



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 10, 2023 – 12:21 AM EDT

PDB ID : 6BZ7
Title : Thermus thermophilus 70S containing 16S G299A point mutation and near-cognate ASL Leucine in A site.
Authors : Hoffer, E.D.; Maehigashi, T.; Fagan, C.E.; Dunham, C.M.
Deposited on : 2017-12-22
Resolution : 3.68 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtrriage (Phenix) : 1.13
EDS : **FAILED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

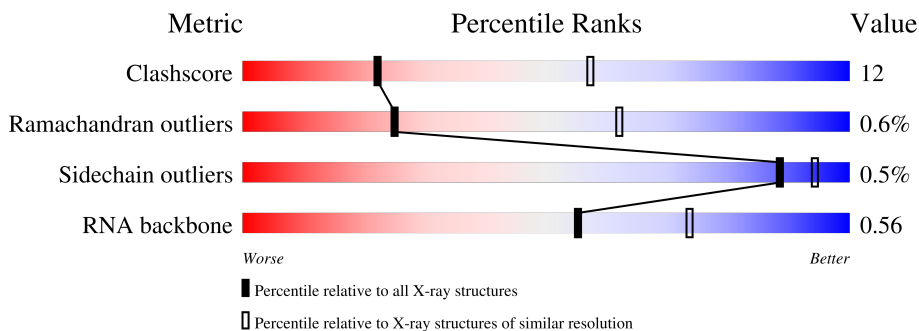
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.68 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1070 (3.84-3.52)
Ramachandran outliers	138981	1036 (3.84-3.52)
Sidechain outliers	138945	1033 (3.84-3.52)
RNA backbone	3102	1024 (4.30-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	QA	1508	
1	XA	1508	
2	QB	256	
2	XB	256	
3	QC	239	
3	XC	239	

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Mol	Chain	Length	Quality of chain	
4	QD	209	68%	31%
4	XD	209	70%	29%
5	QE	162	71%	22%
5	XE	162	77%	17%
6	QF	101	74%	24%
6	XF	101	68%	32%
7	QG	156	81%	18%
7	XG	156	83%	16%
8	QH	138	74%	25%
8	XH	138	80%	20%
9	QI	128	65%	33%
9	XI	128	62%	36%
10	QJ	105	60%	33%
10	XJ	105	69%	23%
11	QK	129	65%	27%
11	XK	129	66%	24%
12	QL	132	72%	23%
12	XL	132	70%	20%
13	QM	126	59%	36%
13	XM	126	61%	33%
14	QN	61	72%	25%
14	XN	61	72%	25%
15	QO	89	80%	19%
15	XO	89	72%	26%
16	QP	88	66%	30%

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Mol	Chain	Length	Quality of chain
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	QW	77	
22	XV	77	
22	XW	77	
23	QX	25	
23	XX	25	
24	QY	17	
24	XY	17	
25	RA	2915	
25	YA	2915	
26	RB	122	
26	YB	122	
27	RD	276	
27	YD	276	

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Mol	Chain	Length	Quality of chain	
28	RE	206	61%	37%
28	YE	206	59%	40%
29	RF	210	66%	30%
29	YF	210	63%	32%
30	RG	182	59%	40%
30	YG	182	54%	44%
31	RH	180	68%	26%
31	YH	180	64%	29%
32	RI	148	68%	30%
32	YI	148	70%	27%
33	RN	140	65%	33%
33	YN	140	71%	26%
34	RO	122	71%	28%
34	YO	122	78%	21%
35	RP	150	69%	31%
35	YP	150	61%	37%
36	RQ	141	62%	38%
36	YQ	141	60%	40%
37	RR	118	66%	33%
37	YR	118	65%	34%
38	RS	112	72%	26%
38	YS	112	71%	28%
39	RT	146	56%	37%
39	YT	146	55%	38%
40	RU	118	70%	27%





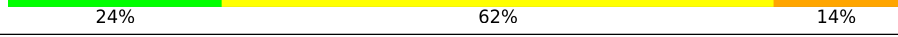
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Mol	Chain	Length	Quality of chain
40	YU	118	70% 27% ..
41	RV	101	64% 35% .
41	YV	101	71% 29%
42	RW	113	74% 24% .
42	YW	113	75% 23% .
43	RX	96	71% 25% .
43	YX	96	63% 33% .
44	RY	110	78% 19% .
44	YY	110	76% 21% .
45	RZ	206	56% 32% . 11%
45	YZ	206	59% 29% . 11%
46	R0	85	66% 29% 5%
46	Y0	85	59% 28% . 12%
47	R1	98	73% 26% .
47	Y1	98	61% 34% 5%
48	R2	72	71% 25% .
48	Y2	72	67% 29% .
49	R3	60	67% 32% .
49	Y3	60	63% 35% .
50	R4	71	69% 25% . .
50	Y4	71	66% 27% . .
51	R5	60	90% 8% .
51	Y5	60	85% 13% .
52	R6	54	81% 17% .
52	Y6	54	89% 9% .

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Mol	Chain	Length	Quality of chain
53	R7	49	 63% 33% .
53	Y7	49	 71% 27% .
54	R8	65	 65% 31% . .
54	Y8	65	 69% 26% . .
55	R9	37	 38% 62%
55	Y9	37	 24% 62% 14%

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 295575 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	QA	1500	Total 32246	C 14353	N 5981	O 10413	P 1499	0	0	0
1	XA	1500	Total 32248	C 14354	N 5984	O 10411	P 1499	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
QA	299	A	G	engineered mutation	GB 55771382
XA	299	A	G	engineered mutation	GB 55771382

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	QB	235	Total 1907	C 1217	N 342	O 343	S 5	0	0	0
2	XB	236	Total 1915	C 1223	N 343	O 344	S 5	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	QC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0
3	XC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	QE	151	1155	729	218	204	4	0	0	0
5	XE	151	1155	729	218	204	4	0	0	0

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	QF	101	843	531	155	154	3	0	0	0
6	XF	101	843	531	155	154	3	0	0	0

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	QG	155	1257	781	252	218	6	0	0	0
7	XG	155	1257	781	252	218	6	0	0	0

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	QH	137	1108	700	214	192	2	0	0	0
8	XH	137	1108	700	214	192	2	0	0	0

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace	
			Total	C	N				O
9	QI	127	1010	639	197	174	0	0	0
9	XI	126	998	633	193	172	0	0	0

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	QJ	99	Total 801	C 504	N 157	O 139	S 1	0	0	0
10	XJ	96	Total 777	C 487	N 153	O 136	S 1	0	0	0

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	QK	119	Total 885	C 549	N 168	O 165	S 3	0	0	0
11	XK	116	Total 864	C 537	N 164	O 160	S 3	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	QL	125	Total 975	C 614	N 196	O 164	S 1	0	0	0
12	XL	122	Total 956	C 603	N 193	O 159	S 1	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	QM	120	Total 955	C 591	N 197	O 165	S 2	0	0	0
13	XM	119	Total 946	C 585	N 195	O 164	S 2	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	QN	60	Total 492	C 312	N 104	O 72	S 4	0	0	0
14	XN	60	Total 492	C 312	N 104	O 72	S 4	0	0	0

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	QO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	XO	87	Total	C	N	O	S	0	0	0
			729	457	146	124	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	QP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	XP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	XQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	XR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

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

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

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	QU	25	Total	C	N	O	0	0	0
			217	134	52	31			
21	XU	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called tRNA fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	QW	76	Total	C	N	O	P	0	0	0
			1618	722	292	529	75			
22	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	XW	76	Total	C	N	O	P	0	0	0
			1618	722	292	529	75			

- Molecule 23 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	8	Total	C	N	O	P	0	0	0
			169	76	29	56	8			
23	XX	10	Total	C	N	O	P	0	0	0
			210	96	39	66	9			

- Molecule 24 is a RNA chain called ASL Leu.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QY	17	Total	C	N	O	P	0	0	0
			358	162	64	116	16			
24	XY	17	Total	C	N	O	P	0	0	0
			358	162	64	116	16			

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
25	RA	2882	Total 62071	C 27627	N 11611	O 19952	P 2881	0	0	0
25	YA	2883	Total 62091	C 27636	N 11613	O 19960	P 2882	0	0	0

- Molecule 26 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
26	RB	120	Total 2573	C 1146	N 476	O 832	P 119	0	0	0
26	YB	120	Total 2573	C 1146	N 476	O 832	P 119	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	RD	272	Total 2115	C 1335	N 420	O 357	S 3	0	0	0
27	YD	272	Total 2115	C 1335	N 420	O 357	S 3	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	RE	205	Total 1568	C 991	N 300	O 271	S 6	0	0	0
28	YE	205	Total 1568	C 991	N 300	O 271	S 6	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	RF	202	Total 1585	C 1011	N 297	O 275	S 2	0	0	0
29	YF	202	Total 1585	C 1011	N 297	O 275	S 2	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L5.

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

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

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	RH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
31	YH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	RI	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
32	YI	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	RN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
33	YN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	RO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
34	YO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	RP	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			
35	YP	147	Total	C	N	O	S	0	0	0
			1122	698	229	192	3			

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	RQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0
36	YQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
38	RS	111	Total 882	C 556	N 176	O 150	0	0	0
38	YS	111	Total 882	C 556	N 176	O 150	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
39	RT	137	Total 1141	C 710	N 234	O 196	S 1	0	0	0
39	YT	137	Total 1141	C 710	N 234	O 196	S 1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
40	RU	117	Total 964	C 610	N 202	O 151	S 1	0	0	0
40	YU	117	Total 964	C 610	N 202	O 151	S 1	0	0	0

- Molecule 41 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	RV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
41	YV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	RX	92	Total	C	N	O	0	0	0
			725	471	131	123			
43	YX	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	RY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			
44	YY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			
45	YZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	R0	81	Total	C	N	O	S	0	0	0
			643	398	137	107	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	Y0	75	599	370	127	101	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	R1	97	763	481	150	131	1	0	0	0
47	Y1	93	729	457	145	126	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	R2	69	581	358	118	104	1	0	0	0
48	Y2	69	581	358	118	104	1	0	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
49	R3	59	469	298	90	81	0	0	0
49	Y3	59	469	298	90	81	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	R4	69	565	356	103	101	5	0	0	0
50	Y4	69	565	356	103	101	5	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	R5	59	459	288	90	76	5	0	0	0
51	Y5	59	459	288	90	76	5	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
52	Y6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
53	Y7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
54	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	QA	68	Total	Mg	0	0
			68	68		
56	QC	1	Total	Mg	0	0
			1	1		
56	QE	1	Total	Mg	0	0
			1	1		
56	QF	1	Total	Mg	0	0
			1	1		

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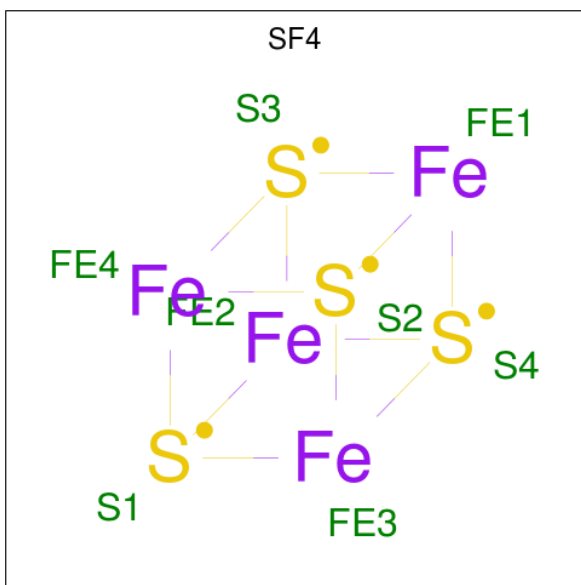
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	QH	1	Total Mg 1 1	0	0
56	QQ	1	Total Mg 1 1	0	0
56	QV	6	Total Mg 6 6	0	0
56	QY	1	Total Mg 1 1	0	0
56	RA	508	Total Mg 508 508	0	0
56	RB	7	Total Mg 7 7	0	0
56	RE	2	Total Mg 2 2	0	0
56	RF	1	Total Mg 1 1	0	0
56	RN	1	Total Mg 1 1	0	0
56	RO	2	Total Mg 2 2	0	0
56	RP	2	Total Mg 2 2	0	0
56	RQ	2	Total Mg 2 2	0	0
56	RR	1	Total Mg 1 1	0	0
56	RT	1	Total Mg 1 1	0	0
56	RU	1	Total Mg 1 1	0	0
56	RY	1	Total Mg 1 1	0	0
56	R0	4	Total Mg 4 4	0	0
56	R1	2	Total Mg 2 2	0	0
56	R4	1	Total Mg 1 1	0	0
56	R8	1	Total Mg 1 1	0	0
56	R9	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	XA	82	Total 82	Mg 82	0	0
56	XE	1	Total 1	Mg 1	0	0
56	XL	1	Total 1	Mg 1	0	0
56	XM	1	Total 1	Mg 1	0	0
56	XQ	1	Total 1	Mg 1	0	0
56	XS	1	Total 1	Mg 1	0	0
56	XV	6	Total 6	Mg 6	0	0
56	YA	546	Total 546	Mg 546	0	0
56	YB	12	Total 12	Mg 12	0	0
56	YD	2	Total 2	Mg 2	0	0
56	YE	2	Total 2	Mg 2	0	0
56	YO	1	Total 1	Mg 1	0	0
56	YP	3	Total 3	Mg 3	0	0
56	YQ	3	Total 3	Mg 3	0	0
56	YX	2	Total 2	Mg 2	0	0
56	YY	1	Total 1	Mg 1	0	0
56	Y0	1	Total 1	Mg 1	0	0
56	Y7	1	Total 1	Mg 1	0	0
56	Y8	1	Total 1	Mg 1	0	0
56	Y9	1	Total 1	Mg 1	0	0

- Molecule 57 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QD	1	Total	Fe S	0	0
			8	4 4		
57	XD	1	Total	Fe S	0	0
			8	4 4		

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	QN	1	Total	Zn	0	0
			1	1		
58	RY	1	Total	Zn	0	0
			1	1		
58	R4	1	Total	Zn	0	0
			1	1		
58	R5	1	Total	Zn	0	0
			1	1		
58	R6	1	Total	Zn	0	0
			1	1		
58	R9	1	Total	Zn	0	0
			1	1		
58	XN	1	Total	Zn	0	0
			1	1		
58	YY	1	Total	Zn	0	0
			1	1		
58	Y4	1	Total	Zn	0	0
			1	1		
58	Y5	1	Total	Zn	0	0
			1	1		

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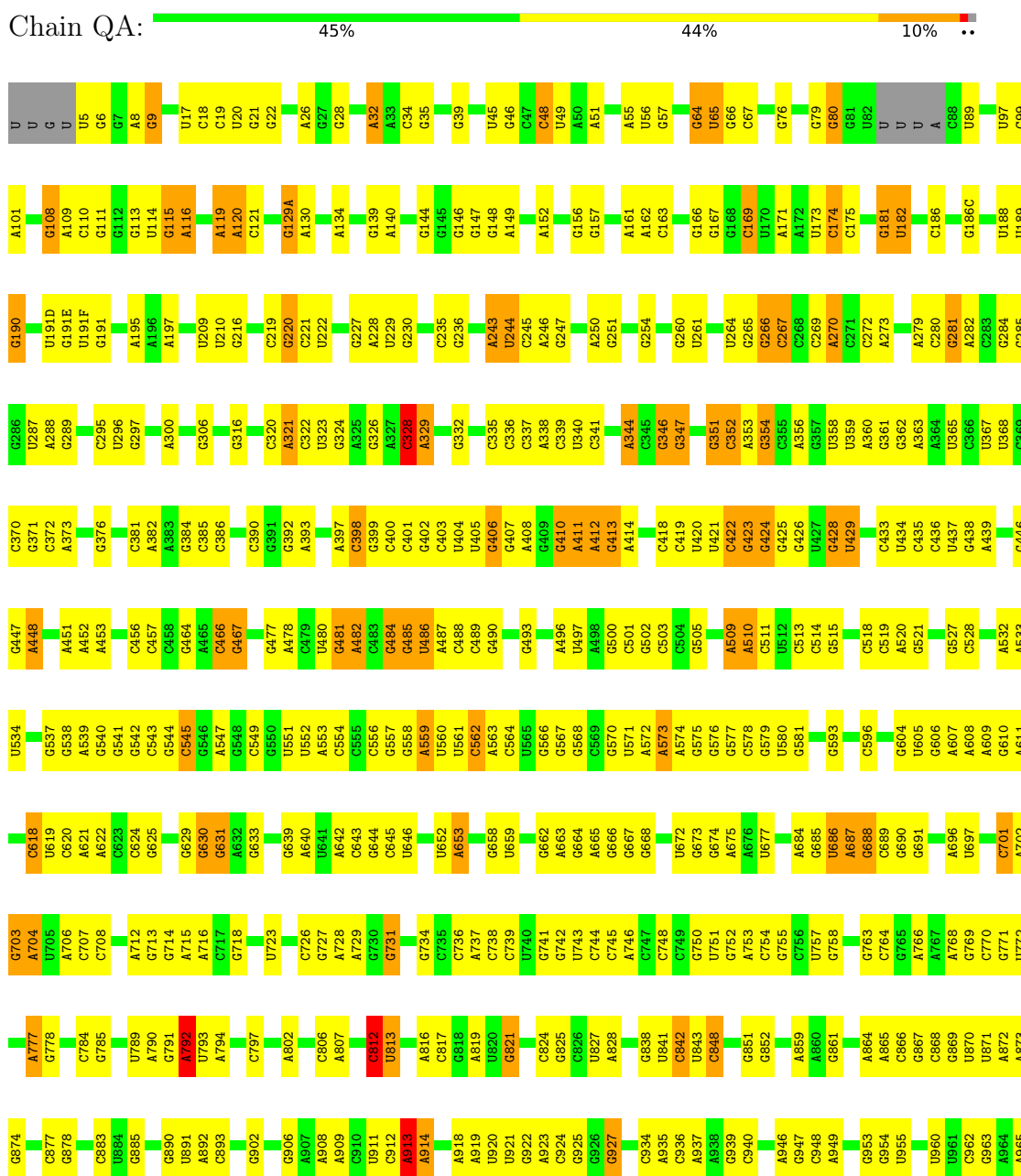
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	Y6	1	Total 1	Zn 1	0	0
58	Y9	1	Total 1	Zn 1	0	0

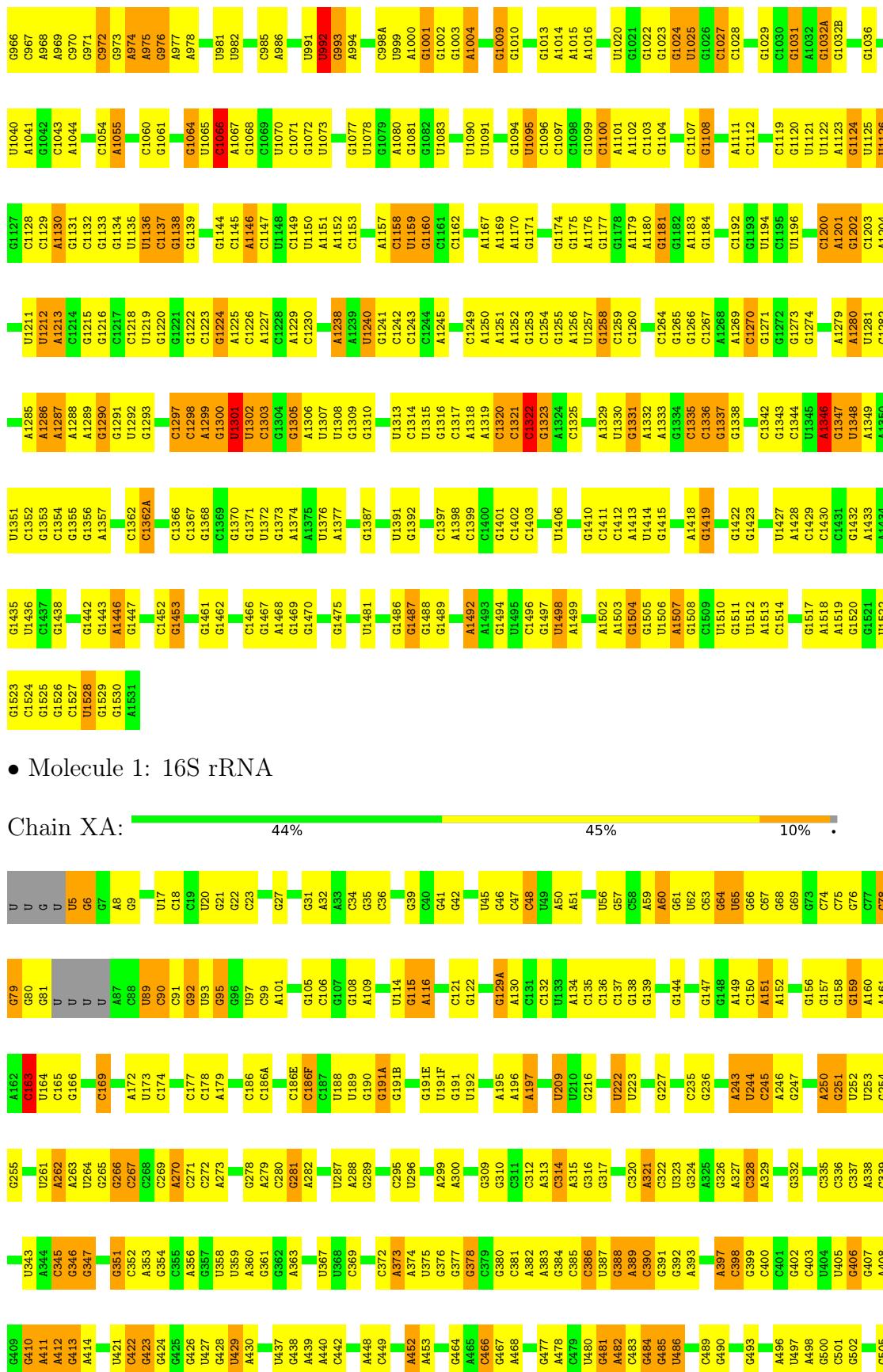
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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.

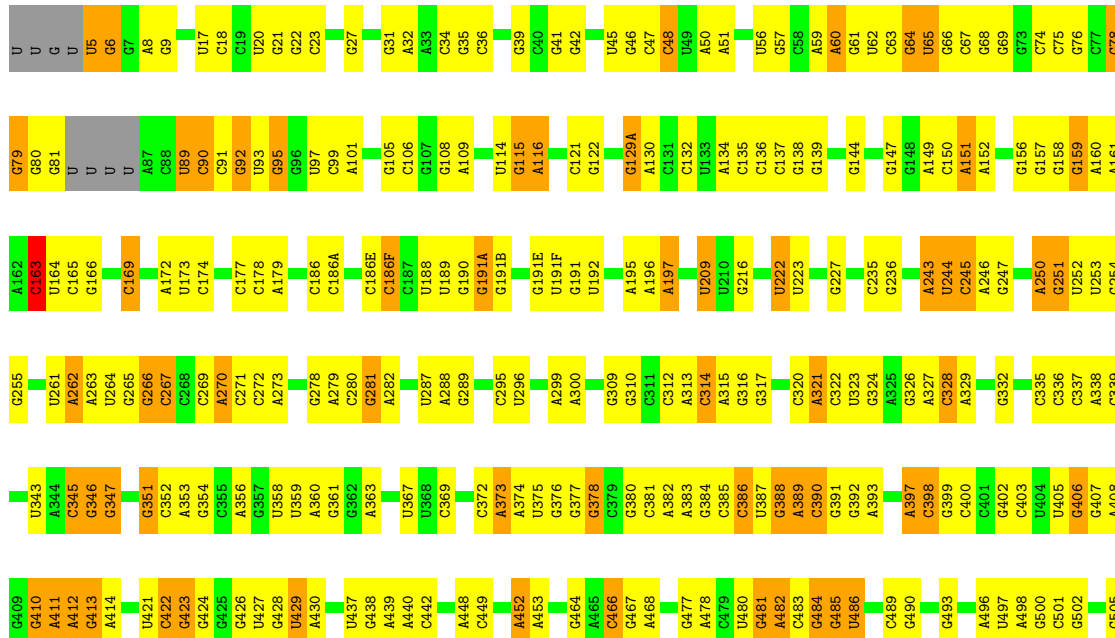
Note EDS failed to run properly.

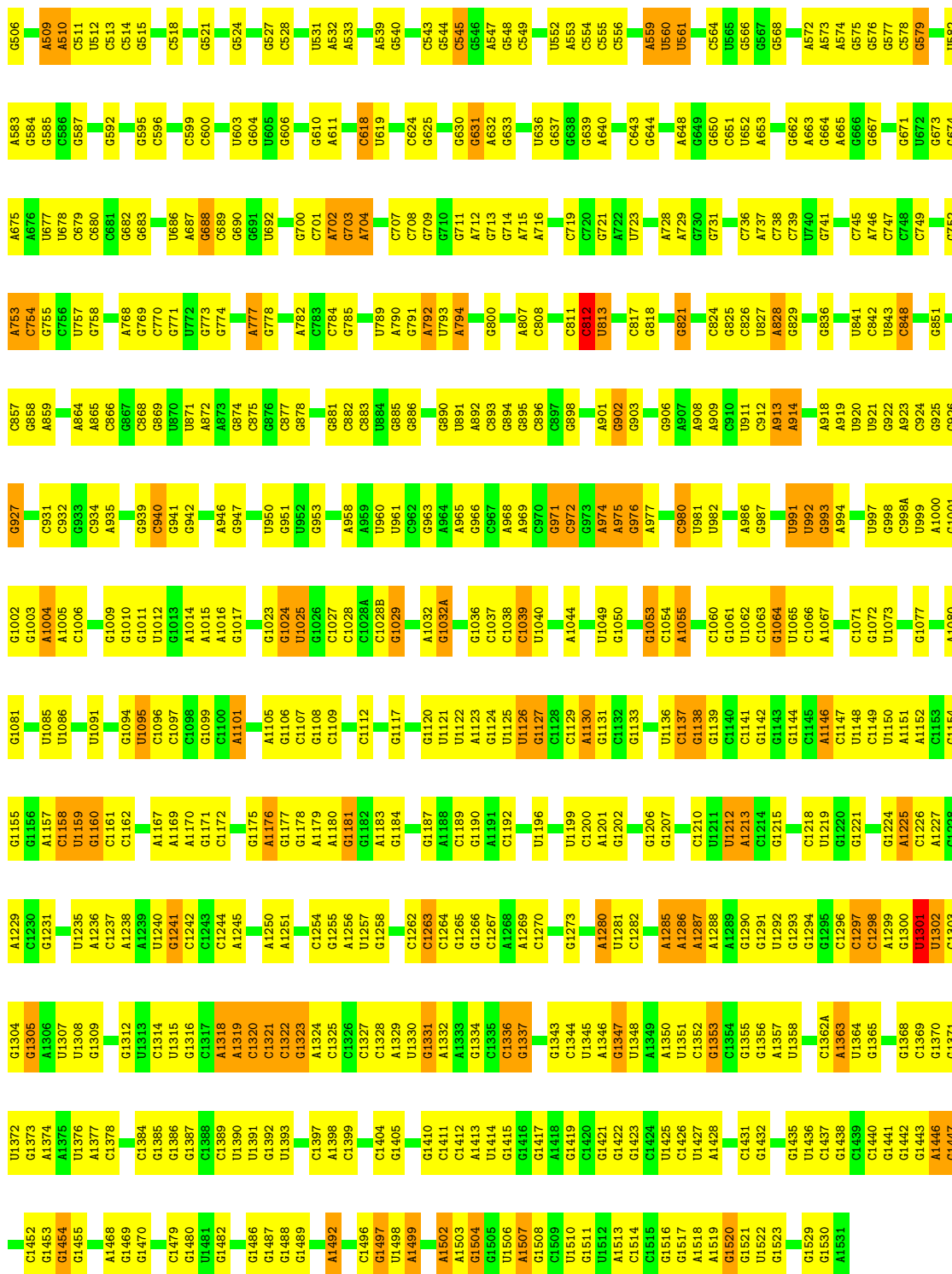
- Molecule 1: 16S rRNA



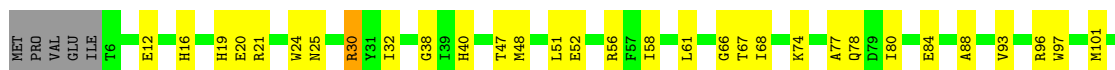


• Molecule 1: 16S rRNA



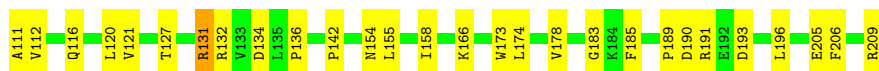
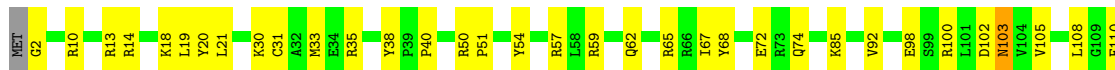


• Molecule 2: 30S ribosomal protein S2

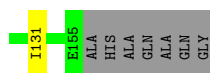




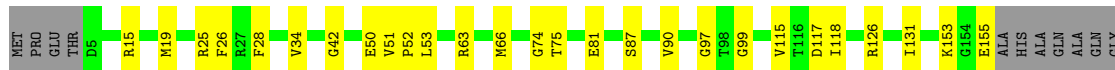
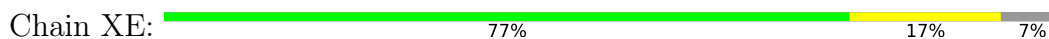
- Molecule 4: 30S ribosomal protein S4



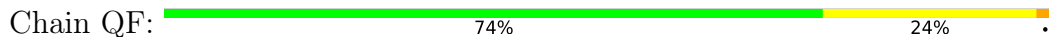
- Molecule 5: 30S ribosomal protein S5



- Molecule 5: 30S ribosomal protein S5




- Molecule 6: 30S ribosomal protein S6



- Molecule 6: 30S ribosomal protein S6




- Molecule 7: 30S ribosomal protein S7

Chain QG:  81% 18%




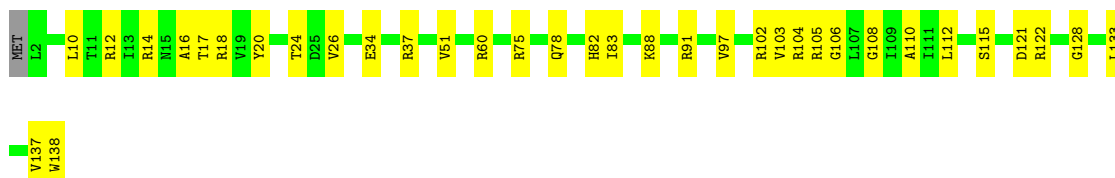
- Molecule 7: 30S ribosomal protein S7

Chain XG:  83% 16%




- Molecule 8: 30S ribosomal protein S8

Chain QH:  74% 25%



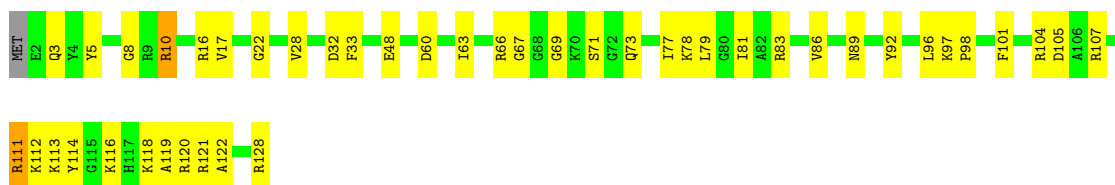
- Molecule 8: 30S ribosomal protein S8

Chain XH:  80% 20%



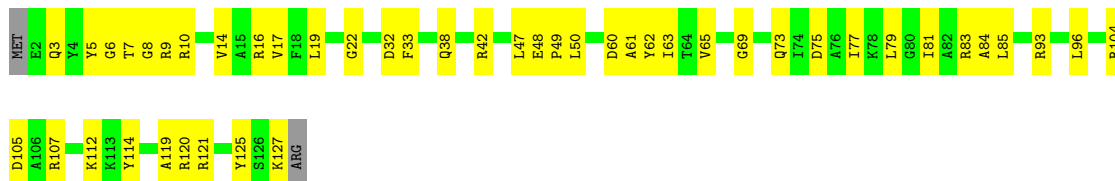
- Molecule 9: 30S ribosomal protein S9

Chain QI:  65% 33%



- Molecule 9: 30S ribosomal protein S9

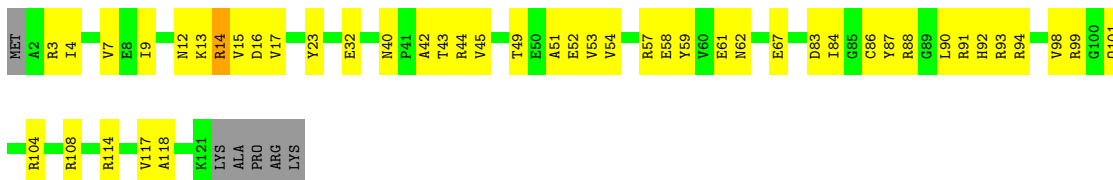
Chain XI:  62% 36%



LYS
LYS

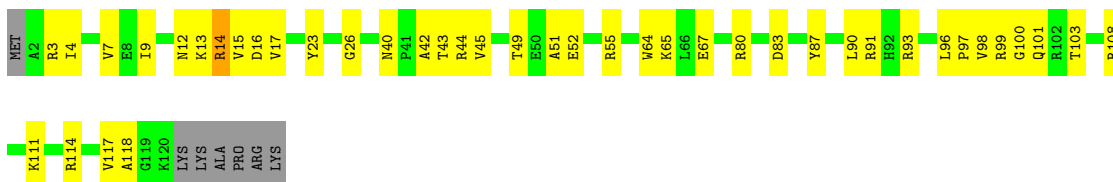
- Molecule 13: 30S ribosomal protein S13

Chain QM:  59% 36% • 5%



- Molecule 13: 30S ribosomal protein S13

Chain XM:  61% 33% • 6%



- Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:  72% 25% ••




- Molecule 14: 30S ribosomal protein S14 type Z

Chain XN:  72% 25% ••



- Molecule 15: 30S ribosomal protein S15

Chain QO:  80% 19% •

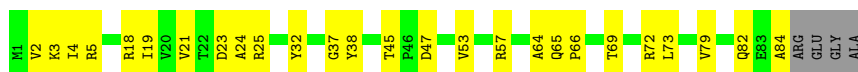


- Molecule 15: 30S ribosomal protein S15

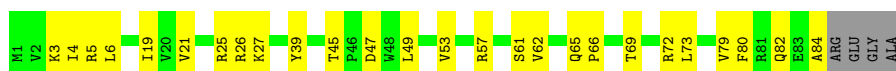
Chain XO:  72% 26% •



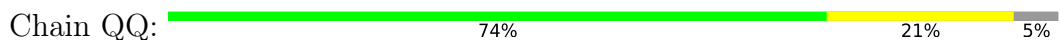
- Molecule 16: 30S ribosomal protein S16



- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17



- Molecule 18: 30S ribosomal protein S18

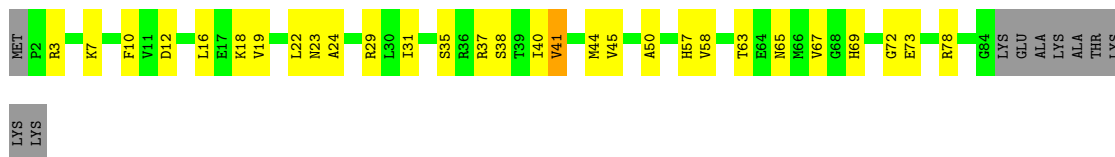


- Molecule 18: 30S ribosomal protein S18



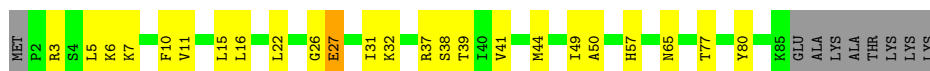
- Molecule 19: 30S ribosomal protein S19





- Molecule 19: 30S ribosomal protein S19

Chain XS: 65% 25% 10%



- Molecule 20: 30S ribosomal protein S20

Chain QT: 69% 25% 7%



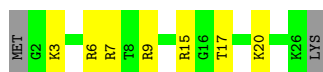
- Molecule 20: 30S ribosomal protein S20

Chain XT: 72% 22% 7%



- Molecule 21: 30S ribosomal protein Thx

Chain QU: 67% 26% 7%



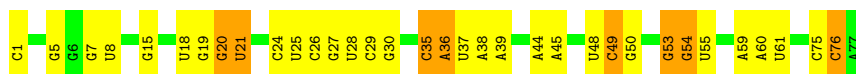
- Molecule 21: 30S ribosomal protein Thx

Chain XU: 52% 41% 7%

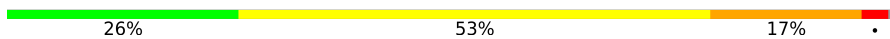


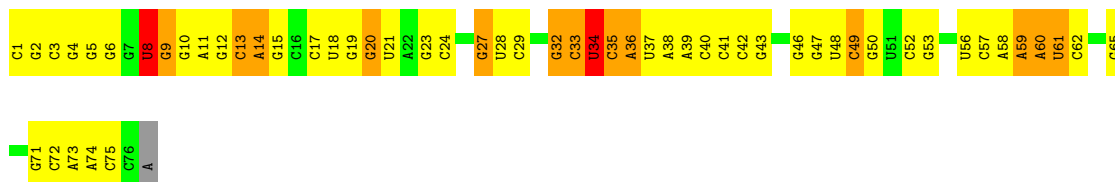
- Molecule 22: tRNA fMet

Chain QV: 56% 34% 10%



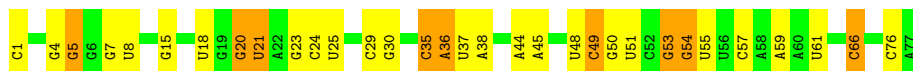
- Molecule 22: tRNA fMet

Chain QW:  26% 53% 17%



- Molecule 22: tRNA fMet

Chain XV:  58% 30% 12%



- Molecule 22: tRNA fMet

Chain XW:  26% 48% 22%



- Molecule 23: messenger RNA

Chain QX:  32% 68%



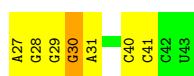
- Molecule 23: messenger RNA

Chain XX:  28% 8% 60%



- Molecule 24: ASL Leu

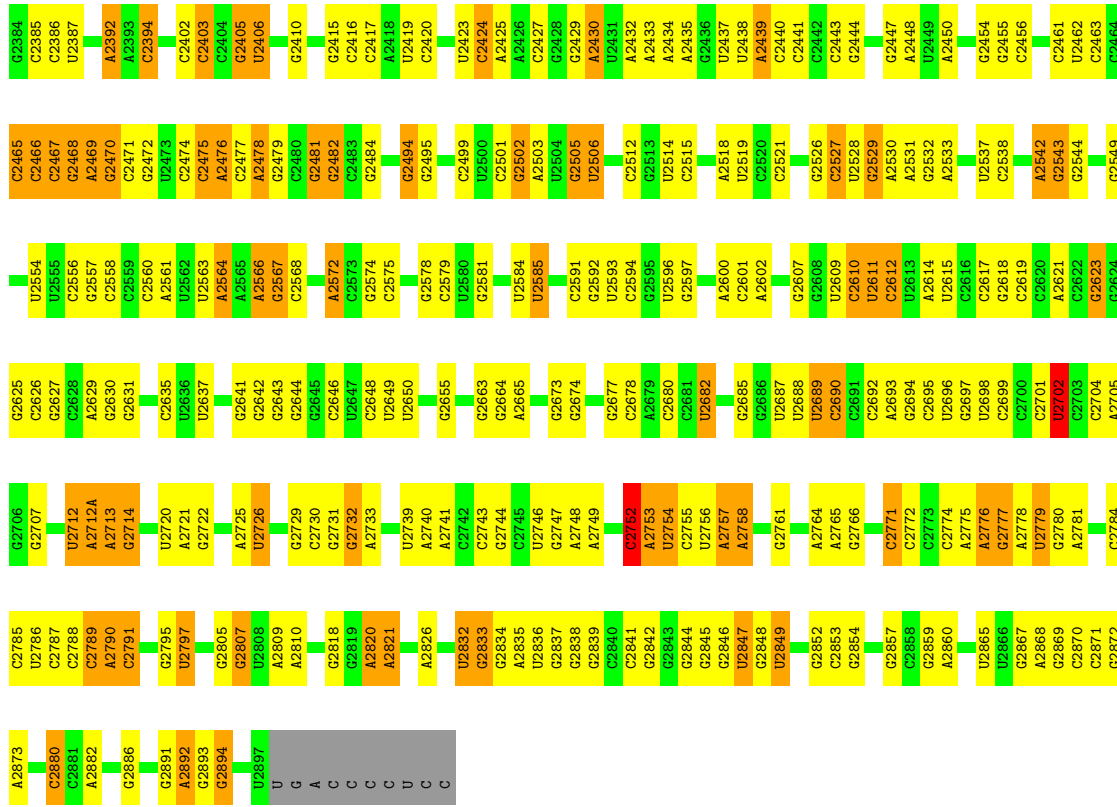
Chain QY:  59% 35% 6%



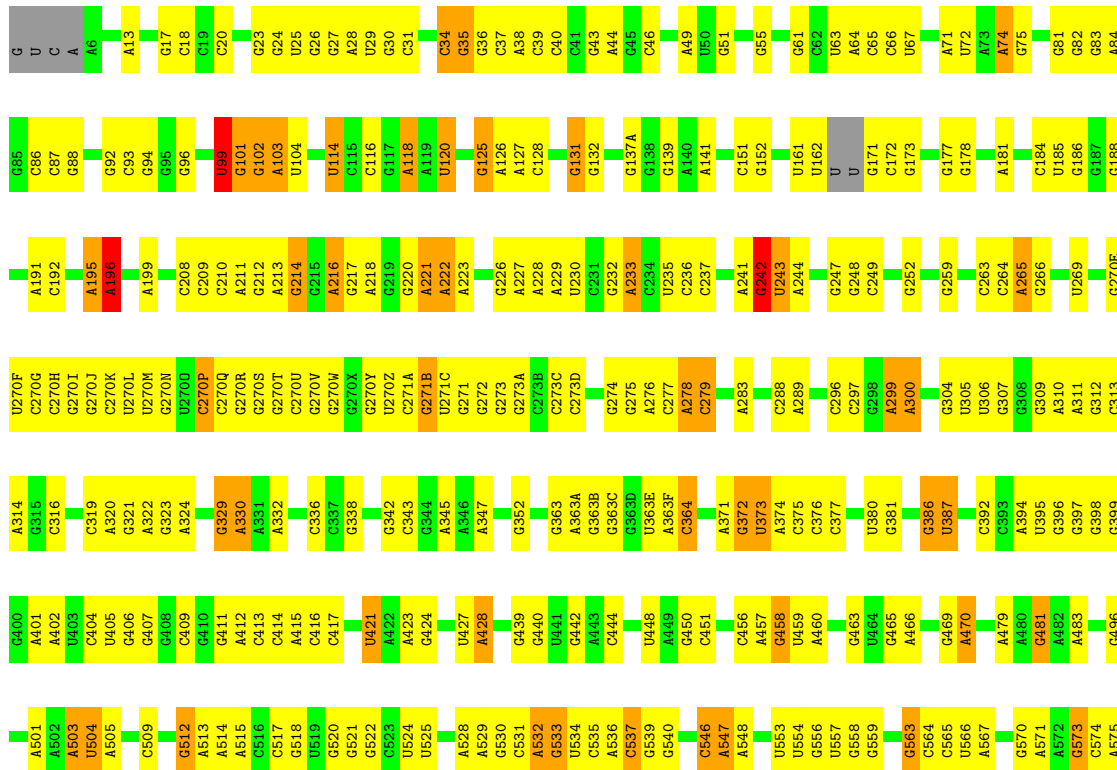
- Molecule 24: ASL Leu

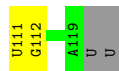
Chain XY:  41% 53% 6%

G2307	G2308	A2309	A2310	A2311	A2312	C2313	C2314	G2315	G2318	G2319	A2320	G2325	G2326	A2327	A2328	G2329	G2330	G2331	A2335	A2336	G2341	C2342	C2343	U2344	U2345	A2346	C2347	C2350	G2354	C2355	G2358	C2359	A2360	A2361	C2364	C2365	C2368	A2369	G2372	C2373	G2375	A2376	A2377	A2378	G2379	C2380	G2383																																																																				
U2041	A2042	C2043	G2046	G2049	C2050	G2052	C2055	G2056	A2059	A2060	A2061	G2062	C2063	C2064	C2065	C2066	C2067	U2068	G2069	C1989	C1990	G1991	C1992	G2009	G2010	U2011	G2012	A2013	A2019	A2020	C2021	U2022	C2103	G2104	C2108	U2109	G2110	C2111	G2112	U2113	A2114	G2115	U2116	A2117	U2118	A2119	G2123	G2124	G2125	G2126	G2127	G2128	U2129	C2292	C2293	C2294	C2295	C2296	C2297	A2298	G2299	G2300	G2303	G2306																																																			
A2126	G2127	C2128	G2131	U2132	A2135	C2136	G2137	C2138	G2145	G2147	G2148	G2149	G2150	G2151	G2152	G2153	G2157	A2158	G2161	G2162	C2163	C2164	G2165	C2166	U2167	C2168	A2169	A2170	A2173	A2176	G2181	G2182	C2183	G2184	G2187	C2188	U2189	G2190	U2197	A2198	A2199	G2210	G2211	G2212	A2213	U2214	U2215	U2216	U2217	U2218	U2219	U2220	U2221	U2222	U2223	U2224	U2225	U2226	U2227	U2228	U2229	U2230	U2231	U2232	U2233	G2234	G2235	G2236	G2237	G2238	G2239	G2240	A2241	G2242	A2243	G2244	U2245	U2246	G2248	A2249	G2250	A2247	G2251	C2258	U2262	C2263	C2264	U2265	U2266	U2267	U2268	U2269	U2270	U2271	U2272	C2275	G2280	C2283	C2284	C2285	A2286	A2287	A2288	U2291	C2292	C2293	C2294	C2295	U2296	C2297	A2298	U2299	G2300	G2303	C2306
G1093	U1094	A1095	A1096	U1097	A1103	C1104	U1105	G1106	G1107	U1108	C1110	A1111	G1112	U1113	G1114	C1115	G1116	G1117	G1122	C1123	A1204	G1125	A1129	U1130	G1131	C1135	G1136	G1137	G1138	G1139	C1140	U1141	U1142	A1142A	G1149	C1150	C1151	C1152	C1153	G1154	A1154	A1155	A1156	G1157	G1164	U1165	C1166	U1167	G1168	G1169	G1173	A1174	U1175	G1176	A1177	C1178	G1179	C1180	U1262	U1263	G1264	A1265	G1266	U1267	A1268	U1269	G1270	G1195	U1198	U1199	C1200	C1202	G1203	U1205	G1206	C1207	C1208	C1209	A1210	U1211	G1212	A1213	A1214	C1217	A1220	G1224	C1225	G1226	A1227	U1234	G1235	G1236	A1237	G1238	G1239	U1240	A1246	U1247	G1248	G1252	A1253	U1254	U1255												
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C1493	A1494	A1495	A1496	U1497	C1498	C1499	G1500	U1503	C1504	C1505	C1506	A1507	A1508	C1509	A1510	A1511	C1512	C1513	U1514	G1517	G1518	G1519	C1605	G1606	C1607	A1608	A1609	A1610	C1611	A1616	C1617	A1618	G1622	G1628	U1629	G1630	C1630A	U1541	G1542	A1543	C1544	A1545	C1550	C1551	C1556	C1557	A1558	G1559	A1560	G1561	A1562																																																																
A1566	U1567	G1568	A1569	A1570	A1571	C1577	U1578	A1579	A1580	A1581	C1585	A1586	U1587	C1588	C1589	G1595	C1599	C1600	G1601	C1605	G1606	C1607	A1608	A1609	A1610	C1611	A1616	C1617	A1618	G1622	G1628	U1629	G1630	C1630A	U1541	G1542	A1543	C1544	A1545	C1550	C1551	C1556	C1557	A1558	G1559	A1560	G1561	A1562																																																																			
C1657	C1658	U1659	C1660	G1661	C1662	C1663	A1664	G1665	G1666	A1668	A1669	C1670	U1671	G1674	A1675	A1676	A1677	U1678	U1679	U1680	G1681	G1687	U1688	A1689	U1689	G1693	C1694	G1695	A1698	G1702	G1703	G1704	G1705	U1706	G1707	C1708	U1709	C1710	G1725	G1728	U1729	U1730	G1731	C1732	G1733	G1742	G1743	U1754	A1755	G1756																																																																	
A1762	G1763	U1764	G1765	U1769	G1770	C1771	G1772	A1773	U1779	A1780	C1781	U1782	A1783	A1787	C1790	A1791	G1792	C1793	U1794	U1795	U1796	G1797	U1798	A1799	G1799	C1800	G1801	A1802	A1803	C1804	A1809	A1810	C1811	A1812	G1816	G1817	U1818	A1819	U1820	A1825	G1826	C1827	C1828	A1829	C1830	G1835	G1839	C1840	U1841	G1842																																																																	
A1847	A1848	U1851	C1852	A1853	G1856	U1857	A1858	A1859	U1864	G1869	A1870	A1871	A1872	A1878	C1882	G1883	A1884	A1885	C1886	C1887	G1888	A1889	U1891	C1892	U1893	C1996	G2009	G2010	U2011	G2012	A2013	A2019	A2020	C2021	U2022	C2103	G2104	C2108	U2109	G2110	C2111	G2112	U2113	A2114	G2115	U2116	A2117	U2118	A2119	G2123	G2124	G2125	G2126	G2127	G2128	U2129	C2292	C2293	C2294	C2295	U2296	C2297	A2298	U2299	G2300	G2303	C2306																																																
A2126	G2127	C2128	G2131	U2132	A2135	C2136	G2137	C2138	G2145	G2147	G2148	G2149	G2150	G2151	G2152	G2153	G2157	A2158	G2161	G2162	C2163	C2164	G2165	C2166	U2167	C2168	A2169	A2170	A2173	A2176	G2181	G2182	C2183	G2184	G2187	C2188	U2189	G2190	U2197	A2198	A2199	G2210	G2211	G2212	A2213	U2214	U2215	U2216	U2217	U2218	U2219	U2220	U2221	U2222	U2223	U2224	U2225	U2226	U2227	U2228	U2229	U2230	U2231	U2232	U2233	G2234	G2235	G2236	G2237	G2238	G2239	G2240	A2241	G2242	A2243	G2244	U2245	U2246	G2248	A2249	G2250	A2247	G2251	C2258	U2262	C2263	C2264	U2265	U2266	U2267	U2268	U2269	U2270	U2271	U2272	C2275	G2280	C2283	C2284	C2285	A2286	A2287	A2288	U2291	C2292	C2293	C2294	C2295	U2296	C2297	A2298	U2299	G2300	G2303	C2306

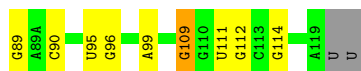
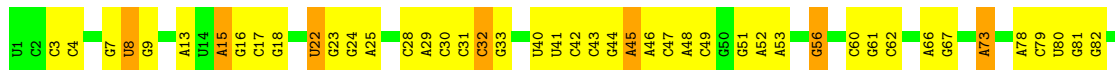


• Molecule 25: 23S rRNA

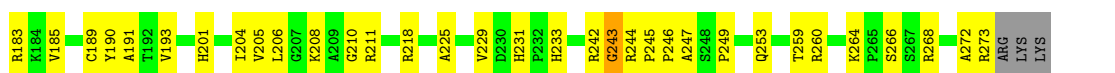
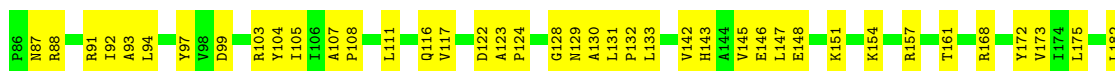
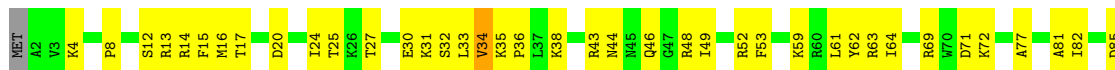




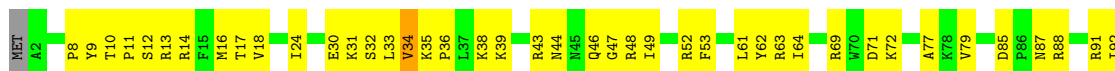
• Molecule 26: 5S rRNA



• Molecule 27: 50S ribosomal protein L2

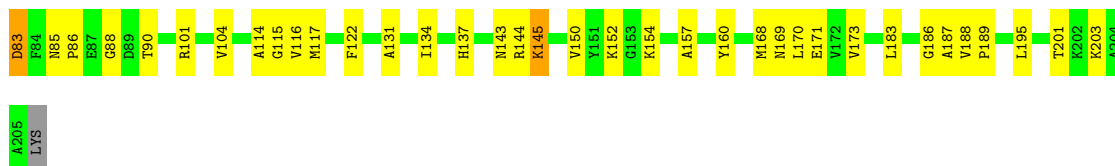


• Molecule 27: 50S ribosomal protein L2



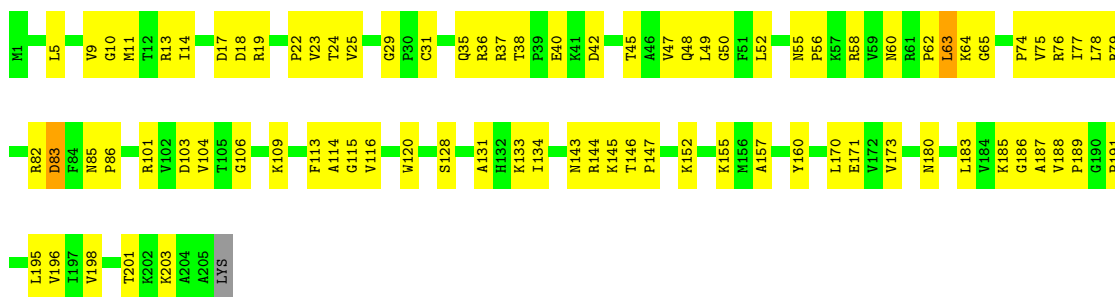
• Molecule 28: 50S ribosomal protein L3





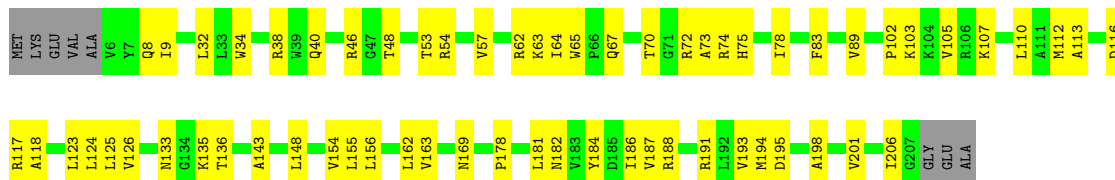
- Molecule 28: 50S ribosomal protein L3

Chain YE: 59% 40%



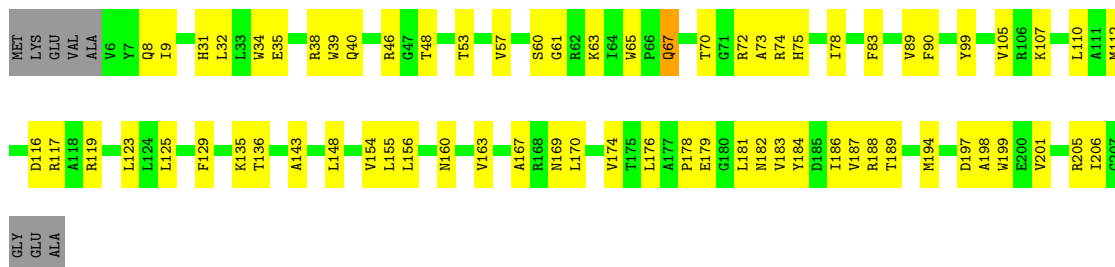
- Molecule 29: 50S ribosomal protein L4

Chain RF: 66% 30%



- Molecule 29: 50S ribosomal protein L4

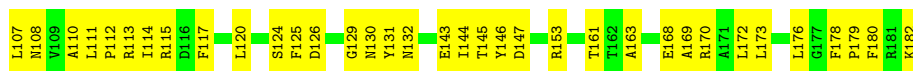
Chain YF: 63% 32%



- Molecule 30: 50S ribosomal protein L5

Chain RG: 59% 40%





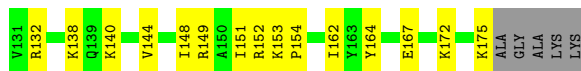
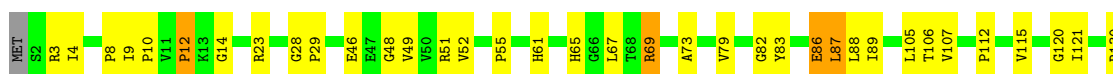
- Molecule 30: 50S ribosomal protein L5

Chain YG: 54% 44% ..



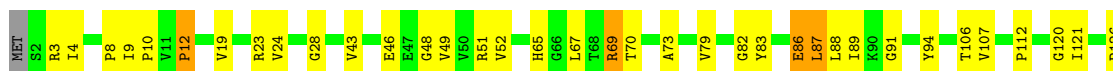
- Molecule 31: 50S ribosomal protein L6

Chain RH: 68% 26% ..



- Molecule 31: 50S ribosomal protein L6

Chain YH: 64% 29% ..



- Molecule 32: 50S ribosomal protein L9

Chain RI: 68% 30% ..

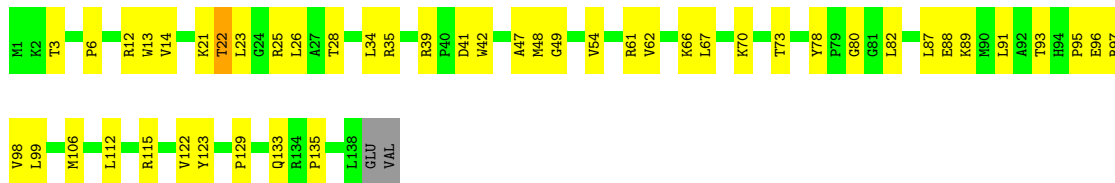


- Molecule 32: 50S ribosomal protein L9

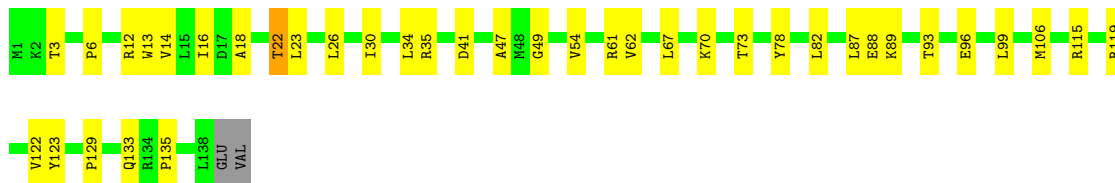
Chain YI: 70% 27% ..



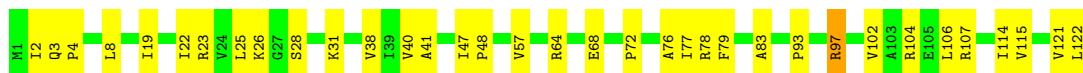
- Molecule 33: 50S ribosomal protein L13



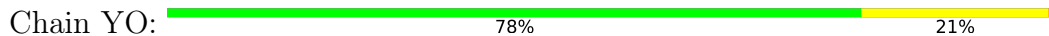
- Molecule 33: 50S ribosomal protein L13



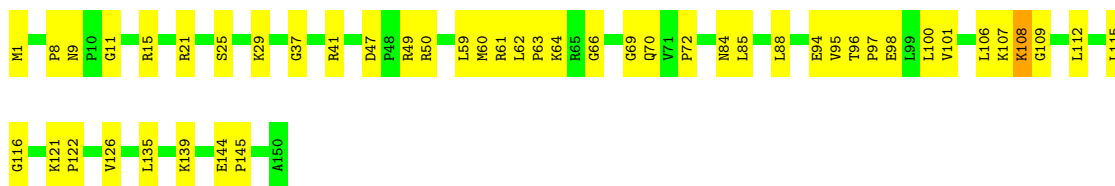
- Molecule 34: 50S ribosomal protein L14



- Molecule 34: 50S ribosomal protein L14

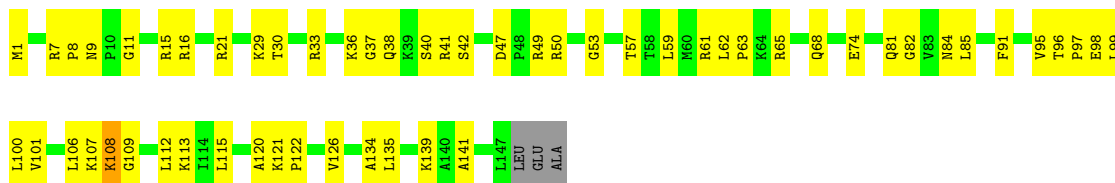


- Molecule 35: 50S ribosomal protein L15



- Molecule 35: 50S ribosomal protein L15

Chain YP:  61% 37% ..



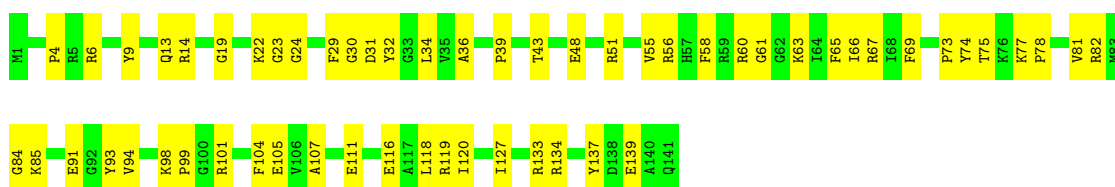
- Molecule 36: 50S ribosomal protein L16

Chain RQ:  62% 38%



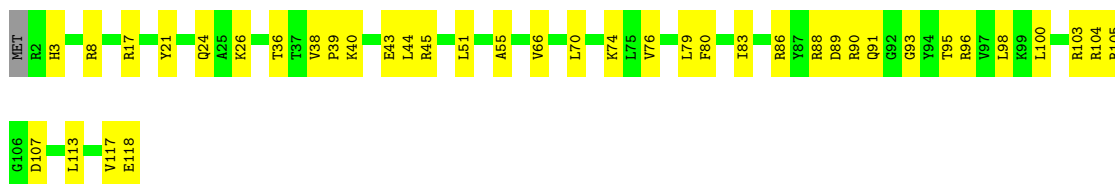
- Molecule 36: 50S ribosomal protein L16

Chain YQ:  60% 40%



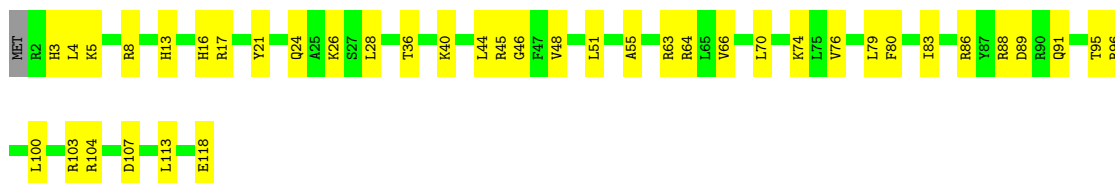
- Molecule 37: 50S ribosomal protein L17

Chain RR:  66% 33%



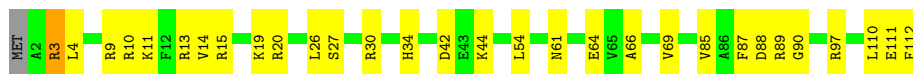
- Molecule 37: 50S ribosomal protein L17

Chain YR:  65% 34%



- Molecule 38: 50S ribosomal protein L18

Chain RS:  72% 26% ..



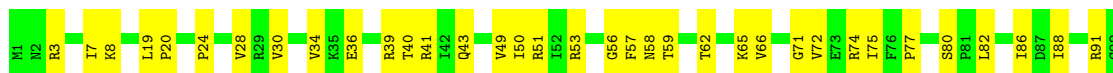
- Molecule 38: 50S ribosomal protein L18

Chain YS:  71% 28% ..



- Molecule 39: 50S ribosomal protein L19

Chain RT:  56% 37% 6% ..



- Molecule 39: 50S ribosomal protein L19

Chain YT:  55% 38% 6% ..



- Molecule 40: 50S ribosomal protein L20

Chain RU:  70% 27% ..



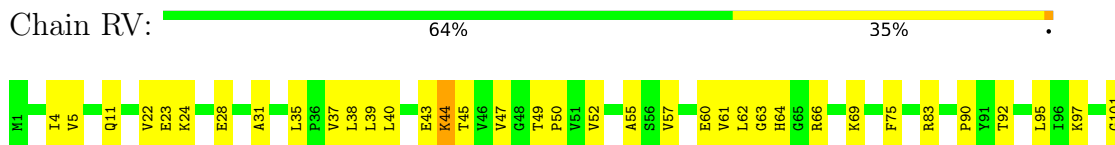
- Molecule 40: 50S ribosomal protein L20

Chain YU:  70% 27% ..

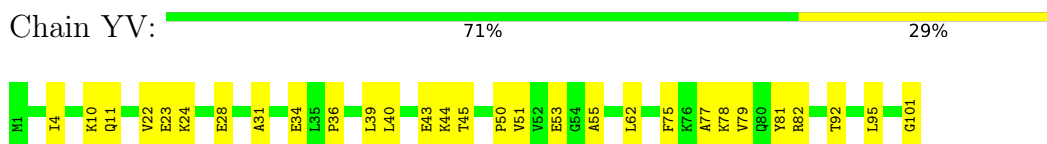


G118

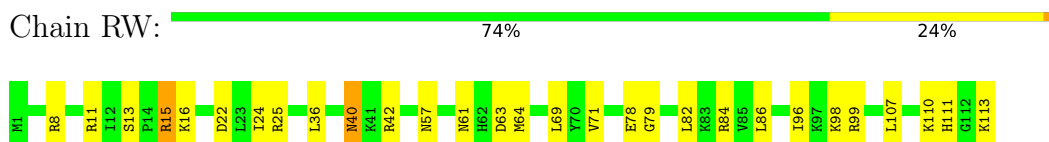
- Molecule 41: 50S ribosomal protein L21



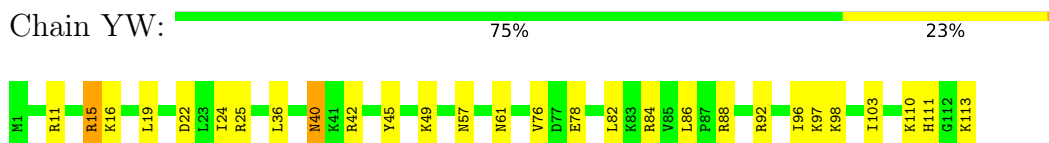
- Molecule 41: 50S ribosomal protein L21



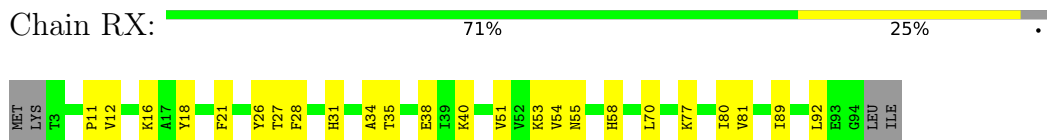
- Molecule 42: 50S ribosomal protein L22



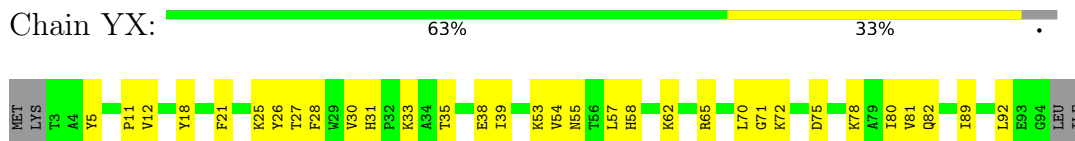
- Molecule 42: 50S ribosomal protein L22



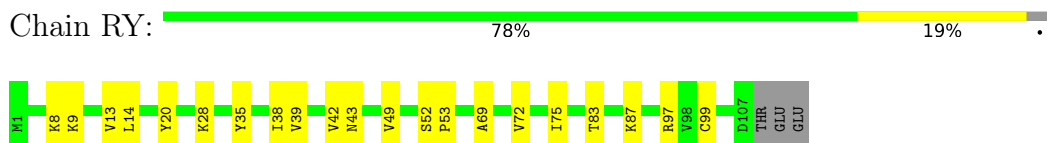
- Molecule 43: 50S ribosomal protein L23



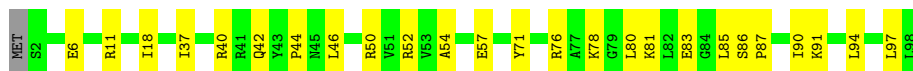
- Molecule 43: 50S ribosomal protein L23



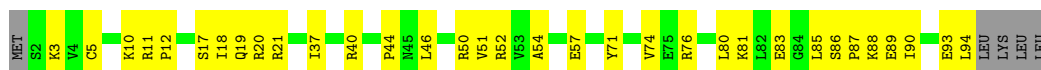
- Molecule 44: 50S ribosomal protein L24



- Molecule 44: 50S ribosomal protein L24



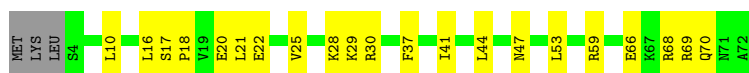
- Molecule 47: 50S ribosomal protein L28



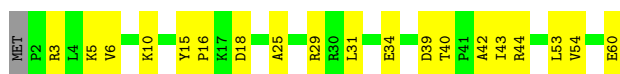
- Molecule 48: 50S ribosomal protein L29



- Molecule 48: 50S ribosomal protein L29



- Molecule 49: 50S ribosomal protein L30



- Molecule 49: 50S ribosomal protein L30



- Molecule 50: 50S ribosomal protein L31



- Molecule 50: 50S ribosomal protein L31

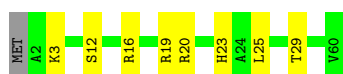
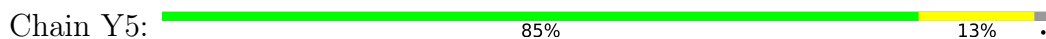




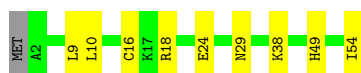
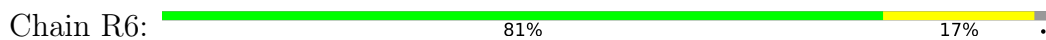
- Molecule 51: 50S ribosomal protein L32



- Molecule 51: 50S ribosomal protein L32



- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33



- Molecule 53: 50S ribosomal protein L34

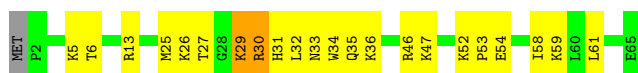


- Molecule 53: 50S ribosomal protein L34



- Molecule 54: 50S ribosomal protein L35





- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36



4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.70Å 446.14Å 616.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	145.57 – 3.68	Depositor
% Data completeness (in resolution range)	99.3 (145.57-3.68)	Depositor
R_{merge}	0.30	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.29 (at 3.58Å)	Xtrriage
Refinement program	PHENIX 1.12_2829	Depositor
R, R_{free}	0.228 , 0.274	Depositor
Wilson B-factor (Å ²)	89.7	Xtrriage
Anisotropy	0.196	Xtrriage
L-test for twinning ²	$\langle L \rangle = 0.36$, $\langle L^2 \rangle = 0.19$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
Total number of atoms	295575	wwPDB-VP
Average B, all atoms (Å ²)	106.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.76% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, SF4, MG

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	QA	0.22	0/36097	0.80	21/56339 (0.0%)
1	XA	0.22	0/36100	0.82	27/56344 (0.0%)
2	QB	0.26	0/1942	0.50	0/2619
2	XB	0.25	0/1950	0.49	0/2630
3	QC	0.25	0/1629	0.47	0/2195
3	XC	0.24	0/1629	0.46	0/2195
4	QD	0.35	1/1733 (0.1%)	0.49	1/2318 (0.0%)
4	XD	0.26	0/1733	0.47	0/2318
5	QE	0.24	0/1171	0.48	0/1576
5	XE	0.25	0/1171	0.49	0/1576
6	QF	0.24	0/856	0.49	0/1154
6	XF	0.24	0/856	0.48	0/1154
7	QG	0.24	0/1276	0.43	0/1709
7	XG	0.24	0/1276	0.42	0/1709
8	QH	0.24	0/1128	0.45	0/1517
8	XH	0.24	0/1128	0.46	0/1517
9	QI	0.26	0/1029	0.50	0/1379
9	XI	0.27	0/1017	0.52	0/1365
10	QJ	0.45	1/814 (0.1%)	0.63	3/1095 (0.3%)
10	XJ	0.24	0/790	0.49	0/1063
11	QK	0.25	0/900	0.46	0/1213
11	XK	0.24	0/879	0.47	0/1187
12	QL	0.26	0/991	0.59	0/1327
12	XL	0.26	0/972	0.63	1/1301 (0.1%)
13	QM	0.25	0/965	0.53	0/1292
13	XM	0.24	0/956	0.53	0/1281
14	QN	0.26	0/501	0.46	0/664
14	XN	0.25	0/501	0.46	0/664
15	QO	0.24	0/745	0.43	0/992
15	XO	0.23	0/740	0.40	0/987
16	QP	0.24	0/721	0.49	0/970
16	XP	0.24	0/721	0.49	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.24	0/847	0.46	0/1131
17	XQ	0.24	0/847	0.45	0/1131
18	QR	0.24	0/579	0.48	0/768
18	XR	0.24	0/579	0.49	0/768
19	QS	0.25	0/680	0.57	0/915
19	XS	0.26	0/689	0.57	0/926
20	QT	0.25	0/765	0.52	0/1007
20	XT	0.25	0/765	0.50	0/1007
21	QU	0.22	0/221	0.45	0/288
21	XU	0.23	0/221	0.46	0/288
22	QV	0.33	1/1836 (0.1%)	0.83	0/2859
22	QW	0.26	0/1807	0.92	2/2816 (0.1%)
22	XV	0.33	1/1836 (0.1%)	0.84	1/2859 (0.0%)
22	XW	0.26	0/1807	0.91	2/2816 (0.1%)
23	QX	0.19	0/188	0.73	0/290
23	XX	0.19	0/235	0.73	0/364
24	QY	0.19	0/400	0.80	0/621
24	XY	0.20	0/400	0.79	0/621
25	RA	0.24	0/69521	0.83	34/108529 (0.0%)
25	YA	0.27	6/69543 (0.0%)	0.85	91/108563 (0.1%)
26	RB	0.22	0/2878	0.81	1/4490 (0.0%)
26	YB	0.23	0/2878	0.82	0/4490
27	RD	0.28	0/2165	0.56	0/2919
27	YD	0.28	0/2165	0.56	0/2919
28	RE	0.26	0/1601	0.60	1/2160 (0.0%)
28	YE	0.26	0/1601	0.60	0/2160
29	RF	0.26	0/1620	0.50	0/2194
29	YF	0.27	0/1620	0.51	0/2194
30	RG	0.26	0/1499	0.55	0/2016
30	YG	0.26	0/1499	0.54	0/2016
31	RH	0.26	0/1362	0.57	1/1841 (0.1%)
31	YH	0.29	0/1362	0.62	1/1841 (0.1%)
32	RI	0.25	0/1151	0.56	0/1558
32	YI	0.25	0/1151	0.56	0/1558
33	RN	0.26	0/1131	0.58	0/1525
33	YN	0.26	0/1131	0.56	0/1525
34	RO	0.26	0/943	0.48	0/1269
34	YO	0.26	0/943	0.50	0/1269
35	RP	0.27	0/1162	0.61	0/1544
35	YP	0.27	0/1139	0.62	0/1514
36	RQ	0.26	0/1143	0.55	0/1527
36	YQ	0.26	0/1143	0.57	0/1527
37	RR	0.26	0/974	0.52	0/1302

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	YR	0.25	0/974	0.49	0/1302
38	RS	0.25	0/892	0.54	0/1187
38	YS	0.25	0/892	0.54	0/1187
39	RT	0.25	0/1155	0.53	0/1542
39	YT	0.25	0/1155	0.54	0/1542
40	RU	0.26	0/982	0.51	0/1306
40	YU	0.26	0/982	0.51	0/1306
41	RV	0.26	0/790	0.58	0/1057
41	YV	0.26	0/790	0.58	0/1057
42	RW	0.25	0/911	0.50	0/1220
42	YW	0.25	0/911	0.50	0/1220
43	RX	0.26	0/739	0.48	0/993
43	YX	0.26	0/739	0.48	0/993
44	RY	0.26	0/831	0.48	0/1108
44	YY	0.26	0/831	0.51	0/1108
45	RZ	0.25	0/1493	0.63	0/2026
45	YZ	0.26	0/1493	0.64	0/2026
46	R0	0.24	0/652	0.47	0/867
46	Y0	0.25	0/607	0.48	0/809
47	R1	0.27	0/770	0.55	0/1022
47	Y1	0.29	0/736	0.53	0/978
48	R2	0.24	0/583	0.49	0/771
48	Y2	0.24	0/583	0.51	0/771
49	R3	0.24	0/474	0.48	0/635
49	Y3	0.25	0/474	0.48	0/635
50	R4	0.25	0/578	0.53	0/776
50	Y4	0.27	0/578	0.54	0/776
51	R5	0.26	0/473	0.48	0/639
51	Y5	0.25	0/473	0.46	0/639
52	R6	0.22	0/460	0.47	0/613
52	Y6	0.22	0/460	0.47	0/613
53	R7	0.24	0/417	0.48	0/550
53	Y7	0.24	0/426	0.49	0/561
54	R8	0.33	0/525	0.67	0/691
54	Y8	0.33	0/525	0.67	0/691
55	R9	0.27	0/310	0.64	0/407
55	Y9	0.63	0/310	1.20	2/407 (0.5%)
All	All	0.25	10/319918 (0.0%)	0.76	189/478576 (0.0%)

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
28	YE	0	2

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	XV	1	C	OP3-P	-10.62	1.48	1.61
22	QV	1	C	OP3-P	-10.59	1.48	1.61
10	QJ	84	GLN	CD-NE2	9.70	1.57	1.32
4	QD	119	GLN	CB-CG	9.68	1.78	1.52
25	YA	2743	C	P-O5'	7.27	1.67	1.59
25	YA	2743	C	C5'-C4'	7.22	1.60	1.51
25	YA	2743	C	C4'-C3'	5.68	1.59	1.53
25	YA	2742	C	O3'-P	5.55	1.67	1.61
25	YA	2742	C	C3'-O3'	5.44	1.49	1.42
25	YA	2744	G	N9-C4	5.24	1.42	1.38

All (189) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2743	C	O4'-C1'-N1	17.82	122.46	108.20
25	YA	2755	C	OP1-P-OP2	12.48	138.32	119.60
25	YA	2754	U	OP1-P-O3'	-11.78	79.29	105.20
25	YA	2525	G	O4'-C1'-N9	11.27	117.22	108.20
25	YA	2754	U	OP2-P-O3'	-11.23	80.50	105.20
55	Y9	29	ASN	C-N-CD	-10.53	97.44	120.60
25	YA	2525	G	N9-C4-C5	10.39	109.56	105.40
25	YA	2741	A	P-O3'-C3'	10.11	131.83	119.70
25	YA	2743	C	O5'-P-OP2	9.69	122.33	110.70
25	YA	2744	G	N3-C4-C5	-9.02	124.09	128.60
25	YA	2525	G	C6-N1-C2	-8.68	119.89	125.10
25	YA	2525	G	C2-N3-C4	8.63	116.22	111.90
25	YA	2525	G	C4-C5-N7	-8.33	107.47	110.80
25	YA	2755	C	C5-C4-N4	-8.12	114.52	120.20
1	QA	1158	C	C2-N1-C1'	7.85	127.43	118.80
25	YA	2744	G	N3-C4-N9	7.77	130.66	126.00
25	YA	2755	C	C5-C6-N1	7.76	124.88	121.00
25	YA	2743	C	C6-N1-C2	-7.67	117.23	120.30
25	YA	2527	C	C2-N1-C1'	7.58	127.14	118.80
1	QA	1158	C	N1-C2-O2	7.48	123.39	118.90
25	YA	2525	G	C8-N9-C1'	7.47	136.72	127.00
1	XA	1158	C	C2-N1-C1'	7.44	126.98	118.80
25	YA	2747	G	C4-C5-N7	7.35	113.74	110.80
25	YA	2527	C	N1-C2-O2	7.25	123.25	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1396	U	C2-N1-C1'	7.21	126.36	117.70
25	YA	2506	U	C2-N1-C1'	7.14	126.27	117.70
25	YA	2356	C	C2-N1-C1'	-7.12	110.97	118.80
1	XA	186(F)	C	N3-C2-O2	-7.11	116.92	121.90
1	XA	163	C	C6-N1-C1'	7.07	129.29	120.80
25	YA	1313	U	C2-N1-C1'	7.05	126.17	117.70
25	RA	2702	U	C2-N1-C1'	7.05	126.16	117.70
25	RA	828	U	C2-N1-C1'	7.00	126.10	117.70
25	YA	2506	U	N1-C2-O2	6.98	127.69	122.80
25	YA	2525	G	C5-C6-N1	6.87	114.94	111.50
25	YA	2747	G	N9-C4-C5	-6.87	102.65	105.40
1	XA	159	G	N3-C4-N9	-6.83	121.90	126.00
1	XA	1301	U	C2-N1-C1'	6.81	125.87	117.70
25	YA	1396	U	N1-C2-O2	6.80	127.56	122.80
25	YA	2356	C	C6-N1-C1'	6.79	128.94	120.80
25	YA	1535	U	C2-N1-C1'	6.75	125.80	117.70
25	YA	2525	G	C6-C5-N7	6.75	134.45	130.40
25	RA	828	U	N1-C2-O2	6.71	127.50	122.80
25	YA	2506	U	N3-C2-O2	-6.71	117.51	122.20
1	XA	1158	C	N1-C2-O2	6.71	122.92	118.90
25	YA	2356	C	C2-N3-C4	-6.69	116.56	119.90
1	QA	1301	U	N1-C2-O2	6.64	127.45	122.80
25	RA	1313	U	C2-N1-C1'	6.60	125.62	117.70
25	RA	2752	C	N1-C2-O2	6.59	122.86	118.90
1	XA	386	C	N3-C2-O2	-6.59	117.29	121.90
25	YA	828	U	C2-N1-C1'	6.58	125.60	117.70
25	YA	2742	C	O5'-P-OP1	6.52	118.52	110.70
1	QA	1066	C	C2-N1-C1'	6.47	125.91	118.80
25	RA	2484	G	N1-C6-O6	-6.46	116.03	119.90
25	YA	2742	C	P-O3'-C3'	6.43	127.41	119.70
25	YA	2743	C	OP1-P-OP2	-6.43	109.96	119.60
1	XA	163	C	C2-N1-C1'	-6.39	111.77	118.80
25	RA	828	U	N3-C2-O2	-6.35	117.76	122.20
25	RA	2752	C	C2-N1-C1'	6.33	125.77	118.80
4	QD	119	GLN	CB-CG-CD	-6.28	95.27	111.60
25	YA	1396	U	N3-C2-O2	-6.27	117.81	122.20
25	RA	2702	U	N1-C2-O2	6.22	127.16	122.80
1	XA	747	C	N3-C2-O2	-6.21	117.55	121.90
25	YA	1535	U	N1-C2-O2	6.14	127.10	122.80
1	XA	1301	U	N1-C2-O2	6.11	127.08	122.80
25	YA	2742	C	C6-N1-C2	-6.10	117.86	120.30
25	YA	2744	G	C2-N3-C4	6.09	114.95	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2741	A	N7-C8-N9	6.03	116.81	113.80
25	YA	1407	C	C2-N1-C1'	5.92	125.31	118.80
1	QA	1301	U	C2-N1-C1'	5.91	124.79	117.70
1	XA	252	U	C2-N1-C1'	5.87	124.75	117.70
1	XA	163	C	N3-C2-O2	-5.87	117.79	121.90
25	YA	2755	C	C4-C5-C6	-5.86	114.47	117.40
1	QA	1301	U	N3-C2-O2	-5.85	118.10	122.20
25	RA	2506	U	C2-N1-C1'	5.83	124.70	117.70
25	RA	2506	U	N1-C2-O2	5.83	126.88	122.80
25	YA	2539	C	C6-N1-C2	-5.81	117.97	120.30
1	QA	1066	C	N1-C2-O2	5.81	122.39	118.90
25	YA	2527	C	C6-N1-C1'	-5.81	113.83	120.80
1	XA	747	C	N1-C2-O2	5.75	122.35	118.90
25	YA	2525	G	C4-N9-C1'	-5.74	119.04	126.50
10	QJ	84	GLN	CB-CA-C	-5.73	98.94	110.40
25	YA	2356	C	N1-C2-N3	5.73	123.21	119.20
25	YA	2525	G	N3-C2-N2	-5.72	115.89	119.90
1	QA	1158	C	N3-C2-O2	-5.71	117.90	121.90
25	RA	1535	U	C2-N1-C1'	5.71	124.55	117.70
1	XA	961	U	N1-C2-N3	5.69	118.31	114.90
25	YA	2741	A	C8-N9-C4	-5.68	103.53	105.80
25	RA	2484	G	C5-C6-O6	5.65	131.99	128.60
25	RA	1462	C	N3-C2-O2	-5.64	117.95	121.90
25	YA	2743	C	OP1-P-O3'	5.64	117.61	105.20
1	XA	159	G	C5-C6-O6	5.63	131.98	128.60
25	YA	2755	C	N3-C4-N4	5.63	121.94	118.00
25	RA	2752	C	N3-C2-O2	-5.61	117.97	121.90
1	XA	1301	U	N3-C2-O2	-5.60	118.28	122.20
1	XA	163	C	N1-C2-N3	5.58	123.11	119.20
25	YA	99	U	OP2-P-O3'	5.58	117.47	105.20
25	RA	1124	C	N3-C2-O2	-5.57	118.00	121.90
1	QA	1158	C	C6-N1-C1'	-5.56	114.13	120.80
1	XA	812	C	P-O3'-C3'	5.55	126.36	119.70
1	QA	1027	C	OP1-P-O3'	5.54	117.39	105.20
25	YA	828	U	N1-C2-O2	5.52	126.66	122.80
25	YA	1535	U	N3-C2-O2	-5.51	118.34	122.20
25	RA	2060	A	P-O3'-C3'	5.51	126.31	119.70
25	YA	2525	G	C8-N9-C4	-5.50	104.20	106.40
25	YA	1314	C	C2-N1-C1'	5.48	124.83	118.80
1	XA	1158	C	N3-C2-O2	-5.46	118.08	121.90
25	RA	1992	G	P-O3'-C3'	5.46	126.25	119.70
25	YA	1914	C	C2-N1-C1'	5.45	124.79	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2474	C	C2-N1-C1'	5.42	124.76	118.80
25	YA	2526	G	C4-N9-C1'	5.40	133.52	126.50
25	YA	2743	C	P-O5'-C5'	5.40	129.54	120.90
1	XA	163	C	C5-C4-N4	5.39	123.98	120.20
31	YH	82	GLY	N-CA-C	5.39	126.58	113.10
25	RA	2506	U	N3-C2-O2	-5.39	118.43	122.20
25	YA	1180	C	C2-N1-C1'	5.37	124.71	118.80
25	YA	2742	C	O5'-P-OP2	-5.37	100.87	105.70
25	YA	2526	G	N7-C8-N9	5.36	115.78	113.10
1	XA	378	G	N3-C4-N9	-5.35	122.79	126.00
1	QA	1322	C	C2-N1-C1'	5.33	124.66	118.80
1	XA	1158	C	C6-N1-C2	-5.31	118.17	120.30
1	QA	328	C	P-O3'-C3'	5.31	126.08	119.70
25	YA	2474	C	N1-C2-O2	5.31	122.09	118.90
25	YA	2755	C	C2-N1-C1'	5.29	124.62	118.80
25	RA	1407	C	C2-N1-C1'	5.27	124.59	118.80
25	RA	2468	G	O4'-C1'-N9	5.27	112.41	108.20
10	QJ	84	GLN	CG-CD-OE1	-5.26	111.08	121.60
25	YA	2889	C	C2-N1-C1'	5.26	124.58	118.80
25	YA	99	U	P-O3'-C3'	5.25	126.00	119.70
1	QA	1027	C	P-O3'-C3'	5.25	126.00	119.70
1	XA	528	C	N1-C2-O2	5.25	122.05	118.90
25	RA	2702	U	N3-C2-O2	-5.24	118.53	122.20
25	YA	196	A	O4'-C1'-N9	5.24	112.39	108.20
1	XA	328	C	P-O3'-C3'	5.24	125.98	119.70
22	XW	8	U	OP1-P-O3'	5.23	116.72	105.20
25	YA	537	C	C2-N1-C1'	5.23	124.55	118.80
25	YA	2538	C	C6-N1-C2	-5.22	118.21	120.30
10	QJ	84	GLN	N-CA-CB	5.22	120.00	110.60
25	YA	2681	C	P-O3'-C3'	5.22	125.96	119.70
12	XL	46	LYS	C-N-CA	-5.21	108.68	121.70
22	XW	35	C	C2-N1-C1'	5.21	124.53	118.80
28	RE	78	LEU	CA-CB-CG	5.20	127.25	115.30
25	YA	2527	C	N3-C4-N4	5.19	121.63	118.00
55	Y9	26	ILE	N-CA-CB	5.18	122.70	110.80
25	RA	1314	C	C2-N1-C1'	5.17	124.49	118.80
25	RA	404	C	P-O3'-C3'	5.16	125.89	119.70
25	YA	1992	G	P-O3'-C3'	5.16	125.89	119.70
1	QA	792	A	P-O3'-C3'	5.16	125.89	119.70
1	QA	812	C	P-O3'-C3'	5.16	125.89	119.70
22	XV	66	C	C2-N1-C1'	5.16	124.47	118.80
22	QW	8	U	OP1-P-O3'	5.15	116.54	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2342	C	C2-N1-C1'	5.15	124.47	118.80
31	RH	82	GLY	N-CA-C	5.15	125.97	113.10
1	XA	931	C	N3-C4-N4	-5.14	114.40	118.00
25	YA	2525	G	N3-C4-C5	-5.14	126.03	128.60
25	RA	1411	C	C2-N1-C1'	5.14	124.45	118.80
25	YA	242	G	P-O3'-C3'	5.13	125.86	119.70
25	YA	669	G	C4-N9-C1'	5.13	133.17	126.50
25	YA	2539	C	N1-C2-O2	-5.12	115.83	118.90
25	YA	1313	U	N1-C2-O2	5.12	126.38	122.80
25	RA	1914	C	C2-N1-C1'	5.11	124.42	118.80
1	QA	1297	C	P-O3'-C3'	5.11	125.83	119.70
25	YA	2539	C	N1-C2-N3	5.11	122.78	119.20
25	YA	2743	C	P-O3'-C3'	5.11	125.83	119.70
25	YA	828	U	N3-C2-O2	-5.11	118.63	122.20
1	QA	1322	C	N1-C2-O2	5.10	121.96	118.90
25	RA	2752	C	C6-N1-C2	-5.10	118.26	120.30
25	RA	846	C	P-O3'-C3'	5.09	125.81	119.70
25	YA	114	U	C2-N1-C1'	5.09	123.81	117.70
1	QA	913	A	P-O3'-C3'	5.09	125.80	119.70
25	RA	1882	C	C2-N1-C1'	5.09	124.39	118.80
25	YA	1313	U	N3-C2-O2	-5.07	118.65	122.20
22	QW	34	U	C2-N1-C1'	5.07	123.78	117.70
1	QA	1346	A	P-O3'-C3'	5.06	125.77	119.70
1	XA	1297	C	P-O3'-C3'	5.05	125.76	119.70
25	YA	846	C	P-O3'-C3'	5.05	125.76	119.70
1	QA	1498	U	P-O3'-C3'	5.04	125.75	119.70
25	RA	1558	A	P-O3'-C3'	5.04	125.75	119.70
25	RA	271(B)	G	P-O3'-C3'	5.03	125.74	119.70
1	XA	449	C	C2-N1-C1'	5.03	124.34	118.80
25	RA	1022	G	P-O3'-C3'	5.03	125.73	119.70
25	YA	1686	C	C2-N1-C1'	5.03	124.33	118.80
25	RA	229	A	OP2-P-O3'	5.02	116.25	105.20
25	YA	271(B)	G	P-O3'-C3'	5.02	125.72	119.70
25	YA	2744	G	C5-C6-N1	5.02	114.01	111.50
26	RB	11	C	N3-C2-O2	-5.02	118.39	121.90
25	YA	1026	U	P-O3'-C3'	5.02	125.72	119.70
25	RA	229	A	P-O3'-C3'	5.02	125.72	119.70
1	QA	992	U	P-O3'-C3'	5.01	125.71	119.70
25	YA	1022	G	P-O3'-C3'	5.00	125.71	119.70

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
28	YE	146	THR	Peptide,Mainchain

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	QA	32246	0	16278	644	0
1	XA	32248	0	16279	617	0
2	QB	1907	0	1958	51	0
2	XB	1915	0	1969	47	0
3	QC	1605	0	1668	37	0
3	XC	1605	0	1668	33	0
4	QD	1703	0	1766	53	0
4	XD	1703	0	1767	46	0
5	QE	1155	0	1213	23	0
5	XE	1155	0	1213	18	0
6	QF	843	0	857	18	0
6	XF	843	0	857	22	0
7	QG	1257	0	1296	20	0
7	XG	1257	0	1296	18	0
8	QH	1108	0	1165	23	0
8	XH	1108	0	1165	20	0
9	QI	1010	0	1037	35	0
9	XI	998	0	1024	39	0
10	QJ	801	0	849	39	0
10	XJ	777	0	816	24	0
11	QK	885	0	904	33	0
11	XK	864	0	881	25	0
12	QL	975	0	1062	26	0
12	XL	956	0	1046	28	0
13	QM	955	0	1021	46	0
13	XM	946	0	1007	36	0
14	QN	492	0	529	15	0
14	XN	492	0	529	12	0
15	QO	734	0	771	13	0
15	XO	729	0	768	17	0
16	QP	705	0	725	19	0
16	XP	705	0	725	22	0
17	QQ	834	0	904	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	XQ	834	0	904	21	0
18	QR	574	0	644	19	0
18	XR	574	0	644	22	0
19	QS	665	0	686	26	0
19	XS	674	0	699	21	0
20	QT	763	0	861	17	0
20	XT	763	0	861	19	0
21	QU	217	0	234	6	0
21	XU	217	0	234	10	0
22	QV	1644	0	836	21	0
22	QW	1618	0	826	45	0
22	XV	1644	0	836	19	0
22	XW	1618	0	826	44	0
23	QX	169	0	86	0	0
23	XX	210	0	109	3	0
24	QY	358	0	183	3	0
24	XY	358	0	184	5	0
25	RA	62071	0	31291	1006	0
25	YA	62091	0	31297	1166	0
26	RB	2573	0	1306	29	0
26	YB	2573	0	1306	42	0
27	RD	2115	0	2195	101	0
27	YD	2115	0	2195	102	0
28	RE	1568	0	1634	67	0
28	YE	1568	0	1634	64	0
29	RF	1585	0	1632	53	0
29	YF	1585	0	1632	55	0
30	RG	1474	0	1535	58	0
30	YG	1474	0	1535	69	0
31	RH	1336	0	1418	37	0
31	YH	1336	0	1418	72	0
32	RI	1136	0	1223	28	0
32	YI	1136	0	1223	27	0
33	RN	1104	0	1180	30	0
33	YN	1104	0	1180	25	0
34	RO	933	0	996	32	0
34	YO	933	0	996	26	0
35	RP	1145	0	1228	48	0
35	YP	1122	0	1206	50	0
36	RQ	1122	0	1179	49	0
36	YQ	1122	0	1179	47	0
37	RR	960	0	1021	30	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	YR	960	0	1021	27	0
38	RS	882	0	943	23	0
38	YS	882	0	943	27	0
39	RT	1141	0	1202	46	0
39	YT	1141	0	1202	49	0
40	RU	964	0	1022	47	0
40	YU	964	0	1022	45	0
41	RV	779	0	852	31	0
41	YV	779	0	852	24	0
42	RW	900	0	964	21	1
42	YW	900	0	964	21	0
43	RX	725	0	778	17	0
43	YX	725	0	778	25	0
44	RY	818	0	910	13	0
44	YY	818	0	912	14	1
45	RZ	1461	0	1493	46	0
45	YZ	1461	0	1493	46	0
46	R0	643	0	667	20	0
46	Y0	599	0	617	23	0
47	R1	763	0	848	18	0
47	Y1	729	0	802	22	0
48	R2	581	0	629	12	0
48	Y2	581	0	629	14	0
49	R3	469	0	518	14	0
49	Y3	469	0	518	16	0
50	R4	565	0	557	18	0
50	Y4	565	0	558	25	0
51	R5	459	0	477	5	0
51	Y5	459	0	480	10	0
52	R6	453	0	474	7	0
52	Y6	453	0	473	3	0
53	R7	409	0	454	12	0
53	Y7	418	0	467	9	0
54	R8	517	0	582	22	0
54	Y8	517	0	582	21	0
55	R9	307	0	338	22	0
55	Y9	307	0	338	141	0
56	QA	68	0	0	0	0
56	QC	1	0	0	0	0
56	QE	1	0	0	0	0
56	QF	1	0	0	0	0
56	QH	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	QQ	1	0	0	0	0
56	QV	6	0	0	0	0
56	QY	1	0	0	0	0
56	R0	4	0	0	0	0
56	R1	2	0	0	0	0
56	R4	1	0	0	0	0
56	R8	1	0	0	0	0
56	R9	1	0	0	0	0
56	RA	508	0	0	0	0
56	RB	7	0	0	0	0
56	RE	2	0	0	0	0
56	RF	1	0	0	0	0
56	RN	1	0	0	0	0
56	RO	2	0	0	0	0
56	RP	2	0	0	0	0
56	RQ	2	0	0	0	0
56	RR	1	0	0	0	0
56	RT	1	0	0	0	0
56	RU	1	0	0	0	0
56	RY	1	0	0	0	0
56	XA	82	0	0	0	0
56	XE	1	0	0	0	0
56	XL	1	0	0	0	0
56	XM	1	0	0	0	0
56	XQ	1	0	0	0	0
56	XS	1	0	0	0	0
56	XV	6	0	0	0	0
56	Y0	1	0	0	0	0
56	Y7	1	0	0	0	0
56	Y8	1	0	0	0	0
56	Y9	1	0	0	0	0
56	YA	546	0	0	0	0
56	YB	12	0	0	0	0
56	YD	2	0	0	0	0
56	YE	2	0	0	0	0
56	YO	1	0	0	0	0
56	YP	3	0	0	0	0
56	YQ	3	0	0	0	0
56	YX	2	0	0	0	0
56	YY	1	0	0	0	0
57	QD	8	0	0	1	0
57	XD	8	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	QN	1	0	0	0	0
58	R4	1	0	0	0	0
58	R5	1	0	0	0	0
58	R6	1	0	0	0	0
58	R9	1	0	0	0	0
58	RY	1	0	0	0	0
58	XN	1	0	0	0	0
58	Y4	1	0	0	0	0
58	Y5	1	0	0	0	0
58	Y6	1	0	0	0	0
58	Y9	1	0	0	0	0
58	YY	1	0	0	0	0
All	All	295575	0	199664	5705	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 12.

All (5705) 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)
4:QD:119:GLN:CG	4:QD:119:GLN:CB	1.78	1.55
25:YA:2755:C:H42	55:Y9:1:MET:HG2	1.08	1.16
25:RA:2747:G:N2	25:RA:2757:A:H62	1.43	1.15
25:YA:2742:C:H1'	55:Y9:26:ILE:HA	1.33	1.10
25:RA:2747:G:H21	25:RA:2757:A:N6	1.52	1.05
10:QJ:26:ALA:HB1	10:QJ:84:GLN:HE21	1.19	1.04
27:RD:35:LYS:HB3	27:RD:36:PRO:HD2	1.42	1.02
25:YA:2867:G:HO2'	25:YA:2868:A:H8	1.05	1.02
25:YA:2743:C:O5'	55:Y9:26:ILE:N	1.94	1.00
27:YD:35:LYS:HB3	27:YD:36:PRO:HD2	1.42	0.98
25:YA:2755:C:N4	55:Y9:1:MET:HG2	1.80	0.97
25:YA:2524:G:N2	55:Y9:29:ASN:OD1	1.99	0.96
22:XW:35:C:N4	23:XX:14:A:C6	2.34	0.94
25:RA:1464:C:HO2'	25:RA:1528:A:H8	1.11	0.94
10:QJ:26:ALA:HB1	10:QJ:84:GLN:NE2	1.85	0.91
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.52	0.90
25:YA:1568:G:H5''	27:YD:61:LEU:HD23	1.53	0.90
22:XW:35:C:N4	23:XX:14:A:N6	2.20	0.90
25:YA:2525:G:H21	55:Y9:28:GLU:HG3	1.37	0.90
25:YA:2526:G:H1	25:YA:2537:U:H3	0.94	0.89
27:YD:17:THR:HB	27:YD:205:VAL:H	1.38	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QW:20:G:O6	25:RA:2112:G:N1	2.06	0.89
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.36	0.87
31:RH:8:PRO:HG2	31:RH:69:ARG:HE	1.38	0.87
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.54	0.87
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.40	0.87
1:QA:1422:G:H5'	34:RO:48:PRO:HB3	1.58	0.86
25:YA:888:C:H3'	25:YA:889:C:H4'	1.55	0.86
1:QA:827:U:O2	1:QA:874:G:N2	2.09	0.85
1:XA:689:C:H3'	1:XA:690:G:H21	1.41	0.85
25:RA:1111:A:H5'	31:RH:3:ARG:HH21	1.39	0.85
47:R1:87:PRO:HA	47:R1:90:ILE:HG22	1.59	0.84
31:YH:87:LEU:HA	55:Y9:18:ARG:HH22	1.41	0.84
31:YH:8:PRO:HG2	31:YH:69:ARG:HE	1.41	0.84
25:RA:2049:G:N2	25:RA:2619:C:O2	2.09	0.83
25:YA:2539:C:O2	55:Y9:29:ASN:ND2	2.10	0.83
25:YA:996:A:OP2	40:YU:92:ARG:NH2	2.12	0.83
25:YA:2525:G:N3	55:Y9:28:GLU:HB2	1.92	0.83
25:YA:2745:C:H4'	31:YH:142:GLY:HA3	1.61	0.82
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.11	0.82
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.12	0.82
19:QS:3:ARG:HE	19:QS:7:LYS:HE2	1.42	0.82
25:RA:2789:C:O2	25:RA:2894:G:N2	2.12	0.82
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.13	0.82
26:RB:33:G:OP2	30:RG:96:ARG:NH2	2.12	0.82
45:RZ:52:SER:O	45:RZ:54:HIS:N	2.13	0.82
25:YA:2470:G:H5'	36:YQ:56:ARG:HH21	1.43	0.82
12:QL:117:ARG:HB2	12:QL:122:THR:HB	1.59	0.82
26:RB:75:G:HO2'	45:RZ:85:HIS:HE2	1.25	0.81
1:XA:403:C:OP2	4:XD:74:GLN:NE2	2.13	0.81
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.13	0.81
25:RA:2789:C:N3	25:RA:2894:G:N1	2.25	0.81
30:RG:29:TRP:O	30:RG:33:ARG:NH1	2.14	0.81
25:YA:460:A:H62	25:YA:469:G:H21	1.29	0.81
1:QA:687:A:N6	1:QA:703:G:N2	2.29	0.81
4:QD:119:GLN:CB	4:QD:119:GLN:CD	2.48	0.81
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.62	0.81
45:YZ:7:ALA:HB2	45:YZ:59:LEU:HB3	1.63	0.81
45:RZ:166:SER:HB2	45:RZ:168:GLU:N	1.96	0.80
16:XP:4:ILE:HG12	16:XP:21:VAL:HG12	1.61	0.80
25:RA:1030:G:O6	25:RA:1125:G:N2	2.14	0.80
30:YG:29:TRP:O	30:YG:33:ARG:NH1	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:133:GLN:HG2	33:RN:135:PRO:HD3	1.63	0.80
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.28	0.80
1:QA:687:A:H62	1:QA:703:G:N2	1.80	0.79
25:YA:2755:C:N4	55:Y9:2:LYS:O	2.15	0.79
54:R8:29:LYS:HG3	54:R8:30:ARG:H	1.47	0.79
54:Y8:29:LYS:HG3	54:Y8:30:ARG:H	1.48	0.79
1:XA:1304:G:N2	1:XA:1334:G:O6	2.16	0.79
1:XA:376:G:H5''	16:XP:5:ARG:HB2	1.64	0.79
45:YZ:166:SER:HB2	45:YZ:168:GLU:N	1.98	0.79
28:RE:17:ASP:O	28:RE:19:ARG:N	2.16	0.79
40:YU:92:ARG:HD2	41:YV:11:GLN:HB2	1.64	0.79
19:QS:18:LYS:HG2	19:QS:31:ILE:HD12	1.65	0.79
27:RD:17:THR:HB	27:RD:205:VAL:H	1.46	0.79
25:YA:67:U:H3	25:YA:74:A:H2	1.31	0.79
1:XA:950:U:H3	1:XA:1231:G:H1	1.30	0.78
1:QA:1351:U:H3	1:QA:1371:G:H1	1.30	0.78
25:YA:2746:U:O4	25:YA:2755:C:O2'	2.01	0.78
25:YA:2882:A:OP1	37:YR:96:ARG:NH1	2.17	0.78
34:YO:104:ARG:HH21	39:YT:34:VAL:HG21	1.48	0.78
16:QP:4:ILE:HG12	16:QP:21:VAL:HG12	1.64	0.78
28:YE:17:ASP:O	28:YE:19:ARG:N	2.16	0.78
1:QA:618:C:H5'	1:QA:619:U:H5''	1.64	0.78
1:XA:1086:U:H3	1:XA:1099:G:H22	1.31	0.78
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.66	0.78
40:RU:92:ARG:HD2	41:RV:11:GLN:HB2	1.67	0.77
45:RZ:7:ALA:HB2	45:RZ:59:LEU:HB3	1.66	0.77
6:QF:37:VAL:HA	6:QF:65:VAL:HG12	1.66	0.77
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.66	0.77
11:XK:83:ILE:HG12	11:XK:109:VAL:HB	1.67	0.77
32:RI:88:ILE:HB	32:RI:121:LYS:HG3	1.66	0.77
1:XA:1492:A:H5''	12:XL:47:LYS:HB3	1.66	0.77
33:YN:133:GLN:HG2	33:YN:135:PRO:HD3	1.67	0.77
25:RA:2527:C:H4'	55:R9:4:ARG:HD3	1.66	0.77
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.66	0.77
25:YA:2495:G:H5''	36:YQ:81:VAL:HG12	1.67	0.77
26:YB:9:G:OP1	38:YS:15:ARG:NH1	2.16	0.77
25:RA:631:A:OP1	54:R8:46:ARG:NH2	2.18	0.77
38:RS:85:VAL:HG22	38:RS:110:LEU:HD22	1.66	0.77
1:XA:380:G:N2	1:XA:383:A:OP2	2.19	0.76
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.67	0.76
39:YT:50:ILE:HD11	39:YT:100:TYR:HA	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:13:ARG:NH1	27:RD:16:MET:SD	2.58	0.76
25:YA:2741:A:C4	55:Y9:30:PRO:HD2	2.20	0.76
26:YB:33:G:H5'	30:YG:2:PRO:HG3	1.66	0.76
1:QA:954:G:H21	1:QA:1227:A:H62	1.31	0.76
12:QL:104:VAL:HG12	12:QL:105:TYR:H	1.50	0.76
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	2.19	0.76
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.18	0.76
27:YD:8:PRO:HB3	27:YD:14:ARG:HB3	1.67	0.76
36:YQ:60:ARG:HH11	45:YZ:113:ALA:HB3	1.51	0.76
28:RE:5:LEU:HG	28:RE:49:LEU:HD23	1.68	0.76
25:YA:2741:A:O3'	55:Y9:31:LYS:HB2	1.85	0.76
25:YA:879:G:N2	25:YA:898:C:O2	2.13	0.75
1:XA:8:A:N6	4:XD:205:GLU:O	2.20	0.75
25:YA:2744:G:H5''	55:Y9:24:TYR:HB2	1.69	0.75
1:QA:689:C:H3'	1:QA:690:G:H21	1.51	0.75
55:Y9:1:MET:HG3	55:Y9:33:LYS:HD2	1.67	0.75
25:YA:2526:G:H1'	55:Y9:28:GLU:HB3	1.67	0.75
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.66	0.75
25:RA:1309:G:H4'	53:R7:7:PRO:HB2	1.67	0.75
25:YA:2068:U:H3	25:YA:2430:A:H2	1.32	0.75
31:RH:164:TYR:HB2	31:RH:167:GLU:HB2	1.69	0.75
31:YH:89:ILE:HA	31:YH:162:ILE:HG23	1.69	0.75
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.05	0.75
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.52	0.75
22:XW:35:C:C4	23:XX:14:A:N6	2.55	0.75
25:RA:2115:G:N2	25:RA:2165:G:N7	2.33	0.74
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.20	0.74
25:YA:589:C:H2'	25:YA:590:A:H8	1.51	0.74
41:YV:43:GLU:HG3	41:YV:44:LYS:H	1.51	0.74
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.67	0.74
25:YA:1359:A:H62	25:YA:1372:U:H3	1.34	0.74
27:RD:31:LYS:HB3	27:RD:35:LYS:HG3	1.70	0.74
27:YD:13:ARG:NH1	27:YD:16:MET:SD	2.60	0.74
1:QA:664:G:H22	1:QA:741:G:H1	1.34	0.74
1:QA:842:C:O2'	1:QA:848:C:N4	2.20	0.74
31:YH:149:ARG:HE	55:Y9:20:HIS:H	1.33	0.74
50:Y4:56:VAL:HG23	50:Y4:58:ARG:HG3	1.69	0.74
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.66	0.74
27:RD:8:PRO:HB3	27:RD:14:ARG:HB3	1.70	0.74
11:QK:58:PRO:HB2	11:QK:93:GLN:HG3	1.67	0.73
43:YX:54:VAL:HG22	43:YX:81:VAL:HG23	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1165:U:H3	25:RA:1184:G:H1	1.33	0.73
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.24	0.73
25:YA:2741:A:H2'	55:Y9:29:ASN:CG	2.09	0.73
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	1.69	0.73
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.69	0.73
27:RD:71:ASP:HB2	27:RD:103:ARG:HH12	1.51	0.73
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.54	0.73
22:XW:8:U:N3	22:XW:14:A:C8	2.57	0.73
25:YA:2701:C:H3'	25:YA:2702:U:H5''	1.68	0.73
55:Y9:1:MET:HG3	55:Y9:33:LYS:HB3	1.71	0.73
41:RV:43:GLU:HG3	41:RV:44:LYS:H	1.53	0.73
34:YO:104:ARG:NH2	39:YT:43:GLN:OE1	2.21	0.73
1:XA:674:G:H2'	1:XA:675:A:H8	1.53	0.73
25:YA:2755:C:C5	55:Y9:35:ARG:HB3	2.24	0.73
1:QA:1238:A:OP1	1:QA:1335:C:O2'	2.07	0.73
38:YS:85:VAL:HG22	38:YS:110:LEU:HD22	1.68	0.73
1:QA:1492:A:H5''	12:QL:47:LYS:HB3	1.69	0.73
22:QW:8:U:N3	22:QW:14:A:C8	2.56	0.73
25:YA:2744:G:N2	31:YH:143:GLN:OE1	2.22	0.73
25:YA:2814:C:HO2'	51:Y5:29:THR:HG1	1.35	0.73
28:YE:76:ARG:HD3	28:YE:195:LEU:HD22	1.71	0.73
25:YA:2246:G:H2'	25:YA:2247:A:H8	1.54	0.72
25:RA:593:G:H4'	54:R8:61:LEU:HD13	1.70	0.72
1:QA:452:A:H62	1:QA:480:U:H3	1.35	0.72
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	1.71	0.72
25:YA:2742:C:C2	55:Y9:30:PRO:HA	2.25	0.72
31:YH:46:GLU:OE1	31:YH:51:ARG:NH1	2.21	0.72
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HG2	1.71	0.72
25:RA:17:G:H4'	40:RU:25:TRP:HE1	1.55	0.72
1:XA:1422:G:H5''	34:YO:48:PRO:HB3	1.71	0.72
1:QA:687:A:N6	1:QA:703:G:H21	1.87	0.72
1:QA:953:G:H5'	1:QA:965:A:H61	1.55	0.72
35:RP:101:VAL:HB	35:RP:106:LEU:HB2	1.71	0.72
39:RT:39:ARG:HH22	39:RT:41:ARG:HD3	1.54	0.72
25:YA:2572:A:H2'	28:YE:144:ARG:HD3	1.71	0.72
25:YA:2784:C:O2'	28:YE:37:ARG:NH1	2.21	0.72
39:RT:50:ILE:HD11	39:RT:100:TYR:HA	1.69	0.72
25:RA:2784:C:O2'	28:RE:37:ARG:NH1	2.23	0.72
25:YA:2739:U:H2'	25:YA:2740:A:C8	2.24	0.72
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.71	0.72
25:RA:2502:G:H5''	25:RA:2503:A:H5''	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:86:GLU:HG3	31:YH:164:TYR:HD1	1.55	0.72
39:RT:66:VAL:HA	39:RT:71:GLY:HA2	1.72	0.71
1:XA:1348:U:H3	1:XA:1374:A:H2	1.37	0.71
25:YA:17:G:H4'	40:YU:25:TRP:HE1	1.53	0.71
1:XA:278:G:OP2	17:XQ:92:ARG:NH2	2.23	0.71
1:XA:448:A:OP2	1:XA:485:G:N2	2.22	0.71
1:XA:1137:C:O2'	1:XA:1138:G:N2	2.22	0.71
1:XA:1227:A:OP1	19:XS:80:TYR:OH	2.07	0.71
1:QA:713:G:H2'	1:QA:714:G:C8	2.26	0.71
25:RA:1600:C:OP1	43:RX:58:HIS:NE2	2.19	0.71
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.72	0.71
22:QV:59:A:O2'	22:QV:61:U:OP2	2.07	0.71
22:QW:20:G:O6	25:RA:2112:G:N2	2.24	0.71
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.23	0.71
45:RZ:163:LEU:HD13	45:RZ:167:PRO:HD3	1.72	0.71
25:YA:2743:C:O2'	25:YA:2744:G:H5''	1.91	0.71
27:RD:151:LYS:O	27:RD:154:LYS:NZ	2.23	0.71
25:YA:265:A:N6	25:YA:427:U:O2'	2.23	0.71
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.25	0.71
32:YI:88:ILE:HB	32:YI:121:LYS:HG3	1.72	0.71
35:YP:135:LEU:HG	35:YP:139:LYS:HE2	1.71	0.71
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	2.23	0.71
1:QA:1249:C:O2'	9:QI:73:GLN:NE2	2.24	0.71
1:QA:1266:G:N2	1:QA:1269:A:OP2	2.24	0.71
25:YA:2540:C:H1'	25:YA:2741:A:N3	2.05	0.71
1:QA:714:G:H2'	1:QA:715:A:C8	2.25	0.71
25:RA:1800:C:OP2	27:RD:183:ARG:NH1	2.22	0.71
27:YD:36:PRO:HA	27:YD:62:TYR:O	1.90	0.71
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	1.71	0.71
4:QD:62:GLN:HE22	4:QD:65:ARG:HH21	1.38	0.71
7:QG:84:ASN:ND2	22:QW:34:U:OP1	2.23	0.71
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	1.73	0.71
54:Y8:29:LYS:O	54:Y8:31:HIS:N	2.24	0.71
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.72	0.71
25:YA:2525:G:H4'	55:Y9:28:GLU:HA	1.71	0.71
27:YD:31:LYS:HB3	27:YD:35:LYS:HG3	1.71	0.71
27:RD:132:PRO:HG3	27:RD:190:TYR:HE1	1.56	0.70
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.72	0.70
25:RA:996:A:OP2	40:RU:92:ARG:NH2	2.23	0.70
34:RO:104:ARG:HH21	39:RT:34:VAL:HG21	1.54	0.70
1:XA:714:G:H2'	1:XA:715:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:690:G:H22	11:QK:55:LYS:HZ1	1.39	0.70
27:RD:24:ILE:HD11	27:RD:91:ARG:HD2	1.72	0.70
25:YA:2526:G:O6	25:YA:2537:U:O4	2.09	0.70
31:RH:46:GLU:OE1	31:RH:51:ARG:NH1	2.25	0.70
25:YA:2666:C:O2	31:YH:152:ARG:NH1	2.24	0.70
55:Y9:22:ARG:HB2	55:Y9:24:TYR:HE2	1.57	0.70
34:RO:104:ARG:NH2	39:RT:43:GLN:OE1	2.25	0.70
1:XA:842:C:O2'	1:XA:848:C:N4	2.25	0.70
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.24	0.70
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.74	0.70
48:R2:22:GLU:OE2	48:R2:68:ARG:NH2	2.25	0.70
1:XA:544:G:OP1	4:XD:59:ARG:NH2	2.24	0.70
1:XA:673:G:H2'	1:XA:674:G:C8	2.27	0.70
25:YA:1817:G:OP1	27:YD:88:ARG:NH2	2.24	0.70
1:QA:8:A:N6	4:QD:205:GLU:O	2.25	0.70
4:QD:30:LYS:HG2	4:QD:35:ARG:HH21	1.56	0.70
10:QJ:49:VAL:HG13	14:QN:41:ARG:HB2	1.74	0.70
18:QR:86:VAL:HG12	18:QR:87:ARG:HG2	1.74	0.70
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.73	0.70
27:YD:168:ARG:HG2	27:YD:173:VAL:HG12	1.74	0.70
33:YN:54:VAL:HB	33:YN:122:VAL:HG22	1.73	0.70
38:YS:20:ARG:NH1	46:Y0:48:GLY:O	2.25	0.70
6:QF:68:PRO:HG3	6:QF:71:ARG:HH21	1.57	0.69
45:RZ:4:ARG:HG2	45:RZ:58:VAL:HB	1.72	0.69
1:XA:31:G:O2'	1:XA:48:C:N4	2.24	0.69
1:XA:992:U:H3	1:XA:1044:A:H62	1.39	0.69
28:YE:5:LEU:HG	28:YE:49:LEU:HD23	1.71	0.69
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.25	0.69
54:R8:29:LYS:O	54:R8:31:HIS:N	2.24	0.69
47:Y1:87:PRO:HA	47:Y1:90:ILE:HG22	1.75	0.69
53:Y7:10:ARG:HE	53:Y7:14:LYS:HD2	1.57	0.69
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.27	0.69
22:QW:20:G:O6	25:RA:2112:G:C2	2.45	0.69
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.75	0.69
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.74	0.69
18:XR:86:VAL:HG12	18:XR:87:ARG:HG2	1.72	0.69
25:YA:2743:C:O2	55:Y9:19:ARG:NH1	2.25	0.69
45:RZ:5:LEU:H	45:RZ:59:LEU:HA	1.56	0.69
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HD23	1.75	0.69
25:YA:2742:C:C5	55:Y9:33:LYS:HB2	2.27	0.69
25:RA:1649:G:O2'	37:RR:107:ASP:OD1	2.05	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:101:VAL:HG21	35:YP:108:LYS:HD2	1.74	0.69
40:YU:85:LYS:NZ	40:YU:117:GLN:OE1	2.26	0.69
1:QA:1130:A:O2'	9:QI:3:GLN:NE2	2.26	0.69
4:QD:119:GLN:CG	4:QD:119:GLN:CA	2.69	0.69
25:RA:1857:G:H21	25:RA:1886:C:H42	1.40	0.69
25:RA:2584:U:H2'	25:RA:2585:U:H2'	1.73	0.69
1:XA:811:C:O2'	1:XA:901:A:N1	2.25	0.69
45:YZ:163:LEU:HD13	45:YZ:167:PRO:HD3	1.74	0.69
48:Y2:22:GLU:OE2	48:Y2:68:ARG:NH2	2.26	0.69
1:QA:1009:G:H1	1:QA:1020:U:H3	1.41	0.69
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.75	0.69
25:RA:2308:G:H22	25:RA:2311:A:H2	1.40	0.69
30:RG:3:LEU:HD11	50:R4:25:TYR:HE2	1.58	0.69
37:RR:104:ARG:HG3	37:RR:107:ASP:HB3	1.75	0.69
47:R1:80:LEU:HD12	47:R1:81:LYS:HG2	1.74	0.69
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.74	0.69
27:YD:132:PRO:HG3	27:YD:190:TYR:HE1	1.58	0.69
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.74	0.69
30:YG:5:VAL:HG11	30:YG:100:TRP:HB3	1.75	0.69
43:YX:53:LYS:NZ	43:YX:55:ASN:OD1	2.26	0.69
45:YZ:4:ARG:HG2	45:YZ:58:VAL:HB	1.74	0.69
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.75	0.69
3:QC:150:LYS:HE3	3:QC:167:TRP:HE1	1.58	0.69
25:RA:141:A:H8	25:RA:1595:G:H21	1.41	0.69
25:RA:1678:G:H22	25:RA:1989:G:H22	1.38	0.69
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.23	0.69
47:R1:76:ARG:HH11	47:R1:94:LEU:HD13	1.58	0.69
4:XD:13:ARG:HH21	4:XD:40:PRO:HB3	1.58	0.69
25:RA:252:G:OP2	35:RP:50:ARG:NH1	2.26	0.68
1:XA:80:G:H1	1:XA:89:U:H3	1.38	0.68
1:XA:789:U:H1'	1:XA:792:A:H2	1.57	0.68
25:YA:630:G:N2	25:YA:633:A:OP2	2.22	0.68
45:YZ:53:ILE:HG22	45:YZ:71:VAL:HG13	1.75	0.68
19:QS:12:ASP:OD2	19:QS:35:SER:OG	2.11	0.68
25:RA:911:A:H2'	36:RQ:9:TYR:HE2	1.58	0.68
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.22	0.68
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	1.73	0.68
1:XA:377:G:H2'	1:XA:378:G:C8	2.27	0.68
25:YA:577:G:O2'	25:YA:1254:A:OP1	2.12	0.68
25:YA:820:A:N3	25:YA:943:U:O2'	2.26	0.68
39:YT:39:ARG:HH22	39:YT:41:ARG:HD3	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:806:C:H2'	1:QA:807:A:H8	1.58	0.68
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.28	0.68
10:XJ:49:VAL:HG23	14:XN:41:ARG:HB2	1.74	0.68
25:YA:1992:G:H5'	25:YA:1994:C:H41	1.58	0.68
25:YA:2246:G:H2'	25:YA:2247:A:C8	2.27	0.68
36:YQ:43:THR:HG22	36:YQ:94:VAL:HG12	1.74	0.68
55:Y9:28:GLU:HG2	55:Y9:29:ASN:HB2	1.75	0.68
1:QA:1347:G:O6	9:QI:10:ARG:NH2	2.27	0.68
36:RQ:137:TYR:HB3	45:RZ:76:LEU:HD11	1.76	0.68
1:XA:1287:A:H2'	1:XA:1288:A:C8	2.28	0.68
54:Y8:26:LYS:HD2	54:Y8:47:LYS:HD3	1.75	0.68
1:QA:448:A:OP2	1:QA:485:G:N2	2.27	0.68
31:RH:121:ILE:HG13	31:RH:144:VAL:HG21	1.76	0.68
45:RZ:166:SER:HB2	45:RZ:168:GLU:H	1.57	0.68
25:YA:288:C:H2'	25:YA:289:A:H8	1.59	0.68
25:YA:581:C:H2'	25:YA:582:G:H8	1.59	0.68
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.27	0.68
25:RA:2328:A:H2'	25:RA:2329:G:H8	1.56	0.68
31:RH:52:VAL:O	31:RH:65:HIS:NE2	2.26	0.68
1:XA:1316:G:N2	1:XA:1319:A:OP2	2.26	0.68
6:XF:37:VAL:HA	6:XF:65:VAL:HG12	1.74	0.68
25:YA:1021:A:H61	25:YA:1142(A):A:H61	1.41	0.68
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.59	0.68
25:YA:1657:C:H2'	25:YA:1658:C:H6	1.58	0.68
25:YA:2328:A:H2'	25:YA:2329:G:H8	1.58	0.68
1:QA:191:G:O2'	20:QT:101:GLY:O	2.11	0.68
17:XQ:9:VAL:HG22	17:XQ:56:VAL:HG22	1.76	0.68
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.75	0.68
25:RA:1059:G:O6	25:RA:1079:C:N4	2.26	0.68
26:RB:9:G:OP1	38:RS:15:ARG:NH1	2.23	0.68
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.76	0.68
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.76	0.68
1:QA:1055:A:N7	1:QA:1200:C:N4	2.42	0.67
13:QM:93:ARG:NH1	25:RA:888:C:OP1	2.28	0.67
25:RA:270:A:OP2	25:RA:270(Y):G:N1	2.27	0.67
25:RA:1365:A:O2'	47:R1:11:ARG:NH2	2.26	0.67
36:RQ:75:THR:HG21	36:RQ:85:LYS:HE3	1.75	0.67
1:XA:269:C:H2'	1:XA:270:A:H8	1.58	0.67
25:YA:1116:C:H2'	25:YA:1117:G:H8	1.59	0.67
25:YA:1860:G:H1	25:YA:1882:C:H42	1.43	0.67
1:QA:851:G:H2'	1:QA:852:G:H8	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67
25:YA:330:A:H2	25:YA:1210:A:HO2'	1.42	0.67
40:YU:91:ASP:HA	40:YU:95:LEU:HB2	1.76	0.67
45:YZ:5:LEU:H	45:YZ:59:LEU:HA	1.59	0.67
1:QA:1162:C:H42	1:QA:1174:G:H1	1.42	0.67
38:YS:30:ARG:HD2	38:YS:97:ARG:HD3	1.77	0.67
30:RG:18:GLU:OE2	30:RG:21:ARG:NH2	2.25	0.67
33:RN:54:VAL:HB	33:RN:122:VAL:HG22	1.74	0.67
1:XA:1178:G:N2	1:XA:1181:G:N7	2.43	0.67
1:XA:1298:C:H2'	7:XG:114:ARG:HH12	1.59	0.67
16:XP:4:ILE:HB	16:XP:66:PRO:HB3	1.75	0.67
25:YA:2199:A:OP1	47:Y1:50:ARG:NH2	2.27	0.67
1:QA:28:G:OP1	4:QD:76:ARG:NH1	2.24	0.67
1:QA:619:U:N3	4:QD:134:ASP:OD1	2.23	0.67
1:XA:639:G:H2'	1:XA:640:A:H8	1.60	0.67
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.28	0.67
1:QA:685:G:H21	1:QA:706:A:N6	1.93	0.67
25:RA:814:C:H1'	25:RA:1226:G:H21	1.59	0.67
45:RZ:13:GLU:HB3	45:RZ:18:LEU:HD11	1.76	0.67
25:YA:2526:G:H2'	25:YA:2527:C:C5	2.30	0.67
1:QA:972:C:H4'	10:QJ:57:LYS:HB2	1.77	0.67
29:RF:154:VAL:HG22	29:RF:191:ARG:HB3	1.77	0.67
25:YA:1651:G:OP1	37:YR:40:LYS:NZ	2.25	0.67
29:YF:32:LEU:HD11	29:YF:105:VAL:HG13	1.76	0.67
31:YH:149:ARG:NE	55:Y9:20:HIS:H	1.93	0.67
36:YQ:24:GLY:H	36:YQ:101:ARG:HD2	1.60	0.67
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.77	0.67
27:RD:94:LEU:HD13	27:RD:104:TYR:HE1	1.59	0.67
31:YH:164:TYR:HB2	31:YH:167:GLU:HB2	1.76	0.67
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.75	0.67
1:QA:973:G:H4'	14:QN:41:ARG:HH22	1.60	0.67
25:RA:1817:G:OP1	27:RD:88:ARG:NH2	2.27	0.67
45:RZ:128:VAL:HG22	45:RZ:129:SER:H	1.60	0.67
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.59	0.67
3:XC:150:LYS:HE3	3:XC:167:TRP:HE1	1.60	0.67
25:YA:2646:C:OP2	25:YA:2732:G:O2'	2.11	0.67
45:YZ:166:SER:HB2	45:YZ:168:GLU:H	1.59	0.67
1:QA:1043:C:H2'	1:QA:1044:A:H8	1.60	0.67
18:QR:32:ARG:HA	18:QR:69:THR:HG21	1.76	0.67
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.28	0.67
27:RD:36:PRO:HA	27:RD:62:TYR:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:69:ARG:NH2	27:YD:128:GLY:O	2.24	0.67
30:YG:18:GLU:OE2	30:YG:21:ARG:NH2	2.27	0.67
43:YX:26:TYR:HD2	43:YX:89:ILE:HD12	1.58	0.67
1:QA:335:C:H2'	1:QA:336:C:H6	1.58	0.66
45:RZ:53:ILE:HG22	45:RZ:71:VAL:HG13	1.76	0.66
25:YA:460:A:H62	25:YA:469:G:N2	1.91	0.66
25:YA:1111:A:OP1	31:YH:3:ARG:NH2	2.28	0.66
25:RA:819:A:OP2	25:RA:1187:G:N2	2.26	0.66
25:YA:662:G:OP1	35:YP:15:ARG:NH1	2.27	0.66
25:YA:1800:C:OP2	27:YD:183:ARG:NH1	2.20	0.66
1:QA:544:G:OP1	4:QD:59:ARG:NH2	2.27	0.66
1:XA:1129:C:OP1	9:XI:62:TYR:OH	2.13	0.66
25:YA:2185:C:H2'	25:YA:2186:G:H8	1.60	0.66
25:RA:1341:U:OP2	25:RA:1394:U:O2'	2.12	0.66
25:RA:1478:G:H2'	25:RA:1479:G:H8	1.59	0.66
25:RA:2109:U:H2'	25:RA:2110:G:C8	2.31	0.66
36:RQ:24:GLY:H	36:RQ:101:ARG:HD2	1.59	0.66
11:XK:86:GLY:O	11:XK:91:ARG:NH1	2.26	0.66
12:XL:77:LEU:HD21	12:XL:107:ALA:HB2	1.78	0.66
31:YH:52:VAL:O	31:YH:65:HIS:NE2	2.28	0.66
1:QA:545:C:H5'	4:QD:72:GLU:HG3	1.75	0.66
1:QA:978:A:OP2	1:QA:1362(A):C:N4	2.27	0.66
1:QA:1356:G:H2'	1:QA:1357:A:H8	1.59	0.66
19:QS:40:ILE:HG13	19:QS:44:MET:HG3	1.78	0.66
25:RA:1542:G:O6	25:RA:1543:A:N6	2.29	0.66
25:RA:1902:C:OP1	27:RD:242:ARG:NH2	2.28	0.66
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.60	0.66
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.30	0.66
1:XA:279:A:OP2	17:XQ:95:TYR:OH	2.12	0.66
1:XA:636:U:H2'	1:XA:637:G:H8	1.60	0.66
1:XA:643:C:H2'	1:XA:644:G:H8	1.61	0.66
1:QA:266:G:O2'	1:QA:267:C:OP2	2.12	0.66
11:QK:18:ARG:HG2	11:QK:81:ASP:HB2	1.77	0.66
33:RN:99:LEU:HD12	33:RN:122:VAL:HG21	1.78	0.66
1:XA:972:C:OP2	10:XJ:57:LYS:NZ	2.29	0.66
25:YA:28:A:N6	25:YA:512:G:O2'	2.28	0.66
31:YH:162:ILE:HG22	55:Y9:18:ARG:HH12	1.61	0.66
50:R4:16:CYS:SG	50:R4:17:GLY:N	2.68	0.66
25:YA:2755:C:H5'	55:Y9:3:VAL:HG13	1.76	0.66
40:YU:61:TRP:HB3	40:YU:93:LYS:O	1.95	0.66
1:QA:323:U:OP1	20:QT:26:ASN:ND2	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:587:C:OP2	35:RP:21:ARG:NH1	2.29	0.66
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.78	0.66
1:XA:713:G:H2'	1:XA:714:G:C8	2.30	0.66
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.60	0.66
2:QB:20:GLU:HG3	2:QB:191:ASP:HB2	1.77	0.66
19:QS:41:VAL:HG11	19:QS:67:VAL:HA	1.78	0.66
25:RA:818:G:N1	25:RA:1188:U:OP2	2.19	0.66
1:XA:266:G:O2'	1:XA:267:C:OP2	2.14	0.66
1:XA:715:A:H2'	1:XA:716:A:C8	2.30	0.66
1:QA:537:G:H5''	12:QL:113:ARG:HH12	1.61	0.65
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.12	0.65
11:XK:54:ARG:NH2	22:XW:40:C:O2'	2.29	0.65
25:RA:1568:G:H5''	27:RD:61:LEU:HD23	1.78	0.65
1:XA:545:C:H5'	4:XD:72:GLU:HG3	1.78	0.65
22:XV:35:C:H2'	22:XV:36:A:H8	1.60	0.65
25:YA:2525:G:O2'	25:YA:2526:G:O4'	2.14	0.65
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.78	0.65
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.61	0.65
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.23	0.65
2:XB:47:THR:HA	2:XB:202:PRO:HG2	1.78	0.65
25:YA:2739:U:H2'	25:YA:2740:A:H8	1.58	0.65
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.79	0.65
25:RA:662:G:OP1	35:RP:15:ARG:NH1	2.30	0.65
35:YP:65:ARG:O	35:YP:68:GLN:NE2	2.29	0.65
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.23	0.65
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.30	0.65
25:RA:1497:U:H5''	25:RA:1498:C:H5	1.61	0.65
25:RA:2495:G:H5''	36:RQ:81:VAL:HG12	1.79	0.65
25:YA:83:G:H1	25:YA:102:G:HO2'	1.41	0.65
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.28	0.65
43:RX:26:TYR:HD2	43:RX:89:ILE:HD12	1.61	0.65
7:XG:84:ASN:ND2	22:XW:34:U:OP1	2.26	0.65
1:QA:1245:A:OP2	21:QU:9:ARG:NH2	2.28	0.65
25:RA:195:A:H61	25:RA:198:C:H3'	1.62	0.65
25:RA:2030:A:H4'	25:RA:2031:A:H8	1.61	0.65
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.77	0.65
36:YQ:65:PHE:HB2	36:YQ:105:GLU:HB3	1.77	0.65
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.61	0.65
1:QA:1355:G:H2'	1:QA:1356:G:C8	2.32	0.65
34:RO:68:GLU:HG3	34:RO:78:ARG:HD3	1.77	0.65
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:109:SER:O	2:QB:113:HIS:ND1	2.30	0.65
25:YA:2747:G:N1	25:YA:2755:C:OP2	2.29	0.65
55:Y9:4:ARG:HB2	55:Y9:34:GLN:HB3	1.78	0.65
27:RD:168:ARG:HG2	27:RD:173:VAL:HG12	1.79	0.65
8:XH:10:LEU:HD22	8:XH:83:ILE:HD11	1.78	0.65
25:YA:24:G:O2'	42:YW:78:GLU:O	2.15	0.65
52:Y6:10:LEU:HG	52:Y6:54:ILE:HD12	1.79	0.65
1:QA:1225:A:H4'	19:QS:78:ARG:HE	1.62	0.64
25:RA:2466:C:OP1	55:R9:22:ARG:NH1	2.29	0.64
25:RA:2572:A:H2'	28:RE:144:ARG:HD3	1.78	0.64
25:RA:2731:G:OP1	28:RE:169:ASN:ND2	2.27	0.64
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.79	0.64
25:YA:586:A:H4'	29:YF:89:VAL:HG11	1.79	0.64
25:YA:2744:G:OP2	55:Y9:19:ARG:N	2.30	0.64
1:QA:684:A:O2'	11:QK:39:PRO:O	2.14	0.64
1:QA:1073:U:O2	2:QB:104:ASN:ND2	2.29	0.64
37:RR:103:ARG:NH1	42:RW:40:ASN:OD1	2.28	0.64
25:YA:1084:A:N1	25:YA:1085:A:N6	2.45	0.64
31:YH:150:ALA:HA	55:Y9:19:ARG:HB3	1.78	0.64
1:QA:1355:G:H2'	1:QA:1356:G:H8	1.62	0.64
18:QR:74:ARG:HG2	18:QR:81:PHE:CE1	2.32	0.64
25:RA:270(T):G:H5''	47:R1:97:LEU:HD22	1.79	0.64
40:RU:85:LYS:NZ	40:RU:117:GLN:OE1	2.29	0.64
25:YA:819:A:OP2	25:YA:1187:G:N2	2.30	0.64
25:RA:2347:C:OP1	52:R6:38:LYS:NZ	2.27	0.64
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.78	0.64
4:XD:62:GLN:HE22	4:XD:65:ARG:HH21	1.45	0.64
25:YA:848:G:H2'	25:YA:849:A:H8	1.61	0.64
7:QG:86:GLN:NE2	22:QW:33:C:O2'	2.30	0.64
11:QK:54:ARG:HH12	22:QW:40:C:H4'	1.61	0.64
30:RG:107:LEU:HD23	30:RG:111:LEU:HD12	1.78	0.64
1:XA:31:G:HO2'	1:XA:48:C:N4	1.96	0.64
25:YA:589:C:H2'	25:YA:590:A:C8	2.31	0.64
1:QA:297:G:N2	1:QA:300:A:OP2	2.27	0.64
3:QC:157:ILE:HD13	3:QC:166:GLU:HG2	1.79	0.64
5:QE:81:GLU:HG2	5:QE:90:VAL:HG22	1.79	0.64
25:RA:675:A:N3	25:RA:2443:C:O2'	2.30	0.64
25:RA:1405:U:H2'	25:RA:1406:U:H6	1.62	0.64
25:RA:1426:G:OP2	25:RA:1427:A:O2'	2.15	0.64
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.80	0.64
38:RS:26:LEU:HB3	38:RS:87:PHE:HA	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:134:A:H61	16:XP:25:ARG:HH12	1.46	0.64
22:QW:59:A:O2'	22:QW:60:A:OP1	2.15	0.64
35:RP:62:LEU:HD23	35:RP:62:LEU:H	1.62	0.64
43:RX:54:VAL:HG22	43:RX:81:VAL:HG23	1.79	0.64
27:YD:35:LYS:HB3	27:YD:36:PRO:CD	2.25	0.64
31:YH:154:PRO:HG3	55:Y9:18:ARG:O	1.97	0.64
19:QS:10:PHE:HE2	19:QS:16:LEU:HB2	1.63	0.64
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.78	0.64
25:YA:20:C:O2	25:YA:520:G:N2	2.20	0.64
25:YA:2743:C:C6	55:Y9:26:ILE:HG23	2.33	0.64
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.31	0.64
1:QA:429:U:OP2	4:QD:36:ARG:NH2	2.30	0.64
25:RA:630:G:N2	25:RA:633:A:OP2	2.31	0.64
17:XQ:6:LEU:HD13	17:XQ:23:VAL:HG11	1.80	0.64
25:YA:566:U:H5'	35:YP:29:LYS:HD2	1.80	0.64
1:QA:689:C:OP1	11:QK:27:ASN:ND2	2.31	0.64
8:QH:10:LEU:HD22	8:QH:83:ILE:HD11	1.78	0.64
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.80	0.64
1:XA:1432:G:O2'	1:XA:1468:A:N6	2.31	0.64
1:QA:954:G:O6	13:QM:104:ARG:NH1	2.30	0.63
25:RA:768:G:O2'	25:RA:1379:A:N6	2.29	0.63
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.62	0.63
50:Y4:16:CYS:SG	50:Y4:17:GLY:N	2.71	0.63
1:QA:606:G:H22	1:QA:631:G:H5'	1.62	0.63
1:QA:715:A:H2'	1:QA:716:A:C8	2.33	0.63
22:XV:44:A:H2'	22:XV:45:A:C8	2.33	0.63
25:YA:1042:G:H1	25:YA:1113:U:H3	1.45	0.63
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.80	0.63
3:QC:108:ASN:HD21	3:QC:144:SER:HB2	1.63	0.63
10:QJ:45:ARG:HB3	10:QJ:65:LEU:HB3	1.80	0.63
25:RA:676:A:H8	25:RA:2069:G:H21	1.46	0.63
25:YA:2743:C:C5'	55:Y9:26:ILE:H	2.11	0.63
25:RA:259:G:H21	25:RA:621:A:H8	1.47	0.63
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.33	0.63
3:XC:172:ARG:HG2	3:XC:174:PRO:HD3	1.80	0.63
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.79	0.63
1:QA:624:C:H2'	1:QA:625:G:H8	1.64	0.63
1:XA:191(A):G:H2'	1:XA:191(B):G:C8	2.34	0.63
25:YA:300:A:OP1	44:YY:86:ARG:NH2	2.32	0.63
1:QA:1160:G:H1	1:QA:1177:G:H22	1.44	0.63
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:42:THR:HG21	10:QJ:66:ARG:HG3	1.79	0.63
25:RA:1021:A:H61	25:RA:1142(A):A:H61	1.47	0.63
25:RA:1857:G:H21	25:RA:1886:C:N4	1.97	0.63
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.28	0.63
1:QA:563:A:H2'	1:QA:567:G:C8	2.34	0.63
25:RA:2354:G:H4'	46:R0:35:ASN:HD22	1.62	0.63
37:RR:51:LEU:HD22	37:RR:66:VAL:HG13	1.80	0.63
1:XA:578:C:O2'	1:XA:728:A:N3	2.26	0.63
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.79	0.63
41:RV:28:GLU:HB3	41:RV:31:ALA:HB2	1.80	0.63
1:XA:390:C:H2'	1:XA:391:G:C8	2.34	0.63
1:XA:1003:G:H21	1:XA:1005:A:H5'	1.62	0.63
19:QS:40:ILE:O	19:QS:41:VAL:HG13	1.99	0.63
1:XA:559:A:OP1	5:XE:126:ARG:NH2	2.29	0.63
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.80	0.63
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.80	0.63
25:YA:998:C:OP2	40:YU:58:ARG:NH1	2.32	0.63
1:QA:1224:G:O2'	1:QA:1322:C:OP2	2.15	0.62
25:RA:1033:U:OP1	55:R9:19:ARG:NE	2.32	0.62
25:RA:1309:G:HO2'	25:RA:1611:C:HO2'	1.46	0.62
25:RA:2376:A:H61	38:RS:89:ARG:HD3	1.64	0.62
50:R4:14:ILE:HB	50:R4:22:ILE:HB	1.79	0.62
25:RA:673:C:OP1	29:RF:54:ARG:NH1	2.31	0.62
25:RA:1329:U:H5''	25:RA:1330:C:H5	1.64	0.62
31:RH:89:ILE:HG22	31:RH:162:ILE:HG12	1.81	0.62
1:XA:1479:C:H2'	1:XA:1480:G:H8	1.64	0.62
25:YA:1061:U:H3'	25:YA:1062:G:H5''	1.80	0.62
31:YH:146:ALA:HA	55:Y9:20:HIS:O	1.98	0.62
1:QA:745:C:H2'	1:QA:746:A:H8	1.63	0.62
1:XA:1329:A:N7	21:XU:7:ARG:NH2	2.47	0.62
25:YA:2616:C:H2'	25:YA:2617:C:H6	1.63	0.62
25:YA:2743:C:H3'	55:Y9:24:TYR:C	2.19	0.62
25:YA:2743:C:C2	55:Y9:26:ILE:HG12	2.34	0.62
25:RA:2867:G:OP2	39:RT:119:LYS:NZ	2.25	0.62
29:RF:143:ALA:HB1	29:RF:148:LEU:HB2	1.82	0.62
1:XA:877:C:H2'	1:XA:878:G:H8	1.64	0.62
1:XA:1266:G:N2	1:XA:1269:A:OP2	2.29	0.62
7:XG:15:ASP:HB3	7:XG:19:GLY:H	1.63	0.62
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.25	0.62
25:YA:1678:G:N2	25:YA:1989:G:H22	1.98	0.62
25:YA:1930:G:N2	25:YA:1969:A:OP2	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:48:PHE:HA	45:YZ:51:ALA:HB3	1.81	0.62
25:RA:144:C:H2'	25:RA:145:G:H8	1.64	0.62
40:RU:90:VAL:HG22	41:RV:39:LEU:HD23	1.82	0.62
45:RZ:102:LEU:HD11	45:RZ:124:ILE:HG13	1.80	0.62
8:XH:112:LEU:HD23	8:XH:133:LEU:HA	1.81	0.62
25:YA:879:G:N1	25:YA:898:C:N3	2.34	0.62
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.82	0.62
45:YZ:13:GLU:HB3	45:YZ:18:LEU:HD11	1.82	0.62
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.65	0.62
25:RA:589:C:H2'	25:RA:590:A:H8	1.65	0.62
25:RA:1668:A:N3	25:RA:1670:C:N4	2.48	0.62
35:RP:61:ARG:HG3	54:R8:13:ARG:HD3	1.81	0.62
38:YS:20:ARG:NH2	46:Y0:51:VAL:O	2.33	0.62
13:QM:99:ARG:HB2	13:QM:101:GLN:HE22	1.64	0.62
25:RA:946:G:O6	25:RA:972:G:N2	2.33	0.62
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.32	0.62
25:RA:1693:U:O2	27:RD:14:ARG:NH1	2.33	0.62
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.34	0.62
22:XW:59:A:O2'	22:XW:60:A:OP1	2.15	0.62
29:YF:63:LYS:NZ	29:YF:75:HIS:O	2.30	0.62
1:XA:191:G:O2'	20:XT:101:GLY:O	2.18	0.62
25:YA:2742:C:O4'	55:Y9:29:ASN:O	2.17	0.62
22:QW:34:U:H3'	22:QW:35:C:H5''	1.81	0.62
25:RA:1518:C:H2'	25:RA:1519:G:H8	1.63	0.62
28:RE:52:LEU:O	28:RE:74:PRO:HA	1.99	0.62
30:RG:3:LEU:HD11	50:R4:25:TYR:CE2	2.35	0.62
25:YA:2539:C:H1'	55:Y9:29:ASN:HD21	1.65	0.62
1:QA:1061:G:OP1	10:QJ:59:SER:OG	2.18	0.61
9:QI:63:ILE:HG21	9:QI:77:ILE:HG12	1.81	0.61
1:XA:675:A:H1'	11:XK:116:HIS:CD2	2.33	0.61
1:XA:738:C:H5''	6:XF:69:GLU:HB2	1.82	0.61
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.00	0.61
40:YU:90:VAL:HG22	41:YV:39:LEU:HD23	1.82	0.61
25:RA:184:C:O2'	25:RA:217:G:N3	2.32	0.61
25:RA:2503:A:O2'	25:RA:2505:G:OP2	2.16	0.61
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.81	0.61
37:RR:55:ALA:HA	37:RR:80:PHE:CE1	2.35	0.61
25:YA:221:A:H4'	25:YA:222:A:O5'	2.00	0.61
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.15	0.61
25:YA:2737:G:H2'	25:YA:2738:A:C8	2.36	0.61
25:YA:2742:C:O2'	55:Y9:25:VAL:O	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:94:LEU:HD13	27:YD:104:TYR:HE1	1.65	0.61
1:QA:346:G:H1'	1:QA:347:G:H5'	1.82	0.61
1:XA:1287:A:H2	1:XA:1353:G:H1'	1.65	0.61
25:YA:460:A:N6	25:YA:469:G:H21	1.97	0.61
25:YA:2514:U:H2'	25:YA:2515:C:H6	1.64	0.61
25:RA:1206:G:H1	25:RA:1240:U:H3	1.49	0.61
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.61
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	1.81	0.61
5:XE:34:VAL:HG11	5:XE:63:ARG:HE	1.64	0.61
25:YA:2314:C:H2'	25:YA:2315:G:H8	1.64	0.61
55:Y9:24:TYR:O	55:Y9:25:VAL:HG13	2.01	0.61
1:QA:26:A:O2'	4:QD:209:ARG:NH2	2.31	0.61
25:RA:2527:C:OP1	55:R9:2:LYS:NZ	2.31	0.61
28:RE:76:ARG:HD3	28:RE:195:LEU:HD22	1.83	0.61
18:XR:74:ARG:HG2	18:XR:81:PHE:CE1	2.35	0.61
25:YA:2473:U:OP1	25:YA:2529:G:N2	2.33	0.61
25:YA:2743:C:H3'	55:Y9:25:VAL:HA	1.83	0.61
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.00	0.61
31:YH:10:PRO:HG3	31:YH:69:ARG:HH12	1.66	0.61
31:YH:142:GLY:O	31:YH:146:ALA:HB2	2.00	0.61
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.36	0.61
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.82	0.61
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.65	0.61
25:RA:1678:G:H22	25:RA:1989:G:N2	1.98	0.61
29:RF:32:LEU:HD11	29:RF:105:VAL:HG13	1.82	0.61
45:RZ:145:GLU:HG3	45:RZ:146:ILE:H	1.65	0.61
26:YB:33:G:OP2	30:YG:96:ARG:NH2	2.32	0.61
27:YD:17:THR:O	27:YD:211:ARG:NH1	2.33	0.61
29:YF:182:ASN:O	29:YF:186:ILE:HG12	2.01	0.61
55:Y9:24:TYR:CZ	55:Y9:35:ARG:HG3	2.35	0.61
12:QL:53:ARG:HH12	12:QL:92:ASP:HB2	1.66	0.61
25:RA:746:A:O2'	25:RA:2611:U:O2'	2.19	0.61
17:XQ:66:SER:O	17:XQ:70:ARG:NH1	2.33	0.61
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.35	0.61
27:YD:31:LYS:HG3	27:YD:32:SER:H	1.64	0.61
25:RA:372:G:N2	25:RA:401:A:OP2	2.33	0.61
25:RA:2747:G:H21	25:RA:2757:A:H62	0.71	0.61
29:RF:182:ASN:O	29:RF:186:ILE:HG12	2.00	0.61
36:RQ:43:THR:HG22	36:RQ:94:VAL:HG12	1.81	0.61
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.36	0.61
28:YE:78:LEU:HG	28:YE:79:ARG:HG2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:30:LEU:HB3	32:YI:36:ALA:HB3	1.81	0.61
45:YZ:30:ASN:OD1	45:YZ:33:LEU:N	2.31	0.61
1:QA:134:A:N6	16:QP:25:ARG:HH12	1.99	0.61
10:QJ:3:LYS:N	10:QJ:74:ILE:O	2.34	0.61
25:RA:321:G:O2'	25:RA:340:A:N3	2.34	0.61
25:RA:2469:A:H5''	25:RA:2470:G:C8	2.35	0.61
1:XA:1291:G:O2'	9:XI:38:GLN:OE1	2.19	0.61
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.66	0.61
4:XD:19:LEU:HD13	4:XD:67:ILE:HA	1.82	0.61
25:YA:679:C:H2'	25:YA:680:G:H8	1.66	0.61
29:YF:117:ARG:HH21	29:YF:187:VAL:HA	1.66	0.61
30:YG:80:PHE:HE2	30:YG:82:LEU:HD12	1.66	0.61
40:YU:91:ASP:O	40:YU:95:LEU:N	2.33	0.61
1:QA:1309:G:N7	13:QM:99:ARG:NH2	2.48	0.61
11:QK:86:GLY:O	11:QK:91:ARG:NH1	2.34	0.61
1:XA:264:U:O2'	17:XQ:64:PRO:O	2.17	0.61
25:YA:813:U:H2'	25:YA:814:C:C6	2.36	0.61
25:YA:2526:G:C1'	55:Y9:28:GLU:HB3	2.31	0.61
31:YH:28:GLY:HA3	31:YH:79:VAL:HB	1.81	0.61
1:QA:1367:C:H4'	10:QJ:48:THR:HG21	1.83	0.60
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.82	0.60
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HD23	1.83	0.60
25:RA:764:A:H5'	27:RD:210:GLY:HA2	1.83	0.60
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.34	0.60
25:RA:2438:U:O3'	25:RA:2439:A:H3'	2.01	0.60
37:RR:24:GLN:HG3	37:RR:44:LEU:HD13	1.83	0.60
1:XA:80:G:O6	1:XA:89:U:O4	2.18	0.60
1:XA:407:G:H2'	1:XA:408:A:H8	1.66	0.60
13:XM:99:ARG:HB2	13:XM:101:GLN:HE22	1.65	0.60
26:YB:43:C:H4'	30:YG:98:ARG:HH22	1.66	0.60
3:QC:95:THR:HG22	3:QC:97:LYS:H	1.66	0.60
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.33	0.60
22:QW:15:G:H2'	22:QW:60:A:N1	2.16	0.60
25:RA:665:C:H2'	25:RA:666:G:H8	1.65	0.60
25:RA:749:C:H5'	25:RA:1271:G:H1'	1.83	0.60
27:RD:17:THR:O	27:RD:211:ARG:NH1	2.34	0.60
1:XA:745:C:H2'	1:XA:746:A:H8	1.65	0.60
27:YD:43:ARG:HH11	27:YD:49:ILE:HD12	1.66	0.60
30:YG:125:PHE:HE2	30:YG:170:ARG:HB2	1.64	0.60
37:YR:17:ARG:HG2	37:YR:21:TYR:CE2	2.36	0.60
47:Y1:17:SER:HB2	47:Y1:40:ARG:HD2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:20:U:O2'	1:QA:573:A:N6	2.35	0.60
1:QA:985:C:H2'	1:QA:986:A:H8	1.65	0.60
25:RA:2296:U:OP2	38:RS:9:ARG:NH1	2.35	0.60
1:XA:1291:G:H5''	7:XG:41:ARG:HH21	1.66	0.60
4:XD:98:GLU:HG2	4:XD:189:PRO:HG3	1.83	0.60
25:YA:299:A:N1	25:YA:322:A:O2'	2.27	0.60
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	1.83	0.60
35:YP:101:VAL:HB	35:YP:106:LEU:HB2	1.82	0.60
25:RA:1348:G:H2'	25:RA:1349:A:H5''	1.83	0.60
6:XF:68:PRO:HG3	6:XF:71:ARG:HH21	1.65	0.60
13:XM:14:ARG:HH12	13:XM:42:ALA:HA	1.66	0.60
25:YA:259:G:H21	25:YA:621:A:H8	1.48	0.60
25:YA:918:A:N3	26:YB:80:U:O2'	2.34	0.60
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.37	0.60
1:QA:1314:C:H2'	1:QA:1315:U:H6	1.67	0.60
25:RA:514:A:N3	25:RA:581:C:O2'	2.33	0.60
25:RA:1011:G:H1	25:RA:1150:C:H42	1.47	0.60
1:XA:477:G:H2'	1:XA:478:A:H8	1.66	0.60
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.64	0.60
33:YN:99:LEU:HD12	33:YN:122:VAL:HG21	1.82	0.60
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.83	0.60
4:QD:19:LEU:HD12	4:QD:21:LEU:HG	1.83	0.60
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.81	0.60
42:RW:86:LEU:HD22	42:RW:96:ILE:HD11	1.83	0.60
1:XA:439:A:OP2	1:XA:493:G:N1	2.34	0.60
13:XM:14:ARG:NH2	13:XM:16:ASP:OD2	2.34	0.60
25:YA:2746:U:OP2	55:Y9:35:ARG:NH2	2.35	0.60
25:RA:2010:G:H5''	42:RW:42:ARG:HB2	1.82	0.60
27:RD:85:ASP:OD2	27:RD:88:ARG:NH1	2.31	0.60
1:XA:346:G:O2'	1:XA:347:G:O4'	2.17	0.60
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.34	0.60
25:YA:2126:A:H4'	25:YA:2127:G:O5'	2.01	0.60
1:QA:712:A:H2'	1:QA:713:G:C8	2.37	0.60
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.66	0.60
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.17	0.60
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.84	0.60
25:RA:1363:C:O2'	25:RA:1809:A:N3	2.31	0.60
1:XA:514:C:H2'	1:XA:515:G:H8	1.67	0.60
25:YA:574:C:N3	28:YE:145:LYS:NZ	2.33	0.60
25:YA:1195:G:O6	35:YP:16:ARG:NH2	2.32	0.60
28:YE:55:ASN:ND2	28:YE:75:VAL:HG22	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:31:HIS:NE2	29:YF:35:GLU:OE2	2.34	0.60
35:YP:50:ARG:HB2	54:Y8:59:LYS:HD3	1.84	0.60
25:RA:2021:C:OP1	51:R5:12:SER:OG	2.13	0.60
45:RZ:48:PHE:HA	45:RZ:51:ALA:HB3	1.83	0.60
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.37	0.60
14:YN:21:TYR:OH	14:YN:23:ARG:NH2	2.32	0.60
25:YA:890:A:H2'	25:YA:892:G:H8	1.67	0.60
25:YA:1348:G:H2'	25:YA:1349:A:H5''	1.83	0.60
46:Y0:23:VAL:HG13	46:Y0:38:VAL:HG22	1.83	0.60
1:QA:339:C:OP2	34:RO:97:ARG:NH1	2.35	0.59
15:QO:39:LEU:HD11	15:QO:52:SER:HB3	1.84	0.59
25:RA:2561:A:H4'	34:RO:40:VAL:HG11	1.84	0.59
1:XA:34:C:H2'	1:XA:35:G:H8	1.67	0.59
1:XA:1151:A:O2'	10:XJ:70:ARG:NH2	2.35	0.59
11:XK:34:ASP:OD1	11:XK:38:ASN:N	2.35	0.59
45:YZ:163:LEU:HD22	45:YZ:167:PRO:HG3	1.84	0.59
25:RA:288:C:H2'	25:RA:289:A:H8	1.67	0.59
28:RE:114:ALA:HB3	28:RE:160:TYR:HB3	1.84	0.59
35:RP:106:LEU:HD21	35:RP:112:LEU:HD13	1.84	0.59
44:RY:52:SER:HB2	44:RY:53:PRO:HD2	1.84	0.59
1:XA:674:G:O6	1:XA:716:A:N1	2.34	0.59
14:YN:29:ARG:HD3	14:YN:40:CYS:HB2	1.84	0.59
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.83	0.59
25:YA:2514:U:H2'	25:YA:2515:C:C6	2.37	0.59
35:YP:62:LEU:HD23	35:YP:62:LEU:H	1.66	0.59
1:QA:562:C:H1'	12:QL:15:ARG:HD2	1.83	0.59
1:QA:1433:A:OP2	1:QA:1467:G:N1	2.33	0.59
13:QM:57:ARG:O	13:QM:61:GLU:HG2	2.02	0.59
22:QV:44:A:H2'	22:QV:45:A:C8	2.37	0.59
25:RA:1853:A:N3	25:RA:2233:U:O2'	2.30	0.59
31:RH:87:LEU:HD22	31:RH:149:ARG:HD3	1.84	0.59
35:RP:101:VAL:HG21	35:RP:108:LYS:HD2	1.84	0.59
53:R7:10:ARG:HE	53:R7:14:LYS:HD2	1.67	0.59
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.84	0.59
25:YA:848:G:H2'	25:YA:849:A:C8	2.37	0.59
25:YA:1359:A:N6	25:YA:1372:U:H3	2.00	0.59
25:YA:2525:G:N2	55:Y9:28:GLU:HG3	2.12	0.59
25:YA:2538:C:H2'	25:YA:2539:C:C6	2.37	0.59
28:YE:131:ALA:O	28:YE:134:ILE:HG13	2.03	0.59
48:Y2:18:PRO:HA	48:Y2:21:LEU:HD12	1.85	0.59
2:QB:68:ILE:HG12	2:QB:161:ALA:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:274:G:N2	25:RA:363:G:O6	2.35	0.59
25:RA:566:U:H5''	35:RP:29:LYS:HD2	1.84	0.59
25:RA:2466:C:H2'	25:RA:2467:C:C6	2.36	0.59
30:RG:82:LEU:HD21	30:RG:88:ILE:HG12	1.84	0.59
32:RI:27:ARG:HB2	47:R1:71:TYR:HE2	1.66	0.59
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.30	0.59
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.37	0.59
39:YT:51:ARG:HG2	39:YT:98:LYS:HE3	1.82	0.59
1:QA:708:C:OP1	11:QK:85:ARG:NH2	2.28	0.59
2:QB:47:THR:HA	2:QB:202:PRO:HG2	1.85	0.59
4:QD:19:LEU:HD13	4:QD:67:ILE:HA	1.83	0.59
25:RA:84:A:N7	25:RA:99:U:N3	2.50	0.59
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.33	0.59
25:YA:618:G:H5'	29:YF:205:ARG:HH21	1.66	0.59
25:YA:864:G:H1'	25:YA:914:C:H42	1.66	0.59
27:YD:39:LYS:NZ	27:YD:87:ASN:OD1	2.28	0.59
37:YR:86:ARG:NH2	37:YR:118:GLU:OXT	2.36	0.59
1:QA:806:C:H2'	1:QA:807:A:C8	2.37	0.59
2:QB:67:THR:HG21	2:QB:155:LEU:HD11	1.85	0.59
25:RA:883:G:H22	25:RA:892:G:H22	1.51	0.59
30:RG:145:THR:OG1	30:RG:147:ASP:OD1	2.18	0.59
31:RH:8:PRO:HG2	31:RH:69:ARG:NE	2.14	0.59
4:XD:10:ARG:HG3	4:XD:40:PRO:HG3	1.83	0.59
22:XW:15:G:H2'	22:XW:60:A:N1	2.17	0.59
26:YB:48:A:OP2	38:YS:30:ARG:NH2	2.36	0.59
1:QA:235:C:H2'	1:QA:236:G:H8	1.68	0.59
1:QA:827:U:H5	1:QA:870:U:C2	2.21	0.59
1:QA:851:G:H2'	1:QA:852:G:C8	2.37	0.59
1:XA:157:G:H1	1:XA:164:U:H3	1.49	0.59
1:XA:452:A:O2'	16:XP:72:ARG:NH1	2.36	0.59
25:YA:1141:U:H1'	25:YA:1142(A):A:C6	2.38	0.59
28:YE:114:ALA:HB3	28:YE:160:TYR:HB3	1.84	0.59
54:Y8:29:LYS:HB2	54:Y8:33:ASN:ND2	2.18	0.59
10:QJ:51:ARG:O	14:QN:45:ARG:NH1	2.36	0.59
22:QV:35:C:H2'	22:QV:36:A:H8	1.68	0.59
25:RA:297:C:OP1	44:RY:87:LYS:NZ	2.32	0.59
25:RA:569:U:O2'	25:RA:983:A:N1	2.31	0.59
25:RA:1006:C:H5'	33:RN:28:THR:HG23	1.84	0.59
25:RA:1026:U:H4'	25:RA:1027:A:OP1	2.03	0.59
25:RA:2392:A:H2	25:RA:2424:C:H42	1.50	0.59
48:R2:18:PRO:HA	48:R2:21:LEU:HD12	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:35:ARG:HE	53:R7:42:LEU:HD13	1.67	0.59
1:XA:1250:A:N3	1:XA:1370:G:O2'	2.32	0.59
25:YA:414:C:H2'	25:YA:415:A:H8	1.68	0.59
25:YA:2746:U:H5	55:Y9:35:ARG:HH12	1.50	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.66	0.59
38:YS:15:ARG:HG3	38:YS:19:LYS:HE2	1.84	0.59
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.59
1:XA:1137:C:HO2'	1:XA:1138:G:N2	2.00	0.59
12:XL:70:ILE:HG12	12:XL:100:ILE:HD12	1.83	0.59
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.35	0.59
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.85	0.59
36:YQ:31:ASP:OD1	36:YQ:134:ARG:NH1	2.36	0.59
1:QA:17:U:H2'	1:QA:18:C:C6	2.38	0.59
25:RA:185:U:H5'	25:RA:217:G:H21	1.68	0.59
25:RA:576:U:H2'	25:RA:577:G:C8	2.38	0.59
25:RA:1399:C:H2'	25:RA:1400:G:H8	1.67	0.59
29:RF:181:LEU:HD11	29:RF:186:ILE:HD11	1.84	0.59
1:XA:243:A:H4'	1:XA:244:U:H3'	1.84	0.59
1:XA:827:U:O2	1:XA:874:G:N2	2.36	0.59
15:XO:79:ARG:HA	15:XO:82:ILE:HG12	1.85	0.59
25:YA:345:A:N3	25:YA:347:A:N6	2.51	0.59
25:YA:814:C:H1'	25:YA:1226:G:H21	1.68	0.59
25:YA:911:A:H2'	36:YQ:9:TYR:HE2	1.68	0.59
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.37	0.59
25:YA:2630:G:H2'	25:YA:2631:G:H8	1.67	0.59
43:YX:55:ASN:HB2	43:YX:80:ILE:HG23	1.84	0.59
47:Y1:90:ILE:HD12	47:Y1:94:LEU:HD12	1.85	0.59
4:QD:4:TYR:OH	4:QD:10:ARG:NH2	2.36	0.58
22:QW:17:C:OP1	22:QW:61:U:O2'	2.21	0.58
25:RA:782:A:O2'	27:RD:225:ALA:O	2.19	0.58
25:RA:2086:U:H2'	25:RA:2087:G:H8	1.68	0.58
30:RG:5:VAL:HG11	30:RG:100:TRP:HB3	1.85	0.58
40:RU:92:ARG:C	40:RU:94:ASN:H	2.06	0.58
25:YA:517:C:OP1	51:Y5:16:ARG:NH2	2.35	0.58
25:YA:554:U:H2'	25:YA:556:G:C8	2.38	0.58
25:YA:780:G:H21	25:YA:783:A:H62	1.51	0.58
25:YA:864:G:H1'	25:YA:914:C:N4	2.17	0.58
25:YA:2526:G:H21	55:Y9:13:LYS:NZ	2.01	0.58
29:YF:65:TRP:NE1	29:YF:73:ALA:O	2.29	0.58
30:YG:9:ARG:O	30:YG:13:GLU:HG2	2.02	0.58
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:414:C:H2'	25:YA:415:A:C8	2.38	0.58
30:YG:65:GLY:HA3	50:Y4:9:LEU:HD21	1.85	0.58
18:QR:53:ARG:HH21	18:QR:59:SER:HA	1.67	0.58
25:RA:24:G:O2'	42:RW:78:GLU:O	2.21	0.58
30:RG:32:PRO:HB3	30:RG:163:ALA:HB2	1.83	0.58
15:XO:17:ARG:HH12	15:XO:77:ARG:HH11	1.50	0.58
25:YA:593:G:H4'	54:Y8:61:LEU:HD13	1.84	0.58
25:YA:1270:C:H5''	25:YA:1271:G:H5'	1.84	0.58
43:YX:12:VAL:HB	43:YX:27:THR:HG23	1.85	0.58
2:QB:25:ASN:ND2	2:QB:193:ASP:HB3	2.18	0.58
4:QD:100:ARG:NH2	4:QD:136:PRO:O	2.37	0.58
25:RA:414:C:O2	25:RA:1864:U:O2'	2.21	0.58
25:RA:577:G:O2'	25:RA:1254:A:OP1	2.21	0.58
25:RA:1812:A:H4'	27:RD:46:GLN:HE22	1.67	0.58
1:XA:1305:G:OP1	21:XU:2:GLY:N	2.36	0.58
24:XY:37:A:O2'	25:YA:1913:A:N1	2.35	0.58
25:YA:1819:A:H5''	27:YD:161:THR:HG21	1.85	0.58
25:YA:2313:C:H5''	30:YG:91:ARG:HD3	1.85	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:HB2	1.84	0.58
39:YT:50:ILE:HG13	39:YT:99:LEU:HD12	1.85	0.58
41:YV:28:GLU:HB3	41:YV:31:ALA:HB2	1.85	0.58
1:QA:581:G:OP1	15:QO:65:ARG:NH1	2.34	0.58
1:QA:1469:G:H2'	1:QA:1470:G:H8	1.69	0.58
3:QC:150:LYS:HE2	3:QC:152:ILE:HD11	1.85	0.58
3:QC:172:ARG:HG2	3:QC:174:PRO:HD3	1.86	0.58
25:RA:363(F):A:H1'	25:RA:364:C:H5	1.69	0.58
25:RA:1859:A:N6	25:RA:1883:G:O2'	2.36	0.58
1:XA:1330:U:H4'	13:XM:23:TYR:CE1	2.39	0.58
4:XD:19:LEU:HD12	4:XD:21:LEU:HG	1.86	0.58
16:XP:3:LYS:HG3	16:XP:65:GLN:O	2.02	0.58
25:YA:587:C:OP2	35:YP:21:ARG:NH1	2.32	0.58
1:QA:673:G:H2'	1:QA:674:G:C8	2.39	0.58
25:RA:582:G:H2'	25:RA:583:G:C8	2.39	0.58
25:RA:2512:C:O2'	28:RE:154:LYS:NZ	2.25	0.58
1:XA:1305:G:N2	1:XA:1332:A:OP2	2.37	0.58
25:YA:2521:C:O2'	25:YA:2564:A:N3	2.34	0.58
25:YA:2742:C:H1'	55:Y9:26:ILE:CA	2.21	0.58
37:YR:55:ALA:HA	37:YR:80:PHE:CE1	2.38	0.58
39:YT:111:ARG:C	39:YT:113:LYS:H	2.07	0.58
45:YZ:145:GLU:HG3	45:YZ:146:ILE:H	1.68	0.58
1:QA:1366:C:O2'	10:QJ:60:ARG:NH1	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QW:72:C:HO2'	25:RA:1851:U:HO2'	1.50	0.58
25:RA:27:G:HO2'	25:RA:28:A:H8	1.51	0.58
25:RA:2752:C:H3'	25:RA:2753:A:H8	1.68	0.58
42:RW:22:ASP:OD1	42:RW:25:ARG:NH1	2.34	0.58
8:XH:17:THR:O	8:XH:78:GLN:NE2	2.37	0.58
22:XW:8:U:C2	22:XW:14:A:N7	2.72	0.58
26:YB:8:U:H3	26:YB:112:G:H1	1.52	0.58
29:YF:39:TRP:NE1	29:YF:99:TYR:O	2.32	0.58
49:Y3:39:ASP:OD1	49:Y3:44:ARG:NH2	2.35	0.58
25:RA:270(S):G:H5'	47:R1:76:ARG:HG2	1.86	0.58
25:RA:1819:A:H5''	27:RD:161:THR:HG21	1.85	0.58
40:RU:91:ASP:O	40:RU:95:LEU:N	2.35	0.58
1:XA:35:G:O2'	12:XL:118:SER:O	2.17	0.58
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.69	0.58
25:YA:813:U:H2'	25:YA:814:C:H6	1.68	0.58
25:YA:1464:C:HO2'	25:YA:1528:A:H8	1.52	0.58
25:YA:2743:C:N1	55:Y9:26:ILE:HG12	2.19	0.58
28:YE:24:THR:OG1	28:YE:186:GLY:HA2	2.03	0.58
1:QA:714:G:H2'	1:QA:715:A:H8	1.66	0.58
25:RA:574:C:N3	28:RE:145:LYS:NZ	2.38	0.58
25:RA:1656:C:H2'	25:RA:1657:C:H6	1.69	0.58
1:XA:17:U:H2'	1:XA:18:C:C6	2.39	0.58
1:XA:582:U:H5''	15:XO:64:ARG:HH12	1.69	0.58
5:XE:81:GLU:HG2	5:XE:90:VAL:HG22	1.86	0.58
13:XM:23:TYR:N	13:XM:67:GLU:OE2	2.34	0.58
22:XV:59:A:O2'	22:XV:61:U:OP2	2.12	0.58
25:YA:458:G:O2'	25:YA:469:G:O6	2.22	0.58
25:YA:1613:G:O2'	53:Y7:3:ARG:NE	2.31	0.58
26:YB:24:G:O6	26:YB:56:G:O2'	2.19	0.58
45:YZ:102:LEU:HD23	45:YZ:137:ILE:HB	1.85	0.58
1:QA:181:G:O2'	1:QA:182:U:O5'	2.21	0.58
25:RA:900:A:H3'	25:RA:901:A:H8	1.68	0.58
25:RA:1403:C:H5''	25:RA:1471:A:H1'	1.85	0.58
28:RE:37:ARG:HD3	28:RE:42:ASP:OD2	2.03	0.58
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.86	0.58
25:YA:2761:G:C2	25:YA:2762:G:H1'	2.39	0.58
29:YF:156:LEU:HD21	29:YF:163:VAL:HG12	1.84	0.58
31:YH:164:TYR:HD2	31:YH:167:GLU:HB2	1.68	0.58
1:QA:17:U:H2'	1:QA:18:C:H6	1.69	0.57
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.19	0.57
1:QA:1352:C:OP1	21:QU:3:LYS:NZ	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:15:G:H1	22:QV:49:C:H5	1.52	0.57
27:RD:31:LYS:HG3	27:RD:32:SER:H	1.67	0.57
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.86	0.57
1:XA:269:C:H2'	1:XA:270:A:C8	2.39	0.57
4:XD:127:THR:HA	4:XD:132:ARG:HA	1.85	0.57
8:XH:34:GLU:OE1	8:XH:37:ARG:NH2	2.37	0.57
12:XL:84:LEU:HB2	12:XL:105:TYR:CD2	2.39	0.57
25:YA:521:G:H2'	25:YA:522:G:H8	1.68	0.57
25:YA:1416:G:H2'	25:YA:1417:C:C6	2.39	0.57
11:QK:62:GLN:HG3	11:QK:97:ALA:HB2	1.86	0.57
37:RR:96:ARG:HH21	37:RR:117:VAL:HG23	1.69	0.57
12:XL:27:LEU:HD13	12:XL:62:SER:HB3	1.85	0.57
13:XM:3:ARG:HH12	30:YG:113:ARG:NH2	2.01	0.57
25:YA:775:G:H4'	25:YA:776:G:H5'	1.85	0.57
25:YA:1173:G:N2	25:YA:1175:U:O4	2.37	0.57
25:YA:2046:G:H5'	51:Y5:19:ARG:HG3	1.87	0.57
25:YA:2102:U:H2'	25:YA:2103:C:H6	1.69	0.57
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.86	0.57
55:Y9:35:ARG:NH1	55:Y9:37:GLY:O	2.36	0.57
6:QF:95:GLU:O	18:QR:32:ARG:NH1	2.37	0.57
20:QT:26:ASN:HA	20:QT:29:LYS:HG2	1.86	0.57
25:RA:71:A:H62	25:RA:114:U:H1'	1.68	0.57
25:RA:662:G:H2'	25:RA:663:G:H8	1.70	0.57
25:RA:971:C:H2'	25:RA:972:G:O4'	2.04	0.57
40:RU:61:TRP:HB3	40:RU:93:LYS:O	2.03	0.57
45:RZ:114:GLY:HA3	45:RZ:177:PRO:HG3	1.86	0.57
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.86	0.57
1:XA:62:U:H2'	1:XA:63:C:C6	2.38	0.57
1:XA:261:U:OP2	20:XT:79:ARG:NH2	2.37	0.57
1:XA:976:G:OP2	1:XA:1358:U:O2'	2.22	0.57
8:XH:106:GLY:O	8:XH:122:ARG:NH2	2.36	0.57
25:YA:259:G:O2'	25:YA:621:A:O2'	2.11	0.57
25:YA:307:G:N2	25:YA:310:A:OP2	2.37	0.57
25:YA:629:G:N3	25:YA:639:U:O2'	2.37	0.57
25:YA:1310:G:OP2	53:Y7:9:ARG:NE	2.30	0.57
25:YA:2743:C:C5'	55:Y9:25:VAL:HA	2.35	0.57
25:YA:2814:C:O2'	51:Y5:29:THR:OG1	2.16	0.57
47:Y1:85:LEU:HD12	47:Y1:88:LYS:HE3	1.84	0.57
1:QA:737:A:H2'	1:QA:738:C:C6	2.39	0.57
11:QK:33:THR:HG22	11:QK:39:PRO:HA	1.86	0.57
22:QW:8:U:C2	22:QW:14:A:N7	2.71	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:855:G:H1	25:RA:922:U:H3	1.50	0.57
25:RA:1518:C:H2'	25:RA:1519:G:C8	2.38	0.57
25:RA:2250:G:C4	36:RQ:82:ARG:HG3	2.39	0.57
32:RI:80:PRO:HB2	32:RI:146:ALA:HB2	1.86	0.57
36:RQ:83:MET:HE3	46:R0:7:LEU:HB2	1.86	0.57
40:RU:91:ASP:O	40:RU:93:LYS:N	2.38	0.57
1:XA:363:A:OP1	12:XL:34:ARG:N	2.28	0.57
1:XA:1213:A:N6	1:XA:1215:G:N3	2.52	0.57
1:XA:1224:G:O2'	1:XA:1322:C:OP2	2.22	0.57
25:YA:1165:U:H2'	25:YA:1166:C:C6	2.39	0.57
25:YA:1791:A:H3'	25:YA:1792:G:H8	1.69	0.57
25:YA:2743:C:H3'	55:Y9:24:TYR:O	2.03	0.57
45:YZ:102:LEU:HD11	45:YZ:124:ILE:HG13	1.85	0.57
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.39	0.57
25:RA:220:G:H21	25:RA:429:A:H62	1.50	0.57
25:RA:1262:A:OP1	42:RW:99:ARG:NH1	2.33	0.57
39:RT:51:ARG:HG2	39:RT:98:LYS:HE3	1.85	0.57
13:XM:52:GLU:HG2	13:XM:55:ARG:HH21	1.68	0.57
22:XW:17:C:OP1	22:XW:61:U:O2'	2.20	0.57
25:YA:514:A:N3	25:YA:581:C:O2'	2.33	0.57
25:YA:1333:C:H2'	25:YA:1334:G:H8	1.70	0.57
32:YI:121:LYS:HG2	32:YI:122:GLU:H	1.70	0.57
1:QA:1507:A:H2'	1:QA:1508:G:C8	2.39	0.57
22:XV:44:A:H2'	22:XV:45:A:H8	1.70	0.57
27:YD:231:HIS:CD2	27:YD:249:PRO:HG3	2.39	0.57
1:QA:501:C:H2'	1:QA:502:G:H8	1.69	0.57
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.85	0.57
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.39	0.57
25:RA:1796:U:H2'	25:RA:1797:C:H6	1.69	0.57
25:RA:2752:C:H3'	25:RA:2753:A:C8	2.40	0.57
25:RA:2836:U:H2'	25:RA:2837:G:C8	2.38	0.57
1:XA:243:A:H4'	1:XA:244:U:O5'	2.03	0.57
25:YA:414:C:O2	25:YA:1864:U:O2'	2.22	0.57
25:YA:823:G:H2'	25:YA:824:A:H8	1.68	0.57
25:YA:1116:C:H2'	25:YA:1117:G:C8	2.38	0.57
25:YA:1353:A:H2'	25:YA:1354:A:C8	2.40	0.57
25:YA:2747:G:C6	25:YA:2755:C:H4'	2.40	0.57
36:YQ:32:TYR:CE1	36:YQ:133:ARG:HG3	2.39	0.57
9:QI:17:VAL:HG11	9:QI:81:ILE:HD13	1.87	0.57
32:RI:27:ARG:HB2	47:R1:71:TYR:CE2	2.39	0.57
34:RO:23:ARG:NH2	34:RO:28:SER:O	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R0:23:VAL:HG13	46:R0:38:VAL:HG22	1.86	0.57
9:XI:17:VAL:HG11	9:XI:81:ILE:HD13	1.87	0.57
17:XQ:28:PRO:HA	17:XQ:35:VAL:HA	1.85	0.57
25:YA:1796:U:H2'	25:YA:1797:C:H6	1.68	0.57
25:YA:2103:C:H2'	25:YA:2104:G:C8	2.39	0.57
35:YP:63:PRO:HB3	54:Y8:13:ARG:HB3	1.85	0.57
35:YP:106:LEU:HD21	35:YP:112:LEU:HD13	1.87	0.57
1:QA:34:C:H2'	1:QA:35:G:H8	1.70	0.57
1:QA:316:G:OP2	1:QA:351:G:O2'	2.21	0.57
25:RA:994:C:H3'	40:RU:54:LYS:HE3	1.86	0.57
25:RA:1169:G:H1	25:RA:1180:C:H42	1.53	0.57
25:RA:1266:G:O6	42:RW:13:SER:OG	2.15	0.57
27:RD:34:VAL:O	27:RD:35:LYS:HG2	2.05	0.57
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.69	0.57
1:XA:22:G:H4'	1:XA:885:G:C8	2.40	0.57
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.57
1:XA:701:C:O2	1:XA:703:G:N1	2.38	0.57
1:XA:1336:C:O2	1:XA:1337:G:N1	2.38	0.57
22:XW:8:U:H4'	22:XW:9:G:OP1	2.05	0.57
25:YA:309:G:N3	25:YA:329:G:O2'	2.38	0.57
25:YA:1508:A:O2'	25:YA:1509:C:O4'	2.23	0.57
25:YA:1999:C:OP1	25:YA:2723:C:O2'	2.22	0.57
25:YA:2762:G:H1	55:Y9:33:LYS:HZ3	1.51	0.57
42:YW:86:LEU:HD22	42:YW:96:ILE:HD11	1.85	0.57
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.40	0.57
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.40	0.57
25:RA:1316:U:H2'	25:RA:1317:A:H8	1.70	0.57
33:RN:70:LYS:HD3	33:RN:87:LEU:HD12	1.86	0.57
35:RP:84:ASN:HA	35:RP:115:LEU:O	2.05	0.57
50:R4:56:VAL:HG23	50:R4:58:ARG:HG3	1.86	0.57
1:XA:410:G:H2'	1:XA:429:U:C5	2.40	0.57
9:XI:10:ARG:HE	9:XI:105:ASP:HB2	1.70	0.57
25:YA:581:C:H2'	25:YA:582:G:C8	2.40	0.57
25:YA:1081:U:H3'	25:YA:1082:U:H4'	1.87	0.57
47:Y1:50:ARG:HD2	47:Y1:57:GLU:OE2	2.05	0.57
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.87	0.56
29:RF:63:LYS:NZ	29:RF:75:HIS:O	2.30	0.56
45:RZ:163:LEU:HD22	45:RZ:167:PRO:HG3	1.87	0.56
1:XA:692:U:OP1	11:XK:124:LYS:NZ	2.31	0.56
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.87	0.56
9:XI:5:TYR:CE1	9:XI:16:ARG:HB2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1525:G:H2'	25:YA:1526:G:H8	1.70	0.56
27:YD:231:HIS:HD2	27:YD:249:PRO:HG3	1.69	0.56
32:YI:88:ILE:HG22	32:YI:90:GLY:H	1.69	0.56
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	1.86	0.56
1:QA:335:C:H2'	1:QA:336:C:C6	2.40	0.56
1:QA:745:C:H2'	1:QA:746:A:C8	2.39	0.56
3:QC:5:ILE:HD12	10:QJ:51:ARG:HH12	1.70	0.56
8:QH:17:THR:O	8:QH:78:GLN:NE2	2.38	0.56
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.88	0.56
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.86	0.56
1:XA:618:C:H5'	1:XA:619:U:H5''	1.86	0.56
25:YA:212:G:H2'	25:YA:213:A:C8	2.41	0.56
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.86	0.56
28:YE:19:ARG:HG3	34:YO:72:PRO:HB2	1.88	0.56
32:YI:82:ARG:HA	32:YI:145:VAL:HG12	1.87	0.56
37:YR:79:LEU:HD12	37:YR:83:ILE:HB	1.86	0.56
1:QA:352:C:O2'	1:QA:354:G:OP1	2.18	0.56
1:QA:418:C:H2'	1:QA:419:C:C6	2.40	0.56
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.86	0.56
1:QA:1100:C:P	2:QB:96:ARG:HD3	2.45	0.56
4:QD:13:ARG:HH21	4:QD:40:PRO:HB3	1.69	0.56
25:RA:38:A:H2'	25:RA:39:C:C6	2.39	0.56
25:RA:617:G:OP1	29:RF:40:GLN:HG3	2.06	0.56
25:RA:848:G:H2'	25:RA:849:A:C8	2.41	0.56
25:RA:969:U:H2'	25:RA:970:C:C6	2.40	0.56
25:RA:1198:U:H2'	25:RA:1199:U:H6	1.70	0.56
25:RA:1224:G:OP2	41:RV:66:ARG:NH1	2.36	0.56
25:RA:1438:U:H2'	25:RA:1439:A:H8	1.69	0.56
25:RA:1509:C:H3'	25:RA:1510:A:H5''	1.87	0.56
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.40	0.56
25:RA:2126:A:N6	25:RA:2163:C:O2'	2.37	0.56
25:RA:2368:C:H2'	25:RA:2369:A:H8	1.69	0.56
35:RP:97:PRO:O	35:RP:98:GLU:HG2	2.05	0.56
37:RR:100:LEU:HD11	37:RR:113:LEU:HB2	1.87	0.56
43:RX:12:VAL:HB	43:RX:27:THR:HG23	1.87	0.56
1:XA:250:A:H4'	1:XA:251:G:O5'	2.05	0.56
1:XA:890:G:O2'	1:XA:906:G:O6	2.20	0.56
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.27	0.56
1:XA:1235:U:H5''	21:XU:3:LYS:HD2	1.87	0.56
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.22	0.56
27:YD:62:TYR:HA	27:YD:87:ASN:ND2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.88	0.56
29:YF:116:ASP:OD2	35:YP:1:MET:N	2.36	0.56
30:YG:142:PRO:HB2	50:Y4:31:ILE:HG21	1.87	0.56
31:YH:8:PRO:CG	31:YH:69:ARG:HE	2.17	0.56
31:YH:43:VAL:HG22	31:YH:52:VAL:HG22	1.87	0.56
31:YH:83:TYR:CE2	31:YH:138:LYS:HD2	2.41	0.56
54:Y8:29:LYS:HB2	54:Y8:33:ASN:HD21	1.70	0.56
1:QA:156:G:H2'	1:QA:157:G:H8	1.71	0.56
1:QA:718:G:N2	18:QR:49:LYS:HG2	2.20	0.56
1:QA:750:G:N3	15:QO:23:GLY:HA3	2.20	0.56
12:QL:86:ARG:HB2	12:QL:101:VAL:HG23	1.87	0.56
25:RA:1103:A:H5''	25:RA:1104:C:H5	1.71	0.56
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.40	0.56
1:XA:339:C:OP1	34:YO:13:ASN:ND2	2.34	0.56
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.69	0.56
11:XK:41:THR:HG21	11:XK:71:LYS:HB3	1.86	0.56
25:YA:270(I):G:H1	25:YA:270(Q):C:H42	1.54	0.56
25:YA:372:G:N2	25:YA:401:A:OP2	2.39	0.56
25:YA:547:A:H2'	25:YA:548:A:C8	2.40	0.56
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.06	0.56
25:YA:2822:G:O2'	25:YA:2825:C:N4	2.35	0.56
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.88	0.56
1:QA:337:C:H2'	1:QA:338:A:H8	1.70	0.56
1:QA:890:G:O2'	1:QA:906:G:O6	2.17	0.56
25:RA:1005:C:O2'	33:RN:28:THR:HG21	2.05	0.56
25:RA:1535:U:H5''	25:RA:1537:C:N3	2.20	0.56
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.19	0.56
25:RA:2355:C:H4'	46:R0:24:LYS:HG3	1.87	0.56
3:XC:95:THR:HG22	3:XC:97:LYS:H	1.71	0.56
25:YA:226:G:H2'	25:YA:227:A:C8	2.41	0.56
25:YA:1571:A:H2'	25:YA:1572:A:H8	1.70	0.56
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.40	0.56
1:QA:119:A:H4'	1:QA:120:A:O5'	2.04	0.56
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	2.06	0.56
49:R3:15:TYR:HE2	49:R3:53:LEU:HD21	1.69	0.56
3:XC:150:LYS:HE2	3:XC:152:ILE:HD11	1.88	0.56
25:YA:949:C:H2'	25:YA:950:G:H8	1.71	0.56
25:YA:2741:A:N7	55:Y9:30:PRO:HB2	2.21	0.56
27:YD:85:ASP:OD2	27:YD:88:ARG:NH1	2.35	0.56
1:QA:406:G:H2'	1:QA:407:G:H8	1.71	0.56
1:QA:437:U:H2'	1:QA:438:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.71	0.56
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.70	0.56
25:RA:50:U:H3'	25:RA:51:G:H5'	1.86	0.56
25:RA:1490:A:O2'	27:RD:99:ASP:OD1	2.24	0.56
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.40	0.56
25:RA:2241:A:H2'	25:RA:2242:G:C8	2.40	0.56
44:RY:14:LEU:HB2	44:RY:75:ILE:HD11	1.87	0.56
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.40	0.56
19:XS:32:LYS:HA	19:XS:50:ALA:HB3	1.88	0.56
25:YA:2747:G:H4'	31:YH:70:THR:HB	1.88	0.56
25:YA:2837:G:H2'	25:YA:2838:G:H8	1.71	0.56
27:YD:260:ARG:NH2	27:YD:264:LYS:HD3	2.20	0.56
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.88	0.56
33:YN:12:ARG:HH11	33:YN:14:VAL:HG22	1.71	0.56
40:YU:81:HIS:NE2	40:YU:85:LYS:HE3	2.21	0.56
14:QN:29:ARG:HD3	14:QN:40:CYS:HB2	1.86	0.56
25:RA:37:C:H2'	25:RA:38:A:C8	2.41	0.56
25:RA:574:C:N4	25:RA:2034:U:OP1	2.38	0.56
25:RA:822:U:H2'	25:RA:823:G:H8	1.70	0.56
27:RD:133:LEU:HB3	27:RD:173:VAL:HG21	1.88	0.56
1:XA:56:U:H2'	1:XA:57:G:C8	2.41	0.56
1:XA:736:C:H2'	1:XA:737:A:H8	1.71	0.56
7:XG:116:ALA:HA	7:XG:119:ARG:HE	1.71	0.56
9:XI:5:TYR:HE1	9:XI:16:ARG:HB2	1.71	0.56
12:XL:83:VAL:HG13	12:XL:100:ILE:HG23	1.88	0.56
25:YA:836:G:H2'	25:YA:837:C:C6	2.41	0.56
25:YA:2469:A:H5''	25:YA:2470:G:C8	2.41	0.56
30:YG:173:LEU:HD22	30:YG:178:PHE:CE2	2.41	0.56
37:YR:51:LEU:HD22	37:YR:66:VAL:HG13	1.88	0.56
44:YY:52:SER:HB2	44:YY:53:PRO:HD2	1.87	0.56
1:QA:80:G:H1	1:QA:89:U:H3	1.54	0.56
13:QM:15:VAL:HG22	13:QM:45:VAL:HB	1.87	0.56
25:RA:2028:U:H2'	25:RA:2029:G:C8	2.41	0.56
25:RA:2103:C:H2'	25:RA:2104:G:C8	2.41	0.56
27:RD:62:TYR:HA	27:RD:87:ASN:ND2	2.20	0.56
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.69	0.56
1:XA:21:G:H2'	1:XA:22:G:C8	2.40	0.56
1:XA:1321:C:H3'	1:XA:1322:C:H5''	1.87	0.56
25:YA:2638:G:OP1	28:YE:82:ARG:NH2	2.39	0.56
25:YA:2853:C:H2'	25:YA:2854:G:H8	1.70	0.56
37:YR:74:LYS:C	37:YR:76:VAL:H	2.09	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:36:ARG:HG2	40:YU:40:PHE:CE2	2.41	0.56
1:QA:985:C:H2'	1:QA:986:A:C8	2.41	0.56
25:RA:65:C:H1'	25:RA:456:C:H42	1.71	0.56
25:RA:270(N):G:OP1	32:RI:57:ARG:NH1	2.39	0.56
25:RA:1209:G:O2'	25:RA:1237:A:N1	2.37	0.56
25:RA:2064:C:H2'	25:RA:2065:C:C6	2.40	0.56
25:RA:2852:G:H1	25:RA:2865:U:H3	1.53	0.56
27:RD:32:SER:HA	27:RD:35:LYS:HB2	1.88	0.56
28:RE:55:ASN:ND2	28:RE:75:VAL:HG22	2.21	0.56
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.06	0.56
1:XA:452:A:H62	1:XA:480:U:H3	1.54	0.56
1:XA:1296:C:H1'	1:XA:1302:U:H5	1.70	0.56
4:XD:50:ARG:HD2	4:XD:51:PRO:HD2	1.88	0.56
15:XO:15:PHE:HE2	15:XO:85:LEU:HD21	1.71	0.56
25:YA:249:C:O2	54:Y8:12:LYS:NZ	2.37	0.56
25:YA:567:A:O3'	35:YP:36:LYS:NZ	2.39	0.56
25:YA:593:G:H2'	25:YA:594:U:C6	2.41	0.56
25:YA:1203:G:H3'	25:YA:1204:A:H5''	1.88	0.56
25:YA:1571:A:H2'	25:YA:1572:A:C8	2.41	0.56
25:YA:2740:A:N6	25:YA:2764:A:N7	2.53	0.56
28:YE:36:ARG:HH12	28:YE:86:PRO:HD2	1.71	0.56
34:YO:68:GLU:HG3	34:YO:78:ARG:HD3	1.88	0.56
1:QA:337:C:H2'	1:QA:338:A:C8	2.39	0.55
1:QA:362:G:N2	1:QA:365:U:OP2	2.39	0.55
1:QA:501:C:H2'	1:QA:502:G:C8	2.41	0.55
11:QK:83:ILE:HG12	11:QK:109:VAL:HG22	1.87	0.55
11:QK:109:VAL:HG12	18:QR:86:VAL:HA	1.87	0.55
25:RA:582:G:H2'	25:RA:583:G:H8	1.71	0.55
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.88	0.55
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.27	0.55
4:XD:54:TYR:HE1	4:XD:209:ARG:HH12	1.53	0.55
22:XV:35:C:H2'	22:XV:36:A:C8	2.41	0.55
25:YA:588:U:H2'	25:YA:589:C:C6	2.41	0.55
25:YA:679:C:H2'	25:YA:680:G:C8	2.41	0.55
25:YA:1652:A:OP1	37:YR:8:ARG:NH1	2.37	0.55
29:YF:70:THR:HG23	29:YF:72:ARG:H	1.71	0.55
55:Y9:21:GLY:C	55:Y9:22:ARG:HD2	2.26	0.55
1:QA:344:A:O2'	1:QA:346:G:O6	2.24	0.55
1:QA:891:U:H2'	1:QA:892:A:H8	1.70	0.55
1:QA:1279:A:O2'	1:QA:1282:C:N4	2.39	0.55
16:QP:4:ILE:HB	16:QP:66:PRO:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:996:A:H4'	40:RU:92:ARG:HG2	1.88	0.55
25:RA:2591:C:H2'	25:RA:2592:G:C8	2.41	0.55
31:RH:107:VAL:HB	31:RH:153:LYS:NZ	2.22	0.55
39:RT:123:GLN:O	39:RT:126:ALA:N	2.38	0.55
1:XA:1516:G:N2	1:XA:1519:A:OP2	2.34	0.55
25:YA:336:C:H4'	44:YY:6:HIS:CD2	2.41	0.55
25:YA:994:C:OP1	40:YU:53:ARG:NH2	2.39	0.55
25:YA:2052:G:H4'	28:YE:143:ASN:O	2.06	0.55
35:YP:30:THR:O	35:YP:33:ARG:HG2	2.05	0.55
1:QA:674:G:H2'	1:QA:675:A:H8	1.69	0.55
25:RA:247:G:H4'	25:RA:386:G:C5	2.40	0.55
25:RA:709:U:H2'	25:RA:710:G:H8	1.70	0.55
25:RA:2789:C:N4	25:RA:2894:G:O6	2.38	0.55
30:RG:19:LEU:HD11	30:RG:172:LEU:HD13	1.88	0.55
1:XA:885:G:H2'	1:XA:886:G:H8	1.71	0.55
25:YA:1423:G:H5''	27:YD:33:LEU:HD11	1.87	0.55
25:YA:2241:A:H2'	25:YA:2242:G:C8	2.42	0.55
25:YA:2502:G:H5''	25:YA:2503:A:H5''	1.88	0.55
31:YH:88:LEU:HA	31:YH:130:ARG:HA	1.88	0.55
1:QA:45:U:H2'	1:QA:46:G:C8	2.41	0.55
1:QA:55:A:N6	1:QA:356:A:N1	2.53	0.55
1:QA:737:A:H2'	1:QA:738:C:H6	1.72	0.55
25:RA:184:C:H2'	25:RA:185:U:C6	2.41	0.55
25:RA:856:C:O2'	25:RA:857:C:OP1	2.21	0.55
25:RA:1543:A:O2'	25:RA:1544:C:H3'	2.06	0.55
25:RA:2076:U:OP2	25:RA:2238:G:N2	2.39	0.55
30:RG:170:ARG:NH2	30:RG:182:LYS:O	2.38	0.55
1:XA:309:G:H2'	1:XA:310:G:H8	1.71	0.55
1:XA:674:G:H2'	1:XA:675:A:C8	2.40	0.55
1:XA:708:C:H2'	1:XA:709:G:H8	1.70	0.55
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.41	0.55
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	2.07	0.55
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.71	0.55
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.89	0.55
25:YA:305:U:H2'	25:YA:306:U:C6	2.42	0.55
25:YA:1155:A:OP1	40:YU:55:ARG:HD2	2.06	0.55
25:YA:1196:C:HO2'	25:YA:1228:G:HO2'	1.46	0.55
25:YA:1264:G:OP1	51:Y5:19:ARG:NH2	2.38	0.55
25:YA:1438:U:H2'	25:YA:1439:A:H8	1.71	0.55
25:YA:2020:A:H5'	51:Y5:12:SER:HB3	1.88	0.55
25:YA:2123:G:H2'	25:YA:2124:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:121:ILE:O	39:YT:125:ARG:HG2	2.06	0.55
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.88	0.55
25:RA:2298:A:H62	25:RA:2318:G:H8	1.53	0.55
25:RA:2845:G:OP1	39:RT:56:GLY:N	2.39	0.55
32:RI:100:ALA:O	32:RI:104:GLN:HB3	2.05	0.55
48:R2:14:ARG:NH1	48:R2:66:GLU:OE1	2.40	0.55
1:XA:45:U:H2'	1:XA:46:G:C8	2.42	0.55
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.41	0.55
12:XL:33:ARG:H	12:XL:85:ILE:HG22	1.69	0.55
22:XW:5:G:H2'	22:XW:6:G:H8	1.72	0.55
25:YA:208:C:H2'	25:YA:209:C:H6	1.72	0.55
25:YA:1902:C:H5'	27:YD:246:PRO:HD3	1.87	0.55
25:YA:2867:G:OP2	39:YT:119:LYS:NZ	2.30	0.55
34:YO:2:ILE:HB	34:YO:33:ALA:HB3	1.88	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
1:QA:707:C:H4'	11:QK:20:TYR:CD2	2.42	0.55
1:QA:864:A:H2'	1:QA:865:A:C8	2.41	0.55
22:QW:8:U:H4'	22:QW:9:G:OP1	2.06	0.55
25:RA:392:C:H5''	25:RA:409:C:H5''	1.88	0.55
25:RA:589:C:H2'	25:RA:590:A:C8	2.41	0.55
25:RA:2258:C:O2'	25:RA:2427:C:OP2	2.23	0.55
39:RT:101:PHE:HD2	39:RT:105:LEU:HD21	1.71	0.55
1:XA:712:A:H2'	1:XA:713:G:C8	2.41	0.55
3:XC:19:GLU:HG2	3:XC:54:ARG:HE	1.71	0.55
25:YA:151:C:H2'	25:YA:152:G:H8	1.71	0.55
26:YB:28:C:H2'	26:YB:29:A:C8	2.42	0.55
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.22	0.55
1:QA:581:G:O3'	15:QO:64:ARG:NH2	2.39	0.55
1:QA:816:A:OP1	1:QA:1526:G:O2'	2.23	0.55
1:QA:1013:G:N2	1:QA:1016:A:OP2	2.32	0.55
2:QB:58:ILE:HD11	2:QB:185:ILE:HD13	1.88	0.55
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.30	0.55
25:RA:2618:G:H21	28:RE:150:VAL:HG21	1.70	0.55
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.41	0.55
2:XB:51:LEU:HD23	2:XB:201:ILE:HD12	1.88	0.55
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.71	0.55
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.71	0.55
25:YA:278:A:H2'	25:YA:279:C:C6	2.41	0.55
25:YA:2535:G:H2'	25:YA:2536:G:H8	1.71	0.55
25:YA:2591:C:H2'	25:YA:2592:G:C8	2.42	0.55
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:19:LEU:HD22	39:YT:86:ILE:HG22	1.89	0.55
50:Y4:14:ILE:HB	50:Y4:22:ILE:HB	1.88	0.55
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.22	0.55
1:QA:360:A:H2'	1:QA:361:G:C8	2.42	0.55
25:RA:774:A:OP1	27:RD:48:ARG:NH2	2.40	0.55
27:RD:69:ARG:NH2	27:RD:128:GLY:O	2.29	0.55
38:RS:15:ARG:HG3	38:RS:19:LYS:HE2	1.89	0.55
49:R3:39:ASP:OD1	49:R3:44:ARG:NH2	2.38	0.55
8:XH:82:HIS:HB3	8:XH:138:TRP:CE2	2.42	0.55
22:XW:40:C:H2'	22:XW:41:C:H6	1.72	0.55
25:YA:2081:C:H2'	25:YA:2082:A:H8	1.71	0.55
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.88	0.55
31:YH:149:ARG:C	31:YH:151:ILE:H	2.09	0.55
1:QA:405:U:O4	4:QD:2:GLY:N	2.40	0.55
1:QA:407:G:H2'	1:QA:408:A:H8	1.72	0.55
1:QA:1497:G:H1'	1:QA:1518:A:H2	1.70	0.55
11:QK:21:ILE:HB	11:QK:84:VAL:HG12	1.87	0.55
32:RI:121:LYS:HG2	32:RI:122:GLU:H	1.70	0.55
42:RW:57:ASN:O	42:RW:61:ASN:HB2	2.07	0.55
47:R1:6:GLU:O	47:R1:91:LYS:HE3	2.07	0.55
50:R4:48:ARG:O	50:R4:52:THR:OG1	2.25	0.55
1:XA:346:G:O2'	1:XA:347:G:O5'	2.25	0.55
1:XA:587:G:N2	1:XA:754:C:OP2	2.40	0.55
22:XW:28:U:H2'	22:XW:29:C:H6	1.70	0.55
25:YA:768:G:O2'	25:YA:1379:A:N6	2.39	0.55
25:YA:1509:C:H3'	25:YA:1510:A:H5''	1.89	0.55
25:YA:2754:U:H5'	25:YA:2755:C:OP2	2.07	0.55
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.42	0.55
1:QA:739:C:O2'	15:QO:42:HIS:ND1	2.37	0.55
1:QA:1096:C:H2'	1:QA:1097:C:H6	1.71	0.55
25:RA:1000:A:OP2	25:RA:1154:G:N1	2.35	0.55
25:RA:2746:U:H5''	31:RH:138:LYS:HE2	1.88	0.55
26:RB:32:C:N3	26:RB:51:G:N2	2.55	0.55
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.71	0.55
25:YA:557:U:H2'	25:YA:558:G:H8	1.71	0.55
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.89	0.55
36:YQ:116:GLU:OE2	36:YQ:119:ARG:NH2	2.36	0.55
37:YR:24:GLN:HG3	37:YR:44:LEU:HD13	1.89	0.55
40:YU:92:ARG:HE	41:YV:11:GLN:H	1.55	0.55
43:YX:25:LYS:HB3	43:YX:80:ILE:HD11	1.88	0.55
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:83:ILE:HG13	8:QH:137:VAL:HG22	1.89	0.54
9:QI:116:LYS:HD3	9:QI:120:ARG:HA	1.88	0.54
22:QV:15:G:H22	22:QV:49:C:H41	1.55	0.54
25:RA:521:G:H2'	25:RA:522:G:H8	1.71	0.54
25:RA:1140:C:OP1	33:RN:23:LEU:HB3	2.06	0.54
25:RA:1290:C:H2'	25:RA:1291:C:H6	1.72	0.54
25:RA:1681:G:O2'	25:RA:1762:A:O2'	2.20	0.54
30:RG:106:LEU:HD12	30:RG:110:ALA:HB3	1.88	0.54
30:RG:126:ASP:OD2	30:RG:130:ASN:HB2	2.08	0.54
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.40	0.54
35:RP:50:ARG:HB2	54:R8:59:LYS:HD3	1.88	0.54
1:XA:312:C:H2'	1:XA:313:A:H8	1.72	0.54
1:XA:390:C:H2'	1:XA:391:G:H8	1.72	0.54
8:XH:83:ILE:HG13	8:XH:137:VAL:HG22	1.89	0.54
25:YA:675:A:N3	25:YA:2443:C:O2'	2.38	0.54
25:YA:1055:G:H1	25:YA:1104:C:H42	1.53	0.54
26:YB:28:C:H2'	26:YB:29:A:H8	1.72	0.54
1:QA:1342:C:H2'	1:QA:1343:G:H8	1.70	0.54
13:QM:54:VAL:HG22	13:QM:57:ARG:HH21	1.73	0.54
25:RA:226:G:O2'	25:RA:228:A:N6	2.39	0.54
25:RA:2068:U:H3	25:RA:2430:A:H2	1.56	0.54
25:RA:2376:A:N6	38:RS:89:ARG:HD3	2.22	0.54
26:RB:28:C:H2'	26:RB:29:A:H8	1.72	0.54
27:RD:231:HIS:HD2	27:RD:249:PRO:HG3	1.71	0.54
30:RG:129:GLY:O	30:RG:161:THR:HB	2.07	0.54
36:RQ:32:TYR:CE1	36:RQ:133:ARG:HG3	2.41	0.54
1:XA:946:A:H2'	1:XA:947:G:C8	2.41	0.54
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.72	0.54
25:YA:172:C:H2'	25:YA:173:G:C8	2.43	0.54
25:YA:320:A:H2'	29:YF:136:THR:HG21	1.88	0.54
1:QA:139:G:H2'	1:QA:140:A:H8	1.73	0.54
4:QD:197:PRO:HD3	6:XF:16:GLN:OE1	2.07	0.54
25:RA:131:G:H2'	25:RA:132:G:H8	1.73	0.54
25:RA:242:G:H4'	25:RA:243:U:O5'	2.07	0.54
25:RA:439:G:H2'	25:RA:440:G:C8	2.42	0.54
25:RA:581:C:H2'	25:RA:582:G:H8	1.72	0.54
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.41	0.54
25:RA:1264:G:OP1	51:R5:19:ARG:NH2	2.35	0.54
25:RA:2246:G:H2'	25:RA:2247:A:H8	1.72	0.54
35:RP:121:LYS:HD3	35:RP:122:PRO:HD2	1.89	0.54
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:26:LYS:HD2	54:R8:47:LYS:HD3	1.88	0.54
1:XA:56:U:H2'	1:XA:57:G:H8	1.71	0.54
3:XC:108:ASN:HD21	3:XC:144:SER:HB2	1.73	0.54
25:YA:1525:G:H2'	25:YA:1526:G:C8	2.42	0.54
25:YA:1791:A:H4'	27:YD:206:LEU:HB2	1.89	0.54
25:YA:2591:C:H2'	25:YA:2592:G:H8	1.73	0.54
25:YA:2705:A:O2'	25:YA:2852:G:OP1	2.14	0.54
27:YD:34:VAL:O	27:YD:35:LYS:HG2	2.07	0.54
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.89	0.54
36:YQ:24:GLY:H	36:YQ:101:ARG:CD	2.20	0.54
37:YR:28:LEU:HD23	37:YR:48:VAL:HG21	1.89	0.54
50:Y4:48:ARG:O	50:Y4:52:THR:OG1	2.25	0.54
1:QA:436:C:H2'	1:QA:437:U:C6	2.42	0.54
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.89	0.54
22:QW:28:U:H2'	22:QW:29:C:H6	1.72	0.54
25:RA:995:C:H5''	40:RU:54:LYS:HG2	1.88	0.54
25:RA:1936:A:H61	25:RA:1963:U:H3	1.55	0.54
45:RZ:30:ASN:OD1	45:RZ:33:LEU:N	2.35	0.54
1:XA:1469:G:H2'	1:XA:1470:G:H8	1.72	0.54
10:XJ:51:ARG:O	14:YN:45:ARG:NH1	2.40	0.54
25:YA:18:C:O2'	25:YA:553:U:OP1	2.25	0.54
25:YA:263:C:H2'	25:YA:264:C:O4'	2.07	0.54
25:YA:1334:G:H5''	43:YX:65:ARG:HH22	1.71	0.54
25:YA:1565:C:H5''	27:YD:18:VAL:HG11	1.90	0.54
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.72	0.54
25:YA:2619:C:H5''	28:YE:152:LYS:HA	1.88	0.54
43:YX:35:THR:HG23	43:YX:38:GLU:H	1.72	0.54
1:QA:489:C:H2'	1:QA:490:G:H8	1.73	0.54
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.88	0.54
1:QA:1226:C:H42	13:QM:104:ARG:HH11	1.54	0.54
1:QA:1310:G:OP2	13:QM:88:ARG:NH2	2.41	0.54
1:QA:1466:C:H2'	1:QA:1467:G:O4'	2.08	0.54
22:QW:40:C:H2'	22:QW:41:C:H6	1.73	0.54
25:RA:1802:A:H2'	25:RA:1803:A:C8	2.43	0.54
26:RB:48:A:H2'	26:RB:49:C:C6	2.43	0.54
1:XA:971:G:N2	1:XA:1363:A:OP2	2.41	0.54
1:XA:1117:G:H4'	9:XI:104:ARG:NH1	2.22	0.54
1:XA:1345:U:OP1	9:XI:120:ARG:NH1	2.41	0.54
25:YA:1079:C:H2'	25:YA:1080:C:C6	2.42	0.54
25:YA:1399:C:H2'	25:YA:1400:G:H8	1.73	0.54
25:YA:1728:G:H8	25:YA:1732:A:H62	1.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2758:A:C5	31:YH:67:LEU:HD21	2.43	0.54
26:YB:111:U:H2'	26:YB:112:G:H8	1.73	0.54
30:YG:82:LEU:HD21	30:YG:88:ILE:HG12	1.89	0.54
35:YP:122:PRO:HB3	35:YP:141:ALA:HB1	1.89	0.54
36:YQ:75:THR:HG21	36:YQ:85:LYS:HE3	1.88	0.54
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.43	0.54
1:QA:1315:U:H2'	1:QA:1316:G:O4'	2.07	0.54
1:QA:1371:G:O3'	9:QI:69:GLY:HA3	2.08	0.54
2:QB:164:VAL:HG12	2:QB:166:ASP:H	1.71	0.54
22:QW:4:G:H2'	22:QW:5:G:C8	2.43	0.54
25:RA:2467:C:H5'	55:R9:18:ARG:HH21	1.72	0.54
25:RA:2753:A:H1'	55:R9:28:GLU:HB2	1.88	0.54
29:RF:53:THR:O	29:RF:57:VAL:HG23	2.07	0.54
32:RI:9:LEU:HD11	32:RI:12:LEU:HD22	1.90	0.54
1:XA:636:U:H2'	1:XA:637:G:C8	2.41	0.54
1:XA:1371:G:O3'	9:XI:69:GLY:HA3	2.08	0.54
25:YA:270(F):U:H2'	25:YA:270(G):C:C6	2.43	0.54
25:YA:1830:C:H2'	25:YA:1831:G:H8	1.73	0.54
25:YA:2243:U:H2'	25:YA:2244:U:C6	2.42	0.54
25:YA:2525:G:C4'	55:Y9:28:GLU:HA	2.36	0.54
25:YA:2741:A:C6	55:Y9:30:PRO:HG2	2.43	0.54
35:YP:68:GLN:HG2	54:Y8:12:LYS:HG2	1.89	0.54
1:QA:1432:G:O2'	1:QA:1468:A:N6	2.41	0.54
13:QM:3:ARG:HH22	30:RG:113:ARG:HH21	1.56	0.54
25:RA:1246:A:OP1	35:RP:15:ARG:NH2	2.35	0.54
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.72	0.54
30:RG:80:PHE:HE2	30:RG:82:LEU:HD12	1.72	0.54
35:RP:135:LEU:HG	35:RP:139:LYS:HE2	1.89	0.54
36:RQ:65:PHE:HB2	36:RQ:105:GLU:HB3	1.89	0.54
45:RZ:102:LEU:HD23	45:RZ:137:ILE:HB	1.90	0.54
48:R2:16:LEU:HD21	48:R2:20:GLU:HG3	1.90	0.54
1:XA:192:U:O2'	20:XT:60:GLU:OE2	2.22	0.54
1:XA:991:U:O4	1:XA:1212:U:O2'	2.19	0.54
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.43	0.54
6:XF:36:ARG:NH2	6:XF:66:GLU:OE1	2.41	0.54
22:XW:4:G:H2'	22:XW:5:G:H8	1.73	0.54
25:YA:184:C:H2'	25:YA:185:U:C6	2.43	0.54
25:YA:2443:C:H2'	25:YA:2444:G:H8	1.73	0.54
25:YA:2535:G:H2'	25:YA:2536:G:C8	2.42	0.54
25:YA:2599:G:H8	27:YD:236:GLY:HA2	1.72	0.54
25:YA:2740:A:N6	25:YA:2764:A:C8	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2741:A:H3'	55:Y9:30:PRO:C	2.27	0.54
35:YP:61:ARG:HG3	54:Y8:13:ARG:HD3	1.89	0.54
45:YZ:70:LEU:HG	45:YZ:91:LEU:HD21	1.90	0.54
55:Y9:2:LYS:HD2	55:Y9:31:LYS:HG2	1.90	0.54
1:QA:486:U:H2'	1:QA:487:A:H8	1.72	0.54
1:QA:514:C:H2'	1:QA:515:G:C8	2.43	0.54
5:QE:34:VAL:HG11	5:QE:63:ARG:HE	1.72	0.54
25:RA:65:C:H2'	25:RA:66:C:H6	1.72	0.54
25:RA:2753:A:O2'	55:R9:28:GLU:O	2.25	0.54
28:RE:170:LEU:HD21	28:RE:187:ALA:HB3	1.90	0.54
1:XA:312:C:H2'	1:XA:313:A:C8	2.43	0.54
1:XA:662:G:H2'	1:XA:663:A:C8	2.42	0.54
1:XA:707:C:H4'	11:XK:20:TYR:HD2	1.73	0.54
1:XA:918:A:H2'	1:XA:919:A:C8	2.43	0.54
25:YA:1946:U:H2'	25:YA:1947:C:C6	2.43	0.54
25:YA:2303:G:N3	30:YG:132:ASN:ND2	2.55	0.54
25:YA:2527:C:H1'	55:Y9:12:ASP:O	2.07	0.54
25:YA:2539:C:O2'	25:YA:2741:A:O2'	2.22	0.54
25:YA:2764:A:N6	25:YA:2766:G:N3	2.56	0.54
30:YG:40:ASN:ND2	30:YG:90:LEU:O	2.41	0.54
36:YQ:24:GLY:HA2	36:YQ:67:ARG:HH21	1.73	0.54
37:YR:88:ARG:NH2	37:YR:89:ASP:OD1	2.41	0.54
43:YX:11:PRO:HD3	48:Y2:37:PHE:CD1	2.42	0.54
1:QA:789:U:H1'	1:QA:792:A:H2	1.72	0.54
4:QD:50:ARG:HD2	4:QD:51:PRO:HD2	1.90	0.54
32:RI:72:LEU:HD11	32:RI:101:LEU:HD11	1.89	0.54
36:RQ:24:GLY:HA2	36:RQ:67:ARG:HH21	1.73	0.54
1:XA:1469:G:H2'	1:XA:1470:G:C8	2.43	0.54
25:YA:397:G:O2'	25:YA:2230:G:N2	2.38	0.54
25:YA:1186:G:H2'	25:YA:1187:G:O4'	2.08	0.54
25:YA:1510:A:O2'	25:YA:1512:G:N7	2.40	0.54
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.43	0.54
25:YA:2126:A:N6	25:YA:2163:C:O2'	2.28	0.54
25:YA:2525:G:O2'	25:YA:2526:G:H8	1.91	0.54
45:YZ:114:GLY:HA3	45:YZ:177:PRO:HG3	1.88	0.54
1:QA:707:C:H4'	11:QK:20:TYR:HD2	1.73	0.54
15:QO:15:PHE:HD2	15:QO:30:ALA:HB2	1.73	0.54
25:RA:92:G:H2'	25:RA:93:C:H6	1.73	0.54
25:RA:184:C:H2'	25:RA:185:U:H6	1.73	0.54
25:RA:2805:G:H2'	25:RA:2807:G:C8	2.42	0.54
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2193:G:H2'	25:YA:2194:G:H8	1.72	0.54
25:YA:2785:C:H2'	25:YA:2786:U:C6	2.43	0.54
29:YF:53:THR:O	29:YF:57:VAL:HG23	2.08	0.54
1:QA:1004:A:C2	1:QA:1025:U:H1'	2.43	0.53
2:QB:19:HIS:CD2	2:QB:206:ASP:HB2	2.43	0.53
25:RA:1166:C:H2'	25:RA:1167:U:C6	2.42	0.53
25:RA:2567:G:H2'	25:RA:2568:C:C6	2.44	0.53
25:RA:2688:U:OP1	25:RA:2713:A:N6	2.41	0.53
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.90	0.53
1:XA:316:G:OP2	1:XA:351:G:O2'	2.16	0.53
1:XA:359:U:H2'	1:XA:360:A:H8	1.72	0.53
1:XA:1105:A:H2'	1:XA:1106:G:H8	1.72	0.53
1:XA:1210:C:O2'	1:XA:1213:A:O2'	2.26	0.53
9:XI:49:PRO:HB2	9:XI:85:LEU:HD21	1.90	0.53
25:YA:439:G:H2'	25:YA:440:G:H8	1.73	0.53
25:YA:729:G:P	27:YD:13:ARG:HD3	2.48	0.53
25:YA:1184:G:P	49:Y3:29:ARG:HH12	2.31	0.53
25:YA:2311:A:C8	30:YG:82:LEU:HD11	2.43	0.53
25:YA:2526:G:H21	55:Y9:13:LYS:HZ3	1.53	0.53
25:YA:2755:C:C6	55:Y9:35:ARG:HB3	2.42	0.53
45:YZ:56:VAL:HG22	45:YZ:70:LEU:HD21	1.89	0.53
1:QA:946:A:O2'	1:QA:1333:A:N3	2.35	0.53
1:QA:1218:C:H2'	1:QA:1219:U:H6	1.73	0.53
2:QB:213:LEU:HD11	2:QB:217:ARG:HE	1.73	0.53
25:RA:30:G:H2'	25:RA:31:C:H6	1.73	0.53
25:RA:270(D):C:H2'	25:RA:270(E):G:H8	1.74	0.53
25:RA:1417:C:H2'	25:RA:1418:G:O4'	2.08	0.53
25:RA:2627:G:O2'	25:RA:2781:A:N1	2.34	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:OD1	2.41	0.53
1:XA:17:U:H2'	1:XA:18:C:H6	1.71	0.53
1:XA:974:A:H5''	14:YN:31:ARG:HD3	1.89	0.53
9:XI:47:LEU:HD12	9:XI:50:LEU:HD12	1.90	0.53
13:XM:15:VAL:HG22	13:XM:45:VAL:HB	1.88	0.53
25:YA:30:G:O2'	25:YA:1214:A:N3	2.33	0.53
25:YA:2315:G:H2'	25:YA:2316:C:C6	2.43	0.53
25:YA:2749:A:OP1	31:YH:4:ILE:HG23	2.08	0.53
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.43	0.53
48:Y2:66:GLU:HG2	48:Y2:69:ARG:HH21	1.74	0.53
52:Y6:10:LEU:HD23	52:Y6:22:ALA:HB2	1.89	0.53
1:QA:269:C:H2'	1:QA:270:A:H8	1.74	0.53
2:QB:61:LEU:HG	2:QB:66:GLY:HA3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:513:A:O2'	25:RA:1217:C:OP1	2.26	0.53
27:RD:44:ASN:HB2	27:RD:48:ARG:O	2.08	0.53
28:RE:24:THR:OG1	28:RE:186:GLY:HA2	2.08	0.53
31:RH:69:ARG:NH1	31:RH:73:ALA:HB2	2.23	0.53
1:XA:700:G:H4'	1:XA:704:A:H1'	1.90	0.53
1:XA:1351:U:H3	1:XA:1371:G:H1	1.56	0.53
2:XB:130:ARG:NE	2:XB:134:GLU:OE1	2.36	0.53
25:YA:2306:C:N4	30:YG:42:GLY:O	2.42	0.53
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.89	0.53
1:QA:272:C:H2'	1:QA:273:A:H8	1.73	0.53
1:QA:356:A:N3	1:QA:368:U:O2'	2.38	0.53
1:QA:422:C:O2'	1:QA:423:G:N2	2.42	0.53
1:QA:1095:U:OP1	1:QA:1108:G:N2	2.34	0.53
2:QB:178:ARG:NH2	2:QB:196:LEU:O	2.40	0.53
9:QI:48:GLU:HB2	9:QI:78:LYS:HE3	1.89	0.53
25:RA:997:G:OP1	40:RU:93:LYS:HB2	2.08	0.53
25:RA:1020:A:N1	25:RA:1141:U:H2'	2.23	0.53
25:RA:2146:C:H4'	25:RA:2147:G:C8	2.44	0.53
25:RA:2197:U:H1'	25:RA:2198:A:H8	1.74	0.53
30:RG:173:LEU:HD22	30:RG:178:PHE:CE2	2.43	0.53
37:RR:17:ARG:HG2	37:RR:21:TYR:CE2	2.44	0.53
1:XA:908:A:H2'	1:XA:909:A:H8	1.73	0.53
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.72	0.53
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.42	0.53
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.23	0.53
25:YA:2032:G:OP2	25:YA:2454:G:O2'	2.19	0.53
25:YA:2695:C:H2'	25:YA:2696:U:C6	2.43	0.53
25:YA:2742:C:OP1	55:Y9:29:ASN:HB3	2.08	0.53
27:YD:52:ARG:NH1	27:YD:249:PRO:HG2	2.24	0.53
34:YO:102:VAL:HB	34:YO:106:LEU:HD12	1.89	0.53
41:YV:55:ALA:HA	41:YV:101:GLY:HA2	1.90	0.53
44:YY:8:LYS:HD3	44:YY:97:ARG:HH21	1.73	0.53
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.43	0.53
19:QS:65:ASN:HA	50:R4:58:ARG:HD2	1.90	0.53
25:RA:586:A:N1	25:RA:809:G:O2'	2.37	0.53
25:RA:1252:G:N2	40:RU:33:ARG:HB3	2.24	0.53
25:RA:2674:G:H5''	34:RO:26:LYS:HE2	1.91	0.53
1:XA:824:C:H2'	1:XA:825:G:C8	2.43	0.53
1:XA:1003:G:N2	1:XA:1005:A:H5'	2.22	0.53
2:XB:174:VAL:HG13	2:XB:184:VAL:HG11	1.91	0.53
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:270(H):C:H2'	25:YA:270(I):G:C8	2.44	0.53
25:YA:321:G:OP2	29:YF:135:LYS:HD3	2.09	0.53
25:YA:676:A:H8	25:YA:2070:G:H1'	1.74	0.53
25:YA:1946:U:H2'	25:YA:1947:C:H6	1.73	0.53
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.41	0.53
35:YP:115:LEU:HA	35:YP:134:ALA:HB2	1.91	0.53
45:YZ:45:ASP:OD1	45:YZ:49:ARG:NE	2.41	0.53
1:QA:5:U:O4	4:QD:87:GLY:N	2.34	0.53
1:QA:19:C:H2'	1:QA:20:U:C6	2.44	0.53
1:QA:501:C:H1'	1:QA:549:C:H1'	1.90	0.53
1:QA:1392:G:N2	1:QA:1502:A:H8	2.06	0.53
3:QC:130:VAL:HG21	3:QC:157:ILE:HG23	1.91	0.53
20:QT:69:GLY:O	20:QT:73:HIS:HB2	2.07	0.53
25:RA:709:U:H2'	25:RA:710:G:C8	2.44	0.53
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.41	0.53
39:RT:28:VAL:HG23	39:RT:88:ILE:HA	1.91	0.53
1:XA:343:U:O2	1:XA:346:G:N1	2.41	0.53
2:XB:118:LEU:HB3	2:XB:142:LEU:HD12	1.91	0.53
3:XC:138:VAL:HG13	3:XC:149:ALA:HB3	1.90	0.53
9:XI:125:TYR:HE2	9:XI:127:LYS:HE3	1.72	0.53
17:XQ:45:HIS:CD2	17:XQ:47:PRO:HG3	2.43	0.53
25:YA:2626:C:H2'	25:YA:2627:G:C8	2.44	0.53
25:YA:2746:U:H5	55:Y9:35:ARG:NH1	2.05	0.53
27:YD:24:ILE:HD11	27:YD:91:ARG:HD2	1.89	0.53
25:RA:1184:G:P	49:R3:29:ARG:HH12	2.31	0.53
25:RA:1651:G:H5'	37:RR:39:PRO:HG2	1.91	0.53
25:RA:2375:G:N2	25:RA:2378:A:OP2	2.39	0.53
28:RE:36:ARG:HH12	28:RE:86:PRO:HD2	1.73	0.53
30:RG:107:LEU:HD21	30:RG:178:PHE:CD1	2.44	0.53
40:RU:90:VAL:HG22	41:RV:39:LEU:HB3	1.91	0.53
1:XA:158:G:H2'	1:XA:159:G:C8	2.44	0.53
1:XA:405:U:O4	4:XD:2:GLY:N	2.42	0.53
1:XA:1004:A:OP1	1:XA:1025:U:N3	2.42	0.53
20:XT:26:ASN:HA	20:XT:29:LYS:HG2	1.90	0.53
22:XW:4:G:H2'	22:XW:5:G:C8	2.43	0.53
25:YA:570:G:H1'	25:YA:983:A:N6	2.24	0.53
25:YA:852:G:H2'	25:YA:853:G:H8	1.72	0.53
25:YA:1689:A:H2'	25:YA:1690:A:H8	1.73	0.53
29:YF:143:ALA:HB1	29:YF:148:LEU:HB2	1.90	0.53
42:YW:76:VAL:HG22	42:YW:103:ILE:HA	1.91	0.53
1:QA:21:G:H2'	1:QA:22:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:674:G:H2'	1:QA:675:A:C8	2.43	0.53
1:QA:838:G:C6	1:QA:842:C:H1'	2.44	0.53
4:QD:98:GLU:HG2	4:QD:189:PRO:HG3	1.90	0.53
9:QI:8:GLY:HA2	9:QI:79:LEU:HD12	1.91	0.53
25:RA:38:A:H2'	25:RA:39:C:H6	1.74	0.53
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.44	0.53
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.42	0.53
25:RA:2224:G:OP1	27:RD:268:ARG:NH1	2.39	0.53
27:RD:132:PRO:HG3	27:RD:190:TYR:CE1	2.41	0.53
1:XA:464:G:C6	1:XA:466:C:H5'	2.44	0.53
3:XC:130:VAL:HG21	3:XC:157:ILE:HG23	1.90	0.53
6:XF:6:VAL:HB	6:XF:63:TYR:HB2	1.91	0.53
11:XK:91:ARG:O	11:XK:95:ILE:HG12	2.09	0.53
25:YA:439:G:H2'	25:YA:440:G:C8	2.44	0.53
25:YA:1108:U:H2'	25:YA:1109:C:C6	2.42	0.53
25:YA:1568:G:P	27:YD:63:ARG:HH22	2.32	0.53
25:YA:2099:U:H3	25:YA:2190:G:H1	1.54	0.53
25:YA:2648:C:H2'	25:YA:2649:U:C6	2.44	0.53
25:YA:2848:G:O2'	25:YA:2867:G:N2	2.39	0.53
28:YE:48:GLN:OE1	28:YE:64:LYS:NZ	2.40	0.53
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.90	0.53
36:YQ:137:TYR:HB3	45:YZ:76:LEU:HD11	1.91	0.53
39:YT:77:PRO:HB2	39:YT:80:SER:HB2	1.89	0.53
48:Y2:16:LEU:HD21	48:Y2:20:GLU:HG3	1.91	0.53
49:Y3:3:ARG:NH2	49:Y3:60:GLU:OXT	2.42	0.53
1:QA:49:U:H4'	12:QL:28:LYS:NZ	2.24	0.53
1:QA:399:G:H2'	1:QA:400:C:C6	2.43	0.53
1:QA:946:A:H2'	1:QA:947:G:C8	2.43	0.53
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.74	0.53
2:QB:130:ARG:NE	2:QB:134:GLU:OE1	2.42	0.53
3:QC:9:GLY:HA2	3:QC:12:LEU:HG	1.90	0.53
3:QC:11:ARG:NH2	3:QC:175:LEU:O	2.41	0.53
22:QW:1:C:H42	22:QW:73:A:H61	1.56	0.53
25:RA:320:A:H2'	29:RF:136:THR:HG21	1.90	0.53
25:RA:754:C:H2'	25:RA:755:C:H6	1.74	0.53
25:RA:1224:G:N2	25:RA:1227:A:OP2	2.34	0.53
1:XA:1060:C:H2'	1:XA:1061:G:H8	1.74	0.53
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.91	0.53
2:XB:72:GLY:HA3	2:XB:81:VAL:HG21	1.91	0.53
25:YA:806:C:O2	25:YA:2444:G:O2'	2.26	0.53
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:36:ARG:HG3	28:YE:47:VAL:HG12	1.90	0.53
40:YU:91:ASP:O	40:YU:93:LYS:N	2.42	0.53
49:Y3:6:VAL:HB	49:Y3:54:VAL:HG21	1.90	0.53
1:QA:254:G:O2'	17:QQ:16:GLN:O	2.27	0.53
25:RA:1085:A:O2'	25:RA:1086:A:O5'	2.27	0.53
25:RA:1336:A:H2'	25:RA:1337:G:C8	2.43	0.53
25:RA:1882:C:H3'	25:RA:1883:G:H8	1.73	0.53
27:RD:231:HIS:CD2	27:RD:249:PRO:HG3	2.44	0.53
1:XA:427:U:OP2	1:XA:428:G:O2'	2.19	0.53
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.91	0.53
7:XG:15:ASP:OD1	7:XG:16:LEU:N	2.42	0.53
22:XV:57:C:N4	30:YG:83:ARG:HH12	2.06	0.53
25:YA:685:A:OP1	25:YA:686:G:N2	2.38	0.53
25:YA:1791:A:N6	25:YA:1828:G:O2'	2.42	0.53
25:YA:2741:A:C5	55:Y9:30:PRO:HD2	2.44	0.53
55:Y9:21:GLY:O	55:Y9:22:ARG:HD2	2.08	0.53
1:QA:736:C:H2'	1:QA:737:A:H8	1.73	0.52
1:QA:973:G:O6	1:QA:974:A:N6	2.43	0.52
1:QA:1068:G:OP1	1:QA:1387:G:O2'	2.26	0.52
1:QA:1250:A:H4'	9:QI:67:GLY:HA2	1.92	0.52
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.44	0.52
22:QW:8:U:O2	22:QW:14:A:N7	2.42	0.52
25:RA:270(Q):C:H5'	32:RI:46:ALA:HB2	1.91	0.52
25:RA:1107:G:H2'	25:RA:1108:U:C6	2.44	0.52
25:RA:2287:A:H62	25:RA:2344:U:H3	1.57	0.52
26:RB:24:G:O6	26:RB:56:G:O2'	2.21	0.52
30:RG:179:PRO:HB3	50:R4:43:TYR:HE1	1.74	0.52
39:RT:77:PRO:HB2	39:RT:80:SER:HB2	1.91	0.52
1:XA:45:U:H2'	1:XA:46:G:H8	1.74	0.52
1:XA:1121:U:H2'	1:XA:1122:U:C6	2.44	0.52
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.44	0.52
25:YA:1641:A:H2'	25:YA:1642:G:O4'	2.09	0.52
25:YA:1991:U:H2'	25:YA:1992:G:H5''	1.90	0.52
25:YA:2010:G:H5''	42:YW:42:ARG:HB2	1.91	0.52
25:YA:2741:A:C2	55:Y9:30:PRO:HD2	2.43	0.52
30:YG:65:GLY:HA2	50:Y4:7:PRO:HG2	1.91	0.52
31:YH:107:VAL:HB	31:YH:153:LYS:NZ	2.23	0.52
32:YI:78:THR:HG22	32:YI:141:LYS:HE3	1.91	0.52
42:YW:24:ILE:HD13	42:YW:36:LEU:HD11	1.90	0.52
45:YZ:54:HIS:HB3	45:YZ:101:PRO:HD3	1.91	0.52
1:QA:407:G:H2'	1:QA:408:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1151:A:H2'	1:QA:1152:A:C8	2.44	0.52
3:QC:19:GLU:HG2	3:QC:54:ARG:HE	1.74	0.52
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.74	0.52
25:RA:512:G:H4'	25:RA:513:A:O5'	2.08	0.52
37:RR:21:TYR:HE1	37:RR:43:GLU:HB3	1.74	0.52
46:R0:32:ARG:N	46:R0:35:ASN:OD1	2.42	0.52
1:XA:662:G:O2'	1:XA:836:G:OP1	2.28	0.52
25:YA:2185:C:H2'	25:YA:2186:G:C8	2.41	0.52
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.44	0.52
27:YD:36:PRO:CB	27:YD:61:LEU:HB3	2.39	0.52
28:YE:37:ARG:HD3	28:YE:42:ASP:OD2	2.09	0.52
30:YG:19:LEU:HD11	30:YG:172:LEU:HD13	1.91	0.52
34:YO:104:ARG:NH1	34:YO:121:VAL:O	2.42	0.52
1:QA:662:G:H2'	1:QA:663:A:C8	2.45	0.52
25:RA:1000:A:H2'	25:RA:1001:A:C8	2.44	0.52
31:RH:130:ARG:NH1	31:RH:132:ARG:HE	2.06	0.52
32:RI:30:LEU:HB3	32:RI:36:ALA:HB3	1.91	0.52
36:RQ:31:ASP:OD1	36:RQ:134:ARG:NH1	2.43	0.52
1:XA:828:A:N3	2:XB:26:PRO:HG2	2.24	0.52
22:XW:8:U:O2	22:XW:14:A:N7	2.43	0.52
25:YA:665:C:H2'	25:YA:666:G:H8	1.75	0.52
25:YA:2355:C:H1'	46:Y0:39:ARG:HH21	1.75	0.52
25:YA:2744:G:OP1	55:Y9:19:ARG:HB2	2.10	0.52
25:YA:2755:C:O4'	55:Y9:35:ARG:NH1	2.41	0.52
25:YA:2787:C:H1'	28:YE:62:PRO:HG3	1.91	0.52
29:YF:78:ILE:HA	29:YF:83:PHE:CD2	2.45	0.52
29:YF:107:LYS:HB3	29:YF:206:ILE:HD12	1.91	0.52
30:YG:121:ASN:HA	30:YG:181:ARG:HH21	1.74	0.52
32:YI:9:LEU:HD11	32:YI:12:LEU:HD22	1.90	0.52
4:QD:15:GLU:OE2	4:QD:59:ARG:NH1	2.42	0.52
25:RA:1028:A:H2'	25:RA:1029:A:C8	2.44	0.52
25:RA:1124:C:H2'	25:RA:1125:G:O4'	2.09	0.52
25:RA:1839:G:C2	25:RA:1840:G:C8	2.97	0.52
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.10	0.52
25:RA:2477:C:O2	55:R9:36:GLN:NE2	2.42	0.52
25:RA:2597:G:H5'	27:RD:243:GLY:HA3	1.91	0.52
25:RA:2832:U:H4'	25:RA:2833:G:H5''	1.92	0.52
27:RD:43:ARG:NH1	27:RD:49:ILE:HB	2.24	0.52
33:RN:12:ARG:HH11	33:RN:14:VAL:HG22	1.74	0.52
50:R4:28:LYS:HB2	50:R4:31:ILE:HD11	1.91	0.52
1:XA:89:U:O2'	1:XA:90:C:OP1	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.74	0.52
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.91	0.52
25:YA:793:A:OP2	25:YA:2071:A:O2'	2.26	0.52
25:YA:2291:U:H2'	25:YA:2292:C:H6	1.75	0.52
25:YA:2492:U:H2'	25:YA:2493:U:C6	2.44	0.52
25:YA:2743:C:C3'	55:Y9:25:VAL:HA	2.39	0.52
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	2.08	0.52
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.91	0.52
1:QA:279:A:OP2	17:QQ:95:TYR:OH	2.19	0.52
8:QH:112:LEU:HD23	8:QH:133:LEU:HA	1.91	0.52
25:RA:226:G:N2	25:RA:230:U:O4	2.43	0.52
25:RA:1292:U:H2'	25:RA:1293:C:H6	1.74	0.52
25:RA:1941:C:N4	25:RA:1965:C:O4'	2.42	0.52
1:XA:574:A:N3	1:XA:883:C:H1'	2.23	0.52
6:XF:44:GLY:HA2	6:XF:59:TYR:CE1	2.45	0.52
25:YA:127:A:H5''	25:YA:128:C:C6	2.44	0.52
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.42	0.52
25:YA:1889:A:N3	25:YA:2086:U:O2'	2.40	0.52
1:QA:186(C):G:H1	1:QA:191(D):U:H3	1.57	0.52
1:QA:243:A:H4'	1:QA:244:U:O5'	2.09	0.52
1:QA:824:C:H2'	1:QA:825:G:H8	1.74	0.52
1:QA:1213:A:N6	1:QA:1215:G:N3	2.58	0.52
17:QQ:51:TYR:CE2	17:QQ:73:VAL:HG11	2.44	0.52
22:QV:29:C:H2'	22:QV:30:G:H8	1.74	0.52
25:RA:458:G:O2'	25:RA:469:G:O6	2.26	0.52
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.45	0.52
25:RA:1996:C:OP1	34:RO:31:LYS:NZ	2.43	0.52
25:RA:2306:C:H2'	25:RA:2307:G:N2	2.24	0.52
26:RB:28:C:H2'	26:RB:29:A:C8	2.44	0.52
43:RX:35:THR:HG23	43:RX:38:GLU:H	1.73	0.52
1:XA:209:U:H1'	1:XA:216:G:C6	2.45	0.52
1:XA:272:C:H2'	1:XA:273:A:H8	1.73	0.52
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.45	0.52
13:XM:80:ARG:HD2	50:Y4:58:ARG:HD3	1.92	0.52
25:YA:997:G:OP1	40:YU:93:LYS:HB2	2.10	0.52
25:YA:2154:G:H2'	25:YA:2155:G:H8	1.74	0.52
25:YA:2742:C:O2'	55:Y9:25:VAL:HB	2.10	0.52
25:YA:2742:C:P	55:Y9:29:ASN:HB3	2.49	0.52
25:YA:2744:G:OP2	55:Y9:17:ILE:HG13	2.09	0.52
25:YA:2755:C:O2'	25:YA:2756:U:H5	1.92	0.52
40:YU:97:ASP:OD1	40:YU:101:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:563:A:H2'	1:QA:567:G:H8	1.74	0.52
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.45	0.52
22:QW:5:G:H2'	22:QW:6:G:H8	1.75	0.52
25:RA:185:U:C2	25:RA:212:G:N2	2.78	0.52
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.45	0.52
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.74	0.52
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.44	0.52
41:RV:62:LEU:HD11	41:RV:95:LEU:HB2	1.91	0.52
1:XA:922:G:H2'	1:XA:923:A:C8	2.44	0.52
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	1.91	0.52
25:YA:458:G:H22	25:YA:469:G:H3'	1.75	0.52
25:YA:807:U:H2'	25:YA:808:G:H8	1.74	0.52
33:YN:73:THR:HB	33:YN:82:LEU:HD11	1.92	0.52
49:Y3:8:LEU:HG	49:Y3:28:LEU:HD13	1.91	0.52
1:QA:537:G:H5''	12:QL:113:ARG:NH1	2.24	0.52
25:RA:777:A:H2'	25:RA:778:G:H8	1.75	0.52
25:RA:849:A:N1	49:R3:25:ALA:HB2	2.24	0.52
25:RA:1636:C:H2'	25:RA:1637:A:H8	1.73	0.52
25:RA:1818:U:H2'	27:RD:157:ARG:HG2	1.91	0.52
25:RA:2183:C:H2'	25:RA:2184:G:C8	2.45	0.52
25:RA:2331:G:O2'	46:R0:43:THR:HG22	2.09	0.52
27:RD:264:LYS:HE2	27:RD:266:SER:HB3	1.92	0.52
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.91	0.52
36:RQ:77:LYS:NZ	36:RQ:84:GLY:O	2.37	0.52
36:RQ:116:GLU:OE2	36:RQ:119:ARG:NH2	2.33	0.52
39:RT:123:GLN:O	39:RT:125:ARG:N	2.42	0.52
42:RW:11:ARG:HH21	42:RW:98:LYS:HD3	1.75	0.52
1:XA:753:A:H4'	1:XA:754:C:O5'	2.10	0.52
12:XL:60:LEU:HD12	12:XL:62:SER:H	1.74	0.52
14:XN:24:CYS:HB3	14:XN:29:ARG:H	1.74	0.52
35:YP:121:LYS:HD3	35:YP:122:PRO:HD2	1.91	0.52
1:QA:22:G:H4'	1:QA:885:G:C8	2.45	0.52
1:QA:677:U:H3	1:QA:713:G:H22	1.58	0.52
1:QA:688:G:H2'	1:QA:689:C:H6	1.74	0.52
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.45	0.52
1:QA:1317:C:H2'	1:QA:1318:A:O4'	2.10	0.52
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.45	0.52
12:QL:85:ILE:HG23	12:QL:98:TYR:HB3	1.91	0.52
25:RA:533:G:N2	40:RU:49:HIS:HE1	2.08	0.52
25:RA:2074:U:H2'	25:RA:2075:U:C6	2.45	0.52
38:RS:34:HIS:CD2	38:RS:54:LEU:HD12	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:50:ILE:HG13	39:RT:99:LEU:HD12	1.91	0.52
54:R8:26:LYS:HD3	54:R8:47:LYS:HB3	1.91	0.52
1:XA:980:C:H5''	1:XA:981:U:C5	2.45	0.52
22:XV:15:G:H1	22:XV:49:C:H5	1.56	0.52
25:YA:1935:G:H1'	25:YA:1964:G:N2	2.24	0.52
25:YA:1990:C:H2'	25:YA:1991:U:C6	2.45	0.52
26:YB:44:G:H1'	26:YB:47:C:N4	2.25	0.52
26:YB:114:G:HO2'	38:YS:50:SER:HG	1.53	0.52
27:YD:52:ARG:HH21	27:YD:53:PHE:HE2	1.57	0.52
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.75	0.52
25:RA:689:A:H2'	25:RA:690:G:C8	2.45	0.52
25:RA:793:A:OP2	25:RA:2071:A:O2'	2.25	0.52
25:RA:1508:A:O2'	25:RA:1509:C:O4'	2.23	0.52
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.45	0.52
27:RD:72:LYS:HG3	27:RD:97:TYR:CE2	2.45	0.52
29:RF:124:LEU:HB3	29:RF:193:VAL:HG22	1.92	0.52
34:RO:102:VAL:HB	34:RO:106:LEU:HD12	1.91	0.52
35:RP:59:LEU:O	54:R8:13:ARG:NH1	2.43	0.52
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.25	0.52
52:R6:10:LEU:HG	52:R6:54:ILE:HG13	1.92	0.52
1:XA:1241:G:H1	1:XA:1296:C:H42	1.58	0.52
5:XE:97:GLY:N	5:XE:117:ASP:OD2	2.40	0.52
22:XV:53:G:O2'	22:XV:54:G:OP1	2.27	0.52
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.43	0.52
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.45	0.52
28:YE:104:VAL:HG22	28:YE:198:VAL:HG22	1.92	0.52
45:YZ:144:LEU:HD11	45:YZ:149:SER:HA	1.91	0.52
3:QC:189:ALA:HB3	3:QC:196:LEU:H	1.76	0.51
12:QL:35:GLY:HA2	12:QL:60:LEU:HA	1.92	0.51
16:QP:3:LYS:HG3	16:QP:65:GLN:O	2.10	0.51
20:QT:81:LYS:O	20:QT:85:MET:HG2	2.10	0.51
25:RA:1050:A:H2'	25:RA:1051:G:O4'	2.10	0.51
25:RA:2065:C:H2'	25:RA:2066:C:H6	1.74	0.51
25:RA:2126:A:H4'	25:RA:2127:G:O5'	2.10	0.51
25:RA:2600:A:H2'	25:RA:2601:C:C6	2.45	0.51
31:RH:83:TYR:CE2	31:RH:138:LYS:HD2	2.46	0.51
31:RH:151:ILE:HG22	31:RH:153:LYS:HG2	1.92	0.51
43:RX:55:ASN:HB2	43:RX:80:ILE:HG23	1.91	0.51
1:XA:407:G:H2'	1:XA:408:A:C8	2.44	0.51
22:XW:11:A:H2'	22:XW:12:G:C8	2.45	0.51
25:YA:2836:U:H2'	25:YA:2837:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:107:LEU:HD21	30:YG:178:PHE:CD1	2.45	0.51
32:YI:144:VAL:HG22	32:YI:145:VAL:H	1.75	0.51
39:YT:24:PRO:HG3	39:YT:52:ILE:HD12	1.93	0.51
42:YW:110:LYS:HG3	42:YW:111:HIS:H	1.74	0.51
1:QA:376:G:H5'	16:QP:5:ARG:HB2	1.91	0.51
1:QA:403:C:H2'	1:QA:404:U:H6	1.75	0.51
1:QA:484:G:H4'	1:QA:485:G:O5'	2.11	0.51
1:QA:1321:C:O2'	19:QS:78:ARG:NH2	2.43	0.51
5:QE:107:ARG:O	5:QE:111:GLU:HB2	2.09	0.51
9:QI:5:TYR:HE1	9:QI:16:ARG:HB2	1.74	0.51
24:QY:27:A:H2'	24:QY:28:G:H8	1.75	0.51
25:RA:37:C:H2'	25:RA:38:A:H8	1.74	0.51
25:RA:2262:U:H2'	25:RA:2263:C:H6	1.76	0.51
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.92	0.51
1:XA:188:U:H2'	1:XA:189:U:H5''	1.92	0.51
1:XA:345:C:H4'	1:XA:346:G:O5'	2.09	0.51
20:XT:69:GLY:O	20:XT:73:HIS:HB2	2.10	0.51
25:YA:2248:C:H2'	25:YA:2249:U:O4'	2.11	0.51
25:YA:2564:A:N7	25:YA:2647:U:O2'	2.43	0.51
25:YA:2741:A:O5'	25:YA:2741:A:H8	1.94	0.51
25:YA:2744:G:C5'	55:Y9:24:TYR:HB2	2.38	0.51
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.91	0.51
41:YV:62:LEU:HD11	41:YV:95:LEU:HB2	1.92	0.51
1:QA:110:C:O2'	16:QP:25:ARG:O	2.28	0.51
1:QA:1194:U:H4'	5:QE:22:GLY:O	2.10	0.51
2:QB:52:GLU:O	2:QB:56:ARG:HG2	2.10	0.51
25:RA:177:G:H3'	25:RA:178:G:H8	1.76	0.51
30:RG:63:ILE:HG22	30:RG:143:GLU:HB2	1.92	0.51
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.92	0.51
44:RY:35:TYR:CE2	44:RY:69:ALA:HB3	2.45	0.51
1:XA:392:G:HO2'	1:XA:483:C:HO2'	1.45	0.51
1:XA:606:G:H22	1:XA:631:G:H5''	1.75	0.51
1:XA:1108:G:H5'	3:XC:176:HIS:CD2	2.46	0.51
10:XJ:50:ILE:HD13	10:XJ:60:ARG:HE	1.75	0.51
25:YA:1427:A:H4'	25:YA:1428:C:O5'	2.10	0.51
25:YA:2354:G:H4'	46:Y0:35:ASN:HD22	1.74	0.51
25:YA:2776:A:H4'	25:YA:2777:G:O5'	2.10	0.51
31:YH:149:ARG:NH2	55:Y9:18:ARG:HG2	2.26	0.51
1:QA:768:A:H5'	1:QA:1524:C:H1'	1.93	0.51
4:QD:119:GLN:CB	4:QD:119:GLN:OE1	2.58	0.51
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1204:A:H1'	25:RA:1206:G:C8	2.45	0.51
25:RA:1525:G:H2'	25:RA:1526:G:C8	2.46	0.51
25:RA:1907:G:O6	25:RA:1924:C:N4	2.44	0.51
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.45	0.51
45:RZ:56:VAL:HG22	45:RZ:70:LEU:HD21	1.92	0.51
25:YA:270(S):G:H2'	25:YA:270(T):G:H8	1.76	0.51
25:YA:783:A:H8	25:YA:784:A:H4'	1.75	0.51
25:YA:2527:C:H2'	25:YA:2528:U:O4'	2.11	0.51
25:YA:2744:G:O2'	31:YH:146:ALA:HB1	2.11	0.51
30:YG:105:LYS:HD3	50:Y4:26:SER:HB2	1.91	0.51
31:YH:152:ARG:HA	55:Y9:19:ARG:HE	1.76	0.51
33:YN:89:LYS:O	33:YN:93:THR:HG22	2.10	0.51
55:Y9:27:CYS:HB3	55:Y9:28:GLU:OE1	2.11	0.51
13:QM:108:ARG:HE	13:QM:114:ARG:HD2	1.75	0.51
19:QS:3:ARG:NE	19:QS:7:LYS:HE2	2.19	0.51
25:RA:297:C:H2'	25:RA:298:G:O4'	2.10	0.51
25:RA:796:C:H2'	25:RA:797:C:C6	2.46	0.51
25:RA:1198:U:H2'	25:RA:1199:U:C6	2.45	0.51
25:RA:1310:G:OP2	53:R7:9:ARG:NE	2.36	0.51
25:RA:1990:C:H2'	25:RA:1991:U:C6	2.45	0.51
1:XA:5:U:O2'	1:XA:6:G:O5'	2.28	0.51
1:XA:414:A:OP2	1:XA:428:G:N2	2.43	0.51
1:XA:898:G:N2	1:XA:901:A:OP2	2.43	0.51
1:XA:1192:C:P	3:XC:4:LYS:HZ1	2.33	0.51
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.91	0.51
7:XG:69:VAL:HG21	7:XG:104:LEU:HD21	1.93	0.51
24:XY:27:A:H2'	24:XY:28:G:H8	1.74	0.51
25:YA:39:C:O2	29:YF:46:ARG:NH2	2.43	0.51
25:YA:1424:G:P	27:YD:33:LEU:HD12	2.51	0.51
25:YA:2102:U:H2'	25:YA:2103:C:C6	2.45	0.51
25:YA:2421:G:N7	54:Y8:31:HIS:NE2	2.59	0.51
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.93	0.51
39:YT:28:VAL:HG23	39:YT:88:ILE:HA	1.93	0.51
39:YT:53:ARG:O	39:YT:59:THR:HG23	2.11	0.51
1:QA:398:C:H2'	1:QA:399:G:H8	1.76	0.51
1:QA:684:A:H1'	11:QK:39:PRO:HD2	1.92	0.51
1:QA:1128:C:H1'	1:QA:1146:A:H61	1.75	0.51
22:QW:4:G:H2'	22:QW:5:G:H8	1.74	0.51
25:RA:638:G:H2'	25:RA:639:U:C6	2.46	0.51
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.46	0.51
25:RA:2285:C:OP1	52:R6:29:ASN:ND2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2314:C:H2'	25:RA:2315:G:H8	1.75	0.51
29:RF:34:TRP:CE3	35:RP:8:PRO:HB3	2.46	0.51
1:XA:1299:A:H2'	1:XA:1301:U:H1'	1.93	0.51
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.11	0.51
25:YA:38:A:H2'	25:YA:39:C:C6	2.46	0.51
25:YA:1045:A:O2'	25:YA:1046:A:OP2	2.24	0.51
25:YA:1844:C:H2'	25:YA:1845:G:H8	1.74	0.51
25:YA:2627:G:O2'	25:YA:2781:A:N1	2.37	0.51
31:YH:8:PRO:HG2	31:YH:69:ARG:NE	2.17	0.51
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.74	0.51
50:Y4:56:VAL:CG2	50:Y4:58:ARG:HG3	2.40	0.51
1:QA:188:U:H2'	1:QA:189:U:H5''	1.93	0.51
1:QA:790:A:OP1	22:QV:39:A:O2'	2.26	0.51
1:QA:1438:G:OP2	20:QT:34:LYS:NZ	2.36	0.51
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.93	0.51
25:RA:2610:C:H4'	25:RA:2611:U:OP2	2.11	0.51
45:RZ:70:LEU:HG	45:RZ:91:LEU:HD21	1.92	0.51
1:XA:477:G:H2'	1:XA:478:A:C8	2.46	0.51
25:YA:2093:G:H2'	25:YA:2094:G:H8	1.75	0.51
25:YA:2308:G:H22	25:YA:2311:A:H2	1.58	0.51
32:YI:100:ALA:O	32:YI:104:GLN:HB3	2.10	0.51
35:YP:97:PRO:O	35:YP:98:GLU:HG2	2.11	0.51
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	1.92	0.51
1:QA:620:C:H4'	4:QD:138:TYR:HD1	1.76	0.51
1:QA:908:A:H2'	1:QA:909:A:H8	1.76	0.51
1:QA:976:G:OP1	14:QN:32:SER:N	2.43	0.51
25:RA:270(S):G:H2'	25:RA:270(T):G:H8	1.76	0.51
25:RA:1468:C:H2'	25:RA:1469:A:C8	2.46	0.51
25:RA:1885:A:H5'	25:RA:1886:C:OP2	2.11	0.51
25:RA:2637:U:H5''	28:RE:82:ARG:NH1	2.25	0.51
27:RD:242:ARG:O	27:RD:244:ARG:HG2	2.11	0.51
30:RG:32:PRO:HB2	30:RG:172:LEU:HD22	1.91	0.51
33:RN:89:LYS:O	33:RN:93:THR:HG22	2.11	0.51
15:XO:7:GLU:OE2	15:XO:38:ARG:NH2	2.44	0.51
28:YE:52:LEU:HB2	28:YE:75:VAL:HB	1.93	0.51
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.38	0.51
44:YY:35:TYR:CE2	44:YY:69:ALA:HB3	2.46	0.51
1:QA:1120:G:H2'	1:QA:1121:U:H6	1.75	0.51
5:QE:97:GLY:N	5:QE:117:ASP:OD2	2.38	0.51
10:QJ:23:ILE:HG23	10:QJ:85:LEU:HD22	1.92	0.51
25:RA:530:G:C6	25:RA:2022:U:H5''	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:792:G:N3	25:RA:2072:G:O2'	2.40	0.51
25:RA:2646:C:OP2	25:RA:2732:G:O2'	2.15	0.51
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.10	0.51
26:RB:29:A:H2'	26:RB:30:C:C6	2.46	0.51
36:RQ:4:PRO:HG3	36:RQ:69:PHE:HE2	1.76	0.51
36:RQ:32:TYR:OH	36:RQ:111:GLU:HB3	2.10	0.51
40:RU:36:ARG:HG2	40:RU:40:PHE:CE2	2.46	0.51
40:RU:97:ASP:OD1	40:RU:101:ARG:NH1	2.44	0.51
1:XA:116:A:H61	1:XA:313:A:H1'	1.75	0.51
1:XA:437:U:H2'	1:XA:438:G:O4'	2.11	0.51
1:XA:1437:C:H2'	1:XA:1438:G:H8	1.75	0.51
19:XS:3:ARG:HH21	19:XS:7:LYS:HD2	1.76	0.51
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.92	0.51
25:YA:172:C:H2'	25:YA:173:G:H8	1.74	0.51
25:YA:1263:U:H2'	25:YA:1264:G:C8	2.46	0.51
25:YA:1754:C:P	39:YT:96:ARG:HH12	2.34	0.51
25:YA:1779:U:OP2	25:YA:1784:A:N6	2.32	0.51
25:YA:2071:A:H2'	25:YA:2072:G:H8	1.75	0.51
25:YA:2331:G:O2'	46:Y0:43:THR:HG22	2.11	0.51
28:YE:115:GLY:HA2	28:YE:157:ALA:HB1	1.93	0.51
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.91	0.51
37:YR:104:ARG:HG3	37:YR:107:ASP:HB3	1.92	0.51
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.75	0.51
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.93	0.51
10:QJ:4:ILE:HG12	10:QJ:100:THR:HG22	1.92	0.51
13:QM:93:ARG:HD2	13:QM:94:ARG:NH1	2.26	0.51
22:QW:11:A:H2'	22:QW:12:G:C8	2.46	0.51
25:RA:811:U:H2'	35:RP:21:ARG:O	2.11	0.51
25:RA:1329:U:H5''	25:RA:1330:C:C5	2.45	0.51
25:RA:1465:G:H4'	25:RA:1528:A:H1'	1.93	0.51
25:RA:1972:A:H2'	25:RA:1973:G:H8	1.75	0.51
25:RA:2526:G:O2'	55:R9:3:VAL:HB	2.11	0.51
1:XA:78:G:H2'	1:XA:79:G:C8	2.46	0.51
1:XA:152:A:H62	1:XA:169:C:H42	1.58	0.51
1:XA:1437:C:H2'	1:XA:1438:G:C8	2.46	0.51
11:XK:33:THR:HG22	11:XK:39:PRO:HA	1.93	0.51
25:YA:222:A:H3'	25:YA:421:U:H5'	1.92	0.51
25:YA:662:G:H2'	25:YA:663:G:H8	1.75	0.51
25:YA:864:G:H2'	25:YA:865:C:C6	2.46	0.51
25:YA:968:G:H2'	25:YA:969:U:C6	2.46	0.51
25:YA:1570:A:H2'	25:YA:1571:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2247:A:H2'	25:YA:2248:C:C6	2.46	0.51
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.75	0.51
31:YH:19:VAL:HA	31:YH:24:VAL:HG12	1.92	0.51
1:QA:368:U:OP1	32:YI:91:SER:OG	2.23	0.50
1:QA:624:C:H2'	1:QA:625:G:C8	2.45	0.50
1:QA:976:G:P	14:QN:32:SER:H	2.34	0.50
1:QA:1004:A:OP1	1:QA:1025:U:N3	2.40	0.50
22:QV:44:A:H2'	22:QV:45:A:H8	1.76	0.50
25:RA:78:A:H2'	25:RA:79:G:H8	1.75	0.50
25:RA:760:G:H2'	25:RA:761:A:O4'	2.10	0.50
25:RA:918:A:N3	26:RB:80:U:O2'	2.35	0.50
25:RA:1657:C:H5'	28:RE:137:HIS:HE1	1.76	0.50
25:RA:1664:A:H61	25:RA:1996:C:H42	1.58	0.50
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.76	0.50
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.26	0.50
25:RA:2626:C:H2'	25:RA:2627:G:C8	2.46	0.50
25:RA:2696:U:H2'	25:RA:2697:G:H8	1.75	0.50
25:RA:2820:A:O2'	25:RA:2821:A:OP1	2.28	0.50
26:RB:44:G:H1'	26:RB:47:C:N4	2.26	0.50
30:RG:108:ASN:HA	50:R4:37:SER:HB3	1.92	0.50
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.45	0.50
1:XA:677:U:H3	1:XA:713:G:H22	1.57	0.50
1:XA:1073:U:O2	2:XB:104:ASN:ND2	2.43	0.50
11:XK:20:TYR:HE1	11:XK:83:ILE:HD12	1.75	0.50
25:YA:338:G:OP1	44:YY:4:LYS:NZ	2.43	0.50
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.42	0.50
25:YA:2616:C:H2'	25:YA:2617:C:C6	2.44	0.50
27:YD:242:ARG:O	27:YD:244:ARG:HG2	2.11	0.50
28:YE:106:GLY:HA3	28:YE:196:VAL:HG12	1.92	0.50
1:QA:452:A:H2'	1:QA:453:A:H8	1.76	0.50
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.38	0.50
1:QA:1133:G:H2'	1:QA:1134:G:H8	1.76	0.50
19:QS:45:VAL:HG13	19:QS:63:THR:HA	1.93	0.50
25:RA:151:C:H2'	25:RA:152:G:H8	1.75	0.50
25:RA:620:G:H4'	25:RA:621:A:H5''	1.94	0.50
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.45	0.50
25:RA:1652:A:OP1	37:RR:8:ARG:NH1	2.43	0.50
25:RA:2471:C:H3'	25:RA:2472:G:H8	1.76	0.50
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.76	0.50
27:RD:35:LYS:HE2	27:RD:35:LYS:HA	1.94	0.50
29:RF:116:ASP:OD2	35:RP:1:MET:N	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.93	0.50
39:RT:111:ARG:C	39:RT:113:LYS:H	2.14	0.50
41:RV:60:GLU:HB2	41:RV:97:LYS:HE3	1.93	0.50
45:RZ:6:LYS:O	45:RZ:62:PRO:HD3	2.10	0.50
1:XA:509:A:H4'	1:XA:510:A:OP1	2.11	0.50
1:XA:911:U:H2'	1:XA:912:C:C6	2.46	0.50
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.42	0.50
1:XA:1312:G:H5'	19:XS:5:LEU:HD11	1.94	0.50
2:XB:19:HIS:CD2	2:XB:206:ASP:HB2	2.45	0.50
12:XL:45:PRO:HG3	12:XL:53:ARG:HD3	1.93	0.50
20:XT:29:LYS:O	20:XT:33:ILE:HG12	2.11	0.50
25:YA:1568:G:OP2	27:YD:63:ARG:NH2	2.45	0.50
25:YA:2308:G:H1	25:YA:2311:A:H2	1.58	0.50
25:YA:2472:G:O2'	25:YA:2478:A:N6	2.40	0.50
25:YA:2742:C:N3	55:Y9:33:LYS:NZ	2.59	0.50
26:YB:29:A:H2'	26:YB:30:C:C6	2.46	0.50
31:YH:69:ARG:NH1	31:YH:73:ALA:HB2	2.27	0.50
39:YT:91:ARG:HD2	39:YT:120:ARG:NH1	2.26	0.50
1:QA:456:C:H2'	1:QA:457:C:H6	1.77	0.50
1:QA:736:C:H2'	1:QA:737:A:C8	2.46	0.50
1:QA:1523:G:OP1	11:QK:123:LYS:NZ	2.44	0.50
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.35	0.50
25:RA:598:G:H4'	35:RP:11:GLY:HA3	1.93	0.50
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.93	0.50
25:RA:2243:U:H2'	25:RA:2244:U:C6	2.46	0.50
28:RE:45:THR:O	28:RE:83:ASP:N	2.43	0.50
37:RR:17:ARG:HG2	37:RR:21:TYR:HE2	1.75	0.50
50:R4:11:PRO:HA	50:R4:25:TYR:CD1	2.47	0.50
1:XA:539:A:H2'	1:XA:540:G:C8	2.46	0.50
1:XA:652:U:O4	1:XA:752:G:O2'	2.22	0.50
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.46	0.50
12:XL:53:ARG:HB3	12:XL:69:TYR:HE1	1.76	0.50
25:YA:191:A:H2'	25:YA:192:C:H6	1.77	0.50
25:YA:304:G:H2'	25:YA:305:U:C6	2.47	0.50
25:YA:720:C:H2'	25:YA:721:C:H6	1.76	0.50
25:YA:2462:U:H2'	25:YA:2463:C:C6	2.44	0.50
2:QB:19:HIS:HB2	2:QB:204:ASN:OD1	2.11	0.50
13:QM:23:TYR:N	13:QM:67:GLU:OE2	2.38	0.50
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.77	0.50
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.76	0.50
25:RA:1353:A:H4'	27:RD:38:LYS:HE3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.47	0.50
25:RA:2311:A:C8	30:RG:82:LEU:HD11	2.47	0.50
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.10	0.50
25:RA:2747:G:N2	25:RA:2757:A:N6	2.28	0.50
26:RB:75:G:HO2'	45:RZ:85:HIS:CD2	2.28	0.50
32:RI:133:HIS:HB3	32:RI:134:PRO:HD3	1.93	0.50
1:XA:115:G:H4'	1:XA:116:A:O5'	2.11	0.50
1:XA:1245:A:OP2	21:XU:9:ARG:NH2	2.44	0.50
3:XC:17:ASP:O	3:XC:54:ARG:NH2	2.44	0.50
4:XD:18:LYS:HE2	4:XD:20:TYR:CZ	2.47	0.50
17:XQ:51:TYR:CE2	17:XQ:73:VAL:HG11	2.46	0.50
25:YA:214:G:N3	25:YA:216:A:O2'	2.37	0.50
25:YA:747:U:O2	25:YA:2014:A:H1'	2.11	0.50
25:YA:923:C:H4'	46:Y0:29:GLN:HG3	1.93	0.50
25:YA:969:U:H2'	25:YA:970:C:C6	2.46	0.50
25:YA:2744:G:C5	25:YA:2761:G:C6	3.00	0.50
32:YI:100:ALA:O	32:YI:104:GLN:CB	2.59	0.50
36:YQ:55:VAL:HG13	45:YZ:178:GLU:HB3	1.93	0.50
1:QA:877:C:OP1	8:QH:88:LYS:HE3	2.11	0.50
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.59	0.50
6:QF:44:GLY:HA2	6:QF:59:TYR:CE1	2.45	0.50
8:QH:34:GLU:OE1	8:QH:37:ARG:NH2	2.45	0.50
11:QK:54:ARG:HH22	22:QW:40:C:H4'	1.76	0.50
16:QP:53:VAL:HG12	16:QP:79:VAL:HG22	1.93	0.50
25:RA:242:G:H3'	54:R8:6:THR:HG23	1.93	0.50
25:RA:1952:A:C5	34:RO:22:ILE:HD12	2.46	0.50
25:RA:2623:G:OP1	25:RA:2826:A:O2'	2.21	0.50
28:RE:115:GLY:HA2	28:RE:157:ALA:HB1	1.94	0.50
1:XA:191(E):G:H2'	1:XA:191(F):U:C6	2.47	0.50
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.75	0.50
19:XS:10:PHE:HE2	19:XS:16:LEU:HD13	1.76	0.50
22:XW:10:G:H2'	22:XW:11:A:C8	2.47	0.50
25:YA:296:C:H2'	25:YA:297:C:H6	1.76	0.50
25:YA:387:U:P	47:Y1:20:ARG:HH12	2.34	0.50
25:YA:1490:A:O2'	27:YD:99:ASP:OD1	2.29	0.50
25:YA:1649:G:O2'	37:YR:107:ASP:OD1	2.17	0.50
25:YA:2247:A:H2'	25:YA:2248:C:H6	1.77	0.50
25:YA:2701:C:H3'	25:YA:2702:U:C5'	2.38	0.50
46:Y0:69:PHE:HE1	46:Y0:79:VAL:HG13	1.76	0.50
49:Y3:18:ASP:OD1	49:Y3:19:GLN:N	2.44	0.50
1:QA:1372:U:H2'	1:QA:1373:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:154:ASN:OD1	4:QD:155:LEU:N	2.40	0.50
16:QP:69:THR:O	16:QP:72:ARG:HG2	2.11	0.50
25:RA:995:C:O2	33:RN:3:THR:OG1	2.28	0.50
25:RA:1266:G:O2'	25:RA:2012:G:O6	2.19	0.50
25:RA:1434:A:H61	25:RA:1558:A:H62	1.59	0.50
31:RH:9:ILE:HD13	31:RH:49:VAL:HG12	1.94	0.50
38:RS:20:ARG:HH22	46:R0:47:PRO:HB2	1.77	0.50
39:RT:91:ARG:HD2	39:RT:120:ARG:NH1	2.27	0.50
42:RW:111:HIS:CD2	42:RW:113:LYS:H	2.29	0.50
1:XA:481:G:O2'	1:XA:482:A:H8	1.95	0.50
1:XA:1336:C:H1'	1:XA:1337:G:C2	2.47	0.50
5:XE:15:ARG:HD2	5:XE:26:PHE:CD2	2.47	0.50
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.76	0.50
25:YA:938:G:H2'	25:YA:939:G:H8	1.76	0.50
25:YA:1400:G:H2'	25:YA:1401:G:H8	1.76	0.50
25:YA:2741:A:N3	55:Y9:30:PRO:HD2	2.27	0.50
25:YA:2747:G:H1	25:YA:2755:C:P	2.35	0.50
27:YD:35:LYS:HE2	27:YD:35:LYS:HA	1.92	0.50
32:YI:14:ASP:C	32:YI:16:GLY:H	2.14	0.50
40:YU:108:GLU:HG3	41:YV:45:THR:OG1	2.11	0.50
43:YX:72:LYS:NZ	43:YX:75:ASP:OD1	2.44	0.50
1:QA:370:C:H2'	1:QA:371:G:C8	2.47	0.50
7:QG:22:LEU:HG	7:QG:62:PHE:HE2	1.76	0.50
8:QH:82:HIS:HB3	8:QH:138:TRP:CE2	2.46	0.50
25:RA:194:G:H2'	25:RA:195:A:O4'	2.11	0.50
25:RA:2046:G:H5'	51:R5:19:ARG:HG3	1.94	0.50
25:RA:2241:A:H2'	25:RA:2242:G:H8	1.76	0.50
25:RA:2630:G:H2'	25:RA:2631:G:H8	1.77	0.50
25:RA:2682:U:O2'	39:RT:58:ASN:ND2	2.45	0.50
1:XA:1236:A:H2'	1:XA:1237:C:C6	2.47	0.50
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.11	0.50
25:YA:2329:G:H2'	25:YA:2330:G:C8	2.46	0.50
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.47	0.50
13:QM:14:ARG:HH12	13:QM:42:ALA:HA	1.76	0.50
14:QN:26:ARG:HD3	14:QN:43:CYS:HB3	1.94	0.50
25:RA:2852:G:H2'	25:RA:2853:C:C6	2.46	0.50
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.92	0.50
29:RF:148:LEU:HD22	29:RF:154:VAL:HG21	1.93	0.50
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.93	0.50
42:RW:82:LEU:HD23	42:RW:84:ARG:NH2	2.26	0.50
44:RY:9:LYS:HE2	44:RY:28:LYS:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:4:ARG:HA	45:RZ:59:LEU:H	1.77	0.50
1:XA:1095:U:P	1:XA:1108:G:H1	2.34	0.50
22:XV:35:C:O2'	22:XV:36:A:OP1	2.29	0.50
25:YA:23:G:OP1	25:YA:504:U:N3	2.40	0.50
25:YA:1022:G:N2	25:YA:1023:U:O4	2.44	0.50
25:YA:1408:C:H2'	25:YA:1409:C:C6	2.47	0.50
30:YG:15:VAL:HG21	30:YG:176:LEU:HD23	1.93	0.50
31:YH:130:ARG:NH1	31:YH:132:ARG:HE	2.09	0.50
35:YP:91:PHE:CE2	35:YP:95:VAL:HG22	2.47	0.50
1:QA:414:A:OP2	1:QA:428:G:N2	2.43	0.50
8:QH:12:ARG:HD2	8:QH:26:VAL:HG12	1.93	0.50
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.93	0.50
28:RE:101:ARG:NH1	28:RE:171:GLU:HB2	2.26	0.50
32:RI:69:LYS:HG3	32:RI:136:VAL:HG23	1.94	0.50
33:RN:47:ALA:HB2	33:RN:112:LEU:HD11	1.94	0.50
1:XA:920:U:H2'	1:XA:921:U:C6	2.46	0.50
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.47	0.50
1:XA:1376:U:OP1	7:XG:98:SER:OG	2.25	0.50
4:XD:30:LYS:HG2	4:XD:35:ARG:HH21	1.76	0.50
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.77	0.50
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.47	0.50
22:XV:37:U:H2'	22:XV:38:A:H8	1.77	0.50
25:YA:273:G:H2'	25:YA:273(A):G:H8	1.77	0.50
25:YA:582:G:H2'	25:YA:583:G:C8	2.47	0.50
25:YA:764:A:N3	27:YD:213:ARG:NH1	2.60	0.50
25:YA:823:G:H2'	25:YA:824:A:C8	2.45	0.50
25:YA:1167:U:H2'	25:YA:1168:G:C8	2.47	0.50
25:YA:2630:G:H2'	25:YA:2631:G:C8	2.47	0.50
25:YA:2747:G:H21	25:YA:2757:A:H62	1.58	0.50
27:YD:36:PRO:HD3	27:YD:63:ARG:HG3	1.94	0.50
31:YH:150:ALA:O	55:Y9:19:ARG:HD3	2.12	0.50
32:YI:133:HIS:HB3	32:YI:134:PRO:HD3	1.94	0.50
42:YW:45:TYR:CZ	42:YW:49:LYS:HD2	2.47	0.50
1:QA:272:C:H2'	1:QA:273:A:C8	2.47	0.49
1:QA:688:G:H2'	1:QA:689:C:C6	2.47	0.49
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.45	0.49
1:QA:1169:A:H2'	1:QA:1170:A:C8	2.47	0.49
1:QA:1222:G:OP1	19:QS:78:ARG:NH1	2.34	0.49
1:QA:1346:A:N3	9:QI:107:ARG:NH2	2.59	0.49
1:QA:1527:C:H2'	1:QA:1528:U:C6	2.47	0.49
5:QE:91:LEU:HG	5:QE:120:THR:HG22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:144:C:H2'	25:RA:145:G:C8	2.46	0.49
25:RA:1791:A:H8	25:RA:1791:A:OP2	1.95	0.49
25:RA:1804:C:OP1	27:RD:259:THR:OG1	2.30	0.49
40:RU:83:LEU:HD12	40:RU:113:ALA:HB2	1.93	0.49
47:R1:44:PRO:HG2	47:R1:46:LEU:CD1	2.42	0.49
1:XA:482:A:H2'	1:XA:483:C:O4'	2.12	0.49
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.27	0.49
25:YA:227:A:C2	25:YA:2407:G:H1'	2.47	0.49
25:YA:676:A:C8	25:YA:2070:G:H1'	2.47	0.49
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.28	0.49
25:YA:1453:A:N6	25:YA:2702:U:H1'	2.27	0.49
25:YA:1923:U:H2'	25:YA:1924:C:C6	2.47	0.49
25:YA:2692:C:H2'	25:YA:2693:A:H8	1.77	0.49
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.47	0.49
25:YA:2868:A:H2'	25:YA:2869:G:C8	2.46	0.49
30:YG:106:LEU:HD12	30:YG:110:ALA:HB3	1.94	0.49
30:YG:107:LEU:HD23	30:YG:111:LEU:HD12	1.93	0.49
39:YT:26:ASP:HB3	39:YT:92:GLY:H	1.76	0.49
39:YT:123:GLN:O	39:YT:126:ALA:N	2.40	0.49
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.94	0.49
1:QA:936:C:C2	1:QA:937:A:C8	3.01	0.49
3:QC:138:VAL:HG13	3:QC:149:ALA:HB3	1.94	0.49
19:QS:23:ASN:OD1	19:QS:24:ALA:N	2.45	0.49
22:QW:71:G:H21	25:RA:1851:U:H4'	1.76	0.49
25:RA:271(B):G:H1	25:RA:404:C:H42	1.60	0.49
25:RA:322:A:OP2	29:RF:169:ASN:HB2	2.12	0.49
25:RA:1791:A:H5'	27:RD:206:LEU:HD12	1.93	0.49
25:RA:2059:A:H5'	25:RA:2060:A:OP2	2.13	0.49
25:RA:2403:C:C2	25:RA:2415:G:C2	2.99	0.49
25:RA:2478:A:H5''	55:R9:5:ALA:HB3	1.94	0.49
26:RB:111:U:H2'	26:RB:112:G:H8	1.77	0.49
32:RI:100:ALA:O	32:RI:104:GLN:CB	2.60	0.49
54:R8:29:LYS:HB2	54:R8:33:ASN:ND2	2.27	0.49
1:XA:244:U:H4'	1:XA:245:C:O5'	2.13	0.49
1:XA:993:G:O2'	1:XA:994:A:N7	2.40	0.49
2:XB:212:GLN:HG3	2:XB:235:SER:HB2	1.93	0.49
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.94	0.49
25:YA:587:C:H4'	25:YA:588:U:O5'	2.12	0.49
25:YA:1076:C:H2'	25:YA:1077:A:H5''	1.94	0.49
25:YA:2115:G:N2	25:YA:2165:G:N7	2.45	0.49
25:YA:2726:U:H5'	34:YO:32:TYR:HE2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:36:PRO:HB2	27:YD:61:LEU:HB3	1.94	0.49
30:YG:81:LYS:O	30:YG:82:LEU:HB2	2.12	0.49
43:YX:21:PHE:HA	43:YX:26:TYR:HE1	1.76	0.49
1:QA:972:C:OP2	10:QJ:57:LYS:HG2	2.12	0.49
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.12	0.49
5:QE:15:ARG:HG3	5:QE:28:PHE:HE1	1.77	0.49
19:QS:10:PHE:CE2	19:QS:16:LEU:HB2	2.47	0.49
25:RA:242:G:H2'	54:R8:5:LYS:HA	1.95	0.49
25:RA:270(S):G:H21	47:R1:78:LYS:HE3	1.77	0.49
25:RA:1224:G:O6	41:RV:69:LYS:NZ	2.45	0.49
25:RA:1263:U:H2'	25:RA:1264:G:C8	2.48	0.49
25:RA:1543:A:H1'	25:RA:1545:A:O4'	2.12	0.49
31:RH:115:VAL:HB	31:RH:148:ILE:HD13	1.93	0.49
34:RO:104:ARG:HH11	34:RO:121:VAL:HG12	1.77	0.49
36:RQ:116:GLU:O	36:RQ:120:ILE:HG12	2.12	0.49
36:RQ:135:ASP:OD2	45:RZ:81:ARG:NH2	2.40	0.49
39:RT:121:ILE:O	39:RT:125:ARG:HG2	2.12	0.49
1:XA:489:C:H2'	1:XA:490:G:H8	1.76	0.49
1:XA:1308:U:H2'	1:XA:1309:G:H8	1.76	0.49
1:XA:1357:A:H61	1:XA:1365:G:H1	1.60	0.49
1:XA:1392:G:H21	1:XA:1502:A:H8	1.58	0.49
6:XF:12:PRO:HG3	6:XF:57:GLN:HG3	1.94	0.49
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.94	0.49
22:XW:8:U:H2'	22:XW:13:C:H41	1.77	0.49
25:YA:820:A:H4'	25:YA:836:G:N2	2.27	0.49
25:YA:1140:C:OP1	33:YN:23:LEU:HB3	2.12	0.49
25:YA:1184:G:OP1	49:Y3:30:ARG:HD2	2.12	0.49
25:YA:1204:A:O2'	25:YA:1205:U:H5''	2.11	0.49
25:YA:2025:C:H2'	25:YA:2026:C:C6	2.48	0.49
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.29	0.49
25:YA:2742:C:H4'	55:Y9:27:CYS:HB2	1.93	0.49
33:YN:70:LYS:HD3	33:YN:87:LEU:HD12	1.94	0.49
36:YQ:48:GLU:OE2	36:YQ:51:ARG:NH2	2.44	0.49
45:YZ:94:GLU:HB2	45:YZ:95:PRO:HD3	1.94	0.49
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.27	0.49
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.45	0.49
11:QK:82:VAL:HB	11:QK:108:ILE:HG12	1.94	0.49
25:RA:30:G:H2'	25:RA:31:C:C6	2.48	0.49
25:RA:607:U:OP1	29:RF:102:PRO:HA	2.12	0.49
25:RA:1539:G:H2'	25:RA:1540:G:H8	1.78	0.49
25:RA:2074:U:H2'	25:RA:2075:U:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2591:C:H2'	25:RA:2592:G:H8	1.75	0.49
25:RA:2693:A:H2'	25:RA:2694:G:H8	1.76	0.49
30:RG:67:LYS:HD2	30:RG:68:PRO:HD2	1.94	0.49
30:RG:120:LEU:HB2	30:RG:180:PHE:HD1	1.78	0.49
37:RR:74:LYS:C	37:RR:76:VAL:H	2.15	0.49
45:RZ:137:ILE:HG22	45:RZ:139:VAL:HG13	1.94	0.49
50:R4:45:GLY:C	50:R4:47:GLN:H	2.15	0.49
1:XA:337:C:H2'	1:XA:338:A:C8	2.48	0.49
1:XA:559:A:H4'	1:XA:560:U:H3'	1.94	0.49
13:XM:91:ARG:HB2	13:XM:98:VAL:HG22	1.94	0.49
25:YA:2525:G:H1'	55:Y9:28:GLU:HB2	1.94	0.49
25:YA:2574:G:H2'	25:YA:2575:C:O4'	2.12	0.49
25:YA:2743:C:H1'	25:YA:2744:G:OP1	2.12	0.49
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.94	0.49
1:QA:1453:G:C6	20:QT:55:ILE:HD11	2.47	0.49
2:QB:74:LYS:NZ	2:QB:205:ASP:O	2.41	0.49
8:QH:17:THR:HB	8:QH:78:GLN:OE1	2.12	0.49
20:QT:15:ARG:NH2	20:QT:18:GLN:OE1	2.46	0.49
25:RA:245:G:OP1	35:RP:69:GLY:HA3	2.13	0.49
25:RA:729:G:OP2	27:RD:13:ARG:HD3	2.13	0.49
25:RA:1667:G:O2'	25:RA:1991:U:O4	2.30	0.49
25:RA:2635:C:O2'	28:RE:80:GLU:OE2	2.30	0.49
30:RG:9:ARG:O	30:RG:13:GLU:HG2	2.13	0.49
32:RI:78:THR:HG22	32:RI:141:LYS:HE3	1.93	0.49
25:YA:831:G:N2	35:YP:53:GLY:O	2.45	0.49
25:YA:1636:C:H2'	25:YA:1637:A:H8	1.78	0.49
25:YA:1656:C:H2'	25:YA:1657:C:H6	1.78	0.49
25:YA:1668:A:N3	25:YA:1670:C:N4	2.60	0.49
25:YA:2001:A:H2'	25:YA:2002:G:C8	2.47	0.49
25:YA:2106:G:H2'	25:YA:2107:C:C6	2.47	0.49
25:YA:2306:C:H3'	25:YA:2307:G:H5''	1.93	0.49
25:YA:2743:C:O2'	25:YA:2744:G:P	2.70	0.49
25:YA:2747:G:H1'	31:YH:67:LEU:HD12	1.94	0.49
25:YA:2756:U:O4	25:YA:2758:A:C5	2.65	0.49
38:YS:3:ARG:HE	38:YS:4:LEU:HD13	1.77	0.49
49:Y3:11:SER:OG	49:Y3:13:ILE:HG12	2.13	0.49
1:QA:56:U:H2'	1:QA:57:G:H8	1.78	0.49
1:QA:743:U:H2'	1:QA:744:C:C6	2.47	0.49
1:QA:1104:G:H4'	2:QB:111:ARG:HD2	1.93	0.49
2:QB:118:LEU:HB3	2:QB:142:LEU:HD12	1.93	0.49
25:RA:270(J):G:H2'	25:RA:270(K):C:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1019:U:HO2'	25:RA:1021:A:H2	1.60	0.49
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.45	0.49
25:RA:2303:G:O2'	30:RG:132:ASN:HB2	2.13	0.49
25:RA:2725:A:O2'	25:RA:2726:U:H5''	2.12	0.49
31:RH:8:PRO:CG	31:RH:69:ARG:HE	2.15	0.49
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.95	0.49
36:RQ:4:PRO:HG3	36:RQ:69:PHE:CE2	2.48	0.49
1:XA:360:A:H2'	1:XA:361:G:C8	2.46	0.49
1:XA:485:G:H1'	1:XA:486:U:H5	1.77	0.49
1:XA:992:U:O2'	1:XA:993:G:OP2	2.27	0.49
25:YA:29:U:H2'	25:YA:30:G:H8	1.77	0.49
25:YA:92:G:H2'	25:YA:93:C:C6	2.47	0.49
25:YA:836:G:H2'	25:YA:837:C:H6	1.78	0.49
25:YA:1202:C:N4	25:YA:1203:G:C6	2.80	0.49
25:YA:1636:C:H2'	25:YA:1637:A:C8	2.47	0.49
25:YA:2575:C:H5'	28:YE:144:ARG:HG3	1.95	0.49
33:YN:47:ALA:O	33:YN:119:ARG:NH1	2.40	0.49
1:QA:560:U:H4'	1:QA:561:U:H5''	1.94	0.49
1:QA:1309:G:C6	1:QA:1329:A:N1	2.81	0.49
25:RA:39:C:O2	29:RF:46:ARG:NH2	2.44	0.49
25:RA:270(R):G:H2'	25:RA:270(S):G:C8	2.48	0.49
25:RA:546:C:H3'	25:RA:547:A:H8	1.77	0.49
25:RA:1113:U:H2'	25:RA:1114:G:H8	1.77	0.49
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.12	0.49
25:RA:1689:A:OP2	25:RA:1698:A:N6	2.41	0.49
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.47	0.49
36:RQ:67:ARG:HD2	36:RQ:105:GLU:OE1	2.11	0.49
37:RR:88:ARG:NH2	37:RR:89:ASP:OD1	2.46	0.49
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.78	0.49
1:XA:254:G:O2'	17:XQ:16:GLN:O	2.28	0.49
1:XA:375:U:O2'	16:XP:6:LEU:O	2.31	0.49
1:XA:599:C:O2'	8:XH:129:VAL:O	2.22	0.49
1:XA:1096:C:H2'	1:XA:1097:C:H6	1.77	0.49
4:XD:108:LEU:HD21	4:XD:183:GLY:HA3	1.94	0.49
12:XL:24:VAL:HG13	12:XL:98:TYR:CE1	2.47	0.49
24:XY:30:G:C2	24:XY:31:A:C8	3.01	0.49
25:YA:590:A:H2'	25:YA:591:C:C6	2.48	0.49
25:YA:1062:G:N3	25:YA:1077:A:N6	2.61	0.49
25:YA:2037:G:H2'	25:YA:2038:G:H8	1.76	0.49
25:YA:2290:G:H2'	25:YA:2291:U:C6	2.47	0.49
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:133:LEU:HB3	27:YD:173:VAL:HG21	1.94	0.49
29:YF:125:LEU:HA	29:YF:194:MET:O	2.12	0.49
31:YH:164:TYR:CD2	31:YH:167:GLU:HB2	2.47	0.49
32:YI:69:LYS:HG3	32:YI:136:VAL:HG23	1.95	0.49
32:YI:72:LEU:HD11	32:YI:101:LEU:HD11	1.95	0.49
33:YN:16:ILE:HG21	33:YN:26:LEU:HD11	1.95	0.49
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.95	0.49
40:YU:92:ARG:CD	41:YV:11:GLN:HB2	2.40	0.49
1:QA:464:G:C6	1:QA:466:C:H5'	2.48	0.49
1:QA:911:U:H2'	1:QA:912:C:C6	2.48	0.49
1:QA:1399:C:C2	1:QA:1502:A:N6	2.81	0.49
1:QA:1414:U:H2'	1:QA:1415:G:H8	1.78	0.49
25:RA:856:C:H2'	25:RA:857:C:C6	2.48	0.49
25:RA:2210:G:H5'	25:RA:2211:G:C6	2.48	0.49
37:RR:79:LEU:HD12	37:RR:83:ILE:HB	1.95	0.49
42:RW:24:ILE:HD13	42:RW:36:LEU:HD11	1.94	0.49
1:XA:359:U:H2'	1:XA:360:A:C8	2.48	0.49
1:XA:736:C:H2'	1:XA:737:A:C8	2.46	0.49
1:XA:1522:U:H2'	1:XA:1523:G:H8	1.77	0.49
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.95	0.49
22:XW:34:U:H3'	22:XW:35:C:H5''	1.93	0.49
25:YA:588:U:O4	25:YA:670:A:H1'	2.13	0.49
25:YA:2064:C:H2'	25:YA:2065:C:C6	2.47	0.49
25:YA:2379:G:O2'	38:YS:17:ARG:NH2	2.35	0.49
29:YF:155:LEU:HB2	29:YF:189:THR:HG21	1.95	0.49
30:YG:179:PRO:HB3	50:Y4:43:TYR:CE1	2.48	0.49
45:YZ:10:ARG:NH2	45:YZ:37:VAL:O	2.46	0.49
1:QA:32:A:H1'	1:QA:48:C:H41	1.78	0.49
1:QA:64:G:H4'	1:QA:65:U:O5'	2.13	0.49
1:QA:108:G:H5''	1:QA:109:A:H5''	1.94	0.49
1:QA:110:C:H2'	1:QA:111:G:O4'	2.12	0.49
1:QA:130:A:H5''	1:QA:190:G:H2'	1.95	0.49
1:QA:385:C:H2'	1:QA:386:C:C6	2.47	0.49
1:QA:579:G:H2'	1:QA:580:U:C6	2.48	0.49
1:QA:1368:G:H4'	14:QN:61:TRP:HZ2	1.78	0.49
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.94	0.49
25:RA:52:A:H2'	25:RA:53:A:H8	1.78	0.49
25:RA:678:C:H2'	25:RA:679:C:C6	2.48	0.49
25:RA:690:G:H2'	25:RA:691:C:C6	2.48	0.49
25:RA:1140:C:OP2	33:RN:66:LYS:NZ	2.31	0.49
25:RA:1164:G:H2'	25:RA:1165:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1351:C:O2'	25:RA:1571:A:N3	2.37	0.49
25:RA:1991:U:H2'	25:RA:1992:G:H5''	1.95	0.49
25:RA:2720:U:C2	25:RA:2721:A:C8	3.01	0.49
26:RB:48:A:OP2	38:RS:30:ARG:NH2	2.46	0.49
34:RO:104:ARG:NH1	34:RO:121:VAL:O	2.46	0.49
1:XA:20:U:H2'	1:XA:21:G:O4'	2.12	0.49
1:XA:555:C:H2'	1:XA:556:C:H6	1.78	0.49
1:XA:1322:C:H5'	13:XM:100:GLY:HA3	1.95	0.49
25:YA:83:G:N1	25:YA:102:G:O2'	2.31	0.49
25:YA:398:G:H2'	25:YA:399:G:H8	1.78	0.49
25:YA:698:C:O2'	25:YA:734:A:N6	2.45	0.49
25:YA:2004:G:C5	25:YA:2005:A:C8	3.01	0.49
25:YA:2329:G:H2'	25:YA:2330:G:H8	1.78	0.49
25:YA:2455:G:H2'	25:YA:2456:C:C6	2.48	0.49
25:YA:2539:C:H1'	55:Y9:29:ASN:ND2	2.27	0.49
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.43	0.49
31:YH:149:ARG:C	55:Y9:20:HIS:HB2	2.34	0.49
1:QA:1145:C:H4'	1:QA:1146:A:H8	1.78	0.49
22:QW:8:U:H2'	22:QW:13:C:H41	1.78	0.49
25:RA:278:A:H61	25:RA:362:U:H3	1.61	0.49
25:RA:459:U:H4'	53:R7:40:TRP:CZ3	2.48	0.49
25:RA:627:A:H4'	25:RA:628:G:H5'	1.93	0.49
25:RA:859:G:N2	25:RA:917:A:OP2	2.46	0.49
28:RE:60:ASN:CG	28:RE:62:PRO:HD2	2.33	0.49
30:RG:114:ILE:HB	30:RG:117:PHE:HB2	1.95	0.49
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.76	0.49
1:XA:501:C:H2'	1:XA:502:G:H8	1.78	0.49
1:XA:552:U:H2'	1:XA:553:A:C8	2.48	0.49
1:XA:728:A:H2'	1:XA:729:A:H8	1.76	0.49
5:XE:75:THR:HA	5:XE:115:VAL:HG13	1.94	0.49
6:XF:80:ARG:HD2	6:XF:88:VAL:HB	1.93	0.49
22:XW:5:G:H2'	22:XW:6:G:C8	2.47	0.49
25:YA:1109:C:O2'	25:YA:1110:G:OP1	2.28	0.49
25:YA:1800:C:H3'	27:YD:147:LEU:HD22	1.95	0.49
25:YA:2541:A:HO2'	25:YA:2764:A:H2	1.60	0.49
27:YD:77:ALA:HB3	27:YD:117:VAL:HG13	1.94	0.49
30:YG:170:ARG:NH2	30:YG:182:LYS:O	2.46	0.49
1:QA:685:G:H21	1:QA:706:A:H61	1.61	0.48
1:QA:1443:G:C6	39:RT:118:ARG:HB2	2.48	0.48
2:QB:160:ASP:O	2:QB:183:PRO:HD2	2.13	0.48
25:RA:679:C:H2'	25:RA:680:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2306:C:H3'	25:RA:2307:G:H5''	1.95	0.48
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.31	0.48
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.48	0.48
25:RA:2771:C:H2'	25:RA:2772:C:C6	2.48	0.48
28:RE:36:ARG:HG3	28:RE:47:VAL:HG12	1.95	0.48
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.95	0.48
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.78	0.48
41:RV:24:LYS:HD3	41:RV:90:PRO:HB2	1.93	0.48
1:XA:265:G:H2'	1:XA:266:G:H5''	1.95	0.48
1:XA:552:U:O2	12:XL:31:PRO:HB3	2.12	0.48
1:XA:663:A:H5''	18:XR:61:LYS:HE3	1.94	0.48
13:XM:87:TYR:O	13:XM:91:ARG:HG2	2.13	0.48
25:YA:413:C:H2'	25:YA:414:C:H6	1.76	0.48
25:YA:690:G:H4'	27:YD:218:ARG:HH22	1.77	0.48
25:YA:1638:C:O2	25:YA:2698:U:O2'	2.29	0.48
25:YA:1853:A:N3	25:YA:2233:U:O2'	2.40	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.28	0.48
39:YT:26:ASP:HB2	39:YT:90:GLN:O	2.13	0.48
45:YZ:27:VAL:HG12	45:YZ:85:HIS:HE1	1.78	0.48
55:Y9:25:VAL:O	55:Y9:33:LYS:HA	2.13	0.48
1:QA:320:C:H2'	1:QA:321:A:C8	2.48	0.48
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.95	0.48
1:QA:1475:G:H4'	25:RA:1689:A:H4'	1.94	0.48
22:QV:24:C:H2'	22:QV:25:U:C6	2.48	0.48
25:RA:263:C:H2'	25:RA:264:C:O4'	2.13	0.48
25:RA:517:C:OP1	51:R5:16:ARG:NH2	2.46	0.48
25:RA:1389:G:H2'	25:RA:1390:U:C6	2.48	0.48
25:RA:1783:A:HO2'	25:RA:2607:G:HO2'	1.60	0.48
1:XA:1479:C:H2'	1:XA:1480:G:C8	2.44	0.48
2:XB:25:ASN:ND2	2:XB:193:ASP:HB3	2.28	0.48
9:XI:125:TYR:CE2	9:XI:127:LYS:HB2	2.48	0.48
15:XO:67:LEU:HB3	15:XO:78:TYR:HE1	1.78	0.48
25:YA:36:G:N3	25:YA:450:G:O2'	2.44	0.48
25:YA:607:U:C5	25:YA:620:G:C5	3.01	0.48
25:YA:672:C:OP2	35:YP:42:SER:OG	2.30	0.48
25:YA:755:C:H2'	25:YA:756:C:H6	1.77	0.48
25:YA:1689:A:H62	25:YA:1698:A:H2	1.61	0.48
25:YA:2133:G:O2'	25:YA:2158:A:N1	2.41	0.48
35:YP:33:ARG:HD3	35:YP:40:SER:HA	1.94	0.48
47:Y1:5:CYS:HB3	47:Y1:10:LYS:H	1.77	0.48
50:Y4:45:GLY:C	50:Y4:47:GLN:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:191(E):G:H2'	1:QA:191(F):U:C6	2.48	0.48
1:QA:1273:G:H3'	1:QA:1274:G:H8	1.78	0.48
1:QA:1307:U:H2'	1:QA:1308:U:C6	2.49	0.48
3:QC:17:ASP:O	3:QC:54:ARG:NH2	2.45	0.48
22:QW:5:G:H2'	22:QW:6:G:C8	2.49	0.48
25:RA:1078:U:HO2'	25:RA:1079:C:P	2.37	0.48
25:RA:2250:G:C5	36:RQ:82:ARG:HG3	2.48	0.48
25:RA:2406:U:N3	35:RP:72:PRO:HB2	2.28	0.48
25:RA:2692:C:H2'	25:RA:2693:A:H8	1.79	0.48
35:RP:37:GLY:O	35:RP:41:ARG:HG2	2.14	0.48
35:RP:64:LYS:C	35:RP:66:GLY:H	2.17	0.48
1:XA:1086:U:H3	1:XA:1099:G:N2	2.07	0.48
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.49	0.48
1:XA:1250:A:H2	1:XA:1370:G:H1'	1.77	0.48
25:YA:17:G:H4'	40:YU:25:TRP:NE1	2.25	0.48
25:YA:795:C:H2'	25:YA:796:C:C6	2.48	0.48
25:YA:1243:G:H4'	35:YP:7:ARG:HH21	1.78	0.48
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.46	0.48
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.78	0.48
25:YA:2741:A:O3'	55:Y9:31:LYS:CB	2.58	0.48
28:YE:74:PRO:HG2	28:YE:77:ILE:HG22	1.94	0.48
35:YP:57:THR:C	35:YP:59:LEU:H	2.17	0.48
45:YZ:150:LEU:HB2	45:YZ:154:ASP:OD2	2.14	0.48
1:QA:674:G:OP1	6:QF:87:ARG:NH2	2.45	0.48
1:QA:1137:C:O2'	1:QA:1138:G:N3	2.46	0.48
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.48	0.48
6:QF:80:ARG:HD2	6:QF:88:VAL:HB	1.95	0.48
25:RA:634:C:H2'	25:RA:635:C:C6	2.48	0.48
25:RA:909:A:H2'	25:RA:912:C:H5	1.78	0.48
25:RA:1496:A:H8	25:RA:1577:C:HO2'	1.62	0.48
25:RA:2138:C:H42	25:RA:2153:G:H1	1.60	0.48
25:RA:2476:A:H2'	25:RA:2477:C:H6	1.78	0.48
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.12	0.48
27:RD:61:LEU:O	27:RD:63:ARG:NH1	2.39	0.48
1:XA:737:A:H2'	1:XA:738:C:C6	2.48	0.48
1:XA:1350:A:O2'	7:XG:33:ASP:OD1	2.29	0.48
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.79	0.48
9:XI:81:ILE:HG22	9:XI:85:LEU:HD23	1.96	0.48
25:YA:1426:G:OP2	25:YA:1427:A:O2'	2.25	0.48
25:YA:2152:G:H2'	25:YA:2153:G:H8	1.77	0.48
25:YA:2363:C:O3'	46:Y0:55:ARG:NH2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2805:G:H2'	25:YA:2807:G:C8	2.48	0.48
26:YB:15:A:H1'	26:YB:109:G:C8	2.49	0.48
26:YB:33:G:H5'	30:YG:2:PRO:CG	2.41	0.48
26:YB:52:A:O2'	26:YB:53:A:C8	2.66	0.48
28:YE:38:THR:OG1	28:YE:40:GLU:OE1	2.29	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.14	0.48
43:YX:28:PHE:CE1	43:YX:92:LEU:HD11	2.49	0.48
45:YZ:137:ILE:HG22	45:YZ:139:VAL:HG13	1.96	0.48
48:Y2:17:SER:OG	48:Y2:20:GLU:HG2	2.13	0.48
1:QA:399:G:H2'	1:QA:400:C:H6	1.77	0.48
1:QA:922:G:H2'	1:QA:923:A:C8	2.48	0.48
1:QA:1129:C:H4'	1:QA:1130:A:H8	1.79	0.48
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.28	0.48
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.96	0.48
13:QM:40:ASN:HB3	13:QM:43:THR:HG23	1.95	0.48
25:RA:1568:G:P	27:RD:63:ARG:HH22	2.36	0.48
25:RA:2419:U:H2'	25:RA:2420:C:C6	2.48	0.48
25:RA:2465:C:H2'	25:RA:2466:C:H5'	1.96	0.48
26:RB:43:C:H4'	30:RG:98:ARG:HH22	1.78	0.48
29:RF:117:ARG:HH21	29:RF:187:VAL:HA	1.79	0.48
40:RU:44:ASN:HD21	41:RV:75:PHE:HB3	1.77	0.48
43:RX:28:PHE:CE1	43:RX:92:LEU:HD11	2.48	0.48
1:XA:137:C:O2'	16:XP:61:SER:O	2.31	0.48
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.13	0.48
1:XA:1189:C:P	10:XJ:51:ARG:HH22	2.36	0.48
1:XA:1287:A:H2'	1:XA:1288:A:H8	1.76	0.48
1:XA:1343:G:H1'	9:XI:121:ARG:NH1	2.28	0.48
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.48	0.48
1:XA:1521:G:H2'	1:XA:1522:U:C6	2.49	0.48
2:XB:167:PRO:HG2	2:XB:192:SER:HB3	1.95	0.48
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.78	0.48
18:XR:74:ARG:HG2	18:XR:81:PHE:CD1	2.49	0.48
19:XS:65:ASN:O	50:Y4:58:ARG:HD2	2.13	0.48
22:XW:36:A:H2'	22:XW:37:U:C6	2.49	0.48
25:YA:963:U:H2'	25:YA:964:C:C6	2.49	0.48
25:YA:2153:G:H2'	25:YA:2154:G:C8	2.48	0.48
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.96	0.48
28:YE:74:PRO:HG2	28:YE:77:ILE:CG2	2.44	0.48
30:YG:55:LYS:NZ	30:YG:59:GLU:OE2	2.45	0.48
31:YH:142:GLY:O	31:YH:146:ALA:CB	2.61	0.48
31:YH:149:ARG:H	55:Y9:20:HIS:CD2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:120:ARG:O	39:YT:123:GLN:HB2	2.14	0.48
1:QA:359:U:H2'	1:QA:360:A:H8	1.78	0.48
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.31	0.48
1:QA:464:G:O6	1:QA:466:C:H5'	2.14	0.48
1:QA:1258:G:H2'	1:QA:1259:C:C6	2.48	0.48
4:QD:31:CYS:C	4:QD:33:MET:H	2.17	0.48
25:RA:49:A:N7	25:RA:120:U:H5	2.12	0.48
25:RA:67:U:H2'	25:RA:68:G:C8	2.49	0.48
25:RA:468:G:H4'	29:RF:62:ARG:HH12	1.77	0.48
25:RA:638:G:H2'	25:RA:639:U:H6	1.78	0.48
25:RA:2747:G:C2	25:RA:2757:A:N6	2.80	0.48
25:RA:2839:G:H1'	37:RR:93:GLY:H	1.78	0.48
43:RX:18:TYR:HA	43:RX:21:PHE:CD2	2.49	0.48
1:XA:322:C:H2'	1:XA:323:U:C6	2.49	0.48
1:XA:539:A:H2'	1:XA:540:G:H8	1.78	0.48
1:XA:975:A:N1	10:XJ:48:THR:HB	2.29	0.48
2:XB:82:ARG:NH1	2:XB:92:TYR:OH	2.47	0.48
4:XD:131:ARG:HD3	4:XD:132:ARG:O	2.14	0.48
25:YA:374:A:H1'	25:YA:401:A:N6	2.28	0.48
25:YA:857:C:OP1	46:Y0:69:PHE:HD2	1.96	0.48
25:YA:1405:U:H2'	25:YA:1406:U:H6	1.79	0.48
25:YA:2789:C:H1'	25:YA:2892:A:C2	2.49	0.48
30:YG:7:LEU:HD12	30:YG:10:LYS:HD2	1.96	0.48
36:YQ:32:TYR:OH	36:YQ:111:GLU:HB3	2.13	0.48
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.95	0.48
39:YT:66:VAL:HA	39:YT:71:GLY:HA2	1.95	0.48
47:Y1:83:GLU:HG2	47:Y1:85:LEU:H	1.78	0.48
49:Y3:11:SER:HB2	49:Y3:31:LEU:HD11	1.95	0.48
1:QA:920:U:H2'	1:QA:921:U:C6	2.48	0.48
1:QA:1144:G:H21	1:QA:1146:A:H62	1.62	0.48
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.48	0.48
4:QD:85:LYS:HD2	4:QD:92:VAL:HG11	1.95	0.48
13:QM:83:ASP:H	13:QM:93:ARG:NH2	2.12	0.48
22:QW:36:A:H2'	22:QW:37:U:C6	2.49	0.48
25:RA:500:G:N1	25:RA:503:A:OP2	2.42	0.48
25:RA:1152:C:H4'	40:RU:77:SER:HA	1.96	0.48
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.49	0.48
26:RB:32:C:C4	26:RB:51:G:N2	2.82	0.48
27:RD:43:ARG:HD2	27:RD:49:ILE:HD12	1.95	0.48
29:RF:107:LYS:HB3	29:RF:206:ILE:HD12	1.96	0.48
1:XA:545:C:O2'	1:XA:549:C:OP1	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:707:C:H2'	1:XA:708:C:C6	2.49	0.48
4:XD:31:CYS:C	4:XD:33:MET:H	2.17	0.48
22:XW:10:G:H2'	22:XW:11:A:H8	1.78	0.48
25:YA:220:G:O2'	25:YA:233:A:N3	2.43	0.48
25:YA:270(F):U:H2'	25:YA:270(G):C:H6	1.79	0.48
25:YA:1186:G:H8	25:YA:1186:G:O5'	1.96	0.48
25:YA:2809:A:H2'	25:YA:2810:A:C8	2.49	0.48
25:YA:2836:U:H2'	25:YA:2837:G:H8	1.78	0.48
1:QA:433:C:H2'	1:QA:434:U:H6	1.77	0.48
1:QA:778:G:O2'	11:QK:120:ARG:O	2.29	0.48
1:QA:1488:G:H2'	1:QA:1489:G:C8	2.49	0.48
5:QE:102:ALA:HB1	5:QE:106:PRO:HG2	1.96	0.48
13:QM:87:TYR:HB2	19:QS:73:GLU:HA	1.94	0.48
25:RA:974(A):C:H4'	25:RA:975:G:C5'	2.43	0.48
25:RA:1709:U:H2'	25:RA:1710:C:C6	2.49	0.48
25:RA:2064:C:H2'	25:RA:2065:C:H6	1.79	0.48
26:RB:109:G:H2'	26:RB:110:G:H8	1.78	0.48
32:RI:14:ASP:C	32:RI:16:GLY:H	2.17	0.48
40:RU:92:ARG:CD	41:RV:11:GLN:HB2	2.39	0.48
41:RV:61:VAL:HG12	41:RV:63:GLY:H	1.77	0.48
1:XA:69:G:HO2'	1:XA:152:A:H2	1.60	0.48
1:XA:324:G:N2	1:XA:327:A:OP2	2.46	0.48
1:XA:1055:A:N6	1:XA:1206:G:N7	2.62	0.48
1:XA:1314:C:H2'	1:XA:1315:U:H6	1.79	0.48
13:XM:64:TRP:HD1	13:XM:65:LYS:O	1.97	0.48
25:YA:1332:G:N2	25:YA:1610:A:N7	2.59	0.48
25:YA:2744:G:O6	55:Y9:1:MET:SD	2.71	0.48
25:YA:2764:A:N7	25:YA:2766:G:C5	2.82	0.48
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.43	0.48
28:YE:170:LEU:HD21	28:YE:187:ALA:HB3	1.96	0.48
30:YG:137:GLU:HB2	30:YG:152:LEU:HD22	1.96	0.48
31:YH:149:ARG:HE	55:Y9:20:HIS:N	2.06	0.48
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.96	0.48
40:YU:74:LEU:HD12	40:YU:110:VAL:HG13	1.95	0.48
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.77	0.48
1:QA:514:C:H2'	1:QA:515:G:H8	1.76	0.48
1:QA:981:U:H2'	1:QA:982:U:C5	2.48	0.48
1:QA:1329:A:N7	21:QU:7:ARG:NH2	2.49	0.48
1:QA:1488:G:H2'	1:QA:1489:G:H8	1.79	0.48
17:QQ:83:ASP:OD1	17:QQ:84:LEU:N	2.45	0.48
25:RA:922:U:H2'	25:RA:923:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1065:U:O2	25:RA:1074:G:N1	2.47	0.48
25:RA:1336:A:H2'	25:RA:1337:G:H8	1.79	0.48
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.14	0.48
45:RZ:182:LYS:O	45:RZ:182:LYS:HD3	2.14	0.48
1:XA:1036:G:H5'	1:XA:1037:C:OP2	2.14	0.48
5:XE:15:ARG:HG3	5:XE:28:PHE:HE1	1.78	0.48
13:XM:14:ARG:HG2	13:XM:44:ARG:NH1	2.28	0.48
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.77	0.48
22:XW:1:C:H42	22:XW:73:A:H61	1.62	0.48
25:YA:401:A:H2'	25:YA:402:A:C8	2.49	0.48
25:YA:755:C:H2'	25:YA:756:C:C6	2.49	0.48
25:YA:783:A:H2'	25:YA:784:A:H4'	1.96	0.48
25:YA:1804:C:OP1	27:YD:259:THR:OG1	2.32	0.48
25:YA:1818:U:H2'	27:YD:157:ARG:HG2	1.96	0.48
25:YA:2437:U:H2'	25:YA:2438:U:C6	2.48	0.48
25:YA:2462:U:H2'	25:YA:2463:C:H6	1.78	0.48
28:YE:35:GLN:HE21	28:YE:37:ARG:CZ	2.26	0.48
29:YF:110:LEU:HD11	29:YF:181:LEU:HG	1.96	0.48
31:YH:91:GLY:HA3	31:YH:94:TYR:CD2	2.49	0.48
43:YX:18:TYR:HA	43:YX:21:PHE:CD2	2.49	0.48
55:Y9:24:TYR:OH	55:Y9:35:ARG:NE	2.44	0.48
1:QA:664:G:N2	1:QA:741:G:H1	2.08	0.48
1:QA:687:A:H2	1:QA:704:A:C6	2.32	0.48
1:QA:973:G:C4	10:QJ:55:LYS:HE3	2.49	0.48
1:QA:1298:C:H4'	1:QA:1299:A:C8	2.49	0.48
9:QI:69:GLY:O	9:QI:73:GLN:HG3	2.13	0.48
25:RA:690:G:H21	27:RD:43:ARG:NH2	2.12	0.48
25:RA:710:G:H2'	25:RA:711:G:H8	1.78	0.48
25:RA:970:C:H2'	25:RA:971:C:C6	2.49	0.48
25:RA:1031:G:C2	55:R9:20:HIS:ND1	2.82	0.48
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.79	0.48
25:RA:1201:C:H2'	25:RA:1202:C:H6	1.78	0.48
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.49	0.48
30:RG:60:LEU:HD21	30:RG:92:VAL:HG11	1.96	0.48
1:XA:21:G:H2'	1:XA:22:G:H8	1.78	0.48
1:XA:114:U:H2'	1:XA:115:G:C8	2.49	0.48
1:XA:138:G:H2'	1:XA:139:G:C8	2.49	0.48
1:XA:411:A:N6	1:XA:413:G:H21	2.12	0.48
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.13	0.48
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.96	0.48
12:XL:45:PRO:HB3	12:XL:92:ASP:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:69:THR:O	16:XP:72:ARG:HG2	2.13	0.48
25:YA:1165:U:H2'	25:YA:1166:C:H6	1.79	0.48
25:YA:1301:A:C8	25:YA:1303:G:C8	3.01	0.48
25:YA:1688:U:H5'	25:YA:1689:A:OP1	2.14	0.48
25:YA:2146:C:H4'	25:YA:2147:G:C8	2.48	0.48
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.13	0.48
25:YA:2528:U:H2'	25:YA:2530:A:O5'	2.14	0.48
25:YA:2745:C:O2'	31:YH:139:GLN:HA	2.14	0.48
25:YA:2816:C:O2	25:YA:2883:A:O2'	2.26	0.48
44:YY:9:LYS:HE2	44:YY:28:LYS:O	2.13	0.48
47:Y1:52:ARG:HH11	47:Y1:57:GLU:HB2	1.79	0.48
1:QA:570:G:H2'	1:QA:571:U:C6	2.49	0.47
1:QA:1301:U:O2'	1:QA:1302:U:OP1	2.32	0.47
25:RA:579:G:H2'	25:RA:580:C:C6	2.49	0.47
25:RA:953:A:OP2	36:RQ:16:ARG:HD3	2.14	0.47
25:RA:1423:G:H5''	27:RD:33:LEU:HD11	1.96	0.47
29:RF:125:LEU:HA	29:RF:194:MET:O	2.14	0.47
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.13	0.47
1:XA:389:A:H3'	1:XA:390:C:C6	2.48	0.47
1:XA:481:G:O2'	1:XA:482:A:O5'	2.32	0.47
1:XA:946:A:H2'	1:XA:947:G:H8	1.79	0.47
11:XK:110:ASP:HB2	18:XR:88:LYS:HD2	1.95	0.47
20:XT:20:LEU:O	20:XT:23:ARG:HG2	2.14	0.47
25:YA:458:G:N2	25:YA:470:A:OP2	2.47	0.47
25:YA:764:A:H5'	27:YD:210:GLY:HA2	1.96	0.47
25:YA:1204:A:H1'	25:YA:1206:G:C8	2.49	0.47
25:YA:1290:C:H2'	25:YA:1291:C:H6	1.79	0.47
25:YA:2547:U:H2'	25:YA:2548:G:H8	1.79	0.47
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.14	0.47
26:YB:32:C:N3	26:YB:51:G:N2	2.62	0.47
30:YG:37:VAL:HG22	30:YG:159:VAL:HG12	1.95	0.47
35:YP:84:ASN:HA	35:YP:115:LEU:O	2.15	0.47
45:YZ:182:LYS:O	45:YZ:182:LYS:HD3	2.14	0.47
1:QA:246:A:C2	1:QA:282:A:C5	3.02	0.47
1:QA:260:G:H2'	1:QA:261:U:C6	2.49	0.47
1:QA:667:G:H2'	1:QA:668:G:C8	2.49	0.47
4:QD:155:LEU:O	4:QD:158:ILE:N	2.47	0.47
13:QM:14:ARG:NH1	13:QM:42:ALA:HA	2.28	0.47
25:RA:65:C:O2'	25:RA:456:C:N3	2.46	0.47
25:RA:181:A:H1'	25:RA:435:C:H5'	1.96	0.47
25:RA:570:G:H2'	25:RA:2030:A:C6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2836:U:H2'	25:RA:2837:G:H8	1.78	0.47
25:RA:2859:G:H2'	25:RA:2860:A:C8	2.49	0.47
26:RB:11:C:OP1	46:R0:72:ARG:NE	2.47	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:HG13	1.96	0.47
1:XA:412:A:H4'	1:XA:413:G:O5'	2.13	0.47
1:XA:707:C:H4'	11:XK:20:TYR:CD2	2.49	0.47
1:XA:1384:C:H2'	1:XA:1385:G:H8	1.80	0.47
1:XA:1422:G:H2'	1:XA:1423:G:H8	1.78	0.47
1:XA:1486:G:H2'	1:XA:1487:G:C8	2.49	0.47
1:XA:1518:A:H2'	1:XA:1519:A:C8	2.48	0.47
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.47
2:XB:205:ASP:OD1	2:XB:206:ASP:N	2.46	0.47
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.79	0.47
14:YN:4:LYS:HA	14:YN:7:ILE:HG12	1.96	0.47
25:YA:603:A:N1	25:YA:625:G:O2'	2.44	0.47
25:YA:971:C:H2'	25:YA:972:G:O4'	2.13	0.47
25:YA:1210:A:H4'	25:YA:1211:U:O5'	2.14	0.47
25:YA:1399:C:H2'	25:YA:1400:G:C8	2.48	0.47
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.49	0.47
25:YA:1475:G:H2'	25:YA:1476:C:C6	2.49	0.47
25:YA:2740:A:C2	25:YA:2741:A:C6	3.02	0.47
25:YA:2755:C:C4	55:Y9:1:MET:HG2	2.47	0.47
26:YB:31:C:N4	26:YB:51:G:H1	2.12	0.47
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.96	0.47
31:YH:121:ILE:HG13	31:YH:144:VAL:HG21	1.97	0.47
31:YH:145:ALA:C	55:Y9:20:HIS:CD2	2.87	0.47
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.95	0.47
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.78	0.47
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.79	0.47
1:QA:1264:C:H2'	1:QA:1265:G:C8	2.49	0.47
1:QA:1354:C:H2'	1:QA:1355:G:H8	1.79	0.47
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CD2	2.49	0.47
20:QT:29:LYS:O	20:QT:33:ILE:HG12	2.14	0.47
20:QT:90:GLN:O	20:QT:93:GLU:HG2	2.14	0.47
22:QW:9:G:H5''	22:QW:10:G:OP2	2.15	0.47
25:RA:575:A:OP2	25:RA:2499:C:O2'	2.27	0.47
25:RA:2292:C:H2'	25:RA:2293:C:H6	1.80	0.47
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.44	0.47
39:RT:53:ARG:O	39:RT:59:THR:HG23	2.14	0.47
48:R2:10:LEU:HD21	48:R2:59:ARG:HD2	1.97	0.47
49:R3:15:TYR:CE2	49:R3:53:LEU:HD21	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:34:C:H2'	1:XA:35:G:C8	2.48	0.47
1:XA:196:A:OP1	20:XT:68:LYS:NZ	2.35	0.47
1:XA:1425:U:H2'	1:XA:1426:C:C6	2.49	0.47
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.49	0.47
15:XO:15:PHE:HD2	15:XO:30:ALA:HB2	1.78	0.47
25:YA:26:G:O2'	25:YA:514:A:N6	2.44	0.47
25:YA:690:G:H2'	25:YA:691:C:C6	2.48	0.47
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.50	0.47
25:YA:1430:C:H2'	25:YA:1431:U:H6	1.76	0.47
25:YA:1662:C:H1'	25:YA:2687:U:H5''	1.97	0.47
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.49	0.47
25:YA:2648:C:H2'	25:YA:2649:U:H6	1.79	0.47
1:QA:295:C:H2'	1:QA:296:U:O4'	2.14	0.47
1:QA:370:C:H2'	1:QA:371:G:H8	1.78	0.47
1:QA:867:G:HO2'	1:QA:873:A:N6	2.12	0.47
1:QA:1159:U:O2'	1:QA:1181:G:N2	2.45	0.47
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.50	0.47
12:QL:30:ALA:HB3	12:QL:33:ARG:HD3	1.95	0.47
13:QM:58:GLU:O	13:QM:62:ASN:HB2	2.13	0.47
25:RA:39:C:H2'	25:RA:40:C:C6	2.49	0.47
25:RA:968:G:H2'	25:RA:969:U:C6	2.49	0.47
25:RA:1291:C:H2'	25:RA:1292:U:H6	1.80	0.47
25:RA:1709:U:H2'	25:RA:1710:C:H6	1.78	0.47
25:RA:2443:C:H2'	25:RA:2444:G:H8	1.79	0.47
25:RA:2455:G:H2'	25:RA:2456:C:C6	2.50	0.47
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.96	0.47
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.78	0.47
45:RZ:94:GLU:HB2	45:RZ:95:PRO:HD3	1.95	0.47
49:R3:6:VAL:HB	49:R3:54:VAL:HG21	1.95	0.47
55:R9:14:CYS:HA	55:R9:27:CYS:SG	2.54	0.47
1:XA:739:C:O2'	15:XO:42:HIS:ND1	2.47	0.47
25:YA:64:A:O3'	43:YX:71:GLY:HA3	2.15	0.47
25:YA:949:C:H2'	25:YA:950:G:C8	2.50	0.47
25:YA:1216:G:OP1	40:YU:11:ARG:NH2	2.36	0.47
25:YA:1539:G:H2'	25:YA:1540:G:H8	1.79	0.47
25:YA:1562:A:H2'	25:YA:1563:G:C8	2.49	0.47
25:YA:2047:U:H2'	25:YA:2048:G:H8	1.77	0.47
25:YA:2752:C:C4	25:YA:2753:A:C6	3.02	0.47
34:YO:2:ILE:N	34:YO:33:ALA:O	2.43	0.47
45:YZ:112:ARG:HG3	45:YZ:113:ALA:N	2.29	0.47
1:QA:420:U:N3	1:QA:422:C:O2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:436:C:H2'	1:QA:437:U:H6	1.78	0.47
22:QV:24:C:H2'	22:QV:25:U:H6	1.78	0.47
22:QV:35:C:H2'	22:QV:36:A:C8	2.48	0.47
22:QV:53:G:O2'	22:QV:54:G:OP1	2.29	0.47
25:RA:593:G:H2'	25:RA:594:U:C6	2.50	0.47
25:RA:598:G:C4'	35:RP:11:GLY:HA3	2.44	0.47
25:RA:1265:A:H8	25:RA:1265:A:OP1	1.97	0.47
25:RA:2131:G:H4'	25:RA:2132:U:H4'	1.95	0.47
25:RA:2643:G:H2'	25:RA:2644:G:O4'	2.14	0.47
31:RH:12:PRO:HG3	31:RH:48:GLY:HA2	1.96	0.47
45:RZ:68:PRO:HG2	45:RZ:91:LEU:HB2	1.96	0.47
1:XA:501:C:H1'	1:XA:549:C:H1'	1.96	0.47
1:XA:807:A:H2'	1:XA:808:C:C6	2.50	0.47
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.48	0.47
1:XA:1507:A:H2'	1:XA:1508:G:C8	2.49	0.47
9:XI:114:TYR:HE2	10:XJ:59:SER:HA	1.80	0.47
25:YA:49:A:N7	25:YA:120:U:H5	2.12	0.47
25:YA:691:C:H2'	25:YA:692:C:H6	1.78	0.47
25:YA:752:A:H4'	25:YA:753:C:O5'	2.14	0.47
25:YA:2080:G:H5'	47:Y1:19:GLN:HG3	1.96	0.47
30:YG:95:ARG:O	30:YG:99:MET:HG2	2.14	0.47
30:YG:125:PHE:CE2	30:YG:170:ARG:HB2	2.48	0.47
1:QA:359:U:OP1	32:YI:87:LYS:NZ	2.45	0.47
1:QA:690:G:H2'	1:QA:691:G:O4'	2.15	0.47
1:QA:861:G:O6	1:QA:869:G:N2	2.47	0.47
2:QB:237:ALA:O	2:QB:239:VAL:N	2.47	0.47
14:QN:4:LYS:HA	14:QN:7:ILE:HG12	1.95	0.47
16:QP:18:ARG:HA	16:QP:38:TYR:HA	1.97	0.47
25:RA:270(Y):G:H2'	25:RA:270(Z):U:C6	2.50	0.47
25:RA:439:G:H2'	25:RA:440:G:H8	1.79	0.47
25:RA:639:U:H2'	25:RA:640:C:C6	2.50	0.47
25:RA:729:G:O2'	25:RA:763:G:H4'	2.14	0.47
25:RA:2212:A:H1'	25:RA:2215:G:C5	2.50	0.47
25:RA:2542:A:H5'	25:RA:2543:G:OP1	2.13	0.47
27:RD:77:ALA:HB3	27:RD:117:VAL:HG13	1.97	0.47
35:RP:63:PRO:HB3	54:R8:13:ARG:HB3	1.95	0.47
36:RQ:66:ILE:HA	36:RQ:104:PHE:HD1	1.80	0.47
44:RY:20:TYR:CE2	44:RY:43:ASN:HA	2.49	0.47
45:RZ:150:LEU:HB2	45:RZ:154:ASP:OD2	2.15	0.47
1:XA:177:C:H2'	1:XA:178:C:H6	1.80	0.47
1:XA:868:C:H2'	1:XA:869:G:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:891:U:H2'	1:XA:892:A:H8	1.80	0.47
1:XA:1095:U:H5''	1:XA:1109:C:O2	2.15	0.47
1:XA:1327:C:H2'	1:XA:1328:C:H6	1.79	0.47
1:XA:1446:A:H5'	39:YT:122:ASP:OD1	2.15	0.47
3:XC:43:LEU:O	3:XC:47:LEU:HB2	2.15	0.47
5:XE:99:GLY:N	5:XE:117:ASP:OD1	2.41	0.47
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.49	0.47
25:YA:24:G:C6	25:YA:25:U:C4	3.02	0.47
25:YA:27:G:H1'	25:YA:513:A:H62	1.79	0.47
25:YA:141:A:C8	25:YA:1408:C:H1'	2.49	0.47
25:YA:1535:U:N3	25:YA:1537:C:H1'	2.30	0.47
25:YA:1590:U:H2'	25:YA:1591:G:C8	2.48	0.47
25:YA:1729:A:H2'	25:YA:1730:U:H5''	1.96	0.47
25:YA:2851:A:O2'	37:YR:64:ARG:NH2	2.47	0.47
25:YA:2853:C:H2'	25:YA:2854:G:C8	2.48	0.47
27:YD:153:ALA:O	27:YD:157:ARG:NH1	2.47	0.47
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.96	0.47
1:QA:20:U:H2'	1:QA:21:G:O4'	2.14	0.47
1:QA:481:G:O2'	1:QA:482:A:O5'	2.33	0.47
1:QA:503:C:OP2	12:QL:116:SER:OG	2.24	0.47
1:QA:575:G:O2'	1:QA:821:G:H5'	2.14	0.47
1:QA:687:A:N6	1:QA:703:G:C2	2.82	0.47
1:QA:1255:G:OP2	10:QJ:45:ARG:NH2	2.47	0.47
1:QA:1288:A:N1	1:QA:1371:G:H1'	2.30	0.47
1:QA:1298:C:H4'	1:QA:1299:A:C4	2.50	0.47
1:QA:1300:G:H1'	1:QA:1303:C:H42	1.80	0.47
1:QA:1525:G:H2'	1:QA:1526:G:H8	1.79	0.47
7:QG:15:ASP:HB3	7:QG:19:GLY:H	1.79	0.47
7:QG:46:ALA:O	7:QG:50:ILE:HG12	2.15	0.47
7:QG:69:VAL:HG21	7:QG:104:LEU:HD21	1.97	0.47
7:QG:111:ARG:HG2	7:QG:113:GLU:OE1	2.14	0.47
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.79	0.47
22:QV:35:C:O2'	22:QV:36:A:OP1	2.26	0.47
22:QW:2:G:H2'	22:QW:3:C:C6	2.50	0.47
25:RA:270(V):G:H2'	25:RA:270(W):G:H8	1.80	0.47
25:RA:274:G:H2'	25:RA:275:G:O4'	2.15	0.47
25:RA:483:A:O2'	44:RY:49:VAL:O	2.24	0.47
25:RA:776:G:N7	25:RA:793:A:O2'	2.48	0.47
25:RA:1032:A:O2'	25:RA:1033:U:OP1	2.27	0.47
25:RA:1155:A:OP1	40:RU:55:ARG:HD2	2.15	0.47
25:RA:1266:G:N7	42:RW:15:ARG:HD2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2025:C:H2'	25:RA:2026:C:C6	2.50	0.47
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.96	0.47
27:RD:201:HIS:O	27:RD:204:ILE:HG12	2.14	0.47
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.50	0.47
30:RG:41:GLN:HE21	30:RG:153:ARG:HB3	1.80	0.47
41:RV:4:ILE:HG13	41:RV:40:LEU:HD12	1.96	0.47
45:RZ:40:ASP:HB3	45:RZ:43:GLU:HB2	1.95	0.47
46:R0:53:MET:HB3	46:R0:59:LEU:HD23	1.96	0.47
55:R9:24:TYR:CE1	55:R9:35:ARG:HG3	2.50	0.47
1:XA:227:G:N2	16:XP:62:VAL:O	2.41	0.47
1:XA:299:A:H2'	1:XA:300:A:C8	2.50	0.47
1:XA:664:G:H22	1:XA:741:G:H1	1.63	0.47
1:XA:728:A:H2'	1:XA:729:A:C8	2.49	0.47
1:XA:921:U:O2	5:XE:19:MET:HB2	2.15	0.47
1:XA:1028(B):C:N4	1:XA:1029:G:H1'	2.30	0.47
1:XA:1443:G:H5'	1:XA:1446:A:OP2	2.14	0.47
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	1.97	0.47
7:XG:22:LEU:HG	7:XG:62:PHE:HE2	1.79	0.47
11:XK:27:ASN:OD1	11:XK:28:THR:N	2.47	0.47
25:YA:273(C):C:H2'	25:YA:273(D):C:H6	1.80	0.47
25:YA:533:G:N2	40:YU:49:HIS:HE1	2.13	0.47
25:YA:740:U:H2'	25:YA:741:G:C8	2.50	0.47
25:YA:1191:G:H2'	25:YA:1192:G:O4'	2.15	0.47
25:YA:1505:C:H2'	25:YA:1506:C:C6	2.49	0.47
25:YA:1689:A:H2'	25:YA:1690:A:C8	2.49	0.47
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.15	0.47
25:YA:2416:C:C2	25:YA:2417:C:C5	3.03	0.47
29:YF:34:TRP:CE3	35:YP:8:PRO:HB3	2.49	0.47
30:YG:32:PRO:HB3	30:YG:163:ALA:HB2	1.97	0.47
32:YI:14:ASP:O	32:YI:16:GLY:N	2.45	0.47
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.48	0.47
40:YU:92:ARG:HB2	41:YV:11:GLN:OE1	2.15	0.47
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.79	0.47
46:Y0:32:ARG:N	46:Y0:35:ASN:OD1	2.42	0.47
1:QA:35:G:O2'	12:QL:118:SER:O	2.26	0.47
1:QA:152:A:H62	1:QA:169:C:H42	1.63	0.47
1:QA:538:G:H2'	1:QA:539:A:H8	1.80	0.47
1:QA:948:C:H2'	1:QA:949:A:H8	1.79	0.47
1:QA:1192:C:P	3:QC:4:LYS:HZ1	2.35	0.47
1:QA:1223:C:P	1:QA:1224:G:H2'	2.55	0.47
1:QA:1250:A:H2	1:QA:1370:G:H1'	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:310:A:H1'	25:RA:311:A:H2'	1.97	0.47
25:RA:321:G:OP2	29:RF:135:LYS:HD3	2.15	0.47
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.80	0.47
25:RA:598:G:O2'	35:RP:9:ASN:ND2	2.43	0.47
25:RA:635:C:O2'	25:RA:639:U:OP1	2.33	0.47
25:RA:1482:U:H5'	25:RA:1483:G:OP2	2.15	0.47
27:RD:122:ASP:OD1	27:RD:123:ALA:N	2.43	0.47
33:RN:12:ARG:NH1	33:RN:14:VAL:HG22	2.29	0.47
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	2.13	0.47
38:RS:110:LEU:O	38:RS:112:PHE:HD1	1.98	0.47
1:XA:27:G:H5'	4:XD:209:ARG:HE	1.80	0.47
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.15	0.47
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.80	0.47
21:XU:6:ARG:HE	21:XU:15:ARG:HH21	1.63	0.47
25:YA:208:C:H2'	25:YA:209:C:C6	2.49	0.47
25:YA:373:U:H1'	25:YA:423:A:N3	2.30	0.47
25:YA:598:G:O3'	35:YP:9:ASN:ND2	2.48	0.47
25:YA:960:A:C8	25:YA:962:G:C8	3.03	0.47
1:QA:46:G:O2'	1:QA:365:U:O2'	2.14	0.47
1:QA:439:A:OP2	1:QA:493:G:N1	2.48	0.47
1:QA:1160:G:H1	1:QA:1177:G:N2	2.12	0.47
5:QE:35:GLY:HA3	5:QE:112:LEU:HB3	1.97	0.47
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.50	0.47
25:RA:640:C:H2'	25:RA:641:C:C6	2.50	0.47
25:RA:1070:A:N7	25:RA:1096:A:H2'	2.30	0.47
25:RA:1157:G:O2'	49:R3:31:LEU:HD12	2.15	0.47
25:RA:2581:G:N2	25:RA:2581:G:OP2	2.48	0.47
25:RA:2870:C:H2'	25:RA:2871:C:O4'	2.14	0.47
26:RB:60:C:H2'	26:RB:61:G:H8	1.80	0.47
33:RN:95:PRO:C	33:RN:97:ARG:H	2.17	0.47
34:RO:76:ALA:HB3	39:RT:75:ILE:HD12	1.97	0.47
41:RV:5:VAL:HG11	41:RV:57:VAL:HG21	1.97	0.47
1:XA:636:U:H5'	17:XQ:2:PRO:HG3	1.97	0.47
1:XA:739:C:HO2'	15:XO:42:HIS:HD1	1.59	0.47
1:XA:1287:A:C2	1:XA:1353:G:H1'	2.48	0.47
1:XA:1321:C:OP2	1:XA:1322:C:H2'	2.15	0.47
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.96	0.47
2:XB:30:ARG:H	2:XB:30:ARG:HD3	1.79	0.47
13:XM:83:ASP:H	13:XM:93:ARG:HH21	1.62	0.47
25:YA:86:C:H4'	25:YA:104:U:H1'	1.97	0.47
25:YA:375:C:H2'	25:YA:376:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:579:G:H2'	25:YA:580:C:C6	2.50	0.47
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.49	0.47
25:YA:1290:C:H2'	25:YA:1291:C:C6	2.50	0.47
25:YA:1689:A:OP2	25:YA:1698:A:N6	2.43	0.47
25:YA:2359:C:H2'	25:YA:2360:A:O4'	2.15	0.47
25:YA:2577:A:H5'	51:Y5:3:LYS:NZ	2.30	0.47
25:YA:2746:U:H4'	31:YH:138:LYS:HD3	1.96	0.47
39:YT:25:GLY:H	39:YT:49:VAL:HG13	1.78	0.47
40:YU:21:ALA:HA	40:YU:24:TYR:CE2	2.49	0.47
1:QA:560:U:H5'	1:QA:566:G:N2	2.30	0.47
1:QA:946:A:H2'	1:QA:947:G:H8	1.80	0.47
1:QA:978:A:C4	1:QA:1319:A:C2	3.03	0.47
1:QA:1160:G:N3	1:QA:1160:G:H2'	2.30	0.47
1:QA:1216:G:H5''	14:QN:5:ALA:HB2	1.95	0.47
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.97	0.47
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.50	0.47
11:QK:91:ARG:O	11:QK:95:ILE:HG12	2.15	0.47
17:QQ:51:TYR:HE2	17:QQ:73:VAL:HG11	1.79	0.47
19:QS:67:VAL:HG11	50:R4:58:ARG:O	2.15	0.47
25:RA:191:A:H2'	25:RA:192:C:C6	2.49	0.47
25:RA:299:A:N3	25:RA:319:C:O2'	2.42	0.47
25:RA:2626:C:H2'	25:RA:2627:G:H8	1.80	0.47
27:RD:93:ALA:HB2	27:RD:107:ALA:HB2	1.96	0.47
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.96	0.47
31:RH:149:ARG:NH2	31:RH:164:TYR:OH	2.47	0.47
40:RU:90:VAL:HG12	40:RU:91:ASP:N	2.29	0.47
45:RZ:112:ARG:HG3	45:RZ:113:ALA:N	2.30	0.47
1:XA:186:C:O2'	20:XT:85:MET:SD	2.63	0.47
1:XA:320:C:H2'	1:XA:321:A:C8	2.50	0.47
1:XA:369:C:OP2	1:XA:388:G:N2	2.47	0.47
1:XA:452:A:H2'	1:XA:453:A:O4'	2.14	0.47
1:XA:600:C:H5'	8:XH:129:VAL:O	2.15	0.47
1:XA:986:A:H2'	1:XA:987:G:C8	2.50	0.47
1:XA:1108:G:H5'	3:XC:176:HIS:HD2	1.80	0.47
1:XA:1386:G:H2'	1:XA:1387:G:H8	1.80	0.47
4:XD:166:LYS:HB2	4:XD:178:VAL:HG11	1.96	0.47
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.97	0.47
22:XW:32:G:H3'	22:XW:33:C:O4'	2.15	0.47
22:XW:49:C:N3	22:XW:60:A:H1'	2.29	0.47
25:YA:270(G):C:H2'	25:YA:270(H):C:C6	2.50	0.47
25:YA:643:A:N1	25:YA:2369:A:O2'	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1520:U:H2'	25:YA:1521:G:O4'	2.15	0.47
25:YA:1899:G:H21	25:YA:1902:C:N4	2.13	0.47
25:YA:2564:A:C6	25:YA:2647:U:H4'	2.49	0.47
25:YA:2635:C:H5''	28:YE:78:LEU:HA	1.96	0.47
25:YA:2756:U:C4	25:YA:2759:G:C8	3.02	0.47
26:YB:22:U:H3	26:YB:61:G:H1	1.63	0.47
27:YD:31:LYS:HE3	27:YD:102:LYS:HD3	1.95	0.47
27:YD:79:VAL:HA	27:YD:95:LEU:HD23	1.97	0.47
39:YT:120:ARG:HA	39:YT:123:GLN:HB2	1.95	0.47
49:Y3:15:TYR:HE2	49:Y3:53:LEU:HD21	1.80	0.47
1:QA:328:C:H1'	1:QA:329:A:OP2	2.15	0.46
1:QA:674:G:H1'	18:QR:81:PHE:HE2	1.80	0.46
1:QA:790:A:H2'	1:QA:791:G:C8	2.50	0.46
1:QA:970:C:H42	9:QI:128:ARG:C	2.18	0.46
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.30	0.46
1:QA:1486:G:H2'	1:QA:1487:G:C8	2.49	0.46
10:QJ:28:ARG:NH2	10:QJ:34:VAL:O	2.48	0.46
10:QJ:78:ASN:O	10:QJ:81:THR:OG1	2.26	0.46
25:RA:559:G:H22	40:RU:49:HIS:CE1	2.33	0.46
25:RA:839:U:H1'	25:RA:1191:G:H1'	1.96	0.46
25:RA:2251:G:C8	25:RA:2450:A:H4'	2.50	0.46
25:RA:2685:G:P	39:RT:51:ARG:HH22	2.38	0.46
25:RA:2697:G:H2'	25:RA:2698:U:C6	2.50	0.46
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.30	0.46
45:RZ:99:TYR:CE1	45:RZ:125:LEU:HB2	2.50	0.46
1:XA:335:C:H2'	1:XA:336:C:C6	2.50	0.46
1:XA:363:A:C2	12:XL:31:PRO:HD2	2.50	0.46
1:XA:422:C:O2'	1:XA:423:G:N2	2.49	0.46
13:XM:16:ASP:OD1	13:XM:17:VAL:N	2.45	0.46
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.97	0.46
25:YA:87:C:H5''	25:YA:88:G:H5'	1.97	0.46
25:YA:247:G:H4'	25:YA:386:G:C5	2.50	0.46
25:YA:638:G:H2'	25:YA:639:U:C6	2.50	0.46
25:YA:1257:C:H4'	29:YF:83:PHE:CE1	2.49	0.46
25:YA:1478:G:H1'	25:YA:1557:C:O2'	2.15	0.46
25:YA:1539:G:H2'	25:YA:1540:G:C8	2.50	0.46
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.51	0.46
25:YA:2665:A:H2'	25:YA:2666:C:O4'	2.14	0.46
33:YN:22:THR:HA	33:YN:61:ARG:O	2.15	0.46
34:YO:23:ARG:NH2	34:YO:28:SER:O	2.47	0.46
38:YS:34:HIS:CE1	38:YS:54:LEU:HD12	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:111:HIS:HD2	42:YW:113:LYS:H	1.62	0.46
46:Y0:46:LYS:HD2	46:Y0:78:TYR:HE1	1.79	0.46
49:Y3:15:TYR:O	49:Y3:20:LYS:NZ	2.48	0.46
1:QA:401:C:H2'	1:QA:402:G:H8	1.80	0.46
1:QA:771:G:H2'	1:QA:772:U:C6	2.50	0.46
1:QA:877:C:H2'	1:QA:878:G:H8	1.80	0.46
1:QA:1066:C:H3'	1:QA:1067:A:H8	1.81	0.46
6:QF:21:LEU:O	6:QF:25:ILE:HG12	2.14	0.46
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.15	0.46
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.80	0.46
24:QY:30:G:C2	24:QY:31:A:C8	3.03	0.46
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.96	0.46
25:RA:822:U:H2'	25:RA:823:G:C8	2.49	0.46
25:RA:1687:G:N2	25:RA:1702:G:O6	2.48	0.46
25:RA:2187:G:H2'	25:RA:2188:C:C6	2.49	0.46
25:RA:2785:C:H2'	25:RA:2786:U:C6	2.51	0.46
29:RF:73:ALA:HB3	29:RF:75:HIS:CE1	2.50	0.46
29:RF:133:ASN:H	29:RF:162:LEU:HD13	1.80	0.46
30:RG:81:LYS:O	30:RG:82:LEU:HB2	2.14	0.46
33:RN:39:ARG:HD3	33:RN:48:MET:HE1	1.97	0.46
35:RP:94:GLU:O	35:RP:96:THR:HG23	2.15	0.46
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.31	0.46
1:XA:22:G:H2'	1:XA:23:C:C6	2.50	0.46
1:XA:411:A:H62	1:XA:413:G:H21	1.62	0.46
1:XA:768:A:H4'	1:XA:1523:G:H21	1.80	0.46
4:XD:57:ARG:HB3	4:XD:206:PHE:CD1	2.51	0.46
9:XI:32:ASP:OD1	9:XI:33:PHE:N	2.48	0.46
25:YA:26:G:H1'	25:YA:515:A:H61	1.80	0.46
25:YA:598:G:H5'	35:YP:11:GLY:HA3	1.97	0.46
25:YA:1265:A:H8	25:YA:1265:A:OP1	1.98	0.46
25:YA:2033:A:O2'	25:YA:2035:G:OP2	2.28	0.46
25:YA:2745:C:OP1	55:Y9:22:ARG:HB2	2.15	0.46
25:YA:2823:A:OP1	28:YE:113:PHE:HB2	2.14	0.46
26:YB:95:U:H2'	26:YB:96:G:H8	1.81	0.46
36:YQ:67:ARG:HD2	36:YQ:105:GLU:OE1	2.15	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.30	0.46
45:YZ:5:LEU:HD11	45:YZ:44:PHE:HA	1.98	0.46
1:QA:1009:G:C2	1:QA:1010:G:C8	3.03	0.46
1:QA:1111:A:H2'	1:QA:1112:C:C6	2.50	0.46
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.50	0.46
1:QA:1305:G:N2	1:QA:1332:A:OP2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1502:A:H2	1:QA:1505:G:H1	1.63	0.46
5:QE:115:VAL:HG11	5:QE:118:ILE:HB	1.97	0.46
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.13	0.46
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.14	0.46
25:RA:84:A:C2	25:RA:103:A:C5	3.04	0.46
25:RA:729:G:P	27:RD:13:ARG:HD3	2.55	0.46
25:RA:1769:G:O2'	25:RA:1958:C:OP1	2.30	0.46
25:RA:2627:G:N2	25:RA:2777:G:OP1	2.43	0.46
25:RA:2648:C:H2'	25:RA:2649:U:H6	1.80	0.46
27:RD:35:LYS:HB3	27:RD:36:PRO:CD	2.24	0.46
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.97	0.46
45:RZ:151:HIS:CB	45:RZ:170:THR:HA	2.46	0.46
1:XA:337:C:H2'	1:XA:338:A:H8	1.80	0.46
1:XA:399:G:H2'	1:XA:400:C:C6	2.51	0.46
1:XA:678:U:H2'	1:XA:679:C:C6	2.49	0.46
1:XA:953:G:H5''	1:XA:965:A:H61	1.81	0.46
1:XA:1372:U:H2'	1:XA:1373:G:O4'	2.15	0.46
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.97	0.46
6:XF:30:LEU:HD23	6:XF:75:LEU:HD21	1.98	0.46
8:XH:51:VAL:HG11	8:XH:60:ARG:HH11	1.79	0.46
22:XW:52:C:H2'	22:XW:53:G:C8	2.50	0.46
25:YA:92:G:H2'	25:YA:93:C:H6	1.81	0.46
25:YA:1394:U:H4'	25:YA:1603:A:H4'	1.96	0.46
25:YA:2789:C:H1'	25:YA:2892:A:H2	1.80	0.46
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.98	0.46
1:QA:281:G:H8	1:QA:281:G:OP2	1.99	0.46
1:QA:406:G:H2'	1:QA:407:G:C8	2.50	0.46
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.47	0.46
1:QA:610:G:C4	1:QA:611:A:C8	3.03	0.46
1:QA:1004:A:P	1:QA:1025:U:H3	2.37	0.46
1:QA:1201:A:HO2'	1:QA:1202:G:P	2.38	0.46
13:QM:86:CYS:SG	13:QM:87:TYR:N	2.88	0.46
25:RA:52:A:H2'	25:RA:53:A:C8	2.49	0.46
25:RA:177:G:H5'	25:RA:178:G:C8	2.50	0.46
25:RA:694:U:OP1	27:RD:59:LYS:NZ	2.36	0.46
25:RA:839:U:H2'	25:RA:840:C:C6	2.50	0.46
25:RA:974(A):C:H4'	25:RA:975:G:O5'	2.15	0.46
25:RA:1278:A:H2'	25:RA:1279:G:C8	2.50	0.46
25:RA:1339:G:H5''	43:RX:16:LYS:HD3	1.97	0.46
25:RA:2712:U:O2'	25:RA:2712(A):A:H8	1.98	0.46
25:RA:2849:U:H5	39:RT:93:ARG:HH12	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:206:LEU:HA	27:RD:211:ARG:HD3	1.97	0.46
29:RF:73:ALA:HB3	29:RF:75:HIS:HE1	1.79	0.46
35:RP:144:GLU:O	35:RP:144:GLU:HG2	2.16	0.46
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.97	0.46
40:RU:91:ASP:C	40:RU:93:LYS:H	2.17	0.46
1:XA:89:U:HO2'	1:XA:90:C:P	2.37	0.46
1:XA:385:C:H2'	1:XA:386:C:C6	2.50	0.46
1:XA:410:G:H4'	1:XA:411:A:OP1	2.16	0.46
1:XA:789:U:H1'	1:XA:792:A:C2	2.43	0.46
1:XA:940:C:H2'	1:XA:941:G:C8	2.51	0.46
1:XA:1325:C:H4'	21:XU:17:THR:HG21	1.97	0.46
3:XC:9:GLY:HA2	3:XC:12:LEU:HG	1.97	0.46
3:XC:153:VAL:HG22	3:XC:198:VAL:HG22	1.98	0.46
18:XR:58:LEU:HD23	18:XR:62:GLU:HB3	1.96	0.46
22:XW:20:G:H3'	22:XW:21:U:C5	2.50	0.46
25:YA:81:G:H2'	25:YA:82:G:O4'	2.15	0.46
25:YA:277:C:H3'	25:YA:278:A:C5'	2.46	0.46
25:YA:319:C:H2'	25:YA:320:A:C8	2.50	0.46
25:YA:413:C:H2'	25:YA:414:C:C6	2.50	0.46
25:YA:503:A:H4'	25:YA:504:U:H5'	1.97	0.46
25:YA:631:A:OP1	54:Y8:46:ARG:NH2	2.49	0.46
25:YA:1843:C:H2'	25:YA:1844:C:C6	2.50	0.46
25:YA:2752:C:H3'	25:YA:2753:A:C8	2.50	0.46
25:YA:2837:G:H2'	25:YA:2838:G:C8	2.50	0.46
29:YF:197:ASP:C	29:YF:199:TRP:H	2.19	0.46
40:YU:90:VAL:HG12	40:YU:91:ASP:N	2.30	0.46
53:Y7:26:GLY:O	53:Y7:30:VAL:HG23	2.15	0.46
55:Y9:25:VAL:O	55:Y9:33:LYS:HG3	2.15	0.46
1:QA:643:C:C2	1:QA:644:G:C8	3.04	0.46
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.97	0.46
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.51	0.46
1:QA:1351:U:O2	1:QA:1371:G:N2	2.44	0.46
25:RA:38:A:N3	29:RF:48:THR:OG1	2.48	0.46
25:RA:863:A:H2'	25:RA:864:G:H8	1.81	0.46
25:RA:968:G:H2'	25:RA:969:U:H6	1.80	0.46
25:RA:1045:A:O2'	25:RA:1046:A:OP2	2.25	0.46
25:RA:1316:U:H2'	25:RA:1317:A:C8	2.49	0.46
25:RA:1433:U:H3	25:RA:1560:G:H1	1.64	0.46
25:RA:1453:A:N6	25:RA:2702:U:H1'	2.31	0.46
25:RA:2379:G:H2'	25:RA:2380:C:C6	2.50	0.46
25:RA:2749:A:OP1	31:RH:4:ILE:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:125:PHE:HE2	30:RG:170:ARG:HB2	1.81	0.46
32:RI:5:LEU:HD21	32:RI:12:LEU:HB3	1.97	0.46
32:RI:13:GLY:HA3	32:RI:17:GLN:HB3	1.96	0.46
34:RO:97:ARG:O	34:RO:97:ARG:HD3	2.15	0.46
1:XA:272:C:H2'	1:XA:273:A:C8	2.51	0.46
1:XA:484:G:H4'	1:XA:485:G:O5'	2.15	0.46
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.15	0.46
1:XA:782:A:H62	1:XA:800:G:H21	1.64	0.46
1:XA:892:A:O2'	1:XA:1415:G:H4'	2.16	0.46
1:XA:1190:G:H5'	3:XC:176:HIS:HE1	1.81	0.46
1:XA:1504:G:OP1	1:XA:1507:A:H4'	2.15	0.46
5:XE:115:VAL:HG11	5:XE:118:ILE:HB	1.97	0.46
15:XO:15:PHE:CE2	15:XO:85:LEU:HD21	2.50	0.46
15:XO:39:LEU:HD11	15:XO:52:SER:HB3	1.98	0.46
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.98	0.46
25:YA:466:A:N3	25:YA:683:C:H1'	2.31	0.46
25:YA:1167:U:H2'	25:YA:1168:G:H8	1.80	0.46
25:YA:1518:C:H2'	25:YA:1519:G:H8	1.80	0.46
25:YA:1766:U:H2'	25:YA:1767:C:H6	1.81	0.46
25:YA:2291:U:H3	25:YA:2341:G:H1	1.64	0.46
25:YA:2306:C:H2'	25:YA:2307:G:N2	2.30	0.46
27:YD:143:HIS:ND1	27:YD:194:GLY:O	2.38	0.46
37:YR:3:HIS:O	37:YR:5:LYS:N	2.49	0.46
37:YR:100:LEU:HD11	37:YR:113:LEU:HB2	1.98	0.46
1:QA:865:A:H2'	1:QA:866:C:C6	2.51	0.46
1:QA:921:U:O2'	5:QE:19:MET:O	2.32	0.46
1:QA:1225:A:H2'	1:QA:1225:A:N3	2.31	0.46
1:QA:1226:C:N4	13:QM:104:ARG:HH11	2.13	0.46
13:QM:108:ARG:NE	13:QM:114:ARG:HD2	2.31	0.46
17:QQ:45:HIS:CD2	17:QQ:47:PRO:HG3	2.51	0.46
25:RA:336:C:O2'	44:RY:35:TYR:OH	2.34	0.46
25:RA:579:G:C2	25:RA:1262:A:C5	3.04	0.46
25:RA:1137:G:H2'	25:RA:1138:G:H8	1.80	0.46
25:RA:1408:C:H2'	25:RA:1409:C:C6	2.49	0.46
25:RA:1441:G:H2'	25:RA:1442:G:H8	1.81	0.46
25:RA:2115:G:N1	25:RA:2164:C:OP2	2.49	0.46
25:RA:2844:G:H3'	25:RA:2845:G:H8	1.81	0.46
29:RF:126:VAL:H	29:RF:195:ASP:HA	1.80	0.46
1:XA:57:G:N2	1:XA:388:G:C6	2.84	0.46
1:XA:427:U:OP1	4:XD:13:ARG:NH2	2.49	0.46
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1109:C:H2'	25:YA:1110:G:O4'	2.15	0.46
25:YA:1499:C:H2'	25:YA:1500:G:H8	1.81	0.46
25:YA:2123:G:H2'	25:YA:2124:G:C8	2.51	0.46
27:YD:201:HIS:O	27:YD:204:ILE:HG12	2.16	0.46
1:QA:28:G:O2'	1:QA:296:U:OP1	2.34	0.46
1:QA:552:U:H2'	1:QA:553:A:H8	1.81	0.46
1:QA:1401:G:O6	1:QA:1504:G:N2	2.48	0.46
8:QH:106:GLY:O	8:QH:122:ARG:NH2	2.48	0.46
25:RA:92:G:H2'	25:RA:93:C:C6	2.50	0.46
25:RA:251:A:C5	25:RA:252:G:H1'	2.50	0.46
25:RA:911:A:H2'	36:RQ:9:TYR:CE2	2.46	0.46
25:RA:1303:G:H1'	25:RA:1641:A:N1	2.31	0.46
25:RA:2038:G:H2'	25:RA:2039:C:C6	2.51	0.46
30:RG:125:PHE:CE2	30:RG:170:ARG:HB2	2.51	0.46
35:RP:101:VAL:CB	35:RP:106:LEU:HB2	2.43	0.46
38:RS:30:ARG:HD2	38:RS:97:ARG:HD3	1.97	0.46
40:RU:81:HIS:NE2	40:RU:85:LYS:HE3	2.30	0.46
1:XA:323:U:OP1	20:XT:26:ASN:ND2	2.48	0.46
1:XA:777:A:H2'	1:XA:778:G:H8	1.81	0.46
1:XA:1229:A:OP2	13:XM:114:ARG:NH1	2.47	0.46
1:XA:1410:G:H2'	1:XA:1411:C:C6	2.51	0.46
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.97	0.46
8:XH:17:THR:HB	8:XH:78:GLN:OE1	2.16	0.46
17:XQ:83:ASP:OD1	17:XQ:84:LEU:N	2.49	0.46
18:XR:50:ILE:HG13	18:XR:74:ARG:HH22	1.80	0.46
25:YA:363(F):A:H4'	25:YA:364:C:H5'	1.98	0.46
25:YA:381:G:C6	25:YA:394:A:N1	2.84	0.46
25:YA:521:G:H2'	25:YA:522:G:C8	2.51	0.46
25:YA:587:C:N3	35:YP:33:ARG:NH2	2.62	0.46
25:YA:639:U:H2'	25:YA:640:C:H6	1.81	0.46
25:YA:2689:U:H5'	25:YA:2713:A:H2	1.81	0.46
26:YB:44:G:H1'	26:YB:47:C:H41	1.80	0.46
28:YE:36:ARG:NH1	28:YE:85:ASN:OD1	2.49	0.46
30:YG:143:GLU:OE2	50:Y4:26:SER:OG	2.23	0.46
31:YH:149:ARG:NH2	55:Y9:20:HIS:H	2.13	0.46
31:YH:149:ARG:CZ	55:Y9:20:HIS:H	2.29	0.46
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.97	0.46
39:YT:101:PHE:HD2	39:YT:105:LEU:HD21	1.80	0.46
55:Y9:4:ARG:HG3	55:Y9:34:GLN:HG2	1.98	0.46
1:QA:113:G:H2'	1:QA:114:U:C6	2.51	0.46
1:QA:279:A:OP1	1:QA:280:C:O2'	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:868:C:H2'	1:QA:869:G:O4'	2.15	0.46
8:QH:121:ASP:OD1	8:QH:122:ARG:N	2.49	0.46
13:QM:4:ILE:HA	13:QM:57:ARG:HG2	1.97	0.46
25:RA:327:G:H2'	25:RA:328:U:C6	2.50	0.46
25:RA:2313:C:H5''	30:RG:91:ARG:HD3	1.97	0.46
41:RV:64:HIS:ND1	41:RV:92:THR:HG22	2.31	0.46
43:RX:11:PRO:HD3	48:R2:37:PHE:CD1	2.50	0.46
54:R8:29:LYS:HB2	54:R8:33:ASN:HD21	1.81	0.46
1:XA:74:C:H2'	1:XA:75:C:C6	2.50	0.46
1:XA:619:U:N3	4:XD:134:ASP:OD1	2.44	0.46
1:XA:650:G:H2'	1:XA:651:C:C6	2.50	0.46
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.16	0.46
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.51	0.46
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.97	0.46
11:XK:87:THR:HA	11:XK:91:ARG:HD2	1.98	0.46
25:YA:296:C:H2'	25:YA:297:C:C6	2.51	0.46
25:YA:639:U:H2'	25:YA:640:C:C6	2.51	0.46
25:YA:2093:G:H2'	25:YA:2094:G:C8	2.51	0.46
25:YA:2099:U:H2'	25:YA:2100:G:H8	1.80	0.46
25:YA:2471:C:H3'	25:YA:2472:G:H8	1.80	0.46
29:YF:148:LEU:HD22	29:YF:154:VAL:HG21	1.98	0.46
30:YG:3:LEU:HD11	50:Y4:25:TYR:HE2	1.81	0.46
30:YG:40:ASN:HD22	30:YG:41:GLN:H	1.64	0.46
33:YN:96:GLU:HB2	33:YN:122:VAL:HG12	1.97	0.46
34:YO:76:ALA:HB3	39:YT:75:ILE:HD12	1.96	0.46
36:YQ:4:PRO:HG3	36:YQ:69:PHE:HE2	1.80	0.46
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.45	0.46
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.81	0.46
6:QF:12:PRO:HG3	6:QF:57:GLN:HG3	1.98	0.46
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.51	0.46
22:QW:49:C:N3	22:QW:60:A:H1'	2.30	0.46
25:RA:815:C:OP2	41:RV:83:ARG:NH1	2.49	0.46
25:RA:1448:G:H5'	25:RA:1449:A:OP1	2.15	0.46
25:RA:1449:A:C4	25:RA:1529:A:H2	2.34	0.46
25:RA:1539:G:H2'	25:RA:1540:G:C8	2.51	0.46
25:RA:1689:A:H62	25:RA:1698:A:H2	1.64	0.46
25:RA:1791:A:H3'	25:RA:1792:G:H8	1.81	0.46
25:RA:2532:G:H2'	25:RA:2533:A:C8	2.51	0.46
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.16	0.46
30:RG:15:VAL:HG21	30:RG:176:LEU:HD23	1.98	0.46
1:XA:78:G:C6	1:XA:92:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:939:G:H2'	1:XA:940:C:C6	2.51	0.46
1:XA:1307:U:O4	1:XA:1331:G:N2	2.49	0.46
4:XD:155:LEU:O	4:XD:158:ILE:N	2.48	0.46
10:XJ:51:ARG:HG3	10:XJ:60:ARG:HA	1.97	0.46
13:XM:87:TYR:O	13:XM:90:LEU:HG	2.16	0.46
15:XO:26:GLU:HG3	15:XO:81:LEU:HD22	1.98	0.46
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.51	0.46
25:YA:583:G:OP2	40:YU:10:ARG:HD2	2.16	0.46
25:YA:907:U:O2'	36:YQ:101:ARG:NH2	2.49	0.46
25:YA:1026:U:H1'	25:YA:1027:A:O5'	2.16	0.46
25:YA:1042:G:H2'	25:YA:1043:C:C6	2.51	0.46
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.51	0.46
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.81	0.46
25:YA:1541:U:H2'	25:YA:1542:G:O4'	2.15	0.46
25:YA:1831:G:H2'	25:YA:1832:C:C6	2.51	0.46
25:YA:2526:G:H4'	55:Y9:27:CYS:SG	2.56	0.46
25:YA:2563:U:H1'	25:YA:2566:A:N6	2.31	0.46
29:YF:9:ILE:HG12	29:YF:123:LEU:HD23	1.97	0.46
36:YQ:4:PRO:HG3	36:YQ:69:PHE:CE2	2.51	0.46
1:QA:728:A:H2'	1:QA:729:A:H8	1.81	0.46
4:QD:10:ARG:HG3	4:QD:40:PRO:HG3	1.98	0.46
7:QG:66:VAL:HG12	7:QG:70:LYS:HE3	1.98	0.46
22:QW:52:C:H2'	22:QW:53:G:C8	2.51	0.46
25:RA:127:A:H5''	25:RA:128:C:C6	2.51	0.46
25:RA:492:A:H2'	25:RA:493:G:O4'	2.15	0.46
25:RA:910:A:C5	36:RQ:13:GLN:HG3	2.50	0.46
25:RA:1210:A:H4'	25:RA:1211:U:O5'	2.16	0.46
25:RA:1268:A:H2'	25:RA:1269:A:O4'	2.15	0.46
25:RA:1281:G:H2'	25:RA:1282:U:C6	2.50	0.46
25:RA:2150:U:H2'	25:RA:2151:G:H8	1.81	0.46
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.46
43:RX:26:TYR:CD2	43:RX:89:ILE:HD12	2.48	0.46
55:R9:2:LYS:HD3	55:R9:32:HIS:HA	1.98	0.46
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.98	0.46
1:XA:1107:C:C4	1:XA:1108:G:C8	3.04	0.46
6:XF:47:ARG:NH2	6:XF:57:GLN:OE1	2.49	0.46
7:XG:152:ALA:O	7:XG:155:ARG:HG3	2.16	0.46
9:XI:42:ARG:HH22	9:XI:75:ASP:CG	2.19	0.46
22:XW:2:G:H2'	22:XW:3:C:C6	2.51	0.46
25:YA:623:G:H2'	25:YA:624:C:C6	2.51	0.46
25:YA:773:U:H4'	27:YD:47:GLY:HA2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:968:G:H2'	25:YA:969:U:H6	1.81	0.46
25:YA:1196:C:C2	25:YA:1197:G:C8	3.04	0.46
25:YA:1231:G:H2'	25:YA:1232:G:H8	1.79	0.46
25:YA:2028:U:H2'	25:YA:2029:G:C8	2.51	0.46
25:YA:2050:C:H2'	25:YA:2051:A:C8	2.51	0.46
27:YD:206:LEU:HA	27:YD:211:ARG:HD3	1.97	0.46
38:YS:110:LEU:HB3	38:YS:112:PHE:CE1	2.51	0.46
39:YT:26:ASP:O	39:YT:49:VAL:HG12	2.16	0.46
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.31	0.46
1:QA:580:U:H2'	1:QA:581:G:O4'	2.16	0.45
1:QA:645:C:H2'	1:QA:646:U:H6	1.81	0.45
1:QA:1004:A:N1	1:QA:1025:U:H1'	2.31	0.45
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.51	0.45
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.81	0.45
4:QD:167:GLY:HA2	27:YD:135:PHE:CZ	2.51	0.45
10:QJ:51:ARG:NH2	10:QJ:61:GLU:HB3	2.31	0.45
12:QL:33:ARG:NH2	12:QL:61:THR:OG1	2.49	0.45
25:RA:94:G:H21	48:R2:47:ASN:HD22	1.64	0.45
25:RA:678:C:H2'	25:RA:679:C:H6	1.81	0.45
25:RA:834:C:C2	25:RA:835:A:C8	3.04	0.45
25:RA:851:U:H2'	25:RA:852:G:H8	1.81	0.45
25:RA:1541:U:H2'	25:RA:1542:G:O4'	2.16	0.45
25:RA:1704:G:H2'	25:RA:1705:G:H8	1.81	0.45
25:RA:2235:G:H2'	25:RA:2236:C:C6	2.51	0.45
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.46	0.45
26:RB:42:C:O2	30:RG:93:THR:N	2.42	0.45
44:RY:83:THR:HG21	44:RY:99:CYS:SG	2.56	0.45
45:RZ:45:ASP:OD1	45:RZ:49:ARG:NE	2.49	0.45
1:XA:165:C:H2'	1:XA:166:G:H8	1.80	0.45
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.52	0.45
1:XA:1315:U:H2'	1:XA:1316:G:O4'	2.17	0.45
25:YA:118:A:N3	25:YA:178:G:H1'	2.31	0.45
25:YA:742:G:H2'	25:YA:743:G:H8	1.81	0.45
25:YA:870:A:H2'	25:YA:871:U:O4'	2.16	0.45
25:YA:1028:A:H2'	25:YA:1029:A:C8	2.50	0.45
25:YA:1065:U:O2	25:YA:1074:G:N1	2.49	0.45
25:YA:1939:U:OP1	25:YA:2604:U:O2'	2.23	0.45
25:YA:2119:A:H61	25:YA:2168:G:N2	2.14	0.45
25:YA:2446:G:N2	25:YA:2449:U:O2	2.48	0.45
27:YD:32:SER:HA	27:YD:35:LYS:HB2	1.98	0.45
38:YS:89:ARG:HD2	38:YS:94:TYR:HB2	1.96	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:77:ALA:O	41:YV:79:VAL:HG23	2.16	0.45
55:Y9:26:ILE:CG2	55:Y9:33:LYS:HE3	2.45	0.45
1:QA:639:G:H2'	1:QA:640:A:H8	1.82	0.45
1:QA:726:C:H2'	1:QA:727:G:H8	1.80	0.45
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.51	0.45
1:QA:1372:U:H5''	9:QI:71:SER:HB3	1.98	0.45
2:QB:163:PHE:HD1	2:QB:185:ILE:HG13	1.82	0.45
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.48	0.45
22:QV:36:A:H2'	22:QV:37:U:C6	2.52	0.45
25:RA:147:U:H2'	25:RA:148:C:C6	2.52	0.45
25:RA:743:G:O2'	25:RA:1659:U:OP1	2.32	0.45
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.51	0.45
25:RA:1164:G:H2'	25:RA:1165:U:H6	1.79	0.45
25:RA:2119:A:N6	25:RA:2170:A:N7	2.62	0.45
26:RB:8:U:H3	26:RB:112:G:H1	1.65	0.45
31:RH:8:PRO:HG2	31:RH:69:ARG:HH21	1.82	0.45
38:RS:14:VAL:HG11	38:RS:90:GLY:O	2.16	0.45
49:R3:16:PRO:HB2	49:R3:18:ASP:OD1	2.17	0.45
1:XA:64:G:H5''	1:XA:65:U:OP1	2.16	0.45
1:XA:97:U:H2'	1:XA:99:C:C6	2.52	0.45
1:XA:132:C:H4'	1:XA:262:A:H1'	1.97	0.45
1:XA:678:U:H2'	1:XA:679:C:H6	1.81	0.45
3:XC:5:ILE:HD11	14:XN:49:HIS:HE1	1.80	0.45
22:XV:29:C:H2'	22:XV:30:G:H8	1.81	0.45
25:YA:27:G:HO2'	25:YA:28:A:H8	1.64	0.45
25:YA:288:C:H2'	25:YA:289:A:C8	2.45	0.45
25:YA:1771:C:H2'	25:YA:1772:G:C8	2.51	0.45
25:YA:2062:A:H2'	25:YA:2062:A:N3	2.29	0.45
25:YA:2567:G:H2'	25:YA:2568:C:C6	2.51	0.45
30:YG:71:THR:N	30:YG:89:GLY:O	2.49	0.45
31:YH:149:ARG:HH21	55:Y9:20:HIS:H	1.63	0.45
48:Y2:10:LEU:HD21	48:Y2:59:ARG:HD2	1.98	0.45
1:QA:166:G:H2'	1:QA:167:G:H8	1.81	0.45
1:QA:422:C:HO2'	1:QA:423:G:N2	2.15	0.45
3:QC:20:SER:OG	3:QC:22:TRP:NE1	2.48	0.45
7:QG:15:ASP:OD1	7:QG:16:LEU:N	2.49	0.45
13:QM:16:ASP:OD1	13:QM:17:VAL:N	2.49	0.45
25:RA:639:U:H2'	25:RA:640:C:H6	1.80	0.45
25:RA:1257:C:H2'	25:RA:1258:C:C6	2.51	0.45
25:RA:2563:U:H1'	25:RA:2566:A:N6	2.31	0.45
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:38:THR:OG1	28:RE:40:GLU:OE1	2.34	0.45
28:RE:48:GLN:OE1	28:RE:64:LYS:NZ	2.46	0.45
32:RI:115:ALA:HB2	32:RI:131:LYS:HE2	1.98	0.45
32:RI:144:VAL:HG22	32:RI:145:VAL:H	1.80	0.45
39:RT:65:LYS:O	39:RT:72:VAL:N	2.43	0.45
39:RT:120:ARG:HA	39:RT:123:GLN:HB2	1.98	0.45
46:R0:48:GLY:HA3	46:R0:80:HIS:CE1	2.51	0.45
1:XA:363:A:N1	12:XL:31:PRO:HD2	2.31	0.45
1:XA:468:A:H5''	16:XP:80:PHE:HB3	1.99	0.45
1:XA:981:U:H2'	1:XA:982:U:C5	2.52	0.45
1:XA:1004:A:HO2'	1:XA:1036:G:H1	1.64	0.45
1:XA:1435:G:H2'	1:XA:1436:U:H6	1.81	0.45
10:XJ:39:PRO:HA	10:XJ:70:ARG:HD3	1.98	0.45
11:XK:43:SER:HB3	11:XK:68:ALA:HB2	1.98	0.45
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.13	0.45
25:YA:1216:G:OP1	40:YU:8:VAL:HG23	2.16	0.45
25:YA:1308:A:H3'	25:YA:1309:G:H8	1.80	0.45
25:YA:1365:A:O2'	47:Y1:11:ARG:NH2	2.39	0.45
25:YA:1694:C:H4'	25:YA:1695:G:O5'	2.15	0.45
25:YA:1790:C:H5''	25:YA:1791:A:OP1	2.16	0.45
25:YA:2074:U:H2'	25:YA:2075:U:H6	1.82	0.45
25:YA:2292:C:H2'	25:YA:2293:C:H6	1.80	0.45
25:YA:2392:A:H2	25:YA:2424:C:H42	1.64	0.45
27:YD:9:TYR:HD2	27:YD:10:THR:HG23	1.81	0.45
28:YE:14:ILE:HG13	39:YT:14:TYR:HE2	1.82	0.45
34:YO:97:ARG:O	34:YO:97:ARG:HD3	2.16	0.45
42:YW:111:HIS:CD2	42:YW:113:LYS:H	2.34	0.45
46:Y0:23:VAL:HB	46:Y0:26:TYR:HE1	1.80	0.45
49:Y3:15:TYR:CE2	49:Y3:53:LEU:HD21	2.51	0.45
1:QA:114:U:H2'	1:QA:115:G:C8	2.52	0.45
1:QA:139:G:H2'	1:QA:140:A:C8	2.51	0.45
1:QA:410:G:H4'	1:QA:411:A:OP1	2.16	0.45
1:QA:541:G:H2'	1:QA:542:G:H8	1.82	0.45
1:QA:1004:A:H1'	1:QA:1036:G:H22	1.80	0.45
2:QB:74:LYS:O	2:QB:78:GLN:HG3	2.17	0.45
15:QO:78:TYR:CZ	15:QO:82:ILE:HD11	2.51	0.45
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.98	0.45
25:RA:17:G:H4'	40:RU:25:TRP:NE1	2.27	0.45
25:RA:26:G:H1'	25:RA:515:A:H61	1.80	0.45
25:RA:519:U:H2'	25:RA:520:G:H8	1.81	0.45
25:RA:1031:G:N2	55:R9:20:HIS:ND1	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2680:C:O2'	28:RE:11:MET:SD	2.74	0.45
25:RA:2841:C:H2'	25:RA:2842:G:H8	1.82	0.45
27:RD:108:PRO:HD2	27:RD:111:LEU:HD22	1.98	0.45
28:RE:36:ARG:NH1	28:RE:85:ASN:OD1	2.50	0.45
28:RE:131:ALA:O	28:RE:134:ILE:HG13	2.16	0.45
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.30	0.45
1:XA:389:A:H3'	1:XA:390:C:H6	1.81	0.45
1:XA:1213:A:N1	1:XA:1215:G:H1'	2.31	0.45
1:XA:1399:C:C2	1:XA:1502:A:N6	2.85	0.45
25:YA:195:A:H5''	25:YA:196:A:O5'	2.16	0.45
25:YA:465:G:N2	25:YA:684:G:H1'	2.31	0.45
25:YA:528:A:C2	25:YA:2042:A:H2'	2.51	0.45
25:YA:1062:G:C8	25:YA:1088:A:C4	3.04	0.45
25:YA:1423:G:H2'	25:YA:1424:G:H8	1.82	0.45
25:YA:1853:A:N6	25:YA:1889:A:N7	2.64	0.45
25:YA:2040:C:H2'	25:YA:2041:U:C6	2.51	0.45
25:YA:2131:G:H1'	25:YA:2158:A:N6	2.31	0.45
25:YA:2528:U:O3'	25:YA:2529:G:H8	2.00	0.45
29:YF:78:ILE:HA	29:YF:83:PHE:HD2	1.80	0.45
29:YF:155:LEU:HD12	29:YF:174:VAL:O	2.17	0.45
46:Y0:46:LYS:HB2	46:Y0:78:TYR:CD1	2.52	0.45
1:QA:513:C:H2'	1:QA:514:C:C6	2.51	0.45
1:QA:1060:C:H5''	10:QJ:51:ARG:HG2	1.98	0.45
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.51	0.45
13:QM:84:ILE:HD13	19:QS:65:ASN:HD21	1.81	0.45
25:RA:687:C:H2'	25:RA:688:U:O4'	2.15	0.45
25:RA:1771:C:H2'	25:RA:1772:G:C8	2.50	0.45
25:RA:2461:C:C2	25:RA:2462:U:C5	3.05	0.45
30:RG:60:LEU:HD22	30:RG:68:PRO:HB3	1.98	0.45
55:R9:13:LYS:HD2	55:R9:28:GLU:OE2	2.15	0.45
1:XA:481:G:HO2'	1:XA:482:A:P	2.40	0.45
1:XA:501:C:H2'	1:XA:502:G:C8	2.51	0.45
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.51	0.45
21:XU:10:ARG:HA	21:XU:13:ILE:HD12	1.98	0.45
25:YA:34:C:H5'	25:YA:35:G:OP2	2.17	0.45
25:YA:483:A:O2'	44:YY:49:VAL:O	2.22	0.45
25:YA:749:C:H5'	25:YA:1271:G:H1'	1.98	0.45
25:YA:1000:A:OP2	25:YA:1154:G:N1	2.42	0.45
25:YA:1069:A:H2'	25:YA:1073:A:N7	2.31	0.45
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.82	0.45
25:YA:1727:U:H2'	25:YA:1728:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2756:U:O5'	55:Y9:3:VAL:HG21	2.16	0.45
25:YA:2803:C:H2'	25:YA:2804:C:C6	2.51	0.45
29:YF:89:VAL:HG12	29:YF:90:PHE:CD2	2.51	0.45
32:YI:27:ARG:HB2	47:Y1:71:TYR:CE2	2.51	0.45
1:QA:1270:C:H2'	1:QA:1271:G:H8	1.82	0.45
2:QB:207:ALA:O	2:QB:209:ARG:N	2.49	0.45
12:QL:66:VAL:HG21	12:QL:98:TYR:CE2	2.51	0.45
13:QM:87:TYR:O	13:QM:90:LEU:HG	2.17	0.45
13:QM:88:ARG:HD3	19:QS:69:HIS:HE1	1.81	0.45
20:QT:20:LEU:O	20:QT:23:ARG:HG2	2.17	0.45
25:RA:288:C:H2'	25:RA:289:A:C8	2.51	0.45
25:RA:813:U:C5	35:RP:25:SER:HB3	2.52	0.45
25:RA:940:G:H2'	25:RA:941:A:O4'	2.17	0.45
25:RA:1327:C:O2'	37:RR:105:ARG:NH1	2.46	0.45
25:RA:1444(A):A:H4'	25:RA:1460:A:O2'	2.16	0.45
25:RA:1535:U:H2'	25:RA:1536:A:C8	2.52	0.45
25:RA:2561:A:H5''	34:RO:57:VAL:HG11	1.99	0.45
49:R3:40:THR:HB	49:R3:43:ILE:HG12	1.98	0.45
1:XA:287:U:H2'	1:XA:288:A:H8	1.81	0.45
1:XA:413:G:OP2	1:XA:413:G:H8	1.99	0.45
1:XA:554:C:H2'	1:XA:555:C:H6	1.82	0.45
1:XA:1206:G:C4	1:XA:1207:G:C8	3.05	0.45
2:XB:134:GLU:HA	2:XB:137:ARG:HG2	1.98	0.45
6:XF:21:LEU:O	6:XF:25:ILE:HG12	2.16	0.45
25:YA:620:G:H4'	25:YA:621:A:H5''	1.98	0.45
25:YA:1142(A):A:C4	25:YA:1144:G:C8	3.04	0.45
25:YA:1262:A:OP2	42:YW:97:LYS:NZ	2.48	0.45
25:YA:1681:G:HO2'	25:YA:1762:A:HO2'	1.61	0.45
25:YA:1869:G:N1	25:YA:1872:A:OP2	2.39	0.45
25:YA:2011:U:OP2	42:YW:16:LYS:NZ	2.36	0.45
25:YA:2755:C:C5'	55:Y9:3:VAL:HG13	2.46	0.45
28:YE:45:THR:O	28:YE:83:ASP:N	2.49	0.45
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.48	0.45
36:YQ:58:PHE:HD2	36:YQ:61:GLY:HA3	1.81	0.45
45:YZ:145:GLU:HG3	45:YZ:146:ILE:HG12	1.98	0.45
1:QA:939:G:H2'	1:QA:940:C:C6	2.51	0.45
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.82	0.45
4:QD:190:ASP:OD1	4:QD:191:ARG:N	2.44	0.45
25:RA:265:A:N6	25:RA:428:A:C8	2.84	0.45
25:RA:270(S):G:H2'	25:RA:270(T):G:C8	2.51	0.45
25:RA:271(B):G:H1'	25:RA:271(C):U:OP2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:307:G:H21	25:RA:330:A:H62	1.65	0.45
25:RA:414:C:H2'	25:RA:415:A:H8	1.82	0.45
25:RA:581:C:H2'	25:RA:582:G:C8	2.51	0.45
25:RA:729:G:H5'	25:RA:730:C:H5''	1.98	0.45
25:RA:1131:G:OP1	33:RN:80:GLY:N	2.42	0.45
25:RA:1438:U:H2'	25:RA:1439:A:C8	2.50	0.45
26:RB:109:G:H2'	26:RB:110:G:C8	2.51	0.45
28:RE:116:VAL:HG23	28:RE:157:ALA:HB2	1.98	0.45
1:XA:595:G:H21	1:XA:596:C:N4	2.15	0.45
15:XO:36:ILE:HG23	15:XO:56:LEU:HD11	1.98	0.45
25:YA:177:G:H3'	25:YA:178:G:H8	1.82	0.45
25:YA:265:A:N6	25:YA:428:A:C8	2.85	0.45
25:YA:557:U:H2'	25:YA:558:G:C8	2.51	0.45
25:YA:1216:G:P	40:YU:11:ARG:HH21	2.40	0.45
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.99	0.45
25:YA:1921:G:H2'	25:YA:1922:G:H8	1.82	0.45
25:YA:2004:G:C4	25:YA:2005:A:C8	3.04	0.45
25:YA:2065:C:H2'	25:YA:2066:C:H6	1.82	0.45
25:YA:2349:G:C6	25:YA:2369:A:C6	3.04	0.45
25:YA:2540:C:H2'	25:YA:2541:A:O4'	2.17	0.45
27:YD:18:VAL:HA	27:YD:211:ARG:HH22	1.82	0.45
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.17	0.45
1:QA:556:C:H2'	1:QA:557:G:H8	1.81	0.45
3:QC:23:TYR:HB3	10:QJ:93:GLY:O	2.16	0.45
16:QP:19:ILE:N	16:QP:37:GLY:O	2.50	0.45
25:RA:270(D):C:H2'	25:RA:270(E):G:C8	2.50	0.45
25:RA:458:G:N2	25:RA:470:A:OP2	2.50	0.45
25:RA:580:C:H2'	25:RA:581:C:C6	2.52	0.45
25:RA:754:C:H2'	25:RA:755:C:C6	2.52	0.45
25:RA:2108:C:O2	25:RA:2181:G:N2	2.35	0.45
25:RA:2857:G:N2	25:RA:2860:A:OP2	2.33	0.45
25:RA:2880:C:O3'	37:RR:90:ARG:NH1	2.50	0.45
33:RN:91:LEU:HD21	33:RN:98:VAL:HG11	1.98	0.45
42:RW:111:HIS:HD2	42:RW:113:LYS:H	1.63	0.45
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.31	0.45
1:XA:1236:A:H4'	1:XA:1304:G:H4'	1.99	0.45
1:XA:1301:U:H2'	1:XA:1301:U:O2	2.17	0.45
2:XB:84:GLU:OE2	2:XB:233:SER:OG	2.32	0.45
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.82	0.45
17:XQ:40:LYS:HE2	17:XQ:42:TYR:HE1	1.82	0.45
25:YA:71:A:N6	25:YA:114:U:H1'	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:659:C:H2'	25:YA:660:G:H8	1.82	0.45
25:YA:814:C:H1'	25:YA:1226:G:N2	2.31	0.45
25:YA:1675:C:H2'	25:YA:1676:A:O4'	2.17	0.45
25:YA:1790:C:H2'	25:YA:1791:A:C4	2.52	0.45
25:YA:2314:C:H2'	25:YA:2315:G:C8	2.47	0.45
25:YA:2443:C:H2'	25:YA:2444:G:C8	2.51	0.45
31:YH:9:ILE:HD13	31:YH:49:VAL:HG12	1.98	0.45
37:YR:26:LYS:HE2	37:YR:70:LEU:O	2.16	0.45
38:YS:110:LEU:O	38:YS:112:PHE:HD1	1.99	0.45
40:YU:92:ARG:NE	41:YV:11:GLN:H	2.14	0.45
45:YZ:6:LYS:O	45:YZ:62:PRO:HD3	2.16	0.45
1:QA:488:C:H2'	1:QA:489:C:C6	2.51	0.45
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.52	0.45
1:QA:1099:G:H5''	2:QB:96:ARG:CZ	2.46	0.45
1:QA:1121:U:H2'	1:QA:1122:U:C6	2.51	0.45
1:QA:1253:G:H2'	1:QA:1254:C:H6	1.82	0.45
1:QA:1320:C:C2	19:QS:72:GLY:HA3	2.51	0.45
3:QC:23:TYR:CD2	10:QJ:95:GLU:HB2	2.52	0.45
17:QQ:6:LEU:HD13	17:QQ:23:VAL:HG11	1.99	0.45
25:RA:541:C:H2'	25:RA:542:C:H6	1.82	0.45
25:RA:1799:G:H4'	25:RA:1800:C:O5'	2.17	0.45
25:RA:1952:A:N3	25:RA:2560:C:O2'	2.40	0.45
25:RA:2306:C:H2'	25:RA:2307:G:H21	1.81	0.45
25:RA:2630:G:H2'	25:RA:2631:G:C8	2.52	0.45
25:RA:2774:C:H2'	25:RA:2775:A:O4'	2.16	0.45
28:RE:74:PRO:HG2	28:RE:77:ILE:CG2	2.47	0.45
28:RE:78:LEU:HG	28:RE:79:ARG:HG2	1.98	0.45
1:XA:178:C:C2	1:XA:179:A:C8	3.05	0.45
25:YA:273(C):C:H2'	25:YA:273(D):C:C6	2.52	0.45
25:YA:534:U:H2'	25:YA:535:C:C6	2.52	0.45
25:YA:709:U:H2'	25:YA:710:G:C8	2.52	0.45
25:YA:724:U:H2'	25:YA:725:G:O4'	2.17	0.45
25:YA:874:G:H2'	25:YA:875:G:H8	1.82	0.45
25:YA:1537:C:H2'	25:YA:1538:G:C8	2.52	0.45
25:YA:1952:A:C6	34:YO:22:ILE:HD12	2.52	0.45
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.82	0.45
27:YD:143:HIS:HB2	27:YD:156:ALA:O	2.17	0.45
27:YD:151:LYS:O	27:YD:154:LYS:NZ	2.50	0.45
31:YH:155:SER:OG	55:Y9:17:ILE:HG21	2.17	0.45
31:YH:162:ILE:HG22	55:Y9:18:ARG:NH1	2.29	0.45
35:YP:47:ASP:OD1	35:YP:49:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:57:ASN:O	42:YW:61:ASN:HB2	2.17	0.45
46:Y0:21:LEU:HD23	46:Y0:39:ARG:HG3	1.99	0.45
1:QA:9:G:N7	1:QA:558:G:O2'	2.50	0.45
1:QA:528:C:H41	12:QL:49:ASN:CG	2.19	0.45
1:QA:608:A:H4'	16:QP:32:TYR:OH	2.17	0.45
1:QA:1133:G:H2'	1:QA:1134:G:C8	2.52	0.45
1:QA:1225:A:H5''	1:QA:1226:C:OP2	2.16	0.45
1:QA:1253:G:H2'	1:QA:1254:C:C6	2.52	0.45
1:QA:1288:A:H2'	1:QA:1289:A:C8	2.52	0.45
1:QA:1318:A:O2'	19:QS:37:ARG:HD3	2.17	0.45
1:QA:1330:U:H4'	13:QM:23:TYR:CE1	2.52	0.45
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.99	0.45
22:QW:32:G:H3'	22:QW:33:C:O4'	2.16	0.45
25:RA:172:C:H2'	25:RA:173:G:C8	2.52	0.45
25:RA:521:G:H2'	25:RA:522:G:C8	2.51	0.45
25:RA:586:A:H4'	29:RF:89:VAL:HG11	1.99	0.45
25:RA:995:C:O4'	40:RU:57:PHE:HD2	2.00	0.45
25:RA:2405:G:O2'	25:RA:2406:U:OP2	2.32	0.45
25:RA:2845:G:H2'	25:RA:2846:G:C8	2.51	0.45
26:RB:60:C:H2'	26:RB:61:G:C8	2.52	0.45
29:RF:70:THR:HG23	29:RF:72:ARG:H	1.80	0.45
30:RG:173:LEU:HB3	30:RG:178:PHE:CD2	2.52	0.45
1:XA:323:U:H5''	20:XT:26:ASN:HD21	1.80	0.45
1:XA:592:G:C6	1:XA:648:A:C6	3.04	0.45
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.52	0.45
1:XA:707:C:OP1	11:XK:85:ARG:NH1	2.50	0.45
1:XA:714:G:H2'	1:XA:715:A:H8	1.78	0.45
1:XA:1404:C:H2'	1:XA:1405:G:C8	2.52	0.45
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.17	0.45
12:XL:84:LEU:HB2	12:XL:105:TYR:CE2	2.52	0.45
25:YA:218:A:C2	25:YA:235:U:H4'	2.52	0.45
25:YA:363(B):G:H2'	25:YA:363(C):G:H8	1.82	0.45
25:YA:796:C:H2'	25:YA:797:C:C6	2.52	0.45
25:YA:911:A:H2'	36:YQ:9:TYR:CE2	2.50	0.45
25:YA:1467:C:C5	25:YA:1546:C:H2'	2.51	0.45
25:YA:2071:A:H2'	25:YA:2072:G:C8	2.52	0.45
27:YD:96:HIS:ND1	27:YD:102:LYS:HG2	2.32	0.45
28:YE:60:ASN:CG	28:YE:62:PRO:HD2	2.36	0.45
1:QA:384:G:H2'	1:QA:385:C:C6	2.52	0.44
1:QA:908:A:H2'	1:QA:909:A:C8	2.52	0.44
1:QA:1000:A:H2'	1:QA:1001:G:H8	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1090:U:H2'	1:QA:1091:U:C6	2.53	0.44
1:QA:1469:G:H2'	1:QA:1470:G:C8	2.49	0.44
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.99	0.44
8:QH:104:ARG:HD2	8:QH:138:TRP:CE3	2.52	0.44
13:QM:14:ARG:HG2	13:QM:44:ARG:NH1	2.31	0.44
25:RA:319:C:H2'	25:RA:320:A:C8	2.51	0.44
25:RA:503:A:H4'	25:RA:504:U:O5'	2.17	0.44
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.99	0.44
25:RA:1657:C:H2'	25:RA:1658:C:C6	2.52	0.44
25:RA:2294:C:H2'	25:RA:2295:C:H6	1.82	0.44
26:RB:32:C:C2	26:RB:51:G:N2	2.85	0.44
32:RI:14:ASP:O	32:RI:16:GLY:N	2.49	0.44
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.32	0.44
50:R4:61:ARG:HG2	50:R4:61:ARG:O	2.16	0.44
1:XA:163:C:H2'	1:XA:164:U:C6	2.52	0.44
1:XA:966:G:C2	22:XV:35:C:H5'	2.52	0.44
1:XA:1028(B):C:C4	1:XA:1029:G:H1'	2.52	0.44
2:XB:141:GLU:O	2:XB:144:ARG:HG3	2.17	0.44
4:XD:85:LYS:HD2	4:XD:92:VAL:HG11	1.99	0.44
25:YA:30:G:H2'	25:YA:31:C:H6	1.82	0.44
25:YA:512:G:HO2'	25:YA:513:A:H8	1.65	0.44
25:YA:1628:G:H2'	25:YA:1629:U:C6	2.52	0.44
25:YA:2564:A:C8	25:YA:2648:C:H5'	2.52	0.44
25:YA:2683:C:O2	34:YO:70:LYS:HE3	2.17	0.44
25:YA:2692:C:H2'	25:YA:2693:A:C8	2.52	0.44
28:YE:11:MET:HG2	28:YE:24:THR:OG1	2.17	0.44
29:YF:73:ALA:HB3	29:YF:75:HIS:CE1	2.53	0.44
32:YI:80:PRO:HB2	32:YI:146:ALA:HB2	2.00	0.44
33:YN:12:ARG:NH1	33:YN:14:VAL:HG22	2.32	0.44
41:YV:75:PHE:HE1	41:YV:82:ARG:HE	1.64	0.44
1:QA:867:G:O2'	1:QA:873:A:N6	2.50	0.44
1:QA:1070:U:H2'	1:QA:1071:C:C6	2.53	0.44
1:QA:1203:C:H2'	1:QA:1204:A:H8	1.81	0.44
1:QA:1267:C:O2	21:QU:20:LYS:HD2	2.17	0.44
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.98	0.44
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.17	0.44
1:QA:1367:C:H5'	10:QJ:60:ARG:NH1	2.32	0.44
7:QG:75:VAL:HG12	7:QG:88:PRO:HB3	2.00	0.44
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.98	0.44
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.53	0.44
25:RA:519:U:H2'	25:RA:520:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:588:U:H2'	25:RA:589:C:C6	2.52	0.44
25:RA:1062:G:OP1	25:RA:1070:A:H4'	2.17	0.44
25:RA:1141:U:O2'	25:RA:1142(A):A:N7	2.50	0.44
25:RA:1811:G:H2'	25:RA:1812:A:C8	2.51	0.44
25:RA:1825:A:H2'	25:RA:1826:G:C8	2.52	0.44
25:RA:1946:U:H2'	25:RA:1947:C:H6	1.83	0.44
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.17	0.44
25:RA:2712:U:HO2'	25:RA:2712(A):A:P	2.41	0.44
25:RA:2730:C:O2'	28:RE:168:MET:O	2.30	0.44
25:RA:2790:A:H2'	25:RA:2791:C:H5''	1.99	0.44
27:RD:247:ALA:HA	27:RD:253:GLN:HA	1.99	0.44
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.97	0.44
36:RQ:30:GLY:HA3	36:RQ:107:ALA:HB2	1.99	0.44
42:RW:64:MET:HB3	42:RW:69:LEU:HD21	1.99	0.44
1:XA:129(A):G:N1	1:XA:188:U:H4'	2.33	0.44
1:XA:150:C:H2'	1:XA:151:A:O4'	2.17	0.44
1:XA:160:A:H2'	1:XA:161:A:O4'	2.18	0.44
1:XA:688:G:H2'	1:XA:689:C:H6	1.82	0.44
1:XA:1355:G:H2'	1:XA:1356:G:H8	1.82	0.44
7:XG:87:VAL:HG13	7:XG:152:ALA:HA	2.00	0.44
9:XI:85:LEU:HD11	9:XI:96:LEU:HD21	1.99	0.44
20:XT:72:LEU:HD23	20:XT:72:LEU:O	2.17	0.44
25:YA:210:C:H2'	25:YA:211:A:H8	1.83	0.44
25:YA:524:U:H2'	25:YA:525:U:C6	2.52	0.44
25:YA:638:G:H2'	25:YA:639:U:H6	1.81	0.44
25:YA:1527:G:H22	25:YA:1545:A:H3'	1.81	0.44
25:YA:2712:U:C5	25:YA:2713:A:H5''	2.52	0.44
25:YA:2743:C:O5'	55:Y9:25:VAL:HA	2.17	0.44
25:YA:2755:C:C5	55:Y9:3:VAL:HA	2.52	0.44
26:YB:43:C:O2'	30:YG:98:ARG:NH2	2.49	0.44
30:YG:27:ASN:OD1	30:YG:28:VAL:N	2.50	0.44
33:YN:123:TYR:HE2	33:YN:129:PRO:HD2	1.82	0.44
37:YR:103:ARG:NH1	42:YW:40:ASN:OD1	2.41	0.44
38:YS:39:ILE:HB	38:YS:49:VAL:HB	1.99	0.44
55:Y9:26:ILE:O	55:Y9:26:ILE:HG13	2.17	0.44
1:QA:113:G:H2'	1:QA:114:U:H6	1.83	0.44
1:QA:115:G:H4'	1:QA:116:A:O5'	2.17	0.44
1:QA:189:U:O2	17:QQ:63:ARG:NH2	2.50	0.44
1:QA:1238:A:H62	1:QA:1299:A:N6	2.15	0.44
16:QP:2:VAL:HG13	16:QP:64:ALA:HA	2.00	0.44
17:QQ:28:PRO:HA	17:QQ:35:VAL:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1212:G:H1'	25:RA:1237:A:N6	2.32	0.44
25:RA:1278:A:H2'	25:RA:1279:G:H8	1.81	0.44
25:RA:2231:C:H2'	25:RA:2232:U:O4'	2.17	0.44
25:RA:2702:U:H3	25:RA:2705:A:H61	1.66	0.44
25:RA:2845:G:H2'	25:RA:2846:G:H8	1.83	0.44
1:XA:67:C:H2'	1:XA:68:G:C8	2.53	0.44
1:XA:135:C:H2'	1:XA:136:C:H5'	1.99	0.44
1:XA:575:G:O2'	1:XA:821:G:H5'	2.17	0.44
1:XA:908:A:H2'	1:XA:909:A:C8	2.52	0.44
1:XA:913:A:OP1	12:XL:46:LYS:NZ	2.51	0.44
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.82	0.44
25:YA:29:U:H2'	25:YA:30:G:C8	2.52	0.44
25:YA:571:A:O2'	41:YV:78:LYS:HE2	2.17	0.44
25:YA:898:C:H3'	25:YA:899:A:H8	1.81	0.44
25:YA:974(A):C:H4'	25:YA:975:G:O5'	2.16	0.44
25:YA:1252:G:N2	40:YU:33:ARG:HB3	2.32	0.44
25:YA:1297:C:H2'	25:YA:1298:C:H6	1.81	0.44
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.52	0.44
25:YA:1657:C:H4'	28:YE:133:LYS:HB3	1.99	0.44
25:YA:1971:A:C8	27:YD:241:PRO:HB3	2.53	0.44
25:YA:2133:G:H1'	25:YA:2158:A:H61	1.82	0.44
25:YA:2742:C:C2	55:Y9:26:ILE:HG22	2.52	0.44
25:YA:2744:G:H5'	55:Y9:24:TYR:CD2	2.52	0.44
26:YB:30:C:H2'	26:YB:31:C:O4'	2.17	0.44
30:YG:173:LEU:HB3	30:YG:178:PHE:CD2	2.53	0.44
36:YQ:73:PRO:HA	36:YQ:93:TYR:CD1	2.52	0.44
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.33	0.44
55:Y9:27:CYS:HB3	55:Y9:28:GLU:H	1.59	0.44
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.53	0.44
1:QA:1496:C:H2'	1:QA:1497:G:C8	2.52	0.44
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.52	0.44
4:QD:93:PHE:CE2	4:QD:97:LEU:HD11	2.53	0.44
13:QM:86:CYS:SG	13:QM:88:ARG:HG2	2.58	0.44
25:RA:140:A:H8	25:RA:1408:C:O2'	1.95	0.44
25:RA:414:C:H2'	25:RA:415:A:C8	2.53	0.44
25:RA:554:U:H2'	25:RA:556:G:C8	2.52	0.44
25:RA:618(A):C:OP2	29:RF:103:LYS:HE3	2.16	0.44
25:RA:924:C:H2'	25:RA:925:C:C6	2.52	0.44
25:RA:1321:A:C4	25:RA:1322:A:C8	3.05	0.44
25:RA:1853:A:N6	25:RA:1889:A:N7	2.66	0.44
25:RA:2336:A:H61	46:R0:43:THR:HG21	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2567:G:H2'	25:RA:2568:C:H6	1.82	0.44
25:RA:2784:C:H2'	25:RA:2785:C:C6	2.51	0.44
27:RD:69:ARG:HH21	27:RD:130:ALA:N	2.16	0.44
29:RF:8:GLN:HG2	29:RF:8:GLN:O	2.17	0.44
36:RQ:58:PHE:HD2	36:RQ:61:GLY:HA3	1.83	0.44
40:RU:108:GLU:HG3	41:RV:45:THR:OG1	2.17	0.44
43:RX:21:PHE:HE1	43:RX:92:LEU:HB3	1.81	0.44
49:R3:10:LYS:HB3	49:R3:53:LEU:HD23	1.98	0.44
1:XA:156:G:H2'	1:XA:157:G:H8	1.82	0.44
1:XA:262:A:H2'	1:XA:263:A:C8	2.52	0.44
1:XA:397:A:H5'	1:XA:398:C:OP1	2.18	0.44
1:XA:877:C:H2'	1:XA:878:G:C8	2.49	0.44
1:XA:1064:G:H21	1:XA:1190:G:H2'	1.82	0.44
1:XA:1127:G:H1'	1:XA:1147:C:H42	1.82	0.44
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.18	0.44
9:XI:8:GLY:HA2	9:XI:79:LEU:HD12	1.99	0.44
11:XK:109:VAL:HG11	18:XR:84:LYS:HD2	2.00	0.44
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.82	0.44
13:XM:49:THR:HB	13:XM:52:GLU:HG3	2.00	0.44
14:YN:26:ARG:HD3	14:YN:43:CYS:HB3	1.99	0.44
17:XQ:12:SER:HB3	17:XQ:20:THR:HB	2.00	0.44
22:XW:9:G:H5''	22:XW:10:G:OP2	2.17	0.44
25:YA:395:U:H2'	25:YA:396:G:C8	2.52	0.44
25:YA:635:C:O2'	25:YA:639:U:OP1	2.35	0.44
25:YA:753:C:H2'	25:YA:754:C:H6	1.82	0.44
25:YA:857:C:H4'	46:Y0:23:VAL:HG21	2.00	0.44
25:YA:934:G:H2'	25:YA:935:C:H6	1.83	0.44
25:YA:1048:A:P	25:YA:1110:G:H22	2.41	0.44
25:YA:1345:C:H2'	25:YA:1346:G:H8	1.81	0.44
25:YA:1562:A:H2'	25:YA:1563:G:H8	1.83	0.44
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.18	0.44
25:YA:1790:C:H2'	25:YA:1791:A:C5	2.52	0.44
25:YA:2743:C:OP2	55:Y9:25:VAL:HB	2.17	0.44
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.82	0.44
39:YT:36:GLU:HG3	39:YT:41:ARG:HE	1.81	0.44
55:Y9:27:CYS:C	55:Y9:29:ASN:H	2.20	0.44
1:QA:1095:U:P	1:QA:1108:G:H1	2.40	0.44
1:QA:1348:U:C4	1:QA:1374:A:H2	2.35	0.44
4:QD:22:LYS:HD3	57:QD:301:SF4:S3	2.58	0.44
11:QK:20:TYR:HE1	11:QK:83:ILE:HD12	1.81	0.44
12:QL:32:PHE:HB3	12:QL:84:LEU:HD11	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:22:LEU:HD21	19:QS:29:ARG:N	2.32	0.44
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.18	0.44
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.82	0.44
25:RA:2531:A:N7	31:RH:175:LYS:HD2	2.33	0.44
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.98	0.44
29:RF:156:LEU:HD21	29:RF:163:VAL:HG12	1.99	0.44
33:RN:35:ARG:HB2	33:RN:42:TRP:HH2	1.82	0.44
35:RP:85:LEU:HD23	35:RP:88:LEU:HD21	1.99	0.44
40:RU:91:ASP:HA	40:RU:95:LEU:HB2	1.99	0.44
53:R7:30:VAL:HG22	53:R7:33:ARG:HH21	1.82	0.44
1:XA:163:C:H2'	1:XA:164:U:H6	1.81	0.44
1:XA:246:A:C2	1:XA:282:A:C5	3.05	0.44
1:XA:674:G:H1'	18:XR:81:PHE:HE2	1.83	0.44
1:XA:925:G:C2	1:XA:927:G:C8	3.06	0.44
1:XA:1320:C:H2'	1:XA:1321:C:C6	2.52	0.44
1:XA:1329:A:H5''	13:XM:26:GLY:N	2.32	0.44
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.98	0.44
9:XI:42:ARG:NH2	9:XI:75:ASP:OD1	2.43	0.44
12:XL:53:ARG:HH12	12:XL:92:ASP:HB2	1.82	0.44
13:XM:108:ARG:NH2	13:XM:111:LYS:HD3	2.32	0.44
17:XQ:51:TYR:HE2	17:XQ:73:VAL:HG11	1.81	0.44
25:YA:20:C:N3	25:YA:520:G:N1	2.38	0.44
25:YA:363(A):A:H2'	25:YA:363(B):G:H8	1.82	0.44
25:YA:616:A:H4'	29:YF:182:ASN:ND2	2.31	0.44
25:YA:851:U:H2'	25:YA:852:G:H8	1.82	0.44
25:YA:870:A:OP1	36:YQ:6:ARG:NH2	2.40	0.44
25:YA:983:A:H2'	25:YA:984:A:C8	2.52	0.44
25:YA:2525:G:H21	55:Y9:28:GLU:CG	2.17	0.44
25:YA:2527:C:C4	25:YA:2528:U:C4	3.06	0.44
30:YG:5:VAL:HG12	30:YG:8:LYS:H	1.82	0.44
30:YG:60:LEU:HD22	30:YG:68:PRO:HB3	2.00	0.44
30:YG:126:ASP:OD2	30:YG:130:ASN:HB2	2.18	0.44
34:YO:64:ARG:HH12	39:YT:70:VAL:HG21	1.82	0.44
37:YR:91:GLN:HG2	37:YR:91:GLN:O	2.16	0.44
41:YV:4:ILE:HG13	41:YV:40:LEU:HD12	1.99	0.44
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.82	0.44
1:QA:1121:U:C2	1:QA:1122:U:C5	3.05	0.44
1:QA:1422:G:H2'	1:QA:1423:G:H8	1.83	0.44
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.16	0.44
2:QB:88:ALA:HB2	2:QB:219:VAL:HG13	2.00	0.44
4:QD:142:PRO:HA	4:QD:185:PHE:HD2	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:15:ARG:HD2	5:QE:26:PHE:CD2	2.52	0.44
25:RA:520:G:H2'	25:RA:521:G:C8	2.52	0.44
25:RA:1811:G:H2'	25:RA:1812:A:H8	1.83	0.44
25:RA:2494:G:OP1	46:R0:3:HIS:N	2.50	0.44
38:RS:11:LYS:O	38:RS:15:ARG:HB2	2.18	0.44
1:XA:560:U:H5'	1:XA:566:G:N2	2.33	0.44
1:XA:1219:U:OP1	14:YN:19:ARG:NH2	2.40	0.44
5:XE:153:LYS:HG3	5:XE:155:GLU:H	1.83	0.44
17:XQ:42:TYR:HD2	17:XQ:59:ILE:HD11	1.82	0.44
25:YA:704:G:H1'	25:YA:727:A:H61	1.83	0.44
25:YA:760:G:H2'	25:YA:761:A:O4'	2.16	0.44
25:YA:834:C:H2'	25:YA:835:A:H8	1.82	0.44
25:YA:1252:G:N2	40:YU:37:GLU:OE2	2.42	0.44
25:YA:1412:A:H2'	25:YA:1413:G:C8	2.52	0.44
25:YA:1907:G:O6	25:YA:1924:C:N4	2.51	0.44
25:YA:2507:C:H2'	25:YA:2508:G:O4'	2.18	0.44
25:YA:2532:G:N2	25:YA:2663:G:O2'	2.50	0.44
25:YA:2712:U:H5	25:YA:2713:A:H5''	1.82	0.44
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.99	0.44
48:Y2:25:VAL:O	48:Y2:29:LYS:HG2	2.17	0.44
1:QA:221:C:C2	1:QA:222:U:C5	3.06	0.44
1:QA:269:C:H2'	1:QA:270:A:C8	2.52	0.44
1:QA:593:G:H1	1:QA:646:U:H3	1.66	0.44
1:QA:998(A):C:H2'	1:QA:999:U:C6	2.53	0.44
1:QA:1145:C:H4'	1:QA:1146:A:C8	2.52	0.44
1:QA:1313:U:H2'	1:QA:1314:C:C6	2.53	0.44
6:QF:97:PHE:HD2	18:QR:31:LEU:HD21	1.83	0.44
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.15	0.44
25:RA:996:A:H4'	40:RU:92:ARG:CG	2.48	0.44
25:RA:1499:C:H2'	25:RA:1500:G:H8	1.83	0.44
25:RA:2557:G:H2'	25:RA:2558:C:C6	2.52	0.44
25:RA:2574:G:H2'	25:RA:2575:C:O4'	2.17	0.44
25:RA:2648:C:H2'	25:RA:2649:U:C6	2.53	0.44
25:RA:2649:U:H2'	25:RA:2650:U:C6	2.52	0.44
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.46	0.44
27:RD:94:LEU:HD13	27:RD:104:TYR:CE1	2.47	0.44
29:RF:113:ALA:HB1	29:RF:186:ILE:HG21	1.98	0.44
39:RT:120:ARG:O	39:RT:123:GLN:HB2	2.17	0.44
40:RU:92:ARG:NE	41:RV:11:GLN:H	2.16	0.44
1:XA:279:A:OP1	1:XA:280:C:O2'	2.26	0.44
1:XA:505:G:H2'	1:XA:506:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:53:ARG:HH21	18:XR:59:SER:HA	1.82	0.44
25:YA:775:G:C5	25:YA:794:G:C8	3.05	0.44
25:YA:845:G:H8	25:YA:845:G:OP2	1.99	0.44
25:YA:1782:C:H1'	25:YA:2609:U:H5''	2.00	0.44
25:YA:2018:G:H2'	25:YA:2019:A:H8	1.83	0.44
25:YA:2290:G:H2'	25:YA:2291:U:H6	1.83	0.44
25:YA:2695:C:H2'	25:YA:2696:U:H6	1.82	0.44
25:YA:2838:G:C4	25:YA:2839:G:C8	3.06	0.44
26:YB:40:U:H1'	26:YB:45:A:H61	1.82	0.44
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.44
28:YE:152:LYS:HG3	33:YN:78:TYR:CE1	2.53	0.44
31:YH:137:ASP:CG	31:YH:138:LYS:H	2.21	0.44
50:Y4:51:ASP:OD1	50:Y4:52:THR:N	2.46	0.44
1:QA:264:U:H2'	1:QA:265:G:O4'	2.18	0.44
1:QA:328:C:H4'	1:QA:329:A:O5'	2.18	0.44
1:QA:770:C:H2'	1:QA:771:G:H8	1.81	0.44
1:QA:1391:U:H2'	1:QA:1392:G:H8	1.83	0.44
1:QA:1427:U:H2'	1:QA:1428:A:H8	1.82	0.44
2:QB:24:TRP:HB2	2:QB:190:THR:HB	2.00	0.44
8:QH:14:ARG:O	8:QH:18:ARG:HG2	2.17	0.44
13:QM:87:TYR:O	13:QM:91:ARG:HG2	2.18	0.44
25:RA:78:A:H2'	25:RA:79:G:C8	2.51	0.44
25:RA:553:U:H2'	25:RA:554:U:O4'	2.18	0.44
25:RA:606:U:H4'	25:RA:658:C:H4'	2.00	0.44
25:RA:823:G:H2'	25:RA:824:A:H8	1.83	0.44
25:RA:1059:G:OP2	25:RA:1060:U:H5''	2.18	0.44
25:RA:1628:G:H2'	25:RA:1629:U:C6	2.52	0.44
25:RA:1856:G:N1	25:RA:1887:C:N3	2.65	0.44
25:RA:2364:C:H2'	25:RA:2365:G:O4'	2.17	0.44
25:RA:2596:U:H2'	25:RA:2597:G:O4'	2.18	0.44
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.53	0.44
27:RD:124:PRO:O	27:RD:129:ASN:ND2	2.51	0.44
28:RE:32:PRO:HA	28:RE:90:THR:HA	1.99	0.44
1:XA:152:A:H62	1:XA:169:C:N4	2.16	0.44
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.52	0.44
1:XA:271:C:H2'	1:XA:272:C:H6	1.83	0.44
1:XA:402:G:OP1	4:XD:74:GLN:HG2	2.18	0.44
1:XA:893:C:C2	1:XA:894:G:C8	3.06	0.44
1:XA:1318:A:O2'	19:XS:37:ARG:HD2	2.17	0.44
1:XA:1352:C:H2'	1:XA:1353:G:C8	2.53	0.44
12:XL:33:ARG:HG2	12:XL:60:LEU:HD13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:131:G:H2'	25:YA:132:G:H8	1.82	0.44
25:YA:1604:C:H2'	25:YA:1605:C:H6	1.83	0.44
25:YA:1761:C:H42	25:YA:1762:A:H62	1.66	0.44
25:YA:2174:C:H2'	25:YA:2175:C:C6	2.53	0.44
25:YA:2505:G:H2'	25:YA:2576:G:H1	1.83	0.44
25:YA:2785:C:H2'	25:YA:2786:U:H6	1.81	0.44
26:YB:32:C:C2	26:YB:51:G:N2	2.85	0.44
28:YE:120:TRP:CD1	28:YE:155:LYS:HB3	2.53	0.44
42:YW:22:ASP:OD1	42:YW:25:ARG:NH1	2.48	0.44
43:YX:5:TYR:CE2	48:Y2:30:ARG:HB2	2.53	0.44
1:QA:412:A:H4'	1:QA:413:G:O5'	2.16	0.44
1:QA:456:C:H2'	1:QA:457:C:C6	2.52	0.44
1:QA:539:A:H2'	1:QA:540:G:H8	1.82	0.44
1:QA:552:U:H2'	1:QA:553:A:C8	2.52	0.44
1:QA:1040:U:H2'	1:QA:1041:A:C8	2.53	0.44
1:QA:1200:C:H4'	1:QA:1201:A:H5'	2.00	0.44
1:QA:1291:G:H5''	7:QG:41:ARG:HH21	1.83	0.44
1:QA:1367:C:OP2	9:QI:112:LYS:NZ	2.51	0.44
1:QA:1461:G:H2'	1:QA:1462:G:H8	1.83	0.44
4:QD:57:ARG:HB3	4:QD:206:PHE:CD1	2.53	0.44
4:QD:105:VAL:HG13	4:QD:110:PHE:HB2	2.00	0.44
20:QT:72:LEU:O	20:QT:72:LEU:HD23	2.18	0.44
22:QW:10:G:H2'	22:QW:11:A:C8	2.52	0.44
25:RA:305:U:H2'	25:RA:306:U:C6	2.53	0.44
25:RA:846:C:H42	25:RA:931:G:H1	1.65	0.44
25:RA:1137:G:H2'	25:RA:1138:G:C8	2.53	0.44
25:RA:1418:G:N2	25:RA:1581:G:O6	2.51	0.44
25:RA:1459:G:C5	25:RA:1461:G:C8	3.05	0.44
25:RA:1605:C:H2'	25:RA:1606:G:O4'	2.18	0.44
25:RA:1656:C:H2'	25:RA:1657:C:C6	2.51	0.44
25:RA:2355:C:H1'	46:R0:39:ARG:HH21	1.82	0.44
25:RA:2392:A:H8	35:RP:60:MET:HG2	1.81	0.44
36:RQ:79:LEU:HB3	46:R0:5:LYS:HD3	1.99	0.44
38:RS:3:ARG:HD3	38:RS:4:LEU:HD13	2.00	0.44
39:RT:108:ARG:HG3	39:RT:111:ARG:NH2	2.33	0.44
43:RX:40:LYS:HG3	43:RX:51:VAL:HG11	2.00	0.44
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.33	0.44
1:XA:543:C:OP1	4:XD:14:ARG:HG3	2.18	0.44
1:XA:792:A:H1'	1:XA:794:A:N7	2.33	0.44
1:XA:857:C:H2'	1:XA:858:G:O4'	2.18	0.44
1:XA:1014:A:C2	1:XA:1219:U:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1267:C:O2	21:XU:20:LYS:HD2	2.18	0.44
2:XB:61:LEU:HG	2:XB:66:GLY:HA3	1.98	0.44
6:XF:49:ALA:HB1	18:XR:80:PRO:HB3	1.99	0.44
25:YA:184:C:H2'	25:YA:185:U:H6	1.83	0.44
25:YA:563:G:C6	25:YA:2018:G:C5	3.06	0.44
25:YA:852:G:H2'	25:YA:853:G:C8	2.51	0.44
25:YA:971:C:O2'	25:YA:983:A:N3	2.38	0.44
25:YA:1059:G:OP2	25:YA:1060:U:H5''	2.17	0.44
25:YA:1084:A:H5'	25:YA:1085:A:OP2	2.18	0.44
25:YA:1338:G:O2'	25:YA:1393:A:N1	2.43	0.44
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.52	0.44
25:YA:1505:C:H2'	25:YA:1506:C:H6	1.82	0.44
25:YA:1534:G:H2'	25:YA:1534:G:N3	2.33	0.44
25:YA:1797:C:O2'	27:YD:259:THR:HG22	2.17	0.44
25:YA:2001:A:H2'	25:YA:2002:G:H8	1.82	0.44
25:YA:2023:G:H4'	25:YA:2617:C:O3'	2.18	0.44
25:YA:2292:C:H2'	25:YA:2293:C:C6	2.53	0.44
29:YF:40:GLN:HE22	29:YF:182:ASN:HB2	1.83	0.44
32:YI:109:ILE:HB	32:YI:130:TYR:CE1	2.53	0.44
1:QA:346:G:OP1	39:RT:41:ARG:NH1	2.51	0.43
1:QA:401:C:H2'	1:QA:402:G:C8	2.53	0.43
1:QA:620:C:H2'	1:QA:621:A:O4'	2.18	0.43
1:QA:981:U:H5'	14:QN:21:TYR:CZ	2.52	0.43
1:QA:1129:C:H4'	1:QA:1130:A:C8	2.52	0.43
15:QO:15:PHE:CE1	15:QO:84:LYS:HD3	2.53	0.43
18:QR:50:ILE:HG13	18:QR:74:ARG:HH22	1.82	0.43
25:RA:777:A:H2'	25:RA:778:G:C8	2.53	0.43
25:RA:1295:C:H2'	25:RA:1296:G:H8	1.82	0.43
25:RA:1812:A:C4'	27:RD:46:GLN:HE22	2.31	0.43
27:RD:12:SER:HB2	27:RD:208:LYS:HB3	2.00	0.43
28:RE:19:ARG:HG3	34:RO:72:PRO:HB2	2.00	0.43
31:RH:88:LEU:HA	31:RH:130:ARG:HA	2.00	0.43
36:RQ:62:GLY:HA2	45:RZ:116:VAL:HG21	2.00	0.43
43:RX:34:ALA:O	43:RX:77:LYS:NZ	2.39	0.43
45:RZ:97:GLU:HG2	45:RZ:125:LEU:HD11	2.00	0.43
49:R3:5:LYS:HD2	49:R3:34:GLU:OE2	2.18	0.43
1:XA:222:U:H2'	1:XA:223:U:H6	1.82	0.43
1:XA:925:G:H1'	1:XA:1502:A:C4	2.53	0.43
1:XA:1178:G:OP2	9:XI:93:ARG:NH2	2.50	0.43
19:XS:10:PHE:CE2	19:XS:16:LEU:HB2	2.52	0.43
24:XY:41:C:H2'	24:XY:42:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:513:A:H2	25:YA:582:G:H4'	1.83	0.43
25:YA:942:G:H2'	25:YA:943:U:O4'	2.18	0.43
25:YA:1357:U:H2'	25:YA:1358:G:O4'	2.17	0.43
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.98	0.43
25:YA:1800:C:C6	25:YA:1802:A:H1'	2.53	0.43
25:YA:2142:C:H2'	25:YA:2143:C:C6	2.53	0.43
25:YA:2182:G:H2'	25:YA:2183:C:C6	2.53	0.43
29:YF:8:GLN:O	29:YF:8:GLN:HG2	2.18	0.43
34:YO:64:ARG:NH1	39:YT:70:VAL:HG21	2.33	0.43
1:QA:21:G:H21	1:QA:914:A:H62	1.66	0.43
1:QA:67:C:O2'	1:QA:171:A:N3	2.41	0.43
1:QA:509:A:H4'	1:QA:510:A:OP1	2.18	0.43
1:QA:543:C:OP2	4:QD:10:ARG:NH1	2.51	0.43
1:QA:731:G:OP1	1:QA:766:A:H1'	2.18	0.43
1:QA:918:A:H2'	1:QA:919:A:C8	2.53	0.43
1:QA:966:G:H2'	1:QA:967:C:C6	2.53	0.43
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.33	0.43
9:QI:5:TYR:CE1	9:QI:16:ARG:HB2	2.53	0.43
9:QI:104:ARG:NH1	9:QI:105:ASP:O	2.50	0.43
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.30	0.43
25:RA:1399:C:H2'	25:RA:1400:G:C8	2.52	0.43
25:RA:1630:G:H2'	25:RA:1630(A):C:C6	2.52	0.43
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.53	0.43
25:RA:2677:G:C6	25:RA:2731:G:C6	3.06	0.43
26:RB:74:U:H2'	26:RB:75:G:O4'	2.17	0.43
27:RD:72:LYS:HG3	27:RD:97:TYR:HE2	1.80	0.43
29:RF:178:PRO:HB3	29:RF:198:ALA:HB2	2.00	0.43
35:RP:47:ASP:OD1	35:RP:49:ARG:HG2	2.17	0.43
35:RP:84:ASN:OD1	35:RP:116:GLY:HA3	2.18	0.43
52:R6:38:LYS:HB2	52:R6:49:HIS:CE1	2.53	0.43
54:R8:54:GLU:O	54:R8:58:ILE:HG12	2.18	0.43
1:XA:105:G:H2'	1:XA:106:C:C6	2.52	0.43
1:XA:790:A:H2'	1:XA:791:G:C8	2.53	0.43
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.51	0.43
4:XD:102:ASP:OD1	4:XD:103:ASN:N	2.51	0.43
9:XI:63:ILE:HG21	9:XI:77:ILE:HG12	2.00	0.43
9:XI:79:LEU:HD11	9:XI:83:ARG:HE	1.82	0.43
13:XM:40:ASN:HB3	13:XM:43:THR:HG23	1.99	0.43
25:YA:270(Y):G:O2'	25:YA:270(Z):U:O4'	2.28	0.43
25:YA:626:U:O4	35:YP:81:GLN:NE2	2.49	0.43
25:YA:742:G:H2'	25:YA:743:G:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1530:G:O6	25:YA:1542:G:N2	2.51	0.43
25:YA:1803:A:H2	25:YA:1823:G:O4'	2.00	0.43
25:YA:2537:U:H2'	25:YA:2538:C:O4'	2.19	0.43
25:YA:2547:U:H2'	25:YA:2548:G:C8	2.53	0.43
25:YA:2761:G:C6	25:YA:2762:G:C4	3.06	0.43
26:YB:30:C:OP2	38:YS:32:LEU:HD11	2.18	0.43
31:YH:149:ARG:HB3	55:Y9:20:HIS:HB2	2.00	0.43
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.43
34:YO:64:ARG:HB2	34:YO:83:ALA:HB3	1.99	0.43
36:YQ:116:GLU:O	36:YQ:120:ILE:HG12	2.18	0.43
41:YV:51:VAL:HG12	41:YV:53:GLU:H	1.83	0.43
43:YX:53:LYS:H	43:YX:82:GLN:HB3	1.82	0.43
44:YY:20:TYR:CE2	44:YY:43:ASN:HA	2.53	0.43
50:Y4:55:ARG:O	50:Y4:56:VAL:HG13	2.17	0.43
1:QA:538:G:H2'	1:QA:539:A:C8	2.53	0.43
25:RA:172:C:H2'	25:RA:173:G:H8	1.83	0.43
25:RA:189:G:H2'	25:RA:205:G:N2	2.33	0.43
25:RA:820:A:H4'	25:RA:836:G:N2	2.33	0.43
25:RA:846:C:N3	25:RA:930:U:N3	2.65	0.43
25:RA:923:C:H2'	25:RA:924:C:C6	2.53	0.43
25:RA:1401:G:H2'	25:RA:1402:C:C6	2.53	0.43
25:RA:1534:G:N3	25:RA:1534:G:H2'	2.33	0.43
25:RA:1764:G:C6	25:RA:1989:G:N1	2.86	0.43
25:RA:2386:C:H2'	25:RA:2387:U:C6	2.52	0.43
25:RA:2432:A:H2'	25:RA:2433:A:C8	2.53	0.43
25:RA:2635:C:H5''	28:RE:78:LEU:HA	1.99	0.43
33:RN:67:LEU:O	33:RN:88:GLU:HB2	2.19	0.43
39:RT:93:ARG:N	39:RT:115:ARG:O	2.36	0.43
40:RU:8:VAL:HG22	40:RU:12:ARG:HG3	1.99	0.43
45:RZ:54:HIS:HB3	45:RZ:101:PRO:HD3	2.01	0.43
45:RZ:59:LEU:O	45:RZ:60:GLU:HG2	2.17	0.43
45:RZ:149:SER:HB2	45:RZ:172:ALA:O	2.17	0.43
47:R1:52:ARG:HH11	47:R1:57:GLU:HB2	1.82	0.43
50:R4:51:ASP:OD1	50:R4:52:THR:N	2.46	0.43
1:XA:173:U:H5''	1:XA:197:A:O4'	2.18	0.43
1:XA:757:U:H2'	1:XA:758:G:O4'	2.19	0.43
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.99	0.43
4:XD:142:PRO:HA	4:XD:185:PHE:HD2	1.82	0.43
8:XH:121:ASP:OD1	8:XH:122:ARG:N	2.51	0.43
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.19	0.43
25:YA:270(V):G:H2'	25:YA:270(W):G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:637:A:H4'	25:YA:638:G:O5'	2.17	0.43
25:YA:1061:U:H3'	25:YA:1062:G:C5'	2.48	0.43
25:YA:1157:G:O2'	49:Y3:31:LEU:HD12	2.19	0.43
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.53	0.43
25:YA:1526:G:C6	25:YA:1527:G:C6	3.06	0.43
25:YA:2154:G:H2'	25:YA:2155:G:C8	2.53	0.43
25:YA:2543:G:H2'	25:YA:2544:G:H8	1.82	0.43
25:YA:2610:C:H4'	25:YA:2611:U:H5'	2.00	0.43
25:YA:2649:U:H2'	25:YA:2650:U:C6	2.53	0.43
25:YA:2712:U:O2'	25:YA:2712(A):A:H8	2.00	0.43
25:YA:2839:G:H5'	37:YR:46:GLY:HA2	1.99	0.43
27:YD:31:LYS:HG3	27:YD:32:SER:N	2.33	0.43
27:YD:213:ARG:HD2	27:YD:217:ARG:O	2.17	0.43
28:YE:101:ARG:NH1	28:YE:171:GLU:HB2	2.33	0.43
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.99	0.43
44:YY:14:LEU:HB2	44:YY:75:ILE:HD11	1.99	0.43
54:Y8:26:LYS:HD3	54:Y8:47:LYS:HB3	1.99	0.43
1:QA:477:G:H2'	1:QA:478:A:H8	1.84	0.43
1:QA:925:G:C2	1:QA:927:G:C8	3.06	0.43
1:QA:1129:C:H5'	1:QA:1130:A:H5'	2.00	0.43
9:QI:89:ASN:HB2	9:QI:92:TYR:CE2	2.54	0.43
9:QI:114:TYR:HE2	10:QJ:59:SER:HA	1.83	0.43
25:RA:301:G:C6	25:RA:317:G:C6	3.07	0.43
25:RA:902:C:H2'	25:RA:903:C:H6	1.82	0.43
25:RA:1184:G:OP1	49:R3:29:ARG:NH1	2.51	0.43
25:RA:1257:C:H4'	29:RF:83:PHE:CE1	2.53	0.43
25:RA:1290:C:H2'	25:RA:1291:C:C6	2.52	0.43
25:RA:2052:G:H4'	28:RE:143:ASN:O	2.19	0.43
25:RA:2692:C:H2'	25:RA:2693:A:C8	2.52	0.43
25:RA:2693:A:H2'	25:RA:2694:G:C8	2.53	0.43
25:RA:2789:C:H1'	25:RA:2892:A:H2	1.83	0.43
25:RA:2846:G:H2'	25:RA:2847:U:C6	2.53	0.43
28:RE:16:ARG:HG3	28:RE:16:ARG:O	2.18	0.43
29:RF:34:TRP:CD2	35:RP:8:PRO:HB3	2.54	0.43
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.50	0.43
41:RV:55:ALA:HA	41:RV:101:GLY:HA2	2.00	0.43
42:RW:71:VAL:HA	42:RW:107:LEU:HD23	2.00	0.43
1:XA:610:G:C4	1:XA:611:A:C8	3.06	0.43
1:XA:950:U:H2'	1:XA:951:G:C8	2.53	0.43
1:XA:997:U:H2'	1:XA:998:G:H8	1.84	0.43
1:XA:1301:U:O2'	1:XA:1302:U:OP1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	2.00	0.43
4:XD:154:ASN:OD1	4:XD:155:LEU:N	2.44	0.43
6:XF:95:GLU:O	18:XR:32:ARG:NH1	2.51	0.43
19:XS:10:PHE:HB2	19:XS:39:THR:HB	2.00	0.43
22:XV:24:C:H2'	22:XV:25:U:H6	1.84	0.43
25:YA:99:U:H4'	25:YA:101:G:H5'	2.01	0.43
25:YA:398:G:H2'	25:YA:399:G:C8	2.52	0.43
25:YA:1257:C:H4'	29:YF:83:PHE:CD1	2.53	0.43
25:YA:2183:C:H2'	25:YA:2184:G:H8	1.83	0.43
25:YA:2298:A:H62	25:YA:2318:G:H8	1.67	0.43
25:YA:2339:G:H2'	25:YA:2340:G:H8	1.83	0.43
25:YA:2475:C:H42	25:YA:2529:G:H22	1.66	0.43
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.53	0.43
25:YA:2599:G:C8	27:YD:236:GLY:HA2	2.51	0.43
29:YF:110:LEU:HA	29:YF:183:VAL:HG12	2.00	0.43
29:YF:167:ALA:HA	29:YF:170:LEU:HD13	2.00	0.43
30:YG:144:ILE:HG22	30:YG:146:TYR:H	1.84	0.43
35:YP:85:LEU:HD13	35:YP:120:ALA:HB2	2.01	0.43
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	2.33	0.43
48:Y2:16:LEU:CD2	48:Y2:20:GLU:HG3	2.49	0.43
54:Y8:54:GLU:O	54:Y8:58:ILE:HG12	2.18	0.43
55:Y9:9:ARG:CZ	55:Y9:16:VAL:HB	2.48	0.43
1:QA:340:U:H2'	1:QA:341:C:C6	2.54	0.43
1:QA:359:U:H2'	1:QA:360:A:C8	2.53	0.43
1:QA:485:G:HO2'	1:QA:486:U:H6	1.63	0.43
1:QA:574:A:N3	1:QA:883:C:H1'	2.33	0.43
1:QA:718:G:H21	18:QR:49:LYS:HE3	1.82	0.43
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.53	0.43
3:QC:88:ARG:NH1	3:QC:101:LEU:H	2.17	0.43
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.18	0.43
13:QM:3:ARG:NH2	30:RG:113:ARG:HH21	2.14	0.43
17:QQ:26:GLN:HB3	17:QQ:37:LYS:HG2	2.01	0.43
22:QW:10:G:H2'	22:QW:11:A:H8	1.83	0.43
25:RA:18:C:O2'	25:RA:553:U:OP1	2.37	0.43
25:RA:71:A:N6	25:RA:114:U:H1'	2.31	0.43
25:RA:689:A:H2'	25:RA:690:G:H8	1.84	0.43
25:RA:2041:U:H2'	25:RA:2042:A:H8	1.82	0.43
25:RA:2271:G:OP1	46:R0:18:ALA:HB1	2.18	0.43
25:RA:2712:U:OP1	25:RA:2714:G:H4'	2.18	0.43
28:RE:134:ILE:HA	28:RE:137:HIS:ND1	2.34	0.43
36:RQ:17:LEU:HD11	36:RQ:41:TRP:NE1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:41:G:H2'	1:XA:42:G:H8	1.83	0.43
1:XA:363:A:OP1	12:XL:33:ARG:HD3	2.18	0.43
1:XA:674:G:H1'	18:XR:81:PHE:CE2	2.54	0.43
1:XA:923:A:H2'	1:XA:924:C:C6	2.54	0.43
1:XA:1000:A:H2'	1:XA:1001:G:C8	2.53	0.43
1:XA:1454:G:H2'	1:XA:1455:G:H8	1.83	0.43
4:XD:190:ASP:OD1	4:XD:191:ARG:N	2.45	0.43
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	2.00	0.43
20:XT:54:LYS:HG3	20:XT:57:ARG:NH2	2.33	0.43
22:XV:15:G:H22	22:XV:49:C:H41	1.66	0.43
24:XY:39:U:H2'	24:XY:40:C:H6	1.82	0.43
25:YA:608:A:H2'	25:YA:609:A:C8	2.53	0.43
25:YA:1930:G:H2'	25:YA:1968:G:H1	1.83	0.43
25:YA:2099:U:H2'	25:YA:2100:G:C8	2.53	0.43
28:YE:56:PRO:HD2	28:YE:58:ARG:NH2	2.32	0.43
31:YH:46:GLU:HB2	31:YH:49:VAL:HG23	1.99	0.43
40:YU:87:GLY:O	41:YV:50:PRO:HD3	2.19	0.43
53:Y7:17:GLY:O	53:Y7:21:ARG:HG2	2.19	0.43
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.84	0.43
1:QA:1151:A:O2'	10:QJ:70:ARG:NH2	2.52	0.43
3:QC:19:GLU:O	3:QC:40:ARG:NH2	2.51	0.43
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	2.00	0.43
12:QL:103:GLY:N	12:QL:107:ALA:O	2.42	0.43
22:QV:75:C:O2'	22:QV:76:C:H5'	2.18	0.43
25:RA:669:G:H2'	25:RA:669:G:N3	2.33	0.43
25:RA:679:C:H2'	25:RA:680:G:C8	2.54	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.99	0.43
28:RE:152:LYS:HG3	33:RN:78:TYR:CE1	2.53	0.43
29:RF:9:ILE:HG12	29:RF:123:LEU:HD23	2.01	0.43
30:RG:111:LEU:HB3	30:RG:117:PHE:CZ	2.53	0.43
44:RY:8:LYS:HD3	44:RY:97:ARG:HH21	1.82	0.43
1:XA:1129:C:H4'	1:XA:1130:A:H8	1.84	0.43
1:XA:1129:C:N4	1:XA:1133:G:O6	2.51	0.43
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.48	0.43
1:XA:1488:G:H2'	1:XA:1489:G:H8	1.83	0.43
2:XB:74:LYS:NZ	2:XB:206:ASP:OD1	2.28	0.43
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.83	0.43
4:XD:100:ARG:NH2	4:XD:136:PRO:O	2.52	0.43
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.53	0.43
7:XG:46:ALA:O	7:XG:50:ILE:HG12	2.18	0.43
25:YA:196:A:N7	25:YA:805:G:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:244:A:H4'	35:YP:74:GLU:HB2	1.99	0.43
25:YA:296:C:O3'	44:YY:95:LYS:NZ	2.51	0.43
25:YA:831:G:O2'	35:YP:38:GLN:OE1	2.34	0.43
25:YA:1438:U:H2'	25:YA:1439:A:C8	2.53	0.43
25:YA:1458:C:H4'	25:YA:1459:G:O4'	2.18	0.43
25:YA:1509:C:H2'	25:YA:1511:A:C8	2.53	0.43
25:YA:1683:C:H2'	25:YA:1684:C:C6	2.54	0.43
25:YA:1770:G:H2'	25:YA:1771:C:C6	2.53	0.43
25:YA:1788:C:H5''	27:YD:225:ALA:HB1	2.00	0.43
25:YA:2684:U:H5''	39:YT:75:ILE:HD13	1.99	0.43
25:YA:2746:U:H5''	31:YH:138:LYS:HE2	1.99	0.43
27:YD:11:PRO:O	27:YD:12:SER:OG	2.32	0.43
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.53	0.43
30:YG:169:ALA:O	30:YG:173:LEU:HG	2.18	0.43
45:YZ:102:LEU:HD21	45:YZ:124:ILE:HD12	2.00	0.43
1:QA:109:A:C6	1:QA:326:G:C6	3.07	0.43
1:QA:134:A:H61	16:QP:25:ARG:HH12	1.67	0.43
1:QA:923:A:H2'	1:QA:924:C:C6	2.53	0.43
1:QA:963:G:H21	10:QJ:55:LYS:HE2	1.83	0.43
1:QA:1014:A:C2	1:QA:1219:U:H1'	2.54	0.43
2:QB:167:PRO:HG3	2:QB:188:ALA:HB2	1.99	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HE3	1.99	0.43
7:QG:143:ARG:HD3	22:QW:42:C:O3'	2.19	0.43
13:QM:7:VAL:HB	30:RG:115:ARG:HH12	1.82	0.43
25:RA:863:A:OP1	36:RQ:21:THR:HB	2.19	0.43
25:RA:910:A:N3	25:RA:2264:C:O2'	2.45	0.43
25:RA:1042:G:H2'	25:RA:1043:C:C6	2.53	0.43
25:RA:1116:C:H2'	25:RA:1117:G:H8	1.84	0.43
25:RA:2469:A:H5''	25:RA:2470:G:H8	1.82	0.43
27:RD:69:ARG:NH1	27:RD:105:ILE:HG12	2.34	0.43
30:RG:112:PRO:HB3	50:R4:40:HIS:CD2	2.53	0.43
30:RG:144:ILE:HG22	30:RG:146:TYR:H	1.84	0.43
32:RI:82:ARG:HA	32:RI:145:VAL:HG12	2.01	0.43
34:RO:93:PRO:HB3	34:RO:114:ILE:HD11	2.00	0.43
36:RQ:24:GLY:H	36:RQ:101:ARG:CD	2.29	0.43
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.87	0.43
40:RU:91:ASP:C	40:RU:93:LYS:N	2.72	0.43
44:RY:28:LYS:N	44:RY:38:ILE:O	2.50	0.43
1:XA:105:G:H2'	1:XA:106:C:H6	1.83	0.43
1:XA:281:G:OP2	1:XA:281:G:H8	2.01	0.43
1:XA:373:A:C2	1:XA:374:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:539:A:OP2	12:XL:115:LYS:HD3	2.18	0.43
1:XA:825:G:H2'	1:XA:826:C:C6	2.54	0.43
1:XA:1167:A:H2'	1:XA:1169:A:C8	2.53	0.43
1:XA:1355:G:H2'	1:XA:1356:G:C8	2.53	0.43
8:XH:103:VAL:HG12	8:XH:108:GLY:HA3	2.00	0.43
17:XQ:28:PRO:HG3	17:XQ:35:VAL:HG22	2.01	0.43
25:YA:191:A:H2'	25:YA:192:C:C6	2.53	0.43
25:YA:270(E):G:H2'	25:YA:270(F):U:C6	2.53	0.43
25:YA:442:G:H1'	29:YF:48:THR:HG21	2.00	0.43
25:YA:554:U:H2'	25:YA:556:G:H8	1.84	0.43
25:YA:609(A):G:H2'	25:YA:610:C:C6	2.54	0.43
25:YA:1869:G:H5'	25:YA:1870:C:OP2	2.19	0.43
25:YA:2176:A:H2'	25:YA:2177:C:C6	2.54	0.43
25:YA:2521:C:H2'	25:YA:2522:U:C6	2.54	0.43
25:YA:2554:U:H2'	25:YA:2555:U:C6	2.53	0.43
25:YA:2577:A:H5'	51:Y5:3:LYS:HZ2	1.83	0.43
25:YA:2649:U:H2'	25:YA:2650:U:H6	1.83	0.43
25:YA:2742:C:C4	55:Y9:33:LYS:NZ	2.85	0.43
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.19	0.43
42:YW:82:LEU:HD23	42:YW:84:ARG:NH2	2.33	0.43
43:YX:26:TYR:CD2	43:YX:89:ILE:HD12	2.47	0.43
46:Y0:72:ARG:HB3	46:Y0:75:LEU:HB2	2.01	0.43
47:Y1:44:PRO:HG2	47:Y1:46:LEU:CD1	2.48	0.43
1:QA:361:G:H2'	1:QA:362:G:O4'	2.19	0.43
1:QA:1254:C:OP1	10:QJ:45:ARG:NE	2.29	0.43
5:QE:5:ASP:OD1	5:QE:6:PHE:N	2.52	0.43
12:QL:24:VAL:HG13	12:QL:98:TYR:CE1	2.54	0.43
13:QM:14:ARG:NH2	13:QM:16:ASP:OD2	2.51	0.43
25:RA:116:C:H2'	25:RA:117:G:O4'	2.19	0.43
25:RA:507:A:H5''	25:RA:508:G:H5'	2.01	0.43
25:RA:687:C:H5''	53:R7:2:LYS:HE2	2.00	0.43
25:RA:1662:C:O2'	25:RA:2687:U:OP1	2.37	0.43
25:RA:1914:C:H2'	25:RA:1915:U:O4'	2.18	0.43
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.19	0.43
25:RA:2168:G:H2'	25:RA:2168:G:N3	2.34	0.43
25:RA:2243:U:H2'	25:RA:2244:U:H6	1.82	0.43
25:RA:2329:G:H2'	25:RA:2330:G:C8	2.54	0.43
25:RA:2443:C:H2'	25:RA:2444:G:C8	2.54	0.43
25:RA:2663:G:H2'	25:RA:2664:G:O4'	2.19	0.43
33:RN:13:TRP:HB2	33:RN:133:GLN:HB3	2.00	0.43
38:RS:42:ASP:C	38:RS:44:LYS:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:12:ARG:HD2	8:XH:26:VAL:HG12	2.00	0.43
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.34	0.43
25:YA:273:G:H1	25:YA:364:C:H42	1.65	0.43
25:YA:767:U:H2'	25:YA:768:G:H8	1.84	0.43
25:YA:816:C:H2'	25:YA:817:C:C6	2.54	0.43
25:YA:1605:C:H2'	25:YA:1606:G:O4'	2.19	0.43
25:YA:2241:A:H2'	25:YA:2242:G:H8	1.81	0.43
25:YA:2319:G:O6	38:YS:4:LEU:HB2	2.19	0.43
25:YA:2742:C:O2'	55:Y9:32:HIS:O	2.25	0.43
29:YF:155:LEU:HD23	29:YF:186:ILE:HD13	2.01	0.43
30:YG:11:TYR:HD1	30:YG:176:LEU:HD21	1.83	0.43
32:YI:5:LEU:HD21	32:YI:12:LEU:HB3	2.00	0.43
1:QA:381:C:H2'	1:QA:382:A:O4'	2.19	0.43
1:QA:701:C:H1'	1:QA:703:G:C2	2.54	0.43
1:QA:797:C:OP1	11:QK:124:LYS:HD3	2.19	0.43
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.19	0.43
1:QA:1128:C:OP1	9:QI:66:ARG:NH2	2.52	0.43
1:QA:1410:G:H2'	1:QA:1411:C:C6	2.54	0.43
13:QM:53:VAL:HG12	13:QM:57:ARG:NE	2.33	0.43
25:RA:605:C:O2	25:RA:657:U:O2'	2.37	0.43
25:RA:1204:A:O2'	25:RA:1205:U:O5'	2.36	0.43
25:RA:2455:G:H2'	25:RA:2456:C:H6	1.84	0.43
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.53	0.43
25:RA:2637:U:H5''	28:RE:82:ARG:HH12	1.84	0.43
26:RB:88:C:H2'	26:RB:89:G:C8	2.54	0.43
36:RQ:65:PHE:O	36:RQ:67:ARG:HG3	2.19	0.43
36:RQ:79:LEU:HD23	36:RQ:79:LEU:O	2.19	0.43
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	2.00	0.43
47:R1:40:ARG:HH12	47:R1:42:GLN:HG2	1.84	0.43
1:XA:93:U:H2'	1:XA:95:G:O4'	2.19	0.43
1:XA:711:G:H2'	1:XA:712:A:H8	1.84	0.43
1:XA:1067:A:N1	1:XA:1108:G:O2'	2.49	0.43
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.34	0.43
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.53	0.43
1:XA:1330:U:H5''	1:XA:1331:G:OP2	2.19	0.43
1:XA:1389:C:H2'	1:XA:1390:U:C6	2.54	0.43
2:XB:160:ASP:O	2:XB:183:PRO:HD2	2.18	0.43
3:XC:157:ILE:HD13	3:XC:166:GLU:HG2	2.01	0.43
6:XF:8:ILE:HD13	6:XF:26:ILE:HD13	2.01	0.43
7:XG:147:ALA:CB	22:XW:42:C:H5'	2.49	0.43
11:XK:67:ASP:OD1	11:XK:71:LYS:HE3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:21:ASP:OD2	15:XO:24:SER:HB2	2.18	0.43
18:XR:70:ILE:O	18:XR:74:ARG:HB2	2.19	0.43
25:YA:375:C:H2'	25:YA:376:C:C6	2.53	0.43
25:YA:664:C:H2'	25:YA:665:C:H6	1.84	0.43
25:YA:709:U:H2'	25:YA:710:G:H8	1.84	0.43
25:YA:729:G:H5'	25:YA:730:C:H5''	2.00	0.43
25:YA:860:U:OP2	25:YA:916:G:N1	2.50	0.43
25:YA:1637:A:H4'	25:YA:2711:A:O2'	2.19	0.43
25:YA:1825:A:H2'	25:YA:1826:G:C8	2.54	0.43
25:YA:1842:G:H2'	25:YA:1843:C:H6	1.84	0.43
25:YA:1878:G:H2'	25:YA:1879:C:C6	2.53	0.43
25:YA:1918:A:O2'	25:YA:1920:C:N4	2.52	0.43
25:YA:2064:C:H2'	25:YA:2065:C:H6	1.83	0.43
25:YA:2433:A:H1'	47:Y1:21:ARG:HH22	1.84	0.43
36:YQ:23:GLY:HA3	36:YQ:101:ARG:HD3	2.00	0.43
36:YQ:65:PHE:O	36:YQ:67:ARG:HG3	2.19	0.43
45:YZ:4:ARG:HA	45:YZ:59:LEU:H	1.83	0.43
45:YZ:59:LEU:O	45:YZ:60:GLU:HG2	2.18	0.43
55:Y9:25:VAL:HG23	55:Y9:34:GLN:N	2.33	0.43
1:QA:148:G:H2'	1:QA:149:A:H8	1.84	0.43
1:QA:323:U:H2'	1:QA:324:G:O4'	2.18	0.43
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.19	0.43
8:QH:103:VAL:HG12	8:QH:108:GLY:HA3	2.01	0.43
9:QI:28:VAL:HG22	9:QI:63:ILE:HB	2.01	0.43
12:QL:104:VAL:HG12	12:QL:105:TYR:N	2.26	0.43
25:RA:111:A:H5'	48:R2:69:ARG:HH11	1.83	0.43
25:RA:638:G:C5	25:RA:651:G:C2	3.06	0.43
25:RA:828:U:H4'	25:RA:831:G:N1	2.33	0.43
25:RA:1105:U:H2'	25:RA:1106:G:C8	2.51	0.43
25:RA:1660:C:H5'	25:RA:2712(A):A:H61	1.83	0.43
25:RA:2198:A:C2	32:RI:29:TYR:HB2	2.54	0.43
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.54	0.43
25:RA:2514:U:H2'	25:RA:2515:C:C6	2.54	0.43
25:RA:2784:C:H2'	25:RA:2785:C:H6	1.83	0.43
28:RE:38:THR:HG23	28:RE:41:LYS:H	1.83	0.43
28:RE:52:LEU:HB2	28:RE:75:VAL:HB	2.00	0.43
29:RF:64:ILE:HG23	29:RF:65:TRP:H	1.84	0.43
44:RY:39:VAL:HB	44:RY:42:VAL:HB	2.01	0.43
53:R7:26:GLY:O	53:R7:30:VAL:HG23	2.19	0.43
1:XA:253:U:H2'	1:XA:254:G:H8	1.84	0.43
1:XA:376:G:H1	1:XA:387:U:H3	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:381:C:H2'	1:XA:382:A:O4'	2.19	0.43
1:XA:1169:A:H2'	1:XA:1170:A:C8	2.53	0.43
1:XA:1226:C:H2'	13:XM:103:THR:HB	2.01	0.43
1:XA:1241:G:H2'	1:XA:1242:C:H6	1.84	0.43
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.53	0.43
1:XA:1446:A:O2'	1:XA:1447:G:O4'	2.36	0.43
19:XS:22:LEU:O	19:XS:26:GLY:HA2	2.18	0.43
25:YA:605:C:O2	25:YA:657:U:O2'	2.37	0.43
25:YA:1425:G:H2'	25:YA:1426:G:C8	2.54	0.43
25:YA:1679:U:H1'	25:YA:1989:G:H21	1.84	0.43
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.53	0.43
25:YA:2697:G:H2'	25:YA:2698:U:C6	2.54	0.43
25:YA:2741:A:H5''	55:Y9:31:LYS:HA	2.00	0.43
27:YD:44:ASN:HB2	27:YD:48:ARG:O	2.18	0.43
27:YD:72:LYS:HG3	27:YD:97:TYR:CE2	2.54	0.43
29:YF:178:PRO:HG2	29:YF:179:GLU:OE1	2.19	0.43
38:YS:42:ASP:C	38:YS:44:LYS:H	2.23	0.43
54:Y8:29:LYS:HG3	54:Y8:30:ARG:N	2.27	0.43
1:QA:434:U:H2'	1:QA:435:C:C6	2.54	0.42
1:QA:742:G:OP2	15:QO:35:ARG:NH2	2.52	0.42
1:QA:892:A:H2'	1:QA:893:C:H6	1.83	0.42
1:QA:963:G:N3	10:QJ:55:LYS:HE2	2.34	0.42
1:QA:1000:A:H2'	1:QA:1001:G:C8	2.54	0.42
1:QA:1104:G:O2'	2:QB:111:ARG:NH1	2.53	0.42
1:QA:1147:C:O2	9:QI:16:ARG:NH2	2.52	0.42
1:QA:1370:G:H2'	1:QA:1371:G:H8	1.84	0.42
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.19	0.42
25:RA:910:A:C6	36:RQ:13:GLN:HG3	2.54	0.42
25:RA:1032:A:HO2'	25:RA:1033:U:P	2.42	0.42
25:RA:1946:U:H2'	25:RA:1947:C:C6	2.54	0.42
25:RA:2073:C:H5''	27:RD:229:VAL:HG22	2.01	0.42
25:RA:2216:G:H2'	25:RA:2217:G:H8	1.84	0.42
25:RA:2310:A:N6	30:RG:79:ASN:OD1	2.52	0.42
25:RA:2579:C:O2'	28:RE:131:ALA:HA	2.18	0.42
27:RD:77:ALA:HB2	27:RD:97:TYR:CD1	2.54	0.42
28:RE:82:ARG:O	28:RE:83:ASP:HB2	2.19	0.42
29:RF:184:TYR:O	29:RF:188:ARG:HG3	2.19	0.42
1:XA:1290:G:N3	1:XA:1290:G:H2'	2.33	0.42
3:XC:56:ASP:HB2	3:XC:67:THR:HB	2.01	0.42
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.99	0.42
19:XS:3:ARG:HH22	19:XS:11:VAL:HG11	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.54	0.42
25:YA:532:A:N1	25:YA:2019:A:H2	2.17	0.42
25:YA:648:G:H2'	25:YA:649:G:H8	1.84	0.42
25:YA:1429:G:H2'	25:YA:1430:C:H6	1.84	0.42
25:YA:2525:G:O2'	25:YA:2526:G:C8	2.69	0.42
25:YA:2679:A:OP2	28:YE:160:TYR:OH	2.36	0.42
25:YA:2740:A:C6	25:YA:2764:A:C5	3.07	0.42
31:YH:9:ILE:HA	31:YH:10:PRO:HD3	1.88	0.42
42:YW:11:ARG:HH21	42:YW:98:LYS:HD3	1.83	0.42
52:Y6:38:LYS:HB2	52:Y6:49:HIS:CE1	2.54	0.42
1:QA:336:C:H1'	1:QA:1468:A:H2	1.84	0.42
1:QA:621:A:H2'	1:QA:622:A:H8	1.84	0.42
1:QA:1250:A:H2'	1:QA:1251:A:C8	2.54	0.42
4:QD:60:GLU:OE2	4:QD:198:VAL:HA	2.19	0.42
7:QG:152:ALA:O	7:QG:155:ARG:HG3	2.19	0.42
11:QK:54:ARG:NH1	22:QW:40:C:H4'	2.33	0.42
18:QR:70:ILE:O	18:QR:74:ARG:HB2	2.19	0.42
25:RA:857:C:OP1	46:R0:69:PHE:HD2	2.02	0.42
25:RA:962:G:H2'	25:RA:963:U:C6	2.53	0.42
25:RA:1212:G:O2'	25:RA:1213:A:OP2	2.35	0.42
25:RA:1234:U:H2'	25:RA:1235:G:O4'	2.18	0.42
25:RA:1412:A:H2'	25:RA:1413:G:C8	2.54	0.42
25:RA:1509:C:N3	25:RA:1511:A:N6	2.67	0.42
25:RA:2403:C:N3	25:RA:2415:G:N1	2.67	0.42
25:RA:2528:U:H2'	25:RA:2530:A:O5'	2.19	0.42
27:RD:52:ARG:NH1	27:RD:249:PRO:HG2	2.34	0.42
27:RD:175:LEU:HD12	27:RD:185:VAL:HG21	2.00	0.42
30:RG:82:LEU:HD21	30:RG:88:ILE:HG21	2.00	0.42
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.54	0.42
36:RQ:48:GLU:OE2	36:RQ:51:ARG:NH2	2.52	0.42
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	2.00	0.42
1:XA:824:C:H2'	1:XA:825:G:H8	1.83	0.42
1:XA:895:G:H2'	1:XA:896:C:C6	2.54	0.42
1:XA:998(A):C:H2'	1:XA:999:U:C6	2.54	0.42
1:XA:1000:A:H2'	1:XA:1001:G:H8	1.84	0.42
1:XA:1154:G:H2'	1:XA:1155:G:H8	1.85	0.42
1:XA:1348:U:N3	1:XA:1374:A:H2	2.12	0.42
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.19	0.42
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	2.01	0.42
15:XO:17:ARG:HH12	15:XO:77:ARG:NH1	2.15	0.42
19:XS:41:VAL:H	19:XS:44:MET:HE3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:49:A:H5''	25:YA:51:G:O4'	2.19	0.42
25:YA:530:G:N1	25:YA:2022:U:OP1	2.52	0.42
25:YA:808:G:H2'	25:YA:809:G:H8	1.84	0.42
25:YA:1130:U:N3	28:YE:147:PRO:HB3	2.33	0.42
25:YA:1448:G:H5'	25:YA:1449:A:OP1	2.19	0.42
25:YA:1526:G:H2'	25:YA:1527:G:C8	2.54	0.42
25:YA:1528:A:N6	25:YA:1545:A:N1	2.66	0.42
25:YA:1812:A:C4'	27:YD:46:GLN:HE22	2.32	0.42
25:YA:1825:A:H2'	25:YA:1826:G:H8	1.83	0.42
25:YA:2515:C:H2'	25:YA:2516:G:H8	1.83	0.42
25:YA:2641:G:H2'	25:YA:2642:G:H8	1.85	0.42
31:YH:152:ARG:HD2	31:YH:152:ARG:C	2.39	0.42
40:YU:17:ILE:HG13	40:YU:32:PHE:HE1	1.84	0.42
43:YX:11:PRO:HD3	48:Y2:37:PHE:CE1	2.54	0.42
43:YX:70:LEU:HD23	43:YX:70:LEU:H	1.84	0.42
1:QA:45:U:H2'	1:QA:46:G:H8	1.82	0.42
1:QA:219:C:H2'	1:QA:220:G:O4'	2.20	0.42
1:QA:424:G:H2'	1:QA:425:G:C8	2.54	0.42
1:QA:1240:U:OP1	7:QG:119:ARG:NH2	2.52	0.42
3:QC:91:LEU:HB3	3:QC:99:VAL:HG11	2.00	0.42
4:QD:119:GLN:OE1	4:QD:119:GLN:HB3	2.20	0.42
25:RA:103:A:H8	25:RA:103:A:OP2	2.02	0.42
25:RA:380:U:H5'	47:R1:18:ILE:HD12	2.02	0.42
25:RA:534:U:H2'	25:RA:535:C:C6	2.55	0.42
25:RA:565:C:H2'	25:RA:566:U:C6	2.54	0.42
25:RA:883:G:H22	25:RA:892:G:N2	2.15	0.42
25:RA:1043:C:H2'	25:RA:1044:G:O4'	2.20	0.42
25:RA:1199:U:H2'	25:RA:1200:C:C6	2.54	0.42
25:RA:1423:G:H2'	25:RA:1424:G:H8	1.83	0.42
25:RA:1651:G:OP2	37:RR:40:LYS:NZ	2.51	0.42
25:RA:2262:U:H4'	25:RA:2328:A:C2	2.55	0.42
25:RA:2420:C:OP1	54:R8:34:TRP:HB3	2.19	0.42
25:RA:2619:C:H5''	28:RE:152:LYS:HA	2.01	0.42
28:RE:18:ASP:HB3	39:RT:82:LEU:HD11	2.02	0.42
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.49	0.42
37:RR:26:LYS:HE2	37:RR:70:LEU:O	2.19	0.42
1:XA:603:U:H2'	1:XA:604:G:H8	1.85	0.42
1:XA:679:C:H2'	1:XA:680:C:C6	2.54	0.42
1:XA:966:G:N2	22:XV:35:C:H5'	2.34	0.42
1:XA:1091:U:C2	1:XA:1095:U:C4	3.07	0.42
1:XA:1202:G:O4'	14:YN:29:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:189:ALA:CB	3:XC:196:LEU:HB2	2.49	0.42
12:XL:33:ARG:N	12:XL:85:ILE:HG22	2.34	0.42
25:YA:629:G:H1'	25:YA:639:U:H1'	2.01	0.42
25:YA:839:U:H1'	25:YA:1191:G:H1'	2.00	0.42
25:YA:947:G:H2'	25:YA:948:G:H8	1.84	0.42
25:YA:1802:A:H2'	25:YA:1803:A:C8	2.54	0.42
25:YA:1907:G:H2'	25:YA:1908:C:C6	2.54	0.42
25:YA:2008:C:H2'	25:YA:2009:G:H8	1.84	0.42
25:YA:2526:G:H1'	55:Y9:28:GLU:OE1	2.19	0.42
25:YA:2740:A:C6	25:YA:2741:A:N6	2.87	0.42
25:YA:2744:G:C6	25:YA:2761:G:C5	3.07	0.42
25:YA:2747:G:N2	25:YA:2757:A:H62	2.15	0.42
27:YD:228:PRO:HD3	27:YD:235:GLY:CA	2.50	0.42
28:YE:171:GLU:HB3	28:YE:185:LYS:HD3	2.01	0.42
29:YF:73:ALA:HB3	29:YF:75:HIS:HE1	1.85	0.42
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.19	0.42
33:YN:22:THR:HG23	33:YN:62:VAL:HA	2.00	0.42
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.53	0.42
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.54	0.42
1:QA:1149:C:H2'	1:QA:1150:U:C6	2.54	0.42
2:QB:166:ASP:HB3	2:QB:169:LYS:HB3	2.01	0.42
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	2.02	0.42
6:QF:47:ARG:NH2	6:QF:57:GLN:OE1	2.53	0.42
22:QW:23:G:C2	22:QW:24:C:C5	3.07	0.42
25:RA:436:C:H2'	25:RA:438:G:H8	1.84	0.42
25:RA:817:C:H2'	25:RA:818:G:O4'	2.19	0.42
25:RA:2041:U:H2'	25:RA:2042:A:C8	2.55	0.42
25:RA:2392:A:C8	35:RP:60:MET:HG2	2.55	0.42
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.53	0.42
27:RD:77:ALA:O	27:RD:116:GLN:HA	2.20	0.42
28:RE:36:ARG:NH2	28:RE:88:GLY:HA2	2.34	0.42
28:RE:101:ARG:HD2	28:RE:169:ASN:OD1	2.19	0.42
32:RI:49:ALA:HA	32:RI:52:ARG:HG2	2.01	0.42
34:RO:122:LEU:HD13	39:RT:72:VAL:HG11	2.01	0.42
40:RU:94:ASN:C	40:RU:96:ALA:H	2.23	0.42
1:XA:828:A:H2'	1:XA:829:G:O4'	2.20	0.42
1:XA:1053:G:N7	1:XA:1199:U:H2'	2.35	0.42
1:XA:1150:U:O4	1:XA:1151:A:N6	2.52	0.42
2:XB:7:VAL:HG11	2:XB:217:ARG:CZ	2.48	0.42
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	2.01	0.42
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	2.00	0.42
16:XP:19:ILE:HD11	16:XP:73:LEU:HD22	2.01	0.42
25:YA:479:A:HO2'	25:YA:481:G:H8	1.66	0.42
25:YA:532:A:H4'	25:YA:533:G:C8	2.54	0.42
25:YA:582:G:H2'	25:YA:583:G:H8	1.83	0.42
25:YA:637:A:OP2	35:YP:115:LEU:HB2	2.19	0.42
25:YA:1441:G:H2'	25:YA:1442:G:H8	1.84	0.42
25:YA:1766:U:H2'	25:YA:1767:C:C6	2.54	0.42
25:YA:2266:A:H4'	25:YA:2267:A:N3	2.34	0.42
25:YA:2305:A:N1	30:YG:154:GLY:N	2.62	0.42
25:YA:2590:A:H2'	25:YA:2591:C:H6	1.84	0.42
25:YA:2745:C:OP2	55:Y9:24:TYR:CZ	2.72	0.42
25:YA:2755:C:N4	55:Y9:2:LYS:C	2.73	0.42
26:YB:23:G:H2'	26:YB:24:G:C8	2.54	0.42
30:YG:3:LEU:HD21	50:Y4:25:TYR:CD2	2.54	0.42
31:YH:149:ARG:HH12	55:Y9:18:ARG:NH1	2.17	0.42
31:YH:151:ILE:HG22	31:YH:153:LYS:HG2	2.00	0.42
38:YS:10:ARG:HG2	38:YS:13:ARG:NH2	2.34	0.42
40:YU:94:ASN:O	40:YU:94:ASN:ND2	2.48	0.42
42:YW:19:LEU:HD23	51:Y5:25:LEU:HG	2.02	0.42
43:YX:27:THR:HA	43:YX:80:ILE:HA	2.02	0.42
55:Y9:1:MET:HG3	55:Y9:33:LYS:CB	2.45	0.42
1:QA:21:G:H2'	1:QA:22:G:H8	1.81	0.42
1:QA:738:C:H2'	1:QA:739:C:C6	2.55	0.42
1:QA:751:U:H2'	1:QA:752:G:O4'	2.19	0.42
1:QA:947:G:H4'	1:QA:1332:A:H2	1.84	0.42
1:QA:955:U:H1'	1:QA:1227:A:N6	2.34	0.42
1:QA:966:G:N2	22:QV:35:C:H5'	2.34	0.42
1:QA:1009:G:O6	1:QA:1020:U:O4	2.37	0.42
1:QA:1149:C:H2'	1:QA:1150:U:H6	1.85	0.42
1:QA:1410:G:H2'	1:QA:1411:C:H6	1.84	0.42
2:QB:93:VAL:HG11	2:QB:97:TRP:CD1	2.54	0.42
7:QG:94:ARG:NH1	7:QG:98:SER:OG	2.53	0.42
19:QS:19:VAL:HG21	19:QS:44:MET:SD	2.60	0.42
25:RA:131:G:H2'	25:RA:132:G:C8	2.53	0.42
25:RA:557:U:H2'	25:RA:558:G:C8	2.55	0.42
25:RA:1103:A:H5''	25:RA:1104:C:C5	2.53	0.42
25:RA:1142(A):A:H4'	33:RN:25:ARG:NH2	2.34	0.42
25:RA:1357:U:H2'	25:RA:1358:G:O4'	2.20	0.42
25:RA:2291:U:OP1	25:RA:2380:C:O2'	2.38	0.42
25:RA:2481:G:HO2'	25:RA:2482:G:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.54	0.42
25:RA:2755:C:H42	55:R9:1:MET:N	2.17	0.42
29:RF:118:ALA:HB2	29:RF:123:LEU:HD22	2.01	0.42
1:XA:149:A:H2'	1:XA:150:C:C6	2.55	0.42
1:XA:624:C:H2'	1:XA:625:G:H8	1.84	0.42
1:XA:1010:G:H2'	1:XA:1011:G:H8	1.84	0.42
1:XA:1321:C:C3'	1:XA:1322:C:H5''	2.50	0.42
1:XA:1374:A:O2'	7:XG:28:ASN:HB3	2.19	0.42
4:XD:57:ARG:HB3	4:XD:206:PHE:HB2	1.99	0.42
9:XI:65:VAL:CG2	9:XI:73:GLN:HG2	2.49	0.42
11:XK:82:VAL:HG11	11:XK:95:ILE:HD12	2.02	0.42
16:XP:57:ARG:NE	16:XP:79:VAL:O	2.53	0.42
25:YA:43:G:H2'	25:YA:44:A:C8	2.54	0.42
25:YA:1257:C:H2'	25:YA:1258:C:C6	2.55	0.42
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.54	0.42
25:YA:1841:U:C2	25:YA:1842:G:C8	3.07	0.42
25:YA:2278:A:OP2	46:Y0:12:ASN:ND2	2.52	0.42
25:YA:2744:G:H4'	55:Y9:19:ARG:O	2.20	0.42
26:YB:32:C:C4	26:YB:51:G:N2	2.87	0.42
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	2.02	0.42
50:Y4:61:ARG:O	50:Y4:61:ARG:HG2	2.19	0.42
55:Y9:1:MET:HG3	55:Y9:33:LYS:CD	2.45	0.42
1:QA:19:C:H5''	5:QE:86:ALA:HB3	2.00	0.42
1:QA:156:G:H2'	1:QA:157:G:C8	2.54	0.42
1:QA:607:A:H2'	1:QA:608:A:O4'	2.20	0.42
1:QA:1107:C:C4	1:QA:1108:G:C8	3.07	0.42
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	2.02	0.42
9:QI:121:ARG:NH1	9:QI:122:ALA:O	2.53	0.42
10:QJ:13:HIS:HB3	10:QJ:68:HIS:NE2	2.34	0.42
25:RA:51:G:OP2	25:RA:51:G:H8	2.03	0.42
25:RA:108:U:H2'	25:RA:109:G:C8	2.55	0.42
25:RA:667:U:H2'	25:RA:668:G:O4'	2.19	0.42
25:RA:861:A:N3	26:RB:79:C:O2'	2.50	0.42
25:RA:1458:C:H4'	25:RA:1459:G:O4'	2.20	0.42
25:RA:1841:U:H2'	25:RA:1842:G:H8	1.84	0.42
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.19	0.42
25:RA:2406:U:C2	35:RP:72:PRO:HB2	2.55	0.42
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.55	0.42
27:RD:148:GLU:OE1	27:RD:151:LYS:NZ	2.42	0.42
30:RG:11:TYR:CD1	30:RG:176:LEU:HD21	2.53	0.42
34:RO:77:ILE:HB	39:RT:74:ARG:HH11	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:10:ARG:NH2	45:RZ:37:VAL:O	2.53	0.42
50:R4:56:VAL:CG2	50:R4:58:ARG:HG3	2.50	0.42
1:XA:552:U:H2'	1:XA:553:A:H8	1.82	0.42
1:XA:555:C:H2'	1:XA:556:C:C6	2.55	0.42
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.35	0.42
1:XA:1161:C:H2'	1:XA:1162:C:C6	2.54	0.42
1:XA:1417:G:C6	1:XA:1482:G:C6	3.08	0.42
3:XC:64:VAL:HG12	3:XC:66:VAL:HG23	2.02	0.42
13:XM:7:VAL:HG11	30:YG:115:ARG:HH12	1.85	0.42
22:XV:20:G:H4'	22:XV:21:U:OP2	2.17	0.42
22:XW:28:U:H2'	22:XW:29:C:C6	2.53	0.42
25:YA:269:U:H1'	25:YA:424:G:N2	2.34	0.42
25:YA:270(I):G:H2'	25:YA:270(J):G:C8	2.55	0.42
25:YA:671:C:H2'	25:YA:672:C:C6	2.55	0.42
25:YA:1142(A):A:C4	25:YA:1144:G:N7	2.88	0.42
25:YA:1296:G:OP1	25:YA:2709:G:O2'	2.22	0.42
25:YA:2061:G:H5''	25:YA:2503:A:C2	2.55	0.42
25:YA:2235:G:H2'	25:YA:2236:C:C6	2.55	0.42
26:YB:7:G:H4'	38:YS:29:PHE:CG	2.54	0.42
28:YE:116:VAL:HG23	28:YE:157:ALA:HB2	2.01	0.42
29:YF:176:LEU:HD21	29:YF:181:LEU:HA	2.02	0.42
32:YI:68:LEU:HA	32:YI:71:ILE:HG22	2.01	0.42
32:YI:99:GLU:OE2	32:YI:103:ARG:NH2	2.52	0.42
34:YO:78:ARG:NE	39:YT:73:GLU:OE1	2.52	0.42
34:YO:103:ALA:HA	34:YO:122:LEU:O	2.19	0.42
35:YP:57:THR:C	35:YP:59:LEU:N	2.71	0.42
38:YS:14:VAL:HG11	38:YS:90:GLY:O	2.19	0.42
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.84	0.42
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.88	0.42
40:YU:92:ARG:NH1	40:YU:94:ASN:OD1	2.53	0.42
1:QA:181:G:H4'	1:QA:182:U:H5'	2.01	0.42
1:QA:322:C:H2'	1:QA:323:U:C6	2.54	0.42
1:QA:652:U:H1'	1:QA:653:A:H2	1.84	0.42
1:QA:1121:U:H2'	1:QA:1122:U:H6	1.85	0.42
1:QA:1347:G:O2'	1:QA:1348:U:P	2.78	0.42
1:QA:1352:C:H2'	1:QA:1353:G:C8	2.55	0.42
2:QB:163:PHE:HA	2:QB:185:ILE:O	2.19	0.42
2:QB:237:ALA:O	2:QB:239:VAL:HG23	2.19	0.42
4:QD:63:LYS:HE3	4:QD:198:VAL:HG22	2.01	0.42
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.20	0.42
9:QI:96:LEU:HD12	9:QI:101:PHE:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:177:G:H5'	25:RA:178:G:N7	2.34	0.42
25:RA:363(E):U:H3'	25:RA:363(F):A:C8	2.54	0.42
25:RA:740:U:H2'	25:RA:741:G:C8	2.54	0.42
25:RA:746:A:H2'	25:RA:2612:C:H5''	2.01	0.42
25:RA:863:A:H2'	25:RA:864:G:C8	2.55	0.42
25:RA:1198:U:C2	25:RA:1199:U:C5	3.08	0.42
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.84	0.42
25:RA:2455:G:C4	25:RA:2456:C:C5	3.07	0.42
25:RA:2514:U:H2'	25:RA:2515:C:H6	1.85	0.42
27:RD:14:ARG:HG3	27:RD:15:PHE:CD1	2.55	0.42
27:RD:52:ARG:HE	27:RD:53:PHE:HE2	1.68	0.42
29:RF:155:LEU:HD23	29:RF:186:ILE:HD13	2.02	0.42
36:RQ:3:MET:HB2	36:RQ:93:TYR:CE2	2.54	0.42
1:XA:62:U:OP1	1:XA:385:C:O2'	2.37	0.42
1:XA:485:G:O2'	1:XA:486:U:P	2.78	0.42
1:XA:498:A:O3'	1:XA:500:G:H8	2.02	0.42
1:XA:864:A:H2'	1:XA:865:A:C8	2.54	0.42
1:XA:932:C:H5'	7:XG:4:ARG:HG3	2.02	0.42
1:XA:950:U:H2'	1:XA:951:G:H8	1.84	0.42
1:XA:1179:A:H2'	1:XA:1180:A:O4'	2.20	0.42
1:XA:1319:A:OP1	19:XS:3:ARG:HD3	2.20	0.42
1:XA:1392:G:H2'	1:XA:1393:U:C6	2.54	0.42
1:XA:1496:C:H2'	1:XA:1497:G:C8	2.55	0.42
2:XB:164:VAL:HG12	2:XB:166:ASP:H	1.84	0.42
3:XC:129:ALA:HB3	3:XC:132:ARG:HB3	2.02	0.42
8:XH:104:ARG:HD2	8:XH:138:TRP:CE3	2.54	0.42
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	2.01	0.42
13:XM:65:LYS:HB3	50:Y4:50:VAL:HG21	2.02	0.42
19:XS:10:PHE:HE1	19:XS:15:LEU:HD21	1.84	0.42
22:XV:53:G:HO2'	22:XV:54:G:P	2.41	0.42
25:YA:270(P):C:H2'	25:YA:270(Q):C:H6	1.85	0.42
25:YA:278:A:O2'	25:YA:279:C:O4'	2.34	0.42
25:YA:459:U:H2'	25:YA:460:A:H8	1.84	0.42
25:YA:1842:G:O2'	27:YD:253:GLN:NE2	2.47	0.42
25:YA:2153:G:H2'	25:YA:2154:G:H8	1.84	0.42
26:YB:111:U:H2'	26:YB:112:G:C8	2.55	0.42
29:YF:178:PRO:HB3	29:YF:198:ALA:HB2	2.00	0.42
30:YG:16:ARG:O	30:YG:20:ILE:HG12	2.19	0.42
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.20	0.42
1:QA:392:G:H2'	1:QA:393:A:C8	2.55	0.42
1:QA:429:U:H3'	4:QD:9:CYS:SG	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:446:G:H2'	1:QA:447:G:O4'	2.20	0.42
1:QA:629:G:H2'	1:QA:630:G:C8	2.55	0.42
1:QA:658:G:H2'	1:QA:659:U:C6	2.55	0.42
1:QA:667:G:H2'	1:QA:668:G:H8	1.84	0.42
1:QA:1211:U:H5'	1:QA:1212:U:OP1	2.20	0.42
1:QA:1419:G:H1	1:QA:1481:U:H3	1.68	0.42
2:QB:48:MET:HA	2:QB:51:LEU:HD12	2.02	0.42
12:QL:104:VAL:HG12	12:QL:105:TYR:CD2	2.54	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	2.02	0.42
25:RA:17:G:HO2'	40:RU:25:TRP:HD1	1.68	0.42
25:RA:150:C:H2'	25:RA:151:C:H6	1.84	0.42
25:RA:621:A:OP2	35:RP:108:LYS:NZ	2.52	0.42
25:RA:783:A:H2'	25:RA:784:A:H4'	2.00	0.42
25:RA:1475:G:H2'	25:RA:1476:C:C6	2.54	0.42
25:RA:1680:U:H2'	25:RA:1681:G:O4'	2.20	0.42
25:RA:2285:C:N4	52:R6:24:GLU:OE2	2.52	0.42
25:RA:2379:G:H2'	25:RA:2380:C:H6	1.85	0.42
25:RA:2532:G:N2	25:RA:2663:G:O2'	2.53	0.42
25:RA:2758:A:C4	31:RH:67:LEU:HD21	2.54	0.42
26:RB:16:G:N2	26:RB:69:G:H1'	2.35	0.42
27:RD:4:LYS:NZ	27:RD:20:ASP:HA	2.35	0.42
31:RH:14:GLY:O	31:RH:29:PRO:HD3	2.20	0.42
34:RO:2:ILE:HG21	34:RO:8:LEU:HD21	2.02	0.42
36:RQ:62:GLY:HA3	36:RQ:107:ALA:O	2.20	0.42
54:R8:34:TRP:CE3	54:R8:35:GLN:HB2	2.55	0.42
55:R9:25:VAL:O	55:R9:33:LYS:HA	2.19	0.42
1:XA:164:U:H2'	1:XA:165:C:C6	2.54	0.42
1:XA:295:C:H2'	1:XA:296:U:O4'	2.20	0.42
1:XA:412:A:H61	4:XD:35:ARG:HA	1.84	0.42
1:XA:560:U:H4'	1:XA:561:U:C5'	2.50	0.42
1:XA:745:C:OP1	1:XA:851:G:O2'	2.37	0.42
1:XA:812:C:H4'	1:XA:813:U:H5'	2.02	0.42
1:XA:902:G:H2'	1:XA:903:G:H8	1.84	0.42
1:XA:1129:C:H4'	1:XA:1130:A:H5'	2.01	0.42
1:XA:1264:C:H2'	1:XA:1265:G:H8	1.83	0.42
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.55	0.42
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.54	0.42
22:XV:20:G:H5'	22:XV:21:U:C5	2.54	0.42
25:YA:137(A):G:H2'	25:YA:139:G:N7	2.34	0.42
25:YA:817:C:O2'	25:YA:839:U:OP1	2.25	0.42
25:YA:1026:U:H4'	25:YA:1027:A:OP1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:151:HIS:CB	45:YZ:170:THR:HA	2.50	0.42
50:Y4:55:ARG:HD3	50:Y4:58:ARG:NH2	2.35	0.42
55:Y9:32:HIS:C	55:Y9:34:GLN:H	2.23	0.42
1:QA:113:G:H1'	1:QA:354:G:H5'	2.01	0.42
1:QA:513:C:H2'	1:QA:514:C:H6	1.85	0.42
1:QA:677:U:O2	1:QA:777:A:O2'	2.36	0.42
1:QA:763:G:H2'	1:QA:764:C:H6	1.85	0.42
1:QA:1160:G:H4'	2:QB:132:LYS:NZ	2.34	0.42
1:QA:1298:C:H4'	1:QA:1299:A:C5	2.55	0.42
1:QA:1343:G:H4'	9:QI:122:ALA:HB3	2.00	0.42
2:QB:12:GLU:HA	2:QB:16:HIS:CD2	2.55	0.42
18:QR:47:THR:O	18:QR:83:GLU:N	2.52	0.42
25:RA:81:G:C6	25:RA:82:G:N2	2.87	0.42
25:RA:220:G:H21	25:RA:429:A:N6	2.17	0.42
25:RA:661:C:H5''	35:RP:15:ARG:NH2	2.35	0.42
25:RA:693:C:O2'	25:RA:1353:A:N3	2.48	0.42
25:RA:1032:A:O2'	25:RA:1033:U:P	2.78	0.42
25:RA:1094:U:O2'	25:RA:1096:A:OP1	2.29	0.42
25:RA:1116:C:H2'	25:RA:1117:G:C8	2.55	0.42
25:RA:1530:G:H1	25:RA:1541:U:H3	1.67	0.42
25:RA:1540:G:H2'	25:RA:1541:U:C6	2.55	0.42
25:RA:2020:A:H4'	40:RU:25:TRP:HZ3	1.85	0.42
25:RA:2368:C:H2'	25:RA:2369:A:C8	2.53	0.42
25:RA:2475:C:H42	25:RA:2529:G:H22	1.67	0.42
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.55	0.42
25:RA:2838:G:C4	25:RA:2839:G:C8	3.07	0.42
27:RD:27:THR:HG21	27:RD:81:ALA:HB1	2.01	0.42
28:RE:74:PRO:HG2	28:RE:77:ILE:HG22	2.02	0.42
34:RO:64:ARG:HB2	34:RO:83:ALA:HB3	2.01	0.42
35:RP:61:ARG:HG3	54:R8:13:ARG:CD	2.49	0.42
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CD2	2.55	0.42
1:XA:109:A:C6	1:XA:326:G:C6	3.08	0.42
1:XA:358:U:H2'	1:XA:359:U:C6	2.55	0.42
1:XA:807:A:H2'	1:XA:808:C:H6	1.83	0.42
1:XA:1016:A:H2'	1:XA:1017:G:O4'	2.20	0.42
1:XA:1038:C:H2'	1:XA:1039:C:C6	2.55	0.42
3:XC:20:SER:OG	3:XC:22:TRP:NE1	2.53	0.42
4:XD:105:VAL:HG13	4:XD:110:PHE:HB2	2.02	0.42
13:XM:83:ASP:H	13:XM:93:ARG:NH2	2.17	0.42
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.34	0.42
25:YA:65:C:H2'	25:YA:66:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:689:A:H2'	25:YA:690:G:H8	1.85	0.42
25:YA:2527:C:H5'	55:Y9:14:CYS:O	2.20	0.42
25:YA:2660:A:H2'	25:YA:2661:G:O4'	2.20	0.42
25:YA:2742:C:O2'	55:Y9:25:VAL:C	2.57	0.42
26:YB:3:C:H2'	26:YB:4:C:C6	2.54	0.42
27:YD:10:THR:OG1	27:YD:13:ARG:HG3	2.19	0.42
31:YH:148:ILE:HG23	55:Y9:20:HIS:NE2	2.35	0.42
35:YP:82:GLY:HA2	35:YP:113:LYS:O	2.20	0.42
1:QA:148:G:H2'	1:QA:149:A:C8	2.54	0.42
1:QA:672:U:H3	1:QA:734:G:H1	1.68	0.42
1:QA:757:U:H2'	1:QA:758:G:O4'	2.19	0.42
1:QA:864:A:O2'	1:QA:1078:U:O4	2.20	0.42
1:QA:1031:G:OP2	1:QA:1031:G:H8	2.03	0.42
1:QA:1060:C:H2'	1:QA:1061:G:H8	1.85	0.42
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.55	0.42
3:QC:5:ILE:HD11	14:QN:49:HIS:HE1	1.84	0.42
3:QC:52:LEU:HD23	3:QC:52:LEU:H	1.85	0.42
3:QC:186:PHE:HA	3:QC:198:VAL:O	2.20	0.42
4:QD:127:THR:HA	4:QD:132:ARG:HA	2.02	0.42
6:QF:7:ASN:HB2	6:QF:89:MET:HB3	2.02	0.42
7:QG:15:ASP:H	7:QG:20:ASP:H	1.68	0.42
25:RA:823:G:H2'	25:RA:824:A:C8	2.54	0.42
25:RA:1790:C:H2'	25:RA:1791:A:C8	2.55	0.42
25:RA:2372:G:H2'	25:RA:2373:G:H8	1.84	0.42
25:RA:2747:G:O6	25:RA:2754:U:H3'	2.20	0.42
25:RA:2869:G:H2'	25:RA:2870:C:C6	2.55	0.42
40:RU:90:VAL:HG11	41:RV:40:LEU:HG	2.02	0.42
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.84	0.42
1:XA:582:U:H2'	1:XA:583:A:H8	1.85	0.42
1:XA:584:G:H2'	1:XA:585:G:H8	1.84	0.42
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.54	0.42
1:XA:1262:C:H2'	1:XA:1263:C:C6	2.55	0.42
1:XA:1323:G:H2'	1:XA:1324:A:C8	2.54	0.42
2:XB:167:PRO:HG2	2:XB:192:SER:CB	2.49	0.42
4:XD:173:TRP:CZ3	4:XD:193:ASP:HB3	2.55	0.42
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	2.02	0.42
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.20	0.42
25:YA:185:U:H2'	25:YA:186:G:C8	2.55	0.42
25:YA:217:G:C4	25:YA:218:A:C8	3.08	0.42
25:YA:376:C:H2'	25:YA:377:C:H6	1.85	0.42
25:YA:881:G:O6	25:YA:895:U:O2	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1246:A:OP1	35:YP:15:ARG:NH2	2.45	0.42
25:YA:1424:G:H2'	25:YA:1425:G:O4'	2.20	0.42
25:YA:1470:G:O2'	25:YA:1522:G:O6	2.22	0.42
25:YA:1550:C:OP1	25:YA:1727:U:O2'	2.24	0.42
25:YA:1669:A:O3'	25:YA:2549:G:H5'	2.20	0.42
27:YD:71:ASP:HB2	27:YD:103:ARG:HH12	1.85	0.42
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.21	0.42
33:YN:13:TRP:HB2	33:YN:133:GLN:HB3	2.01	0.42
33:YN:18:ALA:HB2	33:YN:54:VAL:HG13	2.01	0.42
36:YQ:74:TYR:HD2	36:YQ:91:GLU:HB3	1.85	0.42
1:QA:267:C:P	17:QQ:67:LYS:HD2	2.59	0.41
1:QA:1167:A:H2'	1:QA:1169:A:C8	2.55	0.41
1:QA:1443:G:H5'	1:QA:1446:A:OP2	2.20	0.41
9:QI:83:ARG:O	9:QI:86:VAL:HG12	2.20	0.41
15:QO:36:ILE:HG23	15:QO:56:LEU:HD11	2.02	0.41
16:QP:19:ILE:HD11	16:QP:73:LEU:HD22	2.02	0.41
24:QY:40:C:H2'	24:QY:41:C:C6	2.55	0.41
25:RA:30:G:O2'	25:RA:1214:A:N3	2.36	0.41
25:RA:270(G):C:H2'	25:RA:270(H):C:C6	2.55	0.41
25:RA:784:A:O2'	25:RA:785:G:H5''	2.20	0.41
25:RA:1259:G:H2'	25:RA:1260:G:C8	2.55	0.41
25:RA:2011:U:H2'	25:RA:2012:G:O4'	2.19	0.41
25:RA:2472:G:N1	25:RA:2477:C:OP1	2.38	0.41
27:RD:24:ILE:HD13	27:RD:82:ILE:HG22	2.01	0.41
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.23	0.41
29:RF:32:LEU:HD12	29:RF:32:LEU:HA	1.87	0.41
31:RH:86:GLU:HG3	31:RH:164:TYR:HD1	1.84	0.41
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.87	0.41
36:RQ:55:VAL:HG13	45:RZ:178:GLU:HB3	2.02	0.41
38:RS:110:LEU:HB3	38:RS:112:PHE:CE1	2.55	0.41
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.20	0.41
1:XA:1291:G:H2'	1:XA:1292:U:C6	2.55	0.41
8:XH:12:ARG:HH12	8:XH:27:PRO:HD3	1.85	0.41
10:XJ:38:ILE:HG13	10:XJ:38:ILE:O	2.20	0.41
19:XS:26:GLY:O	19:XS:27:GLU:HG2	2.20	0.41
20:XT:30:LYS:HZ2	20:XT:80:ARG:NH1	2.18	0.41
22:XW:25:U:H2'	22:XW:26:C:C6	2.55	0.41
25:YA:84:A:H2	25:YA:103:A:C5	2.37	0.41
25:YA:1844:C:H2'	25:YA:1845:G:C8	2.53	0.41
25:YA:2746:U:H2'	25:YA:2747:G:C8	2.54	0.41
25:YA:2757:A:N3	25:YA:2757:A:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2809:A:H2'	25:YA:2810:A:H8	1.85	0.41
26:YB:17:C:H2'	26:YB:18:G:O4'	2.20	0.41
35:YP:97:PRO:C	35:YP:99:LEU:H	2.22	0.41
38:YS:14:VAL:O	38:YS:18:ILE:HG12	2.20	0.41
38:YS:20:ARG:HH22	46:Y0:47:PRO:HB2	1.84	0.41
43:YX:31:HIS:CE1	43:YX:33:LYS:HB2	2.55	0.41
44:YY:15:VAL:HG21	44:YY:42:VAL:HG11	2.01	0.41
47:Y1:3:LYS:O	47:Y1:12:PRO:HD3	2.20	0.41
1:QA:363:A:N1	12:QL:31:PRO:HD2	2.35	0.41
1:QA:464:G:N1	1:QA:467:G:OP2	2.54	0.41
1:QA:962:C:H1'	1:QA:1201:A:N6	2.34	0.41
1:QA:1226:C:H42	13:QM:104:ARG:NH1	2.18	0.41
1:QA:1513:A:H2'	1:QA:1514:C:H6	1.86	0.41
9:QI:111:ARG:HG3	14:QN:61:TRP:CD1	2.55	0.41
22:QV:28:U:H2'	22:QV:29:C:H6	1.84	0.41
22:QV:37:U:H2'	22:QV:38:A:H8	1.85	0.41
25:RA:1201:C:C2	25:RA:1202:C:C5	3.08	0.41
25:RA:1351:C:H2'	25:RA:1352:U:C6	2.55	0.41
25:RA:1569:A:H2'	25:RA:1570:A:C8	2.54	0.41
25:RA:2078:C:H2'	25:RA:2079:U:C6	2.55	0.41
25:RA:2868:A:H2'	25:RA:2869:G:C8	2.55	0.41
28:RE:6:GLY:HA2	28:RE:51:PHE:CE1	2.55	0.41
30:RG:16:ARG:O	30:RG:20:ILE:HG12	2.20	0.41
31:RH:154:PRO:HB3	31:RH:162:ILE:O	2.20	0.41
33:RN:73:THR:HB	33:RN:82:LEU:HD11	2.02	0.41
37:RR:86:ARG:NH2	37:RR:118:GLU:OXT	2.52	0.41
40:RU:44:ASN:ND2	41:RV:75:PHE:HB3	2.35	0.41
43:RX:31:HIS:HB3	43:RX:34:ALA:HB2	2.02	0.41
46:R0:15:ASP:OD1	46:R0:16:SER:N	2.53	0.41
1:XA:41:G:C6	1:XA:402:G:C6	3.09	0.41
1:XA:235:C:H2'	1:XA:236:G:H8	1.84	0.41
1:XA:314:C:H2'	1:XA:315:A:C8	2.55	0.41
1:XA:377:G:OP1	16:XP:3:LYS:HD2	2.19	0.41
1:XA:784:C:H2'	1:XA:785:G:C8	2.55	0.41
1:XA:1254:C:H2'	1:XA:1255:G:C8	2.54	0.41
5:XE:15:ARG:HG3	5:XE:28:PHE:CE1	2.54	0.41
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.20	0.41
18:XR:44:LEU:HD21	18:XR:74:ARG:HH21	1.85	0.41
22:XW:19:G:H1'	22:XW:59:A:C2	2.56	0.41
25:YA:27:G:N2	25:YA:513:A:OP2	2.52	0.41
25:YA:689:A:H2'	25:YA:690:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:710:G:H2'	25:YA:711:G:H8	1.85	0.41
25:YA:922:U:H2'	25:YA:923:C:C6	2.55	0.41
25:YA:1354:A:H5'	27:YD:38:LYS:NZ	2.35	0.41
25:YA:1479:G:N7	25:YA:1510:A:N6	2.68	0.41
25:YA:1550:C:H2'	25:YA:1551:C:H6	1.84	0.41
25:YA:1812:A:H4'	27:YD:46:GLN:HE22	1.85	0.41
25:YA:1835:G:H2'	25:YA:1835:G:N3	2.35	0.41
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.19	0.41
26:YB:28:C:OP2	38:YS:33:LYS:HE3	2.21	0.41
30:YG:72:ARG:HD3	30:YG:87:PRO:HB3	2.02	0.41
33:YN:30:ILE:HD13	33:YN:99:LEU:HD11	2.01	0.41
35:YP:107:LYS:O	35:YP:109:GLY:N	2.54	0.41
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	2.01	0.41
45:YZ:99:TYR:CE1	45:YZ:125:LEU:HB2	2.54	0.41
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.35	0.41
1:QA:161:A:H2'	1:QA:162:A:C8	2.56	0.41
1:QA:1103:C:O2	2:QB:107:THR:HG21	2.21	0.41
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.85	0.41
3:QC:81:GLY:HA2	3:QC:84:ILE:HG22	2.03	0.41
11:QK:124:LYS:HE3	11:QK:125:PHE:CE1	2.56	0.41
25:RA:300:A:H2'	25:RA:334:C:H1'	2.02	0.41
25:RA:399:G:H2'	25:RA:400:G:O4'	2.21	0.41
25:RA:523:C:O2	25:RA:553:U:O2'	2.34	0.41
25:RA:639:U:C2	25:RA:640:C:C5	3.08	0.41
25:RA:669:G:H5'	25:RA:670:A:OP2	2.20	0.41
25:RA:752:A:H4'	25:RA:753:C:H5'	2.02	0.41
25:RA:1664:A:H61	25:RA:1996:C:N4	2.17	0.41
25:RA:1829:A:H3'	25:RA:1830:C:H6	1.85	0.41
25:RA:2291:U:O2'	25:RA:2374:C:O2	2.35	0.41
27:RD:260:ARG:NH2	27:RD:264:LYS:HD3	2.36	0.41
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	2.35	0.41
38:RS:27:SER:HA	38:RS:88:ASP:HB3	2.02	0.41
1:XA:272:C:C2	1:XA:273:A:C8	3.08	0.41
1:XA:452:A:O2'	16:XP:72:ARG:HD2	2.21	0.41
1:XA:737:A:H5'	6:XF:90:VAL:O	2.21	0.41
1:XA:770:C:H2'	1:XA:771:G:H8	1.85	0.41
1:XA:1347:G:O2'	1:XA:1348:U:H5	2.03	0.41
2:XB:93:VAL:HG11	2:XB:97:TRP:CD1	2.55	0.41
25:YA:463:G:N2	25:YA:466:A:OP2	2.30	0.41
25:YA:816:C:H2'	25:YA:817:C:H6	1.85	0.41
25:YA:995:C:O2	33:YN:3:THR:OG1	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1291:C:H2'	25:YA:1292:U:H6	1.85	0.41
25:YA:2011:U:H2'	25:YA:2012:G:O4'	2.20	0.41
25:YA:2030:A:H4'	25:YA:2031:A:C8	2.54	0.41
26:YB:48:A:H2'	26:YB:49:C:C6	2.55	0.41
31:YH:149:ARG:HD3	31:YH:162:ILE:HD12	2.02	0.41
55:Y9:13:LYS:HA	55:Y9:13:LYS:HD3	1.79	0.41
1:QA:287:U:H2'	1:QA:288:A:C8	2.55	0.41
1:QA:642:A:N7	8:QH:115:SER:HA	2.35	0.41
1:QA:784:C:H2'	1:QA:785:G:H8	1.85	0.41
1:QA:792:A:N3	1:QA:792:A:H2'	2.35	0.41
1:QA:812:C:H1'	1:QA:813:U:OP2	2.21	0.41
1:QA:913:A:H4'	1:QA:914:A:O5'	2.21	0.41
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.55	0.41
1:QA:1242:C:H2'	1:QA:1243:C:C6	2.55	0.41
1:QA:1289:A:H2'	1:QA:1290:G:H5'	2.03	0.41
1:QA:1349:A:H62	1:QA:1373:G:H21	1.66	0.41
2:QB:97:TRP:NE1	2:QB:101:MET:HG3	2.36	0.41
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	2.01	0.41
20:QT:43:LEU:HD13	20:QT:51:GLU:HG3	2.03	0.41
25:RA:242:G:N2	25:RA:254:G:H2'	2.35	0.41
25:RA:809:G:H2'	25:RA:810:U:C6	2.56	0.41
25:RA:1676:A:H2'	25:RA:1677:A:O4'	2.20	0.41
25:RA:1819:A:H4'	25:RA:1820:U:O5'	2.19	0.41
25:RA:2061:G:H2'	25:RA:2501:C:O2'	2.21	0.41
25:RA:2108:C:H2'	25:RA:2109:U:H6	1.85	0.41
25:RA:2359:C:H2'	25:RA:2360:A:O4'	2.19	0.41
25:RA:2454:G:C2	25:RA:2499:C:N4	2.88	0.41
25:RA:2712:U:O2'	25:RA:2712(A):A:C8	2.73	0.41
25:RA:2712:U:O2'	25:RA:2712(A):A:OP1	2.33	0.41
25:RA:2754:U:H4'	55:R9:30:PRO:HD2	2.02	0.41
31:RH:28:GLY:HA3	31:RH:79:VAL:HB	2.02	0.41
33:RN:123:TYR:HE2	33:RN:129:PRO:HD2	1.86	0.41
40:RU:21:ALA:HA	40:RU:24:TYR:CE2	2.56	0.41
41:RV:35:LEU:HD13	41:RV:37:VAL:HG23	2.02	0.41
49:R3:3:ARG:NH2	49:R3:60:GLU:OXT	2.53	0.41
1:XA:489:C:H2'	1:XA:490:G:C8	2.55	0.41
1:XA:512:U:H2'	1:XA:513:C:C6	2.55	0.41
1:XA:784:C:H2'	1:XA:785:G:H8	1.85	0.41
1:XA:865:A:H2'	1:XA:866:C:C6	2.56	0.41
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.56	0.41
12:XL:27:LEU:HD13	12:XL:62:SER:CB	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:XW:9:G:H4'	22:XW:47:G:H4'	2.02	0.41
25:YA:141:A:H8	25:YA:1408:C:H1'	1.85	0.41
25:YA:210:C:H2'	25:YA:211:A:C8	2.55	0.41
25:YA:848:G:O6	25:YA:929:G:H2'	2.20	0.41
25:YA:1379:A:H4'	25:YA:1380:G:OP2	2.19	0.41
25:YA:1706:U:O2'	25:YA:1757:U:H5'	2.20	0.41
25:YA:1939:U:O2	25:YA:1967:C:H4'	2.20	0.41
25:YA:2526:G:N2	25:YA:2537:U:O2	2.44	0.41
42:YW:88:ARG:HB2	42:YW:92:ARG:HB2	2.01	0.41
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.94	0.41
45:YZ:145:GLU:HG3	45:YZ:146:ILE:N	2.34	0.41
54:Y8:34:TRP:CE3	54:Y8:35:GLN:HB2	2.55	0.41
1:QA:97:U:H2'	1:QA:99:C:C6	2.55	0.41
1:QA:174:C:H2'	1:QA:175:C:C6	2.56	0.41
1:QA:551:U:H2'	1:QA:552:U:C6	2.56	0.41
1:QA:639:G:H2'	1:QA:640:A:C8	2.54	0.41
1:QA:726:C:H2'	1:QA:727:G:C8	2.54	0.41
1:QA:1096:C:H2'	1:QA:1097:C:C6	2.55	0.41
1:QA:1376:U:P	7:QG:94:ARG:HH22	2.43	0.41
16:QP:53:VAL:O	16:QP:57:ARG:HG2	2.20	0.41
22:QW:10:G:C6	22:QW:27:G:C5	3.09	0.41
22:QW:41:C:H2'	22:QW:42:C:C6	2.55	0.41
25:RA:324:A:N6	25:RA:339:U:O4'	2.54	0.41
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.48	0.41
25:RA:1528:A:C8	25:RA:1529:A:C8	3.09	0.41
25:RA:1556:C:H2'	25:RA:1557:C:C6	2.56	0.41
25:RA:2506:U:O2	25:RA:2506:U:H2'	2.20	0.41
29:RF:32:LEU:HD23	29:RF:112:MET:HE1	2.02	0.41
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.35	0.41
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	2.02	0.41
52:R6:16:CYS:HB2	52:R6:18:ARG:NH1	2.36	0.41
1:XA:360:A:C6	1:XA:361:G:C6	3.09	0.41
1:XA:701:C:OP1	1:XA:702:A:O2'	2.22	0.41
1:XA:773:G:O6	1:XA:807:A:N6	2.53	0.41
1:XA:1112:C:H1'	3:XC:179:ARG:NH1	2.36	0.41
2:XB:54:THR:O	2:XB:58:ILE:HG12	2.20	0.41
25:YA:278:A:H4'	25:YA:279:C:OP1	2.21	0.41
25:YA:306:U:H2'	25:YA:307:G:O4'	2.20	0.41
25:YA:812:C:H5''	25:YA:1250:G:O2'	2.20	0.41
25:YA:835:A:C2	25:YA:836:G:C8	3.09	0.41
25:YA:923:C:H2'	25:YA:924:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1141:U:H1'	25:YA:1142(A):A:C5	2.56	0.41
25:YA:1344:G:H4'	25:YA:1384:A:C5	2.56	0.41
25:YA:1538:G:H2'	25:YA:1539:G:H8	1.85	0.41
25:YA:1843:C:H2'	25:YA:1844:C:H6	1.86	0.41
25:YA:2743:C:C1'	55:Y9:26:ILE:HG12	2.51	0.41
25:YA:2832:U:H1'	25:YA:2834:G:C4	2.54	0.41
49:Y3:31:LEU:HD23	49:Y3:31:LEU:HA	1.91	0.41
1:QA:181:G:O2'	1:QA:182:U:P	2.78	0.41
1:QA:358:U:H2'	1:QA:359:U:H6	1.84	0.41
1:QA:400:C:H2'	1:QA:401:C:H6	1.84	0.41
1:QA:541:G:H2'	1:QA:542:G:C8	2.55	0.41
1:QA:701:C:O2	1:QA:703:G:N1	2.54	0.41
1:QA:1099:G:OP2	2:QB:148:TYR:OH	2.38	0.41
1:QA:1179:A:H2'	1:QA:1180:A:O4'	2.21	0.41
5:QE:90:VAL:O	5:QE:120:THR:HA	2.21	0.41
6:QF:8:ILE:HD13	6:QF:26:ILE:HD13	2.02	0.41
8:QH:51:VAL:HG11	8:QH:60:ARG:HH11	1.86	0.41
13:QM:9:ILE:O	13:QM:9:ILE:HD12	2.20	0.41
13:QM:32:GLU:OE2	13:QM:59:TYR:OH	2.38	0.41
15:QO:3:ILE:O	15:QO:3:ILE:HG13	2.20	0.41
25:RA:43:G:H2'	25:RA:44:A:C8	2.56	0.41
25:RA:557:U:H2'	25:RA:558:G:H8	1.86	0.41
25:RA:949:C:H2'	25:RA:950:G:H8	1.85	0.41
25:RA:1207:C:H2'	25:RA:1208:C:H6	1.86	0.41
25:RA:1503:U:H2'	25:RA:1504:C:H6	1.84	0.41
25:RA:2037:G:H2'	25:RA:2038:G:H8	1.85	0.41
25:RA:2039:C:H2'	25:RA:2040:C:C6	2.56	0.41
25:RA:2462:U:H2'	25:RA:2463:C:H6	1.86	0.41
25:RA:2478:A:C8	25:RA:2529:G:C5	3.09	0.41
30:RG:95:ARG:O	30:RG:99:MET:HG2	2.19	0.41
30:RG:169:ALA:O	30:RG:173:LEU:HG	2.21	0.41
31:RH:105:LEU:HD13	31:RH:107:VAL:HG13	2.03	0.41
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.41
1:XA:255:G:H4'	17:XQ:17:LYS:HB2	2.02	0.41
1:XA:514:C:H2'	1:XA:515:G:C8	2.49	0.41
1:XA:544:G:OP1	4:XD:62:GLN:HG3	2.20	0.41
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	2.20	0.41
10:XJ:38:ILE:HG13	10:XJ:71:LEU:HB3	2.02	0.41
16:XP:6:LEU:HG	16:XP:19:ILE:HD13	2.03	0.41
16:XP:26:ARG:HG3	16:XP:27:LYS:N	2.35	0.41
25:YA:38:A:H2'	25:YA:39:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.38	0.41
25:YA:631:A:N3	25:YA:2415:G:O2'	2.45	0.41
25:YA:784:A:O4'	27:YD:227:ASN:ND2	2.54	0.41
25:YA:838:C:C2	25:YA:941:A:C6	3.09	0.41
25:YA:924:C:H2'	25:YA:925:C:C6	2.55	0.41
25:YA:1062:G:C8	25:YA:1088:A:C5	3.08	0.41
25:YA:1113:U:H2'	25:YA:1114:G:H8	1.85	0.41
25:YA:1604:C:H2'	25:YA:1605:C:C6	2.55	0.41
25:YA:1676:A:H2'	25:YA:1677:A:O4'	2.20	0.41
25:YA:1799:G:P	25:YA:1799:G:H3'	2.61	0.41
25:YA:2314:C:H5''	30:YG:38:VAL:HG21	2.03	0.41
25:YA:2525:G:H1'	55:Y9:28:GLU:HA	2.02	0.41
25:YA:2677:G:C6	25:YA:2731:G:C6	3.09	0.41
26:YB:61:G:H2'	26:YB:62:C:C6	2.55	0.41
26:YB:78:A:H2'	26:YB:79:C:O4'	2.21	0.41
27:YD:36:PRO:HB3	27:YD:61:LEU:HB3	2.02	0.41
28:YE:109:LYS:HE2	28:YE:191:PRO:HB3	2.01	0.41
31:YH:126:PRO:HB2	31:YH:130:ARG:O	2.21	0.41
40:YU:91:ASP:C	40:YU:93:LYS:H	2.24	0.41
43:YX:30:VAL:HG21	43:YX:39:ILE:HD11	2.02	0.41
44:YY:28:LYS:N	44:YY:38:ILE:O	2.53	0.41
1:QA:64:G:H5'	1:QA:65:U:OP1	2.20	0.41
1:QA:227:G:H2'	1:QA:228:A:C8	2.56	0.41
1:QA:284:G:H2'	1:QA:285:G:H8	1.86	0.41
1:QA:519:C:H2'	1:QA:520:A:O4'	2.21	0.41
1:QA:559:A:H4'	1:QA:560:U:H3'	2.02	0.41
1:QA:1022:G:H2'	1:QA:1023:G:H8	1.84	0.41
1:QA:1351:U:H5	9:QI:118:LYS:NZ	2.18	0.41
4:QD:196:LEU:HD23	6:XF:16:GLN:NE2	2.36	0.41
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	2.03	0.41
18:QR:74:ARG:HG2	18:QR:81:PHE:CD1	2.55	0.41
22:QV:20:G:H4'	22:QV:21:U:OP2	2.19	0.41
22:QV:26:C:C2	22:QV:27:G:C8	3.09	0.41
25:RA:110:G:H2'	25:RA:111:A:H8	1.84	0.41
25:RA:223:A:O2'	25:RA:420:C:O2	2.37	0.41
25:RA:1523:U:H2'	25:RA:1524:G:C8	2.56	0.41
25:RA:1707:G:C5	25:RA:1756:G:C6	3.08	0.41
25:RA:1864:U:OP1	25:RA:2410:G:O2'	2.39	0.41
25:RA:2199:A:OP1	47:R1:50:ARG:NH2	2.34	0.41
25:RA:2740:A:H2'	25:RA:2741:A:C8	2.55	0.41
27:RD:52:ARG:HH21	27:RD:53:PHE:HE2	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:35:GLN:HE21	28:RE:37:ARG:NH2	2.19	0.41
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	2.03	0.41
32:RI:68:LEU:HA	32:RI:71:ILE:HG22	2.02	0.41
45:RZ:125:LEU:HB3	45:RZ:165:VAL:HG22	2.01	0.41
55:R9:26:ILE:HG22	55:R9:33:LYS:HE3	2.03	0.41
1:XA:265:G:H4'	17:XQ:66:SER:HA	2.02	0.41
1:XA:1032:A:C5	1:XA:1032(A):G:H1'	2.55	0.41
1:XA:1285:A:H1'	1:XA:1286:A:OP2	2.20	0.41
1:XA:1384:C:H2'	1:XA:1385:G:C8	2.55	0.41
10:XJ:51:ARG:CZ	10:XJ:61:GLU:HB3	2.51	0.41
20:XT:79:ARG:HE	20:XT:83:ARG:HH12	1.69	0.41
20:XT:89:ARG:HD2	20:XT:104:LEU:HD21	2.02	0.41
25:YA:84:A:C2	25:YA:103:A:C5	3.08	0.41
25:YA:236:C:H2'	25:YA:237:C:H6	1.86	0.41
25:YA:459:U:H2'	25:YA:460:A:C8	2.56	0.41
25:YA:1062:G:H2'	25:YA:1063:G:H8	1.85	0.41
25:YA:1103:A:H5''	25:YA:1104:C:H5	1.86	0.41
25:YA:1329:U:H5''	25:YA:1330:C:C5	2.56	0.41
25:YA:1454:U:H5'	37:YR:63:ARG:NH2	2.35	0.41
25:YA:2090:G:C6	25:YA:2230:G:C6	3.08	0.41
25:YA:2230:G:C6	25:YA:2231:C:C4	3.09	0.41
25:YA:2271:G:OP1	46:Y0:18:ALA:HB1	2.20	0.41
25:YA:2756:U:C5'	55:Y9:3:VAL:HG21	2.51	0.41
25:YA:2808:U:O2	25:YA:2809:A:C8	2.74	0.41
29:YF:160:ASN:ND2	29:YF:163:VAL:HG23	2.35	0.41
30:YG:111:LEU:HB3	30:YG:117:PHE:CZ	2.56	0.41
31:YH:10:PRO:HG3	31:YH:69:ARG:NH1	2.34	0.41
35:YP:108:LYS:HD2	35:YP:108:LYS:H	1.85	0.41
39:YT:111:ARG:C	39:YT:113:LYS:N	2.73	0.41
48:Y2:28:LYS:HD2	48:Y2:53:LEU:HD11	2.03	0.41
1:QA:502:G:H2'	1:QA:503:C:O4'	2.21	0.41
1:QA:1083:U:O2'	1:QA:1102:A:OP2	2.26	0.41
1:QA:1129:C:O2	1:QA:1132:C:N4	2.54	0.41
1:QA:1362:C:HO2'	1:QA:1362(A):C:H6	1.66	0.41
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.56	0.41
1:QA:1524:C:H2'	1:QA:1525:G:C8	2.56	0.41
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.41	0.41
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.21	0.41
10:QJ:38:ILE:HG13	10:QJ:38:ILE:O	2.21	0.41
10:QJ:50:ILE:HG23	10:QJ:56:HIS:O	2.20	0.41
11:QK:20:TYR:CE1	11:QK:83:ILE:HD12	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:48:G:N2	25:RA:177:G:H21	2.19	0.41
25:RA:262:A:H2'	25:RA:263:C:O4'	2.21	0.41
25:RA:579:G:O2'	25:RA:2019:A:OP1	2.29	0.41
25:RA:609:A:H2'	25:RA:609(A):G:O4'	2.21	0.41
25:RA:827:U:O2	25:RA:2246:G:H4'	2.19	0.41
25:RA:1771:C:H2'	25:RA:1772:G:H8	1.86	0.41
25:RA:2020:A:H4'	40:RU:25:TRP:CZ3	2.55	0.41
25:RA:2593:U:H2'	25:RA:2594:C:H6	1.86	0.41
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	2.02	0.41
46:R0:40:GLN:OE1	46:R0:44:ARG:HB2	2.20	0.41
48:R2:66:GLU:HG2	48:R2:69:ARG:HH21	1.85	0.41
49:R3:40:THR:HG22	49:R3:42:ALA:H	1.86	0.41
55:R9:7:VAL:HG21	55:R9:23:VAL:O	2.21	0.41
1:XA:186(E):C:H2'	1:XA:186(F):C:C6	2.56	0.41
1:XA:603:U:H2'	1:XA:604:G:C8	2.56	0.41
1:XA:827:U:H6	1:XA:827:U:H2'	1.72	0.41
1:XA:1346:A:O2'	1:XA:1347:G:H4'	2.21	0.41
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.20	0.41
16:XP:39:TYR:HD1	16:XP:49:LEU:HD13	1.86	0.41
16:XP:72:ARG:HG3	16:XP:73:LEU:HD12	2.02	0.41
22:XW:10:G:C6	22:XW:27:G:C5	3.09	0.41
25:YA:320:A:C2'	29:YF:169:ASN:HD22	2.33	0.41
25:YA:588:U:O5'	25:YA:588:U:H6	2.04	0.41
25:YA:708:C:H2'	25:YA:709:U:C6	2.55	0.41
25:YA:862:G:H21	26:YB:99:A:H2	1.67	0.41
25:YA:1054:A:H3'	25:YA:1055:G:H8	1.86	0.41
25:YA:1637:A:H2'	25:YA:1638:C:C6	2.56	0.41
25:YA:2210:G:H2'	25:YA:2210:G:N3	2.35	0.41
25:YA:2330:G:H2'	25:YA:2331:G:O4'	2.20	0.41
25:YA:2540:C:H1'	25:YA:2741:A:C4	2.56	0.41
26:YB:3:C:H2'	26:YB:4:C:H6	1.86	0.41
29:YF:32:LEU:HB3	29:YF:112:MET:HE1	2.02	0.41
29:YF:60:SER:OG	29:YF:61:GLY:N	2.53	0.41
1:QA:55:A:C2	32:YI:89:TYR:CD2	3.09	0.41
1:QA:191(F):U:H2'	1:QA:191:G:H8	1.86	0.41
1:QA:552:U:O2	12:QL:31:PRO:HB3	2.21	0.41
1:QA:553:A:H2'	1:QA:554:C:C6	2.56	0.41
1:QA:645:C:H2'	1:QA:646:U:C6	2.56	0.41
1:QA:696:A:H2'	1:QA:697:U:H6	1.84	0.41
1:QA:728:A:H2'	1:QA:729:A:C8	2.56	0.41
1:QA:1043:C:H2'	1:QA:1044:A:C8	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1429:C:H2'	1:QA:1430:C:C6	2.56	0.41
2:QB:16:HIS:ND1	2:QB:210:SER:HA	2.35	0.41
3:QC:34:LEU:HD12	14:QN:25:VAL:HG21	2.02	0.41
4:QD:19:LEU:HB2	4:QD:67:ILE:HG12	2.03	0.41
8:QH:97:VAL:HG21	8:QH:128:GLY:HA2	2.03	0.41
9:QI:32:ASP:OD1	9:QI:33:PHE:N	2.54	0.41
11:QK:20:TYR:CD1	11:QK:83:ILE:HB	2.56	0.41
12:QL:45:PRO:HB3	12:QL:53:ARG:NH1	2.36	0.41
13:QM:3:ARG:HB2	50:R4:34:GLU:HB3	2.02	0.41
16:QP:23:ASP:OD1	16:QP:24:ALA:N	2.54	0.41
17:QQ:95:TYR:HD1	17:QQ:98:LEU:HD12	1.86	0.41
18:QR:36:ASN:HB3	18:QR:39:VAL:HB	2.03	0.41
22:QW:14:A:C4	22:QW:23:G:C2	3.09	0.41
22:QW:15:G:N2	22:QW:60:A:N7	2.69	0.41
25:RA:99:U:H4'	25:RA:101:G:O5'	2.20	0.41
25:RA:413:C:H2'	25:RA:414:C:C6	2.56	0.41
25:RA:527:C:H2'	25:RA:2779:U:H5	1.86	0.41
25:RA:646:A:H2'	25:RA:647:G:O4'	2.21	0.41
25:RA:690:G:H4'	27:RD:218:ARG:HH22	1.85	0.41
25:RA:774:A:O2'	25:RA:775:G:O5'	2.39	0.41
25:RA:820:A:H2'	25:RA:821:A:C8	2.56	0.41
25:RA:1173:G:H4'	25:RA:1174:A:C5	2.56	0.41
25:RA:1201:C:H2'	25:RA:1202:C:C6	2.56	0.41
25:RA:1482:U:H3	25:RA:1512:G:H1	1.69	0.41
25:RA:1535:U:H2'	25:RA:1536:A:N7	2.36	0.41
25:RA:1550:C:H2'	25:RA:1551:C:H6	1.85	0.41
25:RA:1561:G:H2'	25:RA:1562:A:C8	2.56	0.41
25:RA:2036:C:H2'	25:RA:2037:G:H8	1.86	0.41
25:RA:2294:C:H2'	25:RA:2295:C:C6	2.55	0.41
25:RA:2625:G:H2'	25:RA:2626:C:C6	2.55	0.41
25:RA:2795:G:H3'	25:RA:2797:U:H5''	2.02	0.41
27:RD:145:VAL:HG22	27:RD:191:ALA:HB1	2.02	0.41
27:RD:233:HIS:NE2	27:RD:246:PRO:HA	2.36	0.41
28:RE:63:LEU:HD12	28:RE:65:GLY:N	2.36	0.41
29:RF:78:ILE:HA	29:RF:83:PHE:CD2	2.56	0.41
29:RF:110:LEU:HD11	29:RF:181:LEU:HG	2.03	0.41
30:RG:23:PHE:CE2	30:RG:168:GLU:HG2	2.56	0.41
33:RN:22:THR:HG23	33:RN:62:VAL:HA	2.03	0.41
41:RV:38:LEU:HD12	41:RV:57:VAL:HG13	2.03	0.41
41:RV:40:LEU:CD2	41:RV:47:VAL:HG12	2.51	0.41
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:57:G:N2	1:XA:388:G:O6	2.41	0.41
1:XA:59:A:H5''	1:XA:60:A:H5''	2.03	0.41
1:XA:323:U:H2'	1:XA:324:G:O4'	2.19	0.41
1:XA:677:U:O2	1:XA:777:A:O2'	2.39	0.41
1:XA:875:C:O2'	8:XH:14:ARG:HD2	2.20	0.41
1:XA:1011:G:H2'	1:XA:1012:U:C6	2.55	0.41
1:XA:1049:U:H4'	1:XA:1050:G:H5''	2.02	0.41
1:XA:1368:G:H5''	9:XI:112:LYS:HB3	2.03	0.41
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.56	0.41
2:XB:71:VAL:HG23	2:XB:93:VAL:HB	2.03	0.41
4:XD:111:ALA:HB2	4:XD:120:LEU:HD12	2.02	0.41
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.41
12:XL:66:VAL:HG21	12:XL:98:TYR:CE2	2.56	0.41
17:XQ:95:TYR:HD1	17:XQ:98:LEU:HD12	1.86	0.41
18:XR:47:THR:O	18:XR:83:GLU:N	2.54	0.41
18:XR:81:PHE:CD1	18:XR:81:PHE:N	2.89	0.41
22:XV:4:G:O2'	22:XV:5:G:H8	2.03	0.41
22:XW:41:C:H2'	22:XW:42:C:H6	1.85	0.41
22:XW:52:C:O2	22:XW:65:G:N2	2.54	0.41
25:YA:39:C:H2'	25:YA:40:C:C6	2.56	0.41
25:YA:125:G:H5'	53:Y7:19:ARG:HD3	2.03	0.41
25:YA:272:G:H2'	25:YA:273:G:C8	2.55	0.41
25:YA:573:G:O2'	25:YA:574:C:H3'	2.21	0.41
25:YA:609(A):G:H2'	25:YA:610:C:H6	1.86	0.41
25:YA:1007:C:H5''	33:YN:35:ARG:NH1	2.36	0.41
25:YA:1112:G:H2'	25:YA:1113:U:C6	2.55	0.41
25:YA:1266:G:N7	42:YW:15:ARG:HD2	2.36	0.41
25:YA:1297:C:H2'	25:YA:1298:C:C6	2.55	0.41
25:YA:1316:U:H2'	25:YA:1317:A:H8	1.80	0.41
25:YA:1475:G:H2'	25:YA:1476:C:H6	1.86	0.41
25:YA:1595:G:H2'	25:YA:1596:A:C8	2.56	0.41
25:YA:1958:C:H2'	25:YA:1959:G:H8	1.84	0.41
25:YA:2073:C:C5'	27:YD:229:VAL:HG22	2.50	0.41
25:YA:2273:A:H2'	25:YA:2274:A:C8	2.56	0.41
25:YA:2293:C:H2'	25:YA:2294:C:H6	1.84	0.41
25:YA:2315:G:OP1	30:YG:36:LYS:NZ	2.39	0.41
25:YA:2743:C:C4'	55:Y9:26:ILE:H	2.33	0.41
25:YA:2747:G:N1	25:YA:2755:C:H4'	2.36	0.41
25:YA:2755:C:C5'	25:YA:2755:C:H6	2.34	0.41
26:YB:60:C:H2'	26:YB:61:G:H8	1.86	0.41
28:YE:29:GLY:HA2	28:YE:180:ASN:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:63:ILE:HG22	30:YG:143:GLU:HB2	2.03	0.41
30:YG:114:ILE:HB	30:YG:117:PHE:HB2	2.03	0.41
35:YP:37:GLY:O	35:YP:41:ARG:HG2	2.21	0.41
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.20	0.41
36:YQ:139:GLU:N	36:YQ:139:GLU:OE1	2.54	0.41
37:YR:104:ARG:HD2	37:YR:107:ASP:OD2	2.19	0.41
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	2.02	0.41
45:YZ:54:HIS:ND1	45:YZ:101:PRO:HG3	2.36	0.41
45:YZ:58:VAL:O	45:YZ:59:LEU:HB2	2.21	0.41
45:YZ:112:ARG:HG3	45:YZ:113:ALA:H	1.85	0.41
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	2.03	0.41
55:Y9:32:HIS:HB3	55:Y9:34:GLN:HE21	1.86	0.41
1:QA:763:G:H2'	1:QA:764:C:C6	2.55	0.41
1:QA:955:U:H1'	1:QA:1227:A:H61	1.85	0.41
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	2.03	0.41
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.56	0.41
8:QH:12:ARG:NH1	8:QH:26:VAL:HA	2.36	0.41
19:QS:50:ALA:HA	19:QS:58:VAL:O	2.20	0.41
22:QW:10:G:N2	22:QW:27:G:H1'	2.36	0.41
25:RA:839:U:O2'	25:RA:1191:G:N3	2.53	0.41
25:RA:1108:U:H2'	25:RA:1109:C:C2	2.56	0.41
25:RA:1210:A:H5'	25:RA:1211:U:H2'	2.03	0.41
25:RA:1278:A:H5''	37:RR:36:THR:HG22	2.03	0.41
25:RA:1291:C:C2	25:RA:1292:U:C5	3.09	0.41
25:RA:1346:G:C6	25:RA:1601:G:C6	3.09	0.41
25:RA:2271:G:H2'	25:RA:2272:U:C6	2.56	0.41
25:RA:2721:A:C4	25:RA:2722:G:C8	3.09	0.41
25:RA:2848:G:O2'	25:RA:2867:G:N2	2.53	0.41
48:R2:17:SER:OG	48:R2:20:GLU:HG2	2.20	0.41
1:XA:253:U:H2'	1:XA:254:G:C8	2.56	0.41
1:XA:812:C:H1'	1:XA:813:U:OP2	2.21	0.41
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.02	0.41
9:XI:9:ARG:HG2	9:XI:14:VAL:HG22	2.02	0.41
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	2.03	0.41
16:XP:82:GLN:HG2	16:XP:84:ALA:H	1.86	0.41
25:YA:94:G:N3	48:Y2:47:ASN:ND2	2.69	0.41
25:YA:392:C:H5''	25:YA:409:C:H5''	2.03	0.41
25:YA:593:G:H2'	25:YA:594:U:H6	1.84	0.41
25:YA:792:G:N3	25:YA:2072:G:O2'	2.34	0.41
25:YA:1321:A:C4	25:YA:1322:A:C8	3.09	0.41
25:YA:1530:G:H2'	25:YA:1531:C:C6	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1794:U:H2'	25:YA:1795:C:C6	2.56	0.41
25:YA:2108:C:H2'	25:YA:2109:U:C6	2.56	0.41
25:YA:2408:U:H2'	25:YA:2409:G:H8	1.86	0.41
25:YA:2417:C:C2	25:YA:2418:A:C8	3.08	0.41
25:YA:2706:G:O2'	37:YR:64:ARG:HD3	2.20	0.41
25:YA:2867:G:O2'	25:YA:2868:A:H8	1.84	0.41
30:YG:40:ASN:HD22	30:YG:41:GLN:N	2.17	0.41
32:YI:49:ALA:HA	32:YI:52:ARG:HG2	2.03	0.41
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.21	0.41
1:QA:579:G:H5'	1:QA:728:A:H1'	2.03	0.40
1:QA:1219:U:C2	1:QA:1220:G:C8	3.10	0.40
1:QA:1418:A:N3	25:RA:1959:G:H1'	2.36	0.40
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.22	0.40
22:QW:60:A:H2'	22:QW:61:U:O4'	2.21	0.40
25:RA:363:G:H2'	25:RA:363(A):A:H8	1.85	0.40
25:RA:900:A:H2'	25:RA:900:A:N3	2.36	0.40
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.56	0.40
25:RA:1660:C:H2'	25:RA:1661:G:H8	1.86	0.40
25:RA:2114:A:N6	25:RA:2119:A:H62	2.19	0.40
25:RA:2704:C:H2'	25:RA:2705:A:O4'	2.21	0.40
25:RA:2755:C:H42	55:R9:1:MET:H2	1.68	0.40
28:RE:35:GLN:HE21	28:RE:37:ARG:CZ	2.34	0.40
32:RI:21:VAL:HG22	32:RI:22:LYS:H	1.86	0.40
41:RV:49:THR:HB	41:RV:50:PRO:HD2	2.03	0.40
44:RY:13:VAL:HB	44:RY:72:VAL:HG13	2.03	0.40
46:R0:53:MET:HA	46:R0:58:THR:O	2.21	0.40
47:R1:83:GLU:HG2	47:R1:85:LEU:H	1.86	0.40
1:XA:579:G:O2'	15:XO:54:ARG:NE	2.53	0.40
1:XA:881:G:H2'	1:XA:882:C:O4'	2.21	0.40
1:XA:1148:U:O3'	9:XI:14:VAL:HG11	2.21	0.40
2:XB:189:ASP:HB3	2:XB:203:GLY:O	2.20	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD11	2.21	0.40
9:XI:77:ILE:O	9:XI:81:ILE:HG12	2.21	0.40
10:XJ:45:ARG:HB3	10:XJ:65:LEU:HB3	2.02	0.40
10:XJ:50:ILE:CD1	10:XJ:60:ARG:HE	2.33	0.40
11:XK:84:VAL:CG1	11:XK:95:ILE:HD11	2.51	0.40
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.21	0.40
22:XW:41:C:H2'	22:XW:42:C:C6	2.56	0.40
25:YA:116:C:O2'	25:YA:126:A:N3	2.47	0.40
25:YA:242:G:H4'	25:YA:243:U:O5'	2.21	0.40
25:YA:313:C:H2'	25:YA:314:A:H8	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:567:A:N6	41:YV:78:LYS:HD3	2.36	0.40
25:YA:680:G:H2'	25:YA:681:G:C8	2.56	0.40
25:YA:720:C:H2'	25:YA:721:C:C6	2.54	0.40
25:YA:1005:C:H5'	25:YA:1012:U:H1'	2.03	0.40
25:YA:1422:G:H4'	25:YA:1493:C:OP1	2.21	0.40
25:YA:1668:A:N3	25:YA:1670:C:C4	2.89	0.40
25:YA:1907:G:H2'	25:YA:1908:C:H6	1.85	0.40
25:YA:2025:C:H2'	25:YA:2026:C:H6	1.86	0.40
25:YA:2047:U:H2'	25:YA:2048:G:C8	2.54	0.40
25:YA:2747:G:N1	25:YA:2755:C:P	2.94	0.40
25:YA:2847:U:OP1	39:YT:98:LYS:HD3	2.21	0.40
25:YA:2893:G:H5''	25:YA:2894:G:OP1	2.20	0.40
28:YE:103:ASP:OD2	28:YE:201:THR:HA	2.20	0.40
29:YF:34:TRP:CE2	35:YP:8:PRO:HG3	2.56	0.40
29:YF:181:LEU:HD11	29:YF:186:ILE:HD11	2.04	0.40
30:YG:3:LEU:HD21	50:Y4:25:TYR:HD2	1.86	0.40
33:YN:67:LEU:O	33:YN:88:GLU:HB2	2.21	0.40
45:YZ:48:PHE:HE1	45:YZ:71:VAL:HG11	1.84	0.40
1:QA:452:A:O2'	16:QP:72:ARG:HD2	2.20	0.40
1:QA:500:G:H2'	1:QA:501:C:C6	2.56	0.40
1:QA:557:G:H2'	1:QA:558:G:C8	2.56	0.40
1:QA:992:U:H1'	1:QA:993:G:OP2	2.22	0.40
4:QD:57:ARG:HB3	4:QD:206:PHE:HD1	1.85	0.40
22:QW:52:C:O2	22:QW:65:G:N2	2.54	0.40
25:RA:270(P):C:H2'	25:RA:270(Q):C:H6	1.86	0.40
25:RA:436:C:H2'	25:RA:438:G:C8	2.56	0.40
25:RA:554:U:H2'	25:RA:556:G:N7	2.37	0.40
25:RA:1173:G:H21	25:RA:1175:U:H5	1.69	0.40
25:RA:1291:C:H2'	25:RA:1292:U:C6	2.56	0.40
25:RA:1419:A:C8	25:RA:1579:A:N6	2.89	0.40
25:RA:1469:A:H2'	25:RA:1470:G:O4'	2.20	0.40
25:RA:2314:C:H2'	25:RA:2315:G:C8	2.56	0.40
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.57	0.40
25:RA:2437:U:H2'	25:RA:2438:U:C6	2.57	0.40
25:RA:2521:C:O2'	25:RA:2564:A:N3	2.50	0.40
26:RB:73:A:N3	26:RB:73:A:H2'	2.36	0.40
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.22	0.40
39:RT:19:LEU:HD22	39:RT:86:ILE:HG22	2.01	0.40
45:RZ:145:GLU:CG	45:RZ:146:ILE:H	2.33	0.40
1:XA:35:G:H2'	1:XA:36:C:C6	2.56	0.40
1:XA:235:C:H1'	17:XQ:61:GLU:OE1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:374:A:C6	1:XA:375:U:C4	3.09	0.40
1:XA:679:C:H2'	1:XA:680:C:H6	1.87	0.40
1:XA:738:C:H2'	1:XA:739:C:C6	2.55	0.40
1:XA:1421:G:C6	1:XA:1480:G:C6	3.09	0.40
2:XB:155:LEU:O	2:XB:157:ARG:N	2.48	0.40
7:XG:116:ALA:O	7:XG:120:ILE:HG12	2.21	0.40
22:XW:23:G:C2	22:XW:24:C:C5	3.09	0.40
25:YA:38:A:N3	29:YF:48:THR:OG1	2.53	0.40
25:YA:171:G:H2'	25:YA:172:C:C6	2.56	0.40
25:YA:416:C:H2'	25:YA:417:C:C6	2.56	0.40
25:YA:872:A:N6	25:YA:906:G:C6	2.89	0.40
25:YA:978:G:O4'	25:YA:1001:A:H2	2.04	0.40
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.27	0.40
25:YA:1751:C:H2'	25:YA:1752:C:C6	2.57	0.40
25:YA:1862:G:H2'	25:YA:1863:G:H8	1.86	0.40
25:YA:2186:G:H2'	25:YA:2187:G:C8	2.56	0.40
25:YA:2521:C:C2	25:YA:2545:G:N2	2.89	0.40
25:YA:2685:G:P	39:YT:51:ARG:HH22	2.44	0.40
25:YA:2712:U:H5''	25:YA:2714:G:H5'	2.03	0.40
25:YA:2795:G:H3'	25:YA:2797:U:H5''	2.02	0.40
27:YD:77:ALA:HB2	27:YD:97:TYR:CD1	2.57	0.40
28:YE:63:LEU:HD12	28:YE:65:GLY:N	2.37	0.40
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.34	0.40
49:Y3:7:LYS:HA	49:Y3:33:GLN:O	2.21	0.40
1:QA:608:A:C2	1:QA:609:A:H1'	2.57	0.40
4:QD:64:LEU:HB2	4:QD:198:VAL:HG11	2.03	0.40
17:QQ:18:THR:OG1	17:QQ:69:LYS:NZ	2.35	0.40
25:RA:315:G:H2'	25:RA:316:C:C6	2.55	0.40
25:RA:541:C:H2'	25:RA:542:C:C6	2.56	0.40
25:RA:1009:A:N3	25:RA:1153:C:O2'	2.44	0.40
25:RA:1314:C:H5''	25:RA:1610:A:H61	1.87	0.40
25:RA:1478:G:H1'	25:RA:1557:C:O2'	2.22	0.40
25:RA:1671:U:N3	25:RA:1674:G:OP2	2.50	0.40
25:RA:1754:C:P	39:RT:96:ARG:HH12	2.44	0.40
25:RA:1891:G:H2'	25:RA:1892:C:C6	2.56	0.40
25:RA:2025:C:H2'	25:RA:2026:C:H6	1.86	0.40
25:RA:2112:G:O6	25:RA:2169:A:N6	2.54	0.40
25:RA:2466:C:C4	25:RA:2467:C:N4	2.89	0.40
25:RA:2677:G:H2'	25:RA:2678:C:C6	2.55	0.40
25:RA:2787:C:O2'	25:RA:2810:A:O2'	2.37	0.40
25:RA:2846:G:H2'	25:RA:2847:U:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:31:LYS:HG3	27:RD:32:SER:N	2.36	0.40
29:RF:40:GLN:HE22	29:RF:182:ASN:ND2	2.19	0.40
29:RF:64:ILE:HG23	29:RF:65:TRP:N	2.36	0.40
34:RO:107:ARG:HB2	34:RO:115:VAL:HG11	2.02	0.40
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.21	0.40
37:RR:98:LEU:O	37:RR:113:LEU:N	2.43	0.40
38:RS:61:ASN:O	38:RS:64:GLU:N	2.54	0.40
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	2.03	0.40
1:XA:682:G:H2'	1:XA:683:G:H8	1.86	0.40
1:XA:963:G:H21	10:XJ:55:LYS:CD	2.34	0.40
1:XA:997:U:H2'	1:XA:998:G:C8	2.55	0.40
1:XA:1144:G:H21	1:XA:1146:A:H62	1.70	0.40
9:XI:10:ARG:HH21	9:XI:107:ARG:HE	1.69	0.40
9:XI:114:TYR:HB2	10:XJ:60:ARG:HH11	1.86	0.40
22:XW:15:G:N2	22:XW:60:A:N7	2.70	0.40
22:XW:33:C:H5'	22:XW:34:U:OP2	2.22	0.40
25:YA:185:U:H2'	25:YA:186:G:H8	1.85	0.40
25:YA:247:G:H4'	25:YA:386:G:C4	2.57	0.40
25:YA:270(U):C:H2'	25:YA:270(V):G:C8	2.56	0.40
25:YA:465:G:H21	25:YA:684:G:H1'	1.85	0.40
25:YA:520:G:H2'	25:YA:521:G:C8	2.56	0.40
25:YA:536:A:OP1	40:YU:53:ARG:NH1	2.54	0.40
25:YA:564:C:H2'	25:YA:565:C:H6	1.87	0.40
25:YA:970:C:H2'	25:YA:971:C:C6	2.56	0.40
25:YA:1187:G:H5''	41:YV:81:TYR:CE1	2.56	0.40
25:YA:1298:C:H2'	25:YA:1299:G:O4'	2.22	0.40
25:YA:1406:U:H3'	25:YA:1407:C:H6	1.86	0.40
25:YA:1930:G:H2'	25:YA:1968:G:N1	2.36	0.40
25:YA:2051:A:H5'	25:YA:2578:G:O4'	2.21	0.40
25:YA:2208:U:H2'	25:YA:2209:C:C6	2.56	0.40
25:YA:2408:U:H2'	25:YA:2409:G:C8	2.56	0.40
25:YA:2566:A:H4'	25:YA:2567:G:O5'	2.21	0.40
31:YH:146:ALA:HA	55:Y9:20:HIS:HB3	2.03	0.40
35:YP:62:LEU:HD22	54:Y8:27:THR:HA	2.02	0.40
50:Y4:47:GLN:O	50:Y4:48:ARG:C	2.60	0.40
54:Y8:29:LYS:HA	54:Y8:36:LYS:NZ	2.37	0.40
1:QA:578:C:O2'	1:QA:728:A:N3	2.52	0.40
1:QA:604:G:H2'	1:QA:605:U:O4'	2.21	0.40
1:QA:939:G:H2'	1:QA:940:C:H6	1.86	0.40
1:QA:1126:U:H1'	1:QA:1280:A:C5	2.56	0.40
1:QA:1150:U:H2'	1:QA:1151:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1264:C:H2'	1:QA:1265:G:H8	1.85	0.40
1:QA:1319:A:C8	1:QA:1323:G:C5	3.09	0.40
11:QK:93:GLN:OE1	11:QK:96:ARG:NH2	2.48	0.40
22:QV:35:C:HO2'	22:QV:36:A:P	2.44	0.40
25:RA:117:G:H4'	53:R7:18:PHE:CE2	2.56	0.40
25:RA:493:G:H4'	42:RW:8:ARG:HB2	2.04	0.40
25:RA:918:A:C5	25:RA:919:G:H1'	2.56	0.40
25:RA:1292:U:C2	25:RA:1293:C:C5	3.09	0.40
25:RA:1375:C:H2'	25:RA:1376:C:C6	2.57	0.40
25:RA:1407:C:O2	25:RA:1407:C:H2'	2.22	0.40
25:RA:1669:A:O3'	25:RA:2549:G:H5'	2.22	0.40
25:RA:1694:C:H4'	25:RA:1695:G:O5'	2.21	0.40
25:RA:1800:C:H3'	27:RD:147:LEU:HD22	2.04	0.40
25:RA:2009:G:C6	25:RA:2010:G:N7	2.90	0.40
25:RA:2416:C:C2	25:RA:2417:C:C5	3.10	0.40
25:RA:2530:A:N7	31:RH:172:LYS:NZ	2.60	0.40
25:RA:2771:C:H2'	25:RA:2772:C:H6	1.85	0.40
25:RA:2820:A:H4'	37:RR:3:HIS:ND1	2.37	0.40
31:RH:9:ILE:HA	31:RH:10:PRO:HD3	1.90	0.40
31:RH:149:ARG:O	31:RH:149:ARG:HG2	2.21	0.40
33:RN:22:THR:HA	33:RN:61:ARG:O	2.22	0.40
34:RO:64:ARG:HG2	34:RO:79:PHE:CD2	2.56	0.40
36:RQ:73:PRO:HA	36:RQ:93:TYR:CD1	2.56	0.40
38:RS:10:ARG:HG2	38:RS:13:ARG:NH2	2.35	0.40
39:RT:30:VAL:HB	39:RT:86:ILE:HG13	2.03	0.40
42:RW:13:SER:HB3	42:RW:16:LYS:HD2	2.03	0.40
1:XA:392:G:H2'	1:XA:393:A:C8	2.57	0.40
1:XA:405:U:H3'	1:XA:406:G:H5'	2.04	0.40
1:XA:913:A:H4'	1:XA:914:A:O5'	2.21	0.40
1:XA:1004:A:H8	1:XA:1036:G:H22	1.68	0.40
1:XA:1010:G:H2'	1:XA:1011:G:C8	2.57	0.40
2:XB:16:HIS:HD2	2:XB:210:SER:CA	2.34	0.40
4:XD:10:ARG:HG3	4:XD:40:PRO:CG	2.51	0.40
11:XK:21:ILE:HB	11:XK:84:VAL:HG12	2.02	0.40
22:XW:20:G:H3'	22:XW:21:U:H5	1.87	0.40
25:YA:37:C:H2'	25:YA:38:A:H8	1.87	0.40
25:YA:529:A:H8	25:YA:530:G:C6	2.40	0.40
25:YA:1085:A:H2'	25:YA:1086:A:C4	2.57	0.40
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.22	0.40
25:YA:2250:G:C4	36:YQ:82:ARG:HG3	2.57	0.40
25:YA:2712:U:HO2'	25:YA:2712(A):A:P	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2773:C:H2'	25:YA:2774:C:H6	1.85	0.40
26:YB:73:A:H2'	26:YB:73:A:N3	2.36	0.40
27:YD:34:VAL:O	27:YD:34:VAL:HG13	2.22	0.40
30:YG:81:LYS:HB3	30:YG:82:LEU:H	1.69	0.40
36:YQ:77:LYS:NZ	36:YQ:84:GLY:O	2.41	0.40
37:YR:13:HIS:CE1	37:YR:16:HIS:HB2	2.57	0.40
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.86	0.40
40:YU:11:ARG:O	40:YU:15:LYS:HG2	2.22	0.40
40:YU:92:ARG:C	40:YU:94:ASN:N	2.72	0.40
40:YU:92:ARG:HH21	41:YV:10:LYS:HB3	1.86	0.40
46:Y0:68:GLU:HG3	46:Y0:80:HIS:HB2	2.04	0.40
1:QA:229:U:H2'	1:QA:230:G:C8	2.56	0.40
1:QA:235:C:H2'	1:QA:236:G:C8	2.53	0.40
1:QA:975:A:N1	10:QJ:48:THR:HB	2.36	0.40
1:QA:1013:G:N2	1:QA:1015:A:H3'	2.36	0.40
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.56	0.40
1:QA:1325:C:H4'	21:QU:17:THR:HG21	2.02	0.40
3:QC:30:ARG:HD2	14:QN:38:GLY:HA3	2.03	0.40
3:QC:129:ALA:HB3	3:QC:132:ARG:HB3	2.03	0.40
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	2.04	0.40
4:QD:13:ARG:HH12	4:QD:36:ARG:CZ	2.35	0.40
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	2.03	0.40
16:QP:82:GLN:HG2	16:QP:84:ALA:H	1.86	0.40
20:QT:30:LYS:HZ2	20:QT:80:ARG:NH1	2.20	0.40
22:QW:41:C:H2'	22:QW:42:C:H6	1.87	0.40
25:RA:25:U:H5'	42:RW:79:GLY:HA2	2.03	0.40
25:RA:108:U:H4'	25:RA:347:A:H2	1.86	0.40
25:RA:270(U):C:C2	25:RA:270(V):G:C8	3.10	0.40
25:RA:1416:G:H2'	25:RA:1417:C:H6	1.85	0.40
25:RA:1802:A:H2'	25:RA:1803:A:H8	1.85	0.40
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.56	0.40
25:RA:1910:G:H2'	25:RA:1911:U:O4'	2.22	0.40
25:RA:2752:C:O2	25:RA:2752:C:H2'	2.21	0.40
28:RE:117:MET:HA	28:RE:122:PHE:H	1.85	0.40
31:RH:4:ILE:HD12	31:RH:4:ILE:H	1.85	0.40
33:RN:21:LYS:HG2	33:RN:26:LEU:HD13	2.03	0.40
35:RP:107:LYS:O	35:RP:109:GLY:N	2.55	0.40
45:RZ:6:LYS:HD2	45:RZ:8:TYR:CZ	2.57	0.40
52:R6:9:LEU:HA	52:R6:54:ILE:HB	2.03	0.40
1:XA:595:G:H21	1:XA:596:C:H42	1.70	0.40
1:XA:704:A:N3	1:XA:704:A:H2'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:704:A:OP2	1:XA:704:A:H8	2.04	0.40
1:XA:1095:U:H2'	1:XA:1096:C:C6	2.55	0.40
1:XA:1101:A:N6	2:XB:176:GLU:OE2	2.54	0.40
1:XA:1499:A:C1'	1:XA:1520:G:H5'	2.52	0.40
13:XM:3:ARG:NH2	50:Y4:34:GLU:OE2	2.54	0.40
16:XP:53:VAL:O	16:XP:57:ARG:HG2	2.22	0.40
25:YA:546:C:OP1	25:YA:547:A:N6	2.55	0.40
25:YA:565:C:H2'	25:YA:566:U:C6	2.57	0.40
25:YA:598:G:H2'	25:YA:599:G:O4'	2.22	0.40
25:YA:601:C:O2'	25:YA:605:C:H5''	2.21	0.40
25:YA:719:C:H2'	25:YA:720:C:H6	1.87	0.40
25:YA:874:G:H2'	25:YA:875:G:C8	2.57	0.40
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.55	0.40
25:YA:1278:A:OP1	37:YR:36:THR:HG22	2.21	0.40
25:YA:1662:C:H2'	25:YA:1663:C:C6	2.56	0.40
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.86	0.40
25:YA:2078:C:H2'	25:YA:2079:U:C6	2.56	0.40
25:YA:2181:G:H2'	25:YA:2182:G:C8	2.56	0.40
25:YA:2744:G:N7	55:Y9:1:MET:HE3	2.37	0.40
26:YB:46:A:C5	26:YB:47:C:C5	3.09	0.40
28:YE:82:ARG:O	28:YE:83:ASP:HB2	2.21	0.40
30:YG:41:GLN:HE21	30:YG:153:ARG:HB3	1.86	0.40
32:YI:11:ASN:O	32:YI:12:LEU:HD12	2.22	0.40
50:Y4:37:SER:O	50:Y4:43:TYR:HD2	2.04	0.40
55:Y9:2:LYS:HB2	55:Y9:32:HIS:HA	2.03	0.40
55:Y9:31:LYS:HD3	55:Y9:32:HIS:CE1	2.57	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:63:ASP:OD1	44:YY:92:ASN:ND2[3_555]	2.18	0.02

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	233/256 (91%)	202 (87%)	29 (12%)	2 (1%)	17	54
2	XB	234/256 (91%)	202 (86%)	31 (13%)	1 (0%)	34	69
3	QC	203/239 (85%)	188 (93%)	15 (7%)	0	100	100
3	XC	203/239 (85%)	190 (94%)	13 (6%)	0	100	100
4	QD	206/209 (99%)	189 (92%)	17 (8%)	0	100	100
4	XD	206/209 (99%)	190 (92%)	16 (8%)	0	100	100
5	QE	149/162 (92%)	141 (95%)	7 (5%)	1 (1%)	22	59
5	XE	149/162 (92%)	140 (94%)	8 (5%)	1 (1%)	22	59
6	QF	99/101 (98%)	97 (98%)	2 (2%)	0	100	100
6	XF	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
7	QG	153/156 (98%)	147 (96%)	6 (4%)	0	100	100
7	XG	153/156 (98%)	148 (97%)	5 (3%)	0	100	100
8	QH	135/138 (98%)	129 (96%)	6 (4%)	0	100	100
8	XH	135/138 (98%)	126 (93%)	9 (7%)	0	100	100
9	QI	125/128 (98%)	112 (90%)	13 (10%)	0	100	100
9	XI	124/128 (97%)	112 (90%)	12 (10%)	0	100	100
10	QJ	97/105 (92%)	90 (93%)	7 (7%)	0	100	100
10	XJ	94/105 (90%)	84 (89%)	10 (11%)	0	100	100
11	QK	117/129 (91%)	109 (93%)	8 (7%)	0	100	100
11	XK	114/129 (88%)	108 (95%)	6 (5%)	0	100	100
12	QL	123/132 (93%)	105 (85%)	18 (15%)	0	100	100
12	XL	120/132 (91%)	97 (81%)	22 (18%)	1 (1%)	19	56
13	QM	118/126 (94%)	96 (81%)	21 (18%)	1 (1%)	19	56
13	XM	117/126 (93%)	94 (80%)	22 (19%)	1 (1%)	17	54
14	QN	58/61 (95%)	54 (93%)	3 (5%)	1 (2%)	9	42
14	XN	58/61 (95%)	54 (93%)	3 (5%)	1 (2%)	9	42
15	QO	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
15	XO	85/89 (96%)	84 (99%)	1 (1%)	0	100	100
16	QP	82/88 (93%)	79 (96%)	3 (4%)	0	100	100
16	XP	82/88 (93%)	78 (95%)	4 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	QQ	98/105 (93%)	96 (98%)	2 (2%)	0	100	100
17	XQ	98/105 (93%)	96 (98%)	2 (2%)	0	100	100
18	QR	68/88 (77%)	64 (94%)	4 (6%)	0	100	100
18	XR	68/88 (77%)	65 (96%)	3 (4%)	0	100	100
19	QS	81/93 (87%)	70 (86%)	11 (14%)	0	100	100
19	XS	82/93 (88%)	70 (85%)	11 (13%)	1 (1%)	13	49
20	QT	97/106 (92%)	90 (93%)	7 (7%)	0	100	100
20	XT	97/106 (92%)	87 (90%)	10 (10%)	0	100	100
21	QU	23/27 (85%)	22 (96%)	1 (4%)	0	100	100
21	XU	23/27 (85%)	22 (96%)	1 (4%)	0	100	100
27	RD	270/276 (98%)	235 (87%)	33 (12%)	2 (1%)	22	59
27	YD	270/276 (98%)	239 (88%)	29 (11%)	2 (1%)	22	59
28	RE	203/206 (98%)	163 (80%)	37 (18%)	3 (2%)	10	44
28	YE	203/206 (98%)	158 (78%)	42 (21%)	3 (2%)	10	44
29	RF	200/210 (95%)	183 (92%)	17 (8%)	0	100	100
29	YF	200/210 (95%)	185 (92%)	13 (6%)	2 (1%)	15	51
30	RG	179/182 (98%)	149 (83%)	29 (16%)	1 (1%)	25	62
30	YG	179/182 (98%)	148 (83%)	29 (16%)	2 (1%)	14	50
31	RH	172/180 (96%)	141 (82%)	28 (16%)	3 (2%)	9	42
31	YH	172/180 (96%)	137 (80%)	32 (19%)	3 (2%)	9	42
32	RI	144/148 (97%)	119 (83%)	22 (15%)	3 (2%)	7	38
32	YI	144/148 (97%)	117 (81%)	24 (17%)	3 (2%)	7	38
33	RN	136/140 (97%)	117 (86%)	17 (12%)	2 (2%)	10	44
33	YN	136/140 (97%)	117 (86%)	18 (13%)	1 (1%)	22	59
34	RO	120/122 (98%)	116 (97%)	4 (3%)	0	100	100
34	YO	120/122 (98%)	114 (95%)	6 (5%)	0	100	100
35	RP	148/150 (99%)	114 (77%)	33 (22%)	1 (1%)	22	59
35	YP	145/150 (97%)	112 (77%)	32 (22%)	1 (1%)	22	59
36	RQ	139/141 (99%)	114 (82%)	24 (17%)	1 (1%)	22	59
36	YQ	139/141 (99%)	116 (84%)	21 (15%)	2 (1%)	11	45
37	RR	115/118 (98%)	102 (89%)	13 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
37	YR	115/118 (98%)	103 (90%)	11 (10%)	1 (1%)	17	54
38	RS	109/112 (97%)	86 (79%)	23 (21%)	0	100	100
38	YS	109/112 (97%)	87 (80%)	22 (20%)	0	100	100
39	RT	135/146 (92%)	115 (85%)	18 (13%)	2 (2%)	10	44
39	YT	135/146 (92%)	115 (85%)	18 (13%)	2 (2%)	10	44
40	RU	115/118 (98%)	109 (95%)	5 (4%)	1 (1%)	17	54
40	YU	115/118 (98%)	109 (95%)	5 (4%)	1 (1%)	17	54
41	RV	99/101 (98%)	86 (87%)	12 (12%)	1 (1%)	15	51
41	YV	99/101 (98%)	86 (87%)	13 (13%)	0	100	100
42	RW	111/113 (98%)	103 (93%)	8 (7%)	0	100	100
42	YW	111/113 (98%)	98 (88%)	13 (12%)	0	100	100
43	RX	90/96 (94%)	87 (97%)	3 (3%)	0	100	100
43	YX	90/96 (94%)	88 (98%)	2 (2%)	0	100	100
44	RY	105/110 (96%)	101 (96%)	4 (4%)	0	100	100
44	YY	105/110 (96%)	98 (93%)	7 (7%)	0	100	100
45	RZ	181/206 (88%)	144 (80%)	33 (18%)	4 (2%)	6	37
45	YZ	181/206 (88%)	142 (78%)	36 (20%)	3 (2%)	9	42
46	R0	79/85 (93%)	76 (96%)	3 (4%)	0	100	100
46	Y0	73/85 (86%)	69 (94%)	4 (6%)	0	100	100
47	R1	95/98 (97%)	85 (90%)	9 (10%)	1 (1%)	14	50
47	Y1	91/98 (93%)	77 (85%)	13 (14%)	1 (1%)	14	50
48	R2	67/72 (93%)	62 (92%)	4 (6%)	1 (2%)	10	44
48	Y2	67/72 (93%)	61 (91%)	5 (8%)	1 (2%)	10	44
49	R3	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
49	Y3	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
50	R4	67/71 (94%)	53 (79%)	13 (19%)	1 (2%)	10	44
50	Y4	67/71 (94%)	53 (79%)	13 (19%)	1 (2%)	10	44
51	R5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
51	Y5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
52	R6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
52	Y6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	R7	45/49 (92%)	44 (98%)	1 (2%)	0	100	100
53	Y7	46/49 (94%)	45 (98%)	1 (2%)	0	100	100
54	R8	62/65 (95%)	46 (74%)	14 (23%)	2 (3%)	4	31
54	Y8	62/65 (95%)	47 (76%)	13 (21%)	2 (3%)	4	31
55	R9	35/37 (95%)	25 (71%)	10 (29%)	0	100	100
55	Y9	35/37 (95%)	18 (51%)	15 (43%)	2 (6%)	1	19
All	All	11452/12128 (94%)	10130 (88%)	1249 (11%)	73 (1%)	25	62

All (73) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
28	RE	18	ASP
31	RH	87	LEU
32	RI	15	VAL
35	RP	108	LYS
39	RT	124	ASP
40	RU	92	ARG
45	RZ	53	ILE
45	RZ	180	VAL
54	R8	29	LYS
54	R8	30	ARG
28	YE	18	ASP
31	YH	87	LEU
32	YI	15	VAL
35	YP	108	LYS
39	YT	124	ASP
45	YZ	53	ILE
45	YZ	180	VAL
54	Y8	29	LYS
54	Y8	30	ARG
2	QB	208	ILE
14	QN	17	LYS
27	RD	34	VAL
27	RD	243	GLY
33	RN	22	THR
39	RT	123	GLN
50	R4	47	GLN
14	XN	17	LYS
33	YN	22	THR
39	YT	123	GLN

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Mol	Chain	Res	Type
40	YU	92	ARG
50	Y4	47	GLN
55	Y9	30	PRO
13	QM	14	ARG
32	RI	11	ASN
48	R2	70	GLN
27	YD	34	VAL
27	YD	243	GLY
32	YI	11	ASN
37	YR	4	LEU
45	YZ	178	GLU
48	Y2	70	GLN
28	RE	83	ASP
30	RG	81	LYS
31	RH	86	GLU
41	RV	44	LYS
45	RZ	178	GLU
12	XL	105	TYR
19	XS	27	GLU
28	YE	63	LEU
28	YE	83	ASP
30	YG	81	LYS
31	YH	86	GLU
55	Y9	28	GLU
47	R1	54	ALA
13	XM	14	ARG
29	YF	67	GLN
29	YF	129	PHE
28	RE	145	LYS
33	RN	96	GLU
36	RQ	78	PRO
30	YG	82	LEU
31	YH	12	PRO
36	YQ	22	LYS
36	YQ	78	PRO
47	Y1	54	ALA
31	RH	12	PRO
2	XB	208	ILE
2	QB	232	PRO
5	QE	74	GLY
32	RI	16	GLY
5	XE	74	GLY

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Mol	Chain	Res	Type
32	YI	16	GLY
45	RZ	166	SER

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	203/220 (92%)	202 (100%)	1 (0%)	88	94
2	XB	204/220 (93%)	201 (98%)	3 (2%)	65	81
3	QC	159/188 (85%)	159 (100%)	0	100	100
3	XC	159/188 (85%)	159 (100%)	0	100	100
4	QD	180/181 (99%)	178 (99%)	2 (1%)	73	85
4	XD	180/181 (99%)	178 (99%)	2 (1%)	73	85
5	QE	116/123 (94%)	116 (100%)	0	100	100
5	XE	116/123 (94%)	116 (100%)	0	100	100
6	QF	90/90 (100%)	88 (98%)	2 (2%)	52	72
6	XF	90/90 (100%)	90 (100%)	0	100	100
7	QG	126/127 (99%)	126 (100%)	0	100	100
7	XG	126/127 (99%)	126 (100%)	0	100	100
8	QH	118/119 (99%)	117 (99%)	1 (1%)	81	89
8	XH	118/119 (99%)	117 (99%)	1 (1%)	81	89
9	QI	98/99 (99%)	96 (98%)	2 (2%)	55	74
9	XI	97/99 (98%)	97 (100%)	0	100	100
10	QJ	89/92 (97%)	89 (100%)	0	100	100
10	XJ	86/92 (94%)	86 (100%)	0	100	100
11	QK	90/99 (91%)	90 (100%)	0	100	100
11	XK	88/99 (89%)	88 (100%)	0	100	100
12	QL	104/109 (95%)	104 (100%)	0	100	100
12	XL	103/109 (94%)	103 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	QM	96/101 (95%)	96 (100%)	0	100	100
13	XM	95/101 (94%)	95 (100%)	0	100	100
14	QN	49/50 (98%)	48 (98%)	1 (2%)	55	74
14	XN	49/50 (98%)	48 (98%)	1 (2%)	55	74
15	QO	79/80 (99%)	79 (100%)	0	100	100
15	XO	79/80 (99%)	79 (100%)	0	100	100
16	QP	72/74 (97%)	72 (100%)	0	100	100
16	XP	72/74 (97%)	72 (100%)	0	100	100
17	QQ	95/97 (98%)	94 (99%)	1 (1%)	73	85
17	XQ	95/97 (98%)	94 (99%)	1 (1%)	73	85
18	QR	61/77 (79%)	61 (100%)	0	100	100
18	XR	61/77 (79%)	61 (100%)	0	100	100
19	QS	72/80 (90%)	71 (99%)	1 (1%)	67	82
19	XS	73/80 (91%)	73 (100%)	0	100	100
20	QT	76/82 (93%)	75 (99%)	1 (1%)	69	83
20	XT	76/82 (93%)	75 (99%)	1 (1%)	69	83
21	QU	20/22 (91%)	20 (100%)	0	100	100
21	XU	20/22 (91%)	20 (100%)	0	100	100
27	RD	214/218 (98%)	213 (100%)	1 (0%)	88	94
27	YD	214/218 (98%)	213 (100%)	1 (0%)	88	94
28	RE	165/166 (99%)	165 (100%)	0	100	100
28	YE	165/166 (99%)	165 (100%)	0	100	100
29	RF	161/166 (97%)	160 (99%)	1 (1%)	86	93
29	YF	161/166 (97%)	160 (99%)	1 (1%)	86	93
30	RG	155/156 (99%)	154 (99%)	1 (1%)	86	93
30	YG	155/156 (99%)	154 (99%)	1 (1%)	86	93
31	RH	145/148 (98%)	142 (98%)	3 (2%)	53	73
31	YH	145/148 (98%)	142 (98%)	3 (2%)	53	73
32	RI	122/124 (98%)	122 (100%)	0	100	100
32	YI	122/124 (98%)	122 (100%)	0	100	100
33	RN	117/119 (98%)	116 (99%)	1 (1%)	78	88

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	YN	117/119 (98%)	116 (99%)	1 (1%)	78	88
34	RO	100/100 (100%)	99 (99%)	1 (1%)	76	86
34	YO	100/100 (100%)	99 (99%)	1 (1%)	76	86
35	RP	116/116 (100%)	116 (100%)	0	100	100
35	YP	114/116 (98%)	114 (100%)	0	100	100
36	RQ	111/111 (100%)	111 (100%)	0	100	100
36	YQ	111/111 (100%)	111 (100%)	0	100	100
37	RR	100/101 (99%)	100 (100%)	0	100	100
37	YR	100/101 (99%)	100 (100%)	0	100	100
38	RS	87/88 (99%)	86 (99%)	1 (1%)	73	85
38	YS	87/88 (99%)	86 (99%)	1 (1%)	73	85
39	RT	120/127 (94%)	120 (100%)	0	100	100
39	YT	120/127 (94%)	120 (100%)	0	100	100
40	RU	93/94 (99%)	92 (99%)	1 (1%)	73	85
40	YU	93/94 (99%)	92 (99%)	1 (1%)	73	85
41	RV	82/82 (100%)	82 (100%)	0	100	100
41	YV	82/82 (100%)	82 (100%)	0	100	100
42	RW	92/92 (100%)	90 (98%)	2 (2%)	52	72
42	YW	92/92 (100%)	90 (98%)	2 (2%)	52	72
43	RX	74/78 (95%)	74 (100%)	0	100	100
43	YX	74/78 (95%)	74 (100%)	0	100	100
44	RY	88/91 (97%)	88 (100%)	0	100	100
44	YY	88/91 (97%)	88 (100%)	0	100	100
45	RZ	162/179 (90%)	161 (99%)	1 (1%)	86	93
45	YZ	162/179 (90%)	161 (99%)	1 (1%)	86	93
46	R0	65/67 (97%)	65 (100%)	0	100	100
46	Y0	61/67 (91%)	60 (98%)	1 (2%)	62	79
47	R1	82/83 (99%)	82 (100%)	0	100	100
47	Y1	78/83 (94%)	78 (100%)	0	100	100
48	R2	64/67 (96%)	64 (100%)	0	100	100
48	Y2	64/67 (96%)	64 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	R3	51/52 (98%)	51 (100%)	0	100	100
49	Y3	51/52 (98%)	51 (100%)	0	100	100
50	R4	62/63 (98%)	61 (98%)	1 (2%)	62	79
50	Y4	62/63 (98%)	60 (97%)	2 (3%)	39	64
51	R5	51/52 (98%)	51 (100%)	0	100	100
51	Y5	51/52 (98%)	51 (100%)	0	100	100
52	R6	51/52 (98%)	51 (100%)	0	100	100
52	Y6	51/52 (98%)	51 (100%)	0	100	100
53	R7	40/42 (95%)	40 (100%)	0	100	100
53	Y7	41/42 (98%)	41 (100%)	0	100	100
54	R8	54/55 (98%)	54 (100%)	0	100	100
54	Y8	54/55 (98%)	54 (100%)	0	100	100
55	R9	34/34 (100%)	34 (100%)	0	100	100
55	Y9	34/34 (100%)	33 (97%)	1 (3%)	42	66
All	All	9687/10066 (96%)	9635 (100%)	52 (0%)	88	94

All (52) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	30	ARG
4	QD	103	ASN
4	QD	131	ARG
6	QF	71	ARG
6	QF	80	ARG
8	QH	91	ARG
9	QI	10	ARG
9	QI	111	ARG
14	QN	45	ARG
17	QQ	91	ARG
19	QS	41	VAL
20	QT	86	ARG
27	RD	273	ARG
29	RF	38	ARG
30	RG	40	ASN
31	RH	23	ARG
31	RH	69	ARG
31	RH	152	ARG

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Mol	Chain	Res	Type
33	RN	115	ARG
34	RO	97	ARG
38	RS	3	ARG
40	RU	94	ASN
42	RW	15	ARG
42	RW	40	ASN
45	RZ	34	ASN
50	R4	61	ARG
2	XB	30	ARG
2	XB	64	ARG
2	XB	144	ARG
4	XD	103	ASN
4	XD	131	ARG
8	XH	91	ARG
14	XN	45	ARG
17	XQ	91	ARG
20	XT	86	ARG
27	YD	273	ARG
29	YF	38	ARG
30	YG	40	ASN
31	YH	23	ARG
31	YH	69	ARG
31	YH	152	ARG
33	YN	115	ARG
34	YO	97	ARG
38	YS	3	ARG
40	YU	94	ASN
42	YW	15	ARG
42	YW	40	ASN
45	YZ	34	ASN
46	Y0	55	ARG
50	Y4	56	VAL
50	Y4	61	ARG
55	Y9	27	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
3	QC	108	ASN
4	QD	119	GLN
9	QI	3	GLN
9	QI	73	GLN

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Mol	Chain	Res	Type
10	QJ	84	GLN
29	RF	40	GLN
30	RG	40	ASN
37	RR	71	GLN
39	RT	58	ASN
42	RW	111	HIS
43	RX	41	ASN
52	R6	29	ASN
2	XB	16	HIS
29	YF	40	GLN
31	YH	74	ASN
42	YW	111	HIS
44	YY	6	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1498/1508 (99%)	252 (16%)	34 (2%)
1	XA	1499/1508 (99%)	272 (18%)	37 (2%)
22	QV	76/77 (98%)	17 (22%)	3 (3%)
22	QW	75/77 (97%)	31 (41%)	2 (2%)
22	XV	76/77 (98%)	18 (23%)	3 (3%)
22	XW	75/77 (97%)	32 (42%)	2 (2%)
23	QX	7/25 (28%)	0	0
23	XX	9/25 (36%)	3 (33%)	0
24	QY	16/17 (94%)	2 (12%)	0
24	XY	16/17 (94%)	2 (12%)	0
25	RA	2879/2915 (98%)	599 (20%)	47 (1%)
25	YA	2880/2915 (98%)	570 (19%)	48 (1%)
26	RB	119/122 (97%)	17 (14%)	1 (0%)
26	YB	119/122 (97%)	19 (15%)	1 (0%)
All	All	9344/9482 (98%)	1834 (19%)	178 (1%)

All (1834) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	9	G
1	QA	32	A
1	QA	39	G
1	QA	48	C

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Mol	Chain	Res	Type
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	76	G
1	QA	79	G
1	QA	80	G
1	QA	101	A
1	QA	108	G
1	QA	116	A
1	QA	120	A
1	QA	121	C
1	QA	129(A)	G
1	QA	144	G
1	QA	146	G
1	QA	147	G
1	QA	163	C
1	QA	169	C
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	190	G
1	QA	195	A
1	QA	197	A
1	QA	209	U
1	QA	210	U
1	QA	216	G
1	QA	220	G
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	250	A
1	QA	251	G
1	QA	267	C
1	QA	270	A
1	QA	281	G
1	QA	289	G
1	QA	306	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G

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Mol	Chain	Res	Type
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	390	C
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	428	G
1	QA	429	U
1	QA	448	A
1	QA	451	A
1	QA	466	C
1	QA	467	G
1	QA	482	A
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	518	C
1	QA	521	G
1	QA	527	G
1	QA	532	A
1	QA	533	A
1	QA	534	U

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Mol	Chain	Res	Type
1	QA	545	C
1	QA	547	A
1	QA	559	A
1	QA	562	C
1	QA	564	C
1	QA	568	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	596	C
1	QA	618	C
1	QA	630	G
1	QA	631	G
1	QA	633	G
1	QA	653	A
1	QA	665	A
1	QA	666	G
1	QA	686	U
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	723	U
1	QA	731	G
1	QA	748	C
1	QA	754	C
1	QA	755	G
1	QA	777	A
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	802	A
1	QA	813	U
1	QA	817	C
1	QA	819	A
1	QA	821	G
1	QA	828	A
1	QA	841	U
1	QA	842	C
1	QA	843	U

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Mol	Chain	Res	Type
1	QA	848	C
1	QA	859	A
1	QA	871	U
1	QA	872	A
1	QA	902	G
1	QA	914	A
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	974	A
1	QA	975	A
1	QA	976	G
1	QA	977	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	1001	G
1	QA	1004	A
1	QA	1009	G
1	QA	1024	G
1	QA	1025	U
1	QA	1028	C
1	QA	1029	G
1	QA	1031	G
1	QA	1032(A)	G
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1081	G
1	QA	1094	G
1	QA	1095	U
1	QA	1100	C
1	QA	1101	A
1	QA	1108	G

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Mol	Chain	Res	Type
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1171	G
1	QA	1181	G
1	QA	1183	A
1	QA	1184	G
1	QA	1196	U
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1212	U
1	QA	1213	A
1	QA	1224	G
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1260	C
1	QA	1270	C
1	QA	1280	A
1	QA	1281	U
1	QA	1286	A
1	QA	1287	A
1	QA	1290	G
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G

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Mol	Chain	Res	Type
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1320	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1347	G
1	QA	1348	U
1	QA	1362(A)	C
1	QA	1397	C
1	QA	1398	A
1	QA	1406	U
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1452	C
1	QA	1453	G
1	QA	1487	G
1	QA	1492	A
1	QA	1494	G
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1506	U
1	QA	1507	A
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	QV	5	G
22	QV	7	G
22	QV	8	U
22	QV	18	U
22	QV	19	G

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Mol	Chain	Res	Type
22	QV	20	G
22	QV	21	U
22	QV	35	C
22	QV	36	A
22	QV	48	U
22	QV	49	C
22	QV	50	G
22	QV	53	G
22	QV	54	G
22	QV	55	U
22	QV	60	A
22	QV	76	C
22	QW	8	U
22	QW	9	G
22	QW	13	C
22	QW	14	A
22	QW	18	U
22	QW	19	G
22	QW	20	G
22	QW	21	U
22	QW	27	G
22	QW	32	G
22	QW	33	C
22	QW	34	U
22	QW	35	C
22	QW	36	A
22	QW	38	A
22	QW	39	A
22	QW	43	G
22	QW	46	G
22	QW	47	G
22	QW	48	U
22	QW	49	C
22	QW	50	G
22	QW	56	U
22	QW	57	C
22	QW	58	A
22	QW	59	A
22	QW	60	A
22	QW	61	U
22	QW	62	C
22	QW	74	A

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Mol	Chain	Res	Type
22	QW	75	C
24	QY	29	G
24	QY	30	G
25	RA	34	C
25	RA	35	G
25	RA	46	C
25	RA	51	G
25	RA	55	G
25	RA	61	G
25	RA	63	U
25	RA	72	U
25	RA	74	A
25	RA	75	G
25	RA	82	G
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	118	A
25	RA	120	U
25	RA	131	G
25	RA	138	G
25	RA	177	G
25	RA	181	A
25	RA	196	A
25	RA	199	A
25	RA	204	A
25	RA	205	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G
25	RA	242	G
25	RA	243	U
25	RA	248	G
25	RA	252	G
25	RA	265	A
25	RA	266	G

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Mol	Chain	Res	Type
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(N)	G
25	RA	270(P)	C
25	RA	270(Y)	G
25	RA	271(A)	C
25	RA	271(C)	U
25	RA	275	G
25	RA	276	A
25	RA	277	C
25	RA	299	A
25	RA	311	A
25	RA	323	G
25	RA	324	A
25	RA	329	G
25	RA	330	A
25	RA	342	G
25	RA	346	A
25	RA	352	G
25	RA	364	C
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	386	G
25	RA	405	U
25	RA	407	G
25	RA	411	G
25	RA	412	A
25	RA	428	A
25	RA	435	C
25	RA	444	C
25	RA	448	U
25	RA	455	C
25	RA	456	C
25	RA	457	A
25	RA	458	G
25	RA	470	A
25	RA	481	G
25	RA	491	G
25	RA	504	U
25	RA	505	A
25	RA	508	G

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Mol	Chain	Res	Type
25	RA	509	C
25	RA	513	A
25	RA	527	C
25	RA	529	A
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	546	C
25	RA	547	A
25	RA	554	U
25	RA	556	G
25	RA	563	G
25	RA	571	A
25	RA	573	G
25	RA	575	A
25	RA	588	U
25	RA	603	A
25	RA	607	U
25	RA	614	U
25	RA	615	G
25	RA	617	G
25	RA	621	A
25	RA	622	G
25	RA	627	A
25	RA	631	A
25	RA	637	A
25	RA	638	G
25	RA	645	C
25	RA	646	A
25	RA	647	G
25	RA	651	G
25	RA	652	C
25	RA	654	A
25	RA	654(A)	G
25	RA	654(B)	C
25	RA	658	C
25	RA	669	G
25	RA	686	G
25	RA	702	G
25	RA	708	C

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Mol	Chain	Res	Type
25	RA	722	A
25	RA	730	C
25	RA	748	G
25	RA	753	C
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	790	C
25	RA	805	G
25	RA	812	C
25	RA	819	A
25	RA	827	U
25	RA	828	U
25	RA	830	G
25	RA	847	U
25	RA	856	C
25	RA	857	C
25	RA	859	G
25	RA	860	U
25	RA	869	G
25	RA	872	A
25	RA	880	G
25	RA	882	G
25	RA	884	C
25	RA	885	C
25	RA	886	C
25	RA	888	C
25	RA	889	C
25	RA	893	C
25	RA	896	A
25	RA	897	C
25	RA	900	A
25	RA	901	A
25	RA	904	C
25	RA	907	U
25	RA	910	A
25	RA	917	A
25	RA	930	U
25	RA	932	G
25	RA	938	G
25	RA	941	A

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Mol	Chain	Res	Type
25	RA	945	A
25	RA	946	G
25	RA	953	A
25	RA	957	A
25	RA	959	A
25	RA	961	C
25	RA	973	A
25	RA	974	G
25	RA	974(A)	C
25	RA	975	G
25	RA	980	A
25	RA	983	A
25	RA	996	A
25	RA	1003	G
25	RA	1012	U
25	RA	1013	C
25	RA	1017	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1032	A
25	RA	1033	U
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1050	A
25	RA	1053	C
25	RA	1054	A
25	RA	1055	G
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1070	A
25	RA	1071	G
25	RA	1076	C
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C

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Mol	Chain	Res	Type
25	RA	1081	U
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1087	G
25	RA	1088	A
25	RA	1090	U
25	RA	1091	G
25	RA	1093	G
25	RA	1095	A
25	RA	1096	A
25	RA	1097	U
25	RA	1104	C
25	RA	1105	U
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1122	G
25	RA	1124	C
25	RA	1129	A
25	RA	1130	U
25	RA	1135	C
25	RA	1136	G
25	RA	1139	G
25	RA	1140	C
25	RA	1141	U
25	RA	1142(A)	A
25	RA	1151	G
25	RA	1169	G
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1178	C
25	RA	1179	C
25	RA	1183	G
25	RA	1195	G
25	RA	1204	A
25	RA	1205	U
25	RA	1206	G

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Mol	Chain	Res	Type
25	RA	1210	A
25	RA	1211	U
25	RA	1212	G
25	RA	1220	A
25	RA	1238	G
25	RA	1247	A
25	RA	1248	G
25	RA	1253	A
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1273	U
25	RA	1286	A
25	RA	1288	U
25	RA	1300	U
25	RA	1301	A
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1321	A
25	RA	1329	U
25	RA	1330	C
25	RA	1341	U
25	RA	1349	A
25	RA	1352	U
25	RA	1365	A
25	RA	1368	G
25	RA	1378	A
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G
25	RA	1392	A
25	RA	1395	A
25	RA	1407	C
25	RA	1408	C
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G

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Mol	Chain	Res	Type
25	RA	1428	C
25	RA	1434	A
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1482	U
25	RA	1483	G
25	RA	1490	A
25	RA	1493	C
25	RA	1494	A
25	RA	1497	U
25	RA	1503	U
25	RA	1506	C
25	RA	1507	A
25	RA	1508	A
25	RA	1510	A
25	RA	1511	A
25	RA	1513	C
25	RA	1514	U
25	RA	1517	G
25	RA	1519	G
25	RA	1522	G
25	RA	1528	A
25	RA	1534	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1538	G
25	RA	1543	A
25	RA	1545	A
25	RA	1558	A
25	RA	1559	G
25	RA	1560	G
25	RA	1566	A
25	RA	1569	A
25	RA	1578	U

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Mol	Chain	Res	Type
25	RA	1579	A
25	RA	1581	G
25	RA	1585	C
25	RA	1586	A
25	RA	1599	C
25	RA	1608	A
25	RA	1610	A
25	RA	1616	A
25	RA	1617	C
25	RA	1618	A
25	RA	1640	C
25	RA	1648	C
25	RA	1651	G
25	RA	1654	A
25	RA	1665	A
25	RA	1667	G
25	RA	1668	A
25	RA	1674	G
25	RA	1675	C
25	RA	1678	G
25	RA	1695	G
25	RA	1725	G
25	RA	1728	G
25	RA	1729	A
25	RA	1730	U
25	RA	1731	G
25	RA	1732	A
25	RA	1733	G
25	RA	1742	C
25	RA	1743	G
25	RA	1756	G
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G
25	RA	1773	A
25	RA	1779	U
25	RA	1780	A
25	RA	1781	C
25	RA	1782	C
25	RA	1787	A
25	RA	1791	A
25	RA	1799	G

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Mol	Chain	Res	Type
25	RA	1800	C
25	RA	1801	G
25	RA	1816	G
25	RA	1820	U
25	RA	1829	A
25	RA	1835	G
25	RA	1847	A
25	RA	1848	A
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1882	C
25	RA	1888	G
25	RA	1889	A
25	RA	1906	G
25	RA	1927	A
25	RA	1929	G
25	RA	1930	G
25	RA	1931	U
25	RA	1936	A
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
25	RA	1967	C
25	RA	1969	A
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1982	C
25	RA	1992	G
25	RA	1993	U
25	RA	1996	C
25	RA	2013	A
25	RA	2020	A
25	RA	2021	C
25	RA	2023	G
25	RA	2031	A

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Mol	Chain	Res	Type
25	RA	2032	G
25	RA	2033	A
25	RA	2043	C
25	RA	2052	G
25	RA	2055	C
25	RA	2056	G
25	RA	2059	A
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2069	G
25	RA	2093	G
25	RA	2111	C
25	RA	2113	U
25	RA	2114	A
25	RA	2115	G
25	RA	2116	G
25	RA	2117	A
25	RA	2119	A
25	RA	2123	G
25	RA	2126	A
25	RA	2127	G
25	RA	2128	C
25	RA	2131	G
25	RA	2132	U
25	RA	2135	A
25	RA	2136	C
25	RA	2146	C
25	RA	2147	G
25	RA	2148	G
25	RA	2157	G
25	RA	2158	A
25	RA	2161	C
25	RA	2166	G
25	RA	2168	G
25	RA	2169	A
25	RA	2173	A
25	RA	2176	A
25	RA	2189	U
25	RA	2190	G
25	RA	2198	A
25	RA	2199	A

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Mol	Chain	Res	Type
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2213	U
25	RA	2215	G
25	RA	2225	A
25	RA	2238	G
25	RA	2239	G
25	RA	2243	U
25	RA	2266	A
25	RA	2275	C
25	RA	2280	G
25	RA	2283	C
25	RA	2287	A
25	RA	2288	A
25	RA	2307	G
25	RA	2308	G
25	RA	2312	U
25	RA	2319	G
25	RA	2320	A
25	RA	2325	G
25	RA	2335	A
25	RA	2342	C
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2354	G
25	RA	2358	G
25	RA	2383	G
25	RA	2385	C
25	RA	2392	A
25	RA	2394	C
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2429	G
25	RA	2430	A
25	RA	2434	A

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Mol	Chain	Res	Type
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2447	G
25	RA	2448	A
25	RA	2465	C
25	RA	2466	C
25	RA	2467	C
25	RA	2468	G
25	RA	2469	A
25	RA	2470	G
25	RA	2474	C
25	RA	2475	C
25	RA	2476	A
25	RA	2478	A
25	RA	2479	G
25	RA	2482	G
25	RA	2494	G
25	RA	2502	G
25	RA	2505	G
25	RA	2518	A
25	RA	2519	U
25	RA	2527	C
25	RA	2529	G
25	RA	2542	A
25	RA	2543	G
25	RA	2554	U
25	RA	2564	A
25	RA	2567	G
25	RA	2572	A
25	RA	2585	U
25	RA	2602	A
25	RA	2609	U
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2615	U
25	RA	2621	A
25	RA	2623	G
25	RA	2629	A
25	RA	2641	G

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Mol	Chain	Res	Type
25	RA	2642	G
25	RA	2655	G
25	RA	2665	A
25	RA	2673	G
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2702	U
25	RA	2707	G
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2726	U
25	RA	2732	G
25	RA	2733	A
25	RA	2739	U
25	RA	2743	C
25	RA	2744	G
25	RA	2748	A
25	RA	2752	C
25	RA	2753	A
25	RA	2754	U
25	RA	2756	U
25	RA	2757	A
25	RA	2758	A
25	RA	2761	G
25	RA	2764	A
25	RA	2765	A
25	RA	2766	G
25	RA	2771	C
25	RA	2777	G
25	RA	2778	A
25	RA	2779	U
25	RA	2780	G
25	RA	2789	C
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2818	G
25	RA	2820	A

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Mol	Chain	Res	Type
25	RA	2821	A
25	RA	2832	U
25	RA	2833	G
25	RA	2834	G
25	RA	2835	A
25	RA	2847	U
25	RA	2849	U
25	RA	2872	G
25	RA	2873	A
25	RA	2880	C
25	RA	2886	G
25	RA	2891	G
25	RA	2892	A
25	RA	2894	G
26	RB	9	G
26	RB	13	A
26	RB	15	A
26	RB	16	G
26	RB	22	U
26	RB	25	A
26	RB	32	C
26	RB	41	U
26	RB	42	C
26	RB	45	A
26	RB	56	G
26	RB	66	A
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	82	G
26	RB	109	G
1	XA	6	G
1	XA	9	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	61	G
1	XA	65	U
1	XA	66	G

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Mol	Chain	Res	Type
1	XA	76	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	116	A
1	XA	121	C
1	XA	122	G
1	XA	129(A)	G
1	XA	130	A
1	XA	144	G
1	XA	147	G
1	XA	151	A
1	XA	163	C
1	XA	169	C
1	XA	172	A
1	XA	174	C
1	XA	190	G
1	XA	191(A)	G
1	XA	195	A
1	XA	197	A
1	XA	209	U
1	XA	222	U
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	262	A
1	XA	267	C
1	XA	270	A
1	XA	281	G
1	XA	289	G
1	XA	314	C
1	XA	317	G
1	XA	321	A
1	XA	328	C
1	XA	329	A

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Mol	Chain	Res	Type
1	XA	332	G
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	388	G
1	XA	389	A
1	XA	390	C
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	421	U
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	440	A
1	XA	442	C
1	XA	452	A
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	496	A
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C

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Mol	Chain	Res	Type
1	XA	521	G
1	XA	524	G
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	564	C
1	XA	568	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	618	C
1	XA	630	G
1	XA	631	G
1	XA	632	A
1	XA	633	G
1	XA	653	A
1	XA	665	A
1	XA	671	G
1	XA	688	G
1	XA	702	A
1	XA	704	A
1	XA	721	G
1	XA	723	U
1	XA	731	G
1	XA	749	C
1	XA	754	C
1	XA	755	G
1	XA	774	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	817	C

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Mol	Chain	Res	Type
1	XA	818	G
1	XA	821	G
1	XA	828	A
1	XA	841	U
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	902	G
1	XA	914	A
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	940	C
1	XA	942	G
1	XA	958	A
1	XA	960	U
1	XA	968	A
1	XA	969	A
1	XA	971	G
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	980	C
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	1004	A
1	XA	1006	C
1	XA	1009	G
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1039	C
1	XA	1040	U
1	XA	1053	G

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Mol	Chain	Res	Type
1	XA	1054	C
1	XA	1055	A
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1081	G
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1152	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1196	U
1	XA	1201	A
1	XA	1212	U
1	XA	1213	A
1	XA	1225	A
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U

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Mol	Chain	Res	Type
1	XA	1258	G
1	XA	1263	C
1	XA	1270	C
1	XA	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1298	C
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1318	A
1	XA	1319	A
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1331	G
1	XA	1336	C
1	XA	1337	G
1	XA	1347	G
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1378	C
1	XA	1397	C
1	XA	1398	A
1	XA	1419	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A

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Mol	Chain	Res	Type
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1506	U
1	XA	1507	A
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	5	G
22	XV	7	G
22	XV	8	U
22	XV	18	U
22	XV	20	G
22	XV	21	U
22	XV	23	G
22	XV	35	C
22	XV	36	A
22	XV	48	U
22	XV	49	C
22	XV	50	G
22	XV	51	U
22	XV	53	G
22	XV	54	G
22	XV	55	U
22	XV	66	C
22	XV	76	C
22	XW	8	U
22	XW	9	G
22	XW	10	G
22	XW	13	C
22	XW	14	A
22	XW	18	U
22	XW	19	G
22	XW	20	G
22	XW	21	U
22	XW	27	G
22	XW	32	G
22	XW	33	C
22	XW	34	U
22	XW	35	C
22	XW	36	A

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Mol	Chain	Res	Type
22	XW	38	A
22	XW	39	A
22	XW	43	G
22	XW	46	G
22	XW	47	G
22	XW	48	U
22	XW	49	C
22	XW	50	G
22	XW	56	U
22	XW	57	C
22	XW	58	A
22	XW	59	A
22	XW	60	A
22	XW	61	U
22	XW	62	C
22	XW	74	A
22	XW	75	C
23	XX	14	A
23	XX	15	A
23	XX	22	A
24	XY	29	G
24	XY	30	G
25	YA	13	A
25	YA	34	C
25	YA	35	G
25	YA	46	C
25	YA	55	G
25	YA	61	G
25	YA	63	U
25	YA	72	U
25	YA	74	A
25	YA	75	G
25	YA	96	G
25	YA	101	G
25	YA	102	G
25	YA	103	A
25	YA	118	A
25	YA	120	U
25	YA	125	G
25	YA	131	G
25	YA	161	U
25	YA	162	U

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Mol	Chain	Res	Type
25	YA	181	A
25	YA	188	G
25	YA	196	A
25	YA	199	A
25	YA	214	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	223	A
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	233	A
25	YA	242	G
25	YA	243	U
25	YA	248	G
25	YA	252	G
25	YA	265	A
25	YA	266	G
25	YA	270(L)	U
25	YA	270(M)	U
25	YA	270(N)	G
25	YA	270(P)	C
25	YA	271(A)	C
25	YA	271(B)	G
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	275	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	283	A
25	YA	299	A
25	YA	300	A
25	YA	311	A
25	YA	312	G
25	YA	316	C
25	YA	323	G
25	YA	324	A
25	YA	329	G

Continued on next page...

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Mol	Chain	Res	Type
25	YA	330	A
25	YA	332	A
25	YA	342	G
25	YA	343	C
25	YA	352	G
25	YA	363	G
25	YA	363(E)	U
25	YA	364	C
25	YA	371	A
25	YA	372	G
25	YA	373	U
25	YA	380	U
25	YA	386	G
25	YA	387	U
25	YA	405	U
25	YA	406	G
25	YA	407	G
25	YA	411	G
25	YA	412	A
25	YA	421	U
25	YA	428	A
25	YA	444	C
25	YA	448	U
25	YA	451	C
25	YA	456	C
25	YA	457	A
25	YA	458	G
25	YA	470	A
25	YA	481	G
25	YA	496	G
25	YA	501	A
25	YA	504	U
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	518	G
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	537	C
25	YA	539	G
25	YA	540	G

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Mol	Chain	Res	Type
25	YA	546	C
25	YA	547	A
25	YA	563	G
25	YA	573	G
25	YA	575	A
25	YA	588	U
25	YA	603	A
25	YA	607	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	622	G
25	YA	627	A
25	YA	634	C
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	651	G
25	YA	654	A
25	YA	654(A)	G
25	YA	668	G
25	YA	686	G
25	YA	717	G
25	YA	722	A
25	YA	730	C
25	YA	747	U
25	YA	753	C
25	YA	764	A
25	YA	765	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	790	C
25	YA	792	G
25	YA	805	G
25	YA	812	C
25	YA	819	A
25	YA	827	U
25	YA	828	U
25	YA	831	G
25	YA	847	U

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Mol	Chain	Res	Type
25	YA	856	C
25	YA	857	C
25	YA	860	U
25	YA	881	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	888	C
25	YA	889	C
25	YA	896	A
25	YA	899	A
25	YA	900	A
25	YA	906	G
25	YA	907	U
25	YA	910	A
25	YA	914	C
25	YA	915	C
25	YA	917	A
25	YA	930	U
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	953	A
25	YA	959	A
25	YA	961	C
25	YA	965	C
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	980	A
25	YA	983	A
25	YA	996	A
25	YA	1003	G
25	YA	1009	A
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1015	G
25	YA	1017	G
25	YA	1023	U
25	YA	1025	G

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Mol	Chain	Res	Type
25	YA	1026	U
25	YA	1027	A
25	YA	1033	U
25	YA	1045	A
25	YA	1046	A
25	YA	1050	A
25	YA	1054	A
25	YA	1059	G
25	YA	1060	U
25	YA	1061	U
25	YA	1065	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1071	G
25	YA	1073	A
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1082	U
25	YA	1083	U
25	YA	1084	A
25	YA	1085	A
25	YA	1086	A
25	YA	1088	A
25	YA	1093	G
25	YA	1095	A
25	YA	1096	A
25	YA	1097	U
25	YA	1103	A
25	YA	1104	C
25	YA	1110	G
25	YA	1111	A
25	YA	1129	A
25	YA	1130	U
25	YA	1135	C
25	YA	1136	G
25	YA	1139	G
25	YA	1142	U
25	YA	1142(A)	A
25	YA	1151	G
25	YA	1168	G

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Mol	Chain	Res	Type
25	YA	1170	G
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1179	C
25	YA	1195	G
25	YA	1204	A
25	YA	1205	U
25	YA	1206	G
25	YA	1210	A
25	YA	1211	U
25	YA	1220	A
25	YA	1236	G
25	YA	1238	G
25	YA	1250	G
25	YA	1252	G
25	YA	1253	A
25	YA	1256	G
25	YA	1265	A
25	YA	1272	A
25	YA	1273	U
25	YA	1300	U
25	YA	1301	A
25	YA	1319	G
25	YA	1329	U
25	YA	1349	A
25	YA	1352	U
25	YA	1365	A
25	YA	1368	G
25	YA	1378	A
25	YA	1379	A
25	YA	1380	G
25	YA	1384	A
25	YA	1385	G
25	YA	1388	G
25	YA	1391	U
25	YA	1395	A
25	YA	1407	C
25	YA	1411	C
25	YA	1416	G
25	YA	1419	A

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Mol	Chain	Res	Type
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1444(A)	A
25	YA	1445	C
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1455	G
25	YA	1458	C
25	YA	1460	A
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1474	C
25	YA	1480	G
25	YA	1482	U
25	YA	1483	G
25	YA	1490	A
25	YA	1493	C
25	YA	1496	A
25	YA	1497	U
25	YA	1507	A
25	YA	1508	A
25	YA	1510	A
25	YA	1511	A
25	YA	1514	U
25	YA	1522	G
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1540	G
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1547	C
25	YA	1558	A
25	YA	1559	G
25	YA	1560	G
25	YA	1566	A
25	YA	1569	A
25	YA	1578	U

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Mol	Chain	Res	Type
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1591	G
25	YA	1592	C
25	YA	1598	C
25	YA	1608	A
25	YA	1609	A
25	YA	1616	A
25	YA	1617	C
25	YA	1639	U
25	YA	1640	C
25	YA	1646	C
25	YA	1648	C
25	YA	1654	A
25	YA	1660	C
25	YA	1674	G
25	YA	1688	U
25	YA	1695	G
25	YA	1698	A
25	YA	1699	G
25	YA	1700	A
25	YA	1725	G
25	YA	1728	G
25	YA	1729	A
25	YA	1731	G
25	YA	1742	C
25	YA	1743	G
25	YA	1749	A
25	YA	1754	C
25	YA	1757	U
25	YA	1763	G
25	YA	1764	G
25	YA	1773	A
25	YA	1780	A
25	YA	1781	C
25	YA	1782	C
25	YA	1787	A
25	YA	1791	A
25	YA	1799	G
25	YA	1800	C

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Mol	Chain	Res	Type
25	YA	1801	G
25	YA	1816	G
25	YA	1820	U
25	YA	1829	A
25	YA	1835	G
25	YA	1847	A
25	YA	1848	A
25	YA	1858	G
25	YA	1864	U
25	YA	1869	G
25	YA	1870	C
25	YA	1872	A
25	YA	1878	G
25	YA	1882	C
25	YA	1884	A
25	YA	1888	G
25	YA	1889	A
25	YA	1903	G
25	YA	1906	G
25	YA	1919	A
25	YA	1929	G
25	YA	1930	G
25	YA	1931	U
25	YA	1936	A
25	YA	1939	U
25	YA	1955	U
25	YA	1960	A
25	YA	1963	U
25	YA	1965	C
25	YA	1967	C
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1982	C
25	YA	1992	G
25	YA	1993	U
25	YA	2004	G
25	YA	2020	A
25	YA	2021	C
25	YA	2023	G
25	YA	2031	A

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Mol	Chain	Res	Type
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2069	G
25	YA	2070	G
25	YA	2089	U
25	YA	2092	U
25	YA	2093	G
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G
25	YA	2116	G
25	YA	2119	A
25	YA	2120	G
25	YA	2126	A
25	YA	2127	G
25	YA	2128	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2136	C
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2168	G
25	YA	2169	A
25	YA	2173	A
25	YA	2190	G
25	YA	2192	G
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2213	U
25	YA	2215	G

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Mol	Chain	Res	Type
25	YA	2225	A
25	YA	2238	G
25	YA	2239	G
25	YA	2243	U
25	YA	2266	A
25	YA	2275	C
25	YA	2278	A
25	YA	2280	G
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2307	G
25	YA	2308	G
25	YA	2309	A
25	YA	2311	A
25	YA	2312	U
25	YA	2319	G
25	YA	2320	A
25	YA	2325	G
25	YA	2335	A
25	YA	2342	C
25	YA	2345	G
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2383	G
25	YA	2385	C
25	YA	2392	A
25	YA	2394	C
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2427	C
25	YA	2428	G
25	YA	2429	G
25	YA	2430	A
25	YA	2434	A
25	YA	2435	A
25	YA	2439	A

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Mol	Chain	Res	Type
25	YA	2440	C
25	YA	2441	C
25	YA	2448	A
25	YA	2469	A
25	YA	2470	G
25	YA	2471	C
25	YA	2475	C
25	YA	2476	A
25	YA	2482	G
25	YA	2494	G
25	YA	2502	G
25	YA	2504	U
25	YA	2505	G
25	YA	2518	A
25	YA	2520	C
25	YA	2524	G
25	YA	2527	C
25	YA	2529	G
25	YA	2540	C
25	YA	2542	A
25	YA	2554	U
25	YA	2558	C
25	YA	2567	G
25	YA	2573	C
25	YA	2574	G
25	YA	2578	G
25	YA	2599	G
25	YA	2602	A
25	YA	2609	U
25	YA	2611	U
25	YA	2612	C
25	YA	2629	A
25	YA	2632	A
25	YA	2642	G
25	YA	2646	C
25	YA	2665	A
25	YA	2673	G
25	YA	2682	U
25	YA	2689	U
25	YA	2702	U
25	YA	2707	G
25	YA	2712	U

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Mol	Chain	Res	Type
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2726	U
25	YA	2733	A
25	YA	2741	A
25	YA	2742	C
25	YA	2743	C
25	YA	2744	G
25	YA	2745	C
25	YA	2748	A
25	YA	2751	G
25	YA	2754	U
25	YA	2755	C
25	YA	2756	U
25	YA	2758	A
25	YA	2759	G
25	YA	2761	G
25	YA	2765	A
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2780	G
25	YA	2789	C
25	YA	2790	A
25	YA	2791	C
25	YA	2794	C
25	YA	2797	U
25	YA	2799	A
25	YA	2807	G
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2830	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2867	G
25	YA	2868	A
25	YA	2872	G
25	YA	2873	A
25	YA	2880	C

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Mol	Chain	Res	Type
25	YA	2891	G
25	YA	2892	A
25	YA	2893	G
25	YA	2894	G
26	YB	8	U
26	YB	13	A
26	YB	15	A
26	YB	16	G
26	YB	22	U
26	YB	25	A
26	YB	32	C
26	YB	41	U
26	YB	42	C
26	YB	45	A
26	YB	56	G
26	YB	66	A
26	YB	67	G
26	YB	73	A
26	YB	81	G
26	YB	82	G
26	YB	89	G
26	YB	90	C
26	YB	109	G

All (178) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	64	G
1	QA	115	G
1	QA	119	A
1	QA	181	G
1	QA	243	A
1	QA	250	A
1	QA	266	G
1	QA	328	C
1	QA	410	G
1	QA	412	A
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	509	A
1	QA	533	A

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Mol	Chain	Res	Type
1	QA	687	A
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	913	A
1	QA	992	U
1	QA	1027	C
1	QA	1065	U
1	QA	1200	C
1	QA	1201	A
1	QA	1285	A
1	QA	1297	C
1	QA	1301	U
1	QA	1336	C
1	QA	1346	A
1	QA	1347	G
1	QA	1498	U
1	QA	1528	U
22	QV	20	G
22	QV	35	C
22	QV	53	G
22	QW	8	U
22	QW	59	A
25	RA	99	U
25	RA	102	G
25	RA	221	A
25	RA	229	A
25	RA	242	G
25	RA	271(B)	G
25	RA	345	A
25	RA	372	G
25	RA	404	C
25	RA	503	A
25	RA	512	G
25	RA	587	C
25	RA	637	A
25	RA	752	A
25	RA	846	C
25	RA	856	C
25	RA	974(A)	C
25	RA	1012	U

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Mol	Chain	Res	Type
25	RA	1022	G
25	RA	1026	U
25	RA	1032	A
25	RA	1045	A
25	RA	1078	U
25	RA	1085	A
25	RA	1178	C
25	RA	1204	A
25	RA	1210	A
25	RA	1312	U
25	RA	1427	A
25	RA	1558	A
25	RA	1653	G
25	RA	1694	C
25	RA	1799	G
25	RA	1819	A
25	RA	1930	G
25	RA	1992	G
25	RA	2060	A
25	RA	2126	A
25	RA	2405	G
25	RA	2439	A
25	RA	2481	G
25	RA	2566	A
25	RA	2610	C
25	RA	2689	U
25	RA	2712	U
25	RA	2776	A
25	RA	2832	U
26	RB	66	A
1	XA	5	U
1	XA	60	A
1	XA	64	G
1	XA	78	G
1	XA	89	U
1	XA	115	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	345	C

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Mol	Chain	Res	Type
1	XA	352	C
1	XA	410	G
1	XA	412	A
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	560	U
1	XA	687	A
1	XA	703	G
1	XA	753	A
1	XA	812	C
1	XA	913	A
1	XA	991	U
1	XA	992	U
1	XA	1027	C
1	XA	1065	U
1	XA	1200	C
1	XA	1285	A
1	XA	1297	C
1	XA	1301	U
1	XA	1336	C
1	XA	1446	A
1	XA	1498	U
22	XV	20	G
22	XV	35	C
22	XV	53	G
22	XW	8	U
22	XW	59	A
25	YA	99	U
25	YA	195	A
25	YA	221	A
25	YA	222	A
25	YA	229	A
25	YA	241	A
25	YA	242	G
25	YA	271(B)	G
25	YA	278	A
25	YA	372	G
25	YA	404	C
25	YA	503	A

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Mol	Chain	Res	Type
25	YA	587	C
25	YA	637	A
25	YA	752	A
25	YA	846	C
25	YA	856	C
25	YA	859	G
25	YA	974(A)	C
25	YA	1012	U
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1109	C
25	YA	1178	C
25	YA	1210	A
25	YA	1379	A
25	YA	1427	A
25	YA	1558	A
25	YA	1653	G
25	YA	1694	C
25	YA	1698	A
25	YA	1799	G
25	YA	1819	A
25	YA	1930	G
25	YA	1992	G
25	YA	2126	A
25	YA	2212	A
25	YA	2439	A
25	YA	2566	A
25	YA	2610	C
25	YA	2681	C
25	YA	2712	U
25	YA	2743	C
25	YA	2776	A
25	YA	2867	G
26	YB	66	A

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1301 ligands modelled in this entry, 1299 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
57	SF4	XD	301	4	0,12,12	-	-	-		
57	SF4	QD	301	4	0,12,12	-	-	-		

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
57	SF4	XD	301	4	-	-	0/6/5/5
57	SF4	QD	301	4	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	QD	301	SF4	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS failed to run properly - this section is therefore empty.

6.4 Ligands [i](#)

EDS failed to run properly - this section is therefore empty.

6.5 Other polymers [i](#)

EDS failed to run properly - this section is therefore empty.