Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 07:46 AM UTC

PDB ID	:	4V8Z / pdb_00004v8z
EMDB ID	:	EMD-2422
Title	:	Cryo-EM reconstruction of the 80S-eIF5B-Met-itRNAMet Eukaryotic Translation Initiation Complex
Authors	:	Fernandez, I.S.; Bai, X.C.; Hussain, T.; Kelley, A.C.; Lorsch, J.R.; Ramakrishnan, V.; Scheres, S.H.W.
Deposited on	:	2013-07-20
Resolution	:	6.60 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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:

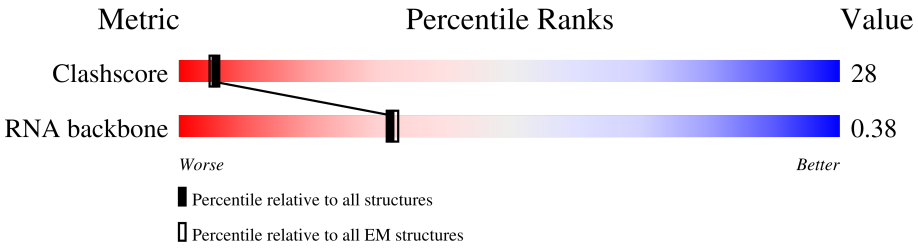
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

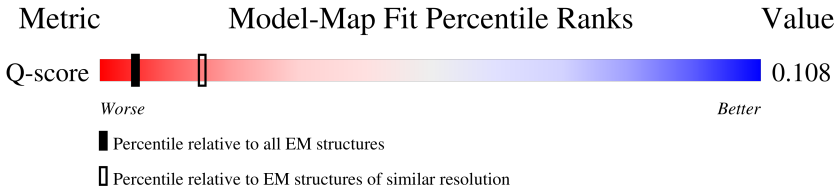
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 6.60 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
RNA backbone	8273	3508	-
Q-score	-	25397	531 (6.10 - 7.10)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A0	119	51% 38% 41% • 18%
2	A1	82	48% 60% 32% 7% •
3	A2	67	82% 40% 54% 6%
4	A3	56	48% 45% 46% • 5%
5	A4	63	52% 60% 35% 5%

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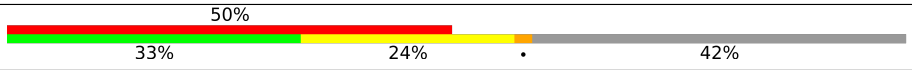
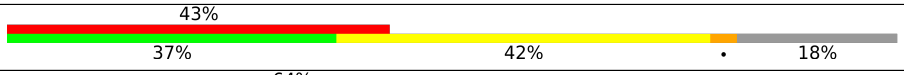
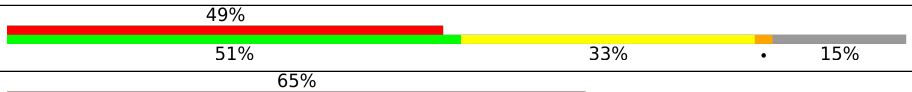
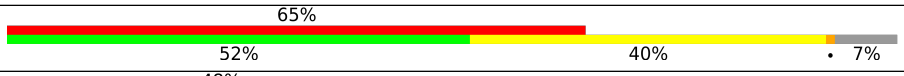
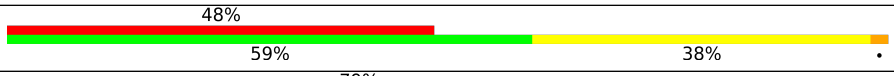
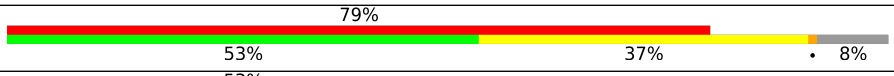
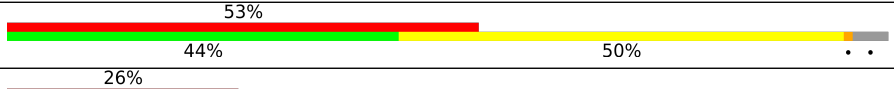
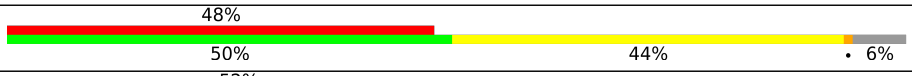
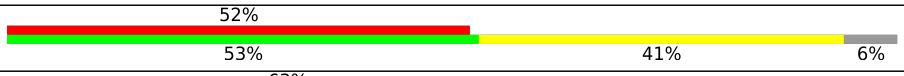
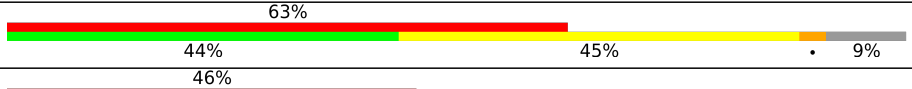
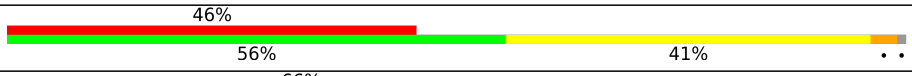
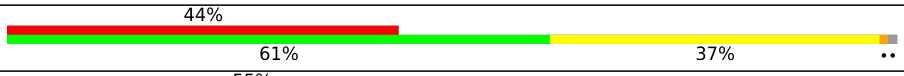
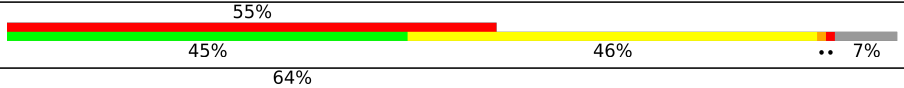
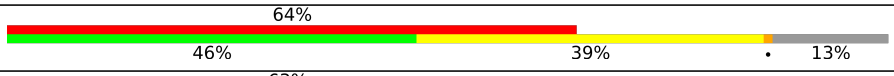
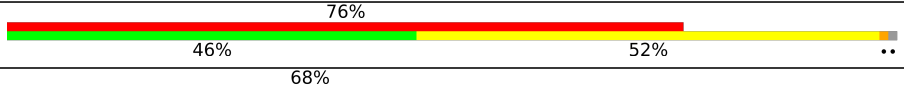
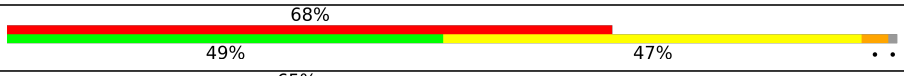
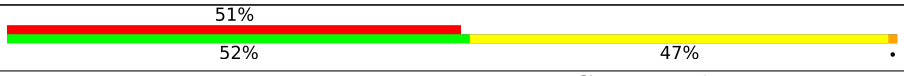
Mol	Chain	Length	Quality of chain
6	A5	152	
7	A6	319	
8	A7	273	
9	AA	252	
10	AB	255	
11	AC	254	
12	AD	240	
13	AE	261	
14	AF	225	
15	AG	236	
16	AH	190	
17	AI	200	
18	AJ	197	
19	AK	105	
20	AL	156	
21	AM	143	
22	AN	151	
23	AO	137	
24	AP	142	
25	AQ	143	
26	AR	136	
27	AS	146	
28	AT	144	
29	AU	121	
30	AV	87	

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Mol	Chain	Length	Quality of chain
31	AW	130	35% 47% 48%
32	AX	145	42% 59% 39%
33	AY	135	47% 61% 36%
34	AZ	108	61% 23% 38% 35%
35	BA	253	53% 56% 42%
36	BB	386	36% 59% 37%
37	BC	361	29% 59% 36% 5%
38	BD	296	27% 59% 38%
39	BE	175	20% 66% 22% 10%
40	BF	243	14% 60% 28% 8%
41	BG	255	42% 44% 44% 9%
42	BH	191	31% 53% 43%
43	BI	220	27% 61% 32%
44	BJ	173	29% 49% 43% 6%
45	BK	174	51% 86% 12%
46	BL	198	41% 57% 37%
47	BM	137	18% 64% 35%
48	BN	203	48% 55% 42%
49	BO	218	30% 68% 30%
50	BP	183	33% 56% 26% 15%
51	BQ	185	30% 68% 29%
52	BR	188	62% 61% 39%
53	BS	172	24% 64% 32%
54	BT	159	29% 60% 37%
55	BU	120	39% 52% 25% 18%

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Mol	Chain	Length	Quality of chain
56	BV	136	46% 67% 31%
57	BW	155	70% 63% 24% 13%
58	BX	141	47% 54% 31% 15%
59	BY	126	33% 60% 38%
60	BZ	135	44% 45% 53%
61	Ba	148	39% 49% 40% 11%
62	Bb	58	41% 48% 38% 14%
63	Bc	104	45% 54% 41%
64	Bd	112	40% 67% 28%
65	Be	129	33% 57% 36% 6%
66	Bf	106	28% 62% 32% 6%
67	Bg	120	50% 52% 39% 7%
68	Bh	119	34% 58% 42%
69	Bi	99	45% 63% 37%
70	Bj	87	46% 48% 51%
71	Bk	77	52% 62% 36%
72	Bl	50	58% 52% 48%
73	Bm	128	14% 24% 15% 59%
74	Bn	25	80% 36% 56% 8%
75	Bo	105	38% 71% 29%
76	Bq	312	21% 33% 11% 54%
77	Br	47	91% 98%
78	Bs	46	87% 100%
79	B2	1800	30% 31% 45% 23%
80	B5	3396	6% 42% 35% 14% 7%

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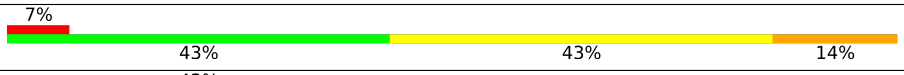
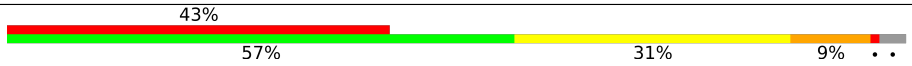
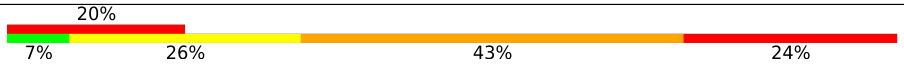
Mol	Chain	Length	Quality of chain
81	B7	121	
82	B8	158	
83	CV	586	
84	CW	76	
85	CX	3	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
88	OHX	A3	102	-	-	X	-
88	OHX	AC	301	-	-	X	-
88	OHX	B2	1907	-	-	X	-
88	OHX	B2	1915	-	-	X	-
88	OHX	B2	1918	-	-	X	-
88	OHX	B2	1921	-	-	X	-
88	OHX	B2	1922	-	-	X	-
88	OHX	B2	1939	-	-	X	-
88	OHX	B2	1953	-	-	X	-
88	OHX	B2	1960	-	-	X	-
88	OHX	B2	1962	-	-	X	-
88	OHX	B2	1963	-	-	X	-
88	OHX	B2	1967	-	-	X	-
88	OHX	B2	1968	-	-	X	-
88	OHX	B2	1973	-	-	X	-
88	OHX	B2	1976	-	-	X	-
88	OHX	B2	1981	-	-	X	-
88	OHX	B2	1987	-	-	X	-
88	OHX	B2	2011	-	-	X	-
88	OHX	B2	2014	-	-	X	-
88	OHX	B2	2025	-	-	X	-
88	OHX	B2	2044	-	-	X	-
88	OHX	B2	2048	-	-	X	-
88	OHX	B2	2062	-	-	X	-
88	OHX	B2	2066	-	-	X	-
88	OHX	B2	2069	-	-	X	-
88	OHX	B2	2071	-	-	X	-
88	OHX	B2	2077	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
88	OHX	B2	2081	-	-	X	-
88	OHX	B7	203	-	-	X	-
88	OHX	B7	219	-	-	X	-
88	OHX	BR	201	-	-	X	-
88	OHX	CV	601	-	-	X	-
89	GCP	CV	602	-	-	X	-

2 Entry composition

There are 89 unique types of molecules in this entry. The entry contains 219371 atoms, of which 8407 are hydrogens and 0 are deuteriums.

In the tables below, 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 40S RIBOSOMAL PROTEIN S26-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A0	97	769	475	160	129	5	0	0

- Molecule 2 is a protein called 40S RIBOSOMAL PROTEIN S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	A1	81	610	382	110	113	5	0	0

- Molecule 3 is a protein called 40S RIBOSOMAL PROTEIN S28-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A2	63	497	306	99	91	1	0	0

- Molecule 4 is a protein called 40S RIBOSOMAL PROTEIN S29-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	A3	53	442	274	92	72	4	0	0

- Molecule 5 is a protein called 40S RIBOSOMAL PROTEIN S30-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	A4	60	475	299	98	77	1	0	0

- Molecule 6 is a protein called UBIQUITIN-40S RIBOSOMAL PROTEIN S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	A5	71	516	328	93	91	4	0	0

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A5	82	UNK	LYS	SEE REMARK 999	UNP P05759
A5	83	UNK	LYS	SEE REMARK 999	UNP P05759
A5	84	UNK	VAL	SEE REMARK 999	UNP P05759
A5	85	UNK	TYR	SEE REMARK 999	UNP P05759
A5	86	UNK	THR	SEE REMARK 999	UNP P05759
A5	87	UNK	THR	SEE REMARK 999	UNP P05759
A5	88	UNK	PRO	SEE REMARK 999	UNP P05759
A5	89	UNK	LYS	SEE REMARK 999	UNP P05759
A5	90	UNK	LYS	SEE REMARK 999	UNP P05759
A5	91	UNK	ILE	SEE REMARK 999	UNP P05759
A5	92	UNK	LYS	SEE REMARK 999	UNP P05759
A5	93	UNK	HIS	SEE REMARK 999	UNP P05759
A5	94	UNK	LYS	SEE REMARK 999	UNP P05759
A5	95	UNK	HIS	SEE REMARK 999	UNP P05759
A5	96	UNK	LYS	SEE REMARK 999	UNP P05759
A5	97	UNK	LYS	SEE REMARK 999	UNP P05759
A5	98	UNK	VAL	SEE REMARK 999	UNP P05759
A5	99	UNK	LYS	SEE REMARK 999	UNP P05759
A5	100	UNK	LEU	SEE REMARK 999	UNP P05759
A5	101	UNK	ALA	SEE REMARK 999	UNP P05759

- Molecule 7 is a protein called GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-LIKE PROTEIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	A6	318	2437	1541	418	470	8	0	0

- Molecule 8 is a protein called SUPPRESSOR PROTEIN STM1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
8	A7	159	1105	653	221	231	0	0

There are 37 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A7	9	UNK	GLY	SEE REMARK 999	UNP P39015
A7	10	UNK	ASN	SEE REMARK 999	UNP P39015
A7	11	UNK	ASP	SEE REMARK 999	UNP P39015
A7	12	UNK	VAL	SEE REMARK 999	UNP P39015

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Chain	Residue	Modelled	Actual	Comment	Reference
A7	13	UNK	GLU	SEE REMARK 999	UNP P39015
A7	14	UNK	ASP	SEE REMARK 999	UNP P39015
A7	15	UNK	ALA	SEE REMARK 999	UNP P39015
A7	16	UNK	ASP	SEE REMARK 999	UNP P39015
A7	17	UNK	VAL	SEE REMARK 999	UNP P39015
A7	18	UNK	VAL	SEE REMARK 999	UNP P39015
A7	19	UNK	VAL	SEE REMARK 999	UNP P39015
A7	20	UNK	LEU	SEE REMARK 999	UNP P39015
A7	151	UNK	LEU	SEE REMARK 999	UNP P39015
A7	152	UNK	GLN	SEE REMARK 999	UNP P39015
A7	153	UNK	ASP	SEE REMARK 999	UNP P39015
A7	154	UNK	TYR	SEE REMARK 999	UNP P39015
A7	155	UNK	LEU	SEE REMARK 999	UNP P39015
A7	156	UNK	ASN	SEE REMARK 999	UNP P39015
A7	157	UNK	GLN	SEE REMARK 999	UNP P39015
A7	158	UNK	GLN	SEE REMARK 999	UNP P39015
A7	159	UNK	ALA	SEE REMARK 999	UNP P39015
A7	160	UNK	ASN	SEE REMARK 999	UNP P39015
A7	161	UNK	ASN	SEE REMARK 999	UNP P39015
A7	162	UNK	GLN	SEE REMARK 999	UNP P39015
A7	163	UNK	PHE	SEE REMARK 999	UNP P39015
A7	164	UNK	ASN	SEE REMARK 999	UNP P39015
A7	165	UNK	LYS	SEE REMARK 999	UNP P39015
A7	166	UNK	VAL	SEE REMARK 999	UNP P39015
A7	167	UNK	PRO	SEE REMARK 999	UNP P39015
A7	168	UNK	GLU	SEE REMARK 999	UNP P39015
A7	169	UNK	ALA	SEE REMARK 999	UNP P39015
A7	170	UNK	LYS	SEE REMARK 999	UNP P39015
A7	171	UNK	LYS	SEE REMARK 999	UNP P39015
A7	172	UNK	VAL	SEE REMARK 999	UNP P39015
A7	173	UNK	GLU	SEE REMARK 999	UNP P39015
A7	174	UNK	LEU	SEE REMARK 999	UNP P39015
A7	175	UNK	ASP	SEE REMARK 999	UNP P39015

- Molecule 9 is a protein called 40S RIBOSOMAL PROTEIN S0-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AA	206	Total	C	N	O	S	0	0
			1577	1014	278	283	2		

- Molecule 10 is a protein called 40S RIBOSOMAL PROTEIN S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AB	214	Total	C	N	O	S	0	0
			1709	1084	310	311	4		

- Molecule 11 is a protein called 40S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AC	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 12 is a protein called 40S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AD	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 13 is a protein called 40S RIBOSOMAL PROTEIN S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AE	260	Total	C	N	O	S	0	0
			2068	1316	389	360	3		

- Molecule 14 is a protein called 40S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AF	206	Total	C	N	O	S	0	0
			1609	1007	300	299	3		

- Molecule 15 is a protein called 40S RIBOSOMAL PROTEIN S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AG	226	Total	C	N	O	S	0	0
			1799	1129	346	321	3		

- Molecule 16 is a protein called 40S RIBOSOMAL PROTEIN S7-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	AH	184	Total	C	N	O	0	0
			1481	951	265	265		

- Molecule 17 is a protein called 40S RIBOSOMAL PROTEIN S8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AI	188	Total	C	N	O	S	0	0
			1489	925	298	264	2		

- Molecule 18 is a protein called 40S RIBOSOMAL PROTEIN S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AJ	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 19 is a protein called 40S RIBOSOMAL PROTEIN S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AK	96	Total	C	N	O	S	0	0
			772	499	126	145	2		

- Molecule 20 is a protein called 40S RIBOSOMAL PROTEIN S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AL	155	Total	C	N	O	S	0	0
			1213	774	230	206	3		

- Molecule 21 is a protein called 40S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AM	124	Total	C	N	O	S	0	0
			890	560	156	172	2		

- Molecule 22 is a protein called 40S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AN	150	Total	C	N	O	S	0	0
			1192	759	224	207	2		

- Molecule 23 is a protein called 40S RIBOSOMAL PROTEIN S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AO	127	Total	C	N	O	S	0	0
			891	545	182	163	1		

- Molecule 24 is a protein called 40S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AP	124	Total	C	N	O	S	0	0
			977	622	182	166	7		

- Molecule 25 is a protein called 40S RIBOSOMAL PROTEIN S16-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	AQ	141	Total	C	N	O	0	0
			1105	708	203	194		

- Molecule 26 is a protein called 40S RIBOSOMAL PROTEIN S17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AR	120	Total	C	N	O	S	0	0
			926	577	177	170	2		

- Molecule 27 is a protein called 40S RIBOSOMAL PROTEIN S18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AS	145	Total	C	N	O	S	0	0
			1192	743	237	210	2		

- Molecule 28 is a protein called 40S RIBOSOMAL PROTEIN S19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AT	143	Total	C	N	O	S	0	0
			1112	694	208	208	2		

- Molecule 29 is a protein called 40S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	AU	107	Total	C	N	O	S	0	0
			855	539	156	159	1		

- Molecule 30 is a protein called 40S RIBOSOMAL PROTEIN S21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	AV	87	Total	C	N	O	S	0	0
			684	420	125	137	2		

- Molecule 31 is a protein called 40S RIBOSOMAL PROTEIN S22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	AW	129	Total	C	N	O	S	0	0
			1021	650	188	180	3		

- Molecule 32 is a protein called 40S RIBOSOMAL PROTEIN S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	AX	144	Total	C	N	O	S	0	0
			1121	708	220	191	2		

- Molecule 33 is a protein called 40S RIBOSOMAL PROTEIN S24-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
33	AY	134	Total	C	N	O	0	0
			1073	676	208	189		

- Molecule 34 is a protein called 40S RIBOSOMAL PROTEIN S25-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
34	AZ	70	Total	C	N	O	0	0
			563	360	104	99		

- Molecule 35 is a protein called 60S RIBOSOMAL PROTEIN L2-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BA	252	Total	C	N	O	S	0	0
			1912	1190	388	333	1		

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BB	386	Total	C	N	O	S	0	0
			3075	1950	584	533	8		

- Molecule 37 is a protein called 60S RIBOSOMAL PROTEIN L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BC	361	Total	C	N	O	S	0	0
			2748	1729	522	494	3		

- Molecule 38 is a protein called 60S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	BD	294	Total	C	N	O	S	0	0
			2359	1489	412	456	2		

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	BE	157	Total	C	N	O	S	0	0
			1248	806	224	217	1		

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	BF	223	Total	C	N	O	S	0	0
			1791	1155	325	310	1		

- Molecule 41 is a protein called 60S RIBOSOMAL PROTEIN L8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BG	231	Total	C	N	O	S	0	0
			1763	1130	316	314	3		

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BH	191	Total	C	N	O	S	0	0
			1518	963	274	277	4		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	BI	213	Total	C	N	O	S	0	0
			1722	1094	325	297	6		

- Molecule 44 is a protein called 60S RIBOSOMAL PROTEIN L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BJ	169	Total	C	N	O	S	0	0
			1353	847	253	249	4		

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	BK	153	Total	C	H	N	O	0	3
			1509	450	756	153	150		

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN L13-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
46	BL	194	Total	C	N	O	0	0
			1548	965	316	267		

- Molecule 47 is a protein called 60S RIBOSOMAL PROTEIN L14-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BM	137	Total	C	N	O	S	0	0
			1059	678	200	179	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BM	89	ALA	GLY	conflict	UNP P38754

- Molecule 48 is a protein called 60S RIBOSOMAL PROTEIN L15-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BN	203	Total	C	N	O	S	0	0
			1720	1077	361	281	1		

- Molecule 49 is a protein called 60S RIBOSOMAL PROTEIN L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BO	197	Total	C	N	O	S	197	0
			3119	2008	581	528	2		

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BO	3	VAL	SER	microheterogeneity	UNP P26784
BO	4	GLU	GLN	microheterogeneity	UNP P26784
BO	11	GLY	ALA	microheterogeneity	UNP P26784
BO	13	GLY	ASP	microheterogeneity	UNP P26784
BO	16	VAL	LEU	microheterogeneity	UNP P26784
BO	22	VAL	THR	microheterogeneity	UNP P26784
BO	23	VAL	ILE	microheterogeneity	UNP P26784

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Chain	Residue	Modelled	Actual	Comment	Reference
BO	27	LEU	VAL	microheterogeneity	UNP P26784
BO	40	GLU	ALA	microheterogeneity	UNP P26784
BO	80	PHE	LEU	microheterogeneity	UNP P26784
BO	84	LEU	ILE	microheterogeneity	UNP P26784
BO	104	VAL	ILE	microheterogeneity	UNP P26784
BO	158	ALA	ASP	microheterogeneity	UNP P26784
BO	163	SER	ARG	microheterogeneity	UNP P26784
BO	179	ALA	SER	microheterogeneity	UNP P26784
BO	182	ASN	SER	microheterogeneity	UNP P26784
BO	184	THR	ALA	microheterogeneity	UNP P26784
BO	186	ALA	SER	microheterogeneity	UNP P26784
BO	196	ALA	SER	microheterogeneity	UNP P26784
BO	197	LEU	PHE	microheterogeneity	UNP P26784

- Molecule 50 is a protein called 60S RIBOSOMAL PROTEIN L17-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
50	BP	155	Total	C	N	O	0	0
			1227	764	238	225		

- Molecule 51 is a protein called 60S RIBOSOMAL PROTEIN L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	BQ	185	Total	C	N	O	S	0	0
			1441	908	290	241	2		

- Molecule 52 is a protein called 60S RIBOSOMAL PROTEIN L19-B.

Mol	Chain	Residues	Atoms				AltConf	Trace
52	BR	188	Total	C	N	O	0	0
			1521	935	326	260		

- Molecule 53 is a protein called 60S RIBOSOMAL PROTEIN L20-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	BS	172	Total	C	N	O	S	0	0
			1445	930	267	244	4		

- Molecule 54 is a protein called 60S RIBOSOMAL PROTEIN L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BT	159	Total	C	N	O	S	0	0
			1276	805	246	221	4		

- Molecule 55 is a protein called 60S RIBOSOMAL PROTEIN L22-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
55	BU	98	Total	C	N	O	0	0
			778	505	127	146		

- Molecule 56 is a protein called 60S RIBOSOMAL PROTEIN L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	BV	136	Total	C	N	O	S	0	0
			1003	628	189	179	7		

- Molecule 57 is a protein called 60S RIBOSOMAL PROTEIN L24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	BW	135	Total	C	N	O	S	0	0
			1038	651	206	180	1		

- Molecule 58 is a protein called 60S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	BX	120	Total	C	N	O	S	0	0
			959	617	168	172	2		

- Molecule 59 is a protein called 60S RIBOSOMAL PROTEIN L26-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
59	BY	126	Total	C	N	O	0	0
			993	625	192	176		

- Molecule 60 is a protein called 60S RIBOSOMAL PROTEIN L27-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
60	BZ	135	Total	C	N	O	0	0
			1092	710	202	180		

- Molecule 61 is a protein called 60S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	Ba	148	Total	C	N	O	S	0	0
			1173	749	231	190	3		

- Molecule 62 is a protein called 60S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
62	Bb	58	Total	C	N	O	0	0
			462	289	100	73		

- Molecule 63 is a protein called 60S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Bc	100	Total	C	N	O	S	0	0
			767	492	128	146	1		

- Molecule 64 is a protein called 60S RIBOSOMAL PROTEIN L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Bd	109	Total	C	N	O	S	0	0
			883	559	167	156	1		

- Molecule 65 is a protein called 60S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Be	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 66 is a protein called 60S RIBOSOMAL PROTEIN L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Bf	106	Total	C	N	O	S	0	0
			850	540	165	144	1		

- Molecule 67 is a protein called 60S RIBOSOMAL PROTEIN L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Bg	112	Total	C	N	O	S	0	0
			880	545	179	152	4		

- Molecule 68 is a protein called 60S RIBOSOMAL PROTEIN L35-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Bh	119	Total	C	N	O	S	0	0
			965	612	185	167	1		

- Molecule 69 is a protein called 60S RIBOSOMAL PROTEIN L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Bi	99	Total	C	N	O	S	0	0
			770	481	156	131	2		

- Molecule 70 is a protein called 60S RIBOSOMAL PROTEIN L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Bj	87	Total	C	N	O	S	0	0
			681	414	148	114	5		

- Molecule 71 is a protein called 60S RIBOSOMAL PROTEIN L38.

Mol	Chain	Residues	Atoms				AltConf	Trace
71	Bk	77	Total	C	N	O	0	0
			608	388	114	106		

- Molecule 72 is a protein called 60S RIBOSOMAL PROTEIN L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Bl	50	Total	C	N	O	S	0	0
			436	272	97	65	2		

- Molecule 73 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Bm	52	Total	C	N	O	S	0	0
			417	259	86	67	5		

- Molecule 74 is a protein called 60S RIBOSOMAL PROTEIN L41-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Bn	25	Total	C	N	O	S	0	0
			233	142	63	27	1		

- Molecule 75 is a protein called 60S RIBOSOMAL PROTEIN L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Bo	105	Total	C	N	O	S	0	0
			847	534	170	138	5		

- Molecule 76 is a protein called 60S ACIDIC RIBOSOMAL PROTEIN P0.

Mol	Chain	Residues	Atoms						AltConf	Trace
76	Bq	145	Total	C	H	N	O	S	0	2
			2185	683	1110	194	195	3		

- Molecule 77 is a protein called 60S ACIDIC RIBOSOMAL PROTEIN P1.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Br	47	Total	C	H	N	O	0	0
			473	141	237	47	48		

- Molecule 78 is a protein called 60S ACIDIC RIBOSOMAL PROTEIN P2.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Bs	46	Total	C	H	N	O	0	0
			463	138	232	46	47		

- Molecule 79 is a RNA chain called 18S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	B2	1781	Total	C	N	O	P	1	0
			37835	16910	6661	12482	1782		

- Molecule 80 is a RNA chain called 25S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
80	B5	3147	Total	C	H	N	O	P	0	0
			67972	30066	664	12132	21965	3145		

- Molecule 81 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	B7	121	Total	C	N	O	P	0	0
			2579	1152	461	845	121		

- Molecule 82 is a RNA chain called 5.8S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	B8	158	Total	C	N	O	P	0	0
			3353	1500	586	1109	158		

- Molecule 83 is a protein called EUKARYOTIC TRANSLATION INITIATION FACTOR 5B, PROBABLE TRANSLATION INITIATION FACTOR IF-2.

Mol	Chain	Residues	Atoms						AltConf	Trace
83	CV	570	Total	C	H	N	O	S	0	2
			9036	2819	4585	766	847	19		

There are 11 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CV	340	ASP	-	linker	UNP P39730
CV	341	LEU	-	linker	UNP P39730
CV	342	THR	-	linker	UNP P39730
CV	343	GLY	-	linker	UNP P39730
CV	344	LEU	-	linker	UNP P39730
CV	345	LEU	-	linker	UNP P39730
CV	346	ASP	-	linker	UNP P39730
CV	347	SER	-	linker	UNP P39730
CV	348	VAL	-	linker	UNP P39730
CV	349	ASP	-	linker	UNP P39730
CV	350	THR	-	linker	UNP P39730

- Molecule 84 is a RNA chain called EUKARYOTIC RIBOSOMAL PI TRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
84	CW	76	Total	C	H	N	O	P	0	0
			2403	721	789	285	533	75		

- Molecule 85 is a RNA chain called 5'-R(*AP*UP*GP)-3'.

Mol	Chain	Residues	Atoms						AltConf	Trace
85	CX	3	Total	C	H	N	O	P	0	0
			96	29	34	12	19	2		

- Molecule 86 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
86	A0	1	Total	Zn	0
			1	1	

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Mol	Chain	Residues	Atoms	AltConf
86	A1	1	Total Zn 1 1	0
86	A3	1	Total Zn 1 1	0
86	A5	1	Total Zn 1 1	0
86	Bj	1	Total Zn 1 1	0
86	Bm	1	Total Zn 1 1	0

- Molecule 87 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
87	A0	2	Total Mg 2 2	0
87	A3	3	Total Mg 3 3	0
87	A5	1	Total Mg 1 1	0
87	AB	1	Total Mg 1 1	0
87	AC	2	Total Mg 2 2	0
87	AE	1	Total Mg 1 1	0
87	AG	1	Total Mg 1 1	0
87	AI	1	Total Mg 1 1	0
87	AJ	1	Total Mg 1 1	0
87	AL	2	Total Mg 2 2	0
87	AN	1	Total Mg 1 1	0
87	AP	1	Total Mg 1 1	0
87	AS	1	Total Mg 1 1	0
87	AU	1	Total Mg 1 1	0

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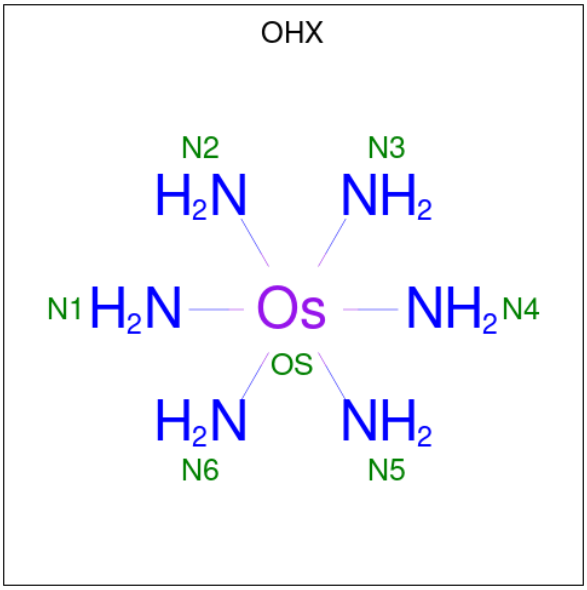
Mol	Chain	Residues	Atoms	AltConf
87	BD	4	Total Mg 4 4	0
87	BF	1	Total Mg 1 1	0
87	BS	3	Total Mg 3 3	0
87	B2	168	Total Mg 168 168	0
87	B5	3	Total Mg 3 3	0
87	B7	27	Total Mg 27 27	0
87	CW	1	Total Mg 1 1	0

- Molecule 88 is osmium (III) hexammine (CCD ID: OHX) (formula: $H_{12}N_6Os$).



Mol	Chain	Residues	Atoms	AltConf
88	A3	1	Total N Os 7 6 1	0
88	A6	1	Total N Os 7 6 1	0
88	AC	1	Total N Os 7 6 1	0
88	AI	1	Total N Os 7 6 1	0

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Mol	Chain	Residues	Atoms			AltConf
88	AI	1	Total	N	Os	0
			7	6	1	
88	AL	1	Total	N	Os	0
			7	6	1	
88	AN	1	Total	N	Os	0
			7	6	1	
88	AP	1	Total	N	Os	0
			7	6	1	
88	BR	1	Total	N	Os	0
			7	6	1	
88	Bn	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
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88	B2	1	Total	N	Os	0
			7	6	1	
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			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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			7	6	1	
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88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
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			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
			7	6	1	
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			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
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			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
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			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
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			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
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88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
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			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	

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Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B2	1	Total	N	Os	0
			7	6	1	
88	B5	1	Total	N	Os	0
			7	6	1	

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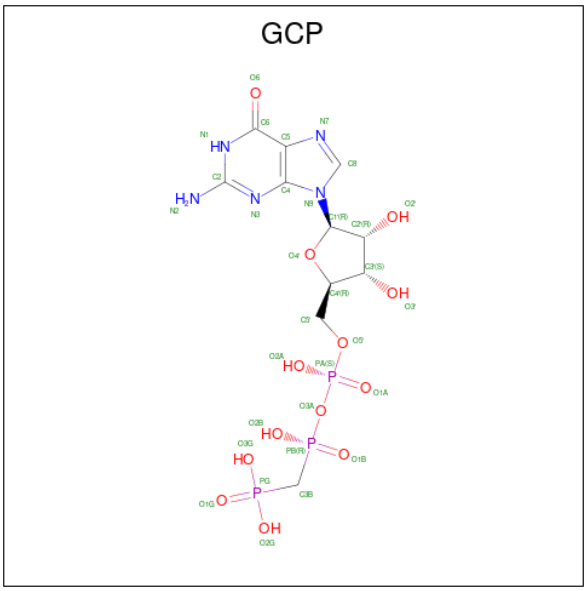
Mol	Chain	Residues	Atoms			AltConf
88	B5	1	Total 7	N 6	Os 1	0
88	B5	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	B7	1	Total 7	N 6	Os 1	0
88	CV	1	Total 7	N 6	Os 1	0
88	CX	1	Total 7	N 6	Os 1	0

- Molecule 89 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (CCD ID: GCP) (formula: $C_{11}H_{18}N_5O_{13}P_3$).



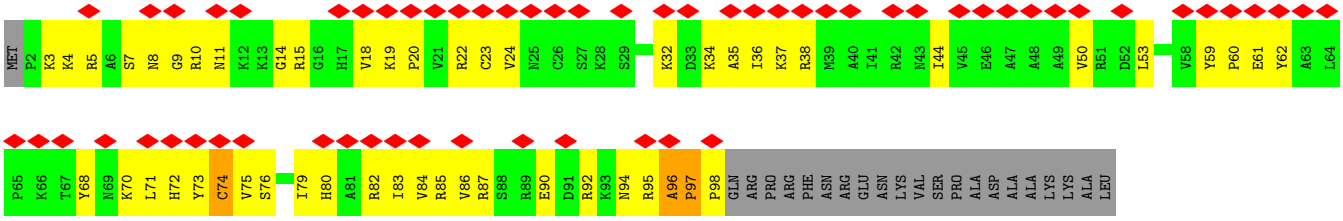
Mol	Chain	Residues	Atoms					AltConf
89	CV	1	Total	C	N	O	P	0
			32	11	5	13	3	

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

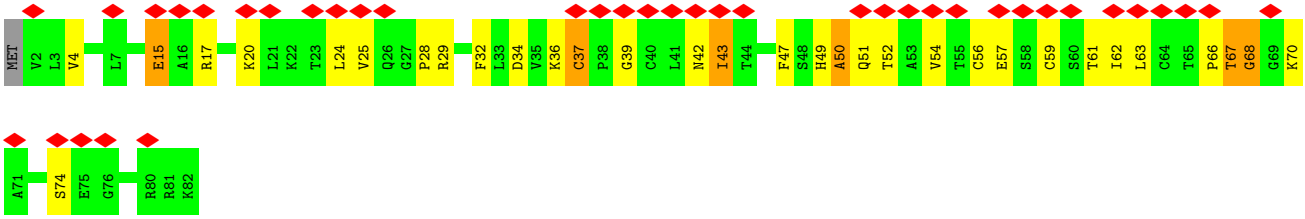
• Molecule 1: 40S RIBOSOMAL PROTEIN S26-A

Chain A0:



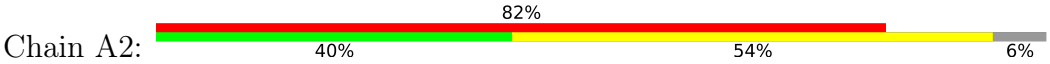
• Molecule 2: 40S RIBOSOMAL PROTEIN S27-A

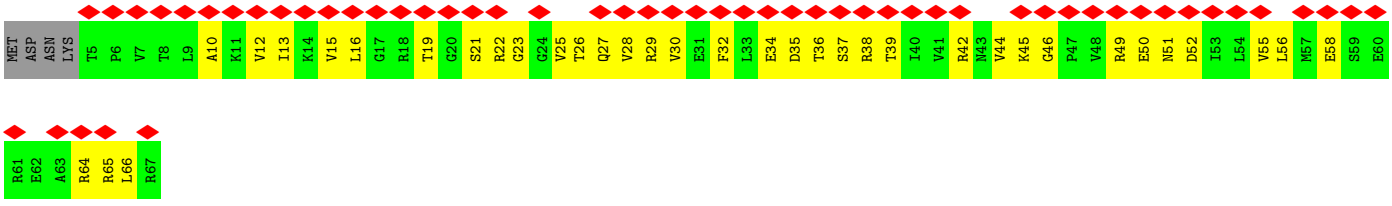
Chain A1:



• Molecule 3: 40S RIBOSOMAL PROTEIN S28-A

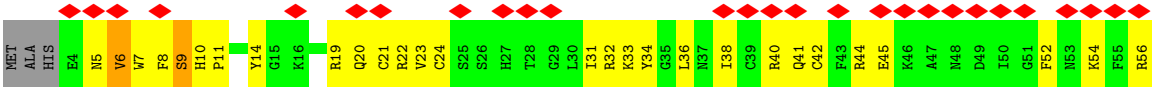
Chain A2:





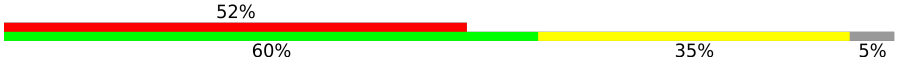
• Molecule 4: 40S RIBOSOMAL PROTEIN S29-A

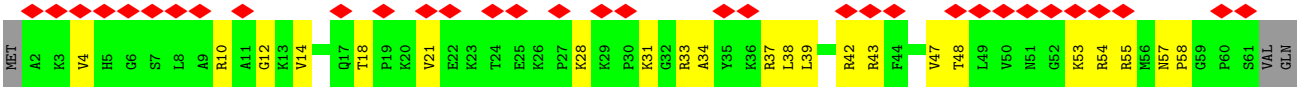
Chain A3:



• Molecule 5: 40S RIBOSOMAL PROTEIN S30-A

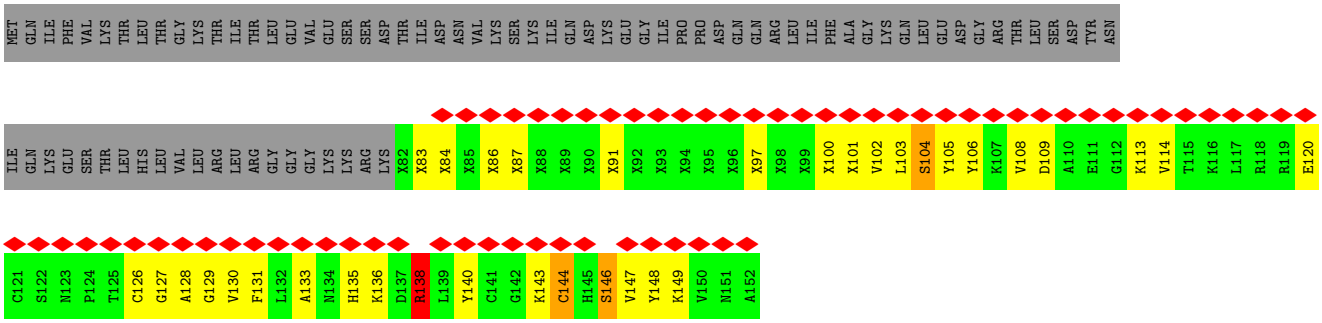
Chain A4:





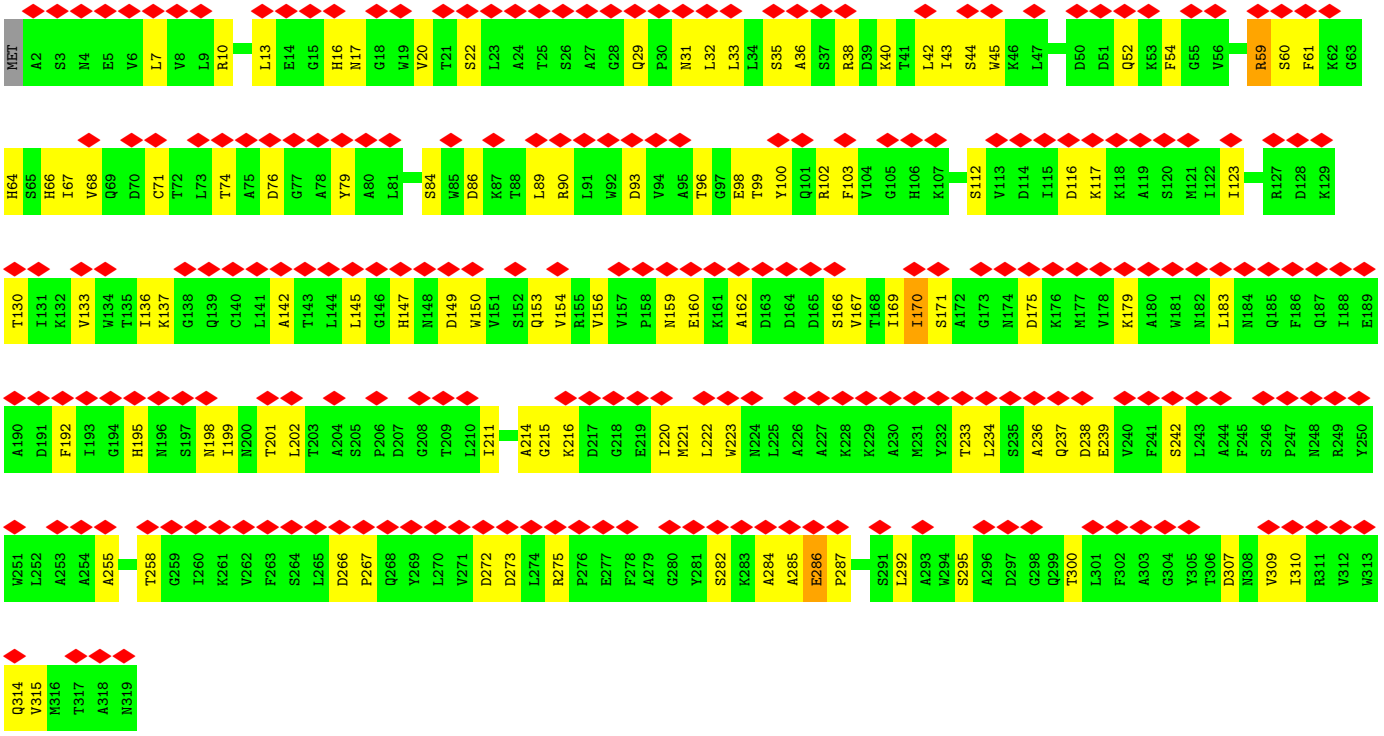
• Molecule 6: UBIQUITIN-40S RIBOSOMAL PROTEIN S31

Chain A5:



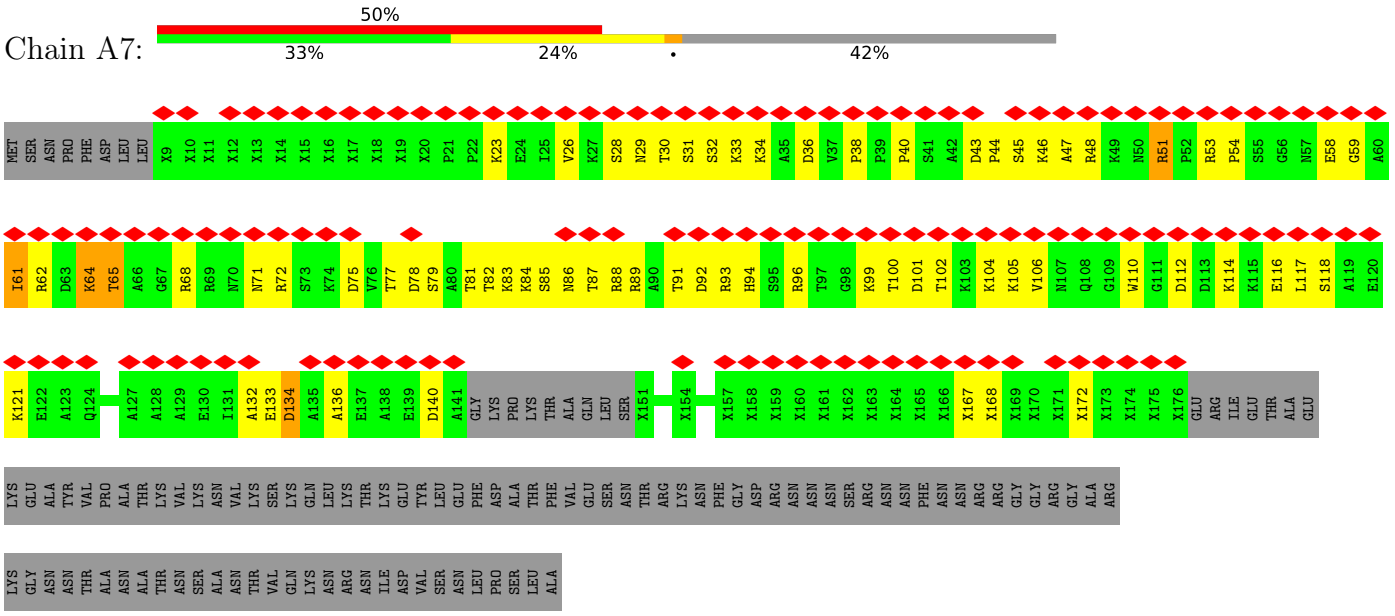
• Molecule 7: GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-LIKE PROTEIN

Chain A6:



• Molecule 8: SUPPRESSOR PROTEIN STM1

Chain A7:

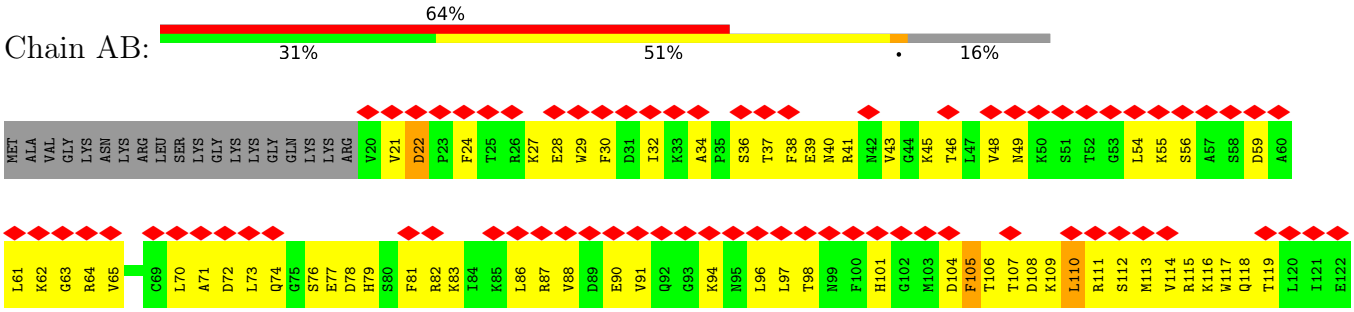


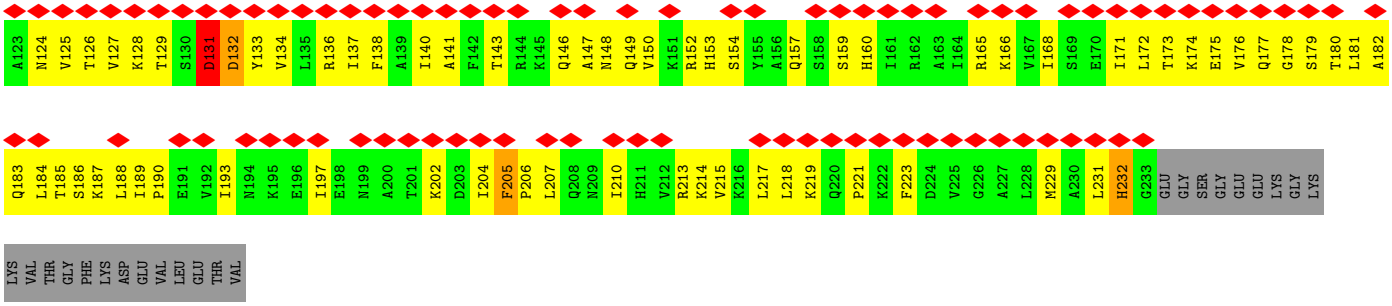
• Molecule 9: 40S RIBOSOMAL PROTEIN S0-A

Chain AA:

• Molecule 10: 40S RIBOSOMAL PROTEIN S1-A

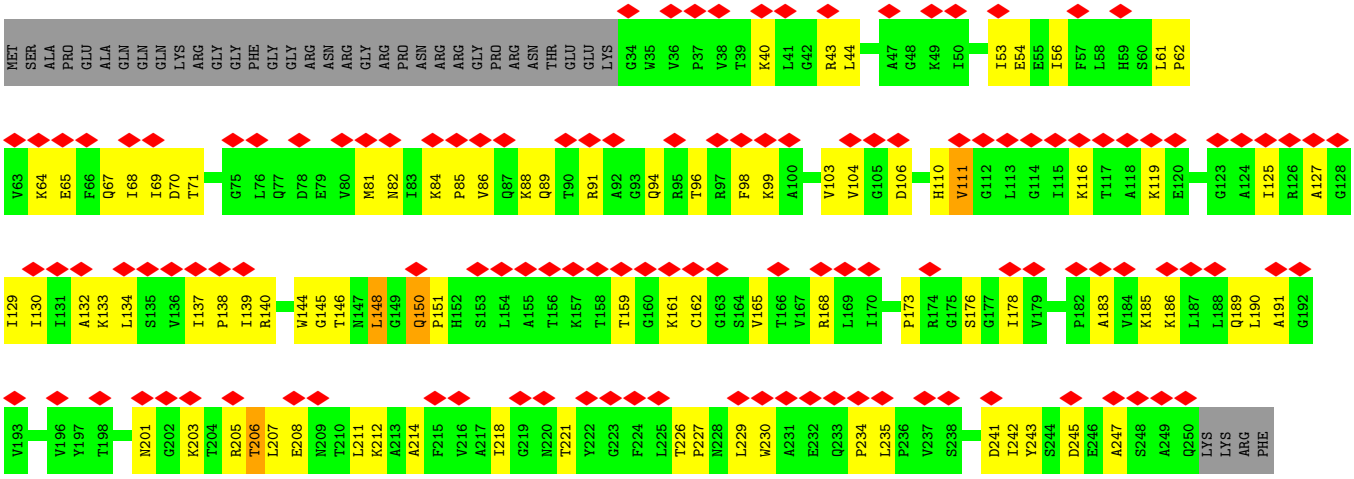
Chain AB:





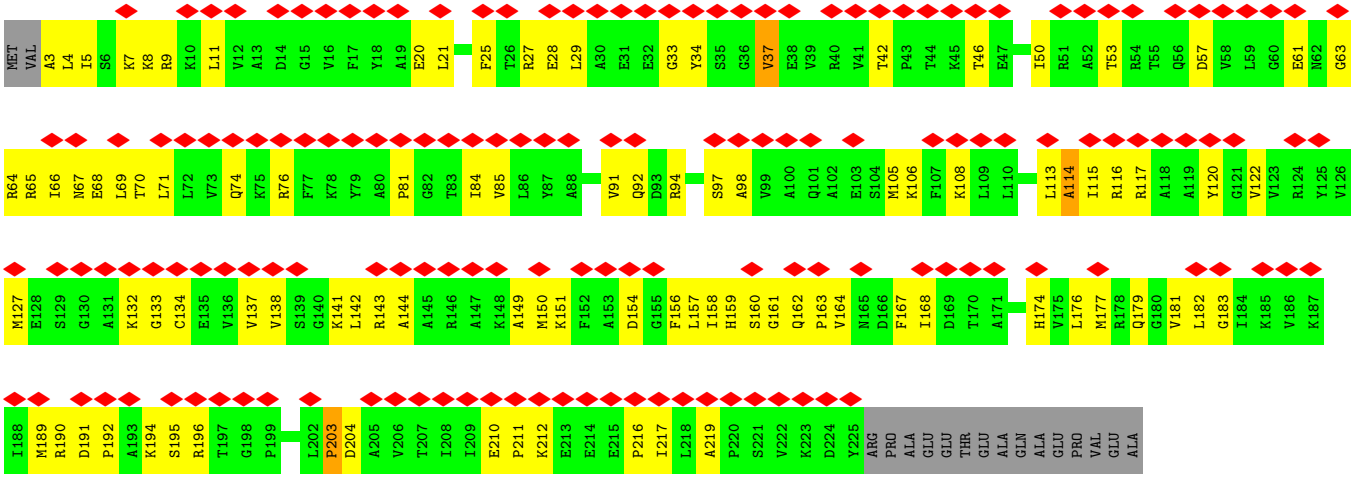
• Molecule 11: 40S RIBOSOMAL PROTEIN S2

Chain AC:



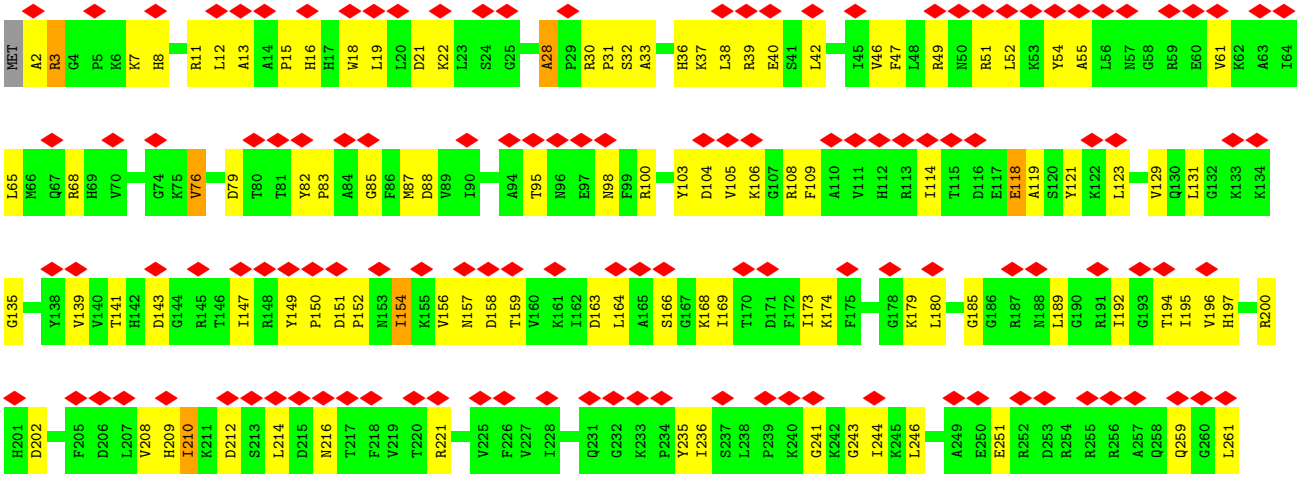
• Molecule 12: 40S RIBOSOMAL PROTEIN S3

Chain AD:



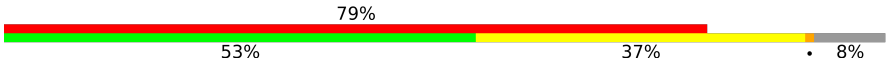
• Molecule 13: 40S RIBOSOMAL PROTEIN S4-A

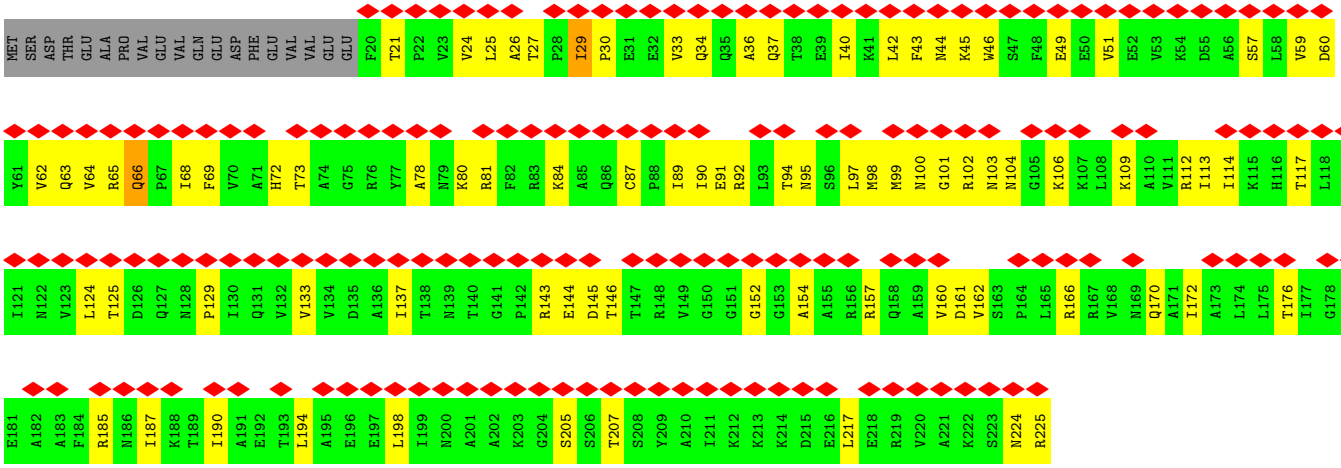
Chain AE:



• Molecule 14: 40S RIBOSOMAL PROTEIN S5

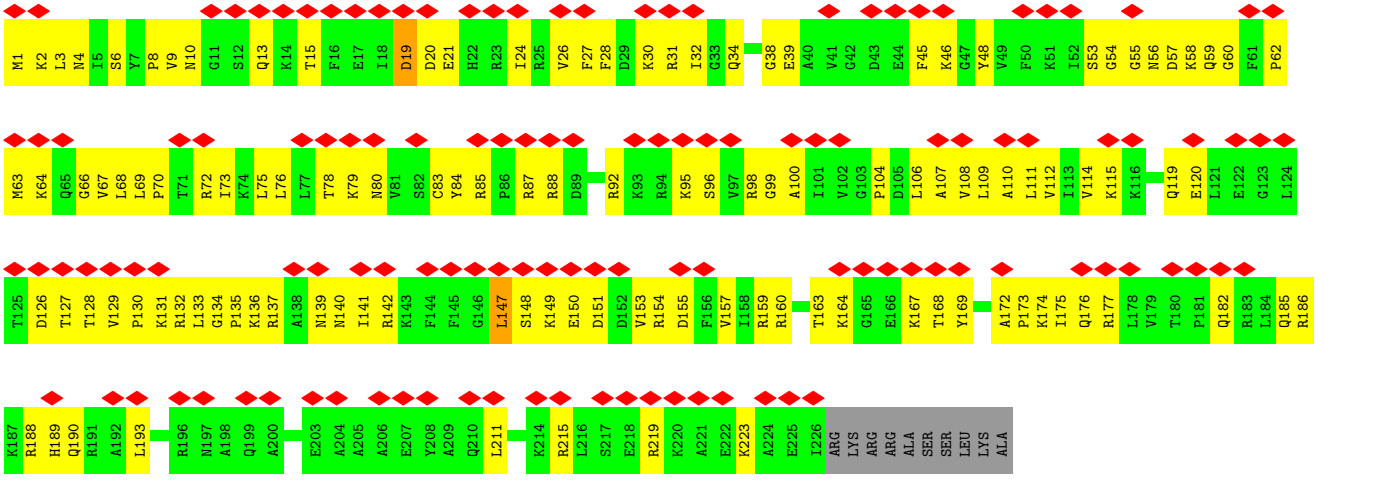
Chain AF:





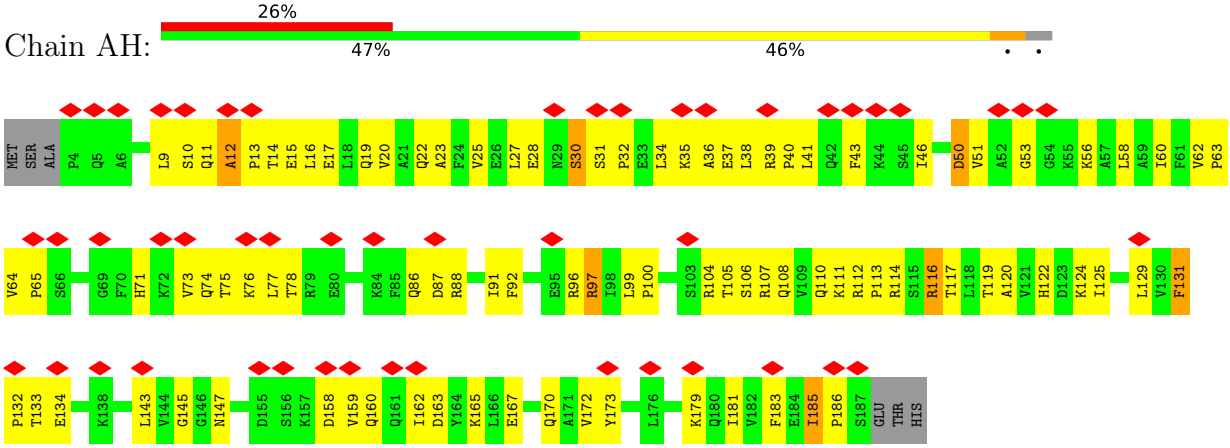
• Molecule 15: 40S RIBOSOMAL PROTEIN S6-A

Chain AG:



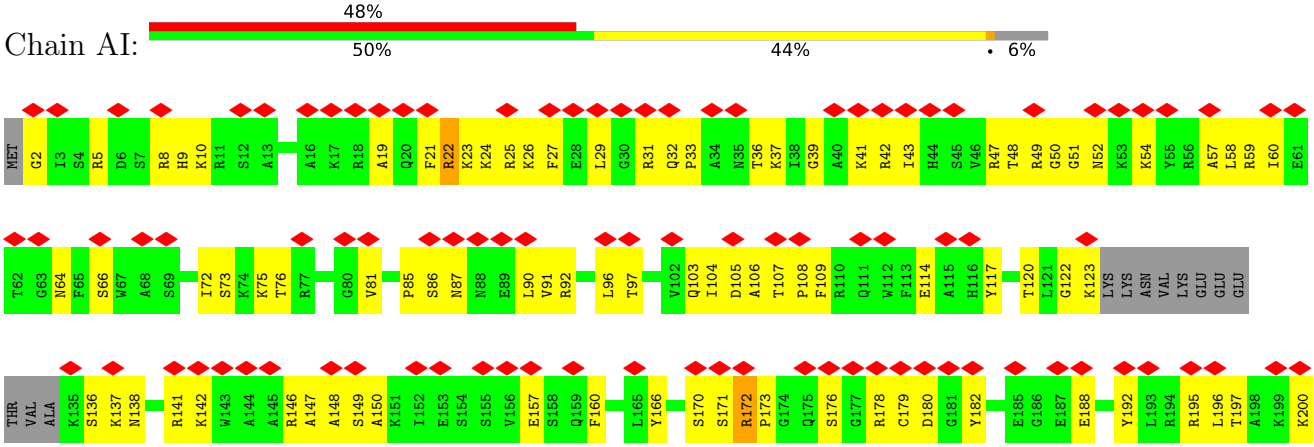
• Molecule 16: 40S RIBOSOMAL PROTEIN S7-A

Chain AH:



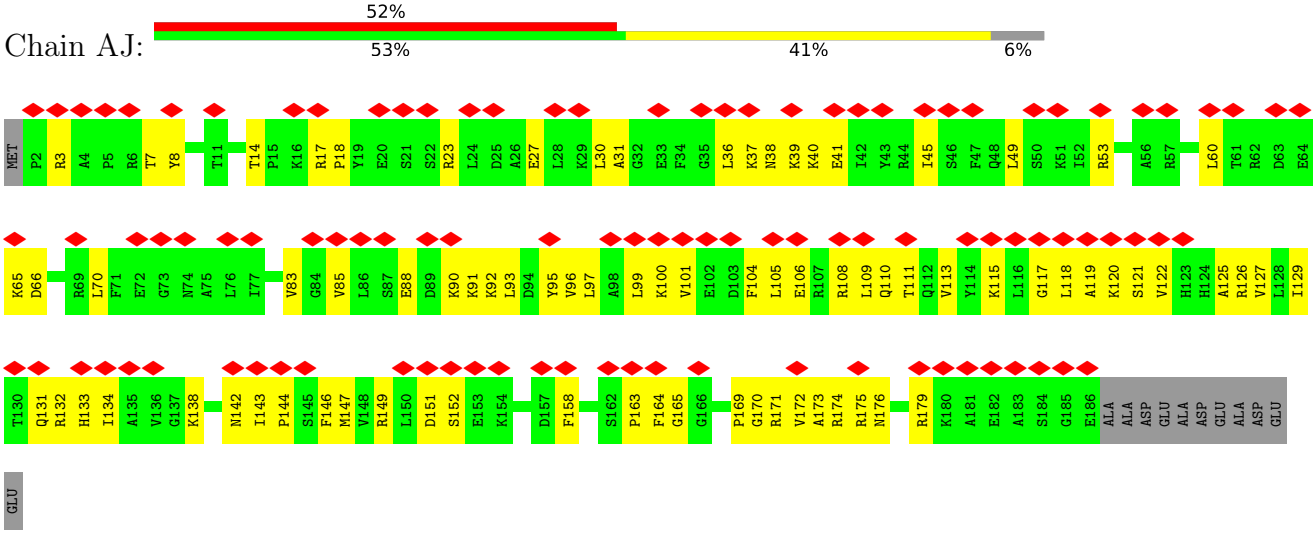
• Molecule 17: 40S RIBOSOMAL PROTEIN S8-A

Chain AI:



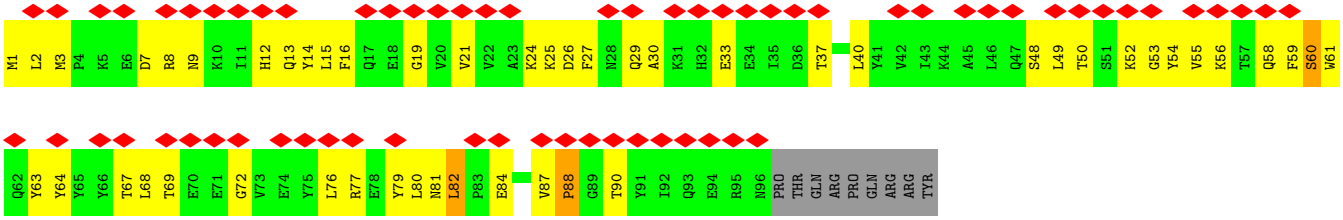
• Molecule 18: 40S RIBOSOMAL PROTEIN S9-A

Chain AJ:



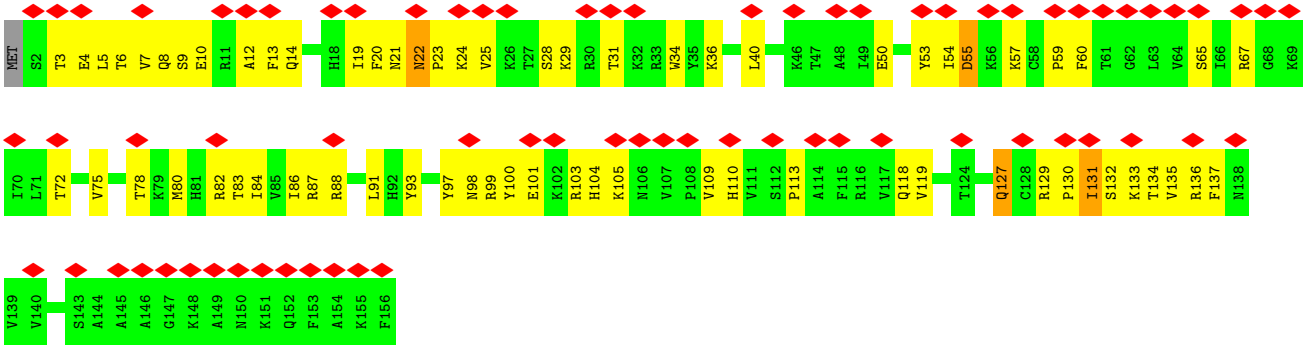
• Molecule 19: 40S RIBOSOMAL PROTEIN S10-A

Chain AK:



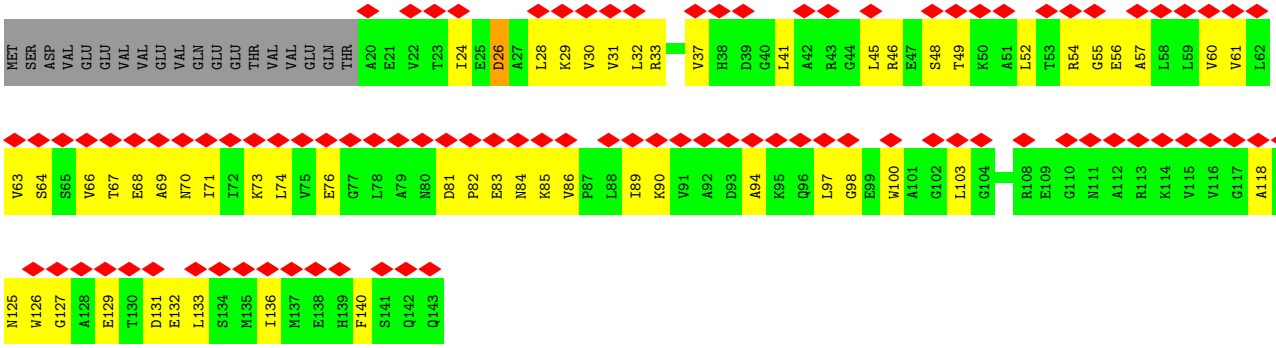
• Molecule 20: 40S RIBOSOMAL PROTEIN S11-A

Chain AL:



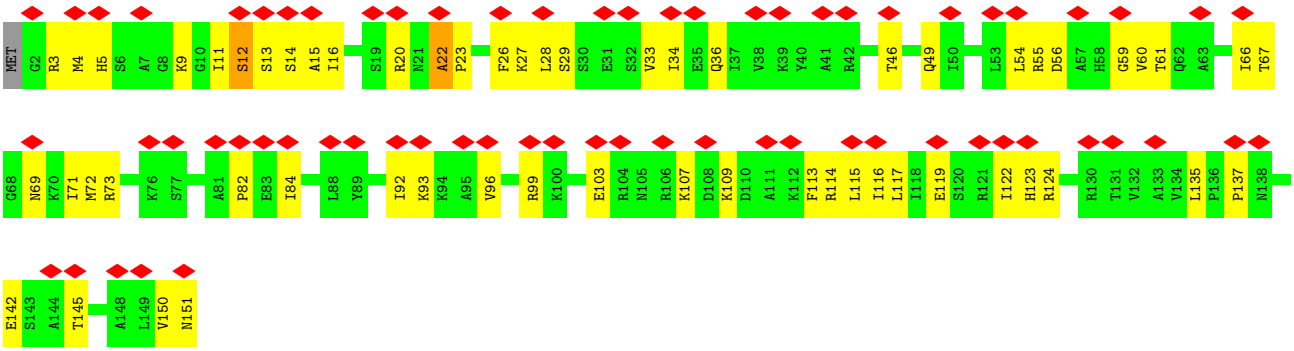
• Molecule 21: 40S RIBOSOMAL PROTEIN S12

Chain AM:



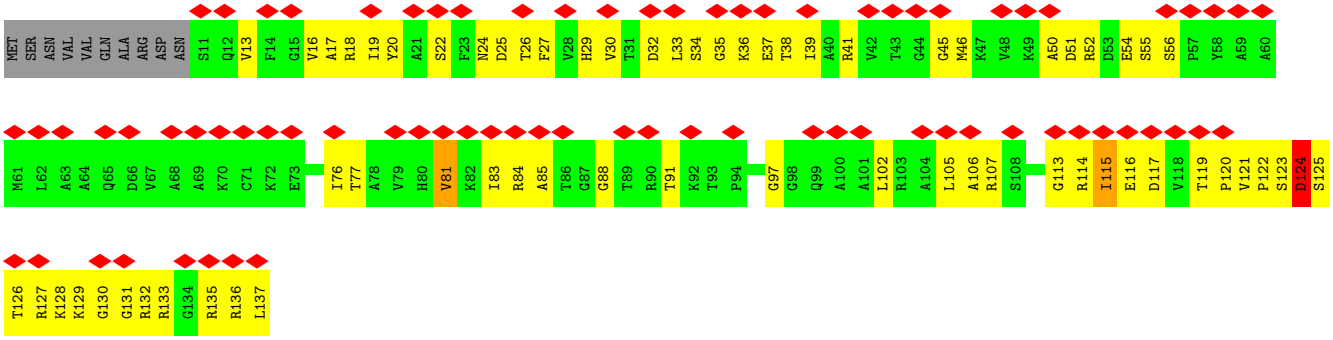
• Molecule 22: 40S RIBOSOMAL PROTEIN S13

Chain AN:



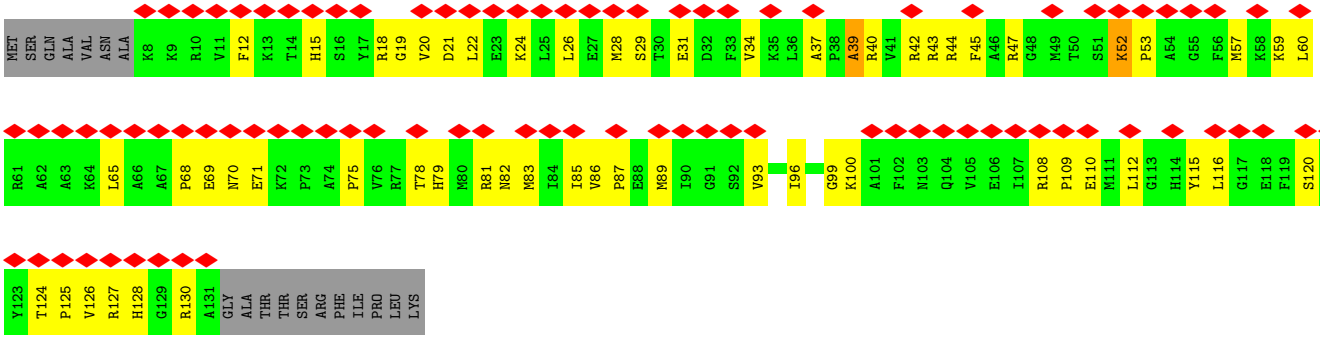
• Molecule 23: 40S RIBOSOMAL PROTEIN S14-A

Chain AO:



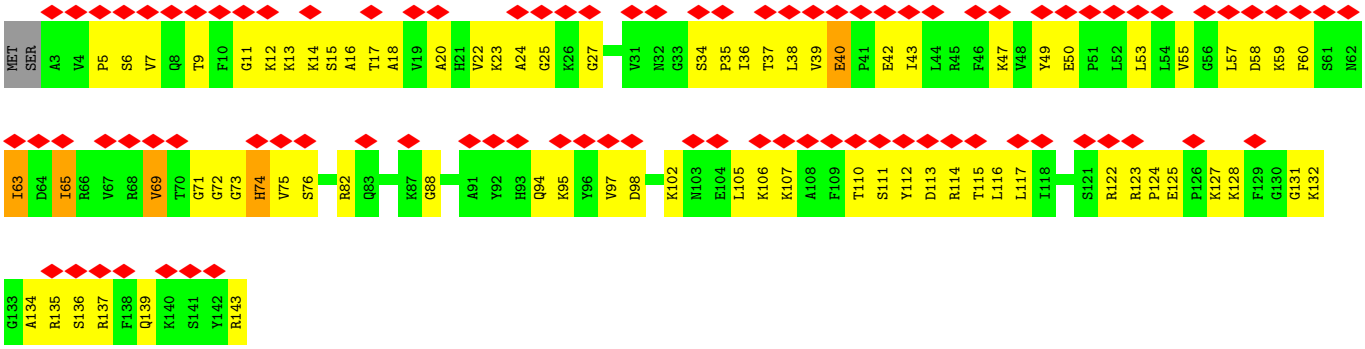
• Molecule 24: 40S RIBOSOMAL PROTEIN S15

Chain AP:



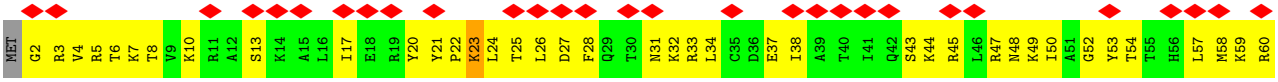
• Molecule 25: 40S RIBOSOMAL PROTEIN S16-A

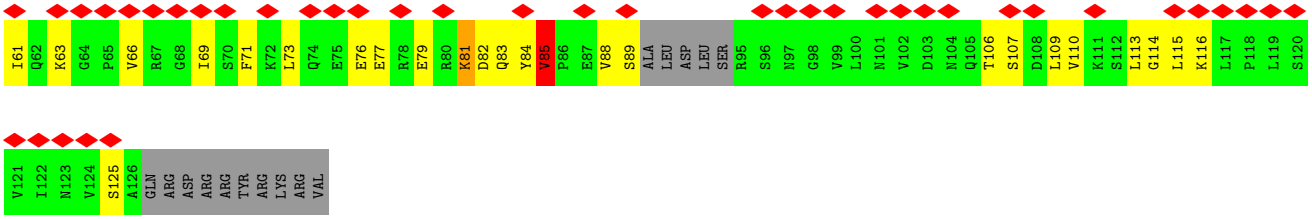
Chain AQ:



• Molecule 26: 40S RIBOSOMAL PROTEIN S17-A

Chain AR:



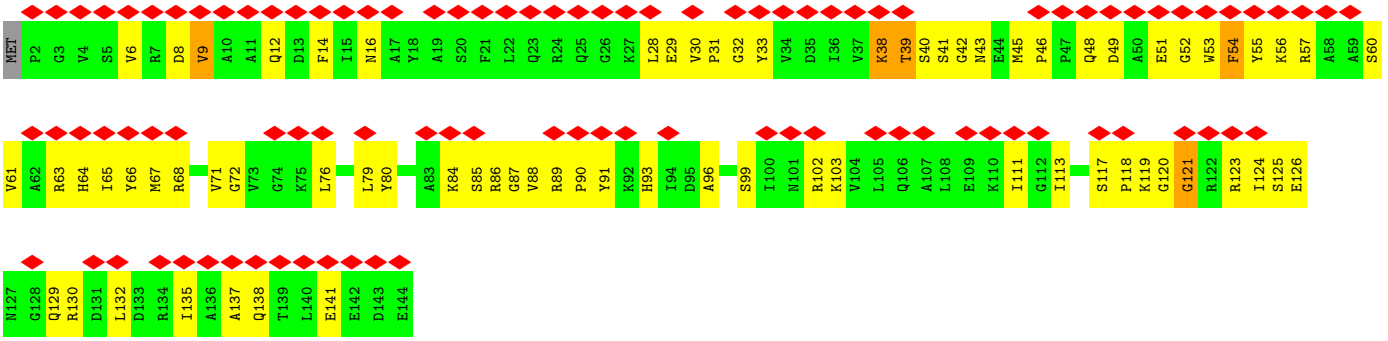


• Molecule 27: 40S RIBOSOMAL PROTEIN S18-A

Chain AS:

• Molecule 28: 40S RIBOSOMAL PROTEIN S19-A

Chain AT:

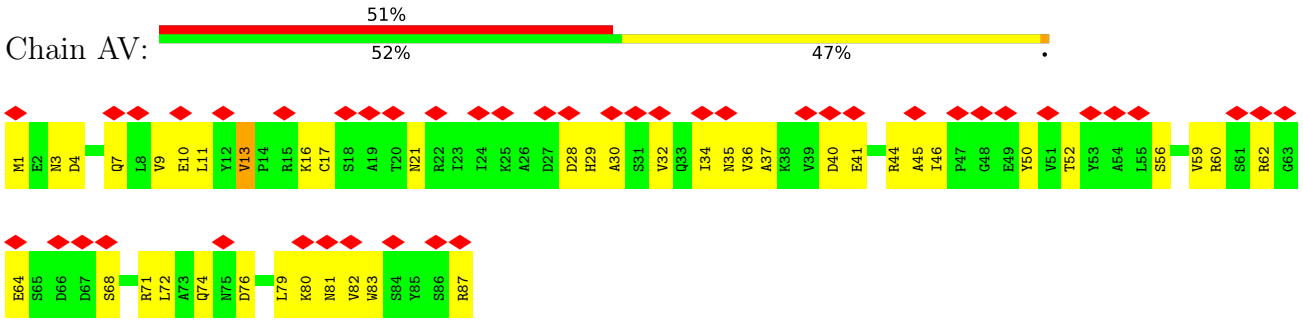


• Molecule 29: 40S RIBOSOMAL PROTEIN S20

Chain AU:

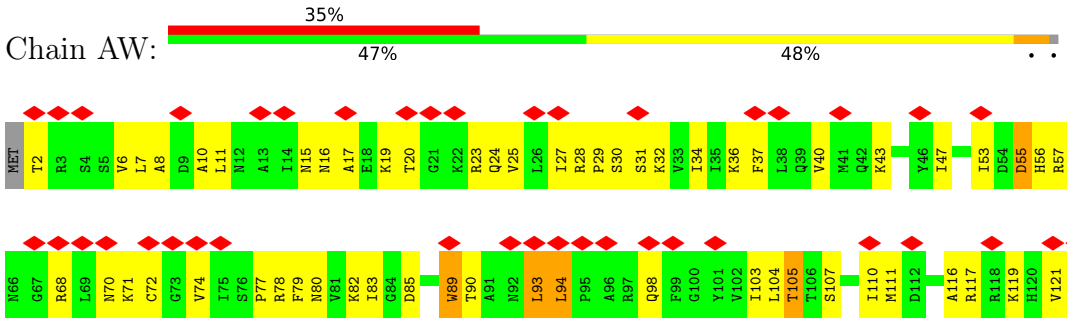
• Molecule 30: 40S RIBOSOMAL PROTEIN S21-A

Chain AV:



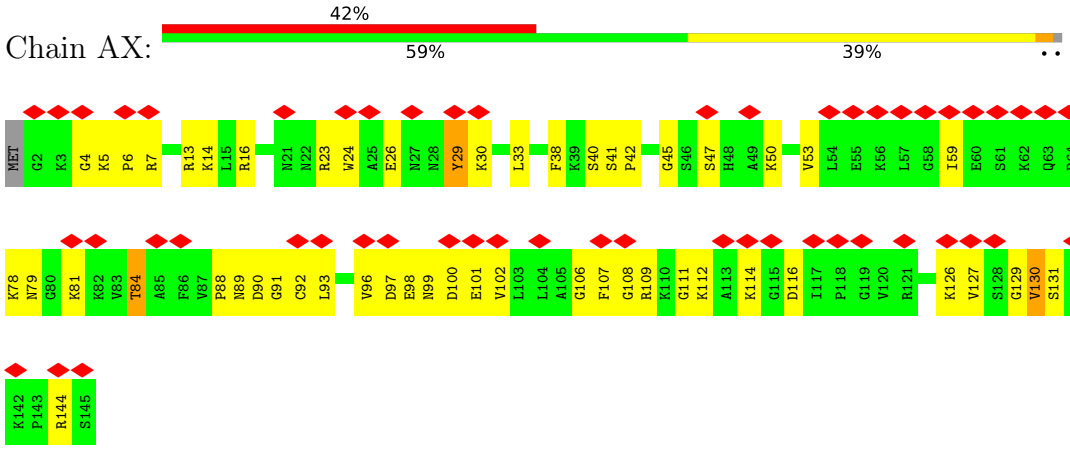
• Molecule 31: 40S RIBOSOMAL PROTEIN S22-A

Chain AW:



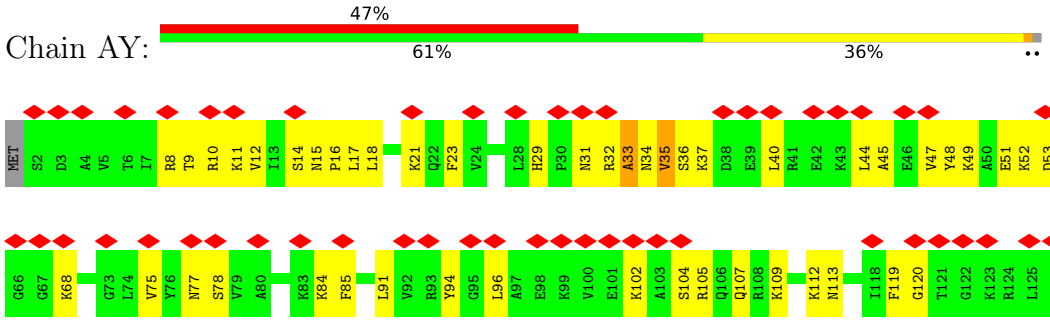
• Molecule 32: 40S RIBOSOMAL PROTEIN S23-A

Chain AX:



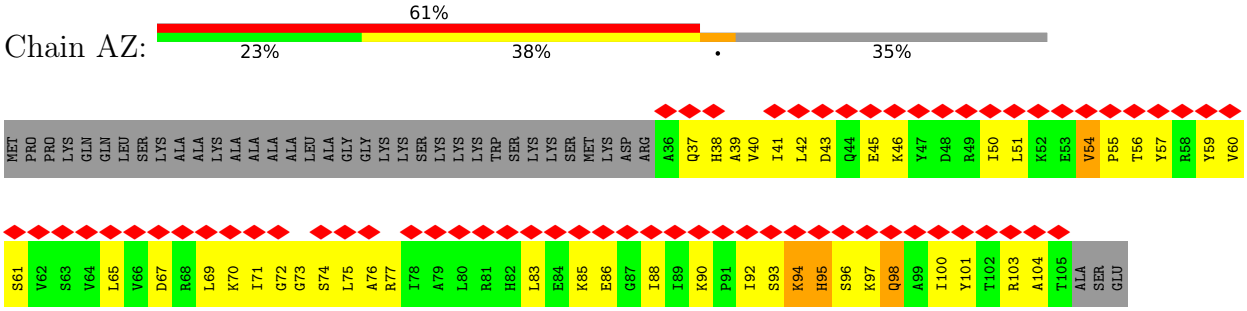
• Molecule 33: 40S RIBOSOMAL PROTEIN S24-A

Chain AY:



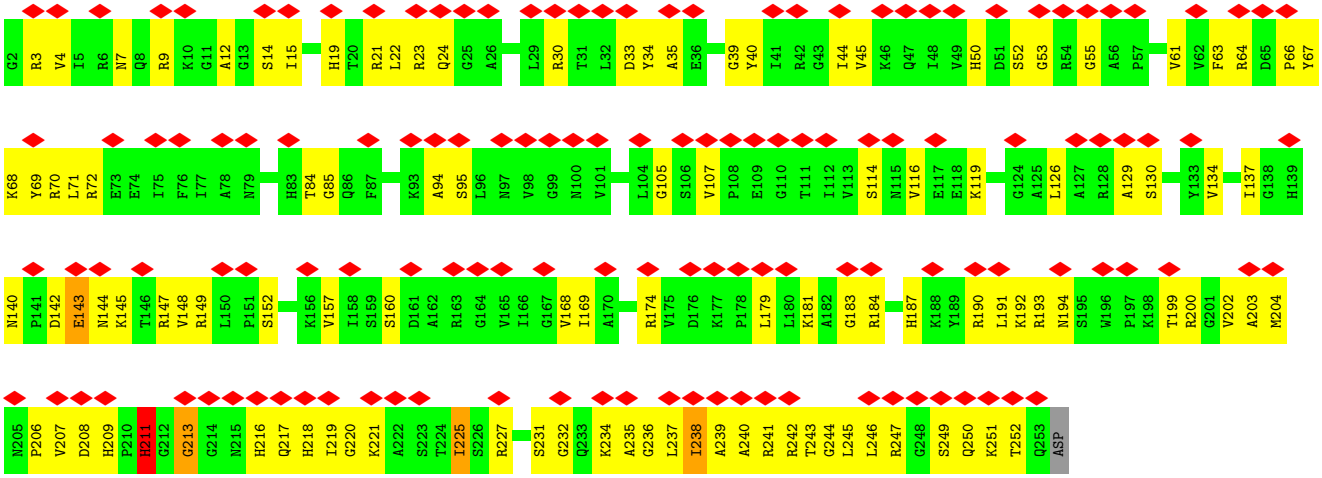
• Molecule 34: 40S RIBOSOMAL PROTEIN S25-A

Chain AZ:



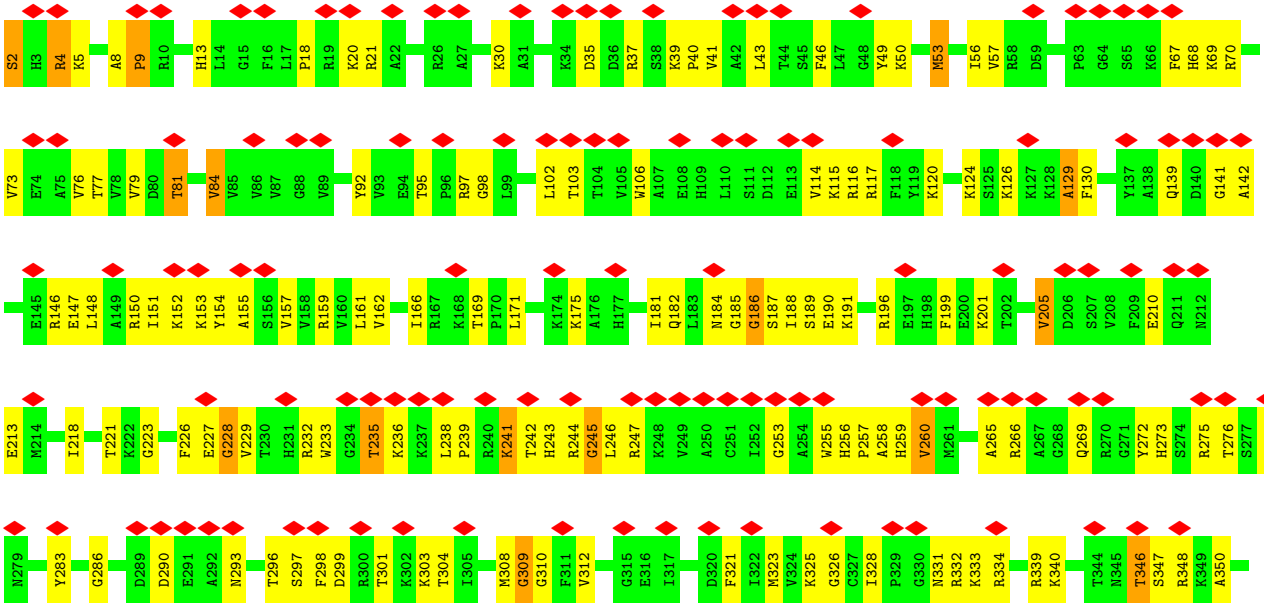
• Molecule 35: 60S RIBOSOMAL PROTEIN L2-B

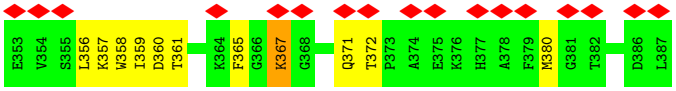
Chain BA:



• Molecule 36: 60S RIBOSOMAL PROTEIN L3

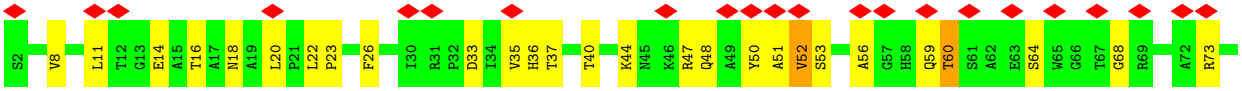
Chain BB:

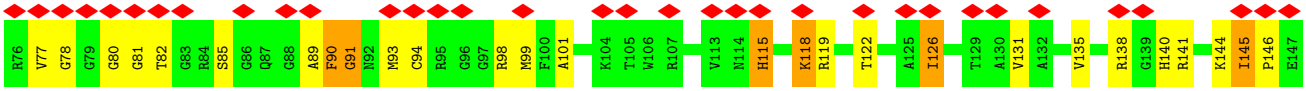


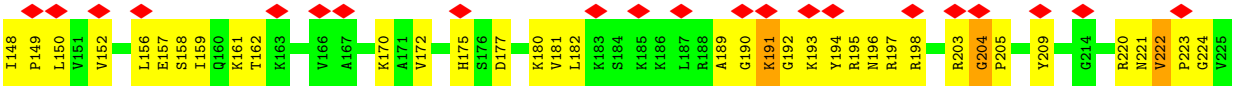


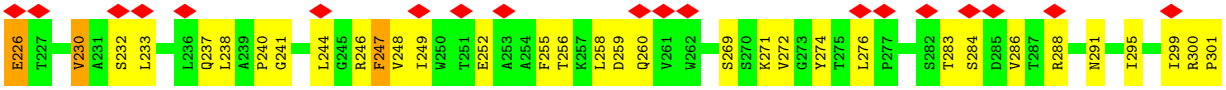
• Molecule 37: 60S RIBOSOMAL PROTEIN L4-A

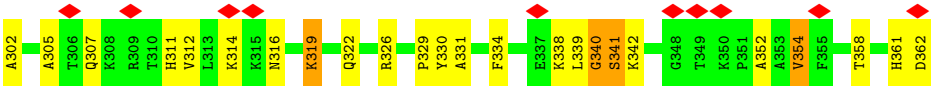
Chain BC:





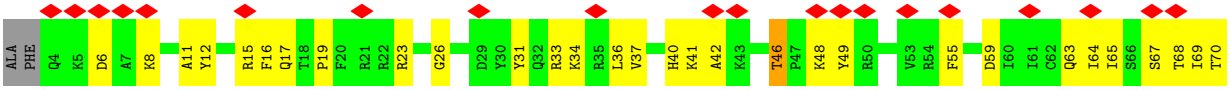


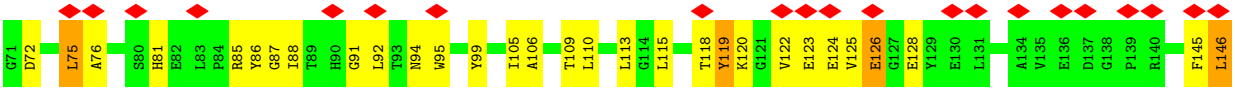


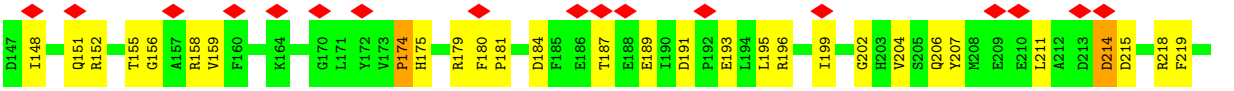


• Molecule 38: 60S RIBOSOMAL PROTEIN L5

Chain BD:

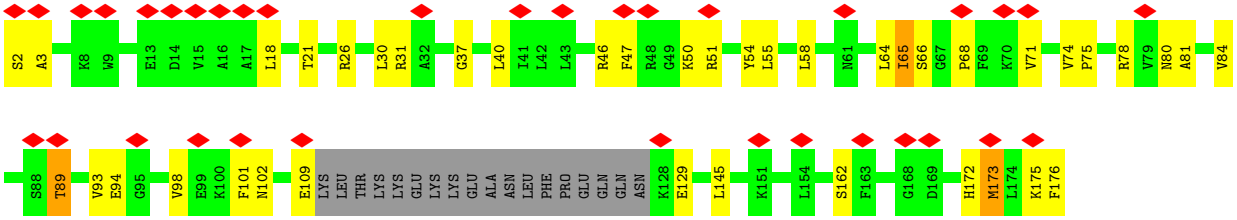






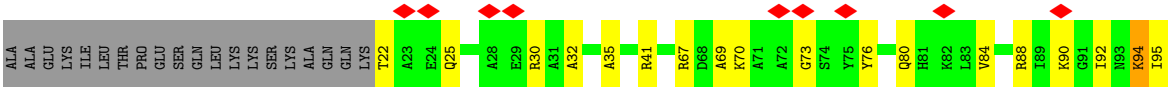
• Molecule 39: 60S RIBOSOMAL PROTEIN L6-A

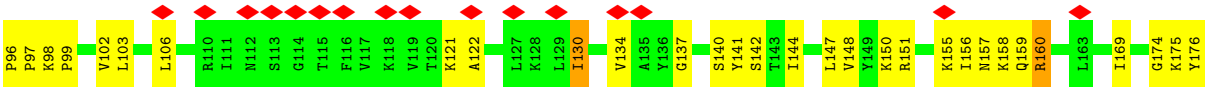
Chain BE:



• Molecule 40: 60S RIBOSOMAL PROTEIN L7-A

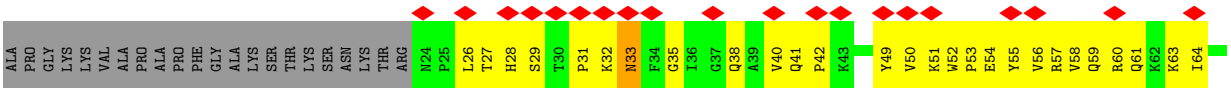
Chain BF:

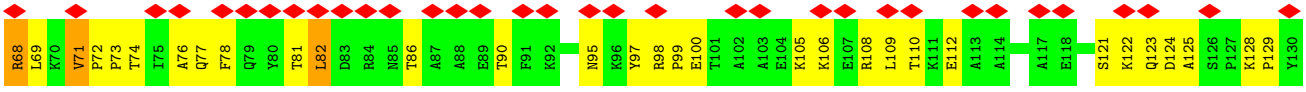


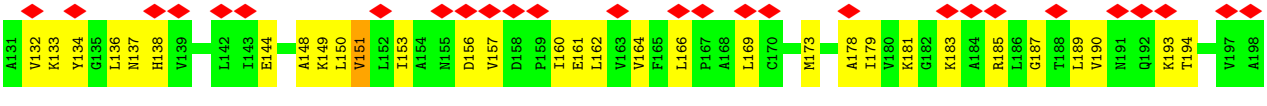


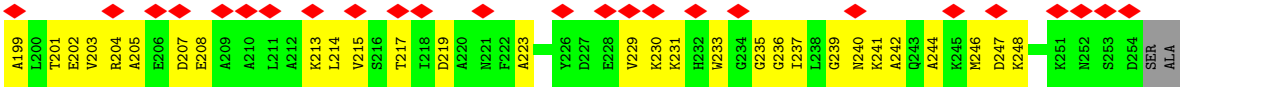
• Molecule 41: 60S RIBOSOMAL PROTEIN L8-A

Chain BG:



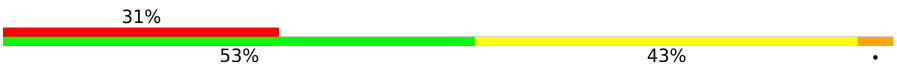


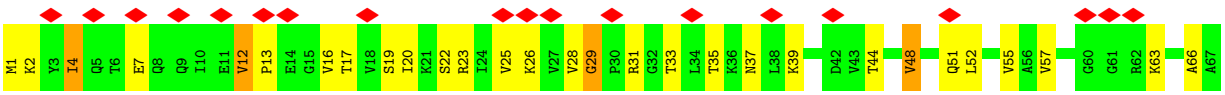


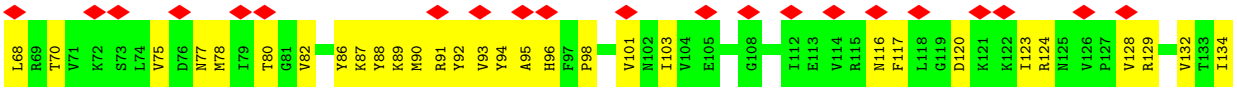


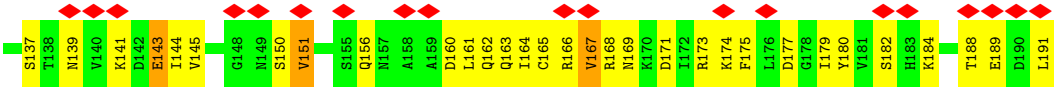
• Molecule 42: 60S RIBOSOMAL PROTEIN L9-A

Chain BH:



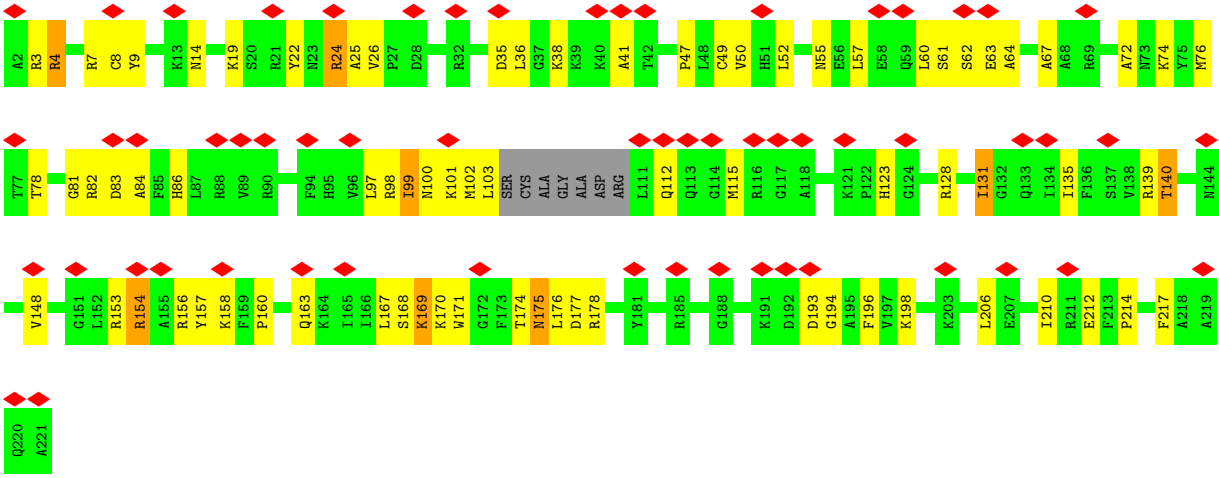






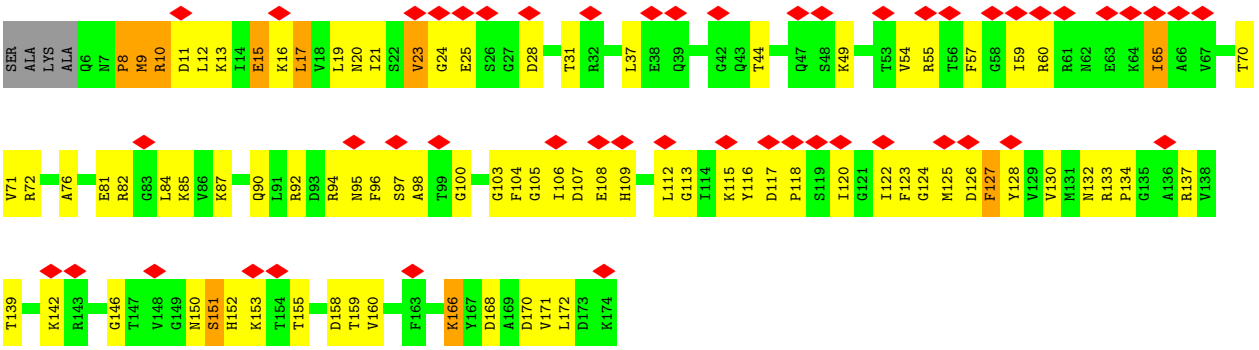
• Molecule 43: 60S RIBOSOMAL PROTEIN L10

Chain BI:



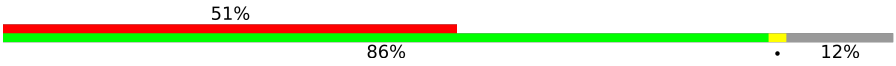
• Molecule 44: 60S RIBOSOMAL PROTEIN L11-A

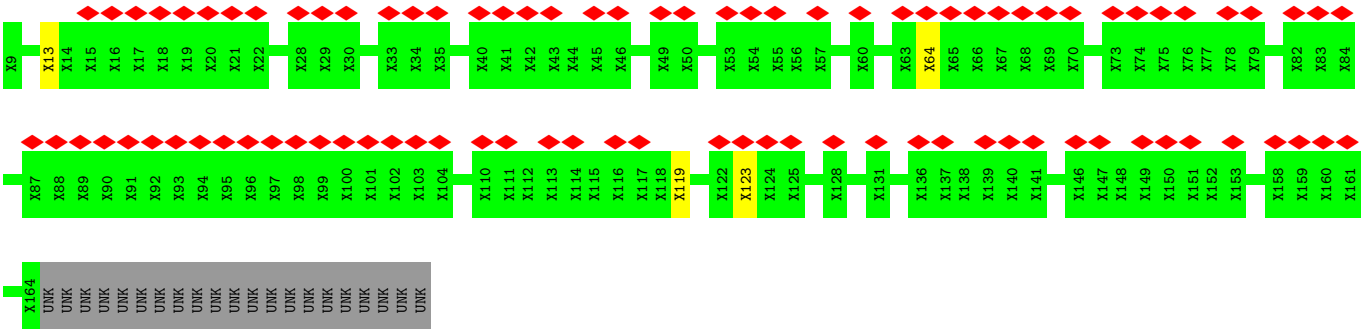
Chain BJ:



• Molecule 45: 60S RIBOSOMAL PROTEIN L11-A

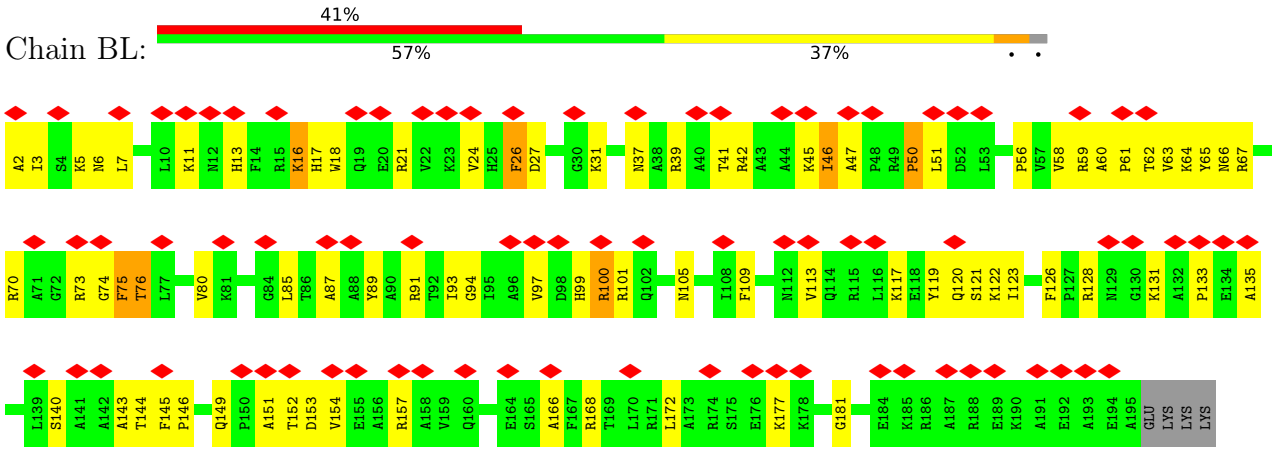
Chain BK:





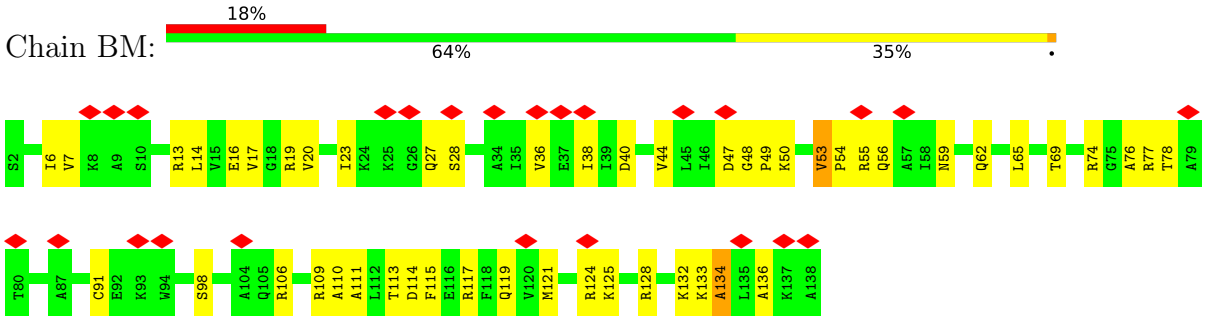
• Molecule 46: 60S RIBOSOMAL PROTEIN L13-A

Chain BL:



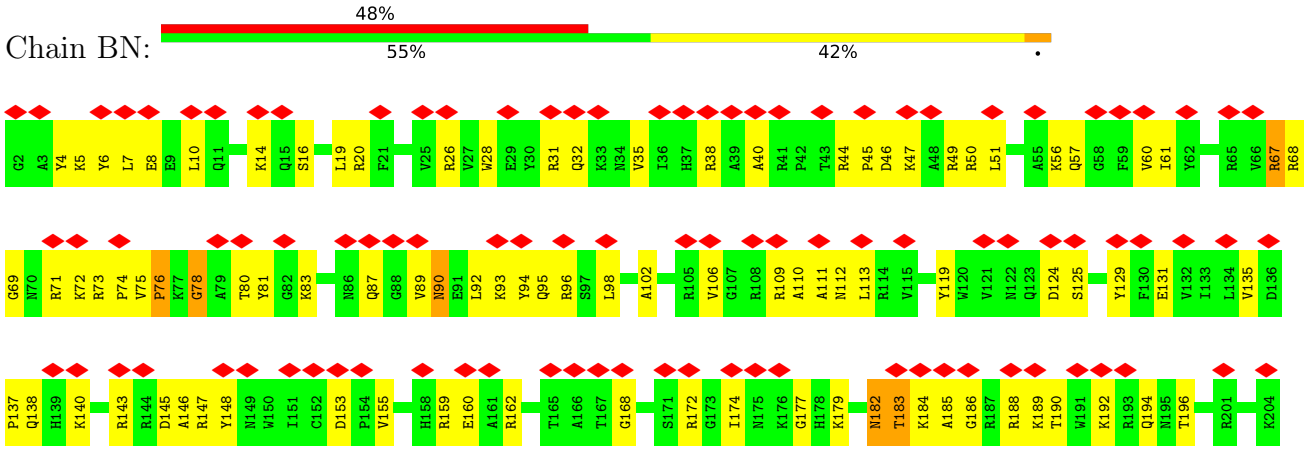
• Molecule 47: 60S RIBOSOMAL PROTEIN L14-B

Chain BM:



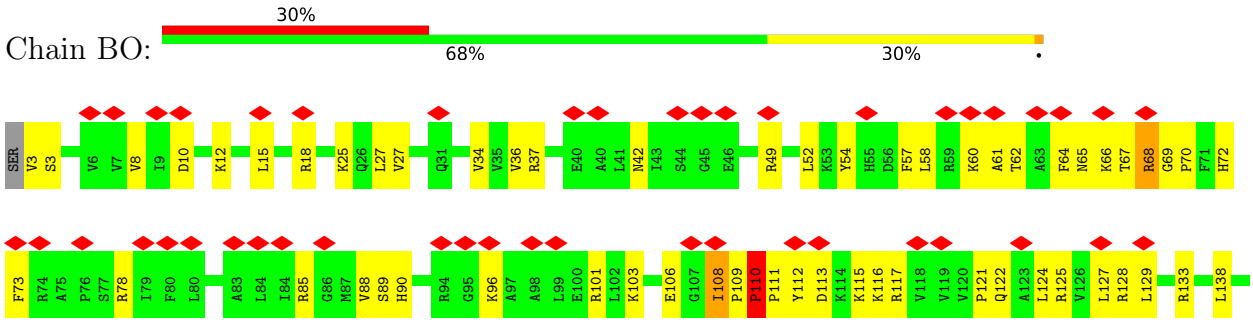
• Molecule 48: 60S RIBOSOMAL PROTEIN L15-A

Chain BN:



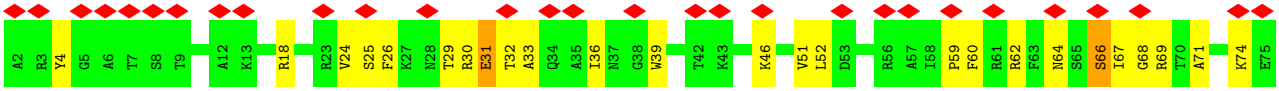
• Molecule 49: 60S RIBOSOMAL PROTEIN L16-A

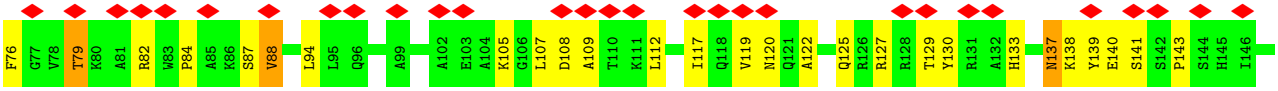
Chain BO:

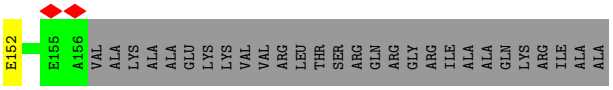


• Molecule 50: 60S RIBOSOMAL PROTEIN L17-A

Chain BP:

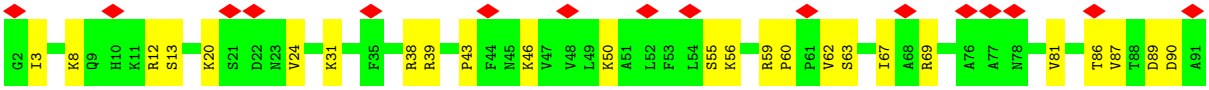


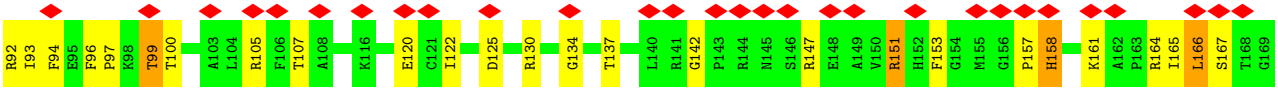


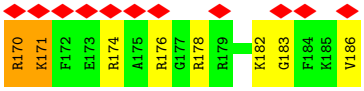


• Molecule 51: 60S RIBOSOMAL PROTEIN L18-A

Chain BQ:

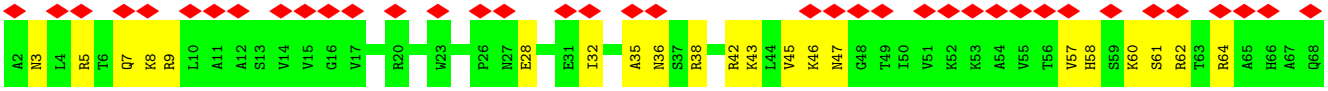


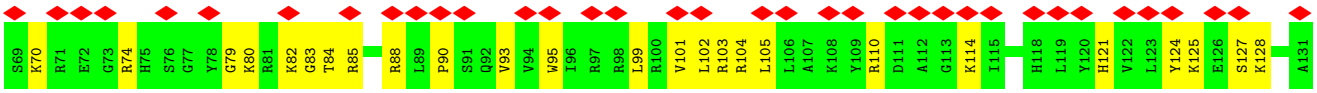




• Molecule 52: 60S RIBOSOMAL PROTEIN L19-B

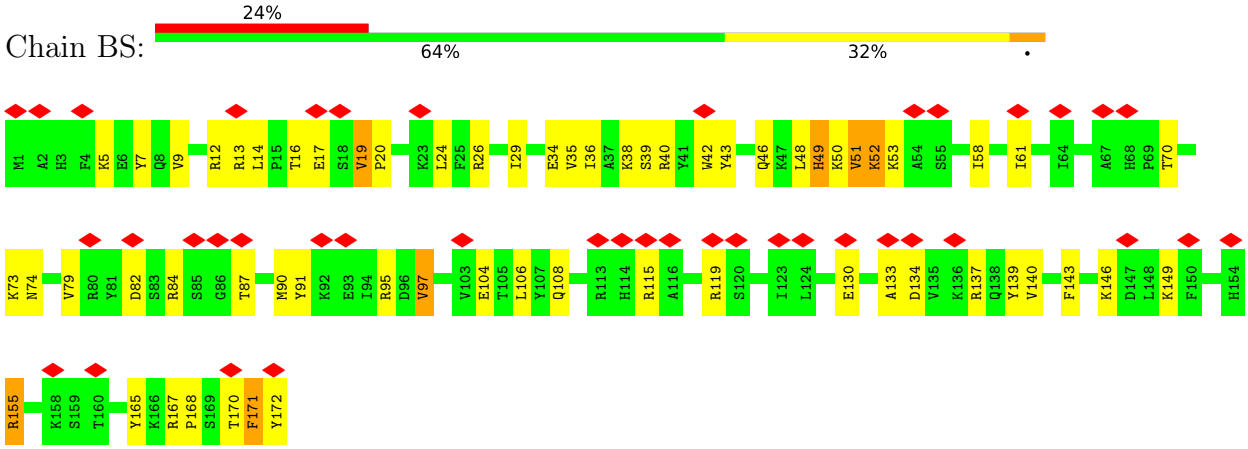
Chain BR:





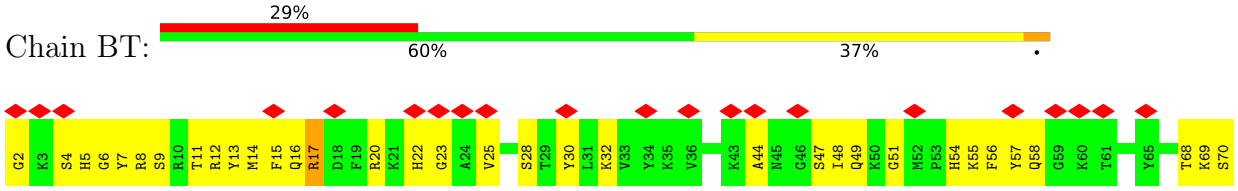
• Molecule 53: 60S RIBOSOMAL PROTEIN L20-B

Chain BS:



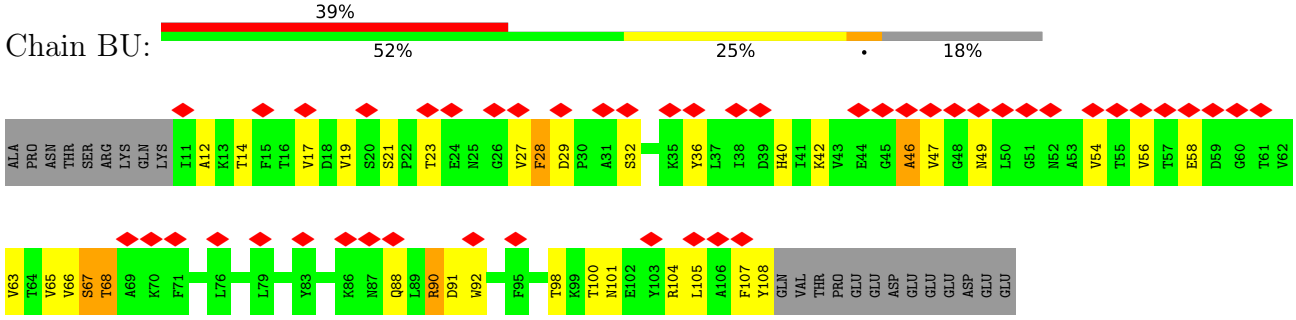
• Molecule 54: 60S RIBOSOMAL PROTEIN L21-A

Chain BT:



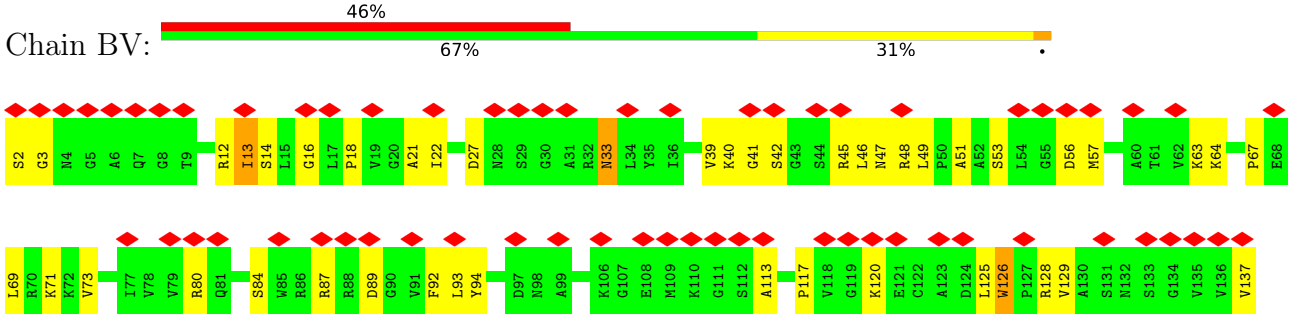
• Molecule 55: 60S RIBOSOMAL PROTEIN L22-A

Chain BU:



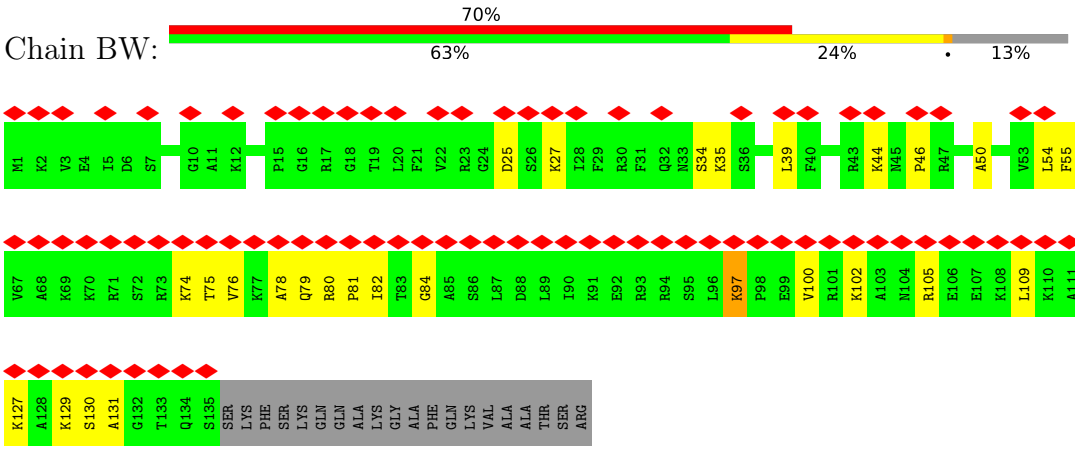
• Molecule 56: 60S RIBOSOMAL PROTEIN L23-A

Chain BV:



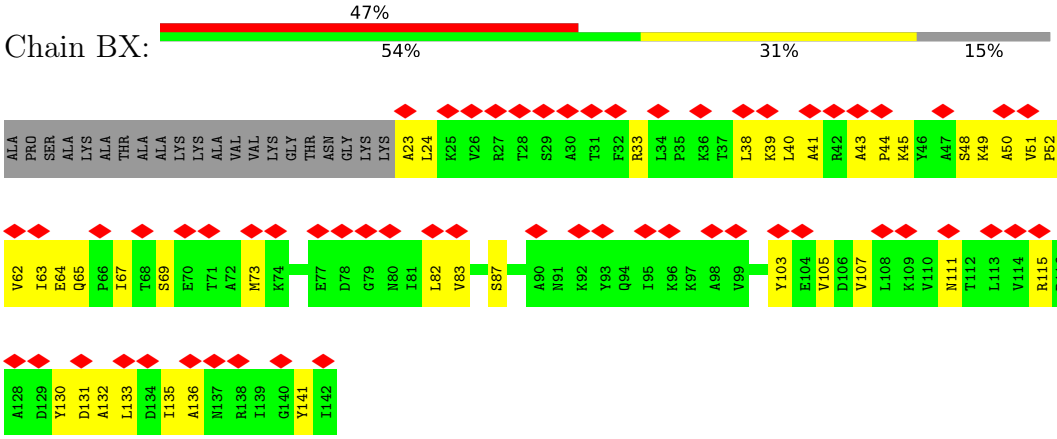
• Molecule 57: 60S RIBOSOMAL PROTEIN L24-A

Chain BW:



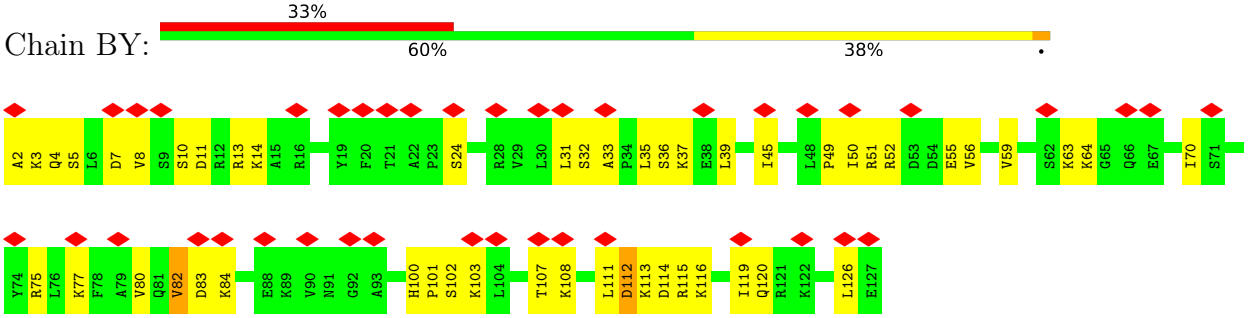
• Molecule 58: 60S RIBOSOMAL PROTEIN L25

Chain BX:



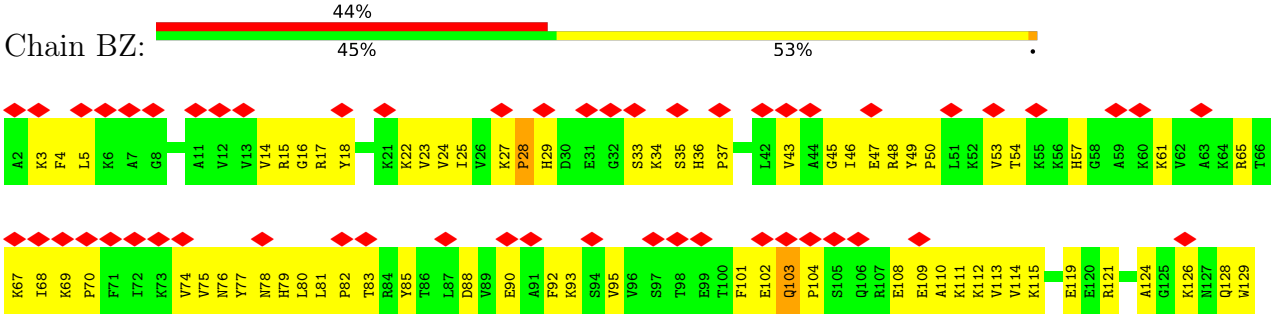
• Molecule 59: 60S RIBOSOMAL PROTEIN L26-A

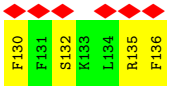
Chain BY:



• Molecule 60: 60S RIBOSOMAL PROTEIN L27-A

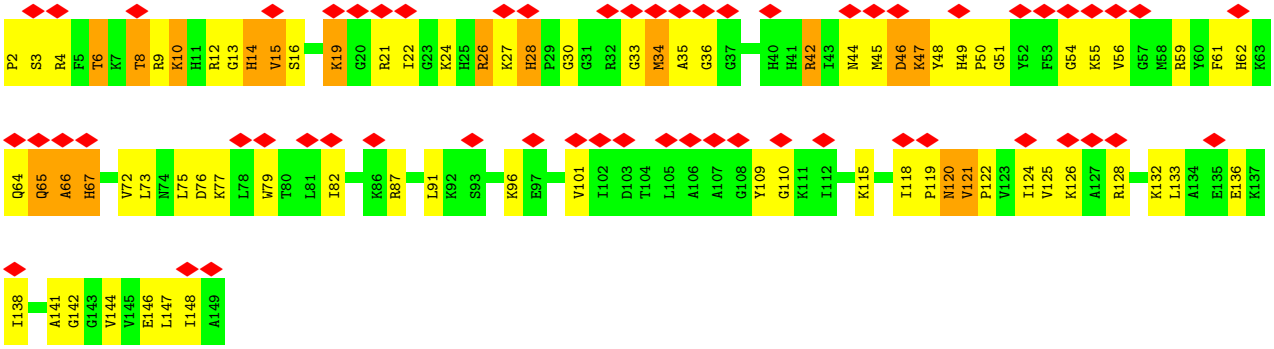
Chain BZ:





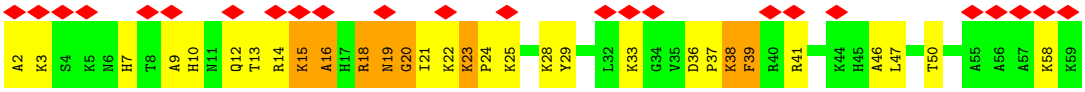
• Molecule 61: 60S RIBOSOMAL PROTEIN L28

Chain Ba:



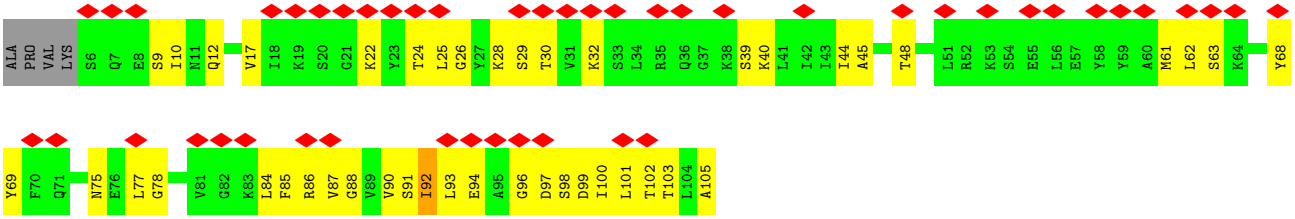
• Molecule 62: 60S RIBOSOMAL PROTEIN L29

Chain Bb:



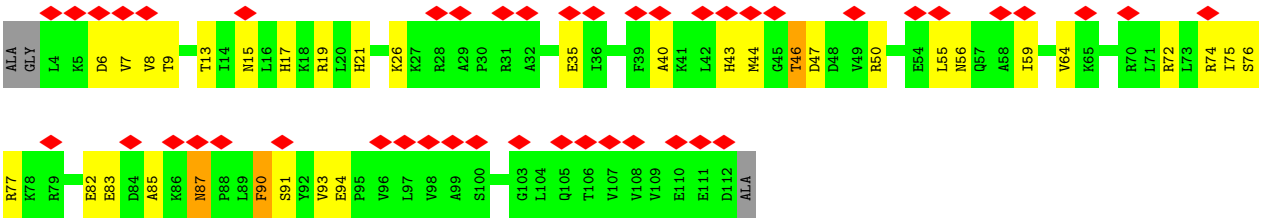
• Molecule 63: 60S RIBOSOMAL PROTEIN L30

Chain Bc:



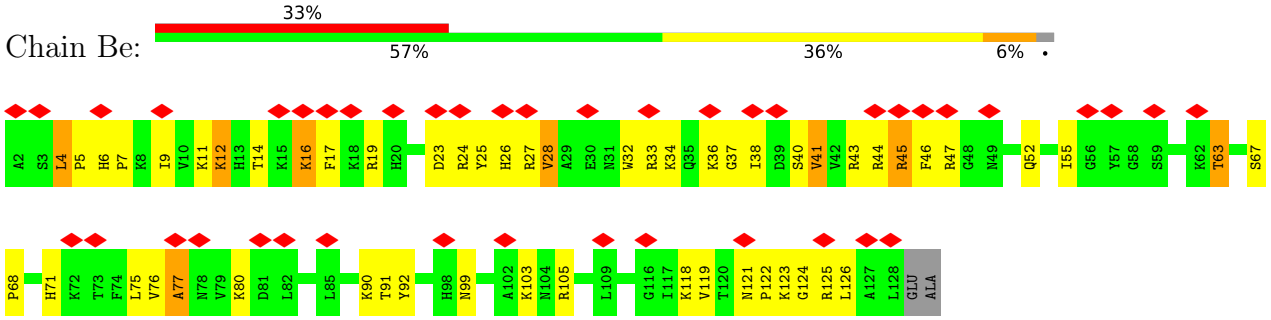
• Molecule 64: 60S RIBOSOMAL PROTEIN L31-A

Chain Bd:



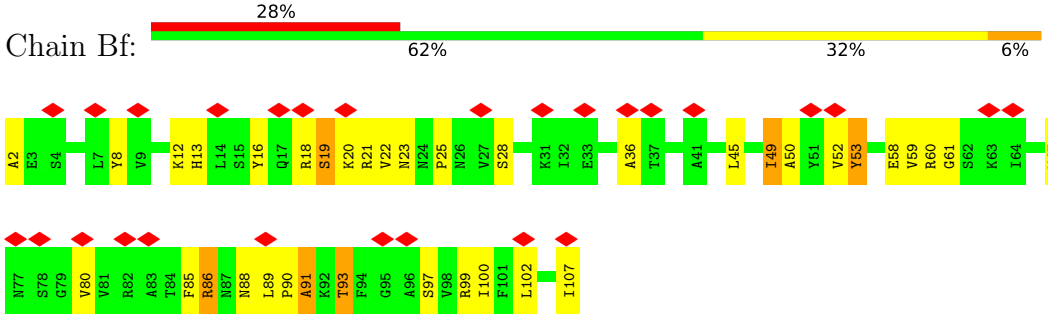
• Molecule 65: 60S RIBOSOMAL PROTEIN L32

Chain Be:



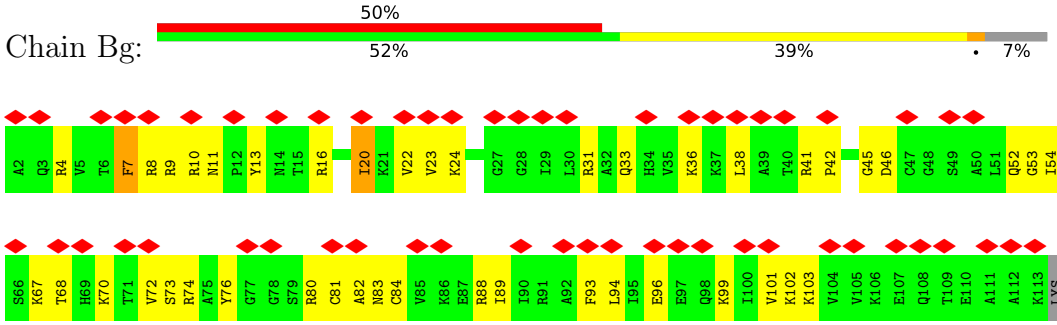
• Molecule 66: 60S RIBOSOMAL PROTEIN L33-A

Chain Bf:



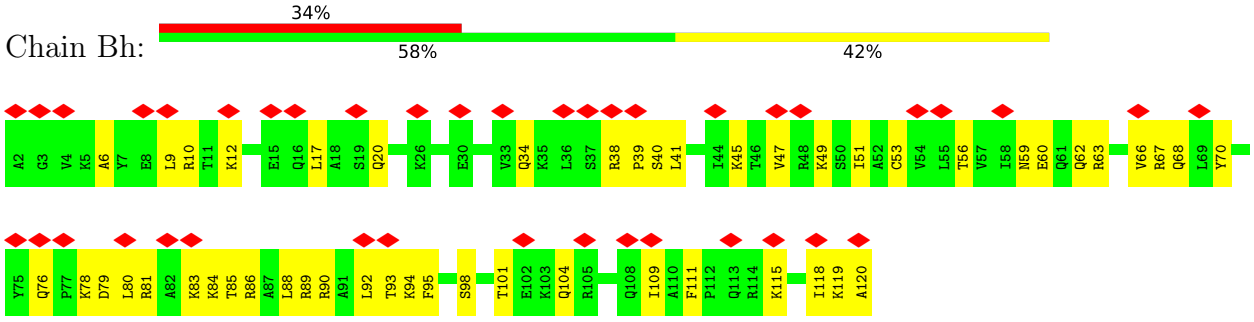
• Molecule 67: 60S RIBOSOMAL PROTEIN L34-A

Chain Bg:



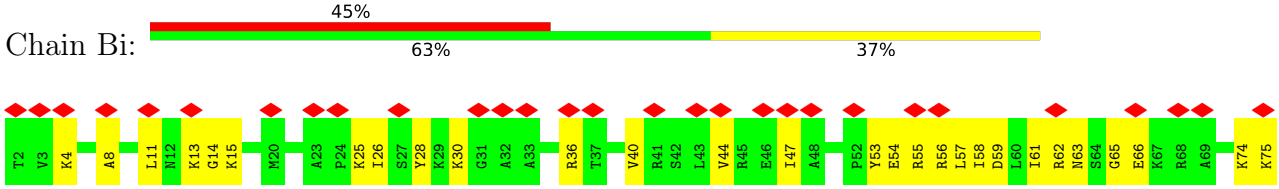
• Molecule 68: 60S RIBOSOMAL PROTEIN L35-B

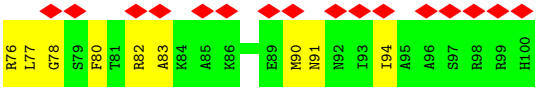
Chain Bh:



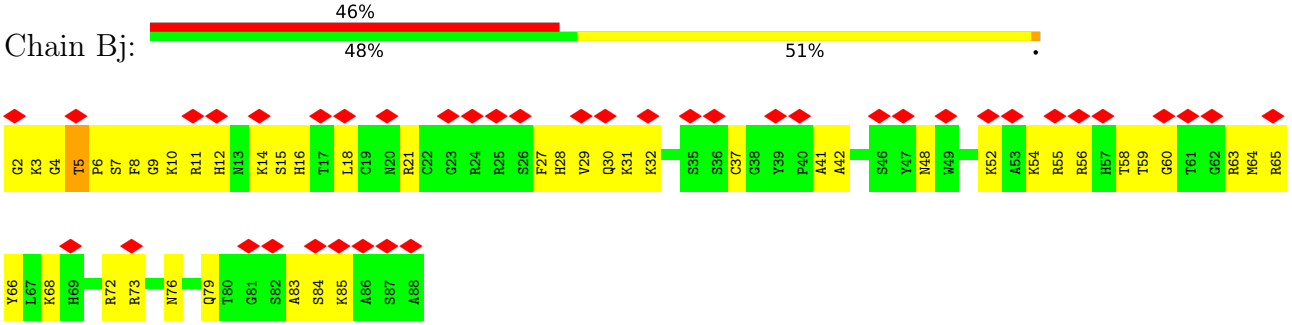
• Molecule 69: 60S RIBOSOMAL PROTEIN L36-A

Chain Bi:

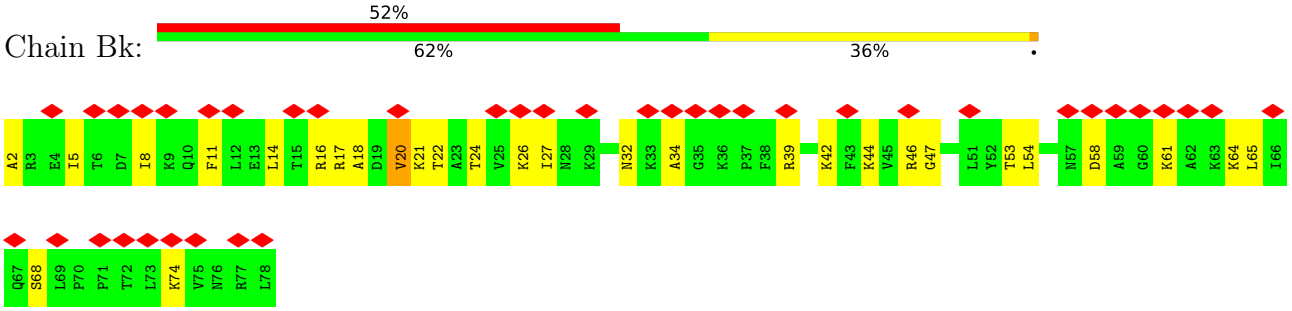




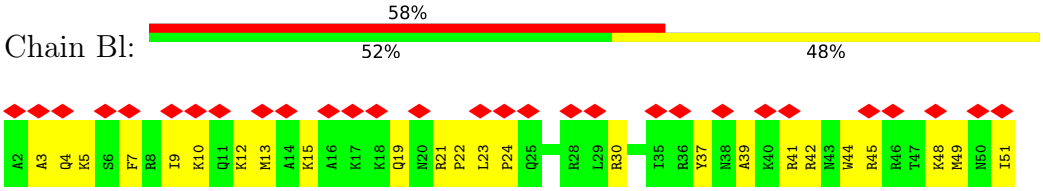
• Molecule 70: 60S RIBOSOMAL PROTEIN L37-A



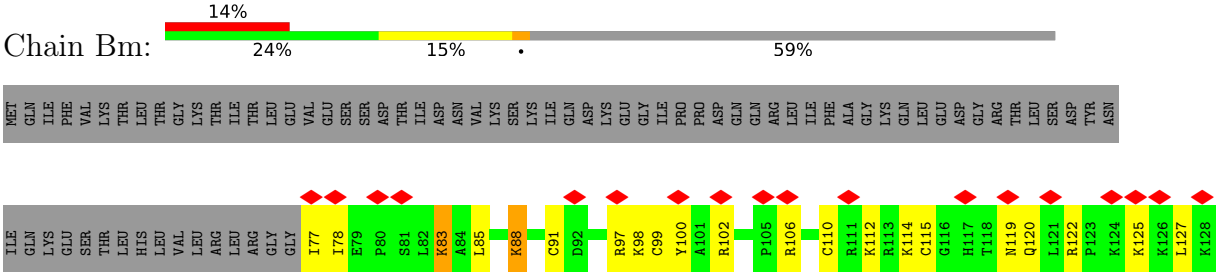
• Molecule 71: 60S RIBOSOMAL PROTEIN L38



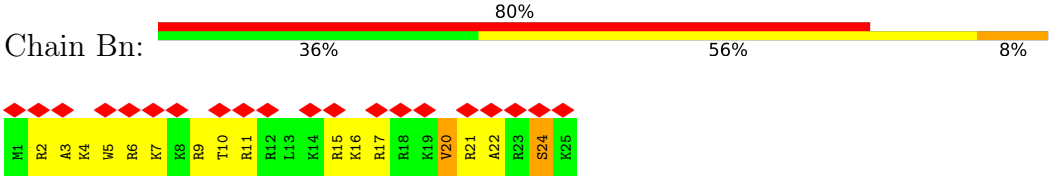
• Molecule 72: 60S RIBOSOMAL PROTEIN L39



• Molecule 73: UBIQUITIN-60S RIBOSOMAL PROTEIN L40

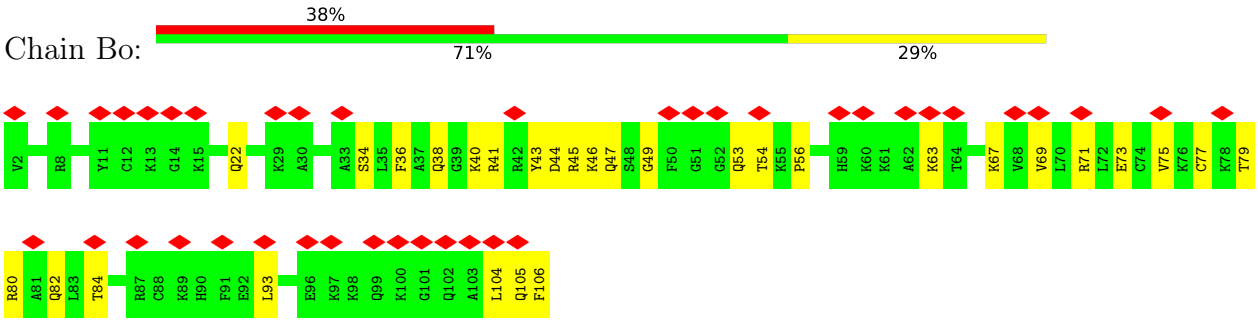


• Molecule 74: 60S RIBOSOMAL PROTEIN L41-B



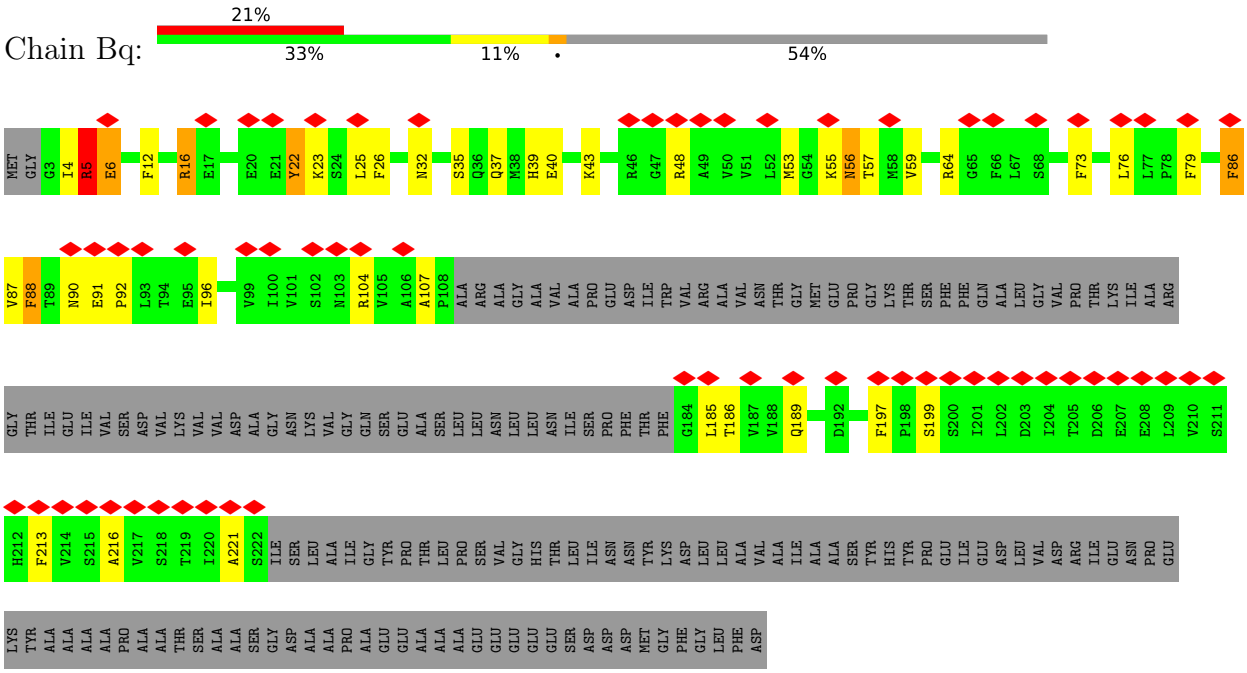
• Molecule 75: 60S RIBOSOMAL PROTEIN L42-A

Chain Bo:



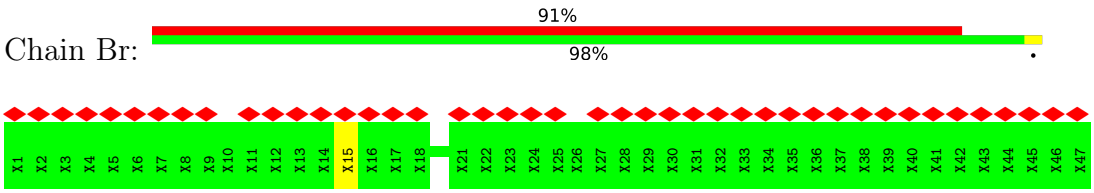
• Molecule 76: 60S ACIDIC RIBOSOMAL PROTEIN P0

Chain Bq:



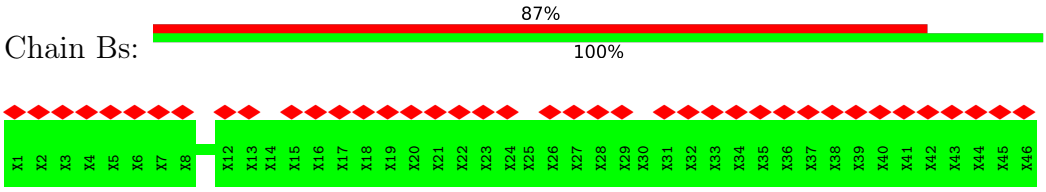
• Molecule 77: 60S ACIDIC RIBOSOMAL PROTEIN P1

Chain Br:



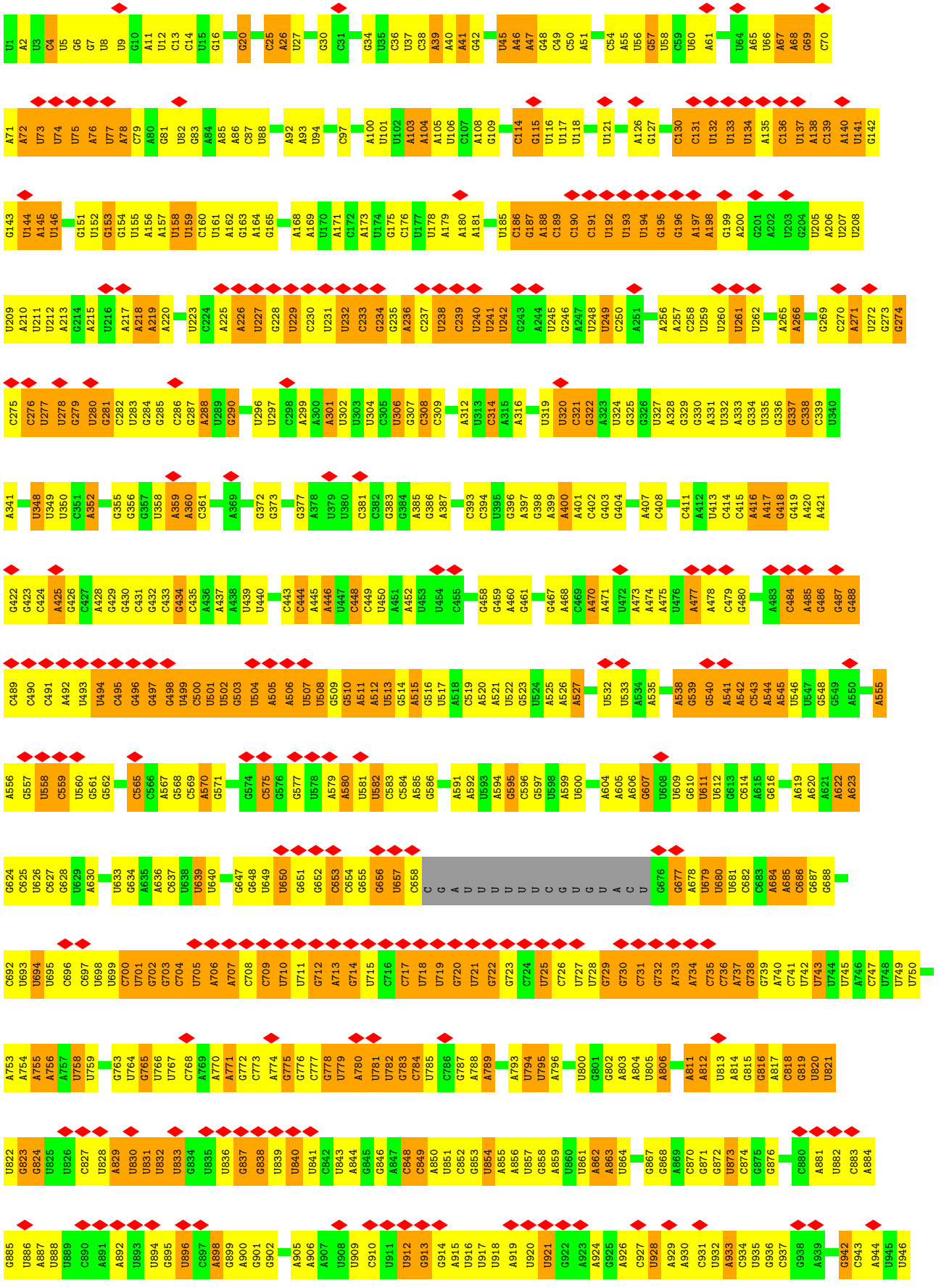
• Molecule 78: 60S ACIDIC RIBOSOMAL PROTEIN P2

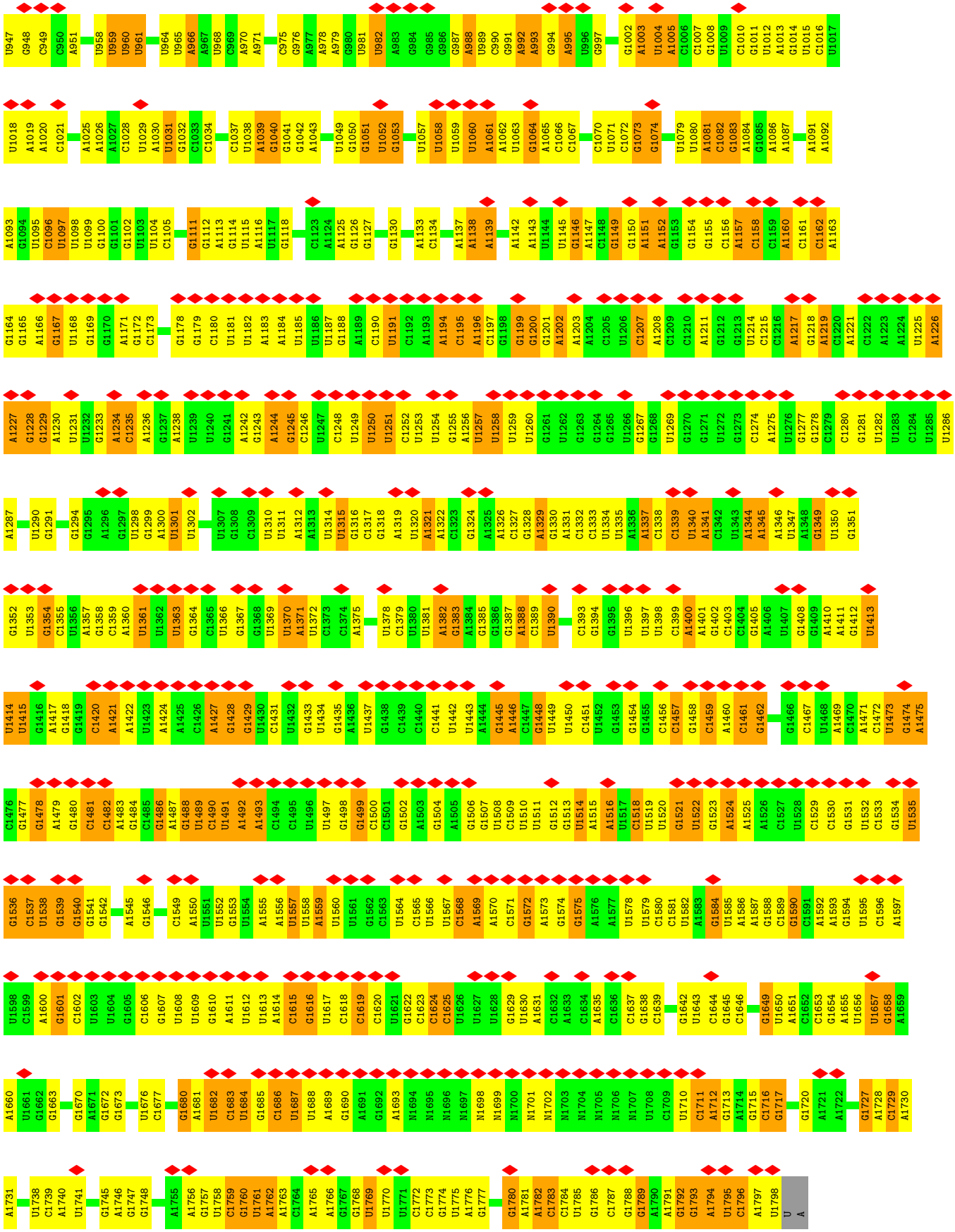
Chain Bs:



• Molecule 79: 18S RIBOSOMAL RNA

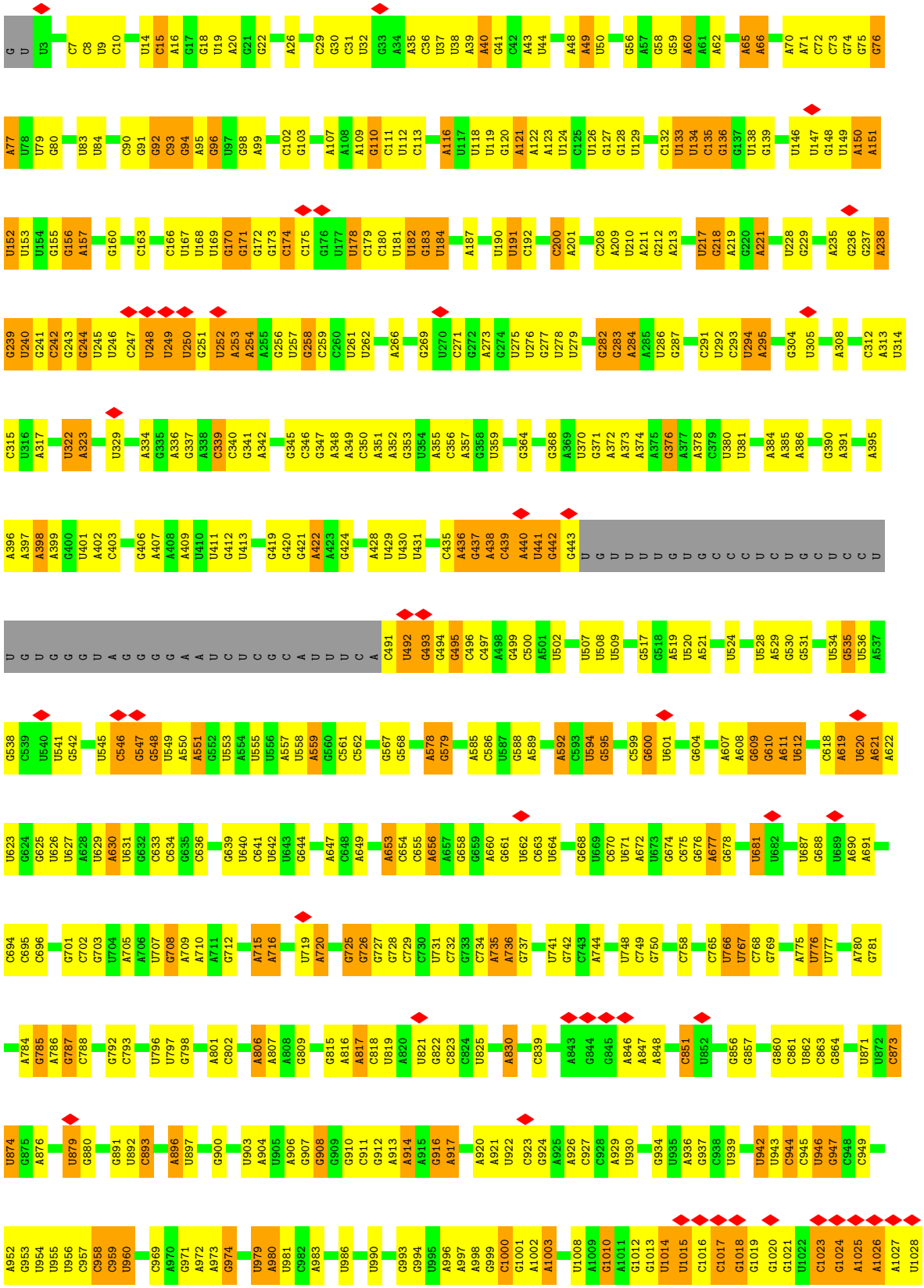
Chain B2:

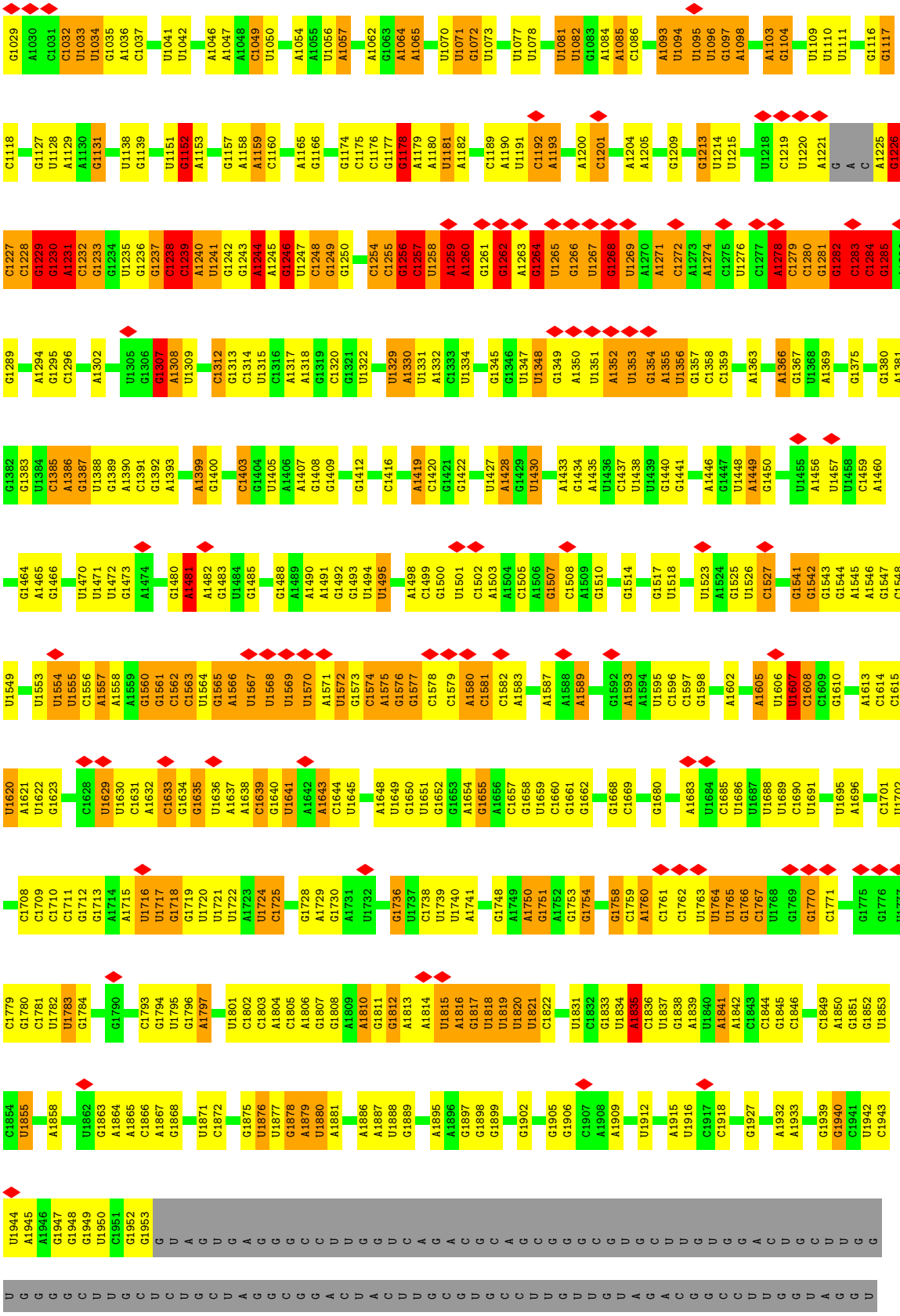


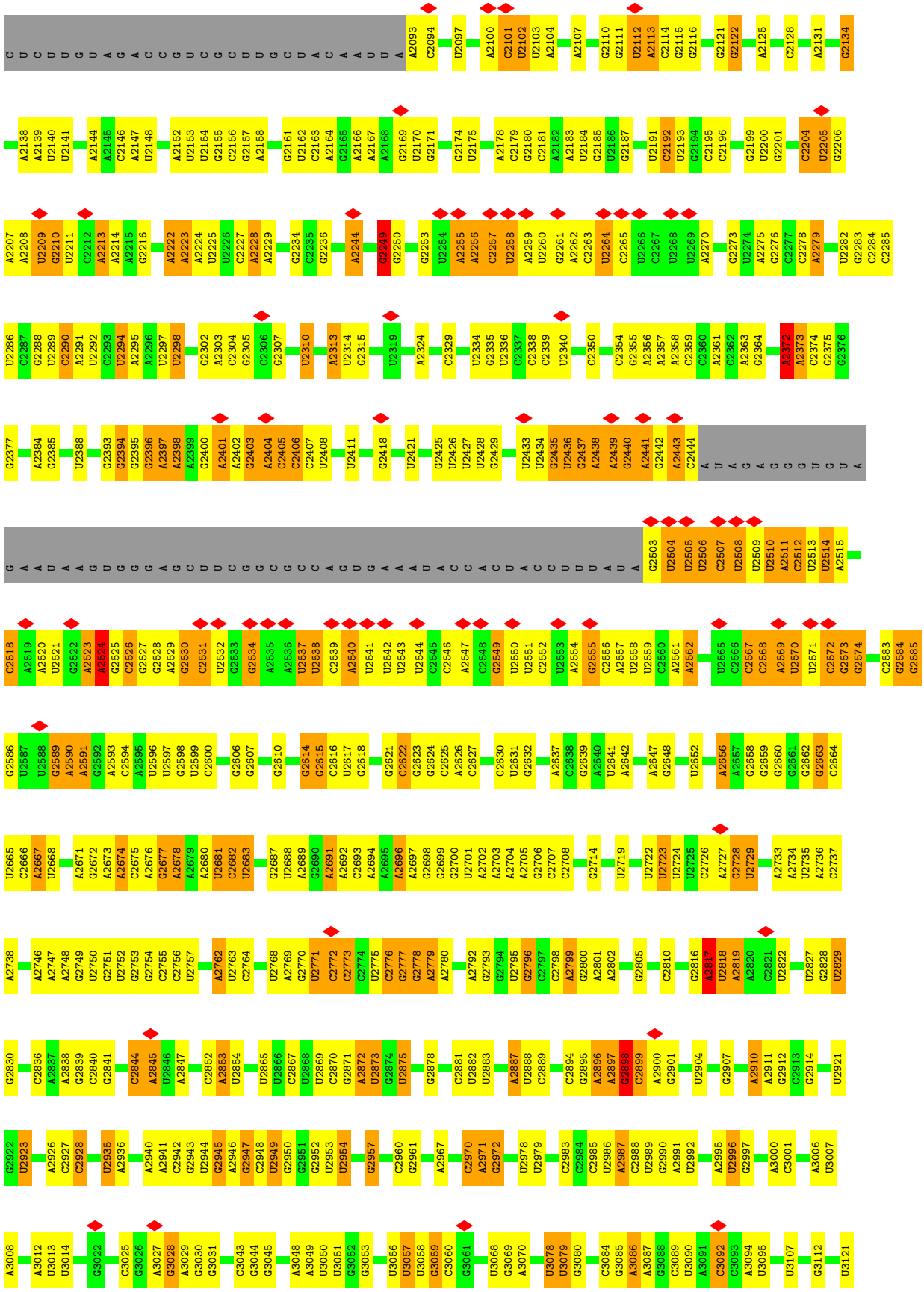


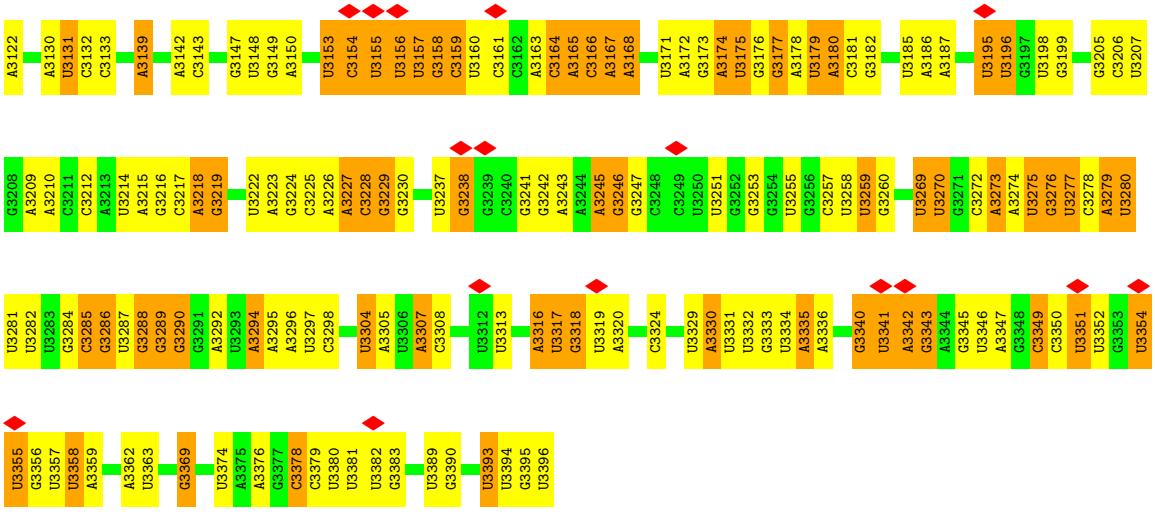
• Molecule 80: 25S RIBOSOMAL RNA

Chain B5:



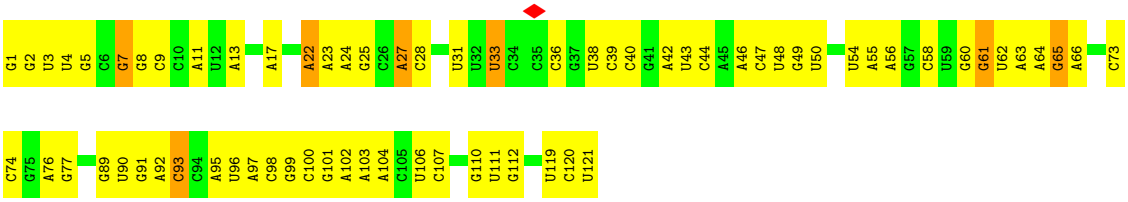






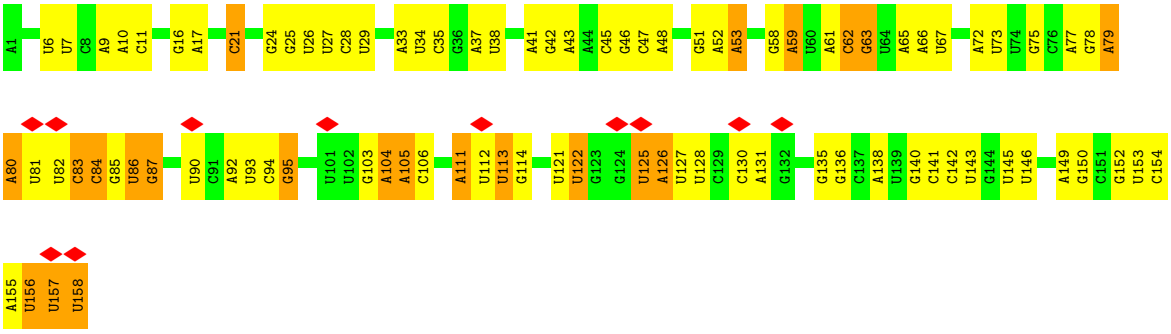
• Molecule 81: 5S RIBOSOMAL RNA

Chain B7:



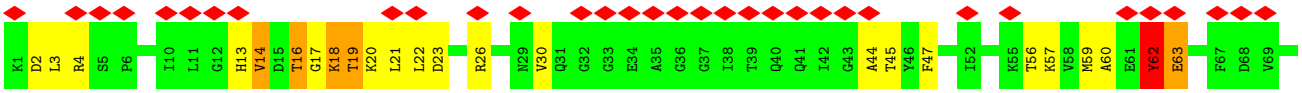
• Molecule 82: 5.8S RIBOSOMAL RNA

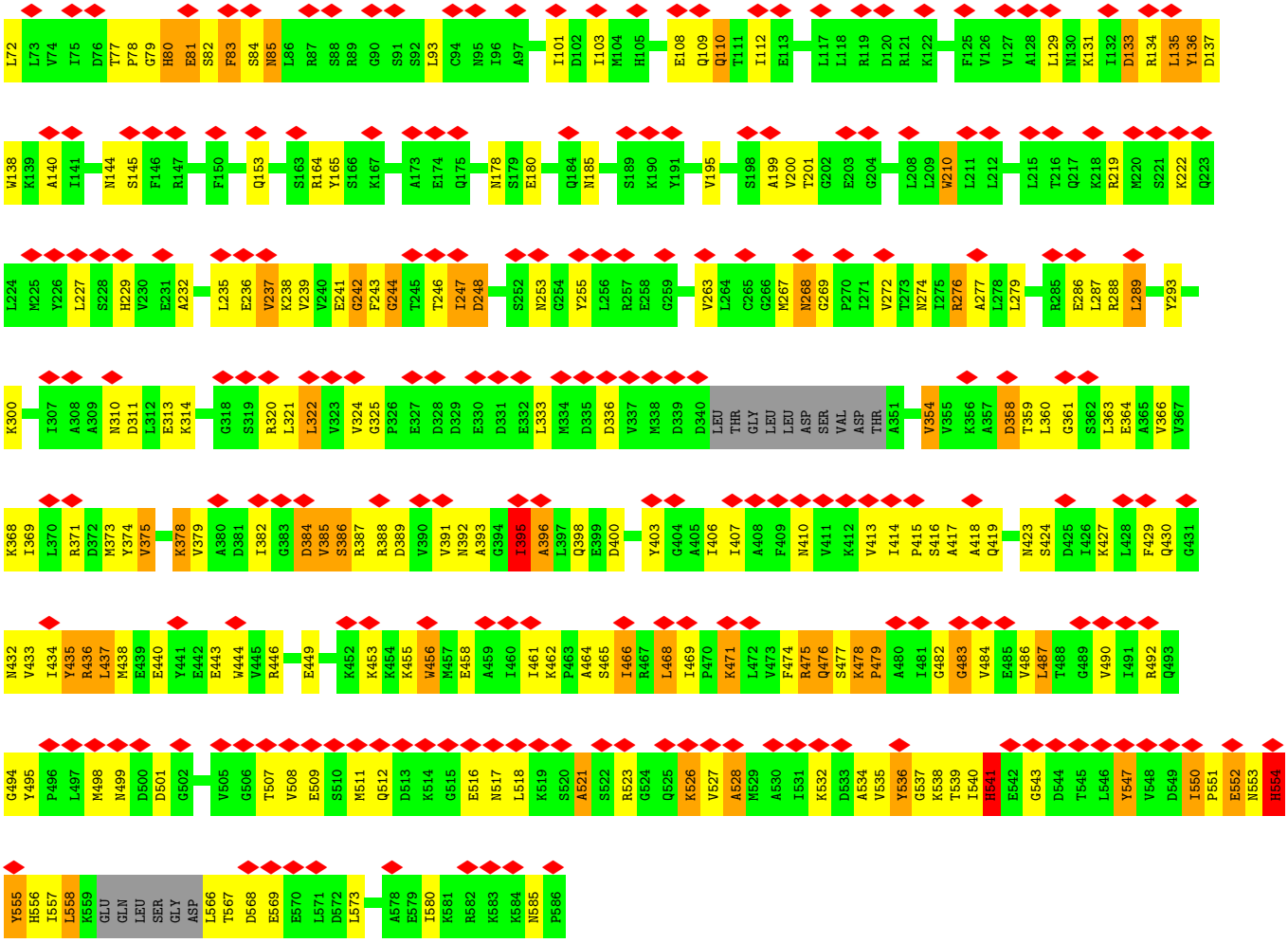
Chain B8:



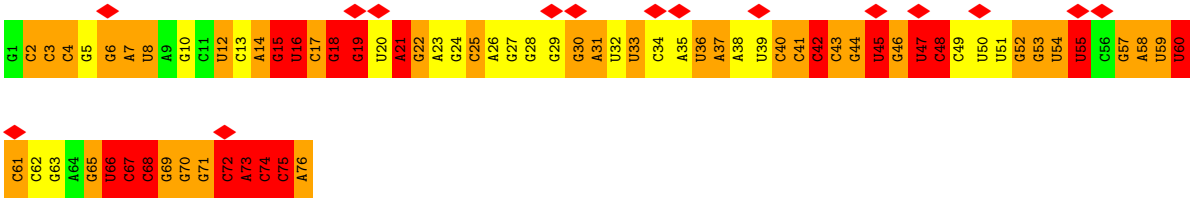
• Molecule 83: EUKARYOTIC TRANSLATION INITIATION FACTOR 5B, PROBABLE TRANSLATION INITIATION FACTOR IF-2

Chain CV:





• Molecule 84: EUKARYOTIC RIBOSOMAL PI TRNA



• Molecule 85: 5'-R(*AP*UP*GP)-3'

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	5143	Depositor
Resolution determination method	Not provided	
CTF correction method	EACH PARTICLE	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	16	Depositor
Minimum defocus (nm)	1900	Depositor
Maximum defocus (nm)	3900	Depositor
Magnification	79096	Depositor
Image detector	FEI FALCON I (4k x 4k)	Depositor
Maximum map value	0.643	Depositor
Minimum map value	-0.362	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.055	Depositor
Recommended contour level	0.15	Depositor
Map size (Å)	424.8, 424.8, 424.8	wwPDB
Map dimensions	240, 240, 240	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.77, 1.77, 1.77	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, OHX, GCP, ZN

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	0.76	0/782	1.15	4/1047 (0.4%)
2	A1	0.69	0/620	1.23	7/838 (0.8%)
3	A2	0.54	0/499	1.08	0/670
4	A3	0.85	1/452 (0.2%)	1.24	2/600 (0.3%)
5	A4	0.61	0/483	1.13	2/643 (0.3%)
6	A5	0.72	0/404	1.37	5/542 (0.9%)
7	A6	0.63	0/2490	1.03	7/3389 (0.2%)
8	A7	1.09	3/925 (0.3%)	1.29	8/1240 (0.6%)
9	AA	0.71	1/1617 (0.1%)	1.22	18/2215 (0.8%)
10	AB	0.62	0/1735	1.13	11/2335 (0.5%)
11	AC	0.81	3/1665 (0.2%)	1.19	6/2263 (0.3%)
12	AD	0.76	0/1759	1.15	11/2368 (0.5%)
13	AE	0.74	0/2109	1.20	17/2839 (0.6%)
14	AF	0.65	0/1629	1.10	7/2202 (0.3%)
15	AG	0.70	0/1823	1.12	7/2439 (0.3%)
16	AH	0.68	0/1506	1.15	12/2028 (0.6%)
17	AI	0.84	0/1514	1.17	7/2021 (0.3%)
18	AJ	0.73	0/1519	1.18	7/2035 (0.3%)
19	AK	0.71	0/789	1.20	7/1067 (0.7%)
20	AL	0.85	0/1239	1.17	6/1673 (0.4%)
21	AM	0.70	0/898	1.13	4/1220 (0.3%)
22	AN	0.79	0/1215	1.17	7/1638 (0.4%)
23	AO	0.69	0/901	1.24	7/1217 (0.6%)
24	AP	0.75	0/998	1.20	8/1341 (0.6%)
25	AQ	0.70	0/1125	1.18	8/1510 (0.5%)
26	AR	0.73	0/935	1.25	7/1254 (0.6%)
27	AS	0.74	0/1211	1.14	5/1628 (0.3%)
28	AT	0.72	1/1130 (0.1%)	1.09	5/1517 (0.3%)
29	AU	0.71	0/865	1.18	8/1169 (0.7%)
30	AV	0.68	1/693 (0.1%)	1.07	3/935 (0.3%)
31	AW	0.83	0/1038	1.23	8/1395 (0.6%)
32	AX	0.91	1/1139 (0.1%)	1.26	6/1518 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	AY	0.70	1/1087 (0.1%)	1.08	2/1449 (0.1%)
34	AZ	0.65	0/571	1.22	4/768 (0.5%)
35	BA	1.11	4/1946 (0.2%)	1.43	18/2614 (0.7%)
36	BB	1.23	5/3146 (0.2%)	1.44	26/4228 (0.6%)
37	BC	1.12	6/2800 (0.2%)	1.43	34/3790 (0.9%)
38	BD	1.02	1/2408 (0.0%)	1.27	21/3248 (0.6%)
39	BE	1.07	0/1269	1.37	11/1705 (0.6%)
40	BF	1.17	2/1828 (0.1%)	1.43	26/2461 (1.1%)
41	BG	0.78	0/1795	1.18	14/2429 (0.6%)
42	BH	1.18	0/1539	1.45	13/2073 (0.6%)
43	BI	1.11	0/1758	1.38	12/2358 (0.5%)
44	BJ	0.99	1/1374 (0.1%)	1.36	17/1842 (0.9%)
46	BL	1.06	3/1573 (0.2%)	1.40	19/2113 (0.9%)
47	BM	1.19	0/1074	1.36	9/1446 (0.6%)
48	BN	0.99	2/1757 (0.1%)	1.30	14/2354 (0.6%)
49	BO	0.64	0/3159	0.95	14/4205 (0.3%)
50	BP	1.34	4/1250 (0.3%)	1.41	6/1683 (0.4%)
51	BQ	1.08	1/1465 (0.1%)	1.42	10/1965 (0.5%)
52	BR	0.95	0/1538	1.21	5/2050 (0.2%)
53	BS	1.20	3/1481 (0.2%)	1.43	17/1990 (0.9%)
54	BT	1.16	2/1300 (0.2%)	1.35	6/1743 (0.3%)
55	BU	0.67	0/794	1.20	8/1076 (0.7%)
56	BV	1.25	2/1018 (0.2%)	1.42	6/1369 (0.4%)
57	BW	0.99	0/1052	1.22	7/1398 (0.5%)
58	BX	0.88	0/974	1.24	7/1314 (0.5%)
59	BY	0.94	0/1004	1.31	6/1341 (0.4%)
60	BZ	0.65	0/1118	1.18	9/1497 (0.6%)
61	Ba	1.20	7/1204 (0.6%)	1.59	28/1612 (1.7%)
62	Bb	1.20	2/473 (0.4%)	1.61	10/629 (1.6%)
63	Bc	0.72	0/775	1.11	3/1040 (0.3%)
64	Bd	1.11	1/897 (0.1%)	1.32	8/1205 (0.7%)
65	Be	1.23	3/1041 (0.3%)	1.58	9/1394 (0.6%)
66	Bf	1.34	6/868 (0.7%)	1.40	6/1168 (0.5%)
67	Bg	0.87	0/890	1.26	3/1189 (0.3%)
68	Bh	0.81	0/974	1.15	2/1297 (0.2%)
69	Bi	0.84	0/777	1.17	2/1033 (0.2%)
70	Bj	1.03	0/696	1.35	4/923 (0.4%)
71	Bk	0.66	0/614	1.07	1/822 (0.1%)
72	Bl	1.03	0/443	1.28	0/588
73	Bm	1.29	0/423	1.42	5/562 (0.9%)
74	Bn	1.05	0/234	1.25	2/300 (0.7%)
75	Bo	0.95	0/860	1.24	0/1136
76	Bq	1.53	6/1090 (0.6%)	1.82	30/1474 (2.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
79	B2	0.53	1/42128 (0.0%)	0.58	0/65642
80	B5	0.84	29/75336 (0.0%)	0.72	69/117449 (0.1%)
81	B7	0.78	0/2883	0.63	0/4491
82	B8	0.66	0/3746	0.61	0/5832
83	CV	2.36	35/4514 (0.8%)	2.08	206/6090 (3.4%)
84	CW	1.35	8/1801 (0.4%)	2.19	71/2803 (2.5%)
85	CX	1.30	0/69	1.99	3/106 (2.8%)
All	All	0.89	146/222521 (0.1%)	1.00	1030/326090 (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
2	A1	0	1
6	A5	0	2
8	A7	0	1
10	AB	0	1
16	AH	0	1
20	AL	0	1
23	AO	0	1
26	AR	0	2
34	AZ	0	3
35	BA	0	2
37	BC	0	1
38	BD	0	1
39	BE	0	1
40	BF	0	2
49	BO	0	2
53	BS	0	1
56	BV	0	1
59	BY	0	1
60	BZ	0	1
61	Ba	0	3
62	Bb	0	1
76	Bq	0	7
77	Br	0	1
80	B5	0	35
83	CV	0	20
84	CW	0	32
85	CX	0	2
All	All	0	127

All (146) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	CV	63	GLU	N-CA	99.89	2.84	1.46
83	CV	210	TRP	CD2-CE3	32.65	1.92	1.40
83	CV	210	TRP	CE2-CZ2	25.81	1.94	1.39
83	CV	210	TRP	CZ2-CH2	23.93	1.82	1.37
83	CV	210	TRP	CD2-CE2	23.30	1.80	1.41
8	A7	134	ASP	CG-OD1	16.86	1.57	1.25
83	CV	210	TRP	CZ3-CH2	15.28	1.78	1.40
8	A7	134	ASP	CG-OD2	15.25	1.54	1.25
83	CV	210	TRP	CE3-CZ3	14.85	1.83	1.38
35	BA	211	HIS	C-O	12.16	1.38	1.24
83	CV	63	GLU	CA-CB	9.19	1.67	1.53
50	BP	66	SER	C-O	8.85	1.35	1.24
80	B5	1227	C	C1'-N1	8.41	1.61	1.48
66	Bf	91	ALA	N-CA	7.85	1.56	1.46
80	B5	2914	G	P-OP2	-7.70	1.33	1.49
37	BC	101	ALA	C-O	7.65	1.27	1.23
11	AC	206	THR	CA-CB	7.49	1.62	1.52
61	Ba	15	VAL	C-O	7.40	1.33	1.24
33	AY	33	ALA	CA-CB	-7.15	1.43	1.53
80	B5	1178	G	P-OP2	-6.92	1.35	1.49
84	CW	19	G	P-O5'	-6.88	1.49	1.59
46	BL	46	ILE	CA-CB	6.82	1.62	1.54
80	B5	2817	A	P-OP1	-6.81	1.35	1.49
65	Be	28	VAL	CA-CB	6.81	1.62	1.53
35	BA	157	VAL	CA-CB	6.80	1.62	1.54
61	Ba	15	VAL	CA-CB	-6.80	1.47	1.54
83	CV	406	ILE	CA-C	-6.56	1.44	1.52
84	CW	67	C	C1'-N1	6.50	1.58	1.48
80	B5	41	G	P-OP1	-6.46	1.36	1.49
46	BL	76	THR	CA-CB	6.45	1.64	1.53
84	CW	67	C	C3'-O3'	6.44	1.51	1.42
83	CV	521	ALA	CA-C	-6.32	1.44	1.52
80	B5	934	G	P-OP1	-6.29	1.36	1.49
80	B5	1902	G	P-OP1	-6.28	1.36	1.49
48	BN	183	THR	CA-CB	6.28	1.64	1.53
64	Bd	7	VAL	CA-CB	6.27	1.62	1.54
61	Ba	28	HIS	N-CA	6.24	1.54	1.46
83	CV	436	ARG	CD-NE	6.15	1.54	1.46
51	BQ	171	LYS	CE-NZ	6.12	1.67	1.49
80	B5	2141	U	P-OP2	-6.11	1.36	1.49
80	B5	2949	U	P-OP1	-6.09	1.36	1.49
62	Bb	16	ALA	CA-CB	-6.08	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1254	C	P-O5'	-6.07	1.50	1.59
83	CV	400	ASP	CA-C	-6.04	1.44	1.52
80	B5	1430	U	P-OP1	-6.04	1.36	1.49
83	CV	435	TYR	CA-CB	6.03	1.63	1.53
37	BC	354	VAL	C-O	-5.95	1.17	1.24
80	B5	1152	G	N9-C4	-5.92	1.26	1.38
66	Bf	22	VAL	CA-CB	-5.92	1.46	1.54
80	B5	2887	A	P-OP2	-5.92	1.37	1.49
37	BC	145	ILE	CA-CB	5.88	1.61	1.54
53	BS	29	ILE	CA-CB	-5.87	1.47	1.54
35	BA	225	ILE	C-O	-5.84	1.17	1.24
80	B5	340	C	P-OP1	-5.83	1.37	1.49
8	A7	65	THR	CA-CB	5.82	1.62	1.53
84	CW	42	C	O3'-P	-5.77	1.52	1.61
83	CV	527	VAL	CA-C	5.76	1.58	1.52
53	BS	36	ILE	CA-CB	-5.76	1.47	1.54
37	BC	101	ALA	CA-CB	-5.75	1.48	1.52
11	AC	206	THR	CA-C	5.74	1.59	1.52
83	CV	526	LYS	C-N	5.73	1.41	1.33
80	B5	1449	A	P-OP2	-5.72	1.37	1.49
84	CW	36	U	C1'-N1	5.71	1.57	1.48
40	BF	227	GLY	C-O	-5.67	1.18	1.23
50	BP	137	ASN	CA-C	-5.65	1.45	1.52
76	Bq	189	GLN	CA-C	-5.64	1.45	1.52
56	BV	73	VAL	CA-CB	5.64	1.61	1.54
32	AX	84	THR	CA-CB	5.62	1.61	1.53
83	CV	276	ARG	CD-NE	5.61	1.54	1.46
28	AT	39	THR	CA-CB	5.57	1.62	1.53
83	CV	354	VAL	CA-C	-5.57	1.45	1.52
83	CV	253	ASN	CA-C	-5.53	1.45	1.52
80	B5	942	U	P-OP1	-5.52	1.38	1.49
83	CV	474	PHE	CA-C	5.50	1.60	1.52
84	CW	72	C	C4'-C3'	5.49	1.60	1.52
80	B5	1226	G	N9-C4	-5.41	1.27	1.38
80	B5	1307	G	C3'-O3'	5.41	1.51	1.43
83	CV	276	ARG	NE-CZ	5.40	1.39	1.33
66	Bf	36	ALA	CA-CB	-5.37	1.45	1.54
11	AC	96	THR	CA-CB	5.37	1.59	1.53
36	BB	227	GLU	CA-C	-5.35	1.46	1.52
80	B5	1152	G	C2-N3	-5.35	1.22	1.32
50	BP	88	VAL	CA-CB	-5.35	1.48	1.54
65	Be	77	ALA	CA-CB	-5.33	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	Bf	50	ALA	CA-CB	-5.33	1.43	1.53
37	BC	358	THR	CA-CB	5.32	1.62	1.53
80	B5	2754	G	P-OP1	-5.31	1.38	1.49
83	CV	23	ASP	N-CA	-5.30	1.40	1.46
4	A3	6	VAL	CA-CB	5.29	1.61	1.54
54	BT	150	THR	CA-CB	5.29	1.60	1.53
54	BT	44	ALA	CA-CB	-5.28	1.45	1.53
84	CW	7	A	O3'-P	-5.28	1.53	1.61
9	AA	103	THR	CA-CB	5.28	1.61	1.53
61	Ba	22	ILE	CA-CB	-5.28	1.47	1.54
79	B2	49	C	P-OP2	-5.28	1.38	1.49
83	CV	279	LEU	CA-C	-5.28	1.46	1.52
83	CV	375	VAL	N-CA	-5.27	1.41	1.45
80	B5	1152	G	N9-C8	5.26	1.48	1.37
80	B5	1835	A	P-OP1	-5.26	1.38	1.49
30	AV	59	VAL	CA-CB	-5.25	1.48	1.54
83	CV	363	LEU	CA-C	-5.25	1.46	1.52
61	Ba	8	THR	N-CA	-5.24	1.40	1.46
80	B5	1369	A	P-OP2	-5.24	1.38	1.49
76	Bq	86	PHE	CA-C	-5.23	1.46	1.52
44	BJ	8	PRO	CB-CG	5.22	1.75	1.49
83	CV	134	ARG	CD-NE	5.22	1.53	1.46
66	Bf	52	VAL	CA-CB	5.22	1.60	1.54
35	BA	12	ALA	CA-CB	-5.21	1.44	1.53
84	CW	12	U	C2'-C1'	-5.21	1.45	1.53
40	BF	130	ILE	CA-CB	-5.21	1.48	1.54
83	CV	366	VAL	CA-C	-5.20	1.46	1.52
37	BC	52	VAL	CA-CB	-5.20	1.49	1.54
83	CV	468	LEU	C-N	5.20	1.38	1.33
83	CV	541	HIS	CA-C	-5.20	1.46	1.53
83	CV	407	ILE	N-CA	-5.18	1.39	1.46
53	BS	35	VAL	CA-CB	-5.18	1.48	1.54
80	B5	2945	G	P-O5'	-5.18	1.51	1.59
76	Bq	25	LEU	CA-C	-5.18	1.46	1.52
83	CV	272	VAL	CA-C	-5.17	1.46	1.52
83	CV	195	VAL	CA-C	-5.17	1.48	1.53
61	Ba	47	LYS	N-CA	5.16	1.52	1.46
83	CV	553	ASN	CA-C	-5.15	1.46	1.52
80	B5	1233	G	C2'-C1'	-5.15	1.45	1.53
56	BV	13	ILE	CA-CB	5.13	1.61	1.54
83	CV	558	LEU	C-N	-5.12	1.26	1.33
76	Bq	221	ALA	C-N	-5.12	1.26	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	Bf	91	ALA	CA-CB	5.11	1.62	1.53
62	Bb	15	LYS	C-O	-5.10	1.18	1.24
38	BD	119	TYR	N-CA	5.09	1.52	1.46
36	BB	260	VAL	CA-CB	-5.08	1.49	1.54
80	B5	1837	U	P-OP2	-5.08	1.38	1.49
80	B5	2214	A	P-OP2	-5.08	1.38	1.49
36	BB	53	MET	SD-CE	-5.08	1.66	1.79
48	BN	183	THR	N-CA	5.08	1.52	1.46
65	Be	12	LYS	N-CA	5.07	1.52	1.46
76	Bq	26	PHE	CA-C	-5.05	1.46	1.52
83	CV	293	TYR	CA-C	-5.04	1.46	1.52
36	BB	367	LYS	CE-NZ	5.03	1.64	1.49
80	B5	348	A	P-OP1	-5.03	1.38	1.49
46	BL	152	THR	CA-CB	5.03	1.61	1.53
61	Ba	24	LYS	CE-NZ	5.03	1.64	1.49
50	BP	130	TYR	C-O	-5.02	1.18	1.23
76	Bq	107	ALA	C-N	-5.02	1.26	1.34
83	CV	18	LYS	N-CA	-5.01	1.40	1.46
36	BB	239	PRO	C-O	-5.01	1.17	1.24
80	B5	1229	G	C5'-C4'	5.01	1.58	1.51

All (1030) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	CW	36	U	P-O3'-C3'	-48.26	47.81	120.20
80	B5	1256	G	P-O3'-C3'	25.89	159.04	120.20
84	CW	36	U	O3'-P-O5'	21.56	136.34	104.00
84	CW	36	U	OP1-P-O3'	-17.49	55.52	108.00
80	B5	1238	C	P-O3'-C3'	17.46	146.38	120.20
65	Be	4	LEU	CA-C-N	-17.04	98.54	119.84
65	Be	4	LEU	C-N-CA	-17.04	98.54	119.84
80	B5	1226	G	C5'-C4'-C3'	16.80	141.20	116.00
84	CW	19	G	P-O5'-C5'	15.92	144.78	120.90
83	CV	474	PHE	N-CA-C	15.19	131.94	113.41
84	CW	68	C	C5'-C4'-C3'	14.93	137.60	115.20
84	CW	36	U	OP2-P-O3'	-14.84	63.48	108.00
80	B5	1258	U	P-O5'-C5'	13.98	141.87	120.90
83	CV	434	ILE	N-CA-C	13.98	124.77	110.23
83	CV	378	LYS	N-CA-C	-13.56	99.16	114.62
83	CV	63	GLU	CB-CA-C	-13.50	88.00	111.22
83	CV	396	ALA	N-CA-C	13.34	127.30	111.82
83	CV	62	TYR	CA-C-N	13.33	142.87	123.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	CV	62	TYR	C-N-CA	13.33	142.87	123.14
80	B5	1233	G	C5'-C4'-C3'	13.07	135.61	116.00
84	CW	7	A	P-O3'-C3'	12.84	139.46	120.20
46	BL	47	ALA	CA-C-N	-12.28	106.94	120.94
46	BL	47	ALA	C-N-CA	-12.28	106.94	120.94
84	CW	67	C	O3'-P-O5'	-12.08	85.88	104.00
84	CW	17	C	P-O3'-C3'	11.65	137.68	120.20
83	CV	63	GLU	N-CA-C	11.64	130.55	107.62
83	CV	63	GLU	N-CA-CB	11.61	130.08	110.46
46	BL	46	ILE	N-CA-C	-11.33	102.03	112.90
32	AX	130	VAL	N-CA-C	11.32	121.29	111.56
84	CW	43	C	C5'-C4'-C3'	-11.09	99.37	116.00
8	A7	134	ASP	CA-CB-CG	10.90	123.50	112.60
84	CW	19	G	O5'-C5'-C4'	-10.88	95.38	111.70
83	CV	554	HIS	CA-CB-CG	-10.84	102.96	113.80
83	CV	527	VAL	N-CA-C	10.83	123.71	108.23
85	CX	2	U	P-O3'-C3'	10.82	136.44	120.20
83	CV	429	PHE	CA-CB-CG	-10.79	103.01	113.80
53	BS	134	ASP	N-CA-C	-10.76	99.73	113.72
83	CV	469	ILE	CB-CA-C	-10.40	98.71	110.68
83	CV	435	TYR	CA-CB-CG	10.31	132.45	113.90
19	AK	88	PRO	N-CA-CB	10.24	114.00	103.25
83	CV	468	LEU	N-CA-C	10.16	124.77	108.41
80	B5	1284	C	C4'-C3'-C2'	10.14	112.74	102.60
76	Bq	86	PHE	CA-CB-CG	-10.09	103.72	113.80
51	BQ	59	ARG	CA-C-N	-9.83	110.26	120.38
51	BQ	59	ARG	C-N-CA	-9.83	110.26	120.38
8	A7	38	PRO	CA-C-N	9.82	130.49	120.38
8	A7	38	PRO	C-N-CA	9.82	130.49	120.38
80	B5	1284	C	C2'-C3'-O3'	9.76	124.14	109.50
18	AJ	14	THR	CA-C-N	9.76	130.37	119.93
18	AJ	14	THR	C-N-CA	9.76	130.37	119.93
80	B5	1258	U	P-O3'-C3'	9.73	134.79	120.20
34	AZ	95	HIS	N-CA-C	9.64	126.49	108.65
49	BO	109[A]	PRO	O-C-N	9.62	125.67	121.15
49	BO	109[B]	PRO	O-C-N	9.62	125.67	121.15
60	BZ	27	LYS	CA-C-N	9.54	130.53	119.47
60	BZ	27	LYS	C-N-CA	9.54	130.53	119.47
58	BX	65	GLN	CA-C-N	-9.41	111.17	120.21
58	BX	65	GLN	C-N-CA	-9.41	111.17	120.21
84	CW	67	C	P-O3'-C3'	-9.41	106.08	120.20
70	Bj	5	THR	CA-C-N	-9.37	109.26	119.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
70	Bj	5	THR	C-N-CA	-9.37	109.26	119.19
84	CW	42	C	C5'-C4'-C3'	-9.37	101.95	116.00
84	CW	58	A	P-O3'-C3'	-9.36	106.15	120.20
25	AQ	43	ILE	N-CA-C	-9.35	101.44	110.42
80	B5	1258	U	O4'-C4'-C3'	-9.34	96.76	106.10
83	CV	423	ASN	N-CA-C	-9.33	102.41	113.88
83	CV	134	ARG	N-CA-C	-9.22	98.91	111.55
83	CV	110	GLN	N-CA-C	9.21	124.31	112.34
80	B5	1226	G	O5'-C5'-C4'	9.18	125.27	111.50
36	BB	114	VAL	CB-CA-C	-9.03	100.14	112.24
51	BQ	170	ARG	N-CA-C	-9.02	98.09	110.35
84	CW	16	U	C2'-C3'-O3'	8.98	127.17	113.70
61	Ba	46	ASP	N-CA-C	-8.96	95.74	110.17
83	CV	81	GLU	CA-C-N	8.94	137.79	121.70
83	CV	81	GLU	C-N-CA	8.94	137.79	121.70
83	CV	386	SER	N-CA-C	-8.93	95.29	107.88
84	CW	13	C	C5'-C4'-C3'	-8.91	102.64	116.00
84	CW	16	U	C4'-C3'-O3'	-8.90	99.64	113.00
84	CW	74	C	P-O3'-C3'	8.89	133.53	120.20
83	CV	568	ASP	N-CA-C	8.88	120.96	111.28
40	BF	94	LYS	CA-C-N	-8.85	113.70	123.43
40	BF	94	LYS	C-N-CA	-8.85	113.70	123.43
36	BB	2	SER	N-CA-C	-8.84	86.24	111.00
84	CW	15	G	P-O5'-C5'	-8.81	107.68	120.90
64	Bd	46	THR	N-CA-C	8.80	120.65	111.14
83	CV	112	ILE	N-CA-C	-8.80	102.73	110.74
27	AS	58	ALA	N-CA-C	-8.80	101.77	111.36
61	Ba	15	VAL	N-CA-C	-8.78	96.92	110.09
61	Ba	67	HIS	N-CA-C	-8.76	101.66	111.82
2	A1	37	CYS	CA-C-N	8.75	130.78	119.84
2	A1	37	CYS	C-N-CA	8.75	130.78	119.84
42	BH	151	VAL	CB-CA-C	-8.75	100.58	112.04
83	CV	541	HIS	CA-CB-CG	-8.72	105.08	113.80
83	CV	385	VAL	N-CA-C	8.71	127.47	109.34
4	A3	9	SER	N-CA-C	8.69	123.60	108.75
44	BJ	9	MET	N-CA-C	-8.65	92.37	110.80
55	BU	46	ALA	N-CA-C	8.64	119.34	108.45
84	CW	67	C	C5'-C4'-C3'	8.63	128.94	116.00
83	CV	85	ASN	CA-C-N	8.59	132.15	120.38
83	CV	85	ASN	C-N-CA	8.59	132.15	120.38
83	CV	22	LEU	CA-C-N	8.59	131.79	120.28
83	CV	22	LEU	C-N-CA	8.59	131.79	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	Bb	39	PHE	N-CA-CB	8.58	124.99	110.49
38	BD	271	LYS	N-CA-C	-8.51	101.03	112.26
84	CW	47	U	P-O3'-C3'	8.49	132.94	120.20
83	CV	57	LYS	N-CA-C	-8.48	95.58	109.40
62	Bb	23	LYS	CA-C-N	-8.44	109.29	119.84
62	Bb	23	LYS	C-N-CA	-8.44	109.29	119.84
35	BA	55	GLY	N-CA-C	-8.41	102.26	111.93
83	CV	392	ASN	CA-CB-CG	-8.37	104.23	112.60
26	AR	85	VAL	CA-C-N	8.34	130.26	119.84
26	AR	85	VAL	C-N-CA	8.34	130.26	119.84
12	AD	210	GLU	CA-C-N	8.32	130.24	119.84
12	AD	210	GLU	C-N-CA	8.32	130.24	119.84
61	Ba	28	HIS	N-CA-C	8.32	128.19	109.81
80	B5	1226	G	O4'-C4'-C3'	-8.32	95.68	104.00
83	CV	30	VAL	N-CA-C	8.29	119.08	110.62
35	BA	238	ILE	CA-C-N	-8.27	109.27	123.25
35	BA	238	ILE	C-N-CA	-8.27	109.27	123.25
83	CV	16	THR	N-CA-C	-8.27	93.19	110.80
76	Bq	43	LYS	CA-C-N	8.25	133.79	120.60
76	Bq	43	LYS	C-N-CA	8.25	133.79	120.60
27	AS	144	ARG	N-CA-C	-8.24	101.98	110.97
84	CW	18	G	O3'-P-O5'	-8.23	91.65	104.00
83	CV	552	GLU	N-CA-C	8.23	121.06	111.02
83	CV	18	LYS	N-CA-C	-8.22	94.69	108.75
80	B5	1152	G	C8-N9-C1'	8.22	151.67	127.00
83	CV	385	VAL	CA-C-N	8.22	137.08	122.45
83	CV	385	VAL	C-N-CA	8.22	137.08	122.45
80	B5	1227	C	C4'-C3'-O3'	-8.19	100.71	113.00
64	Bd	6	ASP	N-CA-C	8.18	120.72	109.11
83	CV	85	ASN	N-CA-C	-8.16	103.53	113.97
83	CV	255	TYR	N-CA-C	-8.12	95.68	109.24
84	CW	59	U	C4'-C3'-C2'	8.10	110.69	102.60
80	B5	1256	G	P-O5'-C5'	8.07	133.01	120.90
83	CV	475	ARG	N-CA-C	8.07	121.55	108.32
44	BJ	151	SER	N-CA-C	-8.02	99.94	110.53
83	CV	19	THR	CA-C-N	8.01	131.82	120.28
83	CV	19	THR	C-N-CA	8.01	131.82	120.28
83	CV	527	VAL	CA-C-N	7.99	133.40	122.77
83	CV	527	VAL	C-N-CA	7.99	133.40	122.77
43	BI	169	LYS	N-CA-C	-7.98	98.21	110.10
61	Ba	15	VAL	CA-C-N	-7.98	110.90	125.66
61	Ba	15	VAL	C-N-CA	-7.98	110.90	125.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	Bf	49	ILE	CB-CA-C	-7.98	98.53	110.82
36	BB	205	VAL	CB-CA-C	-7.96	99.83	112.16
80	B5	1241	U	P-O3'-C3'	7.93	132.10	120.20
49	BO	3[B]	SER	CA-C-N	7.93	141.15	121.80
49	BO	3[B]	SER	C-N-CA	7.93	141.15	121.80
62	Bb	38	LYS	N-CA-C	-7.92	98.56	110.28
36	BB	129	ALA	CA-C-N	-7.91	109.82	122.95
36	BB	129	ALA	C-N-CA	-7.91	109.82	122.95
80	B5	1268	G	P-O5'-C5'	7.87	132.71	120.90
16	AH	185	ILE	CA-C-N	-7.86	110.01	119.84
16	AH	185	ILE	C-N-CA	-7.86	110.01	119.84
83	CV	93	LEU	CA-C-N	7.86	135.84	121.70
83	CV	93	LEU	C-N-CA	7.86	135.84	121.70
35	BA	232	GLY	N-CA-C	-7.85	104.60	113.79
84	CW	48	C	O4'-C1'-C2'	-7.84	97.96	105.80
48	BN	182	ASN	N-CA-C	-7.83	98.72	110.24
53	BS	19	VAL	CA-C-N	-7.83	112.77	120.52
53	BS	19	VAL	C-N-CA	-7.83	112.77	120.52
23	AO	81	VAL	N-CA-C	7.82	119.87	108.53
80	B5	1240	A	P-O3'-C3'	7.79	131.89	120.20
44	BJ	133	ARG	CA-C-N	-7.78	111.98	119.76
44	BJ	133	ARG	C-N-CA	-7.78	111.98	119.76
61	Ba	14	HIS	N-CA-C	-7.76	97.04	109.76
76	Bq	56	ASN	N-CA-C	7.75	119.36	111.07
80	B5	1226	G	P-O3'-C3'	7.75	131.82	120.20
84	CW	21	A	P-O5'-C5'	7.75	132.52	120.90
38	BD	6	ASP	N-CA-C	-7.72	103.84	112.57
37	BC	319	LYS	N-CA-C	-7.72	98.79	110.14
19	AK	63	TYR	N-CA-C	7.71	125.56	114.39
46	BL	100	ARG	N-CA-C	-7.70	100.36	110.53
83	CV	483	GLY	N-CA-C	7.69	121.79	111.03
48	BN	185	ALA	N-CA-C	-7.67	103.92	113.20
40	BF	191	VAL	CA-C-N	-7.66	109.85	121.87
40	BF	191	VAL	C-N-CA	-7.66	109.85	121.87
29	AU	75	GLY	N-CA-C	-7.65	104.69	111.95
51	BQ	99	THR	N-CA-C	7.61	127.01	110.80
83	CV	580	ILE	N-CA-CB	7.60	118.94	110.51
13	AE	76	VAL	N-CA-C	7.60	117.67	110.53
84	CW	45	U	P-O5'-C5'	7.59	132.29	120.90
80	B5	1246	G	P-O3'-C3'	7.58	131.57	120.20
61	Ba	101	VAL	N-CA-C	-7.57	101.80	110.05
83	CV	567	THR	CA-C-N	7.54	130.38	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	CV	567	THR	C-N-CA	7.54	130.38	120.28
80	B5	1232	C	C2'-C3'-O3'	7.53	125.00	113.70
83	CV	300	LYS	N-CA-C	-7.53	97.97	109.95
80	B5	1256	G	C2'-C3'-O3'	7.53	120.79	109.50
48	BN	67	ARG	N-CA-C	7.47	120.48	111.82
4	A3	24	CYS	N-CA-C	7.45	122.43	112.30
67	Bg	7	PHE	N-CA-C	-7.42	100.04	110.50
53	BS	52	LYS	N-CA-C	-7.42	98.13	109.85
2	A1	43	ILE	N-CA-C	7.41	118.58	107.75
10	AB	205	PHE	CA-C-N	7.41	129.11	119.84
10	AB	205	PHE	C-N-CA	7.41	129.11	119.84
37	BC	340	GLY	N-CA-C	-7.41	104.09	115.66
15	AG	85	ARG	CA-C-N	7.41	127.39	119.76
15	AG	85	ARG	C-N-CA	7.41	127.39	119.76
83	CV	72	LEU	CA-C-N	7.41	135.03	121.70
83	CV	72	LEU	C-N-CA	7.41	135.03	121.70
49	BO	108[A]	ILE	CA-C-N	7.40	125.06	119.66
49	BO	108[A]	ILE	C-N-CA	7.40	125.06	119.66
49	BO	108[B]	ILE	CA-C-N	7.40	125.06	119.66
49	BO	108[B]	ILE	C-N-CA	7.40	125.06	119.66
25	AQ	40	GLU	C-N-CD	-7.39	104.35	120.60
83	CV	476	GLN	CA-CB-CG	7.39	128.87	114.10
28	AT	38	LYS	N-CA-C	7.38	122.34	113.12
38	BD	126	GLU	N-CA-C	-7.38	102.02	113.02
25	AQ	69	VAL	CB-CA-C	-7.38	100.81	110.84
10	AB	132	ASP	N-CA-C	7.38	119.94	110.65
83	CV	358	ASP	CA-CB-CG	-7.37	105.23	112.60
83	CV	253	ASN	CA-CB-CG	-7.36	105.24	112.60
25	AQ	40	GLU	CA-C-N	7.35	144.64	127.00
25	AQ	40	GLU	C-N-CA	7.35	144.64	127.00
37	BC	341	SER	N-CA-C	-7.35	101.69	108.75
46	BL	50	PRO	CA-C-O	-7.32	110.33	118.68
48	BN	61	ILE	N-CA-C	7.30	118.41	107.75
80	B5	1152	G	C4-N9-C1'	-7.29	104.64	126.50
47	BM	53	VAL	CA-C-N	7.28	128.43	119.98
47	BM	53	VAL	C-N-CA	7.28	128.43	119.98
80	B5	1255	C	P-O5'-C5'	7.28	131.82	120.90
83	CV	478	LYS	CB-CA-C	7.26	124.48	110.17
83	CV	507	THR	CA-C-N	7.25	135.02	121.97
83	CV	507	THR	C-N-CA	7.25	135.02	121.97
57	BW	75	THR	N-CA-C	7.25	120.21	108.76
38	BD	37	VAL	N-CA-C	7.24	117.34	110.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BF	130	ILE	N-CA-CB	-7.24	103.72	112.33
80	B5	1307	G	C2'-C3'-O3'	7.22	120.33	109.50
6	A5	146	SER	N-CA-C	-7.21	106.40	114.62
37	BC	230	VAL	CB-CA-C	-7.19	101.56	112.05
55	BU	90	ARG	N-CA-C	-7.19	99.81	110.23
68	Bh	41	LEU	CA-C-N	7.17	126.80	119.19
68	Bh	41	LEU	C-N-CA	7.17	126.80	119.19
83	CV	551	PRO	CA-C-N	7.17	130.75	120.79
83	CV	551	PRO	C-N-CA	7.17	130.75	120.79
84	CW	53	G	P-O5'-C5'	-7.15	110.17	120.90
37	BC	204	GLY	CA-C-N	-7.15	113.31	120.31
37	BC	204	GLY	C-N-CA	-7.15	113.31	120.31
49	BO	109[A]	PRO	CA-C-O	-7.14	115.09	120.73
49	BO	109[B]	PRO	CA-C-O	-7.14	115.09	120.73
76	Bq	26	PHE	CA-CB-CG	-7.13	106.67	113.80
22	AN	22	ALA	CA-C-N	7.13	144.12	127.00
22	AN	22	ALA	C-N-CA	7.13	144.12	127.00
80	B5	1229	G	C5'-C4'-C3'	7.13	126.69	116.00
83	CV	242	GLY	CA-C-N	7.12	132.93	122.39
83	CV	242	GLY	C-N-CA	7.12	132.93	122.39
13	AE	28	ALA	CA-C-N	-7.11	112.43	119.90
13	AE	28	ALA	C-N-CA	-7.11	112.43	119.90
35	BA	207	VAL	CB-CA-C	-7.10	101.15	112.16
9	AA	108	THR	N-CA-C	-7.10	100.02	110.52
84	CW	21	A	C5'-C4'-C3'	7.08	126.62	116.00
44	BJ	65	ILE	CB-CA-C	-7.08	104.83	111.06
11	AC	111	VAL	CB-CA-C	-7.08	102.08	111.70
48	BN	90	ASN	CA-C-N	-7.06	111.32	123.25
48	BN	90	ASN	C-N-CA	-7.06	111.32	123.25
83	CV	244	GLY	N-CA-C	7.06	129.91	113.18
14	AF	44	ASN	N-CA-C	-7.06	102.64	111.11
41	BG	72	PRO	CA-C-N	7.05	128.66	119.84
41	BG	72	PRO	C-N-CA	7.05	128.66	119.84
62	Bb	19	ASN	CA-C-N	-7.05	115.75	122.66
62	Bb	19	ASN	C-N-CA	-7.05	115.75	122.66
46	BL	75	PHE	N-CA-C	7.05	122.13	112.90
84	CW	42	C	C4'-C3'-O3'	-7.04	102.44	113.00
80	B5	1254	C	O5'-C5'-C4'	-7.04	100.95	111.50
35	BA	14	SER	CB-CA-C	-7.02	108.46	116.54
9	AA	3	LEU	CA-C-N	6.98	128.57	119.84
9	AA	3	LEU	C-N-CA	6.98	128.57	119.84
48	BN	76	PRO	CA-C-N	-6.98	111.46	123.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BN	76	PRO	C-N-CA	-6.98	111.46	123.25
22	AN	22	ALA	C-N-CD	-6.96	105.28	120.60
13	AE	105	VAL	N-CA-C	-6.94	105.30	113.42
19	AK	82	LEU	CA-C-N	6.94	126.97	119.89
19	AK	82	LEU	C-N-CA	6.94	126.97	119.89
80	B5	1283	C	O3'-P-O5'	6.94	114.41	104.00
83	CV	518	LEU	N-CA-C	-6.94	98.42	109.59
20	AL	135	VAL	N-CA-C	6.93	117.99	108.84
84	CW	51	U	P-O3'-C3'	-6.93	109.80	120.20
53	BS	5	LYS	N-CA-C	-6.93	98.78	109.52
36	BB	81	THR	CA-C-N	-6.90	113.27	120.38
36	BB	81	THR	C-N-CA	-6.90	113.27	120.38
50	BP	51	VAL	N-CA-C	-6.90	102.19	111.44
83	CV	336	ASP	CA-CB-CG	-6.89	105.71	112.60
40	BF	95	ILE	CA-C-N	6.89	127.47	120.38
40	BF	95	ILE	C-N-CA	6.89	127.47	120.38
37	BC	90	PHE	CA-C-N	-6.88	107.92	121.41
37	BC	90	PHE	C-N-CA	-6.88	107.92	121.41
32	AX	45	GLY	N-CA-C	-6.87	105.02	114.64
80	B5	1283	C	C5'-C4'-C3'	6.87	126.31	116.00
83	CV	375	VAL	CB-CA-C	6.86	117.09	110.16
42	BH	143	GLU	N-CA-C	6.84	122.17	113.55
12	AD	219	ALA	CA-C-N	6.83	128.38	119.84
12	AD	219	ALA	C-N-CA	6.83	128.38	119.84
83	CV	434	ILE	CB-CA-C	-6.82	102.97	111.70
17	AI	148	ALA	N-CA-C	-6.82	101.98	111.39
9	AA	202	TYR	N-CA-C	-6.82	101.07	110.35
13	AE	30	ARG	CA-C-N	6.80	127.21	119.93
13	AE	30	ARG	C-N-CA	6.80	127.21	119.93
64	Bd	90	PHE	CB-CA-C	-6.80	97.45	110.24
57	BW	79	GLN	N-CA-C	6.80	120.48	109.40
83	CV	248	ASP	CA-CB-CG	-6.79	105.81	112.60
83	CV	60	ALA	N-CA-C	-6.78	96.35	110.80
80	B5	1227	C	N1-C1'-C2'	6.77	122.15	112.00
40	BF	177	GLY	N-CA-C	-6.75	100.47	112.22
64	Bd	40	ALA	N-CA-C	-6.73	103.86	111.07
54	BT	11	THR	N-CA-C	6.73	121.20	112.92
60	BZ	90	GLU	N-CA-C	6.73	119.23	111.02
83	CV	487	LEU	N-CA-C	-6.73	103.87	111.14
83	CV	384	ASP	CA-C-N	6.72	134.07	121.97
83	CV	384	ASP	C-N-CA	6.72	134.07	121.97
66	Bf	86	ARG	N-CA-C	-6.72	103.95	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BI	153	ARG	N-CA-C	-6.72	104.10	112.90
52	BR	45	VAL	N-CA-C	-6.72	103.68	111.00
65	Be	16	LYS	N-CA-C	6.72	118.39	111.14
80	B5	1254	C	P-O5'-C5'	6.72	130.97	120.90
84	CW	18	G	C5'-C4'-C3'	-6.70	105.15	115.20
61	Ba	72	VAL	N-CA-C	6.69	119.04	108.87
80	B5	1260	A	P-O5'-C5'	-6.69	110.86	120.90
83	CV	268	ASN	N-CA-C	-6.69	104.43	112.59
83	CV	108	GLU	N-CA-C	-6.69	99.00	108.96
40	BF	76	TYR	CA-C-N	-6.68	114.22	123.10
40	BF	76	TYR	C-N-CA	-6.68	114.22	123.10
36	BB	241	LYS	CA-C-N	-6.67	111.89	121.42
36	BB	241	LYS	C-N-CA	-6.67	111.89	121.42
49	BO	110[A]	PRO	CA-C-O	-6.67	110.90	120.56
49	BO	110[B]	PRO	CA-C-O	-6.67	110.90	120.56
55	BU	68	THR	N-CA-C	-6.66	103.62	113.61
41	BG	71	VAL	CA-C-N	-6.65	113.53	120.38
41	BG	71	VAL	C-N-CA	-6.65	113.53	120.38
41	BG	128	LYS	CA-C-N	6.64	126.82	120.31
41	BG	128	LYS	C-N-CA	6.64	126.82	120.31
83	CV	325	GLY	N-CA-C	-6.64	98.79	112.34
65	Be	45	ARG	CB-CA-C	-6.64	103.32	111.82
24	AP	52	LYS	CA-C-N	-6.63	114.95	121.65
24	AP	52	LYS	C-N-CA	-6.63	114.95	121.65
19	AK	87	VAL	CA-C-N	6.63	128.13	119.84
19	AK	87	VAL	C-N-CA	6.63	128.13	119.84
16	AH	50	ASP	N-CA-C	6.62	120.17	110.17
24	AP	100	LYS	N-CA-C	-6.62	99.50	109.96
42	BH	169	ASN	N-CA-C	6.62	120.30	111.30
83	CV	80	HIS	CA-C-N	6.62	133.62	121.70
83	CV	80	HIS	C-N-CA	6.62	133.62	121.70
42	BH	4	ILE	N-CA-CB	6.61	119.53	110.54
69	Bi	66	GLU	N-CA-C	-6.61	104.85	113.17
1	A0	96	ALA	CA-C-N	6.60	127.18	120.38
1	A0	96	ALA	C-N-CA	6.60	127.18	120.38
84	CW	19	G	C4'-C3'-O3'	-6.59	99.51	109.40
83	CV	550	ILE	CA-C-N	6.58	128.07	119.84
83	CV	550	ILE	C-N-CA	6.58	128.07	119.84
76	Bq	79	PHE	CA-CB-CG	-6.57	107.23	113.80
83	CV	400	ASP	N-CA-CB	6.57	121.58	110.49
43	BI	140	THR	CB-CA-C	-6.56	100.25	114.10
38	BD	272	TYR	N-CA-C	-6.56	103.60	112.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	CV	103	ILE	N-CA-C	-6.56	106.33	112.83
50	BP	24	VAL	CB-CA-C	-6.55	100.59	110.55
80	B5	1226	G	P-O5'-C5'	-6.55	111.08	120.90
26	AR	77	GLU	N-CA-C	-6.55	103.83	110.97
83	CV	478	LYS	CA-C-O	-6.54	111.20	120.16
34	AZ	98	GLN	N-CA-C	6.52	119.18	109.59
76	Bq	73	PHE	CA-CB-CG	-6.52	107.28	113.80
23	AO	56	SER	CA-C-N	6.52	126.75	119.32
23	AO	56	SER	C-N-CA	6.52	126.75	119.32
43	BI	99	ILE	CB-CA-C	-6.51	101.12	110.83
73	Bm	83	LYS	N-CA-C	-6.51	104.11	111.14
60	BZ	28	PRO	N-CA-C	6.51	123.24	113.81
33	AY	45	ALA	N-CA-C	-6.49	104.20	111.28
28	AT	9	VAL	N-CA-C	6.49	117.38	107.77
37	BC	192	GLY	N-CA-C	-6.49	106.31	114.16
18	AJ	101	VAL	N-CA-C	6.48	117.23	110.62
23	AO	91	THR	N-CA-C	6.48	119.17	111.33
43	BI	24	ARG	N-CA-C	-6.48	100.93	110.52
61	Ba	42	ARG	N-CA-C	6.48	119.33	111.82
36	BB	286	GLY	N-CA-C	6.47	120.34	111.54
37	BC	248	VAL	N-CA-C	6.47	117.23	108.17
43	BI	62	SER	N-CA-C	-6.47	104.23	111.28
46	BL	151	ALA	N-CA-C	6.46	119.28	111.40
58	BX	56	ARG	N-CA-C	-6.46	101.39	110.50
84	CW	48	C	O4'-C1'-N1	6.46	117.88	108.20
9	AA	167	LYS	CB-CA-C	-6.43	109.17	116.63
44	BJ	44	THR	CB-CA-C	6.43	117.06	109.47
14	AF	29	ILE	CA-C-N	6.42	127.87	119.84
14	AF	29	ILE	C-N-CA	6.42	127.87	119.84
46	BL	76	THR	N-CA-CB	6.42	121.34	110.49
84	CW	16	U	O4'-C1'-C2'	-6.42	101.18	107.60
84	CW	51	U	P-O5'-C5'	6.42	130.53	120.90
84	CW	60	U	O4'-C1'-C2'	-6.42	99.38	105.80
41	BG	68	ARG	N-CA-C	-6.41	102.03	110.43
80	B5	1227	C	P-O5'-C5'	-6.41	111.28	120.90
40	BF	221	LYS	N-CA-C	-6.40	99.83	108.86
61	Ba	8	THR	CB-CA-C	6.40	121.73	110.85
59	BY	100	HIS	CA-C-N	-6.39	113.22	119.87
59	BY	100	HIS	C-N-CA	-6.39	113.22	119.87
10	AB	22	ASP	CA-C-N	6.39	127.83	119.84
10	AB	22	ASP	C-N-CA	6.39	127.83	119.84
83	CV	499	ASN	CA-CB-CG	6.37	118.97	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	CW	75	C	P-O3'-C3'	6.37	129.76	120.20
84	CW	18	G	P-O5'-C5'	-6.36	111.36	120.90
2	A1	15	GLU	N-CA-C	-6.35	103.88	111.69
80	B5	1284	C	O4'-C4'-C3'	-6.35	99.75	106.10
56	BV	42	SER	N-CA-C	6.35	124.32	110.80
22	AN	137	PRO	CA-C-O	-6.34	114.11	121.34
84	CW	74	C	C2'-C3'-O3'	6.34	119.02	109.50
13	AE	197	HIS	N-CA-C	6.34	116.93	108.38
15	AG	147	LEU	N-CA-C	6.33	121.84	114.62
13	AE	168	LYS	N-CA-C	6.33	118.47	110.24
80	B5	1152	G	N3-C4-N9	-6.33	107.01	126.00
34	AZ	94	LYS	N-CA-C	6.33	121.09	112.68
53	BS	40	ARG	CG-CD-NE	6.32	125.90	112.00
59	BY	56	VAL	N-CA-C	6.32	116.69	108.35
83	CV	229	HIS	CA-CB-CG	-6.32	107.48	113.80
43	BI	4	ARG	CB-CA-C	6.32	118.58	109.11
36	BB	228	GLY	N-CA-C	6.31	119.27	112.33
7	A6	286	GLU	CA-C-N	6.30	126.06	119.76
7	A6	286	GLU	C-N-CA	6.30	126.06	119.76
37	BC	222	VAL	CA-C-N	6.30	127.72	119.84
37	BC	222	VAL	C-N-CA	6.30	127.72	119.84
66	Bf	19	SER	N-CA-C	-6.30	100.05	109.94
83	CV	178	ASN	N-CA-C	-6.30	98.35	109.06
16	AH	30	SER	N-CA-C	-6.30	104.39	113.21
16	AH	97	ARG	N-CA-C	6.30	117.94	111.14
43	BI	154	ARG	N-CA-C	-6.30	104.30	112.23
35	BA	148	VAL	N-CA-C	6.29	117.90	108.96
57	BW	76	VAL	N-CA-C	6.29	122.42	109.34
39	BE	30	LEU	N-CA-C	6.28	119.14	110.35
6	A5	106	TYR	N-CA-C	-6.28	97.42	110.80
31	AW	94	LEU	CA-C-N	6.28	125.50	118.97
31	AW	94	LEU	C-N-CA	6.28	125.50	118.97
83	CV	585	ASN	CA-CB-CG	-6.28	106.32	112.60
80	B5	1152	G	N3-C2-N2	-6.28	101.08	119.90
37	BC	115	HIS	N-CA-C	-6.27	104.53	111.36
31	AW	105	THR	CB-CA-C	-6.26	99.92	110.19
73	Bm	119	ASN	N-CA-C	-6.26	104.95	112.59
53	BS	171	PHE	N-CA-C	6.24	120.63	112.89
40	BF	98	LYS	CA-C-N	-6.24	112.41	119.28
40	BF	98	LYS	C-N-CA	-6.24	112.41	119.28
84	CW	60	U	O4'-C1'-N1	6.24	117.55	108.20
40	BF	174	GLY	N-CA-C	-6.23	105.02	113.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	CV	322	LEU	CA-C-N	6.23	129.84	120.75
83	CV	322	LEU	C-N-CA	6.23	129.84	120.75
60	BZ	35	SER	N-CA-C	-6.22	100.63	109.96
83	CV	492	ARG	CA-C-N	6.21	133.40	121.54
83	CV	492	ARG	C-N-CA	6.21	133.40	121.54
83	CV	440	GLU	CB-CA-C	-6.21	100.48	110.79
83	CV	269	GLY	CA-C-N	6.21	125.97	119.76
83	CV	269	GLY	C-N-CA	6.21	125.97	119.76
76	Bq	37	GLN	CA-C-N	6.20	128.90	120.54
76	Bq	37	GLN	C-N-CA	6.20	128.90	120.54
6	A5	144	CYS	N-CA-C	-6.19	97.62	110.80
69	Bi	47	ILE	CB-CA-C	-6.19	104.14	111.94
42	BH	151	VAL	N-CA-CB	6.19	118.20	110.47
83	CV	414	ILE	CA-C-N	6.18	127.57	119.84
83	CV	414	ILE	C-N-CA	6.18	127.57	119.84
55	BU	21	SER	CA-C-N	-6.17	112.65	119.19
55	BU	21	SER	C-N-CA	-6.17	112.65	119.19
32	AX	111	GLY	N-CA-C	-6.17	100.54	112.02
39	BE	94	GLU	N-CA-C	6.17	118.55	111.02
29	AU	75	GLY	CA-C-O	-6.17	118.21	122.22
83	CV	528	ALA	O-C-N	-6.16	116.19	123.22
83	CV	573	LEU	N-CA-C	6.16	117.99	111.28
84	CW	14	A	C5'-C4'-C3'	-6.13	106.80	116.00
83	CV	263	VAL	N-CA-C	-6.13	99.57	108.89
76	Bq	12	PHE	CA-CB-CG	6.13	119.93	113.80
28	AT	121	GLY	N-CA-C	6.11	118.69	111.35
50	BP	79	THR	N-CA-C	-6.11	106.46	114.04
6	A5	104	SER	N-CA-C	-6.11	105.78	113.18
83	CV	479	PRO	N-CA-C	6.11	120.81	111.15
80	B5	1256	G	O5'-C5'-C4'	-6.11	102.54	111.70
13	AE	149	TYR	CA-C-N	-6.11	114.47	120.52
13	AE	149	TYR	C-N-CA	-6.11	114.47	120.52
84	CW	67	C	C4'-C3'-C2'	6.10	108.70	102.60
10	AB	105	PHE	N-CA-C	-6.09	99.81	109.07
83	CV	569	GLU	CA-C-N	6.08	128.43	120.28
83	CV	569	GLU	C-N-CA	6.08	128.43	120.28
22	AN	12	SER	N-CA-C	-6.08	99.27	108.52
11	AC	150	GLN	CA-C-N	6.08	126.10	119.90
11	AC	150	GLN	C-N-CA	6.08	126.10	119.90
15	AG	129	VAL	CA-C-N	6.08	126.40	119.83
15	AG	129	VAL	C-N-CA	6.08	126.40	119.83
15	AG	38	GLY	N-CA-C	6.08	119.85	112.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	AI	104	ILE	N-CA-C	6.07	121.95	109.34
83	CV	62	TYR	N-CA-C	6.06	117.56	111.07
84	CW	15	G	O3'-P-O5'	-6.06	94.90	104.00
24	AP	124	THR	CA-C-N	6.06	127.42	119.84
24	AP	124	THR	C-N-CA	6.06	127.42	119.84
16	AH	31	SER	N-CA-C	6.06	123.20	109.81
52	BR	57	VAL	N-CA-C	6.06	116.89	108.89
83	CV	140	ALA	CA-C-N	6.06	128.12	122.85
83	CV	140	ALA	C-N-CA	6.06	128.12	122.85
31	AW	55	ASP	N-CA-C	-6.05	102.38	110.55
9	AA	111	ILE	N-CA-C	6.05	121.92	109.34
54	BT	122	GLN	N-CA-C	-6.05	105.45	114.64
36	BB	81	THR	CB-CA-C	6.03	119.11	111.21
37	BC	73	ARG	CB-CG-CD	-6.03	97.43	111.30
9	AA	145	ALA	N-CA-C	6.03	118.31	108.55
80	B5	1272	C	P-O5'-C5'	-6.03	111.86	120.90
48	BN	78	GLY	N-CA-C	-6.02	107.36	115.36
83	CV	3	LEU	N-CA-C	-6.02	99.38	109.07
32	AX	29	TYR	N-CA-C	-6.02	104.64	111.14
21	AM	26	ASP	N-CA-C	-6.02	105.90	113.18
53	BS	14	LEU	CA-C-N	6.02	125.98	119.78
53	BS	14	LEU	C-N-CA	6.02	125.98	119.78
27	AS	31	ALA	N-CA-C	-6.01	104.36	111.03
73	Bm	88	LYS	N-CA-C	-6.01	105.21	112.54
83	CV	444	TRP	N-CA-C	-6.00	104.31	111.69
83	CV	62	TYR	CA-C-O	-5.99	114.53	120.82
12	AD	203	PRO	CA-C-N	5.99	128.31	120.28
12	AD	203	PRO	C-N-CA	5.99	128.31	120.28
76	Bq	35	SER	CA-C-N	5.99	132.98	121.54
76	Bq	35	SER	C-N-CA	5.99	132.98	121.54
35	BA	107	VAL	CA-C-N	5.99	125.95	120.03
35	BA	107	VAL	C-N-CA	5.99	125.95	120.03
80	B5	282	G	C2'-C3'-O3'	5.98	122.68	113.70
62	Bb	18	ARG	N-CA-C	-5.98	104.39	111.03
10	AB	153	HIS	N-CA-C	5.98	123.54	110.80
9	AA	67	ILE	CA-C-N	5.98	127.31	119.84
9	AA	67	ILE	C-N-CA	5.98	127.31	119.84
37	BC	191	LYS	N-CA-C	-5.97	105.83	114.12
76	Bq	6	GLU	N-CA-C	-5.97	104.86	111.36
55	BU	28	PHE	N-CA-C	5.96	118.17	108.76
85	CX	2	U	C4'-C3'-O3'	-5.96	104.06	113.00
57	BW	27	LYS	N-CA-C	-5.96	101.22	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	216	HIS	N-CA-C	-5.95	99.65	108.99
41	BG	246	MET	N-CA-C	-5.95	106.15	113.41
76	Bq	90	ASN	N-CA-C	-5.94	100.72	109.81
54	BT	131	GLN	CA-C-N	-5.94	114.64	120.52
54	BT	131	GLN	C-N-CA	-5.94	114.64	120.52
63	Bc	97	ASP	N-CA-C	-5.94	106.09	113.15
56	BV	126	TRP	CA-C-N	5.93	125.41	119.24
56	BV	126	TRP	C-N-CA	5.93	125.41	119.24
83	CV	532	LYS	N-CA-C	-5.93	101.51	110.28
83	CV	495	TYR	CA-C-N	5.92	127.25	119.84
83	CV	495	TYR	C-N-CA	5.92	127.25	119.84
37	BC	276	LEU	CA-C-N	5.92	125.94	119.90
37	BC	276	LEU	C-N-CA	5.92	125.94	119.90
50	BP	64	ASN	CA-C-N	-5.92	114.31	122.30
50	BP	64	ASN	C-N-CA	-5.92	114.31	122.30
83	CV	371	ARG	N-CA-C	-5.92	104.96	111.82
51	BQ	166	LEU	CB-CA-C	-5.91	101.50	111.02
83	CV	311	ASP	N-CA-C	-5.91	104.93	114.09
13	AE	103	TYR	N-CA-C	5.91	119.53	110.20
83	CV	413	VAL	N-CA-C	-5.90	100.08	109.17
46	BL	16	LYS	N-CA-C	5.90	122.49	112.99
83	CV	424	SER	N-CA-C	-5.90	106.13	113.38
28	AT	54	PHE	N-CA-C	-5.88	104.81	112.23
39	BE	66	SER	CA-C-N	-5.88	112.63	121.87
39	BE	66	SER	C-N-CA	-5.88	112.63	121.87
84	CW	43	C	O3'-P-O5'	-5.88	95.17	104.00
80	B5	1226	G	O4'-C1'-N9	5.88	117.33	108.50
23	AO	115	ILE	N-CA-C	5.87	116.32	107.75
61	Ba	10	LYS	N-CA-C	-5.87	105.61	112.89
83	CV	509	GLU	N-CA-CB	5.87	120.41	110.49
2	A1	68	GLY	N-CA-C	-5.87	105.56	113.24
44	BJ	17	LEU	CA-C-N	-5.87	115.27	123.13
44	BJ	17	LEU	C-N-CA	-5.87	115.27	123.13
80	B5	1232	C	O4'-C1'-N1	5.87	117.30	108.50
40	BF	130	ILE	N-CA-C	-5.85	107.56	113.47
36	BB	84	VAL	N-CA-C	-5.84	100.06	108.48
51	BQ	24	VAL	CB-CA-C	-5.84	104.38	112.04
53	BS	49	HIS	N-CA-C	-5.84	99.53	108.76
83	CV	23	ASP	CA-CB-CG	5.84	118.44	112.60
83	CV	462	LYS	N-CA-C	5.84	122.71	109.81
48	BN	177	GLY	N-CA-C	5.84	119.17	111.70
46	BL	42	ARG	N-CA-C	-5.83	104.84	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	CV	499	ASN	CA-C-N	5.83	128.09	120.28
83	CV	499	ASN	C-N-CA	5.83	128.09	120.28
41	BG	82	LEU	N-CA-C	-5.82	98.41	110.80
83	CV	289	LEU	CA-C-N	5.81	132.64	121.54
83	CV	289	LEU	C-N-CA	5.81	132.64	121.54
83	CV	534	ALA	N-CA-CB	5.81	120.31	110.49
37	BC	260	GLN	N-CA-C	-5.81	105.08	111.82
36	BB	310	GLY	N-CA-C	-5.80	104.40	112.18
83	CV	434	ILE	CA-C-O	-5.80	115.38	121.41
83	CV	137	ASP	N-CA-C	5.79	123.14	110.80
83	CV	490	VAL	N-CA-C	-5.79	97.30	109.34
44	BJ	127	PHE	CA-C-N	-5.79	114.84	123.00
44	BJ	127	PHE	C-N-CA	-5.79	114.84	123.00
80	B5	1229	G	O4'-C1'-N9	5.78	117.17	108.50
80	B5	1227	C	C5'-C4'-C3'	-5.78	107.33	116.00
84	CW	7	A	P-O5'-C5'	-5.78	112.23	120.90
83	CV	468	LEU	CA-C-N	5.78	131.31	120.11
83	CV	468	LEU	C-N-CA	5.78	131.31	120.11
83	CV	325	GLY	CA-C-N	5.77	127.06	119.84
83	CV	325	GLY	C-N-CA	5.77	127.06	119.84
58	BX	107	VAL	N-CA-C	5.77	116.19	108.11
47	BM	28	SER	N-CA-C	-5.77	106.14	112.72
80	B5	1257	C	O4'-C1'-N1	5.77	117.15	108.50
16	AH	62	VAL	CA-C-N	5.76	127.05	119.84
16	AH	62	VAL	C-N-CA	5.76	127.05	119.84
41	BG	151	VAL	N-CA-C	5.76	116.42	108.12
83	CV	82	SER	CA-C-N	5.76	132.54	121.54
83	CV	82	SER	C-N-CA	5.76	132.54	121.54
37	BC	269	SER	N-CA-C	5.76	118.50	111.82
47	BM	134	ALA	N-CA-C	-5.76	104.92	111.14
24	AP	37	ALA	CA-C-N	-5.76	112.64	119.84
24	AP	37	ALA	C-N-CA	-5.76	112.64	119.84
83	CV	13	HIS	CA-CB-CG	5.75	119.55	113.80
37	BC	284	SER	N-CA-C	-5.75	106.13	114.12
22	AN	122	ILE	CB-CA-C	-5.74	104.62	111.97
39	BE	102	ASN	N-CA-C	5.74	116.15	108.23
38	BD	88	ILE	CB-CA-C	-5.73	103.04	110.84
65	Be	41	VAL	CB-CA-C	-5.73	102.97	112.26
37	BC	118	LYS	N-CA-C	-5.72	104.24	111.11
80	B5	1227	C	O4'-C1'-C2'	-5.72	101.88	107.60
83	CV	517	ASN	N-CA-C	5.72	118.86	109.76
7	A6	59	ARG	N-CA-C	5.72	118.10	109.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	AE	105	VAL	CB-CA-C	-5.72	104.64	110.88
61	Ba	19	LYS	N-CA-C	5.72	119.95	112.92
48	BN	96	ARG	N-CA-C	-5.71	101.56	110.42
76	Bq	104	ARG	CA-C-N	5.71	132.26	121.97
76	Bq	104	ARG	C-N-CA	5.71	132.26	121.97
71	Bk	20	VAL	N-CA-C	5.70	112.31	106.21
26	AR	85	VAL	N-CA-C	5.70	121.19	108.88
17	AI	32	GLN	CA-C-N	5.70	125.61	119.85
17	AI	32	GLN	C-N-CA	5.70	125.61	119.85
84	CW	60	U	P-O3'-C3'	-5.70	111.65	120.20
84	CW	45	U	O5'-C5'-C4'	-5.70	102.95	111.50
83	CV	501	ASP	CA-CB-CG	-5.70	106.90	112.60
56	BV	33	ASN	CB-CA-C	-5.69	98.61	109.66
7	A6	84	SER	N-CA-C	5.69	117.72	109.07
83	CV	19	THR	N-CA-C	-5.69	100.43	109.76
18	AJ	66	ASP	CA-C-N	5.69	125.16	119.24
18	AJ	66	ASP	C-N-CA	5.69	125.16	119.24
43	BI	131	ILE	N-CA-CB	5.69	116.92	110.72
83	CV	436	ARG	CB-CG-CD	5.69	124.38	111.30
23	AO	124	ASP	N-CA-C	5.68	122.90	110.80
8	A7	64	LYS	N-CA-C	-5.68	103.15	110.19
9	AA	74	VAL	N-CA-C	5.68	116.12	108.17
83	CV	23	ASP	N-CA-C	-5.68	105.09	111.28
53	BS	20	PRO	N-CA-C	-5.68	102.67	111.13
70	Bj	84	SER	N-CA-C	5.67	118.32	111.40
80	B5	1283	C	P-O5'-C5'	-5.67	112.39	120.90
85	CX	1	A	O4'-C4'-C3'	-5.67	98.33	104.00
76	Bq	5	ARG	N-CA-C	-5.67	106.20	113.23
76	Bq	57	THR	N-CA-CB	5.67	118.95	110.22
44	BJ	113	GLY	N-CA-C	-5.66	102.36	112.22
7	A6	137	LYS	N-CA-C	-5.66	106.42	113.38
84	CW	16	U	C1'-O4'-C4'	5.65	115.55	109.90
76	Bq	23	LYS	N-CA-C	-5.65	106.43	113.55
60	BZ	103	GLN	CA-C-N	5.65	126.90	119.84
60	BZ	103	GLN	C-N-CA	5.65	126.90	119.84
36	BB	186	GLY	N-CA-C	5.65	120.51	111.64
42	BH	55	VAL	CB-CA-C	-5.64	102.09	110.33
13	AE	3	ARG	N-CA-C	5.64	122.82	110.80
40	BF	242	SER	N-CA-C	-5.64	106.40	113.28
37	BC	64	SER	N-CA-C	-5.64	102.13	110.48
34	AZ	83	LEU	N-CA-C	-5.64	106.24	113.23
42	BH	12	VAL	N-CA-C	5.64	112.69	107.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AP	39	ALA	N-CA-C	5.63	117.89	111.02
84	CW	67	C	O4'-C4'-C3'	-5.63	98.37	104.00
38	BD	204	VAL	CB-CA-C	-5.63	104.45	112.22
31	AW	98	GLN	N-CA-C	5.62	119.40	112.54
10	AB	131	ASP	CB-CA-C	5.62	119.26	109.65
80	B5	1249	G	P-O5'-C5'	5.62	129.33	120.90
84	CW	48	C	O4'-C4'-C3'	-5.62	100.48	106.10
84	CW	55	U	C5'-C4'-C3'	5.62	124.42	116.00
64	Bd	87	ASN	CA-C-N	5.61	125.70	119.87
64	Bd	87	ASN	C-N-CA	5.61	125.70	119.87
30	AV	34	ILE	CB-CA-C	-5.60	104.18	110.96
31	AW	128	PHE	N-CA-C	5.60	117.36	108.79
80	B5	1152	G	N3-C4-C5	5.60	145.40	128.60
80	B5	1229	G	O4'-C4'-C3'	-5.60	98.40	104.00
46	BL	46	ILE	CB-CA-C	5.59	118.14	111.20
2	A1	67	THR	N-CA-C	5.59	115.40	108.19
83	CV	195	VAL	CB-CA-C	-5.58	104.43	110.85
47	BM	23	ILE	N-CA-C	5.58	115.60	108.12
83	CV	44	ALA	N-CA-C	-5.58	100.59	109.07
42	BH	101	VAL	N-CA-C	5.58	115.90	107.75
29	AU	34	LEU	N-CA-C	-5.58	105.28	111.36
65	Be	63	THR	N-CA-C	-5.58	106.30	114.39
66	Bf	93	THR	N-CA-C	-5.58	105.68	112.88
83	CV	435	TYR	CA-C-O	5.58	126.39	119.97
64	Bd	64	VAL	CB-CA-C	-5.58	102.15	111.29
84	CW	55	U	P-O3'-C3'	5.57	128.56	120.20
84	CW	54	U	C5'-C4'-C3'	-5.57	107.65	116.00
83	CV	375	VAL	N-CA-C	-5.56	96.13	107.92
58	BX	43	ALA	CA-C-N	5.56	126.79	119.84
58	BX	43	ALA	C-N-CA	5.56	126.79	119.84
27	AS	28	ILE	N-CA-C	5.55	120.89	109.34
83	CV	210	TRP	CG-CD1-NE1	5.55	117.42	110.20
38	BD	67	SER	N-CA-C	5.55	118.60	109.72
20	AL	131	ILE	N-CA-C	-5.54	107.42	112.96
36	BB	235	THR	N-CA-CB	-5.54	101.12	110.49
51	BQ	3	ILE	CB-CA-C	-5.54	101.52	110.28
40	BF	147	LEU	N-CA-C	-5.54	105.32	111.36
83	CV	469	ILE	N-CA-CB	5.54	116.32	110.17
36	BB	115	LYS	N-CA-C	-5.54	105.34	111.71
15	AG	19	ASP	N-CA-C	-5.54	101.14	109.95
53	BS	97	VAL	N-CA-C	-5.54	106.94	113.42
80	B5	2524	A	C3'-C2'-C1'	-5.54	95.97	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	213	GLY	CA-C-N	-5.53	117.90	122.16
35	BA	213	GLY	C-N-CA	-5.53	117.90	122.16
58	BX	69	SER	N-CA-C	-5.53	103.40	110.53
76	Bq	53	MET	N-CA-C	-5.53	101.16	109.95
83	CV	21	LEU	N-CA-C	5.53	116.99	111.07
83	CV	235	LEU	N-CA-C	5.53	120.14	112.45
76	Bq	216	ALA	N-CA-C	-5.53	105.32	113.61
84	CW	66	U	P-O5'-C5'	5.52	129.19	120.90
47	BM	20	VAL	N-CA-C	5.52	116.26	108.36
84	CW	73	A	C2'-C3'-O3'	5.52	117.78	109.50
51	BQ	151	ARG	NE-CZ-NH1	-5.52	115.98	121.50
38	BD	46	THR	CB-CA-C	-5.51	100.98	109.85
61	Ba	138	ILE	N-CA-C	-5.51	105.13	110.42
83	CV	386	SER	O-C-N	-5.51	117.31	123.04
83	CV	80	HIS	CA-CB-CG	5.50	119.30	113.80
83	CV	136	TYR	CA-CB-CG	5.50	123.81	113.90
83	CV	547	TYR	N-CA-C	-5.50	100.99	109.52
37	BC	190	GLY	N-CA-C	5.50	126.22	113.18
30	AV	13	VAL	CA-C-N	5.50	126.71	119.84
30	AV	13	VAL	C-N-CA	5.50	126.71	119.84
53	BS	51	VAL	CB-CA-C	-5.50	102.27	111.29
11	AC	64	LYS	N-CA-C	-5.50	108.36	114.62
83	CV	22	LEU	CA-C-O	5.50	126.29	119.97
26	AR	23	LYS	N-CA-C	-5.50	99.10	110.80
61	Ba	65	GLN	CA-C-N	-5.50	115.35	125.02
61	Ba	65	GLN	C-N-CA	-5.50	115.35	125.02
36	BB	309	GLY	N-CA-C	-5.49	107.37	113.79
40	BF	203	TRP	CA-C-N	-5.49	113.90	119.83
40	BF	203	TRP	C-N-CA	-5.49	113.90	119.83
66	Bf	53	TYR	N-CA-C	5.49	117.75	109.41
83	CV	379	VAL	N-CA-C	5.49	116.02	108.12
42	BH	48	VAL	N-CA-C	-5.49	106.35	111.45
49	BO	110[A]	PRO	CB-CA-C	5.49	117.61	110.92
49	BO	110[B]	PRO	CB-CA-C	5.49	117.61	110.92
38	BD	254	LYS	CA-C-N	5.49	125.95	120.14
38	BD	254	LYS	C-N-CA	5.49	125.95	120.14
80	B5	2372	A	C4'-C3'-O3'	5.48	117.62	109.40
39	BE	173	MET	CB-CG-SD	-5.48	96.26	112.70
73	Bm	91	CYS	N-CA-C	5.48	121.65	114.75
12	AD	50	ILE	CB-CA-C	-5.47	106.44	112.68
20	AL	22	ASN	CA-C-N	5.47	125.09	119.56
20	AL	22	ASN	C-N-CA	5.47	125.09	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BB	98	GLY	N-CA-C	5.47	117.61	112.08
80	B5	2372	A	P-O3'-C3'	5.47	128.41	120.20
83	CV	135	LEU	CA-C-N	5.47	131.99	121.54
83	CV	135	LEU	C-N-CA	5.47	131.99	121.54
1	A0	74	CYS	N-CA-C	5.47	119.26	112.59
16	AH	116	ARG	N-CA-C	-5.47	105.56	113.21
9	AA	6	THR	N-CA-C	-5.46	105.83	112.88
84	CW	16	U	O5'-C5'-C4'	-5.46	103.31	111.50
38	BD	75	LEU	N-CA-C	-5.46	104.18	112.04
52	BR	70	LYS	N-CA-C	-5.45	105.42	111.36
12	AD	114	ALA	N-CA-C	-5.45	102.10	109.95
80	B5	1283	C	O4'-C4'-C3'	5.45	109.45	104.00
61	Ba	15	VAL	CB-CA-C	-5.45	104.21	111.13
52	BR	132	PHE	CA-C-N	5.44	127.58	120.28
52	BR	132	PHE	C-N-CA	5.44	127.58	120.28
80	B5	1227	C	C2'-C3'-O3'	5.44	121.87	113.70
16	AH	12	ALA	CA-C-N	5.44	126.64	119.84
16	AH	12	ALA	C-N-CA	5.44	126.64	119.84
83	CV	437	LEU	CA-C-O	5.44	126.19	120.42
84	CW	25	C	P-O3'-C3'	-5.44	112.05	120.20
53	BS	155	ARG	CG-CD-NE	5.43	123.96	112.00
21	AM	81	ASP	CA-C-N	5.43	126.63	119.84
21	AM	81	ASP	C-N-CA	5.43	126.63	119.84
74	Bn	24	SER	N-CA-C	-5.43	105.46	113.61
35	BA	168	VAL	CB-CA-C	-5.43	103.42	111.19
25	AQ	63	ILE	N-CA-C	5.43	116.48	108.45
83	CV	482	GLY	CA-C-N	5.43	126.19	120.43
83	CV	482	GLY	C-N-CA	5.43	126.19	120.43
80	B5	1285	G	C4'-C3'-C2'	-5.43	97.17	102.60
83	CV	430	GLN	N-CA-C	-5.43	100.17	109.24
16	AH	183	PHE	N-CA-C	5.42	117.49	109.69
10	AB	232	HIS	N-CA-C	5.41	118.28	109.24
23	AO	22	SER	N-CA-C	-5.41	101.90	109.69
74	Bn	20	VAL	CB-CA-C	-5.41	104.83	112.14
80	B5	1264	G	P-O3'-C3'	-5.41	112.09	120.20
83	CV	393	ALA	CA-C-N	5.41	125.98	119.98
83	CV	393	ALA	C-N-CA	5.41	125.98	119.98
29	AU	28	SER	N-CA-C	5.41	116.20	108.74
83	CV	201	THR	N-CA-C	-5.40	101.07	109.72
61	Ba	120	ASN	N-CA-C	5.40	120.28	111.37
61	Ba	28	HIS	CB-CA-C	-5.40	99.53	110.17
39	BE	37	GLY	N-CA-C	-5.40	107.66	115.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BL	26	PHE	N-CA-C	-5.40	106.53	113.01
83	CV	324	VAL	CA-C-N	5.39	130.34	121.87
83	CV	324	VAL	C-N-CA	5.39	130.34	121.87
1	A0	97	PRO	N-CA-C	5.39	117.28	110.70
42	BH	29	GLY	CA-C-N	5.39	125.46	119.32
42	BH	29	GLY	C-N-CA	5.39	125.46	119.32
76	Bq	213	PHE	N-CA-C	-5.38	105.93	112.88
60	BZ	14	VAL	CB-CA-C	5.38	118.69	111.85
44	BJ	76	ALA	N-CA-C	-5.38	105.45	112.23
20	AL	109	VAL	N-CA-C	5.38	116.02	108.17
31	AW	93	LEU	N-CA-C	5.37	120.52	112.94
76	Bq	48	ARG	N-CA-C	-5.37	107.98	114.75
38	BD	87	GLY	N-CA-C	5.37	121.08	114.69
27	AS	86	LEU	N-CA-C	5.37	118.23	109.59
66	Bf	72	THR	N-CA-C	5.37	119.83	113.12
83	CV	456	TRP	CA-C-N	5.37	127.47	120.28
83	CV	456	TRP	C-N-CA	5.37	127.47	120.28
57	BW	84	GLY	N-CA-C	-5.37	107.86	115.43
80	B5	2249	G	C3'-C2'-C1'	-5.36	95.94	101.30
51	BQ	158	HIS	N-CA-C	5.36	119.40	112.86
53	BS	130	GLU	N-CA-C	5.35	116.80	110.97
83	CV	417	ALA	N-CA-C	-5.35	105.11	111.69
83	CV	427	LYS	N-CA-C	5.35	118.95	109.96
59	BY	112	ASP	N-CA-C	-5.35	99.40	110.80
76	Bq	87	VAL	N-CA-C	-5.35	97.09	106.61
61	Ba	118	ILE	CA-C-N	-5.35	114.73	120.03
61	Ba	118	ILE	C-N-CA	-5.35	114.73	120.03
60	BZ	24	VAL	CB-CA-C	-5.35	103.18	110.77
83	CV	471	LYS	N-CA-C	5.35	124.22	113.31
83	CV	3	LEU	N-CA-CB	5.34	118.96	110.57
83	CV	580	ILE	N-CA-C	5.34	115.97	110.36
36	BB	278	ILE	N-CA-C	5.34	117.39	109.17
44	BJ	15	GLU	N-CA-C	-5.33	104.36	111.24
76	Bq	57	THR	CA-C-N	5.33	127.37	120.44
76	Bq	57	THR	C-N-CA	5.33	127.37	120.44
44	BJ	166	LYS	N-CA-C	-5.33	101.61	109.86
40	BF	219	LYS	CA-C-N	-5.32	114.09	122.08
40	BF	219	LYS	C-N-CA	-5.32	114.09	122.08
47	BM	110	ALA	N-CA-C	-5.32	106.29	112.89
29	AU	62	VAL	N-CA-C	5.32	115.74	107.28
37	BC	101	ALA	CA-C-N	5.32	126.49	119.84
37	BC	101	ALA	C-N-CA	5.32	126.49	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
80	B5	1232	C	C1'-O4'-C4'	-5.32	104.58	109.90
80	B5	1285	G	O5'-C5'-C4'	5.32	119.68	111.70
61	Ba	34	MET	N-CA-C	5.32	118.61	112.97
37	BC	14	GLU	N-CA-C	5.32	122.12	110.80
53	BS	17	GLU	N-CA-C	-5.32	105.65	111.82
13	AE	154	ILE	CB-CA-C	-5.32	103.40	111.69
83	CV	469	ILE	N-CA-C	5.31	114.75	108.96
12	AD	37	VAL	CB-CA-C	-5.31	103.91	111.19
44	BJ	10	ARG	N-CA-C	5.31	122.11	110.80
80	B5	1278	A	P-O3'-C3'	5.31	128.16	120.20
84	CW	27	G	C5'-C4'-C3'	-5.31	108.03	116.00
40	BF	160	ARG	CA-C-N	-5.31	118.23	122.85
40	BF	160	ARG	C-N-CA	-5.31	118.23	122.85
64	Bd	8	VAL	CB-CA-C	-5.31	102.59	111.29
8	A7	61	ILE	CB-CA-C	-5.30	105.13	112.24
36	BB	8	ALA	N-CA-C	5.30	114.40	108.25
83	CV	313	GLU	N-CA-C	-5.30	99.50	110.80
84	CW	16	U	P-O3'-C3'	5.30	128.16	120.20
37	BC	60	THR	CB-CA-C	-5.30	97.79	109.56
84	CW	19	G	C2'-C3'-O3'	5.30	117.45	109.50
10	AB	110	LEU	N-CA-C	-5.29	105.51	111.28
36	BB	245	GLY	N-CA-C	5.29	119.35	112.68
17	AI	172	ARG	CA-C-N	5.29	124.74	119.24
17	AI	172	ARG	C-N-CA	5.29	124.74	119.24
41	BG	64	ILE	CB-CA-C	-5.29	105.20	111.97
47	BM	27	GLN	N-CA-C	-5.29	107.00	113.50
46	BL	24	VAL	CB-CA-C	-5.28	103.74	110.98
55	BU	88	GLN	N-CA-C	5.28	119.00	111.92
83	CV	395	ILE	N-CA-C	5.28	117.65	111.05
14	AF	27	THR	CA-C-N	5.28	126.42	120.66
14	AF	27	THR	C-N-CA	5.28	126.42	120.66
41	BG	49	TYR	CA-C-N	-5.28	112.87	122.43
41	BG	49	TYR	C-N-CA	-5.28	112.87	122.43
13	AE	235	TYR	N-CA-C	-5.28	106.61	114.64
84	CW	75	C	O4'-C1'-N1	5.28	116.42	108.50
57	BW	97	LYS	CA-C-N	5.28	126.44	119.84
57	BW	97	LYS	C-N-CA	5.28	126.44	119.84
80	B5	1284	C	O4'-C1'-N1	5.28	116.11	108.20
21	AM	94	ALA	N-CA-C	5.27	116.71	111.07
83	CV	539	THR	N-CA-C	-5.27	104.52	111.96
11	AC	148	LEU	N-CA-C	5.27	122.03	110.80
56	BV	129	VAL	N-CA-C	-5.27	105.71	110.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	CW	41	C	O4'-C1'-C2'	-5.27	102.33	107.60
35	BA	119	LYS	CA-C-N	-5.27	114.14	119.83
35	BA	119	LYS	C-N-CA	-5.27	114.14	119.83
83	CV	144	ASN	N-CA-C	-5.27	100.81	109.40
83	CV	237	VAL	N-CA-C	5.27	115.16	107.37
28	AT	39	THR	N-CA-CB	5.26	119.39	110.49
83	CV	466	ILE	N-CA-C	5.26	117.12	108.97
26	AR	81	LYS	N-CA-C	-5.26	106.10	112.88
83	CV	435	TYR	CA-C-N	5.25	128.30	120.31
83	CV	435	TYR	C-N-CA	5.25	128.30	120.31
62	Bb	13	THR	N-CA-CB	5.25	118.42	110.28
83	CV	436	ARG	CA-C-N	5.25	127.75	120.29
83	CV	436	ARG	C-N-CA	5.25	127.75	120.29
63	Bc	44	ILE	N-CA-C	5.25	116.14	108.58
10	AB	204	ILE	CB-CA-C	-5.25	105.61	111.80
35	BA	225	ILE	N-CA-C	5.25	116.14	108.53
56	BV	14	SER	N-CA-C	5.25	117.64	110.24
61	Ba	144	VAL	CB-CA-C	-5.25	103.99	111.34
62	Bb	28	LYS	N-CA-C	-5.25	101.91	110.20
36	BB	290	ASP	N-CA-C	5.25	117.30	109.59
39	BE	75	PRO	CA-C-O	-5.25	115.51	121.96
9	AA	63	ILE	CB-CA-C	-5.24	106.27	111.30
76	Bq	25	LEU	N-CA-C	-5.24	99.73	108.32
80	B5	1258	U	O4'-C1'-N1	5.24	116.06	108.20
43	BI	49	CYS	N-CA-C	5.24	116.95	108.41
7	A6	170	ILE	N-CA-C	5.24	115.52	107.77
48	BN	183	THR	N-CA-C	5.24	121.95	110.80
9	AA	143	VAL	N-CA-C	5.23	116.23	107.18
31	AW	89	TRP	N-CA-C	5.23	117.40	111.02
35	BA	14	SER	N-CA-C	5.23	116.26	108.31
25	AQ	65	ILE	N-CA-C	5.23	115.39	107.75
37	BC	126	ILE	N-CA-C	-5.23	105.75	110.82
42	BH	123	ILE	N-CA-C	5.23	115.84	108.36
83	CV	14	VAL	CA-C-N	5.22	129.78	122.36
83	CV	14	VAL	C-N-CA	5.22	129.78	122.36
37	BC	198	ARG	N-CA-C	5.22	121.92	110.80
80	B5	1274	A	C2'-C3'-O3'	5.22	121.53	113.70
83	CV	56	THR	N-CA-CB	5.22	119.32	110.49
54	BT	135	PRO	CA-C-O	-5.22	111.80	120.05
70	Bj	58	THR	CB-CA-C	-5.22	99.66	111.30
5	A4	57	ASN	CA-C-N	-5.22	114.97	120.66
5	A4	57	ASN	C-N-CA	-5.22	114.97	120.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	CW	42	C	C2'-C3'-O3'	5.22	121.53	113.70
39	BE	65	ILE	CA-C-N	-5.22	114.13	122.17
39	BE	65	ILE	C-N-CA	-5.22	114.13	122.17
84	CW	66	U	C5'-C4'-C3'	5.22	123.83	116.00
8	A7	51	ARG	CA-C-N	5.22	126.36	119.84
8	A7	51	ARG	C-N-CA	5.22	126.36	119.84
73	Bm	85	LEU	N-CA-C	-5.22	105.49	111.07
61	Ba	22	ILE	CB-CA-C	-5.21	105.21	112.04
67	Bg	89	ILE	CB-CA-C	-5.21	105.19	112.02
36	BB	9	PRO	CA-C-O	-5.21	115.32	121.67
33	AY	35	VAL	N-CA-C	5.20	116.04	111.56
9	AA	188	LEU	N-CA-C	5.20	121.88	110.80
38	BD	180	PHE	CA-C-N	-5.20	114.40	119.76
38	BD	180	PHE	C-N-CA	-5.20	114.40	119.76
42	BH	167	VAL	N-CA-CB	5.20	119.81	111.23
48	BN	69	GLY	N-CA-C	5.20	121.05	112.84
62	Bb	20	GLY	O-C-N	5.20	129.05	123.18
40	BF	198	ALA	CA-C-N	5.20	127.50	120.38
40	BF	198	ALA	C-N-CA	5.20	127.50	120.38
32	AX	129	GLY	CA-C-N	-5.19	117.83	123.08
32	AX	129	GLY	C-N-CA	-5.19	117.83	123.08
59	BY	80	VAL	N-CA-C	-5.19	100.77	108.45
83	CV	396	ALA	CA-C-O	-5.19	114.00	119.97
50	BP	31	GLU	N-CA-C	-5.19	105.80	111.82
13	AE	118	GLU	N-CA-C	-5.19	106.21	112.54
37	BC	145	ILE	CA-C-N	5.19	126.32	119.84
37	BC	145	ILE	C-N-CA	5.19	126.32	119.84
38	BD	146	LEU	N-CA-C	5.18	118.07	110.30
8	A7	112	ASP	N-CA-C	5.18	117.25	109.23
38	BD	214	ASP	CB-CA-C	-5.17	101.74	110.64
83	CV	373	MET	CG-SD-CE	-5.17	89.52	100.90
84	CW	60	U	C1'-O4'-C4'	-5.17	104.53	109.70
12	AD	42	THR	CA-C-N	-5.17	114.41	119.99
12	AD	42	THR	C-N-CA	-5.17	114.41	119.99
59	BY	82	VAL	N-CA-C	5.17	115.02	107.37
18	AJ	152	SER	N-CA-C	-5.17	106.08	114.09
61	Ba	125	VAL	N-CA-C	5.17	115.21	107.51
80	B5	1607	U	C4'-C3'-O3'	5.16	117.14	109.40
29	AU	42	VAL	N-CA-C	5.16	115.38	110.53
38	BD	293	LEU	N-CA-C	5.16	117.80	111.82
83	CV	222	LYS	CA-C-N	5.16	127.19	120.28
83	CV	222	LYS	C-N-CA	5.16	127.19	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	BJ	120	ILE	CB-CA-C	-5.16	105.71	111.80
36	BB	4	ARG	CB-CA-C	5.16	117.94	109.90
80	B5	1238	C	C4'-C3'-C2'	-5.16	97.44	102.60
9	AA	158	VAL	N-CA-C	5.15	120.06	109.34
19	AK	60	SER	N-CA-C	5.15	121.77	110.80
48	BN	182	ASN	CA-C-O	-5.15	115.35	120.96
17	AI	22	ARG	N-CA-C	5.15	121.76	110.80
67	Bg	20	ILE	N-CA-C	5.14	117.14	108.81
37	BC	226	GLU	N-CA-C	5.14	117.49	109.52
13	AE	210	ILE	CB-CA-C	-5.14	103.02	110.63
80	B5	1481	A	P-O3'-C3'	5.13	127.90	120.20
83	CV	453	LYS	CA-C-N	5.13	127.47	120.54
83	CV	453	LYS	C-N-CA	5.13	127.47	120.54
83	CV	580	ILE	CA-CB-CG1	5.13	119.12	110.40
47	BM	36	VAL	CB-CA-C	-5.13	105.65	111.55
53	BS	165	TYR	N-CA-C	-5.13	106.33	112.59
61	Ba	6	THR	CB-CA-C	5.13	119.17	109.37
83	CV	16	THR	N-CA-CB	5.13	119.16	110.49
7	A6	272	ASP	N-CA-C	5.12	116.08	108.60
22	AN	4	MET	N-CA-C	5.12	116.67	111.14
46	BL	149	GLN	CA-C-N	5.12	126.24	119.84
46	BL	149	GLN	C-N-CA	5.12	126.24	119.84
41	BG	33	ASN	N-CA-C	5.12	119.80	113.50
76	Bq	16	ARG	CA-C-N	5.12	127.14	120.28
76	Bq	16	ARG	C-N-CA	5.12	127.14	120.28
84	CW	17	C	O4'-C1'-N1	5.12	116.17	108.50
35	BA	211	HIS	CA-C-O	5.12	126.03	120.55
55	BU	67	SER	N-CA-C	5.12	117.50	108.75
14	AF	66	GLN	CA-C-N	5.11	125.32	120.31
14	AF	66	GLN	C-N-CA	5.11	125.32	120.31
43	BI	131	ILE	CB-CA-C	-5.11	104.57	110.91
80	B5	1230	G	P-O5'-C5'	5.11	128.57	120.90
84	CW	10	G	P-O5'-C5'	-5.11	113.24	120.90
65	Be	43	ARG	NE-CZ-NH1	5.11	126.61	121.50
46	BL	50	PRO	N-CA-C	5.11	121.00	114.92
61	Ba	124	ILE	CB-CA-C	-5.11	104.16	111.31
44	BJ	23	VAL	N-CA-C	5.10	115.25	110.30
38	BD	128	GLU	N-CA-C	-5.10	102.23	110.14
6	A5	138	ARG	N-CA-C	5.10	121.66	110.80
9	AA	166	GLY	N-CA-C	5.10	116.93	110.20
39	BE	89	THR	CB-CA-C	5.10	117.94	109.53
63	Bc	92	ILE	CB-CA-C	-5.10	104.52	111.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	AU	54	GLY	CA-C-N	5.10	126.21	119.84
29	AU	54	GLY	C-N-CA	5.10	126.21	119.84
83	CV	498	MET	CA-C-N	5.10	128.44	120.75
83	CV	498	MET	C-N-CA	5.10	128.44	120.75
76	Bq	88	PHE	N-CA-C	-5.09	102.94	110.48
80	B5	1226	G	O3'-P-O5'	-5.09	96.36	104.00
25	AQ	74	HIS	N-CA-C	5.09	116.52	111.07
84	CW	48	C	C5'-C4'-C3'	5.09	122.83	115.20
40	BF	84	VAL	N-CA-C	5.08	117.33	108.95
37	BC	247	PHE	CA-C-N	-5.07	116.90	123.19
37	BC	247	PHE	C-N-CA	-5.07	116.90	123.19
54	BT	17	ARG	CA-CB-CG	-5.07	103.96	114.10
61	Ba	121	VAL	N-CA-C	5.07	119.83	108.88
65	Be	52	GLN	CA-C-N	5.07	124.98	119.76
65	Be	52	GLN	C-N-CA	5.07	124.98	119.76
83	CV	476	GLN	CB-CG-CD	5.06	121.21	112.60
83	CV	145	SER	CA-C-N	5.06	127.02	120.44
83	CV	145	SER	C-N-CA	5.06	127.02	120.44
83	CV	427	LYS	CA-C-N	5.05	130.12	122.99
83	CV	427	LYS	C-N-CA	5.05	130.12	122.99
46	BL	123	ILE	CA-C-N	-5.05	115.81	122.98
46	BL	123	ILE	C-N-CA	-5.05	115.81	122.98
43	BI	175	ASN	N-CA-C	-5.05	100.04	110.80
84	CW	42	C	C1'-O4'-C4'	-5.05	104.85	109.90
38	BD	118	THR	N-CA-C	-5.05	102.39	109.96
83	CV	423	ASN	CA-CB-CG	-5.05	107.55	112.60
9	AA	193	GLN	CA-C-N	5.04	126.14	119.84
9	AA	193	GLN	C-N-CA	5.04	126.14	119.84
83	CV	436	ARG	CB-CA-C	5.04	120.35	110.67
20	AL	55	ASP	N-CA-C	5.04	121.53	110.80
83	CV	247	ILE	N-CA-CB	5.04	119.70	111.44
51	BQ	93	ILE	CB-CA-C	-5.04	104.18	111.68
83	CV	461	ILE	N-CA-C	5.03	119.81	109.34
83	CV	133	ASP	CA-CB-CG	-5.03	107.57	112.60
18	AJ	138	LYS	N-CA-C	-5.03	106.93	113.16
38	BD	174	PRO	CA-C-O	-5.03	115.85	121.23
2	A1	50	ALA	N-CA-C	5.02	121.50	110.80
84	CW	70	G	P-O5'-C5'	5.02	128.43	120.90
84	CW	48	C	P-O3'-C3'	5.02	127.73	120.20
83	CV	83	PHE	N-CA-CB	5.02	118.97	110.49
83	CV	246	THR	N-CA-C	5.02	116.61	109.14
46	BL	21	ARG	NE-CZ-NH1	-5.01	116.48	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BB	346	THR	CB-CA-C	5.01	117.87	109.80
11	AC	206	THR	CB-CA-C	5.01	120.09	111.68
26	AR	125	SER	N-CA-C	5.01	115.65	108.74
80	B5	1248	C	O4'-C1'-N1	5.01	116.01	108.50

There are no chirality outliers.

All (127) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A1	42	ASN	Peptide
6	A5	105	TYR	Peptide
6	A5	138	ARG	Peptide
8	A7	134	ASP	Sidechain
10	AB	131	ASP	Peptide
16	AH	131	PHE	Peptide
20	AL	127	GLN	Peptide
23	AO	124	ASP	Peptide
26	AR	22	PRO	Peptide
26	AR	85	VAL	Peptide
34	AZ	54	VAL	Peptide
34	AZ	93	SER	Peptide
34	AZ	96	SER	Peptide
80	B5	1226	G	Sidechain
80	B5	1228	C	Sidechain
80	B5	1229	G	Sidechain
80	B5	1230	G	Sidechain
80	B5	1231	A	Sidechain
80	B5	1235	U	Sidechain
80	B5	1238	C	Sidechain
80	B5	1239	C	Sidechain
80	B5	1244	A	Sidechain
80	B5	1246	G	Sidechain
80	B5	1249	G	Sidechain
80	B5	1254	C	Sidechain
80	B5	1255	C	Sidechain
80	B5	1256	G	Sidechain
80	B5	1257	C	Sidechain
80	B5	1259	A	Sidechain
80	B5	1260	A	Sidechain
80	B5	1262	G	Sidechain
80	B5	1264	G	Sidechain
80	B5	1265	U	Sidechain

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Mol	Chain	Res	Type	Group
80	B5	1266	G	Sidechain
80	B5	1267	U	Sidechain
80	B5	1268	G	Sidechain
80	B5	1269	U	Sidechain
80	B5	1271	A	Sidechain
80	B5	1274	A	Sidechain
80	B5	1276	U	Sidechain
80	B5	1278	A	Sidechain
80	B5	1279	C	Sidechain
80	B5	1281	G	Sidechain
80	B5	1282	G	Sidechain
80	B5	1283	C	Sidechain
80	B5	1284	C	Sidechain
80	B5	1285	G	Sidechain
80	B5	2898	G	Sidechain
35	BA	143	GLU	Peptide
35	BA	211	HIS	Peptide
37	BC	91	GLY	Peptide
38	BD	271	LYS	Peptide
39	BE	129	GLU	Peptide
40	BF	192	GLY	Peptide
40	BF	226	GLY	Peptide
49	BO	110[A]	PRO	Peptide
49	BO	68[B]	ARG	Peptide
53	BS	133	ALA	Peptide
56	BV	41	GLY	Peptide
59	BY	111	LEU	Peptide
60	BZ	101	PHE	Peptide
61	Ba	26	ARG	Peptide
61	Ba	66	ALA	Peptide
61	Ba	75	LEU	Peptide
62	Bb	19	ASN	Peptide
76	Bq	16	ARG	Sidechain
76	Bq	185	LEU	Peptide
76	Bq	22	TYR	Sidechain
76	Bq	5	ARG	Sidechain
76	Bq	64	ARG	Sidechain
76	Bq	86	PHE	Sidechain
76	Bq	91	GLU	Peptide
77	Br	15	UNK	Peptide
83	CV	165	TYR	Sidechain
83	CV	2	ASP	Mainchain

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Mol	Chain	Res	Type	Group
83	CV	219	ARG	Sidechain
83	CV	227	LEU	Peptide
83	CV	320	ARG	Sidechain
83	CV	374	TYR	Sidechain
83	CV	375	VAL	Mainchain
83	CV	395	ILE	Mainchain
83	CV	4	ARG	Sidechain
83	CV	403	TYR	Sidechain
83	CV	465	SER	Mainchain
83	CV	47	PHE	Peptide
83	CV	523	ARG	Sidechain
83	CV	536	TYR	Sidechain
83	CV	541	HIS	Sidechain
83	CV	547	TYR	Sidechain
83	CV	550	ILE	Peptide
83	CV	554	HIS	Sidechain
83	CV	555	TYR	Sidechain
83	CV	62	TYR	Sidechain
84	CW	12	U	Sidechain
84	CW	14	A	Sidechain
84	CW	15	G	Sidechain
84	CW	16	U	Sidechain
84	CW	18	G	Sidechain
84	CW	19	G	Sidechain
84	CW	21	A	Sidechain
84	CW	26	A	Sidechain
84	CW	28	G	Sidechain
84	CW	30	G	Sidechain
84	CW	31	A	Sidechain
84	CW	33	U	Sidechain
84	CW	4	C	Sidechain
84	CW	40	C	Sidechain
84	CW	44	G	Sidechain
84	CW	45	U	Sidechain
84	CW	47	U	Sidechain
84	CW	48	C	Sidechain
84	CW	55	U	Sidechain
84	CW	6	G	Sidechain
84	CW	60	U	Sidechain
84	CW	63	G	Sidechain
84	CW	65	G	Sidechain
84	CW	66	U	Sidechain

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Mol	Chain	Res	Type	Group
84	CW	67	C	Sidechain
84	CW	68	C	Sidechain
84	CW	7	A	Sidechain
84	CW	70	G	Sidechain
84	CW	71	G	Sidechain
84	CW	74	C	Sidechain
84	CW	75	C	Sidechain
84	CW	8	U	Sidechain
85	CX	2	U	Sidechain
85	CX	3	G	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	769	0	814	122	0
2	A1	610	0	630	53	0
3	A2	497	0	535	32	0
4	A3	442	0	428	57	0
5	A4	475	0	525	21	0
6	A5	516	0	517	41	0
7	A6	2437	0	2386	86	0
8	A7	1105	0	933	457	0
9	AA	1577	0	1567	101	0
10	AB	1709	0	1784	200	0
11	AC	1635	0	1723	82	0
12	AD	1734	0	1817	123	0
13	AE	2068	0	2154	95	0
14	AF	1609	0	1675	118	0
15	AG	1799	0	1874	442	0
16	AH	1481	0	1572	84	0
17	AI	1489	0	1523	193	0
18	AJ	1494	0	1573	98	0
19	AK	772	0	727	48	0
20	AL	1213	0	1257	104	0
21	AM	890	0	887	53	0
22	AN	1192	0	1252	66	0
23	AO	891	0	880	300	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	AP	977	0	1002	78	0
25	AQ	1105	0	1164	147	0
26	AR	926	0	930	135	0
27	AS	1192	0	1220	118	0
28	AT	1112	0	1123	111	0
29	AU	855	0	917	118	0
30	AV	684	0	672	47	0
31	AW	1021	0	1060	70	0
32	AX	1121	0	1195	90	0
33	AY	1073	0	1132	115	0
34	AZ	563	0	602	54	0
35	BA	1912	0	1973	284	0
36	BB	3075	0	3142	153	0
37	BC	2748	0	2859	137	0
38	BD	2359	0	2311	272	0
39	BE	1248	0	1339	41	0
40	BF	1791	0	1869	60	0
41	BG	1763	0	1819	152	0
42	BH	1518	0	1587	85	0
43	BI	1722	0	1754	115	0
44	BJ	1353	0	1380	119	0
45	BK	753	756	195	3	0
46	BL	1548	0	1613	99	0
47	BM	1059	0	1154	45	0
48	BN	1720	0	1779	139	0
49	BO	3119	0	3302	99	0
50	BP	1227	0	1236	43	0
51	BQ	1441	0	1543	78	0
52	BR	1521	0	1605	196	0
53	BS	1445	0	1487	67	0
54	BT	1276	0	1323	141	0
55	BU	778	0	791	24	0
56	BV	1003	0	1048	52	0
57	BW	1038	0	1071	45	0
58	BX	959	0	1023	41	0
59	BY	993	0	1081	46	0
60	BZ	1092	0	1154	119	0
61	Ba	1173	0	1215	108	0
62	Bb	462	0	491	39	0
63	Bc	767	0	816	78	0
64	Bd	883	0	918	32	0
65	Be	1020	0	1090	62	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
66	Bf	850	0	880	36	0
67	Bg	880	0	944	106	0
68	Bh	965	0	1067	56	0
69	Bi	770	0	846	61	0
70	Bj	681	0	683	71	0
71	Bk	608	0	671	23	0
72	Bl	436	0	475	46	0
73	Bm	417	0	455	26	0
74	Bn	233	0	271	71	0
75	Bo	847	0	918	80	0
76	Bq	1075	1110	1021	30	0
77	Br	236	237	65	0	0
78	Bs	231	232	67	0	0
79	B2	37835	0	19045	3195	0
80	B5	67308	664	33785	2782	0
81	B7	2579	0	1303	192	0
82	B8	3353	0	1695	158	0
83	CV	4451	4585	4534	561	0
84	CW	1614	789	802	496	0
85	CX	62	34	34	34	0
86	A0	1	0	0	0	0
86	A1	1	0	0	0	0
86	A3	1	0	0	0	0
86	A5	1	0	0	0	0
86	Bj	1	0	0	0	0
86	Bm	1	0	0	0	0
87	A0	2	0	0	0	0
87	A3	3	0	0	0	0
87	A5	1	0	0	0	0
87	AB	1	0	0	0	0
87	AC	2	0	0	0	0
87	AE	1	0	0	0	0
87	AG	1	0	0	0	0
87	AI	1	0	0	0	0
87	AJ	1	0	0	0	0
87	AL	2	0	0	0	0
87	AN	1	0	0	0	0
87	AP	1	0	0	0	0
87	AS	1	0	0	0	0
87	AU	1	0	0	0	0
87	B2	168	0	0	0	0
87	B5	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
87	B7	27	0	0	0	0
87	BD	4	0	0	0	0
87	BF	1	0	0	0	0
87	BS	3	0	0	0	0
87	CW	1	0	0	0	0
88	A3	7	0	0	4	0
88	A6	7	0	0	2	0
88	AC	7	0	0	5	0
88	AI	14	0	0	2	0
88	AL	7	0	0	3	0
88	AN	7	0	0	2	0
88	AP	7	0	0	3	0
88	B2	1274	0	0	223	0
88	B5	21	0	0	4	0
88	B7	91	0	0	8	0
88	BR	7	0	0	9	0
88	Bn	7	0	0	0	0
88	CV	7	0	0	10	0
88	CX	7	0	0	2	0
89	CV	32	0	7	62	0
All	All	210964	8407	155586	10038	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 28.

All (10038) 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)
80:B5:2621:G:C8	84:CW:75:C:C5	1.76	1.69
8:A7:85:SER:HB2	84:CW:30:G:C8	1.24	1.66
15:AG:175:ILE:HG12	79:B2:78:A:C4	1.29	1.65
83:CV:210:TRP:CH2	83:CV:210:TRP:CZ3	1.78	1.63
83:CV:210:TRP:CZ3	83:CV:210:TRP:CE3	1.83	1.61
83:CV:236:GLU:HG2	83:CV:361:GLY:CA	1.23	1.61
83:CV:210:TRP:CH2	83:CV:210:TRP:CZ2	1.82	1.59
15:AG:175:ILE:HD11	79:B2:78:A:C1'	1.25	1.59
8:A7:88:ARG:HD3	84:CW:35:A:C8	1.35	1.57
83:CV:236:GLU:CG	83:CV:361:GLY:HA2	1.09	1.57
8:A7:91:THR:CG2	84:CW:36:U:C2	1.79	1.56
51:BQ:171:LYS:NZ	51:BQ:171:LYS:CE	1.67	1.55
8:A7:28:SER:HB3	80:B5:2708:C:C4'	1.30	1.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:85:SER:CA	84:CW:30:G:C5	1.87	1.55
79:B2:51:A:C1'	83:CV:242:GLY:CA	1.76	1.54
79:B2:415:C:C5	83:CV:288:ARG:HB3	1.39	1.54
83:CV:210:TRP:CE3	83:CV:210:TRP:CD2	1.92	1.54
75:Bo:105:GLN:CG	84:CW:55:U:N3	1.67	1.54
8:A7:85:SER:N	84:CW:30:G:C4	1.73	1.54
15:AG:133:LEU:HD12	79:B2:66:U:C2	1.42	1.53
79:B2:415:C:C4	83:CV:288:ARG:HD3	1.43	1.53
80:B5:3030:G:H5'	83:CV:436:ARG:CD	1.36	1.52
44:BJ:8:PRO:CB	44:BJ:8:PRO:CG	1.75	1.51
52:BR:163:ARG:C	79:B2:850:A:C5'	1.75	1.51
83:CV:210:TRP:CZ2	83:CV:210:TRP:CE2	1.94	1.51
15:AG:132:ARG:NH2	79:B2:68:A:C8	1.79	1.51
80:B5:2621:G:C8	84:CW:75:C:H5	1.06	1.51
83:CV:85:ASN:HD21	83:CV:368:LYS:CD	0.90	1.51
83:CV:210:TRP:CD2	83:CV:210:TRP:CE2	1.81	1.50
8:A7:77:THR:HG23	84:CW:43:C:C2'	1.39	1.50
8:A7:82:THR:HB	84:CW:29:G:N2	1.17	1.49
33:AY:119:PHE:CZ	79:B2:86:A:H5"	1.48	1.49
8:A7:85:SER:N	84:CW:30:G:C5	1.79	1.49
8:A7:28:SER:CB	80:B5:2708:C:H4'	1.42	1.49
32:AX:144:ARG:HH22	83:CV:314:LYS:CD	1.24	1.48
83:CV:63:GLU:HA	83:CV:210:TRP:CE2	1.48	1.48
15:AG:164:LYS:NZ	79:B2:72:A:H5"	1.25	1.48
15:AG:175:ILE:CD1	79:B2:78:A:H1'	1.03	1.48
8:A7:83:LYS:CB	84:CW:30:G:N2	1.72	1.47
75:Bo:105:GLN:HG3	84:CW:55:U:C2	1.47	1.47
8:A7:85:SER:HB2	84:CW:30:G:N7	1.27	1.46
15:AG:132:ARG:HG3	79:B2:68:A:N6	1.25	1.46
33:AY:119:PHE:CE1	79:B2:86:A:H5"	1.49	1.45
15:AG:59:GLN:N	79:B2:155:U:H4'	1.25	1.45
32:AX:144:ARG:NH2	83:CV:314:LYS:HD2	1.29	1.44
79:B2:1637:C:H4'	85:CX:2:U:C4	1.51	1.44
8:A7:85:SER:CB	84:CW:30:G:N7	1.76	1.44
23:AO:123:SER:HB2	79:B2:885:G:N2	1.25	1.44
15:AG:174:LYS:HA	79:B2:79:C:C1'	1.45	1.43
15:AG:174:LYS:HB2	79:B2:79:C:C2'	1.46	1.43
8:A7:82:THR:CG2	84:CW:29:G:C2	2.02	1.43
8:A7:83:LYS:HE3	84:CW:40:C:C2	1.53	1.43
52:BR:165:LYS:CD	79:B2:849:C:O2	1.67	1.43
15:AG:174:LYS:CA	79:B2:79:C:O4'	1.66	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:60:ARG:CZ	79:B2:1400:A:H5'	1.47	1.42
79:B2:51:A:C1'	83:CV:241:GLU:O	1.68	1.42
79:B2:1645:G:C4'	80:B5:2259:A:N1	1.81	1.42
15:AG:128:THR:HG23	57:BW:81:PRO:CG	1.37	1.42
8:A7:51:ARG:CZ	80:B5:2677:G:H1'	1.48	1.41
8:A7:83:LYS:HB3	84:CW:30:G:N2	1.11	1.41
75:Bo:106:PHE:CD2	84:CW:18:G:N2	1.89	1.41
79:B2:1645:G:H4'	80:B5:2259:A:N1	1.12	1.41
79:B2:1645:G:H4'	80:B5:2259:A:C2	1.53	1.41
8:A7:88:ARG:CD	84:CW:35:A:C8	2.00	1.41
79:B2:51:A:N9	83:CV:242:GLY:N	1.60	1.41
79:B2:433:C:C5	83:CV:388:ARG:HB2	1.55	1.41
8:A7:93:ARG:CA	85:CX:3:G:H22	0.98	1.41
8:A7:88:ARG:CD	84:CW:35:A:N9	1.81	1.40
80:B5:2284:C:P	83:CV:477:SER:HB3	1.59	1.40
8:A7:85:SER:HA	84:CW:30:G:C6	1.56	1.40
23:AO:27:PHE:CZ	79:B2:916:U:O2'	1.70	1.40
44:BJ:55:ARG:CZ	84:CW:48:C:OP1	1.69	1.40
8:A7:88:ARG:HB2	84:CW:36:U:C4'	1.48	1.40
83:CV:388:ARG:NE	88:CV:601:OHX:N6	1.67	1.40
79:B2:414:C:O2	83:CV:289:LEU:CD1	1.70	1.39
80:B5:2623:G:C6	84:CW:76:A:H5"	1.33	1.39
23:AO:18:ARG:NH1	79:B2:919:A:H5'	1.13	1.39
8:A7:88:ARG:HG3	84:CW:35:A:C2'	1.27	1.39
15:AG:159:ARG:CD	79:B2:77:U:C2	2.05	1.39
83:CV:131:LYS:HG2	89:CV:602:GCP:C6	1.53	1.39
75:Bo:105:GLN:HG2	84:CW:55:U:N3	1.16	1.38
15:AG:175:ILE:CG1	79:B2:78:A:N3	1.84	1.38
43:BI:112:GLN:CB	83:CV:471:LYS:HD3	1.51	1.38
60:BZ:48:ARG:NH2	80:B5:1631:C:OP2	1.57	1.38
80:B5:3027:A:C8	83:CV:109:GLN:NE2	1.92	1.38
15:AG:175:ILE:HG12	79:B2:78:A:N3	1.09	1.37
80:B5:2284:C:C6	83:CV:477:SER:CB	2.07	1.38
8:A7:82:THR:HG21	84:CW:29:G:C2	1.54	1.37
80:B5:2284:C:C6	83:CV:477:SER:CA	2.06	1.37
52:BR:166:ASN:ND2	88:BR:201:OHX:N4	1.72	1.37
52:BR:175:GLN:H	79:B2:852:C:C4'	1.30	1.36
79:B2:51:A:C8	83:CV:242:GLY:HA2	1.25	1.36
79:B2:433:C:H6	83:CV:388:ARG:N	1.22	1.36
15:AG:134:GLY:CA	79:B2:66:U:O4	1.74	1.36
8:A7:78:ASP:N	84:CW:44:G:N7	1.73	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:84:LYS:C	84:CW:30:G:C4	1.85	1.36
80:B5:2284:C:C6	83:CV:476:GLN:OE1	1.79	1.35
37:BC:60:THR:HG23	80:B5:364:G:OP1	1.26	1.35
83:CV:199:ALA:CA	89:CV:602:GCP:O6	1.73	1.35
52:BR:163:ARG:O	79:B2:850:A:C5'	1.70	1.35
8:A7:83:LYS:H	84:CW:29:G:N2	1.22	1.34
8:A7:84:LYS:CA	84:CW:30:G:H2'	1.57	1.34
79:B2:913:G:O6	80:B5:2206:G:C4'	1.76	1.34
80:B5:2623:G:C6	84:CW:76:A:C5'	2.10	1.34
25:AQ:13:LYS:CE	79:B2:1584:G:O6	1.71	1.34
52:BR:163:ARG:C	79:B2:850:A:H5'	1.23	1.34
79:B2:433:C:OP1	83:CV:391:VAL:N	1.56	1.34
17:AI:141:ARG:NH2	79:B2:196:G:N7	1.71	1.34
76:Bq:5:ARG:HG2	80:B5:1221:A:O2'	1.25	1.34
79:B2:1637:C:C4'	85:CX:2:U:O4	1.75	1.34
83:CV:388:ARG:CZ	88:CV:601:OHX:N6	1.88	1.33
63:Bc:26:GLY:HA3	80:B5:1730:G:C6	1.62	1.33
17:AI:10:LYS:NZ	79:B2:339:C:OP2	1.59	1.33
23:AO:41:ARG:NH2	79:B2:916:U:H3	1.25	1.33
79:B2:1758:U:O2	80:B5:2255:A:N3	1.58	1.33
44:BJ:137:ARG:NH2	81:B7:44:C:OP2	1.58	1.32
23:AO:45:GLY:HA3	79:B2:900:A:P	1.66	1.32
80:B5:3030:G:C5'	83:CV:436:ARG:CD	2.08	1.32
8:A7:88:ARG:CG	84:CW:35:A:H2'	0.92	1.32
15:AG:83:CYS:N	79:B2:162:A:OP1	1.60	1.32
8:A7:88:ARG:HB2	84:CW:36:U:C5'	1.57	1.32
23:AO:18:ARG:NH1	79:B2:918:U:O3'	1.56	1.32
41:BG:240:ASN:ND2	80:B5:2584:G:N3	1.76	1.32
79:B2:415:C:C5	83:CV:288:ARG:CB	2.13	1.32
8:A7:83:LYS:HE3	84:CW:40:C:O2	1.16	1.31
79:B2:51:A:H1'	83:CV:241:GLU:C	1.55	1.31
15:AG:108:VAL:HG21	79:B2:153:G:O2'	1.30	1.31
63:Bc:87:VAL:HA	80:B5:1728:G:O2'	1.23	1.31
80:B5:3030:G:C5'	83:CV:436:ARG:NE	1.82	1.31
8:A7:77:THR:C	84:CW:43:C:H3'	1.26	1.31
8:A7:85:SER:HA	84:CW:30:G:C5	1.49	1.31
35:BA:249:SER:O	79:B2:987:G:N7	1.61	1.31
74:Bn:5:TRP:CH2	79:B2:1775:U:O4	1.83	1.31
79:B2:1637:C:C2	84:CW:34:C:N4	1.99	1.31
83:CV:199:ALA:C	89:CV:602:GCP:O6	1.74	1.31
52:BR:169:ALA:HB2	79:B2:850:A:C2	1.64	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:25:ASP:HB2	79:B2:901:G:OP2	1.18	1.30
32:AX:53:VAL:O	83:CV:398:GLN:NE2	1.64	1.30
79:B2:1637:C:C5'	85:CX:2:U:O4	1.78	1.30
8:A7:34:LYS:NZ	80:B5:2693:C:H5'	1.46	1.30
8:A7:77:THR:O	84:CW:43:C:C3'	1.79	1.30
52:BR:165:LYS:HE3	79:B2:824:G:N3	1.41	1.30
15:AG:174:LYS:CB	79:B2:79:C:O2'	1.80	1.30
23:AO:18:ARG:CZ	79:B2:919:A:H5'	1.61	1.30
23:AO:136:ARG:NH2	79:B2:1786:G:OP1	1.65	1.30
25:AQ:123:ARG:O	79:B2:1584:G:H3'	1.22	1.30
33:AY:21:LYS:HG2	79:B2:782:U:O2	1.19	1.30
8:A7:91:THR:HG23	84:CW:36:U:N3	1.45	1.29
52:BR:104:ARG:NH1	80:B5:1949:G:H5"	1.45	1.29
12:AD:204:ASP:OD1	79:B2:1330:G:N1	1.65	1.29
80:B5:2284:C:O5'	83:CV:477:SER:HB3	1.26	1.29
8:A7:88:ARG:HB2	84:CW:36:U:O4'	1.21	1.29
79:B2:1644:C:H1'	80:B5:2255:A:N1	1.46	1.29
8:A7:84:LYS:O	84:CW:30:G:C3'	1.78	1.29
15:AG:53:SER:HB2	79:B2:163:G:O3'	1.11	1.29
23:AO:18:ARG:HH12	79:B2:919:A:C5'	1.43	1.29
8:A7:77:THR:O	84:CW:43:C:H3'	1.16	1.28
8:A7:82:THR:CB	84:CW:29:G:N2	1.93	1.28
29:AU:54:GLY:N	79:B2:1345:A:OP1	1.67	1.28
79:B2:1759:C:H1'	80:B5:2262:A:C2	1.68	1.28
14:AF:101:GLY:HA3	79:B2:1167:G:OP1	1.25	1.28
8:A7:84:LYS:NZ	84:CW:31:A:C2'	1.71	1.28
8:A7:88:ARG:CB	84:CW:36:U:C5'	2.12	1.28
79:B2:1190:C:O2	84:CW:31:A:H5"	1.16	1.28
9:AA:101:ARG:NH2	79:B2:1321:A:OP2	1.64	1.28
11:AC:91:ARG:NH1	79:B2:1625:C:OP1	1.67	1.28
80:B5:1225:A:C8	80:B5:1287:A:O2'	1.87	1.28
15:AG:175:ILE:CG1	79:B2:78:A:C4	2.11	1.27
26:AR:28:PHE:CE2	79:B2:1389:C:H6	1.50	1.27
35:BA:241:ARG:NH2	80:B5:2156:C:OP2	1.67	1.27
83:CV:538:LYS:N	84:CW:73:A:C4	1.96	1.27
10:AB:165:ARG:NH1	79:B2:946:U:H5"	1.48	1.27
32:AX:144:ARG:NH2	83:CV:314:LYS:CD	1.87	1.27
75:Bo:106:PHE:CE2	84:CW:57:G:C8	2.14	1.27
83:CV:63:GLU:HA	83:CV:210:TRP:CZ2	1.67	1.27
8:A7:31:SER:O	80:B5:2707:C:H4'	1.27	1.27
25:AQ:13:LYS:HE3	79:B2:1584:G:O6	1.10	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:91:THR:HG23	84:CW:36:U:C2	1.51	1.27
23:AO:45:GLY:HA3	79:B2:900:A:OP2	1.29	1.27
23:AO:46:MET:CG	79:B2:899:G:H4'	1.62	1.27
33:AY:10:ARG:CZ	79:B2:778:G:H22	1.46	1.27
10:AB:101:HIS:HE1	79:B2:921:U:OP1	1.15	1.26
38:BD:207:TYR:CD1	81:B7:33:U:H1'	1.70	1.26
83:CV:85:ASN:OD1	83:CV:368:LYS:HG2	1.31	1.26
48:BN:49:ARG:NH2	80:B5:149:U:OP2	1.64	1.26
26:AR:10:LYS:HE3	79:B2:1316:G:O2'	1.25	1.26
26:AR:28:PHE:CE2	79:B2:1389:C:C6	2.22	1.26
76:Bq:5:ARG:CG	80:B5:1221:A:O2'	1.83	1.26
8:A7:84:LYS:HA	84:CW:30:G:C2'	1.65	1.26
14:AF:109:LYS:HE2	79:B2:1473:U:O3'	1.09	1.26
15:AG:60:GLY:O	79:B2:154:G:N2	1.66	1.26
15:AG:137:ARG:NH1	79:B2:169:A:OP1	1.69	1.26
8:A7:88:ARG:HD3	84:CW:35:A:C1'	1.59	1.25
15:AG:157:VAL:CG1	79:B2:78:A:H4'	1.64	1.25
79:B2:415:C:C4	83:CV:288:ARG:CD	2.18	1.25
80:B5:1226:G:O4'	80:B5:1288:U:H4'	1.32	1.25
15:AG:160:ARG:NH1	79:B2:68:A:OP1	1.67	1.25
25:AQ:76:SER:HB2	79:B2:1609:U:OP1	1.34	1.25
23:AO:25:ASP:CB	79:B2:901:G:OP2	1.84	1.25
15:AG:83:CYS:HA	79:B2:161:U:O3'	1.11	1.25
25:AQ:123:ARG:O	79:B2:1584:G:C3'	1.85	1.25
83:CV:199:ALA:CB	89:CV:602:GCP:O6	1.85	1.25
52:BR:121:HIS:ND1	80:B5:1719:G:OP2	1.69	1.25
80:B5:2621:G:N9	84:CW:75:C:C5	2.05	1.25
79:B2:1637:C:H4'	85:CX:2:U:O4	1.16	1.24
15:AG:128:THR:CG2	57:BW:81:PRO:CG	2.09	1.24
44:BJ:142:LYS:HE3	80:B5:2664:C:OP2	1.31	1.24
75:Bo:41:ARG:NH1	80:B5:284:A:OP2	1.68	1.24
75:Bo:105:GLN:CG	84:CW:55:U:C2	2.09	1.24
80:B5:2279:A:N7	83:CV:478:LYS:HD2	1.51	1.24
17:AI:138:ASN:ND2	79:B2:197:A:N1	1.84	1.24
38:BD:158:ARG:HD3	81:B7:46:A:OP1	1.20	1.24
80:B5:2285:C:N4	83:CV:478:LYS:HG3	1.49	1.24
33:AY:10:ARG:HA	79:B2:778:G:O6	1.37	1.24
79:B2:440:U:OP1	83:CV:274:ASN:ND2	1.71	1.24
15:AG:59:GLN:N	79:B2:155:U:C4'	1.99	1.24
35:BA:242:ARG:O	80:B5:2154:U:H5"	1.29	1.24
83:CV:248:ASP:N	83:CV:360:LEU:HD22	1.50	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:154:ARG:CB	79:B2:78:A:OP2	1.84	1.23
23:AO:126:THR:HG22	79:B2:988:A:C2	1.72	1.23
79:B2:1780:G:O2'	80:B5:2262:A:H4'	1.06	1.23
15:AG:53:SER:C	79:B2:163:G:H4'	1.60	1.23
63:Bc:26:GLY:C	80:B5:1730:G:O6	1.79	1.23
83:CV:236:GLU:HG3	83:CV:364:GLU:OE1	1.15	1.23
8:A7:83:LYS:N	84:CW:29:G:H22	1.36	1.23
15:AG:175:ILE:CG1	79:B2:78:A:H1'	1.68	1.23
20:AL:10:GLU:HG2	79:B2:327:U:O2'	1.30	1.23
79:B2:1427:A:H3'	84:CW:34:C:O4'	1.36	1.23
33:AY:8:ARG:HB3	79:B2:780:A:C8	1.72	1.23
33:AY:119:PHE:CZ	79:B2:86:A:C5'	2.21	1.23
52:BR:165:LYS:HD2	79:B2:849:C:O2	1.22	1.23
79:B2:414:C:O2	83:CV:289:LEU:CG	1.78	1.23
15:AG:164:LYS:NZ	79:B2:72:A:C5'	2.02	1.23
26:AR:49:LYS:HD2	79:B2:1390:U:OP2	1.34	1.23
15:AG:159:ARG:HD2	79:B2:77:U:O2	1.28	1.22
79:B2:1655:A:H1'	80:B5:2302:G:C1'	1.68	1.22
35:BA:95:SER:N	80:B5:2551:U:O4	1.73	1.22
80:B5:2284:C:O5'	83:CV:477:SER:CB	1.86	1.22
75:Bo:105:GLN:C	84:CW:58:A:OP2	1.66	1.22
83:CV:236:GLU:HA	83:CV:364:GLU:CD	1.64	1.22
41:BG:248:LYS:HE2	80:B5:2529:A:OP1	1.33	1.22
79:B2:414:C:C2	83:CV:289:LEU:CD2	2.10	1.22
38:BD:94:ASN:HB2	81:B7:47:C:OP1	1.38	1.22
38:BD:260:PHE:CE2	81:B7:121:U:H5'	1.74	1.21
75:Bo:106:PHE:CE2	84:CW:18:G:N2	2.06	1.21
15:AG:174:LYS:HB2	79:B2:79:C:O2'	1.09	1.21
35:BA:208:ASP:OD1	80:B5:912:G:N1	1.71	1.21
38:BD:218:ARG:NH1	81:B7:31:U:H4'	1.53	1.21
80:B5:2286:U:C6	83:CV:479:PRO:CD	2.24	1.21
83:CV:388:ARG:NH2	88:CV:601:OHX:N6	1.86	1.21
26:AR:60:ARG:NH2	79:B2:1400:A:C5'	2.03	1.21
79:B2:1646:C:O2'	80:B5:2257:C:N4	1.74	1.21
80:B5:2623:G:O6	84:CW:76:A:H5"	1.38	1.21
30:AV:62:ARG:NH2	79:B2:1039:A:H5"	1.55	1.20
15:AG:174:LYS:CB	79:B2:79:C:C1'	2.18	1.20
26:AR:53:TYR:OH	79:B2:1401:A:H5"	1.40	1.20
79:B2:1758:U:O2'	80:B5:2255:A:C5'	1.88	1.20
8:A7:84:LYS:NZ	84:CW:31:A:H2'	1.27	1.20
15:AG:53:SER:O	79:B2:163:G:H5"	1.37	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AT:12:GLN:NE2	79:B2:1530:C:O4'	1.72	1.20
33:AY:10:ARG:NH1	79:B2:778:G:H22	1.40	1.20
35:BA:152:SER:HB3	80:B5:2157:G:O6	1.41	1.20
79:B2:433:C:C5	83:CV:388:ARG:CB	2.25	1.20
8:A7:88:ARG:CB	84:CW:36:U:H5"	1.71	1.20
83:CV:19:THR:C	89:CV:602:GCP:O2A	1.84	1.20
83:CV:131:LYS:HD3	89:CV:602:GCP:C4	1.71	1.19
4:A3:31:ILE:HD11	79:B2:1199:G:O6	1.39	1.19
83:CV:131:LYS:CG	89:CV:602:GCP:C6	2.20	1.19
8:A7:84:LYS:O	84:CW:30:G:H3'	1.03	1.19
15:AG:108:VAL:CG2	79:B2:154:G:H5'	1.73	1.19
75:Bo:104:LEU:HD12	84:CW:55:U:O4	1.39	1.19
79:B2:414:C:C2	83:CV:289:LEU:HD21	1.69	1.19
79:B2:420:A:C5	83:CV:288:ARG:NH2	2.10	1.19
79:B2:432:G:H5'	83:CV:385:VAL:HA	1.20	1.19
14:AF:104:ASN:HD21	79:B2:1166:A:C5'	1.54	1.18
15:AG:15:THR:HG23	79:B2:152:U:O3'	1.42	1.18
23:AO:18:ARG:NH1	79:B2:919:A:C5'	1.99	1.18
52:BR:169:ALA:O	79:B2:852:C:C6	1.97	1.18
79:B2:1002:G:H4'	80:B5:2265:C:OP1	1.43	1.18
15:AG:174:LYS:HB2	79:B2:79:C:C1'	1.73	1.18
35:BA:247:ARG:NH2	79:B2:1013:A:H4'	1.58	1.18
79:B2:1637:C:O2	84:CW:34:C:N4	1.74	1.18
23:AO:123:SER:HB2	79:B2:885:G:C2	1.77	1.18
26:AR:60:ARG:NH2	79:B2:1400:A:O5'	1.77	1.18
12:AD:9:ARG:NH1	79:B2:1489:U:OP2	1.74	1.18
74:Bn:11:ARG:HD3	79:B2:1126:G:H5'	1.21	1.18
79:B2:433:C:C6	83:CV:388:ARG:N	2.11	1.18
83:CV:538:LYS:N	84:CW:73:A:C5	2.12	1.18
29:AU:57:ARG:NH2	79:B2:1382:A:C2	2.11	1.18
52:BR:165:LYS:HE3	79:B2:824:G:C2	1.78	1.18
52:BR:166:ASN:ND2	88:BR:201:OHX:N2	1.91	1.18
79:B2:995:A:H5"	80:B5:2196:C:OP1	1.40	1.18
83:CV:85:ASN:ND2	83:CV:368:LYS:HD3	0.86	1.18
15:AG:133:LEU:CD1	79:B2:66:U:C2	2.26	1.17
35:BA:3:ARG:HD3	80:B5:911:C:N4	1.58	1.17
79:B2:51:A:C8	83:CV:242:GLY:CA	1.89	1.17
15:AG:174:LYS:CA	79:B2:79:C:C1'	2.16	1.17
35:BA:249:SER:O	79:B2:987:G:C5	1.80	1.17
8:A7:77:THR:HG23	84:CW:43:C:H2'	1.26	1.17
8:A7:84:LYS:HG3	84:CW:31:A:C3'	1.50	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:154:ARG:O	79:B2:78:A:H5'	1.02	1.17
23:AO:46:MET:HA	79:B2:899:G:C5'	1.72	1.17
26:AR:10:LYS:NZ	79:B2:1401:A:O3'	1.77	1.17
38:BD:207:TYR:CD1	81:B7:33:U:C1'	2.26	1.17
83:CV:236:GLU:CG	83:CV:364:GLU:OE1	1.91	1.17
8:A7:77:THR:C	84:CW:43:C:C3'	2.17	1.17
8:A7:88:ARG:HD3	84:CW:35:A:N9	0.86	1.17
8:A7:93:ARG:CG	84:CW:34:C:N4	2.04	1.17
15:AG:174:LYS:HD3	79:B2:79:C:O2	1.43	1.17
17:AI:73:SER:OG	79:B2:256:A:N3	1.73	1.17
23:AO:123:SER:CB	79:B2:885:G:H21	1.58	1.17
44:BJ:55:ARG:NH2	84:CW:48:C:OP1	1.77	1.17
79:B2:1646:C:H4'	80:B5:2257:C:N4	1.59	1.17
29:AU:57:ARG:NH2	79:B2:1382:A:H2	1.42	1.17
79:B2:51:A:C1'	83:CV:242:GLY:HA3	1.52	1.17
18:AJ:169:PRO:O	79:B2:512:A:OP1	1.61	1.16
68:Bh:95:PHE:CG	80:B5:136:G:H5'	1.79	1.16
79:B2:1757:G:H2'	80:B5:2255:A:O2'	1.44	1.16
80:B5:2286:U:C6	83:CV:479:PRO:HD3	1.77	1.16
38:BD:146:LEU:HB3	80:B5:2746:A:C2	1.79	1.16
11:AC:119:LYS:HE2	79:B2:1291:G:H5'	1.26	1.16
23:AO:38:THR:HB	79:B2:895:G:H2'	1.25	1.16
8:A7:85:SER:CB	84:CW:30:G:C8	2.18	1.16
54:BT:129:LYS:HB3	80:B5:1097:G:H4'	1.22	1.16
74:Bn:11:ARG:CD	79:B2:1126:G:H5'	1.76	1.16
75:Bo:105:GLN:NE2	84:CW:55:U:C4	2.14	1.16
15:AG:154:ARG:O	79:B2:78:A:C5'	1.94	1.16
25:AQ:15:SER:OG	79:B2:1608:U:OP1	1.60	1.16
8:A7:89:ARG:NH1	84:CW:33:U:H3	1.44	1.15
83:CV:63:GLU:CA	83:CV:210:TRP:CE2	2.29	1.15
17:AI:138:ASN:ND2	79:B2:197:A:C6	2.14	1.15
24:AP:12:PHE:HB2	44:BJ:85:LYS:HG3	1.26	1.15
52:BR:143:ILE:CG1	80:B5:2093:A:H5"	1.74	1.15
69:Bi:25:LYS:HB3	80:B5:156:G:OP2	1.44	1.15
60:BZ:17:ARG:HG3	80:B5:1634:G:O6	1.46	1.15
83:CV:199:ALA:HB3	89:CV:602:GCP:O6	1.43	1.15
15:AG:132:ARG:HG3	79:B2:68:A:C6	1.80	1.15
79:B2:415:C:C5	83:CV:288:ARG:CD	2.30	1.15
80:B5:3030:G:C5'	83:CV:436:ARG:HD3	1.74	1.15
83:CV:20:LYS:CB	89:CV:602:GCP:C8	2.21	1.15
63:Bc:87:VAL:CA	80:B5:1728:G:O2'	1.93	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:199:ALA:C	89:CV:602:GCP:C6	2.19	1.15
83:CV:537:GLY:C	84:CW:73:A:C4	2.25	1.15
8:A7:48:ARG:CD	80:B5:2678:A:OP2	1.94	1.14
14:AF:104:ASN:ND2	79:B2:1166:A:H5'	1.62	1.14
15:AG:110:ALA:CB	79:B2:163:G:H1'	1.77	1.14
15:AG:132:ARG:CZ	79:B2:68:A:C5	2.30	1.14
23:AO:129:LYS:HE3	88:B2:2011:OHX:N1	1.62	1.14
34:AZ:77:ARG:NH2	79:B2:1534:G:N7	1.92	1.14
21:AM:46:ARG:NH1	79:B2:1254:U:OP2	1.81	1.14
23:AO:121:VAL:O	79:B2:886:U:O2'	1.62	1.14
70:Bj:30:GLN:NE2	80:B5:903:U:OP2	1.80	1.14
15:AG:159:ARG:HD2	79:B2:77:U:C2	1.73	1.14
79:B2:913:G:O6	80:B5:2206:G:H4'	1.00	1.14
80:B5:2625:C:N3	84:CW:76:A:C8	2.07	1.14
83:CV:63:GLU:CA	83:CV:210:TRP:CD2	2.31	1.14
83:CV:236:GLU:HG2	83:CV:361:GLY:N	1.61	1.14
4:A3:56:ARG:O	79:B2:1418:G:O2'	1.65	1.14
8:A7:83:LYS:N	84:CW:29:G:N2	1.94	1.14
48:BN:49:ARG:NH2	80:B5:149:U:P	2.20	1.14
15:AG:112:VAL:HG22	79:B2:164:A:H4'	1.24	1.13
35:BA:247:ARG:CZ	79:B2:1013:A:H4'	1.78	1.13
38:BD:48:LYS:NZ	80:B5:2749:G:P	2.20	1.13
52:BR:169:ALA:O	79:B2:852:C:C5	1.87	1.13
79:B2:1190:C:C2	84:CW:31:A:H5"	1.81	1.13
79:B2:1645:G:O3'	80:B5:2259:A:C2	2.00	1.13
80:B5:2285:C:C4	83:CV:478:LYS:CG	2.26	1.13
15:AG:175:ILE:N	79:B2:78:A:N3	1.97	1.13
17:AI:42:ARG:HA	79:B2:260:U:O4	1.45	1.13
35:BA:40:TYR:OH	80:B5:2550:U:H2'	1.48	1.13
44:BJ:72:ARG:NE	81:B7:40:C:O2	1.81	1.13
80:B5:2286:U:C5	83:CV:478:LYS:CB	2.06	1.13
14:AF:109:LYS:CE	79:B2:1473:U:O3'	1.95	1.13
15:AG:83:CYS:SG	79:B2:162:A:C5'	2.36	1.13
18:AJ:172:VAL:HG13	79:B2:512:A:OP2	1.46	1.13
79:B2:1428:G:C5'	84:CW:34:C:H5'	1.78	1.13
15:AG:56:ASN:CB	79:B2:154:G:H1'	1.77	1.13
15:AG:188:ARG:HG2	79:B2:284:G:OP2	1.49	1.13
23:AO:35:GLY:HA3	79:B2:919:A:C4'	1.79	1.13
29:AU:53:LYS:HB3	79:B2:1345:A:C5'	1.78	1.13
35:BA:236:GLY:N	80:B5:2183:A:O2'	1.80	1.13
52:BR:175:GLN:N	79:B2:852:C:H4'	1.47	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:Bq:5:ARG:CD	80:B5:1221:A:O2'	1.97	1.13
79:B2:1686:C:H2'	79:B2:1687:U:H6	1.07	1.13
8:A7:77:THR:CG2	84:CW:43:C:H2'	1.78	1.12
8:A7:88:ARG:CB	84:CW:36:U:O4'	1.95	1.13
79:B2:1646:C:C4'	80:B5:2257:C:N4	2.11	1.12
80:B5:1225:A:C4	80:B5:1287:A:O2'	2.02	1.12
15:AG:59:GLN:H	79:B2:155:U:C4'	1.57	1.12
15:AG:133:LEU:C	79:B2:66:U:O4	1.92	1.12
35:BA:240:ALA:HA	80:B5:2154:U:O3'	1.48	1.12
74:Bn:11:ARG:HD3	79:B2:1126:G:C5'	1.77	1.12
79:B2:1644:C:O2	80:B5:2255:A:C2	2.01	1.12
8:A7:77:THR:CG2	84:CW:43:C:C2'	2.26	1.12
29:AU:75:GLY:N	79:B2:1194:A:OP2	1.82	1.12
79:B2:415:C:OP2	83:CV:288:ARG:HA	1.49	1.12
79:B2:1747:G:O2'	80:B5:2304:C:H5'	1.50	1.12
15:AG:174:LYS:HA	79:B2:79:C:O4'	0.96	1.12
20:AL:19:ILE:HD13	88:AL:201:OHX:N6	1.64	1.12
26:AR:7:LYS:CG	79:B2:1316:G:OP1	1.98	1.12
44:BJ:142:LYS:CE	80:B5:2664:C:OP2	1.97	1.12
48:BN:49:ARG:HH21	80:B5:149:U:P	1.73	1.12
1:A0:70:LYS:HE2	79:B2:930:A:H5"	1.15	1.12
8:A7:47:ALA:HA	80:B5:2678:A:O4'	1.49	1.12
10:AB:101:HIS:CE1	79:B2:921:U:OP1	2.01	1.12
68:Bh:95:PHE:CD2	80:B5:136:G:H5'	1.83	1.12
74:Bn:11:ARG:NH2	79:B2:1127:G:H5"	1.64	1.12
80:B5:3027:A:O2'	83:CV:83:PHE:HE2	1.33	1.12
8:A7:77:THR:HG23	84:CW:43:C:C3'	1.79	1.11
8:A7:78:ASP:N	84:CW:44:G:C8	2.17	1.11
15:AG:107:ALA:CB	79:B2:154:G:H4'	1.80	1.11
79:B2:1655:A:H1'	80:B5:2302:G:H1'	1.22	1.11
8:A7:86:ASN:ND2	84:CW:33:U:C6	2.18	1.11
17:AI:64:ASN:ND2	79:B2:257:A:O2'	1.82	1.11
23:AO:41:ARG:CZ	79:B2:916:U:H3	1.64	1.11
28:AT:60:SER:HB2	79:B2:1479:A:H5"	1.25	1.11
38:BD:274:GLN:OE1	81:B7:60:G:N2	1.82	1.11
54:BT:49:GLN:HG2	80:B5:2756:C:O4'	1.49	1.11
79:B2:414:C:O2	83:CV:289:LEU:HD11	1.35	1.11
79:B2:415:C:C5	83:CV:288:ARG:HD3	1.85	1.11
15:AG:53:SER:O	79:B2:163:G:C5'	1.98	1.11
25:AQ:76:SER:HB2	79:B2:1609:U:P	1.91	1.11
48:BN:109:ARG:NH1	82:B8:141:C:OP1	1.83	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:143:ILE:HG13	80:B5:2093:A:H5”	1.25	1.11
83:CV:236:GLU:CG	83:CV:361:GLY:CA	1.96	1.11
8:A7:48:ARG:HD3	80:B5:2678:A:OP2	1.49	1.11
29:AU:57:ARG:O	79:B2:1381:U:O2’	1.68	1.11
80:B5:2284:C:H6	83:CV:477:SER:HB2	1.13	1.11
15:AG:128:THR:CG2	57:BW:81:PRO:HG3	1.76	1.10
23:AO:38:THR:HG22	79:B2:895:G:O3’	1.48	1.10
27:AS:126:ARG:NH2	79:B2:1459:C:OP1	1.83	1.10
67:Bg:68:THR:HG21	80:B5:1643:A:OP2	1.51	1.10
79:B2:429:G:H4’	83:CV:276:ARG:HD2	1.33	1.10
80:B5:2623:G:C2	84:CW:76:A:OP1	1.89	1.10
80:B5:3030:G:H5’	83:CV:436:ARG:NE	0.93	1.10
80:B5:3031:G:OP2	83:CV:436:ARG:NH2	1.84	1.10
10:AB:150:VAL:HG23	79:B2:1067:C:H5”	1.21	1.10
17:AI:122:GLY:O	88:AI:302:OHX:N5	1.84	1.10
23:AO:136:ARG:HH22	79:B2:1786:G:P	1.74	1.10
8:A7:77:THR:O	84:CW:43:C:C5’	1.99	1.10
8:A7:83:LYS:CB	84:CW:30:G:C2	2.34	1.10
15:AG:107:ALA:HB3	79:B2:154:G:H4’	1.19	1.10
15:AG:131:LYS:N	57:BW:82:ILE:HG23	1.67	1.10
26:AR:2:GLY:HA3	79:B2:1311:U:O3’	1.48	1.10
75:Bo:105:GLN:HG3	84:CW:55:U:O2	1.47	1.10
83:CV:237:VAL:O	83:CV:359:THR:O	1.69	1.10
8:A7:87:THR:HG22	84:CW:37:A:OP1	1.51	1.10
10:AB:150:VAL:CG2	79:B2:1067:C:H5”	1.80	1.10
15:AG:174:LYS:CD	79:B2:79:C:H1’	1.80	1.10
60:BZ:67:LYS:NZ	80:B5:1630:U:OP1	1.83	1.10
79:B2:416:A:OP2	83:CV:287:LEU:CD2	1.83	1.10
26:AR:49:LYS:HG3	79:B2:1390:U:P	1.92	1.10
33:AY:10:ARG:NH1	79:B2:778:G:N2	1.98	1.10
38:BD:285:ARG:NH1	81:B7:62:U:O3’	1.84	1.10
41:BG:185:ARG:HD2	82:B8:155:A:H4’	1.34	1.10
80:B5:2284:C:P	83:CV:477:SER:CB	2.40	1.10
15:AG:132:ARG:NH2	79:B2:68:A:N9	1.97	1.09
26:AR:7:LYS:HG2	79:B2:1316:G:OP1	1.47	1.09
38:BD:48:LYS:HZ3	80:B5:2749:G:P	1.74	1.09
63:Bc:85:PHE:CZ	80:B5:1728:G:C6	2.40	1.09
83:CV:131:LYS:CD	89:CV:602:GCP:C2	2.31	1.09
83:CV:236:GLU:CD	83:CV:361:GLY:HA2	1.75	1.09
83:CV:248:ASP:H	83:CV:360:LEU:CD2	1.62	1.09
79:B2:1427:A:O5’	84:CW:34:C:C6	2.05	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:248:ASP:HB2	83:CV:360:LEU:HD23	1.26	1.09
15:AG:53:SER:CB	79:B2:163:G:O3'	1.99	1.09
79:B2:432:G:C3'	83:CV:388:ARG:N	2.05	1.09
80:B5:2279:A:C8	83:CV:478:LYS:HD2	1.86	1.09
1:A0:97:PRO:O	79:B2:1798:U:C5	2.04	1.09
15:AG:174:LYS:HD3	79:B2:79:C:H1'	1.20	1.09
23:AO:130:GLY:N	79:B2:991:G:OP1	1.86	1.09
74:Bn:2:ARG:HD3	79:B2:1772:C:C3'	1.66	1.09
79:B2:51:A:C1'	83:CV:241:GLU:C	2.16	1.09
79:B2:415:C:C6	83:CV:288:ARG:HB3	1.88	1.09
79:B2:1761:U:C2	85:CX:1:A:O5'	2.03	1.09
23:AO:46:MET:HA	79:B2:899:G:H5'	1.14	1.09
23:AO:132:ARG:H	79:B2:1787:C:P	1.75	1.09
26:AR:48:ASN:HB3	79:B2:1389:C:O4'	1.52	1.09
28:AT:60:SER:CB	79:B2:1479:A:H5"	1.81	1.09
72:Bl:5:LYS:O	80:B5:1833:G:H4'	1.50	1.09
17:AI:64:ASN:OD1	79:B2:257:A:N3	1.85	1.08
38:BD:207:TYR:CG	81:B7:33:U:C2	2.40	1.08
52:BR:161:ALA:O	79:B2:849:C:O2'	1.71	1.08
61:Ba:21:ARG:NH2	80:B5:640:U:OP1	1.86	1.08
79:B2:1780:G:O2'	80:B5:2262:A:C4'	2.00	1.08
80:B5:2283:G:O3'	83:CV:477:SER:CB	2.00	1.08
83:CV:20:LYS:HB2	89:CV:602:GCP:C8	1.80	1.08
17:AI:138:ASN:ND2	79:B2:197:A:N6	2.02	1.08
33:AY:10:ARG:HG2	79:B2:778:G:N1	1.68	1.08
43:BI:158:LYS:NZ	80:B5:2852:C:N3	1.99	1.08
60:BZ:135:ARG:NH2	80:B5:1807:G:C5'	2.16	1.08
80:B5:2623:G:O6	84:CW:76:A:C5'	1.97	1.08
83:CV:63:GLU:CA	83:CV:210:TRP:CZ2	2.37	1.08
7:A6:285:ALA:CB	79:B2:1394:G:OP1	2.01	1.08
23:AO:41:ARG:NH2	79:B2:916:U:N3	2.00	1.08
74:Bn:4:LYS:HE3	79:B2:1773:C:C2'	1.82	1.08
74:Bn:4:LYS:HE3	79:B2:1773:C:H2'	1.10	1.08
79:B2:432:G:H3'	83:CV:388:ARG:N	1.62	1.08
10:AB:117:TRP:N	79:B2:932:U:OP2	1.85	1.08
23:AO:126:THR:HG22	79:B2:988:A:H2	1.04	1.08
35:BA:231:SER:HB2	80:B5:2163:C:H5"	1.33	1.08
67:Bg:82:ALA:HB2	80:B5:1639:C:OP2	1.54	1.08
8:A7:28:SER:CB	80:B5:2708:C:C4'	2.07	1.08
8:A7:86:ASN:ND2	84:CW:33:U:H6	1.49	1.08
15:AG:175:ILE:O	79:B2:78:A:H2	1.37	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:125:SER:HB2	79:B2:927:C:H1'	1.26	1.08
26:AR:60:ARG:NH2	79:B2:1400:A:H5'	1.67	1.08
79:B2:414:C:C6	83:CV:288:ARG:CB	2.36	1.08
83:CV:131:LYS:HD2	89:CV:602:GCP:C2	1.83	1.08
26:AR:60:ARG:CZ	79:B2:1400:A:C5'	2.31	1.07
29:AU:89:ARG:NH1	79:B2:1383:G:OP1	1.85	1.07
38:BD:158:ARG:CD	81:B7:46:A:OP1	2.01	1.07
63:Bc:26:GLY:CA	80:B5:1730:G:O6	2.01	1.07
83:CV:236:GLU:HA	83:CV:364:GLU:OE1	1.50	1.07
8:A7:79:SER:O	84:CW:42:C:O2	1.72	1.07
15:AG:83:CYS:SG	79:B2:162:A:H5"	1.94	1.07
15:AG:157:VAL:HG11	79:B2:78:A:C4'	1.83	1.07
52:BR:165:LYS:CE	79:B2:824:G:N3	2.17	1.07
60:BZ:69:LYS:NZ	80:B5:1633:C:P	2.27	1.07
79:B2:415:C:C5	83:CV:288:ARG:CG	2.37	1.07
80:B5:2286:U:H6	83:CV:479:PRO:CD	1.63	1.07
80:B5:2286:U:H6	83:CV:479:PRO:HD3	1.03	1.07
83:CV:131:LYS:HG2	89:CV:602:GCP:N1	1.69	1.07
8:A7:83:LYS:CE	84:CW:41:C:O4'	1.79	1.07
15:AG:154:ARG:HG3	79:B2:78:A:C8	1.89	1.07
15:AG:164:LYS:HZ1	79:B2:72:A:C5'	1.63	1.07
20:AL:36:LYS:HD3	79:B2:248:U:H4'	1.34	1.07
67:Bg:60:ARG:HH21	80:B5:1616:U:C5'	1.66	1.07
79:B2:913:G:C6	80:B5:2206:G:H5"	1.88	1.07
80:B5:1225:A:N9	80:B5:1287:A:O2'	1.84	1.07
8:A7:84:LYS:CG	84:CW:31:A:H3'	1.84	1.07
8:A7:91:THR:HG21	84:CW:36:U:C2	1.63	1.07
18:AJ:3:ARG:NH2	79:B2:40:A:OP1	1.87	1.07
23:AO:46:MET:HG3	79:B2:899:G:H4'	1.26	1.07
25:AQ:123:ARG:H	79:B2:1584:G:H5'	0.90	1.07
48:BN:35:VAL:HG23	80:B5:1543:G:OP1	1.52	1.07
83:CV:63:GLU:CA	83:CV:210:TRP:CE3	2.38	1.07
15:AG:154:ARG:HB3	79:B2:78:A:OP2	0.91	1.07
61:Ba:67:HIS:NE2	80:B5:71:A:OP2	1.87	1.07
79:B2:51:A:H1'	83:CV:241:GLU:O	0.90	1.07
79:B2:1758:U:O2	80:B5:2255:A:C2	2.07	1.07
80:B5:2615:G:H2'	84:CW:76:A:N1	1.62	1.07
8:A7:87:THR:C	84:CW:36:U:H5"	1.79	1.06
38:BD:266:ALA:HA	81:B7:1:G:C4	1.89	1.06
67:Bg:60:ARG:HH21	80:B5:1616:U:H5"	1.16	1.06
8:A7:83:LYS:CE	84:CW:40:C:O2	2.02	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:83:LYS:HE2	84:CW:41:C:C6	1.87	1.06
15:AG:175:ILE:CB	79:B2:78:A:N3	2.18	1.06
75:Bo:104:LEU:HA	84:CW:55:U:O4	1.55	1.06
8:A7:51:ARG:NE	80:B5:2677:G:H1'	1.71	1.06
17:AI:73:SER:HB2	79:B2:257:A:H1'	1.27	1.06
23:AO:122:PRO:CB	79:B2:887:A:H1'	1.84	1.06
23:AO:122:PRO:HB3	79:B2:887:A:H1'	1.12	1.06
36:BB:296:THR:HG22	36:BB:298:PHE:H	1.18	1.06
79:B2:1758:U:O2'	80:B5:2255:A:H5"	1.53	1.06
8:A7:47:ALA:H	80:B5:2678:A:C1'	1.69	1.06
8:A7:84:LYS:C	84:CW:30:G:N9	2.13	1.06
15:AG:13:GLN:HG3	79:B2:151:G:O2'	1.54	1.06
26:AR:28:PHE:CZ	79:B2:1389:C:H6	1.71	1.06
79:B2:1759:C:H1'	80:B5:2262:A:N1	1.69	1.06
8:A7:33:LYS:NZ	80:B5:2691:A:O3'	1.88	1.05
8:A7:34:LYS:HE3	80:B5:2693:C:P	1.94	1.05
8:A7:51:ARG:HD3	80:B5:2677:G:O3'	1.57	1.05
15:AG:159:ARG:HD3	79:B2:77:U:C2	1.83	1.05
15:AG:172:ALA:O	79:B2:79:C:H5"	1.56	1.05
18:AJ:172:VAL:HG22	79:B2:511:A:H5"	1.32	1.05
75:Bo:104:LEU:HD11	84:CW:54:U:OP2	1.53	1.05
80:B5:2284:C:N1	83:CV:476:GLN:OE1	1.89	1.05
80:B5:3030:G:C5'	83:CV:435:TYR:CE1	2.11	1.05
15:AG:62:PRO:HG3	79:B2:161:U:O2'	1.55	1.05
15:AG:131:LYS:H	57:BW:82:ILE:HG23	1.20	1.05
28:AT:90:PRO:HD3	79:B2:1467:C:O2'	1.55	1.05
35:BA:240:ALA:CB	80:B5:2154:U:H4'	1.85	1.05
79:B2:433:C:H5	83:CV:388:ARG:CB	1.64	1.05
79:B2:1427:A:H2'	84:CW:34:C:H1'	1.35	1.05
80:B5:3027:A:O2'	83:CV:109:GLN:HB2	1.55	1.05
22:AN:3:ARG:NH1	79:B2:867:G:OP2	1.89	1.05
27:AS:40:ARG:NH1	79:B2:1539:G:O4'	1.89	1.05
80:B5:3031:G:P	83:CV:436:ARG:NH2	2.29	1.05
83:CV:63:GLU:N	83:CV:210:TRP:CD2	2.24	1.05
8:A7:93:ARG:CG	84:CW:34:C:H41	1.67	1.05
8:A7:93:ARG:HG3	84:CW:34:C:H41	0.99	1.05
10:AB:165:ARG:NH2	79:B2:947:U:OP2	1.89	1.05
15:AG:159:ARG:CD	79:B2:77:U:O2	1.95	1.05
76:Bq:4:ILE:CG1	80:B5:1219:C:OP1	2.03	1.05
8:A7:51:ARG:CZ	80:B5:2677:G:C1'	2.34	1.05
15:AG:83:CYS:CA	79:B2:161:U:O3'	2.05	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:120:PRO:CB	79:B2:887:A:H5”	1.85	1.05
52:BR:101:VAL:HG22	80:B5:1948:G:O3’	1.55	1.05
28:AT:12:GLN:OE1	79:B2:1529:C:O2’	1.75	1.04
32:AX:144:ARG:HH12	83:CV:314:LYS:HD3	1.19	1.04
41:BG:137:ASN:ND2	80:B5:148:G:N7	2.05	1.04
52:BR:74:ARG:NH1	80:B5:1942:U:OP2	1.88	1.04
54:BT:92:ARG:NH1	80:B5:2736:A:OP1	1.89	1.04
68:Bh:89:ARG:HD2	82:B8:38:U:C4	1.90	1.04
79:B2:46:A:C2	83:CV:387:ARG:NH1	2.25	1.04
80:B5:1226:G:OP2	80:B5:1289:G:H8	1.40	1.04
83:CV:236:GLU:CD	83:CV:361:GLY:CA	2.29	1.04
8:A7:87:THR:O	84:CW:36:U:OP2	1.74	1.04
23:AO:46:MET:HG2	79:B2:899:G:H4’	1.36	1.04
38:BD:146:LEU:HB3	80:B5:2746:A:H2	0.91	1.04
79:B2:1620:C:OP2	88:B2:2071:OHX:N6	1.90	1.04
8:A7:89:ARG:NE	84:CW:33:U:H3’	1.72	1.04
15:AG:174:LYS:CB	79:B2:79:C:H1’	1.79	1.04
15:AG:175:ILE:CD1	79:B2:78:A:C1’	1.99	1.04
23:AO:38:THR:HB	79:B2:895:G:C2’	1.85	1.04
29:AU:53:LYS:HD2	79:B2:1345:A:H5’	1.37	1.04
79:B2:1637:C:O2’	85:CX:3:G:O6	1.74	1.04
79:B2:1637:C:N3	84:CW:34:C:N4	2.06	1.04
8:A7:51:ARG:NH1	80:B5:2677:G:C1’	2.21	1.04
10:AB:148:ASN:OD1	79:B2:1066:C:O2’	1.75	1.04
25:AQ:75:VAL:HG11	79:B2:1610:G:OP1	1.55	1.04
33:AY:119:PHE:CE1	79:B2:86:A:C5’	2.37	1.04
79:B2:1646:C:C2’	80:B5:2257:C:H41	1.71	1.04
80:B5:2284:C:C6	83:CV:477:SER:HB2	1.84	1.04
15:AG:112:VAL:CG2	79:B2:164:A:H4’	1.87	1.04
60:BZ:17:ARG:HB2	80:B5:1635:G:O6	1.57	1.04
63:Bc:85:PHE:CE2	80:B5:1728:G:C6	2.46	1.04
74:Bn:11:ARG:HB3	79:B2:1126:G:H5’	1.38	1.04
79:B2:414:C:C5	83:CV:288:ARG:CG	2.39	1.04
83:CV:16:THR:HB	89:CV:602:GCP:O3A	1.58	1.04
83:CV:63:GLU:N	83:CV:210:TRP:CE2	2.25	1.04
15:AG:83:CYS:SG	79:B2:162:A:H5’	1.96	1.03
23:AO:123:SER:CB	79:B2:885:G:N2	2.17	1.03
74:Bn:15:ARG:HD3	79:B2:1126:G:OP2	1.54	1.03
79:B2:1645:G:C4’	80:B5:2259:A:C2	2.25	1.03
80:B5:2279:A:N7	83:CV:478:LYS:CD	2.21	1.03
8:A7:83:LYS:HE2	84:CW:41:C:O4’	1.58	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:116:LYS:CE	79:B2:933:A:OP1	2.06	1.03
25:AQ:123:ARG:H	79:B2:1584:G:C5'	1.70	1.03
47:BM:128:ARG:NH2	80:B5:3214:U:OP2	1.91	1.03
52:BR:170:ARG:O	79:B2:852:C:C6	1.91	1.03
69:Bi:53:TYR:OH	80:B5:295:A:OP1	1.75	1.03
74:Bn:15:ARG:CD	79:B2:1126:G:OP2	2.03	1.03
80:B5:2285:C:N4	83:CV:478:LYS:CG	2.19	1.03
83:CV:239:VAL:O	83:CV:359:THR:HG22	1.56	1.03
10:AB:165:ARG:CZ	79:B2:946:U:H5"	1.87	1.03
15:AG:182:GLN:NE2	79:B2:271:A:N6	2.06	1.03
43:BI:112:GLN:CB	83:CV:471:LYS:CD	2.35	1.03
52:BR:161:ALA:C	79:B2:849:C:O2'	1.90	1.03
79:B2:432:G:C5'	83:CV:385:VAL:HA	1.89	1.03
83:CV:239:VAL:O	83:CV:359:THR:CG2	2.06	1.03
8:A7:89:ARG:NH1	84:CW:33:U:N3	2.06	1.03
15:AG:110:ALA:HB1	79:B2:163:G:H1'	1.08	1.03
15:AG:174:LYS:CD	79:B2:79:C:O2	2.06	1.03
23:AO:38:THR:HG21	79:B2:896:U:O4'	1.58	1.03
28:AT:88:VAL:HG22	79:B2:1172:G:H21	1.19	1.03
32:AX:98:GLU:O	83:CV:378:LYS:NZ	1.92	1.03
42:BH:44:THR:HG22	80:B5:3186:A:N3	1.73	1.03
44:BJ:55:ARG:NH2	84:CW:48:C:P	2.32	1.03
48:BN:4:TYR:OH	80:B5:148:G:OP2	1.76	1.03
53:BS:108:GLN:NE2	80:B5:1322:U:O2	1.89	1.03
75:Bo:105:GLN:HB2	84:CW:58:A:OP2	1.56	1.03
24:AP:12:PHE:HB2	44:BJ:85:LYS:CG	1.87	1.03
52:BR:169:ALA:CB	79:B2:850:A:C2	2.40	1.03
74:Bn:17:ARG:NE	79:B2:1116:A:H5"	1.72	1.03
79:B2:1758:U:C2	80:B5:2255:A:N3	2.27	1.03
79:B2:1780:G:H2'	80:B5:2262:A:O2'	1.59	1.03
15:AG:56:ASN:OD1	79:B2:153:G:N2	1.91	1.02
15:AG:96:SER:OG	79:B2:420:A:OP1	1.77	1.02
15:AG:108:VAL:HG23	79:B2:154:G:H5'	1.35	1.02
15:AG:172:ALA:HB3	79:B2:79:C:OP1	1.57	1.02
23:AO:35:GLY:HA3	79:B2:919:A:H4'	1.03	1.02
58:BX:49:LYS:HE3	82:B8:135:G:OP1	1.59	1.02
69:Bi:76:ARG:HD3	80:B5:294:U:OP1	1.55	1.02
80:B5:3030:G:H5"	83:CV:435:TYR:CE1	1.38	1.02
10:AB:65:VAL:HG22	79:B2:920:U:H5"	1.40	1.02
15:AG:185:GLN:HG3	79:B2:284:G:C6	1.92	1.02
52:BR:80:LYS:HE2	80:B5:1940:G:OP1	1.59	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Bl:15:LYS:NZ	82:B8:46:G:OP2	1.90	1.02
8:A7:48:ARG:HD3	80:B5:2678:A:P	1.98	1.02
23:AO:18:ARG:NH2	79:B2:919:A:C5'	2.23	1.02
83:CV:63:GLU:CA	83:CV:210:TRP:CZ3	2.42	1.02
25:AQ:143:ARG:NH1	84:CW:32:U:O4'	1.90	1.02
38:BD:272:TYR:CZ	81:B7:22:A:H1'	1.95	1.02
79:B2:1715:G:O6	79:B2:1716:C:N4	1.93	1.02
38:BD:207:TYR:CE1	81:B7:33:U:C6	2.48	1.01
52:BR:166:ASN:CB	79:B2:850:A:H5"	1.90	1.01
80:B5:2284:C:C5	83:CV:477:SER:OG	2.13	1.01
8:A7:32:SER:HA	80:B5:2707:C:H5'	1.38	1.01
8:A7:51:ARG:HD2	80:B5:2677:G:C4'	1.89	1.01
8:A7:83:LYS:O	84:CW:29:G:N2	1.93	1.01
15:AG:132:ARG:CG	79:B2:68:A:N6	2.22	1.01
15:AG:159:ARG:HD3	79:B2:77:U:N3	1.73	1.01
20:AL:80:MET:HE2	79:B2:325:G:C4'	1.90	1.01
23:AO:41:ARG:NH2	79:B2:915:A:N6	2.09	1.01
54:BT:71:SER:OG	80:B5:2736:A:H4'	1.60	1.01
54:BT:130:ARG:N	80:B5:1098:A:OP2	1.92	1.01
60:BZ:115:LYS:HE3	80:B5:1629:U:O3'	1.59	1.01
79:B2:994:G:H4'	80:B5:2195:C:OP1	1.59	1.01
79:B2:1645:G:O2'	80:B5:2259:A:N1	1.91	1.01
15:AG:56:ASN:HB2	79:B2:154:G:H1'	1.39	1.01
33:AY:10:ARG:HG2	79:B2:778:G:H1	0.85	1.01
43:BI:76:MET:HE1	43:BI:148:VAL:HA	1.38	1.01
52:BR:173:ARG:CD	79:B2:853:G:N3	2.08	1.01
83:CV:63:GLU:CA	83:CV:210:TRP:CH2	2.43	1.01
8:A7:92:ASP:HB2	84:CW:35:A:N7	1.74	1.01
8:A7:93:ARG:HG3	84:CW:34:C:N4	1.69	1.01
35:BA:40:TYR:O	80:B5:2550:U:H5	1.43	1.01
41:BG:54:GLU:HG3	80:B5:1558:A:OP2	1.59	1.01
38:BD:207:TYR:HB2	81:B7:33:U:O2	1.61	1.01
38:BD:274:GLN:CD	81:B7:60:G:H21	1.68	1.01
80:B5:3031:G:OP2	83:CV:436:ARG:CZ	2.06	1.01
85:CX:1:A:O2'	88:CX:101:OHX:N3	1.93	1.01
8:A7:88:ARG:HD3	84:CW:35:A:C4	1.95	1.00
8:A7:89:ARG:CZ	84:CW:33:U:N3	2.17	1.00
33:AY:119:PHE:CD1	79:B2:86:A:OP1	2.13	1.00
35:BA:15:ILE:HD11	80:B5:822:G:C4	1.96	1.00
72:Bl:3:ALA:O	80:B5:1834:U:H5'	1.60	1.00
79:B2:1492:A:HO2'	79:B2:1493:A:H8	1.03	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:84:LYS:CG	84:CW:31:A:C3'	2.20	1.00
29:AU:54:GLY:H	79:B2:1345:A:P	1.82	1.00
35:BA:200:ARG:NH2	80:B5:2147:A:OP2	1.94	1.00
42:BH:166:ARG:HH11	42:BH:168:ARG:HH22	1.08	1.00
52:BR:104:ARG:NH1	80:B5:1949:G:C5'	2.24	1.00
1:A0:92:ARG:HD3	79:B2:1796:C:OP2	1.61	1.00
2:A1:28:PRO:HB3	79:B2:959:U:H5'	1.41	1.00
10:AB:116:LYS:HE2	79:B2:932:U:H3'	1.43	1.00
16:AH:9:LEU:HD21	16:AH:17:GLU:HB3	1.43	1.00
33:AY:37:LYS:NZ	79:B2:523:G:OP2	1.94	1.00
38:BD:15:ARG:CZ	80:B5:1003:A:H1'	1.91	1.00
41:BG:137:ASN:ND2	80:B5:148:G:C8	2.28	1.00
52:BR:173:ARG:HD3	79:B2:853:G:N3	1.11	1.00
8:A7:84:LYS:HG3	84:CW:31:A:H3'	1.02	1.00
67:Bg:68:THR:CG2	80:B5:1643:A:OP2	2.09	1.00
79:B2:1190:C:O2	84:CW:31:A:C5'	2.08	1.00
23:AO:38:THR:CB	79:B2:895:G:C2'	2.36	1.00
26:AR:48:ASN:HD22	79:B2:1389:C:P	1.85	1.00
47:BM:19:ARG:HA	47:BM:69:THR:HG22	1.41	1.00
54:BT:57:TYR:OH	80:B5:2724:U:OP1	1.79	1.00
67:Bg:74:ARG:NH2	80:B5:1639:C:OP2	1.95	1.00
15:AG:174:LYS:HD3	79:B2:79:C:C1'	1.91	1.00
23:AO:27:PHE:CZ	79:B2:916:U:C2'	2.43	1.00
23:AO:27:PHE:HE2	79:B2:916:U:O2	1.43	1.00
32:AX:144:ARG:NH1	83:CV:314:LYS:HD3	1.75	1.00
80:B5:2285:C:C4	83:CV:478:LYS:HG3	1.93	1.00
8:A7:28:SER:CA	80:B5:2708:C:H4'	1.92	0.99
23:AO:18:ARG:HH22	79:B2:919:A:C5'	1.75	0.99
60:BZ:78:ASN:ND2	80:B5:1711:C:OP1	1.94	0.99
79:B2:430:G:H4'	83:CV:244:GLY:HA3	1.41	0.99
8:A7:88:ARG:HB3	84:CW:36:U:OP2	1.61	0.99
36:BB:41:VAL:HA	36:BB:185:GLY:HA3	1.39	0.99
15:AG:15:THR:HG21	79:B2:153:G:O5'	1.62	0.99
8:A7:88:ARG:HB3	84:CW:36:U:P	2.01	0.99
37:BC:193:LYS:NZ	82:B8:21:C:OP1	1.93	0.99
83:CV:388:ARG:HD3	88:CV:601:OHX:N4	1.77	0.99
15:AG:59:GLN:CA	79:B2:155:U:H4'	1.93	0.99
15:AG:133:LEU:HA	79:B2:66:U:N3	1.78	0.99
25:AQ:123:ARG:N	79:B2:1584:G:H5'	1.76	0.99
80:B5:1226:G:O4'	80:B5:1288:U:C4'	2.11	0.99
8:A7:32:SER:HB2	80:B5:2692:A:H1'	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:194:ASN:ND2	80:B5:822:G:C4'	2.24	0.99
8:A7:88:ARG:HD2	84:CW:35:A:C8	1.98	0.99
15:AG:157:VAL:HG21	79:B2:78:A:O2'	1.62	0.99
15:AG:175:ILE:HG12	79:B2:78:A:N9	1.77	0.99
69:Bi:77:LEU:HD23	80:B5:294:U:H4'	1.44	0.99
8:A7:89:ARG:HE	84:CW:33:U:H3'	1.21	0.99
17:AI:24:LYS:O	79:B2:400:A:H5"	1.62	0.99
23:AO:18:ARG:CZ	79:B2:919:A:C5'	2.37	0.99
33:AY:105:ARG:HB3	79:B2:443:C:OP2	1.60	0.99
38:BD:207:TYR:CZ	81:B7:33:U:C6	2.50	0.99
60:BZ:135:ARG:NH2	80:B5:1807:G:H5"	1.78	0.99
41:BG:162:LEU:CD1	80:B5:147:U:C2	2.46	0.99
79:B2:913:G:C6	80:B5:2206:G:H4'	1.97	0.99
79:B2:1645:G:O2'	80:B5:2259:A:C6	2.15	0.98
33:AY:12:VAL:N	79:B2:783:G:N7	2.10	0.98
63:Bc:26:GLY:CA	80:B5:1730:G:C6	2.46	0.98
72:Bl:41:ARG:NH1	80:B5:1517:G:OP1	1.96	0.98
79:B2:1686:C:H2'	79:B2:1687:U:C6	1.98	0.98
27:AS:118:LYS:CE	44:BJ:108:GLU:OE2	2.10	0.98
54:BT:23:GLY:N	80:B5:2701:U:OP1	1.95	0.98
69:Bi:82:ARG:NH2	80:B5:271:C:O2	1.95	0.98
80:B5:1225:A:C5	80:B5:1287:A:O2'	2.16	0.98
8:A7:31:SER:O	80:B5:2707:C:C4'	2.10	0.98
8:A7:83:LYS:CE	84:CW:40:C:C2	2.45	0.98
10:AB:124:ASN:ND2	79:B2:884:A:H4'	1.79	0.98
83:CV:248:ASP:HB2	83:CV:360:LEU:CD2	1.94	0.98
15:AG:182:GLN:HE22	79:B2:271:A:N6	1.59	0.98
33:AY:8:ARG:HA	79:B2:780:A:O2'	1.62	0.98
52:BR:125:LYS:NZ	80:B5:1720:U:O4	1.97	0.98
8:A7:34:LYS:HG3	80:B5:2693:C:OP1	1.63	0.98
28:AT:57:ARG:HG3	28:AT:57:ARG:HH11	1.26	0.98
35:BA:50:HIS:CD2	80:B5:1795:U:H2'	1.97	0.98
52:BR:163:ARG:O	79:B2:850:A:H5'	0.80	0.98
79:B2:1645:G:C3'	80:B5:2259:A:C2	2.46	0.98
8:A7:47:ALA:CA	80:B5:2678:A:O4'	2.12	0.98
74:Bn:17:ARG:CZ	79:B2:1116:A:H5'	1.94	0.98
79:B2:51:A:C2'	83:CV:242:GLY:HA3	1.94	0.98
8:A7:84:LYS:HD3	84:CW:32:U:C5	1.98	0.98
74:Bn:21:ARG:NH1	79:B2:1118:G:OP1	1.70	0.98
83:CV:78:PRO:O	89:CV:602:GCP:O2G	1.81	0.98
15:AG:108:VAL:CG2	79:B2:153:G:O2'	2.10	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AU:57:ARG:HG2	79:B2:1382:A:O4'	1.64	0.97
67:Bg:73:SER:O	80:B5:1639:C:N4	1.97	0.97
83:CV:19:THR:CA	89:CV:602:GCP:O2A	2.07	0.97
8:A7:85:SER:CA	84:CW:30:G:N7	2.11	0.97
9:AA:101:ARG:NH2	79:B2:1320:U:H3'	1.79	0.97
25:AQ:13:LYS:HE3	79:B2:1584:G:C6	1.98	0.97
83:CV:199:ALA:HB3	89:CV:602:GCP:C6	1.94	0.97
8:A7:47:ALA:H	80:B5:2678:A:H1'	1.24	0.97
8:A7:93:ARG:HB2	85:CX:3:G:H1	1.30	0.97
41:BG:138:HIS:N	80:B5:148:G:O6	1.97	0.97
44:BJ:103:GLY:C	80:B5:2673:A:H4'	1.89	0.97
8:A7:48:ARG:HD2	80:B5:2678:A:OP2	1.64	0.97
15:AG:58:LYS:HA	79:B2:155:U:H5'	1.46	0.97
29:AU:89:ARG:HH12	79:B2:1383:G:P	1.86	0.97
33:AY:120:GLY:C	79:B2:85:A:H4'	1.90	0.97
52:BR:165:LYS:HD3	79:B2:849:C:O2	1.62	0.97
54:BT:49:GLN:HB3	80:B5:2756:C:H4'	1.42	0.97
74:Bn:17:ARG:CZ	79:B2:1116:A:C5'	2.42	0.97
83:CV:63:GLU:N	83:CV:210:TRP:CE3	2.31	0.97
1:A0:14:GLY:O	79:B2:937:C:N4	1.96	0.97
10:AB:116:LYS:NZ	79:B2:933:A:O5'	1.97	0.97
83:CV:131:LYS:HD3	89:CV:602:GCP:C5	1.93	0.97
35:BA:240:ALA:HB1	80:B5:2154:U:H4'	1.41	0.97
43:BI:193:ASP:OD2	80:B5:1010:G:N2	1.97	0.97
52:BR:171:ASP:OD1	79:B2:852:C:OP2	1.83	0.97
74:Bn:5:TRP:HH2	79:B2:1775:U:O4	1.24	0.97
8:A7:51:ARG:HD2	80:B5:2677:G:H4'	1.45	0.97
43:BI:102:MET:HB3	83:CV:471:LYS:NZ	1.80	0.97
23:AO:38:THR:CG2	79:B2:895:G:C2'	2.42	0.97
76:Bq:5:ARG:NE	80:B5:1221:A:O2'	1.97	0.97
15:AG:132:ARG:NH2	79:B2:68:A:C4	2.32	0.97
63:Bc:26:GLY:HA3	80:B5:1730:G:O6	1.59	0.97
80:B5:437:G:H22	80:B5:622:A:H61	1.01	0.97
15:AG:60:GLY:O	79:B2:154:G:C2	2.18	0.96
60:BZ:135:ARG:NH2	80:B5:1807:G:H5'	1.78	0.96
8:A7:91:THR:HG23	84:CW:36:U:C4	2.00	0.96
10:AB:116:LYS:NZ	79:B2:933:A:P	2.39	0.96
23:AO:132:ARG:CZ	79:B2:1788:G:C8	2.48	0.96
25:AQ:76:SER:CB	79:B2:1609:U:OP1	2.13	0.96
35:BA:241:ARG:HH22	80:B5:2156:C:P	1.88	0.96
38:BD:23:ARG:NE	80:B5:2703:A:OP2	1.98	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:388:ARG:CD	88:CV:601:OHX:N4	2.27	0.96
8:A7:92:ASP:HB3	84:CW:34:C:C5	1.64	0.96
15:AG:175:ILE:CG1	79:B2:78:A:C1'	2.35	0.96
28:AT:87:GLY:C	79:B2:1542:G:H5"	1.90	0.96
52:BR:170:ARG:NH2	88:BR:201:OHX:N1	2.11	0.96
79:B2:433:C:C6	83:CV:388:ARG:HB2	2.00	0.96
8:A7:83:LYS:HB3	84:CW:30:G:H22	1.23	0.96
23:AO:38:THR:HG22	79:B2:895:G:C2'	1.95	0.96
54:BT:8:ARG:HD3	80:B5:2757:U:O4'	1.65	0.96
75:Bo:106:PHE:HE2	84:CW:57:G:C8	1.70	0.96
83:CV:85:ASN:CG	83:CV:368:LYS:HG2	1.88	0.96
83:CV:236:GLU:N	83:CV:360:LEU:HD21	1.79	0.96
1:A0:87:ARG:HD2	79:B2:1797:A:N6	1.80	0.96
8:A7:88:ARG:CB	84:CW:35:A:H2'	1.96	0.96
83:CV:63:GLU:N	83:CV:210:TRP:CZ3	2.34	0.96
22:AN:73:ARG:HD3	79:B2:859:A:C6	1.99	0.96
79:B2:431:C:O2'	83:CV:384:ASP:O	1.83	0.96
80:B5:3027:A:H8	83:CV:109:GLN:NE2	1.49	0.96
10:AB:116:LYS:NZ	79:B2:933:A:OP1	1.97	0.96
26:AR:48:ASN:ND2	79:B2:1389:C:OP1	1.98	0.96
35:BA:84:THR:HB	80:B5:2554:A:N1	1.80	0.96
35:BA:241:ARG:NH2	80:B5:2156:C:P	2.37	0.96
8:A7:83:LYS:HE2	84:CW:41:C:H6	1.29	0.96
8:A7:84:LYS:O	84:CW:30:G:C2'	2.14	0.96
17:AI:64:ASN:HD21	79:B2:257:A:C2'	1.79	0.96
18:AJ:60:LEU:HD21	18:AJ:93:LEU:HD21	1.45	0.96
79:B2:414:C:C5	83:CV:288:ARG:HB2	2.01	0.96
79:B2:1428:G:H5"	84:CW:34:C:H5'	1.48	0.96
80:B5:3030:G:O5'	83:CV:436:ARG:HD3	1.66	0.96
38:BD:260:PHE:CE2	81:B7:121:U:C5'	2.48	0.96
54:BT:28:SER:OG	81:B7:9:C:OP1	1.83	0.96
38:BD:207:TYR:CD1	81:B7:33:U:N1	2.34	0.95
79:B2:1585:U:H3	79:B2:1611:A:H2	0.96	0.95
83:CV:63:GLU:N	83:CV:210:TRP:CZ2	2.33	0.95
14:AF:117:THR:HG21	14:AF:194:LEU:HD12	1.47	0.95
23:AO:45:GLY:CA	79:B2:900:A:OP2	2.13	0.95
83:CV:388:ARG:HG2	88:CV:601:OHX:N2	1.79	0.95
79:B2:415:C:N3	83:CV:288:ARG:HD3	1.79	0.95
80:B5:2284:C:C6	83:CV:477:SER:HA	1.59	0.95
13:AE:108:ARG:NH2	79:B2:788:A:OP2	1.99	0.95
23:AO:46:MET:CA	79:B2:899:G:H5'	1.95	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BZ:69:LYS:HZ3	80:B5:1633:C:P	1.85	0.95
79:B2:1010:C:OP2	88:B2:2011:OHX:N6	1.99	0.95
83:CV:236:GLU:H	83:CV:360:LEU:HD21	1.26	0.95
23:AO:88:GLY:CA	79:B2:888:U:H5'	1.96	0.95
32:AX:144:ARG:CZ	83:CV:314:LYS:CD	2.43	0.95
67:Bg:56:THR:N	80:B5:1740:U:OP1	1.98	0.95
15:AG:159:ARG:NH1	79:B2:77:U:O4'	2.00	0.95
23:AO:122:PRO:HB3	79:B2:887:A:C1'	1.97	0.95
74:Bn:11:ARG:NH2	79:B2:1127:G:C5'	2.28	0.95
79:B2:46:A:N1	83:CV:387:ARG:HA	1.81	0.95
83:CV:131:LYS:CD	89:CV:602:GCP:N1	2.29	0.95
17:AI:51:GLY:H	79:B2:397:A:H5"	1.29	0.95
23:AO:29:HIS:HE1	79:B2:918:U:H4'	1.32	0.95
23:AO:132:ARG:NE	79:B2:1788:G:N7	2.15	0.95
8:A7:28:SER:HB3	80:B5:2708:C:C3'	1.80	0.95
12:AD:8:LYS:NZ	79:B2:1487:A:OP2	1.98	0.95
15:AG:133:LEU:HD11	79:B2:66:U:O2'	1.66	0.95
23:AO:29:HIS:CE1	79:B2:918:U:C4'	2.50	0.95
28:AT:12:GLN:OE1	79:B2:1529:C:C2'	2.14	0.95
38:BD:48:LYS:NZ	80:B5:2749:G:O5'	2.00	0.95
1:A0:15:ARG:NH1	79:B2:936:G:N7	2.15	0.95
8:A7:30:THR:HA	80:B5:2707:C:O2'	1.67	0.95
15:AG:136:LYS:HD2	79:B2:66:U:OP1	1.66	0.95
15:AG:159:ARG:NH1	79:B2:77:U:C1'	2.29	0.95
17:AI:75:LYS:NZ	79:B2:259:U:OP1	2.00	0.95
17:AI:170:SER:O	79:B2:209:U:H5"	1.65	0.95
83:CV:131:LYS:HG2	89:CV:602:GCP:O6	1.66	0.95
83:CV:236:GLU:HA	83:CV:364:GLU:OE2	1.65	0.95
8:A7:82:THR:HG21	84:CW:29:G:N3	1.82	0.95
10:AB:165:ARG:HE	79:B2:947:U:P	1.90	0.95
60:BZ:15:ARG:HD3	80:B5:1637:A:H4'	1.45	0.95
67:Bg:41:ARG:CZ	80:B5:1739:U:H1'	1.96	0.95
83:CV:63:GLU:N	83:CV:210:TRP:CH2	2.34	0.95
8:A7:82:THR:CB	84:CW:29:G:C2	2.44	0.94
20:AL:36:LYS:HD3	79:B2:248:U:C4'	1.97	0.94
23:AO:27:PHE:CE1	79:B2:916:U:O2'	2.19	0.94
23:AO:135:ARG:HE	79:B2:1008:G:P	1.88	0.94
26:AR:60:ARG:HH21	79:B2:1400:A:P	1.90	0.94
29:AU:53:LYS:HB3	79:B2:1345:A:H4'	1.49	0.94
35:BA:194:ASN:ND2	80:B5:822:G:H4'	1.81	0.94
63:Bc:88:GLY:N	80:B5:1729:A:OP1	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:415:C:H5	83:CV:288:ARG:CB	1.65	0.94
79:B2:1645:G:C3'	80:B5:2259:A:N1	2.29	0.94
23:AO:20:TYR:HD2	79:B2:917:U:H5"	1.32	0.94
80:B5:2285:C:N4	83:CV:477:SER:OG	1.99	0.94
32:AX:99:ASN:CB	83:CV:378:LYS:HZ3	1.80	0.94
41:BG:63:LYS:HE2	82:B8:153:U:OP1	1.66	0.94
79:B2:1780:G:HO2'	80:B5:2262:A:H4'	1.16	0.94
80:B5:2286:U:C6	83:CV:479:PRO:HD2	1.98	0.94
80:B5:2286:U:H2'	83:CV:479:PRO:HD2	1.49	0.94
8:A7:84:LYS:HD3	84:CW:32:U:C6	2.02	0.94
26:AR:49:LYS:CD	79:B2:1390:U:OP2	2.15	0.94
10:AB:150:VAL:HG23	79:B2:1067:C:C5'	1.96	0.94
22:AN:3:ARG:NH1	79:B2:867:G:P	2.41	0.94
79:B2:1588:G:H1	79:B2:1608:U:H3	1.13	0.94
80:B5:1226:G:OP2	80:B5:1289:G:C8	2.19	0.94
15:AG:108:VAL:HG23	79:B2:154:G:C5'	1.97	0.94
23:AO:123:SER:N	79:B2:886:U:O2	1.99	0.94
8:A7:77:THR:O	84:CW:43:C:H5"	1.65	0.94
15:AG:112:VAL:HG21	79:B2:164:A:C5'	1.97	0.94
23:AO:18:ARG:NH2	79:B2:919:A:H5"	1.82	0.94
38:BD:269:SER:CB	81:B7:1:G:H21	1.79	0.94
69:Bi:26:ILE:HD13	80:B5:155:G:H1'	1.49	0.94
74:Bn:4:LYS:CE	79:B2:1773:C:H2'	1.96	0.94
79:B2:1646:C:C2'	80:B5:2257:C:N4	2.30	0.94
8:A7:88:ARG:HB3	84:CW:36:U:C5'	1.93	0.94
23:AO:38:THR:CB	79:B2:895:G:H2'	1.97	0.94
23:AO:123:SER:CB	79:B2:885:G:N3	2.31	0.94
29:AU:53:LYS:HA	79:B2:1345:A:P	2.08	0.94
52:BR:124:TYR:OH	80:B5:1721:U:OP2	1.86	0.94
79:B2:701:U:H3	79:B2:737:A:H61	1.06	0.94
80:B5:1877:U:H5"	80:B5:1878:G:H5'	1.50	0.94
8:A7:34:LYS:CG	80:B5:2693:C:OP1	2.16	0.94
8:A7:83:LYS:CE	84:CW:41:C:C6	2.49	0.94
15:AG:132:ARG:C	79:B2:68:A:H61	1.74	0.94
52:BR:168:ALA:HB3	79:B2:850:A:C2'	1.98	0.94
58:BX:111:ASN:ND2	80:B5:1608:C:H5"	1.82	0.94
75:Bo:105:GLN:NE2	84:CW:55:U:C5	2.35	0.94
80:B5:2622:C:C2	84:CW:75:C:O4'	1.89	0.94
23:AO:38:THR:HG22	79:B2:895:G:C3'	1.98	0.93
38:BD:94:ASN:CB	81:B7:47:C:OP1	2.16	0.93
8:A7:48:ARG:HB2	80:B5:2678:A:OP1	1.66	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:109:LYS:HE2	79:B2:1474:G:P	2.08	0.93
44:BJ:105:GLY:HA3	80:B5:2674:A:O4'	1.68	0.93
52:BR:168:ALA:HB3	79:B2:850:A:O2'	1.66	0.93
52:BR:169:ALA:O	79:B2:852:C:C4	2.21	0.93
8:A7:33:LYS:HD2	80:B5:2692:A:H5'	1.49	0.93
8:A7:85:SER:CA	84:CW:30:G:C6	2.33	0.93
15:AG:174:LYS:CA	79:B2:79:C:C4'	2.47	0.93
28:AT:57:ARG:HG3	79:B2:1479:A:OP1	1.68	0.93
32:AX:99:ASN:HB2	83:CV:378:LYS:NZ	1.82	0.93
33:AY:21:LYS:CG	79:B2:782:U:O2	2.14	0.93
15:AG:54:GLY:HA3	79:B2:163:G:H5'	1.51	0.93
20:AL:130:PRO:O	79:B2:335:U:O2'	1.83	0.93
8:A7:91:THR:CG2	84:CW:36:U:N3	2.15	0.93
32:AX:144:ARG:HH22	83:CV:314:LYS:HD3	1.34	0.93
35:BA:241:ARG:HG2	80:B5:2155:G:OP1	1.68	0.93
52:BR:104:ARG:HH11	80:B5:1949:G:H5"	1.29	0.93
80:B5:2836:C:H5	80:B5:2852:C:H42	1.07	0.93
20:AL:80:MET:HE2	79:B2:325:G:H4'	1.47	0.93
25:AQ:40:GLU:OE2	79:B2:1529:C:H4'	1.67	0.93
35:BA:9:ARG:NH2	80:B5:912:G:OP2	2.01	0.93
15:AG:132:ARG:O	79:B2:68:A:N6	2.00	0.93
52:BR:166:ASN:CG	88:BR:201:OHX:N4	2.25	0.93
61:Ba:8:THR:HG21	80:B5:662:U:OP1	1.69	0.93
63:Bc:85:PHE:CE2	80:B5:1728:G:O6	2.21	0.93
17:AI:138:ASN:ND2	79:B2:197:A:H61	1.59	0.93
15:AG:10:ASN:HA	57:BW:80:ARG:CB	1.98	0.93
28:AT:102:ARG:NH2	79:B2:1502:G:O6	2.01	0.93
44:BJ:142:LYS:HE3	80:B5:2664:C:P	2.08	0.93
88:B2:1918:OHX:N4	88:B2:2062:OHX:N6	2.16	0.93
83:CV:20:LYS:NZ	89:CV:602:GCP:N3	2.16	0.93
83:CV:237:VAL:N	83:CV:360:LEU:C	2.13	0.93
8:A7:87:THR:HG22	84:CW:36:U:H5'	1.50	0.92
14:AF:104:ASN:HD21	79:B2:1166:A:H5'	0.77	0.92
52:BR:164:LEU:N	79:B2:850:A:C5'	2.26	0.92
69:Bi:82:ARG:NH1	80:B5:271:C:N3	2.16	0.92
14:AF:78:ALA:O	79:B2:1615:C:N4	2.02	0.92
38:BD:265:TYR:CE1	81:B7:120:C:H2'	2.03	0.92
48:BN:31:ARG:NH1	48:BN:124:ASP:OD2	2.03	0.92
63:Bc:85:PHE:CE1	80:B5:1728:G:C5	2.57	0.92
79:B2:48:G:C4	83:CV:387:ARG:NH1	2.37	0.92
8:A7:83:LYS:HB2	84:CW:30:G:N2	1.82	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:97:LEU:HD13	10:AB:98:THR:H	1.34	0.92
11:AC:162:CYS:HA	88:AC:301:OHX:N5	1.84	0.92
12:AD:159:HIS:N	79:B2:1328:G:OP1	2.01	0.92
28:AT:91:TYR:HE1	79:B2:1469:A:OP1	1.51	0.92
79:B2:279:G:H3'	79:B2:280:U:H5"	1.50	0.92
79:B2:415:C:C6	83:CV:288:ARG:CB	2.50	0.92
1:A0:15:ARG:HG2	79:B2:943:C:N4	1.84	0.92
8:A7:34:LYS:CE	80:B5:2693:C:H5'	1.99	0.92
35:BA:200:ARG:HG3	80:B5:2147:A:OP1	1.70	0.92
79:B2:732:G:O6	88:B2:2009:OHX:N5	2.03	0.92
23:AO:45:GLY:CA	79:B2:900:A:P	2.57	0.92
54:BT:78:LYS:HE3	80:B5:2728:G:O6	1.68	0.92
79:B2:414:C:C6	83:CV:289:LEU:HD23	2.00	0.92
15:AG:176:GLN:NE2	79:B2:65:A:OP1	2.02	0.92
15:AG:185:GLN:HG3	79:B2:284:G:C5	2.05	0.92
1:A0:70:LYS:HE2	79:B2:930:A:C5'	1.99	0.92
15:AG:175:ILE:CG1	79:B2:78:A:N9	2.32	0.92
75:Bo:106:PHE:HD2	84:CW:18:G:N2	1.42	0.92
83:CV:236:GLU:CB	83:CV:360:LEU:HG	1.72	0.92
8:A7:72:ARG:NH1	79:B2:1460:A:O2'	2.02	0.92
10:AB:54:LEU:HD11	80:B5:2438:A:H2	1.35	0.92
15:AG:59:GLN:C	79:B2:155:U:H1'	1.94	0.92
15:AG:108:VAL:HG21	79:B2:154:G:H5'	1.50	0.92
46:BL:73:ARG:NH1	80:B5:110:G:OP2	2.03	0.92
79:B2:839:U:O4	88:B2:2069:OHX:N3	2.03	0.92
79:B2:1646:C:C1'	80:B5:2257:C:H41	1.82	0.92
10:AB:165:ARG:NE	79:B2:946:U:O3'	2.03	0.92
44:BJ:95:ASN:N	80:B5:2673:A:OP1	2.03	0.92
47:BM:55:ARG:NH2	47:BM:76:ALA:O	2.03	0.92
60:BZ:115:LYS:HD3	80:B5:1629:U:O4'	1.70	0.92
74:Bn:5:TRP:HZ3	79:B2:1775:U:C5	1.88	0.92
74:Bn:7:LYS:NZ	79:B2:1025:A:OP1	2.03	0.92
6:A5:86:UNK:O	6:A5:87:UNK:HG3	1.69	0.92
23:AO:18:ARG:NH1	79:B2:919:A:P	2.43	0.92
8:A7:83:LYS:HB3	84:CW:30:G:H21	1.10	0.91
15:AG:95:LYS:HE2	79:B2:161:U:OP1	1.69	0.91
35:BA:3:ARG:HD3	80:B5:911:C:H42	1.25	0.91
43:BI:102:MET:CA	83:CV:471:LYS:NZ	2.33	0.91
79:B2:1644:C:C1'	80:B5:2255:A:N1	2.33	0.91
8:A7:89:ARG:CD	84:CW:33:U:H3'	1.99	0.91
23:AO:38:THR:CG2	79:B2:895:G:O3'	2.18	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AP:12:PHE:CD1	44:BJ:85:LYS:HE2	2.05	0.91
79:B2:1427:A:C2'	84:CW:34:C:H1'	2.00	0.91
80:B5:3343:G:H21	80:B5:3362:A:H2	1.17	0.91
8:A7:34:LYS:NZ	80:B5:2707:C:OP1	2.03	0.91
76:Bq:5:ARG:CZ	80:B5:1221:A:H1'	2.00	0.91
79:B2:51:A:N1	83:CV:243:PHE:CB	2.16	0.91
15:AG:132:ARG:NH2	79:B2:68:A:N7	2.18	0.91
15:AG:154:ARG:C	79:B2:78:A:H5'	1.93	0.91
23:AO:38:THR:HG22	79:B2:895:G:O2'	1.67	0.91
80:B5:2621:G:H8	84:CW:75:C:H5	1.11	0.91
23:AO:120:PRO:HB2	79:B2:887:A:O3'	1.70	0.91
26:AR:4:VAL:HG11	79:B2:1315:U:O2	1.69	0.91
33:AY:10:ARG:CZ	79:B2:778:G:N2	2.32	0.91
33:AY:120:GLY:HA2	79:B2:85:A:O2'	1.69	0.91
38:BD:207:TYR:HD1	81:B7:33:U:H1'	1.25	0.91
54:BT:49:GLN:HB3	80:B5:2756:C:C4'	2.01	0.91
72:Bl:4:GLN:HE21	80:B5:1833:G:H21	1.06	0.91
83:CV:236:GLU:HG3	83:CV:361:GLY:HA2	1.48	0.91
8:A7:86:ASN:N	84:CW:31:A:N7	2.00	0.91
15:AG:174:LYS:HA	79:B2:79:C:H1'	1.50	0.91
65:Be:19:ARG:HH22	80:B5:1433:A:P	1.94	0.91
8:A7:82:THR:HB	84:CW:29:G:C2	2.06	0.91
15:AG:88:ARG:NE	79:B2:92:A:C2	2.38	0.91
23:AO:29:HIS:CE1	79:B2:918:U:H4'	2.05	0.91
23:AO:136:ARG:NH2	79:B2:1786:G:P	2.36	0.91
24:AP:47:ARG:NH1	79:B2:1555:A:OP2	2.03	0.91
27:AS:143:ARG:NH1	79:B2:1461:C:C5	2.39	0.91
29:AU:23:ARG:HH22	79:B2:1347:U:P	1.93	0.91
79:B2:433:C:OP1	83:CV:391:VAL:HG23	1.71	0.91
83:CV:85:ASN:ND2	83:CV:368:LYS:CG	2.32	0.91
6:A5:101:UNK:HA	79:B2:1229:G:OP2	1.71	0.91
8:A7:51:ARG:NH2	80:B5:2677:G:H8	1.68	0.91
8:A7:83:LYS:HB2	84:CW:30:G:C2	2.03	0.91
48:BN:8:GLU:HG3	48:BN:50:ARG:HH12	1.35	0.91
79:B2:51:A:C1'	83:CV:242:GLY:N	2.16	0.91
28:AT:88:VAL:CG2	79:B2:1172:G:H21	1.83	0.91
48:BN:76:PRO:O	80:B5:2166:A:OP2	1.87	0.91
79:B2:1716:C:HO2'	79:B2:1717:G:H8	0.92	0.91
80:B5:3027:A:O5'	83:CV:109:GLN:NE2	1.97	0.91
7:A6:285:ALA:HB2	79:B2:1394:G:OP1	1.68	0.91
8:A7:91:THR:CG2	84:CW:36:U:O2	2.18	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:13:GLN:CG	79:B2:151:G:O2'	2.18	0.91
35:BA:203:ALA:O	80:B5:914:A:O2'	1.89	0.91
72:Bl:45:ARG:NH2	80:B5:1841:A:N3	2.19	0.91
83:CV:131:LYS:CG	89:CV:602:GCP:N1	2.32	0.91
8:A7:34:LYS:HZ1	80:B5:2693:C:H5'	1.36	0.90
10:AB:114:VAL:HG21	79:B2:930:A:C2	2.05	0.90
15:AG:59:GLN:C	79:B2:155:U:C1'	2.44	0.90
15:AG:132:ARG:CZ	79:B2:68:A:N7	2.34	0.90
26:AR:60:ARG:NH2	79:B2:1400:A:P	2.44	0.90
80:B5:2615:G:C2'	84:CW:76:A:N1	2.31	0.90
10:AB:165:ARG:HH21	79:B2:947:U:P	1.94	0.90
52:BR:177:VAL:HG11	79:B2:853:G:O3'	1.70	0.90
79:B2:623:A:OP1	88:B2:2051:OHX:N1	2.04	0.90
10:AB:129:THR:HB	10:AB:180:THR:HA	1.51	0.90
15:AG:110:ALA:HB1	79:B2:163:G:C1'	1.99	0.90
2:A1:28:PRO:HB3	79:B2:959:U:C5'	2.01	0.90
15:AG:4:ASN:ND2	79:B2:152:U:O2	2.04	0.90
26:AR:10:LYS:NZ	79:B2:1402:G:P	2.43	0.90
29:AU:60:THR:O	88:B2:1977:OHX:N1	2.03	0.90
38:BD:218:ARG:HH12	81:B7:31:U:H4'	1.31	0.90
83:CV:239:VAL:C	83:CV:359:THR:HG22	1.96	0.90
38:BD:145:PHE:CD1	80:B5:2748:A:H5'	2.07	0.90
74:Bn:17:ARG:NE	79:B2:1116:A:C5'	2.35	0.90
83:CV:85:ASN:OD1	83:CV:368:LYS:CG	2.19	0.90
15:AG:174:LYS:HB2	79:B2:79:C:HO2'	1.32	0.90
17:AI:170:SER:HB2	79:B2:209:U:O3'	1.70	0.90
25:AQ:143:ARG:NH1	84:CW:32:U:O5'	2.04	0.90
42:BH:116:ASN:ND2	83:CV:136:TYR:CD1	2.39	0.90
80:B5:2818:U:H6	80:B5:2818:U:H5'	1.37	0.90
8:A7:33:LYS:NZ	80:B5:2692:A:P	2.45	0.90
80:B5:2284:C:O3'	83:CV:476:GLN:N	1.99	0.90
36:BB:53:MET:HE3	80:B5:3048:A:C5'	2.01	0.90
41:BG:162:LEU:HD11	80:B5:147:U:C2	2.05	0.90
79:B2:1637:C:H4'	85:CX:2:U:N3	1.85	0.90
79:B2:1715:G:C6	79:B2:1716:C:C4	2.60	0.90
15:AG:132:ARG:NE	79:B2:68:A:C5	2.38	0.90
32:AX:99:ASN:C	83:CV:378:LYS:HZ3	1.79	0.90
48:BN:35:VAL:HG23	80:B5:1543:G:P	2.12	0.90
48:BN:188:ARG:NH2	80:B5:31:C:OP2	2.05	0.90
79:B2:429:G:H4'	83:CV:276:ARG:CD	2.01	0.90
8:A7:47:ALA:N	80:B5:2678:A:O4'	2.03	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:92:ASP:CB	84:CW:34:C:C5	2.46	0.89
29:AU:53:LYS:HB3	79:B2:1345:A:C4'	2.01	0.89
52:BR:171:ASP:CG	79:B2:852:C:OP2	2.07	0.89
54:BT:130:ARG:O	80:B5:1098:A:O2'	1.87	0.89
88:B2:1918:OHX:N2	88:B2:2062:OHX:N6	2.19	0.89
48:BN:109:ARG:HH11	82:B8:141:C:P	1.94	0.89
79:B2:1761:U:N3	85:CX:1:A:O5'	2.00	0.89
79:B2:1780:G:C2'	80:B5:2262:A:H4'	2.01	0.89
80:B5:2621:G:C8	84:CW:75:C:C6	2.61	0.89
8:A7:91:THR:CG2	84:CW:36:U:N1	2.36	0.89
15:AG:56:ASN:CG	79:B2:153:G:H21	1.81	0.89
24:AP:130:ARG:O	84:CW:45:U:H5"	1.72	0.89
26:AR:2:GLY:N	79:B2:1312:A:OP1	2.05	0.89
26:AR:33:ARG:NH2	79:B2:1387:G:OP1	2.06	0.89
43:BI:112:GLN:HA	83:CV:471:LYS:HG2	1.53	0.89
8:A7:84:LYS:O	84:CW:30:G:N9	2.05	0.89
10:AB:118:GLN:O	79:B2:931:C:O2'	1.88	0.89
48:BN:146:ALA:O	48:BN:148:TYR:N	2.05	0.89
8:A7:51:ARG:HH22	80:B5:2677:G:H8	1.20	0.89
8:A7:84:LYS:HZ2	84:CW:31:A:C2'	1.58	0.89
8:A7:88:ARG:N	84:CW:36:U:H5"	1.86	0.89
23:AO:29:HIS:CE1	79:B2:918:U:H5'	2.07	0.89
79:B2:1653:C:OP2	88:B2:1964:OHX:N4	2.05	0.89
17:AI:64:ASN:HB2	79:B2:258:C:C4'	2.03	0.89
23:AO:85:ALA:H	23:AO:119:THR:HG22	1.36	0.89
38:BD:265:TYR:CD2	81:B7:120:C:C4	2.60	0.89
8:A7:48:ARG:HG2	80:B5:1018:G:OP1	1.73	0.89
33:AY:10:ARG:CG	79:B2:778:G:H1	1.81	0.89
63:Bc:87:VAL:HB	80:B5:1728:G:O2'	1.71	0.89
69:Bi:63:ASN:O	69:Bi:65:GLY:N	2.06	0.89
80:B5:3027:A:O2'	83:CV:109:GLN:CB	2.19	0.89
4:A3:32:ARG:N	79:B2:1595:U:OP1	2.04	0.89
8:A7:91:THR:HG22	84:CW:36:U:C2	2.07	0.89
23:AO:130:GLY:H	79:B2:991:G:P	1.94	0.89
35:BA:247:ARG:CZ	79:B2:1013:A:C4'	2.51	0.89
37:BC:60:THR:CG2	80:B5:364:G:OP1	2.18	0.89
15:AG:59:GLN:CA	79:B2:155:U:C4'	2.50	0.89
15:AG:128:THR:HG23	57:BW:81:PRO:HG3	0.89	0.89
17:AI:138:ASN:HD22	79:B2:197:A:N6	1.68	0.89
79:B2:651:G:N7	88:B2:1981:OHX:N6	2.21	0.89
79:B2:1645:G:O3'	80:B5:2259:A:H2	1.51	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:131:LYS:HD3	89:CV:602:GCP:N3	1.87	0.89
10:AB:54:LEU:HD11	80:B5:2438:A:C2	2.07	0.88
15:AG:15:THR:CG2	79:B2:152:U:O3'	2.20	0.88
15:AG:160:ARG:CZ	79:B2:68:A:OP1	2.21	0.88
15:AG:174:LYS:CA	79:B2:79:C:H1'	1.93	0.88
28:AT:39:THR:OG1	79:B2:1478:G:OP1	1.91	0.88
44:BJ:94:ARG:O	44:BJ:96:PHE:N	2.05	0.88
79:B2:46:A:H2	83:CV:387:ARG:NH1	1.70	0.88
8:A7:77:THR:HG23	84:CW:43:C:O2'	1.71	0.88
8:A7:85:SER:N	84:CW:30:G:C6	2.39	0.88
52:BR:101:VAL:CG2	80:B5:1948:G:O3'	2.21	0.88
52:BR:170:ARG:NH1	88:BR:201:OHX:N4	2.21	0.88
50:BP:138:LYS:NZ	80:B5:2356:A:OP1	2.04	0.88
52:BR:143:ILE:CG1	80:B5:2093:A:C5'	2.51	0.88
79:B2:912:U:H4'	79:B2:913:G:H3'	1.52	0.88
14:AF:104:ASN:ND2	79:B2:1166:A:C5'	2.26	0.88
15:AG:133:LEU:HD12	79:B2:66:U:N3	1.88	0.88
15:AG:175:ILE:O	79:B2:78:A:C2	2.26	0.88
23:AO:123:SER:CB	79:B2:885:G:C2	2.54	0.88
39:BE:31:ARG:NH1	66:Bf:107:ILE:HG22	1.88	0.88
60:BZ:115:LYS:HD3	80:B5:1629:U:C4'	2.03	0.88
79:B2:46:A:C2	83:CV:387:ARG:HB3	2.06	0.88
80:B5:2621:G:N7	84:CW:75:C:C5	2.41	0.88
8:A7:82:THR:CG2	84:CW:29:G:N2	2.26	0.88
63:Bc:87:VAL:CB	80:B5:1728:G:O2'	2.20	0.88
80:B5:3027:A:N9	83:CV:109:GLN:NE2	2.21	0.88
8:A7:32:SER:HB3	80:B5:2706:G:O2'	1.74	0.88
40:BF:70:LYS:NZ	80:B5:519:A:OP2	2.06	0.88
83:CV:236:GLU:CA	83:CV:364:GLU:OE1	2.21	0.88
23:AO:122:PRO:HA	79:B2:886:U:O2	1.73	0.88
27:AS:118:LYS:CD	44:BJ:108:GLU:OE2	2.22	0.88
35:BA:242:ARG:O	80:B5:2154:U:C5'	2.20	0.88
41:BG:129:PRO:HG3	80:B5:121:A:C2	2.08	0.88
41:BG:157:VAL:HG13	80:B5:147:U:C4	2.09	0.88
43:BI:103:LEU:C	83:CV:471:LYS:HG3	1.99	0.88
80:B5:1759:C:N4	80:B5:1766:G:O6	2.06	0.88
32:AX:144:ARG:NH2	83:CV:314:LYS:HD3	1.85	0.88
54:BT:129:LYS:HB2	80:B5:1098:A:O5'	1.72	0.88
8:A7:85:SER:N	84:CW:30:G:N3	2.21	0.88
8:A7:88:ARG:HB3	84:CW:36:U:H5"	1.54	0.88
10:AB:32:ILE:HD11	10:AB:46:THR:HG23	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:77:ILE:CG2	83:CV:391:VAL:HG11	2.03	0.88
38:BD:266:ALA:HA	81:B7:1:G:N9	1.89	0.88
50:BP:74:LYS:NZ	80:B5:3298:C:OP1	2.07	0.88
67:Bg:8:ARG:NH2	80:B5:1597:C:OP1	2.07	0.88
8:A7:51:ARG:NH1	80:B5:2677:G:H1'	1.83	0.88
23:AO:132:ARG:N	79:B2:1787:C:OP2	2.07	0.88
43:BI:160:PRO:HD3	80:B5:2854:U:H5"	1.56	0.88
79:B2:991:G:OP2	88:B2:2011:OHX:N1	2.07	0.88
83:CV:237:VAL:N	83:CV:360:LEU:O	2.02	0.88
37:BC:48:GLN:NE2	80:B5:336:A:O2'	2.08	0.87
60:BZ:115:LYS:CD	80:B5:1629:U:O4'	2.23	0.87
8:A7:33:LYS:HE3	80:B5:2692:A:OP1	1.74	0.87
15:AG:107:ALA:HB3	79:B2:154:G:C4'	2.03	0.87
27:AS:40:ARG:NH1	79:B2:1539:G:C4'	2.36	0.87
79:B2:440:U:C5	83:CV:277:ALA:HB2	2.09	0.87
79:B2:1190:C:C2	84:CW:31:A:OP1	2.26	0.87
83:CV:85:ASN:CG	83:CV:368:LYS:CG	2.47	0.87
8:A7:33:LYS:CE	80:B5:2692:A:OP1	2.22	0.87
23:AO:135:ARG:NE	79:B2:1008:G:OP1	2.06	0.87
29:AU:57:ARG:HG2	79:B2:1382:A:C4'	2.04	0.87
33:AY:10:ARG:HG3	79:B2:780:A:C8	2.07	0.87
75:Bo:77:CYS:SG	75:Bo:79:THR:HG23	2.14	0.87
26:AR:28:PHE:CD2	79:B2:1389:C:C6	2.62	0.87
36:BB:247:ARG:HD3	80:B5:1888:U:OP1	1.73	0.87
36:BB:255:TRP:CD1	80:B5:2395:G:H5"	2.09	0.87
43:BI:63:GLU:HB2	80:B5:2853:A:H5'	1.55	0.87
48:BN:76:PRO:HA	80:B5:2166:A:OP1	1.74	0.87
79:B2:415:C:C6	83:CV:288:ARG:CG	2.58	0.87
8:A7:58:GLU:OE1	27:AS:120:ARG:NH1	2.08	0.87
15:AG:174:LYS:CG	79:B2:79:C:O2'	2.23	0.87
18:AJ:110:GLN:HE22	18:AJ:126:ARG:HG2	1.39	0.87
79:B2:433:C:H5	83:CV:388:ARG:HB3	1.37	0.87
80:B5:2512:C:H5'	80:B5:2512:C:H6	1.38	0.87
12:AD:174:HIS:HE1	79:B2:1278:G:O4'	1.58	0.87
20:AL:67:ARG:NH1	79:B2:115:G:OP1	2.07	0.87
26:AR:25:THR:O	26:AR:27:ASP:N	2.07	0.87
14:AF:102:ARG:NH2	79:B2:1472:C:OP1	2.08	0.87
15:AG:134:GLY:N	79:B2:66:U:O4	0.73	0.87
25:AQ:58:ASP:O	25:AQ:60:PHE:N	2.07	0.87
75:Bo:106:PHE:CE2	84:CW:57:G:H8	1.88	0.87
22:AN:3:ARG:HH12	79:B2:867:G:P	1.98	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:43:SER:CB	79:B2:1332:C:OP1	2.23	0.87
8:A7:32:SER:HB2	80:B5:2692:A:C1'	2.04	0.87
17:AI:75:LYS:HB2	79:B2:258:C:C5'	2.04	0.87
20:AL:133:LYS:N	79:B2:336:G:O2'	2.07	0.87
24:AP:12:PHE:HD1	44:BJ:85:LYS:HE2	1.38	0.87
79:B2:414:C:C5	83:CV:288:ARG:CB	2.57	0.87
8:A7:84:LYS:CG	84:CW:32:U:C5	2.58	0.86
23:AO:18:ARG:NH2	79:B2:919:A:H5'	1.84	0.86
23:AO:46:MET:CG	79:B2:899:G:C4'	2.52	0.86
30:AV:62:ARG:HH21	79:B2:1039:A:H5"	1.34	0.86
32:AX:144:ARG:CZ	83:CV:314:LYS:HD3	2.05	0.86
43:BI:115:MET:HB2	80:B5:2865:U:OP1	1.75	0.86
79:B2:301:A:OP2	88:B2:1941:OHX:N2	2.08	0.86
15:AG:134:GLY:N	79:B2:66:U:C4	1.78	0.86
43:BI:175:ASN:OD1	43:BI:176:LEU:N	2.08	0.86
79:B2:679:U:OP2	88:B2:2077:OHX:N1	2.08	0.86
15:AG:8:PRO:CB	79:B2:165:G:H5"	2.05	0.86
43:BI:103:LEU:C	83:CV:471:LYS:CB	2.41	0.86
4:A3:14:TYR:CD2	79:B2:1597:A:C8	2.63	0.86
15:AG:59:GLN:C	79:B2:155:U:O4'	2.18	0.86
15:AG:172:ALA:HB3	79:B2:79:C:P	2.13	0.86
23:AO:88:GLY:HA2	79:B2:888:U:H5'	1.57	0.86
26:AR:28:PHE:CE2	79:B2:1389:C:C5	2.64	0.86
80:B5:2283:G:H1'	83:CV:477:SER:OG	1.75	0.86
83:CV:199:ALA:N	89:CV:602:GCP:O6	2.07	0.86
17:AI:22:ARG:HB3	79:B2:385:A:H5"	1.58	0.86
23:AO:29:HIS:HE1	79:B2:918:U:C4'	1.86	0.86
54:BT:135:PRO:O	54:BT:136:ARG:HB2	1.73	0.86
79:B2:1680:G:O6	88:B2:1988:OHX:N5	2.09	0.86
79:B2:1758:U:O2'	80:B5:2255:A:H5'	1.75	0.86
83:CV:537:GLY:C	84:CW:73:A:N9	2.34	0.86
14:AF:73:THR:HG23	25:AQ:114:ARG:HD3	1.58	0.86
32:AX:144:ARG:HH22	83:CV:314:LYS:HD2	0.70	0.86
42:BH:70:THR:HG21	80:B5:3122:A:N1	1.90	0.86
79:B2:1202:A:OP1	88:B2:1990:OHX:N1	2.09	0.86
11:AC:140:ARG:NH1	30:AV:1:MET:SD	2.49	0.86
15:AG:56:ASN:HB2	79:B2:154:G:C1'	2.06	0.86
38:BD:16:PHE:CZ	80:B5:2688:U:C4	2.63	0.86
38:BD:266:ALA:HB2	81:B7:1:G:C8	2.10	0.86
41:BG:51:LYS:HD3	80:B5:2523:A:OP2	1.75	0.86
52:BR:143:ILE:HG13	80:B5:2093:A:C5'	2.05	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:Bb:23:LYS:HB3	62:Bb:24:PRO:HD3	1.57	0.86
9:AA:24:LEU:O	9:AA:163:ASN:ND2	2.09	0.86
15:AG:188:ARG:HD2	79:B2:284:G:C8	2.11	0.86
41:BG:181:LYS:CG	82:B8:154:C:H5"	2.04	0.86
67:Bg:38:LEU:HD23	80:B5:1741:A:H4'	1.58	0.86
74:Bn:3:ALA:N	79:B2:1773:C:OP1	2.09	0.86
80:B5:2625:C:N3	84:CW:76:A:H8	1.70	0.86
1:A0:92:ARG:HB3	79:B2:1796:C:O2	1.76	0.86
8:A7:34:LYS:HZ2	80:B5:2693:C:H5'	1.31	0.86
15:AG:164:LYS:HZ3	79:B2:72:A:C5'	1.77	0.86
79:B2:431:C:H2'	83:CV:386:SER:N	1.79	0.86
79:B2:1746:A:C2	80:B5:2303:A:H1'	2.11	0.86
83:CV:85:ASN:CG	83:CV:368:LYS:HD3	1.99	0.86
44:BJ:72:ARG:CZ	81:B7:40:C:O2	2.24	0.86
75:Bo:105:GLN:CB	84:CW:58:A:OP2	2.23	0.86
79:B2:1637:C:C4'	85:CX:2:U:C4	2.45	0.86
80:B5:1555:U:O4	80:B5:1557:A:N6	2.09	0.86
83:CV:131:LYS:HD3	89:CV:602:GCP:C2	2.02	0.86
8:A7:86:ASN:HD21	84:CW:33:U:H6	0.87	0.85
25:AQ:135:ARG:O	79:B2:1581:C:H5'	1.75	0.85
26:AR:10:LYS:CE	79:B2:1316:G:O2'	2.19	0.85
38:BD:152:ARG:HD3	80:B5:2663:G:H5'	1.58	0.85
44:BJ:97:SER:HB2	80:B5:2672:G:H1'	1.58	0.85
79:B2:414:C:C6	83:CV:288:ARG:HB2	2.11	0.85
83:CV:16:THR:CB	89:CV:602:GCP:O3A	2.24	0.85
2:A1:29:ARG:HG3	2:A1:29:ARG:HH11	1.41	0.85
80:B5:726:G:H5'	80:B5:726:G:H8	1.41	0.85
10:AB:148:ASN:CG	79:B2:1066:C:HO2'	1.83	0.85
23:AO:52:ARG:HB2	79:B2:906:A:P	2.16	0.85
36:BB:129:ALA:O	80:B5:3150:A:H5'	1.75	0.85
56:BV:47:ASN:O	80:B5:2338:C:H4'	1.75	0.85
17:AI:73:SER:N	79:B2:256:A:O2'	2.08	0.85
18:AJ:176:ASN:ND2	79:B2:511:A:OP2	2.10	0.85
25:AQ:123:ARG:O	79:B2:1584:G:C2'	2.23	0.85
26:AR:28:PHE:CZ	79:B2:1389:C:C6	2.55	0.85
29:AU:53:LYS:CD	79:B2:1345:A:H5'	2.06	0.85
74:Bn:11:ARG:NH1	79:B2:1775:U:OP1	2.09	0.85
1:A0:87:ARG:HD2	79:B2:1797:A:C6	2.11	0.85
24:AP:42:ARG:NH2	79:B2:1550:A:OP2	2.09	0.85
25:AQ:124:PRO:HA	79:B2:1585:U:OP1	1.74	0.85
41:BG:59:GLN:NE2	82:B8:150:G:H1'	1.91	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1655:A:H2	80:B5:2291:A:N3	1.74	0.85
8:A7:92:ASP:OD2	84:CW:34:C:C3'	2.19	0.85
23:AO:18:ARG:HH22	79:B2:919:A:H5"	1.36	0.85
60:BZ:76:ASN:HB2	80:B5:1636:U:H1'	1.58	0.85
15:AG:53:SER:HB2	79:B2:163:G:C3'	2.06	0.85
15:AG:53:SER:C	79:B2:163:G:C4'	2.48	0.85
34:AZ:77:ARG:HH21	79:B2:1533:C:H5	1.25	0.85
41:BG:59:GLN:HE22	82:B8:150:G:H1'	1.42	0.85
41:BG:248:LYS:CE	80:B5:2529:A:OP1	2.24	0.85
83:CV:237:VAL:CG2	83:CV:360:LEU:HD12	2.05	0.85
35:BA:236:GLY:HA2	80:B5:2184:U:O4'	1.76	0.85
52:BR:161:ALA:C	79:B2:849:C:HO2'	1.79	0.85
83:CV:85:ASN:ND2	83:CV:368:LYS:CD	1.72	0.85
15:AG:60:GLY:N	79:B2:155:U:O4'	2.10	0.85
35:BA:247:ARG:NH2	79:B2:1013:A:C4'	2.38	0.85
23:AO:35:GLY:CA	79:B2:919:A:H4'	1.99	0.85
23:AO:46:MET:HG3	79:B2:899:G:C4'	2.07	0.85
28:AT:57:ARG:NH1	79:B2:1479:A:OP2	2.10	0.85
35:BA:50:HIS:CD2	80:B5:1795:U:C2'	2.60	0.85
83:CV:20:LYS:HB2	89:CV:602:GCP:N7	1.90	0.85
1:A0:68:TYR:HB2	10:AB:111:ARG:HG3	1.59	0.84
8:A7:87:THR:CG2	84:CW:37:A:OP1	2.25	0.84
15:AG:169:TYR:HH	79:B2:73:U:H5	1.25	0.84
17:AI:50:GLY:HA2	79:B2:397:A:H4'	1.57	0.84
58:BX:33:ARG:NE	80:B5:1580:A:N6	2.25	0.84
75:Bo:105:GLN:CD	84:CW:55:U:N3	2.34	0.84
79:B2:913:G:C6	80:B5:2206:G:C5'	2.59	0.84
80:B5:2285:C:H5'	83:CV:475:ARG:C	2.02	0.84
60:BZ:15:ARG:CD	80:B5:1637:A:H4'	2.07	0.84
72:Bl:4:GLN:NE2	80:B5:1833:G:H21	1.75	0.84
74:Bn:4:LYS:HE2	79:B2:1774:G:O4'	1.75	0.84
79:B2:1002:G:C4'	80:B5:2265:C:OP1	2.25	0.84
1:A0:70:LYS:CE	79:B2:930:A:H5"	2.04	0.84
54:BT:129:LYS:HE3	80:B5:1097:G:H5'	1.58	0.84
1:A0:92:ARG:O	79:B2:1796:C:H5"	1.77	0.84
9:AA:49:ASN:HB3	9:AA:52:LYS:HG3	1.56	0.84
23:AO:52:ARG:HB3	79:B2:906:A:OP1	1.77	0.84
23:AO:125:SER:HB2	79:B2:927:C:C1'	2.08	0.84
69:Bi:82:ARG:HD3	80:B5:295:A:H1'	1.59	0.84
15:AG:112:VAL:CG2	79:B2:164:A:H5'	2.08	0.84
15:AG:157:VAL:HG11	79:B2:78:A:H4'	0.88	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:170:SER:OG	79:B2:209:U:H4'	1.77	0.84
36:BB:76:VAL:HG11	36:BB:323:MET:HE3	1.59	0.84
44:BJ:72:ARG:NH2	81:B7:40:C:O2	2.11	0.84
79:B2:132:U:H1'	79:B2:133:U:OP2	1.77	0.84
5:A4:18:THR:HG21	79:B2:584:C:H1'	1.59	0.84
15:AG:108:VAL:HG11	79:B2:153:G:O2'	1.77	0.84
15:AG:175:ILE:N	79:B2:78:A:C2	2.45	0.84
19:AK:27:PHE:HB3	19:AK:40:LEU:HD23	1.58	0.84
25:AQ:135:ARG:NH1	79:B2:1582:U:OP1	2.10	0.84
59:BY:4:GLN:HB2	80:B5:229:G:H5"	1.58	0.84
79:B2:1645:G:C2'	80:B5:2259:A:N1	2.41	0.84
15:AG:132:ARG:NH2	79:B2:68:A:C5	2.41	0.84
18:AJ:127:VAL:HG21	79:B2:478:A:C4'	2.08	0.84
46:BL:58:VAL:HG13	80:B5:75:G:H5"	1.58	0.84
46:BL:70:ARG:NH1	80:B5:76:G:OP1	2.10	0.84
52:BR:174:ALA:O	79:B2:853:G:OP1	1.88	0.84
68:Bh:89:ARG:HD2	82:B8:38:U:C5	2.12	0.84
79:B2:416:A:OP2	83:CV:287:LEU:HD21	1.78	0.84
15:AG:59:GLN:H	79:B2:155:U:H4'	0.72	0.84
18:AJ:93:LEU:HA	18:AJ:96:VAL:HG13	1.59	0.84
23:AO:88:GLY:HA3	79:B2:888:U:C5'	2.08	0.84
67:Bg:60:ARG:NH2	80:B5:1616:U:C5'	2.40	0.84
69:Bi:26:ILE:CD1	80:B5:155:G:H1'	2.08	0.84
75:Bo:77:CYS:O	75:Bo:79:THR:N	2.10	0.84
79:B2:51:A:C8	83:CV:242:GLY:N	2.25	0.84
13:AE:139:VAL:HG13	13:AE:150:PRO:HG3	1.58	0.84
15:AG:128:THR:O	57:BW:81:PRO:HG2	1.78	0.84
23:AO:129:LYS:CE	88:B2:2011:OHX:N1	2.40	0.84
32:AX:79:ASN:HB3	32:AX:81:LYS:H	1.40	0.84
38:BD:17:GLN:O	80:B5:2688:U:N3	2.09	0.84
74:Bn:11:ARG:HB3	79:B2:1126:G:C5'	2.08	0.84
79:B2:440:U:P	83:CV:274:ASN:ND2	2.50	0.84
5:A4:28:LYS:NZ	79:B2:477:A:OP1	2.11	0.84
8:A7:28:SER:HB3	80:B5:2708:C:H4'	0.85	0.84
74:Bn:11:ARG:CB	79:B2:1126:G:H5'	2.08	0.84
79:B2:1353:U:O4	88:B2:2024:OHX:N3	2.11	0.84
83:CV:236:GLU:CD	83:CV:361:GLY:HA3	2.03	0.84
43:BI:84:ALA:O	43:BI:140:THR:HG22	1.77	0.83
79:B2:1508:U:O4	88:B2:1909:OHX:N5	2.11	0.83
83:CV:85:ASN:CG	83:CV:368:LYS:CD	2.51	0.83
8:A7:29:ASN:H	80:B5:2708:C:H5'	1.40	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:188:ARG:CG	79:B2:284:G:OP2	2.26	0.83
53:BS:50:LYS:NZ	81:B7:76:A:O2'	2.10	0.83
74:Bn:10:THR:OG1	79:B2:1115:U:OP1	1.94	0.83
79:B2:1427:A:H3'	84:CW:34:C:C1'	2.07	0.83
8:A7:82:THR:HG22	84:CW:29:G:C2	2.10	0.83
35:BA:69:TYR:CE2	80:B5:2558:U:C4	2.66	0.83
67:Bg:60:ARG:NH2	80:B5:1616:U:H4'	1.92	0.83
70:Bj:9:GLY:HA3	80:B5:1852:G:N3	1.92	0.83
17:AI:176:SER:HB2	79:B2:208:U:H5'	1.60	0.83
26:AR:45:ARG:NH1	79:B2:1415:U:OP1	2.11	0.83
29:AU:53:LYS:HB3	79:B2:1345:A:H5'	1.60	0.83
60:BZ:111:LYS:HD3	80:B5:1629:U:O4	1.79	0.83
75:Bo:105:GLN:HG2	84:CW:55:U:C4	2.12	0.83
80:B5:2622:C:C2	84:CW:75:C:C4'	2.62	0.83
80:B5:3278:C:O2'	80:B5:3279:A:OP2	1.95	0.83
83:CV:79:GLY:HA2	89:CV:602:GCP:O2G	1.79	0.83
8:A7:82:THR:CG2	84:CW:29:G:N1	2.40	0.83
32:AX:99:ASN:CA	83:CV:378:LYS:HZ3	1.91	0.83
35:BA:244:GLY:O	80:B5:2153:U:C5'	2.26	0.83
38:BD:95:TRP:CH2	38:BD:181:PRO:HD3	2.13	0.83
48:BN:189:LYS:HB2	80:B5:29:C:OP1	1.79	0.83
74:Bn:2:ARG:HD3	79:B2:1772:C:H3'	1.58	0.83
79:B2:142:G:H22	79:B2:173:A:H2	1.23	0.83
80:B5:3027:A:H8	83:CV:109:GLN:HE21	1.15	0.83
15:AG:57:ASP:HA	15:AG:106:LEU:HA	1.58	0.83
15:AG:174:LYS:CG	79:B2:79:C:H1'	2.08	0.83
52:BR:165:LYS:HE3	79:B2:824:G:N2	1.93	0.83
83:CV:131:LYS:CD	89:CV:602:GCP:C6	2.56	0.83
12:AD:159:HIS:O	79:B2:1421:A:H4'	1.77	0.83
15:AG:112:VAL:CG2	79:B2:164:A:C5'	2.55	0.83
17:AI:10:LYS:HD3	79:B2:338:C:H5"	1.60	0.83
27:AS:134:ARG:HG3	79:B2:1545:A:OP2	1.78	0.83
8:A7:84:LYS:HZ2	84:CW:31:A:H2'	0.70	0.83
11:AC:119:LYS:CE	79:B2:1291:G:H5'	2.07	0.83
15:AG:133:LEU:HD12	79:B2:66:U:O2	1.77	0.83
25:AQ:123:ARG:C	79:B2:1584:G:H2'	2.03	0.83
35:BA:227:ARG:NH2	80:B5:2155:G:O2'	2.09	0.83
38:BD:207:TYR:CZ	81:B7:33:U:C5	2.67	0.83
52:BR:173:ARG:HG2	79:B2:853:G:C4	2.12	0.83
60:BZ:69:LYS:HZ1	80:B5:1633:C:P	1.97	0.83
70:Bj:30:GLN:HE21	80:B5:903:U:P	2.01	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:51:A:C1'	83:CV:242:GLY:HA2	1.70	0.83
79:B2:320:U:H2'	79:B2:321:C:H2'	1.58	0.83
79:B2:1542:G:N2	79:B2:1569:A:OP2	2.12	0.83
79:B2:1646:C:H4'	80:B5:2257:C:H42	1.41	0.83
8:A7:34:LYS:HE3	80:B5:2693:C:OP1	1.78	0.83
10:AB:148:ASN:CG	79:B2:1066:C:O2'	2.20	0.83
12:AD:163:PRO:HG2	79:B2:1331:A:N1	1.93	0.83
15:AG:8:PRO:HB2	79:B2:165:G:H5"	1.61	0.83
25:AQ:125:GLU:N	79:B2:1585:U:OP1	2.11	0.83
33:AY:11:LYS:N	79:B2:783:G:O6	2.11	0.83
43:BI:4:ARG:NH2	80:B5:2828:G:O2'	2.10	0.83
65:Be:38:ILE:N	80:B5:640:U:OP2	2.12	0.83
25:AQ:74:HIS:HE1	79:B2:1480:G:N2	1.77	0.83
43:BI:102:MET:CB	83:CV:471:LYS:NZ	2.41	0.83
75:Bo:63:LYS:HD2	80:B5:2795:U:OP2	1.78	0.83
80:B5:2264:U:OP2	88:B5:3402:OHX:N3	2.12	0.83
15:AG:174:LYS:HD3	79:B2:79:C:C2	2.14	0.82
79:B2:1291:G:N2	79:B2:1324:G:H22	1.76	0.82
37:BC:204:GLY:O	37:BC:246:ARG:NH1	2.12	0.82
75:Bo:41:ARG:HH11	80:B5:284:A:P	2.02	0.82
79:B2:1190:C:N1	84:CW:31:A:OP1	2.13	0.82
79:B2:1759:C:H1'	80:B5:2262:A:H2	1.41	0.82
80:B5:851:C:H5"	80:B5:851:C:H6	1.44	0.82
80:B5:1225:A:N7	80:B5:1287:A:O2'	2.11	0.82
20:AL:25:VAL:HG11	79:B2:837:G:O2'	1.80	0.82
23:AO:54:GLU:CD	79:B2:901:G:H1	1.84	0.82
29:AU:27:THR:HG23	29:AU:113:ASP:HB3	1.62	0.82
68:Bh:89:ARG:NH1	82:B8:38:U:C2	2.48	0.82
8:A7:78:ASP:HB3	84:CW:43:C:C4	2.15	0.82
15:AG:173:PRO:HA	79:B2:66:U:H5'	1.61	0.82
22:AN:151:ASN:O	88:AN:201:OHX:N6	2.12	0.82
24:AP:126:VAL:HG13	24:AP:127:ARG:H	1.41	0.82
25:AQ:14:LYS:NZ	79:B2:1610:G:N7	2.28	0.82
38:BD:145:PHE:CD1	80:B5:2748:A:C5'	2.62	0.82
46:BL:99:HIS:CG	80:B5:156:G:C4	2.68	0.82
10:AB:146:GLN:HE22	79:B2:1065:A:H1'	1.44	0.82
15:AG:175:ILE:CA	79:B2:78:A:N3	2.42	0.82
35:BA:152:SER:CB	80:B5:2157:G:O6	2.27	0.82
79:B2:1041:G:OP1	88:B2:2036:OHX:N5	2.12	0.82
79:B2:1637:C:H5'	85:CX:2:U:O4	1.76	0.82
44:BJ:98:ALA:N	80:B5:2671:A:O2'	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:83:GLY:N	80:B5:1864:A:OP1	2.12	0.82
79:B2:414:C:O5'	83:CV:288:ARG:O	1.94	0.82
79:B2:1646:C:C3'	80:B5:2257:C:N4	2.41	0.82
8:A7:47:ALA:N	80:B5:2678:A:C1'	2.41	0.82
11:AC:161:LYS:O	88:AC:301:OHX:N1	2.13	0.82
23:AO:129:LYS:CA	79:B2:990:C:H5"	2.10	0.82
26:AR:10:LYS:NZ	79:B2:1402:G:OP1	2.13	0.82
61:Ba:35:ALA:HB2	80:B5:39:A:H5"	1.62	0.82
80:B5:2285:C:O4'	83:CV:476:GLN:O	1.96	0.82
8:A7:96:ARG:NH2	84:CW:35:A:H1'	1.95	0.82
17:AI:73:SER:HB2	79:B2:257:A:C1'	2.09	0.82
27:AS:118:LYS:HE2	44:BJ:108:GLU:OE2	1.79	0.82
35:BA:187:HIS:CE1	80:B5:1794:G:C2	2.68	0.82
52:BR:171:ASP:HB2	79:B2:851:U:O3'	1.44	0.82
79:B2:1759:C:C1'	80:B5:2262:A:N1	2.43	0.82
8:A7:33:LYS:NZ	80:B5:2692:A:OP1	2.13	0.82
12:AD:108:LYS:HG2	12:AD:113:LEU:HD12	1.61	0.82
52:BR:175:GLN:H	79:B2:852:C:H4'	0.65	0.82
11:AC:91:ARG:NH1	79:B2:1625:C:P	2.52	0.82
79:B2:433:C:C6	83:CV:388:ARG:CB	2.61	0.82
80:B5:1225:A:O4'	80:B5:1287:A:H2'	1.79	0.82
1:A0:15:ARG:HG2	79:B2:943:C:H42	1.45	0.81
14:AF:101:GLY:CA	79:B2:1167:G:OP1	2.20	0.81
15:AG:169:TYR:OH	79:B2:73:U:H5	1.62	0.81
26:AR:60:ARG:HH12	79:B2:1400:A:H4'	1.43	0.81
52:BR:143:ILE:HG12	80:B5:2093:A:H5"	1.61	0.81
8:A7:47:ALA:CB	80:B5:2678:A:C8	2.63	0.81
33:AY:8:ARG:CB	79:B2:780:A:C8	2.62	0.81
43:BI:103:LEU:C	83:CV:471:LYS:CG	2.53	0.81
63:Bc:85:PHE:CZ	80:B5:1728:G:C5	2.67	0.81
80:B5:3027:A:C1'	83:CV:109:GLN:NE2	2.23	0.81
15:AG:182:GLN:NE2	79:B2:271:A:H61	1.76	0.81
25:AQ:15:SER:CB	79:B2:1608:U:OP1	2.28	0.81
35:BA:211:HIS:ND1	80:B5:2185:G:OP1	2.10	0.81
50:BP:25:SER:O	50:BP:29:THR:HG23	1.80	0.81
52:BR:62:ARG:NH2	80:B5:3068:U:OP2	2.13	0.81
62:Bb:36:ASP:OD1	80:B5:2738:A:H5'	1.79	0.81
79:B2:431:C:H2'	83:CV:386:SER:HB2	1.62	0.81
80:B5:1025:A:H3'	80:B5:1026:A:H4'	1.60	0.81
8:A7:84:LYS:CD	84:CW:32:U:C5	2.64	0.81
8:A7:88:ARG:HB3	84:CW:36:U:O5'	1.79	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:19:ILE:CD1	88:AL:201:OHX:N6	2.42	0.81
23:AO:132:ARG:HB3	79:B2:1787:C:OP2	1.80	0.81
28:AT:57:ARG:NH1	79:B2:1479:A:P	2.53	0.81
63:Bc:86:ARG:O	80:B5:1728:G:H2'	1.80	0.81
23:AO:129:LYS:CB	79:B2:990:C:H5"	2.10	0.81
35:BA:15:ILE:CD1	80:B5:822:G:C4	2.63	0.81
79:B2:829:A:O2'	79:B2:830:U:OP2	1.97	0.81
79:B2:1686:C:C2'	79:B2:1687:U:H6	1.91	0.81
23:AO:20:TYR:CD2	79:B2:917:U:H5"	2.16	0.81
35:BA:244:GLY:O	80:B5:2153:U:H5"	1.81	0.81
48:BN:109:ARG:NH1	82:B8:141:C:P	2.52	0.81
52:BR:170:ARG:CZ	88:BR:201:OHX:N4	2.43	0.81
54:BT:68:THR:HG23	80:B5:2737:C:P	2.21	0.81
67:Bg:8:ARG:NH2	80:B5:1597:C:P	2.53	0.81
79:B2:1229:G:O2'	79:B2:1255:G:N2	2.14	0.81
80:B5:2284:C:C5	83:CV:477:SER:CB	2.63	0.81
32:AX:144:ARG:NH1	83:CV:314:LYS:CD	2.44	0.81
38:BD:158:ARG:HD3	81:B7:46:A:P	2.21	0.81
63:Bc:84:LEU:HD13	80:B5:1715:A:N7	1.96	0.81
80:B5:1815:U:O2'	80:B5:1816:A:OP2	1.98	0.81
20:AL:99:ARG:NH1	32:AX:7:ARG:O	2.14	0.81
23:AO:107:ARG:HH11	23:AO:107:ARG:HG3	1.45	0.81
38:BD:207:TYR:CD2	81:B7:33:U:C2	2.68	0.81
41:BG:55:TYR:OH	82:B8:149:A:O2'	1.96	0.81
48:BN:72:LYS:HD3	80:B5:2166:A:O3'	1.81	0.81
79:B2:1428:G:O5'	84:CW:34:C:C4'	2.29	0.81
80:B5:1015:U:O2'	80:B5:1017:C:OP1	1.99	0.81
4:A3:31:ILE:HD11	79:B2:1199:G:C6	2.16	0.81
8:A7:68:ARG:NH2	27:AS:145:ARG:HB3	1.96	0.81
37:BC:195:ARG:NH2	80:B5:341:G:N7	2.26	0.81
38:BD:266:ALA:CA	81:B7:1:G:C4	2.64	0.81
70:Bj:55:ARG:HD3	80:B5:353:G:N7	1.96	0.81
73:Bm:106:ARG:HB2	73:Bm:106:ARG:HH11	1.46	0.81
1:A0:97:PRO:O	79:B2:1798:U:H5	1.58	0.81
15:AG:175:ILE:CB	79:B2:78:A:C2	2.64	0.81
33:AY:120:GLY:HA2	79:B2:85:A:O3'	1.81	0.81
58:BX:115:ARG:NH1	58:BX:119:THR:OG1	2.14	0.81
80:B5:1804:A:H2'	80:B5:1805:C:C6	2.16	0.81
8:A7:84:LYS:HD3	84:CW:32:U:C4	2.16	0.80
8:A7:91:THR:HG21	84:CW:36:U:N1	1.94	0.80
8:A7:96:ARG:NH2	84:CW:35:A:C1'	2.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:37:GLN:HG2	25:AQ:53:LEU:HD13	1.60	0.80
37:BC:300:ARG:O	51:BQ:39:ARG:NH1	2.13	0.80
60:BZ:67:LYS:CE	80:B5:1630:U:OP1	2.29	0.80
79:B2:280:U:O2'	79:B2:281:G:OP2	1.99	0.80
80:B5:3027:A:O2'	83:CV:83:PHE:CE2	2.25	0.80
8:A7:48:ARG:CD	80:B5:2678:A:P	2.64	0.80
8:A7:88:ARG:CG	84:CW:36:U:O4'	2.28	0.80
8:A7:91:THR:HG21	84:CW:36:U:O2	1.77	0.80
11:AC:99:LYS:NZ	79:B2:1299:G:O3'	2.13	0.80
54:BT:49:GLN:NE2	80:B5:2755:C:O2'	2.14	0.80
60:BZ:15:ARG:HD3	80:B5:1637:A:O3'	1.82	0.80
79:B2:1637:C:H5"	85:CX:2:U:O4	1.76	0.80
80:B5:776:U:H5	80:B5:2719:U:O2	1.64	0.80
83:CV:20:LYS:N	89:CV:602:GCP:O2A	2.15	0.80
8:A7:51:ARG:NH1	80:B5:2677:G:C8	2.49	0.80
16:AH:131:PHE:O	16:AH:133:THR:N	2.14	0.80
35:BA:219:ILE:HD11	80:B5:2185:G:H5'	1.61	0.80
42:BH:98:PRO:O	83:CV:136:TYR:CD2	2.24	0.80
43:BI:154:ARG:NH1	80:B5:2838:A:OP1	2.14	0.80
59:BY:113:LYS:HB2	82:B8:84:C:H1'	1.62	0.80
72:Bl:4:GLN:HA	80:B5:1833:G:O2'	1.80	0.80
9:AA:179:ARG:HD3	9:AA:183:ARG:HH11	1.46	0.80
17:AI:64:ASN:HB2	79:B2:258:C:O4'	1.81	0.80
49:BO:72[A]:HIS:HD2	80:B5:3008:A:OP1	1.64	0.80
8:A7:87:THR:O	84:CW:36:U:H5"	1.81	0.80
10:AB:165:ARG:NE	79:B2:947:U:P	2.54	0.80
23:AO:52:ARG:CB	79:B2:906:A:P	2.70	0.80
43:BI:7:ARG:NH1	80:B5:2828:G:OP2	2.15	0.80
52:BR:83:GLY:H	80:B5:1864:A:P	2.04	0.80
52:BR:143:ILE:HG12	80:B5:2093:A:C5'	2.12	0.80
52:BR:165:LYS:O	79:B2:850:A:C4	2.08	0.80
54:BT:8:ARG:HG3	80:B5:2757:U:H4'	1.62	0.80
67:Bg:68:THR:CG2	80:B5:1643:A:P	2.69	0.80
75:Bo:104:LEU:CD1	84:CW:54:U:OP2	2.30	0.80
80:B5:1225:A:O4'	80:B5:1287:A:C2'	2.28	0.80
15:AG:164:LYS:HZ3	79:B2:72:A:H5"	0.82	0.80
26:AR:3:ARG:N	79:B2:1403:C:OP1	2.14	0.80
29:AU:58:LEU:HD23	79:B2:1516:A:C8	2.17	0.80
61:Ba:16:SER:HA	80:B5:942:U:N3	1.97	0.80
61:Ba:34:MET:HB2	80:B5:96:G:OP2	1.81	0.80
72:Bl:23:LEU:HD22	72:Bl:24:PRO:HD2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:437:G:N2	80:B5:622:A:H61	1.80	0.80
80:B5:2623:G:H2'	84:CW:76:A:OP2	1.80	0.80
13:AE:21:ASP:HB2	79:B2:773:C:H5"	1.62	0.80
15:AG:13:GLN:NE2	79:B2:151:G:H1'	1.96	0.80
15:AG:132:ARG:CG	79:B2:68:A:C6	2.62	0.80
33:AY:10:ARG:HH12	79:B2:778:G:N2	1.78	0.80
54:BT:68:THR:HG21	80:B5:2736:A:O2'	1.81	0.80
61:Ba:59:ARG:NH1	80:B5:283:G:O2'	2.14	0.80
74:Bn:5:TRP:HZ3	79:B2:1775:U:H5	1.25	0.80
10:AB:39:GLU:HG3	10:AB:40:ASN:H	1.47	0.80
15:AG:88:ARG:HG3	79:B2:92:A:N1	1.96	0.80
23:AO:38:THR:CG2	79:B2:896:U:O4'	2.29	0.80
61:Ba:61:PHE:CZ	80:B5:283:G:H2'	2.16	0.80
79:B2:1190:C:C6	84:CW:31:A:OP1	2.35	0.80
83:CV:78:PRO:C	89:CV:602:GCP:O2G	2.25	0.80
83:CV:236:GLU:CB	83:CV:364:GLU:OE1	2.30	0.80
11:AC:56:ILE:HG23	11:AC:61:LEU:HB2	1.63	0.80
15:AG:175:ILE:HB	79:B2:78:A:C2	2.17	0.80
20:AL:80:MET:CE	79:B2:325:G:H5'	2.12	0.80
26:AR:49:LYS:HA	79:B2:1389:C:O3'	1.81	0.80
29:AU:53:LYS:CA	79:B2:1345:A:O5'	2.29	0.80
43:BI:102:MET:C	83:CV:471:LYS:HZ3	1.90	0.80
68:Bh:95:PHE:CD2	80:B5:136:G:C5'	2.63	0.80
79:B2:1758:U:H5'	80:B5:2255:A:O3'	1.80	0.80
18:AJ:127:VAL:HG21	79:B2:478:A:H4'	1.62	0.80
26:AR:60:ARG:NH1	79:B2:1400:A:H5'	1.96	0.80
33:AY:11:LYS:HG2	79:B2:784:C:H42	1.46	0.80
35:BA:39:GLY:HA3	80:B5:2550:U:O4	1.82	0.80
49:BO:110[B]:PRO:O	49:BO:112[B]:TYR:N	2.15	0.80
23:AO:25:ASP:OD2	79:B2:900:A:H5"	1.82	0.79
48:BN:172:ARG:NH1	80:B5:29:C:O2'	2.14	0.79
79:B2:136:C:H4'	79:B2:137:U:OP1	1.83	0.79
83:CV:200:VAL:N	89:CV:602:GCP:O6	2.14	0.79
8:A7:84:LYS:C	84:CW:30:G:C2'	2.56	0.79
8:A7:88:ARG:NH1	84:CW:35:A:C8	2.47	0.79
15:AG:15:THR:CG2	79:B2:153:G:P	2.71	0.79
15:AG:95:LYS:NZ	79:B2:160:C:O3'	2.15	0.79
79:B2:432:G:H5'	83:CV:385:VAL:CA	2.07	0.79
23:AO:50:ALA:O	23:AO:52:ARG:N	2.14	0.79
37:BC:329:PRO:O	37:BC:331:ALA:N	2.14	0.79
38:BD:207:TYR:CE1	81:B7:33:U:N1	2.50	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:Bg:52:GLN:HG2	80:B5:1639:C:H5'	1.64	0.79
80:B5:2440:G:H5'	80:B5:2440:G:H8	1.46	0.79
83:CV:200:VAL:N	89:CV:602:GCP:C6	2.44	0.79
10:AB:65:VAL:CG2	79:B2:920:U:H5"	2.12	0.79
24:AP:69:GLU:OE1	88:AP:201:OHX:N2	2.16	0.79
35:BA:40:TYR:N	80:B5:2550:U:O4	2.15	0.79
38:BD:207:TYR:CE1	81:B7:33:U:C1'	2.65	0.79
79:B2:1686:C:C2'	79:B2:1687:U:O5'	2.30	0.79
8:A7:33:LYS:HZ1	80:B5:2692:A:P	2.04	0.79
18:AJ:109:LEU:HB2	18:AJ:146:PHE:HB3	1.62	0.79
28:AT:93:HIS:ND1	79:B2:1525:A:OP1	2.14	0.79
63:Bc:85:PHE:CD2	80:B5:1728:G:N1	2.51	0.79
8:A7:79:SER:HA	84:CW:42:C:C2	2.18	0.79
15:AG:132:ARG:CZ	79:B2:68:A:C8	2.66	0.79
15:AG:182:GLN:CD	79:B2:271:A:H62	1.91	0.79
38:BD:265:TYR:OH	81:B7:121:U:OP2	1.99	0.79
38:BD:274:GLN:OE1	81:B7:60:G:C2	2.34	0.79
41:BG:242:ALA:HB2	80:B5:2586:G:O6	1.82	0.79
67:Bg:68:THR:HG23	80:B5:1643:A:P	2.22	0.79
79:B2:187:G:H4'	79:B2:188:A:OP1	1.83	0.79
80:B5:2623:G:O6	84:CW:76:A:H5'	1.83	0.79
83:CV:248:ASP:CB	83:CV:360:LEU:HD23	2.09	0.79
33:AY:11:LYS:HG2	79:B2:784:C:N4	1.98	0.79
36:BB:169:THR:HG22	36:BB:171:LEU:H	1.45	0.79
39:BE:31:ARG:HH11	66:Bf:107:ILE:HG22	1.47	0.79
44:BJ:11:ASP:O	44:BJ:12:LEU:HB2	1.81	0.79
54:BT:129:LYS:NZ	80:B5:1097:G:OP1	2.15	0.79
68:Bh:89:ARG:NH1	82:B8:38:U:N3	2.31	0.79
83:CV:541:HIS:HA	84:CW:73:A:N7	1.76	0.79
8:A7:89:ARG:O	84:CW:35:A:N6	2.13	0.79
15:AG:56:ASN:CG	79:B2:153:G:N2	2.38	0.79
20:AL:133:LYS:HD2	79:B2:338:C:P	2.23	0.79
79:B2:494:U:O2'	79:B2:495:C:O5'	2.01	0.79
80:B5:2255:A:H5'	80:B5:2261:G:H22	1.47	0.79
14:AF:112:ARG:NH1	79:B2:1529:C:OP1	2.16	0.79
15:AG:56:ASN:HB3	79:B2:154:G:H1'	1.63	0.79
15:AG:185:GLN:CG	79:B2:284:G:C6	2.65	0.79
17:AI:64:ASN:CG	79:B2:258:C:O4'	2.26	0.79
27:AS:143:ARG:NH2	79:B2:1462:G:N7	2.30	0.79
38:BD:120:LYS:O	38:BD:248:ARG:NH2	2.16	0.79
41:BG:185:ARG:HD2	82:B8:155:A:C4'	2.12	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BS:90:MET:HG2	80:B5:1213:G:H4'	1.65	0.79
63:Bc:28:LYS:HD3	80:B5:1713:G:O6	1.83	0.79
67:Bg:9:ARG:NE	80:B5:1606:U:O4	2.15	0.79
79:B2:1064:G:O6	88:B2:2075:OHX:N6	2.15	0.79
80:B5:173:G:HO2'	80:B5:174:C:H6	1.28	0.79
27:AS:69:ILE:HG22	27:AS:73:MET:HE2	1.63	0.79
83:CV:538:LYS:N	84:CW:73:A:C6	2.50	0.79
35:BA:204:MET:HG2	80:B5:914:A:N3	1.97	0.78
41:BG:242:ALA:CB	80:B5:2586:G:O6	2.31	0.78
53:BS:43:TYR:OH	81:B7:96:U:OP1	1.99	0.78
79:B2:1757:G:O2'	80:B5:2256:A:H2'	1.82	0.78
8:A7:84:LYS:NZ	84:CW:31:A:O2'	2.16	0.78
15:AG:108:VAL:HG21	79:B2:153:G:HO2'	1.45	0.78
23:AO:29:HIS:CD2	79:B2:917:U:O2	2.35	0.78
23:AO:129:LYS:HA	79:B2:990:C:C4'	2.13	0.78
24:AP:115:TYR:CE2	79:B2:1557:U:H5'	2.18	0.78
35:BA:15:ILE:HG13	80:B5:822:G:C1'	2.14	0.78
79:B2:1759:C:C1'	80:B5:2262:A:C2	2.60	0.78
8:A7:30:THR:CA	80:B5:2707:C:O2'	2.30	0.78
15:AG:95:LYS:HE2	79:B2:161:U:P	2.23	0.78
15:AG:175:ILE:CA	79:B2:78:A:C2	2.66	0.78
20:AL:36:LYS:HD3	79:B2:248:U:C5'	2.14	0.78
23:AO:45:GLY:HA3	79:B2:900:A:OP1	1.83	0.78
31:AW:27:ILE:HD11	31:AW:61:ILE:HD12	1.65	0.78
33:AY:9:THR:HG23	79:B2:781:U:OP2	1.82	0.78
60:BZ:15:ARG:HD3	80:B5:1637:A:C4'	2.13	0.78
79:B2:51:A:N1	83:CV:243:PHE:CG	2.51	0.78
79:B2:839:U:O4	88:B2:2069:OHX:N4	2.16	0.78
79:B2:1427:A:C5'	84:CW:34:C:C6	2.66	0.78
10:AB:116:LYS:HE2	79:B2:933:A:OP1	1.82	0.78
15:AG:153:VAL:O	15:AG:155:ASP:N	2.16	0.78
42:BH:28:VAL:HG22	42:BH:33:THR:HB	1.64	0.78
59:BY:114:ASP:CG	82:B8:85:G:O6	2.26	0.78
74:Bn:11:ARG:HD3	79:B2:1126:G:C4'	1.97	0.78
88:B2:1929:OHX:N2	80:B5:2275:A:OP1	2.17	0.78
15:AG:54:GLY:N	79:B2:163:G:H4'	1.97	0.78
23:AO:29:HIS:HE1	79:B2:918:U:C5'	1.97	0.78
54:BT:71:SER:CB	80:B5:2736:A:H4'	2.14	0.78
79:B2:1686:C:H2'	79:B2:1687:U:O5'	1.83	0.78
80:B5:15:C:H5'	80:B5:15:C:H6	1.49	0.78
8:A7:82:THR:HG21	84:CW:29:G:N1	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:168:UNK:HA	21:AM:125:ASN:HD21	1.46	0.78
15:AG:60:GLY:O	79:B2:154:G:N3	2.15	0.78
15:AG:112:VAL:CG2	79:B2:164:A:C4'	2.61	0.78
23:AO:120:PRO:CA	79:B2:887:A:H5"	2.14	0.78
29:AU:57:ARG:CG	79:B2:1382:A:O4'	2.31	0.78
51:BQ:178:ARG:HD3	61:Ba:50:PRO:HB2	1.66	0.78
72:Bl:12:LYS:HE3	82:B8:45:C:OP1	1.82	0.78
8:A7:51:ARG:NH2	80:B5:2677:G:C8	2.52	0.78
8:A7:85:SER:N	84:CW:30:G:C2	2.51	0.78
10:AB:165:ARG:NH2	79:B2:947:U:P	2.55	0.78
22:AN:114:ARG:HG2	22:AN:114:ARG:HH11	1.49	0.78
23:AO:29:HIS:CE1	79:B2:918:U:C5'	2.65	0.78
38:BD:145:PHE:CG	80:B5:2748:A:H4'	2.18	0.78
74:Bn:5:TRP:CZ3	79:B2:1775:U:O4	2.35	0.78
79:B2:48:G:C2	83:CV:387:ARG:NH1	2.42	0.78
79:B2:1681:A:H2'	79:B2:1682:U:H5'	1.65	0.78
80:B5:766:U:H4'	80:B5:767:U:O5'	1.81	0.78
88:B7:203:OHX:N3	88:B7:219:OHX:N6	2.32	0.78
4:A3:33:LYS:HE3	79:B2:1593:A:O2'	1.83	0.78
14:AF:109:LYS:CD	79:B2:1473:U:H1'	2.14	0.78
23:AO:45:GLY:N	79:B2:900:A:OP1	2.16	0.78
36:BB:37:ARG:HG2	36:BB:187:SER:H	1.49	0.78
54:BT:129:LYS:CE	80:B5:1097:G:H5'	2.13	0.78
60:BZ:135:ARG:HH21	80:B5:1807:G:C5'	1.97	0.78
61:Ba:115:LYS:HG3	80:B5:715:A:H8	1.48	0.78
79:B2:1073:G:H2'	79:B2:1074:G:H5"	1.66	0.78
79:B2:1758:U:O3'	80:B5:2255:A:H5"	1.84	0.78
80:B5:2444:C:H42	80:B5:2503:G:H1	1.31	0.78
8:A7:79:SER:C	84:CW:42:C:O2	2.26	0.78
8:A7:91:THR:HG23	84:CW:36:U:N1	1.98	0.78
14:AF:62:VAL:HG13	14:AF:89:ILE:HG21	1.64	0.78
54:BT:71:SER:OG	80:B5:2736:A:C4'	2.31	0.78
79:B2:734:A:H5"	79:B2:735:C:OP1	1.83	0.78
79:B2:1643:U:O2	80:B5:2262:A:H1'	1.84	0.78
8:A7:51:ARG:HD3	80:B5:2678:A:P	2.22	0.78
17:AI:170:SER:CB	79:B2:209:U:O3'	2.32	0.78
38:BD:175:HIS:HA	80:B5:2747:A:H5'	1.64	0.78
52:BR:165:LYS:CE	79:B2:824:G:C2	2.62	0.78
52:BR:173:ARG:NH1	79:B2:819:G:N2	2.32	0.78
8:A7:88:ARG:CA	84:CW:36:U:H5"	2.14	0.77
8:A7:92:ASP:OD2	84:CW:34:C:C4'	2.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:73:ARG:HE	32:AX:84:THR:HG22	1.49	0.77
35:BA:187:HIS:ND1	80:B5:1794:G:C2	2.51	0.77
52:BR:64:ARG:NH1	80:B5:1689:U:OP1	2.17	0.77
52:BR:173:ARG:NH1	79:B2:819:G:H22	1.81	0.77
63:Bc:85:PHE:CG	80:B5:1728:G:C2	2.71	0.77
74:Bn:4:LYS:HE2	79:B2:1774:G:O5'	1.84	0.77
79:B2:838:G:N7	88:B2:2069:OHX:N2	2.32	0.77
8:A7:85:SER:HA	84:CW:30:G:O6	1.84	0.77
8:A7:88:ARG:CB	84:CW:36:U:O5'	2.32	0.77
14:AF:80:LYS:HE3	79:B2:1405:G:OP1	1.83	0.77
21:AM:76:GLU:OE2	21:AM:90:LYS:NZ	2.17	0.77
25:AQ:13:LYS:HE2	79:B2:1584:G:O6	1.83	0.77
29:AU:85:ARG:HH22	79:B2:1335:U:H5'	1.49	0.77
33:AY:10:ARG:NH2	79:B2:778:G:H22	1.83	0.77
52:BR:173:ARG:HG2	79:B2:853:G:C5	2.19	0.77
65:Be:55:ILE:HB	80:B5:947:G:H5'	1.66	0.77
75:Bo:63:LYS:HB2	80:B5:2795:U:OP1	1.83	0.77
75:Bo:104:LEU:CD1	84:CW:55:U:O4	2.27	0.77
79:B2:1291:G:H8	79:B2:1291:G:O5'	1.66	0.77
80:B5:1225:A:N9	80:B5:1287:A:C2'	2.47	0.77
80:B5:1952:G:H1	80:B5:2094:C:H42	1.32	0.77
80:B5:3027:A:HO2'	83:CV:83:PHE:HE2	0.80	0.77
83:CV:236:GLU:HB3	83:CV:360:LEU:HG	1.64	0.77
14:AF:185:ARG:NH1	79:B2:1572:G:C8	2.52	0.77
23:AO:132:ARG:NE	79:B2:1788:G:C8	2.52	0.77
32:AX:78:LYS:HB3	79:B2:434:G:H5'	1.66	0.77
38:BD:40:HIS:HD2	38:BD:42:ALA:H	1.32	0.77
41:BG:162:LEU:HD11	80:B5:147:U:O2	1.83	0.77
42:BH:77:ASN:HA	42:BH:80:THR:HG23	1.66	0.77
79:B2:452:A:OP2	88:B2:1916:OHX:N5	2.18	0.77
80:B5:1225:A:C8	80:B5:1287:A:C2'	2.68	0.77
17:AI:42:ARG:HA	79:B2:260:U:C4	2.19	0.77
36:BB:188:ILE:H	36:BB:188:ILE:HD12	1.50	0.77
79:B2:1761:U:C5	85:CX:1:A:H5'	2.19	0.77
15:AG:154:ARG:HG3	79:B2:78:A:H8	1.47	0.77
59:BY:24:SER:OG	82:B8:73:U:OP1	2.02	0.77
72:Bl:5:LYS:HD2	80:B5:1834:U:OP1	1.84	0.77
83:CV:199:ALA:CB	89:CV:602:GCP:C6	2.56	0.77
1:A0:87:ARG:HH12	79:B2:1796:C:H5'	1.49	0.77
7:A6:284:ALA:HB2	26:AR:63:LYS:HE2	1.64	0.77
8:A7:89:ARG:CD	84:CW:33:U:C3'	2.34	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:56:ASN:ND2	79:B2:153:G:N2	2.32	0.77
17:AI:64:ASN:ND2	79:B2:257:A:C2'	2.41	0.77
25:AQ:125:GLU:HB3	79:B2:1585:U:H5"	1.65	0.77
27:AS:83:ALA:HA	27:AS:86:LEU:HD22	1.65	0.77
33:AY:105:ARG:CB	79:B2:443:C:P	2.72	0.77
79:B2:484:C:H42	79:B2:503:G:H22	1.33	0.77
79:B2:1686:C:C2	79:B2:1687:U:C6	2.72	0.77
79:B2:1761:U:C4	85:CX:1:A:C5'	2.67	0.77
14:AF:109:LYS:HD2	79:B2:1473:U:H1'	1.65	0.77
32:AX:144:ARG:CZ	83:CV:314:LYS:HE3	2.15	0.77
35:BA:34:TYR:CD2	80:B5:2525:G:C6	2.72	0.77
35:BA:68:LYS:NZ	80:B5:1579:C:H5"	2.00	0.77
35:BA:217:GLN:NE2	80:B5:2146:C:OP1	2.15	0.77
38:BD:272:TYR:CD2	81:B7:22:A:C8	2.73	0.77
38:BD:276:LYS:HB3	81:B7:61:G:H5"	1.67	0.77
54:BT:68:THR:HG23	80:B5:2737:C:O5'	1.83	0.77
54:BT:68:THR:OG1	80:B5:2737:C:H4'	1.84	0.77
57:BW:46:PRO:HB2	57:BW:54:LEU:HD23	1.64	0.77
75:Bo:105:GLN:CA	84:CW:58:A:OP2	2.32	0.77
79:B2:431:C:C2'	83:CV:386:SER:HB2	2.14	0.77
83:CV:236:GLU:HG2	83:CV:360:LEU:C	2.08	0.77
3:A2:12:VAL:HG22	3:A2:28:VAL:HG11	1.66	0.77
17:AI:86:SER:OG	79:B2:329:G:O4'	2.03	0.77
36:BB:53:MET:HE3	80:B5:3048:A:H5"	1.65	0.77
38:BD:260:PHE:CD2	81:B7:121:U:H5'	2.19	0.77
52:BR:134:HIS:CD2	80:B5:1947:G:H5'	2.20	0.77
76:Bq:5:ARG:HH21	80:B5:1221:A:H4'	1.49	0.77
79:B2:415:C:H6	83:CV:287:LEU:C	1.92	0.77
79:B2:1370:U:O4	88:B2:1999:OHX:N1	2.17	0.77
1:A0:3:LYS:HA	79:B2:1792:G:H5"	1.66	0.77
15:AG:62:PRO:HB2	79:B2:162:A:C4'	2.15	0.77
25:AQ:14:LYS:CE	79:B2:1610:G:N7	2.48	0.77
35:BA:194:ASN:HD21	80:B5:822:G:H5'	1.50	0.77
79:B2:420:A:C6	83:CV:288:ARG:NH2	2.53	0.77
1:A0:35:ALA:HB3	1:A0:37:LYS:HE3	1.67	0.77
25:AQ:143:ARG:CZ	84:CW:32:U:O5'	2.26	0.77
26:AR:2:GLY:HA3	79:B2:1312:A:P	2.25	0.77
28:AT:89:ARG:HD2	79:B2:1601:G:C6	2.20	0.77
30:AV:74:GLN:NE2	30:AV:81:ASN:O	2.18	0.77
34:AZ:77:ARG:NH2	79:B2:1533:C:C5	2.53	0.77
36:BB:53:MET:HE3	80:B5:3048:A:H5'	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:266:ALA:CB	81:B7:1:G:C8	2.68	0.77
70:Bj:63:ARG:NH2	82:B8:58:G:N7	2.28	0.77
74:Bn:5:TRP:CZ3	79:B2:1775:U:C5	2.72	0.77
80:B5:2227:C:H2'	80:B5:2228:A:H5"	1.65	0.77
14:AF:185:ARG:NH2	79:B2:1572:G:O2'	2.18	0.76
26:AR:48:ASN:CB	79:B2:1389:C:C4'	2.64	0.76
27:AS:84:TRP:HA	27:AS:89:GLN:HE22	1.50	0.76
38:BD:69:ILE:O	81:B7:8:G:H4'	1.86	0.76
52:BR:43:LYS:HG2	80:B5:1764:U:OP2	1.85	0.76
59:BY:45:ILE:HD12	59:BY:119:ILE:HG23	1.66	0.76
60:BZ:69:LYS:NZ	80:B5:1633:C:OP2	2.15	0.76
79:B2:276:C:O2'	79:B2:277:U:H5"	1.84	0.76
80:B5:2511:A:H2'	80:B5:2512:C:H5"	1.66	0.76
10:AB:165:ARG:NH1	79:B2:946:U:C5'	2.41	0.76
12:AD:174:HIS:HE1	79:B2:1278:G:C4'	1.97	0.76
35:BA:69:TYR:CD2	80:B5:2558:U:C2	2.74	0.76
40:BF:216:VAL:HG11	40:BF:227:GLY:HA3	1.67	0.76
74:Bn:2:ARG:C	79:B2:1773:C:OP1	2.22	0.76
79:B2:1229:G:HO2'	79:B2:1255:G:N2	1.81	0.76
79:B2:1780:G:C2'	80:B5:2262:A:O2'	2.33	0.76
80:B5:150:A:H2'	80:B5:151:A:H5'	1.66	0.76
83:CV:78:PRO:O	89:CV:602:GCP:PG	2.44	0.76
84:CW:42:C:C6	84:CW:42:C:H5'	2.20	0.76
6:A5:138:ARG:NH2	79:B2:1236:A:O4'	2.19	0.76
8:A7:47:ALA:HB2	80:B5:2678:A:C8	2.19	0.76
17:AI:42:ARG:CA	79:B2:260:U:O4	2.32	0.76
37:BC:51:ALA:O	82:B8:26:U:O2'	2.03	0.76
61:Ba:16:SER:HA	80:B5:942:U:C4	2.20	0.76
70:Bj:10:LYS:HE3	80:B5:1853:U:H5'	1.67	0.76
79:B2:488:G:H4'	79:B2:488:G:OP1	1.86	0.76
79:B2:1655:A:O2'	80:B5:2302:G:O4'	2.03	0.76
80:B5:2509:U:H2'	80:B5:2510:U:H5"	1.68	0.76
10:AB:116:LYS:HZ1	79:B2:933:A:P	2.07	0.76
15:AG:132:ARG:NE	79:B2:68:A:C6	2.52	0.76
35:BA:219:ILE:HD11	80:B5:2185:G:C5'	2.16	0.76
38:BD:94:ASN:HA	81:B7:47:C:OP2	1.84	0.76
52:BR:166:ASN:HB3	79:B2:850:A:H5"	1.66	0.76
61:Ba:62:HIS:HB2	80:B5:304:G:C8	2.21	0.76
4:A3:14:TYR:HD2	79:B2:1597:A:C8	2.01	0.76
10:AB:62:LYS:O	10:AB:64:ARG:N	2.18	0.76
20:AL:130:PRO:HG2	79:B2:115:G:C6	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:240:ALA:HB2	80:B5:2154:U:H4'	1.65	0.76
38:BD:218:ARG:HH12	81:B7:31:U:C4'	1.98	0.76
67:Bg:67:LYS:HB2	80:B5:1821:U:O2'	1.86	0.76
75:Bo:106:PHE:HE2	84:CW:18:G:N2	1.79	0.76
15:AG:56:ASN:HD21	79:B2:153:G:N2	1.82	0.76
15:AG:169:TYR:OH	79:B2:73:U:C5	2.34	0.76
35:BA:95:SER:OG	80:B5:2551:U:N3	2.17	0.76
10:AB:65:VAL:HG22	79:B2:920:U:C5'	2.14	0.76
13:AE:19:LEU:HD13	79:B2:788:A:C4	2.20	0.76
23:AO:46:MET:HA	79:B2:899:G:O5'	1.85	0.76
24:AP:130:ARG:C	84:CW:46:G:OP1	2.27	0.76
28:AT:12:GLN:NE2	79:B2:1530:C:C1'	2.49	0.76
29:AU:53:LYS:HA	79:B2:1345:A:O5'	1.85	0.76
61:Ba:62:HIS:CD2	80:B5:304:G:C2	2.73	0.76
79:B2:1646:C:C4'	80:B5:2257:C:H41	1.97	0.76
79:B2:1715:G:C6	79:B2:1716:C:N4	2.54	0.76
8:A7:32:SER:CB	80:B5:2706:G:O2'	2.34	0.76
8:A7:96:ARG:HH21	84:CW:35:A:C1'	1.98	0.76
26:AR:88:VAL:HG22	26:AR:89:SER:H	1.47	0.76
79:B2:1761:U:C4	85:CX:1:A:H5'	2.21	0.76
80:B5:2623:G:O5'	84:CW:75:C:H5'	1.71	0.76
1:A0:3:LYS:HA	79:B2:1792:G:C5'	2.15	0.76
8:A7:84:LYS:C	84:CW:30:G:H2'	2.11	0.76
10:AB:181:LEU:O	10:AB:184:LEU:N	2.18	0.76
15:AG:186:ARG:NH2	79:B2:269:G:N7	2.33	0.76
16:AH:35:LYS:O	16:AH:37:GLU:N	2.18	0.76
23:AO:46:MET:HG2	79:B2:899:G:C4'	2.12	0.76
31:AW:30:SER:HA	31:AW:34:ILE:HD12	1.67	0.76
60:BZ:83:THR:HG23	60:BZ:85:TYR:H	1.50	0.76
81:B7:60:G:OP2	88:B7:220:OHX:N6	2.19	0.76
2:A1:67:THR:HG22	79:B2:872:G:H4'	1.68	0.76
8:A7:33:LYS:CD	80:B5:2692:A:H5'	2.15	0.76
12:AD:161:GLY:HA2	79:B2:1420:C:O2	1.85	0.76
15:AG:159:ARG:NE	79:B2:77:U:C2	2.52	0.76
43:BI:102:MET:CA	83:CV:471:LYS:HZ1	1.99	0.76
48:BN:162:ARG:CG	80:B5:56:G:H1'	2.16	0.76
54:BT:70:SER:N	80:B5:2737:C:OP1	2.19	0.76
57:BW:44:LYS:HE3	80:B5:2111:G:N3	2.01	0.76
75:Bo:105:GLN:CD	84:CW:55:U:C2	2.64	0.76
79:B2:433:C:H6	83:CV:388:ARG:CA	1.99	0.76
79:B2:1637:C:N3	84:CW:34:C:C4	2.53	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1716:C:O2'	79:B2:1717:G:H8	1.67	0.76
1:A0:15:ARG:O	79:B2:942:G:N7	2.20	0.75
9:AA:104:PRO:HG2	79:B2:1321:A:O5'	1.86	0.75
10:AB:117:TRP:CA	79:B2:932:U:OP2	2.35	0.75
25:AQ:40:GLU:HA	25:AQ:42:GLU:N	2.01	0.75
29:AU:57:ARG:HG2	79:B2:1382:A:C1'	2.17	0.75
52:BR:173:ARG:CG	79:B2:853:G:C4	2.47	0.75
69:Bi:58:ILE:HG22	69:Bi:90:MET:HG3	1.68	0.75
80:B5:437:G:H22	80:B5:622:A:N6	1.81	0.75
80:B5:3028:G:OP1	83:CV:14:VAL:HG21	1.85	0.75
4:A3:31:ILE:HD13	79:B2:1199:G:H1	1.50	0.75
10:AB:54:LEU:CD1	80:B5:2438:A:H2	1.98	0.75
26:AR:28:PHE:CD2	79:B2:1389:C:C5	2.74	0.75
34:AZ:77:ARG:NH2	79:B2:1533:C:H5	1.84	0.75
49:BO:72[A]:HIS:CD2	80:B5:3008:A:OP1	2.39	0.75
52:BR:175:GLN:N	79:B2:852:C:C4'	2.12	0.75
54:BT:49:GLN:CG	80:B5:2756:C:O4'	2.32	0.75
79:B2:46:A:N1	83:CV:387:ARG:CA	2.48	0.75
79:B2:1645:G:O2'	80:B5:2258:U:O4	2.02	0.75
8:A7:88:ARG:HG3	84:CW:35:A:O2'	1.86	0.75
10:AB:146:GLN:NE2	79:B2:1065:A:H1'	2.00	0.75
15:AG:62:PRO:HB3	79:B2:162:A:O4'	1.85	0.75
33:AY:120:GLY:HA2	79:B2:85:A:C3'	2.16	0.75
38:BD:174:PRO:O	80:B5:2747:A:H4'	1.87	0.75
44:BJ:55:ARG:NH1	84:CW:48:C:OP1	2.18	0.75
64:Bd:13:THR:HG22	64:Bd:72:ARG:HH11	1.51	0.75
74:Bn:5:TRP:CH2	79:B2:1775:U:C4	2.74	0.75
80:B5:3049:A:H5'	80:B5:3049:A:H8	1.50	0.75
83:CV:63:GLU:CB	83:CV:210:TRP:CD2	2.69	0.75
8:A7:51:ARG:CD	80:B5:2677:G:O3'	2.34	0.75
28:AT:91:TYR:CE1	79:B2:1469:A:OP1	2.38	0.75
29:AU:23:ARG:NH1	79:B2:1347:U:OP1	2.19	0.75
37:BC:93:MET:HB2	80:B5:658:G:N2	2.01	0.75
8:A7:51:ARG:CD	80:B5:2677:G:H4'	2.17	0.75
8:A7:88:ARG:CB	84:CW:36:U:C4'	2.44	0.75
10:AB:116:LYS:HA	79:B2:931:C:C4'	2.16	0.75
17:AI:36:THR:HB	17:AI:57:ALA:O	1.85	0.75
25:AQ:72:GLY:HA2	79:B2:1608:U:H5"	1.66	0.75
37:BC:307:GLN:OE1	80:B5:1345:G:N2	2.19	0.75
42:BH:20:ILE:HD13	42:BH:25:VAL:HG22	1.65	0.75
48:BN:67:ARG:HG3	80:B5:1544:G:H5'	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:129:LYS:CB	80:B5:1098:A:O5'	2.34	0.75
61:Ba:6:THR:HG23	61:Ba:8:THR:HG23	1.68	0.75
74:Bn:15:ARG:CG	79:B2:1126:G:OP2	2.35	0.75
79:B2:1179:G:OP1	84:CW:29:G:O2'	2.01	0.75
27:AS:143:ARG:HB3	79:B2:1461:C:P	2.27	0.75
35:BA:181:LYS:NZ	80:B5:860:G:O5'	2.17	0.75
38:BD:15:ARG:NE	80:B5:1003:A:H1'	2.02	0.75
38:BD:218:ARG:NH1	81:B7:31:U:C4'	2.42	0.75
40:BF:158:LYS:HD2	40:BF:159:GLN:HA	1.66	0.75
63:Bc:85:PHE:CG	80:B5:1728:G:N1	2.54	0.75
70:Bj:60:GLY:N	82:B8:42:G:OP1	2.19	0.75
79:B2:1057:U:O2'	79:B2:1058:U:OP2	2.02	0.75
7:A6:89:LEU:HB2	7:A6:103:PHE:HB2	1.68	0.75
8:A7:77:THR:O	84:CW:43:C:H5'	1.85	0.75
17:AI:51:GLY:N	79:B2:397:A:H5"	2.00	0.75
18:AJ:175:ARG:HH11	18:AJ:175:ARG:HG3	1.51	0.75
23:AO:126:THR:CG2	79:B2:988:A:H2	1.94	0.75
44:BJ:92:ARG:HG2	44:BJ:92:ARG:HH11	1.51	0.75
70:Bj:12:HIS:O	80:B5:1491:A:H5'	1.87	0.75
35:BA:211:HIS:HD1	80:B5:2185:G:P	2.10	0.75
38:BD:226:TYR:HE2	38:BD:236:LEU:HD11	1.51	0.75
67:Bg:24:LYS:O	80:B5:1695:U:H4'	1.87	0.75
79:B2:514:G:H1	79:B2:543:C:H5	1.33	0.75
8:A7:87:THR:O	84:CW:36:U:P	2.44	0.75
8:A7:92:ASP:OD2	84:CW:34:C:O5'	2.05	0.75
12:AD:159:HIS:CG	79:B2:1422:A:H4'	2.21	0.75
13:AE:19:LEU:HD22	79:B2:788:A:H2'	1.68	0.75
23:AO:41:ARG:HH22	79:B2:915:A:N6	1.82	0.75
35:BA:114:SER:HB2	35:BA:169:ILE:HD12	1.67	0.75
52:BR:8:LYS:NZ	80:B5:1473:G:OP2	2.20	0.75
61:Ba:115:LYS:HG3	80:B5:715:A:C8	2.22	0.75
80:B5:2621:G:C5	84:CW:75:C:C6	2.75	0.75
6:A5:138:ARG:NH2	79:B2:1235:C:H2'	2.01	0.74
17:AI:138:ASN:CG	79:B2:197:A:N1	2.44	0.74
29:AU:57:ARG:HB3	79:B2:1382:A:O4'	1.87	0.74
33:AY:10:ARG:CA	79:B2:778:G:O6	2.28	0.74
35:BA:194:ASN:ND2	80:B5:822:G:C5'	2.50	0.74
36:BB:347:SER:HB3	36:BB:350:ALA:H	1.52	0.74
50:BP:127:ARG:HD2	80:B5:1505:C:OP1	1.86	0.74
62:Bb:50:THR:HG22	80:B5:1073:U:H1'	1.68	0.74
67:Bg:83:ASN:HD21	80:B5:1709:C:P	2.09	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Bj:63:ARG:NH1	82:B8:58:G:O6	2.18	0.74
8:A7:96:ARG:HH21	84:CW:35:A:H1'	1.48	0.74
17:AI:141:ARG:CZ	79:B2:196:G:N7	2.50	0.74
20:AL:133:LYS:HD2	79:B2:338:C:OP2	1.85	0.74
22:AN:12:SER:O	88:B2:1910:OHX:N3	2.20	0.74
35:BA:211:HIS:CE1	80:B5:2184:U:O3'	2.40	0.74
38:BD:17:GLN:N	80:B5:2688:U:O2	2.19	0.74
41:BG:185:ARG:CD	82:B8:155:A:H4'	2.16	0.74
44:BJ:109:HIS:HD2	44:BJ:123:PHE:H	1.32	0.74
56:BV:2:SER:HA	56:BV:56:ASP:HA	1.69	0.74
80:B5:1308:A:C8	80:B5:1308:A:OP2	2.40	0.74
14:AF:57:SER:O	14:AF:59:VAL:N	2.20	0.74
15:AG:59:GLN:O	79:B2:155:U:H1'	1.86	0.74
16:AH:107:ARG:NH2	79:B2:741:C:O2	2.20	0.74
23:AO:18:ARG:NH1	79:B2:918:U:O2'	2.20	0.74
23:AO:125:SER:CB	79:B2:927:C:H1'	2.13	0.74
23:AO:129:LYS:HA	79:B2:990:C:O3'	1.87	0.74
27:AS:26:ILE:HD11	27:AS:31:ALA:N	2.02	0.74
28:AT:93:HIS:HB2	79:B2:1525:A:H5'	1.68	0.74
39:BE:21:THR:HB	80:B5:612:U:OP1	1.87	0.74
44:BJ:137:ARG:NE	81:B7:43:U:OP1	2.18	0.74
51:BQ:38:ARG:NH2	80:B5:1348:U:OP2	2.20	0.74
79:B2:706:A:N1	79:B2:734:A:N6	2.34	0.74
88:B2:1918:OHX:N1	88:B2:2062:OHX:N3	2.35	0.74
23:AO:51:ASP:CG	79:B2:902:G:H1	1.96	0.74
46:BL:128:ARG:NH2	68:Bh:109:ILE:O	2.20	0.74
80:B5:595:G:H1	80:B5:609:G:H5"	1.53	0.74
83:CV:131:LYS:HD3	89:CV:602:GCP:C6	2.17	0.74
7:A6:102:ARG:NH2	79:B2:1341:A:O2'	2.20	0.74
10:AB:83:LYS:NZ	23:AO:116:GLU:OE2	2.18	0.74
15:AG:133:LEU:HA	79:B2:66:U:C4	2.22	0.74
18:AJ:149:ARG:NH1	79:B2:765:G:C2	2.56	0.74
23:AO:52:ARG:HB2	79:B2:906:A:OP2	1.88	0.74
27:AS:138:THR:OG1	79:B2:1459:C:OP2	2.05	0.74
52:BR:101:VAL:HG22	80:B5:1949:G:P	2.27	0.74
56:BV:48:ARG:HA	80:B5:2338:C:O3'	1.87	0.74
12:AD:161:GLY:N	79:B2:1420:C:O2	2.20	0.74
15:AG:175:ILE:HD11	79:B2:78:A:C2'	2.17	0.74
33:AY:105:ARG:HB3	79:B2:443:C:P	2.26	0.74
43:BI:102:MET:CB	83:CV:471:LYS:HZ1	2.00	0.74
43:BI:103:LEU:N	83:CV:471:LYS:NZ	2.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Bc:85:PHE:HB2	80:B5:1728:G:N2	2.02	0.74
83:CV:535:VAL:O	84:CW:73:A:N6	2.20	0.74
14:AF:144:GLU:OE2	14:AF:225:ARG:NH2	2.21	0.74
23:AO:18:ARG:NH1	79:B2:918:U:C3'	2.51	0.74
43:BI:103:LEU:N	83:CV:471:LYS:HZ2	1.85	0.74
48:BN:72:LYS:NZ	80:B5:2166:A:O3'	2.19	0.74
61:Ba:64:GLN:HE22	80:B5:70:A:H5'	1.53	0.74
17:AI:33:PRO:HA	79:B2:331:A:H5'	1.70	0.74
23:AO:128:LYS:O	79:B2:990:C:H4'	1.87	0.74
27:AS:143:ARG:HA	79:B2:1461:C:OP1	1.88	0.74
44:BJ:55:ARG:HH21	84:CW:47:U:C2'	2.00	0.74
60:BZ:15:ARG:HB3	80:B5:1637:A:H5"	1.70	0.74
60:BZ:48:ARG:NH1	80:B5:1632:A:OP1	2.20	0.74
68:Bh:95:PHE:N	80:B5:135:C:O2'	2.20	0.74
79:B2:355:G:OP2	88:B2:1914:OHX:N4	2.19	0.74
79:B2:1002:G:H4'	80:B5:2265:C:P	2.28	0.74
79:B2:1638:G:OP2	85:CX:2:U:C4	2.40	0.74
88:B2:1921:OHX:N5	88:B2:2048:OHX:N3	2.36	0.74
8:A7:46:LYS:HG3	80:B5:2678:A:H4'	1.68	0.74
10:AB:157:GLN:O	10:AB:159:SER:N	2.20	0.74
15:AG:174:LYS:CE	79:B2:79:C:O2	2.35	0.74
16:AH:50:ASP:OD1	16:AH:50:ASP:N	2.21	0.74
32:AX:144:ARG:HH12	83:CV:314:LYS:CD	1.99	0.74
40:BF:88:ARG:HD2	40:BF:90:LYS:O	1.86	0.74
63:Bc:85:PHE:CD1	80:B5:1728:G:C2	2.75	0.74
79:B2:913:G:O6	80:B5:2206:G:C3'	2.34	0.74
10:AB:109:LYS:HG3	10:AB:113:MET:HE3	1.69	0.74
10:AB:116:LYS:HA	79:B2:931:C:O3'	1.86	0.74
15:AG:83:CYS:N	79:B2:162:A:P	2.60	0.74
17:AI:25:ARG:HA	79:B2:400:A:H5"	1.69	0.74
24:AP:42:ARG:NH1	79:B2:1549:C:OP1	2.20	0.74
35:BA:194:ASN:ND2	80:B5:822:G:H5'	2.03	0.74
46:BL:99:HIS:NE2	80:B5:156:G:C6	2.55	0.74
48:BN:73:ARG:HG2	48:BN:75:VAL:HG13	1.70	0.74
74:Bn:4:LYS:CE	79:B2:1774:G:O5'	2.36	0.74
12:AD:159:HIS:HB3	79:B2:1422:A:H5'	1.70	0.73
15:AG:58:LYS:HA	79:B2:155:U:C5'	2.18	0.73
15:AG:182:GLN:CD	79:B2:271:A:N6	2.46	0.73
25:AQ:5:PRO:HG2	25:AQ:24:ALA:HB2	1.69	0.73
25:AQ:75:VAL:CG1	79:B2:1610:G:OP1	2.34	0.73
26:AR:82:ASP:O	26:AR:83:GLN:NE2	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AU:57:ARG:CG	79:B2:1382:A:C4'	2.66	0.73
29:AU:57:ARG:CB	79:B2:1382:A:O4'	2.36	0.73
35:BA:200:ARG:HD3	80:B5:2187:G:O6	1.88	0.73
38:BD:272:TYR:OH	81:B7:22:A:H1'	1.87	0.73
54:BT:68:THR:HG21	80:B5:2736:A:O3'	1.87	0.73
54:BT:68:THR:HG22	54:BT:71:SER:H	1.51	0.73
69:Bi:15:LYS:N	80:B5:73:C:OP1	2.21	0.73
80:B5:2818:U:H5'	80:B5:2818:U:C6	2.23	0.73
12:AD:7:LYS:NZ	29:AU:115:GLU:OE2	2.21	0.73
15:AG:83:CYS:HA	79:B2:162:A:P	2.28	0.73
15:AG:115:LYS:NZ	57:BW:74:LYS:O	2.21	0.73
23:AO:41:ARG:HH22	79:B2:915:A:H62	1.36	0.73
26:AR:28:PHE:CE1	79:B2:1389:C:H1'	2.23	0.73
35:BA:187:HIS:CD2	80:B5:1794:G:C6	2.76	0.73
49:BO:160[A]:ARG:NH2	80:B5:3182:G:OP1	2.22	0.73
79:B2:108:A:H2'	79:B2:109:G:C8	2.23	0.73
79:B2:431:C:H2'	83:CV:386:SER:CB	2.17	0.73
79:B2:1427:A:O5'	84:CW:34:C:H6	1.68	0.73
15:AG:60:GLY:C	79:B2:154:G:H21	1.91	0.73
15:AG:164:LYS:CE	79:B2:72:A:H5"	2.19	0.73
17:AI:97:THR:HB	79:B2:330:G:OP1	1.88	0.73
25:AQ:74:HIS:HE1	79:B2:1480:G:H22	1.36	0.73
27:AS:123:ARG:HG3	27:AS:133:VAL:HG21	1.69	0.73
28:AT:60:SER:HB2	79:B2:1479:A:C5'	2.13	0.73
29:AU:85:ARG:NH2	79:B2:1335:U:H5'	2.02	0.73
43:BI:102:MET:C	83:CV:471:LYS:NZ	2.44	0.73
48:BN:125:SER:HB3	80:B5:2433:U:H1'	1.70	0.73
52:BR:170:ARG:N	79:B2:851:U:H3'	2.03	0.73
80:B5:2211:U:H5	80:B5:2234:G:O6	1.71	0.73
80:B5:2286:U:OP1	83:CV:479:PRO:HD3	1.86	0.73
15:AG:107:ALA:CB	79:B2:154:G:O3'	2.37	0.73
15:AG:174:LYS:N	79:B2:79:C:O4'	2.20	0.73
17:AI:2:GLY:N	79:B2:393:C:OP2	2.21	0.73
20:AL:80:MET:HE1	79:B2:325:G:H5'	1.69	0.73
51:BQ:43:PRO:CB	80:B5:728:G:H5"	2.18	0.73
72:Bl:49:MET:N	80:B5:1493:G:OP1	2.17	0.73
80:B5:2372:A:H5"	80:B5:2373:A:H5'	1.70	0.73
88:B7:203:OHX:N1	88:B7:219:OHX:N2	2.35	0.73
15:AG:133:LEU:HD11	79:B2:66:U:HO2'	1.50	0.73
15:AG:157:VAL:HG21	79:B2:78:A:HO2'	1.52	0.73
17:AI:64:ASN:CB	79:B2:258:C:O4'	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:7:LYS:CB	79:B2:1316:G:OP1	2.35	0.73
48:BN:172:ARG:HB3	48:BN:174:ILE:HD13	1.70	0.73
52:BR:169:ALA:HB2	79:B2:850:A:N3	2.04	0.73
79:B2:440:U:P	83:CV:274:ASN:HD21	2.08	0.73
79:B2:582:U:C6	79:B2:582:U:H5"	2.24	0.73
79:B2:818:C:N4	79:B2:819:G:O6	2.21	0.73
80:B5:3289:G:H2'	80:B5:3290:G:C8	2.23	0.73
83:CV:63:GLU:HB2	83:CV:210:TRP:CD2	2.23	0.73
8:A7:92:ASP:CB	84:CW:35:A:N7	2.33	0.73
54:BT:89:LEU:HD12	80:B5:2723:U:H5'	1.69	0.73
79:B2:51:A:H1'	83:CV:242:GLY:N	1.95	0.73
79:B2:51:A:C2'	83:CV:242:GLY:CA	2.62	0.73
79:B2:1428:G:O5'	84:CW:34:C:H5'	1.89	0.73
79:B2:1655:A:C4'	80:B5:2302:G:H4'	2.18	0.73
80:B5:2397:A:OP1	80:B5:2398:A:H5"	1.88	0.73
11:AC:206:THR:HG21	79:B2:14:C:OP2	1.89	0.73
17:AI:92:ARG:NH1	80:B5:2107:A:O2'	2.22	0.73
21:AM:89:ILE:HG23	21:AM:90:LYS:H	1.52	0.73
32:AX:144:ARG:CZ	83:CV:314:LYS:CE	2.66	0.73
38:BD:224:LYS:HD2	81:B7:50:U:O2'	1.88	0.73
38:BD:272:TYR:CE2	81:B7:22:A:H1'	2.24	0.73
44:BJ:55:ARG:HH21	84:CW:47:U:C3'	2.01	0.73
54:BT:6:GLY:HA2	80:B5:2630:C:OP1	1.89	0.73
79:B2:471:A:OP2	88:B2:1954:OHX:N4	2.21	0.73
8:A7:92:ASP:OD2	84:CW:34:C:H3'	1.87	0.73
9:AA:4:PRO:HB2	9:AA:7:PHE:HB2	1.70	0.73
12:AD:64:ARG:O	12:AD:67:ASN:N	2.20	0.73
12:AD:203:PRO:HB3	79:B2:1332:C:H5'	1.69	0.73
20:AL:80:MET:CE	79:B2:325:G:C4'	2.67	0.73
42:BH:171:ASP:OD1	42:BH:173:ARG:HD3	1.89	0.73
61:Ba:64:GLN:HE22	80:B5:70:A:C5'	2.02	0.73
79:B2:1686:C:O2'	79:B2:1687:U:C5'	2.37	0.73
80:B5:2279:A:H62	83:CV:478:LYS:HE3	1.52	0.73
80:B5:2284:C:H3'	83:CV:477:SER:O	1.89	0.73
8:A7:87:THR:C	84:CW:36:U:C5'	2.62	0.73
14:AF:97:LEU:O	79:B2:1473:U:O4	2.07	0.73
20:AL:28:SER:OG	79:B2:839:U:H5"	1.89	0.73
23:AO:120:PRO:HB2	79:B2:887:A:H5"	1.71	0.73
23:AO:123:SER:HB2	79:B2:885:G:H21	0.92	0.73
29:AU:53:LYS:CB	79:B2:1345:A:C5'	2.62	0.73
35:BA:71:LEU:HB2	80:B5:1651:U:H5"	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:158:ARG:CD	81:B7:46:A:P	2.76	0.73
41:BG:68:ARG:O	41:BG:69:LEU:HB2	1.89	0.73
70:Bj:48:ASN:OD1	70:Bj:54:LYS:NZ	2.20	0.73
12:AD:65:ARG:HA	12:AD:68:GLU:HG3	1.70	0.73
18:AJ:149:ARG:NH1	79:B2:765:G:N3	2.37	0.73
20:AL:40:LEU:HD13	79:B2:246:G:H1'	1.71	0.73
24:AP:47:ARG:HH11	79:B2:1555:A:P	2.11	0.73
25:AQ:18:ALA:HB2	25:AQ:69:VAL:HG13	1.71	0.73
26:AR:49:LYS:N	79:B2:1389:C:H4'	2.04	0.73
42:BH:70:THR:HB	80:B5:3112:G:O2'	1.88	0.73
79:B2:1428:G:H5'	79:B2:1428:G:H8	1.53	0.73
80:B5:1781:C:H2'	80:B5:1782:U:H6	1.54	0.73
80:B5:3027:A:C2'	83:CV:109:GLN:CB	2.63	0.73
83:CV:85:ASN:HD22	83:CV:368:LYS:HD3	1.44	0.73
7:A6:170:ILE:HG21	7:A6:211:ILE:HD11	1.70	0.72
8:A7:51:ARG:CZ	80:B5:2677:G:C8	2.71	0.72
8:A7:93:ARG:N	85:CX:3:G:N2	2.35	0.72
12:AD:4:LEU:O	79:B2:1514:U:C6	2.42	0.72
22:AN:14:SER:OG	79:B2:960:U:H5	1.72	0.72
70:Bj:59:THR:HG22	82:B8:41:A:O2'	1.88	0.72
76:Bq:5:ARG:CZ	80:B5:1221:A:C1'	2.66	0.72
79:B2:431:C:O2	83:CV:386:SER:HA	1.89	0.72
79:B2:433:C:P	83:CV:391:VAL:HG23	2.29	0.72
8:A7:33:LYS:HE3	80:B5:2692:A:C5'	2.19	0.72
17:AI:25:ARG:HA	79:B2:400:A:C5'	2.18	0.72
20:AL:65:SER:HG	79:B2:114:C:HO2'	0.77	0.72
23:AO:88:GLY:CA	79:B2:888:U:C5'	2.66	0.72
23:AO:132:ARG:N	79:B2:1787:C:P	2.58	0.72
27:AS:143:ARG:HB3	79:B2:1461:C:O5'	1.88	0.72
28:AT:43:ASN:HB3	79:B2:1477:G:OP1	1.88	0.72
38:BD:207:TYR:CD1	81:B7:33:U:C2	2.77	0.72
39:BE:78:ARG:HG3	39:BE:78:ARG:HH11	1.54	0.72
48:BN:4:TYR:CZ	80:B5:148:G:OP2	2.42	0.72
52:BR:165:LYS:CB	79:B2:849:C:O2	2.37	0.72
79:B2:74:U:O2'	79:B2:75:U:OP2	2.06	0.72
79:B2:1062:A:OP2	88:B2:2075:OHX:N4	2.22	0.72
79:B2:1655:A:C2	80:B5:2291:A:N3	2.56	0.72
79:B2:1757:G:C2'	80:B5:2255:A:O2'	2.33	0.72
80:B5:1226:G:C1'	80:B5:1288:U:H4'	2.18	0.72
8:A7:96:ARG:NH2	84:CW:35:A:O4'	2.22	0.72
15:AG:128:THR:OG1	57:BW:80:ARG:CB	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:10:LYS:NZ	79:B2:339:C:P	2.61	0.72
52:BR:166:ASN:N	79:B2:850:A:C8	2.46	0.72
79:B2:649:U:O2'	79:B2:650:U:O5'	2.07	0.72
80:B5:2434:U:H4'	80:B5:2435:G:H5"	1.70	0.72
15:AG:185:GLN:NE2	79:B2:284:G:C2	2.57	0.72
23:AO:37:GLU:HA	79:B2:895:G:H4'	1.72	0.72
26:AR:48:ASN:HB2	79:B2:1389:C:O5'	1.89	0.72
61:Ba:12:ARG:HB3	80:B5:943:U:O2'	1.88	0.72
72:Bl:15:LYS:HB2	82:B8:46:G:OP1	1.89	0.72
79:B2:433:C:C6	83:CV:388:ARG:CA	2.71	0.72
79:B2:1542:G:N2	79:B2:1568:C:H1'	2.04	0.72
1:A0:3:LYS:HE3	79:B2:1030:A:OP1	1.90	0.72
27:AS:118:LYS:HE2	44:BJ:108:GLU:CD	2.13	0.72
50:BP:138:LYS:HG3	50:BP:140:GLU:HG3	1.72	0.72
55:BU:98:THR:HG23	55:BU:104:ARG:HH21	1.55	0.72
65:Be:11:LYS:O	65:Be:12:LYS:HB2	1.90	0.72
69:Bi:62:ARG:O	69:Bi:63:ASN:ND2	2.22	0.72
79:B2:759:U:OP1	88:B2:2057:OHX:N1	2.22	0.72
88:B2:1918:OHX:N4	88:B2:2062:OHX:N3	2.37	0.72
88:B2:1921:OHX:N5	88:B2:2048:OHX:N6	2.38	0.72
80:B5:1724:U:H4'	80:B5:1725:C:OP1	1.87	0.72
15:AG:188:ARG:HD2	79:B2:284:G:N7	2.05	0.72
23:AO:45:GLY:CA	79:B2:900:A:OP1	2.35	0.72
23:AO:128:LYS:C	79:B2:990:C:H4'	2.14	0.72
23:AO:129:LYS:NZ	88:B2:2011:OHX:N3	2.37	0.72
35:BA:204:MET:HG2	80:B5:914:A:C2	2.25	0.72
37:BC:80:GLY:O	80:B5:357:A:H1'	1.89	0.72
51:BQ:170:ARG:HA	51:BQ:174:ARG:HD2	1.71	0.72
56:BV:18:PRO:HG2	80:B5:1898:G:H1'	1.71	0.72
76:Bq:5:ARG:HH21	80:B5:1221:A:C4'	2.03	0.72
88:B2:1921:OHX:N2	88:B2:2048:OHX:N4	2.36	0.72
80:B5:2285:C:C4	83:CV:478:LYS:HG2	2.23	0.72
8:A7:68:ARG:HH22	27:AS:145:ARG:HB3	1.54	0.72
8:A7:93:ARG:N	79:B2:1637:C:O2	2.21	0.72
48:BN:67:ARG:NE	80:B5:1544:G:OP1	2.19	0.72
52:BR:165:LYS:O	79:B2:850:A:N3	2.22	0.72
75:Bo:71:ARG:HH21	75:Bo:80:ARG:NH1	1.86	0.72
79:B2:1600:A:H4'	79:B2:1601:G:OP1	1.90	0.72
79:B2:1683:C:O2'	79:B2:1684:U:O5'	2.07	0.72
83:CV:63:GLU:C	83:CV:210:TRP:CH2	2.67	0.72
8:A7:48:ARG:CB	80:B5:2678:A:OP1	2.38	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:174:LYS:CB	79:B2:79:C:HO2'	1.93	0.72
15:AG:175:ILE:C	79:B2:78:A:H2	1.97	0.72
20:AL:130:PRO:HD2	79:B2:115:G:C5	2.24	0.72
23:AO:102:LEU:HD22	23:AO:105:LEU:HD11	1.71	0.72
23:AO:125:SER:HG	79:B2:927:C:C4'	2.01	0.72
25:AQ:12:LYS:HD3	25:AQ:17:THR:HB	1.70	0.72
65:Be:91:THR:HG22	65:Be:92:TYR:HD1	1.54	0.72
69:Bi:25:LYS:CB	80:B5:156:G:OP2	2.32	0.72
8:A7:82:THR:HB	84:CW:29:G:H21	0.85	0.72
15:AG:132:ARG:CZ	79:B2:68:A:C4	2.71	0.72
17:AI:64:ASN:OD1	79:B2:257:A:C2	2.43	0.72
23:AO:88:GLY:HA3	79:B2:888:U:H5"	1.72	0.72
28:AT:43:ASN:CB	79:B2:1477:G:OP1	2.38	0.72
36:BB:103:THR:HG21	36:BB:147:GLU:OE1	1.90	0.72
43:BI:194:GLY:HA3	80:B5:1010:G:H2'	1.72	0.72
51:BQ:158:HIS:H	51:BQ:186:VAL:HG12	1.55	0.72
67:Bg:41:ARG:NE	80:B5:1739:U:H1'	2.03	0.72
75:Bo:105:GLN:NE2	84:CW:55:U:N3	2.30	0.72
79:B2:1160:A:H2'	79:B2:1161:C:C6	2.25	0.72
8:A7:82:THR:HG22	84:CW:29:G:N1	2.04	0.72
12:AD:204:ASP:CG	79:B2:1330:G:H1	1.90	0.72
17:AI:64:ASN:HB2	79:B2:258:C:H4'	1.71	0.72
26:AR:28:PHE:CD2	79:B2:1389:C:H6	2.00	0.72
38:BD:36:LEU:HG	80:B5:2748:A:C2	2.25	0.72
48:BN:81:TYR:OH	80:B5:908:G:H3'	1.89	0.72
63:Bc:87:VAL:HB	80:B5:1728:G:HO2'	1.53	0.72
65:Be:27:ARG:HB3	80:B5:655:C:OP1	1.89	0.72
74:Bn:11:ARG:CD	79:B2:1126:G:C4'	2.67	0.72
88:B2:1921:OHX:N1	88:B2:2048:OHX:N4	2.38	0.72
80:B5:2875:U:H3	80:B5:2952:G:H1	1.35	0.72
1:A0:79:ILE:HG21	79:B2:1794:A:N3	2.05	0.71
6:A5:102:VAL:O	6:A5:104:SER:N	2.23	0.71
10:AB:202:LYS:NZ	10:AB:202:LYS:O	2.23	0.71
23:AO:29:HIS:HB3	23:AO:41:ARG:HG3	1.72	0.71
25:AQ:122:ARG:HA	79:B2:1584:G:H5"	1.70	0.71
61:Ba:13:GLY:HA2	80:B5:943:U:H3'	1.71	0.71
61:Ba:34:MET:HG3	80:B5:96:G:OP2	1.90	0.71
69:Bi:76:ARG:O	80:B5:293:C:O2'	2.07	0.71
80:B5:2439:A:H2'	80:B5:2440:G:H5"	1.72	0.71
12:AD:9:ARG:NH1	79:B2:1489:U:P	2.63	0.71
31:AW:57:ARG:NE	79:B2:863:A:OP1	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:3:ARG:HD3	80:B5:911:C:H41	1.52	0.71
41:BG:181:LYS:HD2	82:B8:155:A:P	2.30	0.71
41:BG:193:LYS:HB3	80:B5:7:C:H5"	1.72	0.71
50:BP:69:ARG:HG2	50:BP:79:THR:HG23	1.71	0.71
53:BS:91:TYR:HB3	80:B5:1214:U:OP1	1.90	0.71
79:B2:433:C:H5"	83:CV:391:VAL:HG23	1.71	0.71
79:B2:1191:U:H5'	84:CW:32:U:OP1	1.88	0.71
80:B5:2437:G:H5'	80:B5:2437:G:H8	1.55	0.71
23:AO:46:MET:CA	79:B2:899:G:C5'	2.59	0.71
25:AQ:113:ASP:CG	25:AQ:114:ARG:H	1.98	0.71
35:BA:234:LYS:NZ	80:B5:2162:U:OP1	2.22	0.71
37:BC:52:VAL:HG22	80:B5:346:C:P	2.30	0.71
43:BI:115:MET:CB	80:B5:2865:U:OP1	2.39	0.71
48:BN:112:ASN:CG	82:B8:141:C:O2	2.33	0.71
52:BR:46:LYS:HZ1	80:B5:1766:G:H8	1.31	0.71
52:BR:164:LEU:N	79:B2:850:A:O5'	2.05	0.71
53:BS:13:ARG:HH11	53:BS:13:ARG:HG3	1.55	0.71
59:BY:36:SER:HB2	59:BY:37:LYS:HE2	1.70	0.71
8:A7:88:ARG:CG	84:CW:35:A:C1'	2.63	0.71
41:BG:95:ASN:OD1	41:BG:98:ARG:NH1	2.23	0.71
56:BV:67:PRO:HG3	79:B2:1660:A:OP1	1.90	0.71
83:CV:63:GLU:HA	83:CV:210:TRP:CD2	2.21	0.71
10:AB:173:THR:O	10:AB:177:GLN:NE2	2.23	0.71
12:AD:179:GLN:NE2	12:AD:179:GLN:O	2.24	0.71
20:AL:132:SER:HA	79:B2:336:G:H4'	1.69	0.71
25:AQ:75:VAL:HB	79:B2:1610:G:P	2.29	0.71
35:BA:69:TYR:HB2	80:B5:2558:U:O4'	1.91	0.71
37:BC:52:VAL:HG22	80:B5:346:C:OP1	1.89	0.71
44:BJ:124:GLY:HA3	80:B5:2674:A:C2	2.25	0.71
50:BP:29:THR:HG22	50:BP:87:SER:OG	1.90	0.71
65:Be:27:ARG:HB3	80:B5:655:C:P	2.31	0.71
79:B2:717:C:H42	79:B2:720:G:H22	1.37	0.71
1:A0:15:ARG:HA	79:B2:942:G:O6	1.90	0.71
25:AQ:135:ARG:O	79:B2:1581:C:C5'	2.38	0.71
25:AQ:143:ARG:HH12	84:CW:32:U:C4'	2.03	0.71
28:AT:57:ARG:HG3	28:AT:57:ARG:NH1	2.03	0.71
37:BC:115:HIS:HB2	80:B5:681:U:C6	2.26	0.71
49:BO:110[A]:PRO:O	49:BO:113[A]:ASP:N	2.20	0.71
63:Bc:84:LEU:HD13	80:B5:1715:A:C5	2.25	0.71
66:Bf:19:SER:HB3	80:B5:1330:A:OP1	1.90	0.71
67:Bg:33:GLN:NE2	80:B5:1696:A:O2'	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1179:G:P	84:CW:29:G:HO2'	2.13	0.71
8:A7:33:LYS:HE3	80:B5:2692:A:H5"	1.73	0.71
8:A7:34:LYS:HE3	80:B5:2692:A:O3'	1.90	0.71
8:A7:84:LYS:CD	84:CW:32:U:C6	2.74	0.71
15:AG:24:ILE:O	15:AG:26:VAL:N	2.23	0.71
15:AG:107:ALA:CB	79:B2:154:G:C4'	2.63	0.71
22:AN:73:ARG:HD3	79:B2:859:A:N6	2.05	0.71
35:BA:3:ARG:CD	80:B5:911:C:H42	2.01	0.71
63:Bc:9:SER:OG	63:Bc:10:ILE:N	2.22	0.71
63:Bc:85:PHE:CE1	80:B5:1728:G:C6	2.77	0.71
8:A7:77:THR:HG23	84:CW:43:C:O3'	1.90	0.71
11:AC:203:LYS:O	11:AC:206:THR:HG23	1.91	0.71
26:AR:20:TYR:CE2	26:AR:38:ILE:HD11	2.26	0.71
28:AT:41:SER:HA	79:B2:1564:U:OP1	1.90	0.71
33:AY:112:LYS:NZ	79:B2:55:A:OP1	2.24	0.71
51:BQ:147:ARG:NH2	80:B5:670:C:OP1	2.24	0.71
52:BR:114:LYS:HD3	80:B5:2093:A:N6	2.05	0.71
67:Bg:56:THR:OG1	80:B5:1740:U:C5'	2.37	0.71
80:B5:1024:G:H2'	80:B5:1026:A:H8	1.56	0.71
80:B5:2283:G:O3'	83:CV:477:SER:HB2	1.89	0.71
80:B5:2614:G:C2	84:CW:76:A:N6	2.59	0.71
13:AE:3:ARG:HB3	79:B2:93:A:H1'	1.73	0.71
17:AI:50:GLY:HA2	79:B2:397:A:O3'	1.89	0.71
18:AJ:110:GLN:NE2	18:AJ:126:ARG:HG2	2.04	0.71
23:AO:29:HIS:ND1	23:AO:29:HIS:O	2.24	0.71
37:BC:60:THR:HG21	37:BC:77:VAL:HG22	1.71	0.71
38:BD:145:PHE:CD2	80:B5:2748:A:H4'	2.26	0.71
38:BD:207:TYR:CB	81:B7:33:U:O2	2.36	0.71
38:BD:270:LYS:HG2	81:B7:2:G:H5'	1.71	0.71
44:BJ:59:ILE:HD12	44:BJ:65:ILE:HD11	1.72	0.71
49:BO:68[B]:ARG:NH1	80:B5:2988:C:P	2.64	0.71
54:BT:2:GLY:N	80:B5:2626:A:O5'	2.24	0.71
68:Bh:89:ARG:HD2	82:B8:38:U:O4	1.91	0.71
73:Bm:125:LYS:HD2	80:B5:2897:A:H5"	1.72	0.71
8:A7:32:SER:HA	80:B5:2707:C:C5'	2.20	0.71
9:AA:185:ARG:HB2	30:AV:45:ALA:HB3	1.72	0.71
14:AF:40:ILE:HG23	14:AF:42:LEU:HD22	1.70	0.71
15:AG:133:LEU:HA	79:B2:66:U:H3	1.55	0.71
23:AO:25:ASP:CG	79:B2:901:G:OP2	2.33	0.71
28:AT:48:GLN:OE1	79:B2:1532:U:H1'	1.91	0.71
32:AX:77:ILE:HG23	83:CV:391:VAL:CG1	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:40:TYR:O	80:B5:2550:U:C5	2.35	0.71
52:BR:165:LYS:NZ	79:B2:824:G:H1'	2.05	0.71
60:BZ:17:ARG:NH2	80:B5:1634:G:N7	2.38	0.71
74:Bn:11:ARG:CD	79:B2:1126:G:C5'	2.52	0.71
79:B2:415:C:C4	83:CV:288:ARG:HD2	2.22	0.71
79:B2:913:G:C6	80:B5:2206:G:C4'	2.65	0.71
79:B2:1290:U:H2'	79:B2:1291:G:C8	2.25	0.71
79:B2:1758:U:C5'	80:B5:2255:A:O3'	2.36	0.71
83:CV:537:GLY:HA2	84:CW:73:A:C8	2.26	0.71
6:A5:140:TYR:OH	79:B2:1234:A:H1'	1.91	0.70
8:A7:28:SER:HB2	80:B5:2708:C:C4'	2.18	0.70
11:AC:69:ILE:HD11	11:AC:133:LYS:HB3	1.73	0.70
14:AF:109:LYS:CE	79:B2:1474:G:P	2.77	0.70
14:AF:113:ILE:O	14:AF:117:THR:OG1	2.07	0.70
15:AG:149:LYS:HD2	79:B2:141:U:OP2	1.91	0.70
17:AI:41:LYS:HE2	79:B2:260:U:OP2	1.91	0.70
26:AR:48:ASN:HB2	79:B2:1389:C:C4'	2.21	0.70
32:AX:77:ILE:CG2	83:CV:391:VAL:CG1	2.69	0.70
38:BD:146:LEU:HD13	80:B5:2746:A:C2	2.26	0.70
48:BN:109:ARG:NH1	82:B8:140:G:O3'	2.23	0.70
80:B5:2621:G:C4	84:CW:75:C:C5	2.79	0.70
1:A0:95:ARG:HA	79:B2:1797:A:O4'	1.91	0.70
7:A6:76:ASP:OD1	7:A6:76:ASP:N	2.18	0.70
15:AG:128:THR:C	57:BW:81:PRO:HG2	2.16	0.70
28:AT:126:GLU:HA	28:AT:129:GLN:HG3	1.73	0.70
54:BT:87:LYS:NZ	80:B5:2728:G:N7	2.39	0.70
74:Bn:5:TRP:CZ3	79:B2:1775:U:C4	2.79	0.70
24:AP:59:LYS:NZ	79:B2:1242:A:OP1	2.23	0.70
29:AU:106:ILE:HG13	29:AU:107:THR:H	1.53	0.70
52:BR:104:ARG:HH12	80:B5:1949:G:C5'	2.03	0.70
59:BY:3:LYS:HD2	59:BY:8:VAL:HG23	1.72	0.70
61:Ba:77:LYS:O	61:Ba:79:TRP:N	2.24	0.70
63:Bc:88:GLY:H	80:B5:1729:A:P	2.15	0.70
79:B2:416:A:OP2	83:CV:287:LEU:HD22	1.85	0.70
79:B2:1564:U:H2'	79:B2:1565:C:C6	2.26	0.70
80:B5:2407:C:H2'	80:B5:2408:U:H6	1.56	0.70
9:AA:167:LYS:HB3	9:AA:168:HIS:CD2	2.26	0.70
29:AU:69:LYS:HD2	79:B2:1281:G:OP1	1.92	0.70
79:B2:992:A:H2	79:B2:1012:U:H3	1.38	0.70
80:B5:2836:C:H5	80:B5:2852:C:N4	1.86	0.70
8:A7:31:SER:O	80:B5:2707:C:C5'	2.40	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:157:ASP:OD1	30:AV:60:ARG:NH1	2.25	0.70
14:AF:99:MET:HB2	79:B2:1166:A:OP1	1.90	0.70
21:AM:54:ARG:O	21:AM:56:GLU:N	2.23	0.70
28:AT:88:VAL:HG22	79:B2:1172:G:N2	2.00	0.70
33:AY:105:ARG:HB2	79:B2:443:C:P	2.31	0.70
41:BG:240:ASN:ND2	80:B5:2584:G:C4	2.60	0.70
50:BP:129:THR:OG1	80:B5:1507:G:N7	2.23	0.70
52:BR:74:ARG:HD2	80:B5:1942:U:OP2	1.92	0.70
67:Bg:24:LYS:HB3	80:B5:1695:U:H5'	1.73	0.70
74:Bn:4:LYS:HE2	79:B2:1774:G:C4'	2.21	0.70
80:B5:1631:C:H5"	80:B5:1632:A:H5"	1.73	0.70
80:B5:2667:A:H5'	80:B5:2667:A:H8	1.56	0.70
8:A7:77:THR:CG2	84:CW:43:C:C3'	2.64	0.70
15:AG:110:ALA:CB	79:B2:163:G:C1'	2.63	0.70
23:AO:41:ARG:CZ	79:B2:916:U:N3	2.47	0.70
35:BA:68:LYS:HZ3	80:B5:1579:C:H5"	1.55	0.70
38:BD:207:TYR:CE2	81:B7:33:U:C4	2.79	0.70
40:BF:151:ARG:NH2	80:B5:1334:U:O2'	2.24	0.70
42:BH:166:ARG:NH1	42:BH:168:ARG:HH22	1.85	0.70
47:BM:17:VAL:HG21	47:BM:74:ARG:HB2	1.72	0.70
54:BT:54:HIS:CD2	80:B5:2724:U:H4'	2.26	0.70
79:B2:1448:G:O6	88:B2:2081:OHX:N1	2.25	0.70
79:B2:1746:A:H4'	80:B5:2290:C:O2'	1.92	0.70
15:AG:9:VAL:HG13	57:BW:78:ALA:O	1.91	0.70
25:AQ:97:VAL:HG12	25:AQ:98:ASP:H	1.57	0.70
28:AT:86:ARG:HH11	28:AT:86:ARG:HG3	1.55	0.70
46:BL:99:HIS:CD2	80:B5:156:G:C2	2.78	0.70
52:BR:170:ARG:NH2	88:BR:201:OHX:N4	2.38	0.70
79:B2:48:G:C5	83:CV:387:ARG:NH1	2.59	0.70
79:B2:226:A:H2'	79:B2:227:U:H5'	1.73	0.70
79:B2:653:C:H2'	79:B2:654:C:O4'	1.92	0.70
80:B5:2286:U:C5	83:CV:478:LYS:CA	2.75	0.70
83:CV:239:VAL:O	83:CV:359:THR:HG23	1.92	0.70
8:A7:51:ARG:CD	80:B5:2677:G:C4'	2.68	0.70
15:AG:58:LYS:CA	79:B2:155:U:H5'	2.21	0.70
15:AG:62:PRO:HB2	79:B2:162:A:H5'	1.74	0.70
15:AG:174:LYS:HE2	79:B2:79:C:O2	1.92	0.70
17:AI:31:ARG:NH2	79:B2:333:A:OP1	2.25	0.70
18:AJ:117:GLY:O	18:AJ:119:ALA:N	2.24	0.70
38:BD:23:ARG:NH2	80:B5:2703:A:OP2	2.23	0.70
38:BD:260:PHE:CD2	81:B7:121:U:C5'	2.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1769:U:OP2	88:B2:2028:OHX:N1	2.25	0.70
79:B2:1780:G:O6	80:B5:2263:C:H4'	1.46	0.70
80:B5:595:G:N1	80:B5:609:G:H5"	2.06	0.70
1:A0:97:PRO:C	79:B2:1798:U:C5	2.70	0.70
13:AE:22:LYS:NZ	79:B2:772:G:OP1	2.21	0.70
15:AG:133:LEU:C	79:B2:66:U:C4	2.61	0.70
27:AS:118:LYS:CE	44:BJ:108:GLU:CD	2.65	0.70
28:AT:43:ASN:CG	79:B2:1477:G:OP1	2.34	0.70
35:BA:199:THR:HG21	80:B5:914:A:C8	2.27	0.70
43:BI:102:MET:HB3	83:CV:471:LYS:HZ3	1.50	0.70
43:BI:194:GLY:H	80:B5:1010:G:H21	1.40	0.70
46:BL:128:ARG:NH2	80:B5:170:G:OP1	2.24	0.70
48:BN:140:LYS:HG3	80:B5:127:G:OP1	1.91	0.70
52:BR:43:LYS:O	52:BR:47:ASN:HB2	1.92	0.70
53:BS:39:SER:OG	81:B7:98:C:OP1	2.08	0.70
80:B5:1765:U:H4'	80:B5:1765:U:OP1	1.91	0.70
1:A0:92:ARG:HG2	79:B2:1796:C:OP1	1.92	0.70
6:A5:146:SER:HB3	79:B2:1234:A:O2'	1.91	0.70
12:AD:29:LEU:HD21	12:AD:69:LEU:HD11	1.73	0.70
23:AO:123:SER:OG	79:B2:885:G:N3	2.24	0.70
24:AP:115:TYR:HE2	79:B2:1557:U:H5'	1.54	0.70
28:AT:49:ASP:HB3	28:AT:53:TRP:HB3	1.73	0.70
48:BN:112:ASN:OD1	82:B8:141:C:H1'	1.92	0.70
79:B2:434:G:N7	88:CV:601:OHX:N4	2.40	0.70
88:B2:1915:OHX:N2	88:B2:2069:OHX:N2	2.40	0.70
83:CV:537:GLY:CA	84:CW:73:A:C8	2.75	0.70
9:AA:52:LYS:HD2	30:AV:82:VAL:HA	1.72	0.69
12:AD:161:GLY:CA	79:B2:1420:C:O2	2.40	0.69
17:AI:51:GLY:N	79:B2:397:A:C5'	2.55	0.69
26:AR:43:SER:HB2	79:B2:1332:C:OP1	1.91	0.69
27:AS:40:ARG:CZ	79:B2:1539:G:H4'	2.22	0.69
29:AU:59:PRO:HG3	79:B2:1381:U:H4'	1.74	0.69
29:AU:75:GLY:CA	79:B2:1194:A:OP2	2.40	0.69
32:AX:91:GLY:O	32:AX:93:LEU:N	2.25	0.69
33:AY:8:ARG:HB3	79:B2:780:A:H8	1.55	0.69
37:BC:51:ALA:HB3	82:B8:27:U:H4'	1.74	0.69
38:BD:270:LYS:HB2	81:B7:2:G:H4'	1.72	0.69
52:BR:166:ASN:OD1	88:BR:201:OHX:N4	2.25	0.69
61:Ba:8:THR:CG2	80:B5:662:U:OP1	2.38	0.69
64:Bd:75:ILE:HG12	64:Bd:93:VAL:HG13	1.73	0.69
71:Bk:42:LYS:NZ	80:B5:1750:A:OP2	2.16	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Bn:4:LYS:CE	79:B2:1774:G:O4’	2.36	0.69
80:B5:155:G:H5”	80:B5:156:G:C8	2.27	0.69
80:B5:439:C:H4’	80:B5:440:A:H5’	1.74	0.69
8:A7:86:ASN:CG	84:CW:32:U:C2	2.50	0.69
23:AO:88:GLY:HA3	79:B2:888:U:H5’	1.67	0.69
28:AT:28:LEU:HD13	28:AT:29:GLU:H	1.56	0.69
33:AY:119:PHE:CZ	79:B2:86:A:H5’	2.27	0.69
35:BA:69:TYR:O	80:B5:1650:G:H4’	1.92	0.69
38:BD:269:SER:HA	81:B7:22:A:N1	2.07	0.69
42:BH:166:ARG:HH11	42:BH:168:ARG:NH2	1.87	0.69
43:BI:102:MET:HA	83:CV:471:LYS:NZ	2.05	0.69
54:BT:78:LYS:CE	80:B5:2728:G:O6	2.40	0.69
62:Bb:16:ALA:O	62:Bb:20:GLY:HA3	1.92	0.69
79:B2:432:G:H4’	83:CV:385:VAL:HG13	1.74	0.69
79:B2:995:A:C5’	80:B5:2196:C:OP1	2.32	0.69
79:B2:1179:G:H5”	84:CW:29:G:O2’	1.91	0.69
10:AB:176:VAL:O	10:AB:178:GLY:N	2.25	0.69
14:AF:185:ARG:NH1	79:B2:1572:G:H1’	2.06	0.69
14:AF:185:ARG:HH22	79:B2:1572:G:C2’	2.05	0.69
15:AG:175:ILE:HG12	79:B2:78:A:C1’	2.14	0.69
23:AO:125:SER:OG	79:B2:927:C:C4’	2.39	0.69
53:BS:84:ARG:HD3	81:B7:89:G:H4’	1.74	0.69
62:Bb:33:LYS:NZ	80:B5:2722:U:OP1	2.24	0.69
79:B2:565:C:O2	88:B2:1917:OHX:N5	2.25	0.69
79:B2:582:U:H5”	79:B2:582:U:H6	1.57	0.69
80:B5:2624:G:C4	84:CW:76:A:OP1	2.25	0.69
20:AL:78:THR:HG22	20:AL:84:ILE:HG22	1.72	0.69
21:AM:61:VAL:HG13	21:AM:121:VAL:HG23	1.75	0.69
27:AS:134:ARG:NE	79:B2:1546:G:OP2	2.23	0.69
38:BD:12:TYR:OH	80:B5:2688:U:OP1	2.10	0.69
44:BJ:23:VAL:HG12	44:BJ:25:GLU:H	1.56	0.69
52:BR:165:LYS:NZ	79:B2:824:G:N3	2.40	0.69
53:BS:9:VAL:HG22	53:BS:61:ILE:HD13	1.74	0.69
53:BS:137:ARG:HD3	80:B5:1213:G:OP1	1.91	0.69
54:BT:8:ARG:HD3	80:B5:2757:U:C4’	2.22	0.69
67:Bg:82:ALA:CB	80:B5:1639:C:OP2	2.38	0.69
72:Bl:45:ARG:NH2	80:B5:1841:A:C2	2.60	0.69
79:B2:838:G:N7	88:B2:2069:OHX:N6	2.40	0.69
80:B5:2286:U:C2’	83:CV:479:PRO:HD2	2.22	0.69
83:CV:388:ARG:NE	88:CV:601:OHX:N4	2.39	0.69
13:AE:79:ASP:HB3	13:AE:82:TYR:HB2	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AK:68:LEU:HD11	19:AK:76:LEU:HD21	1.73	0.69
25:AQ:136:SER:HA	79:B2:1580:C:O2'	1.92	0.69
36:BB:56:ILE:HD11	36:BB:359:ILE:HG12	1.74	0.69
46:BL:100:ARG:NE	80:B5:66:A:OP2	2.26	0.69
48:BN:38:ARG:NH2	82:B8:143:U:OP1	2.25	0.69
52:BR:103:ARG:NH1	80:B5:1722:U:OP2	2.24	0.69
58:BX:49:LYS:CE	82:B8:135:G:OP1	2.38	0.69
58:BX:51:VAL:HG21	68:Bh:62:GLN:HB3	1.75	0.69
60:BZ:5:LEU:HD22	60:BZ:77:TYR:CE1	2.27	0.69
60:BZ:15:ARG:HD3	80:B5:1637:A:C3'	2.23	0.69
79:B2:437:A:OP1	88:B2:2047:OHX:N3	2.26	0.69
79:B2:591:A:H2'	79:B2:592:A:C8	2.27	0.69
79:B2:1711:C:H2'	79:B2:1712:A:H5"	1.74	0.69
80:B5:549:U:H2'	80:B5:550:A:C8	2.27	0.69
17:AI:49:ARG:HG2	79:B2:117:U:O2'	1.92	0.69
17:AI:171:SER:CA	79:B2:209:U:H5'	2.23	0.69
29:AU:23:ARG:NH2	79:B2:1347:U:H6	1.90	0.69
35:BA:204:MET:HG2	80:B5:914:A:C4	2.28	0.69
52:BR:165:LYS:CG	79:B2:849:C:O2	2.39	0.69
52:BR:168:ALA:HB3	79:B2:850:A:H2'	1.74	0.69
56:BV:12:ARG:NH2	80:B5:3092:C:O2'	2.26	0.69
60:BZ:16:GLY:O	60:BZ:18:TYR:N	2.25	0.69
73:Bm:122:ARG:NH2	80:B5:2896:A:O2'	2.26	0.69
75:Bo:104:LEU:CA	84:CW:55:U:O4	2.39	0.69
8:A7:48:ARG:HG3	80:B5:2678:A:H5'	1.74	0.69
17:AI:47:ARG:HH21	79:B2:397:A:P	2.15	0.69
26:AR:50:ILE:O	26:AR:54:THR:HG23	1.92	0.69
32:AX:99:ASN:C	83:CV:378:LYS:NZ	2.49	0.69
35:BA:85:GLY:CA	80:B5:2554:A:C4	2.76	0.69
36:BB:41:VAL:CA	36:BB:185:GLY:HA3	2.19	0.69
38:BD:48:LYS:NZ	80:B5:2749:G:OP1	2.17	0.69
41:BG:137:ASN:HB2	80:B5:148:G:C6	2.27	0.69
61:Ba:35:ALA:CB	80:B5:39:A:H5"	2.22	0.69
80:B5:1875:G:H2'	80:B5:1876:U:H5"	1.73	0.69
9:AA:193:GLN:O	9:AA:195:TRP:N	2.26	0.69
15:AG:62:PRO:CG	79:B2:161:U:O2'	2.38	0.69
15:AG:133:LEU:CA	79:B2:66:U:C4	2.75	0.69
18:AJ:163:PRO:O	18:AJ:165:GLY:N	2.26	0.69
35:BA:187:HIS:CE1	80:B5:1794:G:N1	2.61	0.69
35:BA:237:LEU:HD23	80:B5:2183:A:H2	1.56	0.69
38:BD:270:LYS:HB2	81:B7:2:G:C4'	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:102:MET:HA	83:CV:471:LYS:HZ1	1.57	0.69
44:BJ:142:LYS:NZ	80:B5:2664:C:OP2	2.25	0.69
49:BO:62[A]:THR:H	49:BO:69[A]:GLY:HA3	1.57	0.69
49:BO:110[A]:PRO:O	49:BO:112[A]:TYR:N	2.26	0.69
50:BP:33:ALA:HB1	50:BP:117:ILE:HG12	1.74	0.69
52:BR:165:LYS:HB2	79:B2:849:C:H2'	1.75	0.69
54:BT:5:HIS:N	80:B5:2630:C:OP2	2.24	0.69
67:Bg:83:ASN:ND2	80:B5:1709:C:OP1	2.26	0.69
68:Bh:89:ARG:NH1	82:B8:38:U:C4	2.61	0.69
74:Bn:2:ARG:HH22	79:B2:1773:C:N4	1.69	0.69
79:B2:46:A:N1	83:CV:387:ARG:HB3	2.07	0.69
79:B2:131:C:OP1	88:B2:1951:OHX:N4	2.26	0.69
79:B2:440:U:O5'	83:CV:276:ARG:HG3	1.93	0.69
79:B2:1179:G:C5'	84:CW:29:G:O2'	2.41	0.69
79:B2:1533:C:H4'	79:B2:1539:G:N1	2.06	0.69
88:B2:1921:OHX:N1	88:B2:2048:OHX:N3	2.40	0.69
80:B5:1781:C:H2'	80:B5:1782:U:C6	2.26	0.69
1:A0:3:LYS:HA	79:B2:1792:G:O5'	1.93	0.69
15:AG:175:ILE:HG13	79:B2:78:A:C4	2.23	0.69
18:AJ:109:LEU:HD13	18:AJ:129:ILE:HD13	1.75	0.69
37:BC:334:PHE:CD2	80:B5:578:A:C6	2.81	0.69
38:BD:272:TYR:CE2	81:B7:22:A:C1'	2.76	0.69
49:BO:68[A]:ARG:NH1	80:B5:2988:C:P	2.65	0.69
63:Bc:26:GLY:O	63:Bc:30:THR:HG23	1.93	0.69
79:B2:1655:A:H4'	80:B5:2302:G:H4'	1.73	0.69
79:B2:1738:U:O4	88:B2:1919:OHX:N4	2.26	0.69
15:AG:132:ARG:HG3	79:B2:68:A:H61	1.47	0.69
15:AG:159:ARG:HD3	79:B2:77:U:H3	1.57	0.69
17:AI:75:LYS:HB2	79:B2:258:C:H5"	1.74	0.69
22:AN:55:ARG:NH1	22:AN:56:ASP:OD2	2.26	0.69
35:BA:209:HIS:HE1	80:B5:2184:U:OP1	1.76	0.69
35:BA:236:GLY:H	80:B5:2183:A:C2'	2.05	0.69
49:BO:60[B]:LYS:NZ	80:B5:1307:G:H5"	2.08	0.69
58:BX:111:ASN:HD21	80:B5:1608:C:H5"	1.55	0.69
70:Bj:21:ARG:HG3	82:B8:103:G:H4'	1.75	0.69
80:B5:1355:A:H4'	80:B5:1356:U:O5'	1.93	0.69
80:B5:2403:G:N2	80:B5:2404:A:H62	1.91	0.69
80:B5:2621:G:H2'	84:CW:75:C:C2	2.13	0.69
83:CV:199:ALA:HB1	89:CV:602:GCP:N7	2.08	0.69
83:CV:248:ASP:CB	83:CV:360:LEU:CD2	2.68	0.69
2:A1:67:THR:O	79:B2:871:G:O2'	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:32:ARG:NH2	79:B2:1597:A:OP2	2.26	0.68
8:A7:32:SER:CB	80:B5:2692:A:H1'	2.22	0.68
32:AX:99:ASN:HB2	83:CV:378:LYS:HZ2	1.58	0.68
35:BA:199:THR:OG1	80:B5:913:A:C5'	2.41	0.68
36:BB:126:LYS:NZ	80:B5:3294:A:OP2	2.26	0.68
41:BG:38:GLN:HA	80:B5:2557:A:C2	2.29	0.68
52:BR:168:ALA:CB	79:B2:850:A:O2'	2.40	0.68
79:B2:1646:C:C3'	80:B5:2257:C:H42	2.05	0.68
80:B5:2621:G:C8	84:CW:75:C:C4	2.75	0.68
22:AN:84:ILE:HG22	22:AN:135:LEU:HD21	1.73	0.68
35:BA:21:ARG:HD2	80:B5:825:U:OP1	1.93	0.68
35:BA:231:SER:OG	80:B5:2164:A:OP2	2.10	0.68
36:BB:41:VAL:HA	36:BB:185:GLY:CA	2.22	0.68
38:BD:272:TYR:CZ	81:B7:22:A:C1'	2.75	0.68
41:BG:90:THR:HA	41:BG:214:LEU:HD21	1.75	0.68
42:BH:95:ALA:O	73:Bm:77:ILE:HG12	1.93	0.68
43:BI:99:ILE:HG13	43:BI:123:HIS:HB2	1.76	0.68
46:BL:61:PRO:HD3	80:B5:75:G:H4'	1.74	0.68
79:B2:176:C:OP1	88:B2:1951:OHX:N3	2.26	0.68
79:B2:415:C:C6	83:CV:288:ARG:HG2	2.29	0.68
79:B2:431:C:H2'	83:CV:386:SER:CA	2.23	0.68
88:B7:203:OHX:N1	88:B7:219:OHX:N5	2.41	0.68
8:A7:51:ARG:NH1	80:B5:2677:G:N9	2.41	0.68
15:AG:87:ARG:NH1	79:B2:159:U:O2	2.26	0.68
15:AG:174:LYS:CB	79:B2:79:C:C4'	2.71	0.68
23:AO:29:HIS:NE2	79:B2:918:U:O4'	2.25	0.68
29:AU:53:LYS:CB	79:B2:1345:A:H5'	2.24	0.68
31:AW:15:ASN:HD21	31:AW:71:LYS:HA	1.58	0.68
36:BB:246:LEU:N	80:B5:1889:G:OP1	2.25	0.68
43:BI:103:LEU:C	83:CV:471:LYS:HB2	2.19	0.68
52:BR:171:ASP:CG	79:B2:852:C:P	2.11	0.68
69:Bi:54:GLU:HG2	69:Bi:90:MET:HE1	1.76	0.68
70:Bj:79:GLN:NE2	82:B8:95:G:C6	2.61	0.68
80:B5:3289:G:H2'	80:B5:3290:G:H8	1.59	0.68
8:A7:72:ARG:HH11	79:B2:1460:A:HO2'	1.40	0.68
23:AO:20:TYR:HE2	79:B2:917:U:OP1	1.75	0.68
28:AT:12:GLN:OE1	79:B2:1529:C:C1'	2.41	0.68
32:AX:144:ARG:NH1	83:CV:314:LYS:CE	2.57	0.68
46:BL:99:HIS:CD2	80:B5:156:G:C6	2.81	0.68
52:BR:8:LYS:NZ	80:B5:1473:G:P	2.67	0.68
53:BS:50:LYS:CE	81:B7:76:A:N3	2.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3317:U:H4'	80:B5:3318:G:O5'	1.92	0.68
17:AI:50:GLY:HA2	79:B2:397:A:C4'	2.23	0.68
17:AI:92:ARG:NH2	80:B5:2107:A:H4'	2.07	0.68
28:AT:12:GLN:OE1	79:B2:1529:C:H1'	1.92	0.68
38:BD:105:ILE:O	38:BD:109:THR:HG23	1.92	0.68
38:BD:207:TYR:CE2	81:B7:33:U:C5	2.81	0.68
51:BQ:20:LYS:HD3	80:B5:671:U:O2'	1.93	0.68
51:BQ:63:SER:HB2	80:B5:785:G:N2	2.09	0.68
74:Bn:17:ARG:CD	79:B2:1116:A:H5"	2.23	0.68
76:Bq:39:HIS:CD2	76:Bq:39:HIS:H	2.10	0.68
79:B2:131:C:O2'	79:B2:132:U:OP1	2.11	0.68
79:B2:839:U:H2'	79:B2:840:U:H5'	1.76	0.68
83:CV:20:LYS:CB	89:CV:602:GCP:H8	2.00	0.68
4:A3:31:ILE:CD1	79:B2:1199:G:H1	2.07	0.68
8:A7:46:LYS:HG3	80:B5:2678:A:C4'	2.23	0.68
13:AE:22:LYS:N	79:B2:773:C:OP1	2.26	0.68
26:AR:48:ASN:ND2	79:B2:1389:C:P	2.62	0.68
39:BE:26:ARG:NH2	80:B5:607:A:OP1	2.26	0.68
40:BF:134:VAL:O	40:BF:229:PHE:HA	1.94	0.68
54:BT:127:GLN:HG3	80:B5:1095:U:N3	2.09	0.68
60:BZ:69:LYS:NZ	80:B5:1633:C:OP1	2.25	0.68
68:Bh:76:GLN:O	68:Bh:81:ARG:NH1	2.26	0.68
79:B2:431:C:C2	83:CV:386:SER:CB	2.76	0.68
79:B2:701:U:H3	79:B2:737:A:N6	1.87	0.68
79:B2:1428:G:O5'	84:CW:34:C:C5'	2.41	0.68
80:B5:1013:G:H2'	80:B5:1014:U:O4'	1.94	0.68
80:B5:2623:G:C2'	84:CW:76:A:OP2	2.41	0.68
10:AB:115:ARG:O	79:B2:931:C:H4'	1.94	0.68
11:AC:116:LYS:HG2	11:AC:127:ALA:HB3	1.75	0.68
15:AG:59:GLN:N	79:B2:155:U:C5'	2.56	0.68
15:AG:160:ARG:NH2	79:B2:68:A:OP1	2.27	0.68
15:AG:164:LYS:HB3	15:AG:167:LYS:HB3	1.75	0.68
16:AH:133:THR:HG22	16:AH:159:VAL:HG12	1.73	0.68
17:AI:114:GLU:HG2	17:AI:120:THR:HA	1.75	0.68
26:AR:4:VAL:HG22	79:B2:1402:G:H4'	1.74	0.68
36:BB:117:ARG:CZ	36:BB:175:LYS:HD2	2.23	0.68
38:BD:207:TYR:CD2	81:B7:33:U:N3	2.62	0.68
42:BH:188:THR:HG22	42:BH:189:GLU:HG2	1.75	0.68
61:Ba:62:HIS:CE1	80:B5:304:G:C6	2.82	0.68
79:B2:1656:U:O2'	80:B5:2292:U:O2'	1.69	0.68
83:CV:199:ALA:HB3	89:CV:602:GCP:C5	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:200:VAL:CA	89:CV:602:GCP:N1	2.57	0.68
8:A7:28:SER:CB	80:B5:2708:C:O4'	2.42	0.68
8:A7:78:ASP:HB3	84:CW:43:C:N4	2.07	0.68
13:AE:85:GLY:N	13:AE:88:ASP:OD2	2.27	0.68
14:AF:185:ARG:NH1	79:B2:1572:G:H8	1.91	0.68
44:BJ:55:ARG:NH2	84:CW:47:U:O3'	2.26	0.68
65:Be:91:THR:HG22	65:Be:92:TYR:CD1	2.29	0.68
68:Bh:78:LYS:HA	68:Bh:81:ARG:HD3	1.76	0.68
79:B2:1644:C:O2	80:B5:2255:A:N1	2.26	0.68
80:B5:2507:C:O2'	80:B5:2508:U:OP1	2.10	0.68
80:B5:3330:A:H5"	80:B5:3330:A:H8	1.59	0.68
83:CV:537:GLY:O	84:CW:73:A:O4'	2.11	0.68
8:A7:47:ALA:HA	80:B5:2678:A:C8	2.28	0.68
25:AQ:143:ARG:NH1	84:CW:32:U:C4'	2.57	0.68
26:AR:48:ASN:HB3	79:B2:1389:C:C4'	2.23	0.68
36:BB:150:ARG:HG2	36:BB:150:ARG:HH11	1.58	0.68
65:Be:27:ARG:NH2	80:B5:654:C:OP1	2.27	0.68
67:Bg:52:GLN:HG3	80:B5:1738:C:C1'	2.24	0.68
79:B2:1449:U:H2'	79:B2:1450:U:C6	2.28	0.68
80:B5:3228:C:O2'	80:B5:3229:G:OP2	2.11	0.68
9:AA:101:ARG:HH22	79:B2:1320:U:H3'	1.50	0.68
16:AH:107:ARG:NH1	79:B2:741:C:O2	2.27	0.68
16:AH:119:THR:HG23	79:B2:639:U:OP1	1.93	0.68
35:BA:15:ILE:HD12	80:B5:822:G:N3	2.09	0.68
41:BG:136:LEU:HD12	80:B5:147:U:H5'	1.76	0.68
43:BI:194:GLY:HA3	80:B5:1010:G:N3	2.09	0.68
51:BQ:69:ARG:HH22	80:B5:720:A:H2	1.39	0.68
54:BT:6:GLY:CA	80:B5:2630:C:H5"	2.23	0.68
55:BU:19:VAL:O	55:BU:23:THR:OG1	2.11	0.68
60:BZ:115:LYS:HD3	80:B5:1629:U:H4'	1.75	0.68
67:Bg:82:ALA:HB1	80:B5:1638:A:H5"	1.75	0.68
69:Bi:26:ILE:HD13	80:B5:155:G:C1'	2.21	0.68
72:Bl:19:GLN:NE2	82:B8:53:A:OP1	2.27	0.68
76:Bq:5:ARG:NH2	80:B5:1221:A:C4'	2.57	0.68
79:B2:1655:A:H1'	80:B5:2302:G:O4'	1.93	0.68
80:B5:2572:C:O2'	80:B5:2573:G:OP2	2.08	0.68
80:B5:2623:G:N1	84:CW:76:A:OP1	2.15	0.68
18:AJ:169:PRO:HD2	18:AJ:174:ARG:HD2	1.76	0.67
25:AQ:40:GLU:OE2	79:B2:1529:C:C4'	2.42	0.67
35:BA:204:MET:HE2	35:BA:209:HIS:HB2	1.75	0.67
47:BM:121:MET:HE1	80:B5:3215:A:O5'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:38:ARG:HH22	82:B8:143:U:P	2.17	0.67
65:Be:38:ILE:HD11	80:B5:640:U:C5	2.28	0.67
65:Be:40:SER:O	65:Be:44:ARG:HG3	1.94	0.67
66:Bf:88:ASN:HB2	80:B5:429:U:H4'	1.74	0.67
80:B5:2622:C:N3	84:CW:75:C:C4'	2.56	0.67
8:A7:85:SER:C	84:CW:31:A:C5	2.34	0.67
10:AB:70:LEU:O	10:AB:74:GLN:N	2.28	0.67
20:AL:4:GLU:HG3	20:AL:5:LEU:HG	1.74	0.67
23:AO:41:ARG:HH21	79:B2:915:A:N6	1.89	0.67
31:AW:47:ILE:HG22	31:AW:65:LEU:HB3	1.76	0.67
63:Bc:22:LYS:HD3	63:Bc:94:GLU:HG3	1.75	0.67
79:B2:38:C:H2'	79:B2:39:A:H5'	1.76	0.67
80:B5:2996:U:OP1	80:B5:2996:U:H4'	1.95	0.67
15:AG:53:SER:O	79:B2:163:G:H4'	1.94	0.67
17:AI:178:ARG:NH2	79:B2:207:U:O2	2.27	0.67
18:AJ:53:ARG:NH1	18:AJ:97:LEU:O	2.27	0.67
22:AN:107:LYS:HE3	79:B2:1019:A:OP2	1.94	0.67
54:BT:51:GLY:HA3	54:BT:92:ARG:HG3	1.76	0.67
63:Bc:99:ASP:OD1	63:Bc:99:ASP:N	2.27	0.67
67:Bg:41:ARG:CZ	80:B5:1739:U:C1'	2.72	0.67
79:B2:1339:C:O2'	79:B2:1340:U:OP1	2.12	0.67
79:B2:1758:U:H5'	80:B5:2256:A:P	2.34	0.67
80:B5:2957:G:H8	80:B5:2957:G:H5'	1.59	0.67
1:A0:87:ARG:CZ	79:B2:1797:A:C5	2.78	0.67
4:A3:33:LYS:O	4:A3:36:LEU:HD23	1.95	0.67
9:AA:185:ARG:HA	30:AV:44:ARG:HA	1.77	0.67
13:AE:13:ALA:O	13:AE:39:ARG:NH2	2.27	0.67
15:AG:8:PRO:HB3	79:B2:165:G:C5'	2.24	0.67
15:AG:112:VAL:HG22	79:B2:164:A:C4'	2.12	0.67
16:AH:50:ASP:HA	16:AH:56:LYS:HA	1.76	0.67
22:AN:15:ALA:O	79:B2:959:U:H5'	1.94	0.67
36:BB:139:GLN:O	36:BB:141:GLY:N	2.27	0.67
38:BD:40:HIS:CD2	38:BD:42:ALA:H	2.11	0.67
41:BG:148:ALA:HA	41:BG:201:THR:HG22	1.76	0.67
46:BL:16:LYS:O	80:B5:48:A:OP2	2.12	0.67
46:BL:45:LYS:HE3	80:B5:241:G:H5'	1.76	0.67
79:B2:1619:C:OP2	88:B2:2071:OHX:N4	2.28	0.67
80:B5:2621:G:C1'	84:CW:75:C:C5	2.72	0.67
25:AQ:122:ARG:CA	79:B2:1584:G:H5"	2.24	0.67
37:BC:93:MET:O	80:B5:1438:U:H1'	1.95	0.67
42:BH:44:THR:HG22	80:B5:3186:A:C2	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BZ:135:ARG:CZ	80:B5:1807:G:H5”	2.23	0.67
70:Bj:8:PHE:HD2	80:B5:1845:G:O2’	1.77	0.67
79:B2:433:C:C5’	83:CV:391:VAL:HG23	2.25	0.67
79:B2:1756[B]:A:O2’	79:B2:1757:G:H5’	1.95	0.67
80:B5:304:G:N3	80:B5:304:G:H5’	2.10	0.67
80:B5:3295:A:H2’	80:B5:3296:A:C8	2.29	0.67
8:A7:89:ARG:CZ	84:CW:33:U:C4	2.78	0.67
14:AF:94:THR:HB	14:AF:114:ILE:HG13	1.77	0.67
22:AN:3:ARG:NH1	79:B2:867:G:OP1	2.28	0.67
24:AP:12:PHE:HD1	44:BJ:85:LYS:CE	2.08	0.67
29:AU:23:ARG:NH2	79:B2:1347:U:C6	2.63	0.67
38:BD:274:GLN:OE1	81:B7:60:G:N3	2.27	0.67
79:B2:838:G:O6	88:B2:2069:OHX:N2	2.28	0.67
79:B2:913:G:O6	80:B5:2206:G:C5’	2.38	0.67
79:B2:1747:G:O2’	80:B5:2304:C:C5’	2.34	0.67
9:AA:70:PRO:HB2	9:AA:94:GLY:HA3	1.77	0.67
23:AO:38:THR:OG1	79:B2:896:U:H1’	1.93	0.67
23:AO:120:PRO:HB3	79:B2:887:A:H5”	1.75	0.67
32:AX:130:VAL:O	32:AX:131:SER:HB3	1.93	0.67
36:BB:308:MET:HE2	36:BB:372:THR:C	2.20	0.67
37:BC:300:ARG:HH11	37:BC:300:ARG:HG2	1.58	0.67
49:BO:68[B]:ARG:NH1	80:B5:2988:C:OP1	2.27	0.67
52:BR:102:LEU:HD13	52:BR:127:SER:HB2	1.76	0.67
53:BS:50:LYS:HZ1	81:B7:76:A:H1’	1.59	0.67
67:Bg:41:ARG:HG2	67:Bg:56:THR:HG21	1.76	0.67
67:Bg:56:THR:OG1	80:B5:1740:U:H5”	1.95	0.67
79:B2:1310:U:O4	88:B2:2078:OHX:N3	2.28	0.67
88:B2:1918:OHX:N2	88:B2:2062:OHX:N5	2.43	0.67
80:B5:1560:G:O2’	80:B5:1561:G:OP1	2.12	0.67
80:B5:2285:C:H5’	83:CV:475:ARG:O	1.95	0.67
7:A6:300:THR:HG23	7:A6:314:GLN:HG3	1.76	0.67
9:AA:71:GLU:O	9:AA:96:THR:HG22	1.95	0.67
15:AG:174:LYS:HB2	79:B2:79:C:C3’	2.22	0.67
15:AG:174:LYS:CB	79:B2:79:C:C2’	2.38	0.67
32:AX:96:VAL:HG23	32:AX:97:ASP:H	1.60	0.67
36:BB:221:THR:HG22	36:BB:273:HIS:H	1.60	0.67
36:BB:283:TYR:HB3	36:BB:323:MET:HE2	1.76	0.67
38:BD:269:SER:O	81:B7:22:A:N6	2.27	0.67
41:BG:129:PRO:CG	80:B5:121:A:C2	2.78	0.67
53:BS:13:ARG:HG3	53:BS:13:ARG:NH1	2.08	0.67
3:A2:32:PHE:HE1	3:A2:38:ARG:HB3	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:36:HIS:O	37:BC:40:THR:HG23	1.94	0.67
48:BN:4:TYR:CE1	80:B5:148:G:OP2	2.48	0.67
54:BT:2:GLY:CA	80:B5:2626:A:O5'	2.43	0.67
67:Bg:68:THR:HG21	80:B5:1643:A:P	2.32	0.67
75:Bo:106:PHE:HD2	84:CW:18:G:H21	0.71	0.67
79:B2:356:G:OP2	88:B2:1914:OHX:N6	2.28	0.67
79:B2:1428:G:C5'	84:CW:34:C:C5'	2.66	0.67
83:CV:78:PRO:O	89:CV:602:GCP:O3G	2.12	0.67
11:AC:159:THR:HB	79:B2:1098:U:OP1	1.94	0.67
15:AG:108:VAL:CG1	79:B2:153:G:O2'	2.42	0.67
17:AI:51:GLY:H	79:B2:397:A:C5'	2.07	0.67
30:AV:41:GLU:CD	30:AV:41:GLU:H	2.00	0.67
38:BD:94:ASN:HA	81:B7:47:C:P	2.35	0.67
38:BD:187:THR:HG22	38:BD:189:GLU:HB2	1.76	0.67
52:BR:169:ALA:HB3	79:B2:851:U:C4	1.72	0.67
62:Bb:23:LYS:HB3	62:Bb:24:PRO:CD	2.25	0.67
79:B2:1427:A:C3'	84:CW:34:C:C1'	2.72	0.67
80:B5:420:G:O5'	80:B5:420:G:OP2	2.12	0.67
80:B5:1225:A:C1'	80:B5:1287:A:C2'	2.73	0.67
84:CW:48:C:C2	84:CW:59:U:H1'	2.30	0.67
10:AB:76:SER:OG	10:AB:78:ASP:OD1	2.12	0.66
13:AE:31:PRO:HG2	13:AE:38:LEU:HD13	1.76	0.66
22:AN:9:LYS:NZ	79:B2:1034:C:OP1	2.26	0.66
26:AR:49:LYS:CG	79:B2:1390:U:P	2.80	0.66
48:BN:60:VAL:HG21	82:B8:142:C:H5"	1.77	0.66
63:Bc:88:GLY:CA	80:B5:1729:A:OP1	2.42	0.66
79:B2:730:G:O6	88:B2:2046:OHX:N4	2.28	0.66
79:B2:1746:A:H2	80:B5:2302:G:N3	1.92	0.66
80:B5:252:U:H4'	80:B5:253:A:C5'	2.25	0.66
80:B5:2621:G:C4	84:CW:75:C:C6	2.83	0.66
14:AF:80:LYS:CE	79:B2:1405:G:OP1	2.43	0.66
20:AL:10:GLU:CG	79:B2:327:U:O2'	2.25	0.66
26:AR:10:LYS:HE3	79:B2:1316:G:HO2'	1.51	0.66
32:AX:78:LYS:HB3	79:B2:434:G:C5'	2.25	0.66
41:BG:86:THR:O	41:BG:90:THR:HG23	1.94	0.66
41:BG:129:PRO:HB3	80:B5:121:A:C2	2.30	0.66
57:BW:44:LYS:HD2	80:B5:2111:G:H1'	1.75	0.66
69:Bi:26:ILE:HG12	80:B5:157:A:C8	2.30	0.66
70:Bj:16:HIS:ND1	80:B5:359:U:O2'	2.29	0.66
79:B2:995:A:H5"	80:B5:2196:C:P	2.36	0.66
79:B2:1537:C:N3	88:B2:2044:OHX:N3	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2872:A:H4'	80:B5:2872:A:OP1	1.93	0.66
15:AG:13:GLN:HE21	79:B2:151:G:H1'	1.60	0.66
23:AO:25:ASP:CB	79:B2:901:G:P	2.83	0.66
35:BA:64:ARG:HD2	80:B5:2557:A:N7	2.11	0.66
40:BF:178:ILE:HA	40:BF:183:ASP:HB3	1.77	0.66
59:BY:2:ALA:N	80:B5:212:G:OP2	2.28	0.66
68:Bh:39:PRO:O	68:Bh:40:SER:HB3	1.96	0.66
69:Bi:82:ARG:CD	80:B5:295:A:H1'	2.25	0.66
79:B2:415:C:H5	83:CV:288:ARG:HB3	0.87	0.66
79:B2:740:A:H2'	79:B2:741:C:H5"	1.77	0.66
80:B5:2204:C:H4'	80:B5:2205:U:OP1	1.95	0.66
83:CV:199:ALA:CB	89:CV:602:GCP:N7	2.58	0.66
15:AG:174:LYS:HB2	79:B2:79:C:C4'	2.24	0.66
17:AI:138:ASN:HD22	79:B2:197:A:H61	1.27	0.66
23:AO:27:PHE:CE2	79:B2:916:U:O2	2.35	0.66
36:BB:299:ASP:OD1	36:BB:301:THR:HG23	1.94	0.66
37:BC:20:LEU:HD13	37:BC:256:THR:HG23	1.76	0.66
67:Bg:60:ARG:HH22	80:B5:1616:U:H4'	1.58	0.66
79:B2:432:G:N3	83:CV:387:ARG:N	2.39	0.66
79:B2:432:G:H21	83:CV:387:ARG:HH11	1.42	0.66
79:B2:1507:G:O6	88:B2:2029:OHX:N5	2.28	0.66
79:B2:1646:C:H5'	80:B5:2258:U:O4	1.96	0.66
79:B2:1780:G:H1'	80:B5:2262:A:C4'	1.82	0.66
80:B5:1655:G:C5'	80:B5:1655:G:H8	2.08	0.66
80:B5:3155:U:H4'	80:B5:3156:U:OP2	1.93	0.66
83:CV:62:TYR:C	83:CV:210:TRP:CE2	2.73	0.66
83:CV:247:ILE:HG22	83:CV:360:LEU:HD13	1.76	0.66
17:AI:176:SER:CB	79:B2:208:U:H5'	2.26	0.66
25:AQ:137:ARG:HB2	79:B2:1580:C:O3'	1.96	0.66
27:AS:118:LYS:NZ	44:BJ:108:GLU:CD	2.54	0.66
35:BA:116:VAL:HG13	35:BA:126:LEU:HB2	1.76	0.66
48:BN:182:ASN:O	48:BN:183:THR:HG22	1.96	0.66
53:BS:137:ARG:HG2	53:BS:139:TYR:CE2	2.30	0.66
59:BY:52:ARG:HA	59:BY:70:ILE:HG22	1.77	0.66
79:B2:1267:G:H21	79:B2:1448:G:H5"	1.59	0.66
79:B2:1758:U:C5'	80:B5:2255:A:O2'	2.42	0.66
10:AB:154:SER:O	10:AB:154:SER:OG	2.09	0.66
12:AD:157:LEU:O	79:B2:1327:C:H4'	1.96	0.66
15:AG:67:VAL:HG21	15:AG:99:GLY:HA2	1.76	0.66
15:AG:112:VAL:HG21	79:B2:164:A:H5'	1.71	0.66
15:AG:132:ARG:NE	79:B2:68:A:C4	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:60:LEU:CD2	18:AJ:93:LEU:HD21	2.22	0.66
23:AO:125:SER:OG	79:B2:927:C:H4'	1.96	0.66
31:AW:27:ILE:HG12	31:AW:61:ILE:HB	1.77	0.66
49:BO:121[B]:PRO:HA	49:BO:124[B]:LEU:HD22	1.76	0.66
60:BZ:67:LYS:HE2	80:B5:1630:U:OP1	1.94	0.66
88:B2:1915:OHX:N4	88:B2:2069:OHX:N1	2.42	0.66
8:A7:33:LYS:HD2	80:B5:2692:A:C5'	2.24	0.66
8:A7:88:ARG:CG	84:CW:35:A:N9	2.59	0.66
20:AL:65:SER:HB3	79:B2:114:C:H1'	1.76	0.66
23:AO:123:SER:O	79:B2:885:G:N2	2.28	0.66
24:AP:12:PHE:HA	44:BJ:85:LYS:HD2	1.77	0.66
29:AU:57:ARG:CG	79:B2:1382:A:H4'	2.26	0.66
46:BL:99:HIS:CD2	80:B5:156:G:N1	2.63	0.66
47:BM:48:GLY:HA3	47:BM:53:VAL:HG13	1.78	0.66
48:BN:72:LYS:NZ	80:B5:2167:A:P	2.68	0.66
53:BS:46:GLN:O	81:B7:77:G:H3'	1.96	0.66
67:Bg:36:LYS:NZ	80:B5:1595:U:OP2	2.21	0.66
25:AQ:123:ARG:C	79:B2:1584:G:C2'	2.67	0.66
38:BD:36:LEU:HG	80:B5:2748:A:N3	2.11	0.66
54:BT:68:THR:CG2	80:B5:2737:C:P	2.84	0.66
79:B2:1316:G:HO2'	79:B2:1401:A:HO2'	1.43	0.66
83:CV:63:GLU:CB	83:CV:210:TRP:CE3	2.79	0.66
2:A1:68:GLY:N	79:B2:872:G:H1'	2.11	0.66
8:A7:23:LYS:H	8:A7:23:LYS:HD2	1.58	0.66
16:AH:50:ASP:HB3	16:AH:56:LYS:HG2	1.75	0.66
23:AO:81:VAL:H	23:AO:115:ILE:HG22	1.61	0.66
28:AT:30:VAL:O	28:AT:32:GLY:N	2.29	0.66
29:AU:88:LYS:NZ	79:B2:1516:A:OP1	2.27	0.66
38:BD:76:ALA:HB3	38:BD:109:THR:HG22	1.76	0.66
43:BI:86:HIS:HB3	43:BI:139:ARG:HG2	1.78	0.66
60:BZ:102:GLU:OE1	60:BZ:103:GLN:N	2.25	0.66
69:Bi:15:LYS:HB3	80:B5:73:C:O4'	1.96	0.66
75:Bo:49:GLY:HA2	80:B5:277:G:H5"	1.76	0.66
79:B2:1688:U:H2'	79:B2:1689:A:C8	2.31	0.66
81:B7:91:G:H2'	81:B7:92:A:C8	2.30	0.66
8:A7:32:SER:OG	80:B5:2692:A:O4'	2.07	0.66
9:AA:10:THR:OG1	9:AA:13:ASP:OD2	2.13	0.66
19:AK:56:LYS:HG3	19:AK:67:THR:HB	1.78	0.66
22:AN:107:LYS:NZ	79:B2:1019:A:OP2	2.29	0.66
23:AO:46:MET:HG2	79:B2:899:G:O5'	1.95	0.66
23:AO:125:SER:OG	79:B2:927:C:O4'	2.12	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AU:57:ARG:NH2	79:B2:1382:A:N3	2.43	0.66
48:BN:143:ARG:HH21	68:Bh:92:LEU:HA	1.61	0.66
52:BR:84:THR:O	52:BR:88:ARG:HG2	1.96	0.66
60:BZ:69:LYS:CE	80:B5:1633:C:OP1	2.44	0.66
61:Ba:27:LYS:NZ	80:B5:801:A:OP1	2.27	0.66
79:B2:843:U:H2'	79:B2:844:A:C8	2.31	0.66
79:B2:1759:C:O2'	80:B5:2263:C:H1'	1.96	0.66
23:AO:38:THR:CG2	79:B2:895:G:O2'	2.12	0.65
31:AW:119:LYS:HG2	79:B2:687:G:H5'	1.77	0.65
37:BC:339:LEU:HA	37:BC:342:LYS:HB3	1.79	0.65
70:Bj:32:LYS:HE3	82:B8:111:A:OP1	1.96	0.65
79:B2:205:U:O4	88:B2:1945:OHX:N3	2.29	0.65
79:B2:422:G:N7	88:B2:1985:OHX:N5	2.44	0.65
79:B2:1041:G:H2'	79:B2:1042:G:C8	2.30	0.65
80:B5:1481:A:O4'	80:B5:1481:A:OP1	2.13	0.65
11:AC:89:GLN:HB3	79:B2:1146:G:C1'	2.27	0.65
24:AP:57:MET:HE1	24:AP:89:MET:HE3	1.78	0.65
25:AQ:139:GLN:HA	79:B2:1579:U:O2'	1.95	0.65
26:AR:7:LYS:N	79:B2:1316:G:OP1	2.27	0.65
28:AT:117:SER:HB2	28:AT:123:ARG:HB2	1.77	0.65
46:BL:11:LYS:HE2	80:B5:98:G:O6	1.95	0.65
52:BR:46:LYS:NZ	80:B5:1766:G:C8	2.60	0.65
76:Bq:5:ARG:HG2	80:B5:1221:A:HO2'	1.57	0.65
79:B2:46:A:N3	83:CV:387:ARG:NH1	2.41	0.65
79:B2:432:G:C4'	83:CV:385:VAL:HA	2.25	0.65
79:B2:1446:A:P	88:B2:2081:OHX:N2	2.70	0.65
79:B2:1592:A:H2'	79:B2:1593:A:H8	1.61	0.65
79:B2:1606:C:H2'	79:B2:1607:G:C8	2.31	0.65
80:B5:2667:A:H5'	80:B5:2667:A:C8	2.30	0.65
7:A6:285:ALA:HB3	79:B2:1394:G:OP1	1.92	0.65
8:A7:87:THR:HG22	84:CW:36:U:C5'	2.24	0.65
10:AB:206:PRO:O	10:AB:207:LEU:HB2	1.95	0.65
11:AC:201:ASN:ND2	79:B2:1097:U:O4	2.29	0.65
12:AD:162:GLN:HG2	79:B2:1333:C:C4'	2.26	0.65
16:AH:38:LEU:HD23	16:AH:41:LEU:HD12	1.76	0.65
26:AR:47:ARG:NH1	26:AR:48:ASN:OD1	2.29	0.65
31:AW:56:HIS:O	79:B2:861:U:O2'	2.09	0.65
37:BC:20:LEU:HD11	37:BC:252:GLU:HG3	1.78	0.65
37:BC:221:ASN:HD21	80:B5:211:A:H3'	1.61	0.65
43:BI:22:TYR:HB3	80:B5:2647:A:H4'	1.78	0.65
43:BI:67:ALA:HB2	80:B5:2852:C:H2'	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:194:GLY:CA	80:B5:1010:G:H2'	2.27	0.65
52:BR:173:ARG:O	79:B2:853:G:H5'	1.96	0.65
53:BS:170:THR:HG1	80:B5:3185:U:HO2'	1.38	0.65
67:Bg:72:VAL:HG12	80:B5:1640:G:OP2	1.96	0.65
70:Bj:32:LYS:CE	82:B8:111:A:OP1	2.44	0.65
79:B2:118:U:O4	88:B2:2043:OHX:N5	2.29	0.65
79:B2:1686:C:C2'	79:B2:1687:U:O4'	2.45	0.65
79:B2:1757:G:H2'	80:B5:2255:A:HO2'	1.59	0.65
80:B5:2103:U:H2'	80:B5:2104:A:C8	2.31	0.65
80:B5:2777:G:H5"	80:B5:2777:G:C8	2.31	0.65
10:AB:116:LYS:HA	79:B2:931:C:H5"	1.77	0.65
14:AF:103:ASN:ND2	79:B2:1473:U:O2'	2.30	0.65
15:AG:107:ALA:HB1	79:B2:154:G:H4'	1.78	0.65
25:AQ:50:GLU:OE1	25:AQ:82:ARG:NH2	2.27	0.65
25:AQ:135:ARG:HB3	79:B2:1581:C:H4'	1.79	0.65
26:AR:3:ARG:HG2	79:B2:1390:U:C6	2.32	0.65
29:AU:23:ARG:HH21	79:B2:1347:U:H6	1.38	0.65
31:AW:2:THR:N	79:B2:1034:C:HO2'	1.93	0.65
54:BT:68:THR:CG2	80:B5:2736:A:O3'	2.45	0.65
74:Bn:9:ARG:HH11	74:Bn:9:ARG:HG3	1.61	0.65
79:B2:1780:G:C2'	80:B5:2262:A:C4'	2.68	0.65
80:B5:249:U:O2'	80:B5:250:U:H5"	1.95	0.65
80:B5:892:U:C2'	80:B5:893:C:H5'	2.26	0.65
15:AG:172:ALA:HB3	79:B2:78:A:O3'	1.96	0.65
23:AO:132:ARG:CB	79:B2:1787:C:OP2	2.44	0.65
33:AY:9:THR:CG2	79:B2:781:U:OP2	2.45	0.65
36:BB:9:PRO:HG2	80:B5:3043:C:H5'	1.79	0.65
42:BH:116:ASN:ND2	83:CV:136:TYR:CG	2.63	0.65
44:BJ:9:MET:O	44:BJ:11:ASP:N	2.29	0.65
48:BN:75:VAL:O	80:B5:2166:A:H5'	1.96	0.65
49:BO:12[B]:LYS:O	53:BS:167:ARG:NH2	2.28	0.65
49:BO:88[A]:VAL:O	49:BO:90[A]:HIS:N	2.30	0.65
60:BZ:25:ILE:HA	60:BZ:43:VAL:HG12	1.78	0.65
60:BZ:135:ARG:HH21	80:B5:1807:G:H5"	1.55	0.65
74:Bn:11:ARG:CG	79:B2:1126:G:H5'	2.26	0.65
79:B2:1644:C:H1'	80:B5:2255:A:C2	2.26	0.65
80:B5:3031:G:H8	83:CV:436:ARG:HH22	1.43	0.65
82:B8:79:A:H3'	82:B8:80:A:C8	2.31	0.65
3:A2:36:THR:OG1	3:A2:37:SER:N	2.28	0.65
4:A3:54:LYS:CE	79:B2:1420:C:OP1	2.44	0.65
8:A7:34:LYS:HE3	80:B5:2693:C:H5'	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:172:ALA:O	79:B2:79:C:C5’	2.39	0.65
26:AR:60:ARG:HH22	79:B2:1400:A:C5’	1.98	0.65
28:AT:90:PRO:CD	79:B2:1467:C:O2’	2.40	0.65
34:AZ:41:ILE:HG23	34:AZ:42:LEU:H	1.59	0.65
41:BG:100:GLU:OE2	41:BG:108:ARG:NH1	2.30	0.65
41:BG:181:LYS:HG2	82:B8:154:C:H5”	1.77	0.65
72:Bl:10:LYS:HA	72:Bl:13:MET:HE3	1.79	0.65
79:B2:46:A:N1	83:CV:387:ARG:CB	2.60	0.65
79:B2:1339:C:O2’	79:B2:1341:A:N7	2.30	0.65
79:B2:1536:G:C5	79:B2:1538:U:H1’	2.32	0.65
79:B2:1686:C:H2’	79:B2:1687:U:O4’	1.96	0.65
80:B5:2285:C:C4	83:CV:477:SER:OG	2.49	0.65
80:B5:2403:G:N7	80:B5:2870:C:H4’	2.12	0.65
82:B8:77:A:H2’	82:B8:78:G:O4’	1.96	0.65
15:AG:151:ASP:OD1	57:BW:105:ARG:CZ	2.44	0.65
22:AN:27:LYS:H	22:AN:27:LYS:HE2	1.60	0.65
27:AS:11:PHE:CE1	27:AS:59:GLY:HA2	2.32	0.65
38:BD:15:ARG:NE	80:B5:1003:A:C1’	2.60	0.65
38:BD:158:ARG:HD2	81:B7:46:A:O5’	1.96	0.65
53:BS:50:LYS:HE3	81:B7:76:A:C2	2.31	0.65
63:Bc:85:PHE:CE1	80:B5:1728:G:C4	2.84	0.65
65:Be:103:LYS:HD3	80:B5:1391:C:C2	2.31	0.65
79:B2:1191:U:C5’	84:CW:32:U:OP1	2.45	0.65
79:B2:1780:G:C2’	80:B5:2262:A:C3’	2.58	0.65
1:A0:86:VAL:CG2	79:B2:1795:U:OP1	2.45	0.65
1:A0:87:ARG:CD	79:B2:1797:A:C6	2.80	0.65
8:A7:33:LYS:CE	80:B5:2692:A:H5’	2.26	0.65
35:BA:194:ASN:CG	80:B5:822:G:H4’	2.21	0.65
38:BD:23:ARG:CZ	80:B5:2703:A:OP2	2.44	0.65
38:BD:270:LYS:O	38:BD:273:ARG:HB3	1.96	0.65
51:BQ:89:ASP:HB3	80:B5:677:A:OP1	1.96	0.65
65:Be:19:ARG:NH2	80:B5:1433:A:P	2.67	0.65
72:Bl:5:LYS:O	80:B5:1833:G:C4’	2.37	0.65
79:B2:431:C:O2’	83:CV:384:ASP:C	2.40	0.65
79:B2:819:G:O2’	79:B2:820:U:H5’	1.96	0.65
80:B5:2569:A:H4’	80:B5:2570:U:H5’	1.78	0.65
8:A7:82:THR:HG21	84:CW:29:G:C4	2.32	0.65
10:AB:114:VAL:HG21	79:B2:930:A:H2	1.62	0.65
14:AF:152:GLY:O	14:AF:154:ALA:N	2.30	0.65
15:AG:53:SER:CB	79:B2:163:G:C3’	2.67	0.65
24:AP:12:PHE:CA	44:BJ:85:LYS:HD2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AY:120:GLY:CA	79:B2:85:A:O3'	2.45	0.65
54:BT:8:ARG:HB2	80:B5:2757:U:O2'	1.97	0.65
63:Bc:87:VAL:HA	80:B5:1728:G:C2'	2.24	0.65
66:Bf:21:ARG:O	80:B5:634:C:H5'	1.97	0.65
66:Bf:49:ILE:HG23	66:Bf:100:ILE:HG13	1.78	0.65
67:Bg:52:GLN:HG3	80:B5:1738:C:O4'	1.96	0.65
68:Bh:62:GLN:O	68:Bh:66:VAL:HG23	1.97	0.65
79:B2:1645:G:C4'	80:B5:2259:A:H2	2.01	0.65
80:B5:1818:U:H2'	80:B5:1819:U:H6	1.62	0.65
6:A5:126:CYS:O	6:A5:128:ALA:N	2.28	0.65
13:AE:212:ASP:OD2	13:AE:216:ASN:HB2	1.97	0.65
20:AL:6:THR:O	20:AL:8:GLN:N	2.30	0.65
35:BA:247:ARG:HH21	79:B2:1013:A:H4'	1.61	0.65
37:BC:162:THR:OG1	80:B5:209:A:H2'	1.95	0.65
38:BD:285:ARG:HD3	81:B7:63:A:OP1	1.97	0.65
59:BY:35:LEU:HD13	59:BY:39:LEU:HB3	1.77	0.65
60:BZ:67:LYS:HZ3	80:B5:1630:U:P	2.19	0.65
74:Bn:4:LYS:HE3	79:B2:1773:C:C3'	2.26	0.65
76:Bq:4:ILE:CG1	80:B5:1219:C:P	2.85	0.65
2:A1:29:ARG:HG3	2:A1:29:ARG:NH1	2.09	0.64
8:A7:77:THR:CG2	84:CW:43:C:O3'	2.45	0.64
8:A7:92:ASP:OD1	84:CW:34:C:O2	1.95	0.64
15:AG:53:SER:O	79:B2:163:G:C4'	2.44	0.64
15:AG:59:GLN:H	79:B2:155:U:C5'	2.10	0.64
15:AG:59:GLN:CA	79:B2:155:U:O4'	2.45	0.64
18:AJ:96:VAL:HA	18:AJ:99:LEU:HD22	1.78	0.64
23:AO:129:LYS:HA	79:B2:990:C:H4'	1.77	0.64
39:BE:78:ARG:NH1	80:B5:3272:C:OP2	2.30	0.64
40:BF:122:ALA:HB1	80:B5:986:U:O2	1.96	0.64
44:BJ:95:ASN:HA	80:B5:2673:A:OP1	1.98	0.64
48:BN:80:THR:HG21	48:BN:87:GLN:HA	1.78	0.64
79:B2:647:G:N2	79:B2:687:G:H22	1.95	0.64
79:B2:895:G:H1	79:B2:917:U:H3	1.45	0.64
80:B5:618:C:H2'	80:B5:619:A:C8	2.31	0.64
80:B5:2549:G:H5'	80:B5:2549:G:C8	2.31	0.64
7:A6:59:ARG:NH2	25:AQ:95:LYS:O	2.30	0.64
30:AV:62:ARG:NH2	79:B2:1039:A:C5'	2.48	0.64
40:BF:92:ILE:HD11	80:B5:1159:A:C2	2.33	0.64
51:BQ:43:PRO:HB3	80:B5:728:G:H5"	1.78	0.64
53:BS:90:MET:CG	80:B5:1213:G:H4'	2.26	0.64
56:BV:33:ASN:HD22	56:BV:63:LYS:HB2	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Bk:46:ARG:NH1	71:Bk:47:GLY:O	2.30	0.64
75:Bo:67:LYS:HB2	80:B5:2793:G:OP1	1.98	0.64
79:B2:1789:G:H5"	79:B2:1789:G:H8	1.60	0.64
80:B5:15:C:H5'	80:B5:15:C:C6	2.31	0.64
80:B5:1085:A:C5'	80:B5:1085:A:H8	2.10	0.64
83:CV:443:GLU:HA	83:CV:446:ARG:HE	1.63	0.64
9:AA:168:HIS:HB3	9:AA:203:PHE:CZ	2.32	0.64
11:AC:86:VAL:HG11	79:B2:1300:A:H5"	1.79	0.64
15:AG:185:GLN:CD	79:B2:284:G:N1	2.55	0.64
17:AI:64:ASN:HB2	79:B2:258:C:C1'	2.27	0.64
17:AI:75:LYS:HB2	79:B2:258:C:H5'	1.79	0.64
17:AI:138:ASN:CG	79:B2:197:A:H61	2.05	0.64
23:AO:41:ARG:HH21	79:B2:916:U:H3	1.37	0.64
23:AO:122:PRO:CA	79:B2:886:U:O2	2.43	0.64
23:AO:126:THR:HG22	79:B2:988:A:N3	2.08	0.64
44:BJ:87:LYS:HD2	44:BJ:104:PHE:CD2	2.32	0.64
54:BT:127:GLN:CG	80:B5:1095:U:H3	2.09	0.64
60:BZ:70:PRO:HD2	80:B5:1629:U:O2	1.96	0.64
66:Bf:2:ALA:HB1	80:B5:3219:G:N7	2.11	0.64
67:Bg:8:ARG:HH22	80:B5:1597:C:P	2.19	0.64
79:B2:1638:G:OP2	85:CX:2:U:C5	2.50	0.64
80:B5:118:U:O2	80:B5:121:A:H5'	1.97	0.64
4:A3:33:LYS:HE3	79:B2:1594:G:H5'	1.80	0.64
5:A4:14:VAL:O	5:A4:18:THR:HG23	1.97	0.64
8:A7:77:THR:CG2	84:CW:44:G:O5'	2.14	0.64
8:A7:84:LYS:O	84:CW:30:G:C1'	2.45	0.64
11:AC:89:GLN:HB3	79:B2:1146:G:O4'	1.97	0.64
15:AG:175:ILE:C	79:B2:78:A:C2	2.75	0.64
18:AJ:172:VAL:CG2	79:B2:511:A:H5"	2.18	0.64
38:BD:277:LEU:HG	81:B7:62:U:OP1	1.98	0.64
42:BH:12:VAL:HG13	42:BH:16:VAL:HG22	1.79	0.64
49:BO:159[A]:LYS:NZ	80:B5:3243:A:OP1	2.31	0.64
52:BR:35:ALA:O	52:BR:36:ASN:ND2	2.29	0.64
54:BT:49:GLN:HG2	80:B5:2756:C:C1'	2.28	0.64
61:Ba:3:SER:O	61:Ba:6:THR:HB	1.97	0.64
70:Bj:8:PHE:HD2	80:B5:1845:G:HO2'	1.44	0.64
79:B2:158:U:O2'	79:B2:159:U:H3'	1.98	0.64
79:B2:433:C:OP1	83:CV:391:VAL:CA	2.45	0.64
79:B2:1015:U:H5"	79:B2:1016:C:OP2	1.97	0.64
7:A6:195:HIS:CD2	7:A6:199:ILE:HD13	2.32	0.64
8:A7:36:ASP:HB3	84:CW:52:G:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:129:LYS:HA	79:B2:990:C:H5”	1.80	0.64
26:AR:7:LYS:CD	79:B2:1316:G:OP1	2.46	0.64
34:AZ:59:TYR:HE1	34:AZ:61:SER:HB3	1.61	0.64
38:BD:269:SER:HA	81:B7:22:A:C2	2.32	0.64
79:B2:420:A:C4	83:CV:288:ARG:NH2	2.45	0.64
20:AL:36:LYS:HD3	79:B2:248:U:H5’	1.80	0.64
23:AO:27:PHE:HZ	79:B2:916:U:O2’	1.35	0.64
36:BB:241:LYS:HE2	80:B5:874:U:P	2.37	0.64
48:BN:183:THR:O	48:BN:184:LYS:HB3	1.98	0.64
51:BQ:55:SER:HA	80:B5:672:A:OP1	1.97	0.64
54:BT:57:TYR:OH	80:B5:2724:U:P	2.56	0.64
65:Be:37:GLY:HA3	80:B5:639:G:P	2.38	0.64
79:B2:497:G:H4’	79:B2:498:G:OP1	1.97	0.64
79:B2:562:G:OP2	88:B2:2023:OHX:N5	2.31	0.64
79:B2:711:U:H1’	79:B2:712:G:H5’	1.78	0.64
79:B2:1518:C:OP1	88:B2:1999:OHX:N5	2.29	0.64
7:A6:136:ILE:HD13	7:A6:136:ILE:H	1.63	0.64
8:A7:28:SER:HB2	80:B5:2708:C:O4’	1.95	0.64
8:A7:33:LYS:CE	80:B5:2692:A:C5’	2.76	0.64
13:AE:221:ARG:HG3	79:B2:753:A:H5’	1.80	0.64
15:AG:108:VAL:HG21	79:B2:153:G:C2’	2.27	0.64
38:BD:16:PHE:CZ	80:B5:2688:U:N3	2.66	0.64
38:BD:266:ALA:CA	81:B7:1:G:N9	2.59	0.64
54:BT:101:CYS:HB3	80:B5:990:U:H1’	1.80	0.64
79:B2:1758:U:HO2’	80:B5:2255:A:H5”	1.60	0.64
11:AC:103:VAL:HG12	11:AC:190:LEU:HD12	1.80	0.64
15:AG:62:PRO:HB2	79:B2:162:A:C5’	2.28	0.64
26:AR:49:LYS:HG3	79:B2:1390:U:OP1	1.98	0.64
27:AS:70:VAL:HA	27:AS:73:MET:HE3	1.80	0.64
27:AS:110:ARG:HD2	44:BJ:118:PRO:HB3	1.80	0.64
27:AS:143:ARG:CA	79:B2:1461:C:OP1	2.46	0.64
35:BA:245:LEU:HD12	80:B5:2152:A:O3’	1.97	0.64
36:BB:117:ARG:HA	36:BB:175:LYS:HD3	1.78	0.64
41:BG:121:SER:O	41:BG:123:GLN:N	2.31	0.64
52:BR:101:VAL:HG21	80:B5:1948:G:H4’	1.80	0.64
66:Bf:88:ASN:HB2	80:B5:429:U:H5’	1.79	0.64
68:Bh:86:ARG:NE	82:B8:37:A:OP2	2.31	0.64
79:B2:1190:C:C2	84:CW:31:A:C5’	2.72	0.64
79:B2:1716:C:O2’	79:B2:1717:G:C8	2.47	0.64
79:B2:1758:U:H5’	80:B5:2255:A:O2’	1.96	0.64
80:B5:2436:U:H3	80:B5:2511:A:H62	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3030:G:OP1	83:CV:436:ARG:N	2.19	0.64
7:A6:216:LYS:HA	7:A6:239:GLU:HG3	1.80	0.64
8:A7:88:ARG:CD	84:CW:35:A:C4	2.66	0.64
8:A7:88:ARG:CG	84:CW:35:A:C2'	1.83	0.64
10:AB:105:PHE:N	10:AB:214:LYS:HZ1	1.96	0.64
15:AG:133:LEU:HD11	79:B2:66:U:C2'	2.27	0.64
19:AK:1:MET:HG3	79:B2:1217:A:H5"	1.80	0.64
22:AN:54:LEU:HB3	22:AN:60:VAL:HG21	1.79	0.64
23:AO:38:THR:OG1	79:B2:896:U:C1'	2.45	0.64
23:AO:127:ARG:HH22	79:B2:1788:G:P	2.21	0.64
28:AT:57:ARG:HH12	79:B2:1479:A:P	2.18	0.64
29:AU:118:VAL:HG22	29:AU:119:ALA:H	1.63	0.64
32:AX:92:CYS:HG	32:AX:136:TRP:CD1	2.16	0.64
35:BA:200:ARG:CZ	80:B5:2147:A:OP2	2.46	0.64
43:BI:174:THR:HG23	43:BI:175:ASN:H	1.63	0.64
59:BY:13:ARG:NH1	82:B8:24:G:OP2	2.24	0.64
60:BZ:3:LYS:HE3	60:BZ:5:LEU:HD12	1.78	0.64
64:Bd:21:HIS:CE1	80:B5:3376:A:C5	2.86	0.64
67:Bg:65:VAL:HG12	67:Bg:70:LYS:HE2	1.80	0.64
79:B2:836:U:OP1	88:B2:2074:OHX:N2	2.30	0.64
79:B2:1190:C:O2'	84:CW:31:A:H3'	1.97	0.64
3:A2:10:ALA:HA	3:A2:32:PHE:HA	1.78	0.64
10:AB:28:GLU:OE2	10:AB:94:LYS:NZ	2.19	0.64
26:AR:48:ASN:CB	79:B2:1389:C:O4'	2.37	0.64
27:AS:126:ARG:CZ	79:B2:1459:C:OP1	2.46	0.64
28:AT:86:ARG:NH1	28:AT:90:PRO:O	2.32	0.64
29:AU:54:GLY:O	79:B2:1344:A:O2'	2.14	0.64
33:AY:105:ARG:N	79:B2:443:C:OP1	2.26	0.64
35:BA:3:ARG:NH2	80:B5:917:A:H62	1.95	0.64
44:BJ:95:ASN:CA	80:B5:2673:A:OP1	2.46	0.64
68:Bh:101:THR:HG22	68:Bh:104:GLN:HB2	1.80	0.64
79:B2:51:A:O4'	83:CV:241:GLU:O	2.13	0.64
79:B2:140:A:N6	79:B2:281:G:OP1	2.21	0.64
79:B2:1701:N:H3'	79:B2:1702:N:H5"	1.80	0.64
80:B5:2283:G:O3'	83:CV:477:SER:OG	2.16	0.64
80:B5:2623:G:C5	84:CW:75:C:O2'	2.43	0.64
1:A0:70:LYS:NZ	79:B2:931:C:OP2	2.27	0.63
8:A7:71:ASN:OD1	24:AP:130:ARG:NH1	2.32	0.63
8:A7:85:SER:HA	84:CW:30:G:N7	1.88	0.63
17:AI:73:SER:CB	79:B2:257:A:H1'	2.17	0.63
18:AJ:176:ASN:HB2	79:B2:511:A:OP2	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AK:8:ARG:HD2	19:AK:12:HIS:CE1	2.33	0.63
25:AQ:34:SER:HB3	25:AQ:38:LEU:HD12	1.80	0.63
35:BA:34:TYR:CD2	80:B5:2525:G:O6	2.51	0.63
42:BH:90:MET:HB2	42:BH:144:ILE:HG22	1.80	0.63
46:BL:181:GLY:HA3	80:B5:2780:A:O2'	1.97	0.63
54:BT:8:ARG:CG	80:B5:2757:U:H4'	2.28	0.63
59:BY:112:ASP:HB3	59:BY:115:ARG:HB2	1.80	0.63
61:Ba:62:HIS:CG	80:B5:304:G:C5	2.86	0.63
66:Bf:88:ASN:HB2	80:B5:429:U:C4'	2.28	0.63
67:Bg:42:PRO:HD3	67:Bg:56:THR:HG22	1.80	0.63
79:B2:470:A:H5"	79:B2:470:A:C8	2.33	0.63
79:B2:1498:G:C2'	79:B2:1499:G:H5'	2.28	0.63
79:B2:1657:U:O4	88:B2:1967:OHX:N4	2.31	0.63
80:B5:830:A:O2'	80:B5:1866:C:H2'	1.98	0.63
80:B5:900:G:H1'	80:B5:1589:A:N6	2.12	0.63
80:B5:1659:U:H2'	80:B5:1660:C:C6	2.32	0.63
80:B5:2436:U:H3	80:B5:2511:A:N6	1.95	0.63
1:A0:37:LYS:O	1:A0:38:ARG:HD2	1.98	0.63
9:AA:183:ARG:NH2	9:AA:191:ARG:O	2.31	0.63
10:AB:138:PHE:HZ	79:B2:885:G:OP1	1.82	0.63
13:AE:28:ALA:HA	79:B2:448:C:OP1	1.98	0.63
13:AE:259:GLN:O	13:AE:261:LEU:N	2.31	0.63
29:AU:53:LYS:CA	79:B2:1345:A:P	2.86	0.63
32:AX:38:PHE:HB3	79:B2:359:A:C2	2.33	0.63
36:BB:293:ASN:HB2	36:BB:304:THR:HA	1.80	0.63
43:BI:102:MET:CB	83:CV:471:LYS:HZ3	2.08	0.63
50:BP:31:GLU:HG3	50:BP:60:PHE:HA	1.80	0.63
51:BQ:43:PRO:HB2	80:B5:728:G:H5"	1.79	0.63
56:BV:67:PRO:CG	79:B2:1660:A:OP1	2.46	0.63
12:AD:4:LEU:CD1	79:B2:1514:U:C2	2.82	0.63
14:AF:81:ARG:HE	79:B2:1615:C:P	2.21	0.63
14:AF:185:ARG:HH12	79:B2:1572:G:H1'	1.64	0.63
15:AG:112:VAL:HG21	79:B2:164:A:H5"	1.78	0.63
18:AJ:172:VAL:HG13	79:B2:512:A:P	2.39	0.63
26:AR:60:ARG:NH1	79:B2:1400:A:H4'	2.11	0.63
46:BL:56:PRO:HG3	46:BL:74:GLY:O	1.98	0.63
64:Bd:19:ARG:NH1	80:B5:3324:C:OP1	2.26	0.63
69:Bi:30:LYS:HE2	80:B5:266:A:H2'	1.80	0.63
73:Bm:78:ILE:HD11	73:Bm:83:LYS:HA	1.80	0.63
79:B2:1202:A:N6	79:B2:1457:C:H5"	2.13	0.63
80:B5:1566:A:H2'	80:B5:1567:U:H5'	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:200:VAL:N	89:CV:602:GCP:N1	2.47	0.63
7:A6:90:ARG:NH1	7:A6:99:THR:OG1	2.31	0.63
8:A7:84:LYS:HG3	84:CW:32:U:C5	2.33	0.63
15:AG:115:LYS:HE3	57:BW:74:LYS:CB	2.28	0.63
23:AO:52:ARG:HD3	79:B2:905:A:H5"	1.81	0.63
25:AQ:75:VAL:HG21	79:B2:1610:G:OP1	1.98	0.63
25:AQ:123:ARG:O	79:B2:1584:G:H2'	1.98	0.63
27:AS:94:ASP:OD2	27:AS:98:TYR:OH	2.17	0.63
36:BB:245:GLY:HA2	80:B5:1889:G:H5'	1.81	0.63
46:BL:93:ILE:HG22	46:BL:94:GLY:H	1.64	0.63
51:BQ:89:ASP:N	80:B5:677:A:OP2	2.24	0.63
51:BQ:89:ASP:H	80:B5:677:A:P	2.21	0.63
79:B2:1428:G:C4'	84:CW:34:C:H5'	2.28	0.63
80:B5:1564:U:H2'	80:B5:1565:G:C8	2.34	0.63
80:B5:2623:G:N1	84:CW:76:A:H5"	2.08	0.63
83:CV:59:MET:HB3	83:CV:62:TYR:H	1.64	0.63
1:A0:92:ARG:HA	79:B2:1796:C:OP1	1.98	0.63
8:A7:89:ARG:O	84:CW:35:A:N7	2.32	0.63
17:AI:50:GLY:CA	79:B2:397:A:H4'	2.28	0.63
35:BA:15:ILE:HG13	80:B5:822:G:O4'	1.98	0.63
47:BM:106:ARG:HD2	80:B5:3209:A:C5	2.34	0.63
53:BS:26:ARG:HH11	54:BT:150:THR:HG21	1.61	0.63
53:BS:137:ARG:HG2	53:BS:139:TYR:CZ	2.32	0.63
60:BZ:50:PRO:HD3	60:BZ:68:ILE:HG12	1.81	0.63
79:B2:431:C:C2	83:CV:386:SER:HB2	2.33	0.63
79:B2:1428:G:H4'	84:CW:34:C:C5'	2.29	0.63
79:B2:1689:A:H2'	79:B2:1690:G:H8	1.64	0.63
80:B5:528:U:H2'	80:B5:529:A:C8	2.33	0.63
80:B5:979:U:H1'	80:B5:980:A:C4	2.34	0.63
80:B5:1227:C:N3	80:B5:1284:C:N3	2.46	0.63
83:CV:388:ARG:CG	88:CV:601:OHX:N2	2.60	0.63
8:A7:85:SER:OG	84:CW:30:G:N7	2.30	0.63
10:AB:134:VAL:HB	10:AB:219:LYS:HB2	1.80	0.63
10:AB:171:ILE:HA	10:AB:174:LYS:HE3	1.81	0.63
12:AD:114:ALA:HB3	12:AD:117:ARG:HB2	1.80	0.63
12:AD:143:ARG:NH2	79:B2:581:U:OP2	2.31	0.63
13:AE:3:ARG:HB2	79:B2:94:U:OP1	1.99	0.63
23:AO:41:ARG:HD2	79:B2:917:U:H1'	1.80	0.63
23:AO:125:SER:CB	79:B2:927:C:C1'	2.75	0.63
25:AQ:115:THR:O	25:AQ:117:LEU:N	2.31	0.63
28:AT:87:GLY:HA3	79:B2:1542:G:H3'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:235:ALA:HB1	80:B5:2184:U:P	2.37	0.63
43:BI:112:GLN:CB	83:CV:471:LYS:CE	2.76	0.63
61:Ba:61:PHE:CD1	80:B5:283:G:C8	2.86	0.63
67:Bg:60:ARG:NH2	80:B5:1616:U:C4'	2.60	0.63
75:Bo:105:GLN:NE2	84:CW:55:U:C6	2.65	0.63
79:B2:51:A:H2'	83:CV:242:GLY:HA3	1.79	0.63
79:B2:1592:A:H2'	79:B2:1593:A:C8	2.34	0.63
79:B2:1657:U:H4'	79:B2:1658:G:O5'	1.99	0.63
80:B5:734:C:H2'	80:B5:735:A:H5"	1.81	0.63
80:B5:817:A:OP2	80:B5:817:A:H4'	1.98	0.63
80:B5:1818:U:H2'	80:B5:1819:U:C6	2.32	0.63
80:B5:2818:U:H6	80:B5:2818:U:C5'	2.10	0.63
80:B5:3049:A:H5'	80:B5:3049:A:C8	2.34	0.63
83:CV:131:LYS:CD	89:CV:602:GCP:C5	2.74	0.63
10:AB:112:SER:O	10:AB:114:VAL:N	2.32	0.63
14:AF:109:LYS:NZ	79:B2:1474:G:OP2	2.29	0.63
17:AI:170:SER:C	79:B2:209:U:H5"	2.24	0.63
18:AJ:99:LEU:O	18:AJ:100:LYS:HB3	1.96	0.63
19:AK:8:ARG:HD2	19:AK:12:HIS:HE1	1.63	0.63
25:AQ:42:GLU:OE1	79:B2:1529:C:H5"	1.98	0.63
38:BD:106:ALA:O	38:BD:110:LEU:HD22	1.97	0.63
63:Bc:85:PHE:CD2	80:B5:1728:G:C6	2.86	0.63
67:Bg:31:ARG:NH2	80:B5:1598:G:OP2	2.32	0.63
68:Bh:95:PHE:CD1	80:B5:136:G:H4'	2.34	0.63
79:B2:9:U:O4	88:B2:2045:OHX:N6	2.31	0.63
79:B2:1291:G:N2	79:B2:1324:G:N2	2.45	0.63
80:B5:2624:G:C1'	84:CW:76:A:OP1	2.43	0.63
83:CV:131:LYS:CD	89:CV:602:GCP:N3	2.55	0.63
1:A0:4:LYS:H	79:B2:1792:G:P	2.22	0.63
14:AF:37:GLN:HB3	25:AQ:53:LEU:HB3	1.80	0.63
17:AI:23:LYS:HE2	79:B2:386:G:H5"	1.80	0.63
23:AO:130:GLY:CA	79:B2:991:G:OP1	2.46	0.63
31:AW:80:ASN:ND2	79:B2:747:C:O2'	2.32	0.63
33:AY:11:LYS:HE2	79:B2:776:G:O6	1.99	0.63
35:BA:191:LEU:HG	80:B5:1795:U:P	2.39	0.63
37:BC:93:MET:HB2	80:B5:658:G:H21	1.63	0.63
38:BD:145:PHE:CE1	80:B5:2748:A:H5"	2.33	0.63
38:BD:265:TYR:CG	81:B7:120:C:N3	2.67	0.63
46:BL:61:PRO:HD3	80:B5:75:G:C4'	2.28	0.63
51:BQ:134:GLY:O	51:BQ:137:THR:OG1	2.11	0.63
54:BT:17:ARG:N	80:B5:2700:G:OP1	2.21	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:68:THR:CG2	80:B5:2737:C:O5'	2.47	0.63
67:Bg:58:ARG:HG3	67:Bg:59:PRO:HD2	1.80	0.63
80:B5:1804:A:H2'	80:B5:1805:C:H6	1.63	0.63
80:B5:2284:C:C1'	83:CV:476:GLN:OE1	2.29	0.63
15:AG:108:VAL:CB	79:B2:153:G:O2'	2.47	0.63
15:AG:114:VAL:HG12	15:AG:115:LYS:HD3	1.81	0.63
17:AI:137:LYS:HE3	79:B2:189:C:OP2	1.98	0.63
23:AO:52:ARG:HB3	79:B2:906:A:P	2.37	0.63
27:AS:138:THR:HB	79:B2:1459:C:H2'	1.80	0.63
28:AT:102:ARG:NH2	79:B2:1502:G:C6	2.67	0.63
31:AW:105:THR:HG23	31:AW:110:ILE:HG12	1.81	0.63
33:AY:113:ASN:ND2	79:B2:54:C:H5"	2.13	0.63
33:AY:120:GLY:O	79:B2:85:A:H4'	1.98	0.63
36:BB:53:MET:CE	80:B5:3048:A:H5'	2.29	0.63
38:BD:146:LEU:HD13	80:B5:2746:A:N3	2.13	0.63
47:BM:77:ARG:NH2	80:B5:524:U:OP1	2.31	0.63
48:BN:68:ARG:HA	48:BN:98:LEU:HD21	1.80	0.63
54:BT:14:MET:HE3	54:BT:58:GLN:HB2	1.81	0.63
68:Bh:85:THR:HG22	68:Bh:88:LEU:H	1.62	0.63
71:Bk:22:THR:HG22	71:Bk:74:LYS:HB3	1.80	0.63
79:B2:1748:G:H5'	80:B5:2304:C:H5"	1.81	0.63
80:B5:1816:A:O2'	80:B5:1817:G:OP1	2.15	0.63
80:B5:2682:C:O2'	80:B5:2683:U:OP1	2.15	0.63
80:B5:3029:A:C5'	83:CV:81:GLU:OE1	2.32	0.63
2:A1:62:ILE:HG13	2:A1:63:LEU:H	1.62	0.62
5:A4:33:ARG:HB2	18:AJ:37:LYS:HB3	1.81	0.62
14:AF:101:GLY:HA3	79:B2:1167:G:P	2.37	0.62
15:AG:133:LEU:CD1	79:B2:66:U:N1	2.62	0.62
19:AK:14:TYR:HE1	19:AK:21:VAL:HG22	1.64	0.62
19:AK:56:LYS:HE3	19:AK:58:GLN:HG2	1.80	0.62
22:AN:73:ARG:CD	79:B2:859:A:C6	2.79	0.62
26:AR:48:ASN:C	79:B2:1389:C:H4'	2.23	0.62
33:AY:91:LEU:HA	33:AY:96:LEU:HD12	1.80	0.62
48:BN:60:VAL:HG21	82:B8:142:C:H4'	1.80	0.62
49:BO:25[A]:LYS:HE3	80:B5:1176:C:OP1	1.98	0.62
49:BO:110[A]:PRO:O	49:BO:111[A]:PRO:C	2.41	0.62
54:BT:127:GLN:HA	80:B5:1095:U:O2	1.99	0.62
55:BU:47:VAL:O	55:BU:49:ASN:N	2.29	0.62
75:Bo:105:GLN:HB2	75:Bo:106:PHE:CD2	2.33	0.62
79:B2:213:A:OP2	88:B2:1995:OHX:N2	2.32	0.62
79:B2:433:C:OP1	83:CV:391:VAL:CG2	2.44	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1758:U:H5'	80:B5:2256:A:OP2	1.99	0.62
80:B5:247:C:C2	80:B5:248:U:H1'	2.33	0.62
80:B5:1094:U:O2'	80:B5:1095:U:H3'	1.99	0.62
80:B5:3174:A:N6	80:B5:3278:C:N3	2.46	0.62
8:A7:110:TRP:HE3	12:AD:150:MET:HE3	1.64	0.62
11:AC:144:TRP:CE2	11:AC:173:PRO:HG3	2.34	0.62
15:AG:128:THR:HG23	57:BW:81:PRO:HG2	1.64	0.62
24:AP:44:ARG:HG2	79:B2:1556:A:OP1	1.99	0.62
29:AU:54:GLY:N	79:B2:1345:A:P	2.56	0.62
29:AU:58:LEU:HD23	79:B2:1516:A:H8	1.63	0.62
33:AY:10:ARG:CG	79:B2:780:A:C8	2.81	0.62
35:BA:7:ASN:HB2	80:B5:2183:A:OP1	2.00	0.62
35:BA:199:THR:OG1	80:B5:913:A:H5'	1.99	0.62
43:BI:8:CYS:SG	80:B5:2828:G:H5"	2.39	0.62
79:B2:1031:U:H4'	79:B2:1032:G:OP2	1.99	0.62
79:B2:1214:U:OP1	79:B2:1246:C:H1'	1.99	0.62
80:B5:541:U:H2'	80:B5:542:G:C8	2.34	0.62
8:A7:32:SER:CB	80:B5:2692:A:C1'	2.76	0.62
8:A7:87:THR:O	84:CW:36:U:C5'	2.47	0.62
11:AC:91:ARG:CZ	79:B2:1625:C:OP1	2.44	0.62
14:AF:98:MET:HE2	79:B2:1611:A:O2'	2.00	0.62
15:AG:15:THR:HG23	79:B2:152:U:C3'	2.29	0.62
33:AY:120:GLY:CA	79:B2:85:A:O2'	2.47	0.62
35:BA:15:ILE:CD1	80:B5:822:G:N3	2.62	0.62
35:BA:204:MET:CE	35:BA:209:HIS:HB2	2.29	0.62
35:BA:234:LYS:HD2	80:B5:2163:C:P	2.38	0.62
41:BG:55:TYR:CE1	80:B5:1558:A:C6	2.88	0.62
41:BG:161:GLU:HA	41:BG:164:VAL:HG22	1.80	0.62
54:BT:12:ARG:HB2	80:B5:2632:G:H5"	1.80	0.62
54:BT:129:LYS:CB	80:B5:1097:G:H4'	2.15	0.62
67:Bg:16:ARG:HH11	67:Bg:16:ARG:HG3	1.63	0.62
72:Bl:5:LYS:HD3	72:Bl:13:MET:HE1	1.79	0.62
79:B2:145:A:O2'	79:B2:146:U:O5'	2.16	0.62
79:B2:245:U:O4	88:B2:1971:OHX:N5	2.32	0.62
3:A2:52:ASP:N	3:A2:52:ASP:OD1	2.26	0.62
8:A7:89:ARG:C	84:CW:35:A:N6	2.57	0.62
30:AV:62:ARG:HH21	79:B2:1039:A:C5'	2.08	0.62
38:BD:266:ALA:CB	81:B7:1:G:N9	2.62	0.62
41:BG:33:ASN:O	41:BG:35:GLY:N	2.33	0.62
44:BJ:60:ARG:NH2	75:Bo:104:LEU:O	2.27	0.62
51:BQ:69:ARG:NH2	80:B5:720:A:C2	2.62	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BQ:165:ILE:HD12	51:BQ:167:SER:O	1.99	0.62
54:BT:129:LYS:HB3	80:B5:1097:G:C4'	2.14	0.62
62:Bb:20:GLY:O	62:Bb:21:ILE:HB	1.97	0.62
79:B2:702:G:O2'	79:B2:703:G:H8	1.82	0.62
79:B2:823:G:O2'	79:B2:824:G:P	2.57	0.62
79:B2:915:A:OP1	88:B2:1972:OHX:N3	2.32	0.62
79:B2:1002:G:C5'	80:B5:2265:C:OP1	2.47	0.62
79:B2:1623:C:H2'	79:B2:1624:C:C6	2.34	0.62
80:B5:1023:C:H5"	80:B5:1024:G:OP2	1.99	0.62
80:B5:1282:G:H3'	80:B5:1283:C:C5'	2.29	0.62
80:B5:2621:G:N7	84:CW:75:C:C6	2.65	0.62
1:A0:3:LYS:HE2	79:B2:1030:A:OP2	2.00	0.62
8:A7:116:GLU:HG3	11:AC:98:PHE:CZ	2.34	0.62
13:AE:185:GLY:N	13:AE:189:LEU:HD13	2.14	0.62
15:AG:128:THR:OG1	57:BW:80:ARG:CA	2.45	0.62
32:AX:7:ARG:NH1	79:B2:1102:G:OP2	2.33	0.62
32:AX:69:ARG:HH12	79:B2:569:C:H41	1.45	0.62
33:AY:105:ARG:HD2	79:B2:443:C:H3'	1.82	0.62
35:BA:71:LEU:N	80:B5:1651:U:OP1	2.30	0.62
48:BN:72:LYS:CD	80:B5:2166:A:O3'	2.46	0.62
79:B2:1524:A:H2'	79:B2:1525:A:C8	2.34	0.62
79:B2:1762:A:H1'	79:B2:1783:C:H5'	1.80	0.62
80:B5:2286:U:OP1	83:CV:479:PRO:CD	2.28	0.62
7:A6:150:TRP:HE1	26:AR:37:GLU:HG3	1.64	0.62
8:A7:92:ASP:HA	84:CW:35:A:C8	2.33	0.62
13:AE:33:ALA:HB3	79:B2:121:U:H1'	1.81	0.62
15:AG:159:ARG:NH1	79:B2:77:U:H1'	2.13	0.62
16:AH:13:PRO:HB3	16:AH:14:THR:HB	1.82	0.62
58:BX:57:LEU:HD23	58:BX:61:LYS:HG2	1.82	0.62
79:B2:497:G:O2'	79:B2:498:G:O5'	2.17	0.62
79:B2:1612:U:H2'	79:B2:1613:U:H5'	1.79	0.62
80:B5:2407:C:H2'	80:B5:2408:U:C6	2.35	0.62
80:B5:3195:U:O2'	80:B5:3196:U:H5'	1.99	0.62
83:CV:79:GLY:CA	89:CV:602:GCP:O2G	2.46	0.62
84:CW:67:C:C4	84:CW:68:C:C4	2.87	0.62
1:A0:59:TYR:HE2	23:AO:113:GLY:HA2	1.64	0.62
1:A0:79:ILE:CG2	79:B2:1794:A:N3	2.62	0.62
10:AB:110:LEU:H	10:AB:110:LEU:HD12	1.63	0.62
26:AR:76:GLU:HA	26:AR:79:GLU:HB2	1.81	0.62
28:AT:52:GLY:O	28:AT:54:PHE:N	2.25	0.62
29:AU:53:LYS:HB3	79:B2:1345:A:O5'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:245:GLY:HA3	80:B5:1889:G:O5'	2.00	0.62
42:BH:96:HIS:HA	83:CV:164:ARG:HH22	1.63	0.62
49:BO:68[A]:ARG:NH1	80:B5:2988:C:OP1	2.32	0.62
52:BR:62:ARG:NE	80:B5:3070:A:OP1	2.26	0.62
53:BS:73:LYS:NZ	53:BS:97:VAL:O	2.32	0.62
80:B5:2440:G:H2'	80:B5:2441:A:C8	2.34	0.62
11:AC:145:GLY:O	11:AC:146:THR:HB	1.98	0.62
12:AD:158:ILE:HB	79:B2:1328:G:OP1	1.99	0.62
12:AD:191:ASP:HB3	12:AD:194:LYS:HG3	1.82	0.62
16:AH:74:GLN:HE22	16:AH:92:PHE:HB2	1.65	0.62
20:AL:36:LYS:CD	79:B2:248:U:H5'	2.30	0.62
27:AS:139:LYS:HG2	79:B2:1461:C:N4	2.15	0.62
28:AT:12:GLN:HE22	79:B2:1530:C:C1'	2.08	0.62
32:AX:77:ILE:HG21	83:CV:391:VAL:HG11	1.82	0.62
32:AX:109:ARG:HB3	32:AX:112:LYS:HB2	1.81	0.62
36:BB:221:THR:HB	36:BB:273:HIS:O	2.00	0.62
38:BD:211:LEU:HD13	38:BD:219:PHE:HA	1.81	0.62
38:BD:265:TYR:CE2	81:B7:120:C:C5	2.88	0.62
41:BG:151:VAL:HG22	41:BG:199:ALA:HB1	1.81	0.62
43:BI:61:SER:HB2	43:BI:63:GLU:HG2	1.82	0.62
51:BQ:86:THR:HB	51:BQ:105:ARG:HB3	1.81	0.62
79:B2:38:C:C2'	79:B2:39:A:H5'	2.29	0.62
79:B2:1490:C:H4'	79:B2:1491:U:OP1	1.99	0.62
80:B5:725:G:H2'	80:B5:726:G:H5"	1.81	0.62
3:A2:42:ARG:HH11	3:A2:56:LEU:HD22	1.63	0.62
8:A7:28:SER:HA	80:B5:2708:C:H4'	1.82	0.62
11:AC:129:ILE:O	11:AC:133:LYS:HG2	1.99	0.62
15:AG:56:ASN:HD21	79:B2:153:G:H22	1.45	0.62
16:AH:145:GLY:O	16:AH:147:ASN:ND2	2.31	0.62
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:HD2	1.64	0.62
29:AU:89:ARG:CZ	79:B2:1383:G:OP1	2.47	0.62
35:BA:194:ASN:HD22	80:B5:822:G:C4'	2.13	0.62
37:BC:144:LYS:HG2	37:BC:145:ILE:H	1.65	0.62
67:Bg:52:GLN:HG3	80:B5:1738:C:C4'	2.30	0.62
79:B2:498:G:O2'	79:B2:499:U:O5'	2.17	0.62
79:B2:1168:U:H2'	79:B2:1169:G:H5'	1.82	0.62
79:B2:1427:A:O5'	84:CW:34:C:C5	2.52	0.62
79:B2:1428:G:O5'	84:CW:34:C:H4'	2.00	0.62
84:CW:42:C:C6	84:CW:42:C:C5'	2.83	0.62
10:AB:116:LYS:HA	79:B2:931:C:H4'	1.80	0.62
16:AH:110:GLN:OE1	79:B2:817:A:H1'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AP:65:LEU:O	88:AP:201:OHX:N1	2.33	0.62
36:BB:296:THR:HG22	36:BB:298:PHE:N	2.03	0.62
38:BD:146:LEU:CD1	80:B5:2746:A:N3	2.63	0.62
52:BR:121:HIS:CE1	80:B5:1719:G:OP2	2.51	0.62
59:BY:75:ARG:HB2	82:B8:73:U:OP2	1.99	0.62
72:Bl:9:ILE:HG22	72:Bl:13:MET:HE2	1.82	0.62
79:B2:1081:A:H5"	79:B2:1082:C:OP1	1.99	0.62
79:B2:1615:C:H4'	79:B2:1616:G:O5'	2.00	0.62
80:B5:1605:A:O2'	80:B5:1607:U:OP2	2.12	0.62
1:A0:5:ARG:NH2	79:B2:1793:G:O2'	2.33	0.61
1:A0:35:ALA:O	1:A0:36:ILE:HG22	2.00	0.61
3:A2:10:ALA:HB1	3:A2:30:VAL:HB	1.81	0.61
8:A7:47:ALA:CA	80:B5:2678:A:C1'	2.76	0.61
8:A7:51:ARG:HD2	80:B5:2677:G:O4'	1.99	0.61
13:AE:11:ARG:O	13:AE:12:LEU:HB2	1.99	0.61
20:AL:80:MET:CE	79:B2:325:G:C5'	2.77	0.61
28:AT:61:VAL:O	28:AT:65:ILE:HG13	2.00	0.61
79:B2:656:G:O2'	79:B2:657:U:O4'	2.16	0.61
83:CV:18:LYS:HB3	89:CV:602:GCP:O1A	1.99	0.61
23:AO:51:ASP:OD1	79:B2:902:G:N1	2.33	0.61
35:BA:15:ILE:HA	80:B5:822:G:H1'	1.81	0.61
35:BA:68:LYS:CE	80:B5:1650:G:OP1	2.49	0.61
38:BD:145:PHE:CE1	80:B5:2748:A:C5'	2.83	0.61
41:BG:194:THR:HG23	80:B5:7:C:H4'	1.80	0.61
42:BH:168:ARG:HD2	80:B5:2894:C:OP1	2.01	0.61
49:BO:60[A]:LYS:NZ	80:B5:1307:G:H5"	2.15	0.61
52:BR:104:ARG:NH1	80:B5:1949:G:OP1	2.33	0.61
56:BV:48:ARG:HG2	80:B5:2339:C:P	2.40	0.61
70:Bj:42:ALA:HB1	82:B8:104:A:O3'	2.00	0.61
79:B2:677:G:H2'	79:B2:678:A:C8	2.36	0.61
79:B2:1427:A:C2'	84:CW:34:C:C1'	2.77	0.61
80:B5:3165:A:H2'	80:B5:3166:C:H6	1.65	0.61
10:AB:77:GLU:OE2	23:AO:114:ARG:NH2	2.30	0.61
14:AF:73:THR:HG23	25:AQ:114:ARG:CD	2.30	0.61
15:AG:59:GLN:HA	79:B2:155:U:C4'	2.28	0.61
17:AI:23:LYS:HG3	79:B2:386:G:OP1	2.01	0.61
26:AR:60:ARG:NH1	79:B2:1400:A:C4'	2.64	0.61
33:AY:64:PHE:CE2	79:B2:767:U:C5	2.89	0.61
35:BA:40:TYR:OH	80:B5:2550:U:C2'	2.36	0.61
36:BB:238:LEU:HB3	36:BB:242:THR:HG21	1.81	0.61
38:BD:265:TYR:HB3	81:B7:1:G:C2	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:99:HIS:CE1	80:B5:156:G:C5	2.89	0.61
48:BN:179:LYS:CE	80:B5:287:G:OP1	2.48	0.61
15:AG:83:CYS:HA	79:B2:161:U:C3'	2.24	0.61
16:AH:11:GLN:HG3	16:AH:13:PRO:HD2	1.80	0.61
31:AW:80:ASN:HD22	31:AW:124:LYS:HG2	1.65	0.61
33:AY:8:ARG:CA	79:B2:780:A:O2'	2.43	0.61
38:BD:266:ALA:HA	81:B7:1:G:N3	2.15	0.61
41:BG:105:LYS:NZ	80:B5:123:A:OP1	2.32	0.61
42:BH:171:ASP:OD2	80:B5:2899:C:H2'	2.00	0.61
48:BN:35:VAL:CG2	80:B5:1543:G:P	2.86	0.61
48:BN:67:ARG:CG	80:B5:1544:G:H5'	2.29	0.61
63:Bc:40:LYS:HD3	63:Bc:93:LEU:O	2.00	0.61
70:Bj:42:ALA:HB2	82:B8:105:A:P	2.40	0.61
79:B2:1428:G:H5'	79:B2:1428:G:C8	2.35	0.61
83:CV:16:THR:HB	89:CV:602:GCP:PB	2.39	0.61
83:CV:236:GLU:HG2	83:CV:361:GLY:HA2	0.70	0.61
83:CV:236:GLU:OE1	83:CV:361:GLY:HA3	1.99	0.61
6:A5:138:ARG:NE	79:B2:1235:C:O2	2.33	0.61
8:A7:47:ALA:CA	80:B5:2678:A:C8	2.84	0.61
8:A7:77:THR:CB	84:CW:43:C:H2'	2.29	0.61
10:AB:166:LYS:NZ	79:B2:948:G:OP1	2.32	0.61
15:AG:182:GLN:OE1	79:B2:270:C:N4	2.33	0.61
17:AI:72:ILE:HA	79:B2:256:A:H1'	1.83	0.61
17:AI:75:LYS:CB	79:B2:258:C:C5'	2.77	0.61
29:AU:72:ASN:ND2	79:B2:1429:G:O2'	2.34	0.61
31:AW:111:MET:HE1	31:AW:121:VAL:HG23	1.81	0.61
34:AZ:43:ASP:O	34:AZ:45:GLU:N	2.34	0.61
35:BA:204:MET:HE3	35:BA:208:ASP:HB3	1.82	0.61
35:BA:237:LEU:HD23	80:B5:2183:A:C2	2.35	0.61
38:BD:207:TYR:CG	81:B7:33:U:O2	2.53	0.61
50:BP:59:PRO:HG3	50:BP:76:PHE:CD2	2.35	0.61
50:BP:69:ARG:NH2	80:B5:2992:U:H1'	2.14	0.61
63:Bc:26:GLY:O	80:B5:1730:G:O6	2.17	0.61
70:Bj:29:VAL:HG21	82:B8:111:A:C6	2.34	0.61
79:B2:1427:A:H5'	84:CW:34:C:C6	2.35	0.61
79:B2:1571:C:OP2	88:B2:2044:OHX:N1	2.33	0.61
17:AI:47:ARG:NH2	79:B2:397:A:OP2	2.24	0.61
29:AU:48:HIS:ND1	29:AU:48:HIS:O	2.34	0.61
31:AW:70:ASN:ND2	31:AW:130:TYR:O	2.29	0.61
38:BD:226:TYR:CE2	38:BD:236:LEU:HD11	2.35	0.61
60:BZ:67:LYS:NZ	80:B5:1630:U:P	2.73	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:Ba:15:VAL:HA	80:B5:943:U:OP1	2.00	0.61
62:Bb:7:HIS:ND1	80:B5:955:U:OP1	2.29	0.61
66:Bf:59:VAL:HG23	66:Bf:60:ARG:H	1.65	0.61
8:A7:34:LYS:HE3	80:B5:2693:C:C5'	2.30	0.61
20:AL:130:PRO:HG2	79:B2:115:G:O6	1.99	0.61
31:AW:11:LEU:HD12	31:AW:74:VAL:HB	1.82	0.61
33:AY:120:GLY:CA	79:B2:85:A:H4'	2.31	0.61
46:BL:177:LYS:HA	69:Bi:11:LEU:HD22	1.82	0.61
60:BZ:79:HIS:HD1	80:B5:1636:U:C2'	2.07	0.61
79:B2:1761:U:C4	85:CX:1:A:H4'	2.36	0.61
80:B5:2970:C:O2'	80:B5:2971:A:OP2	2.16	0.61
88:B7:203:OHX:N4	88:B7:219:OHX:N6	2.49	0.61
82:B8:156:U:O2'	82:B8:157:U:OP1	2.17	0.61
1:A0:44:ILE:H	1:A0:44:ILE:HD12	1.65	0.61
4:A3:14:TYR:CD2	79:B2:1597:A:N7	2.69	0.61
6:A5:100:UNK:C	6:A5:102:VAL:H	2.14	0.61
8:A7:28:SER:CB	80:B5:2708:C:C1'	2.79	0.61
8:A7:84:LYS:HG3	84:CW:32:U:C6	2.36	0.61
10:AB:117:TRP:H	79:B2:932:U:P	2.24	0.61
10:AB:137:ILE:HD11	10:AB:172:LEU:HB3	1.83	0.61
14:AF:109:LYS:CD	79:B2:1473:U:C1'	2.79	0.61
14:AF:109:LYS:HD3	79:B2:1473:U:C1'	2.31	0.61
23:AO:125:SER:HB3	79:B2:926:A:C2	2.36	0.61
31:AW:104:LEU:HB2	31:AW:124:LYS:O	2.01	0.61
35:BA:247:ARG:NE	79:B2:1013:A:H4'	2.15	0.61
37:BC:312:VAL:HG21	80:B5:610:G:C8	2.35	0.61
41:BG:27:THR:O	41:BG:28:HIS:ND1	2.34	0.61
44:BJ:109:HIS:CD2	44:BJ:123:PHE:H	2.15	0.61
49:BO:72[B]:HIS:CD2	80:B5:3008:A:OP1	2.54	0.61
51:BQ:183:GLY:HA2	80:B5:2762:A:O3'	2.01	0.61
53:BS:49:HIS:O	81:B7:77:G:H5"	2.01	0.61
53:BS:170:THR:OG1	80:B5:3185:U:O2'	2.13	0.61
54:BT:12:ARG:HG3	80:B5:2698:G:O2'	2.00	0.61
58:BX:111:ASN:HD22	80:B5:1608:C:H5"	1.66	0.61
67:Bg:7:PHE:CD1	67:Bg:20:ILE:HD12	2.36	0.61
79:B2:1427:A:C3'	84:CW:34:C:O4'	2.30	0.61
80:B5:3195:U:H1'	80:B5:3196:U:OP1	2.01	0.61
1:A0:87:ARG:NH1	79:B2:1796:C:OP1	2.33	0.61
8:A7:44:PRO:HA	80:B5:2678:A:C2	2.36	0.61
10:AB:165:ARG:CZ	79:B2:947:U:P	2.88	0.61
25:AQ:74:HIS:CE1	79:B2:1480:G:N2	2.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:48:ASN:CB	79:B2:1389:C:O5'	2.49	0.61
27:AS:26:ILE:HD12	27:AS:27:LYS:N	2.16	0.61
32:AX:24:TRP:HE3	32:AX:30:LYS:HD3	1.66	0.61
36:BB:147:GLU:OE2	36:BB:150:ARG:NH2	2.34	0.61
36:BB:151:ILE:O	36:BB:155:ALA:HB3	2.01	0.61
37:BC:330:TYR:O	37:BC:334:PHE:N	2.31	0.61
48:BN:72:LYS:NZ	80:B5:2167:A:OP1	2.31	0.61
49:BO:68[A]:ARG:HH12	80:B5:2987:A:H5"	1.66	0.61
63:Bc:25:LEU:O	80:B5:1730:G:N1	2.33	0.61
76:Bq:92:PRO:HB2	76:Bq:96:ILE:H	1.66	0.61
79:B2:843:U:H2'	79:B2:844:A:H8	1.64	0.61
79:B2:992:A:C2	79:B2:1012:U:N3	2.65	0.61
80:B5:150:A:C2'	80:B5:151:A:H5'	2.29	0.61
80:B5:2537:U:O2'	80:B5:2538:U:P	2.59	0.61
80:B5:2895:G:H2'	80:B5:2896:A:H5"	1.82	0.61
2:A1:51:GLN:HB3	79:B2:870:C:O2'	2.01	0.61
18:AJ:146:PHE:CE2	18:AJ:149:ARG:HD3	2.36	0.61
37:BC:221:ASN:ND2	80:B5:211:A:H3'	2.16	0.61
37:BC:232:SER:O	37:BC:233:LEU:HB2	2.01	0.61
39:BE:109:GLU:CD	39:BE:109:GLU:H	2.07	0.61
47:BM:124:ARG:NH2	80:B5:3212:C:OP2	2.34	0.61
56:BV:22:ILE:N	80:B5:1899:G:OP1	2.32	0.61
69:Bi:15:LYS:HG2	80:B5:73:C:C2	2.35	0.61
80:B5:132:C:H2'	80:B5:133:U:H5"	1.82	0.61
80:B5:920:A:OP1	80:B5:922:U:H5	1.84	0.61
15:AG:62:PRO:CB	79:B2:162:A:O4'	2.49	0.60
22:AN:16:ILE:HG22	31:AW:57:ARG:NH2	2.15	0.60
22:AN:107:LYS:CE	79:B2:1019:A:OP2	2.49	0.60
23:AO:25:ASP:OD2	79:B2:901:G:OP2	2.19	0.60
23:AO:120:PRO:HB2	79:B2:887:A:C3'	2.30	0.60
36:BB:334:ARG:NH2	80:B5:3304:U:O2'	2.30	0.60
60:BZ:15:ARG:HB3	80:B5:1637:A:H4'	1.81	0.60
60:BZ:83:THR:HG23	60:BZ:85:TYR:N	2.15	0.60
70:Bj:30:GLN:HG2	80:B5:903:U:OP1	2.02	0.60
80:B5:3358:U:H2'	80:B5:3359:A:H8	1.65	0.60
4:A3:32:ARG:HH21	79:B2:1596:C:H3'	1.66	0.60
8:A7:77:THR:CG2	84:CW:43:C:O2'	2.45	0.60
8:A7:78:ASP:CB	84:CW:43:C:C4	2.77	0.60
8:A7:92:ASP:OD2	84:CW:34:C:O4'	2.05	0.60
9:AA:110:TYR:HD1	9:AA:110:TYR:H	1.46	0.60
14:AF:109:LYS:CD	79:B2:1473:U:O3'	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AZ:54:VAL:O	34:AZ:88:ILE:HG21	2.01	0.60
35:BA:105:GLY:HA3	35:BA:160:SER:HB3	1.83	0.60
35:BA:174:ARG:HG3	80:B5:1793:C:O4'	2.02	0.60
35:BA:209:HIS:HD2	35:BA:211:HIS:H	1.47	0.60
38:BD:270:LYS:CG	81:B7:2:G:H4'	2.31	0.60
41:BG:129:PRO:CB	80:B5:121:A:C2	2.85	0.60
49:BO:68[B]:ARG:NH1	80:B5:2988:C:OP2	2.34	0.60
51:BQ:69:ARG:NH2	80:B5:720:A:N3	2.48	0.60
61:Ba:61:PHE:CZ	80:B5:283:G:C2'	2.83	0.60
79:B2:431:C:O3'	83:CV:384:ASP:O	2.19	0.60
79:B2:702:G:O6	79:B2:736:C:N4	2.19	0.60
79:B2:732:G:O2'	79:B2:733:A:O4'	2.19	0.60
88:B2:1915:OHX:N4	88:B2:2069:OHX:N5	2.48	0.60
80:B5:2284:C:O5'	83:CV:477:SER:CA	2.49	0.60
83:CV:16:THR:CA	89:CV:602:GCP:O3A	2.48	0.60
83:CV:63:GLU:C	83:CV:210:TRP:CZ3	2.79	0.60
8:A7:68:ARG:CZ	27:AS:145:ARG:HD3	2.31	0.60
10:AB:116:LYS:HA	79:B2:931:C:C5'	2.31	0.60
15:AG:83:CYS:CA	79:B2:162:A:P	2.89	0.60
23:AO:129:LYS:HA	79:B2:990:C:C5'	2.31	0.60
26:AR:48:ASN:HB2	79:B2:1389:C:H4'	1.82	0.60
38:BD:152:ARG:HH11	38:BD:152:ARG:HG3	1.66	0.60
44:BJ:166:LYS:O	44:BJ:168:ASP:N	2.35	0.60
48:BN:57:GLN:HG2	82:B8:143:U:O3'	2.00	0.60
48:BN:90:ASN:ND2	80:B5:2425:G:OP2	2.32	0.60
58:BX:33:ARG:CZ	80:B5:1580:A:N6	2.64	0.60
65:Be:19:ARG:NH2	80:B5:1433:A:OP1	2.29	0.60
65:Be:47:ARG:NH1	80:B5:634:C:O3'	2.34	0.60
74:Bn:15:ARG:HG3	79:B2:1126:G:OP2	2.00	0.60
76:Bq:5:ARG:NH2	80:B5:1221:A:H4'	2.16	0.60
79:B2:693:U:H5'	79:B2:694:U:H5'	1.83	0.60
79:B2:820:U:H2'	79:B2:821:U:H4'	1.82	0.60
79:B2:1370:U:H4'	79:B2:1371:A:C5'	2.31	0.60
80:B5:2284:C:N1	83:CV:476:GLN:CD	2.43	0.60
80:B5:3341:U:H5"	80:B5:3342:A:OP2	2.02	0.60
3:A2:45:LYS:HG3	14:AF:166:ARG:HD3	1.83	0.60
8:A7:93:ARG:CB	85:CX:3:G:H1	2.10	0.60
17:AI:64:ASN:ND2	79:B2:257:A:H2'	2.16	0.60
22:AN:5:HIS:HB3	22:AN:117:LEU:HD13	1.84	0.60
23:AO:120:PRO:CG	79:B2:888:U:OP1	2.50	0.60
31:AW:20:THR:HG21	79:B2:1038:U:O3'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:231:SER:CB	80:B5:2163:C:H5”	2.20	0.60
41:BG:132:VAL:HG21	41:BG:190:VAL:HG22	1.83	0.60
60:BZ:115:LYS:CD	80:B5:1629:U:C4’	2.78	0.60
79:B2:538:A:H8	79:B2:543:C:C4	2.19	0.60
79:B2:839:U:C4	88:B2:2069:OHX:N4	2.69	0.60
79:B2:1686:C:N1	79:B2:1687:U:C6	2.69	0.60
80:B5:1500:G:H2’	80:B5:1501:U:O4’	2.02	0.60
80:B5:3269:U:H4’	80:B5:3270:U:O5’	2.00	0.60
1:A0:87:ARG:NH1	79:B2:1797:A:C5	2.69	0.60
8:A7:83:LYS:CB	84:CW:30:G:H22	1.89	0.60
8:A7:88:ARG:NH1	84:CW:35:A:H8	1.99	0.60
12:AD:163:PRO:HD3	79:B2:1332:C:H1’	1.83	0.60
13:AE:7:LYS:CG	79:B2:450:U:OP1	2.49	0.60
32:AX:144:ARG:NH2	83:CV:314:LYS:CE	2.60	0.60
38:BD:270:LYS:CB	81:B7:2:G:H4’	2.31	0.60
41:BG:194:THR:HG23	80:B5:7:C:O3’	2.00	0.60
48:BN:72:LYS:HD3	80:B5:2166:A:O2’	2.02	0.60
48:BN:179:LYS:NZ	80:B5:287:G:OP1	2.35	0.60
49:BO:85[A]:ARG:HD3	49:BO:90[A]:HIS:CG	2.36	0.60
54:BT:2:GLY:N	80:B5:2626:A:OP1	2.34	0.60
79:B2:218:A:O2’	79:B2:219:A:OP1	2.15	0.60
79:B2:1358:G:H2’	79:B2:1359:C:C6	2.35	0.60
80:B5:22:G:H1’	82:B8:104:A:N3	2.16	0.60
80:B5:3029:A:N9	83:CV:435:TYR:CD2	2.69	0.60
80:B5:3030:G:O5’	83:CV:436:ARG:CD	2.34	0.60
82:B8:78:G:H2’	82:B8:79:A:O4’	2.02	0.60
1:A0:84:VAL:O	1:A0:86:VAL:N	2.29	0.60
8:A7:47:ALA:HB2	80:B5:2678:A:N9	2.16	0.60
13:AE:37:LYS:HB2	13:AE:40:GLU:HG2	1.84	0.60
23:AO:19:ILE:HB	23:AO:83:ILE:HD12	1.84	0.60
26:AR:20:TYR:CD2	26:AR:38:ILE:HD11	2.36	0.60
33:AY:10:ARG:NH1	79:B2:778:G:C2	2.68	0.60
38:BD:41:LYS:HB2	54:BT:68:THR:O	2.01	0.60
39:BE:40:LEU:HB3	39:BE:84:VAL:HG13	1.82	0.60
43:BI:112:GLN:HA	83:CV:471:LYS:CG	2.27	0.60
52:BR:134:HIS:HB2	80:B5:1947:G:H5”	1.84	0.60
60:BZ:33:SER:HB3	60:BZ:36:HIS:HB2	1.83	0.60
60:BZ:115:LYS:HD2	80:B5:1629:U:C1’	2.31	0.60
72:Bl:4:GLN:HE21	80:B5:1833:G:N2	1.90	0.60
79:B2:470:A:H5”	79:B2:470:A:H8	1.67	0.60
80:B5:385:A:H2’	80:B5:386:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1567:U:H1'	80:B5:1570:U:H5	1.66	0.60
88:B7:203:OHX:N3	88:B7:219:OHX:N5	2.49	0.60
8:A7:84:LYS:CB	84:CW:31:A:O5'	2.46	0.60
8:A7:93:ARG:CG	84:CW:34:C:C4	2.82	0.60
10:AB:116:LYS:CA	79:B2:931:C:H5"	2.30	0.60
12:AD:27:ARG:HD2	19:AK:60:SER:HB2	1.83	0.60
12:AD:174:HIS:CE1	79:B2:1278:G:C4'	2.81	0.60
15:AG:8:PRO:CB	79:B2:165:G:C5'	2.76	0.60
20:AL:3:THR:OG1	20:AL:82:ARG:NE	2.34	0.60
29:AU:35:GLU:HG2	79:B2:1383:G:H4'	1.82	0.60
35:BA:187:HIS:HB3	80:B5:1794:G:C4	2.37	0.60
37:BC:81:GLY:O	80:B5:356:C:O2'	2.11	0.60
38:BD:282:ARG:HD3	81:B7:63:A:OP2	2.02	0.60
53:BS:52:LYS:NZ	81:B7:100:C:O5'	2.33	0.60
54:BT:6:GLY:HA3	80:B5:2630:C:H5"	1.84	0.60
74:Bn:15:ARG:HD2	79:B2:1125:A:OP1	2.01	0.60
79:B2:415:C:N4	83:CV:288:ARG:HD2	2.17	0.60
80:B5:2372:A:H4'	80:B5:2373:A:OP2	2.01	0.60
84:CW:67:C:C2	84:CW:68:C:N1	2.70	0.60
1:A0:87:ARG:NH2	1:A0:94:ASN:O	2.34	0.60
7:A6:93:ASP:HB2	7:A6:100:TYR:HE2	1.67	0.60
12:AD:53:THR:O	12:AD:53:THR:OG1	2.08	0.60
12:AD:160:SER:OG	79:B2:1329:A:OP2	2.20	0.60
15:AG:59:GLN:HA	79:B2:155:U:H4'	1.81	0.60
17:AI:64:ASN:CB	79:B2:258:C:C1'	2.79	0.60
17:AI:92:ARG:CZ	80:B5:2107:A:H4'	2.32	0.60
25:AQ:40:GLU:HG3	25:AQ:42:GLU:HB2	1.84	0.60
27:AS:118:LYS:HD3	44:BJ:108:GLU:OE2	2.02	0.60
31:AW:57:ARG:NH2	79:B2:863:A:OP1	2.33	0.60
38:BD:145:PHE:CD1	80:B5:2748:A:H4'	2.37	0.60
47:BM:113:THR:HG22	47:BM:115:PHE:H	1.66	0.60
60:BZ:115:LYS:HD2	80:B5:1629:U:O4'	2.00	0.60
69:Bi:40:VAL:O	69:Bi:44:VAL:HG23	2.02	0.60
79:B2:415:C:OP2	83:CV:288:ARG:CA	2.25	0.60
79:B2:1672:G:H2'	79:B2:1673:G:C8	2.37	0.60
79:B2:1757:G:O2'	80:B5:2256:A:H8	1.83	0.60
80:B5:2285:C:H41	83:CV:478:LYS:HG3	1.58	0.60
2:A1:68:GLY:O	79:B2:871:G:N2	2.33	0.60
7:A6:93:ASP:HB2	7:A6:100:TYR:CE2	2.37	0.60
10:AB:147:ALA:O	10:AB:148:ASN:ND2	2.28	0.60
10:AB:181:LEU:HD13	10:AB:181:LEU:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:245:ASP:OD1	11:AC:245:ASP:N	2.34	0.60
15:AG:8:PRO:HB3	79:B2:165:G:H5'	1.83	0.60
26:AR:48:ASN:ND2	79:B2:1389:C:O5'	2.34	0.60
29:AU:59:PRO:HA	79:B2:1381:U:O3'	2.02	0.60
38:BD:184:ASP:HB3	38:BD:187:THR:HB	1.84	0.60
41:BG:213:LYS:O	41:BG:217:THR:HG22	2.02	0.60
42:BH:70:THR:HG21	80:B5:3122:A:C2	2.37	0.60
43:BI:177:ASP:N	43:BI:177:ASP:OD1	2.35	0.60
52:BR:80:LYS:CE	80:B5:1940:G:OP1	2.43	0.60
66:Bf:86:ARG:NH2	80:B5:497:C:O3'	2.35	0.60
67:Bg:13:TYR:CE1	80:B5:1855:U:H1'	2.36	0.60
79:B2:703:G:H2'	79:B2:704:C:H5'	1.83	0.60
79:B2:794:U:O2	79:B2:794:U:H2'	2.00	0.60
80:B5:2285:C:N4	83:CV:477:SER:HG	1.98	0.60
15:AG:154:ARG:HA	79:B2:78:A:O4'	2.01	0.60
20:AL:130:PRO:CG	79:B2:115:G:O6	2.50	0.60
27:AS:41:ARG:HB2	79:B2:1566:U:OP1	2.02	0.60
27:AS:54:LEU:H	27:AS:54:LEU:HD22	1.66	0.60
28:AT:111:ILE:HG23	28:AT:113:ILE:HG13	1.84	0.60
30:AV:17:CYS:HB2	30:AV:56:SER:HB3	1.84	0.60
35:BA:191:LEU:HD11	80:B5:1795:U:OP1	2.02	0.60
37:BC:68:GLY:O	80:B5:2401:A:N3	2.35	0.60
38:BD:64:ILE:HG13	38:BD:109:THR:HG21	1.84	0.60
38:BD:256:THR:N	81:B7:119:U:OP1	2.27	0.60
38:BD:274:GLN:NE2	81:B7:60:G:H21	1.99	0.60
41:BG:157:VAL:HG13	80:B5:147:U:C5	2.37	0.60
60:BZ:79:HIS:CE1	80:B5:1636:U:H2'	2.37	0.60
60:BZ:79:HIS:CE1	80:B5:1636:U:HO2'	2.03	0.60
79:B2:415:C:C2	83:CV:288:ARG:HD3	2.37	0.60
79:B2:498:G:O2'	79:B2:499:U:P	2.60	0.60
80:B5:726:G:H5'	80:B5:726:G:C8	2.31	0.60
84:CW:31:A:C5	84:CW:32:U:C4	2.89	0.60
1:A0:75:VAL:O	1:A0:79:ILE:N	2.26	0.59
1:A0:87:ARG:NH1	79:B2:1796:C:H5'	2.16	0.59
6:A5:131:PHE:HD2	79:B2:1253:U:OP1	1.84	0.59
15:AG:135:PRO:HB2	15:AG:141:ILE:HG12	1.84	0.59
15:AG:219:ARG:O	15:AG:223:LYS:HB2	2.01	0.59
25:AQ:49:TYR:HB3	25:AQ:53:LEU:HD11	1.82	0.59
34:AZ:60:VAL:HG22	34:AZ:101:TYR:HB2	1.83	0.59
35:BA:243:THR:OG1	80:B5:2244:A:OP1	2.18	0.59
43:BI:14:ASN:O	43:BI:128:ARG:NH2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BV:92:PHE:CE2	80:B5:3051:U:H1'	2.36	0.59
60:BZ:16:GLY:HA2	80:B5:1638:A:OP2	2.01	0.59
60:BZ:48:ARG:CZ	80:B5:1631:C:OP2	2.44	0.59
61:Ba:4:ARG:CZ	80:B5:1427:U:H5	2.15	0.59
79:B2:433:C:H5"	83:CV:391:VAL:CG2	2.32	0.59
79:B2:440:U:O4'	83:CV:276:ARG:HG3	2.02	0.59
79:B2:1474:G:H2'	79:B2:1475:A:C8	2.36	0.59
80:B5:1879:A:H4'	80:B5:1880:U:OP2	2.02	0.59
8:A7:77:THR:HB	84:CW:44:G:C3'	2.16	0.59
13:AE:179:LYS:N	13:AE:194:THR:O	2.36	0.59
16:AH:185:ILE:HG22	16:AH:186:PRO:HD3	1.82	0.59
17:AI:39:GLY:O	17:AI:59:ARG:HB3	2.02	0.59
23:AO:37:GLU:HA	79:B2:895:G:C4'	2.31	0.59
35:BA:234:LYS:HZ3	80:B5:2162:U:P	2.25	0.59
43:BI:72:ALA:O	43:BI:76:MET:HG2	2.02	0.59
46:BL:93:ILE:HG22	46:BL:94:GLY:N	2.18	0.59
52:BR:143:ILE:HG12	80:B5:2093:A:H5'	1.84	0.59
59:BY:82:VAL:O	59:BY:84:LYS:N	2.35	0.59
69:Bi:25:LYS:HB2	69:Bi:28:TYR:HD2	1.67	0.59
69:Bi:77:LEU:HD23	80:B5:294:U:C4'	2.27	0.59
70:Bj:55:ARG:NH1	80:B5:353:G:N7	2.50	0.59
79:B2:1381:U:H1'	79:B2:1516:A:N6	2.17	0.59
80:B5:955:U:H2'	80:B5:956:U:C6	2.37	0.59
80:B5:1225:A:H8	80:B5:1288:U:C4'	2.13	0.59
8:A7:51:ARG:CD	80:B5:2677:G:H1'	2.33	0.59
8:A7:83:LYS:CA	84:CW:30:G:N2	2.40	0.59
12:AD:28:GLU:OE1	19:AK:56:LYS:NZ	2.29	0.59
12:AD:174:HIS:CE1	79:B2:1278:G:O4'	2.48	0.59
12:AD:203:PRO:HB2	79:B2:1331:A:N3	2.16	0.59
15:AG:159:ARG:CD	79:B2:77:U:N3	2.43	0.59
25:AQ:14:LYS:HE3	79:B2:1610:G:N7	2.16	0.59
27:AS:46:VAL:HG22	27:AS:72:ILE:HG22	1.83	0.59
34:AZ:42:LEU:HD12	34:AZ:43:ASP:N	2.17	0.59
35:BA:19:HIS:NE2	80:B5:823:C:H5'	2.16	0.59
37:BC:300:ARG:HH11	37:BC:300:ARG:CG	2.15	0.59
38:BD:158:ARG:HB2	81:B7:46:A:OP1	2.00	0.59
41:BG:136:LEU:HB2	80:B5:147:U:OP2	2.01	0.59
44:BJ:24:GLY:HA2	80:B5:2680:A:C2	2.37	0.59
46:BL:13:HIS:HD2	80:B5:98:G:OP2	1.85	0.59
50:BP:125:GLN:HB2	50:BP:141:SER:HB2	1.83	0.59
54:BT:17:ARG:NH1	54:BT:17:ARG:HG2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Bc:86:ARG:O	80:B5:1728:G:C2’	2.47	0.59
67:Bg:41:ARG:HA	67:Bg:56:THR:HG22	1.83	0.59
79:B2:497:G:H2’	79:B2:498:G:C8	2.36	0.59
79:B2:822:U:H2’	79:B2:823:G:H5”	1.83	0.59
80:B5:171:G:N2	80:B5:248:U:O2	2.35	0.59
80:B5:1764:U:H3’	80:B5:1765:U:H5”	1.84	0.59
80:B5:2537:U:H2’	80:B5:2538:U:O4’	2.02	0.59
4:A3:54:LYS:HE3	79:B2:1420:C:OP1	2.02	0.59
8:A7:29:ASN:H	80:B5:2708:C:C5’	2.15	0.59
10:AB:70:LEU:HD21	10:AB:79:HIS:CD2	2.36	0.59
15:AG:8:PRO:HG3	15:AG:112:VAL:HG13	1.84	0.59
15:AG:62:PRO:CB	79:B2:162:A:H5’	2.31	0.59
17:AI:43:ILE:HB	79:B2:260:U:H5	1.68	0.59
25:AQ:75:VAL:HG11	79:B2:1610:G:P	2.41	0.59
25:AQ:125:GLU:CB	79:B2:1585:U:H5”	2.33	0.59
27:AS:26:ILE:HD11	27:AS:31:ALA:H	1.68	0.59
35:BA:206:PRO:HD3	35:BA:213:GLY:HA2	1.84	0.59
35:BA:235:ALA:HB1	80:B5:2184:U:O5’	2.02	0.59
38:BD:16:PHE:CE1	80:B5:2688:U:C2	2.90	0.59
38:BD:85:ARG:HD3	38:BD:86:TYR:CE1	2.38	0.59
59:BY:120:GLN:NE2	59:BY:126:LEU:HA	2.17	0.59
60:BZ:135:ARG:HH22	80:B5:1807:G:H5’	1.65	0.59
66:Bf:88:ASN:HB2	80:B5:429:U:C5’	2.33	0.59
74:Bn:16:LYS:O	74:Bn:20:VAL:HG23	2.02	0.59
75:Bo:56:PRO:HA	80:B5:2802:A:C4	2.38	0.59
79:B2:1492:A:O2’	79:B2:1493:A:H8	1.80	0.59
79:B2:1657:U:H1’	79:B2:1658:G:OP2	2.02	0.59
80:B5:1949:G:H1	80:B5:2097:U:H3	1.50	0.59
80:B5:2284:C:C5	83:CV:477:SER:HA	2.27	0.59
80:B5:2897:A:H2’	80:B5:2899:C:C5’	2.32	0.59
80:B5:3227:A:H2’	80:B5:3228:C:H5’	1.82	0.59
83:CV:20:LYS:H	89:CV:602:GCP:H8	1.67	0.59
9:AA:66:ALA:HB2	30:AV:37:ALA:HB2	1.85	0.59
15:AG:175:ILE:HD11	79:B2:78:A:O4’	1.96	0.59
26:AR:53:TYR:HH	79:B2:1401:A:H5”	1.63	0.59
35:BA:237:LEU:CD2	80:B5:2183:A:H2	2.16	0.59
43:BI:168:SER:HB2	54:BT:160:ILE:O	2.03	0.59
46:BL:99:HIS:CG	80:B5:156:G:C5	2.90	0.59
52:BR:61:SER:OG	80:B5:3069:G:O2’	2.02	0.59
52:BR:170:ARG:N	79:B2:851:U:C3’	2.65	0.59
61:Ba:4:ARG:CZ	80:B5:1427:U:C5	2.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:Be:41:VAL:HG12	65:Be:46:PHE:CD2	2.37	0.59
69:Bi:76:ARG:HG3	80:B5:294:U:H5'	1.85	0.59
70:Bj:30:GLN:HG2	80:B5:903:U:P	2.42	0.59
72:Bl:42:ARG:HH22	80:B5:1494:U:P	2.25	0.59
79:B2:543:C:H5'	79:B2:543:C:O2	2.02	0.59
80:B5:3228:C:H4'	80:B5:3229:G:O5'	2.03	0.59
3:A2:25:VAL:HG11	3:A2:66:LEU:HD12	1.85	0.59
8:A7:93:ARG:HG2	84:CW:34:C:C4	2.38	0.59
10:AB:193:ILE:O	10:AB:197:ILE:HG12	2.03	0.59
18:AJ:7:THR:O	79:B2:771:A:H4'	2.01	0.59
19:AK:64:TYR:OH	79:B2:1435:G:O6	2.14	0.59
21:AM:28:LEU:HD13	21:AM:32:LEU:HD11	1.84	0.59
22:AN:14:SER:OG	79:B2:960:U:C5	2.50	0.59
36:BB:152:LYS:HD3	36:BB:189:SER:HA	1.83	0.59
37:BC:138:ARG:NH2	37:BC:240:PRO:HB2	2.18	0.59
38:BD:261:THR:OG1	38:BD:264:GLN:HG3	2.02	0.59
56:BV:71:LYS:NZ	80:B5:2294:U:OP2	2.21	0.59
60:BZ:15:ARG:HB3	80:B5:1637:A:C5'	2.32	0.59
79:B2:514:G:N1	79:B2:543:C:H5	2.00	0.59
80:B5:1329:U:H4'	80:B5:1330:A:OP1	2.02	0.59
80:B5:2279:A:N6	83:CV:478:LYS:HE3	2.18	0.59
1:A0:3:LYS:CE	79:B2:1030:A:OP1	2.51	0.59
5:A4:58:PRO:HA	79:B2:558:U:OP1	2.02	0.59
9:AA:169:SER:O	9:AA:173:ILE:HG12	2.03	0.59
11:AC:88:LYS:NZ	88:B2:2048:OHX:N2	2.51	0.59
15:AG:142:ARG:HA	15:AG:147:LEU:HD12	1.85	0.59
17:AI:25:ARG:HD3	79:B2:400:A:P	2.42	0.59
23:AO:129:LYS:CA	79:B2:990:C:C5'	2.81	0.59
25:AQ:75:VAL:CB	79:B2:1610:G:P	2.90	0.59
34:AZ:92:ILE:HG12	34:AZ:100:ILE:HG22	1.84	0.59
35:BA:39:GLY:CA	80:B5:2550:U:O4	2.50	0.59
37:BC:119:ARG:NE	80:B5:695:C:OP1	2.31	0.59
42:BH:26:LYS:HG3	42:BH:35:THR:HG22	1.85	0.59
48:BN:162:ARG:HG2	80:B5:56:G:H1'	1.84	0.59
49:BO:180[B]:SER:OG	49:BO:181[B]:ALA:N	2.29	0.59
59:BY:37:LYS:H	59:BY:37:LYS:CD	2.13	0.59
60:BZ:46:ILE:HG12	60:BZ:49:TYR:CE1	2.37	0.59
66:Bf:97:SER:OG	80:B5:3174:A:OP1	2.16	0.59
71:Bk:44:LYS:HG2	71:Bk:53:THR:HB	1.85	0.59
79:B2:431:C:N1	83:CV:386:SER:HB2	2.18	0.59
79:B2:1585:U:N3	79:B2:1611:A:H2	1.81	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1746:A:C2	80:B5:2303:A:C1’	2.86	0.59
80:B5:208:C:C2’	80:B5:209:A:H5’	2.33	0.59
4:A3:32:ARG:NE	79:B2:1596:C:OP2	2.32	0.59
8:A7:83:LYS:NZ	84:CW:41:C:O4’	2.34	0.59
8:A7:93:ARG:HG2	84:CW:34:C:N4	2.10	0.59
10:AB:97:LEU:CD1	10:AB:98:THR:H	2.11	0.59
13:AE:51:ARG:NH2	79:B2:788:A:N1	2.50	0.59
26:AR:5:ARG:HB2	79:B2:1402:G:OP1	2.03	0.59
33:AY:120:GLY:HA2	79:B2:85:A:C2’	2.33	0.59
35:BA:208:ASP:CG	80:B5:912:G:H1	1.95	0.59
36:BB:124:LYS:HB2	80:B5:3316:A:N1	2.17	0.59
37:BC:161:LYS:NZ	80:B5:209:A:OP1	2.35	0.59
58:BX:103:TYR:O	58:BX:105:VAL:HG23	2.03	0.59
64:Bd:44:MET:HB3	64:Bd:77:ARG:NH1	2.17	0.59
68:Bh:10:ARG:NH1	68:Bh:60:GLU:OE1	2.36	0.59
72:Bl:5:LYS:CD	80:B5:1834:U:OP1	2.51	0.59
79:B2:580:A:OP1	88:B2:2023:OHX:N4	2.36	0.59
79:B2:1655:A:C1’	80:B5:2302:G:O2’	2.51	0.59
80:B5:1308:A:OP2	80:B5:1308:A:H8	1.85	0.59
80:B5:2625:C:C6	84:CW:76:A:O3’	2.56	0.59
1:A0:92:ARG:C	79:B2:1796:C:O2	2.46	0.59
4:A3:14:TYR:CE2	79:B2:1597:A:C5	2.90	0.59
8:A7:77:THR:OG1	84:CW:43:C:H2’	2.02	0.59
9:AA:121:VAL:HG23	9:AA:141:ILE:HG21	1.84	0.59
13:AE:16:HIS:HE1	79:B2:789:A:OP2	1.86	0.59
23:AO:38:THR:HG21	79:B2:896:U:C4’	2.32	0.59
29:AU:35:GLU:OE2	79:B2:1383:G:H4’	2.02	0.59
35:BA:234:LYS:HD3	80:B5:2162:U:H5”	1.85	0.59
35:BA:244:GLY:N	80:B5:2153:U:H4’	2.17	0.59
41:BG:63:LYS:HE2	82:B8:153:U:P	2.42	0.59
41:BG:181:LYS:HD3	82:B8:154:C:H5”	1.84	0.59
56:BV:87:ARG:HH22	56:BV:137:VAL:HG22	1.68	0.59
60:BZ:79:HIS:ND1	80:B5:1636:U:C2’	2.64	0.59
68:Bh:95:PHE:CG	80:B5:136:G:C5’	2.71	0.59
69:Bi:58:ILE:HA	69:Bi:61:ILE:HG13	1.84	0.59
70:Bj:42:ALA:CB	82:B8:104:A:O3’	2.51	0.59
79:B2:420:A:C2	83:CV:289:LEU:HD21	2.38	0.59
79:B2:432:G:N2	83:CV:387:ARG:NH1	2.41	0.59
79:B2:1071:U:H2’	79:B2:1072:C:C6	2.38	0.59
79:B2:1644:C:O2	80:B5:2255:A:N3	2.35	0.59
88:B2:1922:OHX:N4	88:B2:1976:OHX:N3	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:237:VAL:C	83:CV:359:THR:O	2.31	0.59
17:AI:10:LYS:HG2	20:AL:133:LYS:HE3	1.85	0.59
22:AN:114:ARG:HG2	22:AN:114:ARG:NH1	2.18	0.59
24:AP:42:ARG:HH22	79:B2:1550:A:P	2.26	0.59
26:AR:60:ARG:NH1	79:B2:1400:A:C5'	2.63	0.59
27:AS:30:TYR:O	27:AS:33:THR:OG1	2.15	0.59
41:BG:55:TYR:OH	82:B8:149:A:C2'	2.50	0.59
41:BG:162:LEU:HD13	80:B5:147:U:N1	2.17	0.59
46:BL:153:ASP:OD2	46:BL:157:ARG:NH1	2.36	0.59
49:BO:110[B]:PRO:O	49:BO:111[B]:PRO:C	2.44	0.59
50:BP:30:ARG:HA	50:BP:119:VAL:CG1	2.33	0.59
52:BR:177:VAL:H	79:B2:853:G:H5'	1.68	0.59
61:Ba:76:ASP:HB2	61:Ba:115:LYS:O	2.02	0.59
64:Bd:50:ARG:CZ	64:Bd:90:PHE:CZ	2.85	0.59
75:Bo:53:GLN:HB3	80:B5:2421:U:H4'	1.85	0.59
79:B2:407:A:H2'	79:B2:408:C:C6	2.38	0.59
79:B2:431:C:N3	83:CV:387:ARG:NH2	2.51	0.59
79:B2:1738:U:H2'	79:B2:1739:C:C6	2.37	0.59
80:B5:2511:A:C2'	80:B5:2512:C:H5"	2.32	0.59
8:A7:53:ARG:HA	8:A7:53:ARG:HE	1.67	0.58
15:AG:172:ALA:C	79:B2:79:C:H5"	2.28	0.58
23:AO:38:THR:HG1	79:B2:896:U:C1'	2.16	0.58
25:AQ:55:VAL:HG21	25:AQ:105:LEU:HG	1.85	0.58
25:AQ:135:ARG:HB3	79:B2:1581:C:O3'	2.03	0.58
37:BC:259:ASP:OD1	37:BC:259:ASP:N	2.35	0.58
40:BF:207:LEU:O	80:B5:1334:U:H5'	2.02	0.58
41:BG:181:LYS:CD	82:B8:154:C:H5"	2.32	0.58
52:BR:166:ASN:CA	79:B2:850:A:C8	2.86	0.58
53:BS:146:LYS:HD3	80:B5:534:U:H1'	1.84	0.58
54:BT:2:GLY:N	80:B5:2626:A:P	2.76	0.58
54:BT:105:PHE:CE1	80:B5:1062:A:H4'	2.38	0.58
62:Bb:38:LYS:H	80:B5:2738:A:H4'	1.68	0.58
79:B2:433:C:C5	83:CV:388:ARG:HB3	2.21	0.58
79:B2:702:G:C6	79:B2:737:A:N6	2.71	0.58
79:B2:913:G:N1	80:B5:2206:G:H5"	2.18	0.58
79:B2:1385:G:N7	88:B2:2013:OHX:N3	2.51	0.58
79:B2:1488:G:H3'	79:B2:1515:A:H61	1.68	0.58
79:B2:1637:C:O2'	85:CX:3:G:C6	2.39	0.58
80:B5:2103:U:H2'	80:B5:2104:A:H8	1.66	0.58
80:B5:2284:C:O5'	83:CV:477:SER:HB2	1.94	0.58
83:CV:237:VAL:HG23	83:CV:360:LEU:HD12	1.82	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A1:68:GLY:CA	79:B2:872:G:H1'	2.33	0.58
8:A7:34:LYS:CE	80:B5:2693:C:C5'	2.79	0.58
9:AA:198:MET:SD	26:AR:85:VAL:HG11	2.44	0.58
15:AG:62:PRO:HB2	79:B2:162:A:H4'	1.85	0.58
15:AG:174:LYS:HG2	79:B2:79:C:O2'	2.03	0.58
16:AH:143:LEU:HB2	16:AH:147:ASN:HB2	1.85	0.58
46:BL:16:LYS:HG3	80:B5:48:A:P	2.43	0.58
46:BL:73:ARG:NH2	80:B5:77:A:N7	2.51	0.58
52:BR:134:HIS:CG	80:B5:1947:G:H5'	2.38	0.58
54:BT:12:ARG:HD3	54:BT:13:TYR:CZ	2.38	0.58
79:B2:1442:U:H2'	79:B2:1443:U:C6	2.37	0.58
80:B5:438:A:H2'	80:B5:494:G:H21	1.68	0.58
80:B5:1225:A:C8	80:B5:1288:U:C4'	2.72	0.58
80:B5:1226:G:H2'	80:B5:1227:C:C6	2.38	0.58
80:B5:1815:U:HO2'	80:B5:1816:A:P	2.25	0.58
80:B5:2434:U:C4'	80:B5:2435:G:H5"	2.34	0.58
8:A7:47:ALA:HA	80:B5:2678:A:C1'	2.32	0.58
8:A7:82:THR:O	84:CW:41:C:H2'	2.03	0.58
9:AA:150:ASP:OD2	9:AA:165:ARG:NH2	2.36	0.58
12:AD:177:MET:SD	12:AD:182:LEU:HD11	2.43	0.58
25:AQ:135:ARG:CB	79:B2:1581:C:H4'	2.33	0.58
32:AX:126:LYS:NZ	79:B2:30:G:OP1	2.33	0.58
35:BA:152:SER:HA	80:B5:2178:A:O2'	2.03	0.58
35:BA:235:ALA:HB1	80:B5:2184:U:OP1	2.03	0.58
36:BB:188:ILE:H	36:BB:188:ILE:CD1	2.14	0.58
42:BH:86:TYR:CE2	42:BH:151:VAL:HG22	2.39	0.58
43:BI:24:ARG:NH2	80:B5:2648:G:OP1	2.36	0.58
43:BI:160:PRO:HD3	80:B5:2854:U:C5'	2.31	0.58
46:BL:70:ARG:HH12	80:B5:76:G:P	2.26	0.58
48:BN:109:ARG:CD	82:B8:140:G:O2'	2.51	0.58
63:Bc:99:ASP:O	63:Bc:101:LEU:N	2.37	0.58
79:B2:279:G:C3'	79:B2:280:U:H5"	2.28	0.58
79:B2:702:G:O2'	79:B2:703:G:O4'	2.21	0.58
79:B2:833:U:OP2	88:B2:2022:OHX:N4	2.36	0.58
80:B5:243:G:H2'	80:B5:244:G:C8	2.39	0.58
80:B5:1282:G:H3'	80:B5:1283:C:H5"	1.84	0.58
80:B5:2440:G:HO2'	80:B5:2441:A:P	2.26	0.58
80:B5:2510:U:O2'	80:B5:2511:A:H5"	2.03	0.58
88:B7:203:OHX:N4	88:B7:219:OHX:N2	2.51	0.58
1:A0:87:ARG:CD	79:B2:1797:A:N6	2.63	0.58
7:A6:36:ALA:HB2	7:A6:71:CYS:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:91:THR:HG23	84:CW:36:U:C6	2.38	0.58
13:AE:200:ARG:NH1	13:AE:202:ASP:OD2	2.36	0.58
16:AH:96:ARG:HB3	79:B2:856:A:N6	2.18	0.58
23:AO:36:LYS:O	79:B2:894:U:O2'	2.12	0.58
24:AP:28:MET:O	24:AP:29:SER:HB3	2.02	0.58
27:AS:41:ARG:NH1	79:B2:1565:C:OP1	2.35	0.58
38:BD:270:LYS:HG2	81:B7:2:G:C5'	2.33	0.58
43:BI:22:TYR:HB3	80:B5:2647:A:C4'	2.33	0.58
44:BJ:70:THR:HB	81:B7:39:C:O2	2.04	0.58
50:BP:74:LYS:HE2	80:B5:3297:U:O3'	2.03	0.58
61:Ba:13:GLY:CA	80:B5:943:U:H3'	2.32	0.58
66:Bf:2:ALA:HB2	80:B5:3216:G:OP2	2.02	0.58
67:Bg:10:ARG:O	80:B5:1488:G:O2'	2.21	0.58
79:B2:1542:G:H22	79:B2:1568:C:H1'	1.67	0.58
83:CV:62:TYR:C	83:CV:210:TRP:CZ2	2.81	0.58
1:A0:95:ARG:HA	79:B2:1797:A:C4'	2.34	0.58
6:A5:144:CYS:HB3	6:A5:147:VAL:HG13	1.85	0.58
10:AB:39:GLU:HB3	10:AB:73:LEU:O	2.04	0.58
15:AG:132:ARG:CD	79:B2:68:A:C6	2.86	0.58
16:AH:51:VAL:HG23	16:AH:53:GLY:H	1.67	0.58
17:AI:37:LYS:H	17:AI:59:ARG:H	1.51	0.58
17:AI:171:SER:HA	79:B2:209:U:H5'	1.85	0.58
33:AY:10:ARG:NH2	79:B2:778:G:N2	2.48	0.58
35:BA:50:HIS:NE2	80:B5:1795:U:H2'	2.18	0.58
38:BD:266:ALA:HA	81:B7:1:G:C1'	2.32	0.58
48:BN:4:TYR:OH	80:B5:148:G:P	2.62	0.58
50:BP:67:ILE:HD12	50:BP:82:ARG:CZ	2.34	0.58
63:Bc:88:GLY:HA3	80:B5:1729:A:OP1	2.04	0.58
80:B5:2439:A:N6	80:B5:2508:U:H3	2.01	0.58
9:AA:179:ARG:HD3	9:AA:183:ARG:NH1	2.17	0.58
13:AE:49:ARG:HB2	13:AE:55:ALA:HB3	1.85	0.58
15:AG:188:ARG:HD3	79:B2:283:U:H3'	1.86	0.58
17:AI:5:ARG:HD3	17:AI:29:LEU:O	2.02	0.58
24:AP:52:LYS:HG3	24:AP:53:PRO:HD3	1.85	0.58
35:BA:200:ARG:NE	80:B5:2147:A:OP2	2.36	0.58
38:BD:207:TYR:CE1	81:B7:33:U:O4'	2.56	0.58
38:BD:260:PHE:HE2	81:B7:121:U:C5'	2.11	0.58
44:BJ:95:ASN:HA	80:B5:2673:A:C5'	2.34	0.58
48:BN:60:VAL:HG21	82:B8:142:C:C4'	2.33	0.58
52:BR:85:ARG:NH1	80:B5:2103:U:O3'	2.37	0.58
68:Bh:94:LYS:N	80:B5:135:C:O2	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Bi:26:ILE:CD1	80:B5:155:G:C1'	2.80	0.58
79:B2:913:G:O6	80:B5:2206:G:O3'	2.20	0.58
83:CV:237:VAL:CG2	83:CV:360:LEU:CD1	2.82	0.58
10:AB:141:ALA:HB1	10:AB:207:LEU:HD23	1.84	0.58
88:AC:301:OHX:N6	88:B2:1906:OHX:N5	2.52	0.58
21:AM:67:THR:C	21:AM:69:ALA:H	2.11	0.58
35:BA:227:ARG:HH22	80:B5:2155:G:HO2'	1.45	0.58
46:BL:65:TYR:CD2	80:B5:103:G:H5'	2.39	0.58
54:BT:127:GLN:CG	80:B5:1095:U:N3	2.67	0.58
61:Ba:34:MET:CB	80:B5:96:G:OP2	2.51	0.58
61:Ba:120:ASN:O	61:Ba:141:ALA:HB1	2.03	0.58
67:Bg:73:SER:OG	80:B5:1641:U:O4	2.22	0.58
70:Bj:65:ARG:HH11	70:Bj:65:ARG:HG3	1.67	0.58
74:Bn:10:THR:HB	79:B2:1115:U:H5"	1.86	0.58
79:B2:241:U:H5'	79:B2:242:U:OP2	2.04	0.58
79:B2:1645:G:H5'	80:B5:2260:U:O2	2.04	0.58
80:B5:1064:A:H4'	80:B5:1065:A:O5'	2.04	0.58
80:B5:3155:U:H3'	80:B5:3156:U:H5"	1.85	0.58
83:CV:199:ALA:CB	89:CV:602:GCP:C5	2.81	0.58
1:A0:92:ARG:CD	79:B2:1796:C:OP2	2.47	0.58
2:A1:50:ALA:O	2:A1:52:THR:N	2.35	0.58
8:A7:89:ARG:HD3	84:CW:35:A:OP2	2.03	0.58
13:AE:7:LYS:HG3	79:B2:450:U:OP1	2.04	0.58
13:AE:104:ASP:HB3	13:AE:106:LYS:H	1.69	0.58
32:AX:5:LYS:HE2	79:B2:611:U:OP2	2.04	0.58
34:AZ:88:ILE:HA	34:AZ:104:ALA:HB2	1.85	0.58
37:BC:334:PHE:CE2	80:B5:578:A:C6	2.91	0.58
37:BC:361:HIS:CG	37:BC:362:ASP:H	2.21	0.58
51:BQ:100:THR:HG22	51:BQ:120:GLU:HB3	1.86	0.58
54:BT:14:MET:HE1	54:BT:55:LYS:HB2	1.86	0.58
72:Bl:48:LYS:NZ	80:B5:1492:G:O2'	2.36	0.58
79:B2:1178:G:H2'	79:B2:1179:G:O4'	2.04	0.58
79:B2:1338:C:H1'	79:B2:1410:A:C4	2.39	0.58
80:B5:979:U:H4'	80:B5:980:A:OP1	2.04	0.58
6:A5:91:UNK:HG2	79:B2:1445:G:C4	2.38	0.58
11:AC:159:THR:HG1	79:B2:1097:U:HO2'	1.50	0.58
15:AG:186:ARG:O	15:AG:190:GLN:HG2	2.04	0.58
17:AI:25:ARG:HA	79:B2:400:A:O5'	2.02	0.58
27:AS:40:ARG:HD2	79:B2:1539:G:H5"	1.86	0.58
35:BA:69:TYR:CD2	80:B5:2558:U:N3	2.72	0.58
55:BU:19:VAL:HG12	55:BU:105:LEU:HD22	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BV:92:PHE:CZ	80:B5:3051:U:H1'	2.39	0.58
57:BW:120:LYS:HA	57:BW:123:ARG:HH11	1.69	0.58
79:B2:373:G:N7	88:B2:2056:OHX:N6	2.51	0.58
79:B2:1498:G:H2'	79:B2:1499:G:H5'	1.85	0.58
80:B5:1579:C:H2'	80:B5:1580:A:H5'	1.86	0.58
11:AC:91:ARG:HD2	79:B2:1625:C:OP1	2.03	0.58
21:AM:56:GLU:HB3	21:AM:124:LYS:HG2	1.84	0.58
23:AO:27:PHE:CE2	79:B2:916:U:C2'	2.87	0.58
25:AQ:113:ASP:CG	25:AQ:115:THR:H	2.12	0.58
28:AT:16:ASN:OD1	28:AT:56:LYS:NZ	2.35	0.58
31:AW:111:MET:HE3	31:AW:116:ALA:HA	1.85	0.58
33:AY:11:LYS:CE	79:B2:776:G:O6	2.52	0.58
36:BB:256:HIS:HA	36:BB:257:PRO:C	2.29	0.58
37:BC:16:THR:HG23	37:BC:18:ASN:H	1.68	0.58
42:BH:174:LYS:HG2	80:B5:2900:A:O2'	2.04	0.58
43:BI:86:HIS:HB3	43:BI:139:ARG:CG	2.34	0.58
49:BO:10[A]:ASP:OD2	49:BO:37[A]:ARG:NH2	2.31	0.58
49:BO:15[A]:LEU:HD21	49:BO:125[A]:ARG:HG3	1.86	0.58
52:BR:175:GLN:CA	79:B2:852:C:H4'	2.29	0.58
56:BV:48:ARG:HG3	80:B5:2339:C:OP2	2.04	0.58
70:Bj:55:ARG:HD3	80:B5:353:G:C8	2.38	0.58
79:B2:190:C:N4	79:B2:196:G:O6	2.37	0.58
79:B2:1637:C:O3'	85:CX:3:G:O6	2.22	0.58
79:B2:1715:G:H2'	79:B2:1716:C:H5'	1.85	0.58
80:B5:2946:A:H5"	80:B5:2947:G:H5'	1.86	0.58
1:A0:87:ARG:NH1	79:B2:1797:A:N7	2.52	0.57
8:A7:88:ARG:HG3	84:CW:35:A:H2'	0.58	0.57
10:AB:62:LYS:C	10:AB:64:ARG:H	2.12	0.57
14:AF:72:HIS:O	25:AQ:47:LYS:HE2	2.04	0.57
14:AF:145:ASP:OD1	14:AF:146:THR:N	2.36	0.57
15:AG:15:THR:HG21	79:B2:153:G:P	2.40	0.57
17:AI:25:ARG:NH2	79:B2:386:G:OP2	2.38	0.57
17:AI:31:ARG:HB2	79:B2:332:U:OP1	2.04	0.57
20:AL:130:PRO:CG	79:B2:115:G:C6	2.87	0.57
23:AO:107:ARG:HG3	23:AO:107:ARG:NH1	2.15	0.57
33:AY:104:SER:HB3	33:AY:107:GLN:HB2	1.85	0.57
38:BD:258:LYS:O	38:BD:258:LYS:HG2	2.02	0.57
41:BG:129:PRO:HB3	80:B5:121:A:H2	1.68	0.57
48:BN:168:GLY:O	48:BN:172:ARG:HB2	2.04	0.57
53:BS:50:LYS:CE	81:B7:76:A:C2	2.87	0.57
71:Bk:32:ASN:HD21	71:Bk:34:ALA:HB3	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1483:A:H2'	79:B2:1484:G:C8	2.39	0.57
80:B5:1581:C:OP2	80:B5:1581:C:H4'	2.03	0.57
83:CV:85:ASN:OD1	83:CV:368:LYS:NZ	2.37	0.57
2:A1:51:GLN:OE1	79:B2:870:C:O2'	2.21	0.57
3:A2:32:PHE:CE1	3:A2:38:ARG:HB3	2.38	0.57
14:AF:109:LYS:HD3	79:B2:1473:U:H1'	1.84	0.57
17:AI:75:LYS:CB	79:B2:258:C:H5"	2.34	0.57
18:AJ:176:ASN:HD22	79:B2:511:A:P	2.26	0.57
23:AO:20:TYR:HD2	79:B2:917:U:C5'	2.13	0.57
24:AP:70:ASN:ND2	44:BJ:172:LEU:CD2	2.67	0.57
24:AP:99:GLY:O	79:B2:1211:A:H1'	2.04	0.57
35:BA:85:GLY:HA2	80:B5:2554:A:C4	2.39	0.57
39:BE:78:ARG:HG3	39:BE:78:ARG:NH1	2.19	0.57
42:BH:91:ARG:NH2	42:BH:141:LYS:O	2.36	0.57
53:BS:155:ARG:HD3	53:BS:172:TYR:CG	2.39	0.57
54:BT:56:PHE:CZ	54:BT:78:LYS:HD3	2.39	0.57
62:Bb:14:ARG:NH2	62:Bb:18:ARG:HH11	2.02	0.57
64:Bd:44:MET:O	64:Bd:46:THR:N	2.37	0.57
67:Bg:8:ARG:NH2	80:B5:1597:C:OP2	2.35	0.57
79:B2:625:C:H2'	79:B2:626:U:C6	2.39	0.57
79:B2:1015:U:OP1	88:B2:1923:OHX:N6	2.38	0.57
80:B5:547:G:H2'	80:B5:548:G:O4'	2.03	0.57
80:B5:2264:U:P	88:B5:3402:OHX:N3	2.77	0.57
83:CV:248:ASP:CA	83:CV:360:LEU:HD22	2.32	0.57
1:A0:95:ARG:NH1	79:B2:934:C:C6	2.73	0.57
2:A1:28:PRO:HB3	79:B2:959:U:O5'	2.03	0.57
15:AG:62:PRO:CB	79:B2:162:A:C4'	2.82	0.57
22:AN:123:HIS:NE2	80:B5:847:A:H4'	2.19	0.57
23:AO:52:ARG:CB	79:B2:906:A:OP2	2.51	0.57
32:AX:144:ARG:NE	83:CV:268:ASN:OD1	2.37	0.57
37:BC:59:GLN:OE1	70:Bj:55:ARG:NH2	2.37	0.57
37:BC:170:LYS:HG3	37:BC:175:HIS:HB2	1.86	0.57
39:BE:176:PHE:H	47:BM:117:ARG:HH22	1.51	0.57
42:BH:120:ASP:OD2	42:BH:124:ARG:NH2	2.37	0.57
44:BJ:103:GLY:O	80:B5:2673:A:H4'	2.03	0.57
52:BR:93:VAL:HG21	80:B5:1779:C:H1'	1.85	0.57
60:BZ:54:THR:H	60:BZ:57:HIS:CD2	2.20	0.57
64:Bd:74:ARG:HB3	64:Bd:94:GLU:HG2	1.86	0.57
71:Bk:58:ASP:HB3	71:Bk:61:LYS:HG3	1.86	0.57
79:B2:104:A:OP2	79:B2:308:C:N4	2.37	0.57
79:B2:414:C:O3'	83:CV:286:GLU:C	2.46	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:990:C:H2'	79:B2:991:G:O4'	2.04	0.57
80:B5:252:U:H4'	80:B5:253:A:H5"	1.86	0.57
80:B5:2546:C:H2'	80:B5:2547:A:H8	1.68	0.57
1:A0:86:VAL:HA	79:B2:1795:U:H5'	1.86	0.57
5:A4:4:VAL:HG22	32:AX:59:ILE:HD12	1.85	0.57
20:AL:130:PRO:CD	79:B2:115:G:C6	2.87	0.57
28:AT:93:HIS:CE1	79:B2:1525:A:OP1	2.57	0.57
32:AX:24:TRP:CE3	32:AX:30:LYS:HD3	2.39	0.57
33:AY:11:LYS:NZ	79:B2:775:G:O6	2.37	0.57
43:BI:103:LEU:O	83:CV:471:LYS:HB2	2.05	0.57
46:BL:3:ILE:HG12	61:Ba:34:MET:HE2	1.86	0.57
48:BN:138:GLN:CD	80:B5:19:U:H4'	2.29	0.57
62:Bb:46:ALA:O	62:Bb:50:THR:HG23	2.03	0.57
67:Bg:56:THR:HG1	80:B5:1740:U:H5"	1.69	0.57
69:Bi:25:LYS:HD3	80:B5:156:G:H5'	1.85	0.57
75:Bo:67:LYS:HB2	80:B5:2792:A:O3'	2.05	0.57
79:B2:45:U:O2'	79:B2:46:A:H2'	2.02	0.57
79:B2:415:C:N4	83:CV:288:ARG:CD	2.65	0.57
79:B2:1711:C:O2'	79:B2:1712:A:OP1	2.14	0.57
79:B2:1746:A:C2	80:B5:2302:G:N3	2.71	0.57
88:B2:1922:OHX:N4	88:B2:1976:OHX:N6	2.52	0.57
80:B5:1574:C:O2'	80:B5:1575:A:OP1	2.22	0.57
80:B5:3078:U:H4'	80:B5:3079:U:O5'	2.02	0.57
80:B5:3358:U:H2'	80:B5:3359:A:C8	2.39	0.57
82:B8:126:A:O2'	82:B8:128:U:OP2	2.16	0.57
7:A6:17:ASN:HD21	79:B2:1408:G:H4'	1.68	0.57
10:AB:117:TRP:HA	79:B2:932:U:OP2	2.04	0.57
14:AF:185:ARG:CZ	79:B2:1572:G:H1'	2.35	0.57
17:AI:48:THR:HG21	17:AI:54:LYS:HB2	1.87	0.57
31:AW:103:ILE:HD11	31:AW:126:LEU:HD12	1.86	0.57
34:AZ:43:ASP:O	34:AZ:46:LYS:N	2.27	0.57
36:BB:2:SER:HA	80:B5:2940:A:N7	2.19	0.57
38:BD:146:LEU:CB	80:B5:2746:A:C2	2.73	0.57
41:BG:157:VAL:CG1	80:B5:147:U:C4	2.85	0.57
42:BH:86:TYR:CD1	42:BH:151:VAL:HG13	2.40	0.57
49:BO:36[B]:VAL:HB	49:BO:108[B]:ILE:HB	1.85	0.57
64:Bd:46:THR:HG23	64:Bd:47:ASP:N	2.19	0.57
75:Bo:67:LYS:HB2	80:B5:2793:G:P	2.44	0.57
79:B2:67:A:O3'	79:B2:68:A:H3'	2.03	0.57
79:B2:429:G:O2'	83:CV:243:PHE:HD1	1.88	0.57
79:B2:704:C:H3'	79:B2:704:C:OP2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1595:U:N3	79:B2:1600:A:H2	2.02	0.57
80:B5:2440:G:O2'	80:B5:2441:A:OP1	2.18	0.57
80:B5:2897:A:H2'	80:B5:2899:C:H5"	1.86	0.57
80:B5:3280:U:O2'	80:B5:3281:U:H5"	2.03	0.57
83:CV:239:VAL:H	83:CV:358:ASP:C	2.11	0.57
7:A6:160:GLU:O	7:A6:162:ALA:N	2.35	0.57
16:AH:35:LYS:HZ2	16:AH:39:ARG:HD2	1.68	0.57
19:AK:15:LEU:HD13	19:AK:21:VAL:HG23	1.87	0.57
20:AL:80:MET:HB2	20:AL:83:THR:HG23	1.86	0.57
22:AN:67:THR:O	22:AN:69:ASN:N	2.36	0.57
23:AO:32:ASP:O	23:AO:35:GLY:N	2.33	0.57
27:AS:91:ASP:O	27:AS:92:ILE:HB	2.03	0.57
36:BB:166:ILE:O	36:BB:169:THR:HB	2.05	0.57
37:BC:162:THR:HG21	80:B5:209:A:C4	2.40	0.57
37:BC:283:THR:HG21	37:BC:288:ARG:HH22	1.69	0.57
41:BG:137:ASN:HB2	80:B5:148:G:C5	2.40	0.57
42:BH:20:ILE:HG23	42:BH:25:VAL:HG22	1.87	0.57
42:BH:22:SER:HB2	42:BH:39:LYS:NZ	2.19	0.57
43:BI:102:MET:CA	83:CV:471:LYS:HZ3	2.10	0.57
53:BS:115:ARG:NH1	80:B5:1296:C:H5'	2.20	0.57
53:BS:137:ARG:NH1	80:B5:1213:G:H5"	2.19	0.57
59:BY:51:ARG:HG2	59:BY:115:ARG:NH2	2.20	0.57
75:Bo:104:LEU:HD21	84:CW:53:G:OP2	2.05	0.57
79:B2:143:G:H2'	79:B2:144:U:H5"	1.85	0.57
79:B2:1207:C:H42	79:B2:1456:C:H5	1.53	0.57
80:B5:892:U:O2'	80:B5:893:C:H5'	2.04	0.57
80:B5:2112:U:H4'	80:B5:2113:A:H5'	1.86	0.57
7:A6:214:ALA:HB2	7:A6:220:ILE:HA	1.85	0.57
8:A7:79:SER:OG	84:CW:43:C:C1'	2.52	0.57
16:AH:63:PRO:C	16:AH:65:PRO:HD2	2.29	0.57
20:AL:34:TRP:NE1	79:B2:249:U:OP1	2.32	0.57
20:AL:136:ARG:HD3	79:B2:304:U:OP1	2.04	0.57
22:AN:72:MET:HE1	22:AN:82:PRO:HD2	1.87	0.57
23:AO:81:VAL:HG13	23:AO:115:ILE:HG21	1.86	0.57
23:AO:120:PRO:CB	79:B2:887:A:C5'	2.75	0.57
23:AO:129:LYS:HA	79:B2:990:C:C3'	2.34	0.57
26:AR:48:ASN:CB	79:B2:1389:C:H4'	2.34	0.57
29:AU:28:SER:OG	29:AU:29:THR:N	2.38	0.57
33:AY:64:PHE:CE2	79:B2:767:U:C6	2.93	0.57
35:BA:52:SER:HB3	35:BA:191:LEU:HD12	1.85	0.57
35:BA:183:GLY:HA3	80:B5:896:A:OP1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:187:SER:HB3	36:BB:190:GLU:OE1	2.04	0.57
43:BI:7:ARG:HH11	80:B5:2828:G:P	2.27	0.57
43:BI:112:GLN:CA	83:CV:471:LYS:HD3	2.30	0.57
45:BK:119:UNK:HA	76:Bq:39:HIS:CE1	2.40	0.57
67:Bg:8:ARG:HH21	67:Bg:31:ARG:HD2	1.70	0.57
68:Bh:67:ARG:HG3	68:Bh:80:LEU:HD22	1.87	0.57
79:B2:414:C:N3	83:CV:289:LEU:HD21	2.17	0.57
79:B2:1759:C:O2	80:B5:2262:A:H2	1.88	0.57
80:B5:2286:U:C5	83:CV:479:PRO:HD3	2.36	0.57
80:B5:2530:G:H2'	80:B5:2531:C:H5'	1.87	0.57
80:B5:2726:C:O2'	80:B5:2727:A:H2'	2.04	0.57
1:A0:24:VAL:HG11	1:A0:71:LEU:HD12	1.85	0.57
4:A3:44:ARG:NH2	79:B2:1280:C:H5'	2.19	0.57
7:A6:64:HIS:ND1	7:A6:86:ASP:OD2	2.35	0.57
7:A6:74:THR:HG23	7:A6:79:TYR:HB2	1.85	0.57
12:AD:115:ILE:HG23	12:AD:116:ARG:HG3	1.87	0.57
13:AE:151:ASP:HB3	13:AE:154:ILE:HG13	1.87	0.57
15:AG:3:LEU:HD13	15:AG:111:LEU:HD11	1.85	0.57
15:AG:189:HIS:CD2	79:B2:285:G:OP2	2.58	0.57
19:AK:1:MET:HG3	79:B2:1217:A:C5'	2.34	0.57
21:AM:30:VAL:HB	21:AM:132:GLU:HG3	1.86	0.57
24:AP:47:ARG:NH1	79:B2:1555:A:P	2.73	0.57
26:AR:5:ARG:NH2	79:B2:1402:G:OP2	2.38	0.57
26:AR:5:ARG:O	26:AR:10:LYS:HE2	2.05	0.57
27:AS:70:VAL:HG12	27:AS:74:GLN:OE1	2.05	0.57
36:BB:367:LYS:HZ1	57:BW:34:SER:H	1.52	0.57
38:BD:31:TYR:HE2	80:B5:2705:A:OP1	1.88	0.57
38:BD:152:ARG:HG3	38:BD:152:ARG:NH1	2.19	0.57
41:BG:90:THR:HG22	41:BG:214:LEU:HG	1.87	0.57
52:BR:171:ASP:OD1	79:B2:852:C:P	2.56	0.57
79:B2:542:A:H2'	79:B2:543:C:H3'	1.86	0.57
79:B2:735:C:OP2	79:B2:735:C:H2'	2.05	0.57
79:B2:1130:G:OP2	88:B2:1952:OHX:N2	2.38	0.57
80:B5:1573:G:C6	80:B5:1574:C:H1'	2.40	0.57
80:B5:2659:G:H4'	80:B5:2751:G:O2'	2.05	0.57
80:B5:2971:A:OP2	80:B5:2971:A:H3'	2.04	0.57
83:CV:248:ASP:H	83:CV:360:LEU:HD22	0.67	0.57
15:AG:88:ARG:CZ	79:B2:92:A:C2	2.88	0.57
26:AR:49:LYS:CG	79:B2:1390:U:OP2	2.52	0.57
28:AT:90:PRO:HD3	79:B2:1467:C:HO2'	1.69	0.57
35:BA:4:VAL:HB	80:B5:910:G:OP2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:21:ARG:HD2	80:B5:1797:A:H1'	1.85	0.57
41:BG:133:LYS:HB2	41:BG:199:ALA:O	2.04	0.57
41:BG:151:VAL:HG13	41:BG:199:ALA:HB2	1.87	0.57
49:BO:65[A]:ASN:OD1	49:BO:67[A]:THR:HB	2.04	0.57
57:BW:25:ASP:N	57:BW:25:ASP:OD1	2.36	0.57
60:BZ:15:ARG:HB3	80:B5:1637:A:C4'	2.35	0.57
72:Bl:3:ALA:O	80:B5:1834:U:C5'	2.44	0.57
72:Bl:5:LYS:HG2	80:B5:1833:G:O3'	2.04	0.57
72:Bl:30:ARG:HG2	82:B8:75:G:C8	2.39	0.57
79:B2:238:U:O2'	79:B2:239:C:H5'	2.05	0.57
79:B2:639:U:H4'	79:B2:639:U:OP2	2.04	0.57
79:B2:1226:A:O2'	79:B2:1227:A:OP1	2.23	0.57
80:B5:708:G:H5"	80:B5:708:G:H8	1.70	0.57
12:AD:159:HIS:CB	79:B2:1422:A:H5'	2.35	0.57
12:AD:162:GLN:HB3	79:B2:1332:C:C2'	2.35	0.57
15:AG:78:THR:HG23	15:AG:92:ARG:HG2	1.86	0.57
15:AG:109:LEU:HD13	15:AG:111:LEU:HD21	1.87	0.57
27:AS:85:PHE:O	79:B2:1565:C:O2'	2.23	0.57
40:BF:206:LYS:HB3	80:B5:1334:U:OP1	2.05	0.57
44:BJ:55:ARG:NH2	84:CW:47:U:C3'	2.66	0.57
48:BN:60:VAL:HG21	82:B8:142:C:C5'	2.35	0.57
51:BQ:56:LYS:NZ	80:B5:674:G:O6	2.38	0.57
67:Bg:7:PHE:HD1	67:Bg:20:ILE:HD12	1.70	0.57
70:Bj:59:THR:HB	82:B8:41:A:O3'	2.05	0.57
79:B2:312:A:C2	79:B2:314:C:H2'	2.40	0.57
79:B2:885:G:H2'	79:B2:886:U:C6	2.40	0.57
9:AA:27:ARG:HG3	9:AA:44:GLY:O	2.04	0.56
10:AB:117:TRP:HE1	10:AB:152:ARG:CZ	2.18	0.56
14:AF:42:LEU:HB2	14:AF:46:TRP:O	2.04	0.56
17:AI:33:PRO:HA	79:B2:331:A:C5'	2.35	0.56
26:AR:48:ASN:HB2	79:B2:1389:C:C5'	2.35	0.56
28:AT:14:PHE:HZ	28:AT:132:LEU:HD23	1.69	0.56
31:AW:57:ARG:HG2	79:B2:863:A:O5'	2.05	0.56
34:AZ:94:LYS:HE2	79:B2:1530:C:OP1	2.05	0.56
40:BF:151:ARG:HD2	40:BF:244:ASN:OD1	2.04	0.56
44:BJ:166:LYS:C	44:BJ:168:ASP:H	2.13	0.56
53:BS:53:LYS:HD3	81:B7:99:G:OP1	2.05	0.56
54:BT:7:TYR:OH	54:BT:54:HIS:HB2	2.04	0.56
59:BY:55:GLU:HB2	59:BY:108:LYS:HB2	1.87	0.56
79:B2:495:C:H3'	79:B2:496:G:O4'	2.04	0.56
79:B2:717:C:N3	79:B2:720:G:N1	2.48	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1780:G:C1’	80:B5:2262:A:H4’	2.31	0.56
80:B5:550:A:H2’	80:B5:551:A:C8	2.40	0.56
80:B5:1081:U:HO2’	80:B5:1082:U:C5’	2.18	0.56
80:B5:1085:A:C5’	80:B5:1085:A:C8	2.88	0.56
80:B5:2286:U:C4	83:CV:478:LYS:HA	2.38	0.56
80:B5:2440:G:H5’	80:B5:2440:G:C8	2.35	0.56
7:A6:16:HIS:CE1	7:A6:43:ILE:HG12	2.40	0.56
7:A6:255:ALA:HB2	7:A6:292:LEU:HD22	1.86	0.56
8:A7:30:THR:HA	80:B5:2707:C:H1’	1.87	0.56
10:AB:34:ALA:N	10:AB:41:ARG:O	2.29	0.56
15:AG:132:ARG:CA	79:B2:68:A:H61	2.17	0.56
16:AH:74:GLN:NE2	16:AH:92:PHE:HB2	2.19	0.56
17:AI:8:ARG:HG3	17:AI:8:ARG:O	2.04	0.56
17:AI:43:ILE:N	79:B2:260:U:O4	2.38	0.56
17:AI:192:TYR:O	17:AI:196:LEU:HB2	2.05	0.56
26:AR:26:LEU:HD23	26:AR:26:LEU:H	1.70	0.56
35:BA:15:ILE:HG12	80:B5:821:U:O2	2.05	0.56
38:BD:145:PHE:CG	80:B5:2748:A:C4’	2.86	0.56
46:BL:60:ALA:H	80:B5:75:G:H5’	1.71	0.56
49:BO:72[B]:HIS:N	80:B5:3008:A:OP1	2.36	0.56
63:Bc:85:PHE:CB	80:B5:1728:G:N2	2.68	0.56
64:Bd:13:THR:CG2	64:Bd:72:ARG:HH11	2.16	0.56
71:Bk:26:LYS:HE2	80:B5:1751:G:H5”	1.86	0.56
79:B2:180:A:H2’	79:B2:181:A:O4’	2.05	0.56
79:B2:1160:A:H2’	79:B2:1161:C:H6	1.69	0.56
80:B5:1032:C:H5’	80:B5:1033:U:OP2	2.06	0.56
84:CW:41:C:C3’	84:CW:42:C:H5”	2.33	0.56
1:A0:24:VAL:HG12	1:A0:72:HIS:O	2.05	0.56
2:A1:37:CYS:O	2:A1:39:GLY:N	2.38	0.56
8:A7:84:LYS:HA	84:CW:30:G:H2’	0.69	0.56
8:A7:116:GLU:HG3	11:AC:98:PHE:CE2	2.40	0.56
12:AD:141:LYS:HD2	12:AD:179:GLN:CG	2.36	0.56
18:AJ:17:ARG:O	18:AJ:23:ARG:NH2	2.38	0.56
23:AO:27:PHE:CE2	79:B2:916:U:H2’	2.40	0.56
23:AO:38:THR:OG1	23:AO:39:ILE:N	2.36	0.56
30:AV:74:GLN:HB2	30:AV:79:LEU:HB2	1.86	0.56
33:AY:77:ASN:O	33:AY:78:SER:HB3	2.05	0.56
35:BA:69:TYR:CE2	80:B5:2558:U:N3	2.73	0.56
35:BA:200:ARG:CD	80:B5:2187:G:O6	2.52	0.56
38:BD:158:ARG:HD2	81:B7:46:A:P	2.43	0.56
38:BD:276:LYS:HD2	81:B7:61:G:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:95:ASN:HA	80:B5:2673:A:P	2.46	0.56
48:BN:109:ARG:HD3	82:B8:140:G:O2'	2.05	0.56
53:BS:12:ARG:HB3	53:BS:24:LEU:HD23	1.87	0.56
56:BV:3:GLY:HA2	56:BV:40:LYS:HB3	1.87	0.56
65:Be:19:ARG:HD2	65:Be:28:VAL:HG13	1.87	0.56
65:Be:123:LYS:HA	65:Be:126:LEU:HG	1.87	0.56
70:Bj:42:ALA:HB2	82:B8:105:A:OP2	2.05	0.56
79:B2:229:U:H3	79:B2:236:A:H61	1.51	0.56
79:B2:855:A:C2	79:B2:857:U:H1'	2.40	0.56
80:B5:1157:G:H2'	80:B5:1158:A:O4'	2.06	0.56
80:B5:2211:U:H5	80:B5:2234:G:C6	2.22	0.56
84:CW:33:U:C2	84:CW:35:A:OP2	2.58	0.56
8:A7:91:THR:HG23	84:CW:36:U:C5	2.39	0.56
11:AC:89:GLN:N	79:B2:1145:U:O2'	2.36	0.56
13:AE:21:ASP:CB	79:B2:773:C:H5"	2.31	0.56
28:AT:6:VAL:HG13	28:AT:66:TYR:CE2	2.41	0.56
35:BA:240:ALA:CA	80:B5:2154:U:O3'	2.37	0.56
36:BB:46:PHE:CE2	36:BB:205:VAL:HG13	2.39	0.56
51:BQ:182:LYS:HE2	80:B5:2764:C:OP1	2.06	0.56
62:Bb:15:LYS:HD2	80:B5:952:A:H5"	1.86	0.56
67:Bg:99:LYS:O	67:Bg:103:LYS:HG2	2.06	0.56
72:Bl:9:ILE:HG22	72:Bl:13:MET:CE	2.36	0.56
79:B2:83:G:OP2	88:B2:1944:OHX:N5	2.38	0.56
79:B2:415:C:C6	83:CV:288:ARG:HD3	2.38	0.56
79:B2:827:C:H2'	79:B2:828:U:C6	2.40	0.56
79:B2:918:U:H2'	79:B2:919:A:C8	2.39	0.56
79:B2:1029:U:O4	88:B2:2032:OHX:N3	2.38	0.56
79:B2:1158:C:OP2	88:B2:2012:OHX:N5	2.38	0.56
79:B2:1511:U:H2'	79:B2:1512:G:C8	2.41	0.56
79:B2:1535:U:O2'	79:B2:1536:G:N3	2.35	0.56
79:B2:1637:C:H4'	85:CX:2:U:H3	1.70	0.56
80:B5:701:G:H2'	80:B5:702:C:C6	2.40	0.56
80:B5:725:G:C3'	80:B5:726:G:H5"	2.36	0.56
80:B5:1688:U:H2'	80:B5:1689:U:C6	2.41	0.56
80:B5:1835:A:H5"	80:B5:1836:C:OP2	2.05	0.56
80:B5:2279:A:N7	83:CV:478:LYS:CE	2.67	0.56
80:B5:2436:U:H2'	80:B5:2437:G:H5"	1.88	0.56
80:B5:3279:A:C2'	80:B5:3280:U:H5'	2.36	0.56
4:A3:33:LYS:CE	79:B2:1593:A:O2'	2.52	0.56
5:A4:28:LYS:NZ	79:B2:477:A:P	2.79	0.56
24:AP:40:ARG:HD3	79:B2:1557:U:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:5:ARG:N	79:B2:1402:G:OP1	2.33	0.56
35:BA:45:VAL:HG22	35:BA:84:THR:HA	1.88	0.56
37:BC:144:LYS:CG	37:BC:145:ILE:H	2.17	0.56
37:BC:144:LYS:NZ	37:BC:144:LYS:H	2.03	0.56
39:BE:18:LEU:H	39:BE:18:LEU:HD12	1.71	0.56
41:BG:32:LYS:HB2	80:B5:2561:A:C2	2.40	0.56
47:BM:113:THR:HG22	47:BM:115:PHE:N	2.20	0.56
51:BQ:153:PHE:O	51:BQ:161:LYS:HG2	2.06	0.56
52:BR:90:PRO:HD2	80:B5:1779:C:N3	2.19	0.56
56:BV:47:ASN:O	80:B5:2338:C:C4’	2.51	0.56
61:Ba:61:PHE:CE1	80:B5:283:G:N9	2.74	0.56
74:Bn:17:ARG:NH2	79:B2:1116:A:H5’	2.21	0.56
79:B2:647:G:N2	79:B2:687:G:N2	2.54	0.56
80:B5:913:A:H2	80:B5:2134:G:N3	2.04	0.56
84:CW:67:C:N3	84:CW:68:C:C2	2.74	0.56
8:A7:79:SER:HA	84:CW:42:C:N3	2.21	0.56
11:AC:86:VAL:HG11	79:B2:1300:A:C5’	2.36	0.56
24:AP:96:ILE:HD11	24:AP:116:LEU:HD22	1.88	0.56
29:AU:54:GLY:CA	79:B2:1344:A:O2’	2.54	0.56
35:BA:236:GLY:HA2	80:B5:2184:U:C1’	2.36	0.56
38:BD:218:ARG:HH11	81:B7:31:U:H4’	1.63	0.56
48:BN:16:SER:O	48:BN:20:ARG:HG2	2.05	0.56
48:BN:179:LYS:HE2	80:B5:287:G:OP1	2.06	0.56
49:BO:64[A]:PHE:HE2	49:BO:68[A]:ARG:HH11	1.54	0.56
54:BT:14:MET:HE3	54:BT:58:GLN:CB	2.35	0.56
54:BT:49:GLN:CB	80:B5:2756:C:C4’	2.80	0.56
55:BU:42:LYS:HG2	55:BU:46:ALA:HA	1.88	0.56
79:B2:25:C:O2	88:B2:1961:OHX:N1	2.39	0.56
79:B2:717:C:N4	79:B2:720:G:H22	2.03	0.56
88:B2:1968:OHX:N3	88:B2:2011:OHX:N6	2.54	0.56
80:B5:2537:U:O2’	80:B5:2538:U:O5’	2.22	0.56
11:AC:212:LYS:NZ	79:B2:1298:U:O3’	2.38	0.56
14:AF:98:MET:HE3	79:B2:1611:A:H1’	1.87	0.56
18:AJ:38:ASN:HB2	18:AJ:41:GLU:HG3	1.87	0.56
25:AQ:116:LEU:H	25:AQ:116:LEU:HD22	1.70	0.56
36:BB:218:ILE:HG13	36:BB:276:THR:HG23	1.88	0.56
38:BD:191:ASP:OD1	38:BD:193:GLU:HB2	2.04	0.56
38:BD:270:LYS:HG3	38:BD:273:ARG:CB	2.36	0.56
52:BR:165:LYS:HB3	79:B2:849:C:O2	2.06	0.56
52:BR:169:ALA:C	79:B2:852:C:C6	2.64	0.56
63:Bc:85:PHE:CZ	80:B5:1728:G:O6	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Bk:16:ARG:O	71:Bk:18:ALA:N	2.39	0.56
79:B2:1446:A:O5'	88:B2:2081:OHX:N2	2.39	0.56
79:B2:1761:U:O4	85:CX:1:A:H4'	2.05	0.56
80:B5:420:G:OP2	80:B5:420:G:OP1	2.24	0.56
80:B5:541:U:H2'	80:B5:542:G:H8	1.70	0.56
5:A4:55:ARG:HB3	5:A4:58:PRO:HG3	1.87	0.56
15:AG:175:ILE:CD1	79:B2:78:A:C2'	2.80	0.56
17:AI:2:GLY:N	79:B2:400:A:N6	2.54	0.56
28:AT:57:ARG:HH11	28:AT:57:ARG:CG	2.09	0.56
32:AX:108:GLY:HA2	79:B2:600:U:OP2	2.06	0.56
35:BA:211:HIS:HE1	80:B5:2184:U:O3'	1.88	0.56
36:BB:265:ALA:C	36:BB:266:ARG:HG2	2.30	0.56
43:BI:8:CYS:SG	80:B5:2828:G:C5'	2.93	0.56
48:BN:46:ASP:N	48:BN:46:ASP:OD1	2.38	0.56
48:BN:67:ARG:O	48:BN:68:ARG:HB3	2.04	0.56
49:BO:180[B]:SER:O	49:BO:183[B]:ALA:N	2.39	0.56
61:Ba:61:PHE:CE1	80:B5:283:G:C8	2.93	0.56
62:Bb:24:PRO:HD2	62:Bb:25:LYS:H	1.69	0.56
62:Bb:29:TYR:O	80:B5:748:U:H5'	2.06	0.56
67:Bg:82:ALA:CB	80:B5:1638:A:H5"	2.35	0.56
69:Bi:91:ASN:O	69:Bi:94:ILE:HG22	2.06	0.56
75:Bo:82:GLN:NE2	80:B5:2768:U:O2	2.36	0.56
80:B5:1093:A:H4'	80:B5:1093:A:OP1	2.05	0.56
80:B5:2621:G:C5	84:CW:75:C:C5	2.93	0.56
1:A0:75:VAL:HG11	79:B2:1793:G:N1	2.21	0.56
7:A6:93:ASP:OD1	7:A6:96:THR:HB	2.06	0.56
12:AD:174:HIS:CE1	79:B2:1277:G:HO2'	2.13	0.56
13:AE:194:THR:O	13:AE:195:ILE:HB	2.05	0.56
14:AF:91:GLU:HA	14:AF:94:THR:HG23	1.87	0.56
17:AI:23:LYS:HE3	79:B2:387:A:OP1	2.05	0.56
18:AJ:163:PRO:C	18:AJ:165:GLY:H	2.14	0.56
26:AR:52:GLY:HA3	79:B2:1389:C:O2'	2.06	0.56
27:AS:40:ARG:CD	79:B2:1539:G:H5"	2.36	0.56
35:BA:191:LEU:CD1	80:B5:1795:U:OP1	2.54	0.56
46:BL:50:PRO:O	46:BL:51:LEU:HB2	2.06	0.56
75:Bo:56:PRO:HA	80:B5:2802:A:C5	2.41	0.56
75:Bo:77:CYS:SG	75:Bo:77:CYS:O	2.64	0.56
88:B2:1963:OHX:N1	88:B2:2025:OHX:N4	2.54	0.56
80:B5:2442:G:H22	80:B5:2506:U:H3	1.53	0.56
8:A7:84:LYS:HG2	84:CW:32:U:C5	2.40	0.56
12:AD:29:LEU:HB2	12:AD:34:TYR:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:173:ALA:N	79:B2:512:A:OP2	2.32	0.56
18:AJ:175:ARG:HD3	18:AJ:179:ARG:NH1	2.21	0.56
20:AL:83:THR:HG21	79:B2:325:G:H4'	1.88	0.56
52:BR:165:LYS:HZ1	79:B2:824:G:H1'	1.70	0.56
54:BT:4:SER:CB	80:B5:2630:C:C5	2.89	0.56
54:BT:6:GLY:HA2	80:B5:2630:C:H5"	1.87	0.56
54:BT:54:HIS:CE1	54:BT:55:LYS:HD3	2.41	0.56
60:BZ:135:ARG:HB3	60:BZ:135:ARG:HH11	1.71	0.56
76:Bq:5:ARG:HD3	80:B5:1220:U:OP1	2.05	0.56
79:B2:1190:C:O2'	84:CW:31:A:C3'	2.52	0.56
79:B2:1428:G:H4'	84:CW:34:C:H5'	1.88	0.56
79:B2:1639:C:OP1	88:B2:2068:OHX:N4	2.39	0.56
80:B5:2207:A:H62	80:B5:2236:G:H1	1.52	0.56
83:CV:248:ASP:N	83:CV:360:LEU:CD2	2.41	0.56
6:A5:135:HIS:HB2	6:A5:138:ARG:CB	2.36	0.55
13:AE:152:PRO:O	13:AE:154:ILE:N	2.39	0.55
15:AG:137:ARG:NH1	79:B2:169:A:P	2.79	0.55
17:AI:138:ASN:O	17:AI:141:ARG:HB2	2.06	0.55
23:AO:52:ARG:HH11	79:B2:905:A:H4'	1.71	0.55
26:AR:71:PHE:HE1	26:AR:73:LEU:HD22	1.71	0.55
35:BA:94:ALA:HA	80:B5:2551:U:O4	2.06	0.55
35:BA:187:HIS:CG	80:B5:1794:G:C5	2.95	0.55
36:BB:21:ARG:HD3	36:BB:269:GLN:OE1	2.06	0.55
37:BC:48:GLN:HG3	80:B5:337:G:C4'	2.36	0.55
37:BC:361:HIS:CG	37:BC:362:ASP:N	2.74	0.55
48:BN:184:LYS:C	48:BN:186:GLY:H	2.13	0.55
49:BO:160[B]:ARG:NH2	80:B5:3182:G:OP1	2.39	0.55
55:BU:47:VAL:C	55:BU:49:ASN:H	2.13	0.55
63:Bc:9:SER:HG	63:Bc:10:ILE:H	1.52	0.55
66:Bf:13:HIS:HE2	66:Bf:28:SER:HG	1.50	0.55
69:Bi:36:ARG:HD2	80:B5:116:A:OP1	2.06	0.55
75:Bo:41:ARG:NH1	80:B5:284:A:P	2.70	0.55
79:B2:116:U:H2'	79:B2:117:U:C6	2.40	0.55
79:B2:540:G:O3'	79:B2:541:A:H3'	2.05	0.55
80:B5:173:G:H22	80:B5:246:U:H1'	1.71	0.55
80:B5:599:C:H2'	80:B5:600:G:O4'	2.06	0.55
80:B5:1541:G:H2'	80:B5:1542:G:O5'	2.06	0.55
80:B5:2676:A:H4'	80:B5:2677:G:O5'	2.05	0.55
84:CW:33:U:O2	84:CW:35:A:OP2	2.23	0.55
6:A5:135:HIS:ND1	6:A5:138:ARG:HD2	2.20	0.55
11:AC:89:GLN:O	79:B2:1145:U:O2'	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:132:SER:CA	79:B2:336:G:H4'	2.36	0.55
23:AO:46:MET:CG	79:B2:899:G:C5'	2.85	0.55
26:AR:60:ARG:HH12	79:B2:1400:A:C4'	2.17	0.55
28:AT:45:MET:HE3	28:AT:46:PRO:HD2	1.87	0.55
36:BB:223:GLY:N	80:B5:3305:A:OP1	2.34	0.55
38:BD:26:GLY:C	80:B5:2703:A:H61	2.15	0.55
38:BD:31:TYR:CE2	80:B5:2705:A:OP1	2.59	0.55
38:BD:274:GLN:CD	81:B7:60:G:N2	2.50	0.55
41:BG:137:ASN:CG	80:B5:148:G:N7	2.63	0.55
43:BI:210:ILE:HA	43:BI:217:PHE:CE1	2.41	0.55
48:BN:179:LYS:HB3	80:B5:287:G:H5'	1.89	0.55
56:BV:47:ASN:O	80:B5:2338:C:C5'	2.54	0.55
74:Bn:5:TRP:CZ3	79:B2:1775:U:H5	2.13	0.55
79:B2:489:C:H42	79:B2:497:G:H22	1.53	0.55
79:B2:514:G:O2'	79:B2:515:A:H5'	2.06	0.55
79:B2:1179:G:P	84:CW:29:G:O2'	2.64	0.55
79:B2:1428:G:H4'	84:CW:34:C:H5"	1.88	0.55
79:B2:1757:G:O2'	80:B5:2256:A:C8	2.59	0.55
79:B2:1780:G:C1'	80:B5:2262:A:C4'	2.58	0.55
80:B5:1110:U:H2'	80:B5:1111:U:C6	2.41	0.55
80:B5:3343:G:N2	80:B5:3362:A:H2	1.97	0.55
4:A3:7:TRP:O	4:A3:8:PHE:HB2	2.06	0.55
10:AB:61:LEU:HD23	10:AB:62:LYS:H	1.72	0.55
12:AD:4:LEU:HD13	79:B2:1514:U:C6	2.42	0.55
15:AG:70:PRO:C	15:AG:98:ARG:HH21	2.14	0.55
15:AG:132:ARG:HH21	79:B2:68:A:C1'	2.17	0.55
21:AM:67:THR:O	21:AM:69:ALA:N	2.35	0.55
25:AQ:50:GLU:OE2	25:AQ:112:TYR:OH	2.24	0.55
33:AY:105:ARG:HE	79:B2:444:C:P	2.29	0.55
38:BD:19:PRO:HD3	80:B5:2688:U:O4	2.06	0.55
39:BE:40:LEU:HD11	39:BE:54:TYR:HB2	1.87	0.55
43:BI:74:LYS:O	43:BI:78:THR:HG23	2.06	0.55
44:BJ:70:THR:OG1	81:B7:39:C:N3	2.37	0.55
48:BN:112:ASN:ND2	82:B8:141:C:O2	2.39	0.55
52:BR:166:ASN:HB2	79:B2:850:A:H5"	1.85	0.55
65:Be:105:ARG:NH2	80:B5:1412:G:OP1	2.37	0.55
72:Bl:44:TRP:CZ2	80:B5:1495:U:H1'	2.40	0.55
79:B2:852:C:O5'	79:B2:852:C:H6	1.89	0.55
79:B2:1332:C:O5'	79:B2:1332:C:H6	1.89	0.55
79:B2:1427:A:H2'	84:CW:34:C:C1'	2.23	0.55
1:A0:75:VAL:HG11	79:B2:1793:G:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:54:LYS:NZ	79:B2:1420:C:OP1	2.40	0.55
8:A7:51:ARG:NH1	80:B5:2677:G:O4'	2.38	0.55
8:A7:92:ASP:CA	84:CW:35:A:C8	2.85	0.55
8:A7:102:THR:O	8:A7:106:VAL:HG23	2.06	0.55
15:AG:159:ARG:HH11	79:B2:77:U:H1'	1.72	0.55
17:AI:39:GLY:N	17:AI:60:ILE:O	2.30	0.55
23:AO:46:MET:HG2	79:B2:899:G:C5'	2.36	0.55
24:AP:18:ARG:NH1	27:AS:90:ASN:O	2.40	0.55
37:BC:82:THR:OG1	80:B5:355:A:N1	2.23	0.55
37:BC:305:ALA:H	80:B5:1347:U:H4'	1.72	0.55
37:BC:316:ASN:O	37:BC:319:LYS:O	2.24	0.55
38:BD:279:LYS:HD3	38:BD:282:ARG:NH2	2.22	0.55
43:BI:102:MET:HB3	83:CV:471:LYS:HZ1	1.58	0.55
44:BJ:155:THR:O	44:BJ:159:THR:HG23	2.07	0.55
60:BZ:36:HIS:CD2	60:BZ:74:VAL:HG11	2.41	0.55
71:Bk:18:ALA:C	71:Bk:20:VAL:H	2.15	0.55
75:Bo:106:PHE:CE2	84:CW:18:G:C2	2.92	0.55
79:B2:1650:U:H2'	79:B2:1651:A:C8	2.42	0.55
79:B2:1759:C:C2	80:B5:2262:A:H2	2.24	0.55
80:B5:209:A:H4'	80:B5:211:A:C8	2.42	0.55
80:B5:1716:U:H6	80:B5:1716:U:H5'	1.71	0.55
80:B5:2284:C:C2	83:CV:477:SER:HA	1.95	0.55
9:AA:167:LYS:HB3	9:AA:168:HIS:HD2	1.72	0.55
16:AH:71:HIS:CG	16:AH:131:PHE:HZ	2.24	0.55
23:AO:27:PHE:CZ	79:B2:916:U:H2'	2.37	0.55
36:BB:2:SER:N	80:B5:2943:G:N7	2.55	0.55
36:BB:253:GLY:O	80:B5:2394:G:H5'	2.07	0.55
38:BD:16:PHE:HA	80:B5:2688:U:HO2'	1.71	0.55
39:BE:3:ALA:HB2	65:Be:77:ALA:HB2	1.89	0.55
41:BG:38:GLN:CB	80:B5:2557:A:H2	2.19	0.55
42:BH:88:TYR:CZ	42:BH:184:LYS:HD3	2.42	0.55
48:BN:162:ARG:HG3	80:B5:56:G:H1'	1.86	0.55
52:BR:165:LYS:HZ2	79:B2:824:G:H1'	1.70	0.55
53:BS:115:ARG:NH2	80:B5:1320:C:O2	2.39	0.55
64:Bd:43:HIS:O	64:Bd:44:MET:HE2	2.07	0.55
79:B2:749:U:H2'	79:B2:750:U:C6	2.41	0.55
79:B2:1686:C:O2'	79:B2:1687:U:H5'	2.06	0.55
80:B5:585:A:H2'	80:B5:586:C:C6	2.41	0.55
80:B5:2512:C:H5'	80:B5:2512:C:C6	2.29	0.55
1:A0:9:GLY:HA3	1:A0:34:LYS:HE2	1.89	0.55
1:A0:97:PRO:O	79:B2:1798:U:C4	2.58	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:162:GLN:HB3	79:B2:1332:C:O2'	2.06	0.55
13:AE:159:THR:HG23	13:AE:173:ILE:HD13	1.88	0.55
24:AP:130:ARG:CA	84:CW:46:G:OP1	2.54	0.55
27:AS:134:ARG:NH2	79:B2:1545:A:C8	2.74	0.55
32:AX:102:VAL:HG12	32:AX:127:VAL:HG12	1.88	0.55
35:BA:15:ILE:HD12	80:B5:822:G:H1'	1.89	0.55
37:BC:18:ASN:N	37:BC:18:ASN:OD1	2.37	0.55
43:BI:52:LEU:HD22	43:BI:163:GLN:HB2	1.88	0.55
46:BL:7:LEU:HD13	80:B5:796:U:H1'	1.87	0.55
48:BN:74:PRO:HA	80:B5:2166:A:O4'	2.07	0.55
61:Ba:36:GLY:N	80:B5:40:A:OP2	2.39	0.55
79:B2:1513:G:O2'	79:B2:1515:A:N3	2.38	0.55
79:B2:1646:C:C4'	80:B5:2257:C:H42	1.98	0.55
80:B5:1811:G:H2'	80:B5:1812:G:O4'	2.07	0.55
80:B5:2625:C:C5	84:CW:76:A:O3'	2.54	0.55
80:B5:3288:G:C4	80:B5:3289:G:C8	2.95	0.55
10:AB:124:ASN:ND2	79:B2:884:A:C4'	2.63	0.55
14:AF:37:GLN:CD	25:AQ:53:LEU:HD22	2.32	0.55
20:AL:101:GLU:OE1	32:AX:16:ARG:NH1	2.40	0.55
24:AP:99:GLY:HA3	79:B2:1183:A:N1	2.21	0.55
31:AW:8:ALA:HA	31:AW:74:VAL:HG11	1.88	0.55
32:AX:99:ASN:CA	83:CV:378:LYS:NZ	2.67	0.55
34:AZ:60:VAL:CG2	34:AZ:101:TYR:HB2	2.37	0.55
40:BF:175:LYS:HD3	40:BF:176:TYR:CZ	2.42	0.55
58:BX:48:SER:HB2	82:B8:136:G:OP1	2.06	0.55
62:Bb:3:LYS:HE3	80:B5:2618:G:O4'	2.07	0.55
69:Bi:75:LYS:HE3	80:B5:2216:G:OP1	2.07	0.55
88:B2:1915:OHX:N6	88:B2:2069:OHX:N5	2.55	0.55
88:B2:1953:OHX:N6	88:B2:2066:OHX:N5	2.54	0.55
80:B5:59:G:H4'	80:B5:60:A:H4'	1.88	0.55
80:B5:2625:C:C4	84:CW:76:A:H8	2.20	0.55
1:A0:95:ARG:NH2	79:B2:1797:A:OP1	2.40	0.55
12:AD:4:LEU:HD13	79:B2:1514:U:N1	2.22	0.55
13:AE:246:LEU:HD13	13:AE:251:GLU:HG2	1.88	0.55
18:AJ:125:ALA:O	18:AJ:129:ILE:HG13	2.07	0.55
20:AL:59:PRO:HG2	20:AL:60:PHE:CE2	2.41	0.55
21:AM:98:GLY:C	21:AM:103:LEU:HD21	2.32	0.55
22:AN:12:SER:O	22:AN:13:SER:HB3	2.06	0.55
23:AO:38:THR:CG2	79:B2:895:G:C3'	2.72	0.55
23:AO:81:VAL:HG22	23:AO:115:ILE:HB	1.87	0.55
23:AO:132:ARG:N	79:B2:1787:C:OP1	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:9:THR:HG21	25:AQ:88:GLY:HA2	1.88	0.55
29:AU:57:ARG:HG3	29:AU:89:ARG:CZ	2.36	0.55
35:BA:64:ARG:CD	80:B5:2557:A:C5	2.90	0.55
41:BG:161:GLU:OE1	48:BN:26:ARG:NH2	2.32	0.55
41:BG:162:LEU:CD1	80:B5:147:U:N1	2.69	0.55
43:BI:7:ARG:NH1	80:B5:2828:G:P	2.80	0.55
43:BI:171:TRP:O	43:BI:174:THR:HG22	2.07	0.55
48:BN:72:LYS:HZ2	80:B5:2167:A:P	2.29	0.55
48:BN:95:GLN:HG3	80:B5:32:U:OP2	2.07	0.55
49:BO:159[B]:LYS:NZ	80:B5:3243:A:OP1	2.39	0.55
69:Bi:56:ARG:HH22	69:Bi:76:ARG:NH1	2.05	0.55
71:Bk:65:LEU:HD23	71:Bk:68:SER:HB2	1.87	0.55
79:B2:558:U:O2'	79:B2:559:C:O5'	2.24	0.55
79:B2:1002:G:H5"	80:B5:2265:C:OP1	2.05	0.55
80:B5:8:C:H2'	80:B5:9:U:O4'	2.06	0.55
80:B5:2263:C:P	88:B5:3402:OHX:N1	2.80	0.55
80:B5:3288:G:HO2'	80:B5:3289:G:H8	1.55	0.55
2:A1:67:THR:HA	79:B2:872:G:C4'	2.36	0.55
8:A7:84:LYS:CG	84:CW:32:U:C6	2.89	0.55
12:AD:162:GLN:HG2	79:B2:1333:C:O4'	2.07	0.55
17:AI:182:TYR:HB3	79:B2:210:A:H4'	1.89	0.55
17:AI:188:GLU:HG2	20:AL:13:PHE:CD2	2.42	0.55
23:AO:54:GLU:OE2	79:B2:901:G:N1	2.40	0.55
27:AS:83:ALA:O	27:AS:89:GLN:NE2	2.39	0.55
28:AT:9:VAL:HG12	28:AT:14:PHE:HB2	1.88	0.55
34:AZ:77:ARG:CZ	79:B2:1534:G:N7	2.66	0.55
38:BD:16:PHE:HD1	80:B5:2688:U:H2'	1.72	0.55
38:BD:16:PHE:CD1	80:B5:2688:U:H2'	2.41	0.55
38:BD:265:TYR:HB3	81:B7:1:G:N1	2.22	0.55
38:BD:269:SER:OG	81:B7:1:G:N3	2.30	0.55
39:BE:50:LYS:HG2	39:BE:74:VAL:CG2	2.37	0.55
51:BQ:122:ILE:HD11	51:BQ:130:ARG:NH1	2.21	0.55
61:Ba:65:GLN:O	61:Ba:66:ALA:HB3	2.07	0.55
67:Bg:56:THR:HG21	80:B5:1739:U:O2'	2.07	0.55
67:Bg:84:CYS:O	67:Bg:88:ARG:HB2	2.07	0.55
79:B2:133:U:H4'	79:B2:134:U:OP2	2.07	0.55
79:B2:197:A:H2'	79:B2:198:A:C8	2.42	0.55
79:B2:499:U:O2'	79:B2:500:C:OP1	2.24	0.55
79:B2:652:G:H1	79:B2:682:C:N4	2.04	0.55
79:B2:1291:G:O5'	79:B2:1291:G:C8	2.55	0.55
79:B2:1413:U:H4'	79:B2:1414:U:OP2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1568:U:H4'	80:B5:1569:U:OP1	2.06	0.55
1:A0:32:LYS:NZ	79:B2:930:A:OP1	2.40	0.55
8:A7:93:ARG:HG3	79:B2:1637:C:C2	2.42	0.55
10:AB:48:VAL:HG13	10:AB:61:LEU:HD21	1.89	0.55
12:AD:4:LEU:HD12	79:B2:1514:U:C4	2.41	0.55
12:AD:64:ARG:O	12:AD:66:ILE:N	2.39	0.55
13:AE:104:ASP:HB2	13:AE:108:ARG:H	1.72	0.55
15:AG:59:GLN:CA	79:B2:155:U:C1'	2.85	0.55
18:AJ:171:ARG:O	18:AJ:175:ARG:N	2.36	0.55
23:AO:13:VAL:HG22	23:AO:76:ILE:HA	1.87	0.55
48:BN:110:ALA:HB1	82:B8:141:C:O2'	2.07	0.55
54:BT:4:SER:HB2	80:B5:2630:C:C4	2.42	0.55
56:BV:67:PRO:HG2	79:B2:1660:A:C5'	2.37	0.55
62:Bb:18:ARG:HG3	80:B5:969:C:O3'	2.07	0.55
68:Bh:85:THR:CG2	68:Bh:88:LEU:H	2.20	0.55
74:Bn:2:ARG:HH22	79:B2:1773:C:H41	1.51	0.55
76:Bq:55:LYS:O	76:Bq:59:VAL:HG23	2.07	0.55
79:B2:480:G:N2	79:B2:509:G:H1'	2.22	0.55
79:B2:872:G:O6	88:B2:2006:OHX:N3	2.40	0.55
80:B5:851:C:H5"	80:B5:851:C:C6	2.34	0.55
1:A0:23:CYS:HB2	1:A0:74:CYS:HB3	1.88	0.54
1:A0:86:VAL:HG22	79:B2:1795:U:OP1	2.07	0.54
13:AE:42:LEU:HD12	13:AE:109:PHE:HB2	1.89	0.54
15:AG:112:VAL:HG23	79:B2:164:A:H5'	1.88	0.54
16:AH:167:GLU:O	16:AH:170:GLN:HB2	2.07	0.54
30:AV:64:GLU:O	30:AV:68:SER:HB2	2.07	0.54
35:BA:22:LEU:CD2	80:B5:1797:A:O5'	2.54	0.54
37:BC:35:VAL:HG21	37:BC:244:LEU:HD21	1.89	0.54
38:BD:46:THR:HG23	80:B5:1078:U:H4'	1.89	0.54
39:BE:176:PHE:H	47:BM:117:ARG:NH2	2.04	0.54
43:BI:81:GLY:O	43:BI:83:ASP:N	2.36	0.54
47:BM:16:GLU:HB3	53:BS:149:LYS:HB3	1.89	0.54
52:BR:79:GLY:N	80:B5:1939:G:OP1	2.35	0.54
61:Ba:122:PRO:HB3	61:Ba:142:GLY:O	2.06	0.54
68:Bh:93:THR:HB	80:B5:135:C:H1'	1.89	0.54
69:Bi:4:LYS:HD2	69:Bi:13:LYS:O	2.07	0.54
69:Bi:53:TYR:CZ	80:B5:295:A:OP1	2.60	0.54
79:B2:1776:A:H2'	79:B2:1777:G:C8	2.42	0.54
80:B5:3334:U:H4'	80:B5:3335:A:H5"	1.88	0.54
1:A0:59:TYR:OH	10:AB:72:ASP:OD1	2.14	0.54
1:A0:97:PRO:HA	79:B2:1798:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:45:GLU:OE1	79:B2:1433:G:N2	2.40	0.54
8:A7:48:ARG:HD3	80:B5:2678:A:OP1	2.07	0.54
8:A7:88:ARG:C	84:CW:33:U:H1'	2.30	0.54
11:AC:91:ARG:HA	79:B2:1147:A:OP1	2.08	0.54
13:AE:8:HIS:CE1	79:B2:449:C:H4'	2.41	0.54
15:AG:58:LYS:C	15:AG:60:GLY:H	2.15	0.54
15:AG:164:LYS:CE	79:B2:72:A:C5'	2.83	0.54
23:AO:120:PRO:HB2	79:B2:887:A:C4'	2.37	0.54
29:AU:53:LYS:CB	79:B2:1345:A:O5'	2.53	0.54
33:AY:120:GLY:N	79:B2:85:A:O3'	2.40	0.54
38:BD:145:PHE:CD1	80:B5:2748:A:C4'	2.90	0.54
39:BE:31:ARG:NH2	39:BE:81:ALA:O	2.40	0.54
39:BE:50:LYS:HG2	39:BE:74:VAL:HG21	1.89	0.54
41:BG:241:LYS:HB2	80:B5:2586:G:N7	2.22	0.54
46:BL:157:ARG:HH22	61:Ba:146:GLU:CD	2.15	0.54
51:BQ:178:ARG:HG2	61:Ba:51:GLY:HA3	1.90	0.54
79:B2:103:A:H4'	79:B2:104:A:OP2	2.07	0.54
79:B2:832:U:H2'	79:B2:833:U:H5"	1.89	0.54
80:B5:495:G:H2'	80:B5:496:C:O4'	2.07	0.54
80:B5:2589:G:C2'	80:B5:2590:A:H5'	2.37	0.54
80:B5:2971:A:H5"	80:B5:2972:G:C5'	2.37	0.54
80:B5:3029:A:N9	83:CV:435:TYR:HD2	2.06	0.54
83:CV:536:TYR:HA	83:CV:540:ILE:HG23	1.90	0.54
5:A4:21:VAL:HG22	79:B2:586:G:H4'	1.88	0.54
8:A7:84:LYS:C	84:CW:30:G:C1'	2.80	0.54
9:AA:13:ASP:HA	9:AA:16:LEU:HD12	1.88	0.54
10:AB:110:LEU:HD21	10:AB:213:ARG:HD2	1.89	0.54
15:AG:53:SER:CB	79:B2:163:G:H4'	2.36	0.54
16:AH:73:VAL:HG12	16:AH:77:LEU:HB2	1.90	0.54
16:AH:111:LYS:O	16:AH:112:ARG:HB2	2.07	0.54
27:AS:139:LYS:HD3	79:B2:1178:G:O6	2.07	0.54
33:AY:94:TYR:HD2	33:AY:96:LEU:HD11	1.72	0.54
41:BG:41:GLN:HG3	41:BG:42:PRO:HD2	1.90	0.54
48:BN:183:THR:O	48:BN:183:THR:HG23	2.07	0.54
49:BO:73[B]:PHE:HA	80:B5:3007:U:OP1	2.08	0.54
49:BO:110[B]:PRO:O	49:BO:113[B]:ASP:N	2.27	0.54
67:Bg:56:THR:OG1	80:B5:1740:U:H5'	2.06	0.54
75:Bo:41:ARG:HD3	80:B5:284:A:O4'	2.07	0.54
79:B2:286:C:H2'	79:B2:287:G:H5'	1.89	0.54
79:B2:499:U:O2'	79:B2:500:C:O4'	2.15	0.54
79:B2:1655:A:H1'	80:B5:2302:G:C2'	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:600:G:H5”	80:B5:600:G:H8	1.72	0.54
80:B5:1579:C:C2’	80:B5:1580:A:H5’	2.37	0.54
80:B5:1724:U:H1’	80:B5:1725:C:C6	2.42	0.54
80:B5:2439:A:H4’	80:B5:2439:A:OP1	2.07	0.54
2:A1:36:LYS:HG2	2:A1:43:ILE:HG22	1.89	0.54
13:AE:12:LEU:O	79:B2:756:A:H1’	2.08	0.54
17:AI:73:SER:H	79:B2:256:A:HO2’	1.47	0.54
17:AI:171:SER:CB	79:B2:209:U:H5’	2.37	0.54
19:AK:9:ASN:O	19:AK:13:GLN:HB3	2.07	0.54
19:AK:14:TYR:CE1	19:AK:21:VAL:HG22	2.43	0.54
20:AL:80:MET:HE3	79:B2:324:U:O2’	2.07	0.54
22:AN:13:SER:HB3	88:B2:1910:OHX:N3	2.22	0.54
22:AN:113:PHE:HA	22:AN:116:ILE:HD12	1.90	0.54
23:AO:122:PRO:CA	79:B2:887:A:H1’	2.36	0.54
25:AQ:13:LYS:NZ	79:B2:1584:G:O6	2.38	0.54
38:BD:269:SER:OG	81:B7:1:G:N2	2.40	0.54
44:BJ:90:GLN:HG2	44:BJ:170:ASP:HB2	1.88	0.54
53:BS:79:VAL:HG21	53:BS:106:LEU:HD21	1.90	0.54
55:BU:58:GLU:HB2	55:BU:63:VAL:HA	1.89	0.54
72:Bl:15:LYS:O	72:Bl:19:GLN:HG3	2.07	0.54
79:B2:348:U:O4	88:B2:2007:OHX:N5	2.40	0.54
79:B2:1157:A:C8	79:B2:1157:A:H3’	2.42	0.54
80:B5:3027:A:C3’	83:CV:109:GLN:CB	2.56	0.54
81:B7:91:G:H2’	81:B7:92:A:H8	1.69	0.54
4:A3:14:TYR:HD2	79:B2:1597:A:N7	2.05	0.54
10:AB:117:TRP:N	79:B2:932:U:P	2.80	0.54
13:AE:192:ILE:HG13	13:AE:243:GLY:HA3	1.89	0.54
15:AG:136:LYS:CE	79:B2:65:A:OP1	2.55	0.54
17:AI:86:SER:OG	79:B2:329:G:C1’	2.56	0.54
18:AJ:65:LYS:HA	18:AJ:70:LEU:HD11	1.89	0.54
28:AT:57:ARG:HA	79:B2:1479:A:OP1	2.07	0.54
43:BI:82:ARG:HG2	43:BI:82:ARG:O	2.07	0.54
46:BL:75:PHE:H	46:BL:97:VAL:HA	1.72	0.54
52:BR:134:HIS:CB	80:B5:1947:G:C5’	2.85	0.54
54:BT:12:ARG:HD3	54:BT:13:TYR:CE1	2.43	0.54
79:B2:1433:G:H2’	79:B2:1434:U:C6	2.42	0.54
88:B2:1953:OHX:N6	88:B2:2066:OHX:N2	2.56	0.54
80:B5:240:U:O2’	80:B5:241:G:O5’	2.19	0.54
12:AD:203:PRO:HD2	79:B2:1331:A:C2	2.43	0.54
17:AI:8:ARG:HH11	17:AI:21:PHE:H	1.54	0.54
20:AL:133:LYS:HB2	79:B2:337:G:H3’	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AP:12:PHE:HB2	44:BJ:85:LYS:CD	2.37	0.54
26:AR:20:TYR:CZ	26:AR:38:ILE:HD11	2.43	0.54
28:AT:121:GLY:HA2	79:B2:1499:G:OP1	2.07	0.54
29:AU:35:GLU:CG	79:B2:1383:G:O2'	2.55	0.54
35:BA:244:GLY:H	80:B5:2153:U:H4'	1.73	0.54
41:BG:181:LYS:HD2	82:B8:155:A:OP1	2.08	0.54
46:BL:99:HIS:CE1	80:B5:156:G:C6	2.95	0.54
67:Bg:53:GLY:HA2	80:B5:1640:G:OP1	2.08	0.54
75:Bo:22:GLN:O	75:Bo:75:VAL:HG22	2.07	0.54
79:B2:230:C:H2'	79:B2:231:U:H5"	1.90	0.54
79:B2:425:A:H5'	79:B2:425:A:H8	1.72	0.54
79:B2:839:U:C5	88:B2:2069:OHX:N6	2.76	0.54
80:B5:419:G:O3'	80:B5:420:G:OP2	2.24	0.54
80:B5:1654:A:H2'	80:B5:1655:G:H5"	1.89	0.54
80:B5:3273:A:C2'	80:B5:3274:A:H5'	2.38	0.54
80:B5:3285:C:H2'	80:B5:3286:G:H5"	1.88	0.54
1:A0:79:ILE:HG23	1:A0:84:VAL:HG21	1.89	0.54
2:A1:68:GLY:N	79:B2:872:G:C1'	2.71	0.54
8:A7:89:ARG:NE	84:CW:33:U:C3'	2.55	0.54
9:AA:9:LEU:HD22	9:AA:10:THR:H	1.72	0.54
9:AA:58:VAL:O	9:AA:62:ARG:HB2	2.08	0.54
12:AD:159:HIS:HB2	79:B2:1328:G:H5"	1.89	0.54
12:AD:211:PRO:O	12:AD:212:LYS:HB2	2.08	0.54
13:AE:158:ASP:OD2	13:AE:174:LYS:NZ	2.38	0.54
15:AG:140:ASN:ND2	79:B2:168:A:OP1	2.38	0.54
15:AG:185:GLN:CD	79:B2:284:G:C2	2.86	0.54
18:AJ:151:ASP:N	18:AJ:151:ASP:OD1	2.39	0.54
23:AO:107:ARG:HH11	23:AO:107:ARG:CG	2.19	0.54
23:AO:131:GLY:HA2	79:B2:1787:C:OP1	2.08	0.54
42:BH:175:PHE:HE1	80:B5:2901:G:H5'	1.73	0.54
44:BJ:28:ASP:HA	44:BJ:31:THR:HG23	1.89	0.54
52:BR:165:LYS:CE	79:B2:824:G:N2	2.69	0.54
59:BY:13:ARG:HH11	82:B8:24:G:P	2.31	0.54
67:Bg:52:GLN:CG	80:B5:1639:C:H5'	2.34	0.54
68:Bh:59:ASN:O	68:Bh:63:ARG:HG2	2.07	0.54
69:Bi:30:LYS:NZ	80:B5:317:A:OP2	2.31	0.54
79:B2:706:A:C6	79:B2:734:A:N6	2.75	0.54
79:B2:823:G:O2'	79:B2:824:G:O5'	2.23	0.54
79:B2:1354:G:H5'	79:B2:1355:C:OP2	2.07	0.54
79:B2:1514:U:H5'	79:B2:1514:U:O2	2.07	0.54
79:B2:1783:C:H2'	79:B2:1784:C:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2425:G:H2'	80:B5:2426:U:O4'	2.08	0.54
80:B5:3198:U:H4'	80:B5:3199:G:OP2	2.08	0.54
6:A5:130:VAL:HG11	6:A5:143:LYS:HG2	1.89	0.54
6:A5:138:ARG:CZ	79:B2:1235:C:C2	2.91	0.54
7:A6:33:LEU:HB3	7:A6:45:TRP:HB2	1.90	0.54
8:A7:75:ASP:O	84:CW:45:U:OP2	2.26	0.54
9:AA:147:THR:OG1	9:AA:159:ALA:HB1	2.07	0.54
10:AB:34:ALA:HB3	10:AB:41:ARG:HA	1.89	0.54
16:AH:16:LEU:HA	16:AH:19:GLN:HG3	1.90	0.54
17:AI:26:LYS:O	17:AI:29:LEU:HB3	2.07	0.54
22:AN:5:HIS:HE2	79:B2:628:G:P	2.30	0.54
23:AO:132:ARG:NH2	79:B2:1788:G:C8	2.76	0.54
35:BA:193:ARG:NH2	80:B5:2181:C:OP1	2.41	0.54
52:BR:60:LYS:HB2	80:B5:1690:C:OP1	2.08	0.54
72:Bl:37:TYR:CE1	72:Bl:39:ALA:HA	2.42	0.54
79:B2:420:A:N7	83:CV:288:ARG:NH2	2.56	0.54
79:B2:503:G:O2'	79:B2:504:U:P	2.65	0.54
79:B2:591:A:H2'	79:B2:592:A:H8	1.70	0.54
79:B2:989:U:H2'	79:B2:990:C:C6	2.42	0.54
79:B2:1157:A:H2'	79:B2:1160:A:N7	2.21	0.54
79:B2:1657:U:H5	80:B5:2125:A:O3'	1.90	0.54
79:B2:1758:U:O2'	80:B5:2255:A:C4'	2.39	0.54
79:B2:1760:G:H2'	79:B2:1761:U:H5'	1.88	0.54
88:B2:1907:OHX:N5	88:B2:2081:OHX:N6	2.56	0.54
8:A7:81:THR:OG1	84:CW:42:C:O5'	2.25	0.54
8:A7:84:LYS:HD3	84:CW:32:U:N1	2.23	0.54
10:AB:131:ASP:CG	10:AB:180:THR:HG21	2.33	0.54
32:AX:78:LYS:CB	79:B2:434:G:H5'	2.36	0.54
35:BA:235:ALA:HA	80:B5:2183:A:O3'	2.08	0.54
36:BB:50:LYS:HE2	36:BB:328:ILE:HG22	1.88	0.54
36:BB:283:TYR:CB	36:BB:323:MET:HE2	2.38	0.54
38:BD:15:ARG:NH2	80:B5:1003:A:H1'	2.21	0.54
38:BD:91:GLY:HA3	81:B7:48:U:OP1	2.08	0.54
40:BF:158:LYS:HD2	40:BF:159:GLN:CA	2.36	0.54
42:BH:162:GLN:HB2	42:BH:179:ILE:O	2.08	0.54
44:BJ:92:ARG:O	44:BJ:95:ASN:HB2	2.07	0.54
47:BM:49:PRO:HG3	47:BM:78:THR:HG23	1.90	0.54
47:BM:55:ARG:HD3	53:BS:70:THR:OG1	2.08	0.54
67:Bg:80:ARG:HG3	67:Bg:88:ARG:HH21	1.72	0.54
73:Bm:97:ARG:HB2	73:Bm:120:GLN:O	2.07	0.54
79:B2:420:A:H2'	79:B2:421:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:970:A:H5'	79:B2:971:A:OP2	2.07	0.54
79:B2:1169:G:N1	79:B2:1575:G:OP2	2.37	0.54
79:B2:1645:G:C3'	80:B5:2259:A:H2	2.07	0.54
79:B2:1759:C:O2'	80:B5:2263:C:C1'	2.56	0.54
88:B2:1953:OHX:N4	88:B2:2066:OHX:N1	2.56	0.54
80:B5:595:G:C8	80:B5:609:G:C6	2.96	0.54
80:B5:2970:C:HO2'	80:B5:2971:A:P	2.30	0.54
17:AI:25:ARG:HD3	79:B2:400:A:O5'	2.07	0.54
25:AQ:123:ARG:CA	79:B2:1584:G:H2'	2.38	0.54
31:AW:83:ILE:HD12	31:AW:122:SER:HB2	1.89	0.54
35:BA:245:LEU:HD13	80:B5:2152:A:H4'	1.89	0.54
43:BI:38:LYS:CG	43:BI:41:ALA:HB2	2.38	0.54
47:BM:121:MET:HG3	80:B5:3214:U:C4	2.42	0.54
53:BS:50:LYS:HE3	81:B7:76:A:N3	2.22	0.54
56:BV:13:ILE:HD13	56:BV:53:SER:HB2	1.89	0.54
57:BW:50:ALA:HA	57:BW:55:PHE:CG	2.43	0.54
60:BZ:16:GLY:C	80:B5:1635:G:O6	2.51	0.54
61:Ba:91:LEU:HD12	61:Ba:121:VAL:HG21	1.90	0.54
66:Bf:91:ALA:C	66:Bf:93:THR:H	2.16	0.54
75:Bo:63:LYS:HD2	80:B5:2795:U:P	2.48	0.54
79:B2:720:G:H1'	79:B2:721:U:H5"	1.90	0.54
79:B2:1352:G:H2'	79:B2:1353:U:O4'	2.08	0.54
79:B2:1655:A:C1'	80:B5:2302:G:H1'	2.15	0.54
80:B5:1192:C:H41	80:B5:1302:A:P	2.31	0.54
80:B5:3160:U:H2'	80:B5:3161:C:C6	2.42	0.54
83:CV:101:ILE:H	83:CV:129:LEU:HA	1.73	0.54
3:A2:13:ILE:HG13	3:A2:29:ARG:O	2.08	0.53
6:A5:97:UNK:HG1	79:B2:1231:U:C5	2.43	0.53
8:A7:84:LYS:O	84:CW:30:G:C8	2.61	0.53
12:AD:34:TYR:OH	12:AD:37:VAL:HG22	2.07	0.53
13:AE:19:LEU:HD13	79:B2:788:A:N9	2.23	0.53
23:AO:120:PRO:HG3	79:B2:888:U:OP1	2.08	0.53
25:AQ:22:VAL:HG22	25:AQ:65:ILE:HD13	1.89	0.53
29:AU:57:ARG:CZ	79:B2:1382:A:N3	2.71	0.53
35:BA:34:TYR:CG	80:B5:2525:G:C5	2.96	0.53
37:BC:326:ARG:O	40:BF:41:ARG:NH2	2.41	0.53
40:BF:155:LYS:C	40:BF:156:ILE:HG12	2.32	0.53
41:BG:78:PHE:CD2	41:BG:179:ILE:HD13	2.43	0.53
48:BN:8:GLU:HG3	48:BN:50:ARG:NH1	2.16	0.53
50:BP:133:HIS:NE2	80:B5:880:G:C6	2.76	0.53
60:BZ:110:ALA:O	60:BZ:114:VAL:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:237:C:H4'	79:B2:238:U:H5'	1.90	0.53
79:B2:290:G:O6	88:B2:2041:OHX:N2	2.41	0.53
88:B2:1953:OHX:N3	88:B2:2066:OHX:N5	2.56	0.53
80:B5:252:U:H4'	80:B5:253:A:O5'	2.08	0.53
80:B5:916:G:H5'	80:B5:917:A:OP1	2.08	0.53
80:B5:2778:G:C2'	80:B5:2779:A:H5'	2.38	0.53
80:B5:2778:G:H2'	80:B5:2779:A:H5'	1.90	0.53
83:CV:236:GLU:HB3	83:CV:360:LEU:CG	2.31	0.53
83:CV:369:ILE:HG21	83:CV:438:MET:HE3	1.90	0.53
5:A4:12:GLY:HA2	32:AX:90:ASP:OD1	2.08	0.53
8:A7:61:ILE:HG23	27:AS:125:ILE:HG12	1.90	0.53
10:AB:180:THR:O	10:AB:184:LEU:HB2	2.08	0.53
12:AD:204:ASP:OD1	79:B2:1330:G:C6	2.56	0.53
14:AF:94:THR:O	14:AF:97:LEU:HB2	2.08	0.53
16:AH:30:SER:HB2	16:AH:34:LEU:HB2	1.90	0.53
17:AI:8:ARG:HH11	17:AI:21:PHE:N	2.07	0.53
17:AI:75:LYS:CB	79:B2:258:C:H5'	2.38	0.53
19:AK:33:GLU:CD	19:AK:33:GLU:H	2.16	0.53
20:AL:130:PRO:CD	79:B2:115:G:C5	2.91	0.53
28:AT:63:ARG:HG3	28:AT:67:MET:HE1	1.90	0.53
33:AY:36:SER:O	33:AY:40:LEU:HG	2.08	0.53
35:BA:116:VAL:HG11	35:BA:134:VAL:HG11	1.89	0.53
39:BE:78:ARG:HH11	39:BE:78:ARG:CG	2.21	0.53
50:BP:108:ASP:N	50:BP:152:GLU:OE2	2.31	0.53
52:BR:105:LEU:HG	52:BR:138:LEU:HD12	1.89	0.53
67:Bg:31:ARG:NH1	80:B5:1598:G:OP2	2.40	0.53
79:B2:414:C:O2	83:CV:289:LEU:HG	1.49	0.53
79:B2:577:G:H8	79:B2:577:G:H3'	1.72	0.53
79:B2:1114:G:O2'	79:B2:1130:G:O6	2.23	0.53
80:B5:420:G:O5'	80:B5:420:G:OP1	2.26	0.53
80:B5:2844:C:H5"	80:B5:2845:A:OP2	2.09	0.53
3:A2:32:PHE:HZ	3:A2:38:ARG:CZ	2.21	0.53
12:AD:3:ALA:O	12:AD:4:LEU:HB2	2.09	0.53
12:AD:176:LEU:H	12:AD:176:LEU:HD12	1.73	0.53
20:AL:34:TRP:HZ2	79:B2:248:U:O3'	1.92	0.53
25:AQ:15:SER:OG	79:B2:1608:U:P	2.65	0.53
27:AS:31:ALA:O	27:AS:34:THR:HG23	2.08	0.53
27:AS:118:LYS:HZ1	44:BJ:108:GLU:CD	2.14	0.53
35:BA:149:ARG:NH2	35:BA:252:THR:O	2.42	0.53
37:BC:162:THR:HG21	80:B5:209:A:C5	2.43	0.53
38:BD:265:TYR:HE1	81:B7:121:U:H5"	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:270:LYS:CB	81:B7:2:G:C4’	2.86	0.53
41:BG:108:ARG:O	41:BG:112:GLU:N	2.31	0.53
47:BM:98:SER:HB2	80:B5:3205:G:OP1	2.08	0.53
50:BP:139:TYR:CZ	80:B5:1507:G:H1’	2.43	0.53
53:BS:119:ARG:HD2	81:B7:95:A:N3	2.23	0.53
53:BS:155:ARG:HH11	53:BS:172:TYR:H	1.54	0.53
53:BS:155:ARG:NH1	53:BS:172:TYR:H	2.06	0.53
68:Bh:45:LYS:O	68:Bh:49:LYS:HG2	2.09	0.53
75:Bo:77:CYS:SG	75:Bo:79:THR:CG2	2.95	0.53
79:B2:93:A:H4’	79:B2:94:U:OP2	2.07	0.53
79:B2:1062:A:H2’	79:B2:1063:U:O4’	2.09	0.53
80:B5:776:U:C5	80:B5:2719:U:O2	2.52	0.53
80:B5:1214:U:H2’	80:B5:1215:U:C6	2.43	0.53
80:B5:2625:C:N4	84:CW:76:A:C8	2.77	0.53
80:B5:2995:A:H5”	80:B5:2996:U:OP2	2.08	0.53
7:A6:192:PHE:HD2	7:A6:223:TRP:CE3	2.26	0.53
15:AG:172:ALA:C	79:B2:79:C:C5’	2.82	0.53
16:AH:35:LYS:NZ	16:AH:39:ARG:HD2	2.23	0.53
16:AH:46:ILE:HG12	16:AH:60:ILE:HG23	1.90	0.53
16:AH:122:HIS:HA	16:AH:125:ILE:HD12	1.89	0.53
17:AI:27:PHE:CZ	79:B2:301:A:H5”	2.44	0.53
20:AL:6:THR:CB	20:AL:9:SER:HB3	2.38	0.53
20:AL:57:LYS:HB2	20:AL:110:HIS:NE2	2.24	0.53
23:AO:18:ARG:NH1	79:B2:918:U:C2’	2.72	0.53
23:AO:18:ARG:HH12	79:B2:919:A:H5’	0.72	0.53
27:AS:40:ARG:CZ	79:B2:1539:G:C4’	2.84	0.53
28:AT:42:GLY:HA2	28:AT:84:LYS:HB2	1.89	0.53
34:AZ:85:LYS:HG3	34:AZ:86:GLU:N	2.22	0.53
37:BC:91:GLY:O	37:BC:94:CYS:HB2	2.09	0.53
42:BH:63:LYS:HD3	80:B5:3122:A:O2’	2.08	0.53
42:BH:163:GLN:HB3	42:BH:166:ARG:HH21	1.74	0.53
46:BL:61:PRO:HD2	46:BL:70:ARG:HH21	1.72	0.53
52:BR:166:ASN:HA	79:B2:850:A:C8	2.43	0.53
53:BS:16:THR:HG1	53:BS:19:VAL:H	1.54	0.53
55:BU:54:VAL:HG13	55:BU:67:SER:HB2	1.90	0.53
63:Bc:29:SER:HA	63:Bc:32:LYS:HD3	1.91	0.53
79:B2:851:U:H2’	79:B2:852:C:C6	2.42	0.53
88:B2:1968:OHX:N5	88:B2:2011:OHX:N6	2.55	0.53
80:B5:112:U:O2’	80:B5:113:C:OP2	2.24	0.53
80:B5:2211:U:C5	80:B5:2234:G:O6	2.59	0.53
80:B5:3380:U:O2’	80:B5:3381:U:H5’	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A1:17:ARG:HD3	79:B2:1070:C:O3'	2.08	0.53
7:A6:273:ASP:CG	7:A6:275:ARG:HH22	2.17	0.53
8:A7:88:ARG:CG	84:CW:35:A:C4	2.91	0.53
9:AA:69:ASN:HB3	9:AA:71:GLU:CD	2.34	0.53
10:AB:165:ARG:NE	79:B2:947:U:OP1	2.33	0.53
12:AD:127:MET:HE1	12:AD:133:GLY:HA2	1.91	0.53
17:AI:36:THR:HG21	17:AI:173:PRO:HB2	1.90	0.53
20:AL:55:ASP:OD2	20:AL:110:HIS:HE1	1.92	0.53
20:AL:80:MET:HE2	79:B2:325:G:O4'	2.08	0.53
23:AO:13:VAL:N	23:AO:77:THR:OG1	2.38	0.53
23:AO:120:PRO:HB2	79:B2:887:A:C5'	2.37	0.53
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:CD	2.21	0.53
26:AR:44:LYS:HG2	26:AR:48:ASN:HD21	1.74	0.53
33:AY:119:PHE:CE1	79:B2:86:A:OP1	2.61	0.53
38:BD:202:GLY:O	38:BD:206:GLN:HG3	2.08	0.53
38:BD:271:LYS:HE2	81:B7:1:G:O2'	2.07	0.53
58:BX:105:VAL:HG11	58:BX:126:LEU:HD13	1.89	0.53
67:Bg:8:ARG:NH2	67:Bg:31:ARG:HD2	2.23	0.53
71:Bk:53:THR:HG21	80:B5:1748:G:OP1	2.08	0.53
76:Bq:5:ARG:NE	80:B5:1221:A:H1'	2.23	0.53
79:B2:138:A:N6	79:B2:266:A:H61	2.06	0.53
79:B2:711:U:H4'	79:B2:712:G:OP1	2.07	0.53
79:B2:981:U:H2'	79:B2:982:U:H5'	1.91	0.53
81:B7:49:G:H4'	81:B7:50:U:O5'	2.08	0.53
83:CV:20:LYS:HG3	89:CV:602:GCP:O5'	2.09	0.53
7:A6:136:ILE:HD13	7:A6:136:ILE:N	2.24	0.53
10:AB:116:LYS:HA	79:B2:931:C:C3'	2.38	0.53
15:AG:56:ASN:OD1	79:B2:153:G:C2	2.59	0.53
15:AG:84:TYR:HD1	79:B2:161:U:OP1	1.90	0.53
15:AG:132:ARG:C	79:B2:68:A:N6	2.56	0.53
16:AH:107:ARG:CZ	79:B2:741:C:O2	2.57	0.53
18:AJ:17:ARG:NH2	79:B2:4:C:O2'	2.38	0.53
25:AQ:113:ASP:CG	25:AQ:114:ARG:N	2.66	0.53
28:AT:126:GLU:H	28:AT:126:GLU:CD	2.17	0.53
29:AU:88:LYS:HE3	79:B2:1516:A:OP1	2.07	0.53
31:AW:72:CYS:HB3	31:AW:129:VAL:HG13	1.90	0.53
32:AX:99:ASN:CB	83:CV:378:LYS:NZ	2.48	0.53
34:AZ:65:LEU:HB3	34:AZ:71:ILE:HD13	1.89	0.53
35:BA:143:GLU:O	35:BA:145:LYS:N	2.42	0.53
37:BC:191:LYS:HG3	37:BC:194:TYR:CZ	2.44	0.53
37:BC:311:HIS:NE2	37:BC:314:LYS:HA	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:92:ILE:HD11	80:B5:1159:A:H2	1.73	0.53
51:BQ:171:LYS:NZ	80:B5:90:C:H41	2.07	0.53
52:BR:74:ARG:NH1	80:B5:1942:U:P	2.81	0.53
52:BR:74:ARG:CD	80:B5:1942:U:OP2	2.57	0.53
59:BY:52:ARG:HA	59:BY:70:ILE:CG2	2.39	0.53
63:Bc:78:GLY:HA2	63:Bc:87:VAL:HG13	1.89	0.53
79:B2:61:A:H8	79:B2:269:G:HO2'	1.52	0.53
79:B2:1595:U:H3	79:B2:1600:A:H2	1.56	0.53
79:B2:1655:A:N1	80:B5:2291:A:O2'	2.32	0.53
80:B5:929:A:H2'	80:B5:930:U:C6	2.44	0.53
80:B5:1085:A:H8	80:B5:1085:A:H5'	1.72	0.53
80:B5:1940:G:H21	80:B5:3362:A:H8	1.55	0.53
80:B5:2209:U:H4'	80:B5:2210:G:OP1	2.08	0.53
80:B5:2733:A:H2'	80:B5:2734:A:O4'	2.09	0.53
80:B5:3242:G:H5"	80:B5:3245:A:H8	1.74	0.53
8:A7:92:ASP:CB	84:CW:35:A:C8	2.92	0.53
9:AA:49:ASN:HB3	9:AA:52:LYS:CG	2.32	0.53
9:AA:59:LEU:HD11	30:AV:79:LEU:HD11	1.91	0.53
18:AJ:90:LYS:HB2	18:AJ:95:TYR:CD2	2.43	0.53
18:AJ:105:LEU:O	18:AJ:108:ARG:HG3	2.09	0.53
20:AL:133:LYS:HB2	79:B2:338:C:OP1	2.08	0.53
23:AO:125:SER:HB3	79:B2:926:A:N3	2.23	0.53
24:AP:128:HIS:ND1	79:B2:1180:C:O2'	2.42	0.53
25:AQ:123:ARG:N	79:B2:1584:G:C5'	2.52	0.53
29:AU:23:ARG:HD3	29:AU:92:ASP:OD1	2.09	0.53
36:BB:332:ARG:NH1	36:BB:333:LYS:HD2	2.24	0.53
37:BC:144:LYS:H	37:BC:144:LYS:HZ2	1.57	0.53
42:BH:137:SER:HB2	42:BH:143:GLU:HB3	1.91	0.53
44:BJ:82:ARG:HD2	44:BJ:112:LEU:HB2	1.89	0.53
46:BL:63:VAL:HG13	80:B5:72:C:C5'	2.39	0.53
52:BR:125:LYS:CE	80:B5:1720:U:O4	2.56	0.53
62:Bb:37:PRO:HG2	80:B5:776:U:O2	2.08	0.53
62:Bb:58:LYS:HA	62:Bb:58:LYS:NZ	2.23	0.53
63:Bc:75:ASN:HA	63:Bc:86:ARG:HB2	1.89	0.53
66:Bf:8:TYR:CE2	66:Bf:99:ARG:HG2	2.43	0.53
70:Bj:32:LYS:HE2	82:B8:111:A:OP1	2.09	0.53
75:Bo:40:LYS:HE3	75:Bo:44:ASP:OD2	2.08	0.53
79:B2:226:A:C2'	79:B2:227:U:H5'	2.38	0.53
79:B2:432:G:N2	83:CV:387:ARG:HH11	2.01	0.53
79:B2:542:A:O2'	79:B2:543:C:P	2.67	0.53
79:B2:542:A:H5"	79:B2:544:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:830:U:OP1	88:B2:2082:OHX:N3	2.41	0.53
80:B5:644:G:H2'	80:B5:2372:A:N7	2.24	0.53
80:B5:1283:C:O2'	80:B5:1284:C:H5'	2.08	0.53
80:B5:2943:G:H2'	80:B5:2944:U:O4'	2.09	0.53
80:B5:3057:U:O2'	80:B5:3059:G:OP1	2.27	0.53
83:CV:79:GLY:HA2	89:CV:602:GCP:PG	2.48	0.53
83:CV:483:GLY:HA2	83:CV:528:ALA:HA	1.91	0.53
84:CW:37:A:C2	85:CX:1:A:C2	2.96	0.53
1:A0:10:ARG:HB2	1:A0:34:LYS:HG3	1.90	0.53
4:A3:22:ARG:HD2	4:A3:38:ILE:HD11	1.91	0.53
4:A3:32:ARG:HB2	79:B2:1595:U:OP1	2.09	0.53
5:A4:28:LYS:HZ1	79:B2:477:A:P	2.30	0.53
8:A7:88:ARG:HG2	84:CW:35:A:C4	2.44	0.53
9:AA:74:VAL:HG22	9:AA:96:THR:HG23	1.91	0.53
9:AA:109:ASN:O	9:AA:112:THR:HG22	2.08	0.53
10:AB:34:ALA:HB2	10:AB:43:VAL:HG23	1.89	0.53
10:AB:133:TYR:CD1	10:AB:181:LEU:HD11	2.44	0.53
14:AF:145:ASP:CG	14:AF:146:THR:H	2.17	0.53
15:AG:172:ALA:CB	79:B2:78:A:O3'	2.56	0.53
17:AI:105:ASP:OD2	17:AI:107:THR:HG23	2.09	0.53
19:AK:53:GLY:O	19:AK:55:VAL:N	2.39	0.53
23:AO:54:GLU:OE1	79:B2:902:G:O6	2.27	0.53
24:AP:115:TYR:CD2	79:B2:1557:U:O4'	2.62	0.53
25:AQ:35:PRO:HG2	25:AQ:38:LEU:HG	1.90	0.53
31:AW:37:PHE:CD2	31:AW:103:ILE:HD12	2.43	0.53
33:AY:119:PHE:CZ	79:B2:86:A:C4'	2.91	0.53
35:BA:70:ARG:HB3	80:B5:1650:G:H5"	1.90	0.53
35:BA:204:MET:HE3	80:B5:914:A:C2	2.44	0.53
35:BA:247:ARG:O	79:B2:1013:A:OP1	2.26	0.53
37:BC:138:ARG:HH21	37:BC:240:PRO:HB2	1.72	0.53
41:BG:241:LYS:HG3	80:B5:2527:G:O4'	2.09	0.53
67:Bg:9:ARG:O	67:Bg:11:ASN:N	2.42	0.53
69:Bi:74:LYS:HG3	69:Bi:80:PHE:HA	1.90	0.53
70:Bj:28:HIS:CE1	70:Bj:31:LYS:HG3	2.44	0.53
79:B2:872:G:H2'	79:B2:873:U:O4'	2.09	0.53
88:B2:1922:OHX:N2	88:B2:1976:OHX:N6	2.56	0.53
80:B5:2284:C:C6	83:CV:477:SER:OG	2.38	0.53
80:B5:2403:G:H22	80:B5:2404:A:H62	1.55	0.53
3:A2:45:LYS:HB3	14:AF:162:VAL:HB	1.90	0.53
8:A7:88:ARG:NE	84:CW:35:A:C8	2.76	0.53
9:AA:14:ALA:O	9:AA:18:LEU:HG	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:5:ARG:NH1	79:B2:332:U:O2'	2.41	0.53
25:AQ:122:ARG:CB	79:B2:1584:G:H5"	2.39	0.53
35:BA:34:TYR:CG	80:B5:2525:G:C6	2.96	0.53
47:BM:132:LYS:HD3	80:B5:3230:G:H4'	1.90	0.53
48:BN:73:ARG:O	48:BN:75:VAL:N	2.38	0.53
49:BO:172[A]:ARG:HA	49:BO:175[A]:THR:HG23	1.89	0.53
51:BQ:178:ARG:CD	61:Ba:50:PRO:HB2	2.37	0.53
52:BR:170:ARG:O	79:B2:852:C:H3'	2.09	0.53
58:BX:44:PRO:O	58:BX:45:LYS:HB2	2.08	0.53
58:BX:50:ALA:N	68:Bh:79:ASP:OD2	2.37	0.53
63:Bc:84:LEU:HB2	80:B5:1715:A:N6	2.23	0.53
76:Bq:5:ARG:NE	80:B5:1221:A:C1'	2.63	0.53
79:B2:133:U:OP2	79:B2:133:U:H3'	2.07	0.53
79:B2:501:U:HO2'	79:B2:502:U:H6	1.56	0.53
88:B2:1953:OHX:N4	88:B2:2066:OHX:N2	2.57	0.53
80:B5:725:G:C2'	80:B5:726:G:H5"	2.39	0.53
80:B5:741:U:H2'	80:B5:742:G:O4'	2.09	0.53
80:B5:1554:U:H4'	80:B5:1555:U:OP1	2.08	0.53
80:B5:1878:G:O2'	80:B5:1879:A:OP1	2.25	0.53
80:B5:1915:A:H2'	80:B5:1916:U:C6	2.43	0.53
80:B5:2541:U:H4'	80:B5:2542:U:OP1	2.09	0.53
80:B5:3153:U:H4'	80:B5:3154:C:H5'	1.90	0.53
6:A5:86:UNK:C	6:A5:87:UNK:HG3	2.38	0.53
7:A6:7:LEU:HD23	7:A6:315:VAL:HG22	1.90	0.53
7:A6:285:ALA:CB	79:B2:1394:G:P	2.97	0.53
11:AC:173:PRO:O	11:AC:176:SER:OG	2.27	0.53
15:AG:130:PRO:C	57:BW:82:ILE:HG23	2.33	0.53
15:AG:159:ARG:CZ	79:B2:77:U:N1	2.72	0.53
23:AO:16:VAL:O	23:AO:30:VAL:HA	2.09	0.53
23:AO:117:ASP:OD1	23:AO:119:THR:HG23	2.08	0.53
27:AS:118:LYS:CG	44:BJ:108:GLU:OE2	2.57	0.53
27:AS:118:LYS:HG3	44:BJ:108:GLU:OE2	2.09	0.53
32:AX:6:PRO:HG3	32:AX:14:LYS:HG2	1.91	0.53
32:AX:107:PHE:CE2	32:AX:114:LYS:HB2	2.44	0.53
34:AZ:94:LYS:HD3	34:AZ:95:HIS:HB3	1.90	0.53
35:BA:15:ILE:CD1	80:B5:822:G:H1'	2.39	0.53
41:BG:38:GLN:HA	80:B5:2557:A:H2	1.72	0.53
41:BG:129:PRO:HG3	80:B5:121:A:N1	2.23	0.53
46:BL:5:LYS:NZ	80:B5:796:U:H5"	2.23	0.53
48:BN:47:LYS:HE3	48:BN:51:LEU:HD11	1.91	0.53
49:BO:64[A]:PHE:HE2	49:BO:68[A]:ARG:NH1	2.05	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BQ:107:THR:HG21	80:B5:676:G:H3'	1.91	0.53
60:BZ:67:LYS:HE2	60:BZ:115:LYS:HZ1	1.74	0.53
61:Ba:21:ARG:HB3	80:B5:641:C:OP1	2.09	0.53
61:Ba:34:MET:CG	80:B5:96:G:OP2	2.55	0.53
79:B2:206:A:OP2	88:B2:1978:OHX:N5	2.41	0.53
79:B2:1473:U:O2	79:B2:1473:U:H2'	2.08	0.53
88:B2:2014:OHX:N6	88:B2:2071:OHX:N2	2.57	0.53
80:B5:1307:G:C2	80:B5:1308:A:C2	2.96	0.53
80:B5:2364:G:H22	80:B5:2396:G:H1'	1.74	0.53
83:CV:19:THR:OG1	89:CV:602:GCP:O1B	2.26	0.53
8:A7:84:LYS:CD	84:CW:32:U:C4	2.92	0.52
10:AB:157:GLN:H	10:AB:160:HIS:HB2	1.73	0.52
10:AB:179:SER:HB3	10:AB:183:GLN:CD	2.34	0.52
11:AC:205:ARG:NH1	79:B2:7:G:N7	2.53	0.52
11:AC:234:PRO:O	11:AC:235:LEU:HB2	2.09	0.52
12:AD:20:GLU:HG3	19:AK:61:TRP:CD2	2.45	0.52
12:AD:156:PHE:HE2	79:B2:1326:A:O3'	1.92	0.52
19:AK:1:MET:HG2	19:AK:2:LEU:H	1.73	0.52
19:AK:12:HIS:NE2	19:AK:49:LEU:HD21	2.24	0.52
20:AL:84:ILE:HD12	20:AL:86:ILE:HG23	1.90	0.52
23:AO:38:THR:HG21	79:B2:896:U:C5'	2.38	0.52
23:AO:46:MET:CA	79:B2:899:G:O5'	2.56	0.52
23:AO:54:GLU:CD	79:B2:901:G:N1	2.42	0.52
36:BB:147:GLU:OE1	36:BB:150:ARG:NH2	2.42	0.52
36:BB:210:GLU:O	36:BB:213:GLU:HB2	2.09	0.52
48:BN:35:VAL:N	80:B5:1543:G:OP1	2.35	0.52
53:BS:46:GLN:HG2	53:BS:51:VAL:O	2.09	0.52
54:BT:4:SER:HB2	80:B5:2630:C:C5	2.43	0.52
61:Ba:133:LEU:HD12	80:B5:715:A:OP1	2.09	0.52
73:Bm:112:LYS:NZ	80:B5:3107:U:P	2.82	0.52
79:B2:1487:A:H2'	79:B2:1488:G:C8	2.44	0.52
79:B2:1760:G:C2'	79:B2:1761:U:H5'	2.39	0.52
80:B5:398:A:O2'	80:B5:1416:C:OP1	2.20	0.52
2:A1:67:THR:C	79:B2:871:G:HO2'	2.15	0.52
6:A5:136:LYS:H	6:A5:138:ARG:HB2	1.73	0.52
10:AB:172:LEU:O	10:AB:176:VAL:HG23	2.08	0.52
15:AG:59:GLN:HA	79:B2:155:U:C1'	2.39	0.52
16:AH:96:ARG:CZ	16:AH:124:LYS:HB3	2.39	0.52
23:AO:129:LYS:HB3	79:B2:990:C:H5"	1.88	0.52
28:AT:57:ARG:NH2	28:AT:80:TYR:HB3	2.24	0.52
32:AX:23:ARG:HA	32:AX:26:GLU:OE2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:2:SER:HB3	80:B5:2943:G:C8	2.44	0.52
37:BC:241:GLY:HA3	80:B5:1383:G:O4'	2.10	0.52
38:BD:94:ASN:CA	81:B7:47:C:OP1	2.57	0.52
40:BF:96:PRO:O	40:BF:99:PRO:HD2	2.09	0.52
57:BW:63:ILE:O	57:BW:65:GLU:N	2.36	0.52
61:Ba:62:HIS:CG	80:B5:304:G:C4	2.97	0.52
70:Bj:79:GLN:NE2	82:B8:95:G:C5	2.78	0.52
79:B2:46:A:C6	83:CV:387:ARG:CB	2.92	0.52
79:B2:520:A:H2'	79:B2:521:A:C8	2.44	0.52
79:B2:779:U:OP2	79:B2:780:A:H2	1.93	0.52
79:B2:1320:U:O2	79:B2:1322:A:H5'	2.09	0.52
79:B2:1676:U:O2'	79:B2:1677:C:H5'	2.09	0.52
80:B5:1560:G:HO2'	80:B5:1561:G:P	2.33	0.52
80:B5:1716:U:H5'	80:B5:1716:U:C6	2.44	0.52
80:B5:2286:U:O5'	83:CV:475:ARG:NH1	2.29	0.52
80:B5:3218:A:H5"	80:B5:3219:G:C5	2.44	0.52
83:CV:239:VAL:HG22	83:CV:358:ASP:C	2.35	0.52
84:CW:31:A:H2'	84:CW:32:U:C6	2.44	0.52
10:AB:127:VAL:HG11	10:AB:176:VAL:HG21	1.91	0.52
10:AB:128:LYS:HE3	10:AB:132:ASP:HB3	1.90	0.52
10:AB:138:PHE:CE2	79:B2:885:G:H5'	2.43	0.52
10:AB:174:LYS:HB2	10:AB:174:LYS:NZ	2.25	0.52
10:AB:181:LEU:O	10:AB:182:ALA:C	2.52	0.52
15:AG:58:LYS:CA	79:B2:155:U:C5'	2.85	0.52
15:AG:134:GLY:HA3	79:B2:66:U:O4	1.94	0.52
17:AI:76:THR:HG22	17:AI:108:PRO:HG2	1.91	0.52
20:AL:14:GLN:HB3	20:AL:54:ILE:HG21	1.91	0.52
20:AL:75:VAL:HG12	20:AL:119:VAL:HA	1.91	0.52
22:AN:92:ILE:O	22:AN:96:VAL:HG23	2.09	0.52
34:AZ:41:ILE:HG13	34:AZ:42:LEU:HG	1.91	0.52
38:BD:152:ARG:CD	80:B5:2663:G:H5'	2.35	0.52
41:BG:105:LYS:HG3	41:BG:109:LEU:HD23	1.91	0.52
46:BL:18:TRP:CD1	46:BL:18:TRP:H	2.26	0.52
52:BR:163:ARG:O	52:BR:167:ARG:HG2	2.09	0.52
61:Ba:73:LEU:HD23	61:Ba:109:TYR:CZ	2.45	0.52
61:Ba:126:LYS:HB3	61:Ba:148:ILE:HG21	1.91	0.52
65:Be:37:GLY:HA3	80:B5:639:G:OP1	2.09	0.52
75:Bo:105:GLN:NE2	84:CW:55:U:C2	2.77	0.52
79:B2:513:U:H2'	79:B2:514:G:C8	2.44	0.52
79:B2:555:A:C8	79:B2:555:A:H3'	2.45	0.52
79:B2:1334:U:H2'	79:B2:1335:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1655:A:O4'	80:B5:2302:G:O2'	2.26	0.52
88:B2:1973:OHX:N3	88:B2:1987:OHX:N5	2.57	0.52
80:B5:1566:A:C2'	80:B5:1567:U:H5'	2.38	0.52
80:B5:2523:A:H4'	80:B5:2524:A:OP2	2.10	0.52
80:B5:3354:U:H4'	80:B5:3355:U:H5"	1.91	0.52
82:B8:66:A:H2'	82:B8:67:U:C6	2.45	0.52
1:A0:22:ARG:HH12	23:AO:127:ARG:HG3	1.75	0.52
4:A3:31:ILE:CD1	79:B2:1199:G:N1	2.72	0.52
6:A5:138:ARG:HH21	79:B2:1235:C:H2'	1.71	0.52
9:AA:73:VAL:O	9:AA:95:ALA:HA	2.09	0.52
13:AE:241:GLY:O	13:AE:244:ILE:HG12	2.10	0.52
15:AG:54:GLY:HA3	79:B2:163:G:C5'	2.32	0.52
17:AI:117:TYR:CD1	17:AI:150:ALA:HB2	2.44	0.52
25:AQ:75:VAL:CG1	79:B2:1610:G:P	2.98	0.52
25:AQ:76:SER:CB	79:B2:1609:U:P	2.83	0.52
26:AR:10:LYS:HZ2	79:B2:1401:A:C3'	2.11	0.52
35:BA:235:ALA:CB	80:B5:2184:U:OP1	2.58	0.52
37:BC:119:ARG:HA	37:BC:122:THR:HG23	1.91	0.52
41:BG:144:GLU:OE2	69:Bi:36:ARG:NH2	2.43	0.52
43:BI:67:ALA:HB2	80:B5:2852:C:C2'	2.39	0.52
46:BL:37:ASN:O	46:BL:41:THR:HG23	2.09	0.52
52:BR:166:ASN:HB2	79:B2:850:A:OP2	2.09	0.52
52:BR:169:ALA:O	79:B2:852:C:N1	2.41	0.52
54:BT:129:LYS:HB2	80:B5:1098:A:C5'	2.40	0.52
70:Bj:52:LYS:HA	70:Bj:55:ARG:HD2	1.92	0.52
79:B2:61:A:H8	79:B2:269:G:O2'	1.92	0.52
79:B2:287:G:O2'	79:B2:288:A:OP2	2.24	0.52
79:B2:542:A:O2'	79:B2:543:C:O5'	2.26	0.52
79:B2:1011:G:OP2	88:B2:1968:OHX:N6	2.42	0.52
88:B2:1963:OHX:N1	88:B2:2025:OHX:N3	2.58	0.52
80:B5:374:A:N3	80:B5:376:G:H5"	2.25	0.52
80:B5:1481:A:O2'	80:B5:1858:A:N3	2.40	0.52
80:B5:2438:A:C6	80:B5:2510:U:N3	2.77	0.52
4:A3:9:SER:HA	79:B2:1451:C:OP1	2.10	0.52
10:AB:116:LYS:CA	79:B2:931:C:O3'	2.57	0.52
11:AC:185:LYS:O	11:AC:189:GLN:HG3	2.10	0.52
15:AG:57:ASP:OD2	15:AG:72:ARG:NH1	2.43	0.52
15:AG:60:GLY:HA2	79:B2:154:G:C2'	2.40	0.52
15:AG:139:ASN:HA	15:AG:142:ARG:HB2	1.91	0.52
15:AG:175:ILE:HD11	79:B2:78:A:H1'	0.52	0.52
18:AJ:88:GLU:HG3	18:AJ:91:LYS:HE3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:76:SER:HB2	79:B2:1609:U:OP2	2.08	0.52
28:AT:60:SER:OG	79:B2:1479:A:H5"	2.08	0.52
33:AY:49:LYS:HD3	33:AY:49:LYS:N	2.24	0.52
34:AZ:71:ILE:HB	34:AZ:76:ALA:HB2	1.92	0.52
35:BA:203:ALA:CB	80:B5:2146:C:H5"	2.39	0.52
40:BF:224:ILE:CG2	81:B7:97:A:H4'	2.39	0.52
46:BL:3:ILE:HG21	61:Ba:45:MET:HE3	1.91	0.52
46:BL:64:LYS:HD3	46:BL:65:TYR:CE2	2.45	0.52
52:BR:166:ASN:CA	79:B2:850:A:H5"	2.13	0.52
52:BR:170:ARG:H	79:B2:851:U:H3'	1.74	0.52
68:Bh:81:ARG:NH2	80:B5:18:G:OP1	2.43	0.52
73:Bm:99:CYS:HB2	73:Bm:114:LYS:HD3	1.92	0.52
74:Bn:17:ARG:NH2	79:B2:1116:A:C5'	2.72	0.52
76:Bq:32:ASN:HB3	80:B5:1260:A:C6	2.45	0.52
79:B2:240:U:H1'	79:B2:241:U:P	2.49	0.52
79:B2:433:C:O5'	83:CV:391:VAL:HG23	2.09	0.52
79:B2:912:U:H4'	79:B2:913:G:O5'	2.10	0.52
88:B2:1921:OHX:N2	88:B2:2048:OHX:N6	2.58	0.52
80:B5:2101:C:O2'	80:B5:2102:U:OP1	2.23	0.52
84:CW:33:U:N3	84:CW:35:A:OP2	2.37	0.52
4:A3:32:ARG:CB	79:B2:1595:U:OP1	2.58	0.52
8:A7:51:ARG:HD2	80:B5:2677:G:C1'	2.39	0.52
27:AS:18:LEU:HD21	27:AS:70:VAL:HG13	1.92	0.52
33:AY:9:THR:H	79:B2:780:A:H1'	1.74	0.52
36:BB:84:VAL:HG13	36:BB:162:VAL:HB	1.91	0.52
37:BC:126:ILE:HG13	37:BC:238:LEU:HD13	1.92	0.52
48:BN:72:LYS:HD3	80:B5:2166:A:C3'	2.40	0.52
48:BN:112:ASN:HA	80:B5:19:U:O2'	2.07	0.52
49:BO:15[A]:LEU:HD11	49:BO:129[A]:LEU:HD13	1.92	0.52
49:BO:110[B]:PRO:HB2	49:BO:111[B]:PRO:HD2	1.91	0.52
63:Bc:45:ALA:O	63:Bc:48:THR:HG23	2.10	0.52
69:Bi:15:LYS:H	80:B5:73:C:P	2.32	0.52
70:Bj:66:TYR:OH	70:Bj:73:ARG:NH2	2.43	0.52
79:B2:20:G:H5'	79:B2:571:G:C5	2.43	0.52
79:B2:114:C:H6	79:B2:114:C:H5'	1.74	0.52
79:B2:487:G:H3'	79:B2:488:G:H5"	1.92	0.52
79:B2:1655:A:N3	80:B5:2302:G:H1'	2.24	0.52
80:B5:1269:U:H6	80:B5:1269:U:O5'	1.93	0.52
80:B5:2590:A:H2'	80:B5:2591:A:O5'	2.09	0.52
83:CV:80:HIS:CB	83:CV:369:ILE:HD11	2.38	0.52
3:A2:15:VAL:HA	3:A2:28:VAL:HG22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:31:ILE:CD1	79:B2:1199:G:C6	2.90	0.52
8:A7:88:ARG:NH1	84:CW:34:C:H2'	2.24	0.52
10:AB:39:GLU:HG3	10:AB:40:ASN:N	2.21	0.52
11:AC:40:LYS:HA	11:AC:43:ARG:NH1	2.25	0.52
12:AD:159:HIS:O	79:B2:1421:A:C4'	2.55	0.52
15:AG:6:SER:HB2	79:B2:164:A:O2'	2.10	0.52
15:AG:62:PRO:HG3	79:B2:161:U:HO2'	1.69	0.52
16:AH:104:ARG:O	16:AH:106:SER:N	2.42	0.52
17:AI:50:GLY:HA2	79:B2:397:A:C3'	2.40	0.52
18:AJ:104:PHE:O	18:AJ:147:MET:HE1	2.10	0.52
20:AL:5:LEU:O	20:AL:7:VAL:N	2.34	0.52
20:AL:50:GLU:OE2	79:B2:827:C:O2'	2.17	0.52
23:AO:38:THR:HG21	79:B2:896:U:O5'	2.09	0.52
23:AO:125:SER:CB	79:B2:926:A:C2	2.93	0.52
28:AT:52:GLY:C	28:AT:54:PHE:H	2.15	0.52
30:AV:72:LEU:O	30:AV:76:ASP:HB2	2.09	0.52
33:AY:33:ALA:CB	79:B2:533:U:H4'	2.40	0.52
35:BA:231:SER:HB2	80:B5:2163:C:C5'	2.23	0.52
35:BA:234:LYS:NZ	80:B5:2162:U:P	2.83	0.52
36:BB:159:ARG:HG2	36:BB:182:GLN:HA	1.91	0.52
48:BN:172:ARG:NH1	80:B5:29:C:O3'	2.42	0.52
52:BR:9:ARG:NH2	80:B5:1602:A:O3'	2.43	0.52
59:BY:116:LYS:HE3	82:B8:84:C:N3	2.24	0.52
66:Bf:75:HIS:HB3	66:Bf:80:VAL:HG12	1.91	0.52
67:Bg:74:ARG:NH2	80:B5:1639:C:P	2.82	0.52
69:Bi:15:LYS:HE2	80:B5:73:C:N3	2.24	0.52
70:Bj:8:PHE:HA	70:Bj:11:ARG:HD3	1.91	0.52
79:B2:256:A:H2'	79:B2:257:A:O4'	2.09	0.52
79:B2:515:A:OP2	88:B2:1948:OHX:N3	2.43	0.52
79:B2:838:G:C6	88:B2:2069:OHX:N2	2.78	0.52
79:B2:1002:G:H2'	79:B2:1003:A:H5'	1.92	0.52
80:B5:920:A:OP1	80:B5:922:U:C5	2.63	0.52
80:B5:996:A:H2'	80:B5:997:A:O4'	2.09	0.52
80:B5:2285:C:N4	83:CV:478:LYS:HG2	2.17	0.52
8:A7:51:ARG:CD	80:B5:2677:G:C1'	2.88	0.52
10:AB:119:THR:HB	10:AB:143:THR:HG23	1.92	0.52
17:AI:146:ARG:NH2	79:B2:186:C:OP1	2.34	0.52
29:AU:67:THR:HG23	79:B2:1199:G:N7	2.25	0.52
35:BA:237:LEU:HD21	80:B5:2153:U:O2	2.10	0.52
36:BB:35:ASP:OD2	36:BB:37:ARG:HD2	2.09	0.52
37:BC:48:GLN:HG3	80:B5:337:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:16:LYS:HE3	80:B5:49:A:OP1	2.10	0.52
48:BN:71:ARG:NH1	80:B5:1546:A:N7	2.58	0.52
50:BP:139:TYR:CE2	80:B5:2355:G:H5'	2.45	0.52
52:BR:167:ARG:HB3	52:BR:167:ARG:HH11	1.75	0.52
55:BU:90:ARG:O	55:BU:91:ASP:HB2	2.10	0.52
68:Bh:34:GLN:HB3	68:Bh:38:ARG:NH1	2.24	0.52
75:Bo:67:LYS:CB	80:B5:2793:G:OP1	2.57	0.52
79:B2:142:G:N2	79:B2:173:A:H2	2.00	0.52
79:B2:144:U:O2'	79:B2:145:A:H5'	2.10	0.52
79:B2:710:U:H2'	79:B2:711:U:H5'	1.91	0.52
79:B2:1234:A:O2'	79:B2:1235:C:O5'	2.20	0.52
79:B2:1291:G:H22	79:B2:1324:G:N2	2.07	0.52
79:B2:1761:U:N3	85:CX:1:A:C5'	2.73	0.52
1:A0:86:VAL:HG23	79:B2:1795:U:OP1	2.09	0.52
4:A3:56:ARG:HG3	79:B2:1418:G:H1'	1.92	0.52
8:A7:78:ASP:N	84:CW:43:C:H3'	2.08	0.52
10:AB:128:LYS:CE	10:AB:132:ASP:HB3	2.40	0.52
14:AF:205:SER:O	14:AF:207:THR:N	2.43	0.52
20:AL:6:THR:HB	20:AL:9:SER:HB3	1.92	0.52
26:AR:106:THR:O	26:AR:109:LEU:HB3	2.10	0.52
34:AZ:77:ARG:NH2	79:B2:1533:C:C6	2.76	0.52
37:BC:181:VAL:HG21	37:BC:224:GLY:HA3	1.92	0.52
40:BF:151:ARG:NH1	40:BF:244:ASN:O	2.43	0.52
41:BG:137:ASN:HB2	80:B5:148:G:O6	2.10	0.52
41:BG:242:ALA:HB3	80:B5:2586:G:O6	2.09	0.52
51:BQ:105:ARG:HH12	80:B5:674:G:P	2.33	0.52
70:Bj:21:ARG:NH2	70:Bj:41:ALA:O	2.38	0.52
79:B2:432:G:H3'	83:CV:388:ARG:H	1.67	0.52
79:B2:929:A:OP2	79:B2:931:C:N4	2.43	0.52
80:B5:1017:C:P	80:B5:1017:C:H2'	2.50	0.52
80:B5:1831:U:O2'	82:B8:114:G:OP1	2.19	0.52
80:B5:2568:C:N4	80:B5:2574:G:O6	2.42	0.52
2:A1:4:VAL:HA	31:AW:24:GLN:NE2	2.24	0.52
2:A1:67:THR:C	79:B2:872:G:O4'	2.53	0.52
8:A7:79:SER:CA	84:CW:42:C:O2	2.58	0.52
9:AA:189:VAL:HG22	9:AA:190:ASP:H	1.75	0.52
10:AB:81:PHE:HA	10:AB:106:THR:HG23	1.92	0.52
12:AD:105:MET:HG2	12:AD:122:VAL:HG21	1.92	0.52
15:AG:88:ARG:CG	79:B2:92:A:N1	2.71	0.52
18:AJ:38:ASN:HB3	18:AJ:40:LYS:H	1.75	0.52
21:AM:52:LEU:HD13	21:AM:85:LYS:NZ	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AM:60:VAL:HG13	21:AM:122:VAL:HG22	1.92	0.52
35:BA:15:ILE:CG1	80:B5:822:G:C1'	2.88	0.52
38:BD:265:TYR:HE1	81:B7:120:C:H2'	1.66	0.52
46:BL:16:LYS:HG3	80:B5:48:A:O5'	2.09	0.52
48:BN:31:ARG:HG3	48:BN:129:TYR:OH	2.09	0.52
52:BR:85:ARG:HH12	80:B5:2104:A:P	2.33	0.52
52:BR:128:LYS:HG2	52:BR:128:LYS:O	2.08	0.52
56:BV:2:SER:O	56:BV:57:MET:N	2.42	0.52
58:BX:63:ILE:HD13	58:BX:63:ILE:C	2.34	0.52
67:Bg:41:ARG:NH1	80:B5:1739:U:H1'	2.25	0.52
79:B2:539:G:H8	79:B2:539:G:OP2	1.93	0.52
79:B2:651:G:C2	79:B2:684:A:C6	2.98	0.52
79:B2:677:G:H2'	79:B2:678:A:H8	1.73	0.52
79:B2:717:C:H2'	79:B2:718:U:H5"	1.90	0.52
79:B2:749:U:H3	79:B2:800:U:H3	1.58	0.52
79:B2:1149:G:H1'	79:B2:1765:A:C4	2.44	0.52
79:B2:1217:A:H5'	79:B2:1217:A:H8	1.73	0.52
79:B2:1370:U:O4	88:B2:1999:OHX:N5	2.43	0.52
80:B5:152:U:H5"	80:B5:153:U:OP2	2.09	0.52
80:B5:1200:A:H5'	80:B5:1201:C:O5'	2.10	0.52
80:B5:1267:U:H3'	80:B5:1268:G:H8	1.75	0.52
80:B5:2257:C:H2'	80:B5:2258:U:O4'	2.09	0.52
80:B5:2439:A:C2'	80:B5:2440:G:H5"	2.40	0.52
80:B5:3165:A:H2'	80:B5:3166:C:C6	2.43	0.52
10:AB:116:LYS:CG	79:B2:931:C:H5"	2.41	0.51
10:AB:116:LYS:HG3	79:B2:931:C:OP1	2.10	0.51
11:AC:67:GLN:HA	11:AC:70:ASP:HB2	1.92	0.51
11:AC:91:ARG:HH11	79:B2:1625:C:P	2.22	0.51
14:AF:102:ARG:HH22	79:B2:1472:C:P	2.33	0.51
14:AF:205:SER:O	14:AF:205:SER:OG	2.25	0.51
15:AG:67:VAL:O	15:AG:68:LEU:HB2	2.10	0.51
26:AR:49:LYS:HG3	79:B2:1389:C:O3'	2.09	0.51
29:AU:54:GLY:CA	79:B2:1345:A:OP1	2.53	0.51
38:BD:265:TYR:OH	81:B7:120:C:H3'	2.10	0.51
48:BN:119:TYR:OH	48:BN:131:GLU:OE1	2.16	0.51
49:BO:36[A]:VAL:HB	49:BO:108[A]:ILE:HB	1.92	0.51
52:BR:74:ARG:HH11	80:B5:1942:U:P	2.26	0.51
52:BR:82:LYS:HB2	80:B5:1863:G:H4'	1.91	0.51
54:BT:104:GLU:HG3	54:BT:105:PHE:N	2.24	0.51
58:BX:132:ALA:O	58:BX:136:ALA:N	2.33	0.51
79:B2:1637:C:N3	84:CW:34:C:C5	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:209:A:H4'	80:B5:211:A:N7	2.26	0.51
80:B5:243:G:O2'	80:B5:244:G:H5'	2.10	0.51
80:B5:385:A:O2'	80:B5:386:A:H5'	2.10	0.51
80:B5:409:A:H2	80:B5:1441:G:N3	2.08	0.51
80:B5:558:U:H4'	80:B5:559:A:OP2	2.09	0.51
80:B5:1876:U:H5"	80:B5:1876:U:H6	1.75	0.51
80:B5:3330:A:H5"	80:B5:3330:A:C8	2.43	0.51
4:A3:14:TYR:HE2	79:B2:1597:A:C5	2.29	0.51
4:A3:34:TYR:CE1	79:B2:1487:A:OP1	2.63	0.51
6:A5:108:VAL:HG13	21:AM:73:LYS:NZ	2.26	0.51
12:AD:179:GLN:NE2	12:AD:179:GLN:C	2.68	0.51
16:AH:97:ARG:N	79:B2:856:A:N7	2.55	0.51
16:AH:99:LEU:HD12	16:AH:116:ARG:HG2	1.92	0.51
23:AO:18:ARG:HD3	79:B2:918:U:O3'	2.10	0.51
23:AO:29:HIS:HB2	23:AO:41:ARG:HA	1.92	0.51
29:AU:53:LYS:HA	79:B2:1345:A:OP2	2.11	0.51
29:AU:88:LYS:CE	79:B2:1516:A:OP1	2.57	0.51
29:AU:102:ARG:O	29:AU:106:ILE:HG22	2.10	0.51
31:AW:107:SER:O	79:B2:803:A:H4'	2.10	0.51
39:BE:68:PRO:HG2	39:BE:71:VAL:CG2	2.40	0.51
48:BN:155:VAL:HG13	80:B5:58:G:H4'	1.91	0.51
49:BO:61[A]:ALA:HB1	49:BO:66[A]:LYS:HG3	1.92	0.51
65:Be:40:SER:HB2	80:B5:639:G:OP1	2.11	0.51
70:Bj:56:ARG:HG2	80:B5:353:G:O2'	2.10	0.51
79:B2:542:A:H5"	79:B2:544:A:N7	2.26	0.51
80:B5:428:A:H2'	80:B5:429:U:C6	2.45	0.51
80:B5:441:U:O2'	80:B5:442:G:O4'	2.22	0.51
80:B5:847:A:H2'	80:B5:848:A:C8	2.45	0.51
80:B5:1228:C:C2	80:B5:1283:C:C2	2.98	0.51
80:B5:1638:A:H5"	80:B5:1639:C:OP2	2.10	0.51
80:B5:1655:G:H8	80:B5:1655:G:H5"	1.73	0.51
80:B5:2573:G:H2'	80:B5:2574:G:O4'	2.09	0.51
84:CW:3:C:H2'	84:CW:4:C:C2	2.45	0.51
4:A3:21:CYS:SG	4:A3:23:VAL:HB	2.50	0.51
9:AA:81:PHE:HB3	9:AA:170:ILE:HD13	1.91	0.51
10:AB:124:ASN:HD22	79:B2:884:A:H4'	1.71	0.51
18:AJ:8:TYR:HB2	79:B2:770:A:O2'	2.10	0.51
18:AJ:117:GLY:C	18:AJ:119:ALA:H	2.17	0.51
21:AM:31:VAL:HG21	21:AM:136:ILE:HD13	1.92	0.51
22:AN:54:LEU:HB3	22:AN:60:VAL:CG2	2.40	0.51
27:AS:26:ILE:HD13	27:AS:30:TYR:HB2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:140:ASN:OD1	35:BA:142:ASP:HB3	2.10	0.51
37:BC:189:ALA:O	80:B5:1420:C:OP2	2.28	0.51
43:BI:50:VAL:HG13	43:BI:167:LEU:HA	1.92	0.51
46:BL:76:THR:O	46:BL:80:VAL:HG23	2.10	0.51
48:BN:113:LEU:HD11	82:B8:142:C:H4'	1.91	0.51
51:BQ:69:ARG:CZ	80:B5:784:A:C8	2.93	0.51
67:Bg:9:ARG:CZ	80:B5:1606:U:O4	2.58	0.51
71:Bk:64:LYS:HG3	71:Bk:65:LEU:N	2.24	0.51
72:Bl:21:ARG:HD3	72:Bl:22:PRO:O	2.09	0.51
79:B2:1655:A:O4'	80:B5:2302:G:H4'	2.10	0.51
2:A1:67:THR:C	79:B2:871:G:O2'	2.54	0.51
6:A5:133:ALA:HB2	79:B2:1252:C:O4'	2.09	0.51
6:A5:138:ARG:CZ	79:B2:1235:C:O2	2.59	0.51
10:AB:134:VAL:O	10:AB:218:LEU:HD22	2.10	0.51
11:AC:178:ILE:HB	11:AC:185:LYS:HG3	1.93	0.51
17:AI:47:ARG:NH2	79:B2:397:A:H5"	2.25	0.51
20:AL:20:PHE:HB2	79:B2:211:U:H5"	1.91	0.51
22:AN:123:HIS:CE1	80:B5:847:A:H4'	2.46	0.51
24:AP:29:SER:OG	24:AP:31:GLU:HG3	2.10	0.51
34:AZ:77:ARG:NH2	79:B2:1534:G:C5	2.74	0.51
35:BA:199:THR:OG1	80:B5:913:A:H4'	2.09	0.51
36:BB:153:LYS:HG2	36:BB:154:TYR:CZ	2.46	0.51
37:BC:81:GLY:HA3	80:B5:357:A:O4'	2.11	0.51
38:BD:72:ASP:N	81:B7:7:G:O2'	2.42	0.51
41:BG:156:ASP:N	41:BG:156:ASP:OD1	2.43	0.51
46:BL:65:TYR:HD2	80:B5:102:C:O2'	1.92	0.51
48:BN:45:PRO:O	48:BN:49:ARG:HB2	2.09	0.51
48:BN:190:THR:O	48:BN:194:GLN:HG2	2.10	0.51
49:BO:133[B]:ARG:CZ	80:B5:1189:C:C4	2.93	0.51
52:BR:82:LYS:HE3	80:B5:2115:G:O2'	2.09	0.51
54:BT:130:ARG:HD3	80:B5:1098:A:OP2	2.09	0.51
66:Bf:8:TYR:CD2	66:Bf:99:ARG:HG2	2.46	0.51
75:Bo:77:CYS:O	75:Bo:79:THR:CG2	2.59	0.51
79:B2:838:G:C5	88:B2:2069:OHX:N2	2.78	0.51
79:B2:1366:U:O4	88:B2:1987:OHX:N6	2.44	0.51
80:B5:1819:U:H2'	80:B5:1820:U:H5'	1.93	0.51
80:B5:2624:G:N2	84:CW:76:A:H1'	2.22	0.51
80:B5:3058:U:H5'	80:B5:3059:G:OP1	2.09	0.51
83:CV:466:ILE:HA	83:CV:487:LEU:HB3	1.92	0.51
84:CW:18:G:C6	84:CW:58:A:C5	2.99	0.51
7:A6:167:VAL:HG12	7:A6:183:LEU:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:286:GLU:HG2	88:A6:401:OHX:N5	2.25	0.51
7:A6:295:SER:HB2	7:A6:300:THR:HB	1.92	0.51
10:AB:104:ASP:OD1	10:AB:214:LYS:NZ	2.43	0.51
14:AF:185:ARG:NH2	79:B2:1572:G:H1'	2.25	0.51
17:AI:171:SER:HB3	79:B2:209:U:H5'	1.91	0.51
23:AO:38:THR:OG1	79:B2:896:U:O4'	2.28	0.51
26:AR:13:SER:HA	26:AR:54:THR:HG22	1.92	0.51
28:AT:137:ALA:O	28:AT:141:GLU:HG2	2.10	0.51
29:AU:51:VAL:HG13	29:AU:94:GLU:HB2	1.92	0.51
29:AU:117:VAL:HG22	29:AU:118:VAL:H	1.75	0.51
35:BA:64:ARG:HD2	80:B5:2557:A:C5	2.46	0.51
35:BA:187:HIS:CE1	80:B5:1794:G:N2	2.78	0.51
35:BA:200:ARG:HE	80:B5:2147:A:P	2.34	0.51
37:BC:271:LYS:HB2	37:BC:274:TYR:HB3	1.90	0.51
38:BD:17:GLN:HB2	54:BT:20:ARG:HG2	1.93	0.51
40:BF:80:GLN:HG3	54:BT:136:ARG:CB	2.41	0.51
52:BR:175:GLN:CB	79:B2:852:C:H4'	2.40	0.51
58:BX:73:MET:HE1	58:BX:141:TYR:HE2	1.75	0.51
62:Bb:18:ARG:HB2	80:B5:969:C:H5"	1.92	0.51
63:Bc:87:VAL:HA	80:B5:1728:G:HO2'	1.63	0.51
65:Be:24:ARG:HD3	65:Be:25:TYR:CZ	2.45	0.51
74:Bn:9:ARG:HG3	74:Bn:9:ARG:NH1	2.25	0.51
79:B2:46:A:C6	83:CV:387:ARG:HB3	2.46	0.51
79:B2:432:G:H5'	83:CV:385:VAL:C	2.27	0.51
79:B2:577:G:H3'	79:B2:577:G:C8	2.45	0.51
79:B2:698:U:O4	88:B2:1974:OHX:N3	2.44	0.51
79:B2:1474:G:H2'	79:B2:1475:A:H8	1.73	0.51
79:B2:1535:U:OP1	79:B2:1535:U:H4'	2.10	0.51
88:B2:1953:OHX:N3	88:B2:2066:OHX:N1	2.59	0.51
80:B5:172:G:H2'	80:B5:173:G:H5"	1.91	0.51
80:B5:249:U:H2'	80:B5:249:U:OP2	2.11	0.51
80:B5:715:A:H4'	80:B5:716:A:OP1	2.10	0.51
80:B5:1229:G:C6	80:B5:1230:G:C2	2.99	0.51
81:B7:64:A:H5'	81:B7:65:G:H5"	1.91	0.51
83:CV:237:VAL:HG22	83:CV:360:LEU:CD1	2.40	0.51
3:A2:34:GLU:O	3:A2:35:ASP:HB2	2.09	0.51
7:A6:286:GLU:CG	88:A6:401:OHX:N5	2.73	0.51
8:A7:82:THR:CA	84:CW:42:C:C5'	2.88	0.51
8:A7:94:HIS:NE2	79:B2:1638:G:OP1	2.44	0.51
10:AB:71:ALA:C	10:AB:73:LEU:H	2.19	0.51
11:AC:99:LYS:HZ2	79:B2:1300:A:P	2.33	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:4:LEU:CD1	79:B2:1514:U:N1	2.74	0.51
14:AF:43:PHE:HA	14:AF:68:ILE:O	2.11	0.51
14:AF:103:ASN:HA	14:AF:106:LYS:HD2	1.92	0.51
18:AJ:106:GLU:OE2	18:AJ:115:LYS:HE2	2.11	0.51
20:AL:93:TYR:HB2	20:AL:100:TYR:CE2	2.45	0.51
23:AO:126:THR:CG2	79:B2:988:A:C2	2.67	0.51
34:AZ:37:GLN:O	34:AZ:38:HIS:HB3	2.10	0.51
37:BC:220:ARG:HG3	80:B5:211:A:OP1	2.10	0.51
40:BF:70:LYS:NZ	80:B5:519:A:P	2.84	0.51
41:BG:215:VAL:O	41:BG:219:ASP:HB2	2.10	0.51
42:BH:48:VAL:HG21	42:BH:52:LEU:HD13	1.92	0.51
43:BI:60:LEU:HD11	43:BI:135:ILE:HD13	1.93	0.51
51:BQ:166:LEU:O	51:BQ:167:SER:HB2	2.11	0.51
56:BV:18:PRO:CG	80:B5:1898:G:H1'	2.40	0.51
60:BZ:80:LEU:O	60:BZ:82:PRO:HD3	2.11	0.51
61:Ba:8:THR:HG21	80:B5:662:U:P	2.50	0.51
61:Ba:62:HIS:HB2	80:B5:304:G:N9	2.25	0.51
65:Be:4:LEU:HB3	65:Be:5:PRO:CD	2.40	0.51
67:Bg:9:ARG:HD3	80:B5:1527:C:H4'	1.93	0.51
79:B2:446:A:N6	79:B2:461:G:H21	2.08	0.51
88:B2:1963:OHX:N5	88:B2:2025:OHX:N6	2.59	0.51
80:B5:2623:G:N3	84:CW:75:C:OP1	2.37	0.51
80:B5:2896:A:H5"	80:B5:2896:A:H8	1.75	0.51
83:CV:554:HIS:HA	83:CV:557:ILE:HB	1.93	0.51
2:A1:34:ASP:N	2:A1:34:ASP:OD1	2.43	0.51
4:A3:10:HIS:CG	4:A3:11:PRO:HD2	2.46	0.51
8:A7:93:ARG:HB2	85:CX:3:G:N1	2.13	0.51
9:AA:27:ARG:HG2	9:AA:28:ASN:H	1.75	0.51
10:AB:186:SER:O	10:AB:190:PRO:HD2	2.10	0.51
14:AF:84:LYS:HE3	79:B2:1613:U:OP2	2.10	0.51
17:AI:170:SER:C	79:B2:209:U:C5'	2.84	0.51
25:AQ:127:LYS:NZ	25:AQ:131:GLY:O	2.38	0.51
26:AR:4:VAL:CG2	79:B2:1402:G:H4'	2.40	0.51
29:AU:104:THR:HG21	29:AU:116:VAL:HG21	1.93	0.51
30:AV:71:ARG:HG3	30:AV:83:TRP:CH2	2.46	0.51
35:BA:187:HIS:CG	80:B5:1794:G:C4	2.99	0.51
35:BA:220:GLY:O	35:BA:221:LYS:HG3	2.11	0.51
37:BC:157:GLU:HG2	37:BC:209:TYR:HB2	1.91	0.51
37:BC:300:ARG:HG2	37:BC:300:ARG:NH1	2.24	0.51
42:BH:1:MET:O	42:BH:2:LYS:HB2	2.11	0.51
49:BO:116[A]:LYS:HG3	49:BO:117[A]:ARG:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BS:26:ARG:NH1	54:BT:150:THR:HG21	2.26	0.51
54:BT:32:LYS:HE3	54:BT:98:HIS:HD2	1.75	0.51
58:BX:82:LEU:HD11	58:BX:135:ILE:HD12	1.92	0.51
60:BZ:46:ILE:HD11	60:BZ:49:TYR:CD2	2.45	0.51
61:Ba:82:ILE:HG22	61:Ba:87:ARG:HG3	1.92	0.51
64:Bd:19:ARG:HD3	64:Bd:35:GLU:CG	2.40	0.51
74:Bn:15:ARG:NE	79:B2:1125:A:H5"	2.26	0.51
79:B2:229:U:H2'	79:B2:230:C:C6	2.46	0.51
79:B2:279:G:H3'	79:B2:279:G:H8	1.75	0.51
79:B2:429:G:O2'	83:CV:243:PHE:CD1	2.63	0.51
79:B2:927:C:H2'	79:B2:928:U:C6	2.46	0.51
79:B2:1215:C:N4	88:B2:2081:OHX:N3	2.59	0.51
79:B2:1644:C:C2	80:B5:2255:A:C2	2.95	0.51
80:B5:308:A:H5'	80:B5:2223:A:O2'	2.11	0.51
80:B5:787:G:H2'	80:B5:788:C:C6	2.46	0.51
80:B5:1176:C:H2'	80:B5:1177:G:N2	2.26	0.51
80:B5:3027:A:C3'	83:CV:109:GLN:HB2	2.39	0.51
83:CV:466:ILE:HA	83:CV:487:LEU:H	1.76	0.51
3:A2:50:GLU:O	3:A2:51:ASN:HB2	2.10	0.51
6:A5:135:HIS:HB2	6:A5:138:ARG:HB3	1.93	0.51
8:A7:89:ARG:NH1	84:CW:33:U:C2	2.75	0.51
17:AI:138:ASN:HB3	79:B2:197:A:H61	1.76	0.51
20:AL:72:THR:O	20:AL:88:ARG:HD2	2.11	0.51
20:AL:105:LYS:HD2	79:B2:306:U:P	2.50	0.51
23:AO:122:PRO:CB	79:B2:887:A:C1'	2.74	0.51
24:AP:87:PRO:HD3	24:AP:112:LEU:HD22	1.91	0.51
25:AQ:7:VAL:HG22	25:AQ:22:VAL:HB	1.92	0.51
25:AQ:73:GLY:H	25:AQ:76:SER:HB3	1.76	0.51
29:AU:106:ILE:C	29:AU:108:ILE:H	2.19	0.51
33:AY:31:ASN:O	33:AY:32:ARG:HB2	2.11	0.51
36:BB:116:ARG:HG2	36:BB:175:LYS:HA	1.92	0.51
36:BB:226:PHE:O	80:B5:1886:A:O2'	2.20	0.51
36:BB:228:GLY:N	80:B5:1887:A:H4'	2.25	0.51
36:BB:309:GLY:O	80:B5:3379:C:H1'	2.11	0.51
36:BB:323:MET:HE1	36:BB:356:LEU:HD11	1.92	0.51
41:BG:59:GLN:NE2	82:B8:150:G:C1'	2.71	0.51
70:Bj:6:PRO:O	80:B5:1852:G:O2'	2.21	0.51
79:B2:1081:A:H4'	79:B2:1082:C:O5'	2.10	0.51
79:B2:1410:A:H2'	79:B2:1411:A:O4'	2.11	0.51
88:B2:1907:OHX:N1	88:B2:2081:OHX:N4	2.58	0.51
88:B2:1915:OHX:N2	88:B2:2069:OHX:N5	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:435:C:H2'	80:B5:436:A:O4'	2.11	0.51
80:B5:3000:A:H2'	80:B5:3001:C:C6	2.45	0.51
9:AA:163:ASN:C	9:AA:165:ARG:H	2.18	0.51
12:AD:156:PHE:CE2	79:B2:1327:C:H5'	2.45	0.51
15:AG:28:PHE:CE2	15:AG:104:PRO:HG3	2.46	0.51
15:AG:157:VAL:CG1	79:B2:78:A:C4'	2.60	0.51
21:AM:29:LYS:HE2	21:AM:100:TRP:NE1	2.26	0.51
27:AS:134:ARG:HG3	79:B2:1545:A:P	2.50	0.51
35:BA:187:HIS:ND1	35:BA:190:ARG:NH1	2.58	0.51
35:BA:219:ILE:HD11	80:B5:2185:G:H4'	1.93	0.51
35:BA:240:ALA:HA	80:B5:2155:G:P	2.51	0.51
36:BB:53:MET:HB2	80:B5:3049:A:H5"	1.93	0.51
37:BC:286:VAL:HG11	51:BQ:31:LYS:HD2	1.93	0.51
38:BD:55:PHE:CZ	38:BD:158:ARG:HB3	2.45	0.51
41:BG:205:ALA:C	41:BG:207:ASP:H	2.18	0.51
43:BI:57:LEU:HD12	81:B7:93:C:H5'	1.91	0.51
44:BJ:54:VAL:HG23	44:BJ:57:PHE:HB2	1.93	0.51
60:BZ:4:PHE:O	60:BZ:5:LEU:HG	2.10	0.51
67:Bg:83:ASN:ND2	80:B5:1708:C:O3'	2.44	0.51
79:B2:56:U:H4'	79:B2:57:G:H5'	1.93	0.51
88:B2:1973:OHX:N4	88:B2:1987:OHX:N2	2.59	0.51
80:B5:2112:U:O2'	88:B5:3401:OHX:N1	2.44	0.51
8:A7:84:LYS:CA	84:CW:30:G:C2'	2.46	0.51
13:AE:163:ASP:O	13:AE:164:LEU:HB2	2.11	0.51
17:AI:123:LYS:O	88:AI:302:OHX:N6	2.44	0.51
17:AI:170:SER:OG	79:B2:209:U:C4'	2.55	0.51
20:AL:80:MET:CE	79:B2:325:G:H4'	2.32	0.51
28:AT:118:PRO:C	28:AT:120:GLY:H	2.18	0.51
35:BA:225:ILE:O	35:BA:238:ILE:O	2.29	0.51
38:BD:266:ALA:HA	81:B7:1:G:H1'	1.92	0.51
41:BG:59:GLN:HE22	82:B8:150:G:C1'	2.20	0.51
42:BH:96:HIS:HA	83:CV:164:ARG:NH2	2.26	0.51
44:BJ:130:VAL:CG1	80:B5:2683:U:O2'	2.59	0.51
47:BM:109:ARG:NH1	80:B5:3210:A:OP1	2.44	0.51
47:BM:134:ALA:O	47:BM:136:ALA:N	2.44	0.51
51:BQ:178:ARG:HG2	61:Ba:51:GLY:CA	2.41	0.51
54:BT:2:GLY:HA3	80:B5:2626:A:O5'	2.11	0.51
60:BZ:53:VAL:HA	60:BZ:57:HIS:HD2	1.76	0.51
65:Be:26:HIS:O	65:Be:28:VAL:N	2.44	0.51
67:Bg:24:LYS:HB3	80:B5:1695:U:C5'	2.39	0.51
79:B2:707:A:H2'	79:B2:708:C:H5"	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:868:G:H1	79:B2:960:U:H3	1.59	0.51
79:B2:1367:G:N7	88:B2:1987:OHX:N6	2.59	0.51
79:B2:1570:A:OP1	88:B2:2044:OHX:N5	2.43	0.51
80:B5:200:C:H5'	80:B5:221:A:C2	2.46	0.51
80:B5:1567:U:H1'	80:B5:1570:U:C5	2.45	0.51
80:B5:2249:G:C8	80:B5:2249:G:H3'	2.46	0.51
80:B5:2627:C:N4	84:CW:76:A:C8	2.79	0.51
83:CV:468:LEU:HB2	83:CV:543:GLY:H	1.76	0.51
84:CW:58:A:C4	84:CW:61:C:C5	2.98	0.51
10:AB:165:ARG:CZ	79:B2:946:U:O3'	2.60	0.50
12:AD:192:PRO:O	12:AD:195:SER:HB2	2.11	0.50
14:AF:69:PHE:HD2	25:AQ:50:GLU:HG2	1.75	0.50
17:AI:29:LEU:C	17:AI:29:LEU:HD23	2.36	0.50
20:AL:10:GLU:HG2	79:B2:327:U:C2'	2.35	0.50
23:AO:136:ARG:HH12	79:B2:1785:U:H5"	1.76	0.50
24:AP:85:ILE:HD11	24:AP:116:LEU:HD23	1.93	0.50
26:AR:21:TYR:HA	26:AR:58:MET:HE1	1.92	0.50
27:AS:88:ARG:NH2	27:AS:112:ASP:OD1	2.45	0.50
34:AZ:55:PRO:C	34:AZ:57:TYR:H	2.19	0.50
42:BH:12:VAL:N	42:BH:51:GLN:O	2.35	0.50
44:BJ:139:THR:HG22	44:BJ:146:GLY:O	2.12	0.50
52:BR:43:LYS:NZ	80:B5:1765:U:H5'	2.26	0.50
53:BS:38:LYS:HD2	53:BS:58:ILE:HD13	1.94	0.50
54:BT:89:LEU:HD12	80:B5:2723:U:C5'	2.39	0.50
57:BW:120:LYS:HA	57:BW:123:ARG:HD2	1.93	0.50
66:Bf:18:ARG:HD3	80:B5:1178:G:H5"	1.92	0.50
72:Bl:15:LYS:CE	82:B8:46:G:OP2	2.58	0.50
79:B2:76:A:H5'	88:B2:2037:OHX:N1	2.25	0.50
79:B2:501:U:H4'	79:B2:502:U:OP1	2.11	0.50
79:B2:734:A:O2'	79:B2:735:C:H5'	2.12	0.50
79:B2:1061:A:H2'	79:B2:1062:A:H5'	1.92	0.50
79:B2:1202:A:H61	79:B2:1457:C:H5"	1.76	0.50
79:B2:1458:G:H2'	79:B2:1458:G:N3	2.26	0.50
80:B5:508:U:H2'	80:B5:509:U:C6	2.46	0.50
80:B5:621:A:H2'	80:B5:622:A:C8	2.46	0.50
80:B5:1876:U:H6	80:B5:1876:U:C5'	2.24	0.50
80:B5:3167:A:O2'	80:B5:3168:A:OP1	2.27	0.50
11:AC:88:LYS:HB2	79:B2:1301:U:OP1	2.11	0.50
88:AC:301:OHX:N3	88:B2:1906:OHX:N5	2.60	0.50
15:AG:59:GLN:HA	79:B2:155:U:O2'	2.11	0.50
15:AG:108:VAL:HG11	79:B2:153:G:HO2'	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:182:GLN:CD	79:B2:270:C:H41	2.19	0.50
17:AI:171:SER:HB3	79:B2:208:U:O2'	2.11	0.50
31:AW:82:LYS:HB2	31:AW:85:ASP:OD2	2.12	0.50
35:BA:243:THR:OG1	80:B5:2244:A:H5"	2.11	0.50
37:BC:283:THR:HG21	37:BC:288:ARG:NH2	2.26	0.50
38:BD:155:THR:O	81:B7:36:C:H5'	2.11	0.50
38:BD:277:LEU:HD11	81:B7:62:U:H5"	1.92	0.50
44:BJ:13:LYS:HE2	44:BJ:132:ASN:HD21	1.76	0.50
50:BP:29:THR:HA	50:BP:32:THR:HG23	1.93	0.50
51:BQ:46:LYS:O	51:BQ:50:LYS:HG3	2.11	0.50
51:BQ:170:ARG:O	51:BQ:170:ARG:HG3	2.11	0.50
61:Ba:59:ARG:HD2	80:B5:90:C:OP1	2.11	0.50
76:Bq:39:HIS:CG	80:B5:1259:A:H5'	2.46	0.50
79:B2:48:G:C6	83:CV:387:ARG:NH1	2.75	0.50
79:B2:606:A:H4'	79:B2:607:G:H5"	1.93	0.50
79:B2:902:G:H8	79:B2:902:G:O5'	1.93	0.50
80:B5:65:A:H2'	80:B5:110:G:N7	2.25	0.50
80:B5:707:U:H2'	80:B5:708:G:H5"	1.93	0.50
80:B5:839:C:H1'	80:B5:1724:U:OP1	2.11	0.50
80:B5:1312:C:H5"	80:B5:1313:G:OP2	2.11	0.50
80:B5:3241:G:H2'	80:B5:3245:A:H8	1.76	0.50
84:CW:41:C:N3	84:CW:42:C:C5	2.79	0.50
8:A7:84:LYS:HD3	84:CW:32:U:C2	2.46	0.50
8:A7:85:SER:N	84:CW:30:G:N1	2.59	0.50
13:AE:3:ARG:HB3	79:B2:93:A:O3'	2.11	0.50
17:AI:58:LEU:O	17:AI:59:ARG:HB2	2.10	0.50
17:AI:76:THR:CG2	17:AI:108:PRO:HG2	2.41	0.50
17:AI:136:SER:OG	17:AI:137:LYS:N	2.43	0.50
25:AQ:106:LYS:O	25:AQ:110:THR:HB	2.10	0.50
26:AR:4:VAL:CG1	79:B2:1315:U:O2	2.53	0.50
35:BA:22:LEU:HD22	80:B5:1796:G:H5"	1.93	0.50
35:BA:85:GLY:HA3	80:B5:2554:A:C4	2.45	0.50
46:BL:65:TYR:CZ	80:B5:103:G:O4'	2.65	0.50
46:BL:121:SER:O	46:BL:121:SER:OG	2.30	0.50
49:BO:65[A]:ASN:HB3	49:BO:68[A]:ARG:HD2	1.94	0.50
49:BO:127[A]:LEU:HD11	53:BS:168:PRO:HG3	1.93	0.50
54:BT:17:ARG:HG2	54:BT:17:ARG:HH11	1.76	0.50
56:BV:48:ARG:NH2	80:B5:3043:C:OP2	2.44	0.50
59:BY:114:ASP:CB	82:B8:85:G:O6	2.59	0.50
60:BZ:65:ARG:HH11	60:BZ:65:ARG:HG3	1.76	0.50
60:BZ:88:ASP:O	60:BZ:121:ARG:NH2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:Ba:35:ALA:HB2	80:B5:39:A:C5’	2.37	0.50
70:Bj:72:ARG:NH1	82:B8:95:G:OP2	2.39	0.50
72:Bl:13:MET:HG2	80:B5:1493:G:O2’	2.12	0.50
79:B2:647:G:H1	79:B2:687:G:H1	1.58	0.50
79:B2:838:G:C5	88:B2:2069:OHX:N6	2.78	0.50
79:B2:1686:C:C6	79:B2:1687:U:C5	2.99	0.50
88:B2:1963:OHX:N2	88:B2:2025:OHX:N4	2.59	0.50
80:B5:1225:A:C8	80:B5:1287:A:H2’	2.46	0.50
80:B5:1267:U:H3’	80:B5:1268:G:C8	2.47	0.50
80:B5:2660:G:O3’	80:B5:2749:G:N2	2.44	0.50
6:A5:138:ARG:HH22	79:B2:1236:A:C1’	2.24	0.50
7:A6:29:GLN:HG3	7:A6:32:LEU:HB2	1.93	0.50
11:AC:148:LEU:O	30:AV:4:ASP:HB2	2.12	0.50
16:AH:28:GLU:O	16:AH:35:LYS:HB2	2.12	0.50
22:AN:3:ARG:HA	79:B2:867:G:OP1	2.11	0.50
28:AT:113:ILE:O	28:AT:124:ILE:HD12	2.11	0.50
35:BA:204:MET:CG	80:B5:914:A:C2	2.93	0.50
36:BB:2:SER:HB3	80:B5:2943:G:H8	1.77	0.50
36:BB:150:ARG:HG2	36:BB:150:ARG:NH1	2.26	0.50
42:BH:162:GLN:HG3	42:BH:163:GLN:N	2.25	0.50
50:BP:71:ALA:O	50:BP:74:LYS:HB2	2.10	0.50
52:BR:8:LYS:HZ2	80:B5:1473:G:P	2.32	0.50
52:BR:151:ARG:O	52:BR:155:LEU:HG	2.11	0.50
52:BR:165:LYS:HZ2	79:B2:824:G:C1’	2.23	0.50
79:B2:220:A:H5”	79:B2:832:U:H1’	1.93	0.50
79:B2:415:C:H6	83:CV:288:ARG:N	2.10	0.50
79:B2:1168:U:C2’	79:B2:1169:G:H5’	2.41	0.50
79:B2:1201:G:O2’	88:B2:1990:OHX:N1	2.45	0.50
88:B2:1963:OHX:N5	88:B2:2025:OHX:N3	2.60	0.50
80:B5:736:A:H2’	80:B5:737:G:O4’	2.12	0.50
3:A2:26:THR:H	3:A2:44:VAL:HG22	1.76	0.50
8:A7:99:LYS:O	88:B2:1917:OHX:N3	2.44	0.50
10:AB:126:THR:HG22	10:AB:136:ARG:HE	1.76	0.50
13:AE:15:PRO:HG2	13:AE:18:TRP:CE2	2.46	0.50
18:AJ:120:LYS:O	18:AJ:121:SER:HB2	2.12	0.50
21:AM:123:VAL:HG11	21:AM:126:TRP:HB3	1.94	0.50
24:AP:110:GLU:HG3	27:AS:119:ILE:HD11	1.94	0.50
27:AS:91:ASP:HB3	27:AS:95:GLY:H	1.77	0.50
28:AT:40:SER:OG	28:AT:96:ALA:HA	2.11	0.50
31:AW:89:TRP:O	31:AW:93:LEU:HD22	2.11	0.50
33:AY:113:ASN:HD22	79:B2:54:C:H5”	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:209:HIS:CD2	35:BA:211:HIS:H	2.29	0.50
37:BC:302:ALA:HB2	51:BQ:39:ARG:NH1	2.26	0.50
39:BE:2:SER:N	80:B5:1387:G:HO2'	2.09	0.50
39:BE:98:VAL:HA	39:BE:101:PHE:CD2	2.45	0.50
41:BG:204:ARG:O	41:BG:207:ASP:HB2	2.11	0.50
46:BL:122:LYS:HA	68:Bh:120:ALA:HA	1.92	0.50
48:BN:138:GLN:OE1	80:B5:19:U:H4'	2.11	0.50
64:Bd:56:ASN:ND2	80:B5:1459:C:H1'	2.27	0.50
65:Be:26:HIS:HB2	80:B5:655:C:H5"	1.92	0.50
70:Bj:21:ARG:HD2	70:Bj:37:CYS:SG	2.52	0.50
71:Bk:2:ALA:HB2	80:B5:1613:A:OP1	2.11	0.50
79:B2:484:C:N4	79:B2:503:G:H22	2.05	0.50
79:B2:647:G:H22	79:B2:687:G:N2	2.09	0.50
79:B2:882:U:H2'	79:B2:883:C:C6	2.46	0.50
79:B2:1686:C:O2'	79:B2:1687:U:O4'	2.30	0.50
80:B5:1655:G:C5'	80:B5:1655:G:C8	2.91	0.50
80:B5:2555:G:H5'	80:B5:2556:C:OP2	2.10	0.50
82:B8:27:U:O5'	82:B8:27:U:H6	1.95	0.50
1:A0:23:CYS:SG	1:A0:74:CYS:HB3	2.52	0.50
2:A1:67:THR:HA	79:B2:872:G:O4'	2.11	0.50
7:A6:154:VAL:HG12	7:A6:171:SER:HB3	1.93	0.50
8:A7:88:ARG:HG3	84:CW:35:A:C1'	2.26	0.50
13:AE:22:LYS:HB2	79:B2:773:C:P	2.51	0.50
16:AH:10:SER:HB3	16:AH:43:PHE:O	2.11	0.50
17:AI:180:ASP:OD2	79:B2:208:U:O2	2.29	0.50
19:AK:77:ARG:HD3	19:AK:84:GLU:HA	1.94	0.50
20:AL:97:TYR:O	20:AL:99:ARG:HG2	2.12	0.50
22:AN:117:LEU:CD2	79:B2:627:C:H4'	2.41	0.50
23:AO:29:HIS:NE2	79:B2:917:U:O2	2.45	0.50
23:AO:52:ARG:NH1	79:B2:905:A:H4'	2.25	0.50
32:AX:97:ASP:HB2	32:AX:100:ASP:OD2	2.12	0.50
35:BA:194:ASN:ND2	80:B5:822:G:O4'	2.44	0.50
36:BB:169:THR:CG2	36:BB:171:LEU:H	2.18	0.50
37:BC:305:ALA:HA	80:B5:1347:U:C1'	2.41	0.50
38:BD:146:LEU:CD1	80:B5:2746:A:C2	2.95	0.50
39:BE:40:LEU:HD13	39:BE:84:VAL:HG11	1.94	0.50
41:BG:29:SER:O	41:BG:31:PRO:HD3	2.12	0.50
46:BL:131:LYS:HD3	46:BL:131:LYS:H	1.77	0.50
47:BM:13:ARG:NH1	47:BM:65:LEU:O	2.44	0.50
48:BN:72:LYS:HZ3	80:B5:2167:A:P	2.32	0.50
48:BN:93:LYS:NZ	80:B5:2600:C:OP1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:72[B]:HIS:HD2	80:B5:3008:A:OP1	1.93	0.50
49:BO:96[B]:LYS:HE2	80:B5:2384:A:N1	2.27	0.50
50:BP:109:ALA:HA	50:BP:112:LEU:HD22	1.94	0.50
60:BZ:115:LYS:NZ	60:BZ:119:GLU:OE1	2.32	0.50
61:Ba:14:HIS:O	80:B5:943:U:OP2	2.29	0.50
61:Ba:62:HIS:NE2	80:B5:304:G:N1	2.60	0.50
67:Bg:9:ARG:NH2	80:B5:1606:U:O4	2.45	0.50
68:Bh:118:ILE:O	68:Bh:119:LYS:HB2	2.12	0.50
69:Bi:30:LYS:CE	80:B5:266:A:H2'	2.41	0.50
70:Bj:9:GLY:HA2	80:B5:1844:C:O2	2.11	0.50
73:Bm:125:LYS:CD	80:B5:2897:A:H5"	2.42	0.50
79:B2:1267:G:H21	79:B2:1448:G:C5'	2.23	0.50
88:B2:1973:OHX:N3	88:B2:1987:OHX:N1	2.60	0.50
80:B5:1717:U:H2'	80:B5:1718:G:C8	2.47	0.50
80:B5:3027:A:C2'	83:CV:109:GLN:HB2	2.31	0.50
82:B8:26:U:H2'	82:B8:27:U:C6	2.47	0.50
82:B8:145:U:H2'	82:B8:146:U:C6	2.47	0.50
83:CV:236:GLU:HB3	83:CV:360:LEU:CD2	2.42	0.50
10:AB:61:LEU:HD13	10:AB:61:LEU:H	1.77	0.50
10:AB:109:LYS:HD2	10:AB:113:MET:HG3	1.93	0.50
11:AC:89:GLN:HB3	79:B2:1146:G:H1'	1.92	0.50
17:AI:23:LYS:N	79:B2:386:G:OP1	2.38	0.50
17:AI:73:SER:O	79:B2:257:A:H4'	2.11	0.50
17:AI:146:ARG:HH22	79:B2:186:C:P	2.35	0.50
19:AK:19:GLY:HA2	19:AK:68:LEU:HD23	1.93	0.50
22:AN:124:ARG:NH2	79:B2:966:A:OP2	2.38	0.50
23:AO:25:ASP:HA	23:AO:54:GLU:O	2.12	0.50
25:AQ:25:GLY:H	25:AQ:63:ILE:HA	1.76	0.50
26:AR:24:LEU:HD13	26:AR:58:MET:HE3	1.93	0.50
27:AS:29:VAL:O	27:AS:43:SER:OG	2.30	0.50
27:AS:40:ARG:NH1	79:B2:1539:G:H4'	2.20	0.50
27:AS:126:ARG:NH1	79:B2:1459:C:OP1	2.45	0.50
31:AW:77:PRO:HD2	31:AW:79:PHE:CE1	2.47	0.50
40:BF:97:PRO:HD3	80:B5:1138:U:O3'	2.11	0.50
43:BI:112:GLN:CA	83:CV:471:LYS:CD	2.90	0.50
44:BJ:15:GLU:HB3	44:BJ:130:VAL:HG22	1.93	0.50
49:BO:171[A]:LYS:O	49:BO:175[A]:THR:HG22	2.12	0.50
51:BQ:176:ARG:HG3	80:B5:2763:U:H5'	1.94	0.50
61:Ba:46:ASP:O	61:Ba:47:LYS:HB3	2.12	0.50
65:Be:14:THR:OG1	80:B5:626:U:OP1	2.30	0.50
79:B2:702:G:O6	79:B2:737:A:N6	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1655:A:C1’	80:B5:2302:G:C1’	2.64	0.50
88:B2:1915:OHX:N2	88:B2:2069:OHX:N1	2.59	0.50
88:B2:1963:OHX:N2	88:B2:2025:OHX:N6	2.60	0.50
88:B2:1973:OHX:N4	88:B2:1987:OHX:N1	2.59	0.50
80:B5:256:G:H2’	80:B5:257:U:C6	2.47	0.50
80:B5:3273:A:O2’	80:B5:3274:A:H5’	2.11	0.50
83:CV:62:TYR:O	83:CV:210:TRP:CE2	2.64	0.50
10:AB:115:ARG:C	79:B2:931:C:H4’	2.37	0.50
11:AC:99:LYS:NZ	79:B2:1300:A:P	2.85	0.50
14:AF:59:VAL:O	14:AF:60:ASP:HB2	2.12	0.50
17:AI:72:ILE:HA	79:B2:256:A:C1’	2.42	0.50
26:AR:2:GLY:CA	79:B2:1312:A:OP1	2.60	0.50
27:AS:118:LYS:NZ	44:BJ:108:GLU:OE2	2.45	0.50
35:BA:15:ILE:CG1	80:B5:822:G:H1’	2.41	0.50
36:BB:361:THR:HG22	36:BB:371:GLN:HB3	1.94	0.50
40:BF:223:PHE:HA	40:BF:227:GLY:HA2	1.93	0.50
44:BJ:104:PHE:O	44:BJ:127:PHE:HB2	2.11	0.50
46:BL:153:ASP:OD1	46:BL:157:ARG:HD3	2.12	0.50
51:BQ:122:ILE:HD11	51:BQ:130:ARG:CZ	2.41	0.50
54:BT:14:MET:CE	54:BT:55:LYS:HB2	2.40	0.50
60:BZ:79:HIS:CE1	80:B5:1637:A:O4’	2.64	0.50
62:Bb:39:PHE:C	62:Bb:39:PHE:CD1	2.90	0.50
67:Bg:53:GLY:CA	80:B5:1640:G:OP1	2.60	0.50
76:Bq:56:ASN:HD21	80:B5:1230:G:H1	1.58	0.50
79:B2:431:C:C2	83:CV:386:SER:HA	2.46	0.50
79:B2:1154:G:N7	88:B2:2014:OHX:N1	2.60	0.50
79:B2:1156:C:OP1	88:B2:2076:OHX:N2	2.45	0.50
79:B2:1622:G:H2’	79:B2:1623:C:C6	2.47	0.50
80:B5:94:G:H2’	80:B5:95:A:C8	2.47	0.50
80:B5:132:C:C4	80:B5:134:U:H5	2.30	0.50
80:B5:1576:G:H5’	80:B5:1577:G:OP2	2.12	0.50
80:B5:1810:A:H2’	80:B5:1811:G:C8	2.46	0.50
81:B7:3:U:H2’	81:B7:4:U:H6	1.76	0.50
84:CW:18:G:H4’	84:CW:60:U:C2	2.47	0.50
1:A0:8:ASN:HB3	79:B2:1791:A:OP1	2.11	0.50
9:AA:120:LEU:HD13	9:AA:142:PRO:HB2	1.94	0.50
9:AA:136:ALA:HB1	9:AA:141:ILE:HB	1.94	0.50
11:AC:89:GLN:OE1	11:AC:94:GLN:NE2	2.41	0.50
11:AC:139:ILE:CD1	11:AC:191:ALA:HB1	2.42	0.50
17:AI:2:GLY:N	79:B2:400:A:H62	2.09	0.50
17:AI:43:ILE:N	79:B2:260:U:C5	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:95:TYR:O	18:AJ:99:LEU:N	2.45	0.50
23:AO:135:ARG:NH2	79:B2:1007:C:O3'	2.45	0.50
24:AP:115:TYR:CD2	79:B2:1557:U:H5'	2.47	0.50
28:AT:31:PRO:HG3	28:AT:103:LYS:HG2	1.94	0.50
35:BA:15:ILE:HD11	80:B5:822:G:N9	2.25	0.50
35:BA:44:ILE:HD12	35:BA:44:ILE:H	1.76	0.50
36:BB:39:LYS:HB2	36:BB:40:PRO:CD	2.41	0.50
37:BC:56:ALA:HA	80:B5:347:G:OP1	2.11	0.50
37:BC:237:GLN:O	37:BC:246:ARG:HG3	2.12	0.50
39:BE:47:PHE:O	39:BE:50:LYS:HB2	2.11	0.50
40:BF:97:PRO:HG3	80:B5:1139:G:OP1	2.11	0.50
43:BI:35:ASP:OD2	80:B5:1008:U:O2'	2.29	0.50
47:BM:47:ASP:C	47:BM:49:PRO:HD3	2.36	0.50
50:BP:122:ALA:HB3	50:BP:143:PRO:HB2	1.94	0.50
52:BR:46:LYS:NZ	80:B5:1766:G:H8	2.03	0.50
52:BR:101:VAL:HG22	80:B5:1949:G:OP1	2.11	0.50
53:BS:146:LYS:HE2	80:B5:535:G:P	2.51	0.50
79:B2:190:C:O2'	79:B2:191:C:OP2	2.23	0.50
79:B2:425:A:H5'	79:B2:425:A:C8	2.46	0.50
79:B2:1638:G:OP1	85:CX:3:G:N7	2.45	0.50
88:B2:1922:OHX:N2	88:B2:1976:OHX:N3	2.60	0.50
80:B5:1295:G:H2'	80:B5:1296:C:C6	2.47	0.50
80:B5:2927:C:H2'	80:B5:2928:C:C6	2.47	0.50
80:B5:3030:G:C4'	83:CV:436:ARG:HD3	2.37	0.50
83:CV:248:ASP:CA	83:CV:360:LEU:CD2	2.89	0.50
84:CW:40:C:C4	84:CW:41:C:C5	3.00	0.50
3:A2:22:ARG:HE	79:B2:1619:C:H1'	1.77	0.49
6:A5:86:UNK:O	6:A5:87:UNK:CG	2.51	0.49
8:A7:86:ASN:N	84:CW:31:A:C5	2.70	0.49
10:AB:56:SER:OG	10:AB:59:ASP:OD1	2.29	0.49
12:AD:203:PRO:HB2	79:B2:1331:A:H2'	1.94	0.49
15:AG:133:LEU:CD1	79:B2:66:U:O2	2.48	0.49
16:AH:110:GLN:OE1	79:B2:817:A:C1'	2.60	0.49
23:AO:25:ASP:N	23:AO:55:SER:HB3	2.26	0.49
26:AR:10:LYS:HE2	79:B2:1316:G:H4'	1.94	0.49
26:AR:32:LYS:NZ	79:B2:1388:A:OP1	2.44	0.49
27:AS:11:PHE:CD1	27:AS:11:PHE:C	2.90	0.49
27:AS:27:LYS:O	27:AS:29:VAL:N	2.44	0.49
28:AT:12:GLN:CD	79:B2:1529:C:HO2'	2.11	0.49
28:AT:48:GLN:OE1	79:B2:1531:G:N2	2.42	0.49
31:AW:16:ASN:HB2	79:B2:1037:C:O2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:48:GLN:HG3	80:B5:337:G:H4'	1.93	0.49
37:BC:148:ILE:HA	37:BC:149:PRO:C	2.37	0.49
40:BF:157:ASN:O	40:BF:159:GLN:N	2.39	0.49
49:BO:68[A]:ARG:HH12	80:B5:2988:C:P	2.34	0.49
59:BY:32:SER:HA	59:BY:49:PRO:HA	1.93	0.49
60:BZ:124:ALA:O	60:BZ:126:LYS:N	2.45	0.49
61:Ba:4:ARG:NE	80:B5:1427:U:C5	2.80	0.49
61:Ba:62:HIS:CD2	80:B5:304:G:N1	2.80	0.49
64:Bd:55:LEU:O	64:Bd:59:ILE:HG13	2.12	0.49
72:Bl:30:ARG:HA	82:B8:75:G:O4'	2.10	0.49
74:Bn:4:LYS:HE2	79:B2:1774:G:C5'	2.42	0.49
79:B2:320:U:H3'	79:B2:321:C:H5"	1.94	0.49
79:B2:393:C:H4'	79:B2:1673:G:O2'	2.12	0.49
79:B2:433:C:OP1	83:CV:391:VAL:CB	2.59	0.49
79:B2:498:G:H2'	79:B2:499:U:C5	2.47	0.49
80:B5:1097:G:H4'	80:B5:1098:A:O5'	2.12	0.49
80:B5:1131:G:C4	80:B5:2373:A:C2	3.00	0.49
80:B5:1875:G:C2'	80:B5:1876:U:H5"	2.40	0.49
80:B5:3227:A:C2'	80:B5:3228:C:H5'	2.41	0.49
83:CV:199:ALA:HB3	89:CV:602:GCP:N7	2.27	0.49
2:A1:51:GLN:HA	79:B2:871:G:H4'	1.93	0.49
8:A7:91:THR:HG22	84:CW:36:U:N3	2.21	0.49
9:AA:33:GLN:C	9:AA:34:GLU:HG2	2.36	0.49
10:AB:61:LEU:HG	10:AB:64:ARG:HH21	1.77	0.49
12:AD:33:GLY:O	12:AD:53:THR:HG23	2.12	0.49
15:AG:53:SER:C	79:B2:163:G:C5'	2.71	0.49
15:AG:136:LYS:CD	79:B2:66:U:OP1	2.52	0.49
17:AI:24:LYS:O	79:B2:400:A:C5'	2.50	0.49
23:AO:46:MET:N	79:B2:899:G:H5'	2.27	0.49
26:AR:2:GLY:CA	79:B2:1312:A:P	3.00	0.49
27:AS:22:VAL:CG1	27:AS:31:ALA:HB1	2.43	0.49
28:AT:117:SER:OG	28:AT:118:PRO:O	2.20	0.49
33:AY:9:THR:OG1	79:B2:781:U:P	2.69	0.49
35:BA:219:ILE:CD1	80:B5:2185:G:H5'	2.36	0.49
36:BB:247:ARG:HB2	80:B5:1888:U:H5"	1.94	0.49
38:BD:36:LEU:HD23	80:B5:2748:A:N3	2.27	0.49
38:BD:36:LEU:CG	80:B5:2748:A:N3	2.75	0.49
49:BO:27[A]:LEU:O	49:BO:101[A]:ARG:NH1	2.45	0.49
56:BV:49:LEU:HG	80:B5:2338:C:H1'	1.94	0.49
60:BZ:75:VAL:HA	80:B5:1636:U:H4'	1.94	0.49
62:Bb:15:LYS:HD3	80:B5:953:G:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:Bb:21:ILE:O	62:Bb:22:LYS:C	2.55	0.49
63:Bc:25:LEU:HD22	63:Bc:90:VAL:HG22	1.93	0.49
65:Be:125:ARG:HH22	80:B5:1392:G:H3'	1.77	0.49
67:Bg:13:TYR:HE1	80:B5:1855:U:H1'	1.76	0.49
69:Bi:58:ILE:HG22	69:Bi:90:MET:CG	2.38	0.49
71:Bk:8:ILE:H	71:Bk:8:ILE:HD12	1.76	0.49
79:B2:1190:C:C1'	84:CW:32:U:OP1	2.56	0.49
80:B5:1944:U:H2'	80:B5:1945:A:C8	2.47	0.49
81:B7:2:G:O2'	81:B7:23:A:N1	2.44	0.49
83:CV:468:LEU:HD22	83:CV:484:VAL:HG22	1.93	0.49
1:A0:3:LYS:HE2	79:B2:1030:A:P	2.52	0.49
1:A0:85:ARG:O	1:A0:86:VAL:HB	2.12	0.49
8:A7:88:ARG:CZ	84:CW:35:A:C8	2.96	0.49
10:AB:70:LEU:HD11	10:AB:79:HIS:HB3	1.94	0.49
12:AD:116:ARG:O	12:AD:120:TYR:HB2	2.12	0.49
14:AF:21:THR:O	14:AF:21:THR:OG1	2.31	0.49
23:AO:27:PHE:HZ	79:B2:916:U:HO2'	0.57	0.49
23:AO:133:ARG:HH22	79:B2:1785:U:P	2.36	0.49
24:AP:22:LEU:HD21	24:AP:109:PRO:HB3	1.94	0.49
35:BA:15:ILE:HG13	80:B5:822:G:H1'	1.91	0.49
36:BB:18:PRO:HG2	36:BB:20:LYS:HD2	1.95	0.49
37:BC:305:ALA:HA	80:B5:1347:U:H1'	1.95	0.49
38:BD:270:LYS:HG2	81:B7:2:G:H4'	1.93	0.49
39:BE:80:ASN:HB2	80:B5:3272:C:O2	2.12	0.49
49:BO:37[A]:ARG:HG3	49:BO:108[A]:ILE:HG22	1.94	0.49
49:BO:108[A]:ILE:HD11	49:BO:113[A]:ASP:HA	1.94	0.49
56:BV:57:MET:HE3	56:BV:126:TRP:CH2	2.47	0.49
57:BW:105:ARG:HG2	57:BW:109:LEU:HD11	1.94	0.49
59:BY:13:ARG:HD3	82:B8:24:G:OP2	2.13	0.49
65:Be:77:ALA:HB1	80:B5:1388:U:H5'	1.93	0.49
66:Bf:58:GLU:OE1	66:Bf:61:GLY:HA2	2.13	0.49
70:Bj:59:THR:HA	82:B8:41:A:O3'	2.12	0.49
74:Bn:9:ARG:HH11	74:Bn:9:ARG:CG	2.24	0.49
75:Bo:93:LEU:HD12	75:Bo:93:LEU:H	1.77	0.49
80:B5:36:C:H2'	80:B5:37:U:H5'	1.94	0.49
80:B5:1580:A:O2'	80:B5:1581:C:OP2	2.30	0.49
80:B5:1595:U:C2	80:B5:1596:C:C5	2.99	0.49
80:B5:2622:C:H5"	80:B5:2623:G:OP2	2.10	0.49
81:B7:23:A:H2'	81:B7:24:A:C8	2.47	0.49
83:CV:63:GLU:HB2	83:CV:210:TRP:CE3	2.48	0.49
83:CV:354:VAL:HG21	83:CV:396:ALA:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:15:ARG:NH1	79:B2:936:G:C5	2.79	0.49
6:A5:87:UNK:HG2	6:A5:87:UNK:O	2.13	0.49
9:AA:29:VAL:HG13	9:AA:150:ASP:HB3	1.93	0.49
10:AB:86:LEU:HB3	10:AB:98:THR:OG1	2.11	0.49
10:AB:125:VAL:HG21	10:AB:173:THR:HG22	1.94	0.49
10:AB:184:LEU:O	10:AB:188:LEU:HG	2.12	0.49
15:AG:188:ARG:NH1	79:B2:283:U:C4	2.80	0.49
16:AH:167:GLU:HG3	16:AH:170:GLN:OE1	2.11	0.49
17:AI:2:GLY:CA	79:B2:393:C:OP2	2.60	0.49
19:AK:49:LEU:HB3	19:AK:55:VAL:CG1	2.42	0.49
23:AO:38:THR:CB	79:B2:896:U:O4’	2.61	0.49
23:AO:85:ALA:H	23:AO:119:THR:CG2	2.15	0.49
29:AU:20:ILE:HG13	29:AU:95:ALA:O	2.11	0.49
38:BD:266:ALA:O	81:B7:1:G:H1’	2.12	0.49
39:BE:55:LEU:HD12	39:BE:64:LEU:HD13	1.94	0.49
40:BF:229:PHE:CD1	40:BF:229:PHE:C	2.91	0.49
47:BM:133:LYS:NZ	80:B5:3227:A:O2’	2.25	0.49
49:BO:62[B]:THR:HG21	49:BO:68[B]:ARG:HG3	1.95	0.49
54:BT:4:SER:OG	80:B5:2630:C:C5	2.66	0.49
61:Ba:26:ARG:NH2	80:B5:939:U:C5	2.80	0.49
68:Bh:89:ARG:CD	82:B8:38:U:C5	2.91	0.49
75:Bo:63:LYS:NZ	80:B5:2795:U:OP2	2.41	0.49
79:B2:194:U:O2’	79:B2:195:G:O4’	2.30	0.49
79:B2:489:C:H2’	79:B2:490:C:C6	2.48	0.49
79:B2:498:G:C4	79:B2:499:U:N3	2.81	0.49
79:B2:1352:G:O6	88:B2:2024:OHX:N1	2.45	0.49
79:B2:1716:C:O2’	79:B2:1717:G:O5’	2.30	0.49
80:B5:1226:G:N1	80:B5:1285:G:C2	2.80	0.49
80:B5:3029:A:H5’	83:CV:81:GLU:OE1	2.10	0.49
83:CV:239:VAL:N	83:CV:359:THR:HG22	2.27	0.49
1:A0:79:ILE:HA	1:A0:84:VAL:HG21	1.93	0.49
4:A3:32:ARG:NH2	79:B2:1596:C:H3’	2.27	0.49
10:AB:124:ASN:N	10:AB:124:ASN:OD1	2.44	0.49
10:AB:185:THR:O	10:AB:189:ILE:HG13	2.12	0.49
11:AC:183:ALA:HB1	11:AC:211:LEU:HD21	1.94	0.49
14:AF:124:LEU:O	14:AF:125:THR:OG1	2.29	0.49
16:AH:64:VAL:HG11	79:B2:856:A:H1’	1.94	0.49
22:AN:22:ALA:HB1	22:AN:23:PRO:C	2.38	0.49
29:AU:89:ARG:NH2	79:B2:1383:G:OP1	2.45	0.49
36:BB:259:HIS:HB3	80:B5:2987:A:O2’	2.12	0.49
37:BC:98:ARG:HD2	37:BC:99:MET:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:138:HIS:CE1	80:B5:119:U:C2	3.01	0.49
43:BI:115:MET:HB2	80:B5:2865:U:P	2.51	0.49
44:BJ:152:HIS:O	44:BJ:153:LYS:HB3	2.11	0.49
54:BT:23:GLY:H	80:B5:2701:U:P	2.27	0.49
56:BV:21:ALA:HA	80:B5:1898:G:O3'	2.12	0.49
63:Bc:32:LYS:NZ	80:B5:1712:G:OP2	2.43	0.49
70:Bj:76:ASN:O	70:Bj:79:GLN:HG3	2.12	0.49
79:B2:487:G:H3'	79:B2:488:G:C5'	2.43	0.49
79:B2:1156:C:C2'	79:B2:1157:A:H5'	2.43	0.49
79:B2:1190:C:C5	84:CW:31:A:OP1	2.64	0.49
79:B2:1446:A:OP1	88:B2:2081:OHX:N2	2.46	0.49
80:B5:2546:C:H2'	80:B5:2547:A:C8	2.46	0.49
11:AC:140:ARG:NH2	11:AC:226:THR:HG23	2.27	0.49
15:AG:136:LYS:HE2	79:B2:65:A:O5'	2.13	0.49
17:AI:136:SER:HG	17:AI:137:LYS:H	1.58	0.49
17:AI:170:SER:HB2	79:B2:210:A:P	2.53	0.49
18:AJ:142:ASN:OD1	79:B2:767:U:H5	1.96	0.49
26:AR:17:ILE:HG23	26:AR:58:MET:HE2	1.95	0.49
26:AR:82:ASP:O	26:AR:83:GLN:HB2	2.12	0.49
31:AW:19:LYS:NZ	79:B2:1095:U:H4'	2.28	0.49
35:BA:15:ILE:HD13	80:B5:904:A:C2	2.48	0.49
37:BC:141:ARG:CZ	37:BC:180:LYS:HD3	2.43	0.49
44:BJ:105:GLY:CA	80:B5:2674:A:O4'	2.52	0.49
46:BL:99:HIS:ND1	80:B5:156:G:C5	2.80	0.49
52:BR:165:LYS:HE3	79:B2:824:G:H21	1.70	0.49
52:BR:177:VAL:HG11	79:B2:854:U:P	2.53	0.49
57:BW:82:ILE:HG22	57:BW:82:ILE:O	2.13	0.49
64:Bd:26:LYS:HE2	80:B5:1456:A:N7	2.28	0.49
72:Bl:44:TRP:CH2	72:Bl:45:ARG:HG3	2.47	0.49
73:Bm:125:LYS:NZ	80:B5:2847:A:O4'	2.42	0.49
74:Bn:6:ARG:HH12	79:B2:1113:A:C4'	2.05	0.49
79:B2:70:C:H2'	79:B2:71:A:O4'	2.12	0.49
79:B2:730:G:H21	79:B2:731:C:H5"	1.78	0.49
79:B2:1049:U:H2'	79:B2:1050:G:C8	2.47	0.49
80:B5:407:A:C2	82:B8:17:A:H1'	2.47	0.49
80:B5:439:C:H4'	80:B5:440:A:OP1	2.12	0.49
80:B5:2263:C:C2'	80:B5:2264:U:H5'	2.42	0.49
80:B5:2568:C:O2'	80:B5:2569:A:O5'	2.28	0.49
80:B5:3259:U:C6	80:B5:3259:U:H5'	2.47	0.49
80:B5:3346:U:H2'	80:B5:3347:A:O4'	2.13	0.49
82:B8:79:A:OP1	82:B8:79:A:H4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:236:GLU:H	83:CV:360:LEU:CD2	2.07	0.49
84:CW:59:U:C5	84:CW:60:U:C5	3.00	0.49
17:AI:8:ARG:C	17:AI:9:HIS:O	2.53	0.49
17:AI:141:ARG:NH2	79:B2:196:G:C5	2.51	0.49
19:AK:80:LEU:O	19:AK:82:LEU:N	2.41	0.49
26:AR:53:TYR:OH	79:B2:1401:A:C5'	2.34	0.49
29:AU:22:ILE:HD12	29:AU:118:VAL:HA	1.93	0.49
31:AW:36:LYS:O	31:AW:40:VAL:HG23	2.13	0.49
31:AW:78:ARG:NH1	79:B2:805:U:O2'	2.45	0.49
33:AY:15:ASN:OD1	33:AY:17:LEU:HD12	2.12	0.49
38:BD:269:SER:CB	81:B7:1:G:N2	2.62	0.49
41:BG:51:LYS:CD	80:B5:2523:A:OP2	2.54	0.49
41:BG:97:TYR:O	41:BG:132:VAL:HG13	2.13	0.49
41:BG:150:LEU:HD22	41:BG:151:VAL:H	1.77	0.49
52:BR:3:ASN:OD1	80:B5:1471:U:H4'	2.13	0.49
56:BV:80:ARG:HD3	56:BV:117:PRO:O	2.13	0.49
61:Ba:54:GLY:N	80:B5:94:G:OP2	2.41	0.49
65:Be:16:LYS:O	65:Be:17:PHE:HB2	2.13	0.49
67:Bg:52:GLN:HA	80:B5:1738:C:O2'	2.13	0.49
79:B2:1637:C:C4'	85:CX:2:U:N3	2.67	0.49
88:B2:1922:OHX:N4	88:B2:1976:OHX:N4	2.61	0.49
80:B5:629:U:H2'	80:B5:630:A:C8	2.48	0.49
80:B5:662:U:H2'	80:B5:663:C:C6	2.47	0.49
80:B5:873:C:H4'	80:B5:874:U:OP2	2.12	0.49
80:B5:1643:A:H4'	80:B5:1822:C:H5'	1.95	0.49
84:CW:41:C:H3'	84:CW:42:C:H5"	1.95	0.49
7:A6:123:ILE:HG22	7:A6:133:VAL:HG22	1.95	0.49
7:A6:130:THR:HG22	7:A6:145:LEU:HD22	1.94	0.49
8:A7:31:SER:C	80:B5:2707:C:H4'	2.25	0.49
11:AC:208:GLU:OE1	79:B2:1299:G:H4'	2.12	0.49
14:AF:185:ARG:HH12	79:B2:1572:G:C1'	2.25	0.49
16:AH:23:ALA:O	16:AH:27:LEU:HG	2.12	0.49
17:AI:8:ARG:NH1	17:AI:21:PHE:HB3	2.28	0.49
21:AM:132:GLU:O	21:AM:136:ILE:HG12	2.13	0.49
25:AQ:16:ALA:HB2	25:AQ:72:GLY:HA3	1.94	0.49
28:AT:57:ARG:NH1	79:B2:1479:A:OP1	2.33	0.49
34:AZ:50:ILE:O	34:AZ:54:VAL:HG23	2.11	0.49
35:BA:242:ARG:NH1	35:BA:246:LEU:HD12	2.28	0.49
36:BB:303:LYS:HZ1	36:BB:361:THR:HB	1.78	0.49
37:BC:44:LYS:HB3	37:BC:47:ARG:NH1	2.28	0.49
38:BD:40:HIS:HD2	38:BD:42:ALA:N	2.06	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:154:VAL:HG23	46:BL:157:ARG:HG2	1.94	0.49
52:BR:61:SER:HB3	80:B5:1689:U:C5'	2.42	0.49
57:BW:35:LYS:O	57:BW:39:LEU:HD22	2.13	0.49
67:Bg:4:ARG:HD3	80:B5:1481:A:C2	2.48	0.49
79:B2:358:U:O2'	79:B2:360:A:H5"	2.13	0.49
79:B2:393:C:H2'	79:B2:394:C:C6	2.48	0.49
79:B2:1114:G:O6	88:B2:1952:OHX:N5	2.45	0.49
79:B2:1282:U:O4	88:B2:2025:OHX:N2	2.45	0.49
79:B2:1446:A:H2'	88:B2:2081:OHX:N2	2.28	0.49
79:B2:1686:C:C5	79:B2:1687:U:C5	3.01	0.49
79:B2:1746:A:H2'	79:B2:1747:G:O4'	2.13	0.49
88:B2:1981:OHX:N2	88:B2:2077:OHX:N4	2.60	0.49
80:B5:996:A:C2	80:B5:1054:A:C4	3.01	0.49
7:A6:153:GLN:HG2	7:A6:202:LEU:HD23	1.95	0.49
8:A7:88:ARG:O	84:CW:33:U:H1'	2.12	0.49
15:AG:126:ASP:OD1	15:AG:127:THR:HG22	2.13	0.49
15:AG:133:LEU:HG	79:B2:66:U:C6	2.47	0.49
17:AI:21:PHE:CE2	79:B2:385:A:H5'	2.48	0.49
17:AI:52:ASN:ND2	79:B2:118:U:OP1	2.45	0.49
17:AI:72:ILE:HB	79:B2:256:A:O2'	2.13	0.49
20:AL:65:SER:CB	79:B2:114:C:H1'	2.42	0.49
21:AM:29:LYS:HE2	21:AM:100:TRP:HE1	1.77	0.49
27:AS:32:LEU:O	27:AS:38:VAL:HG21	2.12	0.49
38:BD:11:ALA:HB1	80:B5:1003:A:H5'	1.94	0.49
41:BG:57:ARG:O	41:BG:61:GLN:HG3	2.13	0.49
46:BL:39:ARG:NH1	80:B5:107:A:OP1	2.42	0.49
48:BN:138:GLN:HA	48:BN:143:ARG:HD2	1.95	0.49
52:BR:154:ALA:O	52:BR:158:GLU:HG2	2.13	0.49
58:BX:38:LEU:O	58:BX:39:LYS:HB2	2.11	0.49
69:Bi:74:LYS:HA	69:Bi:83:ALA:HB2	1.95	0.49
70:Bj:10:LYS:HE3	80:B5:1853:U:C5'	2.41	0.49
75:Bo:69:VAL:CG2	80:B5:2792:A:H4'	2.43	0.49
75:Bo:82:GLN:CD	80:B5:2768:U:HO2'	2.14	0.49
79:B2:51:A:H1'	83:CV:242:GLY:CA	2.02	0.49
79:B2:61:A:C8	79:B2:269:G:O2'	2.65	0.49
79:B2:713:A:H61	79:B2:725:U:H3	1.58	0.49
79:B2:818:C:N4	79:B2:819:G:C6	2.80	0.49
79:B2:838:G:O6	88:B2:2069:OHX:N4	2.46	0.49
79:B2:1253:U:H2'	79:B2:1254:U:C6	2.48	0.49
79:B2:1686:C:O2'	79:B2:1687:U:O5'	2.30	0.49
80:B5:59:G:H2'	82:B8:33:A:O2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:690:A:H4'	80:B5:691:A:OP1	2.13	0.49
83:CV:83:PHE:H	83:CV:84:SER:HA	1.78	0.49
83:CV:239:VAL:CG1	83:CV:382:ILE:HD12	2.43	0.49
1:A0:36:ILE:HG23	1:A0:73:TYR:HB2	1.95	0.49
8:A7:47:ALA:HB2	80:B5:2678:A:C4	2.48	0.49
8:A7:86:ASN:ND2	84:CW:32:U:C2	2.81	0.49
10:AB:22:ASP:O	10:AB:24:PHE:N	2.46	0.49
12:AD:4:LEU:CD1	79:B2:1514:U:C6	2.96	0.49
14:AF:129:PRO:O	14:AF:133:VAL:HG23	2.13	0.49
15:AG:70:PRO:O	15:AG:98:ARG:NH2	2.42	0.49
21:AM:82:PRO:O	21:AM:83:GLU:HB2	2.13	0.49
23:AO:16:VAL:HG22	23:AO:33:LEU:HA	1.95	0.49
25:AQ:112:TYR:OH	25:AQ:114:ARG:NH2	2.45	0.49
35:BA:15:ILE:CD1	80:B5:822:G:N9	2.76	0.49
35:BA:71:LEU:HD22	80:B5:1651:U:H5"	1.95	0.49
35:BA:202:VAL:HG23	35:BA:211:HIS:HB3	1.95	0.49
36:BB:92:TYR:HB2	36:BB:157:VAL:HG22	1.95	0.49
40:BF:160:ARG:HD3	80:B5:1363:A:OP1	2.13	0.49
46:BL:16:LYS:O	46:BL:17:HIS:HB2	2.13	0.49
46:BL:27:ASP:CG	46:BL:31:LYS:HD2	2.38	0.49
52:BR:61:SER:CB	80:B5:3069:G:HO2'	2.24	0.49
53:BS:155:ARG:NH1	53:BS:172:TYR:N	2.61	0.49
57:BW:127:LYS:O	57:BW:131:ALA:N	2.45	0.49
63:Bc:84:LEU:HD13	80:B5:1715:A:C8	2.48	0.49
79:B2:1715:G:O6	79:B2:1716:C:C4	2.56	0.49
80:B5:735:A:O2'	80:B5:736:A:OP1	2.30	0.49
80:B5:959:C:OP2	80:B5:960:U:H5	1.96	0.49
80:B5:1239:C:C4	80:B5:1250:G:C6	3.00	0.49
80:B5:2228:A:H5"	80:B5:2228:A:H8	1.78	0.49
80:B5:2622:C:H2'	84:CW:75:C:H5"	1.95	0.49
82:B8:66:A:H2'	82:B8:67:U:H6	1.78	0.49
6:A5:120:GLU:HG3	6:A5:128:ALA:HB1	1.94	0.48
7:A6:112:SER:CB	7:A6:153:GLN:HA	2.43	0.48
8:A7:44:PRO:HA	80:B5:2678:A:N3	2.29	0.48
21:AM:33:ARG:O	21:AM:37:VAL:HG23	2.13	0.48
23:AO:120:PRO:CA	79:B2:887:A:C5'	2.89	0.48
26:AR:13:SER:OG	26:AR:54:THR:HG22	2.13	0.48
27:AS:24:GLY:O	27:AS:26:ILE:N	2.45	0.48
29:AU:58:LEU:HD12	29:AU:88:LYS:C	2.38	0.48
29:AU:74:GLU:HG2	79:B2:1429:G:C1'	2.43	0.48
29:AU:106:ILE:HD12	29:AU:108:ILE:HD11	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AY:105:ARG:CD	79:B2:444:C:OP2	2.61	0.48
34:AZ:50:ILE:HG22	34:AZ:51:LEU:HD12	1.96	0.48
35:BA:227:ARG:NH2	80:B5:2161:G:O3'	2.38	0.48
38:BD:265:TYR:CD2	81:B7:120:C:N4	2.81	0.48
40:BF:80:GLN:HG3	54:BT:136:ARG:HB3	1.95	0.48
43:BI:100:ASN:O	43:BI:101:LYS:HB3	2.12	0.48
49:BO:61[A]:ALA:HA	49:BO:70[A]:PRO:HD2	1.94	0.48
57:BW:105:ARG:HG2	57:BW:105:ARG:HH11	1.78	0.48
60:BZ:79:HIS:CE1	80:B5:1636:U:C2'	2.95	0.48
60:BZ:95:VAL:HG11	60:BZ:110:ALA:HA	1.93	0.48
60:BZ:115:LYS:CD	80:B5:1629:U:C1'	2.90	0.48
61:Ba:13:GLY:HA2	80:B5:943:U:O5'	2.13	0.48
67:Bg:42:PRO:HG2	67:Bg:54:ILE:HG22	1.95	0.48
68:Bh:85:THR:HG22	68:Bh:88:LEU:N	2.28	0.48
70:Bj:55:ARG:NH1	80:B5:353:G:O6	2.46	0.48
75:Bo:77:CYS:O	75:Bo:79:THR:HG23	2.13	0.48
79:B2:190:C:H1'	79:B2:191:C:H5'	1.93	0.48
79:B2:929:A:N6	79:B2:930:A:C6	2.80	0.48
79:B2:976:G:O6	88:B2:1927:OHX:N3	2.45	0.48
79:B2:1369:U:O4	88:B2:1973:OHX:N5	2.45	0.48
80:B5:998:A:O2'	80:B5:999:G:H5'	2.12	0.48
80:B5:1036:A:H2'	80:B5:1037:C:O4'	2.13	0.48
80:B5:2403:G:N2	80:B5:2404:A:N7	2.55	0.48
83:CV:456:TRP:CH2	83:CV:566:LEU:HA	2.47	0.48
84:CW:18:G:C5	84:CW:57:G:C6	3.01	0.48
1:A0:84:VAL:HG13	1:A0:85:ARG:H	1.79	0.48
2:A1:51:GLN:CD	79:B2:870:C:O2'	2.56	0.48
6:A5:149:LYS:HD3	79:B2:1235:C:O2'	2.12	0.48
9:AA:108:THR:OG1	79:B2:1294:G:O2'	2.29	0.48
9:AA:185:ARG:N	30:AV:45:ALA:H	2.09	0.48
10:AB:116:LYS:CE	79:B2:933:A:P	2.97	0.48
15:AG:67:VAL:HG23	15:AG:68:LEU:O	2.13	0.48
15:AG:182:GLN:CD	79:B2:270:C:N4	2.72	0.48
16:AH:119:THR:HG23	79:B2:639:U:P	2.53	0.48
21:AM:46:ARG:HD2	79:B2:1255:G:O6	2.13	0.48
22:AN:109:LYS:HE2	79:B2:975:C:H5"	1.94	0.48
23:AO:123:SER:OG	79:B2:886:U:C2	2.66	0.48
24:AP:15:HIS:O	24:AP:21:ASP:HA	2.12	0.48
28:AT:63:ARG:HD2	28:AT:67:MET:HE1	1.95	0.48
29:AU:89:ARG:NH1	79:B2:1383:G:P	2.69	0.48
35:BA:200:ARG:NE	80:B5:2147:A:P	2.86	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:209:HIS:CE1	80:B5:2184:U:OP1	2.62	0.48
35:BA:234:LYS:HB2	80:B5:2163:C:OP1	2.13	0.48
36:BB:37:ARG:HA	36:BB:186:GLY:HA2	1.94	0.48
36:BB:37:ARG:CG	36:BB:187:SER:H	2.19	0.48
36:BB:296:THR:HG21	36:BB:357:LYS:HA	1.95	0.48
38:BD:266:ALA:HB2	81:B7:1:G:N7	2.28	0.48
39:BE:89:THR:HG21	47:BM:115:PHE:HB2	1.94	0.48
41:BG:38:GLN:CA	80:B5:2557:A:H2	2.26	0.48
41:BG:244:ALA:HA	41:BG:247:ASP:HB2	1.95	0.48
42:BH:19:SER:HB3	47:BM:6:ILE:H	1.78	0.48
46:BL:87:ALA:O	46:BL:91:ARG:HG3	2.14	0.48
50:BP:94:LEU:HD12	50:BP:94:LEU:HA	1.71	0.48
51:BQ:183:GLY:H	80:B5:2763:U:P	2.35	0.48
56:BV:13:ILE:CD1	56:BV:53:SER:HB2	2.42	0.48
56:BV:45:ARG:O	56:BV:46:LEU:C	2.55	0.48
59:BY:39:LEU:HD21	59:BY:107:THR:O	2.13	0.48
63:Bc:84:LEU:HB2	80:B5:1715:A:C6	2.48	0.48
66:Bf:53:TYR:OH	80:B5:431:U:OP1	2.23	0.48
79:B2:383:G:N7	88:B2:2010:OHX:N4	2.61	0.48
80:B5:653:A:H5'	80:B5:2361:A:H5"	1.95	0.48
84:CW:21:A:C3'	84:CW:22:G:H5"	2.43	0.48
2:A1:54:VAL:O	2:A1:63:LEU:HB2	2.13	0.48
4:A3:36:LEU:HD21	29:AU:65:ILE:HD11	1.95	0.48
4:A3:40:ARG:HG2	4:A3:41:GLN:OE1	2.14	0.48
9:AA:110:TYR:CD1	9:AA:110:TYR:N	2.80	0.48
12:AD:20:GLU:OE2	12:AD:76:ARG:NH2	2.44	0.48
14:AF:24:VAL:HG22	14:AF:25:LEU:H	1.78	0.48
15:AG:188:ARG:NH1	79:B2:284:G:O6	2.43	0.48
22:AN:27:LYS:H	22:AN:27:LYS:CE	2.26	0.48
23:AO:25:ASP:OD2	79:B2:900:A:C5'	2.55	0.48
24:AP:70:ASN:ND2	44:BJ:172:LEU:HD23	2.28	0.48
25:AQ:114:ARG:O	25:AQ:115:THR:OG1	2.26	0.48
31:AW:71:LYS:NZ	79:B2:1099:U:OP1	2.45	0.48
38:BD:15:ARG:NE	80:B5:1003:A:O4'	2.46	0.48
38:BD:152:ARG:HH11	38:BD:152:ARG:CG	2.25	0.48
43:BI:9:TYR:CG	43:BI:97:LEU:HD13	2.48	0.48
54:BT:116:ARG:NH2	80:B5:1097:G:N7	2.61	0.48
60:BZ:54:THR:HG22	60:BZ:57:HIS:CE1	2.48	0.48
67:Bg:23:VAL:HG11	80:B5:1696:A:H4'	1.94	0.48
74:Bn:4:LYS:O	74:Bn:7:LYS:HB3	2.13	0.48
79:B2:497:G:O2'	79:B2:498:G:O4'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:978:A:OP1	88:B2:2058:OHX:N5	2.45	0.48
79:B2:992:A:H2	79:B2:1012:U:N3	2.06	0.48
80:B5:1750:A:H4'	80:B5:1751:G:H5'	1.95	0.48
80:B5:3013:U:H2'	80:B5:3014:U:C6	2.48	0.48
1:A0:38:ARG:HH21	1:A0:83:ILE:HG13	1.78	0.48
8:A7:34:LYS:CE	80:B5:2692:A:O3'	2.59	0.48
14:AF:120:ILE:O	14:AF:124:LEU:HD12	2.13	0.48
15:AG:188:ARG:HD3	79:B2:283:U:H5"	1.95	0.48
23:AO:122:PRO:HB3	79:B2:887:A:O2'	2.13	0.48
23:AO:122:PRO:C	79:B2:886:U:O2	2.55	0.48
30:AV:40:ASP:HB3	30:AV:46:ILE:HD11	1.94	0.48
33:AY:11:LYS:HG3	79:B2:777:C:N4	2.28	0.48
36:BB:255:TRP:CD1	80:B5:2395:G:C5'	2.92	0.48
36:BB:339:ARG:HG2	36:BB:340:LYS:O	2.12	0.48
38:BD:270:LYS:HG3	38:BD:273:ARG:HB2	1.96	0.48
38:BD:272:TYR:CE2	81:B7:22:A:C8	3.02	0.48
40:BF:22:THR:HA	40:BF:25:GLN:HG2	1.94	0.48
44:BJ:10:ARG:HA	44:BJ:134:PRO:HD2	1.94	0.48
48:BN:76:PRO:O	80:B5:2166:A:P	2.71	0.48
48:BN:109:ARG:HD2	82:B8:141:C:H5'	1.95	0.48
52:BR:134:HIS:CB	80:B5:1947:G:H5"	2.44	0.48
52:BR:173:ARG:O	79:B2:853:G:C5'	2.61	0.48
54:BT:17:ARG:HD2	54:BT:47:SER:HB3	1.96	0.48
55:BU:92:TRP:O	55:BU:108:TYR:N	2.44	0.48
79:B2:350:U:O2	79:B2:352:A:C6	2.66	0.48
79:B2:495:C:H3'	79:B2:496:G:C4'	2.43	0.48
79:B2:738:G:O6	88:B2:1974:OHX:N4	2.46	0.48
79:B2:1482:C:OP2	79:B2:1521:G:N2	2.46	0.48
79:B2:1639:C:O2	79:B2:1763:A:N1	2.46	0.48
88:B2:1968:OHX:N5	88:B2:2011:OHX:N2	2.61	0.48
80:B5:3274:A:H3'	80:B5:3275:U:H5"	1.94	0.48
83:CV:19:THR:HA	89:CV:602:GCP:O3A	2.10	0.48
9:AA:52:LYS:NZ	30:AV:82:VAL:O	2.35	0.48
9:AA:119:ARG:HD2	11:AC:241:ASP:OD1	2.12	0.48
10:AB:61:LEU:O	10:AB:63:GLY:N	2.47	0.48
15:AG:141:ILE:HG21	15:AG:153:VAL:HG13	1.94	0.48
16:AH:158:ASP:O	16:AH:160:GLN:N	2.46	0.48
19:AK:1:MET:CG	79:B2:1217:A:H5"	2.44	0.48
19:AK:2:LEU:HD13	79:B2:1258:U:H4'	1.94	0.48
23:AO:122:PRO:C	23:AO:124:ASP:N	2.71	0.48
24:AP:19:GLY:N	27:AS:93:THR:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AU:57:ARG:HG3	79:B2:1382:A:H4'	1.96	0.48
34:AZ:46:LYS:HE2	34:AZ:70:LYS:HD2	1.94	0.48
35:BA:183:GLY:HA2	80:B5:896:A:H5'	1.94	0.48
35:BA:191:LEU:HG	80:B5:1795:U:OP1	2.13	0.48
36:BB:228:GLY:H	80:B5:1887:A:H4'	1.78	0.48
36:BB:255:TRP:NE1	80:B5:2395:G:H5"	2.26	0.48
43:BI:81:GLY:C	43:BI:83:ASP:H	2.21	0.48
46:BL:63:VAL:HG13	80:B5:72:C:H5"	1.94	0.48
46:BL:100:ARG:O	46:BL:101:ARG:HB3	2.14	0.48
56:BV:67:PRO:HG2	79:B2:1660:A:H5"	1.96	0.48
58:BX:33:ARG:HE	80:B5:1580:A:N6	2.09	0.48
60:BZ:23:VAL:HG12	60:BZ:45:GLY:HA3	1.96	0.48
69:Bi:14:GLY:HA2	80:B5:73:C:OP1	2.14	0.48
79:B2:209:U:H2'	79:B2:210:A:C8	2.49	0.48
79:B2:526:A:H2'	79:B2:527:A:O4'	2.14	0.48
79:B2:680:U:H2'	79:B2:681:U:C6	2.49	0.48
79:B2:881:A:H2'	79:B2:882:U:O4'	2.13	0.48
79:B2:1522:U:OP1	88:B2:1936:OHX:N3	2.46	0.48
79:B2:1780:G:N1	80:B5:2263:C:O4'	2.46	0.48
80:B5:1018:G:H2'	80:B5:1019:G:O4'	2.13	0.48
80:B5:1085:A:C8	80:B5:1085:A:H5"	2.49	0.48
80:B5:2960:C:H2'	80:B5:2961:G:C8	2.47	0.48
80:B5:3241:G:H2'	80:B5:3245:A:C8	2.49	0.48
5:A4:53:LYS:HG3	5:A4:54:ARG:H	1.79	0.48
7:A6:221:MET:HG3	7:A6:233:THR:HG23	1.94	0.48
8:A7:83:LYS:CA	84:CW:29:G:H22	2.19	0.48
8:A7:88:ARG:CB	84:CW:36:U:C1'	2.90	0.48
10:AB:146:GLN:H	10:AB:149:GLN:NE2	2.11	0.48
14:AF:109:LYS:NZ	79:B2:1474:G:P	2.87	0.48
17:AI:8:ARG:HD2	17:AI:21:PHE:HD1	1.79	0.48
17:AI:96:LEU:HD13	17:AI:179:CYS:SG	2.53	0.48
17:AI:197:THR:HA	17:AI:200:LYS:HB2	1.96	0.48
18:AJ:91:LYS:O	18:AJ:92:LYS:HG2	2.13	0.48
18:AJ:173:ALA:CA	79:B2:511:A:H5'	2.44	0.48
19:AK:55:VAL:HA	19:AK:69:THR:HG23	1.94	0.48
23:AO:18:ARG:NH1	79:B2:919:A:O5'	2.44	0.48
25:AQ:60:PHE:HA	25:AQ:63:ILE:HD11	1.96	0.48
28:AT:53:TRP:HA	28:AT:56:LYS:HB2	1.95	0.48
28:AT:79:LEU:HD11	79:B2:1481:C:C4	2.49	0.48
31:AW:55:ASP:C	31:AW:57:ARG:H	2.20	0.48
33:AY:9:THR:OG1	79:B2:781:U:OP2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AY:33:ALA:HB2	79:B2:533:U:C5'	2.43	0.48
35:BA:94:ALA:CA	80:B5:2551:U:O4	2.62	0.48
50:BP:62:ARG:NH1	80:B5:412:G:OP1	2.47	0.48
52:BR:167:ARG:HB3	52:BR:167:ARG:NH1	2.28	0.48
79:B2:11:A:C2'	79:B2:12:U:H5'	2.44	0.48
79:B2:545:A:H4'	79:B2:546:U:OP1	2.14	0.48
79:B2:694:U:H2'	79:B2:695:U:H5	1.78	0.48
79:B2:1230:A:HO2'	79:B2:1258:U:H5	1.62	0.48
80:B5:1081:U:O2'	80:B5:1082:U:O5'	2.28	0.48
80:B5:1573:G:C5	80:B5:1574:C:H1'	2.48	0.48
80:B5:3121:U:H1'	80:B5:3122:A:H5"	1.96	0.48
80:B5:3245:A:H2	80:B5:3246:G:N1	2.12	0.48
82:B8:82:U:H1'	82:B8:87:G:H5'	1.96	0.48
83:CV:238:LYS:HG2	83:CV:360:LEU:HB3	1.95	0.48
10:AB:77:GLU:C	10:AB:79:HIS:H	2.21	0.48
12:AD:46:THR:HB	12:AD:84:ILE:HG12	1.96	0.48
17:AI:33:PRO:CA	79:B2:331:A:H5'	2.42	0.48
17:AI:136:SER:OG	79:B2:188:A:OP2	2.28	0.48
17:AI:138:ASN:CB	79:B2:197:A:H61	2.27	0.48
22:AN:73:ARG:HD3	79:B2:859:A:C5	2.46	0.48
24:AP:44:ARG:CG	79:B2:1556:A:OP1	2.62	0.48
24:AP:70:ASN:CG	44:BJ:172:LEU:CD2	2.87	0.48
26:AR:7:LYS:H	79:B2:1316:G:P	2.37	0.48
28:AT:33:TYR:C	28:AT:33:TYR:HD1	2.21	0.48
34:AZ:92:ILE:HG12	34:AZ:100:ILE:CG2	2.44	0.48
38:BD:148:ILE:HA	38:BD:148:ILE:HD12	1.56	0.48
38:BD:148:ILE:HG13	38:BD:159:VAL:HG11	1.96	0.48
38:BD:265:TYR:O	38:BD:269:SER:HB3	2.13	0.48
38:BD:283:ALA:O	38:BD:286:VAL:HB	2.14	0.48
46:BL:66:ASN:ND2	80:B5:72:C:O2'	2.40	0.48
49:BO:34[B]:VAL:HB	49:BO:103[B]:LYS:HB2	1.96	0.48
49:BO:65[B]:ASN:O	49:BO:68[B]:ARG:HG2	2.14	0.48
51:BQ:43:PRO:HD2	80:B5:729:C:OP1	2.14	0.48
51:BQ:96:PHE:CG	51:BQ:97:PRO:HD2	2.49	0.48
51:BQ:176:ARG:HG3	80:B5:2763:U:C5'	2.43	0.48
52:BR:169:ALA:O	79:B2:851:U:H2'	1.77	0.48
52:BR:169:ALA:CB	79:B2:850:A:N1	2.75	0.48
59:BY:3:LYS:HA	80:B5:228:U:O3'	2.13	0.48
73:Bm:100:TYR:CD1	80:B5:2895:G:N2	2.77	0.48
75:Bo:84:THR:HG21	80:B5:2792:A:H5'	1.96	0.48
79:B2:507:U:H3'	79:B2:507:U:O2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:700:C:H42	79:B2:738:G:H1	1.62	0.48
79:B2:812:A:OP1	79:B2:858:G:N2	2.47	0.48
79:B2:1196:A:H1'	79:B2:1602:C:O2'	2.13	0.48
79:B2:1203:A:OP2	88:B2:1990:OHX:N5	2.47	0.48
79:B2:1351:G:C2	79:B2:1375:A:C2	3.02	0.48
79:B2:1553:G:N2	79:B2:1555:A:H3'	2.28	0.48
79:B2:1670:G:N7	88:B2:2002:OHX:N5	2.62	0.48
79:B2:1729:C:H5"	79:B2:1730:A:OP2	2.12	0.48
80:B5:135:C:H4'	80:B5:136:G:OP2	2.12	0.48
80:B5:677:A:H4'	80:B5:678:G:O5'	2.14	0.48
80:B5:1307:G:H1'	80:B5:1308:A:N7	2.28	0.48
83:CV:236:GLU:CA	83:CV:364:GLU:OE2	2.51	0.48
14:AF:133:VAL:HG22	14:AF:198:LEU:HD13	1.96	0.48
14:AF:172:ILE:O	14:AF:176:THR:HG23	2.14	0.48
16:AH:71:HIS:CG	16:AH:131:PHE:CZ	3.02	0.48
17:AI:87:ASN:O	17:AI:90:LEU:HB2	2.14	0.48
18:AJ:93:LEU:HA	18:AJ:96:VAL:CG1	2.38	0.48
18:AJ:122:VAL:O	18:AJ:125:ALA:HB3	2.14	0.48
19:AK:12:HIS:CD2	19:AK:79:TYR:CD2	3.02	0.48
31:AW:32:LYS:HG3	79:B2:637:C:OP1	2.14	0.48
38:BD:110:LEU:HA	38:BD:113:LEU:HB2	1.95	0.48
38:BD:155:THR:O	81:B7:36:C:C5'	2.62	0.48
41:BG:194:THR:CG2	80:B5:7:C:O3'	2.61	0.48
43:BI:38:LYS:HG3	43:BI:41:ALA:HB2	1.95	0.48
43:BI:193:ASP:CG	80:B5:1010:G:N2	2.69	0.48
44:BJ:142:LYS:HD3	44:BJ:142:LYS:HA	1.67	0.48
49:BO:171[B]:LYS:NZ	80:B5:3180:A:OP1	2.46	0.48
50:BP:139:TYR:OH	80:B5:2354:C:O2'	2.31	0.48
57:BW:126:GLU:OE2	57:BW:129:LYS:NZ	2.47	0.48
58:BX:135:ILE:HD13	58:BX:135:ILE:C	2.39	0.48
60:BZ:4:PHE:HE1	63:Bc:63:SER:HB3	1.79	0.48
61:Ba:27:LYS:CE	80:B5:801:A:OP1	2.62	0.48
63:Bc:30:THR:HB	63:Bc:91:SER:HB2	1.95	0.48
63:Bc:39:SER:C	63:Bc:40:LYS:HD2	2.38	0.48
67:Bg:24:LYS:O	80:B5:1695:U:C5'	2.61	0.48
67:Bg:46:ASP:CG	67:Bg:80:ARG:HD2	2.39	0.48
67:Bg:52:GLN:HG2	80:B5:1639:C:C5'	2.39	0.48
68:Bh:47:VAL:O	68:Bh:51:ILE:HG13	2.14	0.48
68:Bh:86:ARG:O	68:Bh:90:ARG:HG2	2.14	0.48
79:B2:711:U:C1'	79:B2:712:G:H5'	2.44	0.48
79:B2:1637:C:C4'	85:CX:2:U:H3	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:B2:1918:OHX:N4	88:B2:2062:OHX:N4	2.62	0.48
80:B5:2206:G:O2'	80:B5:2207:A:H5'	2.13	0.48
84:CW:67:C:N3	84:CW:68:C:N3	2.62	0.48
1:A0:7:SER:HB2	1:A0:11:ASN:H	1.78	0.48
7:A6:40:LYS:HG2	7:A6:66:HIS:O	2.14	0.48
8:A7:62:ARG:HD2	80:B5:2675:C:O2'	2.12	0.48
14:AF:84:LYS:NZ	79:B2:1614:A:OP2	2.36	0.48
15:AG:63:MET:HG2	15:AG:99:GLY:O	2.14	0.48
17:AI:141:ARG:NH2	79:B2:190:C:H42	2.12	0.48
24:AP:115:TYR:HD2	79:B2:1557:U:O4'	1.97	0.48
26:AR:28:PHE:CD2	79:B2:1389:C:H5	2.30	0.48
29:AU:35:GLU:OE2	79:B2:1383:G:C4'	2.62	0.48
34:AZ:72:GLY:O	34:AZ:74:SER:N	2.47	0.48
35:BA:241:ARG:N	80:B5:2155:G:OP1	2.22	0.48
38:BD:36:LEU:CD2	80:B5:2748:A:N3	2.77	0.48
41:BG:38:GLN:HB3	80:B5:2557:A:H2	1.79	0.48
41:BG:181:LYS:HG3	82:B8:154:C:H5"	1.94	0.48
43:BI:174:THR:O	43:BI:175:ASN:HB2	2.13	0.48
44:BJ:124:GLY:C	80:B5:2674:A:C6	2.92	0.48
47:BM:54:PRO:O	47:BM:56:GLN:NE2	2.37	0.48
52:BR:172:ARG:CZ	79:B2:851:U:H1'	2.43	0.48
54:BT:16:GLN:HA	80:B5:2699:G:O3'	2.14	0.48
55:BU:23:THR:HA	55:BU:28:PHE:HB3	1.95	0.48
58:BX:64:GLU:OE2	58:BX:87:SER:HA	2.14	0.48
58:BX:73:MET:HE1	58:BX:141:TYR:CE2	2.49	0.48
61:Ba:28:HIS:CD2	80:B5:936:A:OP1	2.67	0.48
65:Be:105:ARG:HE	65:Be:124:GLY:HA3	1.78	0.48
70:Bj:64:MET:HB2	70:Bj:68:LYS:HB3	1.96	0.48
79:B2:130:C:O2'	79:B2:131:C:OP1	2.29	0.48
79:B2:440:U:C5	83:CV:277:ALA:CB	2.92	0.48
79:B2:740:A:C2'	79:B2:741:C:H5"	2.43	0.48
88:B2:1968:OHX:N1	88:B2:2011:OHX:N4	2.62	0.48
80:B5:1280:C:C5	80:B5:1281:G:C2	3.02	0.48
80:B5:3177:G:O2'	80:B5:3179:U:OP1	2.22	0.48
84:CW:37:A:H3'	84:CW:38:A:C8	2.49	0.48
1:A0:75:VAL:HG11	79:B2:1793:G:C2	2.49	0.48
2:A1:61:THR:HG23	2:A1:62:ILE:H	1.79	0.48
10:AB:62:LYS:HD2	10:AB:91:VAL:HB	1.94	0.48
11:AC:139:ILE:HD11	11:AC:191:ALA:HB1	1.95	0.48
12:AD:181:VAL:HG22	79:B2:1277:G:O4'	2.14	0.48
15:AG:137:ARG:HH12	79:B2:169:A:P	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AH:30:SER:O	16:AH:32:PRO:HD2	2.14	0.48
26:AR:43:SER:OG	79:B2:1332:C:OP1	2.31	0.48
32:AX:127:VAL:O	32:AX:130:VAL:HG22	2.14	0.48
34:AZ:40:VAL:C	34:AZ:75:LEU:HD11	2.38	0.48
35:BA:203:ALA:HB1	80:B5:2146:C:C5'	2.44	0.48
37:BC:288:ARG:O	37:BC:291:ASN:N	2.31	0.48
42:BH:103:ILE:HD11	42:BH:134:ILE:CG2	2.44	0.48
43:BI:3:ARG:CZ	43:BI:63:GLU:HG3	2.44	0.48
46:BL:99:HIS:CD2	80:B5:156:G:C5	3.02	0.48
49:BO:156[B]:LEU:HB3	80:B5:3243:A:N7	2.29	0.48
61:Ba:59:ARG:HD2	80:B5:90:C:P	2.53	0.48
66:Bf:60:ARG:HD2	80:B5:3275:U:C4	2.49	0.48
67:Bg:60:ARG:CZ	80:B5:1593:A:H1'	2.44	0.48
68:Bh:53:CYS:O	68:Bh:56:THR:HB	2.13	0.48
79:B2:131:C:HO2'	79:B2:132:U:P	2.34	0.48
79:B2:269:G:C6	79:B2:287:G:C6	3.02	0.48
79:B2:894:U:H2'	79:B2:895:G:C8	2.49	0.48
80:B5:2702:A:H5'	80:B5:2704:A:O4'	2.13	0.48
83:CV:20:LYS:HG3	89:CV:602:GCP:H8	1.09	0.48
2:A1:28:PRO:CB	79:B2:959:U:H5'	2.27	0.47
6:A5:144:CYS:O	6:A5:146:SER:N	2.47	0.47
8:A7:88:ARG:N	84:CW:36:U:H3'	2.28	0.47
14:AF:133:VAL:O	14:AF:137:ILE:HG12	2.13	0.47
18:AJ:172:VAL:CG1	79:B2:512:A:OP2	2.39	0.47
18:AJ:173:ALA:HA	79:B2:511:A:OP2	2.14	0.47
19:AK:1:MET:HG3	79:B2:1217:A:O5'	2.14	0.47
23:AO:25:ASP:HB3	79:B2:901:G:P	2.53	0.47
23:AO:41:ARG:NH2	79:B2:915:A:C6	2.80	0.47
23:AO:122:PRO:HA	79:B2:887:A:O4'	2.14	0.47
27:AS:11:PHE:CD1	27:AS:59:GLY:HA2	2.49	0.47
27:AS:80:LYS:HA	27:AS:80:LYS:HD2	1.54	0.47
27:AS:139:LYS:HE2	79:B2:1459:C:H42	1.79	0.47
28:AT:52:GLY:HA2	28:AT:55:TYR:CD2	2.48	0.47
33:AY:59:GLY:O	33:AY:60:PHE:HB2	2.14	0.47
33:AY:102:LYS:H	33:AY:102:LYS:HD2	1.79	0.47
39:BE:54:TYR:HA	39:BE:65:ILE:CD1	2.44	0.47
41:BG:244:ALA:HB1	80:B5:2528:G:H4'	1.96	0.47
44:BJ:100:GLY:O	44:BJ:159:THR:HG21	2.13	0.47
50:BP:69:ARG:NH1	80:B5:3308:C:N3	2.62	0.47
54:BT:16:GLN:HG3	80:B5:2699:G:H5"	1.95	0.47
55:BU:100:THR:O	55:BU:101:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BZ:121:ARG:CG	60:BZ:121:ARG:HH11	2.27	0.47
65:Be:71:HIS:CE1	65:Be:118:LYS:HD3	2.49	0.47
67:Bg:74:ARG:HH22	80:B5:1639:C:P	2.37	0.47
69:Bi:30:LYS:HD2	80:B5:266:A:C4	2.49	0.47
70:Bj:3:LYS:HB3	80:B5:2138:A:C4	2.49	0.47
79:B2:192:U:H2'	79:B2:192:U:O2	2.13	0.47
79:B2:542:A:HO2'	79:B2:542:A:H8	1.62	0.47
79:B2:992:A:O2'	79:B2:1785:U:O2	2.31	0.47
79:B2:1783:C:H2'	79:B2:1784:C:C6	2.49	0.47
80:B5:217:U:H2'	80:B5:218:G:OP1	2.13	0.47
80:B5:1470:U:H2'	80:B5:1471:U:C6	2.49	0.47
80:B5:1879:A:N3	80:B5:1879:A:H2'	2.29	0.47
80:B5:2263:C:H2'	80:B5:2264:U:H5'	1.96	0.47
84:CW:6:G:C6	84:CW:68:C:N3	2.82	0.47
1:A0:15:ARG:HD3	79:B2:936:G:O6	2.14	0.47
8:A7:83:LYS:H	84:CW:29:G:H22	0.56	0.47
9:AA:184:LEU:HB3	30:AV:45:ALA:HB2	1.96	0.47
10:AB:30:PHE:CE1	10:AB:96:LEU:HB3	2.50	0.47
12:AD:203:PRO:CB	79:B2:1331:A:H2'	2.45	0.47
17:AI:66:SER:HB3	17:AI:73:SER:OG	2.14	0.47
18:AJ:175:ARG:HD3	18:AJ:179:ARG:HH11	1.78	0.47
23:AO:126:THR:C	79:B2:989:U:O2'	2.57	0.47
27:AS:109:LEU:HG	27:AS:113:LEU:HD11	1.96	0.47
28:AT:99:SER:HB2	79:B2:1504:G:P	2.54	0.47
30:AV:62:ARG:HH22	79:B2:1039:A:H5"	1.67	0.47
35:BA:237:LEU:CD2	80:B5:2153:U:O2	2.62	0.47
38:BD:148:ILE:HG23	38:BD:151:GLN:HB3	1.96	0.47
48:BN:160:GLU:OE1	48:BN:160:GLU:N	2.41	0.47
51:BQ:62:VAL:O	51:BQ:87:VAL:HA	2.14	0.47
51:BQ:100:THR:CG2	51:BQ:120:GLU:HB3	2.43	0.47
52:BR:172:ARG:H	79:B2:851:U:C2'	2.26	0.47
62:Bb:41:ARG:NE	80:B5:776:U:OP1	2.37	0.47
64:Bd:17:HIS:ND1	80:B5:3374:U:OP1	2.39	0.47
65:Be:33:ARG:HD3	80:B5:944:C:OP1	2.14	0.47
74:Bn:24:SER:O	88:B2:1967:OHX:N6	2.47	0.47
79:B2:190:C:N4	79:B2:196:G:C6	2.82	0.47
79:B2:190:C:O2'	79:B2:191:C:H5'	2.14	0.47
79:B2:196:G:O2'	79:B2:197:A:C8	2.65	0.47
79:B2:413:U:O2	83:CV:289:LEU:CD2	2.62	0.47
79:B2:1657:U:C4	88:B2:1967:OHX:N4	2.82	0.47
88:B2:1973:OHX:N6	88:B2:1987:OHX:N5	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:B2:1973:OHX:N6	88:B2:1987:OHX:N2	2.62	0.47
88:B2:2014:OHX:N5	88:B2:2033:OHX:N3	2.62	0.47
80:B5:191:U:H2'	80:B5:192:C:C6	2.49	0.47
80:B5:1724:U:O2	80:B5:1725:C:C2	2.66	0.47
80:B5:2641:U:H5"	80:B5:2642:A:OP1	2.13	0.47
7:A6:133:VAL:HB	7:A6:142:ALA:HB3	1.96	0.47
8:A7:68:ARG:NH1	27:AS:145:ARG:HD3	2.29	0.47
8:A7:82:THR:HG22	84:CW:29:G:N2	2.18	0.47
10:AB:63:GLY:HA2	10:AB:88:VAL:O	2.13	0.47
10:AB:105:PHE:H	10:AB:214:LYS:HZ1	1.61	0.47
11:AC:205:ARG:NH2	79:B2:7:G:O6	2.47	0.47
11:AC:214:ALA:O	11:AC:218:ILE:HG13	2.14	0.47
12:AD:84:ILE:HD13	12:AD:85:VAL:H	1.79	0.47
12:AD:159:HIS:CD2	79:B2:1422:A:H4'	2.48	0.47
12:AD:183:GLY:HA3	79:B2:1277:G:O3'	2.15	0.47
17:AI:22:ARG:NH2	79:B2:302:U:OP1	2.47	0.47
17:AI:66:SER:OG	79:B2:210:A:H1'	2.13	0.47
20:AL:25:VAL:CG1	79:B2:837:G:O2'	2.57	0.47
23:AO:46:MET:HG2	79:B2:898:A:H4'	1.95	0.47
23:AO:135:ARG:CD	79:B2:1008:G:OP1	2.62	0.47
25:AQ:112:TYR:CZ	25:AQ:114:ARG:NH2	2.82	0.47
31:AW:19:LYS:HZ2	79:B2:1095:U:H4'	1.80	0.47
33:AY:51:GLU:OE1	33:AY:53:ASP:N	2.34	0.47
33:AY:84:LYS:HD2	33:AY:85:PHE:CE1	2.50	0.47
34:AZ:94:LYS:CE	79:B2:1530:C:OP1	2.62	0.47
35:BA:71:LEU:HD22	80:B5:1651:U:C5'	2.44	0.47
37:BC:53:SER:N	80:B5:346:C:OP1	2.38	0.47
37:BC:334:PHE:CD2	80:B5:578:A:C5	3.02	0.47
38:BD:260:PHE:HE2	81:B7:121:U:O5'	1.96	0.47
43:BI:63:GLU:CB	80:B5:2853:A:OP1	2.61	0.47
44:BJ:16:LYS:HG3	44:BJ:130:VAL:HG13	1.96	0.47
46:BL:99:HIS:CB	80:B5:156:G:C4	2.97	0.47
50:BP:84:PRO:HB2	50:BP:87:SER:HB2	1.96	0.47
60:BZ:48:ARG:NH2	80:B5:1631:C:P	2.79	0.47
64:Bd:13:THR:HG22	64:Bd:72:ARG:CD	2.44	0.47
68:Bh:9:LEU:HD23	68:Bh:12:LYS:HE3	1.97	0.47
79:B2:539:G:OP2	79:B2:539:G:C8	2.68	0.47
79:B2:819:G:C6	79:B2:853:G:N1	2.83	0.47
79:B2:823:G:H2'	79:B2:824:G:C8	2.49	0.47
79:B2:823:G:H2'	79:B2:824:G:O4'	2.14	0.47
79:B2:1231:U:O5'	79:B2:1259:U:H1'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1644:C:C1’	80:B5:2255:A:C6	2.98	0.47
79:B2:1757:G:N2	80:B5:2255:A:C4	2.82	0.47
79:B2:1789:G:H5”	79:B2:1789:G:C8	2.46	0.47
80:B5:1819:U:C2’	80:B5:1820:U:H5’	2.45	0.47
80:B5:3335:A:H5’	80:B5:3335:A:H8	1.78	0.47
83:CV:455:LYS:HA	83:CV:458:GLU:CD	2.40	0.47
5:A4:21:VAL:HG22	79:B2:586:G:C4’	2.45	0.47
9:AA:124:THR:HG22	9:AA:174:TRP:CZ2	2.49	0.47
11:AC:150:GLN:HA	11:AC:151:PRO:HD3	1.79	0.47
16:AH:16:LEU:O	16:AH:20:VAL:HG23	2.14	0.47
20:AL:28:SER:CB	79:B2:839:U:H5”	2.43	0.47
23:AO:41:ARG:NH2	79:B2:916:U:C4	2.80	0.47
27:AS:143:ARG:NH1	79:B2:1461:C:C4	2.82	0.47
28:AT:60:SER:HG	79:B2:1480:G:P	2.36	0.47
29:AU:48:HIS:O	29:AU:48:HIS:CG	2.67	0.47
38:BD:269:SER:HB3	81:B7:1:G:H21	1.73	0.47
38:BD:289:LYS:O	38:BD:292:ALA:HB3	2.14	0.47
40:BF:214:TRP:CZ2	40:BF:219:LYS:HE3	2.49	0.47
46:BL:65:TYR:CE2	80:B5:103:G:O4’	2.67	0.47
46:BL:89:TYR:HB2	68:Bh:111:PHE:HE1	1.79	0.47
48:BN:40:ALA:HB2	80:B5:10:C:OP2	2.15	0.47
49:BO:65[A]:ASN:C	49:BO:67[A]:THR:H	2.21	0.47
49:BO:65[B]:ASN:HB3	49:BO:68[B]:ARG:HD3	1.97	0.47
54:BT:32:LYS:HE3	54:BT:98:HIS:CD2	2.49	0.47
61:Ba:48:TYR:O	61:Ba:49:HIS:CD2	2.67	0.47
79:B2:51:A:N9	83:CV:242:GLY:CA	0.72	0.47
79:B2:1486:G:H1’	79:B2:1592:A:O2’	2.14	0.47
79:B2:1758:U:H6	80:B5:2255:A:HO2’	1.51	0.47
79:B2:1781:A:O4’	80:B5:2262:A:O2’	2.32	0.47
80:B5:547:G:C5	80:B5:548:G:H1’	2.48	0.47
80:B5:1017:C:OP1	80:B5:1017:C:H2’	2.13	0.47
80:B5:1204:A:C2’	80:B5:1205:A:H5’	2.45	0.47
80:B5:1355:A:H1’	80:B5:1356:U:OP2	2.15	0.47
80:B5:1816:A:O2’	80:B5:1817:G:H5”	2.14	0.47
80:B5:2696:A:H2’	80:B5:2697:A:C8	2.50	0.47
1:A0:37:LYS:C	1:A0:38:ARG:HD2	2.38	0.47
6:A5:127:GLY:O	6:A5:129:GLY:N	2.47	0.47
10:AB:62:LYS:O	10:AB:88:VAL:HB	2.15	0.47
12:AD:174:HIS:CE1	79:B2:1278:G:H4’	2.49	0.47
16:AH:114:ARG:C	16:AH:116:ARG:H	2.22	0.47
19:AK:12:HIS:CD2	19:AK:79:TYR:HD2	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:129:ARG:HB3	79:B2:115:G:OP2	2.14	0.47
23:AO:120:PRO:HA	79:B2:887:A:H5"	1.91	0.47
24:AP:43:ARG:NH1	79:B2:1553:G:O6	2.41	0.47
24:AP:81:ARG:HH12	24:AP:120:SER:HB3	1.78	0.47
25:AQ:75:VAL:CB	79:B2:1610:G:OP1	2.61	0.47
26:AR:28:PHE:CZ	79:B2:1389:C:H1'	2.49	0.47
29:AU:35:GLU:HG2	79:B2:1383:G:O2'	2.14	0.47
30:AV:9:VAL:HG22	30:AV:10:GLU:H	1.79	0.47
31:AW:23:ARG:H	31:AW:24:GLN:NE2	2.13	0.47
35:BA:247:ARG:NH2	79:B2:1013:A:O2'	2.47	0.47
36:BB:153:LYS:HG2	36:BB:154:TYR:CE2	2.49	0.47
37:BC:33:ASP:O	37:BC:37:THR:HG23	2.14	0.47
38:BD:269:SER:CA	81:B7:22:A:N1	2.75	0.47
38:BD:274:GLN:NE2	81:B7:60:G:N2	2.62	0.47
40:BF:158:LYS:HD2	40:BF:159:GLN:N	2.30	0.47
41:BG:169:LEU:HD22	41:BG:173:MET:HG2	1.97	0.47
43:BI:63:GLU:HB3	80:B5:2853:A:OP1	2.14	0.47
47:BM:13:ARG:NH2	80:B5:3206:C:N3	2.61	0.47
54:BT:7:TYR:CZ	54:BT:54:HIS:HB2	2.49	0.47
59:BY:75:ARG:NH2	82:B8:72:A:H4'	2.30	0.47
60:BZ:65:ARG:HH11	60:BZ:65:ARG:CG	2.27	0.47
79:B2:499:U:O2'	79:B2:500:C:P	2.72	0.47
79:B2:503:G:O2'	79:B2:504:U:OP1	2.27	0.47
79:B2:717:C:O2	79:B2:722:G:N1	2.47	0.47
79:B2:1317:C:H2'	79:B2:1318:G:O4'	2.14	0.47
79:B2:1537:C:C4	88:B2:2044:OHX:N3	2.82	0.47
80:B5:687:U:O2'	80:B5:688:G:H5'	2.14	0.47
80:B5:731:U:H2'	80:B5:732:C:H6	1.79	0.47
80:B5:1481:A:H2'	80:B5:1858:A:N3	2.30	0.47
80:B5:1565:G:N2	80:B5:1566:A:H1'	2.30	0.47
80:B5:2257:C:O5'	80:B5:2257:C:H6	1.98	0.47
82:B8:130:C:H2'	82:B8:131:A:C8	2.49	0.47
1:A0:3:LYS:CE	79:B2:1030:A:P	3.02	0.47
8:A7:91:THR:HG21	84:CW:36:U:C1'	2.43	0.47
8:A7:136:ALA:O	8:A7:140:ASP:N	2.31	0.47
10:AB:231:LEU:C	10:AB:232:HIS:CD2	2.93	0.47
13:AE:32:SER:HB2	13:AE:83:PRO:HD3	1.96	0.47
15:AG:45:PHE:HA	15:AG:48:TYR:HD2	1.79	0.47
17:AI:26:LYS:CE	79:B2:396:G:O6	2.62	0.47
35:BA:70:ARG:HB2	80:B5:1650:G:O3'	2.14	0.47
35:BA:244:GLY:N	80:B5:2244:A:OP1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:68:THR:HG22	38:BD:70:THR:N	2.30	0.47
41:BG:55:TYR:HH	82:B8:149:A:HO2'	1.38	0.47
48:BN:10:LEU:HD23	48:BN:10:LEU:HA	1.72	0.47
49:BO:110[A]:PRO:HA	49:BO:113[A]:ASP:OD1	2.14	0.47
60:BZ:128:GLN:O	60:BZ:130:PHE:N	2.48	0.47
63:Bc:68:TYR:C	63:Bc:68:TYR:HD1	2.22	0.47
63:Bc:68:TYR:C	63:Bc:68:TYR:CD1	2.93	0.47
67:Bg:99:LYS:C	67:Bg:103:LYS:HG2	2.39	0.47
69:Bi:59:ASP:O	69:Bi:63:ASN:HB2	2.14	0.47
73:Bm:102:ARG:NE	80:B5:2896:A:OP1	2.34	0.47
79:B2:143:G:C2'	79:B2:144:U:H5"	2.44	0.47
79:B2:372:G:H1'	79:B2:612:U:O2	2.14	0.47
80:B5:879:U:O2	80:B5:2357:A:H1'	2.14	0.47
80:B5:2520:A:H2'	80:B5:2521:U:C6	2.50	0.47
1:A0:19:LYS:HG3	1:A0:20:PRO:HD2	1.96	0.47
2:A1:47:PHE:CD2	2:A1:49:HIS:O	2.68	0.47
4:A3:8:PHE:HA	79:B2:1450:U:O2'	2.15	0.47
6:A5:147:VAL:O	6:A5:148:TYR:HB2	2.14	0.47
7:A6:156:VAL:HG22	7:A6:169:ILE:HG22	1.95	0.47
8:A7:30:THR:HA	80:B5:2707:C:C2'	2.45	0.47
8:A7:101:ASP:OD2	12:AD:144:ALA:HB1	2.14	0.47
9:AA:140:ASN:HD21	30:AV:29:HIS:HA	1.80	0.47
10:AB:61:LEU:CD2	10:AB:62:LYS:H	2.27	0.47
13:AE:7:LYS:HG2	79:B2:450:U:OP1	2.13	0.47
15:AG:13:GLN:NE2	79:B2:151:G:C1'	2.74	0.47
15:AG:107:ALA:HB2	79:B2:154:G:O3'	2.13	0.47
15:AG:159:ARG:CZ	79:B2:77:U:O4'	2.62	0.47
16:AH:96:ARG:HB3	79:B2:856:A:C6	2.49	0.47
18:AJ:143:ILE:HD13	79:B2:768:C:N1	2.30	0.47
18:AJ:176:ASN:CB	79:B2:511:A:OP2	2.62	0.47
20:AL:22:ASN:OD1	20:AL:24:LYS:HB2	2.14	0.47
24:AP:130:ARG:HA	84:CW:46:G:OP1	2.14	0.47
25:AQ:94:GLN:HB2	25:AQ:102:LYS:HD2	1.96	0.47
28:AT:57:ARG:CG	79:B2:1479:A:OP1	2.52	0.47
28:AT:63:ARG:HG3	28:AT:67:MET:CE	2.45	0.47
28:AT:87:GLY:CA	79:B2:1542:G:H3'	2.45	0.47
29:AU:74:GLU:HG2	79:B2:1429:G:H1'	1.96	0.47
31:AW:17:ALA:HB2	31:AW:25:VAL:HG13	1.97	0.47
32:AX:33:LEU:HD23	32:AX:33:LEU:HA	1.70	0.47
33:AY:105:ARG:HD2	79:B2:444:C:OP2	2.13	0.47
35:BA:203:ALA:HB2	80:B5:2146:C:H5"	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:245:LEU:CD1	80:B5:2152:A:H4'	2.45	0.47
37:BC:305:ALA:H	80:B5:1347:U:C4'	2.27	0.47
41:BG:150:LEU:HD22	41:BG:151:VAL:N	2.29	0.47
41:BG:194:THR:CG2	80:B5:7:C:O2'	2.63	0.47
43:BI:3:ARG:NH2	80:B5:2854:U:OP2	2.48	0.47
44:BJ:81:GLU:HA	44:BJ:84:LEU:HD12	1.95	0.47
48:BN:5:LYS:HA	48:BN:5:LYS:HD3	1.73	0.47
48:BN:14:LYS:HA	48:BN:19:LEU:HD23	1.97	0.47
50:BP:30:ARG:HA	50:BP:119:VAL:HG11	1.95	0.47
51:BQ:63:SER:CB	80:B5:785:G:N2	2.77	0.47
52:BR:95:TRP:CZ2	52:BR:99:LEU:HG	2.49	0.47
52:BR:172:ARG:N	79:B2:851:U:C2'	2.77	0.47
54:BT:7:TYR:CE1	80:B5:2724:U:H1'	2.50	0.47
54:BT:120:LYS:C	54:BT:122:GLN:H	2.22	0.47
56:BV:16:GLY:O	80:B5:1897:G:O2'	2.27	0.47
56:BV:49:LEU:HG	80:B5:2338:C:C1'	2.44	0.47
56:BV:67:PRO:C	56:BV:69:LEU:H	2.22	0.47
58:BX:49:LYS:CD	82:B8:135:G:OP1	2.62	0.47
68:Bh:78:LYS:HA	68:Bh:81:ARG:CD	2.44	0.47
79:B2:72:A:C3'	79:B2:73:U:H5"	2.44	0.47
79:B2:77:U:H4'	79:B2:78:A:O5'	2.14	0.47
79:B2:279:G:H3'	79:B2:279:G:C8	2.48	0.47
79:B2:349:U:O4	88:B2:2007:OHX:N3	2.47	0.47
79:B2:414:C:H2'	83:CV:288:ARG:HG2	1.97	0.47
79:B2:710:U:HO2'	79:B2:729:G:H1	1.63	0.47
79:B2:1244:A:HO2'	79:B2:1245:G:P	2.37	0.47
79:B2:1480:G:H3'	79:B2:1481:C:C6	2.49	0.47
79:B2:1509:C:H2'	79:B2:1510:U:O4'	2.14	0.47
79:B2:1745:G:O6	88:B2:1964:OHX:N5	2.48	0.47
80:B5:128:G:H2'	80:B5:129:U:O4'	2.14	0.47
80:B5:253:A:O2'	80:B5:254:A:H8	1.97	0.47
80:B5:818:C:H2'	80:B5:819:U:O4'	2.14	0.47
80:B5:1228:C:N3	80:B5:1283:C:C2	2.82	0.47
80:B5:1541:G:C2'	80:B5:1542:G:O5'	2.63	0.47
80:B5:1701:C:H2'	80:B5:1702:U:O4'	2.15	0.47
80:B5:2514:U:C6	80:B5:2514:U:OP1	2.68	0.47
80:B5:2947:G:N2	80:B5:2948:C:C2	2.83	0.47
80:B5:3030:G:C4'	83:CV:436:ARG:CD	2.88	0.47
85:CX:1:A:O2'	88:CX:101:OHX:N4	2.48	0.47
2:A1:47:PHE:CD2	22:AN:55:ARG:HD2	2.49	0.47
2:A1:63:LEU:O	2:A1:74:SER:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:35:PRO:C	9:AA:37:VAL:H	2.22	0.47
12:AD:133:GLY:HA3	12:AD:156:PHE:H	1.79	0.47
12:AD:179:GLN:C	12:AD:179:GLN:HE21	2.23	0.47
15:AG:15:THR:HG23	79:B2:152:U:O2'	2.15	0.47
15:AG:60:GLY:CA	79:B2:154:G:N3	2.78	0.47
15:AG:87:ARG:NH1	79:B2:159:U:H1'	2.30	0.47
17:AI:41:LYS:HD3	79:B2:260:U:O4'	2.14	0.47
17:AI:172:ARG:NH2	79:B2:332:U:O4	2.48	0.47
18:AJ:149:ARG:HD2	79:B2:765:G:N1	2.30	0.47
23:AO:135:ARG:NE	79:B2:1007:C:O3'	2.48	0.47
24:AP:125:PRO:O	24:AP:126:VAL:HB	2.14	0.47
28:AT:33:TYR:C	28:AT:33:TYR:CD1	2.93	0.47
28:AT:52:GLY:HA2	28:AT:55:TYR:HD2	1.80	0.47
32:AX:50:LYS:HD3	32:AX:101:GLU:HG2	1.97	0.47
37:BC:152:VAL:HG22	37:BC:172:VAL:HG21	1.97	0.47
39:BE:3:ALA:HB1	65:Be:75:LEU:HD13	1.95	0.47
39:BE:58:LEU:HD12	39:BE:78:ARG:HD3	1.97	0.47
41:BG:74:THR:O	41:BG:77:GLN:HG3	2.15	0.47
41:BG:239:GLY:O	41:BG:240:ASN:C	2.58	0.47
43:BI:206:LEU:HD13	81:B7:64:A:C8	2.49	0.47
48:BN:94:TYR:CE1	80:B5:1546:A:H1'	2.49	0.47
49:BO:42[B]:ASN:OD1	49:BO:125[B]:ARG:HD3	2.13	0.47
53:BS:137:ARG:HD3	80:B5:1213:G:P	2.53	0.47
57:BW:122:ALA:O	57:BW:125:ALA:HB3	2.15	0.47
66:Bf:16:TYR:OH	66:Bf:91:ALA:HB2	2.15	0.47
74:Bn:6:ARG:NH1	79:B2:1113:A:C4'	2.77	0.47
79:B2:558:U:O2	79:B2:558:U:H2'	2.14	0.47
79:B2:840:U:O2'	79:B2:841:U:H5"	2.15	0.47
79:B2:1450:U:H2'	79:B2:1451:C:C6	2.50	0.47
79:B2:1617:U:O2'	79:B2:1618:C:H5'	2.14	0.47
80:B5:181:U:H2'	80:B5:182:U:O4'	2.14	0.47
80:B5:1621:A:H2'	80:B5:1622:U:C6	2.50	0.47
80:B5:1765:U:H2'	80:B5:1766:G:O4'	2.15	0.47
80:B5:2279:A:N7	83:CV:478:LYS:CG	2.77	0.47
80:B5:3029:A:C8	83:CV:435:TYR:CD2	3.03	0.47
2:A1:56:CYS:SG	2:A1:57:GLU:N	2.87	0.47
7:A6:13:LEU:HB2	7:A6:310:ILE:HB	1.97	0.47
8:A7:34:LYS:HG2	80:B5:2693:C:OP1	2.10	0.47
19:AK:26:ASP:OD2	19:AK:29:GLN:HG3	2.14	0.47
20:AL:53:TYR:CD1	20:AL:113:PRO:HG2	2.50	0.47
23:AO:124:ASP:O	23:AO:125:SER:HB2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:36:LYS:HB3	27:AS:105:VAL:HG11	1.96	0.47
29:AU:117:VAL:HG13	29:AU:118:VAL:N	2.30	0.47
38:BD:285:ARG:NH1	81:B7:62:U:C3'	2.76	0.47
41:BG:230:LYS:O	41:BG:230:LYS:HG3	2.14	0.47
42:BH:103:ILE:HD11	42:BH:134:ILE:HG21	1.97	0.47
43:BI:86:HIS:ND1	43:BI:139:ARG:NH1	2.57	0.47
43:BI:157:TYR:CB	80:B5:2836:C:H1'	2.44	0.47
49:BO:138[A]:LEU:HD12	49:BO:138[A]:LEU:HA	1.66	0.47
61:Ba:61:PHE:HB2	80:B5:304:G:O2'	2.14	0.47
61:Ba:96:LYS:HE2	61:Ba:142:GLY:O	2.15	0.47
74:Bn:6:ARG:O	74:Bn:10:THR:HG23	2.15	0.47
79:B2:417:A:H62	83:CV:287:LEU:HD21	1.80	0.47
79:B2:1644:C:C2'	80:B5:2255:A:N1	2.77	0.47
79:B2:1646:C:H5'	80:B5:2258:U:C4	2.50	0.47
80:B5:663:C:H2'	80:B5:664:U:C6	2.50	0.47
80:B5:1033:U:HO2'	80:B5:1034:U:P	2.38	0.47
80:B5:2102:U:H2'	80:B5:2103:U:C6	2.50	0.47
80:B5:2397:A:OP1	80:B5:2398:A:C5'	2.60	0.47
80:B5:2440:G:O2'	80:B5:2441:A:P	2.73	0.47
80:B5:3225:C:H2'	80:B5:3226:A:O4'	2.15	0.47
7:A6:211:ILE:HG22	7:A6:223:TRP:CD1	2.50	0.47
8:A7:28:SER:HB2	80:B5:2708:C:C1'	2.45	0.47
9:AA:105:GLY:O	9:AA:108:THR:O	2.33	0.47
14:AF:36:ALA:HB3	14:AF:45:LYS:NZ	2.29	0.47
15:AG:173:PRO:HA	79:B2:66:U:C5'	2.40	0.47
15:AG:188:ARG:CD	79:B2:283:U:H3'	2.44	0.47
16:AH:133:THR:HG21	16:AH:162:ILE:HD11	1.96	0.47
18:AJ:60:LEU:HD22	18:AJ:60:LEU:HA	1.49	0.47
21:AM:66:VAL:HG11	21:AM:71:ILE:HG21	1.97	0.47
22:AN:11:ILE:O	22:AN:11:ILE:HG13	2.15	0.47
23:AO:121:VAL:O	79:B2:886:U:C2'	2.59	0.47
24:AP:86:VAL:HG23	24:AP:87:PRO:HD2	1.96	0.47
25:AQ:53:LEU:H	25:AQ:53:LEU:HG	1.47	0.47
26:AR:115:LEU:HD13	26:AR:116:LYS:H	1.80	0.47
30:AV:80:LYS:NZ	30:AV:80:LYS:HB3	2.30	0.47
34:AZ:73:GLY:O	34:AZ:77:ARG:NH1	2.48	0.47
35:BA:53:GLY:O	35:BA:192:LYS:HE3	2.15	0.47
36:BB:221:THR:CG2	36:BB:273:HIS:H	2.28	0.47
37:BC:295:ILE:O	37:BC:299:ILE:HG12	2.15	0.47
48:BN:4:TYR:HH	80:B5:148:G:P	2.35	0.47
48:BN:113:LEU:HD11	82:B8:142:C:C4'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:124[B]:LEU:O	49:BO:128[B]:ARG:HB2	2.15	0.47
53:BS:42:TRP:O	53:BS:46:GLN:HG3	2.15	0.47
54:BT:85:LEU:HA	54:BT:85:LEU:HD23	1.67	0.47
55:BU:12:ALA:HB2	55:BU:68:THR:HG23	1.97	0.47
56:BV:48:ARG:CG	80:B5:2339:C:P	3.03	0.47
61:Ba:73:LEU:HB2	61:Ba:109:TYR:CD1	2.49	0.47
67:Bg:45:GLY:HA3	80:B5:1652:G:O2'	2.14	0.47
70:Bj:42:ALA:CB	82:B8:105:A:P	3.03	0.47
79:B2:782:U:H4'	79:B2:783:G:OP2	2.14	0.47
79:B2:1004:U:H4'	79:B2:1005:A:OP2	2.15	0.47
79:B2:1347:U:O2	79:B2:1516:A:H5'	2.14	0.47
79:B2:1450:U:OP2	88:B2:1939:OHX:N5	2.48	0.47
80:B5:322:U:H5"	80:B5:323:A:OP1	2.14	0.47
80:B5:380:U:H2'	80:B5:381:U:C6	2.50	0.47
80:B5:1655:G:H8	80:B5:1655:G:H5'	1.80	0.47
82:B8:125:U:O2'	82:B8:126:A:H5'	2.15	0.47
83:CV:537:GLY:CA	84:CW:73:A:N9	2.78	0.47
7:A6:183:LEU:HA	7:A6:183:LEU:HD23	1.71	0.46
8:A7:168:UNK:HA	21:AM:125:ASN:ND2	2.22	0.46
9:AA:52:LYS:HB3	30:AV:82:VAL:HG22	1.97	0.46
9:AA:76:ILE:O	9:AA:124:THR:HG23	2.15	0.46
11:AC:168:ARG:HG3	79:B2:1097:U:O2'	2.15	0.46
12:AD:21:LEU:HD22	12:AD:25:PHE:CE2	2.50	0.46
20:AL:104:HIS:O	20:AL:105:LYS:HG2	2.15	0.46
21:AM:136:ILE:O	21:AM:140:PHE:HB2	2.14	0.46
22:AN:151:ASN:HA	88:AN:201:OHX:N3	2.29	0.46
23:AO:17:ALA:HB3	23:AO:81:VAL:HB	1.96	0.46
27:AS:35:ILE:HB	27:AS:38:VAL:HG21	1.96	0.46
32:AX:131:SER:HB2	79:B2:30:G:H4'	1.97	0.46
33:AY:9:THR:N	79:B2:780:A:H1'	2.30	0.46
34:AZ:54:VAL:HG22	34:AZ:57:TYR:CE2	2.50	0.46
35:BA:15:ILE:CD1	80:B5:904:A:C2	2.98	0.46
36:BB:39:LYS:HB2	36:BB:40:PRO:HD2	1.96	0.46
36:BB:147:GLU:CD	36:BB:150:ARG:NH2	2.73	0.46
37:BC:11:LEU:HD13	37:BC:159:ILE:HD11	1.97	0.46
37:BC:140:HIS:CG	37:BC:247:PHE:HB2	2.50	0.46
37:BC:150:LEU:HD13	37:BC:249:ILE:HG12	1.96	0.46
39:BE:51:ARG:NH1	47:BM:114:ASP:OD2	2.48	0.46
41:BG:71:VAL:HG13	41:BG:235:GLY:N	2.30	0.46
41:BG:136:LEU:N	80:B5:147:U:OP2	2.46	0.46
54:BT:130:ARG:NH1	80:B5:1062:A:N3	2.60	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BU:56:VAL:HG22	55:BU:65:VAL:HG22	1.96	0.46
58:BX:49:LYS:HD2	82:B8:135:G:OP1	2.14	0.46
61:Ba:126:LYS:HA	61:Ba:146:GLU:O	2.15	0.46
67:Bg:99:LYS:O	67:Bg:102:LYS:N	2.48	0.46
70:Bj:16:HIS:HA	70:Bj:27:PHE:O	2.15	0.46
72:Bl:22:PRO:HD2	80:B5:1518:U:OP1	2.15	0.46
75:Bo:104:LEU:HD12	84:CW:55:U:C4	2.37	0.46
79:B2:114:C:H5'	79:B2:114:C:C6	2.49	0.46
79:B2:239:C:H3'	79:B2:240:U:O4'	2.15	0.46
79:B2:433:C:H6	83:CV:387:ARG:C	2.09	0.46
79:B2:507:U:H2'	79:B2:508:U:O5'	2.16	0.46
79:B2:1071:U:H2'	79:B2:1072:C:H6	1.79	0.46
79:B2:1244:A:H3'	79:B2:1244:A:N3	2.29	0.46
79:B2:1585:U:N3	79:B2:1611:A:C2	2.67	0.46
79:B2:1715:G:C5	79:B2:1716:C:C5	3.03	0.46
80:B5:620:U:OP2	80:B5:620:U:H6	1.98	0.46
80:B5:736:A:C4	80:B5:737:G:H1'	2.50	0.46
80:B5:792:G:H2'	80:B5:793:C:C6	2.50	0.46
80:B5:1481:A:C2'	80:B5:1858:A:N3	2.78	0.46
80:B5:2897:A:H2'	80:B5:2899:C:H5'	1.97	0.46
83:CV:17:GLY:HA2	83:CV:79:GLY:HA2	1.95	0.46
1:A0:73:TYR:CZ	1:A0:82:ARG:HD2	2.50	0.46
6:A5:103:LEU:HD23	6:A5:103:LEU:HA	1.71	0.46
8:A7:34:LYS:HZ1	80:B5:2693:C:C5'	2.17	0.46
9:AA:140:ASN:ND2	30:AV:29:HIS:HA	2.30	0.46
10:AB:101:HIS:HD2	10:AB:217:LEU:HD22	1.80	0.46
10:AB:150:VAL:HB	79:B2:1067:C:OP1	2.14	0.46
88:AC:301:OHX:N3	88:B2:1906:OHX:N1	2.63	0.46
12:AD:159:HIS:O	79:B2:1421:A:C5'	2.63	0.46
14:AF:187:ILE:H	14:AF:187:ILE:HD12	1.81	0.46
15:AG:148:SER:C	15:AG:150:GLU:H	2.22	0.46
16:AH:108:GLN:HB2	79:B2:743:U:P	2.55	0.46
17:AI:26:LYS:O	17:AI:26:LYS:HG3	2.12	0.46
17:AI:138:ASN:ND2	79:B2:187:G:C4	2.83	0.46
18:AJ:60:LEU:HD23	18:AJ:93:LEU:HD11	1.97	0.46
20:AL:129:ARG:HB2	79:B2:115:G:C8	2.49	0.46
20:AL:131:ILE:HD13	20:AL:131:ILE:HA	1.45	0.46
23:AO:132:ARG:CZ	79:B2:1788:G:H8	2.22	0.46
29:AU:53:LYS:C	79:B2:1345:A:O5'	2.58	0.46
31:AW:53:ILE:HG12	31:AW:60:LYS:HB2	1.96	0.46
34:AZ:59:TYR:HD1	34:AZ:60:VAL:N	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:34:TYR:CE2	80:B5:2525:G:C6	3.02	0.46
36:BB:35:ASP:OD1	36:BB:184:ASN:O	2.32	0.46
38:BD:122:VAL:HG23	38:BD:123:GLU:N	2.30	0.46
38:BD:273:ARG:O	38:BD:273:ARG:HG2	2.15	0.46
42:BH:175:PHE:CE1	80:B5:2901:G:H5'	2.50	0.46
43:BI:169:LYS:O	43:BI:170:LYS:HD3	2.15	0.46
46:BL:89:TYR:CE2	46:BL:93:ILE:HD11	2.50	0.46
48:BN:145:ASP:OD1	48:BN:147:ARG:HB2	2.15	0.46
50:BP:68:GLY:HA3	80:B5:2350:C:O3'	2.15	0.46
52:BR:165:LYS:HD3	79:B2:849:C:C2	2.43	0.46
53:BS:139:TYR:CD1	53:BS:140:VAL:HG23	2.51	0.46
53:BS:171:PHE:O	53:BS:172:TYR:C	2.56	0.46
54:BT:14:MET:HE2	54:BT:15:PHE:CE1	2.50	0.46
54:BT:129:LYS:HB3	80:B5:1098:A:O5'	2.15	0.46
54:BT:138:SER:C	54:BT:139:ARG:HG3	2.38	0.46
69:Bi:53:TYR:O	69:Bi:57:LEU:HB2	2.14	0.46
79:B2:702:G:C6	79:B2:737:A:C6	3.03	0.46
79:B2:1064:G:H2'	79:B2:1065:A:C8	2.49	0.46
80:B5:217:U:C2'	80:B5:218:G:OP1	2.62	0.46
80:B5:546:C:H4'	80:B5:547:G:O5'	2.14	0.46
80:B5:1118:C:O5'	80:B5:1118:C:H6	1.99	0.46
80:B5:1283:C:C5	80:B5:1284:C:C5	3.03	0.46
80:B5:1313:G:H2'	80:B5:1314:C:H6	1.80	0.46
80:B5:2622:C:N3	84:CW:75:C:H4'	2.28	0.46
80:B5:3242:G:H5"	80:B5:3245:A:C8	2.50	0.46
80:B5:3340:G:H4'	80:B5:3341:U:OP1	2.15	0.46
81:B7:58:C:OP1	88:B7:202:OHX:N3	2.49	0.46
4:A3:40:ARG:HD2	79:B2:1199:G:C8	2.50	0.46
8:A7:30:THR:CA	80:B5:2707:C:H1'	2.46	0.46
8:A7:34:LYS:CE	80:B5:2693:C:OP1	2.55	0.46
8:A7:68:ARG:NH2	27:AS:146:ALA:H	2.14	0.46
15:AG:78:THR:HG22	15:AG:79:LYS:H	1.80	0.46
16:AH:14:THR:HG23	16:AH:15:GLU:H	1.80	0.46
17:AI:66:SER:HA	17:AI:73:SER:HA	1.98	0.46
18:AJ:174:ARG:HA	18:AJ:174:ARG:HE	1.81	0.46
21:AM:45:LEU:O	21:AM:49:THR:HG23	2.14	0.46
21:AM:125:ASN:C	21:AM:127:GLY:H	2.23	0.46
22:AN:115:LEU:O	22:AN:119:GLU:HG3	2.16	0.46
25:AQ:123:ARG:HG3	25:AQ:124:PRO:HD2	1.96	0.46
27:AS:139:LYS:HG3	79:B2:1459:C:N4	2.30	0.46
29:AU:43:LYS:HD2	29:AU:43:LYS:HA	1.52	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:41:SER:HA	32:AX:42:PRO:HD3	1.75	0.46
32:AX:69:ARG:NH1	79:B2:570:A:N6	2.63	0.46
37:BC:118:LYS:HE2	80:B5:694:C:OP2	2.15	0.46
39:BE:98:VAL:HA	39:BE:101:PHE:HD2	1.80	0.46
41:BG:73:PRO:HD3	41:BG:233:TRP:CG	2.50	0.46
41:BG:149:LYS:HD3	41:BG:201:THR:O	2.16	0.46
43:BI:19:LYS:HG3	43:BI:26:VAL:HG22	1.96	0.46
51:BQ:8:LYS:NZ	80:B5:971:G:OP1	2.44	0.46
53:BS:46:GLN:O	81:B7:77:G:C3'	2.64	0.46
63:Bc:17:VAL:HG11	63:Bc:92:ILE:HD12	1.97	0.46
63:Bc:99:ASP:O	63:Bc:102:THR:N	2.40	0.46
72:Bl:23:LEU:CD2	72:Bl:24:PRO:HD2	2.41	0.46
79:B2:705:U:H4'	79:B2:705:U:OP1	2.14	0.46
79:B2:1039:A:O2'	79:B2:1040:G:P	2.74	0.46
80:B5:1464:G:N2	80:B5:1466:G:H3'	2.31	0.46
80:B5:2816:G:C8	80:B5:2869:U:H3'	2.50	0.46
80:B5:3174:A:H2'	80:B5:3175:U:C5'	2.46	0.46
81:B7:43:U:C4	81:B7:44:C:C4	3.03	0.46
81:B7:106:U:H2'	81:B7:107:C:C6	2.50	0.46
1:A0:87:ARG:HD2	79:B2:1797:A:H61	1.76	0.46
8:A7:83:LYS:C	84:CW:29:G:N2	2.69	0.46
10:AB:117:TRP:NE1	10:AB:152:ARG:CZ	2.77	0.46
12:AD:203:PRO:HD2	79:B2:1331:A:H2	1.79	0.46
13:AE:104:ASP:OD2	13:AE:108:ARG:NE	2.41	0.46
14:AF:64:VAL:HG12	14:AF:65:ARG:HD3	1.97	0.46
16:AH:12:ALA:HB3	16:AH:13:PRO:HD3	1.98	0.46
17:AI:64:ASN:CB	79:B2:258:C:H1'	2.45	0.46
18:AJ:127:VAL:CG2	79:B2:478:A:H4'	2.39	0.46
23:AO:132:ARG:CZ	79:B2:1788:G:N7	2.67	0.46
25:AQ:13:LYS:CE	79:B2:1584:G:C6	2.76	0.46
25:AQ:36:ILE:O	25:AQ:36:ILE:HG12	2.15	0.46
31:AW:37:PHE:CE2	31:AW:103:ILE:HD12	2.50	0.46
32:AX:134:ALA:HB1	32:AX:140:LYS:HB2	1.98	0.46
33:AY:33:ALA:HB2	79:B2:533:U:H5'	1.98	0.46
35:BA:244:GLY:O	80:B5:2153:U:H5'	2.12	0.46
37:BC:209:TYR:O	37:BC:230:VAL:HG22	2.16	0.46
38:BD:115:LEU:HD12	38:BD:119:TYR:HD2	1.80	0.46
38:BD:155:THR:O	81:B7:36:C:H4'	2.16	0.46
42:BH:156:GLN:NE2	42:BH:160:ASP:OD1	2.46	0.46
48:BN:57:GLN:OE1	80:B5:126:U:H1'	2.15	0.46
51:BQ:67:ILE:HG23	51:BQ:81:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BS:26:ARG:HB3	54:BT:150:THR:HG22	1.97	0.46
56:BV:46:LEU:HG	56:BV:47:ASN:OD1	2.15	0.46
59:BY:10:SER:OG	80:B5:213:A:N3	2.45	0.46
79:B2:58:U:O4	88:B2:1924:OHX:N1	2.49	0.46
79:B2:258:C:N4	79:B2:259:U:O4	2.48	0.46
79:B2:494:U:HO2'	79:B2:495:C:P	2.34	0.46
79:B2:505:A:N3	79:B2:505:A:H2'	2.30	0.46
79:B2:1349:G:N2	79:B2:1350:U:C2	2.83	0.46
79:B2:1655:A:C1'	80:B5:2302:G:O4'	2.61	0.46
80:B5:508:U:H2'	80:B5:509:U:H6	1.78	0.46
80:B5:1024:G:C2'	80:B5:1026:A:H8	2.26	0.46
80:B5:1085:A:H8	80:B5:1085:A:H5"	1.78	0.46
80:B5:1096:U:H4'	80:B5:1097:G:O5'	2.16	0.46
80:B5:2111:G:H4'	80:B5:2112:U:OP2	2.15	0.46
80:B5:2805:G:N3	80:B5:2967:A:H2	2.13	0.46
80:B5:2946:A:C5'	80:B5:2947:G:H5'	2.45	0.46
80:B5:3238:G:C5'	80:B5:3238:G:H8	2.29	0.46
80:B5:3288:G:O2'	80:B5:3289:G:H8	1.97	0.46
83:CV:555:TYR:CE2	83:CV:556:HIS:CE1	3.04	0.46
1:A0:15:ARG:CG	79:B2:943:C:H42	2.21	0.46
3:A2:44:VAL:HA	14:AF:161:ASP:O	2.15	0.46
9:AA:71:GLU:OE1	9:AA:71:GLU:N	2.37	0.46
13:AE:98:ASN:HD22	13:AE:119:ALA:HB1	1.80	0.46
15:AG:107:ALA:CB	79:B2:154:G:C3'	2.94	0.46
16:AH:173:TYR:HE2	16:AH:179:LYS:HB2	1.80	0.46
22:AN:14:SER:HG	79:B2:960:U:H5	1.40	0.46
25:AQ:122:ARG:HG2	79:B2:1584:G:OP2	2.14	0.46
27:AS:41:ARG:NH1	28:AT:38:LYS:HG3	2.31	0.46
27:AS:108:LYS:HE3	27:AS:111:ASP:OD2	2.15	0.46
31:AW:7:LEU:HD22	31:AW:11:LEU:HG	1.97	0.46
31:AW:57:ARG:CZ	79:B2:863:A:OP1	2.63	0.46
32:AX:144:ARG:NH2	83:CV:267:MET:SD	2.89	0.46
35:BA:200:ARG:CG	80:B5:2147:A:OP1	2.52	0.46
35:BA:247:ARG:HB3	79:B2:1013:A:OP1	2.16	0.46
36:BB:331:ASN:OD1	36:BB:331:ASN:N	2.49	0.46
37:BC:272:VAL:N	80:B5:696:C:OP1	2.48	0.46
38:BD:36:LEU:HD23	80:B5:2748:A:H1'	1.98	0.46
38:BD:285:ARG:HH12	81:B7:62:U:C3'	2.28	0.46
41:BG:134:TYR:CG	41:BG:190:VAL:HG11	2.50	0.46
41:BG:136:LEU:CB	80:B5:147:U:OP2	2.63	0.46
44:BJ:106:ILE:CD1	44:BJ:125:MET:HG2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BQ:94:PHE:CZ	61:Ba:119:PRO:HD3	2.51	0.46
55:BU:27:VAL:HG21	55:BU:107:PHE:HE2	1.80	0.46
56:BV:71:LYS:HB3	56:BV:71:LYS:HE3	1.59	0.46
70:Bj:18:LEU:HG	72:Bl:51:ILE:HG21	1.98	0.46
74:Bn:10:THR:HB	79:B2:1115:U:C5'	2.45	0.46
75:Bo:56:PRO:HB3	80:B5:2802:A:C8	2.50	0.46
79:B2:417:A:H5'	79:B2:418:G:C5	2.50	0.46
79:B2:616:G:C2	79:B2:622:A:N7	2.84	0.46
79:B2:909:U:H2'	79:B2:910:C:H6	1.80	0.46
79:B2:1194:A:H2'	79:B2:1195:C:H5'	1.98	0.46
79:B2:1589:C:OP1	88:B2:2061:OHX:N1	2.48	0.46
80:B5:123:A:C6	80:B5:150:A:C5	3.04	0.46
80:B5:208:C:H2'	80:B5:209:A:H5'	1.97	0.46
80:B5:528:U:H2'	80:B5:529:A:H8	1.78	0.46
1:A0:92:ARG:O	79:B2:1796:C:H2'	2.15	0.46
8:A7:172:UNK:O	21:AM:54:ARG:HB2	2.15	0.46
9:AA:108:THR:HG23	9:AA:135:GLU:OE2	2.16	0.46
10:AB:107:THR:OG1	10:AB:108:ASP:N	2.49	0.46
12:AD:168:ILE:O	12:AD:168:ILE:HD12	2.15	0.46
13:AE:42:LEU:HD23	13:AE:46:VAL:HB	1.97	0.46
15:AG:107:ALA:HB1	79:B2:154:G:C4'	2.42	0.46
16:AH:159:VAL:O	16:AH:162:ILE:HG13	2.16	0.46
17:AI:27:PHE:CE1	79:B2:301:A:H5"	2.51	0.46
17:AI:142:LYS:HZ3	79:B2:186:C:H5'	1.79	0.46
18:AJ:7:THR:HG21	79:B2:758:U:OP1	2.16	0.46
18:AJ:85:VAL:HG12	18:AJ:99:LEU:HD11	1.98	0.46
20:AL:130:PRO:HD2	79:B2:115:G:N7	2.31	0.46
27:AS:22:VAL:HG13	27:AS:31:ALA:HB1	1.96	0.46
27:AS:139:LYS:HG3	79:B2:1459:C:C4	2.50	0.46
29:AU:23:ARG:NH2	79:B2:1347:U:P	2.76	0.46
31:AW:10:ALA:HB1	31:AW:27:ILE:HD12	1.97	0.46
33:AY:10:ARG:HG2	79:B2:778:G:C6	2.48	0.46
35:BA:33:ASP:OD1	35:BA:33:ASP:N	2.48	0.46
35:BA:66:PRO:HB2	35:BA:67:TYR:CE2	2.50	0.46
35:BA:94:ALA:C	80:B5:2551:U:O4	2.52	0.46
35:BA:174:ARG:CD	80:B5:1793:C:O4'	2.63	0.46
35:BA:187:HIS:CB	80:B5:1794:G:C4	2.98	0.46
35:BA:204:MET:HE3	35:BA:208:ASP:CB	2.45	0.46
35:BA:240:ALA:CB	80:B5:2154:U:C4'	2.76	0.46
36:BB:347:SER:HB3	36:BB:350:ALA:N	2.26	0.46
37:BC:222:VAL:HA	37:BC:223:PRO:HD3	1.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:269:SER:C	81:B7:22:A:N1	2.74	0.46
41:BG:156:ASP:OD2	41:BG:183:LYS:HG2	2.15	0.46
42:BH:93:VAL:O	42:BH:177:ASP:HA	2.16	0.46
46:BL:100:ARG:NH2	80:B5:66:A:OP2	2.49	0.46
46:BL:140:SER:HG	46:BL:143:ALA:H	1.61	0.46
49:BO:10[B]:ASP:HB2	49:BO:117[B]:ARG:HG3	1.97	0.46
52:BR:104:ARG:HH12	80:B5:1949:G:H5'	1.79	0.46
53:BS:53:LYS:HD3	81:B7:99:G:P	2.55	0.46
59:BY:2:ALA:HA	80:B5:213:A:O4'	2.15	0.46
61:Ba:55:LYS:HG3	80:B5:93:C:O2'	2.16	0.46
65:Be:4:LEU:HD13	65:Be:90:LYS:HB3	1.97	0.46
79:B2:25:C:OP2	79:B2:26:A:H2'	2.15	0.46
79:B2:485:A:H2'	79:B2:486:G:O4'	2.15	0.46
79:B2:795:U:C5	79:B2:796:A:C8	3.04	0.46
79:B2:1200:G:H4'	79:B2:1201:G:C5'	2.45	0.46
79:B2:1428:G:C4'	84:CW:34:C:C5'	2.90	0.46
80:B5:65:A:C4	80:B5:110:G:N7	2.84	0.46
80:B5:1025:A:H5'	80:B5:1026:A:OP2	2.16	0.46
80:B5:2746:A:H2'	80:B5:2747:A:O4'	2.16	0.46
82:B8:155:A:H2'	82:B8:156:U:O4'	2.16	0.46
83:CV:552:GLU:HA	83:CV:555:TYR:CE1	2.49	0.46
1:A0:18:VAL:O	1:A0:19:LYS:HB2	2.16	0.46
4:A3:5:ASN:C	4:A3:7:TRP:H	2.23	0.46
7:A6:29:GLN:C	7:A6:31:ASN:H	2.23	0.46
10:AB:65:VAL:O	23:AO:34:SER:HA	2.16	0.46
10:AB:110:LEU:HA	10:AB:113:MET:HB2	1.98	0.46
10:AB:179:SER:HB3	10:AB:183:GLN:NE2	2.30	0.46
10:AB:193:ILE:H	10:AB:193:ILE:HG12	1.40	0.46
15:AG:63:MET:HE2	15:AG:106:LEU:HD22	1.96	0.46
16:AH:113:PRO:HD3	79:B2:811:A:N6	2.29	0.46
20:AL:20:PHE:CG	79:B2:211:U:H5"	2.51	0.46
23:AO:20:TYR:CD2	79:B2:917:U:C5'	2.93	0.46
29:AU:77:LYS:HE2	79:B2:1195:C:OP1	2.15	0.46
32:AX:69:ARG:HH11	79:B2:570:A:N6	2.14	0.46
34:AZ:94:LYS:NZ	79:B2:1530:C:OP1	2.48	0.46
36:BB:20:LYS:HB2	80:B5:2991:A:OP1	2.16	0.46
36:BB:312:VAL:HA	80:B5:3378:C:O2'	2.16	0.46
41:BG:106:LYS:O	41:BG:110:THR:HG23	2.15	0.46
41:BG:160:ILE:HD12	41:BG:164:VAL:HG13	1.98	0.46
44:BJ:17:LEU:HD21	44:BJ:19:LEU:HD21	1.98	0.46
46:BL:168:ARG:O	46:BL:172:LEU:HG	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BP:31:GLU:CG	50:BP:60:PHE:HA	2.46	0.46
54:BT:14:MET:HE1	54:BT:55:LYS:CB	2.46	0.46
65:Be:75:LEU:HD22	65:Be:76:VAL:H	1.81	0.46
70:Bj:65:ARG:HG3	70:Bj:65:ARG:NH1	2.31	0.46
72:Bl:3:ALA:H	72:Bl:5:LYS:HE2	1.81	0.46
79:B2:1477:G:H2'	79:B2:1478:G:C8	2.50	0.46
79:B2:1759:C:C1'	80:B5:2262:A:H2	2.17	0.46
88:B2:1968:OHX:N1	88:B2:2011:OHX:N2	2.64	0.46
80:B5:208:C:O2'	80:B5:209:A:H5'	2.16	0.46
80:B5:655:C:H2'	80:B5:656:A:C8	2.51	0.46
80:B5:2664:C:O2'	80:B5:2665:U:H5'	2.15	0.46
82:B8:9:A:H2'	82:B8:10:A:C8	2.50	0.46
2:A1:28:PRO:HG3	79:B2:959:U:C2	2.50	0.46
2:A1:67:THR:CA	79:B2:871:G:O2'	2.64	0.46
4:A3:33:LYS:HG3	79:B2:1594:G:H5"	1.98	0.46
7:A6:42:LEU:HB2	7:A6:61:PHE:HB2	1.98	0.46
7:A6:285:ALA:HB2	79:B2:1394:G:P	2.54	0.46
8:A7:54:PRO:HB2	8:A7:59:GLY:HA2	1.98	0.46
8:A7:68:ARG:NE	27:AS:145:ARG:HH11	2.13	0.46
8:A7:88:ARG:HB2	84:CW:36:U:C1'	2.33	0.46
10:AB:180:THR:HB	10:AB:181:LEU:HD22	1.98	0.46
11:AC:84:LYS:HA	11:AC:85:PRO:HD3	1.79	0.46
15:AG:175:ILE:HG13	79:B2:78:A:N9	2.23	0.46
19:AK:14:TYR:CD1	19:AK:14:TYR:C	2.93	0.46
19:AK:25:LYS:HD3	19:AK:59:PHE:CZ	2.50	0.46
28:AT:49:ASP:OD2	28:AT:53:TRP:N	2.48	0.46
28:AT:124:ILE:HG13	28:AT:125:SER:O	2.16	0.46
32:AX:107:PHE:CD2	32:AX:114:LYS:HB2	2.51	0.46
35:BA:72:ARG:HG3	35:BA:72:ARG:HH11	1.80	0.46
35:BA:72:ARG:HG3	35:BA:72:ARG:NH1	2.31	0.46
36:BB:236:LYS:HD3	80:B5:2340:U:OP2	2.16	0.46
37:BC:331:ALA:HA	80:B5:578:A:N3	2.30	0.46
38:BD:265:TYR:CD1	81:B7:120:C:C2	3.03	0.46
40:BF:219:LYS:HA	40:BF:228:SER:HB2	1.97	0.46
40:BF:221:LYS:O	40:BF:228:SER:O	2.34	0.46
41:BG:54:GLU:HG3	80:B5:1558:A:P	2.55	0.46
42:BH:26:LYS:HB2	80:B5:3198:U:C4	2.51	0.46
43:BI:168:SER:HB2	54:BT:160:ILE:C	2.41	0.46
48:BN:109:ARG:HD2	82:B8:140:G:O2'	2.16	0.46
54:BT:127:GLN:HG2	80:B5:1095:U:H3	1.78	0.46
54:BT:129:LYS:CB	80:B5:1098:A:P	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Bc:85:PHE:CD1	80:B5:1728:G:C4	3.04	0.46
64:Bd:21:HIS:ND1	80:B5:3376:A:C4	2.84	0.46
65:Be:32:TRP:HB3	80:B5:1407:A:H5'	1.97	0.46
65:Be:55:ILE:CD1	80:B5:1405:U:C4	2.99	0.46
65:Be:125:ARG:NH2	80:B5:1392:G:H3'	2.31	0.46
79:B2:544:A:H5"	79:B2:545:A:OP2	2.15	0.46
79:B2:1053:G:N7	88:B2:2059:OHX:N5	2.63	0.46
79:B2:1280:C:H2'	79:B2:1281:G:H8	1.80	0.46
79:B2:1558:U:H3'	79:B2:1559:A:H4'	1.98	0.46
80:B5:491:C:H5"	80:B5:492:U:OP2	2.15	0.46
80:B5:725:G:H3'	80:B5:726:G:H5"	1.96	0.46
80:B5:3031:G:P	83:CV:436:ARG:HH22	2.32	0.46
82:B8:83:C:H4'	82:B8:85:G:N3	2.31	0.46
83:CV:80:HIS:HB3	83:CV:369:ILE:HD11	1.97	0.46
83:CV:537:GLY:C	84:CW:73:A:C8	2.93	0.46
1:A0:10:ARG:HB3	1:A0:34:LYS:HA	1.97	0.46
2:A1:51:GLN:CB	79:B2:870:C:O2'	2.63	0.46
8:A7:86:ASN:N	84:CW:31:A:C8	2.79	0.46
8:A7:91:THR:N	84:CW:36:U:C4	2.84	0.46
8:A7:93:ARG:CA	85:CX:3:G:N2	1.80	0.46
9:AA:41:ARG:HE	9:AA:45:VAL:CG2	2.29	0.46
9:AA:71:GLU:HA	9:AA:95:ALA:N	2.31	0.46
10:AB:101:HIS:O	10:AB:217:LEU:HD13	2.16	0.46
13:AE:22:LYS:HZ2	79:B2:772:G:P	2.36	0.46
15:AG:172:ALA:CB	79:B2:79:C:OP1	2.46	0.46
22:AN:99:ARG:O	22:AN:103:GLU:HG2	2.16	0.46
25:AQ:107:LYS:O	25:AQ:111:SER:HB2	2.16	0.46
27:AS:139:LYS:HE2	79:B2:1459:C:N4	2.30	0.46
35:BA:130:SER:HA	35:BA:169:ILE:HG22	1.97	0.46
36:BB:243:HIS:HD2	80:B5:876:A:OP1	1.99	0.46
37:BC:305:ALA:HA	80:B5:1347:U:O4'	2.16	0.46
38:BD:256:THR:CG2	81:B7:119:U:H5"	2.46	0.46
41:BG:202:GLU:O	41:BG:203:VAL:HB	2.15	0.46
46:BL:168:ARG:HH22	80:B5:769:G:H4'	1.81	0.46
47:BM:125:LYS:NZ	80:B5:3215:A:OP2	2.49	0.46
48:BN:67:ARG:HB2	80:B5:1545:A:OP2	2.16	0.46
52:BR:143:ILE:HG22	52:BR:144:GLN:N	2.31	0.46
58:BX:67:ILE:HB	58:BX:83:VAL:HG12	1.97	0.46
58:BX:131:ASP:O	58:BX:135:ILE:HG22	2.15	0.46
61:Ba:4:ARG:NH2	80:B5:1427:U:OP2	2.49	0.46
65:Be:24:ARG:HG2	65:Be:25:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Bl:21:ARG:NH2	82:B8:51:G:OP2	2.49	0.46
76:Bq:22:TYR:CD2	76:Bq:88:PHE:HB3	2.51	0.46
79:B2:432:G:H21	83:CV:387:ARG:NH1	2.05	0.46
79:B2:688:G:O6	88:B2:2038:OHX:N2	2.48	0.46
79:B2:1552:U:H2'	79:B2:1553:G:O4'	2.16	0.46
79:B2:1612:U:C2'	79:B2:1613:U:H5'	2.46	0.46
79:B2:1629:G:H2'	79:B2:1630:U:C6	2.51	0.46
79:B2:1655:A:H1'	80:B5:2302:G:O2'	2.15	0.46
80:B5:627:U:H4'	80:B5:1399:A:O2'	2.16	0.46
80:B5:801:A:H4'	80:B5:802:C:O5'	2.15	0.46
80:B5:1227:C:N3	80:B5:1284:C:C2	2.83	0.46
80:B5:2772:C:H1'	80:B5:2773:C:OP2	2.16	0.46
80:B5:2898:G:OP2	80:B5:2899:C:H5'	2.15	0.46
80:B5:3275:U:OP1	80:B5:3275:U:C6	2.69	0.46
1:A0:75:VAL:CG1	79:B2:1793:G:N1	2.79	0.46
1:A0:84:VAL:HG13	1:A0:85:ARG:N	2.31	0.46
3:A2:12:VAL:HA	3:A2:30:VAL:HG12	1.97	0.46
8:A7:87:THR:CG2	84:CW:36:U:H5'	2.36	0.46
10:AB:81:PHE:HD1	10:AB:82:ARG:HG3	1.81	0.46
10:AB:109:LYS:HA	10:AB:109:LYS:HD3	1.75	0.46
13:AE:3:ARG:NH2	79:B2:94:U:OP2	2.49	0.46
13:AE:42:LEU:HD22	13:AE:47:PHE:HB2	1.98	0.46
14:AF:25:LEU:HB2	25:AQ:27:GLY:HA3	1.98	0.46
14:AF:109:LYS:HD3	79:B2:1473:U:O4'	2.16	0.46
15:AG:10:ASN:CA	57:BW:80:ARG:CB	2.83	0.46
15:AG:163:THR:HA	15:AG:168:THR:HA	1.98	0.46
17:AI:9:HIS:O	17:AI:10:LYS:CB	2.64	0.46
17:AI:27:PHE:CD1	79:B2:301:A:H4'	2.51	0.46
31:AW:30:SER:O	79:B2:636:A:H4'	2.16	0.46
35:BA:208:ASP:OD1	80:B5:912:G:C2	2.58	0.46
36:BB:53:MET:HG2	36:BB:77:THR:HB	1.97	0.46
36:BB:68:HIS:CD2	36:BB:69:LYS:HG3	2.50	0.46
36:BB:81:THR:CG2	36:BB:81:THR:O	2.64	0.46
37:BC:197:ARG:NH1	80:B5:1381:A:OP1	2.49	0.46
37:BC:302:ALA:HB2	51:BQ:39:ARG:CZ	2.45	0.46
38:BD:211:LEU:HD13	38:BD:219:PHE:CA	2.46	0.46
43:BI:55:ASN:O	43:BI:131:ILE:HG12	2.16	0.46
61:Ba:42:ARG:NH2	80:B5:2799:A:H1'	2.31	0.46
64:Bd:46:THR:HG21	64:Bd:91:SER:HB2	1.98	0.46
67:Bg:60:ARG:HH21	80:B5:1616:U:C4'	2.17	0.46
69:Bi:76:ARG:C	80:B5:293:C:HO2'	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:287:G:O2'	79:B2:288:A:P	2.74	0.46
79:B2:920:U:H2'	79:B2:921:U:O4'	2.15	0.46
79:B2:1657:U:C4	88:B2:1967:OHX:N2	2.84	0.46
80:B5:1012:G:O2'	80:B5:1013:G:H5'	2.16	0.46
80:B5:1614:C:H2'	80:B5:1615:C:H6	1.81	0.46
80:B5:1655:G:H5"	80:B5:1655:G:C8	2.51	0.46
80:B5:2437:G:H5'	80:B5:2437:G:C8	2.44	0.46
80:B5:3159:C:H4'	80:B5:3395:G:C5	2.51	0.46
82:B8:10:A:H2'	82:B8:11:C:C6	2.51	0.46
82:B8:84:C:H5'	82:B8:85:G:H5'	1.97	0.46
1:A0:75:VAL:HG21	79:B2:1793:G:O6	2.16	0.45
7:A6:44:SER:OG	7:A6:59:ARG:HB2	2.16	0.45
7:A6:201:THR:HG21	7:A6:242:SER:HA	1.98	0.45
13:AE:42:LEU:HD12	13:AE:109:PHE:CB	2.45	0.45
13:AE:163:ASP:HB3	13:AE:166:SER:O	2.16	0.45
14:AF:30:PRO:O	14:AF:33:VAL:HB	2.17	0.45
20:AL:98:ASN:HD22	31:AW:79:PHE:HD2	1.59	0.45
23:AO:120:PRO:HG2	79:B2:888:U:OP1	2.17	0.45
23:AO:132:ARG:HH11	23:AO:132:ARG:HG3	1.81	0.45
27:AS:145:ARG:HB3	27:AS:146:ALA:H	1.58	0.45
34:AZ:42:LEU:O	34:AZ:46:LYS:HB2	2.16	0.45
36:BB:120:LYS:NZ	80:B5:3001:C:OP1	2.49	0.45
39:BE:162:SER:HB2	80:B5:3219:G:H1	1.79	0.45
42:BH:75:VAL:HG22	42:BH:78:MET:CE	2.46	0.45
42:BH:168:ARG:NH1	80:B5:2894:C:OP1	2.48	0.45
43:BI:156:ARG:C	43:BI:158:LYS:H	2.24	0.45
44:BJ:13:LYS:HE2	44:BJ:132:ASN:ND2	2.31	0.45
50:BP:133:HIS:CD2	80:B5:880:G:O6	2.68	0.45
54:BT:90:ASN:O	80:B5:2735:U:O2'	2.33	0.45
60:BZ:46:ILE:HD11	60:BZ:49:TYR:CE2	2.51	0.45
63:Bc:99:ASP:HB2	63:Bc:103:THR:HG23	1.97	0.45
73:Bm:78:ILE:HD11	73:Bm:83:LYS:CA	2.44	0.45
79:B2:694:U:H2'	79:B2:695:U:C5	2.52	0.45
79:B2:1541:G:C6	79:B2:1542:G:N1	2.84	0.45
80:B5:709:A:H2'	80:B5:710:A:O4'	2.16	0.45
80:B5:1225:A:C4	80:B5:1287:A:O3'	2.67	0.45
80:B5:1352:A:H1'	80:B5:1353:U:H5'	1.97	0.45
80:B5:2180:G:H2'	80:B5:2181:C:C6	2.51	0.45
80:B5:3287:U:N3	80:B5:3288:G:N7	2.64	0.45
83:CV:236:GLU:CB	83:CV:360:LEU:CD2	2.90	0.45
1:A0:50:VAL:O	1:A0:53:LEU:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:46:GLY:HA3	14:AF:166:ARG:HB2	1.98	0.45
5:A4:10:ARG:HH21	79:B2:567:A:P	2.39	0.45
7:A6:16:HIS:CD2	7:A6:20:VAL:HG22	2.52	0.45
8:A7:40:PRO:HD2	80:B5:2668:U:OP1	2.16	0.45
8:A7:51:ARG:CD	80:B5:2677:G:C3'	2.95	0.45
8:A7:79:SER:OG	84:CW:43:C:H1'	2.15	0.45
14:AF:100:ASN:O	14:AF:102:ARG:N	2.49	0.45
15:AG:133:LEU:HD11	79:B2:66:U:C1'	2.46	0.45
15:AG:137:ARG:HD3	15:AG:177:ARG:HE	1.80	0.45
15:AG:169:TYR:CZ	79:B2:73:U:H5	2.34	0.45
15:AG:215:ARG:HD3	15:AG:215:ARG:HA	1.57	0.45
18:AJ:109:LEU:HD22	18:AJ:113:VAL:HG23	1.98	0.45
20:AL:133:LYS:CD	79:B2:338:C:OP2	2.61	0.45
25:AQ:72:GLY:CA	79:B2:1608:U:H5"	2.43	0.45
33:AY:120:GLY:HA2	79:B2:85:A:C4'	2.46	0.45
36:BB:130:PHE:CE2	80:B5:3149:G:H4'	2.51	0.45
36:BB:244:ARG:HG2	36:BB:244:ARG:HH11	1.81	0.45
38:BD:261:THR:H	38:BD:264:GLN:CD	2.24	0.45
47:BM:55:ARG:NH2	47:BM:77:ARG:HA	2.31	0.45
54:BT:48:ILE:HG13	54:BT:94:GLU:HG2	1.97	0.45
61:Ba:19:LYS:HE3	80:B5:661:G:N7	2.31	0.45
70:Bj:83:ALA:HB3	82:B8:67:U:O4'	2.16	0.45
74:Bn:2:ARG:NH2	79:B2:1773:C:N4	2.52	0.45
76:Bq:39:HIS:CD2	76:Bq:40:GLU:OE2	2.70	0.45
79:B2:381:C:H1'	79:B2:756:A:C2	2.51	0.45
79:B2:491:C:H42	79:B2:496:G:H1	1.63	0.45
79:B2:1111:G:C2'	79:B2:1112:G:H5'	2.46	0.45
79:B2:1138:A:H2'	79:B2:1139:A:C8	2.51	0.45
79:B2:1519:U:H2'	79:B2:1520:U:C5	2.51	0.45
79:B2:1698:N:O2'	79:B2:1699:N:P	2.74	0.45
88:B2:2014:OHX:N6	88:B2:2071:OHX:N5	2.64	0.45
80:B5:90:C:C2'	80:B5:91:G:H5'	2.47	0.45
80:B5:174:C:H2'	80:B5:175:C:C6	2.51	0.45
80:B5:244:G:C6	80:B5:245:U:C4	3.04	0.45
80:B5:1354:G:C6	80:B5:1358:C:H5'	2.51	0.45
80:B5:2298:U:O4	80:B5:2923:U:H5	2.00	0.45
80:B5:2625:C:C4	84:CW:76:A:C8	2.80	0.45
81:B7:3:U:H2'	81:B7:4:U:C6	2.51	0.45
1:A0:97:PRO:HA	79:B2:1798:U:C5	2.51	0.45
8:A7:87:THR:HG22	84:CW:36:U:O3'	2.16	0.45
9:AA:80:THR:C	9:AA:82:GLY:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:88:LYS:HE2	9:AA:88:LYS:HA	1.97	0.45
12:AD:159:HIS:C	79:B2:1421:A:H4'	2.41	0.45
15:AG:64:LYS:O	15:AG:67:VAL:HG22	2.17	0.45
15:AG:153:VAL:HG12	15:AG:154:ARG:N	2.31	0.45
24:AP:126:VAL:CG1	24:AP:127:ARG:H	2.19	0.45
30:AV:50:TYR:HB2	30:AV:52:THR:HG22	1.99	0.45
31:AW:25:VAL:O	31:AW:62:VAL:HA	2.16	0.45
35:BA:19:HIS:CE1	80:B5:823:C:OP1	2.69	0.45
35:BA:68:LYS:HE2	80:B5:1650:G:OP1	2.17	0.45
35:BA:69:TYR:O	80:B5:1650:G:H5'	2.16	0.45
35:BA:137:ILE:HG12	35:BA:147:ARG:HG3	1.98	0.45
36:BB:380:MET:HE2	36:BB:380:MET:HB3	1.80	0.45
37:BC:78:GLY:O	37:BC:85:SER:HB3	2.15	0.45
37:BC:301:PRO:C	51:BQ:39:ARG:HH12	2.23	0.45
41:BG:99:PRO:HG2	41:BG:190:VAL:HG13	1.99	0.45
41:BG:219:ASP:O	41:BG:223:ALA:HB3	2.16	0.45
42:BH:139:ASN:OD1	42:BH:139:ASN:N	2.47	0.45
49:BO:128[A]:ARG:HD3	49:BO:128[A]:ARG:HA	1.50	0.45
50:BP:105:LYS:HB3	50:BP:107:LEU:HD13	1.97	0.45
51:BQ:8:LYS:HB2	51:BQ:8:LYS:HE3	1.53	0.45
60:BZ:46:ILE:HD13	60:BZ:49:TYR:N	2.32	0.45
60:BZ:54:THR:HG22	60:BZ:57:HIS:NE2	2.31	0.45
61:Ba:36:GLY:HA2	80:B5:40:A:OP2	2.17	0.45
71:Bk:11:PHE:O	71:Bk:14:LEU:HB2	2.16	0.45
75:Bo:67:LYS:HG3	80:B5:2793:G:OP1	2.17	0.45
79:B2:192:U:O2'	79:B2:193:U:O4'	2.33	0.45
79:B2:260:U:H5'	79:B2:261:U:H5"	1.98	0.45
79:B2:707:A:H2	79:B2:731:C:H2'	1.81	0.45
79:B2:730:G:H2'	79:B2:730:G:N3	2.31	0.45
79:B2:1217:A:H5'	79:B2:1217:A:C8	2.51	0.45
80:B5:1710:C:H2'	80:B5:1711:C:H6	1.81	0.45
80:B5:1801:U:H2'	80:B5:1802:C:C6	2.52	0.45
80:B5:1816:A:C2'	80:B5:1817:G:H5"	2.46	0.45
80:B5:2304:C:C5	80:B5:2305:G:C6	3.04	0.45
80:B5:3163:A:O2'	80:B5:3164:C:H5'	2.16	0.45
81:B7:22:A:C6	81:B7:23:A:C6	3.04	0.45
83:CV:416:SER:HA	83:CV:419:GLN:CD	2.42	0.45
2:A1:36:LYS:HE2	2:A1:43:ILE:HG21	1.99	0.45
7:A6:149:ASP:HB2	7:A6:175:ASP:HB3	1.97	0.45
8:A7:84:LYS:CG	84:CW:31:A:O5'	2.65	0.45
8:A7:89:ARG:HA	84:CW:35:A:N7	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:167:UNK:O	21:AM:127:GLY:HA2	2.16	0.45
12:AD:57:ASP:N	12:AD:57:ASP:OD1	2.50	0.45
15:AG:4:ASN:HA	15:AG:15:THR:HG22	1.98	0.45
15:AG:28:PHE:C	15:AG:30:LYS:H	2.25	0.45
16:AH:76:LYS:HE2	16:AH:76:LYS:HB3	1.86	0.45
17:AI:66:SER:HB3	17:AI:73:SER:CB	2.46	0.45
22:AN:142:GLU:HG3	22:AN:145:THR:HG23	1.98	0.45
23:AO:25:ASP:OD1	23:AO:26:THR:N	2.44	0.45
26:AR:106:THR:O	26:AR:110:VAL:HG23	2.17	0.45
29:AU:53:LYS:CB	79:B2:1345:A:H4'	2.34	0.45
30:AV:71:ARG:HG3	30:AV:83:TRP:CZ2	2.52	0.45
31:AW:90:THR:HB	31:AW:94:LEU:HD12	1.98	0.45
32:AX:108:GLY:O	32:AX:109:ARG:HG2	2.16	0.45
34:AZ:54:VAL:HG13	34:AZ:57:TYR:HD2	1.81	0.45
35:BA:85:GLY:HA3	80:B5:2554:A:C8	2.51	0.45
36:BB:20:LYS:HB2	80:B5:2991:A:P	2.56	0.45
41:BG:56:VAL:HG13	82:B8:150:G:H4'	1.98	0.45
48:BN:140:LYS:HB2	80:B5:126:U:O3'	2.17	0.45
48:BN:192:LYS:O	48:BN:196:THR:OG1	2.35	0.45
50:BP:26:PHE:HE1	50:BP:120:ASN:HA	1.81	0.45
61:Ba:55:LYS:HE2	80:B5:93:C:C2	2.51	0.45
62:Bb:2:ALA:CB	80:B5:2817:A:O2'	2.64	0.45
71:Bk:21:LYS:HA	71:Bk:21:LYS:HD3	1.69	0.45
72:Bl:15:LYS:HB2	82:B8:46:G:P	2.57	0.45
74:Bn:4:LYS:HE2	79:B2:1774:G:C3'	2.46	0.45
79:B2:196:G:O2'	79:B2:197:A:OP2	2.34	0.45
79:B2:1281:G:H2'	79:B2:1282:U:H6	1.82	0.45
79:B2:1417:A:OP1	88:B2:1949:OHX:N5	2.49	0.45
79:B2:1649:G:N7	88:B2:1928:OHX:N1	2.64	0.45
79:B2:1686:C:C4	79:B2:1687:U:C4	3.05	0.45
80:B5:92:G:H5"	80:B5:94:G:N7	2.32	0.45
80:B5:578:A:H5"	80:B5:579:G:O5'	2.15	0.45
80:B5:611:A:H4'	80:B5:611:A:OP2	2.16	0.45
80:B5:1876:U:C5'	80:B5:1876:U:C6	2.99	0.45
80:B5:2514:U:OP1	80:B5:2514:U:H6	1.99	0.45
80:B5:3242:G:N2	80:B5:3245:A:H5"	2.30	0.45
3:A2:49:ARG:HG2	3:A2:52:ASP:OD1	2.16	0.45
88:A3:102:OHX:N6	88:B2:1939:OHX:N4	2.65	0.45
5:A4:18:THR:HG21	79:B2:584:C:C1'	2.41	0.45
6:A5:108:VAL:HB	6:A5:114:VAL:HG22	1.98	0.45
8:A7:87:THR:O	8:A7:88:ARG:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:102:THR:HG23	8:A7:105:LYS:HB2	1.98	0.45
11:AC:140:ARG:NH2	11:AC:229:LEU:HD22	2.32	0.45
15:AG:53:SER:CB	79:B2:163:G:C4'	2.94	0.45
15:AG:72:ARG:HG2	15:AG:98:ARG:HA	1.99	0.45
16:AH:16:LEU:HD22	16:AH:58:LEU:HD21	1.99	0.45
18:AJ:118:LEU:HG	18:AJ:158:PHE:CZ	2.51	0.45
23:AO:24:ASN:HB3	79:B2:902:G:N7	2.32	0.45
28:AT:43:ASN:OD1	79:B2:1477:G:OP1	2.34	0.45
38:BD:126:GLU:HA	38:BD:196:ARG:HD2	1.97	0.45
38:BD:274:GLN:HB3	81:B7:61:G:O4'	2.16	0.45
43:BI:112:GLN:HA	83:CV:471:LYS:CD	2.46	0.45
43:BI:178:ARG:H	43:BI:178:ARG:HG2	1.51	0.45
43:BI:210:ILE:HA	43:BI:217:PHE:HE1	1.79	0.45
52:BR:114:LYS:HD3	80:B5:2093:A:H61	1.77	0.45
54:BT:129:LYS:NZ	80:B5:1097:G:H5'	2.31	0.45
61:Ba:2:PRO:CB	80:B5:1428:A:OP2	2.65	0.45
75:Bo:46:LYS:HD3	75:Bo:54:THR:HB	1.97	0.45
79:B2:46:A:C2	83:CV:387:ARG:CB	2.90	0.45
79:B2:231:U:O2'	79:B2:232:U:H5"	2.17	0.45
79:B2:702:G:H4'	79:B2:702:G:OP1	2.17	0.45
79:B2:794:U:O2'	79:B2:795:U:O2	2.27	0.45
79:B2:915:A:H5'	79:B2:916:U:OP2	2.17	0.45
79:B2:918:U:H2'	79:B2:919:A:H8	1.81	0.45
79:B2:1363:U:H2'	79:B2:1363:U:O2	2.16	0.45
79:B2:1646:C:H5'	80:B5:2258:U:H3	1.81	0.45
80:B5:1024:G:H5"	80:B5:1025:A:OP2	2.17	0.45
80:B5:2282:U:O2	80:B5:2310:U:H4'	2.16	0.45
80:B5:3195:U:C1'	80:B5:3196:U:OP1	2.65	0.45
2:A1:20:LYS:CE	79:B2:958:U:OP2	2.65	0.45
2:A1:63:LEU:HD23	2:A1:63:LEU:HA	1.72	0.45
9:AA:120:LEU:HD12	9:AA:121:VAL:H	1.81	0.45
9:AA:124:THR:HG22	9:AA:174:TRP:HZ2	1.82	0.45
11:AC:53:ILE:HG23	11:AC:56:ILE:HD12	1.98	0.45
13:AE:212:ASP:OD1	13:AE:214:LEU:N	2.49	0.45
14:AF:198:LEU:HA	14:AF:198:LEU:HD23	1.69	0.45
17:AI:170:SER:OG	79:B2:209:U:O3'	2.34	0.45
18:AJ:108:ARG:HH11	18:AJ:110:GLN:HG2	1.82	0.45
18:AJ:163:PRO:HG2	18:AJ:164:PHE:CD2	2.51	0.45
19:AK:25:LYS:HD3	19:AK:59:PHE:HZ	1.80	0.45
26:AR:28:PHE:CE1	79:B2:1389:C:H6	2.28	0.45
27:AS:139:LYS:HG2	79:B2:1461:C:H41	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AW:83:ILE:HG13	31:AW:117:ARG:HH12	1.80	0.45
35:BA:174:ARG:CG	80:B5:1793:C:O4'	2.64	0.45
39:BE:173:MET:HE3	39:BE:173:MET:HB3	1.45	0.45
41:BG:26:LEU:HD23	41:BG:26:LEU:HA	1.84	0.45
44:BJ:107:ASP:O	44:BJ:108:GLU:HG2	2.17	0.45
49:BO:167[B]:TYR:CD1	49:BO:167[B]:TYR:C	2.92	0.45
57:BW:102:LYS:HG2	57:BW:105:ARG:NH2	2.32	0.45
62:Bb:3:LYS:HD3	80:B5:2617:U:H3'	1.99	0.45
70:Bj:29:VAL:CG1	82:B8:111:A:N7	2.79	0.45
79:B2:87:C:O2'	79:B2:169:A:N1	2.47	0.45
79:B2:489:C:O5'	79:B2:489:C:H6	1.99	0.45
88:B2:1981:OHX:N5	88:B2:2077:OHX:N3	2.64	0.45
80:B5:958:C:C4	80:B5:960:U:H1'	2.51	0.45
80:B5:3163:A:C6	80:B5:3164:C:N4	2.85	0.45
82:B8:62:C:H4'	82:B8:63:G:O5'	2.16	0.45
83:CV:77:THR:H	83:CV:78:PRO:CD	2.29	0.45
12:AD:92:GLN:O	12:AD:92:GLN:NE2	2.46	0.45
22:AN:71:ILE:HD13	79:B2:961:U:H5"	1.99	0.45
23:AO:120:PRO:HB2	79:B2:888:U:P	2.57	0.45
28:AT:85:SER:C	28:AT:87:GLY:H	2.24	0.45
29:AU:74:GLU:HG2	79:B2:1429:G:O4'	2.17	0.45
32:AX:73:ARG:NE	32:AX:84:THR:HG22	2.27	0.45
33:AY:105:ARG:NE	79:B2:444:C:OP2	2.50	0.45
35:BA:236:GLY:HA2	80:B5:2184:U:C4'	2.47	0.45
36:BB:229:VAL:HG13	36:BB:235:THR:HG21	1.98	0.45
38:BD:63:GLN:NE2	81:B7:5:G:O2'	2.42	0.45
38:BD:265:TYR:CD2	81:B7:120:C:N3	2.85	0.45
41:BG:136:LEU:HB2	80:B5:147:U:C5'	2.46	0.45
43:BI:24:ARG:H	43:BI:24:ARG:HG3	1.43	0.45
43:BI:158:LYS:O	80:B5:2854:U:H5'	2.17	0.45
47:BM:133:LYS:HZ2	80:B5:3227:A:HO2'	1.57	0.45
49:BO:25[B]:LYS:HG3	80:B5:1175:C:H5"	1.99	0.45
50:BP:66:SER:HB2	80:B5:1448:U:H5"	1.98	0.45
51:BQ:151:ARG:HH11	51:BQ:151:ARG:HD2	1.57	0.45
54:BT:68:THR:HG22	54:BT:71:SER:N	2.27	0.45
59:BY:5:SER:C	59:BY:7:ASP:H	2.24	0.45
59:BY:83:ASP:O	59:BY:84:LYS:HB2	2.17	0.45
62:Bb:24:PRO:CD	62:Bb:25:LYS:H	2.29	0.45
70:Bj:42:ALA:O	82:B8:104:A:H4'	2.17	0.45
79:B2:51:A:H1'	83:CV:242:GLY:HA3	1.66	0.45
79:B2:68:A:O2'	79:B2:69:G:OP2	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:240:U:H4'	79:B2:240:U:OP1	2.16	0.45
79:B2:414:C:C2	83:CV:289:LEU:CD1	2.69	0.45
79:B2:1051:G:O2'	79:B2:1052:U:P	2.75	0.45
79:B2:1686:C:C2'	79:B2:1687:U:C6	2.79	0.45
79:B2:1727:G:H2'	79:B2:1728:A:C8	2.51	0.45
80:B5:183:G:H2'	80:B5:184:U:O4'	2.17	0.45
80:B5:247:C:N3	80:B5:248:U:H1'	2.32	0.45
80:B5:312:C:O2'	80:B5:313:A:H5'	2.16	0.45
80:B5:1109:U:H2'	80:B5:1110:U:O4'	2.17	0.45
80:B5:1567:U:H2'	80:B5:1568:U:C4'	2.47	0.45
80:B5:1658:G:H2'	80:B5:1659:U:C6	2.50	0.45
80:B5:2567:C:H42	80:B5:2568:C:H41	1.64	0.45
80:B5:2770:G:H2'	80:B5:2771:U:H5'	1.99	0.45
80:B5:2830:G:H5"	83:CV:526:LYS:HB2	1.99	0.45
83:CV:19:THR:CA	89:CV:602:GCP:O3A	2.59	0.45
4:A3:42:CYS:O	4:A3:45:GLU:N	2.49	0.45
4:A3:52:PHE:HB3	29:AU:82:TYR:HB3	1.99	0.45
12:AD:203:PRO:HB3	79:B2:1332:C:C5'	2.43	0.45
15:AG:211:LEU:O	15:AG:215:ARG:HB2	2.16	0.45
18:AJ:176:ASN:ND2	79:B2:511:A:P	2.88	0.45
22:AN:15:ALA:O	79:B2:959:U:C5'	2.63	0.45
32:AX:88:PRO:O	32:AX:89:ASN:HB2	2.17	0.45
33:AY:35:VAL:O	33:AY:36:SER:HB3	2.16	0.45
33:AY:105:ARG:HB2	79:B2:443:C:OP1	2.16	0.45
36:BB:325:LYS:HG2	36:BB:326:GLY:N	2.32	0.45
42:BH:92:TYR:N	42:BH:92:TYR:CD1	2.84	0.45
46:BL:26:PHE:HB2	82:B8:28:C:O3'	2.17	0.45
55:BU:29:ASP:O	55:BU:32:SER:N	2.50	0.45
60:BZ:115:LYS:HD2	80:B5:1629:U:H1'	1.98	0.45
65:Be:19:ARG:NH2	80:B5:1433:A:OP2	2.50	0.45
65:Be:80:LYS:HD3	80:B5:1386:A:OP1	2.17	0.45
70:Bj:64:MET:O	70:Bj:65:ARG:C	2.59	0.45
79:B2:72:A:C2	79:B2:73:U:C4	3.05	0.45
79:B2:782:U:C4'	79:B2:783:G:OP2	2.64	0.45
79:B2:960:U:H2'	79:B2:961:U:H6	1.81	0.45
79:B2:1082:C:H2'	79:B2:1083:G:H5'	1.98	0.45
79:B2:1190:C:C4	84:CW:31:A:OP1	2.70	0.45
79:B2:1396:U:H2'	79:B2:1397:U:C6	2.51	0.45
79:B2:1537:C:N4	88:B2:2044:OHX:N6	2.64	0.45
79:B2:1578:U:O2'	79:B2:1579:U:H5'	2.17	0.45
79:B2:1686:C:C2	79:B2:1687:U:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:138:U:H2'	80:B5:139:G:C8	2.52	0.45
80:B5:181:U:O5'	80:B5:181:U:H6	2.00	0.45
80:B5:406:G:H1'	82:B8:16:G:N2	2.32	0.45
80:B5:1103:A:H3'	80:B5:1104:G:H5'	1.99	0.45
80:B5:1204:A:H2'	80:B5:1205:A:H5'	1.98	0.45
80:B5:1229:G:O6	80:B5:1230:G:C5	2.70	0.45
80:B5:1686:U:O2	80:B5:1688:U:H1'	2.17	0.45
80:B5:3276:G:H4'	80:B5:3277:U:OP1	2.17	0.45
1:A0:38:ARG:NH2	1:A0:83:ILE:HG21	2.32	0.45
2:A1:51:GLN:HA	79:B2:871:G:C4'	2.47	0.45
7:A6:43:ILE:HD13	7:A6:60:SER:HA	1.98	0.45
8:A7:26:VAL:HG11	44:BJ:49:LYS:NZ	2.32	0.45
10:AB:55:LYS:HA	10:AB:55:LYS:HD3	1.67	0.45
10:AB:165:ARG:CZ	79:B2:946:U:C5'	2.77	0.45
12:AD:216:PRO:HB2	12:AD:217:ILE:H	1.58	0.45
15:AG:73:ILE:HD12	15:AG:75:LEU:HD21	1.98	0.45
17:AI:43:ILE:CB	79:B2:260:U:H5	2.29	0.45
17:AI:142:LYS:NZ	79:B2:187:G:N7	2.57	0.45
18:AJ:132:ARG:HG3	18:AJ:132:ARG:HH11	1.82	0.45
20:AL:40:LEU:HD22	79:B2:246:G:C2	2.52	0.45
28:AT:65:ILE:HG23	28:AT:71:VAL:HG22	1.99	0.45
31:AW:105:THR:HG23	31:AW:110:ILE:CG1	2.44	0.45
36:BB:188:ILE:HA	36:BB:191:LYS:HD2	1.98	0.45
37:BC:182:LEU:HD13	37:BC:182:LEU:HA	1.71	0.45
38:BD:95:TRP:HZ3	38:BD:156:GLY:O	2.00	0.45
38:BD:272:TYR:CE2	81:B7:22:A:N9	2.85	0.45
40:BF:179:LEU:HD22	40:BF:183:ASP:OD2	2.17	0.45
42:BH:94:TYR:CD2	42:BH:98:PRO:HA	2.52	0.45
43:BI:170:LYS:HG3	43:BI:175:ASN:HA	1.98	0.45
47:BM:50:LYS:HD3	47:BM:91:CYS:SG	2.56	0.45
48:BN:109:ARG:O	82:B8:140:G:O2'	2.25	0.45
48:BN:184:LYS:C	48:BN:186:GLY:N	2.73	0.45
51:BQ:55:SER:CB	80:B5:671:U:H5"	2.47	0.45
51:BQ:147:ARG:HH21	80:B5:670:C:P	2.40	0.45
56:BV:27:ASP:HA	56:BV:113:ALA:O	2.17	0.45
56:BV:120:LYS:H	56:BV:137:VAL:HG23	1.81	0.45
58:BX:48:SER:CB	82:B8:136:G:OP1	2.65	0.45
61:Ba:9:ARG:NH2	80:B5:1430:U:H2'	2.32	0.45
61:Ba:128:ARG:HB2	69:Bi:8:ALA:CB	2.47	0.45
66:Bf:85:PHE:CZ	66:Bf:89:LEU:HD11	2.52	0.45
69:Bi:36:ARG:HH11	80:B5:116:A:P	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:417:A:H4'	79:B2:418:G:O5'	2.17	0.45
79:B2:595:G:H2'	79:B2:596:C:C6	2.52	0.45
79:B2:725:U:H2'	79:B2:726:C:O4'	2.16	0.45
79:B2:861:U:H5'	79:B2:862:A:OP2	2.16	0.45
79:B2:1111:G:H2'	79:B2:1112:G:H5'	1.99	0.45
79:B2:1166:A:H2'	79:B2:1167:G:O4'	2.17	0.45
79:B2:1277:G:H2'	79:B2:1278:G:O4'	2.17	0.45
79:B2:1629:G:H2'	79:B2:1630:U:H6	1.80	0.45
80:B5:92:G:H5'	80:B5:93:C:H5"	1.98	0.45
80:B5:173:G:H1'	80:B5:174:C:H5'	1.98	0.45
80:B5:182:U:H4'	80:B5:182:U:OP1	2.16	0.45
80:B5:1564:U:H2'	80:B5:1565:G:H8	1.80	0.45
80:B5:1565:G:C2	80:B5:1566:A:H1'	2.51	0.45
80:B5:2681:U:O2'	80:B5:2682:C:H5'	2.16	0.45
80:B5:2949:U:C5	80:B5:2950:G:C6	3.05	0.45
82:B8:154:C:H2'	82:B8:155:A:O4'	2.16	0.45
5:A4:47:VAL:HG22	5:A4:48:THR:H	1.82	0.45
7:A6:43:ILE:HA	7:A6:59:ARG:O	2.16	0.45
7:A6:147:HIS:CE1	7:A6:179:LYS:HD2	2.52	0.45
9:AA:48:ILE:HG21	9:AA:161:PRO:HB2	1.98	0.45
10:AB:110:LEU:CD2	10:AB:213:ARG:HD2	2.46	0.45
10:AB:138:PHE:HE2	79:B2:885:G:H5'	1.82	0.45
14:AF:166:ARG:HH12	14:AF:170:GLN:HE22	1.64	0.45
15:AG:108:VAL:HG23	79:B2:154:G:C4'	2.47	0.45
16:AH:22:GLN:HA	16:AH:25:VAL:HG23	1.99	0.45
24:AP:20:VAL:HG13	24:AP:24:LYS:HD2	1.98	0.45
25:AQ:124:PRO:CA	79:B2:1585:U:OP1	2.56	0.45
26:AR:81:LYS:HE3	26:AR:81:LYS:HB2	1.72	0.45
41:BG:236:GLY:O	41:BG:237:ILE:HB	2.17	0.45
42:BH:90:MET:HE2	42:BH:179:ILE:HG22	1.97	0.45
44:BJ:20:ASN:HB3	44:BJ:126:ASP:HB2	1.98	0.45
46:BL:45:LYS:HA	80:B5:241:G:O2'	2.17	0.45
48:BN:111:ALA:HB3	80:B5:20:A:H1'	1.98	0.45
51:BQ:55:SER:HB2	80:B5:672:A:OP2	2.17	0.45
52:BR:101:VAL:HG21	80:B5:1948:G:C4'	2.45	0.45
60:BZ:46:ILE:HD12	60:BZ:47:GLU:N	2.32	0.45
61:Ba:30:GLY:N	80:B5:40:A:N7	2.65	0.45
71:Bk:27:ILE:HD12	71:Bk:39:ARG:NH2	2.32	0.45
79:B2:47:A:N1	79:B2:386:G:H1'	2.32	0.45
79:B2:139:C:H4'	79:B2:140:A:O5'	2.17	0.45
79:B2:501:U:H2'	79:B2:502:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:779:U:O2'	79:B2:780:A:H5"	2.16	0.45
79:B2:1060:U:H5"	79:B2:1061:A:OP2	2.16	0.45
79:B2:1316:G:H2'	79:B2:1317:C:H6	1.81	0.45
80:B5:183:G:C8	80:B5:183:G:H3'	2.52	0.45
80:B5:412:G:H2'	80:B5:413:U:C6	2.53	0.45
80:B5:642:U:O5'	80:B5:642:U:H6	1.99	0.45
80:B5:1494:U:H4'	80:B5:1495:U:O5'	2.16	0.45
80:B5:3228:C:HO2'	80:B5:3229:G:P	2.40	0.45
80:B5:3245:A:H2	80:B5:3246:G:C2	2.35	0.45
80:B5:3330:A:H8	80:B5:3330:A:C5'	2.29	0.45
80:B5:3330:A:C8	80:B5:3330:A:C5'	3.00	0.45
83:CV:138:TRP:CD2	83:CV:153:GLN:OE1	2.70	0.45
84:CW:16:U:C2	84:CW:60:U:O2	2.69	0.45
2:A1:25:VAL:HG13	31:AW:55:ASP:HA	1.99	0.44
88:A3:102:OHX:N5	88:B2:1939:OHX:N3	2.65	0.44
8:A7:83:LYS:CB	84:CW:30:G:H21	1.84	0.44
9:AA:109:ASN:HB2	79:B2:1294:G:O2'	2.17	0.44
9:AA:202:TYR:O	9:AA:203:PHE:CG	2.70	0.44
12:AD:11:LEU:HD12	29:AU:86:ILE:HG12	1.99	0.44
12:AD:176:LEU:HD23	79:B2:1437:U:H5'	1.98	0.44
13:AE:22:LYS:HB2	79:B2:773:C:OP1	2.17	0.44
14:AF:25:LEU:HB2	14:AF:26:ALA:H	1.68	0.44
16:AH:39:ARG:N	16:AH:40:PRO:HD2	2.32	0.44
26:AR:59:LYS:HE2	79:B2:1393:C:OP2	2.17	0.44
29:AU:35:GLU:HG3	79:B2:1383:G:O2'	2.17	0.44
30:AV:11:LEU:H	30:AV:11:LEU:HG	1.34	0.44
35:BA:50:HIS:CD2	80:B5:1795:U:O2'	2.70	0.44
35:BA:187:HIS:CG	80:B5:1794:G:C6	3.05	0.44
37:BC:322:GLN:CB	80:B5:608:A:H5'	2.47	0.44
40:BF:158:LYS:O	40:BF:203:TRP:HZ3	1.99	0.44
41:BG:59:GLN:NE2	82:B8:150:G:O2'	2.48	0.44
46:BL:80:VAL:HG12	46:BL:85:LEU:O	2.17	0.44
52:BR:162:ARG:HH22	79:B2:848:C:H4'	0.81	0.44
56:BV:48:ARG:HG2	80:B5:2339:C:OP1	2.17	0.44
57:BW:119:GLU:O	57:BW:122:ALA:HB3	2.17	0.44
60:BZ:36:HIS:H	60:BZ:37:PRO:HD3	1.82	0.44
62:Bb:14:ARG:CZ	62:Bb:18:ARG:HH11	2.29	0.44
63:Bc:22:LYS:HB2	63:Bc:94:GLU:HB2	1.99	0.44
64:Bd:77:ARG:HG3	64:Bd:90:PHE:O	2.18	0.44
65:Be:119:VAL:O	65:Be:122:PRO:HD3	2.17	0.44
69:Bi:76:ARG:O	80:B5:293:C:C2'	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Bj:21:ARG:O	82:B8:43:A:H1'	2.16	0.44
73:Bm:106:ARG:HB2	73:Bm:106:ARG:NH1	2.23	0.44
75:Bo:73:GLU:OE2	75:Bo:80:ARG:NH1	2.49	0.44
79:B2:492:A:H2'	79:B2:494:U:H5"	1.98	0.44
79:B2:1238:A:OP2	88:B2:1925:OHX:N2	2.50	0.44
88:B2:1918:OHX:N3	88:B2:2047:OHX:N1	2.65	0.44
80:B5:163:C:H42	80:B5:258:G:H1	1.65	0.44
80:B5:620:U:H5"	80:B5:621:A:O5'	2.16	0.44
80:B5:731:U:H2'	80:B5:732:C:C6	2.52	0.44
80:B5:1229:G:C5	80:B5:1230:G:C2	3.05	0.44
80:B5:1256:G:O2'	80:B5:1257:C:H5'	2.18	0.44
80:B5:2284:C:H4'	83:CV:476:GLN:HB3	1.62	0.44
80:B5:2768:U:H2'	80:B5:2769:A:C8	2.52	0.44
80:B5:2836:C:C5	80:B5:2852:C:N4	2.71	0.44
83:CV:538:LYS:HE3	84:CW:73:A:H2	1.82	0.44
3:A2:16:LEU:HB2	3:A2:27:GLN:HB2	1.99	0.44
7:A6:211:ILE:HG22	7:A6:223:TRP:HD1	1.83	0.44
8:A7:32:SER:CB	80:B5:2692:A:O4'	2.64	0.44
14:AF:109:LYS:HD2	79:B2:1473:U:C1'	2.41	0.44
15:AG:132:ARG:NH2	79:B2:68:A:H2'	2.32	0.44
15:AG:211:LEU:HD11	15:AG:215:ARG:NH2	2.32	0.44
17:AI:8:ARG:NH1	17:AI:19:ALA:O	2.49	0.44
24:AP:34:VAL:HG21	24:AP:45:PHE:HB2	1.99	0.44
25:AQ:47:LYS:NZ	25:AQ:114:ARG:HG2	2.33	0.44
26:AR:24:LEU:O	26:AR:25:THR:HG23	2.18	0.44
28:AT:135:ILE:HA	28:AT:138:GLN:HG3	1.99	0.44
30:AV:71:ARG:HB2	30:AV:83:TRP:CE2	2.51	0.44
36:BB:232:ARG:NH2	80:B5:2989:U:O2'	2.51	0.44
38:BD:91:GLY:CA	81:B7:48:U:OP1	2.64	0.44
38:BD:125:VAL:O	38:BD:125:VAL:HG12	2.17	0.44
38:BD:222:LEU:HD23	38:BD:222:LEU:HA	1.77	0.44
40:BF:150:LYS:HE2	40:BF:151:ARG:NH1	2.33	0.44
41:BG:123:GLN:C	41:BG:125:ALA:H	2.25	0.44
44:BJ:137:ARG:NH2	81:B7:44:C:P	2.80	0.44
47:BM:40:ASP:HA	53:BS:143:PHE:CE2	2.52	0.44
51:BQ:43:PRO:HG2	80:B5:729:C:OP2	2.16	0.44
79:B2:156:A:H2'	79:B2:157:A:O4'	2.17	0.44
79:B2:416:A:H4'	79:B2:417:A:OP2	2.17	0.44
79:B2:1253:U:H2'	79:B2:1254:U:H6	1.82	0.44
79:B2:1256:A:H4'	79:B2:1257:U:O5'	2.17	0.44
79:B2:1287:A:N6	79:B2:1329:A:H5'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1480:G:H3'	79:B2:1481:C:H6	1.82	0.44
79:B2:1758:U:H1'	80:B5:2255:A:N3	2.26	0.44
88:B2:1960:OHX:N3	88:B2:1962:OHX:N5	2.65	0.44
80:B5:1807:G:C6	80:B5:1808:G:N1	2.85	0.44
80:B5:1838:G:H4'	80:B5:1839:A:N3	2.32	0.44
80:B5:2174:G:H4'	80:B5:2175:U:O5'	2.17	0.44
80:B5:2872:A:O2'	80:B5:2873:U:OP1	2.35	0.44
80:B5:3279:A:H2'	80:B5:3280:U:H5'	1.99	0.44
9:AA:120:LEU:HD12	9:AA:142:PRO:O	2.17	0.44
12:AD:9:ARG:CZ	79:B2:1489:U:P	3.05	0.44
14:AF:37:GLN:CG	25:AQ:53:LEU:HD13	2.41	0.44
15:AG:31:ARG:H	15:AG:34:GLN:HG3	1.82	0.44
18:AJ:83:VAL:HG23	18:AJ:85:VAL:HG23	1.99	0.44
21:AM:41:LEU:HD23	21:AM:41:LEU:HA	1.76	0.44
21:AM:84:ASN:O	21:AM:86:VAL:HG22	2.17	0.44
24:AP:22:LEU:HD13	24:AP:26:LEU:HD11	1.99	0.44
25:AQ:14:LYS:HE2	79:B2:1584:G:C5	2.52	0.44
33:AY:29:HIS:CE1	33:AY:68:LYS:N	2.85	0.44
35:BA:21:ARG:CD	80:B5:825:U:OP1	2.63	0.44
35:BA:211:HIS:ND1	80:B5:2185:G:P	2.86	0.44
36:BB:243:HIS:CD2	80:B5:876:A:OP1	2.70	0.44
36:BB:296:THR:HG22	36:BB:297:SER:N	2.33	0.44
37:BC:131:VAL:O	37:BC:135:VAL:HG23	2.18	0.44
37:BC:271:LYS:O	37:BC:272:VAL:C	2.60	0.44
38:BD:94:ASN:CB	81:B7:47:C:P	3.05	0.44
42:BH:4:ILE:HD13	42:BH:4:ILE:HG21	1.66	0.44
42:BH:7:GLU:HA	42:BH:68:LEU:HD11	2.00	0.44
48:BN:112:ASN:ND2	80:B5:18:G:N2	2.65	0.44
53:BS:155:ARG:HD3	53:BS:172:TYR:CD2	2.52	0.44
57:BW:55:PHE:CD1	57:BW:55:PHE:C	2.95	0.44
64:Bd:46:THR:CG2	64:Bd:47:ASP:N	2.80	0.44
65:Be:126:LEU:HD23	65:Be:126:LEU:HA	1.78	0.44
69:Bi:82:ARG:CZ	80:B5:295:A:N3	2.80	0.44
79:B2:1057:U:H1'	79:B2:1058:U:H2'	1.99	0.44
79:B2:1231:U:C4	79:B2:1255:G:N2	2.85	0.44
79:B2:1393:C:H2'	79:B2:1394:G:O4'	2.18	0.44
80:B5:2224:A:H5"	80:B5:2225:U:OP2	2.17	0.44
80:B5:3085:G:H5"	80:B5:3086:A:OP1	2.17	0.44
83:CV:310:ASN:HD22	83:CV:310:ASN:H	1.64	0.44
3:A2:19:THR:O	3:A2:23:GLY:HA2	2.17	0.44
10:AB:149:GLN:NE2	79:B2:1066:C:H4'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:84:ILE:HD13	12:AD:85:VAL:N	2.32	0.44
13:AE:8:HIS:CE1	79:B2:449:C:C4’	3.00	0.44
13:AE:19:LEU:CD2	79:B2:788:A:H2’	2.44	0.44
16:AH:46:ILE:HD11	16:AH:60:ILE:HG12	1.98	0.44
16:AH:181:ILE:HD12	16:AH:181:ILE:HA	1.72	0.44
17:AI:81:VAL:HG12	17:AI:91:VAL:HG22	1.98	0.44
20:AL:20:PHE:CB	79:B2:211:U:H5”	2.48	0.44
20:AL:78:THR:HG22	20:AL:84:ILE:CG2	2.46	0.44
23:AO:37:GLU:CA	79:B2:895:G:H4’	2.44	0.44
25:AQ:135:ARG:HB3	79:B2:1581:C:C4’	2.44	0.44
31:AW:78:ARG:CD	31:AW:126:LEU:HD23	2.47	0.44
38:BD:146:LEU:HD12	80:B5:2746:A:N3	2.32	0.44
38:BD:270:LYS:CG	81:B7:2:G:H5’	2.42	0.44
40:BF:67:ARG:NH2	80:B5:517:G:H5”	2.32	0.44
43:BI:98:ARG:HH21	80:B5:1127:G:P	2.40	0.44
46:BL:26:PHE:HB2	82:B8:29:U:P	2.58	0.44
46:BL:120:GLN:C	46:BL:122:LYS:H	2.26	0.44
46:BL:126:PHE:HB2	68:Bh:115:LYS:HB3	1.98	0.44
60:BZ:28:PRO:O	60:BZ:29:HIS:C	2.60	0.44
61:Ba:19:LYS:HG3	80:B5:661:G:O6	2.17	0.44
61:Ba:44:ASN:O	61:Ba:47:LYS:O	2.36	0.44
63:Bc:103:THR:O	63:Bc:105:ALA:N	2.50	0.44
79:B2:277:U:H2’	79:B2:278:U:OP1	2.17	0.44
79:B2:1225:U:O2	79:B2:1230:A:H4’	2.16	0.44
88:B2:1922:OHX:N1	88:B2:1976:OHX:N3	2.66	0.44
80:B5:622:A:H2’	80:B5:623:U:O4’	2.17	0.44
80:B5:1456:A:H4’	80:B5:1457:U:O5’	2.17	0.44
80:B5:1815:U:O2’	80:B5:1816:A:P	2.72	0.44
84:CW:53:G:C2	84:CW:62:C:C2	3.06	0.44
1:A0:75:VAL:HG21	79:B2:1793:G:C6	2.53	0.44
1:A0:87:ARG:HH12	79:B2:1796:C:C5’	2.27	0.44
6:A5:83:UNK:O	6:A5:84:UNK:HG3	2.18	0.44
8:A7:83:LYS:HD3	84:CW:41:C:O2’	1.65	0.44
10:AB:183:GLN:O	10:AB:187:LYS:HG3	2.17	0.44
10:AB:229:MET:HA	10:AB:232:HIS:CE1	2.52	0.44
14:AF:25:LEU:H	14:AF:25:LEU:HD22	1.82	0.44
14:AF:63:GLN:HB3	14:AF:64:VAL:H	1.70	0.44
15:AG:63:MET:O	79:B2:162:A:H4’	2.18	0.44
15:AG:67:VAL:HG23	15:AG:100:ALA:H	1.83	0.44
16:AH:91:ILE:HD12	16:AH:91:ILE:HA	1.88	0.44
19:AK:29:GLN:O	19:AK:30:ALA:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AP:125:PRO:HG3	27:AS:129:TRP:CH2	2.53	0.44
28:AT:14:PHE:CZ	28:AT:132:LEU:HD23	2.50	0.44
29:AU:27:THR:HB	29:AU:88:LYS:CG	2.47	0.44
29:AU:50:LEU:CD2	29:AU:95:ALA:HB2	2.47	0.44
33:AY:11:LYS:NZ	79:B2:775:G:C6	2.85	0.44
33:AY:11:LYS:NZ	79:B2:776:G:O6	2.48	0.44
33:AY:33:ALA:CB	79:B2:533:U:H5'	2.47	0.44
35:BA:246:LEU:HD13	80:B5:2153:U:OP1	2.17	0.44
36:BB:106:TRP:CH2	36:BB:161:LEU:HD13	2.52	0.44
38:BD:277:LEU:CD1	81:B7:62:U:H5"	2.48	0.44
42:BH:90:MET:O	42:BH:143:GLU:O	2.34	0.44
42:BH:161:LEU:O	42:BH:164:ILE:HG22	2.18	0.44
44:BJ:92:ARG:HG2	44:BJ:92:ARG:NH1	2.26	0.44
46:BL:2:ALA:N	61:Ba:33:GLY:O	2.50	0.44
46:BL:119:TYR:HD1	46:BL:145:PHE:CE2	2.35	0.44
48:BN:113:LEU:HD11	82:B8:142:C:H5'	1.99	0.44
49:BO:18[B]:ARG:NH1	80:B5:1314:C:O3'	2.51	0.44
51:BQ:90:ASP:C	51:BQ:92:ARG:H	2.26	0.44
52:BR:90:PRO:CD	80:B5:1779:C:N3	2.81	0.44
52:BR:170:ARG:NH2	88:BR:201:OHX:N3	2.58	0.44
62:Bb:37:PRO:HB3	80:B5:776:U:O4'	2.18	0.44
79:B2:71:A:O3'	79:B2:72:A:H4'	2.17	0.44
79:B2:105:A:H2'	79:B2:106:U:O4'	2.17	0.44
79:B2:273:G:H1	79:B2:283:U:H3	1.65	0.44
79:B2:413:U:H2'	79:B2:414:C:C6	2.52	0.44
79:B2:489:C:N4	79:B2:497:G:H22	2.15	0.44
79:B2:960:U:H2'	79:B2:961:U:C6	2.53	0.44
79:B2:1248:C:H2'	79:B2:1249:U:C6	2.52	0.44
79:B2:1617:U:H2'	79:B2:1618:C:C6	2.52	0.44
80:B5:29:C:H4'	80:B5:62:A:H4'	2.00	0.44
80:B5:1783:U:H2'	80:B5:1784:G:C8	2.53	0.44
80:B5:1942:U:H2'	80:B5:1943:C:O4'	2.18	0.44
80:B5:2209:U:H1'	80:B5:2210:G:H5"	1.99	0.44
80:B5:2285:C:C4	83:CV:477:SER:CB	2.97	0.44
80:B5:2616:C:N3	84:CW:76:A:C1'	2.81	0.44
80:B5:3362:A:C2	80:B5:3363:U:C2	3.06	0.44
83:CV:26:ARG:HH21	83:CV:45:THR:HG23	1.82	0.44
83:CV:239:VAL:CA	83:CV:359:THR:HG22	2.47	0.44
5:A4:39:LEU:HD12	5:A4:43:ARG:NH2	2.33	0.44
8:A7:93:ARG:HG2	84:CW:34:C:C5	2.52	0.44
9:AA:11:PRO:O	9:AA:15:GLN:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:205:PHE:HA	10:AB:206:PRO:HD2	1.71	0.44
11:AC:165:VAL:HA	11:AC:201:ASN:O	2.17	0.44
15:AG:13:GLN:CD	79:B2:151:G:O2'	2.60	0.44
20:AL:91:LEU:HD23	20:AL:91:LEU:HA	1.79	0.44
23:AO:85:ALA:N	23:AO:119:THR:HG22	2.18	0.44
24:AP:12:PHE:CD1	44:BJ:85:LYS:CE	2.88	0.44
24:AP:82:ASN:CB	79:B2:1557:U:O4	2.66	0.44
28:AT:118:PRO:O	28:AT:119:LYS:HB2	2.18	0.44
29:AU:57:ARG:HB3	79:B2:1382:A:C4'	2.48	0.44
31:AW:103:ILE:HD13	31:AW:126:LEU:HB2	2.00	0.44
33:AY:47:VAL:O	33:AY:49:LYS:NZ	2.49	0.44
36:BB:13:HIS:HB2	80:B5:3044:G:O3'	2.18	0.44
38:BD:145:PHE:CE2	80:B5:2748:A:H4'	2.52	0.44
38:BD:266:ALA:CA	81:B7:1:G:H1'	2.47	0.44
42:BH:90:MET:HE2	42:BH:90:MET:HB3	1.82	0.44
43:BI:171:TRP:HE3	43:BI:178:ARG:HB3	1.82	0.44
48:BN:56:LYS:NZ	48:BN:145:ASP:OD2	2.50	0.44
51:BQ:176:ARG:HB2	80:B5:2763:U:H4'	2.00	0.44
52:BR:61:SER:CB	80:B5:3069:G:O2'	2.65	0.44
67:Bg:81:CYS:O	67:Bg:83:ASN:N	2.51	0.44
68:Bh:119:LYS:HA	68:Bh:119:LYS:HD2	1.38	0.44
70:Bj:29:VAL:HG11	82:B8:111:A:N7	2.33	0.44
71:Bk:14:LEU:HD23	71:Bk:17:ARG:HD3	1.99	0.44
71:Bk:18:ALA:C	71:Bk:20:VAL:N	2.74	0.44
79:B2:443:C:H2'	79:B2:444:C:O4'	2.18	0.44
79:B2:823:G:O2'	79:B2:824:G:OP1	2.36	0.44
79:B2:1191:U:H5'	84:CW:32:U:P	2.57	0.44
79:B2:1346:A:C8	79:B2:1370:U:O2	2.71	0.44
80:B5:422:A:C2	80:B5:2363:A:H4'	2.52	0.44
80:B5:499:G:H2'	80:B5:500:C:C6	2.52	0.44
83:CV:511:MET:SD	83:CV:521:ALA:HB2	2.58	0.44
84:CW:18:G:C6	84:CW:58:A:C6	3.05	0.44
9:AA:142:PRO:HG3	30:AV:32:VAL:HG13	1.99	0.44
9:AA:175:TYR:CD2	9:AA:199:PRO:HA	2.53	0.44
10:AB:157:GLN:OE1	79:B2:874:C:H5"	2.18	0.44
12:AD:105:MET:O	12:AD:106:LYS:C	2.61	0.44
13:AE:8:HIS:ND1	79:B2:449:C:H4'	2.33	0.44
23:AO:29:HIS:CB	23:AO:41:ARG:HA	2.48	0.44
23:AO:30:VAL:HG13	23:AO:39:ILE:O	2.18	0.44
27:AS:26:ILE:CD1	27:AS:30:TYR:HB2	2.48	0.44
27:AS:49:LYS:NZ	27:AS:79:TYR:O	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AT:28:LEU:O	28:AT:29:GLU:HB2	2.17	0.44
31:AW:24:GLN:HA	31:AW:63:VAL:O	2.18	0.44
31:AW:107:SER:HB3	79:B2:802:G:H21	1.83	0.44
33:AY:29:HIS:HE2	33:AY:34:ASN:HA	1.83	0.44
34:AZ:56:THR:HA	34:AZ:103:ARG:HH21	1.83	0.44
35:BA:105:GLY:CA	35:BA:160:SER:HB3	2.47	0.44
36:BB:365:PHE:CE1	80:B5:3378:C:H1'	2.52	0.44
38:BD:257:GLU:O	38:BD:258:LYS:HD3	2.18	0.44
38:BD:269:SER:O	81:B7:22:A:C6	2.70	0.44
43:BI:4:ARG:HA	80:B5:2829:U:OP1	2.17	0.44
46:BL:181:GLY:CA	80:B5:2780:A:O2'	2.65	0.44
48:BN:186:GLY:HA2	80:B5:30:G:OP1	2.18	0.44
52:BR:90:PRO:HG2	52:BR:93:VAL:CG2	2.47	0.44
59:BY:114:ASP:OD2	82:B8:85:G:C6	2.71	0.44
64:Bd:85:ALA:O	64:Bd:87:ASN:N	2.51	0.44
68:Bh:86:ARG:HG3	68:Bh:90:ARG:NH2	2.32	0.44
74:Bn:2:ARG:CD	79:B2:1772:C:H3'	2.30	0.44
75:Bo:106:PHE:HB2	84:CW:58:A:H3'	1.98	0.44
79:B2:186:C:H3'	79:B2:187:G:H8	1.83	0.44
79:B2:431:C:C3'	83:CV:384:ASP:O	2.66	0.44
79:B2:1171:A:H2'	79:B2:1172:G:C8	2.52	0.44
79:B2:1584:G:O2'	79:B2:1610:G:O6	2.29	0.44
79:B2:1645:G:C1'	80:B5:2259:A:N1	2.81	0.44
80:B5:892:U:H2'	80:B5:893:C:H5'	1.99	0.44
80:B5:1128:U:H2'	80:B5:1129:A:O4'	2.18	0.44
80:B5:1510:G:H8	80:B5:1510:G:O5'	2.00	0.44
80:B5:1523:U:H3'	80:B5:1607:U:O2	2.18	0.44
80:B5:1802:C:H2'	80:B5:1803:C:C6	2.53	0.44
80:B5:1819:U:O2'	80:B5:1820:U:OP1	2.26	0.44
80:B5:1864:A:H2'	80:B5:1865:A:C8	2.53	0.44
80:B5:2437:G:H2'	80:B5:2438:A:O4'	2.18	0.44
80:B5:2596:U:H2'	80:B5:2597:U:C6	2.53	0.44
1:A0:3:LYS:CA	79:B2:1792:G:H5"	2.41	0.44
1:A0:96:ALA:C	1:A0:98:PRO:HD2	2.42	0.44
7:A6:40:LYS:HA	7:A6:68:VAL:HG23	1.98	0.44
7:A6:238:ASP:OD2	7:A6:258:THR:OG1	2.32	0.44
8:A7:32:SER:HB2	80:B5:2706:G:O2'	2.13	0.44
8:A7:84:LYS:C	84:CW:30:G:C8	2.92	0.44
9:AA:20:ALA:HB3	9:AA:22:THR:HG23	2.00	0.44
9:AA:172:LEU:O	9:AA:176:LEU:HG	2.17	0.44
10:AB:27:LYS:HE3	79:B2:896:U:OP1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:81:MET:HE1	11:AC:186:LYS:HB3	1.99	0.44
12:AD:4:LEU:HD12	79:B2:1514:U:C5	2.53	0.44
13:AE:180:LEU:HD22	13:AE:192:ILE:HG22	1.99	0.44
15:AG:2:LYS:HB3	15:AG:108:VAL:HG22	1.99	0.44
15:AG:98:ARG:HD3	15:AG:99:GLY:O	2.17	0.44
15:AG:188:ARG:CZ	79:B2:283:U:C5	3.01	0.44
21:AM:74:LEU:HD23	21:AM:74:LEU:HA	1.85	0.44
24:AP:83:MET:SD	24:AP:89:MET:HE1	2.58	0.44
26:AR:113:LEU:HG	26:AR:114:GLY:N	2.31	0.44
28:AT:64:HIS:CE1	28:AT:68:ARG:CZ	3.01	0.44
35:BA:85:GLY:HA3	80:B5:2554:A:C5	2.52	0.44
38:BD:260:PHE:CD2	81:B7:121:U:H5”	2.53	0.44
41:BG:153:ILE:HD13	41:BG:166:LEU:HB3	2.00	0.44
41:BG:190:VAL:O	41:BG:190:VAL:HG12	2.18	0.44
53:BS:48:LEU:O	53:BS:49:HIS:ND1	2.48	0.44
58:BX:58:ASP:O	58:BX:62:VAL:HG23	2.18	0.44
62:Bb:22:LYS:HB2	62:Bb:23:LYS:H	1.61	0.44
63:Bc:24:THR:O	63:Bc:25:LEU:HD23	2.18	0.44
65:Be:33:ARG:HH22	80:B5:1408:G:P	2.40	0.44
66:Bf:23:ASN:ND2	80:B5:633:C:H1’	2.32	0.44
68:Bh:68:GLN:C	68:Bh:70:TYR:H	2.25	0.44
68:Bh:95:PHE:CB	80:B5:136:G:H5’	2.42	0.44
70:Bj:5:THR:HG21	80:B5:1845:G:H21	1.83	0.44
70:Bj:85:LYS:NZ	82:B8:86:U:O2	2.51	0.44
76:Bq:39:HIS:CD2	76:Bq:39:HIS:N	2.84	0.44
79:B2:281:G:H2’	79:B2:282:C:C6	2.52	0.44
79:B2:296:U:H2’	79:B2:297:U:C6	2.52	0.44
79:B2:538:A:C8	79:B2:543:C:C4	3.03	0.44
79:B2:560:U:H2’	79:B2:561:G:H8	1.83	0.44
79:B2:1334:U:H2’	79:B2:1335:U:H6	1.83	0.44
79:B2:1536:G:C6	79:B2:1538:U:H1’	2.53	0.44
79:B2:1657:U:N3	88:B2:1967:OHX:N2	2.65	0.44
80:B5:439:C:H4’	80:B5:440:A:C5’	2.46	0.44
80:B5:1753:G:H2’	80:B5:1754:G:O5’	2.17	0.44
80:B5:2427:U:H2’	80:B5:2428:U:C6	2.53	0.44
84:CW:42:C:C5’	84:CW:42:C:H6	2.31	0.44
84:CW:59:U:C6	84:CW:60:U:C5	3.05	0.44
3:A2:58:GLU:HG2	14:AF:225:ARG:CZ	2.48	0.44
4:A3:6:VAL:HG23	4:A3:7:TRP:CZ3	2.53	0.44
7:A6:16:HIS:NE2	7:A6:35:SER:OG	2.45	0.44
9:AA:17:LEU:HD23	9:AA:172:LEU:HD13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:131:GLN:O	9:AA:135:GLU:HB2	2.17	0.44
9:AA:167:LYS:HB3	9:AA:168:HIS:H	1.50	0.44
11:AC:65:GLU:O	11:AC:68:ILE:HB	2.18	0.44
20:AL:21:ASN:HD22	20:AL:31:THR:HA	1.82	0.44
22:AN:34:ILE:HD11	22:AN:67:THR:HG21	2.00	0.44
30:AV:1:MET:HE2	30:AV:13:VAL:HG22	1.99	0.44
34:AZ:39:ALA:HB1	34:AZ:70:LYS:C	2.43	0.44
35:BA:68:LYS:HD3	35:BA:70:ARG:HH21	1.83	0.44
36:BB:218:ILE:CG1	36:BB:276:THR:HG23	2.48	0.44
38:BD:181:PRO:HD2	38:BD:195:LEU:HD13	2.00	0.44
38:BD:272:TYR:CE1	81:B7:22:A:C4	3.06	0.44
41:BG:181:LYS:CD	82:B8:155:A:P	3.03	0.44
43:BI:36:LEU:N	43:BI:36:LEU:HD12	2.33	0.44
43:BI:196:PHE:CD2	80:B5:1042:U:H4'	2.53	0.44
48:BN:143:ARG:NH2	68:Bh:92:LEU:HD23	2.33	0.44
56:BV:71:LYS:HA	80:B5:2295:A:OP2	2.18	0.44
58:BX:125:ARG:HH22	80:B5:1610:G:P	2.41	0.44
62:Bb:29:TYR:O	80:B5:748:U:C4'	2.66	0.44
65:Be:55:ILE:CB	80:B5:947:G:H5'	2.43	0.44
79:B2:501:U:H2'	79:B2:502:U:C5	2.53	0.44
79:B2:542:A:O2'	79:B2:542:A:H8	2.01	0.44
79:B2:1002:G:N1	79:B2:1761:U:OP1	2.43	0.44
79:B2:1196:A:OP1	79:B2:1196:A:H3'	2.17	0.44
80:B5:238:A:H2'	80:B5:239:G:O4'	2.17	0.44
80:B5:702:C:O2	80:B5:788:C:H4'	2.18	0.44
80:B5:1151:U:H3'	80:B5:1152:G:C8	2.53	0.44
80:B5:1565:G:H1'	80:B5:1575:A:C2	2.52	0.44
80:B5:2540:A:O2'	80:B5:2541:U:H2'	2.18	0.44
80:B5:2726:C:O2	80:B5:2726:C:O5'	2.36	0.44
80:B5:3060:C:H1'	80:B5:3332:U:H1'	1.99	0.44
82:B8:47:C:H1'	82:B8:61:A:H2'	2.00	0.44
84:CW:6:G:H1	84:CW:67:C:H42	1.65	0.44
2:A1:59:CYS:O	2:A1:61:THR:HG22	2.17	0.43
4:A3:33:LYS:HD3	4:A3:34:TYR:CE2	2.53	0.43
9:AA:57:LEU:HD23	9:AA:177:LEU:HD23	2.00	0.43
13:AE:196:VAL:N	13:AE:209:HIS:O	2.43	0.43
15:AG:132:ARG:HG2	15:AG:132:ARG:HH11	1.83	0.43
22:AN:26:PHE:HE2	22:AN:59:GLY:O	2.01	0.43
23:AO:129:LYS:NZ	88:B2:2011:OHX:N1	2.65	0.43
23:AO:136:ARG:NH2	79:B2:1786:G:OP2	2.51	0.43
25:AQ:75:VAL:HB	79:B2:1610:G:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:127:LYS:C	25:AQ:128:LYS:HG2	2.41	0.43
26:AR:5:ARG:CZ	79:B2:1402:G:OP2	2.66	0.43
26:AR:45:ARG:HA	79:B2:1389:C:P	2.58	0.43
28:AT:65:ILE:HG12	28:AT:71:VAL:HG21	2.00	0.43
28:AT:79:LEU:HD11	79:B2:1481:C:N4	2.32	0.43
28:AT:138:GLN:HE21	28:AT:138:GLN:HB3	1.68	0.43
32:AX:79:ASN:HD22	32:AX:81:LYS:HB2	1.83	0.43
36:BB:95:THR:C	36:BB:97:ARG:H	2.26	0.43
36:BB:148:LEU:HD21	36:BB:196:ARG:HD3	1.98	0.43
36:BB:260:VAL:HB	80:B5:2988:C:H1'	2.00	0.43
38:BD:16:PHE:HZ	80:B5:2688:U:C4	2.31	0.43
38:BD:59:ASP:OD2	38:BD:81:HIS:CD2	2.71	0.43
38:BD:269:SER:OG	81:B7:1:G:C2	2.69	0.43
43:BI:174:THR:OG1	43:BI:175:ASN:N	2.48	0.43
51:BQ:125:ASP:OD1	51:BQ:125:ASP:N	2.49	0.43
51:BQ:158:HIS:H	51:BQ:186:VAL:CG1	2.28	0.43
51:BQ:176:ARG:NH2	61:Ba:46:ASP:OD1	2.51	0.43
52:BR:165:LYS:CD	79:B2:849:C:C2	2.78	0.43
59:BY:75:ARG:CZ	82:B8:72:A:H4'	2.48	0.43
63:Bc:40:LYS:HB3	63:Bc:101:LEU:HD11	1.99	0.43
63:Bc:96:GLY:C	63:Bc:98:SER:H	2.25	0.43
65:Be:123:LYS:O	65:Be:124:GLY:O	2.35	0.43
66:Bf:91:ALA:C	66:Bf:93:THR:N	2.76	0.43
79:B2:1165:G:C6	79:B2:1166:A:C6	3.06	0.43
79:B2:1586:A:H1'	79:B2:1611:A:N6	2.32	0.43
79:B2:1747:G:H1'	80:B5:2303:A:O2'	2.18	0.43
80:B5:261:U:H2'	80:B5:262:U:C6	2.53	0.43
80:B5:625:G:H2'	80:B5:626:U:O4'	2.18	0.43
80:B5:1230:G:H2'	80:B5:1231:A:H62	1.82	0.43
80:B5:1817:G:O2'	80:B5:1818:U:P	2.76	0.43
80:B5:2358:A:H2'	80:B5:2359:C:O4'	2.18	0.43
80:B5:3287:U:H2'	80:B5:3288:G:H5'	2.00	0.43
84:CW:16:U:H3	84:CW:59:U:H3	1.65	0.43
1:A0:60:PRO:C	1:A0:62:TYR:H	2.26	0.43
1:A0:92:ARG:HG2	79:B2:1796:C:P	2.58	0.43
4:A3:34:TYR:HE1	79:B2:1487:A:OP1	1.99	0.43
7:A6:159:ASN:ND2	7:A6:166:SER:O	2.51	0.43
8:A7:88:ARG:HG2	8:A7:91:THR:OG1	2.17	0.43
8:A7:92:ASP:OD2	84:CW:34:C:C5'	2.65	0.43
10:AB:105:PHE:CE1	10:AB:213:ARG:HA	2.53	0.43
12:AD:97:SER:O	12:AD:98:ALA:C	2.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:132:LYS:HB3	12:AD:189:MET:HG3	1.99	0.43
15:AG:53:SER:CA	79:B2:163:G:H4'	2.41	0.43
17:AI:176:SER:CB	79:B2:208:U:C5'	2.95	0.43
25:AQ:6:SER:HA	25:AQ:23:LYS:HA	2.00	0.43
25:AQ:136:SER:OG	79:B2:1587:A:OP1	2.32	0.43
26:AR:23:LYS:HB3	26:AR:34:LEU:HD11	1.99	0.43
29:AU:20:ILE:HD13	29:AU:22:ILE:HD13	1.99	0.43
31:AW:43:LYS:O	31:AW:43:LYS:HG3	2.18	0.43
31:AW:82:LYS:O	31:AW:83:ILE:HG22	2.18	0.43
35:BA:219:ILE:HD11	80:B5:2185:G:C4'	2.48	0.43
37:BC:89:ALA:O	37:BC:90:PHE:O	2.36	0.43
37:BC:177:ASP:O	37:BC:180:LYS:HB3	2.18	0.43
37:BC:220:ARG:HD2	80:B5:211:A:OP1	2.18	0.43
37:BC:338:LYS:O	37:BC:340:GLY:N	2.50	0.43
40:BF:30:ARG:NH2	80:B5:595:G:OP2	2.51	0.43
40:BF:141:TYR:O	40:BF:142:SER:C	2.61	0.43
42:BH:93:VAL:HG13	73:Bm:78:ILE:HD12	2.01	0.43
43:BI:61:SER:OG	80:B5:2854:U:OP1	2.36	0.43
44:BJ:8:PRO:HD2	44:BJ:10:ARG:HG2	1.99	0.43
46:BL:45:LYS:HB2	80:B5:241:G:H1'	1.98	0.43
46:BL:105:ASN:C	46:BL:105:ASN:OD1	2.61	0.43
47:BM:77:ARG:NH1	80:B5:562:C:OP2	2.49	0.43
49:BO:115[B]:LYS:HG2	80:B5:3178:A:C2	2.53	0.43
52:BR:28:GLU:O	52:BR:32:ILE:HG13	2.18	0.43
54:BT:129:LYS:HB2	80:B5:1098:A:P	2.57	0.43
60:BZ:92:PHE:O	60:BZ:93:LYS:C	2.61	0.43
60:BZ:135:ARG:HH11	60:BZ:135:ARG:CB	2.31	0.43
67:Bg:42:PRO:HG2	67:Bg:54:ILE:CG2	2.48	0.43
73:Bm:100:TYR:O	80:B5:2895:G:O2'	2.27	0.43
73:Bm:125:LYS:HD2	80:B5:2897:A:C5'	2.45	0.43
79:B2:187:G:C4'	79:B2:188:A:OP1	2.61	0.43
79:B2:604:A:OP2	88:B2:1989:OHX:N5	2.51	0.43
79:B2:981:U:C2'	79:B2:982:U:H5'	2.47	0.43
79:B2:1142:A:H2'	79:B2:1143:A:C8	2.53	0.43
79:B2:1149:G:H5"	79:B2:1150:G:OP1	2.18	0.43
80:B5:278:U:O5'	80:B5:278:U:H6	2.00	0.43
80:B5:507:U:H2'	80:B5:508:U:C6	2.53	0.43
80:B5:736:A:C5	80:B5:737:G:H1'	2.52	0.43
80:B5:1226:G:O4'	80:B5:1288:U:C5'	2.66	0.43
80:B5:1313:G:H2'	80:B5:1314:C:C6	2.53	0.43
80:B5:1952:G:H1	80:B5:2094:C:N4	2.09	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2140:U:O2'	80:B5:2978:U:H5'	2.18	0.43
80:B5:3287:U:N3	80:B5:3288:G:C8	2.87	0.43
83:CV:466:ILE:HG22	83:CV:486:VAL:HA	1.99	0.43
84:CW:71:G:C5	84:CW:72:C:C4	3.07	0.43
5:A4:33:ARG:HG3	18:AJ:36:LEU:O	2.18	0.43
10:AB:116:LYS:HE2	79:B2:933:A:P	2.59	0.43
10:AB:138:PHE:CZ	79:B2:885:G:OP1	2.68	0.43
11:AC:140:ARG:HB3	11:AC:221:THR:HB	1.99	0.43
15:AG:83:CYS:HG	79:B2:162:A:H5"	1.79	0.43
15:AG:95:LYS:CE	79:B2:160:C:O3'	2.66	0.43
16:AH:86:GLN:CG	16:AH:87:ASP:H	2.31	0.43
17:AI:49:ARG:NH2	79:B2:398:G:H4'	2.32	0.43
18:AJ:31:ALA:HA	18:AJ:36:LEU:HD12	2.00	0.43
18:AJ:129:ILE:HG12	18:AJ:134:ILE:HD12	2.00	0.43
26:AR:17:ILE:HG12	26:AR:58:MET:HE2	2.01	0.43
27:AS:26:ILE:HD12	27:AS:26:ILE:C	2.43	0.43
27:AS:110:ARG:HH22	44:BJ:122:ILE:HG12	1.84	0.43
28:AT:9:VAL:CG1	28:AT:14:PHE:HB2	2.48	0.43
37:BC:145:ILE:HA	37:BC:146:PRO:HD3	1.87	0.43
38:BD:99:TYR:CD1	38:BD:199:ILE:HG12	2.54	0.43
41:BG:55:TYR:CE1	80:B5:1558:A:C5	3.07	0.43
41:BG:81:THR:OG1	41:BG:82:LEU:N	2.51	0.43
41:BG:185:ARG:HD2	82:B8:155:A:C5'	2.46	0.43
42:BH:13:PRO:HG2	42:BH:16:VAL:CG1	2.49	0.43
50:BP:4:TYR:CZ	50:BP:18:ARG:HG3	2.53	0.43
54:BT:80:VAL:HG11	54:BT:85:LEU:HD12	1.99	0.43
56:BV:33:ASN:ND2	56:BV:64:LYS:HB2	2.33	0.43
59:BY:120:GLN:OE1	59:BY:126:LEU:HD23	2.17	0.43
60:BZ:34:LYS:HA	60:BZ:34:LYS:HD2	1.67	0.43
60:BZ:129:TRP:O	60:BZ:132:SER:OG	2.36	0.43
61:Ba:49:HIS:N	61:Ba:50:PRO:HD3	2.33	0.43
63:Bc:68:TYR:HD1	63:Bc:69:TYR:N	2.15	0.43
64:Bd:19:ARG:HD3	64:Bd:35:GLU:HG3	1.99	0.43
65:Be:67:SER:O	65:Be:68:PRO:C	2.60	0.43
73:Bm:127:LEU:HD23	73:Bm:127:LEU:HA	1.66	0.43
75:Bo:71:ARG:HG3	75:Bo:71:ARG:NH1	2.33	0.43
79:B2:886:U:H2'	79:B2:887:A:O4'	2.18	0.43
80:B5:174:C:H2'	80:B5:175:C:H6	1.84	0.43
80:B5:248:U:C3'	80:B5:249:U:H5'	2.48	0.43
80:B5:378:A:N7	80:B5:391:A:H2	2.16	0.43
80:B5:437:G:H5"	80:B5:438:A:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1093:A:H2	80:B5:1096:U:O2	2.01	0.43
80:B5:1225:A:H8	80:B5:1288:U:O4'	2.01	0.43
80:B5:3094:A:H2'	80:B5:3095:U:C6	2.54	0.43
80:B5:3350:C:H2'	80:B5:3351:U:C2	2.54	0.43
83:CV:83:PHE:CD1	83:CV:110:GLN:HB3	2.54	0.43
84:CW:16:U:H2'	84:CW:18:G:H5"	2.00	0.43
1:A0:98:PRO:C	79:B2:1798:U:O4	2.61	0.43
7:A6:17:ASN:HD21	79:B2:1408:G:C4'	2.30	0.43
8:A7:89:ARG:NH2	84:CW:34:C:OP1	2.52	0.43
9:AA:182:LEU:HB3	9:AA:188:LEU:HD23	2.00	0.43
14:AF:87:CYS:SG	14:AF:92:ARG:HG3	2.59	0.43
14:AF:109:LYS:O	14:AF:113:ILE:HG13	2.17	0.43
17:AI:85:PRO:HG2	79:B2:328:A:O2'	2.19	0.43
18:AJ:143:ILE:HA	18:AJ:144:PRO:HD3	1.84	0.43
18:AJ:170:GLY:HA2	18:AJ:171:ARG:HH21	1.83	0.43
19:AK:33:GLU:OE1	19:AK:33:GLU:N	2.46	0.43
21:AM:29:LYS:HA	21:AM:32:LEU:HD12	2.01	0.43
22:AN:29:SER:C	22:AN:66:ILE:HD11	2.43	0.43
25:AQ:132:LYS:NZ	79:B2:1587:A:OP1	2.52	0.43
32:AX:4:GLY:O	32:AX:5:LYS:C	2.60	0.43
36:BB:228:GLY:HA3	80:B5:1887:A:O3'	2.18	0.43
37:BC:8:VAL:O	37:BC:16:THR:HB	2.18	0.43
37:BC:205:PRO:HB3	37:BC:247:PHE:CD2	2.53	0.43
42:BH:117:PHE:CE1	42:BH:165:CYS:HB3	2.53	0.43
44:BJ:95:ASN:HA	80:B5:2673:A:H5'	2.00	0.43
49:BO:8[B]:VAL:HG12	49:BO:117[B]:ARG:HB3	1.99	0.43
49:BO:10[B]:ASP:OD2	49:BO:37[B]:ARG:NH2	2.35	0.43
51:BQ:60:PRO:HG2	51:BQ:142:GLY:C	2.43	0.43
52:BR:99:LEU:O	52:BR:103:ARG:HG3	2.18	0.43
56:BV:84:SER:HA	56:BV:94:TYR:HB3	2.00	0.43
58:BX:105:VAL:HG13	58:BX:130:TYR:CD2	2.53	0.43
59:BY:103:LYS:HD3	59:BY:103:LYS:HA	1.45	0.43
64:Bd:82:GLU:O	64:Bd:83:GLU:C	2.61	0.43
66:Bf:89:LEU:HD23	66:Bf:89:LEU:HA	1.76	0.43
67:Bg:94:LEU:HD23	67:Bg:94:LEU:HA	1.66	0.43
70:Bj:59:THR:CG2	82:B8:41:A:O2'	2.61	0.43
79:B2:273:G:H2'	79:B2:274:G:O4'	2.18	0.43
79:B2:477:A:N7	79:B2:538:A:N1	2.66	0.43
79:B2:560:U:H2'	79:B2:561:G:C8	2.54	0.43
79:B2:1002:G:C2'	79:B2:1003:A:H5'	2.48	0.43
79:B2:1497:U:OP2	88:B2:1909:OHX:N1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:32:U:O5'	80:B5:32:U:H6	2.00	0.43
80:B5:1614:C:H2'	80:B5:1615:C:C6	2.53	0.43
80:B5:2818:U:C6	80:B5:2818:U:C5'	2.95	0.43
80:B5:2836:C:O2	80:B5:2836:C:O4'	2.33	0.43
2:A1:51:GLN:CG	79:B2:870:C:O2'	2.66	0.43
3:A2:26:THR:O	3:A2:44:VAL:HG13	2.18	0.43
6:A5:131:PHE:CD2	79:B2:1253:U:OP1	2.70	0.43
7:A6:286:GLU:HA	7:A6:287:PRO:HD3	1.62	0.43
8:A7:78:ASP:HA	84:CW:43:C:H5"	2.01	0.43
10:AB:87:ARG:HE	10:AB:87:ARG:HB3	1.49	0.43
15:AG:55:GLY:C	15:AG:63:MET:HE3	2.44	0.43
15:AG:188:ARG:HD2	79:B2:284:G:H8	1.76	0.43
18:AJ:149:ARG:CZ	79:B2:765:G:C4	3.01	0.43
19:AK:7:ASP:HB3	19:AK:37:THR:HG21	2.01	0.43
21:AM:63:VAL:HB	21:AM:64:SER:H	1.54	0.43
22:AN:28:LEU:HB3	22:AN:29:SER:H	1.67	0.43
22:AN:114:ARG:HA	22:AN:114:ARG:HD3	1.69	0.43
23:AO:125:SER:CB	79:B2:927:C:O4'	2.67	0.43
24:AP:69:GLU:OE1	88:AP:201:OHX:N4	2.51	0.43
25:AQ:11:GLY:C	25:AQ:12:LYS:HG2	2.43	0.43
32:AX:5:LYS:NZ	79:B2:614:C:OP2	2.47	0.43
33:AY:33:ALA:HB2	79:B2:533:U:H4'	2.01	0.43
33:AY:37:LYS:HZ1	79:B2:522:U:P	2.42	0.43
34:AZ:40:VAL:HA	34:AZ:75:LEU:HD11	2.01	0.43
36:BB:245:GLY:CA	80:B5:1889:G:O5'	2.67	0.43
38:BD:68:THR:CG2	38:BD:70:THR:H	2.31	0.43
38:BD:214:ASP:O	38:BD:215:ASP:HB2	2.18	0.43
41:BG:162:LEU:HD23	48:BN:7:LEU:HD21	1.99	0.43
47:BM:14:LEU:H	47:BM:19:ARG:NH2	2.16	0.43
48:BN:73:ARG:HB2	48:BN:92:LEU:HD23	2.00	0.43
48:BN:153:ASP:OD1	48:BN:155:VAL:HG22	2.18	0.43
49:BO:10[A]:ASP:CG	49:BO:37[A]:ARG:HH21	2.21	0.43
56:BV:93:LEU:HD23	56:BV:93:LEU:H	1.83	0.43
59:BY:59:VAL:O	59:BY:64:LYS:HD2	2.18	0.43
60:BZ:53:VAL:HA	60:BZ:57:HIS:CD2	2.54	0.43
65:Be:9:ILE:HG12	65:Be:63:THR:HB	2.00	0.43
68:Bh:83:LYS:HA	82:B8:38:U:C5	2.53	0.43
79:B2:72:A:O2'	79:B2:73:U:H5"	2.18	0.43
79:B2:924:A:O2'	79:B2:987:G:OP1	2.36	0.43
79:B2:1796:C:H4'	79:B2:1797:A:OP2	2.18	0.43
80:B5:242:C:H2'	80:B5:243:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1152:G:H8	80:B5:1152:G:OP2	2.01	0.43
80:B5:1165:A:H2'	80:B5:1166:G:O4'	2.19	0.43
80:B5:1480:G:N2	80:B5:1872:C:C5	2.87	0.43
80:B5:1498:A:H2'	80:B5:1499:C:C6	2.54	0.43
80:B5:1753:G:C2'	80:B5:1754:G:O5'	2.66	0.43
80:B5:1758:G:H5"	80:B5:1759:C:OP2	2.18	0.43
80:B5:1764:U:H3'	80:B5:1765:U:C5'	2.47	0.43
80:B5:1895:A:O2'	80:B5:3053:G:H4'	2.18	0.43
1:A0:62:TYR:CZ	23:AO:114:ARG:HA	2.54	0.43
8:A7:110:TRP:HB3	12:AD:150:MET:CE	2.48	0.43
11:AC:227:PRO:HA	11:AC:230:TRP:CD1	2.54	0.43
12:AD:94:ARG:H	12:AD:94:ARG:HG3	1.51	0.43
14:AF:101:GLY:HA2	79:B2:1166:A:H5"	1.99	0.43
18:AJ:39:LYS:HG2	79:B2:592:A:OP1	2.19	0.43
18:AJ:173:ALA:HA	79:B2:511:A:H5'	1.99	0.43
18:AJ:175:ARG:HD2	18:AJ:176:ASN:N	2.34	0.43
20:AL:28:SER:OG	79:B2:839:U:C5'	2.64	0.43
25:AQ:143:ARG:HE	25:AQ:143:ARG:HB2	1.58	0.43
27:AS:56:LYS:HD3	27:AS:60:GLU:HG3	2.00	0.43
33:AY:52:LYS:C	33:AY:54:ALA:H	2.26	0.43
35:BA:116:VAL:CG1	35:BA:134:VAL:HG11	2.48	0.43
37:BC:23:PRO:HD2	37:BC:26:PHE:CD2	2.54	0.43
37:BC:193:LYS:HB2	37:BC:193:LYS:HE3	1.66	0.43
38:BD:207:TYR:CE2	81:B7:33:U:C6	3.04	0.43
40:BF:94:LYS:HA	80:B5:1139:G:O3'	2.19	0.43
40:BF:224:ILE:HG21	81:B7:97:A:H4'	2.00	0.43
42:BH:17:THR:O	42:BH:17:THR:OG1	2.30	0.43
42:BH:70:THR:HB	80:B5:3112:G:HO2'	1.84	0.43
46:BL:64:LYS:HD2	61:Ba:66:ALA:HB1	1.99	0.43
48:BN:179:LYS:O	80:B5:287:G:H5'	2.19	0.43
49:BO:18[A]:ARG:NH1	80:B5:1315:U:OP1	2.49	0.43
61:Ba:132:LYS:O	61:Ba:136:GLU:HG3	2.18	0.43
63:Bc:99:ASP:O	63:Bc:100:ILE:C	2.61	0.43
64:Bd:55:LEU:O	64:Bd:55:LEU:HD22	2.19	0.43
65:Be:99:ASN:O	80:B5:1389:G:H5'	2.19	0.43
68:Bh:83:LYS:O	68:Bh:84:LYS:C	2.61	0.43
79:B2:88:U:H4'	79:B2:171:A:O4'	2.19	0.43
79:B2:517:U:H3	79:B2:535:A:H61	1.65	0.43
79:B2:729:G:H2'	79:B2:729:G:N3	2.33	0.43
79:B2:1487:A:H2'	79:B2:1488:G:H8	1.83	0.43
79:B2:1600:A:O2'	79:B2:1602:C:N4	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1780:G:C2	80:B5:2263:C:O4’	2.72	0.43
80:B5:48:A:O4’	80:B5:50:U:C6	2.71	0.43
80:B5:1563:C:N3	80:B5:1576:G:O6	2.51	0.43
80:B5:2101:C:HO2’	80:B5:2102:U:P	2.39	0.43
80:B5:2900:A:N3	80:B5:3025:C:O2’	2.50	0.43
82:B8:121:U:O2’	82:B8:122:U:H5’	2.19	0.43
83:CV:388:ARG:CG	88:CV:601:OHX:N4	2.81	0.43
7:A6:201:THR:CB	7:A6:242:SER:HA	2.49	0.43
7:A6:282:SER:H	7:A6:285:ALA:HB3	1.84	0.43
8:A7:114:LYS:HB2	8:A7:114:LYS:HE3	1.84	0.43
9:AA:69:ASN:HB3	9:AA:71:GLU:OE1	2.18	0.43
9:AA:200:ASP:HA	9:AA:203:PHE:CE2	2.54	0.43
11:AC:203:LYS:HD2	79:B2:14:C:H5”	2.00	0.43
12:AD:137:VAL:HG22	12:AD:151:LYS:HG3	1.99	0.43
13:AE:19:LEU:HD11	13:AE:108:ARG:HD2	1.99	0.43
13:AE:61:VAL:HG12	13:AE:65:LEU:HD12	2.00	0.43
15:AG:2:LYS:NZ	79:B2:153:G:O3’	2.46	0.43
15:AG:63:MET:HA	15:AG:98:ARG:O	2.18	0.43
17:AI:48:THR:HG21	17:AI:54:LYS:HE3	2.00	0.43
29:AU:20:ILE:N	29:AU:95:ALA:O	2.50	0.43
32:AX:40:SER:O	32:AX:41:SER:O	2.36	0.43
35:BA:70:ARG:HA	80:B5:1650:G:O3’	2.18	0.43
38:BD:91:GLY:HA2	81:B7:48:U:P	2.59	0.43
43:BI:171:TRP:O	43:BI:174:THR:CG2	2.66	0.43
44:BJ:171:VAL:HG13	44:BJ:172:LEU:N	2.31	0.43
49:BO:15[B]:LEU:HD21	49:BO:125[B]:ARG:HG3	2.00	0.43
50:BP:52:LEU:HD13	50:BP:88:VAL:HG11	2.00	0.43
52:BR:104:ARG:HD3	80:B5:1950:U:OP1	2.18	0.43
53:BS:104:GLU:O	53:BS:104:GLU:HG3	2.14	0.43
60:BZ:16:GLY:CA	80:B5:1638:A:OP2	2.66	0.43
67:Bg:16:ARG:HH11	67:Bg:16:ARG:CG	2.29	0.43
70:Bj:14:LYS:HE2	72:Bl:51:ILE:HG13	2.01	0.43
75:Bo:45:ARG:NH1	80:B5:279:U:O4	2.51	0.43
75:Bo:73:GLU:HG3	75:Bo:80:ARG:HG2	2.01	0.43
79:B2:51:A:H2	83:CV:243:PHE:HB2	1.53	0.43
79:B2:473:A:C2’	79:B2:474:A:H5’	2.49	0.43
79:B2:719:U:O2	79:B2:719:U:H2’	2.18	0.43
79:B2:839:U:O4	79:B2:840:U:C4	2.71	0.43
79:B2:1191:U:OP1	84:CW:33:U:O4	2.36	0.43
79:B2:1720:G:O6	88:B2:1959:OHX:N5	2.52	0.43
80:B5:342:A:C2	80:B5:368:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:911:C:O2	80:B5:917:A:N1	2.51	0.43
80:B5:1237:G:C5	80:B5:1238:C:C5	3.06	0.43
80:B5:1390:A:N3	80:B5:1390:A:H5'	2.33	0.43
80:B5:1715:A:H4'	80:B5:1716:U:OP1	2.18	0.43
80:B5:2147:A:H2'	80:B5:2148:U:O4'	2.19	0.43
80:B5:2624:G:H1'	84:CW:76:A:OP1	2.18	0.43
80:B5:3238:G:H8	80:B5:3238:G:H5"	1.84	0.43
84:CW:22:G:H2'	84:CW:23:A:C8	2.54	0.43
1:A0:87:ARG:HD3	79:B2:1796:C:OP1	2.19	0.43
6:A5:109:ASP:HB2	6:A5:113:LYS:HG2	2.00	0.43
7:A6:38:ARG:HG2	7:A6:67:ILE:CG2	2.48	0.43
7:A6:198:ASN:O	7:A6:215:GLY:HA3	2.19	0.43
8:A7:51:ARG:CZ	80:B5:2677:G:N9	2.77	0.43
12:AD:127:MET:HG2	12:AD:154:ASP:OD2	2.19	0.43
13:AE:147:ILE:HD13	13:AE:169:ILE:HG13	2.00	0.43
14:AF:144:GLU:HB2	14:AF:160:VAL:O	2.19	0.43
20:AL:20:PHE:CD2	79:B2:211:U:H5"	2.54	0.43
23:AO:46:MET:CG	79:B2:899:G:O5'	2.65	0.43
23:AO:122:PRO:CA	79:B2:887:A:C1'	2.97	0.43
25:AQ:9:THR:OG1	25:AQ:20:ALA:HB3	2.19	0.43
29:AU:85:ARG:NH2	79:B2:1334:U:O2'	2.51	0.43
35:BA:250:GLN:HG2	35:BA:251:LYS:H	1.84	0.43
36:BB:186:GLY:O	36:BB:190:GLU:HB2	2.19	0.43
46:BL:59:ARG:HG3	46:BL:59:ARG:O	2.18	0.43
51:BQ:107:THR:HB	80:B5:676:G:O5'	2.18	0.43
54:BT:17:ARG:HH11	54:BT:17:ARG:CG	2.31	0.43
56:BV:120:LYS:H	56:BV:137:VAL:CG2	2.30	0.43
57:BW:61:LYS:HE3	80:B5:3369:G:OP2	2.18	0.43
57:BW:125:ALA:C	57:BW:127:LYS:H	2.26	0.43
61:Ba:34:MET:HB2	80:B5:96:G:P	2.58	0.43
63:Bc:9:SER:OG	63:Bc:12:GLN:HB3	2.18	0.43
69:Bi:55:ARG:O	69:Bi:58:ILE:HD13	2.18	0.43
79:B2:237:C:C4'	79:B2:238:U:H5'	2.49	0.43
79:B2:498:G:H2'	79:B2:499:U:C4	2.54	0.43
79:B2:712:G:C8	79:B2:712:G:H3'	2.53	0.43
79:B2:1321:A:H4'	79:B2:1322:A:O5'	2.19	0.43
79:B2:1402:G:H2'	79:B2:1403:C:C6	2.54	0.43
79:B2:1535:U:H6	79:B2:1535:U:H2'	1.60	0.43
79:B2:1681:A:H2	79:B2:1720:G:H21	1.64	0.43
80:B5:123:A:H5'	80:B5:124:U:OP2	2.18	0.43
80:B5:492:U:C2'	80:B5:493:G:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1262:G:H3'	80:B5:1262:G:C8	2.53	0.43
80:B5:1763:U:H3'	80:B5:1764:U:C5	2.54	0.43
80:B5:2192:C:H2'	80:B5:2193:U:O4'	2.18	0.43
80:B5:2796:G:H5"	80:B5:2798:C:O4'	2.19	0.43
81:B7:11:A:O2'	81:B7:13:A:H2'	2.19	0.43
81:B7:106:U:H2'	81:B7:107:C:O4'	2.19	0.43
83:CV:131:LYS:HD2	89:CV:602:GCP:N2	2.29	0.43
83:CV:464:ALA:HB1	83:CV:466:ILE:HG23	1.99	0.43
2:A1:66:PRO:HB2	79:B2:871:G:H4'	2.00	0.43
4:A3:19:ARG:HD2	4:A3:32:ARG:HD2	1.99	0.43
7:A6:195:HIS:HD2	7:A6:199:ILE:HD13	1.81	0.43
8:A7:100:THR:O	79:B2:577:G:O6	2.36	0.43
9:AA:88:LYS:HE3	26:AR:82:ASP:OD2	2.19	0.43
10:AB:70:LEU:HD12	10:AB:82:ARG:O	2.18	0.43
12:AD:134:CYS:N	12:AD:157:LEU:HD11	2.34	0.43
15:AG:69:LEU:HD12	15:AG:69:LEU:HA	1.82	0.43
19:AK:24:LYS:HB3	19:AK:24:LYS:HE2	1.74	0.43
21:AM:24:ILE:C	21:AM:26:ASP:H	2.27	0.43
21:AM:54:ARG:C	21:AM:56:GLU:H	2.21	0.43
22:AN:67:THR:C	22:AN:69:ASN:H	2.24	0.43
23:AO:38:THR:CG2	79:B2:895:G:H2'	2.29	0.43
26:AR:34:LEU:O	26:AR:38:ILE:HG22	2.18	0.43
26:AR:66:VAL:O	26:AR:69:ILE:HG12	2.19	0.43
27:AS:143:ARG:HB3	79:B2:1461:C:OP1	2.18	0.43
32:AX:29:TYR:CZ	32:AX:33:LEU:HD12	2.54	0.43
32:AX:106:GLY:O	79:B2:599:A:H4'	2.19	0.43
34:AZ:70:LYS:HD3	34:AZ:70:LYS:HA	1.69	0.43
35:BA:15:ILE:CD1	80:B5:822:G:C1'	2.97	0.43
35:BA:208:ASP:CG	80:B5:912:G:N1	2.64	0.43
38:BD:113:LEU:HD12	38:BD:113:LEU:HA	1.68	0.43
39:BE:26:ARG:O	80:B5:502:U:H4'	2.19	0.43
50:BP:30:ARG:HD3	50:BP:30:ARG:C	2.44	0.43
51:BQ:99:THR:HB	51:BQ:100:THR:H	1.55	0.43
55:BU:36:TYR:O	55:BU:40:HIS:HD2	2.01	0.43
58:BX:133:LEU:HD23	58:BX:133:LEU:HA	1.90	0.43
60:BZ:135:ARG:HH11	60:BZ:135:ARG:CG	2.32	0.43
67:Bg:22:VAL:HG12	80:B5:1668:G:H4'	2.00	0.43
76:Bq:197:PHE:HB3	76:Bq:199:SER:HA	1.99	0.43
79:B2:609:U:H4'	79:B2:610:G:O5'	2.18	0.43
79:B2:685:A:O2'	79:B2:686:C:H5'	2.19	0.43
79:B2:1491:U:H5"	79:B2:1491:U:O2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1781:A:H2'	79:B2:1782:A:O4'	2.18	0.43
80:B5:237:G:C2	80:B5:238:A:C8	3.06	0.43
80:B5:726:G:H1'	80:B5:744:A:N6	2.33	0.43
80:B5:1237:G:C6	80:B5:1238:C:C4	3.07	0.43
80:B5:1239:C:C5'	80:B5:1239:C:C6	3.02	0.43
80:B5:2213:A:H61	80:B5:2429:G:H1'	1.84	0.43
80:B5:2406:C:H2'	80:B5:2407:C:C6	2.53	0.43
80:B5:2442:G:N2	80:B5:2506:U:H3	2.17	0.43
80:B5:2585:G:N3	80:B5:2585:G:H2'	2.33	0.43
80:B5:2621:G:C5	84:CW:75:C:H6	2.33	0.43
80:B5:2882:U:H2'	80:B5:2883:U:C6	2.54	0.43
80:B5:3164:C:O2'	80:B5:3165:A:P	2.77	0.43
82:B8:157:U:O2'	82:B8:158:U:H5'	2.19	0.43
1:A0:61:GLU:O	1:A0:62:TYR:HB3	2.18	0.43
1:A0:87:ARG:NE	79:B2:1797:A:C6	2.87	0.43
3:A2:32:PHE:N	3:A2:32:PHE:CD1	2.87	0.43
4:A3:34:TYR:CE1	29:AU:63:LEU:HD22	2.53	0.43
6:A5:144:CYS:CB	6:A5:147:VAL:HG13	2.49	0.43
9:AA:64:ILE:HG12	9:AA:122:ILE:HD11	2.01	0.43
10:AB:97:LEU:HD22	10:AB:97:LEU:HA	1.65	0.43
10:AB:116:LYS:HD3	10:AB:117:TRP:CZ3	2.53	0.43
10:AB:146:GLN:CB	10:AB:149:GLN:HE22	2.32	0.43
13:AE:131:LEU:HD13	13:AE:135:GLY:HA2	2.01	0.43
14:AF:45:LYS:HD3	14:AF:45:LYS:HA	1.45	0.43
16:AH:131:PHE:CD1	16:AH:132:PRO:N	2.87	0.43
22:AN:46:THR:HG23	22:AN:49:GLN:OE1	2.17	0.43
23:AO:38:THR:O	23:AO:39:ILE:HG23	2.19	0.43
27:AS:90:ASN:O	27:AS:91:ASP:C	2.61	0.43
27:AS:134:ARG:CG	79:B2:1545:A:P	3.07	0.43
28:AT:89:ARG:HD2	79:B2:1601:G:C5	2.52	0.43
29:AU:54:GLY:C	79:B2:1344:A:O2'	2.62	0.43
32:AX:69:ARG:NH1	32:AX:116:ASP:OD2	2.52	0.43
34:AZ:75:LEU:H	34:AZ:75:LEU:HG	1.46	0.43
34:AZ:77:ARG:HH22	79:B2:1533:C:H6	1.67	0.43
35:BA:15:ILE:HD12	35:BA:15:ILE:HA	1.66	0.43
35:BA:199:THR:HG21	80:B5:914:A:N7	2.34	0.43
36:BB:275:ARG:NH1	80:B5:3045:G:O3'	2.52	0.43
37:BC:141:ARG:NH1	80:B5:1385:C:OP1	2.51	0.43
41:BG:134:TYR:CD1	41:BG:190:VAL:HG11	2.54	0.43
44:BJ:13:LYS:CE	44:BJ:132:ASN:HD21	2.32	0.43
44:BJ:21:ILE:HG13	44:BJ:37:LEU:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:96:PHE:CD2	44:BJ:160:VAL:HG23	2.54	0.43
47:BM:115:PHE:O	47:BM:119:GLN:HG3	2.19	0.43
49:BO:106[A]:GLU:H	49:BO:106[A]:GLU:HG2	1.57	0.43
50:BP:137:ASN:HB3	80:B5:2356:A:O2'	2.18	0.43
54:BT:101:CYS:HB3	80:B5:990:U:C1'	2.49	0.43
61:Ba:10:LYS:HE3	80:B5:1375:G:O6	2.19	0.43
64:Bd:26:LYS:NZ	80:B5:1456:A:N7	2.64	0.43
68:Bh:6:ALA:O	68:Bh:10:ARG:HG3	2.18	0.43
68:Bh:94:LYS:O	68:Bh:98:SER:HB2	2.19	0.43
76:Bq:186:THR:HG22	80:B5:1259:A:N7	2.33	0.43
79:B2:480:G:H22	79:B2:509:G:H1'	1.84	0.43
79:B2:542:A:H8	79:B2:543:C:H2'	1.84	0.43
79:B2:763:G:C6	79:B2:764:U:C4	3.07	0.43
79:B2:1710:U:H2'	79:B2:1711:C:C5	2.54	0.43
80:B5:178:U:H2'	80:B5:179:C:O4'	2.18	0.43
80:B5:243:G:H2'	80:B5:244:G:H8	1.83	0.43
80:B5:1597:C:H5'	80:B5:1696:A:H1'	2.01	0.43
80:B5:2257:C:O2'	80:B5:2258:U:OP1	2.34	0.43
80:B5:2436:U:C2'	80:B5:2437:G:H5"	2.48	0.43
80:B5:2957:G:H5'	80:B5:2957:G:C8	2.45	0.43
80:B5:3027:A:H2'	80:B5:3028:G:O4'	2.19	0.43
10:AB:116:LYS:CA	79:B2:931:C:H4'	2.49	0.42
11:AC:61:LEU:HA	11:AC:62:PRO:HD2	1.80	0.42
13:AE:95:THR:HG22	33:AY:16:PRO:HG2	2.00	0.42
15:AG:149:LYS:CD	79:B2:141:U:OP2	2.65	0.42
17:AI:73:SER:O	79:B2:257:A:C4'	2.67	0.42
20:AL:3:THR:CG2	20:AL:82:ARG:HH21	2.32	0.42
20:AL:127:GLN:HG3	20:AL:137:PHE:CZ	2.54	0.42
21:AM:129:GLU:O	21:AM:133:LEU:HD13	2.18	0.42
24:AP:78:THR:OG1	24:AP:79:HIS:N	2.52	0.42
25:AQ:73:GLY:HA3	79:B2:1608:U:O3'	2.19	0.42
29:AU:31:VAL:O	29:AU:35:GLU:HB2	2.18	0.42
29:AU:54:GLY:N	79:B2:1344:A:O2'	2.52	0.42
32:AX:78:LYS:HA	79:B2:434:G:OP1	2.19	0.42
35:BA:204:MET:HE2	35:BA:204:MET:HB2	1.79	0.42
38:BD:211:LEU:HD23	38:BD:211:LEU:HA	1.71	0.42
38:BD:277:LEU:N	81:B7:62:U:OP1	2.34	0.42
38:BD:279:LYS:HD3	38:BD:282:ARG:CZ	2.48	0.42
40:BF:137:GLY:HA3	40:BF:236:ILE:HB	2.01	0.42
40:BF:148:VAL:HG12	40:BF:181:ILE:HD11	2.01	0.42
41:BG:50:VAL:HG22	41:BG:52:TRP:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:87:LYS:NZ	42:BH:191:LEU:HD21	2.34	0.42
46:BL:166:ALA:HB1	61:Ba:147:LEU:HD21	2.01	0.42
51:BQ:176:ARG:HA	51:BQ:182:LYS:HB3	2.00	0.42
52:BR:5:ARG:CZ	52:BR:5:ARG:HB2	2.49	0.42
57:BW:63:ILE:HB	57:BW:64:THR:H	1.52	0.42
57:BW:97:LYS:O	57:BW:100:VAL:HG23	2.18	0.42
63:Bc:77:LEU:HD12	63:Bc:77:LEU:O	2.19	0.42
65:Be:6:HIS:HA	65:Be:7:PRO:HD2	1.85	0.42
67:Bg:67:LYS:HA	67:Bg:70:LYS:HE3	2.01	0.42
79:B2:12:U:H2'	79:B2:13:C:C6	2.54	0.42
79:B2:479:C:O2	79:B2:510:G:N2	2.52	0.42
79:B2:577:G:C8	79:B2:577:G:C3'	3.01	0.42
79:B2:978:A:H2'	79:B2:979:A:O4'	2.19	0.42
88:B2:2014:OHX:N2	88:B2:2033:OHX:N4	2.67	0.42
80:B5:735:A:H5"	80:B5:735:A:H8	1.84	0.42
80:B5:958:C:OP1	80:B5:2799:A:H3'	2.19	0.42
80:B5:1084:A:H2'	80:B5:1085:A:H5"	2.00	0.42
80:B5:1307:G:H1'	80:B5:1308:A:C8	2.54	0.42
80:B5:1620:U:H2'	80:B5:1621:A:C8	2.54	0.42
80:B5:1638:A:H2	80:B5:1736:G:N3	2.16	0.42
80:B5:1770:G:H5'	80:B5:1771:C:OP2	2.18	0.42
80:B5:2561:A:O2'	80:B5:2562:A:H8	2.02	0.42
2:A1:61:THR:HG23	2:A1:62:ILE:O	2.19	0.42
3:A2:55:VAL:HG11	14:AF:143:ARG:HD3	1.99	0.42
88:A3:102:OHX:N2	88:B2:1939:OHX:N1	2.67	0.42
8:A7:79:SER:C	84:CW:42:C:H2'	2.44	0.42
9:AA:35:PRO:HG3	30:AV:87:ARG:HH21	1.84	0.42
9:AA:185:ARG:CA	30:AV:44:ARG:HA	2.49	0.42
11:AC:67:GLN:O	11:AC:71:THR:HG23	2.19	0.42
11:AC:111:VAL:HG21	11:AC:218:ILE:HD13	2.01	0.42
14:AF:29:ILE:HG21	25:AQ:57:LEU:HD11	2.00	0.42
14:AF:43:PHE:CZ	14:AF:90:ILE:HG21	2.54	0.42
16:AH:74:GLN:O	16:AH:78:THR:HG23	2.19	0.42
20:AL:6:THR:OG1	20:AL:7:VAL:N	2.52	0.42
20:AL:57:LYS:HB2	20:AL:110:HIS:CE1	2.54	0.42
20:AL:65:SER:HB3	79:B2:114:C:O2	2.20	0.42
21:AM:125:ASN:O	21:AM:126:TRP:CD1	2.72	0.42
21:AM:129:GLU:HA	21:AM:133:LEU:HD22	2.00	0.42
24:AP:57:MET:O	24:AP:60:LEU:HB3	2.19	0.42
24:AP:108:ARG:HD2	24:AP:110:GLU:OE2	2.19	0.42
25:AQ:18:ALA:CB	25:AQ:69:VAL:HG13	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:27:GLY:HA2	25:AQ:63:ILE:O	2.19	0.42
28:AT:99:SER:N	79:B2:1504:G:OP1	2.51	0.42
30:AV:3:ASN:O	30:AV:4:ASP:C	2.62	0.42
31:AW:2:THR:HG21	79:B2:966:A:O2'	2.18	0.42
34:AZ:71:ILE:HG22	34:AZ:75:LEU:HD12	2.02	0.42
35:BA:129:ALA:O	35:BA:130:SER:C	2.62	0.42
35:BA:234:LYS:HD2	80:B5:2163:C:OP1	2.18	0.42
37:BC:52:VAL:HG13	37:BC:53:SER:O	2.19	0.42
37:BC:141:ARG:NH1	37:BC:180:LYS:HD3	2.33	0.42
38:BD:16:PHE:CD1	80:B5:2688:U:C2	3.07	0.42
40:BF:140:SER:O	40:BF:144:ILE:HG13	2.18	0.42
40:BF:185:ILE:O	40:BF:189:ILE:HG22	2.19	0.42
43:BI:81:GLY:C	43:BI:83:ASP:N	2.77	0.42
44:BJ:116:TYR:O	44:BJ:117:ASP:C	2.62	0.42
46:BL:6:ASN:HB2	61:Ba:48:TYR:CE1	2.54	0.42
49:BO:127[B]:LEU:HD11	53:BS:168:PRO:HG3	2.00	0.42
52:BR:110:ARG:O	52:BR:110:ARG:HG2	2.19	0.42
55:BU:36:TYR:O	55:BU:40:HIS:CD2	2.72	0.42
60:BZ:61:LYS:O	60:BZ:65:ARG:HG2	2.19	0.42
60:BZ:121:ARG:HH11	60:BZ:121:ARG:HG3	1.85	0.42
61:Ba:14:HIS:C	61:Ba:15:VAL:O	2.55	0.42
66:Bf:89:LEU:HA	66:Bf:90:PRO:HD3	1.87	0.42
70:Bj:15:SER:HG	80:B5:817:A:H8	1.65	0.42
79:B2:538:A:H8	79:B2:543:C:N4	2.16	0.42
79:B2:781:U:O2'	79:B2:782:U:H6	2.02	0.42
79:B2:839:U:C2'	79:B2:840:U:H5'	2.47	0.42
79:B2:1150:G:O2'	79:B2:1151:A:OP2	2.33	0.42
88:B2:1985:OHX:N4	88:B2:2063:OHX:N6	2.67	0.42
80:B5:83:U:H2'	80:B5:84:U:O4'	2.18	0.42
80:B5:630:A:H2'	80:B5:631:U:C6	2.54	0.42
80:B5:999:G:C6	80:B5:1000:C:N4	2.87	0.42
80:B5:1014:U:H2'	80:B5:1015:U:H5"	2.00	0.42
80:B5:1471:U:H2'	80:B5:1472:U:C6	2.54	0.42
80:B5:1525:G:C6	80:B5:1526:U:O4	2.72	0.42
80:B5:1661:G:H2'	80:B5:1662:G:C8	2.53	0.42
80:B5:1668:G:H2'	80:B5:1669:C:O4'	2.19	0.42
80:B5:1912:U:N3	80:B5:2122:G:OP2	2.46	0.42
80:B5:1940:G:N2	80:B5:3362:A:H8	2.17	0.42
80:B5:2289:U:H2'	80:B5:2290:C:C6	2.55	0.42
80:B5:3174:A:H2'	80:B5:3175:U:H5'	2.01	0.42
1:A0:70:LYS:HZ1	79:B2:931:C:P	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:98:GLU:HG3	7:A6:99:THR:O	2.19	0.42
7:A6:266:ASP:HA	7:A6:267:PRO:HA	1.89	0.42
8:A7:89:ARG:O	84:CW:35:A:C5	2.72	0.42
12:AD:61:GLU:O	12:AD:63:GLY:N	2.52	0.42
12:AD:151:LYS:HD2	79:B2:1424:A:OP1	2.19	0.42
14:AF:94:THR:CB	14:AF:114:ILE:HG13	2.48	0.42
15:AG:66:GLY:CA	79:B2:1681:A:H8	2.31	0.42
17:AI:43:ILE:HD13	79:B2:260:U:OP1	2.19	0.42
18:AJ:143:ILE:HG21	79:B2:768:C:H1'	2.01	0.42
20:AL:87:ARG:HH21	20:AL:104:HIS:CE1	2.38	0.42
20:AL:132:SER:O	20:AL:134:THR:N	2.52	0.42
23:AO:84:ARG:HG3	23:AO:119:THR:HA	2.01	0.42
23:AO:125:SER:CB	79:B2:926:A:H2	2.31	0.42
23:AO:125:SER:HB3	23:AO:126:THR:H	1.45	0.42
27:AS:27:LYS:N	27:AS:57:ARG:HH21	2.16	0.42
28:AT:126:GLU:CD	28:AT:126:GLU:N	2.76	0.42
32:AX:5:LYS:HA	32:AX:6:PRO:HD2	1.81	0.42
32:AX:23:ARG:HD2	32:AX:26:GLU:OE2	2.18	0.42
33:AY:37:LYS:NZ	79:B2:522:U:OP1	2.50	0.42
33:AY:120:GLY:HA2	79:B2:85:A:H4'	2.00	0.42
35:BA:34:TYR:O	35:BA:35:ALA:C	2.62	0.42
35:BA:199:THR:HG1	80:B5:913:A:H5'	1.82	0.42
36:BB:81:THR:HB	36:BB:321:PHE:HA	2.01	0.42
36:BB:139:GLN:C	36:BB:141:GLY:N	2.77	0.42
36:BB:169:THR:CG2	36:BB:171:LEU:HG	2.49	0.42
36:BB:258:ALA:C	36:BB:259:HIS:CG	2.97	0.42
37:BC:258:LEU:HD12	37:BC:258:LEU:HA	1.91	0.42
39:BE:145:LEU:HD23	39:BE:145:LEU:HA	1.71	0.42
39:BE:175:LYS:HD2	47:BM:111:ALA:HA	2.00	0.42
41:BG:136:LEU:HA	41:BG:136:LEU:HD23	1.72	0.42
49:BO:122[B]:GLN:NE2	80:B5:1181:U:H2'	2.34	0.42
60:BZ:36:HIS:N	60:BZ:37:PRO:HD3	2.33	0.42
60:BZ:81:LEU:HD22	60:BZ:81:LEU:HA	1.48	0.42
63:Bc:10:ILE:HD12	63:Bc:10:ILE:HA	1.91	0.42
66:Bf:16:TYR:CG	66:Bf:25:PRO:HA	2.54	0.42
69:Bi:77:LEU:CD2	80:B5:294:U:O3'	2.67	0.42
79:B2:233:C:O2'	79:B2:234:G:P	2.76	0.42
79:B2:506:A:OP1	79:B2:506:A:H3'	2.18	0.42
79:B2:794:U:H3'	79:B2:794:U:OP2	2.20	0.42
79:B2:1151:A:H2'	79:B2:1152:A:C8	2.54	0.42
79:B2:1318:G:O2'	79:B2:1319:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1370:U:O2'	79:B2:1371:A:OP2	2.20	0.42
79:B2:1645:G:H1'	80:B5:2259:A:H61	1.84	0.42
80:B5:79:U:H2'	80:B5:80:G:C8	2.54	0.42
80:B5:1813:A:O2'	80:B5:1816:A:N3	2.47	0.42
80:B5:2373:A:N7	80:B5:2867:C:H1'	2.34	0.42
80:B5:2511:A:C3'	80:B5:2512:C:H5"	2.49	0.42
80:B5:2590:A:C2'	80:B5:2591:A:O5'	2.67	0.42
82:B8:59:A:H3'	82:B8:59:A:OP2	2.19	0.42
83:CV:494:GLY:HA2	83:CV:508:VAL:HB	2.00	0.42
84:CW:24:G:C2	84:CW:25:C:C2	3.07	0.42
8:A7:31:SER:OG	8:A7:33:LYS:HB2	2.19	0.42
11:AC:130:ILE:O	11:AC:134:LEU:HD22	2.19	0.42
13:AE:141:THR:O	13:AE:143:ASP:N	2.53	0.42
14:AF:157:ARG:HB2	14:AF:224:ASN:OD1	2.19	0.42
15:AG:15:THR:HG23	79:B2:152:U:C2'	2.49	0.42
17:AI:147:ALA:H	17:AI:149:SER:HB3	1.84	0.42
17:AI:195:ARG:HA	17:AI:195:ARG:HD3	1.85	0.42
18:AJ:134:ILE:HA	18:AJ:158:PHE:HA	2.00	0.42
35:BA:116:VAL:CG1	35:BA:126:LEU:HB2	2.47	0.42
36:BB:4:ARG:HH11	36:BB:4:ARG:HG3	1.85	0.42
37:BC:50:TYR:HB3	80:B5:337:G:H21	1.84	0.42
38:BD:63:GLN:HB3	38:BD:65:ILE:HD11	2.01	0.42
38:BD:187:THR:CG2	38:BD:189:GLU:HB2	2.45	0.42
46:BL:122:LYS:HG3	68:Bh:119:LYS:O	2.19	0.42
48:BN:6:TYR:CE2	69:Bi:40:VAL:HG22	2.55	0.42
48:BN:20:ARG:HG2	48:BN:20:ARG:H	1.67	0.42
48:BN:49:ARG:HB3	48:BN:50:ARG:H	1.68	0.42
49:BO:60[B]:LYS:H	49:BO:60[B]:LYS:HG2	1.58	0.42
52:BR:138:LEU:O	52:BR:142:ILE:HG13	2.19	0.42
54:BT:49:GLN:HE21	80:B5:2755:C:C2'	2.28	0.42
59:BY:4:GLN:N	80:B5:229:G:OP1	2.32	0.42
60:BZ:46:ILE:HD12	60:BZ:47:GLU:C	2.45	0.42
61:Ba:54:GLY:H	80:B5:94:G:P	2.41	0.42
62:Bb:3:LYS:HE3	80:B5:2618:G:C4'	2.48	0.42
63:Bc:61:MET:HE3	63:Bc:62:LEU:HG	2.01	0.42
67:Bg:53:GLY:HA2	80:B5:1738:C:O3'	2.19	0.42
70:Bj:2:GLY:O	70:Bj:7:SER:HB3	2.20	0.42
70:Bj:64:MET:O	70:Bj:68:LYS:HB3	2.19	0.42
79:B2:40:A:H2'	79:B2:41:A:O4'	2.19	0.42
79:B2:68:A:H3'	79:B2:68:A:H8	1.85	0.42
79:B2:328:A:H2'	79:B2:329:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:993:A:H4'	79:B2:1777:G:O2'	2.19	0.42
79:B2:1560:U:O2	79:B2:1560:U:O4'	2.37	0.42
88:B2:1907:OHX:N5	88:B2:2081:OHX:N4	2.67	0.42
80:B5:536:U:H1'	80:B5:559:A:C8	2.55	0.42
80:B5:1243:G:C6	80:B5:1244:A:C2	3.07	0.42
80:B5:2207:A:H2'	80:B5:2208:A:O4'	2.18	0.42
80:B5:2509:U:H2'	80:B5:2510:U:C5'	2.45	0.42
80:B5:3006:A:H2'	80:B5:3007:U:O4'	2.19	0.42
81:B7:55:A:H2'	81:B7:56:A:O4'	2.20	0.42
82:B8:126:A:H8	82:B8:126:A:OP2	2.02	0.42
1:A0:87:ARG:CZ	79:B2:1797:A:C4	3.02	0.42
7:A6:42:LEU:O	7:A6:61:PHE:HD1	2.03	0.42
8:A7:43:ASP:CG	8:A7:45:SER:HB2	2.44	0.42
8:A7:79:SER:OG	84:CW:43:C:C2'	2.68	0.42
8:A7:83:LYS:O	84:CW:29:G:C2	2.70	0.42
10:AB:140:ILE:O	10:AB:210:ILE:HA	2.20	0.42
16:AH:131:PHE:HB3	16:AH:132:PRO:HD3	2.01	0.42
19:AK:88:PRO:C	19:AK:90:THR:H	2.26	0.42
20:AL:28:SER:O	20:AL:29:LYS:HB3	2.19	0.42
23:AO:84:ARG:HA	23:AO:119:THR:HG22	2.00	0.42
23:AO:129:LYS:CA	79:B2:990:C:H4'	2.45	0.42
26:AR:6:THR:HA	79:B2:1315:U:O2'	2.20	0.42
26:AR:57:LEU:O	26:AR:61:ILE:HG13	2.19	0.42
30:AV:21:ASN:OD1	31:AW:23:ARG:NH2	2.53	0.42
35:BA:200:ARG:NE	80:B5:2187:G:O6	2.52	0.42
35:BA:211:HIS:ND1	80:B5:2184:U:O3'	2.52	0.42
36:BB:67:PHE:O	36:BB:70:ARG:HB2	2.19	0.42
38:BD:223:PHE:O	38:BD:224:LYS:C	2.62	0.42
40:BF:32:ALA:O	40:BF:35:ALA:HB3	2.19	0.42
43:BI:47:PRO:HB3	43:BI:171:TRP:CZ2	2.55	0.42
46:BL:133:PRO:O	46:BL:135:ALA:N	2.52	0.42
48:BN:49:ARG:NH2	80:B5:149:U:OP1	2.22	0.42
49:BO:156[A]:LEU:HB3	80:B5:3243:A:N7	2.34	0.42
51:BQ:90:ASP:OD1	80:B5:785:G:C6	2.72	0.42
55:BU:17:VAL:HB	55:BU:63:VAL:HG23	2.01	0.42
60:BZ:17:ARG:HG2	67:Bg:73:SER:O	2.19	0.42
66:Bf:45:LEU:HA	66:Bf:71:VAL:HG12	2.02	0.42
71:Bk:17:ARG:O	71:Bk:18:ALA:CB	2.67	0.42
79:B2:67:A:C2	79:B2:69:G:H1'	2.54	0.42
79:B2:431:C:O2	83:CV:386:SER:CA	2.63	0.42
79:B2:460:A:H3'	79:B2:461:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:648:G:C4	79:B2:687:G:N2	2.88	0.42
79:B2:720:G:O2'	79:B2:721:U:H5'	2.18	0.42
79:B2:1340:U:N3	79:B2:1378:U:H4'	2.34	0.42
79:B2:1370:U:H4'	79:B2:1371:A:H5'	2.01	0.42
79:B2:1511:U:H2'	79:B2:1512:G:H8	1.83	0.42
88:B2:1907:OHX:N2	88:B2:2081:OHX:N6	2.68	0.42
88:B2:1907:OHX:N2	88:B2:2081:OHX:N4	2.66	0.42
88:B2:1960:OHX:N6	88:B2:1962:OHX:N5	2.67	0.42
88:B2:1960:OHX:N4	88:B2:1962:OHX:N1	2.67	0.42
80:B5:1014:U:H3'	80:B5:1015:U:H5'	2.01	0.42
80:B5:1553:U:H1'	80:B5:1554:U:H5	1.84	0.42
80:B5:1561:G:O2'	80:B5:1562:C:OP2	2.26	0.42
80:B5:1880:U:H2'	80:B5:1881:A:O4'	2.19	0.42
80:B5:2286:U:C5	83:CV:478:LYS:HA	2.51	0.42
80:B5:2518:C:C2	80:B5:2590:A:C2	3.06	0.42
80:B5:2534:G:OP2	80:B5:2534:G:H8	2.03	0.42
80:B5:2537:U:HO2'	80:B5:2538:U:P	2.38	0.42
80:B5:2667:A:H8	80:B5:2667:A:C5'	2.28	0.42
80:B5:2953:U:H5"	80:B5:2954:U:OP2	2.20	0.42
83:CV:322:LEU:HD21	83:CV:333:LEU:HD11	2.02	0.42
84:CW:2:C:H2'	84:CW:3:C:C6	2.54	0.42
2:A1:20:LYS:HE3	79:B2:958:U:OP2	2.19	0.42
4:A3:54:LYS:HZ3	29:AU:80:GLU:HG3	1.84	0.42
5:A4:31:LYS:HG2	79:B2:477:A:OP1	2.19	0.42
10:AB:59:ASP:HA	10:AB:62:LYS:HZ2	1.84	0.42
10:AB:97:LEU:HD12	10:AB:232:HIS:NE2	2.35	0.42
11:AC:137:ILE:HG12	11:AC:138:PRO:HD2	2.01	0.42
12:AD:142:LEU:O	12:AD:144:ALA:N	2.44	0.42
15:AG:147:LEU:O	15:AG:148:SER:OG	2.34	0.42
16:AH:131:PHE:O	16:AH:133:THR:OG1	2.27	0.42
17:AI:26:LYS:HE2	79:B2:396:G:O6	2.19	0.42
17:AI:157:GLU:O	17:AI:160:PHE:HB2	2.19	0.42
18:AJ:49:LEU:HD22	18:AJ:53:ARG:HG3	2.01	0.42
20:AL:130:PRO:HD2	79:B2:115:G:C6	2.53	0.42
24:AP:108:ARG:HG2	24:AP:109:PRO:HD2	2.00	0.42
25:AQ:53:LEU:N	25:AQ:53:LEU:HD23	2.35	0.42
25:AQ:139:GLN:OE1	79:B2:1579:U:H1'	2.20	0.42
26:AR:5:ARG:N	26:AR:5:ARG:HD3	2.35	0.42
29:AU:28:SER:HB2	29:AU:112:VAL:HA	2.02	0.42
29:AU:77:LYS:H	29:AU:77:LYS:HG2	1.66	0.42
31:AW:80:ASN:ND2	31:AW:124:LYS:HG2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:144:ARG:H	32:AX:144:ARG:HG3	1.66	0.42
35:BA:61:VAL:HG22	35:BA:63:PHE:CE1	2.55	0.42
36:BB:37:ARG:O	36:BB:186:GLY:HA3	2.20	0.42
36:BB:49:TYR:O	36:BB:79:VAL:HG23	2.19	0.42
36:BB:236:LYS:HD3	80:B5:2340:U:P	2.59	0.42
37:BC:156:LEU:C	37:BC:158:SER:H	2.26	0.42
38:BD:270:LYS:O	38:BD:271:LYS:HD3	2.20	0.42
41:BG:54:GLU:O	41:BG:58:VAL:HG23	2.19	0.42
41:BG:122:LYS:C	41:BG:124:ASP:H	2.28	0.42
44:BJ:92:ARG:HH11	44:BJ:92:ARG:CG	2.25	0.42
44:BJ:128:TYR:CZ	80:B5:2672:G:N3	2.87	0.42
48:BN:44:ARG:HB3	48:BN:47:LYS:HB3	2.02	0.42
49:BO:65[A]:ASN:ND2	80:B5:2988:C:OP1	2.35	0.42
52:BR:165:LYS:CD	79:B2:824:G:N2	2.83	0.42
54:BT:54:HIS:CG	54:BT:55:LYS:N	2.87	0.42
54:BT:93:VAL:H	54:BT:93:VAL:HG22	1.55	0.42
62:Bb:9:ALA:O	62:Bb:10:HIS:C	2.63	0.42
63:Bc:26:GLY:HA3	80:B5:1730:G:N1	2.24	0.42
66:Bf:12:LYS:HD3	66:Bf:12:LYS:HA	1.84	0.42
75:Bo:38:GLN:NE2	80:B5:284:A:OP2	2.51	0.42
79:B2:1489:U:H2'	79:B2:1490:C:OP1	2.19	0.42
79:B2:1590:G:OP2	88:B2:2020:OHX:N3	2.52	0.42
79:B2:1644:C:O2	80:B5:2255:A:C6	2.72	0.42
80:B5:339:C:OP1	80:B5:1380:G:O2'	2.30	0.42
80:B5:567:G:H2'	80:B5:568:G:C8	2.55	0.42
80:B5:926:A:H2'	80:B5:927:C:C6	2.55	0.42
80:B5:1867:A:H2'	80:B5:1868:G:C8	2.54	0.42
80:B5:2656:A:C8	80:B5:2658:G:C8	3.07	0.42
80:B5:2910:A:H5"	80:B5:2910:A:H8	1.85	0.42
80:B5:2935:U:O2	80:B5:2935:U:H2'	2.19	0.42
80:B5:3158:G:C5	80:B5:3159:C:C5	3.08	0.42
80:B5:3294:A:H2'	80:B5:3295:A:O4'	2.19	0.42
84:CW:18:G:C6	84:CW:57:G:C6	3.07	0.42
8:A7:34:LYS:HZ2	80:B5:2693:C:C5'	2.18	0.42
8:A7:61:ILE:HD12	8:A7:62:ARG:N	2.35	0.42
10:AB:90:GLU:HG2	10:AB:223:PHE:HZ	1.84	0.42
12:AD:28:GLU:OE1	12:AD:28:GLU:HA	2.18	0.42
13:AE:22:LYS:NZ	79:B2:772:G:P	2.93	0.42
14:AF:95:ASN:O	14:AF:98:MET:HG2	2.20	0.42
15:AG:76:LEU:HD22	15:AG:92:ARG:HB3	2.01	0.42
15:AG:79:LYS:O	15:AG:80:ASN:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AH:117:THR:HG23	16:AH:120:ALA:H	1.85	0.42
16:AH:159:VAL:HG23	16:AH:163:ASP:OD1	2.20	0.42
17:AI:50:GLY:C	79:B2:397:A:H4'	2.44	0.42
19:AK:16:PHE:HD2	19:AK:76:LEU:HD23	1.84	0.42
19:AK:54:TYR:N	19:AK:54:TYR:CD1	2.86	0.42
20:AL:53:TYR:CD1	20:AL:53:TYR:C	2.97	0.42
20:AL:103:ARG:NH1	79:B2:307:G:H5"	2.35	0.42
22:AN:46:THR:HG23	22:AN:49:GLN:CD	2.45	0.42
23:AO:126:THR:O	23:AO:127:ARG:C	2.62	0.42
24:AP:40:ARG:CZ	79:B2:1556:A:H2'	2.50	0.42
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:HH11	1.67	0.42
30:AV:74:GLN:C	30:AV:76:ASP:N	2.77	0.42
33:AY:35:VAL:HG11	33:AY:40:LEU:HD11	2.01	0.42
33:AY:105:ARG:CB	79:B2:443:C:OP1	2.68	0.42
35:BA:84:THR:HB	80:B5:2554:A:C2	2.53	0.42
35:BA:191:LEU:CG	80:B5:1795:U:OP1	2.68	0.42
37:BC:93:MET:HE2	37:BC:93:MET:H	1.85	0.42
38:BD:265:TYR:CE1	81:B7:120:C:C2'	2.91	0.42
40:BF:169:ILE:HD13	40:BF:181:ILE:HA	2.01	0.42
41:BG:187:GLY:C	41:BG:189:LEU:H	2.28	0.42
41:BG:241:LYS:HD3	80:B5:2584:G:H21	1.84	0.42
42:BH:31:ARG:HB2	42:BH:82:VAL:HA	2.02	0.42
42:BH:161:LEU:HD13	42:BH:179:ILE:HG21	2.02	0.42
42:BH:166:ARG:O	42:BH:167:VAL:HB	2.20	0.42
42:BH:191:LEU:HD13	42:BH:191:LEU:HA	1.89	0.42
44:BJ:55:ARG:NH2	84:CW:47:U:C2'	2.76	0.42
46:BL:61:PRO:C	46:BL:62:THR:HG23	2.45	0.42
49:BO:61[A]:ALA:CB	49:BO:66[A]:LYS:HG3	2.48	0.42
49:BO:85[B]:ARG:HD3	49:BO:90[B]:HIS:ND1	2.33	0.42
51:BQ:170:ARG:HD2	61:Ba:56:VAL:O	2.20	0.42
54:BT:92:ARG:HD2	80:B5:2736:A:OP1	2.19	0.42
59:BY:50:ILE:HD12	59:BY:70:ILE:HG12	2.02	0.42
67:Bg:24:LYS:O	80:B5:1695:U:C4'	2.62	0.42
70:Bj:72:ARG:HD2	82:B8:94:C:H3'	2.02	0.42
71:Bk:18:ALA:O	71:Bk:20:VAL:N	2.53	0.42
79:B2:36:C:H2'	79:B2:37:U:O4'	2.20	0.42
79:B2:429:G:O2'	83:CV:276:ARG:NE	2.52	0.42
79:B2:429:G:C4'	83:CV:276:ARG:HD2	2.24	0.42
79:B2:505:A:H2'	79:B2:506:A:OP1	2.19	0.42
79:B2:681:U:O4	79:B2:682:C:N4	2.52	0.42
79:B2:778:G:C5	79:B2:783:G:N1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:805:U:H2'	79:B2:806:A:H5"	2.02	0.42
79:B2:1201:G:H22	79:B2:1600:A:H5'	1.85	0.42
79:B2:1244:A:O2'	79:B2:1245:G:OP1	2.29	0.42
79:B2:1456:C:O2	79:B2:1456:C:O4'	2.38	0.42
79:B2:1595:U:H5	79:B2:1596:C:C5	2.37	0.42
80:B5:806:A:H5"	80:B5:936:A:H61	1.85	0.42
80:B5:863:C:H2'	80:B5:864:G:O4'	2.18	0.42
80:B5:1483:G:C8	80:B5:1485:G:C8	3.07	0.42
80:B5:1815:U:H1'	80:B5:1816:A:O5'	2.19	0.42
80:B5:2985:C:H2'	80:B5:2986:U:C6	2.55	0.42
80:B5:3227:A:N3	80:B5:3227:A:O4'	2.51	0.42
80:B5:3329:U:H2'	80:B5:3330:A:H5"	2.00	0.42
80:B5:3393:U:H2'	80:B5:3394:U:O4'	2.20	0.42
82:B8:92:A:H2'	82:B8:93:U:O4'	2.19	0.42
9:AA:69:ASN:HB3	9:AA:71:GLU:OE2	2.19	0.42
10:AB:132:ASP:HB2	10:AB:221:PRO:HB3	2.02	0.42
12:AD:195:SER:O	12:AD:196:ARG:HB3	2.20	0.42
13:AE:3:ARG:NH1	79:B2:93:A:O4'	2.52	0.42
15:AG:115:LYS:NZ	57:BW:74:LYS:C	2.78	0.42
15:AG:119:GLN:HG3	15:AG:120:GLU:N	2.35	0.42
16:AH:133:THR:O	16:AH:134:GLU:HB2	2.19	0.42
19:AK:81:ASN:HB3	21:AM:37:VAL:HG11	2.00	0.42
23:AO:124:ASP:O	79:B2:927:C:H1'	2.19	0.42
24:AP:18:ARG:O	27:AS:95:GLY:HA3	2.20	0.42
25:AQ:127:LYS:HA	25:AQ:134:ALA:HA	2.02	0.42
26:AR:107:SER:HA	26:AR:110:VAL:HG23	2.01	0.42
29:AU:109:GLU:HA	29:AU:110:PRO:HD2	1.78	0.42
31:AW:105:THR:CG2	79:B2:804:A:O2'	2.68	0.42
32:AX:13:ARG:HA	32:AX:16:ARG:HD3	2.01	0.42
36:BB:346:THR:O	36:BB:348:ARG:N	2.53	0.42
38:BD:33:ARG:O	38:BD:34:LYS:C	2.63	0.42
38:BD:269:SER:O	81:B7:22:A:N1	2.52	0.42
40:BF:102:VAL:HG12	40:BF:130:ILE:CD1	2.50	0.42
40:BF:106:LEU:HA	40:BF:106:LEU:HD23	1.84	0.42
53:BS:50:LYS:HE3	81:B7:76:A:H2	1.82	0.42
56:BV:18:PRO:CD	80:B5:1898:G:H1'	2.50	0.42
57:BW:127:LYS:HA	57:BW:130:SER:OG	2.20	0.42
61:Ba:110:GLY:O	61:Ba:128:ARG:O	2.37	0.42
62:Bb:15:LYS:O	80:B5:969:C:H5'	2.19	0.42
72:Bl:7:PHE:CE2	82:B8:113:U:C4	3.08	0.42
72:Bl:10:LYS:HD3	80:B5:1833:G:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:Bm:77:ILE:HG13	73:Bm:78:ILE:N	2.33	0.42
73:Bm:99:CYS:HB3	73:Bm:115:CYS:HB3	2.01	0.42
73:Bm:110:CYS:SG	73:Bm:112:LYS:HB2	2.59	0.42
75:Bo:49:GLY:HA3	80:B5:278:U:P	2.60	0.42
79:B2:812:A:OP1	79:B2:814:A:C8	2.73	0.42
79:B2:1151:A:H2'	79:B2:1152:A:H8	1.85	0.42
79:B2:1686:C:C4	79:B2:1687:U:C5	3.08	0.42
88:B2:2014:OHX:N4	88:B2:2071:OHX:N1	2.68	0.42
80:B5:815:G:C6	80:B5:906:A:C4	3.08	0.42
80:B5:2294:U:C2	80:B5:2297:U:C5	3.07	0.42
80:B5:3030:G:H4'	83:CV:436:ARG:HD3	2.02	0.42
83:CV:131:LYS:CG	89:CV:602:GCP:O6	2.46	0.42
1:A0:76:SER:O	1:A0:80:HIS:N	2.53	0.42
14:AF:69:PHE:CD2	25:AQ:50:GLU:HG2	2.54	0.42
16:AH:74:GLN:O	16:AH:75:THR:C	2.63	0.42
16:AH:75:THR:OG1	16:AH:76:LYS:N	2.52	0.42
18:AJ:30:LEU:HA	18:AJ:30:LEU:HD23	1.80	0.42
18:AJ:92:LYS:HA	18:AJ:92:LYS:HE3	2.01	0.42
18:AJ:127:VAL:HG12	18:AJ:131:GLN:NE2	2.35	0.42
19:AK:3:MET:HE3	19:AK:8:ARG:NH1	2.35	0.42
23:AO:20:TYR:CE2	79:B2:917:U:OP1	2.64	0.42
23:AO:24:ASN:O	23:AO:25:ASP:HB2	2.19	0.42
25:AQ:82:ARG:HH12	25:AQ:114:ARG:HB3	1.84	0.42
32:AX:23:ARG:HH11	32:AX:23:ARG:HG3	1.85	0.42
32:AX:50:LYS:HB2	79:B2:435:C:H5'	2.02	0.42
34:AZ:59:TYR:HE1	34:AZ:61:SER:CB	2.31	0.42
35:BA:30:ARG:NH2	35:BA:33:ASP:OD1	2.51	0.42
35:BA:242:ARG:HH11	35:BA:242:ARG:HG3	1.84	0.42
36:BB:361:THR:HG23	36:BB:371:GLN:O	2.20	0.42
37:BC:22:LEU:HA	37:BC:23:PRO:HD3	1.68	0.42
38:BD:68:THR:HG22	38:BD:70:THR:H	1.85	0.42
38:BD:92:LEU:HA	38:BD:92:LEU:HD23	1.68	0.42
38:BD:124:GLU:O	38:BD:125:VAL:HB	2.20	0.42
40:BF:103:LEU:HD23	40:BF:103:LEU:HA	1.66	0.42
41:BG:136:LEU:HB2	80:B5:147:U:H5"	2.01	0.42
44:BJ:132:ASN:H	44:BJ:132:ASN:HD22	1.65	0.42
44:BJ:132:ASN:HD22	44:BJ:132:ASN:N	2.16	0.42
46:BL:46:ILE:HA	46:BL:46:ILE:HD13	1.45	0.42
46:BL:99:HIS:HB2	80:B5:156:G:C1'	2.49	0.42
49:BO:128[B]:ARG:HD3	49:BO:128[B]:ARG:HA	1.75	0.42
53:BS:34:GLU:O	53:BS:38:LYS:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BS:106:LEU:HD13	53:BS:106:LEU:C	2.45	0.42
54:BT:54:HIS:NE2	80:B5:2724:U:H4'	2.34	0.42
55:BU:42:LYS:NZ	80:B5:1686:U:OP1	2.38	0.42
64:Bd:46:THR:HG21	64:Bd:91:SER:CB	2.50	0.42
65:Be:38:ILE:CD1	80:B5:640:U:C5	3.01	0.42
79:B2:71:A:C2	79:B2:72:A:C2	3.08	0.42
79:B2:568:G:O2'	79:B2:569:C:H5'	2.20	0.42
79:B2:709:C:N4	79:B2:730:G:C4	2.87	0.42
79:B2:1570:A:H2'	79:B2:1571:C:O4'	2.20	0.42
79:B2:1586:A:H2'	79:B2:1587:A:C8	2.54	0.42
79:B2:1642:G:O6	88:B2:1901:OHX:N6	2.53	0.42
79:B2:1740:A:O2'	79:B2:1741:U:H5'	2.19	0.42
80:B5:283:G:O6	80:B5:304:G:H1'	2.20	0.42
80:B5:748:U:H2'	80:B5:749:C:C6	2.55	0.42
80:B5:806:A:O2'	80:B5:807:A:H5'	2.19	0.42
80:B5:1565:G:N1	80:B5:1574:C:C2	2.83	0.42
80:B5:2285:C:H5"	83:CV:475:ARG:HD3	1.55	0.42
82:B8:156:U:HO2'	82:B8:157:U:P	2.43	0.42
7:A6:123:ILE:HD11	7:A6:156:VAL:HG23	2.01	0.42
7:A6:222:LEU:HD23	7:A6:234:LEU:CD1	2.49	0.42
8:A7:33:LYS:HE3	80:B5:2692:A:P	2.60	0.42
8:A7:46:LYS:CG	80:B5:2678:A:H4'	2.42	0.42
9:AA:20:ALA:O	9:AA:21:ASN:HB2	2.19	0.42
9:AA:30:GLN:NE2	9:AA:149:LEU:HD13	2.35	0.42
11:AC:125:ILE:O	11:AC:129:ILE:HG13	2.19	0.42
12:AD:5:ILE:CG2	12:AD:9:ARG:HB3	2.50	0.42
15:AG:27:PHE:C	15:AG:30:LYS:HG2	2.45	0.42
15:AG:32:ILE:HD12	15:AG:100:ALA:HB1	2.02	0.42
17:AI:37:LYS:O	17:AI:59:ARG:HA	2.20	0.42
23:AO:81:VAL:HG13	23:AO:115:ILE:CG2	2.50	0.42
25:AQ:58:ASP:OD1	25:AQ:59:LYS:N	2.53	0.42
25:AQ:75:VAL:CG2	79:B2:1610:G:OP1	2.65	0.42
26:AR:8:THR:HG21	79:B2:1330:G:N2	2.35	0.42
27:AS:10:SER:OG	27:AS:11:PHE:N	2.52	0.42
27:AS:33:THR:C	27:AS:35:ILE:H	2.28	0.42
29:AU:96:PRO:HG2	29:AU:99:ILE:HG22	2.02	0.42
33:AY:105:ARG:O	33:AY:109:LYS:HG3	2.20	0.42
34:AZ:65:LEU:HB3	34:AZ:71:ILE:CD1	2.50	0.42
36:BB:39:LYS:HE2	36:BB:39:LYS:HB3	1.69	0.42
36:BB:226:PHE:HB2	80:B5:3307:A:OP1	2.20	0.42
37:BC:119:ARG:HH21	80:B5:695:C:P	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:236:ILE:O	40:BF:240:VAL:HG23	2.20	0.42
41:BG:124:ASP:HA	80:B5:120:G:H22	1.85	0.42
41:BG:181:LYS:HG2	82:B8:154:C:C5'	2.46	0.42
42:BH:20:ILE:HG13	47:BM:7:VAL:HG22	2.01	0.42
42:BH:129:ARG:O	42:BH:132:VAL:HG13	2.20	0.42
46:BL:67:ARG:H	46:BL:67:ARG:HG3	1.40	0.42
47:BM:38:ILE:HA	47:BM:44:VAL:HG12	2.02	0.42
49:BO:156[A]:LEU:HD13	80:B5:3243:A:C8	2.54	0.42
52:BR:43:LYS:CE	80:B5:1765:U:H5'	2.50	0.42
53:BS:16:THR:OG1	53:BS:19:VAL:N	2.52	0.42
54:BT:68:THR:HG21	80:B5:2736:A:C2'	2.49	0.42
63:Bc:85:PHE:CD1	80:B5:1728:G:N1	2.85	0.42
67:Bg:52:GLN:CG	80:B5:1738:C:O4'	2.65	0.42
67:Bg:76:TYR:CZ	80:B5:1806:A:H5'	2.55	0.42
72:Bl:48:LYS:HA	80:B5:1493:G:OP1	2.20	0.42
79:B2:420:A:C2	83:CV:289:LEU:CD2	3.03	0.42
79:B2:717:C:H42	79:B2:720:G:N2	2.09	0.42
79:B2:814:A:C5	79:B2:816:G:C8	3.07	0.42
79:B2:1337:A:H5'	79:B2:1338:C:OP2	2.20	0.42
80:B5:275:U:H2'	80:B5:276:U:C6	2.54	0.42
80:B5:971:G:H2'	80:B5:972:A:O4'	2.20	0.42
80:B5:1049:C:H2'	80:B5:1050:U:C6	2.55	0.42
80:B5:1190:A:C8	80:B5:1193:A:H1'	2.55	0.42
80:B5:1226:G:O4'	80:B5:1288:U:C3'	2.65	0.42
80:B5:1449:A:C2	80:B5:2356:A:C4	3.08	0.42
80:B5:2441:A:N1	80:B5:2507:C:C2	2.87	0.42
80:B5:2827:U:O2	80:B5:2827:U:H2'	2.20	0.42
80:B5:2896:A:H8	80:B5:2896:A:C5'	2.32	0.42
84:CW:4:C:C4	84:CW:69:G:O6	2.73	0.42
2:A1:66:PRO:CB	79:B2:871:G:H4'	2.49	0.41
3:A2:29:ARG:HG3	3:A2:39:THR:OG1	2.19	0.41
4:A3:41:GLN:OE1	4:A3:41:GLN:N	2.51	0.41
8:A7:132:ALA:O	8:A7:133:GLU:C	2.63	0.41
9:AA:63:ILE:HG12	30:AV:36:VAL:HG22	2.01	0.41
9:AA:172:LEU:HD13	9:AA:176:LEU:HD11	2.01	0.41
10:AB:168:ILE:O	10:AB:172:LEU:HG	2.19	0.41
11:AC:230:TRP:CE2	31:AW:68:ARG:HB3	2.55	0.41
12:AD:70:THR:OG1	12:AD:71:LEU:N	2.51	0.41
13:AE:108:ARG:HH12	79:B2:788:A:P	2.43	0.41
13:AE:114:ILE:HB	13:AE:118:GLU:OE1	2.20	0.41
15:AG:95:LYS:CE	79:B2:161:U:P	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AH:17:GLU:HG2	16:AH:46:ILE:HB	2.01	0.41
16:AH:104:ARG:HB2	16:AH:105:THR:H	1.45	0.41
16:AH:129:LEU:HD21	16:AH:172:VAL:HG11	2.02	0.41
17:AI:87:ASN:HB3	17:AI:90:LEU:HD12	2.02	0.41
19:AK:50:THR:HB	19:AK:55:VAL:O	2.19	0.41
19:AK:72:GLY:O	19:AK:76:LEU:HD22	2.20	0.41
21:AM:131:ASP:HB2	21:AM:132:GLU:CD	2.45	0.41
25:AQ:73:GLY:N	79:B2:1608:U:O3'	2.52	0.41
27:AS:109:LEU:HG	27:AS:113:LEU:CD1	2.50	0.41
34:AZ:97:LYS:HG3	34:AZ:98:GLN:H	1.84	0.41
42:BH:89:LYS:HG2	42:BH:145:VAL:HG22	2.02	0.41
43:BI:74:LYS:HD3	43:BI:74:LYS:HA	1.75	0.41
44:BJ:24:GLY:HA2	80:B5:2680:A:H2	1.81	0.41
46:BL:45:LYS:HB2	80:B5:241:G:C1'	2.49	0.41
46:BL:99:HIS:CD2	80:B5:156:G:C4	3.08	0.41
48:BN:60:VAL:CG2	82:B8:142:C:O3'	2.68	0.41
48:BN:179:LYS:HB3	80:B5:287:G:C5'	2.49	0.41
51:BQ:90:ASP:O	51:BQ:92:ARG:N	2.53	0.41
51:BQ:161:LYS:N	51:BQ:161:LYS:HD2	2.35	0.41
56:BV:87:ARG:HH22	56:BV:137:VAL:CG2	2.31	0.41
60:BZ:95:VAL:CG1	60:BZ:110:ALA:HA	2.50	0.41
60:BZ:103:GLN:HA	60:BZ:104:PRO:HD2	1.95	0.41
60:BZ:108:GLU:O	60:BZ:112:LYS:HG3	2.20	0.41
64:Bd:9:THR:OG1	64:Bd:76:SER:HB3	2.20	0.41
64:Bd:19:ARG:HD3	64:Bd:35:GLU:HG2	2.02	0.41
68:Bh:85:THR:HG22	68:Bh:88:LEU:HB2	2.02	0.41
74:Bn:16:LYS:HB3	74:Bn:16:LYS:HE2	1.75	0.41
75:Bo:71:ARG:HG3	75:Bo:71:ARG:HH11	1.85	0.41
76:Bq:6:GLU:C	76:Bq:6:GLU:CD	2.87	0.41
79:B2:68:A:C8	79:B2:68:A:H3'	2.55	0.41
79:B2:143:G:C2	79:B2:173:A:N3	2.88	0.41
79:B2:488:G:N7	79:B2:498:G:N2	2.68	0.41
79:B2:992:A:N3	79:B2:992:A:O4'	2.53	0.41
79:B2:1013:A:H2'	79:B2:1014:G:O4'	2.19	0.41
79:B2:1449:U:O4	88:B2:1907:OHX:N1	2.53	0.41
79:B2:1535:U:H1'	79:B2:1536:G:C2	2.55	0.41
88:B2:1985:OHX:N1	88:B2:2063:OHX:N5	2.68	0.41
80:B5:314:U:H2'	80:B5:315:C:C6	2.55	0.41
80:B5:1560:G:O2'	80:B5:1561:G:P	2.76	0.41
80:B5:1648:A:H2'	80:B5:1649:U:O4'	2.19	0.41
80:B5:1690:C:H2'	80:B5:1691:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2777:G:C8	80:B5:2777:G:C5'	3.02	0.41
80:B5:3288:G:O2'	80:B5:3289:G:P	2.78	0.41
82:B8:6:U:H2'	82:B8:7:U:C6	2.54	0.41
83:CV:558:LEU:HD12	83:CV:558:LEU:HA	1.96	0.41
84:CW:67:C:C2	84:CW:68:C:C2	3.08	0.41
4:A3:5:ASN:HB3	4:A3:7:TRP:NE1	2.35	0.41
7:A6:116:ASP:HB2	7:A6:117:LYS:HD2	2.01	0.41
8:A7:117:LEU:HD21	8:A7:121:LYS:HD2	2.03	0.41
11:AC:242:ILE:HG22	11:AC:243:TYR:CE2	2.55	0.41
12:AD:162:GLN:HG2	79:B2:1333:C:H4'	1.99	0.41
13:AE:22:LYS:HB2	79:B2:773:C:OP2	2.20	0.41
13:AE:106:LYS:HG3	13:AE:108:ARG:NH2	2.34	0.41
15:AG:62:PRO:CB	79:B2:162:A:C5'	2.96	0.41
17:AI:106:ALA:O	17:AI:109:PHE:N	2.53	0.41
23:AO:25:ASP:HB2	79:B2:901:G:P	2.41	0.41
24:AP:47:ARG:HD3	79:B2:1555:A:OP1	2.19	0.41
27:AS:47:CYS:HB3	27:AS:54:LEU:CD1	2.50	0.41
31:AW:6:VAL:HG13	31:AW:29:PRO:HD2	2.02	0.41
31:AW:28:ARG:HA	31:AW:29:PRO:HA	1.73	0.41
31:AW:30:SER:HB2	31:AW:61:ILE:CD1	2.50	0.41
31:AW:111:MET:CE	31:AW:116:ALA:HA	2.50	0.41
33:AY:8:ARG:HA	79:B2:780:A:HO2'	1.79	0.41
35:BA:69:TYR:CZ	80:B5:2558:U:C4	3.08	0.41
35:BA:187:HIS:HB3	80:B5:1794:G:N9	2.34	0.41
35:BA:217:GLN:O	35:BA:218:HIS:HB3	2.18	0.41
35:BA:239:ALA:C	80:B5:2155:G:H5'	2.44	0.41
35:BA:247:ARG:NE	79:B2:1013:A:C5'	2.83	0.41
38:BD:122:VAL:O	38:BD:124:GLU:N	2.44	0.41
42:BH:13:PRO:HG2	42:BH:16:VAL:HG13	2.02	0.41
42:BH:29:GLY:HA3	42:BH:82:VAL:HG13	2.01	0.41
46:BL:157:ARG:NH2	61:Ba:146:GLU:OE2	2.52	0.41
49:BO:54[B]:TYR:O	49:BO:57[B]:PHE:HB3	2.20	0.41
50:BP:32:THR:HG21	50:BP:87:SER:HB3	2.02	0.41
52:BR:146:LYS:O	52:BR:149:ALA:N	2.53	0.41
56:BV:125:LEU:HB3	56:BV:126:TRP:CD1	2.55	0.41
56:BV:125:LEU:HD12	56:BV:125:LEU:HA	1.84	0.41
58:BX:40:LEU:HB3	58:BX:41:ALA:H	1.58	0.41
67:Bg:96:GLU:OE2	80:B5:2555:G:N2	2.52	0.41
69:Bi:26:ILE:HD12	80:B5:155:G:O3'	2.20	0.41
69:Bi:76:ARG:HA	69:Bi:76:ARG:HE	1.85	0.41
71:Bk:5:ILE:HG22	71:Bk:54:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:73:U:C2	79:B2:74:U:O2	2.73	0.41
79:B2:81:G:C6	79:B2:82:U:N3	2.88	0.41
79:B2:240:U:H4'	79:B2:241:U:OP2	2.20	0.41
79:B2:686:C:H2'	79:B2:687:G:C8	2.55	0.41
79:B2:901:G:C6	79:B2:902:G:C6	3.08	0.41
79:B2:1645:G:O2'	80:B5:2259:A:N6	2.52	0.41
79:B2:1780:G:C2'	80:B5:2262:A:C2'	2.98	0.41
80:B5:173:G:N1	80:B5:246:U:C2	2.88	0.41
80:B5:726:G:C8	80:B5:726:G:C5'	3.01	0.41
80:B5:956:U:H2'	80:B5:957:C:C6	2.55	0.41
80:B5:1366:A:C2	80:B5:1367:G:C4	3.08	0.41
80:B5:2179:C:H4'	80:B5:2180:G:OP2	2.20	0.41
3:A2:64:ARG:HB3	3:A2:65:ARG:H	1.66	0.41
5:A4:34:ALA:O	5:A4:37:ARG:HB3	2.20	0.41
8:A7:32:SER:HB2	80:B5:2692:A:O2'	2.20	0.41
8:A7:93:ARG:HE	8:A7:93:ARG:HB3	1.80	0.41
9:AA:202:TYR:H	9:AA:202:TYR:HD1	1.68	0.41
10:AB:29:TRP:CZ2	10:AB:45:LYS:HB3	2.55	0.41
10:AB:72:ASP:OD2	23:AO:114:ARG:HD2	2.20	0.41
10:AB:111:ARG:HD3	10:AB:111:ARG:HA	1.93	0.41
10:AB:137:ILE:HG22	10:AB:215:VAL:CG2	2.50	0.41
12:AD:66:ILE:O	12:AD:70:THR:HG23	2.20	0.41
14:AF:104:ASN:ND2	79:B2:1166:A:C4'	2.83	0.41
15:AG:107:ALA:HB3	79:B2:154:G:C3'	2.51	0.41
15:AG:159:ARG:HD3	79:B2:77:U:O2	1.89	0.41
16:AH:51:VAL:HG23	16:AH:53:GLY:N	2.34	0.41
21:AM:55:GLY:HA2	21:AM:85:LYS:CD	2.50	0.41
23:AO:26:THR:HG21	23:AO:97:GLY:C	2.45	0.41
25:AQ:122:ARG:HA	79:B2:1584:G:C5'	2.45	0.41
26:AR:84:TYR:C	26:AR:85:VAL:HG23	2.45	0.41
28:AT:12:GLN:CD	79:B2:1529:C:O2'	2.58	0.41
28:AT:49:ASP:O	28:AT:51:GLU:N	2.54	0.41
29:AU:106:ILE:CG1	29:AU:107:THR:H	2.28	0.41
30:AV:16:LYS:HG2	30:AV:21:ASN:HA	2.03	0.41
32:AX:69:ARG:HH11	79:B2:570:A:H61	1.67	0.41
33:AY:18:LEU:HD23	33:AY:18:LEU:HA	1.90	0.41
33:AY:94:TYR:CD2	33:AY:96:LEU:HD11	2.55	0.41
34:AZ:54:VAL:HG13	34:AZ:57:TYR:CD2	2.55	0.41
35:BA:85:GLY:HA2	80:B5:2554:A:N9	2.36	0.41
35:BA:236:GLY:CA	80:B5:2183:A:O2'	2.66	0.41
36:BB:5:LYS:HE3	80:B5:2878:G:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:93:VAL:HG13	39:BE:93:VAL:O	2.19	0.41
51:BQ:12:ARG:O	51:BQ:13:SER:C	2.63	0.41
51:BQ:178:ARG:HA	51:BQ:178:ARG:HD2	1.82	0.41
53:BS:82:ASP:OD1	53:BS:87:THR:HB	2.20	0.41
54:BT:7:TYR:HE1	80:B5:2724:U:H1'	1.85	0.41
57:BW:44:LYS:NZ	80:B5:2111:G:O2'	2.39	0.41
59:BY:102:SER:O	59:BY:103:LYS:HD3	2.20	0.41
62:Bb:3:LYS:HD3	80:B5:2617:U:H5"	2.02	0.41
63:Bc:10:ILE:HD11	63:Bc:68:TYR:HE2	1.86	0.41
73:Bm:98:LYS:HD3	73:Bm:115:CYS:HB2	2.02	0.41
79:B2:11:A:H2'	79:B2:12:U:H5'	2.03	0.41
79:B2:322:G:OP1	88:B2:1969:OHX:N4	2.53	0.41
79:B2:739:G:O6	88:B2:1974:OHX:N4	2.53	0.41
79:B2:1042:G:C6	79:B2:1043:A:N7	2.88	0.41
79:B2:1250:U:O2'	79:B2:1251:U:OP1	2.31	0.41
80:B5:171:G:H1	80:B5:247:C:H42	1.67	0.41
80:B5:291:C:H2'	80:B5:292:U:C6	2.56	0.41
80:B5:353:G:O2'	80:B5:364:G:O6	2.37	0.41
80:B5:438:A:H2'	80:B5:494:G:N2	2.33	0.41
80:B5:1932:A:H5'	80:B5:1933:A:OP2	2.19	0.41
80:B5:2298:U:C5	80:B5:2921:U:H1'	2.55	0.41
80:B5:2313:A:H4'	80:B5:2314:U:C5'	2.50	0.41
80:B5:2561:A:HO2'	80:B5:2562:A:H8	1.69	0.41
80:B5:2572:C:HO2'	80:B5:2573:G:P	2.39	0.41
80:B5:2971:A:H4'	80:B5:2972:G:OP2	2.20	0.41
80:B5:3031:G:O5'	83:CV:436:ARG:NH2	2.51	0.41
80:B5:3245:A:C2	80:B5:3246:G:C2	3.08	0.41
80:B5:3349:C:H2'	80:B5:3350:C:O4'	2.20	0.41
81:B7:4:U:H2'	81:B7:5:G:H8	1.86	0.41
1:A0:23:CYS:CB	1:A0:74:CYS:HB3	2.50	0.41
7:A6:38:ARG:HG2	7:A6:67:ILE:HG23	2.01	0.41
10:AB:81:PHE:HA	10:AB:106:THR:CG2	2.51	0.41
11:AC:104:VAL:HG22	11:AC:132:ALA:HB1	2.00	0.41
13:AE:87:MET:SD	13:AE:123:LEU:HB2	2.60	0.41
15:AG:21:GLU:H	15:AG:21:GLU:HG2	1.60	0.41
15:AG:59:GLN:HA	79:B2:155:U:C2'	2.50	0.41
16:AH:35:LYS:NZ	16:AH:36:ALA:H	2.17	0.41
17:AI:54:LYS:NZ	79:B2:333:A:H5"	2.36	0.41
18:AJ:108:ARG:HG2	18:AJ:147:MET:HE2	2.02	0.41
21:AM:67:THR:HB	79:B2:1228:G:H1	1.85	0.41
21:AM:98:GLY:CA	21:AM:118:ALA:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AM:131:ASP:OD1	21:AM:132:GLU:N	2.53	0.41
23:AO:130:GLY:N	79:B2:991:G:P	2.78	0.41
24:AP:39:ALA:N	79:B2:1549:C:OP2	2.49	0.41
28:AT:6:VAL:C	28:AT:8:ASP:N	2.78	0.41
29:AU:57:ARG:HG2	79:B2:1382:A:H1'	1.99	0.41
35:BA:23:ARG:C	35:BA:24:GLN:O	2.63	0.41
35:BA:68:LYS:NZ	80:B5:1650:G:OP1	2.53	0.41
35:BA:246:LEU:HD13	80:B5:2153:U:H5"	2.02	0.41
36:BB:120:LYS:HB2	80:B5:3296:A:OP1	2.20	0.41
40:BF:102:VAL:HG12	40:BF:130:ILE:HD12	2.02	0.41
41:BG:71:VAL:CG2	41:BG:76:ALA:HB2	2.50	0.41
42:BH:91:ARG:HG2	42:BH:182:SER:HB3	2.02	0.41
43:BI:198:LYS:HE3	80:B5:1041:U:H1'	2.01	0.41
46:BL:109:PHE:O	46:BL:113:VAL:HG23	2.20	0.41
46:BL:144:THR:C	46:BL:146:PRO:HD3	2.45	0.41
48:BN:113:LEU:HD11	82:B8:142:C:C5'	2.51	0.41
52:BR:58:HIS:O	80:B5:1690:C:H5"	2.20	0.41
53:BS:50:LYS:NZ	81:B7:76:A:N3	2.67	0.41
54:BT:9:SER:N	80:B5:2631:U:OP1	2.53	0.41
58:BX:105:VAL:HG13	58:BX:130:TYR:CG	2.56	0.41
60:BZ:46:ILE:HD12	60:BZ:46:ILE:C	2.46	0.41
64:Bd:15:ASN:HB3	80:B5:3324:C:OP1	2.20	0.41
65:Be:23:ASP:OD2	80:B5:424:G:O2'	2.36	0.41
65:Be:123:LYS:HA	65:Be:126:LEU:CG	2.51	0.41
70:Bj:6:PRO:HB3	80:B5:1851:G:O2'	2.21	0.41
73:Bm:100:TYR:CE2	80:B5:2907:G:O4'	2.74	0.41
79:B2:132:U:C1'	79:B2:133:U:OP2	2.58	0.41
79:B2:420:A:H2	83:CV:289:LEU:CD2	2.32	0.41
79:B2:830:U:O2	79:B2:830:U:H2'	2.20	0.41
79:B2:1540:G:C6	79:B2:1541:G:C4	3.07	0.41
79:B2:1654:G:H2'	79:B2:1745:G:N2	2.35	0.41
88:B2:2020:OHX:N1	88:B2:2067:OHX:N4	2.68	0.41
80:B5:594:U:C5'	80:B5:609:G:H1	2.34	0.41
80:B5:629:U:H2'	80:B5:630:A:H8	1.86	0.41
80:B5:949:C:O2'	80:B5:971:G:OP1	2.38	0.41
80:B5:1760:A:H5'	80:B5:1761:C:OP2	2.19	0.41
80:B5:1939:G:C6	80:B5:2110:G:O6	2.74	0.41
80:B5:2840:C:H2'	80:B5:2841:G:O4'	2.20	0.41
80:B5:3089:C:H2'	80:B5:3090:U:O4'	2.21	0.41
83:CV:131:LYS:HD3	89:CV:602:GCP:N1	2.13	0.41
84:CW:67:C:C4	84:CW:68:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:74:THR:CG2	7:A6:79:TYR:HB2	2.48	0.41
9:AA:198:MET:SD	9:AA:199:PRO:HD2	2.61	0.41
10:AB:37:THR:C	10:AB:38:PHE:CG	2.98	0.41
10:AB:115:ARG:HD3	10:AB:115:ARG:HA	1.73	0.41
11:AC:91:ARG:HA	79:B2:1147:A:P	2.60	0.41
13:AE:2:ALA:O	79:B2:94:U:OP1	2.37	0.41
13:AE:3:ARG:HB2	79:B2:94:U:P	2.60	0.41
14:AF:65:ARG:HA	14:AF:66:GLN:C	2.45	0.41
14:AF:185:ARG:NH2	79:B2:1572:G:O3'	2.53	0.41
16:AH:99:LEU:HD23	16:AH:100:PRO:HD2	2.02	0.41
20:AL:98:ASN:ND2	31:AW:79:PHE:HD2	2.19	0.41
22:AN:123:HIS:CD2	80:B5:847:A:H4'	2.56	0.41
25:AQ:22:VAL:HG22	25:AQ:65:ILE:CD1	2.49	0.41
25:AQ:39:VAL:O	25:AQ:40:GLU:C	2.63	0.41
26:AR:60:ARG:NH1	79:B2:1400:A:O3'	2.53	0.41
27:AS:8:GLN:HB2	27:AS:9:GLY:H	1.56	0.41
27:AS:30:TYR:HE2	79:B2:1539:G:H5'	1.86	0.41
30:AV:28:ASP:C	30:AV:30:ALA:H	2.29	0.41
32:AX:47:SER:HB3	79:B2:600:U:H1'	2.01	0.41
33:AY:44:LEU:HA	33:AY:47:VAL:HG22	2.03	0.41
36:BB:102:LEU:O	80:B5:3147:G:H4'	2.21	0.41
37:BC:195:ARG:O	37:BC:196:ASN:HB2	2.21	0.41
38:BD:110:LEU:HD23	38:BD:110:LEU:C	2.44	0.41
38:BD:266:ALA:CA	81:B7:1:G:C1'	2.99	0.41
40:BF:73:GLY:O	54:BT:143:THR:HB	2.20	0.41
43:BI:24:ARG:O	43:BI:25:ALA:HB3	2.21	0.41
44:BJ:97:SER:HB2	80:B5:2672:G:C1'	2.38	0.41
46:BL:65:TYR:CG	80:B5:103:G:H5'	2.55	0.41
51:BQ:55:SER:HB3	80:B5:671:U:H5"	2.03	0.41
55:BU:14:THR:HG23	55:BU:66:VAL:HG13	2.02	0.41
58:BX:125:ARG:NH2	80:B5:1610:G:OP1	2.49	0.41
60:BZ:70:PRO:CD	80:B5:1629:U:O2	2.67	0.41
60:BZ:81:LEU:HD12	67:Bg:93:PHE:CD2	2.55	0.41
60:BZ:92:PHE:HA	60:BZ:95:VAL:HG23	2.01	0.41
61:Ba:14:HIS:ND1	61:Ba:14:HIS:N	2.68	0.41
61:Ba:64:GLN:NE2	80:B5:70:A:H5'	2.29	0.41
74:Bn:2:ARG:CD	79:B2:1772:C:C3'	2.59	0.41
79:B2:51:A:N9	83:CV:242:GLY:HA2	0.45	0.41
79:B2:74:U:H1'	79:B2:75:U:O5'	2.20	0.41
79:B2:499:U:H2'	79:B2:500:C:C6	2.55	0.41
79:B2:948:G:H2'	79:B2:949:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1344:A:H4'	79:B2:1345:A:OP1	2.19	0.41
79:B2:1346:A:H8	79:B2:1370:U:O2	2.03	0.41
80:B5:240:U:O2'	80:B5:241:G:H8	2.02	0.41
80:B5:1403:C:C2	80:B5:1409:G:C2	3.08	0.41
80:B5:2191:U:H2'	80:B5:2192:C:O4'	2.20	0.41
80:B5:2222:A:H8	80:B5:2222:A:O5'	2.04	0.41
80:B5:2397:A:C2	80:B5:2873:U:H5'	2.55	0.41
80:B5:2775:U:H2'	80:B5:2776:C:C6	2.56	0.41
81:B7:110:G:C6	81:B7:111:U:C4	3.08	0.41
83:CV:446:ARG:HA	83:CV:449:GLU:CD	2.45	0.41
84:CW:6:G:C2	84:CW:68:C:N3	2.88	0.41
84:CW:52:G:H1	84:CW:62:C:H42	1.68	0.41
1:A0:98:PRO:C	79:B2:1798:U:C4	2.99	0.41
2:A1:67:THR:CA	79:B2:872:G:O4'	2.68	0.41
3:A2:46:GLY:HA2	14:AF:166:ARG:HD2	2.02	0.41
8:A7:78:ASP:CA	84:CW:43:C:H5"	2.51	0.41
8:A7:104:LYS:HB3	79:B2:575:C:H5'	2.01	0.41
9:AA:13:ASP:O	9:AA:16:LEU:HB2	2.21	0.41
9:AA:83:GLN:HG2	9:AA:100:GLY:H	1.84	0.41
9:AA:177:LEU:HD23	9:AA:177:LEU:HA	1.94	0.41
10:AB:96:LEU:O	10:AB:96:LEU:HD23	2.20	0.41
11:AC:106:ASP:OD1	11:AC:106:ASP:N	2.44	0.41
12:AD:159:HIS:CG	79:B2:1422:A:C4'	2.98	0.41
12:AD:167:PHE:HD1	12:AD:190:ARG:HD3	1.85	0.41
13:AE:36:HIS:HE2	13:AE:88:ASP:CG	2.28	0.41
13:AE:121:TYR:HA	13:AE:163:ASP:O	2.21	0.41
15:AG:1:MET:CE	15:AG:106:LEU:HB2	2.50	0.41
15:AG:133:LEU:HG	79:B2:66:U:C5	2.55	0.41
16:AH:162:ILE:HA	16:AH:165:LYS:HG3	2.02	0.41
23:AO:105:LEU:HD12	23:AO:106:ALA:N	2.36	0.41
24:AP:12:PHE:CB	44:BJ:85:LYS:HD2	2.50	0.41
26:AR:24:LEU:HA	26:AR:31:ASN:OD1	2.21	0.41
28:AT:86:ARG:HG3	28:AT:86:ARG:NH1	2.31	0.41
33:AY:14:SER:HB3	33:AY:21:LYS:HE3	2.02	0.41
33:AY:47:VAL:HG23	33:AY:48:TYR:HD1	1.84	0.41
36:BB:73:VAL:HG13	56:BV:89:ASP:C	2.46	0.41
36:BB:199:PHE:C	36:BB:201:LYS:H	2.28	0.41
37:BC:52:VAL:HB	37:BC:99:MET:CE	2.51	0.41
37:BC:80:GLY:HA2	37:BC:85:SER:OG	2.20	0.41
37:BC:118:LYS:O	37:BC:122:THR:HG22	2.20	0.41
38:BD:49:TYR:CE1	38:BD:75:LEU:HD12	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:121:LYS:HB2	54:BT:133:ALA:HB3	2.03	0.41
41:BG:241:LYS:CD	80:B5:2584:G:N2	2.84	0.41
43:BI:4:ARG:HB2	80:B5:2828:G:O3'	2.20	0.41
43:BI:212:GLU:C	43:BI:214:PRO:HD3	2.46	0.41
44:BJ:92:ARG:HH12	44:BJ:94:ARG:HH11	1.67	0.41
48:BN:194:GLN:HG2	48:BN:194:GLN:H	1.55	0.41
49:BO:88[B]:VAL:HG12	49:BO:89[B]:SER:N	2.36	0.41
49:BO:156[B]:LEU:HD13	80:B5:3243:A:C8	2.56	0.41
50:BP:46:LYS:HE3	50:BP:46:LYS:HB2	1.87	0.41
52:BR:162:ARG:HG2	79:B2:849:C:H6	1.85	0.41
56:BV:87:ARG:HH12	56:BV:137:VAL:HG11	1.85	0.41
58:BX:51:VAL:HA	58:BX:52:PRO:HD3	1.95	0.41
60:BZ:65:ARG:HG3	60:BZ:65:ARG:NH1	2.34	0.41
73:Bm:112:LYS:HZ2	80:B5:3107:U:P	2.42	0.41
75:Bo:34:SER:C	75:Bo:36:PHE:H	2.29	0.41
79:B2:570:A:H5"	79:B2:571:G:OP2	2.21	0.41
79:B2:1133:A:H2'	79:B2:1134:C:O4'	2.19	0.41
79:B2:1172:G:C5	79:B2:1173:C:C4	3.09	0.41
79:B2:1655:A:C1'	80:B5:2302:G:C4'	2.99	0.41
88:B2:1922:OHX:N6	88:B2:1976:OHX:N6	2.68	0.41
80:B5:118:U:C5	80:B5:119:U:C4	3.09	0.41
80:B5:372:A:C6	80:B5:373:A:C6	3.09	0.41
80:B5:600:G:H5'	80:B5:601:U:OP2	2.20	0.41
80:B5:916:G:C5'	80:B5:917:A:OP1	2.69	0.41
80:B5:1393:A:N3	80:B5:1419:A:O2'	2.50	0.41
80:B5:2558:U:O2'	80:B5:2559:U:H5'	2.21	0.41
80:B5:2572:C:O2'	80:B5:2573:G:P	2.79	0.41
80:B5:2666:C:H2'	80:B5:2667:A:H5"	2.03	0.41
80:B5:3242:G:C5'	80:B5:3245:A:C8	3.03	0.41
83:CV:232:ALA:HB3	83:CV:321:LEU:HB3	2.02	0.41
84:CW:49:C:H2'	84:CW:50:U:C6	2.56	0.41
1:A0:44:ILE:H	1:A0:44:ILE:CD1	2.24	0.41
2:A1:15:GLU:OE2	2:A1:24:LEU:N	2.50	0.41
2:A1:32:PHE:CZ	22:AN:61:THR:HG22	2.56	0.41
7:A6:236:ALA:C	7:A6:237:GLN:HG2	2.45	0.41
8:A7:84:LYS:HD3	8:A7:86:ASN:HB2	1.98	0.41
8:A7:117:LEU:O	8:A7:118:SER:C	2.63	0.41
9:AA:63:ILE:HG23	30:AV:35:ASN:O	2.20	0.41
10:AB:171:ILE:O	10:AB:175:GLU:HG2	2.21	0.41
10:AB:207:LEU:HB3	10:AB:210:ILE:HD11	2.02	0.41
12:AD:7:LYS:HB2	79:B2:1515:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:138:VAL:O	12:AD:149:ALA:HA	2.20	0.41
12:AD:204:ASP:OD1	79:B2:1330:G:C2	2.59	0.41
13:AE:104:ASP:HB3	13:AE:106:LYS:N	2.33	0.41
13:AE:180:LEU:HD23	13:AE:180:LEU:HA	1.81	0.41
14:AF:217:LEU:HD23	14:AF:217:LEU:HA	1.90	0.41
15:AG:173:PRO:HB2	15:AG:174:LYS:H	1.55	0.41
26:AR:10:LYS:HG2	26:AR:53:TYR:CE2	2.56	0.41
27:AS:11:PHE:HE1	27:AS:13:HIS:HA	1.86	0.41
28:AT:130:ARG:HH11	28:AT:130:ARG:HG2	1.86	0.41
30:AV:3:ASN:OD1	30:AV:7:GLN:HB2	2.20	0.41
34:AZ:90:LYS:HB3	34:AZ:90:LYS:HE2	1.74	0.41
35:BA:152:SER:HB3	80:B5:2157:G:C6	2.39	0.41
37:BC:44:LYS:HB3	37:BC:47:ARG:HH11	1.84	0.41
37:BC:255:PHE:O	37:BC:258:LEU:HB2	2.21	0.41
37:BC:352:ALA:O	37:BC:354:VAL:N	2.52	0.41
39:BE:47:PHE:CD1	39:BE:74:VAL:HG22	2.56	0.41
45:BK:123:UNK:O	80:B5:1257:C:C6	2.73	0.41
48:BN:183:THR:O	48:BN:183:THR:CG2	2.68	0.41
49:BO:49[B]:ARG:O	49:BO:52[B]:LEU:HB2	2.21	0.41
52:BR:134:HIS:HB3	80:B5:1947:G:H4'	2.01	0.41
52:BR:167:ARG:O	79:B2:851:U:H3'	2.19	0.41
59:BY:37:LYS:HE2	59:BY:37:LYS:H	1.85	0.41
61:Ba:79:TRP:CH2	61:Ba:91:LEU:HD13	2.56	0.41
70:Bj:8:PHE:CD2	80:B5:1845:G:O2'	2.63	0.41
74:Bn:22:ALA:C	74:Bn:24:SER:H	2.29	0.41
79:B2:82:U:H2'	79:B2:83:G:O4'	2.21	0.41
79:B2:279:G:C3'	79:B2:279:G:C8	3.03	0.41
79:B2:732:G:N1	88:B2:2009:OHX:N3	2.68	0.41
79:B2:817:A:C6	79:B2:818:C:N4	2.89	0.41
79:B2:926:A:OP1	79:B2:1016:C:O2'	2.22	0.41
79:B2:1244:A:O2'	79:B2:1245:G:P	2.78	0.41
88:B2:1981:OHX:N5	88:B2:2077:OHX:N6	2.68	0.41
88:B2:2020:OHX:N1	88:B2:2067:OHX:N3	2.69	0.41
80:B5:945:C:H2'	80:B5:946:U:C6	2.56	0.41
80:B5:1283:C:C2'	80:B5:1284:C:H5'	2.51	0.41
80:B5:1596:C:H2'	80:B5:1597:C:C6	2.56	0.41
80:B5:1766:G:C2'	80:B5:1767:C:H5'	2.51	0.41
80:B5:2101:C:O2'	80:B5:2102:U:P	2.78	0.41
80:B5:2504:U:O2'	80:B5:2505:U:OP1	2.35	0.41
80:B5:2660:G:H4'	80:B5:2750:U:O2	2.21	0.41
80:B5:3155:U:C3'	80:B5:3156:U:H5"	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:3:LYS:HE3	79:B2:1030:A:P	2.61	0.41
1:A0:82:ARG:O	1:A0:84:VAL:HG12	2.20	0.41
1:A0:87:ARG:HH11	79:B2:1796:C:P	2.44	0.41
1:A0:95:ARG:O	79:B2:1797:A:H4'	2.21	0.41
4:A3:41:GLN:HG2	79:B2:1433:G:C8	2.56	0.41
6:A5:108:VAL:HG13	21:AM:73:LYS:HZ2	1.86	0.41
6:A5:133:ALA:HB2	79:B2:1252:C:C1'	2.51	0.41
7:A6:38:ARG:HG2	7:A6:67:ILE:HD13	2.03	0.41
7:A6:52:GLN:CD	7:A6:52:GLN:H	2.29	0.41
7:A6:222:LEU:HA	7:A6:222:LEU:HD13	1.78	0.41
7:A6:307:ASP:O	7:A6:309:VAL:HG23	2.21	0.41
8:A7:84:LYS:HE2	84:CW:30:G:N2	2.36	0.41
10:AB:77:GLU:C	10:AB:79:HIS:N	2.78	0.41
10:AB:131:ASP:OD2	10:AB:180:THR:HG21	2.19	0.41
14:AF:49:GLU:O	14:AF:51:VAL:HG23	2.21	0.41
15:AG:87:ARG:HD2	79:B2:159:U:O2	2.21	0.41
15:AG:133:LEU:HD11	79:B2:66:U:C2	2.40	0.41
15:AG:159:ARG:CZ	79:B2:77:U:C2	3.04	0.41
16:AH:28:GLU:O	16:AH:30:SER:N	2.52	0.41
18:AJ:133:HIS:CD2	18:AJ:133:HIS:H	2.37	0.41
24:AP:42:ARG:NH1	79:B2:1549:C:P	2.93	0.41
24:AP:128:HIS:O	24:AP:130:ARG:HG2	2.20	0.41
25:AQ:59:LYS:HA	25:AQ:59:LYS:HD3	1.90	0.41
26:AR:23:LYS:O	26:AR:24:LEU:HB2	2.21	0.41
29:AU:34:LEU:HD23	29:AU:112:VAL:HG13	2.02	0.41
33:AY:11:LYS:HE2	79:B2:776:G:N7	2.36	0.41
33:AY:14:SER:CB	33:AY:21:LYS:HE3	2.49	0.41
34:AZ:54:VAL:HG22	34:AZ:57:TYR:HE2	1.85	0.41
36:BB:43:LEU:HG	36:BB:181:ILE:HG21	2.03	0.41
36:BB:57:VAL:HG23	36:BB:358:TRP:HE3	1.85	0.41
36:BB:245:GLY:HA2	80:B5:1889:G:C5'	2.47	0.41
38:BD:179:ARG:NE	80:B5:2746:A:OP1	2.51	0.41
39:BE:18:LEU:O	80:B5:592:A:H4'	2.20	0.41
41:BG:230:LYS:HE3	41:BG:230:LYS:HB2	1.88	0.41
42:BH:37:ASN:OD1	42:BH:39:LYS:HB2	2.21	0.41
42:BH:117:PHE:CZ	42:BH:165:CYS:HB3	2.55	0.41
43:BI:157:TYR:HB3	80:B5:2836:C:H1'	2.03	0.41
47:BM:47:ASP:CG	47:BM:55:ARG:HB2	2.46	0.41
48:BN:28:TRP:O	48:BN:32:GLN:HG2	2.21	0.41
49:BO:108[A]:ILE:HD13	49:BO:160[A]:ARG:HD2	2.02	0.41
49:BO:121[A]:PRO:HA	49:BO:124[A]:LEU:HD22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:7:GLN:H	52:BR:7:GLN:HG2	1.41	0.41
53:BS:7:TYR:CE2	53:BS:34:GLU:HG2	2.56	0.41
54:BT:69:LYS:HB3	80:B5:2737:C:OP1	2.21	0.41
56:BV:128:ARG:CZ	56:BV:128:ARG:HB3	2.51	0.41
58:BX:40:LEU:HD13	58:BX:40:LEU:HA	1.82	0.41
60:BZ:68:ILE:O	60:BZ:115:LYS:HG3	2.21	0.41
66:Bf:67:MET:HE1	80:B5:430:U:H5'	2.01	0.41
69:Bi:36:ARG:NH1	80:B5:116:A:OP2	2.53	0.41
69:Bi:76:ARG:HD3	80:B5:294:U:P	2.55	0.41
70:Bj:4:GLY:O	70:Bj:5:THR:C	2.64	0.41
79:B2:229:U:H2'	79:B2:230:C:H6	1.85	0.41
79:B2:714:G:C6	79:B2:715:U:C2	3.08	0.41
79:B2:1162:C:H5"	79:B2:1163:A:OP2	2.20	0.41
79:B2:1274:C:H4'	79:B2:1275:A:O5'	2.21	0.41
79:B2:1301:U:H2'	79:B2:1302:U:O4'	2.21	0.41
79:B2:1748:G:O6	88:B2:1982:OHX:N4	2.54	0.41
88:B2:2014:OHX:N4	88:B2:2071:OHX:N2	2.69	0.41
80:B5:1056:U:H2'	80:B5:1057:A:O5'	2.21	0.41
80:B5:1480:G:H4'	80:B5:1481:A:OP1	2.21	0.41
80:B5:1685:C:H2'	80:B5:1686:U:C6	2.56	0.41
80:B5:1821:U:H4'	80:B5:1822:C:OP2	2.21	0.41
80:B5:2405:C:O2	80:B5:2819:A:N1	2.53	0.41
80:B5:2442:G:C2	80:B5:2443:A:N7	2.89	0.41
80:B5:2926:A:O2'	80:B5:2927:C:H5'	2.21	0.41
1:A0:92:ARG:CB	79:B2:1796:C:O2	2.60	0.41
4:A3:5:ASN:HB3	4:A3:7:TRP:CD1	2.56	0.41
5:A4:38:LEU:O	5:A4:42:ARG:HB2	2.21	0.41
8:A7:29:ASN:N	80:B5:2708:C:H5'	2.22	0.41
8:A7:64:LYS:O	8:A7:65:THR:HG23	2.20	0.41
8:A7:68:ARG:HD3	79:B2:1460:A:OP2	2.21	0.41
8:A7:86:ASN:ND2	84:CW:33:U:C5	2.83	0.41
8:A7:87:THR:CG2	84:CW:36:U:O3'	2.69	0.41
10:AB:36:SER:HB2	10:AB:231:LEU:HB3	2.03	0.41
10:AB:141:ALA:HB1	10:AB:207:LEU:CD2	2.49	0.41
12:AD:53:THR:HG22	12:AD:91:VAL:HG11	2.03	0.41
13:AE:3:ARG:CB	79:B2:93:A:O3'	2.69	0.41
13:AE:19:LEU:HD23	13:AE:19:LEU:HA	1.80	0.41
13:AE:68:ARG:NH1	13:AE:76:VAL:HG21	2.35	0.41
13:AE:123:LEU:HD22	13:AE:236:ILE:HG23	2.03	0.41
13:AE:129:VAL:HB	13:AE:139:VAL:HG12	2.03	0.41
14:AF:103:ASN:OD1	79:B2:1473:U:C2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AH:129:LEU:HA	16:AH:129:LEU:HD23	1.79	0.41
17:AI:2:GLY:HA3	79:B2:400:A:N6	2.36	0.41
18:AJ:146:PHE:CZ	18:AJ:149:ARG:HD3	2.56	0.41
20:AL:118:GLN:HG3	20:AL:119:VAL:N	2.35	0.41
22:AN:20:ARG:NE	79:B2:862:A:OP1	2.51	0.41
22:AN:33:VAL:HA	22:AN:36:GLN:HB2	2.02	0.41
22:AN:93:LYS:HG3	22:AN:150:VAL:HG11	2.03	0.41
23:AO:35:GLY:CA	79:B2:919:A:C4'	2.72	0.41
23:AO:51:ASP:CB	79:B2:902:G:H1	2.34	0.41
23:AO:137:LEU:HB3	79:B2:1007:C:H5'	2.02	0.41
24:AP:68:PRO:HG2	24:AP:71:GLU:OE1	2.21	0.41
24:AP:96:ILE:CD1	24:AP:116:LEU:HD22	2.51	0.41
26:AR:88:VAL:CG2	26:AR:89:SER:H	2.26	0.41
27:AS:27:LYS:HA	27:AS:57:ARG:HE	1.84	0.41
28:AT:72:GLY:O	28:AT:76:LEU:HG	2.21	0.41
29:AU:37:VAL:O	29:AU:41:ILE:HD13	2.21	0.41
33:AY:44:LEU:HA	33:AY:47:VAL:CG2	2.51	0.41
33:AY:47:VAL:HG12	79:B2:781:U:O2	2.20	0.41
35:BA:179:LEU:O	35:BA:184:ARG:HD2	2.21	0.41
36:BB:30:LYS:NZ	80:B5:3139:A:OP2	2.40	0.41
36:BB:233:TRP:CD1	36:BB:265:ALA:HB1	2.56	0.41
37:BC:305:ALA:N	80:B5:1347:U:H4'	2.36	0.41
38:BD:16:PHE:HA	80:B5:2688:U:O2'	2.19	0.41
38:BD:155:THR:HG22	38:BD:179:ARG:NH1	2.36	0.41
38:BD:257:GLU:N	38:BD:257:GLU:CD	2.79	0.41
40:BF:22:THR:HA	40:BF:25:GLN:OE1	2.20	0.41
40:BF:69:ALA:O	40:BF:70:LYS:C	2.63	0.41
40:BF:229:PHE:C	40:BF:229:PHE:HD1	2.29	0.41
41:BG:205:ALA:HA	41:BG:208:GLU:OE1	2.21	0.41
42:BH:66:ALA:O	42:BH:70:THR:HG22	2.21	0.41
42:BH:98:PRO:HB2	83:CV:136:TYR:HD2	1.11	0.41
42:BH:150:SER:O	42:BH:151:VAL:C	2.64	0.41
44:BJ:128:TYR:CD2	80:B5:2683:U:H1'	2.56	0.41
48:BN:78:GLY:HA2	48:BN:89:VAL:HG21	2.02	0.41
48:BN:102:ALA:O	48:BN:106:VAL:HG13	2.21	0.41
48:BN:135:VAL:O	48:BN:137:PRO:HD3	2.21	0.41
49:BO:96[A]:LYS:HE2	80:B5:2384:A:N1	2.36	0.41
54:BT:49:GLN:CB	80:B5:2756:C:O4'	2.69	0.41
54:BT:85:LEU:HD13	80:B5:2728:G:C8	2.56	0.41
54:BT:129:LYS:CA	80:B5:1098:A:OP2	2.69	0.41
58:BX:33:ARG:CZ	80:B5:1580:A:H62	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:11:ASP:HB3	59:BY:14:LYS:HG3	2.02	0.41
61:Ba:13:GLY:O	65:Be:36:LYS:HE2	2.20	0.41
62:Bb:37:PRO:HG3	80:B5:776:U:H1'	2.02	0.41
62:Bb:47:LEU:HD12	80:B5:749:C:O2'	2.20	0.41
64:Bd:9:THR:HA	64:Bd:76:SER:HA	2.03	0.41
65:Be:34:LYS:O	65:Be:36:LYS:HD3	2.21	0.41
65:Be:44:ARG:O	65:Be:45:ARG:HB2	2.21	0.41
70:Bj:63:ARG:O	70:Bj:68:LYS:HE2	2.19	0.41
73:Bm:88:LYS:HB3	73:Bm:88:LYS:HE3	1.63	0.41
75:Bo:43:TYR:OH	75:Bo:47:GLN:NE2	2.54	0.41
79:B2:5:U:H2'	79:B2:6:G:H8	1.86	0.41
79:B2:74:U:O2'	79:B2:75:U:H5'	2.20	0.41
79:B2:190:C:C4	79:B2:196:G:C6	3.09	0.41
79:B2:196:G:O2'	79:B2:197:A:H8	2.02	0.41
79:B2:419:G:H22	83:CV:289:LEU:HD11	1.84	0.41
79:B2:458:G:H5"	79:B2:459:G:OP1	2.21	0.41
79:B2:473:A:H2'	79:B2:474:A:H5'	2.03	0.41
79:B2:487:G:C6	79:B2:488:G:C8	3.09	0.41
79:B2:1053:G:C8	79:B2:1053:G:H5'	2.56	0.41
79:B2:1138:A:H2'	79:B2:1139:A:H8	1.86	0.41
79:B2:1281:G:C5	79:B2:1282:U:C5	3.09	0.41
79:B2:1340:U:C2	79:B2:1378:U:H4'	2.56	0.41
79:B2:1413:U:O2	88:B2:1949:OHX:N4	2.54	0.41
79:B2:1427:A:C5'	84:CW:34:C:C5	3.04	0.41
79:B2:1490:C:O4'	79:B2:1490:C:P	2.78	0.41
79:B2:1756[A]:A:OP2	79:B2:1756[A]:A:H8	2.04	0.41
79:B2:1762:A:C1'	79:B2:1783:C:H5'	2.49	0.41
80:B5:36:C:C2'	80:B5:37:U:H5'	2.51	0.41
80:B5:242:C:H2'	80:B5:243:G:C8	2.55	0.41
80:B5:248:U:O2	80:B5:248:U:H2'	2.20	0.41
80:B5:438:A:O2'	80:B5:439:C:P	2.79	0.41
80:B5:594:U:O2'	80:B5:595:G:H5'	2.21	0.41
80:B5:622:A:H8	80:B5:622:A:O5'	2.03	0.41
80:B5:1072:G:H2'	80:B5:1073:U:C6	2.56	0.41
80:B5:1116:G:H4'	80:B5:1117:G:OP2	2.20	0.41
80:B5:1284:C:H4'	80:B5:1285:G:OP1	2.21	0.41
80:B5:1358:C:H2'	80:B5:1359:C:O4'	2.21	0.41
80:B5:1622:U:H2'	80:B5:1623:G:O4'	2.20	0.41
80:B5:2199:G:H2'	80:B5:2200:U:H6	1.86	0.41
80:B5:2621:G:H8	84:CW:75:C:C5	1.95	0.41
80:B5:2911:A:H4'	80:B5:2912:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2995:A:H8	80:B5:2995:A:O5'	2.03	0.41
80:B5:3132:C:H2'	80:B5:3133:C:C6	2.56	0.41
81:B7:24:A:H2'	81:B7:25:G:O4'	2.21	0.41
81:B7:90:U:O5'	81:B7:90:U:H6	2.04	0.41
82:B8:65:A:H2'	82:B8:66:A:O4'	2.21	0.41
83:CV:63:GLU:CA	83:CV:63:GLU:N	2.84	0.41
83:CV:80:HIS:HB2	83:CV:368:LYS:NZ	2.36	0.41
83:CV:410:ASN:HD21	83:CV:432:ASN:HD22	1.68	0.41
84:CW:4:C:C6	84:CW:5:G:C8	3.09	0.41
84:CW:38:A:H3'	84:CW:39:U:C6	2.56	0.41
84:CW:65:G:N2	84:CW:66:U:C2	2.89	0.41
1:A0:85:ARG:HD3	1:A0:85:ARG:HA	1.78	0.41
3:A2:21:SER:OG	3:A2:22:ARG:N	2.54	0.41
4:A3:14:TYR:CE2	79:B2:1597:A:N7	2.89	0.41
8:A7:116:GLU:O	8:A7:117:LEU:C	2.63	0.41
9:AA:59:LEU:O	9:AA:63:ILE:HG13	2.21	0.41
11:AC:54:GLU:OE2	11:AC:110:HIS:NE2	2.53	0.41
12:AD:71:LEU:HD23	12:AD:71:LEU:HA	1.85	0.41
13:AE:52:LEU:O	13:AE:54:TYR:N	2.54	0.41
13:AE:208:VAL:HG12	13:AE:210:ILE:HD11	2.02	0.41
15:AG:39:GLU:HB2	15:AG:46:LYS:HG3	2.03	0.41
15:AG:60:GLY:C	79:B2:154:G:N3	2.79	0.41
15:AG:185:GLN:HB2	79:B2:284:G:O6	2.21	0.41
17:AI:103:GLN:NE2	17:AI:166:TYR:CE1	2.89	0.41
20:AL:22:ASN:HA	20:AL:23:PRO:HD3	1.78	0.41
21:AM:28:LEU:HD22	21:AM:32:LEU:HG	2.02	0.41
27:AS:39:GLY:CA	79:B2:1567:U:OP2	2.69	0.41
28:AT:135:ILE:H	28:AT:135:ILE:HG13	1.53	0.41
32:AX:126:LYS:HA	32:AX:131:SER:HA	2.01	0.41
35:BA:240:ALA:HB2	80:B5:2154:U:O2'	2.21	0.41
36:BB:142:ALA:O	36:BB:146:ARG:N	2.54	0.41
36:BB:245:GLY:CA	80:B5:1889:G:C5'	2.99	0.41
37:BC:203:ARG:NH1	37:BC:226:GLU:OE2	2.54	0.41
41:BG:40:VAL:CG2	80:B5:2558:U:H5'	2.51	0.41
41:BG:229:VAL:C	41:BG:231:LYS:H	2.29	0.41
42:BH:90:MET:HA	42:BH:180:TYR:O	2.21	0.41
44:BJ:151:SER:O	44:BJ:152:HIS:CB	2.68	0.41
48:BN:72:LYS:CD	80:B5:2166:A:O2'	2.68	0.41
48:BN:110:ALA:CB	82:B8:141:C:O2'	2.69	0.41
57:BW:120:LYS:O	57:BW:123:ARG:HB2	2.21	0.41
59:BY:33:ALA:HB2	59:BY:101:PRO:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BZ:22:LYS:HE2	60:BZ:129:TRP:CH2	2.56	0.41
60:BZ:136:PHE:HB2	67:Bg:88:ARG:HG3	2.03	0.41
61:Ba:79:TRP:CZ3	61:Ba:91:LEU:HD13	2.55	0.41
65:Be:24:ARG:HD3	65:Be:25:TYR:CE2	2.56	0.41
66:Bf:67:MET:CE	80:B5:430:U:H5'	2.51	0.41
67:Bg:101:VAL:C	67:Bg:103:LYS:N	2.78	0.41
72:Bl:44:TRP:CE3	80:B5:1495:U:H6	2.38	0.41
79:B2:1233:G:OP2	88:B2:2040:OHX:N1	2.54	0.41
79:B2:1294:G:O2'	79:B2:1321:A:N1	2.48	0.41
79:B2:1360:A:H2'	79:B2:1361:U:C1'	2.51	0.41
88:B2:1914:OHX:N3	88:B2:1937:OHX:N4	2.69	0.41
88:B2:1918:OHX:N5	88:B2:2047:OHX:N1	2.69	0.41
80:B5:167:U:H2'	80:B5:168:U:H6	1.86	0.41
80:B5:174:C:H2'	80:B5:175:C:O4'	2.21	0.41
80:B5:371:G:H4'	80:B5:396:A:N1	2.36	0.41
80:B5:411:U:H2'	80:B5:412:G:H8	1.86	0.41
80:B5:436:A:H8	80:B5:436:A:H5"	1.86	0.41
80:B5:1064:A:N6	80:B5:1096:U:H3	2.19	0.41
80:B5:2285:C:C5	83:CV:477:SER:CB	2.79	0.41
80:B5:2537:U:H6	80:B5:2537:U:O5'	2.04	0.41
80:B5:2573:G:H3'	80:B5:2574:G:H5"	2.02	0.41
80:B5:3156:U:O2'	80:B5:3157:U:O2	2.35	0.41
80:B5:3237:U:H2'	80:B5:3238:G:H5"	2.03	0.41
83:CV:133:ASP:C	83:CV:135:LEU:H	2.29	0.41
84:CW:38:A:H3'	84:CW:39:U:H6	1.85	0.41
1:A0:97:PRO:CA	79:B2:1798:U:C6	3.04	0.40
7:A6:10:ARG:HG2	7:A6:54:PHE:CE1	2.56	0.40
8:A7:83:LYS:CA	84:CW:30:G:H21	2.21	0.40
9:AA:148:ASP:OD1	9:AA:149:LEU:N	2.46	0.40
11:AC:44:LEU:HG	11:AC:247:ALA:HB2	2.02	0.40
11:AC:82:ASN:ND2	11:AC:207:LEU:HD12	2.37	0.40
12:AD:74:GLN:OE1	12:AD:81:PRO:HA	2.20	0.40
13:AE:7:LYS:O	79:B2:449:C:H5"	2.20	0.40
13:AE:98:ASN:HD22	13:AE:119:ALA:CB	2.35	0.40
13:AE:100:ARG:NH2	13:AE:121:TYR:O	2.54	0.40
14:AF:29:ILE:HG22	14:AF:34:GLN:CG	2.51	0.40
14:AF:190:ILE:HG23	14:AF:190:ILE:HD12	1.73	0.40
15:AG:70:PRO:C	15:AG:98:ARG:NH2	2.78	0.40
17:AI:21:PHE:O	17:AI:22:ARG:HG2	2.20	0.40
18:AJ:127:VAL:HG21	79:B2:478:A:O4'	2.19	0.40
19:AK:1:MET:CG	19:AK:2:LEU:H	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:12:ALA:CB	79:B2:328:A:H4'	2.51	0.40
21:AM:57:ALA:HB3	21:AM:85:LYS:NZ	2.36	0.40
22:AN:28:LEU:HD23	22:AN:28:LEU:HA	1.85	0.40
23:AO:120:PRO:CG	79:B2:888:U:P	3.10	0.40
25:AQ:35:PRO:C	25:AQ:37:THR:H	2.29	0.40
25:AQ:71:GLY:HA2	79:B2:1483:A:H4'	2.02	0.40
25:AQ:73:GLY:C	79:B2:1609:U:OP1	2.64	0.40
27:AS:23:ASP:OD1	27:AS:24:GLY:N	2.54	0.40
27:AS:143:ARG:CZ	79:B2:1461:C:C5	3.04	0.40
34:AZ:41:ILE:O	34:AZ:75:LEU:HD13	2.21	0.40
35:BA:68:LYS:HG3	35:BA:69:TYR:N	2.36	0.40
35:BA:144:ASN:O	35:BA:160:SER:N	2.45	0.40
36:BB:247:ARG:HD3	80:B5:1888:U:P	2.58	0.40
36:BB:365:PHE:CE2	80:B5:3378:C:C2	3.09	0.40
38:BD:257:GLU:CD	38:BD:257:GLU:H	2.29	0.40
38:BD:274:GLN:HE22	81:B7:60:G:N2	2.18	0.40
40:BF:158:LYS:HD2	40:BF:158:LYS:C	2.46	0.40
41:BG:53:PRO:HD2	41:BG:56:VAL:HG21	2.02	0.40
42:BH:23:ARG:HH11	42:BH:23:ARG:HD2	1.59	0.40
44:BJ:9:MET:HG3	44:BJ:10:ARG:H	1.85	0.40
44:BJ:155:THR:OG1	44:BJ:158:ASP:HB2	2.21	0.40
52:BR:38:ARG:O	52:BR:42:ARG:HG3	2.21	0.40
54:BT:22:HIS:ND1	80:B5:2701:U:OP2	2.54	0.40
55:BU:90:ARG:H	55:BU:90:ARG:HG2	1.73	0.40
59:BY:120:GLN:CD	59:BY:126:LEU:HA	2.46	0.40
60:BZ:109:GLU:O	60:BZ:113:VAL:HG23	2.21	0.40
66:Bf:20:LYS:HE3	66:Bf:20:LYS:HB2	1.91	0.40
67:Bg:96:GLU:O	67:Bg:99:LYS:HB2	2.21	0.40
75:Bo:93:LEU:HD12	75:Bo:93:LEU:N	2.36	0.40
79:B2:74:U:O2'	79:B2:75:U:P	2.78	0.40
79:B2:377:G:O6	88:B2:1956:OHX:N5	2.55	0.40
79:B2:431:C:O2'	83:CV:385:VAL:N	2.53	0.40
79:B2:1096:C:O2	79:B2:1096:C:H2'	2.20	0.40
88:B2:1960:OHX:N3	88:B2:1962:OHX:N1	2.68	0.40
88:B2:1971:OHX:N4	88:B2:1986:OHX:N3	2.68	0.40
80:B5:384:A:H1'	80:B5:1465:A:C8	2.56	0.40
80:B5:529:A:H2'	80:B5:530:G:O4'	2.20	0.40
80:B5:561:C:H2'	80:B5:562:C:H6	1.86	0.40
80:B5:1064:A:N6	80:B5:1096:U:N3	2.69	0.40
80:B5:1763:U:H3'	80:B5:1764:U:C6	2.56	0.40
80:B5:2314:U:H4'	80:B5:2314:U:OP2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3028:G:H2'	80:B5:3029:A:C8	2.56	0.40
80:B5:3131:U:H2'	80:B5:3132:C:C6	2.56	0.40
81:B7:27:A:H2'	81:B7:28:C:C6	2.56	0.40
83:CV:433:VAL:O	83:CV:437:LEU:N	2.55	0.40
84:CW:15:G:C6	84:CW:59:U:O2	2.74	0.40
1:A0:90:GLU:C	1:A0:92:ARG:H	2.27	0.40
88:A3:102:OHX:N6	88:B2:1939:OHX:N3	2.69	0.40
8:A7:33:LYS:CE	80:B5:2692:A:P	3.02	0.40
14:AF:112:ARG:HD3	34:AZ:95:HIS:NE2	2.35	0.40
15:AG:55:GLY:CA	15:AG:63:MET:HE3	2.51	0.40
17:AI:21:PHE:CZ	17:AI:22:ARG:HD3	2.56	0.40
18:AJ:17:ARG:HA	18:AJ:18:PRO:HD3	1.96	0.40
18:AJ:45:ILE:HD13	18:AJ:45:ILE:HA	1.84	0.40
19:AK:48:SER:HA	79:B2:1219:A:O2'	2.20	0.40
20:AL:103:ARG:NH1	79:B2:307:G:OP1	2.37	0.40
22:AN:27:LYS:HD2	22:AN:28:LEU:H	1.86	0.40
23:AO:50:ALA:C	23:AO:52:ARG:N	2.78	0.40
24:AP:75:PRO:HA	24:AP:93:VAL:HG12	2.03	0.40
25:AQ:123:ARG:N	79:B2:1584:G:H2'	2.36	0.40
27:AS:41:ARG:NE	28:AT:46:PRO:HD3	2.37	0.40
28:AT:89:ARG:HD2	79:B2:1601:G:O6	2.18	0.40
29:AU:50:LEU:HB3	29:AU:51:VAL:H	1.64	0.40
32:AX:100:ASP:N	83:CV:378:LYS:NZ	2.69	0.40
34:AZ:67:ASP:C	34:AZ:69:LEU:H	2.29	0.40
35:BA:85:GLY:CA	80:B5:2554:A:N9	2.85	0.40
38:BD:95:TRP:CZ2	38:BD:181:PRO:HD3	2.54	0.40
38:BD:207:TYR:CD2	81:B7:33:U:C4	3.09	0.40
38:BD:270:LYS:HG3	38:BD:273:ARG:HB3	2.01	0.40
41:BG:52:TRP:NE1	41:BG:60:ARG:HH12	2.19	0.40
41:BG:82:LEU:HD13	41:BG:178:ALA:HB1	2.02	0.40
44:BJ:150:ASN:ND2	81:B7:17:A:OP1	2.52	0.40
46:BL:59:ARG:O	46:BL:60:ALA:HB3	2.20	0.40
48:BN:159:ARG:H	48:BN:159:ARG:HG2	1.73	0.40
49:BO:60[B]:LYS:HE2	80:B5:1307:G:OP1	2.21	0.40
49:BO:133[B]:ARG:HD2	80:B5:1315:U:O2'	2.22	0.40
54:BT:8:ARG:CD	80:B5:2757:U:C4'	2.95	0.40
59:BY:75:ARG:O	59:BY:77:LYS:N	2.53	0.40
62:Bb:12:GLN:CD	80:B5:954:U:H1'	2.46	0.40
62:Bb:21:ILE:C	62:Bb:22:LYS:HG3	2.47	0.40
62:Bb:41:ARG:HD3	80:B5:775:A:H5"	2.02	0.40
65:Be:55:ILE:HB	80:B5:947:G:C5'	2.43	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Bf:102:LEU:HD23	66:Bf:102:LEU:HA	1.84	0.40
67:Bg:52:GLN:HG3	80:B5:1738:C:H4'	2.01	0.40
67:Bg:68:THR:CG2	80:B5:1643:A:O5'	2.70	0.40
79:B2:142:G:C8	79:B2:266:A:N1	2.89	0.40
79:B2:734:A:H4'	79:B2:735:C:H5'	2.02	0.40
79:B2:830:U:O2'	79:B2:831:U:OP2	2.34	0.40
79:B2:1157:A:HO2'	79:B2:1158:C:P	2.43	0.40
79:B2:1181:U:H2'	79:B2:1182:U:O4'	2.21	0.40
79:B2:1280:C:H2'	79:B2:1281:G:C8	2.55	0.40
79:B2:1361:U:O2	79:B2:1361:U:H2'	2.21	0.40
80:B5:1014:U:H3'	80:B5:1015:U:C5'	2.51	0.40
80:B5:1070:U:C2'	80:B5:1071:U:H5'	2.51	0.40
80:B5:1547:G:H2'	80:B5:1548:C:C6	2.56	0.40
80:B5:2567:C:N4	80:B5:2568:C:H41	2.19	0.40
80:B5:2663:G:H2'	80:B5:2664:C:O4'	2.21	0.40
80:B5:2881:C:H2'	80:B5:2882:U:C6	2.57	0.40
80:B5:3084:C:H2'	80:B5:3085:G:O4'	2.21	0.40
80:B5:3205:G:H2'	80:B5:3206:C:C5	2.56	0.40
81:B7:4:U:H2'	81:B7:5:G:C8	2.56	0.40
83:CV:180:GLU:CD	83:CV:185:ASN:HA	2.46	0.40
83:CV:395:ILE:O	83:CV:395:ILE:HG22	2.22	0.40
2:A1:49:HIS:CE1	2:A1:70:LYS:HG2	2.57	0.40
4:A3:54:LYS:HZ1	79:B2:1420:C:P	2.44	0.40
8:A7:30:THR:O	80:B5:2707:C:O4'	2.39	0.40
8:A7:79:SER:CA	84:CW:42:C:C2	2.95	0.40
10:AB:21:VAL:HG23	10:AB:22:ASP:H	1.86	0.40
10:AB:28:GLU:HB3	10:AB:49:ASN:H	1.87	0.40
10:AB:124:ASN:HD21	79:B2:884:A:H4'	1.79	0.40
11:AC:89:GLN:CD	11:AC:94:GLN:HE21	2.26	0.40
13:AE:19:LEU:HD13	79:B2:788:A:H2'	2.03	0.40
13:AE:156:VAL:O	13:AE:157:ASN:HB2	2.20	0.40
14:AF:205:SER:C	14:AF:207:THR:H	2.30	0.40
22:AN:26:PHE:HA	22:AN:27:LYS:HE2	2.03	0.40
23:AO:132:ARG:CB	79:B2:1787:C:P	3.09	0.40
24:AP:85:ILE:HA	24:AP:89:MET:SD	2.62	0.40
25:AQ:82:ARG:NH2	25:AQ:114:ARG:HG2	2.36	0.40
28:AT:118:PRO:C	28:AT:120:GLY:N	2.80	0.40
35:BA:208:ASP:CB	80:B5:914:A:H2	2.34	0.40
36:BB:221:THR:HG22	36:BB:272:TYR:N	2.36	0.40
36:BB:360:ASP:OD1	36:BB:361:THR:N	2.52	0.40
37:BC:341:SER:O	37:BC:342:LYS:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:157:VAL:HG13	80:B5:147:U:O4	2.18	0.40
42:BH:128:VAL:HG22	42:BH:134:ILE:HD13	2.03	0.40
45:BK:13:UNK:HA	45:BK:64:UNK:HA	2.03	0.40
46:BL:113:VAL:HG12	46:BL:117:LYS:HD2	2.03	0.40
47:BM:62:GLN:H	47:BM:62:GLN:HG2	1.78	0.40
48:BN:38:ARG:NH1	82:B8:142:C:OP1	2.47	0.40
48:BN:83:LYS:HB2	80:B5:35:A:OP1	2.22	0.40
50:BP:36:ILE:O	50:BP:39:TRP:HB2	2.21	0.40
51:BQ:157:PRO:CB	80:B5:2729:U:H4'	2.51	0.40
53:BS:74:ASN:OD1	53:BS:95:ARG:NH1	2.54	0.40
54:BT:25:VAL:HG22	54:BT:30:TYR:HE2	1.85	0.40
54:BT:54:HIS:CG	80:B5:2724:U:H4'	2.57	0.40
55:BU:90:ARG:HB3	55:BU:90:ARG:NH1	2.36	0.40
59:BY:63:LYS:HA	59:BY:63:LYS:HD3	1.82	0.40
60:BZ:17:ARG:HG3	80:B5:1639:C:H42	1.86	0.40
61:Ba:59:ARG:HE	61:Ba:59:ARG:HB2	1.76	0.40
68:Bh:17:LEU:HA	68:Bh:20:GLN:HB2	2.02	0.40
68:Bh:83:LYS:HA	82:B8:38:U:C6	2.57	0.40
71:Bk:24:THR:HG23	71:Bk:44:LYS:HB2	2.03	0.40
73:Bm:100:TYR:CE2	80:B5:2907:G:C1'	3.04	0.40
79:B2:205:U:H2'	79:B2:206:A:O4'	2.21	0.40
79:B2:330:G:H2'	79:B2:331:A:O4'	2.22	0.40
79:B2:827:C:H2'	79:B2:828:U:H6	1.84	0.40
79:B2:1182:U:O2	79:B2:1184:A:H8	2.04	0.40
80:B5:797:U:O2'	80:B5:798:G:H5'	2.21	0.40
80:B5:1046:A:H2'	80:B5:1049:C:C5	2.56	0.40
80:B5:1352:A:P	80:B5:1352:A:H3'	2.61	0.40
80:B5:1572:U:O2'	80:B5:1573:G:H8	2.04	0.40
80:B5:1886:A:O4'	80:B5:3307:A:H5'	2.21	0.40
80:B5:2166:A:H2'	80:B5:2167:A:C8	2.57	0.40
80:B5:2697:A:H2'	80:B5:2698:G:C8	2.56	0.40
80:B5:2872:A:O2'	80:B5:2873:U:P	2.79	0.40
83:CV:415:PRO:O	83:CV:418:ALA:HB3	2.22	0.40
2:A1:67:THR:HA	79:B2:872:G:H5'	2.03	0.40
8:A7:68:ARG:CZ	27:AS:145:ARG:HH11	2.34	0.40
10:AB:70:LEU:CD1	10:AB:79:HIS:HB3	2.52	0.40
10:AB:78:ASP:O	10:AB:79:HIS:ND1	2.55	0.40
15:AG:19:ASP:O	15:AG:20:ASP:HB2	2.22	0.40
15:AG:28:PHE:CZ	15:AG:104:PRO:HG3	2.56	0.40
16:AH:56:LYS:O	16:AH:88:ARG:HA	2.22	0.40
17:AI:142:LYS:NZ	79:B2:186:C:H5'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:27:GLU:HB3	18:AJ:39:LYS:HD2	2.03	0.40
18:AJ:105:LEU:O	18:AJ:111:THR:HG21	2.21	0.40
18:AJ:110:GLN:HE22	18:AJ:126:ARG:CG	2.23	0.40
19:AK:52:LYS:HG3	19:AK:54:TYR:CE2	2.57	0.40
88:AL:201:OHX:N2	79:B2:212:U:OP2	2.54	0.40
21:AM:68:GLU:C	21:AM:70:ASN:H	2.29	0.40
30:AV:74:GLN:HE22	30:AV:83:TRP:H	1.69	0.40
33:AY:23:PHE:HE2	33:AY:75:VAL:HG12	1.87	0.40
35:BA:22:LEU:HD21	80:B5:1797:A:O5'	2.22	0.40
38:BD:8:LYS:CE	80:B5:2687:G:OP1	2.69	0.40
38:BD:16:PHE:CE1	80:B5:2688:U:C4	3.06	0.40
38:BD:155:THR:HB	38:BD:179:ARG:HD3	2.04	0.40
39:BE:46:ARG:HG2	39:BE:47:PHE:CE2	2.57	0.40
39:BE:172:HIS:CD2	39:BE:173:MET:HG2	2.56	0.40
40:BF:195:PHE:CD1	40:BF:195:PHE:C	3.00	0.40
42:BH:12:VAL:CG1	42:BH:16:VAL:HG22	2.49	0.40
42:BH:57:VAL:HG23	42:BH:68:LEU:HG	2.04	0.40
44:BJ:115:LYS:HB3	44:BJ:116:TYR:H	1.58	0.40
47:BM:59:ASN:O	47:BM:62:GLN:HG2	2.21	0.40
47:BM:121:MET:CE	80:B5:3214:U:H2'	2.51	0.40
49:BO:58[A]:LEU:HD12	49:BO:58[A]:LEU:HA	1.82	0.40
49:BO:78[B]:ARG:NH1	49:BO:78[B]:ARG:HG3	2.36	0.40
51:BQ:164:ARG:CZ	80:B5:668:G:O2'	2.69	0.40
52:BR:61:SER:HB3	80:B5:1689:U:H5"	2.03	0.40
52:BR:127:SER:HB3	52:BR:132:PHE:HD2	1.86	0.40
52:BR:138:LEU:O	52:BR:138:LEU:HD22	2.22	0.40
54:BT:71:SER:OG	80:B5:2736:A:C5'	2.69	0.40
56:BV:39:VAL:HG21	56:BV:51:ALA:C	2.46	0.40
59:BY:31:LEU:HA	59:BY:31:LEU:HD23	1.85	0.40
63:Bc:69:TYR:N	63:Bc:69:TYR:CD1	2.89	0.40
65:Be:11:LYS:HD3	65:Be:11:LYS:HA	1.88	0.40
67:Bg:82:ALA:HB1	80:B5:1638:A:C5'	2.48	0.40
69:Bi:78:GLY:HA3	80:B5:273:A:H1'	2.04	0.40
79:B2:755:A:O2'	79:B2:756:A:OP1	2.36	0.40
79:B2:830:U:O2'	79:B2:831:U:P	2.80	0.40
79:B2:964:U:H4'	79:B2:965:U:O5'	2.21	0.40
79:B2:1018:U:H2'	79:B2:1019:A:C8	2.57	0.40
79:B2:1163:A:N6	79:B2:1164:G:C6	2.89	0.40
79:B2:1441:C:H2'	79:B2:1442:U:C6	2.57	0.40
79:B2:1644:C:O2	80:B5:2255:A:C4	2.74	0.40
88:B2:1947:OHX:N6	88:B2:2073:OHX:N5	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:237:G:N2	80:B5:238:A:O4'	2.54	0.40
80:B5:1077:U:H2'	80:B5:1078:U:C6	2.56	0.40
80:B5:1267:U:C5	80:B5:1268:G:C5	3.09	0.40
80:B5:3255:U:O5'	80:B5:3255:U:H6	2.04	0.40
83:CV:512:GLN:HA	83:CV:516:GLU:O	2.21	0.40
4:A3:20:GLN:HB2	4:A3:21:CYS:H	1.70	0.40
7:A6:22:SER:HB3	7:A6:36:ALA:HB3	2.03	0.40
10:AB:157:GLN:C	10:AB:159:SER:N	2.78	0.40
12:AD:161:GLY:O	12:AD:164:VAL:HB	2.22	0.40
14:AF:29:ILE:HG22	14:AF:34:GLN:HG2	2.04	0.40
15:AG:69:LEU:HA	15:AG:70:PRO:HD3	1.96	0.40
15:AG:193:LEU:HD23	15:AG:193:LEU:HA	1.85	0.40
21:AM:48:SER:HB3	21:AM:122:VAL:HG23	2.04	0.40
21:AM:55:GLY:HA2	21:AM:85:LYS:HD2	2.02	0.40
21:AM:97:LEU:HA	21:AM:100:TRP:HE3	1.87	0.40
24:AP:130:ARG:O	84:CW:45:U:C5'	2.55	0.40
27:AS:81:ILE:HG23	27:AS:82:PRO:HD2	2.03	0.40
27:AS:108:LYS:HD2	27:AS:108:LYS:HA	1.63	0.40
29:AU:50:LEU:HD23	29:AU:95:ALA:HB2	2.04	0.40
29:AU:109:GLU:OE1	29:AU:110:PRO:HD2	2.20	0.40
30:AV:74:GLN:C	30:AV:76:ASP:H	2.29	0.40
31:AW:31:SER:HB3	79:B2:636:A:H5"	2.03	0.40
32:AX:4:GLY:CA	79:B2:1105:C:H41	2.35	0.40
35:BA:3:ARG:HG2	35:BA:4:VAL:N	2.37	0.40
36:BB:258:ALA:O	36:BB:259:HIS:CD2	2.75	0.40
38:BD:16:PHE:CE1	80:B5:2688:U:N3	2.90	0.40
41:BG:241:LYS:NZ	80:B5:2526:C:O2'	2.54	0.40
43:BI:64:ALA:HB2	80:B5:2853:A:O3'	2.22	0.40
44:BJ:71:VAL:HG12	44:BJ:72:ARG:N	2.36	0.40
47:BM:133:LYS:HB2	47:BM:133:LYS:HE3	1.86	0.40
49:BO:10[B]:ASP:CG	49:BO:37[B]:ARG:HH21	2.23	0.40
49:BO:64[A]:PHE:CE2	49:BO:68[A]:ARG:HD3	2.56	0.40
54:BT:68:THR:HG23	54:BT:69:LYS:N	2.35	0.40
54:BT:129:LYS:H	54:BT:129:LYS:HG2	1.75	0.40
55:BU:105:LEU:HA	55:BU:105:LEU:HD12	1.87	0.40
58:BX:23:ALA:O	58:BX:24:LEU:HB2	2.21	0.40
58:BX:125:ARG:NH2	80:B5:1610:G:P	2.94	0.40
64:Bd:26:LYS:CE	80:B5:1456:A:N7	2.84	0.40
65:Be:121:ASN:C	65:Be:122:PRO:O	2.63	0.40
70:Bj:79:GLN:CD	82:B8:95:G:C4	2.99	0.40
76:Bq:76:LEU:HD23	76:Bq:76:LEU:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:143:G:C2	79:B2:173:A:C2	3.10	0.40
79:B2:333:A:C6	79:B2:334:G:C6	3.09	0.40
79:B2:414:C:C6	83:CV:289:LEU:CD2	2.70	0.40
79:B2:440:U:O4'	83:CV:276:ARG:CG	2.69	0.40
79:B2:633:U:H2'	79:B2:634:G:O4'	2.22	0.40
79:B2:781:U:O2'	79:B2:782:U:O5'	2.38	0.40
79:B2:991:G:O6	88:B2:1968:OHX:N2	2.54	0.40
79:B2:1357:A:C6	79:B2:1358:G:C6	3.10	0.40
79:B2:1459:C:OP2	79:B2:1459:C:H6	2.04	0.40
79:B2:1490:C:H1'	79:B2:1491:U:O4'	2.22	0.40
88:B2:1981:OHX:N2	88:B2:2077:OHX:N6	2.69	0.40
80:B5:345:G:H2'	82:B8:25:G:O2'	2.22	0.40
80:B5:703:G:O2'	80:B5:787:G:H4'	2.22	0.40
80:B5:734:C:H6	80:B5:734:C:OP1	2.04	0.40
80:B5:856:G:C6	80:B5:857:G:N1	2.90	0.40
80:B5:953:G:H2'	80:B5:1117:G:H5"	2.04	0.40
80:B5:973:A:H5"	80:B5:974:G:OP2	2.21	0.40
80:B5:2829:U:H4'	83:CV:526:LYS:HD3	1.96	0.40
80:B5:3164:C:C2	80:B5:3165:A:C8	3.10	0.40
80:B5:3257:C:H2'	80:B5:3258:U:O4'	2.20	0.40
83:CV:385:VAL:HA	83:CV:389:ASP:HB2	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains (i)

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
79	B2	1763/1800 (97%)	548 (31%)	86 (4%)
80	B5	3140/3396 (92%)	756 (24%)	131 (4%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
81	B7	120/121 (99%)	18 (15%)	0
82	B8	157/158 (99%)	33 (21%)	3 (1%)
84	CW	74/76 (97%)	23 (31%)	5 (6%)
85	CX	2/3 (66%)	0	0
All	All	5256/5554 (94%)	1378 (26%)	225 (4%)

All (1378) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
79	B2	2	A
79	B2	4	C
79	B2	8	U
79	B2	16	G
79	B2	20	G
79	B2	25	C
79	B2	26	A
79	B2	27	U
79	B2	34	G
79	B2	39	A
79	B2	41	A
79	B2	42	G
79	B2	45	U
79	B2	46	A
79	B2	47	A
79	B2	50	C
79	B2	57	G
79	B2	60	U
79	B2	67	A
79	B2	68	A
79	B2	69	G
79	B2	72	A
79	B2	73	U
79	B2	74	U
79	B2	75	U
79	B2	76	A
79	B2	77	U
79	B2	78	A
79	B2	97	C
79	B2	100	A
79	B2	101	U
79	B2	104	A
79	B2	114	C

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Mol	Chain	Res	Type
79	B2	115	G
79	B2	126	A
79	B2	127	G
79	B2	131	C
79	B2	132	U
79	B2	133	U
79	B2	134	U
79	B2	135	A
79	B2	136	C
79	B2	137	U
79	B2	138	A
79	B2	139	C
79	B2	140	A
79	B2	141	U
79	B2	144	U
79	B2	145	A
79	B2	146	U
79	B2	153	G
79	B2	158	U
79	B2	159	U
79	B2	175	G
79	B2	178	U
79	B2	179	A
79	B2	185	U
79	B2	186	C
79	B2	187	G
79	B2	188	A
79	B2	189	C
79	B2	190	C
79	B2	191	C
79	B2	192	U
79	B2	193	U
79	B2	194	U
79	B2	195	G
79	B2	196	G
79	B2	197	A
79	B2	198	A
79	B2	199	G
79	B2	200	A
79	B2	215	A
79	B2	218	A
79	B2	219	A

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Mol	Chain	Res	Type
79	B2	223	U
79	B2	225	A
79	B2	226	A
79	B2	227	U
79	B2	228	G
79	B2	229	U
79	B2	233	C
79	B2	234	G
79	B2	235	G
79	B2	236	A
79	B2	238	U
79	B2	239	C
79	B2	240	U
79	B2	241	U
79	B2	242	U
79	B2	249	U
79	B2	250	C
79	B2	261	U
79	B2	262	U
79	B2	265	A
79	B2	266	A
79	B2	271	A
79	B2	272	U
79	B2	274	G
79	B2	275	C
79	B2	276	C
79	B2	277	U
79	B2	278	U
79	B2	279	G
79	B2	280	U
79	B2	281	G
79	B2	288	A
79	B2	290	G
79	B2	299	A
79	B2	301	A
79	B2	306	U
79	B2	308	C
79	B2	309	C
79	B2	314	C
79	B2	316	A
79	B2	319	U
79	B2	320	U

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Mol	Chain	Res	Type
79	B2	321	C
79	B2	322	G
79	B2	337	G
79	B2	338	C
79	B2	341	A
79	B2	348	U
79	B2	352	A
79	B2	359	A
79	B2	360	A
79	B2	361	C
79	B2	399	A
79	B2	400	A
79	B2	401	A
79	B2	402	C
79	B2	403	G
79	B2	404	G
79	B2	411	C
79	B2	416	A
79	B2	417	A
79	B2	418	G
79	B2	423	G
79	B2	424	C
79	B2	425	A
79	B2	426	G
79	B2	428	A
79	B2	434	G
79	B2	439	U
79	B2	444	C
79	B2	445	A
79	B2	446	A
79	B2	448	C
79	B2	467	G
79	B2	468	A
79	B2	470	A
79	B2	475	A
79	B2	477	A
79	B2	484	C
79	B2	485	A
79	B2	486	G
79	B2	487	G
79	B2	488	G
79	B2	493	U

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Mol	Chain	Res	Type
79	B2	494	U
79	B2	495	C
79	B2	496	G
79	B2	497	G
79	B2	498	G
79	B2	499	U
79	B2	500	C
79	B2	502	U
79	B2	503	G
79	B2	504	U
79	B2	505	A
79	B2	506	A
79	B2	507	U
79	B2	508	U
79	B2	510	G
79	B2	511	A
79	B2	512	A
79	B2	513	U
79	B2	515	A
79	B2	516	G
79	B2	519	C
79	B2	525	A
79	B2	527	A
79	B2	532	U
79	B2	538	A
79	B2	539	G
79	B2	540	G
79	B2	541	A
79	B2	542	A
79	B2	543	C
79	B2	544	A
79	B2	545	A
79	B2	548	G
79	B2	555	A
79	B2	556	A
79	B2	557	G
79	B2	558	U
79	B2	559	C
79	B2	565	C
79	B2	570	A
79	B2	575	C
79	B2	579	A

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Mol	Chain	Res	Type
79	B2	580	A
79	B2	582	U
79	B2	583	C
79	B2	585	A
79	B2	594	A
79	B2	595	G
79	B2	597	G
79	B2	605	A
79	B2	607	G
79	B2	611	U
79	B2	619	A
79	B2	620	A
79	B2	622	A
79	B2	623	A
79	B2	624	G
79	B2	630	A
79	B2	639	U
79	B2	640	U
79	B2	650	U
79	B2	653	C
79	B2	655	G
79	B2	656	G
79	B2	657	U
79	B2	658	C
79	B2	677	G
79	B2	679	U
79	B2	680	U
79	B2	684	A
79	B2	685	A
79	B2	686	C
79	B2	692	C
79	B2	694	U
79	B2	696	C
79	B2	697	C
79	B2	699	U
79	B2	700	C
79	B2	701	U
79	B2	702	G
79	B2	703	G
79	B2	704	C
79	B2	705	U
79	B2	706	A

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Mol	Chain	Res	Type
79	B2	707	A
79	B2	709	C
79	B2	710	U
79	B2	712	G
79	B2	713	A
79	B2	714	G
79	B2	717	C
79	B2	718	U
79	B2	719	U
79	B2	720	G
79	B2	721	U
79	B2	722	G
79	B2	723	G
79	B2	725	U
79	B2	727	U
79	B2	728	U
79	B2	729	G
79	B2	730	G
79	B2	731	C
79	B2	732	G
79	B2	733	A
79	B2	734	A
79	B2	735	C
79	B2	736	C
79	B2	737	A
79	B2	738	G
79	B2	742	U
79	B2	743	U
79	B2	745	U
79	B2	754	A
79	B2	755	A
79	B2	756	A
79	B2	758	U
79	B2	765	G
79	B2	766	U
79	B2	771	A
79	B2	774	A
79	B2	775	G
79	B2	778	G
79	B2	779	U
79	B2	780	A
79	B2	781	U

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Mol	Chain	Res	Type
79	B2	782	U
79	B2	783	G
79	B2	784	C
79	B2	785	U
79	B2	787	G
79	B2	789	A
79	B2	793	A
79	B2	794	U
79	B2	795	U
79	B2	806	A
79	B2	811	A
79	B2	812	A
79	B2	813	U
79	B2	815	G
79	B2	816	G
79	B2	818	C
79	B2	819	G
79	B2	820	U
79	B2	821	U
79	B2	823	G
79	B2	824	G
79	B2	829	A
79	B2	830	U
79	B2	831	U
79	B2	832	U
79	B2	833	U
79	B2	837	G
79	B2	838	G
79	B2	840	U
79	B2	846	G
79	B2	848	C
79	B2	849	C
79	B2	854	U
79	B2	862	A
79	B2	863	A
79	B2	864	U
79	B2	873	U
79	B2	876	G
79	B2	892	A
79	B2	896	U
79	B2	898	A
79	B2	912	U

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Mol	Chain	Res	Type
79	B2	913	G
79	B2	914	G
79	B2	921	U
79	B2	928	U
79	B2	933	A
79	B2	935	U
79	B2	942	G
79	B2	944	A
79	B2	951	A
79	B2	959	U
79	B2	960	U
79	B2	961	U
79	B2	966	A
79	B2	968	U
79	B2	982	U
79	B2	988	A
79	B2	992	A
79	B2	993	A
79	B2	995	A
79	B2	997	G
79	B2	1003	A
79	B2	1004	U
79	B2	1005	A
79	B2	1020	A
79	B2	1021	C
79	B2	1026	A
79	B2	1028	C
79	B2	1031	U
79	B2	1039	A
79	B2	1040	G
79	B2	1052	U
79	B2	1053	G
79	B2	1058	U
79	B2	1059	U
79	B2	1060	U
79	B2	1061	A
79	B2	1064	G
79	B2	1073	G
79	B2	1074	G
79	B2	1079	U
79	B2	1080	U
79	B2	1082	C

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Mol	Chain	Res	Type
79	B2	1083	G
79	B2	1084	A
79	B2	1086	A
79	B2	1087	A
79	B2	1091	A
79	B2	1092	A
79	B2	1093	A
79	B2	1096	C
79	B2	1097	U
79	B2	1100	G
79	B2	1104	U
79	B2	1111	G
79	B2	1138	A
79	B2	1139	A
79	B2	1146	G
79	B2	1149	G
79	B2	1151	A
79	B2	1152	A
79	B2	1155	G
79	B2	1157	A
79	B2	1158	C
79	B2	1160	A
79	B2	1162	C
79	B2	1167	G
79	B2	1185	U
79	B2	1188	G
79	B2	1191	U
79	B2	1194	A
79	B2	1196	A
79	B2	1197	C
79	B2	1199	G
79	B2	1200	G
79	B2	1202	A
79	B2	1207	C
79	B2	1208	A
79	B2	1217	A
79	B2	1218	G
79	B2	1219	A
79	B2	1221	A
79	B2	1226	A
79	B2	1227	A
79	B2	1228	G

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Mol	Chain	Res	Type
79	B2	1229	G
79	B2	1235	C
79	B2	1243	G
79	B2	1244	A
79	B2	1245	G
79	B2	1250	U
79	B2	1251	U
79	B2	1257	U
79	B2	1258	U
79	B2	1260	U
79	B2	1269	U
79	B2	1286	U
79	B2	1301	U
79	B2	1314	U
79	B2	1315	U
79	B2	1321	A
79	B2	1329	A
79	B2	1337	A
79	B2	1339	C
79	B2	1340	U
79	B2	1341	A
79	B2	1344	A
79	B2	1345	A
79	B2	1349	G
79	B2	1354	G
79	B2	1361	U
79	B2	1363	U
79	B2	1364	G
79	B2	1370	U
79	B2	1371	A
79	B2	1372	U
79	B2	1379	C
79	B2	1382	A
79	B2	1383	G
79	B2	1388	A
79	B2	1390	U
79	B2	1398	U
79	B2	1399	C
79	B2	1400	A
79	B2	1412	G
79	B2	1413	U
79	B2	1414	U

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Mol	Chain	Res	Type
79	B2	1415	U
79	B2	1420	C
79	B2	1421	A
79	B2	1427	A
79	B2	1428	G
79	B2	1429	G
79	B2	1431	C
79	B2	1445	G
79	B2	1446	A
79	B2	1448	G
79	B2	1454	G
79	B2	1457	C
79	B2	1459	C
79	B2	1461	C
79	B2	1462	G
79	B2	1471	A
79	B2	1473	U
79	B2	1474	G
79	B2	1475	A
79	B2	1478	G
79	B2	1482	C
79	B2	1486	G
79	B2	1488	G
79	B2	1489	U
79	B2	1490	C
79	B2	1491	U
79	B2	1492	A
79	B2	1493	A
79	B2	1499	G
79	B2	1500	C
79	B2	1506	G
79	B2	1514	U
79	B2	1516	A
79	B2	1518	C
79	B2	1521	G
79	B2	1522	U
79	B2	1523	G
79	B2	1524	A
79	B2	1535	U
79	B2	1536	G
79	B2	1537	C
79	B2	1538	U

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Mol	Chain	Res	Type
79	B2	1539	G
79	B2	1540	G
79	B2	1557	U
79	B2	1559	A
79	B2	1569	A
79	B2	1573	A
79	B2	1574	G
79	B2	1575	G
79	B2	1584	G
79	B2	1590	G
79	B2	1601	G
79	B2	1616	G
79	B2	1619	C
79	B2	1624	C
79	B2	1625	C
79	B2	1631	A
79	B2	1635	A
79	B2	1649	G
79	B2	1657	U
79	B2	1658	G
79	B2	1663	G
79	B2	1680	G
79	B2	1682	U
79	B2	1683	C
79	B2	1684	U
79	B2	1685	G
79	B2	1686	C
79	B2	1687	U
79	B2	1693	A
79	B2	1712	A
79	B2	1713	G
79	B2	1716	C
79	B2	1717	G
79	B2	1727	G
79	B2	1729	C
79	B2	1731	A
79	B2	1759	C
79	B2	1760	G
79	B2	1761	U
79	B2	1762	A
79	B2	1766	A
79	B2	1768	G

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Mol	Chain	Res	Type
79	B2	1769	U
79	B2	1770	U
79	B2	1780	G
79	B2	1782	A
79	B2	1783	C
79	B2	1789	G
79	B2	1792	G
79	B2	1793	G
79	B2	1794	A
79	B2	1795	U
79	B2	1796	C
80	B5	14	U
80	B5	15	C
80	B5	16	A
80	B5	26	A
80	B5	38	U
80	B5	40	A
80	B5	43	A
80	B5	44	U
80	B5	49	A
80	B5	60	A
80	B5	65	A
80	B5	66	A
80	B5	74	G
80	B5	76	G
80	B5	77	A
80	B5	92	G
80	B5	93	C
80	B5	94	G
80	B5	96	G
80	B5	99	A
80	B5	109	A
80	B5	110	G
80	B5	111	C
80	B5	116	A
80	B5	121	A
80	B5	122	A
80	B5	133	U
80	B5	134	U
80	B5	135	C
80	B5	136	G
80	B5	146	U

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Mol	Chain	Res	Type
80	B5	150	A
80	B5	152	U
80	B5	156	G
80	B5	157	A
80	B5	160	G
80	B5	166	C
80	B5	170	G
80	B5	171	G
80	B5	174	C
80	B5	178	U
80	B5	180	C
80	B5	182	U
80	B5	183	G
80	B5	184	U
80	B5	187	A
80	B5	190	U
80	B5	191	U
80	B5	200	C
80	B5	201	A
80	B5	210	U
80	B5	218	G
80	B5	219	A
80	B5	221	A
80	B5	235	A
80	B5	236	G
80	B5	238	A
80	B5	239	G
80	B5	240	U
80	B5	242	C
80	B5	244	G
80	B5	248	U
80	B5	249	U
80	B5	250	U
80	B5	251	G
80	B5	252	U
80	B5	253	A
80	B5	254	A
80	B5	258	G
80	B5	259	C
80	B5	269	G
80	B5	283	G
80	B5	284	A

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Mol	Chain	Res	Type
80	B5	286	U
80	B5	294	U
80	B5	295	A
80	B5	305	U
80	B5	322	U
80	B5	323	A
80	B5	329	U
80	B5	334	A
80	B5	339	C
80	B5	349	A
80	B5	350	C
80	B5	351	A
80	B5	352	A
80	B5	370	U
80	B5	376	G
80	B5	390	G
80	B5	395	A
80	B5	397	A
80	B5	398	A
80	B5	399	A
80	B5	401	U
80	B5	402	A
80	B5	403	C
80	B5	421	G
80	B5	422	A
80	B5	436	A
80	B5	437	G
80	B5	438	A
80	B5	439	C
80	B5	440	A
80	B5	441	U
80	B5	442	G
80	B5	443	G
80	B5	492	U
80	B5	493	G
80	B5	495	G
80	B5	520	U
80	B5	521	A
80	B5	531	G
80	B5	535	G
80	B5	538	G
80	B5	546	C

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Mol	Chain	Res	Type
80	B5	547	G
80	B5	548	G
80	B5	551	A
80	B5	553	U
80	B5	555	U
80	B5	557	A
80	B5	559	A
80	B5	578	A
80	B5	579	G
80	B5	588	G
80	B5	589	A
80	B5	592	A
80	B5	594	U
80	B5	595	G
80	B5	600	G
80	B5	604	G
80	B5	609	G
80	B5	610	G
80	B5	611	A
80	B5	612	U
80	B5	619	A
80	B5	620	U
80	B5	621	A
80	B5	630	A
80	B5	636	C
80	B5	649	A
80	B5	653	A
80	B5	656	A
80	B5	660	A
80	B5	675	C
80	B5	677	A
80	B5	681	U
80	B5	705	A
80	B5	708	G
80	B5	712	G
80	B5	715	A
80	B5	716	A
80	B5	719	U
80	B5	720	A
80	B5	725	G
80	B5	726	G
80	B5	727	G

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Mol	Chain	Res	Type
80	B5	735	A
80	B5	736	A
80	B5	750	G
80	B5	758	C
80	B5	766	U
80	B5	767	U
80	B5	768	C
80	B5	776	U
80	B5	777	U
80	B5	780	A
80	B5	781	G
80	B5	785	G
80	B5	786	A
80	B5	787	G
80	B5	806	A
80	B5	809	G
80	B5	817	A
80	B5	830	A
80	B5	846	A
80	B5	851	C
80	B5	861	C
80	B5	862	U
80	B5	871	U
80	B5	874	U
80	B5	879	U
80	B5	891	G
80	B5	893	C
80	B5	896	A
80	B5	897	U
80	B5	907	G
80	B5	908	G
80	B5	914	A
80	B5	916	G
80	B5	917	A
80	B5	921	A
80	B5	923	C
80	B5	924	G
80	B5	937	G
80	B5	944	C
80	B5	946	U
80	B5	947	G
80	B5	958	C

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Mol	Chain	Res	Type
80	B5	959	C
80	B5	960	U
80	B5	974	G
80	B5	979	U
80	B5	980	A
80	B5	981	U
80	B5	983	A
80	B5	993	G
80	B5	994	G
80	B5	1000	C
80	B5	1001	G
80	B5	1002	A
80	B5	1003	A
80	B5	1010	G
80	B5	1014	U
80	B5	1015	U
80	B5	1016	C
80	B5	1017	C
80	B5	1018	G
80	B5	1020	G
80	B5	1021	G
80	B5	1023	C
80	B5	1024	G
80	B5	1025	A
80	B5	1026	A
80	B5	1027	A
80	B5	1028	U
80	B5	1029	G
80	B5	1032	C
80	B5	1034	U
80	B5	1035	G
80	B5	1047	A
80	B5	1049	C
80	B5	1057	A
80	B5	1064	A
80	B5	1065	A
80	B5	1071	U
80	B5	1072	G
80	B5	1081	U
80	B5	1082	U
80	B5	1085	A
80	B5	1086	C

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Mol	Chain	Res	Type
80	B5	1093	A
80	B5	1094	U
80	B5	1095	U
80	B5	1096	U
80	B5	1097	G
80	B5	1098	A
80	B5	1103	A
80	B5	1104	G
80	B5	1117	G
80	B5	1131	G
80	B5	1153	A
80	B5	1159	A
80	B5	1160	C
80	B5	1174	G
80	B5	1178	G
80	B5	1179	A
80	B5	1180	A
80	B5	1181	U
80	B5	1182	A
80	B5	1191	U
80	B5	1192	C
80	B5	1193	A
80	B5	1201	C
80	B5	1209	G
80	B5	1213	G
80	B5	1229	G
80	B5	1230	G
80	B5	1231	A
80	B5	1232	C
80	B5	1233	G
80	B5	1236	G
80	B5	1237	G
80	B5	1239	C
80	B5	1240	A
80	B5	1241	U
80	B5	1242	G
80	B5	1244	A
80	B5	1245	A
80	B5	1246	G
80	B5	1247	U
80	B5	1248	C
80	B5	1258	U

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Mol	Chain	Res	Type
80	B5	1259	A
80	B5	1261	G
80	B5	1262	G
80	B5	1263	A
80	B5	1264	G
80	B5	1265	U
80	B5	1266	G
80	B5	1271	A
80	B5	1272	C
80	B5	1278	A
80	B5	1279	C
80	B5	1280	C
80	B5	1282	G
80	B5	1283	C
80	B5	1284	C
80	B5	1285	G
80	B5	1294	A
80	B5	1307	G
80	B5	1308	A
80	B5	1309	U
80	B5	1312	C
80	B5	1317	A
80	B5	1318	A
80	B5	1330	A
80	B5	1331	U
80	B5	1332	A
80	B5	1348	U
80	B5	1349	G
80	B5	1350	A
80	B5	1351	U
80	B5	1352	A
80	B5	1353	U
80	B5	1354	G
80	B5	1355	A
80	B5	1356	U
80	B5	1357	G
80	B5	1366	A
80	B5	1385	C
80	B5	1386	A
80	B5	1387	G
80	B5	1399	A
80	B5	1400	G

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Mol	Chain	Res	Type
80	B5	1403	C
80	B5	1419	A
80	B5	1422	G
80	B5	1428	A
80	B5	1434	G
80	B5	1435	A
80	B5	1437	C
80	B5	1440	G
80	B5	1446	A
80	B5	1450	G
80	B5	1460	A
80	B5	1481	A
80	B5	1482	A
80	B5	1490	A
80	B5	1495	U
80	B5	1502	C
80	B5	1503	A
80	B5	1508	C
80	B5	1527	C
80	B5	1541	G
80	B5	1542	G
80	B5	1549	U
80	B5	1554	U
80	B5	1555	U
80	B5	1556	C
80	B5	1557	A
80	B5	1560	G
80	B5	1561	G
80	B5	1562	C
80	B5	1563	C
80	B5	1565	G
80	B5	1566	A
80	B5	1567	U
80	B5	1568	U
80	B5	1569	U
80	B5	1570	U
80	B5	1571	A
80	B5	1572	U
80	B5	1574	C
80	B5	1575	A
80	B5	1576	G
80	B5	1577	G

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Mol	Chain	Res	Type
80	B5	1578	C
80	B5	1580	A
80	B5	1581	C
80	B5	1582	C
80	B5	1583	A
80	B5	1587	A
80	B5	1589	A
80	B5	1593	A
80	B5	1605	A
80	B5	1607	U
80	B5	1608	C
80	B5	1620	U
80	B5	1629	U
80	B5	1633	C
80	B5	1635	G
80	B5	1639	C
80	B5	1641	U
80	B5	1643	A
80	B5	1644	C
80	B5	1645	U
80	B5	1655	G
80	B5	1657	C
80	B5	1680	G
80	B5	1683	A
80	B5	1716	U
80	B5	1717	U
80	B5	1718	G
80	B5	1724	U
80	B5	1725	C
80	B5	1736	G
80	B5	1750	A
80	B5	1751	G
80	B5	1754	G
80	B5	1758	G
80	B5	1760	A
80	B5	1762	C
80	B5	1764	U
80	B5	1765	U
80	B5	1766	G
80	B5	1767	C
80	B5	1770	G
80	B5	1778	G

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Mol	Chain	Res	Type
80	B5	1780	G
80	B5	1783	U
80	B5	1797	A
80	B5	1810	A
80	B5	1812	G
80	B5	1814	A
80	B5	1815	U
80	B5	1816	A
80	B5	1817	G
80	B5	1818	U
80	B5	1820	U
80	B5	1821	U
80	B5	1835	A
80	B5	1841	A
80	B5	1842	A
80	B5	1846	C
80	B5	1849	C
80	B5	1850	A
80	B5	1855	U
80	B5	1871	U
80	B5	1876	U
80	B5	1878	G
80	B5	1879	A
80	B5	1880	U
80	B5	1905	G
80	B5	1906	G
80	B5	1909	A
80	B5	1918	C
80	B5	1927	G
80	B5	1940	G
80	B5	1953	G
80	B5	2100	A
80	B5	2101	C
80	B5	2102	U
80	B5	2112	U
80	B5	2113	A
80	B5	2114	C
80	B5	2121	G
80	B5	2122	G
80	B5	2128	C
80	B5	2131	A
80	B5	2134	G

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Mol	Chain	Res	Type
80	B5	2139	A
80	B5	2144	A
80	B5	2158	A
80	B5	2169	G
80	B5	2170	U
80	B5	2171	G
80	B5	2192	C
80	B5	2201	G
80	B5	2205	U
80	B5	2210	G
80	B5	2213	A
80	B5	2222	A
80	B5	2223	A
80	B5	2228	A
80	B5	2229	A
80	B5	2244	A
80	B5	2250	G
80	B5	2253	G
80	B5	2255	A
80	B5	2256	A
80	B5	2257	C
80	B5	2258	U
80	B5	2264	U
80	B5	2270	A
80	B5	2273	G
80	B5	2276	G
80	B5	2278	C
80	B5	2279	A
80	B5	2288	G
80	B5	2290	C
80	B5	2294	U
80	B5	2298	U
80	B5	2307	G
80	B5	2310	U
80	B5	2313	A
80	B5	2315	G
80	B5	2324	A
80	B5	2329	C
80	B5	2334	U
80	B5	2335	G
80	B5	2336	U
80	B5	2373	A

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Mol	Chain	Res	Type
80	B5	2374	C
80	B5	2375	G
80	B5	2377	G
80	B5	2385	G
80	B5	2388	U
80	B5	2393	G
80	B5	2394	G
80	B5	2396	G
80	B5	2397	A
80	B5	2398	A
80	B5	2400	G
80	B5	2401	A
80	B5	2402	A
80	B5	2403	G
80	B5	2404	A
80	B5	2405	C
80	B5	2406	C
80	B5	2411	U
80	B5	2418	G
80	B5	2435	G
80	B5	2436	U
80	B5	2437	G
80	B5	2438	A
80	B5	2439	A
80	B5	2440	G
80	B5	2441	A
80	B5	2443	A
80	B5	2504	U
80	B5	2505	U
80	B5	2506	U
80	B5	2507	C
80	B5	2508	U
80	B5	2510	U
80	B5	2511	A
80	B5	2512	C
80	B5	2513	U
80	B5	2514	U
80	B5	2515	A
80	B5	2518	C
80	B5	2523	A
80	B5	2524	A
80	B5	2526	C

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Mol	Chain	Res	Type
80	B5	2530	G
80	B5	2531	C
80	B5	2532	U
80	B5	2534	G
80	B5	2538	U
80	B5	2539	C
80	B5	2540	A
80	B5	2543	U
80	B5	2544	U
80	B5	2549	G
80	B5	2552	C
80	B5	2555	G
80	B5	2562	A
80	B5	2567	C
80	B5	2568	C
80	B5	2569	A
80	B5	2570	U
80	B5	2571	U
80	B5	2572	C
80	B5	2573	G
80	B5	2574	G
80	B5	2584	G
80	B5	2585	G
80	B5	2589	G
80	B5	2590	A
80	B5	2591	A
80	B5	2593	A
80	B5	2594	C
80	B5	2598	G
80	B5	2599	U
80	B5	2606	G
80	B5	2607	G
80	B5	2610	G
80	B5	2614	G
80	B5	2615	G
80	B5	2622	C
80	B5	2637	A
80	B5	2639	G
80	B5	2652	U
80	B5	2656	A
80	B5	2662	G
80	B5	2663	G

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Mol	Chain	Res	Type
80	B5	2667	A
80	B5	2674	A
80	B5	2677	G
80	B5	2678	A
80	B5	2681	U
80	B5	2683	U
80	B5	2689	A
80	B5	2691	A
80	B5	2694	A
80	B5	2696	A
80	B5	2714	G
80	B5	2723	U
80	B5	2728	G
80	B5	2729	U
80	B5	2752	U
80	B5	2753	G
80	B5	2762	A
80	B5	2771	U
80	B5	2772	C
80	B5	2773	C
80	B5	2776	C
80	B5	2777	G
80	B5	2778	G
80	B5	2779	A
80	B5	2796	G
80	B5	2799	A
80	B5	2800	G
80	B5	2801	A
80	B5	2810	C
80	B5	2817	A
80	B5	2818	U
80	B5	2819	A
80	B5	2822	U
80	B5	2829	U
80	B5	2839	G
80	B5	2844	C
80	B5	2845	A
80	B5	2853	A
80	B5	2871	G
80	B5	2872	A
80	B5	2873	U
80	B5	2875	U

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Mol	Chain	Res	Type
80	B5	2887	A
80	B5	2888	U
80	B5	2889	C
80	B5	2896	A
80	B5	2897	A
80	B5	2898	G
80	B5	2899	C
80	B5	2904	U
80	B5	2910	A
80	B5	2923	U
80	B5	2928	C
80	B5	2935	U
80	B5	2936	A
80	B5	2941	A
80	B5	2942	C
80	B5	2945	G
80	B5	2947	G
80	B5	2954	U
80	B5	2957	G
80	B5	2970	C
80	B5	2971	A
80	B5	2972	G
80	B5	2979	U
80	B5	2983	C
80	B5	2987	A
80	B5	2990	G
80	B5	2996	U
80	B5	2997	G
80	B5	3012	A
80	B5	3028	G
80	B5	3050	U
80	B5	3056	U
80	B5	3057	U
80	B5	3059	G
80	B5	3078	U
80	B5	3079	U
80	B5	3080	G
80	B5	3086	A
80	B5	3087	A
80	B5	3092	C
80	B5	3130	A
80	B5	3131	U

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Mol	Chain	Res	Type
80	B5	3139	A
80	B5	3142	A
80	B5	3143	C
80	B5	3148	U
80	B5	3153	U
80	B5	3154	C
80	B5	3155	U
80	B5	3156	U
80	B5	3157	U
80	B5	3158	G
80	B5	3159	C
80	B5	3164	C
80	B5	3165	A
80	B5	3166	C
80	B5	3168	A
80	B5	3171	U
80	B5	3172	A
80	B5	3173	G
80	B5	3174	A
80	B5	3175	U
80	B5	3176	G
80	B5	3177	G
80	B5	3179	U
80	B5	3180	A
80	B5	3181	C
80	B5	3187	A
80	B5	3195	U
80	B5	3196	U
80	B5	3207	U
80	B5	3217	C
80	B5	3218	A
80	B5	3219	G
80	B5	3222	U
80	B5	3223	A
80	B5	3224	G
80	B5	3227	A
80	B5	3229	G
80	B5	3238	G
80	B5	3245	A
80	B5	3246	G
80	B5	3247	G
80	B5	3251	U

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Mol	Chain	Res	Type
80	B5	3253	G
80	B5	3259	U
80	B5	3260	G
80	B5	3269	U
80	B5	3270	U
80	B5	3273	A
80	B5	3275	U
80	B5	3276	G
80	B5	3277	U
80	B5	3279	A
80	B5	3280	U
80	B5	3282	U
80	B5	3284	G
80	B5	3285	C
80	B5	3286	G
80	B5	3288	G
80	B5	3289	G
80	B5	3290	G
80	B5	3292	A
80	B5	3294	A
80	B5	3304	U
80	B5	3307	A
80	B5	3313	U
80	B5	3316	A
80	B5	3317	U
80	B5	3318	G
80	B5	3319	U
80	B5	3320	A
80	B5	3330	A
80	B5	3331	U
80	B5	3333	G
80	B5	3335	A
80	B5	3336	A
80	B5	3341	U
80	B5	3342	A
80	B5	3343	G
80	B5	3345	G
80	B5	3349	C
80	B5	3351	U
80	B5	3352	U
80	B5	3354	U
80	B5	3355	U

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Mol	Chain	Res	Type
80	B5	3356	G
80	B5	3357	U
80	B5	3358	U
80	B5	3369	G
80	B5	3378	C
80	B5	3382	U
80	B5	3383	G
80	B5	3389	U
80	B5	3390	G
80	B5	3393	U
80	B5	3396	U
81	B7	7	G
81	B7	22	A
81	B7	27	A
81	B7	33	U
81	B7	38	U
81	B7	42	A
81	B7	54	U
81	B7	61	G
81	B7	65	G
81	B7	66	A
81	B7	73	C
81	B7	74	C
81	B7	93	C
81	B7	101	G
81	B7	102	A
81	B7	103	A
81	B7	104	A
81	B7	112	G
82	B8	21	C
82	B8	34	U
82	B8	35	C
82	B8	48	A
82	B8	52	A
82	B8	53	A
82	B8	59	A
82	B8	62	C
82	B8	63	G
82	B8	79	A
82	B8	80	A
82	B8	81	U
82	B8	83	C

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Mol	Chain	Res	Type
82	B8	84	C
82	B8	86	U
82	B8	87	G
82	B8	90	U
82	B8	95	G
82	B8	104	A
82	B8	105	A
82	B8	106	C
82	B8	111	A
82	B8	112	U
82	B8	113	U
82	B8	122	U
82	B8	125	U
82	B8	126	A
82	B8	127	U
82	B8	138	A
82	B8	152	G
82	B8	156	U
82	B8	157	U
82	B8	158	U
84	CW	2	C
84	CW	3	C
84	CW	8	U
84	CW	17	C
84	CW	18	G
84	CW	19	G
84	CW	20	U
84	CW	21	A
84	CW	22	G
84	CW	37	A
84	CW	42	C
84	CW	46	G
84	CW	48	C
84	CW	52	G
84	CW	57	G
84	CW	60	U
84	CW	61	C
84	CW	68	C
84	CW	72	C
84	CW	73	A
84	CW	74	C
84	CW	75	C

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Mol	Chain	Res	Type
84	CW	76	A

All (225) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
79	B2	2	A
79	B2	25	C
79	B2	45	U
79	B2	68	A
79	B2	73	U
79	B2	74	U
79	B2	76	A
79	B2	103	A
79	B2	114	C
79	B2	126	A
79	B2	130	C
79	B2	131	C
79	B2	132	U
79	B2	133	U
79	B2	136	C
79	B2	139	C
79	B2	144	U
79	B2	158	U
79	B2	187	G
79	B2	217	A
79	B2	218	A
79	B2	232	U
79	B2	239	C
79	B2	240	U
79	B2	278	U
79	B2	280	U
79	B2	320	U
79	B2	400	A
79	B2	417	A
79	B2	484	C
79	B2	495	C
79	B2	497	G
79	B2	498	G
79	B2	499	U
79	B2	501	U
79	B2	503	G
79	B2	507	U

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Mol	Chain	Res	Type
79	B2	512	A
79	B2	542	A
79	B2	543	C
79	B2	555	A
79	B2	558	U
79	B2	582	U
79	B2	685	A
79	B2	704	C
79	B2	720	G
79	B2	721	U
79	B2	734	A
79	B2	755	A
79	B2	781	U
79	B2	782	U
79	B2	794	U
79	B2	811	A
79	B2	815	G
79	B2	819	G
79	B2	823	G
79	B2	829	A
79	B2	913	G
79	B2	1051	G
79	B2	1058	U
79	B2	1081	A
79	B2	1137	A
79	B2	1157	A
79	B2	1187	U
79	B2	1195	C
79	B2	1196	A
79	B2	1207	C
79	B2	1226	A
79	B2	1234	A
79	B2	1244	A
79	B2	1250	U
79	B2	1339	C
79	B2	1344	A
79	B2	1370	U
79	B2	1428	G
79	B2	1481	C
79	B2	1489	U
79	B2	1490	C
79	B2	1521	G

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Mol	Chain	Res	Type
79	B2	1568	C
79	B2	1572	G
79	B2	1573	A
79	B2	1615	C
79	B2	1657	U
79	B2	1711	C
79	B2	1761	U
80	B5	43	A
80	B5	65	A
80	B5	93	C
80	B5	151	A
80	B5	169	U
80	B5	183	G
80	B5	217	U
80	B5	238	A
80	B5	282	G
80	B5	397	A
80	B5	436	A
80	B5	438	A
80	B5	439	C
80	B5	545	U
80	B5	546	C
80	B5	588	G
80	B5	611	A
80	B5	619	A
80	B5	647	A
80	B5	705	A
80	B5	715	A
80	B5	719	U
80	B5	726	G
80	B5	735	A
80	B5	765	C
80	B5	786	A
80	B5	816	A
80	B5	873	C
80	B5	896	A
80	B5	908	G
80	B5	916	G
80	B5	937	G
80	B5	979	U
80	B5	993	G
80	B5	1027	A

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Mol	Chain	Res	Type
80	B5	1033	U
80	B5	1064	A
80	B5	1081	U
80	B5	1085	A
80	B5	1094	U
80	B5	1152	G
80	B5	1181	U
80	B5	1192	C
80	B5	1230	G
80	B5	1231	A
80	B5	1236	G
80	B5	1238	C
80	B5	1241	U
80	B5	1256	G
80	B5	1258	U
80	B5	1284	C
80	B5	1307	G
80	B5	1317	A
80	B5	1329	U
80	B5	1331	U
80	B5	1352	A
80	B5	1355	A
80	B5	1434	G
80	B5	1481	A
80	B5	1507	G
80	B5	1514	G
80	B5	1554	U
80	B5	1560	G
80	B5	1568	U
80	B5	1574	C
80	B5	1580	A
80	B5	1589	A
80	B5	1607	U
80	B5	1716	U
80	B5	1724	U
80	B5	1815	U
80	B5	1816	A
80	B5	1817	G
80	B5	1819	U
80	B5	1841	A
80	B5	1842	A
80	B5	1849	C

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Mol	Chain	Res	Type
80	B5	1878	G
80	B5	1879	A
80	B5	2101	C
80	B5	2112	U
80	B5	2116	G
80	B5	2204	C
80	B5	2209	U
80	B5	2249	G
80	B5	2255	A
80	B5	2257	C
80	B5	2372	A
80	B5	2374	C
80	B5	2440	G
80	B5	2507	C
80	B5	2513	U
80	B5	2531	C
80	B5	2537	U
80	B5	2539	C
80	B5	2583	C
80	B5	2585	G
80	B5	2593	A
80	B5	2662	G
80	B5	2682	C
80	B5	2689	A
80	B5	2714	G
80	B5	2728	G
80	B5	2752	U
80	B5	2772	C
80	B5	2777	G
80	B5	2801	A
80	B5	2817	A
80	B5	2818	U
80	B5	2887	A
80	B5	2896	A
80	B5	2970	C
80	B5	2971	A
80	B5	2996	U
80	B5	3056	U
80	B5	3078	U
80	B5	3154	C
80	B5	3155	U
80	B5	3167	A

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Mol	Chain	Res	Type
80	B5	3195	U
80	B5	3218	A
80	B5	3228	C
80	B5	3259	U
80	B5	3269	U
80	B5	3275	U
80	B5	3289	G
80	B5	3317	U
80	B5	3330	A
80	B5	3340	G
80	B5	3341	U
80	B5	3357	U
82	B8	111	A
82	B8	126	A
82	B8	156	U
84	CW	17	C
84	CW	20	U
84	CW	68	C
84	CW	69	G
84	CW	73	A

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 443 ligands modelled in this entry, 232 are monoatomic - leaving 211 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	$\#\|Z\| > 2$
88	OHX	B2	2040	-	0,6,6	-	-	-		
88	OHX	B2	1959	-	0,6,6	-	-	-		
88	OHX	B7	220	-	0,6,6	-	-	-		
88	OHX	B2	1961	-	0,6,6	-	-	-		
88	OHX	B2	2072	-	0,6,6	-	-	-		
88	OHX	B2	2069	79	0,6,6	-	-	-		
88	OHX	B5	3402	-	0,6,6	-	-	-		
88	OHX	B2	2032	-	0,6,6	-	-	-		
88	OHX	B2	1919	-	0,6,6	-	-	-		
88	OHX	B2	1933	-	0,6,6	-	-	-		
88	OHX	B2	2031	-	0,6,6	-	-	-		
88	OHX	B2	2048	87	0,6,6	-	-	-		
88	OHX	B2	2062	88,87	0,6,6	-	-	-		
88	OHX	B2	2067	-	0,6,6	-	-	-		
88	OHX	B2	2035	-	0,6,6	-	-	-		
88	OHX	AP	201	-	0,6,6	-	-	-		
88	OHX	B2	1974	-	0,6,6	-	-	-		
88	OHX	B2	1950	-	0,6,6	-	-	-		
88	OHX	B2	2066	-	0,6,6	-	-	-		
88	OHX	B7	204	-	0,6,6	-	-	-		
88	OHX	B2	2041	-	0,6,6	-	-	-		
88	OHX	B2	2008	-	0,6,6	-	-	-		
88	OHX	B7	202	-	0,6,6	-	-	-		
88	OHX	B2	2071	-	0,6,6	-	-	-		
88	OHX	B2	1917	-	0,6,6	-	-	-		
88	OHX	B2	2005	-	0,6,6	-	-	-		
88	OHX	B2	2034	-	0,6,6	-	-	-		
88	OHX	B2	1967	-	0,6,6	-	-	-		
88	OHX	B2	1996	-	0,6,6	-	-	-		
88	OHX	B2	2077	-	0,6,6	-	-	-		
88	OHX	B2	1905	-	0,6,6	-	-	-		
88	OHX	B2	1930	-	0,6,6	-	-	-		
88	OHX	B2	1932	-	0,6,6	-	-	-		
88	OHX	B2	1934	-	0,6,6	-	-	-		
88	OHX	B2	2009	-	0,6,6	-	-	-		
88	OHX	B2	1937	-	0,6,6	-	-	-		
88	OHX	B2	2059	-	0,6,6	-	-	-		
88	OHX	B2	1999	-	0,6,6	-	-	-		
88	OHX	B2	1915	-	0,6,6	-	-	-		
88	OHX	B2	2076	-	0,6,6	-	-	-		
88	OHX	B2	1927	-	0,6,6	-	-	-		
88	OHX	B7	206	-	0,6,6	-	-	-		
88	OHX	B2	1994	-	0,6,6	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
88	OHX	B2	1947	-	0,6,6	-	-	-		
88	OHX	B2	1965	-	0,6,6	-	-	-		
88	OHX	B2	1918	88	0,6,6	-	-	-		
88	OHX	B2	1995	-	0,6,6	-	-	-		
88	OHX	A6	401	-	0,6,6	-	-	-		
88	OHX	B2	1914	-	0,6,6	-	-	-		
88	OHX	B2	2012	-	0,6,6	-	-	-		
88	OHX	B2	1922	-	0,6,6	-	-	-		
88	OHX	B2	1973	-	0,6,6	-	-	-		
88	OHX	B2	1949	-	0,6,6	-	-	-		
88	OHX	B2	1958	-	0,6,6	-	-	-		
88	OHX	B2	1998	-	0,6,6	-	-	-		
88	OHX	B2	2013	-	0,6,6	-	-	-		
88	OHX	B2	2033	-	0,6,6	-	-	-		
88	OHX	B2	2051	-	0,6,6	-	-	-		
88	OHX	B2	1969	-	0,6,6	-	-	-		
88	OHX	B2	1983	-	0,6,6	-	-	-		
88	OHX	B5	3403	-	0,6,6	-	-	-		
88	OHX	B2	1935	-	0,6,6	-	-	-		
88	OHX	B2	2039	-	0,6,6	-	-	-		
88	OHX	B2	2061	-	0,6,6	-	-	-		
88	OHX	B2	2052	-	0,6,6	-	-	-		
88	OHX	B2	1946	-	0,6,6	-	-	-		
88	OHX	B2	1931	-	0,6,6	-	-	-		
88	OHX	B2	1912	-	0,6,6	-	-	-		
88	OHX	BR	201	-	0,6,6	-	-	-		
88	OHX	B2	2058	-	0,6,6	-	-	-		
88	OHX	B2	1964	-	0,6,6	-	-	-		
88	OHX	B2	1979	-	0,6,6	-	-	-		
88	OHX	B2	1991	-	0,6,6	-	-	-		
88	OHX	B2	1986	-	0,6,6	-	-	-		
88	OHX	B2	1951	-	0,6,6	-	-	-		
88	OHX	AI	302	-	0,6,6	-	-	-		
88	OHX	Bn	101	-	0,6,6	-	-	-		
88	OHX	B2	1954	-	0,6,6	-	-	-		
88	OHX	B2	1972	-	0,6,6	-	-	-		
88	OHX	B2	2042	-	0,6,6	-	-	-		
88	OHX	B2	1988	-	0,6,6	-	-	-		
88	OHX	B7	221	-	0,6,6	-	-	-		
88	OHX	B2	1945	-	0,6,6	-	-	-		
88	OHX	B2	2053	-	0,6,6	-	-	-		
88	OHX	B2	1960	-	0,6,6	-	-	-		
88	OHX	B2	1966	-	0,6,6	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
88	OHX	B2	1962	-	0,6,6	-	-	-		
88	OHX	B2	2025	-	0,6,6	-	-	-		
88	OHX	B7	201	-	0,6,6	-	-	-		
88	OHX	B2	2081	-	0,6,6	-	-	-		
88	OHX	B2	2006	-	0,6,6	-	-	-		
88	OHX	B2	2023	-	0,6,6	-	-	-		
88	OHX	AN	201	-	0,6,6	-	-	-		
88	OHX	B2	1997	-	0,6,6	-	-	-		
88	OHX	B2	1928	-	0,6,6	-	-	-		
88	OHX	B2	2027	-	0,6,6	-	-	-		
88	OHX	B2	2021	-	0,6,6	-	-	-		
88	OHX	B2	1939	-	0,6,6	-	-	-		
88	OHX	B2	2054	-	0,6,6	-	-	-		
88	OHX	B2	2065	-	0,6,6	-	-	-		
88	OHX	B2	2026	-	0,6,6	-	-	-		
88	OHX	B2	2028	-	0,6,6	-	-	-		
88	OHX	B2	2043	-	0,6,6	-	-	-		
88	OHX	B5	3401	-	0,6,6	-	-	-		
88	OHX	B7	215	-	0,6,6	-	-	-		
88	OHX	B2	1901	-	0,6,6	-	-	-		
88	OHX	B2	1908	-	0,6,6	-	-	-		
88	OHX	B2	2002	-	0,6,6	-	-	-		
88	OHX	B2	1955	-	0,6,6	-	-	-		
88	OHX	B2	2047	-	0,6,6	-	-	-		
88	OHX	B2	2015	-	0,6,6	-	-	-		
88	OHX	B2	2079	-	0,6,6	-	-	-		
88	OHX	B2	2073	-	0,6,6	-	-	-		
88	OHX	B2	2016	-	0,6,6	-	-	-		
88	OHX	AL	201	-	0,6,6	-	-	-		
88	OHX	B2	1948	-	0,6,6	-	-	-		
88	OHX	B2	2010	-	0,6,6	-	-	-		
88	OHX	B7	219	87	0,6,6	-	-	-		
88	OHX	B2	1982	-	0,6,6	-	-	-		
88	OHX	B2	1980	-	0,6,6	-	-	-		
88	OHX	B2	2060	-	0,6,6	-	-	-		
88	OHX	B2	2003	-	0,6,6	-	-	-		
88	OHX	A3	102	-	0,6,6	-	-	-		
88	OHX	B2	2019	-	0,6,6	-	-	-		
88	OHX	B2	1942	-	0,6,6	-	-	-		
88	OHX	B2	1957	-	0,6,6	-	-	-		
88	OHX	B2	1929	-	0,6,6	-	-	-		
88	OHX	B2	1987	-	0,6,6	-	-	-		
88	OHX	B2	2080	-	0,6,6	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
88	OHX	B7	203	-	0,6,6	-	-	-		
88	OHX	B2	1985	-	0,6,6	-	-	-		
88	OHX	B2	2049	-	0,6,6	-	-	-		
88	OHX	B2	1992	-	0,6,6	-	-	-		
88	OHX	B2	2057	-	0,6,6	-	-	-		
88	OHX	B2	2004	-	0,6,6	-	-	-		
88	OHX	B2	2075	-	0,6,6	-	-	-		
88	OHX	B2	1944	-	0,6,6	-	-	-		
88	OHX	B2	1971	-	0,6,6	-	-	-		
88	OHX	B2	2046	-	0,6,6	-	-	-		
88	OHX	B2	2055	-	0,6,6	-	-	-		
88	OHX	B2	1909	88	0,6,6	-	-	-		
88	OHX	B2	1970	-	0,6,6	-	-	-		
88	OHX	B2	2024	-	0,6,6	-	-	-		
88	OHX	B2	2037	-	0,6,6	-	-	-		
88	OHX	B2	1910	-	0,6,6	-	-	-		
88	OHX	CX	101	-	0,6,6	-	-	-		
88	OHX	B2	2017	-	0,6,6	-	-	-		
88	OHX	B2	1963	-	0,6,6	-	-	-		
88	OHX	B2	2074	-	0,6,6	-	-	-		
88	OHX	B2	2045	-	0,6,6	-	-	-		
88	OHX	B2	1916	-	0,6,6	-	-	-		
88	OHX	B2	1978	-	0,6,6	-	-	-		
88	OHX	B2	1923	-	0,6,6	-	-	-		
88	OHX	B2	1924	-	0,6,6	-	-	-		
88	OHX	B2	2050	-	0,6,6	-	-	-		
88	OHX	B2	2007	-	0,6,6	-	-	-		
88	OHX	B2	1920	-	0,6,6	-	-	-		
88	OHX	B2	2000	-	0,6,6	-	-	-		
88	OHX	B2	2020	-	0,6,6	-	-	-		
88	OHX	B2	1993	-	0,6,6	-	-	-		
88	OHX	B2	2036	-	0,6,6	-	-	-		
88	OHX	B2	2029	88	0,6,6	-	-	-		
88	OHX	B2	1906	87	0,6,6	-	-	-		
88	OHX	B2	1913	-	0,6,6	-	-	-		
88	OHX	B2	1976	-	0,6,6	-	-	-		
88	OHX	B7	205	-	0,6,6	-	-	-		
88	OHX	B2	1984	-	0,6,6	-	-	-		
88	OHX	B2	1943	-	0,6,6	-	-	-		
88	OHX	B2	2044	-	0,6,6	-	-	-		
88	OHX	B2	1968	-	0,6,6	-	-	-		
88	OHX	B2	2063	-	0,6,6	-	-	-		
88	OHX	B2	1952	-	0,6,6	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
88	OHX	B2	1925	-	0,6,6	-	-	-		
88	OHX	B2	2038	-	0,6,6	-	-	-		
88	OHX	B7	212	-	0,6,6	-	-	-		
88	OHX	B2	1904	-	0,6,6	-	-	-		
88	OHX	CV	601	-	0,6,6	-	-	-		
88	OHX	B2	1938	-	0,6,6	-	-	-		
88	OHX	B2	2064	-	0,6,6	-	-	-		
88	OHX	B2	1911	-	0,6,6	-	-	-		
88	OHX	B2	1953	-	0,6,6	-	-	-		
88	OHX	B2	2068	-	0,6,6	-	-	-		
88	OHX	B2	1940	-	0,6,6	-	-	-		
88	OHX	B2	1981	-	0,6,6	-	-	-		
88	OHX	B7	210	-	0,6,6	-	-	-		
88	OHX	B7	214	-	0,6,6	-	-	-		
88	OHX	B2	1977	-	0,6,6	-	-	-		
88	OHX	B2	2070	-	0,6,6	-	-	-		
88	OHX	B2	1921	-	0,6,6	-	-	-		
88	OHX	AC	301	-	0,6,6	-	-	-		
88	OHX	B2	2082	-	0,6,6	-	-	-		
88	OHX	B2	2001	-	0,6,6	-	-	-		
88	OHX	B2	2030	-	0,6,6	-	-	-		
88	OHX	B2	1989	-	0,6,6	-	-	-		
88	OHX	B2	1990	-	0,6,6	-	-	-		
89	GCP	CV	602	-	32,34,34	1.73	4 (12%)	49,54,54	1.62	5 (10%)
88	OHX	B2	1936	-	0,6,6	-	-	-		
88	OHX	B2	1903	-	0,6,6	-	-	-		
88	OHX	B2	2014	-	0,6,6	-	-	-		
88	OHX	B2	1941	-	0,6,6	-	-	-		
88	OHX	B2	2011	-	0,6,6	-	-	-		
88	OHX	B2	1975	-	0,6,6	-	-	-		
88	OHX	AI	301	-	0,6,6	-	-	-		
88	OHX	B2	1902	-	0,6,6	-	-	-		
88	OHX	B2	2018	-	0,6,6	-	-	-		
88	OHX	B2	1956	-	0,6,6	-	-	-		
88	OHX	B2	1926	-	0,6,6	-	-	-		
88	OHX	B2	2078	-	0,6,6	-	-	-		
88	OHX	B2	2056	-	0,6,6	-	-	-		
88	OHX	B2	1907	-	0,6,6	-	-	-		
88	OHX	B2	2022	-	0,6,6	-	-	-		

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns.

'-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	GCP	CV	602	-	-	1/19/38/38	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
89	CV	602	GCP	PA-O3A	-6.63	1.52	1.59
89	CV	602	GCP	C2'-C1'	-3.04	1.43	1.53
89	CV	602	GCP	C4-N3	2.54	1.40	1.34
89	CV	602	GCP	PB-O3A	-2.36	1.55	1.58

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
89	CV	602	GCP	O3G-PG-C3B	-7.36	88.55	106.40
89	CV	602	GCP	O2A-PA-O3A	3.08	115.59	107.27
89	CV	602	GCP	O1B-PB-C3B	2.91	116.72	109.05
89	CV	602	GCP	O2G-PG-O1G	2.77	119.54	112.39
89	CV	602	GCP	C1'-N9-C8	2.21	133.00	126.73

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
89	CV	602	GCP	PB-C3B-PG-O1G

There are no ring outliers.

126 monomers are involved in 332 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	B2	2040	OHX	1	0
88	B2	1959	OHX	1	0
88	B7	220	OHX	1	0
88	B2	1961	OHX	1	0
88	B2	2069	OHX	17	0
88	B5	3402	OHX	3	0
88	B2	2032	OHX	1	0
88	B2	1919	OHX	1	0
88	B2	2048	OHX	7	0
88	B2	2062	OHX	6	0
88	B2	2067	OHX	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	AP	201	OHX	3	0
88	B2	1974	OHX	3	0
88	B2	2066	OHX	6	0
88	B2	2041	OHX	1	0
88	B7	202	OHX	1	0
88	B2	2071	OHX	6	0
88	B2	1917	OHX	2	0
88	B2	1967	OHX	5	0
88	B2	2077	OHX	5	0
88	B2	2009	OHX	2	0
88	B2	1937	OHX	1	0
88	B2	2059	OHX	1	0
88	B2	1999	OHX	3	0
88	B2	1915	OHX	6	0
88	B2	2076	OHX	1	0
88	B2	1927	OHX	1	0
88	B2	1947	OHX	1	0
88	B2	1918	OHX	8	0
88	B2	1995	OHX	1	0
88	A6	401	OHX	2	0
88	B2	1914	OHX	3	0
88	B2	2012	OHX	1	0
88	B2	1922	OHX	7	0
88	B2	1973	OHX	7	0
88	B2	1949	OHX	2	0
88	B2	2013	OHX	1	0
88	B2	2033	OHX	2	0
88	B2	2051	OHX	1	0
88	B2	1969	OHX	1	0
88	B2	2061	OHX	1	0
88	BR	201	OHX	9	0
88	B2	2058	OHX	1	0
88	B2	1964	OHX	2	0
88	B2	1986	OHX	1	0
88	B2	1951	OHX	2	0
88	AI	302	OHX	2	0
88	B2	1954	OHX	1	0
88	B2	1972	OHX	1	0
88	B2	1988	OHX	1	0
88	B2	1945	OHX	1	0
88	B2	1960	OHX	4	0
88	B2	1962	OHX	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	B2	2025	OHX	7	0
88	B2	2081	OHX	11	0
88	B2	2006	OHX	1	0
88	B2	2023	OHX	2	0
88	AN	201	OHX	2	0
88	B2	1928	OHX	1	0
88	B2	1939	OHX	5	0
88	B2	2028	OHX	1	0
88	B2	2043	OHX	1	0
88	B5	3401	OHX	1	0
88	B2	1901	OHX	1	0
88	B2	2002	OHX	1	0
88	B2	2047	OHX	3	0
88	B2	2073	OHX	1	0
88	AL	201	OHX	3	0
88	B2	1948	OHX	1	0
88	B2	2010	OHX	1	0
88	B7	219	OHX	6	0
88	B2	1982	OHX	1	0
88	A3	102	OHX	4	0
88	B2	1929	OHX	1	0
88	B2	1987	OHX	8	0
88	B7	203	OHX	6	0
88	B2	1985	OHX	3	0
88	B2	2057	OHX	1	0
88	B2	2075	OHX	2	0
88	B2	1944	OHX	1	0
88	B2	1971	OHX	2	0
88	B2	2046	OHX	1	0
88	B2	1909	OHX	2	0
88	B2	2024	OHX	2	0
88	B2	2037	OHX	1	0
88	B2	1910	OHX	2	0
88	CX	101	OHX	2	0
88	B2	1963	OHX	6	0
88	B2	2074	OHX	1	0
88	B2	2045	OHX	1	0
88	B2	1916	OHX	1	0
88	B2	1978	OHX	1	0
88	B2	1923	OHX	1	0
88	B2	1924	OHX	1	0
88	B2	2007	OHX	2	0

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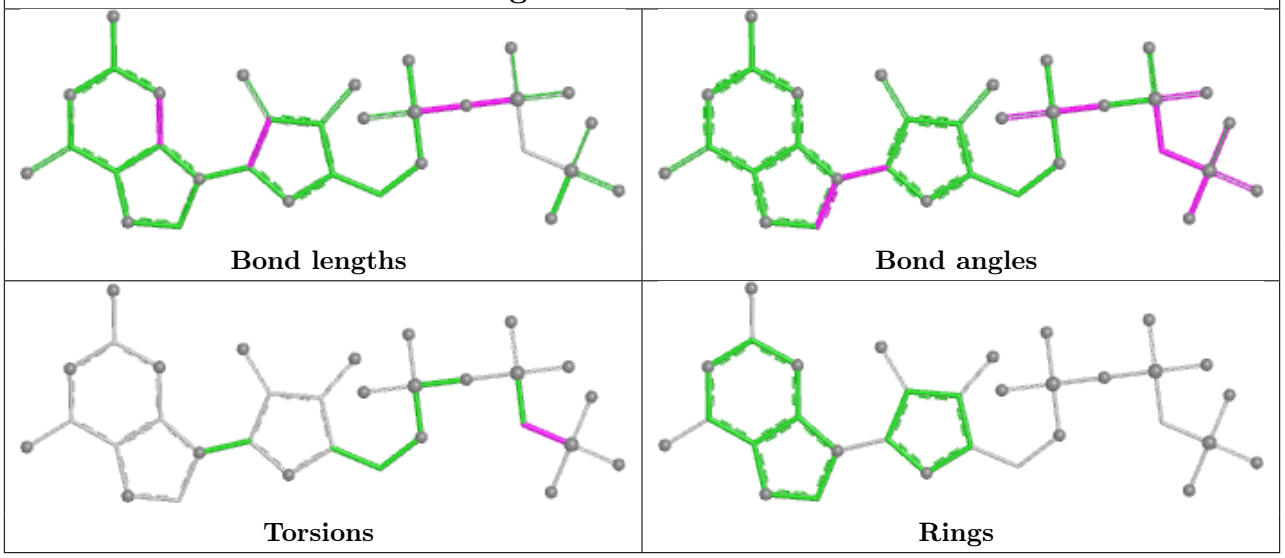
Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	B2	2020	OHX	3	0
88	B2	2036	OHX	1	0
88	B2	2029	OHX	1	0
88	B2	1906	OHX	3	0
88	B2	1976	OHX	7	0
88	B2	2044	OHX	5	0
88	B2	1968	OHX	7	0
88	B2	2063	OHX	2	0
88	B2	1952	OHX	2	0
88	B2	1925	OHX	1	0
88	B2	2038	OHX	1	0
88	CV	601	OHX	10	0
88	B2	1953	OHX	6	0
88	B2	2068	OHX	1	0
88	B2	1981	OHX	5	0
88	B2	1977	OHX	1	0
88	B2	1921	OHX	6	0
88	AC	301	OHX	5	0
88	B2	2082	OHX	1	0
88	B2	1989	OHX	1	0
88	B2	1990	OHX	3	0
89	CV	602	GCP	62	0
88	B2	1936	OHX	1	0
88	B2	2014	OHX	7	0
88	B2	1941	OHX	1	0
88	B2	2011	OHX	11	0
88	B2	1956	OHX	1	0
88	B2	2078	OHX	1	0
88	B2	2056	OHX	1	0
88	B2	1907	OHX	6	0
88	B2	2022	OHX	1	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 GCP CV 602



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
80	B5	1
84	CW	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B5	1285:G	O3'	1286:A	P	6.77
1	CW	33:U	O3'	34:C	P	4.25

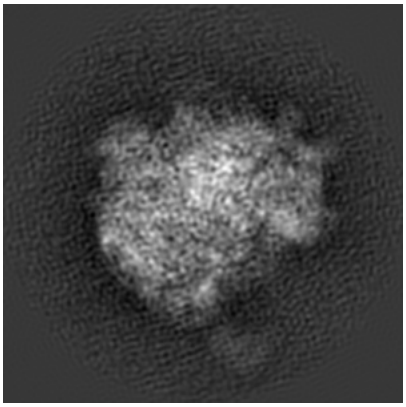
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2422. These allow visual inspection of the internal detail of the map and identification of artifacts.

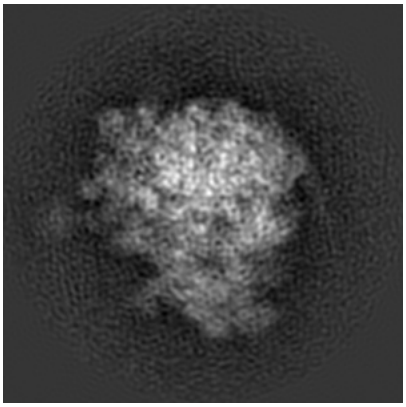
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

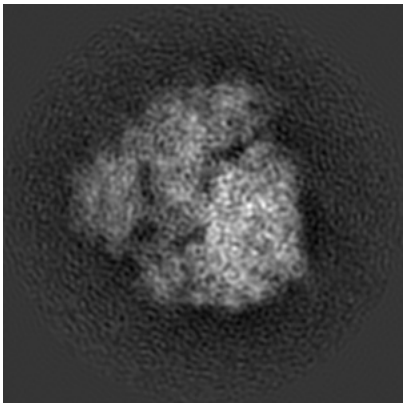
6.1.1 Primary map



X



Y

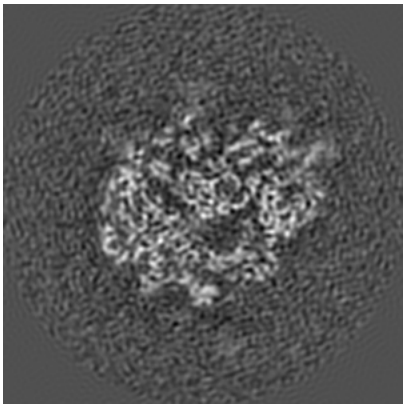


Z

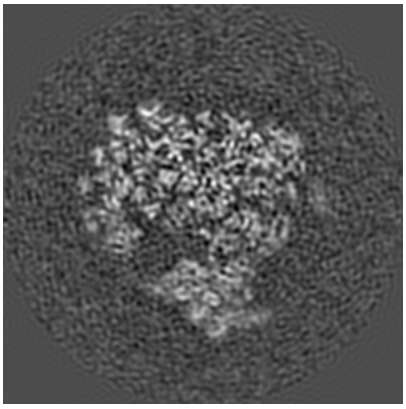
The images above show the map projected in three orthogonal directions.

6.2 Central slices

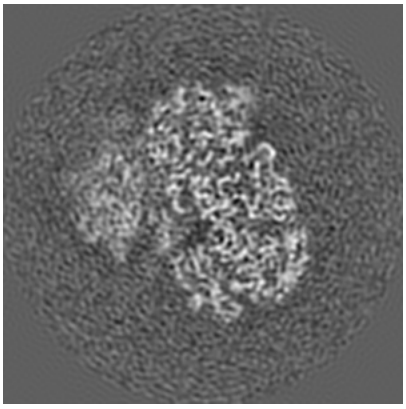
6.2.1 Primary map



X Index: 120



Y Index: 120

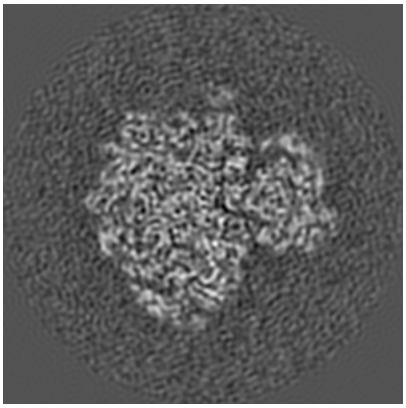


Z Index: 120

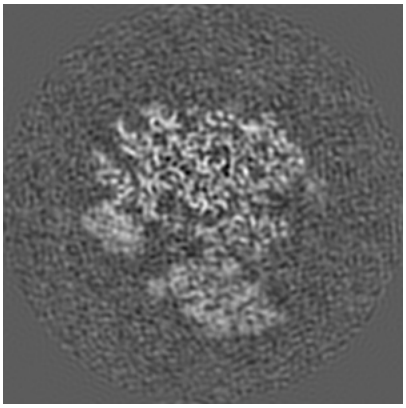
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

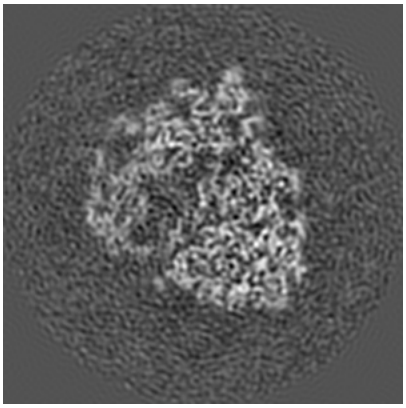
6.3.1 Primary map



X Index: 133



Y Index: 124

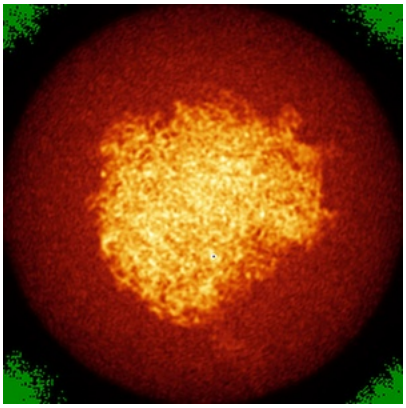


Z Index: 113

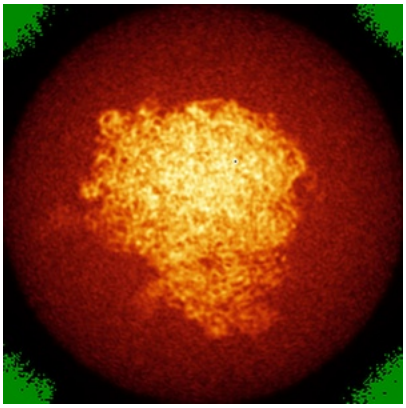
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

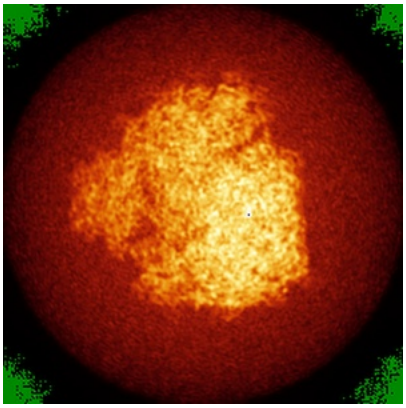
6.4.1 Primary map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.15. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

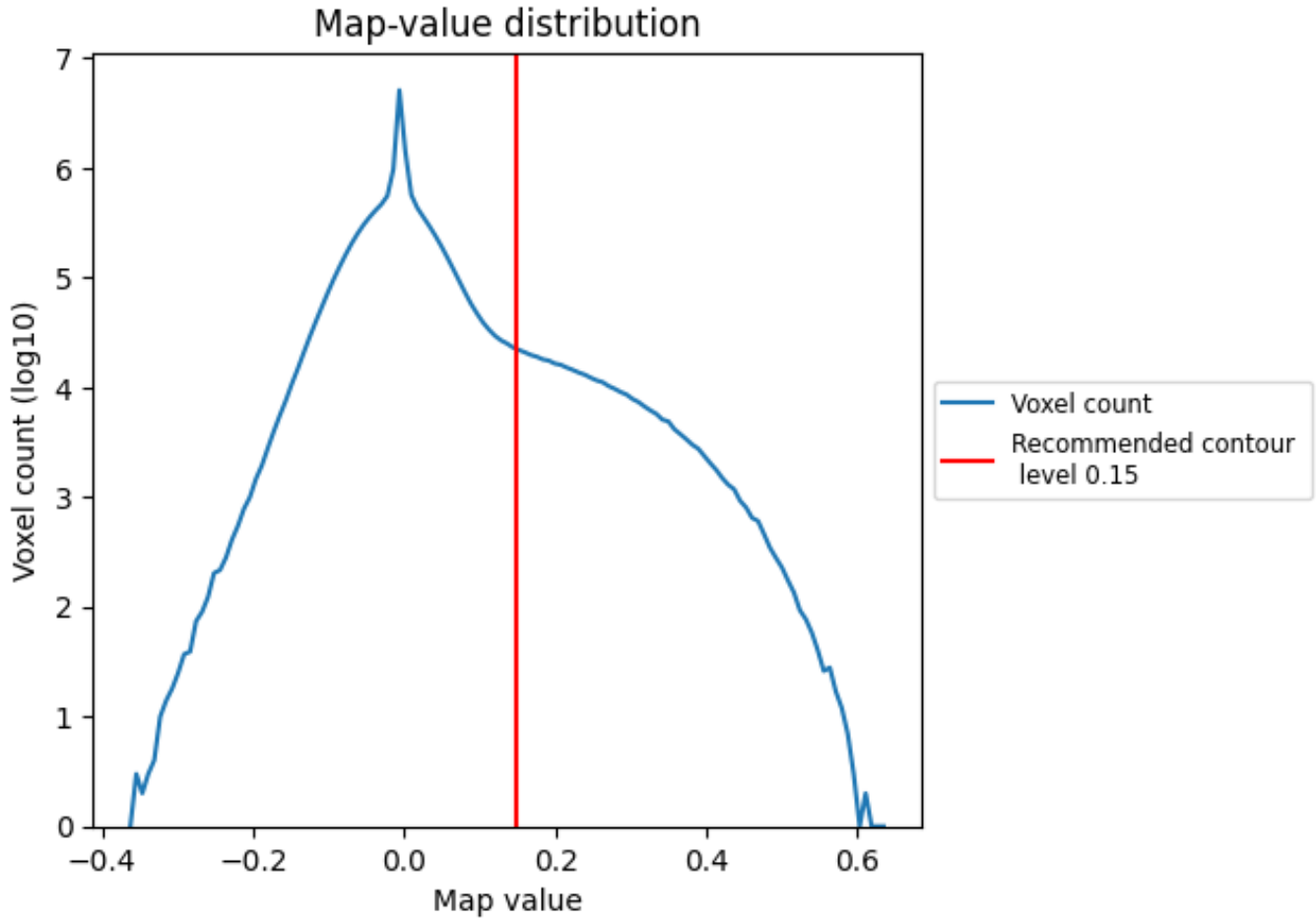
6.6 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

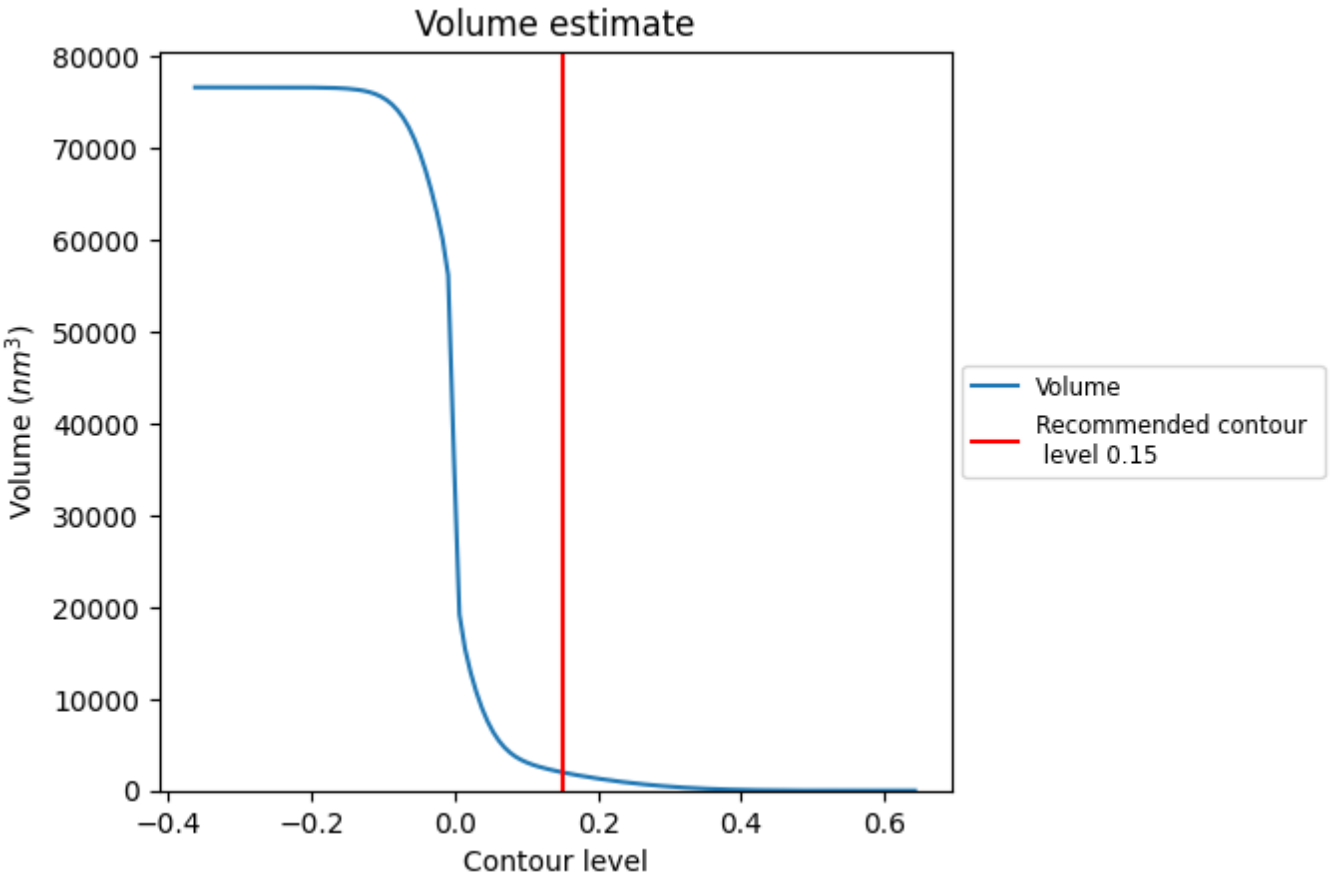
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

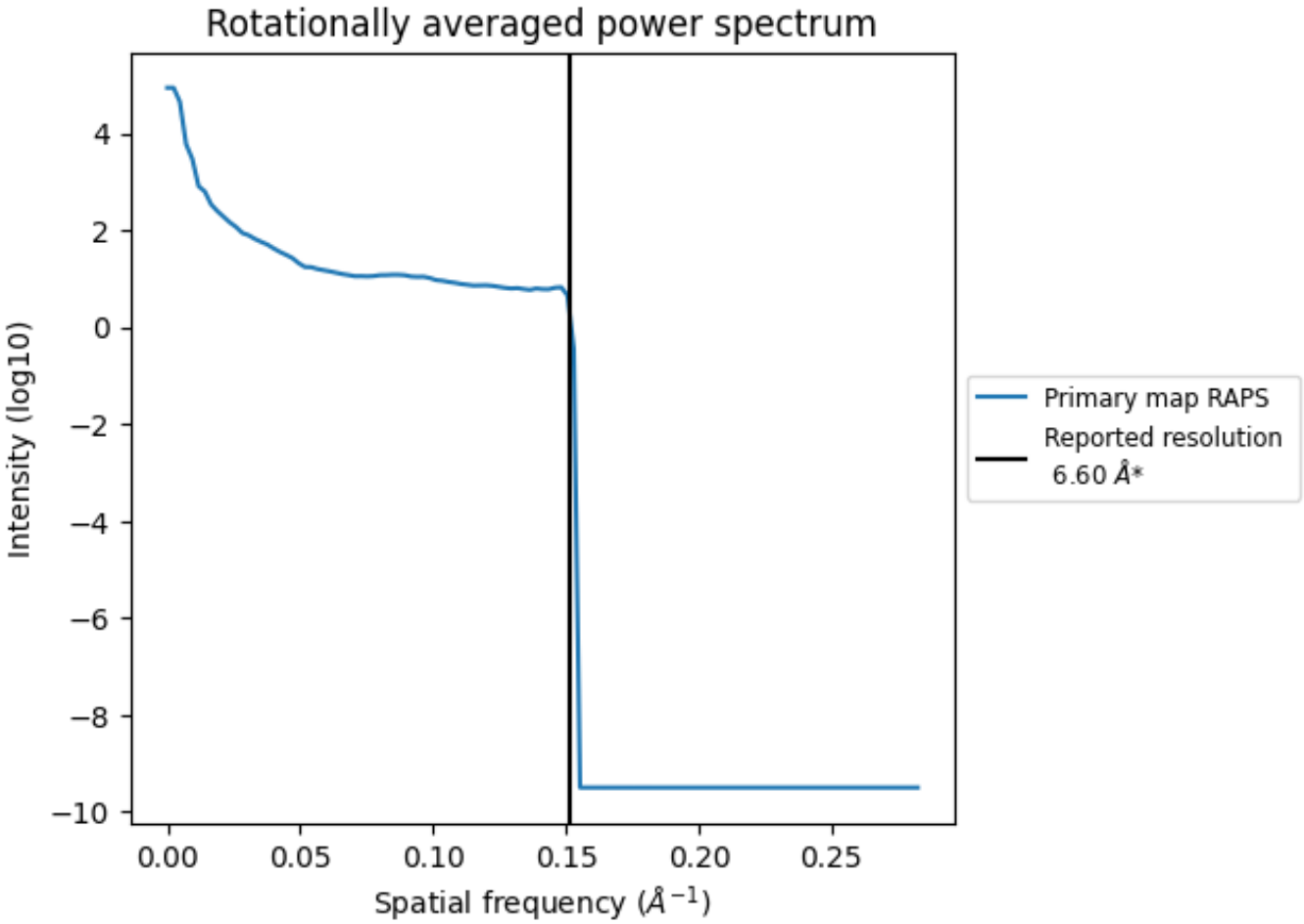
7.2 Volume estimate



The volume at the recommended contour level is 1997 nm^3; this corresponds to an approximate mass of 1804 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.152 Å^{-1}

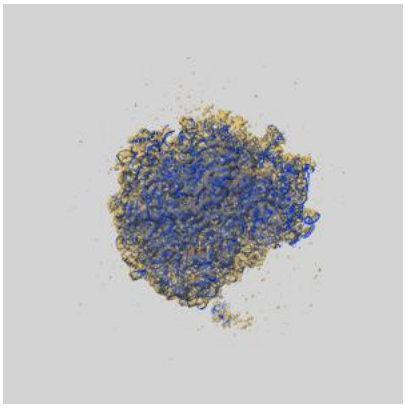
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

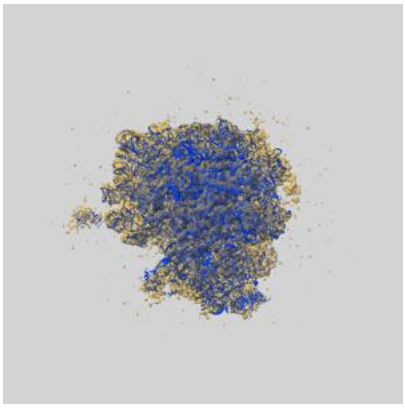
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2422 and PDB model 4V8Z. Per-residue inclusion information can be found in section 3 on page 36.

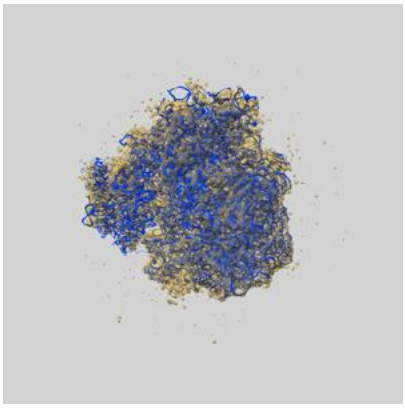
9.1 Map-model overlay



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.15 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model

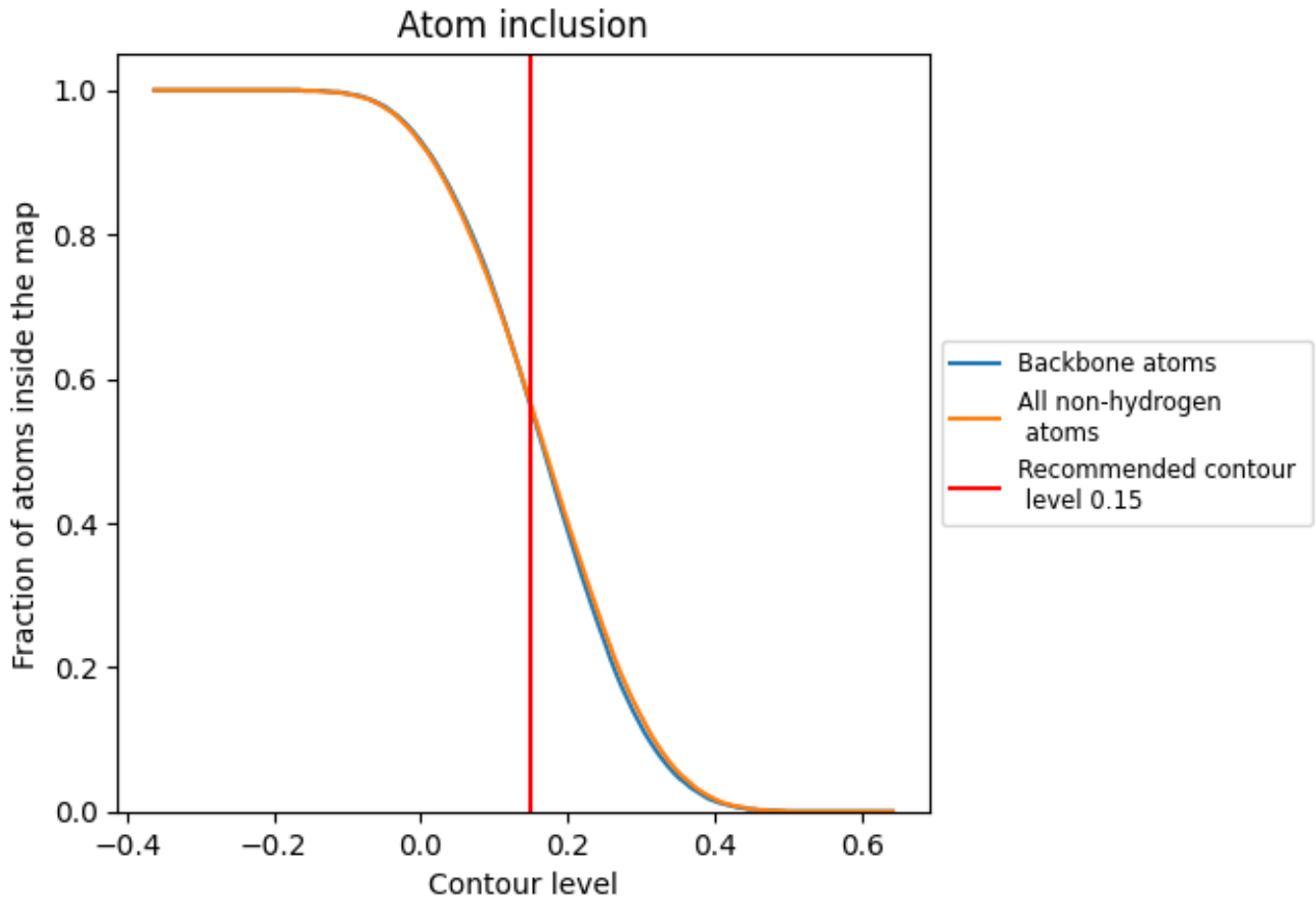
X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model

This section was not generated.

9.4 Atom inclusion (i)



At the recommended contour level, 56% of all backbone atoms, 56% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.15) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5650	0.1080
A0	0.3320	-0.0020
A1	0.4120	0.0760
A2	0.1150	-0.0000
A3	0.3690	0.0080
A4	0.3790	0.0510
A5	0.0510	-0.0100
A6	0.2510	0.0200
A7	0.1380	0.0190
AA	0.4130	0.0530
AB	0.2240	0.0100
AC	0.3920	0.0420
AD	0.2870	-0.0120
AE	0.4220	0.0540
AF	0.1330	-0.0030
AG	0.3770	0.0160
AH	0.5540	0.1420
AI	0.4250	0.0370
AJ	0.4320	0.0580
AK	0.2860	-0.0190
AL	0.4350	0.0800
AM	0.2030	0.0190
AN	0.4650	0.1190
AO	0.3700	-0.0040
AP	0.2320	0.0100
AQ	0.3110	0.0080
AR	0.3940	0.0950
AS	0.2200	0.0110
AT	0.3010	0.0260
AU	0.2410	0.0090
AV	0.4280	0.0470
AW	0.4880	0.1130
AX	0.4390	0.1160
AY	0.4470	0.0390
AZ	0.0530	0.0150

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Chain	Atom inclusion	Q-score
B2	0.5480	0.0840
B5	0.7490	0.1610
B7	0.8480	0.1770
B8	0.7510	0.1470
BA	0.3860	0.0620
BB	0.4890	0.1010
BC	0.5560	0.1160
BD	0.5700	0.1270
BE	0.5990	0.1360
BF	0.5950	0.1490
BG	0.4710	0.0510
BH	0.5440	0.1110
BI	0.5400	0.1340
BJ	0.5390	0.1260
BK	0.4410	0.0840
BL	0.4930	0.0910
BM	0.6360	0.1480
BN	0.4470	0.0670
BO	0.5480	0.1400
BP	0.5210	0.0980
BQ	0.5330	0.1170
BR	0.3290	0.0290
BS	0.5670	0.1260
BT	0.5300	0.1380
BU	0.4250	0.0610
BV	0.4430	0.1270
BW	0.2180	0.0370
BX	0.3940	0.0650
BY	0.5560	0.0940
BZ	0.4560	0.0410
Ba	0.4820	0.1010
Bb	0.4930	0.1510
Bc	0.4110	0.0580
Bd	0.4880	0.0570
Be	0.5370	0.1380
Bf	0.5500	0.1240
Bg	0.4010	0.0400
Bh	0.4970	0.1060
Bi	0.4660	0.0640
Bj	0.4790	0.0670
Bk	0.4290	0.0610
Bl	0.4170	0.0610

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Chain	Atom inclusion	Q-score
Bm	0.4850	0.1270
Bn	0.1780	0.0130
Bo	0.4660	0.1040
Bq	0.4810	0.1050
Br	0.1360	0.0410
Bs	0.1170	0.0360
CV	0.4620	0.1390
CW	0.5950	0.2240
CX	0.5800	0.1470