Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 09:18 AM UTC

PDB ID	:	4V8Q / pdb_00004v8q
Title	:	Complex of SmpB, a tmRNA fragment and EF-Tu-GDP-Kirromycin with the 70S ribosome
Authors	:	Neubauer, C.; Gillet, R.; Kelley, A.C.; Ramakrishnan, V.
Deposited on	:	2011-12-10
Resolution	:	3.10 Å(reported)

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

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

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

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

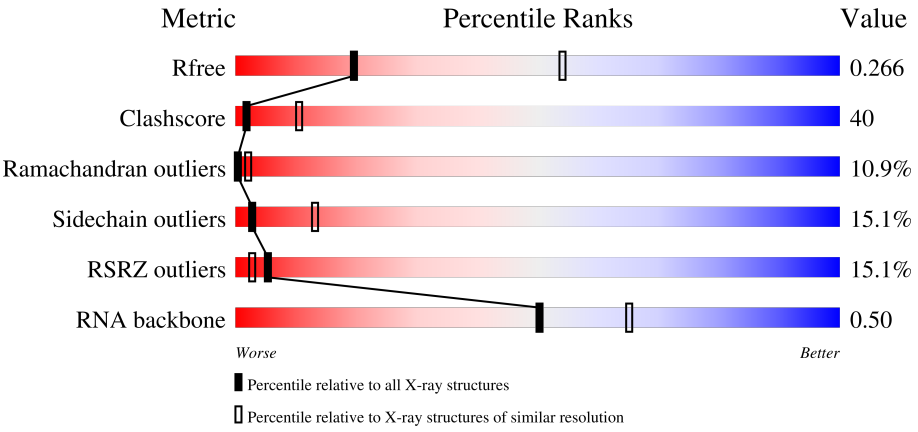
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1456 (3.10-3.10)
Clashscore	190562	1539 (3.10-3.10)
Ramachandran outliers	187476	1467 (3.10-3.10)
Sidechain outliers	187428	1467 (3.10-3.10)
RSRZ outliers	180081	1456 (3.10-3.10)
RNA backbone	3983	1022 (3.32-2.88)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	A0	85	18% 28% 54% 14%
2	A1	98	9% 35% 44% 14%
3	A2	72	12% 17% 61% 19%
4	A3	60	7% 35% 52% 12%

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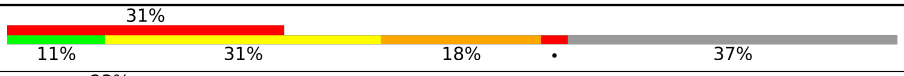
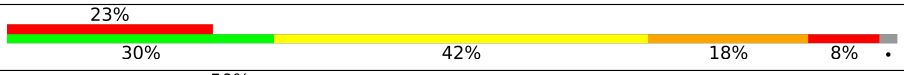
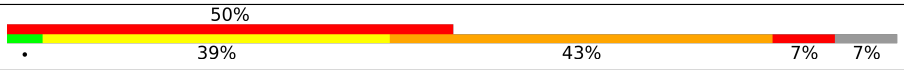
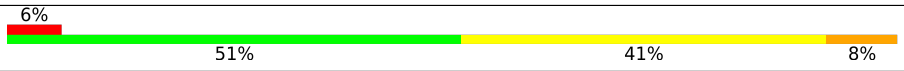
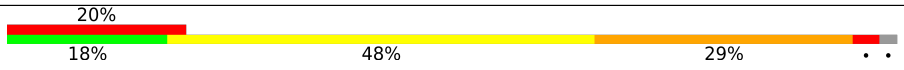
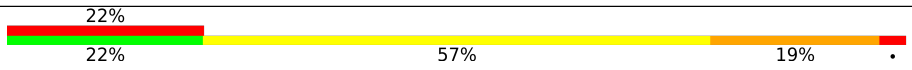
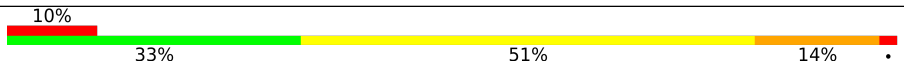
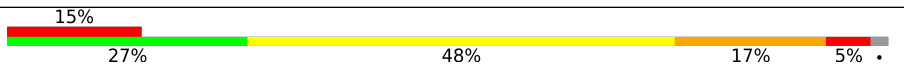
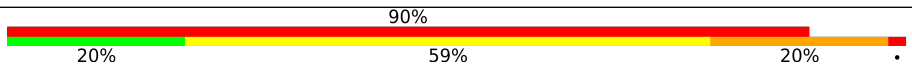
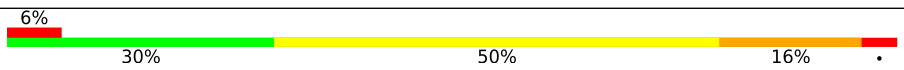
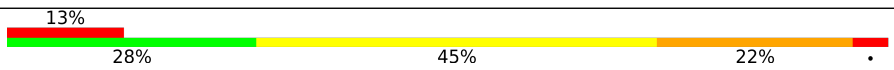
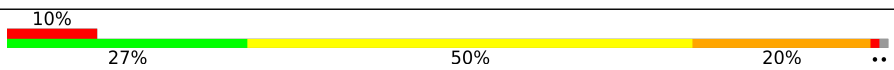
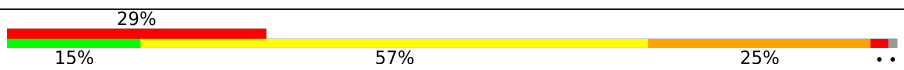
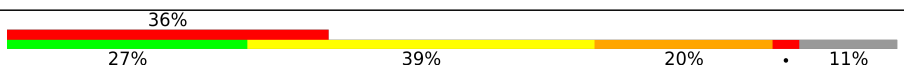
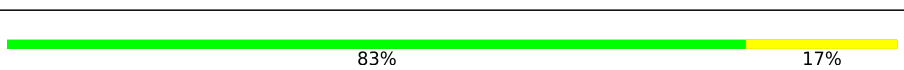
Mol	Chain	Length	Quality of chain
5	A4	71	
6	A5	60	
7	A6	54	
8	A7	49	
9	A8	65	
10	A9	37	
11	AA	2915	
12	AB	122	
13	AC	229	
14	AD	276	
15	AE	206	
16	AF	210	
17	AG	182	
18	AH	180	
19	AJ	130	
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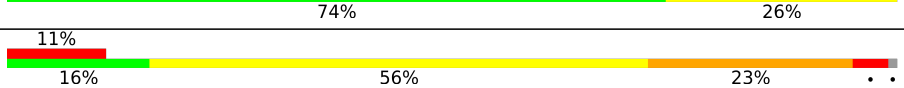
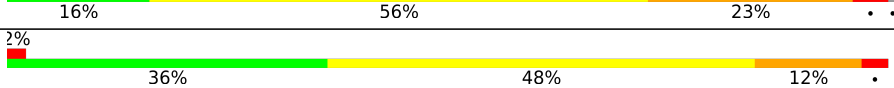
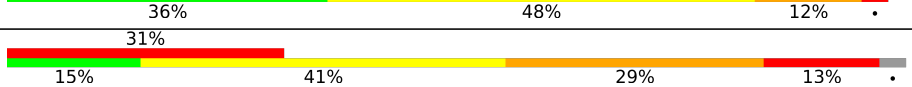
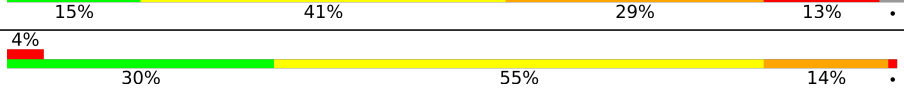
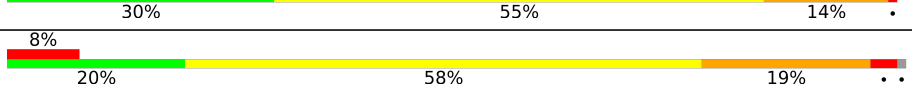
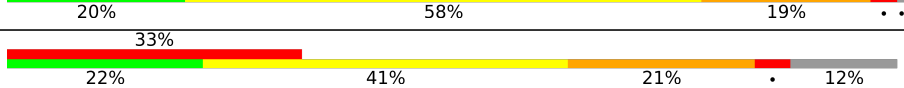
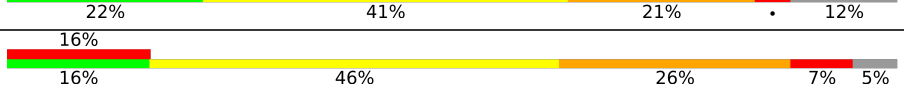
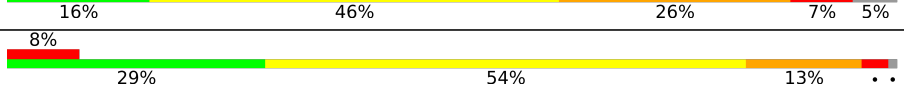
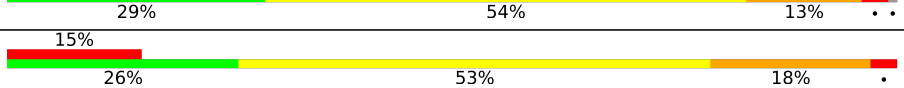
21	AN	140	
22	AO	122	
23	AP	150	
24	AQ	141	
25	AR	118	
26	AS	112	
27	AT	146	
28	AU	118	
29	AV	101	

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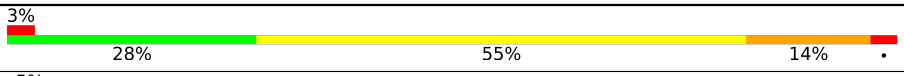
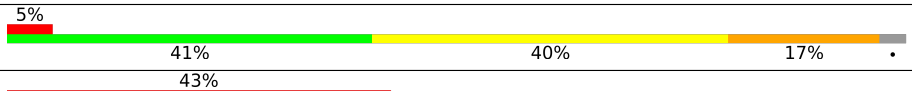
Mol	Chain	Length	Quality of chain
30	AW	113	
31	AX	96	
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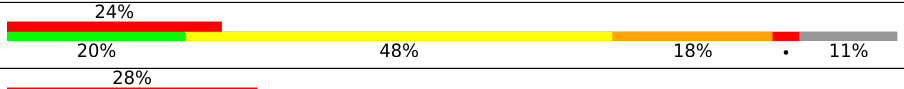
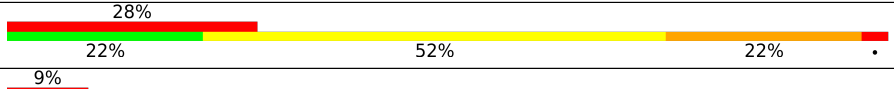
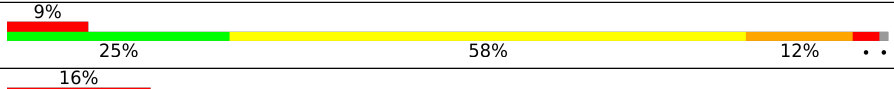
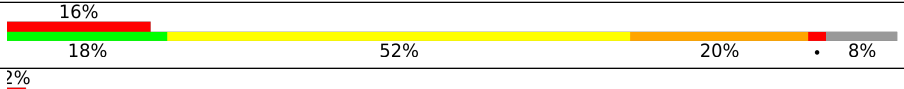
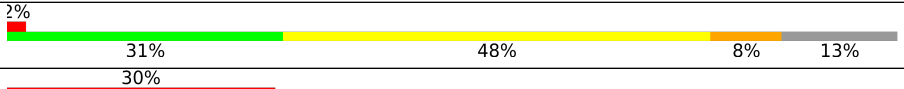
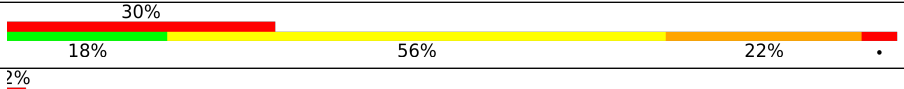
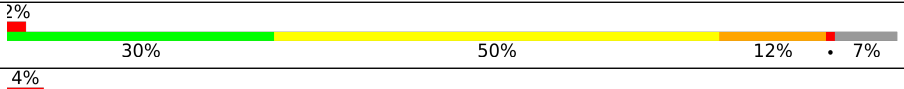
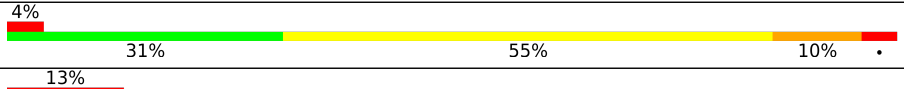
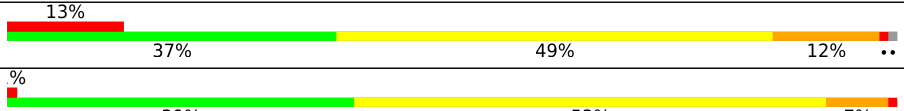
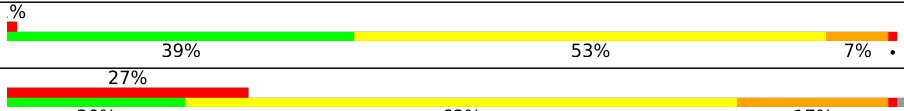
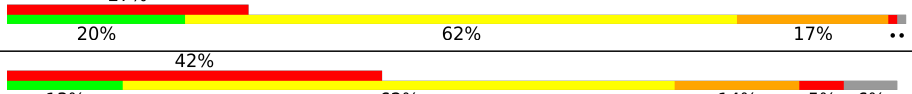
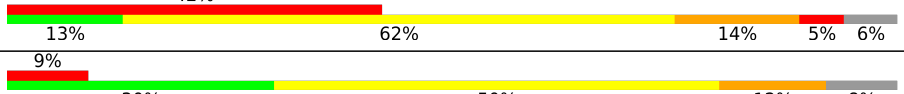
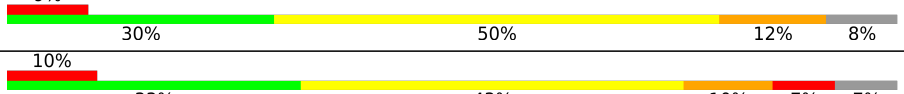
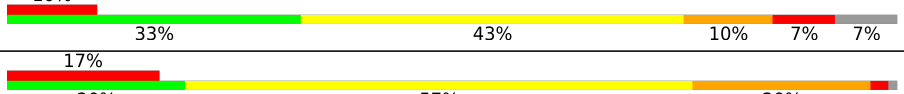
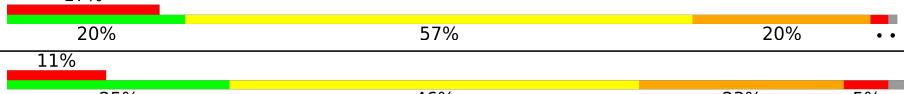
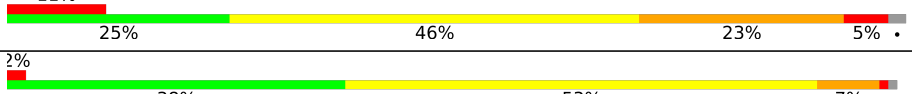
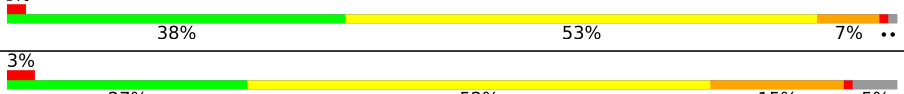
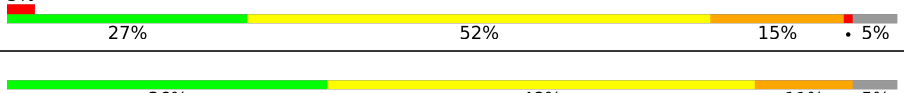
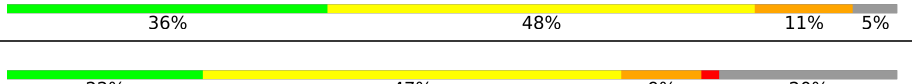
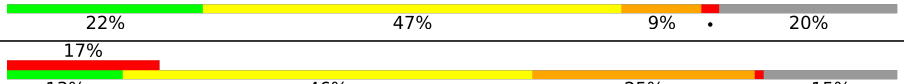
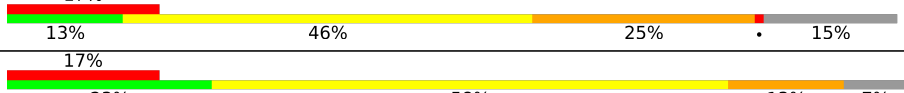
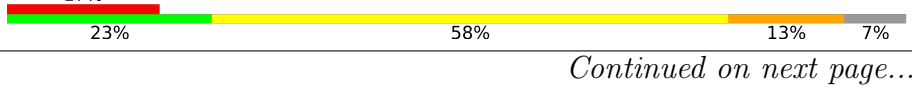
33	AZ	206	
34	B2	144	
35	BA	1522	
36	BB	256	
37	BC	239	
38	BD	209	
39	BE	162	
40	BF	101	
41	BG	156	
42	BH	138	
43	BI	128	
44	BJ	105	
45	BK	129	
46	BL	135	
47	BM	126	
48	BN	61	
49	BO	89	
50	BP	88	
51	BQ	105	
52	BR	88	
53	BS	93	
54	BT	106	

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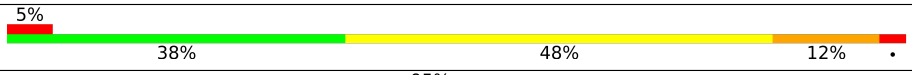
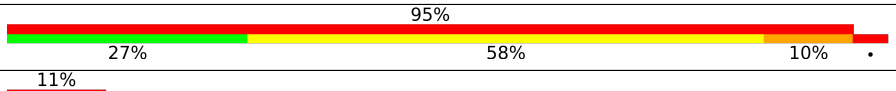
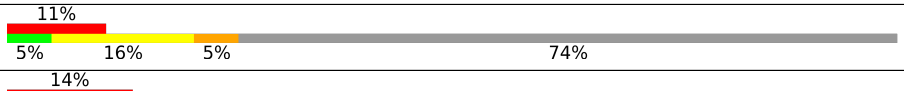
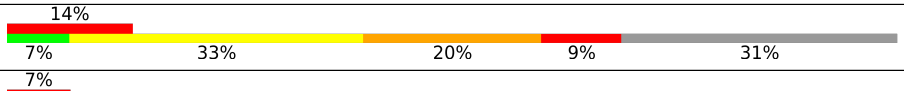
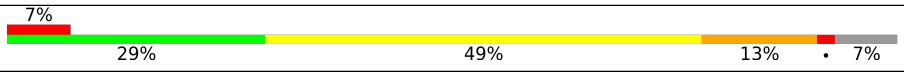
Mol	Chain	Length	Quality of chain
55	BU	27	
56	BV	77	
56	BW	77	
57	BX	19	
58	BY	90	
59	BZ	405	

2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 154205 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 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	A1	94	Total	C	N	O	S	0	0	1
			732	460	146	125	1			

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	A3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 5 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	A4	45	Total	C	N	O	S	0	0	1
			341	218	58	61	4			

- Molecule 6 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	A5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 7 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	A6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 8 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	A7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 9 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	A8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 10 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	A9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 11 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AA	2901	Total	C	N	O	P	0	0	0
			62479	27808	11685	20086	2900			

- Molecule 12 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AC	228	Total	C	N	O	S	0	0	0
			1742	1101	318	319	4			

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AC	19	ILE	VAL	conflict	UNP Q5SLP7
AC	27	HIS	ARG	conflict	UNP Q5SLP7
AC	127	MET	LEU	conflict	UNP Q5SLP7

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L5.

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

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AH	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	AJ	130	Total	C	N	O	0	0	0
			654	393	130	131			

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	AK	140	Total 701	C 420	N 140	O 141	0	0	0

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AN	139	Total 1105	C 712	N 207	O 182	S 4	0	0	1

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AP	146	Total 1114	C 692	N 227	O 193	S 2	0	0	0

- Molecule 24 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L17.

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

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	AS	99	Total 771	C 486	N 155	O 130	0	0	1

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	AT	138	Total	C	N	O	S	0	0	1
			1142	710	235	196	1			

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	AU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L21.

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

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	AW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
31	AX	93	Total	C	N	O	0	0	1
			726	471	132	123			

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	AY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	AZ	184	Total	C	N	O	S	0	0	1
			1460	932	261	265	2			

- Molecule 34 is a protein called SMALL PROTEIN B SMPB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B2	144	Total	C	N	O	S	0	0	0
			1184	754	219	210	1			

- Molecule 35 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	1504	Total	C	N	O	P	0	0	0
			32330	14391	5994	10442	1503			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1489	A	G	conflict	GB NC_006461
BA	1490	A	C	conflict	GB NC_006461

- Molecule 36 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

- Molecule 37 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			

- Molecule 38 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 39 is a protein called 30S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			

- Molecule 40 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 41 is a protein called 30S RIBOSOMAL PROTEIN S7.

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

- Molecule 42 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 43 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

- Molecule 44 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

- Molecule 45 is a protein called 30S RIBOSOMAL PROTEIN S11.

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

- Molecule 46 is a protein called 30S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BL	1	MET	-	expression tag	UNP Q5SHN3
BL	2	VAL	-	expression tag	UNP Q5SHN3
BL	3	ALA	-	expression tag	UNP Q5SHN3
BL	4	LEU	-	expression tag	UNP Q5SHN3

- Molecule 47 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BM	125	Total	C	N	O	S	0	0	1
			988	611	206	169	2			

- Molecule 48 is a protein called 30S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 49 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 50 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

- Molecule 51 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			

- Molecule 52 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
52	BR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 53 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

- Molecule 54 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	BT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 55 is a protein called 30S RIBOSOMAL PROTEIN THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
55	BU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 56 is a RNA chain called E-SITE or P-SITE TRNA FMET.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
56	BW	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 57 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BX	5	Total	C	N	O	P	0	0	0
			104	48	19	33	4			

- Molecule 58 is a RNA chain called TMRNA DELA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BY	62	Total	C	N	O	P	0	0	0
			1305	582	233	429	61			

- Molecule 59 is a protein called ELONGATION FACTOR TU.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	BZ	378	Total	C	N	O	S	0	0	1
			2929	1854	510	553	12			

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BZ	181	GLU	GLN	conflict	UNP Q5SHN6
BZ	184	LYS	ARG	conflict	UNP Q5SHN6
BZ	189	LYS	ARG	conflict	UNP Q5SHN6
BZ	264	LYS	ARG	conflict	UNP Q5SHN6
BZ	288	LEU	VAL	conflict	UNP Q5SHN6
BZ	322	ILE	VAL	conflict	UNP Q5SHN6
BZ	336	THR	SER	conflict	UNP Q5SHN6
BZ	354	ARG	GLN	conflict	UNP Q5SHN6
BZ	357	GLN	PRO	conflict	UNP Q5SHN6

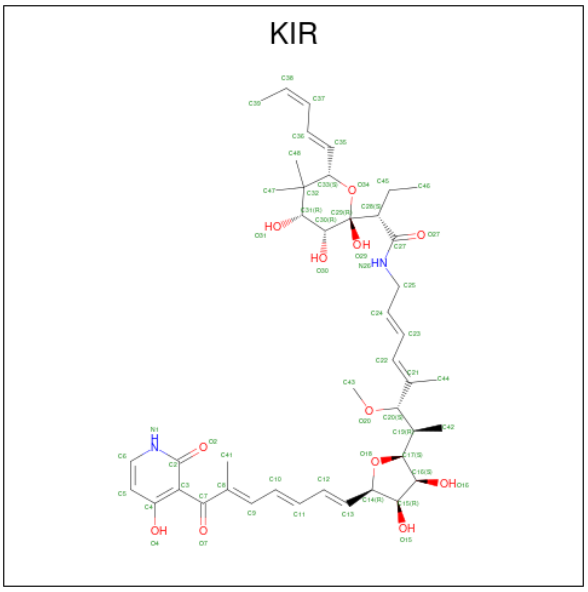
- Molecule 60 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	A9	1	Total Zn 1 1	0	0
60	BD	1	Total Zn 1 1	0	0
60	BN	1	Total Zn 1 1	0	0

- Molecule 61 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

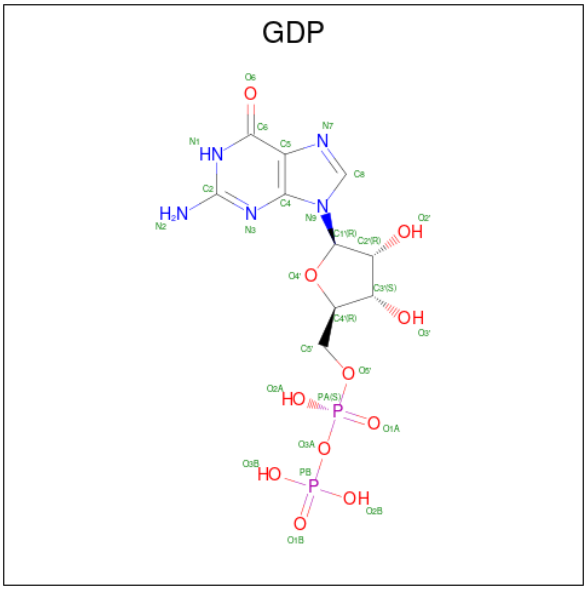
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AA	1	Total Mg 1 1	0	0
61	BZ	1	Total Mg 1 1	0	0

- Molecule 62 is KIRROMYCIN (CCD ID: KIR) (formula: $C_{43}H_{60}N_2O_{12}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
62	BZ	1	Total	C	N	O	0	0
			57	43	2	12		

- Molecule 63 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



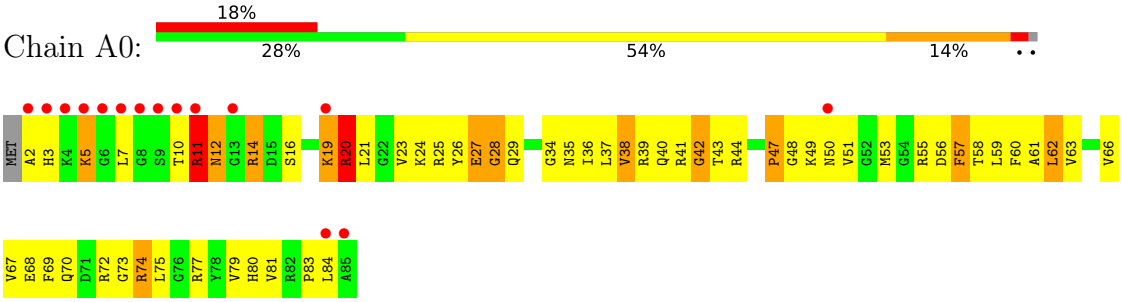
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
63	BZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

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.

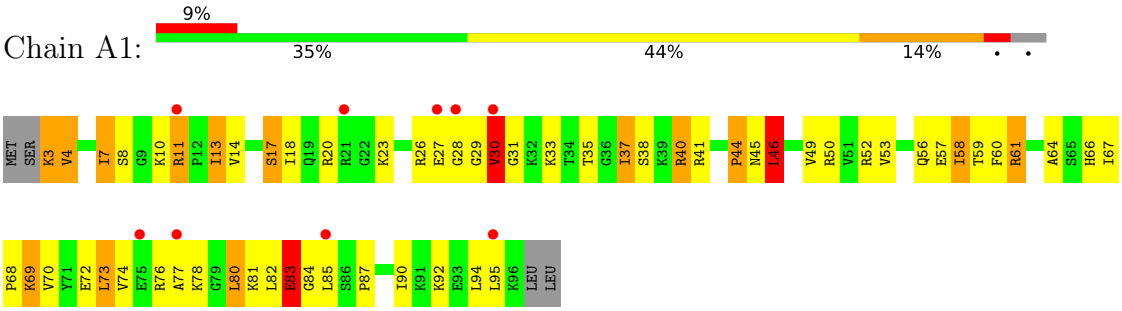
• Molecule 1: 50S RIBOSOMAL PROTEIN L27

Chain A0:



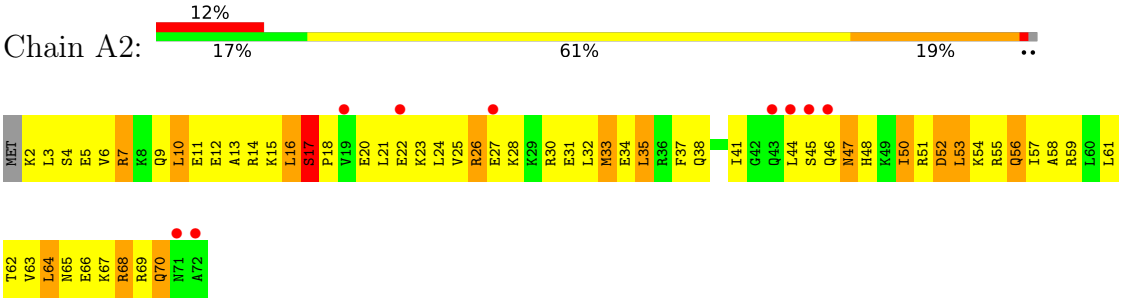
• Molecule 2: 50S RIBOSOMAL PROTEIN L28

Chain A1:



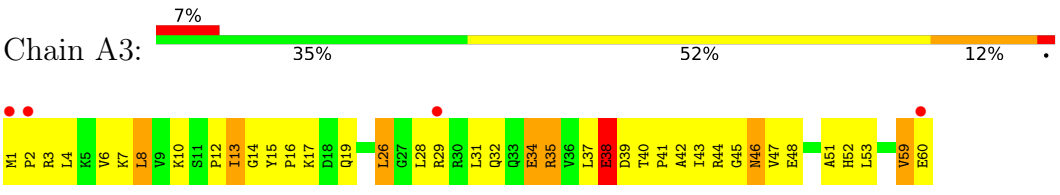
• Molecule 3: 50S RIBOSOMAL PROTEIN L29

Chain A2:



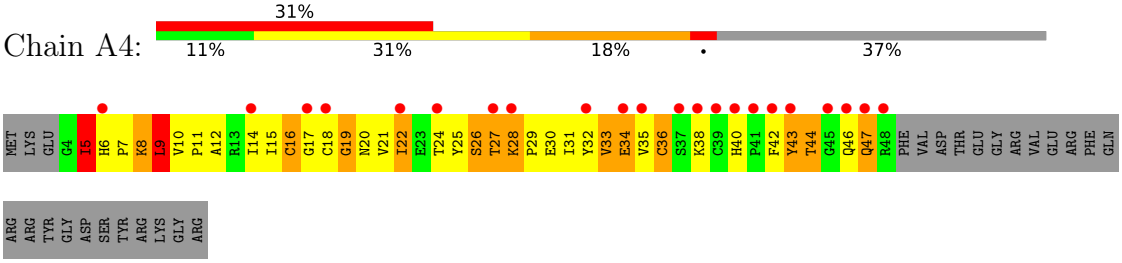
• Molecule 4: 50S RIBOSOMAL PROTEIN L30

Chain A3:



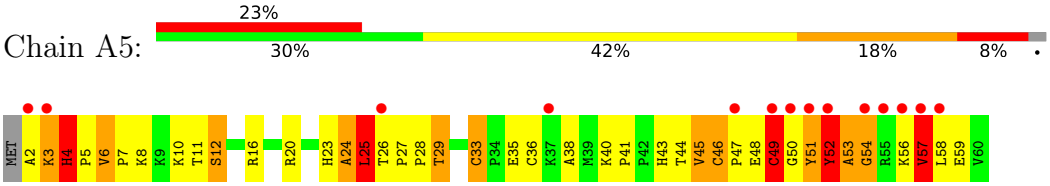
• Molecule 5: 50S RIBOSOMAL PROTEIN L31

Chain A4:



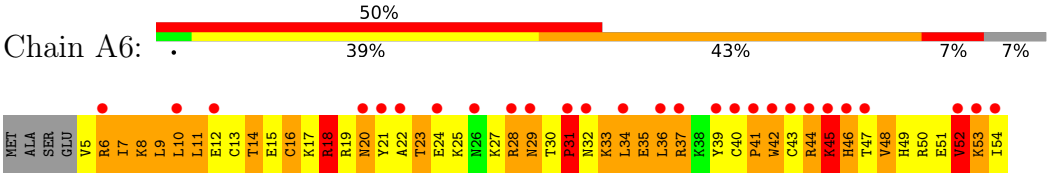
• Molecule 6: 50S RIBOSOMAL PROTEIN L32

Chain A5:



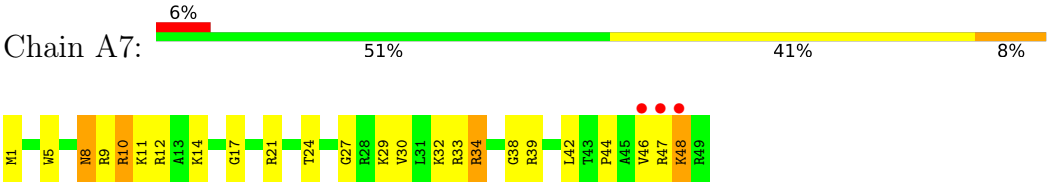
• Molecule 7: 50S RIBOSOMAL PROTEIN L33

Chain A6:



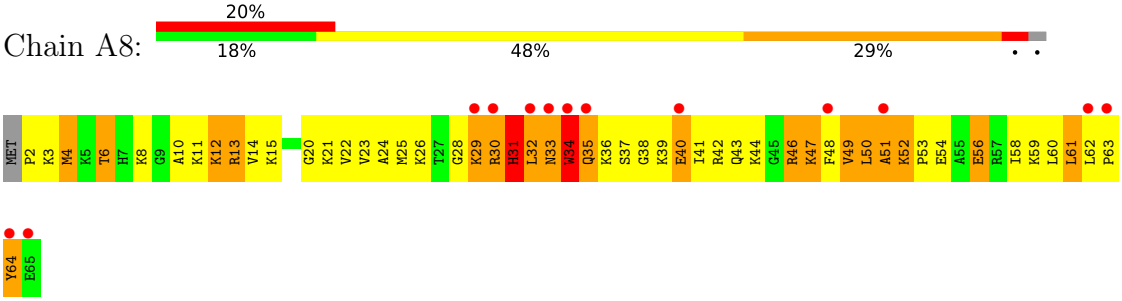
• Molecule 8: 50S RIBOSOMAL PROTEIN L34

Chain A7:



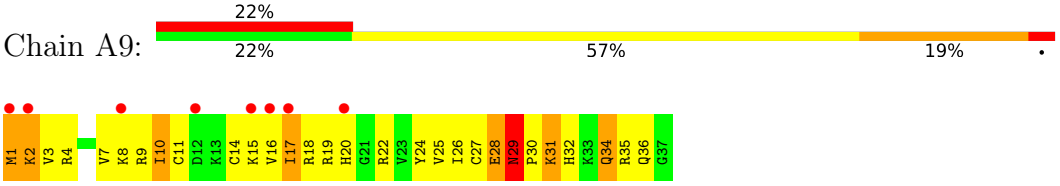
• Molecule 9: 50S RIBOSOMAL PROTEIN L35

Chain A8:



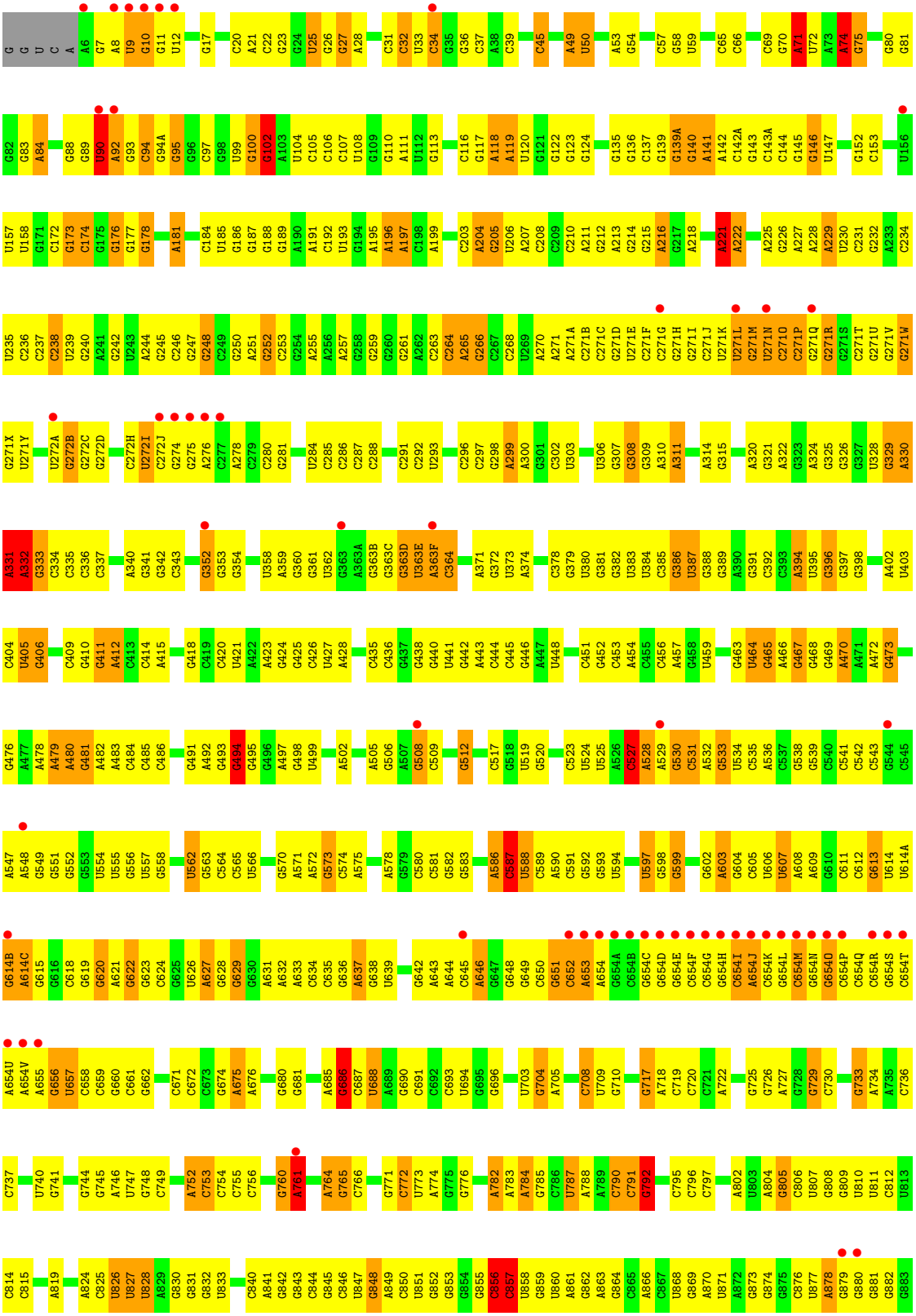
• Molecule 10: 50S RIBOSOMAL PROTEIN L36

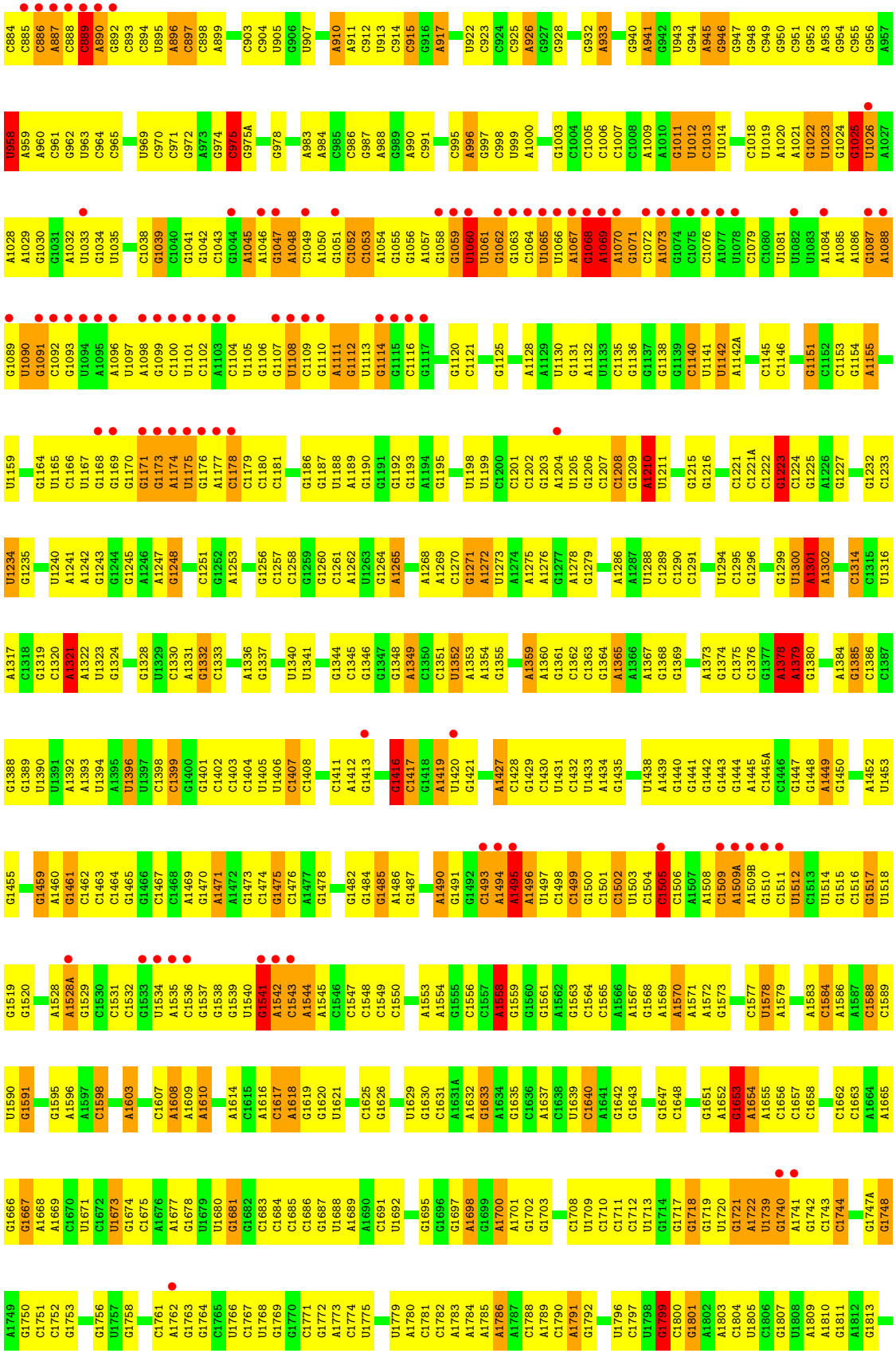
Chain A9:

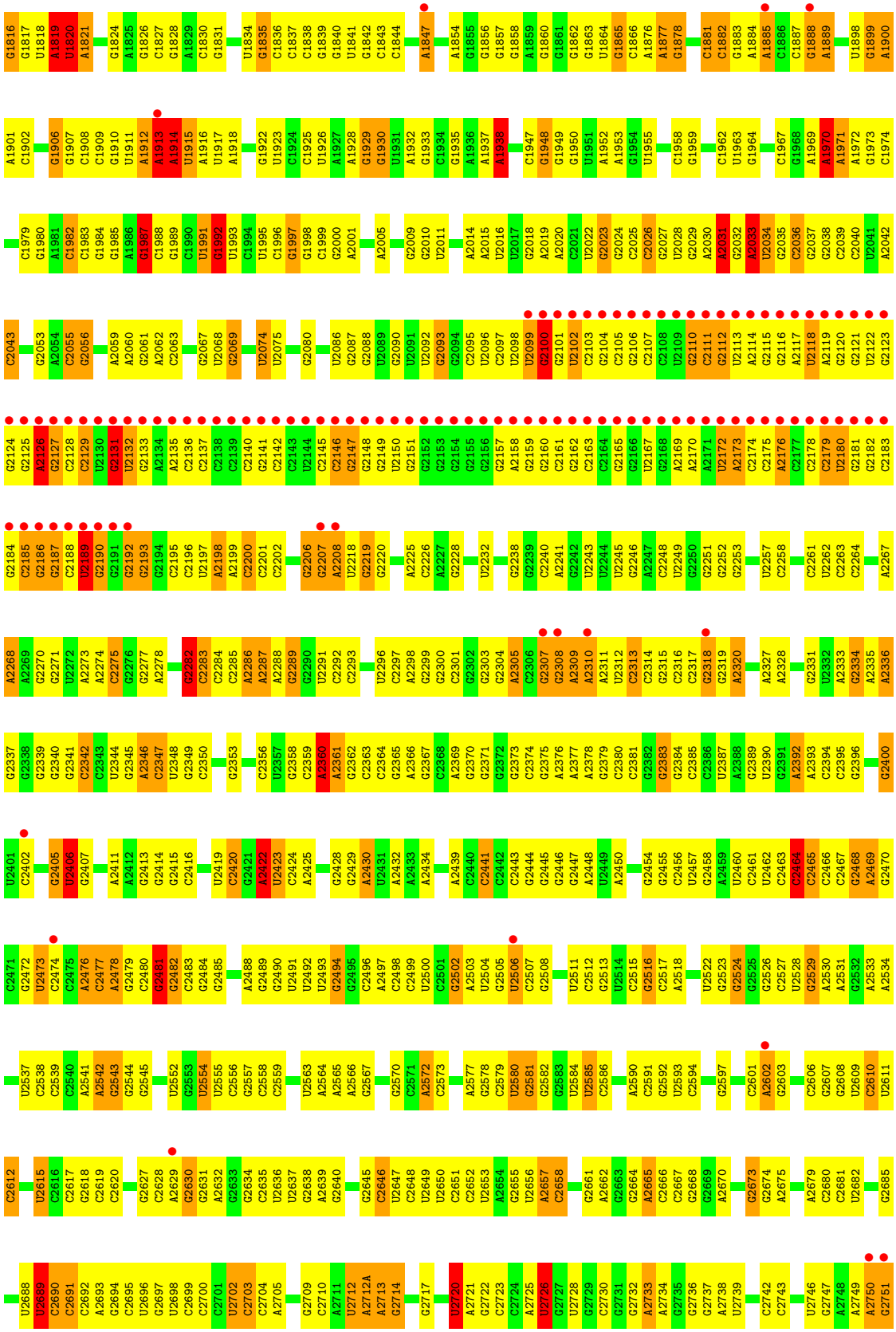


• Molecule 11: 23S ribosomal RNA

Chain AA:



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A1901 C1902 G1906 G1907 C1908 C1909 G1910 U1911 A1912 A1913 A1914 U1915 A1916 U1917 A1918 G1922 U1923 C1924 C1925 U1926 A1927 A1928 G1929 G1930 U1931 A1932 G1933 C1934 G1935 A1936 A1937 A1938 C1947 G1948 G1949 G1950 U1951 A1952 A1953 G1954 U1955 C1958 G1959 C1962 U1963 G1964 C1967 G1968 A1969 A1970 A1971 A1972 G1973 C1974
C1979 G1980 A1981 C1982 C1983 G1984 G1985 A1986 G1987 C1988 G1989 C1990 U1991 G1992 U1993 C1994 U1995 C1996 G1997 G1998 C1999 G2000 A2001 A2005 G2009 G2010 U2011 A2014 A2015 U2016 U2017 G2018 A2019 A2020 C2021 U2022 G2023 G2024 C2025 C2026 G2027 U2028 G2029 A2030 A2031 G2032 A2033 U2034 G2035 C2036 G2037 G2038 C2039 C2040 U2041 A2042
C2043 G2053 A2054 C2055 G2056 A2059 A2060 G2061 A2062 C2063 G2067 U2068 G2069 U2074 U2075 G2080 U2086 G2087 G2088 U2089 G2090 U2091 U2092 G2093 G2094 C2095 U2096 C2097 U2098 U2099 G2100 G2101 U2102 C2103 G2104 C2105 G2106 C2107 C2108 U2109 G2110 C2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2123
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G2184 C2185 G2186 G2187 C2188 U2189 G2190 G2191 G2192 G2193 G2194 C2195 C2196 U2197 A2198 A2199 C2200 C2201 C2202 G2206 G2207 A2208 U2218 G2219 G2220 A2225 C2226 A2227 G2228 U2232 G2238 G2239 C2240 A2241 G2242 U2243 U2244 U2245 G2246 A2247 C2248 U2249 G2250 G2251 G2252 G2253 U2257 C2258 C2261 U2262 C2263 C2264 A2267
A2268 A2269 G2270 G2271 U2272 A2273 A2274 C2275 G2276 G2277 A2278 G2282 C2283 C2284 C2285 A2286 A2287 A2288 G2289 C2290 U2291 C2292 C2293 U2296 C2297 A2298 G2299 C2300 C2301 G2302 G2303 G2304 A2305 C2306 G2307 G2308 A2309 A2310 A2311 U2312 C2313 C2314 G2315 C2316 C2317 G2318 G2319 A2320 A2327 A2328 G2331 U2332 A2333 G2334 A2335 A2336
G2337 G2338 G2339 G2340 G2341 C2342 C2343 U2344 G2345 A2346 C2347 U2348 G2349 C2350 G2353 C2356 U2357 G2358 C2359 A2360 A2361 G2362 C2363 C2364 G2365 A2366 G2367 C2368 A2369 G2370 G2371 G2372 G2373 C2374 G2375 A2376 A2377 A2378 A2379 C2380 C2381 G2382 G2383 G2384 C2385 C2386 U2387 A2388 G2389 U2390 G2391 A2392 A2393 C2394 C2395 G2396 G2400
U2401 C2402 G2405 U2406 G2407 A2411 A2412 G2413 G2414 G2415 C2416 U2419 C2420 G2421 A2422 U2423 C2424 A2425 G2428 G2429 A2430 U2431 A2432 A2433 A2434 A2439 C2440 C2441 C2442 C2443 C2444 G2445 G2446 G2447 A2448 U2449 A2450 G2454 G2455 C2456 U2457 G2458 A2459 U2460 C2461 U2462 C2463 C2464 C2465 C2466 C2467 G2468 A2469 G2470
C2471 G2472 U2473 C2474 C2475 A2476 C2477 A2478 G2479 C2480 G2481 G2482 C2483 G2484 G2485 A2488 G2489 G2490 U2491 U2492 U2493 G2494 G2495 C2496 A2497 C2498 C2499 U2500 C2501 G2502 A2503 U2504 G2505 U2506 C2507 G2508 U2511 C2512 G2513 U2514 C2515 G2516 C2517 A2518 U2522 G2523 G2524 G2525 G2526 C2527 U2528 G2529 A2530 A2531 G2532 A2533 A2534
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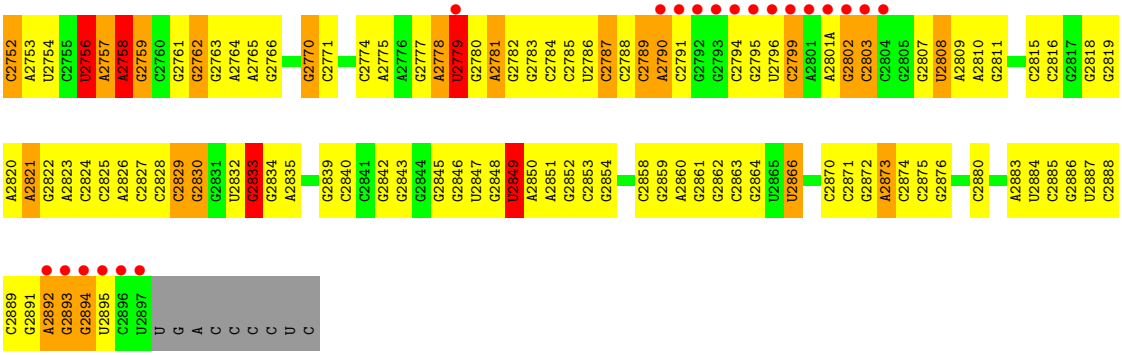
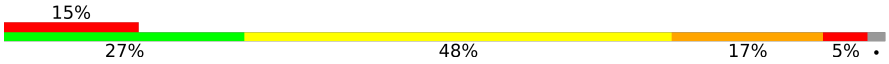
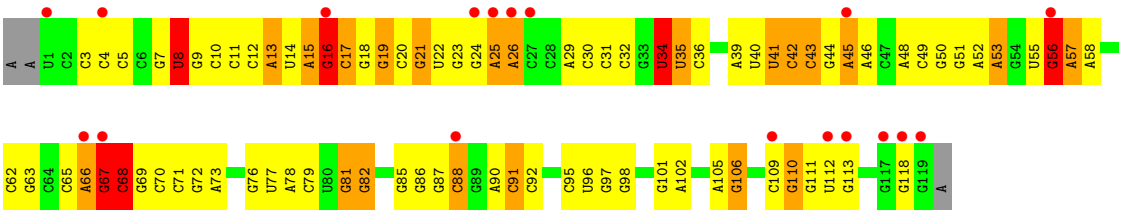
C2612 U2615 C2616 C2617 G2618 C2619 C2620 G2627 C2628 A2629 G2630 G2631 A2632 G2633 G2634 C2635 U2636 U2637 G2638 A2639 G2640 G2645 C2646 U2647 C2648 U2649 U2650 C2651 C2652 U2653 A2654 G2655 U2656 A2657 C2658 G2661 A2662 G2663 G2664 A2665 C2666 C2667 G2668 G2669 A2670 G2673 G2674 A2675 A2679 C2680 C2681 U2682 G2685
U2688 U2689 C2690 C2691 C2692 A2693 G2694 C2695 U2696 G2697 U2698 C2699 C2700 C2701 U2702 C2703 C2704 A2705 G2709 C2710 A2711 U2712 A2712A A2713 G2714 G2717 U2720 A2721 C2722 C2723 C2724 A2725 U2726 G2727 U2728 G2729 G2730 G2731 G2732 A2733 A2734 G2735 G2736 G2737 A2738 U2739 C2742 C2743 U2746 G2747 A2748 A2749 A2750 G2751



• Molecule 12: 5S ribosomal RNA

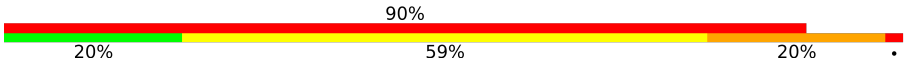
Chain AB:

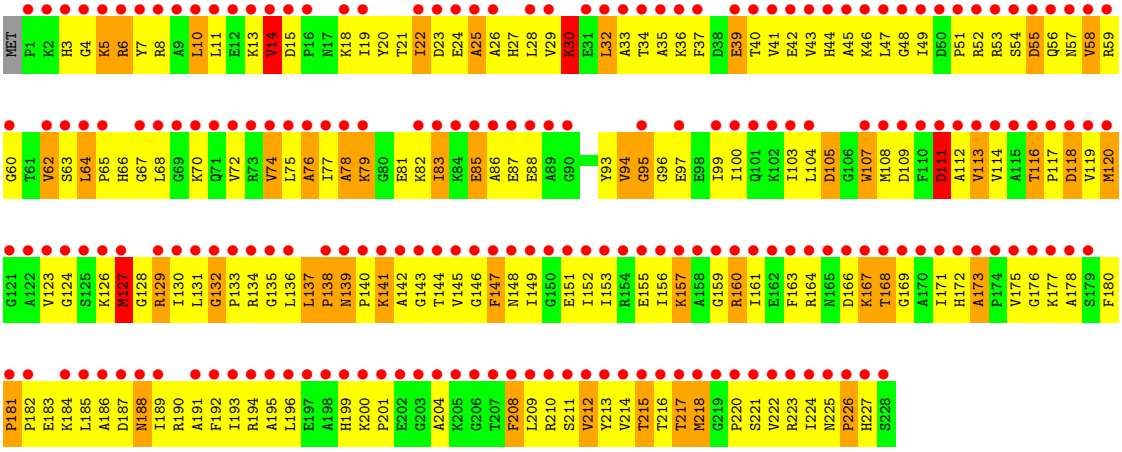




• Molecule 13: 50S RIBOSOMAL PROTEIN L1

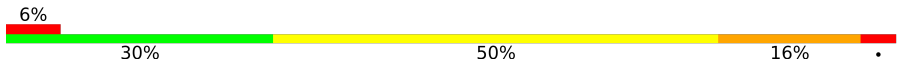
Chain AC:

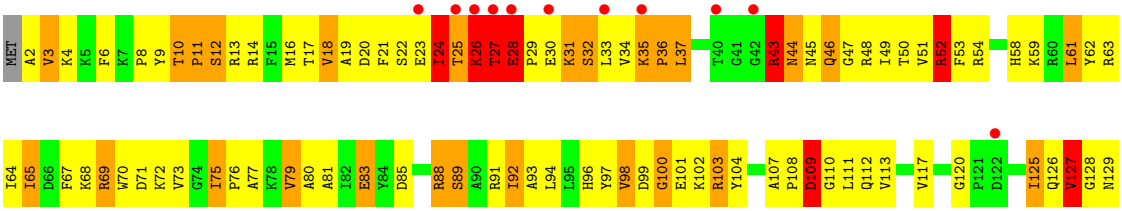


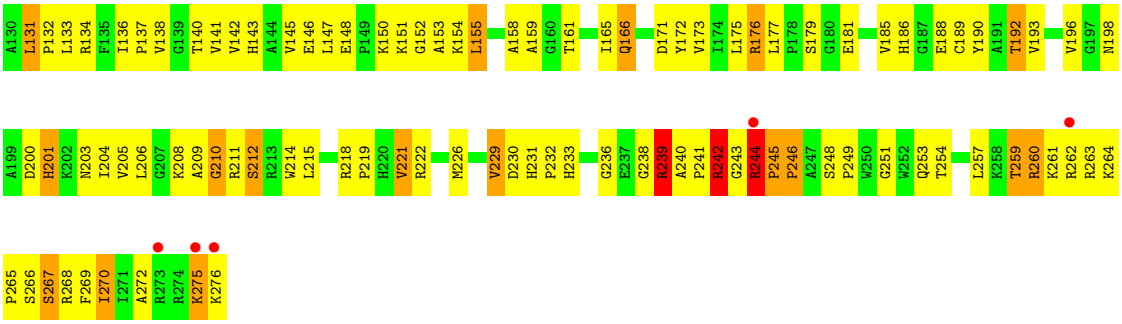


• Molecule 14: 50S RIBOSOMAL PROTEIN L2

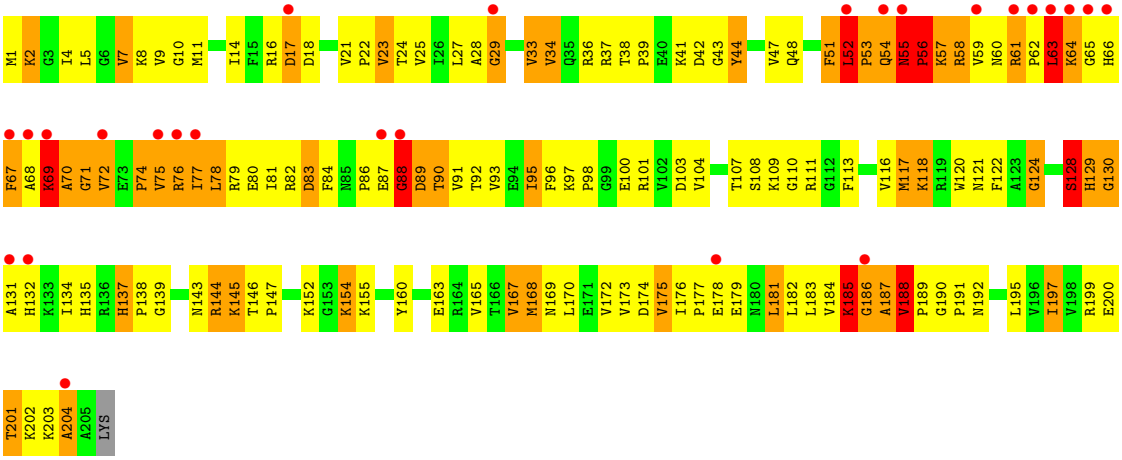
Chain AD:



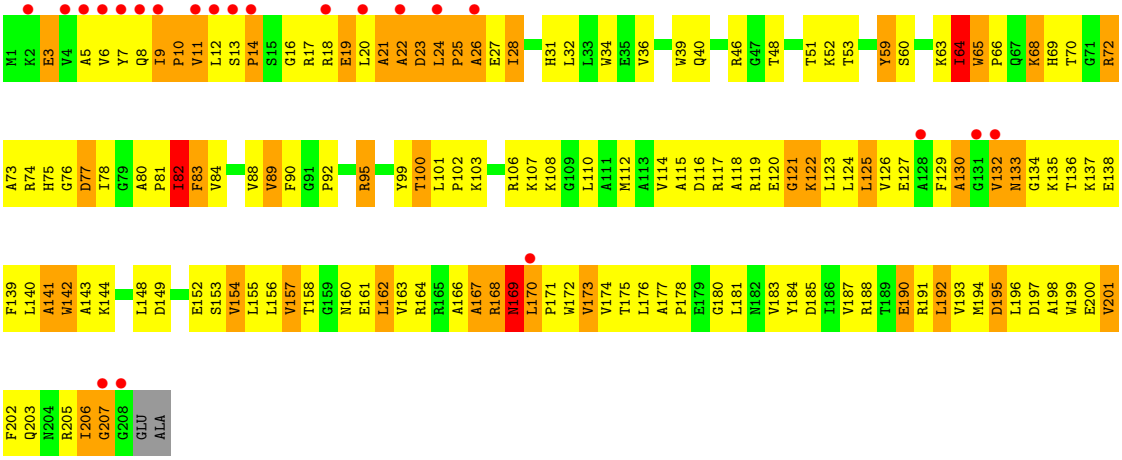




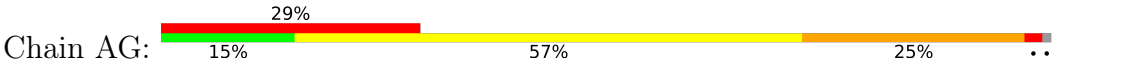
• Molecule 15: 50S RIBOSOMAL PROTEIN L3

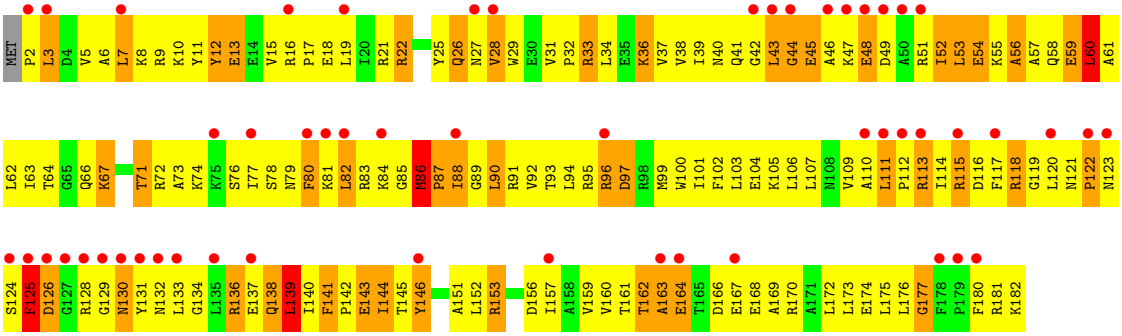


• Molecule 16: 50S RIBOSOMAL PROTEIN L4



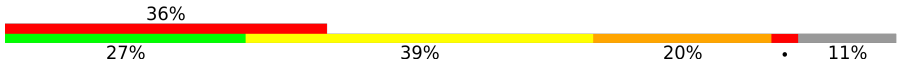
• Molecule 17: 50S RIBOSOMAL PROTEIN L5

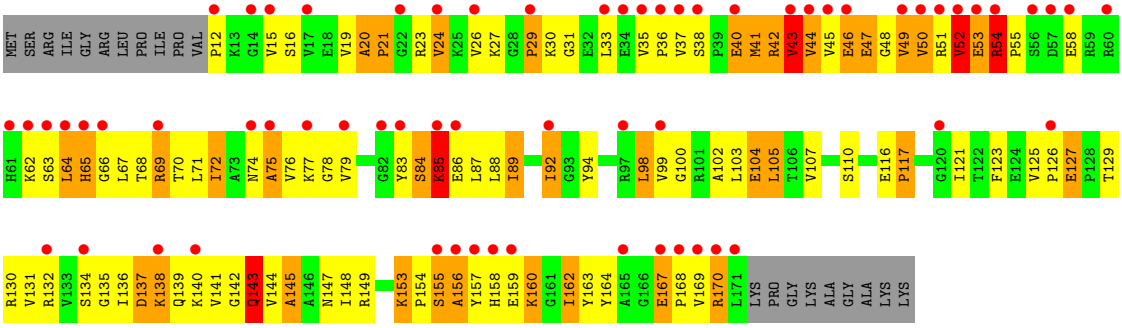




• Molecule 18: 50S RIBOSOMAL PROTEIN L6

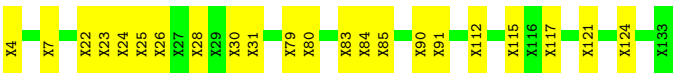
Chain AH:





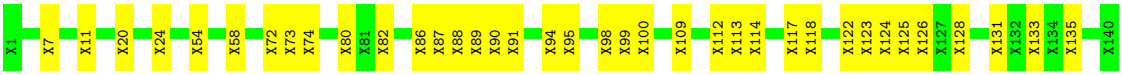
• Molecule 19: 50S RIBOSOMAL PROTEIN L10

Chain AJ:



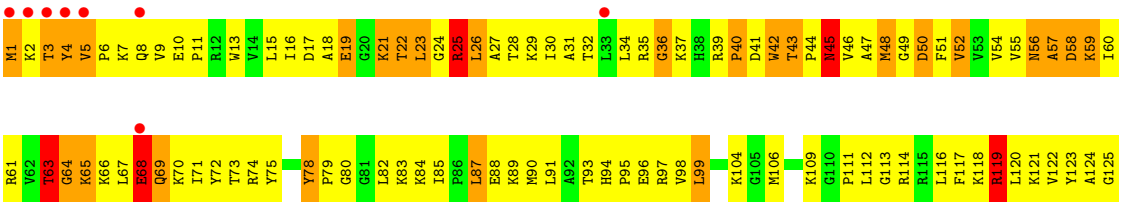
• Molecule 20: 50S RIBOSOMAL PROTEIN L11

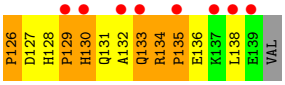
Chain AK:



• Molecule 21: 50S RIBOSOMAL PROTEIN L13

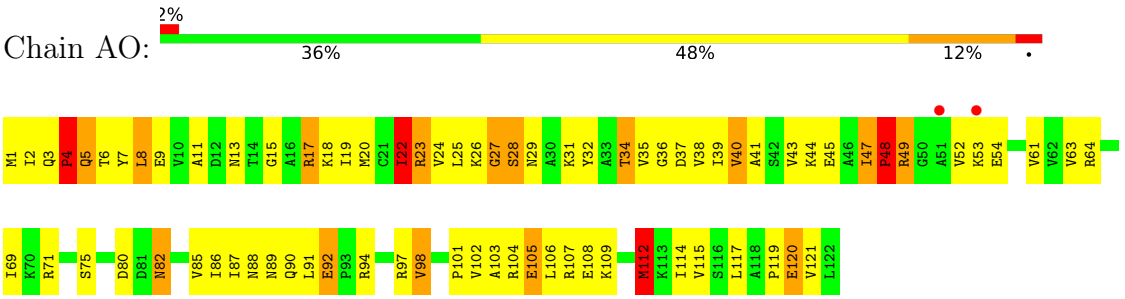
Chain AN:





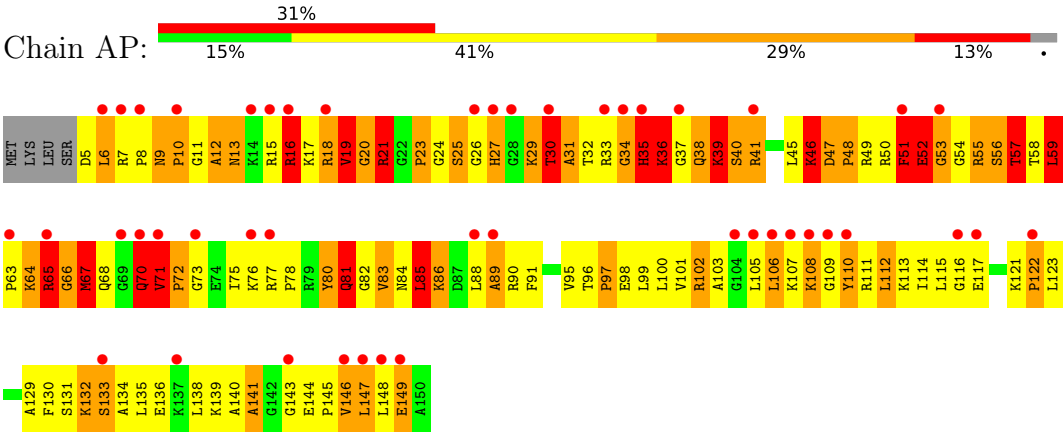
• Molecule 22: 50S RIBOSOMAL PROTEIN L14

Chain AO:



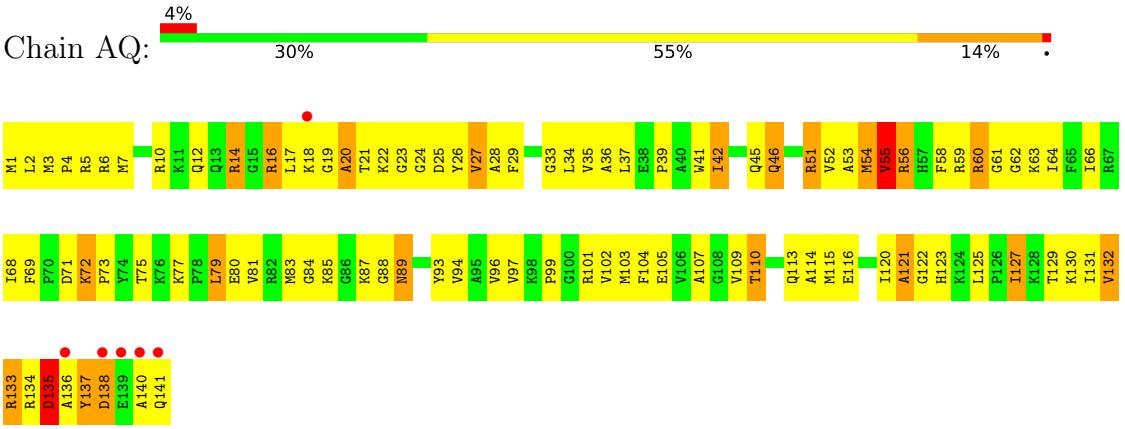
• Molecule 23: 50S RIBOSOMAL PROTEIN L15

Chain AP:



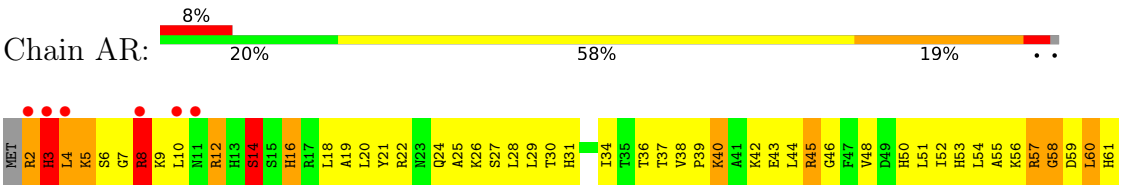
• Molecule 24: 50S RIBOSOMAL PROTEIN L16

Chain AQ:



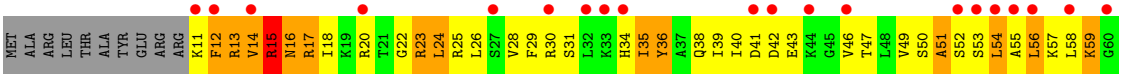
• Molecule 25: 50S RIBOSOMAL PROTEIN L17

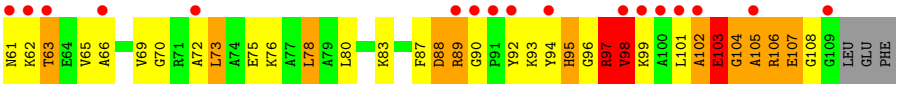
Chain AR:



• Molecule 26: 50S RIBOSOMAL PROTEIN L18

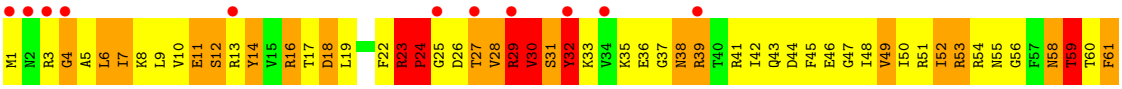
Chain AS:

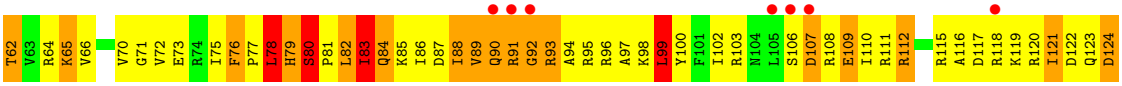


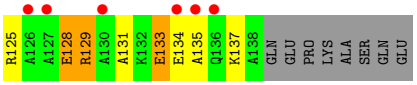


• Molecule 27: 50S RIBOSOMAL PROTEIN L19

Chain AT:

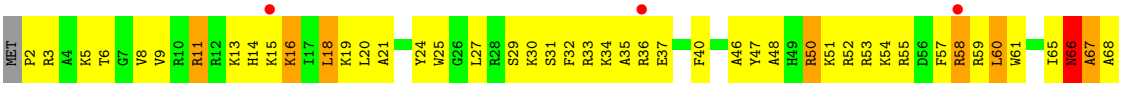


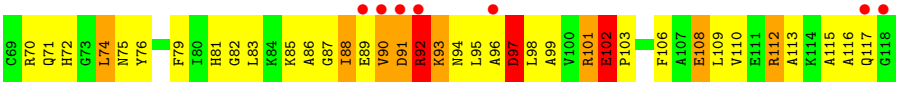




• Molecule 28: 50S RIBOSOMAL PROTEIN L20

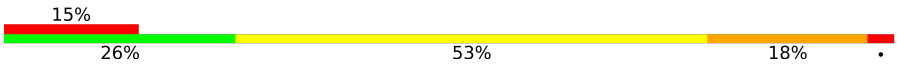
Chain AU:

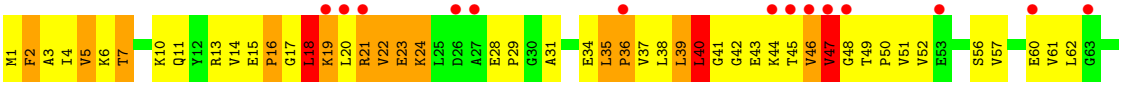


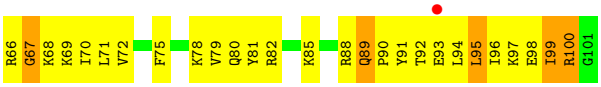


• Molecule 29: 50S RIBOSOMAL PROTEIN L21

Chain AV:

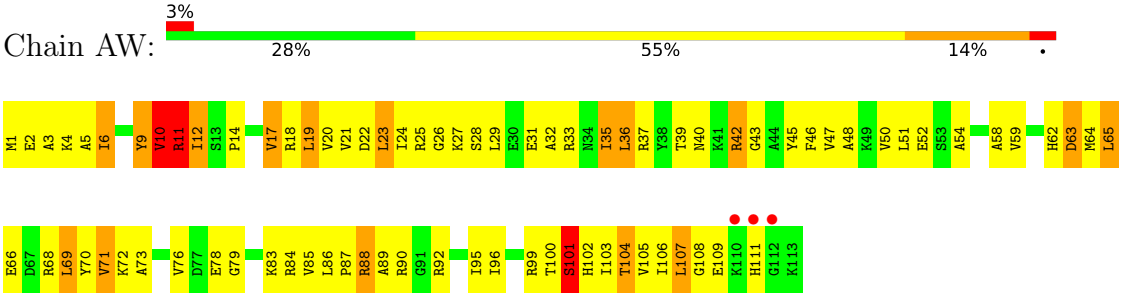






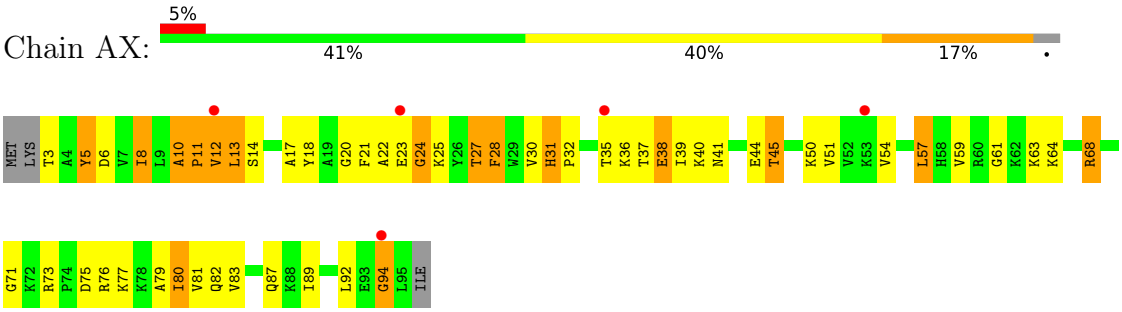
• Molecule 30: 50S RIBOSOMAL PROTEIN L22

Chain AW:



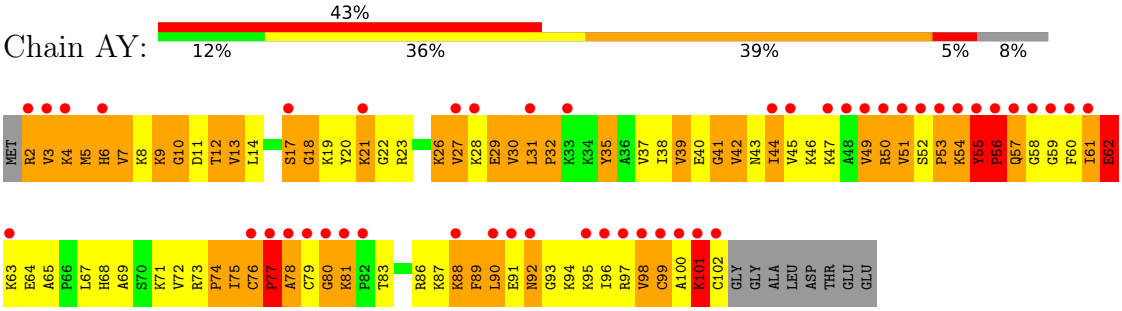
• Molecule 31: 50S RIBOSOMAL PROTEIN L23

Chain AX:



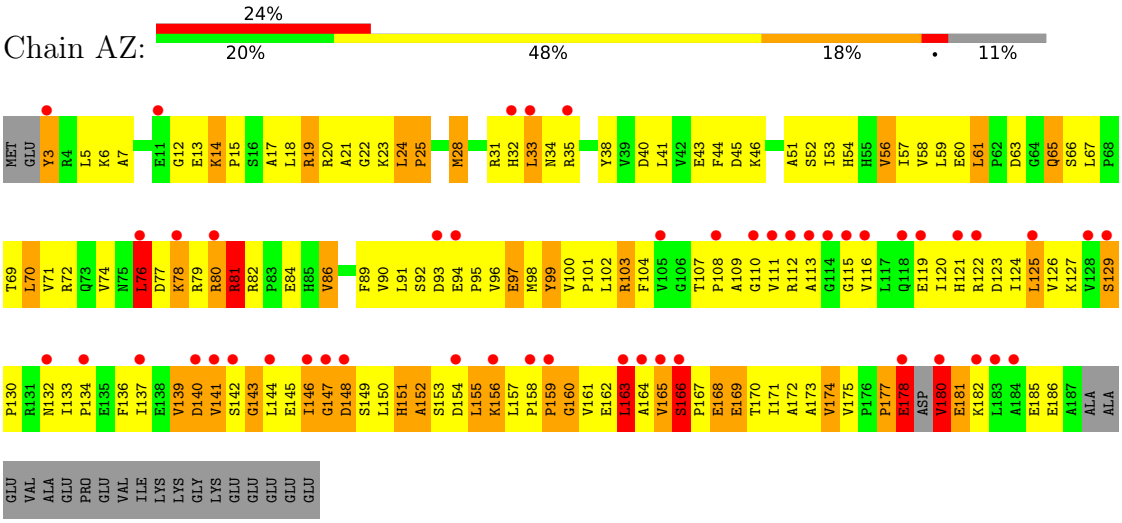
• Molecule 32: 50S RIBOSOMAL PROTEIN L24

Chain AY:



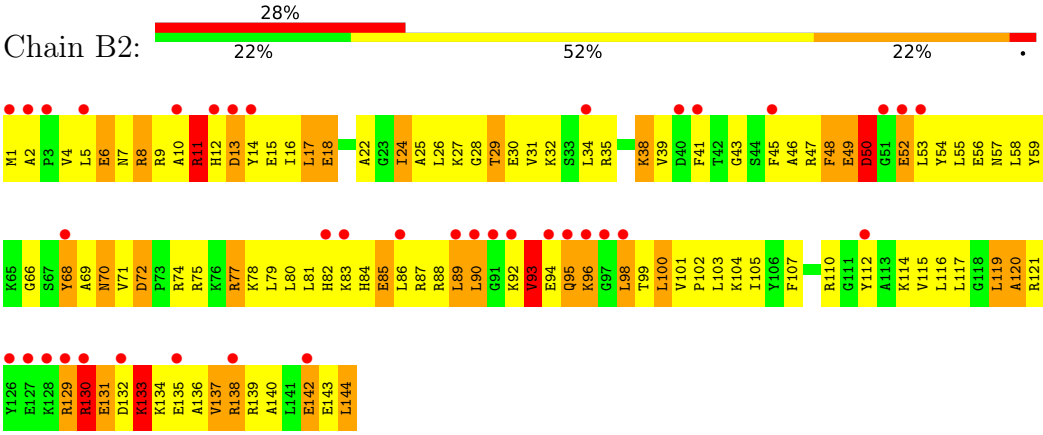
• Molecule 33: 50S RIBOSOMAL PROTEIN L25

Chain AZ:



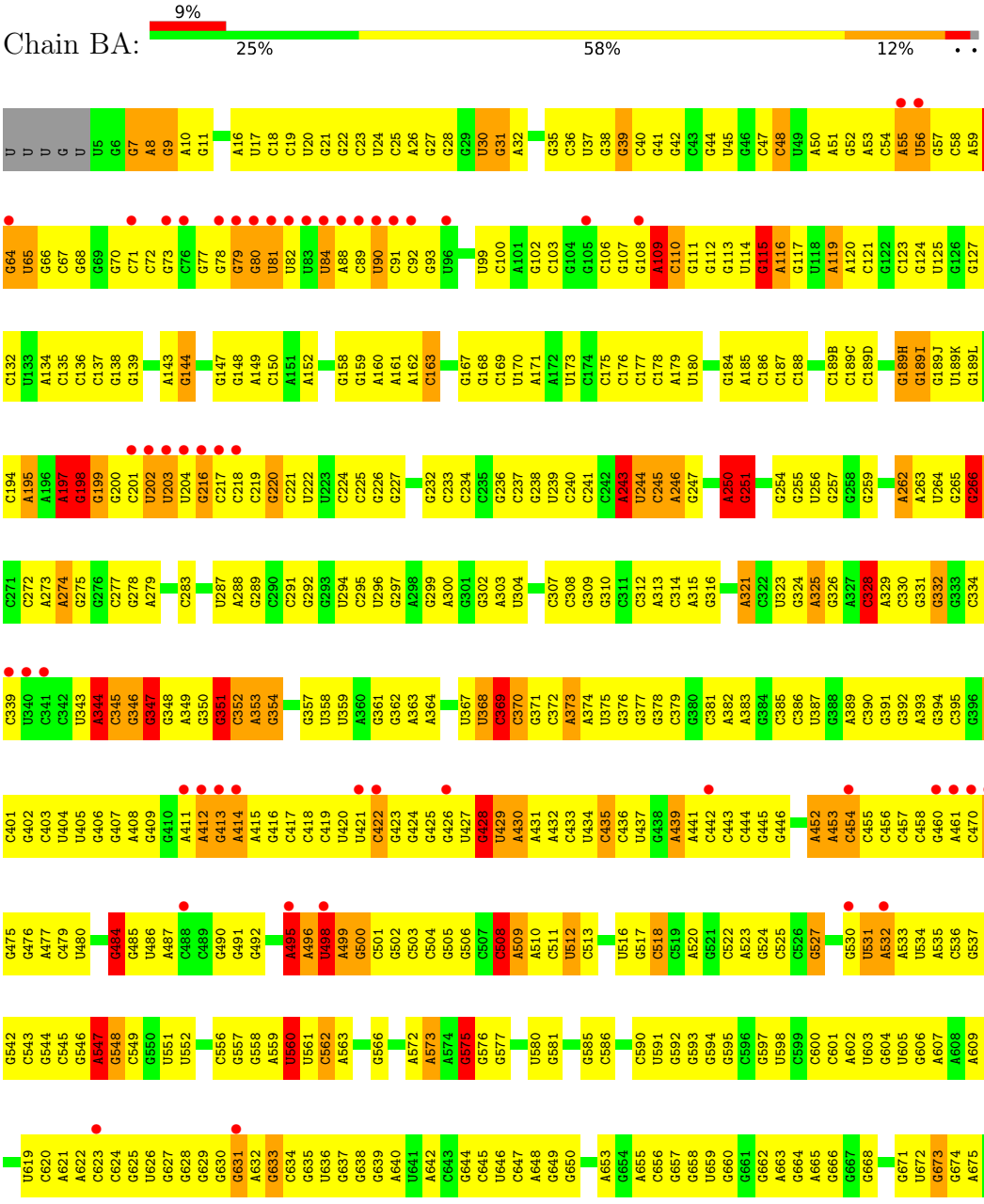
• Molecule 34: SMALL PROTEIN B SMPB

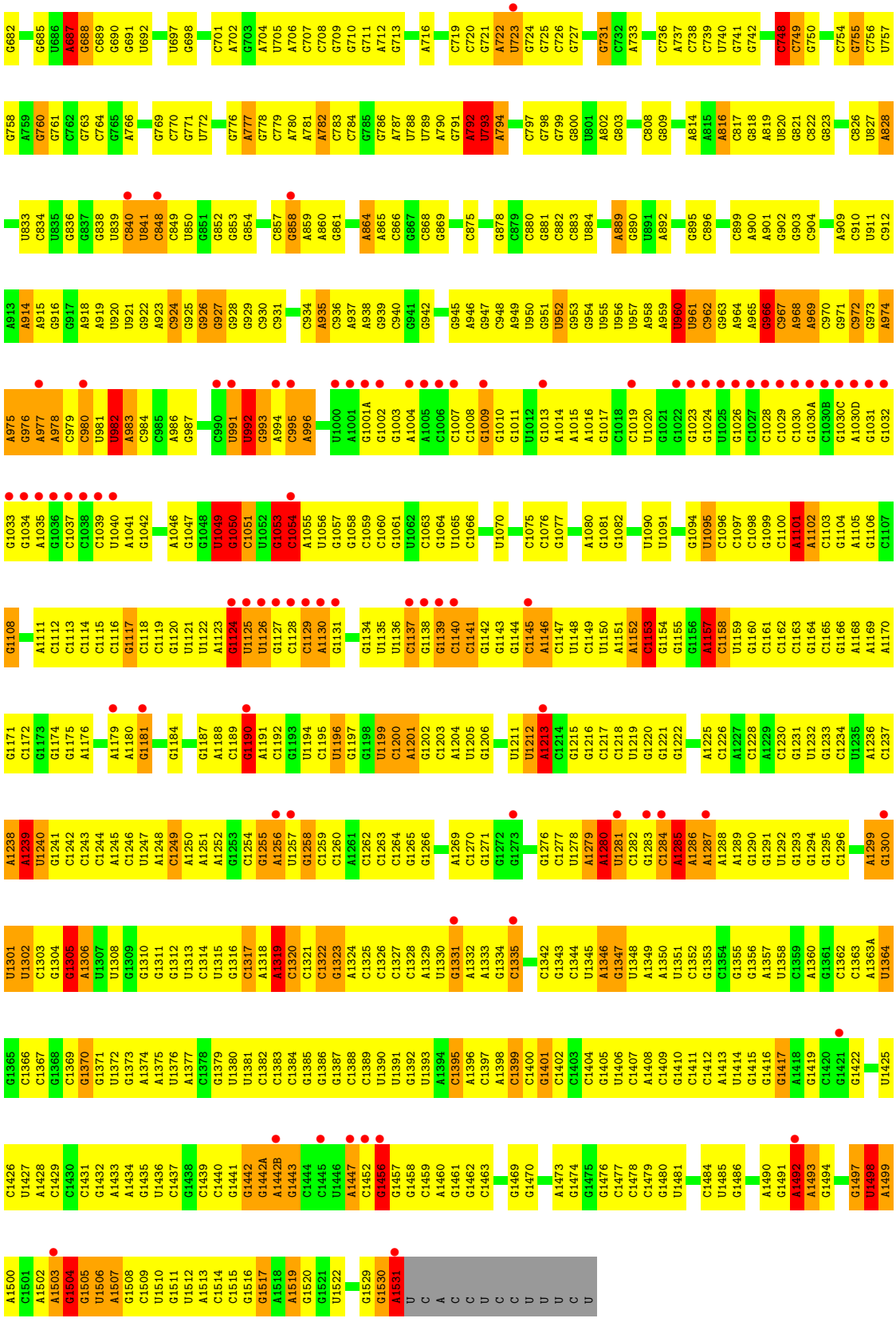
Chain B2:



• Molecule 35: 16S ribosomal RNA

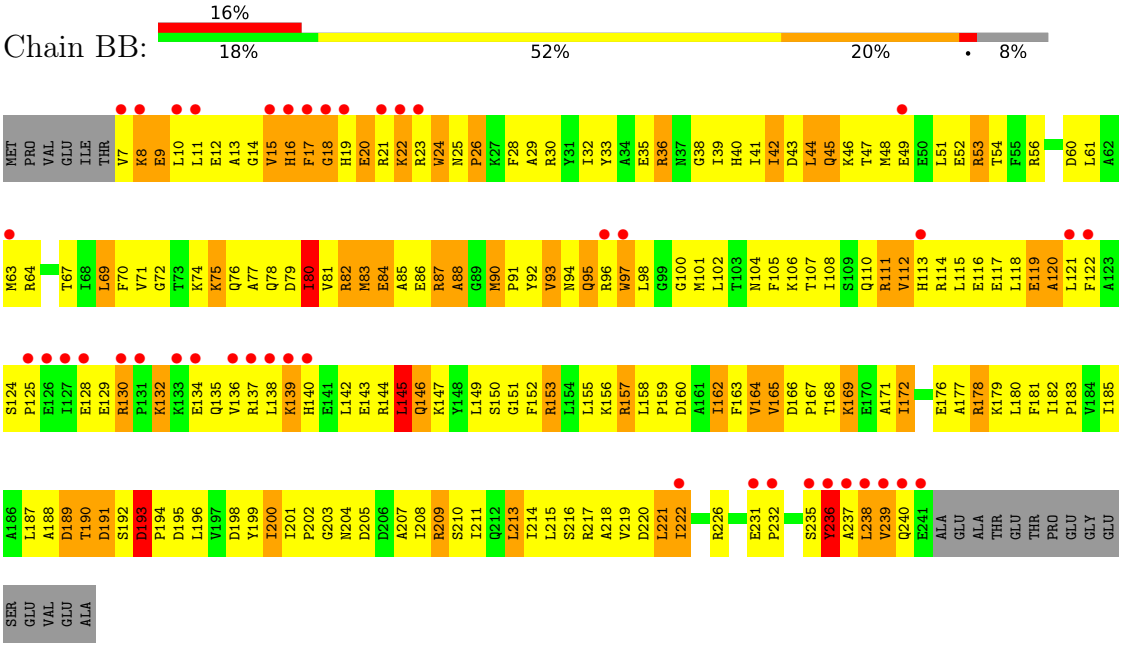
Chain BA:





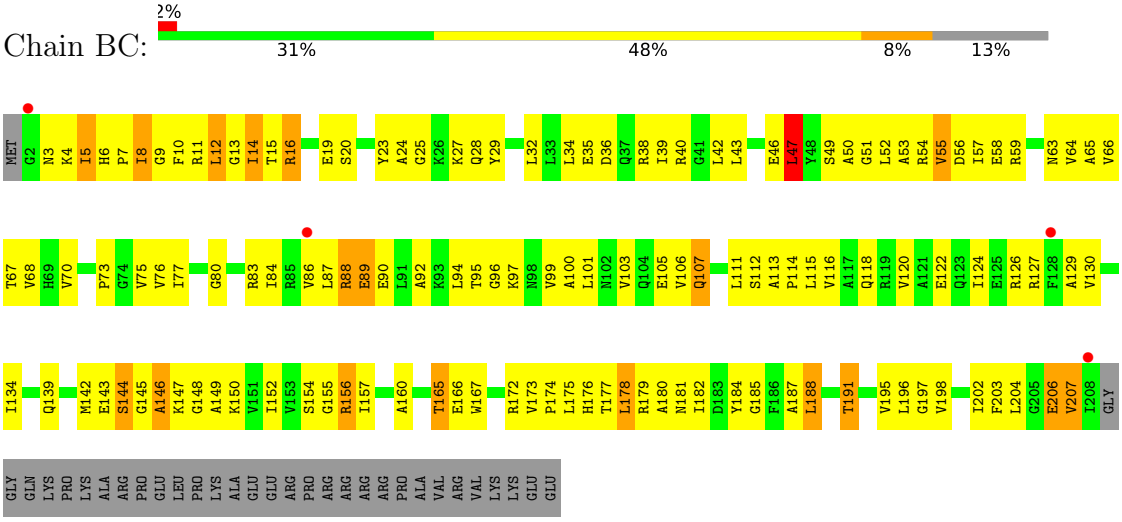
• Molecule 36: 30S RIBOSOMAL PROTEIN S2

Chain BB:



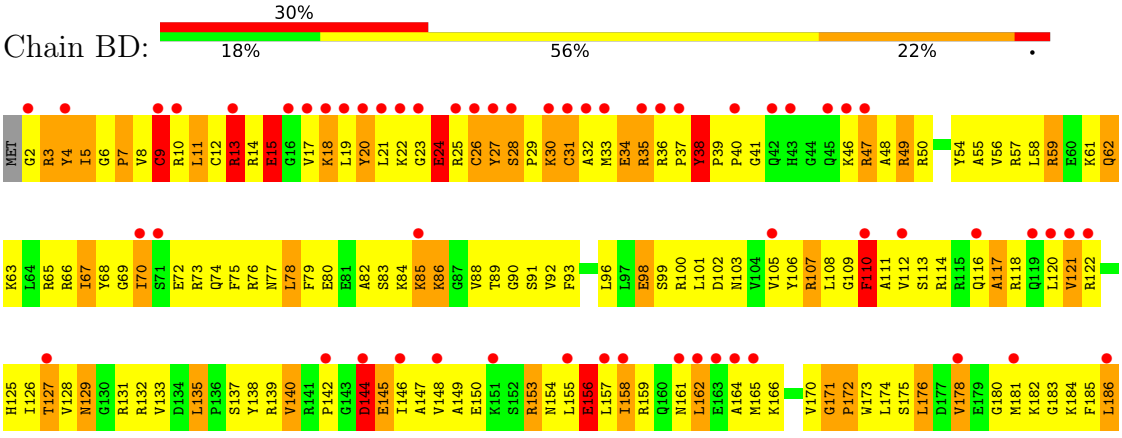
• Molecule 37: 30S RIBOSOMAL PROTEIN S3

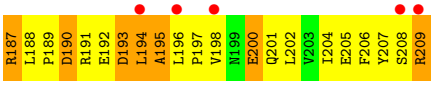
Chain BC:



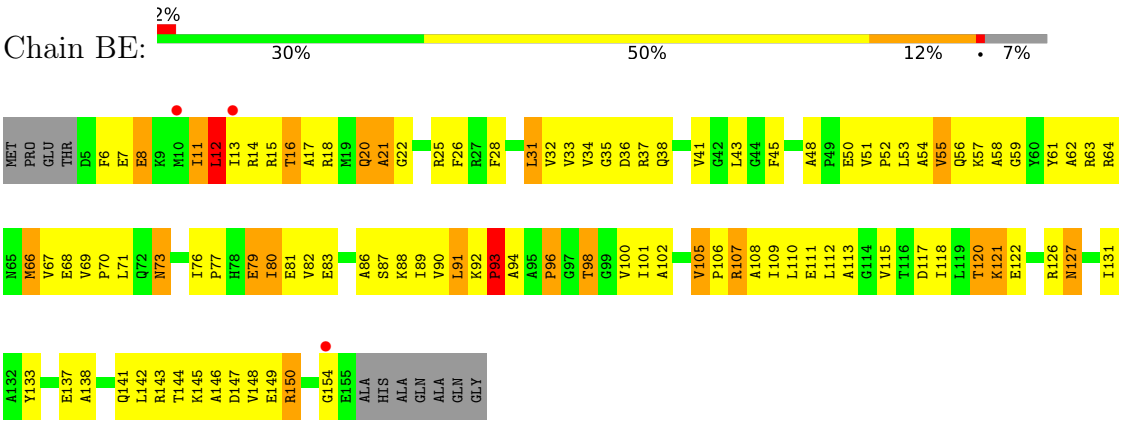
• Molecule 38: 30S RIBOSOMAL PROTEIN S4

Chain BD:

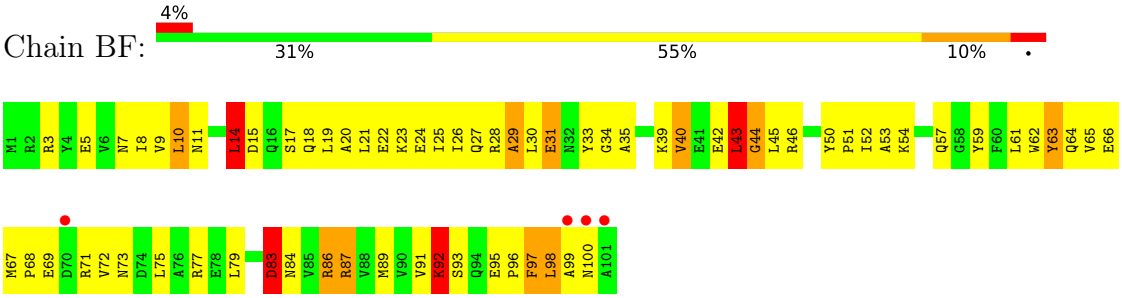




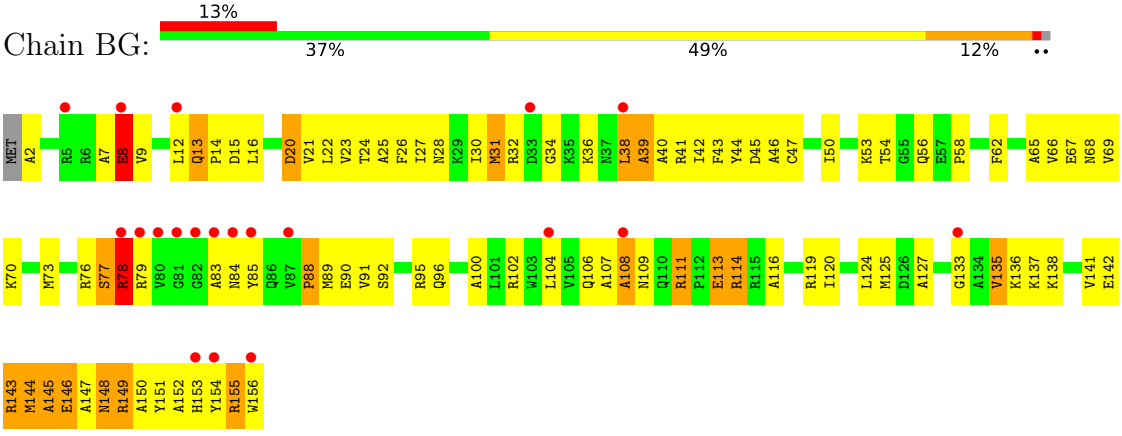
• Molecule 39: 30S RIBOSOMAL PROTEIN S5



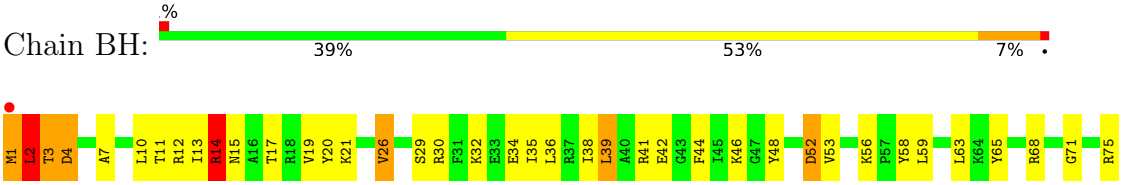
• Molecule 40: 30S RIBOSOMAL PROTEIN S6



• Molecule 41: 30S RIBOSOMAL PROTEIN S7

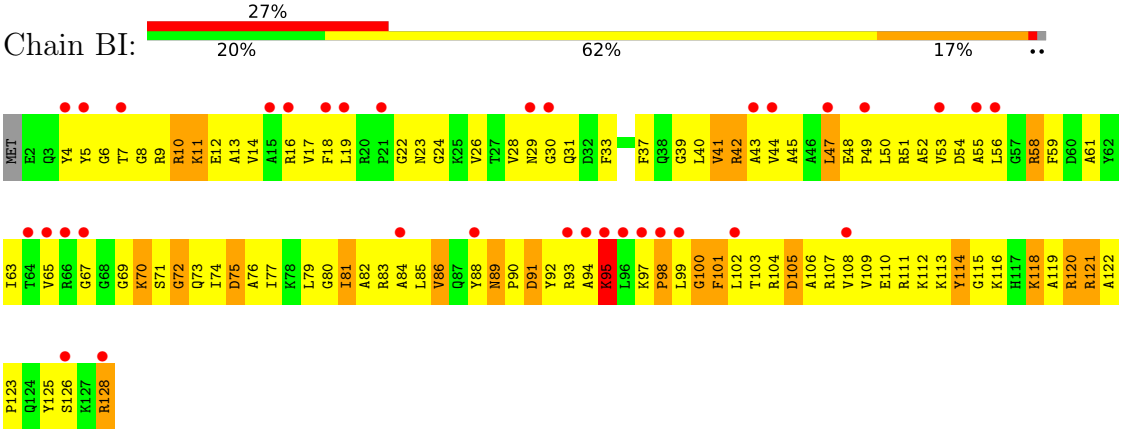


• Molecule 42: 30S RIBOSOMAL PROTEIN S8



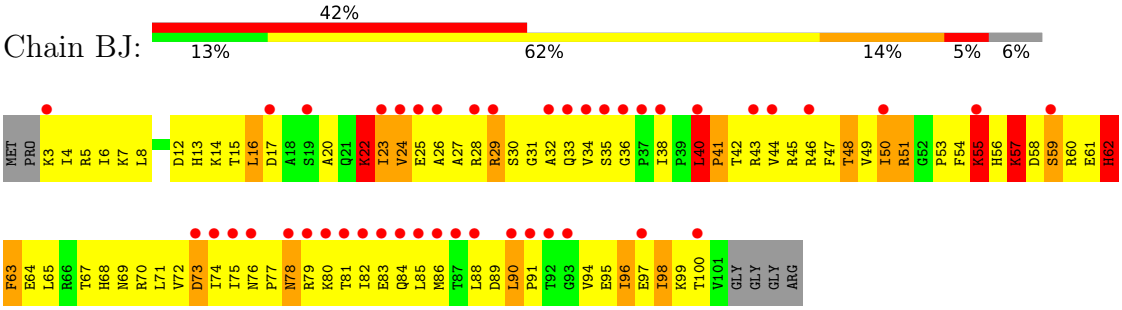
• Molecule 43: 30S RIBOSOMAL PROTEIN S9

Chain BI:



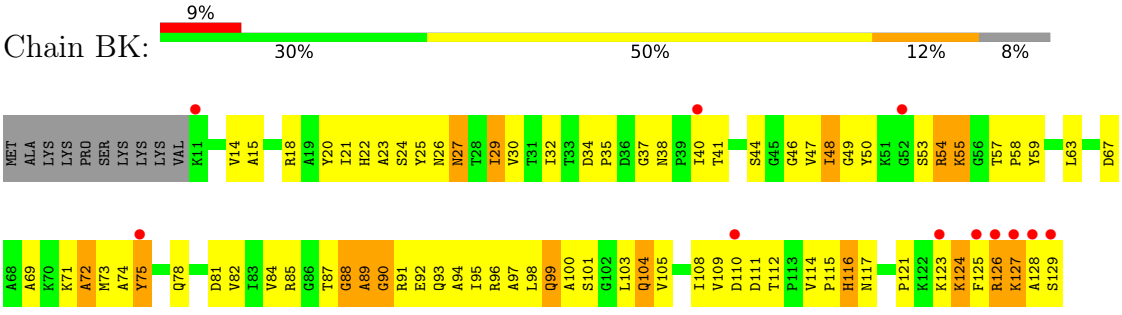
• Molecule 44: 30S RIBOSOMAL PROTEIN S10

Chain BJ:



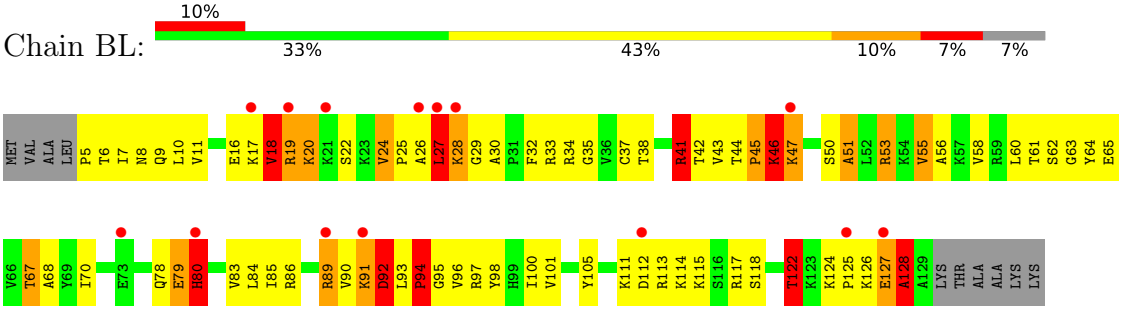
• Molecule 45: 30S RIBOSOMAL PROTEIN S11

Chain BK:



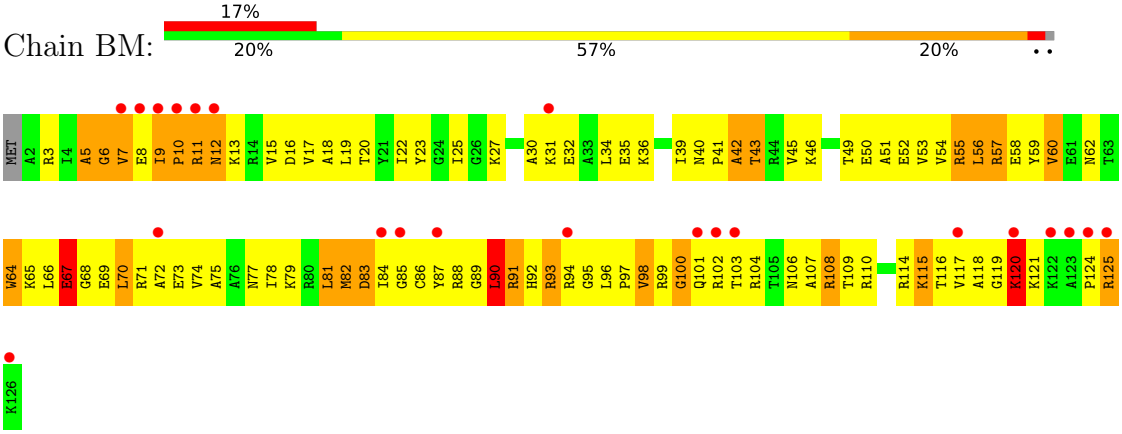
• Molecule 46: 30S RIBOSOMAL PROTEIN S12

Chain BL:



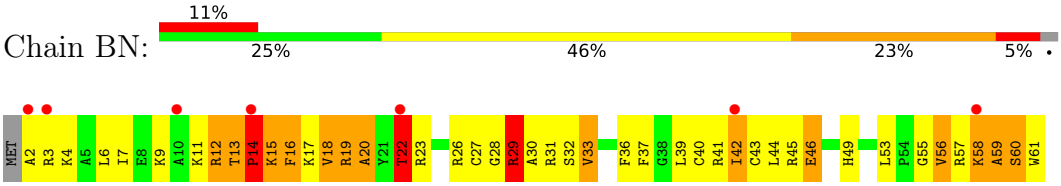
• Molecule 47: 30S RIBOSOMAL PROTEIN S13

Chain BM:



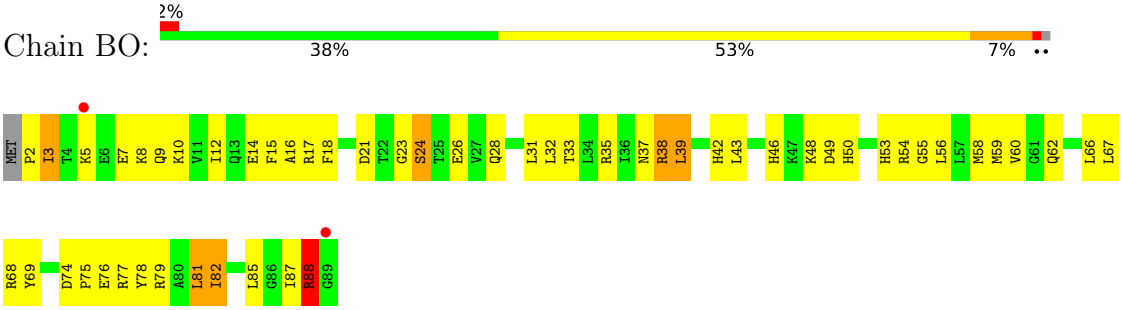
• Molecule 48: 30S RIBOSOMAL PROTEIN S14

Chain BN:



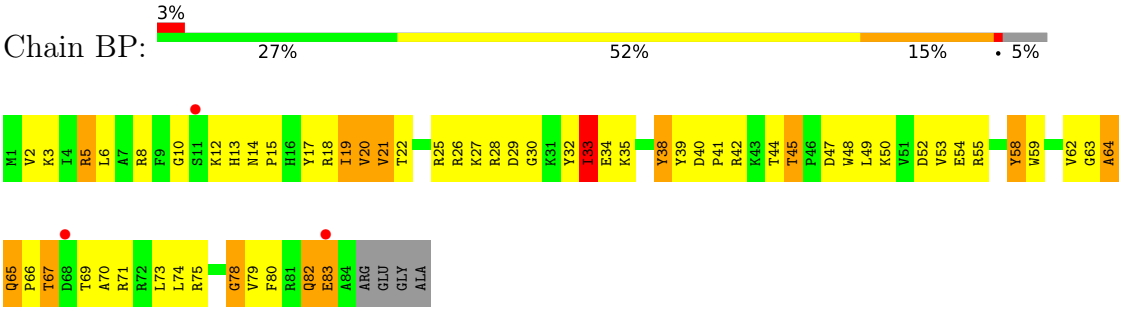
• Molecule 49: 30S RIBOSOMAL PROTEIN S15

Chain BO:



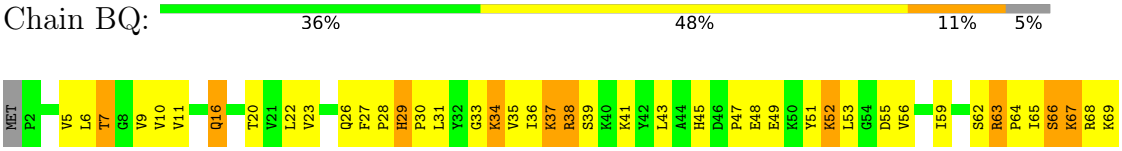
• Molecule 50: 30S RIBOSOMAL PROTEIN S16

Chain BP:



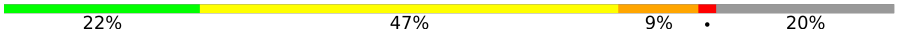
• Molecule 51: 30S RIBOSOMAL PROTEIN S17

Chain BQ:



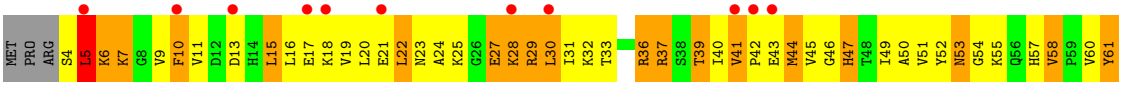
• Molecule 52: 30S RIBOSOMAL PROTEIN S18

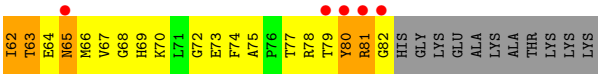
Chain BR:



• Molecule 53: 30S RIBOSOMAL PROTEIN S19

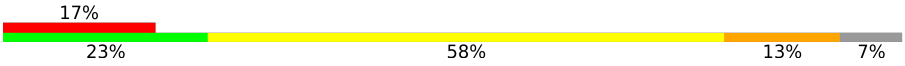
Chain BS:

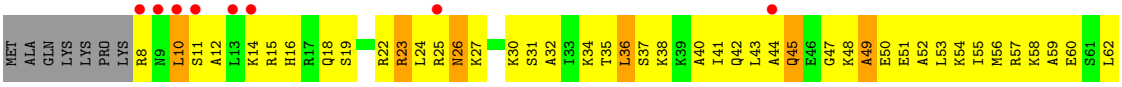


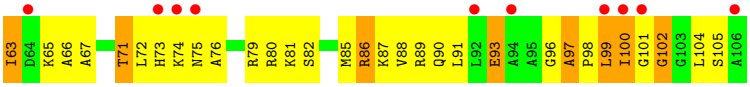


• Molecule 54: 30S RIBOSOMAL PROTEIN S20

Chain BT:





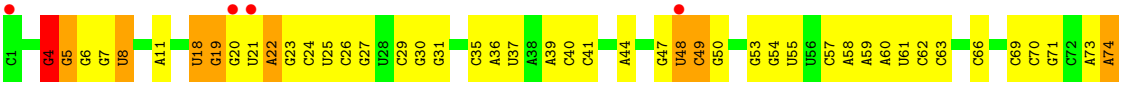


• Molecule 55: 30S RIBOSOMAL PROTEIN THX

Chain BU:

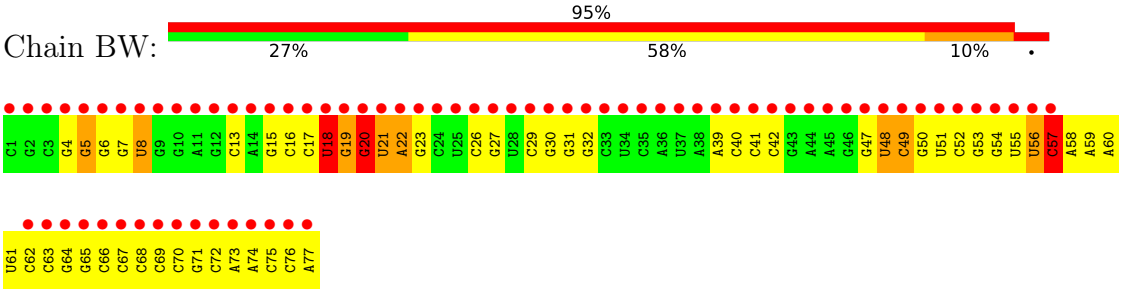
• Molecule 56: E-SITE or P-SITE TRNA FMET

Chain BV:



• Molecule 56: E-SITE or P-SITE TRNA FMET

Chain BW:

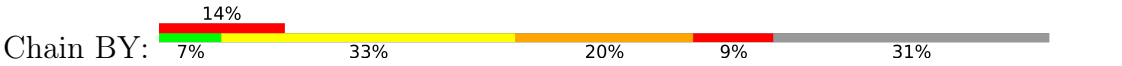


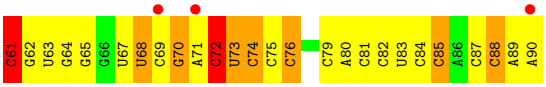
• Molecule 57: MRNA

Chain BX:

• Molecule 58: TMRNA DELA

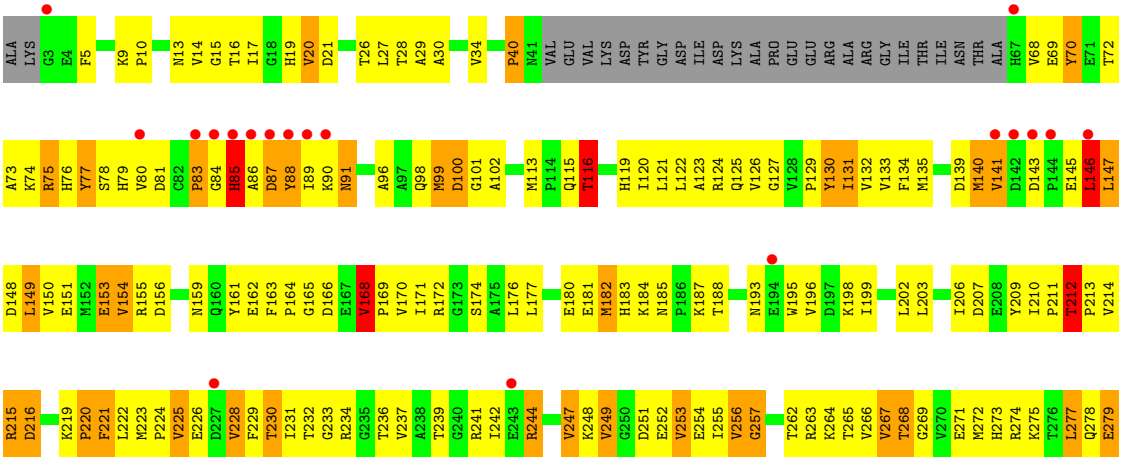
Chain BY:

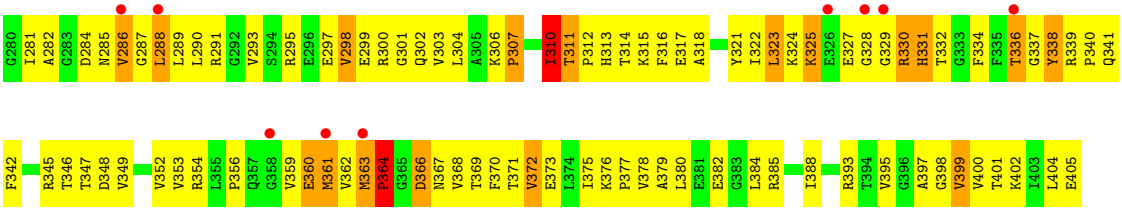




• Molecule 59: ELONGATION FACTOR TU

Chain BZ:




G280 I281 A282 G283 D284 N285 V286 G287 L288 L289 L290 R291 G292 V293 S294 R295 E296 E297 V298 E299 R300 G301 Q302 V303 L304 A305 K306 P307 I310 T311 P312 H313 T314 K315 F316 E317 A318 Y321 I322 L323 K324 K325 E326 E327 G328 G329 R330 H331 T332 G333 F334 F335 T336 G337 Y338 R339 P340 Q341
F342 R345 T346 T347 D348 V349 V352 V353 R354 L355 P356 Q357 G358 V359 E360 M361 V362 M363 P364 G365 D366 N367 V368 T369 F370 T371 V372 E373 L374 I375 K376 P377 V378 A379 L380 E381 E382 G383 L384 R385 I388 R393 T394 V395 G396 A397 G398 V399 V400 T401 K402 I403 L404 E405

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	202.17Å 290.76Å 250.65Å 90.00° 97.63° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 50.00 – 3.10	Depositor EDS
% Data completeness (in resolution range)	97.9 (50.00-3.10) 97.4 (50.00-3.10)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.94 (at 3.12Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.230 , 0.270 0.227 , 0.266	Depositor DCC
R_{free} test set	24443 reflections (4.85%)	wwPDB-VP
Wilson B-factor (Å^2)	44.8	Xtriage
Anisotropy	0.304	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 54.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	154205	wwPDB-VP
Average B, all atoms (Å^2)	58.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.67% 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: ZN, KIR, MG, 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	A0	0.54	0/671	1.03	5/892 (0.6%)
2	A1	0.61	1/739 (0.1%)	1.17	7/983 (0.7%)
3	A2	0.50	0/600	1.12	4/793 (0.5%)
4	A3	0.62	1/473 (0.2%)	1.07	1/636 (0.2%)
5	A4	0.64	1/350 (0.3%)	0.95	1/476 (0.2%)
6	A5	0.66	0/473	1.30	10/639 (1.6%)
7	A6	0.73	0/440	1.32	8/586 (1.4%)
8	A7	0.64	1/427 (0.2%)	1.08	1/563 (0.2%)
9	A8	0.72	2/516 (0.4%)	1.26	6/681 (0.9%)
10	A9	0.56	0/310	1.16	3/407 (0.7%)
11	AA	0.47	1/69979 (0.0%)	0.78	133/109249 (0.1%)
12	AB	0.42	0/2853	0.76	5/4451 (0.1%)
13	AC	0.64	6/1775 (0.3%)	1.08	18/2392 (0.8%)
14	AD	0.66	0/2195	1.19	16/2955 (0.5%)
15	AE	0.71	1/1597 (0.1%)	1.28	19/2155 (0.9%)
16	AF	0.56	1/1659 (0.1%)	1.23	17/2246 (0.8%)
17	AG	0.46	0/1499	1.18	15/2016 (0.7%)
18	AH	0.55	1/1246 (0.1%)	1.23	16/1684 (1.0%)
21	AN	0.62	1/1132 (0.1%)	1.20	14/1527 (0.9%)
22	AO	0.62	0/943	1.20	11/1269 (0.9%)
23	AP	0.74	1/1131 (0.1%)	1.57	28/1504 (1.9%)
24	AQ	0.63	0/1143	1.11	8/1527 (0.5%)
25	AR	0.60	0/974	1.15	5/1302 (0.4%)
26	AS	0.53	1/779 (0.1%)	1.05	5/1038 (0.5%)
27	AT	0.64	1/1156 (0.1%)	1.33	24/1544 (1.6%)
28	AU	0.66	0/975	1.23	10/1297 (0.8%)
29	AV	0.58	0/790	1.09	2/1057 (0.2%)
30	AW	0.64	0/907	1.12	8/1216 (0.7%)
31	AX	0.64	1/740 (0.1%)	1.15	7/995 (0.7%)
32	AY	0.78	1/789 (0.1%)	1.41	12/1053 (1.1%)
33	AZ	0.55	1/1492 (0.1%)	1.05	11/2026 (0.5%)
34	B2	0.54	0/1203	1.11	10/1606 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	BA	0.44	0/36192	0.73	75/56489 (0.1%)
36	BB	0.57	1/1936 (0.1%)	1.10	15/2611 (0.6%)
37	BC	0.51	1/1637 (0.1%)	1.04	8/2207 (0.4%)
38	BD	0.50	0/1733	1.06	16/2318 (0.7%)
39	BE	0.61	1/1163 (0.1%)	1.15	9/1566 (0.6%)
40	BF	0.54	0/856	1.01	5/1154 (0.4%)
41	BG	0.46	0/1276	0.99	6/1709 (0.4%)
42	BH	0.55	0/1136	1.14	11/1527 (0.7%)
43	BI	0.47	0/1029	1.05	4/1378 (0.3%)
44	BJ	0.54	1/808 (0.1%)	1.12	8/1087 (0.7%)
45	BK	0.51	0/900	1.03	5/1213 (0.4%)
46	BL	0.57	1/987 (0.1%)	1.09	9/1322 (0.7%)
47	BM	0.48	1/999 (0.1%)	1.03	2/1338 (0.1%)
48	BN	0.51	0/501	1.09	3/664 (0.5%)
49	BO	0.54	0/745	1.03	1/992 (0.1%)
50	BP	0.52	1/717 (0.1%)	0.96	3/965 (0.3%)
51	BQ	0.49	1/837 (0.1%)	1.00	6/1119 (0.5%)
52	BR	0.52	0/579	1.12	5/768 (0.7%)
53	BS	0.52	1/643 (0.2%)	0.99	2/867 (0.2%)
54	BT	0.43	0/765	1.05	3/1007 (0.3%)
55	BU	0.62	1/213 (0.5%)	0.88	0/279
56	BV	0.43	0/1832	0.75	2/2855 (0.1%)
56	BW	0.48	0/1832	0.71	4/2855 (0.1%)
57	BX	0.53	0/116	0.90	0/179
58	BY	0.55	1/1454 (0.1%)	0.99	9/2258 (0.4%)
59	BZ	0.52	1/2986 (0.0%)	1.08	23/4050 (0.6%)
All	All	0.50	35/165828 (0.0%)	0.89	674/247542 (0.3%)

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
11	AA	9	95
12	AB	0	3
14	AD	0	1
30	AW	0	1
33	AZ	0	1
35	BA	4	40
56	BV	0	1
56	BW	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
58	BY	0	3
All	All	13	148

All (35) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AP	38	GLN	CA-C	8.60	1.56	1.52
58	BY	12	G	C2-N2	-6.80	1.21	1.34
13	AC	127	MET	SD-CE	6.05	1.94	1.79
13	AC	218	MET	SD-CE	5.99	1.94	1.79
26	AS	108	GLY	C-N	-5.84	1.25	1.33
13	AC	127	MET	CG-SD	5.80	1.95	1.80
36	BB	240	GLN	C-N	-5.78	1.25	1.33
13	AC	120	MET	SD-CE	5.69	1.93	1.79
33	AZ	186	GLU	C-N	-5.65	1.25	1.33
44	BJ	100	THR	C-N	-5.59	1.25	1.33
18	AH	170	ARG	C-N	-5.56	1.25	1.33
21	AN	138	LEU	C-N	-5.55	1.25	1.33
16	AF	207	GLY	C-N	-5.55	1.25	1.33
5	A4	47	GLN	C-N	-5.54	1.25	1.33
53	BS	81	ARG	C-N	-5.51	1.25	1.33
47	BM	125	ARG	C-N	-5.50	1.25	1.33
9	A8	4	MET	SD-CE	-5.49	1.65	1.79
27	AT	137	LYS	C-N	-5.48	1.25	1.33
8	A7	48	LYS	C-N	-5.44	1.25	1.33
31	AX	94	GLY	C-N	-5.43	1.25	1.33
55	BU	25	LYS	C-N	-5.42	1.25	1.33
50	BP	83	GLU	C-N	-5.40	1.25	1.33
46	BL	128	ALA	C-N	-5.33	1.25	1.33
39	BE	154	GLY	C-N	-5.32	1.25	1.33
2	A1	95	LEU	C-N	-5.28	1.25	1.33
51	BQ	100	LYS	C-N	-5.27	1.25	1.33
59	BZ	40	PRO	C-N	-5.26	1.25	1.33
13	AC	218	MET	CG-SD	5.23	1.93	1.80
37	BC	207	VAL	C-N	-5.22	1.26	1.33
13	AC	120	MET	CG-SD	5.19	1.93	1.80
11	AA	761	A	C5-C6	-5.16	1.30	1.41
9	A8	64	TYR	C-N	-5.11	1.26	1.33
4	A3	59	VAL	C-N	-5.09	1.26	1.33
32	AY	101	LYS	C-N	-5.05	1.26	1.33
15	AE	204	ALA	C-N	-5.01	1.26	1.33

All (674) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AF	82	ILE	N-CA-C	-17.05	90.94	110.21
11	AA	1992	G	C2'-C3'-O3'	14.73	131.59	109.50
35	BA	115	G	C2'-C3'-O3'	14.09	130.64	109.50
35	BA	1498	U	C2'-C3'-O3'	13.84	130.25	109.50
11	AA	1820	U	C2'-C3'-O3'	13.74	130.12	109.50
11	AA	1799	G	C2'-C3'-O3'	13.60	129.90	109.50
11	AA	614(C)	A	C2'-C3'-O3'	13.41	129.62	109.50
11	AA	1653	G	C2'-C3'-O3'	13.34	129.50	109.50
35	BA	575	G	C2'-C3'-O3'	13.17	129.25	109.50
11	AA	1427	A	C2'-C3'-O3'	12.82	128.73	109.50
11	AA	1300	U	C2'-C3'-O3'	12.58	128.38	109.50
35	BA	1399	C	C2'-C3'-O3'	12.54	128.31	109.50
11	AA	1819	A	C2'-C3'-O3'	12.47	128.21	109.50
15	AE	63	LEU	N-CA-C	-12.30	97.86	111.14
17	AG	88	ILE	N-CA-C	12.04	125.58	108.36
17	AG	86	MET	CA-C-N	-12.01	104.83	119.84
17	AG	86	MET	C-N-CA	-12.01	104.83	119.84
11	AA	2610	C	C2'-C3'-O3'	11.99	127.48	109.50
23	AP	54	GLY	N-CA-C	-11.94	100.27	114.48
11	AA	1210	A	C2'-C3'-O3'	11.85	127.27	109.50
11	AA	387	U	C2'-C3'-O3'	11.82	127.23	109.50
34	B2	130	ARG	N-CA-C	11.79	125.48	108.86
35	BA	1504	G	C4'-C3'-O3'	11.63	126.84	109.40
35	BA	1190	G	C2'-C3'-O3'	11.22	126.33	109.50
11	AA	74	A	C2'-C3'-O3'	11.13	126.19	109.50
11	AA	2610	C	C4'-C3'-O3'	11.05	125.98	109.40
11	AA	2756	U	C2'-C3'-O3'	11.01	126.02	109.50
25	AR	5	LYS	N-CA-C	-10.98	99.89	113.18
11	AA	1378	A	C4'-C3'-O3'	10.95	125.83	109.40
43	BI	86	VAL	N-CA-C	-10.79	102.54	112.90
11	AA	1378	A	C2'-C3'-O3'	10.79	125.68	109.50
54	BT	12	ALA	N-CA-C	-10.66	100.27	113.38
11	AA	49	A	C2'-C3'-O3'	10.60	125.41	109.50
17	AG	54	GLU	N-CA-C	-10.46	100.64	113.50
23	AP	116	GLY	N-CA-C	10.46	121.88	111.95
23	AP	66	GLY	N-CA-C	-10.35	99.25	111.36
11	AA	331	A	C2'-C3'-O3'	10.34	125.01	109.50
58	BY	60	A	C2'-C3'-O3'	10.31	124.97	109.50
35	BA	1504	G	C2'-C3'-O3'	10.30	124.95	109.50
11	AA	1819	A	C4'-C3'-O3'	10.23	124.75	109.40
27	AT	11	GLU	N-CA-C	-10.16	99.59	112.90
23	AP	41	ARG	N-CA-C	-10.13	89.22	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1399	C	C4'-C3'-O3'	10.07	124.50	109.40
11	AA	1558	A	C2'-C3'-O3'	10.03	124.54	109.50
35	BA	109	A	C2'-C3'-O3'	9.92	124.38	109.50
35	BA	687	A	C2'-C3'-O3'	9.88	124.32	109.50
32	AY	49	VAL	N-CA-C	-9.87	103.50	113.47
11	AA	603	A	C2'-C3'-O3'	9.84	124.25	109.50
11	AA	1300	U	C4'-C3'-O3'	9.82	124.13	109.40
28	AU	97	ASP	N-CA-C	-9.76	101.37	113.18
18	AH	35	VAL	N-CA-C	9.72	116.40	107.56
53	BS	22	LEU	N-CA-C	-9.72	101.55	113.50
11	AA	1913	A	C2'-C3'-O3'	9.67	124.01	109.50
28	AU	58	ARG	N-CA-C	-9.65	99.65	111.33
35	BA	266	G	C2'-C3'-O3'	9.65	123.97	109.50
11	AA	49	A	C4'-C3'-O3'	9.64	123.86	109.40
23	AP	52	GLU	N-CA-C	9.43	130.88	110.80
31	AX	5	TYR	N-CA-C	-9.35	102.06	112.72
35	BA	60	A	C2'-C3'-O3'	9.32	123.48	109.50
7	A6	8	LYS	N-CA-C	-9.30	99.24	111.24
11	AA	614(C)	A	C4'-C3'-O3'	9.28	123.32	109.40
11	AA	1799	G	C4'-C3'-O3'	9.13	123.10	109.40
58	BY	61	C	C2'-C3'-O3'	8.99	122.99	109.50
11	AA	1820	U	C4'-C3'-O3'	8.99	122.88	109.40
34	B2	29	THR	N-CA-C	-8.98	101.38	111.71
52	BR	81	PHE	N-CA-C	-8.98	102.48	113.97
11	AA	1427	A	C4'-C3'-O3'	8.97	122.86	109.40
58	BY	14	U	C2'-C3'-O3'	8.97	122.96	109.50
39	BE	67	VAL	N-CA-C	8.93	120.14	108.35
23	AP	53	GLY	N-CA-C	-8.80	92.33	113.18
23	AP	64	LYS	N-CA-C	-8.73	102.75	113.41
14	AD	240	ALA	N-CA-C	8.73	116.08	108.22
54	BT	93	GLU	N-CA-C	-8.72	102.78	112.72
11	AA	1060	U	C2'-C3'-O3'	8.70	122.55	109.50
11	AA	1210	A	C4'-C3'-O3'	8.64	122.36	109.40
23	AP	26	GLY	N-CA-C	-8.64	103.94	114.66
11	AA	1992	G	C4'-C3'-O3'	8.61	122.31	109.40
7	A6	42	TRP	N-CA-C	-8.60	101.56	114.64
28	AU	50	ARG	N-CA-C	-8.60	101.11	111.69
35	BA	1498	U	C4'-C3'-O3'	8.60	122.31	109.40
35	BA	115	G	C4'-C3'-O3'	8.53	122.19	109.40
36	BB	82	ARG	N-CA-C	-8.52	101.95	111.07
35	BA	508	C	C2'-C3'-O3'	8.50	122.25	109.50
35	BA	1492	A	C2'-C3'-O3'	8.48	122.22	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AA	2481	G	C2'-C3'-O3'	8.44	122.15	109.50
32	AY	18	GLY	N-CA-C	8.43	117.88	110.21
37	BC	39	ILE	N-CA-C	-8.42	102.61	110.53
32	AY	54	LYS	N-CA-C	-8.40	93.78	108.23
16	AF	23	ASP	N-CA-C	-8.38	102.78	113.16
35	BA	1200	C	C2'-C3'-O3'	8.35	122.02	109.50
26	AS	54	LEU	N-CA-C	-8.34	103.11	113.28
35	BA	484	G	C2'-C3'-O3'	8.33	121.99	109.50
23	AP	139	LYS	N-CA-C	-8.33	103.13	113.20
56	BW	18	U	C2'-C3'-O3'	8.32	121.98	109.50
52	BR	47	THR	N-CA-C	-8.30	103.29	113.50
27	AT	80	SER	N-CA-C	8.30	128.15	109.81
11	AA	1786	A	N9-C1'-C2'	8.30	126.44	114.00
22	AO	15	GLY	N-CA-C	-8.26	104.65	114.48
23	AP	38	GLN	N-CA-C	8.23	121.21	108.12
16	AF	121	GLY	N-CA-C	-8.23	104.22	114.92
23	AP	27	HIS	N-CA-C	8.19	122.76	108.75
35	BA	748	C	C2'-C3'-O3'	8.16	121.73	109.50
41	BG	143	ARG	N-CA-C	-8.16	102.36	111.82
23	AP	60	MET	N-CA-C	-8.15	103.05	113.16
11	AA	332	A	C2'-C3'-O3'	8.12	121.69	109.50
28	AU	98	LEU	N-CA-C	-8.10	102.39	111.71
15	AE	70	ALA	N-CA-C	-8.10	103.16	112.87
16	AF	154	VAL	N-CA-C	8.09	120.13	108.48
15	AE	188	VAL	CA-C-N	8.08	129.94	119.84
15	AE	188	VAL	C-N-CA	8.08	129.94	119.84
36	BB	24	TRP	N-CA-C	8.07	120.34	110.41
34	B2	120	ALA	N-CA-C	8.04	122.53	109.59
36	BB	23	ARG	N-CA-C	-8.01	102.54	112.88
11	AA	856	C	C2'-C3'-O3'	7.96	125.64	113.70
50	BP	70	ALA	N-CA-C	-7.95	103.18	113.12
58	BY	59	G	C2'-C3'-O3'	7.91	121.37	109.50
6	A5	4	HIS	CA-C-N	-7.88	111.88	119.76
6	A5	4	HIS	C-N-CA	-7.88	111.88	119.76
45	BK	116	HIS	N-CA-C	-7.86	102.51	113.20
15	AE	118	LYS	N-CA-C	-7.84	103.74	113.38
21	AN	109	LYS	N-CA-C	7.82	122.82	113.28
16	AF	177	ALA	N-CA-C	-7.79	100.25	110.07
44	BJ	25	GLU	N-CA-C	-7.79	103.66	113.01
11	AA	1068	G	C2'-C3'-O3'	7.74	121.10	109.50
42	BH	44	PHE	N-CA-C	-7.64	104.10	113.50
21	AN	25	ARG	N-CA-C	-7.63	103.23	112.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1101	A	C2'-C3'-O3'	7.62	120.93	109.50
22	AO	112	MET	N-CA-C	7.62	120.55	111.33
22	AO	40	VAL	N-CA-C	-7.62	98.86	109.45
11	AA	74	A	C4'-C3'-O3'	7.61	120.81	109.40
21	AN	43	THR	CA-C-N	7.60	129.34	119.84
21	AN	43	THR	C-N-CA	7.60	129.34	119.84
8	A7	17	GLY	N-CA-C	7.59	120.68	112.33
45	BK	55	LYS	N-CA-C	-7.58	103.64	113.12
35	BA	560	U	C2'-C3'-O3'	7.58	120.87	109.50
27	AT	29	ARG	N-CA-C	7.57	126.92	110.80
35	BA	1239	A	C2'-C3'-O3'	7.57	120.85	109.50
58	BY	18	G	C2'-C3'-O3'	7.57	120.85	109.50
45	BK	50	TYR	N-CA-C	7.54	120.61	110.35
11	AA	958	U	N1-C1'-C2'	7.53	123.30	112.00
2	A1	74	VAL	N-CA-C	-7.51	105.45	112.96
14	AD	212	SER	N-CA-C	-7.51	102.77	112.23
11	AA	2689	U	C2'-C3'-O3'	7.47	120.71	109.50
23	AP	30	THR	N-CA-C	7.44	120.40	109.69
40	BF	97	PHE	N-CA-C	-7.43	96.29	108.41
35	BA	56	U	N1-C1'-C2'	7.42	123.13	112.00
35	BA	7	G	C2'-C3'-O3'	7.41	120.61	109.50
42	BH	4	ASP	CA-C-N	7.39	126.66	118.97
42	BH	4	ASP	C-N-CA	7.39	126.66	118.97
11	AA	587	C	C2'-C3'-O3'	7.38	120.58	109.50
38	BD	9	CYS	N-CA-C	-7.36	99.29	110.70
17	AG	162	THR	N-CA-C	-7.35	104.05	112.87
35	BA	992	U	C2'-C3'-O3'	7.32	120.47	109.50
35	BA	79	G	C2'-C3'-O3'	7.30	120.45	109.50
35	BA	1280	A	C2'-C3'-O3'	7.30	120.45	109.50
35	BA	1157	A	C2'-C3'-O3'	7.29	120.43	109.50
17	AG	44	GLY	N-CA-C	-7.28	105.20	114.37
21	AN	69	GLN	N-CA-C	-7.27	106.33	114.62
42	BH	96	GLY	N-CA-C	-7.27	101.15	112.85
36	BB	112	VAL	N-CA-C	-7.25	103.71	110.53
38	BD	171	GLY	CA-C-N	7.25	128.91	119.84
38	BD	171	GLY	C-N-CA	7.25	128.91	119.84
11	AA	889	C	C2'-C3'-O3'	7.22	120.33	109.50
32	AY	55	TYR	N-CA-C	-7.21	93.87	109.81
14	AD	100	GLY	N-CA-C	-7.20	105.13	114.85
27	AT	59	THR	N-CA-C	-7.20	98.58	110.17
25	AR	12	ARG	N-CA-C	-7.20	95.47	110.80
38	BD	11	LEU	N-CA-C	-7.19	104.32	113.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AQ	19	GLY	N-CA-C	7.19	122.42	112.57
11	AA	752	A	C2'-C3'-O3'	7.17	120.25	109.50
11	AA	527	C	N1-C1'-C2'	7.16	124.74	114.00
48	BN	13	THR	CA-C-N	7.14	128.76	119.84
48	BN	13	THR	C-N-CA	7.14	128.76	119.84
35	BA	243	A	C2'-C3'-O3'	7.12	120.19	109.50
38	BD	186	LEU	N-CA-C	7.12	118.73	110.97
11	AA	2689	U	C4'-C3'-O3'	7.11	120.06	109.40
49	BO	7	GLU	N-CA-C	-7.09	104.09	112.89
14	AD	98	VAL	N-CA-C	-7.07	102.22	111.05
35	BA	351	G	C2'-C3'-O3'	7.05	120.08	109.50
11	AA	2286	A	N9-C1'-C2'	7.05	124.57	114.00
11	AA	221	A	C2'-C3'-O3'	7.00	120.00	109.50
18	AH	167	GLU	CA-C-N	7.00	126.75	119.76
18	AH	167	GLU	C-N-CA	7.00	126.75	119.76
2	A1	4	VAL	N-CA-C	6.98	118.86	108.46
35	BA	966	G	N9-C1'-C2'	-6.95	101.58	112.00
31	AX	13	LEU	N-CA-C	6.94	119.69	111.02
36	BB	132	LYS	N-CA-C	-6.94	104.68	113.01
21	AN	3	THR	N-CA-C	-6.92	99.08	109.94
26	AS	102	ALA	N-CA-C	-6.91	101.62	110.19
35	BA	344	A	C2'-C3'-O3'	6.90	119.84	109.50
23	AP	16	ARG	N-CA-C	-6.89	102.84	111.11
24	AQ	72	LYS	CA-C-N	6.85	126.82	119.76
24	AQ	72	LYS	C-N-CA	6.85	126.82	119.76
34	B2	11	ARG	N-CA-C	-6.85	103.89	111.36
9	A8	34	TRP	N-CA-C	-6.84	96.23	110.80
35	BA	968	A	C2'-C3'-O3'	6.82	119.73	109.50
18	AH	52	VAL	N-CA-C	6.79	119.82	108.81
24	AQ	132	VAL	N-CA-C	6.79	118.49	108.65
23	AP	59	LEU	N-CA-C	-6.79	104.31	112.59
41	BG	148	ASN	N-CA-C	-6.78	105.34	112.93
16	AF	59	TYR	N-CA-C	6.77	119.30	110.43
59	BZ	91	ASN	N-CA-C	-6.76	106.91	114.62
27	AT	31	SER	N-CA-C	6.76	119.13	108.79
37	BC	67	THR	N-CA-C	-6.76	97.53	108.41
59	BZ	212	THR	CA-C-N	-6.76	111.40	119.84
59	BZ	212	THR	C-N-CA	-6.76	111.40	119.84
35	BA	30	U	C2'-C3'-O3'	6.75	119.63	109.50
35	BA	547	A	C2'-C3'-O3'	6.75	119.63	109.50
22	AO	22	ILE	N-CA-C	-6.74	106.46	112.12
59	BZ	75	ARG	N-CA-C	6.74	118.75	109.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BM	82	MET	N-CA-C	-6.72	105.40	112.93
11	AA	2464	C	C4'-C3'-O3'	6.72	123.08	113.00
11	AA	1970	A	C5'-C4'-C3'	6.69	125.23	115.20
18	AH	116	GLU	CA-C-N	6.68	127.26	120.38
18	AH	116	GLU	C-N-CA	6.68	127.26	120.38
11	AA	1294	U	C2'-C3'-O3'	6.67	123.71	113.70
35	BA	1285	A	C2'-C3'-O3'	6.66	119.48	109.50
46	BL	41	ARG	N-CA-C	6.65	119.52	109.95
10	A9	20	HIS	N-CA-C	-6.63	104.77	112.86
1	A0	14	ARG	N-CA-C	6.62	118.59	108.52
15	AE	52	LEU	CA-C-N	6.62	128.12	119.84
15	AE	52	LEU	C-N-CA	6.62	128.12	119.84
27	AT	14	TYR	N-CA-C	-6.62	103.61	112.94
27	AT	29	ARG	CA-C-N	6.61	133.88	121.97
27	AT	29	ARG	C-N-CA	6.61	133.88	121.97
13	AC	168	THR	N-CA-C	6.61	118.28	111.14
30	AW	85	VAL	N-CA-C	6.60	117.62	107.99
33	AZ	129	SER	CA-C-N	6.60	126.54	119.28
33	AZ	129	SER	C-N-CA	6.60	126.54	119.28
11	AA	1301	A	C2'-C3'-O3'	6.59	119.38	109.50
27	AT	30	VAL	N-CA-C	6.59	123.05	109.34
17	AG	13	GLU	N-CA-C	-6.58	106.20	114.56
11	AA	1653	G	C4'-C3'-O3'	6.57	119.25	109.40
15	AE	58	ARG	N-CA-C	-6.55	102.69	113.50
59	BZ	168	VAL	CA-C-N	6.54	126.31	119.76
59	BZ	168	VAL	C-N-CA	6.54	126.31	119.76
26	AS	98	VAL	N-CA-C	6.54	122.94	109.34
59	BZ	256	VAL	N-CA-C	6.54	117.32	108.17
35	BA	982	U	C2'-C3'-O3'	6.53	119.30	109.50
21	AN	71	ILE	N-CA-C	6.52	117.52	108.12
35	BA	792	A	C2'-C3'-O3'	6.51	119.27	109.50
11	AA	1667	G	C5'-C4'-C3'	-6.51	105.44	115.20
23	AP	97	PRO	N-CA-C	-6.48	102.06	111.33
35	BA	428	G	C2'-C3'-O3'	6.48	119.22	109.50
37	BC	49	SER	N-CA-C	-6.47	105.20	113.23
10	A9	29	ASN	CA-C-N	6.47	127.93	119.84
10	A9	29	ASN	C-N-CA	6.47	127.93	119.84
14	AD	259	THR	N-CA-C	6.45	124.55	110.80
6	A5	52	TYR	N-CA-C	-6.45	96.12	107.73
33	AZ	160	GLY	N-CA-C	6.45	122.36	114.69
6	A5	48	GLU	N-CA-C	-6.44	105.71	112.93
13	AC	64	LEU	CA-C-N	6.44	127.89	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	AC	64	LEU	C-N-CA	6.44	127.89	119.84
59	BZ	87	ASP	N-CA-C	-6.44	105.96	113.88
38	BD	41	GLY	N-CA-C	6.42	121.00	112.65
35	BA	889	A	C4'-C3'-O3'	6.41	119.02	109.40
18	AH	40	GLU	N-CA-C	6.41	118.21	109.11
56	BV	4	G	N9-C1'-C2'	-6.41	102.39	112.00
22	AO	109	LYS	N-CA-C	-6.40	105.11	113.17
23	AP	35	HIS	N-CA-C	-6.40	97.17	110.80
11	AA	587	C	C4'-C3'-O3'	6.39	118.98	109.40
27	AT	23	ARG	CA-C-N	6.38	127.81	119.84
27	AT	23	ARG	C-N-CA	6.38	127.81	119.84
43	BI	118	LYS	N-CA-C	6.37	118.08	110.44
59	BZ	131	ILE	N-CA-C	6.35	115.48	106.53
34	B2	72	ASP	CA-C-N	6.35	125.84	119.24
34	B2	72	ASP	C-N-CA	6.35	125.84	119.24
38	BD	38	TYR	CA-C-N	6.33	124.22	119.66
38	BD	38	TYR	C-N-CA	6.33	124.22	119.66
14	AD	229	VAL	CB-CA-C	-6.32	103.61	112.14
18	AH	50	VAL	N-CA-C	6.30	116.58	107.88
35	BA	197	A	C2'-C3'-O3'	6.30	118.95	109.50
16	AF	187	VAL	N-CA-C	6.30	116.78	110.23
18	AH	64	LEU	N-CA-C	-6.30	105.08	112.89
59	BZ	86	ALA	N-CA-C	-6.28	105.68	113.15
32	AY	62	GLU	N-CA-C	6.26	124.14	110.80
11	AA	2126	A	C2'-C3'-O3'	6.26	118.89	109.50
35	BA	1213	A	N9-C1'-C2'	6.25	121.38	112.00
22	AO	105	GLU	N-CA-C	-6.25	104.58	111.82
42	BH	79	VAL	N-CA-C	-6.24	103.55	112.35
44	BJ	22	LYS	N-CA-C	-6.23	103.07	112.04
22	AO	17	ARG	N-CA-C	-6.22	105.59	113.43
39	BE	150	ARG	N-CA-C	-6.21	104.96	112.54
2	A1	58	ILE	N-CA-C	6.21	116.80	108.11
12	AB	56	G	C2'-C3'-O3'	6.20	118.80	109.50
36	BB	169	LYS	N-CA-C	-6.20	104.44	111.14
43	BI	72	GLY	N-CA-C	-6.19	105.27	112.83
17	AG	125	PHE	N-CA-C	-6.19	104.46	111.14
35	BA	1335	C	N1-C1'-C2'	6.17	121.26	112.00
11	AA	1667	G	C2'-C3'-O3'	6.17	118.76	109.50
25	AR	95	THR	N-CA-C	6.16	119.60	108.69
11	AA	1495	A	N9-C1'-C2'	6.16	121.24	112.00
30	AW	69	LEU	N-CA-C	6.16	119.16	110.23
2	A1	46	LEU	N-CA-C	6.16	118.64	109.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1049	U	C2'-C3'-O3'	6.15	118.73	109.50
14	AD	262	ARG	N-CA-C	6.14	118.48	111.11
11	AA	1753	G	C2'-C3'-O3'	6.13	122.89	113.70
37	BC	80	GLY	N-CA-C	-6.13	104.50	111.85
12	AB	102	A	C2'-C3'-O3'	6.12	122.88	113.70
35	BA	119	A	C2'-C3'-O3'	6.12	118.68	109.50
35	BA	495	A	C2'-C3'-O3'	6.11	118.67	109.50
35	BA	1305	G	N9-C1'-C2'	6.11	121.16	112.00
11	AA	915	C	C5'-C4'-C3'	6.09	125.14	116.00
35	BA	1190	G	C4'-C3'-O3'	6.09	118.53	109.40
58	BY	40	C	C2'-C3'-O3'	6.08	122.82	113.70
11	AA	2720	U	C5'-C4'-C3'	-6.08	106.88	116.00
14	AD	208	LYS	N-CA-C	6.08	117.13	108.74
11	AA	2581	G	C2'-C3'-O3'	6.08	118.61	109.50
38	BD	117	ALA	N-CA-C	-6.06	105.71	113.23
28	AU	116	ALA	N-CA-C	-6.06	105.98	113.19
11	AA	2360	A	N9-C1'-C2'	-6.04	102.94	112.00
7	A6	13	CYS	N-CA-C	6.04	119.83	107.69
38	BD	164	ALA	N-CA-C	-6.03	105.57	113.17
11	AA	790	C	C2'-C3'-O3'	6.02	118.53	109.50
18	AH	117	PRO	N-CA-C	6.02	118.05	110.70
11	AA	729	G	N9-C1'-C2'	6.02	121.03	112.00
27	AT	76	PHE	CA-C-N	6.02	127.37	119.84
27	AT	76	PHE	C-N-CA	6.02	127.37	119.84
33	AZ	63	ASP	N-CA-C	-6.02	104.63	111.07
7	A6	47	THR	N-CA-C	6.01	118.55	109.41
36	BB	195	ASP	N-CA-C	6.01	118.61	111.33
11	AA	975	C	N1-C1'-C2'	6.01	123.02	114.00
17	AG	49	ASP	N-CA-C	6.01	117.94	110.91
18	AH	155	SER	N-CA-C	6.01	123.60	110.80
23	AP	86	LYS	N-CA-C	-6.00	104.65	111.07
6	A5	26	THR	CA-C-N	-6.00	114.20	120.38
6	A5	26	THR	C-N-CA	-6.00	114.20	120.38
35	BA	369	C	C4'-C3'-O3'	6.00	118.39	109.40
37	BC	139	GLN	N-CA-C	-5.99	104.66	111.07
33	AZ	93	ASP	N-CA-C	-5.99	106.52	113.88
51	BQ	62	SER	N-CA-C	5.97	118.04	109.14
11	AA	958	U	C4'-C3'-O3'	-5.97	104.05	113.00
14	AD	244	ARG	C-N-CD	-5.97	107.47	120.60
15	AE	154	LYS	N-CA-C	5.96	120.02	112.87
11	AA	2756	U	C4'-C3'-O3'	5.95	118.33	109.40
17	AG	141	PHE	CA-C-N	5.95	125.63	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	AG	141	PHE	C-N-CA	5.95	125.63	119.56
58	BY	72	C	C2'-C3'-O3'	5.95	122.62	113.70
27	AT	108	ARG	N-CA-C	-5.94	106.08	113.38
25	AR	63	ARG	N-CA-C	-5.93	104.72	111.07
16	AF	77	ASP	N-CA-C	-5.93	102.16	110.35
11	AA	1558	A	C4'-C3'-O3'	5.92	118.29	109.40
33	AZ	156	LYS	N-CA-C	5.92	119.55	110.20
1	A0	19	LYS	N-CA-C	5.91	117.50	109.11
11	AA	1607	C	C2'-C3'-O3'	5.90	118.35	109.50
15	AE	167	VAL	N-CA-C	-5.89	99.21	108.23
23	AP	85	LEU	N-CA-C	-5.89	106.05	113.18
59	BZ	70	TYR	N-CA-C	5.89	117.64	107.93
11	AA	193	U	C5'-C4'-C3'	-5.89	107.17	116.00
23	AP	80	TYR	CB-CA-C	-5.88	107.89	116.53
13	AC	194	ARG	N-CA-C	-5.88	105.20	112.90
35	BA	109	A	C4'-C3'-C2'	5.88	108.48	102.60
46	BL	44	THR	CA-C-N	5.88	127.19	119.84
46	BL	44	THR	C-N-CA	5.88	127.19	119.84
11	AA	394	A	C5'-C4'-C3'	-5.88	107.18	116.00
11	AA	387	U	C4'-C3'-O3'	5.88	118.21	109.40
41	BG	31	MET	N-CA-C	5.88	118.78	110.50
1	A0	11	ARG	N-CA-C	-5.86	105.73	114.64
35	BA	772	U	C5'-C4'-C3'	-5.86	107.21	116.00
39	BE	113	ALA	N-CA-C	-5.85	105.33	112.88
11	AA	2714	G	C5'-C4'-C3'	-5.85	107.22	116.00
18	AH	54	ARG	N-CA-C	5.85	113.48	108.22
13	AC	88	GLU	N-CA-C	-5.85	106.28	113.41
39	BE	55	VAL	N-CA-C	-5.85	104.15	110.23
11	AA	90	U	N1-C1'-C2'	5.84	122.77	114.00
16	AF	201	VAL	N-CA-C	-5.84	103.10	111.17
46	BL	122	THR	N-CA-C	5.84	118.83	110.24
30	AW	12	ILE	N-CA-C	-5.84	97.19	109.34
36	BB	119	GLU	N-CA-C	-5.83	105.66	112.89
46	BL	105	TYR	CB-CA-C	-5.83	109.84	116.54
26	AS	56	LEU	N-CA-C	-5.82	104.38	112.30
42	BH	46	LYS	N-CA-C	-5.82	104.12	111.11
23	AP	46	LYS	N-CA-C	5.82	123.19	110.80
5	A4	38	LYS	N-CA-C	-5.81	105.49	112.58
23	AP	102	ARG	N-CA-C	-5.81	106.53	113.21
32	AY	12	THR	N-CA-C	5.81	118.75	110.10
18	AH	100	GLY	N-CA-C	-5.81	102.59	111.24
30	AW	101	SER	N-CA-C	5.80	118.23	109.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BW	20	G	C2'-C3'-O3'	5.80	122.39	113.70
59	BZ	154	VAL	N-CA-C	-5.79	105.09	110.53
15	AE	128	SER	N-CA-C	5.78	115.14	108.49
59	BZ	212	THR	N-CA-C	-5.78	102.49	109.83
11	AA	1987	G	C5'-C4'-C3'	-5.78	107.33	116.00
22	AO	47	ILE	CA-C-N	5.78	127.07	119.84
22	AO	47	ILE	C-N-CA	5.78	127.07	119.84
29	AV	7	THR	N-CA-C	5.78	117.82	108.34
11	AA	1069	A	C2'-C3'-O3'	5.78	118.17	109.50
42	BH	3	THR	N-CA-C	5.77	117.65	111.36
41	BG	145	ALA	N-CA-C	-5.77	100.78	109.60
50	BP	33	ILE	CB-CA-C	-5.77	104.99	111.80
34	B2	69	ALA	N-CA-C	5.76	117.56	111.28
11	AA	2360	A	C4'-C3'-O3'	5.76	121.64	113.00
35	BA	109	A	C4'-C3'-O3'	5.75	118.03	109.40
9	A8	13	ARG	N-CA-C	5.75	121.22	112.54
17	AG	60	LEU	N-CA-C	-5.75	105.52	112.54
11	AA	1505	C	N1-C1'-C2'	5.75	120.62	112.00
59	BZ	286	VAL	N-CA-C	5.75	116.99	108.65
11	AA	1379	A	N9-C1'-C2'	5.75	122.62	114.00
40	BF	92	LYS	N-CA-C	-5.75	101.54	110.10
11	AA	71	A	C2'-C3'-O3'	5.74	122.31	113.70
3	A2	7	ARG	N-CA-C	-5.74	105.03	111.28
11	AA	1208	C	C5'-C4'-C3'	-5.73	107.41	116.00
11	AA	1914	A	C5'-C4'-O4'	-5.73	101.21	109.80
39	BE	105	VAL	CA-C-N	-5.72	113.29	119.24
39	BE	105	VAL	C-N-CA	-5.72	113.29	119.24
38	BD	15	GLU	N-CA-C	-5.72	105.41	112.38
51	BQ	63	ARG	CA-C-N	5.71	126.98	119.84
51	BQ	63	ARG	C-N-CA	5.71	126.98	119.84
28	AU	21	ALA	N-CA-C	5.71	119.87	113.02
7	A6	7	ILE	N-CA-C	-5.71	107.56	113.10
27	AT	7	ILE	N-CA-C	-5.71	105.00	113.39
15	AE	139	GLY	N-CA-C	-5.69	102.32	112.22
38	BD	31	CYS	N-CA-C	-5.67	106.68	113.21
35	BA	328	C	N1-C1'-C2'	5.67	122.51	114.00
13	AC	160	ARG	N-CA-C	5.67	118.29	110.35
35	BA	1531	A	C2'-C3'-O3'	-5.66	101.00	109.50
59	BZ	398	GLY	N-CA-C	5.65	119.94	110.56
13	AC	14	VAL	N-CA-C	5.64	116.19	107.78
18	AH	72	ILE	N-CA-C	-5.64	106.31	111.67
46	BL	18	VAL	N-CA-C	5.64	121.08	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	AP	72	PRO	N-CA-C	-5.64	105.63	113.81
11	AA	141	A	N9-C1'-C2'	5.64	120.45	112.00
35	BA	484	G	N9-C1'-C2'	5.64	122.45	114.00
35	BA	575	G	C4'-C3'-O3'	5.63	117.85	109.40
28	AU	88	ILE	N-CA-C	5.63	112.24	106.21
11	AA	1294	U	C5'-C4'-C3'	-5.63	107.56	116.00
14	AD	52	ARG	N-CA-C	5.63	117.56	110.24
26	AS	16	ASN	N-CA-C	-5.62	105.53	112.38
32	AY	49	VAL	CB-CA-C	-5.60	104.57	110.62
36	BB	128	GLU	N-CA-C	-5.60	106.41	113.18
13	AC	6	ARG	N-CA-C	-5.59	106.62	113.50
11	AA	494	G	C3'-C2'-O2'	5.59	119.09	110.70
11	AA	2833	G	C2'-C3'-O3'	5.59	117.88	109.50
35	BA	198	G	C4'-C3'-O3'	5.58	117.78	109.40
35	BA	1050	G	C4'-C3'-O3'	5.58	121.37	113.00
11	AA	1970	A	C5'-C4'-O4'	5.58	117.47	109.10
13	AC	83	ILE	N-CA-C	-5.58	107.01	111.81
59	BZ	116	THR	N-CA-C	-5.58	105.35	111.82
40	BF	14	LEU	N-CA-C	5.57	117.44	107.80
11	AA	2100	G	N9-C1'-C2'	5.57	120.35	112.00
34	B2	142	GLU	N-CA-C	5.57	117.15	111.14
32	AY	55	TYR	CA-C-N	5.55	126.78	119.84
32	AY	55	TYR	C-N-CA	5.55	126.78	119.84
36	BB	135	GLN	N-CA-C	-5.55	105.31	111.36
45	BK	72	ALA	N-CA-C	-5.55	107.05	113.88
11	AA	1459	G	N9-C1'-C2'	5.55	120.33	112.00
42	BH	56	LYS	CA-C-N	5.55	125.73	119.90
42	BH	56	LYS	C-N-CA	5.55	125.73	119.90
15	AE	137	HIS	CA-C-N	5.55	125.26	119.82
15	AE	137	HIS	C-N-CA	5.55	125.26	119.82
27	AT	112	ARG	N-CA-C	-5.55	106.87	113.97
40	BF	51	PRO	N-CA-C	5.54	119.29	110.21
2	A1	72	GLU	N-CA-C	-5.54	106.37	113.01
42	BH	103	VAL	N-CA-C	5.54	116.73	108.54
52	BR	46	GLU	N-CA-C	-5.53	99.01	110.80
1	A0	28	GLY	N-CA-C	-5.53	107.69	115.32
30	AW	42	ARG	N-CA-C	-5.53	105.17	111.14
12	AB	34	U	C4'-C3'-O3'	5.53	117.69	109.40
16	AF	68	LYS	N-CA-C	5.53	118.23	109.50
14	AD	53	PHE	N-CA-C	5.52	119.97	113.23
11	AA	2730	C	C2'-C3'-O3'	5.50	121.95	113.70
15	AE	51	PHE	N-CA-C	5.50	115.38	108.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A1	7	ILE	N-CA-C	5.50	116.29	111.56
27	AT	79	HIS	N-CA-C	5.50	117.54	109.24
11	AA	494	G	C5'-C4'-C3'	-5.49	107.77	116.00
27	AT	109	GLU	N-CA-C	-5.48	105.85	112.54
59	BZ	131	ILE	CB-CA-C	-5.48	105.23	111.59
23	AP	71	VAL	CA-C-N	-5.48	113.12	119.47
23	AP	71	VAL	C-N-CA	-5.48	113.12	119.47
11	AA	543	C	C2'-C3'-O3'	5.47	121.91	113.70
11	AA	2282	G	C2'-C3'-O3'	5.47	117.71	109.50
15	AE	168	MET	N-CA-C	5.47	118.50	109.85
59	BZ	168	VAL	N-CA-C	5.47	114.11	109.02
59	BZ	257	GLY	N-CA-C	5.47	119.51	112.18
35	BA	1456	G	N9-C1'-C2'	5.47	120.20	112.00
16	AF	100	THR	N-CA-C	5.46	118.07	108.56
39	BE	127	ASN	N-CA-C	-5.46	101.95	109.71
7	A6	53	LYS	N-CA-C	5.46	119.61	112.13
15	AE	88	GLY	N-CA-C	5.46	126.12	113.18
11	AA	1321	A	C2'-C3'-O3'	5.45	121.88	113.70
17	AG	53	LEU	N-CA-C	5.45	118.71	111.30
11	AA	652	C	C4'-C3'-O3'	5.44	117.56	109.40
35	BA	1319	A	C4'-C3'-O3'	5.44	117.56	109.40
35	BA	1279	A	N9-C1'-C2'	5.44	120.16	112.00
14	AD	88	ARG	N-CA-C	5.43	117.11	108.79
3	A2	56	GLN	N-CA-C	-5.43	105.28	111.14
11	AA	624	C	C5'-C4'-C3'	-5.43	107.86	116.00
25	AR	16	HIS	N-CA-C	-5.43	105.44	111.36
52	BR	27	GLY	N-CA-C	-5.43	105.13	112.57
11	AA	2527	C	C5'-C4'-C3'	-5.42	107.87	116.00
59	BZ	306	LYS	N-CA-C	-5.42	102.95	109.72
39	BE	141	GLN	N-CA-C	5.42	119.15	112.54
11	AA	1208	C	C2'-C3'-O3'	5.41	121.82	113.70
33	AZ	142	SER	N-CA-C	-5.41	107.23	112.97
35	BA	772	U	C2'-C3'-O3'	5.41	121.81	113.70
35	BA	687	A	C4'-C3'-O3'	5.41	117.51	109.40
31	AX	31	HIS	CA-C-N	5.40	126.59	119.84
31	AX	31	HIS	C-N-CA	5.40	126.59	119.84
11	AA	2473	U	N1-C1'-C2'	5.39	120.09	112.00
11	AA	2527	C	C2'-C3'-O3'	5.39	121.79	113.70
15	AE	44	TYR	N-CA-C	5.39	122.29	110.80
11	AA	2542	A	C3'-C2'-O2'	5.39	118.79	110.70
11	AA	2758	A	C4'-C3'-O3'	5.39	117.49	109.40
6	A5	46	CYS	CA-C-N	5.39	126.57	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	A5	46	CYS	C-N-CA	5.39	126.57	119.84
17	AG	22	ARG	N-CA-C	5.39	118.07	111.82
18	AH	69	ARG	N-CA-C	-5.39	106.41	112.87
13	AC	76	ALA	N-CA-C	5.38	117.03	108.79
21	AN	52	VAL	N-CA-C	5.38	115.61	107.75
59	BZ	77	TYR	N-CA-C	5.38	118.33	109.72
56	BW	57	C	N1-C1'-C2'	5.38	120.07	112.00
45	BK	127	LYS	N-CA-C	-5.37	104.87	111.75
1	A0	38	VAL	N-CA-C	5.37	116.46	108.46
2	A1	44	PRO	N-CA-C	-5.36	103.36	111.41
11	AA	2033	A	C2'-C3'-O3'	5.36	117.54	109.50
35	BA	198	G	N9-C1'-C2'	-5.36	105.95	114.00
53	BS	36	ARG	N-CA-C	-5.36	106.01	112.54
28	AU	112	ARG	N-CA-C	-5.35	105.53	111.36
35	BA	1124	G	N9-C1'-C2'	5.35	120.03	112.00
16	AF	72	ARG	N-CA-C	-5.34	101.86	110.14
11	AA	1407	C	C2'-C3'-O3'	5.34	121.71	113.70
23	AP	51	PHE	N-CA-C	5.33	117.76	109.60
30	AW	10	VAL	N-CA-C	5.33	120.43	109.34
35	BA	60	A	C4'-C3'-O3'	5.33	117.39	109.40
11	AA	2282	G	C4'-C3'-O3'	5.33	117.39	109.40
24	AQ	20	ALA	CB-CA-C	-5.33	109.45	115.79
48	BN	14	PRO	N-CA-C	5.33	123.44	112.47
36	BB	193	ASP	CB-CA-C	5.32	115.86	109.31
36	BB	139	LYS	N-CA-C	-5.32	105.97	113.20
11	AA	1159	U	C5'-C4'-C3'	-5.31	108.04	116.00
33	AZ	56	VAL	N-CA-C	5.31	116.23	108.58
30	AW	111	HIS	N-CA-C	5.30	116.76	110.19
31	AX	68	ARG	N-CA-C	-5.29	106.41	112.92
47	BM	50	GLU	N-CA-C	-5.29	104.98	111.75
11	AA	494	G	C2'-C3'-O3'	5.29	121.64	113.70
11	AA	102	G	N9-C1'-C2'	5.29	119.93	112.00
11	AA	1681	G	C2'-C3'-O3'	5.28	117.42	109.50
11	AA	2779	U	C5'-C4'-C3'	-5.28	108.08	116.00
11	AA	2200	C	C5'-C4'-C3'	-5.28	108.08	116.00
33	AZ	109	ALA	N-CA-C	-5.28	105.94	112.38
35	BA	836	G	C5'-C4'-C3'	5.28	123.91	116.00
11	AA	59	U	C5'-C4'-C3'	-5.27	108.09	116.00
11	AA	1159	U	C2'-C3'-O3'	5.27	121.61	113.70
31	AX	11	PRO	N-CA-C	5.27	118.60	111.22
43	BI	91	ASP	N-CA-C	-5.27	106.54	112.87
7	A6	45	LYS	N-CA-C	5.27	122.03	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BP	5	ARG	N-CA-C	5.27	115.34	108.07
13	AC	32	LEU	N-CA-C	-5.27	107.87	114.56
16	AF	174	VAL	N-CA-C	-5.27	100.06	107.75
46	BL	38	THR	N-CA-C	-5.27	107.40	113.88
11	AA	857	C	C5'-C4'-C3'	-5.27	108.10	116.00
21	AN	119	ARG	N-CA-C	-5.27	107.15	113.21
27	AT	99	LEU	N-CA-C	5.27	115.97	108.54
28	AU	86	ALA	N-CA-C	-5.27	106.69	113.01
27	AT	80	SER	CA-C-N	-5.26	113.26	119.84
27	AT	80	SER	C-N-CA	-5.26	113.26	119.84
31	AX	10	ALA	N-CA-C	5.26	112.75	108.07
16	AF	69	HIS	N-CA-C	5.25	119.06	111.56
24	AQ	127	ILE	N-CA-C	5.24	116.56	108.44
13	AC	25	ALA	N-CA-C	-5.24	107.02	113.41
14	AD	83	GLU	N-CA-C	5.24	117.84	110.14
18	AH	75	ALA	N-CA-C	-5.24	106.04	112.90
13	AC	157	LYS	N-CA-C	-5.24	106.91	113.72
38	BD	140	VAL	N-CA-C	5.24	115.85	109.30
11	AA	2422	A	C2'-C3'-O3'	5.23	121.55	113.70
35	BA	1387	G	C5'-C4'-C3'	-5.23	108.15	116.00
46	BL	30	ALA	CA-C-N	5.23	126.38	119.84
46	BL	30	ALA	C-N-CA	5.23	126.38	119.84
11	AA	2830	G	C2'-C3'-O3'	5.23	121.54	113.70
40	BF	83	ASP	N-CA-C	-5.23	107.28	113.97
58	BY	61	C	O4'-C1'-C2'	5.23	111.03	105.80
22	AO	28	SER	N-CA-C	-5.21	106.69	113.16
34	B2	93	VAL	N-CA-C	5.21	115.43	110.53
56	BW	18	U	N1-C1'-C2'	5.21	121.82	114.00
51	BQ	67	LYS	N-CA-C	-5.21	103.47	110.24
56	BV	77	A	C2'-C3'-O3'	-5.20	101.70	109.50
11	AA	1541	G	C2'-C3'-O3'	5.19	121.49	113.70
32	AY	41	GLY	N-CA-C	-5.19	105.07	112.55
35	BA	1153	C	C4'-C3'-O3'	5.19	117.19	109.40
14	AD	43	ARG	N-CA-C	5.19	118.74	112.93
6	A5	46	CYS	N-CA-C	5.18	117.97	110.14
9	A8	26	LYS	N-CA-C	-5.18	103.56	110.55
11	AA	752	A	C4'-C3'-O3'	5.18	117.17	109.40
24	AQ	14	ARG	N-CA-C	5.18	117.60	111.33
27	AT	83	ILE	N-CA-C	-5.18	98.56	109.34
35	BA	793	U	C2'-C3'-O3'	5.18	117.27	109.50
21	AN	50	ASP	N-CA-C	5.18	121.83	110.80
37	BC	88	ARG	N-CA-C	-5.18	105.12	111.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	AO	82	ASN	N-CA-C	-5.17	101.26	109.59
44	BJ	44	VAL	N-CA-C	5.17	115.22	107.51
28	AU	51	LYS	N-CA-C	-5.17	105.54	111.07
27	AT	9	LEU	N-CA-C	-5.17	107.27	113.21
33	AZ	14	LYS	N-CA-C	5.17	121.22	109.81
11	AA	275	G	N9-C1'-C2'	5.16	119.75	112.00
11	AA	2675	A	C2'-C3'-O3'	5.16	121.44	113.70
36	BB	117	GLU	N-CA-C	-5.16	105.66	111.28
52	BR	76	LEU	N-CA-C	-5.16	106.96	113.20
36	BB	145	LEU	N-CA-C	-5.15	105.78	111.71
13	AC	117	PRO	N-CA-C	5.15	120.61	113.65
36	BB	120	ALA	N-CA-C	-5.15	107.00	113.28
16	AF	190	GLU	N-CA-C	5.14	116.70	111.14
44	BJ	55	LYS	N-CA-C	5.14	118.42	107.67
37	BC	149	ALA	N-CA-C	5.14	116.22	108.46
16	AF	173	VAL	N-CA-C	5.14	115.25	107.80
13	AC	116	THR	CA-C-N	5.13	124.93	119.28
13	AC	116	THR	C-N-CA	5.13	124.93	119.28
51	BQ	29	HIS	CA-C-N	5.13	126.26	119.84
51	BQ	29	HIS	C-N-CA	5.13	126.26	119.84
16	AF	95	ARG	N-CA-C	5.13	116.64	108.79
3	A2	17	SER	CA-C-N	5.13	126.25	119.84
3	A2	17	SER	C-N-CA	5.13	126.25	119.84
4	A3	26	LEU	N-CA-C	-5.13	105.87	111.82
9	A8	20	GLY	N-CA-C	-5.12	108.00	115.63
7	A6	29	ASN	N-CA-C	5.12	117.84	111.24
11	AA	696	G	C5'-C4'-C3'	-5.12	108.32	116.00
17	AG	56	ALA	N-CA-C	-5.11	106.20	112.90
21	AN	51	PHE	N-CA-C	-5.11	101.37	109.96
11	AA	1501	C	C2'-C3'-O3'	5.10	121.35	113.70
32	AY	13	VAL	N-CA-C	5.10	117.36	108.90
23	AP	29	LYS	N-CA-C	-5.10	99.02	107.99
23	AP	80	TYR	N-CA-C	5.09	113.64	108.75
11	AA	527	C	O4'-C1'-N1	5.09	115.83	108.20
42	BH	52	ASP	N-CA-C	5.09	117.74	109.24
35	BA	64	G	C2'-C3'-O3'	-5.09	106.07	113.70
11	AA	1210	A	C4'-C3'-C2'	5.08	107.68	102.60
27	AT	124	ASP	N-CA-C	-5.08	105.31	112.12
29	AV	95	LEU	N-CA-C	-5.08	100.63	108.90
44	BJ	83	GLU	N-CA-C	-5.08	106.93	113.02
38	BD	93	PHE	N-CA-C	-5.07	105.75	111.28
6	A5	45	VAL	N-CA-C	-5.07	100.35	107.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AA	552	G	C5'-C4'-C3'	-5.07	108.39	116.00
11	AA	2559	C	C5'-C4'-C3'	-5.07	108.39	116.00
41	BG	39	ALA	N-CA-C	-5.07	103.18	111.04
12	AB	8	U	N1-C1'-C2'	5.07	119.60	112.00
11	AA	2026	C	C5'-C4'-C3'	-5.06	108.41	116.00
58	BY	61	C	C4'-C3'-O3'	5.06	116.99	109.40
35	BA	245	C	C4'-C3'-O3'	5.06	116.99	109.40
38	BD	180	GLY	N-CA-C	-5.06	107.22	115.46
41	BG	135	VAL	N-CA-C	-5.06	105.46	110.62
13	AC	24	GLU	N-CA-C	-5.05	106.89	113.16
11	AA	2131	G	C4'-C3'-O3'	5.05	116.98	109.40
34	B2	96	LYS	N-CA-C	5.05	117.54	109.81
38	BD	158	ILE	N-CA-C	-5.05	106.20	113.07
11	AA	2200	C	C2'-C3'-O3'	5.05	121.27	113.70
21	AN	78	TYR	CA-C-N	5.05	124.96	119.76
21	AN	78	TYR	C-N-CA	5.05	124.96	119.76
54	BT	86	ARG	N-CA-C	-5.05	106.81	113.12
59	BZ	230	THR	N-CA-C	5.05	116.99	108.96
21	AN	75	TYR	N-CA-C	5.05	117.83	107.69
30	AW	68	ARG	N-CA-C	5.04	118.69	112.54
35	BA	563	A	N9-C1'-C2'	5.04	119.57	112.00
32	AY	4	LYS	N-CA-C	-5.04	105.23	111.33
14	AD	210	GLY	N-CA-C	-5.04	101.24	113.18
14	AD	251	GLY	N-CA-C	5.03	119.67	113.79
59	BZ	183	HIS	N-CA-C	-5.03	105.51	111.69
24	AQ	53	ALA	N-CA-C	-5.02	105.80	111.28
44	BJ	62	HIS	N-CA-C	5.02	117.25	108.76
15	AE	74	PRO	N-CA-C	5.02	118.73	110.55
11	AA	34	C	N1-C1'-C2'	5.02	119.53	112.00
35	BA	960	U	N1-C1'-C2'	5.02	121.53	114.00
33	AZ	13	GLU	N-CA-C	5.01	117.12	107.44
44	BJ	40	LEU	CA-C-N	5.01	126.11	119.84
44	BJ	40	LEU	C-N-CA	5.01	126.11	119.84
11	AA	552	G	C2'-C3'-O3'	5.01	121.21	113.70
11	AA	1987	G	C2'-C3'-O3'	5.01	121.22	113.70
11	AA	2031	A	C2'-C3'-O3'	5.01	117.01	109.50
39	BE	98	THR	N-CA-C	-5.01	107.30	113.41
9	A8	49	VAL	N-CA-C	-5.01	100.59	108.90
37	BC	191	THR	N-CA-C	5.01	117.02	109.41
11	AA	752	A	O4'-C1'-C2'	5.00	110.81	105.80
12	AB	67	G	C4'-C3'-O3'	5.00	116.91	109.40
9	A8	50	LEU	N-CA-C	5.00	117.48	108.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	AC	30	LYS	N-CA-C	-5.00	106.96	113.16
35	BA	1053	G	C2'-C3'-O3'	5.00	121.20	113.70

All (13) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
11	AA	614(C)	A	C3'
11	AA	1300	U	C3'
11	AA	1378	A	C3'
11	AA	1427	A	C3'
11	AA	1799	G	C3'
11	AA	1819	A	C3'
11	AA	1820	U	C3'
11	AA	1992	G	C3'
11	AA	2610	C	C3'
35	BA	115	G	C3'
35	BA	1399	C	C3'
35	BA	1498	U	C3'
35	BA	1504	G	C3'

All (148) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AA	1025	G	Sidechain
11	AA	1026	U	Sidechain
11	AA	1128	A	Sidechain
11	AA	1151	G	Sidechain
11	AA	1215	G	Sidechain
11	AA	122	G	Sidechain
11	AA	1223	G	Sidechain
11	AA	1225	G	Sidechain
11	AA	1234	U	Sidechain
11	AA	1352	U	Sidechain
11	AA	1378	A	Sidechain
11	AA	1379	A	Sidechain
11	AA	1399	C	Sidechain
11	AA	1416	G	Sidechain
11	AA	1440	G	Sidechain
11	AA	1570	A	Sidechain
11	AA	1619	G	Sidechain
11	AA	1633	G	Sidechain
11	AA	1673	U	Sidechain

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Mol	Chain	Res	Type	Group
11	AA	176	G	Sidechain
11	AA	1768	U	Sidechain
11	AA	1772	G	Sidechain
11	AA	1774	C	Sidechain
11	AA	178	G	Sidechain
11	AA	1801	G	Sidechain
11	AA	1807	G	Sidechain
11	AA	1820	U	Sidechain
11	AA	1938	A	Sidechain
11	AA	1985	G	Sidechain
11	AA	1991	U	Sidechain
11	AA	1992	G	Sidechain
11	AA	2020	A	Sidechain
11	AA	2029	G	Sidechain
11	AA	2034	U	Sidechain
11	AA	2053	G	Sidechain
11	AA	2059	A	Sidechain
11	AA	2074	U	Sidechain
11	AA	2189	U	Sidechain
11	AA	2360	A	Sidechain
11	AA	2406	U	Sidechain
11	AA	2420	C	Sidechain
11	AA	2460	U	Sidechain
11	AA	2464	C	Sidechain
11	AA	25	U	Sidechain
11	AA	250	G	Sidechain
11	AA	2500	U	Sidechain
11	AA	2504	U	Sidechain
11	AA	2506	U	Sidechain
11	AA	2508	G	Sidechain
11	AA	2516	G	Sidechain
11	AA	2522	U	Sidechain
11	AA	2580	U	Sidechain
11	AA	2597	G	Sidechain
11	AA	2638	G	Sidechain
11	AA	2665	A	Sidechain
11	AA	27	G	Sidechain
11	AA	271(W)	G	Sidechain
11	AA	271(Y)	U	Sidechain
11	AA	2726	U	Sidechain
11	AA	2758	A	Sidechain
11	AA	2779	U	Sidechain

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Mol	Chain	Res	Type	Group
11	AA	2829	C	Sidechain
11	AA	2849	U	Sidechain
11	AA	2866	U	Sidechain
11	AA	2892	A	Sidechain
11	AA	308	G	Sidechain
11	AA	371	A	Sidechain
11	AA	411	G	Sidechain
11	AA	452	G	Sidechain
11	AA	463	G	Sidechain
11	AA	464	U	Sidechain
11	AA	465	G	Sidechain
11	AA	467	G	Sidechain
11	AA	50	U	Sidechain
11	AA	525	U	Sidechain
11	AA	562	U	Sidechain
11	AA	571	A	Sidechain
11	AA	578	A	Sidechain
11	AA	597	U	Sidechain
11	AA	599	G	Sidechain
11	AA	675	A	Sidechain
11	AA	686	G	Sidechain
11	AA	688	U	Sidechain
11	AA	704	G	Sidechain
11	AA	733	G	Sidechain
11	AA	760	G	Sidechain
11	AA	761	A	Sidechain
11	AA	772	C	Sidechain
11	AA	792	G	Sidechain
11	AA	805	G	Sidechain
11	AA	826	U	Sidechain
11	AA	827	U	Sidechain
11	AA	90	U	Sidechain
11	AA	946	G	Sidechain
11	AA	958	U	Sidechain
12	AB	16	G	Sidechain
12	AB	67	G	Sidechain
12	AB	68	C	Sidechain
14	AD	172	TYR	Sidechain
30	AW	9	TYR	Sidechain
33	AZ	99	TYR	Sidechain
35	BA	1050	G	Sidechain
35	BA	1054	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BA	1077	G	Sidechain
35	BA	1153	C	Sidechain
35	BA	1181	G	Sidechain
35	BA	1213	A	Sidechain
35	BA	1370	G	Sidechain
35	BA	1393	U	Sidechain
35	BA	1395	C	Sidechain
35	BA	1401	G	Sidechain
35	BA	1417	G	Sidechain
35	BA	1498	U	Sidechain
35	BA	1503	A	Sidechain
35	BA	1517	G	Sidechain
35	BA	197	A	Sidechain
35	BA	198	G	Sidechain
35	BA	245	C	Sidechain
35	BA	250	A	Sidechain
35	BA	251	G	Sidechain
35	BA	262	A	Sidechain
35	BA	274	A	Sidechain
35	BA	325	A	Sidechain
35	BA	347	G	Sidechain
35	BA	362	G	Sidechain
35	BA	368	U	Sidechain
35	BA	484	G	Sidechain
35	BA	498	U	Sidechain
35	BA	575	G	Sidechain
35	BA	727	G	Sidechain
35	BA	733	A	Sidechain
35	BA	760	G	Sidechain
35	BA	776	G	Sidechain
35	BA	782	A	Sidechain
35	BA	924	C	Sidechain
35	BA	952	U	Sidechain
35	BA	961	U	Sidechain
35	BA	966	G	Sidechain
35	BA	982	U	Sidechain
35	BA	992	U	Sidechain
35	BA	995	C	Sidechain
56	BV	4	G	Sidechain
56	BW	18	U	Sidechain
56	BW	20	G	Sidechain
56	BW	57	C	Sidechain

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Mol	Chain	Res	Type	Group
58	BY	12	G	Sidechain
58	BY	70	G	Sidechain
58	BY	74	C	Sidechain

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	A0	662	0	688	116	0
2	A1	732	0	808	73	0
3	A2	598	0	653	83	0
4	A3	468	0	523	37	0
5	A4	341	0	339	68	0
6	A5	459	0	480	72	0
7	A6	433	0	461	151	0
8	A7	419	0	467	31	0
9	A8	508	0	576	100	0
10	A9	307	0	335	44	0
11	AA	62479	0	31495	2220	0
12	AB	2551	0	1295	108	0
13	AC	1742	0	1794	326	0
14	AD	2145	0	2234	301	0
15	AE	1564	0	1629	228	0
16	AF	1624	0	1677	208	0
17	AG	1474	0	1535	288	0
18	AH	1223	0	1282	163	0
19	AJ	654	0	142	11	0
20	AK	701	0	163	25	0
21	AN	1105	0	1180	172	0
22	AO	933	0	996	97	0
23	AP	1114	0	1187	279	0
24	AQ	1122	0	1179	159	0
25	AR	960	0	1021	144	0
26	AS	771	0	832	130	0
27	AT	1142	0	1202	269	0
28	AU	958	0	1015	137	0
29	AV	779	0	852	152	0
30	AW	896	0	953	86	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	AX	726	0	778	80	0
32	AY	776	0	870	199	0
33	AZ	1460	0	1488	192	0
34	B2	1184	0	1235	208	0
35	BA	32330	0	16318	1303	0
36	BB	1901	0	1951	266	0
37	BC	1613	0	1677	160	0
38	BD	1703	0	1764	279	0
39	BE	1147	0	1207	143	0
40	BF	843	0	857	79	0
41	BG	1257	0	1296	114	0
42	BH	1116	0	1177	82	0
43	BI	1011	0	1043	163	0
44	BJ	795	0	840	181	0
45	BK	885	0	904	90	0
46	BL	971	0	1057	110	0
47	BM	988	0	1059	198	0
48	BN	492	0	529	90	0
49	BO	734	0	771	67	0
50	BP	701	0	720	76	0
51	BQ	824	0	891	59	0
52	BR	574	0	644	64	0
53	BS	630	0	652	109	0
54	BT	763	0	861	89	0
55	BU	209	0	221	16	0
56	BV	1640	0	837	45	0
56	BW	1640	0	837	160	0
57	BX	104	0	55	4	0
58	BY	1305	0	663	88	0
59	BZ	2929	0	2941	363	0
60	A9	1	0	0	0	0
60	BD	1	0	0	1	0
60	BN	1	0	0	0	0
61	AA	1	0	0	0	0
61	BZ	1	0	0	0	0
62	BZ	57	0	58	7	0
63	BZ	28	0	12	3	0
All	All	154205	0	105206	10270	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 40.

All (10270) 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)
38:BD:20:TYR:HA	38:BD:26:CYS:SG	1.82	1.19
14:AD:44:ASN:HB3	14:AD:49:ILE:HA	1.21	1.18
1:A0:40:GLN:HE22	1:A0:43:THR:HA	1.02	1.17
7:A6:11:LEU:HD22	7:A6:12:GLU:H	1.08	1.15
13:AC:167:LYS:HB2	56:BW:18:U:H5"	1.18	1.15
18:AH:52:VAL:HB	18:AH:69:ARG:HD3	1.25	1.15
34:B2:129:ARG:HA	35:BA:1397:C:H42	1.06	1.15
13:AC:167:LYS:CD	56:BW:18:U:H4'	1.77	1.14
11:AA:1914:A:H5'	11:AA:1914:A:C8	1.80	1.14
24:AQ:141:GLN:HE22	33:AZ:72:ARG:HA	1.13	1.14
33:AZ:28:MET:HE3	33:AZ:59:LEU:HD12	1.24	1.14
59:BZ:101:GLY:HA3	59:BZ:210:ILE:HD11	1.25	1.14
59:BZ:315:LYS:HB2	59:BZ:405:GLU:HG2	1.30	1.13
11:AA:1747(A):G:H2'	11:AA:1748:G:H5"	1.14	1.13
6:A5:44:THR:HG21	25:AR:101:ALA:HB2	1.30	1.12
11:AA:655:A:H4'	11:AA:656:G:H5'	1.23	1.12
11:AA:2645:G:H3'	11:AA:2646:C:H5'	1.24	1.12
12:AB:20:C:H2'	12:AB:21:G:H5"	1.29	1.12
2:A1:23:LYS:HD3	2:A1:28:GLY:HA3	1.20	1.12
7:A6:5:VAL:HG11	11:AA:2283:C:H5'	1.29	1.11
16:AF:192:LEU:HD21	16:AF:194:MET:HG3	1.27	1.11
16:AF:24:LEU:HB3	16:AF:25:PRO:HD2	1.30	1.10
9:A8:62:LEU:HD13	11:AA:242:G:H5"	1.25	1.10
11:AA:612:C:H2'	11:AA:613:G:H5"	1.33	1.10
11:AA:1899:G:N2	11:AA:1902:C:H41	1.46	1.10
47:BM:12:ASN:HD21	47:BM:46:LYS:HB2	1.14	1.10
32:AY:95:LYS:HE3	32:AY:99:CYS:O	1.52	1.10
11:AA:1914:A:C2'	11:AA:1915:U:H5"	1.81	1.10
11:AA:1567:A:H5'	14:AD:58:HIS:HD2	1.10	1.09
2:A1:50:ARG:HG2	2:A1:59:THR:HG22	1.31	1.09
35:BA:979:C:H3'	35:BA:980:C:H5"	1.35	1.08
44:BJ:50:ILE:H	44:BJ:50:ILE:HD13	1.15	1.08
38:BD:189:PRO:HB2	38:BD:194:LEU:HD21	1.30	1.08
11:AA:31:C:H2'	11:AA:32:C:H5"	1.13	1.08
11:AA:1914:A:H5'	11:AA:1914:A:H8	1.06	1.08
11:AA:2187:G:H2'	11:AA:2188:C:H5'	1.33	1.08
36:BB:80:ILE:H	36:BB:80:ILE:HD12	1.13	1.08
6:A5:4:HIS:HB3	6:A5:5:PRO:HD3	1.35	1.08
11:AA:2092:U:H4'	11:AA:2093:G:H5"	1.08	1.08
23:AP:77:ARG:HD3	23:AP:78:PRO:HD2	1.33	1.08
16:AF:178:PRO:HB2	16:AF:201:VAL:HG11	1.29	1.08
32:AY:88:LYS:NZ	32:AY:93:GLY:HA3	1.68	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:7:VAL:HA	36:BB:11:LEU:HG	1.35	1.08
3:A2:22:GLU:HG2	3:A2:64:LEU:HD11	1.18	1.07
23:AP:59:LEU:HA	23:AP:61:ARG:NE	1.68	1.07
23:AP:47:ASP:HB3	23:AP:48:PRO:HA	1.15	1.07
43:BI:52:ALA:HB3	43:BI:95:LYS:HE2	1.31	1.07
44:BJ:4:ILE:HB	44:BJ:74:ILE:HD11	1.28	1.07
59:BZ:215:ARG:H	59:BZ:215:ARG:HD2	1.17	1.07
24:AQ:141:GLN:HB2	33:AZ:99:TYR:CD1	1.88	1.07
32:AY:96:ILE:HG13	32:AY:99:CYS:HB2	1.32	1.07
37:BC:20:SER:HB2	37:BC:40:ARG:HH22	1.09	1.07
9:A8:61:LEU:H	9:A8:61:LEU:HD12	1.15	1.07
56:BV:48:U:H3'	56:BV:49:C:H5'	1.35	1.06
11:AA:2317:C:H2'	11:AA:2318:G:H5'	1.36	1.06
11:AA:31:C:C2'	11:AA:32:C:H5"	1.84	1.05
11:AA:1887:C:H2'	11:AA:1888:G:H5"	1.38	1.05
58:BY:13:G:O2'	58:BY:14:U:H5"	1.56	1.05
7:A6:33:LYS:HA	7:A6:33:LYS:HE2	1.35	1.05
11:AA:271(M):G:H2'	11:AA:271(N):U:H5"	1.36	1.05
27:AT:96:ARG:NH1	27:AT:96:ARG:HB2	1.72	1.05
16:AF:6:VAL:HG12	16:AF:7:TYR:H	1.22	1.05
11:AA:2524:G:H5'	11:AA:2524:G:H8	1.14	1.05
59:BZ:363:MET:HG3	59:BZ:364:PRO:HD2	1.38	1.05
35:BA:1003:G:H2'	35:BA:1004:A:H4'	1.38	1.05
58:BY:84:C:H2'	58:BY:85:C:H5"	1.35	1.05
7:A6:44:ARG:C	7:A6:45:LYS:HD2	1.82	1.04
12:AB:7:G:H3'	12:AB:8:U:H5"	1.32	1.04
34:B2:87:ARG:HA	34:B2:90:LEU:HD23	1.39	1.04
35:BA:1116:C:H2'	35:BA:1117:G:H5"	1.29	1.04
35:BA:1305:G:H5"	55:BU:4:GLY:HA3	1.34	1.04
11:AA:1803:A:O3'	14:AD:259:THR:HG21	1.57	1.04
27:AT:91:ARG:HA	27:AT:117:ASP:H	1.22	1.04
1:A0:27:GLU:CD	1:A0:27:GLU:H	1.66	1.04
29:AV:62:LEU:HD21	29:AV:95:LEU:HB2	1.31	1.04
32:AY:7:VAL:HB	32:AY:8:LYS:HD2	1.39	1.04
7:A6:18:ARG:HG2	7:A6:18:ARG:HH11	0.92	1.04
11:AA:1567:A:H5'	14:AD:58:HIS:CD2	1.93	1.04
11:AA:2893:G:H5'	11:AA:2894:G:H5'	1.04	1.04
34:B2:55:LEU:HD11	34:B2:102:PRO:HG3	1.39	1.04
15:AE:57:LYS:HA	15:AE:57:LYS:HE3	1.31	1.03
23:AP:23:PRO:HB2	23:AP:33:ARG:HG3	1.39	1.03
13:AC:137:LEU:HD11	56:BW:56:U:O3'	1.58	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AQ:133:ARG:HH11	24:AQ:133:ARG:HB2	1.20	1.03
59:BZ:143:ASP:HB3	59:BZ:146:LEU:HB2	1.40	1.03
7:A6:15:GLU:CD	7:A6:18:ARG:CZ	2.32	1.03
13:AC:167:LYS:HD2	56:BW:18:U:H4'	1.03	1.03
26:AS:78:LEU:HD11	26:AS:103:GLU:HB2	1.39	1.03
11:AA:1747(A):G:C2'	11:AA:1748:G:H5"	1.89	1.02
11:AA:1899:G:H22	11:AA:1902:C:N4	1.57	1.02
18:AH:67:LEU:HG	18:AH:71:LEU:HD11	1.36	1.02
6:A5:2:ALA:HA	11:AA:2015:A:H1'	1.39	1.02
17:AG:43:LEU:HB3	17:AG:45:GLU:HG2	1.37	1.02
33:AZ:126:VAL:HG12	33:AZ:163:LEU:HB2	1.40	1.02
44:BJ:48:THR:HA	44:BJ:62:HIS:HB3	1.41	1.02
1:A0:7:LEU:HD22	24:AQ:85:LYS:HG3	1.37	1.02
31:AX:24:GLY:O	31:AX:82:GLN:HA	1.58	1.02
25:AR:2:ARG:N	25:AR:2:ARG:HH11	1.57	1.02
11:AA:389:G:H1	23:AP:71:VAL:HG12	1.21	1.01
21:AN:133:GLN:HG2	21:AN:135:PRO:HD3	1.41	1.01
47:BM:108:ARG:HH11	47:BM:108:ARG:HG3	0.86	1.01
23:AP:16:ARG:HB2	23:AP:16:ARG:HH11	1.24	1.01
35:BA:1053:G:H4'	35:BA:1054:C:H5'	1.42	1.01
13:AC:114:VAL:HB	13:AC:149:ILE:HD11	1.41	1.01
11:AA:2477:C:H5'	11:AA:2477:C:H6	1.22	1.01
13:AC:128:GLY:HA2	56:BW:57:C:H2'	1.43	1.01
34:B2:104:LYS:HD2	34:B2:116:LEU:HD23	1.40	1.01
36:BB:67:THR:HG22	36:BB:90:MET:HE1	1.41	1.01
59:BZ:265:THR:HG22	59:BZ:266:VAL:H	1.22	1.01
15:AE:77:ILE:HG22	15:AE:78:LEU:H	1.24	1.00
17:AG:52:ILE:HD13	17:AG:52:ILE:H	1.21	1.00
23:AP:16:ARG:HD3	23:AP:18:ARG:H	1.25	1.00
43:BI:53:VAL:HG13	43:BI:95:LYS:HE3	1.40	1.00
11:AA:1914:A:H2'	11:AA:1915:U:H5"	1.43	1.00
44:BJ:38:ILE:HD11	44:BJ:71:LEU:HD23	1.42	1.00
34:B2:48:PHE:HB3	34:B2:53:LEU:HA	1.39	1.00
35:BA:1149:C:H2'	35:BA:1150:U:H6	1.23	1.00
38:BD:3:ARG:HG2	38:BD:118:ARG:HE	1.26	1.00
53:BS:63:THR:HG22	53:BS:66:MET:HG2	1.40	1.00
11:AA:2801(A):A:H4'	11:AA:2802:G:H5'	1.43	1.00
16:AF:20:LEU:H	16:AF:24:LEU:HD21	1.25	1.00
16:AF:9:ILE:HG12	16:AF:14:PRO:HA	1.44	0.99
27:AT:85:LYS:NZ	27:AT:85:LYS:HB3	1.77	0.99
31:AX:35:THR:HG22	31:AX:37:THR:H	1.22	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AP:47:ASP:HB3	23:AP:48:PRO:CA	1.91	0.99
26:AS:24:LEU:HD13	26:AS:41:ASP:HB2	1.42	0.99
6:A5:46:CYS:SG	6:A5:47:PRO:HD2	2.02	0.99
11:AA:1170:G:H1	11:AA:1179:C:H42	1.10	0.99
26:AS:15:ARG:HB2	26:AS:15:ARG:HH11	1.25	0.99
48:BN:12:ARG:HH11	48:BN:14:PRO:HG2	1.25	0.99
48:BN:12:ARG:NH1	48:BN:14:PRO:HG2	1.76	0.99
13:AC:94:VAL:HG12	13:AC:95:GLY:H	1.22	0.99
32:AY:28:LYS:HZ2	32:AY:72:VAL:HG21	1.24	0.99
36:BB:185:ILE:HG22	36:BB:199:TYR:HB2	1.43	0.99
11:AA:2491:U:H5'	11:AA:2570:G:H5"	1.43	0.99
14:AD:43:ARG:NH1	14:AD:44:ASN:HD21	1.60	0.99
21:AN:73:THR:HG23	21:AN:82:LEU:HD11	1.44	0.99
26:AS:97:ARG:NH2	26:AS:98:VAL:HA	1.78	0.99
46:BL:18:VAL:HG23	46:BL:19:ARG:H	1.26	0.99
38:BD:105:VAL:HG22	38:BD:146:ILE:HG21	1.44	0.98
13:AC:129:ARG:HA	56:BW:20:G:N2	1.78	0.98
21:AN:70:LYS:HD3	21:AN:87:LEU:HD23	1.42	0.98
27:AT:82:LEU:H	27:AT:82:LEU:HD12	1.27	0.98
35:BA:975:A:H4'	35:BA:976:G:H5"	1.43	0.98
53:BS:62:ILE:HD12	53:BS:66:MET:HE2	1.43	0.98
7:A6:11:LEU:HD22	7:A6:12:GLU:N	1.78	0.98
13:AC:22:ILE:HG12	13:AC:224:ILE:HD12	1.44	0.98
13:AC:171:ILE:HG12	13:AC:196:LEU:HD21	1.43	0.98
28:AU:90:VAL:HG12	28:AU:91:ASP:H	1.26	0.98
26:AS:17:ARG:HA	26:AS:20:ARG:NH1	1.79	0.98
27:AT:51:ARG:HG2	27:AT:62:THR:HG23	1.43	0.98
11:AA:612:C:C2'	11:AA:613:G:H5"	1.93	0.98
34:B2:46:ALA:HB2	34:B2:55:LEU:HD12	1.45	0.98
47:BM:108:ARG:HG3	47:BM:108:ARG:NH1	1.65	0.98
5:A4:10:VAL:HG22	5:A4:11:PRO:HD2	1.41	0.97
11:AA:1947:C:C2'	11:AA:1948:G:H5"	1.94	0.97
38:BD:187:ARG:HB3	38:BD:187:ARG:HH11	1.29	0.97
14:AD:43:ARG:HH11	14:AD:44:ASN:HD21	1.00	0.97
38:BD:145:GLU:HG3	38:BD:184:LYS:HG2	1.43	0.97
11:AA:1528(A):A:H62	11:AA:1541:G:N2	1.61	0.97
16:AF:168:ARG:HG3	16:AF:175:THR:HG21	1.44	0.97
35:BA:1116:C:C2'	35:BA:1117:G:H5"	1.94	0.97
35:BA:1314:C:OP2	53:BS:6:LYS:HG3	1.65	0.97
35:BA:1125:U:H3	44:BJ:5:ARG:NH2	1.63	0.97
38:BD:28:SER:HB3	38:BD:29:PRO:HD2	1.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:436:C:H4'	38:BD:157:LEU:HD13	1.47	0.97
59:BZ:224:PRO:HG3	59:BZ:345:ARG:HD3	1.44	0.97
6:A5:2:ALA:CA	11:AA:2015:A:H1'	1.93	0.96
11:AA:1069:A:H1'	11:AA:1070:A:OP2	1.65	0.96
11:AA:2317:C:C2'	11:AA:2318:G:H5'	1.95	0.96
17:AG:105:LYS:HD2	17:AG:142:PRO:HG3	1.46	0.96
14:AD:158:ALA:HB3	14:AD:161:THR:HG21	1.47	0.96
44:BJ:34:VAL:HG22	44:BJ:74:ILE:HG22	1.46	0.96
36:BB:204:ASN:ND2	36:BB:207:ALA:H	1.62	0.96
54:BT:10:LEU:HD12	54:BT:11:SER:N	1.80	0.96
13:AC:40:THR:HG22	13:AC:41:VAL:H	1.26	0.96
1:A0:70:GLN:NE2	1:A0:80:HIS:HE2	1.62	0.96
11:AA:271(H):G:HO2'	11:AA:271(I):G:H8	1.00	0.96
25:AR:3:HIS:O	25:AR:5:LYS:N	1.97	0.96
35:BA:1149:C:H2'	35:BA:1150:U:C6	2.01	0.96
43:BI:9:ARG:HB2	43:BI:104:ARG:HH12	1.29	0.96
47:BM:68:GLY:H	47:BM:71:ARG:HB3	1.31	0.96
13:AC:133:PRO:HD2	56:BW:20:G:C6	1.99	0.96
18:AH:16:SER:HB2	18:AH:27:LYS:HB2	1.45	0.96
32:AY:46:LYS:HG2	32:AY:47:LYS:H	1.30	0.96
11:AA:1484:G:H2'	11:AA:1485:G:H5"	1.43	0.96
11:AA:1902:C:O2'	14:AD:244:ARG:HB2	1.65	0.96
11:AA:628:G:C2'	11:AA:629:G:H5"	1.96	0.96
32:AY:95:LYS:HG3	32:AY:100:ALA:HA	1.45	0.96
36:BB:114:ARG:HH11	36:BB:118:LEU:HD21	1.28	0.96
37:BC:11:ARG:HH21	37:BC:180:ALA:HB3	1.28	0.96
17:AG:96:ARG:H	17:AG:99:MET:HE2	1.27	0.95
27:AT:29:ARG:HE	27:AT:86:ILE:HG23	1.28	0.95
13:AC:167:LYS:HD2	56:BW:18:U:C4'	1.96	0.95
59:BZ:327:GLU:HA	62:BZ:1002:KIR:H101	1.48	0.95
26:AS:13:ARG:HG3	26:AS:14:VAL:H	1.27	0.95
27:AT:89:VAL:HG21	27:AT:91:ARG:HH21	1.31	0.95
31:AX:50:LYS:H	31:AX:87:GLN:HE22	1.00	0.95
35:BA:1442(A):G:H3'	35:BA:1442(B):A:H5"	1.48	0.95
36:BB:44:LEU:H	36:BB:44:LEU:HD12	1.31	0.95
11:AA:2422:A:H1'	56:BW:77:A:C2	2.02	0.95
11:AA:2524:G:H5'	11:AA:2524:G:C8	2.01	0.95
44:BJ:50:ILE:HD11	48:BN:41:ARG:HD2	1.45	0.95
36:BB:172:ILE:H	36:BB:172:ILE:HD12	1.32	0.95
4:A3:35:ARG:HB2	4:A3:35:ARG:HH11	1.31	0.95
17:AG:82:LEU:HD22	17:AG:87:PRO:HG3	1.44	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:58:GLU:H	37:BC:65:ALA:HB3	1.28	0.95
6:A5:50:GLY:HA3	6:A5:56:LYS:HD3	1.47	0.94
11:AA:2287:A:H62	11:AA:2344:U:H3	1.13	0.94
22:AO:35:VAL:HG11	22:AO:103:ALA:HB3	1.49	0.94
13:AC:167:LYS:HB2	56:BW:18:U:C5'	1.97	0.94
13:AC:167:LYS:CB	56:BW:18:U:H5"	1.94	0.94
32:AY:88:LYS:HZ3	32:AY:93:GLY:HA3	1.32	0.94
58:BY:14:U:H5'	58:BY:14:U:O2	1.67	0.94
35:BA:954:G:H4'	47:BM:120:LYS:HD2	1.46	0.94
11:AA:1301:A:O2'	11:AA:1302:A:H2'	1.68	0.94
28:AU:50:ARG:HH12	29:AV:72:VAL:HG12	1.32	0.94
47:BM:108:ARG:HH11	47:BM:108:ARG:CG	1.80	0.94
15:AE:52:LEU:HD13	27:AT:1:MET:HE3	1.45	0.94
41:BG:100:ALA:O	41:BG:104:LEU:HD23	1.67	0.94
1:A0:40:GLN:NE2	1:A0:43:THR:HA	1.82	0.94
11:AA:628:G:H2'	11:AA:629:G:H5"	1.49	0.94
15:AE:1:MET:HB3	15:AE:200:GLU:OE2	1.68	0.94
33:AZ:151:HIS:HA	33:AZ:171:ILE:HG12	1.49	0.94
38:BD:108:LEU:HD11	38:BD:176:LEU:HD13	1.48	0.94
43:BI:4:TYR:HB2	43:BI:19:LEU:HB2	1.49	0.93
48:BN:13:THR:N	48:BN:14:PRO:HD2	1.81	0.93
50:BP:15:PRO:HB2	50:BP:41:PRO:HG3	1.49	0.93
53:BS:58:VAL:HG11	53:BS:75:ALA:HB1	1.47	0.93
11:AA:1947:C:H2'	11:AA:1948:G:H5"	1.50	0.93
11:AA:2893:G:C5'	11:AA:2894:G:H5'	1.95	0.93
29:AV:39:LEU:HA	29:AV:47:VAL:HG13	1.50	0.93
38:BD:62:GLN:HA	38:BD:62:GLN:HE21	1.30	0.93
59:BZ:159:ASN:ND2	59:BZ:165:GLY:HA3	1.83	0.93
14:AD:35:LYS:HD2	14:AD:35:LYS:C	1.92	0.93
23:AP:6:LEU:HG	23:AP:9:ASN:HB2	1.48	0.93
23:AP:58:THR:O	23:AP:61:ARG:NE	2.01	0.93
28:AU:112:ARG:HH12	29:AV:46:VAL:HG11	1.33	0.93
7:A6:10:LEU:H	7:A6:10:LEU:HD22	1.33	0.93
16:AF:82:ILE:O	16:AF:83:PHE:HB2	1.63	0.93
34:B2:8:ARG:HD3	34:B2:8:ARG:N	1.83	0.93
56:BV:48:U:H3'	56:BV:49:C:C5'	1.98	0.93
12:AB:7:G:C3'	12:AB:8:U:H5"	1.98	0.93
14:AD:30:GLU:HG3	14:AD:63:ARG:NE	1.82	0.93
18:AH:153:LYS:HD3	18:AH:153:LYS:H	1.32	0.93
35:BA:1502:A:H2	35:BA:1505:G:H1	1.17	0.93
11:AA:259:G:H21	11:AA:621:A:H8	1.07	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:676:A:H8	11:AA:2069:G:H21	1.11	0.92
11:AA:958:U:H5"	24:AQ:14:ARG:HD3	1.47	0.92
11:AA:2101:G:H2'	11:AA:2102:U:H5"	1.51	0.92
6:A5:3:LYS:HD3	11:AA:747:U:OP2	1.69	0.92
23:AP:34:GLY:O	23:AP:35:HIS:HB2	1.68	0.92
35:BA:1157:A:H1'	35:BA:1181:G:N2	1.83	0.92
11:AA:654(H):G:H2'	11:AA:654(I):C:H5'	1.51	0.92
11:AA:886:C:H2'	11:AA:887:A:H4'	1.51	0.92
26:AS:97:ARG:HH21	26:AS:98:VAL:HA	1.34	0.92
28:AU:8:VAL:HG23	28:AU:11:ARG:HH21	1.31	0.92
30:AW:37:ARG:HH11	30:AW:37:ARG:HG3	1.32	0.92
59:BZ:288:LEU:HD22	59:BZ:304:LEU:HD13	1.50	0.92
25:AR:2:ARG:N	25:AR:2:ARG:NH1	2.18	0.92
25:AR:4:LEU:HG	25:AR:4:LEU:O	1.70	0.92
11:AA:1021:A:H62	11:AA:1141:U:H3	1.01	0.92
27:AT:65:LYS:HE3	27:AT:66:VAL:H	1.35	0.92
44:BJ:40:LEU:HD23	44:BJ:40:LEU:H	1.31	0.92
11:AA:2801(A):A:H5'	11:AA:2802:G:H8	1.34	0.92
33:AZ:130:PRO:HA	33:AZ:133:ILE:HD11	1.50	0.92
44:BJ:30:SER:HB2	44:BJ:84:GLN:HE22	1.34	0.92
27:AT:28:VAL:HG22	27:AT:46:GLU:HA	1.50	0.92
58:BY:65:G:H1	58:BY:75:C:H42	0.96	0.92
11:AA:2656:U:H3	11:AA:2665:A:H2	1.11	0.92
35:BA:973:G:H1'	44:BJ:55:LYS:CE	1.99	0.91
59:BZ:15:GLY:H	59:BZ:99:MET:HE3	1.33	0.91
11:AA:2092:U:C4'	11:AA:2093:G:H5"	1.99	0.91
14:AD:24:ILE:HG23	14:AD:25:THR:H	1.35	0.91
28:AU:8:VAL:HG23	28:AU:11:ARG:NH2	1.85	0.91
34:B2:129:ARG:HA	35:BA:1397:C:N4	1.85	0.91
16:AF:160:ASN:HD21	16:AF:162:LEU:HD22	1.32	0.91
31:AX:54:VAL:HG22	31:AX:81:VAL:HG12	1.53	0.91
2:A1:13:ILE:HD11	11:AA:396:G:O4'	1.70	0.91
11:AA:886:C:C2'	11:AA:887:A:H4'	2.00	0.91
11:AA:2219:G:O2'	11:AA:2220:G:H5'	1.71	0.91
15:AE:14:ILE:HD11	15:AE:173:VAL:HG11	1.50	0.91
36:BB:87:ARG:HD2	36:BB:87:ARG:O	1.70	0.91
38:BD:12:CYS:HA	38:BD:19:LEU:HD13	1.51	0.91
18:AH:67:LEU:O	18:AH:71:LEU:HG	1.70	0.91
7:A6:18:ARG:HH11	7:A6:18:ARG:CG	1.83	0.91
31:AX:12:VAL:HB	31:AX:17:ALA:HB1	1.52	0.91
32:AY:88:LYS:O	32:AY:89:PHE:HB2	1.68	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AY:96:ILE:CG1	32:AY:99:CYS:HB2	2.00	0.91
35:BA:84:U:H2'	35:BA:88:A:H5'	1.51	0.91
38:BD:34:GLU:O	38:BD:35:ARG:HB2	1.70	0.91
47:BM:22:ILE:HG21	47:BM:66:LEU:HD23	1.53	0.91
11:AA:2422:A:C1'	56:BW:77:A:C2	2.55	0.90
13:AC:10:LEU:HD12	13:AC:32:LEU:HD23	1.53	0.90
17:AG:15:VAL:HG12	17:AG:19:LEU:HD11	1.50	0.90
35:BA:1305:G:HO2'	35:BA:1306:A:H8	1.14	0.90
11:AA:1019:U:HO2'	11:AA:1021:A:H2	0.92	0.90
31:AX:41:ASN:O	31:AX:45:THR:HG23	1.70	0.90
34:B2:10:ALA:HA	34:B2:13:ASP:HB2	1.51	0.90
22:AO:107:ARG:NH1	27:AT:35:LYS:HB2	1.84	0.90
53:BS:78:ARG:HB2	53:BS:81:ARG:HH11	1.35	0.90
54:BT:72:LEU:HD11	54:BT:80:ARG:HE	1.37	0.90
23:AP:85:LEU:HD23	23:AP:85:LEU:H	1.35	0.90
36:BB:204:ASN:HD21	36:BB:207:ALA:H	1.14	0.90
59:BZ:327:GLU:HB3	62:BZ:1002:KIR:H121	1.52	0.90
7:A6:19:ARG:HG3	7:A6:20:ASN:H	1.36	0.90
48:BN:4:LYS:O	48:BN:7:ILE:HG12	1.70	0.90
30:AW:10:VAL:O	30:AW:11:ARG:HB2	1.70	0.90
1:A0:11:ARG:HB2	1:A0:11:ARG:HH11	1.35	0.90
35:BA:1305:G:N2	35:BA:1331:G:H2'	1.86	0.90
11:AA:654(N):G:H2'	11:AA:654(O):G:O4'	1.70	0.89
11:AA:2415:G:O3'	23:AP:66:GLY:HA3	1.70	0.89
11:AA:2756:U:H1'	11:AA:2757:A:H5"	1.54	0.89
59:BZ:215:ARG:HD2	59:BZ:215:ARG:N	1.86	0.89
11:AA:2893:G:H5'	11:AA:2894:G:C5'	1.99	0.89
27:AT:78:LEU:O	27:AT:79:HIS:HD2	1.54	0.89
30:AW:29:LEU:HD23	30:AW:33:ARG:HH11	1.35	0.89
34:B2:75:ARG:HD3	34:B2:77:ARG:HG3	1.51	0.89
36:BB:209:ARG:HD3	36:BB:239:VAL:HG11	1.51	0.89
56:BV:73:A:H2'	56:BV:74:A:H5"	1.52	0.89
10:A9:25:VAL:HB	10:A9:34:GLN:HB2	1.52	0.89
9:A8:15:LYS:HD2	23:AP:65:ARG:HH22	1.37	0.89
11:AA:2645:G:H3'	11:AA:2646:C:C5'	2.01	0.89
14:AD:43:ARG:HH11	14:AD:44:ASN:ND2	1.69	0.89
35:BA:1203:C:H2'	35:BA:1204:A:H8	1.37	0.89
40:BF:67:MET:HB2	40:BF:68:PRO:HD2	1.53	0.89
23:AP:16:ARG:HB2	23:AP:16:ARG:NH1	1.88	0.89
27:AT:28:VAL:HG22	27:AT:47:GLY:N	1.86	0.89
47:BM:77:ASN:O	47:BM:81:LEU:HD23	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:315:LYS:CB	59:BZ:405:GLU:HG2	2.02	0.89
36:BB:14:GLY:O	36:BB:15:VAL:HG22	1.73	0.89
11:AA:1516:C:C2'	11:AA:1517:G:H5"	2.02	0.89
11:AA:2511:U:H4'	15:AE:124:GLY:HA2	1.53	0.89
14:AD:28:GLU:H	14:AD:29:PRO:HD2	1.37	0.89
34:B2:32:LYS:HA	34:B2:32:LYS:HE2	1.54	0.89
35:BA:1502:A:H2	35:BA:1505:G:N1	1.69	0.89
24:AQ:59:ARG:HD2	24:AQ:59:ARG:O	1.73	0.89
49:BO:17:ARG:HG3	49:BO:17:ARG:HH11	1.37	0.89
56:BW:77:A:P	56:BW:77:A:H8	1.95	0.89
59:BZ:318:ALA:HB1	59:BZ:399:VAL:O	1.72	0.89
9:A8:30:ARG:HA	9:A8:30:ARG:HE	1.35	0.89
11:AA:2762:G:H5'	11:AA:2762:G:H8	1.38	0.89
38:BD:85:LYS:HD3	38:BD:92:VAL:HG11	1.54	0.89
59:BZ:19:HIS:HD2	59:BZ:115:GLN:H	1.20	0.89
11:AA:2681:C:H5	11:AA:2725:A:H62	1.18	0.88
23:AP:9:ASN:H	23:AP:10:PRO:HD2	1.37	0.88
30:AW:27:LYS:HD3	30:AW:31:GLU:HB3	1.52	0.88
11:AA:2801(A):A:C4'	11:AA:2802:G:H5'	2.03	0.88
23:AP:147:LEU:HG	23:AP:148:LEU:H	1.36	0.88
47:BM:49:THR:HG22	47:BM:51:ALA:H	1.36	0.88
58:BY:11:C:H4'	58:BY:12:G:OP1	1.72	0.88
1:A0:10:THR:HG22	1:A0:12:ASN:H	1.38	0.88
18:AH:19:VAL:HG12	18:AH:20:ALA:H	1.37	0.88
47:BM:66:LEU:HA	47:BM:70:LEU:HD12	1.54	0.88
59:BZ:81:ASP:O	59:BZ:83:PRO:HD3	1.72	0.88
23:AP:47:ASP:HB2	23:AP:51:PHE:HB2	1.56	0.88
11:AA:27:G:N2	11:AA:512:G:H2'	1.89	0.88
35:BA:923:A:OP1	39:BE:21:ALA:HB2	1.73	0.88
59:BZ:99:MET:HE2	59:BZ:102:ALA:HB2	1.55	0.88
11:AA:2422:A:C1'	56:BW:77:A:H2	1.86	0.88
53:BS:78:ARG:HB2	53:BS:81:ARG:NH1	1.88	0.88
27:AT:91:ARG:HB3	27:AT:116:ALA:HA	1.55	0.87
7:A6:53:LYS:HD3	7:A6:54:ILE:H	1.38	0.87
14:AD:30:GLU:HG3	14:AD:63:ARG:CZ	2.04	0.87
14:AD:165:ILE:HD13	14:AD:175:LEU:HD21	1.55	0.87
27:AT:85:LYS:HB3	27:AT:85:LYS:HZ2	1.37	0.87
35:BA:1305:G:H22	35:BA:1331:G:H2'	1.37	0.87
11:AA:2629:A:H1'	11:AA:2895:U:O4	1.73	0.87
15:AE:52:LEU:HB3	15:AE:76:ARG:HB2	1.56	0.87
17:AG:85:GLY:O	17:AG:86:MET:HB3	1.74	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AO:87:ILE:HG21	22:AO:91:LEU:HA	1.55	0.87
36:BB:80:ILE:H	36:BB:80:ILE:CD1	1.87	0.87
11:AA:2472:G:H5'	11:AA:2473:U:H5"	1.56	0.87
28:AU:88:ILE:C	28:AU:90:VAL:H	1.79	0.87
32:AY:86:ARG:HH21	32:AY:95:LYS:NZ	1.73	0.87
11:AA:259:G:N2	11:AA:621:A:H8	1.71	0.87
18:AH:23:ARG:O	18:AH:24:VAL:HG23	1.74	0.87
23:AP:101:VAL:HG12	23:AP:107:LYS:H	1.36	0.87
25:AR:96:ARG:HH22	25:AR:117:VAL:HG23	1.38	0.87
1:A0:19:LYS:NZ	1:A0:41:ARG:HH22	1.73	0.87
5:A4:35:VAL:HG23	47:BM:57:ARG:HH11	1.37	0.87
12:AB:68:C:H2'	12:AB:69:G:H8	1.40	0.87
13:AC:83:ILE:HG12	13:AC:95:GLY:HA3	1.57	0.87
17:AG:44:GLY:CA	17:AG:88:ILE:HG21	2.05	0.87
26:AS:52:SER:HB2	26:AS:56:LEU:HB2	1.57	0.87
32:AY:60:PHE:HA	32:AY:62:GLU:OE2	1.74	0.87
33:AZ:115:GLY:HA2	33:AZ:174:VAL:HG13	1.57	0.87
44:BJ:23:ILE:HG23	44:BJ:85:LEU:HD22	1.56	0.87
17:AG:44:GLY:HA2	17:AG:88:ILE:HG21	1.55	0.87
54:BT:73:HIS:HB3	54:BT:74:LYS:HD3	1.57	0.87
7:A6:41:PRO:HD2	7:A6:45:LYS:HA	1.56	0.87
11:AA:654(H):G:C2'	11:AA:654(I):C:H5'	2.04	0.87
35:BA:1321:C:H5"	35:BA:1322:C:H5"	1.57	0.87
11:AA:2300:G:H1	11:AA:2316:C:H42	1.23	0.86
23:AP:23:PRO:HB2	23:AP:33:ARG:CG	2.05	0.86
36:BB:24:TRP:CZ3	36:BB:26:PRO:HA	2.09	0.86
36:BB:116:GLU:HA	36:BB:119:GLU:HB2	1.57	0.86
43:BI:10:ARG:HD3	43:BI:75:ASP:HB3	1.56	0.86
11:AA:2875:C:H4'	27:AT:5:ALA:HB3	1.57	0.86
16:AF:157:VAL:HG22	16:AF:194:MET:HG2	1.55	0.86
18:AH:85:LYS:HE3	18:AH:87:LEU:HG	1.57	0.86
23:AP:59:LEU:HA	23:AP:61:ARG:HE	1.37	0.86
38:BD:7:PRO:HB2	38:BD:10:ARG:HD2	1.57	0.86
7:A6:27:LYS:HG3	7:A6:30:THR:HB	1.57	0.86
18:AH:12:PRO:HD2	18:AH:15:VAL:HG21	1.56	0.86
28:AU:112:ARG:NH1	29:AV:46:VAL:HG11	1.89	0.86
45:BK:92:GLU:HG3	45:BK:96:ARG:NH1	1.89	0.86
21:AN:133:GLN:HG2	21:AN:134:ARG:H	1.40	0.86
46:BL:20:LYS:N	46:BL:20:LYS:HD3	1.91	0.86
14:AD:27:THR:HG23	14:AD:83:GLU:HG2	1.58	0.86
17:AG:64:THR:HG23	17:AG:66:GLN:H	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AN:67:LEU:O	21:AN:68:GLU:HB2	1.75	0.86
32:AY:87:LYS:O	32:AY:88:LYS:HB2	1.74	0.86
35:BA:265:G:H2'	35:BA:266:G:H5"	1.56	0.86
35:BA:452:A:O2'	35:BA:453:A:H5"	1.75	0.86
44:BJ:96:ILE:H	44:BJ:96:ILE:HD13	1.39	0.86
13:AC:128:GLY:CA	56:BW:57:C:H2'	2.05	0.86
28:AU:101:ARG:O	28:AU:103:PRO:HD3	1.75	0.86
35:BA:973:G:O4'	44:BJ:55:LYS:HG3	1.74	0.86
36:BB:21:ARG:HH21	36:BB:38:GLY:C	1.84	0.86
36:BB:136:VAL:O	36:BB:140:HIS:HB2	1.76	0.86
38:BD:148:VAL:HG12	38:BD:149:ALA:H	1.41	0.86
59:BZ:130:TYR:HB3	59:BZ:209:TYR:HE1	1.41	0.86
11:AA:2476:A:C2'	11:AA:2477:C:H5"	2.05	0.86
11:AA:2713:A:OP1	25:AR:14:SER:HB3	1.75	0.86
35:BA:437:U:H5"	38:BD:155:LEU:HD13	1.57	0.86
35:BA:979:C:C3'	35:BA:980:C:H5"	2.06	0.86
3:A2:22:GLU:CG	3:A2:64:LEU:HD11	2.04	0.85
5:A4:22:ILE:HD12	5:A4:22:ILE:H	1.39	0.85
16:AF:24:LEU:HB3	16:AF:25:PRO:CD	2.07	0.85
30:AW:64:MET:HE2	30:AW:109:GLU:HG3	1.58	0.85
7:A6:22:ALA:HB2	7:A6:39:TYR:CE2	2.11	0.85
11:AA:1169:G:H1	11:AA:1180:C:H42	1.25	0.85
11:AA:2126:A:H4'	11:AA:2127:G:O5'	1.76	0.85
11:AA:2298:A:H62	11:AA:2318:G:H8	1.19	0.85
12:AB:3:C:H42	12:AB:118:G:H1	1.19	0.85
18:AH:153:LYS:HD3	18:AH:153:LYS:N	1.88	0.85
37:BC:20:SER:HB2	37:BC:40:ARG:NH2	1.91	0.85
35:BA:1124:G:H5'	44:BJ:35:SER:HB2	1.58	0.85
35:BA:1305:G:C5'	55:BU:4:GLY:HA3	2.05	0.85
11:AA:1948:G:H5'	11:AA:1948:G:H8	1.39	0.85
22:AO:107:ARG:NH1	27:AT:36:GLU:HG3	1.92	0.85
28:AU:95:LEU:HD12	29:AV:11:GLN:HG3	1.59	0.85
40:BF:43:LEU:HD22	40:BF:43:LEU:H	1.41	0.85
46:BL:5:PRO:HG2	46:BL:10:LEU:HD21	1.57	0.85
7:A6:11:LEU:HD21	7:A6:51:GLU:HG2	1.58	0.85
11:AA:612:C:H2'	11:AA:613:G:C5'	2.05	0.85
11:AA:1887:C:C2'	11:AA:1888:G:H5"	2.07	0.85
15:AE:54:GLN:O	15:AE:75:VAL:HG23	1.77	0.85
25:AR:100:LEU:HD11	25:AR:113:LEU:CD1	2.05	0.85
28:AU:95:LEU:CD1	29:AV:11:GLN:HG3	2.07	0.85
32:AY:52:SER:O	32:AY:54:LYS:N	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:858:G:C6	35:BA:869:G:N7	2.44	0.85
46:BL:55:VAL:HG23	46:BL:68:ALA:O	1.75	0.85
5:A4:34:GLU:HG3	47:BM:57:ARG:HH22	1.40	0.85
35:BA:1125:U:H3	44:BJ:5:ARG:CZ	1.90	0.85
7:A6:18:ARG:HG2	7:A6:18:ARG:NH1	1.72	0.85
9:A8:50:LEU:HD12	9:A8:51:ALA:N	1.91	0.85
17:AG:117:PHE:O	17:AG:118:ARG:HG3	1.77	0.85
23:AP:121:LYS:O	23:AP:123:LEU:HD23	1.76	0.85
29:AV:19:LYS:HG2	29:AV:94:LEU:HB2	1.59	0.85
11:AA:145:G:H2'	11:AA:146:G:H5"	1.59	0.85
11:AA:1348:G:H2'	11:AA:1349:A:H5"	1.57	0.85
15:AE:24:THR:HG21	15:AE:188:VAL:CG1	2.07	0.85
18:AH:98:LEU:HD23	18:AH:125:VAL:HG23	1.57	0.85
36:BB:77:ALA:HB2	36:BB:211:ILE:HD13	1.59	0.85
59:BZ:206:ILE:O	59:BZ:210:ILE:HG22	1.77	0.85
11:AA:271(M):G:C2'	11:AA:271(N):U:H5"	2.07	0.84
24:AQ:63:LYS:HD2	33:AZ:175:VAL:HG21	1.59	0.84
25:AR:72:ASP:HB2	25:AR:75:LEU:HB2	1.57	0.84
27:AT:118:ARG:NH1	35:BA:1442(A):G:H5"	1.92	0.84
31:AX:35:THR:HG22	31:AX:37:THR:N	1.92	0.84
35:BA:539:A:H2'	35:BA:540:G:H8	1.39	0.84
14:AD:79:VAL:HG21	14:AD:111:LEU:HD11	1.59	0.84
25:AR:59:ASP:O	25:AR:61:HIS:N	2.10	0.84
29:AV:69:LYS:HB2	29:AV:88:ARG:HD3	1.58	0.84
47:BM:49:THR:HB	47:BM:52:GLU:HG3	1.56	0.84
7:A6:11:LEU:CD2	7:A6:51:GLU:HG2	2.06	0.84
9:A8:32:LEU:HD12	9:A8:36:LYS:HZ3	1.42	0.84
11:AA:2187:G:C2'	11:AA:2188:C:H5'	2.06	0.84
46:BL:45:PRO:HG3	46:BL:53:ARG:HD3	1.56	0.84
27:AT:30:VAL:HG21	27:AT:84:GLN:HG2	1.59	0.84
42:BH:83:ILE:HD12	42:BH:137:VAL:HG22	1.58	0.84
52:BR:45:SER:O	52:BR:46:GLU:HB2	1.76	0.84
7:A6:6:ARG:NH1	7:A6:6:ARG:HB3	1.92	0.84
9:A8:32:LEU:HD12	9:A8:36:LYS:NZ	1.92	0.84
11:AA:1864:U:H2'	11:AA:1865:G:H5"	1.58	0.84
18:AH:54:ARG:HH12	18:AH:62:LYS:HG3	1.42	0.84
34:B2:86:LEU:HA	34:B2:89:LEU:HD21	1.56	0.84
38:BD:187:ARG:HB3	38:BD:187:ARG:NH1	1.92	0.84
53:BS:19:VAL:HG12	53:BS:44:MET:HE2	1.59	0.84
2:A1:80:LEU:HD23	2:A1:81:LYS:H	1.41	0.84
15:AE:103:ASP:CG	15:AE:168:MET:HB2	2.02	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AU:50:ARG:NH1	29:AV:72:VAL:HG12	1.92	0.84
45:BK:92:GLU:HG3	45:BK:96:ARG:HH11	1.43	0.84
1:A0:11:ARG:HH11	1:A0:11:ARG:CB	1.90	0.84
10:A9:7:VAL:HG13	10:A9:34:GLN:HG2	1.58	0.84
11:AA:2781:A:H5"	11:AA:2782:G:H5'	1.60	0.84
22:AO:13:ASN:ND2	22:AO:97:ARG:HB2	1.93	0.84
24:AQ:134:ARG:HD2	33:AZ:122:ARG:HH21	1.42	0.84
26:AS:40:ILE:HG22	26:AS:47:THR:HG23	1.58	0.84
28:AU:92:ARG:HD3	28:AU:94:ASN:HB3	1.59	0.84
2:A1:46:LEU:HD12	2:A1:61:ARG:HD2	1.60	0.84
11:AA:1434:A:H61	11:AA:1558:A:H62	1.25	0.84
30:AW:4:LYS:HA	30:AW:106:ILE:HG22	1.58	0.84
32:AY:63:LYS:HG2	32:AY:64:GLU:H	1.42	0.84
35:BA:1199:U:H4'	44:BJ:54:PHE:CE1	2.12	0.84
56:BW:76:C:O3'	56:BW:77:A:C8	2.30	0.84
59:BZ:185:ASN:HD21	59:BZ:187:LYS:HB2	1.42	0.84
6:A5:33:CYS:HB2	6:A5:40:LYS:HE3	1.59	0.84
11:AA:141:A:H8	11:AA:1408:C:HO2'	0.88	0.84
11:AA:528:A:C2	11:AA:2042:A:H2'	2.11	0.84
11:AA:2422:A:H1'	56:BW:77:A:N1	1.92	0.84
27:AT:54:ARG:HA	27:AT:59:THR:HB	1.59	0.84
50:BP:34:GLU:OE2	50:BP:55:ARG:HD3	1.78	0.84
15:AE:69:LYS:HE2	15:AE:69:LYS:N	1.93	0.83
32:AY:7:VAL:HB	32:AY:8:LYS:CD	2.07	0.83
54:BT:48:LYS:HB3	54:BT:51:GLU:HG3	1.59	0.83
16:AF:7:TYR:HD2	16:AF:16:GLY:HA3	1.43	0.83
31:AX:50:LYS:H	31:AX:87:GLN:NE2	1.76	0.83
44:BJ:50:ILE:H	44:BJ:50:ILE:CD1	1.91	0.83
13:AC:128:GLY:HA2	56:BW:57:C:C2'	2.09	0.83
34:B2:39:VAL:HG11	34:B2:60:ILE:HG13	1.58	0.83
11:AA:2511:U:H4'	15:AE:124:GLY:CA	2.08	0.83
16:AF:22:ALA:HB1	16:AF:26:ALA:HB2	1.59	0.83
23:AP:148:LEU:O	23:AP:149:GLU:HB2	1.78	0.83
30:AW:73:ALA:HB3	30:AW:106:ILE:HD11	1.58	0.83
44:BJ:63:PHE:HZ	48:BN:45:ARG:HG3	1.43	0.83
47:BM:3:ARG:HH21	47:BM:7:VAL:HG13	1.43	0.83
59:BZ:254:GLU:HG3	59:BZ:307:PRO:HG3	1.60	0.83
35:BA:78:G:H22	35:BA:91:C:H42	1.22	0.83
35:BA:1363(A):A:H4'	35:BA:1364:U:H5"	1.57	0.83
43:BI:9:ARG:CB	43:BI:104:ARG:HH12	1.92	0.83
23:AP:23:PRO:CB	23:AP:33:ARG:HG3	2.09	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AZ:145:GLU:HG3	33:AZ:146:ILE:HG12	1.58	0.83
35:BA:1410:G:H2'	35:BA:1411:C:H6	1.42	0.83
36:BB:155:LEU:HD21	36:BB:159:PRO:HG3	1.59	0.83
50:BP:19:ILE:HD11	50:BP:73:LEU:HD13	1.59	0.83
34:B2:48:PHE:N	34:B2:48:PHE:HD1	1.75	0.83
35:BA:1171:G:H2'	35:BA:1172:C:O2	1.78	0.83
41:BG:152:ALA:O	41:BG:155:ARG:HG3	1.77	0.83
31:AX:12:VAL:HG23	31:AX:13:LEU:N	1.94	0.83
31:AX:50:LYS:N	31:AX:87:GLN:HE22	1.77	0.83
32:AY:42:VAL:HG21	32:AY:67:LEU:HD13	1.61	0.83
35:BA:218:C:H5'	35:BA:470:C:H42	1.40	0.83
38:BD:109:GLY:O	38:BD:111:ALA:N	2.11	0.83
11:AA:975:C:H4'	11:AA:975:C:OP2	1.79	0.83
11:AA:2584:U:H2'	11:AA:2585:U:H5'	1.60	0.83
59:BZ:19:HIS:CD2	59:BZ:115:GLN:HB2	2.14	0.83
32:AY:101:LYS:HG2	32:AY:102:CYS:N	1.94	0.83
35:BA:1410:G:H2'	35:BA:1411:C:C6	2.14	0.83
48:BN:29:ARG:HH11	48:BN:29:ARG:HG3	1.40	0.83
11:AA:1948:G:H5'	11:AA:1948:G:C8	2.13	0.82
22:AO:26:LYS:HD2	22:AO:37:ASP:OD1	1.79	0.82
36:BB:90:MET:HE2	36:BB:90:MET:HA	1.61	0.82
11:AA:1639:U:C2'	11:AA:1640:C:H5"	2.09	0.82
11:AA:1697:G:H3'	11:AA:1698:A:H5"	1.58	0.82
45:BK:82:VAL:HG13	45:BK:108:ILE:HA	1.61	0.82
11:AA:2192:G:H2'	11:AA:2193:G:H5"	1.61	0.82
17:AG:2:PRO:O	17:AG:3:LEU:HB2	1.80	0.82
18:AH:103:LEU:HB2	18:AH:123:PHE:CD2	2.14	0.82
26:AS:15:ARG:HH11	26:AS:15:ARG:CB	1.91	0.82
26:AS:106:ARG:HH11	26:AS:107:GLU:N	1.77	0.82
35:BA:84:U:C2'	35:BA:88:A:H5'	2.07	0.82
11:AA:2584:U:C2'	11:AA:2585:U:H5'	2.09	0.82
12:AB:65:C:H2'	12:AB:109:C:H41	1.42	0.82
16:AF:89:VAL:HG12	16:AF:90:PHE:N	1.94	0.82
27:AT:30:VAL:HG12	27:AT:44:ASP:CG	2.05	0.82
45:BK:48:ILE:HG22	45:BK:49:GLY:H	1.45	0.82
47:BM:91:ARG:HD2	47:BM:97:PRO:O	1.80	0.82
56:BW:77:A:P	56:BW:77:A:C8	2.73	0.82
11:AA:888:C:H5'	47:BM:93:ARG:HG3	1.61	0.82
11:AA:1864:U:C2'	11:AA:1865:G:H5"	2.10	0.82
16:AF:139:PHE:HB2	16:AF:166:ALA:HB1	1.59	0.82
17:AG:122:PRO:HD3	17:AG:181:ARG:HB3	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:252:GLU:HG3	59:BZ:265:THR:O	1.79	0.82
47:BM:12:ASN:HD21	47:BM:46:LYS:CB	1.92	0.82
56:BV:73:A:C2'	56:BV:74:A:H5"	2.09	0.82
14:AD:239:ARG:HG2	14:AD:239:ARG:HH11	1.45	0.82
42:BH:89:PRO:HA	42:BH:92:ARG:HH11	1.45	0.82
46:BL:25:PRO:C	46:BL:27:LEU:H	1.87	0.82
6:A5:2:ALA:N	11:AA:2015:A:H1'	1.95	0.82
11:AA:1517:G:H5'	11:AA:1517:G:H8	1.45	0.82
15:AE:51:PHE:O	15:AE:74:PRO:HB2	1.78	0.82
27:AT:33:LYS:HG3	27:AT:43:GLN:HB2	1.62	0.82
35:BA:1151:A:HO2'	35:BA:1152:A:H8	1.27	0.82
9:A8:62:LEU:HD13	11:AA:242:G:C5'	2.09	0.82
35:BA:1490:A:O2'	35:BA:1491:G:H5'	1.80	0.82
11:AA:2183:C:H2'	11:AA:2184:G:H8	1.45	0.81
24:AQ:141:GLN:NE2	33:AZ:72:ARG:HA	1.94	0.81
27:AT:89:VAL:CB	27:AT:91:ARG:HE	1.93	0.81
35:BA:1134:G:H2'	35:BA:1135:U:H5'	1.62	0.81
53:BS:16:LEU:C	53:BS:18:LYS:H	1.87	0.81
37:BC:34:LEU:HD21	37:BC:38:ARG:HE	1.45	0.81
39:BE:110:LEU:HD13	39:BE:118:ILE:HD13	1.62	0.81
40:BF:11:ASN:HB3	40:BF:14:LEU:HD23	1.61	0.81
11:AA:1053:C:H2'	11:AA:1054:A:H8	1.45	0.81
11:AA:1484:G:C2'	11:AA:1485:G:H5"	2.10	0.81
13:AC:64:LEU:HD13	13:AC:175:VAL:HG13	1.61	0.81
14:AD:70:TRP:CH2	14:AD:150:LYS:HA	2.16	0.81
16:AF:132:VAL:HG13	16:AF:133:ASN:H	1.44	0.81
17:AG:8:LYS:O	17:AG:11:TYR:HB3	1.81	0.81
17:AG:39:ILE:HG22	17:AG:157:ILE:HG12	1.63	0.81
19:AJ:26:UNK:HA	19:AJ:83:UNK:O	1.80	0.81
21:AN:18:ALA:CB	21:AN:26:LEU:HD22	2.09	0.81
21:AN:131:GLN:NE2	21:AN:133:GLN:H	1.77	0.81
24:AQ:133:ARG:HH11	24:AQ:133:ARG:CB	1.93	0.81
25:AR:2:ARG:HG2	25:AR:5:LYS:NZ	1.95	0.81
28:AU:88:ILE:HG13	28:AU:88:ILE:O	1.79	0.81
34:B2:48:PHE:HE1	34:B2:93:VAL:HG11	1.45	0.81
34:B2:130:ARG:HH11	34:B2:130:ARG:HA	1.42	0.81
58:BY:10:A:H5'	58:BY:11:C:OP2	1.81	0.81
18:AH:12:PRO:HB2	18:AH:15:VAL:HG13	1.63	0.81
21:AN:3:THR:HG22	21:AN:4:TYR:H	1.46	0.81
29:AV:39:LEU:HD12	29:AV:47:VAL:HG11	1.61	0.81
35:BA:1054:C:O2'	35:BA:1055:A:H5"	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1324:A:H4'	35:BA:1362:C:H4'	1.62	0.81
36:BB:115:LEU:HB2	36:BB:145:LEU:HD12	1.62	0.81
43:BI:114:TYR:HE2	44:BJ:60:ARG:O	1.62	0.81
11:AA:1536:C:H2'	11:AA:1537:G:H4'	1.62	0.81
12:AB:20:C:C2'	12:AB:21:G:H5"	2.11	0.81
34:B2:95:GLN:HE21	34:B2:95:GLN:HA	1.42	0.81
36:BB:47:THR:HG22	36:BB:51:LEU:CD1	2.11	0.81
36:BB:165:VAL:HG23	36:BB:166:ASP:H	1.45	0.81
42:BH:1:MET:HE2	42:BH:2:LEU:H	1.43	0.81
53:BS:41:VAL:HG12	53:BS:42:PRO:HD2	1.62	0.81
59:BZ:322:ILE:HD12	59:BZ:362:VAL:HG11	1.62	0.81
5:A4:34:GLU:HG3	47:BM:57:ARG:HH12	1.43	0.81
14:AD:35:LYS:HB3	14:AD:35:LYS:HZ2	1.46	0.81
30:AW:9:TYR:H	30:AW:102:HIS:CD2	1.99	0.81
42:BH:1:MET:HE3	42:BH:3:THR:HG23	1.62	0.81
11:AA:1718:G:H5'	11:AA:1718:G:H8	1.46	0.81
28:AU:91:ASP:OD1	28:AU:96:ALA:HB2	1.80	0.81
58:BY:40:C:H2'	58:BY:54:C:C6	2.15	0.81
11:AA:271(L):U:H5"	11:AA:271(M):G:H5'	1.63	0.81
11:AA:1826:G:H4'	14:AD:242:ARG:NH2	1.96	0.81
14:AD:24:ILE:HD13	14:AD:25:THR:N	1.95	0.81
27:AT:96:ARG:HB2	27:AT:96:ARG:HH11	1.42	0.81
18:AH:85:LYS:NZ	18:AH:132:ARG:HA	1.96	0.81
32:AY:47:LYS:HG2	32:AY:60:PHE:CZ	2.16	0.81
35:BA:1305:G:O2'	35:BA:1306:A:H8	1.63	0.81
36:BB:30:ARG:HH21	36:BB:194:PRO:HG2	1.46	0.81
11:AA:141:A:H8	11:AA:1408:C:O2'	1.63	0.81
11:AA:2580:U:H5'	15:AE:131:ALA:HB2	1.61	0.81
17:AG:67:LYS:HD3	17:AG:67:LYS:N	1.96	0.81
32:AY:86:ARG:NH2	32:AY:95:LYS:HZ3	1.79	0.81
5:A4:16:CYS:HB3	5:A4:20:ASN:O	1.80	0.80
5:A4:34:GLU:HG3	47:BM:57:ARG:NH2	1.95	0.80
17:AG:46:ALA:CB	17:AG:88:ILE:HD11	2.12	0.80
23:AP:144:GLU:N	23:AP:145:PRO:HD3	1.97	0.80
25:AR:58:GLY:HA2	25:AR:80:PHE:HE2	1.46	0.80
27:AT:66:VAL:HA	27:AT:71:GLY:HA2	1.62	0.80
11:AA:1106:G:H2'	11:AA:1107:G:O4'	1.81	0.80
14:AD:35:LYS:N	14:AD:36:PRO:HD2	1.95	0.80
34:B2:48:PHE:HD1	34:B2:48:PHE:H	1.28	0.80
34:B2:129:ARG:CA	35:BA:1397:C:H42	1.91	0.80
11:AA:2477:C:H5'	11:AA:2477:C:C6	2.13	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AP:24:GLY:HA2	23:AP:33:ARG:NH1	1.97	0.80
27:AT:61:PHE:CE1	27:AT:76:PHE:HB2	2.16	0.80
34:B2:86:LEU:HA	34:B2:89:LEU:CD2	2.11	0.80
35:BA:573:A:H5'	35:BA:573:A:H8	1.45	0.80
36:BB:200:ILE:HD12	36:BB:200:ILE:H	1.45	0.80
13:AC:124:GLY:HA2	56:BW:57:C:O2'	1.80	0.80
15:AE:38:THR:HB	15:AE:41:LYS:HG2	1.63	0.80
15:AE:197:ILE:HD11	15:AE:199:ARG:NH2	1.95	0.80
23:AP:101:VAL:HG13	23:AP:106:LEU:HD23	1.64	0.80
32:AY:10:GLY:HA2	32:AY:27:VAL:HG13	1.63	0.80
44:BJ:50:ILE:CD1	48:BN:41:ARG:HD2	2.11	0.80
18:AH:42:ARG:O	18:AH:43:VAL:HG13	1.81	0.80
21:AN:55:VAL:HG22	21:AN:126:PRO:HA	1.63	0.80
47:BM:10:PRO:O	47:BM:11:ARG:HB2	1.81	0.80
1:A0:38:VAL:HG12	1:A0:40:GLN:H	1.46	0.80
11:AA:1543:C:H3'	11:AA:1544:A:C5'	2.12	0.80
11:AA:1970:A:H5"	11:AA:1971:A:OP1	1.82	0.80
34:B2:139:ARG:HG3	34:B2:140:ALA:N	1.95	0.80
5:A4:34:GLU:HG3	47:BM:57:ARG:NH1	1.97	0.80
11:AA:528:A:N1	11:AA:2042:A:H2'	1.97	0.80
27:AT:80:SER:HB3	27:AT:81:PRO:HD3	1.61	0.80
59:BZ:228:VAL:HG11	59:BZ:298:VAL:HB	1.62	0.80
11:AA:674:G:H1'	16:AF:74:ARG:HD3	1.64	0.80
15:AE:154:LYS:O	15:AE:154:LYS:HG3	1.81	0.80
16:AF:28:ILE:HD13	16:AF:28:ILE:H	1.45	0.80
35:BA:240:C:H2'	35:BA:241:C:H6	1.45	0.80
35:BA:368:U:OP2	59:BZ:291:ARG:HD3	1.81	0.80
40:BF:87:ARG:HG2	40:BF:87:ARG:HH11	1.44	0.80
3:A2:25:VAL:HG11	3:A2:61:LEU:HD21	1.62	0.80
6:A5:40:LYS:HZ3	6:A5:46:CYS:H	1.26	0.80
23:AP:16:ARG:CD	23:AP:18:ARG:H	1.95	0.80
23:AP:83:VAL:HA	23:AP:105:LEU:HD22	1.64	0.80
32:AY:54:LYS:O	32:AY:55:TYR:HB2	1.80	0.80
9:A8:25:MET:HG3	23:AP:64:LYS:HB2	1.62	0.80
11:AA:1240:U:O2'	11:AA:1241:A:H5'	1.82	0.80
14:AD:71:ASP:HB2	14:AD:103:ARG:HH22	1.47	0.80
16:AF:184:TYR:O	16:AF:188:ARG:HG2	1.80	0.80
38:BD:59:ARG:HA	38:BD:59:ARG:HE	1.46	0.80
11:AA:139(A):G:H3'	11:AA:140:G:H8	1.48	0.79
11:AA:1066:U:C5	58:BY:56:U:H5"	2.17	0.79
28:AU:70:ARG:HA	28:AU:74:LEU:O	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:54:PHE:CE2	44:BJ:55:LYS:HD2	2.16	0.79
17:AG:6:ALA:O	17:AG:10:LYS:HB2	1.83	0.79
29:AV:39:LEU:HA	29:AV:47:VAL:CG1	2.12	0.79
7:A6:6:ARG:HB3	7:A6:6:ARG:CZ	2.11	0.79
7:A6:15:GLU:O	7:A6:17:LYS:N	2.16	0.79
11:AA:1024:G:H3'	11:AA:1025:G:H5"	1.62	0.79
11:AA:1805:U:O2	14:AD:50:THR:HB	1.82	0.79
11:AA:2068:U:H3	11:AA:2430:A:H2	1.29	0.79
13:AC:131:LEU:HD22	13:AC:136:LEU:HD12	1.64	0.79
56:BW:63:C:H2'	56:BW:64:G:C8	2.17	0.79
4:A3:8:LEU:HD22	4:A3:31:LEU:HD23	1.64	0.79
17:AG:73:ALA:HB3	17:AG:85:GLY:HA2	1.63	0.79
28:AU:90:VAL:HG12	28:AU:91:ASP:N	1.98	0.79
35:BA:1003:G:C2'	35:BA:1004:A:H4'	2.10	0.79
58:BY:84:C:C2'	58:BY:85:C:H5"	2.12	0.79
24:AQ:66:ILE:HG22	24:AQ:104:PHE:HD1	1.46	0.79
32:AY:88:LYS:HZ2	32:AY:93:GLY:HA3	1.44	0.79
47:BM:6:GLY:C	47:BM:8:GLU:H	1.90	0.79
56:BW:55:U:C3'	56:BW:56:U:H5"	2.12	0.79
56:BW:55:U:H3'	56:BW:56:U:H5"	1.65	0.79
1:A0:27:GLU:HB3	1:A0:68:GLU:HA	1.64	0.79
3:A2:38:GLN:OE1	3:A2:44:LEU:HD13	1.83	0.79
5:A4:35:VAL:HG23	47:BM:57:ARG:NH1	1.98	0.79
6:A5:3:LYS:HB2	11:AA:747:U:H3	1.46	0.79
9:A8:13:ARG:HD2	23:AP:61:ARG:HD2	1.63	0.79
11:AA:1516:C:H2'	11:AA:1517:G:H5"	1.64	0.79
11:AA:1747(A):G:H2'	11:AA:1748:G:C5'	2.05	0.79
11:AA:1766:U:H2'	11:AA:1767:C:H6	1.48	0.79
21:AN:45:ASN:HD22	21:AN:45:ASN:N	1.81	0.79
23:AP:146:VAL:HG22	23:AP:147:LEU:H	1.44	0.79
32:AY:28:LYS:NZ	32:AY:72:VAL:HG21	1.96	0.79
35:BA:299:G:H2'	35:BA:300:A:C8	2.17	0.79
6:A5:4:HIS:HB3	6:A5:5:PRO:CD	2.10	0.79
11:AA:94:C:H5'	11:AA:94(A):G:OP2	1.82	0.79
13:AC:129:ARG:HA	56:BW:20:G:H21	1.46	0.79
38:BD:100:ARG:NH1	38:BD:137:SER:HA	1.96	0.79
7:A6:45:LYS:O	7:A6:46:HIS:HB3	1.80	0.79
11:AA:654(M):C:H2'	11:AA:654(N):G:C8	2.17	0.79
11:AA:2127:G:H21	11:AA:2173:A:H8	1.28	0.79
15:AE:60:ASN:OD1	15:AE:62:PRO:HD2	1.82	0.79
15:AE:116:VAL:O	15:AE:117:MET:HB2	1.80	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AV:72:VAL:CG2	29:AV:85:LYS:HB2	2.13	0.79
32:AY:86:ARG:NH2	32:AY:95:LYS:NZ	2.30	0.79
35:BA:1251:A:H2'	35:BA:1252:A:C8	2.17	0.79
38:BD:28:SER:HB3	38:BD:29:PRO:CD	2.13	0.79
12:AB:16:G:HO2'	12:AB:17:C:H6	1.29	0.79
13:AC:28:LEU:O	13:AC:28:LEU:HD23	1.82	0.79
13:AC:94:VAL:HG12	13:AC:95:GLY:N	1.98	0.79
23:AP:85:LEU:H	23:AP:85:LEU:CD2	1.96	0.79
32:AY:86:ARG:HH21	32:AY:95:LYS:HZ3	1.29	0.79
35:BA:512:U:H2'	35:BA:513:C:H6	1.46	0.79
35:BA:1492:A:H1'	35:BA:1493:A:OP1	1.81	0.79
36:BB:163:PHE:HD1	36:BB:185:ILE:HG13	1.48	0.79
44:BJ:6:ILE:HG13	44:BJ:72:VAL:HB	1.63	0.79
44:BJ:16:LEU:HD11	44:BJ:70:ARG:HG2	1.65	0.79
11:AA:2170:A:H5"	13:AC:134:ARG:HE	1.48	0.78
13:AC:51:PRO:HA	13:AC:57:ASN:HD21	1.47	0.78
15:AE:36:ARG:HH21	15:AE:88:GLY:HA2	1.48	0.78
23:AP:17:LYS:O	23:AP:17:LYS:HG2	1.83	0.78
35:BA:437:U:OP1	38:BD:155:LEU:HD22	1.83	0.78
35:BA:973:G:H3'	35:BA:974:A:H5"	1.65	0.78
1:A0:11:ARG:HB2	1:A0:11:ARG:NH1	1.98	0.78
29:AV:1:MET:SD	29:AV:43:GLU:HG2	2.23	0.78
35:BA:1053:G:O6	35:BA:1199:U:H2'	1.83	0.78
36:BB:200:ILE:HD12	36:BB:200:ILE:N	1.97	0.78
45:BK:85:ARG:HG2	45:BK:111:ASP:O	1.83	0.78
47:BM:35:GLU:HG3	47:BM:36:LYS:H	1.48	0.78
5:A4:10:VAL:CG2	5:A4:11:PRO:HD2	2.13	0.78
6:A5:43:HIS:HD2	11:AA:2884:U:H5	1.31	0.78
11:AA:1359:A:N6	11:AA:1373:A:H1'	1.99	0.78
29:AV:24:LYS:HA	29:AV:92:THR:CG2	2.13	0.78
39:BE:50:GLU:HG3	39:BE:52:PRO:HD2	1.65	0.78
58:BY:15:C:O2'	58:BY:16:U:H5'	1.84	0.78
59:BZ:159:ASN:HD21	59:BZ:165:GLY:HA3	1.48	0.78
9:A8:50:LEU:HD12	9:A8:51:ALA:H	1.48	0.78
31:AX:12:VAL:CG2	31:AX:13:LEU:H	1.97	0.78
35:BA:1116:C:H2'	35:BA:1117:G:C5'	2.11	0.78
35:BA:1452:C:H5'	35:BA:1456:G:C2	2.19	0.78
47:BM:12:ASN:ND2	47:BM:46:LYS:HB2	1.97	0.78
47:BM:99:ARG:O	47:BM:101:GLN:HG2	1.83	0.78
11:AA:1190:G:H5'	23:AP:35:HIS:H	1.48	0.78
11:AA:1864:U:C3'	11:AA:1865:G:H5"	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AQ:62:GLY:HA2	33:AZ:116:VAL:HG21	1.66	0.78
35:BA:92:C:H2'	35:BA:93:G:H8	1.47	0.78
47:BM:35:GLU:HG3	47:BM:36:LYS:N	1.95	0.78
11:AA:733:G:N7	11:AA:761:A:C6	2.51	0.78
36:BB:30:ARG:HH21	36:BB:194:PRO:CG	1.97	0.78
52:BR:52:PRO:HB2	52:BR:54:ARG:HG3	1.66	0.78
11:AA:1658:C:OP1	15:AE:132:HIS:ND1	2.17	0.78
14:AD:6:PHE:HE1	14:AD:18:VAL:HG12	1.49	0.78
30:AW:92:ARG:NH1	30:AW:92:ARG:HB3	1.98	0.78
54:BT:50:GLU:HB2	54:BT:100:ILE:HD13	1.66	0.78
56:BW:77:A:H8	56:BW:77:A:O5'	1.66	0.78
1:A0:2:ALA:HB3	11:AA:2602:A:N1	1.99	0.78
11:AA:71:A:H5'	11:AA:71:A:C8	2.19	0.78
11:AA:2312:U:H2'	11:AA:2313:C:H5'	1.66	0.78
52:BR:25:THR:HG21	52:BR:42:ARG:HD3	1.65	0.78
8:A7:34:ARG:HD2	8:A7:39:ARG:HG3	1.65	0.78
11:AA:1066:U:H4'	11:AA:1067:A:O5'	1.84	0.78
11:AA:2032:G:H21	15:AE:146:THR:HG23	1.48	0.78
27:AT:27:THR:HG23	27:AT:28:VAL:N	1.99	0.78
35:BA:750:G:N3	49:BO:23:GLY:HA3	1.99	0.78
37:BC:64:VAL:HG21	37:BC:99:VAL:HG12	1.65	0.78
44:BJ:82:ILE:O	44:BJ:86:MET:HB3	1.83	0.78
50:BP:20:VAL:HG21	50:BP:32:TYR:CG	2.19	0.78
11:AA:1063:G:H21	20:AK:89:UNK:HA	1.46	0.78
11:AA:1541:G:H1'	11:AA:1542:A:C4	2.19	0.78
14:AD:44:ASN:ND2	14:AD:49:ILE:HG22	1.98	0.78
17:AG:71:THR:HB	17:AG:89:GLY:C	2.08	0.78
23:AP:106:LEU:O	23:AP:107:LYS:HG2	1.82	0.78
34:B2:48:PHE:HB3	34:B2:53:LEU:CA	2.14	0.78
34:B2:48:PHE:N	34:B2:48:PHE:CD1	2.47	0.78
37:BC:11:ARG:NH2	37:BC:180:ALA:HB3	1.98	0.78
47:BM:10:PRO:CB	47:BM:18:ALA:HB1	2.14	0.78
59:BZ:325:LYS:HG3	59:BZ:331:HIS:HB2	1.64	0.78
11:AA:925:C:H2'	11:AA:926:A:H5"	1.65	0.77
12:AB:30:C:H1'	12:AB:57:A:H61	1.48	0.77
16:AF:152:GLU:OE1	16:AF:191:ARG:HD2	1.84	0.77
17:AG:111:LEU:O	17:AG:114:ILE:HG22	1.84	0.77
18:AH:44:VAL:HG12	18:AH:45:VAL:H	1.47	0.77
27:AT:83:ILE:O	27:AT:84:GLN:O	2.02	0.77
35:BA:1391:U:H2'	35:BA:1392:G:C8	2.19	0.77
47:BM:84:ILE:HG13	53:BS:66:MET:SD	2.23	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:782:A:N1	14:AD:226:MET:HE2	1.99	0.77
11:AA:2476:A:H2'	11:AA:2477:C:H5"	1.65	0.77
15:AE:14:ILE:HD11	15:AE:173:VAL:CG1	2.13	0.77
16:AF:198:ALA:O	16:AF:201:VAL:HG12	1.85	0.77
17:AG:39:ILE:HD11	17:AG:60:LEU:HD11	1.66	0.77
25:AR:100:LEU:HD11	25:AR:113:LEU:HD13	1.64	0.77
27:AT:29:ARG:HE	27:AT:86:ILE:CG2	1.96	0.77
35:BA:1277:C:HO2'	35:BA:1279:A:H8	1.32	0.77
40:BF:98:LEU:H	40:BF:98:LEU:HD12	1.49	0.77
6:A5:20:ARG:HA	6:A5:23:HIS:ND1	1.99	0.77
13:AC:124:GLY:O	56:BW:58:A:H5'	1.84	0.77
13:AC:131:LEU:HB2	56:BW:57:C:C4	2.19	0.77
37:BC:112:SER:HB3	37:BC:115:LEU:HD12	1.67	0.77
1:A0:27:GLU:OE1	11:AA:856:C:H1'	1.84	0.77
14:AD:109:ASP:O	14:AD:111:LEU:N	2.16	0.77
21:AN:10:GLU:CD	21:AN:11:PRO:HD2	2.08	0.77
31:AX:12:VAL:HG23	31:AX:13:LEU:H	1.47	0.77
34:B2:8:ARG:CD	34:B2:8:ARG:H	1.96	0.77
36:BB:121:LEU:HD23	36:BB:139:LYS:HZ3	1.48	0.77
27:AT:28:VAL:HG22	27:AT:46:GLU:CA	2.15	0.77
35:BA:1190:G:OP1	37:BC:4:LYS:HA	1.83	0.77
39:BE:148:VAL:HG21	42:BH:107:LEU:HD13	1.66	0.77
59:BZ:172:ARG:O	59:BZ:198:LYS:HD2	1.84	0.77
14:AD:73:VAL:HG13	14:AD:120:GLY:HA2	1.66	0.77
17:AG:105:LYS:HE3	17:AG:143:GLU:OE2	1.84	0.77
22:AO:104:ARG:NH2	27:AT:33:LYS:HE3	1.99	0.77
34:B2:139:ARG:O	34:B2:143:GLU:HG2	1.85	0.77
59:BZ:315:LYS:HD3	59:BZ:354:ARG:HH12	1.50	0.77
8:A7:34:ARG:HH11	8:A7:34:ARG:HG3	1.49	0.77
17:AG:52:ILE:HB	17:AG:54:GLU:OE2	1.84	0.77
35:BA:562:C:H41	35:BA:884:U:H2'	1.48	0.77
37:BC:46:GLU:O	37:BC:47:LEU:HB2	1.83	0.77
37:BC:66:VAL:O	37:BC:66:VAL:HG12	1.85	0.77
41:BG:144:MET:O	41:BG:147:ALA:HB3	1.85	0.77
6:A5:3:LYS:HD3	11:AA:747:U:P	2.25	0.77
9:A8:33:ASN:CG	9:A8:34:TRP:H	1.92	0.77
11:AA:2393:A:H4'	23:AP:61:ARG:O	1.85	0.77
35:BA:443:C:H2'	35:BA:444:C:H6	1.48	0.77
35:BA:1016:A:H2'	35:BA:1017:G:O4'	1.85	0.77
9:A8:15:LYS:HD3	23:AP:65:ARG:HH12	1.49	0.77
13:AC:137:LEU:HD22	56:BW:57:C:C2	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:370:C:O2'	35:BA:371:G:H5'	1.84	0.77
35:BA:1443:G:H22	35:BA:1460:A:H1'	1.50	0.77
46:BL:32:PHE:HB3	46:BL:84:LEU:HD21	1.67	0.77
11:AA:1222:C:H2'	11:AA:1223:G:H5"	1.65	0.77
11:AA:1779:U:H5	11:AA:1784:A:N7	1.82	0.77
11:AA:1947:C:C3'	11:AA:1948:G:H5"	2.14	0.77
14:AD:8:PRO:HB3	14:AD:14:ARG:HB3	1.65	0.77
14:AD:76:PRO:HG2	14:AD:98:VAL:HG21	1.67	0.77
17:AG:96:ARG:N	17:AG:99:MET:HE2	2.00	0.77
23:AP:16:ARG:CZ	23:AP:18:ARG:HG2	2.14	0.77
25:AR:7:GLY:O	25:AR:8:ARG:HB2	1.85	0.77
29:AV:21:ARG:HB3	29:AV:91:TYR:HB2	1.66	0.77
32:AY:8:LYS:HB2	32:AY:28:LYS:HZ1	1.51	0.77
38:BD:103:ASN:OD1	38:BD:114:ARG:NE	2.16	0.77
43:BI:48:GLU:HB3	43:BI:101:PHE:HE2	1.47	0.77
47:BM:40:ASN:HD22	47:BM:43:THR:HG23	1.50	0.77
7:A6:27:LYS:CG	7:A6:30:THR:HB	2.15	0.76
11:AA:1639:U:H2'	11:AA:1640:C:H5"	1.66	0.76
13:AC:212:VAL:O	13:AC:224:ILE:HG12	1.86	0.76
54:BT:45:GLN:HB3	54:BT:91:LEU:HD13	1.65	0.76
11:AA:747:U:O2'	30:AW:88:ARG:HG3	1.85	0.76
14:AD:28:GLU:H	14:AD:29:PRO:CD	1.98	0.76
17:AG:142:PRO:HG2	17:AG:143:GLU:HG2	1.66	0.76
34:B2:138:ARG:HH21	35:BA:506:G:H4'	1.49	0.76
49:BO:56:LEU:O	49:BO:60:VAL:HG23	1.84	0.76
49:BO:82:ILE:HD13	49:BO:82:ILE:C	2.11	0.76
59:BZ:98:GLN:HE22	59:BZ:285:ASN:HD21	1.32	0.76
59:BZ:254:GLU:O	59:BZ:256:VAL:HG23	1.84	0.76
11:AA:1188:U:O2'	11:AA:1189:A:H5'	1.86	0.76
22:AO:47:ILE:HG23	22:AO:48:PRO:HD2	1.64	0.76
32:AY:46:LYS:HG2	32:AY:47:LYS:N	1.99	0.76
52:BR:58:LEU:HB3	52:BR:62:GLU:HB2	1.66	0.76
59:BZ:299:GLU:N	59:BZ:302:GLN:NE2	2.33	0.76
11:AA:613:G:H5'	11:AA:613:G:H8	1.51	0.76
11:AA:2781:A:C5'	11:AA:2782:G:H5'	2.14	0.76
31:AX:10:ALA:HB1	31:AX:11:PRO:HD2	1.67	0.76
34:B2:86:LEU:HD12	34:B2:89:LEU:HD21	1.66	0.76
34:B2:138:ARG:NH2	35:BA:506:G:H4'	2.00	0.76
35:BA:189(H):G:HO2'	35:BA:189(I):G:H8	1.31	0.76
35:BA:1054:C:H6	35:BA:1196:U:H3	1.33	0.76
37:BC:58:GLU:H	37:BC:65:ALA:CB	1.97	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:944:G:H5'	11:AA:945:A:O5'	1.84	0.76
16:AF:89:VAL:HG12	16:AF:90:PHE:H	1.51	0.76
30:AW:6:ILE:HG12	30:AW:104:THR:HB	1.66	0.76
38:BD:23:GLY:O	38:BD:27:TYR:HB2	1.85	0.76
41:BG:151:TYR:OH	45:BK:54:ARG:HD3	1.85	0.76
47:BM:23:TYR:HB3	47:BM:67:GLU:HB3	1.66	0.76
6:A5:24:ALA:O	6:A5:25:LEU:HB2	1.85	0.76
13:AC:75:LEU:HB3	13:AC:93:TYR:HD2	1.51	0.76
32:AY:81:LYS:NZ	32:AY:99:CYS:SG	2.57	0.76
2:A1:4:VAL:HG23	2:A1:11:ARG:HG2	1.67	0.76
3:A2:45:SER:O	3:A2:46:GLN:NE2	2.19	0.76
11:AA:195:A:OP1	23:AP:46:LYS:HE2	1.85	0.76
11:AA:1494:A:C2'	11:AA:1495:A:H5"	2.14	0.76
21:AN:28:THR:HG23	21:AN:29:LYS:N	2.00	0.76
48:BN:12:ARG:C	48:BN:14:PRO:HD2	2.11	0.76
7:A6:8:LYS:O	7:A6:9:LEU:HB3	1.84	0.76
11:AA:535:C:O2'	11:AA:536:A:H5'	1.86	0.76
11:AA:1087:G:H5'	11:AA:1088:A:OP2	1.86	0.76
34:B2:75:ARG:HG2	34:B2:77:ARG:CZ	2.15	0.76
41:BG:16:LEU:CD1	43:BI:42:ARG:HA	2.15	0.76
47:BM:90:LEU:O	47:BM:92:HIS:N	2.18	0.76
11:AA:926:A:H5'	11:AA:926:A:H8	1.50	0.76
11:AA:1301:A:O2'	11:AA:1302:A:C2'	2.34	0.76
17:AG:122:PRO:CD	17:AG:181:ARG:HB3	2.15	0.76
23:AP:58:THR:C	23:AP:61:ARG:HE	1.93	0.76
11:AA:1914:A:O2'	11:AA:1915:U:H5"	1.86	0.76
11:AA:2842:G:O2'	11:AA:2843:G:H5'	1.86	0.76
23:AP:59:LEU:CA	23:AP:61:ARG:HE	1.97	0.76
36:BB:44:LEU:HD12	36:BB:44:LEU:N	2.01	0.76
59:BZ:140:MET:CA	59:BZ:140:MET:HE2	2.15	0.76
3:A2:11:GLU:C	3:A2:13:ALA:H	1.94	0.75
3:A2:55:ARG:HH21	11:AA:75:G:H4'	1.51	0.75
16:AF:132:VAL:HG13	16:AF:133:ASN:N	2.01	0.75
17:AG:167:GLU:CD	17:AG:167:GLU:H	1.93	0.75
35:BA:433:C:H2'	35:BA:434:U:H6	1.50	0.75
35:BA:1002:G:H2'	35:BA:1003:G:C8	2.21	0.75
50:BP:5:ARG:HH12	50:BP:28:ARG:HA	1.49	0.75
6:A5:2:ALA:HA	11:AA:2015:A:O2'	1.86	0.75
13:AC:51:PRO:HG3	13:AC:168:THR:O	1.85	0.75
14:AD:24:ILE:O	14:AD:25:THR:O	2.03	0.75
22:AO:17:ARG:HE	22:AO:47:ILE:HD11	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AZ:125:LEU:HD11	33:AZ:164:ALA:HB3	1.67	0.75
34:B2:48:PHE:CE1	34:B2:93:VAL:HG11	2.20	0.75
35:BA:189(D):C:H1'	35:BA:189(H):G:N1	2.01	0.75
13:AC:54:SER:HB2	56:BW:63:C:H4'	1.68	0.75
17:AG:83:ARG:HB2	17:AG:84:LYS:HD2	1.68	0.75
21:AN:30:ILE:O	21:AN:34:LEU:HB2	1.86	0.75
25:AR:96:ARG:HD3	25:AR:98:LEU:HD11	1.68	0.75
35:BA:294:U:H2'	35:BA:295:C:C6	2.21	0.75
42:BH:26:VAL:HG13	42:BH:59:LEU:HB2	1.68	0.75
46:BL:55:VAL:CG2	46:BL:67:THR:HG22	2.16	0.75
59:BZ:314:THR:OG1	59:BZ:405:GLU:HG3	1.87	0.75
9:A8:28:GLY:O	9:A8:32:LEU:HD23	1.86	0.75
11:AA:1434:A:H61	11:AA:1558:A:N6	1.85	0.75
11:AA:2312:U:H4'	17:AG:71:THR:CG2	2.17	0.75
27:AT:19:LEU:HD22	27:AT:85:LYS:CD	2.17	0.75
28:AU:92:ARG:HD2	28:AU:95:LEU:HD12	1.68	0.75
32:AY:87:LYS:HG3	32:AY:88:LYS:H	1.51	0.75
36:BB:163:PHE:HA	36:BB:185:ILE:HG13	1.67	0.75
2:A1:8:SER:OG	2:A1:10:LYS:HG3	1.87	0.75
6:A5:51:TYR:HB2	6:A5:54:GLY:HA3	1.68	0.75
17:AG:44:GLY:N	17:AG:88:ILE:HG21	2.02	0.75
33:AZ:17:ALA:HA	33:AZ:20:ARG:HG2	1.69	0.75
36:BB:180:LEU:O	36:BB:181:PHE:HB2	1.86	0.75
11:AA:2121:G:H1'	13:AC:167:LYS:NZ	2.02	0.75
35:BA:1152:A:O2'	35:BA:1153:C:H5'	1.86	0.75
36:BB:80:ILE:HD12	36:BB:80:ILE:N	1.96	0.75
38:BD:148:VAL:HG12	38:BD:149:ALA:N	2.01	0.75
17:AG:46:ALA:HB3	17:AG:88:ILE:HD11	1.69	0.75
17:AG:112:PRO:C	17:AG:114:ILE:H	1.95	0.75
21:AN:89:LYS:O	21:AN:93:THR:HG22	1.86	0.75
25:AR:34:ILE:HB	25:AR:114:VAL:HG23	1.68	0.75
26:AS:101:LEU:O	26:AS:101:LEU:HD12	1.87	0.75
28:AU:92:ARG:CZ	29:AV:11:GLN:H	1.99	0.75
30:AW:37:ARG:HG3	30:AW:37:ARG:NH1	2.00	0.75
38:BD:165:MET:HE3	38:BD:176:LEU:HD21	1.67	0.75
11:AA:1023:U:H2'	11:AA:1024:G:H5'	1.68	0.75
11:AA:2631:G:N2	15:AE:61:ARG:HH12	1.85	0.75
14:AD:248:SER:HB2	14:AD:249:PRO:HD2	1.67	0.75
15:AE:4:ILE:HD13	15:AE:28:ALA:HB1	1.69	0.75
17:AG:76:SER:CB	17:AG:83:ARG:HB3	2.17	0.75
21:AN:1:MET:HE2	21:AN:2:LYS:N	2.02	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AR:84:ALA:HB3	25:AR:85:PRO:HD3	1.69	0.75
27:AT:91:ARG:CB	27:AT:116:ALA:HA	2.15	0.75
27:AT:118:ARG:CZ	35:BA:1442(B):A:C2	2.70	0.75
39:BE:96:PRO:HA	39:BE:117:ASP:OD2	1.87	0.75
11:AA:1021:A:N6	11:AA:1141:U:H3	1.80	0.75
11:AA:1222:C:C2'	11:AA:1223:G:H5"	2.15	0.75
14:AD:91:ARG:HG2	14:AD:91:ARG:HH11	1.51	0.75
35:BA:294:U:H2'	35:BA:295:C:H6	1.52	0.75
39:BE:101:ILE:O	39:BE:120:THR:HB	1.86	0.75
44:BJ:64:GLU:O	48:BN:56:VAL:HA	1.85	0.75
50:BP:6:LEU:HD23	50:BP:17:TYR:CB	2.17	0.75
56:BV:4:G:HO2'	56:BV:5:G:H8	1.32	0.75
14:AD:26:LYS:O	14:AD:27:THR:HG22	1.87	0.74
23:AP:97:PRO:O	23:AP:98:GLU:HB3	1.86	0.74
32:AY:59:GLY:O	32:AY:60:PHE:HD1	1.68	0.74
38:BD:149:ALA:O	38:BD:153:ARG:HG3	1.86	0.74
41:BG:26:PHE:O	41:BG:30:ILE:HG12	1.86	0.74
11:AA:268:C:H42	11:AA:424:G:H1	1.35	0.74
11:AA:298:G:H5'	11:AA:299:A:OP1	1.87	0.74
11:AA:2591:C:H2'	11:AA:2592:G:C8	2.22	0.74
17:AG:113:ARG:HE	17:AG:113:ARG:HA	1.52	0.74
21:AN:58:ASP:C	21:AN:60:ILE:H	1.93	0.74
29:AV:47:VAL:HG12	29:AV:52:VAL:N	2.01	0.74
11:AA:590:A:H2'	11:AA:591:C:C6	2.22	0.74
12:AB:7:G:H3'	12:AB:8:U:C5'	2.14	0.74
23:AP:23:PRO:HB2	23:AP:33:ARG:CD	2.18	0.74
25:AR:87:TYR:O	25:AR:89:ASP:N	2.20	0.74
32:AY:26:LYS:HG2	32:AY:27:VAL:H	1.51	0.74
35:BA:524:G:H2'	35:BA:525:C:C6	2.21	0.74
37:BC:58:GLU:HB2	37:BC:65:ALA:HB2	1.68	0.74
51:BQ:27:PHE:CE1	51:BQ:36:ILE:HD11	2.22	0.74
59:BZ:145:GLU:HG2	59:BZ:149:LEU:HB2	1.70	0.74
10:A9:1:MET:HB2	10:A9:34:GLN:HE22	1.52	0.74
11:AA:774:A:H2	11:AA:787:U:HO2'	1.35	0.74
11:AA:1066:U:H5	58:BY:56:U:H5"	1.51	0.74
11:AA:1396:U:O2	11:AA:1396:U:H2'	1.86	0.74
11:AA:1639:U:O2'	11:AA:1640:C:H5"	1.88	0.74
14:AD:43:ARG:HB3	14:AD:54:ARG:HB2	1.69	0.74
15:AE:36:ARG:NH2	15:AE:88:GLY:HA2	2.01	0.74
17:AG:15:VAL:O	17:AG:19:LEU:HG	1.85	0.74
18:AH:67:LEU:HG	18:AH:71:LEU:CD1	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AP:62:LEU:HD23	23:AP:62:LEU:N	2.03	0.74
23:AP:64:LYS:O	23:AP:66:GLY:N	2.20	0.74
37:BC:83:ARG:O	37:BC:87:LEU:HG	1.88	0.74
48:BN:12:ARG:HH11	48:BN:12:ARG:CB	2.00	0.74
48:BN:12:ARG:HH11	48:BN:12:ARG:HB3	1.51	0.74
48:BN:22:THR:CB	48:BN:33:VAL:HG21	2.17	0.74
7:A6:35:GLU:HB3	7:A6:51:GLU:HG3	1.69	0.74
11:AA:27:G:H22	11:AA:512:G:H2'	1.50	0.74
11:AA:2645:G:C3'	11:AA:2646:C:H5'	2.13	0.74
13:AC:13:LYS:O	13:AC:28:LEU:HD11	1.87	0.74
14:AD:158:ALA:HB3	14:AD:161:THR:CG2	2.18	0.74
21:AN:55:VAL:HG22	21:AN:56:ASN:H	1.52	0.74
27:AT:28:VAL:HG13	27:AT:46:GLU:HA	1.69	0.74
32:AY:49:VAL:O	32:AY:50:ARG:HB2	1.87	0.74
35:BA:973:G:H1'	44:BJ:55:LYS:HE2	1.70	0.74
35:BA:1301:U:H3'	35:BA:1302:U:H5"	1.69	0.74
35:BA:1490:A:C2'	35:BA:1491:G:H5'	2.16	0.74
3:A2:65:ASN:HB3	3:A2:69:ARG:NH2	2.03	0.74
11:AA:332:A:O2'	11:AA:334:C:OP2	2.05	0.74
11:AA:1047:G:H2'	11:AA:1110:G:H21	1.51	0.74
17:AG:102:PHE:CE2	17:AG:106:LEU:HD22	2.23	0.74
33:AZ:155:LEU:N	33:AZ:155:LEU:HD23	2.03	0.74
38:BD:170:VAL:HG21	38:BD:176:LEU:HD22	1.70	0.74
11:AA:181:A:H5'	11:AA:181:A:H8	1.52	0.74
11:AA:633:A:H5"	23:AP:77:ARG:NH1	2.03	0.74
11:AA:2110:G:N2	11:AA:2178:C:H41	1.85	0.74
15:AE:69:LYS:C	15:AE:71:GLY:H	1.96	0.74
27:AT:50:ILE:HG23	27:AT:99:LEU:HD12	1.69	0.74
29:AV:38:LEU:O	29:AV:39:LEU:HD13	1.87	0.74
35:BA:78:G:H22	35:BA:91:C:N4	1.86	0.74
35:BA:436:C:O2'	38:BD:157:LEU:HD22	1.88	0.74
35:BA:991:U:O2	35:BA:991:U:H2'	1.88	0.74
35:BA:1264:C:O2'	35:BA:1265:G:H5'	1.87	0.74
39:BE:63:ARG:HA	39:BE:66:MET:HE2	1.70	0.74
43:BI:122:ALA:HB1	43:BI:123:PRO:HD2	1.67	0.74
59:BZ:375:ILE:HD12	59:BZ:376:LYS:N	2.02	0.74
4:A3:17:LYS:HG2	11:AA:969:U:OP1	1.88	0.74
6:A5:4:HIS:CB	6:A5:5:PRO:HD3	2.15	0.74
11:AA:1654:A:P	25:AR:3:HIS:HB2	2.28	0.74
11:AA:2184:G:H2'	11:AA:2185:C:C1'	2.17	0.74
14:AD:35:LYS:O	14:AD:37:LEU:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:134:A:H61	50:BP:25:ARG:HH12	1.34	0.74
35:BA:509:A:H5'	38:BD:54:TYR:HD2	1.52	0.74
36:BB:22:LYS:HE2	36:BB:22:LYS:HA	1.68	0.74
36:BB:124:SER:OG	36:BB:125:PRO:HD2	1.88	0.74
43:BI:48:GLU:HB3	43:BI:101:PHE:CE2	2.22	0.74
1:A0:26:TYR:HE2	11:AA:857:C:H1'	1.51	0.74
11:AA:89:G:H3'	11:AA:90:U:C5'	2.18	0.74
11:AA:958:U:H5"	24:AQ:14:ARG:CD	2.18	0.74
16:AF:5:ALA:HB3	16:AF:18:ARG:O	1.87	0.74
16:AF:148:LEU:HD23	16:AF:191:ARG:NH1	2.02	0.74
21:AN:134:ARG:H	21:AN:135:PRO:HD3	1.53	0.74
23:AP:146:VAL:O	23:AP:148:LEU:HG	1.87	0.74
23:AP:147:LEU:HG	23:AP:148:LEU:N	2.03	0.74
27:AT:27:THR:HG23	27:AT:28:VAL:H	1.51	0.74
35:BA:1369:C:H2'	35:BA:1370:G:C8	2.23	0.74
47:BM:3:ARG:HG2	47:BM:9:ILE:HG12	1.69	0.74
47:BM:19:LEU:HB3	47:BM:25:ILE:HG21	1.70	0.74
7:A6:15:GLU:OE1	7:A6:18:ARG:NE	2.21	0.74
11:AA:2657:A:H2'	11:AA:2658:C:H5'	1.68	0.74
18:AH:89:ILE:HG13	18:AH:89:ILE:O	1.87	0.74
25:AR:28:LEU:HD23	25:AR:28:LEU:C	2.13	0.74
25:AR:96:ARG:NH2	25:AR:117:VAL:HG23	2.03	0.74
27:AT:39:ARG:H	27:AT:39:ARG:HD2	1.53	0.74
27:AT:109:GLU:HG2	27:AT:112:ARG:CZ	2.18	0.74
32:AY:76:CYS:SG	32:AY:77:PRO:HD2	2.28	0.74
35:BA:375:U:OP1	50:BP:69:THR:HG21	1.88	0.74
15:AE:4:ILE:HD11	15:AE:28:ALA:O	1.88	0.73
39:BE:33:VAL:HG12	39:BE:112:LEU:HD12	1.69	0.73
6:A5:2:ALA:HA	11:AA:2015:A:C1'	2.17	0.73
11:AA:310:A:OP1	32:AY:17:SER:O	2.06	0.73
11:AA:2348:U:O2'	11:AA:2349:G:H5'	1.87	0.73
13:AC:215:THR:HB	13:AC:221:SER:HA	1.70	0.73
17:AG:76:SER:HB3	17:AG:83:ARG:HB3	1.69	0.73
35:BA:1250:A:H2'	35:BA:1251:A:C8	2.22	0.73
39:BE:147:ASP:HA	39:BE:150:ARG:HB3	1.69	0.73
59:BZ:130:TYR:HB3	59:BZ:209:TYR:CE1	2.23	0.73
1:A0:43:THR:O	1:A0:43:THR:HG23	1.88	0.73
11:AA:389:G:N1	23:AP:71:VAL:HG12	2.00	0.73
11:AA:2461:C:H2'	11:AA:2462:U:H6	1.53	0.73
14:AD:76:PRO:HG2	14:AD:98:VAL:CG2	2.18	0.73
27:AT:32:TYR:CG	27:AT:81:PRO:HB2	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:979:C:H3'	35:BA:980:C:C5'	2.17	0.73
35:BA:1347:G:N2	35:BA:1373:G:H2'	2.03	0.73
36:BB:47:THR:HG22	36:BB:51:LEU:HD11	1.68	0.73
36:BB:72:GLY:HA2	36:BB:165:VAL:HG22	1.69	0.73
46:BL:27:LEU:HD13	46:BL:28:LYS:H	1.53	0.73
2:A1:67:ILE:N	2:A1:68:PRO:HD2	2.04	0.73
7:A6:44:ARG:O	7:A6:45:LYS:HD2	1.87	0.73
11:AA:145:G:C2'	11:AA:146:G:H5"	2.17	0.73
21:AN:39:ARG:C	21:AN:41:ASP:H	1.96	0.73
35:BA:250:A:H4'	35:BA:251:G:O5'	1.87	0.73
35:BA:1324:A:C4'	35:BA:1362:C:H4'	2.18	0.73
38:BD:26:CYS:SG	60:BD:1001:ZN:ZN	1.75	0.73
50:BP:21:VAL:O	50:BP:33:ILE:HG12	1.89	0.73
11:AA:1902:C:H4'	14:AD:244:ARG:HA	1.71	0.73
17:AG:114:ILE:HG23	17:AG:114:ILE:O	1.89	0.73
26:AS:46:VAL:HG12	26:AS:47:THR:H	1.53	0.73
35:BA:633:G:H5'	35:BA:634:C:OP2	1.87	0.73
35:BA:1058:G:H2'	35:BA:1059:C:C6	2.22	0.73
38:BD:3:ARG:O	38:BD:5:ILE:HG13	1.89	0.73
53:BS:61:TYR:O	53:BS:62:ILE:HB	1.87	0.73
35:BA:1411:C:O2	35:BA:1490:A:H2	1.71	0.73
37:BC:15:THR:HG21	37:BC:181:ASN:HA	1.71	0.73
43:BI:40:LEU:HD11	43:BI:70:LYS:HG2	1.71	0.73
59:BZ:215:ARG:HG2	59:BZ:216:ASP:H	1.53	0.73
2:A1:29:GLY:O	2:A1:30:VAL:HG22	1.88	0.73
11:AA:71:A:H5'	11:AA:71:A:H8	1.52	0.73
11:AA:2036:C:H6	11:AA:2036:C:H5'	1.54	0.73
11:AA:2461:C:H2'	11:AA:2462:U:C6	2.24	0.73
15:AE:34:VAL:HG13	15:AE:48:GLN:HG2	1.68	0.73
17:AG:56:ALA:HB2	17:AG:153:ARG:HH21	1.53	0.73
22:AO:4:PRO:O	22:AO:5:GLN:HB2	1.87	0.73
22:AO:86:ILE:HG22	22:AO:94:ARG:HG3	1.70	0.73
27:AT:28:VAL:CG2	27:AT:46:GLU:HA	2.18	0.73
34:B2:17:LEU:HD22	34:B2:17:LEU:N	2.04	0.73
12:AB:17:C:H42	12:AB:68:C:H42	1.36	0.73
27:AT:89:VAL:HB	27:AT:91:ARG:HE	1.53	0.73
29:AV:39:LEU:O	29:AV:40:LEU:HB2	1.88	0.73
35:BA:508:C:P	38:BD:209:ARG:HH12	2.11	0.73
35:BA:1270:C:O2'	35:BA:1271:G:H5'	1.89	0.73
35:BA:1452:C:H5'	35:BA:1456:G:N3	2.04	0.73
40:BF:3:ARG:HH12	40:BF:66:GLU:HB2	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BQ:26:GLN:HE21	51:BQ:37:LYS:HE2	1.54	0.73
59:BZ:101:GLY:HA3	59:BZ:210:ILE:CD1	2.14	0.73
3:A2:46:GLN:OE1	11:AA:95:G:H4'	1.89	0.73
9:A8:29:LYS:HG2	9:A8:44:LYS:HG2	1.69	0.73
11:AA:886:C:O2'	11:AA:887:A:H4'	1.88	0.73
11:AA:2291:U:H3	11:AA:2341:G:H1	1.34	0.73
13:AC:187:ASP:HA	13:AC:190:ARG:NH1	2.04	0.73
23:AP:30:THR:CG2	23:AP:31:ALA:N	2.52	0.73
27:AT:12:SER:C	27:AT:13:ARG:HE	1.97	0.73
34:B2:39:VAL:CG1	34:B2:60:ILE:HG13	2.19	0.73
35:BA:1346:A:N1	35:BA:1374:A:H5"	2.02	0.73
38:BD:155:LEU:HB2	38:BD:158:ILE:HG12	1.71	0.73
43:BI:47:LEU:N	43:BI:47:LEU:HD12	2.04	0.73
11:AA:84:A:H5'	32:AY:9:LYS:HD2	1.71	0.73
16:AF:125:LEU:HD23	16:AF:125:LEU:H	1.54	0.73
17:AG:124:SER:HB3	17:AG:131:TYR:CE1	2.24	0.73
17:AG:161:THR:OG1	17:AG:163:ALA:HB2	1.88	0.73
23:AP:99:LEU:HD12	23:AP:102:ARG:NH2	2.04	0.73
27:AT:50:ILE:HA	27:AT:99:LEU:CD1	2.19	0.73
33:AZ:126:VAL:HG12	33:AZ:163:LEU:CB	2.17	0.73
38:BD:13:ARG:HD2	38:BD:38:TYR:O	1.89	0.73
43:BI:53:VAL:HG11	43:BI:92:TYR:CE2	2.24	0.73
44:BJ:49:VAL:O	44:BJ:60:ARG:HB3	1.89	0.73
46:BL:55:VAL:HG21	46:BL:67:THR:HG22	1.70	0.73
54:BT:10:LEU:HD12	54:BT:11:SER:H	1.50	0.73
6:A5:44:THR:HG21	25:AR:101:ALA:CB	2.13	0.72
11:AA:761:A:C8	11:AA:761:A:O5'	2.42	0.72
11:AA:1884:A:H2'	11:AA:1885:A:H5"	1.68	0.72
11:AA:2312:U:H4'	17:AG:71:THR:HG21	1.70	0.72
15:AE:167:VAL:HG22	15:AE:170:LEU:HD11	1.68	0.72
22:AO:1:MET:HE2	22:AO:32:TYR:CE2	2.23	0.72
22:AO:71:ARG:HH11	22:AO:71:ARG:HG3	1.54	0.72
32:AY:86:ARG:HD2	32:AY:88:LYS:HD2	1.71	0.72
40:BF:91:VAL:HG11	52:BR:72:ARG:NH1	2.04	0.72
59:BZ:239:THR:HG22	59:BZ:287:GLY:HA2	1.70	0.72
1:A0:20:ARG:HD3	11:AA:2356:C:O3'	1.89	0.72
7:A6:15:GLU:OE1	7:A6:18:ARG:CZ	2.37	0.72
11:AA:197:A:H8	11:AA:197:A:H5'	1.54	0.72
11:AA:848:G:H2'	11:AA:849:A:C8	2.24	0.72
11:AA:2779:U:H1'	11:AA:2781:A:C5	2.24	0.72
16:AF:154:VAL:HG22	16:AF:191:ARG:HB3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:19:LEU:HD22	27:AT:85:LYS:HD3	1.71	0.72
27:AT:28:VAL:HG21	27:AT:46:GLU:OE2	1.89	0.72
28:AU:92:ARG:NH2	29:AV:10:LYS:HA	2.03	0.72
37:BC:86:VAL:O	37:BC:89:GLU:HB3	1.90	0.72
49:BO:82:ILE:HG12	49:BO:87:ILE:HB	1.71	0.72
56:BV:22:A:H61	56:BV:47:G:H2'	1.53	0.72
11:AA:31:C:H2'	11:AA:32:C:C5'	2.08	0.72
11:AA:1141:U:H2'	21:AN:63:THR:CG2	2.19	0.72
13:AC:54:SER:HB2	56:BW:63:C:C5'	2.18	0.72
13:AC:138:PRO:HD3	56:BW:57:C:C5	2.23	0.72
21:AN:25:ARG:HG2	21:AN:25:ARG:HH11	1.54	0.72
27:AT:38:ASN:C	27:AT:38:ASN:HD22	1.97	0.72
41:BG:113:GLU:HB2	41:BG:119:ARG:HG2	1.70	0.72
11:AA:1141:U:H2'	21:AN:63:THR:HG21	1.71	0.72
11:AA:1803:A:O3'	14:AD:259:THR:CG2	2.35	0.72
13:AC:138:PRO:HD3	56:BW:57:C:C6	2.24	0.72
27:AT:28:VAL:HG22	27:AT:46:GLU:C	2.14	0.72
44:BJ:4:ILE:CB	44:BJ:74:ILE:HD11	2.13	0.72
1:A0:56:ASP:O	1:A0:57:PHE:HB2	1.88	0.72
11:AA:272(H):C:C2'	11:AA:272(I):U:H5"	2.20	0.72
16:AF:8:GLN:HB3	16:AF:126:VAL:HA	1.72	0.72
20:AK:80:UNK:C	20:AK:82:UNK:H	2.02	0.72
28:AU:3:ARG:NH1	28:AU:5:LYS:HB3	2.03	0.72
28:AU:90:VAL:HG21	29:AV:47:VAL:HG23	1.72	0.72
48:BN:4:LYS:HD2	48:BN:7:ILE:HD11	1.72	0.72
51:BQ:86:GLU:O	51:BQ:90:ILE:HG12	1.89	0.72
11:AA:654(O):G:H2'	11:AA:654(P):C:C6	2.25	0.72
11:AA:1543:C:H3'	11:AA:1544:A:H5"	1.70	0.72
11:AA:2245:U:H5'	11:AA:2246:G:H5'	1.72	0.72
14:AD:131:LEU:HB2	14:AD:136:ILE:HD11	1.72	0.72
15:AE:7:VAL:HG12	15:AE:51:PHE:HE2	1.55	0.72
22:AO:112:MET:HA	22:AO:112:MET:HE3	1.70	0.72
26:AS:42:ASP:O	26:AS:43:GLU:HB3	1.89	0.72
35:BA:677:U:H3	35:BA:713:G:H22	1.37	0.72
36:BB:18:GLY:HA3	36:BB:41:ILE:HA	1.69	0.72
36:BB:95:GLN:HG3	36:BB:147:LYS:O	1.89	0.72
46:BL:33:ARG:HG2	46:BL:60:LEU:HD12	1.72	0.72
53:BS:58:VAL:HG11	53:BS:75:ALA:CB	2.20	0.72
11:AA:848:G:H5'	11:AA:848:G:H8	1.54	0.72
11:AA:1192:G:O2'	11:AA:1193:G:H5'	1.89	0.72
11:AA:1367:A:H2'	11:AA:1368:G:H5'	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AP:23:PRO:O	23:AP:33:ARG:HD2	1.89	0.72
27:AT:42:ILE:HD13	27:AT:83:ILE:HD11	1.72	0.72
28:AU:108:GLU:O	28:AU:112:ARG:HG2	1.89	0.72
29:AV:79:VAL:O	29:AV:80:GLN:HB2	1.89	0.72
33:AZ:108:PRO:HA	33:AZ:141:VAL:CG1	2.20	0.72
33:AZ:132:ASN:C	33:AZ:134:PRO:HD3	2.15	0.72
36:BB:18:GLY:HA2	36:BB:42:ILE:HG22	1.70	0.72
44:BJ:48:THR:HG23	44:BJ:62:HIS:ND1	2.04	0.72
9:A8:33:ASN:CG	9:A8:34:TRP:N	2.48	0.72
11:AA:2110:G:H22	11:AA:2178:C:H41	1.36	0.72
22:AO:104:ARG:NE	27:AT:33:LYS:HE3	2.04	0.72
30:AW:12:ILE:HB	30:AW:42:ARG:HH12	1.55	0.72
34:B2:24:ILE:HD12	34:B2:24:ILE:N	2.05	0.72
35:BA:240:C:H2'	35:BA:241:C:C6	2.24	0.72
35:BA:512:U:H2'	35:BA:513:C:C6	2.24	0.72
35:BA:975:A:H5'	35:BA:975:A:H8	1.53	0.72
48:BN:19:ARG:O	48:BN:20:ALA:O	2.07	0.72
6:A5:40:LYS:NZ	6:A5:46:CYS:H	1.87	0.72
11:AA:654(L):G:H2'	11:AA:654(M):C:H4'	1.71	0.72
11:AA:1494:A:H3'	11:AA:1494:A:N3	2.05	0.72
12:AB:56:G:H4'	12:AB:57:A:O5'	1.89	0.72
32:AY:39:VAL:HG12	32:AY:40:GLU:H	1.53	0.72
56:BW:55:U:H3'	56:BW:56:U:C5'	2.19	0.72
58:BY:65:G:H1	58:BY:75:C:N4	1.81	0.72
1:A0:23:VAL:HG22	1:A0:38:VAL:HG22	1.72	0.72
1:A0:70:GLN:HE21	1:A0:80:HIS:HE2	1.34	0.72
7:A6:16:CYS:SG	7:A6:48:VAL:HG22	2.29	0.72
8:A7:11:LYS:HE2	11:AA:686:G:H5"	1.72	0.72
11:AA:2833:G:H3'	11:AA:2834:G:H5'	1.70	0.72
16:AF:3:GLU:O	16:AF:24:LEU:HG	1.90	0.72
26:AS:15:ARG:O	26:AS:18:ILE:HG13	1.88	0.72
27:AT:13:ARG:NE	27:AT:13:ARG:HA	2.05	0.72
27:AT:61:PHE:HE1	27:AT:76:PHE:HB2	1.52	0.72
28:AU:92:ARG:NH2	29:AV:11:GLN:H	1.88	0.72
54:BT:89:ARG:HD2	54:BT:104:LEU:HD11	1.70	0.72
59:BZ:222:LEU:HG	59:BZ:303:VAL:HG11	1.70	0.72
11:AA:336:C:H5"	32:AY:7:VAL:HG11	1.71	0.71
11:AA:1187:G:H5"	29:AV:81:TYR:CE2	2.25	0.71
11:AA:1301:A:H4'	11:AA:1302:A:OP1	1.88	0.71
13:AC:213:TYR:OH	13:AC:223:ARG:HD2	1.90	0.71
16:AF:22:ALA:HB1	16:AF:26:ALA:CB	2.18	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AO:20:MET:HE3	22:AO:44:LYS:HE3	1.72	0.71
38:BD:145:GLU:CG	38:BD:184:LYS:HG2	2.19	0.71
47:BM:93:ARG:HD2	47:BM:93:ARG:N	2.03	0.71
51:BQ:76:LEU:HD12	51:BQ:77:VAL:H	1.55	0.71
58:BY:54:C:O2'	58:BY:55:U:H5'	1.90	0.71
11:AA:2121:G:H1'	13:AC:167:LYS:HZ3	1.55	0.71
13:AC:45:ALA:HB2	13:AC:212:VAL:HA	1.72	0.71
13:AC:175:VAL:HG12	13:AC:188:ASN:HB3	1.72	0.71
14:AD:43:ARG:NH1	14:AD:44:ASN:ND2	2.29	0.71
16:AF:192:LEU:HD23	16:AF:192:LEU:C	2.15	0.71
23:AP:108:LYS:C	23:AP:110:TYR:H	1.98	0.71
32:AY:69:ALA:O	32:AY:72:VAL:HG22	1.89	0.71
33:AZ:28:MET:CE	33:AZ:59:LEU:HD12	2.13	0.71
34:B2:85:GLU:O	34:B2:89:LEU:HD23	1.90	0.71
38:BD:19:LEU:O	38:BD:26:CYS:SG	2.47	0.71
48:BN:3:ARG:HG2	48:BN:3:ARG:O	1.90	0.71
48:BN:22:THR:HB	48:BN:33:VAL:HG21	1.72	0.71
49:BO:35:ARG:NH2	49:BO:59:MET:HE2	2.05	0.71
51:BQ:59:ILE:CG2	51:BQ:71:PHE:HB3	2.20	0.71
11:AA:1053:C:H2'	11:AA:1054:A:C8	2.25	0.71
11:AA:2379:G:H2'	11:AA:2380:C:C6	2.25	0.71
35:BA:1203:C:H2'	35:BA:1204:A:C8	2.25	0.71
35:BA:1316:G:H4'	48:BN:18:VAL:HG13	1.72	0.71
44:BJ:63:PHE:N	44:BJ:63:PHE:CD1	2.58	0.71
45:BK:32:ILE:HD12	45:BK:72:ALA:HB2	1.72	0.71
46:BL:113:ARG:HB3	46:BL:122:THR:HG21	1.72	0.71
58:BY:82:C:H2'	58:BY:83:U:H6	1.53	0.71
11:AA:2512:C:H4'	15:AE:122:PHE:CE2	2.25	0.71
27:AT:23:ARG:O	27:AT:25:GLY:N	2.22	0.71
27:AT:42:ILE:CD1	27:AT:83:ILE:HD11	2.20	0.71
32:AY:7:VAL:CB	32:AY:8:LYS:HD2	2.19	0.71
56:BV:73:A:H2'	56:BV:74:A:C5'	2.20	0.71
11:AA:2305:A:H61	17:AG:43:LEU:HD13	1.55	0.71
13:AC:87:GLU:HG2	13:AC:94:VAL:HG21	1.71	0.71
16:AF:25:PRO:HB3	16:AF:119:ARG:HB2	1.72	0.71
21:AN:73:THR:HG23	21:AN:82:LEU:CD1	2.21	0.71
30:AW:4:LYS:HD3	30:AW:6:ILE:HD11	1.70	0.71
34:B2:24:ILE:HB	34:B2:26:LEU:CD2	2.20	0.71
34:B2:92:LYS:C	34:B2:98:LEU:HD11	2.15	0.71
54:BT:72:LEU:CD1	54:BT:80:ARG:HE	2.03	0.71
11:AA:2189:U:H2'	11:AA:2190:G:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:129:ARG:CZ	27:AT:131:ALA:HB3	2.21	0.71
32:AY:8:LYS:HD2	32:AY:8:LYS:N	2.04	0.71
32:AY:50:ARG:HG3	32:AY:56:PRO:O	1.89	0.71
34:B2:17:LEU:HD22	34:B2:17:LEU:H	1.55	0.71
38:BD:120:LEU:O	38:BD:126:ILE:HD13	1.91	0.71
39:BE:147:ASP:HA	39:BE:150:ARG:HH11	1.54	0.71
44:BJ:6:ILE:CG1	44:BJ:72:VAL:HB	2.21	0.71
44:BJ:23:ILE:O	44:BJ:23:ILE:HG22	1.90	0.71
44:BJ:30:SER:HB2	44:BJ:84:GLN:NE2	2.04	0.71
47:BM:120:LYS:HE3	47:BM:121:LYS:H	1.56	0.71
54:BT:86:ARG:O	54:BT:90:GLN:HG2	1.89	0.71
59:BZ:215:ARG:NH1	59:BZ:215:ARG:HB3	2.04	0.71
8:A7:8:ASN:C	8:A7:8:ASN:HD22	1.94	0.71
27:AT:33:LYS:HZ1	27:AT:43:GLN:HE21	1.37	0.71
35:BA:1003:G:H2'	35:BA:1004:A:C4'	2.17	0.71
36:BB:114:ARG:O	36:BB:118:LEU:HG	1.89	0.71
38:BD:107:ARG:HH21	38:BD:194:LEU:HD12	1.56	0.71
43:BI:83:ARG:O	43:BI:86:VAL:HG12	1.89	0.71
9:A8:52:LYS:N	9:A8:53:PRO:HD2	2.05	0.71
11:AA:2314:C:O2'	11:AA:2315:G:H5'	1.90	0.71
13:AC:185:LEU:O	13:AC:189:ILE:HG13	1.89	0.71
32:AY:10:GLY:CA	32:AY:27:VAL:HG13	2.20	0.71
32:AY:46:LYS:H	32:AY:62:GLU:HG2	1.54	0.71
37:BC:76:VAL:HG23	37:BC:77:ILE:HG13	1.73	0.71
38:BD:36:ARG:HA	38:BD:38:TYR:CE1	2.26	0.71
42:BH:1:MET:HE2	42:BH:2:LEU:N	2.05	0.71
59:BZ:27:LEU:O	59:BZ:30:ALA:HB3	1.91	0.71
59:BZ:215:ARG:HB3	59:BZ:215:ARG:HH11	1.55	0.71
9:A8:33:ASN:HD22	11:AA:2419:U:H5"	1.56	0.71
11:AA:744:G:OP1	15:AE:132:HIS:HB3	1.91	0.71
13:AC:68:LEU:O	13:AC:177:LYS:HG2	1.90	0.71
15:AE:55:ASN:ND2	15:AE:58:ARG:HH11	1.88	0.71
27:AT:91:ARG:HA	27:AT:117:ASP:N	2.03	0.71
33:AZ:146:ILE:HA	33:AZ:174:VAL:HG12	1.71	0.71
34:B2:46:ALA:HB2	34:B2:55:LEU:CD1	2.21	0.71
43:BI:52:ALA:HB1	43:BI:95:LYS:HB2	1.73	0.71
58:BY:73:U:H5"	58:BY:74:C:H5	1.56	0.71
7:A6:19:ARG:CG	7:A6:20:ASN:H	2.03	0.71
11:AA:2219:G:C2'	11:AA:2220:G:H5'	2.21	0.71
15:AE:201:THR:OG1	15:AE:202:LYS:N	2.24	0.71
17:AG:131:TYR:HB3	17:AG:159:VAL:CG1	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AP:46:LYS:HB3	23:AP:52:GLU:HG2	1.73	0.71
28:AU:13:LYS:HD3	28:AU:13:LYS:N	2.05	0.71
28:AU:90:VAL:HG21	29:AV:47:VAL:CG2	2.21	0.71
35:BA:1189:C:H5"	37:BC:5:ILE:HG21	1.73	0.71
5:A4:14:ILE:HG13	5:A4:31:ILE:HB	1.72	0.70
11:AA:686:G:N2	11:AA:788:A:H61	1.89	0.70
11:AA:888:C:C5'	47:BM:93:ARG:HG3	2.21	0.70
11:AA:1174:A:OP1	11:AA:1175:U:H5"	1.90	0.70
13:AC:30:LYS:HB3	13:AC:30:LYS:HZ2	1.56	0.70
14:AD:161:THR:O	14:AD:196:VAL:HG23	1.91	0.70
17:AG:9:ARG:NH1	17:AG:9:ARG:HB3	2.06	0.70
27:AT:39:ARG:H	27:AT:39:ARG:CD	2.04	0.70
27:AT:91:ARG:O	27:AT:117:ASP:HB2	1.90	0.70
31:AX:12:VAL:CB	31:AX:17:ALA:HB1	2.20	0.70
33:AZ:19:ARG:C	33:AZ:21:ALA:H	1.97	0.70
34:B2:52:GLU:HB2	34:B2:54:TYR:HE1	1.55	0.70
35:BA:405:U:H3'	35:BA:406:G:H5'	1.71	0.70
35:BA:882:C:O2'	35:BA:883:C:H5'	1.91	0.70
35:BA:1054:C:H6	35:BA:1196:U:N3	1.88	0.70
37:BC:64:VAL:HB	37:BC:99:VAL:HA	1.72	0.70
40:BF:97:PHE:O	52:BR:31:LEU:HD23	1.91	0.70
52:BR:53:ARG:C	52:BR:55:ARG:H	1.99	0.70
59:BZ:140:MET:HE2	59:BZ:140:MET:HA	1.71	0.70
11:AA:1603:A:H5'	11:AA:1603:A:H8	1.55	0.70
13:AC:40:THR:HG22	13:AC:41:VAL:N	2.03	0.70
13:AC:100:ILE:HG23	13:AC:127:MET:HG3	1.74	0.70
24:AQ:133:ARG:HG2	24:AQ:134:ARG:N	2.06	0.70
29:AV:31:ALA:O	29:AV:60:GLU:HG3	1.91	0.70
35:BA:539:A:H2'	35:BA:540:G:C8	2.24	0.70
35:BA:1498:U:H4'	35:BA:1519:A:C2	2.26	0.70
6:A5:29:THR:HG21	11:AA:2815:C:H5'	1.73	0.70
11:AA:142:A:H8	11:AA:1595:G:H21	1.38	0.70
11:AA:655:A:C4'	11:AA:656:G:H5'	2.14	0.70
11:AA:2184:G:H2'	11:AA:2185:C:H1'	1.71	0.70
22:AO:104:ARG:CZ	27:AT:33:LYS:HE3	2.21	0.70
23:AP:23:PRO:C	23:AP:33:ARG:CZ	2.64	0.70
27:AT:109:GLU:HG2	27:AT:112:ARG:NH2	2.06	0.70
28:AU:95:LEU:HD11	29:AV:11:GLN:O	1.91	0.70
35:BA:1059:C:H2'	35:BA:1060:C:H6	1.56	0.70
36:BB:114:ARG:NH1	36:BB:118:LEU:HD21	2.05	0.70
50:BP:39:TYR:CZ	50:BP:41:PRO:HA	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:315:LYS:HD3	59:BZ:354:ARG:NH1	2.06	0.70
11:AA:914:C:H2'	11:AA:915:C:H5'	1.74	0.70
44:BJ:32:ALA:HB1	44:BJ:75:ILE:HG13	1.73	0.70
47:BM:88:ARG:HG3	47:BM:98:VAL:CG1	2.21	0.70
59:BZ:327:GLU:CB	62:BZ:1002:KIR:H121	2.20	0.70
11:AA:1223:G:H5'	11:AA:1223:G:H8	1.56	0.70
11:AA:2179:C:H5"	11:AA:2180:U:OP1	1.90	0.70
22:AO:104:ARG:HH21	27:AT:33:LYS:HE3	1.56	0.70
34:B2:130:ARG:HG3	34:B2:131:GLU:H	1.55	0.70
35:BA:1030:C:H2'	35:BA:1030(A):G:H5'	1.71	0.70
36:BB:118:LEU:HB2	36:BB:142:LEU:HD12	1.74	0.70
39:BE:20:GLN:O	39:BE:22:GLY:N	2.24	0.70
50:BP:8:ARG:HG2	50:BP:8:ARG:HH11	1.55	0.70
59:BZ:354:ARG:HB2	59:BZ:371:THR:HB	1.72	0.70
1:A0:7:LEU:CD2	24:AQ:85:LYS:HG3	2.20	0.70
5:A4:34:GLU:HG3	47:BM:57:ARG:CZ	2.22	0.70
9:A8:30:ARG:O	9:A8:31:HIS:HB3	1.90	0.70
11:AA:1286:A:H2'	11:AA:1288:U:OP2	1.90	0.70
11:AA:1332:G:N2	11:AA:1609:A:O2'	2.24	0.70
11:AA:2287:A:N6	11:AA:2344:U:H3	1.86	0.70
12:AB:40:U:H3'	12:AB:41:U:H5"	1.72	0.70
13:AC:47:LEU:HD11	13:AC:171:ILE:HG22	1.73	0.70
21:AN:40:PRO:HB3	28:AU:68:ALA:HB2	1.73	0.70
25:AR:100:LEU:HD22	25:AR:112:ALA:HA	1.73	0.70
27:AT:3:ARG:HH11	27:AT:6:LEU:HD13	1.56	0.70
27:AT:27:THR:HA	27:AT:87:ASP:HB2	1.73	0.70
35:BA:547:A:H4'	35:BA:548:G:O5'	1.91	0.70
35:BA:562:C:N4	35:BA:884:U:H2'	2.06	0.70
39:BE:87:SER:HB3	39:BE:131:ILE:HD13	1.73	0.70
41:BG:20:ASP:HB3	41:BG:23:VAL:HG23	1.74	0.70
50:BP:40:ASP:HB3	50:BP:48:TRP:HB2	1.74	0.70
59:BZ:323:LEU:H	59:BZ:323:LEU:CD1	2.05	0.70
11:AA:622:G:O2'	11:AA:623:G:H5'	1.92	0.70
11:AA:943:U:OP2	23:AP:38:GLN:CD	2.34	0.70
11:AA:1064:C:H2'	11:AA:1065:U:H5"	1.71	0.70
11:AA:2146:C:H4'	11:AA:2147:G:C5	2.27	0.70
16:AF:9:ILE:HA	16:AF:13:SER:O	1.92	0.70
18:AH:52:VAL:HB	18:AH:69:ARG:CD	2.14	0.70
21:AN:65:LYS:NZ	21:AN:65:LYS:HB3	2.07	0.70
35:BA:64:G:H4'	35:BA:65:U:H5"	1.74	0.70
35:BA:982:U:H4'	35:BA:983:A:O5'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:120:THR:CG2	39:BE:121:LYS:N	2.54	0.70
4:A3:13:ILE:O	4:A3:13:ILE:HG22	1.91	0.70
11:AA:1012:U:O4	21:AN:28:THR:HG21	1.91	0.70
11:AA:1598:C:H5'	31:AX:36:LYS:HG3	1.73	0.70
34:B2:59:TYR:HB2	34:B2:74:ARG:HH11	1.56	0.70
35:BA:973:G:O3'	48:BN:41:ARG:NH1	2.24	0.70
35:BA:1321:C:H3'	35:BA:1322:C:H5"	1.74	0.70
38:BD:4:TYR:O	38:BD:5:ILE:HB	1.91	0.70
11:AA:614(A):U:H4'	11:AA:614(B):G:H5"	1.74	0.70
11:AA:2298:A:H2'	11:AA:2299:G:O4'	1.91	0.70
13:AC:100:ILE:O	13:AC:104:LEU:HD23	1.92	0.70
14:AD:13:ARG:NH1	14:AD:16:MET:SD	2.65	0.70
16:AF:6:VAL:HG12	16:AF:7:TYR:N	2.02	0.70
16:AF:157:VAL:CG2	16:AF:194:MET:HG2	2.22	0.70
26:AS:30:ARG:HD3	26:AS:97:ARG:HG2	1.73	0.70
26:AS:56:LEU:O	26:AS:56:LEU:HD23	1.92	0.70
29:AV:19:LYS:NZ	29:AV:20:LEU:H	1.89	0.70
32:AY:39:VAL:HG12	32:AY:40:GLU:N	2.06	0.70
35:BA:407:G:H2'	35:BA:408:A:H8	1.57	0.70
35:BA:1280:A:O4'	44:BJ:41:PRO:HG3	1.92	0.70
35:BA:1356:G:H2'	35:BA:1357:A:C8	2.26	0.70
43:BI:10:ARG:CD	43:BI:75:ASP:HB3	2.22	0.70
3:A2:35:LEU:CD1	3:A2:50:ILE:HG13	2.21	0.70
9:A8:51:ALA:N	9:A8:53:PRO:HD2	2.07	0.70
11:AA:649:G:H2'	11:AA:650:C:C6	2.27	0.70
11:AA:1047:G:N2	11:AA:1110:G:H2'	2.07	0.70
16:AF:3:GLU:O	16:AF:19:GLU:HG3	1.91	0.70
17:AG:39:ILE:CD1	17:AG:60:LEU:HD11	2.21	0.70
25:AR:4:LEU:HD12	25:AR:6:SER:O	1.90	0.70
27:AT:50:ILE:HG23	27:AT:99:LEU:O	1.91	0.70
27:AT:50:ILE:HD11	27:AT:64:ARG:CB	2.22	0.70
32:AY:52:SER:C	32:AY:54:LYS:H	1.99	0.70
32:AY:79:CYS:SG	32:AY:80:GLY:N	2.65	0.70
36:BB:61:LEU:O	36:BB:64:ARG:HG2	1.92	0.70
39:BE:34:VAL:HG12	39:BE:62:ALA:HB1	1.74	0.70
45:BK:59:TYR:CE2	45:BK:63:LEU:HD11	2.27	0.70
11:AA:1131:G:H21	21:AN:73:THR:HG21	1.57	0.69
12:AB:24:G:H4'	12:AB:25:A:C8	2.26	0.69
12:AB:34:U:H2'	12:AB:44:G:O6	1.92	0.69
17:AG:9:ARG:HB3	17:AG:9:ARG:HH11	1.57	0.69
24:AQ:55:VAL:HG22	24:AQ:56:ARG:N	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AR:2:ARG:NH1	25:AR:2:ARG:HG3	2.07	0.69
27:AT:60:THR:HG22	27:AT:77:PRO:HA	1.74	0.69
43:BI:26:VAL:HG13	43:BI:61:ALA:HB3	1.72	0.69
56:BW:60:A:H2'	56:BW:61:U:H5'	1.74	0.69
5:A4:43:TYR:OH	5:A4:46:GLN:HB2	1.91	0.69
9:A8:24:ALA:O	9:A8:46:ARG:HA	1.91	0.69
16:AF:168:ARG:HG3	16:AF:175:THR:CG2	2.19	0.69
17:AG:38:VAL:HG13	17:AG:93:THR:HA	1.73	0.69
17:AG:172:LEU:C	17:AG:172:LEU:HD23	2.17	0.69
21:AN:70:LYS:HD3	21:AN:87:LEU:CD2	2.22	0.69
22:AO:107:ARG:HH12	27:AT:35:LYS:HB2	1.56	0.69
28:AU:8:VAL:CG2	28:AU:11:ARG:HH21	2.03	0.69
34:B2:95:GLN:HE21	34:B2:95:GLN:CA	2.05	0.69
35:BA:377:G:OP1	50:BP:3:LYS:HD3	1.91	0.69
35:BA:436:C:H4'	38:BD:157:LEU:CD1	2.22	0.69
35:BA:542:G:O2'	35:BA:543:C:H5'	1.91	0.69
35:BA:722:A:H2'	35:BA:722:A:N3	2.07	0.69
35:BA:1258:G:O2'	35:BA:1259:C:H5'	1.92	0.69
35:BA:1282:C:O2'	35:BA:1283:G:H5'	1.92	0.69
36:BB:98:LEU:O	36:BB:101:MET:HG3	1.91	0.69
37:BC:114:PRO:O	37:BC:118:GLN:HG3	1.92	0.69
42:BH:116:LYS:HD2	42:BH:129:VAL:HG11	1.74	0.69
43:BI:53:VAL:HG13	43:BI:95:LYS:CE	2.18	0.69
46:BL:20:LYS:HD3	46:BL:20:LYS:H	1.54	0.69
49:BO:87:ILE:HG22	49:BO:88:ARG:N	2.08	0.69
4:A3:29:ARG:HH11	4:A3:29:ARG:HG3	1.57	0.69
11:AA:621:A:H2'	11:AA:622:G:H5'	1.74	0.69
14:AD:210:GLY:O	14:AD:211:ARG:HB3	1.90	0.69
16:AF:64:ILE:HG12	16:AF:65:TRP:CD1	2.27	0.69
32:AY:7:VAL:HG11	32:AY:8:LYS:HZ2	1.57	0.69
35:BA:332:G:OP2	54:BT:10:LEU:HD23	1.92	0.69
36:BB:21:ARG:HB3	36:BB:39:ILE:HG23	1.73	0.69
46:BL:24:VAL:O	46:BL:24:VAL:HG12	1.92	0.69
50:BP:39:TYR:OH	50:BP:41:PRO:HA	1.91	0.69
2:A1:41:ARG:HH22	11:AA:1365:A:H5"	1.57	0.69
3:A2:64:LEU:HD23	3:A2:64:LEU:O	1.91	0.69
11:AA:1065:U:O2'	11:AA:1066:U:H5"	1.92	0.69
11:AA:2472:G:H5'	11:AA:2473:U:C5'	2.22	0.69
11:AA:2491:U:C5'	11:AA:2570:G:H5"	2.21	0.69
11:AA:2884:U:H2'	11:AA:2885:C:H5'	1.74	0.69
14:AD:101:GLU:OE2	14:AD:103:ARG:HD3	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:32:TYR:CD2	27:AT:81:PRO:HB2	2.27	0.69
35:BA:189(H):G:O2'	35:BA:189(I):G:H8	1.73	0.69
36:BB:7:VAL:HG13	36:BB:11:LEU:HD12	1.74	0.69
59:BZ:68:VAL:HG23	59:BZ:79:HIS:HB3	1.72	0.69
11:AA:32:C:H6	11:AA:32:C:H5'	1.56	0.69
11:AA:2506:U:H6	11:AA:2506:U:H5'	1.58	0.69
16:AF:28:ILE:HG21	16:AF:116:ASP:HB2	1.74	0.69
21:AN:48:MET:HE3	21:AN:48:MET:C	2.17	0.69
25:AR:48:VAL:O	25:AR:52:ILE:HG12	1.91	0.69
35:BA:723:U:O2'	35:BA:724:G:H5'	1.92	0.69
11:AA:1049:C:O2	11:AA:1113:U:H4'	1.93	0.69
11:AA:1665:A:C2'	11:AA:1666:G:H5'	2.22	0.69
11:AA:2206:G:N2	11:AA:2207:G:H5'	2.07	0.69
11:AA:2807:G:H3'	11:AA:2808:U:H5"	1.73	0.69
23:AP:101:VAL:CG1	23:AP:106:LEU:HD23	2.21	0.69
32:AY:8:LYS:HB2	32:AY:28:LYS:NZ	2.08	0.69
35:BA:1256:A:H2	35:BA:1277:C:C4	2.11	0.69
39:BE:51:VAL:HB	39:BE:52:PRO:HD3	1.73	0.69
48:BN:27:CYS:SG	48:BN:29:ARG:HB2	2.33	0.69
11:AA:197:A:H5'	11:AA:197:A:C8	2.27	0.69
11:AA:2632:A:N3	15:AE:61:ARG:NH1	2.41	0.69
11:AA:2691:C:H5'	11:AA:2691:C:H6	1.58	0.69
14:AD:181:GLU:HA	14:AD:272:ALA:O	1.92	0.69
32:AY:62:GLU:H	32:AY:62:GLU:CD	2.00	0.69
35:BA:1097:C:O2'	35:BA:1098:C:H5'	1.91	0.69
39:BE:12:LEU:CD1	39:BE:31:LEU:HB3	2.22	0.69
9:A8:15:LYS:CD	23:AP:65:ARG:HH12	2.05	0.69
9:A8:30:ARG:HA	9:A8:30:ARG:NE	2.06	0.69
11:AA:606:U:H4'	11:AA:658:C:H4'	1.73	0.69
11:AA:1019:U:O2'	11:AA:1021:A:H2	1.70	0.69
11:AA:1062:G:N2	11:AA:1063:G:H1'	2.08	0.69
11:AA:1914:A:H2'	11:AA:1915:U:C5'	2.19	0.69
13:AC:138:PRO:CD	56:BW:57:C:C6	2.75	0.69
17:AG:151:ALA:HB3	17:AG:153:ARG:NH1	2.07	0.69
22:AO:87:ILE:CG2	22:AO:91:LEU:HA	2.23	0.69
23:AP:84:ASN:HA	23:AP:115:LEU:O	1.93	0.69
27:AT:10:VAL:O	27:AT:13:ARG:HG2	1.92	0.69
34:B2:139:ARG:HG3	34:B2:140:ALA:H	1.56	0.69
35:BA:664:G:H22	35:BA:741:G:H1	1.40	0.69
41:BG:65:ALA:HB1	41:BG:127:ALA:HB3	1.75	0.69
42:BH:7:ALA:HB2	42:BH:85:ARG:HD3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:120:THR:OG1	42:BH:123:GLU:HG3	1.92	0.69
51:BQ:59:ILE:HG22	51:BQ:71:PHE:CD1	2.27	0.69
2:A1:11:ARG:HB3	2:A1:11:ARG:NH1	2.08	0.69
3:A2:33:MET:HE2	31:AX:5:TYR:HD2	1.57	0.69
11:AA:1270:C:H5"	11:AA:1271:G:H5'	1.74	0.69
11:AA:2892:A:N6	11:AA:2893:G:H21	1.90	0.69
13:AC:56:GLN:HA	13:AC:201:PRO:CB	2.23	0.69
17:AG:11:TYR:OH	17:AG:33:ARG:HB3	1.92	0.69
26:AS:46:VAL:HG12	26:AS:47:THR:N	2.08	0.69
27:AT:78:LEU:O	27:AT:79:HIS:CD2	2.44	0.69
49:BO:17:ARG:HG3	49:BO:17:ARG:NH1	2.05	0.69
11:AA:1453:U:H5'	25:AR:63:ARG:NE	2.07	0.69
11:AA:1540:U:H3'	11:AA:1541:G:H3'	1.74	0.69
11:AA:2506:U:H5'	11:AA:2506:U:C6	2.28	0.69
17:AG:52:ILE:H	17:AG:52:ILE:CD1	1.99	0.69
21:AN:25:ARG:HH11	21:AN:25:ARG:CG	2.05	0.69
22:AO:1:MET:HB3	22:AO:32:TYR:HD2	1.58	0.69
27:AT:89:VAL:HG21	27:AT:91:ARG:NH2	2.08	0.69
11:AA:2147:G:H2'	11:AA:2148:G:H5'	1.75	0.68
15:AE:81:ILE:HG22	15:AE:81:ILE:O	1.94	0.68
29:AV:38:LEU:C	29:AV:39:LEU:HD13	2.18	0.68
32:AY:60:PHE:O	32:AY:61:ILE:HG13	1.93	0.68
35:BA:197:A:C6	35:BA:221:C:H4'	2.28	0.68
38:BD:73:ARG:O	38:BD:77:ASN:HB2	1.94	0.68
41:BG:7:ALA:O	41:BG:8:GLU:HB3	1.92	0.68
43:BI:110:GLU:HG2	43:BI:113:LYS:NZ	2.07	0.68
46:BL:68:ALA:CB	46:BL:85:ILE:HD11	2.23	0.68
48:BN:41:ARG:HG2	48:BN:42:ILE:N	2.08	0.68
11:AA:925:C:C2'	11:AA:926:A:H5"	2.23	0.68
11:AA:1038:C:H3'	11:AA:1039:G:H5"	1.75	0.68
11:AA:1516:C:H2'	11:AA:1517:G:C5'	2.23	0.68
11:AA:2789:C:H1'	11:AA:2892:A:C2	2.27	0.68
11:AA:2875:C:H4'	27:AT:5:ALA:CB	2.22	0.68
13:AC:140:PRO:HD3	13:AC:145:VAL:HG21	1.74	0.68
15:AE:116:VAL:HG22	15:AE:122:PHE:CG	2.29	0.68
16:AF:124:LEU:O	16:AF:193:VAL:HA	1.94	0.68
30:AW:10:VAL:O	30:AW:11:ARG:CB	2.40	0.68
35:BA:194:C:H2'	35:BA:195:A:H5"	1.75	0.68
35:BA:382:A:H2'	35:BA:383:A:C8	2.28	0.68
38:BD:176:LEU:HG	38:BD:178:VAL:HG22	1.74	0.68
41:BG:76:ARG:HH21	41:BG:156:TRP:HH2	1.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:124:LYS:HD2	46:BL:125:PRO:HD2	1.75	0.68
59:BZ:322:ILE:HD12	59:BZ:362:VAL:CG1	2.23	0.68
7:A6:30:THR:O	7:A6:31:PRO:C	2.35	0.68
11:AA:598:G:H5'	23:AP:15:ARG:HB3	1.75	0.68
11:AA:1899:G:N2	11:AA:1902:C:N4	2.27	0.68
11:AA:2476:A:O2'	11:AA:2477:C:H5"	1.93	0.68
11:AA:2563:U:H4'	22:AO:28:SER:HA	1.74	0.68
14:AD:27:THR:CG2	14:AD:83:GLU:HG2	2.24	0.68
14:AD:34:VAL:HG23	14:AD:35:LYS:N	2.09	0.68
35:BA:424:G:H2'	35:BA:425:G:H8	1.58	0.68
35:BA:619:U:N3	38:BD:135:LEU:HD11	2.08	0.68
35:BA:954:G:H4'	47:BM:120:LYS:CD	2.24	0.68
35:BA:1010:G:H2'	35:BA:1011:G:H8	1.59	0.68
44:BJ:29:ARG:HG2	44:BJ:29:ARG:O	1.93	0.68
5:A4:5:ILE:O	5:A4:5:ILE:HG12	1.93	0.68
11:AA:1405:U:H2'	11:AA:1406:U:C6	2.29	0.68
11:AA:2848:G:H8	27:AT:97:ALA:HB2	1.59	0.68
13:AC:19:ILE:H	13:AC:19:ILE:HD12	1.56	0.68
14:AD:102:LYS:C	14:AD:103:ARG:HG2	2.18	0.68
32:AY:44:ILE:N	32:AY:44:ILE:HD12	2.08	0.68
35:BA:226:G:O2'	35:BA:227:G:H5'	1.93	0.68
35:BA:1117:G:O2'	43:BI:104:ARG:HD3	1.93	0.68
39:BE:80:ILE:HD11	39:BE:138:ALA:HA	1.76	0.68
43:BI:4:TYR:CD2	43:BI:88:TYR:HB2	2.28	0.68
43:BI:18:PHE:O	43:BI:19:LEU:HD23	1.93	0.68
59:BZ:366:ASP:OD2	59:BZ:368:VAL:HG23	1.92	0.68
11:AA:99:U:H4'	11:AA:102:G:H1'	1.75	0.68
11:AA:271(C):C:H2'	11:AA:271(D):G:H8	1.58	0.68
11:AA:586:A:H5'	16:AF:89:VAL:HG21	1.75	0.68
14:AD:102:LYS:O	14:AD:103:ARG:HG2	1.93	0.68
15:AE:69:LYS:C	15:AE:71:GLY:N	2.49	0.68
16:AF:17:ARG:HH11	16:AF:17:ARG:HG3	1.58	0.68
24:AQ:60:ARG:HB3	24:AQ:60:ARG:NH1	2.09	0.68
34:B2:7:ASN:C	34:B2:7:ASN:HD22	2.02	0.68
35:BA:720:C:H2'	35:BA:721:G:C8	2.28	0.68
35:BA:1323:G:H2'	35:BA:1324:A:C8	2.28	0.68
38:BD:25:ARG:NH1	38:BD:30:LYS:O	2.27	0.68
38:BD:133:VAL:HG11	38:BD:138:TYR:HD2	1.57	0.68
40:BF:3:ARG:HD3	40:BF:64:GLN:NE2	2.09	0.68
42:BH:103:VAL:CG2	42:BH:110:ALA:HB2	2.23	0.68
59:BZ:168:VAL:HG22	59:BZ:169:PRO:HD2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:239:THR:HG22	59:BZ:287:GLY:CA	2.23	0.68
9:A8:21:LYS:HD3	9:A8:48:PHE:CZ	2.28	0.68
11:AA:1021:A:H2'	11:AA:1023:U:H5"	1.75	0.68
14:AD:9:TYR:CD2	14:AD:10:THR:HG22	2.29	0.68
22:AO:107:ARG:HH22	27:AT:35:LYS:HD2	1.59	0.68
23:AP:101:VAL:HG12	23:AP:106:LEU:HB3	1.75	0.68
25:AR:2:ARG:HH11	25:AR:2:ARG:HG3	1.58	0.68
34:B2:68:TYR:C	34:B2:68:TYR:CD1	2.71	0.68
6:A5:44:THR:HG22	6:A5:45:VAL:N	2.09	0.68
10:A9:14:CYS:SG	10:A9:27:CYS:HB2	2.34	0.68
11:AA:628:G:H2'	11:AA:629:G:C5'	2.24	0.68
11:AA:2185:C:H2'	11:AA:2186:G:C5'	2.23	0.68
11:AA:2779:U:H1'	11:AA:2781:A:C6	2.29	0.68
18:AH:144:VAL:O	18:AH:148:ILE:HG12	1.93	0.68
30:AW:92:ARG:HB3	30:AW:92:ARG:HH11	1.57	0.68
34:B2:92:LYS:O	34:B2:98:LEU:HD11	1.92	0.68
35:BA:1143:G:H2'	35:BA:1144:G:C8	2.29	0.68
45:BK:21:ILE:HG13	45:BK:30:VAL:HG12	1.75	0.68
53:BS:16:LEU:HA	53:BS:19:VAL:HB	1.74	0.68
58:BY:90:ALA:N	59:BZ:272:MET:HA	2.09	0.68
59:BZ:17:ILE:HD12	59:BZ:119:HIS:HB3	1.75	0.68
59:BZ:28:THR:HG23	59:BZ:79:HIS:ND1	2.09	0.68
11:AA:271(E):U:H2'	11:AA:271(F):C:C6	2.28	0.68
11:AA:329:G:H1	32:AY:19:LYS:HE3	1.59	0.68
11:AA:1378:A:O2'	11:AA:1379:A:H5'	1.94	0.68
11:AA:1464:C:O2'	11:AA:1528:A:C8	2.46	0.68
11:AA:1484:G:H2'	11:AA:1485:G:C5'	2.21	0.68
11:AA:1528:A:C2	11:AA:1542:A:H2	2.12	0.68
14:AD:44:ASN:HB2	14:AD:48:ARG:O	1.93	0.68
24:AQ:20:ALA:H	33:AZ:79:ARG:HH21	1.41	0.68
34:B2:48:PHE:CZ	34:B2:90:LEU:HA	2.29	0.68
35:BA:351:G:H4'	35:BA:352:C:OP1	1.92	0.68
41:BG:79:ARG:HG3	41:BG:83:ALA:O	1.93	0.68
42:BH:4:ASP:OD2	42:BH:89:PRO:HD3	1.94	0.68
59:BZ:254:GLU:OE1	59:BZ:307:PRO:HA	1.94	0.68
11:AA:1066:U:H3	58:BY:14:U:H6	1.40	0.68
11:AA:2189:U:H2'	11:AA:2190:G:C4'	2.24	0.68
11:AA:2414:G:H21	23:AP:67:MET:HE1	1.59	0.68
13:AC:54:SER:CB	56:BW:63:C:H4'	2.23	0.68
15:AE:52:LEU:CB	15:AE:76:ARG:HB2	2.23	0.68
17:AG:103:LEU:HD23	17:AG:106:LEU:HD23	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AW:28:SER:OG	30:AW:31:GLU:HG3	1.93	0.68
33:AZ:108:PRO:HA	33:AZ:141:VAL:HG12	1.76	0.68
39:BE:76:ILE:HD11	39:BE:93:PRO:HD3	1.74	0.68
47:BM:94:ARG:HG2	53:BS:82:GLY:N	2.09	0.68
54:BT:31:SER:HA	54:BT:34:LYS:HD2	1.75	0.68
1:A0:26:TYR:CE2	11:AA:857:C:H1'	2.28	0.68
4:A3:43:ILE:O	4:A3:47:VAL:HG23	1.93	0.68
11:AA:1499:C:H6	11:AA:1499:C:H5'	1.58	0.68
11:AA:1516:C:O2'	11:AA:1517:G:H5"	1.94	0.68
11:AA:2656:U:N3	11:AA:2665:A:H2	1.89	0.68
14:AD:148:GLU:HB2	14:AD:151:LYS:HD2	1.75	0.68
18:AH:103:LEU:HB2	18:AH:123:PHE:HD2	1.56	0.68
23:AP:80:TYR:HA	23:AP:111:ARG:HB2	1.75	0.68
36:BB:165:VAL:HG23	36:BB:166:ASP:N	2.07	0.68
43:BI:56:LEU:O	43:BI:56:LEU:HD23	1.93	0.68
11:AA:1257:C:H4'	16:AF:83:PHE:CD1	2.29	0.67
11:AA:1915:U:H6	11:AA:1915:U:H5'	1.58	0.67
13:AC:133:PRO:HD3	56:BW:58:A:N1	2.09	0.67
21:AN:16:ILE:O	21:AN:54:VAL:HA	1.94	0.67
21:AN:84:LYS:C	21:AN:85:ILE:HG13	2.18	0.67
23:AP:47:ASP:CB	23:AP:51:PHE:HB2	2.22	0.67
23:AP:71:VAL:HG13	23:AP:72:PRO:HD3	1.76	0.67
27:AT:28:VAL:HG11	27:AT:46:GLU:CD	2.19	0.67
30:AW:73:ALA:HB3	30:AW:106:ILE:CD1	2.24	0.67
33:AZ:152:ALA:HB1	33:AZ:167:PRO:HB2	1.77	0.67
35:BA:218:C:H5'	35:BA:470:C:N4	2.10	0.67
38:BD:175:SER:O	38:BD:176:LEU:HB2	1.93	0.67
47:BM:27:LYS:HE2	47:BM:31:LYS:HE3	1.75	0.67
50:BP:20:VAL:HG23	50:BP:35:LYS:HA	1.74	0.67
3:A2:35:LEU:HD11	3:A2:50:ILE:HG13	1.75	0.67
9:A8:43:GLN:C	9:A8:44:LYS:HD2	2.18	0.67
11:AA:11:G:H2'	11:AA:12:U:C6	2.28	0.67
11:AA:92:A:H2'	11:AA:93:G:O4'	1.94	0.67
11:AA:1494:A:H2'	11:AA:1495:A:H5"	1.76	0.67
11:AA:1681:G:O2'	11:AA:1762:A:H2'	1.93	0.67
11:AA:2126:A:N6	11:AA:2163:C:H4'	2.09	0.67
11:AA:2464:C:O2'	11:AA:2465:C:H6	1.78	0.67
11:AA:2720:U:O2	11:AA:2720:U:H2'	1.94	0.67
13:AC:47:LEU:HD11	13:AC:171:ILE:CG2	2.24	0.67
15:AE:132:HIS:HA	15:AE:135:HIS:CE1	2.29	0.67
16:AF:192:LEU:CD2	16:AF:194:MET:HG3	2.16	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:12:PRO:O	18:AH:15:VAL:HG22	1.92	0.67
24:AQ:140:ALA:HA	33:AZ:99:TYR:CD2	2.28	0.67
24:AQ:141:GLN:N	33:AZ:53:ILE:HD12	2.10	0.67
25:AR:111:LEU:HD12	25:AR:111:LEU:N	2.09	0.67
28:AU:92:ARG:NH1	28:AU:94:ASN:HD22	1.90	0.67
33:AZ:15:PRO:HA	33:AZ:18:LEU:HD23	1.76	0.67
33:AZ:69:THR:HG22	33:AZ:90:VAL:HA	1.75	0.67
36:BB:7:VAL:HG13	36:BB:11:LEU:CD1	2.25	0.67
37:BC:8:ILE:HG23	37:BC:16:ARG:HG2	1.74	0.67
38:BD:12:CYS:CA	38:BD:19:LEU:HD13	2.24	0.67
39:BE:82:VAL:HG21	39:BE:138:ALA:HA	1.76	0.67
44:BJ:27:ALA:HB2	44:BJ:85:LEU:HD11	1.76	0.67
45:BK:115:PRO:C	45:BK:117:ASN:H	2.02	0.67
56:BW:55:U:C2'	56:BW:56:U:H5"	2.24	0.67
59:BZ:72:THR:HG21	59:BZ:77:TYR:HE2	1.58	0.67
59:BZ:265:THR:HG22	59:BZ:266:VAL:N	2.02	0.67
2:A1:3:LYS:NZ	2:A1:3:LYS:HB3	2.09	0.67
3:A2:46:GLN:OE1	3:A2:46:GLN:HA	1.93	0.67
7:A6:15:GLU:CD	7:A6:18:ARG:NH1	2.53	0.67
17:AG:143:GLU:O	17:AG:144:ILE:HG22	1.95	0.67
18:AH:40:GLU:O	18:AH:41:MET:HB2	1.92	0.67
29:AV:51:VAL:HG12	29:AV:52:VAL:N	2.08	0.67
35:BA:189(D):C:H1'	35:BA:189(H):G:H1	1.58	0.67
35:BA:219:C:H2'	35:BA:220:G:O4'	1.93	0.67
35:BA:532:A:N6	37:BC:156:ARG:HH12	1.92	0.67
44:BJ:32:ALA:HB2	44:BJ:76:ASN:HB2	1.76	0.67
1:A0:60:PHE:CE2	11:AA:2365:G:H4'	2.29	0.67
8:A7:12:ARG:HH11	8:A7:12:ARG:HG3	1.58	0.67
11:AA:272(H):C:H2'	11:AA:272(I):U:H5"	1.74	0.67
11:AA:1058:G:H2'	11:AA:1059:G:C5'	2.24	0.67
11:AA:1517:G:H5'	11:AA:1517:G:C8	2.29	0.67
11:AA:1865:G:H5'	11:AA:1865:G:H8	1.59	0.67
11:AA:2852:G:H2'	11:AA:2853:C:C6	2.30	0.67
15:AE:111:ARG:HA	25:AR:2:ARG:HG3	1.76	0.67
23:AP:21:ARG:HH11	23:AP:29:LYS:HG2	1.60	0.67
28:AU:6:THR:O	28:AU:9:VAL:HG22	1.94	0.67
35:BA:594:G:H2'	35:BA:595:G:H5'	1.76	0.67
35:BA:627:G:H2'	35:BA:628:G:H8	1.58	0.67
35:BA:1412:C:H2'	35:BA:1413:A:C8	2.29	0.67
36:BB:112:VAL:O	36:BB:115:LEU:HB3	1.95	0.67
37:BC:34:LEU:CD2	37:BC:38:ARG:HE	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:55:ALA:O	38:BD:59:ARG:HG2	1.95	0.67
54:BT:72:LEU:HD11	54:BT:80:ARG:NE	2.09	0.67
56:BW:22:A:H4'	56:BW:23:G:C8	2.30	0.67
9:A8:4:MET:SD	9:A8:61:LEU:HD22	2.34	0.67
11:AA:1665:A:O2'	11:AA:1666:G:H5'	1.94	0.67
14:AD:34:VAL:HG23	14:AD:35:LYS:H	1.59	0.67
18:AH:52:VAL:HG21	18:AH:69:ARG:HB2	1.75	0.67
21:AN:34:LEU:HD11	21:AN:116:LEU:O	1.95	0.67
22:AO:2:ILE:HD11	22:AO:82:ASN:ND2	2.09	0.67
24:AQ:140:ALA:HB3	33:AZ:53:ILE:HD11	1.76	0.67
25:AR:55:ALA:HB2	25:AR:79:LEU:HD11	1.75	0.67
28:AU:91:ASP:O	28:AU:92:ARG:HB3	1.92	0.67
35:BA:135:C:H2'	35:BA:136:C:H5'	1.76	0.67
35:BA:433:C:H2'	35:BA:434:U:C6	2.30	0.67
35:BA:1313:U:OP2	53:BS:6:LYS:HB3	1.94	0.67
37:BC:64:VAL:HG12	37:BC:66:VAL:HG23	1.77	0.67
38:BD:129:ASN:HD21	38:BD:144:ASP:HA	1.59	0.67
6:A5:49:CYS:O	6:A5:56:LYS:HD2	1.95	0.67
7:A6:20:ASN:O	7:A6:21:TYR:CG	2.48	0.67
11:AA:2286:A:H4'	11:AA:2287:A:O4'	1.94	0.67
11:AA:2762:G:H5'	11:AA:2762:G:C8	2.25	0.67
18:AH:65:HIS:CE1	18:AH:69:ARG:NH2	2.62	0.67
27:AT:61:PHE:H	27:AT:61:PHE:HD1	1.42	0.67
30:AW:24:ILE:HG21	30:AW:36:LEU:HD22	1.75	0.67
32:AY:27:VAL:HG12	32:AY:29:GLU:OE1	1.94	0.67
32:AY:28:LYS:HB3	32:AY:37:VAL:HB	1.77	0.67
33:AZ:95:PRO:HA	33:AZ:129:SER:HA	1.76	0.67
34:B2:17:LEU:HD23	34:B2:119:LEU:HD12	1.77	0.67
35:BA:232:G:H1'	35:BA:262:A:N1	2.10	0.67
35:BA:404:U:H2'	35:BA:405:U:C6	2.29	0.67
35:BA:1049:U:H4'	35:BA:1050:G:H5'	1.76	0.67
35:BA:1104:G:O5'	36:BB:111:ARG:HD2	1.94	0.67
53:BS:32:LYS:HA	53:BS:50:ALA:HB3	1.77	0.67
12:AB:68:C:H2'	12:AB:69:G:C8	2.26	0.67
17:AG:111:LEU:HB2	17:AG:112:PRO:HD3	1.76	0.67
23:AP:83:VAL:O	23:AP:83:VAL:HG13	1.95	0.67
26:AS:52:SER:HB3	26:AS:55:ALA:HB3	1.77	0.67
27:AT:29:ARG:HG2	27:AT:86:ILE:O	1.94	0.67
33:AZ:141:VAL:HA	33:AZ:144:LEU:HD23	1.76	0.67
41:BG:77:SER:HB3	41:BG:84:ASN:HD21	1.58	0.67
44:BJ:33:GLN:O	44:BJ:75:ILE:HG12	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:18:VAL:HG23	46:BL:19:ARG:N	2.05	0.67
56:BV:60:A:C2'	56:BV:61:U:H5'	2.25	0.67
1:A0:61:ALA:HB2	1:A0:81:VAL:HG21	1.75	0.67
9:A8:4:MET:O	9:A8:62:LEU:HD11	1.95	0.67
11:AA:1539:G:H2'	11:AA:1540:U:O4'	1.95	0.67
11:AA:2712:U:O2'	11:AA:2713:A:H5'	1.93	0.67
13:AC:81:GLU:C	13:AC:82:LYS:HE2	2.20	0.67
14:AD:267:SER:C	14:AD:269:PHE:H	2.03	0.67
17:AG:51:ARG:HD3	17:AG:53:LEU:HD21	1.77	0.67
23:AP:16:ARG:HD3	23:AP:18:ARG:N	2.06	0.67
39:BE:150:ARG:NH1	39:BE:150:ARG:HB2	2.09	0.67
43:BI:88:TYR:O	43:BI:89:ASN:HB2	1.94	0.67
46:BL:62:SER:O	46:BL:64:TYR:HD1	1.78	0.67
56:BV:60:A:H2'	56:BV:61:U:H5'	1.74	0.67
56:BW:57:C:H2'	56:BW:57:C:O2	1.93	0.67
11:AA:139(A):G:N2	31:AX:44:GLU:OE1	2.20	0.67
11:AA:1915:U:H5'	11:AA:1915:U:C6	2.29	0.67
27:AT:50:ILE:HD11	27:AT:64:ARG:HB3	1.75	0.67
42:BH:80:ILE:O	42:BH:80:ILE:HG22	1.94	0.67
50:BP:14:ASN:OD1	50:BP:42:ARG:NH2	2.28	0.67
50:BP:63:GLY:O	50:BP:64:ALA:HB2	1.95	0.67
1:A0:70:GLN:NE2	1:A0:80:HIS:NE2	2.40	0.67
11:AA:2101:G:C2'	11:AA:2102:U:H5"	2.25	0.67
12:AB:40:U:O2	12:AB:43:C:H5"	1.95	0.67
12:AB:40:U:C2	12:AB:43:C:H5"	2.30	0.67
13:AC:25:ALA:O	13:AC:29:VAL:HG13	1.94	0.67
14:AD:89:SER:HB2	14:AD:159:ALA:HB2	1.76	0.67
14:AD:239:ARG:HG2	14:AD:239:ARG:NH1	2.07	0.67
28:AU:83:LEU:HG	28:AU:88:ILE:HD11	1.77	0.67
32:AY:7:VAL:HB	32:AY:8:LYS:CE	2.24	0.67
32:AY:13:VAL:HG11	32:AY:28:LYS:HD2	1.76	0.67
35:BA:80:G:H3'	35:BA:81:U:C5'	2.24	0.67
35:BA:1101:A:H4'	35:BA:1102:A:O5'	1.95	0.67
35:BA:1134:G:N2	35:BA:1141:C:C2	2.63	0.67
50:BP:45:THR:HG22	50:BP:47:ASP:H	1.60	0.67
11:AA:654(R):C:H2'	11:AA:654(S):G:C8	2.29	0.66
11:AA:2099:U:H2'	11:AA:2100:G:C8	2.31	0.66
11:AA:2165:G:OP1	13:AC:108:MET:HE2	1.95	0.66
14:AD:221:VAL:CG2	14:AD:226:MET:HE3	2.25	0.66
16:AF:168:ARG:O	16:AF:169:ASN:C	2.38	0.66
27:AT:28:VAL:HG22	27:AT:47:GLY:H	1.57	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AV:57:VAL:HG23	29:AV:99:ILE:HG23	1.77	0.66
34:B2:28:GLY:HA2	34:B2:31:VAL:HG23	1.77	0.66
34:B2:59:TYR:HB2	34:B2:74:ARG:NH1	2.09	0.66
35:BA:160:A:H2'	35:BA:161:A:O4'	1.95	0.66
35:BA:1124:G:C5'	44:BJ:35:SER:HB2	2.25	0.66
37:BC:16:ARG:NH1	37:BC:16:ARG:HB2	2.10	0.66
43:BI:43:ALA:C	43:BI:45:ALA:H	2.03	0.66
46:BL:32:PHE:CB	46:BL:84:LEU:HD21	2.25	0.66
50:BP:6:LEU:HD23	50:BP:17:TYR:CG	2.30	0.66
56:BW:55:U:H2'	56:BW:56:U:H5"	1.76	0.66
10:A9:1:MET:HB2	10:A9:34:GLN:NE2	2.09	0.66
11:AA:1048:A:H2	11:AA:1112:G:N3	1.92	0.66
11:AA:1782:C:H1'	11:AA:2609:U:H5"	1.76	0.66
11:AA:1842:G:H2'	11:AA:1843:C:C6	2.29	0.66
11:AA:2873:A:C2	25:AR:6:SER:HB2	2.30	0.66
17:AG:122:PRO:HB3	17:AG:180:PHE:HB3	1.75	0.66
18:AH:142:GLY:O	18:AH:145:ALA:HB3	1.95	0.66
36:BB:33:TYR:HB2	36:BB:43:ASP:HB2	1.77	0.66
38:BD:67:ILE:CG2	38:BD:67:ILE:O	2.42	0.66
42:BH:17:THR:HG22	42:BH:63:LEU:HG	1.77	0.66
44:BJ:50:ILE:CG1	48:BN:41:ARG:HD2	2.24	0.66
51:BQ:45:HIS:HB2	51:BQ:65:ILE:HD12	1.78	0.66
56:BW:72:C:H2'	56:BW:73:A:C8	2.29	0.66
59:BZ:356:PRO:HG2	59:BZ:359:VAL:CG2	2.25	0.66
11:AA:1151:G:H5"	28:AU:81:HIS:CE1	2.30	0.66
11:AA:1373:A:H2'	11:AA:1374:G:O4'	1.95	0.66
11:AA:1502:C:H6	11:AA:1502:C:H5"	1.59	0.66
11:AA:2023:G:H5'	11:AA:2617:C:H4'	1.76	0.66
11:AA:2346:A:H5'	11:AA:2383:G:H1'	1.78	0.66
11:AA:2758:A:HO2'	11:AA:2759:G:H8	1.40	0.66
15:AE:55:ASN:O	15:AE:56:PRO:C	2.38	0.66
24:AQ:72:LYS:HB3	24:AQ:94:VAL:HG23	1.75	0.66
35:BA:501:C:H2'	35:BA:502:G:H8	1.61	0.66
35:BA:1050:G:O2'	35:BA:1051:C:H6	1.78	0.66
38:BD:12:CYS:SG	38:BD:19:LEU:O	2.53	0.66
43:BI:112:LYS:C	43:BI:112:LYS:HD3	2.20	0.66
44:BJ:82:ILE:HG23	44:BJ:86:MET:HE2	1.76	0.66
59:BZ:324:LYS:HG3	59:BZ:364:PRO:HB3	1.77	0.66
7:A6:19:ARG:HD3	11:AA:2400:G:H4'	1.76	0.66
11:AA:1499:C:H5'	11:AA:1499:C:C6	2.30	0.66
11:AA:1899:G:H22	11:AA:1902:C:H41	0.72	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AC:107:TRP:O	13:AC:108:MET:HE3	1.95	0.66
14:AD:28:GLU:N	14:AD:29:PRO:HD2	2.09	0.66
18:AH:121:ILE:CD1	18:AH:144:VAL:HG21	2.25	0.66
21:AN:16:ILE:HG23	21:AN:54:VAL:HG22	1.77	0.66
25:AR:58:GLY:HA2	25:AR:80:PHE:CE2	2.28	0.66
33:AZ:163:LEU:HG	33:AZ:165:VAL:HG23	1.75	0.66
36:BB:61:LEU:HA	36:BB:64:ARG:NE	2.11	0.66
38:BD:85:LYS:HZ3	38:BD:92:VAL:HG13	1.61	0.66
47:BM:81:LEU:HB3	47:BM:89:GLY:HA2	1.78	0.66
50:BP:5:ARG:NH1	50:BP:28:ARG:HA	2.10	0.66
56:BW:54:G:O2'	56:BW:55:U:H5'	1.95	0.66
5:A4:30:GLU:C	5:A4:31:ILE:HD12	2.20	0.66
11:AA:118:A:H5'	11:AA:119:A:H8	1.60	0.66
11:AA:212:G:O2'	11:AA:213:A:H5'	1.96	0.66
11:AA:2121:G:H1	11:AA:2176:A:H61	1.41	0.66
15:AE:53:PRO:O	15:AE:54:GLN:O	2.14	0.66
18:AH:85:LYS:CE	18:AH:87:LEU:HG	2.26	0.66
18:AH:155:SER:O	18:AH:157:TYR:N	2.27	0.66
19:AJ:24:UNK:HA	19:AJ:85:UNK:O	1.95	0.66
21:AN:65:LYS:O	21:AN:69:GLN:HB2	1.95	0.66
35:BA:1030:C:C2'	35:BA:1030(A):G:H5'	2.25	0.66
38:BD:100:ARG:HG2	38:BD:102:ASP:OD1	1.94	0.66
38:BD:162:LEU:O	38:BD:162:LEU:HD13	1.95	0.66
41:BG:38:LEU:O	41:BG:42:ILE:HG13	1.95	0.66
46:BL:5:PRO:CG	46:BL:10:LEU:HD21	2.25	0.66
47:BM:120:LYS:CE	47:BM:120:LYS:HA	2.26	0.66
6:A5:46:CYS:SG	6:A5:47:PRO:CD	2.80	0.66
11:AA:336:C:H4'	32:AY:7:VAL:HG21	1.76	0.66
11:AA:1021:A:C8	11:AA:1021:A:H3'	2.31	0.66
11:AA:1568:G:P	14:AD:63:ARG:HH22	2.18	0.66
13:AC:104:LEU:O	13:AC:105:ASP:HB2	1.95	0.66
15:AE:116:VAL:O	15:AE:116:VAL:HG13	1.95	0.66
17:AG:122:PRO:HD3	17:AG:181:ARG:H	1.61	0.66
21:AN:21:LYS:HD3	21:AN:22:THR:H	1.61	0.66
22:AO:104:ARG:HE	27:AT:33:LYS:HE3	1.59	0.66
23:AP:146:VAL:HG22	23:AP:147:LEU:N	2.11	0.66
25:AR:7:GLY:C	25:AR:8:ARG:NE	2.53	0.66
26:AS:49:VAL:HG12	26:AS:50:SER:N	2.10	0.66
33:AZ:72:ARG:NH2	33:AZ:97:GLU:O	2.28	0.66
34:B2:39:VAL:HG12	34:B2:60:ILE:HA	1.76	0.66
35:BA:176:C:H2'	35:BA:177:C:H6	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:10:LEU:HD22	42:BH:83:ILE:HD11	1.76	0.66
47:BM:120:LYS:HE3	47:BM:120:LYS:HA	1.78	0.66
59:BZ:316:PHE:CE1	59:BZ:372:VAL:HG22	2.30	0.66
7:A6:12:GLU:HB3	7:A6:23:THR:HG22	1.76	0.66
11:AA:1419:A:O2'	11:AA:1420:U:H5"	1.96	0.66
11:AA:1499:C:O2'	11:AA:1500:G:H5'	1.95	0.66
13:AC:82:LYS:HA	13:AC:85:GLU:HB3	1.78	0.66
15:AE:24:THR:OG1	15:AE:186:GLY:HA2	1.95	0.66
22:AO:1:MET:HB3	22:AO:32:TYR:CD2	2.31	0.66
26:AS:66:ALA:HA	26:AS:69:VAL:HG12	1.78	0.66
42:BH:86:ILE:HG21	42:BH:133:LEU:HD23	1.78	0.66
53:BS:62:ILE:HG23	53:BS:62:ILE:O	1.95	0.66
59:BZ:181:GLU:HG2	59:BZ:184:LYS:HD2	1.77	0.66
1:A0:11:ARG:O	1:A0:14:ARG:NH2	2.28	0.66
14:AD:129:ASN:O	14:AD:193:VAL:HG12	1.96	0.66
23:AP:46:LYS:HG2	23:AP:52:GLU:OE2	1.96	0.66
24:AQ:134:ARG:HD2	33:AZ:122:ARG:NH2	2.08	0.66
27:AT:28:VAL:O	27:AT:29:ARG:HD3	1.96	0.66
33:AZ:155:LEU:HD23	33:AZ:155:LEU:H	1.59	0.66
34:B2:28:GLY:HA2	34:B2:31:VAL:CG2	2.26	0.66
35:BA:31:G:N1	35:BA:48:C:H5"	2.10	0.66
35:BA:1346:A:H61	35:BA:1374:A:H3'	1.60	0.66
38:BD:30:LYS:C	38:BD:32:ALA:H	2.02	0.66
43:BI:5:TYR:CG	43:BI:6:GLY:N	2.64	0.66
11:AA:582:G:H2'	11:AA:583:G:C8	2.31	0.66
11:AA:1068:G:H1'	11:AA:1069:A:OP1	1.95	0.66
11:AA:1348:G:C2'	11:AA:1349:A:H5"	2.25	0.66
13:AC:137:LEU:HD12	13:AC:139:ASN:HD22	1.61	0.66
16:AF:126:VAL:HG21	16:AF:129:PHE:CZ	2.30	0.66
29:AV:18:LEU:HD23	29:AV:19:LYS:N	2.10	0.66
30:AW:79:GLY:HA3	30:AW:100:THR:HG23	1.78	0.66
35:BA:413:G:H4'	35:BA:414:A:H5"	1.77	0.66
35:BA:594:G:C2'	35:BA:595:G:H5'	2.26	0.66
35:BA:1317:C:OP1	48:BN:17:LYS:HG2	1.96	0.66
38:BD:28:SER:CB	38:BD:29:PRO:HD2	2.25	0.66
44:BJ:61:GLU:HG3	48:BN:58:LYS:HE2	1.77	0.66
46:BL:24:VAL:HG13	46:BL:98:TYR:CE2	2.31	0.66
59:BZ:215:ARG:H	59:BZ:215:ARG:CD	1.95	0.66
59:BZ:248:LYS:HE2	59:BZ:279:GLU:HB3	1.77	0.66
11:AA:620:G:H4'	11:AA:621:A:H5"	1.78	0.66
11:AA:847:U:H2'	11:AA:848:G:H5"	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1598:C:H5'	31:AX:36:LYS:CG	2.25	0.66
11:AA:2802:G:H3'	11:AA:2803:C:C5'	2.26	0.66
12:AB:77:U:H4'	33:AZ:84:GLU:OE2	1.96	0.66
13:AC:64:LEU:HD21	13:AC:192:PHE:HB2	1.76	0.66
14:AD:165:ILE:HA	14:AD:175:LEU:HD23	1.77	0.66
18:AH:12:PRO:HA	18:AH:48:GLY:HA2	1.76	0.66
27:AT:11:GLU:OE1	27:AT:11:GLU:N	2.29	0.66
27:AT:41:ARG:HD3	27:AT:41:ARG:C	2.21	0.66
28:AU:15:LYS:O	28:AU:19:LYS:HG3	1.95	0.66
35:BA:266:G:H5'	35:BA:267:C:H5	1.60	0.66
35:BA:827:U:H5'	35:BA:828:A:OP2	1.96	0.66
36:BB:9:GLU:OE1	36:BB:9:GLU:N	2.29	0.66
36:BB:168:THR:HG23	36:BB:192:SER:HB3	1.78	0.66
37:BC:73:PRO:C	37:BC:75:VAL:H	2.03	0.66
39:BE:6:PHE:HB2	39:BE:34:VAL:CG2	2.26	0.66
44:BJ:31:GLY:HA3	44:BJ:78:ASN:ND2	2.11	0.66
2:A1:13:ILE:CD1	11:AA:396:G:H5'	2.26	0.65
2:A1:80:LEU:HD23	2:A1:81:LYS:N	2.08	0.65
7:A6:15:GLU:OE2	7:A6:41:PRO:HB3	1.96	0.65
11:AA:633:A:H5"	23:AP:77:ARG:HH12	1.61	0.65
11:AA:1498:C:H2'	11:AA:1499:C:H5"	1.78	0.65
11:AA:1583:A:H5'	11:AA:1584:C:OP1	1.95	0.65
11:AA:1913:A:H3'	11:AA:1913:A:OP2	1.96	0.65
14:AD:263:ARG:HB2	14:AD:263:ARG:NH1	2.10	0.65
16:AF:114:VAL:HG21	16:AF:202:PHE:CE2	2.31	0.65
23:AP:62:LEU:N	23:AP:62:LEU:CD2	2.59	0.65
25:AR:115:GLU:HG2	25:AR:117:VAL:H	1.61	0.65
30:AW:9:TYR:H	30:AW:102:HIS:HD2	1.43	0.65
34:B2:6:GLU:HG2	34:B2:8:ARG:HG3	1.76	0.65
35:BA:243:A:H4'	35:BA:244:U:O5'	1.96	0.65
35:BA:1108:G:H5'	37:BC:176:HIS:CD2	2.31	0.65
38:BD:196:LEU:HG	38:BD:197:PRO:HD2	1.77	0.65
41:BG:43:PHE:O	41:BG:46:ALA:HB3	1.94	0.65
47:BM:96:LEU:HB3	47:BM:97:PRO:HD2	1.78	0.65
53:BS:15:LEU:O	53:BS:19:VAL:HG23	1.95	0.65
5:A4:12:ALA:CB	5:A4:29:PRO:HA	2.27	0.65
11:AA:152:G:H2'	11:AA:153:C:C6	2.31	0.65
11:AA:654(N):G:O2'	11:AA:654(O):G:H5'	1.97	0.65
17:AG:57:ALA:HB2	17:AG:90:LEU:HD21	1.77	0.65
20:AK:20:UNK:HA	20:AK:24:UNK:CB	2.26	0.65
27:AT:30:VAL:CG2	27:AT:84:GLN:HG2	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:96:ARG:HB2	27:AT:96:ARG:CZ	2.26	0.65
35:BA:189(K):U:H2'	35:BA:189(L):G:C8	2.31	0.65
35:BA:573:A:H5'	35:BA:573:A:C8	2.31	0.65
40:BF:91:VAL:HG11	52:BR:72:ARG:HH12	1.60	0.65
51:BQ:45:HIS:CD2	51:BQ:47:PRO:HD3	2.31	0.65
11:AA:1058:G:H2'	11:AA:1059:G:H5"	1.78	0.65
11:AA:2572:A:C8	15:AE:144:ARG:HD2	2.31	0.65
11:AA:2580:U:H5'	15:AE:131:ALA:CB	2.26	0.65
11:AA:2680:C:H2'	11:AA:2681:C:O2	1.95	0.65
11:AA:2892:A:H62	11:AA:2893:G:H21	1.44	0.65
15:AE:78:LEU:C	15:AE:79:ARG:HD2	2.21	0.65
27:AT:50:ILE:HD12	27:AT:50:ILE:H	1.60	0.65
29:AV:24:LYS:HA	29:AV:92:THR:HG23	1.78	0.65
32:AY:2:ARG:HD3	32:AY:3:VAL:HG23	1.78	0.65
32:AY:27:VAL:HG12	32:AY:29:GLU:H	1.60	0.65
34:B2:30:GLU:OE2	34:B2:75:ARG:HD2	1.96	0.65
35:BA:199:G:O2'	35:BA:200:G:H5'	1.95	0.65
36:BB:167:PRO:HG3	36:BB:188:ALA:HB2	1.77	0.65
38:BD:107:ARG:HH21	38:BD:194:LEU:CD1	2.09	0.65
38:BD:153:ARG:O	38:BD:155:LEU:N	2.27	0.65
39:BE:6:PHE:HB2	39:BE:34:VAL:HG22	1.76	0.65
41:BG:22:LEU:HD22	41:BG:62:PHE:HE2	1.60	0.65
41:BG:69:VAL:HG11	41:BG:104:LEU:HD21	1.76	0.65
44:BJ:32:ALA:CB	44:BJ:76:ASN:HB2	2.27	0.65
44:BJ:48:THR:HG23	44:BJ:62:HIS:HD1	1.62	0.65
49:BO:39:LEU:CD2	49:BO:43:LEU:HG	2.25	0.65
56:BW:77:A:C8	56:BW:77:A:O5'	2.49	0.65
59:BZ:19:HIS:CD2	59:BZ:115:GLN:H	2.08	0.65
11:AA:1717:G:H2'	11:AA:1718:G:H5"	1.77	0.65
11:AA:1799:G:H5'	11:AA:1819:A:N6	2.12	0.65
15:AE:103:ASP:OD2	15:AE:168:MET:HE2	1.95	0.65
16:AF:167:ALA:HB1	16:AF:173:VAL:HG11	1.78	0.65
27:AT:13:ARG:NE	27:AT:13:ARG:CA	2.60	0.65
31:AX:12:VAL:HG12	31:AX:27:THR:C	2.20	0.65
34:B2:7:ASN:HB2	34:B2:41:PHE:HD2	1.61	0.65
34:B2:144:LEU:O	34:B2:144:LEU:HD13	1.96	0.65
35:BA:969:A:O2'	35:BA:970:C:H5'	1.95	0.65
36:BB:102:LEU:HD23	36:BB:182:ILE:HD12	1.77	0.65
37:BC:95:THR:O	37:BC:97:LYS:N	2.29	0.65
40:BF:19:LEU:O	40:BF:19:LEU:HD23	1.97	0.65
43:BI:43:ALA:HA	43:BI:74:ILE:HG21	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:221:PHE:HA	59:BZ:244:ARG:O	1.96	0.65
59:BZ:299:GLU:H	59:BZ:302:GLN:NE2	1.94	0.65
4:A3:35:ARG:HD3	4:A3:37:LEU:HD21	1.78	0.65
7:A6:53:LYS:CD	7:A6:54:ILE:H	2.10	0.65
9:A8:33:ASN:ND2	11:AA:2419:U:H5"	2.12	0.65
11:AA:1385:G:H4'	11:AA:1386:C:OP1	1.97	0.65
18:AH:58:GLU:O	18:AH:62:LYS:HB2	1.96	0.65
27:AT:11:GLU:N	27:AT:11:GLU:CD	2.55	0.65
35:BA:1381:U:H5	35:BA:1382:C:C4	2.15	0.65
35:BA:1510:U:H2'	35:BA:1511:G:C8	2.31	0.65
36:BB:16:HIS:HB3	36:BB:210:SER:HB2	1.77	0.65
36:BB:115:LEU:HB2	36:BB:145:LEU:CD1	2.25	0.65
38:BD:194:LEU:O	38:BD:196:LEU:N	2.30	0.65
43:BI:89:ASN:HB3	43:BI:92:TYR:CD1	2.32	0.65
9:A8:23:VAL:HG12	9:A8:46:ARG:HH11	1.62	0.65
11:AA:848:G:H5'	11:AA:848:G:C8	2.30	0.65
11:AA:1278:A:O2'	11:AA:1279:G:H5'	1.97	0.65
11:AA:1295:C:H2'	11:AA:1296:G:H8	1.61	0.65
11:AA:2555:U:H2'	11:AA:2556:C:H5'	1.78	0.65
13:AC:119:VAL:O	13:AC:123:VAL:HB	1.97	0.65
16:AF:82:ILE:O	16:AF:83:PHE:CB	2.42	0.65
18:AH:44:VAL:HG12	18:AH:45:VAL:N	2.11	0.65
36:BB:163:PHE:CD1	36:BB:185:ILE:HG13	2.32	0.65
59:BZ:298:VAL:HA	59:BZ:302:GLN:HE22	1.60	0.65
11:AA:1188:U:C2'	11:AA:1189:A:H5'	2.26	0.65
11:AA:1270:C:H5"	11:AA:1271:G:C5'	2.26	0.65
13:AC:51:PRO:HA	13:AC:57:ASN:ND2	2.12	0.65
15:AE:24:THR:HG21	15:AE:188:VAL:HG11	1.78	0.65
16:AF:22:ALA:O	16:AF:26:ALA:HB2	1.96	0.65
23:AP:71:VAL:CG1	23:AP:72:PRO:HD3	2.27	0.65
25:AR:18:LEU:HD11	25:AR:22:ARG:CZ	2.27	0.65
39:BE:33:VAL:CG1	39:BE:112:LEU:HD12	2.26	0.65
44:BJ:14:LYS:C	44:BJ:16:LEU:H	2.04	0.65
2:A1:69:LYS:O	2:A1:73:LEU:HD12	1.97	0.65
6:A5:56:LYS:HE2	6:A5:59:GLU:CD	2.22	0.65
10:A9:4:ARG:O	10:A9:36:GLN:HA	1.96	0.65
11:AA:296:C:O2'	11:AA:297:C:H5'	1.97	0.65
11:AA:729:G:N7	14:AD:209:ALA:HB3	2.12	0.65
11:AA:999:U:H5"	11:AA:1154:G:O6	1.96	0.65
11:AA:1667:G:OP2	11:AA:1667:G:H8	1.79	0.65
11:AA:2313:C:H5"	17:AG:40:ASN:ND2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2808:U:O2'	11:AA:2809:A:H5'	1.96	0.65
14:AD:62:TYR:HE1	14:AD:64:ILE:HA	1.62	0.65
15:AE:68:ALA:C	15:AE:70:ALA:H	2.05	0.65
25:AR:27:SER:HA	25:AR:30:THR:HG22	1.78	0.65
27:AT:55:ASN:H	27:AT:59:THR:HG22	1.61	0.65
28:AU:11:ARG:O	28:AU:15:LYS:HG2	1.97	0.65
29:AV:35:LEU:C	29:AV:37:VAL:H	2.03	0.65
34:B2:98:LEU:HD12	34:B2:98:LEU:O	1.97	0.65
35:BA:412:A:H5'	35:BA:413:G:OP1	1.97	0.65
35:BA:953:G:H5'	35:BA:965:A:H61	1.61	0.65
36:BB:22:LYS:HE2	36:BB:22:LYS:CA	2.27	0.65
36:BB:44:LEU:H	36:BB:44:LEU:CD1	2.07	0.65
38:BD:25:ARG:C	38:BD:27:TYR:H	2.05	0.65
42:BH:20:TYR:HA	42:BH:65:TYR:CE2	2.31	0.65
43:BI:99:LEU:O	43:BI:101:PHE:N	2.29	0.65
46:BL:41:ARG:HD2	46:BL:42:THR:H	1.61	0.65
53:BS:40:ILE:HB	53:BS:67:VAL:O	1.96	0.65
58:BY:23:G:H2'	58:BY:24:G:O4'	1.96	0.65
58:BY:89:A:H4'	59:BZ:229:PHE:CZ	2.31	0.65
6:A5:43:HIS:HD2	11:AA:2884:U:C5	2.14	0.65
7:A6:52:VAL:HG13	7:A6:53:LYS:N	2.11	0.65
11:AA:284:U:H2'	11:AA:285:C:H6	1.62	0.65
11:AA:2712:U:H1'	11:AA:2712(A):A:C8	2.32	0.65
15:AE:87:GLU:O	15:AE:89:ASP:N	2.30	0.65
18:AH:137:ASP:HB2	18:AH:140:LYS:HE3	1.79	0.65
25:AR:3:HIS:C	25:AR:5:LYS:H	2.03	0.65
28:AU:92:ARG:HH22	29:AV:10:LYS:CB	2.10	0.65
32:AY:81:LYS:HG2	32:AY:96:ILE:HB	1.77	0.65
35:BA:857:C:H2'	35:BA:858:G:C8	2.32	0.65
35:BA:1321:C:H5"	35:BA:1322:C:C5'	2.25	0.65
38:BD:153:ARG:C	38:BD:155:LEU:H	2.04	0.65
47:BM:86:CYS:HB3	53:BS:74:PHE:CE1	2.31	0.65
48:BN:26:ARG:HH12	48:BN:46:GLU:HG2	1.61	0.65
7:A6:15:GLU:HG2	7:A6:18:ARG:NH1	2.11	0.65
11:AA:782:A:C2	14:AD:226:MET:HE2	2.31	0.65
11:AA:886:C:H2'	11:AA:887:A:C4'	2.25	0.65
11:AA:1070:A:C2	11:AA:1097:U:H4'	2.32	0.65
11:AA:1084:A:O2'	11:AA:1085:A:H5'	1.97	0.65
11:AA:1360:A:H5'	11:AA:1361:G:OP2	1.97	0.65
11:AA:2105:C:H2'	11:AA:2106:G:C8	2.32	0.65
11:AA:2491:U:H4'	11:AA:2570:G:OP1	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AF:25:PRO:HB3	16:AF:119:ARG:CB	2.27	0.65
18:AH:65:HIS:CE1	18:AH:69:ARG:HH22	2.15	0.65
27:AT:42:ILE:O	27:AT:42:ILE:HG13	1.96	0.65
32:AY:29:GLU:CD	32:AY:38:ILE:HG21	2.22	0.65
47:BM:15:VAL:HG23	47:BM:16:ASP:H	1.61	0.65
52:BR:66:LEU:O	52:BR:70:ILE:HG13	1.97	0.65
2:A1:13:ILE:HD11	11:AA:396:G:C4'	2.27	0.64
11:AA:629:G:H5'	11:AA:629:G:H8	1.61	0.64
11:AA:1568:G:OP2	14:AD:63:ARG:NH2	2.28	0.64
11:AA:2228:G:OP1	14:AD:261:LYS:HE3	1.97	0.64
13:AC:129:ARG:CA	56:BW:20:G:N2	2.58	0.64
17:AG:5:VAL:HG12	17:AG:104:GLU:OE2	1.95	0.64
23:AP:6:LEU:CG	23:AP:9:ASN:HB2	2.26	0.64
25:AR:7:GLY:HA3	25:AR:8:ARG:CZ	2.26	0.64
32:AY:44:ILE:HG22	32:AY:45:VAL:N	2.11	0.64
35:BA:423:G:C2'	35:BA:424:G:H5'	2.27	0.64
35:BA:828:A:H4'	35:BA:828:A:OP1	1.98	0.64
35:BA:973:G:C1'	44:BJ:55:LYS:HE2	2.27	0.64
39:BE:81:GLU:HG2	39:BE:90:VAL:HG13	1.78	0.64
48:BN:57:ARG:HB3	48:BN:57:ARG:HH11	1.62	0.64
9:A8:25:MET:CG	23:AP:64:LYS:HB2	2.27	0.64
11:AA:271(C):C:H2'	11:AA:271(D):G:C8	2.32	0.64
11:AA:1688:U:H5'	11:AA:1689:A:OP1	1.96	0.64
11:AA:2339:G:H2'	11:AA:2340:G:H8	1.62	0.64
13:AC:114:VAL:CB	13:AC:149:ILE:HD11	2.23	0.64
14:AD:27:THR:HG23	14:AD:27:THR:O	1.97	0.64
35:BA:266:G:H5'	35:BA:267:C:C5	2.33	0.64
35:BA:792:A:O2'	35:BA:794:A:C8	2.45	0.64
35:BA:952:U:H2'	35:BA:953:G:H8	1.62	0.64
35:BA:1228:C:OP1	47:BM:115:LYS:HE3	1.97	0.64
40:BF:40:VAL:HG13	40:BF:40:VAL:O	1.96	0.64
43:BI:102:LEU:O	43:BI:102:LEU:HD23	1.96	0.64
44:BJ:49:VAL:HG23	48:BN:41:ARG:HB2	1.78	0.64
44:BJ:63:PHE:HD1	44:BJ:63:PHE:H	1.45	0.64
6:A5:7:PRO:HG2	11:AA:2016:U:O2	1.97	0.64
7:A6:28:ARG:HH12	56:BW:67:C:C3'	2.10	0.64
11:AA:1826:G:H4'	14:AD:242:ARG:CZ	2.27	0.64
11:AA:1887:C:H2'	11:AA:1888:G:C5'	2.23	0.64
13:AC:75:LEU:HB2	13:AC:93:TYR:HB2	1.78	0.64
13:AC:123:VAL:O	13:AC:123:VAL:HG13	1.96	0.64
13:AC:138:PRO:HA	13:AC:144:THR:OG1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:162:THR:HG22	17:AG:164:GLU:OE1	1.97	0.64
27:AT:82:LEU:H	27:AT:82:LEU:CD1	2.06	0.64
34:B2:144:LEU:HD13	34:B2:144:LEU:C	2.21	0.64
35:BA:657:G:H4'	49:BO:28:GLN:HG2	1.79	0.64
11:AA:139(A):G:H3'	11:AA:140:G:C8	2.32	0.64
11:AA:2206:G:C2	11:AA:2207:G:H5'	2.32	0.64
11:AA:2394:C:OP1	23:AP:63:PRO:HD2	1.98	0.64
11:AA:2630:G:H1'	11:AA:2894:G:H1'	1.79	0.64
11:AA:2870:C:H5"	25:AR:65:LEU:HD21	1.78	0.64
15:AE:56:PRO:O	15:AE:57:LYS:NZ	2.29	0.64
17:AG:38:VAL:HG22	17:AG:93:THR:HG23	1.78	0.64
27:AT:13:ARG:HE	27:AT:13:ARG:CA	2.11	0.64
35:BA:80:G:H3'	35:BA:81:U:H5'	1.77	0.64
35:BA:1456:G:H8	54:BT:58:LYS:HE2	1.60	0.64
38:BD:148:VAL:CG1	38:BD:149:ALA:H	2.10	0.64
43:BI:85:LEU:HD13	43:BI:92:TYR:HD2	1.62	0.64
44:BJ:54:PHE:CZ	44:BJ:55:LYS:HD2	2.31	0.64
58:BY:89:A:H4'	59:BZ:229:PHE:HZ	1.61	0.64
11:AA:57:C:O2'	11:AA:58:G:H5'	1.97	0.64
11:AA:1328:G:H2'	11:AA:1330:C:C5	2.33	0.64
11:AA:2657:A:H2	11:AA:2664:G:H21	1.42	0.64
14:AD:158:ALA:O	14:AD:161:THR:HG23	1.97	0.64
23:AP:23:PRO:O	23:AP:33:ARG:CZ	2.46	0.64
23:AP:30:THR:HG23	23:AP:31:ALA:H	1.63	0.64
24:AQ:10:ARG:HB2	24:AQ:10:ARG:HH11	1.63	0.64
29:AV:35:LEU:HB2	29:AV:57:VAL:CG1	2.27	0.64
34:B2:84:HIS:HA	34:B2:87:ARG:HD3	1.80	0.64
35:BA:1053:G:C4'	35:BA:1054:C:H5'	2.24	0.64
36:BB:15:VAL:HG21	36:BB:209:ARG:HH21	1.60	0.64
38:BD:5:ILE:O	38:BD:5:ILE:HG22	1.96	0.64
39:BE:11:ILE:O	39:BE:12:LEU:HB3	1.96	0.64
44:BJ:54:PHE:CD1	44:BJ:55:LYS:HE3	2.32	0.64
46:BL:53:ARG:H	46:BL:53:ARG:HD2	1.63	0.64
46:BL:78:GLN:O	46:BL:80:HIS:N	2.24	0.64
52:BR:31:LEU:HD23	52:BR:31:LEU:H	1.63	0.64
52:BR:47:THR:O	52:BR:83:GLU:HG2	1.96	0.64
8:A7:12:ARG:HG3	11:AA:686:G:O6	1.98	0.64
11:AA:2183:C:H2'	11:AA:2184:G:C8	2.30	0.64
21:AN:18:ALA:HB1	21:AN:26:LEU:HD22	1.77	0.64
22:AO:17:ARG:HE	22:AO:47:ILE:CD1	2.11	0.64
32:AY:7:VAL:HG21	32:AY:8:LYS:HZ3	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AY:17:SER:HB2	32:AY:71:LYS:CE	2.27	0.64
35:BA:953:G:C5'	35:BA:965:A:H61	2.10	0.64
46:BL:90:VAL:O	46:BL:92:ASP:N	2.31	0.64
47:BM:88:ARG:HG3	47:BM:98:VAL:HG12	1.80	0.64
1:A0:21:LEU:HD22	1:A0:39:ARG:O	1.97	0.64
11:AA:894:C:C2'	11:AA:895:U:H5'	2.28	0.64
11:AA:1539:G:C2	11:AA:1540:U:H1'	2.32	0.64
11:AA:1915:U:C5'	11:AA:1915:U:H6	2.10	0.64
13:AC:133:PRO:CD	56:BW:20:G:C6	2.79	0.64
23:AP:97:PRO:HD3	23:AP:126:VAL:O	1.97	0.64
35:BA:80:G:C3'	35:BA:81:U:H5'	2.27	0.64
35:BA:291:C:O2'	35:BA:292:G:H5'	1.98	0.64
35:BA:585:G:H4'	46:BL:8:ASN:HD21	1.63	0.64
35:BA:875:C:O2'	42:BH:14:ARG:NH1	2.31	0.64
38:BD:145:GLU:HB3	38:BD:183:GLY:O	1.98	0.64
48:BN:29:ARG:NH1	48:BN:31:ARG:O	2.31	0.64
1:A0:7:LEU:HD22	24:AQ:85:LYS:CG	2.21	0.64
2:A1:58:ILE:HD11	2:A1:90:ILE:HB	1.80	0.64
7:A6:22:ALA:HB2	7:A6:39:TYR:CZ	2.33	0.64
11:AA:860:U:H5	11:AA:917:A:N7	1.96	0.64
13:AC:8:ARG:HA	13:AC:11:LEU:HG	1.80	0.64
13:AC:123:VAL:O	56:BW:57:C:O2'	2.13	0.64
16:AF:6:VAL:CG1	16:AF:7:TYR:H	2.06	0.64
16:AF:155:LEU:HD11	16:AF:176:LEU:HD13	1.79	0.64
18:AH:68:THR:O	18:AH:72:ILE:HG12	1.98	0.64
22:AO:88:ASN:C	22:AO:90:GLN:H	2.05	0.64
24:AQ:21:THR:O	24:AQ:22:LYS:HB3	1.97	0.64
28:AU:115:ALA:C	28:AU:117:GLN:H	2.06	0.64
29:AV:49:THR:HB	29:AV:50:PRO:HD2	1.80	0.64
35:BA:508:C:OP2	38:BD:209:ARG:NH1	2.30	0.64
35:BA:1308:U:H5"	47:BM:98:VAL:HG23	1.80	0.64
36:BB:7:VAL:O	36:BB:11:LEU:HB2	1.98	0.64
42:BH:103:VAL:HG23	42:BH:110:ALA:HB2	1.78	0.64
59:BZ:299:GLU:N	59:BZ:302:GLN:HE21	1.96	0.64
2:A1:4:VAL:CG2	2:A1:11:ARG:HG2	2.27	0.64
11:AA:2543:G:H8	11:AA:2543:G:H5'	1.63	0.64
11:AA:2572:A:N7	15:AE:145:LYS:HB2	2.13	0.64
11:AA:2752:C:O2	11:AA:2752:C:H2'	1.98	0.64
15:AE:55:ASN:ND2	15:AE:75:VAL:HG22	2.12	0.64
23:AP:83:VAL:HG11	23:AP:112:LEU:CD2	2.27	0.64
28:AU:79:PHE:O	28:AU:83:LEU:HD13	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AU:110:VAL:O	28:AU:113:ALA:HB3	1.98	0.64
42:BH:11:THR:HG23	42:BH:14:ARG:HH12	1.62	0.64
52:BR:33:ASP:HB3	52:BR:36:ASN:OD1	1.98	0.64
53:BS:62:ILE:HA	53:BS:66:MET:HE2	1.79	0.64
54:BT:41:ILE:C	54:BT:43:LEU:H	2.05	0.64
56:BW:71:G:O2'	56:BW:72:C:H5'	1.98	0.64
11:AA:894:C:O2'	11:AA:895:U:H5'	1.98	0.64
11:AA:947:G:H2'	11:AA:948:G:C8	2.33	0.64
11:AA:1177:A:H5'	11:AA:1178:C:C5	2.33	0.64
11:AA:1506:C:O2	11:AA:1506:C:H2'	1.98	0.64
11:AA:1590:U:H2'	11:AA:1591:G:H5"	1.78	0.64
11:AA:2105:C:H2'	11:AA:2106:G:H8	1.61	0.64
11:AA:2305:A:H5"	17:AG:134:GLY:HA3	1.80	0.64
21:AN:3:THR:C	21:AN:4:TYR:CG	2.76	0.64
25:AR:4:LEU:O	25:AR:4:LEU:CG	2.44	0.64
25:AR:100:LEU:HD21	25:AR:113:LEU:HD12	1.80	0.64
27:AT:27:THR:O	27:AT:28:VAL:HG23	1.97	0.64
29:AV:99:ILE:HD13	29:AV:99:ILE:N	2.12	0.64
33:AZ:23:LYS:HD3	33:AZ:38:TYR:CE1	2.33	0.64
35:BA:426:G:H2'	35:BA:427:U:C6	2.33	0.64
35:BA:972:C:O3'	44:BJ:57:LYS:HG3	1.98	0.64
35:BA:1157:A:H1'	35:BA:1181:G:H22	1.57	0.64
35:BA:1412:C:H2'	35:BA:1413:A:H8	1.61	0.64
35:BA:1498:U:H4'	35:BA:1519:A:H2	1.61	0.64
41:BG:156:TRP:CD1	41:BG:156:TRP:H	2.14	0.64
43:BI:11:LYS:HG3	43:BI:108:VAL:HG13	1.80	0.64
49:BO:68:ARG:HH11	49:BO:68:ARG:HG3	1.62	0.64
54:BT:54:LYS:HA	54:BT:57:ARG:NH2	2.13	0.64
56:BW:76:C:O3'	56:BW:77:A:H8	1.76	0.64
59:BZ:72:THR:O	59:BZ:74:LYS:N	2.31	0.64
11:AA:2147:G:C2'	11:AA:2148:G:H5'	2.28	0.63
11:AA:2308:G:N7	11:AA:2310:A:H5'	2.11	0.63
11:AA:2656:U:H2'	11:AA:2657:A:H5"	1.80	0.63
35:BA:198:G:O2'	35:BA:199:G:H8	1.80	0.63
35:BA:1258:G:H2'	35:BA:1259:C:C6	2.33	0.63
36:BB:178:ARG:NH1	42:BH:71:GLY:O	2.30	0.63
38:BD:129:ASN:HD22	38:BD:129:ASN:N	1.96	0.63
43:BI:118:LYS:O	43:BI:119:ALA:HB3	1.97	0.63
44:BJ:4:ILE:HB	44:BJ:74:ILE:CD1	2.18	0.63
49:BO:39:LEU:HD22	49:BO:43:LEU:HG	1.80	0.63
51:BQ:67:LYS:HA	51:BQ:70:ARG:HH12	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:100:ILE:N	54:BT:100:ILE:HD12	2.13	0.63
10:A9:25:VAL:HB	10:A9:34:GLN:CB	2.25	0.63
11:AA:247:G:H4'	11:AA:386:G:C5	2.32	0.63
11:AA:272(H):C:O2'	11:AA:272(I):U:H5"	1.97	0.63
11:AA:880:G:H2'	11:AA:881:G:H8	1.64	0.63
13:AC:128:GLY:CA	56:BW:57:C:C2'	2.73	0.63
16:AF:160:ASN:HD21	16:AF:162:LEU:CD2	2.10	0.63
28:AU:70:ARG:NH2	28:AU:75:ASN:HB2	2.13	0.63
28:AU:92:ARG:NH1	29:AV:11:GLN:O	2.31	0.63
29:AV:1:MET:O	29:AV:2:PHE:HB2	1.97	0.63
33:AZ:107:THR:CG2	33:AZ:111:VAL:HG21	2.28	0.63
35:BA:1217:C:H2'	35:BA:1218:C:H6	1.63	0.63
42:BH:89:PRO:HA	42:BH:92:ARG:NH1	2.12	0.63
7:A6:10:LEU:H	7:A6:10:LEU:CD2	2.09	0.63
7:A6:15:GLU:OE2	7:A6:18:ARG:NH2	2.31	0.63
11:AA:380:U:H2'	11:AA:381:G:H8	1.61	0.63
11:AA:1917:U:O2'	11:AA:1918:A:H5'	1.99	0.63
11:AA:2303:G:O2'	17:AG:132:ASN:HB2	1.97	0.63
11:AA:2377:A:H4'	26:AS:107:GLU:O	1.98	0.63
15:AE:65:GLY:HA2	15:AE:70:ALA:HB2	1.79	0.63
21:AN:58:ASP:O	21:AN:60:ILE:N	2.31	0.63
27:AT:106:SER:C	27:AT:107:ASP:OD1	2.41	0.63
35:BA:956:U:H2'	35:BA:957:U:H6	1.64	0.63
35:BA:1080:A:H5'	39:BE:14:ARG:NH2	2.12	0.63
35:BA:1323:G:H2'	35:BA:1324:A:H8	1.63	0.63
35:BA:1476:G:H2'	35:BA:1477:C:C6	2.33	0.63
37:BC:113:ALA:HB3	37:BC:114:PRO:HD3	1.80	0.63
44:BJ:34:VAL:HG13	44:BJ:73:ASP:O	1.98	0.63
45:BK:53:SER:C	45:BK:55:LYS:H	2.06	0.63
45:BK:124:LYS:HD2	45:BK:125:PHE:CE1	2.32	0.63
53:BS:63:THR:HG23	53:BS:65:ASN:N	2.13	0.63
11:AA:1242:A:N1	23:AP:8:PRO:HG3	2.12	0.63
11:AA:2068:U:N3	11:AA:2430:A:H2	1.95	0.63
13:AC:83:ILE:HD11	13:AC:97:GLU:OE2	1.98	0.63
16:AF:178:PRO:CB	16:AF:201:VAL:HG11	2.16	0.63
27:AT:98:LYS:HB3	27:AT:100:TYR:CE1	2.34	0.63
32:AY:13:VAL:HG21	32:AY:72:VAL:HB	1.79	0.63
37:BC:55:VAL:HG13	37:BC:68:VAL:HG22	1.79	0.63
44:BJ:96:ILE:HD13	44:BJ:96:ILE:N	2.13	0.63
55:BU:12:LYS:HG3	55:BU:17:THR:O	1.98	0.63
59:BZ:202:LEU:O	59:BZ:206:ILE:HD13	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:55:ARG:CZ	11:AA:2384:G:OP2	2.47	0.63
6:A5:56:LYS:HE2	6:A5:59:GLU:OE1	1.97	0.63
11:AA:1021:A:H3'	11:AA:1021:A:H8	1.62	0.63
11:AA:1169:G:H1	11:AA:1180:C:N4	1.94	0.63
11:AA:1301:A:O2'	11:AA:1302:A:C3'	2.47	0.63
11:AA:1720:U:H2'	11:AA:1721:G:O4'	1.99	0.63
11:AA:2476:A:H2'	11:AA:2477:C:C5'	2.28	0.63
14:AD:6:PHE:CE1	14:AD:18:VAL:HG12	2.33	0.63
14:AD:133:LEU:HA	14:AD:136:ILE:HD13	1.80	0.63
21:AN:131:GLN:HE22	21:AN:133:GLN:HA	1.63	0.63
24:AQ:137:TYR:HD1	24:AQ:137:TYR:H	1.46	0.63
26:AS:73:LEU:HD23	26:AS:73:LEU:C	2.23	0.63
35:BA:16:A:N1	35:BA:919:A:H2	1.96	0.63
35:BA:353:A:H5'	35:BA:353:A:H8	1.64	0.63
35:BA:1137:C:H4'	35:BA:1138:G:C2	2.33	0.63
35:BA:1148:U:H2'	35:BA:1149:C:O4'	1.99	0.63
35:BA:1499:A:O2'	35:BA:1500:A:H5'	1.98	0.63
39:BE:120:THR:HG23	39:BE:121:LYS:H	1.63	0.63
53:BS:19:VAL:O	53:BS:23:ASN:HB2	1.98	0.63
58:BY:79:C:H2'	58:BY:80:A:C8	2.34	0.63
59:BZ:224:PRO:HB2	59:BZ:346:THR:HG23	1.80	0.63
1:A0:26:TYR:O	1:A0:67:VAL:HB	1.97	0.63
6:A5:40:LYS:HZ3	6:A5:46:CYS:N	1.97	0.63
11:AA:271(A):A:H5'	11:AA:271(B):C:OP2	1.98	0.63
11:AA:1210:A:H8	11:AA:1210:A:H5'	1.64	0.63
12:AB:111:G:C2'	12:AB:112:U:H5'	2.29	0.63
15:AE:167:VAL:O	15:AE:167:VAL:HG13	1.99	0.63
16:AF:160:ASN:ND2	16:AF:162:LEU:HD22	2.09	0.63
17:AG:85:GLY:O	17:AG:87:PRO:HD3	1.98	0.63
35:BA:1196:U:O2	35:BA:1196:U:H2'	1.98	0.63
35:BA:1248:A:H2'	35:BA:1249:C:H5'	1.81	0.63
36:BB:69:LEU:HD23	36:BB:159:PRO:CG	2.28	0.63
36:BB:129:GLU:O	36:BB:130:ARG:O	2.17	0.63
41:BG:13:GLN:NE2	41:BG:14:PRO:HD2	2.14	0.63
49:BO:33:THR:HG21	49:BO:85:LEU:HD21	1.81	0.63
54:BT:44:ALA:CB	54:BT:88:VAL:HG13	2.29	0.63
1:A0:12:ASN:HD22	11:AA:2278:A:H8	1.46	0.63
1:A0:27:GLU:CD	1:A0:27:GLU:N	2.38	0.63
9:A8:15:LYS:HD2	23:AP:65:ARG:NH2	2.12	0.63
17:AG:140:ILE:C	17:AG:140:ILE:HD12	2.23	0.63
17:AG:141:PHE:HB3	17:AG:142:PRO:HD2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:104:GLU:OE1	18:AH:104:GLU:O	2.17	0.63
32:AY:29:GLU:OE1	32:AY:29:GLU:N	2.31	0.63
35:BA:59:A:H1'	35:BA:354:G:N2	2.13	0.63
43:BI:52:ALA:HB3	43:BI:95:LYS:CE	2.18	0.63
45:BK:126:ARG:HB3	45:BK:126:ARG:HH11	1.64	0.63
46:BL:53:ARG:HD2	46:BL:53:ARG:N	2.14	0.63
5:A4:25:TYR:HB2	17:AG:101:ILE:HD13	1.81	0.63
6:A5:4:HIS:O	11:AA:2056:G:N2	2.31	0.63
11:AA:363(B):G:H2'	11:AA:363(C):G:C8	2.32	0.63
13:AC:29:VAL:HA	13:AC:32:LEU:HD12	1.81	0.63
13:AC:215:THR:OG1	13:AC:216:THR:N	2.30	0.63
20:AK:11:UNK:HA	20:AK:54:UNK:HA	1.81	0.63
23:AP:96:THR:HG22	23:AP:126:VAL:HB	1.80	0.63
26:AS:13:ARG:HG3	26:AS:14:VAL:N	2.07	0.63
30:AW:92:ARG:HH11	30:AW:92:ARG:CB	2.11	0.63
33:AZ:130:PRO:CA	33:AZ:133:ILE:HD11	2.25	0.63
35:BA:697:U:H2'	35:BA:698:G:H5'	1.81	0.63
35:BA:939:G:H5"	41:BG:102:ARG:NH2	2.14	0.63
36:BB:44:LEU:C	36:BB:46:LYS:H	2.04	0.63
36:BB:236:TYR:HD1	36:BB:236:TYR:H	1.47	0.63
37:BC:143:GLU:HG2	37:BC:143:GLU:O	1.98	0.63
40:BF:64:GLN:HG3	40:BF:64:GLN:O	1.98	0.63
46:BL:27:LEU:O	46:BL:29:GLY:N	2.32	0.63
11:AA:661:C:O3'	23:AP:18:ARG:HD2	1.99	0.63
11:AA:862:G:H2'	11:AA:863:A:O4'	1.99	0.63
11:AA:2176:A:H4'	13:AC:213:TYR:CD1	2.34	0.63
11:AA:2195:C:O2'	11:AA:2196:C:H5'	1.98	0.63
13:AC:171:ILE:HG21	13:AC:196:LEU:CD1	2.29	0.63
16:AF:51:THR:CG2	16:AF:92:PRO:HD2	2.29	0.63
18:AH:23:ARG:NH1	18:AH:36:PRO:HB3	2.14	0.63
26:AS:35:ILE:HD11	26:AS:99:LYS:HE3	1.79	0.63
27:AT:50:ILE:HA	27:AT:99:LEU:HD11	1.81	0.63
35:BA:1375:A:H2'	35:BA:1376:U:O4'	1.99	0.63
54:BT:18:GLN:O	54:BT:22:ARG:HG3	1.97	0.63
56:BW:29:C:H2'	56:BW:30:G:H8	1.63	0.63
5:A4:6:HIS:HB3	17:AG:67:LYS:HE3	1.81	0.62
10:A9:1:MET:HA	10:A9:4:ARG:CZ	2.28	0.62
10:A9:17:ILE:HG21	10:A9:19:ARG:HH21	1.64	0.62
11:AA:53:A:H2'	11:AA:54:G:H5'	1.81	0.62
11:AA:116:C:O2'	11:AA:117:G:H5'	1.99	0.62
11:AA:352:G:H1'	11:AA:354:G:N7	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1368:G:O2'	11:AA:1369:G:H5'	1.99	0.62
14:AD:34:VAL:C	14:AD:36:PRO:HD2	2.23	0.62
21:AN:10:GLU:OE2	21:AN:11:PRO:HD2	1.98	0.62
21:AN:22:THR:HA	21:AN:61:ARG:O	1.98	0.62
21:AN:28:THR:CG2	21:AN:29:LYS:N	2.61	0.62
22:AO:80:ASP:OD2	27:AT:71:GLY:HA3	1.99	0.62
32:AY:63:LYS:CG	32:AY:64:GLU:H	2.11	0.62
34:B2:6:GLU:C	34:B2:41:PHE:HE2	2.07	0.62
35:BA:619:U:H3	38:BD:135:LEU:HD11	1.64	0.62
35:BA:958:A:N6	53:BS:77:THR:O	2.31	0.62
35:BA:1233:G:H2'	35:BA:1234:C:C6	2.34	0.62
36:BB:14:GLY:O	36:BB:15:VAL:HG13	1.99	0.62
51:BQ:74:LEU:HD12	51:BQ:75:ARG:HG2	1.80	0.62
56:BV:4:G:O2'	56:BV:5:G:H8	1.81	0.62
58:BY:4:G:O2'	58:BY:5:G:H5'	1.98	0.62
11:AA:1058:G:H21	11:AA:1081:U:H3	1.47	0.62
11:AA:1947:C:H2'	11:AA:1948:G:C5'	2.26	0.62
11:AA:2120:G:N2	13:AC:167:LYS:HZ1	1.97	0.62
11:AA:2415:G:H4'	23:AP:66:GLY:C	2.23	0.62
21:AN:57:ALA:HB3	21:AN:124:ALA:HA	1.81	0.62
23:AP:85:LEU:HD23	23:AP:85:LEU:N	2.12	0.62
26:AS:13:ARG:O	26:AS:15:ARG:HG3	1.99	0.62
27:AT:50:ILE:HG23	27:AT:99:LEU:C	2.24	0.62
35:BA:17:U:H2'	35:BA:18:C:C6	2.34	0.62
36:BB:12:GLU:C	36:BB:14:GLY:H	2.06	0.62
36:BB:172:ILE:HD12	36:BB:172:ILE:N	2.10	0.62
38:BD:190:ASP:O	38:BD:194:LEU:HD23	1.99	0.62
58:BY:82:C:H2'	58:BY:83:U:C6	2.34	0.62
11:AA:404:C:H4'	11:AA:405:U:H5'	1.81	0.62
11:AA:519:U:H2'	11:AA:520:G:H8	1.65	0.62
11:AA:1678:G:N2	11:AA:1989:G:H22	1.97	0.62
13:AC:86:ALA:HB3	13:AC:94:VAL:CG1	2.29	0.62
13:AC:171:ILE:HG23	13:AC:171:ILE:O	1.99	0.62
14:AD:35:LYS:NZ	14:AD:36:PRO:HD3	2.14	0.62
21:AN:125:GLY:HA3	21:AN:126:PRO:O	1.99	0.62
27:AT:46:GLU:O	27:AT:65:LYS:HD2	1.99	0.62
32:AY:17:SER:OG	32:AY:18:GLY:N	2.31	0.62
35:BA:262:A:H2'	35:BA:263:A:C8	2.34	0.62
35:BA:930:C:O2'	35:BA:931:C:H5'	2.00	0.62
35:BA:963:G:H2'	35:BA:964:A:H8	1.63	0.62
35:BA:1122:U:H2'	35:BA:1123:A:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1162:C:H42	35:BA:1174:G:H1	1.46	0.62
35:BA:1240:U:OP1	41:BG:116:ALA:HB2	1.99	0.62
35:BA:1409:C:H2'	35:BA:1410:G:C8	2.35	0.62
36:BB:114:ARG:HD2	36:BB:118:LEU:HD11	1.80	0.62
44:BJ:6:ILE:HA	44:BJ:97:GLU:O	1.99	0.62
54:BT:26:ASN:HD22	54:BT:27:LYS:N	1.97	0.62
58:BY:3:G:OP1	59:BZ:87:ASP:HB3	1.99	0.62
11:AA:443:A:H1'	11:AA:1201:C:O4'	1.99	0.62
11:AA:528:A:C2	11:AA:2043:C:H4'	2.34	0.62
11:AA:771:G:H2'	11:AA:772:C:H6	1.64	0.62
11:AA:925:C:H2'	11:AA:926:A:C5'	2.29	0.62
11:AA:1887:C:C3'	11:AA:1888:G:H5"	2.29	0.62
13:AC:163:PHE:HD1	13:AC:171:ILE:HD11	1.64	0.62
21:AN:65:LYS:HB3	21:AN:65:LYS:HZ3	1.63	0.62
21:AN:90:MET:HE2	21:AN:90:MET:HA	1.80	0.62
35:BA:460:G:N1	35:BA:470:C:H5"	2.14	0.62
36:BB:12:GLU:C	36:BB:14:GLY:N	2.55	0.62
36:BB:90:MET:HA	36:BB:90:MET:CE	2.29	0.62
47:BM:16:ASP:HA	47:BM:30:ALA:HB1	1.81	0.62
47:BM:97:PRO:HG3	47:BM:103:THR:HG22	1.80	0.62
48:BN:7:ILE:O	48:BN:11:LYS:HE3	1.99	0.62
53:BS:6:LYS:HD3	53:BS:6:LYS:N	2.14	0.62
59:BZ:215:ARG:O	59:BZ:216:ASP:HB2	1.98	0.62
1:A0:7:LEU:HD21	24:AQ:81:VAL:HG22	1.82	0.62
5:A4:34:GLU:CG	47:BM:57:ARG:HH22	2.09	0.62
9:A8:61:LEU:H	9:A8:61:LEU:CD1	1.86	0.62
10:A9:7:VAL:HG21	10:A9:36:GLN:HB2	1.82	0.62
11:AA:80:G:O2'	11:AA:81:G:H5'	2.00	0.62
11:AA:658:C:H2'	11:AA:659:C:C6	2.34	0.62
11:AA:907:U:OP1	24:AQ:24:GLY:N	2.28	0.62
11:AA:1614:A:N6	30:AW:92:ARG:O	2.32	0.62
11:AA:2774:C:H2'	11:AA:2775:A:O4'	1.99	0.62
15:AE:111:ARG:HB3	25:AR:2:ARG:HH12	1.64	0.62
18:AH:20:ALA:HB1	18:AH:21:PRO:CD	2.29	0.62
21:AN:134:ARG:O	21:AN:136:GLU:N	2.33	0.62
25:AR:38:VAL:HB	25:AR:39:PRO:HD3	1.81	0.62
25:AR:117:VAL:HG22	25:AR:118:GLU:N	2.14	0.62
27:AT:118:ARG:HH12	35:BA:1442(A):G:H5"	1.62	0.62
29:AV:3:ALA:O	29:AV:13:ARG:HA	2.00	0.62
33:AZ:155:LEU:N	33:AZ:155:LEU:CD2	2.62	0.62
34:B2:83:LYS:HG3	34:B2:84:HIS:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:648:A:H2'	35:BA:649:G:H8	1.63	0.62
35:BA:966:G:O2'	35:BA:967:C:C6	2.52	0.62
35:BA:1059:C:H2'	35:BA:1060:C:C6	2.34	0.62
35:BA:1189:C:O3'	37:BC:5:ILE:HD12	1.98	0.62
41:BG:148:ASN:C	41:BG:150:ALA:H	2.07	0.62
42:BH:20:TYR:HE2	42:BH:75:ARG:HD2	1.63	0.62
46:BL:51:ALA:HB3	46:BL:53:ARG:HE	1.64	0.62
46:BL:94:PRO:O	46:BL:96:VAL:N	2.30	0.62
7:A6:32:ASN:O	7:A6:33:LYS:HB2	1.98	0.62
7:A6:45:LYS:NZ	7:A6:45:LYS:HB3	2.15	0.62
9:A8:32:LEU:HB3	9:A8:36:LYS:HD2	1.82	0.62
11:AA:1689:A:H62	11:AA:1698:A:H2	1.45	0.62
11:AA:1779:U:C5	11:AA:1784:A:N7	2.66	0.62
14:AD:62:TYR:CE1	14:AD:64:ILE:HA	2.35	0.62
23:AP:16:ARG:HD3	23:AP:17:LYS:N	2.14	0.62
26:AS:89:ARG:HB3	26:AS:92:TYR:HB3	1.82	0.62
32:AY:7:VAL:CG1	32:AY:8:LYS:HZ2	2.13	0.62
32:AY:46:LYS:H	32:AY:62:GLU:CG	2.12	0.62
32:AY:46:LYS:N	32:AY:62:GLU:HG2	2.15	0.62
35:BA:542:G:OP1	38:BD:10:ARG:NH2	2.33	0.62
35:BA:711:G:O2'	35:BA:712:A:H5'	2.00	0.62
35:BA:763:G:H2'	35:BA:764:C:H6	1.64	0.62
35:BA:1428:A:H2'	35:BA:1429:C:C6	2.34	0.62
35:BA:1493:A:OP1	35:BA:1493:A:H3'	2.00	0.62
38:BD:127:THR:CG2	38:BD:128:VAL:N	2.61	0.62
42:BH:82:HIS:HD2	42:BH:138:TRP:NE1	1.96	0.62
42:BH:112:LEU:N	42:BH:112:LEU:HD23	2.14	0.62
43:BI:108:VAL:HG12	43:BI:109:VAL:H	1.63	0.62
47:BM:74:VAL:HA	47:BM:77:ASN:HD22	1.65	0.62
53:BS:19:VAL:CG1	53:BS:44:MET:HE2	2.28	0.62
56:BW:60:A:C2'	56:BW:61:U:H5'	2.30	0.62
59:BZ:313:HIS:ND1	59:BZ:405:GLU:O	2.31	0.62
3:A2:5:GLU:HG3	3:A2:9:GLN:OE1	1.99	0.62
7:A6:12:GLU:HB2	7:A6:52:VAL:HG12	1.80	0.62
7:A6:15:GLU:CG	7:A6:18:ARG:NH1	2.63	0.62
11:AA:1204:A:H2	11:AA:1241:A:N1	1.97	0.62
11:AA:1952:A:C6	22:AO:22:ILE:HD12	2.34	0.62
11:AA:2377:A:H2'	11:AA:2378:A:C8	2.34	0.62
12:AB:50:G:OP1	26:AS:63:THR:HG23	1.98	0.62
16:AF:126:VAL:HG11	16:AF:142:TRP:CH2	2.35	0.62
17:AG:2:PRO:O	17:AG:3:LEU:CB	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:25:TYR:HH	17:AG:168:GLU:CD	2.07	0.62
24:AQ:134:ARG:NH1	33:AZ:122:ARG:CZ	2.63	0.62
24:AQ:141:GLN:NE2	33:AZ:72:ARG:HD3	2.14	0.62
29:AV:72:VAL:HG23	29:AV:85:LYS:HB2	1.82	0.62
42:BH:88:LYS:HB3	42:BH:89:PRO:HD2	1.80	0.62
43:BI:7:THR:HG22	43:BI:8:GLY:N	2.13	0.62
43:BI:7:THR:O	43:BI:80:GLY:HA2	1.98	0.62
54:BT:48:LYS:HB3	54:BT:51:GLU:CG	2.30	0.62
56:BW:22:A:H4'	56:BW:23:G:H8	1.64	0.62
11:AA:141:A:C8	11:AA:1408:C:O2'	2.44	0.62
15:AE:120:TRP:CD2	15:AE:155:LYS:HG2	2.34	0.62
15:AE:186:GLY:O	15:AE:187:ALA:CB	2.48	0.62
17:AG:60:LEU:O	17:AG:64:THR:HG22	2.00	0.62
22:AO:63:VAL:HG12	22:AO:106:LEU:HD11	1.81	0.62
25:AR:2:ARG:HG2	25:AR:5:LYS:HZ3	1.62	0.62
26:AS:31:SER:HB3	26:AS:34:HIS:O	2.00	0.62
27:AT:73:GLU:OE2	27:AT:103:ARG:HD3	2.00	0.62
32:AY:81:LYS:HD2	32:AY:96:ILE:HD12	1.82	0.62
33:AZ:177:PRO:C	33:AZ:178:GLU:HG2	2.24	0.62
34:B2:14:TYR:HB3	34:B2:121:ARG:H	1.63	0.62
35:BA:92:C:H2'	35:BA:93:G:C8	2.31	0.62
38:BD:170:VAL:HG12	38:BD:174:LEU:HB2	1.82	0.62
43:BI:52:ALA:CB	43:BI:95:LYS:HE2	2.20	0.62
47:BM:68:GLY:C	47:BM:70:LEU:H	2.07	0.62
50:BP:6:LEU:HB3	50:BP:17:TYR:HB3	1.82	0.62
59:BZ:268:THR:O	59:BZ:289:LEU:HD23	2.00	0.62
4:A3:35:ARG:HH11	4:A3:35:ARG:CB	2.09	0.62
11:AA:1301:A:O2'	11:AA:1302:A:H3'	1.99	0.62
11:AA:1550:C:OP1	11:AA:1720:U:O2'	2.18	0.62
11:AA:1766:U:H2'	11:AA:1767:C:C6	2.33	0.62
11:AA:2267:A:H5"	11:AA:2268:A:H5'	1.82	0.62
13:AC:72:VAL:HG23	13:AC:111:ASP:HB3	1.82	0.62
21:AN:21:LYS:HD3	21:AN:22:THR:N	2.15	0.62
24:AQ:10:ARG:HB2	24:AQ:10:ARG:NH1	2.14	0.62
27:AT:32:TYR:N	27:AT:32:TYR:CD1	2.66	0.62
28:AU:92:ARG:CZ	29:AV:11:GLN:HG2	2.30	0.62
33:AZ:119:GLU:HG3	33:AZ:122:ARG:NH1	2.15	0.62
35:BA:78:G:N2	35:BA:91:C:H42	1.95	0.62
35:BA:148:G:O2'	35:BA:149:A:H5'	1.99	0.62
35:BA:915:A:H2'	35:BA:916:G:H5'	1.80	0.62
37:BC:34:LEU:HD21	37:BC:38:ARG:NE	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:43:ALA:O	43:BI:45:ALA:N	2.32	0.62
53:BS:24:ALA:O	53:BS:25:LYS:HB2	1.99	0.62
59:BZ:219:LYS:HB3	59:BZ:220:PRO:HD2	1.81	0.62
2:A1:8:SER:HB3	2:A1:66:HIS:CD2	2.35	0.62
11:AA:309:G:O3'	32:AY:18:GLY:HA2	2.00	0.62
11:AA:1058:G:C2'	11:AA:1059:G:H5"	2.30	0.62
15:AE:199:ARG:HG2	15:AE:200:GLU:OE1	2.00	0.62
28:AU:92:ARG:NE	29:AV:11:GLN:HG2	2.13	0.62
35:BA:719:C:C2	52:BR:50:ILE:HG12	2.35	0.62
44:BJ:6:ILE:HG22	44:BJ:98:ILE:HD12	1.81	0.62
46:BL:68:ALA:HB2	46:BL:85:ILE:HD11	1.80	0.62
47:BM:65:LYS:HE2	47:BM:73:GLU:OE1	2.00	0.62
1:A0:10:THR:HG22	1:A0:11:ARG:H	1.65	0.61
10:A9:8:LYS:HE2	10:A9:8:LYS:HA	1.81	0.61
11:AA:27:G:N2	11:AA:512:G:C2'	2.63	0.61
11:AA:1192:G:N7	23:AP:29:LYS:NZ	2.44	0.61
16:AF:20:LEU:N	16:AF:24:LEU:HD21	2.06	0.61
21:AN:129:PRO:O	21:AN:130:HIS:HB3	2.00	0.61
25:AR:55:ALA:HA	25:AR:80:PHE:CZ	2.35	0.61
27:AT:46:GLU:OE2	27:AT:88:ILE:HG13	2.00	0.61
35:BA:27:G:H2'	35:BA:28:G:H8	1.64	0.61
35:BA:373:A:O2'	35:BA:374:A:H5'	1.99	0.61
35:BA:1443:G:N2	35:BA:1460:A:H1'	2.14	0.61
36:BB:235:SER:HG	36:BB:236:TYR:HD1	1.46	0.61
3:A2:22:GLU:HG2	3:A2:64:LEU:CD1	2.12	0.61
3:A2:63:VAL:HA	3:A2:66:GLU:HG2	1.82	0.61
7:A6:15:GLU:HB2	7:A6:20:ASN:HB3	1.82	0.61
7:A6:33:LYS:HA	7:A6:33:LYS:CE	2.21	0.61
11:AA:996:A:H4'	28:AU:92:ARG:NE	2.15	0.61
11:AA:1257:C:H2'	11:AA:1258:C:H6	1.64	0.61
11:AA:1441:G:O2'	11:AA:1442:G:H5'	1.99	0.61
11:AA:1683:C:H2'	11:AA:1684:C:H6	1.63	0.61
13:AC:64:LEU:HB3	13:AC:188:ASN:ND2	2.14	0.61
27:AT:41:ARG:HH11	27:AT:42:ILE:N	1.98	0.61
27:AT:89:VAL:HB	27:AT:91:ARG:HG3	1.82	0.61
35:BA:975:A:H5'	35:BA:975:A:C8	2.33	0.61
39:BE:102:ALA:HB1	39:BE:106:PRO:HG2	1.81	0.61
44:BJ:4:ILE:HD13	44:BJ:77:PRO:CB	2.31	0.61
44:BJ:78:ASN:HD22	44:BJ:81:THR:HG23	1.66	0.61
47:BM:23:TYR:HB3	47:BM:67:GLU:CB	2.30	0.61
47:BM:49:THR:CB	47:BM:52:GLU:HG3	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:74:LYS:CG	54:BT:75:ASN:H	2.13	0.61
55:BU:4:GLY:O	55:BU:6:ARG:N	2.33	0.61
59:BZ:325:LYS:HG3	59:BZ:331:HIS:CB	2.30	0.61
6:A5:43:HIS:CD2	11:AA:2884:U:H5	2.16	0.61
11:AA:796:C:H2'	11:AA:797:C:C6	2.35	0.61
11:AA:2415:G:H4'	23:AP:67:MET:N	2.15	0.61
13:AC:54:SER:HB2	56:BW:63:C:H5"	1.81	0.61
15:AE:154:LYS:O	15:AE:155:LYS:HB2	1.99	0.61
18:AH:98:LEU:C	18:AH:98:LEU:HD12	2.26	0.61
27:AT:28:VAL:CG1	27:AT:46:GLU:HA	2.30	0.61
28:AU:92:ARG:HB3	29:AV:11:GLN:NE2	2.15	0.61
30:AW:64:MET:O	30:AW:65:LEU:HB3	1.98	0.61
31:AX:8:ILE:HD12	31:AX:8:ILE:N	2.15	0.61
35:BA:556:C:O2'	35:BA:557:G:H5'	2.00	0.61
54:BT:44:ALA:HB2	54:BT:88:VAL:HG13	1.81	0.61
54:BT:57:ARG:NH1	54:BT:102:GLY:HA3	2.14	0.61
11:AA:774:A:H2	11:AA:787:U:O2'	1.83	0.61
11:AA:1069:A:C1'	11:AA:1070:A:OP2	2.45	0.61
11:AA:1155:A:OP1	28:AU:55:ARG:HD2	2.00	0.61
11:AA:1484:G:C3'	11:AA:1485:G:H5"	2.29	0.61
11:AA:1817:G:H2'	11:AA:1818:U:H5'	1.82	0.61
11:AA:2496:C:O2'	11:AA:2497:A:H5'	1.99	0.61
22:AO:49:ARG:HD3	22:AO:49:ARG:H	1.65	0.61
25:AR:45:ARG:HG3	25:AR:46:GLY:H	1.65	0.61
25:AR:52:ILE:O	25:AR:55:ALA:HB3	2.00	0.61
26:AS:97:ARG:C	26:AS:97:ARG:NE	2.58	0.61
29:AV:16:PRO:O	29:AV:96:ILE:HB	2.01	0.61
29:AV:38:LEU:HD23	29:AV:39:LEU:N	2.15	0.61
31:AX:12:VAL:CG2	31:AX:17:ALA:HB1	2.30	0.61
34:B2:5:LEU:O	34:B2:104:LYS:HB2	1.99	0.61
34:B2:48:PHE:CB	34:B2:53:LEU:HA	2.22	0.61
34:B2:87:ARG:CA	34:B2:90:LEU:HD23	2.25	0.61
35:BA:769:G:H4'	35:BA:1513:A:H4'	1.83	0.61
35:BA:1104:G:P	36:BB:111:ARG:HD2	2.41	0.61
36:BB:98:LEU:HB2	36:BB:101:MET:HE3	1.81	0.61
46:BL:41:ARG:NH1	46:BL:43:VAL:HG12	2.14	0.61
3:A2:32:LEU:HD23	3:A2:32:LEU:O	2.01	0.61
5:A4:16:CYS:SG	5:A4:17:GLY:N	2.72	0.61
11:AA:402:A:O2'	11:AA:403:U:H5'	1.99	0.61
11:AA:1909:C:HO2'	56:BV:11:A:H4'	1.66	0.61
13:AC:143:GLY:O	13:AC:152:ILE:HG21	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AE:128:SER:OG	15:AE:129:HIS:N	2.32	0.61
24:AQ:1:MET:C	24:AQ:1:MET:HE3	2.25	0.61
24:AQ:137:TYR:N	24:AQ:137:TYR:CD1	2.65	0.61
27:AT:50:ILE:HA	27:AT:99:LEU:HD12	1.81	0.61
29:AV:49:THR:HB	29:AV:50:PRO:CD	2.30	0.61
32:AY:20:TYR:C	32:AY:22:GLY:H	2.07	0.61
34:B2:7:ASN:HB2	34:B2:41:PHE:CD2	2.36	0.61
35:BA:189(I):G:O2'	35:BA:189(J):G:H5'	2.00	0.61
35:BA:189(K):U:H2'	35:BA:189(L):G:H8	1.63	0.61
35:BA:736:C:H2'	35:BA:737:A:C8	2.36	0.61
36:BB:209:ARG:HD3	36:BB:239:VAL:CG1	2.28	0.61
37:BC:58:GLU:N	37:BC:65:ALA:HB3	2.09	0.61
41:BG:67:GLU:C	41:BG:69:VAL:H	2.09	0.61
41:BG:137:LYS:O	41:BG:141:VAL:HG23	2.00	0.61
44:BJ:63:PHE:CZ	48:BN:45:ARG:HG3	2.33	0.61
48:BN:6:LEU:HB3	48:BN:23:ARG:NH2	2.16	0.61
11:AA:473:G:H5"	11:AA:508:G:N2	2.14	0.61
11:AA:483:A:O3'	32:AY:49:VAL:HG22	2.00	0.61
11:AA:887:A:H2'	11:AA:887:A:N3	2.15	0.61
11:AA:2801(A):A:H5'	11:AA:2802:G:C8	2.26	0.61
12:AB:13:A:O2'	12:AB:14:U:H3'	2.01	0.61
12:AB:25:A:H2'	12:AB:25:A:N3	2.15	0.61
13:AC:75:LEU:O	13:AC:114:VAL:HG22	2.01	0.61
13:AC:103:ILE:O	13:AC:104:LEU:HD22	2.00	0.61
13:AC:201:PRO:HD2	13:AC:208:PHE:CZ	2.36	0.61
16:AF:103:LYS:HG2	16:AF:106:ARG:HH21	1.66	0.61
17:AG:111:LEU:HB2	17:AG:112:PRO:CD	2.30	0.61
21:AN:1:MET:HE2	21:AN:2:LYS:CA	2.31	0.61
24:AQ:21:THR:C	24:AQ:23:GLY:H	2.08	0.61
27:AT:33:LYS:HG3	27:AT:43:GLN:CB	2.30	0.61
35:BA:992:U:H4'	35:BA:993:G:O5'	2.01	0.61
35:BA:1397:C:O2	35:BA:1397:C:H2'	2.00	0.61
39:BE:6:PHE:HB3	39:BE:35:GLY:C	2.25	0.61
43:BI:99:LEU:C	43:BI:101:PHE:H	2.08	0.61
43:BI:111:ARG:HD2	48:BN:61:TRP:OXT	1.99	0.61
58:BY:87:C:O2	59:BZ:295:ARG:NH2	2.34	0.61
11:AA:607:U:OP1	16:AF:102:PRO:HA	2.01	0.61
11:AA:747:U:H5	11:AA:2014:A:N3	1.97	0.61
11:AA:896:A:H5'	33:AZ:146:ILE:HD12	1.82	0.61
11:AA:1188:U:H4'	29:AV:79:VAL:HG13	1.82	0.61
17:AG:43:LEU:HD11	17:AG:153:ARG:CB	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:144:ILE:O	17:AG:144:ILE:HG23	1.99	0.61
21:AN:133:GLN:CG	21:AN:135:PRO:HD3	2.25	0.61
26:AS:15:ARG:CB	26:AS:15:ARG:NH1	2.61	0.61
35:BA:522:C:H41	46:BL:53:ARG:HH22	1.48	0.61
35:BA:1031:G:H2'	35:BA:1032:G:O4'	2.00	0.61
36:BB:193:ASP:C	36:BB:193:ASP:OD1	2.44	0.61
38:BD:13:ARG:O	38:BD:15:GLU:N	2.33	0.61
39:BE:31:LEU:HD23	39:BE:45:PHE:HB2	1.83	0.61
43:BI:37:PHE:CE2	43:BI:74:ILE:HG12	2.35	0.61
43:BI:53:VAL:HG23	43:BI:55:ALA:H	1.64	0.61
59:BZ:98:GLN:NE2	59:BZ:285:ASN:HD21	1.98	0.61
59:BZ:101:GLY:CA	59:BZ:210:ILE:HD11	2.17	0.61
5:A4:10:VAL:HG22	5:A4:11:PRO:CD	2.23	0.61
11:AA:173:G:H5'	11:AA:174:C:OP2	2.01	0.61
11:AA:947:G:H2'	11:AA:948:G:H8	1.64	0.61
11:AA:2389:G:H5"	11:AA:2390:U:O4'	2.01	0.61
14:AD:44:ASN:HB3	14:AD:49:ILE:CA	2.14	0.61
15:AE:188:VAL:HG23	15:AE:189:PRO:HD2	1.81	0.61
17:AG:47:LYS:HG3	17:AG:81:LYS:HG3	1.82	0.61
18:AH:42:ARG:C	18:AH:43:VAL:HG22	2.26	0.61
18:AH:89:ILE:O	18:AH:89:ILE:CG1	2.49	0.61
24:AQ:35:VAL:HG11	24:AQ:130:LYS:HE3	1.81	0.61
24:AQ:137:TYR:HD1	24:AQ:137:TYR:N	1.99	0.61
32:AY:29:GLU:OE2	32:AY:38:ILE:HG21	2.00	0.61
35:BA:393:A:O2'	35:BA:394:G:H5'	2.00	0.61
38:BD:110:PHE:N	38:BD:110:PHE:CD1	2.69	0.61
39:BE:7:GLU:O	39:BE:8:GLU:HB3	1.98	0.61
47:BM:82:MET:HB3	47:BM:93:ARG:NH2	2.16	0.61
59:BZ:314:THR:H	59:BZ:405:GLU:HB2	1.66	0.61
3:A2:32:LEU:HD11	3:A2:54:LYS:HG3	1.81	0.61
6:A5:3:LYS:HG2	11:AA:747:U:OP1	2.01	0.61
11:AA:123:G:O2'	11:AA:124:G:H5'	2.01	0.61
11:AA:2150:U:H2'	11:AA:2151:G:C8	2.36	0.61
11:AA:2327:A:H2'	11:AA:2328:A:C8	2.36	0.61
11:AA:2845:G:O2'	11:AA:2846:G:H5'	2.00	0.61
15:AE:70:ALA:O	15:AE:72:VAL:N	2.34	0.61
15:AE:111:ARG:HB3	25:AR:2:ARG:NH1	2.16	0.61
16:AF:123:LEU:CD1	16:AF:192:LEU:HD22	2.30	0.61
21:AN:55:VAL:CG2	21:AN:126:PRO:HA	2.31	0.61
27:AT:100:TYR:HB3	27:AT:103:ARG:NH2	2.15	0.61
35:BA:659:U:O2'	35:BA:660:G:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:918:A:H2'	35:BA:919:A:C8	2.35	0.61
35:BA:1305:G:H5"	55:BU:4:GLY:CA	2.23	0.61
38:BD:100:ARG:HG3	38:BD:100:ARG:HH11	1.66	0.61
58:BY:1:G:OP3	58:BY:1:G:H8	1.83	0.61
11:AA:186:G:O2'	11:AA:187:G:H5'	2.01	0.61
11:AA:272(H):C:H2'	11:AA:272(I):U:C5'	2.30	0.61
11:AA:2523:G:C2'	11:AA:2524:G:H5"	2.30	0.61
11:AA:2579:C:O3'	15:AE:131:ALA:HB2	2.00	0.61
13:AC:33:ALA:CB	13:AC:178:ALA:HB1	2.31	0.61
13:AC:186:ALA:O	13:AC:190:ARG:HG3	2.01	0.61
14:AD:25:THR:O	14:AD:26:LYS:O	2.19	0.61
15:AE:75:VAL:O	15:AE:77:ILE:N	2.29	0.61
17:AG:107:LEU:HD13	17:AG:177:GLY:O	2.00	0.61
17:AG:161:THR:HG1	17:AG:163:ALA:HB2	1.65	0.61
21:AN:17:ASP:OD1	21:AN:19:GLU:HB3	2.01	0.61
23:AP:6:LEU:HG	23:AP:9:ASN:CB	2.25	0.61
29:AV:17:GLY:C	29:AV:18:LEU:HD13	2.26	0.61
32:AY:59:GLY:O	32:AY:60:PHE:CD1	2.53	0.61
35:BA:630:G:H2'	35:BA:631:G:H5'	1.83	0.61
35:BA:1010:G:H22	35:BA:1020:U:H1'	1.66	0.61
35:BA:1125:U:N3	44:BJ:5:ARG:NH2	2.43	0.61
49:BO:33:THR:HG21	49:BO:85:LEU:CD2	2.31	0.61
52:BR:53:ARG:C	52:BR:55:ARG:N	2.56	0.61
5:A4:20:ASN:HD22	5:A4:21:VAL:N	1.98	0.60
7:A6:15:GLU:OE1	7:A6:18:ARG:CD	2.48	0.60
8:A7:8:ASN:C	8:A7:8:ASN:ND2	2.59	0.60
11:AA:528:A:OP2	21:AN:114:ARG:NH1	2.34	0.60
11:AA:2185:C:H2'	11:AA:2186:G:H5"	1.81	0.60
13:AC:167:LYS:CE	56:BW:18:U:H4'	2.30	0.60
16:AF:116:ASP:OD2	23:AP:5:ASP:N	2.34	0.60
26:AS:88:ASP:CG	26:AS:89:ARG:H	2.09	0.60
29:AV:2:PHE:HB3	29:AV:42:GLY:CA	2.30	0.60
32:AY:46:LYS:HB3	32:AY:62:GLU:HG3	1.82	0.60
34:B2:47:ARG:C	34:B2:53:LEU:HD12	2.26	0.60
35:BA:269:C:H2'	35:BA:270:A:C8	2.36	0.60
35:BA:1164:G:H22	35:BA:1172:C:H5	1.49	0.60
35:BA:1377:A:O2'	41:BG:2:ALA:HB3	2.01	0.60
36:BB:82:ARG:O	36:BB:86:GLU:HG3	2.01	0.60
36:BB:238:LEU:HG	36:BB:238:LEU:O	1.99	0.60
39:BE:12:LEU:O	39:BE:12:LEU:HD13	2.01	0.60
42:BH:110:ALA:HB3	42:BH:121:ASP:HB3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:112:LEU:HA	42:BH:134:ILE:HG12	1.83	0.60
46:BL:78:GLN:C	46:BL:80:HIS:H	2.08	0.60
56:BW:29:C:H2'	56:BW:30:G:C8	2.35	0.60
58:BY:74:C:H2'	58:BY:75:C:H6	1.66	0.60
59:BZ:323:LEU:N	59:BZ:323:LEU:HD12	2.16	0.60
59:BZ:375:ILE:HD12	59:BZ:376:LYS:HB2	1.82	0.60
1:A0:7:LEU:HB3	24:AQ:85:LYS:HD2	1.83	0.60
1:A0:48:GLY:HA3	1:A0:79:VAL:O	2.01	0.60
7:A6:15:GLU:OE2	7:A6:41:PRO:CB	2.49	0.60
11:AA:643:A:O2'	11:AA:644:A:H5'	2.00	0.60
11:AA:2606:C:O2'	11:AA:2607:G:H5'	2.01	0.60
13:AC:137:LEU:HA	56:BW:57:C:C4	2.36	0.60
14:AD:68:LYS:HG3	14:AD:68:LYS:O	2.01	0.60
14:AD:210:GLY:C	14:AD:212:SER:H	2.09	0.60
15:AE:16:ARG:HD2	15:AE:21:VAL:HG11	1.82	0.60
16:AF:10:PRO:HG2	16:AF:11:VAL:H	1.66	0.60
18:AH:85:LYS:HZ3	18:AH:132:ARG:HA	1.63	0.60
21:AN:63:THR:CB	21:AN:66:LYS:HZ1	2.14	0.60
28:AU:34:LYS:HA	28:AU:34:LYS:HE2	1.83	0.60
35:BA:994:A:N7	35:BA:1216:G:H4'	2.16	0.60
35:BA:1505:G:H5"	35:BA:1506:U:OP1	2.00	0.60
37:BC:50:ALA:HB1	37:BC:70:VAL:HG11	1.82	0.60
37:BC:52:LEU:HD23	37:BC:52:LEU:H	1.66	0.60
38:BD:70:ILE:HG23	38:BD:74:GLN:HB3	1.83	0.60
47:BM:15:VAL:HG23	47:BM:34:LEU:HD11	1.82	0.60
47:BM:66:LEU:N	47:BM:66:LEU:HD12	2.16	0.60
49:BO:78:TYR:O	49:BO:82:ILE:HG22	2.01	0.60
53:BS:18:LYS:O	53:BS:22:LEU:HB2	2.01	0.60
11:AA:1453:U:H5'	25:AR:63:ARG:HE	1.65	0.60
11:AA:1498:C:C2'	11:AA:1499:C:H5"	2.31	0.60
11:AA:1909:C:O2'	56:BV:11:A:H4'	2.01	0.60
11:AA:1997:G:O2'	11:AA:1998:G:H5'	2.01	0.60
12:AB:16:G:O2'	12:AB:17:C:H6	1.83	0.60
13:AC:163:PHE:HB2	13:AC:171:ILE:HD11	1.84	0.60
16:AF:120:GLU:HB3	16:AF:122:LYS:HE3	1.82	0.60
17:AG:31:VAL:O	17:AG:33:ARG:HG3	2.02	0.60
25:AR:100:LEU:HD11	25:AR:113:LEU:HD11	1.81	0.60
29:AV:2:PHE:CD1	29:AV:13:ARG:NH1	2.69	0.60
29:AV:35:LEU:C	29:AV:37:VAL:N	2.59	0.60
32:AY:47:LYS:HG2	32:AY:60:PHE:HZ	1.66	0.60
35:BA:314:C:O2'	35:BA:315:A:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:61:GLU:OE2	48:BN:49:HIS:HE1	1.84	0.60
44:BJ:82:ILE:HG23	44:BJ:86:MET:HB2	1.83	0.60
48:BN:28:GLY:O	48:BN:29:ARG:O	2.20	0.60
48:BN:31:ARG:HH11	48:BN:31:ARG:HG3	1.66	0.60
50:BP:38:TYR:N	50:BP:38:TYR:CD1	2.70	0.60
53:BS:16:LEU:C	53:BS:18:LYS:N	2.54	0.60
59:BZ:234:ARG:HH21	59:BZ:289:LEU:CD2	2.15	0.60
1:A0:19:LYS:NZ	1:A0:41:ARG:NH2	2.49	0.60
11:AA:898:C:C2'	11:AA:899:A:H5'	2.32	0.60
11:AA:1042:G:H2'	11:AA:1043:C:O4'	2.02	0.60
11:AA:1203:G:H3'	11:AA:1204:A:H5"	1.84	0.60
13:AC:76:ALA:HB3	13:AC:94:VAL:HA	1.83	0.60
17:AG:11:TYR:HA	17:AG:15:VAL:HG23	1.83	0.60
21:AN:120:LEU:HD11	21:AN:122:VAL:HG23	1.83	0.60
23:AP:130:PHE:CB	23:AP:135:LEU:HD23	2.31	0.60
24:AQ:51:ARG:HG2	24:AQ:52:VAL:N	2.15	0.60
29:AV:38:LEU:HD22	29:AV:52:VAL:HG11	1.82	0.60
35:BA:955:U:O2'	35:BA:956:U:H5'	2.02	0.60
35:BA:1127:G:O2'	35:BA:1128:C:H5'	2.01	0.60
38:BD:33:MET:SD	38:BD:37:PRO:HA	2.40	0.60
41:BG:50:ILE:O	41:BG:54:THR:HG22	2.01	0.60
44:BJ:71:LEU:HD12	44:BJ:72:VAL:H	1.67	0.60
46:BL:18:VAL:O	46:BL:19:ARG:HB3	1.99	0.60
7:A6:28:ARG:NH1	56:BW:68:C:OP2	2.34	0.60
11:AA:1625:C:H2'	11:AA:1626:G:H5'	1.82	0.60
11:AA:1750:G:O2'	11:AA:1751:C:H5'	2.02	0.60
11:AA:2124:G:H1'	13:AC:42:GLU:OE2	2.00	0.60
11:AA:2580:U:C5'	15:AE:131:ALA:HB2	2.32	0.60
12:AB:81:G:H2'	12:AB:82:G:H5'	1.83	0.60
17:AG:85:GLY:C	17:AG:87:PRO:HD3	2.26	0.60
27:AT:26:ASP:C	27:AT:26:ASP:OD1	2.44	0.60
33:AZ:151:HIS:CB	33:AZ:170:THR:HA	2.32	0.60
35:BA:624:C:H4'	50:BP:10:GLY:HA2	1.83	0.60
35:BA:1034:G:N2	35:BA:1035:A:H62	1.99	0.60
38:BD:14:ARG:HA	38:BD:39:PRO:HB3	1.84	0.60
38:BD:173:TRP:HZ3	38:BD:193:ASP:HB3	1.67	0.60
44:BJ:38:ILE:HD11	44:BJ:71:LEU:CD2	2.23	0.60
45:BK:78:GLN:O	45:BK:104:GLN:HB2	2.00	0.60
53:BS:19:VAL:HG11	53:BS:44:MET:HG3	1.83	0.60
59:BZ:21:ASP:HA	63:BZ:1003:GDP:H5'	1.82	0.60
10:A9:29:ASN:HD21	10:A9:32:HIS:CD2	2.18	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:644:A:C2	11:AA:2369:A:H1'	2.37	0.60
11:AA:646:A:H5'	11:AA:646:A:N3	2.16	0.60
11:AA:1375:C:H2'	11:AA:1376:C:H6	1.66	0.60
11:AA:2149:G:O2'	11:AA:2150:U:H5'	2.02	0.60
11:AA:2681:C:H5	11:AA:2725:A:N6	1.94	0.60
11:AA:2848:G:C8	27:AT:97:ALA:HB2	2.37	0.60
13:AC:10:LEU:HD11	13:AC:32:LEU:HA	1.83	0.60
13:AC:133:PRO:HD2	56:BW:20:G:N1	2.16	0.60
14:AD:108:PRO:HB3	14:AD:143:HIS:CE1	2.37	0.60
15:AE:11:MET:HB2	15:AE:23:VAL:O	2.00	0.60
17:AG:95:ARG:O	17:AG:96:ARG:O	2.20	0.60
17:AG:152:LEU:H	17:AG:152:LEU:HD23	1.65	0.60
18:AH:19:VAL:O	18:AH:20:ALA:HB2	2.01	0.60
34:B2:6:GLU:CD	34:B2:6:GLU:N	2.60	0.60
34:B2:130:ARG:CG	34:B2:131:GLU:H	2.14	0.60
35:BA:27:G:H2'	35:BA:28:G:C8	2.36	0.60
35:BA:973:G:H1'	44:BJ:55:LYS:NZ	2.15	0.60
35:BA:1058:G:N2	44:BJ:53:PRO:HG3	2.17	0.60
36:BB:138:LEU:C	36:BB:140:HIS:H	2.10	0.60
37:BC:29:TYR:CD2	48:BN:36:PHE:HE1	2.20	0.60
42:BH:21:LYS:O	42:BH:65:TYR:OH	2.18	0.60
44:BJ:16:LEU:HD11	44:BJ:70:ARG:CG	2.31	0.60
46:BL:17:LYS:HD3	46:BL:18:VAL:HG22	1.82	0.60
48:BN:12:ARG:HB3	48:BN:14:PRO:HG2	1.83	0.60
51:BQ:76:LEU:HD12	51:BQ:77:VAL:N	2.17	0.60
52:BR:88:LYS:C	52:BR:88:LYS:HD3	2.27	0.60
53:BS:4:SER:O	53:BS:5:LEU:O	2.20	0.60
11:AA:8:A:H2'	11:AA:9:U:C5	2.36	0.60
11:AA:1275:A:N1	11:AA:1295:C:O2'	2.34	0.60
11:AA:1688:U:O2	11:AA:1700:A:H5"	2.01	0.60
11:AA:2275:C:O2	24:AQ:85:LYS:HD3	2.02	0.60
16:AF:100:THR:HG22	16:AF:100:THR:O	2.02	0.60
17:AG:52:ILE:HD13	17:AG:52:ILE:N	2.06	0.60
18:AH:20:ALA:HB1	18:AH:21:PRO:HD2	1.84	0.60
21:AN:3:THR:HG22	21:AN:4:TYR:N	2.15	0.60
24:AQ:141:GLN:O	33:AZ:53:ILE:O	2.20	0.60
26:AS:25:ARG:NH1	26:AS:42:ASP:OD1	2.35	0.60
26:AS:90:GLY:O	26:AS:92:TYR:HD1	1.85	0.60
26:AS:106:ARG:NH1	26:AS:107:GLU:N	2.47	0.60
35:BA:423:G:H2'	35:BA:424:G:H5'	1.84	0.60
35:BA:909:A:H2'	35:BA:910:C:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:15:VAL:CG2	36:BB:209:ARG:HH21	2.14	0.60
37:BC:50:ALA:HB1	37:BC:70:VAL:CG1	2.32	0.60
37:BC:155:GLY:O	37:BC:157:ILE:N	2.35	0.60
39:BE:69:VAL:O	39:BE:71:LEU:HG	2.00	0.60
56:BV:19:G:N2	56:BV:58:A:H2'	2.16	0.60
56:BV:74:A:C8	56:BV:74:A:H5'	2.36	0.60
56:BV:74:A:H5'	56:BV:74:A:H8	1.65	0.60
58:BY:20:C:H42	58:BY:58:G:H1	1.50	0.60
2:A1:64:ALA:HA	2:A1:67:ILE:HG13	1.84	0.60
5:A4:25:TYR:O	5:A4:26:SER:HB3	2.02	0.60
9:A8:15:LYS:HB2	23:AP:65:ARG:HH12	1.66	0.60
11:AA:373:U:O2	11:AA:423:A:H2	1.83	0.60
11:AA:1050:A:H2'	11:AA:1051:G:H5'	1.84	0.60
11:AA:1153:C:H2'	11:AA:1154:G:O4'	2.02	0.60
13:AC:45:ALA:HB1	13:AC:211:SER:O	2.02	0.60
14:AD:46:GLN:OE1	14:AD:46:GLN:N	2.35	0.60
14:AD:83:GLU:HB2	14:AD:92:ILE:HD11	1.84	0.60
28:AU:90:VAL:CG1	28:AU:91:ASP:H	1.97	0.60
29:AV:4:ILE:HB	29:AV:39:LEU:O	2.02	0.60
29:AV:5:VAL:HG21	29:AV:35:LEU:HG	1.82	0.60
31:AX:54:VAL:CG2	31:AX:81:VAL:HG12	2.30	0.60
32:AY:46:LYS:CG	32:AY:47:LYS:H	2.11	0.60
34:B2:11:ARG:HG2	34:B2:103:LEU:CD2	2.32	0.60
35:BA:1233:G:H2'	35:BA:1234:C:H6	1.67	0.60
35:BA:1497:G:C2'	35:BA:1498:U:H5'	2.32	0.60
40:BF:42:GLU:C	40:BF:44:GLY:H	2.09	0.60
45:BK:99:GLN:HG2	45:BK:105:VAL:HG21	1.84	0.60
46:BL:41:ARG:HH12	46:BL:43:VAL:HG12	1.67	0.60
56:BW:75:C:O2'	56:BW:76:C:H5'	2.01	0.60
59:BZ:340:PRO:HG2	59:BZ:342:PHE:CE1	2.37	0.60
16:AF:32:LEU:O	16:AF:36:VAL:HG23	2.02	0.60
21:AN:28:THR:HG23	21:AN:29:LYS:H	1.67	0.60
23:AP:97:PRO:HG3	23:AP:112:LEU:HD12	1.84	0.60
27:AT:85:LYS:HB3	27:AT:85:LYS:HZ3	1.67	0.60
32:AY:7:VAL:C	32:AY:8:LYS:HD2	2.27	0.60
32:AY:86:ARG:HG2	32:AY:87:LYS:N	2.16	0.60
33:AZ:3:TYR:N	33:AZ:3:TYR:CD1	2.70	0.60
33:AZ:19:ARG:C	33:AZ:21:ALA:N	2.59	0.60
33:AZ:53:ILE:HG22	33:AZ:71:VAL:HB	1.83	0.60
34:B2:22:ALA:HB2	34:B2:81:LEU:HG	1.84	0.60
38:BD:14:ARG:HA	38:BD:39:PRO:CB	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:133:GLY:O	41:BG:136:LYS:HB2	2.02	0.60
45:BK:21:ILE:HG13	45:BK:30:VAL:CG1	2.31	0.60
45:BK:58:PRO:HB2	45:BK:93:GLN:HG3	1.84	0.60
45:BK:99:GLN:O	45:BK:101:SER:N	2.35	0.60
48:BN:13:THR:N	48:BN:14:PRO:CD	2.59	0.60
49:BO:75:PRO:O	49:BO:78:TYR:HB3	2.02	0.60
59:BZ:272:MET:HE3	59:BZ:286:VAL:CG1	2.31	0.60
59:BZ:360:GLU:O	59:BZ:361:MET:HB3	2.02	0.60
5:A4:34:GLU:CG	47:BM:57:ARG:HH12	2.15	0.60
9:A8:62:LEU:N	9:A8:63:PRO:HD2	2.17	0.60
11:AA:650:C:H3'	11:AA:651:G:H5"	1.84	0.60
11:AA:1155:A:P	28:AU:55:ARG:HD2	2.42	0.60
11:AA:1268:A:H2'	11:AA:1269:A:O4'	2.00	0.60
11:AA:1403:C:H5"	11:AA:1471:A:H1'	1.82	0.60
11:AA:1721:G:H8	11:AA:1741:A:H62	1.50	0.60
14:AD:65:ILE:HD11	14:AD:67:PHE:CD2	2.37	0.60
14:AD:241:PRO:O	14:AD:242:ARG:HB2	2.01	0.60
15:AE:101:ARG:O	15:AE:201:THR:HG22	2.01	0.60
17:AG:125:PHE:HE2	17:AG:173:LEU:HD12	1.67	0.60
17:AG:138:GLN:C	17:AG:140:ILE:H	2.09	0.60
18:AH:153:LYS:H	18:AH:153:LYS:CD	2.12	0.60
21:AN:28:THR:CG2	21:AN:29:LYS:H	2.15	0.60
22:AO:87:ILE:HG22	22:AO:88:ASN:N	2.17	0.60
23:AP:24:GLY:CA	23:AP:33:ARG:NH1	2.64	0.60
26:AS:49:VAL:HG11	26:AS:73:LEU:CD2	2.32	0.60
32:AY:7:VAL:CB	32:AY:8:LYS:HZ2	2.15	0.60
32:AY:90:LEU:HG	32:AY:90:LEU:O	2.02	0.60
35:BA:1308:U:H5"	47:BM:98:VAL:CG2	2.32	0.60
37:BC:13:GLY:H	48:BN:57:ARG:HD2	1.66	0.60
38:BD:190:ASP:OD1	38:BD:191:ARG:N	2.34	0.60
40:BF:7:ASN:O	40:BF:8:ILE:HG13	2.02	0.60
40:BF:87:ARG:HG2	40:BF:87:ARG:NH1	2.13	0.60
41:BG:108:ALA:O	41:BG:119:ARG:HB3	2.01	0.60
55:BU:6:ARG:HD3	55:BU:15:ARG:NH1	2.16	0.60
56:BW:7:G:H2'	56:BW:50:G:OP2	2.02	0.60
56:BW:73:A:O2'	56:BW:74:A:H5'	2.02	0.60
59:BZ:145:GLU:O	59:BZ:146:LEU:C	2.45	0.60
1:A0:51:VAL:HG22	1:A0:81:VAL:HG23	1.84	0.59
3:A2:38:GLN:HB3	3:A2:44:LEU:CB	2.31	0.59
5:A4:14:ILE:HD12	5:A4:14:ILE:N	2.17	0.59
8:A7:34:ARG:HG3	8:A7:34:ARG:NH1	2.13	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1021:A:N6	11:AA:1141:U:N3	2.45	0.59
11:AA:1029:A:H2'	11:AA:1030:G:H5'	1.84	0.59
11:AA:1038:C:C3'	11:AA:1039:G:H5"	2.32	0.59
11:AA:1361:G:O2'	11:AA:1362:C:H5'	2.02	0.59
11:AA:1577:C:H2'	11:AA:1578:U:C1'	2.32	0.59
11:AA:2761:G:C2'	11:AA:2762:G:H5"	2.31	0.59
16:AF:20:LEU:HD12	16:AF:203:GLN:OE1	2.02	0.59
23:AP:99:LEU:HD12	23:AP:102:ARG:HH21	1.65	0.59
28:AU:95:LEU:C	28:AU:97:ASP:H	2.10	0.59
29:AV:6:LYS:O	29:AV:37:VAL:HG21	2.01	0.59
33:AZ:51:ALA:CB	33:AZ:57:ILE:HD11	2.32	0.59
35:BA:437:U:C5'	38:BD:155:LEU:HD13	2.31	0.59
35:BA:833:U:H2'	35:BA:834:C:C6	2.36	0.59
37:BC:59:ARG:HG2	37:BC:63:ASN:O	2.01	0.59
38:BD:31:CYS:C	38:BD:33:MET:H	2.08	0.59
40:BF:3:ARG:HH11	40:BF:3:ARG:HG3	1.67	0.59
47:BM:22:ILE:CG2	47:BM:66:LEU:HD23	2.30	0.59
58:BY:55:U:C2'	58:BY:56:U:H5'	2.32	0.59
59:BZ:225:VAL:HG23	59:BZ:301:GLY:H	1.67	0.59
11:AA:736:C:H2'	11:AA:737:C:H6	1.65	0.59
11:AA:740:U:H2'	11:AA:741:G:C8	2.37	0.59
11:AA:1108:U:H5'	11:AA:1109:C:OP2	2.02	0.59
11:AA:2248:C:H2'	11:AA:2249:U:H5'	1.85	0.59
11:AA:2339:G:H2'	11:AA:2340:G:C8	2.37	0.59
11:AA:2472:G:C5'	11:AA:2473:U:H5"	2.30	0.59
11:AA:2477:C:H6	11:AA:2477:C:C5'	2.08	0.59
11:AA:2713:A:H3'	11:AA:2714:G:C5'	2.32	0.59
11:AA:2728:U:O2'	15:AE:22:PRO:HG3	2.02	0.59
13:AC:52:ARG:O	56:BW:63:C:OP1	2.19	0.59
14:AD:35:LYS:HG2	14:AD:63:ARG:HA	1.83	0.59
23:AP:40:SER:C	23:AP:41:ARG:HG2	2.27	0.59
23:AP:53:GLY:HA3	23:AP:55:ARG:HD3	1.84	0.59
23:AP:83:VAL:CA	23:AP:105:LEU:HD22	2.32	0.59
24:AQ:120:ILE:O	24:AQ:123:HIS:N	2.34	0.59
26:AS:35:ILE:H	26:AS:53:SER:HB2	1.66	0.59
34:B2:18:GLU:O	34:B2:119:LEU:HB2	2.01	0.59
35:BA:204:U:H4'	35:BA:216:G:C8	2.37	0.59
35:BA:731:G:OP1	35:BA:766:A:H1'	2.03	0.59
35:BA:1023:G:H2'	35:BA:1024:G:H5'	1.84	0.59
7:A6:5:VAL:O	7:A6:6:ARG:HB2	2.00	0.59
7:A6:12:GLU:HA	7:A6:23:THR:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:20:ASN:OD1	7:A6:21:TYR:N	2.35	0.59
8:A7:29:LYS:HD3	8:A7:32:LYS:HD3	1.83	0.59
9:A8:50:LEU:O	9:A8:51:ALA:HB3	2.01	0.59
9:A8:52:LYS:N	9:A8:53:PRO:CD	2.65	0.59
11:AA:590:A:H2'	11:AA:591:C:H6	1.67	0.59
11:AA:2833:G:H3'	11:AA:2834:G:C5'	2.33	0.59
13:AC:54:SER:HB2	56:BW:63:C:C4'	2.30	0.59
13:AC:55:ASP:O	13:AC:201:PRO:HB3	2.02	0.59
15:AE:52:LEU:HD23	15:AE:76:ARG:HD3	1.84	0.59
17:AG:34:LEU:HA	17:AG:161:THR:HG22	1.83	0.59
17:AG:42:GLY:O	17:AG:43:LEU:HB2	2.01	0.59
22:AO:23:ARG:HG3	22:AO:24:VAL:N	2.17	0.59
23:AP:88:LEU:HD22	23:AP:114:ILE:HD13	1.84	0.59
29:AV:35:LEU:O	29:AV:37:VAL:N	2.35	0.59
31:AX:10:ALA:O	31:AX:28:PHE:HB3	2.03	0.59
31:AX:23:GLU:O	31:AX:25:LYS:N	2.34	0.59
33:AZ:115:GLY:CA	33:AZ:174:VAL:HG13	2.28	0.59
34:B2:93:VAL:HA	34:B2:98:LEU:CD1	2.32	0.59
35:BA:368:U:H5	59:BZ:234:ARG:CZ	2.15	0.59
35:BA:437:U:H5"	38:BD:155:LEU:CD1	2.32	0.59
35:BA:1010:G:N2	35:BA:1020:U:H1'	2.16	0.59
35:BA:1348:U:H4'	43:BI:120:ARG:HG3	1.84	0.59
35:BA:1435:G:H2'	35:BA:1436:U:C6	2.37	0.59
42:BH:38:ILE:HD11	42:BH:118:VAL:O	2.03	0.59
43:BI:95:LYS:C	43:BI:95:LYS:HD3	2.28	0.59
45:BK:48:ILE:HG22	45:BK:49:GLY:N	2.15	0.59
47:BM:3:ARG:HG2	47:BM:9:ILE:CG1	2.31	0.59
52:BR:50:ILE:HD11	52:BR:74:ARG:CZ	2.32	0.59
58:BY:1:G:H1	58:BY:85:C:H42	1.48	0.59
59:BZ:10:PRO:HG2	59:BZ:75:ARG:HG2	1.85	0.59
2:A1:3:LYS:HB3	2:A1:3:LYS:HZ2	1.64	0.59
11:AA:438:G:H2'	11:AA:440:G:C8	2.37	0.59
11:AA:519:U:H2'	11:AA:520:G:C8	2.37	0.59
11:AA:556:G:H2'	11:AA:557:U:C6	2.37	0.59
11:AA:1925:C:O2'	11:AA:1926:U:H5'	2.01	0.59
11:AA:2762:G:H2'	11:AA:2763:G:O4'	2.01	0.59
13:AC:59:ARG:NH2	13:AC:142:ALA:HB2	2.17	0.59
16:AF:101:LEU:HD12	16:AF:102:PRO:HD2	1.83	0.59
18:AH:65:HIS:HE1	18:AH:69:ARG:HH22	1.48	0.59
22:AO:63:VAL:HB	22:AO:102:VAL:HG12	1.84	0.59
23:AP:64:LYS:C	23:AP:66:GLY:N	2.61	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AQ:35:VAL:HG13	24:AQ:130:LYS:HB3	1.84	0.59
30:AW:73:ALA:HB3	30:AW:106:ILE:CG1	2.32	0.59
31:AX:12:VAL:CG2	31:AX:13:LEU:N	2.55	0.59
34:B2:75:ARG:CD	34:B2:77:ARG:HG3	2.27	0.59
35:BA:1316:G:H4'	48:BN:18:VAL:CG1	2.32	0.59
35:BA:1436:U:H2'	35:BA:1437:C:C6	2.37	0.59
36:BB:79:ASP:C	36:BB:81:VAL:H	2.10	0.59
36:BB:145:LEU:HD13	36:BB:149:LEU:HD12	1.83	0.59
50:BP:15:PRO:HB2	50:BP:41:PRO:CG	2.29	0.59
59:BZ:21:ASP:N	63:BZ:1003:GDP:O1B	2.28	0.59
59:BZ:171:ILE:N	59:BZ:171:ILE:HD12	2.18	0.59
1:A0:77:ARG:NH2	11:AA:857:C:H5'	2.18	0.59
11:AA:1536:C:H2'	11:AA:1537:G:C4'	2.30	0.59
11:AA:2580:U:H4'	15:AE:130:GLY:HA3	1.83	0.59
16:AF:16:GLY:O	16:AF:17:ARG:HG3	2.02	0.59
21:AN:4:TYR:N	21:AN:4:TYR:CD1	2.70	0.59
23:AP:23:PRO:O	23:AP:33:ARG:CD	2.50	0.59
23:AP:30:THR:HG23	23:AP:31:ALA:N	2.17	0.59
24:AQ:21:THR:HG21	24:AQ:101:ARG:HB2	1.84	0.59
28:AU:48:ALA:O	28:AU:52:ARG:HG3	2.02	0.59
32:AY:7:VAL:HB	32:AY:8:LYS:NZ	2.17	0.59
34:B2:55:LEU:HD21	34:B2:58:LEU:HD13	1.85	0.59
35:BA:259:G:H1	35:BA:267:C:H42	1.50	0.59
35:BA:358:U:H2'	35:BA:359:U:C6	2.37	0.59
35:BA:477:A:O2'	35:BA:479:C:H5'	2.03	0.59
35:BA:1009:G:H2'	35:BA:1010:G:C8	2.37	0.59
36:BB:134:GLU:HA	36:BB:137:ARG:HB2	1.85	0.59
36:BB:188:ALA:O	36:BB:202:PRO:HA	2.01	0.59
39:BE:120:THR:HG23	39:BE:121:LYS:N	2.18	0.59
44:BJ:43:ARG:HB2	44:BJ:67:THR:CG2	2.31	0.59
47:BM:90:LEU:N	47:BM:90:LEU:HD23	2.16	0.59
51:BQ:99:SER:O	51:BQ:100:LYS:HG3	2.01	0.59
1:A0:12:ASN:HB3	11:AA:2278:A:N7	2.18	0.59
4:A3:10:LYS:CB	4:A3:53:LEU:HA	2.32	0.59
7:A6:30:THR:HG23	7:A6:31:PRO:HD2	1.85	0.59
11:AA:1112:G:O2'	11:AA:1113:U:H5'	2.03	0.59
11:AA:1914:A:C8	11:AA:1914:A:C5'	2.73	0.59
11:AA:1996:C:OP1	22:AO:31:LYS:HE2	2.02	0.59
11:AA:2300:G:H1	11:AA:2316:C:N4	1.98	0.59
13:AC:149:ILE:O	13:AC:153:ILE:HG13	2.02	0.59
16:AF:21:ALA:C	16:AF:23:ASP:H	2.11	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:41:GLN:HB3	17:AG:43:LEU:CD2	2.33	0.59
29:AV:62:LEU:CD2	29:AV:95:LEU:HB2	2.21	0.59
33:AZ:125:LEU:CD1	33:AZ:164:ALA:HB3	2.31	0.59
34:B2:75:ARG:HG2	34:B2:77:ARG:NH2	2.18	0.59
35:BA:218:C:C5'	35:BA:470:C:H42	2.15	0.59
35:BA:250:A:H5"	35:BA:251:G:OP1	2.02	0.59
35:BA:349:A:O2'	35:BA:350:G:H5'	2.02	0.59
35:BA:1152:A:H5"	44:BJ:13:HIS:HB2	1.85	0.59
35:BA:1442(A):G:C3'	35:BA:1442(B):A:H5"	2.23	0.59
37:BC:165:THR:O	37:BC:165:THR:HG22	2.01	0.59
38:BD:18:LYS:H	38:BD:33:MET:HE3	1.66	0.59
42:BH:82:HIS:CD2	42:BH:138:TRP:NE1	2.70	0.59
45:BK:82:VAL:CG1	45:BK:108:ILE:HG12	2.32	0.59
48:BN:23:ARG:NH1	48:BN:30:ALA:HB2	2.17	0.59
54:BT:60:GLU:HG3	54:BT:81:LYS:HE3	1.84	0.59
8:A7:10:ARG:NH1	8:A7:14:LYS:HE2	2.17	0.59
10:A9:1:MET:HG3	10:A9:31:LYS:O	2.03	0.59
11:AA:642:G:H21	11:AA:646:A:H2	1.50	0.59
11:AA:2713:A:H3'	11:AA:2714:G:H5'	1.83	0.59
11:AA:2777:G:H5"	11:AA:2778:A:H5'	1.85	0.59
11:AA:2887:U:O2'	11:AA:2888:C:H5'	2.03	0.59
14:AD:91:ARG:HG2	14:AD:91:ARG:NH1	2.15	0.59
14:AD:96:HIS:CE1	14:AD:102:LYS:HE2	2.38	0.59
17:AG:44:GLY:O	17:AG:47:LYS:HD2	2.02	0.59
27:AT:92:GLY:O	27:AT:93:ARG:C	2.45	0.59
30:AW:47:VAL:HA	30:AW:50:VAL:HG12	1.83	0.59
32:AY:20:TYR:O	32:AY:22:GLY:N	2.36	0.59
33:AZ:70:LEU:CD2	33:AZ:91:LEU:HD21	2.33	0.59
33:AZ:143:GLY:C	33:AZ:144:LEU:HD22	2.28	0.59
35:BA:236:G:H2'	35:BA:237:C:C6	2.37	0.59
35:BA:1134:G:C2'	35:BA:1135:U:H5'	2.31	0.59
36:BB:75:LYS:HA	36:BB:78:GLN:HE21	1.66	0.59
42:BH:109:ILE:HG12	42:BH:110:ALA:N	2.15	0.59
45:BK:82:VAL:HG11	45:BK:108:ILE:HG12	1.83	0.59
53:BS:62:ILE:HA	53:BS:66:MET:CE	2.33	0.59
1:A0:7:LEU:HD13	24:AQ:85:LYS:HE2	1.84	0.59
7:A6:53:LYS:O	7:A6:54:ILE:OXT	2.20	0.59
11:AA:270:A:O2'	11:AA:271:A:H5'	2.02	0.59
11:AA:580:C:H2'	11:AA:581:C:H6	1.66	0.59
11:AA:755:C:H2'	11:AA:756:C:H6	1.66	0.59
11:AA:1059:G:H21	20:AK:126:UNK:HA	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1398:C:H2'	11:AA:1399:C:H6	1.68	0.59
14:AD:35:LYS:HD2	14:AD:35:LYS:O	2.03	0.59
15:AE:103:ASP:CG	15:AE:201:THR:HA	2.28	0.59
16:AF:160:ASN:ND2	16:AF:162:LEU:HD13	2.17	0.59
17:AG:15:VAL:HG12	17:AG:19:LEU:CD1	2.29	0.59
17:AG:36:LYS:HD2	17:AG:160:VAL:HB	1.85	0.59
22:AO:115:VAL:HG13	22:AO:121:VAL:HG21	1.84	0.59
29:AV:75:PHE:HE1	29:AV:82:ARG:HE	1.51	0.59
33:AZ:181:GLU:O	33:AZ:182:LYS:HG3	2.03	0.59
35:BA:197:A:N6	35:BA:221:C:H4'	2.18	0.59
35:BA:1409:C:H2'	35:BA:1410:G:H8	1.66	0.59
36:BB:90:MET:HE2	36:BB:91:PRO:HD3	1.85	0.59
36:BB:144:ARG:HA	36:BB:147:LYS:HB3	1.83	0.59
39:BE:48:ALA:HB3	39:BE:54:ALA:HB2	1.83	0.59
39:BE:87:SER:HB3	39:BE:131:ILE:CD1	2.32	0.59
41:BG:15:ASP:HA	41:BG:24:THR:CG2	2.33	0.59
41:BG:69:VAL:HG13	41:BG:100:ALA:HB1	1.85	0.59
43:BI:10:ARG:HD3	43:BI:75:ASP:CB	2.32	0.59
50:BP:58:TYR:CD1	50:BP:58:TYR:C	2.80	0.59
53:BS:16:LEU:HD12	53:BS:16:LEU:N	2.17	0.59
53:BS:18:LYS:HA	53:BS:21:GLU:HG2	1.83	0.59
59:BZ:323:LEU:HB3	59:BZ:327:GLU:HG3	1.85	0.59
10:A9:15:LYS:HB3	10:A9:15:LYS:NZ	2.18	0.59
11:AA:523:C:C2'	11:AA:524:U:H5'	2.32	0.59
11:AA:2334:G:H1'	26:AS:18:ILE:CD1	2.33	0.59
12:AB:76:G:H2'	12:AB:77:U:H6	1.68	0.59
16:AF:32:LEU:O	16:AF:32:LEU:HD23	2.02	0.59
23:AP:66:GLY:O	23:AP:67:MET:CB	2.51	0.59
26:AS:89:ARG:HG2	26:AS:89:ARG:HH11	1.67	0.59
27:AT:35:LYS:HZ1	27:AT:41:ARG:HG3	1.67	0.59
28:AU:92:ARG:NH2	29:AV:10:LYS:CA	2.65	0.59
34:B2:93:VAL:HA	34:B2:98:LEU:HD11	1.84	0.59
35:BA:108:G:H5'	35:BA:109:A:H5"	1.85	0.59
35:BA:152:A:H62	35:BA:169:C:N4	2.01	0.59
43:BI:112:LYS:HE3	43:BI:116:LYS:O	2.03	0.59
47:BM:19:LEU:HA	47:BM:22:ILE:HD13	1.85	0.59
48:BN:26:ARG:HG3	48:BN:39:LEU:HD22	1.85	0.59
53:BS:62:ILE:HD12	53:BS:66:MET:CE	2.28	0.59
2:A1:44:PRO:HA	11:AA:396:G:O3'	2.03	0.59
2:A1:56:GLN:HB3	2:A1:87:PRO:HB3	1.85	0.59
6:A5:3:LYS:HA	6:A5:3:LYS:HE3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:6:VAL:HG23	11:AA:2016:U:H1'	1.84	0.59
6:A5:50:GLY:HA3	6:A5:56:LYS:CD	2.28	0.59
11:AA:1021:A:N6	11:AA:1141:U:C2	2.71	0.59
11:AA:1608:A:H1'	11:AA:1610:A:OP2	2.02	0.59
11:AA:1717:G:C2'	11:AA:1718:G:H5"	2.33	0.59
11:AA:1862:G:O2'	11:AA:1863:G:H5'	2.02	0.59
14:AD:186:HIS:O	14:AD:189:CYS:HB2	2.02	0.59
15:AE:1:MET:HE2	15:AE:1:MET:N	2.18	0.59
17:AG:83:ARG:HD3	56:BV:57:C:O2	2.03	0.59
18:AH:98:LEU:HD23	18:AH:125:VAL:CG2	2.32	0.59
25:AR:71:GLN:HA	25:AR:71:GLN:HE21	1.68	0.59
30:AW:29:LEU:HD23	30:AW:33:ARG:NH1	2.12	0.59
31:AX:27:THR:HG22	31:AX:80:ILE:HB	1.85	0.59
33:AZ:146:ILE:HA	33:AZ:174:VAL:CG1	2.32	0.59
35:BA:662:G:H2'	35:BA:663:A:C8	2.38	0.59
35:BA:1348:U:O3'	43:BI:120:ARG:HG3	2.02	0.59
38:BD:142:PRO:HA	38:BD:185:PHE:HD2	1.67	0.59
41:BG:85:TYR:HE2	41:BG:154:TYR:HE2	1.51	0.59
44:BJ:54:PHE:C	44:BJ:55:LYS:HE3	2.28	0.59
51:BQ:52:LYS:H	51:BQ:52:LYS:HD2	1.66	0.59
51:BQ:59:ILE:HG22	51:BQ:71:PHE:HD1	1.67	0.59
52:BR:50:ILE:HD11	52:BR:74:ARG:NH1	2.18	0.59
56:BV:70:C:O2'	56:BV:71:G:H5'	2.03	0.59
58:BY:5:G:O2'	58:BY:6:U:H5'	2.03	0.59
5:A4:5:ILE:HD13	5:A4:5:ILE:N	2.18	0.58
11:AA:910:A:N1	11:AA:2277:G:H1'	2.18	0.58
11:AA:2423:U:H6	11:AA:2423:U:H5'	1.66	0.58
13:AC:28:LEU:O	13:AC:32:LEU:HG	2.03	0.58
22:AO:53:LYS:N	22:AO:53:LYS:HD2	2.18	0.58
23:AP:47:ASP:CB	23:AP:48:PRO:HA	2.11	0.58
26:AS:61:ASN:OD1	26:AS:62:LYS:N	2.36	0.58
27:AT:30:VAL:HG12	27:AT:44:ASP:OD1	2.02	0.58
31:AX:30:VAL:HG21	31:AX:39:ILE:HD11	1.85	0.58
35:BA:1234:C:H1'	35:BA:1364:U:O2	2.02	0.58
35:BA:1510:U:H2'	35:BA:1511:G:H8	1.68	0.58
37:BC:5:ILE:HG12	37:BC:10:PHE:HB2	1.85	0.58
38:BD:100:ARG:HH12	38:BD:137:SER:HA	1.68	0.58
50:BP:75:ARG:HH11	50:BP:75:ARG:HG3	1.68	0.58
3:A2:45:SER:O	3:A2:46:GLN:CD	2.46	0.58
3:A2:52:ASP:O	3:A2:56:GLN:HG3	2.01	0.58
5:A4:22:ILE:HD12	5:A4:22:ILE:N	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:35:GLU:HB3	7:A6:51:GLU:CG	2.33	0.58
10:A9:31:LYS:HD3	11:AA:2478:A:OP1	2.03	0.58
11:AA:184:C:H2'	11:AA:185:U:H6	1.67	0.58
11:AA:690:G:H2'	11:AA:691:C:C6	2.38	0.58
11:AA:782:A:H5'	11:AA:783:A:C2	2.38	0.58
11:AA:1290:C:H2'	11:AA:1291:C:C6	2.38	0.58
11:AA:1473:G:H1	11:AA:1518:U:H3	1.50	0.58
11:AA:2854:G:H1	11:AA:2863:C:H42	1.49	0.58
13:AC:83:ILE:HG23	13:AC:95:GLY:HA3	1.85	0.58
13:AC:137:LEU:HD21	56:BW:56:U:O2'	2.03	0.58
13:AC:172:HIS:O	13:AC:173:ALA:HB2	2.03	0.58
17:AG:18:GLU:O	17:AG:22:ARG:HB2	2.03	0.58
21:AN:131:GLN:NE2	21:AN:133:GLN:N	2.48	0.58
29:AV:19:LYS:HG3	29:AV:20:LEU:N	2.19	0.58
32:AY:50:ARG:CZ	32:AY:55:TYR:HB3	2.32	0.58
34:B2:56:GLU:O	34:B2:57:ASN:HB2	2.03	0.58
35:BA:486:U:H2'	35:BA:487:A:H8	1.68	0.58
35:BA:1125:U:N3	44:BJ:5:ARG:CZ	2.65	0.58
35:BA:1158:C:O2	35:BA:1158:C:C2'	2.51	0.58
40:BF:34:GLY:O	40:BF:68:PRO:HD2	2.03	0.58
43:BI:4:TYR:HA	43:BI:88:TYR:CD1	2.38	0.58
45:BK:124:LYS:HD2	45:BK:125:PHE:HE1	1.68	0.58
47:BM:56:LEU:C	47:BM:56:LEU:HD13	2.28	0.58
50:BP:20:VAL:HG21	50:BP:32:TYR:CD2	2.36	0.58
1:A0:10:THR:HG22	1:A0:12:ASN:N	2.16	0.58
2:A1:23:LYS:HD3	2:A1:28:GLY:CA	2.14	0.58
11:AA:654(H):G:H2'	11:AA:654(I):C:C5'	2.31	0.58
11:AA:1023:U:C2'	11:AA:1024:G:H5'	2.34	0.58
11:AA:1068:G:H2'	11:AA:1068:G:N3	2.18	0.58
11:AA:1722:A:O2'	11:AA:1739:U:H5"	2.03	0.58
11:AA:2147:G:H2'	11:AA:2148:G:C5'	2.33	0.58
11:AA:2758:A:O2'	11:AA:2759:G:H8	1.86	0.58
14:AD:131:LEU:HB2	14:AD:136:ILE:CD1	2.33	0.58
24:AQ:29:PHE:HB2	24:AQ:105:GLU:OE2	2.03	0.58
35:BA:1137:C:O2'	35:BA:1138:G:N2	2.36	0.58
38:BD:28:SER:CB	38:BD:29:PRO:CD	2.81	0.58
43:BI:58:ARG:HG3	43:BI:59:PHE:CD1	2.38	0.58
45:BK:109:VAL:HG13	52:BR:85:LEU:O	2.03	0.58
53:BS:43:GLU:C	53:BS:45:VAL:H	2.09	0.58
59:BZ:356:PRO:HG2	59:BZ:359:VAL:HG21	1.84	0.58
11:AA:654(N):G:C2'	11:AA:654(O):G:H5'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:676:A:H2	11:AA:802:A:H61	1.48	0.58
11:AA:896:A:C5'	33:AZ:146:ILE:HD12	2.34	0.58
11:AA:1567:A:C5'	14:AD:58:HIS:CD2	2.81	0.58
11:AA:2770:G:H5"	11:AA:2771:C:OP2	2.03	0.58
13:AC:14:VAL:HG11	13:AC:222:VAL:HG22	1.84	0.58
14:AD:73:VAL:HG13	14:AD:120:GLY:CA	2.33	0.58
26:AS:35:ILE:HD12	26:AS:97:ARG:HB2	1.86	0.58
27:AT:29:ARG:HB3	27:AT:85:LYS:HA	1.85	0.58
35:BA:176:C:H2'	35:BA:177:C:C6	2.38	0.58
35:BA:1250:A:H2'	35:BA:1251:A:H8	1.67	0.58
41:BG:54:THR:C	41:BG:56:GLN:H	2.11	0.58
42:BH:101:PRO:HG2	42:BH:133:LEU:HD21	1.85	0.58
2:A1:40:ARG:HH22	11:AA:2232:U:P	2.26	0.58
11:AA:481:G:H1'	11:AA:506:G:H21	1.68	0.58
11:AA:1019:U:H3	11:AA:1142(A):A:H62	1.49	0.58
11:AA:1090:U:N3	11:AA:1102:C:H1'	2.19	0.58
11:AA:1198:U:H2'	11:AA:1199:U:C6	2.37	0.58
11:AA:1854:A:H62	11:AA:1888:G:H8	1.52	0.58
11:AA:2577:A:H5"	11:AA:2578:G:H5'	1.85	0.58
16:AF:107:LYS:O	16:AF:108:LYS:C	2.45	0.58
17:AG:131:TYR:H	17:AG:159:VAL:HG13	1.68	0.58
23:AP:23:PRO:O	23:AP:33:ARG:NE	2.36	0.58
23:AP:50:ARG:HG2	23:AP:50:ARG:HH11	1.68	0.58
26:AS:14:VAL:O	26:AS:16:ASN:N	2.37	0.58
35:BA:1221:G:OP1	53:BS:36:ARG:HD3	2.03	0.58
37:BC:47:LEU:HD23	37:BC:52:LEU:HD13	1.85	0.58
43:BI:28:VAL:HG21	43:BI:33:PHE:HD1	1.68	0.58
45:BK:22:HIS:HB3	45:BK:29:ILE:HG23	1.84	0.58
58:BY:7:G:H5'	58:BY:8:A:H5"	1.85	0.58
59:BZ:15:GLY:N	59:BZ:99:MET:HE3	2.12	0.58
7:A6:32:ASN:O	7:A6:33:LYS:CB	2.52	0.58
11:AA:272(J):C:H2'	11:AA:274:G:H5"	1.86	0.58
11:AA:470:A:OP1	16:AF:59:TYR:HE1	1.86	0.58
11:AA:894:C:H2'	11:AA:895:U:H5'	1.85	0.58
11:AA:1165:U:O2'	11:AA:1166:C:H5'	2.03	0.58
11:AA:1448:G:H1'	11:AA:1528:A:N6	2.19	0.58
11:AA:1899:G:H21	11:AA:1902:C:H5	1.51	0.58
11:AA:2590:A:OP2	14:AD:238:GLY:HA2	2.04	0.58
14:AD:30:GLU:HG3	14:AD:63:ARG:HE	1.68	0.58
14:AD:276:LYS:OXT	14:AD:276:LYS:HD3	2.03	0.58
23:AP:40:SER:O	23:AP:41:ARG:HG2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AQ:66:ILE:HG22	24:AQ:104:PHE:CD1	2.35	0.58
26:AS:89:ARG:O	26:AS:92:TYR:HB3	2.04	0.58
32:AY:88:LYS:HZ2	32:AY:93:GLY:CA	2.15	0.58
35:BA:152:A:H62	35:BA:169:C:H42	1.52	0.58
35:BA:158:G:O2'	35:BA:159:G:H5'	2.04	0.58
35:BA:1277:C:H1'	35:BA:1282:C:O2	2.04	0.58
36:BB:15:VAL:C	36:BB:16:HIS:CG	2.81	0.58
36:BB:69:LEU:HD23	36:BB:159:PRO:HG3	1.84	0.58
40:BF:26:ILE:O	40:BF:29:ALA:HB3	2.03	0.58
56:BW:69:C:O2'	56:BW:70:C:H5'	2.04	0.58
6:A5:8:LYS:NZ	11:AA:2055:C:OP1	2.36	0.58
7:A6:12:GLU:CB	7:A6:23:THR:HG22	2.32	0.58
9:A8:58:ILE:HG22	23:AP:49:ARG:HD2	1.84	0.58
11:AA:558:G:P	21:AN:111:PRO:HD2	2.44	0.58
11:AA:2186:G:H2'	11:AA:2187:G:C8	2.39	0.58
11:AA:2786:U:H2'	11:AA:2787:C:C6	2.39	0.58
14:AD:44:ASN:CB	14:AD:48:ARG:O	2.52	0.58
17:AG:129:GLY:O	17:AG:130:ASN:CB	2.52	0.58
18:AH:83:TYR:CB	18:AH:135:GLY:H	2.16	0.58
21:AN:96:GLU:H	21:AN:96:GLU:CD	2.11	0.58
23:AP:7:ARG:O	23:AP:10:PRO:HD2	2.03	0.58
25:AR:9:LYS:O	25:AR:10:LEU:HD23	2.03	0.58
27:AT:78:LEU:C	27:AT:79:HIS:HD2	2.12	0.58
29:AV:89:GLN:OE1	29:AV:90:PRO:HD2	2.02	0.58
33:AZ:32:HIS:O	33:AZ:33:LEU:CB	2.51	0.58
33:AZ:149:SER:CB	33:AZ:173:ALA:HA	2.34	0.58
35:BA:783:C:O2'	35:BA:784:C:H5'	2.04	0.58
36:BB:204:ASN:ND2	36:BB:207:ALA:N	2.44	0.58
37:BC:3:ASN:O	37:BC:4:LYS:HB2	2.03	0.58
37:BC:101:LEU:HD23	37:BC:101:LEU:C	2.29	0.58
44:BJ:43:ARG:HB2	44:BJ:67:THR:HG22	1.85	0.58
49:BO:37:ASN:HD22	49:BO:37:ASN:N	2.01	0.58
1:A0:3:HIS:HB2	11:AA:2494:G:OP1	2.02	0.58
3:A2:30:ARG:O	3:A2:34:GLU:HB2	2.03	0.58
4:A3:31:LEU:O	4:A3:32:GLN:HB2	2.02	0.58
7:A6:33:LYS:O	7:A6:34:LEU:HB2	2.03	0.58
11:AA:654(N):G:H2'	11:AA:654(O):G:C4'	2.34	0.58
11:AA:962:G:O2'	11:AA:963:U:H5'	2.04	0.58
11:AA:1979:C:O2'	11:AA:1980:G:H5'	2.04	0.58
11:AA:2515:C:O2'	11:AA:2516:G:H5'	2.03	0.58
16:AF:65:TRP:CZ3	16:AF:73:ALA:O	2.57	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AF:108:LYS:O	16:AF:112:MET:HB2	2.04	0.58
22:AO:112:MET:HA	22:AO:112:MET:CE	2.33	0.58
24:AQ:140:ALA:CA	33:AZ:99:TYR:CD2	2.86	0.58
26:AS:17:ARG:HA	26:AS:20:ARG:HH11	1.64	0.58
26:AS:17:ARG:HA	26:AS:20:ARG:HH12	1.65	0.58
33:AZ:151:HIS:HB2	33:AZ:170:THR:HA	1.86	0.58
35:BA:413:G:H1'	35:BA:428:G:H21	1.68	0.58
45:BK:26:ASN:O	45:BK:27:ASN:HB2	2.03	0.58
46:BL:34:ARG:O	46:BL:61:THR:HG23	2.03	0.58
47:BM:49:THR:HB	47:BM:52:GLU:H	1.68	0.58
56:BW:21:U:H5'	56:BW:22:A:OP2	2.03	0.58
1:A0:16:SER:HB2	11:AA:2262:U:C5	2.38	0.58
9:A8:4:MET:CE	11:AA:592:G:H21	2.17	0.58
9:A8:15:LYS:HD3	23:AP:65:ARG:NH1	2.18	0.58
11:AA:94(A):G:H2'	11:AA:95:G:H5"	1.84	0.58
11:AA:484:C:P	32:AY:49:VAL:HG22	2.44	0.58
11:AA:1991:U:H2'	11:AA:1992:G:H5"	1.86	0.58
11:AA:2482:G:C2	11:AA:2483:C:H1'	2.39	0.58
13:AC:56:GLN:OE1	13:AC:204:ALA:HA	2.04	0.58
27:AT:33:LYS:HE2	27:AT:43:GLN:NE2	2.18	0.58
27:AT:53:ARG:O	27:AT:53:ARG:HD3	2.04	0.58
29:AV:19:LYS:HB3	29:AV:94:LEU:O	2.03	0.58
30:AW:12:ILE:HB	30:AW:42:ARG:NH1	2.19	0.58
34:B2:93:VAL:HG12	34:B2:94:GLU:N	2.19	0.58
35:BA:161:A:O2'	35:BA:162:A:H5'	2.03	0.58
35:BA:858:G:C8	35:BA:858:G:OP2	2.57	0.58
35:BA:973:G:H1'	44:BJ:55:LYS:CD	2.34	0.58
36:BB:52:GLU:O	36:BB:56:ARG:HB2	2.03	0.58
42:BH:121:ASP:O	42:BH:125:ARG:HB2	2.04	0.58
45:BK:27:ASN:OD1	45:BK:55:LYS:HB3	2.03	0.58
59:BZ:75:ARG:HH12	59:BZ:210:ILE:HG23	1.69	0.58
59:BZ:222:LEU:HD23	59:BZ:223:MET:N	2.18	0.58
59:BZ:354:ARG:N	59:BZ:371:THR:O	2.36	0.58
59:BZ:363:MET:HG3	59:BZ:364:PRO:CD	2.23	0.58
1:A0:27:GLU:OE1	11:AA:856:C:C1'	2.52	0.58
4:A3:40:THR:HG23	4:A3:43:ILE:HG12	1.86	0.58
7:A6:7:ILE:O	7:A6:7:ILE:HG22	2.04	0.58
7:A6:18:ARG:HG3	7:A6:19:ARG:H	1.69	0.58
11:AA:956:G:OP2	24:AQ:14:ARG:NH2	2.37	0.58
11:AA:1448:G:H5'	11:AA:1449:A:OP1	2.04	0.58
11:AA:1570:A:H2'	11:AA:1571:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1935:G:H1'	11:AA:1964:G:N2	2.19	0.58
11:AA:2092:U:H4'	11:AA:2093:G:C5'	2.04	0.58
11:AA:2661:G:OP1	59:BZ:19:HIS:HE1	1.87	0.58
11:AA:2717:G:O2'	27:AT:96:ARG:HD3	2.03	0.58
11:AA:2818:G:O2'	11:AA:2819:G:H5'	2.04	0.58
11:AA:2826:A:O2'	11:AA:2827:C:H5'	2.04	0.58
12:AB:30:C:H2'	12:AB:31:C:O4'	2.04	0.58
13:AC:20:TYR:HB2	13:AC:222:VAL:HG11	1.86	0.58
13:AC:163:PHE:CD1	13:AC:171:ILE:HD11	2.39	0.58
15:AE:2:LYS:O	15:AE:200:GLU:OE1	2.22	0.58
17:AG:71:THR:CG2	17:AG:89:GLY:HA3	2.34	0.58
17:AG:72:ARG:HB3	17:AG:86:MET:H	1.69	0.58
23:AP:17:LYS:O	23:AP:17:LYS:CG	2.52	0.58
28:AU:92:ARG:HH11	28:AU:94:ASN:HD22	1.50	0.58
35:BA:363:A:O2'	35:BA:364:A:H5'	2.04	0.58
35:BA:537:G:H5"	46:BL:113:ARG:NH1	2.19	0.58
38:BD:89:THR:C	38:BD:91:SER:H	2.11	0.58
39:BE:79:GLU:HB3	39:BE:92:LYS:HG3	1.85	0.58
47:BM:79:LYS:O	47:BM:82:MET:HG2	2.04	0.58
1:A0:43:THR:HG21	11:AA:2336:A:H61	1.68	0.57
3:A2:38:GLN:HB3	3:A2:44:LEU:HB3	1.85	0.57
5:A4:26:SER:HB2	17:AG:143:GLU:OE2	2.04	0.57
11:AA:877:U:O2'	11:AA:878:A:H5"	2.03	0.57
11:AA:1104:C:O2'	11:AA:1105:U:H5'	2.04	0.57
11:AA:2086:U:H2'	11:AA:2087:G:C8	2.39	0.57
11:AA:2087:G:C2'	11:AA:2088:G:H5'	2.34	0.57
11:AA:2529:G:OP2	11:AA:2530:A:H5"	2.04	0.57
13:AC:14:VAL:HG13	13:AC:28:LEU:CD2	2.34	0.57
13:AC:56:GLN:HA	13:AC:201:PRO:HB3	1.86	0.57
13:AC:86:ALA:HB3	13:AC:94:VAL:HG11	1.85	0.57
18:AH:85:LYS:CE	18:AH:85:LYS:C	2.77	0.57
23:AP:16:ARG:CZ	23:AP:18:ARG:CG	2.81	0.57
23:AP:146:VAL:HG13	23:AP:147:LEU:N	2.19	0.57
27:AT:39:ARG:HD2	27:AT:39:ARG:N	2.19	0.57
35:BA:328:C:O2	35:BA:328:C:H2'	2.04	0.57
35:BA:407:G:H2'	35:BA:408:A:C8	2.39	0.57
35:BA:915:A:C2'	35:BA:916:G:H5'	2.33	0.57
35:BA:1246:C:O2'	35:BA:1247:U:H5'	2.04	0.57
35:BA:1370:G:H2'	35:BA:1371:G:H8	1.68	0.57
58:BY:1:G:H8	58:BY:1:G:P	2.27	0.57
58:BY:10:A:C5'	58:BY:11:C:OP2	2.50	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:10:LYS:HB2	4:A3:53:LEU:HA	1.85	0.57
4:A3:10:LYS:HB3	4:A3:53:LEU:HD23	1.87	0.57
5:A4:24:THR:HG21	17:AG:104:GLU:CG	2.34	0.57
6:A5:6:VAL:CG2	11:AA:2016:U:H1'	2.34	0.57
9:A8:50:LEU:C	9:A8:52:LYS:H	2.12	0.57
11:AA:2245:U:C5'	11:AA:2246:G:H5'	2.35	0.57
11:AA:2685:G:H1'	11:AA:2726:U:H5	1.69	0.57
13:AC:87:GLU:CG	13:AC:94:VAL:HG21	2.34	0.57
15:AE:173:VAL:O	15:AE:174:ASP:HB2	2.02	0.57
16:AF:28:ILE:H	16:AF:28:ILE:CD1	2.15	0.57
17:AG:27:ASN:C	17:AG:29:TRP:H	2.12	0.57
18:AH:85:LYS:NZ	18:AH:86:GLU:HA	2.19	0.57
25:AR:56:LYS:NZ	25:AR:90:ARG:O	2.36	0.57
27:AT:32:TYR:N	27:AT:32:TYR:HD1	2.02	0.57
27:AT:32:TYR:HB3	27:AT:81:PRO:HB3	1.86	0.57
28:AU:90:VAL:O	28:AU:92:ARG:N	2.37	0.57
29:AV:6:LYS:HB3	29:AV:37:VAL:HB	1.86	0.57
32:AY:81:LYS:CD	32:AY:96:ILE:HB	2.34	0.57
32:AY:95:LYS:CG	32:AY:100:ALA:HA	2.26	0.57
33:AZ:166:SER:OG	33:AZ:167:PRO:HA	2.03	0.57
34:B2:68:TYR:OH	59:BZ:339:ARG:CZ	2.52	0.57
35:BA:1015:A:H2'	35:BA:1016:A:C8	2.39	0.57
35:BA:1301:U:H3'	35:BA:1302:U:C5'	2.33	0.57
36:BB:84:GLU:HB3	36:BB:219:VAL:HG21	1.85	0.57
38:BD:162:LEU:HG	38:BD:181:MET:HE3	1.86	0.57
38:BD:173:TRP:O	38:BD:174:LEU:HD23	2.04	0.57
44:BJ:32:ALA:H	44:BJ:78:ASN:HD21	1.52	0.57
45:BK:123:LYS:HG3	45:BK:126:ARG:HH12	1.69	0.57
59:BZ:323:LEU:H	59:BZ:323:LEU:HD12	1.68	0.57
1:A0:10:THR:HG22	1:A0:11:ARG:N	2.18	0.57
11:AA:761:A:C8	11:AA:761:A:H3'	2.39	0.57
11:AA:2317:C:H2'	11:AA:2318:G:C5'	2.22	0.57
11:AA:2787:C:O2	11:AA:2787:C:H2'	2.03	0.57
12:AB:13:A:H5'	12:AB:13:A:H8	1.68	0.57
13:AC:116:THR:HG22	13:AC:146:GLY:O	2.04	0.57
17:AG:113:ARG:HA	17:AG:113:ARG:NE	2.17	0.57
22:AO:7:TYR:HE1	22:AO:20:MET:HE3	1.68	0.57
24:AQ:104:PHE:HE2	24:AQ:125:LEU:HD11	1.69	0.57
27:AT:78:LEU:O	27:AT:78:LEU:HD23	2.05	0.57
32:AY:43:ASN:HB3	32:AY:64:GLU:HA	1.85	0.57
34:B2:104:LYS:HD2	34:B2:116:LEU:CD2	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:390:C:H2'	35:BA:391:G:H8	1.69	0.57
35:BA:671:G:O2'	35:BA:672:U:H5'	2.04	0.57
35:BA:895:G:H2'	35:BA:896:C:C6	2.38	0.57
35:BA:1316:G:N1	35:BA:1319:A:OP2	2.35	0.57
37:BC:99:VAL:HG23	37:BC:99:VAL:O	2.04	0.57
42:BH:109:ILE:HD11	42:BH:120:THR:HG22	1.85	0.57
59:BZ:163:PHE:O	59:BZ:165:GLY:N	2.37	0.57
10:A9:1:MET:HE3	10:A9:10:ILE:HG12	1.87	0.57
11:AA:1262:A:P	30:AW:99:ARG:HH12	2.27	0.57
15:AE:65:GLY:HA2	15:AE:70:ALA:CB	2.34	0.57
15:AE:104:VAL:HG11	15:AE:188:VAL:HG21	1.87	0.57
15:AE:152:LYS:HG2	21:AN:78:TYR:CE1	2.40	0.57
17:AG:60:LEU:O	17:AG:63:ILE:HG12	2.04	0.57
22:AO:35:VAL:CG2	22:AO:69:ILE:HD11	2.35	0.57
25:AR:87:TYR:O	25:AR:88:ARG:C	2.47	0.57
27:AT:111:ARG:HD2	35:BA:1463:C:OP1	2.03	0.57
35:BA:838:G:C6	35:BA:840:C:H1'	2.39	0.57
35:BA:1255:G:OP1	44:BJ:45:ARG:NH2	2.37	0.57
35:BA:1320:C:H41	53:BS:37:ARG:HB3	1.68	0.57
38:BD:120:LEU:HB3	38:BD:126:ILE:HD11	1.86	0.57
47:BM:83:ASP:CG	47:BM:84:ILE:H	2.11	0.57
1:A0:16:SER:OG	11:AA:2261:C:H3'	2.04	0.57
2:A1:7:ILE:HD12	2:A1:70:VAL:HG22	1.87	0.57
11:AA:898:C:H2'	11:AA:899:A:H5'	1.87	0.57
11:AA:1057:A:C2	11:AA:1058:G:H1'	2.40	0.57
11:AA:1603:A:H5'	11:AA:1603:A:C8	2.38	0.57
11:AA:1756:G:H4'	11:AA:1758:G:O4'	2.04	0.57
11:AA:2185:C:H2'	11:AA:2186:G:H5'	1.85	0.57
11:AA:2685:G:HO2'	11:AA:2726:U:H5	1.52	0.57
13:AC:19:ILE:HD12	13:AC:19:ILE:N	2.19	0.57
16:AF:52:LYS:O	16:AF:88:VAL:HG12	2.03	0.57
20:AK:98:UNK:HA	20:AK:135:UNK:CB	2.34	0.57
23:AP:101:VAL:C	23:AP:103:ALA:H	2.11	0.57
27:AT:31:SER:HB2	27:AT:32:TYR:CD1	2.39	0.57
27:AT:77:PRO:C	27:AT:79:HIS:H	2.12	0.57
28:AU:68:ALA:O	28:AU:71:GLN:HB3	2.04	0.57
32:AY:31:LEU:HB2	32:AY:32:PRO:HA	1.87	0.57
33:AZ:111:VAL:HG12	33:AZ:112:ARG:N	2.20	0.57
35:BA:1395:C:O2'	35:BA:1396:A:H5'	2.04	0.57
36:BB:36:ARG:HH11	36:BB:36:ARG:HG3	1.68	0.57
44:BJ:90:LEU:H	44:BJ:91:PRO:HD3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BK:97:ALA:O	45:BK:101:SER:HB3	2.04	0.57
52:BR:22:VAL:O	52:BR:25:THR:HB	2.04	0.57
54:BT:38:LYS:O	54:BT:42:GLN:HB2	2.04	0.57
59:BZ:219:LYS:HB3	59:BZ:220:PRO:CD	2.34	0.57
1:A0:19:LYS:O	1:A0:21:LEU:HG	2.05	0.57
2:A1:3:LYS:HG3	11:AA:1365:A:OP2	2.03	0.57
7:A6:28:ARG:HH12	56:BW:67:C:H3'	1.69	0.57
7:A6:33:LYS:HD2	56:BW:66:C:O3'	2.05	0.57
11:AA:1257:C:H4'	16:AF:83:PHE:CE1	2.39	0.57
11:AA:1257:C:H2'	11:AA:1258:C:C6	2.40	0.57
11:AA:1448:G:N3	11:AA:1528(A):A:H2	2.01	0.57
11:AA:1495:A:N3	11:AA:1496:A:C2	2.72	0.57
12:AB:62:C:H2'	12:AB:63:G:C8	2.39	0.57
13:AC:83:ILE:CG1	13:AC:95:GLY:HA3	2.34	0.57
13:AC:137:LEU:HD13	13:AC:137:LEU:C	2.29	0.57
14:AD:275:LYS:O	14:AD:276:LYS:HB2	2.03	0.57
29:AV:3:ALA:HB3	29:AV:14:VAL:CG2	2.34	0.57
32:AY:79:CYS:O	32:AY:80:GLY:C	2.47	0.57
33:AZ:119:GLU:HG3	33:AZ:122:ARG:HH11	1.68	0.57
35:BA:1292:U:H2'	35:BA:1293:G:C8	2.39	0.57
38:BD:170:VAL:CG2	38:BD:176:LEU:HD22	2.35	0.57
40:BF:8:ILE:HD11	40:BF:79:LEU:HD13	1.87	0.57
40:BF:10:LEU:HD12	40:BF:10:LEU:N	2.19	0.57
47:BM:83:ASP:C	47:BM:85:GLY:H	2.11	0.57
51:BQ:38:ARG:HA	51:BQ:38:ARG:HE	1.69	0.57
53:BS:10:PHE:CZ	53:BS:70:LYS:HD2	2.39	0.57
58:BY:16:U:O2	58:BY:60:A:N6	2.38	0.57
59:BZ:288:LEU:CD2	59:BZ:304:LEU:HD13	2.28	0.57
3:A2:17:SER:HG	3:A2:20:GLU:HB3	1.69	0.57
9:A8:4:MET:SD	9:A8:61:LEU:CD2	2.91	0.57
11:AA:814:C:H2'	11:AA:815:C:H6	1.70	0.57
11:AA:1045:A:H1'	11:AA:1047:G:C2	2.40	0.57
11:AA:2192:G:C2'	11:AA:2193:G:H5"	2.31	0.57
11:AA:2379:G:H2'	11:AA:2380:C:H6	1.70	0.57
11:AA:2572:A:N7	15:AE:144:ARG:HD2	2.20	0.57
11:AA:2886:G:H2'	11:AA:2887:U:C6	2.39	0.57
13:AC:167:LYS:HE3	56:BW:18:U:C4'	2.34	0.57
15:AE:55:ASN:CG	15:AE:75:VAL:HG22	2.29	0.57
15:AE:77:ILE:HG22	15:AE:78:LEU:N	2.06	0.57
18:AH:125:VAL:O	18:AH:125:VAL:HG12	2.04	0.57
24:AQ:56:ARG:HG3	24:AQ:56:ARG:HH11	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AR:2:ARG:HH11	25:AR:2:ARG:CG	2.17	0.57
26:AS:36:TYR:N	26:AS:36:TYR:CD1	2.71	0.57
27:AT:124:ASP:HB2	27:AT:125:ARG:HH11	1.69	0.57
29:AV:39:LEU:HB3	29:AV:47:VAL:CG2	2.35	0.57
29:AV:75:PHE:HD1	29:AV:82:ARG:HG3	1.69	0.57
35:BA:266:G:C5'	35:BA:267:C:H5	2.18	0.57
35:BA:369:C:HO2'	35:BA:370:C:H6	1.50	0.57
35:BA:1460:A:H2'	35:BA:1461:G:O4'	2.04	0.57
37:BC:47:LEU:HB3	37:BC:52:LEU:HD22	1.87	0.57
47:BM:15:VAL:HG23	47:BM:16:ASP:N	2.19	0.57
53:BS:16:LEU:O	53:BS:18:LYS:N	2.37	0.57
56:BW:5:G:H1	56:BW:69:C:H42	1.53	0.57
7:A6:15:GLU:C	7:A6:17:LYS:H	2.13	0.57
11:AA:426:C:O2'	11:AA:427:U:H5'	2.04	0.57
11:AA:1362:C:O2'	11:AA:1363:C:H5'	2.05	0.57
11:AA:1462:C:H2'	11:AA:1463:C:C6	2.40	0.57
11:AA:1543:C:C3'	11:AA:1544:A:H5"	2.34	0.57
11:AA:2892:A:H62	11:AA:2893:G:N2	2.01	0.57
17:AG:181:ARG:O	17:AG:181:ARG:HG2	2.05	0.57
25:AR:100:LEU:CD1	25:AR:113:LEU:HD13	2.35	0.57
28:AU:72:HIS:HB3	28:AU:110:VAL:HG11	1.87	0.57
29:AV:19:LYS:HE2	29:AV:19:LYS:HA	1.86	0.57
29:AV:52:VAL:O	29:AV:52:VAL:HG13	2.03	0.57
29:AV:91:TYR:CD1	29:AV:91:TYR:C	2.82	0.57
30:AW:64:MET:O	30:AW:65:LEU:CB	2.52	0.57
32:AY:7:VAL:CB	32:AY:8:LYS:NZ	2.68	0.57
33:AZ:60:GLU:O	33:AZ:61:LEU:HB2	2.04	0.57
41:BG:50:ILE:O	41:BG:54:THR:O	2.23	0.57
45:BK:73:MET:C	45:BK:75:TYR:H	2.13	0.57
54:BT:89:ARG:NH1	54:BT:104:LEU:HD21	2.20	0.57
59:BZ:182:MET:HA	59:BZ:182:MET:CE	2.34	0.57
59:BZ:299:GLU:HB2	59:BZ:302:GLN:HE21	1.70	0.57
3:A2:25:VAL:HA	3:A2:28:LYS:HB2	1.87	0.57
5:A4:30:GLU:O	5:A4:31:ILE:HD12	2.05	0.57
8:A7:12:ARG:HG3	8:A7:12:ARG:NH1	2.19	0.57
11:AA:761:A:H3'	11:AA:761:A:H8	1.68	0.57
11:AA:2422:A:H4'	11:AA:2423:U:OP1	2.03	0.57
13:AC:40:THR:CG2	13:AC:41:VAL:H	2.08	0.57
15:AE:93:VAL:C	15:AE:95:ILE:H	2.11	0.57
26:AS:34:HIS:HB3	26:AS:53:SER:CB	2.35	0.57
27:AT:28:VAL:O	27:AT:29:ARG:CB	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:28:VAL:HG12	27:AT:29:ARG:HD3	1.85	0.57
29:AV:2:PHE:CE1	29:AV:13:ARG:HD2	2.40	0.57
29:AV:39:LEU:HB3	29:AV:47:VAL:HG21	1.87	0.57
31:AX:64:LYS:HD3	31:AX:73:ARG:HE	1.69	0.57
35:BA:376:G:O2'	35:BA:377:G:H5'	2.05	0.57
35:BA:390:C:H2'	35:BA:391:G:C8	2.40	0.57
35:BA:1145:C:O2'	35:BA:1146:A:H8	1.88	0.57
39:BE:98:THR:HB	39:BE:117:ASP:HB3	1.87	0.57
45:BK:82:VAL:HG13	45:BK:108:ILE:HG23	1.86	0.57
46:BL:32:PHE:HB3	46:BL:84:LEU:CD2	2.33	0.57
47:BM:87:TYR:C	47:BM:89:GLY:N	2.61	0.57
51:BQ:59:ILE:HG23	51:BQ:71:PHE:HB3	1.87	0.57
59:BZ:88:TYR:CD1	59:BZ:88:TYR:N	2.71	0.57
59:BZ:253:VAL:HA	59:BZ:307:PRO:HD3	1.86	0.57
1:A0:47:PRO:HG2	1:A0:53:MET:HE2	1.87	0.57
7:A6:12:GLU:HA	7:A6:23:THR:CB	2.35	0.57
11:AA:259:G:N2	11:AA:621:A:C8	2.59	0.57
11:AA:637:A:H2'	23:AP:117:GLU:OE2	2.05	0.57
11:AA:1914:A:H8	11:AA:1914:A:C5'	1.99	0.57
11:AA:1980:G:O2'	11:AA:1982:C:OP2	2.22	0.57
11:AA:2688:U:H5	11:AA:2720:U:OP2	1.88	0.57
16:AF:135:LYS:HB3	16:AF:138:GLU:HG3	1.86	0.57
17:AG:51:ARG:HA	17:AG:51:ARG:HE	1.70	0.57
17:AG:173:LEU:O	17:AG:176:LEU:HB2	2.05	0.57
23:AP:126:VAL:HA	23:AP:145:PRO:HB2	1.87	0.57
28:AU:91:ASP:CG	28:AU:96:ALA:HB2	2.29	0.57
32:AY:7:VAL:HG21	32:AY:8:LYS:NZ	2.19	0.57
34:B2:27:LYS:HB3	34:B2:30:GLU:HG3	1.87	0.57
38:BD:3:ARG:O	38:BD:4:TYR:C	2.48	0.57
38:BD:67:ILE:HG21	38:BD:196:LEU:HD21	1.86	0.57
38:BD:96:LEU:HG	38:BD:139:ARG:HH21	1.70	0.57
43:BI:113:LYS:HD2	43:BI:113:LYS:N	2.20	0.57
48:BN:29:ARG:HH11	48:BN:29:ARG:CG	2.17	0.57
58:BY:16:U:H3'	58:BY:17:C:H5"	1.85	0.57
58:BY:84:C:H2'	58:BY:85:C:C5'	2.25	0.57
59:BZ:13:ASN:O	59:BZ:99:MET:HA	2.04	0.57
9:A8:3:LYS:HD3	11:AA:242:G:O5'	2.05	0.56
11:AA:330:A:O2'	11:AA:331:A:C8	2.57	0.56
11:AA:570:G:H2'	11:AA:2030:A:C5	2.39	0.56
11:AA:1166:C:H2'	11:AA:1167:U:H6	1.69	0.56
11:AA:1790:C:H5"	11:AA:1791:A:OP1	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2801(A):A:C3'	11:AA:2802:G:H5'	2.34	0.56
12:AB:65:C:H2'	12:AB:109:C:N4	2.16	0.56
13:AC:137:LEU:HA	56:BW:57:C:C5	2.40	0.56
15:AE:200:GLU:O	15:AE:201:THR:O	2.23	0.56
16:AF:123:LEU:HD13	16:AF:192:LEU:HD22	1.87	0.56
17:AG:112:PRO:C	17:AG:114:ILE:N	2.63	0.56
21:AN:126:PRO:O	21:AN:127:ASP:HB2	2.04	0.56
23:AP:24:GLY:O	23:AP:25:SER:HB3	2.04	0.56
23:AP:83:VAL:HG11	23:AP:112:LEU:HD21	1.85	0.56
24:AQ:34:LEU:HD11	24:AQ:129:THR:HB	1.86	0.56
33:AZ:168:GLU:O	33:AZ:169:GLU:C	2.48	0.56
36:BB:35:GLU:O	36:BB:35:GLU:HG2	2.05	0.56
37:BC:34:LEU:HD23	37:BC:34:LEU:C	2.30	0.56
39:BE:145:LYS:HA	42:BH:107:LEU:HD22	1.85	0.56
43:BI:4:TYR:CE2	43:BI:88:TYR:HB2	2.40	0.56
50:BP:44:THR:O	50:BP:45:THR:CB	2.53	0.56
50:BP:66:PRO:HD2	50:BP:71:ARG:HH11	1.70	0.56
53:BS:22:LEU:HD12	53:BS:47:HIS:HE1	1.69	0.56
58:BY:75:C:O2	58:BY:75:C:H2'	2.03	0.56
5:A4:5:ILE:O	17:AG:67:LYS:HD2	2.05	0.56
6:A5:43:HIS:ND1	11:AA:2816:C:O4'	2.38	0.56
11:AA:671:C:H2'	11:AA:672:C:C6	2.40	0.56
11:AA:1042:G:N3	11:AA:1043:C:H1'	2.20	0.56
11:AA:1314:C:H6	11:AA:1314:C:H5'	1.70	0.56
11:AA:1866:C:H2'	11:AA:1876:A:O4'	2.05	0.56
11:AA:2502:G:H5"	11:AA:2503:A:C5'	2.35	0.56
11:AA:2801(A):A:H4'	11:AA:2802:G:C5'	2.27	0.56
13:AC:10:LEU:CD1	13:AC:32:LEU:HA	2.35	0.56
15:AE:59:VAL:HG21	15:AE:63:LEU:HA	1.87	0.56
17:AG:16:ARG:HD3	17:AG:19:LEU:HD12	1.87	0.56
18:AH:85:LYS:HZ1	18:AH:87:LEU:N	2.03	0.56
21:AN:128:HIS:O	21:AN:130:HIS:N	2.37	0.56
23:AP:82:GLY:O	23:AP:83:VAL:HB	2.05	0.56
32:AY:88:LYS:O	32:AY:89:PHE:CB	2.49	0.56
35:BA:138:G:O2'	35:BA:139:G:H5'	2.05	0.56
35:BA:335:C:H2'	35:BA:336:C:C6	2.39	0.56
35:BA:1139:G:H4'	35:BA:1140:C:O5'	2.05	0.56
36:BB:86:GLU:C	36:BB:88:ALA:H	2.13	0.56
36:BB:189:ASP:HB3	36:BB:203:GLY:O	2.04	0.56
38:BD:12:CYS:HA	38:BD:19:LEU:CD1	2.30	0.56
38:BD:14:ARG:HA	38:BD:39:PRO:HG3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:121:VAL:HG12	38:BD:133:VAL:O	2.05	0.56
38:BD:126:ILE:N	38:BD:126:ILE:HD12	2.20	0.56
47:BM:8:GLU:OE1	47:BM:67:GLU:HG2	2.05	0.56
50:BP:65:GLN:OE1	50:BP:65:GLN:N	2.37	0.56
52:BR:25:THR:HG21	52:BR:42:ARG:CD	2.32	0.56
53:BS:64:GLU:O	53:BS:67:VAL:HG23	2.03	0.56
59:BZ:150:VAL:O	59:BZ:154:VAL:HG23	2.04	0.56
59:BZ:331:HIS:HD2	59:BZ:332:THR:HG23	1.71	0.56
4:A3:46:ASN:ND2	11:AA:851:U:H5'	2.19	0.56
6:A5:10:LYS:HE3	11:AA:1262:A:N3	2.20	0.56
7:A6:35:GLU:CB	7:A6:51:GLU:HG3	2.35	0.56
7:A6:36:LEU:HD23	7:A6:36:LEU:C	2.30	0.56
11:AA:45:C:OP2	11:AA:215:G:H2'	2.05	0.56
11:AA:69:C:O2'	11:AA:70:G:H5'	2.04	0.56
11:AA:328:U:H4'	32:AY:68:HIS:CD2	2.39	0.56
11:AA:1005:C:HO2'	21:AN:28:THR:HG1	1.48	0.56
11:AA:1337:G:P	31:AX:73:ARG:HH22	2.28	0.56
11:AA:1402:C:O2'	11:AA:1403:C:H5'	2.06	0.56
11:AA:1528(A):A:H62	11:AA:1541:G:H21	1.48	0.56
11:AA:1529:G:C2	11:AA:1541:G:N2	2.74	0.56
11:AA:1810:A:H2'	11:AA:1811:G:O4'	2.05	0.56
11:AA:1914:A:H2'	11:AA:1915:U:H6	1.69	0.56
11:AA:2761:G:H2'	11:AA:2762:G:H5"	1.87	0.56
13:AC:100:ILE:HG21	13:AC:126:LYS:HB3	1.88	0.56
14:AD:24:ILE:HG23	14:AD:25:THR:N	2.14	0.56
15:AE:103:ASP:OD2	15:AE:168:MET:CE	2.53	0.56
15:AE:134:ILE:C	15:AE:134:ILE:HD12	2.30	0.56
17:AG:122:PRO:HG3	17:AG:181:ARG:C	2.30	0.56
18:AH:85:LYS:C	18:AH:85:LYS:HE2	2.30	0.56
18:AH:126:PRO:O	18:AH:127:GLU:HG2	2.05	0.56
18:AH:137:ASP:OD1	18:AH:138:LYS:N	2.38	0.56
21:AN:1:MET:O	21:AN:2:LYS:HG3	2.06	0.56
22:AO:2:ILE:HD11	22:AO:82:ASN:HD22	1.68	0.56
23:AP:122:PRO:HB3	23:AP:141:ALA:HB1	1.86	0.56
24:AQ:3:MET:HB2	24:AQ:4:PRO:HD2	1.87	0.56
24:AQ:134:ARG:CD	33:AZ:122:ARG:NH2	2.67	0.56
26:AS:14:VAL:O	26:AS:15:ARG:C	2.48	0.56
27:AT:96:ARG:HH11	27:AT:96:ARG:CB	2.15	0.56
27:AT:106:SER:O	27:AT:107:ASP:OD1	2.23	0.56
27:AT:118:ARG:NH1	35:BA:1442(B):A:C2	2.73	0.56
28:AU:65:ILE:HD11	28:AU:96:ALA:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AV:39:LEU:CD1	29:AV:47:VAL:HG11	2.32	0.56
30:AW:1:MET:SD	30:AW:62:HIS:HB3	2.44	0.56
31:AX:51:VAL:HG11	31:AX:54:VAL:HG23	1.87	0.56
32:AY:6:HIS:NE2	32:AY:30:VAL:HG11	2.20	0.56
32:AY:97:ARG:HG3	32:AY:97:ARG:O	2.05	0.56
34:B2:99:THR:HG22	34:B2:100:LEU:N	2.19	0.56
35:BA:265:G:C2'	35:BA:266:G:H5"	2.33	0.56
35:BA:426:G:P	38:BD:36:ARG:HH22	2.28	0.56
35:BA:895:G:H2'	35:BA:896:C:H6	1.70	0.56
35:BA:1028:C:N4	35:BA:1032:G:H22	2.03	0.56
35:BA:1310:G:H2'	35:BA:1311:G:H8	1.70	0.56
35:BA:1497:G:H2'	35:BA:1498:U:H5'	1.87	0.56
36:BB:44:LEU:C	36:BB:46:LYS:N	2.61	0.56
41:BG:92:SER:O	41:BG:96:GLN:HB2	2.05	0.56
45:BK:105:VAL:HG23	45:BK:105:VAL:O	2.03	0.56
46:BL:51:ALA:HB3	46:BL:53:ARG:NE	2.21	0.56
49:BO:62:GLN:HA	49:BO:62:GLN:NE2	2.21	0.56
54:BT:104:LEU:HD23	54:BT:105:SER:N	2.20	0.56
59:BZ:5:PHE:HB2	59:BZ:275:LYS:CB	2.35	0.56
59:BZ:81:ASP:O	59:BZ:83:PRO:CD	2.49	0.56
59:BZ:317:GLU:HA	59:BZ:370:PHE:O	2.04	0.56
3:A2:25:VAL:C	3:A2:27:GLU:H	2.13	0.56
4:A3:29:ARG:HG3	4:A3:29:ARG:NH1	2.21	0.56
7:A6:52:VAL:CG1	7:A6:53:LYS:N	2.68	0.56
11:AA:414:C:O2'	11:AA:415:A:H5'	2.06	0.56
11:AA:1295:C:H2'	11:AA:1296:G:C8	2.41	0.56
11:AA:2632:A:C2	15:AE:61:ARG:HD2	2.40	0.56
13:AC:59:ARG:HG2	13:AC:60:GLY:N	2.21	0.56
14:AD:108:PRO:O	14:AD:109:ASP:O	2.23	0.56
16:AF:65:TRP:CZ3	16:AF:72:ARG:HB2	2.40	0.56
16:AF:110:LEU:HA	16:AF:183:VAL:HG12	1.85	0.56
18:AH:66:GLY:HA2	18:AH:69:ARG:HB3	1.86	0.56
20:AK:88:UNK:C	20:AK:90:UNK:N	2.66	0.56
26:AS:16:ASN:C	26:AS:18:ILE:H	2.14	0.56
29:AV:46:VAL:HG13	29:AV:46:VAL:O	2.06	0.56
33:AZ:163:LEU:CG	33:AZ:165:VAL:HG23	2.35	0.56
33:AZ:178:GLU:O	33:AZ:180:VAL:HG12	2.05	0.56
35:BA:44:G:H2'	35:BA:45:U:O4'	2.06	0.56
35:BA:189(J):G:H2'	35:BA:189(K):U:C6	2.40	0.56
35:BA:818:G:O2'	35:BA:819:A:H5'	2.05	0.56
36:BB:47:THR:HG22	36:BB:51:LEU:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:120:LEU:HB3	38:BD:126:ILE:CD1	2.35	0.56
39:BE:144:THR:O	39:BE:145:LYS:C	2.47	0.56
40:BF:83:ASP:OD1	40:BF:83:ASP:N	2.38	0.56
44:BJ:30:SER:CB	44:BJ:84:GLN:HE22	2.13	0.56
44:BJ:79:ARG:HA	44:BJ:82:ILE:HG12	1.87	0.56
47:BM:57:ARG:C	47:BM:59:TYR:N	2.61	0.56
3:A2:33:MET:HG2	3:A2:34:GLU:N	2.19	0.56
9:A8:56:GLU:O	9:A8:59:LYS:HE3	2.06	0.56
11:AA:110:G:O2'	11:AA:111:A:H5'	2.05	0.56
11:AA:761:A:O5'	11:AA:761:A:H8	1.89	0.56
11:AA:1222:C:H2'	11:AA:1223:G:C5'	2.33	0.56
11:AA:1842:G:H1	11:AA:1898:U:H3	1.53	0.56
11:AA:2661:G:O2'	11:AA:2662:A:H5'	2.05	0.56
11:AA:2720:U:H5'	11:AA:2721:A:OP2	2.04	0.56
13:AC:63:SER:HA	13:AC:160:ARG:HA	1.86	0.56
14:AD:69:ARG:HH12	14:AD:117:VAL:CG2	2.18	0.56
15:AE:52:LEU:HG	15:AE:75:VAL:HB	1.88	0.56
15:AE:63:LEU:O	15:AE:64:LYS:C	2.49	0.56
16:AF:39:TRP:HB3	16:AF:101:LEU:HD22	1.86	0.56
17:AG:34:LEU:HD13	17:AG:99:MET:SD	2.45	0.56
17:AG:58:GLN:O	17:AG:62:LEU:HD13	2.05	0.56
17:AG:63:ILE:HG13	17:AG:64:THR:N	2.20	0.56
24:AQ:141:GLN:N	33:AZ:53:ILE:CD1	2.68	0.56
26:AS:73:LEU:C	26:AS:73:LEU:CD2	2.79	0.56
27:AT:78:LEU:C	27:AT:79:HIS:CD2	2.83	0.56
28:AU:74:LEU:C	28:AU:74:LEU:HD12	2.31	0.56
32:AY:13:VAL:HG23	32:AY:73:ARG:C	2.30	0.56
34:B2:52:GLU:HB2	34:B2:54:TYR:CE1	2.40	0.56
35:BA:56:U:O2	35:BA:56:U:H2'	2.06	0.56
35:BA:194:C:C2'	35:BA:195:A:H5"	2.34	0.56
35:BA:624:C:O3'	50:BP:10:GLY:HA2	2.05	0.56
35:BA:1112:C:C4	37:BC:178:LEU:HD22	2.40	0.56
35:BA:1286:A:O2'	35:BA:1287:A:H4'	2.05	0.56
35:BA:1310:G:H2'	35:BA:1311:G:C8	2.41	0.56
35:BA:1447:A:N3	35:BA:1447:A:H2'	2.21	0.56
36:BB:215:LEU:O	36:BB:219:VAL:HG23	2.04	0.56
37:BC:10:PHE:CZ	37:BC:178:LEU:HD11	2.41	0.56
37:BC:113:ALA:HB1	37:BC:185:GLY:N	2.21	0.56
38:BD:12:CYS:HA	38:BD:19:LEU:HB2	1.88	0.56
39:BE:122:GLU:OE2	39:BE:131:ILE:HG21	2.06	0.56
53:BS:6:LYS:N	53:BS:6:LYS:CD	2.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:50:ASN:HB3	1:A0:63:VAL:HG22	1.88	0.56
11:AA:654(P):C:H2'	11:AA:654(Q):C:O4'	2.06	0.56
13:AC:27:HIS:CE1	13:AC:182:PRO:HB3	2.40	0.56
15:AE:111:ARG:HD2	15:AE:160:TYR:CE2	2.40	0.56
17:AG:43:LEU:HD11	17:AG:153:ARG:HB3	1.88	0.56
17:AG:162:THR:O	17:AG:163:ALA:C	2.48	0.56
24:AQ:107:ALA:O	24:AQ:109:VAL:HG23	2.05	0.56
33:AZ:34:ASN:CG	33:AZ:34:ASN:O	2.47	0.56
35:BA:1286:A:O2'	35:BA:1287:A:C5'	2.54	0.56
36:BB:19:HIS:O	36:BB:39:ILE:HG22	2.05	0.56
37:BC:5:ILE:CG1	37:BC:10:PHE:HB2	2.35	0.56
38:BD:162:LEU:HD11	38:BD:178:VAL:HG12	1.86	0.56
44:BJ:24:VAL:C	44:BJ:26:ALA:H	2.13	0.56
45:BK:58:PRO:HA	45:BK:90:GLY:HA2	1.88	0.56
50:BP:28:ARG:NH1	50:BP:29:ASP:OD1	2.39	0.56
8:A7:21:ARG:HG2	8:A7:21:ARG:HH11	1.71	0.56
11:AA:271(U):G:H2'	11:AA:271(V):G:H8	1.70	0.56
11:AA:1983:C:O2'	11:AA:1984:G:H5'	2.06	0.56
11:AA:2135:A:H5'	11:AA:2160:G:H4'	1.87	0.56
11:AA:2422:A:N3	56:BW:77:A:C2	2.73	0.56
14:AD:35:LYS:C	14:AD:35:LYS:CD	2.67	0.56
22:AO:88:ASN:HD21	22:AO:92:GLU:HB2	1.70	0.56
22:AO:107:ARG:HH11	27:AT:36:GLU:HG3	1.67	0.56
32:AY:43:ASN:C	32:AY:44:ILE:HD12	2.31	0.56
34:B2:86:LEU:O	34:B2:89:LEU:HG	2.06	0.56
35:BA:254:G:H21	51:BQ:16:GLN:HE22	1.54	0.56
35:BA:407:G:O2'	38:BD:116:GLN:HG3	2.05	0.56
35:BA:453:A:O2'	35:BA:454:C:O4'	2.23	0.56
35:BA:792:A:O2'	35:BA:793:U:OP2	2.24	0.56
35:BA:962:C:O2'	35:BA:963:G:H5'	2.05	0.56
35:BA:1054:C:C2'	35:BA:1055:A:H5"	2.36	0.56
35:BA:1221:G:O2'	35:BA:1222:G:H5'	2.06	0.56
35:BA:1330:U:H5'	35:BA:1331:G:OP2	2.05	0.56
35:BA:1355:G:O2'	35:BA:1356:G:H5'	2.05	0.56
38:BD:129:ASN:HD21	38:BD:144:ASP:CA	2.18	0.56
38:BD:187:ARG:HG2	38:BD:188:LEU:N	2.21	0.56
43:BI:52:ALA:CB	43:BI:95:LYS:HB2	2.35	0.56
46:BL:43:VAL:HG23	46:BL:93:LEU:HD22	1.87	0.56
46:BL:112:ASP:O	46:BL:114:LYS:HG3	2.05	0.56
47:BM:54:VAL:HG12	47:BM:58:GLU:HG3	1.88	0.56
53:BS:46:GLY:H	53:BS:62:ILE:HG23	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:67:ALA:HA	54:BT:72:LEU:O	2.05	0.56
59:BZ:34:VAL:HG11	59:BZ:199:ILE:CG2	2.35	0.56
59:BZ:182:MET:CE	59:BZ:188:THR:HB	2.35	0.56
59:BZ:254:GLU:CG	59:BZ:307:PRO:HG3	2.35	0.56
59:BZ:331:HIS:CD2	59:BZ:332:THR:HG23	2.41	0.56
1:A0:5:LYS:HB3	1:A0:5:LYS:NZ	2.20	0.56
2:A1:29:GLY:HA3	11:AA:2396:G:O2'	2.06	0.56
11:AA:221:A:H61	11:AA:265:A:H8	1.53	0.56
11:AA:1543:C:H3'	11:AA:1544:A:H5'	1.87	0.56
11:AA:1710:C:O2'	11:AA:1711:C:H5'	2.06	0.56
11:AA:1718:G:H5'	11:AA:1718:G:C8	2.35	0.56
11:AA:2248:C:C2'	11:AA:2249:U:H5'	2.36	0.56
11:AA:2512:C:H2'	11:AA:2513:G:O4'	2.05	0.56
12:AB:67:G:O2'	12:AB:68:C:O5'	2.21	0.56
12:AB:92:C:H5"	33:AZ:79:ARG:HH12	1.71	0.56
13:AC:131:LEU:HB2	56:BW:57:C:C5	2.41	0.56
14:AD:27:THR:CG2	14:AD:27:THR:O	2.54	0.56
17:AG:114:ILE:HG23	17:AG:117:PHE:HB2	1.88	0.56
18:AH:76:VAL:O	18:AH:79:VAL:HG22	2.06	0.56
35:BA:254:G:O2'	35:BA:255:G:H5'	2.06	0.56
35:BA:1312:G:H2'	35:BA:1313:U:H6	1.71	0.56
35:BA:1321:C:C5'	35:BA:1322:C:H5"	2.33	0.56
36:BB:74:LYS:NZ	36:BB:76:GLN:HE21	2.03	0.56
36:BB:153:ARG:C	36:BB:155:LEU:H	2.14	0.56
47:BM:3:ARG:CG	47:BM:9:ILE:HG12	2.34	0.56
47:BM:89:GLY:O	47:BM:90:LEU:O	2.24	0.56
11:AA:184:C:H2'	11:AA:185:U:C6	2.41	0.56
11:AA:221:A:H4'	11:AA:222:A:O5'	2.05	0.56
11:AA:425:G:O2'	11:AA:426:C:H5'	2.05	0.56
11:AA:784:A:C6	14:AD:229:VAL:HG11	2.40	0.56
11:AA:2009:G:N3	25:AR:107:ASP:HA	2.20	0.56
11:AA:2162:G:O2'	11:AA:2163:C:H5'	2.05	0.56
11:AA:2787:C:O2	15:AE:61:ARG:NH1	2.39	0.56
11:AA:2801(A):A:H4'	11:AA:2802:G:H2'	1.88	0.56
12:AB:45:A:H1'	17:AG:95:ARG:NH2	2.19	0.56
13:AC:21:THR:HG22	13:AC:225:ASN:CB	2.36	0.56
13:AC:137:LEU:C	13:AC:137:LEU:CD1	2.78	0.56
15:AE:59:VAL:CG2	15:AE:63:LEU:HA	2.36	0.56
17:AG:72:ARG:NE	17:AG:86:MET:HA	2.20	0.56
17:AG:103:LEU:CD2	17:AG:106:LEU:HD23	2.35	0.56
22:AO:97:ARG:NH1	35:BA:339:C:OP2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AQ:133:ARG:HB2	24:AQ:133:ARG:NH1	2.04	0.56
27:AT:24:PRO:HD3	27:AT:52:ILE:HD12	1.88	0.56
27:AT:33:LYS:NZ	27:AT:43:GLN:HE21	2.03	0.56
27:AT:128:GLU:CD	27:AT:128:GLU:C	2.74	0.56
35:BA:412:A:H4'	35:BA:413:G:C8	2.41	0.56
35:BA:501:C:H2'	35:BA:502:G:C8	2.40	0.56
35:BA:1058:G:H2'	35:BA:1059:C:H6	1.70	0.56
35:BA:1096:C:O2'	35:BA:1097:C:H5'	2.05	0.56
38:BD:18:LYS:C	38:BD:19:LEU:HD12	2.31	0.56
38:BD:108:LEU:CD1	38:BD:176:LEU:HD13	2.30	0.56
40:BF:27:GLN:O	40:BF:28:ARG:C	2.49	0.56
42:BH:85:ARG:HH11	42:BH:85:ARG:HG3	1.70	0.56
47:BM:110:ARG:HG2	47:BM:110:ARG:HH11	1.71	0.56
53:BS:29:ARG:HD2	53:BS:29:ARG:N	2.20	0.56
59:BZ:215:ARG:O	59:BZ:216:ASP:CB	2.53	0.56
59:BZ:323:LEU:CD1	59:BZ:323:LEU:N	2.69	0.56
59:BZ:352:VAL:O	59:BZ:372:VAL:HA	2.06	0.56
1:A0:27:GLU:CD	11:AA:856:C:H1'	2.31	0.56
10:A9:9:ARG:NH2	10:A9:14:CYS:O	2.39	0.56
11:AA:528:A:H5"	21:AN:114:ARG:HH12	1.69	0.56
11:AA:963:U:H2'	11:AA:964:C:C6	2.41	0.56
11:AA:1131:G:OP1	21:AN:80:GLY:N	2.34	0.56
11:AA:1141:U:P	21:AN:25:ARG:HH12	2.29	0.56
16:AF:81:PRO:C	16:AF:82:ILE:O	2.41	0.56
24:AQ:68:ILE:HG23	24:AQ:103:MET:HA	1.88	0.56
35:BA:204:U:H5"	35:BA:216:G:O4'	2.05	0.56
35:BA:946:A:H2'	35:BA:947:G:C8	2.40	0.56
36:BB:193:ASP:OD1	36:BB:193:ASP:O	2.24	0.56
37:BC:6:HIS:HD2	37:BC:7:PRO:HD2	1.69	0.56
47:BM:83:ASP:CG	47:BM:84:ILE:N	2.64	0.56
52:BR:59:SER:OG	52:BR:62:GLU:HG3	2.06	0.56
56:BV:22:A:H5'	56:BV:23:G:OP1	2.05	0.56
10:A9:1:MET:HA	10:A9:4:ARG:NH2	2.21	0.55
11:AA:252:G:O2'	11:AA:253:C:H5'	2.07	0.55
11:AA:1518:U:H2'	11:AA:1519:G:O4'	2.05	0.55
11:AA:2762:G:C2'	11:AA:2763:G:H5'	2.36	0.55
14:AD:267:SER:O	14:AD:268:ARG:HB2	2.07	0.55
21:AN:131:GLN:HE22	21:AN:133:GLN:CA	2.18	0.55
21:AN:134:ARG:N	21:AN:135:PRO:HD3	2.20	0.55
23:AP:112:LEU:HD22	23:AP:112:LEU:C	2.29	0.55
27:AT:38:ASN:O	27:AT:38:ASN:ND2	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AW:29:LEU:CD2	30:AW:33:ARG:HD2	2.36	0.55
30:AW:86:LEU:HD12	30:AW:87:PRO:CD	2.36	0.55
31:AX:12:VAL:HG12	31:AX:27:THR:O	2.05	0.55
35:BA:403:C:O2'	35:BA:404:U:H5'	2.06	0.55
35:BA:426:G:H2'	35:BA:427:U:H6	1.70	0.55
35:BA:439:A:C5	35:BA:441:A:H1'	2.41	0.55
35:BA:977:A:O2'	35:BA:978:A:C5'	2.54	0.55
35:BA:1425:U:O2'	35:BA:1426:C:H5'	2.05	0.55
46:BL:18:VAL:CG2	46:BL:19:ARG:H	2.03	0.55
56:BW:26:C:H2'	56:BW:27:G:H8	1.71	0.55
59:BZ:134:PHE:HD2	59:BZ:202:LEU:HD13	1.71	0.55
59:BZ:151:GLU:HG3	59:BZ:170:VAL:HG11	1.89	0.55
11:AA:17:G:H4'	28:AU:25:TRP:CZ3	2.42	0.55
11:AA:92:A:O2'	11:AA:93:G:H5'	2.06	0.55
11:AA:205:G:O2'	11:AA:206:U:P	2.64	0.55
13:AC:175:VAL:CG1	13:AC:188:ASN:HB3	2.35	0.55
13:AC:181:PRO:HG2	13:AC:184:LYS:HG2	1.88	0.55
15:AE:57:LYS:HE3	15:AE:57:LYS:CA	2.20	0.55
18:AH:85:LYS:HE2	18:AH:86:GLU:N	2.22	0.55
24:AQ:140:ALA:HB1	33:AZ:99:TYR:CB	2.37	0.55
30:AW:22:ASP:HA	30:AW:25:ARG:HH12	1.71	0.55
31:AX:35:THR:CG2	31:AX:37:THR:H	2.09	0.55
32:AY:8:LYS:CB	32:AY:28:LYS:NZ	2.69	0.55
35:BA:80:G:H22	35:BA:89:C:H2'	1.70	0.55
35:BA:428:G:H4'	35:BA:429:U:O5'	2.07	0.55
35:BA:585:G:H4'	46:BL:8:ASN:ND2	2.21	0.55
35:BA:1269:A:H2	35:BA:1312:G:N3	2.03	0.55
36:BB:168:THR:O	36:BB:171:ALA:HB2	2.06	0.55
40:BF:75:LEU:HD12	40:BF:75:LEU:O	2.05	0.55
43:BI:5:TYR:CD2	43:BI:6:GLY:N	2.74	0.55
48:BN:57:ARG:HB3	48:BN:57:ARG:NH1	2.21	0.55
50:BP:8:ARG:HG2	50:BP:8:ARG:NH1	2.21	0.55
53:BS:66:MET:HG3	53:BS:66:MET:O	2.05	0.55
59:BZ:327:GLU:O	59:BZ:329:GLY:N	2.40	0.55
2:A1:11:ARG:HB3	2:A1:11:ARG:CZ	2.36	0.55
11:AA:32:C:C2'	11:AA:33:U:H5'	2.36	0.55
11:AA:479:A:H4'	11:AA:480:A:OP1	2.06	0.55
11:AA:747:U:O2	11:AA:747:U:O4'	2.23	0.55
11:AA:1221(A):C:H2'	11:AA:1222:C:H6	1.71	0.55
11:AA:1388:G:O2'	11:AA:1389:G:H5'	2.06	0.55
11:AA:1398:C:H2'	11:AA:1399:C:C6	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1747(A):G:C3'	11:AA:1748:G:H5"	2.36	0.55
11:AA:1999:C:H4'	11:AA:2723:C:O2	2.05	0.55
11:AA:2170:A:H5"	13:AC:134:ARG:NE	2.18	0.55
11:AA:2175:C:O5'	11:AA:2175:C:H6	1.89	0.55
11:AA:2346:A:H5'	11:AA:2383:G:C1'	2.36	0.55
11:AA:2502:G:H5"	11:AA:2503:A:H5"	1.88	0.55
11:AA:2713:A:OP1	25:AR:14:SER:CB	2.52	0.55
12:AB:29:A:C2	12:AB:56:G:C2	2.95	0.55
14:AD:8:PRO:HB3	14:AD:14:ARG:CB	2.33	0.55
14:AD:125:ILE:HD13	14:AD:131:LEU:HD21	1.87	0.55
15:AE:152:LYS:HG2	21:AN:78:TYR:CZ	2.41	0.55
15:AE:201:THR:O	15:AE:202:LYS:HD2	2.05	0.55
21:AN:58:ASP:O	21:AN:60:ILE:HG13	2.07	0.55
23:AP:17:LYS:O	23:AP:19:VAL:N	2.39	0.55
24:AQ:39:PRO:HG3	24:AQ:99:PRO:HD3	1.88	0.55
29:AV:3:ALA:HB3	29:AV:14:VAL:HG23	1.87	0.55
32:AY:63:LYS:HG2	32:AY:64:GLU:N	2.16	0.55
35:BA:134:A:N6	50:BP:25:ARG:HH12	2.02	0.55
35:BA:162:A:C5	35:BA:163:C:H1'	2.41	0.55
35:BA:256:U:O2'	35:BA:257:G:H5'	2.06	0.55
35:BA:1248:A:C4	35:BA:1249:C:C5	2.94	0.55
35:BA:1343:G:H2'	35:BA:1344:C:C6	2.40	0.55
35:BA:1349:A:H2'	35:BA:1350:A:O4'	2.06	0.55
38:BD:193:ASP:OD1	38:BD:193:ASP:N	2.39	0.55
39:BE:77:PRO:HD2	39:BE:142:LEU:HD22	1.87	0.55
41:BG:135:VAL:O	41:BG:138:LYS:HB3	2.06	0.55
44:BJ:65:LEU:CD1	48:BN:56:VAL:H	2.19	0.55
50:BP:12:LYS:O	50:BP:13:HIS:HB2	2.05	0.55
59:BZ:140:MET:HE2	59:BZ:140:MET:N	2.21	0.55
7:A6:19:ARG:NH1	7:A6:43:CYS:SG	2.79	0.55
7:A6:33:LYS:CD	56:BW:66:C:O3'	2.54	0.55
11:AA:1198:U:H2'	11:AA:1199:U:H6	1.71	0.55
11:AA:1884:A:C2'	11:AA:1885:A:H5"	2.37	0.55
11:AA:2131:G:H5"	11:AA:2132:U:O5'	2.05	0.55
11:AA:2345:G:N3	11:AA:2381:C:H2'	2.22	0.55
14:AD:68:LYS:HB2	14:AD:70:TRP:CH2	2.41	0.55
17:AG:31:VAL:O	17:AG:31:VAL:HG13	2.06	0.55
17:AG:138:GLN:C	17:AG:140:ILE:N	2.64	0.55
18:AH:52:VAL:CG2	18:AH:69:ARG:HB2	2.36	0.55
21:AN:133:GLN:HG2	21:AN:134:ARG:N	2.14	0.55
23:AP:16:ARG:CD	23:AP:17:LYS:N	2.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:13:ARG:HE	27:AT:13:ARG:HA	1.71	0.55
32:AY:97:ARG:C	32:AY:98:VAL:HG23	2.31	0.55
34:B2:132:ASP:O	34:B2:133:LYS:C	2.49	0.55
35:BA:67:C:H2'	35:BA:68:G:C8	2.41	0.55
35:BA:149:A:H2'	35:BA:150:C:C6	2.41	0.55
35:BA:1119:C:O2'	35:BA:1120:G:H5'	2.07	0.55
47:BM:68:GLY:N	47:BM:71:ARG:HB3	2.12	0.55
59:BZ:87:ASP:HB2	59:BZ:88:TYR:CD1	2.42	0.55
6:A5:20:ARG:HA	6:A5:23:HIS:CE1	2.41	0.55
7:A6:12:GLU:HA	7:A6:23:THR:CA	2.37	0.55
7:A6:15:GLU:OE2	7:A6:18:ARG:CZ	2.55	0.55
8:A7:34:ARG:CD	8:A7:39:ARG:HG3	2.36	0.55
9:A8:14:VAL:HG21	9:A8:22:VAL:CG1	2.35	0.55
9:A8:15:LYS:HB2	23:AP:65:ARG:NH1	2.21	0.55
11:AA:950:G:H2'	11:AA:951:C:C6	2.42	0.55
11:AA:1651:G:H4'	25:AR:39:PRO:HG2	1.88	0.55
13:AC:75:LEU:CD1	13:AC:113:VAL:HA	2.37	0.55
13:AC:128:GLY:HA2	56:BW:57:C:O2	2.06	0.55
14:AD:127:VAL:O	14:AD:127:VAL:HG12	2.07	0.55
16:AF:178:PRO:C	16:AF:180:GLY:H	2.15	0.55
17:AG:106:LEU:HD12	17:AG:110:ALA:HB3	1.88	0.55
21:AN:6:PRO:O	21:AN:7:LYS:HB2	2.07	0.55
23:AP:59:LEU:CA	23:AP:61:ARG:NE	2.52	0.55
27:AT:117:ASP:O	27:AT:121:ILE:HG13	2.06	0.55
29:AV:39:LEU:C	29:AV:40:LEU:HD23	2.30	0.55
34:B2:99:THR:H	34:B2:120:ALA:HB3	1.70	0.55
35:BA:80:G:H5'	35:BA:82:U:OP2	2.07	0.55
35:BA:134:A:H1'	35:BA:325:A:C5	2.42	0.55
35:BA:858:G:O6	35:BA:869:G:N7	2.38	0.55
37:BC:52:LEU:HD12	37:BC:55:VAL:HG22	1.87	0.55
37:BC:178:LEU:C	37:BC:180:ALA:H	2.14	0.55
38:BD:145:GLU:H	38:BD:145:GLU:CD	2.15	0.55
41:BG:22:LEU:HD23	41:BG:22:LEU:C	2.31	0.55
45:BK:98:LEU:O	45:BK:101:SER:OG	2.23	0.55
48:BN:23:ARG:HD2	48:BN:28:GLY:O	2.06	0.55
52:BR:71:LYS:O	52:BR:75:ILE:HG13	2.06	0.55
59:BZ:255:ILE:HG22	59:BZ:302:GLN:OE1	2.07	0.55
59:BZ:324:LYS:HG2	59:BZ:325:LYS:N	2.21	0.55
3:A2:6:VAL:HA	3:A2:9:GLN:OE1	2.06	0.55
11:AA:11:G:H22	11:AA:2628:C:P	2.30	0.55
11:AA:84:A:C5'	32:AY:9:LYS:HD2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:755:C:H2'	11:AA:756:C:C6	2.42	0.55
11:AA:1003:G:N2	11:AA:1153:C:C2	2.74	0.55
11:AA:2025:C:H2'	11:AA:2026:C:H6	1.72	0.55
11:AA:2790:A:H2'	11:AA:2790:A:N3	2.20	0.55
16:AF:7:TYR:HD2	16:AF:16:GLY:CA	2.16	0.55
17:AG:52:ILE:HB	17:AG:54:GLU:CD	2.31	0.55
18:AH:67:LEU:CG	18:AH:71:LEU:HD11	2.22	0.55
26:AS:34:HIS:HB3	26:AS:53:SER:HB3	1.88	0.55
26:AS:90:GLY:C	26:AS:92:TYR:H	2.15	0.55
27:AT:121:ILE:C	27:AT:123:GLN:H	2.14	0.55
29:AV:28:GLU:O	29:AV:61:VAL:HG21	2.05	0.55
35:BA:35:G:H2'	35:BA:36:C:C6	2.42	0.55
35:BA:628:G:O2'	35:BA:629:G:H5'	2.06	0.55
35:BA:723:U:O2	35:BA:723:U:H2'	2.07	0.55
36:BB:177:ALA:HB1	36:BB:182:ILE:HB	1.89	0.55
37:BC:92:ALA:HB2	37:BC:99:VAL:HG22	1.88	0.55
39:BE:64:ARG:HH11	39:BE:64:ARG:HG3	1.72	0.55
41:BG:34:GLY:O	41:BG:36:LYS:N	2.36	0.55
43:BI:63:ILE:HD11	43:BI:81:ILE:HD11	1.88	0.55
46:BL:80:HIS:N	46:BL:80:HIS:CD2	2.74	0.55
54:BT:100:ILE:O	54:BT:102:GLY:N	2.37	0.55
59:BZ:224:PRO:CG	59:BZ:345:ARG:HD3	2.29	0.55
1:A0:43:THR:H	11:AA:2331:G:H4'	1.72	0.55
2:A1:7:ILE:CD1	2:A1:70:VAL:HG22	2.37	0.55
6:A5:24:ALA:O	6:A5:25:LEU:CB	2.50	0.55
6:A5:56:LYS:HE2	6:A5:59:GLU:OE2	2.05	0.55
10:A9:35:ARG:HD3	11:AA:2742:C:OP1	2.06	0.55
11:AA:17:G:H4'	28:AU:25:TRP:CH2	2.42	0.55
11:AA:271(D):G:O2'	11:AA:271(E):U:H5'	2.07	0.55
13:AC:167:LYS:HE2	13:AC:168:THR:HG23	1.89	0.55
16:AF:192:LEU:HD23	16:AF:193:VAL:N	2.21	0.55
17:AG:111:LEU:CB	17:AG:112:PRO:HD3	2.35	0.55
17:AG:116:ASP:O	17:AG:117:PHE:HB3	2.05	0.55
17:AG:129:GLY:O	17:AG:130:ASN:ND2	2.39	0.55
18:AH:156:ALA:O	18:AH:157:TYR:C	2.49	0.55
21:AN:48:MET:H	21:AN:48:MET:CE	2.20	0.55
21:AN:113:GLY:HA2	21:AN:116:LEU:HD12	1.89	0.55
24:AQ:110:THR:HG23	24:AQ:113:GLN:OE1	2.06	0.55
31:AX:27:THR:HA	31:AX:79:ALA:O	2.06	0.55
33:AZ:81:ARG:O	33:AZ:81:ARG:HG3	2.07	0.55
33:AZ:139:VAL:O	33:AZ:140:ASP:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:524:G:H2'	35:BA:525:C:H6	1.69	0.55
35:BA:600:C:OP1	42:BH:97:VAL:HG12	2.07	0.55
35:BA:1367:C:H5'	44:BJ:60:ARG:CZ	2.37	0.55
39:BE:68:GLU:HG3	39:BE:68:GLU:O	2.05	0.55
42:BH:11:THR:HG22	42:BH:15:ASN:HD21	1.72	0.55
45:BK:54:ARG:O	45:BK:57:THR:HG22	2.07	0.55
53:BS:46:GLY:N	53:BS:62:ILE:HG23	2.22	0.55
2:A1:44:PRO:HG2	2:A1:46:LEU:HD23	1.87	0.55
11:AA:263:C:H2'	11:AA:264:C:O4'	2.06	0.55
11:AA:1071:G:H4'	11:AA:1089:G:OP2	2.06	0.55
11:AA:1301:A:HO2'	11:AA:1302:A:H2'	1.72	0.55
11:AA:1336:A:H2'	11:AA:1337:G:C8	2.42	0.55
11:AA:1444:G:H2'	11:AA:1445(A):C:C5	2.41	0.55
11:AA:2656:U:C2'	11:AA:2657:A:H5"	2.37	0.55
11:AA:2811:G:OP1	15:AE:60:ASN:HB2	2.06	0.55
12:AB:87:G:C3'	12:AB:88:C:H5"	2.36	0.55
15:AE:7:VAL:HG13	15:AE:27:LEU:HB3	1.89	0.55
17:AG:125:PHE:CE2	17:AG:173:LEU:HD12	2.42	0.55
21:AN:58:ASP:HB3	21:AN:95:PRO:HB2	1.89	0.55
26:AS:20:ARG:NH1	26:AS:20:ARG:HG2	2.20	0.55
27:AT:106:SER:O	27:AT:107:ASP:CB	2.54	0.55
31:AX:12:VAL:CG1	31:AX:27:THR:H	2.20	0.55
33:AZ:70:LEU:HD22	33:AZ:91:LEU:HD21	1.89	0.55
33:AZ:141:VAL:HG13	33:AZ:144:LEU:HB2	1.87	0.55
35:BA:386:C:O2'	35:BA:387:U:H5'	2.06	0.55
36:BB:69:LEU:CD2	36:BB:155:LEU:HG	2.36	0.55
43:BI:112:LYS:HD3	43:BI:112:LYS:O	2.06	0.55
48:BN:22:THR:OG1	48:BN:33:VAL:HG21	2.07	0.55
57:BX:16:U:O2'	57:BX:17:G:H5'	2.07	0.55
11:AA:89:G:H3'	11:AA:90:U:H5"	1.87	0.55
11:AA:310:A:P	32:AY:18:GLY:HA2	2.46	0.55
11:AA:608:A:H2'	11:AA:609:A:C8	2.41	0.55
11:AA:655:A:H4'	11:AA:656:G:C5'	2.17	0.55
11:AA:748:G:C8	30:AW:89:ALA:HB1	2.42	0.55
11:AA:832:G:OP1	23:AP:40:SER:HB3	2.07	0.55
11:AA:2542:A:H5'	11:AA:2543:G:OP1	2.06	0.55
11:AA:2580:U:C5'	15:AE:131:ALA:H	2.20	0.55
11:AA:2830:G:N3	11:AA:2883:A:H2	2.04	0.55
11:AA:2864:G:OP1	27:AT:119:LYS:HD2	2.07	0.55
12:AB:24:G:O6	12:AB:56:G:H2'	2.06	0.55
13:AC:78:ALA:HB3	13:AC:83:ILE:HG12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:67:LYS:HD3	17:AG:67:LYS:H	1.70	0.55
23:AP:7:ARG:HB3	23:AP:8:PRO:HD3	1.89	0.55
26:AS:12:PHE:O	26:AS:14:VAL:HG23	2.06	0.55
33:AZ:163:LEU:HD11	33:AZ:165:VAL:CG2	2.37	0.55
35:BA:409:G:H4'	38:BD:24:GLU:OE1	2.07	0.55
35:BA:1319:A:C6	35:BA:1323:G:H1'	2.42	0.55
38:BD:8:VAL:C	38:BD:10:ARG:H	2.14	0.55
58:BY:63:U:O2'	59:BZ:339:ARG:HD2	2.06	0.55
59:BZ:13:ASN:O	59:BZ:100:ASP:N	2.38	0.55
59:BZ:226:GLU:O	59:BZ:300:ARG:HD2	2.06	0.55
59:BZ:314:THR:HG22	59:BZ:377:PRO:HA	1.88	0.55
2:A1:64:ALA:HA	2:A1:67:ILE:CD1	2.37	0.55
11:AA:654(J):A:H8	11:AA:654(L):G:H8	1.55	0.55
11:AA:1041:G:H1	11:AA:1114:G:H1	1.54	0.55
11:AA:1983:C:H4'	11:AA:2606:C:H4'	1.89	0.55
11:AA:2313:C:O2'	11:AA:2314:C:H5'	2.05	0.55
11:AA:2375:G:H8	11:AA:2375:G:O5'	1.90	0.55
12:AB:8:U:H5'	12:AB:8:U:H6	1.71	0.55
15:AE:111:ARG:HD3	25:AR:2:ARG:NH2	2.22	0.55
16:AF:167:ALA:O	16:AF:168:ARG:O	2.24	0.55
17:AG:107:LEU:HD22	17:AG:177:GLY:O	2.07	0.55
18:AH:76:VAL:C	18:AH:78:GLY:H	2.14	0.55
23:AP:71:VAL:HG13	23:AP:72:PRO:CD	2.37	0.55
28:AU:29:SER:OG	28:AU:30:LYS:HE2	2.07	0.55
30:AW:45:TYR:HD2	30:AW:46:PHE:CE1	2.25	0.55
33:AZ:60:GLU:HG3	33:AZ:66:SER:HB3	1.89	0.55
33:AZ:126:VAL:HA	33:AZ:163:LEU:HA	1.89	0.55
34:B2:140:ALA:HB1	39:BE:51:VAL:HG21	1.88	0.55
35:BA:135:C:C2'	35:BA:136:C:H5'	2.37	0.55
35:BA:346:G:H2'	35:BA:346:G:N3	2.22	0.55
35:BA:545:C:O2'	35:BA:546:G:H5'	2.07	0.55
35:BA:1013:G:H2'	35:BA:1015:A:OP2	2.06	0.55
42:BH:30:ARG:HB3	42:BH:30:ARG:NH1	2.21	0.55
44:BJ:27:ALA:HB1	44:BJ:34:VAL:HG21	1.89	0.55
45:BK:37:GLY:C	45:BK:38:ASN:HD22	2.15	0.55
46:BL:27:LEU:HB3	46:BL:33:ARG:NH1	2.22	0.55
47:BM:42:ALA:O	47:BM:43:THR:O	2.25	0.55
50:BP:5:ARG:C	50:BP:6:LEU:HD12	2.31	0.55
59:BZ:150:VAL:HA	59:BZ:153:GLU:CG	2.36	0.55
59:BZ:385:ARG:HG2	59:BZ:399:VAL:CG1	2.36	0.55
11:AA:621:A:H2'	11:AA:622:G:C5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:970:C:H2'	11:AA:971:C:C6	2.42	0.54
11:AA:1509(A):A:H2'	11:AA:1509(B):A:C8	2.42	0.54
11:AA:1625:C:C2'	11:AA:1626:G:H5'	2.37	0.54
11:AA:2096:U:O2'	11:AA:2097:C:H5'	2.07	0.54
13:AC:65:PRO:HD3	13:AC:191:ALA:CB	2.37	0.54
17:AG:91:ARG:HD2	17:AG:91:ARG:C	2.32	0.54
22:AO:107:ARG:HH12	27:AT:35:LYS:CB	2.19	0.54
23:AP:16:ARG:HG3	23:AP:17:LYS:H	1.73	0.54
23:AP:33:ARG:O	23:AP:34:GLY:C	2.50	0.54
25:AR:50:HIS:NE2	25:AR:54:LEU:HD11	2.22	0.54
27:AT:122:ASP:OD2	35:BA:1442(A):G:H2'	2.08	0.54
33:AZ:96:VAL:HG22	33:AZ:97:GLU:N	2.22	0.54
35:BA:1053:G:H4'	35:BA:1054:C:C5'	2.28	0.54
35:BA:1308:U:OP1	47:BM:98:VAL:HG23	2.07	0.54
35:BA:1505:G:H4'	35:BA:1506:U:C5'	2.37	0.54
35:BA:1530:G:H2'	35:BA:1531:A:O5'	2.07	0.54
37:BC:12:LEU:C	37:BC:14:ILE:H	2.15	0.54
37:BC:46:GLU:O	37:BC:47:LEU:CB	2.54	0.54
37:BC:116:VAL:HG21	37:BC:202:ILE:HD11	1.88	0.54
40:BF:100:ASN:HD21	52:BR:23:LYS:HG2	1.69	0.54
42:BH:11:THR:HG22	42:BH:15:ASN:ND2	2.21	0.54
43:BI:88:TYR:O	43:BI:89:ASN:CB	2.55	0.54
48:BN:15:LYS:HB3	48:BN:16:PHE:CD2	2.41	0.54
48:BN:57:ARG:O	48:BN:58:LYS:C	2.50	0.54
59:BZ:88:TYR:N	59:BZ:88:TYR:HD1	2.03	0.54
59:BZ:316:PHE:CD1	59:BZ:316:PHE:C	2.85	0.54
5:A4:43:TYR:CG	5:A4:44:THR:N	2.73	0.54
8:A7:5:TRP:CZ3	11:AA:464:U:H4'	2.43	0.54
11:AA:1248:G:OP1	28:AU:2:PRO:HD2	2.07	0.54
11:AA:1743:C:H2'	11:AA:1744:C:C6	2.41	0.54
11:AA:2850:A:H2'	11:AA:2851:A:O4'	2.07	0.54
14:AD:22:SER:O	14:AD:23:GLU:C	2.50	0.54
14:AD:44:ASN:OD1	14:AD:44:ASN:N	2.38	0.54
17:AG:123:ASN:O	17:AG:126:ASP:OD2	2.26	0.54
21:AN:39:ARG:C	21:AN:41:ASP:N	2.62	0.54
23:AP:131:SER:O	23:AP:134:ALA:N	2.40	0.54
27:AT:8:LYS:C	27:AT:10:VAL:H	2.14	0.54
29:AV:22:VAL:C	29:AV:23:GLU:HG2	2.32	0.54
30:AW:69:LEU:HA	30:AW:108:GLY:O	2.06	0.54
32:AY:81:LYS:CG	32:AY:96:ILE:HB	2.37	0.54
33:AZ:54:HIS:HB3	33:AZ:101:PRO:HD3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:822:C:O2'	35:BA:823:G:H5'	2.08	0.54
37:BC:150:LYS:HE3	37:BC:167:TRP:HE1	1.72	0.54
37:BC:150:LYS:HE3	37:BC:167:TRP:NE1	2.21	0.54
40:BF:69:GLU:H	40:BF:69:GLU:CD	2.16	0.54
41:BG:44:TYR:HE2	43:BI:41:VAL:HG11	1.70	0.54
44:BJ:26:ALA:HB3	44:BJ:85:LEU:HD21	1.88	0.54
48:BN:59:ALA:O	48:BN:60:SER:CB	2.55	0.54
53:BS:79:THR:O	53:BS:80:TYR:HB3	2.06	0.54
54:BT:41:ILE:C	54:BT:43:LEU:N	2.64	0.54
56:BV:5:G:O2'	56:BV:6:G:H5'	2.07	0.54
59:BZ:140:MET:CA	59:BZ:140:MET:CE	2.85	0.54
1:A0:16:SER:HB2	11:AA:2262:U:H5	1.73	0.54
6:A5:4:HIS:CB	6:A5:5:PRO:CD	2.82	0.54
11:AA:605:C:O2'	11:AA:606:U:H5'	2.07	0.54
11:AA:660:G:H5'	16:AF:99:TYR:CE2	2.42	0.54
11:AA:1877:A:H5'	11:AA:1878:G:OP2	2.08	0.54
13:AC:216:THR:O	13:AC:217:THR:C	2.50	0.54
22:AO:119:PRO:O	22:AO:120:GLU:HB2	2.05	0.54
26:AS:92:TYR:CG	26:AS:93:LYS:N	2.75	0.54
27:AT:48:ILE:N	27:AT:48:ILE:HD12	2.23	0.54
32:AY:8:LYS:HG2	32:AY:28:LYS:HZ3	1.73	0.54
32:AY:50:ARG:HG3	32:AY:57:GLN:O	2.07	0.54
33:AZ:162:GLU:O	33:AZ:163:LEU:HD23	2.07	0.54
34:B2:22:ALA:HB1	34:B2:80:LEU:O	2.05	0.54
35:BA:60:A:H4'	35:BA:61:G:O5'	2.07	0.54
35:BA:77:G:H5'	35:BA:78:G:OP2	2.07	0.54
35:BA:381:C:H2'	35:BA:382:A:O4'	2.07	0.54
35:BA:1367:C:H5'	44:BJ:60:ARG:NH2	2.21	0.54
35:BA:1439:C:H42	35:BA:1462:G:H1	1.56	0.54
38:BD:90:GLY:O	38:BD:200:GLU:HG3	2.06	0.54
38:BD:120:LEU:C	38:BD:126:ILE:HD13	2.33	0.54
38:BD:173:TRP:CZ3	38:BD:193:ASP:HB3	2.41	0.54
43:BI:104:ARG:HG2	43:BI:105:ASP:N	2.23	0.54
45:BK:87:THR:HG22	45:BK:88:GLY:H	1.73	0.54
47:BM:116:THR:HG22	47:BM:118:ALA:H	1.71	0.54
49:BO:9:GLN:O	49:BO:10:LYS:C	2.50	0.54
53:BS:78:ARG:O	53:BS:81:ARG:HD3	2.08	0.54
56:BV:18:U:H4'	56:BV:19:G:OP1	2.05	0.54
56:BV:30:G:O2'	56:BV:31:G:H5'	2.07	0.54
56:BW:41:C:H2'	56:BW:42:C:C6	2.43	0.54
58:BY:11:C:C4'	58:BY:12:G:OP1	2.52	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:215:ARG:HH11	59:BZ:215:ARG:CB	2.20	0.54
2:A1:13:ILE:HD11	11:AA:396:G:C5'	2.38	0.54
3:A2:33:MET:CG	3:A2:34:GLU:N	2.69	0.54
11:AA:291:C:H2'	11:AA:292:C:H6	1.73	0.54
11:AA:659:C:O2'	11:AA:660:G:H5'	2.06	0.54
11:AA:2689:U:H5"	11:AA:2690:C:H5'	1.90	0.54
11:AA:2796:U:O2'	11:AA:2799:C:H5'	2.07	0.54
12:AB:111:G:H2'	12:AB:112:U:H5'	1.90	0.54
15:AE:59:VAL:O	15:AE:60:ASN:CG	2.50	0.54
16:AF:164:ARG:HH11	16:AF:164:ARG:HG2	1.72	0.54
17:AG:9:ARG:C	17:AG:11:TYR:H	2.16	0.54
18:AH:12:PRO:HB2	18:AH:15:VAL:CG1	2.36	0.54
22:AO:64:ARG:O	22:AO:82:ASN:HA	2.08	0.54
23:AP:50:ARG:HG2	23:AP:50:ARG:NH1	2.23	0.54
28:AU:16:LYS:O	28:AU:20:LEU:HD23	2.07	0.54
33:AZ:151:HIS:HB3	33:AZ:171:ILE:H	1.72	0.54
35:BA:1277:C:O2'	35:BA:1279:A:H8	1.91	0.54
35:BA:1436:U:H2'	35:BA:1437:C:H6	1.72	0.54
36:BB:75:LYS:HG2	36:BB:78:GLN:NE2	2.22	0.54
46:BL:27:LEU:HD12	46:BL:28:LYS:HG3	1.90	0.54
48:BN:22:THR:O	48:BN:23:ARG:HB3	2.07	0.54
49:BO:87:ILE:CG2	49:BO:88:ARG:N	2.70	0.54
53:BS:61:TYR:O	53:BS:62:ILE:CB	2.55	0.54
59:BZ:20:VAL:HG22	59:BZ:115:GLN:OE1	2.07	0.54
59:BZ:277:LEU:HD13	59:BZ:278:GLN:H	1.72	0.54
4:A3:12:PRO:O	4:A3:14:GLY:N	2.41	0.54
5:A4:26:SER:HB3	17:AG:105:LYS:HZ2	1.73	0.54
11:AA:582:G:H2'	11:AA:583:G:H8	1.70	0.54
11:AA:733:G:N7	11:AA:761:A:C5	2.75	0.54
11:AA:840:C:O2'	11:AA:841:A:H5'	2.07	0.54
11:AA:1678:G:H22	11:AA:1989:G:H22	1.55	0.54
11:AA:2787:C:H1'	15:AE:61:ARG:HG3	1.89	0.54
14:AD:45:ASN:CG	14:AD:46:GLN:N	2.65	0.54
15:AE:7:VAL:HG12	15:AE:51:PHE:CE2	2.37	0.54
16:AF:125:LEU:HA	16:AF:194:MET:O	2.07	0.54
17:AG:129:GLY:O	17:AG:130:ASN:CG	2.50	0.54
18:AH:149:ARG:HA	18:AH:162:ILE:HG12	1.88	0.54
25:AR:72:ASP:HB2	25:AR:75:LEU:CB	2.34	0.54
32:AY:43:ASN:CB	32:AY:64:GLU:HA	2.38	0.54
34:B2:48:PHE:HZ	34:B2:90:LEU:HA	1.68	0.54
34:B2:53:LEU:HD23	34:B2:79:LEU:HD12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B2:60:ILE:O	34:B2:60:ILE:HG22	2.07	0.54
35:BA:221:C:H2'	35:BA:222:U:H6	1.72	0.54
35:BA:948:C:H2'	35:BA:949:A:H8	1.73	0.54
35:BA:1059:C:O2'	35:BA:1060:C:H5'	2.07	0.54
35:BA:1217:C:H2'	35:BA:1218:C:C6	2.42	0.54
39:BE:33:VAL:HG12	39:BE:112:LEU:CD1	2.36	0.54
43:BI:108:VAL:HG12	43:BI:109:VAL:N	2.22	0.54
55:BU:12:LYS:HB3	55:BU:22:ARG:HD2	1.89	0.54
59:BZ:84:GLY:O	59:BZ:85:HIS:HB2	2.06	0.54
9:A8:28:GLY:O	9:A8:30:ARG:N	2.35	0.54
11:AA:32:C:O2'	11:AA:33:U:H5'	2.08	0.54
11:AA:37:C:H4'	11:AA:451:C:OP1	2.07	0.54
11:AA:143:G:H4'	31:AX:35:THR:HG21	1.89	0.54
11:AA:671:C:H2'	11:AA:672:C:H6	1.72	0.54
11:AA:843:G:O2'	11:AA:844:C:H5'	2.07	0.54
11:AA:1053:C:O2'	11:AA:1054:A:H5'	2.08	0.54
11:AA:1166:C:H2'	11:AA:1167:U:C6	2.41	0.54
11:AA:2087:G:O2'	11:AA:2088:G:H5'	2.07	0.54
11:AA:2466:C:O2'	11:AA:2467:C:H5'	2.07	0.54
12:AB:52:A:O2'	12:AB:53:A:C8	2.60	0.54
14:AD:35:LYS:HD2	14:AD:36:PRO:N	2.22	0.54
15:AE:70:ALA:O	15:AE:71:GLY:C	2.51	0.54
15:AE:132:HIS:CG	15:AE:135:HIS:NE2	2.76	0.54
16:AF:126:VAL:HG11	16:AF:142:TRP:HH2	1.72	0.54
22:AO:4:PRO:O	22:AO:5:GLN:CB	2.55	0.54
27:AT:82:LEU:HD12	27:AT:82:LEU:N	2.11	0.54
30:AW:5:ALA:HB3	30:AW:105:VAL:H	1.72	0.54
33:AZ:17:ALA:HA	33:AZ:20:ARG:CG	2.37	0.54
34:B2:133:LYS:HD3	35:BA:16:A:OP1	2.07	0.54
35:BA:426:G:OP1	38:BD:36:ARG:NH1	2.40	0.54
35:BA:560:U:H5'	35:BA:566:G:N2	2.23	0.54
35:BA:580:U:H2'	35:BA:581:G:O4'	2.08	0.54
35:BA:1081:G:O2'	35:BA:1082:G:H5'	2.08	0.54
36:BB:17:PHE:O	36:BB:18:GLY:O	2.24	0.54
36:BB:130:ARG:NH2	36:BB:134:GLU:HG3	2.23	0.54
40:BF:89:MET:HE1	52:BR:75:ILE:HB	1.90	0.54
42:BH:36:LEU:HA	42:BH:39:LEU:HD23	1.90	0.54
45:BK:99:GLN:HG2	45:BK:105:VAL:HG11	1.90	0.54
46:BL:6:THR:H	46:BL:9:GLN:NE2	2.05	0.54
46:BL:25:PRO:C	46:BL:27:LEU:N	2.60	0.54
47:BM:106:ASN:O	47:BM:107:ALA:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:25:THR:HG22	52:BR:42:ARG:HH11	1.71	0.54
59:BZ:98:GLN:O	59:BZ:99:MET:O	2.26	0.54
59:BZ:382:GLU:O	59:BZ:400:VAL:O	2.26	0.54
11:AA:221:A:N6	11:AA:265:A:H8	2.05	0.54
11:AA:740:U:H2'	11:AA:741:G:H8	1.73	0.54
11:AA:1667:G:O2'	11:AA:1991:U:O4	2.25	0.54
11:AA:2196:C:O2'	11:AA:2197:U:H5'	2.08	0.54
23:AP:23:PRO:C	23:AP:33:ARG:NE	2.66	0.54
24:AQ:140:ALA:HA	33:AZ:99:TYR:CE2	2.42	0.54
26:AS:52:SER:HB2	26:AS:56:LEU:CB	2.34	0.54
28:AU:74:LEU:C	28:AU:74:LEU:CD1	2.81	0.54
32:AY:42:VAL:HG21	32:AY:67:LEU:CD1	2.37	0.54
35:BA:689:C:P	45:BK:46:GLY:HA3	2.48	0.54
36:BB:74:LYS:HZ3	36:BB:76:GLN:HE21	1.55	0.54
37:BC:126:ARG:O	37:BC:127:ARG:HB2	2.07	0.54
51:BQ:52:LYS:HD3	51:BQ:55:ASP:OD2	2.08	0.54
59:BZ:224:PRO:CB	59:BZ:346:THR:HG23	2.38	0.54
59:BZ:325:LYS:HE3	59:BZ:331:HIS:HB2	1.88	0.54
11:AA:176:G:O2'	11:AA:177:G:H5'	2.08	0.54
11:AA:809:G:O2'	11:AA:810:U:H5'	2.08	0.54
11:AA:1899:G:O2'	11:AA:1900:A:H5"	2.07	0.54
11:AA:2481:G:HO2'	11:AA:2482:G:P	2.31	0.54
11:AA:2849:U:HO2'	11:AA:2866:U:H6	1.56	0.54
12:AB:7:G:H4'	26:AS:29:PHE:CD2	2.42	0.54
13:AC:137:LEU:CD1	13:AC:139:ASN:HD22	2.20	0.54
16:AF:123:LEU:HD12	16:AF:124:LEU:N	2.22	0.54
17:AG:111:LEU:CB	17:AG:112:PRO:CD	2.85	0.54
24:AQ:42:ILE:HG21	24:AQ:68:ILE:HD12	1.89	0.54
24:AQ:54:MET:HB3	24:AQ:64:ILE:HD13	1.89	0.54
27:AT:50:ILE:HD11	27:AT:64:ARG:HB2	1.89	0.54
28:AU:61:TRP:HB3	28:AU:93:LYS:O	2.07	0.54
28:AU:92:ARG:HH22	29:AV:10:LYS:HB3	1.72	0.54
29:AV:69:LYS:HG3	29:AV:88:ARG:HG2	1.90	0.54
30:AW:12:ILE:HD13	30:AW:17:VAL:HG22	1.88	0.54
32:AY:8:LYS:HE3	32:AY:74:PRO:HD3	1.90	0.54
33:AZ:18:LEU:O	33:AZ:21:ALA:HB3	2.07	0.54
34:B2:28:GLY:CA	34:B2:31:VAL:HG23	2.38	0.54
35:BA:397:A:H3'	35:BA:397:A:N3	2.23	0.54
35:BA:538:G:O2'	35:BA:539:A:H5'	2.08	0.54
35:BA:671:G:C2'	35:BA:672:U:H5'	2.37	0.54
35:BA:948:C:O2'	35:BA:949:A:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1191:A:H2'	35:BA:1192:C:C6	2.43	0.54
38:BD:76:ARG:O	38:BD:80:GLU:HG2	2.08	0.54
40:BF:3:ARG:NH1	40:BF:66:GLU:HB2	2.23	0.54
44:BJ:16:LEU:HD13	44:BJ:16:LEU:C	2.32	0.54
44:BJ:40:LEU:H	44:BJ:40:LEU:CD2	2.11	0.54
45:BK:87:THR:HG22	45:BK:88:GLY:N	2.23	0.54
53:BS:43:GLU:C	53:BS:45:VAL:N	2.65	0.54
59:BZ:19:HIS:HD2	59:BZ:115:GLN:N	1.98	0.54
59:BZ:338:TYR:CD2	59:BZ:340:PRO:HD3	2.43	0.54
1:A0:43:THR:HG22	11:AA:2331:G:O2'	2.08	0.54
3:A2:35:LEU:C	3:A2:35:LEU:HD13	2.33	0.54
9:A8:62:LEU:CD1	11:AA:242:G:H5"	2.17	0.54
11:AA:363(B):G:H2'	11:AA:363(C):G:H8	1.73	0.54
11:AA:845:G:O2'	11:AA:846:C:H5	1.90	0.54
11:AA:1264:G:H3'	11:AA:1265:A:H5"	1.89	0.54
11:AA:1464:C:O2'	11:AA:1528:A:H8	1.89	0.54
11:AA:2422:A:O4'	56:BW:77:A:C2	2.60	0.54
11:AA:2751:G:N3	11:AA:2751:G:H2'	2.22	0.54
11:AA:2828:C:O2'	11:AA:2829:C:H5'	2.08	0.54
14:AD:26:LYS:O	14:AD:27:THR:CG2	2.55	0.54
14:AD:166:GLN:HE21	14:AD:166:GLN:CA	2.19	0.54
15:AE:14:ILE:HB	27:AT:14:TYR:CE2	2.43	0.54
17:AG:12:TYR:HB3	17:AG:16:ARG:HG3	1.90	0.54
21:AN:63:THR:HB	21:AN:66:LYS:HZ1	1.71	0.54
23:AP:9:ASN:H	23:AP:10:PRO:CD	2.15	0.54
25:AR:2:ARG:HD2	25:AR:2:ARG:C	2.32	0.54
27:AT:27:THR:O	27:AT:28:VAL:CB	2.56	0.54
30:AW:79:GLY:CA	30:AW:100:THR:HG23	2.37	0.54
35:BA:961:U:O2'	35:BA:962:C:H6	1.91	0.54
35:BA:1285:A:H4'	35:BA:1286:A:O5'	2.08	0.54
35:BA:1406:U:O2'	35:BA:1407:C:H5'	2.07	0.54
38:BD:31:CYS:SG	38:BD:31:CYS:O	2.66	0.54
39:BE:12:LEU:HD13	39:BE:31:LEU:HB3	1.90	0.54
52:BR:53:ARG:O	52:BR:55:ARG:N	2.41	0.54
56:BW:51:U:H2'	56:BW:52:C:C6	2.43	0.54
56:BW:54:G:N2	56:BW:63:C:H1'	2.23	0.54
58:BY:1:G:H1	58:BY:85:C:N4	2.05	0.54
58:BY:56:U:H2'	58:BY:57:U:C6	2.43	0.54
7:A6:45:LYS:HD2	7:A6:45:LYS:N	2.18	0.54
8:A7:46:VAL:HG12	8:A7:47:ARG:N	2.23	0.54
11:AA:32:C:H5'	11:AA:32:C:C6	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:65:C:H5'	31:AX:71:GLY:HA3	1.90	0.54
11:AA:363(F):A:O2'	11:AA:364:C:C5	2.61	0.54
11:AA:572:A:H5"	11:AA:573:G:OP2	2.07	0.54
11:AA:588:U:H2'	11:AA:589:C:C6	2.43	0.54
11:AA:648:G:O2'	11:AA:649:G:H5'	2.08	0.54
11:AA:796:C:H2'	11:AA:797:C:H6	1.72	0.54
11:AA:912:C:O2'	11:AA:913:U:H5'	2.08	0.54
11:AA:1269:A:H61	11:AA:2011:U:H3	1.56	0.54
11:AA:2544:G:H1'	11:AA:2646:C:H4'	1.90	0.54
11:AA:2627:G:O2'	11:AA:2781:A:N1	2.39	0.54
13:AC:14:VAL:HG13	13:AC:28:LEU:HD21	1.90	0.54
13:AC:120:MET:HE2	13:AC:123:VAL:HG11	1.89	0.54
14:AD:89:SER:HB2	14:AD:159:ALA:CB	2.37	0.54
16:AF:132:VAL:CG1	16:AF:133:ASN:H	2.15	0.54
17:AG:46:ALA:HB2	17:AG:88:ILE:HD11	1.86	0.54
21:AN:43:THR:HG22	21:AN:45:ASN:ND2	2.23	0.54
30:AW:72:LYS:HE2	30:AW:108:GLY:HA3	1.88	0.54
32:AY:96:ILE:CG1	32:AY:99:CYS:CB	2.83	0.54
33:AZ:40:ASP:HB3	33:AZ:43:GLU:HB3	1.90	0.54
33:AZ:127:LYS:HG3	33:AZ:162:GLU:HG3	1.89	0.54
35:BA:137:C:H42	35:BA:226:G:H1	1.56	0.54
35:BA:377:G:O2'	35:BA:378:G:H5'	2.08	0.54
35:BA:523:A:N6	46:BL:53:ARG:HH12	2.06	0.54
35:BA:1111:A:O5'	35:BA:1111:A:H8	1.91	0.54
44:BJ:82:ILE:CG2	44:BJ:86:MET:HB2	2.38	0.54
50:BP:2:VAL:O	50:BP:64:ALA:HA	2.07	0.54
58:BY:12:G:N2	58:BY:70:G:C4	2.76	0.54
59:BZ:69:GLU:OE2	59:BZ:76:HIS:NE2	2.41	0.54
59:BZ:155:ARG:HG2	59:BZ:165:GLY:C	2.33	0.54
59:BZ:182:MET:HA	59:BZ:182:MET:HE3	1.90	0.54
59:BZ:317:GLU:HA	59:BZ:371:THR:HA	1.90	0.54
3:A2:11:GLU:C	3:A2:13:ALA:N	2.62	0.53
4:A3:1:MET:O	4:A3:3:ARG:N	2.42	0.53
7:A6:27:LYS:O	7:A6:28:ARG:C	2.50	0.53
11:AA:997:G:OP1	28:AU:93:LYS:HD3	2.07	0.53
11:AA:1248:G:P	16:AF:92:PRO:HG3	2.48	0.53
11:AA:1658:C:OP1	15:AE:132:HIS:O	2.26	0.53
11:AA:1837:C:OP1	35:BA:784:C:H4'	2.08	0.53
11:AA:2646:C:H2'	11:AA:2647:U:O4'	2.08	0.53
13:AC:47:LEU:HD12	13:AC:47:LEU:N	2.24	0.53
17:AG:136:ARG:HG2	17:AG:136:ARG:HH11	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AO:20:MET:CE	22:AO:44:LYS:HE3	2.36	0.53
23:AP:64:LYS:C	23:AP:66:GLY:H	2.15	0.53
32:AY:40:GLU:OE1	32:AY:40:GLU:HA	2.08	0.53
32:AY:96:ILE:HD11	32:AY:99:CYS:SG	2.48	0.53
35:BA:436:C:H2'	35:BA:437:U:C6	2.43	0.53
35:BA:778:G:O2'	35:BA:779:C:H5'	2.08	0.53
37:BC:77:ILE:HA	37:BC:84:ILE:HG22	1.90	0.53
39:BE:43:LEU:HD23	39:BE:133:TYR:CD1	2.43	0.53
42:BH:14:ARG:HG3	42:BH:83:ILE:CG2	2.39	0.53
44:BJ:33:GLN:HB2	44:BJ:75:ILE:CD1	2.39	0.53
54:BT:100:ILE:HD12	54:BT:100:ILE:H	1.72	0.53
55:BU:5:ASP:O	55:BU:7:ARG:N	2.41	0.53
56:BW:68:C:H2'	56:BW:69:C:C6	2.43	0.53
5:A4:42:PHE:O	5:A4:43:TYR:O	2.25	0.53
7:A6:22:ALA:O	7:A6:23:THR:O	2.25	0.53
11:AA:618:C:H2'	11:AA:619:G:O4'	2.08	0.53
11:AA:1168:G:O2'	11:AA:1169:G:H5'	2.08	0.53
11:AA:2127:G:H4'	13:AC:37:PHE:CD1	2.43	0.53
11:AA:2132:U:O4	13:AC:5:LYS:HD2	2.08	0.53
11:AA:2889:C:H2'	11:AA:2891:G:O4'	2.08	0.53
12:AB:19:G:H2'	12:AB:19:G:N3	2.23	0.53
14:AD:221:VAL:HG22	14:AD:226:MET:HE3	1.89	0.53
15:AE:107:THR:O	15:AE:190:GLY:HA2	2.08	0.53
16:AF:167:ALA:O	16:AF:168:ARG:C	2.51	0.53
22:AO:43:VAL:HG21	22:AO:52:VAL:CG1	2.38	0.53
24:AQ:41:TRP:CZ2	24:AQ:72:LYS:HE2	2.43	0.53
27:AT:13:ARG:HE	27:AT:13:ARG:N	2.05	0.53
27:AT:91:ARG:O	27:AT:93:ARG:N	2.40	0.53
29:AV:18:LEU:CD2	29:AV:19:LYS:N	2.70	0.53
31:AX:32:PRO:O	31:AX:77:LYS:HD2	2.09	0.53
35:BA:368:U:P	59:BZ:291:ARG:HH11	2.30	0.53
35:BA:434:U:H2'	35:BA:435:C:C6	2.44	0.53
35:BA:592:G:O2'	35:BA:593:G:H5'	2.08	0.53
35:BA:1230:C:O2'	35:BA:1231:G:H5'	2.08	0.53
35:BA:1342:C:H4'	43:BI:125:TYR:HB3	1.91	0.53
38:BD:85:LYS:HD3	38:BD:92:VAL:CG1	2.31	0.53
38:BD:192:GLU:O	38:BD:195:ALA:N	2.41	0.53
43:BI:53:VAL:O	43:BI:54:ASP:HB2	2.08	0.53
46:BL:6:THR:H	46:BL:9:GLN:HE21	1.56	0.53
47:BM:10:PRO:HB3	47:BM:18:ALA:HB1	1.90	0.53
48:BN:4:LYS:HD2	48:BN:7:ILE:CD1	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BQ:5:VAL:HA	51:BQ:59:ILE:O	2.08	0.53
56:BW:54:G:H2'	56:BW:55:U:H6	1.73	0.53
59:BZ:121:LEU:O	59:BZ:125:GLN:HG2	2.09	0.53
59:BZ:210:ILE:HG23	59:BZ:210:ILE:O	2.07	0.53
1:A0:19:LYS:HZ1	1:A0:41:ARG:HH22	1.51	0.53
1:A0:73:GLY:C	1:A0:75:LEU:H	2.17	0.53
5:A4:22:ILE:H	5:A4:22:ILE:CD1	2.17	0.53
11:AA:105:C:O2'	32:AY:2:ARG:HB2	2.08	0.53
11:AA:1170:G:H1	11:AA:1179:C:N4	1.93	0.53
11:AA:1375:C:H2'	11:AA:1376:C:C6	2.42	0.53
11:AA:1835:G:H2'	11:AA:1835:G:N3	2.22	0.53
12:AB:111:G:O2'	12:AB:112:U:H5'	2.08	0.53
14:AD:35:LYS:O	14:AD:36:PRO:C	2.51	0.53
16:AF:7:TYR:CD2	16:AF:16:GLY:HA3	2.33	0.53
16:AF:185:ASP:HA	16:AF:188:ARG:HD3	1.91	0.53
21:AN:13:TRP:O	21:AN:135:PRO:HD2	2.08	0.53
26:AS:49:VAL:HG12	26:AS:50:SER:H	1.72	0.53
27:AT:128:GLU:O	27:AT:129:ARG:C	2.52	0.53
34:B2:6:GLU:C	34:B2:41:PHE:CE2	2.86	0.53
35:BA:455:C:H42	35:BA:476:G:H1	1.56	0.53
35:BA:976:G:H5'	35:BA:1358:U:O2'	2.09	0.53
35:BA:1151:A:O2'	35:BA:1152:A:H8	1.87	0.53
35:BA:1248:A:C2'	35:BA:1249:C:H5'	2.38	0.53
41:BG:127:ALA:HA	41:BG:135:VAL:CG2	2.38	0.53
45:BK:127:LYS:C	45:BK:129:SER:H	2.16	0.53
49:BO:82:ILE:HD11	49:BO:87:ILE:O	2.08	0.53
51:BQ:26:GLN:HG2	51:BQ:37:LYS:HG3	1.89	0.53
53:BS:40:ILE:HG23	53:BS:62:ILE:HD11	1.90	0.53
59:BZ:168:VAL:HG23	59:BZ:209:TYR:OH	2.06	0.53
1:A0:61:ALA:CB	1:A0:81:VAL:HG21	2.37	0.53
11:AA:581:C:OP1	28:AU:33:ARG:HG3	2.08	0.53
11:AA:1177:A:H5'	11:AA:1178:C:C6	2.42	0.53
11:AA:1448:G:H1'	11:AA:1528:A:H62	1.73	0.53
11:AA:2485:G:OP1	24:AQ:46:GLN:NE2	2.41	0.53
11:AA:2523:G:H2'	11:AA:2524:G:H5"	1.89	0.53
13:AC:64:LEU:HD13	13:AC:175:VAL:HA	1.91	0.53
14:AD:85:ASP:CG	14:AD:88:ARG:HH11	2.16	0.53
20:AK:131:UNK:C	20:AK:133:UNK:N	2.71	0.53
21:AN:125:GLY:HA3	21:AN:126:PRO:C	2.33	0.53
32:AY:46:LYS:H	32:AY:62:GLU:CB	2.21	0.53
33:AZ:124:ILE:HG13	33:AZ:124:ILE:O	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:443:C:O2'	35:BA:444:C:H5'	2.08	0.53
35:BA:538:G:OP2	46:BL:115:LYS:HG3	2.09	0.53
36:BB:200:ILE:H	36:BB:200:ILE:CD1	2.19	0.53
41:BG:13:GLN:HE21	41:BG:13:GLN:C	2.16	0.53
41:BG:108:ALA:CB	41:BG:120:ILE:HD13	2.38	0.53
42:BH:20:TYR:CE2	42:BH:75:ARG:HD2	2.42	0.53
45:BK:121:PRO:HB2	45:BK:125:PHE:HB2	1.90	0.53
47:BM:39:ILE:HG22	47:BM:40:ASN:N	2.22	0.53
56:BW:62:C:C2'	56:BW:63:C:H5'	2.39	0.53
58:BY:63:U:O2'	58:BY:64:G:H5'	2.07	0.53
59:BZ:14:VAL:HG23	59:BZ:101:GLY:O	2.08	0.53
3:A2:3:LEU:O	3:A2:3:LEU:HD23	2.09	0.53
9:A8:32:LEU:HB3	9:A8:36:LYS:CD	2.38	0.53
11:AA:53:A:C2'	11:AA:54:G:H5'	2.39	0.53
11:AA:554:U:O2'	11:AA:555:U:H5'	2.09	0.53
11:AA:1188:U:H2'	11:AA:1189:A:H5'	1.90	0.53
11:AA:1505:C:H2'	11:AA:1506:C:H6	1.73	0.53
11:AA:2631:G:N2	15:AE:61:ARG:NH1	2.56	0.53
12:AB:21:G:H2'	12:AB:22:U:O4'	2.07	0.53
15:AE:69:LYS:HE2	15:AE:69:LYS:H	1.69	0.53
16:AF:139:PHE:O	16:AF:140:LEU:C	2.51	0.53
17:AG:161:THR:C	17:AG:163:ALA:N	2.65	0.53
18:AH:153:LYS:N	18:AH:153:LYS:CD	2.69	0.53
21:AN:117:PHE:O	21:AN:120:LEU:HB3	2.08	0.53
26:AS:16:ASN:C	26:AS:18:ILE:N	2.66	0.53
34:B2:32:LYS:HA	34:B2:32:LYS:CE	2.33	0.53
35:BA:376:G:P	50:BP:67:THR:HG21	2.49	0.53
35:BA:424:G:H2'	35:BA:425:G:C8	2.42	0.53
36:BB:75:LYS:HA	36:BB:78:GLN:NE2	2.23	0.53
37:BC:35:GLU:OE1	37:BC:59:ARG:NH1	2.42	0.53
39:BE:82:VAL:HG11	39:BE:137:GLU:HB3	1.89	0.53
45:BK:44:SER:OG	45:BK:47:VAL:HG23	2.09	0.53
47:BM:88:ARG:HG3	47:BM:98:VAL:HG11	1.90	0.53
53:BS:22:LEU:HD12	53:BS:47:HIS:CE1	2.43	0.53
56:BW:58:A:H2'	56:BW:59:A:H5'	1.89	0.53
59:BZ:210:ILE:O	59:BZ:210:ILE:CG2	2.57	0.53
59:BZ:384:LEU:O	59:BZ:400:VAL:HG23	2.09	0.53
5:A4:12:ALA:HB1	5:A4:29:PRO:HA	1.90	0.53
11:AA:660:G:H5'	16:AF:99:TYR:CD2	2.44	0.53
11:AA:1066:U:H5	58:BY:56:U:C5'	2.21	0.53
11:AA:1141:U:C5	21:AN:64:GLY:HA3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1958:C:O2'	11:AA:1959:G:H5'	2.09	0.53
11:AA:2320:A:C2	11:AA:2333:A:C8	2.96	0.53
11:AA:2361:A:C2'	11:AA:2362:G:H5'	2.39	0.53
11:AA:2422:A:C1'	56:BW:77:A:N1	2.68	0.53
11:AA:2750:A:H2'	11:AA:2752:C:H41	1.73	0.53
11:AA:2777:G:H5"	11:AA:2778:A:C5'	2.38	0.53
13:AC:99:ILE:HG22	13:AC:99:ILE:O	2.08	0.53
15:AE:67:PHE:O	15:AE:70:ALA:N	2.42	0.53
16:AF:140:LEU:O	16:AF:143:ALA:HB3	2.09	0.53
18:AH:26:VAL:HG11	18:AH:75:ALA:O	2.08	0.53
21:AN:39:ARG:O	21:AN:41:ASP:N	2.40	0.53
24:AQ:59:ARG:HA	33:AZ:180:VAL:HG23	1.90	0.53
24:AQ:134:ARG:HH11	33:AZ:122:ARG:CZ	2.21	0.53
25:AR:2:ARG:HG2	25:AR:5:LYS:HZ1	1.70	0.53
32:AY:23:ARG:HG2	32:AY:23:ARG:HH11	1.74	0.53
32:AY:41:GLY:O	32:AY:42:VAL:O	2.26	0.53
35:BA:149:A:H2'	35:BA:150:C:H6	1.74	0.53
35:BA:473:G:H2'	35:BA:474:G:H8	1.73	0.53
35:BA:1158:C:O2	35:BA:1158:C:H2'	2.08	0.53
35:BA:1312:G:H2'	35:BA:1313:U:C6	2.44	0.53
35:BA:1469:G:HO2'	35:BA:1470:G:H5'	1.74	0.53
37:BC:52:LEU:HD12	37:BC:55:VAL:CG2	2.38	0.53
38:BD:117:ALA:O	38:BD:121:VAL:HG23	2.09	0.53
38:BD:145:GLU:HA	38:BD:184:LYS:HA	1.91	0.53
43:BI:7:THR:CG2	43:BI:8:GLY:N	2.71	0.53
44:BJ:16:LEU:HD13	44:BJ:17:ASP:N	2.23	0.53
44:BJ:48:THR:HA	44:BJ:62:HIS:CB	2.29	0.53
54:BT:42:GLN:NE2	54:BT:42:GLN:HA	2.23	0.53
59:BZ:236:THR:O	59:BZ:289:LEU:HD12	2.09	0.53
59:BZ:331:HIS:CD2	59:BZ:331:HIS:C	2.87	0.53
1:A0:2:ALA:HB1	56:BV:77:A:H62	1.74	0.53
6:A5:53:ALA:O	6:A5:54:GLY:C	2.52	0.53
7:A6:27:LYS:O	7:A6:29:ASN:N	2.42	0.53
11:AA:139(A):G:H5'	11:AA:140:G:OP2	2.09	0.53
11:AA:307:G:H21	11:AA:330:A:H62	1.56	0.53
11:AA:852:G:O2'	11:AA:853:G:H5'	2.09	0.53
11:AA:1113:U:H2'	11:AA:1114:G:C8	2.44	0.53
11:AA:1240:U:HO2'	11:AA:1241:A:H5'	1.74	0.53
11:AA:1695:G:H1'	14:AD:8:PRO:O	2.09	0.53
11:AA:1799:G:H5'	11:AA:1819:A:H61	1.73	0.53
11:AA:2524:G:C8	11:AA:2524:G:C5'	2.86	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2842:G:C2'	11:AA:2843:G:H5'	2.39	0.53
13:AC:75:LEU:HB3	13:AC:93:TYR:CD2	2.37	0.53
13:AC:153:ILE:O	13:AC:153:ILE:HG22	2.07	0.53
14:AD:79:VAL:HG12	14:AD:113:VAL:HA	1.90	0.53
14:AD:166:GLN:HE21	14:AD:166:GLN:HA	1.74	0.53
17:AG:11:TYR:HA	17:AG:15:VAL:CG2	2.38	0.53
23:AP:110:TYR:CE1	23:AP:111:ARG:NH1	2.77	0.53
24:AQ:61:GLY:O	33:AZ:177:PRO:HB3	2.09	0.53
26:AS:76:LYS:O	26:AS:80:LEU:HD12	2.09	0.53
29:AV:51:VAL:HG12	29:AV:52:VAL:H	1.73	0.53
35:BA:668:G:O4'	49:BO:49:ASP:HB2	2.09	0.53
35:BA:878:G:C5'	42:BH:89:PRO:HG2	2.39	0.53
35:BA:900:A:H2'	35:BA:901:A:C8	2.43	0.53
38:BD:106:TYR:CE1	38:BD:113:SER:HA	2.44	0.53
43:BI:110:GLU:HG2	43:BI:113:LYS:HZ1	1.71	0.53
48:BN:57:ARG:HH11	48:BN:57:ARG:CB	2.20	0.53
49:BO:17:ARG:NH1	49:BO:77:ARG:NH1	2.56	0.53
8:A7:8:ASN:HD22	8:A7:9:ARG:N	2.06	0.53
9:A8:2:PRO:O	9:A8:3:LYS:C	2.51	0.53
11:AA:1052:C:H2'	11:AA:1053:C:C6	2.43	0.53
11:AA:1762:A:O5'	11:AA:1762:A:C8	2.62	0.53
11:AA:2114:A:H2'	11:AA:2167:U:O2'	2.08	0.53
18:AH:37:VAL:HG12	18:AH:38:SER:N	2.24	0.53
18:AH:52:VAL:HG13	18:AH:53:GLU:N	2.22	0.53
18:AH:83:TYR:HB2	18:AH:135:GLY:H	1.72	0.53
21:AN:120:LEU:C	21:AN:120:LEU:HD13	2.34	0.53
25:AR:79:LEU:HD22	25:AR:83:ILE:HB	1.91	0.53
29:AV:89:GLN:OE1	29:AV:89:GLN:HA	2.08	0.53
35:BA:64:G:H4'	35:BA:65:U:C5'	2.39	0.53
35:BA:405:U:H5"	35:BA:406:G:O4'	2.08	0.53
35:BA:412:A:H4'	35:BA:413:G:H8	1.74	0.53
35:BA:966:G:O2'	35:BA:967:C:H6	1.90	0.53
35:BA:1057:G:O2'	35:BA:1058:G:H5'	2.09	0.53
35:BA:1316:G:O3'	48:BN:18:VAL:HG22	2.09	0.53
35:BA:1442(A):G:H5'	35:BA:1442(B):A:O5'	2.09	0.53
36:BB:36:ARG:CZ	36:BB:36:ARG:HA	2.39	0.53
41:BG:26:PHE:CE2	41:BG:30:ILE:HD11	2.43	0.53
44:BJ:30:SER:HB2	44:BJ:80:LYS:HZ2	1.74	0.53
45:BK:21:ILE:HA	45:BK:30:VAL:HG12	1.90	0.53
47:BM:52:GLU:HA	47:BM:55:ARG:HB3	1.90	0.53
47:BM:116:THR:O	47:BM:117:VAL:C	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:31:LEU:H	52:BR:31:LEU:CD2	2.21	0.53
54:BT:16:HIS:O	54:BT:19:SER:HB3	2.08	0.53
54:BT:53:LEU:HD12	54:BT:53:LEU:N	2.24	0.53
56:BW:63:C:H2'	56:BW:64:G:N7	2.24	0.53
59:BZ:253:VAL:HG21	59:BZ:304:LEU:HD22	1.90	0.53
1:A0:55:ARG:NH1	11:AA:2384:G:OP2	2.42	0.53
5:A4:20:ASN:HD22	5:A4:20:ASN:C	2.17	0.53
6:A5:52:TYR:O	6:A5:53:ALA:HB3	2.09	0.53
11:AA:32:C:C5'	11:AA:32:C:H6	2.20	0.53
11:AA:654(M):C:H2'	11:AA:654(N):G:N7	2.23	0.53
11:AA:958:U:C5'	24:AQ:14:ARG:HD3	2.31	0.53
11:AA:1023:U:H6	11:AA:1023:U:H5'	1.74	0.53
11:AA:1543:C:C3'	11:AA:1544:A:C5'	2.86	0.53
11:AA:1783:A:H5'	11:AA:2608:G:H4'	1.91	0.53
11:AA:2261:C:O2'	11:AA:2262:U:H5'	2.09	0.53
11:AA:2463:C:O2'	11:AA:2464:C:H5'	2.08	0.53
11:AA:2580:U:H4'	15:AE:131:ALA:H	1.74	0.53
16:AF:51:THR:HG23	16:AF:92:PRO:HD2	1.90	0.53
21:AN:90:MET:O	21:AN:93:THR:O	2.26	0.53
24:AQ:26:TYR:O	24:AQ:27:VAL:HG23	2.08	0.53
27:AT:29:ARG:NE	27:AT:86:ILE:HG23	2.11	0.53
27:AT:83:ILE:O	27:AT:84:GLN:C	2.52	0.53
27:AT:100:TYR:HB3	27:AT:103:ARG:HH21	1.73	0.53
33:AZ:32:HIS:O	33:AZ:33:LEU:HB2	2.09	0.53
34:B2:26:LEU:HD13	34:B2:77:ARG:HD3	1.90	0.53
35:BA:16:A:O2'	35:BA:17:U:H5'	2.09	0.53
35:BA:130:A:H1'	35:BA:263:A:O2'	2.09	0.53
35:BA:130:A:C8	51:BQ:63:ARG:HG3	2.44	0.53
35:BA:191:G:C4	54:BT:105:SER:HB3	2.44	0.53
36:BB:25:ASN:HB2	36:BB:191:ASP:O	2.07	0.53
38:BD:17:VAL:O	38:BD:17:VAL:HG12	2.09	0.53
38:BD:127:THR:HG22	38:BD:128:VAL:N	2.22	0.53
41:BG:8:GLU:HG3	41:BG:8:GLU:O	2.09	0.53
41:BG:16:LEU:HD13	43:BI:42:ARG:HA	1.90	0.53
45:BK:92:GLU:CG	45:BK:96:ARG:NH1	2.69	0.53
45:BK:115:PRO:C	45:BK:117:ASN:N	2.67	0.53
46:BL:42:THR:HG23	46:BL:42:THR:O	2.08	0.53
47:BM:56:LEU:HD13	47:BM:57:ARG:N	2.24	0.53
51:BQ:48:GLU:O	51:BQ:49:GLU:HB2	2.08	0.53
52:BR:53:ARG:HH21	52:BR:59:SER:HA	1.74	0.53
53:BS:4:SER:C	53:BS:5:LEU:O	2.51	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:26:ASN:HB2	54:BT:71:THR:HG23	1.90	0.53
59:BZ:77:TYR:OH	59:BZ:206:ILE:HG22	2.09	0.53
59:BZ:265:THR:CG2	59:BZ:266:VAL:H	2.04	0.53
5:A4:25:TYR:CE2	17:AG:2:PRO:N	2.77	0.53
11:AA:807:U:O2'	11:AA:808:G:H5'	2.09	0.53
11:AA:1474:C:H5'	11:AA:1475:G:OP2	2.09	0.53
11:AA:2376:A:H2'	11:AA:2377:A:O4'	2.08	0.53
11:AA:2824:C:H2'	11:AA:2825:C:O4'	2.09	0.53
11:AA:2839:G:H5'	25:AR:46:GLY:HA2	1.91	0.53
12:AB:15:A:H1'	12:AB:110:G:C5	2.44	0.53
12:AB:34:U:H5"	12:AB:35:U:OP1	2.09	0.53
14:AD:239:ARG:HH11	14:AD:239:ARG:CG	2.18	0.53
21:AN:34:LEU:O	21:AN:34:LEU:HD13	2.09	0.53
23:AP:78:PRO:HB2	23:AP:111:ARG:NH1	2.24	0.53
24:AQ:55:VAL:O	24:AQ:56:ARG:C	2.52	0.53
27:AT:124:ASP:HB2	27:AT:125:ARG:NH1	2.24	0.53
34:B2:8:ARG:HD3	34:B2:8:ARG:H	1.54	0.53
35:BA:39:G:O2'	35:BA:40:C:H5'	2.09	0.53
35:BA:659:U:C2'	35:BA:660:G:H5'	2.38	0.53
35:BA:1152:A:H5'	44:BJ:70:ARG:HH22	1.73	0.53
36:BB:169:LYS:C	36:BB:171:ALA:H	2.16	0.53
36:BB:200:ILE:HG22	36:BB:201:ILE:N	2.24	0.53
37:BC:16:ARG:HB2	37:BC:16:ARG:HH11	1.73	0.53
39:BE:6:PHE:HD2	39:BE:36:ASP:N	2.07	0.53
43:BI:48:GLU:N	43:BI:49:PRO:HD2	2.23	0.53
43:BI:99:LEU:HD22	43:BI:99:LEU:H	1.74	0.53
44:BJ:45:ARG:NE	48:BN:36:PHE:CD2	2.77	0.53
59:BZ:99:MET:CE	59:BZ:102:ALA:HB2	2.34	0.53
59:BZ:327:GLU:HA	62:BZ:1002:KIR:C10	2.32	0.53
3:A2:63:VAL:C	3:A2:65:ASN:H	2.17	0.52
9:A8:34:TRP:O	9:A8:35:GLN:HB2	2.08	0.52
11:AA:211:A:O2'	11:AA:212:G:H5'	2.09	0.52
11:AA:718:A:H2'	11:AA:719:C:H5'	1.90	0.52
11:AA:1508:A:H4'	11:AA:1509(A):A:C2	2.44	0.52
11:AA:1653:G:O3'	25:AR:3:HIS:HB2	2.09	0.52
11:AA:2240:C:O2'	11:AA:2241:A:H5'	2.08	0.52
11:AA:2262:U:H4'	11:AA:2328:A:C2	2.44	0.52
11:AA:2469:A:H2	11:AA:2481:G:H21	1.56	0.52
13:AC:116:THR:O	13:AC:120:MET:HE3	2.08	0.52
17:AG:115:ARG:HG3	47:BM:7:VAL:CG2	2.39	0.52
18:AH:83:TYR:O	18:AH:84:SER:O	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:103:LEU:CD2	18:AH:131:VAL:HG11	2.39	0.52
28:AU:13:LYS:HD2	28:AU:16:LYS:NZ	2.24	0.52
30:AW:70:TYR:OH	30:AW:72:LYS:HG2	2.08	0.52
31:AX:89:ILE:HG22	31:AX:92:LEU:H	1.73	0.52
32:AY:46:LYS:CG	32:AY:47:LYS:N	2.72	0.52
32:AY:50:ARG:O	32:AY:51:VAL:C	2.52	0.52
35:BA:840:C:H5'	35:BA:841:U:OP1	2.09	0.52
36:BB:71:VAL:HB	36:BB:164:VAL:HG22	1.92	0.52
36:BB:162:ILE:HG22	36:BB:182:ILE:CG2	2.39	0.52
40:BF:67:MET:HB2	40:BF:68:PRO:CD	2.32	0.52
44:BJ:79:ARG:NH1	44:BJ:79:ARG:HG2	2.24	0.52
45:BK:53:SER:O	45:BK:55:LYS:N	2.42	0.52
47:BM:73:GLU:O	47:BM:77:ASN:ND2	2.41	0.52
48:BN:32:SER:O	48:BN:40:CYS:HA	2.08	0.52
7:A6:36:LEU:HD12	7:A6:50:ARG:CZ	2.39	0.52
11:AA:1056:G:H21	11:AA:1104:C:H42	1.57	0.52
11:AA:1609:A:H4'	11:AA:1617:C:OP1	2.09	0.52
11:AA:1722:A:H2	11:AA:1740:G:H2'	1.72	0.52
11:AA:1881:C:H5'	11:AA:1882:C:P	2.49	0.52
11:AA:1882:C:H5'	11:AA:1883:G:OP2	2.08	0.52
12:AB:10:C:O2'	12:AB:11:C:H5'	2.09	0.52
13:AC:43:VAL:HG13	13:AC:214:VAL:HG22	1.90	0.52
13:AC:217:THR:HG22	13:AC:218:MET:HG2	1.91	0.52
16:AF:110:LEU:HD12	16:AF:206:ILE:HD11	1.91	0.52
17:AG:162:THR:O	17:AG:164:GLU:HG3	2.09	0.52
18:AH:41:MET:O	18:AH:42:ARG:CB	2.56	0.52
18:AH:41:MET:SD	18:AH:54:ARG:HA	2.49	0.52
18:AH:50:VAL:HG12	18:AH:51:ARG:N	2.25	0.52
23:AP:7:ARG:HB3	23:AP:8:PRO:CD	2.39	0.52
23:AP:24:GLY:CA	23:AP:33:ARG:CZ	2.86	0.52
24:AQ:109:VAL:HG12	24:AQ:113:GLN:HB2	1.90	0.52
25:AR:7:GLY:O	25:AR:8:ARG:CB	2.56	0.52
27:AT:106:SER:O	27:AT:107:ASP:HB3	2.09	0.52
27:AT:121:ILE:C	27:AT:123:GLN:N	2.65	0.52
32:AY:95:LYS:CE	32:AY:99:CYS:O	2.40	0.52
33:AZ:180:VAL:O	33:AZ:181:GLU:C	2.52	0.52
34:B2:124:LYS:O	34:B2:124:LYS:HD2	2.09	0.52
34:B2:142:GLU:HG3	38:BD:49:ARG:HG2	1.91	0.52
35:BA:22:G:H2'	35:BA:23:C:C6	2.43	0.52
35:BA:499:A:H4'	35:BA:500:G:H5'	1.91	0.52
35:BA:892:A:O2'	35:BA:1415:G:H4'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1308:U:H5'	47:BM:110:ARG:HD2	1.91	0.52
35:BA:1372:U:OP1	43:BI:71:SER:HB3	2.09	0.52
36:BB:160:ASP:O	36:BB:183:PRO:HD2	2.09	0.52
38:BD:67:ILE:O	38:BD:67:ILE:HG23	2.08	0.52
43:BI:85:LEU:HD13	43:BI:92:TYR:CD2	2.43	0.52
47:BM:83:ASP:OD1	47:BM:84:ILE:N	2.43	0.52
56:BW:66:C:H2'	56:BW:67:C:C5	2.44	0.52
2:A1:41:ARG:NH2	11:AA:1365:A:OP1	2.42	0.52
8:A7:10:ARG:HH12	8:A7:14:LYS:HE2	1.74	0.52
9:A8:39:LYS:HE3	11:AA:2365:G:O6	2.09	0.52
11:AA:118:A:N3	11:AA:178:G:H1'	2.25	0.52
11:AA:280:C:N4	11:AA:360:G:H1	2.07	0.52
11:AA:465:G:H2'	11:AA:466:A:C8	2.45	0.52
11:AA:611:C:H2'	11:AA:612:C:C6	2.43	0.52
11:AA:806:C:OP2	23:AP:39:LYS:HD2	2.09	0.52
11:AA:860:U:O2	11:AA:860:U:O4'	2.26	0.52
11:AA:893:C:H2'	11:AA:894:C:C6	2.43	0.52
11:AA:903:C:O2'	11:AA:904:C:H5'	2.09	0.52
11:AA:1020:A:N1	11:AA:1141:U:H1'	2.24	0.52
11:AA:1922:G:O2'	11:AA:1923:U:H5'	2.09	0.52
14:AD:2:ALA:O	14:AD:3:VAL:HB	2.09	0.52
17:AG:44:GLY:HA2	17:AG:88:ILE:CG2	2.33	0.52
17:AG:83:ARG:HH11	17:AG:84:LYS:NZ	2.08	0.52
18:AH:136:ILE:HD12	18:AH:136:ILE:N	2.25	0.52
19:AJ:28:UNK:N	19:AJ:112:UNK:O	2.42	0.52
21:AN:55:VAL:HG22	21:AN:56:ASN:N	2.23	0.52
24:AQ:21:THR:CG2	24:AQ:101:ARG:HB2	2.39	0.52
25:AR:85:PRO:C	25:AR:87:TYR:H	2.17	0.52
26:AS:20:ARG:HH11	26:AS:20:ARG:HG2	1.74	0.52
26:AS:88:ASP:CG	26:AS:89:ARG:N	2.67	0.52
27:AT:35:LYS:CE	27:AT:41:ARG:HG3	2.39	0.52
27:AT:80:SER:CB	27:AT:81:PRO:HD3	2.38	0.52
28:AU:57:PHE:O	28:AU:58:ARG:C	2.52	0.52
28:AU:117:GLN:OE1	28:AU:117:GLN:HA	2.09	0.52
33:AZ:20:ARG:HB2	33:AZ:20:ARG:CZ	2.38	0.52
33:AZ:52:SER:OG	33:AZ:53:ILE:N	2.42	0.52
33:AZ:162:GLU:O	33:AZ:163:LEU:O	2.27	0.52
35:BA:369:C:O2'	35:BA:370:C:H6	1.91	0.52
35:BA:458:C:H2'	35:BA:460:G:C8	2.44	0.52
35:BA:899:C:O5'	35:BA:899:C:H6	1.92	0.52
35:BA:1397:C:O2	35:BA:1397:C:C2'	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:91:PRO:HG2	36:BB:155:LEU:HD23	1.91	0.52
37:BC:73:PRO:C	37:BC:75:VAL:N	2.68	0.52
44:BJ:24:VAL:C	44:BJ:26:ALA:N	2.64	0.52
50:BP:20:VAL:HG21	50:BP:32:TYR:CD1	2.43	0.52
54:BT:74:LYS:HG2	54:BT:75:ASN:H	1.75	0.52
59:BZ:341:GLN:NE2	59:BZ:348:ASP:OD2	2.38	0.52
11:AA:74:A:N3	11:AA:74:A:H2'	2.24	0.52
11:AA:309:G:N3	11:AA:329:G:O2'	2.42	0.52
11:AA:435:C:C2'	11:AA:436:C:H5'	2.39	0.52
11:AA:528:A:C2	11:AA:2043:C:C5'	2.92	0.52
11:AA:1039:G:O6	11:AA:1116:C:N4	2.42	0.52
11:AA:1063:G:N2	20:AK:89:UNK:HA	2.21	0.52
11:AA:1171:G:N7	11:AA:1173:G:H1'	2.24	0.52
11:AA:1683:C:H2'	11:AA:1684:C:C6	2.42	0.52
11:AA:1902:C:HO2'	14:AD:244:ARG:HB2	1.68	0.52
11:AA:1906:G:C8	11:AA:1929:G:H2'	2.44	0.52
11:AA:2067:G:O2'	11:AA:2069:G:H5"	2.09	0.52
12:AB:22:U:O2'	12:AB:23:G:H5'	2.09	0.52
13:AC:94:VAL:CG1	13:AC:95:GLY:H	2.00	0.52
13:AC:131:LEU:O	56:BW:57:C:N4	2.43	0.52
13:AC:171:ILE:HG21	13:AC:196:LEU:HD11	1.90	0.52
15:AE:48:GLN:CD	15:AE:78:LEU:HD13	2.34	0.52
15:AE:82:ARG:HG3	15:AE:83:ASP:H	1.74	0.52
15:AE:93:VAL:C	15:AE:95:ILE:N	2.67	0.52
26:AS:66:ALA:HA	26:AS:69:VAL:CG1	2.39	0.52
27:AT:89:VAL:CG1	27:AT:91:ARG:HE	2.23	0.52
31:AX:28:PHE:CE2	31:AX:92:LEU:HD11	2.45	0.52
31:AX:80:ILE:O	31:AX:80:ILE:HG13	2.10	0.52
33:AZ:149:SER:OG	33:AZ:173:ALA:HA	2.10	0.52
35:BA:408:A:H4'	38:BD:112:VAL:CG1	2.39	0.52
35:BA:442:C:H42	35:BA:492:G:H1	1.58	0.52
35:BA:530:G:H3'	35:BA:531:U:C5'	2.39	0.52
35:BA:600:C:H2'	35:BA:601:C:C6	2.44	0.52
35:BA:769:G:O2'	35:BA:770:C:H5'	2.08	0.52
35:BA:918:A:H2'	35:BA:919:A:H8	1.74	0.52
35:BA:975:A:N6	44:BJ:60:ARG:HH12	2.07	0.52
35:BA:1037:C:O5'	35:BA:1037:C:H6	1.91	0.52
35:BA:1431:C:H2'	35:BA:1432:G:H5'	1.90	0.52
35:BA:1469:G:O2'	35:BA:1470:G:H5'	2.09	0.52
38:BD:59:ARG:HE	38:BD:59:ARG:CA	2.17	0.52
40:BF:10:LEU:HA	40:BF:84:ASN:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:99:LEU:HD22	43:BI:99:LEU:N	2.24	0.52
47:BM:107:ALA:C	47:BM:109:THR:H	2.17	0.52
51:BQ:9:VAL:HG23	51:BQ:11:VAL:HG13	1.92	0.52
52:BR:58:LEU:HD22	52:BR:62:GLU:HB3	1.91	0.52
2:A1:29:GLY:C	2:A1:31:GLY:H	2.17	0.52
11:AA:863:A:O2'	11:AA:864:G:H5'	2.09	0.52
11:AA:1038:C:H2'	11:AA:1039:G:H5"	1.91	0.52
11:AA:1048:A:H8	11:AA:1048:A:OP2	1.93	0.52
11:AA:1208:C:C4	11:AA:1209:G:N7	2.78	0.52
11:AA:1232:G:H2'	11:AA:1233:C:C6	2.44	0.52
11:AA:1761:C:H3'	11:AA:1762:A:C8	2.44	0.52
11:AA:2469:A:O2'	24:AQ:56:ARG:HD2	2.10	0.52
13:AC:15:ASP:HB3	13:AC:18:LYS:HB3	1.91	0.52
13:AC:75:LEU:HD11	13:AC:113:VAL:HA	1.91	0.52
17:AG:60:LEU:O	17:AG:60:LEU:HD13	2.10	0.52
17:AG:133:LEU:HD12	17:AG:133:LEU:O	2.08	0.52
29:AV:57:VAL:HG23	29:AV:99:ILE:CG2	2.40	0.52
35:BA:1139:G:H5'	35:BA:1140:C:OP1	2.09	0.52
35:BA:1288:A:C2	35:BA:1289:A:C4	2.98	0.52
35:BA:1372:U:H5"	43:BI:71:SER:HB3	1.91	0.52
36:BB:72:GLY:HA2	36:BB:165:VAL:CG2	2.38	0.52
36:BB:88:ALA:HB2	36:BB:219:VAL:HG13	1.92	0.52
38:BD:6:GLY:O	38:BD:7:PRO:C	2.53	0.52
38:BD:23:GLY:HA3	38:BD:112:VAL:HG22	1.90	0.52
38:BD:107:ARG:HD2	38:BD:173:TRP:CZ2	2.45	0.52
39:BE:15:ARG:CZ	39:BE:26:PHE:CD2	2.93	0.52
40:BF:72:VAL:HG13	40:BF:73:ASN:N	2.23	0.52
47:BM:34:LEU:HD13	47:BM:41:PRO:HA	1.92	0.52
53:BS:9:VAL:O	53:BS:11:VAL:HG12	2.10	0.52
11:AA:491:G:H2'	11:AA:492:A:H8	1.74	0.52
11:AA:953:A:O2'	11:AA:954:G:H5'	2.09	0.52
11:AA:2101:G:H2'	11:AA:2102:U:C5'	2.31	0.52
11:AA:2121:G:C1'	13:AC:167:LYS:NZ	2.71	0.52
11:AA:2121:G:H4'	56:BW:19:G:OP1	2.09	0.52
11:AA:2189:U:H3'	11:AA:2190:G:H5"	1.91	0.52
13:AC:138:PRO:HD2	56:BW:57:C:C6	2.44	0.52
14:AD:77:ALA:HA	14:AD:97:TYR:HA	1.92	0.52
16:AF:5:ALA:HB2	16:AF:24:LEU:HD11	1.92	0.52
17:AG:16:ARG:C	17:AG:18:GLU:H	2.18	0.52
17:AG:119:GLY:O	17:AG:120:LEU:C	2.52	0.52
18:AH:40:GLU:OE1	18:AH:55:PRO:HG3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AN:72:TYR:CD2	21:AN:90:MET:HG3	2.44	0.52
23:AP:59:LEU:HA	23:AP:61:ARG:CD	2.38	0.52
24:AQ:10:ARG:NH1	24:AQ:10:ARG:CB	2.73	0.52
27:AT:120:ARG:HA	27:AT:123:GLN:HG2	1.90	0.52
34:B2:59:TYR:CD1	34:B2:59:TYR:C	2.87	0.52
35:BA:143:A:H2	35:BA:220:G:O6	1.92	0.52
35:BA:236:G:H2'	35:BA:237:C:H6	1.75	0.52
35:BA:509:A:H2	35:BA:544:G:O4'	1.93	0.52
35:BA:1039:C:C5	35:BA:1040:U:H5	2.28	0.52
35:BA:1189:C:H5"	37:BC:5:ILE:CG2	2.38	0.52
35:BA:1458:G:H2'	35:BA:1459:C:C6	2.45	0.52
36:BB:14:GLY:O	36:BB:15:VAL:CG2	2.50	0.52
36:BB:111:ARG:HG2	36:BB:111:ARG:HH11	1.74	0.52
36:BB:178:ARG:HH22	42:BH:68:ARG:HH12	1.58	0.52
37:BC:150:LYS:HE2	37:BC:152:ILE:HD11	1.91	0.52
40:BF:77:ARG:HG2	40:BF:77:ARG:HH11	1.74	0.52
44:BJ:54:PHE:CG	44:BJ:55:LYS:HE3	2.45	0.52
45:BK:73:MET:SD	45:BK:103:LEU:HD22	2.50	0.52
51:BQ:53:LEU:HD22	51:BQ:82:MET:HE1	1.91	0.52
54:BT:82:SER:O	54:BT:86:ARG:HD3	2.10	0.52
56:BW:52:C:H2'	56:BW:53:G:C8	2.45	0.52
59:BZ:132:VAL:HG11	59:BZ:206:ILE:HD11	1.92	0.52
59:BZ:324:LYS:HG3	59:BZ:364:PRO:CB	2.38	0.52
59:BZ:385:ARG:HG2	59:BZ:399:VAL:HG13	1.90	0.52
1:A0:36:ILE:O	1:A0:36:ILE:HG13	2.09	0.52
10:A9:1:MET:CE	10:A9:10:ILE:HG12	2.39	0.52
11:AA:92:A:C2'	11:AA:93:G:H5'	2.39	0.52
11:AA:527:C:O5'	11:AA:2779:U:H5	1.92	0.52
11:AA:1007:C:H5"	21:AN:35:ARG:HH11	1.73	0.52
11:AA:1270:C:H5"	11:AA:1271:G:O5'	2.10	0.52
11:AA:1316:U:O2'	11:AA:1317:A:H5'	2.10	0.52
11:AA:1947:C:C3'	11:AA:1948:G:C5'	2.86	0.52
12:AB:3:C:N3	12:AB:118:G:N2	2.51	0.52
14:AD:61:LEU:O	14:AD:63:ARG:NH1	2.42	0.52
17:AG:10:LYS:HD2	17:AG:13:GLU:OE2	2.09	0.52
17:AG:71:THR:HB	17:AG:89:GLY:O	2.09	0.52
21:AN:18:ALA:HB2	21:AN:26:LEU:HD22	1.91	0.52
24:AQ:60:ARG:CB	24:AQ:60:ARG:HH11	2.23	0.52
32:AY:96:ILE:HD11	32:AY:99:CYS:CB	2.40	0.52
33:AZ:81:ARG:CZ	33:AZ:81:ARG:HB2	2.40	0.52
33:AZ:165:VAL:HG12	33:AZ:167:PRO:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B2:103:LEU:HB2	34:B2:116:LEU:O	2.10	0.52
35:BA:371:G:N2	35:BA:374:A:N6	2.58	0.52
35:BA:436:C:H5"	38:BD:156:GLU:CD	2.35	0.52
35:BA:719:C:O2'	52:BR:49:LYS:HB3	2.10	0.52
35:BA:1411:C:C2	35:BA:1490:A:H2	2.27	0.52
36:BB:100:GLY:N	36:BB:176:GLU:OE2	2.36	0.52
37:BC:7:PRO:O	37:BC:11:ARG:HG2	2.10	0.52
37:BC:35:GLU:OE2	37:BC:95:THR:HG23	2.10	0.52
38:BD:38:TYR:N	38:BD:38:TYR:CD1	2.77	0.52
41:BG:34:GLY:C	41:BG:36:LYS:H	2.18	0.52
43:BI:43:ALA:HB2	43:BI:74:ILE:HD13	1.91	0.52
50:BP:44:THR:O	50:BP:45:THR:HB	2.08	0.52
6:A5:44:THR:CG2	6:A5:45:VAL:N	2.73	0.52
7:A6:19:ARG:O	7:A6:20:ASN:O	2.26	0.52
11:AA:631:A:H2'	11:AA:632:A:O4'	2.10	0.52
11:AA:963:U:H2'	11:AA:964:C:H6	1.73	0.52
11:AA:1204:A:C2	11:AA:1241:A:N1	2.78	0.52
11:AA:2287:A:C2	11:AA:2346:A:C2	2.98	0.52
11:AA:2787:C:H1'	15:AE:61:ARG:HD3	1.91	0.52
12:AB:91:C:OP1	24:AQ:16:ARG:HG3	2.09	0.52
14:AD:43:ARG:CB	14:AD:54:ARG:HB2	2.39	0.52
15:AE:47:VAL:HG23	15:AE:84:PHE:O	2.10	0.52
18:AH:135:GLY:HA3	18:AH:141:VAL:CG2	2.40	0.52
18:AH:156:ALA:C	18:AH:158:HIS:N	2.62	0.52
23:AP:16:ARG:CG	23:AP:17:LYS:H	2.23	0.52
25:AR:71:GLN:HE21	25:AR:71:GLN:CA	2.23	0.52
35:BA:202:U:C2'	35:BA:203:U:OP1	2.57	0.52
35:BA:460:G:C6	35:BA:470:C:H5"	2.45	0.52
35:BA:957:U:O2	35:BA:959:A:H8	1.93	0.52
37:BC:124:ILE:C	37:BC:126:ARG:H	2.17	0.52
46:BL:79:GLU:C	46:BL:80:HIS:CG	2.88	0.52
59:BZ:182:MET:HE3	59:BZ:188:THR:HB	1.90	0.52
1:A0:19:LYS:CE	1:A0:41:ARG:HH22	2.23	0.52
1:A0:38:VAL:HB	1:A0:59:LEU:HB2	1.91	0.52
2:A1:67:ILE:N	2:A1:68:PRO:CD	2.73	0.52
3:A2:3:LEU:HD23	3:A2:3:LEU:C	2.35	0.52
3:A2:63:VAL:C	3:A2:65:ASN:N	2.67	0.52
4:A3:40:THR:CG2	4:A3:43:ILE:HG12	2.39	0.52
11:AA:26:G:O2'	11:AA:27:G:H5'	2.10	0.52
11:AA:203:C:H3'	11:AA:204:A:H5"	1.90	0.52
11:AA:244:A:C2	11:AA:255:A:C4	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:773:U:H4'	14:AD:47:GLY:HA3	1.92	0.52
11:AA:1502:C:H5'	11:AA:1503:U:OP2	2.10	0.52
11:AA:2300:G:O2'	11:AA:2301:C:H5'	2.09	0.52
11:AA:2833:G:C3'	11:AA:2834:G:H5'	2.39	0.52
12:AB:78:A:H2'	12:AB:79:C:O4'	2.10	0.52
13:AC:175:VAL:HG12	13:AC:175:VAL:O	2.10	0.52
14:AD:35:LYS:HZ2	14:AD:35:LYS:CB	2.19	0.52
14:AD:44:ASN:ND2	14:AD:49:ILE:CG2	2.70	0.52
22:AO:71:ARG:HG3	22:AO:71:ARG:NH1	2.20	0.52
24:AQ:113:GLN:O	24:AQ:116:GLU:N	2.37	0.52
25:AR:51:LEU:HD23	25:AR:70:LEU:HD11	1.91	0.52
29:AV:2:PHE:HB3	29:AV:42:GLY:N	2.25	0.52
29:AV:61:VAL:HG23	29:AV:61:VAL:O	2.09	0.52
34:B2:107:PHE:HA	34:B2:112:TYR:O	2.10	0.52
35:BA:390:C:O3'	50:BP:28:ARG:NH2	2.41	0.52
35:BA:1015:A:H1'	35:BA:1218:C:O2'	2.09	0.52
35:BA:1292:U:H2'	35:BA:1293:G:H8	1.74	0.52
36:BB:238:LEU:O	36:BB:239:VAL:C	2.52	0.52
47:BM:89:GLY:O	47:BM:93:ARG:HD3	2.09	0.52
48:BN:32:SER:HB3	48:BN:41:ARG:HB3	1.92	0.52
5:A4:16:CYS:SG	5:A4:36:CYS:SG	3.07	0.52
5:A4:42:PHE:O	5:A4:42:PHE:CG	2.63	0.52
9:A8:30:ARG:NH2	11:AA:2419:U:O4	2.43	0.52
11:AA:491:G:H2'	11:AA:492:A:C8	2.45	0.52
11:AA:811:U:H3'	23:AP:25:SER:HA	1.92	0.52
11:AA:1058:G:H2'	11:AA:1059:G:H5'	1.91	0.52
11:AA:2025:C:H2'	11:AA:2026:C:C6	2.44	0.52
11:AA:2185:C:H6	11:AA:2185:C:OP2	1.92	0.52
13:AC:32:LEU:HD22	13:AC:220:PRO:HG2	1.91	0.52
13:AC:163:PHE:CD1	13:AC:163:PHE:O	2.63	0.52
14:AD:146:GLU:HG2	14:AD:152:GLY:C	2.35	0.52
15:AE:107:THR:HA	15:AE:163:GLU:O	2.10	0.52
16:AF:24:LEU:O	16:AF:26:ALA:N	2.42	0.52
25:AR:7:GLY:HA3	25:AR:8:ARG:NH2	2.25	0.52
25:AR:34:ILE:HB	25:AR:114:VAL:CG2	2.40	0.52
28:AU:88:ILE:O	28:AU:88:ILE:CG1	2.54	0.52
31:AX:25:LYS:HA	31:AX:81:VAL:O	2.10	0.52
35:BA:22:G:O2'	35:BA:23:C:H5'	2.09	0.52
35:BA:461:A:N7	35:BA:471:G:N7	2.58	0.52
35:BA:1431:C:C2'	35:BA:1432:G:H5'	2.40	0.52
36:BB:172:ILE:H	36:BB:172:ILE:CD1	1.99	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:180:ALA:O	37:BC:181:ASN:HB3	2.09	0.52
49:BO:82:ILE:C	49:BO:82:ILE:CD1	2.82	0.52
51:BQ:99:SER:C	51:BQ:100:LYS:HG3	2.35	0.52
54:BT:48:LYS:O	54:BT:52:ALA:N	2.42	0.52
56:BV:50:G:H1	56:BV:66:C:H42	1.56	0.52
58:BY:15:C:O2	58:BY:15:C:H2'	2.09	0.52
2:A1:45:ASN:HD22	2:A1:45:ASN:C	2.17	0.51
4:A3:40:THR:OG1	4:A3:41:PRO:HD2	2.09	0.51
5:A4:9:LEU:HA	5:A4:26:SER:O	2.11	0.51
9:A8:50:LEU:O	9:A8:51:ALA:CB	2.58	0.51
11:AA:280:C:H42	11:AA:360:G:H1	1.58	0.51
11:AA:409:C:O2'	11:AA:410:G:H5'	2.08	0.51
11:AA:523:C:H2'	11:AA:524:U:H5'	1.91	0.51
11:AA:858:U:O2	11:AA:2268:A:H2'	2.10	0.51
11:AA:1006:C:O2'	11:AA:1007:C:H5'	2.10	0.51
11:AA:1203:G:H3'	11:AA:1204:A:C5'	2.38	0.51
11:AA:1434:A:H2'	11:AA:1435:G:C8	2.45	0.51
11:AA:2802:G:H3'	11:AA:2803:C:H5"	1.92	0.51
16:AF:31:HIS:ND1	23:AP:13:ASN:HB2	2.26	0.51
17:AG:71:THR:HG22	17:AG:89:GLY:HA3	1.91	0.51
22:AO:13:ASN:HD21	22:AO:97:ARG:HB2	1.75	0.51
22:AO:87:ILE:HG22	22:AO:88:ASN:O	2.11	0.51
24:AQ:97:VAL:HG23	24:AQ:97:VAL:O	2.09	0.51
24:AQ:110:THR:HG23	24:AQ:113:GLN:HG3	1.92	0.51
27:AT:90:GLN:O	27:AT:91:ARG:C	2.52	0.51
34:B2:38:LYS:O	34:B2:39:VAL:CG1	2.58	0.51
34:B2:99:THR:CG2	34:B2:100:LEU:N	2.71	0.51
34:B2:99:THR:HB	34:B2:120:ALA:CB	2.39	0.51
35:BA:8:A:O5'	39:BE:101:ILE:HG22	2.10	0.51
35:BA:689:C:H4'	35:BA:705:U:H1'	1.92	0.51
35:BA:797:C:O2'	35:BA:798:G:H5'	2.10	0.51
35:BA:986:A:H1'	53:BS:54:GLY:O	2.09	0.51
36:BB:155:LEU:HD13	36:BB:157:ARG:O	2.09	0.51
37:BC:29:TYR:O	37:BC:29:TYR:HD1	1.93	0.51
40:BF:99:ALA:O	40:BF:100:ASN:HB2	2.09	0.51
44:BJ:35:SER:OG	44:BJ:73:ASP:HB2	2.10	0.51
47:BM:58:GLU:O	47:BM:62:ASN:HB2	2.10	0.51
52:BR:45:SER:O	52:BR:46:GLU:CB	2.53	0.51
54:BT:81:LYS:O	54:BT:85:MET:HG2	2.10	0.51
59:BZ:5:PHE:HB2	59:BZ:275:LYS:HB2	1.92	0.51
11:AA:1069:A:N6	11:AA:1073:A:C2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1092:C:H42	11:AA:1100:C:N4	2.09	0.51
11:AA:2111:C:H1'	11:AA:2118:U:O4'	2.10	0.51
11:AA:2181:G:O2'	11:AA:2182:G:H5'	2.10	0.51
11:AA:2446:G:H2'	11:AA:2447:G:H5"	1.92	0.51
13:AC:10:LEU:HB3	13:AC:220:PRO:HG3	1.92	0.51
14:AD:210:GLY:O	14:AD:212:SER:N	2.38	0.51
17:AG:83:ARG:HH11	17:AG:84:LYS:HZ2	1.58	0.51
17:AG:139:LEU:HA	17:AG:144:ILE:HG23	1.90	0.51
18:AH:83:TYR:HB2	18:AH:134:SER:HA	1.92	0.51
21:AN:120:LEU:O	21:AN:121:LYS:HD2	2.09	0.51
22:AO:36:GLY:HA2	22:AO:106:LEU:HD23	1.92	0.51
23:AP:71:VAL:C	23:AP:73:GLY:N	2.67	0.51
23:AP:122:PRO:HB3	23:AP:141:ALA:CB	2.40	0.51
26:AS:49:VAL:HG11	26:AS:73:LEU:HD23	1.91	0.51
27:AT:12:SER:O	27:AT:13:ARG:NH2	2.42	0.51
30:AW:32:ALA:O	30:AW:33:ARG:C	2.51	0.51
35:BA:385:C:H2'	35:BA:386:C:C6	2.46	0.51
35:BA:646:U:H2'	35:BA:647:C:H6	1.75	0.51
38:BD:3:ARG:O	38:BD:3:ARG:HD3	2.10	0.51
43:BI:65:VAL:HG21	43:BI:73:GLN:HB3	1.92	0.51
47:BM:119:GLY:O	56:BV:30:G:OP1	2.28	0.51
48:BN:12:ARG:NH1	48:BN:12:ARG:CB	2.71	0.51
59:BZ:140:MET:O	59:BZ:141:VAL:C	2.53	0.51
62:BZ:1002:KIR:O30	62:BZ:1002:KIR:H473	2.09	0.51
3:A2:22:GLU:O	3:A2:26:ARG:HB2	2.10	0.51
6:A5:40:LYS:HB2	6:A5:41:PRO:HD2	1.92	0.51
7:A6:15:GLU:C	7:A6:17:LYS:N	2.68	0.51
9:A8:59:LYS:HD3	23:AP:50:ARG:HB3	1.92	0.51
11:AA:538:G:O2'	11:AA:539:G:H5'	2.11	0.51
11:AA:635:C:O2'	11:AA:639:U:H5"	2.11	0.51
11:AA:995:C:O4'	28:AU:57:PHE:HD2	1.93	0.51
11:AA:1571:A:H2'	11:AA:1572:A:C8	2.45	0.51
11:AA:2121:G:C4'	13:AC:167:LYS:HD3	2.40	0.51
11:AA:2464:C:HO2'	11:AA:2465:C:H6	1.57	0.51
12:AB:76:G:H2'	12:AB:77:U:C6	2.45	0.51
13:AC:40:THR:HA	13:AC:177:LYS:HA	1.93	0.51
17:AG:43:LEU:HD11	17:AG:153:ARG:HB2	1.91	0.51
23:AP:130:PHE:HB2	23:AP:135:LEU:HD23	1.90	0.51
25:AR:9:LYS:HG2	25:AR:43:GLU:CD	2.34	0.51
26:AS:16:ASN:O	26:AS:18:ILE:N	2.43	0.51
26:AS:39:ILE:HB	26:AS:49:VAL:HB	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AV:41:GLY:HA3	29:AV:45:THR:OG1	2.10	0.51
32:AY:39:VAL:CG1	32:AY:40:GLU:H	2.18	0.51
35:BA:197:A:O2'	35:BA:198:G:C8	2.64	0.51
35:BA:586:C:O2'	35:BA:878:G:H4'	2.10	0.51
35:BA:875:C:H1'	42:BH:15:ASN:OD1	2.10	0.51
35:BA:1211:U:O2'	35:BA:1213:A:C2	2.62	0.51
42:BH:7:ALA:HB2	42:BH:85:ARG:CD	2.39	0.51
44:BJ:50:ILE:HD13	44:BJ:50:ILE:N	2.01	0.51
47:BM:40:ASN:HD21	47:BM:42:ALA:HB3	1.74	0.51
47:BM:81:LEU:HD13	47:BM:86:CYS:SG	2.49	0.51
2:A1:40:ARG:NH2	11:AA:2232:U:P	2.83	0.51
3:A2:2:LYS:HB2	11:AA:97:C:H5"	1.92	0.51
8:A7:34:ARG:HH11	8:A7:34:ARG:CG	2.21	0.51
11:AA:71:A:H2	31:AX:31:HIS:HE1	1.58	0.51
11:AA:137:C:O2	11:AA:137:C:H2'	2.09	0.51
11:AA:284:U:H2'	11:AA:285:C:C6	2.42	0.51
11:AA:627:A:C6	11:AA:637:A:C8	2.98	0.51
11:AA:1055:G:H2'	11:AA:1056:G:O4'	2.11	0.51
11:AA:1331:A:C2'	11:AA:1332:G:H5"	2.40	0.51
11:AA:2373:G:H2'	11:AA:2374:C:C6	2.46	0.51
11:AA:2457:U:O2'	11:AA:2458:G:H5'	2.10	0.51
11:AA:2742:C:O2'	11:AA:2743:C:H5'	2.10	0.51
13:AC:77:ILE:HG22	13:AC:77:ILE:O	2.10	0.51
14:AD:136:ILE:HG22	14:AD:140:THR:OG1	2.10	0.51
15:AE:107:THR:O	15:AE:108:SER:C	2.53	0.51
16:AF:28:ILE:HD13	16:AF:28:ILE:N	2.19	0.51
21:AN:47:ALA:HB2	21:AN:112:LEU:HD11	1.92	0.51
21:AN:57:ALA:HB2	21:AN:123:TYR:O	2.10	0.51
23:AP:77:ARG:CD	23:AP:78:PRO:HD2	2.24	0.51
24:AQ:136:ALA:C	24:AQ:138:ASP:H	2.19	0.51
25:AR:44:LEU:HD13	25:AR:44:LEU:C	2.36	0.51
25:AR:45:ARG:O	25:AR:46:GLY:C	2.53	0.51
29:AV:5:VAL:HG23	29:AV:37:VAL:HG23	1.93	0.51
35:BA:70:G:H2'	35:BA:71:C:O4'	2.10	0.51
35:BA:557:G:C6	35:BA:558:G:C6	2.99	0.51
35:BA:792:A:HO2'	35:BA:794:A:H8	1.47	0.51
35:BA:927:G:H1	35:BA:1390:U:H3	1.57	0.51
35:BA:1255:G:H3'	35:BA:1279:A:N6	2.25	0.51
35:BA:1282:C:C2'	35:BA:1283:G:H5'	2.39	0.51
36:BB:178:ARG:NH2	36:BB:198:ASP:OD1	2.44	0.51
38:BD:14:ARG:HA	38:BD:39:PRO:CG	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:53:VAL:HG23	43:BI:55:ALA:N	2.26	0.51
44:BJ:40:LEU:HB2	44:BJ:41:PRO:HD2	1.92	0.51
45:BK:21:ILE:HD11	45:BK:98:LEU:HD11	1.91	0.51
49:BO:38:ARG:HG2	49:BO:38:ARG:HH11	1.74	0.51
53:BS:44:MET:N	53:BS:44:MET:SD	2.84	0.51
54:BT:48:LYS:O	54:BT:49:ALA:C	2.53	0.51
59:BZ:168:VAL:CG2	59:BZ:169:PRO:HD2	2.41	0.51
59:BZ:253:VAL:HG23	59:BZ:254:GLU:N	2.25	0.51
59:BZ:272:MET:HE3	59:BZ:286:VAL:HG13	1.92	0.51
7:A6:11:LEU:HD13	7:A6:11:LEU:C	2.35	0.51
9:A8:32:LEU:O	9:A8:33:ASN:O	2.28	0.51
9:A8:34:TRP:CZ3	9:A8:35:GLN:O	2.63	0.51
11:AA:20:C:O2'	11:AA:21:A:H5'	2.11	0.51
11:AA:884:C:H2'	11:AA:885:C:H5'	1.92	0.51
11:AA:1917:U:C2'	11:AA:1918:A:H5'	2.41	0.51
11:AA:2162:G:H4'	11:AA:2172:U:H2'	1.92	0.51
13:AC:214:VAL:CG2	13:AC:224:ILE:HD13	2.41	0.51
14:AD:30:GLU:HG3	14:AD:63:ARG:NH2	2.25	0.51
15:AE:143:ASN:HB2	15:AE:147:PRO:HD2	1.93	0.51
15:AE:201:THR:C	15:AE:202:LYS:HD2	2.36	0.51
23:AP:59:LEU:N	23:AP:61:ARG:HE	2.09	0.51
23:AP:140:ALA:O	23:AP:141:ALA:HB3	2.09	0.51
23:AP:144:GLU:N	23:AP:145:PRO:CD	2.70	0.51
30:AW:17:VAL:O	30:AW:20:VAL:HG22	2.10	0.51
30:AW:47:VAL:HA	30:AW:50:VAL:CG1	2.40	0.51
34:B2:49:GLU:O	34:B2:50:ASP:HB2	2.11	0.51
34:B2:70:ASN:OD1	34:B2:70:ASN:N	2.31	0.51
35:BA:31:G:H1	35:BA:48:C:H5"	1.76	0.51
35:BA:59:A:N3	35:BA:59:A:H2'	2.26	0.51
35:BA:338:A:O2'	35:BA:339:C:H5'	2.11	0.51
35:BA:853:G:O2'	35:BA:854:G:H5'	2.09	0.51
35:BA:938:A:C2	35:BA:1345:U:O4	2.64	0.51
35:BA:1010:G:H2'	35:BA:1011:G:C8	2.42	0.51
35:BA:1153:C:O2'	35:BA:1154:G:H5"	2.09	0.51
36:BB:42:ILE:CD1	36:BB:202:PRO:C	2.84	0.51
38:BD:8:VAL:C	38:BD:10:ARG:N	2.65	0.51
38:BD:13:ARG:O	38:BD:14:ARG:HB3	2.11	0.51
38:BD:89:THR:C	38:BD:91:SER:N	2.68	0.51
41:BG:70:LYS:HG2	41:BG:96:GLN:O	2.11	0.51
43:BI:89:ASN:HB3	43:BI:92:TYR:CE1	2.46	0.51
44:BJ:53:PRO:O	48:BN:41:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:51:ALA:CB	46:BL:53:ARG:HE	2.22	0.51
47:BM:78:ILE:O	47:BM:81:LEU:HB2	2.10	0.51
47:BM:100:GLY:C	47:BM:101:GLN:HG2	2.36	0.51
52:BR:86:VAL:O	52:BR:87:ARG:HB3	2.09	0.51
53:BS:41:VAL:HG12	53:BS:42:PRO:CD	2.37	0.51
59:BZ:209:TYR:CD1	59:BZ:209:TYR:C	2.88	0.51
2:A1:40:ARG:NH2	11:AA:2232:U:OP2	2.43	0.51
3:A2:11:GLU:O	3:A2:13:ALA:N	2.44	0.51
11:AA:271:A:N6	11:AA:271(X):G:H1'	2.25	0.51
11:AA:280:C:H2'	11:AA:281:G:O4'	2.11	0.51
11:AA:363(C):G:H2'	11:AA:363(D):G:O4'	2.09	0.51
11:AA:734:A:O2'	11:AA:1635:G:H5'	2.11	0.51
11:AA:970:C:H2'	11:AA:971:C:H6	1.74	0.51
11:AA:1907:G:O2'	11:AA:1908:C:H5'	2.11	0.51
11:AA:2063:C:O2	11:AA:2450:A:N1	2.44	0.51
12:AB:52:A:O2'	12:AB:53:A:H8	1.93	0.51
13:AC:51:PRO:HB2	13:AC:167:LYS:O	2.11	0.51
15:AE:1:MET:HE2	15:AE:1:MET:H2	1.76	0.51
15:AE:33:VAL:HG23	15:AE:47:VAL:HG13	1.92	0.51
17:AG:29:TRP:HA	17:AG:29:TRP:CE3	2.45	0.51
17:AG:36:LYS:HG2	17:AG:37:VAL:N	2.23	0.51
17:AG:105:LYS:CD	17:AG:142:PRO:HG3	2.30	0.51
18:AH:19:VAL:HG12	18:AH:20:ALA:N	2.14	0.51
21:AN:18:ALA:CB	21:AN:26:LEU:CD2	2.86	0.51
21:AN:48:MET:HE3	21:AN:49:GLY:N	2.25	0.51
22:AO:38:VAL:HG12	22:AO:39:ILE:N	2.25	0.51
23:AP:46:LYS:CB	23:AP:52:GLU:HG2	2.41	0.51
27:AT:27:THR:CG2	27:AT:28:VAL:H	2.13	0.51
29:AV:60:GLU:HG2	29:AV:61:VAL:N	2.24	0.51
35:BA:302:G:N3	35:BA:556:C:H4'	2.25	0.51
35:BA:509:A:H5'	38:BD:54:TYR:CD2	2.39	0.51
35:BA:763:G:H2'	35:BA:764:C:C6	2.44	0.51
35:BA:792:A:H4'	35:BA:793:U:O5'	2.11	0.51
36:BB:95:GLN:HA	36:BB:95:GLN:OE1	2.10	0.51
37:BC:68:VAL:O	37:BC:70:VAL:HG23	2.10	0.51
38:BD:8:VAL:HB	38:BD:21:LEU:HD12	1.92	0.51
46:BL:93:LEU:O	46:BL:94:PRO:O	2.28	0.51
47:BM:59:TYR:O	47:BM:60:VAL:C	2.54	0.51
58:BY:90:ALA:N	59:BZ:273:HIS:H	2.08	0.51
1:A0:41:ARG:NH2	11:AA:2387:U:O2'	2.43	0.51
2:A1:83:GLU:OE1	2:A1:84:GLY:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:28:ARG:NH1	56:BW:67:C:H5”	2.26	0.51
7:A6:28:ARG:CZ	56:BW:68:C:OP2	2.59	0.51
7:A6:30:THR:CG2	7:A6:31:PRO:HD2	2.41	0.51
11:AA:271(F):C:C2’	11:AA:271(G):C:H5’	2.41	0.51
11:AA:467:G:O2’	11:AA:468:G:H5’	2.11	0.51
11:AA:612:C:C2’	11:AA:613:G:C5’	2.77	0.51
11:AA:1025:G:H8	11:AA:1025:G:OP1	1.93	0.51
11:AA:1352:U:O2’	11:AA:1353:A:H5’	2.11	0.51
11:AA:2309:A:C2’	11:AA:2310:A:H5”	2.41	0.51
12:AB:81:G:O6	12:AB:96:U:O2	2.29	0.51
13:AC:22:ILE:HG21	13:AC:189:ILE:HB	1.93	0.51
13:AC:46:LYS:HD2	13:AC:169:GLY:O	2.11	0.51
13:AC:68:LEU:HD11	13:AC:161:ILE:CG2	2.41	0.51
13:AC:83:ILE:HG23	13:AC:95:GLY:CA	2.41	0.51
22:AO:7:TYR:HE1	22:AO:20:MET:CE	2.23	0.51
24:AQ:26:TYR:O	24:AQ:102:VAL:HG21	2.11	0.51
27:AT:31:SER:CB	27:AT:32:TYR:CD1	2.94	0.51
27:AT:41:ARG:HH11	27:AT:42:ILE:H	1.59	0.51
34:B2:54:TYR:CZ	34:B2:78:LYS:HE2	2.46	0.51
34:B2:75:ARG:HD3	34:B2:77:ARG:CG	2.32	0.51
34:B2:92:LYS:HD3	34:B2:98:LEU:HD22	1.93	0.51
34:B2:99:THR:N	34:B2:120:ALA:HB3	2.25	0.51
35:BA:411:A:H62	35:BA:413:G:H21	1.59	0.51
35:BA:1123:A:O2’	44:BJ:38:ILE:HG22	2.11	0.51
35:BA:1477:C:O2’	35:BA:1478:C:H5’	2.09	0.51
36:BB:156:LYS:O	36:BB:157:ARG:HB2	2.10	0.51
43:BI:65:VAL:HG21	43:BI:73:GLN:CG	2.41	0.51
43:BI:99:LEU:H	43:BI:99:LEU:CD2	2.24	0.51
46:BL:43:VAL:CG2	46:BL:93:LEU:HD22	2.41	0.51
47:BM:27:LYS:CE	47:BM:31:LYS:HE3	2.40	0.51
47:BM:79:LYS:HA	47:BM:93:ARG:HH22	1.76	0.51
54:BT:37:SER:O	54:BT:38:LYS:C	2.53	0.51
59:BZ:16:THR:O	59:BZ:16:THR:HG23	2.11	0.51
59:BZ:145:GLU:HG2	59:BZ:149:LEU:CB	2.38	0.51
2:A1:3:LYS:HZ3	2:A1:4:VAL:H	1.57	0.51
4:A3:46:ASN:HD21	11:AA:851:U:H5’	1.76	0.51
11:AA:252:G:OP2	23:AP:50:ARG:NH2	2.44	0.51
11:AA:654(P):C:O2’	11:AA:654(Q):C:H5’	2.10	0.51
11:AA:761:A:C8	11:AA:761:A:C3’	2.94	0.51
11:AA:832:G:O2’	23:AP:52:GLU:HB3	2.10	0.51
11:AA:950:G:H2’	11:AA:951:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1173:G:H5'	11:AA:1174:A:O5'	2.11	0.51
11:AA:1204:A:N1	11:AA:1241:A:H2	2.08	0.51
11:AA:1223:G:H5'	11:AA:1223:G:C8	2.41	0.51
11:AA:1996:C:H4'	11:AA:1997:G:H5'	1.92	0.51
11:AA:2121:G:H2'	11:AA:2122:U:C6	2.46	0.51
14:AD:32:SER:HA	14:AD:36:PRO:HD3	1.93	0.51
18:AH:42:ARG:HG2	18:AH:43:VAL:N	2.25	0.51
23:AP:57:THR:C	23:AP:59:LEU:H	2.18	0.51
23:AP:95:VAL:HG13	23:AP:123:LEU:HD12	1.92	0.51
23:AP:125:VAL:O	23:AP:145:PRO:HD2	2.11	0.51
25:AR:26:LYS:O	25:AR:30:THR:HG22	2.11	0.51
29:AV:38:LEU:HD22	29:AV:52:VAL:CG1	2.41	0.51
35:BA:460:G:C6	35:BA:470:C:C5'	2.94	0.51
35:BA:505:G:H5'	35:BA:534:U:H2'	1.92	0.51
35:BA:710:G:O2'	35:BA:711:G:H5'	2.11	0.51
35:BA:757:U:H2'	35:BA:758:G:O4'	2.11	0.51
35:BA:1189:C:OP1	44:BJ:51:ARG:NH2	2.42	0.51
36:BB:165:VAL:CG2	36:BB:166:ASP:H	2.12	0.51
36:BB:189:ASP:O	36:BB:191:ASP:N	2.44	0.51
38:BD:3:ARG:CG	38:BD:118:ARG:HE	2.12	0.51
41:BG:89:MET:O	41:BG:90:GLU:C	2.53	0.51
43:BI:100:GLY:O	43:BI:102:LEU:N	2.44	0.51
48:BN:59:ALA:O	48:BN:60:SER:HB2	2.10	0.51
53:BS:40:ILE:CD1	53:BS:66:MET:HE3	2.41	0.51
56:BW:65:G:C2'	56:BW:66:C:H5'	2.41	0.51
59:BZ:34:VAL:HG11	59:BZ:199:ILE:HG21	1.92	0.51
59:BZ:290:LEU:O	59:BZ:293:VAL:HG22	2.11	0.51
3:A2:25:VAL:C	3:A2:27:GLU:N	2.68	0.51
4:A3:35:ARG:CD	4:A3:37:LEU:HD21	2.41	0.51
7:A6:18:ARG:CG	7:A6:19:ARG:H	2.22	0.51
11:AA:547:A:O2'	11:AA:548:A:H5'	2.11	0.51
11:AA:1932:A:H2'	11:AA:1933:G:O4'	2.10	0.51
11:AA:2121:G:C1'	13:AC:167:LYS:HZ2	2.24	0.51
11:AA:2474:C:O2	11:AA:2474:C:H2'	2.10	0.51
11:AA:2699:C:O2'	11:AA:2700:C:H5'	2.11	0.51
11:AA:2736:G:O2'	11:AA:2737:G:H5'	2.11	0.51
13:AC:96:GLY:HA3	13:AC:99:ILE:HD11	1.92	0.51
14:AD:48:ARG:HG3	14:AD:48:ARG:HH11	1.76	0.51
14:AD:176:ARG:HG2	14:AD:176:ARG:HH11	1.76	0.51
17:AG:46:ALA:HB3	17:AG:88:ILE:CD1	2.39	0.51
17:AG:58:GLN:O	17:AG:61:ALA:HB3	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AK:72:UNK:O	20:AK:73:UNK:C	2.59	0.51
22:AO:47:ILE:CG2	22:AO:48:PRO:HD2	2.39	0.51
22:AO:86:ILE:O	22:AO:87:ILE:HD13	2.10	0.51
23:AP:125:VAL:HG11	23:AP:138:LEU:HD21	1.93	0.51
27:AT:11:GLU:C	27:AT:13:ARG:H	2.18	0.51
27:AT:28:VAL:O	27:AT:29:ARG:CD	2.59	0.51
27:AT:33:LYS:CE	27:AT:43:GLN:NE2	2.74	0.51
27:AT:89:VAL:HB	27:AT:91:ARG:NE	2.25	0.51
28:AU:79:PHE:CE1	28:AU:83:LEU:HD11	2.46	0.51
35:BA:80:G:C2'	35:BA:81:U:H5'	2.41	0.51
35:BA:724:G:O2'	35:BA:725:G:H5'	2.11	0.51
35:BA:1113:C:O2'	35:BA:1114:C:H5'	2.11	0.51
35:BA:1152:A:H2'	35:BA:1153:C:C6	2.46	0.51
35:BA:1180:A:OP1	43:BI:103:THR:HG23	2.11	0.51
35:BA:1281:U:H4'	35:BA:1282:C:OP2	2.11	0.51
35:BA:1314:C:H2'	35:BA:1315:U:C6	2.45	0.51
37:BC:35:GLU:O	37:BC:36:ASP:C	2.53	0.51
37:BC:76:VAL:HG21	37:BC:103:VAL:CG2	2.41	0.51
38:BD:15:GLU:OE1	38:BD:15:GLU:HA	2.10	0.51
39:BE:36:ASP:O	39:BE:38:GLN:HG2	2.11	0.51
44:BJ:79:ARG:HG2	44:BJ:79:ARG:HH11	1.76	0.51
45:BK:41:THR:HG21	45:BK:71:LYS:O	2.11	0.51
52:BR:47:THR:C	52:BR:83:GLU:HG2	2.35	0.51
53:BS:31:ILE:HG23	53:BS:31:ILE:O	2.10	0.51
54:BT:89:ARG:HH11	54:BT:104:LEU:HD21	1.74	0.51
59:BZ:14:VAL:O	59:BZ:79:HIS:HA	2.11	0.51
7:A6:29:ASN:OD1	56:BW:67:C:O3'	2.29	0.51
9:A8:33:ASN:N	9:A8:36:LYS:HD2	2.25	0.51
11:AA:143(A):C:H4'	31:AX:38:GLU:OE2	2.10	0.51
11:AA:528:A:H2	11:AA:2043:C:H5'	1.75	0.51
11:AA:686:G:H21	11:AA:788:A:H61	1.59	0.51
11:AA:1188:U:C5'	29:AV:79:VAL:HG13	2.41	0.51
11:AA:1363:C:O2'	11:AA:1364:G:H5'	2.11	0.51
11:AA:1712:C:O2'	11:AA:1713:U:H5'	2.11	0.51
11:AA:1719:G:C2'	11:AA:1720:U:H5'	2.40	0.51
11:AA:1784:A:H4'	11:AA:1785:A:O5'	2.10	0.51
11:AA:1796:U:H2'	11:AA:1797:C:C6	2.46	0.51
11:AA:2267:A:H5"	11:AA:2268:A:C5'	2.41	0.51
11:AA:2312:U:OP1	17:AG:74:LYS:HD3	2.10	0.51
11:AA:2464:C:O2'	11:AA:2465:C:O5'	2.28	0.51
11:AA:2787:C:C2	15:AE:61:ARG:HD3	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:17:C:O2'	12:AB:18:G:H5'	2.11	0.51
13:AC:75:LEU:CB	13:AC:93:TYR:HB2	2.41	0.51
14:AD:35:LYS:NZ	14:AD:36:PRO:CD	2.74	0.51
18:AH:15:VAL:HG23	18:AH:16:SER:N	2.25	0.51
29:AV:2:PHE:CE1	29:AV:13:ARG:NH1	2.78	0.51
35:BA:411:A:O2'	35:BA:412:A:H5'	2.11	0.51
35:BA:977:A:C2'	35:BA:977:A:N3	2.73	0.51
35:BA:1060:C:H2'	35:BA:1061:G:H8	1.74	0.51
35:BA:1172:C:O2	35:BA:1172:C:O4'	2.29	0.51
35:BA:1321:C:C3'	35:BA:1322:C:H5"	2.41	0.51
38:BD:24:GLU:O	38:BD:27:TYR:N	2.44	0.51
38:BD:62:GLN:HE21	38:BD:62:GLN:CA	2.13	0.51
40:BF:8:ILE:HG22	40:BF:10:LEU:CD1	2.41	0.51
45:BK:93:GLN:NE2	45:BK:96:ARG:NH2	2.59	0.51
46:BL:50:SER:O	46:BL:51:ALA:HB2	2.11	0.51
48:BN:31:ARG:HG3	48:BN:31:ARG:NH1	2.26	0.51
51:BQ:67:LYS:HA	51:BQ:70:ARG:NH1	2.27	0.51
56:BV:59:A:H4'	56:BV:60:A:OP1	2.11	0.51
58:BY:4:G:C2'	58:BY:5:G:H5'	2.41	0.51
58:BY:16:U:OP2	58:BY:59:G:N1	2.41	0.51
59:BZ:139:ASP:C	59:BZ:140:MET:HE2	2.35	0.51
3:A2:38:GLN:HB3	3:A2:44:LEU:HD13	1.93	0.50
7:A6:11:LEU:O	7:A6:23:THR:HB	2.11	0.50
7:A6:12:GLU:HB2	7:A6:52:VAL:CG1	2.41	0.50
11:AA:662:G:OP1	23:AP:18:ARG:NH1	2.44	0.50
11:AA:1106:G:C2	11:AA:1107:G:H1'	2.46	0.50
11:AA:2027:G:C2'	11:AA:2028:U:H5'	2.41	0.50
11:AA:2312:U:H2'	11:AA:2313:C:C5'	2.39	0.50
11:AA:2359:C:O2'	11:AA:2360:A:H5'	2.10	0.50
11:AA:2657:A:N3	11:AA:2657:A:H5'	2.27	0.50
13:AC:137:LEU:HD12	13:AC:139:ASN:ND2	2.25	0.50
13:AC:189:ILE:O	13:AC:189:ILE:HG22	2.10	0.50
14:AD:35:LYS:HZ2	14:AD:36:PRO:CD	2.24	0.50
15:AE:68:ALA:C	15:AE:70:ALA:N	2.69	0.50
16:AF:132:VAL:HG22	16:AF:133:ASN:N	2.26	0.50
23:AP:11:GLY:O	23:AP:12:ALA:O	2.29	0.50
23:AP:59:LEU:O	23:AP:59:LEU:HD23	2.11	0.50
32:AY:44:ILE:HG22	32:AY:45:VAL:H	1.75	0.50
32:AY:76:CYS:CB	32:AY:77:PRO:HD2	2.41	0.50
34:B2:132:ASP:O	34:B2:134:LYS:N	2.43	0.50
35:BA:189(C):C:H2'	35:BA:189(D):C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:224:C:O2'	35:BA:225:C:H5'	2.11	0.50
42:BH:20:TYR:CE1	42:BH:78:GLN:NE2	2.80	0.50
43:BI:53:VAL:CG1	43:BI:95:LYS:HG2	2.42	0.50
43:BI:86:VAL:O	43:BI:86:VAL:HG22	2.09	0.50
44:BJ:43:ARG:O	44:BJ:67:THR:HG22	2.11	0.50
44:BJ:65:LEU:HD12	48:BN:56:VAL:H	1.76	0.50
49:BO:66:LEU:O	49:BO:69:TYR:HB3	2.10	0.50
52:BR:40:LEU:O	52:BR:42:ARG:N	2.43	0.50
57:BX:15:A:H2'	57:BX:16:U:H6	1.76	0.50
59:BZ:174:SER:OG	59:BZ:177:LEU:HB2	2.11	0.50
59:BZ:193:ASN:OD1	59:BZ:195:TRP:HB2	2.11	0.50
59:BZ:318:ALA:O	59:BZ:369:THR:HA	2.11	0.50
11:AA:363(E):U:C4	11:AA:363(F):A:C2	2.99	0.50
11:AA:548:A:H2'	11:AA:549:G:H5'	1.93	0.50
11:AA:657:U:H2'	11:AA:658:C:C6	2.46	0.50
11:AA:1109:C:C2'	11:AA:1110:G:H5'	2.41	0.50
11:AA:2263:C:H2'	11:AA:2264:C:H6	1.76	0.50
13:AC:25:ALA:O	13:AC:29:VAL:HG22	2.10	0.50
13:AC:79:LYS:NZ	13:AC:119:VAL:HG12	2.26	0.50
18:AH:70:THR:O	18:AH:74:ASN:ND2	2.45	0.50
23:AP:18:ARG:O	23:AP:20:GLY:N	2.44	0.50
23:AP:71:VAL:O	23:AP:72:PRO:C	2.50	0.50
23:AP:83:VAL:HG23	23:AP:105:LEU:HD13	1.92	0.50
26:AS:47:THR:HG22	26:AS:49:VAL:O	2.11	0.50
29:AV:98:GLU:C	29:AV:99:ILE:HD13	2.36	0.50
33:AZ:94:GLU:O	33:AZ:130:PRO:HD3	2.11	0.50
34:B2:24:ILE:HB	34:B2:26:LEU:HD23	1.90	0.50
35:BA:110:C:H2'	35:BA:111:G:O4'	2.11	0.50
35:BA:226:G:C2'	35:BA:227:G:H5'	2.41	0.50
35:BA:666:G:H5'	35:BA:726:C:H1'	1.94	0.50
35:BA:952:U:H2'	35:BA:953:G:C8	2.46	0.50
35:BA:1122:U:C2'	35:BA:1123:A:H5'	2.42	0.50
35:BA:1254:C:OP1	44:BJ:45:ARG:HG3	2.11	0.50
36:BB:101:MET:HB3	36:BB:152:PHE:HE2	1.77	0.50
37:BC:172:ARG:O	37:BC:173:VAL:HG23	2.11	0.50
43:BI:26:VAL:HG13	43:BI:61:ALA:O	2.10	0.50
48:BN:41:ARG:CG	48:BN:42:ILE:N	2.73	0.50
50:BP:48:TRP:O	50:BP:49:LEU:HB2	2.11	0.50
52:BR:40:LEU:C	52:BR:42:ARG:N	2.69	0.50
54:BT:14:LYS:O	54:BT:18:GLN:HB2	2.11	0.50
54:BT:25:ARG:HG3	54:BT:25:ARG:HH11	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BV:60:A:H2'	56:BV:61:U:C5'	2.38	0.50
56:BV:76:C:H2'	56:BV:77:A:O4'	2.10	0.50
1:A0:34:GLY:O	1:A0:35:ASN:C	2.53	0.50
7:A6:33:LYS:O	7:A6:34:LEU:CB	2.59	0.50
11:AA:36:G:H2'	11:AA:37:C:H6	1.77	0.50
11:AA:612:C:O2'	11:AA:613:G:H5"	2.12	0.50
11:AA:2019:A:H4'	28:AU:34:LYS:HD2	1.92	0.50
11:AA:2169:A:O2'	56:BW:20:G:N7	2.38	0.50
11:AA:2206:G:H21	11:AA:2207:G:H5'	1.76	0.50
13:AC:53:ARG:HA	56:BW:63:C:OP1	2.12	0.50
14:AD:10:THR:C	14:AD:11:PRO:O	2.54	0.50
16:AF:155:LEU:CD1	16:AF:176:LEU:HD13	2.41	0.50
23:AP:21:ARG:HH11	23:AP:29:LYS:CG	2.23	0.50
24:AQ:141:GLN:HB3	33:AZ:98:MET:HA	1.93	0.50
25:AR:38:VAL:O	25:AR:39:PRO:C	2.54	0.50
25:AR:71:GLN:HA	25:AR:71:GLN:NE2	2.26	0.50
31:AX:41:ASN:HD22	31:AX:41:ASN:N	2.09	0.50
32:AY:44:ILE:CG2	32:AY:45:VAL:N	2.75	0.50
32:AY:94:LYS:O	32:AY:94:LYS:HG3	2.11	0.50
34:B2:24:ILE:HG13	34:B2:79:LEU:CD2	2.41	0.50
35:BA:431:A:H2'	35:BA:432:A:C8	2.46	0.50
35:BA:1217:C:P	48:BN:9:LYS:HZ2	2.34	0.50
35:BA:1299:A:H2'	35:BA:1299:A:N3	2.26	0.50
35:BA:1369:C:H2'	35:BA:1370:G:H8	1.70	0.50
35:BA:1379:G:O2'	35:BA:1380:U:H5'	2.12	0.50
36:BB:140:HIS:HA	36:BB:143:GLU:OE1	2.12	0.50
39:BE:80:ILE:HD11	39:BE:138:ALA:CA	2.41	0.50
39:BE:110:LEU:O	39:BE:115:VAL:HG23	2.11	0.50
40:BF:10:LEU:O	40:BF:11:ASN:C	2.54	0.50
40:BF:22:GLU:O	40:BF:26:ILE:HG13	2.12	0.50
40:BF:62:TRP:CG	52:BR:35:ARG:NH1	2.80	0.50
47:BM:84:ILE:HG22	47:BM:84:ILE:O	2.10	0.50
54:BT:99:LEU:HB3	54:BT:100:ILE:HD12	1.93	0.50
58:BY:55:U:H2'	58:BY:56:U:H5'	1.93	0.50
59:BZ:345:ARG:HH12	59:BZ:384:LEU:HD21	1.76	0.50
2:A1:13:ILE:HD11	11:AA:396:G:H5'	1.92	0.50
3:A2:65:ASN:C	3:A2:67:LYS:N	2.68	0.50
7:A6:11:LEU:CG	7:A6:51:GLU:HG2	2.40	0.50
10:A9:9:ARG:O	10:A9:10:ILE:C	2.54	0.50
11:AA:613:G:H5'	11:AA:613:G:C8	2.38	0.50
11:AA:956:G:H5"	24:AQ:77:LYS:HE2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:969:U:H2'	11:AA:970:C:C6	2.46	0.50
11:AA:1018:C:H2'	11:AA:1019:U:H6	1.75	0.50
11:AA:1771:C:H1'	11:AA:1786:A:C8	2.47	0.50
11:AA:2074:U:H2'	11:AA:2075:U:C6	2.47	0.50
11:AA:2361:A:H2'	11:AA:2362:G:O4'	2.12	0.50
11:AA:2695:C:H2'	11:AA:2696:U:C6	2.47	0.50
12:AB:62:C:H2'	12:AB:63:G:H8	1.76	0.50
13:AC:40:THR:HG23	13:AC:176:GLY:O	2.12	0.50
13:AC:79:LYS:HG2	13:AC:118:ASP:OD2	2.10	0.50
13:AC:131:LEU:C	56:BW:57:C:N4	2.69	0.50
13:AC:137:LEU:C	13:AC:139:ASN:H	2.18	0.50
14:AD:80:ALA:HB2	14:AD:96:HIS:CD2	2.46	0.50
16:AF:10:PRO:HB3	16:AF:127:GLU:HB3	1.93	0.50
16:AF:192:LEU:C	16:AF:192:LEU:CD2	2.85	0.50
22:AO:52:VAL:C	22:AO:53:LYS:HD2	2.36	0.50
24:AQ:133:ARG:HH11	24:AQ:133:ARG:CG	2.23	0.50
27:AT:43:GLN:OE1	35:BA:346:G:OP1	2.30	0.50
31:AX:35:THR:O	31:AX:39:ILE:HG12	2.11	0.50
31:AX:61:GLY:H	31:AX:75:ASP:CG	2.20	0.50
32:AY:20:TYR:C	32:AY:22:GLY:N	2.70	0.50
33:AZ:70:LEU:HD23	33:AZ:70:LEU:H	1.76	0.50
33:AZ:125:LEU:CG	33:AZ:164:ALA:HB3	2.41	0.50
34:B2:17:LEU:HD23	34:B2:119:LEU:HB3	1.92	0.50
35:BA:272:C:O2'	35:BA:273:A:H5'	2.11	0.50
35:BA:343:U:HO2'	35:BA:344:A:H8	1.58	0.50
35:BA:597:G:H2'	35:BA:598:U:H5'	1.93	0.50
37:BC:68:VAL:HG12	37:BC:70:VAL:CG2	2.41	0.50
37:BC:172:ARG:O	37:BC:173:VAL:CG2	2.59	0.50
39:BE:110:LEU:HD13	39:BE:118:ILE:HG21	1.93	0.50
41:BG:111:ARG:HB3	41:BG:111:ARG:HH11	1.76	0.50
43:BI:9:ARG:HG2	43:BI:14:VAL:HG22	1.92	0.50
54:BT:60:GLU:HA	54:BT:63:ILE:HD12	1.91	0.50
55:BU:3:LYS:HD3	55:BU:14:TRP:CD1	2.46	0.50
55:BU:18:TYR:N	55:BU:18:TYR:CD1	2.79	0.50
58:BY:55:U:H2'	58:BY:56:U:O4'	2.12	0.50
59:BZ:121:LEU:O	59:BZ:124:ARG:HB3	2.11	0.50
59:BZ:314:THR:H	59:BZ:405:GLU:CB	2.24	0.50
1:A0:74:ARG:HH12	12:AB:13:A:H8	1.57	0.50
3:A2:34:GLU:O	3:A2:38:GLN:HG2	2.10	0.50
4:A3:59:VAL:HG12	4:A3:60:GLU:N	2.25	0.50
11:AA:210:C:H2'	11:AA:211:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:335:C:H2'	11:AA:336:C:C6	2.47	0.50
11:AA:662:G:OP1	23:AP:18:ARG:HD2	2.10	0.50
11:AA:1276:A:O2'	25:AR:16:HIS:HE1	1.94	0.50
11:AA:1289:C:H2'	11:AA:1290:C:H6	1.76	0.50
11:AA:1665:A:H2'	11:AA:1666:G:H5'	1.91	0.50
11:AA:1999:C:H5"	11:AA:2723:C:O2'	2.12	0.50
11:AA:2392:A:H5'	11:AA:2392:A:N3	2.27	0.50
11:AA:2523:G:H2'	11:AA:2524:G:C5'	2.42	0.50
11:AA:2892:A:H2'	11:AA:2893:G:O4'	2.10	0.50
13:AC:215:THR:HB	13:AC:221:SER:CA	2.39	0.50
14:AD:218:ARG:HB3	14:AD:219:PRO:HD2	1.93	0.50
14:AD:243:GLY:O	14:AD:244:ARG:HB3	2.12	0.50
17:AG:15:VAL:CG1	17:AG:19:LEU:HD11	2.35	0.50
17:AG:16:ARG:HH21	17:AG:33:ARG:HG2	1.76	0.50
18:AH:44:VAL:CG1	18:AH:45:VAL:H	2.15	0.50
18:AH:54:ARG:HH11	18:AH:54:ARG:HG2	1.77	0.50
18:AH:83:TYR:O	18:AH:84:SER:C	2.54	0.50
21:AN:118:LYS:C	21:AN:120:LEU:H	2.18	0.50
22:AO:26:LYS:HD2	22:AO:37:ASP:CG	2.36	0.50
24:AQ:35:VAL:HG22	24:AQ:36:ALA:N	2.25	0.50
25:AR:79:LEU:HD12	25:AR:80:PHE:CD1	2.47	0.50
26:AS:96:GLY:O	26:AS:98:VAL:N	2.33	0.50
29:AV:34:GLU:O	29:AV:36:PRO:CD	2.60	0.50
32:AY:17:SER:HB2	32:AY:71:LYS:HD2	1.93	0.50
33:AZ:15:PRO:C	33:AZ:17:ALA:H	2.19	0.50
35:BA:158:G:C2'	35:BA:159:G:H5'	2.42	0.50
35:BA:167:G:O2'	35:BA:168:G:H5'	2.12	0.50
35:BA:407:G:N2	35:BA:436:C:H1'	2.27	0.50
35:BA:660:G:OP2	49:BO:5:LYS:HD3	2.10	0.50
35:BA:663:A:O2'	35:BA:664:G:H5'	2.11	0.50
35:BA:1148:U:H4'	43:BI:14:VAL:HG11	1.93	0.50
35:BA:1157:A:H1'	35:BA:1181:G:H21	1.69	0.50
35:BA:1179:A:H2'	35:BA:1180:A:O4'	2.11	0.50
35:BA:1490:A:H2'	35:BA:1491:G:H5'	1.93	0.50
36:BB:69:LEU:HD23	36:BB:159:PRO:HG2	1.93	0.50
36:BB:69:LEU:HD22	36:BB:91:PRO:HB2	1.94	0.50
38:BD:110:PHE:N	38:BD:110:PHE:HD1	2.08	0.50
39:BE:12:LEU:HD11	39:BE:31:LEU:HB3	1.93	0.50
40:BF:8:ILE:HG22	40:BF:10:LEU:HD11	1.92	0.50
43:BI:43:ALA:C	43:BI:45:ALA:N	2.70	0.50
47:BM:99:ARG:O	47:BM:100:GLY:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:43:LEU:HD11	49:BO:53:HIS:HA	1.93	0.50
53:BS:22:LEU:O	53:BS:22:LEU:HD13	2.11	0.50
1:A0:19:LYS:HZ1	1:A0:41:ARG:HH12	1.60	0.50
2:A1:13:ILE:HD13	2:A1:13:ILE:N	2.26	0.50
11:AA:142:A:H5'	11:AA:142(A):C:OP2	2.11	0.50
11:AA:176:G:C2'	11:AA:177:G:H5'	2.42	0.50
11:AA:181:A:H5'	11:AA:181:A:C8	2.41	0.50
11:AA:237:C:O2'	11:AA:238:C:H5'	2.12	0.50
11:AA:271(X):G:O3'	11:AA:272(D):G:H4'	2.12	0.50
11:AA:308:G:H2'	11:AA:309:G:O4'	2.12	0.50
11:AA:493:G:H2'	11:AA:494:G:O4'	2.11	0.50
11:AA:795:C:H2'	11:AA:796:C:C6	2.46	0.50
11:AA:824:A:H1'	11:AA:2358:G:N7	2.27	0.50
11:AA:904:C:H2'	11:AA:905:U:H6	1.77	0.50
11:AA:2312:U:C2'	11:AA:2313:C:H5'	2.39	0.50
11:AA:2313:C:H2'	11:AA:2314:C:H6	1.76	0.50
11:AA:2533:A:H2'	11:AA:2534:A:O4'	2.12	0.50
11:AA:2692:C:H4'	11:AA:2870:C:O2	2.11	0.50
13:AC:6:ARG:NH1	13:AC:34:THR:HB	2.25	0.50
13:AC:58:VAL:HG22	13:AC:201:PRO:CD	2.41	0.50
13:AC:163:PHE:CE2	13:AC:195:ALA:HB1	2.46	0.50
13:AC:225:ASN:OD1	13:AC:226:PRO:HD2	2.12	0.50
16:AF:39:TRP:CB	16:AF:101:LEU:HD22	2.40	0.50
16:AF:118:ALA:O	16:AF:121:GLY:N	2.44	0.50
16:AF:170:LEU:HD12	16:AF:172:TRP:CE2	2.46	0.50
17:AG:161:THR:C	17:AG:163:ALA:H	2.20	0.50
18:AH:103:LEU:HD21	18:AH:131:VAL:HG11	1.94	0.50
21:AN:82:LEU:C	21:AN:82:LEU:HD12	2.37	0.50
23:AP:35:HIS:O	23:AP:36:LYS:O	2.29	0.50
25:AR:7:GLY:CA	25:AR:8:ARG:CZ	2.90	0.50
29:AV:19:LYS:HG3	29:AV:20:LEU:O	2.11	0.50
29:AV:19:LYS:HZ1	29:AV:20:LEU:H	1.58	0.50
31:AX:30:VAL:HG11	31:AX:39:ILE:HD12	1.92	0.50
35:BA:71:C:O5'	35:BA:71:C:H6	1.94	0.50
35:BA:977:A:O2'	35:BA:978:A:H5'	2.11	0.50
35:BA:1128:C:O2'	35:BA:1130:A:N7	2.44	0.50
35:BA:1216:G:O2'	35:BA:1217:C:H5'	2.12	0.50
35:BA:1292:U:OP2	41:BG:41:ARG:NH2	2.44	0.50
37:BC:66:VAL:O	37:BC:66:VAL:CG1	2.57	0.50
38:BD:114:ARG:HA	38:BD:117:ALA:HB3	1.92	0.50
39:BE:147:ASP:HA	39:BE:150:ARG:NH1	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:27:LEU:C	46:BL:29:GLY:N	2.67	0.50
49:BO:39:LEU:O	49:BO:42:HIS:HB3	2.12	0.50
52:BR:40:LEU:C	52:BR:42:ARG:H	2.20	0.50
59:BZ:85:HIS:C	59:BZ:87:ASP:H	2.20	0.50
11:AA:221:A:N6	11:AA:265:A:C8	2.79	0.50
11:AA:538:G:OP1	21:AN:5:VAL:HG21	2.12	0.50
11:AA:832:G:H21	23:AP:53:GLY:HA2	1.77	0.50
11:AA:926:A:H5'	11:AA:926:A:C8	2.39	0.50
11:AA:1141:U:H2'	21:AN:63:THR:HG22	1.93	0.50
11:AA:1190:G:OP1	23:AP:32:THR:OG1	2.26	0.50
11:AA:1367:A:C2'	11:AA:1368:G:H5'	2.38	0.50
11:AA:2019:A:C4'	28:AU:34:LYS:HD2	2.42	0.50
11:AA:2121:G:H1	11:AA:2176:A:N6	2.09	0.50
12:AB:65:C:C2'	12:AB:66:A:H5'	2.42	0.50
12:AB:87:G:H3'	12:AB:88:C:C5'	2.42	0.50
13:AC:131:LEU:O	13:AC:132:GLY:C	2.55	0.50
15:AE:4:ILE:HG12	15:AE:5:LEU:N	2.26	0.50
17:AG:140:ILE:HD12	17:AG:141:PHE:N	2.27	0.50
17:AG:181:ARG:O	17:AG:182:LYS:OXT	2.30	0.50
21:AN:104:LYS:HB2	21:AN:117:PHE:CE1	2.46	0.50
23:AP:95:VAL:HG23	23:AP:125:VAL:HG23	1.92	0.50
24:AQ:60:ARG:NH1	24:AQ:60:ARG:CB	2.75	0.50
25:AR:116:LEU:O	25:AR:117:VAL:O	2.29	0.50
26:AS:36:TYR:HD1	26:AS:36:TYR:H	1.60	0.50
27:AT:32:TYR:HB3	27:AT:81:PRO:CB	2.41	0.50
35:BA:408:A:H5'	38:BD:116:GLN:HB2	1.93	0.50
35:BA:742:G:H5"	49:BO:58:MET:CE	2.41	0.50
35:BA:1126:U:O2	35:BA:1126:U:H2'	2.10	0.50
36:BB:12:GLU:O	36:BB:14:GLY:N	2.45	0.50
38:BD:70:ILE:HG23	38:BD:74:GLN:CB	2.42	0.50
38:BD:148:VAL:CG1	38:BD:149:ALA:N	2.69	0.50
44:BJ:94:VAL:HG12	44:BJ:95:GLU:N	2.26	0.50
46:BL:37:CYS:O	46:BL:80:HIS:HA	2.11	0.50
47:BM:120:LYS:HE3	47:BM:120:LYS:CA	2.41	0.50
51:BQ:45:HIS:CB	51:BQ:65:ILE:HD12	2.42	0.50
58:BY:18:G:O2'	58:BY:19:A:OP1	2.26	0.50
59:BZ:277:LEU:HD12	59:BZ:279:GLU:H	1.77	0.50
6:A5:40:LYS:HE2	6:A5:46:CYS:HB3	1.94	0.50
9:A8:4:MET:HE2	11:AA:592:G:N3	2.26	0.50
9:A8:13:ARG:HD2	23:AP:61:ARG:CD	2.37	0.50
9:A8:14:VAL:HG21	9:A8:22:VAL:HG13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:A9:2:LYS:NZ	11:AA:2526:G:O2'	2.41	0.50
11:AA:556:G:H2'	11:AA:557:U:H6	1.75	0.50
11:AA:958:U:O4	24:AQ:17:LEU:HG	2.12	0.50
11:AA:1462:C:H2'	11:AA:1463:C:O4'	2.12	0.50
11:AA:1528:A:H2	11:AA:1542:A:H2	1.59	0.50
11:AA:2366:A:H2'	11:AA:2367:G:O4'	2.11	0.50
14:AD:166:GLN:HA	14:AD:166:GLN:NE2	2.27	0.50
14:AD:181:GLU:HG3	14:AD:272:ALA:O	2.12	0.50
15:AE:52:LEU:CD1	27:AT:1:MET:HE3	2.31	0.50
17:AG:32:PRO:HG3	17:AG:168:GLU:HB3	1.94	0.50
17:AG:172:LEU:HD23	17:AG:172:LEU:O	2.11	0.50
21:AN:119:ARG:HG3	21:AN:119:ARG:NH1	2.25	0.50
23:AP:29:LYS:HD2	23:AP:29:LYS:N	2.26	0.50
25:AR:28:LEU:HD21	25:AR:116:LEU:CD2	2.41	0.50
28:AU:88:ILE:C	28:AU:90:VAL:N	2.52	0.50
29:AV:2:PHE:O	29:AV:41:GLY:HA2	2.12	0.50
32:AY:59:GLY:C	32:AY:60:PHE:HD1	2.19	0.50
34:B2:144:LEU:CD1	39:BE:52:PRO:HG3	2.42	0.50
35:BA:112:G:O2'	35:BA:113:G:H5'	2.12	0.50
35:BA:297:G:H4'	35:BA:557:G:H4'	1.93	0.50
35:BA:518:C:O2'	35:BA:530:G:N2	2.45	0.50
35:BA:1060:C:O2'	44:BJ:56:HIS:CD2	2.64	0.50
35:BA:1276:G:H2'	35:BA:1277:C:O4'	2.12	0.50
35:BA:1385:G:O2'	35:BA:1386:G:H5'	2.11	0.50
36:BB:42:ILE:HD13	36:BB:203:GLY:HA2	1.93	0.50
36:BB:77:ALA:HA	36:BB:80:ILE:HD13	1.94	0.50
36:BB:142:LEU:HD23	36:BB:142:LEU:C	2.37	0.50
38:BD:190:ASP:CG	38:BD:191:ARG:N	2.70	0.50
39:BE:11:ILE:HG13	39:BE:31:LEU:HD12	1.92	0.50
39:BE:36:ASP:OD1	39:BE:38:GLN:HB2	2.11	0.50
41:BG:38:LEU:HD12	41:BG:41:ARG:HD2	1.94	0.50
42:BH:29:SER:HB3	42:BH:32:LYS:HD2	1.94	0.50
46:BL:24:VAL:HG13	46:BL:98:TYR:HE2	1.74	0.50
52:BR:59:SER:O	52:BR:60:ALA:C	2.55	0.50
56:BV:62:C:O2'	56:BV:63:C:H5'	2.11	0.50
58:BY:73:U:H5"	58:BY:74:C:C5	2.43	0.50
59:BZ:185:ASN:ND2	59:BZ:187:LYS:H	2.09	0.50
59:BZ:288:LEU:HD22	59:BZ:304:LEU:CD1	2.33	0.50
5:A4:31:ILE:O	5:A4:31:ILE:HG22	2.10	0.50
7:A6:11:LEU:CD2	7:A6:12:GLU:N	2.65	0.50
7:A6:19:ARG:CG	7:A6:20:ASN:N	2.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:45:LYS:HG2	11:AA:2371:G:H4'	1.94	0.50
11:AA:10:G:N2	11:AA:2895:U:H3	2.09	0.50
11:AA:476:G:H4'	11:AA:502:A:N1	2.27	0.50
11:AA:621:A:C2'	11:AA:622:G:H5'	2.42	0.50
11:AA:990:A:C6	11:AA:1186:G:H1'	2.46	0.50
11:AA:1290:C:H2'	11:AA:1291:C:H6	1.75	0.50
11:AA:1373:A:C2	11:AA:1374:G:H1'	2.46	0.50
11:AA:1788:C:O2'	11:AA:1789:A:H5'	2.11	0.50
11:AA:2292:C:H4'	11:AA:2375:G:H4'	1.93	0.50
11:AA:2340:G:O2'	11:AA:2341:G:H5'	2.11	0.50
11:AA:2467:C:O2'	11:AA:2468:G:H5'	2.11	0.50
11:AA:2781:A:H5'	11:AA:2782:G:H5'	1.92	0.50
13:AC:137:LEU:N	56:BW:57:C:N4	2.60	0.50
15:AE:116:VAL:CG2	15:AE:122:PHE:CD2	2.95	0.50
17:AG:71:THR:N	17:AG:89:GLY:O	2.43	0.50
17:AG:113:ARG:HD3	47:BM:3:ARG:NH1	2.27	0.50
23:AP:5:ASP:OD1	23:AP:6:LEU:HD23	2.11	0.50
23:AP:57:THR:O	23:AP:60:MET:HG3	2.11	0.50
23:AP:85:LEU:HA	23:AP:88:LEU:HB3	1.93	0.50
23:AP:107:LYS:C	23:AP:109:GLY:H	2.20	0.50
25:AR:42:LYS:O	25:AR:45:ARG:CG	2.60	0.50
27:AT:27:THR:O	27:AT:28:VAL:CG2	2.59	0.50
27:AT:133:GLU:O	27:AT:133:GLU:HG2	2.11	0.50
30:AW:4:LYS:HG2	30:AW:5:ALA:N	2.27	0.50
32:AY:77:PRO:O	32:AY:78:ALA:HB2	2.12	0.50
35:BA:184:G:H2'	35:BA:185:A:H8	1.76	0.50
35:BA:620:C:H2'	35:BA:621:A:O4'	2.12	0.50
35:BA:1128:C:C5	35:BA:1139:G:H2'	2.47	0.50
35:BA:1264:C:C2'	35:BA:1265:G:H5'	2.42	0.50
36:BB:47:THR:CG2	36:BB:51:LEU:HD11	2.41	0.50
36:BB:74:LYS:O	36:BB:76:GLN:N	2.44	0.50
36:BB:96:ARG:O	36:BB:97:TRP:C	2.54	0.50
37:BC:53:ALA:HB2	37:BC:115:LEU:HG	1.93	0.50
37:BC:76:VAL:HG21	37:BC:103:VAL:HG21	1.94	0.50
40:BF:10:LEU:HD11	40:BF:61:LEU:HD12	1.93	0.50
41:BG:22:LEU:HD22	41:BG:62:PHE:CE2	2.44	0.50
53:BS:20:LEU:O	53:BS:23:ASN:HB3	2.11	0.50
54:BT:93:GLU:HG2	54:BT:93:GLU:O	2.12	0.50
58:BY:67:U:H2'	58:BY:68:U:H5"	1.92	0.50
59:BZ:131:ILE:O	59:BZ:168:VAL:HG21	2.12	0.50
1:A0:34:GLY:HA3	11:AA:2353:G:H1'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:53:LEU:O	3:A2:57:ILE:HG12	2.12	0.49
9:A8:62:LEU:HB3	11:AA:242:G:H5'	1.94	0.49
11:AA:146:G:H5'	11:AA:146:G:H8	1.76	0.49
11:AA:225:A:O2'	11:AA:257:A:H4'	2.12	0.49
11:AA:234:C:H2'	11:AA:235:U:C6	2.46	0.49
11:AA:270:A:C2'	11:AA:271:A:H5'	2.42	0.49
11:AA:330:A:H2	11:AA:1210:A:H2'	1.76	0.49
11:AA:523:C:O2'	11:AA:524:U:H5'	2.11	0.49
11:AA:868:U:C4	11:AA:869:G:N7	2.80	0.49
14:AD:35:LYS:HB3	14:AD:35:LYS:NZ	2.21	0.49
15:AE:82:ARG:O	15:AE:83:ASP:C	2.55	0.49
16:AF:115:ALA:O	16:AF:118:ALA:HB3	2.12	0.49
17:AG:115:ARG:HG3	47:BM:7:VAL:HG21	1.94	0.49
18:AH:130:ARG:HB3	18:AH:130:ARG:HH11	1.77	0.49
20:AK:99:UNK:O	20:AK:100:UNK:O	2.29	0.49
21:AN:63:THR:O	21:AN:64:GLY:O	2.30	0.49
22:AO:31:LYS:HB3	22:AO:32:TYR:CE1	2.47	0.49
23:AP:97:PRO:O	23:AP:98:GLU:CB	2.57	0.49
25:AR:101:ALA:O	25:AR:102:GLU:O	2.29	0.49
35:BA:106:C:O2	35:BA:379:C:H4'	2.11	0.49
35:BA:945:G:C2	35:BA:946:A:C8	2.99	0.49
35:BA:1248:A:C5	35:BA:1249:C:C5	3.00	0.49
35:BA:1284:C:C6	35:BA:1285:A:N7	2.80	0.49
35:BA:1492:A:C1'	35:BA:1493:A:OP1	2.59	0.49
35:BA:1498:U:C4	57:BX:16:U:H5"	2.47	0.49
40:BF:68:PRO:HG2	40:BF:71:ARG:HB2	1.94	0.49
41:BG:79:ARG:HG3	41:BG:83:ALA:C	2.37	0.49
42:BH:30:ARG:HB3	42:BH:30:ARG:CZ	2.42	0.49
45:BK:116:HIS:O	45:BK:117:ASN:HB2	2.11	0.49
46:BL:86:ARG:HB2	46:BL:101:VAL:CG2	2.42	0.49
59:BZ:75:ARG:NH2	59:BZ:212:THR:N	2.59	0.49
59:BZ:322:ILE:CD1	59:BZ:362:VAL:HG11	2.38	0.49
59:BZ:324:LYS:HA	59:BZ:364:PRO:HB3	1.93	0.49
9:A8:61:LEU:HD12	9:A8:61:LEU:N	1.99	0.49
11:AA:394:A:C2'	11:AA:395:U:H5'	2.42	0.49
11:AA:541:C:O2'	11:AA:542:C:H5'	2.11	0.49
11:AA:549:G:O2'	11:AA:551:G:H5'	2.12	0.49
11:AA:654(O):G:H2'	11:AA:654(P):C:C5	2.47	0.49
11:AA:675:A:OP1	16:AF:63:LYS:HE2	2.12	0.49
11:AA:1232:G:H2'	11:AA:1233:C:H6	1.77	0.49
11:AA:1314:C:H5'	11:AA:1314:C:C6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1718:G:O2'	11:AA:1719:G:H5'	2.11	0.49
11:AA:1902:C:H5'	14:AD:246:PRO:HD3	1.94	0.49
11:AA:2068:U:C2	11:AA:2430:A:H2	2.29	0.49
11:AA:2377:A:H2'	11:AA:2378:A:H8	1.75	0.49
11:AA:2413:G:H21	23:AP:70:GLN:HE22	1.60	0.49
13:AC:51:PRO:HG3	13:AC:168:THR:C	2.37	0.49
13:AC:137:LEU:HD13	13:AC:138:PRO:N	2.27	0.49
15:AE:28:ALA:O	15:AE:29:GLY:O	2.29	0.49
15:AE:97:LYS:O	15:AE:98:PRO:C	2.53	0.49
16:AF:110:LEU:HD21	16:AF:181:LEU:HG	1.93	0.49
16:AF:124:LEU:HD12	16:AF:125:LEU:N	2.26	0.49
18:AH:42:ARG:NH1	18:AH:42:ARG:HB2	2.27	0.49
22:AO:104:ARG:NE	27:AT:33:LYS:CE	2.75	0.49
27:AT:32:TYR:CD2	27:AT:81:PRO:CB	2.94	0.49
32:AY:12:THR:HG22	32:AY:75:ILE:CG2	2.42	0.49
33:AZ:146:ILE:HG13	33:AZ:147:GLY:H	1.76	0.49
33:AZ:149:SER:HB2	33:AZ:172:ALA:O	2.12	0.49
35:BA:56:U:H2'	35:BA:57:G:C8	2.47	0.49
35:BA:963:G:H21	44:BJ:55:LYS:HD3	1.77	0.49
35:BA:1509:C:O2'	35:BA:1510:U:H5'	2.11	0.49
40:BF:39:LYS:HB2	40:BF:64:GLN:HB3	1.93	0.49
41:BG:67:GLU:C	41:BG:69:VAL:N	2.68	0.49
43:BI:47:LEU:N	43:BI:47:LEU:CD1	2.75	0.49
48:BN:12:ARG:NH1	48:BN:14:PRO:CG	2.62	0.49
52:BR:33:ASP:O	52:BR:36:ASN:OD1	2.29	0.49
59:BZ:324:LYS:O	59:BZ:325:LYS:C	2.55	0.49
1:A0:27:GLU:CB	1:A0:68:GLU:HA	2.39	0.49
1:A0:50:ASN:HD22	1:A0:63:VAL:HG21	1.77	0.49
11:AA:2146:C:H4'	11:AA:2147:G:N7	2.26	0.49
11:AA:2795:G:N7	11:AA:2801(A):A:H2	2.09	0.49
13:AC:64:LEU:CD1	13:AC:175:VAL:HA	2.43	0.49
13:AC:119:VAL:O	13:AC:119:VAL:HG23	2.11	0.49
13:AC:155:GLU:OE1	13:AC:160:ARG:HD3	2.11	0.49
13:AC:172:HIS:O	13:AC:173:ALA:CB	2.60	0.49
14:AD:4:LYS:HB2	14:AD:18:VAL:HG13	1.94	0.49
14:AD:71:ASP:CB	14:AD:103:ARG:HH22	2.23	0.49
14:AD:159:ALA:HB1	14:AD:198:ASN:O	2.12	0.49
18:AH:62:LYS:O	18:AH:65:HIS:HB3	2.13	0.49
21:AN:99:LEU:O	21:AN:99:LEU:HD13	2.12	0.49
25:AR:20:LEU:HD21	25:AR:40:LYS:HD3	1.94	0.49
30:AW:37:ARG:NH1	30:AW:37:ARG:CG	2.68	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B2:38:LYS:C	34:B2:39:VAL:HG13	2.37	0.49
35:BA:928:G:O2'	35:BA:929:G:H5'	2.13	0.49
35:BA:1019:C:O2'	35:BA:1020:U:H5'	2.12	0.49
35:BA:1142:G:H2'	35:BA:1143:G:H5'	1.94	0.49
36:BB:21:ARG:HH21	36:BB:38:GLY:CA	2.25	0.49
36:BB:29:ALA:O	36:BB:32:ILE:HG22	2.11	0.49
38:BD:57:ARG:NH2	38:BD:205:GLU:OE1	2.37	0.49
39:BE:33:VAL:HG22	39:BE:43:LEU:CD1	2.41	0.49
41:BG:67:GLU:O	41:BG:69:VAL:N	2.45	0.49
43:BI:103:THR:HG22	43:BI:104:ARG:N	2.28	0.49
45:BK:99:GLN:HE21	45:BK:105:VAL:HG21	1.78	0.49
47:BM:3:ARG:HA	47:BM:8:GLU:O	2.12	0.49
50:BP:80:PHE:N	50:BP:80:PHE:CD1	2.80	0.49
7:A6:45:LYS:HB3	7:A6:45:LYS:HZ3	1.77	0.49
11:AA:93:G:H2'	11:AA:94:C:C6	2.48	0.49
11:AA:286:C:H2'	11:AA:287:C:C6	2.48	0.49
11:AA:845:G:O2'	11:AA:846:C:C5	2.65	0.49
11:AA:892:G:H2'	11:AA:893:C:C6	2.47	0.49
11:AA:910:A:H62	24:AQ:12:GLN:HA	1.78	0.49
11:AA:1286:A:C2'	11:AA:1288:U:OP2	2.60	0.49
11:AA:1345:C:O2'	11:AA:1346:G:H5'	2.12	0.49
11:AA:1625:C:H2'	11:AA:1626:G:C5'	2.43	0.49
11:AA:1701:A:H5'	11:AA:1702:G:OP2	2.12	0.49
12:AB:18:G:H2'	12:AB:19:G:O4'	2.13	0.49
13:AC:30:LYS:HE2	13:AC:180:PHE:O	2.12	0.49
13:AC:128:GLY:HA3	56:BW:57:C:H2'	1.92	0.49
13:AC:152:ILE:O	13:AC:152:ILE:HG22	2.12	0.49
14:AD:34:VAL:CG2	14:AD:35:LYS:N	2.76	0.49
18:AH:85:LYS:HZ1	18:AH:86:GLU:C	2.19	0.49
21:AN:74:ARG:NH2	21:AN:83:LYS:HD3	2.26	0.49
26:AS:106:ARG:NH1	26:AS:106:ARG:HB3	2.28	0.49
27:AT:27:THR:O	27:AT:28:VAL:HB	2.13	0.49
27:AT:31:SER:HG	27:AT:32:TYR:HD1	1.59	0.49
35:BA:225:C:O2'	35:BA:226:G:H5'	2.12	0.49
35:BA:737:A:H2'	35:BA:738:C:H6	1.77	0.49
35:BA:858:G:P	35:BA:858:G:H8	2.35	0.49
35:BA:1459:C:O2'	35:BA:1460:A:H5'	2.13	0.49
42:BH:14:ARG:O	42:BH:15:ASN:C	2.55	0.49
47:BM:69:GLU:HA	47:BM:69:GLU:OE1	2.11	0.49
54:BT:51:GLU:O	54:BT:55:ILE:HG12	2.12	0.49
59:BZ:256:VAL:HG13	59:BZ:312:PRO:HD3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:16:ARG:NH2	11:AA:517:C:OP1	2.45	0.49
7:A6:53:LYS:HD3	7:A6:54:ILE:N	2.19	0.49
11:AA:484:C:OP1	32:AY:49:VAL:HG13	2.13	0.49
11:AA:533:G:H5'	28:AU:24:TYR:CE1	2.48	0.49
11:AA:558:G:OP2	21:AN:111:PRO:HD2	2.13	0.49
11:AA:1828:G:O6	14:AD:222:ARG:HD3	2.12	0.49
11:AA:2312:U:P	17:AG:74:LYS:HD3	2.52	0.49
11:AA:2320:A:H2'	11:AA:2320:A:N3	2.27	0.49
11:AA:2334:G:H1'	26:AS:18:ILE:HD11	1.93	0.49
11:AA:2552:U:C2	11:AA:2554:U:H5'	2.48	0.49
11:AA:2784:C:H2'	11:AA:2785:C:H6	1.77	0.49
14:AD:30:GLU:CG	14:AD:63:ARG:NE	2.68	0.49
14:AD:209:ALA:C	14:AD:210:GLY:O	2.54	0.49
14:AD:210:GLY:C	14:AD:212:SER:N	2.67	0.49
15:AE:71:GLY:O	15:AE:72:VAL:O	2.31	0.49
15:AE:132:HIS:O	15:AE:135:HIS:NE2	2.46	0.49
17:AG:113:ARG:O	17:AG:140:ILE:HG22	2.11	0.49
21:AN:9:VAL:HG12	21:AN:10:GLU:N	2.27	0.49
22:AO:88:ASN:O	22:AO:90:GLN:N	2.44	0.49
24:AQ:84:GLY:O	24:AQ:85:LYS:HB2	2.13	0.49
24:AQ:135:ASP:O	24:AQ:138:ASP:OD1	2.29	0.49
26:AS:36:TYR:N	26:AS:36:TYR:HD1	2.10	0.49
27:AT:89:VAL:HG12	27:AT:91:ARG:HG2	1.95	0.49
31:AX:57:LEU:HD13	31:AX:57:LEU:N	2.28	0.49
33:AZ:38:TYR:CD1	33:AZ:38:TYR:C	2.91	0.49
33:AZ:111:VAL:O	33:AZ:112:ARG:C	2.56	0.49
33:AZ:157:LEU:O	33:AZ:158:PRO:C	2.54	0.49
34:B2:110:ARG:HD3	34:B2:110:ARG:H	1.77	0.49
35:BA:510:A:N3	35:BA:543:C:H1'	2.28	0.49
35:BA:552:U:H4'	46:BL:86:ARG:HG2	1.94	0.49
35:BA:603:U:H2'	35:BA:604:G:H8	1.76	0.49
35:BA:609:A:C2'	35:BA:610:G:H5'	2.43	0.49
35:BA:750:G:C2	49:BO:23:GLY:HA3	2.48	0.49
35:BA:1157:A:C1'	35:BA:1181:G:N2	2.68	0.49
36:BB:118:LEU:CB	36:BB:142:LEU:HD12	2.40	0.49
38:BD:36:ARG:N	38:BD:37:PRO:HD3	2.27	0.49
38:BD:133:VAL:HG11	38:BD:138:TYR:CD2	2.43	0.49
41:BG:22:LEU:CD2	41:BG:62:PHE:HE2	2.25	0.49
41:BG:144:MET:C	41:BG:145:ALA:O	2.53	0.49
43:BI:104:ARG:HG2	43:BI:105:ASP:H	1.77	0.49
44:BJ:65:LEU:HD13	48:BN:56:VAL:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:8:ASN:HD22	51:BQ:34:LYS:HE2	1.77	0.49
51:BQ:22:LEU:HD11	51:BQ:39:SER:HB2	1.93	0.49
52:BR:44:LEU:HA	52:BR:49:LYS:O	2.12	0.49
59:BZ:226:GLU:O	59:BZ:300:ARG:CD	2.61	0.49
8:A7:21:ARG:HG2	8:A7:21:ARG:NH1	2.28	0.49
11:AA:28:A:N6	11:AA:512:G:O2'	2.46	0.49
11:AA:142:A:C8	11:AA:1408:C:H1'	2.48	0.49
11:AA:622:G:C2'	11:AA:623:G:H5'	2.43	0.49
11:AA:746:A:H2'	11:AA:2612:C:H5"	1.95	0.49
11:AA:888:C:H1'	47:BM:82:MET:HE3	1.94	0.49
11:AA:1021:A:C8	11:AA:1021:A:C3'	2.92	0.49
11:AA:1024:G:N2	11:AA:1142(A):A:H2	2.10	0.49
11:AA:1210:A:H5'	11:AA:1210:A:C8	2.47	0.49
11:AA:1278:A:H4'	25:AR:34:ILE:HD12	1.93	0.49
11:AA:1910:G:O2'	11:AA:1911:U:H5'	2.12	0.49
11:AA:2185:C:C2'	11:AA:2186:G:H5"	2.42	0.49
11:AA:2854:G:H1	11:AA:2863:C:N4	2.09	0.49
13:AC:124:GLY:C	56:BW:58:A:H5'	2.38	0.49
15:AE:116:VAL:O	15:AE:116:VAL:CG1	2.61	0.49
18:AH:76:VAL:C	18:AH:78:GLY:N	2.71	0.49
26:AS:46:VAL:CG1	26:AS:47:THR:H	2.25	0.49
32:AY:13:VAL:CG2	32:AY:72:VAL:HB	2.41	0.49
35:BA:353:A:H5'	35:BA:353:A:C8	2.44	0.49
35:BA:398:C:H2'	35:BA:399:G:H8	1.77	0.49
35:BA:598:U:H4'	42:BH:94:TYR:CD2	2.47	0.49
35:BA:979:C:C3'	35:BA:980:C:C5'	2.86	0.49
35:BA:1170:A:H2'	35:BA:1171:G:O4'	2.13	0.49
35:BA:1502:A:C2	35:BA:1505:G:N1	2.57	0.49
37:BC:146:ALA:C	37:BC:148:GLY:H	2.20	0.49
39:BE:15:ARG:NH2	39:BE:26:PHE:CE2	2.81	0.49
39:BE:57:LYS:HG2	39:BE:61:TYR:CE2	2.47	0.49
44:BJ:14:LYS:C	44:BJ:16:LEU:N	2.68	0.49
46:BL:84:LEU:HD23	46:BL:84:LEU:C	2.37	0.49
58:BY:23:G:H2'	58:BY:24:G:O5'	2.12	0.49
59:BZ:177:LEU:HD13	59:BZ:195:TRP:NE1	2.28	0.49
11:AA:185:U:H2'	11:AA:186:G:C8	2.48	0.49
11:AA:239:U:H2'	11:AA:240:G:O4'	2.13	0.49
11:AA:335:C:H2'	11:AA:336:C:H6	1.76	0.49
11:AA:528:A:H5"	11:AA:528:A:H8	1.78	0.49
11:AA:580:C:H2'	11:AA:581:C:C6	2.48	0.49
11:AA:637:A:H5"	23:AP:117:GLU:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1577:C:H2'	11:AA:1578:U:H1'	1.93	0.49
11:AA:2161:C:H2'	11:AA:2162:G:H8	1.78	0.49
11:AA:2303:G:H2'	11:AA:2304:G:O4'	2.12	0.49
11:AA:2593:U:H2'	11:AA:2594:C:C6	2.47	0.49
11:AA:2782:G:N2	11:AA:2783:G:H1'	2.27	0.49
11:AA:2819:G:H2'	11:AA:2821:A:N7	2.27	0.49
12:AB:95:C:O2'	12:AB:96:U:H5'	2.13	0.49
14:AD:48:ARG:HG3	14:AD:48:ARG:NH1	2.28	0.49
15:AE:116:VAL:O	15:AE:117:MET:CB	2.54	0.49
16:AF:132:VAL:HG22	16:AF:133:ASN:H	1.78	0.49
18:AH:45:VAL:O	18:AH:47:GLU:N	2.39	0.49
21:AN:34:LEU:HD23	21:AN:52:VAL:HG23	1.94	0.49
23:AP:114:ILE:CG2	23:AP:130:PHE:CD2	2.96	0.49
23:AP:131:SER:O	23:AP:133:SER:N	2.45	0.49
27:AT:77:PRO:C	27:AT:79:HIS:N	2.70	0.49
30:AW:26:GLY:H	30:AW:71:VAL:HG23	1.78	0.49
33:AZ:103:ARG:O	33:AZ:103:ARG:HG2	2.12	0.49
35:BA:490:G:O2'	35:BA:491:G:H5'	2.12	0.49
35:BA:858:G:H8	35:BA:858:G:O5'	1.96	0.49
35:BA:1342:C:O2'	35:BA:1343:G:H5'	2.12	0.49
36:BB:41:ILE:HD12	36:BB:41:ILE:N	2.28	0.49
36:BB:132:LYS:O	36:BB:136:VAL:HG23	2.12	0.49
36:BB:149:LEU:O	36:BB:150:SER:C	2.55	0.49
38:BD:135:LEU:N	38:BD:135:LEU:CD1	2.75	0.49
40:BF:24:GLU:HG2	40:BF:28:ARG:NH1	2.27	0.49
43:BI:4:TYR:HB2	43:BI:19:LEU:CB	2.32	0.49
43:BI:26:VAL:CG1	43:BI:61:ALA:HB3	2.41	0.49
1:A0:37:LEU:N	1:A0:59:LEU:O	2.43	0.49
6:A5:36:CYS:SG	6:A5:38:ALA:HB3	2.53	0.49
10:A9:3:VAL:HG21	11:AA:2539:C:H4'	1.94	0.49
11:AA:272(B):G:H2'	11:AA:272(C):G:H8	1.77	0.49
11:AA:856:C:H6	11:AA:856:C:C5'	2.25	0.49
11:AA:1245:G:H5"	16:AF:34:TRP:HZ2	1.77	0.49
11:AA:1751:C:O2'	11:AA:1752:C:H5'	2.12	0.49
11:AA:2308:G:H22	17:AG:79:ASN:CG	2.21	0.49
11:AA:2579:C:O2'	15:AE:131:ALA:HB3	2.13	0.49
11:AA:2827:C:O2'	11:AA:2828:C:H5'	2.12	0.49
11:AA:2833:G:H8	11:AA:2833:G:OP1	1.96	0.49
13:AC:128:GLY:CA	56:BW:57:C:O2'	2.61	0.49
14:AD:79:VAL:CG2	14:AD:111:LEU:HD11	2.36	0.49
15:AE:52:LEU:O	15:AE:53:PRO:O	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AE:57:LYS:O	15:AE:58:ARG:HG3	2.13	0.49
17:AG:26:GLN:OE1	17:AG:26:GLN:N	2.45	0.49
17:AG:111:LEU:O	17:AG:114:ILE:CG2	2.58	0.49
17:AG:139:LEU:HA	17:AG:144:ILE:CG2	2.42	0.49
23:AP:114:ILE:HG21	23:AP:130:PHE:CE2	2.46	0.49
24:AQ:6:ARG:C	24:AQ:7:MET:HG3	2.36	0.49
27:AT:19:LEU:HD13	27:AT:78:LEU:HD23	1.93	0.49
27:AT:35:LYS:NZ	27:AT:41:ARG:HG3	2.27	0.49
28:AU:5:LYS:O	28:AU:6:THR:C	2.55	0.49
33:AZ:130:PRO:C	33:AZ:133:ILE:HD11	2.37	0.49
34:B2:49:GLU:OE1	34:B2:49:GLU:N	2.44	0.49
34:B2:83:LYS:O	34:B2:87:ARG:HG2	2.13	0.49
35:BA:189(J):G:O2'	35:BA:189(K):U:H5'	2.12	0.49
35:BA:394:G:H2'	35:BA:395:C:C6	2.47	0.49
35:BA:417:C:H2'	35:BA:418:C:C6	2.48	0.49
35:BA:697:U:C2'	35:BA:698:G:H5'	2.43	0.49
35:BA:963:G:H2'	35:BA:964:A:C8	2.46	0.49
44:BJ:27:ALA:CB	44:BJ:34:VAL:HG21	2.43	0.49
49:BO:43:LEU:CD1	49:BO:53:HIS:HA	2.42	0.49
49:BO:87:ILE:O	49:BO:88:ARG:HB2	2.13	0.49
50:BP:58:TYR:O	50:BP:62:VAL:HG22	2.13	0.49
58:BY:72:C:C2'	58:BY:73:U:O5'	2.60	0.49
7:A6:17:LYS:O	7:A6:18:ARG:HB3	2.12	0.49
7:A6:52:VAL:HG13	7:A6:53:LYS:H	1.76	0.49
11:AA:719:C:O2'	11:AA:720:C:H5'	2.12	0.49
11:AA:729:G:OP2	14:AD:13:ARG:NH1	2.46	0.49
11:AA:882:G:H22	11:AA:894:C:N4	2.09	0.49
11:AA:1469:A:H2'	11:AA:1470:G:C8	2.47	0.49
13:AC:128:GLY:O	56:BW:58:A:C1'	2.61	0.49
13:AC:132:GLY:C	13:AC:134:ARG:H	2.19	0.49
13:AC:141:LYS:NZ	13:AC:141:LYS:HB2	2.28	0.49
14:AD:31:LYS:O	14:AD:33:LEU:N	2.46	0.49
15:AE:16:ARG:HG2	15:AE:16:ARG:O	2.12	0.49
15:AE:47:VAL:O	15:AE:80:GLU:HA	2.13	0.49
15:AE:52:LEU:CD2	15:AE:76:ARG:HD3	2.41	0.49
15:AE:179:GLU:HG3	15:AE:179:GLU:O	2.12	0.49
16:AF:125:LEU:HD23	16:AF:125:LEU:N	2.23	0.49
17:AG:28:VAL:O	17:AG:28:VAL:HG12	2.13	0.49
17:AG:33:ARG:HA	17:AG:172:LEU:HD11	1.94	0.49
18:AH:45:VAL:C	18:AH:47:GLU:H	2.19	0.49
18:AH:125:VAL:C	18:AH:127:GLU:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AK:123:UNK:O	20:AK:125:UNK:N	2.46	0.49
24:AQ:39:PRO:HG3	24:AQ:99:PRO:CD	2.42	0.49
24:AQ:72:LYS:HB3	24:AQ:94:VAL:CG2	2.42	0.49
26:AS:96:GLY:C	26:AS:98:VAL:H	2.18	0.49
28:AU:50:ARG:O	28:AU:54:LYS:HE2	2.13	0.49
31:AX:83:VAL:CG1	31:AX:87:GLN:HE21	2.26	0.49
33:AZ:7:ALA:O	33:AZ:61:LEU:HA	2.12	0.49
35:BA:16:A:C2'	35:BA:17:U:H5'	2.43	0.49
35:BA:193:C:O2'	35:BA:194:C:H5'	2.13	0.49
35:BA:337:C:H2'	35:BA:338:A:C8	2.48	0.49
35:BA:398:C:H2'	35:BA:399:G:C8	2.47	0.49
35:BA:1196:U:O2	35:BA:1196:U:C2'	2.59	0.49
35:BA:1292:U:P	41:BG:41:ARG:NH2	2.86	0.49
35:BA:1330:U:H3'	35:BA:1331:G:O4'	2.12	0.49
35:BA:1426:C:H2'	35:BA:1427:U:C6	2.48	0.49
37:BC:8:ILE:HG13	37:BC:184:TYR:HB3	1.94	0.49
37:BC:54:ARG:NH1	37:BC:56:ASP:OD2	2.46	0.49
39:BE:79:GLU:O	39:BE:80:ILE:HG22	2.12	0.49
43:BI:17:VAL:HG21	43:BI:81:ILE:N	2.28	0.49
43:BI:22:GLY:O	43:BI:58:ARG:HA	2.13	0.49
50:BP:63:GLY:O	50:BP:64:ALA:CB	2.60	0.49
54:BT:32:ALA:O	54:BT:36:LEU:HB2	2.12	0.49
56:BW:54:G:H2'	56:BW:55:U:C6	2.48	0.49
59:BZ:375:ILE:HD12	59:BZ:375:ILE:C	2.38	0.49
2:A1:52:ARG:O	2:A1:56:GLN:O	2.31	0.49
5:A4:12:ALA:HB2	5:A4:29:PRO:HA	1.94	0.49
7:A6:9:LEU:O	7:A6:9:LEU:HD13	2.12	0.49
9:A8:47:LYS:HD2	9:A8:47:LYS:C	2.37	0.49
11:AA:363(E):U:C4	11:AA:363(F):A:H2	2.30	0.49
11:AA:708:C:H5'	11:AA:709:U:OP2	2.13	0.49
11:AA:861:A:H2'	11:AA:862:G:O4'	2.13	0.49
11:AA:873:G:O2'	11:AA:874:G:H5'	2.13	0.49
11:AA:995:C:C4	21:AN:1:MET:HE3	2.47	0.49
11:AA:1388:G:C2'	11:AA:1389:G:H5'	2.42	0.49
11:AA:1411:C:H2'	11:AA:1412:A:C8	2.48	0.49
11:AA:2135:A:H2'	11:AA:2136:C:O4'	2.13	0.49
11:AA:2257:U:O2'	11:AA:2258:C:H5'	2.13	0.49
13:AC:148:ASN:O	13:AC:152:ILE:HG13	2.13	0.49
14:AD:34:VAL:CG2	14:AD:35:LYS:H	2.25	0.49
14:AD:165:ILE:HG23	14:AD:173:VAL:HG21	1.94	0.49
14:AD:231:HIS:CE1	14:AD:232:PRO:HG2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AF:123:LEU:HD12	16:AF:124:LEU:H	1.78	0.49
17:AG:96:ARG:O	17:AG:97:ASP:HB2	2.12	0.49
24:AQ:12:GLN:HE21	24:AQ:73:PRO:CD	2.26	0.49
25:AR:57:ARG:O	25:AR:58:GLY:C	2.56	0.49
26:AS:104:GLY:C	26:AS:106:ARG:H	2.21	0.49
27:AT:30:VAL:CG2	27:AT:83:ILE:HG13	2.43	0.49
27:AT:70:VAL:HG12	27:AT:71:GLY:O	2.13	0.49
28:AU:90:VAL:CG2	29:AV:47:VAL:HG21	2.42	0.49
35:BA:123:C:OP1	35:BA:312:C:H5'	2.13	0.49
35:BA:346:G:N3	35:BA:346:G:C2'	2.75	0.49
35:BA:421:U:H3'	35:BA:421:U:O2	2.13	0.49
35:BA:454:C:H5	35:BA:455:C:C2	2.31	0.49
35:BA:911:U:O2'	35:BA:912:C:H5'	2.12	0.49
35:BA:1262:C:H2'	35:BA:1263:C:H6	1.78	0.49
36:BB:35:GLU:HA	36:BB:39:ILE:O	2.13	0.49
38:BD:65:ARG:C	38:BD:67:ILE:N	2.70	0.49
41:BG:47:CYS:HB3	41:BG:58:PRO:CB	2.43	0.49
47:BM:87:TYR:HE1	53:BS:81:ARG:NH2	2.11	0.49
3:A2:65:ASN:HB3	3:A2:69:ARG:HH21	1.78	0.48
3:A2:69:ARG:O	3:A2:70:GLN:HB3	2.13	0.48
4:A3:44:ARG:O	4:A3:48:GLU:HG2	2.13	0.48
9:A8:33:ASN:O	11:AA:2420:C:OP1	2.31	0.48
11:AA:207:A:H2'	11:AA:208:C:O4'	2.13	0.48
11:AA:325:G:H2'	11:AA:326:G:H8	1.78	0.48
11:AA:826:U:H2'	11:AA:828:U:O4'	2.13	0.48
11:AA:860:U:C5	11:AA:917:A:N7	2.79	0.48
11:AA:1572:A:O2'	11:AA:1573:G:H5'	2.12	0.48
11:AA:2099:U:H2'	11:AA:2100:G:H8	1.77	0.48
11:AA:2360:A:O2'	11:AA:2361:A:P	2.71	0.48
11:AA:2789:C:H5'	11:AA:2790:A:OP1	2.13	0.48
12:AB:48:A:O2'	12:AB:49:C:H5'	2.12	0.48
14:AD:155:LEU:N	14:AD:155:LEU:CD1	2.76	0.48
14:AD:206:LEU:CD2	14:AD:211:ARG:HG3	2.42	0.48
16:AF:125:LEU:N	16:AF:125:LEU:CD2	2.76	0.48
21:AN:58:ASP:C	21:AN:60:ILE:N	2.59	0.48
27:AT:29:ARG:CB	27:AT:85:LYS:HA	2.42	0.48
28:AU:92:ARG:HH21	29:AV:10:LYS:HA	1.76	0.48
30:AW:20:VAL:O	30:AW:23:LEU:HB2	2.13	0.48
32:AY:7:VAL:CG2	32:AY:8:LYS:HZ3	2.26	0.48
32:AY:28:LYS:NZ	32:AY:72:VAL:CG2	2.74	0.48
32:AY:28:LYS:O	32:AY:29:GLU:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B2:68:TYR:OH	59:BZ:339:ARG:NH2	2.45	0.48
35:BA:1493:A:H3'	35:BA:1493:A:P	2.53	0.48
35:BA:1512:U:H2'	35:BA:1513:A:H8	1.78	0.48
36:BB:235:SER:OG	36:BB:236:TYR:HD1	1.96	0.48
37:BC:29:TYR:CD2	48:BN:36:PHE:CE1	3.01	0.48
41:BG:148:ASN:C	41:BG:150:ALA:N	2.71	0.48
49:BO:68:ARG:HG3	49:BO:68:ARG:NH1	2.27	0.48
51:BQ:53:LEU:C	51:BQ:53:LEU:HD23	2.38	0.48
51:BQ:59:ILE:HD13	51:BQ:73:VAL:HA	1.95	0.48
54:BT:82:SER:O	54:BT:86:ARG:HB2	2.13	0.48
55:BU:18:TYR:HB3	55:BU:22:ARG:O	2.13	0.48
56:BV:22:A:N6	56:BV:47:G:H2'	2.25	0.48
1:A0:24:LYS:O	1:A0:25:ARG:HD3	2.12	0.48
3:A2:2:LYS:O	3:A2:5:GLU:HG2	2.13	0.48
6:A5:2:ALA:HA	11:AA:2015:A:C2'	2.42	0.48
6:A5:3:LYS:O	6:A5:4:HIS:C	2.55	0.48
7:A6:10:LEU:HD22	7:A6:10:LEU:N	2.16	0.48
7:A6:17:LYS:HD3	7:A6:17:LYS:HA	1.70	0.48
11:AA:31:C:C3'	11:AA:32:C:H5"	2.40	0.48
11:AA:80:G:C2'	11:AA:81:G:H5'	2.44	0.48
11:AA:268:C:O2	11:AA:268:C:H2'	2.12	0.48
11:AA:320:A:H4'	11:AA:322:A:N7	2.27	0.48
11:AA:373:U:H2'	11:AA:374:A:H8	1.78	0.48
11:AA:638:G:C5	11:AA:651:G:C2	3.02	0.48
11:AA:1006:C:O2	21:AN:106:MET:HG2	2.12	0.48
11:AA:1464:C:H2'	11:AA:1465:G:C8	2.48	0.48
11:AA:1824:G:OP1	14:AD:52:ARG:HD2	2.13	0.48
11:AA:2158:A:H4'	11:AA:2159:G:H5'	1.94	0.48
12:AB:35:U:H2'	12:AB:36:C:C6	2.48	0.48
14:AD:65:ILE:O	14:AD:65:ILE:HD13	2.13	0.48
14:AD:232:PRO:HG3	14:AD:248:SER:O	2.13	0.48
14:AD:264:LYS:HD3	14:AD:266:SER:HB3	1.95	0.48
15:AE:55:ASN:HD22	15:AE:58:ARG:HH11	1.55	0.48
15:AE:111:ARG:HD2	15:AE:160:TYR:CD2	2.48	0.48
15:AE:200:GLU:O	15:AE:200:GLU:HG2	2.12	0.48
18:AH:12:PRO:CD	18:AH:15:VAL:HG21	2.36	0.48
23:AP:50:ARG:HG3	23:AP:51:PHE:N	2.27	0.48
23:AP:82:GLY:O	23:AP:83:VAL:CB	2.61	0.48
23:AP:83:VAL:CB	23:AP:105:LEU:HD22	2.43	0.48
26:AS:35:ILE:HG23	26:AS:35:ILE:O	2.14	0.48
28:AU:90:VAL:HG11	29:AV:40:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AW:18:ARG:HH11	30:AW:18:ARG:HG3	1.78	0.48
33:AZ:151:HIS:HA	33:AZ:171:ILE:CG1	2.31	0.48
35:BA:8:A:H2'	35:BA:8:A:OP2	2.13	0.48
35:BA:114:U:H2'	35:BA:115:G:C8	2.48	0.48
35:BA:116:A:H2'	35:BA:117:G:O4'	2.13	0.48
35:BA:192:U:H2'	35:BA:193:C:H6	1.78	0.48
35:BA:860:A:H2'	35:BA:861:G:O4'	2.13	0.48
35:BA:991:U:O2	35:BA:991:U:C2'	2.60	0.48
35:BA:1075:C:H4'	35:BA:1101:A:N6	2.27	0.48
35:BA:1226:C:N4	47:BM:104:ARG:HD2	2.28	0.48
36:BB:218:ALA:O	36:BB:222:ILE:HG12	2.12	0.48
37:BC:58:GLU:N	37:BC:65:ALA:CB	2.73	0.48
37:BC:112:SER:CB	37:BC:115:LEU:HD12	2.40	0.48
37:BC:147:LYS:HB2	37:BC:203:PHE:CD2	2.47	0.48
46:BL:55:VAL:HG23	46:BL:68:ALA:C	2.39	0.48
47:BM:79:LYS:C	47:BM:81:LEU:N	2.68	0.48
52:BR:70:ILE:HG22	52:BR:70:ILE:O	2.13	0.48
53:BS:6:LYS:C	53:BS:7:LYS:HE3	2.37	0.48
2:A1:45:ASN:HD21	11:AA:2090:G:H21	1.61	0.48
6:A5:7:PRO:HA	11:AA:2615:U:C2	2.49	0.48
7:A6:22:ALA:CB	7:A6:39:TYR:CZ	2.95	0.48
8:A7:33:ARG:NH1	11:AA:467:G:OP1	2.46	0.48
11:AA:143:G:O4'	31:AX:37:THR:HG21	2.13	0.48
11:AA:322:A:H5'	11:AA:340:A:H1'	1.95	0.48
11:AA:882:G:H22	11:AA:894:C:H42	1.60	0.48
11:AA:882:G:O5'	11:AA:882:G:H8	1.95	0.48
11:AA:1045:A:N3	11:AA:1047:G:N2	2.61	0.48
11:AA:1564:C:O2'	11:AA:1565:C:H5'	2.13	0.48
11:AA:2123:G:O2'	11:AA:2124:G:H5'	2.13	0.48
11:AA:2360:A:O2'	11:AA:2361:A:O5'	2.31	0.48
11:AA:2722:G:H2'	11:AA:2723:C:C6	2.47	0.48
11:AA:2733:A:H2'	11:AA:2734:A:H5'	1.95	0.48
12:AB:30:C:H1'	12:AB:57:A:N6	2.22	0.48
15:AE:132:HIS:CE1	15:AE:135:HIS:NE2	2.82	0.48
15:AE:186:GLY:O	15:AE:187:ALA:HB3	2.12	0.48
16:AF:20:LEU:H	16:AF:24:LEU:CD2	2.09	0.48
16:AF:107:LYS:O	16:AF:110:LEU:N	2.46	0.48
20:AK:7:UNK:CB	20:AK:58:UNK:HA	2.44	0.48
21:AN:87:LEU:O	21:AN:88:GLU:C	2.57	0.48
22:AO:88:ASN:C	22:AO:90:GLN:N	2.70	0.48
27:AT:107:ASP:HB2	35:BA:1432:G:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:119:LYS:HB2	35:BA:1442(A):G:H22	1.79	0.48
28:AU:66:ASN:ND2	28:AU:76:TYR:H	2.12	0.48
30:AW:14:PRO:HG3	30:AW:101:SER:HB3	1.94	0.48
30:AW:69:LEU:HD13	30:AW:107:LEU:HD23	1.93	0.48
33:AZ:125:LEU:O	33:AZ:125:LEU:HG	2.13	0.48
34:B2:81:LEU:HB2	34:B2:86:LEU:HD13	1.95	0.48
35:BA:386:C:C2'	35:BA:387:U:H5'	2.44	0.48
35:BA:1258:G:O2'	35:BA:1259:C:C5'	2.60	0.48
36:BB:60:ASP:CG	36:BB:64:ARG:HH21	2.22	0.48
37:BC:16:ARG:HH11	37:BC:16:ARG:CB	2.25	0.48
38:BD:14:ARG:HB2	38:BD:40:PRO:HD2	1.94	0.48
38:BD:61:LYS:HE3	38:BD:207:TYR:OH	2.12	0.48
38:BD:126:ILE:HG22	38:BD:127:THR:N	2.28	0.48
39:BE:105:VAL:HB	39:BE:106:PRO:CD	2.43	0.48
44:BJ:89:ASP:O	44:BJ:90:LEU:HD13	2.14	0.48
47:BM:40:ASN:ND2	47:BM:43:THR:HG23	2.22	0.48
50:BP:38:TYR:HE1	50:BP:50:LYS:HE2	1.78	0.48
53:BS:63:THR:HG23	53:BS:65:ASN:H	1.77	0.48
56:BW:17:C:OP1	56:BW:62:C:H5'	2.13	0.48
56:BW:56:U:H2'	56:BW:58:A:OP2	2.14	0.48
58:BY:2:G:O2'	58:BY:3:G:H5'	2.13	0.48
59:BZ:84:GLY:O	59:BZ:85:HIS:CB	2.62	0.48
3:A2:4:SER:HA	3:A2:7:ARG:HD2	1.94	0.48
5:A4:11:PRO:HD3	5:A4:25:TYR:CE2	2.48	0.48
5:A4:24:THR:HG21	17:AG:104:GLU:HG2	1.95	0.48
11:AA:205:G:HO2'	11:AA:206:U:P	2.36	0.48
11:AA:654(J):A:H8	11:AA:654(L):G:C8	2.32	0.48
11:AA:754:C:H2'	11:AA:755:C:C6	2.48	0.48
11:AA:1048:A:N6	11:AA:1111:A:C8	2.82	0.48
11:AA:1070:A:H2'	11:AA:1097:U:OP1	2.13	0.48
11:AA:1331:A:H2'	11:AA:1332:G:H5"	1.95	0.48
11:AA:1708:C:H2'	11:AA:1709:U:C6	2.49	0.48
11:AA:1856:G:O2'	11:AA:1857:G:H5'	2.14	0.48
11:AA:2422:A:O4'	56:BW:77:A:H2	1.96	0.48
11:AA:2533:A:OP1	11:AA:2665:A:H1'	2.13	0.48
11:AA:2647:U:H2'	11:AA:2648:C:C6	2.47	0.48
13:AC:187:ASP:HA	13:AC:190:ARG:HH11	1.77	0.48
14:AD:26:LYS:HE2	14:AD:26:LYS:HA	1.96	0.48
14:AD:117:VAL:HG23	14:AD:128:GLY:C	2.38	0.48
15:AE:87:GLU:O	15:AE:87:GLU:HG3	2.13	0.48
17:AG:47:LYS:CG	17:AG:81:LYS:HG3	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:12:PRO:C	18:AH:15:VAL:HG22	2.38	0.48
27:AT:65:LYS:HA	27:AT:65:LYS:NZ	2.28	0.48
34:B2:71:VAL:HG12	34:B2:72:ASP:N	2.28	0.48
35:BA:979:C:C2'	35:BA:980:C:H5"	2.43	0.48
38:BD:70:ILE:HD11	38:BD:100:ARG:HD2	1.95	0.48
46:BL:60:LEU:HD22	46:BL:60:LEU:N	2.28	0.48
47:BM:120:LYS:HE3	47:BM:121:LYS:N	2.26	0.48
53:BS:51:VAL:O	53:BS:57:HIS:HA	2.13	0.48
56:BW:16:C:O2'	56:BW:17:C:H5'	2.12	0.48
58:BY:16:U:H3'	58:BY:17:C:C5'	2.43	0.48
59:BZ:140:MET:HE3	63:BZ:1003:GDP:HN21	1.77	0.48
59:BZ:150:VAL:HA	59:BZ:153:GLU:HG2	1.94	0.48
1:A0:58:THR:HG22	1:A0:59:LEU:N	2.29	0.48
3:A2:32:LEU:HD23	3:A2:32:LEU:C	2.38	0.48
5:A4:9:LEU:CD1	5:A4:25:TYR:HB3	2.43	0.48
7:A6:15:GLU:HG2	7:A6:18:ARG:HH12	1.78	0.48
7:A6:27:LYS:HE3	7:A6:30:THR:H	1.78	0.48
11:AA:654(J):A:C8	11:AA:654(L):G:H8	2.31	0.48
11:AA:1022:G:N7	21:AN:66:LYS:HE3	2.28	0.48
11:AA:1429:G:H2'	11:AA:1430:C:C6	2.49	0.48
11:AA:1914:A:HO2'	11:AA:1915:U:H5"	1.78	0.48
11:AA:2115:G:H5'	11:AA:2167:U:O2'	2.14	0.48
11:AA:2121:G:H4'	13:AC:167:LYS:HD3	1.96	0.48
11:AA:2307:G:H3'	11:AA:2308:G:C5'	2.43	0.48
12:AB:81:G:H2'	12:AB:82:G:C5'	2.43	0.48
12:AB:87:G:H5"	12:AB:88:C:OP2	2.14	0.48
13:AC:67:GLY:HA2	13:AC:159:GLY:HA2	1.94	0.48
13:AC:79:LYS:HD2	13:AC:97:GLU:OE1	2.12	0.48
14:AD:3:VAL:H	14:AD:20:ASP:HB2	1.79	0.48
14:AD:153:ALA:O	14:AD:154:LYS:HG2	2.14	0.48
20:AK:86:UNK:O	20:AK:87:UNK:CB	2.60	0.48
23:AP:35:HIS:HB3	23:AP:36:LYS:HG2	1.96	0.48
26:AS:35:ILE:CD1	26:AS:99:LYS:HE3	2.44	0.48
28:AU:88:ILE:O	28:AU:90:VAL:N	2.45	0.48
29:AV:35:LEU:HB3	29:AV:37:VAL:CG2	2.44	0.48
29:AV:39:LEU:C	29:AV:40:LEU:CD2	2.87	0.48
33:AZ:19:ARG:O	33:AZ:21:ALA:N	2.47	0.48
33:AZ:139:VAL:O	33:AZ:140:ASP:CB	2.61	0.48
35:BA:1063:C:H2'	35:BA:1064:G:C8	2.48	0.48
36:BB:17:PHE:O	36:BB:18:GLY:C	2.57	0.48
36:BB:79:ASP:O	36:BB:81:VAL:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:162:ILE:HG22	36:BB:182:ILE:HG22	1.95	0.48
38:BD:89:THR:O	38:BD:91:SER:N	2.46	0.48
41:BG:44:TYR:O	41:BG:47:CYS:N	2.46	0.48
44:BJ:8:LEU:HA	44:BJ:95:GLU:O	2.12	0.48
47:BM:108:ARG:N	47:BM:108:ARG:HD2	2.27	0.48
50:BP:6:LEU:HD12	50:BP:6:LEU:N	2.29	0.48
50:BP:17:TYR:CD1	50:BP:17:TYR:N	2.80	0.48
59:BZ:181:GLU:HA	59:BZ:184:LYS:HD2	1.94	0.48
59:BZ:255:ILE:HD11	59:BZ:293:VAL:HG11	1.95	0.48
2:A1:80:LEU:HB3	2:A1:82:LEU:HD13	1.96	0.48
7:A6:15:GLU:CD	7:A6:18:ARG:NH2	2.70	0.48
9:A8:33:ASN:HA	9:A8:36:LYS:CD	2.43	0.48
11:AA:118:A:C8	11:AA:119:A:C8	3.02	0.48
11:AA:306:U:H2'	11:AA:307:G:O4'	2.13	0.48
11:AA:1029:A:C2'	11:AA:1030:G:H5'	2.43	0.48
11:AA:1042:G:C2	11:AA:1043:C:H1'	2.48	0.48
11:AA:1528:A:N1	11:AA:1542:A:H2	2.10	0.48
11:AA:1691:C:O2'	11:AA:1692:U:H5'	2.14	0.48
11:AA:1860:G:H1	11:AA:1882:C:H42	1.61	0.48
11:AA:1907:G:H2'	11:AA:1908:C:H6	1.79	0.48
11:AA:2136:C:H2'	11:AA:2137:C:C6	2.49	0.48
11:AA:2630:G:C1'	11:AA:2894:G:H1'	2.41	0.48
12:AB:4:C:H2'	12:AB:5:C:C6	2.48	0.48
12:AB:17:C:N4	12:AB:68:C:H42	2.08	0.48
13:AC:222:VAL:O	13:AC:224:ILE:HG23	2.13	0.48
14:AD:2:ALA:O	14:AD:3:VAL:CB	2.61	0.48
15:AE:75:VAL:HG12	15:AE:76:ARG:N	2.28	0.48
15:AE:185:LYS:O	15:AE:186:GLY:O	2.31	0.48
16:AF:65:TRP:CH2	16:AF:75:HIS:HD2	2.32	0.48
16:AF:160:ASN:O	16:AF:161:GLU:C	2.57	0.48
17:AG:34:LEU:CD1	17:AG:99:MET:SD	3.02	0.48
17:AG:138:GLN:O	17:AG:140:ILE:N	2.46	0.48
18:AH:70:THR:HG22	18:AH:74:ASN:ND2	2.29	0.48
20:AK:123:UNK:C	20:AK:125:UNK:N	2.75	0.48
22:AO:80:ASP:OD2	27:AT:71:GLY:CA	2.62	0.48
25:AR:27:SER:O	25:AR:30:THR:HG22	2.14	0.48
27:AT:56:GLY:O	27:AT:59:THR:CG2	2.61	0.48
28:AU:92:ARG:HH22	29:AV:10:LYS:CA	2.26	0.48
29:AV:22:VAL:O	29:AV:23:GLU:CB	2.61	0.48
34:B2:2:ALA:HB2	34:B2:35:ARG:HA	1.96	0.48
35:BA:144:G:H1	35:BA:178:C:H42	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:177:C:OP1	54:BT:65:LYS:HD3	2.13	0.48
35:BA:357:G:O2'	35:BA:358:U:H5'	2.14	0.48
35:BA:415:A:H2'	35:BA:416:G:C8	2.48	0.48
35:BA:630:G:C2'	35:BA:631:G:H5'	2.42	0.48
35:BA:779:C:O2'	35:BA:780:A:H5'	2.14	0.48
45:BK:69:ALA:HB1	45:BK:103:LEU:HD23	1.95	0.48
46:BL:34:ARG:CG	46:BL:35:GLY:N	2.77	0.48
47:BM:8:GLU:C	47:BM:9:ILE:HG13	2.38	0.48
52:BR:34:TYR:CD1	52:BR:35:ARG:HG3	2.49	0.48
52:BR:36:ASN:HB2	52:BR:39:VAL:HG23	1.94	0.48
54:BT:45:GLN:C	54:BT:45:GLN:CD	2.81	0.48
1:A0:19:LYS:O	1:A0:20:ARG:C	2.56	0.48
1:A0:56:ASP:O	1:A0:57:PHE:CB	2.61	0.48
3:A2:33:MET:HE2	31:AX:5:TYR:CD2	2.45	0.48
11:AA:654(O):G:C5	11:AA:654(P):C:N4	2.81	0.48
11:AA:806:C:C5	23:AP:39:LYS:HE2	2.48	0.48
11:AA:833:U:H5"	23:AP:48:PRO:CB	2.43	0.48
11:AA:863:A:O2'	12:AB:101:G:H1'	2.14	0.48
11:AA:898:C:H2'	11:AA:899:A:C5'	2.44	0.48
11:AA:2511:U:H2'	11:AA:2512:C:C6	2.48	0.48
11:AA:2632:A:H2	15:AE:61:ARG:HD2	1.77	0.48
11:AA:2691:C:H5'	11:AA:2691:C:C6	2.45	0.48
12:AB:42:C:N4	17:AG:91:ARG:NH1	2.62	0.48
13:AC:124:GLY:CA	56:BW:57:C:O2'	2.58	0.48
13:AC:214:VAL:HG21	13:AC:224:ILE:HD13	1.95	0.48
14:AD:3:VAL:HG21	14:AD:203:ASN:HB2	1.96	0.48
18:AH:158:HIS:HD1	18:AH:168:PRO:HB2	1.78	0.48
21:AN:63:THR:HB	21:AN:66:LYS:NZ	2.28	0.48
23:AP:16:ARG:CG	23:AP:17:LYS:N	2.76	0.48
26:AS:12:PHE:H	26:AS:12:PHE:HD1	1.60	0.48
26:AS:106:ARG:O	26:AS:107:GLU:O	2.32	0.48
27:AT:129:ARG:HG3	27:AT:129:ARG:O	2.13	0.48
28:AU:92:ARG:HD2	29:AV:11:GLN:HG3	1.95	0.48
28:AU:92:ARG:HG2	28:AU:94:ASN:H	1.79	0.48
30:AW:46:PHE:O	30:AW:50:VAL:HG12	2.13	0.48
30:AW:83:LYS:C	30:AW:84:ARG:HG2	2.39	0.48
32:AY:7:VAL:CG2	32:AY:8:LYS:NZ	2.76	0.48
32:AY:30:VAL:HG12	32:AY:31:LEU:N	2.28	0.48
34:B2:130:ARG:HA	34:B2:130:ARG:NH1	2.18	0.48
35:BA:457:C:H2'	35:BA:458:C:C6	2.48	0.48
35:BA:627:G:O2'	35:BA:628:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:786:G:H2'	35:BA:787:A:O4'	2.14	0.48
35:BA:969:A:C2'	35:BA:970:C:H5'	2.43	0.48
35:BA:1118:C:H2'	35:BA:1119:C:C6	2.49	0.48
35:BA:1219:U:H2'	35:BA:1220:G:H8	1.78	0.48
35:BA:1279:A:O2'	35:BA:1282:C:N4	2.46	0.48
35:BA:1414:U:H2'	35:BA:1415:G:H8	1.77	0.48
40:BF:91:VAL:HG12	40:BF:92:LYS:O	2.13	0.48
44:BJ:70:ARG:HG2	44:BJ:70:ARG:HH11	1.78	0.48
46:BL:55:VAL:HG22	46:BL:56:ALA:N	2.27	0.48
47:BM:22:ILE:HB	47:BM:25:ILE:HB	1.96	0.48
47:BM:23:TYR:CD1	47:BM:23:TYR:C	2.91	0.48
58:BY:7:G:H5'	58:BY:8:A:OP1	2.14	0.48
58:BY:80:A:H2'	58:BY:81:C:C6	2.49	0.48
59:BZ:122:LEU:C	59:BZ:124:ARG:N	2.69	0.48
59:BZ:314:THR:HG22	59:BZ:377:PRO:HB3	1.96	0.48
2:A1:23:LYS:HE3	56:BW:74:A:O2'	2.14	0.48
5:A4:26:SER:HB3	17:AG:105:LYS:NZ	2.29	0.48
10:A9:7:VAL:HG12	10:A9:25:VAL:HG21	1.95	0.48
11:AA:614:U:O2	11:AA:614:U:O4'	2.31	0.48
11:AA:720:C:O5'	11:AA:720:C:H6	1.97	0.48
11:AA:1590:U:C2'	11:AA:1591:G:H5"	2.44	0.48
11:AA:1827:C:O2'	11:AA:1828:G:H5'	2.13	0.48
11:AA:2555:U:C2'	11:AA:2556:C:H5'	2.42	0.48
11:AA:2591:C:H2'	11:AA:2592:G:H8	1.75	0.48
12:AB:7:G:C2'	12:AB:8:U:H5"	2.42	0.48
12:AB:56:G:O2'	12:AB:57:A:OP2	2.30	0.48
16:AF:202:PHE:CD1	16:AF:202:PHE:C	2.92	0.48
18:AH:49:VAL:O	18:AH:50:VAL:HG22	2.13	0.48
21:AN:34:LEU:HD23	21:AN:52:VAL:CG2	2.44	0.48
27:AT:66:VAL:HG23	27:AT:66:VAL:O	2.12	0.48
27:AT:119:LYS:HB2	35:BA:1442(A):G:N2	2.28	0.48
29:AV:66:ARG:HG2	29:AV:88:ARG:HB3	1.96	0.48
32:AY:4:LYS:HG3	32:AY:5:MET:N	2.28	0.48
32:AY:6:HIS:HB3	32:AY:35:TYR:OH	2.14	0.48
35:BA:346:G:O2'	35:BA:347:G:P	2.71	0.48
35:BA:393:A:C2'	35:BA:394:G:H5'	2.44	0.48
35:BA:1041:A:H2'	35:BA:1042:G:H8	1.78	0.48
35:BA:1512:U:H2'	35:BA:1513:A:C8	2.49	0.48
37:BC:8:ILE:O	37:BC:11:ARG:N	2.33	0.48
38:BD:127:THR:HA	38:BD:132:ARG:HA	1.96	0.48
38:BD:129:ASN:HD22	38:BD:129:ASN:H	1.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:82:VAL:CG2	39:BE:138:ALA:HA	2.42	0.48
39:BE:145:LYS:O	39:BE:149:GLU:HG2	2.14	0.48
41:BG:23:VAL:HG13	41:BG:43:PHE:CE2	2.47	0.48
41:BG:53:LYS:HB3	41:BG:125:MET:HE1	1.96	0.48
42:BH:13:ILE:O	42:BH:17:THR:HG23	2.13	0.48
44:BJ:56:HIS:O	44:BJ:58:ASP:O	2.31	0.48
47:BM:6:GLY:C	47:BM:8:GLU:N	2.59	0.48
47:BM:87:TYR:O	47:BM:88:ARG:C	2.57	0.48
51:BQ:10:VAL:HG23	51:BQ:55:ASP:O	2.13	0.48
51:BQ:27:PHE:HD1	51:BQ:28:PRO:O	1.97	0.48
52:BR:59:SER:HG	52:BR:62:GLU:HG3	1.78	0.48
58:BY:63:U:C2'	58:BY:64:G:H5'	2.43	0.48
59:BZ:226:GLU:HG2	59:BZ:239:THR:O	2.14	0.48
11:AA:65:C:H2'	11:AA:66:C:H6	1.78	0.48
11:AA:420:C:H2'	11:AA:421:U:C6	2.49	0.48
11:AA:440:G:H2'	11:AA:441:U:C6	2.48	0.48
11:AA:626:U:C2	23:AP:105:LEU:HG	2.49	0.48
11:AA:654(E):G:O2'	11:AA:654(F):C:H5'	2.14	0.48
11:AA:990:A:N6	11:AA:1186:G:H1'	2.28	0.48
11:AA:1041:G:H22	11:AA:1114:G:N2	2.11	0.48
11:AA:1190:G:H5'	23:AP:35:HIS:N	2.24	0.48
11:AA:1271:G:O3'	11:AA:1272:A:H4'	2.14	0.48
11:AA:1499:C:C2'	11:AA:1500:G:H5'	2.44	0.48
11:AA:2001:A:H4'	11:AA:2689:U:H2'	1.96	0.48
11:AA:2415:G:O4'	23:AP:67:MET:HE3	2.14	0.48
11:AA:2693:A:H2'	11:AA:2694:G:H8	1.79	0.48
16:AF:158:THR:HG23	16:AF:160:ASN:H	1.78	0.48
16:AF:194:MET:CE	16:AF:199:TRP:HD1	2.27	0.48
23:AP:31:ALA:C	23:AP:33:ARG:N	2.71	0.48
26:AS:66:ALA:CA	26:AS:69:VAL:HG12	2.44	0.48
27:AT:30:VAL:O	27:AT:30:VAL:HG23	2.13	0.48
27:AT:89:VAL:CG2	27:AT:91:ARG:HE	2.26	0.48
31:AX:12:VAL:HG12	31:AX:27:THR:N	2.29	0.48
32:AY:26:LYS:CG	32:AY:27:VAL:H	2.18	0.48
33:AZ:51:ALA:HB3	33:AZ:57:ILE:HD11	1.95	0.48
33:AZ:104:PHE:CE2	33:AZ:119:GLU:HB3	2.49	0.48
34:B2:58:LEU:HD23	34:B2:60:ILE:CD1	2.44	0.48
34:B2:124:LYS:O	34:B2:124:LYS:CG	2.61	0.48
35:BA:162:A:N7	35:BA:163:C:H1'	2.28	0.48
35:BA:637:G:H2'	35:BA:638:G:C8	2.48	0.48
35:BA:878:G:H5"	42:BH:89:PRO:HG2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:956:U:H2'	35:BA:957:U:C6	2.47	0.48
35:BA:1070:U:H5'	39:BE:18:ARG:HH22	1.79	0.48
36:BB:8:LYS:O	36:BB:10:LEU:N	2.47	0.48
36:BB:28:PHE:CZ	36:BB:189:ASP:HA	2.48	0.48
39:BE:31:LEU:HD23	39:BE:45:PHE:CD1	2.48	0.48
40:BF:43:LEU:H	40:BF:43:LEU:CD2	2.20	0.48
43:BI:63:ILE:CD1	43:BI:81:ILE:HD11	2.44	0.48
54:BT:57:ARG:NH1	54:BT:57:ARG:HB2	2.29	0.48
54:BT:74:LYS:HG2	54:BT:75:ASN:N	2.29	0.48
59:BZ:139:ASP:OD2	59:BZ:140:MET:HE3	2.14	0.48
1:A0:62:LEU:C	1:A0:63:VAL:HG13	2.39	0.48
7:A6:27:LYS:HG3	7:A6:27:LYS:O	2.14	0.48
11:AA:530:G:C5	11:AA:2022:U:H5"	2.49	0.48
11:AA:1022:G:N2	11:AA:1142(A):A:C2	2.82	0.48
11:AA:1188:U:H2'	11:AA:1189:A:C5'	2.43	0.48
11:AA:1221(A):C:H2'	11:AA:1222:C:C6	2.49	0.48
11:AA:1721:G:C2	11:AA:1739:U:OP2	2.66	0.48
11:AA:1847:A:H2'	11:AA:1847:A:N3	2.29	0.48
11:AA:2117:A:H2'	11:AA:2118:U:H3'	1.96	0.48
12:AB:7:G:O5'	26:AS:29:PHE:CE2	2.67	0.48
12:AB:48:A:H4'	26:AS:95:HIS:HD2	1.79	0.48
13:AC:10:LEU:HD12	13:AC:32:LEU:CD2	2.37	0.48
14:AD:35:LYS:NZ	14:AD:36:PRO:N	2.62	0.48
14:AD:241:PRO:O	14:AD:243:GLY:N	2.47	0.48
17:AG:25:TYR:OH	17:AG:168:GLU:CD	2.56	0.48
17:AG:67:LYS:N	17:AG:67:LYS:CD	2.68	0.48
17:AG:109:VAL:HG21	17:AG:142:PRO:HB3	1.96	0.48
17:AG:110:ALA:HB1	17:AG:140:ILE:HD13	1.95	0.48
17:AG:172:LEU:C	17:AG:172:LEU:CD2	2.87	0.48
18:AH:52:VAL:CB	18:AH:69:ARG:HD3	2.18	0.48
24:AQ:35:VAL:HG11	24:AQ:130:LYS:CE	2.43	0.48
27:AT:78:LEU:O	27:AT:78:LEU:CD2	2.61	0.48
27:AT:125:ARG:HH11	27:AT:125:ARG:HG2	1.79	0.48
30:AW:6:ILE:HA	30:AW:103:ILE:O	2.13	0.48
33:AZ:71:VAL:HG11	33:AZ:74:VAL:HG23	1.95	0.48
35:BA:40:C:H2'	35:BA:41:G:C8	2.48	0.48
35:BA:323:U:H2'	35:BA:324:G:O4'	2.13	0.48
35:BA:404:U:H5"	38:BD:122:ARG:HG2	1.96	0.48
35:BA:689:C:H2'	35:BA:690:G:O4'	2.13	0.48
35:BA:737:A:H2'	35:BA:738:C:C6	2.49	0.48
35:BA:1440:C:H2'	35:BA:1441:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:200:ILE:HG22	36:BB:201:ILE:H	1.79	0.48
37:BC:105:GLU:HG2	37:BC:106:VAL:N	2.29	0.48
38:BD:107:ARG:HD2	38:BD:173:TRP:HZ2	1.78	0.48
44:BJ:7:LYS:HG2	44:BJ:71:LEU:HD13	1.94	0.48
44:BJ:38:ILE:CG1	44:BJ:71:LEU:HB3	2.44	0.48
47:BM:13:LYS:O	47:BM:45:VAL:HG23	2.13	0.48
48:BN:28:GLY:O	48:BN:29:ARG:C	2.56	0.48
59:BZ:284:ASP:HB3	59:BZ:286:VAL:HG13	1.96	0.48
3:A2:63:VAL:HA	3:A2:66:GLU:CG	2.44	0.47
4:A3:15:TYR:HD2	4:A3:19:GLN:HE22	1.62	0.47
11:AA:189:G:H2'	11:AA:205:G:N2	2.30	0.47
11:AA:389:G:H22	23:AP:72:PRO:HD3	1.78	0.47
11:AA:1047:G:C2	11:AA:1110:G:H2'	2.49	0.47
11:AA:1486:A:N1	11:AA:1504:C:N4	2.62	0.47
11:AA:1544:A:H2'	11:AA:1545:A:C8	2.49	0.47
11:AA:2121:G:O2'	13:AC:167:LYS:HD3	2.13	0.47
11:AA:2653:U:O2'	18:AH:110:SER:HB2	2.14	0.47
14:AD:26:LYS:O	14:AD:27:THR:CB	2.61	0.47
14:AD:97:TYR:HB3	14:AD:99:ASP:HB2	1.96	0.47
14:AD:136:ILE:CG2	14:AD:140:THR:OG1	2.62	0.47
14:AD:245:PRO:O	14:AD:246:PRO:C	2.56	0.47
15:AE:5:LEU:HD11	15:AE:79:ARG:HB2	1.95	0.47
18:AH:149:ARG:HD3	18:AH:164:TYR:CE1	2.49	0.47
21:AN:131:GLN:HE22	21:AN:133:GLN:H	1.60	0.47
23:AP:98:GLU:O	23:AP:101:VAL:HG22	2.14	0.47
23:AP:105:LEU:O	23:AP:106:LEU:CB	2.62	0.47
23:AP:108:LYS:C	23:AP:110:TYR:N	2.66	0.47
24:AQ:54:MET:SD	24:AQ:121:ALA:HB2	2.54	0.47
26:AS:26:LEU:HD22	26:AS:87:PHE:CE1	2.49	0.47
26:AS:102:ALA:O	26:AS:103:GLU:HG2	2.13	0.47
28:AU:92:ARG:NH2	29:AV:11:GLN:N	2.60	0.47
33:AZ:154:ASP:H	33:AZ:155:LEU:CD2	2.27	0.47
35:BA:408:A:O4'	38:BD:116:GLN:NE2	2.47	0.47
35:BA:594:G:H2'	35:BA:595:G:C5'	2.44	0.47
35:BA:646:U:H2'	35:BA:647:C:C6	2.49	0.47
35:BA:658:G:H2'	35:BA:659:U:C6	2.49	0.47
35:BA:926:G:H2'	35:BA:1505:G:N3	2.29	0.47
36:BB:97:TRP:CZ2	36:BB:102:LEU:HD13	2.49	0.47
36:BB:147:LYS:O	36:BB:147:LYS:HG2	2.12	0.47
37:BC:65:ALA:O	37:BC:100:ALA:O	2.32	0.47
38:BD:25:ARG:C	38:BD:27:TYR:N	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:31:CYS:O	38:BD:32:ALA:HB3	2.13	0.47
38:BD:79:PHE:O	38:BD:82:ALA:HB3	2.14	0.47
44:BJ:12:ASP:O	44:BJ:16:LEU:HB3	2.14	0.47
47:BM:6:GLY:O	47:BM:8:GLU:N	2.46	0.47
49:BO:53:HIS:O	49:BO:56:LEU:HB3	2.14	0.47
53:BS:31:ILE:HG23	53:BS:49:ILE:HA	1.95	0.47
59:BZ:135:MET:HE1	59:BZ:147:LEU:O	2.13	0.47
59:BZ:248:LYS:CE	59:BZ:279:GLU:HB3	2.42	0.47
59:BZ:316:PHE:C	59:BZ:316:PHE:HD1	2.22	0.47
2:A1:73:LEU:O	2:A1:77:ALA:HB2	2.15	0.47
7:A6:45:LYS:O	7:A6:45:LYS:HG2	2.14	0.47
11:AA:146:G:H2'	11:AA:147:U:H5'	1.96	0.47
11:AA:204:A:O3'	11:AA:205:G:H4'	2.14	0.47
11:AA:359:A:H2'	11:AA:360:G:O4'	2.14	0.47
11:AA:1038:C:C2'	11:AA:1039:G:H5"	2.44	0.47
11:AA:1070:A:N3	11:AA:1097:U:H4'	2.28	0.47
11:AA:1112:G:H2'	11:AA:1113:U:O4'	2.14	0.47
11:AA:1412:A:H2'	11:AA:1413:G:O4'	2.14	0.47
11:AA:2031:A:C6	11:AA:2498:C:H1'	2.49	0.47
11:AA:2185:C:C2'	11:AA:2186:G:C5'	2.90	0.47
11:AA:2197:U:O2'	11:AA:2198:A:H2'	2.13	0.47
14:AD:32:SER:C	14:AD:36:PRO:HG3	2.39	0.47
14:AD:65:ILE:HD11	14:AD:67:PHE:CE2	2.49	0.47
16:AF:162:LEU:H	16:AF:162:LEU:CD1	2.28	0.47
17:AG:42:GLY:HA2	17:AG:90:LEU:N	2.29	0.47
17:AG:131:TYR:HB3	17:AG:159:VAL:HG11	1.96	0.47
18:AH:40:GLU:O	18:AH:41:MET:CB	2.61	0.47
20:AK:124:UNK:O	20:AK:128:UNK:CB	2.62	0.47
23:AP:83:VAL:HA	23:AP:105:LEU:CD2	2.41	0.47
29:AV:95:LEU:HD23	29:AV:96:ILE:N	2.29	0.47
32:AY:26:LYS:HG2	32:AY:27:VAL:N	2.25	0.47
33:AZ:146:ILE:HG13	33:AZ:147:GLY:N	2.29	0.47
34:B2:6:GLU:N	34:B2:6:GLU:OE1	2.47	0.47
35:BA:601:C:O2'	35:BA:602:A:H5'	2.15	0.47
35:BA:687:A:N3	35:BA:688:G:H1'	2.29	0.47
35:BA:975:A:H62	44:BJ:60:ARG:HH12	1.61	0.47
40:BF:34:GLY:O	40:BF:67:MET:HB2	2.13	0.47
43:BI:9:ARG:HB3	43:BI:104:ARG:HH22	1.78	0.47
43:BI:37:PHE:CD1	43:BI:70:LYS:HD2	2.49	0.47
44:BJ:65:LEU:CD1	48:BN:55:GLY:HA3	2.43	0.47
47:BM:117:VAL:O	47:BM:117:VAL:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:25:THR:CG2	52:BR:42:ARG:HH11	2.27	0.47
1:A0:74:ARG:CZ	12:AB:13:A:OP2	2.62	0.47
3:A2:63:VAL:O	3:A2:65:ASN:N	2.47	0.47
9:A8:4:MET:HE1	11:AA:592:G:H21	1.78	0.47
9:A8:62:LEU:N	9:A8:63:PRO:CD	2.76	0.47
11:AA:268:C:N4	11:AA:424:G:H1	2.08	0.47
11:AA:271(U):G:O2'	11:AA:271(V):G:H5'	2.14	0.47
11:AA:548:A:C2'	11:AA:549:G:H5'	2.44	0.47
11:AA:850:C:O2'	11:AA:851:U:H5'	2.15	0.47
11:AA:1070:A:C4	11:AA:1097:U:H4'	2.49	0.47
11:AA:1171:G:C8	11:AA:1173:G:H1'	2.49	0.47
11:AA:1500:G:H21	14:AD:100:GLY:HA3	1.79	0.47
11:AA:2024:G:O2'	11:AA:2025:C:H5'	2.15	0.47
13:AC:82:LYS:HE2	13:AC:82:LYS:N	2.29	0.47
13:AC:137:LEU:CD2	56:BW:57:C:C2	2.93	0.47
13:AC:156:ILE:O	13:AC:156:ILE:HG22	2.14	0.47
14:AD:132:PRO:O	14:AD:133:LEU:C	2.58	0.47
15:AE:9:VAL:CG1	15:AE:25:VAL:HB	2.44	0.47
16:AF:21:ALA:O	16:AF:24:LEU:HD23	2.14	0.47
16:AF:169:ASN:HB3	16:AF:170:LEU:H	1.53	0.47
18:AH:149:ARG:HA	18:AH:162:ILE:CD1	2.45	0.47
19:AJ:25:UNK:O	19:AJ:84:UNK:HA	2.14	0.47
21:AN:39:ARG:HE	21:AN:41:ASP:HB3	1.78	0.47
24:AQ:141:GLN:O	33:AZ:53:ILE:HB	2.14	0.47
34:B2:15:GLU:H	34:B2:121:ARG:HB2	1.79	0.47
34:B2:138:ARG:NH2	35:BA:506:G:C4'	2.75	0.47
35:BA:152:A:N6	35:BA:170:U:C2	2.82	0.47
35:BA:238:G:O2'	35:BA:239:U:H5'	2.14	0.47
35:BA:413:G:O6	38:BD:35:ARG:HD3	2.15	0.47
35:BA:961:U:O2'	35:BA:962:C:O5'	2.29	0.47
35:BA:1097:C:C2'	35:BA:1098:C:H5'	2.44	0.47
35:BA:1350:A:N7	43:BI:118:LYS:NZ	2.62	0.47
35:BA:1442:G:H1	35:BA:1461:G:H21	1.61	0.47
35:BA:1504:G:OP1	35:BA:1507:A:H4'	2.14	0.47
36:BB:8:LYS:C	36:BB:10:LEU:N	2.73	0.47
38:BD:99:SER:O	38:BD:140:VAL:HG23	2.13	0.47
41:BG:44:TYR:O	41:BG:45:ASP:C	2.55	0.47
42:BH:87:SER:HA	42:BH:93:VAL:HG23	1.95	0.47
44:BJ:96:ILE:N	44:BJ:96:ILE:CD1	2.76	0.47
47:BM:35:GLU:CG	47:BM:36:LYS:N	2.73	0.47
49:BO:85:LEU:HD23	49:BO:85:LEU:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BP:39:TYR:HH	50:BP:41:PRO:HA	1.78	0.47
51:BQ:20:THR:HG21	51:BQ:41:LYS:HD2	1.97	0.47
56:BW:4:G:HO2'	56:BW:5:G:H8	1.62	0.47
59:BZ:16:THR:HB	59:BZ:79:HIS:HE2	1.78	0.47
59:BZ:231:ILE:HG13	59:BZ:237:VAL:HG21	1.96	0.47
59:BZ:345:ARG:NH1	59:BZ:384:LEU:HD21	2.29	0.47
5:A4:25:TYR:O	17:AG:105:LYS:NZ	2.47	0.47
9:A8:61:LEU:CD1	9:A8:61:LEU:N	2.57	0.47
11:AA:144:C:H2'	11:AA:145:G:H8	1.80	0.47
11:AA:218:A:C2	11:AA:235:U:H4'	2.50	0.47
11:AA:251:A:H5"	23:AP:51:PHE:CZ	2.49	0.47
11:AA:325:G:H2'	11:AA:326:G:C8	2.50	0.47
11:AA:825:C:H4'	11:AA:2428:G:C5	2.49	0.47
11:AA:1106:G:O2'	11:AA:1107:G:H5'	2.14	0.47
11:AA:1131:G:O6	11:AA:2040:C:H1'	2.14	0.47
11:AA:2340:G:H2'	11:AA:2341:G:H8	1.79	0.47
11:AA:2680:C:H5'	15:AE:189:PRO:HA	1.95	0.47
11:AA:2788:C:O2'	11:AA:2809:A:N3	2.44	0.47
15:AE:59:VAL:HG13	15:AE:60:ASN:N	2.30	0.47
17:AG:39:ILE:CG1	17:AG:92:VAL:HG12	2.44	0.47
17:AG:39:ILE:CG2	17:AG:157:ILE:HG12	2.38	0.47
22:AO:107:ARG:HH12	27:AT:35:LYS:CG	2.28	0.47
23:AP:91:PHE:O	23:AP:121:LYS:NZ	2.39	0.47
26:AS:28:VAL:HG12	26:AS:29:PHE:N	2.30	0.47
29:AV:4:ILE:HG22	29:AV:39:LEU:HD23	1.96	0.47
29:AV:37:VAL:HG23	29:AV:37:VAL:O	2.13	0.47
33:AZ:60:GLU:O	33:AZ:65:GLN:O	2.33	0.47
35:BA:61:G:H2'	35:BA:62:U:O4'	2.14	0.47
35:BA:430:A:OP2	38:BD:22:LYS:HE2	2.14	0.47
35:BA:1366:C:O3'	44:BJ:60:ARG:NH2	2.48	0.47
37:BC:150:LYS:CE	37:BC:167:TRP:HE1	2.26	0.47
38:BD:59:ARG:HA	38:BD:59:ARG:NE	2.23	0.47
38:BD:120:LEU:O	38:BD:125:HIS:HB2	2.14	0.47
38:BD:165:MET:HE3	38:BD:176:LEU:CD2	2.39	0.47
40:BF:52:ILE:O	40:BF:53:ALA:HB3	2.14	0.47
44:BJ:12:ASP:C	44:BJ:14:LYS:H	2.23	0.47
47:BM:15:VAL:O	47:BM:19:LEU:HD23	2.13	0.47
48:BN:26:ARG:HD3	48:BN:43:CYS:HB3	1.95	0.47
56:BW:62:C:H2'	56:BW:63:C:H5'	1.95	0.47
58:BY:2:G:P	59:BZ:90:LYS:HD2	2.54	0.47
59:BZ:72:THR:HG21	59:BZ:77:TYR:CE2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A4:43:TYR:O	5:A4:44:THR:HB	2.13	0.47
10:A9:7:VAL:HG13	10:A9:34:GLN:CG	2.37	0.47
11:AA:57:C:H2'	11:AA:58:G:O4'	2.14	0.47
11:AA:212:G:C2'	11:AA:213:A:H5'	2.45	0.47
11:AA:248:G:H5"	11:AA:386:G:N2	2.29	0.47
11:AA:1155:A:OP2	28:AU:58:ARG:NH1	2.47	0.47
11:AA:1344:G:O2'	11:AA:1385:G:H2'	2.14	0.47
11:AA:1487:G:O6	11:AA:1502:C:N4	2.46	0.47
11:AA:1665:A:H2'	11:AA:1666:G:C5'	2.45	0.47
11:AA:2141:G:H2'	11:AA:2142:C:O4'	2.15	0.47
11:AA:2516:G:C6	11:AA:2517:C:N4	2.83	0.47
11:AA:2832:U:H4'	11:AA:2833:G:H5"	1.95	0.47
12:AB:70:C:O2'	12:AB:71:C:H5'	2.15	0.47
13:AC:86:ALA:HB3	13:AC:94:VAL:HG13	1.95	0.47
13:AC:114:VAL:HG21	13:AC:153:ILE:HD11	1.95	0.47
13:AC:177:LYS:O	13:AC:185:LEU:HD21	2.13	0.47
16:AF:118:ALA:C	16:AF:120:GLU:N	2.68	0.47
17:AG:174:GLU:O	17:AG:176:LEU:N	2.40	0.47
18:AH:148:ILE:HG22	18:AH:162:ILE:HD11	1.96	0.47
21:AN:29:LYS:O	21:AN:30:ILE:C	2.57	0.47
21:AN:94:HIS:HA	21:AN:96:GLU:OE2	2.14	0.47
22:AO:35:VAL:HG23	22:AO:69:ILE:HD11	1.97	0.47
25:AR:54:LEU:O	25:AR:57:ARG:HG3	2.14	0.47
25:AR:97:VAL:O	25:AR:97:VAL:HG12	2.14	0.47
29:AV:89:GLN:OE1	29:AV:90:PRO:CD	2.63	0.47
34:B2:124:LYS:O	34:B2:124:LYS:CD	2.63	0.47
35:BA:413:G:H1'	35:BA:428:G:N2	2.28	0.47
35:BA:427:U:C4	35:BA:428:G:C6	3.02	0.47
35:BA:1028:C:H2'	35:BA:1029:C:H5'	1.95	0.47
35:BA:1436:U:H2'	35:BA:1437:C:O4'	2.15	0.47
36:BB:163:PHE:HD1	36:BB:185:ILE:CG1	2.23	0.47
38:BD:127:THR:HG23	38:BD:131:ARG:O	2.13	0.47
38:BD:153:ARG:C	38:BD:155:LEU:N	2.70	0.47
43:BI:100:GLY:C	43:BI:102:LEU:H	2.23	0.47
44:BJ:82:ILE:O	44:BJ:86:MET:CB	2.57	0.47
45:BK:38:ASN:HD22	45:BK:38:ASN:N	2.13	0.47
47:BM:41:PRO:O	47:BM:42:ALA:O	2.32	0.47
51:BQ:76:LEU:HD11	51:BQ:78:GLU:O	2.14	0.47
56:BV:69:C:H2'	56:BV:70:C:C6	2.49	0.47
2:A1:76:ARG:HD2	11:AA:271(R):G:OP1	2.15	0.47
3:A2:2:LYS:HD2	3:A2:5:GLU:OE2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:146:G:C2'	11:AA:147:U:H5'	2.44	0.47
11:AA:894:C:H2'	11:AA:895:U:C5'	2.45	0.47
11:AA:1051:G:H2'	11:AA:1052:C:C2	2.50	0.47
11:AA:1401:G:H2'	11:AA:1402:C:O4'	2.14	0.47
11:AA:2646:C:OP2	11:AA:2732:G:O2'	2.25	0.47
11:AA:2852:G:H2'	11:AA:2853:C:H6	1.76	0.47
15:AE:1:MET:O	15:AE:2:LYS:C	2.57	0.47
24:AQ:51:ARG:O	24:AQ:54:MET:CB	2.62	0.47
24:AQ:120:ILE:O	24:AQ:121:ALA:C	2.58	0.47
26:AS:49:VAL:HG11	26:AS:73:LEU:HD21	1.97	0.47
28:AU:115:ALA:C	28:AU:117:GLN:N	2.67	0.47
33:AZ:33:LEU:HD11	33:AZ:35:ARG:HG2	1.96	0.47
33:AZ:77:ASP:HB2	33:AZ:82:ARG:O	2.14	0.47
35:BA:1165:C:O2'	35:BA:1166:G:H5'	2.15	0.47
35:BA:1290:G:H2'	35:BA:1290:G:N3	2.30	0.47
35:BA:1391:U:H2'	35:BA:1392:G:H8	1.74	0.47
35:BA:1426:C:O2'	35:BA:1427:U:H5'	2.15	0.47
38:BD:61:LYS:C	38:BD:61:LYS:HD3	2.38	0.47
41:BG:69:VAL:HG21	41:BG:104:LEU:HD21	1.97	0.47
41:BG:145:ALA:O	41:BG:146:GLU:C	2.56	0.47
42:BH:11:THR:HG23	42:BH:14:ARG:NH1	2.30	0.47
43:BI:77:ILE:O	43:BI:81:ILE:HG12	2.14	0.47
43:BI:110:GLU:OE2	43:BI:113:LYS:NZ	2.40	0.47
48:BN:26:ARG:HG3	48:BN:39:LEU:CD2	2.44	0.47
49:BO:55:GLY:O	49:BO:59:MET:HG3	2.13	0.47
56:BW:22:A:N6	56:BW:47:G:H2'	2.29	0.47
59:BZ:68:VAL:CG2	59:BZ:79:HIS:HB3	2.42	0.47
59:BZ:135:MET:HE3	59:BZ:172:ARG:HG2	1.97	0.47
59:BZ:209:TYR:O	59:BZ:211:PRO:HD3	2.15	0.47
1:A0:51:VAL:CG2	1:A0:81:VAL:HG23	2.44	0.47
5:A4:46:GLN:NE2	5:A4:47:GLN:H	2.12	0.47
7:A6:15:GLU:HB2	7:A6:20:ASN:CB	2.43	0.47
7:A6:45:LYS:O	7:A6:46:HIS:CB	2.55	0.47
10:A9:31:LYS:HE3	11:AA:2528:U:H5"	1.95	0.47
11:AA:118:A:OP2	11:AA:119:A:H2'	2.14	0.47
11:AA:139:G:H2'	11:AA:139(A):G:H5"	1.96	0.47
11:AA:654(T):C:H2'	11:AA:654(U):A:O4'	2.14	0.47
11:AA:709:U:H2'	11:AA:710:G:C8	2.50	0.47
11:AA:749:C:O2	11:AA:1618:A:H2'	2.15	0.47
11:AA:1041:G:O2'	11:AA:1042:G:H5'	2.14	0.47
11:AA:1062:G:C2	11:AA:1063:G:H1'	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1066:U:C4	58:BY:56:U:H5”	2.49	0.47
11:AA:1434:A:H2’	11:AA:1435:G:H8	1.79	0.47
11:AA:1475:G:C2	11:AA:1517:G:C4	3.03	0.47
11:AA:1494:A:H2’	11:AA:1495:A:C5’	2.43	0.47
11:AA:1821:A:OP1	14:AD:201:HIS:NE2	2.48	0.47
11:AA:2307:G:C2	11:AA:2308:G:H5”	2.49	0.47
11:AA:2511:U:H4’	15:AE:124:GLY:HA3	1.91	0.47
11:AA:2720:U:C5’	11:AA:2721:A:OP2	2.62	0.47
11:AA:2789:C:H1’	11:AA:2892:A:H2	1.74	0.47
11:AA:2823:A:OP1	15:AE:113:PHE:HB2	2.14	0.47
13:AC:18:LYS:O	13:AC:20:TYR:CD1	2.67	0.47
13:AC:44:HIS:O	13:AC:213:TYR:N	2.48	0.47
13:AC:119:VAL:O	13:AC:123:VAL:CG1	2.63	0.47
13:AC:120:MET:HA	13:AC:123:VAL:HG12	1.97	0.47
14:AD:145:VAL:HG12	14:AD:146:GLU:O	2.15	0.47
15:AE:117:MET:HA	15:AE:122:PHE:H	1.80	0.47
17:AG:34:LEU:C	17:AG:34:LEU:HD12	2.39	0.47
18:AH:49:VAL:O	18:AH:50:VAL:CG2	2.62	0.47
21:AN:15:LEU:HD13	21:AN:15:LEU:C	2.39	0.47
24:AQ:12:GLN:HG2	24:AQ:73:PRO:HD2	1.96	0.47
24:AQ:54:MET:HG2	24:AQ:64:ILE:HD13	1.97	0.47
25:AR:20:LEU:O	25:AR:24:GLN:HG3	2.14	0.47
26:AS:24:LEU:CD1	26:AS:41:ASP:HB2	2.29	0.47
27:AT:35:LYS:HE2	27:AT:41:ARG:HG3	1.95	0.47
27:AT:92:GLY:C	27:AT:94:ALA:N	2.67	0.47
31:AX:12:VAL:HG12	31:AX:27:THR:H	1.79	0.47
32:AY:88:LYS:HB2	32:AY:91:GLU:HB2	1.96	0.47
35:BA:28:G:O2’	35:BA:296:U:OP1	2.31	0.47
35:BA:189(B):C:H2’	35:BA:189(C):C:C6	2.50	0.47
35:BA:254:G:OP1	51:BQ:67:LYS:O	2.32	0.47
35:BA:375:U:O2’	50:BP:28:ARG:HD2	2.15	0.47
35:BA:427:U:OP1	38:BD:13:ARG:NH2	2.48	0.47
35:BA:432:A:H2’	35:BA:433:C:H5’	1.97	0.47
35:BA:605:U:O2’	35:BA:606:G:H5’	2.14	0.47
35:BA:719:C:O2	52:BR:50:ILE:HG12	2.15	0.47
35:BA:1168:A:N1	35:BA:1169:A:C2	2.83	0.47
36:BB:60:ASP:CG	36:BB:64:ARG:NH2	2.73	0.47
36:BB:142:LEU:CD2	36:BB:146:GLN:HE21	2.28	0.47
37:BC:53:ALA:O	37:BC:54:ARG:CB	2.63	0.47
38:BD:88:VAL:O	38:BD:92:VAL:HG23	2.13	0.47
39:BE:89:ILE:HG23	39:BE:89:ILE:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:147:ASP:HA	39:BE:150:ARG:CB	2.41	0.47
40:BF:87:ARG:NH1	40:BF:87:ARG:CG	2.77	0.47
41:BG:107:ALA:C	41:BG:109:ASN:H	2.22	0.47
44:BJ:78:ASN:O	44:BJ:82:ILE:HG12	2.15	0.47
47:BM:49:THR:C	47:BM:51:ALA:N	2.67	0.47
47:BM:71:ARG:O	47:BM:74:VAL:HG23	2.15	0.47
54:BT:15:ARG:O	54:BT:19:SER:HB2	2.14	0.47
54:BT:26:ASN:HD22	54:BT:26:ASN:C	2.21	0.47
54:BT:59:ALA:O	54:BT:60:GLU:C	2.57	0.47
56:BW:31:G:H2'	56:BW:32:G:H8	1.80	0.47
59:BZ:84:GLY:HA3	59:BZ:88:TYR:HB2	1.96	0.47
59:BZ:251:ASP:O	59:BZ:266:VAL:HG13	2.14	0.47
59:BZ:290:LEU:HD11	59:BZ:304:LEU:HD21	1.95	0.47
59:BZ:337:GLY:O	59:BZ:338:TYR:C	2.57	0.47
7:A6:7:ILE:HG22	7:A6:27:LYS:NZ	2.29	0.47
11:AA:271(U):G:H2'	11:AA:271(V):G:C8	2.49	0.47
11:AA:363(F):A:O2'	11:AA:364:C:C6	2.68	0.47
11:AA:882:G:N2	11:AA:894:C:H42	2.12	0.47
11:AA:1804:C:H6	11:AA:1804:C:O5'	1.98	0.47
11:AA:1929:G:H4'	11:AA:1930:G:OP1	2.15	0.47
11:AA:2009:G:H4'	30:AW:40:ASN:ND2	2.30	0.47
11:AA:2123:G:H1'	13:AC:172:HIS:CB	2.45	0.47
11:AA:2360:A:C2	11:AA:2361:A:H1'	2.50	0.47
11:AA:2657:A:O2'	18:AH:160:LYS:HE2	2.15	0.47
11:AA:2702:U:H4'	11:AA:2703:C:OP1	2.13	0.47
11:AA:2832:U:O4	11:AA:2883:A:H5"	2.14	0.47
11:AA:2870:C:H2'	11:AA:2871:C:O4'	2.15	0.47
12:AB:7:G:O5'	26:AS:29:PHE:HE2	1.98	0.47
13:AC:136:LEU:C	56:BW:57:C:H41	2.22	0.47
13:AC:137:LEU:CD2	56:BW:56:U:O2'	2.63	0.47
13:AC:139:ASN:HB3	13:AC:142:ALA:HB2	1.96	0.47
14:AD:44:ASN:HD22	14:AD:49:ILE:CG2	2.28	0.47
14:AD:83:GLU:O	14:AD:92:ILE:HD13	2.15	0.47
14:AD:146:GLU:HG2	14:AD:152:GLY:O	2.14	0.47
16:AF:129:PHE:O	16:AF:130:ALA:C	2.56	0.47
17:AG:103:LEU:HA	17:AG:106:LEU:HB3	1.97	0.47
18:AH:105:LEU:N	18:AH:105:LEU:HD23	2.30	0.47
23:AP:114:ILE:HG21	23:AP:130:PHE:CD2	2.49	0.47
28:AU:66:ASN:O	28:AU:67:ALA:C	2.56	0.47
32:AY:50:ARG:NH2	32:AY:55:TYR:HB3	2.28	0.47
33:AZ:108:PRO:HA	33:AZ:141:VAL:HG11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:37:U:O2'	35:BA:38:G:H5'	2.15	0.47
35:BA:173:U:H5"	35:BA:197:A:O4'	2.15	0.47
35:BA:175:C:H4'	54:BT:25:ARG:NH1	2.30	0.47
35:BA:287:U:O2'	35:BA:288:A:H5'	2.15	0.47
35:BA:375:U:C2	35:BA:376:G:C8	3.02	0.47
35:BA:382:A:H2'	35:BA:383:A:H8	1.78	0.47
36:BB:24:TRP:CH2	36:BB:26:PRO:HA	2.49	0.47
36:BB:36:ARG:H	36:BB:41:ILE:HD13	1.80	0.47
36:BB:110:GLN:O	36:BB:113:HIS:HB2	2.14	0.47
37:BC:94:LEU:C	37:BC:94:LEU:HD12	2.40	0.47
38:BD:65:ARG:O	38:BD:67:ILE:N	2.48	0.47
38:BD:196:LEU:CG	38:BD:197:PRO:HD2	2.43	0.47
39:BE:31:LEU:HB2	39:BE:45:PHE:CD1	2.49	0.47
46:BL:34:ARG:HG2	46:BL:35:GLY:N	2.30	0.47
47:BM:15:VAL:C	47:BM:17:VAL:N	2.70	0.47
59:BZ:303:VAL:HG12	59:BZ:304:LEU:N	2.30	0.47
3:A2:37:PHE:O	3:A2:41:ILE:HG23	2.15	0.47
3:A2:69:ARG:O	3:A2:70:GLN:CB	2.63	0.47
6:A5:33:CYS:SG	6:A5:35:GLU:HB2	2.55	0.47
6:A5:53:ALA:O	6:A5:56:LYS:NZ	2.47	0.47
7:A6:29:ASN:O	7:A6:30:THR:C	2.57	0.47
11:AA:1043:C:OP2	11:AA:1043:C:H6	1.97	0.47
11:AA:1090:U:C4	11:AA:1102:C:H1'	2.49	0.47
11:AA:1332:G:H4'	11:AA:1333:C:OP2	2.15	0.47
11:AA:1639:U:H2'	11:AA:1640:C:C5'	2.42	0.47
11:AA:2120:G:H21	13:AC:167:LYS:HZ1	1.62	0.47
14:AD:201:HIS:O	14:AD:204:ILE:HG12	2.15	0.47
15:AE:64:LYS:C	15:AE:66:HIS:H	2.22	0.47
15:AE:101:ARG:HB3	15:AE:169:ASN:HD22	1.79	0.47
18:AH:46:GLU:OE1	18:AH:50:VAL:HG13	2.15	0.47
18:AH:68:THR:C	18:AH:70:THR:H	2.22	0.47
18:AH:130:ARG:HB3	18:AH:130:ARG:NH1	2.30	0.47
23:AP:47:ASP:CB	23:AP:48:PRO:CA	2.77	0.47
24:AQ:35:VAL:CG2	24:AQ:36:ALA:N	2.78	0.47
24:AQ:75:THR:HG21	24:AQ:87:LYS:HG2	1.97	0.47
25:AR:7:GLY:CA	25:AR:8:ARG:NH2	2.78	0.47
26:AS:28:VAL:HB	26:AS:89:ARG:HB2	1.97	0.47
26:AS:88:ASP:OD1	26:AS:89:ARG:N	2.48	0.47
26:AS:106:ARG:HH11	26:AS:106:ARG:C	2.22	0.47
27:AT:129:ARG:NH1	27:AT:131:ALA:HB3	2.30	0.47
31:AX:30:VAL:HG11	31:AX:39:ILE:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B2:142:GLU:OE1	38:BD:49:ARG:HA	2.15	0.47
35:BA:106:C:H2'	35:BA:107:G:H8	1.79	0.47
35:BA:1118:C:H2'	35:BA:1119:C:H6	1.80	0.47
35:BA:1175:G:O2'	35:BA:1176:A:H5'	2.15	0.47
35:BA:1299:A:O2'	35:BA:1300:G:H4'	2.15	0.47
36:BB:105:PHE:O	36:BB:106:LYS:C	2.58	0.47
36:BB:142:LEU:HD21	36:BB:146:GLN:HE21	1.80	0.47
36:BB:167:PRO:HG2	36:BB:192:SER:CB	2.44	0.47
38:BD:62:GLN:HA	38:BD:62:GLN:NE2	2.11	0.47
38:BD:189:PRO:HB2	38:BD:194:LEU:CD2	2.22	0.47
40:BF:45:LEU:HD12	40:BF:46:ARG:N	2.29	0.47
47:BM:15:VAL:CG2	47:BM:34:LEU:HD11	2.44	0.47
49:BO:26:GLU:HG3	49:BO:77:ARG:NH1	2.30	0.47
50:BP:58:TYR:HD1	50:BP:59:TRP:N	2.12	0.47
53:BS:47:HIS:O	53:BS:62:ILE:HG22	2.14	0.47
56:BV:35:C:O5'	56:BV:35:C:H6	1.98	0.47
56:BV:54:G:H2'	56:BV:55:U:H6	1.79	0.47
56:BV:77:A:OP1	56:BV:77:A:H4'	2.15	0.47
1:A0:40:GLN:NE2	1:A0:43:THR:CA	2.68	0.47
1:A0:72:ARG:HH11	1:A0:75:LEU:HD13	1.80	0.47
3:A2:47:ASN:HA	3:A2:50:ILE:HD13	1.97	0.47
3:A2:65:ASN:C	3:A2:67:LYS:H	2.22	0.47
8:A7:8:ASN:HB3	8:A7:11:LYS:HB3	1.96	0.47
10:A9:16:VAL:HG11	11:AA:1032:A:O3'	2.15	0.47
11:AA:70:G:H2'	11:AA:113:G:O2'	2.15	0.47
11:AA:104:U:H2'	11:AA:105:C:H5'	1.97	0.47
11:AA:628:G:O2'	11:AA:629:G:H5"	2.14	0.47
11:AA:2287:A:N6	11:AA:2344:U:N3	2.59	0.47
11:AA:2494:G:O2'	24:AQ:80:GLU:HA	2.15	0.47
11:AA:2533:A:O2'	11:AA:2534:A:H5'	2.15	0.47
14:AD:263:ARG:HB2	14:AD:263:ARG:CZ	2.44	0.47
23:AP:75:ILE:O	23:AP:77:ARG:N	2.47	0.47
32:AY:54:LYS:O	32:AY:55:TYR:CB	2.57	0.47
33:AZ:133:ILE:N	33:AZ:134:PRO:HD3	2.29	0.47
34:B2:24:ILE:N	34:B2:24:ILE:CD1	2.75	0.47
34:B2:46:ALA:CB	34:B2:55:LEU:HD12	2.32	0.47
34:B2:110:ARG:NH1	58:BY:17:C:OP1	2.48	0.47
35:BA:8:A:H62	38:BD:208:SER:HB2	1.80	0.47
35:BA:77:G:N3	35:BA:77:G:H2'	2.30	0.47
35:BA:99:U:H2'	35:BA:100:C:C6	2.50	0.47
35:BA:645:C:O2'	35:BA:646:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:681:C:O2'	35:BA:682:G:H5'	2.14	0.47
35:BA:1129:C:N4	35:BA:1135:U:H3	2.12	0.47
35:BA:1187:G:H3'	35:BA:1188:A:H8	1.80	0.47
35:BA:1498:U:C4'	35:BA:1519:A:H2	2.25	0.47
37:BC:178:LEU:C	37:BC:180:ALA:N	2.71	0.47
38:BD:111:ALA:C	38:BD:113:SER:H	2.22	0.47
38:BD:194:LEU:N	38:BD:194:LEU:HD22	2.30	0.47
39:BE:107:ARG:HG2	39:BE:108:ALA:N	2.30	0.47
44:BJ:30:SER:HB2	44:BJ:80:LYS:NZ	2.29	0.47
44:BJ:47:PHE:CE1	48:BN:37:PHE:HE1	2.33	0.47
47:BM:119:GLY:O	47:BM:120:LYS:O	2.33	0.47
59:BZ:316:PHE:CE1	59:BZ:372:VAL:CG2	2.98	0.47
1:A0:11:ARG:CB	1:A0:11:ARG:NH1	2.67	0.46
11:AA:99:U:C3'	11:AA:100:G:H5'	2.45	0.46
11:AA:102:G:H4'	11:AA:102:G:OP1	2.15	0.46
11:AA:231:C:O2'	11:AA:232:G:H5'	2.14	0.46
11:AA:384:U:H2'	11:AA:385:C:H6	1.80	0.46
11:AA:855:G:H2'	11:AA:856:C:C6	2.49	0.46
11:AA:1057:A:O2'	11:AA:1058:G:H5'	2.14	0.46
11:AA:1141:U:O5'	21:AN:63:THR:HG21	2.15	0.46
11:AA:2822:G:OP2	15:AE:110:GLY:O	2.33	0.46
15:AE:76:ARG:O	15:AE:77:ILE:O	2.33	0.46
16:AF:10:PRO:HB3	16:AF:127:GLU:CB	2.45	0.46
25:AR:27:SER:CA	25:AR:30:THR:HG22	2.43	0.46
29:AV:40:LEU:CD2	29:AV:40:LEU:N	2.78	0.46
32:AY:26:LYS:O	32:AY:27:VAL:O	2.32	0.46
32:AY:27:VAL:HG12	32:AY:28:LYS:N	2.29	0.46
35:BA:9:G:OP1	39:BE:122:GLU:HG3	2.15	0.46
35:BA:266:G:C5'	35:BA:267:C:C5	2.96	0.46
35:BA:833:U:H2'	35:BA:834:C:H6	1.79	0.46
35:BA:1283:G:O2'	35:BA:1284:C:C6	2.65	0.46
38:BD:31:CYS:C	38:BD:33:MET:N	2.71	0.46
39:BE:6:PHE:CB	39:BE:34:VAL:HG22	2.43	0.46
44:BJ:98:ILE:O	44:BJ:99:LYS:HD3	2.15	0.46
45:BK:82:VAL:HG13	45:BK:108:ILE:CA	2.39	0.46
47:BM:57:ARG:C	47:BM:59:TYR:H	2.22	0.46
51:BQ:86:GLU:O	51:BQ:87:LYS:C	2.58	0.46
54:BT:23:ARG:O	54:BT:27:LYS:HB2	2.15	0.46
56:BV:40:C:H2'	56:BV:41:C:C6	2.51	0.46
56:BW:15:G:O2'	56:BW:21:U:C5	2.68	0.46
2:A1:17:SER:HB3	2:A1:38:SER:HB2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:16:LEU:C	3:A2:17:SER:HG	2.20	0.46
11:AA:528:A:N1	11:AA:2043:C:O5'	2.48	0.46
11:AA:598:G:H2'	11:AA:599:G:O4'	2.16	0.46
11:AA:687:C:H2'	11:AA:688:U:O4'	2.15	0.46
11:AA:1090:U:H3	11:AA:1102:C:H1'	1.80	0.46
11:AA:1588:C:H2'	11:AA:1589:C:C6	2.50	0.46
11:AA:1675:C:O2	15:AE:129:HIS:HA	2.16	0.46
11:AA:2206:G:N3	11:AA:2207:G:H5'	2.29	0.46
11:AA:2649:U:H2'	11:AA:2650:U:C6	2.51	0.46
13:AC:21:THR:HA	13:AC:225:ASN:HB2	1.97	0.46
13:AC:33:ALA:HA	13:AC:39:GLU:OE2	2.14	0.46
13:AC:137:LEU:HD22	56:BW:57:C:N3	2.29	0.46
14:AD:165:ILE:HG23	14:AD:173:VAL:CG2	2.45	0.46
14:AD:259:THR:O	14:AD:259:THR:HG22	2.15	0.46
15:AE:56:PRO:HD2	15:AE:58:ARG:NH1	2.30	0.46
16:AF:3:GLU:HA	16:AF:24:LEU:CB	2.45	0.46
17:AG:115:ARG:CG	47:BM:7:VAL:HG23	2.45	0.46
17:AG:128:ARG:O	17:AG:129:GLY:C	2.56	0.46
17:AG:170:ARG:O	17:AG:174:GLU:HB2	2.16	0.46
18:AH:68:THR:C	18:AH:70:THR:N	2.72	0.46
18:AH:105:LEU:HD23	18:AH:105:LEU:H	1.81	0.46
21:AN:55:VAL:O	21:AN:56:ASN:C	2.57	0.46
21:AN:125:GLY:CA	21:AN:126:PRO:O	2.63	0.46
21:AN:131:GLN:HE22	21:AN:133:GLN:N	2.11	0.46
22:AO:98:VAL:HG13	22:AO:117:LEU:HB3	1.97	0.46
27:AT:27:THR:HA	27:AT:87:ASP:CB	2.44	0.46
27:AT:65:LYS:HE3	27:AT:66:VAL:HG22	1.97	0.46
27:AT:65:LYS:HG3	27:AT:66:VAL:N	2.29	0.46
28:AU:91:ASP:O	28:AU:95:LEU:HB2	2.15	0.46
28:AU:102:GLU:HG3	29:AV:2:PHE:CZ	2.50	0.46
29:AV:47:VAL:O	29:AV:48:GLY:C	2.58	0.46
30:AW:17:VAL:C	30:AW:19:LEU:N	2.71	0.46
30:AW:36:LEU:HD11	30:AW:48:ALA:HA	1.96	0.46
32:AY:87:LYS:HG3	32:AY:88:LYS:N	2.26	0.46
35:BA:385:C:O2'	35:BA:386:C:H5'	2.15	0.46
35:BA:644:G:O2'	35:BA:645:C:H5'	2.16	0.46
35:BA:736:C:H2'	35:BA:737:A:H8	1.77	0.46
35:BA:939:G:H5"	41:BG:102:ARG:HH22	1.78	0.46
35:BA:1054:C:C2'	35:BA:1054:C:O2	2.63	0.46
35:BA:1152:A:OP1	44:BJ:68:HIS:CD2	2.69	0.46
36:BB:97:TRP:CZ3	36:BB:176:GLU:OE2	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:6:HIS:NE2	37:BC:184:TYR:CE2	2.79	0.46
38:BD:127:THR:HG23	38:BD:128:VAL:H	1.80	0.46
41:BG:78:ARG:O	41:BG:78:ARG:HG3	2.13	0.46
49:BO:50:HIS:O	49:BO:53:HIS:HB3	2.15	0.46
49:BO:79:ARG:HA	49:BO:82:ILE:CG2	2.45	0.46
51:BQ:83:ASP:CG	51:BQ:84:LEU:N	2.73	0.46
56:BW:48:U:H3'	56:BW:49:C:H5'	1.96	0.46
59:BZ:141:VAL:HG23	59:BZ:141:VAL:O	2.15	0.46
59:BZ:145:GLU:CG	59:BZ:149:LEU:HB2	2.43	0.46
7:A6:35:GLU:OE1	7:A6:35:GLU:HA	2.15	0.46
9:A8:23:VAL:HG11	9:A8:46:ARG:HD3	1.97	0.46
10:A9:18:ARG:HD2	11:AA:1034:G:H5'	1.97	0.46
11:AA:285:C:O2'	11:AA:286:C:H5'	2.15	0.46
11:AA:363(D):G:H2'	11:AA:363(D):G:N3	2.30	0.46
11:AA:654(H):G:C3'	11:AA:654(I):C:H5'	2.45	0.46
11:AA:693:C:O2'	11:AA:694:U:H5'	2.16	0.46
11:AA:1081:U:H5"	20:AK:122:UNK:CB	2.46	0.46
11:AA:1531:C:H42	11:AA:1538:G:H1	1.63	0.46
11:AA:1639:U:H4'	11:AA:2699:C:H4'	1.96	0.46
11:AA:1719:G:H2'	11:AA:1720:U:H5'	1.96	0.46
11:AA:1952:A:C6	11:AA:1953:A:N1	2.83	0.46
11:AA:2533:A:C2'	11:AA:2534:A:H5'	2.45	0.46
11:AA:2762:G:H2'	11:AA:2763:G:C5'	2.44	0.46
13:AC:59:ARG:HG2	13:AC:60:GLY:H	1.79	0.46
16:AF:200:GLU:C	16:AF:202:PHE:N	2.70	0.46
18:AH:49:VAL:C	18:AH:50:VAL:CG2	2.87	0.46
18:AH:102:ALA:HA	18:AH:117:PRO:HD3	1.98	0.46
24:AQ:137:TYR:CZ	33:AZ:81:ARG:CZ	2.98	0.46
25:AR:117:VAL:CG2	25:AR:118:GLU:N	2.79	0.46
27:AT:28:VAL:O	27:AT:29:ARG:CG	2.63	0.46
28:AU:24:TYR:HB2	28:AU:29:SER:HB3	1.98	0.46
28:AU:90:VAL:HG13	29:AV:39:LEU:HG	1.98	0.46
33:AZ:24:LEU:HD22	33:AZ:25:PRO:O	2.16	0.46
33:AZ:166:SER:OG	33:AZ:168:GLU:N	2.49	0.46
34:B2:43:GLY:O	34:B2:57:ASN:ND2	2.46	0.46
34:B2:45:PHE:HE2	34:B2:47:ARG:CZ	2.29	0.46
34:B2:95:GLN:CA	34:B2:95:GLN:NE2	2.77	0.46
35:BA:486:U:H2'	35:BA:487:A:C8	2.50	0.46
35:BA:532:A:N6	35:BA:1206:G:O2'	2.49	0.46
35:BA:966:G:O2'	35:BA:967:C:O5'	2.32	0.46
35:BA:982:U:O2'	35:BA:983:A:OP2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1097:C:O2	35:BA:1169:A:H2	1.98	0.46
36:BB:71:VAL:HG13	36:BB:93:VAL:HG13	1.97	0.46
36:BB:97:TRP:HH2	36:BB:176:GLU:CD	2.23	0.46
37:BC:6:HIS:NE2	37:BC:184:TYR:CD2	2.80	0.46
37:BC:34:LEU:CD2	37:BC:38:ARG:NE	2.77	0.46
37:BC:43:LEU:O	37:BC:47:LEU:HB2	2.14	0.46
37:BC:84:ILE:O	37:BC:88:ARG:HG3	2.15	0.46
38:BD:29:PRO:C	38:BD:30:LYS:HG2	2.39	0.46
38:BD:57:ARG:HB3	38:BD:206:PHE:HB2	1.96	0.46
39:BE:107:ARG:C	39:BE:109:ILE:H	2.24	0.46
39:BE:107:ARG:C	39:BE:109:ILE:N	2.73	0.46
41:BG:15:ASP:HB2	41:BG:23:VAL:HB	1.97	0.46
41:BG:53:LYS:CB	41:BG:125:MET:HE1	2.45	0.46
43:BI:126:SER:O	43:BI:128:ARG:HD2	2.14	0.46
46:BL:117:ARG:O	46:BL:118:SER:C	2.55	0.46
47:BM:87:TYR:O	47:BM:89:GLY:N	2.48	0.46
48:BN:29:ARG:HG3	48:BN:29:ARG:NH1	2.18	0.46
51:BQ:7:THR:O	51:BQ:23:VAL:HG13	2.16	0.46
56:BV:36:A:O2'	56:BV:37:U:H5'	2.14	0.46
56:BW:57:C:C2'	56:BW:57:C:O2	2.61	0.46
59:BZ:119:HIS:O	59:BZ:120:ILE:C	2.58	0.46
59:BZ:131:ILE:O	59:BZ:131:ILE:HG22	2.14	0.46
59:BZ:315:LYS:HB2	59:BZ:405:GLU:CG	2.21	0.46
59:BZ:322:ILE:HD13	59:BZ:334:PHE:CE2	2.51	0.46
3:A2:33:MET:CE	31:AX:5:TYR:HD2	2.28	0.46
3:A2:59:ARG:HA	3:A2:62:THR:OG1	2.15	0.46
6:A5:2:ALA:CA	11:AA:2015:A:C1'	2.81	0.46
10:A9:26:ILE:HG22	10:A9:27:CYS:N	2.30	0.46
11:AA:221:A:O2'	11:AA:222:A:OP2	2.28	0.46
11:AA:534:U:H2'	11:AA:535:C:C6	2.51	0.46
11:AA:1006:C:C2	11:AA:1138:G:N2	2.83	0.46
11:AA:1049:C:H2'	11:AA:1050:A:H8	1.80	0.46
11:AA:1071:G:N2	11:AA:1091:G:N7	2.63	0.46
11:AA:1447:G:C6	11:AA:1448:G:N7	2.84	0.46
11:AA:1654:A:OP1	25:AR:3:HIS:HB2	2.14	0.46
11:AA:2161:C:H2'	11:AA:2162:G:C8	2.50	0.46
11:AA:2270:G:H2'	11:AA:2271:G:O4'	2.16	0.46
11:AA:2796:U:C2'	11:AA:2799:C:H5'	2.46	0.46
12:AB:97:G:C2'	12:AB:98:G:H5'	2.46	0.46
15:AE:10:GLY:HA2	15:AE:192:ASN:HD21	1.81	0.46
18:AH:107:VAL:HG23	18:AH:107:VAL:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AN:24:GLY:O	21:AN:28:THR:HB	2.16	0.46
26:AS:89:ARG:CB	26:AS:92:TYR:HB3	2.44	0.46
27:AT:48:ILE:HD12	27:AT:48:ILE:H	1.78	0.46
28:AU:106:PHE:HA	28:AU:109:LEU:HD12	1.96	0.46
30:AW:70:TYR:O	30:AW:107:LEU:HA	2.16	0.46
33:AZ:125:LEU:HD12	33:AZ:126:VAL:N	2.31	0.46
33:AZ:156:LYS:HG2	33:AZ:158:PRO:HD3	1.97	0.46
34:B2:129:ARG:HD2	34:B2:129:ARG:C	2.40	0.46
35:BA:124:G:C6	35:BA:125:U:C4	3.04	0.46
35:BA:475:G:O2'	35:BA:476:G:H5'	2.16	0.46
35:BA:1280:A:O2'	35:BA:1281:U:OP1	2.31	0.46
36:BB:97:TRP:HZ2	36:BB:102:LEU:HD13	1.80	0.46
36:BB:101:MET:HB3	36:BB:152:PHE:CE2	2.49	0.46
37:BC:29:TYR:CD1	37:BC:29:TYR:C	2.93	0.46
38:BD:100:ARG:NH1	38:BD:100:ARG:HG3	2.29	0.46
39:BE:147:ASP:CA	39:BE:150:ARG:HB3	2.42	0.46
40:BF:98:LEU:HD12	40:BF:98:LEU:N	2.22	0.46
41:BG:143:ARG:O	41:BG:147:ALA:HB2	2.15	0.46
43:BI:13:ALA:HA	43:BI:67:GLY:O	2.16	0.46
45:BK:108:ILE:O	52:BR:87:ARG:N	2.41	0.46
46:BL:55:VAL:CG2	46:BL:56:ALA:N	2.78	0.46
47:BM:7:VAL:HG12	47:BM:7:VAL:O	2.15	0.46
49:BO:26:GLU:HG3	49:BO:77:ARG:HH12	1.80	0.46
56:BW:67:C:O5'	56:BW:67:C:H6	1.98	0.46
59:BZ:26:THR:O	59:BZ:29:ALA:HB3	2.16	0.46
59:BZ:75:ARG:HH12	59:BZ:210:ILE:CG2	2.28	0.46
59:BZ:324:LYS:CG	59:BZ:325:LYS:N	2.78	0.46
59:BZ:356:PRO:CG	59:BZ:359:VAL:HG21	2.45	0.46
1:A0:28:GLY:H	1:A0:66:VAL:HG13	1.80	0.46
10:A9:22:ARG:HB2	10:A9:24:TYR:HE1	1.80	0.46
11:AA:265:A:H1'	11:AA:266:G:O4'	2.15	0.46
11:AA:536:A:H5'	28:AU:53:ARG:HD3	1.97	0.46
11:AA:654(T):C:O2'	11:AA:654(U):A:H5'	2.14	0.46
11:AA:988:A:H4'	11:AA:1155:A:N1	2.30	0.46
11:AA:1411:C:H2'	11:AA:1412:A:H8	1.80	0.46
11:AA:1856:G:C2'	11:AA:1857:G:H5'	2.46	0.46
11:AA:1912:A:N6	35:BA:1408:A:H5'	2.30	0.46
11:AA:2122:U:H2'	11:AA:2123:G:H8	1.80	0.46
11:AA:2489:G:C6	11:AA:2490:G:C6	3.02	0.46
11:AA:2564:A:C2	11:AA:2647:U:H4'	2.50	0.46
11:AA:2667:C:H2'	11:AA:2668:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:16:G:O2'	12:AB:17:C:O5'	2.32	0.46
14:AD:132:PRO:HG3	14:AD:190:TYR:CE1	2.51	0.46
14:AD:155:LEU:HD23	14:AD:177:LEU:CD2	2.44	0.46
16:AF:32:LEU:HD23	16:AF:32:LEU:C	2.40	0.46
18:AH:49:VAL:C	18:AH:50:VAL:HG23	2.40	0.46
20:AK:94:UNK:O	20:AK:95:UNK:C	2.63	0.46
21:AN:119:ARG:HG3	21:AN:119:ARG:HH11	1.79	0.46
23:AP:30:THR:HG22	23:AP:31:ALA:N	2.28	0.46
23:AP:123:LEU:HD23	23:AP:123:LEU:H	1.81	0.46
24:AQ:27:VAL:O	24:AQ:29:PHE:N	2.48	0.46
24:AQ:51:ARG:O	24:AQ:54:MET:HB3	2.15	0.46
27:AT:39:ARG:CD	27:AT:39:ARG:N	2.72	0.46
32:AY:9:LYS:O	32:AY:11:ASP:N	2.48	0.46
34:B2:5:LEU:HB3	34:B2:41:PHE:HZ	1.79	0.46
35:BA:24:U:O2'	35:BA:25:C:H5'	2.16	0.46
35:BA:189(B):C:O2'	35:BA:189(C):C:H5'	2.16	0.46
35:BA:193:C:H2'	35:BA:194:C:C6	2.51	0.46
35:BA:334:C:O5'	35:BA:334:C:H6	1.97	0.46
35:BA:961:U:O2'	35:BA:962:C:P	2.73	0.46
35:BA:1256:A:C2	35:BA:1277:C:C4	2.99	0.46
36:BB:104:ASN:O	36:BB:108:ILE:HG12	2.15	0.46
37:BC:172:ARG:C	37:BC:173:VAL:HG23	2.40	0.46
38:BD:67:ILE:O	38:BD:68:TYR:CD1	2.68	0.46
39:BE:100:VAL:HG12	39:BE:118:ILE:HG22	1.98	0.46
43:BI:128:ARG:HG2	43:BI:128:ARG:OXT	2.15	0.46
46:BL:98:TYR:N	46:BL:98:TYR:CD1	2.83	0.46
50:BP:18:ARG:O	50:BP:19:ILE:C	2.57	0.46
53:BS:16:LEU:HB3	53:BS:20:LEU:HG	1.97	0.46
5:A4:14:ILE:N	5:A4:14:ILE:CD1	2.78	0.46
10:A9:9:ARG:O	10:A9:10:ILE:O	2.34	0.46
10:A9:16:VAL:O	10:A9:16:VAL:HG12	2.16	0.46
11:AA:210:C:H2'	11:AA:211:A:H8	1.81	0.46
11:AA:1048:A:N7	11:AA:1049:C:N4	2.64	0.46
11:AA:1915:U:C5'	11:AA:1915:U:C6	2.93	0.46
11:AA:2192:G:H2'	11:AA:2193:G:C5'	2.37	0.46
11:AA:2580:U:C5'	15:AE:131:ALA:N	2.78	0.46
12:AB:30:C:H4'	12:AB:58:A:H2	1.81	0.46
13:AC:45:ALA:CB	13:AC:212:VAL:HA	2.43	0.46
14:AD:25:THR:O	14:AD:26:LYS:C	2.57	0.46
14:AD:25:THR:CG2	14:AD:26:LYS:N	2.78	0.46
15:AE:111:ARG:HA	25:AR:2:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:42:GLY:O	17:AG:88:ILE:HG23	2.15	0.46
17:AG:51:ARG:CD	17:AG:53:LEU:HD21	2.44	0.46
17:AG:130:ASN:OD1	17:AG:161:THR:N	2.45	0.46
18:AH:85:LYS:O	18:AH:132:ARG:HB2	2.16	0.46
27:AT:33:LYS:HZ3	27:AT:43:GLN:HG2	1.79	0.46
28:AU:6:THR:O	28:AU:9:VAL:CG2	2.63	0.46
33:AZ:77:ASP:O	33:AZ:79:ARG:N	2.49	0.46
33:AZ:122:ARG:C	33:AZ:123:ASP:OD1	2.59	0.46
34:B2:64:GLU:OE1	46:BL:78:GLN:HA	2.15	0.46
34:B2:100:LEU:HD12	34:B2:117:LEU:HD13	1.98	0.46
35:BA:78:G:H1	35:BA:91:C:N4	2.13	0.46
35:BA:471:G:H3'	35:BA:471:G:OP2	2.15	0.46
35:BA:674:G:H2'	35:BA:675:A:C8	2.50	0.46
35:BA:790:A:H2'	35:BA:791:G:C8	2.51	0.46
35:BA:858:G:H8	35:BA:858:G:C5'	2.29	0.46
35:BA:986:A:H2'	35:BA:987:G:O4'	2.15	0.46
35:BA:1316:G:H2'	35:BA:1317:C:H5"	1.98	0.46
35:BA:1349:A:OP2	43:BI:118:LYS:HE2	2.15	0.46
36:BB:149:LEU:O	36:BB:153:ARG:HB2	2.16	0.46
43:BI:114:TYR:CE2	44:BJ:60:ARG:O	2.54	0.46
45:BK:24:SER:OG	45:BK:25:TYR:N	2.47	0.46
50:BP:65:GLN:HA	50:BP:66:PRO:HD3	1.74	0.46
1:A0:16:SER:OG	11:AA:2262:U:OP2	2.22	0.46
2:A1:33:LYS:HE2	11:AA:2432:A:C8	2.50	0.46
2:A1:45:ASN:ND2	11:AA:2090:G:H21	2.13	0.46
7:A6:23:THR:O	7:A6:24:GLU:CD	2.59	0.46
7:A6:42:TRP:HA	7:A6:42:TRP:CE3	2.51	0.46
11:AA:7:G:O2'	11:AA:8:A:H5'	2.16	0.46
11:AA:65:C:H2'	11:AA:66:C:C6	2.51	0.46
11:AA:582:G:OP1	28:AU:14:HIS:HD2	1.98	0.46
11:AA:1019:U:C2	11:AA:1142(A):A:N6	2.84	0.46
11:AA:1630:G:H2'	11:AA:1631:C:C6	2.51	0.46
11:AA:1743:C:C6	11:AA:1744:C:C5	3.04	0.46
11:AA:2208:A:H1'	11:AA:2219:G:C6	2.50	0.46
11:AA:2445:G:O2'	11:AA:2446:G:H5'	2.16	0.46
11:AA:2685:G:H1'	11:AA:2726:U:C5	2.49	0.46
11:AA:2695:C:H2'	11:AA:2696:U:H6	1.81	0.46
11:AA:2784:C:H1'	15:AE:37:ARG:HH12	1.81	0.46
13:AC:22:ILE:HG12	13:AC:224:ILE:CD1	2.31	0.46
13:AC:134:ARG:O	13:AC:136:LEU:HG	2.15	0.46
14:AD:63:ARG:HB2	14:AD:85:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:211:ARG:HA	14:AD:214:TRP:CD2	2.49	0.46
16:AF:21:ALA:HB3	16:AF:23:ASP:OD2	2.15	0.46
16:AF:125:LEU:H	16:AF:125:LEU:CD2	2.26	0.46
17:AG:122:PRO:HG3	17:AG:182:LYS:N	2.31	0.46
18:AH:29:PRO:O	18:AH:31:GLY:N	2.49	0.46
18:AH:41:MET:SD	18:AH:53:GLU:C	2.99	0.46
18:AH:41:MET:HG3	18:AH:42:ARG:O	2.16	0.46
18:AH:89:ILE:HG23	18:AH:129:THR:O	2.16	0.46
23:AP:16:ARG:NH2	23:AP:18:ARG:HG3	2.31	0.46
24:AQ:79:LEU:HD23	24:AQ:80:GLU:H	1.79	0.46
27:AT:124:ASP:N	27:AT:124:ASP:OD1	2.49	0.46
28:AU:90:VAL:CG1	28:AU:91:ASP:N	2.65	0.46
31:AX:59:VAL:O	31:AX:59:VAL:HG12	2.14	0.46
32:AY:8:LYS:HB2	32:AY:28:LYS:CE	2.44	0.46
32:AY:100:ALA:O	32:AY:101:LYS:CB	2.64	0.46
33:AZ:44:PHE:CD1	33:AZ:44:PHE:C	2.94	0.46
33:AZ:180:VAL:HG13	33:AZ:181:GLU:N	2.30	0.46
34:B2:82:HIS:HA	58:BY:19:A:OP1	2.16	0.46
35:BA:160:A:O2'	35:BA:161:A:H5'	2.16	0.46
35:BA:977:A:N3	35:BA:977:A:H2'	2.31	0.46
35:BA:1075:C:O2'	35:BA:1076:C:H5'	2.15	0.46
35:BA:1371:G:O3'	43:BI:69:GLY:HA3	2.15	0.46
35:BA:1473:A:O2'	35:BA:1474:G:H5'	2.15	0.46
36:BB:74:LYS:NZ	36:BB:76:GLN:NE2	2.64	0.46
36:BB:188:ALA:HB1	36:BB:192:SER:OG	2.16	0.46
38:BD:126:ILE:CG2	38:BD:127:THR:N	2.78	0.46
38:BD:129:ASN:N	38:BD:129:ASN:ND2	2.64	0.46
39:BE:20:GLN:C	39:BE:20:GLN:NE2	2.74	0.46
41:BG:69:VAL:HA	41:BG:138:LYS:HD2	1.97	0.46
43:BI:104:ARG:CG	43:BI:105:ASP:H	2.28	0.46
44:BJ:17:ASP:OD1	44:BJ:70:ARG:NH2	2.48	0.46
45:BK:59:TYR:O	45:BK:63:LEU:HG	2.15	0.46
50:BP:38:TYR:O	50:BP:49:LEU:HD12	2.16	0.46
52:BR:37:VAL:HG23	52:BR:38:GLU:N	2.30	0.46
59:BZ:132:VAL:HG12	59:BZ:133:VAL:N	2.31	0.46
1:A0:29:GLN:O	1:A0:66:VAL:HA	2.16	0.46
2:A1:83:GLU:OE1	2:A1:83:GLU:N	2.48	0.46
3:A2:48:HIS:O	3:A2:52:ASP:HB2	2.16	0.46
7:A6:10:LEU:HD12	9:A8:34:TRP:CD1	2.50	0.46
10:A9:27:CYS:SG	10:A9:28:GLU:N	2.88	0.46
11:AA:336:C:H2'	11:AA:337:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:628:G:C3'	11:AA:629:G:H5"	2.44	0.46
11:AA:922:U:H2'	11:AA:923:C:C6	2.49	0.46
11:AA:1064:C:C2'	11:AA:1065:U:H5"	2.44	0.46
11:AA:1072:C:N4	11:AA:1098:A:OP2	2.48	0.46
11:AA:1216:G:OP1	28:AU:8:VAL:HG21	2.16	0.46
11:AA:1744:C:O2	11:AA:1744:C:H2'	2.15	0.46
11:AA:1799:G:N7	14:AD:179:SER:OG	2.40	0.46
11:AA:2023:G:H4'	11:AA:2617:C:O3'	2.16	0.46
11:AA:2537:U:H2'	11:AA:2538:C:C6	2.51	0.46
13:AC:41:VAL:O	13:AC:41:VAL:HG12	2.16	0.46
17:AG:64:THR:OG1	17:AG:94:LEU:HD21	2.15	0.46
17:AG:169:ALA:O	17:AG:173:LEU:HG	2.16	0.46
23:AP:108:LYS:N	23:AP:108:LYS:HD2	2.31	0.46
27:AT:28:VAL:HG21	27:AT:46:GLU:CD	2.41	0.46
33:AZ:133:ILE:O	33:AZ:133:ILE:HG22	2.16	0.46
35:BA:44:G:C6	35:BA:45:U:C2	3.04	0.46
35:BA:1389:C:H2'	35:BA:1390:U:C6	2.50	0.46
35:BA:1530:G:C2'	35:BA:1531:A:O5'	2.64	0.46
36:BB:102:LEU:HB3	36:BB:180:LEU:HD12	1.98	0.46
37:BC:24:ALA:HB2	37:BC:32:LEU:HD12	1.98	0.46
38:BD:78:LEU:HD21	38:BD:96:LEU:HD23	1.98	0.46
43:BI:113:LYS:H	43:BI:119:ALA:HA	1.81	0.46
44:BJ:54:PHE:CD2	44:BJ:55:LYS:HD2	2.51	0.46
53:BS:13:ASP:C	53:BS:15:LEU:H	2.22	0.46
58:BY:1:G:H4'	59:BZ:91:ASN:OD1	2.16	0.46
6:A5:40:LYS:NZ	6:A5:46:CYS:N	2.58	0.46
11:AA:143:G:H2'	11:AA:143(A):C:C6	2.50	0.46
11:AA:172:C:H2'	11:AA:173:G:O4'	2.15	0.46
11:AA:602:G:N1	11:AA:654(U):A:N7	2.63	0.46
11:AA:654(G):C:O2'	11:AA:654(H):G:H8	1.98	0.46
11:AA:904:C:H2'	11:AA:905:U:C6	2.50	0.46
11:AA:1106:G:C2'	11:AA:1107:G:H5'	2.46	0.46
11:AA:1265:A:H8	11:AA:1265:A:OP1	1.99	0.46
11:AA:1433:U:H1'	11:AA:1561:G:N2	2.31	0.46
11:AA:1671:U:O2'	11:AA:1673:U:H5	1.99	0.46
11:AA:1842:G:O2'	14:AD:253:GLN:OE1	2.33	0.46
11:AA:1915:U:H2'	11:AA:1916:A:C5'	2.46	0.46
11:AA:2092:U:H5	11:AA:2226:C:OP2	1.98	0.46
11:AA:2312:U:O3'	17:AG:71:THR:HG21	2.15	0.46
11:AA:2545:G:N3	11:AA:2565:A:H2	2.13	0.46
11:AA:2679:A:H4'	15:AE:165:VAL:HG11	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:90:A:N7	12:AB:91:C:H1'	2.31	0.46
14:AD:70:TRP:CZ3	14:AD:146:GLU:OE2	2.68	0.46
17:AG:6:ALA:HB3	17:AG:104:GLU:OE2	2.16	0.46
17:AG:143:GLU:O	17:AG:144:ILE:CG2	2.63	0.46
18:AH:85:LYS:NZ	18:AH:86:GLU:CA	2.79	0.46
21:AN:4:TYR:O	21:AN:5:VAL:C	2.59	0.46
21:AN:57:ALA:O	21:AN:58:ASP:C	2.58	0.46
21:AN:60:ILE:HD13	21:AN:99:LEU:HD23	1.98	0.46
21:AN:120:LEU:CD1	21:AN:122:VAL:HG23	2.46	0.46
22:AO:7:TYR:CE1	22:AO:20:MET:HB2	2.51	0.46
22:AO:87:ILE:CG2	22:AO:88:ASN:N	2.78	0.46
23:AP:80:TYR:CE2	23:AP:111:ARG:HG2	2.51	0.46
23:AP:121:LYS:HB2	23:AP:123:LEU:CD2	2.46	0.46
27:AT:31:SER:C	27:AT:32:TYR:HD1	2.24	0.46
27:AT:61:PHE:CD1	27:AT:61:PHE:N	2.81	0.46
27:AT:102:ILE:HB	27:AT:110:ILE:HD12	1.98	0.46
28:AU:52:ARG:O	28:AU:53:ARG:C	2.59	0.46
28:AU:90:VAL:HG21	29:AV:47:VAL:HG21	1.98	0.46
32:AY:101:LYS:CG	32:AY:102:CYS:N	2.68	0.46
35:BA:84:U:O2'	35:BA:88:A:H5'	2.16	0.46
35:BA:673:G:H2'	35:BA:674:G:C8	2.51	0.46
35:BA:1128:C:H1'	35:BA:1146:A:H61	1.81	0.46
35:BA:1313:U:P	53:BS:6:LYS:HB3	2.56	0.46
35:BA:1388:C:H2'	35:BA:1389:C:C6	2.51	0.46
37:BC:77:ILE:HG12	37:BC:84:ILE:HG21	1.96	0.46
38:BD:67:ILE:HG22	38:BD:68:TYR:CD1	2.51	0.46
40:BF:96:PRO:HB3	52:BR:30:ASP:CG	2.40	0.46
42:BH:35:ILE:HG22	42:BH:39:LEU:CD2	2.46	0.46
44:BJ:3:LYS:N	44:BJ:74:ILE:O	2.49	0.46
46:BL:124:LYS:HD2	46:BL:125:PRO:CD	2.44	0.46
52:BR:37:VAL:CG2	52:BR:38:GLU:N	2.78	0.46
54:BT:72:LEU:HD22	54:BT:76:ALA:HB1	1.97	0.46
59:BZ:72:THR:HG21	59:BZ:207:ASP:OD1	2.15	0.46
59:BZ:195:TRP:HA	59:BZ:195:TRP:CE3	2.51	0.46
2:A1:73:LEU:HD22	2:A1:94:LEU:HB3	1.98	0.46
3:A2:17:SER:OG	3:A2:20:GLU:HB3	2.16	0.46
4:A3:38:GLU:OE1	4:A3:38:GLU:HA	2.13	0.46
11:AA:406:G:H8	11:AA:406:G:O5'	1.98	0.46
11:AA:736:C:H6	11:AA:736:C:O5'	1.99	0.46
11:AA:791:C:H4'	11:AA:792:G:OP1	2.15	0.46
11:AA:962:G:C2'	11:AA:963:U:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1173:G:H2'	11:AA:1175:U:C5	2.50	0.46
11:AA:1505:C:H2'	11:AA:1506:C:O4'	2.16	0.46
11:AA:1509:C:O2	11:AA:1509:C:O4'	2.34	0.46
11:AA:1632:A:N6	11:AA:1633:G:N1	2.64	0.46
11:AA:1914:A:H2'	11:AA:1915:U:C6	2.50	0.46
11:AA:1914:A:N6	35:BA:1409:C:O3'	2.48	0.46
11:AA:2125:G:N3	11:AA:2173:A:N6	2.63	0.46
11:AA:2273:A:O2'	11:AA:2274:A:H5'	2.15	0.46
11:AA:2802:G:C3'	11:AA:2803:C:H5"	2.46	0.46
12:AB:11:C:OP2	12:AB:12:C:H5	1.99	0.46
12:AB:55:U:H2'	12:AB:56:G:C8	2.51	0.46
14:AD:35:LYS:N	14:AD:36:PRO:CD	2.71	0.46
14:AD:45:ASN:CG	14:AD:46:GLN:H	2.23	0.46
15:AE:52:LEU:HD12	15:AE:53:PRO:HD2	1.98	0.46
15:AE:59:VAL:HG13	15:AE:60:ASN:H	1.81	0.46
15:AE:81:ILE:O	15:AE:81:ILE:CG2	2.63	0.46
15:AE:120:TRP:CE3	15:AE:155:LYS:HG2	2.50	0.46
16:AF:148:LEU:HD23	16:AF:191:ARG:HH11	1.80	0.46
17:AG:85:GLY:C	17:AG:87:PRO:CD	2.89	0.46
18:AH:65:HIS:C	18:AH:67:LEU:H	2.24	0.46
18:AH:83:TYR:HB2	18:AH:135:GLY:N	2.31	0.46
23:AP:95:VAL:CG2	23:AP:125:VAL:HG23	2.46	0.46
26:AS:49:VAL:CG1	26:AS:50:SER:N	2.77	0.46
26:AS:54:LEU:O	26:AS:54:LEU:HD13	2.16	0.46
30:AW:24:ILE:O	30:AW:71:VAL:HG21	2.15	0.46
32:AY:46:LYS:C	32:AY:47:LYS:HG3	2.41	0.46
35:BA:71:C:H2'	35:BA:72:C:C6	2.50	0.46
35:BA:202:U:H2'	35:BA:203:U:OP1	2.16	0.46
35:BA:498:U:O2'	35:BA:499:A:O5'	2.33	0.46
35:BA:748:C:H4'	35:BA:749:C:O5'	2.15	0.46
35:BA:790:A:H5'	56:BV:39:A:O3'	2.15	0.46
35:BA:975:A:N6	35:BA:1367:C:O4'	2.49	0.46
35:BA:1014:A:H2'	35:BA:1015:A:C8	2.51	0.46
35:BA:1152:A:H2'	35:BA:1153:C:H6	1.80	0.46
35:BA:1199:U:H4'	44:BJ:54:PHE:CD1	2.49	0.46
35:BA:1318:A:H1'	53:BS:37:ARG:HH21	1.80	0.46
37:BC:6:HIS:O	37:BC:7:PRO:C	2.58	0.46
37:BC:29:TYR:HD1	37:BC:29:TYR:C	2.24	0.46
38:BD:170:VAL:CG1	38:BD:174:LEU:HB2	2.46	0.46
39:BE:100:VAL:HA	39:BE:118:ILE:HG22	1.98	0.46
40:BF:69:GLU:O	40:BF:72:VAL:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:34:GLU:OE1	42:BH:34:GLU:HA	2.16	0.46
42:BH:114:THR:C	42:BH:116:LYS:H	2.24	0.46
43:BI:90:PRO:C	43:BI:92:TYR:N	2.72	0.46
45:BK:15:ALA:HB1	45:BK:78:GLN:HB2	1.98	0.46
46:BL:127:GLU:O	46:BL:128:ALA:C	2.58	0.46
49:BO:82:ILE:HD13	49:BO:82:ILE:O	2.16	0.46
53:BS:53:ASN:HB2	53:BS:77:THR:HG22	1.98	0.46
59:BZ:87:ASP:HB2	59:BZ:88:TYR:HD1	1.80	0.46
59:BZ:129:PRO:O	59:BZ:130:TYR:O	2.34	0.46
3:A2:10:LEU:HD22	3:A2:14:ARG:NH1	2.31	0.45
5:A4:35:VAL:HG12	5:A4:36:CYS:N	2.31	0.45
6:A5:44:THR:HG22	6:A5:45:VAL:H	1.82	0.45
7:A6:19:ARG:HD2	11:AA:2400:G:O2'	2.16	0.45
7:A6:20:ASN:O	7:A6:21:TYR:CD2	2.69	0.45
7:A6:27:LYS:HG3	7:A6:30:THR:CB	2.39	0.45
11:AA:272(I):U:H5'	11:AA:272(I):U:C6	2.51	0.45
11:AA:1047:G:H2'	11:AA:1110:G:N2	2.25	0.45
11:AA:1076:C:N4	11:AA:1088:A:H61	2.15	0.45
11:AA:1354:A:H2'	11:AA:1355:G:O4'	2.15	0.45
11:AA:1504:C:O2'	11:AA:1505:C:C5'	2.64	0.45
11:AA:1630:G:C2	11:AA:1637:A:C2	3.04	0.45
11:AA:2000:G:O2'	11:AA:2001:A:H5'	2.16	0.45
11:AA:2120:G:N1	11:AA:2178:C:N3	2.64	0.45
11:AA:2464:C:O2'	11:AA:2465:C:P	2.74	0.45
11:AA:2825:C:H2'	11:AA:2826:A:H5'	1.97	0.45
14:AD:35:LYS:HZ3	14:AD:36:PRO:HD3	1.81	0.45
15:AE:75:VAL:C	15:AE:77:ILE:H	2.19	0.45
15:AE:95:ILE:N	15:AE:95:ILE:HD13	2.31	0.45
16:AF:117:ARG:CZ	23:AP:5:ASP:N	2.79	0.45
18:AH:167:GLU:HB3	18:AH:168:PRO:HD2	1.97	0.45
23:AP:82:GLY:HA2	23:AP:115:LEU:HD21	1.97	0.45
25:AR:22:ARG:O	25:AR:26:LYS:HG3	2.16	0.45
25:AR:79:LEU:HD13	25:AR:79:LEU:C	2.41	0.45
29:AV:51:VAL:CG1	29:AV:52:VAL:N	2.76	0.45
31:AX:83:VAL:HG12	31:AX:87:GLN:HE21	1.80	0.45
32:AY:86:ARG:NH2	32:AY:95:LYS:HZ2	2.11	0.45
34:B2:38:LYS:O	34:B2:39:VAL:HG12	2.16	0.45
34:B2:45:PHE:HE2	34:B2:47:ARG:NE	2.13	0.45
34:B2:142:GLU:OE1	38:BD:50:ARG:N	2.44	0.45
35:BA:41:G:H2'	35:BA:42:G:C8	2.51	0.45
35:BA:309:G:O2'	35:BA:310:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:849:C:O2'	35:BA:850:U:H5'	2.16	0.45
37:BC:24:ALA:CB	37:BC:32:LEU:HD12	2.46	0.45
39:BE:91:LEU:O	39:BE:92:LYS:HB2	2.16	0.45
44:BJ:46:ARG:HG2	44:BJ:64:GLU:OE1	2.15	0.45
44:BJ:74:ILE:O	44:BJ:74:ILE:HG13	2.14	0.45
45:BK:91:ARG:O	45:BK:94:ALA:HB3	2.15	0.45
46:BL:83:VAL:HG12	46:BL:84:LEU:N	2.31	0.45
47:BM:57:ARG:O	47:BM:59:TYR:N	2.49	0.45
59:BZ:13:ASN:OD1	59:BZ:78:SER:HB2	2.17	0.45
59:BZ:196:VAL:O	59:BZ:199:ILE:HB	2.16	0.45
7:A6:36:LEU:HD12	7:A6:50:ARG:NH2	2.31	0.45
11:AA:218:A:H2	11:AA:235:U:H4'	1.81	0.45
11:AA:271(F):C:H2'	11:AA:271(G):C:H5'	1.97	0.45
11:AA:414:C:H1'	11:AA:1864:U:O2'	2.17	0.45
11:AA:478:A:C6	11:AA:480:A:C6	3.04	0.45
11:AA:652:C:O2'	11:AA:653:A:O5'	2.35	0.45
11:AA:1041:G:C2'	11:AA:1042:G:H5'	2.47	0.45
11:AA:1658:C:O5'	11:AA:1658:C:H6	1.98	0.45
11:AA:1827:C:C2'	11:AA:1828:G:H5'	2.46	0.45
11:AA:1899:G:N2	11:AA:1902:C:C5	2.84	0.45
11:AA:1948:G:C2'	11:AA:1949:G:H5'	2.45	0.45
11:AA:2364:C:O2'	11:AA:2365:G:H5'	2.16	0.45
11:AA:2580:U:H4'	15:AE:130:GLY:CA	2.46	0.45
11:AA:2758:A:O2'	11:AA:2759:G:C5'	2.64	0.45
11:AA:2762:G:O2'	11:AA:2763:G:H5'	2.15	0.45
13:AC:72:VAL:O	13:AC:157:LYS:HE2	2.16	0.45
14:AD:28:GLU:N	14:AD:29:PRO:CD	2.64	0.45
14:AD:35:LYS:HZ2	14:AD:36:PRO:N	2.14	0.45
14:AD:35:LYS:HG2	14:AD:63:ARG:HG3	1.97	0.45
15:AE:37:ARG:HA	15:AE:42:ASP:OD2	2.15	0.45
15:AE:200:GLU:OE1	15:AE:200:GLU:N	2.50	0.45
16:AF:132:VAL:O	16:AF:133:ASN:C	2.57	0.45
16:AF:206:ILE:HG22	16:AF:207:GLY:H	1.80	0.45
17:AG:57:ALA:O	17:AG:60:LEU:N	2.48	0.45
22:AO:88:ASN:OD1	22:AO:90:GLN:N	2.46	0.45
24:AQ:116:GLU:O	24:AQ:120:ILE:HG12	2.15	0.45
25:AR:59:ASP:N	25:AR:59:ASP:OD1	2.47	0.45
25:AR:100:LEU:HD21	25:AR:113:LEU:CD1	2.45	0.45
27:AT:38:ASN:C	27:AT:38:ASN:ND2	2.69	0.45
28:AU:9:VAL:O	28:AU:13:LYS:HG2	2.16	0.45
28:AU:92:ARG:HD2	29:AV:11:GLN:CG	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AX:28:PHE:CD1	31:AX:28:PHE:N	2.84	0.45
32:AY:13:VAL:HG22	32:AY:14:LEU:N	2.31	0.45
34:B2:7:ASN:C	34:B2:7:ASN:ND2	2.70	0.45
34:B2:17:LEU:N	34:B2:17:LEU:CD2	2.76	0.45
35:BA:80:G:N2	35:BA:89:C:H2'	2.31	0.45
35:BA:109:A:C6	35:BA:326:G:C6	3.05	0.45
35:BA:179:A:O2'	35:BA:180:U:H5'	2.16	0.45
35:BA:414:A:C5	35:BA:431:A:C2	3.04	0.45
35:BA:590:C:O2'	35:BA:591:U:H5'	2.15	0.45
35:BA:755:G:O2'	35:BA:756:C:H5'	2.16	0.45
35:BA:951:G:O2'	35:BA:952:U:H5'	2.16	0.45
35:BA:1009:G:H2'	35:BA:1010:G:H8	1.80	0.45
35:BA:1104:G:H4'	36:BB:111:ARG:NH1	2.30	0.45
35:BA:1292:U:P	41:BG:41:ARG:HH21	2.40	0.45
35:BA:1411:C:C2	35:BA:1490:A:C2	3.04	0.45
35:BA:1439:C:N4	35:BA:1462:G:H1	2.14	0.45
36:BB:39:ILE:HG22	36:BB:40:HIS:H	1.80	0.45
36:BB:54:THR:HG21	36:BB:201:ILE:HD11	1.98	0.45
37:BC:187:ALA:HB3	37:BC:198:VAL:HB	1.97	0.45
38:BD:157:LEU:O	38:BD:161:ASN:ND2	2.49	0.45
43:BI:40:LEU:O	43:BI:42:ARG:N	2.49	0.45
43:BI:69:GLY:O	43:BI:71:SER:N	2.49	0.45
45:BK:20:TYR:O	45:BK:30:VAL:HA	2.16	0.45
46:BL:24:VAL:O	46:BL:24:VAL:CG1	2.60	0.45
47:BM:66:LEU:CA	47:BM:70:LEU:HD12	2.38	0.45
56:BW:65:G:H2'	56:BW:66:C:H5'	1.98	0.45
2:A1:18:ILE:HG12	2:A1:37:ILE:HG22	1.98	0.45
9:A8:4:MET:HB2	11:AA:592:G:O2'	2.17	0.45
11:AA:104:U:C2'	11:AA:105:C:H5'	2.47	0.45
11:AA:173:G:H5'	11:AA:174:C:P	2.56	0.45
11:AA:887:A:H5'	47:BM:94:ARG:HH12	1.81	0.45
11:AA:1109:C:H2'	11:AA:1110:G:H5'	1.98	0.45
11:AA:1452:A:C4	11:AA:2702:U:C5	3.04	0.45
11:AA:1662:C:O2'	11:AA:1663:C:H5'	2.16	0.45
11:AA:1856:G:H2'	11:AA:1857:G:O4'	2.15	0.45
13:AC:195:ALA:O	13:AC:199:HIS:HB2	2.15	0.45
14:AD:3:VAL:HG12	14:AD:17:THR:HB	1.98	0.45
14:AD:19:ALA:HB3	14:AD:21:PHE:CZ	2.51	0.45
14:AD:196:VAL:O	14:AD:196:VAL:HG12	2.16	0.45
14:AD:211:ARG:O	14:AD:215:LEU:HG	2.16	0.45
15:AE:77:ILE:CG2	15:AE:78:LEU:H	2.06	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AE:79:ARG:HD2	15:AE:79:ARG:N	2.29	0.45
15:AE:103:ASP:OD2	15:AE:168:MET:HB2	2.16	0.45
17:AG:121:ASN:C	17:AG:123:ASN:H	2.25	0.45
20:AK:131:UNK:O	20:AK:135:UNK:N	2.50	0.45
21:AN:78:TYR:N	21:AN:78:TYR:CD1	2.85	0.45
22:AO:8:LEU:H	22:AO:8:LEU:HD22	1.82	0.45
23:AP:88:LEU:HD22	23:AP:114:ILE:CD1	2.46	0.45
23:AP:95:VAL:HG23	23:AP:95:VAL:O	2.16	0.45
24:AQ:54:MET:O	24:AQ:55:VAL:C	2.59	0.45
25:AR:25:ALA:O	25:AR:26:LYS:C	2.60	0.45
26:AS:61:ASN:CG	26:AS:62:LYS:H	2.24	0.45
27:AT:76:PHE:C	27:AT:78:LEU:H	2.24	0.45
33:AZ:119:GLU:CG	33:AZ:122:ARG:NH1	2.79	0.45
35:BA:472:A:H4'	50:BP:80:PHE:O	2.16	0.45
35:BA:710:G:OP1	40:BF:54:LYS:HE3	2.16	0.45
35:BA:790:A:O2'	35:BA:791:G:H5'	2.16	0.45
35:BA:1030(C):G:O2'	35:BA:1030(D):A:H5'	2.17	0.45
35:BA:1134:G:H2'	35:BA:1135:U:C5'	2.41	0.45
35:BA:1360:A:H8	35:BA:1360:A:OP1	1.99	0.45
35:BA:1377:A:H2'	41:BG:7:ALA:HB2	1.98	0.45
36:BB:221:LEU:O	36:BB:222:ILE:C	2.59	0.45
38:BD:173:TRP:C	38:BD:186:LEU:HB2	2.41	0.45
40:BF:5:GLU:HG3	40:BF:93:SER:OG	2.16	0.45
45:BK:124:LYS:HB2	45:BK:124:LYS:HZ2	1.82	0.45
58:BY:14:U:O2'	58:BY:15:C:C5'	2.64	0.45
59:BZ:147:LEU:HB3	59:BZ:172:ARG:CZ	2.46	0.45
1:A0:38:VAL:CG2	1:A0:59:LEU:HD12	2.46	0.45
8:A7:10:ARG:HH12	8:A7:14:LYS:CE	2.29	0.45
11:AA:654(C):G:H2'	11:AA:654(D):G:H5'	1.99	0.45
11:AA:1438:U:O2'	11:AA:1439:A:H5'	2.16	0.45
11:AA:1514:U:H2'	11:AA:1515:G:C8	2.51	0.45
11:AA:1563:G:O2'	11:AA:1564:C:H5'	2.15	0.45
11:AA:1914:A:C2'	11:AA:1915:U:C5'	2.73	0.45
11:AA:2043:C:H1'	11:AA:2779:U:O4	2.17	0.45
11:AA:2310:A:O2'	11:AA:2311:A:C5'	2.65	0.45
12:AB:87:G:H3'	12:AB:88:C:H5"	1.99	0.45
13:AC:120:MET:CE	13:AC:123:VAL:HG11	2.46	0.45
14:AD:211:ARG:HD3	14:AD:214:TRP:CZ3	2.52	0.45
14:AD:229:VAL:HG23	14:AD:230:ASP:N	2.32	0.45
15:AE:116:VAL:HG22	15:AE:122:PHE:CD2	2.51	0.45
16:AF:63:LYS:NZ	16:AF:75:HIS:O	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:43:LEU:CB	17:AG:45:GLU:HG2	2.27	0.45
17:AG:114:ILE:O	17:AG:115:ARG:C	2.60	0.45
18:AH:148:ILE:HG22	18:AH:162:ILE:CD1	2.46	0.45
24:AQ:25:ASP:OD2	33:AZ:78:LYS:HD3	2.15	0.45
28:AU:108:GLU:HG3	29:AV:44:LYS:HD3	1.98	0.45
31:AX:36:LYS:HA	31:AX:39:ILE:HG13	1.98	0.45
32:AY:13:VAL:HB	32:AY:28:LYS:HD3	1.98	0.45
35:BA:198:G:O2'	35:BA:199:G:O5'	2.34	0.45
35:BA:1324:A:H2'	35:BA:1325:C:C6	2.51	0.45
38:BD:122:ARG:HA	38:BD:122:ARG:HD2	1.72	0.45
39:BE:15:ARG:NE	39:BE:26:PHE:CD2	2.85	0.45
39:BE:37:ARG:HH12	39:BE:111:GLU:HG2	1.81	0.45
40:BF:99:ALA:O	52:BR:28:GLU:HA	2.15	0.45
41:BG:50:ILE:O	41:BG:54:THR:CG2	2.64	0.45
41:BG:137:LYS:HB3	41:BG:137:LYS:HE2	1.85	0.45
43:BI:49:PRO:C	43:BI:51:ARG:H	2.24	0.45
45:BK:34:ASP:HB3	45:BK:40:ILE:HD11	1.99	0.45
53:BS:4:SER:O	53:BS:5:LEU:C	2.58	0.45
56:BV:40:C:H2'	56:BV:41:C:H6	1.81	0.45
59:BZ:185:ASN:ND2	59:BZ:187:LYS:HB2	2.21	0.45
59:BZ:242:ILE:CG2	59:BZ:282:ALA:HA	2.46	0.45
2:A1:64:ALA:HA	2:A1:67:ILE:CG1	2.46	0.45
3:A2:32:LEU:HA	3:A2:53:LEU:HD13	1.98	0.45
3:A2:35:LEU:HD12	3:A2:50:ILE:HG13	1.96	0.45
5:A4:9:LEU:HD11	5:A4:25:TYR:HB3	1.98	0.45
5:A4:27:THR:HG22	17:AG:143:GLU:OE1	2.17	0.45
11:AA:197:A:N6	11:AA:2430:A:H2'	2.32	0.45
11:AA:680:G:H2'	11:AA:681:G:C8	2.51	0.45
11:AA:811:U:OP2	23:AP:33:ARG:NH1	2.49	0.45
11:AA:910:A:H2	11:AA:2264:C:O2	2.00	0.45
11:AA:999:U:O2'	11:AA:1000:A:H5'	2.16	0.45
11:AA:1060:U:H1'	11:AA:1061:U:O5'	2.16	0.45
11:AA:1299:G:N1	11:AA:1640:C:OP2	2.46	0.45
11:AA:2128:C:OP1	13:AC:35:ALA:HA	2.17	0.45
11:AA:2131:G:H4'	11:AA:2132:U:OP2	2.17	0.45
11:AA:2208:A:H1'	11:AA:2219:G:C5	2.50	0.45
11:AA:2378:A:H2	26:AS:20:ARG:HH21	1.63	0.45
11:AA:2531:A:H2	11:AA:2658:C:O2	1.99	0.45
15:AE:116:VAL:HG21	15:AE:122:PHE:CE2	2.51	0.45
16:AF:22:ALA:C	16:AF:24:LEU:H	2.24	0.45
16:AF:127:GLU:OE1	16:AF:196:LEU:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AN:58:ASP:OD2	21:AN:59:LYS:HG2	2.16	0.45
25:AR:116:LEU:O	25:AR:117:VAL:HG12	2.17	0.45
27:AT:85:LYS:O	27:AT:86:ILE:C	2.60	0.45
30:AW:32:ALA:O	30:AW:36:LEU:HD23	2.17	0.45
32:AY:31:LEU:CB	32:AY:32:PRO:HA	2.46	0.45
33:AZ:108:PRO:C	33:AZ:110:GLY:N	2.74	0.45
34:B2:7:ASN:CB	34:B2:41:PHE:HD2	2.28	0.45
34:B2:39:VAL:HB	34:B2:59:TYR:O	2.17	0.45
34:B2:86:LEU:HA	34:B2:89:LEU:HD23	1.97	0.45
34:B2:123:LYS:HB3	34:B2:124:LYS:H	1.38	0.45
35:BA:328:C:H4'	35:BA:329:A:H5'	1.97	0.45
35:BA:692:U:H5'	35:BA:797:C:H5'	1.98	0.45
35:BA:1114:C:H2'	35:BA:1115:C:H6	1.81	0.45
35:BA:1245:A:C2	35:BA:1293:G:C2	3.05	0.45
35:BA:1499:A:C2'	35:BA:1500:A:H5'	2.47	0.45
36:BB:36:ARG:HG3	36:BB:36:ARG:NH1	2.32	0.45
36:BB:36:ARG:C	36:BB:38:GLY:H	2.22	0.45
36:BB:42:ILE:HD11	36:BB:202:PRO:O	2.16	0.45
37:BC:3:ASN:O	37:BC:4:LYS:CB	2.62	0.45
37:BC:15:THR:HG22	37:BC:16:ARG:N	2.32	0.45
37:BC:157:ILE:HD13	37:BC:166:GLU:HB2	1.98	0.45
38:BD:65:ARG:C	38:BD:67:ILE:H	2.25	0.45
38:BD:127:THR:CG2	38:BD:128:VAL:H	2.30	0.45
39:BE:142:LEU:O	39:BE:143:ARG:NE	2.49	0.45
43:BI:71:SER:O	43:BI:72:GLY:C	2.58	0.45
43:BI:97:LYS:N	43:BI:98:PRO:CD	2.79	0.45
43:BI:113:LYS:HD2	43:BI:113:LYS:H	1.80	0.45
44:BJ:82:ILE:CG2	44:BJ:86:MET:HE2	2.43	0.45
45:BK:126:ARG:C	45:BK:128:ALA:N	2.71	0.45
47:BM:64:TRP:HD1	47:BM:66:LEU:HD11	1.81	0.45
55:BU:5:ASP:C	55:BU:7:ARG:N	2.75	0.45
59:BZ:273:HIS:O	59:BZ:274:ARG:HB2	2.16	0.45
59:BZ:332:THR:O	59:BZ:364:PRO:HD3	2.16	0.45
2:A1:94:LEU:N	2:A1:94:LEU:HD12	2.32	0.45
7:A6:34:LEU:O	7:A6:35:GLU:C	2.60	0.45
7:A6:44:ARG:C	7:A6:45:LYS:CD	2.74	0.45
11:AA:562:U:C4	11:AA:2036:C:O4'	2.69	0.45
11:AA:703:U:C2'	11:AA:704:G:H5'	2.46	0.45
11:AA:764:A:C5	14:AD:209:ALA:HB1	2.52	0.45
11:AA:842:G:O2'	11:AA:843:G:H5'	2.16	0.45
11:AA:1105:U:H2'	11:AA:1106:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1227:G:OP2	28:AU:16:LYS:NZ	2.49	0.45
11:AA:1363:C:O2'	11:AA:1809:A:N3	2.42	0.45
11:AA:1792:G:H5'	14:AD:205:VAL:HG13	1.98	0.45
11:AA:1914:A:C3'	11:AA:1915:U:H5"	2.44	0.45
11:AA:2395:C:C2	11:AA:2396:G:C8	3.04	0.45
11:AA:2491:U:O2'	11:AA:2492:U:H5'	2.17	0.45
12:AB:15:A:H3'	12:AB:16:G:C5'	2.45	0.45
12:AB:42:C:O2'	12:AB:43:C:P	2.74	0.45
15:AE:10:GLY:HA2	15:AE:192:ASN:ND2	2.32	0.45
17:AG:123:ASN:O	17:AG:123:ASN:OD1	2.34	0.45
20:AK:117:UNK:O	20:AK:118:UNK:CB	2.64	0.45
23:AP:61:ARG:H	23:AP:61:ARG:HG3	1.52	0.45
23:AP:132:LYS:O	23:AP:136:GLU:HG2	2.17	0.45
25:AR:4:LEU:C	25:AR:6:SER:N	2.71	0.45
25:AR:37:THR:OG1	25:AR:40:LYS:HB2	2.17	0.45
26:AS:50:SER:O	26:AS:51:ALA:HB2	2.16	0.45
27:AT:3:ARG:O	27:AT:4:GLY:C	2.59	0.45
29:AV:38:LEU:C	29:AV:38:LEU:HD23	2.41	0.45
29:AV:47:VAL:HG12	29:AV:51:VAL:C	2.42	0.45
30:AW:62:HIS:O	30:AW:63:ASP:O	2.34	0.45
32:AY:3:VAL:H	32:AY:5:MET:HE3	1.80	0.45
32:AY:39:VAL:O	32:AY:40:GLU:CD	2.59	0.45
34:B2:7:ASN:ND2	34:B2:10:ALA:H	2.13	0.45
34:B2:24:ILE:HG23	34:B2:79:LEU:HD23	1.99	0.45
35:BA:368:U:C5	59:BZ:234:ARG:CZ	2.98	0.45
35:BA:520:A:N1	35:BA:536:C:H1'	2.32	0.45
35:BA:915:A:H2'	35:BA:916:G:C5'	2.45	0.45
35:BA:1220:G:H2'	35:BA:1221:G:H8	1.81	0.45
36:BB:71:VAL:HG13	36:BB:93:VAL:CG1	2.46	0.45
38:BD:145:GLU:C	38:BD:146:ILE:HD13	2.42	0.45
38:BD:162:LEU:CD1	38:BD:178:VAL:HG12	2.46	0.45
38:BD:182:LYS:HB2	38:BD:182:LYS:HE3	1.68	0.45
43:BI:79:LEU:HD13	43:BI:79:LEU:C	2.41	0.45
44:BJ:23:ILE:HG23	44:BJ:85:LEU:CD2	2.36	0.45
44:BJ:58:ASP:O	44:BJ:59:SER:O	2.35	0.45
44:BJ:79:ARG:HA	44:BJ:82:ILE:CG1	2.46	0.45
46:BL:126:LYS:C	46:BL:128:ALA:H	2.25	0.45
47:BM:64:TRP:CD1	47:BM:66:LEU:HD11	2.52	0.45
58:BY:67:U:C3'	58:BY:68:U:H5"	2.47	0.45
59:BZ:298:VAL:CA	59:BZ:302:GLN:HE22	2.28	0.45
2:A1:14:VAL:HG21	11:AA:188:G:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:40:LYS:HZ1	6:A5:46:CYS:HB3	1.82	0.45
7:A6:27:LYS:HG2	7:A6:30:THR:HB	1.95	0.45
11:AA:22:C:H2'	11:AA:23:G:O4'	2.16	0.45
11:AA:247:G:H4'	11:AA:386:G:C6	2.52	0.45
11:AA:473:G:P	11:AA:508:G:H22	2.39	0.45
11:AA:654(S):G:H2'	11:AA:654(T):C:O4'	2.16	0.45
11:AA:1041:G:H22	11:AA:1114:G:H22	1.64	0.45
11:AA:1771:C:O2'	11:AA:1786:A:H8	1.99	0.45
11:AA:1962:C:O2'	11:AA:1964:G:OP2	2.33	0.45
11:AA:2188:C:C4	11:AA:2189:U:C4	3.04	0.45
11:AA:2363:C:O2'	11:AA:2364:C:H5'	2.17	0.45
11:AA:2762:G:H2'	11:AA:2763:G:H5'	1.99	0.45
13:AC:100:ILE:CG2	13:AC:127:MET:HG3	2.43	0.45
14:AD:211:ARG:HA	14:AD:214:TRP:CE3	2.51	0.45
16:AF:51:THR:HG21	16:AF:92:PRO:HD2	1.97	0.45
24:AQ:21:THR:O	24:AQ:23:GLY:N	2.50	0.45
25:AR:85:PRO:O	25:AR:87:TYR:N	2.50	0.45
28:AU:60:LEU:O	28:AU:60:LEU:HD22	2.16	0.45
34:B2:17:LEU:H	34:B2:17:LEU:CD2	2.28	0.45
35:BA:127:G:C2	35:BA:128:G:C8	3.05	0.45
35:BA:403:C:H2'	35:BA:404:U:H6	1.81	0.45
35:BA:444:C:H2'	35:BA:445:G:C8	2.52	0.45
35:BA:609:A:O2'	35:BA:610:G:H5'	2.16	0.45
35:BA:922:G:N3	35:BA:1398:A:H2	2.15	0.45
35:BA:1091:U:C2	35:BA:1095:U:N3	2.84	0.45
35:BA:1125:U:C4	44:BJ:71:LEU:HD21	2.52	0.45
35:BA:1505:G:H4'	35:BA:1506:U:H5"	1.99	0.45
38:BD:56:VAL:O	38:BD:57:ARG:C	2.58	0.45
38:BD:150:GLU:OE1	38:BD:150:GLU:N	2.36	0.45
41:BG:40:ALA:O	41:BG:41:ARG:C	2.58	0.45
41:BG:149:ARG:O	41:BG:149:ARG:HG2	2.16	0.45
42:BH:42:GLU:HG3	42:BH:109:ILE:HD12	1.99	0.45
43:BI:10:ARG:O	43:BI:11:LYS:HB3	2.16	0.45
44:BJ:30:SER:CB	44:BJ:84:GLN:NE2	2.76	0.45
45:BK:23:ALA:CB	45:BK:91:ARG:HB2	2.47	0.45
46:BL:27:LEU:CD1	46:BL:28:LYS:HG3	2.46	0.45
50:BP:82:GLN:CD	50:BP:82:GLN:H	2.24	0.45
59:BZ:113:MET:H	59:BZ:116:THR:HB	1.81	0.45
59:BZ:221:PHE:CE1	59:BZ:247:VAL:HG22	2.51	0.45
7:A6:14:THR:HG22	7:A6:50:ARG:HB2	1.98	0.45
11:AA:480:A:H3'	11:AA:481:G:H5"	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:598:G:C5'	23:AP:15:ARG:HB3	2.46	0.45
11:AA:605:C:H2'	11:AA:606:U:O4'	2.17	0.45
11:AA:643:A:C2'	11:AA:644:A:H5'	2.46	0.45
11:AA:810:U:O2'	23:AP:33:ARG:NH1	2.49	0.45
11:AA:825:C:H4'	11:AA:2428:G:N7	2.32	0.45
11:AA:1475:G:H5"	11:AA:1475:G:H8	1.81	0.45
11:AA:1534:U:H2'	11:AA:1535:A:O4'	2.16	0.45
11:AA:1542:A:C8	11:AA:1544:A:H5'	2.51	0.45
11:AA:2033:A:H2'	11:AA:2035:G:OP2	2.17	0.45
11:AA:2291:U:H2'	11:AA:2292:C:C6	2.52	0.45
11:AA:2335:A:C8	11:AA:2337:G:C5	3.05	0.45
11:AA:2341:G:H2'	11:AA:2342:C:C6	2.52	0.45
11:AA:2360:A:O2'	11:AA:2361:A:C5'	2.65	0.45
11:AA:2639:A:C2'	11:AA:2640:G:H5'	2.47	0.45
11:AA:2809:A:C2	11:AA:2892:A:N3	2.85	0.45
12:AB:111:G:H2'	12:AB:112:U:C5'	2.46	0.45
13:AC:129:ARG:C	56:BW:20:G:N2	2.75	0.45
14:AD:45:ASN:ND2	14:AD:46:GLN:H	2.15	0.45
14:AD:93:ALA:HB2	14:AD:107:ALA:HB2	1.98	0.45
15:AE:68:ALA:HB3	15:AE:69:LYS:CE	2.47	0.45
16:AF:8:GLN:O	16:AF:10:PRO:N	2.49	0.45
16:AF:117:ARG:HD3	16:AF:117:ARG:HA	1.73	0.45
16:AF:169:ASN:O	16:AF:170:LEU:C	2.59	0.45
17:AG:39:ILE:HA	17:AG:156:ASP:O	2.17	0.45
18:AH:88:LEU:HD22	18:AH:164:TYR:O	2.17	0.45
21:AN:35:ARG:O	21:AN:42:TRP:CZ3	2.70	0.45
22:AO:38:VAL:CG1	22:AO:39:ILE:N	2.79	0.45
23:AP:7:ARG:HA	23:AP:7:ARG:HD2	1.84	0.45
23:AP:16:ARG:NH2	23:AP:18:ARG:CG	2.79	0.45
23:AP:146:VAL:CG2	23:AP:147:LEU:H	2.15	0.45
23:AP:147:LEU:O	23:AP:148:LEU:CB	2.63	0.45
24:AQ:120:ILE:O	24:AQ:122:GLY:N	2.49	0.45
25:AR:21:TYR:N	25:AR:21:TYR:CD1	2.85	0.45
27:AT:28:VAL:O	27:AT:29:ARG:HB2	2.17	0.45
27:AT:30:VAL:HG12	27:AT:44:ASP:OD2	2.16	0.45
29:AV:7:THR:HG23	29:AV:7:THR:O	2.17	0.45
29:AV:68:LYS:HA	29:AV:68:LYS:HD2	1.77	0.45
32:AY:77:PRO:O	32:AY:78:ALA:CB	2.65	0.45
33:AZ:153:SER:H	33:AZ:167:PRO:HB2	1.82	0.45
33:AZ:156:LYS:C	33:AZ:158:PRO:HD3	2.42	0.45
34:B2:28:GLY:C	34:B2:30:GLU:N	2.67	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:116:A:H2'	35:BA:117:G:H8	1.82	0.45
35:BA:328:C:O2	35:BA:328:C:C2'	2.65	0.45
35:BA:688:G:O2'	35:BA:689:C:H5'	2.16	0.45
35:BA:716:A:N3	45:BK:117:ASN:O	2.50	0.45
35:BA:799:G:H2'	35:BA:800:G:H5'	1.99	0.45
35:BA:903:G:H2'	35:BA:904:C:H6	1.81	0.45
35:BA:950:U:H2'	35:BA:951:G:C8	2.52	0.45
35:BA:1408:A:O2'	35:BA:1409:C:H5'	2.16	0.45
35:BA:1476:G:H2'	35:BA:1477:C:H6	1.80	0.45
36:BB:42:ILE:CD1	36:BB:202:PRO:HB2	2.47	0.45
37:BC:14:ILE:O	37:BC:15:THR:HB	2.16	0.45
37:BC:145:GLY:O	37:BC:146:ALA:O	2.35	0.45
38:BD:114:ARG:C	38:BD:117:ALA:H	2.24	0.45
39:BE:15:ARG:CZ	39:BE:26:PHE:CE2	2.99	0.45
40:BF:3:ARG:HD3	40:BF:64:GLN:HE22	1.79	0.45
41:BG:102:ARG:O	41:BG:106:GLN:HG3	2.17	0.45
47:BM:83:ASP:C	47:BM:85:GLY:N	2.74	0.45
49:BO:8:LYS:O	49:BO:12:ILE:HG13	2.17	0.45
51:BQ:29:HIS:O	51:BQ:31:LEU:N	2.49	0.45
51:BQ:52:LYS:HD3	51:BQ:55:ASP:CG	2.42	0.45
53:BS:58:VAL:HG13	53:BS:58:VAL:O	2.17	0.45
54:BT:16:HIS:O	54:BT:19:SER:CB	2.65	0.45
59:BZ:147:LEU:HD23	59:BZ:147:LEU:N	2.32	0.45
59:BZ:340:PRO:HB2	59:BZ:388:ILE:HG23	1.99	0.45
6:A5:57:VAL:HG12	6:A5:58:LEU:HD12	1.98	0.45
7:A6:27:LYS:CG	7:A6:27:LYS:O	2.64	0.45
11:AA:292:C:O2'	11:AA:293:U:H5'	2.16	0.45
11:AA:332:A:H4'	11:AA:333:G:OP1	2.16	0.45
11:AA:498:G:O2'	11:AA:499:U:H5'	2.17	0.45
11:AA:635:C:H2'	11:AA:636:G:O4'	2.17	0.45
11:AA:807:U:H2'	11:AA:808:G:H8	1.82	0.45
11:AA:888:C:H5'	47:BM:93:ARG:CG	2.38	0.45
11:AA:910:A:H2'	11:AA:911:A:C8	2.51	0.45
11:AA:986:C:O2'	11:AA:987:G:H5'	2.17	0.45
11:AA:1323:U:H2'	11:AA:1324:G:H5'	1.98	0.45
11:AA:1432:C:H2'	11:AA:1433:U:O4'	2.17	0.45
11:AA:1473:G:H2'	11:AA:1474:C:O4'	2.16	0.45
11:AA:1821:A:OP1	14:AD:201:HIS:CD2	2.70	0.45
11:AA:2125:G:H1'	11:AA:2173:A:H61	1.81	0.45
12:AB:16:G:C6	12:AB:69:G:C2	3.05	0.45
13:AC:4:GLY:O	13:AC:8:ARG:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AC:46:LYS:O	13:AC:210:ARG:HB2	2.17	0.45
13:AC:137:LEU:O	13:AC:139:ASN:N	2.36	0.45
14:AD:71:ASP:HB2	14:AD:103:ARG:NH2	2.22	0.45
18:AH:49:VAL:HG23	18:AH:50:VAL:N	2.32	0.45
25:AR:28:LEU:C	25:AR:28:LEU:CD2	2.85	0.45
27:AT:93:ARG:HD2	27:AT:93:ARG:HA	1.59	0.45
28:AU:109:LEU:O	28:AU:113:ALA:N	2.41	0.45
31:AX:12:VAL:HA	31:AX:27:THR:O	2.16	0.45
31:AX:63:LYS:HB2	31:AX:63:LYS:HE3	1.70	0.45
32:AY:96:ILE:CD1	32:AY:99:CYS:SG	3.05	0.45
33:AZ:70:LEU:HD23	33:AZ:70:LEU:N	2.32	0.45
35:BA:131:C:H2'	35:BA:132:C:C6	2.51	0.45
35:BA:473:G:O2'	35:BA:474:G:H5'	2.17	0.45
35:BA:692:U:H5'	35:BA:797:C:C5'	2.47	0.45
35:BA:738:C:H2'	35:BA:739:C:H6	1.81	0.45
35:BA:742:G:H5"	49:BO:58:MET:HE1	1.98	0.45
35:BA:1099:G:H3'	35:BA:1100:C:H6	1.82	0.45
35:BA:1160:G:O2'	35:BA:1161:C:H5'	2.16	0.45
35:BA:1202:G:H1'	48:BN:29:ARG:HD3	1.99	0.45
37:BC:34:LEU:O	37:BC:35:GLU:C	2.60	0.45
38:BD:26:CYS:HA	38:BD:31:CYS:HA	1.99	0.45
38:BD:46:LYS:O	38:BD:47:ARG:C	2.60	0.45
39:BE:28:PHE:CD2	39:BE:51:VAL:HG22	2.52	0.45
39:BE:32:VAL:HG23	39:BE:58:ALA:CB	2.47	0.45
40:BF:33:TYR:CD2	40:BF:75:LEU:HA	2.51	0.45
41:BG:69:VAL:HG21	41:BG:104:LEU:CD2	2.45	0.45
41:BG:138:LYS:O	41:BG:142:GLU:HG3	2.17	0.45
45:BK:93:GLN:NE2	45:BK:96:ARG:HH21	2.15	0.45
49:BO:23:GLY:O	49:BO:24:SER:O	2.35	0.45
51:BQ:51:TYR:CD2	51:BQ:73:VAL:HG11	2.52	0.45
52:BR:36:ASN:HB2	52:BR:39:VAL:CG2	2.47	0.45
54:BT:100:ILE:H	54:BT:100:ILE:CD1	2.30	0.45
56:BV:24:C:H2'	56:BV:25:U:C6	2.52	0.45
58:BY:76:C:O2	58:BY:76:C:H2'	2.16	0.45
59:BZ:185:ASN:ND2	59:BZ:185:ASN:C	2.73	0.45
5:A4:31:ILE:CG2	5:A4:33:VAL:HG23	2.47	0.45
7:A6:33:LYS:O	7:A6:34:LEU:HD12	2.17	0.45
8:A7:12:ARG:NH1	11:AA:686:G:O6	2.50	0.45
9:A8:58:ILE:HG22	9:A8:58:ILE:O	2.17	0.45
11:AA:271(M):G:C3'	11:AA:271(N):U:H5"	2.47	0.45
11:AA:587:C:C5	23:AP:33:ARG:HG2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:952:G:OP1	24:AQ:16:ARG:NH2	2.46	0.45
11:AA:1067:A:H1'	58:BY:69:C:O4'	2.16	0.45
11:AA:1337:G:OP2	31:AX:73:ARG:NH2	2.46	0.45
11:AA:1678:G:H8	11:AA:1678:G:O5'	2.00	0.45
11:AA:1973:G:H2'	11:AA:1974:C:C6	2.51	0.45
11:AA:2096:U:H3	11:AA:2193:G:H1	1.64	0.45
11:AA:2543:G:H2'	11:AA:2544:G:C8	2.52	0.45
11:AA:2585:U:O2	11:AA:2585:U:O4'	2.34	0.45
13:AC:21:THR:C	13:AC:23:ASP:H	2.25	0.45
14:AD:28:GLU:N	14:AD:28:GLU:CD	2.75	0.45
16:AF:63:LYS:O	16:AF:64:ILE:C	2.60	0.45
16:AF:132:VAL:HG21	16:AF:162:LEU:HD23	1.99	0.45
16:AF:156:LEU:HD12	16:AF:193:VAL:HB	1.99	0.45
22:AO:11:ALA:O	22:AO:98:VAL:HA	2.16	0.45
23:AP:31:ALA:C	23:AP:33:ARG:H	2.25	0.45
24:AQ:113:GLN:O	24:AQ:114:ALA:C	2.58	0.45
25:AR:4:LEU:C	25:AR:6:SER:H	2.22	0.45
26:AS:34:HIS:CB	26:AS:53:SER:HB3	2.47	0.45
27:AT:1:MET:HG3	27:AT:1:MET:O	2.17	0.45
27:AT:91:ARG:HD3	27:AT:116:ALA:HB2	1.98	0.45
29:AV:81:TYR:C	29:AV:82:ARG:HD2	2.42	0.45
32:AY:63:LYS:CG	32:AY:64:GLU:N	2.78	0.45
33:AZ:100:VAL:HG13	33:AZ:101:PRO:HD2	1.98	0.45
33:AZ:146:ILE:O	33:AZ:147:GLY:O	2.34	0.45
34:B2:47:ARG:O	34:B2:53:LEU:HD12	2.17	0.45
35:BA:66:G:H4'	35:BA:173:U:C5	2.51	0.45
35:BA:90:U:O3'	35:BA:91:C:C6	2.70	0.45
35:BA:421:U:H6	37:BC:127:ARG:CZ	2.30	0.45
35:BA:706:A:H1'	45:BK:29:ILE:HD11	1.99	0.45
35:BA:709:G:O2'	35:BA:710:G:H5'	2.17	0.45
35:BA:720:C:H2'	35:BA:721:G:H8	1.79	0.45
35:BA:731:G:H5'	35:BA:766:A:H4'	1.98	0.45
35:BA:914:A:O2'	35:BA:915:A:H5'	2.17	0.45
35:BA:1115:C:O2'	35:BA:1116:C:H5'	2.16	0.45
35:BA:1313:U:H2'	35:BA:1314:C:H6	1.81	0.45
36:BB:142:LEU:HD21	36:BB:146:GLN:NE2	2.32	0.45
38:BD:10:ARG:NH1	38:BD:40:PRO:HG3	2.32	0.45
38:BD:126:ILE:N	38:BD:126:ILE:CD1	2.80	0.45
41:BG:54:THR:O	41:BG:54:THR:HG23	2.17	0.45
45:BK:90:GLY:O	45:BK:91:ARG:C	2.60	0.45
51:BQ:67:LYS:O	51:BQ:68:ARG:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BW:13:C:O5'	56:BW:13:C:H6	2.00	0.45
58:BY:23:G:C2'	58:BY:24:G:O5'	2.65	0.45
59:BZ:69:GLU:HG2	59:BZ:70:TYR:N	2.32	0.45
59:BZ:171:ILE:N	59:BZ:171:ILE:CD1	2.80	0.45
59:BZ:242:ILE:HD12	59:BZ:281:ILE:O	2.17	0.45
59:BZ:345:ARG:HH12	59:BZ:384:LEU:CD2	2.30	0.45
1:A0:50:ASN:HB3	1:A0:63:VAL:CG2	2.47	0.44
1:A0:74:ARG:HB2	12:AB:12:C:O2'	2.17	0.44
7:A6:5:VAL:O	7:A6:6:ARG:CB	2.65	0.44
7:A6:20:ASN:C	7:A6:21:TYR:CG	2.95	0.44
11:AA:271(V):G:O2'	11:AA:271(W):G:H5'	2.17	0.44
11:AA:535:C:C2'	11:AA:536:A:H5'	2.47	0.44
11:AA:1140:C:O3'	21:AN:25:ARG:NH1	2.48	0.44
11:AA:1164:G:H2'	11:AA:1165:U:H6	1.83	0.44
11:AA:1531:C:H2'	11:AA:1532:C:C6	2.52	0.44
11:AA:1687:G:H2'	11:AA:1688:U:C6	2.52	0.44
11:AA:1813:G:H1'	14:AD:50:THR:OG1	2.17	0.44
11:AA:1842:G:H2'	11:AA:1843:C:H6	1.81	0.44
11:AA:2126:A:H5'	13:AC:37:PHE:CD2	2.51	0.44
15:AE:51:PHE:O	15:AE:52:LEU:O	2.35	0.44
17:AG:42:GLY:HA2	17:AG:90:LEU:H	1.82	0.44
17:AG:51:ARG:HA	17:AG:51:ARG:NE	2.32	0.44
17:AG:90:LEU:HD12	17:AG:90:LEU:HA	1.74	0.44
17:AG:97:ASP:H	17:AG:100:TRP:HD1	1.65	0.44
21:AN:119:ARG:HH11	21:AN:119:ARG:CG	2.30	0.44
23:AP:96:THR:CG2	23:AP:126:VAL:HB	2.46	0.44
29:AV:40:LEU:N	29:AV:40:LEU:HD22	2.32	0.44
30:AW:22:ASP:HA	30:AW:25:ARG:NH1	2.32	0.44
30:AW:65:LEU:O	30:AW:66:GLU:C	2.58	0.44
31:AX:12:VAL:HG12	31:AX:27:THR:CA	2.47	0.44
31:AX:80:ILE:O	31:AX:80:ILE:CG1	2.65	0.44
33:AZ:145:GLU:HG3	33:AZ:146:ILE:N	2.32	0.44
34:B2:39:VAL:O	34:B2:39:VAL:HG23	2.15	0.44
34:B2:63:TYR:H	34:B2:70:ASN:HD22	1.64	0.44
35:BA:233:C:H2'	35:BA:234:C:H6	1.82	0.44
35:BA:518:C:H2'	35:BA:530:G:C2	2.52	0.44
35:BA:622:A:C8	35:BA:623:C:C6	3.05	0.44
35:BA:864:A:H3'	35:BA:865:A:C8	2.52	0.44
35:BA:995:C:O2'	35:BA:996:A:P	2.75	0.44
35:BA:1225:A:OP1	47:BM:102:ARG:HA	2.17	0.44
35:BA:1478:C:H2'	35:BA:1479:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:12:CYS:SG	38:BD:19:LEU:HB2	2.56	0.44
38:BD:171:GLY:HA2	38:BD:172:PRO:HD3	1.81	0.44
39:BE:11:ILE:HD11	39:BE:31:LEU:HD13	1.99	0.44
39:BE:63:ARG:HG2	39:BE:63:ARG:HH11	1.82	0.44
41:BG:107:ALA:O	41:BG:109:ASN:N	2.50	0.44
43:BI:9:ARG:HB2	43:BI:104:ARG:NH1	2.13	0.44
47:BM:17:VAL:O	47:BM:20:THR:OG1	2.34	0.44
47:BM:53:VAL:O	47:BM:56:LEU:HB3	2.17	0.44
47:BM:54:VAL:O	47:BM:56:LEU:N	2.50	0.44
52:BR:87:ARG:HB3	52:BR:87:ARG:HE	1.55	0.44
53:BS:33:THR:HG22	53:BS:50:ALA:O	2.17	0.44
53:BS:47:HIS:O	53:BS:62:ILE:CG2	2.65	0.44
53:BS:79:THR:O	53:BS:80:TYR:CB	2.65	0.44
56:BW:65:G:H2'	56:BW:66:C:O4'	2.17	0.44
59:BZ:98:GLN:NE2	59:BZ:285:ASN:ND2	2.65	0.44
59:BZ:185:ASN:C	59:BZ:185:ASN:HD22	2.24	0.44
59:BZ:216:ASP:OD2	59:BZ:219:LYS:HG3	2.16	0.44
59:BZ:401:THR:HG22	59:BZ:402:LYS:N	2.32	0.44
1:A0:41:ARG:O	1:A0:57:PHE:HD2	2.00	0.44
9:A8:10:ALA:O	9:A8:14:VAL:HG12	2.17	0.44
9:A8:44:LYS:HD2	9:A8:44:LYS:N	2.31	0.44
11:AA:952:G:P	24:AQ:16:ARG:HH22	2.39	0.44
11:AA:971:C:H2'	11:AA:972:G:C5'	2.47	0.44
11:AA:1431:U:O2'	11:AA:1432:C:H5'	2.18	0.44
11:AA:1494:A:N3	11:AA:1494:A:C3'	2.79	0.44
11:AA:1888:G:N3	11:AA:1888:G:H5'	2.32	0.44
11:AA:1995:U:H2'	11:AA:1996:C:C5	2.53	0.44
11:AA:2010:G:O2'	11:AA:2011:U:H5'	2.17	0.44
11:AA:2282:G:O2'	11:AA:2283:C:OP2	2.32	0.44
11:AA:2528:U:O2'	11:AA:2529:G:H3'	2.17	0.44
11:AA:2544:G:H8	11:AA:2544:G:O5'	2.00	0.44
11:AA:2580:U:H5'	15:AE:131:ALA:H	1.83	0.44
13:AC:10:LEU:HB3	13:AC:220:PRO:CD	2.48	0.44
13:AC:130:ILE:O	13:AC:134:ARG:HD2	2.17	0.44
14:AD:20:ASP:OD2	14:AD:22:SER:OG	2.29	0.44
15:AE:179:GLU:HB3	15:AE:181:LEU:HD22	1.99	0.44
16:AF:10:PRO:HB3	16:AF:127:GLU:CG	2.46	0.44
25:AR:19:ALA:O	25:AR:20:LEU:C	2.61	0.44
27:AT:11:GLU:O	27:AT:13:ARG:N	2.39	0.44
29:AV:99:ILE:O	29:AV:100:ARG:C	2.60	0.44
30:AW:62:HIS:O	30:AW:63:ASP:C	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AX:11:PRO:HG2	31:AX:13:LEU:HG	1.99	0.44
34:B2:140:ALA:CB	39:BE:51:VAL:HG21	2.46	0.44
35:BA:369:C:O2'	35:BA:370:C:O5'	2.36	0.44
35:BA:455:C:N4	35:BA:476:G:H1	2.14	0.44
35:BA:626:U:H2'	35:BA:627:G:C8	2.52	0.44
35:BA:959:A:O3'	35:BA:960:U:H4'	2.16	0.44
35:BA:981:U:H2'	35:BA:982:U:C5	2.52	0.44
35:BA:1055:A:O5'	35:BA:1055:A:H8	2.00	0.44
35:BA:1280:A:O4'	44:BJ:41:PRO:CG	2.64	0.44
35:BA:1293:G:H2'	35:BA:1294:G:C8	2.52	0.44
35:BA:1370:G:C2	35:BA:1371:G:N7	2.85	0.44
35:BA:1505:G:H4'	35:BA:1506:U:H5'	1.98	0.44
36:BB:45:GLN:HE21	36:BB:45:GLN:HB3	1.60	0.44
37:BC:120:VAL:HB	37:BC:198:VAL:HG11	2.00	0.44
41:BG:143:ARG:HD3	56:BW:41:C:C5'	2.47	0.44
44:BJ:33:GLN:HB2	44:BJ:75:ILE:HD13	1.98	0.44
45:BK:124:LYS:NZ	45:BK:124:LYS:CB	2.80	0.44
46:BL:89:ARG:HA	46:BL:97:ARG:HA	1.99	0.44
58:BY:89:A:H5'	59:BZ:229:PHE:CE1	2.51	0.44
59:BZ:139:ASP:OD2	59:BZ:140:MET:CE	2.65	0.44
7:A6:10:LEU:HD12	9:A8:34:TRP:HD1	1.81	0.44
11:AA:195:A:H5"	11:AA:196:A:OP2	2.17	0.44
11:AA:468:G:H2'	11:AA:469:G:O4'	2.17	0.44
11:AA:880:G:H1	11:AA:897:C:H42	1.66	0.44
11:AA:1009:A:H1'	28:AU:59:ARG:NH1	2.32	0.44
11:AA:1023:U:H2'	11:AA:1024:G:C5'	2.43	0.44
11:AA:1385:G:O2'	11:AA:1396:U:C6	2.67	0.44
11:AA:1443:G:C2	11:AA:1549:C:N3	2.85	0.44
11:AA:1484:G:H3'	11:AA:1485:G:H5"	1.99	0.44
11:AA:1494:A:O2'	11:AA:1495:A:H5"	2.16	0.44
11:AA:2112:G:O6	56:BW:21:U:H1'	2.17	0.44
11:AA:2488:A:H2'	11:AA:2489:G:O4'	2.17	0.44
11:AA:2493:U:H2'	11:AA:2494:G:O5'	2.17	0.44
11:AA:2637:U:H5'	15:AE:44:TYR:CE2	2.53	0.44
11:AA:2661:G:C6	11:AA:2662:A:C2	3.05	0.44
13:AC:75:LEU:HG	13:AC:112:ALA:O	2.16	0.44
14:AD:270:ILE:H	14:AD:270:ILE:HG13	1.67	0.44
18:AH:83:TYR:CB	18:AH:135:GLY:N	2.80	0.44
18:AH:85:LYS:O	18:AH:85:LYS:HD3	2.18	0.44
24:AQ:110:THR:HG23	24:AQ:113:GLN:CG	2.47	0.44
25:AR:55:ALA:CB	25:AR:79:LEU:HD11	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:50:ILE:HD12	27:AT:50:ILE:N	2.30	0.44
30:AW:35:ILE:HG22	30:AW:36:LEU:N	2.32	0.44
34:B2:38:LYS:C	34:B2:39:VAL:CG1	2.90	0.44
35:BA:134:A:N6	50:BP:25:ARG:NH1	2.66	0.44
35:BA:760:G:O2'	51:BQ:98:LEU:HD23	2.17	0.44
35:BA:782:A:H2'	35:BA:783:C:H5'	1.99	0.44
35:BA:783:C:H2'	35:BA:784:C:C6	2.52	0.44
35:BA:1001(A):G:H8	35:BA:1002:G:C8	2.35	0.44
35:BA:1058:G:C5	35:BA:1059:C:C4	3.06	0.44
35:BA:1070:U:H5'	39:BE:18:ARG:NH2	2.32	0.44
35:BA:1255:G:C6	35:BA:1279:A:C8	3.05	0.44
35:BA:1314:C:C5	53:BS:6:LYS:HE2	2.52	0.44
35:BA:1442(A):G:H3'	35:BA:1442(B):A:C5'	2.33	0.44
35:BA:1459:C:H4'	54:BT:24:LEU:HD21	1.98	0.44
37:BC:15:THR:CG2	37:BC:181:ASN:HA	2.45	0.44
44:BJ:71:LEU:HD12	44:BJ:72:VAL:N	2.30	0.44
46:BL:83:VAL:HG13	46:BL:100:ILE:HG23	1.99	0.44
47:BM:52:GLU:O	47:BM:53:VAL:C	2.60	0.44
48:BN:58:LYS:HD3	48:BN:59:ALA:N	2.32	0.44
53:BS:51:VAL:HG12	53:BS:52:TYR:N	2.32	0.44
59:BZ:336:THR:O	59:BZ:353:VAL:O	2.34	0.44
2:A1:45:ASN:C	2:A1:45:ASN:ND2	2.74	0.44
4:A3:4:LEU:HD11	4:A3:39:ASP:OD1	2.17	0.44
4:A3:52:HIS:CD2	4:A3:52:HIS:H	2.34	0.44
7:A6:14:THR:HA	7:A6:19:ARG:O	2.18	0.44
9:A8:11:LYS:C	9:A8:13:ARG:H	2.25	0.44
11:AA:402:A:C2'	11:AA:403:U:H5'	2.47	0.44
11:AA:531:C:C5	11:AA:2035:G:C2	3.06	0.44
11:AA:614(A):U:C4'	11:AA:614(B):G:H5"	2.46	0.44
11:AA:1058:G:C2'	11:AA:1059:G:C5'	2.93	0.44
11:AA:1142:U:H5"	11:AA:1142(A):A:H5"	1.99	0.44
11:AA:1528:A:H2	11:AA:1542:A:C2	2.36	0.44
11:AA:1640:C:H6	11:AA:1640:C:H5'	1.82	0.44
13:AC:131:LEU:HD22	13:AC:136:LEU:CD1	2.40	0.44
14:AD:77:ALA:HB2	14:AD:97:TYR:CD2	2.53	0.44
14:AD:125:ILE:HG13	14:AD:137:PRO:CD	2.48	0.44
14:AD:158:ALA:C	14:AD:161:THR:HG23	2.42	0.44
15:AE:17:ASP:HB3	15:AE:18:ASP:H	1.42	0.44
16:AF:5:ALA:HB2	16:AF:24:LEU:CD1	2.47	0.44
16:AF:114:VAL:O	16:AF:115:ALA:C	2.61	0.44
18:AH:37:VAL:HG21	18:AH:72:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:85:LYS:HZ1	18:AH:86:GLU:HA	1.81	0.44
22:AO:32:TYR:N	22:AO:32:TYR:CD1	2.85	0.44
22:AO:43:VAL:HB	22:AO:54:GLU:HA	2.00	0.44
22:AO:104:ARG:HB3	22:AO:121:VAL:HG12	1.99	0.44
23:AP:83:VAL:HG12	23:AP:113:LYS:O	2.18	0.44
24:AQ:60:ARG:N	33:AZ:180:VAL:HB	2.32	0.44
24:AQ:66:ILE:O	24:AQ:66:ILE:HG13	2.17	0.44
27:AT:32:TYR:CD2	27:AT:81:PRO:HG2	2.53	0.44
29:AV:49:THR:O	29:AV:50:PRO:C	2.59	0.44
33:AZ:129:SER:HA	33:AZ:130:PRO:HD3	1.83	0.44
34:B2:99:THR:HB	34:B2:120:ALA:HB3	1.99	0.44
35:BA:52:G:O2'	35:BA:53:A:H5'	2.17	0.44
35:BA:189(D):C:H1'	35:BA:189(H):G:C2	2.52	0.44
35:BA:655:A:H2'	35:BA:656:C:C6	2.52	0.44
35:BA:868:C:H2'	35:BA:869:G:O4'	2.16	0.44
35:BA:1114:C:H2'	35:BA:1115:C:C6	2.53	0.44
35:BA:1194:U:H2'	35:BA:1195:C:O4'	2.16	0.44
35:BA:1276:G:O2'	35:BA:1277:C:H5'	2.18	0.44
35:BA:1321:C:C5'	35:BA:1322:C:C5'	2.95	0.44
35:BA:1326:C:OP1	55:BU:12:LYS:NZ	2.47	0.44
35:BA:1379:G:C6	35:BA:1380:U:C4	3.05	0.44
36:BB:8:LYS:HB2	36:BB:9:GLU:OE1	2.18	0.44
36:BB:42:ILE:HD12	36:BB:202:PRO:HB2	1.99	0.44
36:BB:191:ASP:OD1	36:BB:191:ASP:C	2.61	0.44
43:BI:89:ASN:O	43:BI:92:TYR:HB2	2.17	0.44
51:BQ:26:GLN:HA	51:BQ:36:ILE:O	2.18	0.44
52:BR:74:ARG:HG2	52:BR:80:PRO:O	2.16	0.44
53:BS:39:THR:HG23	53:BS:68:GLY:O	2.17	0.44
53:BS:64:GLU:CG	53:BS:65:ASN:N	2.80	0.44
56:BW:6:G:H2'	56:BW:7:G:H8	1.82	0.44
58:BY:1:G:OP3	58:BY:1:G:C8	2.69	0.44
59:BZ:131:ILE:HD11	59:BZ:163:PHE:CZ	2.51	0.44
59:BZ:176:LEU:O	59:BZ:180:GLU:HG3	2.18	0.44
59:BZ:226:GLU:C	59:BZ:300:ARG:HG3	2.42	0.44
59:BZ:310:ILE:O	59:BZ:311:THR:HG23	2.18	0.44
8:A7:27:GLY:O	8:A7:30:VAL:HB	2.16	0.44
9:A8:32:LEU:HB3	9:A8:36:LYS:HE2	2.00	0.44
9:A8:32:LEU:HD22	11:AA:2392:A:OP1	2.17	0.44
11:AA:314:A:O2'	11:AA:315:G:H5'	2.18	0.44
11:AA:483:A:N7	11:AA:497:A:H2	2.15	0.44
11:AA:1060:U:O2'	11:AA:1061:U:OP2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1188:U:C4'	29:AV:79:VAL:HG13	2.47	0.44
11:AA:1221:C:H2'	11:AA:1221(A):C:C6	2.53	0.44
11:AA:1710:C:H4'	11:AA:2858:C:O2	2.18	0.44
11:AA:2030:A:H4'	11:AA:2031:A:H8	1.82	0.44
11:AA:2140:C:O2'	11:AA:2141:G:H5'	2.17	0.44
11:AA:2709:G:H2'	11:AA:2710:C:C6	2.53	0.44
11:AA:2810:A:H2'	11:AA:2811:G:O4'	2.18	0.44
11:AA:2886:G:H2'	11:AA:2887:U:H6	1.81	0.44
14:AD:18:VAL:CG2	14:AD:19:ALA:N	2.80	0.44
14:AD:233:HIS:CD2	14:AD:233:HIS:N	2.84	0.44
14:AD:267:SER:C	14:AD:269:PHE:N	2.69	0.44
15:AE:9:VAL:HG12	15:AE:25:VAL:O	2.17	0.44
15:AE:33:VAL:HG23	15:AE:47:VAL:CG1	2.47	0.44
16:AF:89:VAL:CG1	16:AF:90:PHE:N	2.66	0.44
17:AG:44:GLY:HA2	17:AG:88:ILE:HG13	2.00	0.44
17:AG:102:PHE:HE2	17:AG:106:LEU:HD22	1.78	0.44
19:AJ:117:UNK:HA	19:AJ:121:UNK:O	2.17	0.44
21:AN:63:THR:O	21:AN:64:GLY:C	2.60	0.44
23:AP:147:LEU:CG	23:AP:148:LEU:N	2.68	0.44
27:AT:102:ILE:HG13	27:AT:103:ARG:N	2.31	0.44
31:AX:35:THR:HG21	31:AX:37:THR:HB	2.00	0.44
32:AY:21:LYS:HG2	32:AY:21:LYS:O	2.18	0.44
34:B2:7:ASN:ND2	34:B2:7:ASN:O	2.51	0.44
34:B2:55:LEU:HD11	34:B2:102:PRO:CG	2.28	0.44
34:B2:95:GLN:HA	34:B2:95:GLN:NE2	2.22	0.44
35:BA:336:C:O2'	35:BA:337:C:H5'	2.18	0.44
35:BA:479:C:H2'	35:BA:480:U:C6	2.53	0.44
35:BA:668:G:O2'	49:BO:46:HIS:CD2	2.70	0.44
35:BA:685:G:N2	35:BA:704:A:OP2	2.47	0.44
35:BA:1163:C:H2'	35:BA:1164:G:H8	1.82	0.44
36:BB:111:ARG:HG2	36:BB:111:ARG:NH1	2.33	0.44
37:BC:111:LEU:HD23	37:BC:111:LEU:HA	1.86	0.44
38:BD:8:VAL:O	38:BD:10:ARG:N	2.41	0.44
38:BD:34:GLU:O	38:BD:35:ARG:CB	2.52	0.44
43:BI:26:VAL:HG22	43:BI:61:ALA:HB3	1.99	0.44
45:BK:34:ASP:HB2	45:BK:35:PRO:CD	2.47	0.44
47:BM:5:ALA:O	47:BM:6:GLY:O	2.36	0.44
51:BQ:68:ARG:N	51:BQ:70:ARG:NH1	2.66	0.44
53:BS:16:LEU:N	53:BS:16:LEU:CD1	2.81	0.44
56:BV:4:G:O2'	56:BV:5:G:O5'	2.36	0.44
56:BW:39:A:O2'	56:BW:40:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BW:58:A:H2'	56:BW:59:A:C5'	2.47	0.44
59:BZ:17:ILE:HB	59:BZ:119:HIS:ND1	2.33	0.44
59:BZ:125:GLN:C	59:BZ:127:GLY:N	2.75	0.44
59:BZ:134:PHE:C	59:BZ:134:PHE:CD1	2.95	0.44
2:A1:73:LEU:CD2	2:A1:94:LEU:HB3	2.48	0.44
2:A1:78:LYS:HE2	2:A1:78:LYS:HB3	1.83	0.44
5:A4:6:HIS:HA	17:AG:67:LYS:HD2	1.99	0.44
9:A8:11:LYS:C	9:A8:13:ARG:N	2.76	0.44
11:AA:185:U:H4'	11:AA:218:A:H4'	2.00	0.44
11:AA:528:A:H2	11:AA:2043:C:C5'	2.28	0.44
11:AA:960:A:C4'	11:AA:2457:U:H4'	2.47	0.44
11:AA:2097:C:H2'	11:AA:2098:U:O4'	2.16	0.44
11:AA:2129:C:OP2	13:AC:6:ARG:HB3	2.17	0.44
11:AA:2179:C:H1'	11:AA:2180:U:C5	2.53	0.44
11:AA:2309:A:H2'	11:AA:2310:A:C5'	2.48	0.44
11:AA:2619:C:O2'	11:AA:2620:C:H5'	2.17	0.44
13:AC:20:TYR:HB2	13:AC:222:VAL:CG1	2.47	0.44
14:AD:76:PRO:HG2	14:AD:98:VAL:HG23	1.96	0.44
15:AE:172:VAL:HG13	15:AE:182:LEU:HD11	1.99	0.44
16:AF:176:LEU:HD23	16:AF:180:GLY:O	2.17	0.44
16:AF:199:TRP:CD2	16:AF:199:TRP:O	2.71	0.44
17:AG:173:LEU:O	17:AG:174:GLU:C	2.59	0.44
21:AN:48:MET:HE3	21:AN:48:MET:H	1.82	0.44
22:AO:104:ARG:HE	27:AT:33:LYS:CE	2.29	0.44
23:AP:33:ARG:O	23:AP:35:HIS:O	2.36	0.44
27:AT:89:VAL:HG11	27:AT:91:ARG:NE	2.32	0.44
28:AU:13:LYS:N	28:AU:13:LYS:CD	2.78	0.44
28:AU:37:GLU:O	28:AU:40:PHE:HB2	2.17	0.44
28:AU:90:VAL:CG2	29:AV:47:VAL:CG2	2.94	0.44
29:AV:36:PRO:HA	29:AV:56:SER:CB	2.47	0.44
30:AW:5:ALA:HB2	30:AW:54:ALA:HB2	1.98	0.44
31:AX:75:ASP:C	31:AX:76:ARG:HG3	2.43	0.44
32:AY:27:VAL:C	32:AY:29:GLU:OE1	2.61	0.44
32:AY:81:LYS:HD2	32:AY:96:ILE:CG1	2.48	0.44
33:AZ:140:ASP:C	33:AZ:141:VAL:CG2	2.91	0.44
33:AZ:140:ASP:O	33:AZ:141:VAL:HG22	2.18	0.44
33:AZ:151:HIS:O	33:AZ:152:ALA:C	2.61	0.44
34:B2:24:ILE:HD11	34:B2:115:VAL:H	1.82	0.44
34:B2:112:TYR:HB3	34:B2:114:LYS:NZ	2.33	0.44
35:BA:17:U:H4'	35:BA:1080:A:O4'	2.17	0.44
35:BA:437:U:O3'	38:BD:125:HIS:CE1	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:848:C:H2'	35:BA:849:C:C6	2.53	0.44
35:BA:1293:G:H2'	35:BA:1294:G:H8	1.82	0.44
36:BB:47:THR:C	36:BB:51:LEU:HD12	2.43	0.44
39:BE:59:GLY:O	39:BE:63:ARG:HG3	2.17	0.44
40:BF:15:ASP:C	40:BF:17:SER:H	2.24	0.44
40:BF:42:GLU:C	40:BF:44:GLY:N	2.75	0.44
41:BG:85:TYR:CE2	41:BG:154:TYR:HE2	2.32	0.44
47:BM:90:LEU:O	47:BM:91:ARG:C	2.59	0.44
59:BZ:168:VAL:HG23	59:BZ:209:TYR:CZ	2.53	0.44
59:BZ:353:VAL:HG13	59:BZ:370:PHE:CD1	2.53	0.44
1:A0:5:LYS:HB3	1:A0:5:LYS:HZ3	1.83	0.44
7:A6:17:LYS:O	7:A6:18:ARG:CB	2.66	0.44
11:AA:142:A:N6	11:AA:1596:A:H5'	2.33	0.44
11:AA:188:G:C6	11:AA:189:G:C4	3.06	0.44
11:AA:284:U:O2'	11:AA:285:C:H5'	2.18	0.44
11:AA:1053:C:C2'	11:AA:1054:A:H8	2.21	0.44
11:AA:1234:U:H2'	11:AA:1235:G:H5'	2.00	0.44
11:AA:1234:U:C2'	11:AA:1235:G:H5'	2.48	0.44
11:AA:1240:U:O2'	11:AA:1241:A:C5'	2.60	0.44
11:AA:1742:G:C6	11:AA:1743:C:N3	2.86	0.44
11:AA:2201:C:O2'	11:AA:2202:C:H5'	2.18	0.44
11:AA:2506:U:H4'	11:AA:2507:C:OP1	2.17	0.44
11:AA:2758:A:O2'	11:AA:2759:G:P	2.76	0.44
12:AB:97:G:H2'	12:AB:98:G:H5'	2.00	0.44
14:AD:72:LYS:O	14:AD:75:ILE:HG12	2.18	0.44
16:AF:169:ASN:O	16:AF:170:LEU:O	2.36	0.44
19:AJ:4:UNK:O	19:AJ:7:UNK:N	2.51	0.44
21:AN:57:ALA:C	21:AN:58:ASP:O	2.58	0.44
23:AP:85:LEU:HA	23:AP:88:LEU:CB	2.48	0.44
24:AQ:51:ARG:HH11	24:AQ:51:ARG:HG3	1.83	0.44
24:AQ:110:THR:CG2	24:AQ:113:GLN:OE1	2.65	0.44
25:AR:85:PRO:C	25:AR:87:TYR:N	2.75	0.44
25:AR:111:LEU:N	25:AR:111:LEU:CD1	2.80	0.44
27:AT:42:ILE:HD13	27:AT:83:ILE:CD1	2.43	0.44
28:AU:74:LEU:O	28:AU:74:LEU:HD12	2.17	0.44
28:AU:82:GLY:O	28:AU:83:LEU:C	2.61	0.44
32:AY:67:LEU:O	32:AY:68:HIS:C	2.61	0.44
33:AZ:158:PRO:O	33:AZ:159:PRO:C	2.60	0.44
35:BA:186:C:O3'	54:BT:82:SER:HB3	2.17	0.44
35:BA:392:G:H2'	35:BA:393:A:H8	1.83	0.44
35:BA:657:G:C4'	49:BO:28:GLN:HG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1032:G:H2'	35:BA:1033:G:N7	2.33	0.44
35:BA:1142:G:C2'	35:BA:1143:G:H5'	2.47	0.44
35:BA:1314:C:O2'	35:BA:1315:U:H5'	2.16	0.44
35:BA:1373:G:H8	35:BA:1373:G:O5'	2.00	0.44
35:BA:1431:C:H2'	35:BA:1432:G:C5'	2.48	0.44
36:BB:93:VAL:HG13	36:BB:93:VAL:O	2.17	0.44
37:BC:142:MET:C	37:BC:144:SER:H	2.26	0.44
38:BD:85:LYS:HG2	38:BD:86:LYS:N	2.32	0.44
38:BD:196:LEU:C	38:BD:198:VAL:H	2.26	0.44
39:BE:82:VAL:HG12	39:BE:83:GLU:N	2.33	0.44
40:BF:23:LYS:NZ	40:BF:42:GLU:OE2	2.49	0.44
40:BF:34:GLY:HA3	40:BF:71:ARG:HH21	1.82	0.44
41:BG:156:TRP:H	41:BG:156:TRP:HD1	1.62	0.44
42:BH:20:TYR:HA	42:BH:65:TYR:CZ	2.52	0.44
42:BH:38:ILE:HD12	42:BH:118:VAL:HG12	1.99	0.44
43:BI:82:ALA:C	43:BI:84:ALA:H	2.26	0.44
45:BK:57:THR:OG1	45:BK:58:PRO:HD2	2.18	0.44
46:BL:18:VAL:O	46:BL:19:ARG:CB	2.64	0.44
46:BL:46:LYS:HB3	46:BL:47:LYS:H	1.53	0.44
59:BZ:9:LYS:HB3	59:BZ:10:PRO:HD2	2.00	0.44
5:A4:14:ILE:CD1	5:A4:14:ILE:H	2.31	0.44
11:AA:22:C:O5'	11:AA:22:C:H6	2.01	0.44
11:AA:634:C:H2'	11:AA:635:C:C6	2.52	0.44
11:AA:1096:A:N3	11:AA:1096:A:H2'	2.33	0.44
11:AA:1205:U:C5	16:AF:171:PRO:HA	2.53	0.44
11:AA:1532:C:O5'	11:AA:1532:C:H6	2.00	0.44
11:AA:1620:G:C6	11:AA:1621:U:C4	3.06	0.44
11:AA:1697:G:H3'	11:AA:1698:A:C5'	2.40	0.44
11:AA:1781:C:O2	11:AA:1781:C:O4'	2.35	0.44
11:AA:2099:U:OP2	11:AA:2099:U:H6	2.00	0.44
11:AA:2312:U:C4'	17:AG:71:THR:HG21	2.44	0.44
11:AA:2422:A:N9	56:BW:77:A:H2	2.13	0.44
11:AA:2661:G:H2'	11:AA:2662:A:O4'	2.17	0.44
12:AB:49:C:OP1	26:AS:96:GLY:HA3	2.18	0.44
13:AC:163:PHE:CB	13:AC:171:ILE:HD11	2.48	0.44
17:AG:129:GLY:O	17:AG:130:ASN:HB2	2.16	0.44
17:AG:181:ARG:O	17:AG:182:LYS:C	2.61	0.44
21:AN:36:GLY:N	21:AN:49:GLY:HA3	2.32	0.44
21:AN:60:ILE:H	21:AN:60:ILE:HG13	1.58	0.44
22:AO:19:ILE:HG22	22:AO:43:VAL:HA	1.99	0.44
25:AR:104:ARG:HD2	25:AR:109:ALA:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AS:70:GLY:C	26:AS:72:ALA:N	2.74	0.44
27:AT:89:VAL:HG11	27:AT:91:ARG:HE	1.83	0.44
32:AY:17:SER:HB2	32:AY:71:LYS:CD	2.48	0.44
33:AZ:165:VAL:HG12	33:AZ:166:SER:N	2.32	0.44
34:B2:64:GLU:HG3	46:BL:79:GLU:HB2	2.00	0.44
34:B2:136:ALA:O	34:B2:139:ARG:HG2	2.18	0.44
35:BA:80:G:H2'	35:BA:81:U:C6	2.53	0.44
35:BA:99:U:H2'	35:BA:100:C:H6	1.82	0.44
35:BA:344:A:O2'	35:BA:345:C:OP1	2.32	0.44
35:BA:460:G:C6	35:BA:470:C:H5'	2.53	0.44
35:BA:619:U:H3	38:BD:135:LEU:CD1	2.31	0.44
35:BA:947:G:H2'	35:BA:948:C:C6	2.52	0.44
35:BA:1105:A:O2'	35:BA:1106:G:H5'	2.17	0.44
35:BA:1313:U:H2'	35:BA:1314:C:C6	2.52	0.44
37:BC:150:LYS:NZ	37:BC:167:TRP:HE1	2.15	0.44
38:BD:11:LEU:O	38:BD:13:ARG:O	2.36	0.44
39:BE:126:ARG:O	39:BE:127:ASN:C	2.61	0.44
40:BF:9:VAL:HG12	40:BF:86:ARG:HG3	1.99	0.44
46:BL:32:PHE:CE1	46:BL:86:ARG:HG3	2.52	0.44
47:BM:49:THR:HB	47:BM:52:GLU:CG	2.40	0.44
47:BM:56:LEU:O	47:BM:60:VAL:HG23	2.18	0.44
50:BP:52:ASP:OD2	50:BP:55:ARG:HG3	2.18	0.44
50:BP:58:TYR:C	50:BP:58:TYR:HD1	2.25	0.44
51:BQ:33:GLY:O	51:BQ:34:LYS:C	2.61	0.44
56:BW:7:G:H5'	56:BW:8:U:C5	2.53	0.44
59:BZ:135:MET:HE2	59:BZ:151:GLU:HB2	1.98	0.44
1:A0:19:LYS:HZ2	1:A0:41:ARG:NH2	2.15	0.44
3:A2:38:GLN:HG2	3:A2:38:GLN:H	1.59	0.44
7:A6:33:LYS:HD3	56:BW:66:C:O3'	2.18	0.44
11:AA:71:A:C2	31:AX:31:HIS:HE1	2.35	0.44
11:AA:1403:C:H5"	11:AA:1471:A:C1'	2.48	0.44
11:AA:1510:G:O2'	11:AA:1511:C:H5'	2.18	0.44
11:AA:1915:U:O2'	11:AA:1916:A:H5'	2.18	0.44
11:AA:2206:G:H3'	11:AA:2207:G:C5'	2.47	0.44
11:AA:2746:U:C2'	11:AA:2747:G:H5'	2.47	0.44
14:AD:8:PRO:CB	14:AD:14:ARG:HB3	2.42	0.44
14:AD:70:TRP:CZ2	14:AD:150:LYS:HA	2.51	0.44
14:AD:206:LEU:HD23	14:AD:211:ARG:HG3	1.98	0.44
17:AG:39:ILE:HG22	17:AG:157:ILE:CG1	2.42	0.44
17:AG:146:TYR:CD1	47:BM:9:ILE:HD13	2.53	0.44
19:AJ:30:UNK:O	19:AJ:31:UNK:CB	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AS:28:VAL:HB	26:AS:89:ARG:HD3	1.99	0.44
26:AS:90:GLY:C	26:AS:92:TYR:N	2.74	0.44
32:AY:8:LYS:CB	32:AY:28:LYS:HE2	2.47	0.44
34:B2:2:ALA:HB3	34:B2:107:PHE:CD1	2.52	0.44
34:B2:24:ILE:HD12	34:B2:24:ILE:H	1.79	0.44
35:BA:116:A:H61	35:BA:313:A:H1'	1.82	0.44
35:BA:516:U:C2'	35:BA:517:G:H5'	2.48	0.44
35:BA:782:A:H4'	35:BA:1514:C:O2'	2.18	0.44
35:BA:1075:C:OP1	36:BB:179:LYS:HE2	2.18	0.44
35:BA:1248:A:O2'	43:BI:70:LYS:NZ	2.50	0.44
35:BA:1296:C:H4'	35:BA:1302:U:C5	2.53	0.44
36:BB:13:ALA:C	36:BB:15:VAL:H	2.26	0.44
37:BC:36:ASP:OD1	37:BC:57:ILE:HG21	2.18	0.44
38:BD:96:LEU:CD2	38:BD:139:ARG:HH21	2.31	0.44
38:BD:102:ASP:OD1	38:BD:102:ASP:N	2.51	0.44
41:BG:34:GLY:C	41:BG:36:LYS:N	2.76	0.44
43:BI:4:TYR:HA	43:BI:88:TYR:CE1	2.53	0.44
44:BJ:49:VAL:HG12	44:BJ:61:GLU:O	2.18	0.44
45:BK:95:ILE:HG21	45:BK:108:ILE:HD13	2.00	0.44
46:BL:55:VAL:HG22	46:BL:67:THR:HG22	1.97	0.44
56:BW:55:U:C3'	56:BW:56:U:C5'	2.85	0.44
58:BY:20:C:N4	58:BY:58:G:H1	2.13	0.44
1:A0:20:ARG:HH11	1:A0:20:ARG:CG	2.30	0.43
1:A0:48:GLY:H	1:A0:51:VAL:HB	1.83	0.43
1:A0:66:VAL:HG12	1:A0:67:VAL:O	2.18	0.43
7:A6:53:LYS:CG	7:A6:54:ILE:N	2.80	0.43
9:A8:8:LYS:O	9:A8:12:LYS:HG3	2.18	0.43
11:AA:92:A:OP1	11:AA:92:A:O4'	2.35	0.43
11:AA:470:A:OP1	16:AF:59:TYR:CE1	2.69	0.43
11:AA:1106:G:C6	11:AA:1107:G:N3	2.86	0.43
11:AA:1188:U:C2'	11:AA:1189:A:C5'	2.94	0.43
11:AA:1227:G:P	28:AU:16:LYS:HZ3	2.41	0.43
11:AA:1629:U:H2'	11:AA:1630:G:C8	2.52	0.43
11:AA:2287:A:C2	11:AA:2289:G:C8	3.06	0.43
11:AA:2787:C:O2	11:AA:2787:C:C2'	2.66	0.43
13:AC:87:GLU:HG2	13:AC:94:VAL:CG2	2.46	0.43
13:AC:167:LYS:HE3	56:BW:18:U:C5'	2.48	0.43
14:AD:30:GLU:CG	14:AD:63:ARG:HE	2.30	0.43
14:AD:31:LYS:C	14:AD:33:LEU:H	2.25	0.43
14:AD:70:TRP:CE2	14:AD:150:LYS:HD3	2.52	0.43
14:AD:210:GLY:O	14:AD:211:ARG:CB	2.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:244:ARG:HG2	14:AD:245:PRO:HD3	2.00	0.43
15:AE:92:THR:HB	15:AE:93:VAL:H	1.57	0.43
15:AE:137:HIS:HB3	15:AE:138:PRO:CD	2.47	0.43
16:AF:3:GLU:C	16:AF:24:LEU:HG	2.43	0.43
17:AG:27:ASN:C	17:AG:29:TRP:N	2.76	0.43
17:AG:46:ALA:HB3	17:AG:88:ILE:CG1	2.48	0.43
18:AH:19:VAL:O	18:AH:20:ALA:CB	2.66	0.43
22:AO:103:ALA:C	22:AO:105:GLU:H	2.27	0.43
23:AP:58:THR:O	23:AP:58:THR:HG22	2.17	0.43
24:AQ:33:GLY:O	24:AQ:132:VAL:HG22	2.18	0.43
25:AR:28:LEU:HA	25:AR:34:ILE:HG12	1.99	0.43
26:AS:106:ARG:HB3	26:AS:106:ARG:CZ	2.48	0.43
27:AT:94:ALA:HB1	27:AT:99:LEU:HD23	2.00	0.43
28:AU:85:LYS:C	28:AU:87:GLY:H	2.25	0.43
34:B2:99:THR:HG22	34:B2:101:VAL:HG13	1.99	0.43
35:BA:677:U:O2	35:BA:777:A:O2'	2.35	0.43
35:BA:738:C:H2'	35:BA:739:C:C6	2.53	0.43
35:BA:1221:G:OP1	35:BA:1321:C:N3	2.51	0.43
35:BA:1288:A:H1'	35:BA:1352:C:O2'	2.18	0.43
37:BC:19:GLU:O	37:BC:56:ASP:HA	2.18	0.43
39:BE:79:GLU:C	39:BE:80:ILE:CG2	2.90	0.43
43:BI:11:LYS:C	43:BI:13:ALA:H	2.26	0.43
43:BI:82:ALA:O	43:BI:85:LEU:HG	2.18	0.43
43:BI:118:LYS:O	43:BI:119:ALA:CB	2.63	0.43
45:BK:21:ILE:HB	45:BK:84:VAL:HG12	1.99	0.43
53:BS:41:VAL:O	53:BS:44:MET:HB2	2.18	0.43
54:BT:49:ALA:O	54:BT:50:GLU:C	2.61	0.43
54:BT:91:LEU:C	54:BT:93:GLU:H	2.25	0.43
59:BZ:248:LYS:HE2	59:BZ:279:GLU:CB	2.45	0.43
59:BZ:314:THR:HG22	59:BZ:377:PRO:CA	2.47	0.43
3:A2:7:ARG:NH1	11:AA:102:G:OP2	2.50	0.43
6:A5:51:TYR:HB3	6:A5:52:TYR:H	1.63	0.43
11:AA:435:C:H2'	11:AA:436:C:H5'	2.00	0.43
11:AA:637:A:N1	11:AA:652:C:H5'	2.33	0.43
11:AA:662:G:P	23:AP:18:ARG:HD2	2.58	0.43
11:AA:864:G:N7	24:AQ:22:LYS:NZ	2.56	0.43
11:AA:958:U:O4	24:AQ:16:ARG:HA	2.19	0.43
11:AA:1493:C:C5	11:AA:2206:G:O2'	2.71	0.43
11:AA:1678:G:N2	11:AA:1989:G:N2	2.65	0.43
11:AA:2312:U:C2'	11:AA:2313:C:C5'	2.96	0.43
11:AA:2359:C:C2'	11:AA:2360:A:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2369:A:O2'	11:AA:2370:G:H5'	2.17	0.43
13:AC:21:THR:HG22	13:AC:225:ASN:HB2	2.01	0.43
13:AC:30:LYS:HD3	13:AC:185:LEU:HD12	1.99	0.43
14:AD:69:ARG:NH2	14:AD:128:GLY:O	2.46	0.43
15:AE:52:LEU:HB3	15:AE:76:ARG:H	1.83	0.43
16:AF:19:GLU:HB2	16:AF:24:LEU:HG	1.99	0.43
16:AF:22:ALA:CB	16:AF:26:ALA:HB2	2.40	0.43
18:AH:162:ILE:HG12	18:AH:162:ILE:O	2.17	0.43
25:AR:7:GLY:H	25:AR:8:ARG:NH2	2.16	0.43
26:AS:28:VAL:HG12	26:AS:29:PHE:H	1.83	0.43
28:AU:31:SER:O	28:AU:32:PHE:C	2.60	0.43
30:AW:31:GLU:O	30:AW:35:ILE:HG12	2.18	0.43
35:BA:17:U:H2'	35:BA:18:C:H6	1.81	0.43
35:BA:655:A:C2	35:BA:754:C:N4	2.86	0.43
35:BA:1080:A:H5'	39:BE:14:ARG:HH21	1.80	0.43
35:BA:1325:C:OP2	55:BU:15:ARG:NH2	2.51	0.43
36:BB:97:TRP:HZ2	36:BB:102:LEU:CD1	2.31	0.43
36:BB:120:ALA:O	36:BB:124:SER:HB2	2.18	0.43
37:BC:6:HIS:CD2	37:BC:7:PRO:HD2	2.51	0.43
38:BD:84:LYS:O	38:BD:85:LYS:O	2.37	0.43
38:BD:114:ARG:O	38:BD:118:ARG:N	2.49	0.43
40:BF:28:ARG:HG3	40:BF:28:ARG:HH11	1.82	0.43
43:BI:90:PRO:C	43:BI:92:TYR:H	2.25	0.43
45:BK:109:VAL:HG12	45:BK:110:ASP:N	2.33	0.43
45:BK:127:LYS:C	45:BK:129:SER:N	2.77	0.43
46:BL:78:GLN:C	46:BL:80:HIS:N	2.71	0.43
47:BM:120:LYS:HA	47:BM:120:LYS:NZ	2.33	0.43
3:A2:2:LYS:HE3	3:A2:52:ASP:OD1	2.18	0.43
3:A2:55:ARG:O	3:A2:58:ALA:HB3	2.17	0.43
10:A9:18:ARG:O	10:A9:18:ARG:CG	2.67	0.43
10:A9:30:PRO:C	10:A9:32:HIS:H	2.27	0.43
11:AA:26:G:C6	11:AA:27:G:N1	2.86	0.43
11:AA:373:U:O2	11:AA:423:A:C2	2.69	0.43
11:AA:414:C:O2	11:AA:1864:U:O2'	2.36	0.43
11:AA:654(V):A:OP2	11:AA:655:A:H3'	2.18	0.43
11:AA:760:G:H2'	11:AA:761:A:H5'	2.00	0.43
11:AA:760:G:C2'	11:AA:761:A:H5'	2.47	0.43
11:AA:1092:C:H2'	11:AA:1093:G:O4'	2.19	0.43
11:AA:1677:A:H2'	11:AA:1678:G:C8	2.53	0.43
11:AA:2101:G:H2'	11:AA:2102:U:O4'	2.19	0.43
11:AA:2885:C:H2'	11:AA:2886:G:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:2:ALA:C	14:AD:3:VAL:HG23	2.44	0.43
16:AF:28:ILE:CG2	16:AF:116:ASP:HB2	2.46	0.43
18:AH:87:LEU:HB2	18:AH:131:VAL:O	2.19	0.43
20:AK:109:UNK:HA	20:AK:112:UNK:CB	2.48	0.43
20:AK:113:UNK:O	20:AK:114:UNK:CB	2.66	0.43
22:AO:87:ILE:CG2	22:AO:91:LEU:CA	2.95	0.43
24:AQ:72:LYS:O	24:AQ:93:TYR:HA	2.18	0.43
32:AY:50:ARG:O	32:AY:52:SER:N	2.51	0.43
34:B2:96:LYS:HE2	34:B2:96:LYS:HB3	1.78	0.43
35:BA:21:G:H2'	35:BA:22:G:C8	2.53	0.43
35:BA:389:A:H2'	35:BA:389:A:N3	2.34	0.43
35:BA:973:G:C1'	44:BJ:55:LYS:HG3	2.46	0.43
35:BA:1125:U:C5	44:BJ:71:LEU:HD21	2.53	0.43
35:BA:1152:A:C6	35:BA:1153:C:N4	2.86	0.43
35:BA:1246:C:C2'	35:BA:1247:U:H5'	2.47	0.43
36:BB:219:VAL:O	36:BB:220:ASP:C	2.60	0.43
38:BD:18:LYS:N	38:BD:33:MET:HE3	2.33	0.43
38:BD:108:LEU:O	38:BD:110:PHE:CD1	2.71	0.43
39:BE:48:ALA:HB1	39:BE:53:LEU:HD22	2.00	0.43
40:BF:62:TRP:C	40:BF:63:TYR:CD1	2.96	0.43
41:BG:89:MET:O	41:BG:89:MET:HG2	2.18	0.43
47:BM:10:PRO:HB2	47:BM:18:ALA:HB1	1.95	0.43
47:BM:15:VAL:C	47:BM:17:VAL:H	2.26	0.43
47:BM:54:VAL:C	47:BM:56:LEU:N	2.72	0.43
49:BO:21:ASP:OD1	49:BO:24:SER:HB3	2.18	0.43
50:BP:21:VAL:HG12	50:BP:34:GLU:O	2.17	0.43
50:BP:27:LYS:HG3	50:BP:30:GLY:HA3	2.00	0.43
50:BP:75:ARG:O	50:BP:78:GLY:N	2.51	0.43
52:BR:73:ALA:HB3	52:BR:79:LEU:HD12	2.00	0.43
54:BT:27:LYS:O	54:BT:27:LYS:HD3	2.18	0.43
59:BZ:13:ASN:HD22	59:BZ:241:ARG:HD2	1.82	0.43
59:BZ:70:TYR:CE1	59:BZ:79:HIS:HB2	2.53	0.43
59:BZ:132:VAL:HG21	59:BZ:206:ILE:HD12	2.00	0.43
59:BZ:267:VAL:HG11	59:BZ:288:LEU:HD11	2.00	0.43
5:A4:26:SER:OG	5:A4:27:THR:N	2.50	0.43
6:A5:41:PRO:HG2	6:A5:44:THR:OG1	2.17	0.43
11:AA:39:C:O2	16:AF:46:ARG:NH2	2.52	0.43
11:AA:287:C:H2'	11:AA:288:C:H6	1.83	0.43
11:AA:558:G:OP1	21:AN:111:PRO:HD2	2.18	0.43
11:AA:587:C:N3	23:AP:36:LYS:HE3	2.32	0.43
11:AA:851:U:H2'	11:AA:852:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1100:C:O5'	11:AA:1100:C:H6	2.00	0.43
11:AA:1405:U:H2'	11:AA:1406:U:H6	1.76	0.43
11:AA:1490:A:H5'	11:AA:1491:G:OP2	2.17	0.43
11:AA:1843:C:H2'	11:AA:1844:C:H6	1.84	0.43
11:AA:1887:C:H3'	11:AA:1888:G:H5"	1.99	0.43
11:AA:1926:U:H2'	11:AA:1928:A:OP2	2.19	0.43
11:AA:2175:C:H1'	13:AC:44:HIS:CD2	2.54	0.43
11:AA:2406:U:C4	23:AP:72:PRO:HD2	2.53	0.43
11:AA:2635:C:C2'	11:AA:2636:U:O5'	2.66	0.43
11:AA:2657:A:H2	11:AA:2664:G:N2	2.12	0.43
14:AD:126:GLN:O	14:AD:127:VAL:C	2.61	0.43
15:AE:93:VAL:O	15:AE:95:ILE:N	2.52	0.43
18:AH:85:LYS:C	18:AH:85:LYS:CD	2.91	0.43
23:AP:9:ASN:N	23:AP:10:PRO:HD2	2.17	0.43
23:AP:77:ARG:HG2	23:AP:77:ARG:HH11	1.83	0.43
23:AP:88:LEU:O	23:AP:90:ARG:N	2.44	0.43
24:AQ:133:ARG:CG	24:AQ:134:ARG:N	2.74	0.43
25:AR:27:SER:HB3	25:AR:34:ILE:HD11	2.00	0.43
29:AV:62:LEU:HD22	29:AV:62:LEU:N	2.33	0.43
30:AW:27:LYS:HB3	30:AW:31:GLU:HB2	2.00	0.43
31:AX:20:GLY:O	31:AX:22:ALA:N	2.51	0.43
33:AZ:24:LEU:CD2	33:AZ:25:PRO:O	2.67	0.43
35:BA:22:G:H2'	35:BA:23:C:H6	1.83	0.43
35:BA:392:G:OP2	50:BP:12:LYS:HG3	2.17	0.43
35:BA:1163:C:O2'	35:BA:1164:G:H5'	2.19	0.43
35:BA:1237:C:H5"	35:BA:1238:A:C1'	2.49	0.43
35:BA:1266:G:N2	35:BA:1269:A:OP2	2.50	0.43
35:BA:1281:U:H3'	35:BA:1282:C:C6	2.53	0.43
35:BA:1333:A:H2'	35:BA:1334:G:O4'	2.18	0.43
36:BB:151:GLY:O	36:BB:153:ARG:N	2.51	0.43
37:BC:53:ALA:HB1	37:BC:114:PRO:HB2	1.99	0.43
38:BD:11:LEU:O	38:BD:12:CYS:C	2.60	0.43
38:BD:145:GLU:OE1	38:BD:145:GLU:N	2.48	0.43
39:BE:7:GLU:O	39:BE:8:GLU:CB	2.65	0.43
39:BE:20:GLN:CD	39:BE:25:ARG:NH1	2.76	0.43
41:BG:8:GLU:O	41:BG:8:GLU:CG	2.67	0.43
44:BJ:6:ILE:O	44:BJ:71:LEU:HD12	2.18	0.43
44:BJ:38:ILE:HG13	44:BJ:71:LEU:HB3	2.00	0.43
45:BK:73:MET:C	45:BK:75:TYR:N	2.75	0.43
46:BL:83:VAL:CG1	46:BL:84:LEU:N	2.81	0.43
47:BM:10:PRO:O	47:BM:11:ARG:CB	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BM:118:ALA:HB3	56:BV:30:G:C5'	2.48	0.43
51:BQ:43:LEU:O	51:BQ:69:LYS:HG3	2.18	0.43
56:BV:53:G:H2'	56:BV:54:G:H8	1.83	0.43
59:BZ:232:THR:HG22	59:BZ:233:GLY:N	2.33	0.43
2:A1:11:ARG:CZ	2:A1:11:ARG:CB	2.96	0.43
3:A2:51:ARG:HB2	3:A2:55:ARG:NH1	2.34	0.43
4:A3:42:ALA:O	4:A3:43:ILE:C	2.61	0.43
5:A4:15:ILE:HD13	5:A4:21:VAL:CG2	2.49	0.43
7:A6:45:LYS:NZ	7:A6:45:LYS:CB	2.80	0.43
11:AA:71:A:H2	31:AX:31:HIS:CE1	2.36	0.43
11:AA:380:U:H2'	11:AA:381:G:C8	2.48	0.43
11:AA:814:C:O2'	11:AA:815:C:H5'	2.18	0.43
11:AA:1120:G:H2'	11:AA:1121:C:C6	2.54	0.43
11:AA:1202:C:N4	11:AA:1203:G:C6	2.87	0.43
11:AA:1404:C:C2'	11:AA:1405:U:H5'	2.48	0.43
11:AA:2602:A:H4'	11:AA:2603:G:H5'	2.00	0.43
11:AA:2665:A:C2'	11:AA:2666:C:O5'	2.67	0.43
14:AD:4:LYS:O	14:AD:17:THR:HA	2.18	0.43
14:AD:92:ILE:CD1	14:AD:92:ILE:H	2.32	0.43
18:AH:103:LEU:HG	18:AH:105:LEU:HD22	2.00	0.43
22:AO:25:LEU:HD11	22:AO:40:VAL:HG23	2.00	0.43
23:AP:143:GLY:C	23:AP:145:PRO:HD3	2.42	0.43
24:AQ:69:PHE:CD2	24:AQ:71:ASP:HB3	2.54	0.43
27:AT:28:VAL:C	27:AT:29:ARG:HD3	2.44	0.43
28:AU:101:ARG:O	28:AU:103:PRO:CD	2.57	0.43
33:AZ:100:VAL:HG11	33:AZ:137:ILE:HG12	2.00	0.43
34:B2:5:LEU:HD21	34:B2:39:VAL:HG22	1.99	0.43
35:BA:19:C:H5"	39:BE:86:ALA:CB	2.47	0.43
35:BA:307:C:H2'	35:BA:308:C:C6	2.53	0.43
35:BA:368:U:O4	59:BZ:234:ARG:NH1	2.48	0.43
35:BA:392:G:H2'	35:BA:393:A:C8	2.52	0.43
35:BA:460:G:O6	35:BA:470:C:H5'	2.19	0.43
35:BA:1050:G:O2'	35:BA:1051:C:O5'	2.37	0.43
35:BA:1236:A:H4'	35:BA:1304:G:H4'	1.99	0.43
35:BA:1415:G:C6	35:BA:1486:G:C6	3.06	0.43
36:BB:98:LEU:CB	36:BB:101:MET:HE3	2.47	0.43
36:BB:113:HIS:O	36:BB:114:ARG:C	2.62	0.43
36:BB:121:LEU:HD23	36:BB:139:LYS:NZ	2.26	0.43
36:BB:213:LEU:C	36:BB:213:LEU:CD2	2.91	0.43
37:BC:130:VAL:O	37:BC:134:ILE:HG13	2.19	0.43
38:BD:19:LEU:HD12	38:BD:19:LEU:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:54:TYR:O	38:BD:55:ALA:C	2.60	0.43
38:BD:69:GLY:O	38:BD:70:ILE:C	2.61	0.43
38:BD:72:GLU:OE1	38:BD:72:GLU:HA	2.18	0.43
41:BG:31:MET:CG	41:BG:32:ARG:N	2.81	0.43
46:BL:26:ALA:O	46:BL:27:LEU:O	2.36	0.43
59:BZ:121:LEU:HD22	62:BZ:1002:KIR:O4	2.18	0.43
5:A4:16:CYS:HB2	5:A4:36:CYS:SG	2.58	0.43
7:A6:5:VAL:O	7:A6:5:VAL:HG12	2.17	0.43
7:A6:7:ILE:O	7:A6:7:ILE:CG2	2.67	0.43
11:AA:272(B):G:H2'	11:AA:272(C):G:C8	2.54	0.43
11:AA:774:A:C2	11:AA:787:U:O2'	2.62	0.43
11:AA:1999:C:O2'	11:AA:2000:G:H5'	2.18	0.43
11:AA:2443:C:O2'	11:AA:2444:G:H5'	2.19	0.43
11:AA:2468:G:H5"	24:AQ:120:ILE:HD12	2.00	0.43
11:AA:2785:C:H2'	11:AA:2786:U:O4'	2.19	0.43
13:AC:20:TYR:C	13:AC:21:THR:O	2.62	0.43
14:AD:83:GLU:OE1	14:AD:104:TYR:OH	2.30	0.43
22:AO:63:VAL:HG11	22:AO:85:VAL:HG23	2.01	0.43
22:AO:97:ARG:C	22:AO:98:VAL:HG12	2.43	0.43
24:AQ:141:GLN:OE1	33:AZ:72:ARG:NE	2.51	0.43
25:AR:50:HIS:CE1	25:AR:54:LEU:HD11	2.53	0.43
27:AT:8:LYS:C	27:AT:10:VAL:N	2.77	0.43
31:AX:8:ILE:N	31:AX:8:ILE:CD1	2.81	0.43
32:AY:50:ARG:NH2	32:AY:55:TYR:CD2	2.87	0.43
33:AZ:153:SER:HB2	33:AZ:167:PRO:HB3	2.00	0.43
35:BA:68:G:H5'	35:BA:171:A:H1'	2.00	0.43
35:BA:783:C:HO2'	35:BA:784:C:H5'	1.83	0.43
35:BA:878:G:H5'	42:BH:89:PRO:HG2	1.99	0.43
35:BA:1320:C:N4	53:BS:37:ARG:HB3	2.33	0.43
35:BA:1401:G:H2'	35:BA:1402:C:O4'	2.18	0.43
36:BB:36:ARG:N	36:BB:41:ILE:HD13	2.34	0.43
37:BC:28:GLN:O	37:BC:32:LEU:HG	2.19	0.43
38:BD:114:ARG:O	38:BD:117:ALA:N	2.48	0.43
39:BE:81:GLU:HG2	39:BE:90:VAL:HG22	1.99	0.43
43:BI:97:LYS:O	43:BI:98:PRO:C	2.61	0.43
47:BM:12:ASN:HD22	47:BM:12:ASN:HA	1.61	0.43
49:BO:16:ALA:HB1	49:BO:21:ASP:HB3	2.00	0.43
50:BP:75:ARG:HG3	50:BP:75:ARG:NH1	2.31	0.43
53:BS:9:VAL:C	53:BS:11:VAL:H	2.27	0.43
54:BT:87:LYS:O	54:BT:91:LEU:HG	2.18	0.43
56:BW:71:G:C2'	56:BW:72:C:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:96:ALA:HA	59:BZ:99:MET:SD	2.58	0.43
59:BZ:254:GLU:HA	59:BZ:263:ARG:O	2.19	0.43
59:BZ:329:GLY:HA3	59:BZ:393:ARG:HG3	2.00	0.43
59:BZ:347:THR:HG23	59:BZ:348:ASP:N	2.32	0.43
2:A1:80:LEU:CD2	2:A1:81:LYS:N	2.80	0.43
3:A2:38:GLN:CD	3:A2:44:LEU:HD13	2.41	0.43
4:A3:26:LEU:O	4:A3:35:ARG:HD3	2.19	0.43
5:A4:15:ILE:HD13	5:A4:21:VAL:CG1	2.49	0.43
7:A6:40:CYS:HA	7:A6:41:PRO:HD3	1.85	0.43
9:A8:38:GLY:O	9:A8:42:ARG:CB	2.66	0.43
10:A9:30:PRO:O	10:A9:32:HIS:N	2.52	0.43
11:AA:451:C:C2	11:AA:453:C:C5	3.07	0.43
11:AA:717:G:H2'	11:AA:718:A:O4'	2.19	0.43
11:AA:1260:G:H2'	11:AA:1261:C:C6	2.52	0.43
11:AA:2086:U:H2'	11:AA:2087:G:H8	1.83	0.43
11:AA:2243:U:O2	11:AA:2434:A:C2	2.72	0.43
11:AA:2630:G:H21	11:AA:2892:A:H1'	1.83	0.43
11:AA:2656:U:C3'	11:AA:2657:A:H5"	2.49	0.43
13:AC:167:LYS:HE3	56:BW:18:U:H4'	1.97	0.43
16:AF:89:VAL:CG1	16:AF:90:PHE:H	2.23	0.43
17:AG:107:LEU:O	17:AG:111:LEU:HG	2.19	0.43
18:AH:54:ARG:HG2	18:AH:54:ARG:NH1	2.34	0.43
21:AN:65:LYS:NZ	21:AN:65:LYS:CB	2.79	0.43
26:AS:20:ARG:HH11	26:AS:20:ARG:CG	2.31	0.43
26:AS:65:VAL:O	26:AS:69:VAL:HG12	2.19	0.43
27:AT:46:GLU:OE2	27:AT:88:ILE:CG1	2.64	0.43
33:AZ:125:LEU:HD11	33:AZ:164:ALA:CB	2.44	0.43
34:B2:5:LEU:HD23	34:B2:39:VAL:CG2	2.48	0.43
35:BA:25:C:H2'	35:BA:26:A:C8	2.54	0.43
35:BA:707:C:H2'	35:BA:708:C:H6	1.84	0.43
35:BA:1057:G:H1'	37:BC:195:VAL:HG11	1.99	0.43
36:BB:21:ARG:HB3	36:BB:39:ILE:CG2	2.47	0.43
36:BB:214:ILE:O	36:BB:218:ALA:HB2	2.18	0.43
37:BC:58:GLU:HB2	37:BC:65:ALA:CB	2.44	0.43
37:BC:179:ARG:HG3	37:BC:206:GLU:HG2	2.00	0.43
38:BD:106:TYR:C	38:BD:108:LEU:N	2.74	0.43
39:BE:17:ALA:HB2	39:BE:26:PHE:CD2	2.54	0.43
39:BE:82:VAL:HG21	39:BE:138:ALA:CA	2.48	0.43
46:BL:58:VAL:HG12	46:BL:60:LEU:HD22	2.00	0.43
48:BN:22:THR:O	48:BN:23:ARG:CB	2.67	0.43
50:BP:52:ASP:O	50:BP:54:GLU:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:72:LEU:HD23	54:BT:72:LEU:HA	1.91	0.43
56:BW:65:G:H2'	56:BW:66:C:C5'	2.48	0.43
59:BZ:315:LYS:H	59:BZ:405:GLU:HB2	1.84	0.43
59:BZ:360:GLU:N	59:BZ:360:GLU:OE1	2.52	0.43
3:A2:48:HIS:ND1	11:AA:95:G:O2'	2.44	0.43
4:A3:35:ARG:HB2	4:A3:35:ARG:NH1	2.15	0.43
10:A9:8:LYS:HA	10:A9:8:LYS:CE	2.47	0.43
11:AA:888:C:OP2	47:BM:93:ARG:HB3	2.19	0.43
11:AA:1028:A:N6	11:AA:1125:G:H2'	2.33	0.43
11:AA:1086:A:H3'	11:AA:1086:A:N3	2.33	0.43
11:AA:1332:G:N1	11:AA:1609:A:O2'	2.52	0.43
11:AA:2340:G:H2'	11:AA:2341:G:C8	2.54	0.43
11:AA:2826:A:C2'	11:AA:2827:C:H5'	2.49	0.43
12:AB:43:C:H3'	12:AB:44:G:C5'	2.49	0.43
12:AB:65:C:C2	12:AB:109:C:N4	2.87	0.43
13:AC:22:ILE:O	13:AC:22:ILE:HG22	2.19	0.43
13:AC:26:ALA:HA	13:AC:29:VAL:HG22	2.00	0.43
13:AC:47:LEU:HD12	13:AC:47:LEU:H	1.82	0.43
13:AC:171:ILE:HG21	13:AC:196:LEU:HD13	1.99	0.43
15:AE:96:PHE:HA	15:AE:100:GLU:OE1	2.18	0.43
16:AF:17:ARG:HG3	16:AF:17:ARG:NH1	2.29	0.43
16:AF:164:ARG:HD3	16:AF:175:THR:OG1	2.19	0.43
17:AG:34:LEU:CA	17:AG:161:THR:HG22	2.49	0.43
18:AH:42:ARG:HG2	18:AH:43:VAL:H	1.82	0.43
24:AQ:3:MET:HB2	24:AQ:93:TYR:CD1	2.54	0.43
24:AQ:104:PHE:CE2	24:AQ:125:LEU:HD11	2.51	0.43
24:AQ:120:ILE:C	24:AQ:122:GLY:N	2.76	0.43
25:AR:26:LYS:HE2	25:AR:71:GLN:H	1.84	0.43
26:AS:29:PHE:C	26:AS:29:PHE:CD1	2.96	0.43
26:AS:35:ILE:HD12	26:AS:97:ARG:CB	2.49	0.43
27:AT:30:VAL:HG22	27:AT:84:GLN:O	2.19	0.43
28:AU:106:PHE:O	28:AU:109:LEU:HB2	2.18	0.43
29:AV:91:TYR:HE1	29:AV:93:GLU:HG3	1.84	0.43
30:AW:35:ILE:O	30:AW:37:ARG:N	2.51	0.43
32:AY:49:VAL:O	32:AY:49:VAL:HG12	2.19	0.43
32:AY:81:LYS:HE2	32:AY:97:ARG:O	2.18	0.43
32:AY:88:LYS:CB	32:AY:91:GLU:HB2	2.49	0.43
33:AZ:67:LEU:N	33:AZ:67:LEU:HD12	2.33	0.43
35:BA:16:A:N1	35:BA:919:A:C2	2.82	0.43
35:BA:59:A:H61	35:BA:331:G:H1'	1.84	0.43
35:BA:72:C:O2'	35:BA:73:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:605:U:C2'	35:BA:606:G:H5'	2.49	0.43
35:BA:936:C:H2'	35:BA:937:A:H8	1.84	0.43
35:BA:1350:A:P	43:BI:121:ARG:HG3	2.59	0.43
35:BA:1352:C:H2'	35:BA:1353:G:C8	2.54	0.43
37:BC:76:VAL:CG2	37:BC:103:VAL:HG21	2.49	0.43
37:BC:173:VAL:HG12	37:BC:175:LEU:CD1	2.48	0.43
38:BD:147:ALA:HA	38:BD:181:MET:O	2.19	0.43
39:BE:11:ILE:CD1	39:BE:33:VAL:HG23	2.48	0.43
41:BG:16:LEU:HD12	43:BI:42:ARG:HA	1.98	0.43
42:BH:88:LYS:O	42:BH:92:ARG:HD2	2.19	0.43
45:BK:92:GLU:O	45:BK:93:GLN:C	2.62	0.43
46:BL:6:THR:HG23	46:BL:9:GLN:NE2	2.33	0.43
46:BL:20:LYS:H	46:BL:20:LYS:CD	2.27	0.43
46:BL:27:LEU:C	46:BL:29:GLY:H	2.26	0.43
48:BN:42:ILE:HD13	48:BN:42:ILE:HA	1.89	0.43
49:BO:14:GLU:HG3	49:BO:15:PHE:CD2	2.54	0.43
50:BP:22:THR:HA	50:BP:33:ILE:HG12	2.00	0.43
53:BS:13:ASP:C	53:BS:15:LEU:N	2.76	0.43
53:BS:20:LEU:O	53:BS:23:ASN:N	2.51	0.43
54:BT:63:ILE:O	54:BT:66:ALA:N	2.51	0.43
56:BW:75:C:C2'	56:BW:76:C:H5'	2.49	0.43
59:BZ:249:VAL:HG22	59:BZ:269:GLY:HA2	2.00	0.43
59:BZ:257:GLY:O	59:BZ:302:GLN:HG2	2.18	0.43
2:A1:49:VAL:CG1	2:A1:60:PHE:HB2	2.49	0.43
7:A6:11:LEU:HG	7:A6:51:GLU:HG2	1.99	0.43
7:A6:25:LYS:O	11:AA:2286:A:N1	2.52	0.43
11:AA:225:A:H2'	11:AA:226:G:H5'	2.01	0.43
11:AA:736:C:H2'	11:AA:737:C:C6	2.49	0.43
11:AA:753:C:O2'	11:AA:754:C:H5'	2.18	0.43
11:AA:847:U:OP2	11:AA:928:G:O6	2.37	0.43
11:AA:1000:A:H62	11:AA:1154:G:H2'	1.84	0.43
11:AA:1203:G:H4'	23:AP:7:ARG:HG2	2.00	0.43
11:AA:1830:C:O2'	11:AA:1831:G:H5'	2.19	0.43
11:AA:1889:A:O2'	11:AA:2087:G:H5'	2.19	0.43
11:AA:1911:U:H2'	11:AA:1918:A:N1	2.34	0.43
11:AA:2293:C:H42	11:AA:2339:G:H1	1.67	0.43
11:AA:2392:A:H2	11:AA:2424:C:H42	1.64	0.43
11:AA:2468:G:H22	11:AA:2481:G:HO2'	1.66	0.43
13:AC:138:PRO:HD2	56:BW:57:C:O4'	2.18	0.43
14:AD:35:LYS:CG	14:AD:63:ARG:HG3	2.49	0.43
15:AE:116:VAL:HG21	15:AE:122:PHE:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:73:ALA:CB	17:AG:85:GLY:HA2	2.42	0.43
17:AG:112:PRO:O	17:AG:114:ILE:N	2.51	0.43
18:AH:23:ARG:HH11	18:AH:36:PRO:HB3	1.83	0.43
18:AH:50:VAL:HG12	18:AH:51:ARG:O	2.18	0.43
19:AJ:115:UNK:CB	19:AJ:124:UNK:HA	2.48	0.43
21:AN:87:LEU:CD1	21:AN:91:LEU:HG	2.49	0.43
23:AP:81:GLN:HG3	23:AP:82:GLY:N	2.33	0.43
23:AP:146:VAL:HG13	23:AP:147:LEU:H	1.81	0.43
24:AQ:75:THR:HA	24:AQ:89:ASN:O	2.19	0.43
24:AQ:134:ARG:O	24:AQ:135:ASP:C	2.61	0.43
24:AQ:140:ALA:HB1	33:AZ:99:TYR:HB2	2.00	0.43
27:AT:10:VAL:O	27:AT:13:ARG:CG	2.64	0.43
31:AX:13:LEU:HA	31:AX:18:TYR:CE1	2.54	0.43
31:AX:64:LYS:HD3	31:AX:73:ARG:NE	2.32	0.43
33:AZ:108:PRO:HB3	33:AZ:141:VAL:HG11	2.00	0.43
34:B2:31:VAL:O	34:B2:35:ARG:HG3	2.19	0.43
34:B2:112:TYR:CE2	58:BY:16:U:H4'	2.54	0.43
35:BA:138:G:H2'	35:BA:139:G:O4'	2.19	0.43
35:BA:264:U:H2'	35:BA:265:G:O4'	2.19	0.43
35:BA:495:A:H1'	35:BA:496:A:C8	2.54	0.43
35:BA:668:G:O2'	49:BO:46:HIS:HD2	2.01	0.43
35:BA:707:C:H2'	35:BA:708:C:C6	2.54	0.43
35:BA:723:U:O2	35:BA:723:U:C2'	2.67	0.43
35:BA:986:A:H1'	53:BS:55:LYS:HA	2.01	0.43
35:BA:1219:U:P	48:BN:19:ARG:HH22	2.41	0.43
35:BA:1322:C:H5'	47:BM:100:GLY:HA3	1.99	0.43
35:BA:1323:G:O2'	35:BA:1324:A:H5'	2.19	0.43
35:BA:1402:C:O2	35:BA:1500:A:N1	2.51	0.43
38:BD:3:ARG:O	38:BD:3:ARG:CD	2.67	0.43
38:BD:48:ALA:O	38:BD:49:ARG:C	2.61	0.43
39:BE:145:LYS:HA	42:BH:107:LEU:CD2	2.48	0.43
39:BE:150:ARG:HH11	39:BE:150:ARG:CB	2.31	0.43
40:BF:91:VAL:HG12	40:BF:92:LYS:N	2.34	0.43
41:BG:16:LEU:CD2	43:BI:45:ALA:HB2	2.48	0.43
41:BG:54:THR:O	41:BG:56:GLN:N	2.50	0.43
41:BG:66:VAL:C	41:BG:69:VAL:HG12	2.44	0.43
42:BH:116:LYS:HD2	42:BH:129:VAL:CG1	2.43	0.43
43:BI:65:VAL:HG21	43:BI:73:GLN:CB	2.48	0.43
45:BK:126:ARG:HH11	45:BK:126:ARG:CB	2.29	0.43
48:BN:12:ARG:NH1	48:BN:12:ARG:HB2	2.34	0.43
52:BR:47:THR:HB	52:BR:49:LYS:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BS:51:VAL:O	53:BS:58:VAL:N	2.52	0.43
54:BT:73:HIS:C	54:BT:74:LYS:HD3	2.43	0.43
59:BZ:96:ALA:C	59:BZ:98:GLN:N	2.76	0.43
1:A0:47:PRO:CG	1:A0:53:MET:HE2	2.48	0.43
9:A8:6:THR:HG22	9:A8:60:LEU:HD23	2.00	0.43
11:AA:1543:C:H2'	11:AA:1544:A:H5"	2.01	0.43
11:AA:1771:C:C1'	11:AA:1786:A:C8	3.02	0.43
11:AA:2422:A:C4	56:BW:77:A:C2	3.07	0.43
11:AA:2465:C:O2'	11:AA:2466:C:H5'	2.19	0.43
11:AA:2467:C:H2'	11:AA:2468:G:O4'	2.18	0.43
11:AA:2601:C:H2'	11:AA:2603:G:C8	2.54	0.43
13:AC:10:LEU:HB3	13:AC:220:PRO:CG	2.49	0.43
13:AC:59:ARG:NH1	13:AC:164:ARG:NH1	2.67	0.43
14:AD:111:LEU:C	14:AD:111:LEU:HD13	2.44	0.43
15:AE:1:MET:O	15:AE:200:GLU:CD	2.62	0.43
15:AE:5:LEU:CD2	15:AE:197:ILE:HB	2.49	0.43
17:AG:44:GLY:C	17:AG:46:ALA:N	2.77	0.43
18:AH:42:ARG:CG	18:AH:43:VAL:H	2.32	0.43
18:AH:149:ARG:HA	18:AH:162:ILE:CG1	2.49	0.43
21:AN:22:THR:O	21:AN:23:LEU:C	2.62	0.43
21:AN:99:LEU:HD13	21:AN:99:LEU:C	2.44	0.43
22:AO:18:LYS:HB2	22:AO:45:GLU:HB3	2.00	0.43
22:AO:26:LYS:HB3	22:AO:27:GLY:H	1.62	0.43
26:AS:69:VAL:O	26:AS:69:VAL:HG22	2.18	0.43
28:AU:95:LEU:C	28:AU:97:ASP:N	2.77	0.43
32:AY:28:LYS:HA	32:AY:38:ILE:HG22	2.01	0.43
32:AY:52:SER:C	32:AY:54:LYS:N	2.69	0.43
34:B2:134:LYS:O	34:B2:138:ARG:HB2	2.19	0.43
35:BA:9:G:H5'	39:BE:122:GLU:OE1	2.19	0.43
35:BA:197:A:C5	35:BA:221:C:H4'	2.54	0.43
35:BA:461:A:N7	35:BA:471:G:C5	2.87	0.43
35:BA:621:A:O2'	35:BA:622:A:H5'	2.19	0.43
35:BA:781:A:H4'	35:BA:1522:U:O2'	2.18	0.43
35:BA:799:G:C2'	35:BA:800:G:H5'	2.49	0.43
35:BA:808:C:O2'	35:BA:809:G:H5'	2.19	0.43
35:BA:820:U:H4'	35:BA:821:G:OP2	2.19	0.43
35:BA:1033:G:P	35:BA:1033:G:H8	2.42	0.43
35:BA:1221:G:P	53:BS:36:ARG:HD3	2.58	0.43
35:BA:1238:A:N7	35:BA:1303:C:H1'	2.34	0.43
35:BA:1310:G:C2	35:BA:1328:C:N3	2.86	0.43
35:BA:1416:G:O2'	35:BA:1417:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1493:A:C4	57:BX:18:U:H1'	2.53	0.43
36:BB:121:LEU:CD2	36:BB:139:LYS:HZ3	2.26	0.43
36:BB:155:LEU:HD11	36:BB:159:PRO:HD3	2.00	0.43
38:BD:192:GLU:C	38:BD:194:LEU:N	2.74	0.43
43:BI:80:GLY:O	43:BI:81:ILE:C	2.61	0.43
43:BI:82:ALA:C	43:BI:84:ALA:N	2.76	0.43
44:BJ:28:ARG:C	44:BJ:30:SER:H	2.27	0.43
44:BJ:54:PHE:C	44:BJ:55:LYS:CE	2.92	0.43
46:BL:89:ARG:HD3	46:BL:91:LYS:N	2.34	0.43
49:BO:2:PRO:HB2	49:BO:3:ILE:H	1.70	0.43
53:BS:15:LEU:HD21	53:BS:33:THR:OG1	2.19	0.43
54:BT:16:HIS:HA	54:BT:19:SER:HB2	2.01	0.43
54:BT:56:MET:O	54:BT:59:ALA:HB3	2.19	0.43
59:BZ:85:HIS:HB2	59:BZ:88:TYR:CD1	2.54	0.43
59:BZ:315:LYS:HB2	59:BZ:315:LYS:HE3	1.88	0.43
59:BZ:345:ARG:CZ	59:BZ:384:LEU:HD11	2.48	0.43
9:A8:61:LEU:HB3	11:AA:593:G:H4'	2.00	0.42
10:A9:1:MET:HE1	10:A9:10:ILE:HG21	2.01	0.42
10:A9:15:LYS:HB3	10:A9:15:LYS:HZ2	1.82	0.42
11:AA:227:A:C2	11:AA:2407:G:H1'	2.53	0.42
11:AA:324:A:H2'	11:AA:325:G:O4'	2.19	0.42
11:AA:528:A:H5"	11:AA:528:A:C8	2.54	0.42
11:AA:606:U:H4'	11:AA:658:C:C4'	2.46	0.42
11:AA:856:C:H6	11:AA:856:C:H5"	1.84	0.42
11:AA:997:G:O2'	11:AA:998:C:H5'	2.18	0.42
11:AA:1058:G:N2	11:AA:1081:U:H3	2.13	0.42
11:AA:1503:U:C4	11:AA:1504:C:N4	2.87	0.42
11:AA:1539:G:C6	11:AA:1540:U:O2	2.72	0.42
11:AA:1652:A:OP1	25:AR:9:LYS:HE2	2.19	0.42
11:AA:1995:U:H3'	11:AA:1996:C:H2'	1.99	0.42
11:AA:2262:U:H2'	11:AA:2263:C:H6	1.84	0.42
11:AA:2651:C:O2'	11:AA:2652:C:H5'	2.18	0.42
11:AA:2682:U:H6	11:AA:2682:U:H5'	1.83	0.42
14:AD:147:LEU:HD13	14:AD:155:LEU:HD21	2.02	0.42
17:AG:11:TYR:O	17:AG:15:VAL:HB	2.19	0.42
17:AG:82:LEU:C	17:AG:83:ARG:CG	2.91	0.42
17:AG:121:ASN:HA	17:AG:122:PRO:HD2	1.85	0.42
18:AH:158:HIS:CE1	18:AH:169:VAL:C	2.97	0.42
21:AN:27:ALA:O	21:AN:28:THR:C	2.62	0.42
24:AQ:35:VAL:HG12	24:AQ:130:LYS:O	2.19	0.42
24:AQ:79:LEU:HD22	24:AQ:80:GLU:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AQ:131:ILE:N	24:AQ:131:ILE:HD12	2.34	0.42
24:AQ:141:GLN:C	33:AZ:53:ILE:O	2.61	0.42
30:AW:27:LYS:O	30:AW:71:VAL:HG22	2.18	0.42
32:AY:96:ILE:CD1	32:AY:99:CYS:CB	2.97	0.42
34:B2:119:LEU:HD22	34:B2:119:LEU:HA	1.72	0.42
35:BA:627:G:H2'	35:BA:628:G:C8	2.46	0.42
35:BA:792:A:O2'	35:BA:793:U:P	2.77	0.42
35:BA:814:A:N7	35:BA:816:A:C4	2.87	0.42
35:BA:1433:A:O2'	35:BA:1434:A:H5'	2.19	0.42
36:BB:236:TYR:N	36:BB:236:TYR:CD1	2.87	0.42
37:BC:111:LEU:HD11	37:BC:144:SER:O	2.20	0.42
39:BE:143:ARG:HD3	39:BE:143:ARG:HA	1.68	0.42
40:BF:29:ALA:O	40:BF:30:LEU:C	2.62	0.42
44:BJ:5:ARG:CG	44:BJ:71:LEU:HD11	2.48	0.42
44:BJ:62:HIS:O	48:BN:59:ALA:HB3	2.19	0.42
44:BJ:90:LEU:N	44:BJ:91:PRO:CD	2.81	0.42
46:BL:70:ILE:HG12	46:BL:100:ILE:HD12	2.00	0.42
49:BO:32:LEU:O	49:BO:33:THR:C	2.62	0.42
56:BV:29:C:C2	56:BV:44:A:C2	3.07	0.42
59:BZ:74:LYS:HD2	59:BZ:207:ASP:HB3	2.00	0.42
59:BZ:263:ARG:HE	59:BZ:297:GLU:CD	2.27	0.42
59:BZ:324:LYS:O	59:BZ:327:GLU:N	2.48	0.42
59:BZ:363:MET:CG	59:BZ:364:PRO:HD2	2.29	0.42
4:A3:26:LEU:O	4:A3:35:ARG:CD	2.67	0.42
5:A4:34:GLU:CD	47:BM:57:ARG:HH22	2.26	0.42
7:A6:48:VAL:HG23	7:A6:49:HIS:N	2.32	0.42
11:AA:106:C:H2'	11:AA:107:C:C6	2.54	0.42
11:AA:231:C:H2'	11:AA:232:G:O4'	2.19	0.42
11:AA:321:G:C2	11:AA:341:G:H4'	2.54	0.42
11:AA:481:G:C2'	11:AA:482:A:OP2	2.67	0.42
11:AA:483:A:H3'	11:AA:484:C:C6	2.54	0.42
11:AA:1062:G:N3	11:AA:1062:G:H2'	2.33	0.42
11:AA:1099:G:H2'	11:AA:1100:C:C6	2.54	0.42
11:AA:1142(A):A:H5'	11:AA:1142(A):A:H8	1.84	0.42
11:AA:1204:A:N1	11:AA:1241:A:C2	2.86	0.42
11:AA:1655:A:N7	11:AA:2005:A:H2	2.17	0.42
11:AA:1901:A:OP2	11:AA:1901:A:H4'	2.18	0.42
11:AA:2317:C:O2'	11:AA:2318:G:H5'	2.19	0.42
11:AA:2346:A:C2	11:AA:2383:G:C2	3.07	0.42
11:AA:2541:A:H4'	11:AA:2764:A:C2	2.54	0.42
12:AB:26:A:H2'	12:AB:26:A:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AB:39:A:O2'	12:AB:46:A:N1	2.44	0.42
13:AC:139:ASN:HB3	13:AC:142:ALA:CB	2.49	0.42
14:AD:70:TRP:CD1	14:AD:70:TRP:C	2.97	0.42
14:AD:101:GLU:OE2	14:AD:103:ARG:NH1	2.52	0.42
14:AD:142:VAL:HG23	14:AD:192:THR:C	2.44	0.42
16:AF:31:HIS:CE1	23:AP:13:ASN:HB2	2.54	0.42
17:AG:7:LEU:O	17:AG:11:TYR:HB2	2.19	0.42
17:AG:56:ALA:CB	17:AG:153:ARG:HH21	2.28	0.42
18:AH:137:ASP:O	18:AH:138:LYS:HB2	2.18	0.42
20:AK:73:UNK:O	20:AK:74:UNK:C	2.66	0.42
21:AN:3:THR:C	21:AN:4:TYR:CD1	2.98	0.42
24:AQ:21:THR:CG2	24:AQ:23:GLY:O	2.68	0.42
26:AS:15:ARG:C	26:AS:17:ARG:N	2.76	0.42
26:AS:97:ARG:CZ	26:AS:97:ARG:O	2.68	0.42
28:AU:93:LYS:H	28:AU:93:LYS:HD2	1.84	0.42
32:AY:8:LYS:CD	32:AY:8:LYS:N	2.75	0.42
34:B2:133:LYS:HB2	34:B2:133:LYS:HE3	1.82	0.42
35:BA:41:G:H2'	35:BA:42:G:H8	1.83	0.42
35:BA:50:A:N6	35:BA:361:G:H4'	2.34	0.42
35:BA:642:A:C5	42:BH:115:SER:HA	2.53	0.42
35:BA:658:G:H2'	35:BA:659:U:H6	1.84	0.42
35:BA:770:C:O2'	35:BA:771:G:H5'	2.19	0.42
35:BA:1090:U:O2'	35:BA:1091:U:H5'	2.19	0.42
35:BA:1244:C:H2'	35:BA:1245:A:C8	2.54	0.42
35:BA:1350:A:C5	35:BA:1351:U:C4	3.07	0.42
35:BA:1413:A:C2	35:BA:1414:U:C2	3.07	0.42
35:BA:1492:A:H2'	35:BA:1492:A:OP2	2.19	0.42
36:BB:19:HIS:CG	36:BB:20:GLU:N	2.86	0.42
36:BB:48:MET:O	36:BB:49:GLU:C	2.61	0.42
37:BC:124:ILE:C	37:BC:126:ARG:N	2.78	0.42
37:BC:188:LEU:C	37:BC:188:LEU:HD13	2.45	0.42
38:BD:188:LEU:HA	38:BD:189:PRO:HD2	1.88	0.42
39:BE:94:ALA:HB3	39:BE:117:ASP:C	2.44	0.42
42:BH:48:TYR:CD1	42:BH:48:TYR:C	2.94	0.42
42:BH:53:VAL:HB	42:BH:58:TYR:CE1	2.55	0.42
43:BI:29:ASN:O	43:BI:30:GLY:C	2.62	0.42
46:BL:113:ARG:CB	46:BL:122:THR:HG21	2.47	0.42
49:BO:31:LEU:HA	49:BO:31:LEU:HD12	1.73	0.42
50:BP:74:LEU:O	50:BP:79:VAL:HG23	2.19	0.42
53:BS:30:LEU:HD23	53:BS:30:LEU:C	2.44	0.42
59:BZ:314:THR:O	59:BZ:373:GLU:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:14:ARG:HH11	1:A0:14:ARG:HG3	1.84	0.42
3:A2:33:MET:O	3:A2:34:GLU:C	2.63	0.42
4:A3:7:LYS:HD2	4:A3:34:GLU:OE1	2.18	0.42
7:A6:18:ARG:HG3	7:A6:19:ARG:N	2.32	0.42
7:A6:45:LYS:N	7:A6:45:LYS:CD	2.82	0.42
10:A9:27:CYS:HB3	10:A9:32:HIS:HB2	2.01	0.42
11:AA:123:G:H2'	11:AA:124:G:C8	2.54	0.42
11:AA:146:G:H2'	11:AA:147:U:C5'	2.50	0.42
11:AA:271(J):C:H2'	11:AA:271(J):C:O2	2.18	0.42
11:AA:341:G:O2'	11:AA:342:G:H5'	2.19	0.42
11:AA:1445(A):C:O2	11:AA:1445(A):C:H2'	2.19	0.42
11:AA:1504:C:O2'	11:AA:1505:C:O5'	2.36	0.42
11:AA:1642:G:O2'	11:AA:1643:G:H5'	2.20	0.42
14:AD:238:GLY:O	14:AD:239:ARG:O	2.36	0.42
15:AE:109:LYS:HE3	15:AE:191:PRO:HA	2.00	0.42
15:AE:132:HIS:O	15:AE:135:HIS:CD2	2.72	0.42
18:AH:33:LEU:HD12	18:AH:75:ALA:HA	2.01	0.42
21:AN:45:ASN:N	21:AN:45:ASN:ND2	2.53	0.42
23:AP:5:ASP:O	23:AP:6:LEU:C	2.63	0.42
23:AP:89:ALA:HA	23:AP:121:LYS:HD3	2.01	0.42
24:AQ:84:GLY:O	24:AQ:85:LYS:CB	2.67	0.42
25:AR:100:LEU:HD22	25:AR:112:ALA:CA	2.47	0.42
29:AV:6:LYS:HE2	29:AV:37:VAL:HG11	2.02	0.42
29:AV:34:GLU:O	29:AV:36:PRO:HD2	2.19	0.42
31:AX:35:THR:CG2	31:AX:37:THR:HB	2.49	0.42
32:AY:8:LYS:HB2	32:AY:28:LYS:HE2	2.02	0.42
33:AZ:24:LEU:CD2	33:AZ:86:VAL:HG23	2.49	0.42
33:AZ:58:VAL:HA	33:AZ:67:LEU:O	2.19	0.42
34:B2:2:ALA:HB3	34:B2:107:PHE:CE1	2.54	0.42
34:B2:82:HIS:HB2	34:B2:85:GLU:HB2	2.01	0.42
35:BA:189(I):G:C2'	35:BA:189(J):G:H5'	2.49	0.42
35:BA:422:C:H1'	35:BA:423:G:C2	2.54	0.42
35:BA:783:C:C2'	35:BA:784:C:H5'	2.49	0.42
35:BA:953:G:C2	35:BA:954:G:H1'	2.54	0.42
35:BA:1443:G:H8	35:BA:1443:G:OP2	2.02	0.42
35:BA:1516:G:N1	35:BA:1519:A:OP2	2.52	0.42
36:BB:72:GLY:O	36:BB:94:ASN:HA	2.18	0.42
37:BC:8:ILE:O	37:BC:10:PHE:N	2.52	0.42
37:BC:174:PRO:HB2	37:BC:177:THR:HB	2.01	0.42
38:BD:57:ARG:NH2	38:BD:202:LEU:HD22	2.35	0.42
38:BD:83:SER:O	38:BD:84:LYS:C	2.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:96:LEU:C	38:BD:98:GLU:N	2.77	0.42
38:BD:108:LEU:O	38:BD:110:PHE:CE1	2.72	0.42
38:BD:118:ARG:HH11	38:BD:118:ARG:HG3	1.82	0.42
39:BE:76:ILE:HB	39:BE:77:PRO:HD2	1.99	0.42
41:BG:26:PHE:CZ	41:BG:30:ILE:HD11	2.55	0.42
42:BH:103:VAL:HG21	42:BH:110:ALA:HB2	1.96	0.42
49:BO:37:ASN:N	49:BO:37:ASN:ND2	2.66	0.42
52:BR:25:THR:HG22	52:BR:25:THR:O	2.19	0.42
53:BS:40:ILE:HD11	53:BS:66:MET:HE3	2.01	0.42
54:BT:41:ILE:O	54:BT:43:LEU:N	2.52	0.42
54:BT:53:LEU:HD12	54:BT:53:LEU:H	1.82	0.42
56:BW:18:U:O2'	56:BW:19:G:P	2.77	0.42
56:BW:70:C:O2'	56:BW:71:G:H5'	2.18	0.42
2:A1:18:ILE:HG21	2:A1:20:ARG:CZ	2.49	0.42
5:A4:7:PRO:O	5:A4:8:LYS:HB3	2.20	0.42
6:A5:27:PRO:O	6:A5:28:PRO:C	2.61	0.42
10:A9:29:ASN:O	10:A9:29:ASN:ND2	2.52	0.42
11:AA:442:G:O4'	16:AF:46:ARG:HG2	2.19	0.42
11:AA:484:C:H2'	11:AA:485:C:C6	2.54	0.42
11:AA:597:U:O3'	23:AP:15:ARG:HD3	2.19	0.42
11:AA:629:G:H1'	11:AA:639:U:O2'	2.20	0.42
11:AA:675:A:C4	11:AA:804:A:C2	3.07	0.42
11:AA:1131:G:N2	21:AN:73:THR:HG21	2.30	0.42
11:AA:1319:G:C6	11:AA:1320:C:N4	2.88	0.42
11:AA:1416:G:HO2'	11:AA:1417:C:H5	1.67	0.42
11:AA:1632:A:C5	11:AA:1633:G:C6	3.07	0.42
11:AA:2099:U:OP2	11:AA:2099:U:C6	2.73	0.42
11:AA:2416:C:O5'	11:AA:2416:C:H6	2.01	0.42
11:AA:2491:U:H5'	11:AA:2570:G:C5'	2.30	0.42
11:AA:2746:U:H2'	11:AA:2747:G:H5'	2.01	0.42
12:AB:9:G:OP1	26:AS:25:ARG:NH2	2.51	0.42
13:AC:33:ALA:HB1	13:AC:178:ALA:HB1	2.01	0.42
13:AC:62:VAL:HG21	13:AC:195:ALA:HB2	2.00	0.42
13:AC:103:ILE:O	13:AC:103:ILE:HG22	2.20	0.42
13:AC:124:GLY:HA2	56:BW:57:C:O3'	2.19	0.42
13:AC:167:LYS:HE3	56:BW:18:U:H5'	2.02	0.42
14:AD:24:ILE:CD1	14:AD:25:THR:N	2.76	0.42
14:AD:125:ILE:CD1	14:AD:131:LEU:CD2	2.98	0.42
14:AD:166:GLN:CA	14:AD:166:GLN:NE2	2.83	0.42
16:AF:8:GLN:O	16:AF:9:ILE:C	2.62	0.42
17:AG:42:GLY:HA2	17:AG:89:GLY:HA2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AG:133:LEU:HD12	17:AG:133:LEU:C	2.45	0.42
17:AG:170:ARG:HG2	17:AG:170:ARG:HH11	1.85	0.42
18:AH:44:VAL:HG12	18:AH:45:VAL:HG23	2.00	0.42
21:AN:57:ALA:O	21:AN:58:ASP:O	2.38	0.42
22:AO:47:ILE:O	22:AO:48:PRO:O	2.37	0.42
23:AP:61:ARG:C	23:AP:62:LEU:CD2	2.92	0.42
23:AP:110:TYR:CZ	23:AP:111:ARG:NH1	2.87	0.42
23:AP:121:LYS:HA	23:AP:122:PRO:HD3	1.91	0.42
27:AT:28:VAL:HG13	27:AT:46:GLU:CA	2.45	0.42
29:AV:35:LEU:HB2	29:AV:57:VAL:HG13	1.98	0.42
29:AV:39:LEU:O	29:AV:40:LEU:CB	2.57	0.42
29:AV:67:GLY:H	29:AV:91:TYR:HD2	1.66	0.42
33:AZ:41:LEU:O	33:AZ:44:PHE:N	2.47	0.42
35:BA:55:A:N6	58:BY:88:C:C5	2.88	0.42
35:BA:401:C:O2'	35:BA:402:G:H5'	2.18	0.42
35:BA:415:A:H2'	35:BA:416:G:H8	1.84	0.42
35:BA:609:A:H2'	35:BA:610:G:H5'	2.02	0.42
35:BA:920:U:H2'	35:BA:921:U:C6	2.53	0.42
35:BA:1030(A):G:H2'	35:BA:1030(C):G:OP2	2.19	0.42
35:BA:1281:U:H5'	35:BA:1282:C:H5	1.85	0.42
35:BA:1328:C:H2'	35:BA:1329:A:H8	1.83	0.42
35:BA:1458:G:H2'	35:BA:1459:C:H6	1.84	0.42
36:BB:12:GLU:O	36:BB:16:HIS:ND1	2.31	0.42
36:BB:70:PHE:O	36:BB:92:TYR:HA	2.20	0.42
36:BB:86:GLU:C	36:BB:88:ALA:N	2.77	0.42
36:BB:235:SER:O	36:BB:237:ALA:N	2.53	0.42
39:BE:83:GLU:OE2	39:BE:88:LYS:HD2	2.19	0.42
40:BF:50:TYR:CE1	52:BR:77:GLY:HA2	2.54	0.42
41:BG:113:GLU:CB	41:BG:119:ARG:HG2	2.44	0.42
46:BL:11:VAL:HG22	51:BQ:29:HIS:CD2	2.54	0.42
47:BM:97:PRO:CG	47:BM:103:THR:HG22	2.48	0.42
47:BM:108:ARG:NH1	47:BM:108:ARG:CG	2.51	0.42
54:BT:23:ARG:CD	54:BT:23:ARG:C	2.93	0.42
58:BY:9:A:C8	58:BY:9:A:H5"	2.54	0.42
58:BY:55:U:H2'	58:BY:56:U:C5'	2.49	0.42
1:A0:69:PHE:N	1:A0:69:PHE:CD1	2.87	0.42
2:A1:78:LYS:C	2:A1:80:LEU:H	2.27	0.42
6:A5:52:TYR:O	6:A5:53:ALA:CB	2.68	0.42
7:A6:37:ARG:HD3	7:A6:37:ARG:HA	1.78	0.42
9:A8:15:LYS:CD	23:AP:65:ARG:NH1	2.79	0.42
9:A8:61:LEU:N	9:A8:63:PRO:HD2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:32:C:H2'	11:AA:33:U:H5'	2.01	0.42
11:AA:302:C:H2'	11:AA:303:U:C6	2.55	0.42
11:AA:637:A:H4'	11:AA:638:G:O5'	2.19	0.42
11:AA:955:C:OP1	24:AQ:87:LYS:HE2	2.19	0.42
11:AA:1164:G:H2'	11:AA:1165:U:C6	2.55	0.42
11:AA:1459:G:C8	11:AA:1461:G:H1'	2.54	0.42
11:AA:1511:C:H2'	11:AA:1512:U:O4'	2.19	0.42
11:AA:1750:G:O2'	11:AA:2860:A:N1	2.47	0.42
11:AA:1840:G:C6	11:AA:1841:U:C4	3.08	0.42
11:AA:2115:G:H4'	11:AA:2167:U:H1'	2.01	0.42
11:AA:2189:U:H2'	11:AA:2190:G:H4'	1.99	0.42
11:AA:2648:C:H2'	11:AA:2649:U:C6	2.54	0.42
11:AA:2651:C:O5'	11:AA:2651:C:H6	2.02	0.42
11:AA:2693:A:H2'	11:AA:2694:G:C8	2.54	0.42
11:AA:2786:U:H2'	11:AA:2787:C:H6	1.81	0.42
13:AC:20:TYR:O	13:AC:21:THR:C	2.62	0.42
13:AC:72:VAL:CG2	13:AC:111:ASP:HB3	2.48	0.42
17:AG:63:ILE:CG1	17:AG:64:THR:N	2.82	0.42
19:AJ:22:UNK:O	19:AJ:23:UNK:CB	2.67	0.42
21:AN:31:ALA:O	21:AN:34:LEU:HB3	2.19	0.42
23:AP:23:PRO:CG	23:AP:33:ARG:HG3	2.50	0.42
23:AP:82:GLY:CA	23:AP:115:LEU:HD21	2.49	0.42
24:AQ:72:LYS:HA	24:AQ:73:PRO:HD3	1.82	0.42
29:AV:18:LEU:HD23	29:AV:19:LYS:H	1.83	0.42
29:AV:29:PRO:O	29:AV:61:VAL:HG23	2.20	0.42
30:AW:24:ILE:HG21	30:AW:36:LEU:CD2	2.45	0.42
30:AW:86:LEU:HD12	30:AW:87:PRO:HD2	2.01	0.42
32:AY:23:ARG:HG2	32:AY:23:ARG:NH1	2.34	0.42
35:BA:246:A:N1	35:BA:278:G:O2'	2.46	0.42
35:BA:458:C:C6	35:BA:460:G:N7	2.88	0.42
35:BA:688:G:H5'	45:BK:46:GLY:C	2.45	0.42
35:BA:1168:A:C6	35:BA:1169:A:C6	3.08	0.42
36:BB:20:GLU:HG3	36:BB:191:ASP:HB2	2.02	0.42
36:BB:97:TRP:CH2	36:BB:176:GLU:OE2	2.72	0.42
36:BB:208:ILE:O	36:BB:209:ARG:C	2.62	0.42
36:BB:217:ARG:HA	36:BB:220:ASP:OD2	2.20	0.42
37:BC:154:SER:O	37:BC:196:LEU:HD13	2.20	0.42
38:BD:96:LEU:N	38:BD:96:LEU:HD12	2.34	0.42
39:BE:107:ARG:O	39:BE:111:GLU:HB2	2.20	0.42
42:BH:11:THR:CG2	42:BH:15:ASN:HD21	2.33	0.42
45:BK:67:ASP:OD1	45:BK:71:LYS:HD2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:44:LEU:HD12	48:BN:53:LEU:HD11	2.01	0.42
48:BN:56:VAL:O	48:BN:56:VAL:HG12	2.18	0.42
49:BO:74:ASP:CG	49:BO:77:ARG:HG2	2.44	0.42
54:BT:76:ALA:HA	54:BT:79:ARG:NH1	2.35	0.42
54:BT:100:ILE:N	54:BT:100:ILE:CD1	2.80	0.42
58:BY:1:G:N2	58:BY:2:G:C4	2.88	0.42
59:BZ:122:LEU:O	59:BZ:123:ALA:C	2.61	0.42
59:BZ:222:LEU:HG	59:BZ:303:VAL:CG1	2.46	0.42
59:BZ:334:PHE:CD1	59:BZ:334:PHE:C	2.97	0.42
1:A0:28:GLY:H	1:A0:66:VAL:CG1	2.32	0.42
7:A6:19:ARG:H	7:A6:19:ARG:HG2	1.72	0.42
11:AA:102:G:OP1	11:AA:102:G:C4'	2.68	0.42
11:AA:391:G:C5	11:AA:392:C:C5	3.08	0.42
11:AA:646:A:H4'	11:AA:646:A:OP1	2.20	0.42
11:AA:729:G:H2'	11:AA:1775:U:H1'	2.00	0.42
11:AA:876:C:H2'	11:AA:877:U:O4'	2.19	0.42
11:AA:879:G:H2'	11:AA:879:G:N3	2.35	0.42
11:AA:898:C:H2'	11:AA:899:A:O4'	2.20	0.42
11:AA:1034:G:H2'	11:AA:1035:U:H6	1.85	0.42
11:AA:1884:A:C3'	11:AA:1885:A:H5"	2.50	0.42
11:AA:2127:G:O5'	13:AC:37:PHE:HB3	2.19	0.42
11:AA:2252:G:O2'	11:AA:2253:G:H5'	2.19	0.42
11:AA:2297:C:O2'	11:AA:2298:A:H5'	2.18	0.42
12:AB:105:A:H4'	33:AZ:89:PHE:CE1	2.54	0.42
14:AD:11:PRO:O	14:AD:13:ARG:N	2.52	0.42
14:AD:248:SER:HB2	14:AD:249:PRO:CD	2.43	0.42
15:AE:144:ARG:HB3	15:AE:145:LYS:H	1.48	0.42
16:AF:64:ILE:HG22	16:AF:76:GLY:O	2.20	0.42
17:AG:10:LYS:HA	17:AG:13:GLU:HG2	2.01	0.42
21:AN:94:HIS:N	21:AN:95:PRO:CD	2.83	0.42
22:AO:112:MET:CE	22:AO:112:MET:CA	2.97	0.42
25:AR:54:LEU:O	25:AR:55:ALA:C	2.63	0.42
26:AS:23:ARG:O	26:AS:24:LEU:O	2.37	0.42
27:AT:27:THR:CG2	27:AT:28:VAL:N	2.66	0.42
29:AV:62:LEU:CD2	29:AV:62:LEU:N	2.83	0.42
29:AV:72:VAL:CG2	29:AV:85:LYS:CB	2.94	0.42
30:AW:12:ILE:O	30:AW:101:SER:OG	2.33	0.42
31:AX:12:VAL:HB	31:AX:17:ALA:CB	2.37	0.42
31:AX:20:GLY:C	31:AX:22:ALA:N	2.78	0.42
32:AY:44:ILE:CG2	32:AY:45:VAL:H	2.31	0.42
34:B2:28:GLY:H	34:B2:31:VAL:HG23	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B2:38:LYS:HD2	34:B2:38:LYS:HA	1.87	0.42
35:BA:368:U:O4	59:BZ:234:ARG:HD3	2.20	0.42
35:BA:637:G:H2'	35:BA:638:G:H8	1.84	0.42
35:BA:802:A:H3'	35:BA:803:G:C8	2.54	0.42
35:BA:865:A:H2'	35:BA:866:C:C6	2.54	0.42
35:BA:1296:C:H4'	35:BA:1302:U:H5	1.84	0.42
35:BA:1316:G:O3'	48:BN:18:VAL:CG2	2.68	0.42
35:BA:1327:C:O2'	35:BA:1328:C:H5'	2.20	0.42
36:BB:79:ASP:C	36:BB:81:VAL:N	2.73	0.42
36:BB:81:VAL:O	36:BB:85:ALA:HB2	2.19	0.42
37:BC:147:LYS:CB	37:BC:203:PHE:CD2	3.03	0.42
38:BD:61:LYS:HD3	38:BD:62:GLN:N	2.34	0.42
39:BE:143:ARG:NH1	42:BH:77:GLU:OE2	2.53	0.42
41:BG:88:PRO:HB2	41:BG:145:ALA:HB1	2.01	0.42
41:BG:148:ASN:O	41:BG:150:ALA:N	2.53	0.42
44:BJ:48:THR:HG23	44:BJ:62:HIS:CG	2.54	0.42
45:BK:21:ILE:HD13	45:BK:82:VAL:HG23	2.02	0.42
48:BN:23:ARG:CD	48:BN:28:GLY:O	2.68	0.42
52:BR:61:LYS:O	52:BR:65:ILE:HG12	2.19	0.42
58:BY:60:A:O2'	58:BY:61:C:OP2	2.33	0.42
2:A1:37:ILE:HD12	2:A1:37:ILE:O	2.19	0.42
3:A2:48:HIS:HD1	11:AA:95:G:HO2'	1.65	0.42
3:A2:69:ARG:NH2	11:AA:111:A:H4'	2.35	0.42
9:A8:32:LEU:HB3	9:A8:36:LYS:CE	2.50	0.42
11:AA:107:C:O2'	11:AA:108:U:H5'	2.20	0.42
11:AA:214:G:H1'	11:AA:216:A:O2'	2.20	0.42
11:AA:235:U:O2'	11:AA:236:C:H5'	2.19	0.42
11:AA:300:A:H2'	11:AA:334:C:H1'	2.02	0.42
11:AA:360:G:O2'	11:AA:361:G:H5'	2.19	0.42
11:AA:869:G:O2'	11:AA:870:A:H5'	2.19	0.42
11:AA:2037:G:H2'	11:AA:2038:G:C8	2.54	0.42
11:AA:2312:U:H5"	17:AG:74:LYS:NZ	2.35	0.42
11:AA:2703:C:H2'	11:AA:2704:C:H6	1.84	0.42
12:AB:34:U:C2'	12:AB:44:G:O6	2.65	0.42
13:AC:10:LEU:O	13:AC:220:PRO:HG3	2.19	0.42
13:AC:85:GLU:O	13:AC:85:GLU:HG3	2.18	0.42
13:AC:166:ASP:OD2	13:AC:168:THR:OG1	2.37	0.42
16:AF:39:TRP:HA	16:AF:99:TYR:CZ	2.55	0.42
16:AF:195:ASP:OD2	16:AF:197:ASP:HB2	2.18	0.42
17:AG:67:LYS:H	17:AG:67:LYS:CD	2.30	0.42
17:AG:136:ARG:HG2	17:AG:136:ARG:NH1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:85:LYS:HZ1	18:AH:86:GLU:CA	2.33	0.42
23:AP:91:PHE:CE2	23:AP:95:VAL:HG12	2.55	0.42
25:AR:72:ASP:CB	25:AR:75:LEU:HB2	2.40	0.42
26:AS:13:ARG:O	26:AS:14:VAL:HB	2.19	0.42
35:BA:303:A:H2'	35:BA:304:U:H6	1.84	0.42
35:BA:436:C:H5"	38:BD:156:GLU:OE1	2.20	0.42
35:BA:600:C:H2'	35:BA:601:C:H6	1.85	0.42
35:BA:750:G:H21	49:BO:23:GLY:HA3	1.85	0.42
35:BA:802:A:H2'	35:BA:803:G:O4'	2.19	0.42
35:BA:923:A:O2'	35:BA:924:C:H5'	2.19	0.42
35:BA:936:C:O2'	35:BA:937:A:H5'	2.20	0.42
35:BA:1057:G:C2'	35:BA:1058:G:H5'	2.49	0.42
35:BA:1324:A:H2'	35:BA:1325:C:H6	1.83	0.42
35:BA:1366:C:H2'	35:BA:1367:C:H6	1.84	0.42
38:BD:67:ILE:O	38:BD:67:ILE:HG22	2.19	0.42
39:BE:83:GLU:HG2	39:BE:88:LYS:HG3	2.02	0.42
40:BF:3:ARG:HB3	40:BF:93:SER:HB2	2.01	0.42
43:BI:69:GLY:O	43:BI:70:LYS:C	2.63	0.42
43:BI:79:LEU:HD13	43:BI:79:LEU:O	2.19	0.42
44:BJ:22:LYS:HE3	44:BJ:22:LYS:HB3	1.85	0.42
44:BJ:31:GLY:HA3	44:BJ:78:ASN:HD21	1.79	0.42
54:BT:8:ARG:HG3	54:BT:8:ARG:HH11	1.84	0.42
58:BY:40:C:O5'	58:BY:40:C:H6	2.02	0.42
59:BZ:314:THR:CG2	59:BZ:377:PRO:HB3	2.50	0.42
1:A0:7:LEU:HD13	24:AQ:85:LYS:HG3	2.02	0.42
1:A0:53:MET:HA	1:A0:58:THR:O	2.20	0.42
6:A5:44:THR:CG2	25:AR:101:ALA:N	2.82	0.42
8:A7:34:ARG:HD2	8:A7:39:ARG:CG	2.43	0.42
11:AA:191:A:O2'	11:AA:192:C:H5'	2.20	0.42
11:AA:330:A:H2	11:AA:1210:A:C2'	2.33	0.42
11:AA:492:A:H2'	11:AA:493:G:O4'	2.19	0.42
11:AA:811:U:C2	11:AA:1251:C:C5	3.08	0.42
11:AA:864:G:OP2	24:AQ:22:LYS:HE3	2.20	0.42
11:AA:1038:C:H3'	11:AA:1039:G:C5'	2.49	0.42
11:AA:1093:G:N2	11:AA:1099:G:O6	2.52	0.42
11:AA:1169:G:N2	11:AA:1181:C:C2	2.88	0.42
11:AA:1210:A:H8	11:AA:1210:A:C5'	2.32	0.42
11:AA:1221:C:H2'	11:AA:1221(A):C:H6	1.84	0.42
11:AA:1264:G:H8	11:AA:1264:G:O5'	2.02	0.42
11:AA:1351:C:H2'	11:AA:1352:U:C6	2.55	0.42
11:AA:1666:G:H2'	11:AA:1667:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1685:C:H2'	11:AA:1686:C:H6	1.85	0.42
11:AA:1949:G:C6	11:AA:1950:G:C6	3.08	0.42
11:AA:2095:C:H2'	11:AA:2096:U:C6	2.54	0.42
11:AA:2206:G:H21	11:AA:2207:G:C5'	2.32	0.42
11:AA:2248:C:H3'	11:AA:2249:U:H6	1.84	0.42
11:AA:2590:A:O2'	11:AA:2591:C:H5'	2.20	0.42
11:AA:2712(A):A:H5"	11:AA:2713:A:OP2	2.18	0.42
11:AA:2753:A:O2'	11:AA:2754:U:H5'	2.19	0.42
11:AA:2801(A):A:H4'	11:AA:2802:G:C2'	2.50	0.42
11:AA:2861:G:O2'	11:AA:2862:G:H5'	2.19	0.42
13:AC:138:PRO:HB2	56:BW:57:C:H5"	2.00	0.42
14:AD:35:LYS:HZ2	14:AD:36:PRO:HD3	1.80	0.42
14:AD:70:TRP:HZ3	14:AD:146:GLU:OE2	2.03	0.42
14:AD:107:ALA:HA	14:AD:108:PRO:HD2	1.94	0.42
15:AE:67:PHE:HD1	15:AE:67:PHE:HA	1.75	0.42
16:AF:80:ALA:O	16:AF:82:ILE:O	2.38	0.42
16:AF:181:LEU:HD23	16:AF:202:PHE:HD2	1.84	0.42
17:AG:141:PHE:CB	17:AG:142:PRO:HD2	2.45	0.42
19:AJ:79:UNK:O	19:AJ:80:UNK:CB	2.68	0.42
23:AP:70:GLN:HB3	23:AP:71:VAL:H	1.59	0.42
27:AT:89:VAL:CG1	27:AT:91:ARG:CG	2.97	0.42
28:AU:112:ARG:HH22	29:AV:46:VAL:HG13	1.85	0.42
30:AW:17:VAL:C	30:AW:19:LEU:H	2.27	0.42
30:AW:86:LEU:HD12	30:AW:87:PRO:N	2.34	0.42
34:B2:110:ARG:H	34:B2:110:ARG:CD	2.32	0.42
35:BA:116:A:H8	35:BA:116:A:O5'	2.02	0.42
35:BA:160:A:H1'	35:BA:344:A:C5	2.54	0.42
35:BA:1205:U:H4'	37:BC:195:VAL:HG23	2.01	0.42
35:BA:1242:C:H2'	35:BA:1243:C:C6	2.55	0.42
35:BA:1286:A:O2'	35:BA:1287:A:C4'	2.68	0.42
35:BA:1347:G:C4	43:BI:107:ARG:NH2	2.88	0.42
35:BA:1383:C:H2'	35:BA:1384:C:C6	2.54	0.42
37:BC:46:GLU:O	37:BC:47:LEU:HD13	2.19	0.42
38:BD:20:TYR:HD2	38:BD:26:CYS:O	2.02	0.42
38:BD:70:ILE:CG2	38:BD:74:GLN:HB3	2.49	0.42
39:BE:120:THR:HG22	39:BE:121:LYS:N	2.33	0.42
41:BG:107:ALA:C	41:BG:109:ASN:N	2.77	0.42
42:BH:105:ARG:HA	42:BH:105:ARG:HD3	1.72	0.42
43:BI:80:GLY:O	43:BI:84:ALA:N	2.51	0.42
43:BI:94:ALA:O	43:BI:95:LYS:HB3	2.19	0.42
44:BJ:54:PHE:CD1	44:BJ:55:LYS:CE	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:61:GLU:OE1	48:BN:45:ARG:HD2	2.19	0.42
45:BK:82:VAL:CG1	45:BK:108:ILE:HG23	2.50	0.42
45:BK:88:GLY:O	45:BK:89:ALA:C	2.61	0.42
47:BM:73:GLU:HG2	47:BM:77:ASN:HD21	1.85	0.42
49:BO:87:ILE:CG2	49:BO:88:ARG:H	2.33	0.42
50:BP:14:ASN:N	50:BP:15:PRO:HD3	2.34	0.42
59:BZ:155:ARG:O	59:BZ:156:ASP:C	2.62	0.42
59:BZ:316:PHE:HD2	59:BZ:380:LEU:HD13	1.83	0.42
1:A0:43:THR:O	1:A0:43:THR:CG2	2.60	0.42
1:A0:73:GLY:O	1:A0:75:LEU:N	2.50	0.42
4:A3:42:ALA:O	4:A3:45:GLY:N	2.52	0.42
6:A5:4:HIS:O	6:A5:6:VAL:HG12	2.20	0.42
7:A6:6:ARG:HB3	7:A6:6:ARG:HH11	1.80	0.42
7:A6:45:LYS:HB3	7:A6:45:LYS:HZ2	1.85	0.42
9:A8:38:GLY:O	9:A8:42:ARG:HB3	2.19	0.42
11:AA:330:A:O2'	11:AA:331:A:H8	2.02	0.42
11:AA:483:A:H2'	11:AA:484:C:O4'	2.20	0.42
11:AA:483:A:H1'	32:AY:60:PHE:HE1	1.84	0.42
11:AA:566:U:O4	29:AV:78:LYS:HE2	2.19	0.42
11:AA:593:G:O2'	11:AA:594:U:H5'	2.20	0.42
11:AA:654(C):G:C2'	11:AA:654(D):G:H5'	2.50	0.42
11:AA:671:C:O2'	11:AA:672:C:H5'	2.20	0.42
11:AA:1106:G:O6	11:AA:1107:G:N2	2.48	0.42
11:AA:1120:G:H2'	11:AA:1121:C:H6	1.84	0.42
11:AA:1509(B):A:N7	11:AA:1510:G:N7	2.67	0.42
11:AA:1515:G:H4'	11:AA:1556:C:O2'	2.20	0.42
11:AA:1668:A:H4'	11:AA:1669:A:O5'	2.20	0.42
11:AA:1827:C:H2'	11:AA:1828:G:C5'	2.50	0.42
13:AC:3:HIS:CE1	13:AC:7:TYR:CE1	3.08	0.42
13:AC:22:ILE:HD11	13:AC:193:ILE:CD1	2.50	0.42
13:AC:107:TRP:CZ3	13:AC:131:LEU:HD21	2.55	0.42
14:AD:259:THR:CG2	14:AD:259:THR:O	2.67	0.42
14:AD:276:LYS:OXT	14:AD:276:LYS:CD	2.68	0.42
15:AE:182:LEU:HD12	15:AE:183:LEU:N	2.35	0.42
17:AG:129:GLY:HA3	17:AG:163:ALA:HB1	2.01	0.42
22:AO:43:VAL:HG21	22:AO:52:VAL:HG11	2.02	0.42
23:AP:107:LYS:C	23:AP:109:GLY:N	2.77	0.42
24:AQ:17:LEU:CD2	24:AQ:96:VAL:HG13	2.49	0.42
26:AS:83:LYS:O	26:AS:105:ALA:N	2.49	0.42
33:AZ:19:ARG:NH1	33:AZ:84:GLU:O	2.52	0.42
33:AZ:80:ARG:O	33:AZ:81:ARG:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AZ:144:LEU:HD22	33:AZ:144:LEU:N	2.35	0.42
34:B2:133:LYS:O	34:B2:137:VAL:HG12	2.19	0.42
35:BA:9:G:OP2	39:BE:121:LYS:NZ	2.51	0.42
35:BA:71:C:H2'	35:BA:72:C:C5	2.55	0.42
35:BA:266:G:O3'	51:BQ:67:LYS:HB2	2.20	0.42
35:BA:452:A:C2	35:BA:453:A:C4	3.08	0.42
35:BA:503:C:H2'	35:BA:504:C:H6	1.85	0.42
35:BA:510:A:O2'	35:BA:542:G:H1'	2.19	0.42
35:BA:638:G:O2'	35:BA:639:G:H5'	2.20	0.42
35:BA:1080:A:H5"	39:BE:16:THR:HG21	2.01	0.42
35:BA:1259:C:C4	35:BA:1260:C:O2	2.72	0.42
35:BA:1283:G:O2'	35:BA:1284:C:H6	2.01	0.42
35:BA:1347:G:H22	35:BA:1374:A:P	2.43	0.42
36:BB:18:GLY:HA2	36:BB:42:ILE:H	1.85	0.42
36:BB:74:LYS:HD3	36:BB:205:ASP:O	2.19	0.42
36:BB:81:VAL:O	36:BB:85:ALA:CB	2.68	0.42
36:BB:231:GLU:HB2	36:BB:232:PRO:CD	2.50	0.42
37:BC:181:ASN:ND2	37:BC:204:LEU:HB2	2.34	0.42
39:BE:11:ILE:HG13	39:BE:31:LEU:CD1	2.49	0.42
40:BF:61:LEU:HD13	40:BF:63:TYR:OH	2.19	0.42
41:BG:44:TYR:C	41:BG:46:ALA:N	2.76	0.42
45:BK:99:GLN:CG	45:BK:105:VAL:HG11	2.50	0.42
46:BL:53:ARG:HB2	46:BL:93:LEU:HD21	2.02	0.42
46:BL:111:LYS:C	46:BL:113:ARG:H	2.28	0.42
47:BM:5:ALA:C	47:BM:6:GLY:O	2.61	0.42
47:BM:86:CYS:HB2	53:BS:73:GLU:HB3	2.02	0.42
50:BP:25:ARG:HH11	50:BP:25:ARG:HG3	1.85	0.42
52:BR:45:SER:HB3	52:BR:49:LYS:HB2	2.02	0.42
53:BS:9:VAL:O	53:BS:11:VAL:N	2.53	0.42
58:BY:74:C:H2'	58:BY:75:C:C6	2.49	0.42
59:BZ:98:GLN:O	59:BZ:99:MET:HG2	2.19	0.42
59:BZ:202:LEU:O	59:BZ:203:LEU:C	2.63	0.42
1:A0:26:TYR:HA	1:A0:69:PHE:CE1	2.55	0.42
3:A2:28:LYS:HB3	3:A2:57:ILE:HD13	2.02	0.42
4:A3:19:GLN:HE22	4:A3:52:HIS:HE1	1.68	0.42
7:A6:25:LYS:HD2	11:AA:2285:C:H41	1.83	0.42
9:A8:8:LYS:HE3	11:AA:245:G:O6	2.20	0.42
11:AA:106:C:H2'	11:AA:107:C:H6	1.83	0.42
11:AA:519:U:H5"	30:AW:25:ARG:NH2	2.35	0.42
11:AA:806:C:OP2	23:AP:39:LYS:CD	2.68	0.42
11:AA:1701:A:C3'	11:AA:1702:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1743:C:C5	11:AA:1744:C:C5	3.08	0.42
11:AA:1987:G:H5'	11:AA:1988:C:OP2	2.20	0.42
11:AA:2027:G:O2'	11:AA:2028:U:H5'	2.20	0.42
11:AA:2193:G:H8	11:AA:2193:G:H5'	1.85	0.42
11:AA:2557:G:H2'	11:AA:2558:C:C6	2.55	0.42
11:AA:2634:G:N2	11:AA:2785:C:C2	2.87	0.42
11:AA:2808:U:C2'	11:AA:2809:A:H5'	2.49	0.42
12:AB:9:G:P	26:AS:25:ARG:NH2	2.93	0.42
13:AC:66:HIS:N	13:AC:188:ASN:OD1	2.49	0.42
13:AC:74:VAL:HA	13:AC:112:ALA:HB3	2.01	0.42
14:AD:11:PRO:C	14:AD:13:ARG:N	2.77	0.42
14:AD:125:ILE:CD1	14:AD:137:PRO:HD3	2.50	0.42
14:AD:186:HIS:CD2	14:AD:188:GLU:HB2	2.54	0.42
16:AF:65:TRP:HZ3	16:AF:73:ALA:O	2.03	0.42
17:AG:15:VAL:HG12	17:AG:19:LEU:HD21	2.02	0.42
17:AG:86:MET:O	17:AG:86:MET:HG2	2.19	0.42
17:AG:130:ASN:HB3	17:AG:159:VAL:O	2.19	0.42
18:AH:42:ARG:CG	18:AH:43:VAL:N	2.82	0.42
18:AH:141:VAL:O	18:AH:142:GLY:C	2.63	0.42
18:AH:163:TYR:CD1	18:AH:163:TYR:N	2.87	0.42
21:AN:2:LYS:O	21:AN:4:TYR:CZ	2.73	0.42
25:AR:30:THR:HG23	25:AR:31:HIS:N	2.35	0.42
27:AT:24:PRO:HA	27:AT:49:VAL:HG22	2.01	0.42
27:AT:56:GLY:O	27:AT:59:THR:HG23	2.20	0.42
32:AY:81:LYS:HD2	32:AY:96:ILE:CD1	2.47	0.42
33:AZ:17:ALA:CA	33:AZ:20:ARG:HG2	2.45	0.42
34:B2:81:LEU:HD23	34:B2:81:LEU:HA	1.73	0.42
35:BA:501:C:H1'	35:BA:549:C:H1'	2.02	0.42
35:BA:1122:U:H2'	35:BA:1123:A:C5'	2.48	0.42
35:BA:1125:U:O4	44:BJ:5:ARG:NE	2.52	0.42
35:BA:1154:G:H2'	35:BA:1155:G:H8	1.85	0.42
35:BA:1318:A:O3'	53:BS:10:PHE:CD2	2.72	0.42
35:BA:1322:C:H6	35:BA:1322:C:OP1	2.03	0.42
35:BA:1457:G:O2'	35:BA:1458:G:H5'	2.19	0.42
36:BB:14:GLY:C	36:BB:15:VAL:HG22	2.43	0.42
39:BE:6:PHE:HB3	39:BE:35:GLY:O	2.20	0.42
39:BE:43:LEU:HD23	39:BE:133:TYR:CE1	2.55	0.42
39:BE:112:LEU:HA	39:BE:112:LEU:HD23	1.86	0.42
42:BH:65:TYR:CD1	42:BH:65:TYR:N	2.87	0.42
44:BJ:20:ALA:C	44:BJ:22:LYS:H	2.27	0.42
45:BK:18:ARG:HD3	45:BK:20:TYR:OH	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:27:LEU:HD23	46:BL:64:TYR:CE1	2.55	0.42
46:BL:85:ILE:HD12	46:BL:85:ILE:HA	1.90	0.42
47:BM:79:LYS:HB3	47:BM:82:MET:SD	2.60	0.42
47:BM:87:TYR:C	47:BM:89:GLY:H	2.28	0.42
51:BQ:81:ARG:HD2	51:BQ:81:ARG:HA	1.93	0.42
52:BR:40:LEU:HB3	52:BR:79:LEU:HD11	2.02	0.42
54:BT:74:LYS:CG	54:BT:75:ASN:N	2.79	0.42
58:BY:3:G:H2'	58:BY:4:G:O4'	2.20	0.42
59:BZ:139:ASP:OD1	59:BZ:174:SER:HB2	2.20	0.42
7:A6:11:LEU:HD13	7:A6:12:GLU:N	2.35	0.41
7:A6:33:LYS:HD3	56:BW:66:C:H4'	2.02	0.41
11:AA:573:G:O2'	11:AA:574:C:H3'	2.20	0.41
11:AA:765:G:H2'	11:AA:766:C:H6	1.85	0.41
11:AA:806:C:O2'	11:AA:2445:G:H4'	2.20	0.41
11:AA:940:G:H2'	11:AA:941:A:O4'	2.20	0.41
11:AA:1667:G:OP2	11:AA:1667:G:C8	2.68	0.41
11:AA:1786:A:H1'	11:AA:1938:A:N6	2.35	0.41
11:AA:2032:G:OP2	11:AA:2454:G:O2'	2.35	0.41
11:AA:2287:A:H2	11:AA:2346:A:C2	2.36	0.41
11:AA:2307:G:N2	11:AA:2308:G:H5"	2.35	0.41
11:AA:2713:A:C3'	11:AA:2714:G:C5'	2.96	0.41
11:AA:2738:A:H2'	11:AA:2739:U:O5'	2.20	0.41
11:AA:2749:A:N1	11:AA:2750:A:N6	2.67	0.41
11:AA:2801(A):A:C5'	11:AA:2802:G:H5'	2.49	0.41
11:AA:2850:A:H2	25:AR:61:HIS:CG	2.38	0.41
12:AB:67:G:O2'	12:AB:68:C:P	2.78	0.41
12:AB:105:A:H2'	12:AB:106:G:O4'	2.20	0.41
13:AC:65:PRO:CD	13:AC:191:ALA:CB	2.98	0.41
14:AD:65:ILE:HD13	14:AD:65:ILE:H	1.84	0.41
15:AE:118:LYS:O	15:AE:118:LYS:HG2	2.19	0.41
16:AF:11:VAL:HG12	16:AF:12:LEU:H	1.85	0.41
16:AF:153:SER:OG	16:AF:190:GLU:HG3	2.19	0.41
17:AG:34:LEU:CB	17:AG:161:THR:HG22	2.50	0.41
23:AP:80:TYR:O	23:AP:81:GLN:CB	2.67	0.41
23:AP:110:TYR:HE1	23:AP:149:GLU:OE2	2.03	0.41
23:AP:131:SER:O	23:AP:132:LYS:C	2.63	0.41
25:AR:77:ARG:O	25:AR:78:LYS:C	2.64	0.41
26:AS:34:HIS:HB3	26:AS:53:SER:HB2	2.02	0.41
26:AS:58:LEU:O	26:AS:59:LYS:O	2.38	0.41
26:AS:101:LEU:C	26:AS:102:ALA:O	2.61	0.41
27:AT:33:LYS:NZ	27:AT:43:GLN:HG2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AT:85:LYS:HZ2	27:AT:85:LYS:CB	2.19	0.41
29:AV:46:VAL:O	29:AV:48:GLY:N	2.53	0.41
35:BA:277:C:H5'	51:BQ:68:ARG:NH1	2.34	0.41
35:BA:538:G:OP1	46:BL:115:LYS:N	2.50	0.41
35:BA:922:G:H4'	39:BE:20:GLN:HA	2.01	0.41
35:BA:1117:G:H5'	35:BA:1117:G:H8	1.85	0.41
35:BA:1199:U:H4'	44:BJ:54:PHE:CZ	2.54	0.41
35:BA:1219:U:C5	35:BA:1220:G:N7	2.88	0.41
35:BA:1319:A:P	53:BS:5:LEU:HD23	2.60	0.41
35:BA:1490:A:H2'	35:BA:1491:G:C5'	2.50	0.41
36:BB:44:LEU:HA	36:BB:47:THR:OG1	2.20	0.41
36:BB:53:ARG:NH2	36:BB:199:TYR:CE1	2.88	0.41
36:BB:106:LYS:HG3	36:BB:107:THR:H	1.84	0.41
37:BC:25:GLY:C	37:BC:27:LYS:N	2.77	0.41
39:BE:32:VAL:HG12	39:BE:33:VAL:N	2.34	0.41
39:BE:105:VAL:O	39:BE:106:PRO:C	2.62	0.41
44:BJ:40:LEU:HG	44:BJ:69:ASN:CB	2.50	0.41
49:BO:9:GLN:O	49:BO:12:ILE:N	2.52	0.41
53:BS:7:LYS:HA	53:BS:7:LYS:HD3	1.80	0.41
53:BS:37:ARG:O	53:BS:37:ARG:HD3	2.20	0.41
53:BS:69:HIS:HA	53:BS:73:GLU:OE2	2.20	0.41
59:BZ:321:TYR:N	59:BZ:397:ALA:O	2.53	0.41
1:A0:42:GLY:HA3	11:AA:2331:G:C4'	2.49	0.41
4:A3:16:PRO:O	4:A3:17:LYS:C	2.63	0.41
5:A4:14:ILE:HD12	5:A4:14:ILE:H	1.85	0.41
11:AA:157:U:H2'	11:AA:158:U:H5'	2.02	0.41
11:AA:309:G:O3'	32:AY:18:GLY:CA	2.67	0.41
11:AA:1024:G:C3'	11:AA:1025:G:H5"	2.39	0.41
11:AA:1050:A:C2'	11:AA:1051:G:H5'	2.49	0.41
11:AA:1088:A:H3'	11:AA:1088:A:N3	2.36	0.41
11:AA:1359:A:H2'	11:AA:1360:A:O4'	2.20	0.41
11:AA:1475:G:C2'	11:AA:1476:C:H5'	2.50	0.41
11:AA:1983:C:C2'	11:AA:1984:G:H5'	2.50	0.41
11:AA:2262:U:H2'	11:AA:2263:C:C6	2.55	0.41
11:AA:2360:A:O2'	11:AA:2361:A:O4'	2.32	0.41
11:AA:2416:C:P	23:AP:66:GLY:HA3	2.59	0.41
13:AC:58:VAL:HG22	13:AC:201:PRO:CG	2.49	0.41
13:AC:62:VAL:HG21	13:AC:191:ALA:O	2.20	0.41
13:AC:119:VAL:O	13:AC:123:VAL:CB	2.66	0.41
14:AD:64:ILE:HG23	14:AD:64:ILE:O	2.19	0.41
14:AD:108:PRO:C	14:AD:109:ASP:O	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AE:55:ASN:HD22	15:AE:55:ASN:HA	1.53	0.41
15:AE:67:PHE:C	15:AE:69:LYS:N	2.76	0.41
17:AG:5:VAL:O	17:AG:8:LYS:HB3	2.20	0.41
17:AG:181:ARG:O	17:AG:181:ARG:CG	2.68	0.41
21:AN:59:LYS:HD3	21:AN:59:LYS:HA	1.80	0.41
22:AO:34:THR:OG1	22:AO:35:VAL:N	2.52	0.41
23:AP:50:ARG:CG	23:AP:51:PHE:N	2.82	0.41
24:AQ:10:ARG:CB	24:AQ:10:ARG:CZ	2.98	0.41
25:AR:7:GLY:O	25:AR:8:ARG:NE	2.53	0.41
25:AR:104:ARG:O	25:AR:105:ARG:C	2.63	0.41
27:AT:12:SER:O	27:AT:13:ARG:NE	2.50	0.41
27:AT:16:ARG:NH1	27:AT:18:ASP:OD2	2.53	0.41
27:AT:19:LEU:HD13	27:AT:78:LEU:CD2	2.51	0.41
28:AU:35:ALA:O	28:AU:36:ARG:C	2.63	0.41
33:AZ:163:LEU:CD1	33:AZ:165:VAL:CG2	2.98	0.41
34:B2:84:HIS:HA	34:B2:87:ARG:CD	2.49	0.41
35:BA:173:U:C6	35:BA:197:A:C2	3.08	0.41
35:BA:349:A:C2'	35:BA:350:G:H5'	2.50	0.41
35:BA:611:A:O2'	35:BA:612:C:H5'	2.19	0.41
35:BA:712:A:O2'	35:BA:713:G:H5'	2.21	0.41
35:BA:782:A:O3'	35:BA:1515:C:H4'	2.19	0.41
35:BA:1201:A:H5'	35:BA:1203:C:OP2	2.20	0.41
35:BA:1239:A:O2'	35:BA:1240:U:OP2	2.32	0.41
35:BA:1291:G:H4'	43:BI:39:GLY:HA3	2.02	0.41
35:BA:1317:C:OP1	48:BN:18:VAL:HG22	2.20	0.41
36:BB:121:LEU:O	36:BB:122:PHE:C	2.63	0.41
36:BB:157:ARG:HG2	36:BB:158:LEU:N	2.36	0.41
37:BC:182:ILE:HA	37:BC:202:ILE:O	2.20	0.41
38:BD:2:GLY:O	38:BD:3:ARG:C	2.63	0.41
39:BE:54:ALA:O	39:BE:55:VAL:C	2.64	0.41
41:BG:22:LEU:CD2	41:BG:62:PHE:CE2	3.02	0.41
41:BG:27:ILE:O	41:BG:28:ASN:C	2.63	0.41
41:BG:152:ALA:O	41:BG:154:TYR:N	2.51	0.41
44:BJ:14:LYS:O	44:BJ:16:LEU:N	2.53	0.41
49:BO:81:LEU:CD1	49:BO:85:LEU:HD12	2.51	0.41
51:BQ:20:THR:CG2	51:BQ:41:LYS:HD2	2.49	0.41
53:BS:15:LEU:HD22	53:BS:15:LEU:HA	1.91	0.41
56:BW:69:C:H2'	56:BW:70:C:C6	2.55	0.41
59:BZ:98:GLN:C	59:BZ:99:MET:HG2	2.45	0.41
59:BZ:216:ASP:CG	59:BZ:219:LYS:HG3	2.45	0.41
4:A3:10:LYS:HB3	4:A3:53:LEU:CD2	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:11:THR:O	6:A5:12:SER:C	2.62	0.41
11:AA:185:U:H2'	11:AA:186:G:H8	1.84	0.41
11:AA:486:C:C2	11:AA:495:G:C2	3.08	0.41
11:AA:923:C:O5'	11:AA:923:C:H6	2.03	0.41
11:AA:958:U:C4	24:AQ:17:LEU:HG	2.56	0.41
11:AA:1013:C:H2'	11:AA:1014:U:C6	2.54	0.41
11:AA:1272:A:OP2	11:AA:1647:G:OP1	2.38	0.41
11:AA:1541:G:H1'	11:AA:1542:A:N3	2.33	0.41
11:AA:1712:C:C2'	11:AA:1713:U:H5'	2.51	0.41
11:AA:2038:G:H2'	11:AA:2039:C:H6	1.84	0.41
11:AA:2219:G:C2'	11:AA:2220:G:C5'	2.97	0.41
11:AA:2414:G:N2	23:AP:67:MET:HE1	2.32	0.41
13:AC:137:LEU:HD13	56:BW:57:C:H5'	2.02	0.41
14:AD:72:LYS:O	14:AD:73:VAL:C	2.64	0.41
14:AD:264:LYS:HG2	14:AD:266:SER:HB3	2.02	0.41
14:AD:268:ARG:NH1	14:AD:268:ARG:HB3	2.35	0.41
15:AE:60:ASN:OD1	15:AE:61:ARG:N	2.54	0.41
15:AE:68:ALA:HB3	15:AE:69:LYS:HE2	2.02	0.41
16:AF:60:SER:O	16:AF:77:ASP:HB2	2.21	0.41
16:AF:137:LYS:O	16:AF:138:GLU:C	2.62	0.41
16:AF:170:LEU:HB3	16:AF:173:VAL:HG23	2.02	0.41
16:AF:183:VAL:O	16:AF:184:TYR:C	2.62	0.41
17:AG:77:ILE:HG22	17:AG:80:PHE:H	1.85	0.41
21:AN:93:THR:O	21:AN:93:THR:HG23	2.21	0.41
22:AO:40:VAL:HG12	22:AO:41:ALA:N	2.35	0.41
23:AP:55:ARG:O	23:AP:57:THR:N	2.53	0.41
23:AP:114:ILE:HG22	23:AP:129:ALA:O	2.19	0.41
24:AQ:75:THR:O	24:AQ:75:THR:HG22	2.19	0.41
26:AS:14:VAL:C	26:AS:16:ASN:N	2.77	0.41
26:AS:69:VAL:HG13	26:AS:99:LYS:HE2	2.02	0.41
28:AU:25:TRP:CD1	28:AU:25:TRP:C	2.98	0.41
28:AU:46:ALA:O	28:AU:47:TYR:C	2.63	0.41
29:AV:72:VAL:HG23	29:AV:72:VAL:O	2.20	0.41
30:AW:3:ALA:HB2	30:AW:58:ALA:HA	2.02	0.41
30:AW:21:VAL:O	30:AW:24:ILE:HG12	2.20	0.41
32:AY:3:VAL:O	32:AY:3:VAL:HG12	2.20	0.41
34:B2:24:ILE:HG13	34:B2:79:LEU:HD23	2.02	0.41
34:B2:30:GLU:HB3	34:B2:60:ILE:HG21	2.02	0.41
35:BA:90:U:O3'	35:BA:91:C:H6	2.03	0.41
35:BA:108:G:C6	54:BT:15:ARG:HG3	2.54	0.41
35:BA:243:A:H4'	35:BA:244:U:C5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:279:A:OP2	51:BQ:95:TYR:OH	2.37	0.41
35:BA:639:G:O2'	35:BA:640:A:H5'	2.20	0.41
35:BA:673:G:H5"	40:BF:87:ARG:NE	2.36	0.41
35:BA:963:G:N2	44:BJ:55:LYS:HG2	2.35	0.41
35:BA:977:A:O2'	35:BA:978:A:H5"	2.20	0.41
36:BB:83:MET:HE2	36:BB:83:MET:HA	2.01	0.41
36:BB:92:TYR:CE1	36:BB:151:GLY:HA2	2.55	0.41
37:BC:77:ILE:HG23	37:BC:84:ILE:CG2	2.50	0.41
38:BD:8:VAL:HG23	38:BD:9:CYS:N	2.35	0.41
39:BE:51:VAL:HB	39:BE:52:PRO:CD	2.45	0.41
40:BF:15:ASP:C	40:BF:17:SER:N	2.77	0.41
40:BF:43:LEU:O	40:BF:44:GLY:C	2.63	0.41
43:BI:115:GLY:O	43:BI:116:LYS:HG2	2.20	0.41
46:BL:8:ASN:HD22	51:BQ:34:LYS:CE	2.32	0.41
47:BM:90:LEU:HD23	47:BM:90:LEU:H	1.84	0.41
50:BP:6:LEU:HD23	50:BP:17:TYR:HB3	1.98	0.41
51:BQ:59:ILE:CG2	51:BQ:71:PHE:CD1	3.01	0.41
54:BT:47:GLY:C	54:BT:49:ALA:H	2.27	0.41
59:BZ:14:VAL:HA	59:BZ:99:MET:HB2	2.02	0.41
59:BZ:185:ASN:C	59:BZ:187:LYS:H	2.27	0.41
59:BZ:324:LYS:CG	59:BZ:325:LYS:H	2.33	0.41
1:A0:38:VAL:HG21	1:A0:59:LEU:HD12	2.01	0.41
2:A1:49:VAL:HG13	2:A1:60:PHE:HB2	2.03	0.41
5:A4:34:GLU:HB3	5:A4:35:VAL:H	1.65	0.41
11:AA:848:G:O6	11:AA:928:G:H2'	2.19	0.41
11:AA:949:C:H2'	11:AA:950:G:H8	1.86	0.41
11:AA:1092:C:H42	11:AA:1100:C:H42	1.68	0.41
11:AA:1109:C:H2'	11:AA:1109:C:O2	2.19	0.41
11:AA:1206:G:C6	11:AA:1207:C:C4	3.09	0.41
11:AA:1769:G:O2'	11:AA:1958:C:OP1	2.33	0.41
11:AA:1995:U:H2'	11:AA:1996:C:C6	2.55	0.41
11:AA:2018:G:H2'	11:AA:2019:A:C8	2.56	0.41
11:AA:2024:G:H2'	11:AA:2025:C:H6	1.85	0.41
11:AA:2310:A:O2'	11:AA:2311:A:H5'	2.20	0.41
11:AA:2481:G:O2'	11:AA:2482:G:P	2.78	0.41
11:AA:2498:C:O2'	11:AA:2499:C:H5'	2.20	0.41
11:AA:2840:C:H5"	25:AR:53:HIS:CD2	2.55	0.41
11:AA:2885:C:C2'	11:AA:2886:G:O5'	2.69	0.41
12:AB:40:U:H3'	12:AB:41:U:C5'	2.48	0.41
13:AC:49:ILE:C	13:AC:49:ILE:HD12	2.45	0.41
13:AC:163:PHE:HD1	13:AC:171:ILE:CD1	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AD:11:PRO:O	14:AD:12:SER:C	2.63	0.41
16:AF:118:ALA:C	16:AF:120:GLU:H	2.29	0.41
16:AF:202:PHE:CD1	16:AF:203:GLN:N	2.89	0.41
17:AG:78:SER:HB2	56:BV:57:C:O2	2.21	0.41
22:AO:2:ILE:HD12	22:AO:6:THR:HG21	2.02	0.41
25:AR:3:HIS:HB3	25:AR:4:LEU:H	1.30	0.41
25:AR:118:GLU:OE1	25:AR:118:GLU:HA	2.20	0.41
28:AU:85:LYS:C	28:AU:87:GLY:N	2.76	0.41
28:AU:102:GLU:H	28:AU:102:GLU:HG2	1.54	0.41
32:AY:95:LYS:NZ	32:AY:100:ALA:HB2	2.35	0.41
35:BA:197:A:H4'	35:BA:198:G:O5'	2.20	0.41
35:BA:368:U:H3'	35:BA:369:C:H5"	2.02	0.41
35:BA:430:A:C2'	35:BA:431:A:H5'	2.51	0.41
35:BA:1040:U:H2'	35:BA:1041:A:C8	2.55	0.41
35:BA:1046:A:H2'	35:BA:1047:G:H5'	2.01	0.41
35:BA:1213:A:N7	35:BA:1215:G:C5	2.89	0.41
37:BC:55:VAL:O	37:BC:55:VAL:HG12	2.20	0.41
38:BD:4:TYR:O	38:BD:5:ILE:CB	2.61	0.41
38:BD:112:VAL:HG22	38:BD:112:VAL:O	2.20	0.41
39:BE:31:LEU:HD23	39:BE:45:PHE:CB	2.48	0.41
41:BG:73:MET:HG2	41:BG:90:GLU:HG2	2.02	0.41
41:BG:77:SER:HB3	41:BG:84:ASN:ND2	2.32	0.41
41:BG:141:VAL:O	41:BG:141:VAL:HG12	2.20	0.41
43:BI:13:ALA:HA	43:BI:67:GLY:C	2.45	0.41
43:BI:79:LEU:HD11	43:BI:83:ARG:NH2	2.35	0.41
45:BK:14:VAL:HG23	45:BK:14:VAL:O	2.19	0.41
45:BK:99:GLN:HG2	45:BK:105:VAL:CG2	2.50	0.41
47:BM:66:LEU:O	47:BM:67:GLU:O	2.38	0.41
47:BM:72:ALA:O	47:BM:75:ALA:HB3	2.20	0.41
47:BM:77:ASN:O	47:BM:81:LEU:CD2	2.55	0.41
47:BM:79:LYS:C	47:BM:81:LEU:H	2.27	0.41
47:BM:91:ARG:C	47:BM:93:ARG:N	2.76	0.41
47:BM:91:ARG:O	47:BM:95:GLY:N	2.51	0.41
47:BM:91:ARG:HH11	47:BM:96:LEU:HB3	1.84	0.41
49:BO:54:ARG:O	49:BO:55:GLY:C	2.64	0.41
58:BY:72:C:O2'	58:BY:73:U:O5'	2.37	0.41
59:BZ:323:LEU:H	59:BZ:323:LEU:HD13	1.84	0.41
59:BZ:388:ILE:HG22	59:BZ:395:VAL:CG2	2.51	0.41
1:A0:60:PHE:CD1	1:A0:60:PHE:C	2.98	0.41
11:AA:342:G:H2'	11:AA:343:C:H6	1.84	0.41
11:AA:405:U:O2	11:AA:405:U:O4'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:745:G:C2'	11:AA:746:A:H5'	2.50	0.41
11:AA:828:U:H4'	11:AA:831:G:N1	2.36	0.41
11:AA:889:C:O2'	11:AA:890:A:P	2.77	0.41
11:AA:1084:A:C8	11:AA:1085:A:C4	3.09	0.41
11:AA:1141:U:H5"	11:AA:1142(A):A:O4'	2.20	0.41
11:AA:1167:U:O2	11:AA:1167:U:H2'	2.20	0.41
11:AA:1547:C:O2'	11:AA:1548:C:H5'	2.20	0.41
11:AA:1709:U:O2'	11:AA:2859:G:H1'	2.19	0.41
11:AA:1916:A:O2'	11:AA:1917:U:H5'	2.20	0.41
11:AA:1925:C:C2'	11:AA:1926:U:H5'	2.50	0.41
11:AA:2756:U:C4	11:AA:2759:G:O6	2.74	0.41
11:AA:2784:C:H1'	15:AE:37:ARG:NH1	2.36	0.41
12:AB:71:C:H2'	12:AB:72:G:O4'	2.20	0.41
14:AD:25:THR:HG22	14:AD:26:LYS:N	2.34	0.41
14:AD:133:LEU:HD12	14:AD:189:CYS:HB2	2.02	0.41
14:AD:260:ARG:O	14:AD:261:LYS:C	2.62	0.41
15:AE:47:VAL:CG2	15:AE:84:PHE:O	2.68	0.41
16:AF:158:THR:C	16:AF:178:PRO:HD3	2.45	0.41
16:AF:163:VAL:O	16:AF:164:ARG:C	2.63	0.41
17:AG:5:VAL:HB	17:AG:8:LYS:HB2	2.02	0.41
18:AH:143:GLN:CA	18:AH:143:GLN:HE21	2.32	0.41
27:AT:22:PHE:CD1	27:AT:22:PHE:C	2.98	0.41
27:AT:31:SER:OG	27:AT:32:TYR:CE1	2.70	0.41
27:AT:102:ILE:HB	27:AT:110:ILE:CD1	2.51	0.41
28:AU:112:ARG:CZ	29:AV:46:VAL:HG11	2.50	0.41
31:AX:3:THR:HA	31:AX:6:ASP:OD2	2.19	0.41
34:B2:39:VAL:O	34:B2:39:VAL:CG2	2.68	0.41
35:BA:102:G:H2'	35:BA:103:C:C6	2.55	0.41
35:BA:283:C:H6	35:BA:283:C:O5'	2.04	0.41
35:BA:369:C:O2'	35:BA:370:C:P	2.78	0.41
35:BA:409:G:OP1	38:BD:25:ARG:N	2.52	0.41
35:BA:1101:A:O2'	35:BA:1102:A:OP2	2.37	0.41
35:BA:1157:A:C4	35:BA:1181:G:N2	2.88	0.41
35:BA:1484:C:O2'	35:BA:1485:U:H5'	2.20	0.41
36:BB:44:LEU:O	36:BB:46:LYS:N	2.54	0.41
36:BB:74:LYS:O	36:BB:77:ALA:N	2.49	0.41
37:BC:7:PRO:HG3	37:BC:184:TYR:CD1	2.55	0.41
37:BC:122:GLU:O	37:BC:126:ARG:HG3	2.21	0.41
40:BF:18:GLN:C	40:BF:20:ALA:N	2.76	0.41
40:BF:35:ALA:HA	40:BF:67:MET:HB3	2.01	0.41
41:BG:54:THR:C	41:BG:56:GLN:N	2.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:152:ALA:C	41:BG:154:TYR:H	2.28	0.41
42:BH:41:ARG:NH1	42:BH:123:GLU:OE1	2.53	0.41
43:BI:29:ASN:C	43:BI:31:GLN:N	2.75	0.41
43:BI:104:ARG:CG	43:BI:105:ASP:N	2.83	0.41
44:BJ:23:ILE:HG23	44:BJ:85:LEU:HD13	2.02	0.41
45:BK:40:ILE:HG22	45:BK:75:TYR:CD2	2.56	0.41
47:BM:90:LEU:HB2	47:BM:91:ARG:H	1.48	0.41
54:BT:89:ARG:HB2	54:BT:104:LEU:HD11	2.02	0.41
56:BW:48:U:H3'	56:BW:49:C:C5'	2.51	0.41
58:BY:10:A:H2'	58:BY:10:A:N3	2.34	0.41
59:BZ:299:GLU:HB3	59:BZ:300:ARG:H	1.73	0.41
3:A2:69:ARG:C	3:A2:70:GLN:HG2	2.46	0.41
11:AA:27:G:H22	11:AA:512:G:C2'	2.24	0.41
11:AA:271(D):G:H1	11:AA:271(T):C:H42	1.68	0.41
11:AA:311:A:H5'	11:AA:332:A:C2	2.56	0.41
11:AA:978:G:C2	11:AA:986:C:C2	3.09	0.41
11:AA:1011:G:C2	11:AA:1013:C:C2	3.08	0.41
11:AA:1403:C:H2'	11:AA:1404:C:O5'	2.21	0.41
11:AA:1474:C:H3'	11:AA:1475:G:H5"	2.02	0.41
11:AA:1917:U:H2'	11:AA:1918:A:C5'	2.51	0.41
11:AA:2175:C:H4'	13:AC:221:SER:HB3	2.02	0.41
11:AA:2283:C:H2'	11:AA:2284:C:H5'	2.02	0.41
11:AA:2618:G:H2'	11:AA:2619:C:H6	1.85	0.41
11:AA:2697:G:H2'	11:AA:2698:U:O4'	2.21	0.41
13:AC:37:PHE:HD1	13:AC:37:PHE:H	1.68	0.41
13:AC:131:LEU:O	13:AC:134:ARG:HB2	2.20	0.41
13:AC:213:TYR:HD2	13:AC:221:SER:HB2	1.85	0.41
14:AD:200:ASP:O	14:AD:201:HIS:C	2.61	0.41
15:AE:16:ARG:O	15:AE:17:ASP:C	2.63	0.41
15:AE:167:VAL:O	15:AE:167:VAL:CG1	2.66	0.41
16:AF:46:ARG:HG3	16:AF:48:THR:HG23	2.03	0.41
16:AF:198:ALA:C	16:AF:201:VAL:HG12	2.46	0.41
17:AG:44:GLY:C	17:AG:46:ALA:H	2.29	0.41
17:AG:114:ILE:O	17:AG:114:ILE:CG2	2.62	0.41
18:AH:70:THR:HG22	18:AH:74:ASN:HD21	1.86	0.41
21:AN:28:THR:O	21:AN:31:ALA:HB3	2.20	0.41
21:AN:58:ASP:C	21:AN:60:ILE:HG13	2.45	0.41
23:AP:24:GLY:N	23:AP:33:ARG:CZ	2.83	0.41
23:AP:95:VAL:CG2	23:AP:95:VAL:O	2.69	0.41
25:AR:2:ARG:HB2	25:AR:3:HIS:H	1.68	0.41
25:AR:52:ILE:HB	25:AR:94:TYR:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AR:96:ARG:HD3	25:AR:98:LEU:CD1	2.43	0.41
26:AS:49:VAL:CG1	26:AS:50:SER:H	2.34	0.41
27:AT:115:ARG:HD3	27:AT:115:ARG:HA	1.92	0.41
29:AV:5:VAL:CG2	29:AV:6:LYS:N	2.84	0.41
30:AW:20:VAL:HG23	30:AW:47:VAL:HG21	2.02	0.41
34:B2:5:LEU:CD2	34:B2:39:VAL:CG2	2.98	0.41
34:B2:123:LYS:O	34:B2:124:LYS:HG3	2.20	0.41
34:B2:144:LEU:HD12	39:BE:52:PRO:HG3	2.02	0.41
35:BA:187:C:O2'	35:BA:188:C:H5'	2.20	0.41
35:BA:262:A:C6	35:BA:263:A:C6	3.09	0.41
35:BA:401:C:OP1	38:BD:77:ASN:ND2	2.54	0.41
35:BA:930:C:C2'	35:BA:931:C:H5'	2.49	0.41
35:BA:947:G:C6	35:BA:948:C:C4	3.08	0.41
35:BA:1202:G:C1'	48:BN:29:ARG:HD3	2.50	0.41
35:BA:1317:C:C2	48:BN:16:PHE:CE1	3.08	0.41
35:BA:1320:C:C2	53:BS:72:GLY:HA3	2.55	0.41
35:BA:1389:C:H2'	35:BA:1390:U:H6	1.85	0.41
38:BD:88:VAL:HG12	38:BD:89:THR:N	2.35	0.41
38:BD:92:VAL:O	38:BD:96:LEU:HD13	2.21	0.41
38:BD:209:ARG:HE	38:BD:209:ARG:C	2.28	0.41
42:BH:104:ARG:C	42:BH:106:GLY:H	2.29	0.41
43:BI:11:LYS:HB3	43:BI:11:LYS:HE2	1.80	0.41
44:BJ:46:ARG:HA	44:BJ:64:GLU:HB3	2.03	0.41
45:BK:89:ALA:O	45:BK:90:GLY:C	2.62	0.41
53:BS:27:GLU:O	53:BS:28:LYS:O	2.39	0.41
56:BW:49:C:OP2	56:BW:60:A:H5'	2.20	0.41
59:BZ:132:VAL:CG1	59:BZ:133:VAL:N	2.83	0.41
1:A0:42:GLY:O	1:A0:57:PHE:CD2	2.74	0.41
3:A2:33:MET:C	3:A2:35:LEU:N	2.78	0.41
5:A4:18:CYS:SG	5:A4:19:GLY:N	2.93	0.41
6:A5:51:TYR:CD2	6:A5:52:TYR:CE1	3.09	0.41
9:A8:62:LEU:H	9:A8:62:LEU:HG	1.56	0.41
11:AA:272(C):G:H2'	11:AA:272(D):G:H8	1.85	0.41
11:AA:335:C:H5"	32:AY:73:ARG:NH2	2.35	0.41
11:AA:397:G:O2'	11:AA:398:G:H5'	2.19	0.41
11:AA:481:G:H1'	11:AA:506:G:N2	2.32	0.41
11:AA:633:A:C5'	23:AP:77:ARG:HH12	2.29	0.41
11:AA:782:A:C6	14:AD:226:MET:HE2	2.56	0.41
11:AA:1019:U:O2'	11:AA:1021:A:C2	2.56	0.41
11:AA:1141:U:H4'	11:AA:1142(A):A:O4'	2.21	0.41
11:AA:1145:C:H2'	11:AA:1146:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:1394:U:H4'	11:AA:1603:A:H4'	2.02	0.41
11:AA:2024:G:H2'	11:AA:2025:C:C6	2.55	0.41
11:AA:2121:G:C1'	13:AC:167:LYS:HD3	2.51	0.41
11:AA:2784:C:H2'	11:AA:2785:C:C6	2.55	0.41
11:AA:2880:C:H1'	25:AR:92:GLY:O	2.20	0.41
12:AB:112:U:H2'	12:AB:113:G:H8	1.86	0.41
13:AC:58:VAL:HG22	13:AC:201:PRO:HG2	2.02	0.41
13:AC:107:TRP:C	13:AC:108:MET:HE3	2.46	0.41
14:AD:155:LEU:HD23	14:AD:177:LEU:HD22	2.03	0.41
16:AF:65:TRP:CB	16:AF:66:PRO:CD	2.99	0.41
17:AG:34:LEU:HA	17:AG:161:THR:CG2	2.49	0.41
17:AG:115:ARG:HB3	17:AG:116:ASP:H	1.61	0.41
17:AG:170:ARG:HG2	17:AG:170:ARG:NH1	2.36	0.41
21:AN:25:ARG:CG	21:AN:25:ARG:NH1	2.70	0.41
21:AN:45:ASN:HA	21:AN:112:LEU:HD22	2.02	0.41
21:AN:133:GLN:O	21:AN:134:ARG:CB	2.68	0.41
26:AS:98:VAL:O	26:AS:99:LYS:HB2	2.20	0.41
27:AT:28:VAL:HG13	27:AT:45:PHE:O	2.20	0.41
28:AU:112:ARG:HA	28:AU:112:ARG:HD2	1.86	0.41
33:AZ:77:ASP:O	33:AZ:78:LYS:HB2	2.21	0.41
33:AZ:119:GLU:HG2	33:AZ:119:GLU:O	2.20	0.41
35:BA:66:G:H5'	35:BA:173:U:O4	2.20	0.41
35:BA:321:A:N7	35:BA:328:C:O2'	2.47	0.41
35:BA:516:U:H2'	35:BA:517:G:H5'	2.02	0.41
35:BA:691:G:H2'	35:BA:692:U:C6	2.55	0.41
35:BA:750:G:N2	49:BO:23:GLY:HA3	2.36	0.41
35:BA:848:C:H3'	35:BA:848:C:H6	1.86	0.41
35:BA:942:G:C2	35:BA:1342:C:C2	3.08	0.41
35:BA:1049:U:H1'	35:BA:1201:A:N7	2.36	0.41
35:BA:1221:G:H4'	53:BS:77:THR:HG21	2.02	0.41
35:BA:1243:C:C2	35:BA:1295:G:N2	2.89	0.41
35:BA:1452:C:H4'	35:BA:1456:G:H5"	2.02	0.41
36:BB:44:LEU:O	36:BB:47:THR:N	2.53	0.41
38:BD:3:ARG:HE	38:BD:5:ILE:HG13	1.84	0.41
39:BE:8:GLU:HA	39:BE:34:VAL:HA	2.03	0.41
41:BG:120:ILE:O	41:BG:124:LEU:HG	2.21	0.41
43:BI:70:LYS:O	43:BI:74:ILE:HG13	2.21	0.41
47:BM:54:VAL:HG12	47:BM:58:GLU:CG	2.51	0.41
47:BM:81:LEU:N	47:BM:81:LEU:CD2	2.84	0.41
50:BP:45:THR:C	50:BP:47:ASP:N	2.76	0.41
53:BS:15:LEU:HB3	53:BS:16:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:96:GLY:O	54:BT:97:ALA:O	2.39	0.41
56:BW:52:C:H2'	56:BW:53:G:H8	1.85	0.41
59:BZ:145:GLU:O	59:BZ:148:ASP:N	2.53	0.41
59:BZ:315:LYS:HE3	59:BZ:405:GLU:HG2	2.02	0.41
1:A0:56:ASP:OD2	11:AA:2364:C:H4'	2.21	0.41
5:A4:5:ILE:HD13	5:A4:5:ILE:H	1.85	0.41
8:A7:34:ARG:HB3	8:A7:42:LEU:CD2	2.51	0.41
11:AA:145:G:C3'	11:AA:146:G:H5"	2.50	0.41
11:AA:412:A:N7	11:AA:2411:A:H2	2.18	0.41
11:AA:528:A:C2	11:AA:2043:C:C4'	3.04	0.41
11:AA:705:A:C2	11:AA:727:A:H1'	2.56	0.41
11:AA:962:G:N2	24:AQ:83:MET:HE2	2.36	0.41
11:AA:1145:C:H2'	11:AA:1146:C:H6	1.86	0.41
11:AA:1362:C:C2'	11:AA:1363:C:H5'	2.51	0.41
11:AA:1389:G:H2'	11:AA:1390:U:O4'	2.20	0.41
11:AA:1553:A:N3	11:AA:1553:A:H2'	2.34	0.41
11:AA:1864:U:H3'	11:AA:1865:G:H5"	1.99	0.41
12:AB:85:G:H2'	12:AB:86:G:H8	1.86	0.41
13:AC:82:LYS:HD2	13:AC:147:PHE:O	2.20	0.41
14:AD:265:PRO:O	14:AD:266:SER:C	2.63	0.41
15:AE:9:VAL:HG12	15:AE:25:VAL:HB	2.03	0.41
15:AE:116:VAL:CG2	15:AE:122:PHE:CG	3.01	0.41
16:AF:141:ALA:O	16:AF:144:LYS:HB2	2.20	0.41
17:AG:39:ILE:HG22	17:AG:157:ILE:HG23	2.03	0.41
17:AG:54:GLU:C	17:AG:56:ALA:N	2.79	0.41
17:AG:55:LYS:O	17:AG:59:GLU:HB3	2.20	0.41
17:AG:92:VAL:O	17:AG:92:VAL:HG13	2.19	0.41
17:AG:116:ASP:O	17:AG:117:PHE:CB	2.68	0.41
18:AH:40:GLU:HB2	18:AH:64:LEU:CD1	2.51	0.41
22:AO:75:SER:HB2	27:AT:75:ILE:O	2.19	0.41
23:AP:105:LEU:O	23:AP:106:LEU:HB2	2.20	0.41
23:AP:147:LEU:O	23:AP:148:LEU:HG	2.21	0.41
24:AQ:115:MET:SD	24:AQ:131:ILE:HG21	2.61	0.41
26:AS:38:GLN:HB3	26:AS:47:THR:CG2	2.51	0.41
29:AV:28:GLU:O	29:AV:29:PRO:C	2.64	0.41
35:BA:18:C:H5"	39:BE:127:ASN:ND2	2.36	0.41
35:BA:1007:C:O2'	35:BA:1008:C:H5'	2.20	0.41
35:BA:1081:G:P	39:BE:16:THR:HG1	2.43	0.41
35:BA:1114:C:O2'	35:BA:1115:C:H5'	2.21	0.41
35:BA:1383:C:H2'	35:BA:1384:C:H6	1.86	0.41
36:BB:106:LYS:HG3	36:BB:107:THR:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:142:LEU:CD2	36:BB:146:GLN:NE2	2.84	0.41
38:BD:201:GLN:O	38:BD:204:ILE:N	2.45	0.41
39:BE:73:ASN:HD22	39:BE:73:ASN:HA	1.61	0.41
39:BE:107:ARG:CG	39:BE:108:ALA:N	2.83	0.41
42:BH:106:GLY:C	42:BH:108:GLY:H	2.29	0.41
43:BI:4:TYR:O	43:BI:19:LEU:N	2.53	0.41
43:BI:4:TYR:CZ	43:BI:88:TYR:HB3	2.56	0.41
44:BJ:49:VAL:CG2	48:BN:41:ARG:HB2	2.49	0.41
47:BM:57:ARG:O	47:BM:58:GLU:C	2.63	0.41
47:BM:65:LYS:C	47:BM:66:LEU:HD12	2.46	0.41
47:BM:93:ARG:N	47:BM:93:ARG:CD	2.81	0.41
53:BS:40:ILE:CG2	53:BS:67:VAL:HA	2.51	0.41
54:BT:31:SER:O	54:BT:35:THR:HG23	2.21	0.41
59:BZ:264:LYS:HE2	59:BZ:307:PRO:CG	2.50	0.41
1:A0:26:TYR:CD1	1:A0:26:TYR:N	2.88	0.41
1:A0:62:LEU:H	1:A0:62:LEU:HD23	1.85	0.41
2:A1:35:THR:HG21	11:AA:2080:G:OP1	2.20	0.41
3:A2:7:ARG:H	3:A2:7:ARG:HG3	1.62	0.41
3:A2:31:GLU:HB3	3:A2:53:LEU:HD11	2.02	0.41
4:A3:28:LEU:HD21	4:A3:35:ARG:HB3	2.03	0.41
5:A4:8:LYS:O	5:A4:9:LEU:CB	2.69	0.41
8:A7:12:ARG:NH2	8:A7:44:PRO:HB3	2.36	0.41
8:A7:46:VAL:CG1	8:A7:47:ARG:N	2.84	0.41
9:A8:14:VAL:CG2	9:A8:22:VAL:HG13	2.50	0.41
10:A9:9:ARG:NH1	10:A9:9:ARG:HB3	2.36	0.41
11:AA:25:U:H5'	30:AW:78:GLU:O	2.21	0.41
11:AA:135:G:O2'	11:AA:136:G:H5'	2.21	0.41
11:AA:271(M):G:O2'	11:AA:271(O):C:H5'	2.21	0.41
11:AA:382:G:H2'	11:AA:383:U:H5'	2.02	0.41
11:AA:517:C:O5'	11:AA:517:C:H6	2.03	0.41
11:AA:725:G:C6	11:AA:726:G:N1	2.89	0.41
11:AA:765:G:H2'	11:AA:766:C:C6	2.55	0.41
11:AA:814:C:H2'	11:AA:815:C:C6	2.53	0.41
11:AA:947:G:O2'	11:AA:984:A:N1	2.47	0.41
11:AA:990:A:OP2	11:AA:991:C:OP2	2.38	0.41
11:AA:1242:A:H5'	11:AA:1243:G:OP2	2.21	0.41
11:AA:1340:U:H4'	11:AA:1341:U:OP2	2.21	0.41
11:AA:1360:A:C8	11:AA:1361:G:C8	3.09	0.41
11:AA:1665:A:C2'	11:AA:1666:G:C5'	2.97	0.41
11:AA:1771:C:O2'	11:AA:1786:A:C8	2.74	0.41
11:AA:2415:G:C2	11:AA:2416:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AA:2441:C:H4'	11:AA:2441:C:OP1	2.20	0.41
11:AA:2480:C:N4	11:AA:2481:G:C6	2.89	0.41
11:AA:2639:A:H2'	11:AA:2640:G:H5'	2.02	0.41
11:AA:2665:A:H2'	11:AA:2666:C:O5'	2.21	0.41
11:AA:2884:U:H2'	11:AA:2885:C:C5'	2.48	0.41
12:AB:15:A:H3'	12:AB:16:G:H5'	2.02	0.41
13:AC:75:LEU:HA	13:AC:93:TYR:O	2.20	0.41
13:AC:128:GLY:HA3	56:BW:57:C:O2'	2.21	0.41
13:AC:200:LYS:HE3	13:AC:208:PHE:HB2	2.03	0.41
14:AD:51:VAL:O	14:AD:54:ARG:HG2	2.21	0.41
14:AD:80:ALA:O	14:AD:81:ALA:HB2	2.21	0.41
14:AD:147:LEU:HD12	14:AD:147:LEU:HA	1.81	0.41
14:AD:173:VAL:HG12	14:AD:185:VAL:O	2.21	0.41
14:AD:179:SER:HB2	14:AD:181:GLU:H	1.86	0.41
15:AE:197:ILE:HD11	15:AE:199:ARG:HH22	1.81	0.41
16:AF:3:GLU:O	16:AF:19:GLU:HB2	2.21	0.41
17:AG:71:THR:HB	17:AG:89:GLY:CA	2.50	0.41
18:AH:76:VAL:O	18:AH:78:GLY:N	2.54	0.41
21:AN:97:ARG:O	21:AN:98:VAL:C	2.63	0.41
21:AN:132:ALA:O	21:AN:133:GLN:CB	2.69	0.41
22:AO:107:ARG:HG3	22:AO:112:MET:SD	2.60	0.41
23:AP:56:SER:OG	23:AP:60:MET:HG2	2.20	0.41
23:AP:108:LYS:O	23:AP:110:TYR:N	2.51	0.41
24:AQ:36:ALA:HB1	24:AQ:127:ILE:HD12	2.03	0.41
24:AQ:141:GLN:CD	33:AZ:72:ARG:CZ	2.93	0.41
25:AR:25:ALA:O	25:AR:29:LEU:HB2	2.20	0.41
26:AS:70:GLY:O	26:AS:73:LEU:N	2.54	0.41
26:AS:73:LEU:C	26:AS:75:GLU:N	2.78	0.41
27:AT:25:GLY:O	27:AT:48:ILE:HG23	2.20	0.41
27:AT:28:VAL:HG11	27:AT:46:GLU:OE1	2.21	0.41
27:AT:58:ASN:ND2	27:AT:58:ASN:H	2.19	0.41
27:AT:134:GLU:O	27:AT:135:ALA:HB3	2.21	0.41
28:AU:27:LEU:C	28:AU:29:SER:H	2.29	0.41
29:AV:5:VAL:HG22	29:AV:6:LYS:N	2.36	0.41
30:AW:2:GLU:HB2	30:AW:107:LEU:O	2.20	0.41
30:AW:25:ARG:NH1	30:AW:25:ARG:HB2	2.36	0.41
30:AW:42:ARG:O	30:AW:43:GLY:C	2.64	0.41
32:AY:4:LYS:CG	32:AY:5:MET:N	2.84	0.41
32:AY:91:GLU:HB3	32:AY:92:ASN:H	1.52	0.41
33:AZ:15:PRO:C	33:AZ:17:ALA:N	2.78	0.41
33:AZ:20:ARG:HB2	33:AZ:20:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AZ:102:LEU:HD11	33:AZ:124:ILE:CG2	2.51	0.41
33:AZ:154:ASP:H	33:AZ:155:LEU:HD22	1.86	0.41
34:B2:81:LEU:C	58:BY:18:G:O2'	2.64	0.41
34:B2:84:HIS:HA	34:B2:87:ARG:CG	2.51	0.41
34:B2:105:ILE:HG12	34:B2:115:VAL:HG23	2.03	0.41
34:B2:134:LYS:O	34:B2:137:VAL:HG13	2.20	0.41
35:BA:10:A:O2'	35:BA:11:G:H5'	2.21	0.41
35:BA:57:G:H2'	35:BA:58:C:C6	2.56	0.41
35:BA:116:A:H2'	35:BA:117:G:C8	2.56	0.41
35:BA:419:C:O2	35:BA:425:G:C2	2.74	0.41
35:BA:456:C:O2	35:BA:476:G:N2	2.54	0.41
35:BA:527:G:O2'	35:BA:535:A:N1	2.54	0.41
35:BA:556:C:C2'	35:BA:557:G:H5'	2.51	0.41
35:BA:590:C:H2'	35:BA:591:U:H6	1.86	0.41
35:BA:689:C:O2'	35:BA:690:G:H5'	2.20	0.41
35:BA:788:U:H2'	35:BA:789:U:O4'	2.20	0.41
35:BA:826:C:H2'	35:BA:827:U:H6	1.86	0.41
35:BA:972:C:O3'	44:BJ:57:LYS:CG	2.68	0.41
35:BA:1064:G:N2	35:BA:1190:G:O2'	2.51	0.41
35:BA:1103:C:H5"	36:BB:98:LEU:HD22	2.03	0.41
35:BA:1116:C:O2'	43:BI:108:VAL:HG21	2.21	0.41
35:BA:1190:G:OP1	37:BC:5:ILE:N	2.54	0.41
35:BA:1192:C:O2	39:BE:25:ARG:NH2	2.54	0.41
35:BA:1216:G:OP1	48:BN:2:ALA:HB1	2.21	0.41
35:BA:1232:U:H2'	35:BA:1233:G:O5'	2.21	0.41
35:BA:1323:G:H4'	35:BA:1363:C:N3	2.36	0.41
36:BB:16:HIS:HB3	36:BB:210:SER:CB	2.46	0.41
36:BB:28:PHE:CG	36:BB:190:THR:HA	2.56	0.41
36:BB:71:VAL:HG13	36:BB:97:TRP:CD1	2.55	0.41
36:BB:80:ILE:CD1	36:BB:80:ILE:N	2.65	0.41
36:BB:163:PHE:CD1	36:BB:185:ILE:CG1	3.01	0.41
36:BB:237:ALA:O	36:BB:238:LEU:HB3	2.21	0.41
37:BC:7:PRO:HG2	37:BC:184:TYR:HB2	2.02	0.41
37:BC:42:LEU:HD21	37:BC:90:GLU:OE1	2.20	0.41
40:BF:44:GLY:HA2	40:BF:59:TYR:CE1	2.56	0.41
40:BF:61:LEU:HB3	40:BF:63:TYR:HE1	1.85	0.41
41:BG:13:GLN:O	41:BG:24:THR:HG21	2.20	0.41
41:BG:114:ARG:H	41:BG:114:ARG:HG2	1.59	0.41
42:BH:12:ARG:O	42:BH:13:ILE:C	2.64	0.41
43:BI:99:LEU:N	43:BI:99:LEU:CD2	2.84	0.41
44:BJ:4:ILE:HD13	44:BJ:77:PRO:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:17:LYS:HD3	46:BL:18:VAL:N	2.35	0.41
47:BM:32:GLU:O	47:BM:32:GLU:HG2	2.21	0.41
49:BO:67:LEU:O	49:BO:68:ARG:C	2.63	0.41
51:BQ:66:SER:O	51:BQ:67:LYS:C	2.64	0.41
54:BT:97:ALA:O	54:BT:99:LEU:N	2.54	0.41
56:BV:7:G:H3'	56:BV:8:U:C5'	2.49	0.41
59:BZ:132:VAL:HG11	59:BZ:206:ILE:CD1	2.51	0.41
59:BZ:187:LYS:O	59:BZ:188:THR:C	2.63	0.41
59:BZ:239:THR:HA	59:BZ:286:VAL:O	2.21	0.41
59:BZ:330:ARG:HG3	59:BZ:395:VAL:CG1	2.51	0.41
1:A0:43:THR:N	11:AA:2331:G:H4'	2.36	0.41
3:A2:13:ALA:C	3:A2:15:LYS:H	2.29	0.41
7:A6:10:LEU:CD1	9:A8:34:TRP:HD1	2.34	0.41
8:A7:38:GLY:O	8:A7:39:ARG:C	2.62	0.41
9:A8:11:LYS:O	9:A8:13:ARG:N	2.54	0.41
9:A8:12:LYS:HD3	23:AP:68:GLN:HG2	2.03	0.41
9:A8:33:ASN:HA	9:A8:36:LYS:HG3	2.03	0.41
10:A9:26:ILE:CG2	10:A9:27:CYS:N	2.84	0.41
11:AA:173:G:H2'	11:AA:173:G:N3	2.36	0.41
11:AA:245:G:O2'	11:AA:246:C:H5'	2.20	0.41
11:AA:271(A):A:H3'	11:AA:271(B):C:H6	1.86	0.41
11:AA:271(P):C:C2'	11:AA:271(Q):G:H5'	2.50	0.41
11:AA:320:A:H2'	16:AF:136:THR:OG1	2.21	0.41
11:AA:378:C:O2'	11:AA:379:G:H5'	2.21	0.41
11:AA:806:C:P	23:AP:39:LYS:HG3	2.62	0.41
11:AA:1051:G:N2	11:AA:1108:U:H5	2.19	0.41
11:AA:1348:G:C3'	11:AA:1349:A:H5"	2.51	0.41
11:AA:1392:A:C6	11:AA:1393:A:C6	3.09	0.41
11:AA:1401:G:O2'	11:AA:1402:C:H5'	2.21	0.41
11:AA:1495:A:N3	11:AA:1495:A:H2'	2.35	0.41
11:AA:1514:U:H2'	11:AA:1515:G:H8	1.85	0.41
11:AA:1656:C:H2'	11:AA:1657:C:C6	2.56	0.41
11:AA:2296:U:H4'	11:AA:2297:C:OP1	2.21	0.41
11:AA:2407:G:H2'	11:AA:2407:G:N3	2.36	0.41
11:AA:2479:G:OP1	11:AA:2537:U:H1'	2.21	0.41
12:AB:50:G:H2'	12:AB:51:G:O5'	2.21	0.41
13:AC:18:LYS:O	13:AC:20:TYR:HD1	2.03	0.41
13:AC:140:PRO:HB3	13:AC:145:VAL:HB	2.03	0.41
13:AC:188:ASN:C	13:AC:190:ARG:H	2.29	0.41
13:AC:201:PRO:HD2	13:AC:208:PHE:HZ	1.80	0.41
15:AE:39:PRO:HA	15:AE:43:GLY:CA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AF:205:ARG:C	16:AF:206:ILE:HD13	2.46	0.41
18:AH:84:SER:O	18:AH:85:LYS:HB3	2.20	0.41
22:AO:61:VAL:O	22:AO:61:VAL:HG13	2.21	0.41
25:AR:7:GLY:H	25:AR:8:ARG:HH21	1.69	0.41
27:AT:30:VAL:HA	27:AT:44:ASP:HA	2.03	0.41
30:AW:4:LYS:CA	30:AW:106:ILE:HG22	2.40	0.41
31:AX:10:ALA:HB1	31:AX:11:PRO:CD	2.45	0.41
33:AZ:76:LEU:HB3	33:AZ:77:ASP:H	1.70	0.41
33:AZ:77:ASP:OD2	33:AZ:79:ARG:O	2.39	0.41
33:AZ:125:LEU:HD12	33:AZ:125:LEU:C	2.46	0.41
34:B2:22:ALA:O	34:B2:115:VAL:HG12	2.21	0.41
35:BA:9:G:C5'	39:BE:122:GLU:OE1	2.69	0.41
35:BA:202:U:H2'	35:BA:202:U:O2	2.21	0.41
35:BA:420:U:C2	35:BA:424:G:C2	3.09	0.41
35:BA:624:C:H2'	35:BA:625:G:C8	2.56	0.41
35:BA:852:G:C6	35:BA:853:G:N7	2.89	0.41
35:BA:1104:G:OP1	36:BB:111:ARG:CD	2.69	0.41
35:BA:1151:A:H5"	44:BJ:42:THR:OG1	2.21	0.41
35:BA:1281:U:C5'	35:BA:1282:C:H5	2.34	0.41
35:BA:1320:C:H2'	35:BA:1321:C:O4'	2.21	0.41
35:BA:1348:U:H4'	43:BI:120:ARG:HD2	2.01	0.41
35:BA:1349:A:OP1	43:BI:120:ARG:HB2	2.21	0.41
38:BD:131:ARG:N	38:BD:131:ARG:HD3	2.36	0.41
38:BD:188:LEU:HD23	38:BD:188:LEU:C	2.45	0.41
39:BE:55:VAL:O	39:BE:58:ALA:HB3	2.21	0.41
43:BI:16:ARG:O	43:BI:63:ILE:HG23	2.21	0.41
44:BJ:67:THR:O	44:BJ:67:THR:HG23	2.21	0.41
49:BO:75:PRO:HG2	49:BO:76:GLU:H	1.85	0.41
49:BO:87:ILE:O	49:BO:88:ARG:CB	2.69	0.41
51:BQ:56:VAL:O	51:BQ:77:VAL:HB	2.20	0.41
56:BW:30:G:H2'	56:BW:31:G:O4'	2.20	0.41
59:BZ:89:ILE:C	59:BZ:91:ASN:H	2.28	0.41
59:BZ:143:ASP:HB3	59:BZ:146:LEU:CB	2.29	0.41
59:BZ:146:LEU:HD13	59:BZ:146:LEU:HA	1.88	0.41
59:BZ:378:VAL:HG22	59:BZ:379:ALA:N	2.36	0.41
1:A0:49:LYS:O	1:A0:50:ASN:HB2	2.21	0.40
3:A2:20:GLU:O	3:A2:23:LYS:HB2	2.21	0.40
7:A6:15:GLU:CD	7:A6:41:PRO:HB3	2.46	0.40
8:A7:39:ARG:HA	11:AA:459:U:OP1	2.21	0.40
9:A8:31:HIS:ND1	9:A8:31:HIS:C	2.79	0.40
9:A8:40:GLU:O	9:A8:41:ILE:C	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A8:48:PHE:CZ	11:AA:650:C:OP1	2.74	0.40
11:AA:333:G:C6	11:AA:334:C:C4	3.08	0.40
11:AA:384:U:H2'	11:AA:385:C:C6	2.55	0.40
11:AA:975:C:OP2	11:AA:975(A):G:H5"	2.21	0.40
11:AA:1058:G:O2'	11:AA:1059:G:H5"	2.22	0.40
11:AA:1268:A:C2	11:AA:1269:A:H1'	2.55	0.40
11:AA:1632:A:C6	11:AA:1633:G:N1	2.89	0.40
11:AA:1680:U:H2'	11:AA:1681:G:O4'	2.20	0.40
11:AA:1684:C:O2'	11:AA:1685:C:H5'	2.21	0.40
11:AA:1791:A:C5'	11:AA:1792:G:OP2	2.68	0.40
11:AA:2102:U:H2'	11:AA:2103:C:O4'	2.20	0.40
11:AA:2801(A):A:C4'	11:AA:2802:G:H2'	2.51	0.40
13:AC:41:VAL:HG21	13:AC:185:LEU:HD22	2.03	0.40
13:AC:48:GLY:N	13:AC:208:PHE:O	2.51	0.40
13:AC:171:ILE:CG2	13:AC:171:ILE:O	2.68	0.40
13:AC:180:PHE:HA	13:AC:181:PRO:HD2	1.94	0.40
13:AC:214:VAL:HB	13:AC:224:ILE:HG21	2.04	0.40
14:AD:68:LYS:HB2	14:AD:70:TRP:CZ3	2.56	0.40
14:AD:260:ARG:NH1	14:AD:267:SER:OG	2.53	0.40
15:AE:132:HIS:ND1	15:AE:135:HIS:NE2	2.70	0.40
15:AE:176:ILE:HA	15:AE:177:PRO:HD2	1.97	0.40
16:AF:110:LEU:HA	16:AF:183:VAL:CG1	2.51	0.40
17:AG:144:ILE:O	17:AG:144:ILE:CG2	2.66	0.40
17:AG:162:THR:O	17:AG:164:GLU:OE1	2.39	0.40
18:AH:143:GLN:O	18:AH:144:VAL:C	2.63	0.40
22:AO:3:GLN:O	22:AO:4:PRO:C	2.64	0.40
23:AP:38:GLN:O	23:AP:39:LYS:HB2	2.21	0.40
24:AQ:137:TYR:CE2	33:AZ:81:ARG:NH2	2.89	0.40
25:AR:62:ALA:O	25:AR:66:VAL:HG23	2.21	0.40
27:AT:91:ARG:CA	27:AT:116:ALA:HA	2.50	0.40
28:AU:112:ARG:O	28:AU:115:ALA:HB3	2.20	0.40
30:AW:95:ILE:HG13	30:AW:95:ILE:O	2.22	0.40
32:AY:44:ILE:N	32:AY:44:ILE:CD1	2.78	0.40
33:AZ:98:MET:O	33:AZ:125:LEU:HA	2.20	0.40
33:AZ:161:VAL:O	33:AZ:161:VAL:HG12	2.20	0.40
34:B2:79:LEU:HD13	34:B2:117:LEU:HD11	2.03	0.40
35:BA:8:A:C6	38:BD:209:ARG:HB3	2.56	0.40
35:BA:40:C:H2'	35:BA:41:G:H8	1.86	0.40
35:BA:59:A:H5'	35:BA:60:A:H5"	2.03	0.40
35:BA:269:C:H2'	35:BA:270:A:H8	1.84	0.40
35:BA:594:G:O2'	35:BA:595:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:737:A:OP1	40:BF:91:VAL:HG13	2.21	0.40
35:BA:739:C:C4	35:BA:740:U:C5	3.08	0.40
35:BA:741:G:H5"	49:BO:59:MET:HE1	2.03	0.40
35:BA:802:A:H3'	35:BA:803:G:H8	1.86	0.40
35:BA:1113:C:H2'	35:BA:1114:C:H6	1.85	0.40
35:BA:1306:A:N6	35:BA:1331:G:H1'	2.37	0.40
35:BA:1416:G:C2'	35:BA:1417:G:H5'	2.51	0.40
35:BA:1480:G:H2'	35:BA:1481:U:O4'	2.20	0.40
35:BA:1508:G:H2'	35:BA:1509:C:C6	2.56	0.40
36:BB:118:LEU:O	36:BB:121:LEU:HB3	2.22	0.40
37:BC:146:ALA:C	37:BC:148:GLY:N	2.77	0.40
38:BD:14:ARG:CA	38:BD:39:PRO:HG3	2.51	0.40
39:BE:64:ARG:HH11	39:BE:64:ARG:CG	2.34	0.40
39:BE:79:GLU:C	39:BE:80:ILE:HG22	2.47	0.40
39:BE:150:ARG:HB2	39:BE:150:ARG:CZ	2.50	0.40
43:BI:26:VAL:HG13	43:BI:61:ALA:CB	2.47	0.40
44:BJ:75:ILE:HG13	44:BJ:76:ASN:N	2.36	0.40
44:BJ:75:ILE:HG13	44:BJ:76:ASN:H	1.86	0.40
49:BO:48:LYS:HD3	49:BO:48:LYS:HA	1.79	0.40
50:BP:26:ARG:O	50:BP:27:LYS:C	2.64	0.40
52:BR:66:LEU:HD11	52:BR:70:ILE:HD11	2.01	0.40
53:BS:27:GLU:HB3	53:BS:28:LYS:H	1.52	0.40
56:BW:60:A:H2'	56:BW:61:U:C5'	2.49	0.40
59:BZ:72:THR:CG2	59:BZ:77:TYR:HE2	2.30	0.40
59:BZ:119:HIS:O	59:BZ:122:LEU:N	2.55	0.40
1:A0:41:ARG:O	1:A0:57:PHE:CD2	2.74	0.40
6:A5:23:HIS:O	6:A5:24:ALA:C	2.63	0.40
11:AA:7:G:H4'	21:AN:13:TRP:CH2	2.56	0.40
11:AA:297:C:H2'	11:AA:298:G:O4'	2.20	0.40
11:AA:445:C:C4	11:AA:446:G:C6	3.09	0.40
11:AA:570:G:H2'	11:AA:2030:A:N7	2.36	0.40
11:AA:1131:G:HO2'	11:AA:1132:A:H8	1.68	0.40
11:AA:1321:A:H2'	11:AA:1322:A:O4'	2.22	0.40
11:AA:1496:A:H8	11:AA:1577:C:O2'	2.04	0.40
11:AA:1834:U:O3'	11:AA:1835:G:H8	2.05	0.40
11:AA:2312:U:C5'	17:AG:74:LYS:HZ3	2.33	0.40
11:AA:2444:G:OP2	16:AF:68:LYS:NZ	2.52	0.40
11:AA:2673:G:O2'	11:AA:2674:G:H5'	2.21	0.40
11:AA:2692:C:H1'	11:AA:2847:U:O2'	2.21	0.40
14:AD:165:ILE:HA	14:AD:175:LEU:CD2	2.48	0.40
15:AE:90:THR:HG22	15:AE:91:VAL:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AF:3:GLU:HA	16:AF:24:LEU:HB3	2.03	0.40
16:AF:170:LEU:HD12	16:AF:172:TRP:NE1	2.37	0.40
17:AG:47:LYS:HB3	17:AG:48:GLU:HG3	2.02	0.40
17:AG:114:ILE:HG21	17:AG:117:PHE:CD1	2.57	0.40
17:AG:120:LEU:O	17:AG:121:ASN:C	2.64	0.40
21:AN:23:LEU:HD13	21:AN:98:VAL:HG12	2.02	0.40
21:AN:79:PRO:O	21:AN:80:GLY:C	2.64	0.40
23:AP:39:LYS:O	23:AP:40:SER:CB	2.69	0.40
26:AS:72:ALA:O	26:AS:75:GLU:HB3	2.20	0.40
26:AS:101:LEU:HD12	26:AS:101:LEU:C	2.46	0.40
28:AU:15:LYS:HA	28:AU:18:LEU:HB2	2.03	0.40
28:AU:97:ASP:C	28:AU:99:ALA:N	2.78	0.40
32:AY:14:LEU:HD12	32:AY:23:ARG:O	2.22	0.40
34:B2:24:ILE:HG22	34:B2:25:ALA:H	1.84	0.40
34:B2:110:ARG:CD	34:B2:110:ARG:N	2.84	0.40
35:BA:375:U:H4'	50:BP:17:TYR:CE2	2.57	0.40
35:BA:414:A:N7	35:BA:431:A:C2	2.90	0.40
35:BA:417:C:H2'	35:BA:418:C:H6	1.84	0.40
35:BA:423:G:C3'	35:BA:424:G:H5'	2.50	0.40
35:BA:426:G:P	38:BD:36:ARG:NH2	2.94	0.40
35:BA:612:C:O2'	35:BA:613:C:H5'	2.20	0.40
35:BA:935:A:C2	35:BA:936:C:C2	3.09	0.40
35:BA:991:U:C2	35:BA:1212:U:O2	2.74	0.40
35:BA:1054:C:OP1	35:BA:1197:G:OP1	2.38	0.40
35:BA:1121:U:O5'	35:BA:1121:U:H6	2.03	0.40
35:BA:1251:A:O2'	35:BA:1370:G:H5'	2.20	0.40
35:BA:1303:C:N4	35:BA:1304:G:C6	2.90	0.40
35:BA:1330:U:H5'	35:BA:1331:G:P	2.61	0.40
36:BB:84:GLU:OE1	36:BB:216:SER:HA	2.22	0.40
41:BG:12:LEU:HD11	41:BG:25:ALA:HB2	2.03	0.40
41:BG:95:ARG:HH11	41:BG:95:ARG:HG3	1.86	0.40
43:BI:10:ARG:HB2	43:BI:76:ALA:HB2	2.04	0.40
43:BI:37:PHE:HD1	43:BI:70:LYS:HD2	1.86	0.40
43:BI:43:ALA:CB	43:BI:74:ILE:HD13	2.51	0.40
46:BL:90:VAL:HG11	46:BL:93:LEU:HD12	2.02	0.40
47:BM:9:ILE:O	47:BM:10:PRO:O	2.39	0.40
47:BM:66:LEU:N	47:BM:66:LEU:CD1	2.83	0.40
51:BQ:5:VAL:O	51:BQ:6:LEU:HD23	2.21	0.40
53:BS:40:ILE:HG21	53:BS:66:MET:O	2.21	0.40
55:BU:5:ASP:C	55:BU:7:ARG:H	2.29	0.40
55:BU:6:ARG:O	55:BU:12:LYS:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BZ:242:ILE:HB	59:BZ:282:ALA:HA	2.04	0.40
7:A6:35:GLU:OE1	7:A6:36:LEU:N	2.47	0.40
7:A6:53:LYS:CD	7:A6:54:ILE:N	2.81	0.40
9:A8:53:PRO:HG2	9:A8:54:GLU:N	2.35	0.40
11:AA:226:G:C2	11:AA:227:A:C6	3.10	0.40
11:AA:229:A:OP1	11:AA:229:A:C8	2.75	0.40
11:AA:363(E):U:C5'	11:AA:363(E):U:H6	2.35	0.40
11:AA:564:C:O2'	11:AA:565:C:H5'	2.22	0.40
11:AA:629:G:H5'	11:AA:629:G:C8	2.49	0.40
11:AA:654:A:H3'	11:AA:654:A:OP1	2.21	0.40
11:AA:659:C:H2'	11:AA:660:G:H8	1.86	0.40
11:AA:1009:A:O4'	28:AU:59:ARG:HD3	2.21	0.40
11:AA:1836:C:O2'	11:AA:1837:C:H5'	2.21	0.40
11:AA:2347:C:H2'	11:AA:2348:U:C6	2.55	0.40
11:AA:2405:G:O2'	11:AA:2406:U:OP2	2.39	0.40
11:AA:2655:G:O2'	11:AA:2656:U:P	2.79	0.40
11:AA:2849:U:OP2	27:AT:95:ARG:NH1	2.55	0.40
12:AB:7:G:H4'	26:AS:29:PHE:HD2	1.86	0.40
13:AC:79:LYS:HD3	13:AC:119:VAL:CG1	2.51	0.40
13:AC:103:ILE:HD12	13:AC:127:MET:HE1	2.02	0.40
14:AD:10:THR:O	14:AD:11:PRO:O	2.40	0.40
16:AF:116:ASP:C	16:AF:118:ALA:N	2.79	0.40
16:AF:141:ALA:C	16:AF:143:ALA:N	2.79	0.40
17:AG:139:LEU:C	17:AG:141:PHE:N	2.77	0.40
18:AH:85:LYS:NZ	18:AH:85:LYS:O	2.49	0.40
18:AH:92:ILE:C	18:AH:94:TYR:H	2.29	0.40
20:AK:80:UNK:O	20:AK:82:UNK:N	2.46	0.40
21:AN:128:HIS:HA	21:AN:129:PRO:HD2	1.92	0.40
23:AP:18:ARG:O	23:AP:19:VAL:C	2.64	0.40
25:AR:53:HIS:O	25:AR:54:LEU:C	2.62	0.40
25:AR:59:ASP:O	25:AR:60:LEU:C	2.62	0.40
26:AS:106:ARG:HD2	26:AS:107:GLU:O	2.21	0.40
27:AT:32:TYR:O	27:AT:33:LYS:HB2	2.21	0.40
29:AV:23:GLU:O	29:AV:24:LYS:C	2.64	0.40
31:AX:20:GLY:C	31:AX:22:ALA:H	2.29	0.40
31:AX:64:LYS:NZ	31:AX:73:ARG:HH21	2.19	0.40
32:AY:42:VAL:HG12	32:AY:65:ALA:HB3	2.04	0.40
33:AZ:67:LEU:HD12	33:AZ:67:LEU:H	1.87	0.40
34:B2:5:LEU:CD2	34:B2:39:VAL:HG22	2.51	0.40
34:B2:132:ASP:O	34:B2:135:GLU:N	2.53	0.40
35:BA:538:G:C6	35:BA:539:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:635:G:O2'	35:BA:636:U:H5'	2.21	0.40
35:BA:956:U:O2'	35:BA:957:U:H5'	2.21	0.40
35:BA:1055:A:C2	35:BA:1056:U:H1'	2.56	0.40
36:BB:14:GLY:O	36:BB:15:VAL:CG1	2.68	0.40
36:BB:116:GLU:H	36:BB:116:GLU:HG2	1.74	0.40
37:BC:23:TYR:CD1	37:BC:23:TYR:C	2.98	0.40
38:BD:109:GLY:C	38:BD:111:ALA:N	2.78	0.40
39:BE:144:THR:O	39:BE:148:VAL:HG23	2.21	0.40
39:BE:147:ASP:OD1	39:BE:147:ASP:N	2.53	0.40
40:BF:7:ASN:C	40:BF:8:ILE:HG13	2.45	0.40
41:BG:39:ALA:O	41:BG:40:ALA:C	2.64	0.40
42:BH:20:TYR:HD1	42:BH:65:TYR:CD2	2.39	0.40
42:BH:85:ARG:HG3	42:BH:85:ARG:NH1	2.35	0.40
42:BH:98:LYS:HG3	42:BH:99:GLU:HG3	2.04	0.40
44:BJ:5:ARG:HG3	44:BJ:71:LEU:HD11	2.02	0.40
46:BL:41:ARG:NH1	46:BL:43:VAL:CG1	2.82	0.40
50:BP:66:PRO:O	50:BP:67:THR:C	2.64	0.40
59:BZ:98:GLN:HB3	59:BZ:241:ARG:HD3	2.03	0.40
59:BZ:169:PRO:HD3	59:BZ:209:TYR:CD2	2.57	0.40
59:BZ:188:THR:HG21	59:BZ:196:VAL:HG21	2.03	0.40
59:BZ:342:PHE:O	59:BZ:348:ASP:HA	2.21	0.40
59:BZ:345:ARG:NH1	59:BZ:384:LEU:HD11	2.37	0.40
2:A1:4:VAL:HG23	2:A1:10:LYS:O	2.22	0.40
2:A1:17:SER:CB	2:A1:38:SER:HB2	2.51	0.40
2:A1:44:PRO:HG2	2:A1:46:LEU:CD2	2.51	0.40
3:A2:17:SER:OG	3:A2:20:GLU:CB	2.69	0.40
6:A5:40:LYS:HE2	6:A5:40:LYS:HB3	1.89	0.40
8:A7:34:ARG:HB3	8:A7:42:LEU:HD22	2.03	0.40
11:AA:848:G:N3	11:AA:933:A:H1'	2.37	0.40
11:AA:1632:A:C6	11:AA:1633:G:C6	3.09	0.40
11:AA:1948:G:C8	11:AA:1948:G:C5'	2.96	0.40
11:AA:2113:U:H2'	11:AA:2114:A:C8	2.57	0.40
11:AA:2455:G:H2'	11:AA:2456:C:C6	2.57	0.40
13:AC:128:GLY:O	56:BW:58:A:O4'	2.39	0.40
14:AD:28:GLU:N	14:AD:28:GLU:OE2	2.54	0.40
14:AD:81:ALA:HA	14:AD:113:VAL:HG22	2.03	0.40
14:AD:125:ILE:HD13	14:AD:131:LEU:CD2	2.51	0.40
15:AE:23:VAL:HA	15:AE:184:VAL:O	2.22	0.40
16:AF:183:VAL:HG23	16:AF:184:TYR:N	2.36	0.40
17:AG:115:ARG:HA	47:BM:7:VAL:HG23	2.03	0.40
17:AG:137:GLU:HG2	17:AG:152:LEU:HD12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AH:63:SER:O	18:AH:67:LEU:HB2	2.21	0.40
32:AY:7:VAL:HB	32:AY:8:LYS:HZ2	1.83	0.40
34:B2:95:GLN:HG3	34:B2:96:LYS:HG3	2.03	0.40
34:B2:144:LEU:C	34:B2:144:LEU:CD1	2.92	0.40
35:BA:20:U:H2'	35:BA:21:G:O4'	2.21	0.40
35:BA:23:C:O2'	35:BA:24:U:H5'	2.21	0.40
35:BA:44:G:C2	35:BA:45:U:H1'	2.57	0.40
35:BA:391:G:H2'	35:BA:392:G:O5'	2.21	0.40
35:BA:445:G:H2'	35:BA:446:G:H8	1.86	0.40
35:BA:674:G:H2'	35:BA:675:A:H8	1.86	0.40
35:BA:819:A:H4'	35:BA:820:U:OP2	2.22	0.40
35:BA:880:C:O2'	35:BA:881:G:H5'	2.21	0.40
35:BA:925:G:C2	35:BA:927:G:C8	3.09	0.40
35:BA:1165:C:C2'	35:BA:1166:G:H5'	2.50	0.40
35:BA:1225:A:H2'	35:BA:1226:C:C5	2.57	0.40
35:BA:1237:C:C2'	35:BA:1238:A:OP1	2.69	0.40
35:BA:1313:U:C2	35:BA:1314:C:C5	3.09	0.40
35:BA:1328:C:H2'	35:BA:1329:A:C8	2.56	0.40
35:BA:1404:C:H2'	35:BA:1405:G:C8	2.57	0.40
35:BA:1411:C:N3	35:BA:1490:A:N1	2.69	0.40
35:BA:1452:C:O4'	35:BA:1456:G:N2	2.54	0.40
35:BA:1503:A:C2	35:BA:1507:A:OP2	2.74	0.40
36:BB:19:HIS:O	36:BB:39:ILE:CG2	2.69	0.40
37:BC:84:ILE:HG13	37:BC:101:LEU:HD22	2.03	0.40
37:BC:113:ALA:O	37:BC:114:PRO:C	2.64	0.40
38:BD:24:GLU:O	38:BD:27:TYR:CB	2.70	0.40
38:BD:30:LYS:C	38:BD:32:ALA:N	2.70	0.40
38:BD:142:PRO:HA	38:BD:185:PHE:CD2	2.50	0.40
38:BD:193:ASP:HB2	38:BD:194:LEU:HD22	2.03	0.40
40:BF:27:GLN:C	40:BF:29:ALA:N	2.76	0.40
40:BF:30:LEU:O	40:BF:35:ALA:HB3	2.21	0.40
46:BL:43:VAL:HG22	46:BL:55:VAL:HG12	2.04	0.40
47:BM:41:PRO:O	47:BM:42:ALA:C	2.63	0.40
47:BM:69:GLU:O	47:BM:69:GLU:HG3	2.22	0.40
47:BM:82:MET:HB3	47:BM:93:ARG:HH22	1.85	0.40
58:BY:18:G:H2'	58:BY:19:A:C8	2.56	0.40
59:BZ:5:PHE:HB2	59:BZ:275:LYS:HB3	2.03	0.40
59:BZ:72:THR:CG2	59:BZ:77:TYR:CE2	3.05	0.40
59:BZ:125:GLN:HB3	62:BZ:1002:KIR:H392	2.03	0.40
59:BZ:161:TYR:O	59:BZ:162:GLU:HB2	2.21	0.40
59:BZ:368:VAL:CG1	59:BZ:369:THR:N	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:19:LYS:NZ	1:A0:41:ARG:HH12	2.19	0.40
1:A0:56:ASP:OD1	1:A0:58:THR:OG1	2.31	0.40
1:A0:62:LEU:HD23	1:A0:62:LEU:N	2.36	0.40
2:A1:30:VAL:HA	11:AA:2395:C:O2'	2.21	0.40
9:A8:4:MET:HE2	11:AA:592:G:H21	1.85	0.40
10:A9:17:ILE:HG21	10:A9:19:ARG:NH2	2.34	0.40
11:AA:391:G:O2'	11:AA:392:C:H5'	2.20	0.40
11:AA:472:A:H2'	11:AA:473:G:H5'	2.03	0.40
11:AA:1541:G:C8	11:AA:1542:A:N1	2.90	0.40
11:AA:1816:G:H8	14:AD:62:TYR:CZ	2.39	0.40
11:AA:1876:A:H2'	11:AA:1877:A:C8	2.56	0.40
11:AA:2704:C:H2'	11:AA:2705:A:O4'	2.21	0.40
12:AB:8:U:H5'	12:AB:8:U:C6	2.55	0.40
13:AC:209:LEU:HD12	13:AC:227:HIS:HE1	1.86	0.40
14:AD:204:ILE:HD13	14:AD:204:ILE:HG21	1.88	0.40
14:AD:221:VAL:CG2	14:AD:226:MET:CE	2.98	0.40
16:AF:206:ILE:HG22	16:AF:207:GLY:N	2.36	0.40
17:AG:52:ILE:CD1	17:AG:52:ILE:N	2.74	0.40
17:AG:100:TRP:O	17:AG:101:ILE:C	2.63	0.40
17:AG:151:ALA:HB3	17:AG:153:ARG:HH11	1.85	0.40
19:AJ:90:UNK:O	19:AJ:91:UNK:C	2.69	0.40
20:AK:91:UNK:CB	20:AK:133:UNK:CB	2.99	0.40
21:AN:93:THR:O	21:AN:94:HIS:HB2	2.22	0.40
23:AP:96:THR:C	23:AP:97:PRO:O	2.62	0.40
24:AQ:55:VAL:HB	33:AZ:178:GLU:OE2	2.21	0.40
24:AQ:75:THR:HG23	24:AQ:88:GLY:C	2.47	0.40
24:AQ:135:ASP:HB2	24:AQ:136:ALA:H	1.68	0.40
27:AT:28:VAL:CG2	27:AT:47:GLY:N	2.70	0.40
27:AT:118:ARG:HH11	35:BA:1442(A):G:H5"	1.78	0.40
32:AY:26:LYS:O	32:AY:27:VAL:C	2.64	0.40
32:AY:62:GLU:CD	32:AY:62:GLU:N	2.68	0.40
33:AZ:28:MET:HE1	33:AZ:67:LEU:HD13	2.04	0.40
33:AZ:153:SER:O	33:AZ:154:ASP:OD1	2.39	0.40
33:AZ:158:PRO:O	33:AZ:160:GLY:N	2.54	0.40
34:B2:87:ARG:HG2	34:B2:87:ARG:H	1.58	0.40
35:BA:259:G:H1	35:BA:267:C:N4	2.17	0.40
35:BA:458:C:C5	35:BA:460:G:N7	2.90	0.40
35:BA:551:U:O2'	35:BA:552:U:H5'	2.21	0.40
35:BA:604:G:C6	35:BA:605:U:C4	3.10	0.40
35:BA:760:G:H2'	35:BA:761:G:H5'	2.04	0.40
35:BA:939:G:H2'	35:BA:940:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1054:C:O2	35:BA:1054:C:H2'	2.21	0.40
35:BA:1112:C:N4	37:BC:178:LEU:HD22	2.37	0.40
35:BA:1130:A:N3	35:BA:1146:A:C2	2.90	0.40
35:BA:1147:C:H2'	43:BI:16:ARG:HD3	2.02	0.40
36:BB:20:GLU:HG2	36:BB:189:ASP:OD2	2.21	0.40
36:BB:180:LEU:O	36:BB:181:PHE:CB	2.60	0.40
37:BC:3:ASN:OD1	37:BC:3:ASN:N	2.54	0.40
38:BD:170:VAL:CG1	38:BD:171:GLY:N	2.84	0.40
43:BI:17:VAL:CG1	43:BI:81:ILE:HD13	2.51	0.40
44:BJ:40:LEU:HD23	44:BJ:40:LEU:N	2.14	0.40
46:BL:22:SER:C	46:BL:24:VAL:N	2.79	0.40
50:BP:22:THR:HA	50:BP:33:ILE:CG1	2.52	0.40
50:BP:38:TYR:CE1	50:BP:50:LYS:HB3	2.56	0.40
52:BR:44:LEU:HD23	52:BR:80:PRO:HG2	2.03	0.40
52:BR:66:LEU:HD21	52:BR:70:ILE:HD11	2.03	0.40
54:BT:37:SER:O	54:BT:40:ALA:N	2.55	0.40
56:BV:26:C:H2'	56:BV:27:G:O4'	2.21	0.40
56:BW:8:U:H2'	56:BW:13:C:H42	1.87	0.40
58:BY:88:C:O2	58:BY:88:C:O4'	2.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A0	82/85 (96%)	62 (76%)	14 (17%)	6 (7%)	1	5
2	A1	92/98 (94%)	80 (87%)	7 (8%)	5 (5%)	1	9
3	A2	69/72 (96%)	47 (68%)	13 (19%)	9 (13%)	0	1
4	A3	58/60 (97%)	46 (79%)	8 (14%)	4 (7%)	1	5
5	A4	43/71 (61%)	23 (54%)	10 (23%)	10 (23%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	A5	57/60 (95%)	39 (68%)	10 (18%)	8 (14%)	0 1
7	A6	48/54 (89%)	18 (38%)	15 (31%)	15 (31%)	0 0
8	A7	47/49 (96%)	45 (96%)	2 (4%)	0	100 100
9	A8	62/65 (95%)	37 (60%)	14 (23%)	11 (18%)	0 0
10	A9	35/37 (95%)	27 (77%)	6 (17%)	2 (6%)	1 8
13	AC	226/229 (99%)	159 (70%)	46 (20%)	21 (9%)	0 3
14	AD	273/276 (99%)	210 (77%)	39 (14%)	24 (9%)	0 3
15	AE	203/206 (98%)	136 (67%)	40 (20%)	27 (13%)	0 1
16	AF	206/210 (98%)	147 (71%)	34 (16%)	25 (12%)	0 1
17	AG	179/182 (98%)	110 (62%)	46 (26%)	23 (13%)	0 1
18	AH	158/180 (88%)	98 (62%)	35 (22%)	25 (16%)	0 0
21	AN	137/140 (98%)	89 (65%)	27 (20%)	21 (15%)	0 0
22	AO	120/122 (98%)	103 (86%)	9 (8%)	8 (7%)	1 6
23	AP	144/150 (96%)	74 (51%)	28 (19%)	42 (29%)	0 0
24	AQ	139/141 (99%)	104 (75%)	27 (19%)	8 (6%)	1 8
25	AR	115/118 (98%)	80 (70%)	21 (18%)	14 (12%)	0 1
26	AS	97/112 (87%)	57 (59%)	20 (21%)	20 (21%)	0 0
27	AT	136/146 (93%)	89 (65%)	28 (21%)	19 (14%)	0 1
28	AU	115/118 (98%)	88 (76%)	18 (16%)	9 (8%)	1 4
29	AV	99/101 (98%)	61 (62%)	23 (23%)	15 (15%)	0 0
30	AW	111/113 (98%)	88 (79%)	15 (14%)	8 (7%)	1 5
31	AX	91/96 (95%)	78 (86%)	8 (9%)	5 (6%)	1 9
32	AY	99/110 (90%)	47 (48%)	18 (18%)	34 (34%)	0 0
33	AZ	182/206 (88%)	107 (59%)	40 (22%)	35 (19%)	0 0
34	B2	142/144 (99%)	124 (87%)	14 (10%)	4 (3%)	4 20
36	BB	233/256 (91%)	153 (66%)	55 (24%)	25 (11%)	0 2
37	BC	205/239 (86%)	141 (69%)	49 (24%)	15 (7%)	1 5
38	BD	206/209 (99%)	126 (61%)	52 (25%)	28 (14%)	0 1
39	BE	149/162 (92%)	121 (81%)	21 (14%)	7 (5%)	2 11
40	BF	99/101 (98%)	80 (81%)	14 (14%)	5 (5%)	1 10
41	BG	153/156 (98%)	109 (71%)	34 (22%)	10 (6%)	1 6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
42	BH	136/138 (99%)	120 (88%)	14 (10%)	2 (2%)	8 32
43	BI	125/128 (98%)	73 (58%)	33 (26%)	19 (15%)	0 0
44	BJ	97/105 (92%)	69 (71%)	18 (19%)	10 (10%)	0 2
45	BK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1 4
46	BL	123/135 (91%)	84 (68%)	23 (19%)	16 (13%)	0 1
47	BM	123/126 (98%)	76 (62%)	28 (23%)	19 (15%)	0 0
48	BN	58/61 (95%)	43 (74%)	5 (9%)	10 (17%)	0 0
49	BO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	3 16
50	BP	82/88 (93%)	53 (65%)	23 (28%)	6 (7%)	1 5
51	BQ	98/105 (93%)	76 (78%)	20 (20%)	2 (2%)	6 25
52	BR	68/88 (77%)	53 (78%)	10 (15%)	5 (7%)	1 5
53	BS	77/93 (83%)	53 (69%)	14 (18%)	10 (13%)	0 1
54	BT	97/106 (92%)	72 (74%)	17 (18%)	8 (8%)	0 4
55	BU	23/27 (85%)	11 (48%)	10 (44%)	2 (9%)	0 4
59	BZ	374/405 (92%)	295 (79%)	58 (16%)	21 (6%)	1 8
All	All	6294/6697 (94%)	4435 (70%)	1170 (19%)	689 (11%)	0 2

All (689) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A1	30	VAL
2	A1	83	GLU
3	A2	47	ASN
3	A2	70	GLN
4	A3	13	ILE
5	A4	26	SER
5	A4	43	TYR
5	A4	44	THR
6	A5	4	HIS
6	A5	12	SER
6	A5	24	ALA
6	A5	25	LEU
6	A5	49	CYS
6	A5	57	VAL
7	A6	16	CYS
7	A6	18	ARG
7	A6	20	ASN

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Mol	Chain	Res	Type
7	A6	23	THR
7	A6	28	ARG
7	A6	31	PRO
7	A6	33	LYS
7	A6	34	LEU
7	A6	45	LYS
7	A6	46	HIS
9	A8	29	LYS
9	A8	31	HIS
9	A8	33	ASN
9	A8	34	TRP
9	A8	35	GLN
9	A8	46	ARG
10	A9	10	ILE
13	AC	39	GLU
13	AC	78	ALA
13	AC	105	ASP
13	AC	109	ASP
13	AC	173	ALA
13	AC	181	PRO
13	AC	217	THR
14	AD	24	ILE
14	AD	25	THR
14	AD	36	PRO
14	AD	109	ASP
14	AD	110	GLY
14	AD	127	VAL
14	AD	239	ARG
15	AE	2	LYS
15	AE	29	GLY
15	AE	53	PRO
15	AE	54	GLN
15	AE	71	GLY
15	AE	76	ARG
15	AE	77	ILE
15	AE	88	GLY
15	AE	90	THR
15	AE	185	LYS
15	AE	186	GLY
15	AE	187	ALA
15	AE	201	THR
16	AF	3	GLU

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Mol	Chain	Res	Type
16	AF	11	VAL
16	AF	14	PRO
16	AF	21	ALA
16	AF	26	ALA
16	AF	84	VAL
16	AF	89	VAL
16	AF	167	ALA
16	AF	168	ARG
16	AF	170	LEU
17	AG	3	LEU
17	AG	82	LEU
17	AG	86	MET
17	AG	87	PRO
17	AG	96	ARG
17	AG	126	ASP
18	AH	24	VAL
18	AH	29	PRO
18	AH	41	MET
18	AH	42	ARG
18	AH	46	GLU
18	AH	84	SER
18	AH	92	ILE
18	AH	137	ASP
18	AH	138	LYS
18	AH	159	GLU
18	AH	160	LYS
18	AH	170	ARG
21	AN	8	GLN
21	AN	45	ASN
21	AN	64	GLY
21	AN	68	GLU
21	AN	133	GLN
21	AN	134	ARG
21	AN	135	PRO
22	AO	48	PRO
23	AP	10	PRO
23	AP	12	ALA
23	AP	18	ARG
23	AP	21	ARG
23	AP	35	HIS
23	AP	36	LYS
23	AP	40	SER

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Mol	Chain	Res	Type
23	AP	47	ASP
23	AP	52	GLU
23	AP	57	THR
23	AP	71	VAL
23	AP	76	LYS
23	AP	81	GLN
23	AP	83	VAL
23	AP	106	LEU
23	AP	132	LYS
23	AP	149	GLU
24	AQ	2	LEU
24	AQ	28	ALA
24	AQ	135	ASP
25	AR	4	LEU
25	AR	12	ARG
25	AR	60	LEU
25	AR	88	ARG
25	AR	102	GLU
25	AR	103	ARG
25	AR	107	ASP
25	AR	117	VAL
26	AS	15	ARG
26	AS	23	ARG
26	AS	24	LEU
26	AS	59	LYS
26	AS	97	ARG
27	AT	24	PRO
27	AT	28	VAL
27	AT	32	TYR
27	AT	80	SER
27	AT	84	GLN
27	AT	88	ILE
27	AT	107	ASP
28	AU	90	VAL
28	AU	91	ASP
29	AV	2	PHE
29	AV	24	LYS
29	AV	46	VAL
30	AW	11	ARG
30	AW	63	ASP
32	AY	17	SER
32	AY	27	VAL

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Mol	Chain	Res	Type
32	AY	42	VAL
32	AY	51	VAL
32	AY	53	PRO
32	AY	56	PRO
32	AY	62	GLU
32	AY	77	PRO
32	AY	78	ALA
33	AZ	33	LEU
33	AZ	76	LEU
33	AZ	81	ARG
33	AZ	163	LEU
33	AZ	165	VAL
33	AZ	177	PRO
33	AZ	180	VAL
33	AZ	181	GLU
34	B2	133	LYS
36	BB	15	VAL
36	BB	18	GLY
36	BB	75	LYS
36	BB	97	TRP
36	BB	130	ARG
36	BB	165	VAL
36	BB	190	THR
36	BB	238	LEU
37	BC	47	LEU
37	BC	146	ALA
37	BC	156	ARG
38	BD	3	ARG
38	BD	4	TYR
38	BD	18	LYS
38	BD	28	SER
38	BD	85	LYS
38	BD	110	PHE
38	BD	154	ASN
39	BE	21	ALA
40	BF	40	VAL
41	BG	8	GLU
41	BG	114	ARG
41	BG	153	HIS
43	BI	44	VAL
43	BI	58	ARG
43	BI	89	ASN

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Mol	Chain	Res	Type
43	BI	95	LYS
44	BJ	36	GLY
45	BK	99	GLN
46	BL	18	VAL
46	BL	27	LEU
46	BL	28	LYS
46	BL	46	LYS
46	BL	79	GLU
46	BL	80	HIS
46	BL	91	LYS
46	BL	94	PRO
47	BM	5	ALA
47	BM	10	PRO
47	BM	12	ASN
47	BM	42	ALA
47	BM	43	THR
47	BM	67	GLU
47	BM	83	ASP
47	BM	90	LEU
47	BM	91	ARG
47	BM	120	LYS
47	BM	125	ARG
48	BN	14	PRO
48	BN	15	LYS
48	BN	20	ALA
48	BN	22	THR
48	BN	29	ARG
48	BN	56	VAL
48	BN	59	ALA
48	BN	60	SER
49	BO	24	SER
50	BP	45	THR
50	BP	64	ALA
52	BR	45	SER
52	BR	46	GLU
53	BS	5	LEU
53	BS	28	LYS
53	BS	61	TYR
53	BS	62	ILE
54	BT	49	ALA
54	BT	71	THR
54	BT	99	LEU

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Mol	Chain	Res	Type
55	BU	5	ASP
59	BZ	73	ALA
59	BZ	83	PRO
59	BZ	85	HIS
59	BZ	99	MET
59	BZ	130	TYR
59	BZ	141	VAL
59	BZ	216	ASP
59	BZ	220	PRO
59	BZ	328	GLY
59	BZ	338	TYR
1	A0	20	ARG
1	A0	74	ARG
1	A0	83	PRO
2	A1	53	VAL
2	A1	85	LEU
3	A2	12	GLU
4	A3	38	GLU
5	A4	5	ILE
6	A5	53	ALA
6	A5	54	GLY
7	A6	35	GLU
9	A8	40	GLU
10	A9	31	LYS
13	AC	95	GLY
13	AC	111	ASP
13	AC	132	GLY
13	AC	135	GLY
14	AD	3	VAL
14	AD	26	LYS
14	AD	27	THR
14	AD	32	SER
14	AD	246	PRO
14	AD	267	SER
15	AE	56	PRO
15	AE	117	MET
15	AE	124	GLY
16	AF	9	ILE
16	AF	10	PRO
16	AF	64	ILE
16	AF	133	ASN
16	AF	134	GLY

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Mol	Chain	Res	Type
17	AG	28	VAL
17	AG	118	ARG
17	AG	130	ASN
18	AH	20	ALA
18	AH	21	PRO
18	AH	30	LYS
18	AH	43	VAL
18	AH	44	VAL
18	AH	49	VAL
18	AH	156	ALA
21	AN	36	GLY
21	AN	50	ASP
21	AN	58	ASP
21	AN	63	THR
21	AN	129	PRO
21	AN	130	HIS
22	AO	5	GLN
22	AO	29	ASN
22	AO	89	ASN
22	AO	120	GLU
23	AP	9	ASN
23	AP	13	ASN
23	AP	19	VAL
23	AP	20	GLY
23	AP	31	ALA
23	AP	34	GLY
23	AP	46	LYS
23	AP	56	SER
23	AP	61	ARG
23	AP	67	MET
23	AP	70	GLN
23	AP	110	TYR
23	AP	146	VAL
23	AP	147	LEU
25	AR	8	ARG
25	AR	14	SER
25	AR	58	GLY
25	AR	105	ARG
26	AS	13	ARG
26	AS	17	ARG
26	AS	103	GLU
26	AS	105	ALA

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Mol	Chain	Res	Type
26	AS	107	GLU
27	AT	4	GLY
27	AT	91	ARG
27	AT	129	ARG
28	AU	93	LYS
28	AU	101	ARG
28	AU	102	GLU
29	AV	16	PRO
29	AV	18	LEU
29	AV	47	VAL
29	AV	67	GLY
29	AV	100	ARG
32	AY	3	VAL
32	AY	10	GLY
32	AY	21	LYS
32	AY	26	LYS
32	AY	29	GLU
32	AY	50	ARG
32	AY	61	ILE
32	AY	80	GLY
32	AY	81	LYS
32	AY	88	LYS
32	AY	89	PHE
32	AY	90	LEU
32	AY	101	LYS
33	AZ	120	ILE
33	AZ	136	PHE
33	AZ	140	ASP
33	AZ	146	ILE
33	AZ	147	GLY
33	AZ	148	ASP
33	AZ	178	GLU
33	AZ	185	GLU
34	B2	131	GLU
36	BB	80	ILE
36	BB	93	VAL
36	BB	191	ASP
36	BB	236	TYR
36	BB	239	VAL
37	BC	9	GLY
37	BC	96	GLY
38	BD	5	ILE

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Mol	Chain	Res	Type
38	BD	35	ARG
38	BD	49	ARG
38	BD	63	LYS
38	BD	176	LEU
38	BD	195	ALA
39	BE	12	LEU
41	BG	68	ASN
41	BG	149	ARG
41	BG	155	ARG
42	BH	14	ARG
43	BI	23	ASN
43	BI	42	ARG
43	BI	70	LYS
43	BI	100	GLY
43	BI	101	PHE
43	BI	105	ASP
44	BJ	59	SER
44	BJ	88	LEU
45	BK	27	ASN
45	BK	54	ARG
45	BK	90	GLY
45	BK	100	ALA
46	BL	63	GLY
46	BL	92	ASP
46	BL	95	GLY
46	BL	128	ALA
47	BM	7	VAL
47	BM	11	ARG
47	BM	55	ARG
47	BM	60	VAL
47	BM	100	GLY
47	BM	114	ARG
48	BN	16	PHE
49	BO	88	ARG
50	BP	53	VAL
50	BP	78	GLY
52	BR	41	LYS
53	BS	10	PHE
53	BS	17	GLU
53	BS	30	LEU
53	BS	47	HIS
53	BS	80	TYR

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Mol	Chain	Res	Type
54	BT	63	ILE
54	BT	101	GLY
54	BT	102	GLY
55	BU	6	ARG
59	BZ	310	ILE
3	A2	17	SER
3	A2	18	PRO
3	A2	68	ARG
4	A3	51	ALA
5	A4	28	LYS
5	A4	34	GLU
7	A6	6	ARG
9	A8	64	TYR
13	AC	62	VAL
13	AC	79	LYS
15	AE	8	LYS
15	AE	72	VAL
15	AE	75	VAL
15	AE	83	ASP
16	AF	22	ALA
16	AF	24	LEU
16	AF	130	ALA
16	AF	132	VAL
16	AF	141	ALA
16	AF	169	ASN
17	AG	115	ARG
17	AG	139	LEU
17	AG	144	ILE
17	AG	163	ALA
18	AH	143	GLN
21	AN	42	TRP
21	AN	57	ALA
21	AN	59	LYS
23	AP	6	LEU
23	AP	23	PRO
23	AP	39	LYS
23	AP	51	PHE
24	AQ	54	MET
25	AR	86	ARG
26	AS	78	LEU
26	AS	88	ASP
26	AS	89	ARG

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Mol	Chain	Res	Type
27	AT	12	SER
27	AT	17	THR
28	AU	89	GLU
29	AV	40	LEU
31	AX	21	PHE
32	AY	35	TYR
32	AY	55	TYR
32	AY	58	GLY
33	AZ	22	GLY
33	AZ	46	LYS
33	AZ	78	LYS
33	AZ	80	ARG
33	AZ	152	ALA
33	AZ	159	PRO
33	AZ	166	SER
33	AZ	168	GLU
36	BB	9	GLU
36	BB	87	ARG
36	BB	88	ALA
36	BB	153	ARG
36	BB	209	ARG
37	BC	8	ILE
37	BC	12	LEU
37	BC	107	GLN
37	BC	129	ALA
38	BD	24	GLU
38	BD	26	CYS
38	BD	47	ARG
38	BD	66	ARG
38	BD	144	ASP
38	BD	166	LYS
39	BE	70	PRO
39	BE	146	ALA
40	BF	31	GLU
40	BF	43	LEU
41	BG	20	ASP
41	BG	108	ALA
43	BI	12	GLU
43	BI	98	PRO
43	BI	106	ALA
44	BJ	15	THR
44	BJ	41	PRO

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Mol	Chain	Res	Type
44	BJ	57	LYS
46	BL	45	PRO
47	BM	124	PRO
48	BN	19	ARG
50	BP	19	ILE
50	BP	83	GLU
51	BQ	30	PRO
51	BQ	66	SER
52	BR	34	TYR
52	BR	54	ARG
53	BS	53	ASN
59	BZ	213	PRO
59	BZ	307	PRO
3	A2	64	LEU
5	A4	8	LYS
5	A4	36	CYS
7	A6	44	ARG
13	AC	208	PHE
13	AC	212	VAL
14	AD	79	VAL
14	AD	242	ARG
14	AD	244	ARG
14	AD	245	PRO
15	AE	69	LYS
15	AE	86	PRO
15	AE	130	GLY
15	AE	204	ALA
16	AF	83	PHE
17	AG	97	ASP
17	AG	113	ARG
17	AG	175	LEU
18	AH	47	GLU
18	AH	77	LYS
23	AP	89	ALA
23	AP	108	LYS
24	AQ	121	ALA
25	AR	3	HIS
26	AS	51	ALA
26	AS	95	HIS
28	AU	66	ASN
29	AV	23	GLU
29	AV	97	LYS

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Mol	Chain	Res	Type
30	AW	6	ILE
30	AW	36	LEU
30	AW	65	LEU
31	AX	40	LYS
32	AY	39	VAL
32	AY	92	ASN
32	AY	98	VAL
32	AY	99	CYS
33	AZ	45	ASP
33	AZ	113	ALA
33	AZ	151	HIS
33	AZ	169	GLU
36	BB	95	GLN
37	BC	206	GLU
38	BD	13	ARG
38	BD	75	PHE
39	BE	8	GLU
40	BF	29	ALA
43	BI	11	LYS
43	BI	93	ARG
44	BJ	24	VAL
44	BJ	29	ARG
45	BK	89	ALA
46	BL	19	ARG
46	BL	51	ALA
47	BM	6	GLY
54	BT	98	PRO
59	BZ	221	PHE
1	A0	47	PRO
1	A0	57	PHE
2	A1	27	GLU
3	A2	26	ARG
5	A4	9	LEU
9	A8	12	LYS
9	A8	51	ALA
14	AD	12	SER
14	AD	125	ILE
14	AD	134	ARG
14	AD	201	HIS
15	AE	52	LEU
16	AF	142	TRP
16	AF	206	ILE

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Mol	Chain	Res	Type
17	AG	43	LEU
17	AG	111	LEU
17	AG	122	PRO
17	AG	138	GLN
18	AH	85	LYS
18	AH	145	ALA
18	AH	154	PRO
21	AN	44	PRO
22	AO	27	GLY
22	AO	101	PRO
23	AP	25	SER
23	AP	65	ARG
23	AP	141	ALA
24	AQ	18	LYS
26	AS	104	GLY
27	AT	37	GLY
27	AT	92	GLY
28	AU	67	ALA
29	AV	22	VAL
29	AV	36	PRO
30	AW	59	VAL
31	AX	24	GLY
32	AY	5	MET
32	AY	30	VAL
32	AY	74	PRO
33	AZ	139	VAL
33	AZ	141	VAL
34	B2	50	ASP
36	BB	8	LYS
36	BB	83	MET
36	BB	84	GLU
36	BB	157	ARG
37	BC	51	GLY
37	BC	160	ALA
38	BD	30	LYS
38	BD	70	ILE
38	BD	156	GLU
38	BD	159	ARG
38	BD	172	PRO
39	BE	121	LYS
41	BG	78	ARG
41	BG	88	PRO

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Mol	Chain	Res	Type
42	BH	2	LEU
45	BK	74	ALA
59	BZ	40	PRO
59	BZ	364	PRO
5	A4	19	GLY
9	A8	37	SER
13	AC	107	TRP
13	AC	138	PRO
15	AE	55	ASN
17	AG	45	GLU
17	AG	177	GLY
26	AS	94	TYR
27	AT	27	THR
27	AT	78	LEU
28	AU	92	ARG
29	AV	15	GLU
29	AV	35	LEU
31	AX	94	GLY
32	AY	31	LEU
33	AZ	14	LYS
33	AZ	25	PRO
34	B2	66	GLY
36	BB	26	PRO
38	BD	7	PRO
38	BD	153	ARG
43	BI	24	GLY
43	BI	41	VAL
43	BI	50	LEU
46	BL	127	GLU
54	BT	97	ALA
59	BZ	146	LEU
59	BZ	325	LYS
59	BZ	361	MET
1	A0	42	GLY
4	A3	2	PRO
7	A6	52	VAL
13	AC	22	ILE
14	AD	28	GLU
14	AD	236	GLY
21	AN	40	PRO
23	AP	37	GLY
26	AS	14	VAL

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Mol	Chain	Res	Type
27	AT	121	ILE
30	AW	10	VAL
32	AY	75	ILE
33	AZ	12	GLY
36	BB	222	ILE
37	BC	207	VAL
44	BJ	90	LEU
13	AC	94	VAL
15	AE	175	VAL
16	AF	25	PRO
17	AG	17	PRO
24	AQ	55	VAL
26	AS	22	GLY
26	AS	98	VAL
30	AW	35	ILE
44	BJ	23	ILE
59	BZ	164	PRO
13	AC	113	VAL
14	AD	11	PRO
21	AN	5	VAL
21	AN	46	VAL
33	AZ	143	GLY
37	BC	197	GLY
39	BE	93	PRO
40	BF	44	GLY
49	BO	18	PHE
59	BZ	249	VAL
13	AC	226	PRO
23	AP	122	PRO
24	AQ	27	VAL
27	AT	52	ILE
37	BC	55	VAL
43	BI	81	ILE
45	BK	48	ILE
45	BK	88	GLY
3	A2	50	ILE
7	A6	41	PRO
22	AO	4	PRO
27	AT	83	ILE
31	AX	12	VAL
33	AZ	61	LEU
21	AN	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	A0	66/67 (98%)	58 (88%)	8 (12%)	5 20
2	A1	78/83 (94%)	62 (80%)	16 (20%)	1 5
3	A2	66/67 (98%)	57 (86%)	9 (14%)	3 16
4	A3	51/52 (98%)	45 (88%)	6 (12%)	5 21
5	A4	39/63 (62%)	30 (77%)	9 (23%)	1 4
6	A5	51/52 (98%)	41 (80%)	10 (20%)	1 6
7	A6	49/52 (94%)	38 (78%)	11 (22%)	1 4
8	A7	41/42 (98%)	35 (85%)	6 (15%)	3 14
9	A8	53/55 (96%)	43 (81%)	10 (19%)	1 7
10	A9	34/34 (100%)	27 (79%)	7 (21%)	1 5
13	AC	180/181 (99%)	157 (87%)	23 (13%)	4 18
14	AD	217/218 (100%)	176 (81%)	41 (19%)	1 7
15	AE	165/166 (99%)	136 (82%)	29 (18%)	2 9
16	AF	165/166 (99%)	146 (88%)	19 (12%)	5 23
17	AG	155/156 (99%)	132 (85%)	23 (15%)	3 13
18	AH	132/148 (89%)	115 (87%)	17 (13%)	4 18
21	AN	117/119 (98%)	98 (84%)	19 (16%)	2 11
22	AO	100/100 (100%)	87 (87%)	13 (13%)	4 18
23	AP	112/116 (97%)	87 (78%)	25 (22%)	1 4
24	AQ	111/111 (100%)	93 (84%)	18 (16%)	2 11
25	AR	100/101 (99%)	84 (84%)	16 (16%)	2 12
26	AS	77/88 (88%)	66 (86%)	11 (14%)	3 14
27	AT	120/127 (94%)	93 (78%)	27 (22%)	1 4
28	AU	92/94 (98%)	82 (89%)	10 (11%)	6 24
29	AV	82/82 (100%)	71 (87%)	11 (13%)	4 17
30	AW	91/92 (99%)	76 (84%)	15 (16%)	2 11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
31	AX	74/78 (95%)	65 (88%)	9 (12%)	5 20
32	AY	84/91 (92%)	70 (83%)	14 (17%)	2 10
33	AZ	161/179 (90%)	135 (84%)	26 (16%)	2 11
34	B2	120/120 (100%)	81 (68%)	39 (32%)	0 0
36	BB	202/220 (92%)	173 (86%)	29 (14%)	3 14
37	BC	160/188 (85%)	149 (93%)	11 (7%)	14 41
38	BD	180/181 (99%)	147 (82%)	33 (18%)	2 8
39	BE	115/123 (94%)	98 (85%)	17 (15%)	3 13
40	BF	90/90 (100%)	75 (83%)	15 (17%)	2 10
41	BG	126/127 (99%)	114 (90%)	12 (10%)	8 30
42	BH	119/119 (100%)	106 (89%)	13 (11%)	6 24
43	BI	98/99 (99%)	89 (91%)	9 (9%)	8 31
44	BJ	88/92 (96%)	74 (84%)	14 (16%)	2 12
45	BK	90/99 (91%)	82 (91%)	8 (9%)	9 33
46	BL	104/111 (94%)	87 (84%)	17 (16%)	2 11
47	BM	99/101 (98%)	86 (87%)	13 (13%)	4 17
48	BN	49/50 (98%)	40 (82%)	9 (18%)	1 8
49	BO	79/80 (99%)	73 (92%)	6 (8%)	12 39
50	BP	72/74 (97%)	64 (89%)	8 (11%)	6 24
51	BQ	94/97 (97%)	85 (90%)	9 (10%)	8 30
52	BR	61/77 (79%)	54 (88%)	7 (12%)	5 23
53	BS	69/80 (86%)	55 (80%)	14 (20%)	1 5
54	BT	76/82 (93%)	68 (90%)	8 (10%)	6 26
55	BU	19/22 (86%)	17 (90%)	2 (10%)	6 26
59	BZ	316/338 (94%)	269 (85%)	47 (15%)	3 13
All	All	5289/5550 (95%)	4491 (85%)	798 (15%)	3 13

All (798) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A0	5	LYS
1	A0	11	ARG
1	A0	12	ASN

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Mol	Chain	Res	Type
1	A0	20	ARG
1	A0	27	GLU
1	A0	44	ARG
1	A0	62	LEU
1	A0	84	LEU
2	A1	3	LYS
2	A1	11	ARG
2	A1	13	ILE
2	A1	17	SER
2	A1	26	ARG
2	A1	30	VAL
2	A1	37	ILE
2	A1	40	ARG
2	A1	46	LEU
2	A1	57	GLU
2	A1	61	ARG
2	A1	69	LYS
2	A1	73	LEU
2	A1	80	LEU
2	A1	83	GLU
2	A1	92	LYS
3	A2	10	LEU
3	A2	16	LEU
3	A2	21	LEU
3	A2	24	LEU
3	A2	33	MET
3	A2	35	LEU
3	A2	52	ASP
3	A2	53	LEU
3	A2	68	ARG
4	A3	6	VAL
4	A3	8	LEU
4	A3	34	GLU
4	A3	35	ARG
4	A3	38	GLU
4	A3	46	ASN
5	A4	5	ILE
5	A4	9	LEU
5	A4	16	CYS
5	A4	22	ILE
5	A4	27	THR
5	A4	28	LYS

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Mol	Chain	Res	Type
5	A4	32	TYR
5	A4	33	VAL
5	A4	40	HIS
6	A5	3	LYS
6	A5	4	HIS
6	A5	6	VAL
6	A5	25	LEU
6	A5	29	THR
6	A5	33	CYS
6	A5	49	CYS
6	A5	51	TYR
6	A5	52	TYR
6	A5	57	VAL
7	A6	9	LEU
7	A6	10	LEU
7	A6	11	LEU
7	A6	14	THR
7	A6	18	ARG
7	A6	31	PRO
7	A6	36	LEU
7	A6	37	ARG
7	A6	45	LYS
7	A6	48	VAL
7	A6	52	VAL
8	A7	1	MET
8	A7	8	ASN
8	A7	10	ARG
8	A7	24	THR
8	A7	34	ARG
8	A7	48	LYS
9	A8	6	THR
9	A8	30	ARG
9	A8	31	HIS
9	A8	32	LEU
9	A8	34	TRP
9	A8	47	LYS
9	A8	49	VAL
9	A8	52	LYS
9	A8	56	GLU
9	A8	61	LEU
10	A9	1	MET
10	A9	2	LYS

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Mol	Chain	Res	Type
10	A9	11	CYS
10	A9	17	ILE
10	A9	28	GLU
10	A9	29	ASN
10	A9	34	GLN
13	AC	5	LYS
13	AC	10	LEU
13	AC	14	VAL
13	AC	30	LYS
13	AC	36	LYS
13	AC	55	ASP
13	AC	58	VAL
13	AC	70	LYS
13	AC	74	VAL
13	AC	85	GLU
13	AC	111	ASP
13	AC	118	ASP
13	AC	127	MET
13	AC	129	ARG
13	AC	137	LEU
13	AC	139	ASN
13	AC	141	LYS
13	AC	147	PHE
13	AC	151	GLU
13	AC	167	LYS
13	AC	183	GLU
13	AC	188	ASN
13	AC	215	THR
14	AD	10	THR
14	AD	18	VAL
14	AD	24	ILE
14	AD	26	LYS
14	AD	27	THR
14	AD	28	GLU
14	AD	31	LYS
14	AD	35	LYS
14	AD	37	LEU
14	AD	43	ARG
14	AD	44	ASN
14	AD	46	GLN
14	AD	52	ARG
14	AD	59	LYS

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Mol	Chain	Res	Type
14	AD	61	LEU
14	AD	65	ILE
14	AD	69	ARG
14	AD	75	ILE
14	AD	89	SER
14	AD	92	ILE
14	AD	94	LEU
14	AD	103	ARG
14	AD	109	ASP
14	AD	112	GLN
14	AD	127	VAL
14	AD	131	LEU
14	AD	138	VAL
14	AD	141	VAL
14	AD	155	LEU
14	AD	166	GLN
14	AD	171	ASP
14	AD	176	ARG
14	AD	192	THR
14	AD	221	VAL
14	AD	239	ARG
14	AD	242	ARG
14	AD	254	THR
14	AD	257	LEU
14	AD	260	ARG
14	AD	270	ILE
14	AD	275	LYS
15	AE	7	VAL
15	AE	17	ASP
15	AE	23	VAL
15	AE	33	VAL
15	AE	34	VAL
15	AE	55	ASN
15	AE	56	PRO
15	AE	57	LYS
15	AE	61	ARG
15	AE	63	LEU
15	AE	64	LYS
15	AE	67	PHE
15	AE	69	LYS
15	AE	78	LEU
15	AE	89	ASP

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Mol	Chain	Res	Type
15	AE	95	ILE
15	AE	121	ASN
15	AE	128	SER
15	AE	129	HIS
15	AE	144	ARG
15	AE	145	LYS
15	AE	175	VAL
15	AE	178	GLU
15	AE	181	LEU
15	AE	185	LYS
15	AE	188	VAL
15	AE	195	LEU
15	AE	197	ILE
15	AE	203	LYS
16	AF	19	GLU
16	AF	27	GLU
16	AF	28	ILE
16	AF	40	GLN
16	AF	53	THR
16	AF	64	ILE
16	AF	65	TRP
16	AF	70	THR
16	AF	78	ILE
16	AF	82	ILE
16	AF	95	ARG
16	AF	122	LYS
16	AF	125	LEU
16	AF	149	ASP
16	AF	157	VAL
16	AF	162	LEU
16	AF	169	ASN
16	AF	192	LEU
16	AF	195	ASP
17	AG	7	LEU
17	AG	12	TYR
17	AG	21	ARG
17	AG	26	GLN
17	AG	33	ARG
17	AG	36	LYS
17	AG	48	GLU
17	AG	52	ILE
17	AG	59	GLU

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Mol	Chain	Res	Type
17	AG	60	LEU
17	AG	67	LYS
17	AG	71	THR
17	AG	80	PHE
17	AG	90	LEU
17	AG	125	PHE
17	AG	136	ARG
17	AG	139	LEU
17	AG	143	GLU
17	AG	145	THR
17	AG	146	TYR
17	AG	153	ARG
17	AG	164	GLU
17	AG	166	ASP
18	AH	43	VAL
18	AH	52	VAL
18	AH	53	GLU
18	AH	54	ARG
18	AH	65	HIS
18	AH	85	LYS
18	AH	89	ILE
18	AH	98	LEU
18	AH	99	VAL
18	AH	104	GLU
18	AH	105	LEU
18	AH	127	GLU
18	AH	139	GLN
18	AH	143	GLN
18	AH	147	ASN
18	AH	153	LYS
18	AH	162	ILE
21	AN	1	MET
21	AN	4	TYR
21	AN	19	GLU
21	AN	21	LYS
21	AN	22	THR
21	AN	23	LEU
21	AN	25	ARG
21	AN	26	LEU
21	AN	32	THR
21	AN	37	LYS
21	AN	45	ASN

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Mol	Chain	Res	Type
21	AN	48	MET
21	AN	56	ASN
21	AN	63	THR
21	AN	65	LYS
21	AN	68	GLU
21	AN	87	LEU
21	AN	99	LEU
21	AN	119	ARG
22	AO	4	PRO
22	AO	8	LEU
22	AO	9	GLU
22	AO	22	ILE
22	AO	23	ARG
22	AO	34	THR
22	AO	48	PRO
22	AO	49	ARG
22	AO	92	GLU
22	AO	98	VAL
22	AO	108	GLU
22	AO	112	MET
22	AO	114	ILE
23	AP	16	ARG
23	AP	19	VAL
23	AP	21	ARG
23	AP	27	HIS
23	AP	30	THR
23	AP	35	HIS
23	AP	36	LYS
23	AP	39	LYS
23	AP	45	LEU
23	AP	48	PRO
23	AP	52	GLU
23	AP	55	ARG
23	AP	57	THR
23	AP	59	LEU
23	AP	61	ARG
23	AP	62	LEU
23	AP	65	ARG
23	AP	67	MET
23	AP	70	GLN
23	AP	81	GLN
23	AP	85	LEU

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Mol	Chain	Res	Type
23	AP	86	LYS
23	AP	100	LEU
23	AP	112	LEU
23	AP	133	SER
24	AQ	5	ARG
24	AQ	16	ARG
24	AQ	37	LEU
24	AQ	42	ILE
24	AQ	45	GLN
24	AQ	46	GLN
24	AQ	51	ARG
24	AQ	55	VAL
24	AQ	56	ARG
24	AQ	58	PHE
24	AQ	60	ARG
24	AQ	79	LEU
24	AQ	89	ASN
24	AQ	110	THR
24	AQ	133	ARG
24	AQ	135	ASP
24	AQ	137	TYR
24	AQ	138	ASP
25	AR	2	ARG
25	AR	3	HIS
25	AR	8	ARG
25	AR	14	SER
25	AR	36	THR
25	AR	40	LYS
25	AR	45	ARG
25	AR	57	ARG
25	AR	65	LEU
25	AR	71	GLN
25	AR	75	LEU
25	AR	76	VAL
25	AR	99	LYS
25	AR	100	LEU
25	AR	111	LEU
25	AR	114	VAL
26	AS	11	LYS
26	AS	12	PHE
26	AS	15	ARG
26	AS	35	ILE

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Mol	Chain	Res	Type
26	AS	36	TYR
26	AS	57	LYS
26	AS	63	THR
26	AS	73	LEU
26	AS	97	ARG
26	AS	103	GLU
26	AS	106	ARG
27	AT	6	LEU
27	AT	7	ILE
27	AT	16	ARG
27	AT	18	ASP
27	AT	23	ARG
27	AT	24	PRO
27	AT	29	ARG
27	AT	30	VAL
27	AT	32	TYR
27	AT	38	ASN
27	AT	39	ARG
27	AT	49	VAL
27	AT	53	ARG
27	AT	58	ASN
27	AT	59	THR
27	AT	61	PHE
27	AT	62	THR
27	AT	65	LYS
27	AT	72	VAL
27	AT	78	LEU
27	AT	82	LEU
27	AT	89	VAL
27	AT	90	GLN
27	AT	93	ARG
27	AT	99	LEU
27	AT	128	GLU
27	AT	133	GLU
28	AU	11	ARG
28	AU	16	LYS
28	AU	18	LEU
28	AU	60	LEU
28	AU	66	ASN
28	AU	74	LEU
28	AU	92	ARG
28	AU	97	ASP

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Mol	Chain	Res	Type
28	AU	102	GLU
28	AU	108	GLU
29	AV	5	VAL
29	AV	18	LEU
29	AV	19	LYS
29	AV	21	ARG
29	AV	39	LEU
29	AV	40	LEU
29	AV	47	VAL
29	AV	70	ILE
29	AV	71	LEU
29	AV	89	GLN
29	AV	99	ILE
30	AW	11	ARG
30	AW	17	VAL
30	AW	19	LEU
30	AW	23	LEU
30	AW	39	THR
30	AW	51	LEU
30	AW	52	GLU
30	AW	71	VAL
30	AW	76	VAL
30	AW	88	ARG
30	AW	90	ARG
30	AW	96	ILE
30	AW	101	SER
30	AW	104	THR
30	AW	107	LEU
31	AX	8	ILE
31	AX	14	SER
31	AX	27	THR
31	AX	28	PHE
31	AX	38	GLU
31	AX	45	THR
31	AX	57	LEU
31	AX	68	ARG
31	AX	80	ILE
32	AY	2	ARG
32	AY	6	HIS
32	AY	7	VAL
32	AY	9	LYS
32	AY	32	PRO

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Mol	Chain	Res	Type
32	AY	44	ILE
32	AY	53	PRO
32	AY	55	TYR
32	AY	56	PRO
32	AY	57	GLN
32	AY	62	GLU
32	AY	76	CYS
32	AY	77	PRO
32	AY	83	THR
33	AZ	3	TYR
33	AZ	5	LEU
33	AZ	6	LYS
33	AZ	19	ARG
33	AZ	24	LEU
33	AZ	28	MET
33	AZ	31	ARG
33	AZ	56	VAL
33	AZ	65	GLN
33	AZ	70	LEU
33	AZ	76	LEU
33	AZ	81	ARG
33	AZ	86	VAL
33	AZ	92	SER
33	AZ	97	GLU
33	AZ	103	ARG
33	AZ	121	HIS
33	AZ	125	LEU
33	AZ	148	ASP
33	AZ	150	LEU
33	AZ	155	LEU
33	AZ	163	LEU
33	AZ	166	SER
33	AZ	174	VAL
33	AZ	178	GLU
33	AZ	180	VAL
34	B2	1	MET
34	B2	4	VAL
34	B2	6	GLU
34	B2	8	ARG
34	B2	9	ARG
34	B2	11	ARG
34	B2	12	HIS

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Mol	Chain	Res	Type
34	B2	13	ASP
34	B2	16	ILE
34	B2	17	LEU
34	B2	18	GLU
34	B2	24	ILE
34	B2	29	THR
34	B2	34	LEU
34	B2	38	LYS
34	B2	48	PHE
34	B2	49	GLU
34	B2	50	ASP
34	B2	52	GLU
34	B2	60	ILE
34	B2	68	TYR
34	B2	70	ASN
34	B2	77	ARG
34	B2	85	GLU
34	B2	88	ARG
34	B2	89	LEU
34	B2	90	LEU
34	B2	93	VAL
34	B2	95	GLN
34	B2	98	LEU
34	B2	100	LEU
34	B2	119	LEU
34	B2	124	LYS
34	B2	129	ARG
34	B2	130	ARG
34	B2	133	LYS
34	B2	137	VAL
34	B2	138	ARG
34	B2	144	LEU
36	BB	16	HIS
36	BB	17	PHE
36	BB	20	GLU
36	BB	22	LYS
36	BB	36	ARG
36	BB	42	ILE
36	BB	44	LEU
36	BB	45	GLN
36	BB	53	ARG
36	BB	63	MET

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Mol	Chain	Res	Type
36	BB	69	LEU
36	BB	80	ILE
36	BB	90	MET
36	BB	111	ARG
36	BB	145	LEU
36	BB	146	GLN
36	BB	162	ILE
36	BB	164	VAL
36	BB	172	ILE
36	BB	178	ARG
36	BB	187	LEU
36	BB	189	ASP
36	BB	193	ASP
36	BB	196	LEU
36	BB	200	ILE
36	BB	213	LEU
36	BB	221	LEU
36	BB	226	ARG
36	BB	236	TYR
37	BC	5	ILE
37	BC	14	ILE
37	BC	16	ARG
37	BC	47	LEU
37	BC	89	GLU
37	BC	107	GLN
37	BC	144	SER
37	BC	165	THR
37	BC	178	LEU
37	BC	188	LEU
37	BC	191	THR
38	BD	9	CYS
38	BD	13	ARG
38	BD	15	GLU
38	BD	20	TYR
38	BD	24	GLU
38	BD	27	TYR
38	BD	34	GLU
38	BD	38	TYR
38	BD	58	LEU
38	BD	59	ARG
38	BD	62	GLN
38	BD	67	ILE

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Mol	Chain	Res	Type
38	BD	78	LEU
38	BD	86	LYS
38	BD	98	GLU
38	BD	101	LEU
38	BD	107	ARG
38	BD	110	PHE
38	BD	121	VAL
38	BD	127	THR
38	BD	129	ASN
38	BD	135	LEU
38	BD	144	ASP
38	BD	145	GLU
38	BD	156	GLU
38	BD	162	LEU
38	BD	178	VAL
38	BD	187	ARG
38	BD	190	ASP
38	BD	193	ASP
38	BD	194	LEU
38	BD	200	GLU
38	BD	209	ARG
39	BE	11	ILE
39	BE	12	LEU
39	BE	13	ILE
39	BE	16	THR
39	BE	20	GLN
39	BE	31	LEU
39	BE	41	VAL
39	BE	56	GLN
39	BE	66	MET
39	BE	73	ASN
39	BE	79	GLU
39	BE	80	ILE
39	BE	91	LEU
39	BE	93	PRO
39	BE	96	PRO
39	BE	107	ARG
39	BE	120	THR
40	BF	10	LEU
40	BF	14	LEU
40	BF	21	LEU
40	BF	25	ILE

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Mol	Chain	Res	Type
40	BF	31	GLU
40	BF	43	LEU
40	BF	57	GLN
40	BF	63	TYR
40	BF	65	VAL
40	BF	83	ASP
40	BF	86	ARG
40	BF	87	ARG
40	BF	92	LYS
40	BF	95	GLU
40	BF	98	LEU
41	BG	8	GLU
41	BG	9	VAL
41	BG	13	GLN
41	BG	21	VAL
41	BG	38	LEU
41	BG	77	SER
41	BG	78	ARG
41	BG	91	VAL
41	BG	111	ARG
41	BG	113	GLU
41	BG	144	MET
41	BG	146	GLU
42	BH	1	MET
42	BH	2	LEU
42	BH	14	ARG
42	BH	19	VAL
42	BH	26	VAL
42	BH	39	LEU
42	BH	52	ASP
42	BH	81	HIS
42	BH	83	ILE
42	BH	91	ARG
42	BH	109	ILE
42	BH	119	LEU
42	BH	127	LEU
43	BI	10	ARG
43	BI	47	LEU
43	BI	75	ASP
43	BI	91	ASP
43	BI	95	LYS
43	BI	114	TYR

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Mol	Chain	Res	Type
43	BI	120	ARG
43	BI	121	ARG
43	BI	128	ARG
44	BJ	16	LEU
44	BJ	22	LYS
44	BJ	40	LEU
44	BJ	48	THR
44	BJ	50	ILE
44	BJ	51	ARG
44	BJ	55	LYS
44	BJ	57	LYS
44	BJ	62	HIS
44	BJ	63	PHE
44	BJ	73	ASP
44	BJ	78	ASN
44	BJ	96	ILE
44	BJ	98	ILE
45	BK	29	ILE
45	BK	75	TYR
45	BK	81	ASP
45	BK	104	GLN
45	BK	112	THR
45	BK	114	VAL
45	BK	124	LYS
45	BK	126	ARG
46	BL	7	ILE
46	BL	16	GLU
46	BL	20	LYS
46	BL	24	VAL
46	BL	27	LEU
46	BL	41	ARG
46	BL	46	LYS
46	BL	47	LYS
46	BL	53	ARG
46	BL	55	VAL
46	BL	65	GLU
46	BL	67	THR
46	BL	80	HIS
46	BL	89	ARG
46	BL	92	ASP
46	BL	94	PRO
46	BL	122	THR

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Mol	Chain	Res	Type
47	BM	9	ILE
47	BM	56	LEU
47	BM	57	ARG
47	BM	64	TRP
47	BM	67	GLU
47	BM	70	LEU
47	BM	81	LEU
47	BM	90	LEU
47	BM	93	ARG
47	BM	98	VAL
47	BM	108	ARG
47	BM	115	LYS
47	BM	120	LYS
48	BN	12	ARG
48	BN	14	PRO
48	BN	18	VAL
48	BN	22	THR
48	BN	29	ARG
48	BN	33	VAL
48	BN	42	ILE
48	BN	46	GLU
48	BN	58	LYS
49	BO	3	ILE
49	BO	38	ARG
49	BO	39	LEU
49	BO	81	LEU
49	BO	82	ILE
49	BO	88	ARG
50	BP	20	VAL
50	BP	21	VAL
50	BP	33	ILE
50	BP	38	TYR
50	BP	58	TYR
50	BP	65	GLN
50	BP	67	THR
50	BP	82	GLN
51	BQ	7	THR
51	BQ	16	GLN
51	BQ	34	LYS
51	BQ	35	VAL
51	BQ	37	LYS
51	BQ	38	ARG

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Mol	Chain	Res	Type
51	BQ	52	LYS
51	BQ	64	PRO
51	BQ	74	LEU
52	BR	28	GLU
52	BR	31	LEU
52	BR	32	ARG
52	BR	36	ASN
52	BR	37	VAL
52	BR	54	ARG
52	BR	76	LEU
53	BS	5	LEU
53	BS	6	LYS
53	BS	7	LYS
53	BS	15	LEU
53	BS	27	GLU
53	BS	29	ARG
53	BS	37	ARG
53	BS	39	THR
53	BS	41	VAL
53	BS	44	MET
53	BS	58	VAL
53	BS	60	VAL
53	BS	63	THR
53	BS	65	ASN
54	BT	10	LEU
54	BT	23	ARG
54	BT	26	ASN
54	BT	30	LYS
54	BT	36	LEU
54	BT	45	GLN
54	BT	62	LEU
54	BT	100	ILE
55	BU	5	ASP
55	BU	18	TYR
59	BZ	20	VAL
59	BZ	80	VAL
59	BZ	85	HIS
59	BZ	88	TYR
59	BZ	100	ASP
59	BZ	116	THR
59	BZ	126	VAL
59	BZ	140	MET

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Mol	Chain	Res	Type
59	BZ	146	LEU
59	BZ	147	LEU
59	BZ	149	LEU
59	BZ	153	GLU
59	BZ	166	ASP
59	BZ	168	VAL
59	BZ	182	MET
59	BZ	212	THR
59	BZ	214	VAL
59	BZ	215	ARG
59	BZ	225	VAL
59	BZ	228	VAL
59	BZ	230	THR
59	BZ	244	ARG
59	BZ	247	VAL
59	BZ	253	VAL
59	BZ	262	THR
59	BZ	267	VAL
59	BZ	268	THR
59	BZ	271	GLU
59	BZ	277	LEU
59	BZ	279	GLU
59	BZ	288	LEU
59	BZ	298	VAL
59	BZ	310	ILE
59	BZ	311	THR
59	BZ	323	LEU
59	BZ	330	ARG
59	BZ	331	HIS
59	BZ	336	THR
59	BZ	349	VAL
59	BZ	360	GLU
59	BZ	363	MET
59	BZ	364	PRO
59	BZ	366	ASP
59	BZ	367	ASN
59	BZ	372	VAL
59	BZ	399	VAL
59	BZ	404	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (179) such sidechains are listed below:

Mol	Chain	Res	Type
1	A0	17	GLN
1	A0	40	GLN
1	A0	50	ASN
1	A0	70	GLN
2	A1	45	ASN
2	A1	47	GLN
3	A2	43	GLN
3	A2	56	GLN
4	A3	19	GLN
4	A3	46	ASN
4	A3	52	HIS
5	A4	20	ASN
5	A4	46	GLN
5	A4	47	GLN
6	A5	22	HIS
7	A6	29	ASN
8	A7	8	ASN
9	A8	43	GLN
10	A9	29	ASN
10	A9	32	HIS
13	AC	3	HIS
13	AC	57	ASN
13	AC	66	HIS
13	AC	139	ASN
14	AD	44	ASN
14	AD	58	HIS
14	AD	96	HIS
14	AD	115	GLN
14	AD	126	GLN
14	AD	166	GLN
14	AD	186	HIS
14	AD	198	ASN
14	AD	227	ASN
15	AE	35	GLN
15	AE	54	GLN
15	AE	55	ASN
15	AE	121	ASN
15	AE	129	HIS
15	AE	159	HIS
15	AE	169	ASN
15	AE	180	ASN
15	AE	192	ASN
16	AF	40	GLN

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Mol	Chain	Res	Type
16	AF	67	GLN
16	AF	69	HIS
16	AF	75	HIS
16	AF	133	ASN
16	AF	160	ASN
17	AG	40	ASN
17	AG	123	ASN
18	AH	65	HIS
18	AH	74	ASN
18	AH	143	GLN
18	AH	147	ASN
21	AN	45	ASN
21	AN	56	ASN
21	AN	101	HIS
21	AN	131	GLN
21	AN	133	GLN
22	AO	82	ASN
22	AO	89	ASN
23	AP	38	GLN
23	AP	70	GLN
23	AP	84	ASN
23	AP	128	HIS
24	AQ	12	GLN
24	AQ	141	GLN
25	AR	3	HIS
25	AR	13	HIS
25	AR	16	HIS
25	AR	23	ASN
25	AR	71	GLN
26	AS	34	HIS
26	AS	68	GLN
26	AS	95	HIS
27	AT	38	ASN
27	AT	43	GLN
27	AT	58	ASN
27	AT	79	HIS
28	AU	14	HIS
28	AU	49	HIS
28	AU	66	ASN
28	AU	81	HIS
28	AU	94	ASN
29	AV	11	GLN

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Mol	Chain	Res	Type
30	AW	34	ASN
30	AW	57	ASN
30	AW	102	HIS
30	AW	111	HIS
31	AX	31	HIS
31	AX	41	ASN
31	AX	55	ASN
31	AX	87	GLN
33	AZ	118	GLN
34	B2	7	ASN
34	B2	95	GLN
36	BB	37	ASN
36	BB	45	GLN
36	BB	76	GLN
36	BB	78	GLN
36	BB	146	GLN
36	BB	204	ASN
37	BC	28	GLN
37	BC	31	HIS
37	BC	69	HIS
37	BC	104	GLN
37	BC	107	GLN
37	BC	108	ASN
37	BC	118	GLN
37	BC	170	GLN
37	BC	176	HIS
38	BD	62	GLN
38	BD	74	GLN
38	BD	77	ASN
38	BD	129	ASN
38	BD	161	ASN
39	BE	20	GLN
39	BE	65	ASN
39	BE	73	ASN
39	BE	127	ASN
39	BE	141	GLN
40	BF	7	ASN
40	BF	13	ASN
40	BF	27	GLN
40	BF	32	ASN
40	BF	57	GLN
40	BF	64	GLN

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Mol	Chain	Res	Type
40	BF	73	ASN
40	BF	84	ASN
40	BF	100	ASN
41	BG	13	GLN
41	BG	28	ASN
41	BG	37	ASN
41	BG	68	ASN
41	BG	84	ASN
41	BG	106	GLN
42	BH	82	HIS
43	BI	29	ASN
43	BI	31	GLN
43	BI	87	GLN
43	BI	89	ASN
43	BI	124	GLN
44	BJ	56	HIS
44	BJ	68	HIS
44	BJ	76	ASN
44	BJ	78	ASN
45	BK	38	ASN
45	BK	93	GLN
45	BK	116	HIS
45	BK	117	ASN
46	BL	8	ASN
46	BL	9	GLN
46	BL	49	ASN
46	BL	75	HIS
47	BM	12	ASN
47	BM	40	ASN
47	BM	77	ASN
47	BM	92	HIS
48	BN	49	HIS
49	BO	13	GLN
49	BO	37	ASN
49	BO	46	HIS
49	BO	62	GLN
50	BP	76	GLN
51	BQ	16	GLN
51	BQ	26	GLN
53	BS	14	HIS
53	BS	47	HIS
54	BT	18	GLN

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Mol	Chain	Res	Type
54	BT	26	ASN
54	BT	42	GLN
59	BZ	11	HIS
59	BZ	19	HIS
59	BZ	98	GLN
59	BZ	159	ASN
59	BZ	183	HIS
59	BZ	185	ASN
59	BZ	285	ASN
59	BZ	302	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
11	AA	2900/2915 (99%)	539 (18%)	63 (2%)
12	AB	118/122 (96%)	27 (22%)	4 (3%)
35	BA	1503/1522 (98%)	249 (16%)	56 (3%)
56	BV	76/77 (98%)	12 (15%)	2 (2%)
56	BW	76/77 (98%)	11 (14%)	2 (2%)
57	BX	4/19 (21%)	1 (25%)	0
58	BY	60/90 (66%)	22 (36%)	13 (21%)
All	All	4737/4822 (98%)	861 (18%)	140 (2%)

All (861) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
11	AA	9	U
11	AA	10	G
11	AA	32	C
11	AA	34	C
11	AA	45	C
11	AA	49	A
11	AA	50	U
11	AA	71	A
11	AA	72	U
11	AA	74	A
11	AA	75	G
11	AA	83	G
11	AA	84	A
11	AA	88	G
11	AA	90	U

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Mol	Chain	Res	Type
11	AA	92	A
11	AA	94	C
11	AA	95	G
11	AA	100	G
11	AA	102	G
11	AA	118	A
11	AA	119	A
11	AA	120	U
11	AA	139(A)	G
11	AA	140	G
11	AA	146	G
11	AA	173	G
11	AA	174	C
11	AA	181	A
11	AA	196	A
11	AA	197	A
11	AA	199	A
11	AA	204	A
11	AA	205	G
11	AA	216	A
11	AA	221	A
11	AA	222	A
11	AA	228	A
11	AA	229	A
11	AA	230	U
11	AA	238	C
11	AA	248	G
11	AA	252	G
11	AA	261	G
11	AA	264	C
11	AA	265	A
11	AA	266	G
11	AA	271(K)	U
11	AA	271(L)	U
11	AA	271(M)	G
11	AA	271(N)	U
11	AA	271(O)	C
11	AA	271(P)	C
11	AA	271(R)	G
11	AA	272(A)	U
11	AA	272(B)	G
11	AA	272(I)	U

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Mol	Chain	Res	Type
11	AA	276	A
11	AA	278	A
11	AA	299	A
11	AA	311	A
11	AA	329	G
11	AA	330	A
11	AA	331	A
11	AA	332	A
11	AA	333	G
11	AA	352	G
11	AA	353	G
11	AA	358	U
11	AA	362	U
11	AA	363(D)	G
11	AA	363(E)	U
11	AA	363(F)	A
11	AA	364	C
11	AA	372	G
11	AA	386	G
11	AA	387	U
11	AA	388	G
11	AA	396	G
11	AA	405	U
11	AA	406	G
11	AA	411	G
11	AA	412	A
11	AA	418	G
11	AA	428	A
11	AA	444	C
11	AA	448	U
11	AA	454	A
11	AA	456	C
11	AA	457	A
11	AA	470	A
11	AA	473	G
11	AA	480	A
11	AA	481	G
11	AA	494	G
11	AA	505	A
11	AA	508	G
11	AA	509	C
11	AA	512	G

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Mol	Chain	Res	Type
11	AA	527	C
11	AA	528	A
11	AA	530	G
11	AA	531	C
11	AA	532	A
11	AA	533	G
11	AA	563	G
11	AA	573	G
11	AA	575	A
11	AA	586	A
11	AA	588	U
11	AA	603	A
11	AA	604	G
11	AA	607	U
11	AA	613	G
11	AA	614(B)	G
11	AA	615	G
11	AA	620	G
11	AA	622	G
11	AA	627	A
11	AA	629	G
11	AA	637	A
11	AA	645	C
11	AA	646	A
11	AA	651	G
11	AA	653	A
11	AA	654(I)	C
11	AA	654(J)	A
11	AA	654(K)	C
11	AA	654(M)	C
11	AA	654(O)	G
11	AA	656	G
11	AA	657	U
11	AA	686	G
11	AA	708	C
11	AA	717	G
11	AA	722	A
11	AA	730	C
11	AA	753	C
11	AA	764	A
11	AA	765	G
11	AA	776	G

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Mol	Chain	Res	Type
11	AA	782	A
11	AA	784	A
11	AA	785	G
11	AA	787	U
11	AA	790	C
11	AA	791	C
11	AA	792	G
11	AA	805	G
11	AA	812	C
11	AA	819	A
11	AA	827	U
11	AA	828	U
11	AA	830	G
11	AA	848	G
11	AA	857	C
11	AA	859	G
11	AA	866	A
11	AA	871	U
11	AA	878	A
11	AA	886	C
11	AA	887	A
11	AA	889	C
11	AA	890	A
11	AA	896	A
11	AA	897	C
11	AA	910	A
11	AA	917	A
11	AA	926	A
11	AA	932	G
11	AA	933	A
11	AA	941	A
11	AA	945	A
11	AA	946	G
11	AA	958	U
11	AA	959	A
11	AA	961	C
11	AA	965	C
11	AA	974	G
11	AA	975	C
11	AA	983	A
11	AA	996	A
11	AA	1011	G

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Mol	Chain	Res	Type
11	AA	1012	U
11	AA	1013	C
11	AA	1022	G
11	AA	1023	U
11	AA	1025	G
11	AA	1026	U
11	AA	1033	U
11	AA	1039	G
11	AA	1045	A
11	AA	1046	A
11	AA	1047	G
11	AA	1048	A
11	AA	1053	C
11	AA	1059	G
11	AA	1061	U
11	AA	1062	G
11	AA	1065	U
11	AA	1067	A
11	AA	1068	G
11	AA	1069	A
11	AA	1070	A
11	AA	1071	G
11	AA	1073	A
11	AA	1079	C
11	AA	1087	G
11	AA	1088	A
11	AA	1090	U
11	AA	1091	G
11	AA	1101	U
11	AA	1108	U
11	AA	1111	A
11	AA	1112	G
11	AA	1114	G
11	AA	1130	U
11	AA	1135	C
11	AA	1136	G
11	AA	1140	C
11	AA	1142	U
11	AA	1155	A
11	AA	1171	G
11	AA	1174	A
11	AA	1175	U

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Mol	Chain	Res	Type
11	AA	1176	G
11	AA	1178	C
11	AA	1195	G
11	AA	1210	A
11	AA	1211	U
11	AA	1223	G
11	AA	1224	C
11	AA	1247	A
11	AA	1248	G
11	AA	1253	A
11	AA	1256	G
11	AA	1265	A
11	AA	1271	G
11	AA	1272	A
11	AA	1273	U
11	AA	1300	U
11	AA	1301	A
11	AA	1302	A
11	AA	1314	C
11	AA	1321	A
11	AA	1332	G
11	AA	1349	A
11	AA	1359	A
11	AA	1365	A
11	AA	1378	A
11	AA	1379	A
11	AA	1380	G
11	AA	1384	A
11	AA	1385	G
11	AA	1396	U
11	AA	1407	C
11	AA	1416	G
11	AA	1417	C
11	AA	1419	A
11	AA	1421	G
11	AA	1427	A
11	AA	1428	C
11	AA	1445	A
11	AA	1449	A
11	AA	1450	G
11	AA	1455	G
11	AA	1460	A

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Mol	Chain	Res	Type
11	AA	1461	G
11	AA	1467	C
11	AA	1471	A
11	AA	1475	G
11	AA	1478	G
11	AA	1482	G
11	AA	1485	G
11	AA	1490	A
11	AA	1493	C
11	AA	1494	A
11	AA	1495	A
11	AA	1496	A
11	AA	1497	U
11	AA	1499	C
11	AA	1502	C
11	AA	1505	C
11	AA	1509	C
11	AA	1509(A)	A
11	AA	1512	U
11	AA	1517	G
11	AA	1520	G
11	AA	1528(A)	A
11	AA	1541	G
11	AA	1542	A
11	AA	1543	C
11	AA	1544	A
11	AA	1554	A
11	AA	1558	A
11	AA	1559	G
11	AA	1569	A
11	AA	1578	U
11	AA	1579	A
11	AA	1584	C
11	AA	1586	A
11	AA	1588	C
11	AA	1591	G
11	AA	1598	C
11	AA	1603	A
11	AA	1608	A
11	AA	1610	A
11	AA	1616	A
11	AA	1617	C

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Mol	Chain	Res	Type
11	AA	1618	A
11	AA	1640	C
11	AA	1648	C
11	AA	1654	A
11	AA	1674	G
11	AA	1698	A
11	AA	1700	A
11	AA	1703	G
11	AA	1718	G
11	AA	1721	G
11	AA	1722	A
11	AA	1739	U
11	AA	1740	G
11	AA	1744	C
11	AA	1748	G
11	AA	1763	G
11	AA	1764	G
11	AA	1773	A
11	AA	1780	A
11	AA	1791	A
11	AA	1799	G
11	AA	1800	C
11	AA	1801	G
11	AA	1816	G
11	AA	1820	U
11	AA	1821	A
11	AA	1835	G
11	AA	1838	C
11	AA	1839	G
11	AA	1847	A
11	AA	1858	G
11	AA	1865	G
11	AA	1877	A
11	AA	1878	G
11	AA	1881	C
11	AA	1882	C
11	AA	1885	A
11	AA	1888	G
11	AA	1889	A
11	AA	1900	A
11	AA	1906	G
11	AA	1912	A

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Mol	Chain	Res	Type
11	AA	1913	A
11	AA	1914	A
11	AA	1915	U
11	AA	1929	G
11	AA	1930	G
11	AA	1937	A
11	AA	1938	A
11	AA	1948	G
11	AA	1955	U
11	AA	1963	U
11	AA	1967	C
11	AA	1969	A
11	AA	1970	A
11	AA	1971	A
11	AA	1972	A
11	AA	1982	C
11	AA	1987	G
11	AA	1993	U
11	AA	1997	G
11	AA	2023	G
11	AA	2031	A
11	AA	2033	A
11	AA	2034	U
11	AA	2036	C
11	AA	2043	C
11	AA	2055	C
11	AA	2056	G
11	AA	2060	A
11	AA	2061	G
11	AA	2062	A
11	AA	2069	G
11	AA	2093	G
11	AA	2099	U
11	AA	2100	G
11	AA	2102	U
11	AA	2104	G
11	AA	2107	C
11	AA	2110	G
11	AA	2111	C
11	AA	2112	G
11	AA	2116	G
11	AA	2118	U

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Mol	Chain	Res	Type
11	AA	2119	A
11	AA	2127	G
11	AA	2129	C
11	AA	2131	G
11	AA	2132	U
11	AA	2133	G
11	AA	2145	C
11	AA	2146	C
11	AA	2147	G
11	AA	2157	G
11	AA	2172	U
11	AA	2173	A
11	AA	2174	C
11	AA	2176	A
11	AA	2179	C
11	AA	2180	U
11	AA	2185	C
11	AA	2186	G
11	AA	2187	G
11	AA	2189	U
11	AA	2190	G
11	AA	2192	G
11	AA	2193	G
11	AA	2198	A
11	AA	2199	A
11	AA	2200	C
11	AA	2206	G
11	AA	2207	G
11	AA	2208	A
11	AA	2218	U
11	AA	2219	G
11	AA	2225	A
11	AA	2238	G
11	AA	2251	G
11	AA	2268	A
11	AA	2275	C
11	AA	2283	C
11	AA	2287	A
11	AA	2288	A
11	AA	2289	G
11	AA	2305	A
11	AA	2307	G

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Mol	Chain	Res	Type
11	AA	2308	G
11	AA	2309	A
11	AA	2310	A
11	AA	2313	C
11	AA	2319	G
11	AA	2320	A
11	AA	2334	G
11	AA	2336	A
11	AA	2342	C
11	AA	2347	C
11	AA	2350	C
11	AA	2361	A
11	AA	2383	G
11	AA	2385	C
11	AA	2392	A
11	AA	2400	G
11	AA	2402	C
11	AA	2406	U
11	AA	2423	U
11	AA	2425	A
11	AA	2429	G
11	AA	2430	A
11	AA	2439	A
11	AA	2441	C
11	AA	2448	A
11	AA	2465	C
11	AA	2468	G
11	AA	2469	A
11	AA	2470	G
11	AA	2476	A
11	AA	2477	C
11	AA	2478	A
11	AA	2482	G
11	AA	2484	G
11	AA	2494	G
11	AA	2502	G
11	AA	2505	G
11	AA	2518	A
11	AA	2524	G
11	AA	2529	G
11	AA	2543	G
11	AA	2554	U

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Mol	Chain	Res	Type
11	AA	2566	A
11	AA	2567	G
11	AA	2572	A
11	AA	2573	C
11	AA	2581	G
11	AA	2582	G
11	AA	2585	U
11	AA	2586	C
11	AA	2602	A
11	AA	2611	U
11	AA	2612	C
11	AA	2615	U
11	AA	2630	G
11	AA	2646	C
11	AA	2657	A
11	AA	2658	C
11	AA	2670	A
11	AA	2673	G
11	AA	2690	C
11	AA	2691	C
11	AA	2702	U
11	AA	2703	C
11	AA	2712	U
11	AA	2712(A)	A
11	AA	2713	A
11	AA	2720	U
11	AA	2726	U
11	AA	2733	A
11	AA	2750	A
11	AA	2751	G
11	AA	2752	C
11	AA	2756	U
11	AA	2757	A
11	AA	2759	G
11	AA	2762	G
11	AA	2765	A
11	AA	2766	G
11	AA	2770	G
11	AA	2778	A
11	AA	2779	U
11	AA	2780	G
11	AA	2781	A

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Mol	Chain	Res	Type
11	AA	2787	C
11	AA	2789	C
11	AA	2790	A
11	AA	2791	C
11	AA	2794	C
11	AA	2799	C
11	AA	2802	G
11	AA	2803	C
11	AA	2808	U
11	AA	2820	A
11	AA	2821	A
11	AA	2833	G
11	AA	2835	A
11	AA	2849	U
11	AA	2872	G
11	AA	2873	A
11	AA	2874	C
11	AA	2876	G
11	AA	2893	G
11	AA	2894	G
12	AB	8	U
12	AB	13	A
12	AB	15	A
12	AB	16	G
12	AB	17	C
12	AB	19	G
12	AB	21	G
12	AB	25	A
12	AB	26	A
12	AB	32	C
12	AB	35	U
12	AB	41	U
12	AB	42	C
12	AB	43	C
12	AB	45	A
12	AB	53	A
12	AB	57	A
12	AB	66	A
12	AB	67	G
12	AB	68	C
12	AB	73	A
12	AB	81	G

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Mol	Chain	Res	Type
12	AB	82	G
12	AB	88	C
12	AB	91	C
12	AB	106	G
12	AB	110	G
35	BA	8	A
35	BA	9	G
35	BA	31	G
35	BA	32	A
35	BA	39	G
35	BA	47	C
35	BA	48	C
35	BA	51	A
35	BA	54	C
35	BA	55	A
35	BA	60	A
35	BA	61	G
35	BA	65	U
35	BA	79	G
35	BA	80	G
35	BA	81	U
35	BA	84	U
35	BA	90	U
35	BA	110	C
35	BA	116	A
35	BA	120	A
35	BA	121	C
35	BA	131	C
35	BA	144	G
35	BA	147	G
35	BA	163	C
35	BA	189(H)	G
35	BA	189(I)	G
35	BA	195	A
35	BA	197	A
35	BA	198	G
35	BA	199	G
35	BA	201	C
35	BA	203	U
35	BA	216	G
35	BA	217	C
35	BA	220	G

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Mol	Chain	Res	Type
35	BA	244	U
35	BA	246	A
35	BA	247	G
35	BA	251	G
35	BA	267	C
35	BA	274	A
35	BA	275	G
35	BA	289	G
35	BA	316	G
35	BA	321	A
35	BA	328	C
35	BA	330	C
35	BA	332	G
35	BA	344	A
35	BA	345	C
35	BA	346	G
35	BA	347	G
35	BA	348	G
35	BA	352	C
35	BA	353	A
35	BA	354	G
35	BA	367	U
35	BA	369	C
35	BA	370	C
35	BA	372	C
35	BA	373	A
35	BA	397	A
35	BA	398	C
35	BA	412	A
35	BA	413	G
35	BA	414	A
35	BA	422	C
35	BA	428	G
35	BA	429	U
35	BA	430	A
35	BA	435	C
35	BA	439	A
35	BA	452	A
35	BA	453	A
35	BA	454	C
35	BA	471	G
35	BA	484	G

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Mol	Chain	Res	Type
35	BA	485	G
35	BA	496	A
35	BA	498	U
35	BA	499	A
35	BA	500	G
35	BA	508	C
35	BA	509	A
35	BA	511	C
35	BA	512	U
35	BA	518	C
35	BA	527	G
35	BA	531	U
35	BA	532	A
35	BA	533	A
35	BA	548	G
35	BA	559	A
35	BA	561	U
35	BA	562	C
35	BA	572	A
35	BA	573	A
35	BA	575	G
35	BA	576	G
35	BA	577	G
35	BA	607	A
35	BA	631	G
35	BA	632	A
35	BA	633	G
35	BA	650	G
35	BA	653	A
35	BA	665	A
35	BA	673	G
35	BA	687	A
35	BA	688	G
35	BA	701	C
35	BA	702	A
35	BA	722	A
35	BA	723	U
35	BA	731	G
35	BA	748	C
35	BA	749	C
35	BA	755	G
35	BA	777	A

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Mol	Chain	Res	Type
35	BA	793	U
35	BA	794	A
35	BA	816	A
35	BA	817	C
35	BA	828	A
35	BA	839	U
35	BA	840	C
35	BA	841	U
35	BA	848	C
35	BA	858	G
35	BA	859	A
35	BA	864	A
35	BA	889	A
35	BA	890	G
35	BA	902	G
35	BA	914	A
35	BA	926	G
35	BA	927	G
35	BA	934	C
35	BA	935	A
35	BA	960	U
35	BA	962	C
35	BA	966	G
35	BA	967	C
35	BA	968	A
35	BA	969	A
35	BA	971	G
35	BA	972	C
35	BA	974	A
35	BA	975	A
35	BA	976	G
35	BA	977	A
35	BA	978	A
35	BA	980	C
35	BA	982	U
35	BA	983	A
35	BA	984	C
35	BA	991	U
35	BA	992	U
35	BA	993	G
35	BA	996	A
35	BA	1009	G

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Mol	Chain	Res	Type
35	BA	1026	G
35	BA	1050	G
35	BA	1051	C
35	BA	1054	C
35	BA	1066	C
35	BA	1094	G
35	BA	1095	U
35	BA	1101	A
35	BA	1102	A
35	BA	1108	G
35	BA	1117	G
35	BA	1124	G
35	BA	1125	U
35	BA	1126	U
35	BA	1129	C
35	BA	1130	A
35	BA	1131	G
35	BA	1136	U
35	BA	1137	C
35	BA	1139	G
35	BA	1140	C
35	BA	1141	C
35	BA	1145	C
35	BA	1146	A
35	BA	1152	A
35	BA	1158	C
35	BA	1159	U
35	BA	1184	G
35	BA	1196	U
35	BA	1199	U
35	BA	1200	C
35	BA	1201	A
35	BA	1212	U
35	BA	1238	A
35	BA	1240	U
35	BA	1241	G
35	BA	1249	C
35	BA	1255	G
35	BA	1256	A
35	BA	1257	U
35	BA	1258	G
35	BA	1278	U

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Mol	Chain	Res	Type
35	BA	1280	A
35	BA	1281	U
35	BA	1284	C
35	BA	1285	A
35	BA	1286	A
35	BA	1287	A
35	BA	1299	A
35	BA	1300	G
35	BA	1301	U
35	BA	1302	U
35	BA	1306	A
35	BA	1317	C
35	BA	1320	C
35	BA	1322	C
35	BA	1323	G
35	BA	1331	G
35	BA	1332	A
35	BA	1335	C
35	BA	1346	A
35	BA	1347	G
35	BA	1364	U
35	BA	1400	C
35	BA	1419	G
35	BA	1422	G
35	BA	1442	G
35	BA	1442(B)	A
35	BA	1443	G
35	BA	1447	A
35	BA	1456	G
35	BA	1492	A
35	BA	1493	A
35	BA	1494	G
35	BA	1497	G
35	BA	1499	A
35	BA	1504	G
35	BA	1505	G
35	BA	1506	U
35	BA	1507	A
35	BA	1517	G
35	BA	1519	A
35	BA	1520	G
35	BA	1529	G

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Mol	Chain	Res	Type
35	BA	1530	G
35	BA	1531	A
56	BV	5	G
56	BV	8	U
56	BV	18	U
56	BV	19	G
56	BV	20	G
56	BV	21	U
56	BV	22	A
56	BV	48	U
56	BV	49	C
56	BV	74	A
56	BV	76	C
56	BV	77	A
56	BW	5	G
56	BW	8	U
56	BW	18	U
56	BW	19	G
56	BW	20	G
56	BW	21	U
56	BW	22	A
56	BW	48	U
56	BW	49	C
56	BW	56	U
56	BW	57	C
57	BX	18	U
58	BY	8	A
58	BY	9	A
58	BY	10	A
58	BY	11	C
58	BY	12	G
58	BY	13	G
58	BY	14	U
58	BY	15	C
58	BY	17	C
58	BY	19	A
58	BY	23	G
58	BY	24	G
58	BY	54	C
58	BY	60	A
58	BY	61	C
58	BY	62	G

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Mol	Chain	Res	Type
58	BY	68	U
58	BY	71	A
58	BY	73	U
58	BY	76	C
58	BY	85	C
58	BY	88	C

All (140) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
11	AA	49	A
11	AA	71	A
11	AA	74	A
11	AA	199	A
11	AA	221	A
11	AA	331	A
11	AA	332	A
11	AA	363(E)	U
11	AA	363(F)	A
11	AA	387	U
11	AA	479	A
11	AA	529	A
11	AA	587	C
11	AA	603	A
11	AA	614(C)	A
11	AA	685	A
11	AA	752	A
11	AA	764	A
11	AA	790	C
11	AA	856	C
11	AA	889	C
11	AA	974	G
11	AA	1052	C
11	AA	1060	U
11	AA	1068	G
11	AA	1069	A
11	AA	1173	G
11	AA	1210	A
11	AA	1223	G
11	AA	1300	U
11	AA	1301	A
11	AA	1378	A

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Mol	Chain	Res	Type
11	AA	1427	A
11	AA	1490	A
11	AA	1541	G
11	AA	1558	A
11	AA	1653	G
11	AA	1799	G
11	AA	1819	A
11	AA	1820	U
11	AA	1899	G
11	AA	1913	A
11	AA	1914	A
11	AA	1970	A
11	AA	1992	G
11	AA	2031	A
11	AA	2033	A
11	AA	2126	A
11	AA	2131	G
11	AA	2179	C
11	AA	2282	G
11	AA	2318	G
11	AA	2346	A
11	AA	2360	A
11	AA	2405	G
11	AA	2422	A
11	AA	2464	C
11	AA	2481	G
11	AA	2581	G
11	AA	2610	C
11	AA	2689	U
11	AA	2756	U
11	AA	2873	A
12	AB	16	G
12	AB	34	U
12	AB	42	C
12	AB	56	G
35	BA	7	G
35	BA	30	U
35	BA	60	A
35	BA	79	G
35	BA	109	A
35	BA	115	G
35	BA	119	A

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Mol	Chain	Res	Type
35	BA	197	A
35	BA	202	U
35	BA	243	A
35	BA	250	A
35	BA	266	G
35	BA	274	A
35	BA	344	A
35	BA	351	G
35	BA	412	A
35	BA	428	G
35	BA	429	U
35	BA	453	A
35	BA	484	G
35	BA	495	A
35	BA	508	C
35	BA	547	A
35	BA	560	U
35	BA	575	G
35	BA	687	A
35	BA	748	C
35	BA	792	A
35	BA	793	U
35	BA	889	A
35	BA	966	G
35	BA	968	A
35	BA	982	U
35	BA	983	A
35	BA	992	U
35	BA	1049	U
35	BA	1050	G
35	BA	1053	G
35	BA	1065	U
35	BA	1101	A
35	BA	1139	G
35	BA	1145	C
35	BA	1157	A
35	BA	1190	G
35	BA	1200	C
35	BA	1239	A
35	BA	1280	A
35	BA	1285	A
35	BA	1305	G

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Mol	Chain	Res	Type
35	BA	1319	A
35	BA	1399	C
35	BA	1442(A)	G
35	BA	1492	A
35	BA	1493	A
35	BA	1498	U
35	BA	1504	G
56	BV	4	G
56	BV	18	U
56	BW	18	U
56	BW	20	G
58	BY	9	A
58	BY	10	A
58	BY	11	C
58	BY	12	G
58	BY	13	G
58	BY	14	U
58	BY	18	G
58	BY	23	G
58	BY	40	C
58	BY	59	G
58	BY	60	A
58	BY	61	C
58	BY	72	C

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 7 ligands modelled in this entry, 5 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond

length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
63	GDP	BZ	1003	61	29,30,30	1.10	3 (10%)	45,47,47	1.65	7 (15%)
62	KIR	BZ	1002	-	56,59,59	3.52	18 (32%)	60,84,84	1.68	15 (25%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
63	GDP	BZ	1003	61	-	2/16/32/32	0/3/3/3
62	KIR	BZ	1002	-	-	8/54/98/98	0/3/3/3

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	BZ	1002	KIR	O18-C17	-13.82	1.24	1.44
62	BZ	1002	KIR	O30-C30	-13.24	1.16	1.42
62	BZ	1002	KIR	O34-C33	-9.57	1.28	1.44
62	BZ	1002	KIR	C45-C28	4.75	1.61	1.53
62	BZ	1002	KIR	C3-C4	4.67	1.50	1.41
62	BZ	1002	KIR	C8-C7	4.05	1.57	1.48
62	BZ	1002	KIR	C27-N26	3.98	1.43	1.33
62	BZ	1002	KIR	C41-C8	3.87	1.60	1.50
62	BZ	1002	KIR	C19-C17	3.71	1.63	1.54
62	BZ	1002	KIR	C22-C21	3.66	1.37	1.33
62	BZ	1002	KIR	O2-C2	3.54	1.30	1.23
62	BZ	1002	KIR	O29-C29	3.20	1.46	1.40
62	BZ	1002	KIR	O7-C7	3.11	1.30	1.23
62	BZ	1002	KIR	C9-C8	2.98	1.42	1.34
62	BZ	1002	KIR	C6-C5	2.85	1.41	1.35
62	BZ	1002	KIR	C5-C4	2.68	1.48	1.42
62	BZ	1002	KIR	C42-C19	2.49	1.58	1.53
62	BZ	1002	KIR	C44-C21	2.27	1.54	1.50
63	BZ	1003	GDP	C5-N7	-2.23	1.34	1.39
63	BZ	1003	GDP	C4-N9	-2.10	1.32	1.38
63	BZ	1003	GDP	C8-N9	-2.06	1.32	1.37

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	BZ	1002	KIR	O29-C29-O34	-5.77	100.64	110.15
63	BZ	1003	GDP	C2-N3-C4	5.06	121.02	112.30
63	BZ	1003	GDP	C5-C4-N3	-5.02	120.41	128.39
62	BZ	1002	KIR	C3-C2-N1	4.41	122.86	114.65
62	BZ	1002	KIR	O34-C29-C28	3.88	114.55	104.55
63	BZ	1003	GDP	C2-N1-C6	-3.23	119.25	125.11
63	BZ	1003	GDP	N9-C4-N3	3.05	132.05	125.95
62	BZ	1002	KIR	C22-C23-C24	-2.65	117.42	123.63
62	BZ	1002	KIR	C15-C16-C17	2.62	106.07	102.35
62	BZ	1002	KIR	C11-C10-C9	-2.42	118.57	123.52
62	BZ	1002	KIR	O20-C20-C21	-2.39	107.36	111.52
63	BZ	1003	GDP	C4-C5-N7	-2.34	106.96	110.67
62	BZ	1002	KIR	C48-C32-C31	2.29	113.44	109.28
62	BZ	1002	KIR	C12-C11-C10	-2.27	119.47	124.72
62	BZ	1002	KIR	C29-C30-C31	-2.20	107.84	110.80
62	BZ	1002	KIR	O2-C2-C3	-2.18	119.14	125.69
62	BZ	1002	KIR	C48-C32-C47	-2.18	104.73	107.70
62	BZ	1002	KIR	O7-C7-C3	-2.16	112.68	121.87
62	BZ	1002	KIR	O27-C27-C28	-2.09	118.12	122.10
63	BZ	1003	GDP	C5-C6-N1	2.08	118.56	113.25
63	BZ	1003	GDP	O6-C6-C5	-2.06	121.09	126.53
62	BZ	1002	KIR	C14-C13-C12	-2.05	121.73	125.88

There are no chirality outliers.

All (10) torsion outliers are listed below:

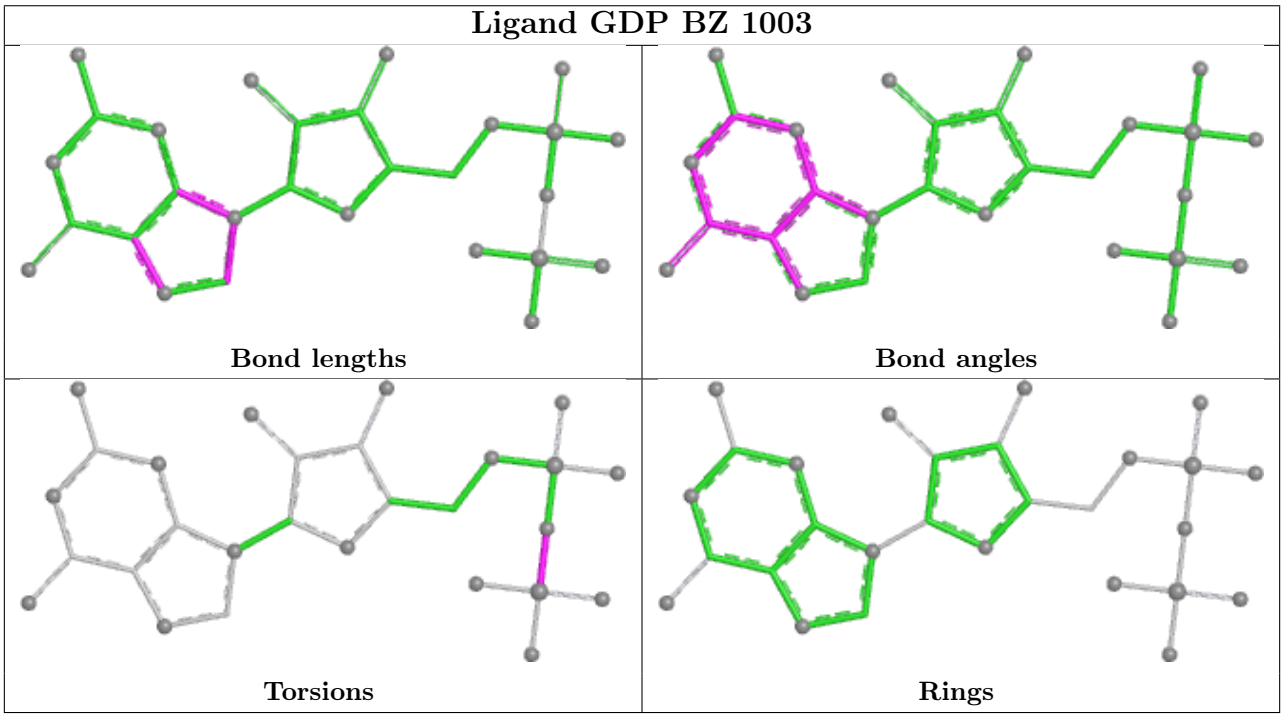
Mol	Chain	Res	Type	Atoms
62	BZ	1002	KIR	C12-C13-C14-O18
62	BZ	1002	KIR	C16-C17-C19-C20
62	BZ	1002	KIR	C16-C17-C19-C42
62	BZ	1002	KIR	O18-C17-C19-C20
62	BZ	1002	KIR	O18-C17-C19-C42
63	BZ	1003	GDP	PA-O3A-PB-O2B
63	BZ	1003	GDP	PA-O3A-PB-O3B
62	BZ	1002	KIR	C11-C10-C9-C8
62	BZ	1002	KIR	C36-C37-C38-C39
62	BZ	1002	KIR	C12-C13-C14-C15

There are no ring outliers.

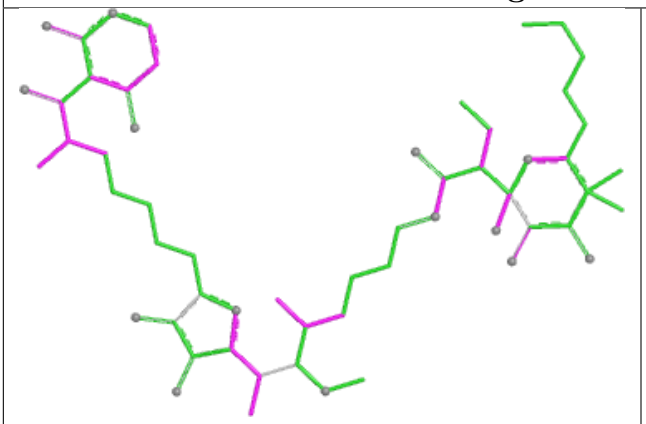
2 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
63	BZ	1003	GDP	3	0
62	BZ	1002	KIR	7	0

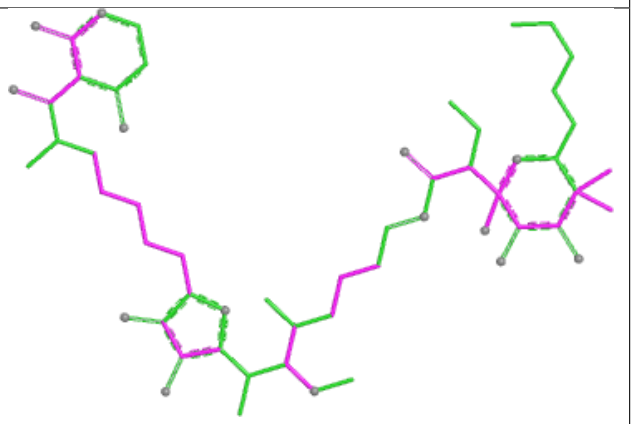
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.



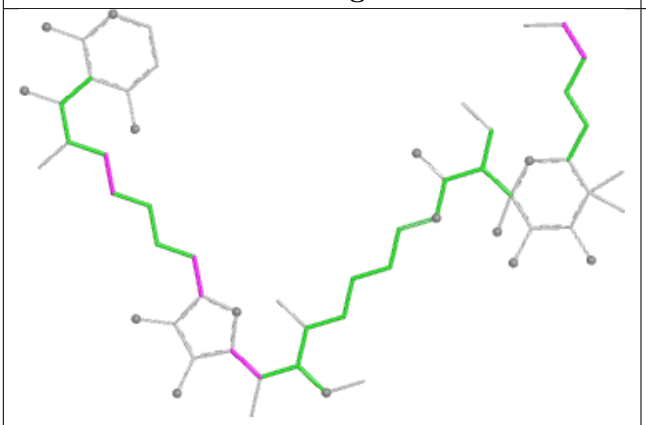
Ligand KIR BZ 1002



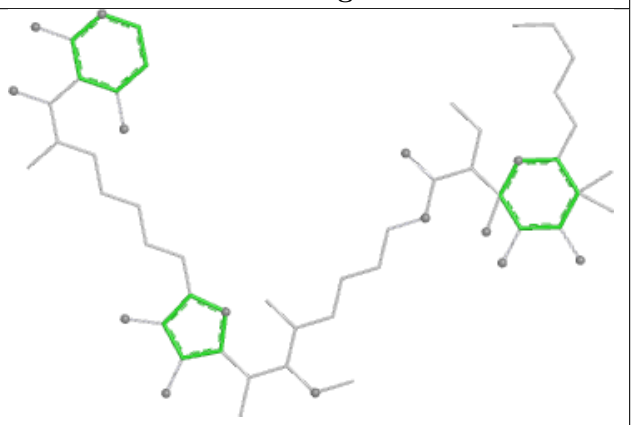
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A0	84/85 (98%)	1.04	15 (17%) 3 1	25, 44, 110, 136	0
2	A1	94/98 (95%)	0.67	9 (9%) 13 7	23, 43, 88, 95	0
3	A2	71/72 (98%)	0.90	9 (12%) 8 4	34, 61, 88, 98	0
4	A3	60/60 (100%)	0.23	4 (6%) 24 13	21, 36, 55, 87	0
5	A4	45/71 (63%)	2.14	22 (48%) 0 0	98, 118, 132, 138	0
6	A5	59/60 (98%)	0.94	14 (23%) 2 1	14, 39, 121, 137	0
7	A6	50/54 (92%)	2.25	27 (54%) 0 0	31, 61, 79, 82	0
8	A7	49/49 (100%)	0.05	3 (6%) 27 15	14, 24, 77, 93	0
9	A8	64/65 (98%)	1.04	13 (20%) 3 1	21, 40, 55, 83	0
10	A9	37/37 (100%)	1.18	8 (21%) 2 1	33, 49, 68, 72	0
11	AA	2901/2915 (99%)	0.23	279 (9%) 13 7	8, 36, 159, 189	0
12	AB	119/122 (97%)	0.97	18 (15%) 5 3	26, 77, 104, 137	0
13	AC	228/229 (99%)	3.73	205 (89%) 0 0	131, 151, 164, 168	0
14	AD	275/276 (99%)	0.09	16 (5%) 29 16	8, 27, 53, 87	0
15	AE	205/206 (99%)	0.50	26 (12%) 8 4	10, 29, 75, 88	0
16	AF	208/210 (99%)	0.60	22 (10%) 11 6	11, 49, 116, 129	0
17	AG	181/182 (99%)	1.70	53 (29%) 1 1	55, 86, 112, 132	0
18	AH	160/180 (88%)	1.80	64 (40%) 1 0	39, 83, 124, 134	0
19	AJ	0/130	-	-	-	-
20	AK	0/140	-	-	-	-
21	AN	139/140 (99%)	0.59	16 (11%) 9 5	17, 37, 86, 94	0
22	AO	122/122 (100%)	-0.09	2 (1%) 70 49	15, 31, 49, 66	0
23	AP	146/150 (97%)	1.60	46 (31%) 1 1	18, 60, 93, 119	0
24	AQ	141/141 (100%)	0.34	6 (4%) 40 22	22, 32, 57, 106	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	AR	117/118 (99%)	0.29	9 (7%) 19 10	19, 31, 54, 67	0
26	AS	99/112 (88%)	1.87	37 (37%) 1 0	53, 76, 107, 109	0
27	AT	138/146 (94%)	0.88	24 (17%) 4 2	15, 48, 124, 143	0
28	AU	117/118 (99%)	0.44	10 (8%) 16 9	15, 30, 57, 97	0
29	AV	101/101 (100%)	1.04	15 (14%) 5 3	9, 56, 76, 82	0
30	AW	113/113 (100%)	0.06	3 (2%) 56 35	12, 29, 61, 106	0
31	AX	93/96 (96%)	0.47	5 (5%) 31 17	22, 41, 61, 75	0
32	AY	101/110 (91%)	2.17	47 (46%) 0 0	25, 56, 108, 128	0
33	AZ	184/206 (89%)	1.38	49 (26%) 1 1	28, 63, 98, 115	0
34	B2	144/144 (100%)	1.48	40 (27%) 1 1	49, 78, 118, 124	0
35	BA	1504/1522 (98%)	0.56	132 (8%) 15 9	14, 52, 128, 187	0
36	BB	235/256 (91%)	0.84	42 (17%) 3 1	27, 51, 114, 128	0
37	BC	207/239 (86%)	0.56	4 (1%) 66 45	36, 59, 86, 96	0
38	BD	208/209 (99%)	1.61	63 (30%) 1 1	47, 74, 111, 116	0
39	BE	151/162 (93%)	0.13	3 (1%) 65 44	23, 40, 70, 92	0
40	BF	101/101 (100%)	0.47	4 (3%) 42 23	33, 56, 71, 95	0
41	BG	155/156 (99%)	1.22	20 (12%) 7 4	52, 75, 107, 129	0
42	BH	138/138 (100%)	0.02	1 (0%) 84 68	17, 36, 54, 67	0
43	BI	127/128 (99%)	1.56	34 (26%) 1 1	46, 82, 107, 111	0
44	BJ	99/105 (94%)	2.07	44 (44%) 0 0	42, 82, 119, 122	0
45	BK	119/129 (92%)	0.68	11 (9%) 14 8	26, 56, 90, 107	0
46	BL	125/135 (92%)	0.75	14 (11%) 10 5	24, 50, 69, 112	0
47	BM	125/126 (99%)	1.36	22 (17%) 4 2	42, 80, 107, 139	0
48	BN	60/61 (98%)	1.02	7 (11%) 9 5	38, 48, 70, 77	0
49	BO	88/89 (98%)	0.22	2 (2%) 61 39	22, 41, 64, 69	0
50	BP	84/88 (95%)	0.90	3 (3%) 46 26	39, 58, 77, 102	0
51	BQ	100/105 (95%)	0.27	0 100 100	27, 47, 68, 73	0
52	BR	70/88 (79%)	0.23	0 100 100	28, 46, 71, 79	0
53	BS	79/93 (84%)	1.67	16 (20%) 3 1	55, 73, 101, 111	0
54	BT	99/106 (93%)	1.28	18 (18%) 3 1	46, 65, 101, 104	0
55	BU	25/27 (92%)	1.72	10 (40%) 1 0	52, 65, 83, 84	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
56	BV	77/77 (100%)	0.58	4 (5%) 33 17	36, 57, 97, 104	0
56	BW	77/77 (100%)	3.38	73 (94%) 0 0	95, 192, 197, 199	0
57	BX	5/19 (26%)	1.15	2 (40%) 1 0	34, 36, 69, 80	0
58	BY	62/90 (68%)	1.13	13 (20%) 2 1	55, 85, 125, 135	0
59	BZ	378/405 (93%)	0.56	28 (7%) 20 11	23, 56, 92, 124	0
All	All	11143/11789 (94%)	0.74	1686 (15%) 5 3	8, 50, 137, 199	0

All (1686) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
53	BS	82	GLY	15.2
35	BA	89	C	12.6
53	BS	81	ARG	10.5
48	BN	2	ALA	9.5
41	BG	81	GLY	9.4
11	AA	2182	G	9.4
32	AY	51	VAL	9.2
29	AV	36	PRO	9.2
33	AZ	114	GLY	8.8
13	AC	72	VAL	8.8
26	AS	54	LEU	8.7
32	AY	52	SER	8.4
13	AC	189	ILE	8.3
11	AA	2103	C	8.0
11	AA	2134	A	7.9
13	AC	77	ILE	7.9
11	AA	2123	G	7.8
44	BJ	83	GLU	7.8
18	AH	171	LEU	7.7
54	BT	9	ASN	7.6
7	A6	54	ILE	7.6
1	A0	4	LYS	7.6
24	AQ	141	GLN	7.5
11	AA	2158	A	7.5
13	AC	218	MET	7.4
13	AC	130	ILE	7.4
11	AA	2183	C	7.4
56	BW	77	A	7.4
32	AY	28	LYS	7.3
7	A6	42	TRP	7.3

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Mol	Chain	Res	Type	RSRZ
11	AA	2102	U	7.2
35	BA	88	A	7.2
11	AA	2181	G	7.2
24	AQ	140	ALA	7.1
11	AA	2101	G	7.1
13	AC	161	ILE	7.1
32	AY	58	GLY	7.0
11	AA	2135	A	7.0
13	AC	58	VAL	7.0
13	AC	109	ASP	7.0
32	AY	59	GLY	6.9
10	A9	1	MET	6.9
11	AA	2166	G	6.9
18	AH	170	ARG	6.9
11	AA	887	A	6.9
13	AC	2	LYS	6.8
18	AH	169	VAL	6.8
13	AC	170	ALA	6.8
13	AC	171	ILE	6.8
13	AC	172	HIS	6.8
13	AC	143	GLY	6.8
11	AA	2177	C	6.8
13	AC	196	LEU	6.7
1	A0	2	ALA	6.7
13	AC	113	VAL	6.7
9	A8	65	GLU	6.7
13	AC	9	ALA	6.7
1	A0	3	HIS	6.7
13	AC	226	PRO	6.6
53	BS	10	PHE	6.6
47	BM	124	PRO	6.6
13	AC	169	GLY	6.5
17	AG	122	PRO	6.5
35	BA	81	U	6.5
11	AA	2160	G	6.5
11	AA	654(V)	A	6.4
11	AA	2802	G	6.3
13	AC	193	ILE	6.3
11	AA	2133	G	6.2
17	AG	28	VAL	6.2
11	AA	2174	C	6.2
6	A5	58	LEU	6.2

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Mol	Chain	Res	Type	RSRZ
13	AC	168	THR	6.2
36	BB	7	VAL	6.2
13	AC	173	ALA	6.1
11	AA	2144	U	6.1
13	AC	214	VAL	6.1
13	AC	111	ASP	6.1
13	AC	127	MET	6.1
28	AU	118	GLY	6.1
35	BA	80	G	6.1
23	AP	7	ARG	6.1
11	AA	1094	U	6.1
11	AA	654(H)	G	6.1
11	AA	2159	G	6.1
17	AG	50	ALA	6.1
11	AA	654(U)	A	6.0
33	AZ	165	VAL	6.0
44	BJ	81	THR	6.0
13	AC	227	HIS	6.0
13	AC	74	VAL	6.0
13	AC	144	THR	5.9
56	BW	35	C	5.9
11	AA	1026	U	5.9
6	A5	2	ALA	5.9
11	AA	2100	G	5.8
13	AC	116	THR	5.8
16	AF	208	GLY	5.8
11	AA	2122	U	5.8
13	AC	47	LEU	5.8
13	AC	212	VAL	5.8
11	AA	1066	U	5.7
44	BJ	85	LEU	5.7
13	AC	114	VAL	5.7
13	AC	174	PRO	5.6
35	BA	1030	C	5.6
35	BA	1129	C	5.6
13	AC	136	LEU	5.6
7	A6	26	ASN	5.6
13	AC	123	VAL	5.6
23	AP	30	THR	5.6
32	AY	53	PRO	5.5
11	AA	1065	U	5.5
34	B2	95	GLN	5.5

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Mol	Chain	Res	Type	RSRZ
41	BG	38	LEU	5.5
11	AA	2121	G	5.5
11	AA	2145	C	5.5
13	AC	115	ALA	5.5
23	AP	27	HIS	5.5
11	AA	2168	G	5.5
26	AS	53	SER	5.4
32	AY	60	PHE	5.4
26	AS	55	ALA	5.4
54	BT	11	SER	5.4
41	BG	85	TYR	5.4
32	AY	56	PRO	5.4
11	AA	2156	G	5.4
11	AA	654(G)	C	5.4
11	AA	654(K)	C	5.4
41	BG	82	GLY	5.4
35	BA	1031	G	5.4
13	AC	6	ARG	5.4
13	AC	5	LYS	5.4
11	AA	2175	C	5.3
44	BJ	82	ILE	5.3
13	AC	107	TRP	5.3
56	BW	39	A	5.3
17	AG	2	PRO	5.3
11	AA	654(F)	C	5.2
11	AA	2894	G	5.2
38	BD	21	LEU	5.2
13	AC	165	ASN	5.1
11	AA	2152	G	5.1
11	AA	2170	A	5.1
13	AC	156	ILE	5.1
43	BI	67	GLY	5.1
9	A8	64	TYR	5.1
13	AC	62	VAL	5.1
53	BS	80	TYR	5.1
13	AC	220	PRO	5.1
11	AA	2120	G	5.1
13	AC	49	ILE	5.1
11	AA	2169	A	5.1
11	AA	2178	C	5.1
47	BM	125	ARG	5.1
47	BM	123	ALA	5.0

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Mol	Chain	Res	Type	RSRZ
35	BA	90	U	5.0
13	AC	166	ASP	5.0
33	AZ	115	GLY	5.0
43	BI	4	TYR	5.0
44	BJ	55	LYS	5.0
32	AY	49	VAL	5.0
13	AC	34	THR	5.0
18	AH	52	VAL	5.0
11	AA	274	G	5.0
38	BD	22	LYS	5.0
11	AA	2114	A	5.0
11	AA	654(E)	G	4.9
11	AA	2131	G	4.9
13	AC	192	PHE	4.9
38	BD	20	TYR	4.9
56	BW	36	A	4.9
11	AA	2157	G	4.9
13	AC	100	ILE	4.9
54	BT	73	HIS	4.9
11	AA	1535	A	4.9
11	AA	2801(A)	A	4.9
11	AA	2190	G	4.9
17	AG	46	ALA	4.9
13	AC	122	ALA	4.9
11	AA	276	A	4.9
11	AA	2139	C	4.9
29	AV	48	GLY	4.8
13	AC	7	TYR	4.8
13	AC	131	LEU	4.8
11	AA	1067	A	4.8
13	AC	159	GLY	4.8
14	AD	276	LYS	4.8
11	AA	2165	G	4.8
11	AA	2795	G	4.8
13	AC	16	PRO	4.8
32	AY	77	PRO	4.8
34	B2	126	TYR	4.8
13	AC	162	GLU	4.8
11	AA	2179	C	4.8
13	AC	103	ILE	4.8
6	A5	57	VAL	4.8
13	AC	63	SER	4.8

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Mol	Chain	Res	Type	RSRZ
41	BG	83	ALA	4.8
11	AA	11	G	4.8
11	AA	1063	G	4.8
4	A3	1	MET	4.8
59	BZ	90	LYS	4.8
56	BW	66	C	4.7
1	A0	5	LYS	4.7
35	BA	1033	G	4.7
17	AG	157	ILE	4.7
32	AY	4	LYS	4.7
11	AA	2109	U	4.7
41	BG	80	VAL	4.7
38	BD	42	GLN	4.6
1	A0	8	GLY	4.6
5	A4	42	PHE	4.6
13	AC	175	VAL	4.6
11	AA	275	G	4.6
11	AA	508	G	4.6
11	AA	654(D)	G	4.6
12	AB	119	G	4.6
56	BW	1	C	4.6
32	AY	54	LYS	4.6
32	AY	57	GLN	4.6
5	A4	48	ARG	4.6
11	AA	2115	G	4.6
35	BA	1503	A	4.6
11	AA	654(T)	C	4.6
13	AC	3	HIS	4.6
13	AC	110	PHE	4.6
13	AC	119	VAL	4.6
13	AC	142	ALA	4.6
58	BY	90	ALA	4.6
16	AF	7	TYR	4.6
11	AA	2104	G	4.6
11	AA	2146	C	4.6
17	AG	128	ARG	4.6
11	AA	2099	U	4.5
13	AC	205	LYS	4.5
56	BW	38	A	4.5
11	AA	654(A)	G	4.5
34	B2	51	GLY	4.5
13	AC	149	ILE	4.5

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Mol	Chain	Res	Type	RSRZ
13	AC	32	LEU	4.5
58	BY	8	A	4.5
11	AA	2124	G	4.5
56	BW	2	G	4.5
11	AA	1534	U	4.5
11	AA	2167	U	4.5
15	AE	88	GLY	4.5
13	AC	160	ARG	4.5
43	BI	64	THR	4.5
15	AE	76	ARG	4.5
33	AZ	146	ILE	4.5
34	B2	96	LYS	4.5
32	AY	2	ARG	4.5
7	A6	32	ASN	4.4
11	AA	2154	G	4.4
56	BW	4	G	4.4
56	BW	65	G	4.4
15	AE	67	PHE	4.4
13	AC	112	ALA	4.4
32	AY	102	CYS	4.4
27	AT	2	ASN	4.4
36	BB	136	VAL	4.4
23	AP	117	GLU	4.4
17	AG	129	GLY	4.4
11	AA	2155	G	4.4
44	BJ	84	GLN	4.4
18	AH	26	VAL	4.4
33	AZ	144	LEU	4.4
26	AS	62	LYS	4.4
21	AN	1	MET	4.4
11	AA	2803	C	4.4
35	BA	470	C	4.4
56	BW	34	U	4.4
54	BT	64	ASP	4.4
13	AC	29	VAL	4.4
11	AA	2153	G	4.3
13	AC	99	ILE	4.3
13	AC	152	ILE	4.3
11	AA	2138	C	4.3
13	AC	203	GLY	4.3
59	BZ	326	GLU	4.3
11	AA	1062	G	4.3

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Mol	Chain	Res	Type	RSRZ
11	AA	2110	G	4.3
59	BZ	141	VAL	4.3
13	AC	138	PRO	4.3
44	BJ	59	SER	4.3
11	AA	2896	C	4.3
13	AC	4	GLY	4.3
53	BS	17	GLU	4.3
11	AA	1093	G	4.3
11	AA	2107	C	4.3
11	AA	2108	C	4.3
44	BJ	75	ILE	4.3
11	AA	2173	A	4.2
38	BD	158	ILE	4.2
13	AC	50	ASP	4.2
44	BJ	80	LYS	4.2
15	AE	59	VAL	4.2
44	BJ	88	LEU	4.2
11	AA	90	U	4.2
13	AC	67	GLY	4.2
11	AA	1091	G	4.2
59	BZ	86	ALA	4.2
11	AA	2176	A	4.2
33	AZ	112	ARG	4.2
11	AA	1059	G	4.2
35	BA	1034	G	4.2
56	BW	19	G	4.2
56	BW	27	G	4.2
7	A6	46	HIS	4.2
13	AC	141	LYS	4.2
13	AC	215	THR	4.2
38	BD	26	CYS	4.2
13	AC	191	ALA	4.2
13	AC	14	VAL	4.1
13	AC	145	VAL	4.1
33	AZ	141	VAL	4.1
38	BD	162	LEU	4.1
13	AC	201	PRO	4.1
17	AG	127	GLY	4.1
11	AA	277	C	4.1
11	AA	889	C	4.1
13	AC	209	LEU	4.1
11	AA	654(S)	G	4.1

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Mol	Chain	Res	Type	RSRZ
11	AA	2151	G	4.1
11	AA	2792	G	4.1
21	AN	8	GLN	4.1
15	AE	62	PRO	4.1
18	AH	155	SER	4.1
13	AC	68	LEU	4.1
13	AC	73	ARG	4.1
2	A1	85	LEU	4.1
11	AA	1541	G	4.1
16	AF	6	VAL	4.1
18	AH	64	LEU	4.1
29	AV	20	LEU	4.1
36	BB	239	VAL	4.1
56	BW	20	G	4.1
17	AG	47	LYS	4.1
18	AH	138	LYS	4.1
59	BZ	89	ILE	4.1
11	AA	2310	A	4.1
56	BW	68	C	4.1
11	AA	2125	G	4.1
11	AA	2127	G	4.1
38	BD	47	ARG	4.1
56	BW	18	U	4.1
13	AC	43	VAL	4.0
33	AZ	3	TYR	4.0
11	AA	2136	C	4.0
56	BV	1	C	4.0
56	BW	33	C	4.0
56	BW	67	C	4.0
13	AC	75	LEU	4.0
11	AA	2116	G	4.0
13	AC	70	LYS	4.0
27	AT	1	MET	4.0
17	AG	146	TYR	4.0
36	BB	236	TYR	4.0
41	BG	5	ARG	4.0
11	AA	1095	A	4.0
11	AA	1064	C	4.0
56	BW	57	C	4.0
18	AH	66	GLY	4.0
13	AC	199	HIS	4.0
11	AA	2189	U	4.0

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Mol	Chain	Res	Type	RSRZ
35	BA	1125	U	4.0
7	A6	39	TYR	4.0
59	BZ	85	HIS	4.0
11	AA	888	C	4.0
13	AC	139	ASN	4.0
13	AC	45	ALA	4.0
13	AC	86	ALA	4.0
11	AA	2112	G	4.0
56	BW	50	G	4.0
56	BW	73	A	4.0
13	AC	207	THR	4.0
23	AP	76	LYS	4.0
38	BD	151	LYS	4.0
11	AA	1101	U	3.9
7	A6	29	ASN	3.9
21	AN	4	TYR	3.9
11	AA	2186	G	3.9
35	BA	1127	G	3.9
11	AA	1177	A	3.9
56	BW	17	C	3.9
15	AE	132	HIS	3.9
11	AA	2180	U	3.9
11	AA	2895	U	3.9
14	AD	275	LYS	3.9
36	BB	237	ALA	3.9
41	BG	84	ASN	3.9
18	AH	50	VAL	3.9
13	AC	56	GLN	3.9
35	BA	1030(D)	A	3.9
11	AA	2128	C	3.9
11	AA	2185	C	3.9
56	BW	3	C	3.9
13	AC	178	ALA	3.9
55	BU	6	ARG	3.9
11	AA	1092	C	3.9
11	AA	2164	C	3.9
28	AU	89	GLU	3.9
56	BW	37	U	3.9
13	AC	185	LEU	3.9
32	AY	99	CYS	3.8
32	AY	55	TYR	3.8
11	AA	654(J)	A	3.8

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Mol	Chain	Res	Type	RSRZ
13	AC	65	PRO	3.8
13	AC	133	PRO	3.8
11	AA	2129	C	3.8
11	AA	2172	U	3.8
11	AA	2893	G	3.8
12	AB	1	U	3.8
35	BA	1126	U	3.8
56	BW	5	G	3.8
25	AR	105	ARG	3.8
32	AY	48	ALA	3.8
54	BT	25	ARG	3.8
13	AC	117	PRO	3.8
9	A8	48	PHE	3.8
47	BM	12	ASN	3.8
11	AA	92	A	3.8
13	AC	198	ALA	3.8
35	BA	91	C	3.8
54	BT	14	LYS	3.8
56	BW	32	G	3.8
17	AG	131	TYR	3.8
13	AC	153	ILE	3.8
32	AY	96	ILE	3.8
7	A6	22	ALA	3.8
13	AC	228	SER	3.8
35	BA	991	U	3.8
11	AA	2791	C	3.8
13	AC	1	PRO	3.8
18	AH	83	TYR	3.8
18	AH	56	SER	3.8
24	AQ	139	GLU	3.8
13	AC	163	PHE	3.8
35	BA	1145	C	3.7
5	A4	40	HIS	3.7
15	AE	17	ASP	3.7
35	BA	413	G	3.7
26	AS	92	TYR	3.7
15	AE	68	ALA	3.7
38	BD	31	CYS	3.7
5	A4	47	GLN	3.7
15	AE	75	VAL	3.7
57	BX	14	A	3.7
11	AA	2105	C	3.7

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Mol	Chain	Res	Type	RSRZ
35	BA	488	C	3.7
28	AU	36	ARG	3.7
32	AY	61	ILE	3.7
34	B2	132	ASP	3.7
32	AY	97	ARG	3.7
11	AA	1494	A	3.7
15	AE	63	LEU	3.7
35	BA	1035	A	3.7
13	AC	15	ASP	3.7
32	AY	47	LYS	3.7
56	BW	26	C	3.7
56	BW	42	C	3.7
6	A5	26	THR	3.7
13	AC	222	VAL	3.7
17	AG	51	ARG	3.7
42	BH	1	MET	3.7
11	AA	2106	G	3.7
13	AC	10	LEU	3.7
35	BA	1032	G	3.7
56	BW	64	G	3.7
13	AC	13	LYS	3.7
13	AC	126	LYS	3.7
17	AG	180	PHE	3.7
11	AA	2113	U	3.7
11	AA	2150	U	3.7
11	AA	886	C	3.7
56	BW	16	C	3.7
1	A0	7	LEU	3.7
24	AQ	18	LYS	3.7
59	BZ	84	GLY	3.7
21	AN	135	PRO	3.6
35	BA	1281	U	3.6
15	AE	69	LYS	3.6
11	AA	1536	C	3.6
11	AA	2402	C	3.6
13	AC	164	ARG	3.6
36	BB	128	GLU	3.6
11	AA	1175	U	3.6
11	AA	2130	U	3.6
35	BA	1257	U	3.6
44	BJ	33	GLN	3.6
11	AA	1068	G	3.6

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Mol	Chain	Res	Type	RSRZ
23	AP	26	GLY	3.6
6	A5	47	PRO	3.6
44	BJ	37	PRO	3.6
11	AA	2188	C	3.6
21	AN	5	VAL	3.6
6	A5	51	TYR	3.6
17	AG	3	LEU	3.6
17	AG	133	LEU	3.6
54	BT	74	LYS	3.6
23	AP	35	HIS	3.6
43	BI	94	ALA	3.6
11	AA	10	G	3.6
11	AA	2192	G	3.6
11	AA	6	A	3.6
36	BB	238	LEU	3.6
13	AC	132	GLY	3.6
18	AH	60	ARG	3.6
13	AC	51	PRO	3.6
33	AZ	111	VAL	3.6
33	AZ	113	ALA	3.6
47	BM	117	VAL	3.6
17	AG	82	LEU	3.6
15	AE	77	ILE	3.6
17	AG	88	ILE	3.6
26	AS	63	THR	3.6
11	AA	2207	G	3.5
11	AA	2142	C	3.5
11	AA	2161	C	3.5
2	A1	30	VAL	3.5
32	AY	3	VAL	3.5
13	AC	25	ALA	3.5
16	AF	22	ALA	3.5
59	BZ	144	PRO	3.5
7	A6	34	LEU	3.5
38	BD	209	ARG	3.5
25	AR	3	HIS	3.5
36	BB	19	HIS	3.5
13	AC	33	ALA	3.5
16	AF	5	ALA	3.5
56	BW	74	A	3.5
35	BA	1036	G	3.5
56	BW	6	G	3.5

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Mol	Chain	Res	Type	RSRZ
23	AP	65	ARG	3.5
41	BG	33	ASP	3.5
11	AA	1077	A	3.5
11	AA	2117	A	3.5
11	AA	1072	C	3.5
11	AA	1116	C	3.5
13	AC	208	PHE	3.5
11	AA	2141	G	3.5
15	AE	64	LYS	3.5
36	BB	16	HIS	3.5
59	BZ	87	ASP	3.5
56	BW	56	U	3.5
32	AY	50	ARG	3.5
11	AA	890	A	3.5
11	AA	2140	C	3.5
28	AU	91	ASP	3.5
11	AA	654(C)	G	3.5
35	BA	340	U	3.5
56	BV	48	U	3.5
8	A7	46	VAL	3.4
26	AS	14	VAL	3.4
36	BB	15	VAL	3.4
43	BI	99	LEU	3.4
11	AA	2119	A	3.4
35	BA	1137	C	3.4
56	BW	24	C	3.4
18	AH	65	HIS	3.4
14	AD	30	GLU	3.4
59	BZ	88	TYR	3.4
27	AT	105	LEU	3.4
13	AC	135	GLY	3.4
13	AC	223	ARG	3.4
45	BK	128	ALA	3.4
13	AC	40	THR	3.4
13	AC	57	ASN	3.4
44	BJ	76	ASN	3.4
13	AC	19	ILE	3.4
17	AG	75	LYS	3.4
43	BI	95	LYS	3.4
11	AA	2162	G	3.4
56	BW	23	G	3.4
38	BD	9	CYS	3.4

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Mol	Chain	Res	Type	RSRZ
13	AC	147	PHE	3.4
53	BS	43	GLU	3.4
36	BB	10	LEU	3.4
36	BB	121	LEU	3.4
17	AG	42	GLY	3.4
11	AA	654	A	3.4
11	AA	655	A	3.4
11	AA	1088	A	3.4
13	AC	22	ILE	3.4
32	AY	92	ASN	3.4
17	AG	124	SER	3.4
23	AP	51	PHE	3.4
45	BK	129	SER	3.4
26	AS	32	LEU	3.4
44	BJ	90	LEU	3.4
11	AA	2187	G	3.4
56	BW	15	G	3.4
21	AN	132	ALA	3.4
31	AX	53	LYS	3.4
29	AV	45	THR	3.4
26	AS	61	ASN	3.3
5	A4	18	CYS	3.3
11	AA	654(M)	C	3.3
26	AS	89	ARG	3.3
34	B2	94	GLU	3.3
56	BW	25	U	3.3
15	AE	65	GLY	3.3
18	AH	157	TYR	3.3
27	AT	32	TYR	3.3
35	BA	1026	G	3.3
58	BY	1	G	3.3
15	AE	61	ARG	3.3
18	AH	35	VAL	3.3
13	AC	97	GLU	3.3
46	BL	73	GLU	3.3
23	AP	107	LYS	3.3
16	AF	26	ALA	3.3
29	AV	63	GLY	3.3
46	BL	26	ALA	3.3
56	BW	63	C	3.3
7	A6	31	PRO	3.3
41	BG	156	TRP	3.3

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Mol	Chain	Res	Type	RSRZ
18	AH	40	GLU	3.3
35	BA	1024	G	3.3
35	BA	1456	G	3.3
56	BW	47	G	3.3
17	AG	126	ASP	3.3
59	BZ	227	ASP	3.3
11	AA	2126	A	3.3
44	BJ	100	THR	3.3
47	BM	94	ARG	3.3
38	BD	17	VAL	3.3
13	AC	76	ALA	3.3
13	AC	83	ILE	3.3
26	AS	100	ALA	3.3
13	AC	23	ASP	3.3
26	AS	20	ARG	3.3
11	AA	1173	G	3.3
12	AB	118	G	3.3
17	AG	111	LEU	3.3
17	AG	125	PHE	3.3
21	AN	3	THR	3.3
35	BA	1023	G	3.3
35	BA	1030(A)	G	3.3
35	BA	1181	G	3.3
18	AH	45	VAL	3.3
21	AN	2	LYS	3.3
35	BA	723	U	3.3
11	AA	654(I)	C	3.3
15	AE	131	ALA	3.3
35	BA	1029	C	3.3
58	BY	11	C	3.3
13	AC	125	SER	3.2
13	AC	167	LYS	3.2
45	BK	127	LYS	3.2
36	BB	127	ILE	3.2
5	A4	45	GLY	3.2
11	AA	654(L)	G	3.2
11	AA	2147	G	3.2
13	AC	95	GLY	3.2
56	BW	43	G	3.2
11	AA	2629	A	3.2
56	BW	40	C	3.2
28	AU	117	GLN	3.2

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Mol	Chain	Res	Type	RSRZ
44	BJ	44	VAL	3.2
38	BD	146	ILE	3.2
18	AH	53	GLU	3.2
27	AT	91	ARG	3.2
6	A5	3	LYS	3.2
13	AC	184	LYS	3.2
11	AA	1051	G	3.2
35	BA	1030(C)	G	3.2
47	BM	7	VAL	3.2
56	BW	31	G	3.2
56	BW	46	G	3.2
9	A8	35	GLN	3.2
43	BI	7	THR	3.2
56	BW	41	C	3.2
47	BM	84	ILE	3.2
18	AH	54	ARG	3.2
21	AN	68	GLU	3.2
26	AS	30	ARG	3.2
44	BJ	46	ARG	3.2
18	AH	156	ALA	3.2
33	AZ	164	ALA	3.2
35	BA	471	G	3.2
35	BA	1002	G	3.2
43	BI	96	LEU	3.2
23	AP	110	TYR	3.2
38	BD	112	VAL	3.2
59	BZ	83	PRO	3.2
43	BI	84	ALA	3.2
18	AH	82	GLY	3.1
15	AE	52	LEU	3.1
13	AC	42	GLU	3.1
18	AH	86	GLU	3.1
18	AH	159	GLU	3.1
18	AH	49	VAL	3.1
36	BB	122	PHE	3.1
41	BG	154	TYR	3.1
11	AA	2804	C	3.1
35	BA	1028	C	3.1
43	BI	126	SER	3.1
13	AC	129	ARG	3.1
13	AC	182	PRO	3.1
17	AG	130	ASN	3.1

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Mol	Chain	Res	Type	RSRZ
47	BM	122	LYS	3.1
54	BT	100	ILE	3.1
27	AT	135	ALA	3.1
38	BD	164	ALA	3.1
11	AA	654(P)	C	3.1
13	AC	211	SER	3.1
11	AA	1115	G	3.1
35	BA	1001(A)	G	3.1
37	BC	2	GLY	3.1
54	BT	101	GLY	3.1
15	AE	72	VAL	3.1
13	AC	52	ARG	3.1
29	AV	21	ARG	3.1
29	AV	19	LYS	3.1
35	BA	1025	U	3.1
27	AT	130	ALA	3.1
54	BT	106	ALA	3.1
13	AC	104	LEU	3.1
56	BW	14	A	3.1
3	A2	22	GLU	3.1
11	AA	2143	C	3.1
36	BB	241	GLU	3.1
45	BK	125	PHE	3.1
55	BU	5	ASP	3.1
5	A4	41	PRO	3.1
46	BL	28	LYS	3.1
11	AA	2191	G	3.1
56	BW	12	G	3.1
13	AC	195	ALA	3.1
11	AA	272(A)	U	3.1
59	BZ	146	LEU	3.1
28	AU	58	ARG	3.1
43	BI	18	PHE	3.1
5	A4	38	LYS	3.1
13	AC	200	LYS	3.1
35	BA	1005	A	3.1
13	AC	108	MET	3.1
18	AH	29	PRO	3.1
29	AV	27	ALA	3.0
54	BT	75	ASN	3.0
6	A5	54	GLY	3.0
35	BA	1139	G	3.0

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Mol	Chain	Res	Type	RSRZ
13	AC	217	THR	3.0
34	B2	45	PHE	3.0
36	BB	8	LYS	3.0
38	BD	163	GLU	3.0
26	AS	94	TYR	3.0
13	AC	11	LEU	3.0
17	AG	43	LEU	3.0
54	BT	10	LEU	3.0
11	AA	1073	A	3.0
11	AA	2171	A	3.0
11	AA	2801	A	3.0
10	A9	20	HIS	3.0
13	AC	225	ASN	3.0
27	AT	118	ARG	3.0
11	AA	1509	C	3.0
11	AA	2474	C	3.0
35	BA	1128	C	3.0
56	BW	62	C	3.0
8	A7	48	LYS	3.0
33	AZ	128	VAL	3.0
44	BJ	74	ILE	3.0
11	AA	2796	U	3.0
11	AA	1047	G	3.0
11	AA	1074	G	3.0
11	AA	1114	G	3.0
11	AA	2184	G	3.0
11	AA	2308	G	3.0
35	BA	1283	G	3.0
32	AY	31	LEU	3.0
33	AZ	110	GLY	3.0
43	BI	97	LYS	3.0
11	AA	1509(B)	A	3.0
38	BD	198	VAL	3.0
56	BW	11	A	3.0
11	AA	1505	C	3.0
11	AA	2111	C	3.0
15	AE	87	GLU	3.0
33	AZ	119	GLU	3.0
35	BA	1007	C	3.0
35	BA	1452	C	3.0
9	A8	63	PRO	3.0
38	BD	37	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
48	BN	14	PRO	3.0
59	BZ	288	LEU	3.0
23	AP	89	ALA	3.0
38	BD	32	ALA	3.0
34	B2	92	LYS	3.0
59	BZ	67	HIS	3.0
11	AA	1058	G	3.0
11	AA	1099	G	3.0
11	AA	1533	G	3.0
11	AA	2148	G	3.0
13	AC	41	VAL	3.0
16	AF	4	VAL	3.0
1	A0	84	LEU	3.0
11	AA	1069	A	3.0
13	AC	64	LEU	3.0
25	AR	4	LEU	3.0
35	BA	1130	A	3.0
8	A7	47	ARG	3.0
13	AC	78	ALA	3.0
35	BA	1038	C	3.0
17	AG	49	ASP	3.0
44	BJ	73	ASP	3.0
34	B2	97	GLY	3.0
53	BS	41	VAL	3.0
11	AA	2132	U	3.0
35	BA	56	U	3.0
3	A2	44	LEU	2.9
36	BB	11	LEU	2.9
13	AC	53	ARG	2.9
18	AH	12	PRO	2.9
46	BL	125	PRO	2.9
55	BU	15	ARG	2.9
13	AC	186	ALA	2.9
56	BW	29	C	2.9
10	A9	17	ILE	2.9
14	AD	26	LYS	2.9
23	AP	122	PRO	2.9
41	BG	108	ALA	2.9
30	AW	112	GLY	2.9
36	BB	18	GLY	2.9
56	BW	10	G	2.9
25	AR	72	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
34	B2	90	LEU	2.9
34	B2	130	ARG	2.9
13	AC	36	LYS	2.9
47	BM	10	PRO	2.9
28	AU	90	VAL	2.9
1	A0	9	SER	2.9
26	AS	34	HIS	2.9
37	BC	128	PHE	2.9
16	AF	8	GLN	2.9
17	AG	16	ARG	2.9
23	AP	33	ARG	2.9
11	AA	1107	G	2.9
12	AB	117	G	2.9
32	AY	91	GLU	2.9
56	BW	9	G	2.9
11	AA	1495	A	2.9
12	AB	26	A	2.9
16	AF	131	GLY	2.9
35	BA	980	C	2.9
43	BI	5	TYR	2.9
56	BW	72	C	2.9
7	A6	37	ARG	2.9
14	AD	273	ARG	2.9
32	AY	6	HIS	2.9
33	AZ	32	HIS	2.9
59	BZ	143	ASP	2.9
14	AD	25	THR	2.9
27	AT	126	ALA	2.9
54	BT	44	ALA	2.9
44	BJ	78	ASN	2.9
53	BS	21	GLU	2.9
36	BB	96	ARG	2.9
47	BM	11	ARG	2.9
11	AA	1847	A	2.9
23	AP	6	LEU	2.9
28	AU	15	LYS	2.9
33	AZ	33	LEU	2.9
35	BA	216	G	2.9
35	BA	1300	G	2.9
38	BD	19	LEU	2.9
53	BS	18	LYS	2.9
58	BY	23	G	2.9

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Mol	Chain	Res	Type	RSRZ
11	AA	12	U	2.8
18	AH	63	SER	2.8
11	AA	1076	C	2.8
56	BW	21	U	2.8
17	AG	110	ALA	2.8
18	AH	165	ALA	2.8
33	AZ	184	ALA	2.8
7	A6	20	ASN	2.8
18	AH	17	VAL	2.8
44	BJ	29	ARG	2.8
23	AP	34	GLY	2.8
23	AP	37	GLY	2.8
26	AS	11	LYS	2.8
5	A4	32	TYR	2.8
11	AA	1046	A	2.8
11	AA	1174	A	2.8
35	BA	1004	A	2.8
11	AA	654(N)	G	2.8
11	AA	1044	G	2.8
18	AH	57	ASP	2.8
35	BA	203	U	2.8
35	BA	204	U	2.8
35	BA	1000	U	2.8
35	BA	1040	U	2.8
56	BW	8	U	2.8
48	BN	22	THR	2.8
11	AA	654(R)	C	2.8
43	BI	65	VAL	2.8
56	BW	69	C	2.8
13	AC	177	LYS	2.8
23	AP	108	LYS	2.8
34	B2	128	LYS	2.8
6	A5	50	GLY	2.8
16	AF	24	LEU	2.8
33	AZ	121	HIS	2.8
38	BD	116	GLN	2.8
47	BM	101	GLN	2.8
2	A1	77	ALA	2.8
17	AG	113	ARG	2.8
43	BI	98	PRO	2.8
55	BU	24	ARG	2.8
31	AX	12	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
2	A1	27	GLU	2.8
36	BB	126	GLU	2.8
11	AA	1762	A	2.8
11	AA	1885	A	2.8
9	A8	34	TRP	2.8
1	A0	50	ASN	2.8
35	BA	82	U	2.8
13	AC	176	GLY	2.8
6	A5	52	TYR	2.8
11	AA	1543	C	2.8
11	AA	2793	G	2.8
32	AY	76	CYS	2.8
13	AC	59	ARG	2.8
46	BL	89	ARG	2.8
13	AC	82	LYS	2.8
13	AC	102	LYS	2.8
21	AN	129	PRO	2.8
32	AY	63	LYS	2.8
13	AC	155	GLU	2.8
23	AP	147	LEU	2.8
25	AR	10	LEU	2.8
38	BD	157	LEU	2.8
16	AF	9	ILE	2.8
59	BZ	142	ASP	2.8
26	AS	90	GLY	2.8
27	AT	4	GLY	2.8
9	A8	33	ASN	2.8
11	AA	271(N)	U	2.8
13	AC	213	TYR	2.8
43	BI	88	TYR	2.8
24	AQ	136	ALA	2.8
41	BG	79	ARG	2.8
11	AA	34	C	2.8
11	AA	2799	C	2.8
26	AS	99	LYS	2.8
11	AA	1171	G	2.8
16	AF	14	PRO	2.8
44	BJ	91	PRO	2.8
16	AF	20	LEU	2.8
33	AZ	178	GLU	2.8
1	A0	6	GLY	2.7
13	AC	55	ASP	2.7

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Mol	Chain	Res	Type	RSRZ
59	BZ	358	GLY	2.7
48	BN	3	ARG	2.7
27	AT	127	ALA	2.7
47	BM	126	LYS	2.7
11	AA	653	A	2.7
35	BA	55	A	2.7
35	BA	83	U	2.7
35	BA	1447	A	2.7
33	AZ	134	PRO	2.7
12	AB	27	C	2.7
44	BJ	36	GLY	2.7
14	AD	122	ASP	2.7
56	BW	7	G	2.7
38	BD	43	HIS	2.7
16	AF	12	LEU	2.7
36	BB	232	PRO	2.7
13	AC	224	ILE	2.7
56	BW	55	U	2.7
4	A3	60	GLU	2.7
33	AZ	11	GLU	2.7
41	BG	8	GLU	2.7
1	A0	10	THR	2.7
13	AC	69	GLY	2.7
13	AC	216	THR	2.7
13	AC	221	SER	2.7
59	BZ	329	GLY	2.7
18	AH	85	LYS	2.7
23	AP	14	LYS	2.7
38	BD	18	LYS	2.7
11	AA	885	C	2.7
11	AA	1178	C	2.7
11	AA	1493	C	2.7
35	BA	92	C	2.7
26	AS	105	ALA	2.7
33	AZ	105	VAL	2.7
13	AC	28	LEU	2.7
33	AZ	76	LEU	2.7
3	A2	43	GLN	2.7
13	AC	140	PRO	2.7
27	AT	136	GLN	2.7
35	BA	108	G	2.7
35	BA	426	G	2.7

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Mol	Chain	Res	Type	RSRZ
35	BA	1131	G	2.7
38	BD	142	PRO	2.7
44	BJ	38	ILE	2.7
32	AY	79	CYS	2.7
13	AC	24	GLU	2.7
13	AC	39	GLU	2.7
23	AP	149	GLU	2.7
33	AZ	94	GLU	2.7
6	A5	55	ARG	2.7
13	AC	134	ARG	2.7
27	AT	3	ARG	2.7
38	BD	25	ARG	2.7
43	BI	66	ARG	2.7
43	BI	93	ARG	2.7
17	AG	81	LYS	2.7
47	BM	103	THR	2.7
38	BD	71	SER	2.7
11	AA	1084	A	2.7
11	AA	2790	A	2.7
13	AC	35	ALA	2.7
53	BS	13	ASP	2.7
18	AH	61	HIS	2.7
26	AS	58	LEU	2.7
11	AA	272(J)	C	2.7
11	AA	1104	C	2.7
23	AP	70	GLN	2.7
33	AZ	158	PRO	2.7
36	BB	125	PRO	2.7
13	AC	84	LYS	2.7
15	AE	29	GLY	2.7
18	AH	140	LYS	2.7
23	AP	28	GLY	2.7
55	BU	4	GLY	2.7
11	AA	892	G	2.7
11	AA	2149	G	2.7
35	BA	1138	G	2.7
56	BW	71	G	2.7
13	AC	204	ALA	2.7
11	AA	1033	U	2.7
12	AB	112	U	2.7
18	AH	37	VAL	2.7
34	B2	98	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
38	BD	148	VAL	2.7
43	BI	56	LEU	2.7
54	BT	92	LEU	2.7
56	BW	28	U	2.7
56	BW	51	U	2.7
13	AC	188	ASN	2.7
11	AA	2750	A	2.6
26	AS	12	PHE	2.6
56	BW	44	A	2.6
13	AC	154	ARG	2.6
32	AY	21	LYS	2.6
38	BD	30	LYS	2.6
13	AC	48	GLY	2.6
56	BW	75	C	2.6
38	BD	155	LEU	2.6
11	AA	352	G	2.6
11	AA	879	G	2.6
11	AA	1169	G	2.6
18	AH	36	PRO	2.6
5	A4	46	GLN	2.6
11	AA	2118	U	2.6
11	AA	2897	U	2.6
15	AE	54	GLN	2.6
32	AY	101	LYS	2.6
36	BB	22	LYS	2.6
38	BD	119	GLN	2.6
56	BW	48	U	2.6
38	BD	23	GLY	2.6
11	AA	1542	A	2.6
29	AV	93	GLU	2.6
35	BA	532	A	2.6
13	AC	158	ALA	2.6
23	AP	88	LEU	2.6
13	AC	44	HIS	2.6
17	AG	77	ILE	2.6
36	BB	222	ILE	2.6
38	BD	165	MET	2.6
9	A8	40	GLU	2.6
11	AA	2506	U	2.6
18	AH	167	GLU	2.6
31	AX	23	GLU	2.6
44	BJ	25	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
57	BX	18	U	2.6
11	AA	614(B)	G	2.6
11	AA	880	G	2.6
58	BY	22	G	2.6
23	AP	105	LEU	2.6
18	AH	43	VAL	2.6
27	AT	27	THR	2.6
7	A6	43	CYS	2.6
5	A4	28	LYS	2.6
34	B2	129	ARG	2.6
33	AZ	142	SER	2.6
44	BJ	35	SER	2.6
13	AC	219	GLY	2.6
7	A6	12	GLU	2.6
9	A8	29	LYS	2.6
11	AA	1420	U	2.6
11	AA	544	G	2.6
35	BA	1009	G	2.6
35	BA	1022	G	2.6
36	BB	140	HIS	2.6
36	BB	131	PRO	2.6
11	AA	1103	A	2.6
21	AN	133	GLN	2.6
35	BA	1492	A	2.6
31	AX	94	GLY	2.6
11	AA	1102	C	2.6
18	AH	46	GLU	2.6
18	AH	58	GLU	2.6
26	AS	46	VAL	2.6
32	AY	45	VAL	2.6
35	BA	1039	C	2.6
58	BY	40	C	2.6
1	A0	85	ALA	2.6
13	AC	26	ALA	2.6
16	AF	18	ARG	2.6
23	AP	15	ARG	2.6
38	BD	85	LYS	2.6
5	A4	24	THR	2.6
32	AY	44	ILE	2.5
44	BJ	50	ILE	2.5
35	BA	96	U	2.5
35	BA	421	U	2.5

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Mol	Chain	Res	Type	RSRZ
18	AH	168	PRO	2.5
13	AC	124	GLY	2.5
9	A8	32	LEU	2.5
11	AA	2751	G	2.5
13	AC	187	ASP	2.5
17	AG	123	ASN	2.5
23	AP	18	ARG	2.5
23	AP	77	ARG	2.5
33	AZ	122	ARG	2.5
33	AZ	182	LYS	2.5
35	BA	631	G	2.5
35	BA	1190	G	2.5
44	BJ	28	ARG	2.5
55	BU	9	ARG	2.5
56	BV	20	G	2.5
26	AS	102	ALA	2.5
35	BA	1001	A	2.5
5	A4	14	ILE	2.5
11	AA	1109	C	2.5
35	BA	217	C	2.5
35	BA	1027	C	2.5
35	BA	1054	C	2.5
13	AC	54	SER	2.5
7	A6	6	ARG	2.5
10	A9	8	LYS	2.5
46	BL	21	LYS	2.5
23	AP	146	VAL	2.5
29	AV	47	VAL	2.5
18	AH	74	ASN	2.5
33	AZ	93	ASP	2.5
33	AZ	148	ASP	2.5
44	BJ	26	ALA	2.5
5	A4	27	THR	2.5
12	AB	25	A	2.5
56	BW	22	A	2.5
11	AA	654(O)	G	2.5
11	AA	1087	G	2.5
4	A3	2	PRO	2.5
7	A6	21	TYR	2.5
18	AH	158	HIS	2.5
13	AC	157	LYS	2.5
17	AG	84	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
18	AH	33	LEU	2.5
43	BI	19	LEU	2.5
53	BS	30	LEU	2.5
5	A4	17	GLY	2.5
23	AP	104	GLY	2.5
35	BA	454	C	2.5
55	BU	10	ARG	2.5
56	BW	52	C	2.5
33	AZ	166	SER	2.5
18	AH	15	VAL	2.5
26	AS	98	VAL	2.5
32	AY	27	VAL	2.5
11	AA	1108	U	2.5
13	AC	31	GLU	2.5
33	AZ	137	ILE	2.5
39	BE	13	ILE	2.5
17	AG	117	PHE	2.5
23	AP	10	PRO	2.5
7	A6	36	LEU	2.5
13	AC	194	ARG	2.5
17	AG	7	LEU	2.5
32	AY	95	LYS	2.5
35	BA	1531	A	2.5
56	BW	45	A	2.5
5	A4	39	CYS	2.5
11	AA	271(Q)	G	2.5
11	AA	1110	G	2.5
11	AA	1168	G	2.5
18	AH	38	SER	2.5
35	BA	1013	G	2.5
13	AC	120	MET	2.5
34	B2	1	MET	2.5
35	BA	840	C	2.5
39	BE	10	MET	2.5
44	BJ	17	ASP	2.5
34	B2	83	LYS	2.5
14	AD	33	LEU	2.5
45	BK	75	TYR	2.5
5	A4	37	SER	2.4
36	BB	235	SER	2.4
11	AA	1070	A	2.4
11	AA	1913	A	2.4

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Mol	Chain	Res	Type	RSRZ
12	AB	45	A	2.4
13	AC	37	PHE	2.4
7	A6	28	ARG	2.4
7	A6	44	ARG	2.4
13	AC	79	LYS	2.4
13	AC	148	ASN	2.4
23	AP	16	ARG	2.4
33	AZ	78	LYS	2.4
43	BI	16	ARG	2.4
54	BT	8	ARG	2.4
11	AA	1049	C	2.4
11	AA	1075	C	2.4
35	BA	1140	C	2.4
23	AP	63	PRO	2.4
23	AP	116	GLY	2.4
45	BK	52	GLY	2.4
26	AS	27	SER	2.4
7	A6	53	LYS	2.4
38	BD	13	ARG	2.4
38	BD	122	ARG	2.4
54	BT	99	LEU	2.4
3	A2	71	ASN	2.4
35	BA	977	A	2.4
53	BS	79	THR	2.4
13	AC	146	GLY	2.4
30	AW	111	HIS	2.4
38	BD	105	VAL	2.4
26	AS	66	ALA	2.4
35	BA	1037	C	2.4
35	BA	1445	C	2.4
37	BC	208	ILE	2.4
58	BY	69	C	2.4
11	AA	1060	U	2.4
11	AA	1740	G	2.4
12	AB	67	G	2.4
35	BA	73	G	2.4
35	BA	1331	G	2.4
10	A9	2	LYS	2.4
27	AT	13	ARG	2.4
48	BN	58	LYS	2.4
17	AG	19	LEU	2.4
34	B2	89	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
54	BT	13	LEU	2.4
38	BD	161	ASN	2.4
59	BZ	336	THR	2.4
18	AH	79	VAL	2.4
23	AP	109	GLY	2.4
23	AP	143	GLY	2.4
34	B2	68	TYR	2.4
18	AH	75	ALA	2.4
28	AU	96	ALA	2.4
40	BF	101	ALA	2.4
11	AA	1098	A	2.4
11	AA	1741	A	2.4
35	BA	412	A	2.4
13	AC	101	GLN	2.4
27	AT	39	ARG	2.4
13	AC	197	GLU	2.4
17	AG	135	LEU	2.4
35	BA	218	C	2.4
35	BA	1006	C	2.4
35	BA	1335	C	2.4
38	BD	120	LEU	2.4
41	BG	104	LEU	2.4
46	BL	27	LEU	2.4
53	BS	5	LEU	2.4
27	AT	106	SER	2.4
11	AA	1413	G	2.4
11	AA	1510	G	2.4
35	BA	1273	G	2.4
35	BA	1421	G	2.4
56	BW	54	G	2.4
16	AF	11	VAL	2.4
33	AZ	180	VAL	2.4
1	A0	13	GLY	2.4
13	AC	90	GLY	2.4
13	AC	150	GLY	2.4
26	AS	41	ASP	2.4
36	BB	113	HIS	2.4
32	AY	78	ALA	2.4
7	A6	45	LYS	2.4
44	BJ	3	LYS	2.4
55	BU	25	LYS	2.4
21	AN	138	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
11	AA	8	A	2.4
58	BY	71	A	2.4
18	AH	134	SER	2.4
3	A2	19	VAL	2.4
11	AA	2779	U	2.4
23	AP	8	PRO	2.4
38	BD	40	PRO	2.4
11	AA	654(B)	C	2.3
11	AA	2794	C	2.3
35	BA	848	C	2.3
56	BW	76	C	2.3
14	AD	42	GLY	2.3
23	AP	137	LYS	2.3
34	B2	12	HIS	2.3
49	BO	5	LYS	2.3
46	BL	112	ASP	2.3
11	AA	1089	G	2.3
17	AG	164	GLU	2.3
59	BZ	80	VAL	2.3
13	AC	181	PRO	2.3
26	AS	91	PRO	2.3
34	B2	3	PRO	2.3
11	AA	1096	A	2.3
11	AA	1509(A)	A	2.3
34	B2	123	LYS	2.3
35	BA	1179	A	2.3
44	BJ	19	SER	2.3
13	AC	18	LYS	2.3
18	AH	22	GLY	2.3
18	AH	51	ARG	2.3
25	AR	8	ARG	2.3
38	BD	127	THR	2.3
5	A4	6	HIS	2.3
41	BG	153	HIS	2.3
11	AA	271(L)	U	2.3
35	BA	84	U	2.3
11	AA	2163	C	2.3
34	B2	13	ASP	2.3
35	BA	201	C	2.3
35	BA	995	C	2.3
56	BW	13	C	2.3
34	B2	41	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
7	A6	24	GLU	2.3
59	BZ	194	GLU	2.3
35	BA	105	G	2.3
43	BI	53	VAL	2.3
13	AC	46	LYS	2.3
47	BM	120	LYS	2.3
1	A0	11	ARG	2.3
14	AD	244	ARG	2.3
18	AH	126	PRO	2.3
27	AT	29	ARG	2.3
47	BM	102	ARG	2.3
13	AC	179	SER	2.3
38	BD	2	GLY	2.3
44	BJ	23	ILE	2.3
55	BU	16	GLY	2.3
38	BD	181	MET	2.3
59	BZ	361	MET	2.3
59	BZ	363	MET	2.3
33	AZ	183	LEU	2.3
43	BI	29	ASN	2.3
53	BS	65	ASN	2.3
35	BA	1213	A	2.3
10	A9	12	ASP	2.3
35	BA	202	U	2.3
56	BV	21	U	2.3
58	BY	14	U	2.3
2	A1	75	GLU	2.3
21	AN	139	GLU	2.3
46	BL	127	GLU	2.3
35	BA	1019	C	2.3
13	AC	8	ARG	2.3
17	AG	112	PRO	2.3
18	AH	120	GLY	2.3
45	BK	40	ILE	2.3
43	BI	15	ALA	2.3
7	A6	47	THR	2.3
46	BL	80	HIS	2.3
3	A2	46	GLN	2.3
34	B2	40	ASP	2.3
45	BK	110	ASP	2.3
33	AZ	156	LYS	2.3
34	B2	124	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
46	BL	17	LYS	2.3
11	AA	2892	A	2.3
18	AH	97	ARG	2.3
29	AV	60	GLU	2.3
35	BA	414	A	2.3
43	BI	44	VAL	2.3
45	BK	126	ARG	2.3
11	AA	156	U	2.3
17	AG	163	ALA	2.3
18	AH	14	GLY	2.3
34	B2	2	ALA	2.3
11	AA	271(G)	C	2.3
35	BA	76	C	2.3
35	BA	623	C	2.3
2	A1	95	LEU	2.3
9	A8	62	LEU	2.3
31	AX	35	THR	2.3
33	AZ	125	LEU	2.3
34	B2	5	LEU	2.3
38	BD	186	LEU	2.3
38	BD	208	SER	2.3
38	BD	4	TYR	2.3
47	BM	87	TYR	2.3
7	A6	40	CYS	2.3
16	AF	2	LYS	2.3
17	AG	132	ASN	2.3
41	BG	78	ARG	2.3
44	BJ	79	ARG	2.3
26	AS	42	ASP	2.3
33	AZ	140	ASP	2.3
33	AZ	154	ASP	2.3
44	BJ	24	VAL	2.3
13	AC	151	GLU	2.2
15	AE	178	GLU	2.2
12	AB	56	G	2.2
12	AB	113	G	2.2
35	BA	858	G	2.2
35	BA	1124	G	2.2
58	BY	13	G	2.2
47	BM	9	ILE	2.2
2	A1	28	GLY	2.2
3	A2	72	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
13	AC	206	GLY	2.2
47	BM	85	GLY	2.2
34	B2	86	LEU	2.2
35	BA	461	A	2.2
44	BJ	87	THR	2.2
1	A0	19	LYS	2.2
12	AB	88	C	2.2
13	AC	210	ARG	2.2
23	AP	41	ARG	2.2
33	AZ	35	ARG	2.2
35	BA	1030(B)	C	2.2
36	BB	21	ARG	2.2
17	AG	27	ASN	2.2
18	AH	24	VAL	2.2
13	AC	12	GLU	2.2
13	AC	202	GLU	2.2
50	BP	68	ASP	2.2
59	BZ	243	GLU	2.2
13	AC	60	GLY	2.2
16	AF	128	ALA	2.2
23	AP	106	LEU	2.2
27	AT	25	GLY	2.2
44	BJ	86	MET	2.2
6	A5	37	LYS	2.2
17	AG	80	PHE	2.2
32	AY	81	LYS	2.2
35	BA	79	G	2.2
35	BA	460	G	2.2
36	BB	139	LYS	2.2
28	AU	92	ARG	2.2
43	BI	128	ARG	2.2
44	BJ	43	ARG	2.2
11	AA	363(F)	A	2.2
33	AZ	129	SER	2.2
16	AF	132	VAL	2.2
27	AT	34	VAL	2.2
38	BD	178	VAL	2.2
36	BB	240	GLN	2.2
33	AZ	132	ASN	2.2
14	AD	28	GLU	2.2
35	BA	71	C	2.2
35	BA	422	C	2.2

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Mol	Chain	Res	Type	RSRZ
35	BA	1284	C	2.2
9	A8	51	ALA	2.2
32	AY	100	ALA	2.2
34	B2	34	LEU	2.2
41	BG	12	LEU	2.2
48	BN	10	ALA	2.2
38	BD	46	LYS	2.2
17	AG	96	ARG	2.2
36	BB	97	TRP	2.2
5	A4	35	VAL	2.2
29	AV	46	VAL	2.2
32	AY	98	VAL	2.2
43	BI	108	VAL	2.2
23	AP	133	SER	2.2
33	AZ	118	GLN	2.2
12	AB	16	G	2.2
16	AF	170	LEU	2.2
17	AG	48	GLU	2.2
18	AH	34	GLU	2.2
34	B2	142	GLU	2.2
35	BA	64	G	2.2
33	AZ	163	LEU	2.2
35	BA	994	A	2.2
35	BA	1256	A	2.2
58	BY	24	G	2.2
36	BB	138	LEU	2.2
15	AE	204	ALA	2.2
41	BG	133	GLY	2.2
32	AY	33	LYS	2.2
45	BK	11	LYS	2.2
9	A8	30	ARG	2.2
25	AR	2	ARG	2.2
11	AA	2137	C	2.2
7	A6	52	VAL	2.2
41	BG	87	VAL	2.2
48	BN	42	ILE	2.2
50	BP	11	SER	2.2
7	A6	10	LEU	2.2
36	BB	134	GLU	2.2
10	A9	15	LYS	2.2
17	AG	44	GLY	2.2
17	AG	179	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
22	AO	53	LYS	2.2
40	BF	100	ASN	2.2
11	AA	1082	U	2.2
53	BS	42	PRO	2.2
59	BZ	3	GLY	2.2
17	AG	178	PHE	2.2
38	BD	110	PHE	2.2
38	BD	144	ASP	2.2
11	AA	2602	A	2.2
35	BA	411	A	2.2
35	BA	1442(B)	A	2.2
11	AA	1176	G	2.2
11	AA	1888	G	2.2
11	AA	2307	G	2.2
56	BW	53	G	2.2
23	AP	71	VAL	2.1
12	AB	109	C	2.1
13	AC	71	GLN	2.1
27	AT	90	GLN	2.1
43	BI	102	LEU	2.1
3	A2	45	SER	2.1
6	A5	56	LYS	2.1
18	AH	62	LYS	2.1
32	AY	17	SER	2.1
32	AY	88	LYS	2.1
36	BB	63	MET	2.1
13	AC	88	GLU	2.1
14	AD	23	GLU	2.1
36	BB	49	GLU	2.1
43	BI	55	ALA	2.1
16	AF	207	GLY	2.1
26	AS	60	GLY	2.1
46	BL	19	ARG	2.1
15	AE	55	ASN	2.1
33	AZ	116	VAL	2.1
34	B2	82	HIS	2.1
37	BC	86	VAL	2.1
44	BJ	34	VAL	2.1
11	AA	529	A	2.1
34	B2	112	TYR	2.1
32	AY	90	LEU	2.1
38	BD	196	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
45	BK	123	LYS	2.1
11	AA	1117	G	2.1
14	AD	262	ARG	2.1
58	BY	12	G	2.1
26	AS	109	GLY	2.1
27	AT	134	GLU	2.1
29	AV	53	GLU	2.1
34	B2	91	GLY	2.1
36	BB	231	GLU	2.1
39	BE	154	GLY	2.1
47	BM	8	GLU	2.1
55	BU	2	GLY	2.1
11	AA	645	C	2.1
14	AD	27	THR	2.1
30	AW	110	LYS	2.1
34	B2	14	TYR	2.1
36	BB	133	LYS	2.1
38	BD	27	TYR	2.1
53	BS	28	LYS	2.1
43	BI	43	ALA	2.1
47	BM	72	ALA	2.1
54	BT	94	ALA	2.1
3	A2	27	GLU	2.1
5	A4	34	GLU	2.1
7	A6	41	PRO	2.1
11	AA	1204	A	2.1
11	AA	1528(A)	A	2.1
12	AB	66	A	2.1
23	AP	53	GLY	2.1
32	AY	80	GLY	2.1
33	AZ	108	PRO	2.1
33	AZ	159	PRO	2.1
34	B2	135	GLU	2.1
35	BA	1287	A	2.1
38	BD	16	GLY	2.1
44	BJ	93	GLY	2.1
44	BJ	97	GLU	2.1
16	AF	13	SER	2.1
25	AR	11	ASN	2.1
18	AH	99	VAL	2.1
35	BA	530	G	2.1
11	AA	652	C	2.1

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Mol	Chain	Res	Type	RSRZ
11	AA	1100	C	2.1
11	AA	1511	C	2.1
35	BA	339	C	2.1
35	BA	341	C	2.1
35	BA	442	C	2.1
56	BW	49	C	2.1
56	BW	70	C	2.1
14	AD	35	LYS	2.1
21	AN	130	HIS	2.1
21	AN	137	LYS	2.1
6	A5	49	CYS	2.1
17	AG	120	LEU	2.1
34	B2	53	LEU	2.1
17	AG	115	ARG	2.1
5	A4	43	TYR	2.1
11	AA	1078	U	2.1
35	BA	498	U	2.1
27	AT	92	GLY	2.1
33	AZ	147	GLY	2.1
43	BI	30	GLY	2.1
34	B2	127	GLU	2.1
10	A9	16	VAL	2.1
11	AA	548	A	2.1
2	A1	21	ARG	2.1
15	AE	66	HIS	2.1
18	AH	69	ARG	2.1
18	AH	132	ARG	2.1
23	AP	148	LEU	2.1
34	B2	138	ARG	2.1
36	BB	23	ARG	2.1
36	BB	137	ARG	2.1
44	BJ	40	LEU	2.1
13	AC	118	ASP	2.1
25	AR	69	ASP	2.1
27	AT	107	ASP	2.1
40	BF	70	ASP	2.1
44	BJ	92	THR	2.1
12	AB	4	C	2.1
11	AA	2318	G	2.1
12	AB	24	G	2.1
34	B2	10	ALA	2.1
40	BF	99	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
56	BW	30	G	2.1
38	BD	45	GLN	2.1
59	BZ	328	GLY	2.1
13	AC	85	GLU	2.1
13	AC	87	GLU	2.1
17	AG	167	GLU	2.1
32	AY	82	PRO	2.1
18	AH	44	VAL	2.0
26	AS	44	LYS	2.0
29	AV	44	LYS	2.0
38	BD	121	VAL	2.0
47	BM	31	LYS	2.0
26	AS	52	SER	2.0
2	A1	11	ARG	2.0
5	A4	22	ILE	2.0
26	AS	56	LEU	2.0
26	AS	101	LEU	2.0
43	BI	47	LEU	2.0
11	AA	761	A	2.0
22	AO	51	ALA	2.0
24	AQ	138	ASP	2.0
26	AS	72	ALA	2.0
29	AV	26	ASP	2.0
44	BJ	32	ALA	2.0
13	AC	121	GLY	2.0
15	AE	186	GLY	2.0
23	AP	69	GLY	2.0
43	BI	49	PRO	2.0
17	AG	137	GLU	2.0
35	BA	990	C	2.0
46	BL	47	LYS	2.0
59	BZ	286	VAL	2.0
11	AA	363	G	2.0
35	BA	78	G	2.0
36	BB	130	ARG	2.0
38	BD	10	ARG	2.0
38	BD	35	ARG	2.0
38	BD	36	ARG	2.0
38	BD	194	LEU	2.0
38	BD	28	SER	2.0
38	BD	70	ILE	2.0
11	AA	9	U	2.0

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Mol	Chain	Res	Type	RSRZ
38	BD	33	MET	2.0
13	AC	89	ALA	2.0
14	AD	40	THR	2.0
23	AP	73	GLY	2.0
36	BB	17	PHE	2.0
49	BO	89	GLY	2.0
18	AH	77	LYS	2.0
26	AS	33	LYS	2.0
43	BI	21	PRO	2.0
46	BL	91	LYS	2.0
11	AA	2208	A	2.0
34	B2	52	GLU	2.0
35	BA	495	A	2.0
50	BP	83	GLU	2.0
4	A3	29	ARG	2.0
33	AZ	80	ARG	2.0
21	AN	33	LEU	2.0
18	AH	92	ILE	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
62	KIR	BZ	1002	57/57	0.89	0.29	101,117,134,134	0
61	MG	BZ	1001	1/1	0.94	0.12	25,25,25,25	0
63	GDP	BZ	1003	28/28	0.96	0.08	36,43,44,45	0
61	MG	AA	3001	1/1	0.97	0.15	10,10,10,10	0
60	ZN	A9	1001	1/1	0.99	0.02	58,58,58,58	0

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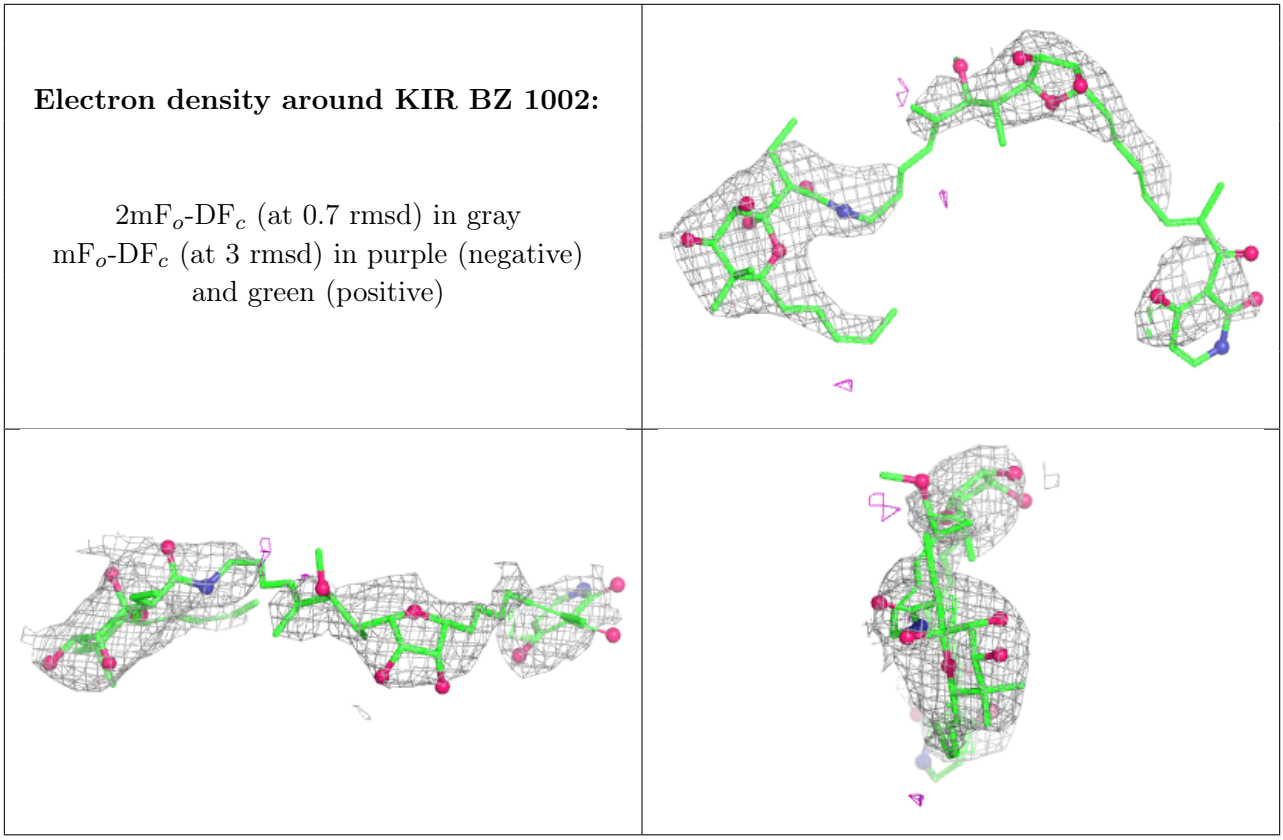
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
60	ZN	BD	1001	1/1	0.99	0.11	59,59,59,59	0
60	ZN	BN	1001	1/1	1.00	0.02	51,51,51,51	0

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.

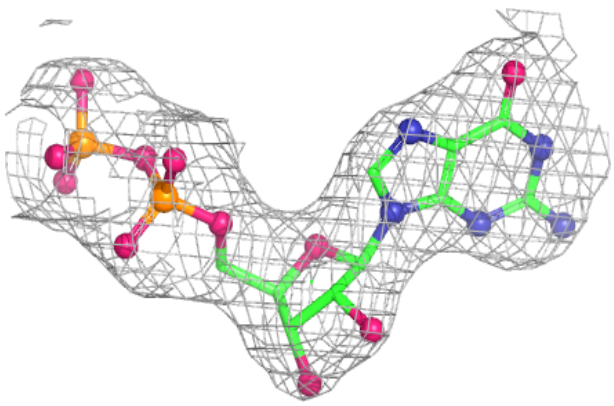
Electron density around KIR BZ 1002:

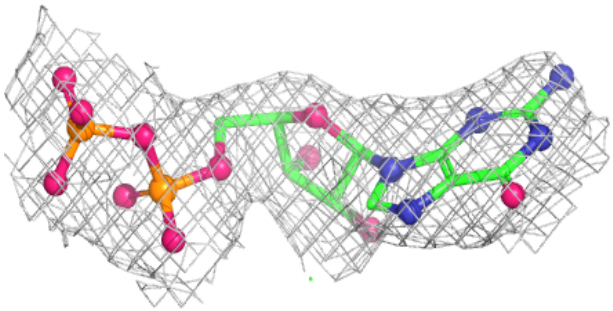
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

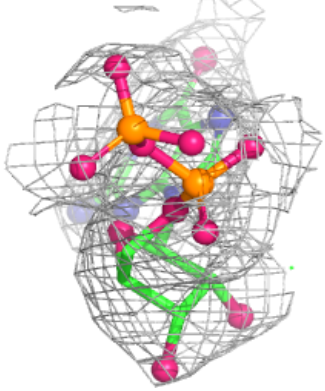


Electron density around GDP BZ 1003:

$2mF_o$-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.