



Full wwPDB X-ray Structure Validation Report

Sep 17, 2014 – 08:14 PM EDT

PDB ID : 1VVJ
Title : Crystal Structure of Frameshift Suppressor tRNA SufA6 bound to Codon CCC-G on the Ribosome
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2013-05-24
Resolution : 3.44 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

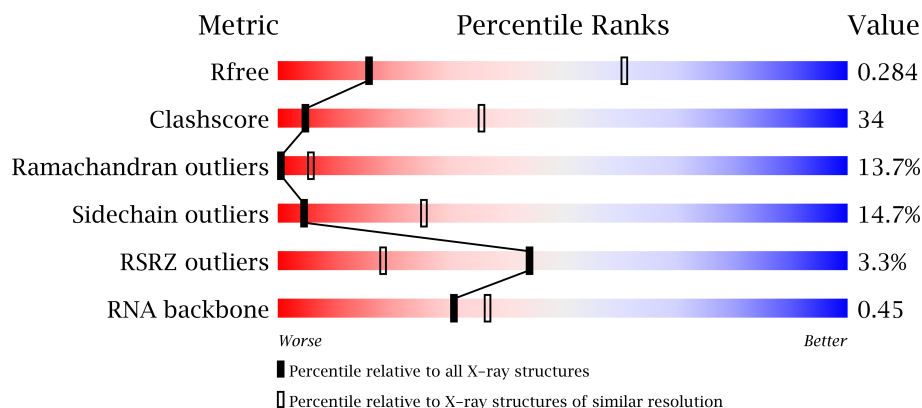
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.16 November 2013
Xtriage (Phenix) : dev-1439
EDS : stable23489
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23489

1 Overall quality at a glance

The reported resolution of this entry is 3.44 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1032 (3.58-3.30)
Clashscore	79885	1296 (3.58-3.30)
Ramachandran outliers	78287	1256 (3.58-3.30)
Sidechain outliers	78261	1256 (3.58-3.30)
RSRZ outliers	66119	1032 (3.58-3.30)
RNA backbone	1838	1004 (4.10-2.76)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	QA	1522	
1	XA	1522	
2	QB	256	
2	XB	256	
3	QC	239	
3	XC	239	
4	QD	209	
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	

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Mol	Chain	Length	Quality of chain
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QL	132	
12	XL	132	
13	QM	126	
13	XM	126	
14	QN	61	
14	XN	61	
15	QO	89	
15	XO	89	
16	QP	88	
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	XV	77	
23	QX	25	
23	XX	25	
24	QY	18	
24	XY	18	
25	RA	2916	
25	YA	2916	
26	RB	122	
26	YB	122	
27	RD	276	

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Mol	Chain	Length	Quality of chain
27	YD	276	
28	RE	206	
28	YE	206	
29	RF	210	
29	YF	210	
30	RG	182	
30	YG	182	
31	RH	180	
31	YH	180	
32	RI	148	
32	YI	148	
33	RN	140	
33	YN	140	
34	RO	122	
34	YO	122	
35	RP	150	
35	YP	150	
36	RQ	141	
36	YQ	141	
37	RR	118	
37	YR	118	
38	RS	112	
38	YS	112	
39	RT	146	
39	YT	146	
40	RU	118	
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	

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Mol	Chain	Length	Quality of chain
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	71	
51	R5	60	
51	Y5	60	
52	R6	54	
52	Y6	54	
53	R7	49	
53	Y7	49	
54	R8	65	
54	Y8	65	
55	Z6	3	
55	Z8	3	

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 291123 atoms, of which 0 are hydrogen and 0 are deuterium.

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
1	QA	1500	Total	C	N	O	P	0	0	0
			32247	14353	5981	10414	1499			
1	XA	1501	Total	C	N	O	P	0	0	0
			32269	14363	5986	10420	1500			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	QB	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
2	XB	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	QH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	XH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	QJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	XJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			
13	XM	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			

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

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

- 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	88	Total	C	N	O	S	0	0	0
			734	459	147	126	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	84	Total	C	N	O	S	0	0	0
			674	430	126	116	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			
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 S21.

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 P-site 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	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			

- Molecule 23 is a RNA chain called A-site ASL SufA6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	8	Total	C	N	O	P	0	0	0
			170	76	31	55	8			
23	XX	8	Total	C	N	O	P	0	0	0
			170	76	31	55	8			

- Molecule 24 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QY	14	Total	C	N	O	P	0	0	0
			303	135	55	99	14			
24	XY	14	Total	C	N	O	P	0	0	0
			303	135	55	99	14			

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	RG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
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	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			
31	YH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	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	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
37	YR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

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

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

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

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

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

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

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			
44	YY	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RZ	172	Total	C	N	O	S	0	0	0
			1378	879	248	248	3			
45	YZ	172	Total	C	N	O	S	0	0	0
			1378	879	248	248	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	R0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			
46	Y0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	R4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			
50	Y4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

- Molecule 51 is a protein called 50S ribosomal protein L33.

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

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			
52	Y6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
53	Y7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 54 is a protein called tRNA acceptor end mimic.

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 RNA chain called RNA (5'-R(*CP*CP*(PPU))-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	Z6	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
55	Z8	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

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

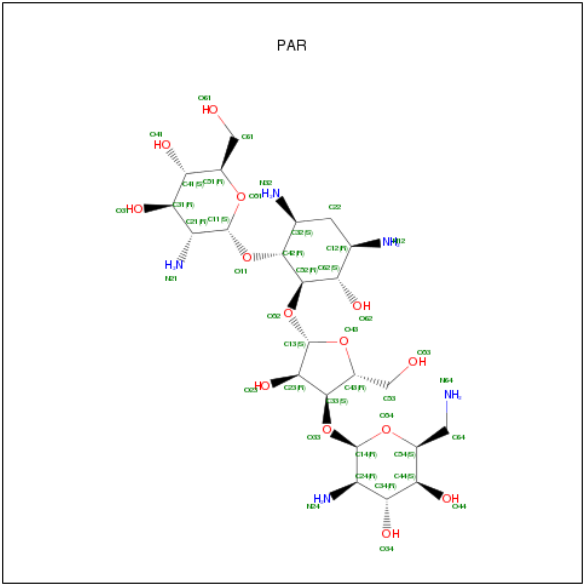
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	RE	2	Total	Mg	0	0
			2	2		
56	YX	1	Total	Mg	0	0
			1	1		
56	XA	63	Total	Mg	0	0
			63	63		
56	QA	60	Total	Mg	0	0
			60	60		
56	Y5	1	Total	Mg	0	0
			1	1		
56	RP	1	Total	Mg	0	0
			1	1		
56	QX	2	Total	Mg	0	0
			2	2		
56	YA	242	Total	Mg	0	0
			242	242		
56	YB	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	QF	1	Total	Mg	0	0
			1	1		
56	QM	1	Total	Mg	0	0
			1	1		
56	R5	1	Total	Mg	0	0
			1	1		
56	RB	2	Total	Mg	0	0
			2	2		
56	RA	212	Total	Mg	0	0
			212	212		
56	XM	2	Total	Mg	0	0
			2	2		
56	QH	1	Total	Mg	0	0
			1	1		
56	XV	2	Total	Mg	0	0
			2	2		
56	RF	1	Total	Mg	0	0
			1	1		
56	QV	2	Total	Mg	0	0
			2	2		
56	YE	2	Total	Mg	0	0
			2	2		

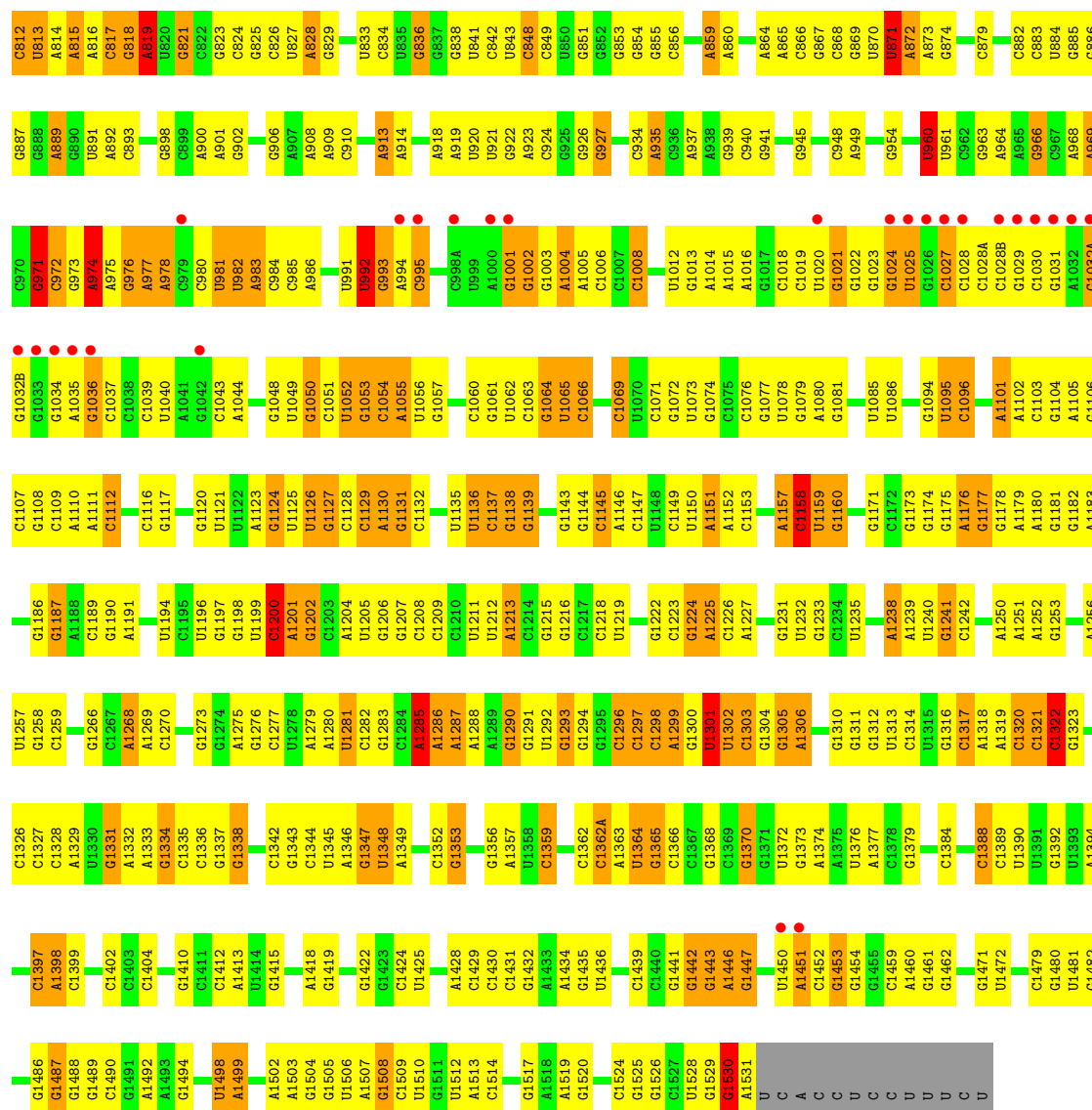
- Molecule 57 is PAROMOMYCIN (three-letter code: PAR) (formula: C₂₃H₄₅N₅O₁₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
57	QA	1	Total	C	N	O	0	0
			42	23	5	14		
57	XA	1	Total	C	N	O	0	0
			42	23	5	14		

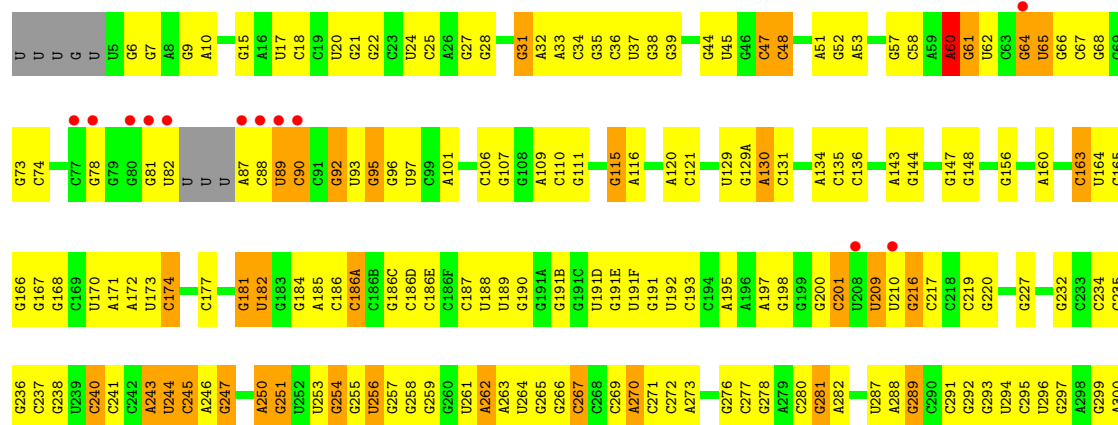
- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

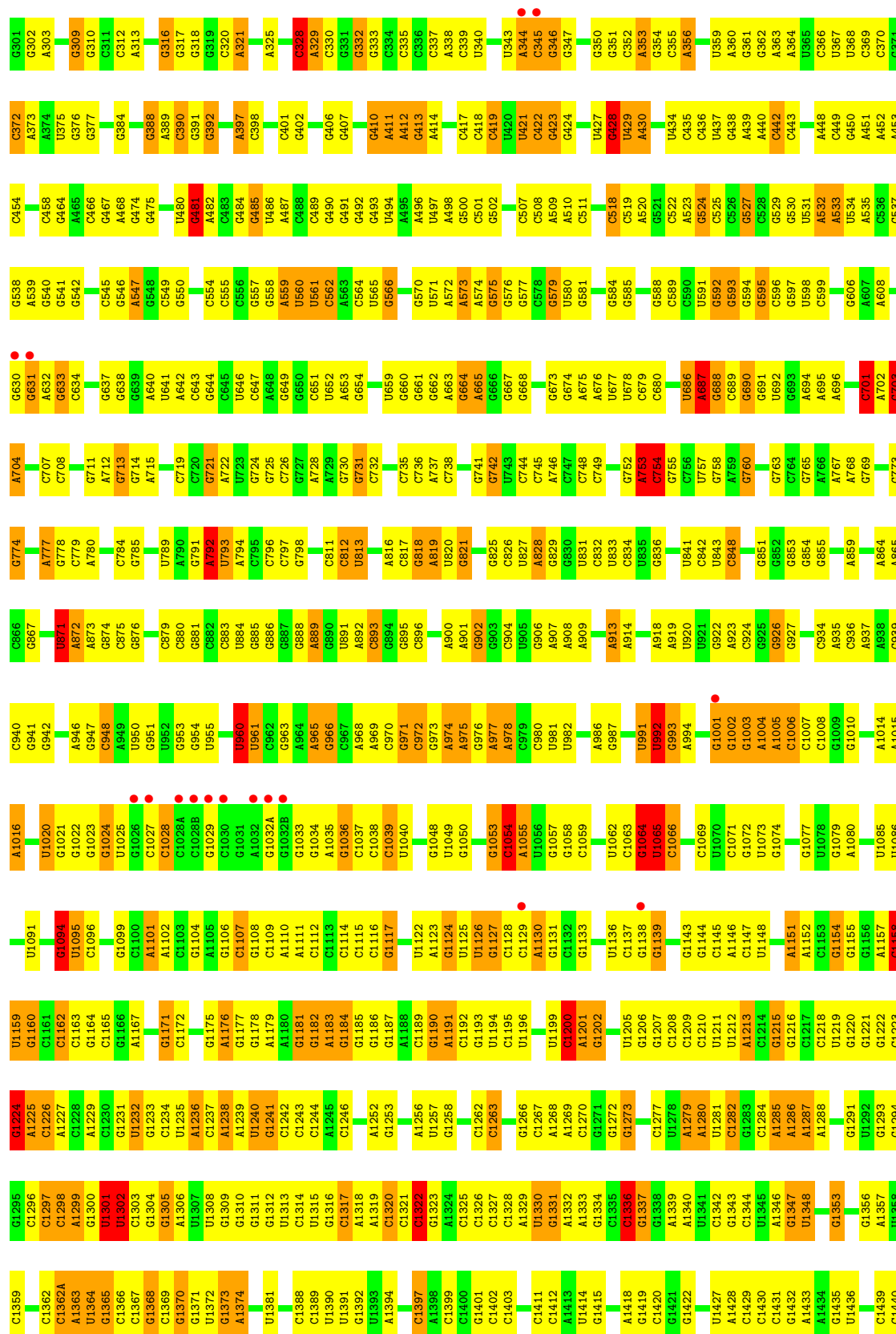
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	XD	1	Total	Zn	0	0
			1	1		
58	QD	1	Total	Zn	0	0
			1	1		
58	QN	1	Total	Zn	0	0
			1	1		
58	XN	1	Total	Zn	0	0
			1	1		

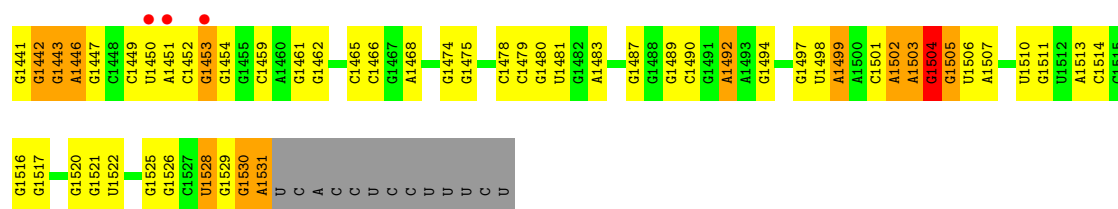


- Molecule 1: 16S rRNA

Chain XA:

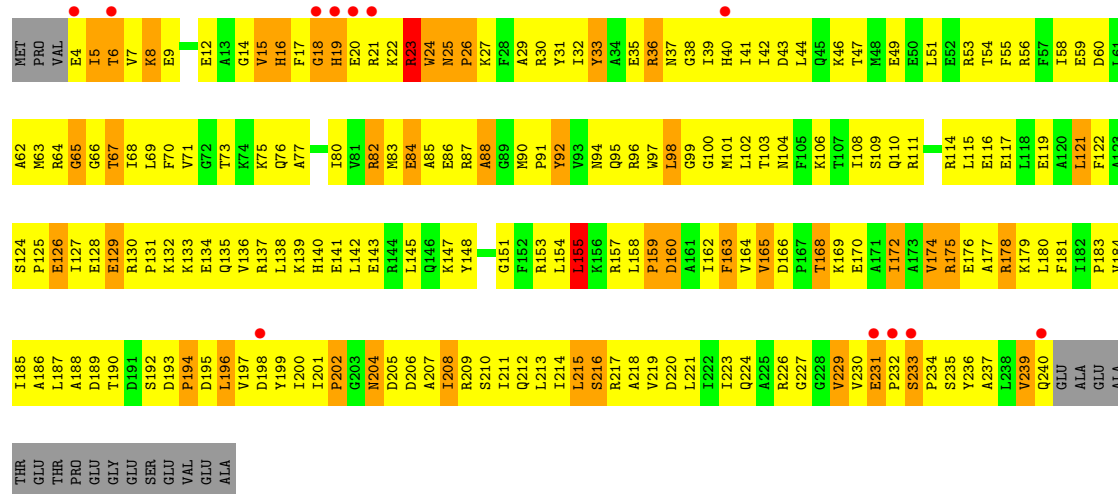






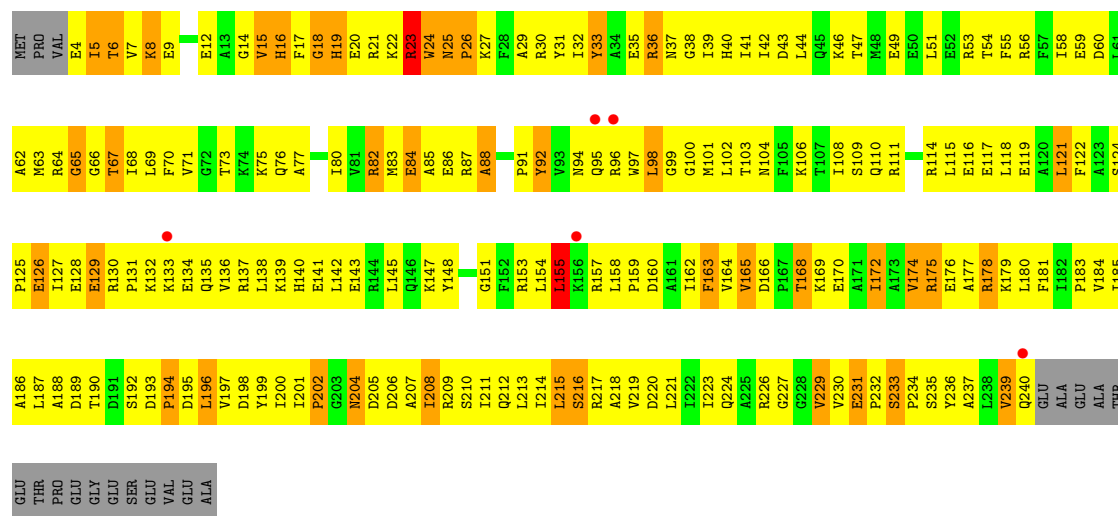
• Molecule 2: 30S ribosomal protein S2

Chain QB:



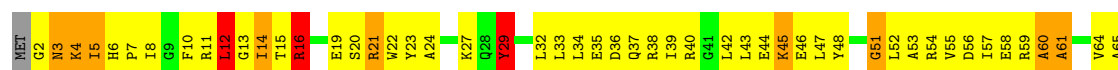
• Molecule 2: 30S ribosomal protein S2

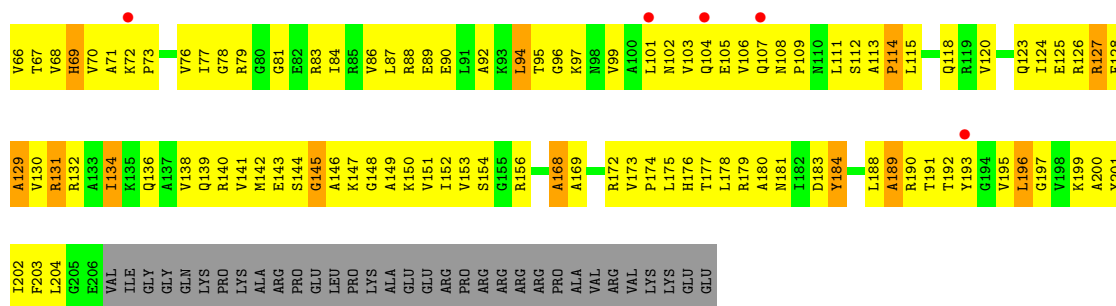
Chain XB:



• Molecule 3: 30S ribosomal protein S3

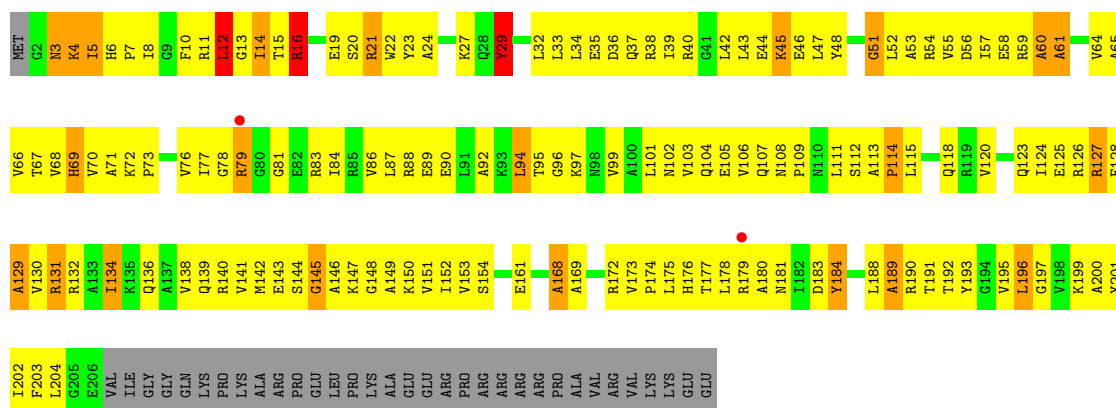
Chain QC:





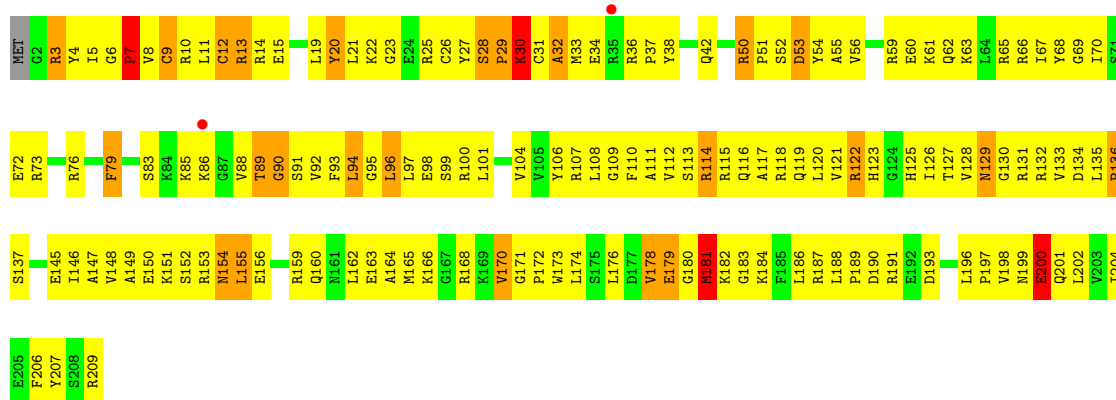
• Molecule 3: 30S ribosomal protein S3

Chain XC:



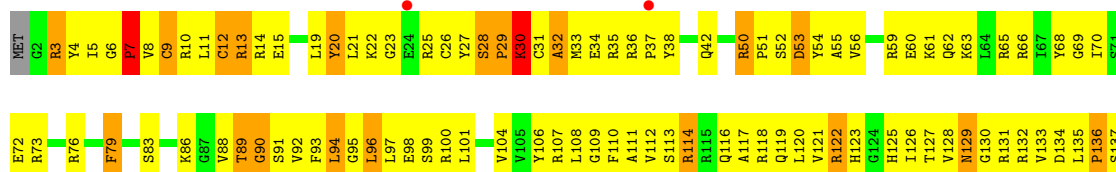
• Molecule 4: 30S ribosomal protein S4

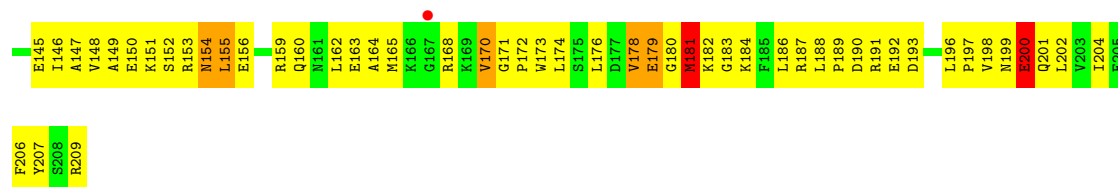
Chain QD:



• Molecule 4: 30S ribosomal protein S4

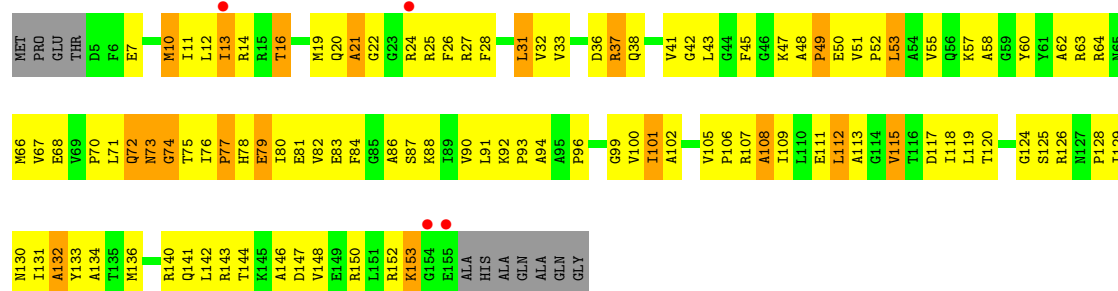
Chain XD:





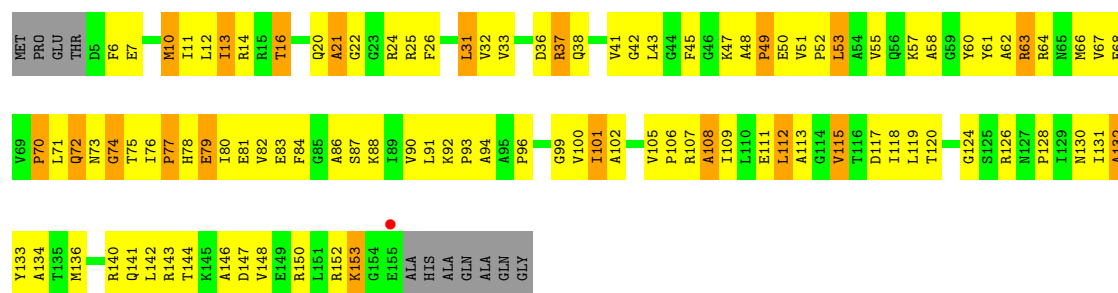
- Molecule 5: 30S ribosomal protein S5

Chain QE:



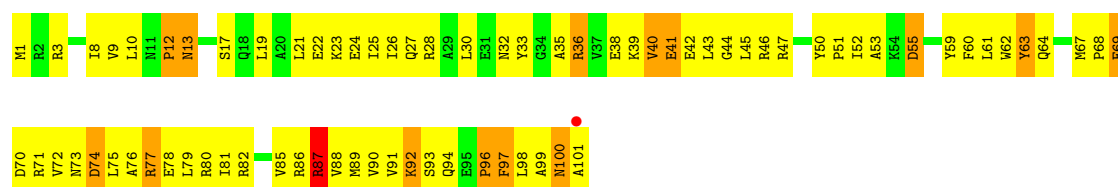
- Molecule 5: 30S ribosomal protein S5

Chain XE:



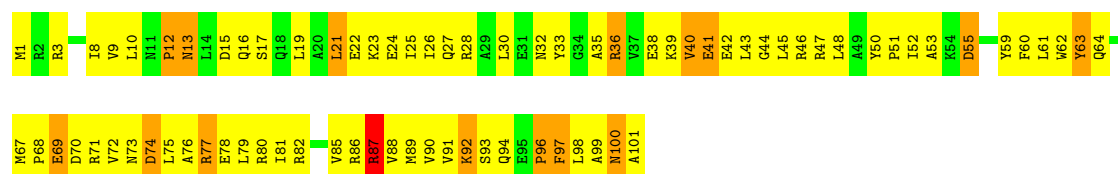
- Molecule 6: 30S ribosomal protein S6

Chain QF:



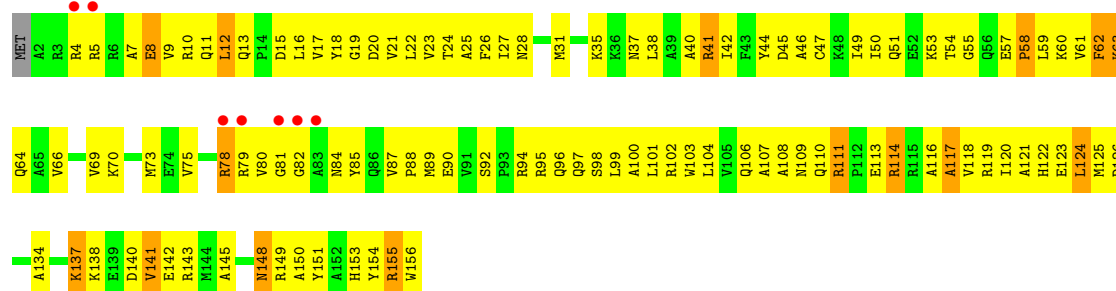
- Molecule 6: 30S ribosomal protein S6

Chain XF:



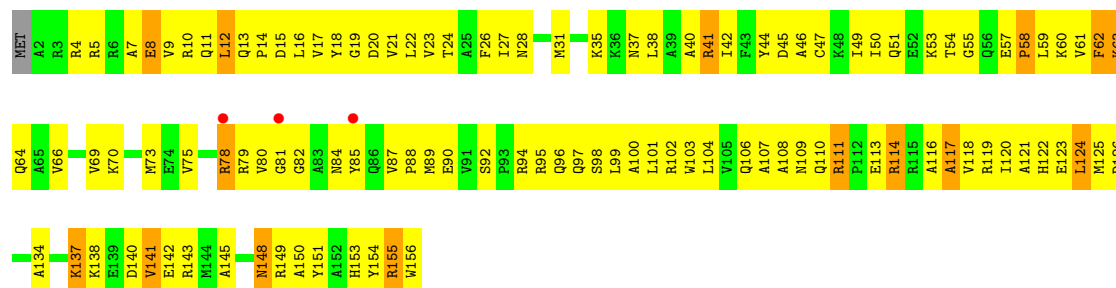
- Molecule 7: 30S ribosomal protein S7

Chain QG:



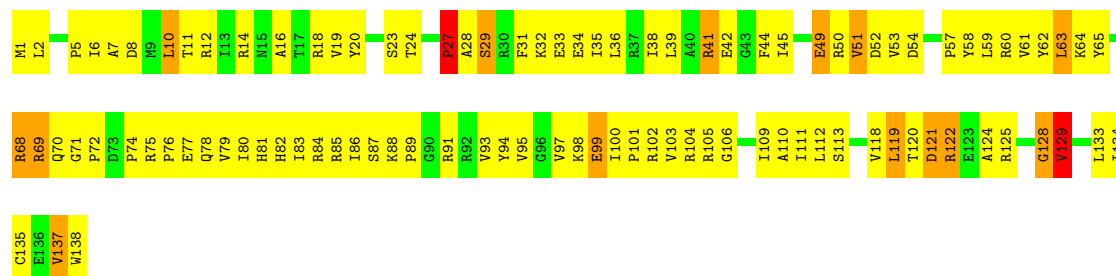
- Molecule 7: 30S ribosomal protein S7

Chain XG:



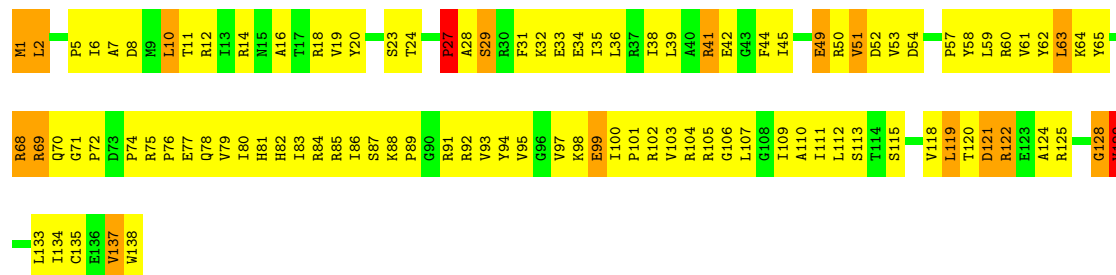
- Molecule 8: 30S ribosomal protein S8

Chain QH:



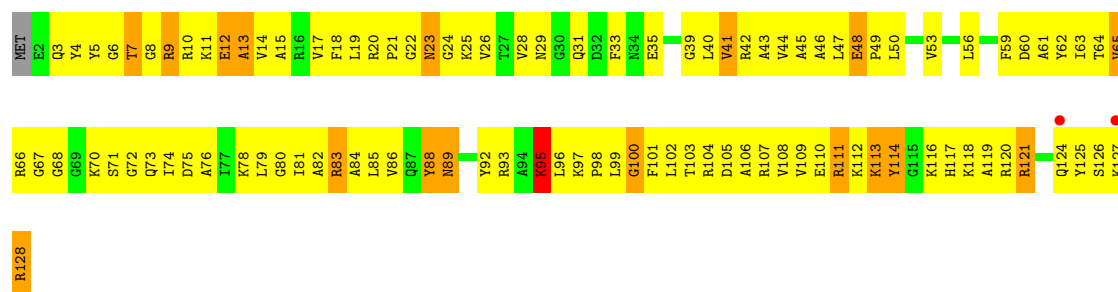
- Molecule 8: 30S ribosomal protein S8

Chain XH:



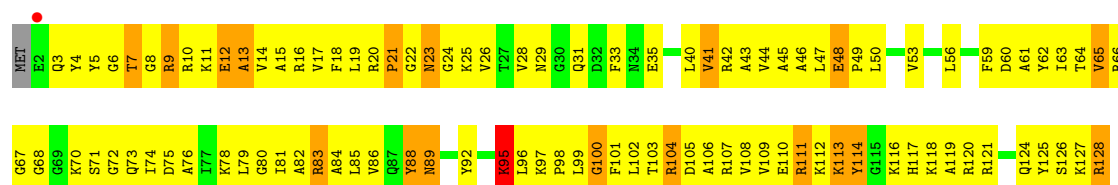
- Molecule 9: 30S ribosomal protein S9

Chain QI:



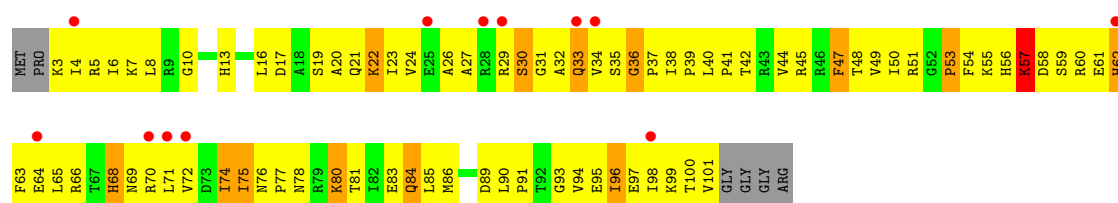
- Molecule 9: 30S ribosomal protein S9

Chain XI:



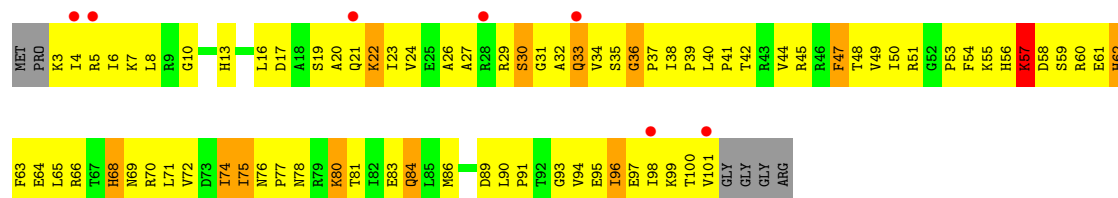
- Molecule 10: 30S ribosomal protein S10

Chain QJ:



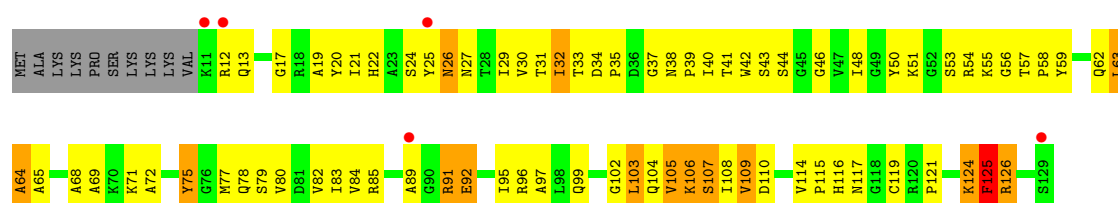
- Molecule 10: 30S ribosomal protein S10

Chain XJ:

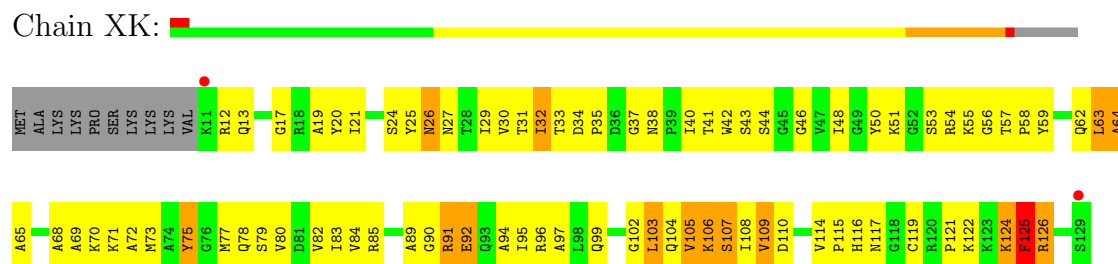


- Molecule 11: 30S ribosomal protein S11

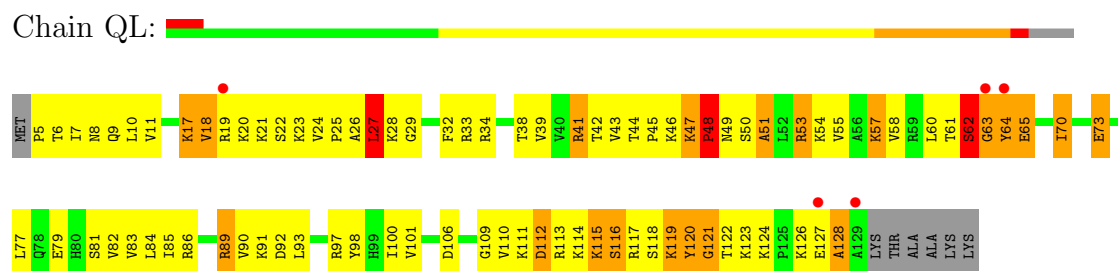
Chain QK:



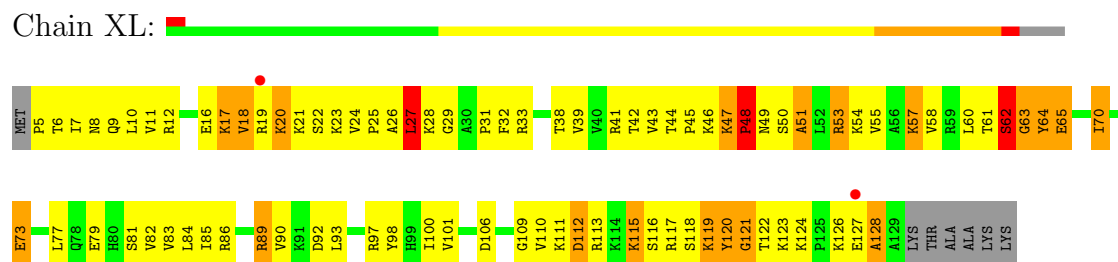
- Molecule 11: 30S ribosomal protein S11



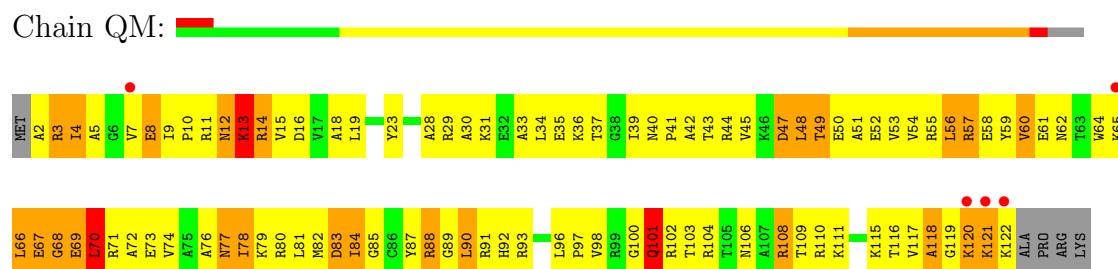
- Molecule 12: 30S ribosomal protein S12



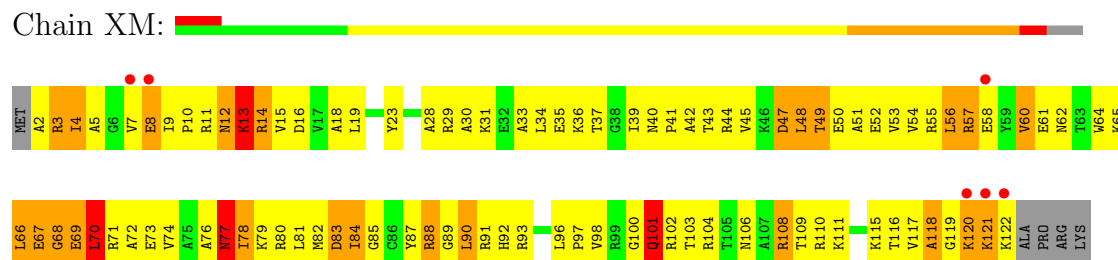
- Molecule 12: 30S ribosomal protein S12



- Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13



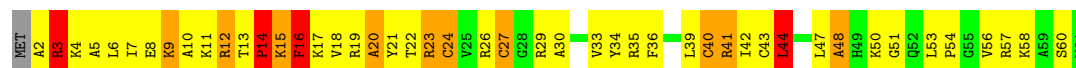
- Molecule 14: 30S ribosomal protein S14

Chain QN: 



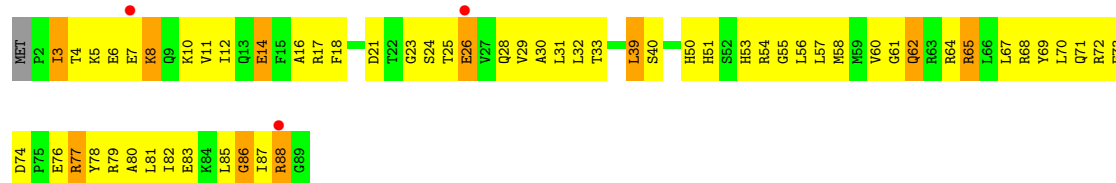
- Molecule 14: 30S ribosomal protein S14

Chain XN: 



- Molecule 15: 30S ribosomal protein S15

Chain QO: 



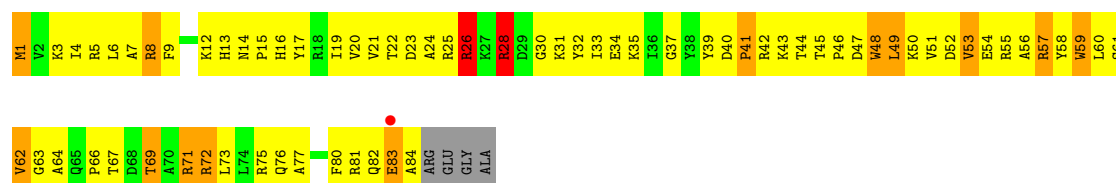
- Molecule 15: 30S ribosomal protein S15

Chain XO: 



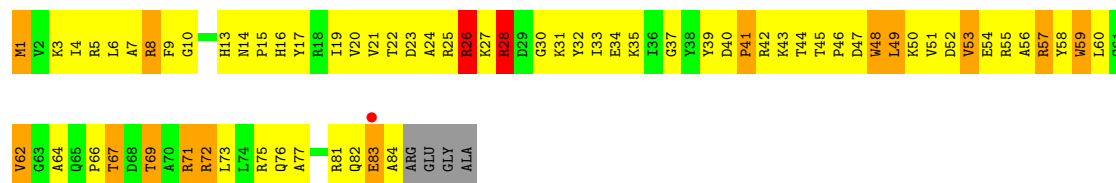
- Molecule 16: 30S ribosomal protein S16

Chain QP: 



- Molecule 16: 30S ribosomal protein S16

Chain XP: 



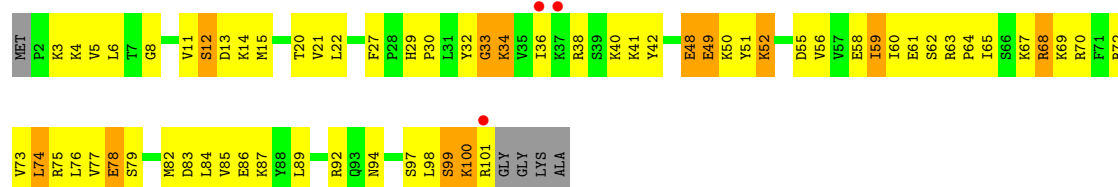
- Molecule 17: 30S ribosomal protein S17

Chain QQ:



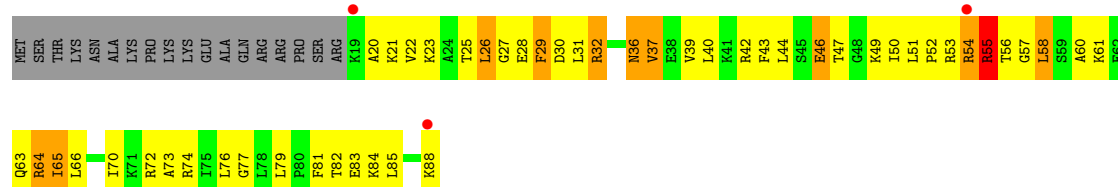
- Molecule 17: 30S ribosomal protein S17

Chain XQ:



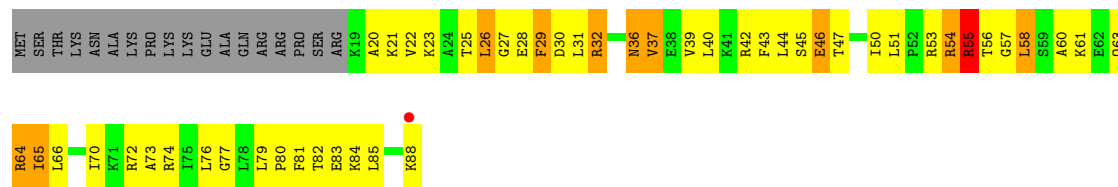
- Molecule 18: 30S ribosomal protein S18

Chain QR:



- Molecule 18: 30S ribosomal protein S18

Chain XR:



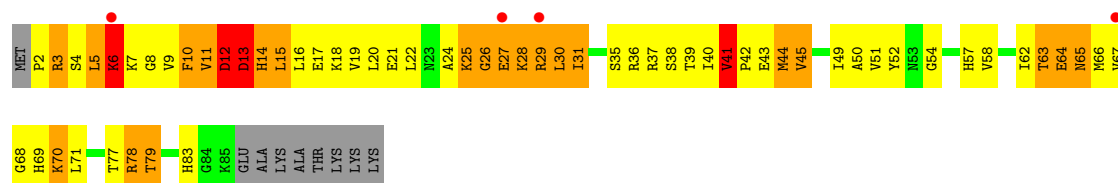
- Molecule 19: 30S ribosomal protein S19

Chain QS:



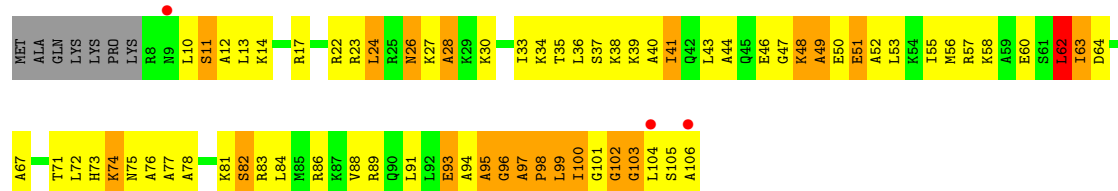
- Molecule 19: 30S ribosomal protein S19

Chain XS:



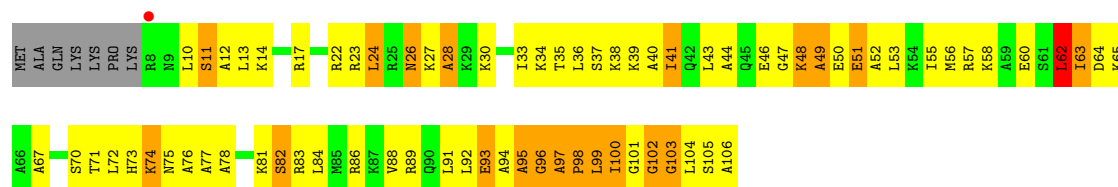
- Molecule 20: 30S ribosomal protein S20

Chain QT:



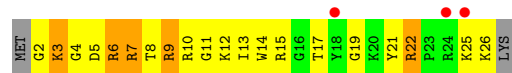
- Molecule 20: 30S ribosomal protein S20

Chain XT:



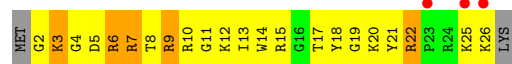
- Molecule 21: 30S ribosomal protein S21

Chain QU:



- Molecule 21: 30S ribosomal protein S21

Chain XU:



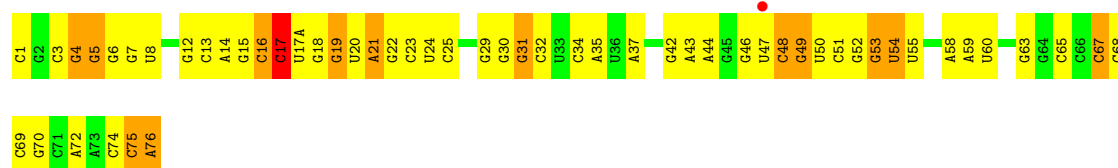
- Molecule 22: P-site tRNA fMet

Chain QV:



- Molecule 22: P-site tRNA fMet

Chain XV:



- Molecule 23: A-site ASL SufA6

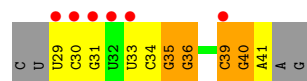
Chain QX:

- Molecule 23: A-site ASL SufA6

Chain XX:

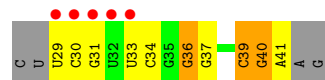
- Molecule 24: messenger RNA

Chain QY:



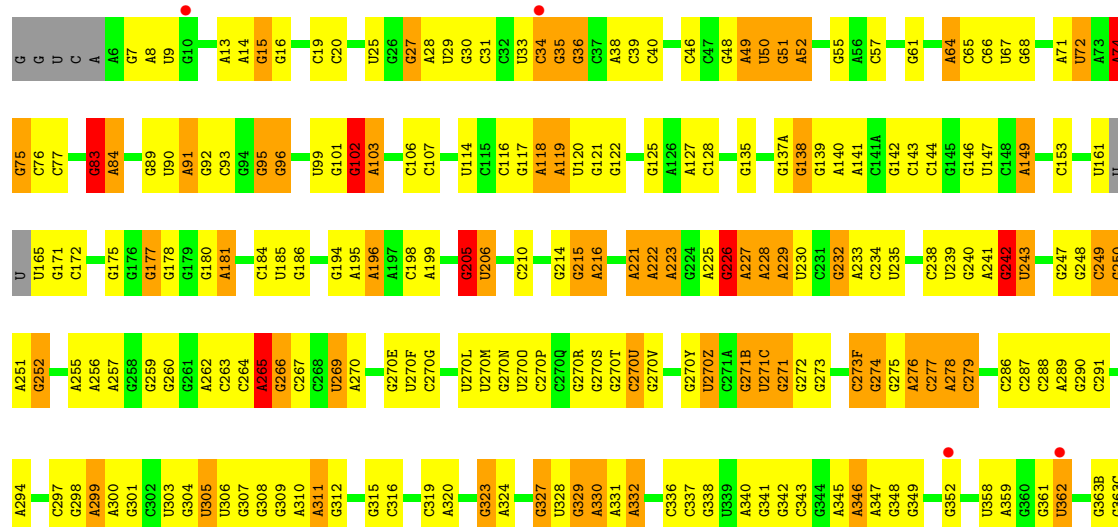
- Molecule 24: messenger RNA

Chain XY:



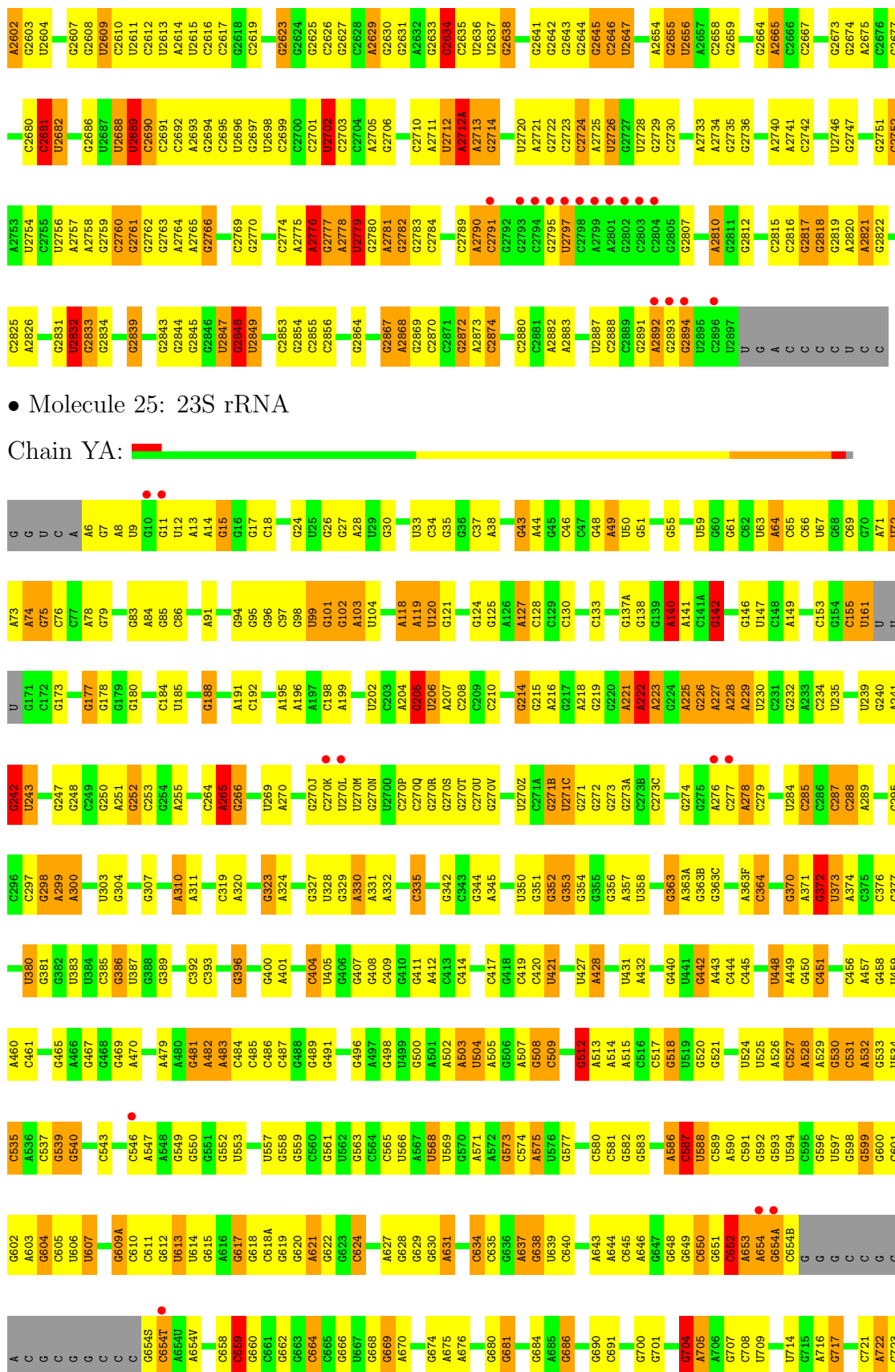
- Molecule 25: 23S rRNA

Chain RA:



A1373	C1297	G1212	C1135	U1066	A1000	U922	G853	G775	U639	C574	U504	A428	G363D
A1379	C1298	A1213	G1136	A1067	A1001	C923	G854	G776	G640	A575	A505	A429	U363E
G1380	G1299	G1216	G1137	G1068	G1002	C924	G855	A782	G641	U576	G506	A430	A363F
G1381	G1300	G1216	G1138	A1069	G1003	C925	C856	C698	G642	A577	G507	U431	C364
G1382	A1301	A1220	G1140	G1071	G1004	A926	C857	C698	G645	A578	G508	A432	C365
G1383	A1302	C1221	U1141	G1072	C1005	G928	U858	A784	A646	G579	C509	C433	C366
A1384	G1303	C1222	U1142	G1073	C1006	G929	G859	G785	G647	C580	G512	U434	G370
G1385	C1304	G1226	A1142A	C1075	C1007	U930	U860	C786	G649	C581	A513	C435	A371
C1386	A1227	G1228	A1143	C1076	G1011	G931	A861	U787	G650	G582	G516	A442	G372
C1387	C1306	G1228	A1148	U1078	U1012	G940	A862	A788	G651	C584	C517	A443	U373
G1388	G1309	G1232	G1151	C1079	C1013	A941	G864	C790	G652	G585	G518	C444	C375
U1391	G1310	G1232	G1151	C1080	U1014	G942	C865	G792	A654	A586	U519	C447	C376
A1392	U1311	C1233	G1157	U1081	G1015	G945	U868	G796	G654A	C587	G520	U448	C377
G1395	U1312	C1234	G1157	U1082	G1019	G946	G869	C796	G654B	U588	G521	U449	U380
U1396	C1313	G1238	U1159	U1083	U1019	G947	A870	C797	G	C589	G522	A450	G381
U1397	C1314	G1239	U1160	A1084	A1020	G948	U871	G717	G	G590	G523	C451	G382
C1398	A1317	U1240	G1161	A1085	A1021	C949	A872	A718	C	U594	U524	G452	U383
G1401	C1318	A1241	G1162	A1086	G1022	A953	A878	C720	C	G593	A526	C453	U384
C1402	G1319	A1242	U1165	A1088	G1024	G954	G879	A721	G	G598	C527	A454	C385
C1403	C1320	G1245	U1166	U1089	G1025	C955	G880	A722	C	G599	A528	C456	G386
C1404	A1321	G1245	U1167	U1090	U1026	G956	G881	G723	A	A529	A57	A457	G389
U1405	C1327	G1250	G1173	G1093	A1027	A957	G883	G724	C	G530	G530	C458	C392
U1406	G1328	C1251	U1174	U1094	G1030	U958	G885	G725	G	C531	C531	U459	
C1407	U1329	G1252	U1175	A1095	U1033	A959	C886	G726	C	A532	G532	U464	U395
C1408	C1330	G1256	G1176	A1096	U1034	A960	C887	A727	G	G533	G533	G465	G396
G1411	A1331	G1256	G1177	U1097	G1035	G962	A887	G728	C	U607	C537	G468	G397
A1412	G1332	A1262	C1178	U1098	U1036	U963	C888	G729	C	G609A	G539	G469	G398
G1413	U1335	U1263	C1179	C1100	G1037	G968	C889	C730	C	G612	G540	A470	G399
G1416	A1336	G1264	C1180	U1094	U1038	U969	A890	A734	G654S	U613	C541	A471	A401
C1417	G1337	A1265	C1181	A1095	G1039	G972	G892	G738	C654T	U614	C542	A472	A402
G1418	G1338	G1266	A1182	C1104	G1040	A973	C893	U740	U657	G615	C544	U475	U403
A1419	U1340	U1267	G1183	U1105	C1041	G974	A896	A746	C658	A616	G545	G476	U404
U1420	U1341	A1269	G1186	G1106	G1042	C974	C897	U747	C659	G617	C546	G477	U405
G1421	A1342	C1270	G1187	U1107	C1043	C974A	C898	A748	G660	G618	A547	A479	G407
G1422	G1343	G1271	U1188	U1108	G1044	G975	A899	U747	G661	C618A	A548	A480	G408
G1423	G1344	A1272	U1189	C1109	A1045	G975	A900	G748	G662	G619	G549	A481	C409
G1424	A1349	U1273	G1190	A1111	A1046	G978	A901	A829	G674	G620	U553	A482	G410
G1425		A1274	G1195	A1112	G1047	G979	C902	A751	G666	A621	U554	A483	G411
G1426	U1352	G1277	C1196	U1113	A1048	C981	C903	A752	U667	G622	G554	A484	A412
A1427	A1353	A1278	G1197	G1114	A1050	A983	U905	C753	G668	G623	G556	C484	C413
G1429	U1354	G1279	U1198	G1115	G1051	C985	G906	C755	G669	C624	U557	C485	C414
C1430			U1199	C1118	A1054	C986	U907	C756	G674	U626	G558	C486	A415
U1431	A1359	U1282	C1200	G1118	G1055	C987	A910	G760	A675	A627	U562	A492	C416
G1432		G1283	C1201	C1124	G1056	A988	A911	A761	A676	G628	G563	C493	C417
U1433	C1363	A1284	C1202	G1125	A1057	G989	C912	G765	A677	G629	C564	G494	C418
A1434	G1364	G1285	G1203	U1126	G1058	A990	U913	G678	C678	G630	C565	G495	C419
G1435	A1365	A1204	C1204	A1127	G1059	C991	C914	C679	C679	A631	U566	A497	C420
G1436		U1205	G1205	U1128	G992	C992	U847	G680	G680	A632	A567	U421	U421
C1437	G1368	U1288	G1206	A1129	U1061	G993	A917	G769	G681	A633	U568	C498	A423
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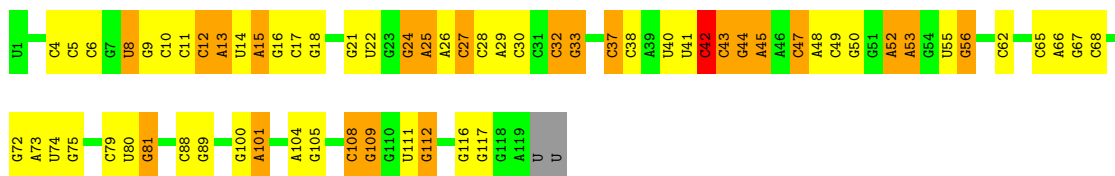


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C1843	C1844	A1847	G1848	G1849	G1850	U1851	C1852	A1853	G1855	G1856	G1857	G1858	G1859	G1860	G1861	G1862	G1863	U1864	U1865	C1869	C1870	A1871	A1872	G1878	C1879	C1880	C1881	G1882	G1883	A1884	A1885	C1886	C1887	G1888	A1889	A1890	G1891	C1892	C1895	G1896	G1897	U1898	A1900	A1901	G1902	G1903	G1906	G1907	C1908	G1909	G1910	A1913	C1914	U1915			

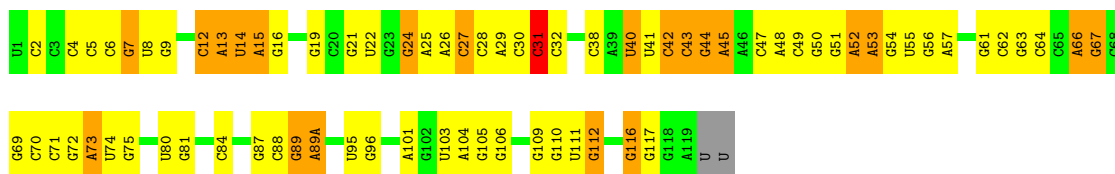
• Molecule 26: 5S rRNA

Chain RB:



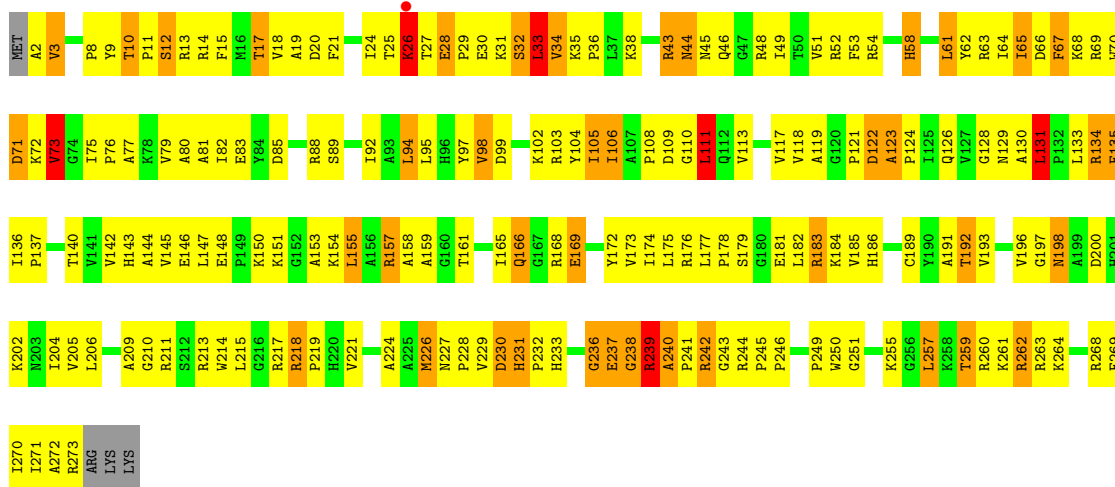
• Molecule 26: 5S rRNA

Chain YB:



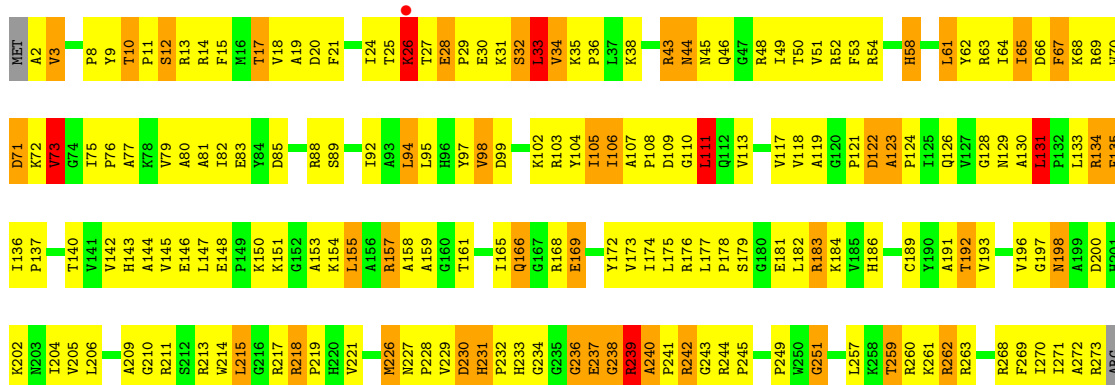
• Molecule 27: 50S ribosomal protein L2

Chain RD:



• Molecule 27: 50S ribosomal protein L2

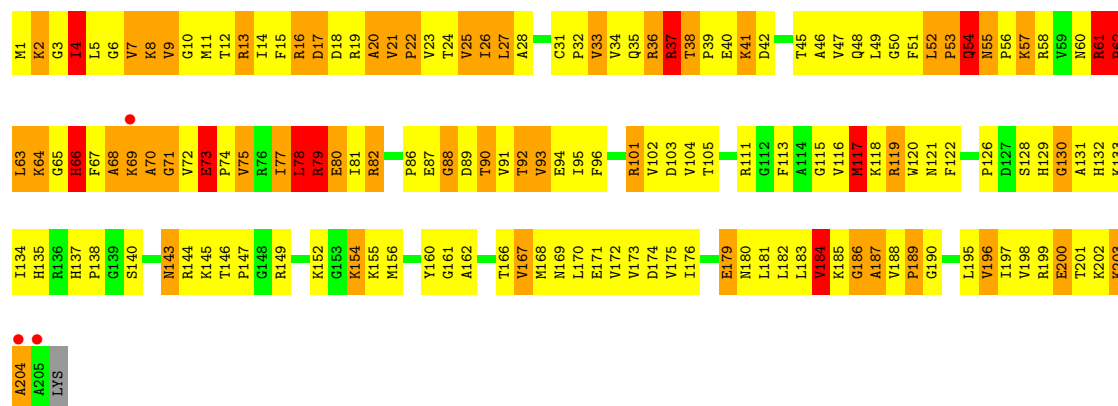
Chain YD:



LYS
LYS

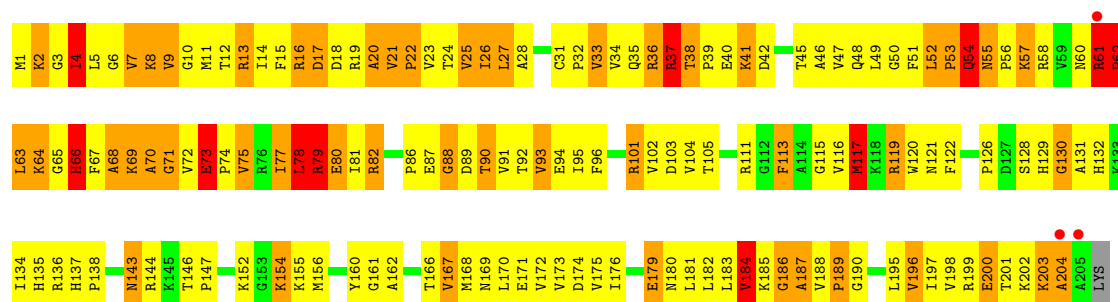
- Molecule 28: 50S ribosomal protein L3

Chain RE:



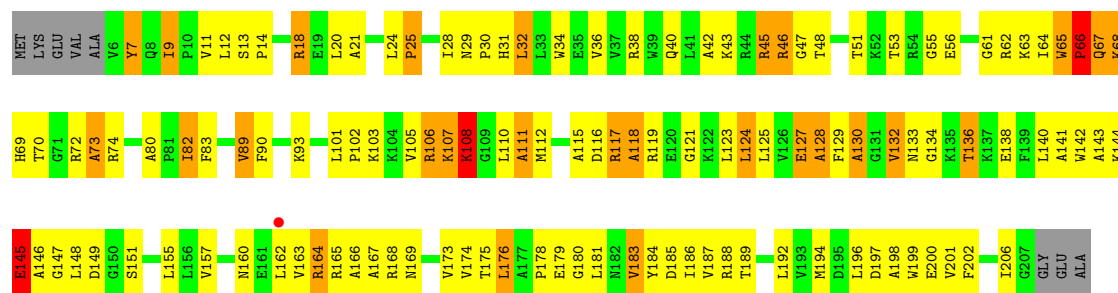
- Molecule 28: 50S ribosomal protein L3

Chain YE:



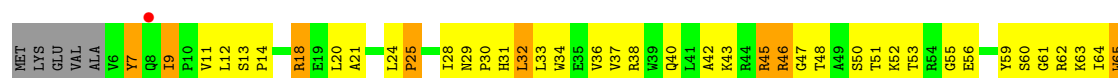
- Molecule 29: 50S ribosomal protein L4

Chain RF:



- Molecule 29: 50S ribosomal protein L4

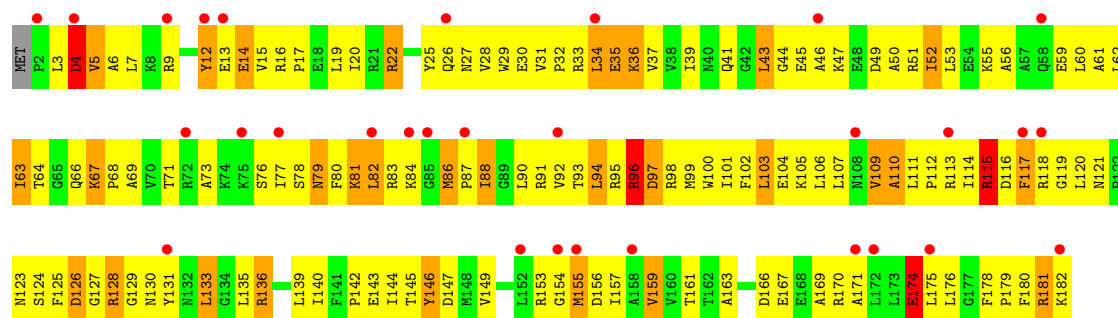
Chain YF:





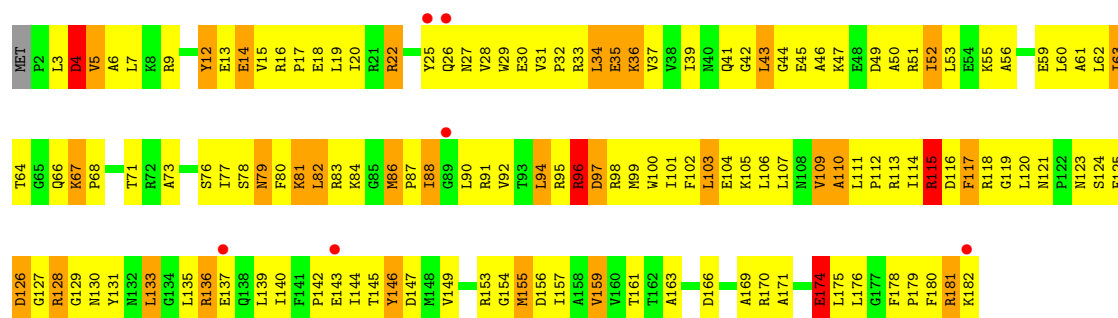
- Molecule 30: 50S ribosomal protein L5

Chain RG:



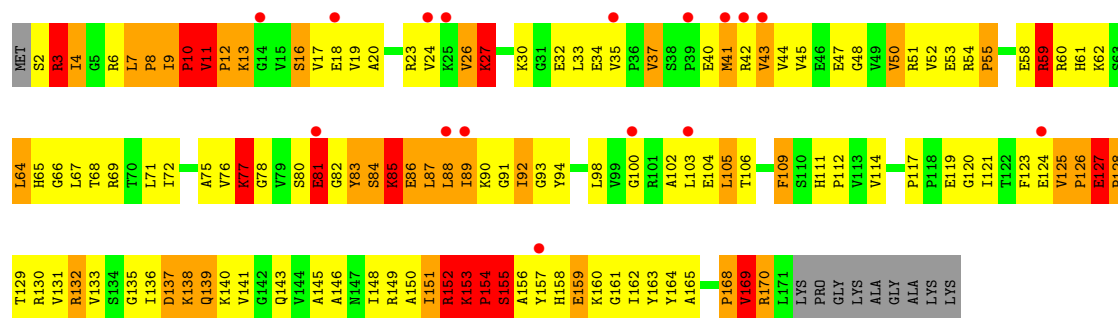
- Molecule 30: 50S ribosomal protein L5

Chain YG:



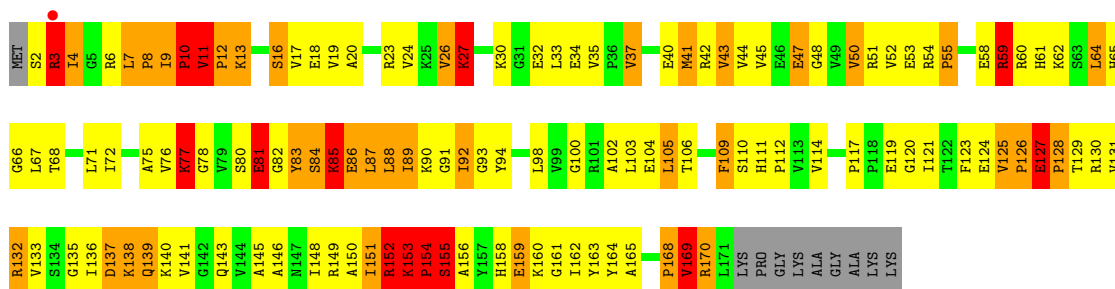
- Molecule 31: 50S ribosomal protein L6

Chain RH:



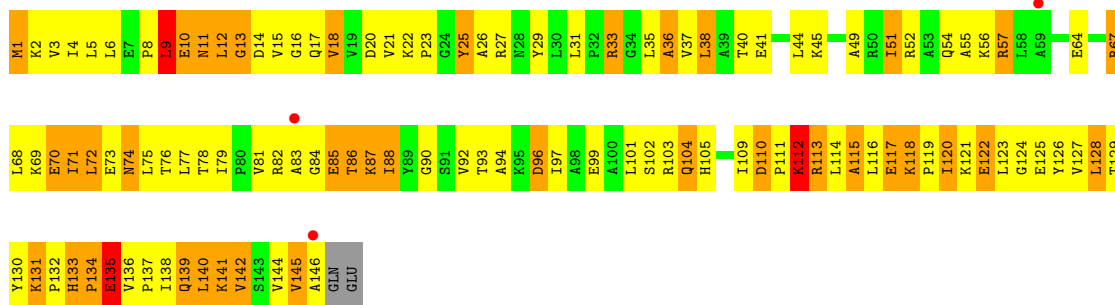
- Molecule 31: 50S ribosomal protein L6

Chain YH:



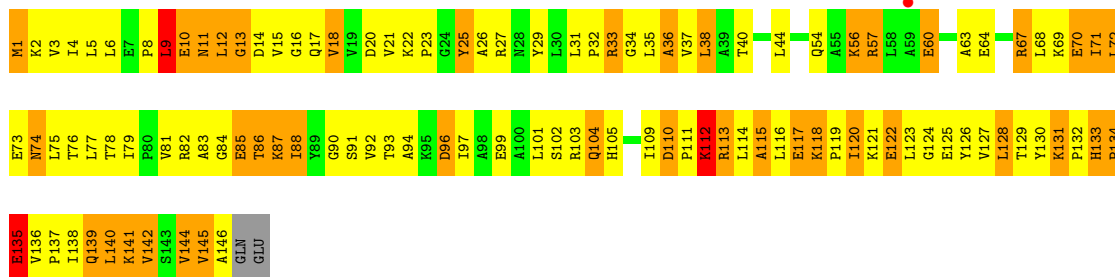
- Molecule 32: 50S ribosomal protein L9

Chain RI:



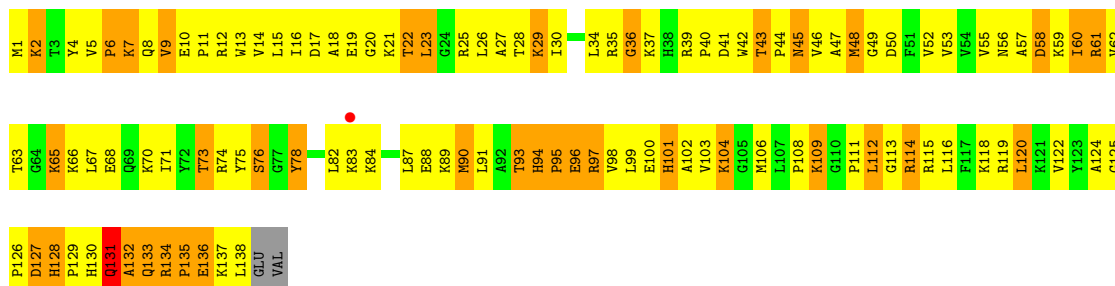
- Molecule 32: 50S ribosomal protein L9

Chain YI:



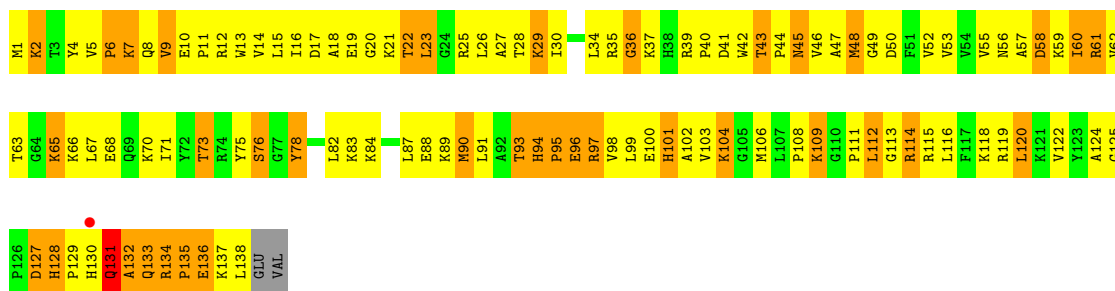
- Molecule 33: 50S ribosomal protein L13

Chain RN:



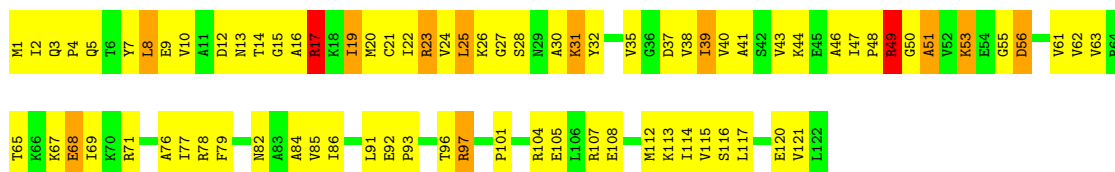
- Molecule 33: 50S ribosomal protein L13

Chain YN:



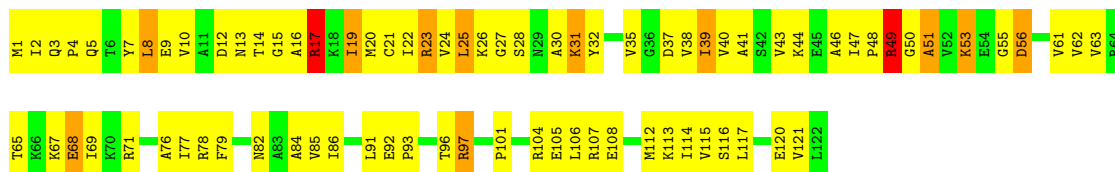
- Molecule 34: 50S ribosomal protein L14

Chain RO:



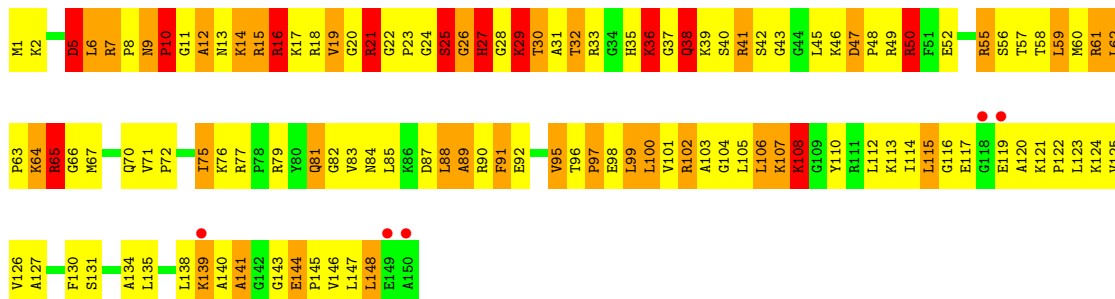
- Molecule 34: 50S ribosomal protein L14

Chain YO:



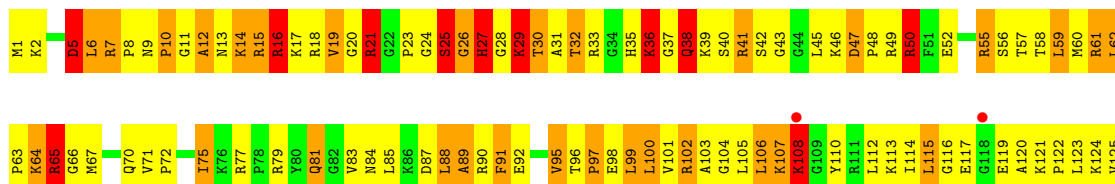
- Molecule 35: 50S ribosomal protein L15

Chain RP:



- Molecule 35: 50S ribosomal protein L15

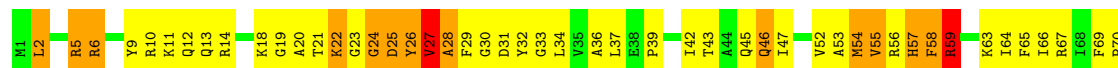
Chain YP:





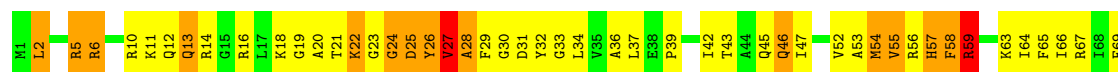
- Molecule 36: 50S ribosomal protein L16

Chain RQ:



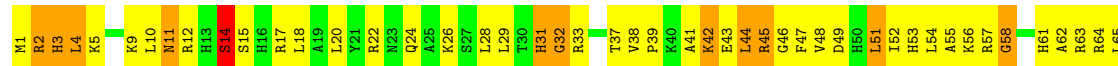
- Molecule 36: 50S ribosomal protein L16

Chain YQ:



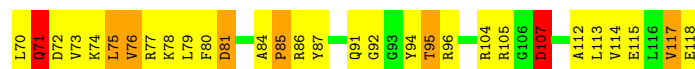
- Molecule 37: 50S ribosomal protein L17

Chain RR:



- Molecule 37: 50S ribosomal protein L17

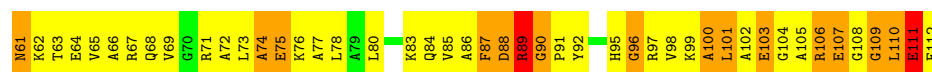
Chain YR:



- Molecule 38: 50S ribosomal protein L18

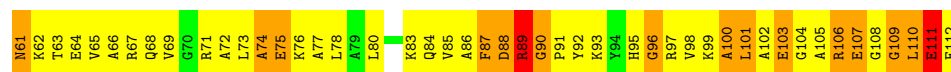
Chain RS:





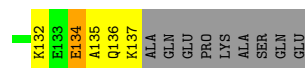
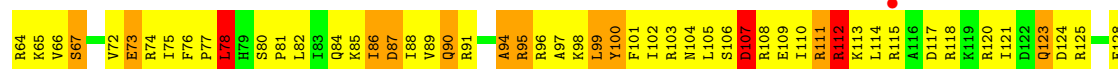
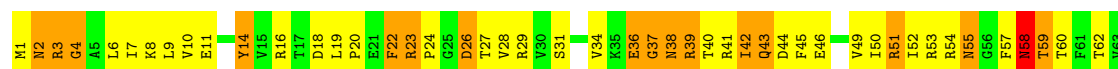
- Molecule 38: 50S ribosomal protein L18

Chain YS:



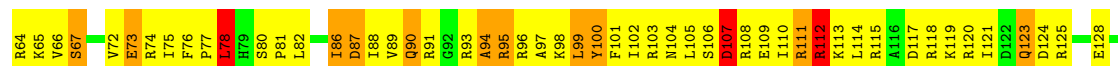
- Molecule 39: 50S ribosomal protein L19

Chain RT:



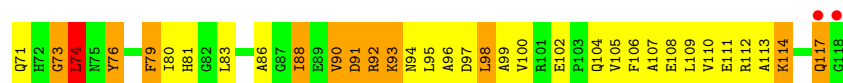
- Molecule 39: 50S ribosomal protein L19

Chain YT:



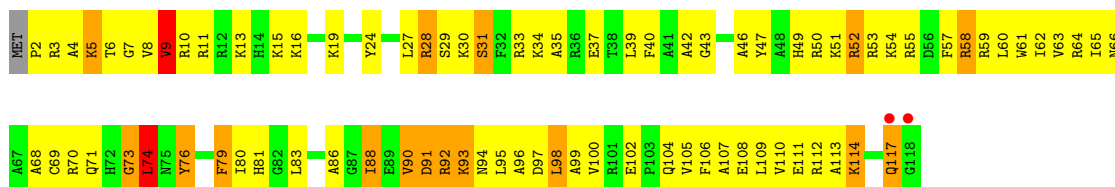
- Molecule 40: 50S ribosomal protein L20

Chain RU:



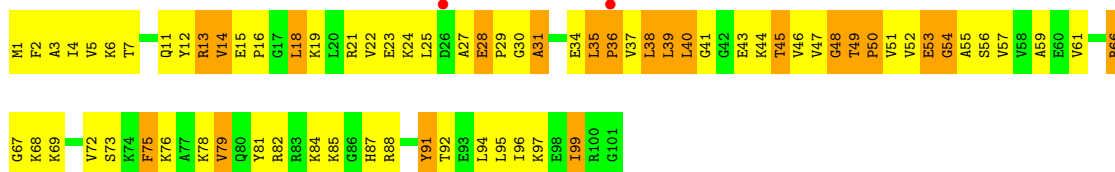
- Molecule 40: 50S ribosomal protein L20

Chain YU:



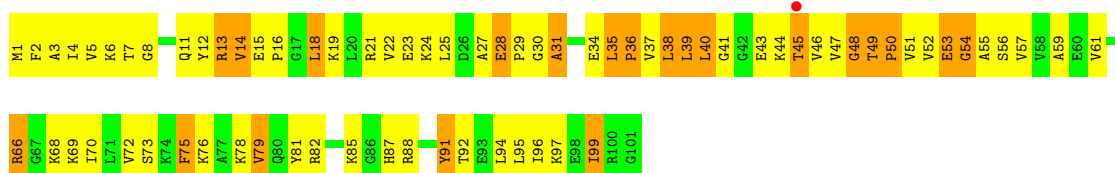
• Molecule 41: 50S ribosomal protein L21

Chain RV:



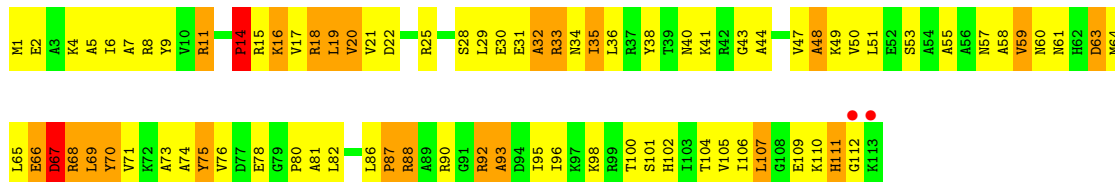
• Molecule 41: 50S ribosomal protein L21

Chain YV:



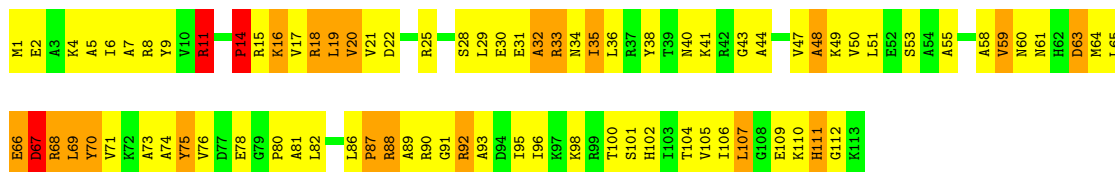
• Molecule 42: 50S ribosomal protein L22

Chain RW:



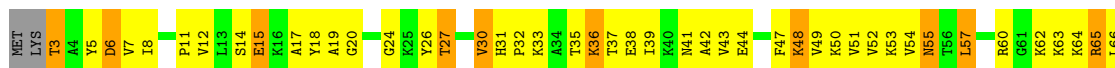
• Molecule 42: 50S ribosomal protein L22

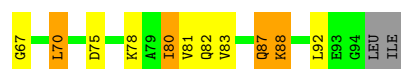
Chain YW:



• Molecule 43: 50S ribosomal protein L23

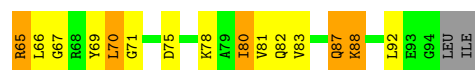
Chain RX:





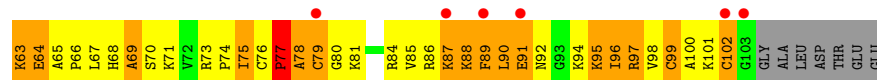
• Molecule 43: 50S ribosomal protein L23

Chain YX:



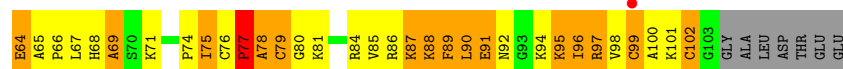
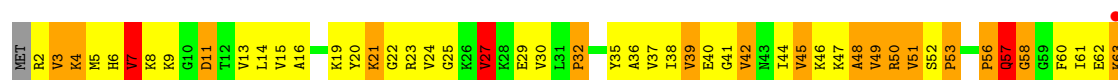
• Molecule 44: 50S ribosomal protein L24

Chain RY:



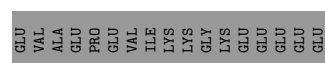
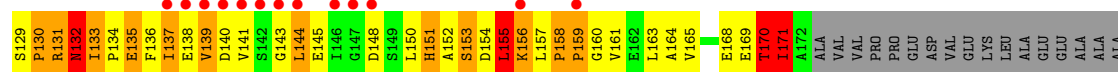
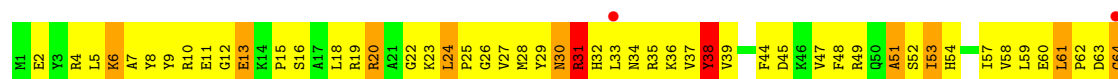
• Molecule 44: 50S ribosomal protein L24

Chain YY:



• Molecule 45: 50S ribosomal protein L25

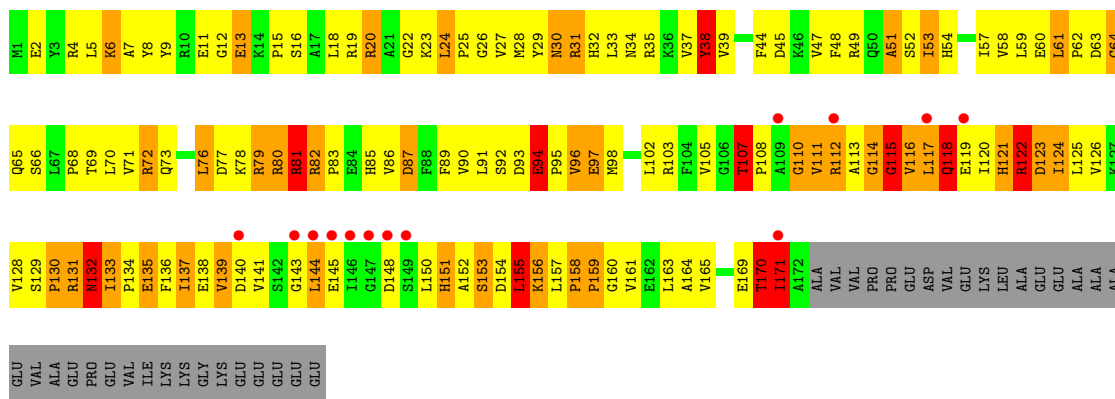
Chain RZ:



• Molecule 45: 50S ribosomal protein L25

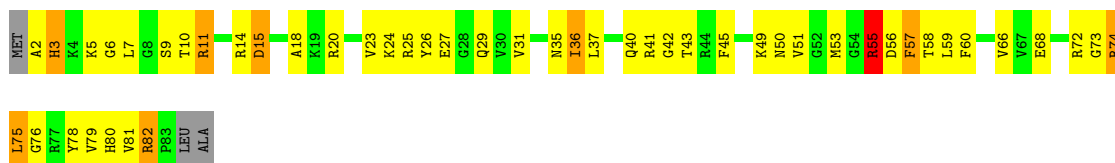
Chain YZ:





- Molecule 46: 50S ribosomal protein L27

Chain R0:



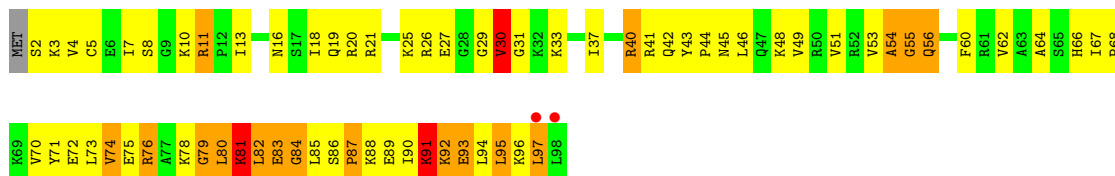
- Molecule 46: 50S ribosomal protein L27

Chain Y0:



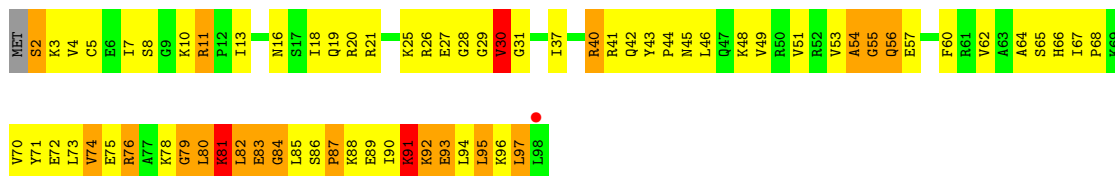
- Molecule 47: 50S ribosomal protein L28

Chain R1:



- Molecule 47: 50S ribosomal protein L28

Chain Y1:



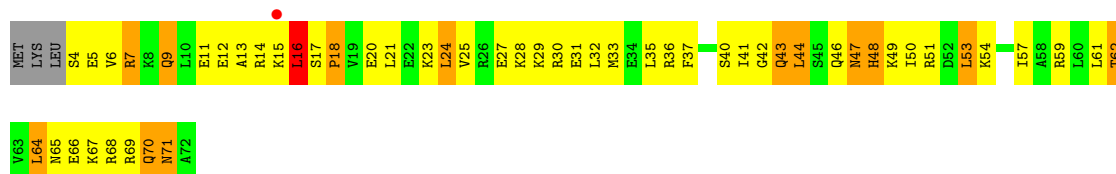
- Molecule 48: 50S ribosomal protein L29

Chain R2:



- Molecule 48: 50S ribosomal protein L29

Chain Y2:



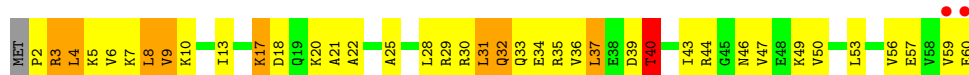
- Molecule 49: 50S ribosomal protein L30

Chain R3:



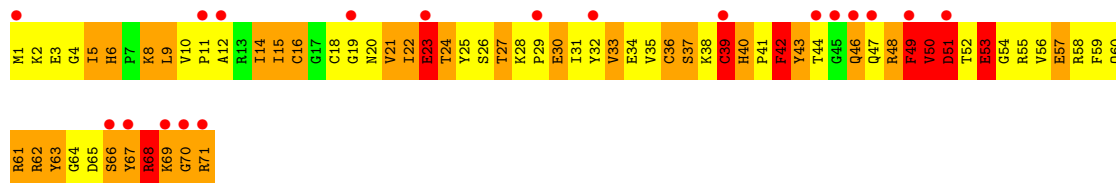
- Molecule 49: 50S ribosomal protein L30

Chain Y3:



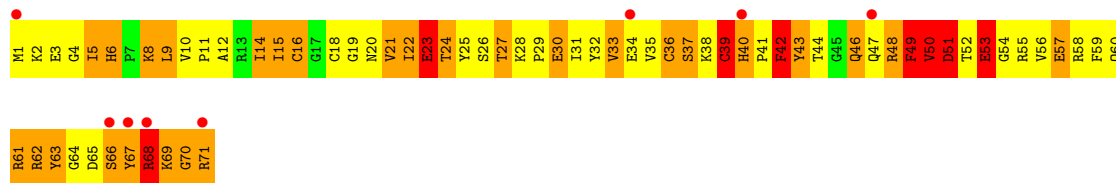
- Molecule 50: 50S ribosomal protein L32

Chain R4:



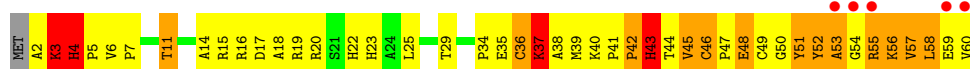
- Molecule 50: 50S ribosomal protein L32

Chain Y4:



- Molecule 51: 50S ribosomal protein L33

Chain R5:



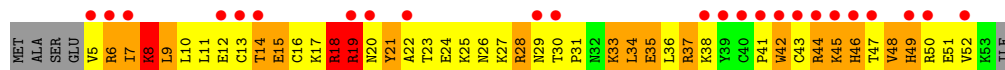
- Molecule 51: 50S ribosomal protein L33

Chain Y5:



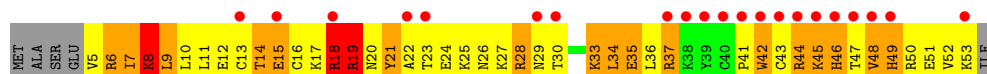
- Molecule 52: 50S ribosomal protein L34

Chain R6:



- Molecule 52: 50S ribosomal protein L34

Chain Y6:



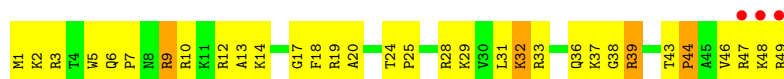
- Molecule 53: 50S ribosomal protein L35

Chain R7:



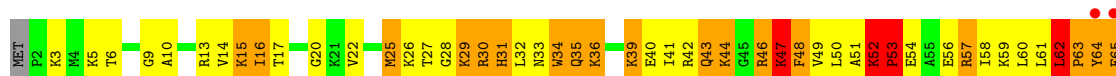
- Molecule 53: 50S ribosomal protein L35

Chain Y7:



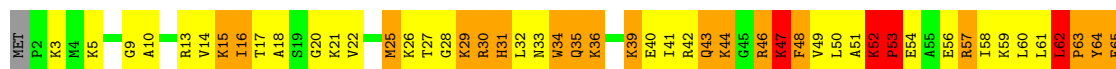
- Molecule 54: tRNA acceptor end mimic

Chain R8:



- Molecule 54: tRNA acceptor end mimic

Chain Y8:




- Molecule 55: RNA (5'-R(*CP*CP*(PPU))-3')

Chain Z6:



- Molecule 55: RNA (5'-R(*CP*CP*(PPU))-3')

Chain Z8: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.55Å 449.21Å 619.24Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.81 – 3.44 34.81 – 3.26	Depositor EDS
% Data completeness (in resolution range)	98.7 (34.81-3.44) 98.2 (34.81-3.26)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.44 (at 3.25Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.2_1309)	Depositor
R, R_{free}	0.243 , 0.285 0.243 , 0.284	Depositor DCC
R_{free} test set	34671 reflections (4.59%)	DCC
Wilson B-factor (Å ²)	65.0	Xtriage
Anisotropy	0.193	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 24.8	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.37$, $\langle L^2 \rangle = 0.19$	Xtriage
Outliers	0 of 881904 reflections	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	291123	wwPDB-VP
Average B, all atoms (Å ²)	85.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.41% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, PAR, 1MG, PPU

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	0.42	0/36098	0.97	58/56341 (0.1%)
1	XA	0.45	0/36123	1.00	71/56380 (0.1%)
2	QB	0.35	0/1959	0.65	0/2642
2	XB	0.35	0/1959	0.65	0/2642
3	QC	0.36	0/1629	0.60	0/2195
3	XC	0.36	0/1629	0.60	0/2195
4	QD	0.42	0/1733	0.69	1/2318 (0.0%)
4	XD	0.42	0/1733	0.70	1/2318 (0.0%)
5	QE	0.38	0/1171	0.66	0/1576
5	XE	0.38	0/1171	0.66	0/1576
6	QF	0.43	0/856	0.68	0/1154
6	XF	0.43	0/856	0.68	0/1154
7	QG	0.37	0/1276	0.60	0/1709
7	XG	0.37	0/1276	0.61	0/1709
8	QH	0.40	0/1136	0.69	0/1527
8	XH	0.40	0/1136	0.69	0/1527
9	QI	0.36	0/1029	0.67	0/1379
9	XI	0.36	0/1029	0.67	0/1379
10	QJ	0.35	0/814	0.61	0/1095
10	XJ	0.36	0/814	0.61	0/1095
11	QK	0.40	0/900	0.67	0/1213
11	XK	0.40	0/900	0.67	0/1213
12	QL	0.45	0/991	1.00	4/1327 (0.3%)
12	XL	0.45	0/991	1.00	4/1327 (0.3%)
13	QM	0.34	0/974	0.66	0/1303
13	XM	0.35	0/974	0.66	0/1303
14	QN	0.43	0/501	0.70	1/664 (0.2%)
14	XN	0.43	0/501	0.70	1/664 (0.2%)
15	QO	0.39	0/745	0.66	0/992
15	XO	0.39	0/745	0.66	0/992
16	QP	0.37	0/721	0.67	0/970
16	XP	0.37	0/721	0.67	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.38	0/847	0.68	0/1131
17	XQ	0.38	0/847	0.68	0/1131
18	QR	0.39	0/579	0.72	0/768
18	XR	0.39	0/579	0.73	0/768
19	QS	0.36	0/689	0.84	2/926 (0.2%)
19	XS	0.36	0/689	0.84	2/926 (0.2%)
20	QT	0.34	0/765	0.69	0/1007
20	XT	0.33	0/765	0.69	0/1007
21	QU	0.37	0/221	0.63	0/288
21	XU	0.37	0/221	0.62	0/288
22	QV	0.52	0/1836	0.99	6/2859 (0.2%)
22	XV	0.52	0/1836	0.99	6/2859 (0.2%)
23	QX	0.40	0/189	0.75	0/292
23	XX	0.66	0/189	1.09	2/292 (0.7%)
24	QY	0.51	0/311	0.88	0/483
24	XY	0.52	0/311	0.89	0/483
25	RA	0.52	2/69543 (0.0%)	1.06	149/108563 (0.1%)
25	YA	0.59	2/69521 (0.0%)	1.10	200/108529 (0.2%)
26	RB	0.44	0/2878	1.04	7/4490 (0.2%)
26	YB	0.46	0/2878	1.03	2/4490 (0.0%)
27	RD	0.62	2/2165 (0.1%)	0.90	3/2919 (0.1%)
27	YD	0.62	2/2165 (0.1%)	0.90	3/2919 (0.1%)
28	RE	0.52	0/1601	0.91	2/2160 (0.1%)
28	YE	0.52	0/1601	0.91	2/2160 (0.1%)
29	RF	0.50	0/1620	0.76	0/2194
29	YF	0.50	0/1620	0.76	0/2194
30	RG	0.40	0/1499	0.66	0/2016
30	YG	0.40	0/1499	0.66	0/2016
31	RH	0.45	0/1332	0.85	4/1802 (0.2%)
31	YH	0.45	0/1332	0.85	4/1802 (0.2%)
32	RI	0.40	0/1151	0.80	1/1558 (0.1%)
32	YI	0.40	0/1151	0.79	1/1558 (0.1%)
33	RN	0.46	0/1131	0.78	1/1525 (0.1%)
33	YN	0.46	0/1131	0.78	1/1525 (0.1%)
34	RO	0.53	0/943	0.71	0/1269
34	YO	0.53	0/943	0.71	0/1269
35	RP	0.50	0/1162	0.94	3/1544 (0.2%)
35	YP	0.49	0/1162	0.95	3/1544 (0.2%)
36	RQ	0.53	0/1143	0.89	3/1527 (0.2%)
36	YQ	0.53	0/1143	0.89	3/1527 (0.2%)
37	RR	0.45	0/982	0.80	1/1312 (0.1%)
37	YR	0.45	0/982	0.80	1/1312 (0.1%)
38	RS	0.46	0/892	0.82	1/1187 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YS	0.45	0/892	0.82	1/1187 (0.1%)
39	RT	0.47	0/1155	0.73	2/1542 (0.1%)
39	YT	0.47	0/1155	0.73	2/1542 (0.1%)
40	RU	0.48	0/982	0.78	0/1306
40	YU	0.48	0/982	0.78	0/1306
41	RV	0.47	0/790	0.82	0/1057
41	YV	0.47	0/790	0.82	0/1057
42	RW	0.45	0/911	0.75	0/1220
42	YW	0.45	0/911	0.75	0/1220
43	RX	0.56	0/739	0.78	0/993
43	YX	0.56	0/739	0.77	0/993
44	RY	0.52	0/798	0.80	0/1064
44	YY	0.52	0/798	0.80	0/1064
45	RZ	0.47	0/1408	0.77	1/1908 (0.1%)
45	YZ	0.47	0/1408	0.77	1/1908 (0.1%)
46	R0	0.57	0/657	0.80	0/874
46	Y0	0.60	0/657	0.85	0/874
47	R1	0.49	0/770	0.85	1/1022 (0.1%)
47	Y1	0.49	0/770	0.85	1/1022 (0.1%)
48	R2	0.50	0/583	0.83	1/771 (0.1%)
48	Y2	0.50	0/583	0.84	1/771 (0.1%)
49	R3	0.43	0/474	0.71	0/635
49	Y3	0.43	0/474	0.71	0/635
50	R4	0.38	0/594	0.78	1/795 (0.1%)
50	Y4	0.38	0/594	0.78	1/795 (0.1%)
51	R5	0.51	0/473	0.74	0/639
51	Y5	0.51	0/473	0.74	0/639
52	R6	0.42	0/431	0.76	0/575
52	Y6	0.42	0/431	0.76	0/575
53	R7	0.56	0/438	0.76	0/575
53	Y7	0.56	0/438	0.76	0/575
54	R8	0.62	0/525	0.93	1/691 (0.1%)
54	Y8	0.62	0/525	0.93	1/691 (0.1%)
55	Z6	0.82	0/40	1.81	1/60 (1.7%)
55	Z8	0.80	0/40	1.80	1/60 (1.7%)
All	All	0.50	8/315563 (0.0%)	0.98	571/471909 (0.1%)

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	YD	236	GLY	C-N	8.59	1.53	1.34
27	RD	236	GLY	C-N	8.55	1.53	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	YD	239	ARG	CA-C	-6.77	1.35	1.52
27	RD	239	ARG	CA-C	-6.76	1.35	1.52
25	YA	783	A	N7-C5	-5.95	1.35	1.39
25	RA	654(T)	C	C1'-N1	5.65	1.57	1.48
25	YA	654(T)	C	C1'-N1	5.13	1.56	1.48
25	RA	751	A	N9-C4	-5.01	1.34	1.37

All (571) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	QL	47	LYS	C-N-CD	-20.50	75.51	120.60
12	XL	47	LYS	C-N-CD	-20.46	75.58	120.60
25	YA	761	A	N1-C6-N6	12.76	126.25	118.60
25	YA	945	A	N9-C1'-C2'	12.75	130.58	114.00
22	QV	17	C	C2-N1-C1'	11.85	131.84	118.80
22	XV	17	C	C2-N1-C1'	11.84	131.82	118.80
1	QA	254	G	O5'-P-OP1	-10.70	96.07	105.70
28	YE	21	VAL	C-N-CD	-10.15	98.26	120.60
1	QA	960	U	N1-C2-O2	10.14	129.90	122.80
28	RE	21	VAL	C-N-CD	-10.13	98.32	120.60
25	YA	945	A	P-O3'-C3'	10.00	131.70	119.70
25	YA	761	A	C5-C6-N6	-9.98	115.71	123.70
1	QA	960	U	N3-C2-O2	-9.72	115.40	122.20
23	XX	6	C	O5'-P-OP1	-9.65	97.01	105.70
25	YA	945	A	C4-N9-C1'	9.32	143.08	126.30
25	YA	761	A	C4-C5-N7	9.24	115.32	110.70
25	RA	1929	G	C6-C5-N7	-9.20	124.88	130.40
25	YA	945	A	C8-N9-C1'	-9.19	111.17	127.70
1	QA	328	C	N1-C2-O2	8.92	124.25	118.90
1	QA	328	C	C2-N1-C1'	8.83	128.51	118.80
22	XV	17	C	C6-N1-C1'	-8.82	110.21	120.80
12	QL	47	LYS	C-N-CA	8.77	158.85	122.00
12	XL	47	LYS	C-N-CA	8.76	158.80	122.00
25	YA	1253	A	N1-C6-N6	8.74	123.84	118.60
25	RA	1899	G	N1-C2-N2	-8.72	108.35	116.20
36	RQ	81	VAL	CB-CA-C	-8.71	94.85	111.40
36	YQ	81	VAL	CB-CA-C	-8.70	94.88	111.40
22	QV	17	C	C6-N1-C1'	-8.68	110.39	120.80
25	YA	2681	C	P-O3'-C3'	8.64	130.06	119.70
25	YA	1929	G	C6-C5-N7	-8.63	125.22	130.40
1	XA	1336	C	C2-N1-C1'	8.59	128.25	118.80
25	YA	1950	G	C4-N9-C1'	8.55	137.62	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	761	A	C5-N7-C8	-8.53	99.64	103.90
45	YZ	115	GLY	N-CA-C	8.49	134.31	113.10
45	RZ	115	GLY	N-CA-C	8.48	134.31	113.10
25	RA	1929	G	C4-C5-N7	8.44	114.17	110.80
25	YA	2506	U	N3-C2-O2	-8.39	116.33	122.20
25	YA	2506	U	N1-C2-O2	8.35	128.64	122.80
1	XA	1301	U	C2-N1-C1'	8.30	127.66	117.70
25	YA	530	G	N1-C6-O6	-8.25	114.95	119.90
1	XA	1158	C	C2-N1-C1'	8.20	127.82	118.80
25	RA	1929	G	C5-C6-O6	-8.14	123.71	128.60
1	XA	1336	C	N1-C2-O2	8.13	123.78	118.90
25	YA	1950	G	N7-C8-N9	8.11	117.16	113.10
1	XA	372	C	C2-N1-C1'	8.11	127.72	118.80
25	YA	783	A	N7-C8-N9	8.10	117.85	113.80
25	YA	783	A	N1-C6-N6	8.07	123.44	118.60
1	XA	254	G	O5'-P-OP1	-8.04	98.46	105.70
1	QA	1301	U	C2-N1-C1'	8.01	127.31	117.70
25	RA	2779	U	O4'-C1'-N1	7.95	114.56	108.20
25	YA	1929	G	OP1-P-O3'	7.93	122.65	105.20
25	YA	783	A	C6-C5-N7	-7.90	126.77	132.30
25	YA	2712(A)	A	N7-C8-N9	7.90	117.75	113.80
1	XA	1064	G	P-O3'-C3'	7.89	129.17	119.70
47	R1	79	GLY	N-CA-C	-7.87	93.42	113.10
1	QA	1322	C	C2-N1-C1'	7.87	127.46	118.80
25	YA	761	A	C6-C5-N7	-7.86	126.80	132.30
25	RA	165	U	C2-N1-C1'	7.85	127.12	117.70
47	Y1	79	GLY	N-CA-C	-7.82	93.54	113.10
25	YA	783	A	C5-N7-C8	-7.79	100.00	103.90
25	RA	685	A	N1-C6-N6	-7.77	113.94	118.60
1	QA	1322	C	N1-C2-O2	7.75	123.55	118.90
25	YA	1950	G	O4'-C1'-N9	7.72	114.37	108.20
1	QA	121	C	C2-N3-C4	-7.71	116.04	119.90
25	RA	2426	A	P-O3'-C3'	7.69	128.93	119.70
25	YA	528	A	N1-C2-N3	7.65	133.12	129.30
25	YA	2584	U	N3-C2-O2	-7.58	116.89	122.20
25	RA	1899	G	N3-C2-N2	7.56	125.19	119.90
1	XA	1322	C	C2-N1-C1'	7.51	127.06	118.80
25	YA	1396	U	C2-N1-C1'	7.50	126.71	117.70
25	RA	1396	U	N1-C2-O2	7.49	128.04	122.80
25	YA	2031	A	O4'-C1'-N9	7.45	114.16	108.20
22	XV	17	C	N1-C2-O2	7.41	123.34	118.90
25	YA	783	A	C8-N9-C4	-7.40	102.84	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1302	U	C2-N1-C1'	7.39	126.57	117.70
23	XX	7	G	P-O3'-C3'	-7.38	110.85	119.70
1	QA	1301	U	N1-C2-O2	7.35	127.94	122.80
1	XA	713	G	N1-C6-O6	-7.34	115.50	119.90
25	RA	1372	U	N1-C2-O2	7.32	127.93	122.80
25	YA	1929	G	C4-C5-N7	7.29	113.72	110.80
25	YA	912	C	N3-C2-O2	-7.28	116.81	121.90
25	RA	2702	U	N1-C2-O2	7.28	127.89	122.80
35	YP	59	LEU	N-CA-C	-7.26	91.40	111.00
35	RP	59	LEU	N-CA-C	-7.26	91.41	111.00
25	YA	1950	G	C8-N9-C4	-7.25	103.50	106.40
25	YA	912	C	N1-C2-O2	7.23	123.24	118.90
1	XA	328	C	C6-N1-C2	-7.23	117.41	120.30
25	YA	242	G	P-O3'-C3'	7.22	128.36	119.70
25	RA	1929	G	OP1-P-O3'	7.21	121.07	105.20
25	RA	2712(A)	A	C8-N9-C4	-7.21	102.92	105.80
25	YA	2447	G	C8-N9-C1'	7.18	136.34	127.00
25	YA	761	A	N9-C4-C5	-7.16	102.94	105.80
22	QV	17	C	N1-C2-O2	7.14	123.18	118.90
25	RA	1929	G	N1-C6-O6	7.12	124.17	119.90
25	YA	140	A	C8-N9-C4	-7.10	102.96	105.80
1	XA	1322	C	N1-C2-O2	7.09	123.15	118.90
1	QA	1158	C	C2-N1-C1'	7.08	126.58	118.80
36	RQ	81	VAL	N-CA-C	7.08	130.11	111.00
25	YA	528	A	C2-N3-C4	-7.08	107.06	110.60
36	YQ	81	VAL	N-CA-C	7.07	130.08	111.00
25	RA	1396	U	C2-N1-C1'	7.06	126.17	117.70
25	YA	1396	U	N1-C2-O2	7.05	127.74	122.80
25	RA	2031	A	O4'-C1'-N9	7.00	113.80	108.20
25	RA	2712(A)	A	N7-C8-N9	6.99	117.30	113.80
25	RA	1955	U	P-O3'-C3'	6.97	128.06	119.70
1	QA	723	U	C2-N1-C1'	6.96	126.05	117.70
1	XA	1301	U	N1-C2-O2	6.94	127.66	122.80
25	RA	205	G	P-O3'-C3'	6.93	128.02	119.70
25	YA	2447	G	N3-C4-N9	-6.93	121.84	126.00
25	YA	1130	U	P-O3'-C3'	6.92	128.00	119.70
25	YA	140	A	N7-C8-N9	6.91	117.26	113.80
1	QA	372	C	C2-N1-C1'	6.90	126.39	118.80
25	YA	1496	A	C8-N9-C4	-6.89	103.04	105.80
1	QA	1301	U	N3-C2-O2	-6.87	117.39	122.20
25	YA	828	U	N3-C2-O2	-6.85	117.40	122.20
25	YA	1929	G	N9-C4-C5	-6.84	102.67	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	328	C	N3-C2-O2	-6.82	117.13	121.90
25	YA	2032	G	N3-C4-C5	6.81	132.00	128.60
25	YA	2060	A	P-O3'-C3'	6.80	127.87	119.70
25	YA	2573	C	N1-C2-O2	6.78	122.97	118.90
25	YA	1396	U	N3-C2-O2	-6.77	117.46	122.20
1	XA	792	A	P-O3'-C3'	6.77	127.82	119.70
25	RA	2702	U	C2-N1-C1'	6.71	125.75	117.70
25	RA	1786	A	N7-C8-N9	6.71	117.15	113.80
25	RA	1130	U	P-O3'-C3'	6.70	127.74	119.70
55	Z6	74	C	N1-C2-O2	6.70	122.92	118.90
25	RA	165	U	N1-C2-O2	6.69	127.48	122.80
25	RA	2307	G	O4'-C1'-N9	6.68	113.55	108.20
55	Z8	74	C	N1-C2-O2	6.68	122.91	118.90
25	RA	1396	U	N3-C2-O2	-6.65	117.55	122.20
25	YA	2447	G	C4-N9-C1'	-6.64	117.86	126.50
25	RA	676	A	O4'-C1'-N9	6.64	113.51	108.20
25	RA	512	G	N3-C4-N9	-6.61	122.03	126.00
25	RA	512	G	C8-N9-C1'	6.61	135.59	127.00
25	RA	2681	C	P-O3'-C3'	6.60	127.62	119.70
1	XA	792	A	N1-C6-N6	6.59	122.55	118.60
1	XA	1053	G	C4-N9-C1'	-6.59	117.94	126.50
25	YA	1300	U	P-O3'-C3'	6.58	127.59	119.70
25	YA	1496	A	N7-C8-N9	6.56	117.08	113.80
25	YA	2779	U	O4'-C1'-N1	6.56	113.45	108.20
27	RD	131	LEU	CA-CB-CG	6.55	130.38	115.30
27	YD	131	LEU	CA-CB-CG	6.53	130.32	115.30
25	YA	2681	C	OP2-P-O3'	6.53	119.56	105.20
12	XL	48	PRO	CA-N-CD	-6.53	102.36	111.50
1	QA	328	C	C6-N1-C2	-6.52	117.69	120.30
1	XA	186(A)	C	C6-N1-C2	-6.51	117.70	120.30
25	YA	1554	A	P-O3'-C3'	6.51	127.51	119.70
25	YA	512	G	O4'-C1'-N9	6.48	113.39	108.20
12	QL	48	PRO	CA-N-CD	-6.46	102.46	111.50
25	YA	2375	G	N1-C6-O6	6.45	123.77	119.90
1	XA	372	C	C6-N1-C1'	-6.44	113.08	120.80
25	RA	1795	C	C6-N1-C2	-6.43	117.73	120.30
25	RA	2584	U	N3-C2-O2	-6.43	117.70	122.20
25	RA	1929	G	N9-C4-C5	-6.42	102.83	105.40
25	YA	676	A	C5-N7-C8	-6.41	100.69	103.90
25	YA	530	G	N3-C2-N2	6.40	124.38	119.90
1	XA	913	A	P-O3'-C3'	6.39	127.36	119.70
25	RA	2490	G	C4-N9-C1'	6.38	134.79	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1372	U	N3-C2-O2	-6.36	117.75	122.20
1	XA	1301	U	C6-N1-C1'	-6.36	112.30	121.20
25	YA	1332	G	C4-N9-C1'	6.36	134.77	126.50
1	QA	328	C	C5-C6-N1	6.36	124.18	121.00
25	YA	676	A	C2-N3-C4	-6.34	107.43	110.60
25	RA	2584	U	C6-N1-C2	-6.33	117.20	121.00
1	XA	792	A	C4-C5-N7	6.33	113.86	110.70
25	RA	1332	G	C6-C5-N7	-6.32	126.61	130.40
22	QV	17	C	C6-N1-C2	-6.32	117.77	120.30
1	XA	1336	C	C6-N1-C1'	-6.30	113.24	120.80
25	YA	1799	G	P-O3'-C3'	6.30	127.26	119.70
25	YA	2682	U	OP1-P-OP2	-6.30	110.15	119.60
25	YA	2832	U	P-O3'-C3'	6.30	127.26	119.70
25	YA	1950	G	C8-N9-C1'	-6.29	118.82	127.00
1	XA	372	C	N1-C2-O2	6.29	122.67	118.90
25	YA	205	G	O4'-C1'-N9	6.29	113.23	108.20
25	RA	2688	U	N3-C2-O2	-6.29	117.80	122.20
25	RA	465	G	C8-N9-C4	-6.29	103.89	106.40
1	XA	960	U	C2-N1-C1'	6.28	125.23	117.70
25	YA	2419	U	OP1-P-O3'	6.28	119.01	105.20
25	YA	783	A	C4-C5-N7	6.27	113.83	110.70
25	YA	2584	U	C5-C4-O4	6.27	129.66	125.90
25	YA	1332	G	C8-N9-C1'	-6.27	118.85	127.00
1	XA	1054	C	N1-C2-O2	6.25	122.65	118.90
25	YA	2311	A	C2-N3-C4	-6.25	107.47	110.60
25	RA	1543	A	P-O3'-C3'	6.25	127.19	119.70
1	XA	1224	G	P-O3'-C3'	6.24	127.19	119.70
25	YA	1253	A	C5-C6-N6	-6.23	118.72	123.70
1	XA	372	C	C5-C6-N1	6.22	124.11	121.00
25	YA	1930	G	C6-C5-N7	6.21	134.12	130.40
25	RA	165	U	N3-C2-O2	-6.20	117.86	122.20
25	RA	828	U	C2-N1-C1'	6.20	125.14	117.70
25	RA	2420	C	O5'-P-OP1	-6.19	100.13	105.70
25	YA	1314	C	C6-N1-C2	-6.19	117.82	120.30
25	RA	2395	C	C5-C6-N1	6.17	124.09	121.00
25	YA	1253	A	C4-C5-N7	6.17	113.79	110.70
25	RA	1781	C	C2-N1-C1'	6.17	125.58	118.80
25	RA	372	G	C4-N9-C1'	-6.16	118.49	126.50
1	XA	701	C	P-O3'-C3'	6.15	127.08	119.70
1	XA	1158	C	N1-C2-O2	6.15	122.59	118.90
1	XA	754	C	C2-N1-C1'	6.13	125.55	118.80
1	QA	1530	G	OP2-P-O3'	6.12	118.67	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1322	C	C6-N1-C1'	-6.10	113.48	120.80
1	XA	1158	C	C6-N1-C2	-6.09	117.86	120.30
25	RA	676	A	N7-C8-N9	6.08	116.84	113.80
25	YA	1332	G	C6-C5-N7	-6.08	126.75	130.40
25	RA	1781	C	C6-N1-C1'	-6.07	113.52	120.80
25	RA	1653	G	P-O3'-C3'	6.06	126.97	119.70
25	YA	2702	U	O4'-C1'-N1	6.05	113.04	108.20
37	YR	9	LYS	N-CA-C	-6.03	94.71	111.00
37	RR	9	LYS	N-CA-C	-6.03	94.72	111.00
1	QA	1158	C	N1-C2-O2	6.02	122.51	118.90
1	QA	1322	C	C6-N1-C1'	-6.02	113.58	120.80
25	RA	685	A	C8-N9-C4	-6.02	103.39	105.80
25	YA	1247	A	C8-N9-C4	6.01	108.20	105.80
25	RA	512	G	C4-N9-C1'	-6.01	118.69	126.50
25	RA	621	A	O4'-C1'-N9	6.01	113.01	108.20
26	RB	44	G	C4-N9-C1'	-6.01	118.69	126.50
25	RA	2307	G	C4-N9-C1'	6.01	134.31	126.50
25	YA	1786	A	N7-C8-N9	6.00	116.80	113.80
1	XA	1054	C	C2-N1-C1'	5.99	125.39	118.80
25	YA	1929	G	N3-C4-N9	5.99	129.59	126.00
25	RA	1929	G	N3-C4-N9	5.99	129.59	126.00
25	YA	1607	C	N1-C2-O2	5.97	122.48	118.90
1	QA	871	U	P-O3'-C3'	5.97	126.86	119.70
25	YA	1937	A	P-O3'-C3'	5.97	126.86	119.70
25	YA	2439	A	P-O3'-C3'	5.97	126.86	119.70
25	RA	2584	U	C2-N1-C1'	5.96	124.85	117.70
1	XA	713	G	C5-C6-O6	5.96	132.18	128.60
25	YA	59	U	N3-C2-O2	-5.94	118.04	122.20
25	YA	912	C	C2-N1-C1'	5.94	125.33	118.80
1	QA	971	G	O4'-C1'-N9	5.93	112.94	108.20
25	RA	1980	G	P-O3'-C3'	5.93	126.81	119.70
25	RA	856	C	C5-C6-N1	5.93	123.96	121.00
25	YA	1653	G	P-O3'-C3'	5.92	126.81	119.70
1	QA	1065	U	P-O3'-C3'	5.92	126.80	119.70
25	YA	142	G	C4-N9-C1'	-5.91	118.82	126.50
25	YA	2848	G	P-O3'-C3'	5.90	126.78	119.70
22	QV	17	C	C5-C6-N1	5.88	123.94	121.00
25	YA	652	C	N1-C2-O2	5.87	122.42	118.90
31	YH	125	VAL	C-N-CD	-5.87	107.68	120.60
25	YA	298	G	C5-N7-C8	-5.86	101.37	104.30
1	QA	121	C	N1-C2-N3	5.86	123.30	119.20
25	YA	2429	G	OP2-P-O3'	5.86	118.09	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2439	A	C8-N9-C4	-5.86	103.46	105.80
25	RA	2439	A	P-O3'-C3'	5.85	126.72	119.70
1	XA	1054	C	C6-N1-C1'	-5.85	113.78	120.80
12	QL	119	LYS	N-CA-C	-5.84	95.22	111.00
28	RE	58	ARG	N-CA-C	-5.84	95.23	111.00
25	RA	1332	G	C4-N9-C1'	5.84	134.09	126.50
25	RA	2702	U	N3-C2-O2	-5.84	118.11	122.20
31	RH	125	VAL	C-N-CD	-5.84	107.76	120.60
1	QA	328	C	C6-N1-C1'	-5.84	113.80	120.80
25	RA	624	C	C2-N1-C1'	5.83	125.22	118.80
25	RA	1505	C	C2-N1-C1'	5.83	125.21	118.80
35	RP	26	GLY	N-CA-C	-5.83	98.53	113.10
22	XV	17	C	C6-N1-C2	-5.83	117.97	120.30
26	YB	31	C	N1-C2-O2	5.83	122.39	118.90
25	RA	512	G	O4'-C1'-N9	5.82	112.86	108.20
25	RA	685	A	P-O3'-C3'	5.82	126.69	119.70
25	YA	1950	G	C6-C5-N7	-5.82	126.91	130.40
25	RA	306	U	O5'-P-OP1	5.82	117.68	110.70
28	YE	58	ARG	N-CA-C	-5.82	95.29	111.00
25	RA	1694	C	P-O3'-C3'	5.81	126.68	119.70
35	YP	26	GLY	N-CA-C	-5.81	98.58	113.10
12	XL	119	LYS	N-CA-C	-5.80	95.33	111.00
1	QA	1069	C	C6-N1-C2	-5.80	117.98	120.30
25	RA	685	A	N9-C4-C5	5.79	108.12	105.80
25	YA	2032	G	C4-C5-N7	5.79	113.12	110.80
25	RA	2032	G	C5-N7-C8	-5.79	101.41	104.30
25	RA	74	A	N1-C6-N6	5.79	122.07	118.60
25	YA	1359	A	C5-C6-N6	-5.78	119.07	123.70
25	YA	2584	U	N1-C2-N3	5.78	118.37	114.90
25	YA	2573	C	C2-N1-C1'	5.78	125.16	118.80
25	RA	1929	G	C5-N7-C8	-5.78	101.41	104.30
25	RA	2205	C	C2-N1-C1'	5.78	125.16	118.80
25	YA	2032	G	N1-C6-O6	5.78	123.36	119.90
25	YA	828	U	C2-N1-C1'	5.77	124.62	117.70
1	QA	687	A	P-O3'-C3'	5.76	126.61	119.70
25	RA	242	G	P-O3'-C3'	5.76	126.61	119.70
25	RA	1505	C	N1-C2-O2	5.76	122.36	118.90
1	QA	1200	C	P-O3'-C3'	5.75	126.60	119.70
48	Y2	16	LEU	N-CA-C	-5.75	95.49	111.00
1	QA	701	C	P-O3'-C3'	5.74	126.59	119.70
48	R2	16	LEU	N-CA-C	-5.74	95.50	111.00
1	QA	974	A	O4'-C1'-N9	5.73	112.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1786	A	C5-N7-C8	-5.73	101.03	103.90
1	QA	372	C	C6-N1-C2	-5.73	118.01	120.30
25	YA	1929	G	N1-C6-O6	5.72	123.33	119.90
25	YA	1881	C	C2-N1-C1'	5.71	125.08	118.80
19	XS	6	LYS	N-CA-C	-5.71	95.59	111.00
25	RA	856	C	C6-N1-C2	-5.71	118.02	120.30
25	YA	2712(A)	A	C8-N9-C4	-5.70	103.52	105.80
25	YA	2406	U	O5'-P-OP2	-5.70	100.57	105.70
19	QS	6	LYS	N-CA-C	-5.70	95.61	111.00
25	RA	2326	C	C6-N1-C2	-5.69	118.02	120.30
1	XA	1336	C	N3-C2-O2	-5.69	117.92	121.90
25	RA	1332	G	C8-N9-C1'	-5.68	119.61	127.00
25	YA	1359	A	N9-C4-C5	-5.68	103.53	105.80
25	RA	383	U	N1-C2-O2	5.68	126.77	122.80
25	RA	1372	U	C2-N1-C1'	5.67	124.51	117.70
1	XA	754	C	N1-C2-O2	5.67	122.30	118.90
1	QA	1200	C	OP2-P-O3'	5.67	117.66	105.20
1	XA	753	A	P-O3'-C3'	5.67	126.50	119.70
14	QN	40	CYS	CA-CB-SG	5.66	124.18	114.00
25	RA	650	C	C6-N1-C2	-5.65	118.04	120.30
26	RB	37	C	C6-N1-C2	-5.65	118.04	120.30
25	YA	2544	G	N1-C6-O6	5.65	123.29	119.90
1	XA	1094	G	OP2-P-O3'	5.65	117.62	105.20
25	RA	1197	G	C5-C6-O6	5.65	131.99	128.60
14	XN	40	CYS	CA-CB-SG	5.63	124.14	114.00
1	QA	913	A	P-O3'-C3'	5.63	126.45	119.70
25	RA	752	A	C8-N9-C4	-5.63	103.55	105.80
25	YA	2573	C	C6-N1-C1'	-5.62	114.06	120.80
25	YA	512	G	C8-N9-C1'	5.62	134.30	127.00
25	YA	1830	C	C5-C6-N1	5.62	123.81	121.00
25	RA	1078	U	P-O3'-C3'	5.61	126.43	119.70
25	YA	860	U	N3-C2-O2	-5.60	118.28	122.20
25	YA	828	U	N1-C2-O2	5.60	126.72	122.80
1	XA	812	C	P-O3'-C3'	5.60	126.42	119.70
25	RA	74	A	N7-C8-N9	5.59	116.59	113.80
25	RA	372	G	C8-N9-C1'	5.59	134.26	127.00
25	RA	2335	A	O4'-C1'-N9	5.59	112.67	108.20
1	XA	1094	G	P-O3'-C3'	5.58	126.39	119.70
25	RA	1941	C	C6-N1-C2	-5.58	118.07	120.30
25	YA	2198	A	P-O3'-C3'	5.58	126.39	119.70
25	YA	1979	C	C6-N1-C2	-5.57	118.07	120.30
25	YA	792	G	N3-C4-C5	-5.57	125.81	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	205	G	OP2-P-O3'	5.57	117.44	105.20
25	YA	372	G	OP2-P-O3'	5.56	117.43	105.20
25	YA	1193	G	C8-N9-C4	5.56	108.62	106.40
50	R4	39	CYS	N-CA-C	-5.55	96.00	111.00
25	YA	974(A)	C	P-O3'-C3'	5.54	126.35	119.70
33	YN	114	ARG	N-CA-C	-5.54	96.03	111.00
1	QA	372	C	N1-C2-O2	5.54	122.22	118.90
25	RA	2776	A	C8-N9-C4	-5.54	103.58	105.80
1	XA	701	C	OP2-P-O3'	5.54	117.38	105.20
1	XA	792	A	C6-C5-N7	-5.54	128.43	132.30
1	QA	372	C	C5-C6-N1	5.53	123.77	121.00
25	RA	1914	C	N1-C2-O2	5.53	122.22	118.90
25	RA	1992	G	C8-N9-C4	-5.53	104.19	106.40
25	YA	2318	G	O4'-C1'-N9	5.53	112.62	108.20
1	XA	1053	G	C8-N9-C1'	5.53	134.19	127.00
25	RA	1411	C	N1-C2-O2	5.53	122.22	118.90
25	YA	1130	U	C6-N1-C2	-5.53	117.69	121.00
25	YA	796	C	C6-N1-C2	5.52	122.51	120.30
1	QA	690	G	O4'-C1'-N9	5.52	112.62	108.20
33	RN	114	ARG	N-CA-C	-5.52	96.09	111.00
50	Y4	39	CYS	N-CA-C	-5.52	96.10	111.00
25	YA	1786	A	C5-N7-C8	-5.52	101.14	103.90
1	XA	690	G	O4'-C1'-N9	5.51	112.61	108.20
25	RA	372	G	O4'-C1'-N9	5.51	112.61	108.20
1	XA	328	C	P-O3'-C3'	5.50	126.30	119.70
1	QA	1322	C	C5-C6-N1	5.49	123.75	121.00
25	RA	475	U	C2-N1-C1'	5.49	124.29	117.70
25	YA	287	C	C6-N1-C2	5.49	122.49	120.30
25	RA	828	U	N1-C2-O2	5.48	126.64	122.80
25	RA	2585	U	P-O3'-C3'	5.48	126.28	119.70
26	RB	42	C	C5-C4-N4	-5.48	116.36	120.20
25	YA	1314	C	C2-N1-C1'	5.48	124.83	118.80
1	XA	481	G	P-O3'-C3'	5.48	126.28	119.70
25	RA	1937	A	C8-N9-C4	5.47	107.99	105.80
25	YA	535	C	C6-N1-C2	-5.47	118.11	120.30
25	YA	1929	G	O4'-C1'-N9	-5.47	103.82	108.20
25	YA	2751	G	C3'-C2'-C1'	5.47	105.88	101.50
1	QA	792	A	P-O3'-C3'	5.47	126.26	119.70
25	RA	912	C	C6-N1-C2	-5.47	118.11	120.30
26	YB	43	C	C2-N1-C1'	5.47	124.81	118.80
31	YH	127	GLU	N-CA-C	-5.47	96.24	111.00
25	YA	1929	G	C5-C6-O6	-5.46	125.32	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	703	G	P-O3'-C3'	5.46	126.26	119.70
1	XA	871	U	P-O3'-C3'	5.46	126.25	119.70
1	QA	1301	U	C6-N1-C1'	-5.45	113.57	121.20
25	RA	1786	A	C8-N9-C4	-5.45	103.62	105.80
1	XA	687	A	P-O3'-C3'	5.45	126.25	119.70
25	YA	1253	A	N9-C4-C5	-5.45	103.62	105.80
26	RB	43	C	N3-C2-O2	-5.45	118.08	121.90
35	RP	25	SER	N-CA-C	-5.45	96.29	111.00
27	RD	251	GLY	N-CA-C	5.44	126.70	113.10
25	YA	1050	A	N7-C8-N9	5.44	116.52	113.80
4	QD	12	CYS	CA-CB-SG	5.44	123.79	114.00
25	YA	2584	U	C6-N1-C2	-5.44	117.74	121.00
25	YA	2588	G	C4-C5-N7	5.44	112.97	110.80
25	YA	974(A)	C	N3-C2-O2	-5.43	118.10	121.90
27	YD	251	GLY	N-CA-C	5.43	126.67	113.10
25	RA	593	G	O4'-C1'-N9	5.43	112.54	108.20
25	YA	487	C	N1-C2-O2	5.42	122.15	118.90
1	XA	971	G	C4-N9-C1'	-5.42	119.46	126.50
35	YP	25	SER	N-CA-C	-5.42	96.37	111.00
1	QA	533	A	P-O3'-C3'	5.42	126.20	119.70
31	RH	127	GLU	N-CA-C	-5.42	96.38	111.00
25	YA	676	A	O4'-C1'-N9	5.42	112.53	108.20
4	XD	12	CYS	CA-CB-SG	5.41	123.74	114.00
25	RA	702	G	C4-N9-C1'	5.41	133.53	126.50
25	RA	2326	C	C5-C6-N1	5.41	123.70	121.00
1	XA	1158	C	C6-N1-C1'	-5.41	114.31	120.80
25	RA	1899	G	C6-C5-N7	-5.40	127.16	130.40
32	RI	135	GLU	N-CA-C	5.39	125.56	111.00
1	XA	792	A	C2-N3-C4	-5.39	107.90	110.60
32	YI	135	GLU	N-CA-C	5.39	125.56	111.00
25	RA	1786	A	C6-C5-N7	-5.39	128.53	132.30
25	YA	1819	A	P-O3'-C3'	5.39	126.17	119.70
1	XA	893	C	N1-C2-O2	5.39	122.13	118.90
27	YD	111	LEU	CA-CB-CG	5.38	127.68	115.30
25	RA	270(Z)	U	O4'-C1'-N1	5.38	112.50	108.20
25	RA	1899	G	N3-C4-N9	5.38	129.23	126.00
31	RH	100	GLY	N-CA-C	-5.38	99.66	113.10
31	YH	100	GLY	N-CA-C	-5.37	99.67	113.10
25	RA	1781	C	O4'-C1'-N1	5.37	112.49	108.20
25	RA	1496	A	N7-C8-N9	5.36	116.48	113.80
1	XA	1003	G	N9-C1'-C2'	-5.36	106.11	112.00
1	XA	428	G	P-O3'-C3'	5.36	126.13	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	265	A	C5-C6-N1	5.36	120.38	117.70
25	RA	1379	A	O4'-C1'-N9	5.35	112.48	108.20
27	RD	111	LEU	CA-CB-CG	5.35	127.61	115.30
25	RA	787	U	O5'-P-OP2	-5.35	100.89	105.70
22	XV	17	C	N3-C2-O2	-5.35	118.16	121.90
25	YA	1936	A	N1-C6-N6	5.34	121.81	118.60
25	RA	27	G	C4-N9-C1'	-5.34	119.56	126.50
25	RA	226	G	P-O3'-C3'	5.34	126.11	119.70
25	RA	2689	U	P-O3'-C3'	5.34	126.11	119.70
1	XA	1302	U	C6-N1-C1'	-5.34	113.72	121.20
1	QA	882	C	N1-C2-O2	5.34	122.10	118.90
1	XA	1158	C	C5-C6-N1	5.34	123.67	121.00
25	RA	74	A	C8-N9-C4	-5.33	103.67	105.80
25	YA	372	G	P-O3'-C3'	5.33	126.10	119.70
25	YA	2032	G	C5-N7-C8	-5.33	101.63	104.30
1	XA	1528	U	P-O3'-C3'	5.32	126.08	119.70
22	XV	17	C	C5-C6-N1	5.32	123.66	121.00
25	YA	1319	G	N7-C8-N9	5.31	115.76	113.10
25	RA	2782	G	N3-C4-N9	5.31	129.19	126.00
25	YA	140	A	O4'-C1'-N9	5.31	112.45	108.20
25	YA	848	G	N3-C4-N9	5.31	129.19	126.00
54	R8	36	LYS	N-CA-C	-5.31	96.66	111.00
25	RA	1929	G	N7-C8-N9	5.31	115.75	113.10
25	RA	1992	G	N3-C4-C5	-5.31	125.95	128.60
1	XA	1503	A	P-O3'-C3'	5.30	126.07	119.70
25	YA	1558	A	P-O3'-C3'	5.30	126.07	119.70
25	YA	1694	C	P-O3'-C3'	5.30	126.06	119.70
54	Y8	36	LYS	N-CA-C	-5.30	96.68	111.00
1	XA	1302	U	N1-C2-O2	5.30	126.51	122.80
25	YA	704	G	P-O3'-C3'	5.28	126.04	119.70
25	YA	1950	G	C5-N7-C8	-5.28	101.66	104.30
25	YA	205	G	P-O3'-C3'	5.28	126.04	119.70
25	YA	1210	A	N7-C8-N9	5.28	116.44	113.80
1	XA	792	A	C5-N7-C8	-5.28	101.26	103.90
1	XA	1200	C	P-O3'-C3'	5.27	126.03	119.70
25	YA	335	C	C6-N1-C2	-5.27	118.19	120.30
1	XA	1374	A	O4'-C1'-N9	5.27	112.41	108.20
25	YA	205	G	OP2-P-O3'	5.26	116.78	105.20
25	RA	1558	A	P-O3'-C3'	5.26	126.02	119.70
25	YA	1332	G	N3-C4-N9	5.26	129.16	126.00
25	YA	2375	G	C5-C6-O6	-5.26	125.44	128.60
25	YA	2779	U	C2-N1-C1'	5.26	124.01	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	372	G	OP2-P-O3'	5.25	116.76	105.20
25	YA	404	C	P-O3'-C3'	5.25	126.00	119.70
38	RS	110	LEU	CA-CB-CG	5.25	127.38	115.30
25	YA	2254	C	N1-C2-O2	-5.25	115.75	118.90
25	YA	1218	C	N1-C2-O2	5.25	122.05	118.90
25	YA	624	C	N1-C2-O2	5.25	122.05	118.90
25	YA	1204	A	O4'-C1'-N9	5.24	112.39	108.20
25	YA	1407	C	N1-C2-O2	5.24	122.05	118.90
1	XA	1065	U	P-O3'-C3'	5.23	125.98	119.70
25	YA	1936	A	N9-C4-C5	-5.23	103.71	105.80
25	YA	2585	U	C6-N1-C2	5.23	124.14	121.00
25	RA	1241	A	O4'-C1'-N9	5.23	112.38	108.20
25	YA	1607	C	C2-N1-C1'	5.23	124.55	118.80
36	YQ	5	ARG	N-CA-C	-5.22	96.90	111.00
1	QA	960	U	C2-N1-C1'	5.22	123.96	117.70
25	RA	404	C	P-O3'-C3'	5.22	125.96	119.70
1	QA	703	G	P-O3'-C3'	5.21	125.96	119.70
25	RA	102	G	C8-N9-C1'	-5.21	120.23	127.00
1	QA	410	G	P-O3'-C3'	5.21	125.95	119.70
36	RQ	5	ARG	N-CA-C	-5.21	96.94	111.00
25	RA	1411	C	C2-N1-C1'	5.20	124.52	118.80
25	RA	2519	U	O5'-P-OP1	-5.20	101.02	105.70
19	XS	79	THR	N-CA-C	-5.20	96.96	111.00
25	RA	2205	C	C6-N1-C2	-5.20	118.22	120.30
25	RA	1729	A	O4'-C1'-N9	5.20	112.36	108.20
25	RA	2848	G	P-O3'-C3'	5.19	125.93	119.70
26	RB	44	G	N3-C4-N9	-5.19	122.88	126.00
25	RA	83	G	P-O3'-C3'	5.19	125.93	119.70
25	RA	475	U	C6-N1-C2	-5.19	117.89	121.00
25	RA	2394	C	N1-C2-O2	5.19	122.01	118.90
1	QA	1027	C	OP1-P-O3'	5.19	116.61	105.20
25	RA	846	C	P-O3'-C3'	5.18	125.92	119.70
25	RA	828	U	N3-C2-O2	-5.18	118.57	122.20
25	RA	2832	U	P-O3'-C3'	5.18	125.92	119.70
25	RA	265	A	O4'-C1'-N9	5.18	112.34	108.20
1	QA	31	G	P-O3'-C3'	5.18	125.92	119.70
25	RA	624	C	C5-C6-N1	5.18	123.59	121.00
25	YA	2712	U	N3-C2-O2	-5.17	118.58	122.20
25	YA	1930	G	C4-N9-C1'	-5.17	119.78	126.50
38	YS	110	LEU	CA-CB-CG	5.17	127.19	115.30
1	QA	819	A	N1-C6-N6	5.17	121.70	118.60
25	YA	1313	U	C5-C6-N1	5.17	125.28	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2849	U	O4'-C1'-N1	5.17	112.33	108.20
25	YA	142	G	C8-N9-C1'	5.16	133.71	127.00
25	YA	1699	G	C5-C6-O6	5.16	131.69	128.60
19	QS	79	THR	N-CA-C	-5.16	97.08	111.00
25	RA	2394	C	N3-C2-O2	-5.16	118.29	121.90
25	RA	2634	G	N1-C6-O6	5.15	122.99	119.90
25	YA	774	A	N3-C4-N9	-5.15	123.28	127.40
26	RB	44	G	N3-C4-C5	5.15	131.18	128.60
25	YA	1964	G	N1-C6-O6	5.15	122.99	119.90
25	YA	2311	A	N1-C2-N3	5.15	131.87	129.30
25	YA	2447	G	N9-C4-C5	5.15	107.46	105.40
25	YA	604	G	N3-C4-N9	5.14	129.09	126.00
25	YA	1806	C	C6-N1-C2	-5.14	118.24	120.30
1	QA	328	C	P-O3'-C3'	5.14	125.87	119.70
26	RB	44	G	C8-N9-C1'	5.14	133.68	127.00
1	QA	484	G	P-O3'-C3'	5.14	125.86	119.70
25	YA	910	A	N1-C6-N6	5.14	121.68	118.60
25	RA	2542	A	C8-N9-C4	5.13	107.85	105.80
25	RA	395	U	O4'-C1'-N1	5.13	112.31	108.20
25	RA	1637	A	C8-N9-C4	-5.13	103.75	105.80
25	RA	2634	G	C4-C5-N7	5.13	112.85	110.80
25	YA	587	C	P-O3'-C3'	5.13	125.85	119.70
25	YA	659	C	N1-C2-O2	5.13	121.98	118.90
1	QA	1065	U	OP2-P-O3'	5.12	116.47	105.20
25	YA	856	C	C6-N1-C2	-5.12	118.25	120.30
25	YA	2726	U	O4'-C1'-N1	5.12	112.30	108.20
25	YA	2776	A	P-O3'-C3'	5.12	125.84	119.70
1	QA	906	G	C5-C6-O6	-5.11	125.53	128.60
25	YA	930	U	N1-C2-O2	5.11	126.38	122.80
25	YA	1359	A	N1-C6-N6	5.11	121.66	118.60
25	YA	2468	G	O4'-C1'-N9	5.10	112.28	108.20
25	RA	810	U	N3-C4-O4	5.10	122.97	119.40
1	XA	971	G	N3-C4-N9	-5.10	122.94	126.00
1	XA	1336	C	C5-C6-N1	5.10	123.55	121.00
1	QA	1334	G	C4-N9-C1'	5.09	133.12	126.50
1	QA	1151	A	O4'-C1'-N9	5.08	112.27	108.20
39	RT	123	GLN	N-CA-C	-5.08	97.27	111.00
39	YT	123	GLN	N-CA-C	-5.08	97.28	111.00
25	RA	1313	U	C2-N1-C1'	5.08	123.79	117.70
1	XA	60	A	P-O3'-C3'	5.07	125.79	119.70
25	RA	2634	G	C5-C6-O6	-5.07	125.56	128.60
39	YT	59	THR	N-CA-C	-5.07	97.31	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	676	A	C8-N9-C4	-5.07	103.77	105.80
25	YA	1698	A	N1-C2-N3	5.06	131.83	129.30
25	YA	2345	G	C5-C6-O6	5.06	131.64	128.60
39	RT	59	THR	N-CA-C	-5.06	97.35	111.00
1	QA	412	A	P-O3'-C3'	5.06	125.77	119.70
1	QA	992	U	P-O3'-C3'	5.06	125.77	119.70
25	YA	2567	G	O5'-P-OP1	-5.06	101.15	105.70
25	YA	1931	U	N3-C2-O2	-5.05	118.66	122.20
25	YA	2756	U	OP1-P-O3'	5.05	116.32	105.20
1	XA	992	U	P-O3'-C3'	5.05	125.76	119.70
25	YA	1253	A	C5-N7-C8	-5.05	101.38	103.90
25	YA	2439	A	C8-N9-C4	-5.05	103.78	105.80
1	QA	121	C	C4-C5-C6	5.04	119.92	117.40
1	QA	1285	A	P-O3'-C3'	5.04	125.75	119.70
1	XA	353	A	OP2-P-O3'	5.04	116.30	105.20
25	YA	846	C	P-O3'-C3'	5.04	125.75	119.70
31	RH	127	GLU	C-N-CD	-5.04	109.51	120.60
31	YH	127	GLU	C-N-CD	-5.04	109.51	120.60
25	YA	1929	G	P-O3'-C3'	5.04	125.75	119.70
25	YA	1130	U	C5-C6-N1	5.03	125.22	122.70
25	YA	214	G	N3-C4-C5	-5.03	126.08	128.60
25	YA	59	U	C6-N1-C2	-5.03	117.98	121.00
25	RA	2490	G	C8-N9-C4	-5.03	104.39	106.40
25	YA	568	U	N1-C2-O2	-5.02	119.28	122.80
25	RA	2490	G	N3-C4-C5	-5.02	126.09	128.60
25	YA	2430	A	C8-N9-C4	-5.02	103.79	105.80
1	QA	314	C	C2-N1-C1'	5.02	124.32	118.80
25	YA	974(A)	C	N1-C2-O2	5.02	121.91	118.90
25	YA	1253	A	C6-C5-N7	-5.02	128.79	132.30
22	QV	17	C	N3-C2-O2	-5.01	118.39	121.90
25	RA	739	G	N1-C6-O6	-5.01	116.89	119.90
1	XA	1504	G	N3-C4-C5	-5.01	126.10	128.60
25	YA	222	A	P-O3'-C3'	5.01	125.71	119.70
25	YA	1699	G	C4-C5-N7	-5.01	108.80	110.80
25	YA	2610	C	OP2-P-O3'	5.00	116.21	105.20

There are no chirality outliers.

There are no planarity outliers.

5.2 Close contacts ⓘ

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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32247	0	16275	828	0
1	XA	32269	0	16289	816	0
2	QB	1924	0	1975	291	0
2	XB	1924	0	1975	301	0
3	QC	1605	0	1668	208	0
3	XC	1605	0	1668	209	1
4	QD	1703	0	1762	240	0
4	XD	1703	0	1763	215	0
5	QE	1155	0	1213	147	0
5	XE	1155	0	1213	142	0
6	QF	843	0	857	93	0
6	XF	843	0	857	99	0
7	QG	1257	0	1296	149	0
7	XG	1257	0	1296	147	0
8	QH	1116	0	1176	155	0
8	XH	1116	0	1177	164	0
9	QI	1010	0	1037	151	0
9	XI	1010	0	1037	160	0
10	QJ	801	0	849	138	0
10	XJ	801	0	849	136	0
11	QK	885	0	904	108	1
11	XK	885	0	904	118	0
12	QL	975	0	1062	109	0
12	XL	975	0	1062	113	0
13	QM	964	0	1034	171	0
13	XM	964	0	1034	180	0
14	QN	492	0	531	89	0
14	XN	492	0	529	87	0
15	QO	734	0	771	75	0
15	XO	734	0	771	74	0
16	QP	705	0	725	114	0
16	XP	705	0	725	113	0
17	QQ	834	0	904	84	0
17	XQ	834	0	904	82	0
18	QR	574	0	644	68	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
18	XR	574	0	644	67	0
19	QS	674	0	699	104	0
19	XS	674	0	699	143	0
20	QT	763	0	860	108	0
20	XT	763	0	861	102	0
21	QU	217	0	234	30	0
21	XU	217	0	234	29	0
22	QV	1644	0	836	41	0
22	XV	1644	0	836	40	0
23	QX	170	0	87	16	0
23	XX	170	0	88	10	0
24	QY	303	0	154	13	0
24	XY	303	0	154	17	0
25	RA	62091	0	31301	1401	0
25	YA	62071	0	31286	1351	0
26	RB	2573	0	1306	70	0
26	YB	2573	0	1306	61	0
27	RD	2115	0	2195	324	0
27	YD	2115	0	2195	350	0
28	RE	1568	0	1634	277	0
28	YE	1568	0	1634	266	0
29	RF	1585	0	1632	174	0
29	YF	1585	0	1632	182	0
30	RG	1474	0	1535	212	0
30	YG	1474	0	1535	206	0
31	RH	1307	0	1382	217	0
31	YH	1307	0	1382	219	1
32	RI	1136	0	1223	179	0
32	YI	1136	0	1223	176	0
33	RN	1104	0	1180	194	0
33	YN	1104	0	1180	186	0
34	RO	933	0	996	123	0
34	YO	933	0	996	124	0
35	RP	1145	0	1228	248	0
35	YP	1145	0	1228	247	0
36	RQ	1122	0	1179	168	0
36	YQ	1122	0	1179	168	0
37	RR	968	0	1033	115	0
37	YR	968	0	1033	112	0
38	RS	882	0	943	158	0
38	YS	882	0	943	163	0
39	RT	1141	0	1202	152	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	YT	1141	0	1202	156	0
40	RU	964	0	1022	130	0
40	YU	964	0	1022	138	0
41	RV	779	0	852	132	0
41	YV	779	0	852	130	1
42	RW	900	0	964	101	0
42	YW	900	0	964	108	0
43	RX	725	0	778	68	0
43	YX	725	0	778	82	0
44	RY	785	0	878	163	0
44	YY	785	0	878	154	1
45	RZ	1378	0	1407	227	0
45	YZ	1378	0	1407	227	0
46	R0	648	0	672	88	0
46	Y0	648	0	672	85	0
47	R1	763	0	848	141	0
47	Y1	763	0	848	145	0
48	R2	581	0	629	80	0
48	Y2	581	0	629	75	0
49	R3	469	0	518	40	0
49	Y3	469	0	518	41	0
50	R4	581	0	574	159	0
50	Y4	581	0	574	180	0
51	R5	459	0	480	77	0
51	Y5	459	0	480	75	1
52	R6	424	0	450	93	0
52	Y6	424	0	450	90	0
53	R7	430	0	480	47	0
53	Y7	430	0	480	42	0
54	R8	517	0	582	106	0
54	Y8	517	0	582	100	0
55	Z6	74	0	51	10	0
55	Z8	74	0	51	4	0
56	QA	60	0	0	0	0
56	QF	1	0	0	0	0
56	QH	1	0	0	0	0
56	QM	1	0	0	0	0
56	QV	2	0	0	0	0
56	QX	2	0	0	0	0
56	R5	1	0	0	0	0
56	RA	212	0	0	0	0
56	RB	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	RE	2	0	0	0	0
56	RF	1	0	0	0	0
56	RP	1	0	0	0	0
56	XA	63	0	0	0	0
56	XM	2	0	0	0	0
56	XV	2	0	0	0	0
56	Y5	1	0	0	0	0
56	YA	242	0	0	0	0
56	YB	2	0	0	0	0
56	YE	2	0	0	0	0
56	YX	1	0	0	0	0
57	QA	42	0	45	4	0
57	XA	42	0	45	1	0
58	QD	1	0	0	0	0
58	QN	1	0	0	0	0
58	XD	1	0	0	0	0
58	XN	1	0	0	0	0
All	All	291123	0	197505	16608	3

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 34.

All (16608) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:QN:39:LEU:HD22	14:QN:43:CYS:SG	1.33	1.63
36:YQ:81:VAL:HG23	46:Y0:7:LEU:CD2	1.21	1.60
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.35	1.54
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.35	1.52
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	1.45	1.51
36:YQ:81:VAL:CG2	46:Y0:7:LEU:HD21	0.94	1.42
47:R1:81:LYS:HA	47:R1:81:LYS:NZ	1.42	1.34
47:Y1:81:LYS:HA	47:Y1:81:LYS:NZ	1.43	1.33
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	2.11	1.31
13:QM:121:LYS:NZ	24:QY:40:G:OP1	1.65	1.28
47:R1:81:LYS:N	47:R1:81:LYS:HE2	1.50	1.26
36:YQ:81:VAL:CG2	46:Y0:7:LEU:CD2	1.85	1.26
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	1.26
36:RQ:80:GLU:CG	46:R0:5:LYS:HB3	1.66	1.25
32:RI:144:VAL:O	32:RI:145:VAL:HG12	1.31	1.25
14:QN:39:LEU:CD2	14:QN:43:CYS:SG	2.27	1.23
46:Y0:3:HIS:CD2	46:Y0:4:LYS:O	1.93	1.22
36:YQ:80:GLU:OE1	46:Y0:5:LYS:HD2	1.09	1.22

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:127:GLU:HG2	31:YH:128:PRO:CD	1.69	1.21
31:RH:127:GLU:HG2	31:RH:128:PRO:CD	1.69	1.21
14:QN:26:ARG:HB3	14:QN:43:CYS:SG	1.81	1.21
31:YH:127:GLU:CB	31:YH:128:PRO:HD3	1.69	1.20
31:RH:127:GLU:CB	31:RH:128:PRO:HD3	1.69	1.19
44:RY:95:LYS:HB3	44:RY:100:ALA:HA	1.20	1.17
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.16
47:Y1:82:LEU:HD12	47:Y1:82:LEU:C	1.66	1.16
13:XM:121:LYS:NZ	24:XY:40:G:OP1	1.76	1.16
44:YY:76:CYS:HB3	44:YY:96:ILE:HD13	1.17	1.16
31:RH:132:ARG:HH11	31:RH:132:ARG:HB2	1.10	1.16
44:YY:95:LYS:HB3	44:YY:100:ALA:HA	1.20	1.16
35:RP:50:ARG:HB3	35:RP:50:ARG:HH21	1.13	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.14
47:R1:82:LEU:HD12	47:R1:82:LEU:C	1.66	1.13
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
13:XM:121:LYS:NZ	24:XY:39:C:O2'	1.82	1.12
35:YP:50:ARG:HB3	35:YP:50:ARG:HH21	1.13	1.12
45:RZ:152:ALA:HB2	45:RZ:169:GLU:HB3	1.15	1.12
47:R1:82:LEU:CD1	47:R1:83:GLU:O	1.97	1.11
40:RU:8:VAL:HG23	40:RU:11:ARG:HH21	1.14	1.11
40:YU:8:VAL:HG23	40:YU:11:ARG:HH21	1.14	1.11
45:YZ:152:ALA:HB2	45:YZ:169:GLU:HB3	1.15	1.11
27:YD:44:ASN:HB2	27:YD:48:ARG:O	1.50	1.11
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.32	1.11
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.31	1.11
29:RF:101:LEU:HD12	29:RF:102:PRO:HD2	1.21	1.11
19:XS:5:LEU:CD1	50:Y4:66:SER:HB2	1.80	1.11
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.11
47:Y1:82:LEU:HD12	47:Y1:83:GLU:N	1.66	1.11
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.32	1.11
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.10
27:RD:44:ASN:HB2	27:RD:48:ARG:O	1.50	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.06	1.10
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.48	1.10
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.10
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.10
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.10
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.15	1.09
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:270(T):G:H5''	47:R1:97:LEU:HD22	1.34	1.08
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.32	1.08
31:YH:152:ARG:HG3	31:YH:153:LYS:HE2	1.33	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.33	1.08
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.08
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.18	1.08
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.08
35:RP:19:VAL:HG22	35:RP:20:GLY:H	1.15	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
27:YD:131:LEU:HB2	27:YD:136:ILE:HD11	1.35	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
31:YH:86:GLU:HG3	31:YH:165:ALA:H	1.05	1.08
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.08
36:YQ:81:VAL:HG22	46:Y0:7:LEU:HD21	1.15	1.08
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	1.07
13:XM:8:GLU:OE2	30:YG:115:ARG:NH1	1.85	1.07
36:YQ:81:VAL:HG23	46:Y0:7:LEU:HD22	1.35	1.07
36:YQ:81:VAL:HG21	46:Y0:7:LEU:HD21	1.33	1.07
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.07
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.02	1.07
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.34	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
25:YA:1050:A:H8	25:YA:2751:G:H2'	1.14	1.07
50:R4:71:ARG:HH11	50:R4:71:ARG:HG3	1.13	1.07
19:XS:5:LEU:HD22	50:Y4:67:TYR:CZ	1.90	1.06
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.31	1.06
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06
50:Y4:71:ARG:HG3	50:Y4:71:ARG:HH11	1.13	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
35:YP:59:LEU:HA	35:YP:61:ARG:NH2	1.69	1.06
28:RE:21:VAL:HB	28:RE:22:PRO:HB3	1.37	1.06
54:Y8:52:LYS:H	54:Y8:53:PRO:CD	1.69	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.06	1.06
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.06
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	1.71	1.06
1:QA:1531:A:H5''	1:QA:1531:A:H8	1.19	1.06
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
13:QM:88:ARG:HB3	13:QM:88:ARG:HH11	1.19	1.05
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.11	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	1.86	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.34	1.05
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.38	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.35	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.05
36:YQ:80:GLU:OE1	46:Y0:5:LYS:CD	2.05	1.05
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	1.04
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.21	1.04
45:YZ:138:GLU:O	45:YZ:156:LYS:HD3	1.56	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.34	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.04
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.57	1.04
45:RZ:138:GLU:O	45:RZ:156:LYS:HD3	1.56	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
13:QM:62:ASN:ND2	50:R4:49:PHE:HD2	1.56	1.04
31:YH:127:GLU:CG	31:YH:128:PRO:CD	2.31	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.03
38:YS:83:LYS:O	38:YS:109:GLY:HA3	1.57	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
31:YH:127:GLU:CB	31:YH:128:PRO:CD	2.35	1.03
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	1.41	1.03
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.03
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.38	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
29:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.59	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.73	1.02
36:YQ:81:VAL:O	36:YQ:82:ARG:CD	2.06	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
29:RF:67:GLN:O	29:RF:68:LYS:HB2	1.56	1.02
36:YQ:65:PHE:O	36:YQ:66:ILE:HG12	1.59	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	1.02
1:QA:1498:U:O2'	1:QA:1499:A:OP2	1.76	1.02
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.02
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
29:YF:46:ARG:HG2	29:YF:46:ARG:HH11	1.20	1.02
31:RH:153:LYS:HB3	31:RH:154:PRO:HD2	1.06	1.02
46:Y0:3:HIS:HD2	46:Y0:4:LYS:N	1.56	1.02
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.25	1.02
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.40	1.01
34:RO:53:LYS:H	34:RO:53:LYS:HD2	1.23	1.01
30:YG:13:GLU:O	30:YG:14:GLU:HB2	1.60	1.01
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.02	1.01
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
32:YI:78:THR:HG22	32:YI:141:LYS:HD2	1.41	1.01
13:QM:50:GLU:OE1	50:R4:32:TYR:CE2	2.13	1.01
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.42	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
26:RB:42:C:H42	30:RG:91:ARG:HH21	1.06	1.01
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.61	1.01
41:RV:49:THR:HB	41:RV:50:PRO:HD2	1.39	1.01
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.25	1.01
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	1.01
36:RQ:79:LEU:HD13	36:RQ:80:GLU:OE1	1.61	1.00
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
32:YI:144:VAL:HG22	32:YI:145:VAL:H	1.22	1.00
27:RD:227:ASN:HB3	27:RD:228:PRO:HD2	1.43	1.00
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.00
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.24	1.00
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	1.94	1.00
52:Y6:7:ILE:HG13	52:Y6:8:LYS:H	1.25	1.00
36:YQ:79:LEU:HD13	36:YQ:80:GLU:OE1	1.61	1.00
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
36:RQ:65:PHE:O	36:RQ:66:ILE:HG12	1.59	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.60	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	1.00
29:YF:185:ASP:HA	29:YF:188:ARG:HD3	1.41	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	0.99
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.27	0.99
46:R0:2:ALA:HB1	46:R0:3:HIS:CD2	1.97	0.99
31:RH:153:LYS:HB3	31:RH:154:PRO:CD	1.92	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
45:YZ:152:ALA:CB	45:YZ:169:GLU:HB3	1.92	0.99
31:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.30	0.99
45:RZ:152:ALA:CB	45:RZ:169:GLU:HB3	1.92	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.63	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.78	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
48:Y2:50:ILE:HD12	48:Y2:51:ARG:N	1.76	0.99
35:YP:105:LEU:O	35:YP:106:LEU:HB2	1.60	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.99
35:RP:105:LEU:O	35:RP:106:LEU:HB2	1.60	0.99
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.98
35:RP:50:ARG:CB	35:RP:50:ARG:HH21	1.76	0.98
45:RZ:120:ILE:HB	45:RZ:171:ILE:HA	1.45	0.98
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.43	0.98
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98
32:RI:144:VAL:O	32:RI:145:VAL:CG1	2.11	0.98
46:Y0:3:HIS:CD2	46:Y0:4:LYS:N	2.31	0.98
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	1.97	0.98
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.45	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
30:RG:13:GLU:O	30:RG:14:GLU:HB2	1.60	0.98
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.03	0.98
36:RQ:79:LEU:HD22	36:RQ:79:LEU:O	1.64	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:94:LEU:HD12	4:QD:94:LEU:H	1.28	0.98
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.98
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.98
4:QD:30:LYS:C	4:QD:32:ALA:H	1.62	0.98
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.46	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.97
28:RE:20:ALA:O	28:RE:21:VAL:HG22	1.64	0.97
52:Y6:41:PRO:HG2	52:Y6:45:LYS:H	1.29	0.97
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
47:R1:81:LYS:HZ3	47:R1:81:LYS:HA	0.82	0.97
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	0.97
36:RQ:80:GLU:HG3	46:R0:5:LYS:HB3	1.43	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.45	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.28	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.78	0.97
32:YI:38:LEU:HD12	32:YI:38:LEU:H	1.30	0.97
36:YQ:79:LEU:HD22	36:YQ:79:LEU:O	1.64	0.97
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	1.99	0.97
52:R6:7:ILE:HG13	52:R6:8:LYS:H	1.25	0.97
36:RQ:79:LEU:HD13	36:RQ:79:LEU:O	1.63	0.97
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.97
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.97
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	2.00	0.96
25:RA:2298:A:H62	25:RA:2318:G:H8	1.09	0.96
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.47	0.96
1:QA:1049:U:HO2'	14:QN:2:ALA:N	1.61	0.96
1:QA:343:U:HO2'	1:QA:346:G:H1	1.00	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	0.96
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	1.79	0.96
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.30	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.47	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
45:YZ:120:ILE:HB	45:YZ:171:ILE:HA	1.44	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.45	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:20:ALA:O	28:YE:21:VAL:HG22	1.64	0.96
44:YY:84:ARG:HH12	44:YY:97:ARG:HB2	1.28	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
19:XS:9:VAL:HG12	50:Y4:66:SER:O	1.64	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.96
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.96
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.27	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.31	0.95
12:QL:6:THR:H	12:QL:9:GLN:HE21	1.14	0.95
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.95
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.43	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.95
19:QS:5:LEU:HD22	50:R4:67:TYR:HE2	1.19	0.95
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.11	0.95
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.31	0.95
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95
44:RY:84:ARG:HH12	44:RY:97:ARG:HB2	1.28	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.49	0.95
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.95
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95
46:Y0:10:THR:HG22	46:Y0:11:ARG:H	1.27	0.95
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.95
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.95
32:RI:38:LEU:HD12	32:RI:38:LEU:H	1.30	0.95
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.95
4:XD:94:LEU:HD12	4:XD:94:LEU:H	1.28	0.95
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.95
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.97	0.95
35:YP:62:LEU:HD22	35:YP:62:LEU:N	1.82	0.95
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
47:Y1:81:LYS:N	47:Y1:81:LYS:CE	2.30	0.94
48:Y2:13:ALA:HA	48:Y2:16:LEU:HD23	1.48	0.94
47:R1:81:LYS:CA	47:R1:81:LYS:CE	2.45	0.94
45:RZ:120:ILE:CD1	45:RZ:169:GLU:HG3	1.97	0.94
25:RA:1371:G:HO2'	25:RA:1372:U:H5	1.14	0.94
35:RP:62:LEU:HD22	35:RP:62:LEU:N	1.82	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
34:RO:2:ILE:HD11	34:RO:82:ASN:HD22	1.33	0.94
44:RY:51:VAL:HG13	44:RY:52:SER:H	1.31	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.29	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.00	0.94
44:YY:51:VAL:HG13	44:YY:52:SER:H	1.31	0.94
45:YZ:120:ILE:CD1	45:YZ:169:GLU:HG3	1.97	0.94
27:RD:28:GLU:HB2	27:RD:29:PRO:CD	1.98	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
27:RD:108:PRO:HB3	27:RD:143:HIS:HE1	1.32	0.94
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
25:YA:138:G:N2	43:YX:44:GLU:OE2	1.99	0.94
47:R1:81:LYS:CE	47:R1:81:LYS:N	2.30	0.94
28:RE:78:LEU:HG	28:RE:79:ARG:HE	1.31	0.94
41:RV:35:LEU:HD21	41:RV:57:VAL:HG22	1.47	0.94
31:YH:77:LYS:NZ	31:YH:77:LYS:HB3	1.82	0.94
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.47	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.94
25:YA:1496:A:H8	25:YA:1577:C:HO2'	1.00	0.94
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.31	0.93
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.93
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.93
2:XB:8:LYS:H	2:XB:8:LYS:HD3	1.31	0.93
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.03	0.93
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
31:YH:77:LYS:HZ3	31:YH:77:LYS:HB3	1.31	0.93
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.30	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
39:YT:11:GLU:H	39:YT:11:GLU:CD	1.71	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
25:YA:859:G:O2'	25:YA:860:U:O2	1.87	0.93
13:QM:57:ARG:HH11	13:QM:57:ARG:HB2	1.32	0.93
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.51	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:R5:58:LEU:HD13	51:R5:60:VAL:HG12	1.47	0.93
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.04	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.51	0.93
41:RV:99:ILE:H	41:RV:99:ILE:HD13	1.32	0.93
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.93
25:YA:71:A:H2	43:YX:31:HIS:HE1	1.16	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.85	0.92
45:RZ:18:LEU:H	45:RZ:18:LEU:HD12	1.33	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.35	0.92
5:QE:53:LEU:HD12	5:QE:53:LEU:H	1.34	0.92
29:RF:103:LYS:HA	29:RF:106:ARG:HG3	1.48	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
25:YA:1050:A:C8	25:YA:2751:G:H2'	2.04	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
47:R1:81:LYS:CA	47:R1:81:LYS:NZ	2.31	0.92
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.03	0.92
32:RI:115:ALA:HB3	32:RI:128:LEU:HD11	1.50	0.92
5:XE:79:GLU:OE2	8:XH:104:ARG:HA	1.69	0.92
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
32:YI:144:VAL:HG13	32:YI:145:VAL:HG13	1.52	0.92
27:RD:183:ARG:HH11	27:RD:183:ARG:HG2	1.34	0.92
45:RZ:107:THR:HB	45:RZ:144:LEU:HB2	1.52	0.92
45:YZ:18:LEU:HD12	45:YZ:18:LEU:H	1.33	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
47:R1:81:LYS:CE	47:R1:81:LYS:HA	2.00	0.92
30:RG:37:VAL:HG22	30:RG:159:VAL:HA	1.52	0.92
31:RH:153:LYS:CB	31:RH:154:PRO:HD2	1.97	0.92
5:XE:53:LEU:HD12	5:XE:53:LEU:H	1.34	0.92
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.92
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.92
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.92
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:RQ:80:GLU:HG2	46:R0:5:LYS:HD3	1.50	0.92
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.91
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	1.83	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.51	0.91
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.31	0.91
36:YQ:34:LEU:HD11	36:YQ:129:THR:HB	1.50	0.91
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.35	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.34	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
22:QV:1:C:C4'	46:R0:5:LYS:HE2	2.00	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.01	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
4:QD:166:LYS:HG3	27:YD:135:PHE:CZ	2.05	0.91
30:RG:101:ILE:HG13	30:RG:102:PHE:N	1.86	0.91
31:RH:77:LYS:NZ	31:RH:77:LYS:HB3	1.82	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
30:YG:37:VAL:HG22	30:YG:159:VAL:HA	1.52	0.91
38:YS:67:ARG:NH1	38:YS:67:ARG:HB2	1.85	0.91
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
44:YY:30:VAL:HG22	44:YY:37:VAL:HG12	1.53	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.33	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.50	0.91
37:RR:33:ARG:NH2	51:R5:55:ARG:HG2	1.85	0.91
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.91
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.50	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.91
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.86	0.91
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.91
36:RQ:81:VAL:HG23	46:R0:7:LEU:HD11	1.51	0.91
38:RS:67:ARG:HB2	38:RS:67:ARG:NH1	1.85	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.90
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.90
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.90
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.90
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.34	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.35	0.90
36:YQ:80:GLU:CD	46:Y0:5:LYS:HD2	1.92	0.90
25:RA:676:A:H8	25:RA:2069:G:H21	1.18	0.90
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	0.90
13:QM:50:GLU:OE1	50:R4:32:TYR:HE2	1.51	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
31:RH:4:ILE:HG13	31:RH:6:ARG:CZ	2.01	0.90
1:QA:1071:C:H5''	5:QE:49:PRO:HG2	1.53	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
48:Y2:65:ASN:HB3	48:Y2:69:ARG:HH12	1.34	0.90
27:YD:147:LEU:HD13	27:YD:155:LEU:HD11	1.51	0.90
27:YD:44:ASN:H	27:YD:44:ASN:HD22	1.19	0.90
35:YP:106:LEU:O	35:YP:107:LYS:HB2	1.71	0.90
41:YV:44:LYS:O	41:YV:46:VAL:HG12	1.72	0.90
22:QV:1:C:O4'	46:R0:5:LYS:CE	2.20	0.90
25:RA:859:G:O2'	25:RA:860:U:O2	1.88	0.90
1:XA:186(E):C:H42	1:XA:191(B):G:H1	1.19	0.90
8:XH:6:ILE:HD12	8:XH:6:ILE:H	1.35	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	0.90
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.50	0.90
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
32:YI:115:ALA:HB3	32:YI:128:LEU:HD11	1.50	0.90
45:YZ:107:THR:HB	45:YZ:144:LEU:HB2	1.52	0.90
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.36	0.90
25:RA:819:A:OP2	25:RA:1187:G:N2	2.03	0.90
31:YH:4:ILE:HG13	31:YH:6:ARG:CZ	2.01	0.90
14:QN:26:ARG:CB	14:QN:43:CYS:SG	2.60	0.89
31:RH:26:VAL:HG13	31:RH:27:LYS:H	1.35	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.72	0.89
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.20	0.89
27:YD:183:ARG:HH11	27:YD:183:ARG:HG2	1.34	0.89
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.89
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.89
36:RQ:80:GLU:CG	46:R0:5:LYS:CB	2.50	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.55	0.89
25:RA:242:G:H5'	54:R8:62:LEU:HD22	1.52	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:Y0:3:HIS:HD2	46:Y0:4:LYS:O	1.53	0.89
19:XS:5:LEU:HD22	50:Y4:67:TYR:CE2	2.06	0.89
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.36	0.89
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.05	0.89
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
40:RU:92:ARG:O	40:RU:92:ARG:HG2	1.69	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
51:R5:3:LYS:HE3	51:R5:3:LYS:HA	1.54	0.89
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.53	0.89
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
28:YE:63:LEU:HD12	28:YE:64:LYS:N	1.88	0.89
54:R8:52:LYS:H	54:R8:53:PRO:HD3	1.35	0.89
41:RV:44:LYS:O	41:RV:46:VAL:HG12	1.72	0.89
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.13	0.89
54:Y8:59:LYS:NZ	54:Y8:59:LYS:HB2	1.88	0.89
35:RP:88:LEU:HD12	35:RP:95:VAL:HG11	1.52	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
1:QA:677:U:H3	1:QA:713:G:H1	1.20	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.89
27:RD:27:THR:HG23	27:RD:28:GLU:H	1.38	0.88
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.88
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.73	0.88
2:XB:178:ARG:HH21	8:XH:74:PRO:CB	1.86	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.53	0.88
30:RG:88:ILE:HD13	30:RG:88:ILE:O	1.72	0.88
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.87	0.88
51:R5:40:LYS:HZ1	51:R5:48:GLU:HB2	1.38	0.88
32:RI:75:LEU:HB3	32:RI:105:HIS:CE1	2.08	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.07	0.88
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.46	0.88
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.88
28:RE:63:LEU:HD12	28:RE:64:LYS:N	1.88	0.88
33:RN:22:THR:HG22	33:RN:23:LEU:N	1.88	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2701:C:H3'	25:YA:2702:U:H5''	1.55	0.88
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.06	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
44:RY:30:VAL:HG22	44:RY:37:VAL:HG12	1.53	0.88
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.56	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
46:Y0:3:HIS:NE2	46:Y0:4:LYS:O	2.05	0.88
25:YA:1689:A:H62	25:YA:1698:A:H2	1.21	0.88
5:XE:152:ARG:O	8:XH:64:LYS:NZ	2.07	0.88
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.36	0.88
13:XM:8:GLU:OE1	30:YG:115:ARG:CZ	2.22	0.88
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.88
54:R8:59:LYS:NZ	54:R8:59:LYS:HB2	1.88	0.88
42:RW:65:LEU:HD12	42:RW:68:ARG:HH11	1.36	0.88
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.89	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
27:RD:28:GLU:HB2	27:RD:29:PRO:HD2	1.56	0.88
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.88
23:XX:2:U:O2'	23:XX:3:G:H5'	1.74	0.88
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.88
28:RE:77:ILE:HD12	28:RE:78:LEU:N	1.89	0.87
32:RI:88:ILE:HG12	32:RI:122:GLU:H	1.39	0.87
35:RP:49:ARG:HD2	54:R8:58:ILE:HG22	1.54	0.87
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.87
46:Y0:25:ARG:HD2	46:Y0:29:GLN:NE2	1.90	0.87
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	0.87
46:R0:25:ARG:HD2	46:R0:29:GLN:NE2	1.90	0.87
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.39	0.87
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.87
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.05	0.87
32:YI:9:LEU:O	32:YI:10:GLU:HG3	1.74	0.87
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	0.87
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.87
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.87
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.87	0.87
41:RV:19:LYS:HD2	41:RV:95:LEU:HD23	1.55	0.87
13:XM:8:GLU:OE1	30:YG:115:ARG:NH2	2.07	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
1:QA:339:C:OP2	34:RO:97:ARG:NH1	2.08	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
27:RD:44:ASN:HD22	27:RD:44:ASN:H	1.19	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87
4:QD:166:LYS:CG	27:YD:135:PHE:CZ	2.58	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
5:QE:152:ARG:O	8:QH:64:LYS:NZ	2.06	0.87
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.87
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.74	0.87
10:XJ:74:ILE:HD13	10:XJ:74:ILE:H	1.38	0.87
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.56	0.87
23:QX:2:U:O2'	23:QX:3:G:H5'	1.74	0.87
35:RP:64:LYS:O	35:RP:66:GLY:N	2.07	0.87
25:YA:270(T):G:H5''	47:Y1:97:LEU:HD22	1.55	0.87
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.87
45:YZ:24:LEU:HD11	45:YZ:86:VAL:HG23	1.57	0.87
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.86
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.86
32:YI:75:LEU:HB3	32:YI:105:HIS:CE1	2.08	0.86
1:QA:343:U:O2'	1:QA:346:G:N1	2.07	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.86
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.40	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
25:RA:1542:G:O6	25:RA:1543:A:N6	2.08	0.86
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.55	0.86
30:YG:101:ILE:HG13	30:YG:102:PHE:N	1.86	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
40:YU:92:ARG:HD2	41:YV:11:GLN:NE2	1.90	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.40	0.86
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.86
38:RS:106:ARG:HH11	38:RS:106:ARG:HB2	1.40	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.07	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.57	0.86
25:YA:2494:G:OP1	46:Y0:3:HIS:HB3	1.74	0.86
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.54	0.86
32:YI:109:ILE:HB	32:YI:130:TYR:OH	1.75	0.86
1:QA:1223:C:H5''	1:QA:1224:G:H5''	1.57	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
29:RF:82:ILE:HG13	29:RF:82:ILE:O	1.73	0.86
45:YZ:53:ILE:HG22	45:YZ:71:VAL:O	1.76	0.86
31:YH:127:GLU:HG2	31:YH:128:PRO:HD3	0.86	0.86
32:RI:109:ILE:HB	32:RI:130:TYR:OH	1.75	0.86
22:XV:74:C:O2	25:YA:2252:G:N2	2.09	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.41	0.86
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
26:RB:42:C:H42	30:RG:91:ARG:NH2	1.74	0.86
32:RI:51:ILE:O	32:RI:55:ALA:N	2.09	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.75	0.86
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
1:XA:448:A:OP2	1:XA:485:G:N2	2.09	0.86
1:QA:559:A:H4'	1:QA:560:U:H3'	1.56	0.85
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.85
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.85
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.57	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.39	0.85
45:YZ:72:ARG:HB2	45:YZ:72:ARG:HH11	1.42	0.85
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.85
36:RQ:80:GLU:HG2	46:R0:5:LYS:HB3	1.56	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.56	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85
45:RZ:59:LEU:O	45:RZ:60:GLU:HG2	1.75	0.85
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.10	0.85
24:XY:29:U:H2'	24:XY:30:C:C6	2.11	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.40	0.85
39:YT:111:ARG:O	39:YT:112:ARG:HG3	1.76	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.91	0.85
44:YY:51:VAL:O	44:YY:56:PRO:HA	1.76	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
22:QV:1:C:O4'	46:R0:5:LYS:HE2	1.77	0.85
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85
32:RI:9:LEU:O	32:RI:10:GLU:HG3	1.74	0.85
40:RU:64:ARG:HH21	40:RU:64:ARG:HG2	1.42	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85
45:YZ:59:LEU:O	45:YZ:60:GLU:HG2	1.76	0.85
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.41	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.91	0.85
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.57	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.58	0.85
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.39	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.85
27:YD:28:GLU:HB2	27:YD:29:PRO:HD2	1.56	0.85
29:YF:82:ILE:HG13	29:YF:82:ILE:O	1.73	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.76	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
13:XM:57:ARG:HH21	50:Y4:34:GLU:HA	1.42	0.85
24:QY:29:U:H2'	24:QY:30:C:C6	2.11	0.84
25:RA:2056:G:N2	51:R5:4:HIS:O	2.10	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.39	0.84
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.84
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.84
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	0.84
45:RZ:53:ILE:HG22	45:RZ:71:VAL:O	1.76	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
47:R1:81:LYS:CA	47:R1:81:LYS:HZ3	1.79	0.84
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
28:YE:95:ILE:H	28:YE:95:ILE:HD12	1.42	0.84
34:YO:26:LYS:HB2	34:YO:30:ALA:HB2	1.59	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84
19:QS:5:LEU:CD2	50:R4:67:TYR:CZ	2.60	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:345:C:H5'	1:XA:346:G:H5'	1.59	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.75	0.84
31:YH:54:ARG:NH1	31:YH:62:LYS:HG2	1.92	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
25:RA:1043:C:N3	25:RA:1112:G:N2	2.25	0.84
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.77	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	0.84
45:RZ:108:PRO:HB2	45:RZ:112:ARG:HB2	1.60	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
44:YY:57:GLN:NE2	44:YY:58:GLY:H	1.76	0.84
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.40	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.07	0.84
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.60	0.84
4:QD:96:LEU:H	4:QD:96:LEU:HD22	1.43	0.84
14:QN:24:CYS:SG	14:QN:43:CYS:CB	2.65	0.84
47:R1:82:LEU:HD11	47:R1:83:GLU:O	1.75	0.84
19:QS:5:LEU:HD21	50:R4:67:TYR:CE2	2.10	0.84
38:RS:83:LYS:HG2	38:RS:109:GLY:CA	2.07	0.84
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.59	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.84
39:RT:111:ARG:O	39:RT:112:ARG:HG3	1.76	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.84
38:YS:89:ARG:HD2	38:YS:92:TYR:O	1.78	0.84
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.60	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.60	0.84
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.59	0.84
1:QA:1531:A:H5''	1:QA:1531:A:C8	2.10	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
31:RH:105:LEU:H	31:RH:105:LEU:HD13	1.42	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	0.83
45:RZ:24:LEU:HD11	45:RZ:86:VAL:HG23	1.57	0.83
1:XA:973:G:H3'	1:XA:974:A:H5''	1.59	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
19:XS:64:GLU:HB2	50:Y4:55:ARG:HH12	1.42	0.83
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.57	0.83
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.83
32:YI:74:ASN:H	32:YI:74:ASN:HD22	1.25	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.60	0.83
45:YZ:108:PRO:HB2	45:YZ:112:ARG:HB2	1.60	0.83
37:RR:117:VAL:HG22	37:RR:118:GLU:H	1.43	0.83
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.59	0.83
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.83
52:Y6:27:LYS:HB2	52:Y6:27:LYS:NZ	1.93	0.83
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.11	0.83
31:YH:13:LYS:HA	31:YH:13:LYS:HE2	1.60	0.83
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
25:RA:2451:A:C6	55:Z6:76:PPU:HE2	2.12	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
14:XN:12:ARG:C	14:XN:14:PRO:HD2	1.98	0.83
14:XN:21:TYR:HE2	14:XN:23:ARG:HH21	1.24	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.10	0.83
32:RI:74:ASN:HD22	32:RI:74:ASN:H	1.25	0.83
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	1.95	0.83
1:QA:1139:G:N2	1:QA:1143:G:O6	2.12	0.83
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.83
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD3	1.61	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.12	0.83
14:XN:8:GLU:OE2	14:XN:11:LYS:HD2	1.78	0.83
25:YA:1190:G:OP1	35:YP:30:THR:OG1	1.96	0.83
28:YE:7:VAL:HG23	28:YE:8:LYS:H	1.44	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.58	0.83
33:RN:133:GLN:HB2	33:RN:135:PRO:HD3	1.59	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:RY:57:GLN:NE2	44:RY:58:GLY:H	1.76	0.83
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.43	0.83
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.60	0.83
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.61	0.83
33:YN:131:GLN:NE2	33:YN:132:ALA:H	1.75	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83
1:QA:595:G:H1	1:QA:641:U:HO2'	1.21	0.83
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
25:RA:2093:G:H21	25:RA:2198:A:H62	1.27	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.11	0.83
1:XA:1313:U:OP2	50:Y4:67:TYR:OH	1.97	0.83
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.59	0.83
39:YT:53:ARG:O	39:YT:59:THR:HG23	1.78	0.83
29:RF:53:THR:HG23	29:RF:56:GLU:OE1	1.77	0.83
32:RI:145:VAL:HG22	32:RI:146:ALA:H	1.41	0.83
33:RN:131:GLN:NE2	33:RN:132:ALA:H	1.75	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
22:XV:1:C:O2'	46:Y0:6:GLY:O	1.95	0.83
45:YZ:108:PRO:CG	45:YZ:112:ARG:H	1.92	0.83
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.82
52:R6:27:LYS:HB2	52:R6:27:LYS:NZ	1.93	0.82
38:RS:106:ARG:HA	38:RS:110:LEU:CD1	2.07	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.78	0.82
2:QB:178:ARG:HH21	8:QH:74:PRO:CB	1.89	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.82
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.82
28:RE:15:PHE:CE1	28:RE:20:ALA:HB2	2.14	0.82
36:RQ:30:GLY:HA2	36:RQ:107:ALA:HB2	1.60	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
25:YA:1899:G:H21	25:YA:1902:C:H41	1.26	0.82
31:YH:105:LEU:H	31:YH:105:LEU:HD13	1.42	0.82
23:QX:6:C:O2'	23:QX:7:G:OP1	1.96	0.82
25:RA:1496:A:H8	25:RA:1577:C:HO2'	1.27	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	0.82
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	0.82
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.62	0.82
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
1:XA:346:G:H4'	39:YT:41:ARG:HH11	1.44	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	0.82
25:YA:1322:A:N6	25:YA:1333:C:O2	2.12	0.82
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
13:QM:62:ASN:ND2	50:R4:49:PHE:CD2	2.45	0.82
1:XA:708:C:OP1	11:XK:85:ARG:NH2	2.10	0.82
4:XD:96:LEU:HD22	4:XD:96:LEU:H	1.43	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.61	0.82
27:RD:35:LYS:NZ	27:RD:104:TYR:HB2	1.93	0.82
33:RN:22:THR:HG22	33:RN:23:LEU:H	1.44	0.82
40:RU:88:ILE:HD13	40:RU:88:ILE:H	1.44	0.82
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.82
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.79	0.82
50:Y4:71:ARG:NH1	50:Y4:71:ARG:HG3	1.90	0.82
27:YD:35:LYS:NZ	27:YD:104:TYR:HB2	1.93	0.82
33:YN:22:THR:HG22	33:YN:23:LEU:H	1.45	0.82
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
26:RB:65:C:H41	26:RB:108:C:H2'	1.45	0.82
45:RZ:108:PRO:CG	45:RZ:112:ARG:H	1.92	0.82
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.60	0.82
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.82
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.82
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
13:XM:11:ARG:HH21	30:YG:146:TYR:HD2	1.28	0.82
34:YO:14:THR:HG21	34:YO:86:ILE:HB	1.62	0.82
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.82
29:RF:155:LEU:HD13	29:RF:174:VAL:HG13	1.62	0.82
45:RZ:72:ARG:HH11	45:RZ:72:ARG:HB2	1.42	0.82
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.09	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:YS:19:LYS:O	38:YS:20:ARG:HB3	1.80	0.82
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
45:YZ:94:GLU:HB2	45:YZ:130:PRO:HD3	1.61	0.81
1:QA:17:U:O2	1:QA:1079:G:N2	2.13	0.81
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.45	0.81
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.81
30:YG:67:LYS:HE2	50:Y4:6:HIS:CE1	2.14	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
1:XA:1071:C:H5''	5:XE:49:PRO:HG2	1.62	0.81
13:XM:8:GLU:OE2	30:YG:115:ARG:CZ	2.28	0.81
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.59	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.08	0.81
48:R2:16:LEU:O	48:R2:16:LEU:HG	1.78	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
31:RH:132:ARG:HB2	31:RH:132:ARG:NH1	1.94	0.81
31:RH:153:LYS:HG2	31:RH:162:ILE:HG13	1.61	0.81
34:RO:53:LYS:N	34:RO:53:LYS:HD2	1.96	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	0.81
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
10:XJ:6:ILE:HD12	10:XJ:6:ILE:O	1.81	0.81
10:XJ:63:PHE:HD1	14:XN:58:LYS:HA	1.43	0.81
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
31:YH:10:PRO:O	31:YH:11:VAL:HG13	1.80	0.81
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.10	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
13:QM:7:VAL:CG1	30:RG:115:ARG:HH12	1.94	0.81
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	1.61	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81
10:QJ:6:ILE:O	10:QJ:6:ILE:HD12	1.80	0.81
25:RA:1728:G:H3'	25:RA:1729:A:H5''	1.61	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	0.81
25:YA:1359:A:N6	25:YA:1372:U:O4	2.14	0.81
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.81
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.81
23:QX:4:C:C2'	23:QX:5:C:H5'	2.11	0.81
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.81
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
31:RH:13:LYS:HA	31:RH:13:LYS:HE2	1.60	0.80
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.80
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.80
2:XB:181:PHE:HE1	8:XH:70:GLN:O	1.64	0.80
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.62	0.80
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.62	0.80
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.14	0.80
45:YZ:137:ILE:HB	45:YZ:156:LYS:HD2	1.62	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
3:XC:52:LEU:H	3:XC:52:LEU:HD23	1.46	0.80
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.46	0.80
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
4:QD:28:SER:HB3	4:QD:29:PRO:CD	2.12	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.80	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.95	0.80
27:RD:27:THR:HG21	27:RD:83:GLU:HB3	1.63	0.80
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.12	0.80
32:RI:79:ILE:HB	32:RI:142:VAL:HA	1.61	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.11	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
1:QA:973:G:H3'	1:QA:974:A:H5''	1.64	0.80
5:QE:126:ARG:HG3	5:QE:126:ARG:HH11	1.47	0.80
27:RD:121:PRO:HB3	27:RD:135:PHE:HE1	1.46	0.80
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.03	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.46	0.80
1:QA:1239:A:H62	1:QA:1299:A:H62	1.26	0.80
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.47	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
41:RV:99:ILE:HD13	41:RV:99:ILE:N	1.95	0.80
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
27:YD:121:PRO:HB3	27:YD:135:PHE:HE1	1.46	0.80
25:YA:2208:U:H1'	27:YD:151:LYS:HE2	1.64	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
30:YG:61:ALA:HB2	30:YG:68:PRO:CD	2.12	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80
14:QN:39:LEU:HB3	14:QN:43:CYS:HB3	1.64	0.80
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.80
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.80
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.62	0.80
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.79
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.94	0.79
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.79
27:YD:34:VAL:HG13	27:YD:34:VAL:O	1.80	0.79
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.79
31:YH:152:ARG:O	31:YH:153:LYS:HB2	1.80	0.79
45:YZ:158:PRO:HB3	45:YZ:159:PRO:HD2	1.63	0.79
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
27:RD:34:VAL:HG13	27:RD:34:VAL:O	1.81	0.79
12:XL:48:PRO:HD2	12:XL:49:ASN:N	1.97	0.79
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.15	0.79
25:YA:918:A:N3	26:YB:80:U:O2'	2.16	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.02	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
31:RH:126:PRO:CG	31:RH:127:GLU:H	1.95	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.79
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	1.96	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.98	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.64	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
8:QH:84:ARG:HG3	8:QH:84:ARG:HH11	1.45	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79
29:RF:11:VAL:HB	29:RF:18:ARG:HG3	1.64	0.79
30:RG:61:ALA:HB2	30:RG:68:PRO:CD	2.12	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.64	0.79
12:QL:48:PRO:HD2	12:QL:49:ASN:N	1.97	0.79
32:RI:2:LYS:CA	32:RI:20:ASP:HB3	2.13	0.79
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	0.79
45:RZ:137:ILE:HB	45:RZ:156:LYS:HD2	1.63	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
36:YQ:81:VAL:O	36:YQ:82:ARG:CG	2.31	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
31:RH:10:PRO:O	31:RH:11:VAL:HG13	1.80	0.79
25:RA:583:G:H5"	40:RU:10:ARG:HH12	1.46	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.18	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
12:XL:86:ARG:HB2	12:XL:101:VAL:HG22	1.62	0.79
14:XN:39:LEU:HB3	14:XN:43:CYS:HB2	1.63	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
27:RD:68:LYS:HB2	27:RD:70:TRP:CH2	2.17	0.79
28:RE:111:ARG:HE	28:RE:160:TYR:HE1	1.31	0.79
31:RH:86:GLU:CG	31:RH:165:ALA:H	1.94	0.79
32:RI:93:THR:HG22	32:RI:119:PRO:HB3	1.65	0.79
1:XA:1053:G:H5'	1:XA:1054:C:H5'	1.64	0.79
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.15	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
12:XL:6:THR:N	12:XL:9:GLN:HE21	1.80	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
27:YD:17:THR:CG2	27:YD:205:VAL:H	1.96	0.79
28:YE:24:THR:HG21	28:YE:188:VAL:CG1	2.13	0.79
40:YU:105:VAL:HG22	41:YV:44:LYS:HD2	1.65	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.14	0.79
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.15	0.79
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.15	0.79
13:XM:3:ARG:HH21	30:YG:139:LEU:HD13	1.46	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.48	0.79
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
35:RP:97:PRO:O	35:RP:98:GLU:HB3	1.83	0.79
45:RZ:158:PRO:HB3	45:RZ:159:PRO:HD2	1.63	0.79
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.14	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
47:Y1:11:ARG:NH1	47:Y1:11:ARG:HB3	1.98	0.79
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.63	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
32:YI:11:ASN:O	32:YI:12:LEU:HB2	1.83	0.79
45:YZ:30:ASN:O	45:YZ:32:HIS:N	2.16	0.79
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.65	0.78
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.78
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.65	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.78
4:QD:28:SER:HB3	4:QD:29:PRO:HD2	1.65	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.78
1:XA:642:A:N3	8:XH:113:SER:OG	2.16	0.78
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.78
32:YI:93:THR:HG22	32:YI:119:PRO:HB3	1.65	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	0.78
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.78
43:YX:70:LEU:N	43:YX:70:LEU:HD23	1.98	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.65	0.78
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.14	0.78
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.65	0.78
25:RA:265:A:N6	25:RA:427:U:O2'	2.16	0.78
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.78
45:RZ:130:PRO:HA	45:RZ:133:ILE:HD11	1.65	0.78
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.13	0.78
50:Y4:58:ARG:O	50:Y4:63:TYR:HB2	1.84	0.78
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.15	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
30:YG:128:ARG:HG3	30:YG:128:ARG:HH21	1.48	0.78
32:YI:2:LYS:CA	32:YI:20:ASP:HB3	2.13	0.78
34:YO:97:ARG:H	34:YO:117:LEU:HD22	1.48	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.65	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.47	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
26:YB:40:U:O2	26:YB:45:A:N6	2.16	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
36:RQ:119:ARG:HH11	36:RQ:119:ARG:HG2	1.48	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
25:RA:307:G:H21	25:RA:330:A:H62	1.32	0.78
27:RD:54:ARG:HH11	27:RD:54:ARG:HG3	1.49	0.78
45:YZ:28:MET:O	45:YZ:34:ASN:HA	1.84	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.78
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78
25:YA:2287:A:H62	25:YA:2344:U:H3	1.32	0.78
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.66	0.78
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HB2	1.65	0.78
1:XA:346:G:H4'	39:YT:41:ARG:NH1	1.98	0.78
25:YA:352:G:H3'	25:YA:353:G:H8	1.47	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.64	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
13:XM:88:ARG:CB	13:XM:88:ARG:HH11	1.96	0.78
1:XA:1327:C:OP2	21:XU:12:LYS:NZ	2.17	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
29:YF:145:GLU:HG3	29:YF:145:GLU:O	1.81	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.84	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
28:RE:24:THR:HG21	28:RE:188:VAL:CG1	2.13	0.78
28:RE:4:ILE:HD12	28:RE:28:ALA:HB1	1.66	0.78
30:RG:128:ARG:HG3	30:RG:128:ARG:HH21	1.48	0.78
34:RO:47:ILE:HD12	34:RO:48:PRO:HD2	1.66	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.78
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
1:XA:1226:C:O2'	13:XM:103:THR:O	2.02	0.78
25:YA:1899:G:H21	25:YA:1902:C:N4	1.81	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.77
52:R6:15:GLU:CD	52:R6:41:PRO:HB3	2.04	0.77
27:RD:25:THR:O	27:RD:27:THR:N	2.17	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.17	0.77
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.48	0.77
29:RF:29:ASN:H	29:RF:112:MET:CE	1.97	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
19:XS:5:LEU:CD2	50:Y4:67:TYR:CZ	2.66	0.77
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.94	0.77
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.64	0.77
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
23:QX:5:C:H2'	23:QX:6:C:H6	1.49	0.77
25:RA:878:A:N6	25:RA:899:A:O2'	2.16	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
35:RP:62:LEU:CD2	35:RP:62:LEU:N	2.46	0.77
35:RP:75:ILE:HD13	35:RP:75:ILE:N	2.00	0.77
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77
40:RU:66:ASN:O	40:RU:70:ARG:HB2	1.84	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.18	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.77
14:QN:39:LEU:HD22	14:QN:43:CYS:HG	1.46	0.77
22:QV:1:C:H4'	46:R0:5:LYS:HE2	1.65	0.77
30:RG:127:GLY:HA2	30:RG:166:ASP:CG	2.05	0.77
45:RZ:28:MET:O	45:RZ:34:ASN:HA	1.84	0.77
45:RZ:30:ASN:O	45:RZ:32:HIS:N	2.16	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.77
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.04	0.77
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
45:YZ:130:PRO:HA	45:YZ:133:ILE:HD11	1.66	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
25:RA:1689:A:H62	25:RA:1698:A:H2	1.29	0.77
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.67	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77
22:XV:74:C:N3	25:YA:2252:G:N1	2.30	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
25:YA:84:A:N1	25:YA:98:G:O2'	2.17	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
17:QQ:59:ILE:HD13	17:QQ:59:ILE:H	1.50	0.77
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	1.99	0.77
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.77
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.49	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.32	0.77
27:YD:44:ASN:N	27:YD:44:ASN:HD22	1.78	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
1:QA:642:A:N3	8:QH:113:SER:OG	2.18	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:HD12	2:XB:44:LEU:H	1.48	0.77
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:CB	1.96	0.77
25:YA:330:A:HO2'	25:YA:331:A:H8	1.31	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.15	0.77
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.67	0.77
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77
32:RI:11:ASN:O	32:RI:12:LEU:HB2	1.83	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
7:XG:150:ALA:HA	11:XK:59:TYR:CD2	2.19	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
45:YZ:108:PRO:HG2	45:YZ:112:ARG:H	1.49	0.77
13:QM:7:VAL:HB	30:RG:115:ARG:NH1	2.00	0.77
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.85	0.77
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.50	0.77
25:RA:2314:C:OP1	30:RG:91:ARG:NH1	2.18	0.77
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.66	0.77
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.77
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.77
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.84	0.77
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.77
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.77
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.77
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.77
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
38:YS:60:GLY:O	38:YS:61:ASN:HB3	1.83	0.77
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.49	0.76
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.76
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.76
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.76
13:QM:3:ARG:NH2	30:RG:139:LEU:HD13	1.99	0.76
31:RH:153:LYS:HA	31:RH:153:LYS:NZ	1.99	0.76
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.17	0.76
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.66	0.76
13:QM:88:ARG:CB	13:QM:88:ARG:HH11	1.96	0.76
54:R8:59:LYS:HZ3	54:R8:59:LYS:CB	1.96	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.48	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.00	0.76
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.76
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:153:LYS:HA	31:YH:153:LYS:NZ	1.99	0.76
34:YO:104:ARG:HH11	34:YO:104:ARG:HG2	1.50	0.76
35:YP:114:ILE:HD11	35:YP:130:PHE:CE1	2.19	0.76
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.76
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.76
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	2.16	0.76
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.76
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
54:R8:59:LYS:HZ2	54:R8:59:LYS:HB2	1.49	0.76
25:YA:819:A:OP2	25:YA:1187:G:N2	2.17	0.76
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.67	0.76
33:YN:62:VAL:HG12	33:YN:66:LYS:HD2	1.65	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	2.00	0.76
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HB2	1.65	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	0.76
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.00	0.76
45:RZ:7:ALA:HB2	45:RZ:59:LEU:HD22	1.67	0.76
30:YG:142:PRO:HB2	50:Y4:31:ILE:HD13	1.68	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
25:RA:2112:G:O6	25:RA:2169:A:N6	2.19	0.76
27:RD:34:VAL:HG21	27:RD:103:ARG:HA	1.66	0.76
1:XA:1152:A:H5''	10:XJ:13:HIS:HD2	1.51	0.76
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.76
22:QV:1:C:O4'	46:R0:5:LYS:HE3	1.84	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
19:QS:5:LEU:CD2	50:R4:67:TYR:CD2	2.68	0.76
25:RA:2308:G:H22	25:RA:2311:A:H2	1.33	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.47	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.19	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2655:G:N2	25:YA:2665:A:OP2	2.18	0.76
25:YA:583:G:H5''	40:YU:10:ARG:HH12	1.51	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.85	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.51	0.76
5:XE:53:LEU:CD1	5:XE:53:LEU:H	1.99	0.76
29:YF:29:ASN:H	29:YF:112:MET:CE	1.98	0.76
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.76
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
1:QA:452:A:N6	1:QA:480:U:O2	2.19	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.50	0.76
5:QE:53:LEU:CD1	5:QE:53:LEU:H	1.99	0.76
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.76
25:RA:518:G:H4'	42:RW:18:ARG:NH1	2.00	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	0.76
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.68	0.76
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.49	0.76
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.01	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.01	0.76
8:QH:91:ARG:HG2	8:QH:91:ARG:HH11	1.51	0.76
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.85	0.76
47:R1:56:GLN:N	47:R1:56:GLN:NE2	2.34	0.76
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
32:RI:2:LYS:HA	32:RI:20:ASP:HB3	1.68	0.76
1:XA:688:G:H2'	1:XA:689:C:H6	1.48	0.76
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.32	0.76
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
52:Y6:34:LEU:HD13	52:Y6:34:LEU:H	1.50	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.51	0.76
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.76
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.75
25:RA:654:A:O2'	25:RA:654(A):G:N7	2.19	0.75
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.75
1:XA:411:A:H62	1:XA:413:G:H21	1.32	0.75
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.75
28:YE:63:LEU:CD1	28:YE:65:GLY:H	1.99	0.75
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.49	0.75
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	0.75
35:YP:62:LEU:CD2	35:YP:62:LEU:N	2.47	0.75
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	0.75
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.18	0.75
34:RO:104:ARG:HG2	34:RO:104:ARG:HH11	1.50	0.75
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.20	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
46:Y0:3:HIS:CD2	46:Y0:4:LYS:H	2.04	0.75
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.75
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.75
40:YU:88:ILE:HG22	40:YU:90:VAL:HG23	1.67	0.75
4:QD:30:LYS:C	4:QD:32:ALA:N	2.36	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.19	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.75
31:RH:150:ALA:C	31:RH:152:ARG:H	1.88	0.75
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.14	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.85	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.65	0.75
25:YA:1187:G:H5"	41:YV:81:TYR:CE2	2.21	0.75
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.69	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
44:YY:44:ILE:HG13	44:YY:45:VAL:N	2.00	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.51	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.52	0.75
35:RP:62:LEU:HD21	54:R8:25:MET:HB2	1.69	0.75
40:RU:52:ARG:HG2	40:RU:52:ARG:HH11	1.51	0.75
41:RV:47:VAL:HG13	41:RV:48:GLY:H	1.49	0.75
45:RZ:108:PRO:HG2	45:RZ:112:ARG:H	1.49	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.75
25:YA:2198:A:O2'	25:YA:2199:A:O5'	2.04	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.67	0.75
35:YP:62:LEU:HD21	54:Y8:25:MET:HB2	1.69	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.07	0.75
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
12:QL:48:PRO:HD2	12:QL:49:ASN:H	1.52	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.75
36:RQ:81:VAL:CG2	46:R0:7:LEU:HD11	2.16	0.75
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.68	0.75
45:RZ:76:LEU:HD23	45:RZ:76:LEU:H	1.51	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	0.75
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
41:YV:52:VAL:HG21	41:YV:55:ALA:HB3	1.68	0.75
45:YZ:76:LEU:HD23	45:YZ:76:LEU:H	1.51	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.69	0.75
30:RG:142:PRO:HB2	50:R4:31:ILE:HD13	1.68	0.75
45:RZ:5:LEU:HD23	45:RZ:47:VAL:HG21	1.68	0.75
1:XA:486:U:H2'	1:XA:487:A:H8	1.51	0.75
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.75
14:XN:22:THR:O	14:XN:23:ARG:HB2	1.85	0.75
47:Y1:56:GLN:N	47:Y1:56:GLN:NE2	2.34	0.75
54:Y8:59:LYS:HZ2	54:Y8:59:LYS:HB2	1.49	0.75
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.01	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.17	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	0.75
4:XD:11:LEU:C	4:XD:13:ARG:N	2.36	0.75
7:XG:148:ASN:N	7:XG:148:ASN:HD22	1.82	0.75
25:YA:530:G:C2	25:YA:2022:U:OP1	2.40	0.75
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
45:YZ:5:LEU:HD23	45:YZ:47:VAL:HG21	1.68	0.75
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:QX:2:U:C2'	23:QX:3:G:H5'	2.17	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	0.75
44:RY:94:LYS:O	44:RY:101:LYS:HB3	1.85	0.75
1:XA:1403:C:O2	1:XA:1499:A:N6	2.19	0.75
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.01	0.75
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75
35:YP:75:ILE:N	35:YP:75:ILE:HD13	2.00	0.75
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.75
1:QA:1049:U:O2'	14:QN:2:ALA:N	2.20	0.75
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.75
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.75
25:RA:25:U:H5''	42:RW:80:PRO:HD3	1.69	0.75
28:RE:63:LEU:CD1	28:RE:65:GLY:H	2.00	0.75
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.87	0.75
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.00	0.75
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.75
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.51	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75
13:XM:8:GLU:CD	30:YG:115:ARG:CZ	2.56	0.75
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
47:Y1:81:LYS:CA	47:Y1:81:LYS:NZ	2.31	0.75
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.75
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.75
1:QA:19:C:OP1	5:QE:125:SER:OG	2.04	0.74
1:QA:448:A:OP2	1:QA:485:G:N2	2.18	0.74
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.69	0.74
4:QD:25:ARG:HH12	4:QD:30:LYS:HG3	1.52	0.74
25:RA:1021:A:N6	25:RA:1141:U:O2	2.20	0.74
25:RA:1379:A:O2'	25:RA:1380:G:OP1	2.05	0.74
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.74
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.74
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.86	0.74
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.74
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.74
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.20	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
25:RA:768:G:O2'	25:RA:1379:A:N6	2.20	0.74
32:RI:3:VAL:HG12	32:RI:38:LEU:HA	1.69	0.74
32:RI:5:LEU:HD12	32:RI:5:LEU:H	1.51	0.74
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74
17:XQ:59:ILE:HD13	17:XQ:59:ILE:H	1.50	0.74
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.74
27:YD:54:ARG:HG3	27:YD:54:ARG:HH11	1.49	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.74
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.74
25:RA:141:A:H8	25:RA:1595:G:H21	1.35	0.74
25:RA:392:C:H5''	25:RA:409:C:H5''	1.70	0.74
32:RI:145:VAL:HG22	32:RI:146:ALA:N	2.03	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.74
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.74
1:XA:1312:G:OP1	50:Y4:58:ARG:NH1	2.17	0.74
32:YI:2:LYS:HA	32:YI:20:ASP:HB3	1.68	0.74
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.69	0.74
9:QI:113:LYS:H	9:QI:113:LYS:HD2	1.51	0.74
47:R1:26:ARG:O	47:R1:26:ARG:HD2	1.86	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
43:RX:57:LEU:HD11	43:RX:78:LYS:HB2	1.68	0.74
45:RZ:63:ASP:O	45:RZ:65:GLN:HG2	1.88	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74
13:XM:57:ARG:HH21	50:Y4:34:GLU:CA	2.00	0.74
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.17	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.88	0.74
45:YZ:103:ARG:HB2	45:YZ:138:GLU:HA	1.69	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.52	0.74
25:RA:363(B):G:H2'	25:RA:363(C):G:H8	1.51	0.74
25:RA:807:U:OP2	35:RP:41:ARG:NH1	2.21	0.74
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
1:XA:527:G:O6	12:XL:49:ASN:ND2	2.20	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
23:XX:2:U:C2'	23:XX:3:G:H5'	2.17	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:YZ:7:ALA:HB2	45:YZ:59:LEU:HD22	1.67	0.74
1:QA:451:A:N7	1:QA:481:G:N2	2.36	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
50:R4:71:ARG:NH1	50:R4:71:ARG:HG3	1.90	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.70	0.74
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.87	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
33:YN:96:GLU:HG2	33:YN:97:ARG:N	2.01	0.74
36:YQ:79:LEU:CD2	36:YQ:79:LEU:O	2.36	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.03	0.74
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.20	0.74
15:QO:70:LEU:O	15:QO:70:LEU:HD12	1.88	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
25:RA:1667:G:O2'	25:RA:1669:A:N6	2.20	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
45:RZ:154:ASP:CG	45:RZ:155:LEU:H	1.91	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
49:Y3:29:ARG:HH11	49:Y3:29:ARG:HB2	1.52	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
1:QA:446:G:H1	1:QA:488:C:H42	1.35	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.22	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.88	0.74
25:RA:1043:C:H42	25:RA:1112:G:H1	1.32	0.74
36:RQ:20:ALA:HB3	45:RZ:79:ARG:NH1	2.03	0.74
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.74
1:XA:1178:G:N2	1:XA:1181:G:N7	2.36	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.53	0.74
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.20	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	1.69	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
39:YT:54:ARG:HH11	39:YT:54:ARG:HG2	1.52	0.74
45:YZ:154:ASP:CG	45:YZ:155:LEU:H	1.91	0.74
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:RT:50:ILE:HD12	39:RT:102:ILE:HD11	1.68	0.74
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.21	0.74
6:XF:19:LEU:HD23	6:XF:19:LEU:O	1.88	0.74
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.74
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
25:YA:2467:C:H4'	36:YQ:123:HIS:ND1	2.01	0.74
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.70	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
45:YZ:63:ASP:O	45:YZ:65:GLN:HG2	1.88	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.69	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.74
51:R5:2:ALA:O	51:R5:3:LYS:HB2	1.88	0.74
35:RP:50:ARG:NH2	35:RP:50:ARG:HB3	1.97	0.74
35:RP:62:LEU:HD22	35:RP:62:LEU:H	1.53	0.74
36:RQ:80:GLU:CD	46:R0:5:LYS:CB	2.56	0.74
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.51	0.74
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.74
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.74
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.22	0.74
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.74
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.74
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.74
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.74
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.73
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.73
47:R1:76:ARG:HG2	47:R1:76:ARG:HH11	1.53	0.73
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.73
33:RN:58:ASP:H	33:RN:60:ILE:HD11	1.53	0.73
36:RQ:79:LEU:CD1	36:RQ:79:LEU:O	2.35	0.73
38:RS:36:TYR:CD2	38:RS:52:SER:HB3	2.23	0.73
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.73
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.73
45:RZ:103:ARG:HB2	45:RZ:138:GLU:HA	1.69	0.73
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	1.88	0.73
25:YA:2051:A:H2	25:YA:2052:G:O6	1.71	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.17	0.73
1:QA:108:G:H5''	1:QA:109:A:H5''	1.70	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:R3:29:ARG:HB2	49:R3:29:ARG:HH11	1.53	0.73
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.68	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.73
45:RZ:9:TYR:HE2	45:RZ:61:LEU:HD13	1.53	0.73
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.73
32:YI:5:LEU:H	32:YI:5:LEU:HD12	1.51	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.18	0.73
4:QD:11:LEU:C	4:QD:13:ARG:N	2.36	0.73
13:QM:11:ARG:NH2	30:RG:146:TYR:CD2	2.57	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.88	0.73
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.69	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
25:YA:2306:C:H3'	25:YA:2307:G:H5''	1.71	0.73
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.73
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.04	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
40:RU:64:ARG:CG	40:RU:64:ARG:HH21	2.00	0.73
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.70	0.73
1:XA:765:G:N2	1:XA:813:U:OP2	2.21	0.73
25:YA:71:A:H2	43:YX:31:HIS:CE1	2.05	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.18	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
25:YA:2469:A:H2	25:YA:2481:G:H21	1.36	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.17	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.51	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.87	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.68	0.73
2:XB:8:LYS:N	2:XB:8:LYS:HD3	2.03	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
25:YA:1998:G:OP2	28:YE:136:ARG:NH2	2.21	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:352:G:H3'	25:YA:353:G:C8	2.24	0.73
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.89	0.73
30:YG:7:LEU:HD21	30:YG:176:LEU:HD22	1.70	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.69	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.70	0.73
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.73
31:RH:125:VAL:HA	31:RH:126:PRO:HB3	1.68	0.73
31:RH:84:SER:O	31:RH:85:LYS:HB2	1.89	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
27:YD:77:ALA:CB	27:YD:97:TYR:HA	2.18	0.73
36:YQ:79:LEU:CD1	36:YQ:79:LEU:O	2.35	0.73
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.73
14:QN:24:CYS:SG	14:QN:43:CYS:HB2	2.28	0.73
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.73
36:RQ:90:VAL:CG1	36:RQ:91:GLU:H	2.02	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
51:Y5:40:LYS:CE	51:Y5:46:CYS:HB3	2.19	0.73
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.73
25:YA:569:U:OP1	25:YA:945:A:C4	2.42	0.73
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.73
33:YN:58:ASP:H	33:YN:60:ILE:HD11	1.53	0.73
36:YQ:20:ALA:HB3	45:YZ:79:ARG:NH1	2.03	0.73
25:YA:518:G:H4'	42:YW:18:ARG:NH1	2.02	0.73
4:QD:146:ILE:N	4:QD:146:ILE:HD12	2.04	0.73
13:QM:3:ARG:HG2	50:R4:34:GLU:OE1	1.88	0.73
29:RF:101:LEU:CD1	29:RF:102:PRO:HD2	2.11	0.73
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.73
40:RU:34:LYS:HA	40:RU:34:LYS:HE2	1.70	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
28:YE:203:LYS:HD2	28:YE:203:LYS:O	1.88	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.52	0.73
1:QA:414:A:OP2	1:QA:428:G:N2	2.22	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.55	0.72
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.54	0.72
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.71	0.72
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.72
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.70	0.72
25:YA:2112:G:O6	25:YA:2169:A:N6	2.22	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72
32:YI:131:LYS:HB3	32:YI:132:PRO:HA	1.71	0.72
37:YR:3:HIS:O	37:YR:5:LYS:N	2.22	0.72
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.53	0.72
1:QA:67:C:O2'	1:QA:171:A:N3	2.20	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
19:QS:5:LEU:HD21	50:R4:67:TYR:CD2	2.24	0.72
32:RI:133:HIS:CD2	32:RI:134:PRO:HD2	2.24	0.72
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.52	0.72
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
46:Y0:10:THR:HG22	46:Y0:11:ARG:N	1.98	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.18	0.72
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72
31:YH:54:ARG:HH12	31:YH:62:LYS:HG2	1.54	0.72
35:YP:88:LEU:C	35:YP:90:ARG:H	1.92	0.72
36:YQ:79:LEU:C	36:YQ:79:LEU:HD22	2.07	0.72
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	0.72
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
25:YA:297:C:H5''	44:YY:85:VAL:HG21	1.70	0.72
53:R7:10:ARG:O	53:R7:14:LYS:HB2	1.89	0.72
25:RA:2781:A:H5''	25:RA:2782:G:H5'	1.71	0.72
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.71	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
1:XA:971:G:N2	1:XA:1363:A:OP2	2.20	0.72
25:YA:1013:C:H42	25:YA:1149:G:H1	1.36	0.72
35:YP:126:VAL:CG1	35:YP:147:LEU:HD21	2.17	0.72
38:YS:26:LEU:HD23	38:YS:26:LEU:O	1.90	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
23:QX:5:C:H2'	23:QX:6:C:C6	2.24	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:RH:26:VAL:CG1	31:RH:27:LYS:H	2.02	0.72
32:RI:131:LYS:HB3	32:RI:132:PRO:HA	1.70	0.72
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.72
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
39:RT:54:ARG:HG2	39:RT:54:ARG:HH11	1.52	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
12:XL:10:LEU:HD13	17:XQ:32:TYR:HE2	1.52	0.72
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.72
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
32:YI:130:TYR:C	32:YI:131:LYS:HD2	2.10	0.72
33:YN:89:LYS:O	33:YN:93:THR:HG22	1.90	0.72
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.72
45:YZ:9:TYR:HE2	45:YZ:61:LEU:HD13	1.53	0.72
1:QA:377:G:H1	1:QA:386:C:H42	1.37	0.72
1:QA:757:U:O2'	1:QA:879:C:O2	2.07	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.04	0.72
32:RI:99:GLU:HG2	32:RI:103:ARG:HH21	1.55	0.72
39:RT:78:LEU:HD13	39:RT:78:LEU:O	1.87	0.72
1:XA:1494:G:N7	57:XA:1664:PAR:N32	2.37	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.90	0.72
3:XC:16:ARG:NH1	3:XC:16:ARG:HB2	2.04	0.72
12:XL:48:PRO:HD2	12:XL:49:ASN:H	1.52	0.72
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
25:YA:2502:G:H5''	25:YA:2503:A:H5''	1.72	0.72
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:YI:133:HIS:CD2	32:YI:134:PRO:HD2	2.25	0.72
25:YA:64:A:C5	43:YX:66:LEU:HD13	2.23	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.89	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.89	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
51:R5:58:LEU:CD1	51:R5:60:VAL:HG12	2.19	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.89	0.72
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.72	0.72
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.72
36:RQ:80:GLU:HG2	46:R0:5:LYS:CD	2.19	0.72
14:YN:24:CYS:HB2	14:YN:40:CYS:N	2.03	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.69	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
31:YH:132:ARG:CB	31:YH:132:ARG:HH11	1.97	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
28:YE:14:ILE:HD11	39:YT:14:TYR:OH	1.90	0.72
25:YA:2683:C:OP1	39:YT:53:ARG:NH2	2.22	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.71	0.72
29:RF:32:LEU:O	29:RF:32:LEU:HD12	1.90	0.72
30:RG:7:LEU:HD21	30:RG:176:LEU:HD22	1.70	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
39:RT:57:PHE:C	39:RT:58:ASN:HD22	1.93	0.72
40:RU:69:CYS:HB3	40:RU:106:PHE:HZ	1.55	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	0.72
1:XA:1238:A:H62	1:XA:1301:U:H3	1.37	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	1.89	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:O	1.90	0.72
32:YI:99:GLU:HG2	32:YI:103:ARG:HH21	1.54	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
12:QL:10:LEU:HD13	17:QQ:32:TYR:CD2	2.25	0.72
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.78	0.72
54:R8:60:LEU:O	54:R8:63:PRO:HD2	1.90	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:49:A:H5''	25:RA:50:U:H3'	1.70	0.72
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
39:RT:102:ILE:HB	39:RT:110:ILE:CD1	2.19	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.72
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.24	0.72
12:XL:126:LYS:NZ	12:XL:126:LYS:HB2	2.04	0.72
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.55	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
32:YI:144:VAL:HG22	32:YI:145:VAL:N	2.02	0.72
35:YP:127:ALA:C	35:YP:147:LEU:HD23	2.10	0.72
44:YY:57:GLN:HE21	44:YY:58:GLY:H	1.37	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
54:R8:16:ILE:HD11	54:R8:57:ARG:HG2	1.70	0.72
54:R8:61:LEU:O	54:R8:62:LEU:HB2	1.88	0.72
25:RA:987:G:O2'	25:RA:1000:A:N3	2.22	0.72
31:RH:89:ILE:CD1	31:RH:129:THR:HB	2.20	0.72
32:RI:130:TYR:C	32:RI:131:LYS:HD2	2.10	0.72
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.72
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.72
47:Y1:76:ARG:HH11	47:Y1:76:ARG:HG2	1.53	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	0.72
54:Y8:60:LEU:C	54:Y8:63:PRO:HD2	2.11	0.72
42:YW:70:TYR:H	42:YW:70:TYR:HD2	1.37	0.72
23:QX:4:C:H2'	23:QX:5:C:H5'	1.72	0.71
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.04	0.71
25:RA:2832:U:H4'	25:RA:2833:G:H5''	1.71	0.71
26:RB:45:A:O4'	30:RG:95:ARG:NH1	2.23	0.71
29:RF:32:LEU:HD12	29:RF:32:LEU:C	2.10	0.71
31:RH:152:ARG:O	31:RH:153:LYS:HD2	1.90	0.71
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.89	0.71
38:RS:26:LEU:HD23	38:RS:26:LEU:O	1.90	0.71
40:RU:8:VAL:HG23	40:RU:11:ARG:NH2	1.99	0.71
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.71
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.70	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
46:Y0:43:THR:HG23	46:Y0:43:THR:O	1.90	0.71
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.55	0.71
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.90	0.71
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.25	0.71
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.71
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.71
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.71
29:YF:32:LEU:HD12	29:YF:32:LEU:C	2.10	0.71
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.71
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.88	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.89	0.71
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.71
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.70	0.71
1:QA:842:C:O2'	1:QA:848:C:N4	2.23	0.71
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.02	0.71
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
28:RE:21:VAL:HB	28:RE:22:PRO:CB	2.18	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	0.71
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.71
42:RW:1:MET:HE2	42:RW:2:GLU:H	1.55	0.71
1:XA:960:U:O2'	1:XA:961:U:OP2	2.06	0.71
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.71
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.71
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.71
48:Y2:41:ILE:HD12	48:Y2:41:ILE:C	2.10	0.71
25:YA:607:U:H3	25:YA:621:A:H2	1.38	0.71
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	1.90	0.71
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.91	0.71
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.05	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.24	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
32:RI:92:VAL:CG1	32:RI:120:ILE:HG23	2.18	0.71
37:RR:3:HIS:O	37:RR:5:LYS:N	2.22	0.71
45:RZ:140:ASP:OD2	45:RZ:156:LYS:N	2.24	0.71
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.70	0.71
1:XA:986:A:H1'	19:XS:54:GLY:O	1.90	0.71
47:Y1:80:LEU:C	47:Y1:81:LYS:HE2	2.10	0.71
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.04	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
54:Y8:58:ILE:HD13	54:Y8:61:LEU:HD11	1.72	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71
45:YZ:138:GLU:C	45:YZ:156:LYS:HD3	2.11	0.71
1:QA:1054:C:OP2	1:QA:1197:G:P	2.48	0.71
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.55	0.71
33:RN:1:MET:CE	40:RU:95:LEU:HD21	2.20	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.71
19:XS:40:ILE:HG13	19:XS:44:MET:SD	2.31	0.71
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.73	0.71
51:Y5:2:ALA:O	51:Y5:3:LYS:HB2	1.88	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
32:YI:73:GLU:HG3	32:YI:136:VAL:HG23	1.72	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	0.71
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
2:QB:75:LYS:HD3	2:QB:75:LYS:O	1.89	0.71
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.71
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.72	0.71
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.05	0.71
43:RX:12:VAL:HG12	43:RX:27:THR:O	1.91	0.71
13:XM:121:LYS:NZ	24:XY:40:G:P	2.62	0.71
25:YA:185:U:H4'	25:YA:218:A:H4'	1.72	0.71
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.88	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
33:YN:1:MET:CE	40:YU:95:LEU:HD21	2.21	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71
45:YZ:140:ASP:OD2	45:YZ:156:LYS:N	2.24	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
52:R6:25:LYS:HD2	54:R8:34:TRP:HZ2	1.56	0.71
25:RA:1939:U:OP1	25:RA:2604:U:O2'	2.08	0.71
35:RP:49:ARG:HD2	54:R8:58:ILE:CG2	2.20	0.71
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	0.71
38:RS:67:ARG:O	38:RS:71:ARG:HG3	1.90	0.71
41:RV:39:LEU:O	41:RV:40:LEU:HD23	1.90	0.71
2:XB:126:GLU:CG	2:XB:129:GLU:HG3	2.20	0.71
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.71
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.73	0.71
27:YD:263:ARG:HB2	27:YD:263:ARG:NH1	2.06	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	2.21	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.21	0.71
46:R0:25:ARG:HD2	46:R0:29:GLN:HE22	1.55	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	0.71
54:R8:58:ILE:HD13	54:R8:61:LEU:HD11	1.72	0.71
25:RA:1403:C:H5"	25:RA:1471:A:H1'	1.73	0.71
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.72	0.71
25:RA:2635:C:H5"	28:RE:78:LEU:HA	1.72	0.71
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.19	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.52	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.71	0.71
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.25	0.71
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.71	0.71
1:QA:971:G:H5"	1:QA:972:C:H5"	1.73	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
54:R8:60:LEU:C	54:R8:63:PRO:HD2	2.11	0.71
32:RI:73:GLU:HG3	32:RI:136:VAL:HG23	1.72	0.71
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.55	0.71
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.90	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	0.71
25:YA:1286:A:O2'	25:YA:1288:U:OP2	2.06	0.71
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.73	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
42:YW:6:ILE:HG12	42:YW:104:THR:HG23	1.73	0.71
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.72	0.71
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.19	0.71
25:RA:2392:A:OP2	25:RA:2422:A:N6	2.24	0.71
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.24	0.71
35:RP:83:VAL:CG1	35:RP:112:LEU:HD21	2.21	0.71
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:243:A:H4'	1:XA:244:U:H3'	1.72	0.71
1:XA:537:G:H5''	12:XL:113:ARG:HH12	1.55	0.71
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.72	0.71
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.25	0.71
48:Y2:7:ARG:HH11	48:Y2:7:ARG:HG3	1.55	0.71
25:YA:26:G:H1'	25:YA:515:A:H61	1.56	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.04	0.71
25:RA:579:G:O2'	25:RA:2019:A:OP1	2.09	0.71
27:RD:263:ARG:NH1	27:RD:263:ARG:HB2	2.05	0.71
27:RD:43:ARG:HB3	27:RD:54:ARG:HB2	1.73	0.71
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	0.71
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.71
2:XB:172:ILE:HD12	2:XB:172:ILE:H	1.56	0.71
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.71
47:Y1:81:LYS:CA	47:Y1:81:LYS:HE2	2.13	0.71
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.06	0.71
25:YA:363:G:H2'	25:YA:363(A):A:H8	1.56	0.71
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.89	0.71
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.08	0.71
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.70
4:QD:170:VAL:O	6:XF:21:LEU:CD2	2.34	0.70
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
5:QE:79:GLU:OE2	8:QH:104:ARG:CA	2.37	0.70
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.70
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.70
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.70
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.71	0.70
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.70
46:Y0:25:ARG:HD2	46:Y0:29:GLN:HE22	1.55	0.70
31:YH:80:SER:O	31:YH:81:GLU:HB2	1.89	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	0.70
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.24	0.70
31:RH:125:VAL:HG12	31:RH:126:PRO:HG3	1.71	0.70
36:RQ:79:LEU:CD1	36:RQ:80:GLU:OE1	2.38	0.70
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.04	0.70
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.72	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.72	0.70
31:YH:59:ARG:HG3	31:YH:59:ARG:HH11	1.56	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.91	0.70
36:YQ:134:ARG:CZ	45:YZ:122:ARG:NH2	2.55	0.70
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.23	0.70
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.37	0.70
25:RA:227:A:O2'	25:RA:228:A:O5'	2.08	0.70
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.56	0.70
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	1.92	0.70
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.90	0.70
31:RH:132:ARG:CB	31:RH:132:ARG:HH11	1.97	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	0.70
5:XE:82:VAL:HG12	5:XE:83:GLU:N	2.06	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	0.70
25:YA:558:G:P	33:YN:111:PRO:HD2	2.31	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.70
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
36:RQ:134:ARG:CZ	45:RZ:122:ARG:NH2	2.54	0.70
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.06	0.70
29:YF:178:PRO:HG2	29:YF:179:GLU:OE2	1.90	0.70
31:YH:103:LEU:HD12	31:YH:131:VAL:HG21	1.73	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.91	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.70
1:XA:842:C:O2'	1:XA:848:C:N4	2.24	0.70
1:XA:827:U:O2	1:XA:874:G:N2	2.24	0.70
13:XM:121:LYS:HA	13:XM:121:LYS:HE2	1.71	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
26:YB:15:A:H5'	26:YB:16:G:C8	2.26	0.70
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.73	0.70
26:YB:42:C:N4	30:YG:91:ARG:HH21	1.89	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.73	0.70
26:RB:80:U:H2'	26:RB:81:G:H21	1.55	0.70
25:RA:607:U:OP1	29:RF:102:PRO:HA	1.92	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.73	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.22	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
31:YH:152:ARG:O	31:YH:153:LYS:CB	2.39	0.70
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.06	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.70
48:R2:7:ARG:HH11	48:R2:7:ARG:HG3	1.55	0.70
27:RD:65:ILE:O	27:RD:65:ILE:HD13	1.91	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.39	0.70
32:RI:6:LEU:HD13	32:RI:36:ALA:HA	1.74	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
44:RY:45:VAL:HG12	44:RY:60:PHE:CD1	2.27	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
25:YA:265:A:N6	25:YA:427:U:O2'	2.22	0.70
28:YE:28:ALA:HB3	28:YE:93:VAL:HG22	1.72	0.70
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.74	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
36:RQ:80:GLU:CD	46:R0:5:LYS:HB3	2.12	0.70
32:RI:27:ARG:HD3	47:R1:71:TYR:HE1	1.55	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
8:XH:49:GLU:HG3	8:XH:51:VAL:HG13	1.74	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.21	0.70
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.25	0.70
30:YG:131:TYR:O	30:YG:159:VAL:HG13	1.92	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
32:YI:92:VAL:HG13	32:YI:120:ILE:CG2	2.16	0.70
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.73	0.70
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.25	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
48:R2:47:ASN:O	48:R2:49:LYS:N	2.25	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
13:QM:7:VAL:CB	30:RG:115:ARG:HH12	2.05	0.70
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
1:XA:437:U:H2'	1:XA:438:G:O4'	1.92	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
10:XJ:49:VAL:CG2	14:XN:41:ARG:HB2	2.21	0.70
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.27	0.70
28:YE:103:ASP:OD1	28:YE:201:THR:HA	1.92	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.73	0.70
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.70
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.11	0.70
13:QM:93:ARG:NH1	25:RA:887:A:OP1	2.25	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
32:RI:21:VAL:HG22	32:RI:22:LYS:H	1.57	0.70
1:XA:201:C:N4	1:XA:209:U:O2	2.25	0.70
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.20	0.70
27:YD:65:ILE:HD13	27:YD:65:ILE:O	1.91	0.70
35:YP:114:ILE:HD13	35:YP:125:VAL:HG21	1.72	0.70
35:YP:64:LYS:C	35:YP:66:GLY:H	1.94	0.70
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.21	0.70
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.72	0.70
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.70
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.72	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.69
22:QV:1:C:C4'	46:R0:5:LYS:CE	2.70	0.69
47:R1:7:ILE:HD12	47:R1:70:VAL:HG22	1.73	0.69
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.22	0.69
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.24	0.69
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.69
1:XA:130:A:N3	1:XA:263:A:O2'	2.23	0.69
1:XA:941:G:H1	1:XA:1342:C:H42	1.38	0.69
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.74	0.69
25:YA:2734:A:H3'	25:YA:2735:G:H8	1.57	0.69
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.74	0.69
25:YA:956:G:N2	25:YA:960:A:OP2	2.24	0.69
13:XM:7:VAL:HG21	30:YG:113:ARG:O	1.92	0.69
1:XA:1446:A:N3	39:YT:118:ARG:HD2	2.06	0.69
1:QA:793:U:H3'	1:QA:794:A:H5''	1.74	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.73	0.69
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.69
9:QI:113:LYS:N	9:QI:113:LYS:HD2	2.07	0.69
25:RA:1971:A:C4	27:RD:241:PRO:HD3	2.27	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.69
45:RZ:138:GLU:C	45:RZ:156:LYS:HD3	2.11	0.69
1:XA:356:A:N3	1:XA:368:U:O2'	2.25	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
10:XJ:38:ILE:HG13	10:XJ:38:ILE:O	1.92	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.69
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.72	0.69
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.69
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.22	0.69
32:YI:6:LEU:HD13	32:YI:36:ALA:HA	1.74	0.69
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.69
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.69
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.69
45:YZ:121:HIS:O	45:YZ:122:ARG:HB2	1.92	0.69
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.90	0.69
46:R0:6:GLY:C	46:R0:7:LEU:HD22	2.12	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
27:RD:76:PRO:O	27:RD:98:VAL:HG23	1.91	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	0.69
25:RA:2849:U:O4	39:RT:23:ARG:NH2	2.24	0.69
1:XA:677:U:H3	1:XA:713:G:H1	1.39	0.69
1:XA:895:G:H1	1:XA:904:C:H42	1.37	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
1:XA:1322:C:H5'	13:XM:100:GLY:HA2	1.73	0.69
14:XN:6:LEU:HD23	14:XN:6:LEU:O	1.92	0.69
47:Y1:53:VAL:HG22	47:Y1:74:VAL:HG13	1.74	0.69
25:YA:1499:C:H2'	25:YA:1500:G:C8	2.27	0.69
25:YA:768:G:O2'	25:YA:1379:A:N6	2.22	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.97	0.69
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
47:R1:74:VAL:O	47:R1:74:VAL:HG12	1.93	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	0.69
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.10	0.69
28:RE:103:ASP:OD1	28:RE:201:THR:HA	1.92	0.69
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69
1:XA:1219:U:OP1	14:XN:19:ARG:NH2	2.19	0.69
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.58	0.69
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
34:YO:8:LEU:N	34:YO:8:LEU:HD22	2.07	0.69
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.92	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.75	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.90	0.69
15:QO:65:ARG:HH11	15:QO:65:ARG:HB2	1.57	0.69
1:QA:280:C:N3	17:QQ:39:SER:N	2.38	0.69
26:RB:15:A:H5'	26:RB:16:G:C8	2.26	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
45:RZ:121:HIS:O	45:RZ:122:ARG:HB2	1.92	0.69
45:RZ:129:SER:HB3	45:RZ:132:ASN:OD1	1.92	0.69
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.13	0.69
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.25	0.69
25:YA:1077:A:H5'	25:YA:1078:U:H5''	1.75	0.69
25:YA:192:C:O2'	25:YA:802:A:N3	2.25	0.69
27:YD:76:PRO:O	27:YD:98:VAL:HG23	1.91	0.69
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
1:QA:1531:A:C5'	1:QA:1531:A:H8	2.01	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
8:QH:6:ILE:N	8:QH:6:ILE:HD12	2.08	0.69
25:RA:307:G:N2	25:RA:310:A:OP2	2.25	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.74	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.58	0.69
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69
35:YP:61:ARG:HD2	35:YP:61:ARG:H	1.58	0.69
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
1:QA:380:G:N2	1:QA:383:A:OP2	2.26	0.69
1:QA:45:U:H2'	1:QA:46:G:C8	2.27	0.69
1:QA:592:G:H1	1:QA:647:C:H42	1.39	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.27	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	0.69
47:R1:81:LYS:CA	47:R1:81:LYS:HE2	2.13	0.69
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.36	0.69
25:RA:586:A:N1	25:RA:809:G:O2'	2.22	0.69
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.58	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
35:RP:39:LYS:CA	35:RP:45:LEU:HD11	2.23	0.69
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.27	0.69
41:RV:41:GLY:HA3	41:RV:46:VAL:HG11	1.74	0.69
41:RV:66:ARG:HH12	41:RV:88:ARG:NH1	1.90	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
25:YA:1318:C:H2'	25:YA:1319:G:H5''	1.74	0.69
25:YA:2401:U:H2'	25:YA:2402:C:H5''	1.74	0.69
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
2:QB:126:GLU:O	2:QB:126:GLU:HG2	1.92	0.69
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.73	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
39:RT:41:ARG:NH2	39:RT:43:GLN:HB2	2.06	0.69
45:RZ:53:ILE:HG22	45:RZ:71:VAL:HG13	1.74	0.69
2:XB:178:ARG:NH2	8:XH:68:ARG:HH22	1.90	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
19:XS:5:LEU:CD1	50:Y4:66:SER:CB	2.59	0.69
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.69
25:YA:2343:C:HO2'	25:YA:2373:G:HO2'	1.38	0.69
27:YD:17:THR:HG22	27:YD:205:VAL:N	2.08	0.69
30:YG:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
31:YH:150:ALA:C	31:YH:152:ARG:N	2.44	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.92	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69
35:YP:62:LEU:H	35:YP:62:LEU:HD22	1.53	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
25:RA:2602:A:C2	55:Z6:76:PPU:H8	2.28	0.69
1:QA:713:G:H2'	1:QA:714:G:C8	2.28	0.69
2:QB:172:ILE:HD12	2:QB:172:ILE:H	1.56	0.69
46:R0:43:THR:O	46:R0:43:THR:HG23	1.90	0.69
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.55	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
32:RI:13:GLY:HA3	32:RI:17:GLN:OE1	1.93	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
40:RU:90:VAL:O	40:RU:92:ARG:N	2.26	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.05	0.69
7:XG:8:GLU:H	7:XG:8:GLU:CD	1.96	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
19:XS:5:LEU:CG	50:Y4:66:SER:HB2	2.23	0.69
25:YA:380:U:H2'	25:YA:381:G:H8	1.57	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.07	0.69
31:YH:154:PRO:O	31:YH:155:SER:HB2	1.91	0.69
33:YN:56:ASN:HD22	33:YN:125:GLY:C	1.96	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.75	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
48:R2:23:LYS:O	48:R2:27:GLU:OE1	2.11	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69
34:YO:1:MET:HE3	34:YO:67:LYS:HE2	1.75	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.15	0.69
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.75	0.69
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	1.75	0.69
35:RP:61:ARG:H	35:RP:61:ARG:HD2	1.58	0.69
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.69
7:XG:155:ARG:N	7:XG:155:ARG:HD3	2.07	0.69
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.69
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.69
25:YA:242:G:H5''	54:Y8:3:LYS:HE3	1.73	0.69
25:YA:654:A:O2'	25:YA:654(A):G:N7	2.26	0.69
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.69
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	0.69
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
45:YZ:53:ILE:HG22	45:YZ:71:VAL:HG13	1.74	0.69
1:QA:243:A:H4'	1:QA:244:U:H3'	1.75	0.68
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.08	0.68
7:QG:155:ARG:HD3	7:QG:155:ARG:N	2.07	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	1.92	0.68
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.93	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.05	0.68
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.94	0.68
13:XM:57:ARG:NH2	50:Y4:34:GLU:HA	2.07	0.68
52:Y6:41:PRO:CG	52:Y6:45:LYS:H	2.05	0.68
25:YA:568:U:H5'	25:YA:945:A:C2	2.27	0.68
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.68
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.68
1:QA:1048:G:H1	1:QA:1209:C:H42	1.39	0.68
1:QA:1288:A:N3	1:QA:1352:C:O2'	2.25	0.68
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.74	0.68
13:QM:119:GLY:HA3	22:QV:29:G:OP1	1.93	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
52:R6:14:THR:HG21	52:R6:19:ARG:HH21	1.58	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
30:RG:112:PRO:CB	50:R4:37:SER:HB2	2.22	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.74	0.68
44:RY:40:GLU:HA	44:RY:64:GLU:OE1	1.94	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.74	0.68
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.68
25:YA:2068:U:H3	25:YA:2430:A:H2	1.42	0.68
32:YI:5:LEU:N	32:YI:5:LEU:HD12	2.08	0.68
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
1:QA:1349:A:OP2	9:QI:118:LYS:NZ	2.23	0.68
1:QA:475:G:H2'	1:QA:476:G:H8	1.58	0.68
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.68
25:RA:526:A:OP1	25:RA:527:C:OP1	2.11	0.68
25:RA:630:G:N2	25:RA:633:A:OP2	2.26	0.68
35:RP:26:GLY:O	35:RP:28:GLY:N	2.26	0.68
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.58	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.59	0.68
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.23	0.68
25:YA:852:G:H1	25:YA:925:C:H42	1.42	0.68
44:YY:48:ALA:O	44:YY:49:VAL:C	2.30	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:YY:61:ILE:CG2	44:YY:62:GLU:N	2.56	0.68
1:QA:765:G:H1	1:QA:812:C:H2'	1.57	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.68
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.75	0.68
25:RA:774:A:H2	25:RA:787:U:HO2'	1.40	0.68
34:RO:8:LEU:HD22	34:RO:8:LEU:N	2.08	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	0.68
1:XA:673:G:H2'	1:XA:674:G:C8	2.29	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
10:XJ:96:ILE:HD13	10:XJ:96:ILE:N	2.09	0.68
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.11	0.68
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.28	0.68
32:YI:92:VAL:CG1	32:YI:120:ILE:HG23	2.18	0.68
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.68
20:QT:47:GLY:O	20:QT:49:ALA:N	2.19	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
50:R4:15:ILE:HD13	50:R4:15:ILE:N	2.09	0.68
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	0.68
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.93	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.07	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
25:YA:1509:C:H3'	25:YA:1510:A:H5''	1.75	0.68
25:YA:780:G:H21	25:YA:783:A:H62	1.42	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.58	0.68
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.58	0.68
38:YS:57:LYS:H	38:YS:57:LYS:HD3	1.59	0.68
44:YY:29:GLU:HB3	44:YY:38:ILE:HG12	1.74	0.68
4:QD:96:LEU:N	4:QD:96:LEU:HD22	2.07	0.68
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.76	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.09	0.68
25:RA:1203:G:O2'	25:RA:1242:A:N6	2.26	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:581:C:N4	25:RA:582:G:O6	2.27	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	0.68
31:RH:126:PRO:HB2	31:RH:130:ARG:O	1.93	0.68
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.68
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.41	0.68
17:XQ:59:ILE:N	17:XQ:59:ILE:HD13	2.08	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.09	0.68
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.74	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.24	0.68
25:RA:372:G:H5''	47:R1:66:HIS:CD2	2.28	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
33:RN:134:ARG:N	33:RN:135:PRO:HD3	1.97	0.68
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
36:RQ:12:GLN:CG	36:RQ:73:PRO:HD2	2.21	0.68
37:RR:29:LEU:HD23	37:RR:79:LEU:HD12	1.75	0.68
39:RT:108:ARG:HA	39:RT:111:ARG:CZ	2.24	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.25	0.68
2:XB:126:GLU:O	2:XB:126:GLU:HG2	1.92	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
13:XM:68:GLY:CA	30:YG:116:ASP:OD2	2.41	0.68
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
28:YE:16:ARG:HG3	28:YE:16:ARG:O	1.93	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.76	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NE	2.08	0.68
32:YI:13:GLY:HA3	32:YI:17:GLN:OE1	1.93	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	0.68
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
14:QN:6:LEU:HD23	14:QN:6:LEU:O	1.93	0.68
17:QQ:59:ILE:N	17:QQ:59:ILE:HD13	2.09	0.68
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.68
25:RA:2199:A:H3'	25:RA:2205:C:H6	1.59	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	1.94	0.68
1:XA:291:C:H42	1:XA:309:G:H1	1.42	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
8:XH:6:ILE:N	8:XH:6:ILE:HD12	2.08	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.91	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
32:YI:8:PRO:HG3	32:YI:14:ASP:HB2	1.76	0.68
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.68
36:YQ:79:LEU:CD1	36:YQ:80:GLU:OE1	2.38	0.68
45:YZ:129:SER:HB3	45:YZ:132:ASN:OD1	1.92	0.68
45:YZ:18:LEU:H	45:YZ:18:LEU:CD1	2.06	0.68
25:RA:1265:A:H1'	25:RA:1267:U:C6	2.28	0.68
25:RA:2134:A:OP2	25:RA:2157:G:N2	2.26	0.68
25:RA:2746:U:H5''	31:RH:138:LYS:HE2	1.76	0.68
25:RA:558:G:P	33:RN:111:PRO:HD2	2.34	0.68
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.68
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.27	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
45:RZ:18:LEU:CD1	45:RZ:18:LEU:H	2.06	0.68
1:XA:1128:C:H42	1:XA:1144:G:H1	1.40	0.68
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.75	0.68
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.09	0.68
25:YA:1364:G:N2	25:YA:1367:A:OP2	2.17	0.68
25:YA:2832:U:H4'	25:YA:2833:G:H5''	1.76	0.68
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.75	0.68
30:YG:171:ALA:O	30:YG:175:LEU:HG	1.93	0.68
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NH1	2.09	0.68
32:YI:74:ASN:CG	32:YI:75:LEU:H	1.97	0.68
35:YP:39:LYS:CA	35:YP:45:LEU:HD11	2.23	0.68
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.68
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.75	0.68
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68
25:RA:1187:G:H5''	41:RV:81:TYR:CE2	2.29	0.68
28:RE:13:ARG:CB	28:RE:13:ARG:HH11	2.07	0.68
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.68
31:RH:88:LEU:HD22	31:RH:88:LEU:H	1.58	0.68
32:RI:115:ALA:HB3	32:RI:128:LEU:CD1	2.23	0.68
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.27	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.76	0.68
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.68
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.57	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.94	0.68
32:YI:99:GLU:CG	32:YI:103:ARG:HH21	2.07	0.68
32:YI:21:VAL:HG22	32:YI:22:LYS:H	1.57	0.68
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.27	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
45:YZ:125:LEU:O	45:YZ:164:ALA:HB3	1.94	0.68
1:QA:745:C:OP1	1:QA:851:G:O2'	2.13	0.67
7:QG:8:GLU:H	7:QG:8:GLU:CD	1.96	0.67
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.10	0.67
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.67
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.28	0.67
47:R1:20:ARG:HH11	47:R1:20:ARG:HG2	1.58	0.67
25:RA:1337:G:H2'	25:RA:1338:G:H8	1.58	0.67
44:RY:49:VAL:O	44:RY:51:VAL:N	2.27	0.67
45:RZ:125:LEU:O	45:RZ:164:ALA:HB3	1.94	0.67
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.30	0.67
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.67
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.60	0.67
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.28	0.67
32:YI:127:VAL:HA	32:YI:139:GLN:HA	1.76	0.67
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
4:QD:29:PRO:O	4:QD:30:LYS:HD3	1.94	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.09	0.67
10:QJ:96:ILE:N	10:QJ:96:ILE:HD13	2.09	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.10	0.67
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.67
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.94	0.67
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.67
25:YA:27:G:N2	25:YA:513:A:OP2	2.27	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	1.94	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.95	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67
38:YS:35:ILE:HD13	38:YS:101:LEU:HD23	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
44:YY:21:LYS:HG3	44:YY:22:GLY:N	2.09	0.67
1:QA:411:A:C5	1:QA:413:G:H1'	2.29	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.60	0.67
27:RD:135:PHE:N	27:RD:135:PHE:CD2	2.62	0.67
31:RH:89:ILE:O	31:RH:89:ILE:HG12	1.92	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
36:RQ:80:GLU:OE2	36:RQ:80:GLU:HA	1.94	0.67
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.59	0.67
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.07	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.41	0.67
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.67
35:YP:65:ARG:CG	35:YP:65:ARG:HH11	2.06	0.67
36:YQ:33:GLY:HA2	36:YQ:105:GLU:HA	1.76	0.67
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.67
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.26	0.67
25:RA:323:G:H2'	29:RF:169:ASN:OD1	1.93	0.67
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.27	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.77	0.67
38:RS:35:ILE:HD13	38:RS:101:LEU:HD23	1.76	0.67
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.24	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.10	0.67
25:YA:2576:G:O2'	25:YA:2579:C:OP2	2.10	0.67
35:YP:26:GLY:O	35:YP:28:GLY:N	2.26	0.67
36:YQ:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
41:YV:25:LEU:H	41:YV:92:THR:HG21	1.60	0.67
44:YY:14:LEU:HD23	44:YY:15:VAL:N	2.09	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.59	0.67
36:RQ:104:PHE:CE1	36:RQ:125:LEU:HD11	2.30	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.09	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.29	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.77	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	0.67
25:YA:1434:A:H61	25:YA:1558:A:N6	1.93	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
32:YI:13:GLY:HA3	32:YI:17:GLN:CD	2.15	0.67
36:YQ:12:GLN:CG	36:YQ:73:PRO:HD2	2.21	0.67
44:YY:49:VAL:O	44:YY:51:VAL:N	2.27	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.59	0.67
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.27	0.67
25:RA:2690:C:N4	25:RA:2713:A:O2'	2.28	0.67
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	0.67
25:RA:565:C:OP1	41:RV:82:ARG:NH2	2.27	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.75	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	1.75	0.67
28:YE:13:ARG:HH11	28:YE:13:ARG:CB	2.07	0.67
25:YA:443:A:N7	29:YF:45:ARG:HD2	2.10	0.67
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
38:YS:67:ARG:CZ	38:YS:67:ARG:HB2	2.24	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.23	0.67
5:QE:78:HIS:CD2	8:QH:104:ARG:CG	2.76	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
48:R2:47:ASN:ND2	48:R2:47:ASN:H	1.92	0.67
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67
32:RI:5:LEU:N	32:RI:5:LEU:HD12	2.08	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67
1:XA:148:G:H1	1:XA:174:C:H42	1.43	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
52:Y6:48:VAL:HG13	52:Y6:49:HIS:H	1.60	0.67
25:YA:141:A:H8	25:YA:1595:G:H21	1.41	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
29:YF:184:TYR:O	29:YF:188:ARG:HG3	1.94	0.67
31:YH:88:LEU:H	31:YH:88:LEU:HD22	1.58	0.67
36:YQ:104:PHE:HE1	36:YQ:125:LEU:HD11	1.58	0.67
36:YQ:81:VAL:C	36:YQ:82:ARG:HG2	2.15	0.67
45:YZ:27:VAL:HG22	45:YZ:28:MET:N	2.10	0.67
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.60	0.67
25:RA:2655:G:N2	25:RA:2665:A:OP2	2.28	0.67
25:RA:27:G:HO2'	25:RA:28:A:H8	1.43	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.57	0.67
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.14	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.67
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.10	0.67
50:Y4:16:CYS:SG	50:Y4:33:VAL:HB	2.35	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	0.67
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.27	0.67
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.77	0.67
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	1.94	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
31:RH:124:GLU:HB3	31:RH:132:ARG:HD2	1.77	0.67
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.67
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	0.67
1:XA:320:C:HO2'	1:XA:1435:G:HO2'	1.43	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.58	0.67
49:Y3:29:ARG:NH1	49:Y3:29:ARG:HB2	2.10	0.67
25:YA:102:G:O2'	25:YA:103:A:OP2	2.13	0.67
25:YA:353:G:H2'	25:YA:354:G:H8	1.60	0.67
27:YD:241:PRO:O	27:YD:243:GLY:N	2.28	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.74	0.67
40:YU:90:VAL:O	40:YU:92:ARG:N	2.26	0.67
41:YV:44:LYS:O	41:YV:46:VAL:N	2.28	0.67
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.67
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.06	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
28:RE:16:ARG:HG3	28:RE:16:ARG:O	1.93	0.67
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.67
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.27	0.67
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.77	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.76	0.67
25:YA:2051:A:C2	25:YA:2052:G:O6	2.48	0.67
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.67
29:YF:46:ARG:HH11	29:YF:46:ARG:CG	2.04	0.67
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.67
36:YQ:80:GLU:OE2	36:YQ:80:GLU:HA	1.94	0.67
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.67
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.67
1:QA:160:A:H61	1:QA:347:G:H1'	1.60	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.23	0.66
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.66
47:R1:80:LEU:HD23	47:R1:80:LEU:N	2.10	0.66
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.29	0.66
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66
32:RI:127:VAL:HA	32:RI:139:GLN:HA	1.76	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.94	0.66
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.24	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.66
25:YA:1026:U:H4'	25:YA:1027:A:OP1	1.95	0.66
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.66
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	0.66
36:YQ:88:GLY:C	36:YQ:90:VAL:N	2.47	0.66
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.95	0.66
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.31	0.66
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.66
1:QA:1226:C:O2'	13:QM:103:THR:O	2.08	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
25:RA:1266:G:N7	42:RW:15:ARG:NH1	2.44	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:562:U:O2'	25:RA:572:A:O4'	2.12	0.66
28:RE:36:ARG:HB3	28:RE:36:ARG:HH11	1.60	0.66
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.66
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.66
45:RZ:33:LEU:HD21	45:RZ:35:ARG:HD2	1.78	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
47:Y1:56:GLN:N	47:Y1:56:GLN:HE21	1.93	0.66
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
1:QA:1050:G:H1	1:QA:1208:C:H42	1.43	0.66
1:QA:188:U:H2'	1:QA:189:U:H5''	1.76	0.66
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.78	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.42	0.66
50:R4:37:SER:C	50:R4:39:CYS:H	1.98	0.66
25:RA:1899:G:H21	25:RA:1902:C:N4	1.93	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.30	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
32:RI:55:ALA:O	32:RI:57:ARG:N	2.27	0.66
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
44:RY:89:PHE:C	44:RY:90:LEU:HD13	2.15	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
25:YA:1024:G:OP2	25:YA:1025:G:H3'	1.95	0.66
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.28	0.66
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.60	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.95	0.66
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.78	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.94	0.66
49:R3:29:ARG:HB2	49:R3:29:ARG:NH1	2.10	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.26	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.75	0.66
13:QM:7:VAL:HB	30:RG:115:ARG:HH12	1.56	0.66
35:RP:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
8:XH:84:ARG:NH1	8:XH:84:ARG:HG3	2.10	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
25:YA:392:C:H5"	25:YA:409:C:H5"	1.76	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.27	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
25:RA:128:C:O3'	53:R7:49:ARG:NH2	2.29	0.66
31:RH:168:PRO:O	31:RH:169:VAL:HG12	1.96	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.25	0.66
40:RU:88:ILE:N	40:RU:88:ILE:HD13	2.10	0.66
1:XA:67:C:O2'	1:XA:171:A:N3	2.26	0.66
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.75	0.66
7:XG:69:VAL:O	7:XG:69:VAL:HG12	1.95	0.66
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	1.99	0.66
51:Y5:40:LYS:NZ	51:Y5:48:GLU:HB2	2.10	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
33:YN:57:ALA:HA	33:YN:60:ILE:HD11	1.78	0.66
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.27	0.66
40:YU:88:ILE:N	40:YU:88:ILE:HD13	2.10	0.66
41:YV:53:GLU:O	41:YV:53:GLU:HG2	1.94	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
45:YZ:112:ARG:NH2	45:YZ:145:GLU:HA	2.10	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
1:QA:191:G:C4	20:QT:105:SER:HB3	2.31	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.76	0.66
25:RA:2602:A:H2	55:Z6:76:PPU:C8	2.09	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.96	0.66
27:RD:241:PRO:O	27:RD:243:GLY:N	2.28	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
28:RE:174:ASP:CG	28:RE:175:VAL:H	1.98	0.66
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	0.66
32:RI:13:GLY:HA3	32:RI:17:GLN:CD	2.15	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
46:Y0:3:HIS:HD2	46:Y0:4:LYS:C	1.99	0.66
19:XS:64:GLU:CB	50:Y4:55:ARG:HH12	2.08	0.66
50:Y4:71:ARG:CG	50:Y4:71:ARG:HH11	1.98	0.66
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.28	0.66
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	1.96	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	0.66
35:YP:61:ARG:NH2	54:Y8:13:ARG:HD2	2.10	0.66
1:QA:1128:C:H42	1:QA:1144:G:H1	1.43	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.66
28:RE:101:ARG:CZ	28:RE:171:GLU:HB2	2.25	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.43	0.66
32:RI:68:LEU:HA	32:RI:71:ILE:CG2	2.26	0.66
32:RI:99:GLU:CG	32:RI:103:ARG:HH21	2.07	0.66
34:RO:86:ILE:HD12	34:RO:86:ILE:H	1.61	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.25	0.66
39:RT:11:GLU:CD	39:RT:11:GLU:N	2.47	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
1:XA:1348:U:H3	1:XA:1374:A:H2	1.43	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.96	0.66
7:XG:141:VAL:O	7:XG:141:VAL:HG12	1.95	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
25:YA:2392:A:H2	25:YA:2424:C:H42	1.43	0.66
27:YD:135:PHE:N	27:YD:135:PHE:CD2	2.62	0.66
28:YE:37:ARG:HA	28:YE:37:ARG:NE	2.11	0.66
32:YI:115:ALA:HB3	32:YI:128:LEU:CD1	2.22	0.66
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.31	0.66
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.76	0.66
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.30	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
35:RP:61:ARG:NH2	54:R8:13:ARG:HD2	2.10	0.66
25:RA:2115:G:N2	25:RA:2165:G:N7	2.40	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.26	0.66
29:RF:175:THR:O	29:RF:176:LEU:HB2	1.96	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RI:74:ASN:CG	32:RI:75:LEU:H	1.97	0.66
32:RI:79:ILE:HG21	32:RI:142:VAL:HG12	1.77	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.08	0.66
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.60	0.66
10:XJ:81:THR:C	10:XJ:83:GLU:H	2.00	0.66
25:YA:489:G:N7	42:YW:49:LYS:NZ	2.42	0.66
25:YA:602:G:O2'	25:YA:604:G:O2'	2.13	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.12	0.66
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.66
27:RD:35:LYS:HZ1	27:RD:65:ILE:HA	1.60	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.95	0.66
32:RI:8:PRO:HG3	32:RI:14:ASP:HB2	1.76	0.66
1:XA:272:C:H2'	1:XA:273:A:H8	1.61	0.66
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
27:YD:183:ARG:HH11	27:YD:183:ARG:CG	2.07	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
33:YN:134:ARG:N	33:YN:135:PRO:HD3	1.97	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
44:YY:42:VAL:CG1	44:YY:65:ALA:HB3	2.25	0.66
45:YZ:102:LEU:HD22	45:YZ:156:LYS:NZ	2.11	0.66
1:QA:1239:A:H62	1:QA:1299:A:N6	1.92	0.66
1:QA:1238:A:H62	1:QA:1301:U:H3	1.44	0.66
1:QA:748:C:H1'	1:QA:749:C:H5	1.60	0.66
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.66
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.30	0.66
32:RI:51:ILE:HA	32:RI:54:GLN:HB2	1.77	0.66
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	0.66
41:RV:53:GLU:O	41:RV:53:GLU:HG2	1.94	0.66
1:XA:1049:U:HO2'	14:YN:2:ALA:N	1.94	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.78	0.66
12:XL:48:PRO:CD	12:XL:49:ASN:N	2.57	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:Y1:11:ARG:HH11	47:Y1:11:ARG:HB3	1.61	0.66
25:YA:458:G:O2'	25:YA:469:G:O6	2.13	0.66
25:YA:543:C:H42	25:YA:550:G:H1	1.43	0.66
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	0.66
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	0.66
34:YO:86:ILE:HD12	34:YO:86:ILE:H	1.61	0.66
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	1.94	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
44:YY:35:TYR:CE1	44:YY:69:ALA:HB3	2.31	0.66
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
7:QG:69:VAL:HG12	7:QG:69:VAL:O	1.95	0.65
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.65
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.65
27:RD:237:GLU:OE1	27:RD:237:GLU:N	2.29	0.65
32:RI:75:LEU:HB3	32:RI:105:HIS:HE1	1.60	0.65
32:RI:92:VAL:HG13	32:RI:120:ILE:CG2	2.16	0.65
39:RT:22:PHE:N	39:RT:22:PHE:CD2	2.63	0.65
1:XA:971:G:H5''	1:XA:972:C:H5''	1.77	0.65
8:XH:10:LEU:H	8:XH:10:LEU:HD23	1.60	0.65
25:YA:890:A:HO2'	25:YA:892:G:H8	1.45	0.65
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.65
44:YY:47:LYS:HG2	44:YY:60:PHE:CE1	2.31	0.65
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.29	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.96	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
25:RA:863:A:H2'	25:RA:864:G:C8	2.32	0.65
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.65
25:RA:957:A:H5'	36:RQ:76:LYS:HD2	1.77	0.65
41:RV:76:LYS:HB2	41:RV:81:TYR:HB3	1.79	0.65
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.65
45:RZ:112:ARG:NH2	45:RZ:145:GLU:HA	2.10	0.65
36:RQ:134:ARG:NE	45:RZ:122:ARG:HH22	1.94	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.65
25:YA:928:G:O2'	49:Y3:43:ILE:HD11	1.96	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.25	0.65
28:YE:13:ARG:NH1	28:YE:21:VAL:HG12	2.11	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.26	0.65
38:YS:88:ASP:OD2	38:YS:90:GLY:N	2.28	0.65
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.65
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.65
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.65
25:RA:942:G:O2'	25:RA:1189:A:N3	2.28	0.65
25:RA:2286:A:H4'	25:RA:2287:A:O4'	1.94	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	0.65
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.65
42:RW:25:ARG:HB2	42:RW:25:ARG:NH1	2.11	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.96	0.65
1:XA:130:A:H1'	1:XA:264:U:H5'	1.77	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
1:XA:227:G:N2	16:XP:62:VAL:O	2.25	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
27:YD:145:VAL:HG12	27:YD:146:GLU:O	1.95	0.65
31:YH:124:GLU:HB3	31:YH:132:ARG:HD2	1.77	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
32:YI:116:LEU:O	32:YI:118:LYS:N	2.29	0.65
32:YI:79:ILE:HG21	32:YI:142:VAL:HG12	1.77	0.65
35:YP:39:LYS:HA	35:YP:45:LEU:HD13	1.79	0.65
36:YQ:80:GLU:CG	46:Y0:5:LYS:HB3	2.26	0.65
37:YR:26:LYS:HE2	37:YR:70:LEU:O	1.95	0.65
25:YA:2293:C:H5''	38:YS:89:ARG:NH2	2.11	0.65
42:YW:65:LEU:HD12	42:YW:68:ARG:NH1	2.11	0.65
45:YZ:33:LEU:HD21	45:YZ:35:ARG:HD2	1.77	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	1.95	0.65
26:RB:50:G:OP1	38:RS:63:THR:HG23	1.97	0.65
43:RX:65:ARG:N	43:RX:65:ARG:HD3	2.12	0.65
45:RZ:27:VAL:HG22	45:RZ:28:MET:N	2.10	0.65
45:RZ:72:ARG:HH11	45:RZ:72:ARG:CB	2.09	0.65
1:XA:376:G:OP1	16:XP:5:ARG:HB2	1.96	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.64	0.65
25:YA:1499:C:H2'	25:YA:1500:G:H8	1.61	0.65
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.29	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.09	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
4:QD:122:ARG:HD3	4:QD:122:ARG:O	1.97	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.96	0.65
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.62	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
25:RA:1510:A:O2'	25:RA:1511:A:N7	2.29	0.65
27:RD:176:ARG:HG2	27:RD:176:ARG:HH11	1.60	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
32:RI:116:LEU:O	32:RI:118:LYS:N	2.28	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
45:RZ:102:LEU:HD22	45:RZ:156:LYS:NZ	2.11	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
25:YA:860:U:H1'	25:YA:2268:A:H5'	1.78	0.65
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
1:QA:1060:C:H2'	1:QA:1061:G:H8	1.62	0.65
1:QA:871:U:O2'	1:QA:872:A:O5'	2.11	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
25:RA:2096:U:H3	25:RA:2193:G:H1	1.44	0.65
32:RI:125:GLU:HA	32:RI:125:GLU:OE1	1.96	0.65
34:RO:12:ASP:OD1	34:RO:14:THR:HG23	1.97	0.65
40:RU:74:LEU:HD23	40:RU:114:LYS:HD3	1.77	0.65
41:RV:43:GLU:HA	41:RV:43:GLU:OE2	1.95	0.65
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	0.65
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.27	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
1:XA:1397:C:H1'	23:XX:8:A:N6	2.12	0.65
25:YA:2304:G:H1	25:YA:2312:U:H3	1.43	0.65
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.61	0.65
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.60	0.65
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.96	0.65
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.96	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.26	0.65
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.64	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.32	0.65
25:RA:483:A:H3'	25:RA:484:C:C6	2.31	0.65
25:RA:483:A:H3'	25:RA:484:C:H6	1.61	0.65
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	0.65
34:RO:7:TYR:CE1	34:RO:20:MET:HB2	2.32	0.65
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
35:RP:6:LEU:O	35:RP:7:ARG:HG2	1.97	0.65
40:RU:90:VAL:CG1	40:RU:91:ASP:H	2.00	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.99	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.79	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	1.42	0.65
32:YI:68:LEU:HA	32:YI:71:ILE:CG2	2.26	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	0.65
26:YB:28:C:OP1	38:YS:36:TYR:OH	2.11	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:YZ:72:ARG:CB	45:YZ:72:ARG:HH11	2.09	0.65
1:QA:1015:A:H1'	1:QA:1219:U:H5'	1.77	0.65
1:QA:966:G:O2'	9:QI:127:LYS:O	2.15	0.65
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.30	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
24:QY:29:U:H2'	24:QY:30:C:H6	1.61	0.65
47:R1:11:ARG:HH11	47:R1:11:ARG:HB3	1.61	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65
29:RF:45:ARG:CG	29:RF:45:ARG:HH11	2.09	0.65
26:RB:42:C:C6	30:RG:69:ALA:HB2	2.31	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
35:RP:97:PRO:HD3	35:RP:126:VAL:O	1.97	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.62	0.65
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.97	0.65
12:XL:48:PRO:CD	12:XL:49:ASN:H	2.10	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.65
25:YA:1971:A:C4	27:YD:241:PRO:HD3	2.32	0.65
25:YA:69:C:O2	25:YA:73:A:O2'	2.12	0.65
27:YD:176:ARG:HG2	27:YD:176:ARG:HH11	1.60	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
32:YI:99:GLU:HG2	32:YI:103:ARG:NH2	2.11	0.65
32:YI:125:GLU:HA	32:YI:125:GLU:OE1	1.96	0.65
32:YI:77:LEU:HD11	32:YI:140:LEU:HD12	1.79	0.65
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
39:YT:11:GLU:OE1	39:YT:11:GLU:N	2.27	0.65
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	1.97	0.65
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.79	0.65
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.65
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.65
50:R4:36:CYS:O	50:R4:37:SER:O	2.14	0.65
25:RA:184:C:H2'	25:RA:185:U:C6	2.32	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
32:RI:99:GLU:HG2	32:RI:103:ARG:NH2	2.12	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:RZ:103:ARG:CB	45:RZ:138:GLU:HA	2.27	0.65
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	1.97	0.65
45:RZ:9:TYR:CE2	45:RZ:61:LEU:HD13	2.32	0.65
1:XA:1340:A:HO2'	22:XV:31:G:HO2'	1.31	0.65
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.77	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.77	0.65
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
25:YA:1678:G:N2	25:YA:1989:G:H22	1.94	0.65
27:YD:44:ASN:HB3	27:YD:49:ILE:HG22	1.78	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.79	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
25:RA:1798:U:H5'	27:RD:259:THR:HG22	1.78	0.65
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.65
4:XD:13:ARG:HH22	4:XD:36:ARG:NH2	1.94	0.65
5:XE:79:GLU:OE2	8:XH:104:ARG:CA	2.45	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.78	0.65
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	1.79	0.65
25:YA:1663:C:HO2'	25:YA:1664:A:H8	1.43	0.65
27:YD:237:GLU:N	27:YD:237:GLU:OE1	2.29	0.65
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.63	0.65
40:YU:74:LEU:HD23	40:YU:114:LYS:HD3	1.78	0.65
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.65
1:QA:503:C:OP2	12:QL:116:SER:HB3	1.97	0.64
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.33	0.64
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.64
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.65	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.10	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.95	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
1:XA:1364:U:O2'	1:XA:1365:G:OP1	2.15	0.64
1:XA:272:C:H2'	1:XA:273:A:C8	2.32	0.64
1:XA:674:G:H2'	1:XA:675:A:H8	1.60	0.64
1:XA:828:A:H2'	1:XA:829:G:O4'	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.64
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.64
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.64
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.00	0.64
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.30	0.64
25:YA:1509:C:N3	25:YA:1511:A:N6	2.45	0.64
25:YA:221:A:H4'	25:YA:222:A:O5'	1.95	0.64
25:YA:507:A:H5''	25:YA:508:G:H5'	1.79	0.64
35:YP:138:LEU:HD11	35:YP:144:GLU:HG3	1.79	0.64
36:YQ:23:GLY:HA3	36:YQ:101:ARG:NH1	2.12	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	1.97	0.64
42:YW:59:VAL:HG12	42:YW:60:ASN:N	2.11	0.64
1:QA:924:C:O2'	1:QA:1502:A:N6	2.31	0.64
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.98	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.97	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
4:QD:13:ARG:HH22	4:QD:36:ARG:NH2	1.94	0.64
4:QD:79:PHE:HD2	4:QD:79:PHE:C	1.99	0.64
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.61	0.64
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.64
54:R8:52:LYS:HG3	54:R8:52:LYS:O	1.97	0.64
28:RE:37:ARG:HA	28:RE:37:ARG:NE	2.11	0.64
31:RH:51:ARG:HG3	31:RH:51:ARG:HH11	1.62	0.64
36:RQ:81:VAL:O	36:RQ:82:ARG:HG2	1.97	0.64
25:RA:2294:C:OP2	38:RS:89:ARG:NH2	2.31	0.64
39:RT:11:GLU:OE1	39:RT:11:GLU:N	2.27	0.64
40:RU:65:ILE:HG12	40:RU:96:ALA:CB	2.26	0.64
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.97	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.64
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.64
25:YA:1590:U:H2'	25:YA:1591:G:C8	2.32	0.64
27:YD:77:ALA:HB2	27:YD:97:TYR:HA	1.77	0.64
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	1.97	0.64
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.79	0.64
1:QA:1055:A:H61	1:QA:1205:U:H3	1.45	0.64
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.13	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:971:G:C5	1:QA:1365:G:H5'	2.32	0.64
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
22:QV:6:G:H1	22:QV:67:C:H42	1.45	0.64
25:RA:1187:G:H5''	41:RV:81:TYR:HE2	1.60	0.64
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.14	0.64
31:RH:148:ILE:O	31:RH:151:ILE:HG12	1.98	0.64
32:RI:77:LEU:HD11	32:RI:140:LEU:HD12	1.79	0.64
45:RZ:5:LEU:O	45:RZ:6:LYS:HB2	1.98	0.64
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.31	0.64
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.12	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.77	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
14:XN:24:CYS:SG	14:XN:27:CYS:N	2.69	0.64
51:Y5:40:LYS:HD3	51:Y5:46:CYS:CB	2.26	0.64
25:YA:372:G:HO2'	25:YA:400:G:H1	1.38	0.64
25:YA:372:G:N2	25:YA:401:A:OP2	2.22	0.64
40:YU:102:GLU:HG3	41:YV:2:PHE:HE2	1.62	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
4:QD:11:LEU:HD22	4:QD:66:ARG:HD3	1.78	0.64
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.64
11:QK:103:LEU:HD22	11:QK:103:LEU:H	1.61	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.11	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
47:R1:80:LEU:HD12	47:R1:81:LYS:HE3	1.78	0.64
51:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.10	0.64
25:RA:593:G:H2'	25:RA:594:U:H6	1.63	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
32:RI:88:ILE:HG12	32:RI:122:GLU:N	2.13	0.64
36:RQ:80:GLU:CD	46:R0:5:LYS:HB2	2.16	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.78	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.96	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	0.64
50:Y4:36:CYS:O	50:Y4:37:SER:O	2.14	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:Y4:37:SER:C	50:Y4:39:CYS:H	1.98	0.64
25:YA:2469:A:H5''	25:YA:2470:G:H8	1.63	0.64
25:YA:24:G:O2'	42:YW:78:GLU:O	2.15	0.64
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
1:QA:1074:G:O2'	1:QA:1101:A:N1	2.27	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
32:RI:120:ILE:HD11	32:RI:126:TYR:CZ	2.32	0.64
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64
37:RR:2:ARG:HG2	37:RR:5:LYS:NZ	2.13	0.64
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.78	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.32	0.64
14:XN:26:ARG:NE	14:XN:47:LEU:HD21	2.13	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.12	0.64
50:Y4:35:VAL:O	50:Y4:37:SER:N	2.26	0.64
25:YA:1678:G:H22	25:YA:1989:G:H22	1.45	0.64
25:YA:2415:G:H4'	35:YP:67:MET:N	2.12	0.64
25:YA:575:A:OP1	25:YA:2499:C:O2'	2.15	0.64
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.00	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.28	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
44:YY:56:PRO:HG2	44:YY:57:GLN:OE1	1.98	0.64
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.13	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.77	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
9:QI:128:ARG:HD3	22:QV:32:C:OP2	1.96	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.62	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.62	0.64
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
25:YA:848:G:H2'	25:YA:849:A:C8	2.32	0.64
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
29:YF:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.62	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.98	0.64
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.64
41:YV:43:GLU:OE2	41:YV:43:GLU:HA	1.95	0.64
44:YY:86:ARG:O	44:YY:92:ASN:HB2	1.97	0.64
1:QA:1124:G:H5''	1:QA:1145:C:H41	1.60	0.64
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.64
25:RA:2790:A:O2'	25:RA:2893:G:N3	2.30	0.64
25:RA:994:C:H3'	40:RU:54:LYS:HE3	1.78	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64
32:RI:67:ARG:O	32:RI:71:ILE:HG22	1.98	0.64
32:RI:74:ASN:OD1	32:RI:75:LEU:HD13	1.97	0.64
33:RN:15:LEU:HD12	33:RN:136:GLU:HB2	1.79	0.64
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.64
45:RZ:120:ILE:HD13	45:RZ:169:GLU:HG3	1.79	0.64
1:XA:1502:A:H2	1:XA:1505:G:H1	1.46	0.64
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.31	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.97	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.96	0.64
25:YA:2227:A:H5''	27:YD:263:ARG:NH1	2.12	0.64
25:YA:2593:U:H2'	25:YA:2594:C:H6	1.62	0.64
27:YD:135:PHE:HD2	27:YD:135:PHE:N	1.96	0.64
29:YF:11:VAL:HG12	29:YF:12:LEU:N	2.13	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.96	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.55	0.64
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.64
54:R8:56:GLU:OE1	54:R8:56:GLU:N	2.31	0.64
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.61	0.64
26:RB:12:C:H2'	46:R0:73:GLY:HA3	1.80	0.64
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.97	0.64
40:RU:102:GLU:HG3	41:RV:2:PHE:HE2	1.62	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.28	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.31	0.64
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	1.79	0.64
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
25:YA:1113:U:OP1	31:YH:2:SER:N	2.30	0.64
28:YE:69:LYS:O	28:YE:71:GLY:N	2.27	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
32:YI:120:ILE:HD11	32:YI:126:TYR:CZ	2.33	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	0.64
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
25:RA:2131:G:H4'	25:RA:2132:U:H4'	1.80	0.64
25:RA:327:G:N2	44:RY:70:SER:OG	2.31	0.64
25:RA:507:A:H5''	25:RA:508:G:H5'	1.79	0.64
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.28	0.64
14:XN:18:VAL:HG23	14:XN:19:ARG:H	1.63	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
27:YD:239:ARG:O	27:YD:240:ALA:HB2	1.97	0.64
29:YF:46:ARG:NH1	29:YF:46:ARG:HG2	2.00	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.98	0.64
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.13	0.64
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.64
36:YQ:134:ARG:NE	45:YZ:122:ARG:HH22	1.94	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.63	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.64
46:R0:11:ARG:CG	46:R0:11:ARG:HH11	2.11	0.64
25:RA:1026:U:H4'	25:RA:1027:A:OP1	1.97	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
1:XA:1284:C:H3'	1:XA:1285:A:H8	1.63	0.64
2:XB:8:LYS:CD	2:XB:8:LYS:H	2.09	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:165:MET:HE3	4:XD:165:MET:HA	1.80	0.64
4:XD:79:PHE:HD2	4:XD:79:PHE:C	2.00	0.64
5:XE:78:HIS:CG	8:XH:104:ARG:HG2	2.32	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.64
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.64
25:YA:127:A:H5"	25:YA:128:C:C6	2.32	0.64
25:YA:273(C):C:H42	25:YA:363(C):G:H1	1.45	0.64
25:YA:2580:U:H4'	28:YE:130:GLY:HA3	1.78	0.64
32:YI:74:ASN:OD1	32:YI:75:LEU:HD13	1.97	0.64
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.64
1:QA:664:G:H22	1:QA:741:G:H1	1.46	0.63
9:QI:47:LEU:HD22	9:QI:47:LEU:N	2.14	0.63
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.63
25:RA:1359:A:N6	25:RA:1372:U:H3	1.95	0.63
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.33	0.63
25:RA:686:G:N2	25:RA:788:A:H61	1.95	0.63
25:RA:817:C:O2'	25:RA:839:U:H5"	1.98	0.63
25:RA:997:G:OP1	40:RU:93:LYS:HD3	1.98	0.63
26:RB:6:C:HO2'	38:RS:29:PHE:HE1	1.44	0.63
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.63
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.63
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.63
41:RV:52:VAL:CG2	41:RV:55:ALA:HB3	2.28	0.63
1:XA:67:C:H2'	1:XA:68:G:C8	2.32	0.63
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.63
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.63
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.63	0.63
25:YA:1055:G:H1	25:YA:1104:C:H42	1.44	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63
36:YQ:80:GLU:CD	46:Y0:5:LYS:HB3	2.18	0.63
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.63
45:YZ:120:ILE:HD13	45:YZ:169:GLU:HG3	1.79	0.63
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.28	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
8:QH:97:VAL:HG13	8:QH:98:LYS:N	2.13	0.63
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:QN:40:CYS:SG	14:QN:43:CYS:HB2	2.38	0.63
15:QO:8:LYS:NZ	15:QO:8:LYS:HB2	2.13	0.63
25:RA:2637:U:H5''	28:RE:82:ARG:HH21	1.63	0.63
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.63	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
34:RO:86:ILE:N	34:RO:86:ILE:HD12	2.13	0.63
35:RP:113:LYS:HG2	35:RP:115:LEU:HD23	1.79	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.97	0.63
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.79	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.63
7:XG:150:ALA:HA	11:XK:59:TYR:HD2	1.61	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.62	0.63
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.63
26:YB:42:C:H42	30:YG:91:ARG:HH21	1.46	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
4:QD:197:PRO:HD3	6:XF:16:GLN:HG3	1.80	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.64	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
25:RA:1062:G:H2'	25:RA:1063:G:H8	1.63	0.63
25:RA:451:C:H41	25:RA:454:A:H5'	1.64	0.63
25:RA:959:A:N3	25:RA:2457:U:O2'	2.25	0.63
27:RD:135:PHE:HD2	27:RD:135:PHE:N	1.96	0.63
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.63
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.63
29:RF:11:VAL:HG12	29:RF:12:LEU:N	2.13	0.63
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	1.98	0.63
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.63	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
2:XB:158:LEU:HD12	2:XB:158:LEU:O	1.97	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.80	0.63
25:YA:601:C:O2'	25:YA:605:C:OP1	2.16	0.63
28:YE:14:ILE:CG1	28:YE:15:PHE:H	2.08	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
1:QA:439:A:OP2	1:QA:493:G:N1	2.31	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.28	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
27:RD:239:ARG:O	27:RD:240:ALA:HB2	1.97	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.63
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	0.63
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.81	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.47	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.63	0.63
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	1.98	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.99	0.63
27:YD:230:ASP:O	27:YD:231:HIS:HB2	1.98	0.63
28:YE:50:GLY:HA3	28:YE:74:PRO:HG3	1.80	0.63
35:YP:106:LEU:O	35:YP:107:LYS:CB	2.46	0.63
25:YA:910:A:H62	36:YQ:12:GLN:HA	1.62	0.63
43:YX:18:TYR:C	43:YX:20:GLY:H	2.02	0.63
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.79	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	0.63
4:QD:11:LEU:C	4:QD:13:ARG:H	2.00	0.63
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	2.38	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.28	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
52:R6:27:LYS:HZ3	52:R6:27:LYS:HB2	1.61	0.63
25:RA:1037:G:H1	25:RA:1118:C:H42	1.44	0.63
25:RA:2306:C:H3'	25:RA:2307:G:H5''	1.79	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.80	0.63
26:RB:42:C:N4	30:RG:91:ARG:HH21	1.88	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63
39:RT:49:VAL:HG13	39:RT:49:VAL:O	1.99	0.63
43:RX:18:TYR:C	43:RX:20:GLY:H	2.02	0.63
43:RX:49:VAL:HG13	43:RX:83:VAL:HG13	1.80	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.62	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
19:XS:42:PRO:HB3	50:Y4:60:GLN:OE1	1.97	0.63
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.47	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1203:G:H3'	25:YA:1204:A:H5''	1.79	0.63
25:YA:2439:A:H5'	25:YA:2439:A:C8	2.33	0.63
26:YB:75:G:H21	45:YZ:85:HIS:CE1	2.16	0.63
32:YI:86:THR:HG22	32:YI:86:THR:O	1.98	0.63
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	0.63
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.13	0.63
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.64	0.63
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.78	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
1:QA:690:G:H22	11:QK:55:LYS:NZ	1.97	0.63
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.82	0.63
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	0.63
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
29:RF:132:VAL:HG23	29:RF:133:ASN:N	2.14	0.63
32:RI:144:VAL:C	32:RI:145:VAL:HG12	2.15	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.99	0.63
35:RP:108:LYS:H	35:RP:108:LYS:HD2	1.63	0.63
38:RS:78:LEU:HD11	38:RS:107:GLU:O	1.98	0.63
44:RY:95:LYS:CB	44:RY:100:ALA:HA	2.13	0.63
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.07	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.63
54:Y8:59:LYS:HB3	54:Y8:59:LYS:HZ3	1.62	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.13	0.63
32:YI:133:HIS:HD2	32:YI:134:PRO:HD2	1.63	0.63
33:YN:87:LEU:HD23	33:YN:87:LEU:O	1.99	0.63
34:YO:86:ILE:HD12	34:YO:86:ILE:N	2.13	0.63
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
38:YS:22:GLY:O	38:YS:23:ARG:O	2.17	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.63
45:YZ:4:ARG:HH11	45:YZ:4:ARG:HG2	1.64	0.63
1:QA:1410:G:H1	1:QA:1490:C:H42	1.45	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.63
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63
48:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63
48:R2:46:GLN:HA	48:R2:46:GLN:OE1	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.14	0.63
25:RA:1509:C:H3'	25:RA:1510:A:H5''	1.79	0.63
25:RA:1792:G:H2'	25:RA:1793:C:H6	1.63	0.63
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.13	0.63
25:RA:2636:U:OP1	28:RE:79:ARG:HA	1.99	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.81	0.63
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.29	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.62	0.63
1:XA:591:U:H2'	1:XA:592:G:H8	1.64	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.97	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
48:Y2:46:GLN:HA	48:Y2:46:GLN:OE1	1.97	0.63
25:YA:1026:U:H1'	25:YA:1027:A:H5''	1.80	0.63
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	1.98	0.63
25:YA:222:A:H3'	25:YA:421:U:H5'	1.79	0.63
28:YE:35:GLN:CG	28:YE:37:ARG:NE	2.62	0.63
30:YG:61:ALA:HB2	30:YG:68:PRO:HD2	1.81	0.63
36:YQ:10:ARG:O	36:YQ:11:LYS:HB2	1.98	0.63
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.28	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.63
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.10	0.63
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.63
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.63
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.63
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.80	0.63
25:RA:2344:U:C2	52:R6:37:ARG:HD3	2.33	0.63
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.32	0.63
25:RA:249:C:H4'	25:RA:250:G:O5'	1.99	0.63
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.63
27:RD:44:ASN:ND2	27:RD:44:ASN:N	2.42	0.63
32:RI:86:THR:O	32:RI:86:THR:HG22	1.99	0.63
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.63
40:RU:102:GLU:HG3	41:RV:2:PHE:CE2	2.34	0.63
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.32	0.63
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.17	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.13	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.63
25:YA:2287:A:O2'	25:YA:2288:A:O5'	2.15	0.63
25:YA:310:A:O2'	25:YA:311:A:H2'	1.98	0.63
27:YD:72:LYS:HG2	27:YD:103:ARG:NH2	2.13	0.63
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.80	0.63
31:YH:86:GLU:O	31:YH:87:LEU:HB2	1.99	0.63
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.81	0.63
39:YT:49:VAL:O	39:YT:49:VAL:HG13	1.99	0.63
1:QA:920:U:H2'	1:QA:921:U:C6	2.34	0.63
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.63
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.97	0.63
1:QA:1402:C:N4	23:QX:3:G:OP1	2.32	0.63
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.63
47:R1:87:PRO:O	47:R1:88:LYS:C	2.37	0.63
54:R8:48:PHE:CD1	54:R8:48:PHE:N	2.66	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	0.63
40:RU:34:LYS:HA	40:RU:34:LYS:CE	2.29	0.63
44:RY:86:ARG:O	44:RY:92:ASN:HB2	1.97	0.63
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.63
14:YN:18:VAL:HG23	14:YN:19:ARG:N	2.14	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
19:XS:5:LEU:CG	50:Y4:66:SER:CB	2.77	0.63
22:XV:6:G:H1	22:XV:67:C:H42	1.45	0.63
23:XX:8:A:O5'	23:XX:8:A:H8	1.81	0.63
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	0.63
33:YN:61:ARG:HE	33:YN:61:ARG:HA	1.63	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	0.63
45:YZ:5:LEU:O	45:YZ:6:LYS:HB2	1.97	0.63
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.62
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.62
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62
29:RF:107:LYS:O	29:RF:108:LYS:C	2.37	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	0.62
32:RI:133:HIS:HD2	32:RI:134:PRO:HD2	1.63	0.62
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.12	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.64	0.62
16:XP:8:ARG:HG2	16:XP:8:ARG:HH11	1.64	0.62
25:YA:226:G:O2'	25:YA:228:A:N6	2.32	0.62
25:YA:2396:G:H1'	47:Y1:30:VAL:HG13	1.81	0.62
28:YE:13:ARG:HH12	28:YE:21:VAL:HG12	1.64	0.62
28:YE:4:ILE:CD1	28:YE:28:ALA:HB1	2.29	0.62
32:YI:11:ASN:ND2	32:YI:12:LEU:HD13	2.14	0.62
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.62
39:YT:22:PHE:HD2	39:YT:22:PHE:N	1.97	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.98	0.62
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.62
45:YZ:9:TYR:CE2	45:YZ:61:LEU:HD13	2.32	0.62
1:QA:514:C:H2'	1:QA:515:G:C8	2.34	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.62
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.31	0.62
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.13	0.62
1:QA:192:U:H4'	20:QT:102:GLY:O	1.99	0.62
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.79	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
1:XA:816:A:OP1	1:XA:1526:G:O2'	2.13	0.62
3:XC:3:ASN:N	3:XC:3:ASN:HD22	1.96	0.62
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.62
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.62
1:XA:690:G:H22	11:XK:55:LYS:NZ	1.95	0.62
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.20	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1446:C:H42	25:YA:1465:G:H1	1.46	0.62
25:YA:227:A:O2'	25:YA:228:A:O5'	2.16	0.62
25:YA:49:A:N7	25:YA:120:U:H5	1.97	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:H	1.64	0.62
32:YI:75:LEU:HB3	32:YI:105:HIS:HE1	1.60	0.62
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.24	0.62
45:YZ:132:ASN:O	45:YZ:134:PRO:HD3	1.99	0.62
45:YZ:103:ARG:CB	45:YZ:138:GLU:HA	2.27	0.62
45:YZ:94:GLU:HB2	45:YZ:95:PRO:HA	1.80	0.62
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.10	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.38	0.62
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	1.99	0.62
25:RA:476:G:N1	25:RA:479:A:OP2	2.27	0.62
26:RB:48:A:OP2	38:RS:30:ARG:NH2	2.31	0.62
35:RP:65:ARG:CG	35:RP:65:ARG:HH11	2.06	0.62
36:RQ:81:VAL:HG23	46:R0:7:LEU:CD1	2.29	0.62
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.99	0.62
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
1:XA:292:G:H21	1:XA:608:A:H61	1.47	0.62
1:XA:312:C:H2'	1:XA:313:A:C8	2.34	0.62
1:XA:560:U:O2'	1:XA:561:U:OP2	2.14	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.98	0.62
2:XB:178:ARG:NH2	8:XH:74:PRO:CB	2.58	0.62
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.14	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.64	0.62
25:YA:2372:G:H4'	52:Y6:46:HIS:NE2	2.15	0.62
25:YA:234:C:H2'	25:YA:235:U:C6	2.34	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
40:YU:34:LYS:CE	40:YU:34:LYS:HA	2.29	0.62
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.30	0.62
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.33	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
25:RA:1600:C:H4'	53:R7:49:ARG:HE	1.64	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.13	0.62
28:RE:35:GLN:CG	28:RE:37:ARG:NE	2.62	0.62
30:RG:77:ILE:HD13	30:RG:82:LEU:CD1	2.29	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:RO:8:LEU:HB2	34:RO:19:ILE:HD11	1.81	0.62
45:RZ:97:GLU:HB3	45:RZ:125:LEU:HD11	1.81	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.10	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
52:Y6:44:ARG:O	52:Y6:45:LYS:HB2	2.00	0.62
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.31	0.62
25:YA:568:U:H5'	25:YA:945:A:N1	2.14	0.62
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.35	0.62
39:YT:96:ARG:NH1	39:YT:96:ARG:HB2	2.14	0.62
41:YV:52:VAL:CG2	41:YV:55:ALA:HB3	2.28	0.62
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.81	0.62
1:QA:113:G:N3	1:QA:353:A:O2'	2.32	0.62
1:QA:1304:G:N1	1:QA:1332:A:OP2	2.33	0.62
1:QA:606:G:H22	1:QA:631:G:H5'	1.64	0.62
3:QC:127:ARG:HG2	3:QC:127:ARG:HH11	1.64	0.62
4:QD:29:PRO:C	4:QD:30:LYS:HD3	2.19	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.34	0.62
9:QI:17:VAL:HG21	9:QI:81:ILE:N	2.15	0.62
48:R2:40:SER:C	48:R2:42:GLY:N	2.51	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
30:RG:94:LEU:N	30:RG:94:LEU:HD23	2.14	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62
32:RI:11:ASN:ND2	32:RI:12:LEU:HD13	2.14	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
38:RS:48:LEU:HD12	38:RS:48:LEU:N	2.15	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	1.99	0.62
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.62
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.35	0.62
1:XA:1297:C:H4'	1:XA:1298:C:H5'	1.82	0.62
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.14	0.62
1:XA:1461:G:H2'	1:XA:1462:G:H8	1.64	0.62
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.63	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
4:XD:11:LEU:C	4:XD:13:ARG:H	2.00	0.62
8:XH:112:LEU:HD12	8:XH:112:LEU:O	1.98	0.62
48:Y2:41:ILE:HG12	48:Y2:44:LEU:HD12	1.82	0.62
25:YA:1590:U:H2'	25:YA:1591:G:H8	1.64	0.62
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:N	2.14	0.62
35:YP:105:LEU:O	35:YP:106:LEU:CB	2.42	0.62
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.31	0.62
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	1.99	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	1.99	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.33	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
23:QX:8:A:O5'	23:QX:8:A:H8	1.82	0.62
47:R1:91:LYS:HA	47:R1:91:LYS:HE3	1.81	0.62
25:RA:2424:C:O2	25:RA:2429:G:O2'	2.16	0.62
25:RA:686:G:H21	25:RA:788:A:H61	1.47	0.62
29:RF:129:PHE:O	29:RF:130:ALA:HB3	1.99	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.81	0.62
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	0.62
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
45:RZ:124:ILE:HD11	45:RZ:165:VAL:HG21	1.82	0.62
45:RZ:4:ARG:HG2	45:RZ:4:ARG:HH11	1.64	0.62
45:RZ:94:GLU:HB2	45:RZ:95:PRO:HA	1.80	0.62
1:XA:939:G:H5''	7:XG:102:ARG:HH22	1.64	0.62
2:XB:23:ARG:H	2:XB:23:ARG:HD3	1.64	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
4:XD:96:LEU:CD2	4:XD:96:LEU:H	2.12	0.62
47:Y1:91:LYS:HE3	47:Y1:91:LYS:HA	1.82	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.67	0.62
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.81	0.62
29:YF:28:ILE:HD13	29:YF:30:PRO:HD3	1.80	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.65	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.30	0.62
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.65	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
1:QA:545:C:H5''	4:QD:72:GLU:HG2	1.82	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
18:QR:25:THR:O	18:QR:25:THR:HG22	2.00	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.35	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
32:RI:116:LEU:O	32:RI:116:LEU:HG	2.00	0.62
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.65	0.62
32:RI:8:PRO:O	32:RI:9:LEU:HB3	1.99	0.62
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
39:RT:57:PHE:CD2	39:RT:58:ASN:N	2.66	0.62
45:RZ:158:PRO:CB	45:RZ:159:PRO:HD2	2.29	0.62
1:XA:674:G:H2'	1:XA:675:A:C8	2.35	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
10:XJ:29:ARG:O	10:XJ:29:ARG:HG2	2.00	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
25:YA:2030:A:H4'	25:YA:2031:A:H8	1.65	0.62
25:YA:2756:U:H4'	25:YA:2757:A:OP1	1.99	0.62
25:YA:557:U:H2'	25:YA:558:G:H8	1.65	0.62
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.15	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
29:YF:107:LYS:O	29:YF:108:LYS:C	2.37	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
45:YZ:94:GLU:HB2	45:YZ:130:PRO:CD	2.30	0.62
1:QA:646:U:H2'	1:QA:647:C:C6	2.35	0.62
2:QB:178:ARG:NH2	8:QH:74:PRO:CB	2.54	0.62
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.02	0.62
48:R2:69:ARG:CZ	48:R2:69:ARG:HB2	2.30	0.62
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	1.99	0.62
25:RA:443:A:HO2'	25:RA:1200:C:HO2'	1.47	0.62
25:RA:1441:G:H2'	25:RA:1442:G:H8	1.64	0.62
25:RA:1495:A:H2'	25:RA:1496:A:N3	2.14	0.62
25:RA:2723:C:H5''	37:RR:1:MET:HG2	1.81	0.62
29:RF:32:LEU:CD1	29:RF:105:VAL:HG13	2.29	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RI:33:ARG:HG3	32:RI:33:ARG:HH11	1.63	0.62
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.62
45:RZ:132:ASN:O	45:RZ:134:PRO:HD3	1.99	0.62
1:XA:191(F):U:H2'	1:XA:191:G:H8	1.63	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.21	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.81	0.62
25:YA:2152:G:H2'	25:YA:2153:G:H8	1.64	0.62
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.14	0.62
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.62	0.62
28:YE:131:ALA:HB1	28:YE:135:HIS:CE1	2.34	0.62
35:YP:112:LEU:HD11	35:YP:114:ILE:HG23	1.80	0.62
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.35	0.62
1:QA:34:C:H2'	1:QA:35:G:H8	1.64	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
8:QH:84:ARG:NH1	8:QH:84:ARG:HG3	2.10	0.62
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.62
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62
52:R6:18:ARG:HD2	52:R6:18:ARG:O	2.00	0.62
25:RA:83:G:N2	25:RA:103:A:OP2	2.31	0.62
25:RA:1567:A:H5'	27:RD:58:HIS:ND1	2.14	0.62
25:RA:1791:A:N6	25:RA:1828:G:O2'	2.32	0.62
25:RA:1849:G:H2'	25:RA:1850:G:H8	1.65	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.62
25:RA:558:G:OP1	33:RN:111:PRO:HD2	2.00	0.62
38:RS:100:ALA:HA	38:RS:103:GLU:CG	2.30	0.62
39:RT:22:PHE:N	39:RT:22:PHE:HD2	1.97	0.62
39:RT:31:SER:HA	39:RT:44:ASP:OD2	2.00	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
45:RZ:94:GLU:HB2	45:RZ:130:PRO:CD	2.30	0.62
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.62
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
50:Y4:61:ARG:O	50:Y4:63:TYR:N	2.33	0.62
25:YA:1782:C:H1'	25:YA:2609:U:H5''	1.81	0.62
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	0.62
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:51:PHE:O	28:YE:52:LEU:C	2.38	0.62
32:YI:33:ARG:HH11	32:YI:33:ARG:HG3	1.64	0.62
38:YS:48:LEU:N	38:YS:48:LEU:HD12	2.15	0.62
1:QA:254:G:H2'	1:QA:255:G:H8	1.64	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
25:RA:1309:G:H4'	53:R7:7:PRO:HB2	1.81	0.62
25:RA:573:G:N1	25:RA:2031:A:OP2	2.24	0.62
25:RA:2131:G:N2	25:RA:2158:A:N7	2.48	0.62
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	0.62
35:RP:114:ILE:HD11	35:RP:130:PHE:CD1	2.34	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
24:XY:29:U:H2'	24:XY:30:C:H6	1.60	0.62
47:Y1:87:PRO:O	47:Y1:88:LYS:C	2.37	0.62
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.62
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.32	0.62
29:YF:28:ILE:HG22	29:YF:112:MET:HB3	1.80	0.62
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.62
35:YP:50:ARG:NH2	35:YP:50:ARG:CB	2.57	0.62
42:YW:60:ASN:C	42:YW:61:ASN:HD22	2.03	0.62
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.00	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	1.99	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
25:RA:128:C:H4'	53:R7:49:ARG:HH12	1.65	0.61
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.46	0.61
25:RA:1639:U:H2'	25:RA:1640:C:H5''	1.81	0.61
25:RA:319:C:H2'	25:RA:320:A:C8	2.35	0.61
25:RA:363(B):G:H2'	25:RA:363(C):G:C8	2.33	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.61
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.61
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.61
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	0.61
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.81	0.61
38:RS:26:LEU:HD12	38:RS:39:ILE:CD1	2.23	0.61
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.32	0.61
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.15	0.61
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.47	0.61
4:XD:79:PHE:CD2	4:XD:79:PHE:C	2.71	0.61
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.61
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.61
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.61
25:YA:946:G:H2'	25:YA:947:G:O4'	2.00	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
35:YP:108:LYS:H	35:YP:108:LYS:HD2	1.64	0.61
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.61
40:YU:102:GLU:HG3	41:YV:2:PHE:CE2	2.34	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.61
19:QS:2:PRO:HB2	50:R4:68:ARG:HH22	1.65	0.61
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.81	0.61
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.81	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61
30:RG:170:ARG:O	30:RG:174:GLU:HB2	2.00	0.61
32:RI:71:ILE:O	32:RI:71:ILE:HG12	2.00	0.61
33:RN:62:VAL:CG1	33:RN:66:LYS:HD2	2.29	0.61
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.61
1:XA:58:C:O2'	1:XA:388:G:N7	2.29	0.61
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.31	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.61
47:Y1:76:ARG:HD2	47:Y1:76:ARG:H	1.64	0.61
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.82	0.61
26:YB:111:U:H2'	26:YB:112:G:C8	2.35	0.61
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
1:QA:1202:G:H1'	14:QN:29:ARG:HD2	1.81	0.61
1:QA:328:C:H4'	1:QA:329:A:H5'	1.81	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:QL:48:PRO:CD	12:QL:49:ASN:H	2.10	0.61
47:R1:80:LEU:O	47:R1:81:LYS:HD2	2.00	0.61
50:R4:23:GLU:O	50:R4:25:TYR:N	2.33	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.61	0.61
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	1.99	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	1.99	0.61
45:YZ:132:ASN:HB2	45:YZ:160:GLY:HA3	1.83	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
36:RQ:80:GLU:HG2	46:R0:5:LYS:CB	2.23	0.61
25:RA:2397:G:H2'	25:RA:2398:U:H6	1.66	0.61
25:RA:530:G:C5	25:RA:2022:U:H5''	2.35	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.81	0.61
25:RA:871:U:H4'	36:RQ:69:PHE:CE2	2.35	0.61
45:RZ:154:ASP:O	45:RZ:155:LEU:HD22	2.01	0.61
1:XA:1213:A:N6	1:XA:1215:G:N3	2.48	0.61
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.81	0.61
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.35	0.61
1:XA:501:C:H2'	1:XA:502:G:H8	1.65	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.00	0.61
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
6:XF:77:ARG:NH1	6:XF:77:ARG:HB2	2.15	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
21:XU:15:ARG:HG2	21:XU:15:ARG:HH11	1.63	0.61
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.33	0.61
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.26	0.61
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.35	0.61
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.33	0.61
25:YA:628:G:HO2'	25:YA:651:G:HO2'	1.47	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.82	0.61
41:YV:46:VAL:HG13	41:YV:46:VAL:O	2.01	0.61
43:YX:15:GLU:OE1	43:YX:15:GLU:N	2.34	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
1:QA:34:C:H2'	1:QA:35:G:C8	2.35	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.29	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.01	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.82	0.61
52:R6:25:LYS:HD2	54:R8:34:TRP:CZ2	2.36	0.61
25:RA:1359:A:H61	25:RA:1372:U:H3	1.49	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
32:RI:115:ALA:CB	32:RI:128:LEU:HD11	2.29	0.61
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.61
38:RS:88:ASP:O	38:RS:89:ARG:CB	2.49	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.83	0.61
42:RW:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
1:XA:491:G:H2'	1:XA:492:G:H8	1.64	0.61
1:XA:501:C:H2'	1:XA:502:G:C8	2.35	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.83	0.61
25:YA:27:G:N2	25:YA:512:G:H2'	2.14	0.61
25:YA:581:C:H2'	25:YA:582:G:C8	2.36	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61
27:YD:227:ASN:CB	27:YD:228:PRO:HD2	2.24	0.61
27:YD:27:THR:O	27:YD:29:PRO:HD2	1.99	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
1:QA:500:G:H2'	1:QA:501:C:C6	2.36	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.64	0.61
13:QM:36:LYS:C	13:QM:36:LYS:HD3	2.20	0.61
49:R3:29:ARG:CB	49:R3:29:ARG:HH11	2.13	0.61
30:RG:142:PRO:HB2	50:R4:31:ILE:CD1	2.30	0.61
54:R8:29:LYS:HD3	54:R8:44:LYS:CB	2.30	0.61
25:RA:153:C:P	47:R1:88:LYS:HE2	2.40	0.61
25:RA:2822:G:O2'	25:RA:2825:C:N4	2.31	0.61
26:RB:65:C:N4	26:RB:108:C:H2'	2.15	0.61
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RI:77:LEU:C	32:RI:77:LEU:HD12	2.21	0.61
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.61
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	0.61
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.82	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.61
13:XM:121:LYS:NZ	24:XY:39:C:HO2'	1.98	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.82	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
32:YI:116:LEU:HG	32:YI:116:LEU:O	2.00	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
10:QJ:98:ILE:N	10:QJ:98:ILE:HD12	2.16	0.61
50:R4:35:VAL:O	50:R4:37:SER:N	2.26	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
25:RA:2418:A:H2'	25:RA:2419:U:C6	2.36	0.61
25:RA:345:A:O2'	25:RA:346:A:N7	2.30	0.61
25:RA:698:C:O2'	25:RA:734:A:N6	2.34	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.65	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
41:RV:46:VAL:HG13	41:RV:46:VAL:O	2.01	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.35	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
4:XD:12:CYS:HB2	4:XD:31:CYS:O	2.01	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.61
13:XM:121:LYS:CE	24:XY:40:G:OP1	2.49	0.61
49:Y3:5:LYS:HB2	49:Y3:36:VAL:HG12	1.82	0.61
25:YA:747:U:C4	51:Y5:2:ALA:N	2.69	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
52:Y6:7:ILE:HG13	52:Y6:8:LYS:N	2.06	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:95:ILE:N	28:YE:95:ILE:HD12	2.15	0.61
29:YF:164:ARG:HG2	29:YF:164:ARG:HH11	1.66	0.61
25:YA:2311:A:C8	30:YG:82:LEU:HD11	2.35	0.61
32:YI:77:LEU:C	32:YI:77:LEU:HD12	2.21	0.61
33:YN:7:LYS:CD	33:YN:9:VAL:H	2.13	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
34:YO:91:LEU:HD22	34:YO:91:LEU:N	2.16	0.61
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.82	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	0.61
45:YZ:73:GLN:HB3	45:YZ:87:ASP:OD1	2.01	0.61
1:QA:475:G:H2'	1:QA:476:G:C8	2.35	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
25:RA:1497:U:H5''	25:RA:1498:C:H5	1.66	0.61
25:RA:2227:A:H5''	27:RD:263:ARG:NH1	2.15	0.61
25:RA:291:C:H42	25:RA:349:G:H1	1.47	0.61
25:RA:985:C:H2'	25:RA:986:C:H6	1.66	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.98	0.61
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
2:XB:178:ARG:NH2	8:XH:74:PRO:HG3	2.16	0.61
12:XL:85:ILE:HD11	12:XL:98:TYR:HB2	1.81	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
3:XC:13:GLY:HA3	14:XN:57:ARG:CZ	2.31	0.61
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.61
49:Y3:59:VAL:HG12	49:Y3:60:GLU:N	2.16	0.61
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	2.15	0.61
25:YA:714:U:O2'	25:YA:716:A:N7	2.29	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.11	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
32:YI:67:ARG:O	32:YI:71:ILE:HG22	2.01	0.61
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CD	2.29	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.61
6:QF:98:LEU:O	6:QF:98:LEU:HD12	2.01	0.61
13:QM:9:ILE:O	13:QM:9:ILE:HD12	2.01	0.61
16:QP:8:ARG:HG2	16:QP:8:ARG:HH11	1.64	0.61
49:R3:59:VAL:HG12	49:R3:60:GLU:N	2.16	0.61
25:RA:1385:G:H4'	25:RA:1386:C:OP1	2.01	0.61
25:RA:2051:A:OP1	28:RE:137:HIS:ND1	2.30	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
32:RI:74:ASN:ND2	32:RI:74:ASN:H	1.97	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.61
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.61
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	1.99	0.61
52:Y6:41:PRO:HD2	52:Y6:46:HIS:N	2.16	0.61
25:YA:2637:U:H5''	28:YE:82:ARG:HH21	1.65	0.61
25:YA:27:G:H22	25:YA:512:G:H2'	1.65	0.61
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	0.61
28:YE:52:LEU:HB3	28:YE:54:GLN:OE1	2.00	0.61
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.28	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.30	0.61
32:YI:8:PRO:O	32:YI:9:LEU:HB3	1.99	0.61
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.61
40:YU:88:ILE:CD1	40:YU:88:ILE:H	2.05	0.61
42:YW:28:SER:O	42:YW:31:GLU:N	2.34	0.61
44:YY:19:LYS:HG3	44:YY:19:LYS:O	2.01	0.61
1:QA:701:C:H4'	1:QA:702:A:H5''	1.83	0.61
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:146:ILE:H	4:QD:146:ILE:HD12	1.66	0.61
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.00	0.61
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.04	0.61
20:QT:101:GLY:O	20:QT:103:GLY:N	2.34	0.61
49:R3:5:LYS:HB2	49:R3:36:VAL:HG12	1.82	0.61
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	0.61
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.00	0.61
25:RA:1056:G:O2'	25:RA:1086:A:O2'	2.18	0.61
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.61
34:RO:91:LEU:N	34:RO:91:LEU:HD22	2.16	0.61
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.82	0.61
4:XD:196:LEU:N	4:XD:196:LEU:HD12	2.15	0.61
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.21	0.61
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.61
50:Y4:71:ARG:CG	50:Y4:71:ARG:NH1	2.61	0.61
25:YA:617:G:OP1	29:YF:40:GLN:NE2	2.34	0.61
25:YA:900:A:H5'	25:YA:901:A:OP2	2.01	0.61
27:YD:237:GLU:CA	27:YD:237:GLU:OE1	2.48	0.61
29:YF:119:ARG:HH11	29:YF:119:ARG:HG2	1.64	0.61
45:YZ:124:ILE:HD11	45:YZ:165:VAL:HG21	1.82	0.61
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.60
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.16	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.29	0.60
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.60
19:QS:5:LEU:HD21	50:R4:66:SER:HB2	1.83	0.60
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.60
25:RA:2427:C:H5''	25:RA:2429:G:H5'	1.83	0.60
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.60
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.60
25:RA:993:G:OP1	40:RU:50:ARG:NH1	2.34	0.60
41:RV:35:LEU:HD23	41:RV:35:LEU:O	2.01	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.60
4:XD:146:ILE:H	4:XD:146:ILE:HD12	1.66	0.60
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.60
1:XA:1147:C:O2	9:XI:16:ARG:NH1	2.33	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
14:XM:42:ILE:O	14:XM:43:CYS:C	2.39	0.60
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.60
1:XA:177:C:H5''	20:XT:65:LYS:NZ	2.16	0.60
25:YA:1992:G:H5'	25:YA:1994:C:H41	1.66	0.60
25:YA:565:C:H2'	25:YA:566:U:O4'	2.00	0.60
27:YD:263:ARG:CB	27:YD:263:ARG:HH11	2.14	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
27:YD:54:ARG:HH11	27:YD:54:ARG:CG	2.14	0.60
28:YE:131:ALA:HB1	28:YE:135:HIS:HE1	1.65	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
32:YI:124:GLY:H	32:YI:142:VAL:HG23	1.65	0.60
32:YI:21:VAL:HG22	32:YI:22:LYS:N	2.16	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.01	0.60
35:YP:27:HIS:N	35:YP:27:HIS:ND1	2.49	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.60
42:YW:82:LEU:HB2	42:YW:98:LYS:HB2	1.82	0.60
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.60
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.98	0.60
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.11	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
1:QA:538:G:OP1	12:QL:113:ARG:HD2	2.01	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
12:QL:11:VAL:HG21	17:QQ:34:LYS:HD3	1.84	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.60
25:RA:1050:A:H2'	25:RA:1051:G:O4'	2.01	0.60
25:RA:2343:C:H2'	25:RA:2344:U:H6	1.65	0.60
25:RA:247:G:H4'	25:RA:386:G:C5	2.37	0.60
25:RA:310:A:O2'	25:RA:311:A:H2'	2.01	0.60
25:RA:83:G:O2'	25:RA:84:A:O5'	2.19	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
31:RH:44:VAL:O	31:RH:44:VAL:HG22	2.01	0.60
36:RQ:66:ILE:CG1	36:RQ:67:ARG:N	2.64	0.60
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.60
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.41	0.60
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.82	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	2.31	0.60
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.82	0.60
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.00	0.60
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.60
46:Y0:3:HIS:HD2	46:Y0:4:LYS:CA	2.13	0.60
25:YA:137(A):G:N3	43:YX:41:ASN:ND2	2.47	0.60
28:YE:37:ARG:CA	28:YE:37:ARG:NE	2.64	0.60
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.16	0.60
32:YI:74:ASN:ND2	32:YI:74:ASN:H	1.97	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.36	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
1:QA:939:G:H5''	7:QG:102:ARG:HH22	1.66	0.60
1:QA:960:U:O2	1:QA:960:U:H2'	2.00	0.60
4:QD:196:LEU:HD12	4:QD:196:LEU:N	2.15	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
13:QM:62:ASN:CG	50:R4:49:PHE:HD2	2.03	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
25:RA:2439:A:H5'	25:RA:2439:A:H8	1.65	0.60
25:RA:2790:A:H2'	25:RA:2791:C:H5''	1.83	0.60
25:RA:593:G:H2'	25:RA:594:U:C6	2.37	0.60
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
45:RZ:144:LEU:HD21	45:RZ:150:LEU:HD22	1.83	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	0.60
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
25:YA:330:A:O2'	25:YA:331:A:H8	1.83	0.60
32:YI:35:LEU:O	32:YI:36:ALA:HB2	2.01	0.60
45:YZ:113:ALA:O	45:YZ:114:GLY:C	2.40	0.60
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.36	0.60
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.16	0.60
1:QA:1348:U:H3	1:QA:1374:A:H2	1.50	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.82	0.60
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.22	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60
14:QN:39:LEU:CD2	14:QN:43:CYS:HG	2.02	0.60
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2392:A:H2	25:RA:2424:C:H42	1.48	0.60
25:RA:262:A:H2'	25:RA:263:C:O4'	2.01	0.60
25:RA:910:A:N3	25:RA:2264:C:O2'	2.33	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.65	0.60
32:RI:2:LYS:HB3	32:RI:20:ASP:HB3	1.82	0.60
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.60
36:RQ:86:GLY:C	36:RQ:88:GLY:N	2.52	0.60
44:RY:19:LYS:HG3	44:RY:19:LYS:O	2.01	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.01	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.02	0.60
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60
25:YA:1914:C:H2'	25:YA:1915:U:O4'	2.00	0.60
25:YA:2011:U:OP2	42:YW:16:LYS:NZ	2.34	0.60
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.16	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
30:YG:28:VAL:O	30:YG:31:VAL:HG12	2.01	0.60
31:YH:44:VAL:O	31:YH:44:VAL:HG22	2.01	0.60
32:YI:110:ASP:HB3	32:YI:112:LYS:N	2.16	0.60
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
45:YZ:113:ALA:O	45:YZ:115:GLY:N	2.34	0.60
45:YZ:158:PRO:CB	45:YZ:159:PRO:HD2	2.29	0.60
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.36	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
2:QB:221:LEU:O	2:QB:221:LEU:HD13	2.02	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.83	0.60
1:QA:191:G:O2'	20:QT:101:GLY:O	2.19	0.60
46:R0:2:ALA:HB1	46:R0:3:HIS:HD2	1.59	0.60
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.60
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.67	0.60
25:RA:486:C:H4'	42:RW:60:ASN:OD1	2.02	0.60
27:RD:263:ARG:CB	27:RD:263:ARG:HH11	2.14	0.60
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.82	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
35:RP:55:ARG:HD2	35:RP:56:SER:O	2.01	0.60
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.60
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.32	0.60
45:RZ:113:ALA:O	45:RZ:115:GLY:N	2.34	0.60
1:XA:369:C:OP2	1:XA:388:G:N2	2.34	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.16	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
26:YB:40:U:H3	26:YB:43:C:H5"	1.66	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
32:YI:114:LEU:O	32:YI:115:ALA:CB	2.49	0.60
32:YI:71:ILE:HG12	32:YI:71:ILE:O	2.00	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
34:YO:97:ARG:N	34:YO:117:LEU:HD22	2.15	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.02	0.60
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	2.02	0.60
13:QM:121:LYS:NZ	24:QY:39:C:O2'	2.35	0.60
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.37	0.60
25:RA:2451:A:N1	55:Z6:76:PPU:HE2	2.15	0.60
25:RA:2469:A:H2	25:RA:2481:G:H21	1.47	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.82	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.60
29:RF:164:ARG:HG2	29:RF:164:ARG:HH11	1.66	0.60
29:RF:46:ARG:CG	29:RF:46:ARG:HH11	2.04	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
33:RN:133:GLN:O	33:RN:134:ARG:HB3	2.00	0.60
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.01	0.60
1:XA:1446:A:OP1	1:XA:1446:A:H4'	2.01	0.60
2:XB:181:PHE:CE1	8:XH:70:GLN:O	2.52	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.02	0.60
13:XM:121:LYS:HZ3	24:XY:39:C:HO2'	1.50	0.60
25:YA:1372:U:H2'	25:YA:1373:A:H5'	1.84	0.60
25:YA:528:A:C2	25:YA:2042:A:H2'	2.37	0.60
25:YA:2688:U:OP1	25:YA:2713:A:N6	2.35	0.60
25:YA:2716:U:H2'	25:YA:2717:G:H8	1.65	0.60
27:YD:236:GLY:C	27:YD:237:GLU:OE1	2.39	0.60
28:YE:93:VAL:N	28:YE:95:ILE:HD12	2.17	0.60
25:YA:558:G:OP1	33:YN:111:PRO:HD2	2.00	0.60
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CE1	2.37	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
41:YV:35:LEU:O	41:YV:35:LEU:HD23	2.01	0.60
41:YV:99:ILE:CD1	41:YV:99:ILE:N	2.65	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
4:QD:12:CYS:HB2	4:QD:31:CYS:O	2.01	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
6:QF:97:PHE:HD2	6:QF:97:PHE:C	2.05	0.60
12:QL:54:LYS:N	12:QL:54:LYS:CD	2.64	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.25	0.60
25:RA:1833:U:O2'	25:RA:1969:A:N1	2.27	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ2	1.66	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.81	0.60
43:RX:15:GLU:N	43:RX:15:GLU:OE1	2.34	0.60
1:XA:1200:C:H4'	1:XA:1201:A:C5'	2.31	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:941:G:H1	1:XA:1342:C:N4	1.99	0.60
1:XA:210:U:O2'	1:XA:216:G:N7	2.35	0.60
1:XA:312:C:H2'	1:XA:313:A:H8	1.66	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.01	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
27:YD:147:LEU:HD13	27:YD:155:LEU:CD1	2.29	0.60
27:YD:166:GLN:CA	27:YD:166:GLN:HE21	2.14	0.60
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.60
40:YU:92:ARG:NH1	40:YU:95:LEU:CD1	2.65	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
1:QA:948:C:H2'	1:QA:949:A:H8	1.67	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB2	1.83	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.82	0.60
25:RA:2404:C:H2'	25:RA:2405:G:O4'	2.02	0.60
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.66	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.36	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
32:RI:114:LEU:O	32:RI:115:ALA:CB	2.49	0.60
32:RI:21:VAL:HG22	32:RI:22:LYS:N	2.16	0.60
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.83	0.60
45:RZ:48:PHE:HA	45:RZ:51:ALA:HB3	1.84	0.60
1:XA:701:C:H1'	1:XA:703:G:C6	2.37	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.60
9:XI:85:LEU:O	9:XI:85:LEU:HD12	2.02	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.02	0.60
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:HA	0.70	0.60
25:YA:1918:A:O2'	25:YA:1920:C:N4	2.35	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
28:YE:93:VAL:N	28:YE:95:ILE:CD1	2.65	0.60
32:YI:99:GLU:CD	32:YI:103:ARG:HH21	2.05	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
25:YA:2318:G:H22	38:YS:2:ALA:HA	1.66	0.60
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.35	0.60
1:QA:1190:G:H5''	3:QC:176:HIS:NE2	2.17	0.60
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	2.31	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.31	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
14:QN:42:ILE:O	14:QN:43:CYS:C	2.39	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.49	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
47:R1:91:LYS:CG	47:R1:92:LYS:H	2.15	0.60
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.02	0.60
25:RA:2287:A:O2'	25:RA:2288:A:O5'	2.18	0.60
25:RA:2688:U:H6	25:RA:2721:A:H62	1.49	0.60
26:RB:33:G:H5''	26:RB:33:G:H8	1.67	0.60
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
30:RG:44:GLY:HA2	30:RG:88:ILE:CG1	2.30	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.20	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.02	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.32	0.60
14:YN:19:ARG:O	14:YN:20:ALA:C	2.40	0.60
14:YN:44:LEU:HD12	14:YN:48:ALA:HB2	1.84	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
22:XV:35:A:C2	23:XX:3:G:C2	2.89	0.60
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.84	0.60
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
25:YA:2619:C:H1'	28:YE:156:MET:HE1	1.84	0.60
25:YA:503:A:H4'	25:YA:504:U:H5'	1.84	0.60
26:YB:74:U:H2'	26:YB:75:G:O4'	2.02	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.49	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.60
30:YG:9:ARG:HG2	30:YG:13:GLU:OE1	2.00	0.60
32:YI:2:LYS:HB3	32:YI:20:ASP:HB3	1.83	0.60
34:YO:7:TYR:HE1	34:YO:20:MET:HE3	1.67	0.60
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.60
39:YT:107:ASP:O	39:YT:110:ILE:HG22	2.02	0.60
1:QA:1312:G:H5''	50:R4:67:TYR:OH	2.01	0.60
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.60
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.60
46:R0:51:VAL:HG23	46:R0:81:VAL:HG23	1.83	0.60
25:RA:227:A:OP1	35:RP:76:LYS:HE3	2.01	0.60
25:RA:286:C:H2'	25:RA:287:C:H6	1.65	0.60
28:RE:37:ARG:CA	28:RE:37:ARG:NE	2.64	0.60
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.60
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.60
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.02	0.60
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.60
38:RS:99:LYS:O	38:RS:102:ALA:N	2.34	0.60
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.60
41:RV:35:LEU:HB2	41:RV:37:VAL:HG23	1.84	0.60
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.84	0.60
45:RZ:73:GLN:HB3	45:RZ:87:ASP:OD1	2.01	0.60
9:XI:66:ARG:HG2	9:XI:66:ARG:HH11	1.67	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.60
19:XS:2:PRO:HB2	50:Y4:68:ARG:HH22	1.67	0.60
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.60
25:YA:242:G:C5'	54:Y8:3:LYS:HE3	2.32	0.60
54:Y8:22:VAL:CG2	54:Y8:53:PRO:HB2	2.32	0.60
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.60
38:YS:59:LYS:HG2	38:YS:60:GLY:N	2.12	0.60
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.01	0.60
41:YV:1:MET:CE	41:YV:43:GLU:HG2	2.32	0.60
45:YZ:48:PHE:HA	45:YZ:51:ALA:HB3	1.84	0.60
4:QD:114:ARG:NH1	4:QD:114:ARG:HG3	2.13	0.59
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.67	0.59
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.17	0.59
22:QV:75:C:OP1	25:RA:2602:A:O5'	2.20	0.59
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.55	0.59
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.66	0.59
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.59
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.59
37:RR:75:LEU:C	37:RR:75:LEU:HD13	2.22	0.59
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.59
1:XA:1182:G:H4'	1:XA:1183:A:H5''	1.84	0.59
1:XA:411:A:N6	1:XA:413:G:H21	1.97	0.59
1:XA:458:C:H2'	1:XA:464:G:H8	1.67	0.59
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.47	0.59
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.02	0.59
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.30	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
10:XJ:98:ILE:N	10:XJ:98:ILE:HD12	2.15	0.59
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.59
25:YA:270(U):C:H2'	25:YA:270(V):G:H8	1.67	0.59
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.59
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.59
31:YH:30:LYS:CD	31:YH:81:GLU:H	2.15	0.59
32:YI:144:VAL:CG2	32:YI:145:VAL:H	2.06	0.59
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.59
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.18	0.59
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59
13:QM:45:VAL:O	13:QM:45:VAL:HG22	2.02	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.59
26:RB:52:A:O2'	26:RB:53:A:N7	2.35	0.59
27:RD:166:GLN:HE21	27:RD:166:GLN:CA	2.14	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.83	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.59
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.17	0.59
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.67	0.59
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.67	0.59
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
39:RT:107:ASP:O	39:RT:110:ILE:HG22	2.02	0.59
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.83	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
52:Y6:25:LYS:HD2	54:Y8:34:TRP:CZ2	2.36	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.67	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.17	0.59
32:YI:29:TYR:O	32:YI:33:ARG:HB2	2.02	0.59
32:YI:38:LEU:HD12	32:YI:38:LEU:N	2.11	0.59
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.83	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.83	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.84	0.59
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
45:YZ:154:ASP:O	45:YZ:155:LEU:HD22	2.01	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.83	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
25:RA:2419:U:O4	54:R8:30:ARG:NE	2.35	0.59
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.86	0.59
25:RA:198:C:H5'	25:RA:2244:U:OP1	2.02	0.59
25:RA:38:A:H2'	25:RA:39:C:C6	2.37	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.32	0.59
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.59
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.84	0.59
45:RZ:132:ASN:HB2	45:RZ:160:GLY:HA3	1.83	0.59
1:XA:246:A:N6	1:XA:281:G:H1'	2.17	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.16	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
18:XR:31:LEU:H	18:XR:31:LEU:HD23	1.67	0.59
27:YD:174:ILE:N	27:YD:174:ILE:HD12	2.16	0.59
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.03	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.83	0.59
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
1:QA:345:C:H4'	1:QA:346:G:C2	2.37	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.01	0.59
3:QC:127:ARG:CG	3:QC:127:ARG:HH11	2.15	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.40	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
33:RN:41:ASP:O	33:RN:48:MET:HE3	2.01	0.59
1:XA:17:U:H2'	1:XA:18:C:C6	2.37	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
8:XH:41:ARG:HB3	8:XH:41:ARG:HH11	1.66	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
46:Y0:51:VAL:HG23	46:Y0:81:VAL:HG23	1.83	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
25:YA:1291:C:H5'	25:YA:1536:A:H5'	1.83	0.59
25:YA:747:U:C4	25:YA:2613:U:C4	2.90	0.59
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.59
28:YE:51:PHE:HD1	28:YE:52:LEU:HG	1.68	0.59
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.59
37:YR:92:GLY:H	37:YR:94:TYR:HE2	1.49	0.59
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.37	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
46:R0:29:GLN:O	46:R0:31:VAL:HG13	2.03	0.59
47:R1:87:PRO:O	47:R1:91:LYS:N	2.31	0.59
52:R6:13:CYS:O	52:R6:21:TYR:HA	2.02	0.59
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.38	0.59
25:RA:2681:C:O2'	25:RA:2682:U:O5'	2.16	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
30:RG:13:GLU:O	30:RG:14:GLU:CB	2.44	0.59
31:RH:153:LYS:HZ2	31:RH:153:LYS:HA	1.67	0.59
32:RI:99:GLU:CD	32:RI:103:ARG:HH21	2.05	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	0.59
45:RZ:113:ALA:O	45:RZ:114:GLY:C	2.40	0.59
45:RZ:30:ASN:HB3	45:RZ:89:PHE:HE2	1.68	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.35	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
25:YA:1951:U:O2'	25:YA:1953:A:N7	2.33	0.59
25:YA:530:G:N1	25:YA:2022:U:OP1	2.35	0.59
25:YA:898:C:H2'	25:YA:899:A:H5'	1.83	0.59
28:YE:116:VAL:O	28:YE:117:MET:CB	2.49	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	0.59
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.59
45:YZ:20:ARG:O	45:YZ:20:ARG:HD3	2.03	0.59
1:QA:1502:A:H2	1:QA:1505:G:H1	1.50	0.59
5:QE:68:GLU:HG3	5:QE:68:GLU:O	2.03	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
12:QL:48:PRO:CD	12:QL:49:ASN:N	2.57	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
46:R0:6:GLY:O	46:R0:7:LEU:HD22	2.03	0.59
54:R8:22:VAL:HG21	54:R8:53:PRO:HB2	1.83	0.59
25:RA:1019:U:H2'	25:RA:1020:A:C8	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.14	0.59
25:RA:1291:C:H5'	25:RA:1536:A:H5'	1.85	0.59
25:RA:256:A:H2'	25:RA:257:A:H8	1.68	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.38	0.59
1:XA:258:G:H2'	1:XA:259:G:H8	1.67	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.51	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.15	0.59
14:YN:15:LYS:HD2	14:YN:16:PHE:CZ	2.36	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
25:YA:2749:A:O2'	31:YH:59:ARG:NE	2.35	0.59
27:YD:177:LEU:HD11	27:YD:183:ARG:HB2	1.85	0.59
28:YE:4:ILE:C	28:YE:5:LEU:HD23	2.22	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59
38:YS:88:ASP:O	38:YS:89:ARG:CB	2.49	0.59
1:QA:527:G:O6	12:QL:49:ASN:ND2	2.28	0.59
1:QA:923:A:H2'	1:QA:924:C:C6	2.38	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.84	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.59
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.84	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.59
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.83	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.16	0.59
25:RA:1297:C:H2'	25:RA:1298:C:H6	1.68	0.59
25:RA:2425:A:OP2	25:RA:2426:A:O2'	2.12	0.59
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.01	0.59
25:RA:674:G:C1'	29:RF:74:ARG:HD3	2.30	0.59
31:RH:127:GLU:HG2	31:RH:128:PRO:CG	2.32	0.59
32:RI:110:ASP:HB3	32:RI:112:LYS:N	2.16	0.59
32:RI:35:LEU:O	32:RI:36:ALA:HB2	2.01	0.59
37:RR:79:LEU:C	37:RR:79:LEU:HD23	2.23	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
9:XI:127:LYS:CE	22:XV:34:C:OP2	2.51	0.59
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.67	0.59
1:XA:523:A:N6	12:XL:92:ASP:HB2	2.12	0.59
14:XN:23:ARG:CZ	14:XN:30:ALA:HB2	2.33	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	0.59
25:YA:1057:A:H62	25:YA:1086:A:H2'	1.68	0.59
25:YA:740:U:H2'	25:YA:741:G:C8	2.37	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59
31:YH:159:GLU:O	31:YH:160:LYS:HG2	2.03	0.59
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.59
25:YA:71:A:C2	43:YX:31:HIS:HE1	2.08	0.59
1:QA:1498:U:HO2'	1:QA:1499:A:P	2.19	0.59
1:QA:300:A:O2'	1:QA:564:C:N3	2.31	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.59
51:R5:40:LYS:NZ	51:R5:46:CYS:HB3	2.18	0.59
25:RA:520:G:H2'	25:RA:521:G:H8	1.66	0.59
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.59
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
33:RN:18:ALA:HB3	33:RN:55:VAL:O	2.03	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59
1:XA:539:A:H2'	1:XA:540:G:C8	2.37	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59
31:YH:124:GLU:HB3	31:YH:132:ARG:HG3	1.85	0.59
37:YR:63:ARG:HG3	37:YR:63:ARG:HH11	1.68	0.59
37:YR:72:ASP:O	37:YR:76:VAL:HB	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:YT:102:ILE:HB	39:YT:110:ILE:HD11	1.84	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
45:YZ:18:LEU:HD12	45:YZ:18:LEU:N	2.12	0.59
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59
18:QR:31:LEU:H	18:QR:31:LEU:HD23	1.67	0.59
22:QV:53:G:H4'	22:QV:54:U:OP1	2.02	0.59
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.59
25:RA:1226:G:H4'	41:RV:84:LYS:HG2	1.84	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
40:RU:52:ARG:NH1	40:RU:52:ARG:HG2	2.18	0.59
41:RV:1:MET:CE	41:RV:43:GLU:HG2	2.32	0.59
43:RX:49:VAL:CG1	43:RX:83:VAL:HG13	2.33	0.59
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.37	0.59
1:XA:954:G:H21	1:XA:1227:A:H62	1.51	0.59
1:XA:558:G:H5''	1:XA:559:A:OP2	2.03	0.59
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.59
5:XE:153:LYS:NZ	5:XE:153:LYS:HB2	2.18	0.59
6:XF:97:PHE:CD2	6:XF:97:PHE:C	2.76	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
46:Y0:55:ARG:HH11	46:Y0:55:ARG:HG3	1.67	0.59
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.59
25:YA:1815:A:OP2	27:YD:54:ARG:NH2	2.36	0.59
25:YA:2841:C:H2'	25:YA:2842:G:C8	2.37	0.59
27:YD:137:PRO:HB2	27:YD:140:THR:CG2	2.33	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59
35:YP:138:LEU:O	35:YP:140:ALA:N	2.33	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.67	0.59
1:QA:1524:C:H2'	1:QA:1525:G:C8	2.38	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
13:QM:77:ASN:ND2	50:R4:71:ARG:NH1	2.50	0.59
46:R0:55:ARG:HH11	46:R0:55:ARG:HG3	1.67	0.59
25:RA:1268:A:H2'	25:RA:1269:A:O4'	2.03	0.59
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.68	0.59
25:RA:1795:C:O2	27:RD:255:LYS:HE2	2.02	0.59
25:RA:946:G:H2'	25:RA:947:G:H8	1.68	0.59
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.18	0.59
39:RT:66:VAL:HG12	39:RT:67:SER:H	1.67	0.59
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.66	0.59
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.18	0.59
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.37	0.59
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.35	0.59
25:YA:2474:C:H5''	25:YA:2475:C:C5	2.38	0.59
4:QD:166:LYS:HD3	27:YD:134:ARG:NH1	2.18	0.59
28:YE:36:ARG:H	28:YE:37:ARG:HH21	1.50	0.59
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.59
29:YF:174:VAL:HG13	29:YF:174:VAL:O	2.03	0.59
31:YH:126:PRO:CD	31:YH:127:GLU:N	2.65	0.59
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.59
31:YH:89:ILE:O	31:YH:91:GLY:N	2.35	0.59
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.67	0.59
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.03	0.59
45:YZ:144:LEU:HD21	45:YZ:150:LEU:HD22	1.83	0.59
1:QA:1120:G:O6	1:QA:1152:A:N6	2.36	0.58
1:QA:184:G:H2'	1:QA:185:A:H8	1.67	0.58
4:QD:13:ARG:CD	4:QD:38:TYR:O	2.51	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.02	0.58
24:QY:39:C:O2'	24:QY:40:G:OP1	2.21	0.58
46:R0:51:VAL:HG21	46:R0:79:VAL:O	2.03	0.58
25:RA:1815:A:OP2	27:RD:54:ARG:NH2	2.36	0.58
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	2.03	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.20	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.18	0.58
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	0.58
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.58
39:RT:36:GLU:HG3	39:RT:41:ARG:HD3	1.85	0.58
44:RY:81:LYS:HD3	44:RY:97:ARG:CD	2.33	0.58
1:XA:560:U:H4'	1:XA:561:U:H5''	1.85	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.58
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.58
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.19	0.58
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.58
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.58
26:YB:42:C:H42	30:YG:91:ARG:NH2	2.00	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
30:YG:126:ASP:OD1	30:YG:130:ASN:HB2	2.02	0.58
32:YI:127:VAL:HG22	32:YI:139:GLN:HB3	1.84	0.58
34:YO:107:ARG:O	34:YO:112:MET:HE3	2.03	0.58
1:QA:1056:U:H2'	1:QA:1057:G:H8	1.67	0.58
1:QA:1348:U:N3	1:QA:1374:A:H2	2.01	0.58
1:QA:620:C:H2'	1:QA:621:A:O4'	2.03	0.58
4:QD:11:LEU:O	4:QD:13:ARG:N	2.36	0.58
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58
51:R5:60:VAL:OXT	51:R5:60:VAL:HG13	2.03	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
26:RB:55:U:C4'	30:RG:29:TRP:HE1	2.17	0.58
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58
38:RS:88:ASP:CG	38:RS:90:GLY:H	2.06	0.58
39:RT:102:ILE:HB	39:RT:110:ILE:HD11	1.84	0.58
1:XA:188:U:H2'	1:XA:189:U:H5''	1.84	0.58
1:XA:714:G:H2'	1:XA:715:A:C8	2.38	0.58
1:XA:752:G:H1'	1:XA:754:C:H41	1.68	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
25:YA:2712:U:O2'	25:YA:2712(A):A:H8	1.84	0.58
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.03	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.32	0.58
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
32:YI:133:HIS:HB2	32:YI:134:PRO:CD	2.34	0.58
39:YT:66:VAL:HG12	39:YT:67:SER:H	1.67	0.58
1:QA:1126:U:OP2	1:QA:1281:U:H1'	2.03	0.58
1:QA:1392:G:H21	1:QA:1502:A:H8	1.51	0.58
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.51	0.58
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.58
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.58
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ3	1.68	0.58
17:QQ:92:ARG:HH11	17:QQ:92:ARG:HG3	1.68	0.58
25:RA:2356:C:O3'	46:R0:20:ARG:HD3	2.02	0.58
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.72	0.58
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.37	0.58
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.18	0.58
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.03	0.58
45:RZ:20:ARG:O	45:RZ:20:ARG:HD3	2.03	0.58
1:XA:1442:G:O6	1:XA:1446:A:N6	2.36	0.58
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.02	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.03	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.66	0.58
25:YA:2208:U:O2'	27:YD:151:LYS:HG2	2.03	0.58
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.18	0.58
30:YG:64:THR:HG23	30:YG:66:GLN:H	1.67	0.58
31:YH:92:ILE:HG22	31:YH:93:GLY:N	2.18	0.58
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.85	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.58
45:YZ:52:SER:O	45:YZ:53:ILE:HG13	2.04	0.58
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.37	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.23	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.58
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.18	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
18:QR:36:ASN:ND2	18:QR:36:ASN:O	2.32	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:R2:69:ARG:CB	48:R2:69:ARG:NH1	2.67	0.58
25:RA:2015:A:C1'	51:R5:2:ALA:HA	2.31	0.58
25:RA:1061:U:H3'	25:RA:1062:G:H5''	1.86	0.58
25:RA:1264:G:H5'	51:R5:11:THR:HG21	1.84	0.58
25:RA:2517:C:C2	25:RA:2542:A:N6	2.71	0.58
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.39	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.84	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
36:RQ:80:GLU:OE1	46:R0:5:LYS:HB2	2.03	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.84	0.58
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.85	0.58
13:XM:45:VAL:O	13:XM:45:VAL:HG22	2.02	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.17	0.58
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.03	0.58
25:YA:1689:A:N6	25:YA:1698:A:H2	1.99	0.58
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.39	0.58
25:YA:598:G:H1	25:YA:659:C:H42	1.52	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
32:YI:115:ALA:CB	32:YI:128:LEU:HD11	2.29	0.58
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ1	1.68	0.58
25:YA:1266:G:N7	42:YW:15:ARG:NH1	2.51	0.58
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.18	0.58
1:QA:817:C:H1'	1:QA:819:A:H5'	1.83	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.85	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.21	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.02	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
48:R2:16:LEU:CG	48:R2:16:LEU:O	2.49	0.58
25:RA:2159:G:H2'	25:RA:2160:G:H8	1.68	0.58
25:RA:2602:A:C2	55:Z6:76:PPU:C8	2.86	0.58
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.58
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
13:QM:3:ARG:HH21	30:RG:139:LEU:HD13	1.65	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
32:RI:133:HIS:HB2	32:RI:134:PRO:CD	2.34	0.58
32:RI:4:ILE:HG12	32:RI:18:VAL:CG2	2.25	0.58
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.04	0.58
25:RA:1342:A:OP1	43:RX:36:LYS:NZ	2.33	0.58
44:RY:95:LYS:HD3	44:RY:95:LYS:H	1.67	0.58
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.33	0.58
1:XA:372:C:H42	1:XA:389:A:H62	1.50	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
1:XA:939:G:H5'	7:XG:102:ARG:NH2	2.18	0.58
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.84	0.58
16:XP:28:ARG:HG2	16:XP:28:ARG:HH11	1.68	0.58
46:Y0:51:VAL:HG21	46:Y0:79:VAL:O	2.03	0.58
48:Y2:17:SER:CB	48:Y2:18:PRO:HA	2.33	0.58
19:XS:5:LEU:HG	50:Y4:66:SER:HB3	1.84	0.58
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.03	0.58
25:YA:573:G:N1	25:YA:2031:A:OP2	2.34	0.58
25:YA:2405:G:O2'	25:YA:2406:U:OP2	2.16	0.58
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.03	0.58
25:YA:288:C:H2'	25:YA:289:A:H8	1.69	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	0.58
29:YF:89:VAL:HG12	29:YF:90:PHE:N	2.18	0.58
31:YH:85:LYS:HA	31:YH:86:GLU:OE1	2.03	0.58
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.58
25:YA:748:G:O6	42:YW:90:ARG:NH1	2.37	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
1:QA:677:U:H2'	1:QA:678:U:C6	2.37	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.18	0.58
13:QM:77:ASN:OD1	50:R4:71:ARG:CZ	2.51	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.68	0.58
38:RS:67:ARG:HH11	38:RS:67:ARG:HB2	1.65	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
42:RW:95:ILE:O	42:RW:95:ILE:HD12	2.04	0.58
1:XA:745:C:OP1	1:XA:851:G:O2'	2.20	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:114:ARG:NH1	4:XD:114:ARG:HG3	2.13	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.84	0.58
14:YN:23:ARG:H	14:YN:33:VAL:HG11	1.67	0.58
14:YN:44:LEU:HD12	14:YN:44:LEU:C	2.24	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58
48:Y2:69:ARG:CB	48:Y2:69:ARG:NH1	2.67	0.58
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.39	0.58
25:YA:1950:G:N2	25:YA:1951:U:O4	2.37	0.58
31:YH:4:ILE:H	31:YH:4:ILE:HD13	1.68	0.58
32:YI:116:LEU:HD11	32:YI:119:PRO:HG3	1.85	0.58
33:YN:9:VAL:HG21	33:YN:48:MET:HB3	1.85	0.58
38:YS:42:ASP:C	38:YS:44:LYS:H	2.06	0.58
41:YV:38:LEU:HD23	41:YV:39:LEU:N	2.19	0.58
42:YW:66:GLU:O	42:YW:68:ARG:N	2.33	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.33	0.58
1:QA:1314:C:OP2	19:QS:4:SER:OG	2.22	0.58
2:QB:111:ARG:NE	2:QB:111:ARG:HA	2.18	0.58
2:QB:178:ARG:O	8:QH:71:GLY:HA2	2.03	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	0.58
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.37	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.38	0.58
32:RI:1:MET:HG3	32:RI:23:PRO:HB3	1.85	0.58
32:RI:2:LYS:CB	32:RI:20:ASP:HB3	2.33	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.03	0.58
45:RZ:154:ASP:O	45:RZ:157:LEU:HD13	2.03	0.58
1:XA:737:A:H2'	1:XA:738:C:H6	1.69	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
4:XD:12:CYS:HA	4:XD:19:LEU:HD23	1.85	0.58
5:XE:68:GLU:HG3	5:XE:68:GLU:O	2.02	0.58
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.03	0.58
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.58
12:XL:54:LYS:HD2	12:XL:54:LYS:N	2.18	0.58
13:XM:121:LYS:HZ1	24:XY:40:G:P	2.17	0.58
46:Y0:29:GLN:O	46:Y0:31:VAL:HG13	2.03	0.58
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
25:YA:859:G:H2'	25:YA:916:G:O6	2.03	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.39	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
31:YH:117:PRO:HB3	31:YH:123:PHE:CD1	2.37	0.58
32:YI:73:GLU:OE1	32:YI:137:PRO:HD2	2.04	0.58
33:YN:41:ASP:O	33:YN:48:MET:HE3	2.03	0.58
34:YO:40:VAL:HG12	34:YO:41:ALA:N	2.19	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.85	0.58
42:YW:95:ILE:HD12	42:YW:95:ILE:O	2.04	0.58
45:YZ:30:ASN:HB3	45:YZ:89:PHE:HE2	1.68	0.58
1:QA:25:C:H2'	1:QA:26:A:C8	2.39	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
5:QE:153:LYS:NZ	5:QE:153:LYS:HB2	2.18	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.27	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
25:RA:414:C:H2'	25:RA:415:A:H8	1.68	0.58
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.03	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
25:RA:662:G:H5''	35:RP:15:ARG:O	2.04	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
10:XJ:49:VAL:HG22	14:XN:41:ARG:HB2	1.84	0.58
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.58
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.33	0.58
25:YA:1200:C:H1'	40:YU:2:PRO:HG2	1.86	0.58
25:YA:2293:C:H5''	38:YS:89:ARG:HH22	1.68	0.58
25:YA:2351:G:H8	25:YA:2351:G:O5'	1.87	0.58
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.39	0.58
25:YA:821:A:H2'	25:YA:946:G:H5''	1.85	0.58
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
25:YA:1805:U:O2	27:YD:50:THR:HB	2.04	0.58
29:YF:138:GLU:O	29:YF:141:ALA:HB3	2.03	0.58
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.58
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.58
1:QA:1073:U:OP2	5:QE:57:LYS:NZ	2.32	0.58
1:QA:411:A:H62	1:QA:413:G:H21	1.51	0.58
1:QA:592:G:H1	1:QA:647:C:N4	2.01	0.58
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.58
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.03	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.57	0.58
46:R0:36:ILE:HD13	46:R0:36:ILE:O	2.03	0.58
50:R4:27:THR:O	50:R4:28:LYS:HB3	2.04	0.58
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.58
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.58
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.03	0.58
32:RI:127:VAL:HG22	32:RI:139:GLN:HB3	1.84	0.58
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
4:XD:13:ARG:CD	4:XD:38:TYR:O	2.51	0.58
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.33	0.58
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.19	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
32:YI:99:GLU:OE2	32:YI:103:ARG:NH2	2.36	0.58
33:YN:35:ARG:O	33:YN:37:LYS:N	2.37	0.58
36:YQ:134:ARG:NE	45:YZ:122:ARG:NH2	2.52	0.58
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.58
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.04	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	2.04	0.58
44:YY:51:VAL:CG1	44:YY:52:SER:H	2.11	0.58
45:YZ:154:ASP:O	45:YZ:155:LEU:O	2.22	0.58
45:YZ:27:VAL:HG22	45:YZ:28:MET:H	1.69	0.58
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.36	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.58
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.58
25:RA:76:C:O2'	48:R2:62:THR:HG21	2.03	0.58
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.58
50:R4:38:LYS:C	50:R4:40:HIS:N	2.52	0.58
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.58
25:RA:1444(A):A:H4'	25:RA:1460:A:O2'	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.04	0.58
25:RA:2273:A:H2'	25:RA:2274:A:C8	2.39	0.58
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.38	0.58
27:RD:147:LEU:HD13	27:RD:155:LEU:CD1	2.29	0.58
32:RI:116:LEU:HD11	32:RI:119:PRO:HG3	1.85	0.58
38:RS:26:LEU:CD2	38:RS:87:PHE:HD1	2.17	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.85	0.58
45:RZ:27:VAL:HG22	45:RZ:28:MET:H	1.69	0.58
2:XB:111:ARG:NE	2:XB:111:ARG:HA	2.19	0.58
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.58
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.58
19:XS:68:GLY:N	50:Y4:59:PHE:CE1	2.71	0.58
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.58
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.58
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.52	0.58
25:YA:2252:G:H2'	25:YA:2253:G:O4'	2.04	0.58
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.38	0.58
26:YB:6:C:H2'	26:YB:7:G:H5''	1.85	0.58
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.58
32:YI:2:LYS:CB	32:YI:20:ASP:HB3	2.34	0.58
33:YN:13:TRP:O	33:YN:135:PRO:HD2	2.04	0.58
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.37	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.58
1:QA:294:U:OP1	1:QA:610:G:O2'	2.15	0.57
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.57
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.57
50:R4:22:ILE:HG22	50:R4:23:GLU:N	2.18	0.57
25:RA:530:G:C6	25:RA:2022:U:H5''	2.39	0.57
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.39	0.57
25:RA:947:G:H2'	25:RA:948:G:C8	2.39	0.57
30:RG:53:LEU:HD23	30:RG:53:LEU:C	2.25	0.57
31:RH:4:ILE:H	31:RH:4:ILE:HD13	1.68	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.34	0.57
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.57
45:RZ:33:LEU:HG	45:RZ:34:ASN:N	2.19	0.57
1:XA:1065:U:OP2	1:XA:1190:G:N2	2.27	0.57
1:XA:1116:C:O2'	9:XI:108:VAL:HG11	2.03	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.57
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.57
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.57
51:Y5:60:VAL:OXT	51:Y5:60:VAL:HG13	2.03	0.57
25:YA:207:A:H2'	25:YA:208:C:O4'	2.03	0.57
25:YA:2451:A:C6	55:Z8:76:PPU:HE2	2.39	0.57
25:YA:573:G:O2'	25:YA:574:C:H3'	2.04	0.57
25:YA:1567:A:H5'	27:YD:58:HIS:ND1	2.19	0.57
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.57
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.57
31:YH:127:GLU:HG2	31:YH:128:PRO:CG	2.32	0.57
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.57
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.86	0.57
1:QA:1399:C:C2	1:QA:1502:A:N6	2.72	0.57
1:QA:514:C:H2'	1:QA:515:G:H8	1.68	0.57
1:QA:707:C:H5''	11:QK:85:ARG:HH11	1.70	0.57
1:QA:757:U:H2'	1:QA:758:G:O4'	2.03	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.57
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.57
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.85	0.57
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.67	0.57
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.85	0.57
34:RO:20:MET:HG2	34:RO:21:CYS:N	2.19	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	0.57
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.68	0.57
42:RW:1:MET:HE3	42:RW:1:MET:HA	1.85	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.34	0.57
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.17	0.57
22:XV:53:G:H4'	22:XV:54:U:OP1	2.02	0.57
24:XY:39:C:O2'	24:XY:40:G:OP1	2.21	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57
25:YA:1790:C:H2'	25:YA:1791:A:C4	2.39	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:41:LYS:HA	28:YE:41:LYS:HE2	1.86	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
32:YI:11:ASN:O	32:YI:12:LEU:CB	2.51	0.57
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.18	0.57
39:YT:82:LEU:N	39:YT:82:LEU:HD12	2.19	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.69	0.57
1:QA:236:G:OP1	17:QQ:40:LYS:NZ	2.35	0.57
1:QA:343:U:H2'	1:QA:345:C:H1'	1.85	0.57
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.73	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.33	0.57
12:QL:10:LEU:HB3	17:QQ:32:TYR:CE2	2.38	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.05	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.86	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.05	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.20	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.04	0.57
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.03	0.57
25:YA:1530:G:O6	25:YA:1542:G:N2	2.37	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.57
30:YG:53:LEU:HD23	30:YG:53:LEU:C	2.24	0.57
32:YI:4:ILE:HG12	32:YI:18:VAL:CG2	2.25	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.39	0.57
5:QE:140:ARG:HH11	5:QE:140:ARG:HB2	1.69	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.87	0.57
47:R1:81:LYS:H	47:R1:81:LYS:HE2	1.62	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	0.57
27:RD:177:LEU:HD11	27:RD:183:ARG:HB2	1.85	0.57
27:RD:263:ARG:HB2	27:RD:263:ARG:HH11	1.67	0.57
27:RD:35:LYS:HG2	27:RD:64:ILE:CA	2.34	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	0.57
36:RQ:55:VAL:HG22	36:RQ:56:ARG:N	2.18	0.57
37:RR:63:ARG:HG3	37:RR:63:ARG:HH11	1.68	0.57
38:RS:67:ARG:HH11	38:RS:67:ARG:CB	2.18	0.57
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.57
1:XA:924:C:O2'	1:XA:1502:A:N6	2.37	0.57
1:XA:491:G:H2'	1:XA:492:G:C8	2.39	0.57
1:XA:690:G:H22	11:XK:55:LYS:HZ1	1.51	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
11:XK:21:ILE:N	11:XK:21:ILE:HD12	2.20	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
16:XP:76:GLN:HG2	16:XP:76:GLN:O	2.05	0.57
19:XS:15:LEU:N	19:XS:15:LEU:HD23	2.19	0.57
25:YA:1309:G:OP1	53:Y7:9:ARG:HD3	2.04	0.57
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.40	0.57
25:YA:1824:G:O3'	27:YD:249:PRO:HD3	2.04	0.57
32:YI:1:MET:HG3	32:YI:23:PRO:HB3	1.85	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
37:YR:79:LEU:HD23	37:YR:79:LEU:C	2.23	0.57
45:YZ:152:ALA:HB2	45:YZ:170:THR:H	1.69	0.57
1:QA:458:C:H2'	1:QA:464:G:H8	1.70	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57
46:R0:24:LYS:O	46:R0:25:ARG:HD3	2.05	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
52:R6:6:ARG:O	52:R6:8:LYS:HD2	2.05	0.57
25:RA:1543:A:C2	25:RA:1545:A:C8	2.92	0.57
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.40	0.57
25:RA:1678:G:H22	25:RA:1989:G:H1	1.53	0.57
25:RA:2692:C:H2'	25:RA:2693:A:O4'	2.04	0.57
25:RA:676:A:H8	25:RA:2069:G:N2	1.97	0.57
25:RA:878:A:N6	25:RA:899:A:HO2'	2.02	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.57
32:RI:73:GLU:OE1	32:RI:137:PRO:HD2	2.04	0.57
32:RI:6:LEU:HD13	32:RI:36:ALA:CA	2.34	0.57
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
25:RA:2393:A:H4'	35:RP:61:ARG:O	2.05	0.57
33:RN:42:TRP:O	40:RU:64:ARG:NH2	2.35	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57
25:YA:1130:U:O5'	25:YA:1130:U:H6	1.87	0.57
25:YA:1297:C:H2'	25:YA:1298:C:H6	1.69	0.57
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.30	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.87	0.57
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	1.85	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	0.57
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.57
41:YV:78:LYS:O	41:YV:79:VAL:HB	2.04	0.57
1:QA:1346:A:N6	7:QG:10:ARG:HD2	2.20	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.05	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
25:RA:443:A:O2'	25:RA:1200:C:O2'	2.19	0.57
26:RB:52:A:H62	38:RS:33:LYS:HG3	1.70	0.57
28:RE:41:LYS:HA	28:RE:41:LYS:HE2	1.86	0.57
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.87	0.57
30:RG:107:LEU:HD11	30:RG:178:PHE:CE1	2.39	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
45:RZ:152:ALA:HB2	45:RZ:170:THR:H	1.69	0.57
45:RZ:157:LEU:N	45:RZ:158:PRO:HD3	2.20	0.57
1:XA:1239:A:H4'	1:XA:1240:U:H5''	1.86	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
5:XE:140:ARG:HB2	5:XE:140:ARG:HH11	1.69	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
46:Y0:14:ARG:O	46:Y0:15:ASP:HB2	2.05	0.57
46:Y0:36:ILE:HD13	46:Y0:36:ILE:O	2.03	0.57
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
25:YA:1003:G:O2'	25:YA:1010:A:N1	2.35	0.57
25:YA:1359:A:N6	25:YA:1372:U:C4	2.71	0.57
25:YA:2121:G:O6	25:YA:2176:A:N6	2.37	0.57
25:YA:2777:G:OP2	25:YA:2781:A:O2'	2.18	0.57
32:YI:6:LEU:HD13	32:YI:36:ALA:CA	2.34	0.57
34:YO:71:ARG:HH11	34:YO:71:ARG:HG3	1.69	0.57
37:YR:32:GLY:O	37:YR:115:GLU:HA	2.04	0.57
1:QA:935:A:H1'	1:QA:1384:C:N3	2.20	0.57
1:QA:865:A:N3	1:QA:918:A:O2'	2.34	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.04	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
25:RA:2015:A:N3	51:R5:2:ALA:N	2.52	0.57
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
25:RA:180:G:N2	25:RA:215:G:O6	2.37	0.57
25:RA:654(A):G:H22	25:RA:654(U):A:H1'	1.69	0.57
26:RB:11:C:H3'	26:RB:12:C:C6	2.40	0.57
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.39	0.57
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.87	0.57
25:RA:2839:G:H21	37:RR:92:GLY:HA3	1.70	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
45:RZ:154:ASP:O	45:RZ:155:LEU:O	2.22	0.57
45:RZ:52:SER:O	45:RZ:53:ILE:HG13	2.03	0.57
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.69	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.57
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
25:YA:1695:G:H1'	27:YD:8:PRO:O	2.03	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.85	0.57
27:YD:34:VAL:CG1	27:YD:34:VAL:O	2.50	0.57
27:YD:36:PRO:HB2	27:YD:61:LEU:HG	1.87	0.57
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.17	0.57
1:QA:1259:C:HO2'	1:QA:1283:G:H21	1.51	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.03	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.05	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.57
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.40	0.57
25:RA:2735:G:H2'	25:RA:2736:G:H8	1.70	0.57
25:RA:620:G:H4'	25:RA:621:A:H5''	1.86	0.57
26:RB:80:U:H2'	26:RB:81:G:N2	2.18	0.57
25:RA:1655:A:O3'	28:RE:115:GLY:HA3	2.03	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
45:RZ:30:ASN:HB3	45:RZ:89:PHE:CE2	2.40	0.57
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.86	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
5:XE:140:ARG:CB	5:XE:140:ARG:HH11	2.18	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
2:XB:178:ARG:NH2	8:XH:68:ARG:NH2	2.52	0.57
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
25:YA:1553:A:C6	25:YA:1555:G:H1'	2.40	0.57
25:YA:2115:G:N2	25:YA:2165:G:N7	2.46	0.57
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.87	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
34:YO:96:THR:O	34:YO:97:ARG:HB3	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:64:LYS:C	35:YP:66:GLY:N	2.56	0.57
25:YA:518:G:C4'	42:YW:18:ARG:HH12	2.08	0.57
44:YY:97:ARG:HG2	44:YY:97:ARG:O	2.05	0.57
45:YZ:154:ASP:O	45:YZ:157:LEU:HD13	2.03	0.57
45:YZ:33:LEU:HG	45:YZ:34:ASN:N	2.20	0.57
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.87	0.57
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.20	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.57
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
18:QR:57:GLY:O	18:QR:58:LEU:C	2.43	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.05	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
25:RA:1426:G:O2'	25:RA:1572:A:N6	2.37	0.57
25:RA:2548:G:H2'	25:RA:2549:G:O4'	2.04	0.57
25:RA:507:A:C5'	25:RA:508:G:H5'	2.33	0.57
25:RA:74:A:H4'	25:RA:75:G:O5'	2.05	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.39	0.57
1:XA:606:G:H1	1:XA:631:G:H5''	1.70	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.34	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57
14:XN:13:THR:N	14:XN:14:PRO:CD	2.68	0.57
26:YB:55:U:O2'	26:YB:57:A:N7	2.37	0.57
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.57
27:YD:69:ARG:C	27:YD:71:ASP:H	2.08	0.57
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	0.57
40:YU:52:ARG:NH1	40:YU:52:ARG:HG2	2.18	0.57
44:YY:21:LYS:HG3	44:YY:22:GLY:H	1.69	0.57
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.21	0.57
1:QA:579:G:H5'	1:QA:728:A:H1'	1.87	0.57
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.05	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.20	0.57
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.03	0.57
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.33	0.57
46:R0:14:ARG:O	46:R0:15:ASP:HB2	2.05	0.57
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.57
25:RA:2286:A:H3'	52:R6:31:PRO:HG2	1.86	0.57
25:RA:2342:C:O2	25:RA:2374:C:H4'	2.04	0.57
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.38	0.57
25:RA:76:C:H2'	25:RA:77:C:H6	1.69	0.57
28:RE:63:LEU:HD12	28:RE:65:GLY:H	1.69	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.70	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.85	0.57
33:RN:131:GLN:CG	33:RN:132:ALA:N	2.68	0.57
28:RE:152:LYS:HG2	33:RN:78:TYR:CE1	2.39	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	0.57
34:RO:96:THR:O	34:RO:97:ARG:HB3	2.04	0.57
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.57
1:XA:328:C:H4'	1:XA:329:A:H5'	1.87	0.57
1:XA:891:U:OP2	1:XA:906:G:N2	2.28	0.57
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.57
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.57
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.57
47:Y1:70:VAL:O	47:Y1:74:VAL:HG23	2.05	0.57
49:Y3:7:LYS:NZ	49:Y3:32:GLN:HE21	2.03	0.57
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.03	0.57
52:Y6:14:THR:O	52:Y6:49:HIS:HA	2.05	0.57
25:YA:133:C:H42	25:YA:146:G:H1	1.50	0.57
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.36	0.57
25:YA:2331:G:O2'	25:YA:2336:A:N1	2.27	0.57
25:YA:26:G:H1'	25:YA:515:A:N6	2.20	0.57
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.57
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.87	0.57
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
39:YT:134:GLU:O	39:YT:135:ALA:HB3	2.04	0.57
45:YZ:157:LEU:N	45:YZ:158:PRO:HD3	2.20	0.57
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.34	0.56
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.40	0.56
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:R3:4:LEU:O	49:R3:36:VAL:HA	2.04	0.56
25:RA:1543:A:H2	25:RA:1545:A:C4	2.22	0.56
25:RA:2438:U:O3'	25:RA:2439:A:H3'	2.05	0.56
26:RB:48:A:H2'	26:RB:49:C:C6	2.39	0.56
32:RI:70:GLU:OE1	32:RI:70:GLU:HA	2.05	0.56
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.70	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.05	0.56
40:RU:79:PHE:C	40:RU:79:PHE:CD2	2.78	0.56
1:XA:1094:G:O2'	1:XA:1095:U:OP2	2.19	0.56
1:XA:198:G:H1	1:XA:219:C:H42	1.52	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.52	0.56
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.56
25:YA:2892:A:H2'	25:YA:2893:G:O4'	2.05	0.56
25:YA:307:G:N2	25:YA:310:A:OP2	2.35	0.56
25:YA:784:A:HO2'	25:YA:785:G:H8	1.52	0.56
29:YF:118:ALA:O	29:YF:121:GLY:N	2.33	0.56
13:XM:68:GLY:HA3	30:YG:116:ASP:OD2	2.04	0.56
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.05	0.56
32:YI:126:TYR:O	32:YI:140:LEU:HD23	2.05	0.56
35:YP:59:LEU:HA	35:YP:61:ARG:CZ	2.35	0.56
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.56
40:YU:104:GLN:N	40:YU:104:GLN:OE1	2.35	0.56
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.56
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.56
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.20	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.70	0.56
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.36	0.56
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
48:R2:51:ARG:HA	48:R2:54:LYS:HB2	1.86	0.56
51:R5:55:ARG:HD3	51:R5:56:LYS:N	2.20	0.56
52:R6:42:TRP:CD1	52:R6:42:TRP:N	2.73	0.56
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.19	0.56
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.56
28:RE:78:LEU:HD23	28:RE:79:ARG:HD2	1.86	0.56
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.56
32:RI:11:ASN:O	32:RI:12:LEU:CB	2.51	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
1:XA:1305:G:H21	1:XA:1331:G:H2'	1.70	0.56
1:XA:1492:A:H4'	12:XL:47:LYS:HD3	1.87	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.35	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
4:XD:11:LEU:O	4:XD:13:ARG:N	2.36	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.56
46:Y0:24:LYS:O	46:Y0:25:ARG:HD3	2.05	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
50:Y4:15:ILE:HG22	50:Y4:20:ASN:HA	1.86	0.56
53:Y7:48:LYS:HG2	53:Y7:49:ARG:N	2.19	0.56
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.56
25:YA:227:A:H1'	25:YA:228:A:C2	2.41	0.56
25:YA:2469:A:H5''	25:YA:2470:G:C8	2.39	0.56
25:YA:2716:U:H2'	25:YA:2717:G:C8	2.40	0.56
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.40	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
33:YN:82:LEU:HD12	33:YN:83:LYS:H	1.70	0.56
38:YS:32:LEU:O	38:YS:62:LYS:HE2	2.05	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.41	0.56
6:QF:97:PHE:CD2	6:QF:97:PHE:C	2.76	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
5:QE:93:PRO:HG3	8:QH:105:ARG:HG3	1.86	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.05	0.56
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.71	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
25:RA:1800:C:OP1	27:RD:264:LYS:NZ	2.28	0.56
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.39	0.56
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.56
29:RF:192:LEU:HD21	29:RF:194:MET:CE	2.34	0.56
29:RF:46:ARG:NH1	29:RF:46:ARG:HG2	2.00	0.56
13:QM:7:VAL:HG11	30:RG:115:ARG:HH12	1.68	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
25:RA:310:A:H5'	44:RY:17:SER:HB2	1.87	0.56
36:RQ:134:ARG:NE	45:RZ:122:ARG:NH2	2.52	0.56
45:RZ:18:LEU:N	45:RZ:18:LEU:HD12	2.12	0.56
1:XA:376:G:H2'	1:XA:377:G:H8	1.69	0.56
1:XA:498:A:O2'	1:XA:546:G:N2	2.38	0.56
1:XA:688:G:H2'	1:XA:689:C:C6	2.35	0.56
1:XA:95:G:H2'	1:XA:96:G:C8	2.39	0.56
4:XD:42:GLN:O	4:XD:42:GLN:HG2	2.05	0.56
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
14:XN:29:ARG:HH11	14:XN:29:ARG:HG3	1.70	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
46:Y0:74:ARG:C	46:Y0:76:GLY:H	2.08	0.56
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.69	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.04	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	0.56
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.40	0.56
25:YA:1171:G:O6	25:YA:1174:A:N6	2.38	0.56
25:YA:530:G:C5	25:YA:2022:U:H5''	2.39	0.56
25:YA:2820:A:O2'	25:YA:2821:A:OP1	2.22	0.56
27:YD:183:ARG:HD2	27:YD:270:ILE:HG12	1.88	0.56
28:YE:69:LYS:C	28:YE:71:GLY:H	2.08	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56
32:YI:74:ASN:N	32:YI:74:ASN:HD22	1.94	0.56
25:YA:1006:C:H5'	33:YN:28:THR:HG23	1.88	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	0.56
36:YQ:79:LEU:CG	36:YQ:79:LEU:O	2.52	0.56
40:YU:68:ALA:O	40:YU:71:GLN:HB2	2.05	0.56
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.71	0.56
4:QD:42:GLN:O	4:QD:42:GLN:HG2	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.21	0.56
50:R4:48:ARG:O	50:R4:50:VAL:N	2.38	0.56
50:R4:64:GLY:C	50:R4:66:SER:H	2.07	0.56
25:RA:1478:G:H2'	25:RA:1479:G:H8	1.70	0.56
25:RA:1428:C:N4	25:RA:1570:A:OP2	2.33	0.56
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.05	0.56
27:RD:236:GLY:O	27:RD:237:GLU:OE1	2.24	0.56
28:RE:174:ASP:CG	28:RE:175:VAL:N	2.58	0.56
28:RE:37:ARG:NE	28:RE:37:ARG:N	2.53	0.56
29:RF:198:ALA:CA	29:RF:201:VAL:HG12	2.35	0.56
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
41:RV:1:MET:HE2	41:RV:43:GLU:HG2	1.87	0.56
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.05	0.56
1:XA:316:G:OP2	1:XA:351:G:O2'	2.24	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.56
10:XJ:49:VAL:HG21	14:XN:41:ARG:HB2	1.87	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.38	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.05	0.56
25:YA:2637:U:H2'	25:YA:2638:G:O4'	2.05	0.56
27:YD:236:GLY:O	27:YD:237:GLU:OE1	2.23	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56
45:YZ:58:VAL:O	45:YZ:60:GLU:N	2.36	0.56
25:RA:2451:A:C2	55:Z6:76:PPU:HD2	2.40	0.56
1:QA:1259:C:O2'	1:QA:1283:G:N2	2.34	0.56
1:QA:814:A:O2'	1:QA:815:A:H3'	2.05	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.56
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.67	0.56
52:R6:14:THR:O	52:R6:49:HIS:HA	2.06	0.56
25:RA:2134:A:H62	25:RA:2157:G:H1'	1.69	0.56
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.04	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:183:LEU:N	28:RE:183:LEU:HD12	2.20	0.56
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
37:RR:84:ALA:HB3	37:RR:85:PRO:HD3	1.87	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
1:XA:1001:G:H2'	1:XA:1002:G:O4'	2.06	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.06	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.05	0.56
47:Y1:76:ARG:NH1	47:Y1:76:ARG:HG2	2.19	0.56
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
25:YA:1495:A:H1'	25:YA:1579:A:H5''	1.87	0.56
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.22	0.56
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.41	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.08	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.53	0.56
25:RA:135:G:H1	25:RA:144:C:H42	1.52	0.56
25:RA:1678:G:N2	25:RA:1989:G:H22	2.02	0.56
25:RA:2370:G:N3	52:R6:45:LYS:NZ	2.54	0.56
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.87	0.56
25:RA:898:C:H2'	25:RA:899:A:H5'	1.88	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56
32:RI:126:TYR:O	32:RI:140:LEU:HD23	2.05	0.56
36:RQ:79:LEU:O	36:RQ:79:LEU:CG	2.52	0.56
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	0.56
44:RY:97:ARG:HG2	44:RY:97:ARG:O	2.05	0.56
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.20	0.56
1:XA:1239:A:H62	1:XA:1299:A:N6	2.03	0.56
1:XA:191(D):U:H2'	1:XA:191(E):G:C8	2.40	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.21	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.08	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.53	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.86	0.56
25:YA:2636:U:OP1	28:YE:79:ARG:HA	2.06	0.56
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.56
33:YN:56:ASN:N	33:YN:125:GLY:O	2.35	0.56
35:YP:59:LEU:HD23	35:YP:59:LEU:O	2.06	0.56
38:YS:103:GLU:O	38:YS:106:ARG:CG	2.53	0.56
1:QA:368:U:OP1	32:YI:91:SER:OG	2.23	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.05	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
25:RA:1494:A:C2	25:RA:1495:A:C4	2.93	0.56
25:RA:1693:U:O4	25:RA:1976:U:O2'	2.14	0.56
25:RA:1952:A:OP1	34:RO:44:LYS:NZ	2.30	0.56
25:RA:276:A:OP1	25:RA:276:A:H4'	2.06	0.56
25:RA:984:A:H5''	25:RA:985:C:H5	1.69	0.56
30:RG:180:PHE:C	30:RG:182:LYS:H	2.09	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
34:RO:19:ILE:HD13	34:RO:19:ILE:O	2.06	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
38:RS:5:THR:OG1	38:RS:7:TYR:HB3	2.06	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.36	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
45:RZ:53:ILE:CG2	45:RZ:71:VAL:HG13	2.36	0.56
45:RZ:5:LEU:HB3	45:RZ:59:LEU:HD23	1.87	0.56
1:XA:156:G:H1	1:XA:165:C:H42	1.52	0.56
1:XA:735:C:H2'	1:XA:736:C:H6	1.71	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.70	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.06	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
13:XM:62:ASN:HA	50:Y4:49:PHE:CD2	2.40	0.56
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.87	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56
25:YA:1201:C:H2'	25:YA:1202:C:C6	2.41	0.56
25:YA:1533:C:H2'	25:YA:1534:G:N7	2.21	0.56
25:YA:1826:G:O2'	27:YD:242:ARG:NH2	2.38	0.56
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.70	0.56
25:YA:909:A:H2'	25:YA:912:C:H5	1.70	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.86	0.56
38:YS:14:VAL:HG13	38:YS:15:ARG:N	2.21	0.56
44:YY:95:LYS:O	44:YY:95:LYS:HE3	2.06	0.56
1:QA:429:U:H3	1:QA:431:A:H62	1.51	0.56
1:QA:560:U:H5'	1:QA:566:G:H22	1.71	0.56
4:QD:165:MET:HA	4:QD:165:MET:CE	2.36	0.56
4:QD:33:MET:HE2	4:QD:37:PRO:HA	1.87	0.56
9:QI:114:TYR:CD2	9:QI:114:TYR:O	2.58	0.56
14:QN:29:ARG:HG3	14:QN:29:ARG:HH11	1.70	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.61	0.56
25:RA:753:C:H2'	25:RA:754:C:H6	1.69	0.56
28:RE:117:MET:HG3	28:RE:117:MET:O	2.06	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
29:RF:9:ILE:HD11	29:RF:125:LEU:CG	2.36	0.56
26:RB:56:G:P	30:RG:27:ASN:HD21	2.28	0.56
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	0.56
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.36	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.40	0.56
1:XA:452:A:H62	1:XA:480:U:H3	1.54	0.56
1:XA:881:G:P	12:XL:12:ARG:HH22	2.28	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.19	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.70	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.56
25:YA:2391:G:O2'	25:YA:2422:A:N7	2.38	0.56
25:YA:752:A:H4'	25:YA:753:C:O5'	2.05	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	0.56
25:YA:1454:U:P	37:YR:77:ARG:NH1	2.79	0.56
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.36	0.56
45:YZ:123:ASP:OD2	45:YZ:123:ASP:N	2.39	0.56
45:YZ:53:ILE:CG2	45:YZ:71:VAL:HG13	2.36	0.56
1:QA:637:G:H2'	1:QA:638:G:H8	1.70	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.56
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.06	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.56
25:RA:2181:G:H2'	25:RA:2182:G:H8	1.70	0.56
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.40	0.56
25:RA:2702:U:H2'	25:RA:2702:U:O2	2.06	0.56
25:RA:582:G:H2'	25:RA:583:G:H8	1.71	0.56
27:RD:221:VAL:HG22	27:RD:226:MET:HE2	1.88	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.88	0.56
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
34:RO:107:ARG:O	34:RO:112:MET:HE3	2.05	0.56
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56
39:RT:105:LEU:C	39:RT:107:ASP:H	2.07	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.70	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.04	0.56
1:XA:966:G:O2'	9:XI:127:LYS:O	2.22	0.56
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.56
25:YA:177:G:H3'	25:YA:178:G:H8	1.71	0.56
32:YI:64:GLU:HG3	32:YI:67:ARG:NH2	2.21	0.56
1:XA:346:G:H5''	39:YT:41:ARG:HD2	1.88	0.56
45:YZ:5:LEU:HD13	45:YZ:5:LEU:C	2.26	0.56
57:QA:1661:PAR:O43	57:QA:1661:PAR:N21	2.39	0.56
1:QA:500:G:H2'	1:QA:501:C:H6	1.71	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.56
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.87	0.56
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.04	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
46:R0:74:ARG:C	46:R0:76:GLY:H	2.08	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.71	0.56
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
25:RA:1077:A:H5'	25:RA:1078:U:H5''	1.88	0.56
25:RA:270:A:OP2	25:RA:270(Y):G:N2	2.39	0.56
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.56
30:RG:120:LEU:HB3	30:RG:131:TYR:OH	2.05	0.56
30:RG:83:ARG:HG3	30:RG:86:MET:HE1	1.88	0.56
34:RO:3:GLN:CB	34:RO:4:PRO:HD2	2.35	0.56
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.56
45:RZ:33:LEU:HD12	45:RZ:34:ASN:H	1.70	0.56
1:XA:686:U:O4	1:XA:703:G:H1'	2.06	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.56
50:Y4:41:PRO:O	50:Y4:42:PHE:CB	2.54	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
25:YA:2262:U:H4'	25:YA:2328:A:C2	2.41	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
32:YI:144:VAL:O	32:YI:145:VAL:HG22	2.06	0.56
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.56
44:YY:84:ARG:NH1	44:YY:97:ARG:HB2	2.11	0.56
45:YZ:107:THR:CB	45:YZ:144:LEU:HB2	2.32	0.56
45:YZ:44:PHE:CE2	45:YZ:86:VAL:HG11	2.41	0.56
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.86	0.56
1:QA:939:G:H5''	7:QG:102:ARG:HH12	1.71	0.56
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.56
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.71	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
25:RA:1755:A:N6	25:RA:2694:G:O2'	2.39	0.56
25:RA:2776:A:OP1	25:RA:2776:A:H3'	2.05	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.70	0.56
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.71	0.56
35:RP:15:ARG:O	35:RP:17:LYS:N	2.39	0.56
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.56
38:RS:14:VAL:HG13	38:RS:15:ARG:N	2.21	0.56
45:RZ:16:SER:O	45:RZ:20:ARG:HB2	2.06	0.56
45:RZ:93:ASP:O	45:RZ:94:GLU:CD	2.44	0.56
1:XA:486:U:H2'	1:XA:487:A:C8	2.38	0.56
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.71	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.56
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.56
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.89	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
13:XM:119:GLY:HA3	22:XV:29:G:OP1	2.06	0.56
48:Y2:15:LYS:H	48:Y2:67:LYS:NZ	2.02	0.56
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.47	0.56
25:YA:1525:G:H2'	25:YA:1526:G:C8	2.40	0.56
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	2.05	0.56
25:YA:242:G:N2	25:YA:255:A:OP2	2.30	0.56
25:YA:2582:G:N2	25:YA:2583:G:H1'	2.20	0.56
40:YU:96:ALA:O	40:YU:100:VAL:HG23	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:YU:105:VAL:HA	41:YV:44:LYS:HE3	1.88	0.56
42:YW:1:MET:C	42:YW:64:MET:HE1	2.26	0.56
45:YZ:27:VAL:HG12	45:YZ:87:ASP:HB3	1.87	0.56
1:QA:184:G:H2'	1:QA:185:A:C8	2.40	0.55
1:QA:560:U:H5'	1:QA:566:G:N2	2.21	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.53	0.55
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.55
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.55
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.74	0.55
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.55
46:R0:11:ARG:HG3	46:R0:11:ARG:HH11	1.70	0.55
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.55
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.41	0.55
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.86	0.55
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
40:RU:83:LEU:HD12	40:RU:113:ALA:HB2	1.86	0.55
42:RW:14:PRO:HG2	42:RW:78:GLU:OE2	2.07	0.55
45:RZ:37:VAL:O	45:RZ:38:TYR:HB3	2.06	0.55
1:XA:1336:C:H1'	1:XA:1337:G:C2	2.41	0.55
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.42	0.55
1:XA:417:C:H2'	1:XA:418:C:H6	1.70	0.55
1:XA:690:G:H2'	1:XA:691:G:O4'	2.06	0.55
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.55
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.55
4:XD:13:ARG:NH2	4:XD:36:ARG:NH2	2.53	0.55
1:XA:430:A:H4'	4:XD:7:PRO:HG3	1.88	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
12:XL:83:VAL:HG22	12:XL:84:LEU:N	2.21	0.55
1:XA:947:G:O3'	13:XM:109:THR:OG1	2.22	0.55
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.55
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.55
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.55
25:YA:1061:U:H3'	25:YA:1062:G:H5''	1.87	0.55
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.55
28:YE:174:ASP:CG	28:YE:175:VAL:N	2.58	0.55
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.55
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.55
35:YP:15:ARG:O	35:YP:17:LYS:N	2.39	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.98	0.55
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	0.55
42:YW:20:VAL:C	42:YW:22:ASP:N	2.59	0.55
45:YZ:120:ILE:HD11	45:YZ:169:GLU:HG3	1.85	0.55
45:YZ:93:ASP:O	45:YZ:94:GLU:CD	2.44	0.55
1:QA:321:A:H62	1:QA:328:C:H1'	1.70	0.55
1:QA:581:G:N2	1:QA:760:G:N7	2.54	0.55
1:QA:980:C:H5'	1:QA:981:U:OP2	2.06	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.54	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
20:QT:74:LYS:C	20:QT:76:ALA:H	2.10	0.55
23:QX:5:C:O2'	23:QX:6:C:H5'	2.06	0.55
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.40	0.55
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.22	0.55
25:RA:1508:A:O2'	25:RA:1509:C:O4'	2.24	0.55
25:RA:1543:A:N3	25:RA:1545:A:O4'	2.40	0.55
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.71	0.55
25:RA:407:G:H2'	25:RA:408:G:C8	2.41	0.55
25:RA:566:U:OP1	35:RP:29:LYS:HE2	2.06	0.55
27:RD:31:LYS:O	27:RD:35:LYS:O	2.24	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.87	0.55
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.20	0.55
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.55
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.55
44:RY:21:LYS:HG3	44:RY:22:GLY:H	1.69	0.55
1:XA:1095:U:P	1:XA:1108:G:H1	2.29	0.55
1:XA:1262:C:H42	1:XA:1273:G:H1	1.55	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.88	0.55
12:XL:79:GLU:HG2	12:XL:79:GLU:O	2.06	0.55
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
25:YA:1407:C:H42	25:YA:1595:G:H1	1.55	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2404:C:H1'	35:YP:67:MET:HE2	1.87	0.55
25:YA:609(A):G:H2'	25:YA:610:C:H6	1.71	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.48	0.55
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.35	0.55
33:YN:101:HIS:C	33:YN:101:HIS:CD2	2.79	0.55
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.55
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.22	0.55
36:YQ:79:LEU:O	36:YQ:80:GLU:CD	2.44	0.55
40:YU:73:GLY:O	40:YU:74:LEU:HB3	2.07	0.55
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
45:YZ:38:TYR:CG	45:YZ:38:TYR:O	2.59	0.55
45:YZ:76:LEU:HD23	45:YZ:76:LEU:N	2.20	0.55
1:QA:1252:A:H2'	1:QA:1253:G:O4'	2.07	0.55
1:QA:458:C:H2'	1:QA:464:G:C8	2.41	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
11:QK:125:PHE:H	11:QK:125:PHE:HD1	1.54	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.07	0.55
48:R2:41:ILE:HD11	48:R2:44:LEU:CG	2.36	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55
25:RA:1277:G:O2'	37:RR:24:GLN:OE1	2.24	0.55
25:RA:1693:U:H1'	27:RD:14:ARG:NH2	2.21	0.55
25:RA:2009:G:H1'	37:RR:107:ASP:O	2.06	0.55
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.87	0.55
25:RA:512:G:HO2'	25:RA:513:A:P	2.29	0.55
26:RB:21:G:H1	26:RB:62:C:H42	1.55	0.55
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	2.06	0.55
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
36:RQ:79:LEU:O	36:RQ:80:GLU:CD	2.44	0.55
45:RZ:38:TYR:O	45:RZ:38:TYR:CG	2.59	0.55
1:XA:1129:C:N4	1:XA:1133:G:O6	2.39	0.55
1:XA:692:U:H5	11:XK:26:ASN:OD1	1.90	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.87	0.55
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.26	0.55
14:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.36	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.41	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.07	0.55
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.55
25:YA:1092:C:O2'	31:YH:170:ARG:NE	2.40	0.55
25:YA:508:G:HO2'	25:YA:509:C:P	2.29	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:YG:180:PHE:C	30:YG:182:LYS:H	2.09	0.55
35:YP:31:ALA:O	35:YP:32:THR:HG23	2.05	0.55
35:YP:39:LYS:N	35:YP:45:LEU:HD11	2.21	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.87	0.55
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.12	0.55
39:YT:107:ASP:O	39:YT:111:ARG:NH1	2.39	0.55
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55
44:YY:48:ALA:H	44:YY:60:PHE:HA	1.72	0.55
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
45:YZ:33:LEU:HD12	45:YZ:34:ASN:H	1.70	0.55
45:YZ:30:ASN:HB3	45:YZ:89:PHE:CE2	2.40	0.55
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.41	0.55
1:QA:6:G:O2'	1:QA:7:G:H5''	2.07	0.55
2:QB:169:LYS:O	2:QB:169:LYS:HD3	2.05	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.06	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.89	0.55
16:QP:59:TRP:CE3	16:QP:59:TRP:HA	2.42	0.55
25:RA:1929:G:H8	25:RA:1929:G:O5'	1.90	0.55
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.36	0.55
25:RA:2531:A:H3'	25:RA:2532:G:H8	1.72	0.55
25:RA:298:G:H8	25:RA:298:G:O5'	1.89	0.55
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.40	0.55
27:RD:69:ARG:HD3	27:RD:105:ILE:HD11	1.87	0.55
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.55
35:RP:115:LEU:HD12	35:RP:116:GLY:N	2.21	0.55
41:RV:52:VAL:O	41:RV:54:GLY:N	2.39	0.55
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.88	0.55
45:RZ:22:GLY:C	45:RZ:23:LYS:HD3	2.27	0.55
1:XA:1200:C:H4'	1:XA:1201:A:H5'	1.88	0.55
1:XA:908:A:H2'	1:XA:909:A:C8	2.42	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.73	0.55
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.55
20:XT:47:GLY:C	20:XT:49:ALA:H	2.07	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.05	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
47:Y1:91:LYS:CG	47:Y1:92:LYS:H	2.15	0.55
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.37	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.70	0.55
25:YA:1430:C:H2'	25:YA:1431:U:H6	1.71	0.55
25:YA:363(F):A:H4'	25:YA:364:C:H5'	1.89	0.55
25:YA:612:G:H2'	25:YA:613:U:O2	2.06	0.55
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	0.55
29:YF:24:LEU:HB3	29:YF:115:ALA:HB2	1.87	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
26:YB:103:U:O3'	45:YZ:72:ARG:HD3	2.06	0.55
1:QA:690:G:H2'	1:QA:691:G:O4'	2.07	0.55
3:QC:188:LEU:HD22	3:QC:188:LEU:N	2.21	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
15:QO:65:ARG:NH1	15:QO:65:ARG:HB2	2.20	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.71	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.53	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
25:RA:1266:G:OP2	51:R5:20:ARG:NH2	2.39	0.55
25:RA:1332:G:H21	25:RA:1610:A:H8	1.49	0.55
25:RA:1792:G:H2'	25:RA:1793:C:C6	2.42	0.55
25:RA:2439:A:H5'	25:RA:2439:A:C8	2.41	0.55
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.32	0.55
28:RE:26:ILE:C	28:RE:26:ILE:HD13	2.26	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	0.55
37:RR:12:ARG:HH11	37:RR:12:ARG:HG3	1.71	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
42:RW:1:MET:C	42:RW:64:MET:HE1	2.27	0.55
44:RY:95:LYS:NZ	44:RY:95:LYS:HB2	2.21	0.55
1:XA:1139:G:N2	1:XA:1143:G:O6	2.40	0.55
1:XA:950:U:H2'	1:XA:951:G:C8	2.41	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.17	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.22	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.06	0.55
15:XO:24:SER:O	15:XO:28:GLN:HG3	2.06	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.41	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.07	0.55
25:YA:2152:G:H2'	25:YA:2153:G:C8	2.41	0.55
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.06	0.55
25:YA:2841:C:H2'	25:YA:2842:G:H8	1.70	0.55
25:YA:2318:G:N2	38:YS:2:ALA:HA	2.22	0.55
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.06	0.55
1:QA:498:A:H4'	1:QA:500:G:OP1	2.06	0.55
1:QA:898:G:N2	1:QA:901:A:OP2	2.39	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.21	0.55
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.06	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.06	0.55
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.55
52:R6:27:LYS:HZ2	52:R6:27:LYS:HB2	1.69	0.55
25:RA:1128:A:O2'	25:RA:1129:A:OP2	2.21	0.55
25:RA:1448:G:H2'	25:RA:1449:A:C8	2.42	0.55
25:RA:1657:C:H2'	25:RA:1658:C:C6	2.41	0.55
25:RA:1914:C:H2'	25:RA:1915:U:O4'	2.06	0.55
25:RA:2114:A:N6	25:RA:2119:A:N7	2.54	0.55
25:RA:2322:A:H2'	25:RA:2323:G:O4'	2.06	0.55
25:RA:2633:G:H2'	25:RA:2634:G:O4'	2.07	0.55
26:RB:55:U:H4'	30:RG:29:TRP:HE1	1.71	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.05	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	0.55
33:RN:109:LYS:HD2	33:RN:109:LYS:N	2.22	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
35:RP:88:LEU:C	35:RP:90:ARG:N	2.60	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
44:RY:48:ALA:H	44:RY:60:PHE:HA	1.71	0.55
45:RZ:44:PHE:CE2	45:RZ:86:VAL:HG11	2.41	0.55
1:XA:1346:A:N1	1:XA:1374:A:H5''	2.22	0.55
1:XA:236:G:OP1	17:XQ:40:LYS:NZ	2.32	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.06	0.55
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.06	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:XJ:16:LEU:O	10:XJ:16:LEU:HD13	2.07	0.55
14:YN:41:ARG:HG2	14:YN:41:ARG:HH11	1.71	0.55
15:XO:65:ARG:NH1	15:XO:65:ARG:HB2	2.19	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.21	0.55
25:YA:1728:G:H3'	25:YA:1729:A:H5''	1.89	0.55
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.07	0.55
25:YA:568:U:N3	25:YA:571:A:OP2	2.24	0.55
25:YA:593:G:H2'	25:YA:594:U:C6	2.41	0.55
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.88	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.69	0.55
28:YE:3:GLY:HA3	28:YE:81:ILE:HD12	1.88	0.55
33:YN:131:GLN:CG	33:YN:132:ALA:N	2.68	0.55
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.70	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.19	0.55
44:YY:61:ILE:HG23	44:YY:62:GLU:H	1.71	0.55
45:YZ:16:SER:O	45:YZ:20:ARG:HB2	2.06	0.55
45:YZ:37:VAL:O	45:YZ:38:TYR:HB3	2.07	0.55
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HD23	1.88	0.55
45:YZ:94:GLU:CB	45:YZ:95:PRO:HA	2.37	0.55
1:QA:126:G:H1	1:QA:235:C:H42	1.54	0.55
4:QD:25:ARG:NH1	4:QD:30:LYS:HG3	2.20	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.06	0.55
10:QJ:16:LEU:O	10:QJ:16:LEU:HD13	2.07	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
25:RA:1384:A:N3	25:RA:1405:U:H1'	2.22	0.55
25:RA:2502:G:H5''	25:RA:2503:A:H5''	1.89	0.55
25:RA:2712:U:OP1	25:RA:2714:G:H4'	2.07	0.55
25:RA:814:C:H41	35:RP:25:SER:HA	1.70	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	0.55
45:RZ:136:PHE:HD1	45:RZ:137:ILE:N	2.05	0.55
45:RZ:5:LEU:HD13	45:RZ:5:LEU:C	2.26	0.55
1:XA:436:C:H2'	1:XA:437:U:O4'	2.06	0.55
1:XA:715:A:H1'	1:XA:777:A:N1	2.20	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.22	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:XH:23:SER:HB2	8:XH:61:VAL:O	2.07	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.07	0.55
1:XA:110:C:O2'	16:XP:25:ARG:O	2.24	0.55
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
52:Y6:42:TRP:CD1	52:Y6:42:TRP:N	2.74	0.55
25:YA:1020:A:N6	25:YA:1141:U:O2'	2.40	0.55
25:YA:743:G:O2'	25:YA:1659:U:OP1	2.24	0.55
25:YA:581:C:H2'	25:YA:582:G:H8	1.71	0.55
25:YA:664:C:OP1	35:YP:18:ARG:NH2	2.28	0.55
25:YA:852:G:H1	25:YA:925:C:N4	2.03	0.55
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.06	0.55
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.37	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
28:YE:67:PHE:O	28:YE:69:LYS:N	2.39	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55
35:YP:49:ARG:NE	54:Y8:59:LYS:HG2	2.22	0.55
39:YT:29:ARG:HB2	39:YT:29:ARG:HH11	1.72	0.55
40:YU:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	0.55
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
1:QA:192:U:H2'	1:QA:193:C:C6	2.42	0.55
1:QA:444:C:H2'	1:QA:445:G:H8	1.72	0.55
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.40	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.55
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.55
54:R8:63:PRO:O	54:R8:64:TYR:HB2	2.07	0.55
25:RA:1272:A:OP2	25:RA:1647:G:OP1	2.25	0.55
25:RA:2360:A:H2'	25:RA:2361:A:O4'	2.07	0.55
25:RA:2656:U:OP2	25:RA:2664:G:N1	2.28	0.55
25:RA:2783:G:H2'	25:RA:2784:C:C6	2.41	0.55
25:RA:414:C:O2	25:RA:1864:U:O2'	2.25	0.55
25:RA:571:A:N6	25:RA:2499:C:O3'	2.40	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.55
38:RS:13:ARG:HD2	38:RS:13:ARG:O	2.06	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:RU:104:GLN:N	40:RU:104:GLN:OE1	2.35	0.55
45:RZ:70:LEU:HD11	45:RZ:98:MET:HE1	1.89	0.55
1:XA:343:U:O2'	1:XA:346:G:O6	2.25	0.55
1:XA:640:A:H1'	8:XH:115:SER:HB3	1.89	0.55
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.55
6:XF:52:ILE:O	6:XF:53:ALA:HB3	2.07	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:HZ2	1.72	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.07	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
18:XR:58:LEU:H	18:XR:58:LEU:HD12	1.72	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.89	0.55
25:YA:1062:G:H2'	25:YA:1063:G:H8	1.70	0.55
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.41	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
32:YI:2:LYS:HA	32:YI:20:ASP:CB	2.35	0.55
33:YN:44:PRO:HG2	33:YN:45:ASN:H	1.71	0.55
34:YO:19:ILE:HD13	34:YO:19:ILE:O	2.06	0.55
35:YP:88:LEU:C	35:YP:90:ARG:N	2.60	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.06	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	0.55
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
1:QA:1081:G:OP1	5:QE:16:THR:OG1	2.25	0.55
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.40	0.55
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
25:RA:1203:G:H3'	25:RA:1204:A:H5''	1.87	0.55
25:RA:1494:A:H3'	25:RA:1495:A:H8	1.72	0.55
25:RA:1897:G:H2'	25:RA:1898:U:C6	2.42	0.55
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.40	0.55
25:RA:2245:U:H5'	25:RA:2246:G:H5'	1.88	0.55
25:RA:2795:G:H3'	25:RA:2797:U:H5'	1.89	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
30:RG:3:LEU:HD12	30:RG:4:ASP:N	2.19	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RN:101:HIS:C	33:RN:101:HIS:CD2	2.79	0.55
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
36:RQ:25:ASP:N	36:RQ:102:VAL:HG23	2.22	0.55
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.55
45:RZ:76:LEU:N	45:RZ:76:LEU:HD23	2.20	0.55
45:RZ:27:VAL:HG12	45:RZ:87:ASP:HB3	1.87	0.55
1:XA:413:G:H2'	1:XA:428:G:H22	1.71	0.55
1:XA:946:A:H2'	1:XA:947:G:C8	2.41	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
9:XI:114:TYR:CD2	9:XI:114:TYR:O	2.58	0.55
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	0.55
50:Y4:9:LEU:H	50:Y4:27:THR:HG22	1.71	0.55
50:Y4:48:ARG:HH12	50:Y4:52:THR:HG22	1.71	0.55
50:Y4:51:ASP:O	50:Y4:51:ASP:OD1	2.25	0.55
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.54	0.55
25:YA:1114:G:H2'	25:YA:1115:G:H8	1.71	0.55
25:YA:1252:G:H1'	40:YU:33:ARG:CD	2.37	0.55
25:YA:2212:A:N3	25:YA:2215:G:N1	2.54	0.55
25:YA:2283:C:P	52:Y6:5:VAL:HG13	2.47	0.55
25:YA:2689:U:OP2	25:YA:2872:G:N2	2.31	0.55
25:YA:2815:C:H5'	51:Y5:29:THR:HG21	1.88	0.55
25:YA:1798:U:H5''	27:YD:259:THR:HG22	1.89	0.55
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.27	0.55
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	0.55
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55
38:YS:107:GLU:N	38:YS:110:LEU:HD11	2.22	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.07	0.55
1:QA:1179:A:O3'	9:QI:103:THR:HG23	2.06	0.55
1:QA:377:G:H1	1:QA:386:C:N4	2.05	0.55
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.07	0.55
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.25	0.55
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
25:RA:857:C:H1'	46:R0:26:TYR:CE2	2.42	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	0.55
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.71	0.55
53:R7:48:LYS:HG2	53:R7:49:ARG:N	2.19	0.55
25:RA:1198:U:H2'	25:RA:1199:U:C6	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2638:G:OP2	28:RE:82:ARG:NH2	2.40	0.55
25:RA:2688:U:H1'	25:RA:2721:A:H61	1.71	0.55
25:RA:311:A:HO2'	25:RA:331:A:HO2'	1.54	0.55
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.70	0.55
25:RA:922:U:H2'	25:RA:923:C:C6	2.41	0.55
25:RA:956:G:N2	25:RA:960:A:OP2	2.36	0.55
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.55
30:RG:135:LEU:N	30:RG:135:LEU:HD12	2.21	0.55
25:RA:2642:G:H5''	33:RN:78:TYR:CD2	2.42	0.55
34:RO:1:MET:HE2	34:RO:67:LYS:HG2	1.89	0.55
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.06	0.55
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.55
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	0.55
1:XA:753:A:H4'	1:XA:754:C:O5'	2.06	0.55
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.22	0.55
4:QD:27:TYR:HE2	6:XF:15:ASP:HB3	1.72	0.55
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.55
12:XL:10:LEU:HD13	17:XQ:32:TYR:CD2	2.42	0.55
1:XA:719:C:O2'	18:XR:50:ILE:O	2.21	0.55
19:XS:68:GLY:N	50:Y4:59:PHE:CZ	2.74	0.55
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
25:YA:1102:C:H2'	25:YA:1103:A:H5''	1.88	0.55
25:YA:2468:G:H5''	36:YQ:120:ILE:HD12	1.89	0.55
25:YA:2845:G:H2'	25:YA:2846:G:C8	2.41	0.55
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.55
13:XM:11:ARG:NH2	30:YG:146:TYR:CD2	2.71	0.55
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	1.87	0.55
30:YG:83:ARG:HG3	30:YG:86:MET:HE1	1.89	0.55
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.55
25:YA:2839:G:H5'	37:YR:46:GLY:CA	2.37	0.55
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.55
45:YZ:22:GLY:C	45:YZ:23:LYS:HD3	2.27	0.55
1:QA:1207:G:H2'	1:QA:1208:C:C6	2.42	0.54
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.35	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.21	0.54
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.54
7:QG:50:ILE:O	7:QG:50:ILE:HG22	2.07	0.54
9:QI:66:ARG:NH1	9:QI:66:ARG:HG2	2.22	0.54
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.54
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.89	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
47:R1:91:LYS:CE	47:R1:91:LYS:HA	2.37	0.54
25:RA:141:A:N6	25:RA:1595:G:O2'	2.37	0.54
25:RA:1651:G:N7	37:RR:11:ASN:ND2	2.54	0.54
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.22	0.54
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.22	0.54
25:RA:310:A:O2'	25:RA:311:A:O5'	2.25	0.54
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.33	0.54
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.06	0.54
29:RF:62:ARG:NH1	29:RF:62:ARG:HB3	2.22	0.54
32:RI:110:ASP:CB	32:RI:111:PRO:C	2.75	0.54
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54
35:RP:59:LEU:HD23	35:RP:59:LEU:O	2.06	0.54
25:RA:2415:G:H4'	35:RP:67:MET:N	2.23	0.54
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.39	0.54
41:RV:99:ILE:CD1	41:RV:99:ILE:N	2.65	0.54
42:RW:70:TYR:CD2	42:RW:70:TYR:N	2.75	0.54
44:RY:95:LYS:N	44:RY:95:LYS:HD3	2.22	0.54
1:XA:44:G:C2	1:XA:45:U:H1'	2.41	0.54
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.54
4:XD:19:LEU:HD23	4:XD:19:LEU:N	2.23	0.54
4:XD:94:LEU:CD1	4:XD:94:LEU:H	2.08	0.54
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.54
13:XM:121:LYS:N	13:XM:121:LYS:HE2	2.22	0.54
13:XM:7:VAL:HB	30:YG:115:ARG:HH12	1.71	0.54
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.41	0.54
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.60	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
46:Y0:56:ASP:O	46:Y0:57:PHE:HB2	2.06	0.54
25:YA:2207:C:O2	27:YD:151:LYS:NZ	2.25	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
29:YF:28:ILE:O	29:YF:28:ILE:HD12	2.06	0.54
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.54
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.64	0.54
40:YU:58:ARG:NH1	40:YU:93:LYS:HE2	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:YU:95:LEU:HD12	41:YV:11:GLN:HE21	1.72	0.54
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.89	0.54
44:YY:95:LYS:HA	44:YY:101:LYS:H	1.72	0.54
1:QA:179:A:H2'	1:QA:180:U:C6	2.41	0.54
1:QA:555:C:H2'	1:QA:556:C:C6	2.42	0.54
1:QA:818:G:O2'	1:QA:819:A:H5''	2.07	0.54
3:QC:107:GLN:N	3:QC:107:GLN:CD	2.60	0.54
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.54
53:R7:18:PHE:CD2	53:R7:18:PHE:C	2.81	0.54
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.42	0.54
25:RA:139:G:N2	25:RA:1596:A:H4'	2.22	0.54
25:RA:2450:A:OP1	25:RA:2497:A:O2'	2.17	0.54
26:RB:42:C:N1	30:RG:69:ALA:HB2	2.22	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.06	0.54
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
45:RZ:107:THR:CB	45:RZ:144:LEU:HB2	2.32	0.54
1:XA:1246:C:H42	1:XA:1291:G:H1	1.55	0.54
1:XA:1297:C:O2'	7:XG:114:ARG:NH2	2.40	0.54
1:XA:237:C:H2'	1:XA:238:G:H8	1.71	0.54
1:XA:442:C:H5'	1:XA:443:C:OP2	2.08	0.54
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.07	0.54
4:XD:11:LEU:O	4:XD:12:CYS:C	2.45	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
14:XN:15:LYS:O	14:XN:16:PHE:O	2.24	0.54
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.54
9:XI:128:ARG:HH21	22:XV:35:A:P	2.29	0.54
22:XV:68:C:H2'	22:XV:69:C:C6	2.42	0.54
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.54
25:YA:330:A:C2	25:YA:1210:A:H2'	2.42	0.54
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.56	0.54
32:YI:70:GLU:HA	32:YI:70:GLU:OE1	2.05	0.54
38:YS:13:ARG:HD2	38:YS:13:ARG:O	2.06	0.54
38:YS:36:TYR:HD2	38:YS:52:SER:CB	2.19	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54
44:YY:2:ARG:NH1	44:YY:2:ARG:HG2	2.22	0.54
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	0.54
1:QA:234:C:H2'	1:QA:235:C:C6	2.42	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
10:QJ:101:VAL:O	10:QJ:101:VAL:HG22	2.07	0.54
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.72	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.26	0.54
36:RQ:83:MET:HB2	46:R0:7:LEU:HB3	1.89	0.54
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.54	0.54
49:R3:8:LEU:HD22	49:R3:31:LEU:CD2	2.37	0.54
25:RA:1403:C:H5''	25:RA:1471:A:C1'	2.37	0.54
25:RA:919:G:N2	25:RA:2269:A:OP2	2.40	0.54
25:RA:2357:U:OP1	46:R0:20:ARG:NE	2.31	0.54
25:RA:2887:U:H2'	25:RA:2888:C:H6	1.71	0.54
25:RA:67:U:H2'	25:RA:68:G:C8	2.42	0.54
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.08	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.89	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	0.54
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
42:RW:80:PRO:O	42:RW:100:THR:CG2	2.55	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.56	0.54
45:RZ:94:GLU:CB	45:RZ:95:PRO:HA	2.37	0.54
1:XA:662:G:H2'	1:XA:663:A:C8	2.42	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.89	0.54
19:XS:15:LEU:H	19:XS:15:LEU:CD2	2.21	0.54
46:Y0:49:LYS:O	46:Y0:50:ASN:HB2	2.07	0.54
47:Y1:92:LYS:O	47:Y1:94:LEU:N	2.41	0.54
51:Y5:55:ARG:HD3	51:Y5:56:LYS:H	1.73	0.54
25:YA:1402:C:H2'	25:YA:1403:C:H5'	1.89	0.54
25:YA:38:A:N6	25:YA:440:G:O6	2.40	0.54
25:YA:823:G:H2'	25:YA:824:A:C8	2.43	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:176:ILE:HG22	28:YE:179:GLU:H	1.72	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
39:YT:6:LEU:O	39:YT:7:ILE:C	2.45	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.23	0.54
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.71	0.54
2:QB:41:ILE:N	2:QB:41:ILE:HD12	2.22	0.54
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.90	0.54
4:QD:11:LEU:O	4:QD:12:CYS:C	2.46	0.54
4:QD:12:CYS:CB	4:QD:31:CYS:O	2.56	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
11:QK:125:PHE:N	11:QK:125:PHE:HD1	2.05	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.43	0.54
25:RA:946:G:H2'	25:RA:947:G:C8	2.42	0.54
26:RB:11:C:H3'	26:RB:12:C:H6	1.72	0.54
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.51	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
44:RY:47:LYS:O	44:RY:49:VAL:HG23	2.07	0.54
45:RZ:139:VAL:HA	45:RZ:156:LYS:HE2	1.90	0.54
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.41	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.22	0.54
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.54
47:Y1:53:VAL:HG12	47:Y1:54:ALA:N	2.21	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54
25:YA:1212:G:O2'	25:YA:1236:G:N2	2.38	0.54
25:YA:508:G:O2'	25:YA:509:C:P	2.65	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.25	0.54
44:YY:95:LYS:NZ	44:YY:95:LYS:HB2	2.21	0.54
45:YZ:124:ILE:O	45:YZ:126:VAL:HG13	2.07	0.54
45:YZ:5:LEU:O	45:YZ:6:LYS:CB	2.56	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1446:A:C5	39:RT:118:ARG:NH1	2.76	0.54
1:QA:546:G:P	4:QD:72:GLU:HB3	2.47	0.54
2:QB:142:LEU:HD23	2:QB:142:LEU:C	2.27	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
4:QD:166:LYS:CD	27:YD:134:ARG:HH11	2.18	0.54
4:QD:19:LEU:HD23	4:QD:19:LEU:N	2.23	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
6:QF:92:LYS:NZ	6:QF:92:LYS:HB2	2.22	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
1:QA:707:C:H5"	11:QK:85:ARG:NH1	2.22	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
13:QM:121:LYS:N	13:QM:121:LYS:HE2	2.23	0.54
13:QM:50:GLU:HB3	50:R4:32:TYR:OH	2.07	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
16:QP:4:ILE:N	16:QP:4:ILE:HD12	2.23	0.54
1:QA:192:U:H4'	20:QT:103:GLY:HA2	1.90	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
50:R4:37:SER:HB3	50:R4:42:PHE:CD1	2.43	0.54
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
25:RA:1245:G:OP1	35:RP:13:ASN:ND2	2.33	0.54
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.42	0.54
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.73	0.54
25:RA:729:G:H2'	25:RA:1775:U:H1'	1.88	0.54
25:RA:1991:U:H2'	25:RA:1992:G:H5"	1.90	0.54
25:RA:2197:U:H1'	25:RA:2198:A:N7	2.23	0.54
25:RA:2506:U:OP2	25:RA:2576:G:N1	2.26	0.54
25:RA:2525:G:H1	25:RA:2538:C:H42	1.55	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
32:RI:2:LYS:HA	32:RI:20:ASP:CB	2.36	0.54
32:RI:94:ALA:HB1	32:RI:111:PRO:HB2	1.89	0.54
39:RT:29:ARG:HB2	39:RT:29:ARG:HH11	1.72	0.54
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54
45:RZ:124:ILE:O	45:RZ:126:VAL:HG13	2.07	0.54
45:RZ:5:LEU:O	45:RZ:6:LYS:CB	2.56	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.06	0.54
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.90	0.54
51:Y5:44:THR:O	51:Y5:46:CYS:N	2.41	0.54
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.54
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54
25:YA:184:C:H2'	25:YA:185:U:C6	2.43	0.54
25:YA:264:C:C2'	25:YA:265:A:H5''	2.38	0.54
25:YA:2723:C:OP1	25:YA:2820:A:H8	1.91	0.54
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.23	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
45:YZ:136:PHE:HD1	45:YZ:137:ILE:N	2.05	0.54
45:YZ:139:VAL:HA	45:YZ:156:LYS:HE2	1.89	0.54
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.72	0.54
1:QA:316:G:OP2	1:QA:351:G:O2'	2.25	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	1.72	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.19	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.07	0.54
25:RA:298:G:P	44:RY:85:VAL:HG22	2.47	0.54
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.08	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54
1:XA:1223:C:OP1	1:XA:1224:G:H3'	2.07	0.54
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.73	0.54
1:XA:167:G:H2'	1:XA:168:G:H8	1.73	0.54
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.90	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:178:ARG:NH2	8:XH:74:PRO:CG	2.70	0.54
10:XJ:61:GLU:HG3	14:XN:58:LYS:HE2	1.90	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	0.54
52:Y6:17:LYS:O	52:Y6:18:ARG:HB2	2.08	0.54
25:YA:155:C:H5'	25:YA:161:U:OP2	2.08	0.54
25:YA:2630:G:H2'	25:YA:2631:G:H8	1.72	0.54
25:YA:353:G:H2'	25:YA:354:G:C8	2.42	0.54
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.43	0.54
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.22	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54
30:YG:3:LEU:HD12	30:YG:4:ASP:N	2.19	0.54
25:YA:2306:C:N4	30:YG:42:GLY:O	2.35	0.54
30:YG:7:LEU:HD12	30:YG:104:GLU:HA	1.88	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
44:YY:47:LYS:O	44:YY:49:VAL:HG23	2.08	0.54
45:YZ:7:ALA:O	45:YZ:8:TYR:CD2	2.61	0.54
1:QA:1012:U:H2'	1:QA:1013:G:C8	2.43	0.54
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.43	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	2.90	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.88	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.06	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
46:R0:56:ASP:O	46:R0:57:PHE:HB2	2.06	0.54
47:R1:83:GLU:OE1	47:R1:85:LEU:HD23	2.07	0.54
48:R2:43:GLN:O	48:R2:44:LEU:CG	2.54	0.54
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.72	0.54
25:RA:1352:U:O2'	25:RA:1570:A:N3	2.35	0.54
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.42	0.54
25:RA:2641:G:OP2	33:RN:74:ARG:NH2	2.34	0.54
25:RA:481:G:O2'	25:RA:507:A:N1	2.37	0.54
25:RA:583:G:H5''	40:RU:10:ARG:NH1	2.21	0.54
25:RA:987:G:C2	25:RA:988:A:H1'	2.42	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.63	0.54
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
1:XA:1267:C:O2	21:XU:20:LYS:HD2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1439:C:H42	1:XA:1462:G:H1	1.56	0.54
1:XA:192:U:H4'	20:XT:102:GLY:O	2.07	0.54
1:XA:372:C:N4	1:XA:389:A:H62	2.05	0.54
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.15	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.37	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
25:YA:1043:C:H42	25:YA:1112:G:H1	1.55	0.54
25:YA:1600:C:H4'	53:Y7:49:ARG:HE	1.71	0.54
25:YA:1851:U:H2'	25:YA:1852:C:O4'	2.07	0.54
25:YA:2334:G:C6	46:Y0:75:LEU:HD21	2.43	0.54
25:YA:2517:C:C2	25:YA:2542:A:N6	2.75	0.54
25:YA:442:G:H1'	29:YF:48:THR:HG21	1.89	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
27:YD:25:THR:HG23	27:YD:25:THR:O	2.07	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.89	0.54
1:QA:978:A:O2'	1:QA:1322:C:N3	2.39	0.54
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.08	0.54
1:QA:45:U:H2'	1:QA:46:G:H8	1.73	0.54
1:QA:937:A:N6	1:QA:1345:U:O4	2.38	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.38	0.54
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.54
51:R5:60:VAL:CG1	51:R5:60:VAL:OXT	2.56	0.54
25:RA:1936:A:H4'	25:RA:1937:A:O5'	2.08	0.54
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.38	0.54
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.72	0.54
34:RO:113:LYS:HG2	34:RO:117:LEU:CD1	2.38	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.87	0.54
38:RS:67:ARG:NH1	38:RS:67:ARG:CB	2.64	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
41:RV:45:THR:O	41:RV:45:THR:HG22	2.08	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.38	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
7:XG:50:ILE:O	7:XG:50:ILE:HG22	2.07	0.54
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.54
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.36	0.54
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.89	0.54
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.39	0.54
25:YA:526:A:OP1	25:YA:527:C:OP1	2.25	0.54
28:YE:134:ILE:HD12	28:YE:134:ILE:C	2.28	0.54
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.40	0.54
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.07	0.54
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.89	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.88	0.54
35:YP:84:ASN:ND2	35:YP:115:LEU:HD12	2.22	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
41:YV:45:THR:O	41:YV:45:THR:HG22	2.08	0.54
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.55	0.54
44:YY:87:LYS:NZ	44:YY:87:LYS:HB2	2.23	0.54
1:QA:108:G:H5''	1:QA:109:A:C5'	2.38	0.54
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.43	0.54
1:QA:583:A:H2'	1:QA:584:G:O4'	2.08	0.54
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.54
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.37	0.54
4:QD:13:ARG:HD2	4:QD:38:TYR:O	2.08	0.54
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.54
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.21	0.54
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.89	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
1:QA:1397:C:H1'	23:QX:8:A:N6	2.22	0.54
46:R0:53:MET:HA	46:R0:58:THR:O	2.08	0.54
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54
25:RA:1451:C:H42	25:RA:1459:G:H1	1.55	0.54
25:RA:612:G:O2'	25:RA:616:A:N1	2.33	0.54
25:RA:848:G:H2'	25:RA:849:A:C8	2.43	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:RD:183:ARG:HG2	27:RD:183:ARG:NH1	2.12	0.54
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.73	0.54
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.06	0.54
35:RP:112:LEU:HD13	35:RP:112:LEU:C	2.29	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.54
45:RZ:57:ILE:HD12	45:RZ:57:ILE:N	2.23	0.54
1:XA:439:A:OP2	1:XA:493:G:N1	2.41	0.54
5:XE:101:ILE:O	5:XE:101:ILE:HG12	2.08	0.54
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.08	0.54
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.30	0.54
47:Y1:91:LYS:CE	47:Y1:91:LYS:HA	2.37	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.43	0.54
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	0.54
31:YH:91:GLY:O	31:YH:94:TYR:HB2	2.08	0.54
32:YI:94:ALA:HB1	32:YI:111:PRO:HB2	1.89	0.54
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	0.54
35:YP:92:GLU:HA	35:YP:123:LEU:CD2	2.38	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
37:YR:38:VAL:HG22	37:YR:112:ALA:HB2	1.90	0.54
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	2.08	0.54
40:YU:24:TYR:O	40:YU:29:SER:HB3	2.08	0.54
25:YA:993:G:OP1	40:YU:50:ARG:NH1	2.40	0.54
40:YU:86:ALA:HB1	40:YU:88:ILE:HD11	1.90	0.54
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.54
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.21	0.54
22:QV:68:C:H2'	22:QV:69:C:C6	2.42	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
25:RA:222:A:O2'	25:RA:223:A:O5'	2.22	0.54
25:RA:2308:G:N2	25:RA:2311:A:H2	2.03	0.54
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.43	0.54
27:RD:227:ASN:CB	27:RD:228:PRO:HD2	2.24	0.54
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.90	0.54
28:RE:51:PHE:O	28:RE:74:PRO:HB3	2.08	0.54
28:RE:54:GLN:N	28:RE:54:GLN:NE2	2.55	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	0.54
37:RR:53:HIS:HA	37:RR:56:LYS:HD3	1.90	0.54
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.07	0.54
44:RY:87:LYS:HB2	44:RY:87:LYS:NZ	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:RZ:110:GLY:O	45:RZ:117:LEU:HD21	2.08	0.54
45:RZ:52:SER:C	45:RZ:53:ILE:HG13	2.29	0.54
1:XA:160:A:H1'	1:XA:344:A:N7	2.23	0.54
1:XA:34:C:H2'	1:XA:35:G:C8	2.42	0.54
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.89	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
1:XA:1298:C:P	7:XG:114:ARG:HH22	2.29	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.23	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.25	0.54
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.61	0.54
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.54
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.54
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.54
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.28	0.54
28:YE:186:GLY:O	28:YE:188:VAL:N	2.40	0.54
29:YF:53:THR:C	29:YF:55:GLY:H	2.11	0.54
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.73	0.54
32:YI:110:ASP:CB	32:YI:111:PRO:C	2.76	0.54
34:YO:49:ARG:NH1	34:YO:49:ARG:HB3	2.23	0.54
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.54
40:YU:47:TYR:C	40:YU:47:TYR:CD2	2.81	0.54
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	1.90	0.54
1:QA:342:C:H2'	1:QA:343:U:O4'	2.07	0.53
2:QB:75:LYS:C	2:QB:75:LYS:HD3	2.28	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.08	0.53
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.44	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.53
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.53
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.08	0.53
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.53
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.44	0.53
25:RA:2540:C:O2'	25:RA:2740:A:N3	2.40	0.53
25:RA:818:G:N1	25:RA:1188:U:OP2	2.41	0.53
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.90	0.53
27:RD:85:ASP:OD2	27:RD:88:ARG:HG2	2.07	0.53
28:RE:14:ILE:CG1	28:RE:15:PHE:H	2.08	0.53
28:RE:53:PRO:O	28:RE:74:PRO:HA	2.07	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:RF:116:ASP:OD1	29:RF:119:ARG:NH2	2.41	0.53
29:RF:53:THR:C	29:RF:55:GLY:H	2.10	0.53
30:RG:81:LYS:O	30:RG:82:LEU:CB	2.56	0.53
31:RH:139:GLN:O	31:RH:143:GLN:HB2	2.09	0.53
32:RI:110:ASP:HB3	32:RI:111:PRO:C	2.29	0.53
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.28	0.53
35:RP:37:GLY:C	35:RP:41:ARG:HD3	2.29	0.53
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.53
25:RA:1287:A:N7	37:RR:107:ASP:HB2	2.22	0.53
39:RT:14:TYR:H	39:RT:14:TYR:HD1	1.56	0.53
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
33:RN:42:TRP:CD1	40:RU:63:VAL:HG11	2.42	0.53
45:RZ:94:GLU:CB	45:RZ:130:PRO:CD	2.86	0.53
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.89	0.53
1:XA:1216:G:H5''	14:XN:5:ALA:CB	2.37	0.53
1:XA:711:G:H2'	1:XA:712:A:H8	1.73	0.53
1:XA:791:G:H2'	1:XA:792:A:H5'	1.90	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.53
14:XN:22:THR:HB	14:XN:33:VAL:HG11	1.88	0.53
14:XN:40:CYS:H	14:XN:43:CYS:HB2	1.73	0.53
46:Y0:53:MET:HA	46:Y0:58:THR:O	2.08	0.53
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.20	0.53
54:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
25:YA:1440:G:H2'	25:YA:1441:G:H8	1.73	0.53
25:YA:1525:G:H2'	25:YA:1526:G:H8	1.74	0.53
25:YA:2688:U:O2'	25:YA:2721:A:N6	2.41	0.53
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.53
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.53
29:YF:51:THR:O	29:YF:93:LYS:NZ	2.38	0.53
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
34:YO:12:ASP:OD1	34:YO:85:VAL:HG13	2.08	0.53
35:YP:37:GLY:C	35:YP:41:ARG:HD3	2.29	0.53
25:YA:870:A:H5''	36:YQ:6:ARG:O	2.08	0.53
37:YR:91:GLN:O	37:YR:91:GLN:HG2	2.08	0.53
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.53
39:YT:88:ILE:HD12	39:YT:88:ILE:C	2.29	0.53
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.53
45:YZ:125:LEU:C	45:YZ:164:ALA:HB3	2.29	0.53
1:QA:1129:C:H4'	1:QA:1130:A:O5'	2.07	0.53
1:QA:1286:A:C8	1:QA:1287:A:H4'	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:46:G:H2'	1:QA:366:C:C5	2.43	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.53
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.53
25:RA:2630:G:H2'	25:RA:2631:G:C8	2.43	0.53
25:RA:527:C:N4	25:RA:2779:U:H5''	2.22	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	0.53
31:RH:153:LYS:HA	31:RH:153:LYS:CE	2.37	0.53
33:RN:137:LYS:HG3	33:RN:138:LEU:N	2.23	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	0.53
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.53
40:RU:47:TYR:CD2	40:RU:47:TYR:C	2.81	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.53
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.24	0.53
3:XC:3:ASN:H	3:XC:3:ASN:ND2	2.05	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.38	0.53
25:YA:1705:G:C6	25:YA:1706:U:C4	2.97	0.53
25:YA:2839:G:H5'	37:YR:46:GLY:HA2	1.89	0.53
25:YA:297:C:H2'	25:YA:298:G:O4'	2.08	0.53
32:YI:76:THR:HG23	32:YI:139:GLN:O	2.08	0.53
34:YO:12:ASP:CG	34:YO:14:THR:HG23	2.29	0.53
45:YZ:52:SER:C	45:YZ:53:ILE:HG13	2.29	0.53
1:QA:126:G:OP1	1:QA:605:U:O2'	2.25	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
3:QC:173:VAL:O	3:QC:173:VAL:HG12	2.08	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.09	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
13:QM:76:ALA:O	13:QM:79:LYS:HB3	2.09	0.53
46:R0:49:LYS:O	46:R0:50:ASN:HB2	2.07	0.53
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.53
51:R5:16:ARG:NH1	51:R5:17:ASP:OD1	2.41	0.53
51:R5:44:THR:O	51:R5:46:CYS:N	2.41	0.53
53:R7:10:ARG:NH1	53:R7:14:LYS:HE3	2.23	0.53
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
25:RA:513:A:H5'	25:RA:1216:G:O2'	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2150:U:H2'	25:RA:2151:G:C8	2.44	0.53
25:RA:2636:U:OP2	28:RE:79:ARG:NH1	2.42	0.53
27:RD:206:LEU:O	27:RD:211:ARG:NH1	2.38	0.53
25:RA:2415:G:O3'	35:RP:66:GLY:HA3	2.08	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
45:RZ:7:ALA:O	45:RZ:8:TYR:CD2	2.61	0.53
1:XA:407:G:H1	1:XA:435:C:H42	1.57	0.53
1:XA:518:C:H2'	1:XA:530:G:C4	2.43	0.53
1:XA:737:A:H2'	1:XA:738:C:C6	2.43	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
6:XF:89:MET:HG2	6:XF:89:MET:O	2.09	0.53
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.53
11:XK:125:PHE:N	11:XK:125:PHE:HD1	2.05	0.53
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
48:Y2:16:LEU:CG	48:Y2:16:LEU:O	2.49	0.53
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
25:YA:1434:A:H61	25:YA:1558:A:H62	1.55	0.53
25:YA:1754:C:H2'	25:YA:1755:A:C8	2.42	0.53
25:YA:2469:A:H2	25:YA:2481:G:N2	2.04	0.53
25:YA:2723:C:O3'	37:YR:1:MET:HE2	2.08	0.53
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.38	0.53
26:YB:111:U:H2'	26:YB:112:G:H8	1.73	0.53
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.67	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.07	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
13:XM:11:ARG:NH2	30:YG:146:TYR:HD2	2.03	0.53
35:YP:88:LEU:HD23	35:YP:89:ALA:N	2.24	0.53
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	0.53
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.89	0.53
41:YV:35:LEU:N	41:YV:35:LEU:HD22	2.23	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.90	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
45:YZ:94:GLU:CB	45:YZ:130:PRO:CD	2.86	0.53
1:QA:1422:G:H5''	34:RO:48:PRO:HG3	1.90	0.53
1:QA:407:G:OP1	4:QD:3:ARG:NH1	2.41	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
5:QE:140:ARG:NH1	5:QE:140:ARG:HB2	2.24	0.53
14:QN:40:CYS:H	14:QN:43:CYS:HB3	1.72	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.43	0.53
25:RA:2503:A:O2'	25:RA:2505:G:OP2	2.25	0.53
25:RA:270(S):G:O4'	47:R1:78:LYS:HD2	2.08	0.53
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.37	0.53
27:RD:124:PRO:HB2	27:RD:126:GLN:NE2	2.23	0.53
32:RI:38:LEU:N	32:RI:38:LEU:HD12	2.11	0.53
34:RO:12:ASP:CG	34:RO:14:THR:HG23	2.29	0.53
35:RP:140:ALA:O	35:RP:141:ALA:HB2	2.08	0.53
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
37:RR:28:LEU:HD13	37:RR:28:LEU:O	2.08	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
39:RT:105:LEU:O	39:RT:107:ASP:N	2.41	0.53
41:RV:66:ARG:HH11	41:RV:66:ARG:CB	2.20	0.53
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
1:XA:1184:G:H2'	1:XA:1185:G:C8	2.44	0.53
1:XA:1320:C:H5'	19:XS:70:LYS:HG3	1.89	0.53
1:XA:418:C:H2'	1:XA:419:C:C6	2.44	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.53
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
50:Y4:37:SER:C	50:Y4:39:CYS:N	2.62	0.53
25:YA:1300:U:H4'	25:YA:1301:A:O5'	2.09	0.53
25:YA:1686:C:H2'	25:YA:1687:G:O4'	2.07	0.53
25:YA:2250:G:C8	25:YA:2496:C:H5''	2.43	0.53
25:YA:2853:C:H42	25:YA:2864:G:H1	1.56	0.53
31:YH:59:ARG:CG	31:YH:59:ARG:HH11	2.20	0.53
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	0.53
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.53
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.08	0.53
1:QA:1205:U:H1'	3:QC:195:VAL:CG2	2.39	0.53
1:QA:1235:U:O2'	1:QA:1305:G:O5'	2.26	0.53
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.44	0.53
1:QA:487:A:C2	1:QA:488:C:H1'	2.43	0.53
1:QA:872:A:C5	1:QA:874:G:C8	2.96	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.08	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
25:RA:2351:G:O6	54:R8:39:LYS:HG2	2.09	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.91	0.53
25:RA:1297:C:H2'	25:RA:1298:C:C6	2.43	0.53
25:RA:177:G:H5'	25:RA:178:G:C8	2.43	0.53
25:RA:279:C:H42	25:RA:361:G:H1	1.57	0.53
25:RA:304:G:H2'	25:RA:305:U:C6	2.44	0.53
25:RA:336:C:O2'	44:RY:35:TYR:OH	2.23	0.53
25:RA:784:A:O2'	25:RA:785:G:H5''	2.09	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.89	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.38	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
36:RQ:119:ARG:NH1	36:RQ:119:ARG:HG2	2.20	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.65	0.53
36:RQ:134:ARG:CZ	45:RZ:122:ARG:HH22	2.22	0.53
1:XA:1050:G:N2	1:XA:1209:C:H1'	2.24	0.53
1:XA:1233:G:O2'	1:XA:1365:G:OP1	2.21	0.53
1:XA:713:G:H2'	1:XA:714:G:C8	2.43	0.53
1:XA:811:C:H4'	1:XA:900:A:N6	2.23	0.53
4:XD:12:CYS:CB	4:XD:31:CYS:O	2.56	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
15:XO:8:LYS:HZ2	15:XO:8:LYS:HB2	1.73	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
47:Y1:87:PRO:O	47:Y1:91:LYS:N	2.32	0.53
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.41	0.53
25:YA:1020:A:N1	25:YA:1141:U:H2'	2.23	0.53
25:YA:1204:A:HO2'	25:YA:1205:U:P	2.30	0.53
25:YA:1428:C:O2'	25:YA:1569:A:OP2	2.18	0.53
25:YA:2341:G:H2'	25:YA:2342:C:C6	2.43	0.53
25:YA:1127:A:N1	25:YA:2463:C:O2'	2.41	0.53
25:YA:2584:U:H2'	25:YA:2585:U:H2'	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.44	0.53
25:YA:587:C:H4'	25:YA:588:U:O5'	2.08	0.53
26:YB:14:U:OP2	26:YB:70:C:O2'	2.26	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
33:YN:134:ARG:N	33:YN:135:PRO:CD	2.58	0.53
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.07	0.53
39:YT:110:ILE:HG23	39:YT:111:ARG:N	2.24	0.53
41:YV:81:TYR:C	41:YV:82:ARG:HG3	2.28	0.53
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.43	0.53
1:QA:37:U:O2'	1:QA:500:G:H4'	2.08	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.37	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
17:QQ:65:ILE:H	17:QQ:65:ILE:HD12	1.73	0.53
18:QR:58:LEU:H	18:QR:58:LEU:HD12	1.72	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.89	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
25:RA:2335:A:HO2'	25:RA:2336:A:P	2.30	0.53
25:RA:1693:U:H1'	27:RD:14:ARG:HH22	1.72	0.53
27:RD:25:THR:HG23	27:RD:25:THR:O	2.07	0.53
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.28	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
34:RO:14:THR:HG21	34:RO:86:ILE:HD13	1.91	0.53
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53
41:RV:7:THR:CG2	41:RV:22:VAL:HG11	2.39	0.53
45:RZ:51:ALA:O	45:RZ:52:SER:HB3	2.08	0.53
1:XA:1028:C:H42	1:XA:1033:G:H1	1.57	0.53
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.44	0.53
1:XA:793:U:O2	1:XA:1516:G:H4'	2.09	0.53
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.21	0.53
4:XD:14:ARG:HD3	4:XD:14:ARG:O	2.09	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
50:Y4:49:PHE:CD1	50:Y4:49:PHE:N	2.76	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.28	0.53
43:YX:60:ARG:NH1	53:Y7:47:ARG:HH22	2.07	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
25:YA:1871:A:H2'	25:YA:1872:A:C8	2.43	0.53
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.30	0.53
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.43	0.53
29:YF:179:GLU:H	29:YF:179:GLU:CD	2.11	0.53
13:XM:3:ARG:NH2	30:YG:139:LEU:HD13	2.20	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.70	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.08	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.74	0.53
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.18	0.53
1:QA:444:C:H2'	1:QA:445:G:C8	2.43	0.53
1:QA:455:C:H42	1:QA:477:G:H1	1.56	0.53
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
3:QC:3:ASN:H	3:QC:3:ASN:ND2	2.06	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
7:QG:150:ALA:HA	11:QK:59:TYR:CD2	2.43	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.53
15:QO:6:GLU:H	15:QO:6:GLU:CD	2.12	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
46:R0:56:ASP:C	46:R0:56:ASP:OD2	2.47	0.53
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
25:RA:1491:G:H2'	25:RA:1492:G:H8	1.73	0.53
25:RA:2198:A:C2	32:RI:29:TYR:HB2	2.44	0.53
25:RA:1050:A:O2'	25:RA:2752:C:O2	2.27	0.53
25:RA:492:A:H2'	25:RA:493:G:O4'	2.09	0.53
28:RE:134:ILE:HD12	28:RE:134:ILE:C	2.28	0.53
29:RF:129:PHE:O	29:RF:142:TRP:CD1	2.62	0.53
32:RI:76:THR:HG23	32:RI:139:GLN:O	2.08	0.53
32:RI:77:LEU:O	32:RI:77:LEU:HD12	2.09	0.53
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.28	0.53
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.53
1:XA:1002:G:H1	1:XA:1038:C:H42	1.56	0.53
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.43	0.53
1:XA:165:C:H2'	1:XA:166:G:H8	1.73	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:186(E):C:N4	1:XA:191(B):G:H1	2.00	0.53
4:XD:13:ARG:HD2	4:XD:38:TYR:O	2.09	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.90	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.90	0.53
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.53
25:YA:1002:G:H2'	25:YA:1003:G:O4'	2.09	0.53
25:YA:1219:G:OP2	40:YU:19:LYS:HD2	2.08	0.53
25:YA:2721:A:H2'	25:YA:2722:G:O4'	2.09	0.53
25:YA:2831:G:O2'	25:YA:2884:U:OP1	2.19	0.53
25:YA:288:C:H2'	25:YA:289:A:C8	2.44	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.53
32:YI:109:ILE:HB	32:YI:130:TYR:CZ	2.43	0.53
33:YN:137:LYS:HG3	33:YN:138:LEU:N	2.23	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.23	0.53
35:YP:79:ARG:HD3	35:YP:110:TYR:CE1	2.43	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
40:YU:39:LEU:O	40:YU:40:PHE:C	2.47	0.53
41:YV:48:GLY:O	41:YV:49:THR:O	2.26	0.53
42:YW:43:GLY:O	42:YW:44:ALA:C	2.46	0.53
45:YZ:4:ARG:HG2	45:YZ:4:ARG:NH1	2.24	0.53
45:YZ:57:ILE:HD12	45:YZ:57:ILE:N	2.23	0.53
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.71	0.53
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.44	0.53
1:QA:198:G:H2'	1:QA:199:G:C8	2.44	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.84	0.53
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.41	0.53
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.25	0.53
25:RA:2298:A:N6	25:RA:2318:G:H8	1.92	0.53
25:RA:2395:C:H2'	25:RA:2396:G:O4'	2.08	0.53
25:RA:2705:A:H2'	25:RA:2706:G:O4'	2.08	0.53
25:RA:2728:U:O2'	25:RA:2729:G:H5'	2.09	0.53
25:RA:2847:U:H2'	25:RA:2848:G:H5'	1.90	0.53
25:RA:900:A:H3'	25:RA:901:A:H8	1.73	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	0.53
28:RE:20:ALA:O	28:RE:21:VAL:CG2	2.48	0.53
39:RT:98:LYS:HB3	39:RT:100:TYR:CE1	2.43	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.91	0.53
45:RZ:123:ASP:N	45:RZ:123:ASP:OD2	2.39	0.53
1:XA:240:C:H2'	1:XA:241:C:C6	2.44	0.53
1:XA:679:C:H2'	1:XA:680:C:C6	2.44	0.53
1:XA:89:U:O2'	1:XA:90:C:OP1	2.24	0.53
1:XA:892:A:N6	1:XA:906:G:O2'	2.41	0.53
2:XB:75:LYS:C	2:XB:75:LYS:HD3	2.28	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.91	0.53
14:XN:40:CYS:H	14:XN:43:CYS:CB	2.22	0.53
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.53
47:Y1:20:ARG:NH1	47:Y1:20:ARG:HG2	2.24	0.53
51:Y5:60:VAL:CG1	51:Y5:60:VAL:OXT	2.56	0.53
25:YA:1729:A:H2'	25:YA:1730:U:H5''	1.91	0.53
25:YA:1782:C:O2	25:YA:2608:G:O2'	2.24	0.53
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.53
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.53
31:YH:139:GLN:O	31:YH:143:GLN:HB2	2.08	0.53
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53
25:YA:2406:U:N3	35:YP:72:PRO:HB2	2.23	0.53
36:YQ:76:LYS:O	36:YQ:88:GLY:HA3	2.09	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
41:YV:38:LEU:HD13	41:YV:55:ALA:HB3	1.91	0.53
36:YQ:134:ARG:CZ	45:YZ:122:ARG:HH22	2.22	0.53
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.44	0.53
1:QA:358:U:H2'	1:QA:359:U:C6	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:309:G:O2'	1:QA:607:A:N1	2.37	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.90	0.53
14:QN:40:CYS:H	14:QN:43:CYS:CB	2.22	0.53
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
25:RA:828:U:H4'	25:RA:831:G:N1	2.24	0.53
30:RG:125:PHE:C	30:RG:127:GLY:H	2.12	0.53
32:RI:109:ILE:HB	32:RI:130:TYR:CZ	2.43	0.53
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.90	0.53
37:RR:33:ARG:NH2	51:R5:55:ARG:CG	2.66	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.53
38:RS:25:ARG:CB	38:RS:25:ARG:HH11	2.22	0.53
38:RS:89:ARG:HG2	38:RS:89:ARG:HH11	1.74	0.53
25:RA:518:G:C4'	42:RW:18:ARG:HH12	2.09	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
1:XA:1297:C:HO2'	1:XA:1298:C:C5'	2.21	0.53
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.44	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.53
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
25:YA:1078:U:O2'	25:YA:1079:C:OP2	2.24	0.53
25:YA:2844:G:H5'	25:YA:2845:G:OP2	2.08	0.53
25:YA:287:C:O2'	25:YA:288:C:O4'	2.26	0.53
25:YA:738:G:O6	25:YA:739:G:N1	2.41	0.53
26:YB:116:G:H2'	26:YB:117:G:C8	2.44	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.53
33:YN:109:LYS:H	33:YN:109:LYS:HD2	1.73	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
1:QA:127:G:H4'	17:QQ:2:PRO:HD2	1.91	0.53
1:QA:222:U:H2'	1:QA:223:U:H6	1.72	0.53
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.49	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:983:A:N1	1:QA:1222:G:N2	2.55	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.53
50:R4:47:GLN:O	50:R4:48:ARG:HB2	2.07	0.53
25:RA:747:U:N3	51:R5:2:ALA:N	2.57	0.53
25:RA:1436:G:H1'	25:RA:1477:A:O2'	2.07	0.53
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.53
25:RA:1798:U:H5'	27:RD:259:THR:CG2	2.39	0.53
27:RD:43:ARG:NH1	27:RD:44:ASN:OD1	2.42	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.53
45:RZ:154:ASP:CG	45:RZ:155:LEU:N	2.61	0.53
1:XA:1184:G:H2'	1:XA:1185:G:H8	1.74	0.53
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.53
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.23	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.91	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
25:YA:380:U:H2'	25:YA:381:G:C8	2.42	0.53
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.53
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	0.53
32:YI:114:LEU:O	32:YI:115:ALA:HB3	2.09	0.53
35:YP:125:VAL:O	35:YP:125:VAL:HG13	2.09	0.53
37:YR:56:LYS:C	37:YR:58:GLY:N	2.62	0.53
37:YR:67:LEU:HD13	37:YR:76:VAL:CG2	2.27	0.53
40:YU:92:ARG:NH2	40:YU:94:ASN:HD22	2.07	0.53
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.53
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.74	0.53
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.52
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.52
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.52
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.52
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.52
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.09	0.52
22:QV:15:G:H22	22:QV:48:C:H42	1.57	0.52
22:QV:4:G:HO2'	22:QV:5:G:H8	1.56	0.52
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.52
13:QM:65:LYS:NZ	50:R4:52:THR:HG21	2.24	0.52
25:RA:1337:G:H2'	25:RA:1338:G:C8	2.41	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1509:C:N3	25:RA:1511:A:N6	2.58	0.52
25:RA:1667:G:H2'	25:RA:1991:U:O4	2.08	0.52
25:RA:1674:G:H1'	25:RA:1676:A:N6	2.25	0.52
25:RA:2070:G:H2'	25:RA:2071:A:C8	2.44	0.52
25:RA:2159:G:H2'	25:RA:2160:G:C8	2.43	0.52
25:RA:2313:C:H2'	25:RA:2314:C:C6	2.44	0.52
25:RA:273:G:H1	25:RA:364:C:H42	1.56	0.52
27:RD:34:VAL:CG1	27:RD:34:VAL:O	2.51	0.52
31:RH:126:PRO:HD2	31:RH:127:GLU:H	1.72	0.52
31:RH:12:PRO:HG3	31:RH:48:GLY:O	2.09	0.52
32:RI:120:ILE:HD11	32:RI:126:TYR:OH	2.10	0.52
32:RI:85:GLU:OE2	32:RI:85:GLU:HA	2.08	0.52
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.52
35:RP:125:VAL:O	35:RP:125:VAL:HG13	2.09	0.52
36:RQ:76:LYS:O	36:RQ:88:GLY:HA3	2.09	0.52
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
45:RZ:169:GLU:O	45:RZ:170:THR:HG23	2.09	0.52
45:RZ:120:ILE:HD12	45:RZ:171:ILE:H	1.74	0.52
1:XA:1219:U:H2'	1:XA:1220:G:C8	2.44	0.52
1:XA:947:G:H2'	1:XA:948:C:C6	2.44	0.52
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.40	0.52
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.52
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.52
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.20	0.52
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
15:XO:6:GLU:H	15:XO:6:GLU:CD	2.12	0.52
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	2.09	0.52
25:YA:1332:G:N2	25:YA:1610:A:N7	2.53	0.52
25:YA:205:G:O2'	25:YA:206:U:P	2.68	0.52
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
31:YH:44:VAL:CG2	31:YH:44:VAL:O	2.58	0.52
32:YI:85:GLU:HA	32:YI:85:GLU:OE2	2.08	0.52
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52
37:YR:70:LEU:O	37:YR:72:ASP:N	2.43	0.52
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.52
45:YZ:6:LYS:O	45:YZ:7:ALA:HB3	2.09	0.52
1:QA:167:G:H2'	1:QA:168:G:H8	1.73	0.52
4:QD:166:LYS:HG2	27:YD:135:PHE:CZ	2.42	0.52
5:QE:101:ILE:HG12	5:QE:101:ILE:O	2.08	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.57	0.52
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.92	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.74	0.52
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.91	0.52
25:RA:49:A:H61	25:RA:177:G:H2'	1.74	0.52
25:RA:2286:A:H3'	52:R6:31:PRO:CG	2.39	0.52
25:RA:2566:A:H4'	25:RA:2567:G:O5'	2.08	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
28:RE:61:ARG:O	28:RE:63:LEU:N	2.42	0.52
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.09	0.52
31:RH:44:VAL:O	31:RH:44:VAL:CG2	2.57	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
38:RS:83:LYS:O	38:RS:109:GLY:CA	2.46	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.52
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.45	0.52
1:XA:661:G:H1	1:XA:744:C:H42	1.57	0.52
1:XA:574:A:N3	1:XA:883:C:H1'	2.24	0.52
1:XA:895:G:H1	1:XA:904:C:N4	2.06	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.22	0.52
2:XB:9:GLU:N	2:XB:9:GLU:OE2	2.42	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.09	0.52
11:XK:77:MET:HE3	11:XK:80:VAL:HG12	1.90	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.52
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.92	0.52
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.73	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
25:YA:2531:A:H61	25:YA:2662:A:H61	1.56	0.52
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.52
29:YF:192:LEU:HD21	29:YF:194:MET:HE2	1.91	0.52
31:YH:2:SER:O	31:YH:3:ARG:C	2.47	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.52
31:YH:89:ILE:CG1	31:YH:89:ILE:O	2.57	0.52
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.52
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
42:YW:25:ARG:HH11	42:YW:25:ARG:HB2	1.74	0.52
42:YW:8:ARG:HH11	42:YW:8:ARG:HG3	1.73	0.52
45:YZ:105:VAL:CG1	45:YZ:138:GLU:HG2	2.39	0.52
45:YZ:120:ILE:HD12	45:YZ:171:ILE:H	1.74	0.52
45:YZ:169:GLU:O	45:YZ:170:THR:HG23	2.10	0.52
45:YZ:59:LEU:O	45:YZ:60:GLU:CG	2.54	0.52
1:QA:1028(A):C:H42	1:QA:1032(B):G:H1	1.57	0.52
1:QA:376:G:H1	1:QA:387:U:H3	1.57	0.52
1:QA:446:G:H1	1:QA:488:C:N4	2.04	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.44	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
6:QF:89:MET:HG2	6:QF:89:MET:O	2.09	0.52
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
19:QS:65:ASN:H	19:QS:65:ASN:ND2	2.08	0.52
47:R1:20:ARG:NH1	47:R1:20:ARG:HG2	2.24	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.24	0.52
50:R4:49:PHE:CD1	50:R4:49:PHE:N	2.76	0.52
25:RA:2524:G:C2	25:RA:2540:C:C2	2.98	0.52
25:RA:685:A:P	25:RA:685:A:H3'	2.49	0.52
27:RD:134:ARG:HB2	27:RD:135:PHE:HD2	1.75	0.52
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	0.52
29:RF:192:LEU:HD21	29:RF:194:MET:HE2	1.91	0.52
32:RI:145:VAL:CG2	32:RI:146:ALA:H	2.16	0.52
32:RI:25:TYR:CE2	32:RI:29:TYR:CD2	2.97	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52
35:RP:92:GLU:HA	35:RP:123:LEU:CD2	2.39	0.52
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.09	0.52
39:RT:14:TYR:CD1	39:RT:14:TYR:N	2.77	0.52
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	2.09	0.52
25:RA:1228:G:OP1	40:RU:13:LYS:HG2	2.10	0.52
45:RZ:125:LEU:C	45:RZ:164:ALA:HB3	2.29	0.52
1:XA:64:G:H5''	1:XA:65:U:OP1	2.09	0.52
3:XC:140:ARG:HH11	3:XC:140:ARG:HG3	1.75	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:173:VAL:O	3:XC:173:VAL:HG12	2.08	0.52
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.52
5:XE:140:ARG:NH1	5:XE:140:ARG:HB2	2.23	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.90	0.52
16:XP:75:ARG:C	16:XP:77:ALA:H	2.12	0.52
18:XR:36:ASN:ND2	18:XR:36:ASN:O	2.32	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
25:YA:2345:G:N3	25:YA:2381:C:H2'	2.23	0.52
25:YA:2648:C:H2'	25:YA:2649:U:H6	1.74	0.52
25:YA:270(T):G:H5''	47:Y1:97:LEU:CD2	2.32	0.52
25:YA:557:U:H2'	25:YA:558:G:C8	2.44	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.11	0.52
32:YI:120:ILE:HD11	32:YI:126:TYR:OH	2.10	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.21	0.52
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.09	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.09	0.52
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
42:YW:7:ALA:HB2	42:YW:50:VAL:CG2	2.40	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52
1:QA:243:A:H4'	1:QA:244:U:O5'	2.10	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.40	0.52
9:QI:118:LYS:CB	9:QI:118:LYS:HZ2	2.23	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.19	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
25:RA:1412:A:H2'	25:RA:1413:G:O4'	2.10	0.52
25:RA:1416:G:H2'	25:RA:1417:C:H6	1.75	0.52
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.44	0.52
25:RA:1810:A:H2'	25:RA:1811:G:O4'	2.10	0.52
25:RA:2343:C:H2'	25:RA:2344:U:C6	2.44	0.52
25:RA:2790:A:O3'	25:RA:2893:G:N2	2.42	0.52
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.74	0.52
25:RA:34:C:H41	25:RA:447:A:N6	2.07	0.52
25:RA:796:C:H2'	25:RA:797:C:C6	2.44	0.52
25:RA:7:G:H2'	25:RA:8:A:O4'	2.09	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	0.52
28:RE:7:VAL:O	28:RE:196:VAL:HG13	2.09	0.52
29:RF:140:LEU:O	29:RF:143:ALA:HB3	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	0.52
33:RN:94:HIS:O	33:RN:95:PRO:O	2.27	0.52
33:RN:7:LYS:HD3	33:RN:9:VAL:CA	2.38	0.52
39:RT:94:ALA:O	39:RT:95:ARG:HB3	2.09	0.52
45:RZ:105:VAL:CG1	45:RZ:138:GLU:HG2	2.40	0.52
1:XA:532:A:HO2'	1:XA:533:A:P	2.32	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.74	0.52
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
14:XN:7:ILE:CG1	14:XN:8:GLU:N	2.73	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
52:Y6:30:THR:HG23	52:Y6:30:THR:O	2.09	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
25:YA:1266:G:C8	42:YW:15:ARG:NH1	2.78	0.52
25:YA:1440:G:H2'	25:YA:1441:G:C8	2.44	0.52
25:YA:1494:A:C2'	25:YA:1495:A:H5'	2.39	0.52
25:YA:1528:A:H2	25:YA:1542:G:C2	2.27	0.52
25:YA:1819:A:H4'	25:YA:1820:U:O5'	2.08	0.52
25:YA:48:G:H22	25:YA:177:G:H5'	1.74	0.52
25:YA:878:A:H61	25:YA:899:A:H1'	1.74	0.52
27:YD:28:GLU:O	27:YD:29:PRO:C	2.45	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52
32:YI:25:TYR:CE2	32:YI:29:TYR:CD2	2.97	0.52
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52
1:QA:520:A:N1	1:QA:536:C:H1'	2.25	0.52
1:QA:558:G:H2'	1:QA:559:A:H2	1.75	0.52
1:QA:604:G:H2'	1:QA:605:U:O4'	2.09	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
49:R3:7:LYS:HE2	49:R3:32:GLN:NE2	2.25	0.52
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.73	0.52
25:RA:1133:U:O2	25:RA:1137:G:H5''	2.10	0.52
25:RA:1317:A:H61	25:RA:1335:U:H3	1.56	0.52
25:RA:2105:C:H2'	25:RA:2106:G:C8	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2818:G:OP2	37:RR:42:LYS:NZ	2.42	0.52
25:RA:556:G:H2'	25:RA:557:U:C6	2.45	0.52
25:RA:724:U:H2'	25:RA:725:G:O4'	2.09	0.52
27:RD:210:GLY:O	27:RD:213:ARG:N	2.43	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.91	0.52
28:RE:179:GLU:OE1	28:RE:179:GLU:HA	2.10	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
32:RI:114:LEU:O	32:RI:115:ALA:HB3	2.08	0.52
32:RI:131:LYS:HB3	32:RI:132:PRO:CA	2.38	0.52
33:RN:103:VAL:O	33:RN:106:MET:N	2.42	0.52
33:RN:112:LEU:HD23	33:RN:112:LEU:C	2.30	0.52
36:RQ:78:PRO:HB2	46:R0:5:LYS:NZ	2.24	0.52
37:RR:56:LYS:C	37:RR:58:GLY:N	2.61	0.52
41:RV:34:GLU:O	41:RV:36:PRO:HD3	2.09	0.52
45:RZ:120:ILE:HD11	45:RZ:169:GLU:HG3	1.85	0.52
45:RZ:4:ARG:NH1	45:RZ:4:ARG:HG2	2.24	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
2:XB:5:ILE:HD13	2:XB:5:ILE:N	2.24	0.52
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
14:XN:24:CYS:HB2	14:XN:39:LEU:C	2.29	0.52
16:XP:4:ILE:N	16:XP:4:ILE:HD12	2.23	0.52
46:Y0:56:ASP:OD2	46:Y0:56:ASP:C	2.47	0.52
46:Y0:7:LEU:HD12	46:Y0:7:LEU:H	1.73	0.52
48:Y2:7:ARG:NH1	48:Y2:7:ARG:HG3	2.25	0.52
50:Y4:15:ILE:H	50:Y4:15:ILE:HD13	1.73	0.52
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.10	0.52
27:YD:36:PRO:HA	27:YD:62:TYR:O	2.09	0.52
29:YF:162:LEU:HD23	29:YF:165:ARG:NH2	2.25	0.52
30:YG:124:SER:HB2	30:YG:131:TYR:CE1	2.44	0.52
31:YH:24:VAL:O	31:YH:24:VAL:HG23	2.09	0.52
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
45:YZ:154:ASP:CG	45:YZ:155:LEU:N	2.61	0.52
1:QA:1321:C:H5"	1:QA:1322:C:H5"	1.91	0.52
1:QA:1494:G:N7	57:QA:1661:PAR:N32	2.57	0.52
1:QA:346:G:H5'	39:RT:41:ARG:HH12	1.73	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:445:G:H2'	1:QA:446:G:C8	2.45	0.52
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.42	0.52
1:QA:939:G:H5''	7:QG:102:ARG:NH1	2.24	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
50:R4:63:TYR:C	50:R4:65:ASP:N	2.62	0.52
25:RA:1543:A:H2	25:RA:1545:A:C5	2.28	0.52
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.44	0.52
25:RA:1790:C:H2'	25:RA:1791:A:C4	2.44	0.52
25:RA:92:G:H2'	25:RA:93:C:C6	2.45	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
27:RD:35:LYS:HD3	27:RD:63:ARG:CA	2.39	0.52
27:RD:66:ASP:OD2	27:RD:69:ARG:HG2	2.09	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
28:RE:55:ASN:C	28:RE:57:LYS:N	2.62	0.52
39:RT:23:ARG:HG2	39:RT:120:ARG:HH12	1.75	0.52
40:RU:88:ILE:CD1	40:RU:88:ILE:H	2.05	0.52
45:RZ:108:PRO:C	45:RZ:110:GLY:H	2.13	0.52
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.25	0.52
1:XA:1049:U:OP1	14:YN:3:ARG:HB2	2.10	0.52
1:XA:1368:G:OP1	9:XI:111:ARG:NH2	2.39	0.52
1:XA:191(F):U:H2'	1:XA:191:G:C8	2.43	0.52
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.42	0.52
13:XM:65:LYS:NZ	50:Y4:52:THR:HG21	2.25	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.16	0.52
27:YD:174:ILE:CD1	27:YD:174:ILE:N	2.73	0.52
32:YI:69:LYS:O	32:YI:73:GLU:HB2	2.10	0.52
33:YN:103:VAL:O	33:YN:106:MET:N	2.42	0.52
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
38:YS:67:ARG:HH11	38:YS:67:ARG:HB2	1.65	0.52
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.52
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52
45:YZ:110:GLY:O	45:YZ:117:LEU:HD21	2.08	0.52
1:QA:1394:A:OP1	1:QA:1394:A:H8	1.92	0.52
1:QA:447:G:O6	1:QA:485:G:H2'	2.09	0.52
1:QA:595:G:N1	1:QA:641:U:O2'	2.36	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:923:A:H2'	1:QA:924:C:H6	1.73	0.52
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.90	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.72	0.52
31:RH:121:ILE:HG12	31:RH:135:GLY:HA3	1.91	0.52
31:RH:4:ILE:O	31:RH:6:ARG:N	2.43	0.52
35:RP:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.52
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
40:RU:92:ARG:NH2	40:RU:94:ASN:HD22	2.07	0.52
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
25:RA:1614:A:H62	42:RW:93:ALA:HB2	1.74	0.52
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.43	0.52
1:XA:1288:A:N1	1:XA:1371:G:H1'	2.23	0.52
1:XA:730:G:C5	1:XA:731:G:H1'	2.45	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.73	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.08	0.52
19:XS:15:LEU:H	19:XS:15:LEU:HD23	1.74	0.52
25:YA:2334:G:O6	46:Y0:75:LEU:HD21	2.10	0.52
49:Y3:9:VAL:HG12	49:Y3:32:GLN:HE22	1.74	0.52
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.10	0.52
25:YA:2489:G:O2'	25:YA:2518:A:N6	2.43	0.52
25:YA:844:C:H3'	25:YA:845:G:H8	1.74	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52
28:YE:55:ASN:C	28:YE:57:LYS:N	2.62	0.52
32:YI:77:LEU:O	32:YI:77:LEU:HD12	2.09	0.52
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52
25:YA:871:U:H4'	36:YQ:69:PHE:CE2	2.45	0.52
39:YT:42:ILE:N	39:YT:42:ILE:HD12	2.25	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	0.52
44:YY:91:GLU:HG3	44:YY:92:ASN:N	2.25	0.52
45:YZ:107:THR:CG2	45:YZ:108:PRO:HA	2.40	0.52
1:QA:1050:G:H1	1:QA:1208:C:N4	2.07	0.52
1:QA:112:G:H4'	1:QA:389:A:H4'	1.91	0.52
1:QA:539:A:H2'	1:QA:540:G:H8	1.75	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:922:G:H1'	5:QE:19:MET:HB3	1.92	0.52
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.92	0.52
1:QA:1316:G:H5''	14:QN:17:LYS:CE	2.40	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
9:QI:128:ARG:CD	22:QV:32:C:OP2	2.57	0.52
46:R0:7:LEU:N	46:R0:7:LEU:CD2	2.73	0.52
49:R3:6:VAL:HG12	49:R3:56:VAL:HG22	1.92	0.52
50:R4:50:VAL:O	50:R4:51:ASP:C	2.48	0.52
50:R4:54:GLY:HA2	50:R4:57:GLU:HG2	1.92	0.52
53:R7:38:GLY:O	53:R7:39:ARG:C	2.48	0.52
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.91	0.52
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.39	0.52
25:RA:27:G:H22	25:RA:512:G:H2'	1.75	0.52
25:RA:2831:G:OP1	25:RA:2834:G:H4'	2.09	0.52
25:RA:389:G:N1	35:RP:71:VAL:HG12	2.25	0.52
25:RA:669:G:H2'	25:RA:669:G:N3	2.25	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	0.52
33:RN:114:ARG:C	33:RN:116:LEU:H	2.13	0.52
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.52
42:RW:28:SER:HB3	42:RW:31:GLU:HB2	1.90	0.52
44:RY:91:GLU:HG3	44:RY:92:ASN:N	2.25	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.37	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
1:XA:555:C:OP1	12:XL:20:LYS:NZ	2.42	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
12:XL:11:VAL:HG13	17:XQ:29:HIS:HD2	1.75	0.52
18:XR:44:LEU:N	18:XR:44:LEU:HD12	2.24	0.52
25:YA:1218:C:H42	25:YA:1231:G:H1	1.56	0.52
25:YA:1297:C:H2'	25:YA:1298:C:C6	2.45	0.52
25:YA:1853:A:N1	25:YA:2087:G:H1'	2.25	0.52
25:YA:2481:G:O2'	25:YA:2482:G:OP2	2.20	0.52
25:YA:2695:C:H2'	25:YA:2696:U:C6	2.45	0.52
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.52
28:YE:61:ARG:O	28:YE:63:LEU:N	2.42	0.52
29:YF:108:LYS:O	29:YF:112:MET:HG3	2.10	0.52
32:YI:131:LYS:HB3	32:YI:132:PRO:CA	2.38	0.52
32:YI:83:ALA:O	32:YI:84:GLY:C	2.48	0.52
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
34:YO:43:VAL:HG23	34:YO:56:ASP:O	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.90	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
44:YY:9:LYS:O	44:YY:9:LYS:HG2	2.10	0.52
45:YZ:51:ALA:O	45:YZ:52:SER:HB3	2.09	0.52
1:QA:673:G:H2'	1:QA:674:G:C8	2.45	0.52
1:QA:762:C:H2'	1:QA:763:G:C8	2.44	0.52
1:QA:778:G:H2'	1:QA:779:C:O4'	2.10	0.52
1:QA:986:A:H1'	19:QS:54:GLY:O	2.09	0.52
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
1:QA:408:A:H5'	4:QD:116:GLN:HB2	1.92	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.86	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
47:R1:76:ARG:NH1	47:R1:76:ARG:HG2	2.19	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
25:RA:1814:G:H2'	25:RA:1815:A:C8	2.44	0.52
25:RA:2467:C:H4'	36:RQ:123:HIS:ND1	2.25	0.52
25:RA:541:C:H2'	25:RA:542:C:H6	1.75	0.52
25:RA:76:C:H2'	25:RA:77:C:C6	2.45	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
31:RH:2:SER:O	31:RH:3:ARG:C	2.47	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	2.09	0.52
34:RO:4:PRO:O	34:RO:5:GLN:CB	2.58	0.52
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.39	0.52
35:RP:13:ASN:O	35:RP:14:LYS:C	2.49	0.52
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.52
41:RV:3:ALA:HB3	41:RV:14:VAL:HG23	1.92	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
1:XA:363:A:C4	12:XL:31:PRO:HD2	2.43	0.52
13:XM:98:VAL:HG12	13:XM:98:VAL:O	2.10	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.73	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
49:Y3:49:LYS:HG2	49:Y3:49:LYS:O	2.10	0.52
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.52
25:YA:1210:A:H4'	25:YA:1211:U:O5'	2.09	0.52
25:YA:2474:C:H5''	25:YA:2475:C:H5	1.73	0.52
25:YA:2677:G:H2'	25:YA:2678:C:C6	2.45	0.52
25:YA:2832:U:H1'	25:YA:2834:G:C5	2.44	0.52
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.09	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52
27:YD:43:ARG:NH1	27:YD:44:ASN:OD1	2.42	0.52
28:YE:170:LEU:CD2	28:YE:185:LYS:HB2	2.40	0.52
33:YN:112:LEU:C	33:YN:112:LEU:HD23	2.30	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
40:YU:107:ALA:O	40:YU:111:GLU:OE1	2.28	0.52
40:YU:59:ARG:O	40:YU:63:VAL:HG23	2.10	0.52
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	0.52
45:YZ:170:THR:O	45:YZ:171:ILE:HB	2.10	0.52
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.49	0.52
1:QA:575:G:O2'	1:QA:821:G:H5'	2.09	0.52
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.10	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.10	0.52
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.52
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.52
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.75	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.41	0.52
49:R3:49:LYS:HG2	49:R3:49:LYS:O	2.10	0.52
52:R6:30:THR:O	52:R6:30:THR:HG23	2.09	0.52
25:RA:1417:C:H1'	25:RA:1586:A:H62	1.75	0.52
25:RA:1496:A:H5'	25:RA:1497:U:OP1	2.10	0.52
25:RA:629:G:H5'	25:RA:650:C:O2'	2.10	0.52
28:RE:54:GLN:H	28:RE:54:GLN:NE2	2.08	0.52
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.25	0.52
34:RO:23:ARG:O	34:RO:39:ILE:HB	2.10	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	0.52
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	0.52
45:RZ:107:THR:CG2	45:RZ:108:PRO:HA	2.40	0.52
45:RZ:136:PHE:O	45:RZ:137:ILE:HG23	2.10	0.52
45:RZ:61:LEU:HB3	45:RZ:62:PRO:CD	2.40	0.52
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.42	0.52
1:XA:292:G:N2	1:XA:608:A:H61	2.07	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.52
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.52
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.52
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.52
5:XE:101:ILE:HD13	5:XE:101:ILE:N	2.25	0.52
7:XG:153:HIS:CE1	11:XK:58:PRO:HD2	2.44	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.52
50:Y4:68:ARG:HD3	50:Y4:69:LYS:HG2	1.92	0.52
25:YA:1318:C:C2'	25:YA:1319:G:H5''	2.39	0.52
25:YA:1824:G:OP1	27:YD:52:ARG:HD3	2.10	0.52
25:YA:2445:G:OP1	29:YF:74:ARG:NH2	2.43	0.52
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.10	0.52
25:YA:888:C:H3'	25:YA:889:C:H4'	1.92	0.52
29:YF:67:GLN:O	29:YF:68:LYS:CB	2.39	0.52
30:YG:34:LEU:HD13	30:YG:34:LEU:C	2.30	0.52
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.52
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	0.52
42:YW:14:PRO:O	42:YW:17:VAL:N	2.42	0.52
44:YY:75:ILE:C	44:YY:75:ILE:HD13	2.30	0.52
1:QA:585:G:O3'	17:QQ:34:LYS:NZ	2.42	0.51
1:QA:669:U:H2'	1:QA:670:G:H8	1.76	0.51
1:QA:954:G:H21	1:QA:1227:A:H62	1.55	0.51
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.51
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.51
4:QD:14:ARG:HD3	4:QD:14:ARG:O	2.09	0.51
4:QD:163:GLU:OE1	27:YD:134:ARG:NH2	2.43	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
4:QD:13:ARG:HD3	4:QD:38:TYR:O	2.10	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.40	0.51
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.51
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.11	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.92	0.51
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.51
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.45	0.51
25:RA:792:G:O2'	25:RA:2440:C:N3	2.36	0.51
25:RA:2518:A:H4'	25:RA:2519:U:OP1	2.09	0.51
25:RA:272:G:H1	25:RA:365:C:H42	1.59	0.51
1:QA:1443:G:N2	25:RA:2864:G:OP1	2.41	0.51
26:RB:40:U:H1'	26:RB:45:A:H61	1.75	0.51
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
33:RN:108:PRO:O	33:RN:113:GLY:HA3	2.10	0.51
34:RO:2:ILE:N	34:RO:2:ILE:HD12	2.24	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	0.51
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.10	0.51
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.35	0.51
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.24	0.51
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.09	0.51
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.43	0.51
1:XA:261:U:O2'	1:XA:263:A:N7	2.34	0.51
1:XA:965:A:H4'	1:XA:966:G:OP1	2.09	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.40	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.51
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.51
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.58	0.51
25:YA:1245:G:OP1	35:YP:13:ASN:ND2	2.33	0.51
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.11	0.51
25:YA:1803:A:N1	25:YA:1822:G:O2'	2.29	0.51
25:YA:2244:U:H2'	25:YA:2245:U:O4'	2.10	0.51
25:YA:350:U:H2'	25:YA:351:G:O4'	2.10	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51
30:YG:44:GLY:CA	30:YG:88:ILE:HD11	2.40	0.51
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.51
44:YY:101:LYS:O	44:YY:102:CYS:SG	2.66	0.51
44:YY:74:PRO:O	44:YY:80:GLY:HA2	2.10	0.51
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.35	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.10	0.51
50:R4:14:ILE:HG23	50:R4:14:ILE:O	2.10	0.51
25:RA:1418:G:O5'	25:RA:1418:G:H8	1.93	0.51
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.43	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.39	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	2.26	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RI:69:LYS:O	32:RI:73:GLU:HB2	2.10	0.51
35:RP:147:LEU:O	35:RP:148:LEU:CB	2.57	0.51
39:RT:42:ILE:N	39:RT:42:ILE:HD12	2.24	0.51
43:RX:47:PHE:CD1	43:RX:47:PHE:N	2.78	0.51
44:RY:75:ILE:C	44:RY:75:ILE:HD13	2.30	0.51
45:RZ:59:LEU:O	45:RZ:60:GLU:CG	2.54	0.51
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.45	0.51
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.51
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
1:XA:1229:A:O2'	22:XV:30:G:OP1	2.25	0.51
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
50:Y4:14:ILE:O	50:Y4:14:ILE:HG23	2.10	0.51
25:YA:331:A:N6	25:YA:1210:A:OP2	2.34	0.51
25:YA:1403:C:H5''	25:YA:1471:A:C1'	2.40	0.51
25:YA:1409:C:H2'	25:YA:1410:G:O4'	2.10	0.51
25:YA:14:A:N1	25:YA:2044:C:O2'	2.28	0.51
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.45	0.51
25:YA:2307:G:H1'	25:YA:2308:G:N2	2.25	0.51
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.10	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.51
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.51
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.51
32:YI:110:ASP:HB3	32:YI:111:PRO:C	2.29	0.51
32:YI:12:LEU:O	32:YI:13:GLY:O	2.28	0.51
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	0.51
34:YO:16:ALA:HA	34:YO:46:ALA:HB2	1.92	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
36:YQ:119:ARG:HG2	36:YQ:119:ARG:NH1	2.20	0.51
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.51
41:YV:75:PHE:CD1	41:YV:75:PHE:C	2.83	0.51
1:QA:145:G:H1	1:QA:177:C:H42	1.58	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.93	0.51
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	0.51
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.46	0.51
25:RA:1727:U:H2'	25:RA:1728:G:O4'	2.10	0.51
25:RA:2563:U:H1'	25:RA:2566:A:N6	2.25	0.51
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.46	0.51
25:RA:2688:U:H1'	25:RA:2721:A:N6	2.25	0.51
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.51
29:RF:127:GLU:HA	29:RF:127:GLU:OE1	2.07	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.26	0.51
32:RI:12:LEU:O	32:RI:13:GLY:O	2.28	0.51
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.92	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:H	1.74	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.26	0.51
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	0.51
41:RV:75:PHE:CD1	41:RV:75:PHE:C	2.83	0.51
42:RW:25:ARG:HB2	42:RW:25:ARG:HH11	1.74	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.24	0.51
1:XA:1022:G:H2'	1:XA:1023:G:C8	2.45	0.51
1:XA:1126:U:H5	1:XA:1127:G:C4	2.28	0.51
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.25	0.51
1:XA:1521:G:C2	1:XA:1522:U:C2	2.99	0.51
1:XA:200:G:H1	1:XA:217:C:H42	1.58	0.51
1:XA:269:C:H2'	1:XA:270:A:H8	1.75	0.51
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.51
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.76	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
3:XC:29:TYR:OH	14:YN:54:PRO:HD2	2.09	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.75	0.51
9:XI:127:LYS:NZ	22:XV:34:C:OP2	2.44	0.51
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.93	0.51
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.22	0.51
25:YA:1081:U:H3'	25:YA:1082:U:H4'	1.91	0.51
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.08	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.10	0.51
35:YP:112:LEU:HD22	35:YP:113:LYS:H	1.75	0.51
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.51
45:YZ:136:PHE:O	45:YZ:137:ILE:HG23	2.11	0.51
1:QA:376:G:N2	1:QA:387:U:O2	2.37	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.51
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.51
1:QA:1346:A:H5''	9:QI:120:ARG:HH12	1.75	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.51
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
22:QV:76:A:O2'	55:Z6:76:PPU:N	2.38	0.51
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.10	0.51
25:RA:299:A:H8	25:RA:299:A:OP2	1.94	0.51
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.25	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.93	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
34:RO:24:VAL:HG21	34:RO:32:TYR:O	2.10	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
36:RQ:80:GLU:HG2	46:R0:5:LYS:CG	2.40	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
38:RS:87:PHE:O	38:RS:88:ASP:O	2.28	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
44:RY:9:LYS:HG2	44:RY:9:LYS:O	2.11	0.51
45:RZ:94:GLU:CB	45:RZ:130:PRO:HD3	2.38	0.51
45:RZ:6:LYS:O	45:RZ:7:ALA:HB3	2.09	0.51
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.25	0.51
1:XA:1330:U:H4'	13:XM:23:TYR:CZ	2.45	0.51
1:XA:980:C:H5''	1:XA:981:U:C5	2.44	0.51
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.41	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.93	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
25:YA:2365:G:OP1	46:Y0:55:ARG:HG2	2.10	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
25:YA:747:U:N3	51:Y5:2:ALA:N	2.58	0.51
25:YA:942:G:O2'	25:YA:1189:A:N3	2.32	0.51
25:YA:1204:A:H1'	25:YA:1206:G:N9	2.26	0.51
25:YA:311:A:HO2'	25:YA:331:A:HO2'	1.57	0.51
25:YA:844:C:H3'	25:YA:845:G:C8	2.45	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
25:YA:662:G:H5''	35:YP:17:LYS:HG2	1.92	0.51
41:YV:14:VAL:HA	41:YV:18:LEU:HD12	1.93	0.51
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ1	1.75	0.51
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.51
45:YZ:80:ARG:HH21	45:YZ:82:ARG:HH12	1.58	0.51
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.92	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
4:QD:166:LYS:HG2	27:YD:135:PHE:CE2	2.45	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.10	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.11	0.51
13:QM:9:ILE:C	13:QM:9:ILE:HD12	2.31	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.10	0.51
19:QS:15:LEU:H	19:QS:15:LEU:HD23	1.75	0.51
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.10	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.09	0.51
25:RA:1226:G:O3'	41:RV:84:LYS:HD3	2.10	0.51
25:RA:222:A:H3'	25:RA:421:U:H5''	1.93	0.51
25:RA:2395:C:H42	25:RA:2421:G:H1	1.57	0.51
25:RA:2816:C:O2	25:RA:2883:A:O2'	2.27	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1902:C:H5'	27:RD:246:PRO:HD3	1.91	0.51
27:RD:259:THR:O	27:RD:260:ARG:C	2.49	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.51
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
33:RN:26:LEU:HG	33:RN:30:ILE:HD11	1.92	0.51
34:RO:79:PHE:CD2	39:RT:72:VAL:HG22	2.45	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.73	0.51
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
45:RZ:170:THR:O	45:RZ:171:ILE:HB	2.10	0.51
45:RZ:48:PHE:CZ	45:RZ:52:SER:HA	2.46	0.51
45:RZ:80:ARG:HH21	45:RZ:82:ARG:HH12	1.58	0.51
1:XA:1422:G:H5''	34:YO:48:PRO:HG3	1.93	0.51
1:XA:244:U:H4'	1:XA:245:C:O5'	2.10	0.51
1:XA:38:G:N2	1:XA:397:A:OP1	2.40	0.51
1:XA:692:U:O2'	1:XA:694:A:N7	2.38	0.51
1:XA:784:C:H2'	1:XA:785:G:O4'	2.10	0.51
1:XA:950:U:H2'	1:XA:951:G:H8	1.75	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.92	0.51
1:XA:676:A:O2'	11:XK:115:PRO:HB3	2.11	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.92	0.51
12:XL:24:VAL:CG1	12:XL:24:VAL:O	2.58	0.51
46:Y0:8:GLY:O	46:Y0:9:SER:O	2.29	0.51
25:YA:180:G:N2	25:YA:215:G:O6	2.43	0.51
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.09	0.51
25:YA:2216:G:H2'	25:YA:2217:G:H8	1.75	0.51
27:YD:210:GLY:O	27:YD:213:ARG:N	2.43	0.51
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.51
28:YE:203:LYS:HE3	28:YE:204:ALA:CB	2.40	0.51
28:YE:51:PHE:CD1	28:YE:52:LEU:N	2.76	0.51
33:YN:131:GLN:HE21	33:YN:132:ALA:H	1.57	0.51
34:YO:24:VAL:HG21	34:YO:32:TYR:O	2.10	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
37:YR:118:GLU:HG3	37:YR:118:GLU:OXT	2.11	0.51
25:YA:2839:G:O2'	37:YR:49:ASP:OD2	2.22	0.51
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.92	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.90	0.51
45:YZ:108:PRO:C	45:YZ:110:GLY:H	2.13	0.51
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.41	0.51
1:QA:160:A:H2'	1:QA:161:A:O4'	2.10	0.51
1:QA:339:C:H2'	1:QA:340:U:C6	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:378:G:H2'	1:QA:379:C:C6	2.46	0.51
1:QA:713:G:H21	1:QA:777:A:H1'	1.75	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.26	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
25:RA:1239:G:H2'	25:RA:1240:U:O4'	2.10	0.51
25:RA:1667:G:N1	25:RA:1992:G:OP2	2.31	0.51
25:RA:878:A:H3'	25:RA:879:G:C8	2.46	0.51
25:RA:878:A:H3'	25:RA:879:G:H8	1.76	0.51
26:RB:5:C:O2'	26:RB:27:C:O2	2.28	0.51
28:RE:77:ILE:O	28:RE:78:LEU:C	2.48	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
42:RW:20:VAL:C	42:RW:22:ASP:N	2.60	0.51
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.51
1:XA:1347:G:H22	1:XA:1374:A:P	2.34	0.51
1:XA:234:C:H2'	1:XA:235:C:C6	2.46	0.51
1:XA:243:A:H4'	1:XA:244:U:O5'	2.10	0.51
1:XA:31:G:O2'	1:XA:48:C:N4	2.43	0.51
1:XA:518:C:H5'	1:XA:530:G:O4'	2.10	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.51
6:XF:63:TYR:N	6:XF:63:TYR:CD2	2.79	0.51
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.08	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.91	0.51
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.51
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.91	0.51
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.45	0.51
25:YA:184:C:H2'	25:YA:185:U:H6	1.76	0.51
28:YE:77:ILE:O	28:YE:78:LEU:C	2.48	0.51
30:YG:114:ILE:CG2	30:YG:115:ARG:N	2.73	0.51
32:YI:4:ILE:N	32:YI:37:VAL:O	2.41	0.51
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.51
25:YA:1199:U:H1'	40:YU:4:ALA:HB2	1.91	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:YX:18:TYR:C	43:YX:20:GLY:N	2.63	0.51
45:YZ:61:LEU:HB3	45:YZ:62:PRO:CD	2.40	0.51
1:QA:920:U:H5'	1:QA:1080:A:C6	2.46	0.51
1:QA:1095:U:P	1:QA:1108:G:H1	2.34	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
6:QF:63:TYR:N	6:QF:63:TYR:HD2	2.09	0.51
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.58	0.51
13:QM:57:ARG:CB	13:QM:57:ARG:HH11	2.14	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	0.51
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.10	0.51
25:RA:1459:G:H2'	25:RA:1460:A:H5''	1.93	0.51
25:RA:789:A:O3'	25:RA:1781:C:N4	2.44	0.51
25:RA:1779:U:OP2	25:RA:1784:A:N6	2.38	0.51
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.11	0.51
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.26	0.51
25:RA:631:A:H2'	25:RA:632:A:O4'	2.10	0.51
25:RA:67:U:H2'	25:RA:68:G:H8	1.75	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.79	0.51
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	1.93	0.51
32:RI:14:ASP:O	32:RI:16:GLY:N	2.44	0.51
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
1:XA:1504:G:H4'	1:XA:1505:G:O5'	2.10	0.51
1:XA:156:G:H1	1:XA:165:C:N4	2.08	0.51
1:XA:262:A:H2'	1:XA:263:A:C8	2.46	0.51
1:XA:264:U:H2'	1:XA:265:G:O4'	2.11	0.51
1:XA:926:G:H22	23:XX:1:A:P	2.34	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	0.51
1:XA:1359:C:H3'	14:XN:35:ARG:HH12	1.75	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
22:XV:4:G:HO2'	22:XV:5:G:H8	1.58	0.51
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.62	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.51
25:YA:1077:A:H2	25:YA:1079:C:H5''	1.75	0.51
25:YA:1270:C:H5''	25:YA:1271:G:O5'	2.11	0.51
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.46	0.51
25:YA:142:G:O3'	43:YX:35:THR:HG21	2.10	0.51
25:YA:1547:C:O2'	25:YA:1548:C:H5'	2.11	0.51
25:YA:1688:U:H1'	25:YA:1701:A:C6	2.46	0.51
25:YA:1929:G:C8	25:YA:1929:G:O5'	2.64	0.51
28:YE:37:ARG:HE	28:YE:37:ARG:N	2.09	0.51
32:YI:129:THR:HA	32:YI:137:PRO:HA	1.93	0.51
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.93	0.51
32:YI:14:ASP:O	32:YI:16:GLY:N	2.44	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.40	0.51
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
39:YT:14:TYR:CD1	39:YT:14:TYR:N	2.77	0.51
43:YX:47:PHE:N	43:YX:47:PHE:CD1	2.78	0.51
43:YX:65:ARG:CD	43:YX:65:ARG:H	2.24	0.51
45:YZ:48:PHE:CZ	45:YZ:52:SER:HA	2.46	0.51
45:YZ:70:LEU:HD11	45:YZ:98:MET:HE1	1.91	0.51
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.75	0.51
1:QA:509:A:H5''	4:QD:55:ALA:HB2	1.93	0.51
1:QA:539:A:H2'	1:QA:540:G:C8	2.45	0.51
1:QA:646:U:H2'	1:QA:647:C:H6	1.72	0.51
1:QA:765:G:N1	1:QA:812:C:H2'	2.25	0.51
2:QB:187:LEU:O	2:QB:187:LEU:HD13	2.11	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.45	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.10	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.58	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.46	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
25:RA:1370:C:H2'	25:RA:1371:G:O4'	2.11	0.51
25:RA:307:G:N2	25:RA:330:A:H62	2.04	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
34:RO:15:GLY:O	34:RO:46:ALA:HB1	2.10	0.51
38:RS:89:ARG:O	38:RS:89:ARG:HD2	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:939:G:H2'	1:XA:940:C:C6	2.46	0.51
4:XD:13:ARG:HD3	4:XD:38:TYR:O	2.10	0.51
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
25:YA:1184:G:OP1	49:Y3:29:ARG:NH1	2.44	0.51
25:YA:1688:U:O2	25:YA:1700:A:H5''	2.11	0.51
25:YA:2308:G:N1	25:YA:2311:A:C2	2.77	0.51
25:YA:43:G:H2'	25:YA:44:A:O4'	2.10	0.51
25:YA:890:A:O2'	25:YA:892:G:H8	1.93	0.51
25:YA:1654:A:O2'	28:YE:113:PHE:O	2.21	0.51
30:YG:51:ARG:HB3	30:YG:51:ARG:HH11	1.76	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
36:YQ:133:ARG:HG2	36:YQ:134:ARG:N	2.26	0.51
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
45:YZ:124:ILE:HD11	45:YZ:165:VAL:CG2	2.41	0.51
1:QA:109:A:C6	1:QA:326:G:C6	2.98	0.51
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.46	0.51
1:QA:1207:G:H2'	1:QA:1208:C:H6	1.76	0.51
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.51
3:QC:99:VAL:HG23	3:QC:99:VAL:O	2.11	0.51
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.10	0.51
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
47:R1:91:LYS:CA	47:R1:91:LYS:HE3	2.39	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51
25:RA:1049:C:H2'	25:RA:1050:A:H5''	1.93	0.51
25:RA:1283:G:O2'	25:RA:1285:G:N7	2.34	0.51
25:RA:1464:C:HO2'	25:RA:1528:A:H8	1.58	0.51
25:RA:1930:G:O2'	25:RA:1931:U:O5'	2.27	0.51
25:RA:2027:G:H2'	25:RA:2028:U:O4'	2.10	0.51
25:RA:482:A:O2'	25:RA:497:A:N1	2.38	0.51
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
27:RD:94:LEU:C	27:RD:94:LEU:HD13	2.31	0.51
30:RG:51:ARG:HB3	30:RG:51:ARG:HH11	1.76	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
32:RI:83:ALA:O	32:RI:84:GLY:C	2.48	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.21	0.51
33:RN:6:PRO:HG2	33:RN:43:THR:OG1	2.11	0.51
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
44:RY:2:ARG:NH1	44:RY:2:ARG:HG2	2.22	0.51
1:XA:232:G:H1'	1:XA:262:A:N1	2.26	0.51
1:XA:496:A:H2'	1:XA:496:A:N3	2.25	0.51
1:XA:292:G:H21	1:XA:608:A:N6	2.09	0.51
1:XA:659:U:H2'	1:XA:660:G:C8	2.46	0.51
1:XA:918:A:H2'	1:XA:919:A:C8	2.45	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.51
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.51
22:XV:58:A:O2'	22:XV:60:U:OP2	2.16	0.51
48:Y2:36:ARG:O	48:Y2:40:SER:HB2	2.10	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
53:Y7:36:GLN:O	53:Y7:36:GLN:HG2	2.09	0.51
25:YA:2581:G:N3	25:YA:2581:G:H2'	2.26	0.51
25:YA:2710:C:H2'	25:YA:2711:A:O4'	2.11	0.51
25:YA:323:G:O2'	25:YA:1205:U:N3	2.38	0.51
25:YA:630:G:H4'	25:YA:640:C:H4'	1.92	0.51
26:YB:48:A:H2'	26:YB:49:C:C6	2.46	0.51
27:YD:28:GLU:OE1	27:YD:29:PRO:HD2	2.11	0.51
27:YD:94:LEU:C	27:YD:94:LEU:HD13	2.31	0.51
30:YG:109:VAL:O	30:YG:113:ARG:HG3	2.10	0.51
31:YH:4:ILE:O	31:YH:6:ARG:N	2.43	0.51
31:YH:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
33:YN:16:ILE:HG22	33:YN:17:ASP:N	2.25	0.51
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.51
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1268:A:H2'	1:QA:1269:A:C8	2.46	0.51
1:QA:1333:A:H2'	1:QA:1334:G:O4'	2.10	0.51
1:QA:1471:G:H2'	1:QA:1472:U:C6	2.46	0.51
1:QA:362:G:N2	1:QA:365:U:OP2	2.42	0.51
1:QA:648:A:H2'	1:QA:649:G:H8	1.76	0.51
1:QA:871:U:HO2'	1:QA:872:A:C5'	2.22	0.51
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
1:QA:1190:G:OP2	3:QC:5:ILE:HG23	2.11	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.51
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.51
14:QN:8:GLU:C	14:QN:10:ALA:H	2.13	0.51
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.51
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	0.51
25:RA:1162:G:H1'	41:RV:23:GLU:OE2	2.11	0.51
25:RA:973:A:H5'	25:RA:1188:U:H1'	1.93	0.51
25:RA:127:A:H5''	25:RA:128:C:C6	2.47	0.51
25:RA:747:U:C4	25:RA:2613:U:C4	2.98	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.51
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.51
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.51
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.23	0.51
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	0.51
44:RY:44:ILE:CG1	44:RY:45:VAL:H	2.24	0.51
1:XA:10:A:HO2'	1:XA:507:C:HO2'	1.58	0.51
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.26	0.51
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.45	0.51
1:XA:321:A:H61	1:XA:332:G:H1	1.58	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
5:XE:78:HIS:CD2	8:XH:104:ARG:CG	2.87	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:XV:15:G:H22	22:XV:48:C:H42	1.57	0.51
22:XV:35:A:C4	23:XX:3:G:N2	2.79	0.51
25:YA:1218:C:N4	25:YA:1231:G:H1	2.09	0.51
25:YA:2055:C:H4'	25:YA:2056:G:H5''	1.92	0.51
26:YB:13:A:N6	26:YB:70:C:H5'	2.25	0.51
26:YB:42:C:N4	30:YG:91:ARG:NH2	2.58	0.51
27:YD:10:THR:CG2	27:YD:13:ARG:HB3	2.35	0.51
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	0.51
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.11	0.51
33:YN:118:LYS:O	33:YN:120:LEU:N	2.43	0.51
33:YN:78:TYR:HD1	33:YN:78:TYR:N	2.07	0.51
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.51
34:YO:24:VAL:HG13	34:YO:24:VAL:O	2.11	0.51
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.51
1:QA:1178:G:H5''	9:QI:93:ARG:HH21	1.76	0.50
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.94	0.50
1:QA:266:G:O2'	1:QA:267:C:OP2	2.20	0.50
1:QA:889:A:H5'	1:QA:891:U:H1'	1.93	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
46:R0:11:ARG:CG	46:R0:11:ARG:NH1	2.73	0.50
25:RA:1019:U:H2'	25:RA:1020:A:H8	1.76	0.50
25:RA:1232:G:H2'	25:RA:1233:C:C6	2.45	0.50
25:RA:1314:C:OP1	25:RA:1332:G:OP1	2.30	0.50
25:RA:1910:G:H1	25:RA:1920:C:H42	1.60	0.50
25:RA:2049:G:H1	25:RA:2619:C:H42	1.58	0.50
25:RA:587:C:H4'	25:RA:588:U:O5'	2.11	0.50
25:RA:690:G:H2'	25:RA:691:C:C6	2.46	0.50
29:RF:108:LYS:NZ	29:RF:108:LYS:HA	2.26	0.50
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.09	0.50
30:RG:92:VAL:HG13	30:RG:92:VAL:O	2.12	0.50
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
37:RR:1:MET:O	37:RR:2:ARG:CB	2.59	0.50
39:RT:51:ARG:HG3	39:RT:98:LYS:HG3	1.93	0.50
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.93	0.50
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
1:XA:163:C:H2'	1:XA:164:U:C6	2.46	0.50
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.11	0.50
5:XE:126:ARG:CG	5:XE:126:ARG:HH11	2.20	0.50
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.50
22:XV:68:C:H2'	22:XV:69:C:H6	1.76	0.50
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.91	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.50
25:YA:1309:G:P	53:Y7:9:ARG:HD3	2.51	0.50
25:YA:2133:G:H1'	25:YA:2158:A:H61	1.76	0.50
25:YA:2281:C:O2'	25:YA:2282:G:H5'	2.11	0.50
25:YA:2756:U:H1'	25:YA:2757:A:H5''	1.93	0.50
28:YE:116:VAL:HG22	28:YE:122:PHE:HB2	1.91	0.50
33:YN:26:LEU:HG	33:YN:30:ILE:HD11	1.93	0.50
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.50
35:YP:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	0.50
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.50
38:YS:89:ARG:O	38:YS:89:ARG:HD2	2.11	0.50
38:YS:95:HIS:CG	38:YS:96:GLY:N	2.77	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
44:YY:95:LYS:O	44:YY:96:ILE:O	2.28	0.50
45:YZ:116:VAL:HG23	45:YZ:116:VAL:O	2.11	0.50
45:YZ:81:ARG:O	45:YZ:81:ARG:HD3	2.12	0.50
1:QA:186(D):C:H2'	1:QA:186(E):C:H6	1.75	0.50
1:QA:445:G:H2'	1:QA:446:G:H8	1.77	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.10	0.50
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.42	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.41	0.50
22:QV:68:C:H2'	22:QV:69:C:H6	1.76	0.50
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.50
51:R5:37:LYS:HD2	51:R5:37:LYS:O	2.12	0.50
25:RA:288:C:H2'	25:RA:289:A:H8	1.76	0.50
29:RF:45:ARG:NH1	29:RF:45:ARG:CG	2.71	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
31:RH:153:LYS:HG3	31:RH:161:GLY:HA2	1.91	0.50
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.50
37:RR:70:LEU:O	37:RR:72:ASP:N	2.42	0.50
1:XA:1048:G:OP1	14:YN:3:ARG:HB3	2.11	0.50
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.26	0.50
1:XA:1399:C:C2	1:XA:1401:G:C5	3.00	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.93	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.24	0.50
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.50
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.50
25:YA:83:G:N2	25:YA:102:G:O2'	2.43	0.50
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.46	0.50
25:YA:1818:U:H2'	27:YD:157:ARG:HG3	1.92	0.50
25:YA:299:A:N6	25:YA:300:A:N1	2.58	0.50
25:YA:611:C:H2'	25:YA:612:G:O4'	2.11	0.50
27:YD:238:GLY:O	27:YD:239:ARG:HB2	2.11	0.50
28:YE:105:THR:HG23	28:YE:166:THR:OG1	2.10	0.50
28:YE:54:GLN:NE2	28:YE:54:GLN:H	2.09	0.50
29:YF:108:LYS:HA	29:YF:108:LYS:NZ	2.27	0.50
31:YH:103:LEU:CD1	31:YH:131:VAL:HG21	2.41	0.50
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
34:YO:23:ARG:HG2	34:YO:23:ARG:HH11	1.76	0.50
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.50
25:YA:2318:G:H1	38:YS:2:ALA:HA	1.75	0.50
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.50
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.50
1:QA:102:G:O2'	1:QA:151:A:N3	2.34	0.50
1:QA:314:C:H5'	1:QA:315:A:OP2	2.10	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.40	0.50
1:QA:1111:A:N1	3:QC:177:THR:HG23	2.26	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.11	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
1:QA:110:C:O2'	16:QP:25:ARG:O	2.29	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
25:RA:1533:C:H3'	25:RA:1534:G:H5''	1.92	0.50
25:RA:1578:U:C2'	25:RA:1579:A:H5'	2.41	0.50
25:RA:589:C:H2'	25:RA:590:A:C8	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.50
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	0.50
32:RI:4:ILE:N	32:RI:37:VAL:O	2.41	0.50
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.77	0.50
45:RZ:108:PRO:CB	45:RZ:112:ARG:HB2	2.38	0.50
45:RZ:150:LEU:O	45:RZ:151:HIS:O	2.29	0.50
1:XA:1213:A:C6	1:XA:1215:G:H1'	2.46	0.50
1:XA:1465:C:H2'	1:XA:1466:C:O4'	2.11	0.50
1:XA:255:G:H2'	1:XA:256:U:C6	2.46	0.50
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.47	0.50
1:XA:523:A:H61	12:XL:92:ASP:CB	2.16	0.50
1:XA:646:U:H2'	1:XA:647:C:C6	2.46	0.50
1:XA:908:A:H2'	1:XA:909:A:H8	1.76	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
5:XE:126:ARG:NH1	5:XE:126:ARG:HG3	2.19	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.11	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
25:YA:651:G:OP2	54:Y8:21:LYS:HE3	2.11	0.50
25:YA:2227:A:H5''	27:YD:263:ARG:HH11	1.74	0.50
25:YA:284:U:H2'	25:YA:285:C:C6	2.46	0.50
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.75	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
32:YI:71:ILE:O	32:YI:72:LEU:HB2	2.10	0.50
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.93	0.50
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.31	0.50
25:YA:814:C:H41	35:YP:25:SER:HA	1.77	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
1:QA:560:U:N3	1:QA:566:G:O4'	2.44	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
1:QA:1216:G:H5''	14:QN:5:ALA:CB	2.41	0.50
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.40	0.50
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.50
19:QS:43:GLU:OE2	19:QS:43:GLU:N	2.45	0.50
25:RA:1110:G:H2'	25:RA:1111:A:C8	2.46	0.50
25:RA:1826:G:H2'	25:RA:1827:C:H6	1.76	0.50
25:RA:2199:A:H3'	25:RA:2205:C:C6	2.42	0.50
25:RA:746:A:O2'	25:RA:747:U:OP2	2.29	0.50
27:RD:238:GLY:O	27:RD:239:ARG:HB2	2.11	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.26	0.50
28:RE:37:ARG:H	28:RE:37:ARG:HE	1.59	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50
34:RO:47:ILE:CG1	34:RO:48:PRO:HD2	2.42	0.50
35:RP:95:VAL:HG13	35:RP:100:LEU:CD2	2.41	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.50
45:RZ:124:ILE:HD11	45:RZ:165:VAL:CG2	2.41	0.50
45:RZ:134:PRO:O	45:RZ:136:PHE:N	2.45	0.50
1:XA:1348:U:N3	1:XA:1374:A:H2	2.09	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.11	0.50
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.93	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.42	0.50
14:XN:8:GLU:C	14:XN:10:ALA:H	2.13	0.50
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.50
1:XA:760:G:O2'	17:XQ:98:LEU:HD23	2.12	0.50
49:Y3:17:LYS:HA	49:Y3:20:LYS:HD2	1.92	0.50
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.50
51:Y5:56:LYS:N	51:Y5:56:LYS:HD2	2.13	0.50
25:YA:1187:G:H8	25:YA:1187:G:O5'	1.95	0.50
25:YA:239:U:H2'	25:YA:240:G:O4'	2.12	0.50
25:YA:2579:C:H2'	25:YA:2580:U:O4'	2.11	0.50
25:YA:818:G:O2'	25:YA:838:C:O2'	2.19	0.50
25:YA:99:U:H4'	25:YA:101:G:C5'	2.41	0.50
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.50
45:YZ:134:PRO:C	45:YZ:136:PHE:N	2.64	0.50
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.46	0.50
1:QA:170:U:O2'	1:QA:171:A:H5'	2.12	0.50
1:QA:735:C:H2'	1:QA:736:C:H6	1.77	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.93	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.76	0.50
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.50
25:RA:1050:A:H8	25:RA:2751:G:O2'	1.94	0.50
25:RA:1494:A:H3'	25:RA:1495:A:C8	2.46	0.50
25:RA:2426:A:H5'	25:RA:2426:A:H8	1.77	0.50
25:RA:2658:C:H2'	25:RA:2659:G:O4'	2.12	0.50
25:RA:582:G:H2'	25:RA:583:G:C8	2.47	0.50
25:RA:840:C:H2'	25:RA:841:A:C8	2.46	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.89	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.09	0.50
38:RS:62:LYS:HB3	38:RS:97:ARG:CD	2.39	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
45:RZ:134:PRO:C	45:RZ:136:PHE:N	2.64	0.50
1:XA:167:G:H2'	1:XA:168:G:C8	2.47	0.50
2:XB:23:ARG:HH11	2:XB:23:ARG:HG2	1.76	0.50
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.93	0.50
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.50
1:XA:797:C:OP1	11:XK:124:LYS:HE2	2.11	0.50
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	0.50
50:Y4:57:GLU:O	50:Y4:61:ARG:O	2.30	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.11	0.50
25:YA:2067:G:O2'	25:YA:2069:G:H5''	2.11	0.50
25:YA:2303:G:H1	25:YA:2313:C:H42	1.59	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.44	0.50
25:YA:2869:G:H2'	25:YA:2870:C:O4'	2.11	0.50
26:YB:44:G:H1'	26:YB:47:C:N4	2.26	0.50
27:YD:182:LEU:H	27:YD:272:ALA:CB	2.25	0.50
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
31:YH:131:VAL:CG1	31:YH:132:ARG:N	2.74	0.50
31:YH:133:VAL:HG12	31:YH:141:VAL:HG13	1.93	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
33:YN:112:LEU:HD23	33:YN:113:GLY:N	2.26	0.50
34:YO:35:VAL:O	34:YO:35:VAL:HG23	2.11	0.50
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.31	0.50
36:YQ:132:VAL:HG12	36:YQ:133:ARG:N	2.27	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.40	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.77	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:H	2.22	0.50
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
45:YZ:107:THR:HG22	45:YZ:108:PRO:HA	1.94	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.50
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.46	0.50
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.15	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.25	0.50
22:QV:75:C:H2'	22:QV:76:A:O4'	2.12	0.50
46:R0:51:VAL:CG2	46:R0:81:VAL:HG23	2.42	0.50
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.50
25:RA:1083:U:O2'	25:RA:1085:A:H5''	2.12	0.50
25:RA:116:C:H2'	25:RA:117:G:O4'	2.11	0.50
25:RA:2582:G:N2	25:RA:2583:G:H1'	2.27	0.50
25:RA:1655:A:O2'	28:RE:115:GLY:HA2	2.11	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.42	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
33:RN:87:LEU:C	33:RN:87:LEU:HD23	2.32	0.50
34:RO:107:ARG:HA	34:RO:112:MET:HE1	1.94	0.50
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:RQ:2:LEU:N	36:RQ:2:LEU:HD23	2.27	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	0.50
44:RY:74:PRO:O	44:RY:80:GLY:HA2	2.10	0.50
44:RY:88:LYS:HA	44:RY:88:LYS:NZ	2.27	0.50
1:XA:1015:A:N3	1:XA:1218:C:O2'	2.43	0.50
1:XA:1329:A:H5'	13:XM:29:ARG:HG3	1.93	0.50
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.93	0.50
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.47	0.50
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.32	0.50
2:XB:178:ARG:O	8:XH:71:GLY:HA2	2.12	0.50
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.12	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.46	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.50
14:XN:39:LEU:HD22	14:XN:43:CYS:HB3	1.93	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.75	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.57	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
19:XS:67:VAL:HB	50:Y4:59:PHE:CE2	2.47	0.50
25:YA:1416:G:O2'	25:YA:1417:C:O5'	2.22	0.50
25:YA:609(A):G:H2'	25:YA:610:C:C6	2.47	0.50
27:YD:233:HIS:H	27:YD:233:HIS:CD2	2.29	0.50
28:YE:105:THR:HB	28:YE:197:ILE:HG12	1.92	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
32:YI:74:ASN:ND2	32:YI:75:LEU:H	2.09	0.50
25:YA:1007:C:OP1	33:YN:35:ARG:NH1	2.45	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
40:YU:92:ARG:CD	40:YU:94:ASN:HB3	2.42	0.50
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50
45:YZ:170:THR:O	45:YZ:171:ILE:CB	2.60	0.50
1:QA:1128:C:N4	1:QA:1144:G:H1	2.09	0.50
1:QA:683:G:H2'	1:QA:684:A:C8	2.47	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50
6:QF:63:TYR:CD2	6:QF:63:TYR:N	2.79	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.50
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.77	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
18:QR:30:ASP:C	18:QR:32:ARG:H	2.16	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
25:RA:1925:C:N3	25:RA:1929:G:O6	2.44	0.50
25:RA:2410:G:H2'	25:RA:2411:A:H8	1.76	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.58	0.50
25:RA:2414:G:H21	35:RP:67:MET:CE	2.25	0.50
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ1	1.76	0.50
1:XA:1069:C:O3'	5:XE:25:ARG:NH1	2.45	0.50
1:XA:1225:A:H5''	1:XA:1226:C:OP2	2.12	0.50
1:XA:345:C:H4'	1:XA:346:G:C2	2.47	0.50
1:XA:836:G:OP1	18:XR:61:LYS:NZ	2.34	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.27	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.50
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.11	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.11	0.50
13:XM:57:ARG:CB	13:XM:57:ARG:HH11	2.14	0.50
47:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.46	0.50
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
50:Y4:22:ILE:HD12	50:Y4:22:ILE:H	1.77	0.50
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
25:YA:1156:A:C8	40:YU:51:LYS:HD2	2.46	0.50
25:YA:1312:U:H4'	25:YA:1313:U:O5'	2.12	0.50
25:YA:1658:C:C4	25:YA:1659:U:C4	3.00	0.50
25:YA:2347:C:H5	25:YA:2382:G:H1'	1.76	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50
37:YR:117:VAL:CG2	37:YR:118:GLU:N	2.74	0.50
1:XA:1443:G:N2	39:YT:119:LYS:HB2	2.27	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:YV:51:VAL:CG1	41:YV:52:VAL:N	2.75	0.50
41:YV:29:PRO:O	41:YV:61:VAL:O	2.29	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
45:YZ:134:PRO:O	45:YZ:136:PHE:N	2.45	0.50
55:Z8:76:PPU:HN2	55:Z8:76:PPU:HD2	1.76	0.50
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.24	0.50
1:QA:186(A):C:H2'	1:QA:186(B):C:H6	1.75	0.50
1:QA:452:A:H2'	1:QA:453:A:C8	2.47	0.50
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.50
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
15:QO:8:LYS:HZ2	15:QO:8:LYS:HB2	1.74	0.50
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.47	0.50
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.30	0.50
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.08	0.50
47:R1:80:LEU:HB2	47:R1:81:LYS:CE	2.41	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.46	0.50
28:RE:176:ILE:O	28:RE:176:ILE:HG22	2.10	0.50
28:RE:179:GLU:O	28:RE:180:ASN:HB2	2.12	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.50
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.50
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.50
32:RI:130:TYR:HB3	32:RI:136:VAL:HG13	1.93	0.50
32:RI:145:VAL:CG2	32:RI:146:ALA:N	2.73	0.50
35:RP:6:LEU:CD2	35:RP:6:LEU:N	2.75	0.50
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
25:RA:297:C:H5''	44:RY:85:VAL:HG21	1.93	0.50
45:RZ:170:THR:O	45:RZ:171:ILE:CB	2.60	0.50
1:XA:1116:C:C2'	1:XA:1117:G:H5'	2.42	0.50
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.40	0.50
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.46	0.50
1:XA:428:G:H5''	4:XD:7:PRO:HB3	1.93	0.50
1:XA:52:G:H2'	1:XA:53:A:H8	1.76	0.50
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
1:XA:27:G:C4'	4:XD:209:ARG:HG3	2.40	0.50
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.50
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.50
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.50
13:XM:65:LYS:HZ2	13:XM:69:GLU:HG2	1.76	0.50
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.42	0.50
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50
51:Y5:37:LYS:HD2	51:Y5:37:LYS:O	2.12	0.50
53:Y7:12:ARG:HG3	53:Y7:12:ARG:NH1	2.27	0.50
25:YA:1069:A:H4'	25:YA:1070:A:H5''	1.94	0.50
25:YA:1086:A:OP1	25:YA:1104:C:O2'	2.30	0.50
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.12	0.50
25:YA:1388:G:H2'	25:YA:1389:G:H8	1.76	0.50
25:YA:272:G:H2'	25:YA:273:G:H8	1.77	0.50
25:YA:571:A:H1'	25:YA:573:G:C8	2.47	0.50
25:YA:910:A:N1	25:YA:2277:G:H1'	2.27	0.50
26:YB:13:A:N1	26:YB:69:G:O2'	2.33	0.50
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.50
1:QA:621:A:H2'	1:QA:622:A:C8	2.47	0.50
1:QA:980:C:H5''	1:QA:981:U:C5	2.47	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.50
12:QL:24:VAL:CG1	12:QL:24:VAL:O	2.58	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.12	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
52:R6:34:LEU:HD23	52:R6:36:LEU:HD22	1.92	0.50
52:R6:41:PRO:HD2	52:R6:46:HIS:H	1.77	0.50
53:R7:12:ARG:HG3	53:R7:12:ARG:NH1	2.27	0.50
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
25:RA:1186:G:H2'	25:RA:1187:G:O4'	2.12	0.50
25:RA:222:A:HO2'	25:RA:223:A:P	2.35	0.50
25:RA:2552:U:C2	25:RA:2554:U:H5''	2.47	0.50
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.50
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.50
1:XA:299:G:H2'	1:XA:300:A:C8	2.46	0.50
2:XB:172:ILE:CD1	2:XB:172:ILE:H	2.18	0.50
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.50
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.26	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.50
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.50
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.50
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.12	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.12	0.50
23:XX:7:G:H5''	23:XX:7:G:H8	1.76	0.50
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.50
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
52:Y6:44:ARG:O	52:Y6:45:LYS:CB	2.60	0.50
25:YA:1388:G:O2'	25:YA:1389:G:H5'	2.11	0.50
25:YA:1727:U:H3	25:YA:1733:G:H1	1.60	0.50
25:YA:323:G:H2'	29:YF:169:ASN:ND2	2.27	0.50
25:YA:49:A:N7	25:YA:120:U:C5	2.79	0.50
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.50
28:YE:37:ARG:H	28:YE:37:ARG:HE	1.59	0.50
28:YE:2:LYS:HG2	28:YE:95:ILE:CG2	2.42	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	2.41	0.50
45:YZ:150:LEU:O	45:YZ:151:HIS:O	2.29	0.50
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.60	0.49
1:QA:1479:C:H2'	1:QA:1480:G:H8	1.77	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.49
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.49
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.49
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.49
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.49
25:RA:1285:G:H22	25:RA:1329:U:P	2.33	0.49
25:RA:1371:G:O2'	25:RA:1372:U:H5	1.87	0.49
25:RA:2643:G:H2'	25:RA:2644:G:O4'	2.11	0.49
25:RA:503:A:H4'	25:RA:504:U:H5''	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:654(S):G:H2'	25:RA:654(T):C:C6	2.47	0.49
25:RA:2311:A:C8	30:RG:82:LEU:HD11	2.47	0.49
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.49
32:RI:114:LEU:HD12	32:RI:129:THR:O	2.12	0.49
32:RI:74:ASN:ND2	32:RI:75:LEU:H	2.09	0.49
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	0.49
45:RZ:45:ASP:OD1	45:RZ:49:ARG:NE	2.41	0.49
45:RZ:81:ARG:O	45:RZ:81:ARG:HD3	2.12	0.49
1:XA:1298:C:H4'	1:XA:1299:A:C8	2.47	0.49
1:XA:243:A:N6	1:XA:281:G:O2'	2.45	0.49
1:XA:302:G:C6	1:XA:303:A:C5	2.99	0.49
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.42	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
8:XH:91:ARG:NH1	8:XH:91:ARG:HG2	2.25	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.27	0.49
13:XM:82:MET:O	13:XM:83:ASP:C	2.49	0.49
14:XN:40:CYS:SG	14:XN:43:CYS:N	2.75	0.49
46:Y0:51:VAL:CG2	46:Y0:81:VAL:HG23	2.42	0.49
25:YA:121:G:H4'	25:YA:149:A:H5'	1.94	0.49
25:YA:1727:U:H2'	25:YA:1728:G:O4'	2.12	0.49
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.77	0.49
25:YA:2719:G:O2'	25:YA:2720:U:O5'	2.29	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.49
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.49
30:YG:83:ARG:HH11	30:YG:83:ARG:HG2	1.76	0.49
32:YI:140:LEU:HD23	32:YI:140:LEU:N	2.28	0.49
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.26	0.49
36:YQ:79:LEU:O	36:YQ:80:GLU:OE1	2.31	0.49
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.26	0.49
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.49
1:QA:1024:G:OP1	1:QA:1024:G:H4'	2.11	0.49
1:QA:1410:G:H1	1:QA:1490:C:N4	2.08	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.49
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.49
25:RA:1728:G:H3'	25:RA:1729:A:C5'	2.37	0.49
25:RA:2400:G:N2	25:RA:2417:C:C2	2.80	0.49
25:RA:222:A:H5''	25:RA:421:U:OP1	2.13	0.49
25:RA:987:G:H2'	25:RA:988:A:O4'	2.12	0.49
26:RB:24:G:H5''	26:RB:25:A:OP1	2.12	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
28:RE:61:ARG:O	28:RE:62:PRO:C	2.51	0.49
30:RG:83:ARG:HG2	30:RG:83:ARG:HH11	1.76	0.49
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.56	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
45:RZ:33:LEU:HD21	45:RZ:35:ARG:CD	2.42	0.49
1:XA:489:C:P	4:XD:132:ARG:HH22	2.34	0.49
1:XA:711:G:H2'	1:XA:712:A:C8	2.47	0.49
1:XA:87:A:H2'	1:XA:88:C:O4'	2.11	0.49
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.11	0.49
4:XD:107:ARG:C	4:XD:109:GLY:H	2.15	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.49
16:XP:59:TRP:HE3	16:XP:59:TRP:HA	1.76	0.49
19:XS:64:GLU:HB2	50:Y4:55:ARG:NH1	2.22	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
47:Y1:93:GLU:O	47:Y1:97:LEU:HD11	2.12	0.49
49:Y3:21:ALA:O	49:Y3:25:ALA:N	2.41	0.49
25:YA:1182:A:H2'	25:YA:1183:G:O4'	2.12	0.49
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.46	0.49
25:YA:2197:U:H1'	25:YA:2198:A:C8	2.47	0.49
25:YA:859:G:O2'	25:YA:860:U:O5'	2.30	0.49
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
36:YQ:2:LEU:HD23	36:YQ:2:LEU:N	2.27	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.49
44:YY:44:ILE:CG1	44:YY:45:VAL:H	2.24	0.49
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.94	0.49
1:QA:919:A:O2'	1:QA:1080:A:N1	2.34	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1531:A:C5'	1:QA:1531:A:C8	2.85	0.49
1:QA:496:A:H5'	1:QA:497:U:OP2	2.12	0.49
1:QA:692:U:H5	11:QK:26:ASN:OD1	1.95	0.49
1:QA:789:U:O2'	1:QA:791:G:N7	2.46	0.49
4:QD:33:MET:CE	4:QD:37:PRO:HA	2.42	0.49
4:QD:8:VAL:O	4:QD:11:LEU:HB2	2.12	0.49
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.92	0.49
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.49
25:RA:1537:C:H2'	25:RA:1538:G:O4'	2.11	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	0.49
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.49
30:RG:49:ASP:OD1	30:RG:51:ARG:HG3	2.12	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.94	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
38:RS:18:ILE:O	38:RS:19:LYS:O	2.31	0.49
41:RV:91:TYR:HD1	41:RV:91:TYR:C	2.16	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
44:RY:90:LEU:H	44:RY:90:LEU:HD22	1.73	0.49
45:RZ:116:VAL:O	45:RZ:116:VAL:HG23	2.11	0.49
1:XA:1480:G:H2'	1:XA:1481:U:O4'	2.12	0.49
1:XA:165:C:H2'	1:XA:166:G:C8	2.47	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.22	0.49
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
12:XL:62:SER:C	12:XL:64:TYR:H	2.15	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49
50:Y4:9:LEU:H	50:Y4:27:THR:CG2	2.26	0.49
54:Y8:56:GLU:O	54:Y8:57:ARG:C	2.50	0.49
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.20	0.49
25:YA:1300:U:H4'	25:YA:1301:A:C5'	2.42	0.49
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.36	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.89	0.49
29:YF:11:VAL:CG1	29:YF:12:LEU:N	2.75	0.49
31:YH:153:LYS:HA	31:YH:153:LYS:HZ3	1.75	0.49
32:YI:78:THR:HG22	32:YI:141:LYS:CD	2.27	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.12	0.49
44:YY:88:LYS:HA	44:YY:88:LYS:NZ	2.27	0.49
45:YZ:124:ILE:O	45:YZ:124:ILE:HG23	2.11	0.49
45:YZ:57:ILE:HG22	45:YZ:58:VAL:N	2.28	0.49
45:YZ:69:THR:HG22	45:YZ:90:VAL:HG22	1.94	0.49
55:Z6:76:PPU:HN2	55:Z6:76:PPU:HD2	1.76	0.49
1:QA:1198:G:H2'	1:QA:1199:U:O4'	2.11	0.49
1:QA:1498:U:O2'	1:QA:1499:A:P	2.69	0.49
1:QA:617:G:H1	1:QA:623:C:H42	1.60	0.49
1:QA:64:G:H4'	1:QA:65:U:O5'	2.13	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.77	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.12	0.49
8:QH:14:ARG:HG2	8:QH:14:ARG:O	2.12	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
50:R4:23:GLU:C	50:R4:24:THR:HG1	2.16	0.49
50:R4:9:LEU:H	50:R4:27:THR:CG2	2.25	0.49
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	0.49
25:RA:1309:G:OP1	53:R7:9:ARG:HD3	2.13	0.49
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.12	0.49
25:RA:242:G:O3'	54:R8:6:THR:HG23	2.11	0.49
25:RA:2585:U:O2'	25:RA:2586:C:O5'	2.29	0.49
27:RD:72:LYS:O	27:RD:73:VAL:C	2.51	0.49
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.94	0.49
25:RA:2531:A:H4'	31:RH:157:TYR:CE2	2.47	0.49
32:RI:71:ILE:O	32:RI:72:LEU:HB2	2.10	0.49
36:RQ:132:VAL:HG12	36:RQ:133:ARG:N	2.27	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	0.49
37:RR:18:LEU:C	37:RR:18:LEU:HD13	2.33	0.49
40:RU:79:PHE:HE2	40:RU:83:LEU:HD22	1.78	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
45:RZ:134:PRO:HB2	45:RZ:136:PHE:O	2.12	0.49
13:XM:54:VAL:CG2	50:Y4:32:TYR:OH	2.60	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
50:Y4:1:MET:O	50:Y4:1:MET:HG3	2.12	0.49
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.49
19:XS:5:LEU:HG	50:Y4:66:SER:CB	2.42	0.49
54:Y8:10:ALA:O	54:Y8:14:VAL:HG12	2.11	0.49
25:YA:2273:A:H2'	25:YA:2274:A:C8	2.47	0.49
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.27	0.49
25:YA:869:G:H1	25:YA:908:C:H42	1.58	0.49
25:YA:869:G:N2	25:YA:908:C:N3	2.59	0.49
25:YA:1568:G:O4'	27:YD:58:HIS:HE1	1.96	0.49
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.49
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.49
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.41	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
45:YZ:82:ARG:HG3	45:YZ:83:PRO:N	2.27	0.49
1:QA:923:A:N6	1:QA:1392:G:O6	2.45	0.49
1:QA:981:U:H5	1:QA:982:U:HO2'	1.61	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
9:QI:79:LEU:HD13	9:QI:79:LEU:O	2.12	0.49
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.42	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.15	0.49
13:QM:102:ARG:HG3	13:QM:102:ARG:O	2.11	0.49
16:QP:83:GLU:HA	16:QP:83:GLU:OE2	2.12	0.49
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.49
1:QA:103:C:P	20:QT:17:ARG:HH21	2.35	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.92	0.49
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.47	0.49
25:RA:2439:A:O2'	25:RA:2440:C:OP2	2.24	0.49
25:RA:2540:C:H2'	25:RA:2541:A:O4'	2.12	0.49
25:RA:2696:U:H2'	25:RA:2697:G:H8	1.77	0.49
27:RD:2:ALA:CB	27:RD:20:ASP:HB3	2.41	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.45	0.49
26:RB:56:G:H5'	30:RG:27:ASN:HD21	1.73	0.49
30:RG:35:GLU:C	30:RG:35:GLU:CD	2.71	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49
39:RT:16:ARG:NE	39:RT:19:LEU:HD21	2.27	0.49
39:RT:94:ALA:O	39:RT:95:ARG:CB	2.61	0.49
41:RV:76:LYS:HG3	41:RV:81:TYR:CD1	2.48	0.49
1:XA:946:A:O2'	1:XA:1333:A:N3	2.39	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.94	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
4:XD:196:LEU:C	4:XD:198:VAL:N	2.66	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
52:Y6:7:ILE:C	52:Y6:9:LEU:N	2.65	0.49
25:YA:128:C:H4'	53:Y7:49:ARG:HH12	1.77	0.49
25:YA:1942:C:OP2	25:YA:1943:U:O2'	2.18	0.49
25:YA:2723:C:H5''	37:YR:1:MET:HB3	1.93	0.49
25:YA:619:G:H3'	25:YA:620:G:N2	2.26	0.49
25:YA:953:A:OP2	36:YQ:16:ARG:NH1	2.42	0.49
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
30:YG:107:LEU:HD11	30:YG:178:PHE:CD1	2.48	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	0.49
38:YS:25:ARG:HH12	38:YS:42:ASP:CG	2.16	0.49
39:YT:39:ARG:CG	39:YT:40:THR:H	2.22	0.49
41:YV:91:TYR:HD1	41:YV:91:TYR:C	2.16	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
44:YY:81:LYS:CD	44:YY:97:ARG:HE	2.20	0.49
45:YZ:111:VAL:HG22	45:YZ:111:VAL:O	2.12	0.49
1:QA:1259:C:HO2'	1:QA:1283:G:N2	2.09	0.49
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.48	0.49
1:QA:148:G:H1	1:QA:174:C:H42	1.60	0.49
1:QA:629:G:H2'	1:QA:630:G:C8	2.48	0.49
1:QA:661:G:H1	1:QA:744:C:H42	1.59	0.49
1:QA:78:G:H1	1:QA:91:C:H42	1.60	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
5:QE:78:HIS:CB	8:QH:104:ARG:O	2.61	0.49
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
25:RA:1951:U:N3	25:RA:1954:G:OP2	2.37	0.49
25:RA:2093:G:N2	25:RA:2198:A:H62	2.03	0.49
25:RA:227:A:H1'	25:RA:228:A:C2	2.47	0.49
25:RA:2336:A:N3	25:RA:2385:C:H1'	2.27	0.49
25:RA:328:U:H4'	44:RY:68:HIS:CD2	2.47	0.49
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	0.49
34:RO:105:GLU:O	34:RO:108:GLU:HB2	2.12	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
34:RO:8:LEU:N	34:RO:8:LEU:CD2	2.76	0.49
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	0.49
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.41	0.49
44:RY:19:LYS:CG	44:RY:19:LYS:O	2.60	0.49
44:RY:95:LYS:CD	44:RY:95:LYS:N	2.75	0.49
45:RZ:19:ARG:HD3	45:RZ:25:PRO:HD2	1.95	0.49
45:RZ:82:ARG:HG3	45:RZ:83:PRO:N	2.27	0.49
1:XA:269:C:H2'	1:XA:270:A:C8	2.47	0.49
1:XA:833:U:H2'	1:XA:834:C:C6	2.47	0.49
1:XA:93:U:H2'	1:XA:95:G:O4'	2.12	0.49
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.41	0.49
4:XD:8:VAL:O	4:XD:11:LEU:HB2	2.12	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.28	0.49
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
9:XI:110:GLU:HG3	9:XI:110:GLU:O	2.12	0.49
16:XP:83:GLU:OE2	16:XP:83:GLU:HA	2.12	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
21:XU:2:GLY:O	21:XU:4:GLY:N	2.46	0.49
13:XM:3:ARG:HG2	50:Y4:34:GLU:OE1	2.12	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.60	0.49
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
25:YA:1469:A:H2'	25:YA:1470:G:C8	2.48	0.49
25:YA:153:C:P	47:Y1:88:LYS:HE2	2.53	0.49
25:YA:2126:A:H61	25:YA:2163:C:H1'	1.77	0.49
25:YA:2564:A:OP1	25:YA:2648:C:H4'	2.13	0.49
25:YA:2610:C:H4'	25:YA:2611:U:OP2	2.13	0.49
25:YA:620:G:H4'	25:YA:621:A:H5"	1.94	0.49
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
28:YE:179:GLU:O	28:YE:180:ASN:HB2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
37:YR:96:ARG:NH2	37:YR:117:VAL:HG23	2.27	0.49
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	0.49
39:YT:38:ASN:O	39:YT:39:ARG:O	2.30	0.49
39:YT:57:PHE:O	39:YT:59:THR:N	2.46	0.49
41:YV:79:VAL:O	41:YV:79:VAL:HG22	2.12	0.49
43:YX:51:VAL:HG13	43:YX:81:VAL:HG23	1.93	0.49
44:YY:61:ILE:HG22	44:YY:62:GLU:N	2.28	0.49
45:YZ:143:GLY:O	45:YZ:145:GLU:HG3	2.12	0.49
1:QA:396:G:O2'	1:QA:398:C:OP1	2.12	0.49
1:QA:683:G:C6	1:QA:684:A:C6	3.01	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
2:QB:179:LYS:HA	8:QH:72:PRO:HD3	1.95	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.24	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
25:RA:1535:U:H2'	25:RA:1536:A:C8	2.48	0.49
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.13	0.49
25:RA:1751:C:O2'	25:RA:1752:C:H5'	2.13	0.49
25:RA:1678:G:N2	25:RA:1989:G:H1	2.10	0.49
25:RA:2126:A:H61	25:RA:2163:C:H1'	1.77	0.49
25:RA:2311:A:H1'	30:RG:82:LEU:CD1	2.41	0.49
25:RA:2638:G:O2'	25:RA:2778:A:N6	2.45	0.49
25:RA:39:C:H2'	25:RA:40:C:C6	2.47	0.49
26:RB:116:G:O2'	38:RS:54:LEU:HD11	2.12	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
25:RA:1655:A:H4'	28:RE:115:GLY:N	2.28	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.93	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RI:140:LEU:N	32:RI:140:LEU:HD23	2.28	0.49
35:RP:101:VAL:CG1	35:RP:102:ARG:N	2.75	0.49
36:RQ:79:LEU:O	36:RQ:80:GLU:OE1	2.31	0.49
37:RR:71:GLN:HE21	37:RR:71:GLN:HA	1.77	0.49
37:RR:52:ILE:CG2	37:RR:94:TYR:CD1	2.95	0.49
40:RU:92:ARG:CD	40:RU:94:ASN:HB3	2.42	0.49
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49
44:RY:84:ARG:HD3	44:RY:86:ARG:NH1	2.28	0.49
45:RZ:107:THR:HG22	45:RZ:108:PRO:CA	2.43	0.49
1:XA:923:A:N6	1:XA:1392:G:O6	2.45	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.94	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49
1:XA:376:G:OP2	16:XP:67:THR:HG21	2.13	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.13	0.49
51:Y5:2:ALA:O	51:Y5:3:LYS:CB	2.60	0.49
25:YA:2239:G:H5'	27:YD:251:GLY:HA3	1.95	0.49
25:YA:26:G:N1	25:YA:27:G:N2	2.61	0.49
25:YA:628:G:H5''	54:Y8:18:ALA:HB2	1.95	0.49
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.49
28:YE:17:ASP:N	28:YE:17:ASP:OD2	2.46	0.49
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.27	0.49
31:YH:151:ILE:C	31:YH:152:ARG:O	2.49	0.49
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.49
32:YI:128:LEU:O	32:YI:138:ILE:N	2.44	0.49
32:YI:114:LEU:HD12	32:YI:129:THR:O	2.12	0.49
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.77	0.49
37:YR:18:LEU:C	37:YR:18:LEU:HD13	2.33	0.49
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.77	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.47	0.49
1:QA:167:G:H2'	1:QA:168:G:C8	2.47	0.49
1:QA:244:U:H4'	1:QA:245:C:C5'	2.43	0.49
1:QA:538:G:H2'	1:QA:539:A:C8	2.47	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:539:A:OP2	12:QL:115:LYS:HE3	2.13	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
25:RA:330:A:H2	25:RA:1210:A:H2'	1.78	0.49
25:RA:2168:G:N2	25:RA:2170:A:N7	2.61	0.49
25:RA:2645:G:H3'	25:RA:2646:C:C5'	2.32	0.49
25:RA:852:G:H1	25:RA:925:C:H42	1.61	0.49
29:RF:45:ARG:HG2	29:RF:45:ARG:NH1	2.28	0.49
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.26	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49
33:RN:95:PRO:O	33:RN:97:ARG:N	2.46	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
25:RA:2839:G:O2'	37:RR:49:ASP:OD2	2.30	0.49
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.49
41:RV:7:THR:HG23	41:RV:22:VAL:HG11	1.94	0.49
42:RW:30:GLU:O	42:RW:34:ASN:ND2	2.46	0.49
45:RZ:107:THR:HG22	45:RZ:108:PRO:HA	1.94	0.49
45:RZ:69:THR:HG22	45:RZ:90:VAL:HG22	1.94	0.49
1:XA:524:G:H2'	1:XA:525:C:C6	2.47	0.49
3:XC:188:LEU:CD2	3:XC:188:LEU:N	2.76	0.49
5:XE:153:LYS:HZ3	5:XE:153:LYS:HB2	1.77	0.49
9:XI:79:LEU:HD13	9:XI:79:LEU:O	2.12	0.49
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.33	0.49
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	2.12	0.49
52:Y6:20:ASN:CG	52:Y6:21:TYR:N	2.66	0.49
52:Y6:37:ARG:HE	52:Y6:37:ARG:HA	1.77	0.49
52:Y6:9:LEU:HD13	52:Y6:26:ASN:HD22	1.76	0.49
25:YA:1930:G:HO2'	25:YA:1931:U:P	2.36	0.49
25:YA:748:G:C6	42:YW:90:ARG:NH1	2.81	0.49
25:YA:934:G:H2'	25:YA:935:C:C6	2.47	0.49
25:YA:945:A:H4'	25:YA:946:G:OP1	2.13	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	0.49
30:YG:115:ARG:HG2	30:YG:115:ARG:HH11	1.77	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
32:YI:35:LEU:O	32:YI:36:ALA:CB	2.61	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
25:YA:1250:G:OP2	35:YP:21:ARG:HD3	2.13	0.49
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.49
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
40:YU:64:ARG:NH2	40:YU:64:ARG:CG	2.70	0.49
44:YY:84:ARG:HD3	44:YY:86:ARG:NH1	2.28	0.49
45:YZ:77:ASP:OD2	45:YZ:80:ARG:HB2	2.12	0.49
1:QA:1053:G:N7	1:QA:1200:C:H5''	2.28	0.49
1:QA:1352:C:H42	1:QA:1370:G:H1	1.61	0.49
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.49
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.28	0.49
3:QC:188:LEU:CD2	3:QC:188:LEU:N	2.76	0.49
4:QD:9:CYS:C	4:QD:11:LEU:H	2.16	0.49
9:QI:110:GLU:HG3	9:QI:110:GLU:O	2.12	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.61	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
52:R6:27:LYS:CB	52:R6:27:LYS:NZ	2.73	0.49
52:R6:44:ARG:O	52:R6:45:LYS:CB	2.60	0.49
25:RA:1344:G:H4'	25:RA:1384:A:N7	2.28	0.49
25:RA:1441:G:H2'	25:RA:1442:G:C8	2.47	0.49
25:RA:1790:C:H5''	25:RA:1791:A:OP1	2.12	0.49
25:RA:1931:U:H6	25:RA:1932:A:C8	2.31	0.49
25:RA:242:G:H4'	25:RA:243:U:O5'	2.12	0.49
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.12	0.49
25:RA:751:A:C6	25:RA:789:A:C5	3.00	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
28:RE:46:ALA:HB1	28:RE:80:GLU:HB2	1.94	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.19	0.49
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:RH:98:LEU:HD12	31:RH:102:ALA:O	2.13	0.49
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
35:RP:64:LYS:C	35:RP:66:GLY:N	2.56	0.49
36:RQ:86:GLY:O	36:RQ:88:GLY:N	2.46	0.49
41:RV:79:VAL:HG22	41:RV:79:VAL:O	2.12	0.49
41:RV:91:TYR:CD1	41:RV:91:TYR:C	2.87	0.49
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49
45:RZ:111:VAL:O	45:RZ:111:VAL:HG22	2.12	0.49
45:RZ:124:ILE:O	45:RZ:124:ILE:HG23	2.11	0.49
45:RZ:125:LEU:HG	45:RZ:164:ALA:HB1	1.95	0.49
45:RZ:72:ARG:HH11	45:RZ:72:ARG:CG	2.26	0.49
1:XA:1003:G:H21	1:XA:1005:A:H5'	1.77	0.49
1:XA:191(D):U:H2'	1:XA:191(E):G:H8	1.76	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.49
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	0.49
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
10:XJ:63:PHE:CD1	14:YN:58:LYS:HA	2.35	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
46:Y0:25:ARG:HD2	46:Y0:29:GLN:HE21	1.76	0.49
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.49
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
25:YA:1049:C:H1'	25:YA:1113:U:H4'	1.94	0.49
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.95	0.49
25:YA:1266:G:OP2	51:Y5:20:ARG:NE	2.44	0.49
25:YA:1368:G:C2	25:YA:1369:G:C8	3.01	0.49
25:YA:2185:C:H2'	25:YA:2186:G:C8	2.47	0.49
25:YA:2630:G:H1	25:YA:2788:C:H42	1.60	0.49
25:YA:2846:G:N2	25:YA:2871:C:H1'	2.28	0.49
25:YA:299:A:H5'	25:YA:300:A:OP2	2.13	0.49
27:YD:237:GLU:HA	27:YD:237:GLU:OE1	2.11	0.49
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
31:YH:153:LYS:O	31:YH:154:PRO:O	2.30	0.49
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.49
31:YH:54:ARG:HD3	31:YH:65:HIS:ND1	2.27	0.49
35:YP:14:LYS:O	35:YP:15:ARG:C	2.51	0.49
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.49
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.76	0.49
45:YZ:134:PRO:HB2	45:YZ:136:PHE:O	2.12	0.49
1:QA:1250:A:H2	1:QA:1353:G:H21	1.59	0.49
1:QA:664:G:N2	1:QA:741:G:H1	2.10	0.49
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.49
1:QA:1190:G:OP1	3:QC:4:LYS:HA	2.13	0.49
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.42	0.49
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.49
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.49
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.49
1:QA:191:G:N9	20:QT:105:SER:HB3	2.27	0.49
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.43	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
25:RA:518:G:H2'	25:RA:519:U:C6	2.48	0.49
25:RA:851:U:H1'	49:R3:46:ASN:HD21	1.78	0.49
25:RA:861:A:N3	26:RB:79:C:O2'	2.46	0.49
28:RE:38:THR:O	28:RE:42:ASP:HB2	2.13	0.49
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.49
30:RG:36:LYS:HA	30:RG:95:ARG:HG2	1.95	0.49
31:RH:103:LEU:H	31:RH:103:LEU:HD23	1.78	0.49
32:RI:1:MET:HG3	32:RI:23:PRO:HA	1.94	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.43	0.49
34:RO:55:GLY:O	34:RO:56:ASP:C	2.50	0.49
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.49
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.43	0.49
39:RT:111:ARG:O	39:RT:112:ARG:CG	2.55	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	0.49
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.49
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.13	0.49
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.49
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	1.94	0.49
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.49
45:RZ:77:ASP:OD2	45:RZ:80:ARG:HB2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1022:G:H2'	1:XA:1023:G:H8	1.77	0.49
1:XA:1284:C:H3'	1:XA:1285:A:C8	2.47	0.49
1:XA:417:C:H2'	1:XA:418:C:C6	2.47	0.49
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.12	0.49
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.31	0.49
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.49
7:XG:63:LYS:HD2	7:XG:63:LYS:O	2.13	0.49
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.48	0.49
1:XA:798:G:OP1	11:XK:122:LYS:NZ	2.46	0.49
12:XL:11:VAL:HG13	17:XQ:29:HIS:CD2	2.48	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.49
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.95	0.49
19:XS:64:GLU:C	50:Y4:55:ARG:NH1	2.66	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.49
25:YA:1374:G:H2'	25:YA:1375:C:O4'	2.12	0.49
25:YA:1339:G:N2	25:YA:1603:A:H1'	2.27	0.49
25:YA:1742:C:H5'	25:YA:1743:G:OP2	2.13	0.49
25:YA:2123:G:H2'	25:YA:2124:G:H8	1.78	0.49
25:YA:530:G:H1'	25:YA:2021:C:O2'	2.12	0.49
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
30:YG:115:ARG:HG2	30:YG:115:ARG:NH1	2.26	0.49
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.11	0.49
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.39	0.49
33:YN:56:ASN:ND2	33:YN:125:GLY:C	2.66	0.49
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.49
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.49
38:YS:11:LYS:HG2	38:YS:11:LYS:O	2.12	0.49
41:YV:35:LEU:HD22	41:YV:57:VAL:O	2.13	0.49
41:YV:91:TYR:CD1	41:YV:91:TYR:C	2.87	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
44:YY:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.49
1:QA:65:U:H5''	1:QA:65:U:H6	1.77	0.48
1:QA:971:G:O2'	1:QA:1365:G:O2'	2.18	0.48
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.12	0.48
7:QG:78:ARG:HH11	7:QG:78:ARG:HG3	1.78	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.13	0.48
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.48
1:QA:690:G:H22	11:QK:55:LYS:HZ1	1.60	0.48
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.48	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:R1:19:GLN:OE1	47:R1:19:GLN:HA	2.12	0.48
47:R1:25:LYS:C	47:R1:27:GLU:H	2.17	0.48
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.48
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	0.48
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.48
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.48
25:RA:1022:G:C6	25:RA:1140:C:C4	3.01	0.48
25:RA:1622:G:C2	25:RA:1623:G:C8	3.01	0.48
25:RA:226:G:O2'	25:RA:227:A:O4'	2.30	0.48
25:RA:2585:U:HO2'	25:RA:2586:C:C5'	2.25	0.48
25:RA:2735:G:H2'	25:RA:2736:G:C8	2.46	0.48
25:RA:312:G:H4'	25:RA:331:A:C2	2.47	0.48
25:RA:482:A:N6	25:RA:506:G:O2'	2.46	0.48
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.48	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.48
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.28	0.48
38:RS:48:LEU:CD1	38:RS:48:LEU:N	2.76	0.48
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.12	0.48
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.48
45:RZ:136:PHE:C	45:RZ:136:PHE:CD1	2.86	0.48
1:XA:501:C:H1'	1:XA:549:C:H1'	1.95	0.48
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.31	0.48
2:XB:178:ARG:HH22	8:XH:68:ARG:NH2	2.10	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.57	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.48
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.48
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
16:XP:57:ARG:HG3	16:XP:57:ARG:HH11	1.78	0.48
22:XV:75:C:H2'	22:XV:76:A:O4'	2.12	0.48
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
52:Y6:7:ILE:O	52:Y6:9:LEU:N	2.46	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
54:Y8:33:ASN:O	54:Y8:35:GLN:N	2.46	0.48
25:YA:1364:G:N7	47:Y1:2:SER:N	2.60	0.48
25:YA:1548:C:H2'	25:YA:1549:C:C6	2.48	0.48
25:YA:2637:U:H5''	28:YE:82:ARG:NH2	2.27	0.48
25:YA:612:G:N2	25:YA:617:G:C5	2.81	0.48
25:YA:942:G:O2'	25:YA:1189:A:H2'	2.12	0.48
25:YA:729:G:N7	27:YD:209:ALA:HB3	2.28	0.48
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	0.48
25:YA:195:A:OP1	35:YP:46:LYS:HE2	2.13	0.48
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.48
35:YP:6:LEU:O	35:YP:7:ARG:O	2.31	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
45:YZ:136:PHE:CD1	45:YZ:136:PHE:C	2.86	0.48
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.47	0.48
1:QA:545:C:OP1	4:QD:61:LYS:NZ	2.41	0.48
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.13	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.95	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.48
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.48
1:QA:192:U:C4'	20:QT:103:GLY:HA2	2.43	0.48
23:QX:4:C:C3'	23:QX:5:C:H5'	2.41	0.48
25:RA:1034:G:H2'	25:RA:1035:U:O4'	2.13	0.48
25:RA:1069:A:O4'	25:RA:1096:A:O2'	2.30	0.48
25:RA:177:G:OP2	25:RA:177:G:N2	2.39	0.48
25:RA:2544:G:H2'	25:RA:2545:G:C8	2.48	0.48
25:RA:872:A:H4'	36:RQ:66:ILE:HD11	1.94	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	0.48
30:RG:115:ARG:HH11	30:RG:115:ARG:HG2	1.77	0.48
30:RG:77:ILE:O	30:RG:81:LYS:O	2.31	0.48
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.43	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.13	0.48
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.28	0.48
35:RP:35:HIS:O	35:RP:36:LYS:O	2.31	0.48
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.95	0.48
40:RU:81:HIS:CE1	40:RU:117:GLN:HG3	2.48	0.48
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.48
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.48
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.25	0.48
45:RZ:93:ASP:OD1	45:RZ:94:GLU:N	2.46	0.48
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.47	0.48
1:XA:1194:U:H4'	5:XE:22:GLY:O	2.13	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.14	0.48
11:XK:91:ARG:HH22	18:XR:88:LYS:NZ	2.09	0.48
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.43	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
25:YA:1557:C:H2'	25:YA:1558:A:C2	2.48	0.48
25:YA:205:G:O2'	25:YA:206:U:OP2	2.30	0.48
25:YA:507:A:C5'	25:YA:508:G:H5'	2.42	0.48
25:YA:7:G:H2'	25:YA:8:A:O4'	2.13	0.48
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.48
26:YB:43:C:O2	30:YG:95:ARG:NH2	2.47	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
32:YI:123:LEU:HA	32:YI:142:VAL:CG2	2.44	0.48
32:YI:1:MET:HG3	32:YI:23:PRO:HA	1.94	0.48
35:YP:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
37:YR:71:GLN:HA	37:YR:71:GLN:HE21	1.77	0.48
40:YU:91:ASP:O	40:YU:95:LEU:N	2.42	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
25:YA:142:G:H1'	43:YX:37:THR:CG2	2.44	0.48
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.46	0.48
1:QA:20:U:H2'	1:QA:21:G:O4'	2.13	0.48
1:QA:964:A:N3	1:QA:969:A:O2'	2.37	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.42	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:189:U:H3	17:QQ:63:ARG:HB3	1.78	0.48
46:R0:37:LEU:N	46:R0:59:LEU:O	2.41	0.48
48:R2:69:ARG:HH11	48:R2:69:ARG:HB3	1.79	0.48
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.47	0.48
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.48	0.48
25:RA:2418:A:H2'	25:RA:2419:U:H6	1.78	0.48
25:RA:256:A:H2'	25:RA:257:A:C8	2.47	0.48
25:RA:260:G:O4'	25:RA:621:A:H1'	2.13	0.48
25:RA:2783:G:H2'	25:RA:2784:C:H6	1.78	0.48
25:RA:678:C:H2'	25:RA:679:C:C6	2.47	0.48
25:RA:774:A:H2	25:RA:787:U:O2'	1.97	0.48
26:RB:8:U:H3	26:RB:112:G:H1	1.61	0.48
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.48
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.95	0.48
31:RH:123:PHE:O	31:RH:125:VAL:HG23	2.13	0.48
32:RI:10:GLU:O	32:RI:11:ASN:O	2.31	0.48
33:RN:95:PRO:O	33:RN:96:GLU:C	2.51	0.48
25:RA:389:G:H22	35:RP:72:PRO:CD	2.25	0.48
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.48
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
1:XA:1122:U:O4	1:XA:1123:A:N6	2.47	0.48
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.81	0.48
1:XA:489:C:H2'	1:XA:490:G:H8	1.77	0.48
1:XA:539:A:OP2	12:XL:115:LYS:HE3	2.12	0.48
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.41	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.48
24:XY:40:G:O2'	24:XY:41:A:H5'	2.13	0.48
36:YQ:80:GLU:HG3	46:Y0:5:LYS:HB3	1.95	0.48
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.14	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
25:YA:1779:U:OP2	25:YA:1784:A:N6	2.39	0.48
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.48	0.48
25:YA:481:G:C4	25:YA:507:A:C2	3.02	0.48
25:YA:1812:A:O2'	27:YD:45:ASN:HB2	2.14	0.48
27:YD:48:ARG:HH11	27:YD:48:ARG:HG3	1.78	0.48
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
29:YF:155:LEU:HD23	29:YF:186:ILE:HA	1.95	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48
38:YS:48:LEU:CD1	38:YS:48:LEU:N	2.76	0.48
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.14	0.48
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.94	0.48
45:YZ:157:LEU:HA	45:YZ:161:VAL:HG11	1.95	0.48
1:QA:177:C:H2'	1:QA:178:C:C6	2.48	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
4:QD:11:LEU:CD2	4:QD:66:ARG:HD3	2.41	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
16:QP:71:ARG:HB2	16:QP:71:ARG:HH11	1.79	0.48
25:RA:380:U:O3'	47:R1:16:ASN:HB2	2.12	0.48
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.46	0.48
25:RA:824:A:H1'	25:RA:2358:G:N7	2.28	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	0.48
35:RP:101:VAL:C	35:RP:103:ALA:H	2.17	0.48
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
38:RS:46:VAL:HG12	38:RS:47:THR:N	2.28	0.48
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.44	0.48
1:XA:134:A:H1'	1:XA:325:A:C5	2.48	0.48
1:XA:429:U:H1'	1:XA:430:A:H5''	1.94	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.96	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.75	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
22:XV:4:G:O2'	22:XV:5:G:H8	1.96	0.48
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.60	0.48
25:YA:1013:C:N4	25:YA:1149:G:H1	2.07	0.48
25:YA:1264:G:H2'	25:YA:2014:A:N6	2.29	0.48
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.48	0.48
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.48	0.48
25:YA:2159:G:H2'	25:YA:2160:G:C8	2.48	0.48
25:YA:2350:C:H5	54:Y8:42:ARG:HH12	1.61	0.48
25:YA:600:G:N2	25:YA:605:C:O3'	2.46	0.48
25:YA:898:C:C2'	25:YA:899:A:H5'	2.43	0.48
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	0.48
29:YF:107:LYS:O	29:YF:110:LEU:N	2.47	0.48
32:YI:10:GLU:O	32:YI:11:ASN:O	2.31	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
38:YS:18:ILE:O	38:YS:19:LYS:O	2.30	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.49	0.48
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
44:YY:35:TYR:CD1	44:YY:69:ALA:HB3	2.48	0.48
45:YZ:108:PRO:HG2	45:YZ:111:VAL:HA	1.95	0.48
1:QA:246:A:N6	1:QA:281:G:H1'	2.28	0.48
1:QA:607:A:H2'	1:QA:608:A:O4'	2.13	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.48
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.29	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
22:QV:4:G:O2'	22:QV:5:G:H8	1.96	0.48
46:R0:66:VAL:HG22	46:R0:82:ARG:HB3	1.96	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
52:R6:14:THR:OG1	52:R6:19:ARG:NE	2.41	0.48
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1444(A):A:O2'	25:RA:1460:A:N3	2.47	0.48
25:RA:1637:A:H4'	25:RA:2711:A:O2'	2.14	0.48
25:RA:2420:C:OP1	54:R8:34:TRP:HB2	2.14	0.48
25:RA:2528:U:O2'	25:RA:2530:A:OP1	2.25	0.48
25:RA:310:A:HO2'	25:RA:311:A:P	2.35	0.48
25:RA:455:C:N3	25:RA:472:A:H2'	2.28	0.48
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.73	0.48
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.14	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
44:RY:57:GLN:O	44:RY:58:GLY:O	2.32	0.48
1:XA:977:A:H8	1:XA:1223:C:C4	2.31	0.48
1:XA:1326:C:OP1	21:XU:17:THR:OG1	2.23	0.48
1:XA:389:A:H2'	1:XA:390:C:O4'	2.13	0.48
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.94	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.28	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	0.48
9:XI:118:LYS:CB	9:XI:118:LYS:NZ	2.75	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
47:Y1:56:GLN:H	47:Y1:56:GLN:NE2	2.10	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
51:Y5:48:GLU:HA	51:Y5:59:GLU:HG2	1.94	0.48
25:YA:1114:G:H2'	25:YA:1115:G:C8	2.48	0.48
25:YA:577:G:O2'	25:YA:1254:A:OP1	2.27	0.48
25:YA:859:G:O2'	25:YA:860:U:P	2.71	0.48
25:YA:942:G:C6	25:YA:943:U:N3	2.81	0.48
31:YH:82:GLY:O	31:YH:83:TYR:O	2.31	0.48
32:YI:140:LEU:N	32:YI:140:LEU:CD2	2.77	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
1:QA:1205:U:H1'	3:QC:195:VAL:HG23	1.96	0.48
1:QA:945:G:N2	1:QA:1334:G:O2'	2.46	0.48
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.78	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.12	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
16:QP:57:ARG:HH11	16:QP:57:ARG:HG3	1.78	0.48
23:QX:4:C:H42	24:QY:36:G:H1	1.60	0.48
46:R0:74:ARG:C	46:R0:76:GLY:N	2.66	0.48
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.54	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.13	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
25:RA:1774:C:O5'	25:RA:1774:C:H6	1.97	0.48
25:RA:2335:A:O2'	25:RA:2336:A:O5'	2.28	0.48
25:RA:239:U:H2'	25:RA:240:G:O4'	2.14	0.48
25:RA:2637:U:H5''	28:RE:82:ARG:NH2	2.28	0.48
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.77	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.95	0.48
27:RD:198:ASN:HD22	27:RD:198:ASN:C	2.17	0.48
29:RF:107:LYS:O	29:RF:110:LEU:N	2.47	0.48
31:RH:10:PRO:C	31:RH:11:VAL:HG22	2.34	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.43	0.48
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.48
45:RZ:57:ILE:HG22	45:RZ:58:VAL:N	2.28	0.48
1:XA:1243:C:H2'	1:XA:1244:C:C6	2.48	0.48
1:XA:271:C:H2'	1:XA:272:C:H6	1.78	0.48
1:XA:791:G:N2	1:XA:1497:G:O3'	2.46	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.14	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.95	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
9:XI:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
14:XN:22:THR:O	14:XN:23:ARG:CB	2.59	0.48
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48
25:YA:2681:C:HO2'	25:YA:2682:U:P	2.36	0.48
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
25:YA:1655:A:H4'	28:YE:115:GLY:N	2.28	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
31:YH:7:LEU:N	31:YH:8:PRO:CD	2.77	0.48
35:YP:35:HIS:O	35:YP:36:LYS:O	2.31	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
39:YT:58:ASN:N	39:YT:58:ASN:HD22	2.10	0.48
45:YZ:19:ARG:HD3	45:YZ:25:PRO:HD2	1.95	0.48
45:YZ:33:LEU:CG	45:YZ:34:ASN:N	2.77	0.48
45:YZ:93:ASP:OD1	45:YZ:94:GLU:N	2.46	0.48
1:QA:1127:G:H21	1:QA:1147:C:H41	1.61	0.48
1:QA:113:G:H21	1:QA:353:A:H1'	1.79	0.48
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.46	0.48
1:QA:1530:G:H2'	1:QA:1531:A:O5'	2.14	0.48
1:QA:384:G:H2'	1:QA:385:C:C6	2.49	0.48
1:QA:812:C:O2'	1:QA:813:U:P	2.72	0.48
4:QD:165:MET:HE3	4:QD:168:ARG:HD2	1.96	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.96	0.48
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.27	0.48
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.43	0.48
50:R4:42:PHE:O	50:R4:43:TYR:C	2.51	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.13	0.48
25:RA:1697:G:H5''	25:RA:1698:A:H3'	1.96	0.48
25:RA:1861:G:H1	25:RA:1881:C:H42	1.61	0.48
25:RA:2320:A:N3	25:RA:2320:A:H2'	2.29	0.48
25:RA:2777:G:OP2	25:RA:2781:A:O2'	2.27	0.48
25:RA:278:A:N1	25:RA:362:U:N3	2.61	0.48
25:RA:530:G:O2'	25:RA:532:A:N7	2.43	0.48
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
31:RH:104:GLU:HG3	31:RH:114:VAL:HG22	1.96	0.48
32:RI:140:LEU:N	32:RI:140:LEU:CD2	2.77	0.48
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.65	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
35:RP:112:LEU:HD12	35:RP:127:ALA:CB	2.44	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.78	0.48
36:RQ:21:THR:HB	36:RQ:22:LYS:H	1.42	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.48
45:RZ:7:ALA:CB	45:RZ:59:LEU:HD22	2.42	0.48
1:XA:1287:A:H2	1:XA:1353:G:N3	2.12	0.48
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.28	0.48
1:XA:1443:G:H4'	1:XA:1446:A:OP2	2.13	0.48
1:XA:28:G:O2'	1:XA:296:U:OP1	2.30	0.48
1:XA:564:C:N4	1:XA:565:U:O4	2.47	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.48
19:XS:43:GLU:N	19:XS:43:GLU:OE2	2.45	0.48
50:Y4:42:PHE:O	50:Y4:44:THR:O	2.31	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.78	0.48
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.49	0.48
25:YA:1339:G:H21	25:YA:1603:A:H1'	1.79	0.48
25:YA:1906:G:H8	25:YA:1929:G:H2'	1.78	0.48
25:YA:680:G:C4	25:YA:798:G:N2	2.81	0.48
25:YA:721:C:H3'	25:YA:722:A:H8	1.79	0.48
26:YB:40:U:H1'	26:YB:45:A:H61	1.77	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	0.48
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.48
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	0.48
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.42	0.48
39:YT:96:ARG:CB	39:YT:96:ARG:NH1	2.77	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
44:YY:11:ASP:HB2	44:YY:27:VAL:HG11	1.94	0.48
45:YZ:94:GLU:CB	45:YZ:130:PRO:HD3	2.38	0.48
45:YZ:125:LEU:HG	45:YZ:164:ALA:HB1	1.95	0.48
1:QA:1109:C:H2'	1:QA:1110:A:O4'	2.13	0.48
1:QA:1487:G:H8	1:QA:1487:G:O5'	1.96	0.48
1:QA:192:U:H2'	1:QA:193:C:H6	1.76	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:198:G:H2'	1:QA:199:G:H8	1.79	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.13	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.14	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.48
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.43	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.14	0.48
25:RA:2286:A:N6	52:R6:24:GLU:OE1	2.47	0.48
25:RA:1384:A:O2'	25:RA:1404:C:O2	2.27	0.48
25:RA:1523:U:H2'	25:RA:1524:G:H8	1.79	0.48
25:RA:221:A:H5'	25:RA:222:A:H4'	1.94	0.48
25:RA:345:A:H2'	25:RA:347:A:H62	1.79	0.48
25:RA:528:A:C2	25:RA:2042:A:H2'	2.49	0.48
25:RA:628:G:HO2'	25:RA:651:G:HO2'	1.60	0.48
27:RD:65:ILE:C	27:RD:65:ILE:HD13	2.33	0.48
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
29:RF:51:THR:O	29:RF:93:LYS:NZ	2.38	0.48
30:RG:136:ARG:O	30:RG:154:GLY:CA	2.62	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
25:RA:2093:G:OP1	32:RI:23:PRO:HG2	2.14	0.48
33:RN:82:LEU:HD12	33:RN:83:LYS:N	2.27	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48
36:RQ:119:ARG:O	36:RQ:123:HIS:HD2	1.97	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
45:RZ:143:GLY:O	45:RZ:145:GLU:HG3	2.13	0.48
45:RZ:33:LEU:CG	45:RZ:34:ASN:N	2.77	0.48
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.49	0.48
1:XA:250:A:H4'	1:XA:251:G:O5'	2.13	0.48
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.61	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
4:XD:22:LYS:HB2	4:XD:26:CYS:HB2	1.96	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
7:XG:51:GLN:HA	7:XG:51:GLN:OE1	2.14	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
48:Y2:33:MET:O	48:Y2:37:PHE:HD1	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:Y4:10:VAL:CG2	50:Y4:11:PRO:HD2	2.43	0.48
25:YA:1190:G:C5'	35:YP:32:THR:HA	2.43	0.48
25:YA:141:A:H1'	25:YA:1408:C:O4'	2.14	0.48
25:YA:1896:G:H2'	25:YA:1897:G:H8	1.79	0.48
25:YA:1930:G:O2'	25:YA:1931:U:P	2.71	0.48
25:YA:219:G:N3	25:YA:234:C:O2'	2.44	0.48
25:YA:2734:A:H3'	25:YA:2735:G:C8	2.43	0.48
25:YA:2849:U:H5	39:YT:93:ARG:HH12	1.62	0.48
25:YA:520:G:H2'	25:YA:521:G:C8	2.49	0.48
27:YD:130:ALA:HA	27:YD:192:THR:HA	1.95	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48
28:YE:55:ASN:O	28:YE:57:LYS:N	2.44	0.48
29:YF:129:PHE:CD2	29:YF:163:VAL:HG21	2.48	0.48
25:YA:2653:U:O2'	31:YH:110:SER:HB2	2.13	0.48
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.48
37:YR:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.46	0.48
45:YZ:120:ILE:O	45:YZ:171:ILE:HD13	2.14	0.48
45:YZ:33:LEU:HD11	45:YZ:35:ARG:CG	2.44	0.48
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.49	0.48
1:QA:553:A:O2'	12:QL:29:GLY:O	2.31	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.48
4:QD:163:GLU:C	4:QD:165:MET:N	2.67	0.48
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.93	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.48
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.48
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.95	0.48
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.48
1:QA:136:C:O2'	16:QP:63:GLY:O	2.28	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
19:QS:36:ARG:NH1	19:QS:36:ARG:HB3	2.28	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
24:QY:40:G:O2'	24:QY:41:A:H5'	2.13	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
25:RA:1138:G:H21	33:RN:106:MET:CE	2.26	0.48
25:RA:118:A:N3	25:RA:178:G:H1'	2.29	0.48
25:RA:1561:G:H2'	25:RA:1562:A:C8	2.49	0.48
25:RA:205:G:H1'	25:RA:206:U:OP2	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2527:C:H2'	25:RA:2528:U:O4'	2.13	0.48
25:RA:181:A:H1'	25:RA:435:C:H5'	1.96	0.48
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.48
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.45	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
25:RA:2784:C:O2'	28:RE:42:ASP:OD1	2.30	0.48
33:RN:18:ALA:O	33:RN:19:GLU:C	2.53	0.48
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.48
38:RS:56:LEU:C	38:RS:56:LEU:HD23	2.34	0.48
40:RU:92:ARG:CZ	40:RU:94:ASN:HD22	2.27	0.48
45:RZ:108:PRO:HG2	45:RZ:111:VAL:HA	1.95	0.48
45:RZ:26:GLY:HA3	45:RZ:86:VAL:O	2.14	0.48
1:XA:181:G:O2'	1:XA:182:U:O5'	2.32	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.14	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
13:XM:8:GLU:C	13:XM:9:ILE:HG23	2.34	0.48
14:XN:15:LYS:HD2	14:XN:16:PHE:CE2	2.49	0.48
14:XN:41:ARG:NH1	14:XN:41:ARG:HG2	2.29	0.48
1:XA:134:A:H61	16:XP:25:ARG:NH1	2.11	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
1:XA:189:U:H3	17:XQ:63:ARG:CB	2.27	0.48
19:XS:36:ARG:NH1	19:XS:36:ARG:HB3	2.28	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.29	0.48
50:Y4:36:CYS:O	50:Y4:37:SER:C	2.52	0.48
50:Y4:8:LYS:O	50:Y4:9:LEU:CB	2.62	0.48
25:YA:2370:G:N3	52:Y6:45:LYS:NZ	2.62	0.48
25:YA:1212:G:O2'	25:YA:1213:A:OP2	2.31	0.48
25:YA:1545:A:N6	25:YA:1545(A):A:N1	2.62	0.48
25:YA:2210:G:N3	25:YA:2210:G:H2'	2.28	0.48
25:YA:2277:G:OP1	36:YQ:85:LYS:HB2	2.13	0.48
25:YA:2516:G:C5	25:YA:2517:C:C4	3.02	0.48
25:YA:2657:A:H1'	25:YA:2665:A:N6	2.28	0.48
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.49	0.48
25:YA:2724:C:P	37:YR:1:MET:HE3	2.54	0.48
25:YA:272:G:H2'	25:YA:273:G:C8	2.48	0.48
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.48
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	0.48
28:YE:64:LYS:C	28:YE:66:HIS:N	2.68	0.48
29:YF:34:TRP:HD1	35:YP:6:LEU:HB3	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:YF:45:ARG:HG2	29:YF:45:ARG:NH1	2.28	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
31:YH:127:GLU:HB3	31:YH:128:PRO:HD2	1.92	0.48
36:YQ:42:ILE:HD12	36:YQ:42:ILE:N	2.29	0.48
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.48
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.96	0.48
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:CD2	2.26	0.48
41:YV:21:ARG:HD2	41:YV:91:TYR:CZ	2.49	0.48
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48
25:YA:64:A:O3'	43:YX:71:GLY:HA3	2.14	0.48
45:YZ:135:GLU:HG3	45:YZ:136:PHE:CD2	2.49	0.48
45:YZ:35:ARG:NH1	45:YZ:35:ARG:HB3	2.29	0.48
45:YZ:72:ARG:CG	45:YZ:72:ARG:HH11	2.26	0.48
1:QA:1107:C:O2	1:QA:1191:A:O2'	2.30	0.48
1:QA:1509:C:H2'	1:QA:1510:U:O4'	2.14	0.48
1:QA:244:U:H4'	1:QA:245:C:O5'	2.12	0.48
1:QA:266:G:O2'	1:QA:268:C:OP2	2.31	0.48
1:QA:356:A:N3	1:QA:368:U:O2'	2.39	0.48
1:QA:709:G:H2'	1:QA:710:G:H8	1.77	0.48
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.48
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.48
7:QG:63:LYS:HD2	7:QG:63:LYS:O	2.13	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
8:QH:45:ILE:HG13	8:QH:45:ILE:O	2.13	0.48
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.48
15:QO:61:GLY:C	15:QO:65:ARG:NH1	2.67	0.48
1:QA:450:G:H5'	16:QP:41:PRO:O	2.14	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.48
25:RA:2607:G:H2'	25:RA:2608:G:O4'	2.14	0.48
25:RA:508:G:HO2'	25:RA:509:C:P	2.36	0.48
26:RB:17:C:H2'	26:RB:18:G:O4'	2.12	0.48
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.48
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.48
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.48
36:RQ:42:ILE:N	36:RQ:42:ILE:HD12	2.29	0.48
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.48
37:RR:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.48
25:RA:1188:U:H4'	41:RV:79:VAL:HG22	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.14	0.48
45:RZ:120:ILE:HD12	45:RZ:171:ILE:N	2.29	0.48
1:XA:255:G:H2'	1:XA:256:U:H6	1.78	0.48
1:XA:533:A:OP1	1:XA:533:A:H3'	2.14	0.48
1:XA:741:G:H2'	1:XA:742:G:O4'	2.14	0.48
1:XA:779:C:H2'	1:XA:780:A:O4'	2.13	0.48
1:XA:977:A:C2'	1:XA:978:A:H5'	2.44	0.48
4:XD:114:ARG:CG	4:XD:114:ARG:HH11	2.17	0.48
1:XA:438:G:H4'	4:XD:123:HIS:ND1	2.28	0.48
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.48
4:XD:11:LEU:O	4:XD:19:LEU:HD21	2.14	0.48
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.14	0.48
11:XK:115:PRO:C	11:XK:117:ASN:H	2.17	0.48
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.96	0.48
14:XN:6:LEU:CD2	14:XN:23:ARG:NH2	2.77	0.48
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.48
47:Y1:25:LYS:C	47:Y1:27:GLU:H	2.16	0.48
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.48
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.13	0.48
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	0.48
25:YA:1009:A:OP1	33:YN:37:LYS:NZ	2.46	0.48
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.40	0.48
25:YA:1108:U:H2'	25:YA:1109:C:C6	2.49	0.48
25:YA:1332:G:H8	25:YA:1332:G:H2'	1.51	0.48
25:YA:1388:G:H2'	25:YA:1389:G:C8	2.48	0.48
25:YA:1807:G:N2	25:YA:1810:A:OP2	2.44	0.48
25:YA:1930:G:H2'	25:YA:1968:G:N1	2.29	0.48
25:YA:37:C:H2'	25:YA:38:A:O4'	2.14	0.48
25:YA:383:U:H2'	25:YA:385:C:C5	2.48	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.48	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
28:YE:93:VAL:C	28:YE:95:ILE:H	2.17	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.46	0.48
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.48
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	0.48
31:YH:45:VAL:HG13	31:YH:45:VAL:O	2.14	0.48
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.77	0.48
37:YR:63:ARG:NH1	37:YR:63:ARG:HG3	2.29	0.48
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.48
38:YS:56:LEU:HD23	38:YS:56:LEU:C	2.34	0.48
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.48
25:YA:298:G:P	44:YY:85:VAL:HG22	2.54	0.48
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.27	0.48
45:YZ:107:THR:HG22	45:YZ:108:PRO:CA	2.43	0.48
1:QA:1152:A:H2'	1:QA:1153:C:H6	1.78	0.47
1:QA:1297:C:H2'	7:QG:114:ARG:NH2	2.28	0.47
1:QA:181:G:HO2'	1:QA:182:U:P	2.37	0.47
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.47
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.47
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.44	0.47
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.47
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.47
7:QG:51:GLN:OE1	7:QG:51:GLN:HA	2.14	0.47
7:QG:8:GLU:N	7:QG:8:GLU:CD	2.67	0.47
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.47
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.47
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.47
46:R0:74:ARG:O	46:R0:76:GLY:N	2.47	0.47
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.47
25:RA:1069:A:H4'	25:RA:1070:A:H5''	1.95	0.47
25:RA:1853:A:H2'	25:RA:1854:A:C8	2.49	0.47
25:RA:2520:C:H42	25:RA:2545:G:H1	1.61	0.47
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.49	0.47
25:RA:30:G:H2'	25:RA:31:C:C6	2.49	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:64:LYS:C	28:RE:66:HIS:N	2.68	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.96	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:CD1	2.43	0.47
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.35	0.47
40:RU:107:ALA:O	40:RU:110:VAL:HB	2.14	0.47
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.27	0.47
40:RU:91:ASP:O	40:RU:92:ARG:C	2.52	0.47
41:RV:4:ILE:HA	41:RV:12:TYR:O	2.14	0.47
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.47
44:RY:97:ARG:NH1	44:RY:97:ARG:HG2	2.28	0.47
1:XA:255:G:P	17:XQ:69:LYS:HZ3	2.37	0.47
1:XA:413:G:H2'	1:XA:428:G:N2	2.27	0.47
1:XA:701:C:H1'	1:XA:703:G:C5	2.48	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.14	0.47
18:XR:30:ASP:C	18:XR:32:ARG:H	2.16	0.47
19:XS:24:ALA:O	19:XS:25:LYS:HB2	2.13	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.29	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HA	2.13	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.44	0.47
54:Y8:41:ILE:HG13	54:Y8:42:ARG:N	2.28	0.47
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.47
25:YA:1055:G:H1	25:YA:1104:C:N4	2.12	0.47
25:YA:1682:G:OP1	25:YA:1699:G:N1	2.47	0.47
25:YA:2013:A:N3	42:YW:88:ARG:NH2	2.60	0.47
25:YA:2294:C:H2'	25:YA:2295:C:H6	1.79	0.47
25:YA:652:C:H5'	25:YA:653:A:OP2	2.14	0.47
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.14	0.47
32:YI:1:MET:HG3	32:YI:23:PRO:CA	2.44	0.47
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	0.47
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.61	0.47
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.47
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.47
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.62	0.47
45:YZ:39:VAL:HG21	45:YZ:44:PHE:HB2	1.95	0.47
1:QA:109:A:H5'	1:QA:110:C:H5	1.80	0.47
1:QA:198:G:H1	1:QA:219:C:H42	1.62	0.47
1:QA:234:C:H2'	1:QA:235:C:H6	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.45	0.47
1:QA:601:C:H2'	1:QA:602:A:O4'	2.14	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.14	0.47
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.47
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.96	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.47
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.47
36:RQ:83:MET:H	46:R0:7:LEU:HD12	1.80	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.13	0.47
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.47
25:RA:1533:C:H42	25:RA:1538:G:H1	1.62	0.47
25:RA:2626:C:H2'	25:RA:2627:G:O4'	2.15	0.47
25:RA:2693:A:H2'	25:RA:2694:G:C8	2.49	0.47
25:RA:960:A:H2'	25:RA:962:G:H5'	1.95	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.47
29:RF:53:THR:C	29:RF:55:GLY:N	2.68	0.47
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.15	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
32:RI:123:LEU:HA	32:RI:142:VAL:CG2	2.44	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.78	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
35:RP:47:ASP:OD1	35:RP:50:ARG:NH2	2.47	0.47
37:RR:107:ASP:C	37:RR:107:ASP:OD2	2.52	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	0.47
41:RV:48:GLY:O	41:RV:49:THR:C	2.52	0.47
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.61	0.47
42:RW:32:ALA:O	42:RW:33:ARG:C	2.52	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.29	0.47
1:XA:593:G:H5''	1:XA:594:G:OP2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:954:G:H21	1:XA:1227:A:N6	2.12	0.47
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.47
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.12	0.47
4:XD:9:CYS:C	4:XD:11:LEU:H	2.17	0.47
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.47
16:XP:25:ARG:HH11	16:XP:25:ARG:HG3	1.79	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.47
20:XT:26:ASN:ND2	20:XT:26:ASN:N	2.62	0.47
22:XV:19:G:H4'	22:XV:20:U:OP2	2.14	0.47
25:YA:1087:G:C5	25:YA:1089:G:H1'	2.48	0.47
25:YA:1728:G:H3'	25:YA:1729:A:C5'	2.44	0.47
25:YA:1799:G:H4'	25:YA:1800:C:O5'	2.14	0.47
25:YA:2376:A:H2'	25:YA:2377:A:O4'	2.14	0.47
25:YA:270(J):G:N2	25:YA:270(Q):C:O2	2.47	0.47
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.33	0.47
26:YB:116:G:H2'	26:YB:117:G:H8	1.79	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.06	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	0.47
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.47
33:YN:18:ALA:O	33:YN:19:GLU:C	2.53	0.47
33:YN:12:ARG:NH1	33:YN:50:ASP:CG	2.67	0.47
33:YN:75:TYR:C	33:YN:76:SER:O	2.52	0.47
35:YP:147:LEU:HD22	35:YP:147:LEU:N	2.28	0.47
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.13	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	0.47
44:YY:44:ILE:CG1	44:YY:45:VAL:N	2.70	0.47
45:YZ:33:LEU:HD21	45:YZ:35:ARG:CD	2.42	0.47
1:QA:954:G:O6	1:QA:1225:A:N6	2.47	0.47
1:QA:189:U:H3	17:QQ:63:ARG:CB	2.27	0.47
1:QA:558:G:H2'	1:QA:559:A:C2	2.49	0.47
1:QA:792:A:H4'	1:QA:793:U:O5'	2.14	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.47	0.47
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
11:QK:115:PRO:C	11:QK:117:ASN:H	2.18	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.50	0.47
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.47
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.47
22:QV:19:G:H4'	22:QV:20:U:OP2	2.14	0.47
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.47
47:R1:56:GLN:H	47:R1:56:GLN:NE2	2.10	0.47
50:R4:50:VAL:CG1	50:R4:50:VAL:O	2.63	0.47
25:RA:1329:U:H5''	25:RA:1330:C:H5	1.79	0.47
25:RA:1651:G:H1	25:RA:2006:C:H42	1.62	0.47
25:RA:2055:C:H4'	25:RA:2056:G:H5''	1.96	0.47
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.49	0.47
25:RA:717:G:H2'	25:RA:718:A:O4'	2.14	0.47
25:RA:924:C:H2'	25:RA:925:C:H6	1.79	0.47
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.79	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
32:RI:9:LEU:HD21	32:RI:12:LEU:O	2.15	0.47
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.28	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	0.47
1:XA:955:U:H1'	1:XA:1227:A:H61	1.79	0.47
1:XA:554:C:H2'	1:XA:555:C:H6	1.79	0.47
1:XA:696:A:H8	1:XA:696:A:O5'	1.97	0.47
1:XA:745:C:H2'	1:XA:746:A:C8	2.49	0.47
1:XA:881:G:P	12:XL:12:ARG:NH2	2.88	0.47
1:XA:992:U:H4'	1:XA:993:G:O5'	2.15	0.47
2:XB:4:GLU:CG	2:XB:5:ILE:H	1.99	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.95	0.47
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.47
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.14	0.47
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.47
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
46:Y0:10:THR:CG2	46:Y0:11:ARG:N	2.73	0.47
46:Y0:3:HIS:C	46:Y0:3:HIS:CD2	2.85	0.47
54:Y8:56:GLU:O	54:Y8:58:ILE:N	2.47	0.47
25:YA:1861:G:C2	25:YA:1862:G:C8	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.15	0.47
25:YA:2776:A:H3'	25:YA:2776:A:OP1	2.14	0.47
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.43	0.47
25:YA:543:C:N4	25:YA:550:G:H1	2.12	0.47
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.50	0.47
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.47
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	1.97	0.47
36:YQ:119:ARG:O	36:YQ:123:HIS:HD2	1.97	0.47
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.62	0.47
37:YR:10:LEU:O	37:YR:12:ARG:HG3	2.14	0.47
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.47
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	0.47
41:YV:2:PHE:CD2	41:YV:13:ARG:NH2	2.83	0.47
41:YV:35:LEU:O	41:YV:37:VAL:N	2.47	0.47
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.79	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
1:QA:1359:C:H3'	14:QN:35:ARG:HH12	1.78	0.47
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.47
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.47
25:RA:458:G:O2'	53:R7:39:ARG:HD3	2.14	0.47
25:RA:2401:U:H2'	25:RA:2402:C:H5''	1.95	0.47
25:RA:825:C:H2'	25:RA:826:U:O4'	2.15	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
25:RA:617:G:OP1	29:RF:40:GLN:NE2	2.47	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.27	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
34:RO:37:ASP:O	34:RO:62:VAL:HG23	2.14	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
39:RT:96:ARG:CB	39:RT:96:ARG:NH1	2.77	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	0.47
41:RV:16:PRO:HA	41:RV:96:ILE:O	2.14	0.47
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ3	1.77	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:RZ:39:VAL:HG21	45:RZ:44:PHE:HB2	1.95	0.47
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.14	0.47
1:XA:184:G:H2'	1:XA:185:A:H8	1.79	0.47
1:XA:277:C:H2'	1:XA:278:G:H8	1.78	0.47
1:XA:777:A:H2'	1:XA:778:G:C8	2.49	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.62	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.96	0.47
3:XC:127:ARG:NH1	3:XC:127:ARG:CG	2.73	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
5:XE:13:ILE:O	5:XE:13:ILE:HG22	2.14	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.95	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
7:XG:151:TYR:HE1	11:XK:54:ARG:HD3	1.79	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.46	0.47
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.77	0.47
19:XS:5:LEU:HD21	50:Y4:66:SER:CB	2.45	0.47
46:Y0:74:ARG:C	46:Y0:76:GLY:N	2.67	0.47
25:YA:2287:A:N6	25:YA:2344:U:H3	2.08	0.47
25:YA:520:G:H2'	25:YA:521:G:H8	1.79	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	0.47
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.97	0.47
31:YH:123:PHE:O	31:YH:125:VAL:HG23	2.13	0.47
34:YO:8:LEU:HB2	34:YO:19:ILE:CD1	2.43	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	0.47
40:YU:106:PHE:O	40:YU:109:LEU:HB2	2.15	0.47
40:YU:92:ARG:CZ	40:YU:94:ASN:HD22	2.27	0.47
41:YV:36:PRO:HA	41:YV:56:SER:CB	2.44	0.47
42:YW:32:ALA:O	42:YW:33:ARG:C	2.52	0.47
45:YZ:108:PRO:CG	45:YZ:112:ARG:N	2.70	0.47
1:QA:32:A:OP2	1:QA:398:C:H1'	2.15	0.47
1:QA:859:A:H2'	1:QA:860:A:O4'	2.15	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
4:QD:11:LEU:O	4:QD:19:LEU:HD21	2.14	0.47
7:QG:79:ARG:NH1	7:QG:79:ARG:HG2	2.29	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.34	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
30:RG:5:VAL:HG22	50:R4:25:TYR:CE2	2.50	0.47
25:RA:1025:G:C4	25:RA:1135:C:H1'	2.50	0.47
25:RA:1027:A:N6	25:RA:1126:A:C4	2.82	0.47
25:RA:1509:C:H3'	25:RA:1510:A:C5'	2.44	0.47
25:RA:2059:A:H5'	25:RA:2060:A:OP2	2.14	0.47
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.49	0.47
25:RA:2287:A:HO2'	25:RA:2288:A:P	2.36	0.47
25:RA:2760:C:H2'	25:RA:2761:G:O4'	2.15	0.47
30:RG:13:GLU:O	30:RG:13:GLU:HG3	2.14	0.47
32:RI:1:MET:HG3	32:RI:23:PRO:CA	2.44	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	0.47
38:RS:25:ARG:HH12	38:RS:42:ASP:CG	2.16	0.47
45:RZ:102:LEU:HD22	45:RZ:156:LYS:HZ1	1.77	0.47
45:RZ:157:LEU:HA	45:RZ:161:VAL:HG11	1.95	0.47
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.14	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.50	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.10	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.44	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
10:XJ:49:VAL:HG23	14:YN:34:TYR:OH	2.13	0.47
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.47	0.47
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.47
46:Y0:12:ASN:HB2	46:Y0:13:GLY:H	1.51	0.47
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.45	0.47
1:XA:1312:G:P	50:Y4:58:ARG:HH12	2.36	0.47
54:Y8:43:GLN:C	54:Y8:44:LYS:HD2	2.34	0.47
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.14	0.47
25:YA:1930:G:H22	25:YA:1969:A:H5''	1.79	0.47
25:YA:2790:A:H2'	25:YA:2791:C:H5''	1.95	0.47
25:YA:2849:U:H4'	25:YA:2868:A:C2	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:319:C:H2'	25:YA:320:A:O4'	2.14	0.47
25:YA:611:C:H2'	25:YA:612:G:C8	2.50	0.47
26:YB:27:C:H5'	26:YB:28:C:OP2	2.13	0.47
25:YA:917:A:H62	26:YB:80:U:H4'	1.78	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.47
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.48	0.47
30:YG:5:VAL:HG22	50:Y4:25:TYR:CE2	2.50	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.45	0.47
35:YP:112:LEU:HD12	35:YP:127:ALA:CB	2.44	0.47
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.63	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
41:YV:59:ALA:HB2	41:YV:96:ILE:HD13	1.97	0.47
1:QA:1076:C:N4	1:QA:1077:G:O6	2.47	0.47
1:QA:1127:G:H2'	1:QA:1128:C:C6	2.50	0.47
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.29	0.47
1:QA:1418:A:N6	1:QA:1482:G:O2'	2.44	0.47
1:QA:436:C:H2'	1:QA:437:U:C6	2.49	0.47
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
10:QJ:74:ILE:O	10:QJ:74:ILE:HG12	2.13	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
14:QN:36:PHE:CD1	14:QN:36:PHE:C	2.88	0.47
1:QA:377:G:P	16:QP:5:ARG:HH11	2.35	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
25:RA:1012:U:O4	33:RN:25:ARG:HA	2.14	0.47
25:RA:1729:A:H2'	25:RA:1730:U:H5''	1.95	0.47
25:RA:27:G:H1'	25:RA:513:A:N6	2.30	0.47
25:RA:593:G:O3'	54:R8:61:LEU:HD22	2.14	0.47
25:RA:598:G:C6	25:RA:599:G:C5	3.02	0.47
25:RA:862:G:H2'	25:RA:863:A:O4'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:63:LEU:CD1	28:RE:64:LYS:N	2.71	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.96	0.47
32:RI:74:ASN:HD22	32:RI:74:ASN:N	1.94	0.47
32:RI:86:THR:O	32:RI:87:LYS:HB2	2.15	0.47
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
36:RQ:80:GLU:OE1	46:R0:5:LYS:HD2	2.14	0.47
26:RB:6:C:O2'	38:RS:29:PHE:HE1	1.97	0.47
41:RV:2:PHE:CD2	41:RV:13:ARG:NH2	2.83	0.47
41:RV:36:PRO:HA	41:RV:56:SER:CB	2.44	0.47
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.27	0.47
1:XA:1317:C:H5''	1:XA:1318:A:OP2	2.14	0.47
1:XA:1440:C:O2'	1:XA:1442:G:N2	2.48	0.47
1:XA:864:A:H2'	1:XA:865:A:C8	2.49	0.47
1:XA:908:A:O5'	1:XA:908:A:H8	1.97	0.47
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	0.47
46:Y0:53:MET:HB3	46:Y0:59:LEU:HD23	1.96	0.47
46:Y0:74:ARG:O	46:Y0:76:GLY:N	2.47	0.47
25:YA:372:G:H8	47:Y1:65:SER:O	1.97	0.47
25:YA:270(S):G:H1'	47:Y1:78:LYS:HD2	1.97	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.44	0.47
25:YA:223:A:N1	25:YA:407:G:O2'	2.34	0.47
25:YA:2429:G:N7	35:YP:56:SER:OG	2.41	0.47
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.49	0.47
25:YA:2860:A:C8	25:YA:2861:G:H1'	2.49	0.47
25:YA:357:A:H2'	25:YA:358:U:H6	1.79	0.47
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.13	0.47
27:YD:32:SER:O	27:YD:33:LEU:CB	2.60	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
30:YG:14:GLU:O	30:YG:17:PRO:HG2	2.15	0.47
32:YI:74:ASN:ND2	32:YI:75:LEU:N	2.63	0.47
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.45	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.44	0.47
25:YA:814:C:N4	35:YP:25:SER:HA	2.28	0.47
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	2.15	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.14	0.47
25:YA:1614:A:N1	42:YW:91:GLY:HA2	2.28	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.15	0.47
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.49	0.47
1:QA:1327:C:OP2	21:QU:12:LYS:NZ	2.48	0.47
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.48	0.47
1:QA:623:C:H2'	1:QA:624:C:O4'	2.14	0.47
1:QA:871:U:HO2'	1:QA:872:A:P	2.36	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
50:R4:3:GLU:HG3	50:R4:4:GLY:H	1.79	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.15	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
25:RA:1897:G:C2	25:RA:1898:U:C2	3.03	0.47
25:RA:2011:U:OP2	42:RW:16:LYS:NZ	2.46	0.47
25:RA:570:G:H2'	25:RA:2030:A:C5	2.49	0.47
25:RA:2722:G:O2'	37:RR:3:HIS:HB2	2.15	0.47
25:RA:311:A:C6	25:RA:328:U:C4	3.02	0.47
26:RB:100:G:H2'	26:RB:101:A:O4'	2.15	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
28:RE:197:ILE:CD1	28:RE:199:ARG:HH12	2.26	0.47
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
32:RI:77:LEU:HD12	32:RI:140:LEU:HB2	1.96	0.47
32:RI:35:LEU:O	32:RI:36:ALA:CB	2.61	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:H	2.27	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.24	0.47
35:RP:37:GLY:O	35:RP:41:ARG:HD3	2.15	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
26:RB:116:G:H4'	38:RS:54:LEU:CD1	2.42	0.47
41:RV:2:PHE:C	41:RV:2:PHE:CD1	2.88	0.47
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
1:XA:1329:A:P	13:XM:28:ALA:HB3	2.54	0.47
1:XA:1347:G:O2'	1:XA:1348:U:O5'	2.33	0.47
1:XA:271:C:H2'	1:XA:272:C:C6	2.50	0.47
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:742:G:OP2	15:XO:35:ARG:NH2	2.42	0.47
1:XA:947:G:C6	1:XA:948:C:C4	3.02	0.47
2:XB:179:LYS:HA	8:XH:72:PRO:HG3	1.96	0.47
2:XB:224:GLN:HA	2:XB:229:VAL:HG23	1.97	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.27	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
50:Y4:38:LYS:C	50:Y4:40:HIS:H	2.07	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:CG1	2.62	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:HG13	2.15	0.47
25:YA:1300:U:H4'	25:YA:1301:A:H5''	1.95	0.47
25:YA:1932:A:H2'	25:YA:1933:G:O4'	2.15	0.47
25:YA:2074:U:HO2'	25:YA:2597:G:HO2'	1.58	0.47
25:YA:2867:G:O2'	25:YA:2868:A:C8	2.68	0.47
25:YA:2850:A:H5'	25:YA:2868:A:H2	1.79	0.47
25:YA:598:G:H1	25:YA:659:C:N4	2.13	0.47
26:YB:55:U:O3'	30:YG:27:ASN:ND2	2.45	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
29:YF:53:THR:C	29:YF:55:GLY:N	2.68	0.47
30:YG:36:LYS:HA	30:YG:95:ARG:HG2	1.95	0.47
35:YP:126:VAL:HA	35:YP:145:PRO:HD2	1.95	0.47
38:YS:46:VAL:HG12	38:YS:47:THR:N	2.28	0.47
40:YU:104:GLN:H	40:YU:104:GLN:CD	2.16	0.47
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.47
44:YY:39:VAL:O	44:YY:40:GLU:OE2	2.32	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	0.47
45:YZ:125:LEU:HG	45:YZ:164:ALA:CB	2.44	0.47
25:YA:2452:C:O4'	55:Z8:76:PPU:HB2	2.15	0.47
1:QA:378:G:H2'	1:QA:379:C:H6	1.79	0.47
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.14	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
4:QD:110:PHE:H	4:QD:110:PHE:HD1	1.63	0.47
5:QE:101:ILE:CD1	5:QE:119:LEU:HD23	2.36	0.47
5:QE:78:HIS:HB3	8:QH:104:ARG:O	2.14	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:72:ALA:O	13:QM:76:ALA:HB2	2.14	0.47
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.47
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.28	0.47
50:R4:8:LYS:O	50:R4:9:LEU:CB	2.62	0.47
52:R6:20:ASN:ND2	52:R6:42:TRP:CZ2	2.82	0.47
25:RA:1986:A:H2'	25:RA:1987:G:C8	2.50	0.47
25:RA:2207:C:H42	25:RA:2217:G:H1	1.62	0.47
25:RA:2402:C:H5	25:RA:2415:G:H22	1.60	0.47
25:RA:2725:A:O2'	25:RA:2726:U:OP2	2.31	0.47
25:RA:286:C:H2'	25:RA:287:C:C6	2.48	0.47
25:RA:29:U:H2'	25:RA:30:G:C8	2.50	0.47
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.29	0.47
27:RD:205:VAL:O	27:RD:206:LEU:C	2.52	0.47
28:RE:65:GLY:HA2	28:RE:70:ALA:HB3	1.95	0.47
29:RF:184:TYR:CD2	29:RF:188:ARG:HD2	2.50	0.47
32:RI:74:ASN:ND2	32:RI:75:LEU:N	2.63	0.47
35:RP:12:ALA:C	35:RP:14:LYS:H	2.17	0.47
35:RP:75:ILE:CD1	35:RP:75:ILE:H	2.15	0.47
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
1:QA:1446:A:N3	39:RT:118:ARG:HD2	2.30	0.47
44:RY:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
45:RZ:135:GLU:HG3	45:RZ:136:PHE:CD2	2.49	0.47
45:RZ:120:ILE:O	45:RZ:171:ILE:HD13	2.14	0.47
1:XA:1010:G:N2	1:XA:1020:U:O2'	2.47	0.47
1:XA:1326:C:H5''	21:XU:18:TYR:O	2.14	0.47
1:XA:1366:C:O2'	10:XJ:60:ARG:NH1	2.47	0.47
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.46	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
2:XB:168:THR:CB	2:XB:192:SER:HB2	2.41	0.47
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	1.97	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.47
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.48	0.47
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47
6:XF:19:LEU:C	6:XF:19:LEU:HD23	2.35	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.47
14:YN:8:GLU:C	14:YN:10:ALA:N	2.68	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
47:Y1:29:GLY:C	47:Y1:30:VAL:CG2	2.82	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.15	0.47
50:Y4:33:VAL:CG1	50:Y4:34:GLU:H	2.22	0.47
25:YA:1176:G:HO2'	25:YA:1178:C:H5	1.62	0.47
25:YA:1469:A:H2'	25:YA:1470:G:H8	1.78	0.47
25:YA:1631:A:H2'	25:YA:1632:A:O4'	2.15	0.47
25:YA:2070:G:H2'	25:YA:2071:A:O4'	2.14	0.47
25:YA:639:U:H2'	25:YA:640:C:C6	2.49	0.47
25:YA:956:G:H2'	25:YA:957:A:H2'	1.97	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.14	0.47
32:YI:114:LEU:O	32:YI:128:LEU:HD12	2.15	0.47
32:YI:133:HIS:CB	32:YI:134:PRO:CD	2.92	0.47
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.47
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	0.47
39:YT:51:ARG:CG	39:YT:98:LYS:HG3	2.44	0.47
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
44:YY:56:PRO:O	44:YY:57:GLN:C	2.53	0.47
44:YY:56:PRO:O	44:YY:58:GLY:N	2.47	0.47
1:QA:1442:G:C6	1:QA:1446:A:N6	2.83	0.47
1:QA:259:G:H1	1:QA:267:C:H42	1.62	0.47
1:QA:360:A:H2'	1:QA:361:G:C8	2.50	0.47
1:QA:368:U:P	32:YI:91:SER:HG	2.38	0.47
1:QA:496:A:H2'	1:QA:496:A:N3	2.30	0.47
1:QA:637:G:H2'	1:QA:638:G:C8	2.49	0.47
1:QA:811:C:H4'	1:QA:900:A:N6	2.29	0.47
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.47
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.47
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.47
25:RA:2152:G:H2'	25:RA:2153:G:C8	2.50	0.47
25:RA:2534:A:C2	25:RA:2535:G:H1'	2.50	0.47
25:RA:259:G:H21	25:RA:621:A:H8	1.63	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	0.47
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.47
28:RE:17:ASP:OD2	28:RE:17:ASP:N	2.46	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
31:RH:67:LEU:O	31:RH:71:LEU:HB2	2.15	0.47
32:RI:79:ILE:HG23	32:RI:81:VAL:HG13	1.97	0.47
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	0.47
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.47
38:RS:61:ASN:O	38:RS:65:VAL:HG23	2.15	0.47
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	0.47
44:RY:68:HIS:O	44:RY:71:LYS:HB2	2.14	0.47
45:RZ:128:VAL:HG22	45:RZ:129:SER:H	1.80	0.47
45:RZ:33:LEU:HD11	45:RZ:35:ARG:CG	2.44	0.47
45:RZ:33:LEU:CD1	45:RZ:34:ASN:H	2.28	0.47
1:XA:1127:G:H2'	1:XA:1128:C:C6	2.50	0.47
1:XA:189:U:H3	17:XQ:63:ARG:HB2	1.79	0.47
1:XA:397:A:N7	1:XA:547:A:O2'	2.44	0.47
1:XA:591:U:H2'	1:XA:592:G:C8	2.46	0.47
1:XA:867:G:HO2'	1:XA:873:A:N6	2.12	0.47
4:XD:114:ARG:CG	4:XD:114:ARG:NH1	2.77	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
5:XE:152:ARG:HD3	8:XH:44:PHE:CE1	2.49	0.47
13:XM:87:TYR:C	13:XM:89:GLY:H	2.18	0.47
16:XP:21:VAL:HG23	16:XP:34:GLU:H	1.79	0.47
46:Y0:37:LEU:N	46:Y0:59:LEU:O	2.40	0.47
25:YA:2285:C:H5	52:Y6:27:LYS:HE2	1.79	0.47
25:YA:2553:G:H1'	25:YA:2582:G:N3	2.29	0.47
25:YA:2630:G:H2'	25:YA:2631:G:C8	2.49	0.47
25:YA:566:U:H5"	35:YP:29:LYS:NZ	2.30	0.47
25:YA:680:G:H2'	25:YA:681:G:C8	2.50	0.47
25:YA:806:C:C2	25:YA:807:U:C5	3.03	0.47
27:YD:72:LYS:CG	27:YD:103:ARG:NH2	2.77	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.14	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.47
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
30:YG:88:ILE:O	30:YG:88:ILE:CD1	2.54	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
40:YU:91:ASP:O	40:YU:92:ARG:C	2.53	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:YZ:120:ILE:HD12	45:YZ:171:ILE:N	2.29	0.47
1:QA:321:A:H2'	1:QA:322:C:C6	2.50	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.62	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.47
14:QN:40:CYS:O	14:QN:42:ILE:N	2.48	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
48:R2:17:SER:CB	48:R2:18:PRO:CA	2.92	0.47
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	0.47
25:RA:771:G:OP1	53:R7:10:ARG:NH1	2.48	0.47
25:RA:1024:G:C6	25:RA:1025:G:C6	3.02	0.47
25:RA:1676:A:H2'	25:RA:1677:A:O4'	2.14	0.47
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.49	0.47
25:RA:311:A:H1'	25:RA:332:A:H5'	1.97	0.47
25:RA:451:C:N4	25:RA:454:A:H5'	2.29	0.47
25:RA:516:C:H2'	25:RA:517:C:H6	1.80	0.47
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.62	0.47
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.14	0.47
32:RI:9:LEU:O	32:RI:10:GLU:O	2.33	0.47
32:RI:128:LEU:O	32:RI:138:ILE:N	2.44	0.47
32:RI:133:HIS:CB	32:RI:134:PRO:CD	2.92	0.47
32:RI:99:GLU:CG	32:RI:103:ARG:NH2	2.75	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	0.47
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.14	0.47
33:RN:1:MET:HE3	40:RU:95:LEU:HD21	1.96	0.47
41:RV:30:GLY:O	41:RV:31:ALA:O	2.33	0.47
45:RZ:131:ARG:C	45:RZ:133:ILE:H	2.18	0.47
45:RZ:156:LYS:HB2	45:RZ:158:PRO:HD3	1.96	0.47
45:RZ:35:ARG:HB3	45:RZ:35:ARG:NH1	2.29	0.47
1:XA:1036:G:H3'	1:XA:1037:C:C6	2.50	0.47
1:XA:971:G:H2'	1:XA:1365:G:H4'	1.95	0.47
1:XA:686:U:H1'	11:XK:42:TRP:NE1	2.21	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
9:XI:112:LYS:C	9:XI:112:LYS:HD3	2.35	0.47
1:XA:970:C:N4	9:XI:128:ARG:OXT	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.47
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.32	0.47
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.14	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	0.47
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.47
25:YA:1029:A:N6	25:YA:1125:G:O2'	2.44	0.47
25:YA:1138:G:H21	33:YN:106:MET:CE	2.24	0.47
25:YA:1639:U:C2'	25:YA:1640:C:H5''	2.44	0.47
25:YA:273(A):G:C6	25:YA:364:C:C4	3.02	0.47
25:YA:503:A:H5''	25:YA:504:U:H5'	1.97	0.47
26:YB:49:C:H2'	26:YB:50:G:C8	2.50	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
28:YE:103:ASP:OD2	28:YE:168:MET:HG2	2.15	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
25:YA:618(A):C:OP2	29:YF:103:LYS:HE2	2.15	0.47
32:YI:9:LEU:O	32:YI:10:GLU:O	2.33	0.47
32:YI:74:ASN:CG	32:YI:75:LEU:HD13	2.36	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
35:YP:81:GLN:HB3	35:YP:110:TYR:HB3	1.97	0.47
26:YB:52:A:N6	38:YS:33:LYS:HG3	2.29	0.47
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.78	0.47
45:YZ:111:VAL:O	45:YZ:113:ALA:N	2.48	0.47
45:YZ:156:LYS:HB2	45:YZ:158:PRO:HD3	1.96	0.47
45:YZ:26:GLY:HA3	45:YZ:86:VAL:O	2.14	0.47
45:YZ:95:PRO:O	45:YZ:96:VAL:HG13	2.15	0.47
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.41	0.47
57:QA:1661:PAR:H43	57:QA:1661:PAR:H642	1.96	0.47
1:QA:664:G:OP1	18:QR:64:ARG:NE	2.41	0.47
4:QD:22:LYS:HB2	4:QD:26:CYS:HB2	1.96	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.35	0.47
15:QO:82:ILE:O	15:QO:86:GLY:N	2.48	0.47
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.47
17:QQ:76:LEU:HD11	17:QQ:79:SER:H	1.80	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
22:QV:1:C:H4'	46:R0:5:LYS:CE	2.42	0.47
50:R4:53:GLU:O	50:R4:57:GLU:HG3	2.14	0.47
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.30	0.47
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1131:G:C8	25:RA:2025:C:H4'	2.50	0.47
25:RA:1270:C:H5''	25:RA:1271:G:H5'	1.96	0.47
25:RA:2677:G:H1	25:RA:2730:C:H42	1.63	0.47
25:RA:626:U:H5''	25:RA:627:A:H5'	1.96	0.47
25:RA:897:C:H2'	25:RA:898:C:C6	2.51	0.47
25:RA:923:C:H2'	25:RA:924:C:C6	2.50	0.47
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.47
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.47
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.47
30:RG:44:GLY:HA2	30:RG:88:ILE:HG12	1.97	0.47
32:RI:67:ARG:NH2	32:RI:68:LEU:HB2	2.30	0.47
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.47
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.97	0.47
1:XA:1164:G:C6	1:XA:1165:C:C4	3.03	0.47
1:XA:1266:G:N2	1:XA:1269:A:OP2	2.48	0.47
1:XA:361:G:H2'	1:XA:362:G:O4'	2.15	0.47
1:XA:637:G:H2'	1:XA:638:G:H8	1.81	0.47
1:XA:977:A:C8	1:XA:1223:C:C4	3.02	0.47
2:XB:220:ASP:O	2:XB:223:ILE:N	2.48	0.47
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.47
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.36	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
1:XA:598:U:H4'	8:XH:94:TYR:CG	2.49	0.47
14:XN:40:CYS:O	14:XN:42:ILE:N	2.48	0.47
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
25:YA:769:G:H5'	25:YA:1379:A:N6	2.30	0.47
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.80	0.47
25:YA:2356:C:H2'	25:YA:2357:U:O4'	2.15	0.47
25:YA:389:G:H22	35:YP:72:PRO:CG	2.28	0.47
26:YB:31:C:H2'	26:YB:53:A:H61	1.80	0.47
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.47
28:YE:101:ARG:HD2	28:YE:171:GLU:HA	1.97	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:HB3	1.95	0.47
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.47
31:YH:9:ILE:O	31:YH:10:PRO:O	2.33	0.47
33:YN:46:VAL:HG13	33:YN:47:ALA:N	2.30	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
34:YO:53:LYS:CD	34:YO:56:ASP:OD1	2.63	0.47
35:YP:115:LEU:CD1	35:YP:116:GLY:N	2.78	0.47
36:YQ:58:PHE:O	36:YQ:59:ARG:C	2.53	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.47
45:YZ:33:LEU:CD1	45:YZ:34:ASN:H	2.28	0.47
1:QA:1365:G:H2'	1:QA:1366:C:H6	1.80	0.46
1:QA:161:A:N1	1:QA:347:G:O2'	2.47	0.46
1:QA:448:A:C2	1:QA:449:C:N3	2.83	0.46
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.46
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.46
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.18	0.46
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
47:R1:79:GLY:N	47:R1:80:LEU:HD23	2.30	0.46
53:R7:25:PRO:HA	53:R7:28:ARG:CZ	2.45	0.46
25:RA:242:G:H5''	54:R8:3:LYS:HE3	1.97	0.46
25:RA:1363:C:H2'	25:RA:1364:G:H8	1.80	0.46
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.28	0.46
25:RA:2844:G:H3'	25:RA:2845:G:H8	1.80	0.46
25:RA:301:G:H1	25:RA:316:C:H42	1.62	0.46
25:RA:83:G:O2'	25:RA:84:A:H8	1.97	0.46
26:RB:52:A:N6	38:RS:33:LYS:HG3	2.29	0.46
27:RD:183:ARG:NH1	27:RD:183:ARG:CG	2.69	0.46
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.48	0.46
29:RF:65:TRP:CH2	29:RF:72:ARG:HB3	2.50	0.46
31:RH:9:ILE:O	31:RH:10:PRO:O	2.33	0.46
32:RI:64:GLU:HG3	32:RI:67:ARG:NH2	2.30	0.46
32:RI:68:LEU:HA	32:RI:71:ILE:HG23	1.97	0.46
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.46
37:RR:78:LYS:HG2	37:RR:78:LYS:O	2.15	0.46
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
45:RZ:122:ARG:HB3	45:RZ:123:ASP:H	1.43	0.46
1:XA:1206:G:C4	1:XA:1207:G:C8	3.04	0.46
1:XA:1219:U:H2'	1:XA:1220:G:H8	1.80	0.46
1:XA:280:C:H5''	1:XA:281:G:C8	2.50	0.46
1:XA:585:G:O2'	1:XA:879:C:OP1	2.32	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:652:U:O4	1:XA:752:G:H2'	2.15	0.46
1:XA:789:U:O2'	1:XA:791:G:N7	2.35	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.46
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.46
8:XH:68:ARG:HG2	8:XH:68:ARG:HH11	1.80	0.46
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.46
1:XA:1367:C:H4'	10:XJ:48:THR:HG21	1.96	0.46
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.46
12:XL:10:LEU:CD1	17:XQ:32:TYR:CE2	2.89	0.46
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
25:YA:2364:C:H4'	46:Y0:56:ASP:OD1	2.15	0.46
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.46
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.16	0.46
25:YA:330:A:H2	25:YA:1210:A:H2'	1.80	0.46
25:YA:1957:C:H2'	25:YA:1958:C:C6	2.50	0.46
25:YA:199:A:O2'	25:YA:2433:A:N6	2.43	0.46
25:YA:2219:G:OP1	27:YD:172:TYR:OH	2.23	0.46
25:YA:2563:U:H1'	25:YA:2566:A:N6	2.30	0.46
25:YA:270(U):C:H2'	25:YA:270(V):G:C8	2.50	0.46
25:YA:277:C:H5'	25:YA:278:A:H8	1.80	0.46
25:YA:534:U:H2'	25:YA:535:C:C6	2.50	0.46
27:YD:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.46
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.46
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.80	0.46
29:YF:46:ARG:NH1	29:YF:46:ARG:CG	2.71	0.46
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	0.46
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.16	0.46
32:YI:73:GLU:HG3	32:YI:136:VAL:CG2	2.43	0.46
33:YN:35:ARG:O	33:YN:35:ARG:HG3	2.15	0.46
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.46
35:YP:12:ALA:C	35:YP:14:LYS:H	2.16	0.46
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.46
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.46
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	0.46
41:YV:2:PHE:CD1	41:YV:2:PHE:C	2.88	0.46
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.98	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.96	0.46
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.14	0.46
45:YZ:107:THR:HG21	45:YZ:144:LEU:N	2.30	0.46
45:YZ:131:ARG:C	45:YZ:133:ILE:H	2.18	0.46
1:QA:1008:C:H42	1:QA:1021:G:H1	1.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1073:U:H3	1:QA:1102:A:H61	1.62	0.46
1:QA:1317:C:H5''	1:QA:1318:A:OP2	2.15	0.46
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.30	0.46
1:QA:1327:C:OP1	21:QU:21:TYR:HD1	1.98	0.46
1:QA:296:U:H2'	1:QA:297:G:C8	2.50	0.46
1:QA:651:C:H2'	1:QA:652:U:C6	2.50	0.46
1:QA:752:G:H1'	1:QA:754:C:H41	1.81	0.46
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.46
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.46
4:QD:29:PRO:O	4:QD:30:LYS:HB3	2.15	0.46
4:QD:31:CYS:O	4:QD:32:ALA:CB	2.63	0.46
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.80	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.32	0.46
10:QJ:95:GLU:HA	10:QJ:95:GLU:OE2	2.16	0.46
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	0.46
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
25:RA:19:C:H2'	25:RA:20:C:C6	2.50	0.46
25:RA:2161:C:H2'	25:RA:2162:G:O4'	2.15	0.46
25:RA:2646:C:H2'	25:RA:2647:U:O4'	2.16	0.46
25:RA:265:A:O2'	25:RA:266:G:H4'	2.15	0.46
25:RA:704:G:H1'	25:RA:727:A:N6	2.31	0.46
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
28:RE:20:ALA:C	28:RE:21:VAL:HG13	2.35	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.78	0.46
31:RH:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.46
31:RH:4:ILE:CD1	31:RH:4:ILE:H	2.24	0.46
32:RI:114:LEU:O	32:RI:128:LEU:HD12	2.15	0.46
32:RI:37:VAL:HG12	32:RI:38:LEU:N	2.30	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.53	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.15	0.46
39:RT:29:ARG:NH1	39:RT:46:GLU:OE1	2.47	0.46
45:RZ:125:LEU:HG	45:RZ:164:ALA:CB	2.45	0.46
45:RZ:140:ASP:OD2	45:RZ:156:LYS:CA	2.63	0.46
45:RZ:5:LEU:HD13	45:RZ:5:LEU:O	2.16	0.46
45:RZ:30:ASN:CB	45:RZ:89:PHE:HE2	2.27	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:RZ:95:PRO:O	45:RZ:96:VAL:HG13	2.15	0.46
1:XA:253:U:H2'	1:XA:254:G:C8	2.51	0.46
1:XA:585:G:H1'	1:XA:879:C:H5''	1.96	0.46
1:XA:60:A:H4'	1:XA:61:G:O5'	2.15	0.46
1:XA:833:U:H2'	1:XA:834:C:H6	1.81	0.46
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.15	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.46
24:XY:40:G:H2'	24:XY:41:A:C8	2.51	0.46
47:Y1:76:ARG:CD	47:Y1:76:ARG:H	2.28	0.46
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.46
54:Y8:29:LYS:HE3	54:Y8:41:ILE:O	2.15	0.46
25:YA:1437:C:H2'	25:YA:1438:U:H6	1.80	0.46
25:YA:1448:G:H5'	25:YA:1449:A:OP1	2.14	0.46
25:YA:1477:A:H2'	25:YA:1478:G:O4'	2.15	0.46
25:YA:2343:C:O2'	25:YA:2373:G:O2'	2.16	0.46
25:YA:2475:C:H3'	25:YA:2476:A:H5''	1.97	0.46
25:YA:2875:C:H2'	25:YA:2876:G:O4'	2.15	0.46
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	0.46
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.46
29:YF:184:TYR:CD2	29:YF:188:ARG:HD2	2.50	0.46
30:YG:135:LEU:HD11	30:YG:157:ILE:HD12	1.98	0.46
31:YH:94:TYR:CD1	31:YH:94:TYR:N	2.82	0.46
32:YI:77:LEU:HD12	32:YI:140:LEU:HB2	1.97	0.46
32:YI:86:THR:O	32:YI:87:LYS:HB2	2.15	0.46
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	1.97	0.46
34:YO:61:VAL:O	34:YO:84:ALA:HB1	2.16	0.46
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.46
25:YA:2850:A:C2	37:YR:61:HIS:CD2	3.02	0.46
25:YA:2318:G:N1	38:YS:2:ALA:HA	2.30	0.46
40:YU:8:VAL:O	40:YU:9:VAL:C	2.53	0.46
41:YV:5:VAL:HG13	41:YV:14:VAL:HG21	1.97	0.46
25:YA:486:C:H4'	42:YW:60:ASN:OD1	2.15	0.46
45:YZ:140:ASP:OD2	45:YZ:156:LYS:CA	2.63	0.46
1:QA:1051:C:N4	1:QA:1052:U:O4	2.49	0.46
1:QA:1471:G:H2'	1:QA:1472:U:H6	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
57:QA:1661:PAR:N21	57:QA:1661:PAR:O53	2.49	0.46
1:QA:147:G:H1	1:QA:175:C:H42	1.62	0.46
1:QA:56:U:H2'	1:QA:57:G:C8	2.50	0.46
1:QA:583:A:N6	1:QA:758:G:O2'	2.48	0.46
1:QA:868:C:H2'	1:QA:869:G:O4'	2.15	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
1:QA:972:C:H4'	10:QJ:57:LYS:CG	2.46	0.46
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.16	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.14	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	0.46
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.46
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.46
20:QT:26:ASN:ND2	20:QT:26:ASN:N	2.62	0.46
24:QY:34:C:O2'	24:QY:35:G:O5'	2.25	0.46
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.63	0.46
48:R2:7:ARG:NH1	48:R2:7:ARG:HG3	2.25	0.46
52:R6:48:VAL:O	52:R6:49:HIS:HB2	2.15	0.46
25:RA:1430:C:H2'	25:RA:1431:U:C6	2.50	0.46
25:RA:1482:U:H3	25:RA:1512:G:H1	1.63	0.46
25:RA:2303:G:H1	25:RA:2313:C:H42	1.63	0.46
25:RA:918:A:C5	25:RA:919:G:H1'	2.51	0.46
26:RB:74:U:H2'	26:RB:75:G:O4'	2.16	0.46
30:RG:95:ARG:O	30:RG:96:ARG:C	2.54	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.30	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.46
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.97	0.46
43:RX:12:VAL:HG13	43:RX:12:VAL:O	2.15	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.45	0.46
45:RZ:107:THR:HG21	45:RZ:144:LEU:N	2.30	0.46
1:XA:106:C:H2'	1:XA:107:G:H8	1.80	0.46
1:XA:1478:C:H2'	1:XA:1479:C:C6	2.51	0.46
1:XA:297:G:N2	1:XA:299:G:H3'	2.30	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
1:XA:1205:U:O2'	3:XC:195:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.79	0.46
4:XD:7:PRO:HB2	4:XD:10:ARG:HD2	1.96	0.46
4:XD:146:ILE:CD1	4:XD:146:ILE:N	2.73	0.46
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.46
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
2:XB:178:ARG:HH22	8:XH:68:ARG:HH22	1.60	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.33	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
13:XM:68:GLY:HA2	30:YG:116:ASP:OD2	2.15	0.46
14:XN:36:PHE:C	14:XN:36:PHE:CD1	2.88	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
54:Y8:40:GLU:C	54:Y8:42:ARG:N	2.68	0.46
25:YA:1022:G:O2'	25:YA:1023:U:OP2	2.24	0.46
25:YA:86:C:H4'	25:YA:104:U:H1'	1.96	0.46
25:YA:1790:C:H5''	25:YA:1791:A:OP1	2.15	0.46
22:XV:13:C:O2'	25:YA:1924:C:H4'	2.16	0.46
25:YA:2219:G:H5''	27:YD:269:PHE:CZ	2.51	0.46
25:YA:250:G:C6	25:YA:251:A:C6	3.04	0.46
25:YA:2818:G:H1	25:YA:2828:C:H42	1.63	0.46
25:YA:738:G:C6	25:YA:739:G:C2	3.03	0.46
25:YA:979:G:N2	25:YA:985:C:N3	2.63	0.46
28:YE:3:GLY:HA3	28:YE:81:ILE:HG21	1.97	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
31:YH:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.96	0.46
35:YP:144:GLU:N	35:YP:144:GLU:OE1	2.48	0.46
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
36:YQ:80:GLU:CD	46:Y0:5:LYS:CB	2.84	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.98	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
41:YV:61:VAL:HA	41:YV:94:LEU:HD23	1.97	0.46
45:YZ:102:LEU:CD1	45:YZ:171:ILE:HD11	2.46	0.46
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.80	0.46
45:YZ:45:ASP:OD1	45:YZ:49:ARG:NE	2.41	0.46
1:QA:1347:G:C2	9:QI:107:ARG:NH2	2.83	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:297:G:H4'	1:QA:557:G:H4'	1.97	0.46
1:QA:689:C:O2'	1:QA:705:U:O2'	2.16	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.46
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.46
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.46
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.31	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.48	0.46
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
46:R0:55:ARG:HB2	46:R0:55:ARG:CZ	2.44	0.46
46:R0:53:MET:HB3	46:R0:59:LEU:HD23	1.97	0.46
25:RA:1857:G:O2'	25:RA:1885:A:N6	2.48	0.46
25:RA:185:U:H2'	25:RA:186:G:C8	2.50	0.46
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.39	0.46
25:RA:2210:G:N3	25:RA:2210:G:H2'	2.29	0.46
25:RA:221:A:H4'	25:RA:222:A:O5'	2.14	0.46
25:RA:2331:G:O4'	46:R0:42:GLY:HA3	2.15	0.46
25:RA:2468:G:H5''	36:RQ:120:ILE:HD12	1.97	0.46
25:RA:2769:C:H2'	25:RA:2770:G:O4'	2.15	0.46
25:RA:428:A:H8	25:RA:428:A:OP2	1.99	0.46
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.46
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.16	0.46
25:RA:336:C:HO2'	44:RY:35:TYR:HH	1.53	0.46
44:RY:35:TYR:O	44:RY:35:TYR:CD1	2.69	0.46
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.46
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.48	0.46
45:RZ:11:GLU:HG3	45:RZ:12:GLY:N	2.31	0.46
1:XA:1432:G:O2'	1:XA:1468:A:N6	2.49	0.46
1:XA:401:C:H2'	1:XA:402:G:C8	2.50	0.46
1:XA:411:A:H62	1:XA:413:G:N2	2.07	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.46
4:XD:135:LEU:O	4:XD:137:SER:N	2.48	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
1:XA:686:U:C1'	11:XK:42:TRP:HE1	2.23	0.46
1:XA:35:G:O2'	12:XL:118:SER:O	2.22	0.46
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.14	0.46
25:YA:1269:A:O5'	25:YA:1269:A:H8	1.98	0.46
25:YA:1925:C:N3	25:YA:1929:G:O6	2.48	0.46
25:YA:2394:C:H2'	25:YA:2395:C:H6	1.81	0.46
25:YA:2744:G:H21	31:YH:143:GLN:HE21	1.63	0.46
25:YA:631:A:H4'	35:YP:65:ARG:HA	1.96	0.46
25:YA:74:A:H4'	25:YA:75:G:O5'	2.15	0.46
27:YD:102:LYS:O	27:YD:103:ARG:HG3	2.15	0.46
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.46
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	0.46
27:YD:198:ASN:ND2	27:YD:198:ASN:C	2.69	0.46
29:YF:108:LYS:HA	29:YF:108:LYS:HZ3	1.80	0.46
31:YH:89:ILE:HD13	31:YH:89:ILE:H	1.81	0.46
32:YI:9:LEU:HD21	32:YI:12:LEU:O	2.15	0.46
32:YI:37:VAL:HG12	32:YI:38:LEU:N	2.30	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.63	0.46
34:YO:7:TYR:CD1	34:YO:20:MET:HB2	2.50	0.46
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
40:YU:98:LEU:HD23	40:YU:98:LEU:C	2.36	0.46
42:YW:36:LEU:CD1	42:YW:47:VAL:HG12	2.44	0.46
43:YX:31:HIS:CD2	43:YX:33:LYS:HB2	2.50	0.46
45:YZ:30:ASN:CB	45:YZ:89:PHE:HE2	2.27	0.46
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.44	0.46
1:QA:1301:U:H3'	1:QA:1302:U:H5'	1.98	0.46
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.51	0.46
1:QA:826:C:H2'	1:QA:827:U:O2	2.15	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:QC:127:ARG:NH1	3:QC:127:ARG:CG	2.74	0.46
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.80	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:3:ARG:HH11	6:QF:3:ARG:HG3	1.80	0.46
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.80	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	2.15	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
52:R6:18:ARG:O	52:R6:19:ARG:O	2.33	0.46
54:R8:52:LYS:O	54:R8:52:LYS:CG	2.64	0.46
25:RA:137(A):G:H1'	43:RX:41:ASN:ND2	2.31	0.46
25:RA:1438:U:H2'	25:RA:1439:A:H8	1.80	0.46
25:RA:1478:G:H2'	25:RA:1479:G:C8	2.49	0.46
25:RA:1696:G:H8	25:RA:1696:G:OP2	1.97	0.46
25:RA:2228:G:H2'	25:RA:2229:C:O4'	2.15	0.46
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.15	0.46
25:RA:270(E):G:C2	25:RA:270(V):G:C2	3.04	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
28:RE:188:VAL:HG13	28:RE:188:VAL:O	2.15	0.46
28:RE:47:VAL:O	28:RE:48:GLN:C	2.52	0.46
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
35:RP:6:LEU:HD22	35:RP:6:LEU:N	2.31	0.46
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
40:RU:106:PHE:O	40:RU:109:LEU:HB2	2.15	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.98	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
45:RZ:152:ALA:H	45:RZ:170:THR:N	2.14	0.46
1:XA:1308:U:OP1	13:XM:98:VAL:N	2.26	0.46
1:XA:687:A:N3	1:XA:688:G:H1'	2.30	0.46
1:XA:713:G:H21	1:XA:777:A:H1'	1.80	0.46
1:XA:966:G:C4	22:XV:34:C:H4'	2.50	0.46
1:XA:986:A:H2'	1:XA:987:G:C8	2.51	0.46
2:XB:136:VAL:O	2:XB:140:HIS:N	2.43	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.16	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.46
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.80	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
17:XQ:92:ARG:NH1	17:XQ:92:ARG:HG3	2.30	0.46
46:Y0:55:ARG:CZ	46:Y0:55:ARG:HB2	2.44	0.46
46:Y0:66:VAL:HG22	46:Y0:82:ARG:HB3	1.96	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
54:Y8:48:PHE:N	54:Y8:48:PHE:HD1	2.14	0.46
25:YA:30:G:O2'	25:YA:1214:A:N3	2.41	0.46
25:YA:414:C:O2	25:YA:1864:U:O2'	2.26	0.46
25:YA:704:G:H1'	25:YA:727:A:N6	2.30	0.46
25:YA:71:A:H5''	25:YA:72:U:H3'	1.97	0.46
25:YA:784:A:O2'	25:YA:785:G:H8	1.98	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
28:YE:54:GLN:CA	28:YE:54:GLN:HE21	2.27	0.46
25:YA:618:G:OP1	29:YF:106:ARG:HB3	2.16	0.46
30:YG:102:PHE:HA	30:YG:105:LYS:HE3	1.98	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.51	0.46
30:YG:36:LYS:O	30:YG:37:VAL:HG23	2.15	0.46
33:YN:36:GLY:O	33:YN:42:TRP:HE3	1.98	0.46
34:YO:101:PRO:HA	34:YO:120:GLU:O	2.16	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.97	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.50	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.15	0.46
1:QA:1232:U:P	9:QI:124:GLN:HE21	2.39	0.46
1:QA:254:G:H2'	1:QA:255:G:C8	2.47	0.46
1:QA:424:G:H2'	1:QA:425:G:H8	1.81	0.46
1:QA:681:C:H2'	1:QA:682:G:H8	1.80	0.46
1:QA:74:C:H2'	1:QA:75:C:H6	1.80	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:124:ILE:C	3:QC:126:ARG:H	2.18	0.46
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
5:QE:78:HIS:CD2	8:QH:104:ARG:HE	2.33	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
8:QH:91:ARG:NH1	8:QH:91:ARG:HG2	2.25	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
12:QL:8:ASN:OD1	17:QQ:34:LYS:CE	2.48	0.46
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.16	0.46
1:QA:310:G:H4'	16:QP:31:LYS:HD3	1.97	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
25:RA:1927:A:C6	25:RA:1928:A:C6	3.04	0.46
25:RA:2181:G:H2'	25:RA:2182:G:C8	2.50	0.46
25:RA:827:U:H1'	25:RA:2246:G:O2'	2.16	0.46
25:RA:2287:A:C6	25:RA:2289:G:C4	3.03	0.46
25:RA:242:G:C3'	54:R8:6:THR:HG23	2.46	0.46
25:RA:401:A:H2'	25:RA:402:A:O4'	2.16	0.46
25:RA:459:U:H5''	53:R7:40:TRP:CD2	2.51	0.46
25:RA:571:A:H5'	25:RA:2030:A:N7	2.30	0.46
25:RA:598:G:H2'	25:RA:599:G:O4'	2.14	0.46
25:RA:620:G:H4'	25:RA:621:A:C5'	2.45	0.46
27:RD:136:ILE:N	27:RD:136:ILE:HD12	2.30	0.46
27:RD:69:ARG:C	27:RD:71:ASP:N	2.69	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46
26:RB:43:C:O2'	30:RG:93:THR:O	2.11	0.46
32:RI:78:THR:O	32:RI:79:ILE:HG12	2.16	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.15	0.46
37:RR:29:LEU:CD1	37:RR:29:LEU:N	2.79	0.46
37:RR:85:PRO:C	37:RR:87:TYR:H	2.19	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
25:RA:1200:C:H1'	40:RU:2:PRO:HG2	1.98	0.46
45:RZ:108:PRO:CG	45:RZ:112:ARG:N	2.70	0.46
45:RZ:151:HIS:O	45:RZ:153:SER:O	2.33	0.46
1:XA:1080:A:H5''	5:XE:16:THR:HG21	1.98	0.46
1:XA:109:A:H4'	1:XA:110:C:OP2	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:565:U:H5''	1:XA:566:G:H2'	1.96	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.80	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
1:XA:1298:C:C4	7:XG:114:ARG:HD2	2.51	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
11:XK:17:GLY:HA3	11:XK:77:MET:HE1	1.97	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.46
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.54	0.46
54:Y8:44:LYS:HD2	54:Y8:44:LYS:N	2.30	0.46
25:YA:1289:C:H2'	25:YA:1290:C:H6	1.81	0.46
25:YA:1494:A:H2'	25:YA:1495:A:H5'	1.98	0.46
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.50	0.46
25:YA:2105:C:H2'	25:YA:2106:G:C8	2.50	0.46
25:YA:2159:G:H2'	25:YA:2160:G:H8	1.80	0.46
25:YA:2228:G:H2'	25:YA:2229:C:O4'	2.16	0.46
25:YA:2811:G:H1	25:YA:2889:C:H42	1.63	0.46
25:YA:372:G:O2'	25:YA:373:U:OP2	2.33	0.46
25:YA:748:G:C8	42:YW:89:ALA:HB1	2.51	0.46
27:YD:105:ILE:HG23	27:YD:106:ILE:O	2.15	0.46
4:QD:166:LYS:HD3	27:YD:134:ARG:HH11	1.78	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.97	0.46
31:YH:53:GLU:HA	31:YH:53:GLU:OE1	2.16	0.46
31:YH:86:GLU:O	31:YH:87:LEU:CB	2.64	0.46
32:YI:78:THR:O	32:YI:79:ILE:HG12	2.16	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
36:YQ:87:LYS:HG2	36:YQ:87:LYS:O	2.15	0.46
37:YR:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
38:YS:108:GLY:O	38:YS:110:LEU:N	2.48	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
45:YZ:27:VAL:CG2	45:YZ:28:MET:N	2.78	0.46
45:YZ:5:LEU:O	45:YZ:5:LEU:HD13	2.16	0.46
1:QA:725:G:C6	1:QA:726:C:C4	3.03	0.46
1:QA:792:A:HI'	1:QA:793:U:OP2	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.46
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.97	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
1:QA:643:C:H5'	8:QH:31:PHE:CD1	2.51	0.46
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.46
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
13:QM:118:ALA:O	22:QV:28:C:O3'	2.34	0.46
22:QV:49:G:O6	22:QV:65:C:N4	2.49	0.46
47:R1:60:PHE:CE2	47:R1:91:LYS:NZ	2.84	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.29	0.46
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
25:RA:1472:A:H2'	25:RA:1473:G:O4'	2.16	0.46
25:RA:1578:U:H2'	25:RA:1579:A:H5'	1.98	0.46
25:RA:1694:C:H4'	25:RA:1695:G:O5'	2.16	0.46
25:RA:1795:C:H2'	25:RA:1796:U:O4'	2.15	0.46
22:QV:13:C:O2'	25:RA:1924:C:H4'	2.16	0.46
25:RA:2777:G:H5''	25:RA:2778:A:O5'	2.16	0.46
25:RA:639:U:H2'	25:RA:640:C:C6	2.51	0.46
25:RA:719:C:H2'	25:RA:720:C:C6	2.51	0.46
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
28:RE:95:ILE:HG22	28:RE:95:ILE:O	2.16	0.46
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46
30:RG:111:LEU:HD22	30:RG:120:LEU:HD21	1.96	0.46
30:RG:135:LEU:HD11	30:RG:157:ILE:HD12	1.98	0.46
30:RG:52:ILE:O	30:RG:52:ILE:HG22	2.15	0.46
32:RI:77:LEU:HB2	32:RI:104:GLN:OE1	2.15	0.46
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.50	0.46
34:RO:101:PRO:HA	34:RO:120:GLU:O	2.16	0.46
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.46
35:RP:45:LEU:CD1	35:RP:45:LEU:N	2.79	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:RT:58:ASN:N	39:RT:58:ASN:HD22	2.10	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
1:XA:1095:U:H5'	1:XA:1109:C:O2	2.15	0.46
1:XA:335:C:O2'	1:XA:1433:A:N3	2.47	0.46
1:XA:1441:G:H4'	1:XA:1442:G:C4	2.51	0.46
4:XD:192:GLU:HG3	4:XD:192:GLU:H	1.57	0.46
6:XF:100:ASN:HA	6:XF:100:ASN:HD22	1.47	0.46
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
8:XH:49:GLU:O	8:XH:49:GLU:HG3	2.15	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
1:XA:1219:U:P	14:YN:19:ARG:HH22	2.36	0.46
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.15	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46
52:Y6:15:GLU:HB3	52:Y6:16:CYS:H	1.46	0.46
25:YA:1026:U:H1'	25:YA:1027:A:C5'	2.46	0.46
25:YA:1093:G:H3'	25:YA:1094:U:H6	1.80	0.46
25:YA:2038:G:H2'	25:YA:2039:C:O4'	2.16	0.46
25:YA:2347:C:C5	25:YA:2382:G:H1'	2.51	0.46
25:YA:634:C:H2'	25:YA:635:C:C6	2.51	0.46
25:YA:669:G:C2	25:YA:801:G:C6	3.04	0.46
25:YA:829:A:H5"	25:YA:831:G:N7	2.30	0.46
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.49	0.46
27:YD:48:ARG:NH1	27:YD:48:ARG:HG3	2.31	0.46
27:YD:61:LEU:HB3	27:YD:63:ARG:NH1	2.31	0.46
28:YE:129:HIS:O	28:YE:130:GLY:C	2.53	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
30:YG:76:SER:CB	30:YG:83:ARG:HA	2.46	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
32:YI:92:VAL:HG13	32:YI:92:VAL:O	2.16	0.46
33:YN:96:GLU:O	33:YN:99:LEU:N	2.34	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.46
35:YP:23:PRO:O	35:YP:23:PRO:HG2	2.15	0.46
36:YQ:81:VAL:HG22	46:Y0:7:LEU:CD2	1.99	0.46
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
41:YV:36:PRO:HA	41:YV:56:SER:HG	1.81	0.46
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.46
42:YW:48:ALA:O	42:YW:49:LYS:C	2.53	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46
25:YA:142:G:H1'	43:YX:37:THR:HG21	1.97	0.46
1:QA:1050:G:N2	1:QA:1209:C:C2	2.84	0.46
1:QA:156:G:H1	1:QA:165:C:H42	1.63	0.46
1:QA:46:G:H2'	1:QA:366:C:H5	1.79	0.46
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.46
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.46
7:QG:54:THR:O	7:QG:54:THR:HG23	2.16	0.46
8:QH:49:GLU:O	8:QH:49:GLU:HG3	2.14	0.46
14:QN:41:ARG:NH1	14:QN:41:ARG:HG2	2.29	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
20:QT:93:GLU:O	20:QT:93:GLU:HG2	2.14	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
24:QY:40:G:H2'	24:QY:41:A:C8	2.51	0.46
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.46
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.46
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.46
25:RA:1641:A:H2'	25:RA:1642:G:O4'	2.16	0.46
22:QV:76:A:H8	25:RA:2602:A:H62	1.63	0.46
25:RA:2693:A:H2'	25:RA:2694:G:H8	1.80	0.46
25:RA:307:G:N1	25:RA:310:A:OP2	2.48	0.46
25:RA:642:G:H21	25:RA:646:A:H2	1.63	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
30:RG:88:ILE:CD1	30:RG:88:ILE:O	2.54	0.46
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.39	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
32:RI:92:VAL:O	32:RI:92:VAL:HG13	2.16	0.46
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	0.46
34:RO:61:VAL:O	34:RO:84:ALA:HB1	2.16	0.46
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46
45:RZ:108:PRO:HG2	45:RZ:112:ARG:N	2.24	0.46
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.48	0.46
1:XA:991:U:O2'	1:XA:992:U:O5'	2.32	0.46
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.08	0.46
4:XD:110:PHE:H	4:XD:110:PHE:HD1	1.63	0.46
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.31	0.46
5:XE:150:ARG:O	5:XE:150:ARG:HG2	2.16	0.46
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.46
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.81	0.46
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.46
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.46
25:YA:2396:G:C2'	25:YA:2397:G:H5'	2.45	0.46
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.36	0.46
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.46
27:YD:79:VAL:HG21	27:YD:111:LEU:HD21	1.98	0.46
28:YE:137:HIS:CB	28:YE:138:PRO:HD2	2.42	0.46
30:YG:14:GLU:O	30:YG:17:PRO:HD2	2.16	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.16	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.80	0.46
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	0.46
39:YT:54:ARG:HG2	39:YT:54:ARG:NH1	2.23	0.46
45:YZ:58:VAL:O	45:YZ:59:LEU:HB2	2.16	0.46
1:QA:1022:G:H2'	1:QA:1023:G:H8	1.81	0.46
1:QA:109:A:H5'	1:QA:110:C:C5	2.51	0.46
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.43	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.46
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:87:LEU:C	3:QC:89:GLU:H	2.20	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
15:QO:76:GLU:C	15:QO:78:TYR:N	2.69	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.46
24:QY:39:C:O2'	24:QY:40:G:P	2.74	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
25:RA:1341:U:OP1	25:RA:1397:U:N3	2.44	0.46
25:RA:1684:C:H42	25:RA:1704:G:H1	1.62	0.46
25:RA:171:G:H2'	25:RA:172:C:C6	2.51	0.46
25:RA:1932:A:H2'	25:RA:1933:G:O4'	2.16	0.46
25:RA:1939:U:O2	25:RA:1967:C:H4'	2.16	0.46
25:RA:2395:C:N4	25:RA:2421:G:H1	2.13	0.46
25:RA:2584:U:H6	25:RA:2585:U:C4	2.34	0.46
25:RA:2855:C:H2'	25:RA:2856:C:C6	2.51	0.46
25:RA:376:C:H2'	25:RA:377:C:C6	2.51	0.46
25:RA:845:G:H8	25:RA:845:G:OP2	1.99	0.46
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	0.46
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:14:GLU:HB3	30:RG:15:VAL:H	1.56	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.16	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.16	0.46
32:RI:90:GLY:O	32:RI:121:LYS:HE2	2.16	0.46
34:RO:7:TYR:CD1	34:RO:20:MET:HB2	2.50	0.46
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
36:RQ:87:LYS:O	36:RQ:87:LYS:HG2	2.15	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.35	0.46
1:XA:451:A:OP1	1:XA:481:G:N2	2.49	0.46
1:XA:731:G:H2'	1:XA:732:C:H6	1.81	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.97	0.46
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
7:XG:8:GLU:N	7:XG:8:GLU:CD	2.67	0.46
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.46
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.15	0.46
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.46
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46
25:YA:94:G:H21	48:Y2:47:ASN:HD22	1.63	0.46
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
25:YA:1059:G:H3'	25:YA:1060:U:H5''	1.96	0.46
25:YA:1453:A:O2'	25:YA:1454:U:H2'	2.16	0.46
25:YA:1677:A:H2'	25:YA:1678:G:C8	2.50	0.46
25:YA:1764:G:H1	25:YA:1988:C:H42	1.62	0.46
25:YA:1891:G:C6	25:YA:1892:C:C4	3.04	0.46
25:YA:2133:G:H2'	25:YA:2157:G:N2	2.31	0.46
25:YA:241:A:H5'	25:YA:243:U:H1'	1.97	0.46
25:YA:592:G:N2	25:YA:666:G:C4	2.84	0.46
25:YA:730:C:OP2	25:YA:731:C:OP2	2.33	0.46
26:YB:89:G:C6	26:YB:89(A):A:C6	3.04	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.46
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
30:YG:129:GLY:O	30:YG:130:ASN:OD1	2.34	0.46
30:YG:95:ARG:O	30:YG:96:ARG:C	2.54	0.46
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	0.46
25:YA:1225:C:O2'	41:YV:85:LYS:HA	2.16	0.46
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.16	0.46
1:QA:1461:G:H2'	1:QA:1462:G:C8	2.51	0.46
1:QA:781:A:C8	1:QA:782:A:C8	3.04	0.46
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
2:QB:95:GLN:OE1	2:QB:95:GLN:HA	2.16	0.46
4:QD:197:PRO:HD3	6:XF:16:GLN:CG	2.46	0.46
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.31	0.46
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.46
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.46
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.46
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.46
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
46:R0:66:VAL:O	46:R0:81:VAL:HA	2.16	0.46
25:RA:1047:G:H2'	25:RA:1110:G:C6	2.51	0.46
25:RA:1454:U:H5'	37:RR:63:ARG:NE	2.24	0.46
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.50	0.46
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.51	0.46
25:RA:2324:C:H5''	25:RA:2325:G:H5'	1.99	0.46
25:RA:2346:A:H5''	25:RA:2383:G:H1'	1.98	0.46
25:RA:2843:G:H1	25:RA:2874:C:H42	1.63	0.46
25:RA:51:G:H8	25:RA:51:G:OP2	1.99	0.46
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.51	0.46
25:RA:972:G:OP2	25:RA:973:A:O2'	2.17	0.46
26:RB:44:G:H1'	26:RB:47:C:N4	2.31	0.46
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.31	0.46
28:RE:47:VAL:HG23	28:RE:47:VAL:O	2.16	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:RH:137:ASP:HB2	31:RH:140:LYS:HE3	1.98	0.46
33:RN:112:LEU:O	33:RN:116:LEU:HG	2.16	0.46
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.34	0.46
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46
43:RX:35:THR:HG23	43:RX:35:THR:O	2.16	0.46
1:XA:1521:G:N2	1:XA:1522:U:O2	2.49	0.46
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.46
13:XM:80:ARG:O	13:XM:82:MET:O	2.33	0.46
1:XA:1316:G:H5''	14:XN:17:LYS:CE	2.46	0.46
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.46
16:XP:71:ARG:HH11	16:XP:71:ARG:HB2	1.79	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.46
25:YA:396:G:O3'	47:Y1:44:PRO:HA	2.15	0.46
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.44	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
51:Y5:43:HIS:N	51:Y5:43:HIS:ND1	2.63	0.46
25:YA:118:A:O5'	25:YA:119:A:H5''	2.16	0.46
25:YA:1264:G:H5'	51:Y5:11:THR:CG2	2.46	0.46
25:YA:1663:C:O2'	25:YA:1664:A:H8	1.99	0.46
25:YA:2198:A:O2'	25:YA:2199:A:P	2.74	0.46
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.51	0.46
25:YA:2517:C:N3	25:YA:2542:A:N6	2.64	0.46
25:YA:270(R):G:H1'	47:Y1:78:LYS:NZ	2.30	0.46
25:YA:247:G:H4'	25:YA:386:G:C5	2.51	0.46
25:YA:612:G:C2	25:YA:617:G:C6	3.04	0.46
25:YA:690:G:H2'	25:YA:691:C:C6	2.51	0.46
25:YA:977:G:C6	25:YA:987:G:C6	3.04	0.46
30:YG:6:ALA:HB3	30:YG:104:GLU:OE2	2.16	0.46
32:YI:90:GLY:O	32:YI:121:LYS:HE2	2.16	0.46
34:YO:86:ILE:CD1	34:YO:86:ILE:H	2.28	0.46
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.46
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.80	0.46
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.16	0.46
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.46
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.45	0.46
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.46
45:YZ:151:HIS:O	45:YZ:153:SER:O	2.33	0.46
45:YZ:137:ILE:HG22	45:YZ:158:PRO:HG2	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1105:A:H2'	1:QA:1106:G:H8	1.81	0.45
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.16	0.45
1:QA:1480:G:C6	1:QA:1481:U:C4	3.04	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.98	0.45
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.45
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.45
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.99	0.45
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.45
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.45
10:QJ:96:ILE:CD1	10:QJ:96:ILE:N	2.79	0.45
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.16	0.45
1:QA:521:G:H4'	12:QL:73:GLU:HG3	1.98	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
46:R0:36:ILE:N	46:R0:36:ILE:HD13	2.31	0.45
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.45
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.45
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.45
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.45
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.45
25:RA:1270:C:H5''	25:RA:1271:G:C5'	2.46	0.45
25:RA:2429:G:N7	35:RP:56:SER:OG	2.44	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:C	2.69	0.45
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.46	0.45
26:RB:55:U:H4'	30:RG:29:TRP:NE1	2.32	0.45
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.99	0.45
33:RN:17:ASP:O	33:RN:55:VAL:O	2.34	0.45
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.45
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.50	0.45
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	0.45
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.98	0.45
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.45
45:RZ:108:PRO:HG2	45:RZ:111:VAL:CA	2.46	0.45
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.51	0.45
1:XA:1301:U:O2'	1:XA:1302:U:OP1	2.30	0.45
1:XA:1304:G:C6	1:XA:1305:G:C2	3.04	0.45
1:XA:1362:C:H2'	1:XA:1362(A):C:H5''	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1365:G:H2'	1:XA:1366:C:H6	1.80	0.45
1:XA:310:G:OP2	16:XP:27:LYS:HE3	2.17	0.45
3:XC:43:LEU:HD22	3:XC:47:LEU:CD2	2.46	0.45
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.49	0.45
7:XG:54:THR:HG23	7:XG:54:THR:O	2.16	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
10:XJ:21:GLN:O	10:XJ:21:GLN:HG2	2.16	0.45
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.45
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.45
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.80	0.45
25:YA:1454:U:H5'	37:YR:63:ARG:NE	2.23	0.45
25:YA:1786:A:H1'	25:YA:1938:A:N6	2.30	0.45
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.15	0.45
25:YA:270(T):G:C6	25:YA:270(U):C:C4	3.04	0.45
25:YA:869:G:O2'	25:YA:870:A:H5'	2.15	0.45
26:YB:40:U:N3	26:YB:43:C:H5''	2.31	0.45
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.84	0.45
31:YH:51:ARG:NH1	31:YH:51:ARG:HG3	2.30	0.45
32:YI:79:ILE:HG23	32:YI:81:VAL:HG13	1.97	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.98	0.45
45:YZ:108:PRO:HG2	45:YZ:111:VAL:CA	2.47	0.45
1:QA:1298:C:C4	7:QG:114:ARG:HD2	2.51	0.45
1:QA:308:C:H2'	1:QA:309:G:H8	1.80	0.45
1:QA:363:A:OP2	12:QL:34:ARG:HB3	2.15	0.45
1:QA:408:A:OP2	4:QD:115:ARG:NH2	2.50	0.45
1:QA:300:A:H1'	1:QA:565:U:O2	2.16	0.45
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.50	0.45
1:QA:983:A:H2	1:QA:984:C:C6	2.33	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.51	0.45
2:QB:96:ARG:N	2:QB:96:ARG:HD2	2.20	0.45
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.45
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.45
4:QD:187:ARG:HG2	4:QD:187:ARG:HH11	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
1:QA:502:G:OP1	12:QL:118:SER:HB2	2.17	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
24:QY:39:C:HO2'	24:QY:40:G:P	2.38	0.45
25:RA:2615:U:C2	51:R5:7:PRO:HA	2.51	0.45
25:RA:128:C:H4'	53:R7:49:ARG:NH1	2.28	0.45
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.39	0.45
25:RA:1287:A:C6	25:RA:1288:U:N3	2.84	0.45
25:RA:1497:U:H5''	25:RA:1498:C:C5	2.50	0.45
25:RA:1543:A:O2'	25:RA:1544:C:P	2.73	0.45
25:RA:2031:A:H2'	25:RA:2031:A:N3	2.31	0.45
25:RA:2108:C:H2'	25:RA:2109:U:C6	2.51	0.45
25:RA:2212:A:H1'	25:RA:2215:G:C5	2.51	0.45
25:RA:2287:A:H62	25:RA:2344:U:H3	1.65	0.45
25:RA:2529:G:H5''	25:RA:2530:A:H5''	1.97	0.45
25:RA:2572:A:C4	28:RE:144:ARG:NH2	2.84	0.45
25:RA:2779:U:O2'	25:RA:2781:A:C5	2.64	0.45
26:RB:13:A:H4'	26:RB:15:A:C5	2.52	0.45
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.45
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
31:RH:89:ILE:HD13	31:RH:89:ILE:H	1.81	0.45
32:RI:79:ILE:HA	32:RI:79:ILE:HD13	1.83	0.45
34:RO:104:ARG:HG2	34:RO:121:VAL:HG12	1.97	0.45
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.39	0.45
36:RQ:81:VAL:HG23	36:RQ:82:ARG:N	2.32	0.45
36:RQ:85:LYS:HD3	36:RQ:86:GLY:H	1.81	0.45
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.45
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.31	0.45
1:XA:291:C:N4	1:XA:309:G:H1	2.10	0.45
1:XA:421:U:H5''	1:XA:422:C:OP2	2.16	0.45
1:XA:963:G:H21	10:XJ:55:LYS:CE	2.30	0.45
1:XA:96:G:C6	1:XA:97:U:C2	3.04	0.45
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.45
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.45
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.32	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
1:XA:1346:A:H5''	9:XI:120:ARG:HH12	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
16:XP:40:ASP:O	16:XP:42:ARG:N	2.50	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.63	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
25:YA:1329:U:H5''	25:YA:1330:C:H5	1.80	0.45
25:YA:1679:U:C2'	25:YA:1680:U:H5'	2.46	0.45
25:YA:1888:G:N3	25:YA:1888:G:H5''	2.31	0.45
25:YA:17:G:H2'	25:YA:18:C:C6	2.51	0.45
25:YA:1965:C:H2'	25:YA:1966:A:C8	2.51	0.45
25:YA:2638:G:O2'	25:YA:2639:A:H8	1.99	0.45
25:YA:500:G:N2	25:YA:502:A:H3'	2.31	0.45
25:YA:580:C:H2'	25:YA:581:C:C6	2.51	0.45
25:YA:855:G:C6	25:YA:856:C:C4	3.05	0.45
25:YA:872:A:H4'	36:YQ:66:ILE:HD11	1.97	0.45
25:YA:934:G:H2'	25:YA:935:C:H6	1.81	0.45
26:YB:89:G:OP2	26:YB:89:G:H8	1.98	0.45
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.81	0.45
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
30:YG:14:GLU:HB3	30:YG:15:VAL:H	1.56	0.45
25:YA:2406:U:C2	35:YP:72:PRO:HB2	2.52	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.33	0.45
25:YA:1228:G:OP1	40:YU:13:LYS:HG2	2.16	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.16	0.45
44:YY:35:TYR:O	44:YY:35:TYR:CD1	2.69	0.45
45:YZ:11:GLU:HG3	45:YZ:12:GLY:N	2.31	0.45
45:YZ:152:ALA:H	45:YZ:170:THR:N	2.14	0.45
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.50	0.45
1:QA:1322:C:H5'	13:QM:100:GLY:HA2	1.98	0.45
1:QA:376:G:H5''	16:QP:5:ARG:HD2	1.99	0.45
2:QB:181:PHE:HE1	8:QH:70:GLN:O	2.00	0.45
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.45
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.45
5:QE:64:ARG:HG3	5:QE:64:ARG:HH11	1.82	0.45
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.32	0.45
46:R0:7:LEU:N	46:R0:7:LEU:HD22	2.30	0.45
25:RA:1005:C:C2	25:RA:1143:A:C5	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1274:A:OP1	25:RA:1646:C:N4	2.48	0.45
25:RA:1937:A:C8	25:RA:1939:U:H2'	2.51	0.45
25:RA:2602:A:H2	55:Z6:76:PPU:N7	2.14	0.45
25:RA:309:G:O3'	44:RY:18:GLY:HA2	2.16	0.45
25:RA:330:A:O2'	25:RA:331:A:H2'	2.15	0.45
26:RB:40:U:H1'	26:RB:45:A:N6	2.30	0.45
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.45
30:RG:36:LYS:O	30:RG:37:VAL:HG23	2.15	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
32:RI:78:THR:HG22	32:RI:141:LYS:CD	2.27	0.45
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
35:RP:144:GLU:OE1	35:RP:144:GLU:N	2.48	0.45
36:RQ:104:PHE:O	36:RQ:105:GLU:CB	2.65	0.45
37:RR:1:MET:O	37:RR:2:ARG:HB2	2.15	0.45
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.45
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.45
45:RZ:102:LEU:CD1	45:RZ:171:ILE:HD11	2.46	0.45
45:RZ:27:VAL:CG1	45:RZ:87:ASP:HB3	2.46	0.45
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.16	0.45
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.16	0.45
1:XA:1194:U:H3'	1:XA:1195:C:C6	2.52	0.45
1:XA:1252:A:H2'	1:XA:1253:G:O4'	2.16	0.45
1:XA:31:G:N2	1:XA:47:C:O5'	2.49	0.45
1:XA:570:G:O3'	1:XA:819:A:O2'	2.23	0.45
1:XA:777:A:H2'	1:XA:778:G:H8	1.81	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.98	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.45
10:XJ:95:GLU:HA	10:XJ:95:GLU:OE2	2.16	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.30	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.98	0.45
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.45
1:XA:177:C:H5''	20:XT:65:LYS:HZ3	1.79	0.45
46:Y0:66:VAL:O	46:Y0:81:VAL:HA	2.16	0.45
51:Y5:16:ARG:O	51:Y5:20:ARG:HG3	2.16	0.45
52:Y6:17:LYS:O	52:Y6:18:ARG:CB	2.65	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.80	0.45
25:YA:1688:U:O2	25:YA:1700:A:H8	1.99	0.45
25:YA:229:A:OP1	25:YA:229:A:H4'	2.17	0.45
25:YA:2498:C:O2'	25:YA:2499:C:H5'	2.17	0.45
25:YA:2588:G:O6	25:YA:2607:G:C6	2.70	0.45
25:YA:596:G:C6	25:YA:597:U:C2	3.03	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	0.45
29:YF:65:TRP:CH2	29:YF:72:ARG:HB3	2.51	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.85	0.45
32:YI:77:LEU:HB2	32:YI:104:GLN:OE1	2.15	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.73	0.45
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.45
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.31	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.64	0.45
37:YR:85:PRO:C	37:YR:87:TYR:H	2.19	0.45
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.36	0.45
1:QA:1028(B):C:H42	1:QA:1032(A):G:H1	1.65	0.45
1:QA:103:C:C4	1:QA:104:G:N7	2.85	0.45
1:QA:486:U:H2'	1:QA:487:A:H8	1.81	0.45
1:QA:519:C:H2'	1:QA:520:A:O4'	2.16	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
4:QD:33:MET:HE1	4:QD:37:PRO:O	2.17	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
8:QH:41:ARG:NH1	8:QH:41:ARG:CG	2.76	0.45
10:QJ:21:GLN:O	10:QJ:21:GLN:HG2	2.16	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
46:R0:43:THR:O	46:R0:43:THR:CG2	2.62	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45
25:RA:819:A:N6	25:RA:1189:A:H1'	2.31	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1402:C:H2'	25:RA:1403:C:H5'	1.98	0.45
25:RA:1652:A:N7	25:RA:1653:G:C6	2.84	0.45
25:RA:270(E):G:H1	25:RA:270(U):C:H42	1.62	0.45
25:RA:340:A:H2'	25:RA:341:G:O4'	2.16	0.45
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:CA	2.78	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.45
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45
28:RE:22:PRO:O	28:RE:22:PRO:CG	2.63	0.45
30:RG:51:ARG:NH2	30:RG:52:ILE:HD11	2.32	0.45
30:RG:83:ARG:HB2	30:RG:86:MET:HE3	1.97	0.45
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45
33:RN:128:HIS:HB2	33:RN:129:PRO:CD	2.46	0.45
35:RP:62:LEU:CD2	35:RP:62:LEU:H	2.19	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.99	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.45
42:RW:14:PRO:O	42:RW:16:LYS:N	2.50	0.45
45:RZ:120:ILE:HD13	45:RZ:169:GLU:CG	2.45	0.45
45:RZ:27:VAL:CG2	45:RZ:28:MET:N	2.78	0.45
1:XA:1199:U:H5''	1:XA:1200:C:OP2	2.16	0.45
1:XA:412:A:H4'	1:XA:413:G:O5'	2.16	0.45
1:XA:564:C:C4	1:XA:565:U:C4	3.05	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.85	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.64	0.45
3:XC:8:ILE:C	3:XC:10:PHE:N	2.69	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.29	0.45
10:XJ:29:ARG:HH11	10:XJ:29:ARG:HG2	1.81	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
47:Y1:85:LEU:N	47:Y1:85:LEU:HD22	2.31	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.97	0.45
25:YA:1654:A:P	37:YR:2:ARG:HD2	2.57	0.45
25:YA:1799:G:O2'	27:YD:270:ILE:HD11	2.17	0.45
25:YA:195:A:N6	25:YA:198:C:OP2	2.42	0.45
25:YA:566:U:OP1	35:YP:29:LYS:HE2	2.16	0.45
25:YA:74:A:H4'	25:YA:75:G:O4'	2.17	0.45
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.47	0.45
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
36:YQ:59:ARG:HD2	36:YQ:59:ARG:N	2.31	0.45
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.45
37:YR:29:LEU:CD1	37:YR:29:LEU:N	2.79	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
45:YZ:108:PRO:HG2	45:YZ:112:ARG:N	2.24	0.45
1:QA:922:G:N3	1:QA:1398:A:H2	2.14	0.45
1:QA:390:C:O3'	16:QP:28:ARG:NH2	2.50	0.45
1:QA:756:C:H2'	1:QA:757:U:O4'	2.17	0.45
1:QA:909:A:H2'	1:QA:910:C:O4'	2.16	0.45
3:QC:34:LEU:C	3:QC:34:LEU:HD23	2.37	0.45
3:QC:78:GLY:HA3	3:QC:83:ARG:HB3	1.98	0.45
4:QD:101:LEU:HD21	4:QD:121:VAL:HG13	1.99	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.97	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.17	0.45
12:QL:91:LYS:HB2	12:QL:91:LYS:HE2	1.76	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.16	0.45
22:QV:53:G:HO2'	22:QV:54:U:H6	1.63	0.45
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.97	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.45
25:RA:1588:C:H2'	25:RA:1589:C:C6	2.51	0.45
25:RA:2655:G:H2'	25:RA:2664:G:N1	2.30	0.45
25:RA:307:G:C2	25:RA:310:A:OP2	2.70	0.45
25:RA:329:G:H8	25:RA:329:G:OP1	1.99	0.45
25:RA:372:G:O2'	25:RA:373:U:P	2.74	0.45
25:RA:71:A:H5''	25:RA:72:U:H3'	1.97	0.45
25:RA:911:A:H2'	36:RQ:9:TYR:OH	2.16	0.45
26:RB:16:G:H2'	26:RB:17:C:H6	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:2:LYS:O	28:RE:199:ARG:HA	2.17	0.45
30:RG:102:PHE:HA	30:RG:105:LYS:HE3	1.98	0.45
30:RG:20:ILE:HD13	30:RG:25:TYR:HB2	1.98	0.45
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.85	0.45
32:RI:127:VAL:HG13	32:RI:139:GLN:CG	2.47	0.45
33:RN:35:ARG:O	33:RN:35:ARG:HG3	2.15	0.45
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.45
35:RP:96:THR:HG22	35:RP:126:VAL:CB	2.46	0.45
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.45
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.37	0.45
42:RW:48:ALA:O	42:RW:49:LYS:C	2.53	0.45
44:RY:2:ARG:O	44:RY:3:VAL:C	2.55	0.45
1:XA:757:U:H2'	1:XA:758:G:O4'	2.17	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.31	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.81	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.45
7:XG:151:TYR:OH	11:XK:54:ARG:HG3	2.17	0.45
10:XJ:51:ARG:HG2	10:XJ:51:ARG:HH11	1.81	0.45
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.45
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.55	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.80	0.45
52:Y6:9:LEU:CD1	52:Y6:26:ASN:ND2	2.80	0.45
25:YA:1526:G:H2'	25:YA:1527:G:O4'	2.17	0.45
25:YA:1682:G:H2'	25:YA:1683:C:O4'	2.16	0.45
25:YA:2283:C:H2'	25:YA:2284:C:O4'	2.16	0.45
25:YA:2520:C:H42	25:YA:2545:G:H1	1.64	0.45
25:YA:746:A:C5	25:YA:2611:U:H5''	2.51	0.45
25:YA:460:A:H2'	25:YA:461:C:O4'	2.17	0.45
25:YA:528:A:H2	25:YA:2043:C:C5'	2.29	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45
32:YI:127:VAL:HG13	32:YI:139:GLN:CG	2.47	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	0.45
36:YQ:65:PHE:O	36:YQ:66:ILE:CG1	2.48	0.45
40:YU:95:LEU:HD13	41:YV:4:ILE:HD12	1.98	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
42:YW:21:VAL:HG12	42:YW:21:VAL:O	2.17	0.45
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.45
44:YY:75:ILE:HA	44:YY:80:GLY:HA2	1.99	0.45
1:QA:1107:C:C4	1:QA:1108:G:C8	3.05	0.45
1:QA:123:C:H5''	1:QA:311:C:O2'	2.17	0.45
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.52	0.45
1:QA:60:A:N1	1:QA:107:G:O2'	2.30	0.45
1:QA:662:G:H2'	1:QA:663:A:C8	2.51	0.45
1:QA:681:C:H2'	1:QA:682:G:C8	2.51	0.45
1:QA:853:G:H2'	1:QA:854:G:H8	1.82	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	0.45
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.52	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.16	0.45
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.99	0.45
54:R8:48:PHE:HD1	54:R8:48:PHE:N	2.14	0.45
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.32	0.45
25:RA:1188:U:H4'	41:RV:79:VAL:CG2	2.47	0.45
25:RA:1250:G:OP2	35:RP:21:ARG:HD3	2.16	0.45
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.49	0.45
25:RA:16:G:H1	25:RA:524:U:H3	1.64	0.45
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.35	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.98	0.45
25:RA:2747:G:O2'	31:RH:67:LEU:HD13	2.17	0.45
32:RI:1:MET:HG3	32:RI:23:PRO:CB	2.47	0.45
32:RI:73:GLU:HG3	32:RI:136:VAL:CG2	2.43	0.45
33:RN:96:GLU:O	33:RN:99:LEU:N	2.34	0.45
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:RP:81:GLN:CD	35:RP:106:LEU:O	2.55	0.45
36:RQ:59:ARG:HD2	36:RQ:59:ARG:N	2.31	0.45
36:RQ:5:ARG:O	36:RQ:6:ARG:O	2.35	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.63	0.45
45:RZ:23:LYS:HD3	45:RZ:23:LYS:N	2.30	0.45
45:RZ:24:LEU:CD1	45:RZ:86:VAL:HG23	2.38	0.45
1:XA:1226:C:H2'	13:XM:103:THR:CB	2.45	0.45
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.81	0.45
1:XA:1412:C:C2	1:XA:1489:G:N2	2.85	0.45
1:XA:20:U:H2'	1:XA:21:G:O4'	2.17	0.45
1:XA:256:U:H2'	1:XA:257:G:O4'	2.17	0.45
1:XA:980:C:H5'	1:XA:981:U:OP2	2.16	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
2:XB:240:GLN:O	2:XB:240:GLN:HG2	2.17	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.82	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.82	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.50	0.45
7:XG:153:HIS:CE1	11:XK:57:THR:HG23	2.52	0.45
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.96	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
1:XA:332:G:OP2	20:XT:10:LEU:HD23	2.15	0.45
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.49	0.45
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.45
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
25:YA:1307:A:N6	25:YA:1606:G:O2'	2.50	0.45
25:YA:1880:C:H2'	25:YA:1881:C:O4'	2.17	0.45
25:YA:2277:G:H5'	36:YQ:85:LYS:HG3	1.97	0.45
25:YA:2290:G:C6	25:YA:2291:U:C4	3.04	0.45
25:YA:2561:A:H2'	25:YA:2562:U:O4'	2.17	0.45
25:YA:27:G:O2'	25:YA:28:A:C8	2.67	0.45
26:YB:4:C:H42	26:YB:116:G:H1	1.64	0.45
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.99	0.45
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:YN:20:GLY:HA2	33:YN:61:ARG:HD2	1.99	0.45
35:YP:88:LEU:HD23	35:YP:88:LEU:C	2.36	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
25:YA:483:A:C4'	44:YY:49:VAL:HA	2.36	0.45
44:YY:97:ARG:HG2	44:YY:97:ARG:HH11	1.82	0.45
45:YZ:136:PHE:CD1	45:YZ:137:ILE:N	2.84	0.45
1:QA:1310:G:H2'	1:QA:1311:G:H8	1.81	0.45
1:QA:58:C:O2'	1:QA:388:G:N7	2.39	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
2:QB:33:TYR:O	2:QB:33:TYR:HD1	2.00	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.45	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.32	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.32	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.52	0.45
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.51	0.45
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.17	0.45
25:RA:1210:A:H4'	25:RA:1211:U:O5'	2.16	0.45
25:RA:1266:G:H1'	25:RA:1267:U:OP2	2.16	0.45
25:RA:1771:C:O2'	25:RA:1786:A:H8	2.00	0.45
25:RA:2399:G:H2'	25:RA:2400:G:O4'	2.17	0.45
25:RA:242:G:H5'	54:R8:62:LEU:CD2	2.34	0.45
25:RA:2544:G:H2'	25:RA:2545:G:H8	1.81	0.45
25:RA:2585:U:O2'	25:RA:2586:C:P	2.75	0.45
25:RA:1999:C:H4'	25:RA:2723:C:O2	2.17	0.45
25:RA:2893:G:H5''	25:RA:2894:G:H5'	1.99	0.45
25:RA:358:U:H2'	25:RA:359:A:H8	1.80	0.45
25:RA:704:G:O2'	25:RA:705:A:P	2.74	0.45
26:RB:42:C:H2'	26:RB:43:C:H6	1.82	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
25:RA:618(A):C:OP2	29:RF:103:LYS:HE2	2.17	0.45
29:RF:119:ARG:CG	29:RF:119:ARG:HH11	2.29	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
32:RI:74:ASN:CG	32:RI:75:LEU:HD13	2.36	0.45
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
36:RQ:93:TYR:N	36:RQ:93:TYR:CD1	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:RU:53:ARG:C	40:RU:55:ARG:H	2.20	0.45
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	0.45
42:RW:65:LEU:CD1	42:RW:68:ARG:NH1	2.75	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
1:XA:1304:G:H2'	1:XA:1305:G:H1'	1.98	0.45
1:XA:1269:A:HO2'	1:XA:1325:C:HO2'	1.64	0.45
1:XA:376:G:H5''	16:XP:5:ARG:HD2	1.98	0.45
1:XA:597:G:N2	1:XA:643:C:N3	2.65	0.45
1:XA:986:A:N3	19:XS:52:TYR:OH	2.49	0.45
1:XA:1109:C:P	3:XC:176:HIS:HD1	2.39	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.46	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.17	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.32	0.45
46:Y0:36:ILE:HD13	46:Y0:36:ILE:N	2.31	0.45
50:Y4:68:ARG:O	50:Y4:69:LYS:HB2	2.17	0.45
25:YA:1641:A:N6	25:YA:1642:G:C2	2.85	0.45
25:YA:2119:A:C2	25:YA:2171:A:H1'	2.52	0.45
25:YA:2259:G:C2	25:YA:2282:G:N1	2.85	0.45
25:YA:2317:C:H2'	25:YA:2318:G:H5'	1.98	0.45
25:YA:2325:G:H2'	25:YA:2326:C:H6	1.82	0.45
25:YA:2389:G:C5'	25:YA:2390:U:H5'	2.46	0.45
25:YA:2507:C:H2'	25:YA:2508:G:O4'	2.17	0.45
25:YA:419:C:H2'	25:YA:420:C:O4'	2.17	0.45
25:YA:431:U:H2'	25:YA:432:A:H8	1.81	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
29:YF:45:ARG:CG	29:YF:45:ARG:NH1	2.71	0.45
30:YG:121:ASN:C	30:YG:123:ASN:H	2.19	0.45
32:YI:79:ILE:HG22	32:YI:81:VAL:HG22	1.99	0.45
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.98	0.45
40:YU:76:TYR:CD2	40:YU:76:TYR:C	2.90	0.45
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
42:YW:88:ARG:CB	42:YW:92:ARG:HB3	2.47	0.45
43:YX:47:PHE:O	43:YX:48:LYS:C	2.55	0.45
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.17	0.45
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:246:A:N1	1:QA:278:G:O2'	2.40	0.45
1:QA:321:A:H2'	1:QA:322:C:H6	1.81	0.45
1:QA:667:G:H4'	15:QO:51:HIS:ND1	2.31	0.45
1:QA:948:C:H2'	1:QA:949:A:C8	2.49	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
5:QE:152:ARG:HD3	8:QH:44:PHE:CE1	2.51	0.45
7:QG:95:ARG:HG3	7:QG:95:ARG:HH11	1.82	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
47:R1:80:LEU:CB	47:R1:81:LYS:HE2	2.44	0.45
47:R1:82:LEU:HD13	47:R1:83:GLU:C	2.35	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
25:RA:1114:G:H2'	25:RA:1115:G:C8	2.52	0.45
25:RA:1583:A:H4'	25:RA:1586:A:N3	2.32	0.45
25:RA:180:G:OP1	53:R7:32:LYS:HG3	2.17	0.45
25:RA:2292:C:H2'	25:RA:2293:C:H6	1.82	0.45
25:RA:2300:G:H2'	25:RA:2301:C:C6	2.52	0.45
25:RA:2303:G:H1	25:RA:2313:C:N4	2.15	0.45
25:RA:2489:G:C5	25:RA:2490:G:C6	3.03	0.45
25:RA:2526:G:C6	25:RA:2527:C:C4	3.04	0.45
25:RA:2735:G:H22	25:RA:2770:G:H1'	1.82	0.45
25:RA:412:A:H2'	25:RA:413:C:H5'	1.98	0.45
26:RB:40:U:N3	26:RB:43:C:H5''	2.32	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	0.45
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.82	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.45
32:RI:79:ILE:HG22	32:RI:81:VAL:HG22	1.99	0.45
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
35:RP:88:LEU:HD23	35:RP:88:LEU:C	2.37	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	0.45
37:RR:17:ARG:O	37:RR:20:LEU:HB3	2.17	0.45
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
40:RU:79:PHE:C	40:RU:79:PHE:HD2	2.18	0.45
41:RV:61:VAL:HA	41:RV:94:LEU:HD23	1.97	0.45
1:XA:1074:G:H4'	2:XB:104:ASN:HB2	1.99	0.45
1:XA:1207:G:C6	1:XA:1208:C:C4	3.05	0.45
1:XA:359:U:H2'	1:XA:360:A:C8	2.52	0.45
1:XA:428:G:O2'	4:XD:36:ARG:NH2	2.47	0.45
1:XA:725:G:H2'	1:XA:726:C:H6	1.81	0.45
1:XA:779:C:H4'	11:XK:121:PRO:O	2.17	0.45
1:XA:926:G:H2'	1:XA:1505:G:N3	2.31	0.45
2:XB:229:VAL:O	2:XB:229:VAL:HG12	2.17	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
7:XG:95:ARG:HG3	7:XG:95:ARG:HH11	1.82	0.45
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.98	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
13:XM:110:ARG:HG3	13:XM:110:ARG:HH11	1.82	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
18:XR:63:GLN:OE1	18:XR:63:GLN:HA	2.17	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.20	0.45
24:XY:39:C:O2'	24:XY:40:G:P	2.74	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.16	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
25:YA:1843:C:H2'	25:YA:1844:C:C6	2.52	0.45
25:YA:2677:G:H2'	25:YA:2678:C:H6	1.82	0.45
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.74	0.45
25:YA:356:G:H2'	25:YA:357:A:C8	2.51	0.45
25:YA:428:A:OP2	25:YA:428:A:H8	1.99	0.45
25:YA:598:G:H2'	25:YA:599:G:O4'	2.17	0.45
26:YB:110:G:H2'	26:YB:111:U:O4'	2.17	0.45
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45
13:XM:3:ARG:HH12	30:YG:113:ARG:NH2	2.15	0.45
31:YH:7:LEU:HD12	31:YH:7:LEU:C	2.37	0.45
33:YN:22:THR:O	33:YN:60:ILE:HG22	2.16	0.45
33:YN:5:VAL:HG13	33:YN:5:VAL:O	2.16	0.45
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:YP:92:GLU:HA	35:YP:123:LEU:HD23	1.99	0.45
36:YQ:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.99	0.45
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.45
45:YZ:105:VAL:HG11	45:YZ:138:GLU:HG2	1.99	0.45
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.16	0.45
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.99	0.45
1:QA:1489:G:H2'	1:QA:1490:C:O4'	2.17	0.45
1:QA:635:G:C6	1:QA:636:U:C4	3.05	0.45
1:QA:648:A:H2'	1:QA:649:G:C8	2.52	0.45
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.17	0.45
1:QA:74:C:H2'	1:QA:75:C:C6	2.52	0.45
3:QC:140:ARG:CG	3:QC:140:ARG:HH11	2.30	0.45
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.45
5:QE:78:HIS:CB	8:QH:104:ARG:HG2	2.47	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
1:QA:779:C:H4'	11:QK:121:PRO:O	2.17	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
13:QM:56:LEU:O	13:QM:56:LEU:HD13	2.17	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
16:QP:50:LYS:O	16:QP:50:LYS:HD3	2.16	0.45
22:QV:35:A:C2	23:QX:3:G:C2	3.05	0.45
46:R0:25:ARG:HD2	46:R0:29:GLN:HE21	1.77	0.45
46:R0:2:ALA:HA	46:R0:3:HIS:HA	1.70	0.45
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.45
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.17	0.45
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.31	0.45
25:RA:2372:G:H4'	52:R6:46:HIS:CD2	2.52	0.45
25:RA:71:A:H62	25:RA:114:U:H1'	1.81	0.45
25:RA:122:G:OP1	25:RA:149:A:O2'	2.31	0.45
25:RA:1756:G:H4'	25:RA:1758:G:O4'	2.17	0.45
25:RA:1835:G:C4	25:RA:1931:U:N3	2.85	0.45
25:RA:1889:A:H1'	25:RA:2087:G:O4'	2.17	0.45
25:RA:1897:G:H2'	25:RA:1898:U:H6	1.80	0.45
25:RA:273(F):C:H2'	25:RA:274:G:H5'	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:921:G:H4'	25:RA:2269:A:C5	2.51	0.45
26:RB:43:C:C4	26:RB:45:A:C6	3.05	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:HA	2.32	0.45
35:RP:115:LEU:HA	35:RP:134:ALA:CB	2.47	0.45
36:RQ:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	0.45
41:RV:5:VAL:HG22	41:RV:14:VAL:CG2	2.46	0.45
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.45
43:RX:47:PHE:O	43:RX:48:LYS:C	2.55	0.45
1:XA:1014:A:C2	1:XA:1219:U:H1'	2.52	0.45
1:XA:1086:U:H3	1:XA:1099:G:H22	1.65	0.45
1:XA:1222:G:H5''	19:XS:78:ARG:NH1	2.32	0.45
1:XA:1443:G:H22	39:YT:119:LYS:HD2	1.82	0.45
1:XA:665:A:N3	1:XA:732:C:H2'	2.31	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
5:XE:101:ILE:H	5:XE:101:ILE:HD13	1.82	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.42	0.45
25:YA:2336:A:H61	46:Y0:43:THR:HG21	1.82	0.45
47:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.45
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.45
54:Y8:52:LYS:CG	54:Y8:52:LYS:O	2.64	0.45
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.52	0.45
25:YA:140:A:H8	25:YA:1408:C:HO2'	1.58	0.45
25:YA:2170:A:H2'	25:YA:2171:A:O4'	2.17	0.45
25:YA:2216:G:H2'	25:YA:2217:G:C8	2.51	0.45
25:YA:2612:C:C5	25:YA:2613:U:H5	2.35	0.45
25:YA:606:U:H4'	25:YA:658:C:H4'	1.98	0.45
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	0.45
34:YO:53:LYS:CD	34:YO:53:LYS:N	2.69	0.45
35:YP:112:LEU:CD1	35:YP:114:ILE:HG23	2.47	0.45
35:YP:45:LEU:CD1	35:YP:45:LEU:N	2.79	0.45
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.45
25:YA:910:A:C6	36:YQ:13:GLN:HG3	2.52	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
38:YS:89:ARG:O	38:YS:90:GLY:C	2.54	0.45
25:RA:2602:A:H2	55:Z6:76:PPU:H8	1.69	0.45
1:QA:1233:G:O2'	1:QA:1365:G:OP1	2.34	0.45
1:QA:547:A:H4'	1:QA:548:G:O5'	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:62:U:O2'	1:QA:379:C:H1'	2.17	0.45
1:QA:654:G:C6	1:QA:655:A:C4	3.05	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.45
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
1:QA:1343:G:H1'	9:QI:121:ARG:NH1	2.31	0.45
10:QJ:29:ARG:HH11	10:QJ:29:ARG:HG2	1.81	0.45
10:QJ:62:HIS:CD2	10:QJ:62:HIS:N	2.85	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
12:QL:120:TYR:CD1	12:QL:120:TYR:N	2.85	0.45
13:QM:101:GLN:HB2	13:QM:101:GLN:HE21	1.66	0.45
13:QM:57:ARG:HD2	13:QM:61:GLU:OE2	2.17	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.50	0.45
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.45
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.45
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.65	0.45
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
53:R7:24:THR:O	53:R7:28:ARG:HG3	2.16	0.45
25:RA:459:U:OP1	53:R7:39:ARG:HA	2.17	0.45
25:RA:1264:G:H5'	51:R5:11:THR:CG2	2.46	0.45
25:RA:1282:U:H2'	25:RA:1283:G:O4'	2.17	0.45
25:RA:1319:G:C2	25:RA:1320:C:N3	2.85	0.45
25:RA:1543:A:HO2'	25:RA:1544:C:P	2.40	0.45
25:RA:1303:G:H1'	25:RA:1641:A:N1	2.32	0.45
25:RA:1897:G:H2'	25:RA:1898:U:O4'	2.17	0.45
25:RA:2410:G:H2'	25:RA:2411:A:C8	2.52	0.45
25:RA:2416:C:H5''	35:RP:64:LYS:HE3	1.99	0.45
25:RA:2420:C:H6	25:RA:2420:C:O5'	2.00	0.45
25:RA:2627:G:O2'	25:RA:2781:A:N1	2.45	0.45
25:RA:289:A:H2'	25:RA:290:G:O4'	2.16	0.45
25:RA:51:G:H4'	25:RA:52:A:H5'	1.99	0.45
25:RA:632:A:H2'	25:RA:633:A:C8	2.52	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.45
27:RD:44:ASN:HB2	27:RD:49:ILE:HA	1.93	0.45
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.45
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.45
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.80	0.45
36:RQ:10:ARG:O	36:RQ:11:LYS:CB	2.64	0.45
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.45
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	1.98	0.45
43:RX:87:GLN:HB2	43:RX:87:GLN:HE21	1.55	0.45
45:RZ:48:PHE:HE2	45:RZ:71:VAL:HG11	1.82	0.45
45:RZ:77:ASP:O	45:RZ:78:LYS:C	2.56	0.45
1:XA:1234:C:H2'	1:XA:1235:U:C6	2.52	0.45
1:XA:1363:A:H4'	1:XA:1364:U:H5''	1.99	0.45
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.45	0.45
1:XA:1525:G:C4	1:XA:1526:G:C8	3.05	0.45
1:XA:292:G:N7	1:XA:293:G:H1'	2.32	0.45
1:XA:438:G:H2'	1:XA:494:U:O4	2.17	0.45
1:XA:449:C:H5	1:XA:450:G:C4	2.35	0.45
1:XA:662:G:H2'	1:XA:663:A:H8	1.81	0.45
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
4:XD:94:LEU:O	4:XD:98:GLU:N	2.49	0.45
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
5:XE:93:PRO:HG3	8:XH:105:ARG:HG3	1.99	0.45
2:XB:179:LYS:HA	8:XH:72:PRO:HD3	1.99	0.45
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45
1:XA:1128:C:H5'	9:XI:16:ARG:NH2	2.32	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.52	0.45
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.45
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.98	0.45
11:XK:53:SER:C	11:XK:55:LYS:H	2.20	0.45
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.45
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.45
9:XI:128:ARG:NH2	22:XV:35:A:P	2.90	0.45
52:Y6:7:ILE:HG23	52:Y6:8:LYS:N	2.32	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2038:G:C6	25:YA:2039:C:C4	3.05	0.45
25:YA:2277:G:C5'	36:YQ:85:LYS:HG3	2.47	0.45
25:YA:2729:G:H2'	25:YA:2730:C:H6	1.82	0.45
25:YA:2882:A:OP1	37:YR:96:ARG:NH1	2.49	0.45
28:YE:18:ASP:O	28:YE:19:ARG:C	2.56	0.45
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.45
32:YI:99:GLU:CG	32:YI:103:ARG:NH2	2.75	0.45
32:YI:131:LYS:HD2	32:YI:131:LYS:N	2.32	0.45
32:YI:124:GLY:N	32:YI:142:VAL:HG23	2.31	0.45
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.45
39:YT:57:PHE:O	39:YT:58:ASN:C	2.54	0.45
42:YW:14:PRO:O	42:YW:16:LYS:N	2.50	0.45
44:YY:25:GLY:HA3	44:YY:39:VAL:CG1	2.47	0.45
45:YZ:23:LYS:N	45:YZ:23:LYS:HD3	2.30	0.45
1:QA:1428:A:H2'	1:QA:1429:C:C6	2.51	0.44
1:QA:1507:A:H2'	1:QA:1508:G:O4'	2.18	0.44
1:QA:181:G:N2	1:QA:195:A:N3	2.65	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.44
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.44
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.44
4:QD:30:LYS:O	4:QD:32:ALA:N	2.49	0.44
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.44
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.46	0.44
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
1:QA:1116:C:O2'	9:QI:108:VAL:HG11	2.16	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.44
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.18	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
1:QA:1268:A:O3'	21:QU:19:GLY:HA2	2.17	0.44
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.44
54:R8:9:GLY:O	54:R8:13:ARG:HG2	2.16	0.44
25:RA:1079:C:H2'	25:RA:1080:C:O4'	2.17	0.44
25:RA:1695:G:H2'	25:RA:1696:G:O4'	2.17	0.44
25:RA:1980:G:O2'	25:RA:1981:A:OP1	2.35	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2041:U:H2'	25:RA:2042:A:O4'	2.17	0.44
25:RA:2251:G:C4	25:RA:2450:A:H1'	2.52	0.44
25:RA:247:G:H4'	25:RA:386:G:C6	2.52	0.44
25:RA:520:G:H2'	25:RA:521:G:C8	2.48	0.44
25:RA:900:A:H5'	25:RA:901:A:OP2	2.17	0.44
28:RE:4:ILE:HG12	28:RE:91:VAL:HG11	1.99	0.44
29:RF:7:TYR:CD1	29:RF:7:TYR:N	2.84	0.44
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.51	0.44
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.44
32:RI:111:PRO:O	32:RI:112:LYS:C	2.55	0.44
32:RI:83:ALA:O	32:RI:85:GLU:N	2.50	0.44
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.44
33:RN:36:GLY:O	33:RN:42:TRP:CE3	2.69	0.44
33:RN:57:ALA:HA	33:RN:60:ILE:CD1	2.44	0.44
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
36:RQ:119:ARG:CG	36:RQ:119:ARG:HH11	2.25	0.44
25:RA:583:G:OP2	40:RU:10:ARG:NH1	2.50	0.44
41:RV:69:LYS:HG3	41:RV:87:HIS:O	2.17	0.44
42:RW:21:VAL:O	42:RW:21:VAL:HG12	2.17	0.44
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.44
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.83	0.44
45:RZ:58:VAL:O	45:RZ:59:LEU:HB2	2.16	0.44
1:XA:1321:C:C5'	1:XA:1322:C:H5''	2.48	0.44
1:XA:340:U:C2	1:XA:350:G:N2	2.85	0.44
1:XA:580:U:H2'	1:XA:581:G:O4'	2.17	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	0.44
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.85	0.44
9:XI:7:THR:O	9:XI:83:ARG:CD	2.66	0.44
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.18	0.44
13:XM:108:ARG:O	13:XM:111:LYS:N	2.48	0.44
13:XM:28:ALA:C	13:XM:30:ALA:N	2.70	0.44
15:XO:83:GLU:C	15:XO:85:LEU:N	2.70	0.44
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.44
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:XS:5:LEU:CD2	50:Y4:67:TYR:CE2	2.90	0.44
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.44
25:YA:1999:C:H2'	25:YA:2000:G:O4'	2.17	0.44
25:YA:327:G:H2'	25:YA:328:U:H6	1.80	0.44
25:YA:517:C:O2'	42:YW:18:ARG:NH2	2.50	0.44
25:YA:596:G:H2'	25:YA:597:U:O4'	2.16	0.44
26:YB:95:U:C2	26:YB:96:G:C8	3.05	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
25:YA:448:U:H1'	29:YF:84:VAL:CG2	2.47	0.44
31:YH:137:ASP:HB2	31:YH:140:LYS:HE3	1.98	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
39:YT:80:SER:HA	39:YT:81:PRO:HD3	1.73	0.44
45:YZ:93:ASP:O	45:YZ:94:GLU:CB	2.65	0.44
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.52	0.44
1:QA:1293:G:H2'	1:QA:1294:G:C8	2.53	0.44
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.82	0.44
1:QA:1397:C:H5''	1:QA:1398:A:O4'	2.16	0.44
1:QA:833:U:H2'	1:QA:834:C:C6	2.52	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.17	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	1.99	0.44
1:QA:430:A:H4'	4:QD:7:PRO:HG3	1.98	0.44
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.44
7:QG:40:ALA:O	7:QG:41:ARG:C	2.55	0.44
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.37	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
1:QA:719:C:N3	18:QR:50:ILE:HD13	2.32	0.44
20:QT:10:LEU:C	20:QT:12:ALA:H	2.21	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
46:R0:40:GLN:OE1	46:R0:45:PHE:HB2	2.18	0.44
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.80	0.44
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
25:RA:1037:G:H1	25:RA:1118:C:N4	2.14	0.44
25:RA:1139:G:O2'	25:RA:1143:A:N1	2.36	0.44
25:RA:1494:A:N3	25:RA:1494:A:H2'	2.33	0.44
25:RA:1835:G:N3	25:RA:1931:U:N3	2.57	0.44
25:RA:2052:G:C6	25:RA:2053:G:N7	2.86	0.44
25:RA:226:G:O2'	25:RA:227:A:P	2.75	0.44
25:RA:2356:C:O3'	46:R0:20:ARG:CD	2.65	0.44
25:RA:2342:C:H2'	25:RA:2374:C:H5''	1.98	0.44
25:RA:2532:G:H2'	25:RA:2533:A:C8	2.53	0.44
25:RA:2629:A:O2'	25:RA:2630:G:H5''	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:470:A:H2'	25:RA:471:A:O4'	2.17	0.44
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	0.44
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.44
28:RE:36:ARG:CB	28:RE:36:ARG:HH11	2.28	0.44
28:RE:77:ILE:O	28:RE:78:LEU:O	2.35	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
32:RI:92:VAL:O	32:RI:120:ILE:HG22	2.18	0.44
33:RN:67:LEU:HA	33:RN:87:LEU:HD13	2.00	0.44
34:RO:19:ILE:H	34:RO:19:ILE:HD13	1.83	0.44
36:RQ:90:VAL:C	36:RQ:92:GLY:N	2.71	0.44
37:RR:10:LEU:O	37:RR:11:ASN:C	2.55	0.44
25:RA:1654:A:OP2	37:RR:2:ARG:HD2	2.17	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
45:RZ:137:ILE:HG22	45:RZ:158:PRO:HG2	1.98	0.44
1:XA:106:C:H2'	1:XA:107:G:C8	2.52	0.44
1:XA:1328:C:H2'	1:XA:1329:A:O4'	2.17	0.44
1:XA:1397:C:H1'	23:XX:8:A:H62	1.82	0.44
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.96	0.44
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.35	0.44
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.44
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.44
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.44
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.18	0.44
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.44
10:XJ:61:GLU:CG	14:YN:58:LYS:HE2	2.47	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
12:XL:120:TYR:CD1	12:XL:120:TYR:N	2.86	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	0.44
19:XS:3:ARG:HB3	50:Y4:67:TYR:CD2	2.53	0.44
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.44
46:Y0:25:ARG:HH11	46:Y0:25:ARG:HG2	1.81	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
25:YA:1309:G:H1	25:YA:1605:C:H42	1.65	0.44
25:YA:1508:A:O2'	25:YA:1509:C:O5'	2.33	0.44
25:YA:1556:C:H2'	25:YA:1557:C:H6	1.81	0.44
25:YA:2699:C:H2'	25:YA:2700:C:O4'	2.17	0.44
25:YA:2870:C:H2'	25:YA:2871:C:O4'	2.17	0.44
25:YA:288:C:N4	25:YA:353:G:H1	2.16	0.44
25:YA:357:A:H2'	25:YA:358:U:C6	2.52	0.44
25:YA:597:U:H2'	25:YA:598:G:C8	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
27:YD:238:GLY:O	27:YD:239:ARG:O	2.36	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.53	0.44
25:YA:2572:A:C4	28:YE:144:ARG:NH2	2.85	0.44
30:YG:129:GLY:HA2	30:YG:169:ALA:HB2	1.99	0.44
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.32	0.44
32:YI:83:ALA:O	32:YI:85:GLU:N	2.50	0.44
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.44
36:YQ:93:TYR:N	36:YQ:93:TYR:CD1	2.85	0.44
39:YT:23:ARG:CB	39:YT:24:PRO:HD2	2.40	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.44
45:YZ:120:ILE:HD13	45:YZ:169:GLU:CG	2.45	0.44
45:YZ:27:VAL:CG1	45:YZ:87:ASP:HB3	2.46	0.44
1:QA:1149:C:H2'	1:QA:1150:U:O4'	2.17	0.44
1:QA:1338:G:N3	22:QV:41:C:O2'	2.49	0.44
1:QA:374:A:C6	1:QA:375:U:C4	3.06	0.44
1:QA:392:G:OP2	16:QP:12:LYS:HG3	2.18	0.44
1:QA:59:A:H1'	1:QA:354:G:N2	2.32	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.44	0.44
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.44
9:QI:128:ARG:HH21	22:QV:35:A:P	2.40	0.44
1:QA:502:G:P	12:QL:118:SER:HB2	2.58	0.44
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.44
1:QA:191:G:H1'	20:QT:105:SER:HB3	1.99	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.44
25:RA:1893:C:C4	25:RA:1894:C:C4	3.05	0.44
25:RA:2350:C:H2'	25:RA:2351:G:O4'	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2417:C:C4	25:RA:2418:A:N7	2.86	0.44
25:RA:2844:G:H5'	25:RA:2845:G:OP2	2.17	0.44
25:RA:813:U:H2'	25:RA:814:C:C6	2.51	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	0.44
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
32:RI:117:GLU:O	32:RI:118:LYS:HB2	2.18	0.44
32:RI:124:GLY:N	32:RI:142:VAL:HG23	2.31	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.44
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
39:RT:49:VAL:CG1	39:RT:49:VAL:O	2.64	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	0.44
1:XA:1074:G:C4'	2:XB:104:ASN:HB2	2.46	0.44
1:XA:1213:A:N7	1:XA:1215:G:C5	2.85	0.44
1:XA:1530:G:H2'	1:XA:1531:A:O4'	2.17	0.44
1:XA:317:G:C6	1:XA:318:G:C5	3.05	0.44
1:XA:412:A:OP2	4:XD:35:ARG:NH2	2.50	0.44
1:XA:422:C:O2'	1:XA:423:G:H5''	2.18	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.48	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.51	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
1:XA:1128:C:H5'	9:XI:16:ARG:HH22	1.82	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.51	0.44
10:XJ:63:PHE:HB3	14:YN:57:ARG:O	2.18	0.44
13:XM:121:LYS:HZ2	24:XY:40:G:P	2.34	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44
19:XS:3:ARG:CG	19:XS:4:SER:H	2.21	0.44
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.44
46:Y0:78:TYR:CD1	46:Y0:78:TYR:N	2.86	0.44
25:YA:102:G:OP1	48:Y2:7:ARG:NH2	2.50	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.19	0.44
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.44
25:YA:1319:G:H8	25:YA:1319:G:H5'	1.82	0.44
25:YA:1437:C:H2'	25:YA:1438:U:C6	2.52	0.44
25:YA:2105:C:H2'	25:YA:2106:G:H8	1.83	0.44
25:YA:2550:G:C2	25:YA:2559:C:O2	2.71	0.44
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.83	0.44
26:YB:61:G:C6	26:YB:62:C:C4	3.06	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:YB:71:C:H2'	26:YB:72:G:H8	1.82	0.44
26:YB:95:U:N3	26:YB:96:G:N7	2.65	0.44
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.44
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44
32:YI:117:GLU:O	32:YI:118:LYS:HB2	2.17	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
35:YP:45:LEU:HD12	35:YP:45:LEU:N	2.32	0.44
36:YQ:82:ARG:H	46:Y0:7:LEU:HD22	1.80	0.44
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.44
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.44
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.44
40:YU:57:PHE:O	40:YU:59:ARG:N	2.50	0.44
41:YV:72:VAL:HG13	41:YV:85:LYS:HB3	2.00	0.44
42:YW:28:SER:O	42:YW:30:GLU:N	2.51	0.44
45:YZ:139:VAL:O	45:YZ:139:VAL:CG1	2.65	0.44
45:YZ:169:GLU:O	45:YZ:170:THR:OG1	2.35	0.44
1:QA:1311:G:C2	1:QA:1327:C:C2	3.06	0.44
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.42	0.44
1:QA:271:C:H2'	1:QA:272:C:H6	1.83	0.44
1:QA:538:G:H2'	1:QA:539:A:H8	1.81	0.44
1:QA:771:G:H2'	1:QA:772:U:C6	2.52	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	2.00	0.44
4:QD:9:CYS:SG	4:QD:32:ALA:HB2	2.58	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.47	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.44
24:QY:34:C:C2'	24:QY:35:G:O5'	2.65	0.44
48:R2:41:ILE:O	48:R2:41:ILE:HD12	2.16	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44
53:R7:32:LYS:O	53:R7:33:ARG:C	2.56	0.44
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.44
25:RA:2133:G:H2'	25:RA:2157:G:N2	2.32	0.44
25:RA:2437:U:H2'	25:RA:2438:U:C6	2.52	0.44
25:RA:2887:U:H2'	25:RA:2888:C:C6	2.51	0.44
25:RA:380:U:H2'	25:RA:381:G:H8	1.81	0.44
25:RA:704:G:HO2'	25:RA:705:A:P	2.40	0.44
27:RD:155:LEU:HD12	27:RD:155:LEU:N	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	2.17	0.44
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.50	0.44
32:RI:9:LEU:C	32:RI:10:GLU:HG3	2.36	0.44
35:RP:45:LEU:HD12	35:RP:45:LEU:N	2.32	0.44
35:RP:81:GLN:HG3	35:RP:82:GLY:N	2.32	0.44
39:RT:135:ALA:C	39:RT:137:LYS:N	2.71	0.44
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.48	0.44
41:RV:35:LEU:N	41:RV:35:LEU:HD22	2.23	0.44
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.99	0.44
42:RW:29:LEU:HD11	42:RW:55:ALA:HB2	1.98	0.44
42:RW:88:ARG:HG2	42:RW:88:ARG:HH11	1.82	0.44
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
45:RZ:117:LEU:HB3	45:RZ:118:GLN:H	1.70	0.44
45:RZ:136:PHE:CD1	45:RZ:137:ILE:N	2.84	0.44
45:RZ:52:SER:O	45:RZ:54:HIS:N	2.50	0.44
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.18	0.44
1:XA:1235:U:H2'	1:XA:1236:A:O4'	2.18	0.44
1:XA:36:C:O2'	1:XA:501:C:OP1	2.32	0.44
1:XA:540:G:H2'	1:XA:541:G:O4'	2.18	0.44
1:XA:557:G:C6	1:XA:558:G:C6	3.05	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
3:XC:69:HIS:ND1	3:XC:69:HIS:N	2.66	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.44
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.99	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
9:XI:128:ARG:HD3	22:XV:32:C:OP2	2.18	0.44
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.44
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.44
1:XA:1320:C:C4	19:XS:36:ARG:HG3	2.51	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
52:Y6:19:ARG:HA	52:Y6:19:ARG:HD2	1.77	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.18	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.52	0.44
25:YA:1937:A:N7	25:YA:1939:U:H2'	2.32	0.44
25:YA:573:G:N2	25:YA:2031:A:OP2	2.45	0.44
25:YA:2185:C:H2'	25:YA:2186:G:H8	1.83	0.44
25:YA:225:A:H5'	25:YA:226:G:OP2	2.16	0.44
25:YA:2373:G:H2'	25:YA:2374:C:C6	2.53	0.44
25:YA:2389:G:H5''	25:YA:2390:U:H5'	1.99	0.44
25:YA:2625:G:H2'	25:YA:2626:C:C6	2.52	0.44
25:YA:514:A:H2'	25:YA:515:A:C8	2.53	0.44
25:YA:529:A:C8	25:YA:530:G:C6	3.06	0.44
27:YD:237:GLU:HB3	27:YD:238:GLY:H	1.45	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
32:YI:9:LEU:C	32:YI:10:GLU:HG3	2.36	0.44
32:YI:1:MET:HG3	32:YI:23:PRO:CB	2.47	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.44
42:YW:1:MET:CE	42:YW:2:GLU:H	2.31	0.44
25:YA:71:A:C2	43:YX:31:HIS:CE1	2.94	0.44
45:YZ:137:ILE:O	45:YZ:156:LYS:NZ	2.50	0.44
1:QA:1062:U:H2'	1:QA:1063:C:C6	2.53	0.44
1:QA:1346:A:N1	1:QA:1374:A:H5''	2.32	0.44
1:QA:420:U:H4'	1:QA:421:U:H5	1.83	0.44
1:QA:892:A:C6	1:QA:893:C:C4	3.06	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.44
7:QG:150:ALA:HA	11:QK:59:TYR:HD2	1.83	0.44
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.44
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.99	0.44
1:QA:1316:G:H5''	14:QN:17:LYS:HE3	1.99	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
20:QT:84:LEU:HD13	20:QT:84:LEU:C	2.37	0.44
48:R2:4:SER:OG	48:R2:5:GLU:OE2	2.26	0.44
25:RA:1045:A:O2'	25:RA:1046:A:OP2	2.31	0.44
25:RA:1906:G:C8	25:RA:1929:G:C4	3.05	0.44
25:RA:2050:C:H2'	25:RA:2051:A:O4'	2.18	0.44
25:RA:2303:G:O2'	25:RA:2304:G:H5'	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:348:G:H2'	25:RA:349:G:C8	2.53	0.44
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.62	0.44
25:RA:774:A:HO2'	25:RA:775:G:P	2.40	0.44
25:RA:962:G:H2'	25:RA:963:U:O4'	2.17	0.44
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
28:RE:143:ASN:N	28:RE:143:ASN:ND2	2.65	0.44
29:RF:174:VAL:O	29:RF:174:VAL:CG1	2.65	0.44
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	2.00	0.44
32:RI:131:LYS:HD2	32:RI:131:LYS:N	2.32	0.44
32:RI:45:LYS:O	32:RI:49:ALA:N	2.48	0.44
32:RI:68:LEU:HA	32:RI:71:ILE:HG22	1.99	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
37:RR:12:ARG:HG3	37:RR:12:ARG:NH1	2.32	0.44
37:RR:79:LEU:O	37:RR:79:LEU:HD23	2.16	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
42:RW:74:ALA:O	42:RW:75:TYR:CB	2.65	0.44
44:RY:88:LYS:HB3	44:RY:90:LEU:CD2	2.48	0.44
45:RZ:93:ASP:O	45:RZ:94:GLU:CB	2.65	0.44
1:XA:170:U:H2'	1:XA:171:A:H8	1.81	0.44
1:XA:339:C:H5	34:YO:97:ARG:HH12	1.62	0.44
1:XA:524:G:H2'	1:XA:525:C:C5	2.52	0.44
1:XA:659:U:H2'	1:XA:660:G:O4'	2.17	0.44
1:XA:689:C:O4'	1:XA:704:A:H2	2.00	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.99	0.44
4:XD:13:ARG:NH2	4:XD:36:ARG:HH21	2.15	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.44
1:XA:1117:G:H5''	9:XI:104:ARG:NH2	2.32	0.44
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.47	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
46:Y0:3:HIS:CD2	46:Y0:4:LYS:C	2.74	0.44
46:Y0:42:GLY:C	46:Y0:57:PHE:HD1	2.21	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.16	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:XS:5:LEU:HD21	50:Y4:66:SER:HB2	1.99	0.44
25:YA:125:G:N2	53:Y7:9:ARG:HB3	2.33	0.44
25:YA:1217:C:OP1	40:YU:15:LYS:NZ	2.44	0.44
25:YA:1575:C:H2'	25:YA:1576:U:O4'	2.18	0.44
25:YA:205:G:HO2'	25:YA:206:U:H5	1.64	0.44
25:YA:2687:U:H2'	25:YA:2688:U:O4'	2.18	0.44
25:YA:2713:A:H3'	25:YA:2714:G:H5''	1.99	0.44
25:YA:273(C):C:N4	25:YA:363(C):G:H1	2.14	0.44
25:YA:835:A:C6	25:YA:836:G:C5	3.06	0.44
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.44
25:YA:2572:A:C8	28:YE:144:ARG:HB3	2.52	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
29:YF:116:ASP:OD2	35:YP:1:MET:N	2.44	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
32:YI:110:ASP:CB	32:YI:111:PRO:CA	2.96	0.44
32:YI:135:GLU:HB2	32:YI:136:VAL:H	1.49	0.44
32:YI:64:GLU:O	32:YI:67:ARG:NE	2.50	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.24	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.44
38:YS:56:LEU:O	38:YS:57:LYS:O	2.36	0.44
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.53	0.44
1:QA:1388:C:H2'	1:QA:1389:C:H6	1.82	0.44
1:QA:825:G:H2'	1:QA:826:C:O4'	2.17	0.44
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.63	0.44
2:QB:136:VAL:O	2:QB:140:HIS:N	2.43	0.44
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.44
9:QI:47:LEU:H	9:QI:47:LEU:HD22	1.81	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.52	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.17	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.81	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
17:QQ:92:ARG:NH1	17:QQ:92:ARG:HG3	2.30	0.44
18:QR:20:ALA:O	18:QR:21:LYS:HG3	2.18	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:RB:12:C:O2'	46:R0:74:ARG:HG3	2.17	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.18	0.44
25:RA:2350:C:C5	54:R8:42:ARG:NH1	2.85	0.44
25:RA:300:A:H1'	25:RA:319:C:H1'	2.00	0.44
25:RA:310:A:OP1	44:RY:18:GLY:N	2.44	0.44
25:RA:635:C:H2'	25:RA:636:G:O4'	2.18	0.44
26:RB:72:G:O2'	26:RB:104:A:N6	2.44	0.44
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.44
25:RA:1844:C:OP1	27:RD:257:LEU:HD23	2.18	0.44
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	0.44
30:RG:67:LYS:N	30:RG:67:LYS:HD2	2.33	0.44
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.81	0.44
32:RI:79:ILE:CB	32:RI:142:VAL:HA	2.42	0.44
32:RI:67:ARG:CZ	32:RI:68:LEU:HB2	2.48	0.44
33:RN:57:ALA:O	33:RN:124:ALA:HA	2.18	0.44
34:RO:63:VAL:HG23	34:RO:63:VAL:O	2.17	0.44
34:RO:91:LEU:N	34:RO:91:LEU:CD2	2.80	0.44
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	1.99	0.44
37:RR:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
45:RZ:105:VAL:HG22	45:RZ:105:VAL:O	2.18	0.44
45:RZ:152:ALA:HA	45:RZ:171:ILE:HB	2.00	0.44
45:RZ:24:LEU:HD21	45:RZ:86:VAL:CG2	2.48	0.44
1:XA:1074:G:OP2	5:XE:61:TYR:OH	2.30	0.44
1:XA:1297:C:O2'	1:XA:1298:C:P	2.75	0.44
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.18	0.44
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.81	0.44
1:XA:390:C:H4'	16:XP:28:ARG:NH2	2.31	0.44
1:XA:664:G:H22	1:XA:741:G:H1	1.65	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
11:XK:124:LYS:O	11:XK:126:ARG:N	2.40	0.44
16:XP:50:LYS:O	16:XP:50:LYS:HD3	2.17	0.44
19:XS:67:VAL:HG21	50:Y4:60:GLN:HE22	1.83	0.44
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.44
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:Y0:40:GLN:OE1	46:Y0:45:PHE:HB2	2.18	0.44
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.50	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
25:YA:1126:A:H4'	25:YA:1127:A:O5'	2.17	0.44
25:YA:1530:G:C2	25:YA:1531:C:C2	3.05	0.44
25:YA:1771:C:O2'	25:YA:1786:A:O4'	2.35	0.44
25:YA:2193:G:H2'	25:YA:2194:G:H8	1.82	0.44
25:YA:2331:G:O4'	46:Y0:42:GLY:HA3	2.17	0.44
25:YA:531:C:OP1	25:YA:561:G:N1	2.51	0.44
25:YA:638:G:C5	25:YA:651:G:C2	3.05	0.44
25:YA:83:G:O2'	25:YA:84:A:H8	2.01	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
27:YD:238:GLY:C	27:YD:239:ARG:O	2.53	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
29:YF:65:TRP:CZ2	29:YF:72:ARG:NH2	2.86	0.44
30:YG:16:ARG:NH2	30:YG:31:VAL:CG1	2.75	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
35:YP:6:LEU:HD22	35:YP:6:LEU:N	2.31	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
37:YR:41:ALA:C	37:YR:43:GLU:H	2.20	0.44
40:YU:97:ASP:HA	40:YU:100:VAL:CG2	2.47	0.44
40:YU:79:PHE:CE2	40:YU:83:LEU:CD1	3.00	0.44
42:YW:14:PRO:HB3	42:YW:18:ARG:HE	1.83	0.44
42:YW:88:ARG:HG2	42:YW:88:ARG:HH11	1.82	0.44
45:YZ:108:PRO:CB	45:YZ:112:ARG:HB2	2.38	0.44
1:QA:1206:G:C6	1:QA:1207:G:C5	3.05	0.44
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.33	0.44
1:QA:1268:A:H4'	21:QU:19:GLY:C	2.38	0.44
1:QA:149:A:H4'	1:QA:1450:U:C4	2.53	0.44
1:QA:1494:G:OP2	1:QA:1494:G:H8	2.01	0.44
1:QA:738:C:H5''	6:QF:69:GLU:HB2	2.00	0.44
1:QA:576:G:N2	1:QA:759:A:OP1	2.50	0.44
1:QA:792:A:H2'	1:QA:792:A:N3	2.33	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.42	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.50	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:14:ARG:C	4:QD:14:ARG:HD3	2.38	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
8:QH:23:SER:HB3	8:QH:62:TYR:HA	1.99	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
20:QT:101:GLY:C	20:QT:103:GLY:H	2.21	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.50	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
25:RA:103:A:H8	25:RA:103:A:O5'	2.00	0.44
25:RA:1533:C:H2'	25:RA:1534:G:C8	2.53	0.44
25:RA:2821:A:H2'	25:RA:2822:G:C8	2.53	0.44
25:RA:2721:A:H1'	25:RA:2873:A:O2'	2.18	0.44
25:RA:2831:G:H1'	25:RA:2883:A:H2'	1.98	0.44
25:RA:303:U:H2'	25:RA:304:G:C8	2.53	0.44
25:RA:554:U:HO2'	25:RA:556:G:P	2.39	0.44
25:RA:836:G:H2'	25:RA:837:C:C6	2.53	0.44
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.44
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
27:RD:44:ASN:ND2	27:RD:44:ASN:H	1.97	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.44
28:RE:13:ARG:HB3	28:RE:13:ARG:HH11	1.82	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.73	0.44
34:RO:77:ILE:O	34:RO:77:ILE:HG23	2.17	0.44
37:RR:41:ALA:C	37:RR:43:GLU:H	2.20	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.99	0.44
39:RT:114:LEU:HA	39:RT:114:LEU:HD23	1.74	0.44
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.51	0.44
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.44
45:RZ:12:GLY:O	45:RZ:13:GLU:O	2.36	0.44
1:XA:1064:G:H4'	1:XA:1065:U:O5'	2.18	0.44
1:XA:186(C):G:H2'	1:XA:186(D):C:O4'	2.18	0.44
1:XA:730:G:C6	1:XA:731:G:H1'	2.53	0.44
2:XB:33:TYR:O	2:XB:33:TYR:HD1	2.00	0.44
1:XA:1055:A:H4'	3:XC:161:GLU:OE2	2.18	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.44
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.50	0.44
7:XG:69:VAL:CG1	7:XG:69:VAL:O	2.62	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	1.99	0.44
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.44
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
10:XJ:51:ARG:NH1	10:XJ:51:ARG:HG2	2.32	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.51	0.44
16:XP:72:ARG:O	16:XP:72:ARG:HD3	2.18	0.44
25:YA:1022:G:N2	25:YA:1142(A):A:H2	2.14	0.44
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.52	0.44
25:YA:2302:G:C6	25:YA:2303:G:C5	3.06	0.44
25:YA:2517:C:C4	25:YA:2542:A:C6	3.05	0.44
25:YA:26:G:C6	25:YA:27:G:C2	3.06	0.44
25:YA:295:G:C5	25:YA:344:G:C2	3.05	0.44
25:YA:356:G:C2	25:YA:357:A:C4	3.06	0.44
25:YA:987:G:H2'	25:YA:988:A:O4'	2.18	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
29:YF:24:LEU:N	29:YF:24:LEU:HD12	2.33	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	0.44
32:YI:92:VAL:O	32:YI:120:ILE:HG22	2.18	0.44
25:YA:2723:C:OP1	37:YR:3:HIS:HD2	2.00	0.44
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
40:YU:86:ALA:CB	40:YU:88:ILE:HD11	2.48	0.44
43:YX:35:THR:O	43:YX:36:LYS:C	2.55	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44
45:YZ:152:ALA:HA	45:YZ:171:ILE:HB	2.00	0.44
45:YZ:48:PHE:HE2	45:YZ:71:VAL:HG11	1.82	0.44
1:QA:1266:G:N2	1:QA:1268:A:H3'	2.33	0.44
1:QA:1429:C:H2'	1:QA:1430:C:H6	1.82	0.44
1:QA:209:U:H1'	1:QA:216:G:C6	2.52	0.44
1:QA:277:C:H5''	17:QQ:68:ARG:NH2	2.31	0.44
1:QA:730:G:C5	1:QA:731:G:H1'	2.52	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	2.00	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.29	0.44
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.44
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.98	0.44
2:QB:178:ARG:NH2	8:QH:74:PRO:CG	2.81	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:QG:151:TYR:HE1	11:QK:54:ARG:HD3	1.83	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.33	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.48	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
25:RA:625:G:OP1	54:R8:64:TYR:HD1	2.00	0.44
25:RA:1027:A:C6	25:RA:1126:A:C4	3.06	0.44
25:RA:1030:G:H1	25:RA:1124:C:H42	1.66	0.44
25:RA:2674:G:H2'	25:RA:2675:A:O4'	2.18	0.44
25:RA:395:U:H2'	25:RA:396:G:N7	2.32	0.44
25:RA:495:G:H1'	42:RW:57:ASN:ND2	2.33	0.44
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
28:RE:199:ARG:HG3	28:RE:199:ARG:HH11	1.82	0.44
25:RA:618:G:OP1	29:RF:106:ARG:HB3	2.18	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44
32:RI:40:THR:O	32:RI:44:LEU:HB2	2.18	0.44
35:RP:83:VAL:HG11	35:RP:112:LEU:HD21	1.97	0.44
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.52	0.44
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.44
40:RU:79:PHE:CE2	40:RU:83:LEU:CD1	3.00	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.44
25:RA:1335:U:OP1	43:RX:65:ARG:NE	2.51	0.44
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.44
45:RZ:105:VAL:HG11	45:RZ:138:GLU:HG2	1.99	0.44
45:RZ:139:VAL:O	45:RZ:139:VAL:CG1	2.65	0.44
1:XA:1002:G:N2	1:XA:1039:C:N3	2.65	0.44
1:XA:1305:G:O2'	1:XA:1332:A:N6	2.50	0.44
1:XA:722:A:H2'	1:XA:724:G:C8	2.52	0.44
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
46:Y0:25:ARG:CD	46:Y0:29:GLN:HE22	2.27	0.44
25:YA:2397:G:H5''	47:Y1:28:GLY:HA2	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
30:YG:67:LYS:CE	50:Y4:6:HIS:NE2	2.74	0.44
25:YA:1214:A:H2'	25:YA:1215:G:O4'	2.17	0.44
25:YA:11:G:H2'	25:YA:12:U:O4'	2.18	0.44
25:YA:1495:A:N3	25:YA:1578:U:O2'	2.41	0.44
25:YA:1442:G:C2	25:YA:1550:C:O2	2.71	0.44
25:YA:1660:C:H2'	25:YA:1661:G:C8	2.53	0.44
25:YA:2262:U:H2'	25:YA:2263:C:H6	1.83	0.44
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.53	0.44
25:YA:234:C:H2'	25:YA:235:U:H6	1.79	0.44
25:YA:524:U:H2'	25:YA:525:U:C6	2.53	0.44
25:YA:817:C:H4'	25:YA:932:G:C5	2.53	0.44
25:YA:971:C:O2'	25:YA:983:A:N3	2.43	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
25:YA:1567:A:H5'	27:YD:58:HIS:CE1	2.53	0.44
27:YD:95:LEU:HD12	27:YD:95:LEU:O	2.17	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
32:YI:110:ASP:HB2	32:YI:111:PRO:C	2.38	0.44
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.44
35:YP:13:ASN:C	35:YP:15:ARG:H	2.21	0.44
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.44
35:YP:88:LEU:O	35:YP:90:ARG:N	2.50	0.44
36:YQ:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CE1	2.53	0.44
25:YA:2296:U:H2'	38:YS:9:ARG:NH1	2.33	0.44
39:YT:107:ASP:OD2	39:YT:109:GLU:HB2	2.18	0.44
42:YW:67:ASP:N	42:YW:67:ASP:OD2	2.50	0.44
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
1:QA:1194:U:H4'	5:QE:22:GLY:O	2.17	0.44
1:QA:1286:A:H8	1:QA:1287:A:H4'	1.83	0.44
1:QA:1346:A:O2'	1:QA:1347:G:O4'	2.36	0.44
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.17	0.44
1:QA:580:U:H2'	1:QA:581:G:O4'	2.18	0.44
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.44
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.44
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.00	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.18	0.44
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.44
10:QJ:10:GLY:O	10:QJ:68:HIS:N	2.51	0.44
11:QK:53:SER:C	11:QK:55:LYS:H	2.21	0.44
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.44
1:QA:375:U:H5''	16:QP:69:THR:HG21	1.99	0.44
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.44
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.44
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.44
25:RA:1020:A:N6	25:RA:1141:U:HO2'	2.15	0.44
25:RA:1475:G:H2'	25:RA:1476:C:C6	2.53	0.44
25:RA:1638:C:H4'	25:RA:2710:C:O2	2.18	0.44
25:RA:2105:C:H2'	25:RA:2106:G:H8	1.82	0.44
25:RA:251:A:C5	25:RA:252:G:H1'	2.52	0.44
25:RA:2608:G:H5''	25:RA:2609:U:OP1	2.18	0.44
25:RA:271(C):U:O2'	25:RA:271:G:OP1	2.33	0.44
25:RA:2720:U:H2'	25:RA:2721:A:O4'	2.17	0.44
25:RA:823:G:H2'	25:RA:824:A:C8	2.53	0.44
25:RA:863:A:H2'	25:RA:864:G:H8	1.79	0.44
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.44
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.00	0.44
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
37:RR:3:HIS:C	37:RR:5:LYS:H	2.17	0.44
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.44
42:RW:70:TYR:HD2	42:RW:70:TYR:N	2.06	0.44
43:RX:3:THR:HA	43:RX:6:ASP:OD2	2.18	0.44
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.44
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.44
45:RZ:103:ARG:HB3	45:RZ:138:GLU:HG3	2.00	0.44
1:XA:1054:C:HO2'	1:XA:1055:A:P	2.40	0.44
1:XA:148:G:H1	1:XA:174:C:N4	2.13	0.44
1:XA:258:G:H2'	1:XA:259:G:C8	2.51	0.44
1:XA:573:A:N3	1:XA:883:C:O2'	2.40	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.44
5:XE:20:GLN:O	5:XE:21:ALA:C	2.56	0.44
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.44
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.44
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.44
14:XN:17:LYS:HG3	14:XN:18:VAL:N	2.33	0.44
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.44
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.00	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:YA:380:U:O3'	47:Y1:16:ASN:HB2	2.17	0.44
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.44
25:YA:1142(A):A:C4	25:YA:1144:G:C8	3.05	0.44
25:YA:1313:U:H5''	25:YA:1314:C:OP2	2.18	0.44
25:YA:146:G:H2'	25:YA:147:U:O4'	2.17	0.44
25:YA:2197:U:H2'	25:YA:2224:G:H1	1.83	0.44
25:YA:2447:G:N2	25:YA:2450:A:OP2	2.51	0.44
25:YA:2524:G:H2'	25:YA:2741:A:H2	1.82	0.44
25:YA:2528:U:O2'	25:YA:2529:G:H3'	2.18	0.44
25:YA:2592:G:C6	25:YA:2593:U:N3	2.86	0.44
25:YA:775:G:C5	25:YA:794:G:C8	3.06	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.79	0.44
32:YI:60:GLU:O	32:YI:64:GLU:N	2.51	0.44
32:YI:68:LEU:HA	32:YI:71:ILE:HG22	1.99	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44
34:YO:91:LEU:CD2	34:YO:91:LEU:N	2.80	0.44
35:YP:36:LYS:HZ3	35:YP:36:LYS:HG3	1.42	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.44
39:YT:49:VAL:CG1	39:YT:49:VAL:O	2.64	0.44
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.44
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.44
45:YZ:102:LEU:HD22	45:YZ:156:LYS:HZ2	1.80	0.44
45:YZ:152:ALA:H	45:YZ:170:THR:H	1.66	0.44
1:QA:1072:G:H2'	1:QA:1073:U:O4'	2.18	0.43
1:QA:1179:A:H2'	1:QA:1180:A:O4'	2.18	0.43
1:QA:1321:C:C3'	1:QA:1322:C:H5''	2.48	0.43
1:QA:1365:G:H2'	1:QA:1366:C:C6	2.53	0.43
1:QA:927:G:H1	1:QA:1390:U:H3	1.65	0.43
1:QA:175:C:H2'	1:QA:176:C:O4'	2.18	0.43
1:QA:437:U:H2'	1:QA:438:G:O4'	2.18	0.43
1:QA:451:A:N7	1:QA:481:G:C2	2.86	0.43
1:QA:97:U:H2'	1:QA:99:C:C6	2.53	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.30	0.43
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.18	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.71	0.43
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.17	0.43
10:QJ:38:ILE:CG1	10:QJ:71:LEU:HB3	2.48	0.43
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.43
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.43
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.71	0.43
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.43
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.43
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
46:R0:25:ARG:CD	46:R0:29:GLN:HE22	2.27	0.43
47:R1:8:SER:CB	47:R1:66:HIS:CE1	3.01	0.43
50:R4:48:ARG:C	50:R4:49:PHE:HD1	2.22	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.43
25:RA:1267:U:OP2	25:RA:2012:G:N1	2.41	0.43
25:RA:140:A:C8	25:RA:1408:C:O2'	2.70	0.43
25:RA:1433:U:H1'	25:RA:1561:G:N2	2.32	0.43
25:RA:1651:G:N2	25:RA:2007:C:C2	2.86	0.43
25:RA:2516:G:C5	25:RA:2517:C:C4	3.05	0.43
25:RA:2636:U:OP1	28:RE:79:ARG:HG3	2.18	0.43
25:RA:276:A:O2'	25:RA:277:C:O5'	2.35	0.43
25:RA:31:C:H5''	25:RA:1239:G:OP1	2.19	0.43
25:RA:396:G:H8	25:RA:396:G:O5'	2.01	0.43
25:RA:675:A:N3	25:RA:2443:C:O2'	2.40	0.43
25:RA:71:A:H4'	25:RA:72:U:H5''	2.00	0.43
25:RA:864:G:C6	25:RA:865:C:N4	2.86	0.43
25:RA:953:A:H2'	25:RA:954:G:H8	1.81	0.43
27:RD:206:LEU:HA	27:RD:206:LEU:HD23	1.49	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
29:RF:24:LEU:N	29:RF:24:LEU:HD12	2.33	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
38:RS:86:ALA:O	38:RS:87:PHE:CB	2.65	0.43
39:RT:105:LEU:C	39:RT:107:ASP:OD1	2.56	0.43
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
44:RY:88:LYS:HA	44:RY:88:LYS:HZ2	1.83	0.43
1:XA:61:G:H2'	1:XA:62:U:O4'	2.18	0.43
1:XA:89:U:HO2'	1:XA:90:C:P	2.42	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.43
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
7:XG:60:LYS:O	7:XG:61:VAL:C	2.56	0.43
9:XI:127:LYS:HE2	22:XV:34:C:OP2	2.17	0.43
10:XJ:96:ILE:H	10:XJ:96:ILE:HD13	1.83	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.43
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.43
9:XI:128:ARG:NH2	22:XV:35:A:OP2	2.51	0.43
24:XY:39:C:H4'	24:XY:40:G:OP1	2.18	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
25:YA:1025:G:C4	25:YA:1135:C:H1'	2.52	0.43
25:YA:1252:G:H1'	40:YU:33:ARG:HD3	2.00	0.43
25:YA:1469:A:H2'	25:YA:1470:G:O4'	2.18	0.43
25:YA:1562:A:N6	25:YA:1563:G:C6	2.86	0.43
25:YA:1956:U:O2	25:YA:1985:G:H4'	2.18	0.43
25:YA:1967:C:H2'	25:YA:1968:G:H5'	1.99	0.43
25:YA:67:U:H3	25:YA:74:A:H2	1.64	0.43
26:YB:30:C:OP2	38:YS:32:LEU:HD11	2.18	0.43
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.43
27:YD:213:ARG:HA	27:YD:213:ARG:HD2	1.60	0.43
27:YD:35:LYS:HB3	27:YD:36:PRO:HA	2.00	0.43
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.43
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.43
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.43
25:YA:448:U:H1'	29:YF:84:VAL:HG21	2.00	0.43
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	1.99	0.43
31:YH:109:PHE:C	31:YH:111:HIS:H	2.22	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
32:YI:111:PRO:O	32:YI:112:LYS:C	2.55	0.43
33:YN:87:LEU:CD2	33:YN:87:LEU:C	2.86	0.43
35:YP:96:THR:HG22	35:YP:126:VAL:CB	2.46	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	0.43
39:YT:114:LEU:HD23	39:YT:114:LEU:HA	1.74	0.43
43:YX:14:SER:HB2	43:YX:15:GLU:OE1	2.18	0.43
43:YX:70:LEU:H	43:YX:70:LEU:HD23	1.77	0.43
45:YZ:158:PRO:N	45:YZ:161:VAL:HG21	2.33	0.43
45:YZ:24:LEU:HD21	45:YZ:86:VAL:CG2	2.48	0.43
45:YZ:27:VAL:CG2	45:YZ:28:MET:H	2.31	0.43
1:QA:1150:U:O4	1:QA:1151:A:N6	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1364:U:O2'	1:QA:1365:G:OP1	2.31	0.43
1:QA:1429:C:H2'	1:QA:1430:C:C6	2.53	0.43
1:QA:358:U:H2'	1:QA:359:U:H6	1.80	0.43
1:QA:401:C:H2'	1:QA:402:G:C8	2.53	0.43
1:QA:542:G:N2	1:QA:543:C:C2	2.86	0.43
1:QA:757:U:O2'	1:QA:879:C:H1'	2.18	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.82	0.43
10:QJ:80:LYS:HE2	1:XA:1162:C:H4'	2.00	0.43
11:QK:106:LYS:O	11:QK:107:SER:CB	2.66	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.85	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.98	0.43
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.43
22:QV:4:G:C6	22:QV:70:G:N1	2.86	0.43
24:QY:39:C:H4'	24:QY:40:G:OP1	2.18	0.43
46:R0:42:GLY:C	46:R0:57:PHE:HD1	2.21	0.43
25:RA:2364:C:H4'	46:R0:56:ASP:OD1	2.18	0.43
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.43
50:R4:49:PHE:HD1	50:R4:49:PHE:N	2.16	0.43
13:QM:77:ASN:ND2	50:R4:71:ARG:HH12	2.16	0.43
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.43
25:RA:2077:A:OP1	25:RA:2238:G:N2	2.49	0.43
25:RA:271(B):G:N7	25:RA:421:U:H2'	2.33	0.43
25:RA:639:U:H3	25:RA:649:G:H1	1.66	0.43
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.43
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.18	0.43
31:RH:109:PHE:C	31:RH:111:HIS:H	2.22	0.43
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.43
32:RI:35:LEU:HD12	32:RI:35:LEU:O	2.19	0.43
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	0.43
35:RP:75:ILE:HG12	35:RP:77:ARG:NH1	2.32	0.43
37:RR:81:ASP:OD2	37:RR:81:ASP:N	2.50	0.43
39:RT:105:LEU:O	39:RT:105:LEU:HG	2.18	0.43
39:RT:99:LEU:O	39:RT:99:LEU:CD1	2.66	0.43
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.43
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.43
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.43
45:RZ:15:PRO:HA	45:RZ:18:LEU:HD13	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1054:C:N4	24:XY:34:C:C6	2.86	0.43
1:XA:1071:C:H2'	1:XA:1072:G:C8	2.53	0.43
1:XA:115:G:O5'	1:XA:115:G:H8	2.02	0.43
1:XA:978:A:O2'	1:XA:1322:C:N3	2.51	0.43
1:XA:143:A:H2	1:XA:220:G:H1	1.65	0.43
1:XA:198:G:H1	1:XA:219:C:N4	2.16	0.43
1:XA:338:A:H61	1:XA:351:G:H1	1.66	0.43
1:XA:37:U:O2'	1:XA:500:G:H4'	2.17	0.43
1:XA:92:G:H3'	1:XA:93:U:C6	2.53	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
4:XD:180:GLY:O	4:XD:181:MET:C	2.55	0.43
7:XG:78:ARG:CG	7:XG:78:ARG:HH11	2.30	0.43
8:XH:1:MET:CE	8:XH:1:MET:H3	2.31	0.43
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.01	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
1:XA:562:C:N4	12:XL:16:GLU:OE1	2.51	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.43
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.83	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.66	0.43
25:YA:1024:G:OP2	25:YA:1025:G:C3'	2.66	0.43
25:YA:1029:A:H2	25:YA:2465:C:O2	2.01	0.43
25:YA:1085:A:HO2'	25:YA:1086:A:P	2.38	0.43
25:YA:1126:A:OP1	25:YA:1126:A:H8	2.02	0.43
25:YA:1679:U:H2'	25:YA:1680:U:H5'	2.00	0.43
25:YA:1952:A:C6	25:YA:1953:A:N1	2.86	0.43
25:YA:2558:C:H2'	25:YA:2559:C:O4'	2.18	0.43
25:YA:2712:U:H1'	25:YA:2712(A):A:N7	2.33	0.43
25:YA:582:G:H2'	25:YA:583:G:H8	1.83	0.43
26:YB:5:C:O2'	26:YB:27:C:O2	2.37	0.43
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.43
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	0.43
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.43
31:YH:92:ILE:CD1	31:YH:160:LYS:HD3	2.48	0.43
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.43
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.43
35:YP:70:GLN:OE1	35:YP:70:GLN:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.54	0.43
41:YV:1:MET:HE1	41:YV:43:GLU:HG2	2.00	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:NH1	2.61	0.43
42:YW:29:LEU:HD11	42:YW:55:ALA:HB2	1.98	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
45:YZ:117:LEU:HB3	45:YZ:118:GLN:H	1.70	0.43
45:YZ:144:LEU:HD21	45:YZ:150:LEU:HD13	2.00	0.43
1:QA:1362:C:H2'	1:QA:1362(A):C:H5''	2.01	0.43
1:QA:190:G:H2'	1:QA:190:G:N3	2.33	0.43
1:QA:232:G:H2'	1:QA:233:C:O4'	2.18	0.43
1:QA:654:G:H2'	1:QA:655:A:O4'	2.18	0.43
1:QA:992:U:H1'	1:QA:993:G:OP2	2.18	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.18	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.00	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
9:QI:41:VAL:O	9:QI:41:VAL:HG12	2.18	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
1:QA:995:C:H5'	14:QN:8:GLU:HG2	2.00	0.43
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
22:QV:15:G:N2	22:QV:48:C:H42	2.17	0.43
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	0.43
52:R6:20:ASN:O	52:R6:21:TYR:CG	2.72	0.43
25:RA:1012:U:O2'	25:RA:1013:C:OP2	2.27	0.43
25:RA:1213:A:N3	25:RA:1238:G:O2'	2.49	0.43
25:RA:1380:G:O2'	25:RA:1569:A:N6	2.50	0.43
25:RA:1380:G:OP2	25:RA:1380:G:H3'	2.18	0.43
25:RA:1543:A:C2	25:RA:1545:A:C4	3.06	0.43
25:RA:1844:C:H2'	25:RA:1845:G:H8	1.81	0.43
25:RA:829:A:N7	25:RA:2248:C:H5'	2.33	0.43
25:RA:2741:A:H2'	25:RA:2742:C:O4'	2.18	0.43
25:RA:2818:G:O2'	25:RA:2819:G:H5'	2.18	0.43
25:RA:2855:C:H2'	25:RA:2856:C:H6	1.82	0.43
25:RA:308:G:C6	25:RA:309:G:C2	3.06	0.43
25:RA:818:G:O2'	25:RA:1189:A:N6	2.52	0.43
26:RB:13:A:H5''	26:RB:15:A:N6	2.33	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.31	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.49	0.43
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.43
29:RF:63:LYS:CE	29:RF:67:GLN:HB2	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.84	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.43
31:RH:136:ILE:N	31:RH:136:ILE:HD12	2.31	0.43
31:RH:137:ASP:OD1	31:RH:138:LYS:N	2.51	0.43
32:RI:110:ASP:CB	32:RI:111:PRO:CA	2.96	0.43
32:RI:110:ASP:HB2	32:RI:111:PRO:C	2.38	0.43
32:RI:33:ARG:CG	32:RI:33:ARG:HH11	2.31	0.43
34:RO:97:ARG:HA	34:RO:117:LEU:HD22	2.00	0.43
34:RO:51:ALA:O	34:RO:53:LYS:HE3	2.19	0.43
35:RP:101:VAL:HG13	35:RP:102:ARG:N	2.33	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	0.43
38:RS:38:GLN:CG	38:RS:47:THR:HG21	2.48	0.43
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.67	0.43
44:RY:81:LYS:HZ2	44:RY:98:VAL:HB	1.83	0.43
45:RZ:24:LEU:O	45:RZ:24:LEU:HG	2.18	0.43
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.18	0.43
1:XA:1325:C:H2'	1:XA:1326:C:C6	2.53	0.43
1:XA:1441:G:H4'	1:XA:1442:G:C5	2.53	0.43
1:XA:584:G:H2'	1:XA:585:G:C8	2.53	0.43
1:XA:831:U:H2'	1:XA:832:C:C6	2.52	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	1.99	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.18	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.00	0.43
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.32	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.18	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.18	0.43
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:Y7:19:ARG:NH1	53:Y7:19:ARG:HG2	2.33	0.43
25:YA:594:U:H5'	54:Y8:61:LEU:HD21	2.00	0.43
25:YA:1819:A:C8	25:YA:1821:A:C2	3.06	0.43
25:YA:792:G:O2'	25:YA:2440:C:N3	2.42	0.43
25:YA:270(R):G:H2'	25:YA:270(S):G:H8	1.82	0.43
25:YA:373:U:H2'	25:YA:374:A:H8	1.84	0.43
27:YD:11:PRO:O	27:YD:12:SER:OG	2.29	0.43
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.43
27:YD:44:ASN:HB3	27:YD:49:ILE:CG2	2.47	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.48	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	0.43
28:YE:69:LYS:C	28:YE:71:GLY:N	2.71	0.43
30:YG:31:VAL:HG13	30:YG:31:VAL:O	2.18	0.43
32:YI:60:GLU:HA	32:YI:63:ALA:HB3	2.00	0.43
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.43
25:YA:1012:U:H3	33:YN:25:ARG:HH11	1.66	0.43
34:YO:63:VAL:HG23	34:YO:63:VAL:O	2.17	0.43
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.43
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.43
42:YW:50:VAL:O	42:YW:53:SER:N	2.50	0.43
45:YZ:12:GLY:O	45:YZ:13:GLU:O	2.36	0.43
45:YZ:35:ARG:HB3	45:YZ:35:ARG:HH11	1.83	0.43
1:QA:1202:G:N7	10:QJ:53:PRO:HB2	2.33	0.43
1:QA:25:C:H2'	1:QA:26:A:H8	1.81	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	2.00	0.43
2:QB:178:ARG:NH2	8:QH:68:ARG:HH22	2.17	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
3:QC:27:LYS:HB3	3:QC:27:LYS:NZ	2.34	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
6:QF:88:VAL:HG12	6:QF:89:MET:N	2.34	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.19	0.43
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.43
10:QJ:16:LEU:C	10:QJ:16:LEU:HD13	2.38	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
46:R0:25:ARG:HG2	46:R0:25:ARG:HH11	1.82	0.43
47:R1:44:PRO:O	47:R1:46:LEU:N	2.51	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CD1	2.67	0.43
25:RA:1210:A:P	25:RA:1212:G:H5'	2.58	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1453:A:C6	25:RA:2702:U:H1'	2.53	0.43
25:RA:1469:A:H2'	25:RA:1470:G:O4'	2.18	0.43
25:RA:1479:G:H1	25:RA:1514:U:H3	1.65	0.43
25:RA:1805:U:H5''	27:RD:250:TRP:CG	2.54	0.43
25:RA:1804:C:H2'	25:RA:1805:U:H6	1.83	0.43
25:RA:221:A:H8	25:RA:221:A:OP2	2.01	0.43
25:RA:27:G:O2'	25:RA:28:A:H8	1.99	0.43
25:RA:705:A:H2'	25:RA:706:A:O4'	2.18	0.43
25:RA:940:G:H2'	25:RA:941:A:O4'	2.19	0.43
26:RB:111:U:H2'	26:RB:112:G:H8	1.83	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.98	0.43
29:RF:144:LYS:C	29:RF:146:ALA:H	2.21	0.43
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.99	0.43
32:RI:27:ARG:HD3	47:RI:71:TYR:CE1	2.45	0.43
33:RN:103:VAL:O	33:RN:104:LYS:C	2.56	0.43
33:RN:61:ARG:HA	33:RN:61:ARG:NE	2.32	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
35:RP:70:GLN:N	35:RP:70:GLN:OE1	2.51	0.43
38:RS:56:LEU:O	38:RS:57:LYS:O	2.36	0.43
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
1:XA:1049:U:H4'	1:XA:1050:G:C5'	2.49	0.43
1:XA:1053:G:C5'	1:XA:1054:C:H5'	2.42	0.43
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.53	0.43
1:XA:1339:A:C5	1:XA:1340:A:H1'	2.53	0.43
1:XA:236:G:H5''	17:XQ:42:TYR:OH	2.18	0.43
1:XA:560:U:HO2'	1:XA:561:U:P	2.36	0.43
1:XA:571:U:O2	1:XA:918:A:H5'	2.18	0.43
1:XA:89:U:H2'	1:XA:90:C:C6	2.54	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43
4:XD:163:GLU:HA	4:XD:163:GLU:OE2	2.19	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
1:XA:1342:C:H1'	9:XI:124:GLN:HG3	1.99	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
11:XK:70:LYS:HA	11:XK:73:MET:HE2	2.00	0.43
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.43
14:XN:12:ARG:C	14:XN:14:PRO:CD	2.80	0.43
1:XA:392:G:OP1	16:XP:8:ARG:NH2	2.51	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	1.99	0.43
22:XV:49:G:O6	22:XV:65:C:N4	2.49	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
52:Y6:20:ASN:O	52:Y6:21:TYR:CG	2.71	0.43
25:YA:2372:G:H4'	52:Y6:46:HIS:CD2	2.53	0.43
53:Y7:17:GLY:O	53:Y7:20:ALA:HB3	2.18	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
25:YA:2308:G:H22	25:YA:2311:A:H2	1.66	0.43
25:YA:2318:G:H22	38:YS:2:ALA:CA	2.29	0.43
25:YA:2865:U:C4	25:YA:2866:U:C4	3.07	0.43
25:YA:2868:A:H2'	25:YA:2869:G:O4'	2.18	0.43
25:YA:459:U:H2'	25:YA:460:A:H8	1.83	0.43
25:YA:869:G:H1	25:YA:908:C:N4	2.16	0.43
28:YE:3:GLY:CA	28:YE:81:ILE:HG21	2.49	0.43
28:YE:48:GLN:HB3	28:YE:48:GLN:HE21	1.55	0.43
31:YH:136:ILE:N	31:YH:136:ILE:HD12	2.31	0.43
31:YH:35:VAL:CG2	31:YH:75:ALA:HB2	2.48	0.43
32:YI:35:LEU:HD12	32:YI:35:LEU:O	2.19	0.43
33:YN:17:ASP:O	33:YN:55:VAL:O	2.34	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
37:YR:48:VAL:O	37:YR:49:ASP:C	2.57	0.43
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.43
42:YW:111:HIS:CG	42:YW:112:GLY:H	2.37	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
1:QA:544:G:C6	1:QA:545:C:C4	3.06	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
5:QE:62:ALA:O	5:QE:64:ARG:N	2.50	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.82	0.43
11:QK:105:VAL:HG23	11:QK:105:VAL:O	2.19	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
52:R6:7:ILE:HG23	52:R6:8:LYS:N	2.32	0.43
25:RA:1434:A:H2'	25:RA:1435:G:C8	2.54	0.43
25:RA:194:G:H2'	25:RA:195:A:O4'	2.18	0.43
25:RA:1951:U:O2	25:RA:1953:A:H8	2.01	0.43
25:RA:2081:C:H2'	25:RA:2082:A:C8	2.53	0.43
25:RA:2231:C:H2'	25:RA:2232:U:O4'	2.18	0.43
25:RA:945:A:C4	25:RA:2448:A:C2	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:250:G:C6	25:RA:251:A:C6	3.07	0.43
25:RA:34:C:H41	25:RA:447:A:H61	1.67	0.43
25:RA:414:C:H2'	25:RA:415:A:C8	2.51	0.43
25:RA:678:C:H2'	25:RA:679:C:H6	1.83	0.43
25:RA:856:C:HO2'	25:RA:857:C:P	2.41	0.43
25:RA:868:U:H2'	25:RA:869:G:O4'	2.19	0.43
25:RA:978:G:H1	25:RA:985:C:H42	1.66	0.43
29:RF:62:ARG:NH1	29:RF:62:ARG:CB	2.82	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
32:RI:74:ASN:CG	32:RI:75:LEU:N	2.68	0.43
33:RN:1:MET:O	33:RN:1:MET:HG3	2.19	0.43
34:RO:86:ILE:CD1	34:RO:86:ILE:H	2.28	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.54	0.43
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.98	0.43
41:RV:15:GLU:O	41:RV:96:ILE:HB	2.19	0.43
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.43
44:RY:6:HIS:ND1	44:RY:6:HIS:N	2.66	0.43
45:RZ:35:ARG:HB3	45:RZ:35:ARG:HH11	1.83	0.43
1:XA:1115:C:H2'	1:XA:1116:C:C6	2.53	0.43
1:XA:1126:U:C5	1:XA:1127:G:C4	3.07	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
3:XC:27:LYS:NZ	3:XC:27:LYS:HB3	2.34	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.81	0.43
13:XM:36:LYS:CD	13:XM:36:LYS:C	2.86	0.43
22:XV:54:U:C4	22:XV:55:U:C4	3.06	0.43
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.43
50:Y4:15:ILE:CD1	50:Y4:15:ILE:N	2.78	0.43
50:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
25:YA:1432:C:H2'	25:YA:1433:U:O4'	2.19	0.43
25:YA:1436:G:H2'	25:YA:1437:C:O4'	2.18	0.43
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.18	0.43
25:YA:1929:G:O5'	25:YA:1929:G:H8	2.01	0.43
25:YA:2186:G:H2'	25:YA:2187:G:H8	1.82	0.43
25:YA:2308:G:N2	25:YA:2311:A:H2	2.16	0.43
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.18	0.43
25:YA:392:C:OP1	25:YA:409:C:OP1	2.37	0.43
25:YA:652:C:N4	25:YA:653:A:N1	2.65	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:YB:87:G:H22	26:YB:89:G:H3'	1.84	0.43
27:YD:241:PRO:O	27:YD:242:ARG:C	2.55	0.43
28:YE:143:ASN:ND2	28:YE:143:ASN:N	2.65	0.43
28:YE:51:PHE:O	28:YE:74:PRO:CB	2.67	0.43
30:YG:114:ILE:O	30:YG:116:ASP:N	2.51	0.43
39:YT:105:LEU:C	39:YT:107:ASP:OD1	2.56	0.43
25:YA:532:A:H2'	40:YU:28:ARG:NE	2.34	0.43
40:YU:99:ALA:HA	40:YU:106:PHE:HB2	2.01	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43
45:YZ:103:ARG:HB3	45:YZ:138:GLU:HG3	2.00	0.43
1:QA:1441:G:H4'	1:QA:1442:G:C5	2.54	0.43
1:QA:292:G:C5	1:QA:293:G:H1'	2.53	0.43
1:QA:405:U:H5''	1:QA:406:G:O4'	2.19	0.43
1:QA:692:U:O2	1:QA:694:A:H3'	2.18	0.43
1:QA:762:C:H2'	1:QA:763:G:H8	1.82	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
6:QF:27:GLN:H	6:QF:27:GLN:HG2	1.65	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.82	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.48	0.43
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.43
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.80	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
25:RA:1222:C:H6	25:RA:1222:C:O5'	2.00	0.43
25:RA:1632:A:O5'	25:RA:1632:A:H8	2.00	0.43
25:RA:1967:C:H2'	25:RA:1968:G:O4'	2.18	0.43
25:RA:2142:C:H2'	25:RA:2143:C:C6	2.53	0.43
25:RA:2475:C:H42	25:RA:2529:G:H22	1.66	0.43
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.41	0.43
25:RA:453:C:H4'	25:RA:472:A:N6	2.34	0.43
25:RA:541:C:H2'	25:RA:542:C:C6	2.54	0.43
25:RA:95:G:H5'	48:R2:46:GLN:OE1	2.18	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.20	0.43
27:RD:238:GLY:O	27:RD:239:ARG:O	2.35	0.43
27:RD:241:PRO:O	27:RD:242:ARG:C	2.55	0.43
28:RE:120:TRP:CE3	28:RE:155:LYS:HD3	2.53	0.43
28:RE:203:LYS:C	28:RE:203:LYS:HD2	2.38	0.43
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
13:QM:8:GLU:OE2	30:RG:115:ARG:NH1	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.38	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.29	0.43
45:RZ:137:ILE:O	45:RZ:156:LYS:NZ	2.50	0.43
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.84	0.43
1:XA:1128:C:N4	1:XA:1144:G:H1	2.13	0.43
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.19	0.43
1:XA:1461:G:H2'	1:XA:1462:G:C8	2.49	0.43
1:XA:287:U:H2'	1:XA:288:A:H8	1.83	0.43
1:XA:35:G:C2	1:XA:550:G:C2	3.06	0.43
1:XA:721:G:H4'	1:XA:722:A:O4'	2.19	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
3:XC:101:LEU:C	3:XC:101:LEU:HD23	2.38	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
1:XA:690:G:N2	11:XK:55:LYS:HZ1	2.16	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
48:Y2:62:THR:O	48:Y2:65:ASN:HB2	2.18	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
25:YA:1193:G:H2'	25:YA:1194:A:O4'	2.18	0.43
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.17	0.43
25:YA:1759:A:H4'	25:YA:2715:C:O4'	2.18	0.43
25:YA:796:C:H2'	25:YA:797:C:C6	2.54	0.43
4:QD:166:LYS:CD	27:YD:135:PHE:HZ	2.30	0.43
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.43
28:YE:3:GLY:HA3	28:YE:81:ILE:CD1	2.48	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
34:YO:61:VAL:O	34:YO:61:VAL:HG13	2.18	0.43
37:YR:54:LEU:O	37:YR:62:ALA:HB1	2.19	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
39:YT:64:ARG:HG2	39:YT:64:ARG:HH11	1.84	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
1:QA:1018:C:H2'	1:QA:1019:C:C6	2.53	0.43
1:QA:209:U:O2'	1:QA:210:U:H4'	2.19	0.43
1:QA:377:G:P	16:QP:5:ARG:NH1	2.91	0.43
1:QA:765:G:N2	1:QA:812:C:O2'	2.51	0.43
1:QA:885:G:C2	1:QA:886:G:C8	3.07	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
1:QA:619:U:O2	4:QD:135:LEU:HD23	2.18	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.22	0.43
11:QK:75:TYR:N	11:QK:75:TYR:HD1	2.17	0.43
16:QP:72:ARG:O	16:QP:72:ARG:HD3	2.18	0.43
22:QV:56:C:O2'	30:RG:78:SER:HB2	2.19	0.43
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.87	0.43
54:R8:40:GLU:O	54:R8:41:ILE:C	2.56	0.43
25:RA:1669:A:H5''	25:RA:2550:G:OP1	2.19	0.43
25:RA:1050:A:O2'	25:RA:2752:C:H1'	2.18	0.43
25:RA:503:A:H4'	25:RA:504:U:C5'	2.49	0.43
25:RA:512:G:O2'	25:RA:513:A:P	2.76	0.43
25:RA:522:G:H2'	25:RA:523:C:C6	2.54	0.43
25:RA:2619:C:H1'	28:RE:156:MET:HE1	2.00	0.43
28:RE:23:VAL:HG12	28:RE:184:VAL:O	2.19	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.18	0.43
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.99	0.43
33:RN:96:GLU:O	33:RN:97:ARG:C	2.57	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
45:RZ:144:LEU:HD21	45:RZ:150:LEU:HD13	2.00	0.43
1:XA:1293:G:H2'	1:XA:1294:G:O4'	2.19	0.43
1:XA:1531:A:H8	1:XA:1531:A:OP2	2.02	0.43
1:XA:33:A:H5''	1:XA:364:A:H1'	2.00	0.43
1:XA:633:G:H5'	1:XA:634:C:OP2	2.19	0.43
1:XA:654:G:C4	1:XA:753:A:C6	3.07	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.43
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
7:XG:89:MET:HE3	7:XG:156:TRP:H	1.83	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
12:XL:10:LEU:HB3	17:XQ:32:TYR:CE2	2.53	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
19:XS:29:ARG:HG2	19:XS:29:ARG:HH11	1.84	0.43
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:XT:44:ALA:C	20:XT:91:LEU:HB3	2.39	0.43
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.43
25:YA:819:A:C4	25:YA:1189:A:C2	3.07	0.43
25:YA:49:A:C8	25:YA:120:U:H5	2.37	0.43
25:YA:582:G:H1	25:YA:1258:C:H42	1.65	0.43
25:YA:1678:G:N2	25:YA:1989:G:N2	2.64	0.43
25:YA:2048:G:N2	25:YA:2621:A:H1'	2.33	0.43
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.19	0.43
25:YA:2419:U:OP1	52:Y6:23:THR:HG21	2.17	0.43
25:YA:303:U:H2'	25:YA:304:G:C8	2.54	0.43
25:YA:825:C:H2'	25:YA:826:U:O4'	2.19	0.43
27:YD:17:THR:HG22	27:YD:204:ILE:HA	1.98	0.43
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43
25:YA:2310:A:N6	30:YG:79:ASN:HB2	2.33	0.43
32:YI:33:ARG:HH11	32:YI:33:ARG:CG	2.31	0.43
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.43
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.19	0.43
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
28:YE:25:VAL:HG21	39:YT:8:LYS:HG3	2.00	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.19	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:CD	2.74	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
45:YZ:77:ASP:O	45:YZ:78:LYS:C	2.56	0.43
25:YA:2451:A:N1	55:Z8:76:PPU:HE2	2.33	0.43
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.53	0.43
1:QA:1211:U:H1'	1:QA:1213:A:N3	2.34	0.43
1:QA:1479:C:H2'	1:QA:1480:G:C8	2.54	0.43
1:QA:18:C:H4'	1:QA:1078:U:O2	2.19	0.43
1:QA:411:A:N6	1:QA:413:G:H21	2.15	0.43
1:QA:565:U:H5''	1:QA:566:G:H2'	2.01	0.43
1:QA:855:G:C6	1:QA:856:C:C4	3.07	0.43
2:QB:33:TYR:CD1	2:QB:33:TYR:C	2.92	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
5:QE:126:ARG:CG	5:QE:126:ARG:NH1	2.79	0.43
6:QF:61:LEU:HD23	6:QF:63:TYR:OH	2.17	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.84	0.43
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.43
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
22:QV:43:A:H2'	22:QV:44:A:C8	2.54	0.43
22:QV:54:U:C4	22:QV:55:U:C4	3.06	0.43
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.18	0.43
25:RA:1204:A:H1'	25:RA:1206:G:C8	2.53	0.43
25:RA:1653:G:H4'	25:RA:1654:A:O5'	2.19	0.43
25:RA:2053:G:C2	25:RA:2617:C:C2	3.07	0.43
25:RA:2306:C:C3'	25:RA:2307:G:H5''	2.49	0.43
25:RA:2340:G:H2'	25:RA:2341:G:C8	2.53	0.43
25:RA:2415:G:H2'	25:RA:2416:C:C6	2.53	0.43
25:RA:2839:G:H5'	37:RR:46:GLY:HA2	2.00	0.43
25:RA:304:G:H2'	25:RA:305:U:H6	1.82	0.43
25:RA:48:G:H22	25:RA:177:G:H5''	1.84	0.43
25:RA:546:C:H5'	25:RA:547:A:OP2	2.19	0.43
25:RA:753:C:H2'	25:RA:754:C:C6	2.52	0.43
25:RA:774:A:O2'	25:RA:775:G:O5'	2.29	0.43
27:RD:134:ARG:HG3	27:RD:134:ARG:H	1.55	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.51	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:CG2	2.47	0.43
28:RE:18:ASP:O	28:RE:19:ARG:C	2.55	0.43
28:RE:48:GLN:HB3	28:RE:48:GLN:HE21	1.55	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
29:RF:183:VAL:O	29:RF:184:TYR:C	2.56	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
33:RN:7:LYS:N	33:RN:7:LYS:HD2	2.29	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
38:RS:29:PHE:HD2	38:RS:92:TYR:HH	1.66	0.43
45:RZ:29:TYR:HA	45:RZ:33:LEU:O	2.19	0.43
1:XA:237:C:H2'	1:XA:238:G:C8	2.53	0.43
1:XA:434:U:H2'	1:XA:435:C:C6	2.54	0.43
1:XA:836:G:C6	1:XA:851:G:C6	3.07	0.43
1:XA:885:G:H2'	1:XA:886:G:H8	1.83	0.43
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.70	0.43
2:XB:33:TYR:CD1	2:XB:33:TYR:C	2.92	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.18	0.43
11:XK:75:TYR:HD1	11:XK:75:TYR:N	2.16	0.43
1:XA:1202:G:O4'	14:XN:29:ARG:HD2	2.18	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
16:XP:1:MET:H2	16:XP:24:ALA:HB3	1.83	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
53:Y7:5:TRP:CD1	53:Y7:7:PRO:HG3	2.53	0.43
25:YA:2097:C:H2'	25:YA:2098:U:O4'	2.19	0.43
25:YA:2308:G:N1	25:YA:2311:A:H2	2.16	0.43
25:YA:2619:C:H2'	25:YA:2620:C:H6	1.83	0.43
25:YA:273(C):C:N3	25:YA:363(C):G:N2	2.56	0.43
25:YA:310:A:HO2'	25:YA:311:A:H2'	1.82	0.43
25:YA:552:G:H2'	25:YA:553:U:O4'	2.19	0.43
25:YA:6:A:H2'	25:YA:7:G:H8	1.83	0.43
25:YA:806:C:N3	25:YA:807:U:C5	2.87	0.43
25:YA:845:G:OP2	25:YA:845:G:H8	2.02	0.43
26:YB:24:G:N3	26:YB:27:C:N4	2.55	0.43
26:YB:87:G:N2	26:YB:89:G:H3'	2.34	0.43
28:YE:23:VAL:HG12	28:YE:184:VAL:O	2.19	0.43
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.43
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
31:YH:59:ARG:NH1	31:YH:59:ARG:CG	2.79	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:57:ALA:O	33:YN:124:ALA:HA	2.18	0.43
34:YO:107:ARG:HA	34:YO:112:MET:HE1	2.00	0.43
25:YA:2850:A:H2	37:YR:61:HIS:CG	2.37	0.43
37:YR:51:LEU:HD13	37:YR:66:VAL:HG22	2.01	0.43
25:YA:2849:U:H5	39:YT:93:ARG:NH1	2.16	0.43
1:QA:836:G:C6	1:QA:851:G:C6	3.07	0.43
2:QB:200:ILE:N	2:QB:200:ILE:HD12	2.34	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.43
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
6:QF:85:VAL:O	6:QF:85:VAL:HG12	2.18	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.24	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	0.43
15:QO:83:GLU:OE1	15:QO:83:GLU:HA	2.19	0.43
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.43
18:QR:29:PHE:HD2	18:QR:29:PHE:N	2.17	0.43
1:QA:663:A:H5'	18:QR:61:LYS:NZ	2.34	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
46:R0:78:TYR:N	46:R0:78:TYR:CD1	2.86	0.43
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.18	0.43
25:RA:1059:G:H3'	25:RA:1060:U:H5''	2.01	0.43
25:RA:996:A:N6	25:RA:1160:G:C6	2.87	0.43
25:RA:1372:U:H2'	25:RA:1373:A:H5'	2.01	0.43
25:RA:142:G:H2'	25:RA:143:C:C6	2.52	0.43
25:RA:1930:G:O2'	25:RA:1931:U:P	2.76	0.43
25:RA:1942:C:C4	25:RA:1943:U:C4	3.07	0.43
25:RA:2168:G:N3	25:RA:2168:G:H2'	2.32	0.43
25:RA:2370:G:H2'	25:RA:2371:G:O4'	2.19	0.43
25:RA:307:G:O5'	25:RA:307:G:H8	2.01	0.43
25:RA:479:A:N3	25:RA:481:G:H5''	2.33	0.43
27:RD:44:ASN:CB	27:RD:49:ILE:HG22	2.46	0.43
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.43
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
31:RH:53:GLU:CD	31:RH:54:ARG:H	2.21	0.43
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.43
1:XA:1024:G:H4'	1:XA:1024:G:OP1	2.18	0.43
1:XA:1109:C:H2'	1:XA:1110:A:O4'	2.19	0.43
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.19	0.43
1:XA:166:G:H2'	1:XA:167:G:H8	1.83	0.43
1:XA:390:C:H2'	1:XA:391:G:C8	2.54	0.43
1:XA:975:A:N6	1:XA:1367:C:O4'	2.52	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.43
5:XE:126:ARG:NH1	5:XE:126:ARG:CG	2.79	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
10:XJ:74:ILE:CD1	10:XJ:74:ILE:H	2.21	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.53	0.43
22:XV:53:G:HO2'	22:XV:54:U:H6	1.66	0.43
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	0.43
51:Y5:56:LYS:O	51:Y5:57:VAL:C	2.57	0.43
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.56	0.43
25:YA:177:G:N3	25:YA:177:G:H5''	2.33	0.43
25:YA:1906:G:H1	25:YA:1924:C:H42	1.66	0.43
25:YA:1906:G:C8	25:YA:1929:G:H2'	2.54	0.43
25:YA:2259:G:C6	25:YA:2260:C:C4	3.06	0.43
25:YA:2272:U:H5''	25:YA:2273:A:OP1	2.19	0.43
25:YA:654(S):G:H2'	25:YA:654(T):C:C6	2.53	0.43
25:YA:817:C:H2'	25:YA:818:G:O4'	2.18	0.43
25:YA:972:G:C6	25:YA:973:A:C6	3.07	0.43
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	0.43
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.18	0.43
29:YF:63:LYS:CE	29:YF:67:GLN:HB2	2.48	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.84	0.43
31:YH:125:VAL:CG1	31:YH:126:PRO:CG	2.94	0.43
32:YI:31:LEU:HD12	32:YI:31:LEU:N	2.34	0.43
32:YI:68:LEU:HA	32:YI:71:ILE:HG23	1.98	0.43
33:YN:118:LYS:C	33:YN:120:LEU:H	2.21	0.43
38:YS:105:ALA:C	38:YS:110:LEU:HD21	2.38	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
45:YZ:24:LEU:HG	45:YZ:24:LEU:O	2.19	0.43
45:YZ:63:ASP:O	45:YZ:64:GLY:C	2.57	0.43
1:QA:1130:A:N6	1:QA:1144:G:H21	2.16	0.43
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.17	0.43
1:QA:1366:C:O2'	10:QJ:60:ARG:NH1	2.49	0.43
1:QA:181:G:O2'	1:QA:182:U:O5'	2.31	0.43
1:QA:51:A:C6	1:QA:353:A:C2	3.07	0.43
1:QA:448:A:C2	1:QA:487:A:C2	3.06	0.43
1:QA:690:G:H22	11:QK:55:LYS:HZ2	1.66	0.43
1:QA:963:G:H1	1:QA:972:C:N4	2.17	0.43
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.01	0.43
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.48	0.43
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.43
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.48	0.43
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.43
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.43
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.18	0.43
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.43
19:QS:29:ARG:HG2	19:QS:29:ARG:HH11	1.84	0.43
46:R0:6:GLY:C	46:R0:7:LEU:CD2	2.86	0.43
46:R0:72:ARG:HH21	46:R0:75:LEU:HD12	1.83	0.43
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.43
25:RA:747:U:C1'	51:R5:2:ALA:HB3	2.48	0.43
53:R7:19:ARG:NH1	53:R7:19:ARG:HG2	2.33	0.43
25:RA:2391:G:OP2	54:R8:32:LEU:HD13	2.19	0.43
25:RA:242:G:H3'	54:R8:6:THR:HG23	2.01	0.43
25:RA:1046:A:N3	25:RA:1046:A:H3'	2.34	0.43
25:RA:1438:U:H2'	25:RA:1439:A:C8	2.54	0.43
25:RA:1775:U:H2'	25:RA:1776:G:O4'	2.19	0.43
25:RA:229:A:OP1	25:RA:229:A:H4'	2.19	0.43
25:RA:2426:A:H5'	25:RA:2426:A:C8	2.53	0.43
25:RA:2872:G:C2	25:RA:2873:A:N6	2.86	0.43
25:RA:605:C:O2	25:RA:657:U:O2'	2.37	0.43
25:RA:90:U:H4'	25:RA:91:A:H5'	2.00	0.43
27:RD:17:THR:HG21	27:RD:204:ILE:HA	1.99	0.43
27:RD:76:PRO:O	27:RD:98:VAL:CG2	2.65	0.43
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.78	0.43
28:RE:25:VAL:HG21	39:RT:8:LYS:HG3	2.00	0.43
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.43
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.43
32:RI:138:ILE:HG23	32:RI:138:ILE:O	2.19	0.43
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.43
35:RP:112:LEU:CD1	35:RP:114:ILE:HG23	2.47	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.43
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.19	0.43
40:RU:91:ASP:O	40:RU:95:LEU:N	2.42	0.43
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
42:RW:28:SER:O	42:RW:30:GLU:N	2.51	0.43
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.83	0.43
45:RZ:158:PRO:N	45:RZ:161:VAL:HG21	2.33	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1015:A:H2'	1:XA:1016:A:O4'	2.18	0.43
1:XA:337:C:H2'	1:XA:338:A:C8	2.54	0.43
1:XA:33:A:H2'	1:XA:34:C:C6	2.53	0.43
1:XA:875:C:C4	1:XA:876:G:N7	2.86	0.43
1:XA:889:A:H61	1:XA:907:A:H3'	1.83	0.43
1:XA:895:G:H2'	1:XA:896:C:C6	2.54	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.43
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.49	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.43
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.43
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.43
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.43
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.43
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.81	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.43
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.43
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.84	0.43
25:YA:1316:U:H2'	25:YA:1317:A:H8	1.83	0.43
25:YA:1684:C:H2'	25:YA:1685:C:C6	2.54	0.43
25:YA:2660:A:H2'	25:YA:2661:G:O4'	2.19	0.43
25:YA:2816:C:H2'	25:YA:2817:G:H8	1.84	0.43
25:YA:2848:G:O2'	25:YA:2849:U:OP2	2.25	0.43
25:YA:2879:C:H4'	25:YA:2880:C:OP1	2.19	0.43
25:YA:650:C:OP1	54:Y8:48:PHE:CZ	2.72	0.43
25:YA:862:G:H2'	25:YA:863:A:O4'	2.18	0.43
25:YA:958:U:OP1	36:YQ:74:TYR:OH	2.22	0.43
26:YB:73:A:C4	26:YB:104:A:C2	3.07	0.43
26:YB:63:G:C6	26:YB:64:C:C4	3.07	0.43
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.82	0.43
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.43
30:YG:77:ILE:H	30:YG:82:LEU:HB2	1.84	0.43
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
37:YR:94:TYR:CD2	37:YR:94:TYR:N	2.87	0.43
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.79	0.43
45:YZ:105:VAL:O	45:YZ:105:VAL:HG22	2.18	0.43
45:YZ:15:PRO:HA	45:YZ:18:LEU:HD13	2.00	0.43
45:YZ:29:TYR:HA	45:YZ:33:LEU:O	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:22:G:H2'	1:QA:23:C:C6	2.54	0.42
3:QC:101:LEU:C	3:QC:101:LEU:HD23	2.38	0.42
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.84	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.42
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.42
1:QA:718:G:H5'	11:QK:117:ASN:ND2	2.34	0.42
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.42
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.42
18:QR:76:LEU:HD22	18:QR:76:LEU:N	2.34	0.42
22:QV:1:C:O2'	22:QV:2:G:H5'	2.19	0.42
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.42
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.42
54:R8:28:GLY:O	54:R8:29:LYS:O	2.37	0.42
25:RA:1448:G:N3	25:RA:1529:A:H2	2.17	0.42
25:RA:1777:U:H3	25:RA:1787:A:H61	1.67	0.42
25:RA:2405:G:HO2'	25:RA:2406:U:P	2.42	0.42
25:RA:412:A:N7	25:RA:2411:A:H2	2.15	0.42
25:RA:422:A:C6	25:RA:423:A:C6	3.07	0.42
25:RA:924:C:H2'	25:RA:925:C:C6	2.54	0.42
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.42
31:RH:16:SER:OG	31:RH:17:VAL:N	2.50	0.42
32:RI:31:LEU:HD12	32:RI:31:LEU:N	2.34	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.42
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.42
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.01	0.42
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.42
45:RZ:70:LEU:HB2	45:RZ:91:LEU:HD21	2.01	0.42
1:XA:1429:C:H2'	1:XA:1430:C:H6	1.83	0.42
1:XA:316:G:C2	1:XA:317:G:C8	3.07	0.42
1:XA:825:G:H2'	1:XA:826:C:O4'	2.17	0.42
1:XA:955:U:H1'	1:XA:1227:A:N6	2.34	0.42
1:XA:977:A:H2'	1:XA:978:A:H5'	2.01	0.42
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	0.42
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.42
22:XV:4:G:C6	22:XV:70:G:N1	2.86	0.42
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.42
47:Y1:72:GLU:O	47:Y1:75:GLU:HB2	2.19	0.42
25:YA:1295:C:H2'	25:YA:1296:G:H8	1.84	0.42
25:YA:137(A):G:H1'	43:YX:41:ASN:HD22	1.83	0.42
25:YA:1427:A:H4'	25:YA:1428:C:O5'	2.19	0.42
25:YA:1995:U:H2'	25:YA:1996:C:C5	2.54	0.42
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.54	0.42
25:YA:2540:C:H2'	25:YA:2541:A:O4'	2.19	0.42
25:YA:264:C:O2'	25:YA:265:A:H5''	2.18	0.42
25:YA:484:C:H2'	25:YA:485:C:C6	2.54	0.42
26:YB:29:A:H2'	26:YB:30:C:C6	2.54	0.42
28:YE:94:GLU:C	28:YE:96:PHE:N	2.72	0.42
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.42
25:YA:797:C:OP1	29:YF:62:ARG:NH1	2.52	0.42
30:YG:7:LEU:CD2	30:YG:176:LEU:HD22	2.45	0.42
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	0.42
32:YI:77:LEU:CD1	32:YI:140:LEU:HB2	2.49	0.42
33:YN:43:THR:HA	33:YN:44:PRO:HD2	1.92	0.42
33:YN:62:VAL:HG12	33:YN:66:LYS:HB2	2.01	0.42
35:YP:120:ALA:HB1	35:YP:138:LEU:CB	2.49	0.42
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.19	0.42
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.42
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.42
44:YY:97:ARG:HH21	44:YY:98:VAL:CG2	2.32	0.42
1:QA:1086:U:O5'	1:QA:1086:U:H6	2.02	0.42
1:QA:1488:G:H2'	1:QA:1489:G:C8	2.54	0.42
1:QA:468:A:H4'	16:QP:80:PHE:O	2.19	0.42
1:QA:309:G:H1'	1:QA:608:A:C2	2.53	0.42
1:QA:783:C:O2'	1:QA:784:C:H5'	2.20	0.42
1:QA:828:A:H2'	1:QA:829:G:O4'	2.19	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
2:QB:92:TYR:HD1	2:QB:92:TYR:C	2.22	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.72	0.42
10:QJ:49:VAL:HG11	14:QN:41:ARG:O	2.19	0.42
1:QA:539:A:OP1	12:QL:114:LYS:HE2	2.18	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
19:QS:66:MET:HG3	19:QS:66:MET:O	2.19	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.19	0.42
25:RA:96:G:H4'	48:R2:48:HIS:CD2	2.54	0.42
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.42
25:RA:2485:G:H5''	36:RQ:46:GLN:NE2	2.34	0.42
25:RA:270(O):U:C4	32:RI:52:ARG:HD3	2.53	0.42
26:RB:32:C:N4	26:RB:33:G:O6	2.52	0.42
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	0.42
30:RG:31:VAL:O	30:RG:31:VAL:HG13	2.18	0.42
30:RG:4:ASP:O	30:RG:5:VAL:HB	2.19	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	0.42
33:RN:87:LEU:C	33:RN:87:LEU:CD2	2.87	0.42
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.42
35:RP:114:ILE:CD1	35:RP:130:PHE:CE1	2.98	0.42
35:RP:49:ARG:HG2	35:RP:49:ARG:HH11	1.84	0.42
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.42
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.42
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.34	0.42
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.37	0.42
1:XA:329:A:C5	1:XA:332:G:C6	3.07	0.42
1:XA:518:C:H2'	1:XA:530:G:N3	2.33	0.42
1:XA:532:A:O2'	1:XA:533:A:P	2.77	0.42
1:XA:527:G:O2'	1:XA:535:A:N1	2.34	0.42
1:XA:784:C:H4'	25:YA:1837:C:OP1	2.19	0.42
1:XA:88:C:H3'	1:XA:89:U:C6	2.54	0.42
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.42
4:XD:146:ILE:CD1	4:XD:146:ILE:H	2.30	0.42
4:XD:14:ARG:HD3	4:XD:14:ARG:C	2.39	0.42
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.42
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.42
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.31	0.42
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.42
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.42
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:Y1:13:ILE:CG1	47:Y1:42:GLN:HB2	2.49	0.42
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.42
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
25:YA:1224:G:OP2	41:YV:66:ARG:NH2	2.52	0.42
25:YA:1301:A:H2	25:YA:1626:G:N3	2.16	0.42
25:YA:1885:A:H5'	25:YA:1886:C:OP2	2.19	0.42
25:YA:2198:A:O2'	25:YA:2199:A:O4'	2.37	0.42
25:YA:2309:A:H2'	25:YA:2310:A:O4'	2.18	0.42
25:YA:311:A:C6	25:YA:328:U:C4	3.07	0.42
25:YA:335:C:H6	25:YA:335:C:O5'	2.02	0.42
25:YA:449:A:H2'	25:YA:450:G:O4'	2.19	0.42
25:YA:873:G:H1	25:YA:904:C:H42	1.67	0.42
25:YA:728:G:H4'	27:YD:13:ARG:HD2	2.01	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.39	0.42
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.24	0.42
28:YE:203:LYS:C	28:YE:203:LYS:HD2	2.39	0.42
25:YA:2784:C:H5''	28:YE:41:LYS:NZ	2.34	0.42
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.49	0.42
35:YP:107:LYS:O	35:YP:108:LYS:C	2.58	0.42
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.42
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	0.42
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.42
41:YV:38:LEU:CD2	41:YV:39:LEU:N	2.82	0.42
45:YZ:134:PRO:C	45:YZ:136:PHE:H	2.22	0.42
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.84	0.42
1:QA:1310:G:H2'	1:QA:1311:G:C8	2.53	0.42
1:QA:940:C:H2'	1:QA:941:G:C8	2.54	0.42
4:QD:59:ARG:NE	4:QD:59:ARG:HA	2.34	0.42
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.42
7:QG:126:ASP:OD2	7:QG:126:ASP:N	2.53	0.42
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.42
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.42
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.56	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42
51:R5:3:LYS:CE	51:R5:3:LYS:HA	2.36	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
25:RA:1649:G:C6	25:RA:2009:G:C6	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:195:A:OP1	35:RP:46:LYS:HE2	2.19	0.42
25:RA:196:A:H2'	25:RA:196:A:N3	2.35	0.42
25:RA:2287:A:N6	25:RA:2344:U:H3	2.17	0.42
25:RA:2487:G:H2'	25:RA:2488:A:C8	2.54	0.42
25:RA:2531:A:H3'	25:RA:2532:G:C8	2.52	0.42
25:RA:288:C:H2'	25:RA:289:A:C8	2.53	0.42
25:RA:373:U:H2'	25:RA:374:A:H8	1.84	0.42
25:RA:675:A:H4'	29:RF:67:GLN:OE1	2.19	0.42
25:RA:846:C:H42	25:RA:931:G:H1	1.67	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
27:RD:238:GLY:C	27:RD:239:ARG:O	2.53	0.42
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.48	0.42
28:RE:54:GLN:N	28:RE:54:GLN:CD	2.73	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42
30:RG:114:ILE:O	30:RG:116:ASP:N	2.51	0.42
33:RN:15:LEU:HD13	33:RN:15:LEU:C	2.40	0.42
34:RO:2:ILE:N	34:RO:2:ILE:CD1	2.82	0.42
35:RP:119:GLU:OE1	35:RP:119:GLU:HA	2.19	0.42
25:RA:2722:G:H4'	37:RR:4:LEU:HB2	2.01	0.42
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.50	0.42
38:RS:95:HIS:O	38:RS:96:GLY:C	2.57	0.42
40:RU:92:ARG:NH2	41:RV:11:GLN:O	2.53	0.42
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.42
42:RW:8:ARG:NH1	42:RW:8:ARG:HG3	2.34	0.42
44:RY:42:VAL:HG11	44:RY:65:ALA:HB3	2.02	0.42
1:XA:1225:A:H5''	13:XM:103:THR:HG1	1.85	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.42
1:XA:520:A:O2'	12:XL:73:GLU:HG2	2.19	0.42
14:XN:26:ARG:NH1	14:XN:43:CYS:HA	2.34	0.42
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
1:XA:1222:G:P	19:XS:77:THR:HG21	2.58	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
46:Y0:72:ARG:HH21	46:Y0:75:LEU:HD12	1.83	0.42
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.22	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42
25:YA:1282:U:H2'	25:YA:1283:G:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1467:C:H2'	25:YA:1468:C:H6	1.84	0.42
25:YA:1473:G:H1	25:YA:1520:U:H3	1.67	0.42
25:YA:15:G:H4'	51:Y5:21:SER:CB	2.49	0.42
25:YA:1647:G:H5'	25:YA:1647:G:C8	2.54	0.42
25:YA:2289:G:H1	25:YA:2343:C:H42	1.68	0.42
25:YA:2354:G:O2'	46:Y0:36:ILE:HD12	2.19	0.42
25:YA:2849:U:O4	39:YT:23:ARG:NH2	2.48	0.42
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	0.42
29:YF:128:ALA:O	29:YF:129:PHE:CB	2.67	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	0.42
30:YG:16:ARG:NE	30:YG:31:VAL:HG11	2.35	0.42
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.39	0.42
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.54	0.42
35:YP:125:VAL:C	35:YP:145:PRO:HD2	2.39	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
1:QA:1060:C:H2'	1:QA:1061:G:C8	2.48	0.42
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.87	0.42
1:QA:1525:G:H2'	1:QA:1526:G:O4'	2.19	0.42
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.87	0.42
1:QA:600:C:H2'	1:QA:601:C:C6	2.54	0.42
1:QA:795:C:O5'	1:QA:795:C:H6	2.02	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
2:QB:33:TYR:HD1	2:QB:33:TYR:C	2.23	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.35	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.42
14:QN:26:ARG:NH1	14:QN:43:CYS:HA	2.34	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.19	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.82	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
47:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.18	0.42
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
25:RA:1071:G:H8	25:RA:1071:G:O5'	2.02	0.42
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.20	0.42
25:RA:1430:C:C2	25:RA:1431:U:C5	3.07	0.42
25:RA:1497:U:H3'	25:RA:1498:C:H6	1.85	0.42
25:RA:1921:G:H2'	25:RA:1922:G:H8	1.84	0.42
25:RA:2587:A:H8	25:RA:2587:A:O5'	2.02	0.42
25:RA:2596:U:H2'	25:RA:2597:G:O4'	2.19	0.42
25:RA:2623:G:H5'	25:RA:2826:A:H1'	2.02	0.42
25:RA:397:G:H1'	25:RA:2231:C:O2'	2.18	0.42
25:RA:464:U:H2'	25:RA:465:G:O4'	2.19	0.42
25:RA:554:U:H2'	25:RA:556:G:C8	2.55	0.42
25:RA:553:U:H2'	25:RA:554:U:O4'	2.19	0.42
25:RA:747:U:C4	51:R5:2:ALA:N	2.88	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.52	0.42
30:RG:27:ASN:HB3	30:RG:30:GLU:OE2	2.20	0.42
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.50	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.50	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
32:RI:121:LYS:HB2	32:RI:121:LYS:HE3	1.79	0.42
25:RA:1007:C:H5''	33:RN:35:ARG:NH1	2.34	0.42
35:RP:115:LEU:HB3	35:RP:131:SER:HB2	2.01	0.42
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.42
37:RR:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
1:QA:346:G:H5'	39:RT:41:ARG:NH1	2.34	0.42
1:XA:1311:G:N2	1:XA:1327:C:C2	2.88	0.42
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.54	0.42
1:XA:947:G:H2'	1:XA:948:C:H6	1.82	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
2:XB:44:LEU:CD1	2:XB:44:LEU:H	2.26	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.72	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.19	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.52	0.42
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
2:XB:179:LYS:HA	8:XH:72:PRO:CG	2.49	0.42
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
1:XA:1453:G:H8	20:XT:39:LYS:HZ1	1.65	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
24:XY:36:G:C2	24:XY:37:1MG:C4	3.07	0.42
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.42
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
25:YA:1265:A:H8	25:YA:1265:A:OP1	2.03	0.42
25:YA:1558:A:H1'	25:YA:1559:G:H5''	2.00	0.42
25:YA:2123:G:H2'	25:YA:2124:G:C8	2.53	0.42
25:YA:2296:U:OP2	38:YS:9:ARG:NH1	2.53	0.42
25:YA:2645:G:N2	25:YA:2767:C:OP2	2.52	0.42
25:YA:445:C:H5''	40:YU:3:ARG:HB2	2.01	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	0.42
28:YE:104:VAL:CG1	28:YE:188:VAL:HG23	2.49	0.42
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.42
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	2.01	0.42
32:YI:8:PRO:HG3	32:YI:14:ASP:CB	2.48	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.20	0.42
1:QA:865:A:H5'	1:QA:1078:U:C5	2.54	0.42
1:QA:404:U:H2'	1:QA:405:U:C6	2.55	0.42
1:QA:731:G:OP1	1:QA:766:A:H1'	2.20	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.38	0.42
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.01	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.20	0.42
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.18	0.42
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.91	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.84	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
25:RA:2432:A:C8	47:R1:33:LYS:HE2	2.54	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.42
25:RA:1159:U:O2'	25:RA:1160:G:H5'	2.18	0.42
25:RA:1167:U:C2	25:RA:1183:G:N2	2.87	0.42
25:RA:1337:G:C4	25:RA:1338:G:C8	3.07	0.42
25:RA:1382:G:C5	25:RA:1383:C:C4	3.07	0.42
25:RA:1534:G:H2'	25:RA:1534:G:N3	2.33	0.42
25:RA:1880:C:H2'	25:RA:1881:C:O4'	2.19	0.42
25:RA:2068:U:H3	25:RA:2430:A:H2	1.60	0.42
25:RA:2183:C:H2'	25:RA:2184:G:C8	2.50	0.42
25:RA:2397:G:H2'	25:RA:2398:U:C6	2.49	0.42
25:RA:2758:A:C2	25:RA:2759:G:H1'	2.54	0.42
25:RA:2816:C:H2'	25:RA:2817:G:C8	2.54	0.42
25:RA:273:G:H1	25:RA:364:C:N4	2.17	0.42
25:RA:417:C:H2'	25:RA:418:G:O4'	2.19	0.42
25:RA:897:C:H2'	25:RA:898:C:H6	1.83	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.00	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:CD1	2.48	0.42
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.40	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	0.42
31:RH:89:ILE:H	31:RH:89:ILE:CD1	2.32	0.42
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.68	0.42
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.91	0.42
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
25:RA:748:G:O6	42:RW:90:ARG:NH1	2.53	0.42
1:XA:1403:C:H6	1:XA:1403:C:O5'	2.02	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.23	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.21	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.20	0.42
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.19	0.42
10:XJ:49:VAL:HG11	14:YN:41:ARG:O	2.19	0.42
14:YN:48:ALA:HA	14:YN:53:LEU:HD12	2.02	0.42
14:YN:9:LYS:O	14:YN:9:LYS:HG2	2.19	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
46:Y0:11:ARG:CZ	46:Y0:11:ARG:CB	2.97	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.55	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.55	0.42
25:YA:1466:G:N2	25:YA:1547:C:N3	2.67	0.42
25:YA:1473:G:C2	25:YA:1474:C:C2	3.08	0.42
25:YA:49:A:H61	25:YA:177:G:H2'	1.85	0.42
25:YA:2313:C:O2'	25:YA:2314:C:H5'	2.20	0.42
25:YA:590:A:H2'	25:YA:591:C:O4'	2.19	0.42
25:YA:620:G:H4'	25:YA:621:A:C5'	2.49	0.42
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.01	0.42
28:YE:117:MET:HA	28:YE:122:PHE:N	2.35	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.82	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	0.42
30:YG:73:ALA:O	30:YG:84:LYS:O	2.38	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.37	0.42
31:YH:58:GLU:O	31:YH:60:ARG:N	2.52	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.02	0.42
39:YT:54:ARG:HA	39:YT:59:THR:HG23	2.02	0.42
39:YT:96:ARG:CZ	39:YT:96:ARG:HB2	2.49	0.42
40:YU:79:PHE:CD2	40:YU:83:LEU:HD13	2.54	0.42
41:YV:25:LEU:H	41:YV:92:THR:CG2	2.28	0.42
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.42
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
45:YZ:70:LEU:HD11	45:YZ:98:MET:CE	2.49	0.42
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.84	0.42
1:QA:119:A:C8	1:QA:288:A:C2	3.07	0.42
1:QA:1048:G:N2	1:QA:1209:C:N3	2.58	0.42
1:QA:1213:A:N6	1:QA:1215:G:N3	2.68	0.42
1:QA:162:A:C5	1:QA:163:C:H1'	2.55	0.42
1:QA:230:G:N2	1:QA:231:G:H1'	2.35	0.42
1:QA:323:U:H2'	1:QA:324:G:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:372:C:O2'	1:QA:373:A:O5'	2.37	0.42
1:QA:410:G:H2'	1:QA:429:U:C4	2.55	0.42
1:QA:44:G:C6	1:QA:45:U:C2	3.08	0.42
1:QA:651:C:N4	1:QA:753:A:OP2	2.47	0.42
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.42
4:QD:13:ARG:NH2	4:QD:36:ARG:HH21	2.15	0.42
4:QD:172:PRO:CG	6:XF:24:GLU:OE1	2.67	0.42
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
9:QL:25:LYS:O	9:QL:60:ASP:OD1	2.37	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
25:RA:1216:G:N2	25:RA:1234:U:H1'	2.34	0.42
25:RA:579:G:C2	25:RA:1262:A:C4	3.07	0.42
25:RA:1401:G:C6	25:RA:1402:C:C4	3.07	0.42
25:RA:1952:A:C2	34:RO:22:ILE:HG23	2.55	0.42
25:RA:2094:G:C2	25:RA:2196:C:C2	3.08	0.42
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.55	0.42
25:RA:500:G:N2	25:RA:502:A:H3'	2.34	0.42
25:RA:738:G:O6	25:RA:739:G:N1	2.53	0.42
25:RA:760:G:H2'	25:RA:761:A:O4'	2.20	0.42
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.42
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.02	0.42
25:RA:2729:G:C1'	28:RE:187:ALA:HB2	2.37	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42
30:RG:34:LEU:HD11	30:RG:99:MET:CE	2.49	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.25	0.42
32:RI:117:GLU:O	32:RI:118:LYS:CB	2.67	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42
36:RQ:27:VAL:HG11	36:RQ:134:ARG:HG3	2.00	0.42
36:RQ:65:PHE:O	36:RQ:66:ILE:CG1	2.48	0.42
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	2.02	0.42
39:RT:24:PRO:HA	39:RT:49:VAL:CG1	2.39	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.01	0.42
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.42
44:RY:20:TYR:CE1	44:RY:42:VAL:HA	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:RY:60:PHE:CD2	44:RY:60:PHE:N	2.87	0.42
45:RZ:63:ASP:O	45:RZ:64:GLY:C	2.57	0.42
1:XA:1095:U:H2'	1:XA:1096:C:O4'	2.20	0.42
1:XA:1401:G:C2	1:XA:1402:C:H1'	2.55	0.42
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.42
1:XA:1190:G:OP1	3:XC:4:LYS:HA	2.19	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.19	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
7:XG:151:TYR:CE1	11:XK:54:ARG:HG2	2.54	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.24	0.42
19:XS:68:GLY:H	50:Y4:59:PHE:HZ	1.62	0.42
22:XV:35:A:C2	23:XX:3:G:N3	2.87	0.42
22:XV:15:G:N2	22:XV:48:C:H42	2.17	0.42
46:Y0:74:ARG:H	46:Y0:74:ARG:HG3	1.60	0.42
48:Y2:27:GLU:CD	48:Y2:27:GLU:H	2.17	0.42
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.01	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.37	0.42
25:YA:1010:A:H1'	25:YA:1153:C:H1'	2.00	0.42
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.20	0.42
25:YA:1338:G:O6	43:YX:62:LYS:HE2	2.19	0.42
25:YA:1554:A:O2'	25:YA:1555:G:P	2.78	0.42
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.33	0.42
25:YA:2395:C:O2'	47:Y1:30:VAL:HG12	2.20	0.42
25:YA:2525:G:H1	25:YA:2538:C:H42	1.68	0.42
25:YA:2564:A:C6	25:YA:2565:A:C6	3.07	0.42
25:YA:2567:G:H2'	25:YA:2568:C:C6	2.55	0.42
25:YA:2636:U:OP1	28:YE:79:ARG:HG3	2.19	0.42
25:YA:2845:G:H2'	25:YA:2846:G:H8	1.84	0.42
25:YA:85:G:OP1	44:YY:8:LYS:HA	2.19	0.42
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.02	0.42
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	2.01	0.42
25:YA:443:A:H3'	29:YF:45:ARG:NH1	2.34	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
32:YI:138:ILE:O	32:YI:138:ILE:HG23	2.19	0.42
32:YI:145:VAL:HG23	32:YI:146:ALA:N	2.35	0.42
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.01	0.42
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
39:YT:3:ARG:O	39:YT:4:GLY:C	2.58	0.42
41:YV:59:ALA:HA	41:YV:95:LEU:O	2.19	0.42
45:YZ:102:LEU:HD22	45:YZ:156:LYS:HZ1	1.83	0.42
1:QA:1446:A:H5'	1:QA:1446:A:N3	2.33	0.42
1:QA:341:C:H2'	1:QA:342:C:C6	2.54	0.42
1:QA:501:C:H2'	1:QA:502:G:C8	2.55	0.42
1:QA:512:U:H2'	1:QA:513:C:C6	2.55	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
9:QL:71:SER:O	9:QL:74:ILE:N	2.52	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42
22:QV:17:C:O2	22:QV:17:C:H2'	2.20	0.42
47:R1:76:ARG:CD	47:R1:76:ARG:H	2.28	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
25:RA:942:G:O2'	25:RA:1189:A:H2'	2.20	0.42
25:RA:1429:G:H2'	25:RA:1430:C:H6	1.83	0.42
25:RA:1705:G:C6	25:RA:1706:U:C4	3.07	0.42
25:RA:1821:A:H8	25:RA:1821:A:OP2	2.02	0.42
25:RA:1847:A:H5'	25:RA:1848:A:OP2	2.20	0.42
25:RA:2526:G:C5	25:RA:2527:C:C5	3.07	0.42
25:RA:2867:G:HO2'	25:RA:2868:A:P	2.42	0.42
25:RA:76:C:O2'	25:RA:77:C:H5'	2.20	0.42
25:RA:968:G:C6	25:RA:969:U:C4	3.07	0.42
25:RA:1800:C:OP1	27:RD:260:ARG:NH2	2.52	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.01	0.42
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.42
38:RS:102:ALA:C	38:RS:104:GLY:N	2.73	0.42
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
45:RZ:152:ALA:H	45:RZ:170:THR:H	1.66	0.42
45:RZ:153:SER:O	45:RZ:154:ASP:HB3	2.20	0.42
1:XA:1091:U:N3	1:XA:1094:G:OP2	2.31	0.42
1:XA:977:A:H8	1:XA:1223:C:C2	2.37	0.42
1:XA:1394:A:C5	1:XA:1501:C:H4'	2.55	0.42
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.35	0.42
1:XA:575:G:O2'	1:XA:821:G:H5'	2.20	0.42
1:XA:977:A:H8	1:XA:1223:C:N3	2.17	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
5:XE:78:HIS:CD2	8:XH:104:ARG:HE	2.37	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
1:XA:529:G:H22	12:XL:51:ALA:HB2	1.84	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
1:XA:1312:G:H3'	50:Y4:67:TYR:OH	2.19	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
43:YX:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	0.42
25:YA:1149:G:H2'	25:YA:1150:C:C6	2.54	0.42
25:YA:1204:A:H2	25:YA:1241:A:N1	2.18	0.42
25:YA:130:C:O3'	25:YA:1349:A:H1'	2.19	0.42
25:YA:1344:G:H5'	25:YA:1384:A:C6	2.54	0.42
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.54	0.42
25:YA:1594:G:C6	25:YA:1595:G:C5	3.08	0.42
25:YA:1929:G:H4'	25:YA:1930:G:OP1	2.19	0.42
25:YA:2469:A:H3'	25:YA:2470:G:O4'	2.19	0.42
25:YA:2531:A:N6	25:YA:2662:A:H61	2.17	0.42
26:YB:38:C:O2	26:YB:48:A:H1'	2.20	0.42
26:YB:48:A:P	38:YS:30:ARG:NH2	2.93	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YD:263:ARG:CB	27:YD:263:ARG:NH1	2.75	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	0.42
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.85	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.42
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.42
34:YO:2:ILE:HG12	34:YO:8:LEU:HD11	2.02	0.42
35:YP:119:GLU:OE1	35:YP:119:GLU:HA	2.19	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42
35:YP:37:GLY:O	35:YP:38:GLN:C	2.58	0.42
36:YQ:132:VAL:HG11	45:YZ:81:ARG:CZ	2.50	0.42
37:YR:10:LEU:C	37:YR:12:ARG:N	2.72	0.42
38:YS:95:HIS:O	38:YS:96:GLY:C	2.57	0.42
42:YW:74:ALA:O	42:YW:75:TYR:CB	2.65	0.42
45:YZ:82:ARG:HG3	45:YZ:83:PRO:CD	2.50	0.42
1:QA:1296:C:H5'	1:QA:1297:C:OP2	2.20	0.42
1:QA:1316:G:O2'	1:QA:1318:A:N7	2.49	0.42
1:QA:1348:U:C4	1:QA:1374:A:H2	2.37	0.42
1:QA:1434:A:H2'	1:QA:1435:G:O4'	2.20	0.42
1:QA:222:U:C2	1:QA:223:U:C5	3.08	0.42
1:QA:250:A:H4'	1:QA:251:G:O5'	2.20	0.42
1:QA:977:A:N3	1:QA:977:A:H3'	2.35	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
2:QB:204:ASN:C	2:QB:204:ASN:HD22	2.22	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.42
1:QA:1081:G:P	5:QE:16:THR:OG1	2.78	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.30	0.42
8:QH:95:VAL:HG23	8:QH:95:VAL:O	2.20	0.42
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.42
1:QA:501:C:O3'	12:QL:118:SER:HB2	2.20	0.42
14:QN:24:CYS:SG	14:QN:39:LEU:C	2.99	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
22:QV:58:A:O2'	22:QV:60:U:OP2	2.17	0.42
23:QX:2:U:HO2'	23:QX:3:G:H5'	1.82	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:R0:49:LYS:N	46:R0:80:HIS:ND1	2.63	0.42
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
25:RA:1529:A:H2'	25:RA:1530:G:O4'	2.19	0.42
25:RA:1030:G:H4'	25:RA:2466:C:O2'	2.20	0.42
25:RA:2625:G:H2'	25:RA:2626:C:C6	2.55	0.42
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.46	0.42
25:RA:13:A:C2	25:RA:526:A:N7	2.88	0.42
25:RA:903:C:H2'	25:RA:904:C:C6	2.54	0.42
25:RA:949:C:H42	25:RA:968:G:H1	1.68	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	2.02	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.42
28:RE:176:ILE:N	28:RE:176:ILE:HD12	2.35	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.47	0.42
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.42
29:RF:132:VAL:CG2	29:RF:133:ASN:N	2.80	0.42
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	2.01	0.42
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	0.42
30:RG:51:ARG:CB	30:RG:51:ARG:NH1	2.83	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.33	0.42
30:RG:78:SER:O	30:RG:80:PHE:N	2.53	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
32:RI:112:LYS:HG2	32:RI:112:LYS:H	1.62	0.42
32:RI:77:LEU:CD1	32:RI:140:LEU:HB2	2.49	0.42
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.42
36:RQ:118:LEU:HD23	36:RQ:118:LEU:HA	1.87	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.42
40:RU:35:ALA:O	40:RU:39:LEU:HG	2.19	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
41:RV:35:LEU:HB2	41:RV:37:VAL:CG2	2.48	0.42
42:RW:81:ALA:C	42:RW:82:LEU:HD12	2.40	0.42
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.23	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42
1:XA:1388:C:H2'	1:XA:1389:C:C6	2.55	0.42
1:XA:579:G:C6	1:XA:580:U:C4	3.08	0.42
1:XA:664:G:N2	1:XA:741:G:H1	2.17	0.42
1:XA:677:U:H2'	1:XA:678:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:936:C:H2'	1:XA:937:A:O4'	2.20	0.42
2:XB:109:SER:C	2:XB:111:ARG:H	2.21	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
5:XE:153:LYS:C	5:XE:153:LYS:HD3	2.40	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.85	0.42
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.20	0.42
19:XS:58:VAL:HG23	19:XS:58:VAL:O	2.20	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
22:XV:43:A:H2'	22:XV:44:A:C8	2.54	0.42
25:YA:2331:G:H5'	46:Y0:44:ARG:HG3	2.01	0.42
47:Y1:56:GLN:HB2	47:Y1:57:GLU:H	1.48	0.42
49:Y3:7:LYS:O	49:Y3:7:LYS:HG2	2.19	0.42
19:XS:5:LEU:CD2	50:Y4:66:SER:HB2	2.49	0.42
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.85	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
35:YP:64:LYS:HG3	54:Y8:25:MET:CE	2.50	0.42
25:YA:1018:C:O3'	25:YA:1120:G:N2	2.52	0.42
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.26	0.42
25:YA:2531:A:H2	25:YA:2658:C:O2	2.02	0.42
25:YA:2653:U:H3'	25:YA:2654:A:C8	2.55	0.42
25:YA:2804:C:H2'	25:YA:2805:G:O4'	2.20	0.42
25:YA:2849:U:H4'	25:YA:2868:A:N1	2.34	0.42
25:YA:273:G:H1	25:YA:364:C:H42	1.67	0.42
25:YA:514:A:H1'	25:YA:581:C:O2'	2.20	0.42
25:YA:6:A:H2'	25:YA:7:G:C8	2.54	0.42
25:YA:729:G:H2'	25:YA:1775:U:H1'	2.02	0.42
25:YA:917:A:N6	26:YB:80:U:H4'	2.34	0.42
27:YD:109:ASP:HB2	27:YD:197:GLY:HA2	2.02	0.42
27:YD:196:VAL:CG1	27:YD:196:VAL:O	2.68	0.42
28:YE:176:ILE:N	28:YE:176:ILE:HD12	2.35	0.42
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.47	0.42
28:YE:35:GLN:HB3	28:YE:48:GLN:HB2	2.01	0.42
29:YF:101:LEU:HD12	29:YF:102:PRO:N	2.33	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	2.02	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.20	0.42
31:YH:105:LEU:N	31:YH:105:LEU:CD1	2.81	0.42
31:YH:84:SER:O	31:YH:85:LYS:CB	2.64	0.42
32:YI:87:LYS:HA	32:YI:122:GLU:HA	2.02	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	0.42
35:YP:83:VAL:HG11	35:YP:112:LEU:HD21	1.97	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	0.42
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.42
39:YT:24:PRO:HA	39:YT:49:VAL:CG1	2.39	0.42
41:YV:47:VAL:HG13	41:YV:48:GLY:N	2.26	0.42
44:YY:95:LYS:HA	44:YY:101:LYS:N	2.33	0.42
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42
45:YZ:68:PRO:HG2	45:YZ:68:PRO:O	2.20	0.42
1:QA:1424:C:H2'	1:QA:1425:U:O4'	2.20	0.42
1:QA:537:G:H5''	12:QL:113:ARG:HH12	1.84	0.42
1:QA:685:G:H5''	1:QA:686:U:OP2	2.19	0.42
1:QA:838:G:C5	1:QA:842:C:H1'	2.55	0.42
1:QA:887:G:H21	1:QA:1489:G:H4'	1.85	0.42
2:QB:155:LEU:C	2:QB:157:ARG:H	2.22	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.49	0.42
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.42
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.42
8:QH:74:PRO:O	8:QH:75:ARG:C	2.58	0.42
1:QA:1179:A:H5''	9:QI:102:LEU:O	2.20	0.42
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.42
9:QI:35:GLU:O	9:QI:35:GLU:HG2	2.19	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
13:QM:119:GLY:O	13:QM:120:LYS:O	2.38	0.42
17:QQ:77:VAL:HG12	17:QQ:77:VAL:O	2.20	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42
19:QS:15:LEU:CD2	19:QS:15:LEU:N	2.79	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.42
47:R1:81:LYS:CD	47:R1:81:LYS:N	2.83	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.42
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.42
25:RA:106:C:H2'	25:RA:107:C:H6	1.85	0.42
25:RA:1142(A):A:O2'	25:RA:1143:A:O5'	2.33	0.42
25:RA:1359:A:N6	25:RA:1372:U:N3	2.66	0.42
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.85	0.42
25:RA:1998:G:H4'	25:RA:2724:C:O2'	2.20	0.42
25:RA:232:G:H8	25:RA:232:G:OP2	2.03	0.42
25:RA:2542:A:H5'	25:RA:2543:G:OP1	2.19	0.42
25:RA:2521:C:H42	25:RA:2544:G:H1	1.67	0.42
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.19	0.42
25:RA:429:A:C5	25:RA:430:G:C6	3.07	0.42
25:RA:432:A:H2'	25:RA:433:C:H6	1.85	0.42
25:RA:904:C:H5'	25:RA:905:U:OP2	2.20	0.42
26:RB:15:A:H1'	26:RB:109:G:N9	2.34	0.42
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.42
29:RF:61:GLY:O	29:RF:62:ARG:C	2.58	0.42
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.42
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.42
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.16	0.42
35:RP:107:LYS:O	35:RP:108:LYS:C	2.58	0.42
25:RA:631:A:H5'	35:RP:65:ARG:HG3	2.02	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	0.42
43:RX:60:ARG:HA	43:RX:75:ASP:OD2	2.20	0.42
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.42
45:RZ:134:PRO:C	45:RZ:136:PHE:H	2.22	0.42
45:RZ:48:PHE:CE2	45:RZ:71:VAL:HG11	2.55	0.42
45:RZ:48:PHE:CE2	45:RZ:52:SER:HA	2.55	0.42
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.20	0.42
1:XA:1347:G:O2'	1:XA:1348:U:P	2.78	0.42
1:XA:735:C:H2'	1:XA:736:C:C6	2.52	0.42
1:XA:828:A:OP1	1:XA:828:A:H4'	2.20	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	0.42
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.19	0.42
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
46:Y0:36:ILE:H	46:Y0:36:ILE:HD13	1.85	0.42
50:Y4:12:ALA:HB1	50:Y4:30:GLU:N	2.35	0.42
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
25:YA:1045:A:O2'	25:YA:1046:A:OP2	2.30	0.42
25:YA:1318:C:C3'	25:YA:1319:G:H5''	2.50	0.42
25:YA:1896:G:H2'	25:YA:1897:G:C8	2.55	0.42
25:YA:227:A:O2'	25:YA:228:A:P	2.77	0.42
25:YA:2315:G:H2'	25:YA:2316:C:C6	2.54	0.42
25:YA:2508:G:H2'	25:YA:2509:G:O4'	2.19	0.42
25:YA:270:A:H1'	25:YA:370:G:C2	2.55	0.42
25:YA:700:G:H2'	25:YA:701:G:O4'	2.20	0.42
25:YA:782:A:H5'	25:YA:783:A:C2	2.54	0.42
26:YB:70:C:H42	26:YB:106:G:H1	1.68	0.42
27:YD:14:ARG:CG	27:YD:15:PHE:N	2.83	0.42
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.42
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.19	0.42
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
32:YI:74:ASN:CG	32:YI:75:LEU:N	2.68	0.42
33:YN:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.42
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.42
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.42
35:YP:114:ILE:CD1	35:YP:130:PHE:CE1	2.98	0.42
35:YP:81:GLN:HB2	35:YP:81:GLN:HE21	1.59	0.42
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.02	0.42
37:YR:28:LEU:C	37:YR:28:LEU:HD13	2.40	0.42
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	2.01	0.42
40:YU:6:THR:HG21	40:YU:10:ARG:CZ	2.50	0.42
40:YU:27:LEU:C	40:YU:29:SER:N	2.74	0.42
41:YV:15:GLU:O	41:YV:96:ILE:HB	2.19	0.42
42:YW:96:ILE:O	42:YW:96:ILE:CG2	2.68	0.42
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.42
25:YA:310:A:H5'	44:YY:21:LYS:NZ	2.35	0.42
1:QA:9:G:H2'	1:QA:10:A:H8	1.84	0.42
1:QA:153:C:H2'	1:QA:154:C:C6	2.55	0.42
1:QA:190:G:O6	1:QA:264:U:H5''	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:376:G:O2'	1:QA:377:G:H5'	2.20	0.42
2:QB:109:SER:C	2:QB:111:ARG:N	2.73	0.42
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.42
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
5:QE:78:HIS:CD2	8:QH:104:ARG:NE	2.88	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
9:QI:43:ALA:C	9:QI:45:ALA:N	2.72	0.42
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.01	0.42
13:QM:88:ARG:O	13:QM:88:ARG:HD2	2.19	0.42
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.01	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.42
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
47:R1:29:GLY:O	47:R1:31:GLY:N	2.49	0.42
48:R2:41:ILE:CD1	48:R2:41:ILE:C	2.81	0.42
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	0.42
25:RA:1311:G:O6	53:R7:9:ARG:NH2	2.53	0.42
25:RA:180:G:H5''	25:RA:181:A:OP1	2.20	0.42
25:RA:1764:G:C6	25:RA:1989:G:C2	3.08	0.42
25:RA:2238:G:H2'	25:RA:2238:G:N3	2.34	0.42
25:RA:829:A:N6	25:RA:2247:A:O2'	2.48	0.42
25:RA:2059:A:N6	25:RA:2503:A:H2'	2.35	0.42
25:RA:263:C:H2'	25:RA:264:C:O4'	2.20	0.42
26:RB:28:C:H2'	26:RB:29:A:O4'	2.20	0.42
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.20	0.42
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.81	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
28:RE:94:GLU:C	28:RE:96:PHE:N	2.72	0.42
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.42
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.42
34:RO:97:ARG:CA	34:RO:117:LEU:HD22	2.50	0.42
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.02	0.42
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.42
37:RR:55:ALA:HA	37:RR:80:PHE:CE2	2.55	0.42
38:RS:99:LYS:C	38:RS:101:LEU:N	2.73	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.50	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	0.42
1:XA:1058:G:C5	1:XA:1059:C:C4	3.08	0.42
1:XA:1191:A:H2'	1:XA:1192:C:C6	2.55	0.42
1:XA:1302:U:H2'	1:XA:1302:U:O2	2.19	0.42
1:XA:1339:A:H2'	1:XA:1340:A:O4'	2.19	0.42
1:XA:430:A:OP1	4:XD:9:CYS:N	2.44	0.42
1:XA:57:G:H1	1:XA:355:C:H42	1.66	0.42
1:XA:818:G:H3'	1:XA:819:A:H5''	2.01	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.42
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.01	0.42
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.42
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.02	0.42
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.42
14:XN:39:LEU:HB3	14:XN:43:CYS:CB	2.42	0.42
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.42
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.42
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42
25:YA:1284:A:H2'	25:YA:1285:G:O4'	2.20	0.42
25:YA:1356:G:C6	25:YA:1357:U:C4	3.08	0.42
25:YA:1312:U:C2	25:YA:1603:A:C2	3.07	0.42
25:YA:1627:G:C2	25:YA:1628:G:C8	3.08	0.42
25:YA:188:G:H1	25:YA:208:C:H42	1.68	0.42
25:YA:529:A:H8	25:YA:530:G:C6	2.37	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
25:YA:1971:A:C5	27:YD:241:PRO:HD3	2.55	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.20	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.01	0.42
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.42
32:YI:123:LEU:HA	32:YI:142:VAL:HG21	2.02	0.42
33:YN:52:VAL:CG1	33:YN:53:VAL:N	2.82	0.42
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.02	0.42
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.42
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.85	0.42
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.42
39:YT:105:LEU:HG	39:YT:105:LEU:O	2.19	0.42
40:YU:35:ALA:O	40:YU:39:LEU:HG	2.19	0.42
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.42
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.42
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	0.42
44:YY:20:TYR:CE1	44:YY:42:VAL:HA	2.55	0.42
44:YY:90:LEU:HB2	44:YY:91:GLU:H	1.53	0.42
45:YZ:153:SER:O	45:YZ:154:ASP:HB3	2.20	0.42
1:QA:386:C:C2'	1:QA:387:U:H5'	2.50	0.41
1:QA:386:C:H2'	1:QA:387:U:H5'	2.01	0.41
1:QA:417:C:H42	1:QA:426:G:H1	1.68	0.41
1:QA:977:A:C8	1:QA:1223:C:C2	3.08	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	0.41
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.41
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.41
7:QG:141:VAL:CG1	7:QG:141:VAL:O	2.64	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
1:QA:684:A:O2'	11:QK:39:PRO:O	2.30	0.41
1:QA:528:C:H41	12:QL:49:ASN:CG	2.23	0.41
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.50	0.41
17:QQ:74:LEU:HD13	17:QQ:74:LEU:O	2.20	0.41
1:QA:1453:G:H8	20:QT:39:LYS:HE2	1.85	0.41
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.41
52:R6:19:ARG:HA	52:R6:19:ARG:HD2	1.77	0.41
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.41
25:RA:1765:C:H2'	25:RA:1766:U:O4'	2.19	0.41
25:RA:1826:G:H4'	27:RD:242:ARG:NH2	2.27	0.41
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.35	0.41
25:RA:962:G:HO2'	25:RA:2496:C:HO2'	1.66	0.41
25:RA:2766:G:H2'	25:RA:2766:G:N3	2.34	0.41
25:RA:299:A:H5'	44:RY:84:ARG:NH2	2.33	0.41
25:RA:13:A:C2	25:RA:525:U:C2	3.08	0.41
25:RA:64:A:H2'	25:RA:65:C:O4'	2.19	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:918:A:N3	26:RB:80:U:O2'	2.46	0.41
25:RA:1805:U:H5''	27:RD:250:TRP:CD2	2.54	0.41
28:RE:11:MET:HE3	28:RE:186:GLY:HA2	2.01	0.41
30:RG:73:ALA:O	30:RG:84:LYS:O	2.38	0.41
31:RH:128:PRO:CG	31:RH:129:THR:H	2.33	0.41
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.41
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.41
1:XA:854:G:H3'	1:XA:871:U:O4	2.19	0.41
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.41
5:XE:26:PHE:N	5:XE:26:PHE:CD1	2.87	0.41
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.41
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.41
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.85	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.85	0.41
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.41
14:YN:9:LYS:HE2	14:YN:9:LYS:HB3	1.85	0.41
1:XA:474:G:H5'	16:XP:81:ARG:HG3	2.00	0.41
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.41
51:Y5:39:MET:C	51:Y5:40:LYS:HG3	2.39	0.41
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.41
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.19	0.41
25:YA:1328:G:H8	25:YA:1328:G:O5'	2.02	0.41
25:YA:1971:A:OP2	27:YD:242:ARG:NH2	2.44	0.41
25:YA:204:A:H8	25:YA:204:A:OP1	2.02	0.41
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.20	0.41
25:YA:2441:C:H2'	25:YA:2442:C:C6	2.55	0.41
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.20	0.41
25:YA:2681:C:O2'	25:YA:2682:U:OP2	2.29	0.41
25:YA:2749:A:H3'	25:YA:2750:A:H2'	2.02	0.41
26:YB:44:G:H1'	26:YB:47:C:H42	1.85	0.41
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.41
25:YA:2599:G:OP2	27:YD:236:GLY:HA2	2.20	0.41
27:YD:239:ARG:O	27:YD:240:ALA:CB	2.62	0.41
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
30:YG:78:SER:O	30:YG:80:PHE:N	2.53	0.41
32:YI:117:GLU:O	32:YI:118:LYS:CB	2.67	0.41
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.41
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:YO:2:ILE:CD1	34:YO:2:ILE:N	2.82	0.41
39:YT:6:LEU:HD12	39:YT:9:LEU:HD12	2.01	0.41
43:YX:57:LEU:H	43:YX:57:LEU:HD12	1.85	0.41
44:YY:51:VAL:CG1	44:YY:52:SER:N	2.74	0.41
1:QA:1095:U:H2'	1:QA:1096:C:O4'	2.19	0.41
1:QA:1290:G:C4	1:QA:1291:G:C8	3.07	0.41
1:QA:14:U:O2	1:QA:17:U:H5	2.03	0.41
1:QA:259:G:H2'	1:QA:260:G:H8	1.85	0.41
1:QA:340:U:H2'	1:QA:341:C:C6	2.56	0.41
1:QA:686:U:O4	1:QA:703:G:H2'	2.19	0.41
2:QB:163:PHE:CD2	2:QB:185:ILE:HD12	2.54	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.01	0.41
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.49	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
14:QN:9:LYS:O	14:QN:9:LYS:HG2	2.19	0.41
15:QO:3:ILE:HD13	15:QO:3:ILE:N	2.22	0.41
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.41
22:QV:23:C:H2'	22:QV:24:U:C6	2.55	0.41
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.41
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.41
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.58	0.41
25:RA:2467:C:C2'	25:RA:2468:G:H5'	2.50	0.41
25:RA:2469:A:OP1	25:RA:2469:A:H4'	2.20	0.41
25:RA:2563:U:N3	25:RA:2566:A:OP2	2.25	0.41
25:RA:265:A:H2'	25:RA:266:G:O4'	2.20	0.41
25:RA:2692:C:O2	25:RA:2847:U:O2'	2.38	0.41
25:RA:2779:U:H6	25:RA:2779:U:H2'	1.58	0.41
25:RA:348:G:H2'	25:RA:349:G:H8	1.85	0.41
25:RA:255:A:O2'	25:RA:384:U:OP1	2.37	0.41
25:RA:738:G:C6	25:RA:739:G:C2	3.09	0.41
25:RA:947:G:H2'	25:RA:948:G:H8	1.86	0.41
27:RD:196:VAL:CG1	27:RD:196:VAL:O	2.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.35	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
31:RH:105:LEU:N	31:RH:105:LEU:CD1	2.81	0.41
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.21	0.41
32:RI:87:LYS:HA	32:RI:122:GLU:HA	2.02	0.41
32:RI:132:PRO:O	32:RI:133:HIS:C	2.59	0.41
32:RI:72:LEU:C	32:RI:74:ASN:H	2.24	0.41
32:RI:93:THR:O	32:RI:97:ILE:HG12	2.20	0.41
33:RN:114:ARG:C	33:RN:116:LEU:N	2.74	0.41
33:RN:27:ALA:O	33:RN:28:THR:C	2.58	0.41
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.50	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.55	0.41
39:RT:39:ARG:CG	39:RT:40:THR:H	2.22	0.41
39:RT:96:ARG:HB2	39:RT:96:ARG:CZ	2.49	0.41
41:RV:38:LEU:CD2	41:RV:39:LEU:N	2.81	0.41
42:RW:19:LEU:HD12	42:RW:19:LEU:HA	1.79	0.41
45:RZ:157:LEU:O	45:RZ:158:PRO:O	2.37	0.41
36:RQ:20:ALA:CB	45:RZ:79:ARG:NH1	2.80	0.41
1:XA:1073:U:OP2	5:XE:57:LYS:NZ	2.40	0.41
1:XA:1128:C:N3	1:XA:1144:G:N2	2.67	0.41
1:XA:883:C:C2'	1:XA:884:U:H5'	2.50	0.41
1:XA:892:A:C6	1:XA:893:C:C4	3.08	0.41
1:XA:889:A:N1	1:XA:907:A:H5''	2.35	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
4:XD:120:LEU:HA	4:XD:120:LEU:HD23	1.84	0.41
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.41
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.34	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
2:XB:178:ARG:CD	8:XH:71:GLY:O	2.68	0.41
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.84	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.20	0.41
19:XS:66:MET:HG3	19:XS:66:MET:O	2.20	0.41
46:Y0:36:ILE:HA	46:Y0:60:PHE:CB	2.51	0.41
47:Y1:80:LEU:O	47:Y1:81:LYS:CD	2.65	0.41
50:Y4:38:LYS:HG3	50:Y4:44:THR:OG1	2.20	0.41
25:YA:1899:G:O2'	25:YA:1900:A:H5''	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2469:A:H5'	25:YA:2470:G:OP2	2.19	0.41
25:YA:2639:A:H1'	25:YA:2778:A:C2	2.56	0.41
25:YA:303:U:H2'	25:YA:304:G:H8	1.85	0.41
25:YA:376:C:H2'	25:YA:377:C:O4'	2.20	0.41
25:YA:950:G:H2'	25:YA:951:C:C6	2.55	0.41
26:YB:66:A:HO2'	26:YB:67:G:P	2.43	0.41
26:YB:71:C:H2'	26:YB:72:G:C8	2.55	0.41
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.41
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	0.41
30:YG:41:GLN:NE2	30:YG:154:GLY:O	2.52	0.41
33:YN:1:MET:HG3	33:YN:1:MET:O	2.19	0.41
34:YO:92:GLU:O	34:YO:93:PRO:C	2.58	0.41
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.41
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.01	0.41
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	0.41
25:YA:456:C:C5	43:YX:69:TYR:CZ	3.09	0.41
25:YA:65:C:P	43:YX:71:GLY:HA3	2.60	0.41
45:YZ:24:LEU:CD1	45:YZ:86:VAL:HG23	2.38	0.41
1:QA:1277:C:O2'	1:QA:1279:A:H8	2.03	0.41
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.35	0.41
1:QA:160:A:H1'	1:QA:344:A:N7	2.36	0.41
1:QA:468:A:C8	1:QA:474:G:C8	3.07	0.41
1:QA:498:A:H1'	1:QA:500:G:O5'	2.20	0.41
1:QA:502:G:OP1	12:QL:118:SER:N	2.47	0.41
1:QA:752:G:HO2'	1:QA:753:A:P	2.43	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
5:QE:31:LEU:HA	5:QE:31:LEU:HD22	1.86	0.41
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.50	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
9:QI:118:LYS:NZ	9:QI:118:LYS:HB3	2.34	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.02	0.41
1:QA:972:C:O3'	10:QJ:57:LYS:HG2	2.20	0.41
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41
13:QM:77:ASN:OD1	50:R4:71:ARG:NH1	2.53	0.41
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1327:C:N4	25:RA:1328:G:C6	2.88	0.41
25:RA:146:G:H2'	25:RA:147:U:O4'	2.19	0.41
25:RA:1491:G:C6	25:RA:1500:G:C2	3.08	0.41
25:RA:1543:A:O2'	25:RA:1544:C:O5'	2.34	0.41
25:RA:2081:C:H2'	25:RA:2082:A:H8	1.85	0.41
25:RA:222:A:H1'	25:RA:223:A:OP1	2.20	0.41
25:RA:2273:A:H2'	25:RA:2274:A:H8	1.82	0.41
25:RA:2642:G:H5''	33:RN:78:TYR:CG	2.56	0.41
25:RA:337:C:H2'	25:RA:338:G:O4'	2.21	0.41
25:RA:389:G:H22	35:RP:72:PRO:CG	2.33	0.41
25:RA:527:C:C4	25:RA:2779:U:H5''	2.55	0.41
25:RA:585:G:H8	25:RA:585:G:O5'	2.02	0.41
26:RB:16:G:H2'	26:RB:17:C:C6	2.55	0.41
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.01	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.23	0.41
30:RG:117:PHE:CE1	30:RG:119:GLY:CA	3.03	0.41
30:RG:60:LEU:C	30:RG:60:LEU:HD23	2.41	0.41
33:RN:131:GLN:HB3	33:RN:131:GLN:HE21	1.57	0.41
33:RN:21:LYS:O	33:RN:22:THR:O	2.39	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	0.41
38:RS:15:ARG:O	38:RS:19:LYS:HD3	2.19	0.41
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.41
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
39:RT:134:GLU:O	39:RT:135:ALA:CB	2.69	0.41
40:RU:83:LEU:HG	40:RU:88:ILE:HG13	2.02	0.41
41:RV:81:TYR:C	41:RV:82:ARG:CG	2.89	0.41
41:RV:16:PRO:HB3	41:RV:97:LYS:O	2.20	0.41
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.35	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
45:RZ:31:ARG:HE	45:RZ:31:ARG:HB2	1.61	0.41
45:RZ:91:LEU:N	45:RZ:91:LEU:HD22	2.35	0.41
1:XA:1106:G:H2'	1:XA:1107:C:C6	2.55	0.41
1:XA:1151:A:H2'	1:XA:1152:A:C8	2.55	0.41
1:XA:376:G:H2'	1:XA:377:G:C8	2.53	0.41
1:XA:427:U:O2'	1:XA:541:G:OP1	2.33	0.41
1:XA:597:G:H1'	1:XA:644:G:N2	2.35	0.41
1:XA:692:U:H1'	1:XA:695:A:N7	2.35	0.41
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:25:ARG:C	4:XD:27:TYR:H	2.24	0.41
5:XE:68:GLU:CG	5:XE:68:GLU:O	2.68	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.02	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
14:YN:3:ARG:CG	14:YN:4:LYS:N	2.84	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.02	0.41
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.41
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
22:XV:17:C:O2	22:XV:17:C:H2'	2.20	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.81	0.41
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.41
25:YA:1471:A:H3'	25:YA:1472:A:H8	1.84	0.41
25:YA:2298:A:H62	25:YA:2318:G:H8	1.64	0.41
25:YA:2555:U:C4	25:YA:2556:C:C2	3.08	0.41
25:YA:532:A:H2'	40:YU:28:ARG:HE	1.85	0.41
25:YA:589:C:H2'	25:YA:590:A:C8	2.55	0.41
25:YA:71:A:OP1	25:YA:72:U:H2'	2.19	0.41
25:YA:738:G:C6	25:YA:739:G:N1	2.88	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.03	0.41
29:YF:20:LEU:HD12	29:YF:21:ALA:N	2.26	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.25	0.41
32:YI:54:GLN:O	32:YI:57:ARG:HG3	2.21	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
33:YN:28:THR:O	33:YN:29:LYS:C	2.59	0.41
33:YN:42:TRP:HA	33:YN:48:MET:HE3	2.03	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.41
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	2.01	0.41
40:YU:83:LEU:HG	40:YU:88:ILE:HG13	2.02	0.41
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
41:YV:72:VAL:HG13	41:YV:72:VAL:O	2.19	0.41
42:YW:25:ARG:CB	42:YW:25:ARG:NH1	2.79	0.41
42:YW:8:ARG:HG3	42:YW:8:ARG:NH1	2.34	0.41
45:YZ:157:LEU:O	45:YZ:158:PRO:O	2.37	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:YZ:48:PHE:CE2	45:YZ:52:SER:HA	2.55	0.41
45:YZ:70:LEU:HB2	45:YZ:91:LEU:HD21	2.01	0.41
45:YZ:91:LEU:N	45:YZ:91:LEU:HD22	2.35	0.41
1:QA:1052:U:H5''	1:QA:1053:G:OP2	2.20	0.41
1:QA:1055:A:N7	1:QA:1200:C:N4	2.69	0.41
1:QA:32:A:C2	1:QA:33:A:C4	3.08	0.41
1:QA:973:G:C1'	10:QJ:55:LYS:HG2	2.50	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
6:QF:92:LYS:CB	6:QF:92:LYS:NZ	2.83	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
19:QS:58:VAL:HG23	19:QS:58:VAL:O	2.20	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
25:RA:2419:U:OP1	52:R6:23:THR:HG21	2.19	0.41
25:RA:1320:C:H4'	25:RA:1321:A:OP1	2.21	0.41
25:RA:1387:C:C2	25:RA:1388:G:C8	3.08	0.41
25:RA:1929:G:H4'	25:RA:1930:G:OP1	2.20	0.41
25:RA:2235:G:H2'	25:RA:2236:C:C6	2.55	0.41
25:RA:234:C:H2'	25:RA:235:U:O4'	2.19	0.41
25:RA:2448:A:OP1	25:RA:2499:C:OP1	2.38	0.41
25:RA:2869:G:H2'	25:RA:2870:C:O4'	2.20	0.41
25:RA:715:G:C6	25:RA:716:A:C6	3.08	0.41
26:RB:4:C:C2	26:RB:117:G:N2	2.88	0.41
27:RD:13:ARG:O	27:RD:13:ARG:HG2	2.20	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
28:RE:93:VAL:HG21	28:RE:180:ASN:HA	2.03	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41
1:XA:1057:G:C6	1:XA:1058:G:C4	3.08	0.41
1:XA:110:C:H2'	1:XA:111:G:O4'	2.19	0.41
1:XA:1237:C:H4'	1:XA:1303:C:O2	2.20	0.41
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.31	0.41
1:XA:769:G:H4'	1:XA:1513:A:H4'	2.02	0.41
1:XA:451:A:H4'	1:XA:452:A:O4'	2.21	0.41
1:XA:507:C:OP2	1:XA:508:C:O2'	2.30	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.21	0.41
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.41
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
14:XN:22:THR:HB	14:XN:33:VAL:CG1	2.50	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
49:Y3:37:LEU:N	49:Y3:37:LEU:HD23	2.35	0.41
25:YA:1142(A):A:H4'	25:YA:1143:A:OP1	2.21	0.41
25:YA:1356:G:C2	25:YA:1357:U:C2	3.08	0.41
25:YA:1519:G:H2'	25:YA:1520:U:O4'	2.20	0.41
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.39	0.41
25:YA:2002:G:H2'	25:YA:2003:G:H8	1.85	0.41
25:YA:530:G:C4	25:YA:2022:U:H5''	2.56	0.41
25:YA:2169:A:N6	25:YA:2170:A:N1	2.67	0.41
25:YA:265:A:O2'	25:YA:266:G:H4'	2.19	0.41
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.84	0.41
25:YA:704:G:O2'	25:YA:705:A:P	2.79	0.41
27:YD:269:PHE:N	27:YD:269:PHE:CD2	2.88	0.41
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.03	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41
25:YA:588:U:C2	29:YF:90:PHE:CE1	3.08	0.41
30:YG:51:ARG:CB	30:YG:51:ARG:NH1	2.83	0.41
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.41
33:YN:21:LYS:O	33:YN:22:THR:O	2.39	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.46	0.41
36:YQ:27:VAL:HG22	36:YQ:105:GLU:CD	2.41	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
37:YR:55:ALA:HA	37:YR:80:PHE:CE2	2.55	0.41
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.03	0.41
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	0.41
42:YW:17:VAL:O	42:YW:18:ARG:C	2.57	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
45:YZ:20:ARG:O	45:YZ:20:ARG:CD	2.68	0.41
45:YZ:29:TYR:O	45:YZ:30:ASN:HB3	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:YZ:48:PHE:CE2	45:YZ:71:VAL:HG11	2.55	0.41
1:QA:544:G:H2'	1:QA:545:C:C6	2.56	0.41
1:QA:578:C:H2'	1:QA:579:G:O4'	2.21	0.41
1:QA:823:G:H2'	1:QA:824:C:C6	2.56	0.41
1:QA:985:C:H2'	1:QA:986:A:H8	1.85	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.00	0.41
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.74	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
9:QI:127:LYS:CE	22:QV:34:C:OP2	2.69	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.55	0.41
25:RA:1820:U:O2'	27:RD:158:ALA:HB1	2.19	0.41
25:RA:184:C:H2'	25:RA:185:U:H6	1.84	0.41
25:RA:2123:G:H2'	25:RA:2124:G:H8	1.85	0.41
25:RA:2512:C:H5''	25:RA:2513:G:OP2	2.21	0.41
25:RA:2697:G:H2'	25:RA:2698:U:O4'	2.20	0.41
25:RA:2774:C:H2'	25:RA:2775:A:O4'	2.20	0.41
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.46	0.41
25:RA:36:G:N3	25:RA:450:G:O2'	2.52	0.41
25:RA:702:G:H5'	25:RA:703:U:OP2	2.21	0.41
25:RA:83:G:O2'	25:RA:84:A:C8	2.73	0.41
25:RA:857:C:N4	25:RA:858:U:O4	2.53	0.41
25:RA:870:A:OP1	36:RQ:6:ARG:NE	2.53	0.41
26:RB:117:G:OP1	38:RS:57:LYS:NZ	2.53	0.41
27:RD:158:ALA:O	27:RD:196:VAL:HG11	2.21	0.41
27:RD:269:PHE:N	27:RD:269:PHE:CD2	2.88	0.41
29:RF:111:ALA:O	29:RF:112:MET:C	2.59	0.41
29:RF:46:ARG:CG	29:RF:46:ARG:NH1	2.72	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
37:RR:28:LEU:C	37:RR:28:LEU:HD13	2.40	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:RR:28:LEU:HD12	37:RR:29:LEU:HD12	2.01	0.41
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.21	0.41
42:RW:55:ALA:O	42:RW:58:ALA:HB3	2.21	0.41
1:XA:1079:G:H2'	1:XA:1080:A:C8	2.55	0.41
1:XA:1226:C:C4	13:XM:104:ARG:HB2	2.56	0.41
1:XA:1268:A:O3'	21:XU:19:GLY:HA2	2.21	0.41
1:XA:595:G:N1	1:XA:641:U:O2'	2.44	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
3:XC:46:GLU:C	3:XC:48:TYR:H	2.23	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
7:XG:141:VAL:CG1	7:XG:141:VAL:O	2.65	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
14:YN:15:LYS:HD3	14:YN:15:LYS:HA	1.86	0.41
14:YN:34:TYR:CD1	14:YN:34:TYR:N	2.89	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
21:XU:2:GLY:C	21:XU:4:GLY:H	2.24	0.41
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.41
13:XM:65:LYS:HZ1	50:Y4:52:THR:HG21	1.84	0.41
25:YA:1513:C:H2'	25:YA:1514:U:O4'	2.21	0.41
25:YA:1601:G:C5	25:YA:1602:U:C4	3.08	0.41
25:YA:1607:C:H4'	25:YA:1608:A:O5'	2.20	0.41
25:YA:2011:U:H2'	25:YA:2012:G:O4'	2.20	0.41
25:YA:571:A:C5'	25:YA:2030:A:H62	2.33	0.41
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.56	0.41
25:YA:242:G:H5''	54:Y8:3:LYS:CE	2.46	0.41
25:YA:2068:U:N3	25:YA:2430:A:H2	2.11	0.41
25:YA:2633:G:H5'	25:YA:2811:G:O2'	2.20	0.41
25:YA:602:G:H3'	25:YA:654(V):A:H61	1.85	0.41
25:YA:753:C:O5'	25:YA:753:C:H6	2.02	0.41
25:YA:821:A:H5''	25:YA:822:U:H6	1.86	0.41
26:YB:51:G:N7	38:YS:62:LYS:NZ	2.52	0.41
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	0.41
31:YH:146:ALA:HB2	31:YH:164:TYR:OH	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:YN:27:ALA:O	33:YN:28:THR:C	2.57	0.41
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.50	0.41
39:YT:134:GLU:OE1	39:YT:135:ALA:N	2.53	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
42:YW:29:LEU:HD23	42:YW:29:LEU:C	2.41	0.41
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
1:QA:1003:G:H2'	1:QA:1004:A:H5'	2.02	0.41
1:QA:1173:G:H2'	1:QA:1174:G:O4'	2.20	0.41
1:QA:1347:G:O2'	1:QA:1348:U:P	2.78	0.41
1:QA:359:U:H2'	1:QA:360:A:C8	2.56	0.41
1:QA:500:G:C6	1:QA:546:G:C2	3.09	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.58	0.41
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.41
10:QJ:45:ARG:HH11	10:QJ:45:ARG:HG3	1.86	0.41
12:QL:21:LYS:CD	12:QL:21:LYS:N	2.83	0.41
13:QM:110:ARG:O	13:QM:110:ARG:HG3	2.20	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.20	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41
22:QV:21:A:N6	22:QV:46:G:H2'	2.36	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.82	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.50	0.41
25:RA:1021:A:C2	25:RA:1023:U:C2	3.09	0.41
25:RA:1372:U:H2'	25:RA:1372:U:O2	2.20	0.41
25:RA:1541:U:H2'	25:RA:1542:G:O4'	2.21	0.41
25:RA:2675:A:OP2	25:RA:2675:A:H8	2.03	0.41
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.77	0.41
25:RA:2822:G:H8	25:RA:2822:G:O5'	2.04	0.41
25:RA:398:G:H2'	25:RA:399:G:O4'	2.20	0.41
26:RB:24:G:O6	26:RB:56:G:O2'	2.39	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
30:RG:77:ILE:H	30:RG:82:LEU:HB2	1.84	0.41
31:RH:86:GLU:HG3	31:RH:165:ALA:CA	2.49	0.41
33:RN:133:GLN:C	33:RN:134:ARG:HG2	2.41	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.02	0.41
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
40:RU:91:ASP:OD2	40:RU:96:ALA:CA	2.69	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41
41:RV:61:VAL:O	41:RV:61:VAL:CG2	2.68	0.41
41:RV:67:GLY:O	41:RV:68:LYS:C	2.59	0.41
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.41
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41
45:RZ:68:PRO:O	45:RZ:68:PRO:HG2	2.20	0.41
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.20	0.41
1:XA:115:G:C2	1:XA:289:G:C5	3.08	0.41
1:XA:1367:C:OP2	9:XI:112:LYS:NZ	2.53	0.41
1:XA:22:G:H4'	1:XA:885:G:C8	2.55	0.41
1:XA:439:A:OP2	1:XA:493:G:N2	2.54	0.41
2:XB:212:GLN:O	2:XB:212:GLN:NE2	2.54	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.34	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.39	0.41
19:XS:5:LEU:HD22	50:Y4:67:TYR:OH	2.19	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.54	0.41
25:YA:1364:G:C8	47:Y1:2:SER:N	2.89	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	0.41
49:Y3:37:LEU:HD12	49:Y3:43:ILE:CG2	2.50	0.41
50:Y4:61:ARG:C	50:Y4:63:TYR:N	2.73	0.41
25:YA:1376:C:H2'	25:YA:1377:G:C8	2.56	0.41
25:YA:1387:C:C2	25:YA:1388:G:C8	3.09	0.41
25:YA:2256:G:C6	25:YA:2257:U:C4	3.09	0.41
25:YA:2404:C:O3'	35:YP:77:ARG:NH2	2.54	0.41
25:YA:2406:U:C4	35:YP:72:PRO:HB2	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2468:G:H5''	36:YQ:120:ILE:CD1	2.51	0.41
25:YA:271(B):G:O2'	25:YA:271(C):U:OP2	2.28	0.41
25:YA:2723:C:H5''	37:YR:1:MET:CB	2.50	0.41
25:YA:653:A:H4'	25:YA:654:A:OP1	2.20	0.41
25:YA:658:C:H2'	25:YA:659:C:H6	1.85	0.41
25:YA:707:G:H2'	25:YA:708:C:O4'	2.20	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
27:YD:134:ARG:HG3	27:YD:134:ARG:H	1.55	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.41
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.54	0.41
38:YS:66:ALA:HA	38:YS:69:VAL:CG1	2.51	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.41
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.20	0.41
42:YW:68:ARG:O	42:YW:110:LYS:N	2.46	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
44:YY:95:LYS:CD	44:YY:95:LYS:H	2.33	0.41
45:YZ:79:ARG:C	45:YZ:81:ARG:H	2.24	0.41
1:QA:1137:C:O2'	1:QA:1138:G:H5''	2.20	0.41
1:QA:118:U:O4	1:QA:288:A:H2'	2.21	0.41
1:QA:430:A:OP1	4:QD:9:CYS:HB2	2.21	0.41
1:QA:618:C:N3	1:QA:622:A:N6	2.68	0.41
1:QA:665:A:H2'	1:QA:725:G:N2	2.35	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
5:QE:68:GLU:CG	5:QE:68:GLU:O	2.68	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.02	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.24	0.41
18:QR:84:LYS:HG2	18:QR:84:LYS:H	1.57	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.85	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.41
22:QV:16:C:O2'	22:QV:17:C:OP1	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
54:R8:26:LYS:HD3	54:R8:26:LYS:HA	1.86	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
25:RA:1711:C:H2'	25:RA:1712:C:C6	2.55	0.41
25:RA:528:A:H2	25:RA:2043:C:C5'	2.34	0.41
25:RA:2199:A:C2	25:RA:2205:C:H1'	2.55	0.41
25:RA:227:A:HO2'	25:RA:228:A:P	2.41	0.41
25:RA:2528:U:H2'	25:RA:2530:A:O5'	2.20	0.41
25:RA:2534:A:C5	25:RA:2535:G:C8	3.08	0.41
25:RA:2844:G:H3'	25:RA:2845:G:C8	2.55	0.41
25:RA:345:A:H5''	25:RA:346:A:OP1	2.21	0.41
25:RA:564:C:H2'	25:RA:565:C:O4'	2.20	0.41
25:RA:948:G:H2'	25:RA:949:C:C6	2.56	0.41
26:RB:79:C:H2'	26:RB:80:U:O4'	2.21	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	0.41
30:RG:47:LYS:HE3	30:RG:47:LYS:HB2	1.80	0.41
34:RO:2:ILE:HG12	34:RO:8:LEU:HD11	2.02	0.41
35:RP:101:VAL:HG23	35:RP:106:LEU:HB3	2.03	0.41
36:RQ:132:VAL:HG11	45:RZ:81:ARG:CZ	2.50	0.41
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CG	2.51	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	0.41
38:RS:53:SER:HA	38:RS:56:LEU:CD2	2.50	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
42:RW:29:LEU:C	42:RW:29:LEU:HD23	2.41	0.41
42:RW:96:ILE:O	42:RW:96:ILE:CG2	2.68	0.41
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
45:RZ:122:ARG:HA	45:RZ:122:ARG:HD2	1.84	0.41
45:RZ:27:VAL:CG2	45:RZ:28:MET:H	2.31	0.41
1:XA:1167:A:OP1	1:XA:1167:A:H8	2.04	0.41
1:XA:294:U:H2'	1:XA:295:C:H6	1.85	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.44	0.41
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.20	0.41
4:XD:26:CYS:HA	4:XD:31:CYS:HA	2.03	0.41
5:XE:10:MET:CE	5:XE:13:ILE:HD13	2.51	0.41
7:XG:103:TRP:O	7:XG:104:LEU:C	2.59	0.41
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.86	0.41
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.70	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.35	0.41
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.21	0.41
50:Y4:4:GLY:O	50:Y4:5:ILE:C	2.59	0.41
52:Y6:27:LYS:CB	52:Y6:27:LYS:NZ	2.73	0.41
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.51	0.41
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
25:YA:1022:G:H4'	25:YA:1023:U:H5'	2.03	0.41
25:YA:1322:A:OP1	42:YW:11:ARG:HG3	2.21	0.41
25:YA:1354:A:H2'	25:YA:1355:G:O4'	2.21	0.41
25:YA:1609:A:C6	25:YA:1616:A:C5	3.09	0.41
25:YA:1681:G:H8	25:YA:1681:G:OP2	2.04	0.41
25:YA:1799:G:H5'	25:YA:1819:A:H61	1.84	0.41
25:YA:1855:G:H2'	25:YA:1856:G:O4'	2.20	0.41
25:YA:1895:C:H2'	25:YA:1896:G:O4'	2.20	0.41
25:YA:18:C:O2'	25:YA:553:U:H5''	2.20	0.41
22:XV:12:G:H4'	25:YA:1908:C:O2	2.20	0.41
25:YA:1833:U:O2'	25:YA:1969:A:N1	2.40	0.41
25:YA:2378:A:C5	25:YA:2379:G:H1'	2.56	0.41
25:YA:2544:G:H8	25:YA:2544:G:O5'	2.04	0.41
25:YA:265:A:N6	25:YA:428:A:C8	2.89	0.41
25:YA:465:G:H21	25:YA:684:G:H1'	1.85	0.41
27:YD:197:GLY:O	27:YD:198:ASN:HB3	2.21	0.41
27:YD:215:LEU:HG	27:YD:215:LEU:H	1.59	0.41
27:YD:240:ALA:HA	27:YD:241:PRO:HD2	1.85	0.41
28:YE:36:ARG:O	28:YE:37:ARG:C	2.59	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
31:YH:86:GLU:HG3	31:YH:165:ALA:CA	2.49	0.41
32:YI:132:PRO:O	32:YI:133:HIS:C	2.59	0.41
32:YI:74:ASN:N	32:YI:74:ASN:ND2	2.61	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.50	0.41
35:YP:12:ALA:C	35:YP:14:LYS:N	2.72	0.41
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.41
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
40:YU:92:ARG:O	40:YU:92:ARG:CG	2.54	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	0.41
25:YA:65:C:H5'	43:YX:71:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.41
1:QA:1030:C:H2'	1:QA:1031:G:O4'	2.21	0.41
1:QA:1301:U:H3'	1:QA:1302:U:C5'	2.51	0.41
1:QA:419:C:H42	1:QA:424:G:H1	1.68	0.41
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.86	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
3:QC:55:VAL:O	3:QC:55:VAL:HG12	2.21	0.41
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	0.41
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.41
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.41
10:QJ:8:LEU:HD11	10:QJ:23:ILE:CD1	2.37	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.41	0.41
1:QA:191(F):U:C2	20:QT:105:SER:HB2	2.55	0.41
23:QX:4:C:O2	23:QX:4:C:H2'	2.19	0.41
47:R1:18:ILE:HG22	47:R1:18:ILE:O	2.21	0.41
48:R2:18:PRO:C	48:R2:20:GLU:N	2.73	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.35	0.41
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.41
25:RA:1002:G:C6	25:RA:1003:G:C5	3.09	0.41
25:RA:141:A:C8	25:RA:1408:C:H1'	2.55	0.41
25:RA:1430:C:N3	25:RA:1431:U:C4	2.89	0.41
25:RA:1543:A:C2	25:RA:1545:A:N9	2.88	0.41
25:RA:1889:A:C6	25:RA:1890:A:C6	3.08	0.41
25:RA:2037:G:C6	25:RA:2038:G:C6	3.08	0.41
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.56	0.41
25:RA:2472:G:H2'	25:RA:2475:C:H42	1.85	0.41
25:RA:269:U:C4	25:RA:270(Z):U:C2	3.09	0.41
25:RA:2758:A:H2'	25:RA:2759:G:O4'	2.19	0.41
25:RA:544:C:H2'	25:RA:545:G:O4'	2.21	0.41
25:RA:67:U:H3	25:RA:74:A:H2	1.64	0.41
25:RA:83:G:O2'	25:RA:84:A:P	2.79	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:RD:197:GLY:O	27:RD:198:ASN:HB3	2.21	0.41
25:RA:1657:C:O2'	28:RE:133:LYS:HD2	2.21	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.41
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	0.41
31:RH:45:VAL:O	31:RH:45:VAL:CG1	2.69	0.41
32:RI:123:LEU:HA	32:RI:142:VAL:HG21	2.02	0.41
33:RN:56:ASN:ND2	33:RN:126:PRO:N	2.69	0.41
34:RO:10:VAL:HG21	34:RO:16:ALA:HB3	2.03	0.41
34:RO:48:PRO:O	34:RO:50:GLY:N	2.54	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
44:RY:86:ARG:HA	44:RY:86:ARG:HD2	1.91	0.41
1:XA:1316:G:H2'	1:XA:1318:A:OP2	2.21	0.41
1:XA:181:G:HO2'	1:XA:182:U:H6	1.68	0.41
1:XA:707:C:H2'	1:XA:708:C:C6	2.56	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
4:XD:15:GLU:OE1	4:XD:15:GLU:N	2.54	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	0.41
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.41
12:XL:90:VAL:HG12	12:XL:92:ASP:H	1.85	0.41
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.41
14:XN:40:CYS:N	14:XN:43:CYS:SG	2.87	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:64:GLU:C	50:Y4:55:ARG:HH12	2.24	0.41
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
22:XV:23:C:H2'	22:XV:24:U:C6	2.55	0.41
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.55	0.41
53:Y7:24:THR:HB	53:Y7:25:PRO:HD2	2.03	0.41
25:YA:1210:A:C5'	25:YA:1210:A:H8	2.34	0.41
25:YA:1301:A:O3'	25:YA:1302:A:H2'	2.21	0.41
25:YA:1509:C:H3'	25:YA:1510:A:C5'	2.49	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2145:C:H2'	25:YA:2147:G:N2	2.36	0.41
25:YA:2313:C:H2'	25:YA:2314:C:C6	2.56	0.41
25:YA:2366:A:C6	25:YA:2367:G:C4	3.09	0.41
25:YA:2394:C:H2'	25:YA:2395:C:C6	2.56	0.41
25:YA:2790:A:C2	25:YA:2791:C:H2'	2.55	0.41
25:YA:2821:A:H2'	25:YA:2822:G:O4'	2.21	0.41
25:YA:2852:G:C6	25:YA:2853:C:C4	3.08	0.41
25:YA:2870:C:C5'	37:YR:65:LEU:HD21	2.51	0.41
25:YA:738:G:C2	25:YA:759:G:C5	3.08	0.41
28:YE:11:MET:HE3	28:YE:186:GLY:HA2	2.03	0.41
13:XM:8:GLU:CD	30:YG:115:ARG:NH2	2.68	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
32:YI:79:ILE:CB	32:YI:142:VAL:HA	2.42	0.41
25:YA:995:C:N4	33:YN:2:LYS:HG3	2.35	0.41
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.43	0.41
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
35:YP:18:ARG:HD2	35:YP:27:HIS:CD2	2.55	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
25:YA:2318:G:C2	38:YS:2:ALA:HA	2.56	0.41
40:YU:57:PHE:O	40:YU:60:LEU:N	2.54	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.21	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
45:YZ:108:PRO:HB2	45:YZ:112:ARG:CB	2.42	0.41
1:QA:1036:G:H3'	1:QA:1037:C:C6	2.56	0.41
1:QA:1043:C:H2'	1:QA:1044:A:H8	1.86	0.41
1:QA:1189:C:H5''	3:QC:5:ILE:HG21	2.03	0.41
1:QA:1238:A:N7	1:QA:1303:C:H1'	2.36	0.41
1:QA:57:G:H2'	1:QA:58:C:O4'	2.21	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
3:QC:140:ARG:NH1	3:QC:140:ARG:HB2	2.36	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
3:QC:95:THR:HG23	3:QC:97:LYS:HZ1	1.86	0.41
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.41
46:R0:36:ILE:HA	46:R0:60:PHE:CB	2.51	0.41
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:R4:63:TYR:O	50:R4:65:ASP:N	2.54	0.41
25:RA:2344:U:OP1	52:R6:38:LYS:HD3	2.20	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.21	0.41
25:RA:1165:U:H2'	25:RA:1166:C:C6	2.55	0.41
25:RA:1443:G:H1	25:RA:1548:C:H42	1.68	0.41
25:RA:14:A:H5''	25:RA:15:G:OP2	2.20	0.41
25:RA:216:A:C8	25:RA:432:A:C6	3.09	0.41
25:RA:2585:U:HO2'	25:RA:2586:C:P	2.44	0.41
25:RA:238:C:H42	25:RA:259:G:H1	1.68	0.41
25:RA:2848:G:OP2	39:RT:96:ARG:HG3	2.19	0.41
25:RA:2867:G:HO2'	25:RA:2868:A:H8	1.67	0.41
25:RA:365:C:H2'	25:RA:366:C:O4'	2.21	0.41
25:RA:425:G:N1	25:RA:426:C:C4	2.89	0.41
25:RA:57:C:H6	25:RA:57:C:O5'	2.04	0.41
25:RA:631:A:H61	25:RA:2402:C:N4	2.18	0.41
25:RA:706:A:H2'	25:RA:707:G:O4'	2.21	0.41
26:RB:10:C:C4	26:RB:11:C:C5	3.08	0.41
26:RB:16:G:H1	26:RB:68:C:H42	1.68	0.41
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.41
27:RD:177:LEU:C	27:RD:179:SER:H	2.23	0.41
25:RA:729:G:N7	27:RD:209:ALA:HB3	2.36	0.41
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41
30:RG:95:ARG:HA	30:RG:99:MET:HB3	2.03	0.41
30:RG:95:ARG:CA	30:RG:99:MET:HB3	2.50	0.41
33:RN:58:ASP:HB3	33:RN:95:PRO:HB3	2.02	0.41
38:RS:106:ARG:CZ	38:RS:106:ARG:HB2	2.49	0.41
39:RT:39:ARG:HG2	39:RT:40:THR:N	2.25	0.41
40:RU:27:LEU:C	40:RU:29:SER:N	2.73	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	0.41
40:RU:57:PHE:O	40:RU:60:LEU:N	2.54	0.41
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
45:RZ:72:ARG:O	45:RZ:72:ARG:HG2	2.21	0.41
1:XA:1301:U:HO2'	1:XA:1302:U:P	2.44	0.41
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.56	0.41
1:XA:321:A:C2	1:XA:333:G:C2	3.08	0.41
1:XA:411:A:C8	1:XA:413:G:H1'	2.55	0.41
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.49	0.41
1:XA:637:G:H2'	1:XA:638:G:C8	2.56	0.41
1:XA:73:G:H2'	1:XA:74:C:C6	2.56	0.41
1:XA:767:A:H2'	1:XA:768:A:O4'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:926:G:C6	1:XA:1505:G:C6	3.09	0.41
2:XB:37:ASN:C	2:XB:39:ILE:N	2.73	0.41
2:XB:75:LYS:C	2:XB:77:ALA:H	2.25	0.41
8:XH:109:ILE:HG13	8:XH:120:THR:HB	2.03	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	0.41
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:H	1.85	0.41
48:Y2:41:ILE:HD12	48:Y2:43:GLN:N	2.35	0.41
52:Y6:6:ARG:NE	52:Y6:6:ARG:HA	2.35	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.21	0.41
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.41
25:YA:1011:G:H4'	25:YA:1012:U:OP1	2.20	0.41
25:YA:1212:G:H1'	25:YA:1237:A:N6	2.36	0.41
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.50	0.41
25:YA:1506:C:H3'	25:YA:1507:A:H5''	2.02	0.41
25:YA:1766:U:H2'	25:YA:1767:C:H6	1.85	0.41
25:YA:1776:G:H2'	25:YA:1776:G:N3	2.36	0.41
25:YA:2317:C:C2'	25:YA:2318:G:H5'	2.51	0.41
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.21	0.41
25:YA:2530:A:OP1	25:YA:2535:G:N2	2.54	0.41
25:YA:2623:G:OP1	25:YA:2826:A:H1'	2.21	0.41
25:YA:2850:A:C2	25:YA:2851:A:C4	3.09	0.41
25:YA:467:G:OP1	53:Y7:33:ARG:NH1	2.54	0.41
25:YA:2729:G:C1'	28:YE:187:ALA:HB2	2.44	0.41
28:YE:62:PRO:O	28:YE:63:LEU:C	2.59	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.41
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41
32:YI:32:PRO:C	32:YI:34:GLY:H	2.24	0.41
34:YO:31:LYS:HD3	34:YO:31:LYS:HA	1.92	0.41
25:YA:2495:G:H5''	36:YQ:81:VAL:CG1	2.50	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
41:YV:38:LEU:CD1	41:YV:55:ALA:CB	2.98	0.41
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.41
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.23	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
44:YY:95:LYS:HZ1	44:YY:95:LYS:HB2	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:YZ:72:ARG:NH2	45:YZ:97:GLU:O	2.54	0.41
1:QA:177:C:H2'	1:QA:178:C:H6	1.84	0.41
1:QA:866:C:C4	1:QA:867:G:H1'	2.56	0.41
1:QA:908:A:H2'	1:QA:909:A:H8	1.85	0.41
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.41
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.03	0.41
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.86	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.41
16:QP:50:LYS:C	16:QP:50:LYS:HD3	2.42	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.41
17:QQ:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.41
48:R2:65:ASN:O	48:R2:66:GLU:C	2.59	0.41
50:R4:26:SER:O	50:R4:27:THR:O	2.39	0.41
30:RG:143:GLU:C	50:R4:28:LYS:HZ2	2.24	0.41
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.53	0.41
25:RA:1006:C:H1'	33:RN:106:MET:HE3	2.02	0.41
25:RA:118:A:OP2	25:RA:119:A:H5''	2.21	0.41
25:RA:121:G:H5''	25:RA:149:A:O4'	2.21	0.41
25:RA:1338:G:N7	43:RX:62:LYS:NZ	2.63	0.41
25:RA:1418:G:N1	25:RA:1579:A:OP2	2.44	0.41
25:RA:1906:G:C2	25:RA:1907:G:C8	3.08	0.41
25:RA:2093:G:N3	25:RA:2198:A:N6	2.69	0.41
25:RA:2314:C:H2'	25:RA:2315:G:H8	1.86	0.41
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.21	0.41
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.20	0.41
25:RA:2543:G:H21	25:RA:2646:C:H5''	1.86	0.41
25:RA:27:G:N2	25:RA:512:G:O2'	2.54	0.41
25:RA:35:G:H1'	25:RA:454:A:C4	2.56	0.41
25:RA:623:G:H2'	25:RA:624:C:C6	2.56	0.41
25:RA:918:A:C6	25:RA:919:G:H1'	2.56	0.41
27:RD:154:LYS:C	27:RD:155:LEU:HD12	2.41	0.41
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41
25:RA:1824:G:OP1	27:RD:52:ARG:HD3	2.21	0.41
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
28:RE:92:THR:HB	28:RE:93:VAL:H	1.57	0.41
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	0.41
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	0.41
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	0.41
36:RQ:27:VAL:HG22	36:RQ:105:GLU:CD	2.41	0.41
40:RU:83:LEU:CD1	40:RU:113:ALA:HB2	2.50	0.41
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.41
45:RZ:24:LEU:HD11	45:RZ:86:VAL:CG2	2.40	0.41
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.51	0.41
1:XA:1316:G:H5''	14:YN:17:LYS:HE3	2.03	0.41
1:XA:1474:G:O2'	25:YA:1701:A:H2	2.03	0.41
1:XA:24:U:H2'	1:XA:25:C:C6	2.56	0.41
1:XA:302:G:O3'	12:XL:17:LYS:HE2	2.21	0.41
1:XA:588:G:C6	1:XA:589:C:N4	2.89	0.41
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.21	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.41
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.41
9:XI:105:ASP:C	9:XI:107:ARG:N	2.74	0.41
9:XI:83:ARG:HG2	9:XI:83:ARG:H	1.64	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41
12:XL:62:SER:O	12:XL:64:TYR:N	2.54	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
14:YN:48:ALA:O	14:YN:51:GLY:N	2.53	0.41
15:XO:69:TYR:CZ	15:XO:73:GLU:HG3	2.56	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.21	0.41
1:XA:191:G:O2'	20:XT:101:GLY:O	2.38	0.41
46:Y0:40:GLN:NE2	46:Y0:43:THR:HA	2.36	0.41
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	0.41
50:Y4:26:SER:C	50:Y4:27:THR:O	2.58	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.37	0.41
25:YA:1717:G:H1	25:YA:1742:C:H42	1.69	0.41
25:YA:1793:C:H2'	25:YA:1794:U:C6	2.55	0.41
25:YA:1906:G:C2	25:YA:1907:G:C8	3.08	0.41
25:YA:2100:G:N3	25:YA:2100:G:H2'	2.36	0.41
25:YA:2390:U:O2'	25:YA:2391:G:H5'	2.21	0.41
25:YA:28:A:C2	25:YA:513:A:C8	3.09	0.41
25:YA:643:A:C2	25:YA:644:A:C4	3.08	0.41
25:YA:760:G:H2'	25:YA:761:A:O4'	2.21	0.41
28:YE:101:ARG:C	28:YE:201:THR:OG1	2.58	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.41
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.41
33:YN:101:HIS:HD2	33:YN:102:ALA:N	2.19	0.41
33:YN:9:VAL:HB	33:YN:10:GLU:H	1.70	0.41
38:YS:89:ARG:HG2	38:YS:89:ARG:NH1	2.36	0.41
40:YU:76:TYR:O	40:YU:80:ILE:HG12	2.21	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
33:YN:1:MET:HE3	40:YU:95:LEU:HD21	1.98	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
44:YY:42:VAL:HG21	44:YY:67:LEU:CD1	2.51	0.41
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.41
1:QA:130:A:N3	1:QA:263:A:O2'	2.49	0.41
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.41
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.41
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.48	0.41
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.20	0.41
10:QJ:84:GLN:HG3	10:QJ:84:GLN:H	1.50	0.41
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.49	0.41
17:QQ:60:ILE:HG23	17:QQ:60:ILE:O	2.21	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
25:RA:2396:G:H4'	47:R1:30:VAL:HA	2.02	0.41
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.41
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.56	0.41
54:R8:32:LEU:HA	54:R8:32:LEU:HD23	1.94	0.41
25:RA:1466:G:H2'	25:RA:1547:C:H41	1.86	0.41
25:RA:1638:C:H5''	25:RA:2710:C:O2'	2.20	0.41
25:RA:1826:G:OP1	27:RD:224:ALA:N	2.43	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:2511:U:O2	28:RE:140:SER:N	2.53	0.41
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.21	0.41
25:RA:373:U:H2'	25:RA:374:A:C8	2.56	0.41
25:RA:681:G:H2'	25:RA:682:G:O4'	2.20	0.41
26:RB:37:C:C4	26:RB:38:C:C4	3.09	0.41
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.35	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.41
29:RF:80:ALA:O	29:RF:83:PHE:HB2	2.20	0.41
13:QM:8:GLU:OE2	30:RG:115:ARG:CZ	2.69	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.51	0.41
32:RI:82:ARG:HD3	32:RI:82:ARG:HA	1.77	0.41
33:RN:10:GLU:OE2	33:RN:11:PRO:HD2	2.21	0.41
25:RA:1012:U:O2	33:RN:25:ARG:NH1	2.54	0.41
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.41
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
37:RR:22:ARG:O	37:RR:26:LYS:HG3	2.21	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
25:RA:2873:A:N3	37:RR:5:LYS:HA	2.36	0.41
37:RR:94:TYR:CD2	37:RR:94:TYR:N	2.87	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
39:RT:84:GLN:HG2	39:RT:85:LYS:N	2.36	0.41
42:RW:14:PRO:C	42:RW:18:ARG:HD2	2.41	0.41
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.41
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.41
45:RZ:108:PRO:O	45:RZ:110:GLY:N	2.45	0.41
45:RZ:10:ARG:O	45:RZ:36:LYS:HB2	2.21	0.41
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.56	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
4:XD:12:CYS:O	4:XD:33:MET:HG3	2.21	0.41
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.41
5:XE:75:THR:CG2	5:XE:76:ILE:N	2.80	0.41
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.21	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
14:XN:47:LEU:O	14:XN:50:LYS:N	2.52	0.41
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.41
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.60	0.41
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.21	0.41
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.62	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.41
1:XA:1327:C:P	21:XU:12:LYS:HZ1	2.40	0.41
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.41
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.41
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.53	0.41
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.46	0.41
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
25:YA:1395:A:C6	25:YA:1398:C:C2	3.09	0.41
25:YA:1790:C:H2'	25:YA:1791:A:C5	2.56	0.41
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.31	0.41
25:YA:1659:U:C2	25:YA:2002:G:N2	2.89	0.41
25:YA:2287:A:N1	25:YA:2289:G:H1'	2.35	0.41
25:YA:2408:U:H6	25:YA:2408:U:O5'	2.04	0.41
25:YA:2619:C:H2'	25:YA:2620:C:C6	2.56	0.41
25:YA:611:C:H2'	25:YA:612:G:H8	1.85	0.41
25:YA:741:G:C6	25:YA:757:U:O2	2.74	0.41
25:YA:78:A:H2'	25:YA:79:G:H8	1.85	0.41
25:YA:888:C:H3'	25:YA:889:C:C4'	2.49	0.41
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.41
27:YD:68:LYS:HG3	27:YD:68:LYS:O	2.20	0.41
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41
30:YG:18:GLU:OE2	30:YG:18:GLU:HA	2.21	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.41
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.41
32:YI:10:GLU:O	32:YI:11:ASN:HB3	2.21	0.41
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.80	0.41
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.36	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.21	0.41
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.41
39:YT:10:VAL:O	39:YT:11:GLU:C	2.59	0.41
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.41
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.84	0.41
45:YZ:72:ARG:HG2	45:YZ:72:ARG:O	2.21	0.41
1:QA:1276:G:H2'	1:QA:1277:C:C6	2.56	0.40
1:QA:24:U:H2'	1:QA:25:C:H6	1.86	0.40
1:QA:256:U:H3	1:QA:270:A:H61	1.69	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:391:G:C6	1:QA:392:G:C5	3.09	0.40
1:QA:452:A:C6	1:QA:453:A:C6	3.09	0.40
1:QA:502:G:C6	1:QA:503:C:C4	3.09	0.40
1:QA:692:U:O2'	1:QA:694:A:N7	2.41	0.40
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.40
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.40
4:QD:172:PRO:HG2	6:XF:24:GLU:OE1	2.21	0.40
5:QE:41:VAL:O	5:QE:66:MET:HA	2.22	0.40
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.40
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.44	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.01	0.40
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
25:RA:855:G:O2'	46:R0:27:GLU:OE2	2.39	0.40
46:R0:55:ARG:NH1	46:R0:55:ARG:HG3	2.35	0.40
46:R0:5:LYS:HG2	46:R0:6:GLY:H	1.86	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	0.40
48:R2:32:LEU:HD23	48:R2:32:LEU:O	2.21	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
54:R8:3:LYS:HB3	54:R8:3:LYS:HE2	1.83	0.40
25:RA:1570:A:C6	25:RA:1571:A:C6	3.09	0.40
25:RA:1992:G:O5'	25:RA:1992:G:C8	2.74	0.40
25:RA:2255:G:H1	25:RA:2275:C:H42	1.68	0.40
25:RA:2291:U:OP1	25:RA:2380:C:O2'	2.33	0.40
25:RA:2583:G:H3'	25:RA:2584:U:O2	2.20	0.40
25:RA:27:G:H22	25:RA:512:G:C2'	2.34	0.40
25:RA:482:A:OP2	25:RA:507:A:N6	2.39	0.40
25:RA:871:U:OP1	36:RQ:5:ARG:HG2	2.21	0.40
27:RD:147:LEU:CD1	27:RD:155:LEU:HD21	2.51	0.40
32:RI:27:ARG:HB3	47:R1:71:TYR:CE1	2.56	0.40
34:RO:92:GLU:O	34:RO:93:PRO:C	2.58	0.40
35:RP:55:ARG:NH2	35:RP:55:ARG:HG2	2.36	0.40
35:RP:66:GLY:O	35:RP:67:MET:CB	2.63	0.40
35:RP:84:ASN:HB2	35:RP:87:ASP:OD2	2.22	0.40
36:RQ:52:VAL:O	36:RQ:53:ALA:C	2.59	0.40
36:RQ:76:LYS:HB3	36:RQ:90:VAL:CG1	2.51	0.40
25:RA:2723:C:H4'	37:RR:1:MET:HE2	2.02	0.40
42:RW:88:ARG:HD2	42:RW:88:ARG:HA	1.92	0.40
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.85	0.40
45:RZ:111:VAL:HG23	45:RZ:115:GLY:O	2.21	0.40
45:RZ:82:ARG:HG3	45:RZ:83:PRO:CD	2.50	0.40
1:XA:1064:G:C8	1:XA:1066:C:C2	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:135:C:H2'	1:XA:136:C:H5'	2.02	0.40
1:XA:295:C:H2'	1:XA:296:U:C6	2.56	0.40
1:XA:321:A:N6	1:XA:332:G:H1	2.19	0.40
1:XA:410:G:C8	1:XA:410:G:H3'	2.56	0.40
1:XA:57:G:H2'	1:XA:58:C:C6	2.56	0.40
1:XA:791:G:C6	1:XA:792:A:N1	2.89	0.40
2:XB:125:PRO:O	2:XB:126:GLU:HB2	2.21	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.20	0.40
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.40
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.35	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.40
1:XA:1232:U:P	9:XI:124:GLN:HE21	2.43	0.40
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.40
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.40
12:XL:10:LEU:CD1	17:XQ:32:TYR:CD2	3.03	0.40
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.40
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.40
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.90	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
22:XV:16:C:O2'	22:XV:17:C:OP1	2.39	0.40
32:YI:27:ARG:HB3	47:Y1:71:TYR:CE1	2.57	0.40
13:XM:65:LYS:HE3	50:Y4:50:VAL:HG11	2.03	0.40
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.40
25:YA:1166:C:H2'	25:YA:1167:U:H6	1.86	0.40
25:YA:1446:C:N4	25:YA:1465:G:H1	2.17	0.40
25:YA:1655:A:O2'	28:YE:115:GLY:HA2	2.22	0.40
25:YA:1690:A:H2'	25:YA:1691:C:O4'	2.21	0.40
25:YA:1729:A:N6	25:YA:1731:G:C2	2.88	0.40
25:YA:1872:A:H5'	25:YA:1878:G:OP2	2.21	0.40
25:YA:1659:U:O2'	25:YA:2712(A):A:N1	2.47	0.40
25:YA:638:G:H2'	25:YA:639:U:O4'	2.20	0.40
29:YF:62:ARG:CZ	29:YF:62:ARG:HB3	2.52	0.40
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.56	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	0.40
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.40
32:YI:93:THR:O	32:YI:97:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
38:YS:102:ALA:C	38:YS:104:GLY:N	2.73	0.40
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.87	0.40
40:YU:57:PHE:O	40:YU:58:ARG:C	2.59	0.40
1:QA:259:G:H1	1:QA:267:C:N4	2.19	0.40
1:QA:282:A:C8	1:QA:283:C:C5	3.10	0.40
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.38	0.40
1:QA:467:G:C6	1:QA:468:A:C5	3.09	0.40
1:QA:864:A:H2'	1:QA:865:A:C8	2.55	0.40
2:QB:132:LYS:HA	2:QB:135:GLN:CG	2.51	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40
3:QC:178:LEU:CD2	3:QC:178:LEU:N	2.85	0.40
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.40
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.40
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
14:QN:26:ARG:CD	14:QN:47:LEU:HD21	2.52	0.40
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.40
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.60	0.40
19:QS:10:PHE:CD2	19:QS:11:VAL:N	2.89	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
19:QS:5:LEU:CD2	50:R4:66:SER:HB2	2.51	0.40
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.36	0.40
54:R8:53:PRO:HD2	54:R8:54:GLU:H	1.84	0.40
25:RA:1419:A:H61	25:RA:1494:A:H61	1.70	0.40
25:RA:1688:U:O2	25:RA:1700:A:H5''	2.20	0.40
25:RA:1688:U:O2	25:RA:1700:A:H8	2.05	0.40
25:RA:1771:C:O2'	25:RA:1786:A:C8	2.73	0.40
25:RA:1845:G:N2	25:RA:1846:G:H1'	2.36	0.40
25:RA:195:A:H61	25:RA:198:C:H3'	1.86	0.40
25:RA:2210:G:H5'	25:RA:2211:G:C5	2.56	0.40
25:RA:2326:C:H6	25:RA:2326:C:O5'	2.04	0.40
25:RA:2740:A:N6	25:RA:2763:G:O2'	2.55	0.40
27:RD:145:VAL:CG1	27:RD:146:GLU:N	2.84	0.40
28:RE:5:LEU:O	28:RE:28:ALA:HA	2.22	0.40
29:RF:128:ALA:O	29:RF:129:PHE:CB	2.67	0.40
29:RF:144:LYS:C	29:RF:146:ALA:N	2.75	0.40
29:RF:68:LYS:O	29:RF:69:HIS:HB2	2.21	0.40
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RN:137:LYS:HD2	33:RN:137:LYS:HA	1.89	0.40
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.40
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.40
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.40
38:RS:12:PHE:HD2	38:RS:12:PHE:HA	1.80	0.40
38:RS:42:ASP:O	38:RS:43:GLU:CB	2.62	0.40
38:RS:6:ALA:O	38:RS:10:ARG:HD3	2.22	0.40
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
1:XA:1162:C:O2'	1:XA:1163:C:O4'	2.39	0.40
1:XA:1418:A:C2	1:XA:1483:A:C2	3.09	0.40
1:XA:187:C:H2'	1:XA:188:U:O4'	2.22	0.40
1:XA:474:G:H2'	1:XA:475:G:C8	2.56	0.40
1:XA:498:A:N1	1:XA:546:G:O2'	2.45	0.40
1:XA:575:G:C5	1:XA:881:G:C2	3.10	0.40
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.21	0.40
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD21	2.21	0.40
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.40
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.20	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.51	0.40
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.40
46:Y0:19:LYS:HA	46:Y0:19:LYS:HD3	1.68	0.40
46:Y0:68:GLU:CG	46:Y0:80:HIS:HB2	2.50	0.40
47:Y1:94:LEU:HA	47:Y1:94:LEU:HD23	1.81	0.40
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.70	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.56	0.40
50:Y4:49:PHE:HD1	50:Y4:49:PHE:N	2.17	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
25:YA:1638:C:OP1	25:YA:2710:C:O2'	2.39	0.40
25:YA:2262:U:H2'	25:YA:2263:C:C6	2.57	0.40
25:YA:2345:G:H4'	25:YA:2346:A:O5'	2.21	0.40
25:YA:273(A):G:C2	25:YA:364:C:C2	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YA:2867:G:O2'	25:YA:2868:A:H8	2.04	0.40
25:YA:407:G:H2'	25:YA:408:G:C8	2.57	0.40
25:YA:686:G:H8	53:Y7:6:GLN:O	2.04	0.40
25:YA:716:A:C2	25:YA:717:G:H1'	2.57	0.40
25:YA:724:U:H2'	25:YA:725:G:O4'	2.22	0.40
25:YA:780:G:N2	25:YA:783:A:H62	2.12	0.40
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.40
32:YI:121:LYS:HB2	32:YI:121:LYS:HE3	1.79	0.40
32:YI:82:ARG:HA	32:YI:82:ARG:HD3	1.77	0.40
32:YI:94:ALA:O	32:YI:96:ASP:N	2.54	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
34:YO:106:LEU:HA	34:YO:106:LEU:HD23	1.88	0.40
34:YO:86:ILE:CD1	34:YO:86:ILE:N	2.83	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.68	0.40
40:YU:5:LYS:C	40:YU:7:GLY:N	2.75	0.40
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.37	0.40
1:QA:127:G:C2	1:QA:128:G:C8	3.09	0.40
1:QA:1285:A:H4'	1:QA:1286:A:C5'	2.52	0.40
1:QA:1432:G:OP1	39:RT:107:ASP:HB2	2.21	0.40
1:QA:1531:A:C4'	1:QA:1531:A:C8	3.04	0.40
1:QA:421:U:H5''	1:QA:422:C:OP2	2.22	0.40
1:QA:661:G:H1	1:QA:744:C:N4	2.19	0.40
1:QA:709:G:H2'	1:QA:710:G:C8	2.56	0.40
1:QA:753:A:H4'	1:QA:754:C:O5'	2.21	0.40
1:QA:804:U:H5''	1:QA:805:C:OP2	2.21	0.40
1:QA:883:C:N3	1:QA:884:U:C4	2.89	0.40
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.40
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.51	0.40
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
4:QD:26:CYS:HA	4:QD:31:CYS:HA	2.03	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.40
5:QE:31:LEU:HD13	5:QE:43:LEU:HD11	2.04	0.40
10:QJ:22:LYS:CD	10:QJ:22:LYS:C	2.90	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.22	0.40
14:QN:9:LYS:HB3	14:QN:9:LYS:HE2	1.85	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
52:R6:7:ILE:CG1	52:R6:8:LYS:N	2.75	0.40
53:R7:5:TRP:HE1	53:R7:7:PRO:HG3	1.85	0.40
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
25:RA:1425:G:H2'	25:RA:1426:G:O4'	2.20	0.40
25:RA:1859:A:C2	25:RA:1884:A:H1'	2.57	0.40
25:RA:2145:C:H2'	25:RA:2147:G:N2	2.35	0.40
25:RA:2152:G:H2'	25:RA:2153:G:H8	1.86	0.40
25:RA:2252:G:H2'	25:RA:2253:G:O4'	2.22	0.40
25:RA:2337:G:H2'	25:RA:2337:G:N3	2.36	0.40
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.85	0.40
25:RA:2526:G:H5'	25:RA:2742:C:O2'	2.21	0.40
25:RA:568:U:O5'	25:RA:945:A:N6	2.54	0.40
25:RA:66:C:C4	25:RA:67:U:C4	3.10	0.40
25:RA:680:G:H2'	25:RA:681:G:C8	2.56	0.40
27:RD:176:ARG:CG	27:RD:176:ARG:HH11	2.30	0.40
27:RD:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
29:RF:62:ARG:HB3	29:RF:62:ARG:CZ	2.52	0.40
29:RF:64:ILE:HD12	29:RF:64:ILE:HA	1.89	0.40
26:RB:45:A:H1'	30:RG:95:ARG:HH22	1.86	0.40
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.40
33:RN:28:THR:O	33:RN:29:LYS:C	2.59	0.40
33:RN:5:VAL:HA	33:RN:6:PRO:HD3	1.94	0.40
34:RO:20:MET:O	34:RO:41:ALA:CB	2.67	0.40
34:RO:31:LYS:C	34:RO:32:TYR:CD2	2.95	0.40
35:RP:19:VAL:HG22	35:RP:21:ARG:N	2.36	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.85	0.40
36:RQ:139:GLU:HG2	36:RQ:140:ALA:N	2.37	0.40
37:RR:14:SER:HB2	37:RR:15:SER:H	1.72	0.40
37:RR:61:HIS:CE1	37:RR:65:LEU:HD11	2.56	0.40
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.40
25:RA:2020:A:OP1	40:RU:27:LEU:HD23	2.20	0.40
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.21	0.40
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
1:XA:247:G:O6	1:XA:278:G:C6	2.74	0.40
1:XA:453:A:C6	1:XA:454:C:C4	3.10	0.40
1:XA:558:G:H2'	1:XA:559:A:H2	1.86	0.40
1:XA:901:A:C5	1:XA:902:G:H1'	2.56	0.40
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
3:XC:178:LEU:CD2	3:XC:178:LEU:N	2.85	0.40
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
13:XM:54:VAL:HG12	13:XM:54:VAL:O	2.21	0.40
13:XM:56:LEU:HD13	13:XM:60:VAL:CG2	2.51	0.40
16:XP:39:TYR:CD2	16:XP:41:PRO:HD3	2.56	0.40
16:XP:50:LYS:C	16:XP:50:LYS:HD3	2.41	0.40
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.40
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.40
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.40
19:XS:29:ARG:NH1	19:XS:29:ARG:HG2	2.37	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.40
52:Y6:50:ARG:NH1	52:Y6:50:ARG:HG2	2.37	0.40
54:Y8:39:LYS:O	54:Y8:39:LYS:HD2	2.22	0.40
25:YA:1084:A:H5'	25:YA:1085:A:OP2	2.22	0.40
25:YA:1789:A:OP1	27:YD:221:VAL:HA	2.21	0.40
25:YA:2168:G:N3	25:YA:2168:G:H2'	2.35	0.40
25:YA:2359:C:H42	25:YA:2428:G:H1	1.69	0.40
25:YA:1128:A:O4'	25:YA:2516:G:O2'	2.39	0.40
25:YA:48:G:H22	25:YA:177:G:C5'	2.35	0.40
25:YA:723:G:H2'	25:YA:724:U:C6	2.57	0.40
25:YA:728:G:C2	25:YA:730:C:C2	3.09	0.40
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.40
28:YE:154:LYS:C	28:YE:154:LYS:HD3	2.42	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.23	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40
25:YA:38:A:H4'	29:YF:50:SER:HB2	2.02	0.40
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.50	0.40
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.21	0.40
32:YI:9:LEU:CD2	32:YI:12:LEU:O	2.69	0.40
34:YO:16:ALA:HA	34:YO:46:ALA:CB	2.50	0.40
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
42:YW:14:PRO:O	42:YW:15:ARG:C	2.58	0.40
43:YX:9:LEU:HA	48:Y2:36:ARG:HH21	1.86	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
1:QA:1157:A:H1'	1:QA:1158:C:N3	2.36	0.40
1:QA:132:C:H4'	1:QA:262:A:H1'	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1439:C:H42	1:QA:1462:G:H1	1.69	0.40
1:QA:1415:G:C4	1:QA:1486:G:C2	3.10	0.40
1:QA:437:U:H5''	4:QD:155:LEU:HD22	2.03	0.40
1:QA:532:A:N1	3:QC:156:ARG:NH1	2.68	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
2:QB:212:GLN:O	2:QB:212:GLN:NE2	2.54	0.40
3:QC:113:ALA:HB3	3:QC:114:PRO:CD	2.43	0.40
1:QA:403:C:H4'	4:QD:122:ARG:NH2	2.36	0.40
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.40
4:QD:19:LEU:HG	4:QD:21:LEU:HG	2.03	0.40
4:QD:25:ARG:C	4:QD:27:TYR:H	2.24	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
5:QE:48:ALA:C	5:QE:50:GLU:H	2.25	0.40
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
7:QG:140:ASP:C	7:QG:142:GLU:N	2.69	0.40
1:QA:1250:A:H4'	9:QI:68:GLY:O	2.21	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.40
16:QP:20:VAL:CG2	16:QP:32:TYR:CD2	3.04	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
49:R3:7:LYS:HG2	49:R3:7:LYS:O	2.19	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
52:R6:36:LEU:N	52:R6:36:LEU:HD23	2.37	0.40
52:R6:37:ARG:O	52:R6:48:VAL:O	2.39	0.40
54:R8:53:PRO:CG	54:R8:54:GLU:N	2.85	0.40
25:RA:1159:U:H2'	25:RA:1160:G:H8	1.85	0.40
25:RA:1252:G:H1'	40:RU:33:ARG:HD3	2.04	0.40
25:RA:135:G:H1	25:RA:144:C:N4	2.17	0.40
25:RA:1454:U:O2	37:RR:64:ARG:NE	2.45	0.40
25:RA:1751:C:H2'	25:RA:1752:C:H6	1.86	0.40
25:RA:1839:G:C8	25:RA:1927:A:H1'	2.56	0.40
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.87	0.40
25:RA:2120:G:H2'	25:RA:2121:G:C8	2.57	0.40
25:RA:315:G:H2'	25:RA:316:C:H6	1.85	0.40
25:RA:336:C:H5''	44:RY:6:HIS:CD2	2.56	0.40
25:RA:817:C:H2'	25:RA:818:G:O4'	2.21	0.40
25:RA:89:G:OP2	25:RA:90:U:O2'	2.28	0.40
25:RA:974:G:H1'	25:RA:975:G:N7	2.36	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:RG:41:GLN:HB3	30:RG:43:LEU:CD1	2.51	0.40
33:RN:101:HIS:HD2	33:RN:102:ALA:N	2.19	0.40
35:RP:65:ARG:O	35:RP:66:GLY:C	2.60	0.40
38:RS:52:SER:HB2	38:RS:55:ALA:HB3	2.04	0.40
38:RS:89:ARG:NH1	38:RS:89:ARG:HG2	2.36	0.40
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.56	0.40
45:RZ:108:PRO:C	45:RZ:110:GLY:N	2.75	0.40
45:RZ:154:ASP:O	45:RZ:157:LEU:CD1	2.68	0.40
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.55	0.40
1:XA:1297:C:HO2'	1:XA:1298:C:P	2.45	0.40
1:XA:328:C:H4'	1:XA:329:A:C5'	2.51	0.40
1:XA:598:U:H2'	1:XA:599:C:C6	2.56	0.40
1:XA:701:C:O2	1:XA:703:G:N1	2.54	0.40
1:XA:773:G:H2'	1:XA:774:G:O4'	2.21	0.40
1:XA:871:U:O2'	1:XA:872:A:H5''	2.22	0.40
1:XA:971:G:H22	1:XA:1363:A:P	2.39	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.52	0.40
2:XB:183:PRO:HA	2:XB:198:ASP:OD1	2.21	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
5:XE:48:ALA:C	5:XE:50:GLU:H	2.24	0.40
7:XG:46:ALA:O	7:XG:49:ILE:HB	2.21	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
17:XQ:68:ARG:HG3	17:XQ:68:ARG:O	2.22	0.40
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.40
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.33	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
25:YA:1284:A:C6	25:YA:1285:G:C2	3.10	0.40
25:YA:781:A:O2'	25:YA:1788:C:O2	2.39	0.40
25:YA:1817:G:C6	25:YA:1818:U:C5	3.09	0.40
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.87	0.40
25:YA:252:G:N2	25:YA:253:C:H1'	2.37	0.40
25:YA:2552:U:O5'	25:YA:2552:U:H6	2.04	0.40
25:YA:975:G:H1'	25:YA:990:A:C2	2.57	0.40
26:YB:49:C:H2'	26:YB:50:G:H8	1.85	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
32:YI:56:LYS:HG3	32:YI:57:ARG:N	2.36	0.40
33:YN:133:GLN:C	33:YN:134:ARG:HG2	2.41	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.87	0.40
34:YO:31:LYS:C	34:YO:32:TYR:CD2	2.95	0.40
35:YP:126:VAL:HG12	35:YP:147:LEU:CD2	2.23	0.40
35:YP:85:LEU:HD23	35:YP:85:LEU:HA	1.92	0.40
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.21	0.40
36:YQ:58:PHE:C	36:YQ:59:ARG:HD2	2.42	0.40
38:YS:83:LYS:HE3	38:YS:84:GLN:HG3	2.02	0.40
39:YT:20:PRO:HG2	39:YT:86:ILE:O	2.21	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
41:YV:70:ILE:HG22	41:YV:70:ILE:O	2.21	0.40
45:YZ:37:VAL:HG23	45:YZ:38:TYR:N	2.36	0.40
1:QA:1250:A:H2	1:QA:1353:G:N2	2.19	0.40
1:QA:1343:G:H1'	9:QI:121:ARG:HH12	1.87	0.40
1:QA:410:G:C2	1:QA:429:U:C2	3.10	0.40
1:QA:838:G:C2	1:QA:849:C:C2	3.10	0.40
2:QB:201:ILE:HG21	2:QB:214:ILE:HG21	2.03	0.40
3:QC:138:VAL:HG22	3:QC:151:VAL:HG23	2.03	0.40
3:QC:172:ARG:C	3:QC:173:VAL:HG23	2.42	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
4:QD:120:LEU:HA	4:QD:120:LEU:HD23	1.84	0.40
4:QD:12:CYS:O	4:QD:33:MET:HG3	2.21	0.40
4:QD:209:ARG:NE	4:QD:209:ARG:HA	2.36	0.40
6:QF:98:LEU:C	6:QF:98:LEU:HD12	2.41	0.40
6:QF:99:ALA:O	6:QF:100:ASN:CB	2.70	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
8:QH:100:ILE:HA	8:QH:101:PRO:HD3	1.85	0.40
1:QA:590:C:OP1	8:QH:29:SER:HA	2.22	0.40
9:QI:105:ASP:C	9:QI:107:ARG:N	2.74	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
12:QL:39:VAL:HG12	12:QL:41:ARG:HG2	2.04	0.40
1:QA:1329:A:H5''	13:QM:29:ARG:HG3	2.03	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40
15:QO:77:ARG:CA	15:QO:80:ALA:HB3	2.52	0.40
46:R0:40:GLN:NE2	46:R0:43:THR:HA	2.36	0.40
52:R6:24:GLU:HB3	52:R6:25:LYS:H	1.56	0.40
25:RA:1422:G:C6	25:RA:1423:G:C5	3.10	0.40
25:RA:1572:A:H2'	25:RA:1573:G:O4'	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RA:1728:G:C6	25:RA:1730:U:OP2	2.74	0.40
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.57	0.40
25:RA:2458:G:H1'	25:RA:2460:U:O4	2.22	0.40
25:RA:271(B):G:N3	25:RA:271:G:H1'	2.37	0.40
25:RA:2742:C:H6	25:RA:2742:C:O5'	2.04	0.40
25:RA:2630:G:N3	25:RA:2894:G:N2	2.70	0.40
25:RA:372:G:N2	25:RA:400:G:H2'	2.37	0.40
25:RA:49:A:H5'	25:RA:51:G:O4'	2.21	0.40
25:RA:755:C:H2'	25:RA:756:C:H6	1.86	0.40
25:RA:930:U:H4'	25:RA:931:G:O4'	2.21	0.40
26:RB:12:C:C2	46:RO:74:ARG:HD2	2.57	0.40
27:RD:185:VAL:HG12	27:RD:186:HIS:N	2.37	0.40
27:RD:25:THR:HG23	27:RD:27:THR:HB	2.01	0.40
28:RE:154:LYS:HD3	28:RE:154:LYS:C	2.42	0.40
28:RE:93:VAL:C	28:RE:95:ILE:N	2.75	0.40
32:RI:121:LYS:CG	32:RI:122:GLU:N	2.85	0.40
32:RI:94:ALA:O	32:RI:96:ASP:N	2.54	0.40
34:RO:97:ARG:H	34:RO:117:LEU:CD2	2.24	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
39:RT:50:ILE:HD11	39:RT:102:ILE:CG1	2.52	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
40:RU:15:LYS:O	40:RU:16:LYS:C	2.60	0.40
41:RV:95:LEU:C	41:RV:95:LEU:HD13	2.42	0.40
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.40
45:RZ:168:GLU:OE2	45:RZ:168:GLU:N	2.55	0.40
1:XA:1034:G:N2	1:XA:1035:A:C6	2.90	0.40
1:XA:1154:G:C4	1:XA:1155:G:C8	3.09	0.40
1:XA:1262:C:H2'	1:XA:1263:C:C6	2.55	0.40
1:XA:192:U:H2'	1:XA:193:C:C6	2.57	0.40
1:XA:338:A:C5	1:XA:339:C:C5	3.10	0.40
1:XA:370:C:C2	1:XA:392:G:N2	2.89	0.40
1:XA:468:A:OP1	16:XP:75:ARG:NH2	2.55	0.40
1:XA:570:G:H1'	1:XA:820:U:C4	2.56	0.40
3:XC:149:ALA:O	3:XC:169:ALA:CA	2.67	0.40
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.40
3:XC:55:VAL:HG12	3:XC:55:VAL:O	2.21	0.40
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.86	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	0.40
7:XG:69:VAL:HG12	7:XG:100:ALA:HA	2.03	0.40
8:XH:41:ARG:NH1	8:XH:41:ARG:CG	2.76	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
10:XJ:22:LYS:CD	10:XJ:22:LYS:C	2.89	0.40
10:XJ:49:VAL:HG13	14:XN:41:ARG:HD2	2.03	0.40
11:XK:90:GLY:O	11:XK:94:ALA:HB2	2.21	0.40
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
14:XN:40:CYS:N	14:XN:43:CYS:HB2	2.36	0.40
3:XC:33:LEU:HD11	14:XN:53:LEU:HD23	2.04	0.40
16:XP:6:LEU:CD1	16:XP:6:LEU:N	2.84	0.40
17:XQ:8:GLY:HA3	17:XQ:21:VAL:HG12	2.03	0.40
17:XQ:51:TYR:HA	17:XQ:52:LYS:HZ2	1.86	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
20:XT:55:ILE:HA	20:XT:58:LYS:HB3	2.03	0.40
22:XV:21:A:N6	22:XV:46:G:H2'	2.36	0.40
22:XV:74:C:H2'	22:XV:75:C:H5'	2.03	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40
50:Y4:51:ASP:CG	50:Y4:51:ASP:O	2.60	0.40
52:Y6:53:LYS:HB3	52:Y6:53:LYS:NZ	2.36	0.40
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.56	0.40
25:YA:1402:C:C2'	25:YA:1403:C:H5'	2.51	0.40
25:YA:133:C:N4	25:YA:146:G:H1	2.18	0.40
25:YA:1795:C:H2'	25:YA:1796:U:O4'	2.21	0.40
25:YA:191:A:H2'	25:YA:192:C:C6	2.57	0.40
25:YA:2083:G:H2'	25:YA:2084:C:O4'	2.22	0.40
25:YA:2168:G:N2	25:YA:2170:A:N7	2.70	0.40
25:YA:2360:A:H8	25:YA:2360:A:O5'	2.04	0.40
25:YA:483:A:H3'	25:YA:484:C:H6	1.87	0.40
25:YA:539:G:H5'	25:YA:540:G:P	2.62	0.40
25:YA:790:C:H2'	25:YA:790:C:H6	1.69	0.40
25:YA:99:U:H1'	25:YA:102:G:C2	2.57	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
28:YE:3:GLY:HA3	28:YE:81:ILE:CG2	2.52	0.40
30:YG:98:ARG:CA	30:YG:101:ILE:HG12	2.40	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
35:YP:96:THR:O	35:YP:97:PRO:O	2.40	0.40
38:YS:59:LYS:CG	38:YS:60:GLY:N	2.80	0.40
40:YU:30:LYS:HA	40:YU:30:LYS:HD3	1.84	0.40
41:YV:35:LEU:C	41:YV:37:VAL:N	2.75	0.40
44:YY:57:GLN:O	44:YY:58:GLY:C	2.60	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40
45:YZ:144:LEU:CD2	45:YZ:150:LEU:HD13	2.51	0.40

All (3) 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	Distance(Å)	Clash(Å)
41:YV:51:VAL:N	51:Y5:60:VAL:O[4.445]	1.98	0.22
31:YH:47:GLU:OE2	44:YY:79:CYS:CB[4.445]	2.04	0.16
11:QK:99:GLN:NE2	3:XC:79:ARG:NH2[4.555]	2.06	0.14

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	7
2	XB	235/256 (92%)	152 (65%)	53 (23%)	30 (13%)	0	7
3	QC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	1	14
3	XC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	1	14
4	QD	206/209 (99%)	133 (65%)	51 (25%)	22 (11%)	1	10
4	XD	206/209 (99%)	133 (65%)	50 (24%)	23 (11%)	1	9
5	QE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	1	10
5	XE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	1	12
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	15
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	15
7	QG	153/156 (98%)	102 (67%)	37 (24%)	14 (9%)	1	15
7	XG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	1	12
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	1	10
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	1	10
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	7
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	7
10	QJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	1	11
10	XJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	1	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	20
11	XK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	20
12	QL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	1	9
12	XL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	1	9
13	QM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	3
13	XM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	3
14	QN	58/61 (95%)	33 (57%)	15 (26%)	10 (17%)	0	3
14	XN	58/61 (95%)	33 (57%)	15 (26%)	10 (17%)	0	3
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	2	23
15	XO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	2	23
16	QP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	6
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	6
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	18
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	18
18	QR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	1	9
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	1	9
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0	2
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0	2
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	3
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	3
27	RD	270/276 (98%)	204 (76%)	46 (17%)	20 (7%)	2	22
27	YD	270/276 (98%)	204 (76%)	46 (17%)	20 (7%)	2	22
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	2
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	2
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	1	12
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	1	12
30	RG	179/182 (98%)	120 (67%)	38 (21%)	21 (12%)	1	9
30	YG	179/182 (98%)	120 (67%)	38 (21%)	21 (12%)	1	9
31	RH	168/180 (93%)	94 (56%)	35 (21%)	39 (23%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
31	YH	168/180 (93%)	95 (56%)	35 (21%)	38 (23%)	0	1
32	RI	144/148 (97%)	83 (58%)	33 (23%)	28 (19%)	0	2
32	YI	144/148 (97%)	85 (59%)	32 (22%)	27 (19%)	0	2
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	4
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	4
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	2	21
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	2	21
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
36	RQ	139/141 (99%)	94 (68%)	30 (22%)	15 (11%)	1	10
36	YQ	139/141 (99%)	94 (68%)	30 (22%)	15 (11%)	1	10
37	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	1	8
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	1	8
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	3
38	YS	109/112 (97%)	63 (58%)	27 (25%)	19 (17%)	0	3
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	4
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	4
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	19
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	19
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	1	12
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	1	12
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	7
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	7
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	3	30
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	3	30
44	RY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	1
44	YY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	1
45	RZ	170/206 (82%)	91 (54%)	40 (24%)	39 (23%)	0	1
45	YZ	170/206 (82%)	91 (54%)	40 (24%)	39 (23%)	0	1
46	R0	80/85 (94%)	61 (76%)	14 (18%)	5 (6%)	2	27
46	Y0	80/85 (94%)	62 (78%)	12 (15%)	6 (8%)	2	21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	1	9
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	1	9
48	R2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	6
48	Y2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	6
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	3	32
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	3	32
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
50	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
51	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
51	Y5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
52	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
52	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
53	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	2	26
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	2	26
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	3
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	3
All	All	11378/12054 (94%)	7461 (66%)	2359 (21%)	1558 (14%)	0	6

All (1558) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA
2	QB	126	GLU
2	QB	230	VAL
2	QB	233	SER
3	QC	4	LYS
3	QC	12	LEU
3	QC	14	ILE
3	QC	29	TYR
3	QC	61	ALA
3	QC	189	ALA
3	QC	190	ARG

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Mol	Chain	Res	Type
4	QD	28	SER
4	QD	30	LYS
4	QD	51	PRO
4	QD	89	THR
4	QD	129	ASN
4	QD	154	ASN
4	QD	155	LEU
4	QD	178	VAL
5	QE	146	ALA
7	QG	5	ARG
7	QG	7	ALA
8	QH	50	ARG
8	QH	129	VAL
9	QI	23	ASN
9	QI	56	LEU
9	QI	95	LYS
9	QI	111	ARG
9	QI	117	HIS
10	QJ	30	SER
10	QJ	33	GLN
11	QK	91	ARG
12	QL	18	VAL
12	QL	27	LEU
12	QL	48	PRO
12	QL	62	SER
12	QL	121	GLY
13	QM	70	LEU
13	QM	83	ASP
13	QM	106	ASN
13	QM	108	ARG
13	QM	118	ALA
14	QN	3	ARG
14	QN	16	PHE
14	QN	23	ARG
15	QO	88	ARG
16	QP	44	THR
16	QP	67	THR
17	QQ	34	LYS
17	QQ	49	GLU
18	QR	22	VAL
19	QS	3	ARG
19	QS	12	ASP

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Mol	Chain	Res	Type
19	QS	14	HIS
19	QS	25	LYS
19	QS	26	GLY
19	QS	31	ILE
19	QS	41	VAL
19	QS	70	LYS
19	QS	78	ARG
19	QS	79	THR
20	QT	48	LYS
20	QT	49	ALA
20	QT	74	LYS
20	QT	95	ALA
20	QT	96	GLY
20	QT	100	ILE
21	QU	7	ARG
21	QU	9	ARG
21	QU	22	ARG
27	RD	26	LYS
27	RD	28	GLU
27	RD	123	ALA
27	RD	231	HIS
28	RE	4	ILE
28	RE	7	VAL
28	RE	9	VAL
28	RE	22	PRO
28	RE	54	GLN
28	RE	57	LYS
28	RE	60	ASN
28	RE	63	LEU
28	RE	64	LYS
28	RE	68	ALA
28	RE	70	ALA
28	RE	73	GLU
28	RE	90	THR
28	RE	92	THR
28	RE	93	VAL
28	RE	169	ASN
28	RE	187	ALA
28	RE	189	PRO
29	RF	25	PRO
29	RF	66	PRO
29	RF	68	LYS

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Mol	Chain	Res	Type
29	RF	73	ALA
29	RF	89	VAL
29	RF	128	ALA
29	RF	176	LEU
30	RG	4	ASP
30	RG	14	GLU
30	RG	79	ASN
30	RG	86	MET
31	RH	10	PRO
31	RH	12	PRO
31	RH	83	TYR
31	RH	85	LYS
31	RH	86	GLU
31	RH	87	LEU
31	RH	90	LYS
31	RH	92	ILE
31	RH	126	PRO
31	RH	127	GLU
31	RH	128	PRO
31	RH	137	ASP
31	RH	138	LYS
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	169	VAL
32	RI	9	LEU
32	RI	10	GLU
32	RI	13	GLY
32	RI	15	VAL
32	RI	56	LYS
32	RI	115	ALA
32	RI	133	HIS
32	RI	145	VAL
33	RN	6	PRO
33	RN	9	VAL
33	RN	22	THR
33	RN	36	GLY
33	RN	58	ASP
33	RN	95	PRO
33	RN	97	ARG
33	RN	119	ARG
33	RN	131	GLN

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Mol	Chain	Res	Type
33	RN	133	GLN
33	RN	134	ARG
34	RO	49	ARG
35	RP	5	ASP
35	RP	10	PRO
35	RP	15	ARG
35	RP	19	VAL
35	RP	21	ARG
35	RP	25	SER
35	RP	27	HIS
35	RP	36	LYS
35	RP	38	GLN
35	RP	42	SER
35	RP	65	ARG
35	RP	95	VAL
35	RP	106	LEU
35	RP	107	LYS
35	RP	141	ALA
35	RP	148	LEU
36	RQ	6	ARG
36	RQ	18	LYS
36	RQ	22	LYS
36	RQ	27	VAL
36	RQ	81	VAL
36	RQ	90	VAL
36	RQ	134	ARG
37	RR	2	ARG
37	RR	3	HIS
37	RR	4	LEU
37	RR	14	SER
37	RR	58	GLY
37	RR	86	ARG
37	RR	117	VAL
38	RS	4	LEU
38	RS	12	PHE
38	RS	14	VAL
38	RS	23	ARG
38	RS	56	LEU
38	RS	57	LYS
38	RS	88	ASP
38	RS	89	ARG
38	RS	90	GLY

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Mol	Chain	Res	Type
38	RS	107	GLU
39	RT	2	ASN
39	RT	3	ARG
39	RT	39	ARG
39	RT	55	ASN
39	RT	58	ASN
39	RT	90	GLN
39	RT	94	ALA
39	RT	97	ALA
39	RT	106	SER
39	RT	107	ASP
41	RV	28	GLU
41	RV	31	ALA
41	RV	45	THR
41	RV	48	GLY
41	RV	49	THR
41	RV	50	PRO
41	RV	53	GLU
41	RV	79	VAL
42	RW	59	VAL
42	RW	67	ASP
42	RW	75	TYR
42	RW	111	HIS
43	RX	36	LYS
44	RY	3	VAL
44	RY	23	ARG
44	RY	48	ALA
44	RY	49	VAL
44	RY	50	ARG
44	RY	53	PRO
44	RY	58	GLY
44	RY	63	LYS
44	RY	77	PRO
44	RY	78	ALA
44	RY	96	ILE
45	RZ	6	LYS
45	RZ	13	GLU
45	RZ	31	ARG
45	RZ	51	ALA
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	114	GLY

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Mol	Chain	Res	Type
45	RZ	116	VAL
45	RZ	122	ARG
45	RZ	141	VAL
45	RZ	151	HIS
45	RZ	155	LEU
45	RZ	156	LYS
45	RZ	158	PRO
45	RZ	170	THR
45	RZ	171	ILE
47	R1	30	VAL
47	R1	54	ALA
47	R1	81	LYS
47	R1	82	LEU
47	R1	95	LEU
48	R2	16	LEU
48	R2	43	GLN
48	R2	47	ASN
48	R2	48	HIS
48	R2	71	ASN
49	R3	3	ARG
50	R4	5	ILE
50	R4	14	ILE
50	R4	16	CYS
50	R4	22	ILE
50	R4	23	GLU
50	R4	36	CYS
50	R4	37	SER
50	R4	40	HIS
50	R4	42	PHE
50	R4	43	TYR
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	62	ARG
50	R4	66	SER
50	R4	68	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	35	GLU
51	R5	51	TYR
51	R5	53	ALA

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Mol	Chain	Res	Type
52	R6	7	ILE
52	R6	14	THR
52	R6	15	GLU
52	R6	19	ARG
52	R6	21	TYR
52	R6	33	LYS
52	R6	45	LYS
52	R6	48	VAL
54	R8	29	LYS
54	R8	31	HIS
54	R8	34	TRP
54	R8	52	LYS
54	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS
3	XC	12	LEU
3	XC	14	ILE
3	XC	29	TYR
3	XC	61	ALA
3	XC	189	ALA
3	XC	190	ARG
4	XD	28	SER
4	XD	30	LYS
4	XD	51	PRO
4	XD	89	THR
4	XD	129	ASN
4	XD	154	ASN
4	XD	155	LEU
4	XD	178	VAL
5	XE	146	ALA
7	XG	5	ARG
7	XG	7	ALA
8	XH	50	ARG
8	XH	129	VAL
9	XI	23	ASN

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Mol	Chain	Res	Type
9	XI	56	LEU
9	XI	95	LYS
9	XI	111	ARG
9	XI	117	HIS
10	XJ	30	SER
10	XJ	33	GLN
11	XK	91	ARG
12	XL	18	VAL
12	XL	27	LEU
12	XL	48	PRO
12	XL	62	SER
12	XL	121	GLY
13	XM	67	GLU
13	XM	70	LEU
13	XM	83	ASP
13	XM	106	ASN
13	XM	108	ARG
13	XM	118	ALA
14	XN	3	ARG
14	XN	16	PHE
14	XN	23	ARG
15	XO	88	ARG
16	XP	44	THR
16	XP	67	THR
17	XQ	34	LYS
17	XQ	49	GLU
18	XR	22	VAL
19	XS	3	ARG
19	XS	12	ASP
19	XS	14	HIS
19	XS	25	LYS
19	XS	26	GLY
19	XS	31	ILE
19	XS	41	VAL
19	XS	70	LYS
19	XS	78	ARG
19	XS	79	THR
20	XT	48	LYS
20	XT	49	ALA
20	XT	74	LYS
20	XT	95	ALA
20	XT	96	GLY

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Mol	Chain	Res	Type
20	XT	100	ILE
21	XU	7	ARG
21	XU	9	ARG
21	XU	22	ARG
27	YD	26	LYS
27	YD	28	GLU
27	YD	123	ALA
27	YD	231	HIS
28	YE	4	ILE
28	YE	7	VAL
28	YE	9	VAL
28	YE	22	PRO
28	YE	54	GLN
28	YE	57	LYS
28	YE	60	ASN
28	YE	63	LEU
28	YE	64	LYS
28	YE	68	ALA
28	YE	70	ALA
28	YE	73	GLU
28	YE	90	THR
28	YE	92	THR
28	YE	93	VAL
28	YE	169	ASN
28	YE	187	ALA
28	YE	189	PRO
29	YF	25	PRO
29	YF	66	PRO
29	YF	68	LYS
29	YF	73	ALA
29	YF	89	VAL
29	YF	128	ALA
29	YF	176	LEU
30	YG	4	ASP
30	YG	14	GLU
30	YG	79	ASN
30	YG	86	MET
31	YH	10	PRO
31	YH	12	PRO
31	YH	83	TYR
31	YH	85	LYS
31	YH	86	GLU

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Mol	Chain	Res	Type
31	YH	87	LEU
31	YH	90	LYS
31	YH	92	ILE
31	YH	126	PRO
31	YH	127	GLU
31	YH	128	PRO
31	YH	137	ASP
31	YH	138	LYS
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	169	VAL
32	YI	9	LEU
32	YI	10	GLU
32	YI	13	GLY
32	YI	15	VAL
32	YI	115	ALA
32	YI	133	HIS
32	YI	145	VAL
33	YN	6	PRO
33	YN	9	VAL
33	YN	22	THR
33	YN	36	GLY
33	YN	58	ASP
33	YN	95	PRO
33	YN	97	ARG
33	YN	119	ARG
33	YN	131	GLN
33	YN	133	GLN
33	YN	134	ARG
34	YO	49	ARG
35	YP	5	ASP
35	YP	10	PRO
35	YP	15	ARG
35	YP	19	VAL
35	YP	21	ARG
35	YP	25	SER
35	YP	27	HIS
35	YP	36	LYS
35	YP	38	GLN
35	YP	42	SER
35	YP	65	ARG

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Mol	Chain	Res	Type
35	YP	95	VAL
35	YP	106	LEU
35	YP	107	LYS
35	YP	141	ALA
35	YP	148	LEU
36	YQ	6	ARG
36	YQ	18	LYS
36	YQ	22	LYS
36	YQ	27	VAL
36	YQ	81	VAL
36	YQ	90	VAL
36	YQ	134	ARG
37	YR	2	ARG
37	YR	3	HIS
37	YR	4	LEU
37	YR	14	SER
37	YR	58	GLY
37	YR	86	ARG
37	YR	117	VAL
38	YS	4	LEU
38	YS	12	PHE
38	YS	14	VAL
38	YS	23	ARG
38	YS	56	LEU
38	YS	57	LYS
38	YS	88	ASP
38	YS	89	ARG
38	YS	90	GLY
38	YS	107	GLU
39	YT	2	ASN
39	YT	3	ARG
39	YT	39	ARG
39	YT	55	ASN
39	YT	58	ASN
39	YT	90	GLN
39	YT	94	ALA
39	YT	97	ALA
39	YT	106	SER
39	YT	107	ASP
41	YV	28	GLU
41	YV	31	ALA
41	YV	45	THR

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Mol	Chain	Res	Type
41	YV	48	GLY
41	YV	49	THR
41	YV	50	PRO
41	YV	53	GLU
41	YV	79	VAL
42	YW	59	VAL
42	YW	67	ASP
42	YW	75	TYR
42	YW	111	HIS
43	YX	36	LYS
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
44	YY	53	PRO
44	YY	58	GLY
44	YY	63	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	96	ILE
45	YZ	6	LYS
45	YZ	13	GLU
45	YZ	31	ARG
45	YZ	51	ALA
45	YZ	111	VAL
45	YZ	112	ARG
45	YZ	114	GLY
45	YZ	116	VAL
45	YZ	122	ARG
45	YZ	141	VAL
45	YZ	151	HIS
45	YZ	155	LEU
45	YZ	156	LYS
45	YZ	158	PRO
45	YZ	170	THR
45	YZ	171	ILE
47	Y1	30	VAL
47	Y1	54	ALA
47	Y1	81	LYS
47	Y1	82	LEU
47	Y1	95	LEU

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Mol	Chain	Res	Type
48	Y2	16	LEU
48	Y2	43	GLN
48	Y2	47	ASN
48	Y2	48	HIS
48	Y2	71	ASN
49	Y3	3	ARG
50	Y4	5	ILE
50	Y4	14	ILE
50	Y4	16	CYS
50	Y4	22	ILE
50	Y4	23	GLU
50	Y4	36	CYS
50	Y4	37	SER
50	Y4	40	HIS
50	Y4	42	PHE
50	Y4	43	TYR
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	62	ARG
50	Y4	66	SER
50	Y4	68	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	35	GLU
51	Y5	51	TYR
51	Y5	53	ALA
52	Y6	7	ILE
52	Y6	14	THR
52	Y6	15	GLU
52	Y6	19	ARG
52	Y6	21	TYR
52	Y6	33	LYS
52	Y6	45	LYS
52	Y6	48	VAL
54	Y8	29	LYS
54	Y8	31	HIS
54	Y8	34	TRP
54	Y8	52	LYS
54	Y8	62	LEU
2	QB	18	GLY

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Mol	Chain	Res	Type
2	QB	65	GLY
2	QB	208	ILE
2	QB	216	SER
2	QB	237	ALA
3	QC	60	ALA
3	QC	79	ARG
3	QC	129	ALA
3	QC	145	GLY
4	QD	7	PRO
4	QD	20	TYR
4	QD	32	ALA
4	QD	164	ALA
4	QD	170	VAL
4	QD	179	GLU
4	QD	181	MET
4	QD	200	GLU
5	QE	21	ALA
5	QE	63	ARG
5	QE	108	ALA
6	QF	70	ASP
7	QG	4	ARG
7	QG	63	LYS
7	QG	141	VAL
8	QH	68	ARG
8	QH	69	ARG
8	QH	76	PRO
8	QH	122	ARG
9	QI	31	GLN
9	QI	41	VAL
9	QI	100	GLY
9	QI	109	VAL
10	QJ	36	GLY
10	QJ	68	HIS
11	QK	103	LEU
11	QK	107	SER
11	QK	124	LYS
11	QK	125	PHE
11	QK	126	ARG
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER

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Mol	Chain	Res	Type
12	QL	128	ALA
13	QM	49	THR
13	QM	67	GLU
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
16	QP	49	LEU
17	QQ	14	LYS
17	QQ	33	GLY
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG
18	QR	65	ILE
19	QS	13	ASP
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
27	RD	3	VAL
27	RD	32	SER
27	RD	58	HIS
27	RD	122	ASP
27	RD	169	GLU
28	RE	8	LYS
28	RE	20	ALA
28	RE	37	ARG
28	RE	53	PRO
28	RE	61	ARG
28	RE	78	LEU
28	RE	88	GLY
28	RE	186	GLY
28	RE	190	GLY
28	RE	204	ALA
29	RF	18	ARG
29	RF	107	LYS

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Mol	Chain	Res	Type
29	RF	108	LYS
29	RF	111	ALA
29	RF	132	VAL
29	RF	134	GLY
29	RF	168	ARG
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU
30	RG	96	ARG
30	RG	110	ALA
30	RG	126	ASP
30	RG	136	ARG
31	RH	3	ARG
31	RH	8	PRO
31	RH	55	PRO
31	RH	59	ARG
31	RH	84	SER
31	RH	151	ILE
31	RH	156	ALA
31	RH	168	PRO
32	RI	12	LEU
32	RI	36	ALA
32	RI	57	ARG
32	RI	72	LEU
32	RI	135	GLU
33	RN	23	LEU
33	RN	76	SER
34	RO	51	ALA
34	RO	56	ASP
34	RO	68	GLU
35	RP	6	LEU
35	RP	11	GLY
35	RP	12	ALA
35	RP	16	ARG
36	RQ	13	GLN
36	RQ	24	GLY
36	RQ	28	ALA
36	RQ	57	HIS
36	RQ	59	ARG
37	RR	11	ASN
38	RS	75	GLU
38	RS	87	PHE

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Mol	Chain	Res	Type
38	RS	96	GLY
38	RS	100	ALA
38	RS	109	GLY
38	RS	111	GLU
39	RT	4	GLY
39	RT	36	GLU
39	RT	43	GLN
39	RT	67	SER
39	RT	124	ASP
40	RU	9	VAL
40	RU	28	ARG
40	RU	73	GLY
40	RU	90	VAL
42	RW	63	ASP
42	RW	66	GLU
43	RX	67	GLY
44	RY	4	LYS
44	RY	41	GLY
44	RY	56	PRO
44	RY	57	GLN
44	RY	99	CYS
45	RZ	38	TYR
45	RZ	79	ARG
45	RZ	110	GLY
45	RZ	124	ILE
45	RZ	153	SER
45	RZ	159	PRO
46	R0	18	ALA
46	R0	55	ARG
47	R1	45	ASN
47	R1	55	GLY
47	R1	84	GLY
48	R2	24	LEU
48	R2	44	LEU
48	R2	70	GLN
50	R4	9	LEU
50	R4	24	THR
51	R5	43	HIS
51	R5	55	ARG
53	R7	39	ARG
2	XB	18	GLY
2	XB	65	GLY

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Mol	Chain	Res	Type
2	XB	208	ILE
2	XB	216	SER
2	XB	237	ALA
3	XC	60	ALA
3	XC	79	ARG
3	XC	129	ALA
3	XC	145	GLY
4	XD	7	PRO
4	XD	20	TYR
4	XD	32	ALA
4	XD	164	ALA
4	XD	170	VAL
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP
7	XG	4	ARG
7	XG	63	LYS
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
8	XH	128	GLY
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER

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Mol	Chain	Res	Type
12	XL	128	ALA
13	XM	49	THR
13	XM	68	GLY
13	XM	120	LYS
14	XN	14	PRO
14	XN	15	LYS
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU
17	XQ	100	LYS
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
27	YD	3	VAL
27	YD	32	SER
27	YD	58	HIS
27	YD	122	ASP
27	YD	169	GLU
28	YE	8	LYS
28	YE	20	ALA
28	YE	37	ARG
28	YE	53	PRO
28	YE	61	ARG
28	YE	71	GLY
28	YE	78	LEU
28	YE	88	GLY
28	YE	186	GLY
28	YE	190	GLY
28	YE	204	ALA
29	YF	18	ARG
29	YF	107	LYS

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Mol	Chain	Res	Type
29	YF	108	LYS
29	YF	111	ALA
29	YF	132	VAL
29	YF	134	GLY
29	YF	168	ARG
30	YG	5	VAL
30	YG	36	LYS
30	YG	81	LYS
30	YG	82	LEU
30	YG	96	ARG
30	YG	110	ALA
30	YG	126	ASP
30	YG	136	ARG
31	YH	3	ARG
31	YH	8	PRO
31	YH	55	PRO
31	YH	59	ARG
31	YH	84	SER
31	YH	151	ILE
31	YH	156	ALA
31	YH	168	PRO
32	YI	12	LEU
32	YI	36	ALA
32	YI	72	LEU
32	YI	135	GLU
33	YN	23	LEU
33	YN	76	SER
34	YO	51	ALA
34	YO	56	ASP
34	YO	68	GLU
35	YP	6	LEU
35	YP	11	GLY
35	YP	12	ALA
35	YP	16	ARG
36	YQ	13	GLN
36	YQ	24	GLY
36	YQ	28	ALA
36	YQ	57	HIS
36	YQ	59	ARG
37	YR	11	ASN
38	YS	87	PHE
38	YS	96	GLY

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Mol	Chain	Res	Type
38	YS	100	ALA
38	YS	109	GLY
38	YS	111	GLU
39	YT	4	GLY
39	YT	36	GLU
39	YT	43	GLN
39	YT	67	SER
39	YT	124	ASP
40	YU	9	VAL
40	YU	28	ARG
40	YU	73	GLY
40	YU	90	VAL
42	YW	63	ASP
42	YW	66	GLU
43	YX	67	GLY
44	YY	4	LYS
44	YY	41	GLY
44	YY	56	PRO
44	YY	57	GLN
44	YY	91	GLU
44	YY	99	CYS
45	YZ	38	TYR
45	YZ	79	ARG
45	YZ	80	ARG
45	YZ	110	GLY
45	YZ	124	ILE
45	YZ	153	SER
45	YZ	159	PRO
46	Y0	9	SER
46	Y0	18	ALA
46	Y0	55	ARG
47	Y1	45	ASN
47	Y1	55	GLY
47	Y1	84	GLY
48	Y2	24	LEU
48	Y2	44	LEU
48	Y2	70	GLN
50	Y4	9	LEU
50	Y4	24	THR
51	Y5	43	HIS
51	Y5	55	ARG
53	Y7	39	ARG

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Mol	Chain	Res	Type
2	QB	155	LEU
2	QB	159	PRO
2	QB	175	ARG
3	QC	16	ARG
3	QC	45	LYS
3	QC	81	GLY
4	QD	29	PRO
4	QD	73	ARG
4	QD	136	PRO
5	QE	37	ARG
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
8	QH	128	GLY
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	51	ALA
12	QL	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS
14	QN	41	ARG
14	QN	48	ALA
15	QO	14	GLU
15	QO	23	GLY
15	QO	77	ARG
16	QP	8	ARG
16	QP	83	GLU
17	QQ	30	PRO
17	QQ	99	SER
18	QR	55	ARG
19	QS	6	LYS
19	QS	27	GLU
19	QS	64	GLU
20	QT	82	SER
20	QT	98	PRO
27	RD	111	LEU

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Mol	Chain	Res	Type
27	RD	238	GLY
27	RD	242	ARG
27	RD	262	ARG
28	RE	62	PRO
28	RE	69	LYS
28	RE	71	GLY
28	RE	82	ARG
28	RE	117	MET
28	RE	130	GLY
28	RE	132	HIS
30	RG	5	VAL
30	RG	115	ARG
30	RG	128	ARG
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	11	ASN
32	RI	86	THR
32	RI	87	LYS
32	RI	110	ASP
32	RI	118	LYS
33	RN	45	ASN
33	RN	130	HIS
33	RN	135	PRO
35	RP	7	ARG
35	RP	14	LYS
35	RP	43	GLY
35	RP	89	ALA
35	RP	102	ARG
35	RP	115	LEU
36	RQ	88	GLY
36	RQ	91	GLU
37	RR	42	LYS
37	RR	45	ARG
37	RR	71	GLN
37	RR	107	ASP
38	RS	19	LYS
38	RS	61	ASN
38	RS	74	ALA
39	RT	78	LEU
39	RT	112	ARG

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Mol	Chain	Res	Type
40	RU	46	ALA
40	RU	93	LYS
41	RV	54	GLY
42	RW	68	ARG
42	RW	93	ALA
43	RX	48	LYS
43	RX	87	GLN
44	RY	21	LYS
44	RY	39	VAL
44	RY	42	VAL
44	RY	69	ALA
44	RY	91	GLU
44	RY	102	CYS
45	RZ	30	ASN
45	RZ	61	LEU
45	RZ	64	GLY
45	RZ	80	ARG
45	RZ	81	ARG
45	RZ	92	SER
45	RZ	118	GLN
45	RZ	135	GLU
45	RZ	163	LEU
46	R0	15	ASP
46	R0	57	PHE
46	R0	75	LEU
47	R1	74	VAL
47	R1	91	LYS
47	R1	93	GLU
50	R4	27	THR
50	R4	46	GLN
52	R6	18	ARG
53	R7	32	LYS
54	R8	46	ARG
54	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO
2	XB	175	ARG
3	XC	16	ARG
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG

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Mol	Chain	Res	Type
4	XD	136	PRO
5	XE	37	ARG
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG
8	XH	2	LEU
9	XI	12	GLU
9	XI	13	ALA
12	XL	51	ALA
12	XL	123	LYS
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	41	ARG
15	XO	14	GLU
15	XO	23	GLY
15	XO	77	ARG
16	XP	8	ARG
16	XP	83	GLU
17	XQ	30	PRO
17	XQ	99	SER
18	XR	55	ARG
19	XS	6	LYS
19	XS	27	GLU
20	XT	82	SER
20	XT	98	PRO
27	YD	111	LEU
27	YD	238	GLY
27	YD	242	ARG
27	YD	262	ARG
28	YE	62	PRO
28	YE	69	LYS
28	YE	82	ARG
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	115	ARG
30	YG	128	ARG
30	YG	174	GLU
31	YH	50	VAL
31	YH	81	GLU

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Mol	Chain	Res	Type
31	YH	152	ARG
32	YI	11	ASN
32	YI	86	THR
32	YI	87	LYS
32	YI	118	LYS
33	YN	45	ASN
33	YN	130	HIS
33	YN	135	PRO
35	YP	7	ARG
35	YP	14	LYS
35	YP	43	GLY
35	YP	89	ALA
35	YP	102	ARG
35	YP	115	LEU
36	YQ	88	GLY
36	YQ	91	GLU
37	YR	42	LYS
37	YR	45	ARG
37	YR	71	GLN
37	YR	107	ASP
38	YS	19	LYS
38	YS	61	ASN
38	YS	74	ALA
38	YS	75	GLU
39	YT	78	LEU
39	YT	112	ARG
40	YU	46	ALA
40	YU	58	ARG
40	YU	93	LYS
41	YV	54	GLY
42	YW	68	ARG
42	YW	93	ALA
43	YX	48	LYS
43	YX	87	GLN
44	YY	21	LYS
44	YY	39	VAL
44	YY	42	VAL
44	YY	69	ALA
44	YY	102	CYS
45	YZ	30	ASN
45	YZ	61	LEU
45	YZ	64	GLY

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Mol	Chain	Res	Type
45	YZ	81	ARG
45	YZ	92	SER
45	YZ	118	GLN
45	YZ	135	GLU
45	YZ	163	LEU
46	Y0	15	ASP
46	Y0	57	PHE
46	Y0	75	LEU
47	Y1	74	VAL
47	Y1	91	LYS
47	Y1	93	GLU
50	Y4	27	THR
50	Y4	46	GLN
52	Y6	18	ARG
53	Y7	32	LYS
54	Y8	46	ARG
54	Y8	47	LYS
2	QB	19	HIS
2	QB	131	PRO
2	QB	160	ASP
2	QB	177	ALA
3	QC	168	ALA
4	QD	151	LYS
5	QE	70	PRO
5	QE	72	GLN
5	QE	124	GLY
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	109	ASN
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	44	LEU

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Mol	Chain	Res	Type
15	QO	86	GLY
16	QP	26	ARG
16	QP	28	ARG
16	QP	48	TRP
18	QR	58	LEU
19	QS	28	LYS
19	QS	44	MET
20	QT	40	ALA
20	QT	51	GLU
27	RD	12	SER
27	RD	73	VAL
28	RE	66	HIS
28	RE	126	PRO
29	RF	43	LYS
29	RF	130	ALA
29	RF	145	GLU
30	RG	12	TYR
30	RG	117	PHE
30	RG	146	TYR
31	RH	13	LYS
31	RH	109	PHE
31	RH	159	GLU
32	RI	113	ARG
32	RI	117	GLU
32	RI	122	GLU
33	RN	96	GLU
33	RN	127	ASP
33	RN	132	ALA
34	RO	17	ARG
34	RO	97	ARG
35	RP	29	LYS
35	RP	47	ASP
35	RP	139	LYS
39	RT	37	GLY
39	RT	95	ARG
40	RU	58	ARG
40	RU	74	LEU
42	RW	14	PRO
42	RW	48	ALA
45	RZ	144	LEU
50	R4	8	LYS
51	R5	14	ALA

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Mol	Chain	Res	Type
51	R5	37	LYS
51	R5	45	VAL
51	R5	48	GLU
52	R6	8	LYS
52	R6	9	LEU
52	R6	10	LEU
52	R6	49	HIS
54	R8	25	MET
54	R8	53	PRO
54	R8	57	ARG
2	XB	19	HIS
2	XB	129	GLU
2	XB	131	PRO
2	XB	160	ASP
3	XC	168	ALA
4	XD	151	LYS
5	XE	70	PRO
5	XE	72	GLN
5	XE	124	GLY
6	XF	13	ASN
6	XF	40	VAL
6	XF	42	GLU
7	XG	35	LYS
7	XG	41	ARG
7	XG	116	ALA
7	XG	117	ALA
8	XH	27	PRO
8	XH	29	SER
8	XH	49	GLU
10	XJ	57	LYS
10	XJ	93	GLY
12	XL	64	TYR
13	XM	4	ILE
13	XM	12	ASN
13	XM	14	ARG
13	XM	69	GLU
13	XM	77	ASN
14	XN	44	LEU
14	XN	48	ALA
15	XO	86	GLY
16	XP	26	ARG
16	XP	28	ARG

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Mol	Chain	Res	Type
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
19	XS	64	GLU
20	XT	40	ALA
20	XT	51	GLU
27	YD	12	SER
27	YD	73	VAL
28	YE	66	HIS
28	YE	126	PRO
29	YF	43	LYS
29	YF	130	ALA
29	YF	145	GLU
30	YG	12	TYR
30	YG	117	PHE
30	YG	146	TYR
31	YH	13	LYS
31	YH	109	PHE
31	YH	159	GLU
32	YI	110	ASP
32	YI	113	ARG
32	YI	117	GLU
32	YI	122	GLU
33	YN	96	GLU
33	YN	127	ASP
33	YN	132	ALA
34	YO	17	ARG
34	YO	97	ARG
35	YP	29	LYS
35	YP	47	ASP
35	YP	139	LYS
39	YT	37	GLY
39	YT	95	ARG
40	YU	74	LEU
42	YW	14	PRO
42	YW	48	ALA
45	YZ	144	LEU
50	Y4	8	LYS
51	Y5	14	ALA
51	Y5	37	LYS
51	Y5	45	VAL
51	Y5	48	GLU

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Mol	Chain	Res	Type
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	88	TYR
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
11	QK	105	VAL
12	QL	63	GLY
19	QS	11	VAL
27	RD	33	LEU
27	RD	178	PRO
27	RD	239	ARG
28	RE	79	ARG
29	RF	47	GLY
29	RF	118	ALA
29	RF	136	THR

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Mol	Chain	Res	Type
31	RH	11	VAL
31	RH	27	LYS
31	RH	47	GLU
31	RH	77	LYS
31	RH	170	ARG
32	RI	18	VAL
32	RI	26	ALA
32	RI	102	SER
33	RN	29	LYS
33	RN	104	LYS
33	RN	128	HIS
34	RO	25	LEU
35	RP	50	ARG
35	RP	97	PRO
35	RP	108	LYS
37	RR	85	PRO
40	RU	91	ASP
42	RW	32	ALA
43	RX	19	ALA
44	RY	7	VAL
45	RZ	132	ASN
45	RZ	133	ILE
49	R3	13	ILE
50	R4	30	GLU
50	R4	33	VAL
51	R5	42	PRO
52	R6	35	GLU
53	R7	44	PRO
54	R8	64	TYR
2	XB	23	ARG
2	XB	25	ASN
2	XB	98	LEU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO

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Mol	Chain	Res	Type
6	XF	32	ASN
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER
10	XJ	75	ILE
11	XK	64	ALA
11	XK	105	VAL
12	XL	63	GLY
18	XR	58	LEU
19	XS	11	VAL
27	YD	33	LEU
27	YD	239	ARG
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA
29	YF	136	THR
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
32	YI	18	VAL
32	YI	102	SER
33	YN	29	LYS
33	YN	104	LYS
33	YN	128	HIS
34	YO	25	LEU
35	YP	50	ARG
35	YP	97	PRO
35	YP	108	LYS
37	YR	85	PRO
39	YT	38	ASN
40	YU	91	ASP
42	YW	32	ALA
43	YX	19	ALA
44	YY	7	VAL

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Mol	Chain	Res	Type
45	YZ	132	ASN
45	YZ	133	ILE
50	Y4	30	GLU
50	Y4	33	VAL
50	Y4	70	GLY
51	Y5	42	PRO
52	Y6	35	GLU
53	Y7	44	PRO
54	Y8	57	ARG
54	Y8	64	TYR
2	QB	239	VAL
3	QC	51	GLY
5	QE	115	VAL
10	QJ	85	LEU
11	QK	106	LYS
13	QM	13	LYS
13	QM	48	LEU
14	QN	20	ALA
16	QP	57	ARG
30	RG	109	VAL
30	RG	181	ARG
31	RH	7	LEU
31	RH	26	VAL
31	RH	69	ARG
32	RI	104	GLN
32	RI	112	LYS
32	RI	120	ILE
39	RT	38	ASN
42	RW	11	ARG
42	RW	33	ARG
45	RZ	94	GLU
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
3	XC	51	GLY
4	XD	72	GLU
5	XE	49	PRO
5	XE	112	LEU
5	XE	115	VAL
11	XK	106	LYS
13	XM	13	LYS
13	XM	48	LEU

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Mol	Chain	Res	Type
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
27	YD	178	PRO
30	YG	109	VAL
30	YG	181	ARG
31	YH	7	LEU
31	YH	26	VAL
32	YI	26	ALA
32	YI	104	GLN
32	YI	112	LYS
32	YI	120	ILE
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
45	YZ	94	GLU
49	Y3	13	ILE
50	Y4	69	LYS
51	Y5	57	VAL
2	QB	202	PRO
3	QC	114	PRO
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
16	QP	53	VAL
18	QR	37	VAL
20	QT	63	ILE
27	RD	240	ALA
28	RE	86	PRO
28	RE	184	VAL
32	RI	71	ILE
36	RQ	86	GLY
37	RR	32	GLY
41	RV	36	PRO
42	RW	35	ILE
45	RZ	53	ILE
45	RZ	130	PRO
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO

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Mol	Chain	Res	Type
4	XD	88	VAL
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE
27	YD	240	ALA
28	YE	86	PRO
28	YE	184	VAL
32	YI	71	ILE
36	YQ	86	GLY
37	YR	32	GLY
42	YW	35	ILE
45	YZ	53	ILE
45	YZ	130	PRO
2	QB	227	GLY
3	QC	134	ILE
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
44	RY	27	VAL
44	RY	32	PRO
51	R5	46	CYS
2	XB	227	GLY
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
44	YY	32	PRO
51	Y5	46	CYS
9	QI	21	PRO
13	QM	84	ILE
27	RD	34	VAL
30	RG	52	ILE
34	RO	114	ILE
44	RY	51	VAL
45	RZ	107	THR
45	RZ	115	GLY
51	R5	34	PRO
3	XC	134	ILE

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Mol	Chain	Res	Type
9	XI	21	PRO
13	XM	84	ILE
27	YD	34	VAL
30	YG	52	ILE
32	YI	144	VAL
34	YO	114	ILE
44	YY	27	VAL
44	YY	51	VAL
45	YZ	107	THR
45	YZ	115	GLY
51	Y5	34	PRO
13	QM	78	ILE
28	RE	52	LEU
28	RE	55	ASN
34	RO	27	GLY
49	R3	40	THR
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
34	YO	27	GLY
49	Y3	40	THR
5	QE	129	ILE
8	QH	51	VAL
16	QP	41	PRO
20	QT	97	ALA
7	XG	14	PRO
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
48	R2	18	PRO
48	Y2	18	PRO

5.3.2 Protein sidechains ⓘ

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	205/220 (93%)	181 (88%)	24 (12%)	8 37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	XB	205/220 (93%)	181 (88%)	24 (12%)	8	37
3	QC	159/188 (85%)	143 (90%)	16 (10%)	11	46
3	XC	159/188 (85%)	143 (90%)	16 (10%)	11	46
4	QD	180/181 (99%)	164 (91%)	16 (9%)	14	54
4	XD	180/181 (99%)	164 (91%)	16 (9%)	14	54
5	QE	116/123 (94%)	107 (92%)	9 (8%)	18	61
5	XE	116/123 (94%)	108 (93%)	8 (7%)	22	68
6	QF	90/90 (100%)	77 (86%)	13 (14%)	5	26
6	XF	90/90 (100%)	77 (86%)	13 (14%)	5	26
7	QG	126/127 (99%)	115 (91%)	11 (9%)	15	56
7	XG	126/127 (99%)	115 (91%)	11 (9%)	15	56
8	QH	119/119 (100%)	106 (89%)	13 (11%)	9	41
8	XH	119/119 (100%)	106 (89%)	13 (11%)	9	41
9	QI	98/99 (99%)	87 (89%)	11 (11%)	9	39
9	XI	98/99 (99%)	87 (89%)	11 (11%)	9	39
10	QJ	89/92 (97%)	81 (91%)	8 (9%)	14	53
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	14	53
11	QK	90/99 (91%)	81 (90%)	9 (10%)	11	46
11	XK	90/99 (91%)	81 (90%)	9 (10%)	11	46
12	QL	104/109 (95%)	90 (86%)	14 (14%)	6	29
12	XL	104/109 (95%)	90 (86%)	14 (14%)	6	29
13	QM	97/101 (96%)	81 (84%)	16 (16%)	3	20
13	XM	97/101 (96%)	80 (82%)	17 (18%)	3	16
14	QN	49/50 (98%)	45 (92%)	4 (8%)	17	59
14	XN	49/50 (98%)	42 (86%)	7 (14%)	5	27
15	QO	79/80 (99%)	73 (92%)	6 (8%)	19	63
15	XO	79/80 (99%)	73 (92%)	6 (8%)	19	63
16	QP	72/74 (97%)	63 (88%)	9 (12%)	7	33
16	XP	72/74 (97%)	63 (88%)	9 (12%)	7	33
17	QQ	95/97 (98%)	89 (94%)	6 (6%)	25	72
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	25	72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	QR	61/77 (79%)	54 (88%)	7 (12%)	8	37
18	XR	61/77 (79%)	54 (88%)	7 (12%)	8	37
19	QS	73/80 (91%)	62 (85%)	11 (15%)	4	24
19	XS	73/80 (91%)	62 (85%)	11 (15%)	4	24
20	QT	76/82 (93%)	68 (90%)	8 (10%)	10	43
20	XT	76/82 (93%)	68 (90%)	8 (10%)	10	43
21	QU	20/22 (91%)	19 (95%)	1 (5%)	34	78
21	XU	20/22 (91%)	19 (95%)	1 (5%)	34	78
27	RD	214/218 (98%)	177 (83%)	37 (17%)	3	16
27	YD	214/218 (98%)	177 (83%)	37 (17%)	3	16
28	RE	165/166 (99%)	127 (77%)	38 (23%)	1	6
28	YE	165/166 (99%)	127 (77%)	38 (23%)	1	6
29	RF	161/166 (97%)	140 (87%)	21 (13%)	6	31
29	YF	161/166 (97%)	139 (86%)	22 (14%)	5	28
30	RG	155/156 (99%)	130 (84%)	25 (16%)	3	21
30	YG	155/156 (99%)	131 (84%)	24 (16%)	4	23
31	RH	142/148 (96%)	115 (81%)	27 (19%)	2	11
31	YH	142/148 (96%)	115 (81%)	27 (19%)	2	11
32	RI	122/124 (98%)	98 (80%)	24 (20%)	2	10
32	YI	122/124 (98%)	97 (80%)	25 (20%)	2	9
33	RN	117/119 (98%)	98 (84%)	19 (16%)	3	20
33	YN	117/119 (98%)	98 (84%)	19 (16%)	3	20
34	RO	100/100 (100%)	90 (90%)	10 (10%)	11	46
34	YO	100/100 (100%)	90 (90%)	10 (10%)	11	46
35	RP	116/116 (100%)	89 (77%)	27 (23%)	1	6
35	YP	116/116 (100%)	89 (77%)	27 (23%)	1	6
36	RQ	111/111 (100%)	92 (83%)	19 (17%)	3	17
36	YQ	111/111 (100%)	92 (83%)	19 (17%)	3	17
37	RR	101/101 (100%)	84 (83%)	17 (17%)	3	18
37	YR	101/101 (100%)	84 (83%)	17 (17%)	3	18
38	RS	87/88 (99%)	74 (85%)	13 (15%)	4	25

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	YS	87/88 (99%)	74 (85%)	13 (15%)	4	25
39	RT	120/127 (94%)	97 (81%)	23 (19%)	2	11
39	YT	120/127 (94%)	97 (81%)	23 (19%)	2	11
40	RU	93/94 (99%)	80 (86%)	13 (14%)	5	28
40	YU	93/94 (99%)	80 (86%)	13 (14%)	5	28
41	RV	82/82 (100%)	71 (87%)	11 (13%)	6	30
41	YV	82/82 (100%)	71 (87%)	11 (13%)	6	30
42	RW	92/92 (100%)	77 (84%)	15 (16%)	3	20
42	YW	92/92 (100%)	77 (84%)	15 (16%)	3	20
43	RX	74/78 (95%)	63 (85%)	11 (15%)	4	25
43	YX	74/78 (95%)	63 (85%)	11 (15%)	4	25
44	RY	85/91 (93%)	70 (82%)	15 (18%)	3	15
44	YY	85/91 (93%)	70 (82%)	15 (18%)	3	15
45	RZ	152/179 (85%)	124 (82%)	28 (18%)	2	13
45	YZ	152/179 (85%)	124 (82%)	28 (18%)	2	13
46	R0	65/67 (97%)	55 (85%)	10 (15%)	4	23
46	Y0	65/67 (97%)	56 (86%)	9 (14%)	5	28
47	R1	82/83 (99%)	67 (82%)	15 (18%)	2	13
47	Y1	82/83 (99%)	67 (82%)	15 (18%)	2	13
48	R2	64/67 (96%)	57 (89%)	7 (11%)	9	41
48	Y2	64/67 (96%)	57 (89%)	7 (11%)	9	41
49	R3	51/52 (98%)	40 (78%)	11 (22%)	1	7
49	Y3	51/52 (98%)	40 (78%)	11 (22%)	1	7
50	R4	63/63 (100%)	44 (70%)	19 (30%)	0	3
50	Y4	63/63 (100%)	44 (70%)	19 (30%)	0	3
51	R5	51/52 (98%)	39 (76%)	12 (24%)	1	6
51	Y5	51/52 (98%)	39 (76%)	12 (24%)	1	6
52	R6	48/52 (92%)	38 (79%)	10 (21%)	2	8
52	Y6	48/52 (92%)	38 (79%)	10 (21%)	2	8
53	R7	42/42 (100%)	39 (93%)	3 (7%)	21	66
53	Y7	42/42 (100%)	39 (93%)	3 (7%)	21	66

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	R8	54/55 (98%)	39 (72%)	15 (28%)	0	3
54	Y8	54/55 (98%)	39 (72%)	15 (28%)	0	3
All	All	9614/9998 (96%)	8197 (85%)	1417 (15%)	4	25

All (1417) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE
2	QB	8	LYS
2	QB	16	HIS
2	QB	23	ARG
2	QB	24	TRP
2	QB	33	TYR
2	QB	36	ARG
2	QB	63	MET
2	QB	67	THR
2	QB	73	THR
2	QB	82	ARG
2	QB	92	TYR
2	QB	94	ASN
2	QB	121	LEU
2	QB	155	LEU
2	QB	163	PHE
2	QB	165	VAL
2	QB	168	THR
2	QB	172	ILE
2	QB	174	VAL
2	QB	178	ARG
2	QB	196	LEU
2	QB	204	ASN
2	QB	215	LEU
3	QC	3	ASN
3	QC	5	ILE
3	QC	12	LEU
3	QC	16	ARG
3	QC	21	ARG
3	QC	29	TYR
3	QC	56	ASP
3	QC	69	HIS
3	QC	94	LEU
3	QC	127	ARG

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Mol	Chain	Res	Type
3	QC	131	ARG
3	QC	154	SER
3	QC	184	TYR
3	QC	192	THR
3	QC	193	TYR
3	QC	196	LEU
4	QD	3	ARG
4	QD	7	PRO
4	QD	9	CYS
4	QD	13	ARG
4	QD	30	LYS
4	QD	50	ARG
4	QD	53	ASP
4	QD	79	PHE
4	QD	86	LYS
4	QD	94	LEU
4	QD	96	LEU
4	QD	114	ARG
4	QD	122	ARG
4	QD	131	ARG
4	QD	181	MET
4	QD	200	GLU
5	QE	10	MET
5	QE	13	ILE
5	QE	16	THR
5	QE	31	LEU
5	QE	53	LEU
5	QE	73	ASN
5	QE	79	GLU
5	QE	101	ILE
5	QE	153	LYS
6	QF	17	SER
6	QF	21	LEU
6	QF	36	ARG
6	QF	55	ASP
6	QF	63	TYR
6	QF	69	GLU
6	QF	74	ASP
6	QF	77	ARG
6	QF	87	ARG
6	QF	92	LYS
6	QF	94	GLN

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Mol	Chain	Res	Type
6	QF	97	PHE
6	QF	100	ASN
7	QG	8	GLU
7	QG	12	LEU
7	QG	78	ARG
7	QG	84	ASN
7	QG	98	SER
7	QG	111	ARG
7	QG	114	ARG
7	QG	124	LEU
7	QG	137	LYS
7	QG	148	ASN
7	QG	155	ARG
8	QH	1	MET
8	QH	10	LEU
8	QH	27	PRO
8	QH	41	ARG
8	QH	52	ASP
8	QH	63	LEU
8	QH	69	ARG
8	QH	81	HIS
8	QH	99	GLU
8	QH	119	LEU
8	QH	121	ASP
8	QH	129	VAL
8	QH	137	VAL
9	QI	7	THR
9	QI	9	ARG
9	QI	48	GLU
9	QI	65	VAL
9	QI	83	ARG
9	QI	95	LYS
9	QI	104	ARG
9	QI	113	LYS
9	QI	114	TYR
9	QI	121	ARG
9	QI	128	ARG
10	QJ	22	LYS
10	QJ	47	PHE
10	QJ	57	LYS
10	QJ	62	HIS
10	QJ	74	ILE

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Mol	Chain	Res	Type
10	QJ	80	LYS
10	QJ	84	GLN
10	QJ	96	ILE
11	QK	26	ASN
11	QK	32	ILE
11	QK	63	LEU
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL
11	QK	116	HIS
11	QK	125	PHE
12	QL	17	LYS
12	QL	20	LYS
12	QL	27	LEU
12	QL	41	ARG
12	QL	53	ARG
12	QL	57	LYS
12	QL	60	LEU
12	QL	62	SER
12	QL	70	ILE
12	QL	73	GLU
12	QL	81	SER
12	QL	89	ARG
12	QL	112	ASP
12	QL	120	TYR
13	QM	3	ARG
13	QM	8	GLU
13	QM	13	LYS
13	QM	35	GLU
13	QM	47	ASP
13	QM	56	LEU
13	QM	57	ARG
13	QM	64	TRP
13	QM	66	LEU
13	QM	70	LEU
13	QM	88	ARG
13	QM	90	LEU
13	QM	101	GLN
13	QM	115	LYS
13	QM	116	THR
13	QM	122	LYS

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Mol	Chain	Res	Type
14	QN	3	ARG
14	QN	12	ARG
14	QN	14	PRO
14	QN	16	PHE
15	QO	3	ILE
15	QO	8	LYS
15	QO	26	GLU
15	QO	39	LEU
15	QO	62	GLN
15	QO	65	ARG
16	QP	1	MET
16	QP	26	ARG
16	QP	28	ARG
16	QP	59	TRP
16	QP	62	VAL
16	QP	69	THR
16	QP	71	ARG
16	QP	72	ARG
16	QP	82	GLN
17	QQ	12	SER
17	QQ	48	GLU
17	QQ	52	LYS
17	QQ	59	ILE
17	QQ	68	ARG
17	QQ	74	LEU
18	QR	26	LEU
18	QR	29	PHE
18	QR	32	ARG
18	QR	36	ASN
18	QR	46	GLU
18	QR	54	ARG
18	QR	55	ARG
19	QS	5	LEU
19	QS	10	PHE
19	QS	12	ASP
19	QS	13	ASP
19	QS	15	LEU
19	QS	29	ARG
19	QS	30	LEU
19	QS	41	VAL
19	QS	63	THR
19	QS	65	ASN

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Mol	Chain	Res	Type
19	QS	83	HIS
20	QT	11	SER
20	QT	24	LEU
20	QT	26	ASN
20	QT	41	ILE
20	QT	62	LEU
20	QT	73	HIS
20	QT	75	ASN
20	QT	93	GLU
21	QU	6	ARG
27	RD	10	THR
27	RD	17	THR
27	RD	26	LYS
27	RD	33	LEU
27	RD	43	ARG
27	RD	44	ASN
27	RD	61	LEU
27	RD	65	ILE
27	RD	67	PHE
27	RD	71	ASP
27	RD	73	VAL
27	RD	94	LEU
27	RD	98	VAL
27	RD	105	ILE
27	RD	106	ILE
27	RD	131	LEU
27	RD	134	ARG
27	RD	135	PHE
27	RD	155	LEU
27	RD	157	ARG
27	RD	166	GLN
27	RD	173	VAL
27	RD	183	ARG
27	RD	192	THR
27	RD	198	ASN
27	RD	200	ASP
27	RD	215	LEU
27	RD	217	ARG
27	RD	218	ARG
27	RD	226	MET
27	RD	230	ASP
27	RD	237	GLU

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Mol	Chain	Res	Type
27	RD	257	LEU
27	RD	259	THR
27	RD	261	LYS
27	RD	262	ARG
27	RD	271	ILE
28	RE	2	LYS
28	RE	4	ILE
28	RE	13	ARG
28	RE	16	ARG
28	RE	17	ASP
28	RE	25	VAL
28	RE	26	ILE
28	RE	27	LEU
28	RE	33	VAL
28	RE	36	ARG
28	RE	37	ARG
28	RE	38	THR
28	RE	41	LYS
28	RE	45	THR
28	RE	54	GLN
28	RE	61	ARG
28	RE	62	PRO
28	RE	66	HIS
28	RE	73	GLU
28	RE	75	VAL
28	RE	77	ILE
28	RE	78	LEU
28	RE	79	ARG
28	RE	80	GLU
28	RE	101	ARG
28	RE	113	PHE
28	RE	117	MET
28	RE	119	ARG
28	RE	143	ASN
28	RE	146	THR
28	RE	154	LYS
28	RE	167	VAL
28	RE	179	GLU
28	RE	184	VAL
28	RE	196	VAL
28	RE	200	GLU
28	RE	202	LYS

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Mol	Chain	Res	Type
28	RE	203	LYS
29	RF	7	TYR
29	RF	9	ILE
29	RF	25	PRO
29	RF	32	LEU
29	RF	45	ARG
29	RF	46	ARG
29	RF	65	TRP
29	RF	66	PRO
29	RF	67	GLN
29	RF	70	THR
29	RF	82	ILE
29	RF	106	ARG
29	RF	108	LYS
29	RF	117	ARG
29	RF	124	LEU
29	RF	127	GLU
29	RF	145	GLU
29	RF	164	ARG
29	RF	181	LEU
29	RF	183	VAL
29	RF	206	ILE
30	RG	4	ASP
30	RG	22	ARG
30	RG	26	GLN
30	RG	33	ARG
30	RG	34	LEU
30	RG	35	GLU
30	RG	43	LEU
30	RG	45	GLU
30	RG	63	ILE
30	RG	67	LYS
30	RG	71	THR
30	RG	88	ILE
30	RG	94	LEU
30	RG	96	ARG
30	RG	97	ASP
30	RG	103	LEU
30	RG	115	ARG
30	RG	118	ARG
30	RG	133	LEU
30	RG	147	ASP

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Mol	Chain	Res	Type
30	RG	155	MET
30	RG	156	ASP
30	RG	159	VAL
30	RG	167	GLU
30	RG	174	GLU
31	RH	3	ARG
31	RH	4	ILE
31	RH	9	ILE
31	RH	10	PRO
31	RH	11	VAL
31	RH	16	SER
31	RH	27	LYS
31	RH	32	GLU
31	RH	37	VAL
31	RH	41	MET
31	RH	43	VAL
31	RH	59	ARG
31	RH	64	LEU
31	RH	77	LYS
31	RH	81	GLU
31	RH	85	LYS
31	RH	88	LEU
31	RH	89	ILE
31	RH	105	LEU
31	RH	132	ARG
31	RH	139	GLN
31	RH	152	ARG
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	158	HIS
31	RH	169	VAL
32	RI	1	MET
32	RI	9	LEU
32	RI	25	TYR
32	RI	33	ARG
32	RI	38	LEU
32	RI	41	GLU
32	RI	51	ILE
32	RI	67	ARG
32	RI	70	GLU
32	RI	74	ASN

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Mol	Chain	Res	Type
32	RI	85	GLU
32	RI	88	ILE
32	RI	96	ASP
32	RI	101	LEU
32	RI	112	LYS
32	RI	113	ARG
32	RI	128	LEU
32	RI	131	LYS
32	RI	134	PRO
32	RI	135	GLU
32	RI	139	GLN
32	RI	140	LEU
32	RI	141	LYS
32	RI	142	VAL
33	RN	2	LYS
33	RN	7	LYS
33	RN	43	THR
33	RN	48	MET
33	RN	60	ILE
33	RN	61	ARG
33	RN	65	LYS
33	RN	73	THR
33	RN	78	TYR
33	RN	90	MET
33	RN	93	THR
33	RN	94	HIS
33	RN	101	HIS
33	RN	109	LYS
33	RN	112	LEU
33	RN	120	LEU
33	RN	127	ASP
33	RN	131	GLN
33	RN	136	GLU
34	RO	8	LEU
34	RO	9	GLU
34	RO	17	ARG
34	RO	19	ILE
34	RO	23	ARG
34	RO	31	LYS
34	RO	39	ILE
34	RO	49	ARG
34	RO	53	LYS

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Mol	Chain	Res	Type
34	RO	65	THR
35	RP	5	ASP
35	RP	9	ASN
35	RP	10	PRO
35	RP	16	ARG
35	RP	21	ARG
35	RP	27	HIS
35	RP	29	LYS
35	RP	30	THR
35	RP	32	THR
35	RP	36	LYS
35	RP	38	GLN
35	RP	41	ARG
35	RP	50	ARG
35	RP	55	ARG
35	RP	61	ARG
35	RP	62	LEU
35	RP	64	LYS
35	RP	65	ARG
35	RP	75	ILE
35	RP	81	GLN
35	RP	88	LEU
35	RP	91	PHE
35	RP	99	LEU
35	RP	100	LEU
35	RP	108	LYS
35	RP	144	GLU
35	RP	146	VAL
36	RQ	2	LEU
36	RQ	25	ASP
36	RQ	26	TYR
36	RQ	27	VAL
36	RQ	45	GLN
36	RQ	46	GLN
36	RQ	54	MET
36	RQ	55	VAL
36	RQ	58	PHE
36	RQ	59	ARG
36	RQ	79	LEU
36	RQ	80	GLU
36	RQ	83	MET
36	RQ	89	ASN

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Mol	Chain	Res	Type
36	RQ	90	VAL
36	RQ	91	GLU
36	RQ	130	LYS
36	RQ	135	ASP
36	RQ	139	GLU
37	RR	14	SER
37	RR	31	HIS
37	RR	37	THR
37	RR	44	LEU
37	RR	51	LEU
37	RR	57	ARG
37	RR	66	VAL
37	RR	67	LEU
37	RR	71	GLN
37	RR	75	LEU
37	RR	76	VAL
37	RR	81	ASP
37	RR	95	THR
37	RR	104	ARG
37	RR	105	ARG
37	RR	107	ASP
37	RR	113	LEU
38	RS	4	LEU
38	RS	12	PHE
38	RS	17	ARG
38	RS	18	ILE
38	RS	20	ARG
38	RS	44	LYS
38	RS	56	LEU
38	RS	57	LYS
38	RS	89	ARG
38	RS	101	LEU
38	RS	103	GLU
38	RS	106	ARG
38	RS	111	GLU
39	RT	2	ASN
39	RT	14	TYR
39	RT	22	PHE
39	RT	23	ARG
39	RT	26	ASP
39	RT	27	THR
39	RT	42	ILE

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Mol	Chain	Res	Type
39	RT	51	ARG
39	RT	58	ASN
39	RT	65	LYS
39	RT	73	GLU
39	RT	78	LEU
39	RT	86	ILE
39	RT	87	ASP
39	RT	99	LEU
39	RT	100	TYR
39	RT	104	ASN
39	RT	107	ASP
39	RT	111	ARG
39	RT	112	ARG
39	RT	115	ARG
39	RT	128	GLU
39	RT	134	GLU
40	RU	5	LYS
40	RU	9	VAL
40	RU	31	SER
40	RU	52	ARG
40	RU	74	LEU
40	RU	76	TYR
40	RU	79	PHE
40	RU	88	ILE
40	RU	92	ARG
40	RU	98	LEU
40	RU	108	GLU
40	RU	114	LYS
40	RU	117	GLN
41	RV	13	ARG
41	RV	14	VAL
41	RV	18	LEU
41	RV	35	LEU
41	RV	38	LEU
41	RV	39	LEU
41	RV	40	LEU
41	RV	66	ARG
41	RV	75	PHE
41	RV	91	TYR
41	RV	99	ILE
42	RW	11	ARG
42	RW	14	PRO

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Mol	Chain	Res	Type
42	RW	16	LYS
42	RW	18	ARG
42	RW	19	LEU
42	RW	20	VAL
42	RW	63	ASP
42	RW	67	ASP
42	RW	69	LEU
42	RW	70	TYR
42	RW	87	PRO
42	RW	88	ARG
42	RW	92	ARG
42	RW	107	LEU
42	RW	109	GLU
43	RX	3	THR
43	RX	6	ASP
43	RX	15	GLU
43	RX	27	THR
43	RX	30	VAL
43	RX	55	ASN
43	RX	57	LEU
43	RX	65	ARG
43	RX	70	LEU
43	RX	80	ILE
43	RX	88	LYS
44	RY	7	VAL
44	RY	11	ASP
44	RY	27	VAL
44	RY	45	VAL
44	RY	57	GLN
44	RY	64	GLU
44	RY	75	ILE
44	RY	77	PRO
44	RY	79	CYS
44	RY	87	LYS
44	RY	88	LYS
44	RY	89	PHE
44	RY	90	LEU
44	RY	95	LYS
44	RY	97	ARG
45	RZ	2	GLU
45	RZ	20	ARG
45	RZ	24	LEU

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Mol	Chain	Res	Type
45	RZ	31	ARG
45	RZ	38	TYR
45	RZ	72	ARG
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	82	ARG
45	RZ	87	ASP
45	RZ	94	GLU
45	RZ	96	VAL
45	RZ	97	GLU
45	RZ	107	THR
45	RZ	117	LEU
45	RZ	118	GLN
45	RZ	119	GLU
45	RZ	121	HIS
45	RZ	122	ARG
45	RZ	123	ASP
45	RZ	131	ARG
45	RZ	132	ASN
45	RZ	137	ILE
45	RZ	139	VAL
45	RZ	148	ASP
45	RZ	155	LEU
45	RZ	170	THR
45	RZ	171	ILE
46	R0	3	HIS
46	R0	9	SER
46	R0	10	THR
46	R0	11	ARG
46	R0	35	ASN
46	R0	36	ILE
46	R0	41	ARG
46	R0	55	ARG
46	R0	74	ARG
46	R0	82	ARG
47	R1	2	SER
47	R1	11	ARG
47	R1	21	ARG
47	R1	30	VAL
47	R1	40	ARG
47	R1	41	ARG
47	R1	56	GLN

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Mol	Chain	Res	Type
47	R1	76	ARG
47	R1	80	LEU
47	R1	81	LYS
47	R1	83	GLU
47	R1	87	PRO
47	R1	91	LYS
47	R1	92	LYS
47	R1	97	LEU
48	R2	7	ARG
48	R2	9	GLN
48	R2	16	LEU
48	R2	24	LEU
48	R2	53	LEU
48	R2	62	THR
48	R2	64	LEU
49	R3	4	LEU
49	R3	8	LEU
49	R3	9	VAL
49	R3	10	LYS
49	R3	17	LYS
49	R3	30	ARG
49	R3	31	LEU
49	R3	32	GLN
49	R3	37	LEU
49	R3	40	THR
49	R3	44	ARG
50	R4	6	HIS
50	R4	15	ILE
50	R4	18	CYS
50	R4	21	VAL
50	R4	23	GLU
50	R4	39	CYS
50	R4	42	PHE
50	R4	48	ARG
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	57	GLU
50	R4	61	ARG
50	R4	62	ARG
50	R4	63	TYR

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Mol	Chain	Res	Type
50	R4	67	TYR
50	R4	68	ARG
50	R4	71	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	6	VAL
51	R5	11	THR
51	R5	19	ARG
51	R5	25	LEU
51	R5	36	CYS
51	R5	37	LYS
51	R5	43	HIS
51	R5	52	TYR
51	R5	56	LYS
51	R5	58	LEU
52	R6	6	ARG
52	R6	8	LYS
52	R6	18	ARG
52	R6	19	ARG
52	R6	28	ARG
52	R6	34	LEU
52	R6	37	ARG
52	R6	42	TRP
52	R6	44	ARG
52	R6	46	HIS
53	R7	1	MET
53	R7	9	ARG
53	R7	43	THR
54	R8	15	LYS
54	R8	16	ILE
54	R8	30	ARG
54	R8	35	GLN
54	R8	39	LYS
54	R8	43	GLN
54	R8	44	LYS
54	R8	47	LYS
54	R8	48	PHE
54	R8	49	VAL
54	R8	52	LYS
54	R8	53	PRO
54	R8	62	LEU
54	R8	63	PRO

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Mol	Chain	Res	Type
54	R8	65	GLU
2	XB	5	ILE
2	XB	8	LYS
2	XB	16	HIS
2	XB	23	ARG
2	XB	24	TRP
2	XB	33	TYR
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR
2	XB	73	THR
2	XB	82	ARG
2	XB	92	TYR
2	XB	94	ASN
2	XB	121	LEU
2	XB	155	LEU
2	XB	163	PHE
2	XB	165	VAL
2	XB	168	THR
2	XB	172	ILE
2	XB	174	VAL
2	XB	178	ARG
2	XB	196	LEU
2	XB	204	ASN
2	XB	215	LEU
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	16	ARG
3	XC	21	ARG
3	XC	29	TYR
3	XC	56	ASP
3	XC	69	HIS
3	XC	94	LEU
3	XC	127	ARG
3	XC	131	ARG
3	XC	154	SER
3	XC	184	TYR
3	XC	192	THR
3	XC	193	TYR
3	XC	196	LEU
4	XD	3	ARG

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Mol	Chain	Res	Type
4	XD	7	PRO
4	XD	9	CYS
4	XD	13	ARG
4	XD	30	LYS
4	XD	50	ARG
4	XD	53	ASP
4	XD	79	PHE
4	XD	86	LYS
4	XD	94	LEU
4	XD	96	LEU
4	XD	114	ARG
4	XD	122	ARG
4	XD	131	ARG
4	XD	181	MET
4	XD	200	GLU
5	XE	10	MET
5	XE	13	ILE
5	XE	16	THR
5	XE	31	LEU
5	XE	53	LEU
5	XE	79	GLU
5	XE	101	ILE
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	36	ARG
6	XF	55	ASP
6	XF	63	TYR
6	XF	69	GLU
6	XF	74	ASP
6	XF	77	ARG
6	XF	87	ARG
6	XF	92	LYS
6	XF	94	GLN
6	XF	97	PHE
6	XF	100	ASN
7	XG	8	GLU
7	XG	12	LEU
7	XG	78	ARG
7	XG	84	ASN
7	XG	98	SER
7	XG	111	ARG

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Mol	Chain	Res	Type
7	XG	114	ARG
7	XG	124	LEU
7	XG	137	LYS
7	XG	148	ASN
7	XG	155	ARG
8	XH	1	MET
8	XH	10	LEU
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP
8	XH	63	LEU
8	XH	69	ARG
8	XH	81	HIS
8	XH	99	GLU
8	XH	119	LEU
8	XH	121	ASP
8	XH	129	VAL
8	XH	137	VAL
9	XI	7	THR
9	XI	9	ARG
9	XI	48	GLU
9	XI	65	VAL
9	XI	83	ARG
9	XI	95	LYS
9	XI	104	ARG
9	XI	113	LYS
9	XI	114	TYR
9	XI	121	ARG
9	XI	128	ARG
10	XJ	22	LYS
10	XJ	47	PHE
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	74	ILE
10	XJ	80	LYS
10	XJ	84	GLN
10	XJ	96	ILE
11	XK	26	ASN
11	XK	32	ILE
11	XK	63	LEU
11	XK	75	TYR
11	XK	92	GLU

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Mol	Chain	Res	Type
11	XK	109	VAL
11	XK	114	VAL
11	XK	116	HIS
11	XK	125	PHE
12	XL	17	LYS
12	XL	20	LYS
12	XL	27	LEU
12	XL	41	ARG
12	XL	53	ARG
12	XL	57	LYS
12	XL	60	LEU
12	XL	62	SER
12	XL	70	ILE
12	XL	73	GLU
12	XL	81	SER
12	XL	89	ARG
12	XL	112	ASP
12	XL	120	TYR
13	XM	3	ARG
13	XM	8	GLU
13	XM	13	LYS
13	XM	35	GLU
13	XM	47	ASP
13	XM	56	LEU
13	XM	57	ARG
13	XM	64	TRP
13	XM	66	LEU
13	XM	70	LEU
13	XM	77	ASN
13	XM	88	ARG
13	XM	90	LEU
13	XM	101	GLN
13	XM	115	LYS
13	XM	116	THR
13	XM	122	LYS
14	XN	3	ARG
14	XN	12	ARG
14	XN	14	PRO
14	XN	16	PHE
14	XN	24	CYS
14	XN	27	CYS
14	XN	44	LEU

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Mol	Chain	Res	Type
15	XO	3	ILE
15	XO	8	LYS
15	XO	26	GLU
15	XO	39	LEU
15	XO	62	GLN
15	XO	65	ARG
16	XP	1	MET
16	XP	26	ARG
16	XP	28	ARG
16	XP	59	TRP
16	XP	62	VAL
16	XP	69	THR
16	XP	71	ARG
16	XP	72	ARG
16	XP	82	GLN
17	XQ	12	SER
17	XQ	48	GLU
17	XQ	52	LYS
17	XQ	59	ILE
17	XQ	68	ARG
17	XQ	74	LEU
18	XR	26	LEU
18	XR	29	PHE
18	XR	32	ARG
18	XR	36	ASN
18	XR	46	GLU
18	XR	54	ARG
18	XR	55	ARG
19	XS	5	LEU
19	XS	10	PHE
19	XS	12	ASP
19	XS	13	ASP
19	XS	15	LEU
19	XS	29	ARG
19	XS	30	LEU
19	XS	41	VAL
19	XS	63	THR
19	XS	65	ASN
19	XS	83	HIS
20	XT	11	SER
20	XT	24	LEU
20	XT	26	ASN

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Mol	Chain	Res	Type
20	XT	41	ILE
20	XT	62	LEU
20	XT	73	HIS
20	XT	75	ASN
20	XT	93	GLU
21	XU	6	ARG
27	YD	10	THR
27	YD	17	THR
27	YD	26	LYS
27	YD	33	LEU
27	YD	43	ARG
27	YD	44	ASN
27	YD	61	LEU
27	YD	65	ILE
27	YD	67	PHE
27	YD	71	ASP
27	YD	73	VAL
27	YD	94	LEU
27	YD	98	VAL
27	YD	105	ILE
27	YD	106	ILE
27	YD	131	LEU
27	YD	134	ARG
27	YD	135	PHE
27	YD	155	LEU
27	YD	157	ARG
27	YD	166	GLN
27	YD	173	VAL
27	YD	183	ARG
27	YD	192	THR
27	YD	198	ASN
27	YD	200	ASP
27	YD	215	LEU
27	YD	217	ARG
27	YD	218	ARG
27	YD	226	MET
27	YD	230	ASP
27	YD	237	GLU
27	YD	257	LEU
27	YD	259	THR
27	YD	261	LYS
27	YD	262	ARG

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Mol	Chain	Res	Type
27	YD	271	ILE
28	YE	2	LYS
28	YE	4	ILE
28	YE	13	ARG
28	YE	16	ARG
28	YE	17	ASP
28	YE	25	VAL
28	YE	26	ILE
28	YE	27	LEU
28	YE	33	VAL
28	YE	36	ARG
28	YE	37	ARG
28	YE	38	THR
28	YE	41	LYS
28	YE	45	THR
28	YE	54	GLN
28	YE	61	ARG
28	YE	62	PRO
28	YE	66	HIS
28	YE	73	GLU
28	YE	75	VAL
28	YE	77	ILE
28	YE	78	LEU
28	YE	79	ARG
28	YE	80	GLU
28	YE	101	ARG
28	YE	113	PHE
28	YE	117	MET
28	YE	119	ARG
28	YE	143	ASN
28	YE	146	THR
28	YE	154	LYS
28	YE	167	VAL
28	YE	179	GLU
28	YE	184	VAL
28	YE	196	VAL
28	YE	200	GLU
28	YE	202	LYS
28	YE	203	LYS
29	YF	7	TYR
29	YF	9	ILE
29	YF	25	PRO

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Mol	Chain	Res	Type
29	YF	32	LEU
29	YF	45	ARG
29	YF	46	ARG
29	YF	65	TRP
29	YF	66	PRO
29	YF	67	GLN
29	YF	70	THR
29	YF	82	ILE
29	YF	106	ARG
29	YF	108	LYS
29	YF	117	ARG
29	YF	124	LEU
29	YF	127	GLU
29	YF	145	GLU
29	YF	164	ARG
29	YF	169	ASN
29	YF	181	LEU
29	YF	183	VAL
29	YF	206	ILE
30	YG	4	ASP
30	YG	22	ARG
30	YG	26	GLN
30	YG	33	ARG
30	YG	34	LEU
30	YG	35	GLU
30	YG	43	LEU
30	YG	45	GLU
30	YG	63	ILE
30	YG	67	LYS
30	YG	71	THR
30	YG	88	ILE
30	YG	94	LEU
30	YG	96	ARG
30	YG	97	ASP
30	YG	103	LEU
30	YG	115	ARG
30	YG	118	ARG
30	YG	133	LEU
30	YG	147	ASP
30	YG	155	MET
30	YG	156	ASP
30	YG	159	VAL

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Mol	Chain	Res	Type
30	YG	174	GLU
31	YH	3	ARG
31	YH	4	ILE
31	YH	9	ILE
31	YH	10	PRO
31	YH	11	VAL
31	YH	16	SER
31	YH	27	LYS
31	YH	32	GLU
31	YH	37	VAL
31	YH	41	MET
31	YH	43	VAL
31	YH	59	ARG
31	YH	64	LEU
31	YH	77	LYS
31	YH	81	GLU
31	YH	85	LYS
31	YH	88	LEU
31	YH	89	ILE
31	YH	105	LEU
31	YH	132	ARG
31	YH	139	GLN
31	YH	152	ARG
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	158	HIS
31	YH	169	VAL
32	YI	1	MET
32	YI	9	LEU
32	YI	25	TYR
32	YI	33	ARG
32	YI	38	LEU
32	YI	56	LYS
32	YI	57	ARG
32	YI	60	GLU
32	YI	67	ARG
32	YI	70	GLU
32	YI	74	ASN
32	YI	85	GLU
32	YI	88	ILE
32	YI	96	ASP

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Mol	Chain	Res	Type
32	YI	101	LEU
32	YI	112	LYS
32	YI	113	ARG
32	YI	128	LEU
32	YI	131	LYS
32	YI	134	PRO
32	YI	135	GLU
32	YI	139	GLN
32	YI	140	LEU
32	YI	141	LYS
32	YI	142	VAL
33	YN	2	LYS
33	YN	7	LYS
33	YN	43	THR
33	YN	48	MET
33	YN	60	ILE
33	YN	61	ARG
33	YN	65	LYS
33	YN	73	THR
33	YN	78	TYR
33	YN	90	MET
33	YN	93	THR
33	YN	94	HIS
33	YN	101	HIS
33	YN	109	LYS
33	YN	112	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	131	GLN
33	YN	136	GLU
34	YO	8	LEU
34	YO	9	GLU
34	YO	17	ARG
34	YO	19	ILE
34	YO	23	ARG
34	YO	31	LYS
34	YO	39	ILE
34	YO	49	ARG
34	YO	53	LYS
34	YO	65	THR
35	YP	5	ASP
35	YP	9	ASN

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Mol	Chain	Res	Type
35	YP	10	PRO
35	YP	16	ARG
35	YP	21	ARG
35	YP	27	HIS
35	YP	29	LYS
35	YP	30	THR
35	YP	32	THR
35	YP	36	LYS
35	YP	38	GLN
35	YP	41	ARG
35	YP	50	ARG
35	YP	55	ARG
35	YP	61	ARG
35	YP	62	LEU
35	YP	64	LYS
35	YP	65	ARG
35	YP	75	ILE
35	YP	81	GLN
35	YP	88	LEU
35	YP	91	PHE
35	YP	99	LEU
35	YP	100	LEU
35	YP	108	LYS
35	YP	144	GLU
35	YP	146	VAL
36	YQ	2	LEU
36	YQ	25	ASP
36	YQ	26	TYR
36	YQ	27	VAL
36	YQ	45	GLN
36	YQ	46	GLN
36	YQ	54	MET
36	YQ	55	VAL
36	YQ	58	PHE
36	YQ	59	ARG
36	YQ	79	LEU
36	YQ	80	GLU
36	YQ	83	MET
36	YQ	89	ASN
36	YQ	90	VAL
36	YQ	91	GLU
36	YQ	130	LYS

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Mol	Chain	Res	Type
36	YQ	135	ASP
36	YQ	139	GLU
37	YR	14	SER
37	YR	31	HIS
37	YR	37	THR
37	YR	44	LEU
37	YR	51	LEU
37	YR	57	ARG
37	YR	66	VAL
37	YR	67	LEU
37	YR	71	GLN
37	YR	75	LEU
37	YR	76	VAL
37	YR	81	ASP
37	YR	95	THR
37	YR	104	ARG
37	YR	105	ARG
37	YR	107	ASP
37	YR	113	LEU
38	YS	4	LEU
38	YS	12	PHE
38	YS	17	ARG
38	YS	18	ILE
38	YS	20	ARG
38	YS	44	LYS
38	YS	56	LEU
38	YS	57	LYS
38	YS	89	ARG
38	YS	101	LEU
38	YS	103	GLU
38	YS	106	ARG
38	YS	111	GLU
39	YT	2	ASN
39	YT	14	TYR
39	YT	22	PHE
39	YT	23	ARG
39	YT	26	ASP
39	YT	27	THR
39	YT	42	ILE
39	YT	51	ARG
39	YT	58	ASN
39	YT	65	LYS

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Mol	Chain	Res	Type
39	YT	73	GLU
39	YT	78	LEU
39	YT	86	ILE
39	YT	87	ASP
39	YT	99	LEU
39	YT	100	TYR
39	YT	104	ASN
39	YT	107	ASP
39	YT	111	ARG
39	YT	112	ARG
39	YT	115	ARG
39	YT	128	GLU
39	YT	134	GLU
40	YU	5	LYS
40	YU	9	VAL
40	YU	31	SER
40	YU	52	ARG
40	YU	74	LEU
40	YU	76	TYR
40	YU	79	PHE
40	YU	88	ILE
40	YU	92	ARG
40	YU	98	LEU
40	YU	108	GLU
40	YU	114	LYS
40	YU	117	GLN
41	YV	13	ARG
41	YV	14	VAL
41	YV	18	LEU
41	YV	35	LEU
41	YV	38	LEU
41	YV	39	LEU
41	YV	40	LEU
41	YV	66	ARG
41	YV	75	PHE
41	YV	91	TYR
41	YV	99	ILE
42	YW	11	ARG
42	YW	14	PRO
42	YW	16	LYS
42	YW	18	ARG
42	YW	19	LEU

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Mol	Chain	Res	Type
42	YW	20	VAL
42	YW	63	ASP
42	YW	67	ASP
42	YW	69	LEU
42	YW	70	TYR
42	YW	87	PRO
42	YW	88	ARG
42	YW	92	ARG
42	YW	107	LEU
42	YW	109	GLU
43	YX	3	THR
43	YX	6	ASP
43	YX	15	GLU
43	YX	27	THR
43	YX	30	VAL
43	YX	55	ASN
43	YX	57	LEU
43	YX	65	ARG
43	YX	70	LEU
43	YX	80	ILE
43	YX	88	LYS
44	YY	7	VAL
44	YY	11	ASP
44	YY	27	VAL
44	YY	45	VAL
44	YY	57	GLN
44	YY	64	GLU
44	YY	75	ILE
44	YY	77	PRO
44	YY	79	CYS
44	YY	87	LYS
44	YY	88	LYS
44	YY	89	PHE
44	YY	90	LEU
44	YY	95	LYS
44	YY	97	ARG
45	YZ	2	GLU
45	YZ	20	ARG
45	YZ	24	LEU
45	YZ	31	ARG
45	YZ	38	TYR
45	YZ	72	ARG

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Mol	Chain	Res	Type
45	YZ	76	LEU
45	YZ	81	ARG
45	YZ	82	ARG
45	YZ	87	ASP
45	YZ	94	GLU
45	YZ	96	VAL
45	YZ	97	GLU
45	YZ	107	THR
45	YZ	117	LEU
45	YZ	118	GLN
45	YZ	119	GLU
45	YZ	121	HIS
45	YZ	122	ARG
45	YZ	123	ASP
45	YZ	131	ARG
45	YZ	132	ASN
45	YZ	137	ILE
45	YZ	139	VAL
45	YZ	148	ASP
45	YZ	155	LEU
45	YZ	170	THR
45	YZ	171	ILE
46	Y0	4	LYS
46	Y0	7	LEU
46	Y0	11	ARG
46	Y0	35	ASN
46	Y0	36	ILE
46	Y0	41	ARG
46	Y0	55	ARG
46	Y0	74	ARG
46	Y0	82	ARG
47	Y1	2	SER
47	Y1	11	ARG
47	Y1	21	ARG
47	Y1	30	VAL
47	Y1	40	ARG
47	Y1	41	ARG
47	Y1	56	GLN
47	Y1	76	ARG
47	Y1	80	LEU
47	Y1	81	LYS
47	Y1	83	GLU

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Mol	Chain	Res	Type
47	Y1	87	PRO
47	Y1	91	LYS
47	Y1	92	LYS
47	Y1	97	LEU
48	Y2	7	ARG
48	Y2	9	GLN
48	Y2	16	LEU
48	Y2	24	LEU
48	Y2	53	LEU
48	Y2	62	THR
48	Y2	64	LEU
49	Y3	4	LEU
49	Y3	8	LEU
49	Y3	9	VAL
49	Y3	10	LYS
49	Y3	17	LYS
49	Y3	30	ARG
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	37	LEU
49	Y3	40	THR
49	Y3	44	ARG
50	Y4	6	HIS
50	Y4	15	ILE
50	Y4	18	CYS
50	Y4	21	VAL
50	Y4	23	GLU
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	48	ARG
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	57	GLU
50	Y4	61	ARG
50	Y4	62	ARG
50	Y4	63	TYR
50	Y4	67	TYR
50	Y4	68	ARG
50	Y4	71	ARG
51	Y5	3	LYS

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Mol	Chain	Res	Type
51	Y5	4	HIS
51	Y5	6	VAL
51	Y5	11	THR
51	Y5	19	ARG
51	Y5	25	LEU
51	Y5	36	CYS
51	Y5	37	LYS
51	Y5	43	HIS
51	Y5	52	TYR
51	Y5	56	LYS
51	Y5	58	LEU
52	Y6	6	ARG
52	Y6	8	LYS
52	Y6	18	ARG
52	Y6	19	ARG
52	Y6	28	ARG
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	42	TRP
52	Y6	44	ARG
52	Y6	46	HIS
53	Y7	1	MET
53	Y7	9	ARG
53	Y7	43	THR
54	Y8	15	LYS
54	Y8	16	ILE
54	Y8	30	ARG
54	Y8	35	GLN
54	Y8	39	LYS
54	Y8	43	GLN
54	Y8	44	LYS
54	Y8	47	LYS
54	Y8	48	PHE
54	Y8	49	VAL
54	Y8	52	LYS
54	Y8	53	PRO
54	Y8	62	LEU
54	Y8	63	PRO
54	Y8	65	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (105) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	95	GLN
2	QB	135	GLN
2	QB	204	ASN
2	QB	212	GLN
3	QC	181	ASN
5	QE	72	GLN
5	QE	78	HIS
6	QF	64	GLN
6	QF	100	ASN
7	QG	37	ASN
7	QG	86	GLN
7	QG	148	ASN
10	QJ	78	ASN
12	QL	9	GLN
13	QM	40	ASN
13	QM	62	ASN
13	QM	101	GLN
19	QS	65	ASN
20	QT	26	ASN
27	RD	44	ASN
27	RD	143	HIS
27	RD	166	GLN
27	RD	198	ASN
28	RE	48	GLN
28	RE	135	HIS
32	RI	11	ASN
32	RI	74	ASN
32	RI	105	HIS
33	RN	56	ASN
33	RN	101	HIS
33	RN	131	GLN
34	RO	5	GLN
34	RO	82	ASN
35	RP	81	GLN
35	RP	84	ASN
36	RQ	123	HIS
37	RR	3	HIS
39	RT	55	ASN
39	RT	58	ASN
40	RU	81	HIS
40	RU	94	ASN
41	RV	11	GLN
43	RX	55	ASN

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Mol	Chain	Res	Type
43	RX	87	GLN
44	RY	57	GLN
46	R0	3	HIS
46	R0	29	GLN
47	R1	56	GLN
48	R2	9	GLN
48	R2	47	ASN
49	R3	19	GLN
49	R3	32	GLN
2	XB	95	GLN
2	XB	135	GLN
2	XB	204	ASN
2	XB	212	GLN
3	XC	181	ASN
5	XE	72	GLN
5	XE	78	HIS
6	XF	64	GLN
6	XF	100	ASN
7	XG	28	ASN
7	XG	86	GLN
7	XG	148	ASN
10	XJ	78	ASN
11	XK	117	ASN
12	XL	9	GLN
13	XM	62	ASN
13	XM	101	GLN
19	XS	65	ASN
20	XT	26	ASN
27	YD	44	ASN
27	YD	143	HIS
27	YD	166	GLN
27	YD	198	ASN
28	YE	48	GLN
28	YE	135	HIS
32	YI	11	ASN
32	YI	74	ASN
32	YI	105	HIS
33	YN	56	ASN
33	YN	101	HIS
33	YN	131	GLN
34	YO	5	GLN
34	YO	82	ASN

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Mol	Chain	Res	Type
35	YP	81	GLN
35	YP	84	ASN
36	YQ	123	HIS
37	YR	3	HIS
39	YT	55	ASN
39	YT	58	ASN
40	YU	49	HIS
40	YU	94	ASN
41	YV	11	GLN
42	YW	61	ASN
43	YX	31	HIS
43	YX	55	ASN
43	YX	87	GLN
44	YY	57	GLN
46	Y0	3	HIS
46	Y0	29	GLN
47	Y1	56	GLN
48	Y2	9	GLN
49	Y3	19	GLN
49	Y3	32	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	343 (22%)	51 (3%)
1	XA	1499/1522 (98%)	333 (22%)	55 (3%)
22	QV	76/77 (98%)	30 (39%)	1 (1%)
22	XV	76/77 (98%)	30 (39%)	1 (1%)
23	QX	7/25 (28%)	6 (85%)	1 (14%)
23	XX	7/25 (28%)	2 (28%)	0
24	QY	13/18 (72%)	6 (46%)	1 (7%)
24	XY	13/18 (72%)	5 (38%)	1 (7%)
25	RA	2880/2916 (98%)	734 (25%)	76 (2%)
25	YA	2879/2916 (98%)	747 (25%)	75 (2%)
26	RB	119/122 (97%)	30 (25%)	2 (1%)
26	YB	119/122 (97%)	38 (31%)	1 (0%)
55	Z6	1/3 (33%)	0	0
55	Z8	1/3 (33%)	0	0
All	All	9189/9366 (98%)	2304 (25%)	265 (2%)

All (2304) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	9	G
1	QA	32	A
1	QA	39	G
1	QA	41	G
1	QA	44	G
1	QA	47	C
1	QA	48	C
1	QA	50	A
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	76	G
1	QA	80	G
1	QA	89	U
1	QA	91	C
1	QA	95	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	130	A
1	QA	142	G
1	QA	144	G
1	QA	147	G
1	QA	162	A
1	QA	163	C
1	QA	168	G
1	QA	171	A
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	185	A
1	QA	190	G
1	QA	195	A
1	QA	209	U
1	QA	222	U
1	QA	226	G
1	QA	244	U

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Mol	Chain	Res	Type
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	267	C
1	QA	270	A
1	QA	279	A
1	QA	281	G
1	QA	289	G
1	QA	290	C
1	QA	306	G
1	QA	314	C
1	QA	315	A
1	QA	316	G
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	343	U
1	QA	344	A
1	QA	345	C
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	362	G
1	QA	367	U
1	QA	373	A
1	QA	382	A
1	QA	384	G
1	QA	388	G
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	414	A
1	QA	419	C
1	QA	421	U
1	QA	422	C
1	QA	423	G

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Mol	Chain	Res	Type
1	QA	424	G
1	QA	429	U
1	QA	439	A
1	QA	440	A
1	QA	442	C
1	QA	450	G
1	QA	452	A
1	QA	465	A
1	QA	467	G
1	QA	482	A
1	QA	484	G
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	498	A
1	QA	500	G
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	517	G
1	QA	518	C
1	QA	521	G
1	QA	527	G
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	536	C
1	QA	547	A
1	QA	559	A
1	QA	560	U
1	QA	561	U
1	QA	566	G
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	597	G

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Mol	Chain	Res	Type
1	QA	618	C
1	QA	623	C
1	QA	630	G
1	QA	631	G
1	QA	633	G
1	QA	652	U
1	QA	653	A
1	QA	665	A
1	QA	686	U
1	QA	687	A
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	724	G
1	QA	729	A
1	QA	731	G
1	QA	733	A
1	QA	748	C
1	QA	749	C
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	777	A
1	QA	786	G
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	795	C
1	QA	796	C
1	QA	801	U
1	QA	802	A
1	QA	813	U
1	QA	815	A
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	819	A
1	QA	821	G
1	QA	828	A

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Mol	Chain	Res	Type
1	QA	836	G
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	870	U
1	QA	871	U
1	QA	872	A
1	QA	873	A
1	QA	889	A
1	QA	902	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	961	U
1	QA	966	G
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	978	A
1	QA	981	U
1	QA	982	U
1	QA	983	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	995	C
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1005	A
1	QA	1006	C
1	QA	1008	C

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Mol	Chain	Res	Type
1	QA	1016	A
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1039	C
1	QA	1040	U
1	QA	1050	G
1	QA	1052	U
1	QA	1053	G
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1085	U
1	QA	1094	G
1	QA	1095	U
1	QA	1096	C
1	QA	1101	A
1	QA	1112	C
1	QA	1117	G
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
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	1145	C
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G

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Mol	Chain	Res	Type
1	QA	1171	G
1	QA	1176	A
1	QA	1177	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1187	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	1218	C
1	QA	1224	G
1	QA	1225	A
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	1268	A
1	QA	1270	C
1	QA	1273	G
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1290	G
1	QA	1293	G
1	QA	1296	C
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1306	A

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Mol	Chain	Res	Type
1	QA	1317	C
1	QA	1319	A
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	1353	G
1	QA	1359	C
1	QA	1362(A)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1365	G
1	QA	1368	G
1	QA	1370	G
1	QA	1379	G
1	QA	1388	C
1	QA	1397	C
1	QA	1398	A
1	QA	1404	C
1	QA	1419	G
1	QA	1442	G
1	QA	1443	G
1	QA	1446	A
1	QA	1447	G
1	QA	1451	A
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1460	A
1	QA	1487	G
1	QA	1492	A
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1506	U

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Mol	Chain	Res	Type
1	QA	1508	G
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	QV	3	C
22	QV	4	G
22	QV	5	G
22	QV	7	G
22	QV	8	U
22	QV	14	A
22	QV	16	C
22	QV	17	C
22	QV	17(A)	U
22	QV	18	G
22	QV	19	G
22	QV	21	A
22	QV	22	G
22	QV	25	C
22	QV	31	G
22	QV	37	A
22	QV	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	50	U
22	QV	51	C
22	QV	52	G
22	QV	54	U
22	QV	59	A
22	QV	63	G
22	QV	67	C
22	QV	72	A
22	QV	75	C
22	QV	76	A
23	QX	3	G
23	QX	4	C
23	QX	5	C
23	QX	6	C
23	QX	7	G
23	QX	8	A

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Mol	Chain	Res	Type
24	QY	31	G
24	QY	33	U
24	QY	35	G
24	QY	36	G
24	QY	39	C
24	QY	40	G
25	RA	9	U
25	RA	15	G
25	RA	33	U
25	RA	34	C
25	RA	35	G
25	RA	36	G
25	RA	46	C
25	RA	49	A
25	RA	50	U
25	RA	51	G
25	RA	52	A
25	RA	55	G
25	RA	61	G
25	RA	64	A
25	RA	72	U
25	RA	74	A
25	RA	75	G
25	RA	84	A
25	RA	91	A
25	RA	95	G
25	RA	96	G
25	RA	99	U
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	118	A
25	RA	119	A
25	RA	120	U
25	RA	125	G
25	RA	138	G
25	RA	149	A
25	RA	161	U
25	RA	175	G
25	RA	177	G
25	RA	181	A
25	RA	196	A

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Mol	Chain	Res	Type
25	RA	199	A
25	RA	206	U
25	RA	214	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	225	A
25	RA	227	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G
25	RA	233	A
25	RA	242	G
25	RA	243	U
25	RA	248	G
25	RA	249	C
25	RA	250	G
25	RA	252	G
25	RA	265	A
25	RA	266	G
25	RA	267	C
25	RA	269	U
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(N)	G
25	RA	270(P)	C
25	RA	270(U)	C
25	RA	271(C)	U
25	RA	271	G
25	RA	273(F)	C
25	RA	274	G
25	RA	275	G
25	RA	276	A
25	RA	277	C
25	RA	278	A
25	RA	279	C
25	RA	294	A
25	RA	299	A
25	RA	305	U

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Mol	Chain	Res	Type
25	RA	311	A
25	RA	323	G
25	RA	324	A
25	RA	327	G
25	RA	329	G
25	RA	330	A
25	RA	332	A
25	RA	342	G
25	RA	343	C
25	RA	346	A
25	RA	352	G
25	RA	362	U
25	RA	363(E)	U
25	RA	363(F)	A
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	376	C
25	RA	386	G
25	RA	396	G
25	RA	404	C
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	420	C
25	RA	422	A
25	RA	428	A
25	RA	444	C
25	RA	448	U
25	RA	451	C
25	RA	454	A
25	RA	455	C
25	RA	457	A
25	RA	459	U
25	RA	470	A
25	RA	481	G
25	RA	483	A
25	RA	496	G
25	RA	503	A
25	RA	504	U
25	RA	505	A
25	RA	509	C

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Mol	Chain	Res	Type
25	RA	513	A
25	RA	527	C
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	541	C
25	RA	544	C
25	RA	546	C
25	RA	547	A
25	RA	549	G
25	RA	556	G
25	RA	562	U
25	RA	563	G
25	RA	573	G
25	RA	575	A
25	RA	577	G
25	RA	588	U
25	RA	603	A
25	RA	606	U
25	RA	607	U
25	RA	609(A)	G
25	RA	614	U
25	RA	615	G
25	RA	616	A
25	RA	617	G
25	RA	621	A
25	RA	622	G
25	RA	624	C
25	RA	626	U
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	650	C
25	RA	651	G
25	RA	652	C
25	RA	653	A

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Mol	Chain	Res	Type
25	RA	654	A
25	RA	654(A)	G
25	RA	654(B)	C
25	RA	654(T)	C
25	RA	658	C
25	RA	659	C
25	RA	668	G
25	RA	669	G
25	RA	685	A
25	RA	686	G
25	RA	702	G
25	RA	705	A
25	RA	709	U
25	RA	717	G
25	RA	722	A
25	RA	726	G
25	RA	730	C
25	RA	734	A
25	RA	739	G
25	RA	740	U
25	RA	747	U
25	RA	752	A
25	RA	753	C
25	RA	765	G
25	RA	769	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	783	A
25	RA	784	A
25	RA	785	G
25	RA	790	C
25	RA	792	G
25	RA	800	A
25	RA	805	G
25	RA	812	C
25	RA	819	A
25	RA	827	U
25	RA	828	U
25	RA	831	G
25	RA	847	U
25	RA	854	G

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Mol	Chain	Res	Type
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	881	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	899	A
25	RA	900	A
25	RA	901	A
25	RA	902	C
25	RA	904	C
25	RA	906	G
25	RA	907	U
25	RA	910	A
25	RA	914	C
25	RA	917	A
25	RA	932	G
25	RA	941	A
25	RA	945	A
25	RA	946	G
25	RA	954	G
25	RA	959	A
25	RA	961	C
25	RA	962	G
25	RA	973	A
25	RA	974	G
25	RA	974(A)	C
25	RA	979	G
25	RA	983	A
25	RA	990	A
25	RA	991	C
25	RA	996	A

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Mol	Chain	Res	Type
25	RA	1003	G
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1034	G
25	RA	1036	G
25	RA	1039	G
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1050	A
25	RA	1054	A
25	RA	1055	G
25	RA	1057	A
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
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	1093	G

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Mol	Chain	Res	Type
25	RA	1095	A
25	RA	1096	A
25	RA	1097	U
25	RA	1099	G
25	RA	1104	C
25	RA	1105	U
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1129	A
25	RA	1130	U
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1140	C
25	RA	1142	U
25	RA	1142(A)	A
25	RA	1143	A
25	RA	1148	A
25	RA	1151	G
25	RA	1157	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	1180	C
25	RA	1181	C
25	RA	1190	G
25	RA	1195	G
25	RA	1204	A
25	RA	1205	U
25	RA	1209	G
25	RA	1210	A
25	RA	1211	U
25	RA	1220	A
25	RA	1221	C
25	RA	1238	G
25	RA	1252	G
25	RA	1256	G
25	RA	1265	A

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Mol	Chain	Res	Type
25	RA	1266	G
25	RA	1267	U
25	RA	1271	G
25	RA	1272	A
25	RA	1282	U
25	RA	1286	A
25	RA	1288	U
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A
25	RA	1304	C
25	RA	1306	C
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1319	G
25	RA	1321	A
25	RA	1329	U
25	RA	1341	U
25	RA	1349	A
25	RA	1352	U
25	RA	1365	A
25	RA	1368	G
25	RA	1370	C
25	RA	1372	U
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G
25	RA	1386	C
25	RA	1391	U
25	RA	1392	A
25	RA	1395	A
25	RA	1402	C
25	RA	1406	U
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	1424	G
25	RA	1428	C
25	RA	1435	G
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1472	A
25	RA	1480	G
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1486	A
25	RA	1493	C
25	RA	1494	A
25	RA	1495	A
25	RA	1497	U
25	RA	1504	C
25	RA	1506	C
25	RA	1508	A
25	RA	1510	A
25	RA	1513	C
25	RA	1514	U
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
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	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A

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Mol	Chain	Res	Type
25	RA	1558	A
25	RA	1559	G
25	RA	1566	A
25	RA	1567	A
25	RA	1569	A
25	RA	1573	G
25	RA	1578	U
25	RA	1579	A
25	RA	1580	A
25	RA	1581	G
25	RA	1585	C
25	RA	1586	A
25	RA	1593	G
25	RA	1598	C
25	RA	1602	U
25	RA	1603	A
25	RA	1608	A
25	RA	1609	A
25	RA	1610	A
25	RA	1617	C
25	RA	1618	A
25	RA	1639	U
25	RA	1640	C
25	RA	1646	C
25	RA	1648	C
25	RA	1654	A
25	RA	1667	G
25	RA	1668	A
25	RA	1674	G
25	RA	1695	G
25	RA	1698	A
25	RA	1699	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	1752	C

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Mol	Chain	Res	Type
25	RA	1754	C
25	RA	1756	G
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G
25	RA	1773	A
25	RA	1780	A
25	RA	1787	A
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1803	A
25	RA	1816	G
25	RA	1817	G
25	RA	1820	U
25	RA	1821	A
25	RA	1829	A
25	RA	1835	G
25	RA	1847	A
25	RA	1848	A
25	RA	1853	A
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1885	A
25	RA	1888	G
25	RA	1889	A
25	RA	1896	G
25	RA	1905	C
25	RA	1906	G
25	RA	1909	C
25	RA	1913	A
25	RA	1914	C
25	RA	1916	A
25	RA	1919	A
25	RA	1927	A
25	RA	1929	G
25	RA	1930	G
25	RA	1931	U

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Mol	Chain	Res	Type
25	RA	1934	C
25	RA	1936	A
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U
25	RA	1940	U
25	RA	1949	G
25	RA	1954	G
25	RA	1955	U
25	RA	1956	U
25	RA	1963	U
25	RA	1964	G
25	RA	1966	A
25	RA	1967	C
25	RA	1969	A
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1981	A
25	RA	1982	C
25	RA	1992	G
25	RA	1993	U
25	RA	2023	G
25	RA	2027	G
25	RA	2031	A
25	RA	2033	A
25	RA	2043	C
25	RA	2051	A
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	2063	C
25	RA	2069	G
25	RA	2089	U
25	RA	2092	U
25	RA	2093	G
25	RA	2111	C
25	RA	2113	U

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Mol	Chain	Res	Type
25	RA	2114	A
25	RA	2115	G
25	RA	2116	G
25	RA	2117	A
25	RA	2118	U
25	RA	2120	G
25	RA	2126	A
25	RA	2127	G
25	RA	2128	C
25	RA	2131	G
25	RA	2132	U
25	RA	2133	G
25	RA	2136	C
25	RA	2146	C
25	RA	2147	G
25	RA	2148	G
25	RA	2158	A
25	RA	2166	G
25	RA	2168	G
25	RA	2169	A
25	RA	2173	A
25	RA	2176	A
25	RA	2190	G
25	RA	2192	G
25	RA	2197	U
25	RA	2198	A
25	RA	2199	A
25	RA	2205	C
25	RA	2207	C
25	RA	2208	U
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	2239	G
25	RA	2243	U
25	RA	2245	U
25	RA	2275	C
25	RA	2280	G
25	RA	2283	C

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Mol	Chain	Res	Type
25	RA	2286	A
25	RA	2287	A
25	RA	2294	C
25	RA	2295	C
25	RA	2303	G
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2311	A
25	RA	2319	G
25	RA	2320	A
25	RA	2321	G
25	RA	2325	G
25	RA	2329	G
25	RA	2330	G
25	RA	2334	G
25	RA	2342	C
25	RA	2343	C
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2354	G
25	RA	2372	G
25	RA	2379	G
25	RA	2382	G
25	RA	2383	G
25	RA	2385	C
25	RA	2388	A
25	RA	2392	A
25	RA	2394	C
25	RA	2400	G
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2411	A
25	RA	2423	U
25	RA	2425	A
25	RA	2426	A
25	RA	2427	C
25	RA	2428	G
25	RA	2429	G

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Mol	Chain	Res	Type
25	RA	2430	A
25	RA	2431	U
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2445	G
25	RA	2448	A
25	RA	2450	A
25	RA	2469	A
25	RA	2470	G
25	RA	2476	A
25	RA	2482	G
25	RA	2483	C
25	RA	2484	G
25	RA	2487	G
25	RA	2494	G
25	RA	2502	G
25	RA	2505	G
25	RA	2506	U
25	RA	2507	C
25	RA	2513	G
25	RA	2519	U
25	RA	2520	C
25	RA	2531	A
25	RA	2532	G
25	RA	2542	A
25	RA	2543	G
25	RA	2549	G
25	RA	2553	G
25	RA	2554	U
25	RA	2559	C
25	RA	2560	C
25	RA	2567	G
25	RA	2573	C
25	RA	2582	G
25	RA	2585	U
25	RA	2586	C
25	RA	2602	A
25	RA	2603	G
25	RA	2609	U
25	RA	2610	C

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Mol	Chain	Res	Type
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2616	C
25	RA	2623	G
25	RA	2629	A
25	RA	2634	G
25	RA	2638	G
25	RA	2645	G
25	RA	2646	C
25	RA	2647	U
25	RA	2654	A
25	RA	2655	G
25	RA	2656	U
25	RA	2665	A
25	RA	2673	G
25	RA	2682	U
25	RA	2686	G
25	RA	2689	U
25	RA	2690	C
25	RA	2691	C
25	RA	2702	U
25	RA	2703	C
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2724	C
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2752	C
25	RA	2754	U
25	RA	2757	A
25	RA	2760	C
25	RA	2761	G
25	RA	2762	G
25	RA	2764	A
25	RA	2765	A
25	RA	2766	G
25	RA	2777	G
25	RA	2778	A

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Mol	Chain	Res	Type
25	RA	2779	U
25	RA	2780	G
25	RA	2781	A
25	RA	2789	C
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2810	A
25	RA	2812	G
25	RA	2817	G
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2833	G
25	RA	2839	G
25	RA	2847	U
25	RA	2849	U
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2874	C
25	RA	2880	C
25	RA	2891	G
25	RA	2892	A
25	RA	2894	G
26	RB	8	U
26	RB	9	G
26	RB	12	C
26	RB	13	A
26	RB	14	U
26	RB	15	A
26	RB	22	U
26	RB	25	A
26	RB	26	A
26	RB	27	C
26	RB	30	C
26	RB	32	C
26	RB	33	G
26	RB	41	U
26	RB	42	C
26	RB	45	A

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Mol	Chain	Res	Type
26	RB	47	C
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	88	C
26	RB	89	G
26	RB	101	A
26	RB	105	G
26	RB	108	C
26	RB	109	G
26	RB	112	G
1	XA	6	G
1	XA	7	G
1	XA	9	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	51	A
1	XA	61	G
1	XA	65	U
1	XA	66	G
1	XA	78	G
1	XA	81	G
1	XA	82	U
1	XA	89	U
1	XA	90	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	129	U
1	XA	129(A)	G
1	XA	130	A
1	XA	131	C
1	XA	144	G
1	XA	147	G

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Mol	Chain	Res	Type
1	XA	163	C
1	XA	172	A
1	XA	173	U
1	XA	174	C
1	XA	182	U
1	XA	190	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	240	C
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	256	U
1	XA	262	A
1	XA	267	C
1	XA	270	A
1	XA	281	G
1	XA	282	A
1	XA	289	G
1	XA	309	G
1	XA	316	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	344	A
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	373	A
1	XA	384	G

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Mol	Chain	Res	Type
1	XA	388	G
1	XA	390	C
1	XA	392	G
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	410	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	419	C
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	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C
1	XA	519	C
1	XA	524	G
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	534	U
1	XA	547	A
1	XA	559	A
1	XA	561	U
1	XA	562	C
1	XA	566	G
1	XA	572	A

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Mol	Chain	Res	Type
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	592	G
1	XA	593	G
1	XA	596	C
1	XA	630	G
1	XA	631	G
1	XA	632	A
1	XA	633	G
1	XA	649	G
1	XA	651	C
1	XA	653	A
1	XA	664	G
1	XA	665	A
1	XA	686	U
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	721	G
1	XA	731	G
1	XA	742	G
1	XA	748	C
1	XA	749	C
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	760	G
1	XA	763	G
1	XA	774	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	796	C
1	XA	813	U
1	XA	817	C
1	XA	818	G
1	XA	819	A

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Mol	Chain	Res	Type
1	XA	821	G
1	XA	828	A
1	XA	841	U
1	XA	843	U
1	XA	848	C
1	XA	853	G
1	XA	855	G
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	888	G
1	XA	889	A
1	XA	902	G
1	XA	914	A
1	XA	920	U
1	XA	922	G
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	942	G
1	XA	948	C
1	XA	960	U
1	XA	961	U
1	XA	966	G
1	XA	968	A
1	XA	969	A
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	978	A
1	XA	982	U
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1001	G
1	XA	1002	G
1	XA	1004	A
1	XA	1005	A

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Mol	Chain	Res	Type
1	XA	1006	C
1	XA	1008	C
1	XA	1016	A
1	XA	1020	U
1	XA	1021	G
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1036	G
1	XA	1039	C
1	XA	1040	U
1	XA	1054	C
1	XA	1055	A
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1107	C
1	XA	1117	G
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	1151	A
1	XA	1154	G
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C

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Mol	Chain	Res	Type
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1190	G
1	XA	1191	A
1	XA	1193	G
1	XA	1196	U
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1210	C
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A
1	XA	1215	G
1	XA	1225	A
1	XA	1226	C
1	XA	1232	U
1	XA	1236	A
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1263	C
1	XA	1270	C
1	XA	1272	G
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	1296	C
1	XA	1297	C
1	XA	1298	C

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Mol	Chain	Res	Type
1	XA	1299	A
1	XA	1301	U
1	XA	1302	U
1	XA	1305	G
1	XA	1310	G
1	XA	1317	C
1	XA	1319	A
1	XA	1320	C
1	XA	1322	C
1	XA	1323	G
1	XA	1330	U
1	XA	1331	G
1	XA	1334	G
1	XA	1336	C
1	XA	1337	G
1	XA	1348	U
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1368	G
1	XA	1370	G
1	XA	1372	U
1	XA	1373	G
1	XA	1381	U
1	XA	1397	C
1	XA	1411	C
1	XA	1419	G
1	XA	1420	C
1	XA	1442	G
1	XA	1443	G
1	XA	1446	A
1	XA	1447	G
1	XA	1449	C
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1475	G
1	XA	1487	G
1	XA	1492	A
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	1505	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
1	XA	1531	A
22	XV	3	C
22	XV	4	G
22	XV	5	G
22	XV	7	G
22	XV	8	U
22	XV	14	A
22	XV	16	C
22	XV	17	C
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	22	G
22	XV	25	C
22	XV	31	G
22	XV	37	A
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	50	U
22	XV	51	C
22	XV	52	G
22	XV	54	U
22	XV	59	A
22	XV	63	G
22	XV	67	C
22	XV	72	A
22	XV	75	C
22	XV	76	A
23	XX	3	G

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Mol	Chain	Res	Type
23	XX	4	C
24	XY	31	G
24	XY	33	U
24	XY	36	G
24	XY	39	C
24	XY	40	G
25	YA	9	U
25	YA	13	A
25	YA	15	G
25	YA	33	U
25	YA	34	C
25	YA	35	G
25	YA	43	G
25	YA	46	C
25	YA	49	A
25	YA	50	U
25	YA	51	G
25	YA	55	G
25	YA	61	G
25	YA	63	U
25	YA	64	A
25	YA	66	C
25	YA	72	U
25	YA	74	A
25	YA	75	G
25	YA	91	A
25	YA	95	G
25	YA	96	G
25	YA	97	C
25	YA	99	U
25	YA	101	G
25	YA	102	G
25	YA	103	A
25	YA	118	A
25	YA	119	A
25	YA	120	U
25	YA	124	G
25	YA	127	A
25	YA	140	A
25	YA	142	G
25	YA	155	C
25	YA	161	U

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Mol	Chain	Res	Type
25	YA	173	G
25	YA	177	G
25	YA	188	G
25	YA	196	A
25	YA	202	U
25	YA	205	G
25	YA	206	U
25	YA	214	G
25	YA	216	A
25	YA	222	A
25	YA	223	A
25	YA	225	A
25	YA	226	G
25	YA	227	A
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
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	269	U
25	YA	270(L)	U
25	YA	270(M)	U
25	YA	270(N)	G
25	YA	270(P)	C
25	YA	270(Z)	U
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	285	C
25	YA	288	C
25	YA	299	A
25	YA	300	A
25	YA	310	A
25	YA	323	G

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Mol	Chain	Res	Type
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	332	A
25	YA	342	G
25	YA	345	A
25	YA	352	G
25	YA	353	G
25	YA	363	G
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	393	C
25	YA	396	G
25	YA	405	U
25	YA	411	G
25	YA	412	A
25	YA	417	C
25	YA	421	U
25	YA	428	A
25	YA	442	G
25	YA	444	C
25	YA	448	U
25	YA	451	C
25	YA	457	A
25	YA	470	A
25	YA	479	A
25	YA	481	G
25	YA	482	A
25	YA	483	A
25	YA	491	G
25	YA	496	G
25	YA	503	A
25	YA	504	U
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	518	G

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Mol	Chain	Res	Type
25	YA	527	C
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	537	C
25	YA	539	G
25	YA	540	G
25	YA	546	C
25	YA	547	A
25	YA	549	G
25	YA	563	G
25	YA	573	G
25	YA	575	A
25	YA	586	A
25	YA	588	U
25	YA	599	G
25	YA	603	A
25	YA	607	U
25	YA	609(A)	G
25	YA	613	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	621	A
25	YA	622	G
25	YA	624	C
25	YA	627	A
25	YA	629	G
25	YA	631	A
25	YA	634	C
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	648	G
25	YA	649	G
25	YA	650	C
25	YA	652	C
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C
25	YA	659	C

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Mol	Chain	Res	Type
25	YA	664	C
25	YA	668	G
25	YA	669	G
25	YA	670	A
25	YA	681	G
25	YA	686	G
25	YA	705	A
25	YA	709	U
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	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	790	C
25	YA	791	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	829	A
25	YA	831	G
25	YA	845	G
25	YA	846	C
25	YA	847	U
25	YA	854	G
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	865	C
25	YA	866	A
25	YA	870	A
25	YA	880	G
25	YA	881	G

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Mol	Chain	Res	Type
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	887	A
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	893	C
25	YA	896	A
25	YA	897	C
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	904	C
25	YA	906	G
25	YA	907	U
25	YA	910	A
25	YA	917	A
25	YA	918	A
25	YA	932	G
25	YA	938	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	961	C
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	983	A
25	YA	986	C
25	YA	990	A
25	YA	991	C
25	YA	996	A
25	YA	1003	G
25	YA	1005	C
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1015	G
25	YA	1022	G
25	YA	1023	U

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Mol	Chain	Res	Type
25	YA	1025	G
25	YA	1026	U
25	YA	1027	A
25	YA	1033	U
25	YA	1045	A
25	YA	1046	A
25	YA	1047	G
25	YA	1050	A
25	YA	1051	G
25	YA	1054	A
25	YA	1055	G
25	YA	1057	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	1070	A
25	YA	1071	G
25	YA	1076	C
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	1090	U
25	YA	1095	A
25	YA	1096	A
25	YA	1097	U
25	YA	1103	A
25	YA	1104	C
25	YA	1105	U
25	YA	1110	G
25	YA	1111	A
25	YA	1112	G
25	YA	1122	G

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Mol	Chain	Res	Type
25	YA	1124	C
25	YA	1131	G
25	YA	1135	C
25	YA	1136	G
25	YA	1142	U
25	YA	1142(A)	A
25	YA	1143	A
25	YA	1148	A
25	YA	1155	A
25	YA	1157	G
25	YA	1168	G
25	YA	1170	G
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1178	C
25	YA	1179	C
25	YA	1181	C
25	YA	1183	G
25	YA	1188	U
25	YA	1190	G
25	YA	1195	G
25	YA	1197	G
25	YA	1204	A
25	YA	1205	U
25	YA	1210	A
25	YA	1211	U
25	YA	1218	C
25	YA	1220	A
25	YA	1236	G
25	YA	1237	A
25	YA	1238	G
25	YA	1241	A
25	YA	1243	G
25	YA	1244	G
25	YA	1248	G
25	YA	1252	G
25	YA	1253	A
25	YA	1256	G
25	YA	1265	A
25	YA	1271	G

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Mol	Chain	Res	Type
25	YA	1272	A
25	YA	1273	U
25	YA	1274	A
25	YA	1282	U
25	YA	1300	U
25	YA	1301	A
25	YA	1303	G
25	YA	1308	A
25	YA	1313	U
25	YA	1319	G
25	YA	1321	A
25	YA	1329	U
25	YA	1330	C
25	YA	1345	C
25	YA	1349	A
25	YA	1352	U
25	YA	1356	G
25	YA	1365	A
25	YA	1368	G
25	YA	1371	G
25	YA	1376	C
25	YA	1378	A
25	YA	1379	A
25	YA	1380	G
25	YA	1384	A
25	YA	1385	G
25	YA	1386	C
25	YA	1388	G
25	YA	1389	G
25	YA	1390	U
25	YA	1392	A
25	YA	1395	A
25	YA	1407	C
25	YA	1408	C
25	YA	1411	C
25	YA	1412	A
25	YA	1416	G
25	YA	1417	C
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C

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Mol	Chain	Res	Type
25	YA	1444(A)	A
25	YA	1445	C
25	YA	1448	G
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1451	C
25	YA	1453	A
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	1486	A
25	YA	1493	C
25	YA	1494	A
25	YA	1495	A
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A
25	YA	1508	A
25	YA	1510	A
25	YA	1513	C
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	1538	G
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1549	C
25	YA	1554	A
25	YA	1555	G
25	YA	1558	A

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Mol	Chain	Res	Type
25	YA	1559	G
25	YA	1560	G
25	YA	1566	A
25	YA	1569	A
25	YA	1578	U
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1598	C
25	YA	1606	G
25	YA	1607	C
25	YA	1608	A
25	YA	1610	A
25	YA	1616	A
25	YA	1617	C
25	YA	1618	A
25	YA	1619	G
25	YA	1631	A
25	YA	1639	U
25	YA	1640	C
25	YA	1646	C
25	YA	1647	G
25	YA	1648	C
25	YA	1654	A
25	YA	1666	G
25	YA	1667	G
25	YA	1668	A
25	YA	1674	G
25	YA	1688	U
25	YA	1695	G
25	YA	1699	G
25	YA	1700	A
25	YA	1725	G
25	YA	1728	G
25	YA	1729	A
25	YA	1730	U
25	YA	1731	G
25	YA	1741	C
25	YA	1742	C
25	YA	1743	G
25	YA	1750	G

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Mol	Chain	Res	Type
25	YA	1753	G
25	YA	1754	C
25	YA	1756	G
25	YA	1759	A
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G
25	YA	1769	G
25	YA	1773	A
25	YA	1780	A
25	YA	1787	A
25	YA	1791	A
25	YA	1799	G
25	YA	1800	C
25	YA	1801	G
25	YA	1811	G
25	YA	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1833	U
25	YA	1834	U
25	YA	1835	G
25	YA	1836	C
25	YA	1847	A
25	YA	1849	G
25	YA	1850	G
25	YA	1858	G
25	YA	1869	G
25	YA	1870	C
25	YA	1872	A
25	YA	1878	G
25	YA	1881	C
25	YA	1882	C
25	YA	1885	A
25	YA	1889	A
25	YA	1896	G
25	YA	1903	G
25	YA	1906	G
25	YA	1910	G
25	YA	1913	A
25	YA	1916	A

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Mol	Chain	Res	Type
25	YA	1930	G
25	YA	1931	U
25	YA	1936	A
25	YA	1937	A
25	YA	1938	A
25	YA	1939	U
25	YA	1941	C
25	YA	1945	G
25	YA	1947	C
25	YA	1955	U
25	YA	1963	U
25	YA	1964	G
25	YA	1965	C
25	YA	1967	C
25	YA	1968	G
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1982	C
25	YA	1988	C
25	YA	1991	U
25	YA	1993	U
25	YA	2017	U
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2034	U
25	YA	2040	C
25	YA	2043	C
25	YA	2049	G
25	YA	2052	G
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	2063	C
25	YA	2069	G
25	YA	2093	G

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Mol	Chain	Res	Type
25	YA	2099	U
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G
25	YA	2116	G
25	YA	2117	A
25	YA	2118	U
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	2145	C
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2167	U
25	YA	2168	G
25	YA	2169	A
25	YA	2173	A
25	YA	2176	A
25	YA	2181	G
25	YA	2190	G
25	YA	2191	G
25	YA	2192	G
25	YA	2193	G
25	YA	2198	A
25	YA	2199	A
25	YA	2205	C
25	YA	2209	C
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2215	G
25	YA	2225	A

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Mol	Chain	Res	Type
25	YA	2238	G
25	YA	2239	G
25	YA	2240	C
25	YA	2243	U
25	YA	2249	U
25	YA	2250	G
25	YA	2273	A
25	YA	2275	C
25	YA	2279	G
25	YA	2280	G
25	YA	2283	C
25	YA	2286	A
25	YA	2287	A
25	YA	2290	G
25	YA	2303	G
25	YA	2305	A
25	YA	2307	G
25	YA	2308	G
25	YA	2310	A
25	YA	2311	A
25	YA	2319	G
25	YA	2320	A
25	YA	2325	G
25	YA	2334	G
25	YA	2335	A
25	YA	2336	A
25	YA	2341	G
25	YA	2342	C
25	YA	2343	C
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2357	U
25	YA	2372	G
25	YA	2383	G
25	YA	2385	C
25	YA	2387	U
25	YA	2392	A
25	YA	2394	C
25	YA	2396	G
25	YA	2397	G
25	YA	2398	U

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Mol	Chain	Res	Type
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2407	G
25	YA	2408	U
25	YA	2411	A
25	YA	2422	A
25	YA	2423	U
25	YA	2424	C
25	YA	2426	A
25	YA	2429	G
25	YA	2430	A
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2445	G
25	YA	2448	A
25	YA	2450	A
25	YA	2460	U
25	YA	2467	C
25	YA	2469	A
25	YA	2470	G
25	YA	2474	C
25	YA	2475	C
25	YA	2478	A
25	YA	2482	G
25	YA	2484	G
25	YA	2494	G
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C
25	YA	2518	A
25	YA	2519	U
25	YA	2529	G
25	YA	2542	A
25	YA	2543	G
25	YA	2554	U
25	YA	2562	U
25	YA	2566	A
25	YA	2567	G

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Mol	Chain	Res	Type
25	YA	2569	G
25	YA	2573	C
25	YA	2582	G
25	YA	2585	U
25	YA	2602	A
25	YA	2609	U
25	YA	2610	C
25	YA	2611	U
25	YA	2612	C
25	YA	2623	G
25	YA	2629	A
25	YA	2632	A
25	YA	2641	G
25	YA	2642	G
25	YA	2654	A
25	YA	2655	G
25	YA	2665	A
25	YA	2666	C
25	YA	2673	G
25	YA	2681	C
25	YA	2682	U
25	YA	2689	U
25	YA	2690	C
25	YA	2691	C
25	YA	2702	U
25	YA	2703	C
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2718	G
25	YA	2719	G
25	YA	2720	U
25	YA	2723	C
25	YA	2724	C
25	YA	2726	U
25	YA	2727	G
25	YA	2730	C
25	YA	2733	A
25	YA	2734	A
25	YA	2744	G
25	YA	2748	A
25	YA	2751	G

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Mol	Chain	Res	Type
25	YA	2752	C
25	YA	2753	A
25	YA	2757	A
25	YA	2758	A
25	YA	2760	C
25	YA	2761	G
25	YA	2764	A
25	YA	2765	A
25	YA	2771	C
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2780	G
25	YA	2787	C
25	YA	2790	A
25	YA	2791	C
25	YA	2797	U
25	YA	2807	G
25	YA	2808	U
25	YA	2813	A
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2831	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2846	G
25	YA	2847	U
25	YA	2848	G
25	YA	2849	U
25	YA	2861	G
25	YA	2867	G
25	YA	2868	A
25	YA	2872	G
25	YA	2883	A
25	YA	2891	G
25	YA	2892	A
25	YA	2894	G
26	YB	2	C
26	YB	7	G
26	YB	8	U

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Mol	Chain	Res	Type
26	YB	9	G
26	YB	12	C
26	YB	13	A
26	YB	14	U
26	YB	15	A
26	YB	19	G
26	YB	21	G
26	YB	22	U
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	27	C
26	YB	31	C
26	YB	32	C
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	45	A
26	YB	52	A
26	YB	53	A
26	YB	54	G
26	YB	56	G
26	YB	67	G
26	YB	73	A
26	YB	81	G
26	YB	84	C
26	YB	88	C
26	YB	89	G
26	YB	89(A)	A
26	YB	101	A
26	YB	105	G
26	YB	109	G
26	YB	112	G
26	YB	116	G

All (265) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	5	U
1	QA	31	G
1	QA	64	G

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Mol	Chain	Res	Type
1	QA	115	G
1	QA	181	G
1	QA	243	A
1	QA	244	U
1	QA	250	A
1	QA	266	G
1	QA	328	C
1	QA	372	C
1	QA	388	G
1	QA	410	G
1	QA	412	A
1	QA	421	U
1	QA	428	G
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	498	A
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	815	A
1	QA	870	U
1	QA	871	U
1	QA	913	A
1	QA	960	U
1	QA	991	U
1	QA	992	U
1	QA	1027	C
1	QA	1065	U
1	QA	1129	C
1	QA	1200	C
1	QA	1201	A
1	QA	1285	A
1	QA	1297	C
1	QA	1305	G

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Mol	Chain	Res	Type
1	QA	1336	C
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A
1	QA	1528	U
22	QV	53	G
23	QX	6	C
24	QY	39	C
25	RA	50	U
25	RA	74	A
25	RA	83	G
25	RA	99	U
25	RA	102	G
25	RA	196	A
25	RA	205	G
25	RA	221	A
25	RA	222	A
25	RA	226	G
25	RA	227	A
25	RA	229	A
25	RA	241	A
25	RA	242	G
25	RA	271(B)	G
25	RA	271(C)	U
25	RA	276	A
25	RA	372	G
25	RA	404	C
25	RA	503	A
25	RA	508	G
25	RA	512	G
25	RA	587	C
25	RA	637	A
25	RA	685	A
25	RA	704	G
25	RA	752	A
25	RA	774	A
25	RA	846	C
25	RA	856	C
25	RA	960	A
25	RA	1022	G
25	RA	1026	U

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Mol	Chain	Res	Type
25	RA	1045	A
25	RA	1078	U
25	RA	1085	A
25	RA	1130	U
25	RA	1142(A)	A
25	RA	1178	C
25	RA	1210	A
25	RA	1266	G
25	RA	1301	A
25	RA	1312	U
25	RA	1379	A
25	RA	1427	A
25	RA	1460	A
25	RA	1558	A
25	RA	1608	A
25	RA	1653	G
25	RA	1694	C
25	RA	1698	A
25	RA	1786	A
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1936	A
25	RA	1944	U
25	RA	1955	U
25	RA	1980	G
25	RA	1992	G
25	RA	2126	A
25	RA	2426	A
25	RA	2439	A
25	RA	2481	G
25	RA	2518	A
25	RA	2566	A
25	RA	2585	U
25	RA	2610	C
25	RA	2681	C
25	RA	2689	U
25	RA	2712	U
25	RA	2756	U
25	RA	2776	A
25	RA	2832	U
25	RA	2848	G

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Mol	Chain	Res	Type
25	RA	2867	G
26	RB	24	G
26	RB	66	A
1	XA	31	G
1	XA	60	A
1	XA	64	G
1	XA	89	U
1	XA	115	G
1	XA	181	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	366	C
1	XA	410	G
1	XA	412	A
1	XA	428	G
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	509	A
1	XA	532	A
1	XA	533	A
1	XA	560	U
1	XA	575	G
1	XA	595	G
1	XA	687	A
1	XA	701	C
1	XA	703	G
1	XA	753	A
1	XA	792	A
1	XA	812	C
1	XA	871	U
1	XA	913	A
1	XA	960	U
1	XA	965	A
1	XA	991	U
1	XA	992	U
1	XA	1027	C
1	XA	1064	G
1	XA	1065	U

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Mol	Chain	Res	Type
1	XA	1094	G
1	XA	1200	C
1	XA	1224	G
1	XA	1279	A
1	XA	1285	A
1	XA	1297	C
1	XA	1300	G
1	XA	1301	U
1	XA	1336	C
1	XA	1347	G
1	XA	1364	U
1	XA	1443	G
1	XA	1498	U
1	XA	1503	A
1	XA	1504	G
1	XA	1528	U
22	XV	53	G
24	XY	39	C
25	YA	74	A
25	YA	99	U
25	YA	196	A
25	YA	205	G
25	YA	221	A
25	YA	222	A
25	YA	227	A
25	YA	229	A
25	YA	242	G
25	YA	271(B)	G
25	YA	278	A
25	YA	370	G
25	YA	372	G
25	YA	404	C
25	YA	508	G
25	YA	587	C
25	YA	637	A
25	YA	653	A
25	YA	669	G
25	YA	704	G
25	YA	752	A
25	YA	846	C
25	YA	856	C
25	YA	858	U

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Mol	Chain	Res	Type
25	YA	859	G
25	YA	880	G
25	YA	896	A
25	YA	945	A
25	YA	974(A)	C
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1130	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	A
25	YA	1300	U
25	YA	1427	A
25	YA	1554	A
25	YA	1558	A
25	YA	1653	G
25	YA	1694	C
25	YA	1698	A
25	YA	1786	A
25	YA	1799	G
25	YA	1819	A
25	YA	1847	A
25	YA	1929	G
25	YA	1930	G
25	YA	1937	A
25	YA	1992	G
25	YA	2060	A
25	YA	2126	A
25	YA	2198	A
25	YA	2238	G
25	YA	2405	G
25	YA	2428	G
25	YA	2439	A
25	YA	2481	G
25	YA	2566	A
25	YA	2610	C
25	YA	2681	C
25	YA	2702	U
25	YA	2712	U

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Mol	Chain	Res	Type
25	YA	2719	G
25	YA	2751	G
25	YA	2756	U
25	YA	2776	A
25	YA	2779	U
25	YA	2832	U
25	YA	2848	G
25	YA	2867	G
25	YA	2873	A
26	YB	66	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
24	1MG	QY	37	24	24,26,27	3.02	6 (25%)	34,39,42	3.83	12 (35%)
24	1MG	XY	37	24	24,26,27	3.03	6 (25%)	34,39,42	3.38	12 (35%)
55	PPU	Z6	76	55,25	38,40,41	2.42	9 (23%)	54,57,60	2.60	14 (25%)
55	PPU	Z8	76	55,25	38,40,41	2.41	9 (23%)	54,57,60	2.60	14 (25%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	1MG	QY	37	24	-	0/8/25/26	0/3/3/3
24	1MG	XY	37	24	-	0/8/25/26	0/3/3/3
55	PPU	Z6	76	55,25	-	0/26/43/44	0/4/4/4
55	PPU	Z8	76	55,25	-	0/26/43/44	0/4/4/4

All (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	Z6	76	PPU	O-C	9.16	1.41	1.23
55	Z8	76	PPU	O-C	9.15	1.41	1.23
24	QY	37	1MG	C4-N3	8.30	1.49	1.35
24	XY	37	1MG	C4-N3	8.15	1.49	1.35
24	XY	37	1MG	C2-N1	7.52	1.47	1.37
24	QY	37	1MG	C2-N1	7.39	1.47	1.37
24	QY	37	1MG	C2-N2	6.74	1.48	1.33
24	XY	37	1MG	C2-N2	6.70	1.48	1.33
55	Z6	76	PPU	C9-N6	-5.44	1.32	1.45
55	Z8	76	PPU	C9-N6	-5.41	1.32	1.45
55	Z6	76	PPU	C-N3'	5.39	1.46	1.34
55	Z8	76	PPU	C-N3'	5.39	1.46	1.34
55	Z8	76	PPU	C10-N6	-5.14	1.32	1.45
55	Z6	76	PPU	C10-N6	-5.14	1.32	1.45
24	XY	37	1MG	P-OP1	4.95	1.52	1.46
24	QY	37	1MG	P-OP1	4.68	1.52	1.46
24	XY	37	1MG	C5-N7	-3.82	1.33	1.38
24	QY	37	1MG	C5-N7	-3.61	1.33	1.38
55	Z6	76	PPU	C4-N9	-3.08	1.33	1.37
55	Z8	76	PPU	C4-N9	-3.08	1.33	1.37
55	Z8	76	PPU	C8-N9	-3.02	1.32	1.36
55	Z6	76	PPU	C8-N9	-2.96	1.32	1.36
55	Z8	76	PPU	O4'-C1'	2.83	1.44	1.41
55	Z6	76	PPU	O4'-C1'	2.83	1.44	1.41
55	Z8	76	PPU	C6-C5	-2.53	1.40	1.44
55	Z6	76	PPU	C6-C5	-2.50	1.40	1.44
24	XY	37	1MG	C8-N9	-2.11	1.33	1.36
24	QY	37	1MG	C8-N9	-2.10	1.33	1.36
55	Z6	76	PPU	C5-N7	-2.03	1.32	1.39
55	Z8	76	PPU	C5-N7	-2.02	1.32	1.39

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	QY	37	1MG	C6-C5-N7	-16.25	133.37	134.24
24	XY	37	1MG	C6-N1-C2	12.33	124.09	120.71
24	QY	37	1MG	C6-N1-C2	11.68	123.91	120.71
24	XY	37	1MG	C6-C5-N7	-11.65	133.62	134.24
55	Z6	76	PPU	N3-C2-N1	-8.57	121.35	128.89
55	Z8	76	PPU	N3-C2-N1	-8.54	121.38	128.89
55	Z8	76	PPU	C3'-N3'-C	-8.12	110.27	123.19
55	Z6	76	PPU	C3'-N3'-C	-8.11	110.28	123.19
55	Z8	76	PPU	C5-C4-N3	-6.31	119.83	125.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	Z6	76	PPU	C5-C4-N3	-6.25	119.89	125.98
55	Z6	76	PPU	C2'-C1'-N9	-5.46	98.48	113.35
55	Z8	76	PPU	C2'-C1'-N9	-5.46	98.48	113.35
55	Z8	76	PPU	C2'-C3'-N3'	5.18	125.10	113.08
55	Z6	76	PPU	C2'-C3'-N3'	5.17	125.07	113.08
55	Z8	76	PPU	C2-N1-C6	4.73	121.77	111.52
55	Z6	76	PPU	C2-N1-C6	4.72	121.74	111.52
55	Z8	76	PPU	C4'-O4'-C1'	-3.94	105.39	109.72
24	QY	37	1MG	N2-C2-N1	3.94	123.79	118.45
55	Z6	76	PPU	C4'-O4'-C1'	-3.94	105.39	109.72
24	XY	37	1MG	N3-C4-N9	3.91	132.64	126.91
55	Z8	76	PPU	N3-C4-N9	3.90	132.07	125.39
24	XY	37	1MG	N2-C2-N1	3.86	123.68	118.45
55	Z6	76	PPU	N3-C4-N9	3.84	131.99	125.39
24	QY	37	1MG	N3-C4-N9	3.82	132.51	126.91
55	Z8	76	PPU	C4-C5-N7	-3.52	106.01	109.41
55	Z6	76	PPU	C4-C5-N7	-3.49	106.04	109.41
24	XY	37	1MG	C8-N9-C4	3.42	109.74	106.96
24	XY	37	1MG	C5-C4-N3	-3.36	122.20	126.07
24	QY	37	1MG	C5-C4-N3	-3.35	122.21	126.07
24	QY	37	1MG	C8-N9-C4	3.33	109.67	106.96
55	Z8	76	PPU	CM-OC-CZ	-3.16	110.20	117.54
55	Z6	76	PPU	CM-OC-CZ	-3.15	110.20	117.54
24	XY	37	1MG	C4-C5-N7	-2.83	106.67	109.41
24	QY	37	1MG	C4-C5-N7	-2.73	106.77	109.41
24	XY	37	1MG	N3-C2-N1	-2.68	119.01	123.84
55	Z6	76	PPU	O4'-C1'-N9	-2.66	102.30	108.10
55	Z8	76	PPU	O4'-C1'-N9	-2.66	102.31	108.10
55	Z8	76	PPU	C2-N3-C4	2.64	120.86	113.27
55	Z6	76	PPU	C2-N3-C4	2.64	120.86	113.27
55	Z6	76	PPU	C4'-C3'-N3'	-2.63	108.03	113.56
55	Z8	76	PPU	C4'-C3'-N3'	-2.63	108.03	113.56
24	QY	37	1MG	N3-C2-N1	-2.61	119.12	123.84
24	XY	37	1MG	C8-N7-C5	2.40	111.03	103.58
24	XY	37	1MG	C1'-N9-C4	-2.38	122.53	126.64
24	QY	37	1MG	C1'-N9-C4	-2.36	122.55	126.64
24	QY	37	1MG	C8-N7-C5	2.34	110.84	103.58
24	XY	37	1MG	C2-N3-C4	2.34	118.11	115.30
24	QY	37	1MG	C2-N3-C4	2.19	117.92	115.30
24	XY	37	1MG	N7-C8-N9	-2.12	107.40	112.20
24	QY	37	1MG	N7-C8-N9	-2.09	107.45	112.20
55	Z6	76	PPU	CA-C-N3'	2.05	121.72	115.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	Z8	76	PPU	CA-C-N3'	2.05	121.70	115.94

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.5 Carbohydrates i

There are no carbohydrates in this entry.

5.6 Ligand geometry i

Of 607 ligands modelled in this entry, 605 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	PAR	QA	1661	-	45,45,45	1.28	6 (13%)	67,67,67	1.37	7 (10%)
57	PAR	XA	1664	-	45,45,45	1.32	6 (13%)	67,67,67	1.32	6 (8%)

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	PAR	QA	1661	-	-	0/18/94/94	0/4/4/4
57	PAR	XA	1664	-	-	0/18/94/94	0/4/4/4

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	XA	1664	PAR	C52-C42	3.13	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	QA	1661	PAR	C52-C42	3.08	1.58	1.52
57	XA	1664	PAR	C11-C21	2.91	1.58	1.52
57	QA	1661	PAR	O54-C14	2.89	1.49	1.41
57	QA	1661	PAR	C64-C54	2.73	1.58	1.51
57	XA	1664	PAR	C64-C54	2.72	1.58	1.51
57	XA	1664	PAR	O54-C14	2.71	1.48	1.41
57	XA	1664	PAR	O51-C11	2.48	1.48	1.41
57	QA	1661	PAR	O51-C11	2.29	1.47	1.41
57	QA	1661	PAR	C11-C21	2.20	1.56	1.52
57	XA	1664	PAR	C14-C24	2.14	1.56	1.52
57	QA	1661	PAR	C31-C21	2.03	1.56	1.53

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	QA	1661	PAR	O52-C13-C23	4.66	115.81	107.50
57	QA	1661	PAR	C14-O54-C54	4.24	121.94	113.73
57	XA	1664	PAR	O52-C13-C23	4.12	114.86	107.50
57	XA	1664	PAR	C14-O54-C54	4.09	121.65	113.73
57	XA	1664	PAR	O33-C14-C24	3.84	115.67	108.08
57	QA	1661	PAR	O33-C14-C24	3.37	114.74	108.08
57	QA	1661	PAR	O54-C54-C64	3.34	112.33	105.97
57	XA	1664	PAR	O54-C54-C64	2.97	111.63	105.97
57	XA	1664	PAR	O11-C42-C32	-2.89	102.06	108.97
57	QA	1661	PAR	O11-C42-C32	-2.79	102.29	108.97
57	QA	1661	PAR	C22-C12-C62	-2.47	106.38	110.13
57	XA	1664	PAR	C11-O51-C51	2.21	118.00	113.73
57	QA	1661	PAR	C22-C32-C42	2.21	114.82	109.37

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	QA	1500/1522 (98%)	-0.11	35 (2%) 57 25	30, 83, 175, 356	0
1	XA	1501/1522 (98%)	-0.22	31 (2%) 60 27	30, 76, 171, 324	0
2	QB	237/256 (92%)	0.43	12 (5%) 27 10	56, 138, 222, 266	0
2	XB	237/256 (92%)	0.27	5 (2%) 60 27	55, 126, 194, 238	0
3	QC	205/239 (85%)	0.26	5 (2%) 56 24	54, 122, 199, 216	0
3	XC	205/239 (85%)	0.08	2 (0%) 79 44	39, 95, 158, 217	0
4	QD	208/209 (99%)	0.08	2 (0%) 79 44	44, 92, 154, 184	0
4	XD	208/209 (99%)	0.18	3 (1%) 72 35	39, 95, 161, 234	0
5	QE	151/162 (93%)	0.28	4 (2%) 53 22	29, 104, 175, 237	0
5	XE	151/162 (93%)	0.01	1 (0%) 84 52	34, 79, 149, 229	0
6	QF	101/101 (100%)	0.03	1 (0%) 79 44	44, 86, 125, 222	0
6	XF	101/101 (100%)	0.03	0 100 100	36, 86, 144, 209	0
7	QG	155/156 (99%)	0.19	7 (4%) 32 13	51, 106, 181, 215	0
7	XG	155/156 (99%)	0.12	3 (1%) 64 29	46, 103, 177, 230	0
8	QH	138/138 (100%)	0.07	0 100 100	48, 108, 167, 204	0
8	XH	138/138 (100%)	0.04	0 100 100	48, 96, 158, 208	0
9	QI	127/128 (99%)	0.35	2 (1%) 68 32	53, 124, 188, 214	0
9	XI	127/128 (99%)	0.31	1 (0%) 83 49	43, 116, 194, 219	0
10	QJ	99/105 (94%)	0.85	12 (12%) 5 3	67, 145, 212, 246	0
10	XJ	99/105 (94%)	0.54	7 (7%) 16 7	37, 119, 193, 210	0
11	QK	119/129 (92%)	0.36	5 (4%) 35 14	42, 92, 152, 199	0
11	XK	119/129 (92%)	0.21	2 (1%) 67 31	39, 89, 165, 204	0
12	QL	125/132 (94%)	0.31	5 (4%) 36 14	42, 84, 176, 269	0
12	XL	125/132 (94%)	0.05	2 (1%) 68 32	30, 66, 131, 242	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	121/126 (96%)	0.35	5 (4%) 35 14	43, 124, 197, 254	0
13	XM	121/126 (96%)	0.18	6 (4%) 28 11	44, 98, 183, 264	0
14	QN	60/61 (98%)	0.74	3 (5%) 28 11	61, 128, 195, 227	0
14	XN	60/61 (98%)	0.07	0 100 100	47, 87, 134, 161	0
15	QO	88/89 (98%)	0.23	3 (3%) 43 18	42, 97, 165, 235	0
15	XO	88/89 (98%)	0.02	1 (1%) 77 41	39, 79, 130, 178	0
16	QP	84/88 (95%)	0.11	1 (1%) 75 39	41, 79, 136, 206	0
16	XP	84/88 (95%)	0.20	1 (1%) 75 39	54, 92, 151, 203	0
17	QQ	100/105 (95%)	0.19	2 (2%) 62 28	53, 102, 165, 210	0
17	XQ	100/105 (95%)	0.31	3 (3%) 48 20	38, 101, 159, 213	0
18	QR	70/88 (79%)	0.11	3 (4%) 34 13	34, 90, 156, 213	0
18	XR	70/88 (79%)	0.07	1 (1%) 72 35	30, 88, 138, 206	0
19	QS	84/93 (90%)	0.82	10 (11%) 5 3	87, 149, 204, 237	0
19	XS	84/93 (90%)	0.42	4 (4%) 29 12	55, 105, 176, 244	0
20	QT	99/106 (93%)	0.30	3 (3%) 48 20	48, 101, 192, 233	0
20	XT	99/106 (93%)	0.15	1 (1%) 79 44	50, 107, 163, 197	0
21	QU	25/27 (92%)	1.21	3 (12%) 5 3	41, 100, 139, 189	0
21	XU	25/27 (92%)	1.04	3 (12%) 5 3	52, 96, 135, 165	0
22	QV	77/77 (100%)	0.12	1 (1%) 74 37	40, 91, 151, 170	0
22	XV	77/77 (100%)	-0.05	1 (1%) 74 37	34, 77, 126, 180	0
23	QX	8/25 (32%)	0.54	0 100 100	61, 82, 137, 169	0
23	XX	8/25 (32%)	0.46	1 (12%) 5 3	39, 67, 104, 175	0
24	QY	14/18 (77%)	3.01	6 (42%) 1 1	93, 213, 294, 312	0
24	XY	14/18 (77%)	2.49	5 (35%) 1 1	69, 188, 276, 278	0
25	RA	2883/2916 (98%)	-0.15	138 (4%) 29 12	24, 57, 221, 389	0
25	YA	2882/2916 (98%)	-0.26	115 (3%) 36 14	17, 48, 215, 377	0
26	RB	120/122 (98%)	-0.15	0 100 100	52, 91, 141, 150	0
26	YB	120/122 (98%)	-0.33	0 100 100	44, 74, 109, 158	0
27	RD	272/276 (98%)	0.02	1 (0%) 90 68	19, 60, 98, 243	0
27	YD	272/276 (98%)	-0.08	1 (0%) 90 68	13, 50, 85, 221	0
28	RE	205/206 (99%)	0.02	3 (1%) 70 33	24, 78, 165, 260	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	YE	205/206 (99%)	0.06	3 (1%) 70 33	22, 76, 161, 238	0
29	RF	202/210 (96%)	0.09	1 (0%) 88 61	21, 82, 158, 250	0
29	YF	202/210 (96%)	-0.04	1 (0%) 88 61	13, 64, 130, 197	0
30	RG	181/182 (99%)	1.12	30 (16%) 2 2	58, 164, 258, 303	0
30	YG	181/182 (99%)	0.53	6 (3%) 44 18	59, 108, 186, 248	0
31	RH	170/180 (94%)	0.87	16 (9%) 9 5	78, 171, 239, 267	0
31	YH	170/180 (94%)	0.22	1 (0%) 86 56	39, 100, 156, 260	0
32	RI	146/148 (98%)	0.30	3 (2%) 60 27	56, 118, 204, 240	0
32	YI	146/148 (98%)	0.11	1 (0%) 84 52	40, 104, 169, 214	0
33	RN	138/140 (98%)	0.08	1 (0%) 84 52	32, 84, 153, 194	0
33	YN	138/140 (98%)	-0.06	1 (0%) 84 52	31, 78, 128, 166	0
34	RO	122/122 (100%)	-0.05	0 100 100	24, 71, 133, 170	0
34	YO	122/122 (100%)	-0.02	0 100 100	23, 66, 114, 153	0
35	RP	150/150 (100%)	0.22	5 (3%) 44 18	15, 79, 185, 232	0
35	YP	150/150 (100%)	0.10	2 (1%) 74 37	5, 68, 135, 230	0
36	RQ	141/141 (100%)	0.19	0 100 100	38, 85, 149, 219	0
36	YQ	141/141 (100%)	-0.02	0 100 100	27, 66, 118, 196	0
37	RR	118/118 (100%)	-0.08	0 100 100	28, 68, 107, 171	0
37	YR	118/118 (100%)	-0.04	0 100 100	20, 64, 114, 153	0
38	RS	111/112 (99%)	0.10	0 100 100	40, 90, 146, 203	0
38	YS	111/112 (99%)	-0.05	0 100 100	36, 77, 134, 207	0
39	RT	137/146 (93%)	0.15	1 (0%) 84 52	39, 90, 189, 221	0
39	YT	137/146 (93%)	0.11	1 (0%) 84 52	41, 78, 176, 220	0
40	RU	117/118 (99%)	0.12	2 (1%) 67 31	27, 73, 155, 249	0
40	YU	117/118 (99%)	-0.03	2 (1%) 67 31	20, 59, 129, 212	0
41	RV	101/101 (100%)	0.13	2 (1%) 62 28	28, 88, 167, 278	0
41	YV	101/101 (100%)	0.06	1 (0%) 79 44	25, 82, 143, 255	0
42	RW	113/113 (100%)	0.02	2 (1%) 65 30	28, 63, 127, 241	0
42	YW	113/113 (100%)	-0.03	0 100 100	22, 60, 109, 204	0
43	RX	92/96 (95%)	0.00	0 100 100	31, 65, 108, 137	0
43	YX	92/96 (95%)	0.03	0 100 100	21, 50, 92, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	RY	102/110 (92%)	0.64	13 (12%) 4 3	46, 106, 214, 270	0
44	YY	102/110 (92%)	0.17	2 (1%) 62 28	25, 85, 144, 243	0
45	RZ	172/206 (83%)	0.76	22 (12%) 4 3	62, 130, 264, 332	0
45	YZ	172/206 (83%)	0.52	13 (7%) 14 6	33, 111, 243, 361	0
46	R0	82/85 (96%)	0.13	0 100 100	35, 72, 105, 143	0
46	Y0	82/85 (96%)	-0.05	0 100 100	28, 63, 99, 116	0
47	R1	97/98 (98%)	0.33	2 (2%) 60 27	24, 67, 167, 259	0
47	Y1	97/98 (98%)	0.18	1 (1%) 79 44	20, 65, 161, 211	0
48	R2	69/72 (95%)	0.03	0 100 100	34, 82, 149, 217	0
48	Y2	69/72 (95%)	0.04	1 (1%) 72 35	22, 72, 138, 203	0
49	R3	59/60 (98%)	0.19	1 (1%) 67 31	35, 81, 147, 173	0
49	Y3	59/60 (98%)	0.11	2 (3%) 43 18	33, 67, 108, 178	0
50	R4	71/71 (100%)	1.53	19 (26%) 1 1	102, 207, 283, 352	0
50	Y4	71/71 (100%)	0.85	8 (11%) 6 4	88, 160, 251, 277	0
51	R5	59/60 (98%)	0.48	5 (8%) 11 5	12, 64, 224, 264	0
51	Y5	59/60 (98%)	0.01	0 100 100	20, 71, 220, 229	0
52	R6	49/54 (90%)	2.64	24 (48%) 1 1	119, 196, 290, 297	0
52	Y6	49/54 (90%)	2.10	21 (42%) 1 1	120, 182, 235, 265	0
53	R7	49/49 (100%)	-0.06	0 100 100	19, 44, 100, 216	0
53	Y7	49/49 (100%)	0.03	3 (6%) 21 8	15, 37, 100, 216	0
54	R8	64/65 (98%)	0.20	2 (3%) 47 20	18, 62, 156, 228	0
54	Y8	64/65 (98%)	0.11	0 100 100	20, 61, 116, 173	0
55	Z6	3/3 (100%)	2.84	1 (33%) 1 1	49, 49, 51, 53	0
55	Z8	3/3 (100%)	2.14	1 (33%) 1 1	36, 36, 37, 41	0
All	All	20780/21420 (97%)	0.05	695 (3%) 44 18	5, 78, 195, 389	0

All (695) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	YA	2173	A	16.7
25	YA	2174	C	15.5
24	QY	32	U	14.1
25	YA	2175	C	13.3
52	R6	43	CYS	13.0

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Mol	Chain	Res	Type	RSRZ
25	YA	2801	A	12.7
25	RA	1096	A	12.7
25	RA	1057	A	12.6
24	XY	32	U	12.6
25	RA	1061	U	12.4
25	RA	2116	G	11.1
25	YA	2122	U	10.9
25	YA	2125	G	10.1
25	YA	2112	G	10.0
25	YA	2136	C	9.9
25	YA	2121	G	9.9
25	RA	1088	A	9.8
25	RA	1098	A	9.3
25	RA	2799	A	9.3
25	YA	2799	A	9.0
25	RA	1065	U	8.8
24	QY	33	U	8.7
25	YA	2123	G	8.4
25	RA	654	A	8.4
25	YA	1536	A	8.4
25	RA	1064	C	8.3
25	RA	1059	G	8.2
25	RA	1060	U	8.1
50	R4	70	GLY	8.0
25	RA	2138	C	7.8
42	RW	113	LYS	7.8
25	RA	2118	U	7.7
55	Z6	76	PPU	7.6
52	R6	46	HIS	7.5
25	RA	2168	G	7.4
25	RA	1070	A	7.3
52	Y6	43	CYS	7.3
25	RA	2798	C	7.3
25	YA	2113	U	7.2
52	R6	50	ARG	7.2
50	R4	71	ARG	7.1
25	RA	2117	A	7.1
25	RA	1068	G	7.0
25	RA	2169	A	6.9
25	YA	2137	C	6.9
1	XA	87	A	6.8
24	XY	33	U	6.7

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Mol	Chain	Res	Type	RSRZ
1	QA	1032(A)	G	6.6
25	YA	2117	A	6.6
25	RA	2797	U	6.6
51	R5	60	VAL	6.6
13	QM	121	LYS	6.6
1	QA	1029	G	6.5
25	RA	2801	A	6.4
25	RA	1097	U	6.4
55	Z8	76	PPU	6.3
25	YA	2106	G	6.3
25	RA	1063	G	6.3
25	YA	2798	C	6.2
25	RA	1536	A	6.2
49	Y3	60	GLU	6.2
25	YA	1058	G	6.2
25	YA	1096	A	6.1
30	RG	182	LYS	6.0
52	R6	6	ARG	6.0
25	RA	1058	G	6.0
25	YA	2129	C	6.0
25	YA	2803	C	5.9
25	RA	1066	U	5.8
7	QG	82	GLY	5.8
25	YA	2178	C	5.7
25	YA	2114	A	5.7
45	RZ	138	GLU	5.7
25	YA	1060	U	5.6
45	RZ	112	ARG	5.6
7	QG	81	GLY	5.6
50	R4	67	TYR	5.5
25	RA	2894	G	5.5
50	R4	47	GLN	5.5
24	XY	31	G	5.4
11	XK	11	LYS	5.3
25	YA	1061	U	5.3
25	YA	2108	C	5.3
25	RA	1067	A	5.3
25	RA	2141	G	5.3
45	RZ	140	ASP	5.3
52	R6	7	ILE	5.3
25	YA	2189	U	5.3
25	RA	2119	A	5.1

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Mol	Chain	Res	Type	RSRZ
25	RA	1084	A	5.1
25	RA	2173	A	5.1
12	QL	129	ALA	5.1
25	RA	2165	G	5.1
25	RA	2170	A	5.1
25	RA	1083	U	5.0
25	RA	1095	A	5.0
25	YA	2797	U	5.0
51	R5	59	GLU	5.0
2	QB	4	GLU	5.0
25	YA	2119	A	5.0
1	QA	1032(B)	G	4.9
25	YA	2794	C	4.9
25	YA	2894	G	4.9
19	QS	6	LYS	4.9
45	YZ	147	GLY	4.9
25	RA	1082	U	4.9
45	YZ	148	ASP	4.8
1	QA	1033	G	4.8
25	RA	1087	G	4.8
25	YA	1057	A	4.8
31	RH	42	ARG	4.8
25	RA	2129	C	4.8
30	RG	2	PRO	4.8
25	YA	1064	C	4.8
52	Y6	53	LYS	4.8
25	YA	1059	G	4.7
1	XA	630	G	4.7
45	RZ	146	ILE	4.7
25	YA	276	A	4.7
1	QA	994	A	4.7
52	R6	49	HIS	4.7
45	YZ	145	GLU	4.7
52	Y6	44	ARG	4.7
25	YA	2167	U	4.7
52	R6	40	CYS	4.7
1	XA	1028(B)	C	4.7
1	QA	1026	G	4.6
28	RE	204	ALA	4.6
1	QA	345	C	4.6
50	R4	44	THR	4.6
10	QJ	33	GLN	4.6

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Mol	Chain	Res	Type	RSRZ
50	Y4	40	HIS	4.6
52	Y6	38	LYS	4.6
1	XA	1032(A)	G	4.6
18	XR	88	LYS	4.6
51	R5	54	GLY	4.5
2	QB	231	GLU	4.5
24	QY	31	G	4.5
52	R6	14	THR	4.5
12	QL	19	ARG	4.5
1	QA	1032	A	4.5
25	YA	2188	C	4.5
25	YA	2795	G	4.5
1	XA	1032	A	4.4
25	YA	2118	U	4.4
25	YA	1095	A	4.4
13	XM	122	LYS	4.4
52	Y6	46	HIS	4.4
25	YA	2107	C	4.3
25	RA	1105	U	4.3
2	QB	19	HIS	4.3
25	RA	2175	C	4.3
45	RZ	144	LEU	4.3
52	Y6	37	ARG	4.3
25	RA	890	A	4.3
19	QS	64	GLU	4.3
25	RA	654(A)	G	4.3
25	RA	2135	A	4.3
25	YA	2793	G	4.2
31	RH	43	VAL	4.2
44	RY	102	CYS	4.2
7	XG	78	ARG	4.2
25	YA	2804	C	4.2
44	RY	58	GLY	4.2
52	R6	13	CYS	4.2
40	RU	118	GLY	4.2
25	YA	2151	G	4.1
1	XA	1129	C	4.1
52	Y6	13	CYS	4.1
2	QB	240	GLN	4.1
13	QM	120	LYS	4.1
11	QK	129	SER	4.1
45	RZ	142	SER	4.1

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Mol	Chain	Res	Type	RSRZ
25	RA	1079	C	4.1
25	RA	2107	C	4.1
25	RA	2166	G	4.1
25	YA	2124	G	4.1
51	R5	55	ARG	4.1
25	YA	2169	A	4.1
25	RA	2113	U	4.1
25	YA	2141	G	4.1
52	R6	45	LYS	4.0
52	Y6	39	TYR	4.0
7	XG	85	TYR	4.0
25	RA	2115	G	4.0
21	XU	26	LYS	4.0
25	YA	654	A	4.0
25	RA	2159	G	4.0
1	QA	344	A	4.0
25	RA	2146	C	4.0
25	RA	2174	C	4.0
25	RA	2114	A	4.0
25	YA	2138	C	4.0
25	RA	2112	G	3.9
25	YA	2116	G	3.9
2	XB	96	ARG	3.9
25	RA	1085	A	3.9
25	RA	2128	C	3.9
47	R1	98	LEU	3.9
28	YE	205	ALA	3.9
25	YA	1087	G	3.9
49	R3	60	GLU	3.9
1	QA	1450	U	3.9
50	R4	45	GLY	3.9
50	Y4	67	TYR	3.9
44	RY	48	ALA	3.8
35	RP	150	ALA	3.8
1	XA	90	C	3.8
45	RZ	141	VAL	3.8
1	QA	1451	A	3.8
25	YA	2802	G	3.8
25	YA	1093	G	3.8
24	QY	29	U	3.8
45	RZ	117	LEU	3.7
25	RA	546	C	3.7

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Mol	Chain	Res	Type	RSRZ
25	RA	1104	C	3.7
25	RA	1176	G	3.7
25	RA	2136	C	3.7
45	YZ	144	LEU	3.7
19	XS	27	GLU	3.7
25	YA	2477	C	3.7
11	QK	11	LYS	3.7
25	YA	2105	C	3.7
17	XQ	101	ARG	3.7
1	QA	1036	G	3.7
25	RA	2145	C	3.7
25	YA	2165	G	3.7
25	RA	1103	A	3.7
4	QD	35	ARG	3.7
52	Y6	49	HIS	3.6
45	YZ	112	ARG	3.6
10	XJ	33	GLN	3.6
25	RA	2160	G	3.6
51	R5	53	ALA	3.6
25	RA	1078	U	3.6
25	YA	546	C	3.6
25	RA	1094	U	3.6
1	XA	345	C	3.6
44	RY	89	PHE	3.6
1	QA	1020	U	3.6
10	XJ	5	ARG	3.6
16	XP	83	GLU	3.6
1	XA	80	G	3.6
25	RA	1093	G	3.6
52	Y6	48	VAL	3.6
24	XY	29	U	3.6
25	RA	2131	G	3.6
25	RA	2167	U	3.6
1	QA	81	G	3.5
52	Y6	22	ALA	3.5
25	YA	654(A)	G	3.5
45	YZ	117	LEU	3.5
25	RA	2802	G	3.5
25	YA	2135	A	3.5
21	QU	25	LYS	3.5
52	R6	30	THR	3.5
30	RG	72	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
25	YA	2166	G	3.5
25	YA	2168	G	3.5
50	R4	1	MET	3.5
25	YA	1075	C	3.5
40	RU	117	GLN	3.5
25	YA	2164	C	3.5
10	XJ	4	ILE	3.5
27	YD	26	LYS	3.5
30	RG	154	GLY	3.4
12	QL	127	GLU	3.4
25	RA	1056	G	3.4
25	RA	1062	G	3.4
25	RA	1099	G	3.4
50	R4	49	PHE	3.4
50	R4	11	PRO	3.4
25	RA	2147	G	3.4
25	RA	2156	G	3.4
1	XA	210	U	3.4
1	QA	88	C	3.4
25	RA	2104	G	3.4
28	RE	205	ALA	3.4
52	R6	38	LYS	3.4
25	RA	2105	C	3.4
30	RG	152	LEU	3.4
25	RA	1055	G	3.4
7	QG	79	ARG	3.4
4	XD	24	GLU	3.3
30	RG	85	GLY	3.3
50	R4	39	CYS	3.3
17	QQ	101	ARG	3.3
25	YA	2126	A	3.3
1	XA	1450	U	3.3
25	RA	1069	A	3.3
52	Y6	40	CYS	3.3
50	Y4	71	ARG	3.3
5	QE	155	GLU	3.3
10	QJ	25	GLU	3.3
30	RG	118	ARG	3.3
1	XA	631	G	3.3
25	YA	2176	A	3.3
52	R6	5	VAL	3.3
45	RZ	119	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
25	RA	1100	C	3.2
25	YA	2170	A	3.2
19	QS	5	LEU	3.2
10	QJ	64	GLU	3.2
25	YA	1066	U	3.2
25	YA	2120	G	3.2
50	R4	23	GLU	3.2
54	R8	65	GLU	3.2
32	RI	146	ALA	3.2
13	QM	122	LYS	3.2
12	QL	64	TYR	3.2
40	YU	117	GLN	3.2
25	RA	887	A	3.2
52	R6	39	TYR	3.2
25	YA	277	C	3.2
39	RT	115	ARG	3.2
45	YZ	171	ILE	3.2
28	YE	204	ALA	3.1
53	Y7	47	ARG	3.1
10	QJ	28	ARG	3.1
52	R6	52	VAL	3.1
47	R1	97	LEU	3.1
52	R6	20	ASN	3.1
30	YG	182	LYS	3.1
25	RA	1077	A	3.1
13	XM	7	VAL	3.1
42	RW	112	GLY	3.1
25	YA	2139	C	3.1
15	XO	88	ARG	3.1
25	RA	2795	G	3.1
25	RA	34	C	3.1
30	RG	82	LEU	3.0
52	R6	44	ARG	3.0
25	RA	2148	G	3.0
31	RH	81	GLU	3.0
41	RV	26	ASP	3.0
33	YN	130	HIS	3.0
19	QS	27	GLU	3.0
2	QB	18	GLY	3.0
31	RH	18	GLU	3.0
25	YA	1078	U	3.0
25	RA	2171	A	3.0

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Mol	Chain	Res	Type	RSRZ
25	YA	2172	U	3.0
3	QC	193	TYR	3.0
40	YU	118	GLY	3.0
25	RA	2125	G	3.0
1	QA	723	U	3.0
30	RG	4	ASP	3.0
25	YA	2161	C	3.0
3	XC	179	ARG	3.0
50	R4	19	GLY	3.0
25	RA	2133	G	3.0
45	RZ	109	ALA	3.0
21	XU	25	LYS	3.0
1	QA	1001	G	3.0
25	RA	2804	C	3.0
1	QA	1025	U	2.9
2	QB	40	HIS	2.9
27	RD	26	LYS	2.9
50	Y4	1	MET	2.9
1	XA	1027	C	2.9
5	XE	155	GLU	2.9
25	RA	1166	C	2.9
31	RH	124	GLU	2.9
25	RA	2108	C	2.9
25	YA	1073	A	2.9
25	RA	645	C	2.9
25	RA	2803	C	2.9
1	QA	1027	C	2.9
1	XA	89	U	2.9
52	Y6	45	LYS	2.9
1	XA	1026	G	2.9
45	YZ	146	ILE	2.9
1	QA	995	C	2.8
25	RA	1054	A	2.8
2	QB	21	ARG	2.8
1	QA	1024	G	2.8
1	XA	1032(B)	G	2.8
52	Y6	41	PRO	2.8
25	YA	890	A	2.8
25	YA	11	G	2.8
1	XA	344	A	2.8
25	RA	889	C	2.8
25	YA	897	C	2.8

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Mol	Chain	Res	Type	RSRZ
52	R6	12	GLU	2.8
31	RH	39	PRO	2.8
25	RA	2139	C	2.8
1	QA	1031	G	2.8
14	QN	8	GLU	2.8
44	RY	62	GLU	2.8
18	QR	54	ARG	2.8
7	XG	81	GLY	2.8
31	RH	157	TYR	2.8
1	XA	1451	A	2.8
23	XX	8	A	2.8
25	RA	1086	A	2.8
25	RA	2158	A	2.8
25	YA	270(K)	C	2.8
25	YA	1079	C	2.8
31	RH	25	LYS	2.8
1	QA	998(A)	C	2.7
25	YA	2893	G	2.7
45	RZ	33	LEU	2.7
52	R6	19	ARG	2.7
45	YZ	119	GLU	2.7
32	RI	83	ALA	2.7
9	QI	127	LYS	2.7
25	YA	2146	C	2.7
25	YA	10	G	2.7
45	RZ	147	GLY	2.7
25	YA	1534	G	2.7
13	QM	65	LYS	2.7
25	RA	2164	C	2.7
25	YA	1076	C	2.7
25	YA	2128	C	2.7
25	RA	879	G	2.7
25	RA	2154	G	2.7
30	YG	26	GLN	2.7
25	RA	878	A	2.7
1	QA	532	A	2.7
44	RY	87	LYS	2.7
1	XA	1028(A)	C	2.6
1	QA	89	U	2.6
45	YZ	149	SER	2.6
44	RY	103	GLY	2.6
44	RY	91	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
25	RA	653	A	2.6
25	YA	1077	A	2.6
25	RA	2179	C	2.6
45	YZ	109	ALA	2.6
19	QS	85	LYS	2.6
1	XA	208	U	2.6
25	RA	899	A	2.6
25	RA	1081	U	2.6
1	XA	81	G	2.6
25	RA	2157	G	2.6
35	RP	149	GLU	2.6
7	QG	83	ALA	2.6
25	YA	2154	G	2.6
25	YA	1092	C	2.6
31	RH	41	MET	2.6
18	QR	88	LYS	2.6
6	QF	101	ALA	2.6
25	RA	1046	A	2.6
25	YA	1088	A	2.6
30	RG	46	ALA	2.6
19	QS	28	LYS	2.6
10	XJ	28	ARG	2.6
53	Y7	49	ARG	2.6
25	YA	2102	U	2.6
25	YA	2104	G	2.5
25	YA	2110	G	2.5
50	Y4	66	SER	2.5
25	RA	896	A	2.5
22	QV	47	U	2.5
50	Y4	68	ARG	2.5
31	RH	24	VAL	2.5
44	RY	50	ARG	2.5
44	RY	79	CYS	2.5
54	R8	64	TYR	2.5
25	YA	1177	A	2.5
3	QC	104	GLN	2.5
10	QJ	29	ARG	2.5
45	RZ	113	ALA	2.5
19	QS	8	GLY	2.5
1	QA	1042	G	2.5
10	QJ	71	LEU	2.5
25	YA	2101	G	2.5

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Mol	Chain	Res	Type	RSRZ
47	Y1	98	LEU	2.5
52	Y6	30	THR	2.5
31	RH	35	VAL	2.5
1	QA	1000	A	2.5
25	YA	1070	A	2.5
14	QN	35	ARG	2.5
21	QU	24	ARG	2.5
25	RA	1074	G	2.5
15	QO	7	GLU	2.5
1	XA	64	G	2.5
20	XT	8	ARG	2.5
12	XL	127	GLU	2.5
1	XA	88	C	2.5
35	YP	118	GLY	2.5
25	YA	654(T)	C	2.4
25	YA	2160	G	2.4
35	RP	118	GLY	2.4
2	XB	133	LYS	2.4
50	R4	51	ASP	2.4
2	QB	6	THR	2.4
13	XM	121	LYS	2.4
30	RG	77	ILE	2.4
25	YA	2140	C	2.4
16	QP	83	GLU	2.4
22	XV	47	U	2.4
44	YY	63	LYS	2.4
2	QB	232	PRO	2.4
2	XB	156	LYS	2.4
17	XQ	36	ILE	2.4
14	QN	2	ALA	2.4
2	XB	240	GLN	2.4
25	RA	10	G	2.4
25	YA	2162	G	2.4
41	RV	36	PRO	2.4
3	QC	107	GLN	2.4
12	XL	19	ARG	2.4
9	XI	2	GLU	2.4
1	XA	1453	G	2.4
25	YA	2133	G	2.4
10	QJ	4	ILE	2.4
32	RI	59	ALA	2.4
44	YY	99	CYS	2.4

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Mol	Chain	Res	Type	RSRZ
30	RG	131	TYR	2.4
52	R6	47	THR	2.4
30	RG	158	ALA	2.4
25	RA	362	U	2.4
25	YA	270(L)	U	2.4
13	QM	7	VAL	2.4
25	RA	2896	C	2.4
52	Y6	23	THR	2.4
45	RZ	121	HIS	2.3
25	RA	1537	C	2.3
44	RY	47	LYS	2.3
7	QG	78	ARG	2.3
15	QO	26	GLU	2.3
31	RH	103	LEU	2.3
9	QI	124	GLN	2.3
19	XS	6	LYS	2.3
20	QT	104	LEU	2.3
30	RG	87	PRO	2.3
25	RA	898	C	2.3
50	R4	12	ALA	2.3
30	YG	143	GLU	2.3
25	RA	2111	C	2.3
1	XA	1001	G	2.3
45	RZ	143	GLY	2.3
25	RA	1177	A	2.3
50	R4	46	GLN	2.3
3	XC	79	ARG	2.3
30	RG	175	LEU	2.3
25	RA	2109	U	2.3
50	R4	66	SER	2.3
30	YG	137	GLU	2.3
1	QA	1034	G	2.3
11	XK	129	SER	2.3
25	RA	2176	A	2.3
10	XJ	21	GLN	2.3
1	XA	77	C	2.3
25	RA	888	C	2.3
45	YZ	143	GLY	2.3
25	YA	2132	U	2.3
32	YI	59	ALA	2.3
1	XA	1138	G	2.3
2	QB	198	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
25	RA	2794	C	2.3
44	RY	46	LYS	2.3
50	Y4	34	GLU	2.3
28	RE	69	LYS	2.3
25	RA	1534	G	2.2
30	RG	113	ARG	2.2
45	RZ	137	ILE	2.2
30	RG	12	TYR	2.2
1	QA	979	C	2.2
25	YA	2109	U	2.2
30	RG	172	LEU	2.2
31	RH	88	LEU	2.2
25	YA	2127	G	2.2
50	R4	29	PRO	2.2
5	QE	13	ILE	2.2
1	XA	1030	C	2.2
25	RA	2132	U	2.2
5	QE	154	GLY	2.2
3	QC	72	LYS	2.2
25	YA	2182	G	2.2
52	Y6	18	ARG	2.2
10	QJ	72	VAL	2.2
5	QE	24	ARG	2.2
10	XJ	98	ILE	2.2
17	XQ	37	LYS	2.2
35	RP	139	LYS	2.2
45	YZ	140	ASP	2.2
10	QJ	62	HIS	2.2
30	RG	13	GLU	2.2
52	R6	42	TRP	2.2
25	RA	1508	A	2.2
50	Y4	47	GLN	2.2
31	RH	89	ILE	2.2
30	RG	171	ALA	2.2
10	QJ	34	VAL	2.2
30	RG	34	LEU	2.2
25	YA	2150	U	2.2
31	RH	14	GLY	2.2
15	QO	88	ARG	2.2
30	RG	9	ARG	2.2
19	QS	40	ILE	2.2
52	R6	41	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
29	YF	8	GLN	2.2
1	XA	82	U	2.2
21	QU	18	TYR	2.2
25	YA	1100	C	2.2
45	RZ	159	PRO	2.2
10	XJ	101	VAL	2.2
30	RG	75	LYS	2.2
25	RA	2476	A	2.2
25	RA	2893	G	2.2
2	XB	95	GLN	2.2
30	RG	155	MET	2.2
17	QQ	100	LYS	2.2
45	RZ	64	GLY	2.2
50	R4	69	LYS	2.2
1	QA	1028(B)	C	2.1
24	XY	30	C	2.1
25	YA	889	C	2.1
33	RN	83	LYS	2.1
35	YP	108	LYS	2.1
30	RG	92	VAL	2.1
45	RZ	116	VAL	2.1
25	RA	1108	U	2.1
25	RA	2793	G	2.1
39	YT	133	GLU	2.1
11	QK	25	TYR	2.1
1	QA	1028	C	2.1
31	YH	3	ARG	2.1
3	QC	101	LEU	2.1
25	YA	887	A	2.1
25	RA	1089	G	2.1
24	QY	30	C	2.1
49	Y3	59	VAL	2.1
10	QJ	98	ILE	2.1
12	QL	63	GLY	2.1
25	RA	1049	C	2.1
25	RA	2140	C	2.1
25	YA	896	A	2.1
19	XS	29	ARG	2.1
25	YA	1063	G	2.1
25	YA	1176	G	2.1
52	Y6	15	GLU	2.1
1	QA	1030	C	2.1

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Mol	Chain	Res	Type	RSRZ
30	RG	84	LYS	2.1
50	R4	32	TYR	2.1
52	R6	29	ASN	2.1
52	R6	22	ALA	2.1
45	RZ	139	VAL	2.1
44	RY	22	GLY	2.1
45	RZ	148	ASP	2.1
25	RA	1075	C	2.1
25	YA	1080	C	2.1
41	YV	45	THR	2.1
1	QA	210	U	2.1
31	RH	100	GLY	2.1
2	QB	233	SER	2.1
30	RG	58	GLN	2.1
25	RA	2152	G	2.1
24	QY	39	C	2.1
30	RG	108	ASN	2.1
4	XD	37	PRO	2.1
30	RG	117	PHE	2.1
11	QK	89	ALA	2.1
25	RA	2106	G	2.1
29	RF	162	LEU	2.1
35	RP	119	GLU	2.1
52	Y6	42	TRP	2.1
19	QS	67	VAL	2.1
52	Y6	47	THR	2.1
4	QD	86	LYS	2.0
18	QR	19	LYS	2.0
19	QS	7	LYS	2.0
1	XA	78	G	2.0
11	QK	12	ARG	2.0
30	YG	89	GLY	2.0
13	XM	120	LYS	2.0
45	RZ	156	LYS	2.0
4	XD	167	GLY	2.0
25	RA	352	G	2.0
25	RA	2137	C	2.0
25	YA	884	C	2.0
30	RG	26	GLN	2.0
7	QG	5	ARG	2.0
20	QT	106	ALA	2.0
53	Y7	48	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
52	Y6	29	ASN	2.0
2	QB	20	GLU	2.0
20	QT	9	ASN	2.0
10	QJ	70	ARG	2.0
1	QA	1035	A	2.0
13	XM	58	GLU	2.0
30	YG	25	TYR	2.0
48	Y2	15	LYS	2.0
19	XS	67	VAL	2.0
1	QA	466	C	2.0
1	XA	1029	G	2.0
13	XM	8	GLU	2.0
25	RA	2791	C	2.0
7	QG	4	ARG	2.0
25	RA	2892	A	2.0
25	YA	1069	A	2.0
21	XU	23	PRO	2.0
28	YE	61	ARG	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
55	PPU	Z6	76	37/38	0.29	-	53,53,53,53	0
24	1MG	QY	37	24/25	0.23	-	124,124,124,124	0
24	1MG	XY	37	24/25	0.14	-	89,89,89,89	0
55	PPU	Z8	76	37/38	0.26	-	40,40,40,40	0

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
56	MG	YA	3041	1/1	0.27	-	6,6,6,6	0
56	MG	XA	1635	1/1	0.10	-	36,36,36,36	0
56	MG	YA	3040	1/1	0.10	-	1,1,1,1	0
56	MG	XA	1647	1/1	0.57	-	58,58,58,58	0
56	MG	YA	3158	1/1	0.12	-	20,20,20,20	0
56	MG	QA	1626	1/1	0.38	-	77,77,77,77	0
56	MG	RA	3160	1/1	0.23	-	25,25,25,25	0
56	MG	YA	3164	1/1	0.28	-	25,25,25,25	0
56	MG	YA	3037	1/1	0.20	-	3,3,3,3	0
56	MG	XA	1614	1/1	0.11	-	14,14,14,14	0
56	MG	RA	3107	1/1	0.30	-	21,21,21,21	0
56	MG	RA	3030	1/1	0.29	-	15,15,15,15	0
56	MG	YA	3137	1/1	0.07	-	15,15,15,15	0
56	MG	YA	3207	1/1	0.28	-	66,66,66,66	0
56	MG	RA	3027	1/1	0.73	-	80,80,80,80	0
56	MG	RA	3060	1/1	0.21	-	25,25,25,25	0
56	MG	YA	3088	1/1	0.25	-	20,20,20,20	0
56	MG	YA	3193	1/1	0.20	-	39,39,39,39	0
56	MG	YA	3161	1/1	0.07	-	30,30,30,30	0
56	MG	YA	3027	1/1	0.12	-	5,5,5,5	0
56	MG	RA	3123	1/1	0.14	-	32,32,32,32	0
56	MG	QX	101	1/1	0.09	-	24,24,24,24	0
56	MG	YA	3070	1/1	0.17	-	22,22,22,22	0
56	MG	YA	3124	1/1	0.20	-	22,22,22,22	0
56	MG	YA	3006	1/1	0.19	-	0,0,0,0	0
56	MG	RA	3151	1/1	0.21	-	23,23,23,23	0
56	MG	RA	3131	1/1	0.22	-	77,77,77,77	0
56	MG	YB	202	1/1	0.13	-	42,42,42,42	0
56	MG	XA	1623	1/1	0.33	-	31,31,31,31	0
56	MG	RA	3078	1/1	0.17	-	15,15,15,15	0
56	MG	YA	3162	1/1	0.23	-	34,34,34,34	0
56	MG	RA	3044	1/1	0.29	-	21,21,21,21	0
56	MG	RA	3084	1/1	0.30	-	17,17,17,17	0
56	MG	YA	3007	1/1	0.14	-	6,6,6,6	0
56	MG	YA	3145	1/1	0.14	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	RA	3176	1/1	0.55	-	71,71,71,71	0
56	MG	RA	3165	1/1	0.09	-	5,5,5,5	0
56	MG	YA	3238	1/1	0.19	-	34,34,34,34	0
56	MG	XA	1607	1/1	0.11	-	5,5,5,5	0
56	MG	YA	3123	1/1	0.11	-	15,15,15,15	0
56	MG	YA	3220	1/1	0.15	-	18,18,18,18	0
56	MG	YA	3205	1/1	0.12	-	28,28,28,28	0
56	MG	RA	3099	1/1	0.12	-	21,21,21,21	0
56	MG	YA	3016	1/1	0.15	-	19,19,19,19	0
56	MG	RA	3145	1/1	0.19	-	37,37,37,37	0
56	MG	YA	3011	1/1	0.30	-	13,13,13,13	0
56	MG	YA	3206	1/1	0.14	-	24,24,24,24	0
56	MG	YA	3103	1/1	0.08	-	12,12,12,12	0
56	MG	YA	3224	1/1	0.22	-	18,18,18,18	0
56	MG	RA	3016	1/1	0.23	-	2,2,2,2	0
56	MG	QA	1601	1/1	0.20	-	27,27,27,27	0
56	MG	XA	1662	1/1	0.21	-	27,27,27,27	0
56	MG	QA	1630	1/1	0.14	-	66,66,66,66	0
56	MG	RA	3055	1/1	0.14	-	12,12,12,12	0
56	MG	RA	3036	1/1	0.31	-	10,10,10,10	0
56	MG	YA	3021	1/1	0.21	-	12,12,12,12	0
56	MG	RA	3057	1/1	0.05	-	22,22,22,22	0
56	MG	RA	3059	1/1	0.29	-	21,21,21,21	0
56	MG	YA	3076	1/1	0.37	-	7,7,7,7	0
56	MG	RA	3031	1/1	0.31	-	26,26,26,26	0
56	MG	QA	1614	1/1	0.16	-	38,38,38,38	0
56	MG	RA	3134	1/1	0.19	-	18,18,18,18	0
56	MG	XA	1648	1/1	0.33	-	25,25,25,25	0
56	MG	QA	1651	1/1	0.23	-	70,70,70,70	0
56	MG	YA	3064	1/1	0.13	-	23,23,23,23	0
56	MG	YA	3156	1/1	0.18	-	33,33,33,33	0
56	MG	YA	3004	1/1	0.21	-	13,13,13,13	0
56	MG	YA	3098	1/1	0.14	-	49,49,49,49	0
56	MG	YA	3176	1/1	0.11	-	54,54,54,54	0
56	MG	YA	3117	1/1	0.34	-	60,60,60,60	0
56	MG	XA	1654	1/1	0.10	-	50,50,50,50	0
56	MG	YA	3010	1/1	0.14	-	3,3,3,3	0
56	MG	RA	3038	1/1	0.18	-	14,14,14,14	0
56	MG	YA	3147	1/1	0.09	-	11,11,11,11	0
56	MG	XA	1636	1/1	0.20	-	58,58,58,58	0
56	MG	RA	3047	1/1	0.20	-	7,7,7,7	0
56	MG	YA	3108	1/1	0.14	-	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	QA	1627	1/1	0.36	-	57,57,57,57	0
58	ZN	XN	101	1/1	0.11	-	107,107,107,107	0
56	MG	YA	3150	1/1	0.16	-	54,54,54,54	0
56	MG	YA	3171	1/1	0.28	-	72,72,72,72	0
56	MG	YA	3175	1/1	0.09	-	12,12,12,12	0
56	MG	RA	3002	1/1	0.28	-	8,8,8,8	0
56	MG	YA	3172	1/1	0.16	-	55,55,55,55	0
56	MG	XA	1606	1/1	0.24	-	17,17,17,17	0
56	MG	YX	101	1/1	0.08	-	28,28,28,28	0
56	MG	YA	3104	1/1	0.28	-	6,6,6,6	0
56	MG	RA	3140	1/1	0.18	-	45,45,45,45	0
56	MG	YA	3215	1/1	0.15	-	51,51,51,51	0
56	MG	QA	1607	1/1	0.16	-	22,22,22,22	0
56	MG	RA	3124	1/1	0.27	-	21,21,21,21	0
56	MG	QA	1640	1/1	0.18	-	54,54,54,54	0
56	MG	Y5	101	1/1	0.19	-	25,25,25,25	0
56	MG	QA	1636	1/1	0.07	-	15,15,15,15	0
56	MG	RP	201	1/1	0.31	-	37,37,37,37	0
56	MG	YA	3242	1/1	0.30	-	34,34,34,34	0
56	MG	RA	3132	1/1	0.15	-	12,12,12,12	0
56	MG	YA	3058	1/1	0.32	-	16,16,16,16	0
56	MG	RA	3074	1/1	0.27	-	8,8,8,8	0
56	MG	RA	3164	1/1	0.24	-	52,52,52,52	0
56	MG	RA	3017	1/1	0.16	-	13,13,13,13	0
56	MG	YA	3126	1/1	0.16	-	27,27,27,27	0
56	MG	RA	3081	1/1	0.40	-	28,28,28,28	0
56	MG	YA	3179	1/1	0.37	-	31,31,31,31	0
56	MG	XA	1651	1/1	0.12	-	18,18,18,18	0
56	MG	RA	3152	1/1	0.20	-	26,26,26,26	0
56	MG	YA	3198	1/1	0.39	-	32,32,32,32	0
56	MG	QH	201	1/1	0.30	-	124,124,124,124	0
56	MG	YA	3203	1/1	0.11	-	24,24,24,24	0
56	MG	YA	3062	1/1	0.12	-	6,6,6,6	0
56	MG	YA	3034	1/1	0.22	-	3,3,3,3	0
56	MG	RA	3061	1/1	0.19	-	28,28,28,28	0
56	MG	RA	3042	1/1	0.18	-	11,11,11,11	0
56	MG	RA	3088	1/1	0.14	-	24,24,24,24	0
56	MG	YA	3029	1/1	0.36	-	17,17,17,17	0
56	MG	R5	101	1/1	0.16	-	27,27,27,27	0
56	MG	RA	3167	1/1	0.17	-	35,35,35,35	0
56	MG	QA	1631	1/1	0.13	-	55,55,55,55	0
56	MG	YA	3148	1/1	0.11	-	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	XA	1618	1/1	0.16	-	24,24,24,24	0
56	MG	XA	1611	1/1	0.16	-	29,29,29,29	0
56	MG	RA	3101	1/1	0.16	-	50,50,50,50	0
56	MG	YA	3199	1/1	0.25	-	42,42,42,42	0
56	MG	YA	3113	1/1	0.19	-	21,21,21,21	0
56	MG	RA	3066	1/1	0.23	-	12,12,12,12	0
56	MG	RA	3019	1/1	0.12	-	10,10,10,10	0
56	MG	YA	3114	1/1	0.28	-	6,6,6,6	0
56	MG	YA	3186	1/1	0.30	-	50,50,50,50	0
56	MG	RA	3095	1/1	0.14	-	31,31,31,31	0
56	MG	RA	3122	1/1	0.24	-	70,70,70,70	0
56	MG	YA	3055	1/1	0.23	-	16,16,16,16	0
56	MG	YA	3192	1/1	0.27	-	40,40,40,40	0
56	MG	XA	1620	1/1	0.10	-	55,55,55,55	0
56	MG	RB	201	1/1	0.04	-	13,13,13,13	0
56	MG	RA	3192	1/1	0.25	-	56,56,56,56	0
56	MG	YA	3102	1/1	0.21	-	5,5,5,5	0
56	MG	YA	3013	1/1	0.28	-	3,3,3,3	0
56	MG	XA	1643	1/1	0.08	-	47,47,47,47	0
56	MG	YA	3173	1/1	0.23	-	43,43,43,43	0
56	MG	RA	3069	1/1	0.27	-	43,43,43,43	0
56	MG	YA	3023	1/1	0.20	-	4,4,4,4	0
56	MG	YA	3200	1/1	0.09	-	15,15,15,15	0
56	MG	XA	1645	1/1	0.20	-	31,31,31,31	0
56	MG	RA	3178	1/1	0.19	-	62,62,62,62	0
56	MG	RA	3146	1/1	0.18	-	44,44,44,44	0
56	MG	RA	3183	1/1	0.41	-	49,49,49,49	0
56	MG	RA	3186	1/1	0.17	-	90,90,90,90	0
56	MG	QA	1616	1/1	0.10	-	42,42,42,42	0
56	MG	XA	1657	1/1	0.19	-	28,28,28,28	0
56	MG	QA	1605	1/1	0.17	-	51,51,51,51	0
56	MG	YA	3144	1/1	0.17	-	13,13,13,13	0
56	MG	YA	3154	1/1	0.25	-	15,15,15,15	0
56	MG	YA	3047	1/1	0.23	-	6,6,6,6	0
56	MG	YA	3129	1/1	0.07	-	22,22,22,22	0
56	MG	RA	3045	1/1	0.29	-	12,12,12,12	0
56	MG	YA	3049	1/1	0.28	-	15,15,15,15	0
56	MG	RA	3120	1/1	0.10	-	10,10,10,10	0
56	MG	YA	3073	1/1	0.31	-	24,24,24,24	0
56	MG	XA	1663	1/1	0.30	-	85,85,85,85	0
56	MG	RA	3039	1/1	0.29	-	18,18,18,18	0
56	MG	QA	1653	1/1	0.22	-	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	YA	3209	1/1	0.14	-	41,41,41,41	0
56	MG	XA	1630	1/1	0.14	-	39,39,39,39	0
56	MG	YA	3188	1/1	0.20	-	38,38,38,38	0
56	MG	YA	3139	1/1	0.24	-	32,32,32,32	0
56	MG	YA	3181	1/1	0.28	-	51,51,51,51	0
56	MG	YA	3096	1/1	0.22	-	15,15,15,15	0
56	MG	QV	102	1/1	0.15	-	8,8,8,8	0
56	MG	QA	1602	1/1	0.25	-	19,19,19,19	0
56	MG	XV	102	1/1	0.10	-	22,22,22,22	0
56	MG	RA	3205	1/1	0.25	-	54,54,54,54	0
56	MG	YA	3204	1/1	0.16	-	43,43,43,43	0
56	MG	RA	3210	1/1	0.33	-	38,38,38,38	0
56	MG	RA	3115	1/1	0.22	-	59,59,59,59	0
56	MG	QA	1648	1/1	0.03	-	100,100,100,100	0
56	MG	XA	1626	1/1	0.32	-	27,27,27,27	0
56	MG	RA	3077	1/1	0.31	-	14,14,14,14	0
56	MG	YA	3127	1/1	0.48	-	44,44,44,44	0
56	MG	RA	3194	1/1	0.14	-	14,14,14,14	0
56	MG	YA	3054	1/1	0.13	-	14,14,14,14	0
56	MG	YA	3130	1/1	0.19	-	16,16,16,16	0
56	MG	YA	3185	1/1	0.10	-	10,10,10,10	0
56	MG	YA	3153	1/1	0.21	-	26,26,26,26	0
56	MG	YA	3118	1/1	0.20	-	12,12,12,12	0
56	MG	RA	3085	1/1	0.07	-	15,15,15,15	0
56	MG	YA	3043	1/1	0.35	-	9,9,9,9	0
56	MG	YA	3045	1/1	0.36	-	22,22,22,22	0
56	MG	YA	3222	1/1	0.05	-	9,9,9,9	0
56	MG	RA	3168	1/1	0.09	-	31,31,31,31	0
56	MG	YA	3002	1/1	0.36	-	15,15,15,15	0
56	MG	RA	3073	1/1	0.40	-	5,5,5,5	0
56	MG	YA	3152	1/1	0.37	-	38,38,38,38	0
56	MG	RA	3135	1/1	0.22	-	32,32,32,32	0
56	MG	RA	3118	1/1	0.14	-	14,14,14,14	0
56	MG	YB	201	1/1	0.15	-	21,21,21,21	0
56	MG	YA	3227	1/1	0.13	-	22,22,22,22	0
56	MG	YA	3014	1/1	0.39	-	12,12,12,12	0
56	MG	RA	3094	1/1	0.13	-	19,19,19,19	0
56	MG	YA	3170	1/1	0.40	-	10,10,10,10	0
56	MG	XA	1621	1/1	0.15	-	22,22,22,22	0
56	MG	RA	3142	1/1	0.08	-	15,15,15,15	0
56	MG	YA	3187	1/1	0.25	-	58,58,58,58	0
56	MG	YA	3149	1/1	0.26	-	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	QA	1618	1/1	0.14	-	41,41,41,41	0
56	MG	RA	3201	1/1	0.36	-	22,22,22,22	0
56	MG	QA	1641	1/1	0.28	-	25,25,25,25	0
56	MG	QA	1646	1/1	0.18	-	14,14,14,14	0
56	MG	QA	1656	1/1	0.19	-	53,53,53,53	0
56	MG	YA	3169	1/1	0.19	-	84,84,84,84	0
56	MG	RA	3125	1/1	0.28	-	24,24,24,24	0
56	MG	RA	3053	1/1	0.20	-	5,5,5,5	0
56	MG	RA	3207	1/1	0.13	-	51,51,51,51	0
56	MG	YA	3044	1/1	0.24	-	9,9,9,9	0
56	MG	RA	3161	1/1	0.13	-	32,32,32,32	0
56	MG	RA	3049	1/1	0.15	-	10,10,10,10	0
56	MG	RA	3028	1/1	0.16	-	12,12,12,12	0
56	MG	RA	3097	1/1	0.20	-	24,24,24,24	0
56	MG	RA	3171	1/1	0.26	-	49,49,49,49	0
56	MG	RA	3102	1/1	0.27	-	32,32,32,32	0
56	MG	YA	3106	1/1	0.29	-	32,32,32,32	0
56	MG	YA	3202	1/1	0.07	-	21,21,21,21	0
56	MG	YE	302	1/1	0.19	-	13,13,13,13	0
56	MG	YA	3060	1/1	0.21	-	13,13,13,13	0
56	MG	YA	3116	1/1	0.20	-	28,28,28,28	0
56	MG	YA	3090	1/1	0.37	-	11,11,11,11	0
56	MG	QA	1660	1/1	0.18	-	45,45,45,45	0
56	MG	XA	1650	1/1	0.25	-	39,39,39,39	0
56	MG	XA	1642	1/1	0.17	-	49,49,49,49	0
56	MG	RA	3015	1/1	0.15	-	15,15,15,15	0
56	MG	YA	3033	1/1	0.23	-	6,6,6,6	0
56	MG	RA	3065	1/1	0.28	-	21,21,21,21	0
56	MG	RA	3100	1/1	0.14	-	44,44,44,44	0
56	MG	RA	3117	1/1	0.26	-	42,42,42,42	0
56	MG	QA	1649	1/1	0.36	-	45,45,45,45	0
56	MG	YA	3191	1/1	0.19	-	24,24,24,24	0
56	MG	RA	3153	1/1	0.15	-	36,36,36,36	0
56	MG	YA	3217	1/1	0.09	-	35,35,35,35	0
56	MG	RA	3035	1/1	0.09	-	21,21,21,21	0
56	MG	YA	3063	1/1	0.11	-	6,6,6,6	0
56	MG	RA	3185	1/1	0.27	-	44,44,44,44	0
56	MG	YA	3036	1/1	0.18	-	3,3,3,3	0
56	MG	QA	1625	1/1	0.14	-	66,66,66,66	0
56	MG	YA	3136	1/1	0.14	-	4,4,4,4	0
56	MG	YA	3026	1/1	0.38	-	9,9,9,9	0
56	MG	RA	3144	1/1	0.18	-	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	RA	3082	1/1	0.14	-	13,13,13,13	0
56	MG	RE	301	1/1	0.10	-	22,22,22,22	0
56	MG	YA	3066	1/1	0.44	-	18,18,18,18	0
56	MG	RA	3048	1/1	0.25	-	13,13,13,13	0
56	MG	YA	3125	1/1	0.14	-	18,18,18,18	0
56	MG	RA	3138	1/1	0.14	-	21,21,21,21	0
56	MG	YA	3239	1/1	0.46	-	48,48,48,48	0
56	MG	RA	3143	1/1	0.47	-	16,16,16,16	0
56	MG	QA	1658	1/1	0.09	-	68,68,68,68	0
56	MG	RA	3087	1/1	0.12	-	9,9,9,9	0
56	MG	YA	3074	1/1	0.19	-	28,28,28,28	0
56	MG	RA	3010	1/1	0.33	-	4,4,4,4	0
56	MG	YA	3146	1/1	0.09	-	50,50,50,50	0
56	MG	YA	3095	1/1	0.24	-	5,5,5,5	0
56	MG	YA	3080	1/1	0.26	-	3,3,3,3	0
56	MG	RA	3091	1/1	0.14	-	21,21,21,21	0
56	MG	XA	1624	1/1	0.14	-	35,35,35,35	0
56	MG	XA	1612	1/1	0.28	-	21,21,21,21	0
56	MG	RA	3156	1/1	0.18	-	22,22,22,22	0
56	MG	YA	3008	1/1	0.27	-	17,17,17,17	0
56	MG	QA	1617	1/1	0.22	-	41,41,41,41	0
56	MG	YA	3085	1/1	0.16	-	41,41,41,41	0
56	MG	QA	1638	1/1	0.38	-	53,53,53,53	0
56	MG	RA	3034	1/1	0.33	-	16,16,16,16	0
56	MG	YA	3142	1/1	0.15	-	30,30,30,30	0
56	MG	XA	1633	1/1	0.14	-	32,32,32,32	0
56	MG	RA	3070	1/1	0.29	-	37,37,37,37	0
56	MG	RA	3013	1/1	0.20	-	10,10,10,10	0
56	MG	YA	3232	1/1	0.28	-	43,43,43,43	0
56	MG	RA	3148	1/1	0.18	-	21,21,21,21	0
56	MG	XA	1604	1/1	0.04	-	31,31,31,31	0
56	MG	QA	1647	1/1	0.10	-	41,41,41,41	0
56	MG	YA	3109	1/1	0.27	-	25,25,25,25	0
56	MG	YA	3223	1/1	0.08	-	30,30,30,30	0
58	ZN	QN	101	1/1	0.14	-	155,155,155,155	0
56	MG	RA	3001	1/1	0.15	-	36,36,36,36	0
56	MG	YA	3229	1/1	0.10	-	52,52,52,52	0
56	MG	YA	3028	1/1	0.18	-	23,23,23,23	0
56	MG	YA	3018	1/1	0.35	-	24,24,24,24	0
56	MG	YA	3053	1/1	0.20	-	4,4,4,4	0
56	MG	RA	3141	1/1	0.27	-	43,43,43,43	0
56	MG	YA	3020	1/1	0.34	-	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	RA	3058	1/1	0.22	-	13,13,13,13	0
56	MG	YA	3052	1/1	0.23	-	17,17,17,17	0
56	MG	YA	3182	1/1	0.27	-	30,30,30,30	0
56	MG	YA	3210	1/1	0.11	-	35,35,35,35	0
56	MG	RA	3158	1/1	0.16	-	14,14,14,14	0
56	MG	YA	3219	1/1	0.23	-	29,29,29,29	0
56	MG	XA	1641	1/1	0.12	-	24,24,24,24	0
56	MG	YA	3235	1/1	0.12	-	26,26,26,26	0
56	MG	YA	3084	1/1	0.20	-	23,23,23,23	0
56	MG	QA	1644	1/1	0.18	-	23,23,23,23	0
56	MG	RA	3177	1/1	0.14	-	59,59,59,59	0
56	MG	YA	3093	1/1	0.11	-	18,18,18,18	0
56	MG	RA	3075	1/1	0.34	-	4,4,4,4	0
56	MG	YA	3159	1/1	0.34	-	43,43,43,43	0
56	MG	XA	1629	1/1	0.20	-	49,49,49,49	0
56	MG	RA	3012	1/1	0.33	-	26,26,26,26	0
56	MG	RA	3150	1/1	0.19	-	26,26,26,26	0
56	MG	RA	3089	1/1	0.27	-	26,26,26,26	0
56	MG	YA	3012	1/1	1.48	-	80,80,80,80	0
56	MG	RA	3200	1/1	0.28	-	58,58,58,58	0
56	MG	YA	3212	1/1	0.09	-	21,21,21,21	0
56	MG	RA	3209	1/1	0.26	-	49,49,49,49	0
56	MG	XV	101	1/1	0.18	-	14,14,14,14	0
56	MG	YA	3105	1/1	0.25	-	16,16,16,16	0
56	MG	QA	1650	1/1	0.18	-	36,36,36,36	0
56	MG	RA	3067	1/1	0.06	-	7,7,7,7	0
56	MG	RA	3173	1/1	0.18	-	71,71,71,71	0
56	MG	RA	3127	1/1	0.22	-	47,47,47,47	0
56	MG	RA	3184	1/1	0.29	-	33,33,33,33	0
56	MG	YA	3177	1/1	0.14	-	35,35,35,35	0
56	MG	YA	3030	1/1	0.28	-	24,24,24,24	0
56	MG	QA	1629	1/1	0.25	-	68,68,68,68	0
56	MG	YA	3138	1/1	0.15	-	15,15,15,15	0
56	MG	YA	3240	1/1	0.15	-	45,45,45,45	0
56	MG	YA	3163	1/1	0.19	-	40,40,40,40	0
56	MG	QA	1637	1/1	0.18	-	49,49,49,49	0
56	MG	RA	3174	1/1	0.27	-	68,68,68,68	0
56	MG	QA	1612	1/1	0.07	-	37,37,37,37	0
56	MG	RA	3193	1/1	0.16	-	49,49,49,49	0
56	MG	YA	3087	1/1	0.22	-	7,7,7,7	0
56	MG	QA	1657	1/1	0.09	-	76,76,76,76	0
56	MG	YA	3233	1/1	0.18	-	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	RA	3052	1/1	0.45	-	24,24,24,24	0
56	MG	YA	3178	1/1	0.37	-	68,68,68,68	0
56	MG	RE	302	1/1	0.29	-	22,22,22,22	0
56	MG	YA	3131	1/1	0.14	-	20,20,20,20	0
56	MG	RA	3189	1/1	0.19	-	34,34,34,34	0
56	MG	RA	3163	1/1	0.18	-	38,38,38,38	0
56	MG	XA	1625	1/1	0.19	-	20,20,20,20	0
56	MG	RA	3050	1/1	0.13	-	0,0,0,0	0
56	MG	YA	3197	1/1	0.11	-	33,33,33,33	0
56	MG	RA	3112	1/1	0.30	-	50,50,50,50	0
56	MG	RA	3086	1/1	0.22	-	33,33,33,33	0
56	MG	YA	3236	1/1	0.30	-	57,57,57,57	0
56	MG	XA	1603	1/1	0.12	-	23,23,23,23	0
56	MG	RA	3033	1/1	0.18	-	62,62,62,62	0
56	MG	YA	3155	1/1	0.20	-	22,22,22,22	0
56	MG	YA	3234	1/1	0.24	-	34,34,34,34	0
56	MG	XA	1628	1/1	0.22	-	24,24,24,24	0
56	MG	YA	3165	1/1	0.22	-	42,42,42,42	0
56	MG	YA	3038	1/1	0.13	-	12,12,12,12	0
56	MG	YA	3157	1/1	0.22	-	29,29,29,29	0
56	MG	XA	1601	1/1	0.15	-	15,15,15,15	0
56	MG	YA	3214	1/1	0.18	-	42,42,42,42	0
57	PAR	XA	1664	42/42	0.27	-	57,57,57,57	0
56	MG	QA	1643	1/1	0.22	-	24,24,24,24	0
56	MG	YA	3042	1/1	0.29	-	28,28,28,28	0
56	MG	YA	3112	1/1	0.10	-	41,41,41,41	0
56	MG	RA	3187	1/1	0.39	-	68,68,68,68	0
56	MG	YA	3069	1/1	0.17	-	16,16,16,16	0
56	MG	QA	1603	1/1	0.09	-	28,28,28,28	0
56	MG	XM	201	1/1	0.13	-	28,28,28,28	0
56	MG	RA	3062	1/1	0.33	-	21,21,21,21	0
56	MG	QA	1619	1/1	0.31	-	48,48,48,48	0
56	MG	RA	3121	1/1	0.56	-	35,35,35,35	0
56	MG	XA	1652	1/1	0.14	-	64,64,64,64	0
56	MG	RA	3190	1/1	0.15	-	50,50,50,50	0
56	MG	YA	3059	1/1	0.15	-	74,74,74,74	0
56	MG	RA	3179	1/1	0.23	-	22,22,22,22	0
56	MG	YA	3071	1/1	0.12	-	18,18,18,18	0
56	MG	RA	3139	1/1	0.13	-	31,31,31,31	0
56	MG	YA	3231	1/1	0.23	-	32,32,32,32	0
56	MG	RA	3196	1/1	0.20	-	53,53,53,53	0
56	MG	YA	3166	1/1	0.31	-	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	RA	3072	1/1	0.29	-	24,24,24,24	0
56	MG	YA	3022	1/1	0.21	-	6,6,6,6	0
56	MG	RA	3157	1/1	0.42	-	20,20,20,20	0
56	MG	YA	3196	1/1	0.11	-	33,33,33,33	0
56	MG	YA	3024	1/1	0.11	-	10,10,10,10	0
56	MG	QM	201	1/1	0.18	-	34,34,34,34	0
56	MG	XA	1634	1/1	0.16	-	28,28,28,28	0
56	MG	YA	3061	1/1	0.11	-	35,35,35,35	0
56	MG	QA	1609	1/1	0.23	-	34,34,34,34	0
56	MG	RA	3009	1/1	0.16	-	21,21,21,21	0
56	MG	RA	3032	1/1	0.17	-	17,17,17,17	0
56	MG	XA	1631	1/1	0.28	-	45,45,45,45	0
56	MG	QA	1611	1/1	0.08	-	32,32,32,32	0
56	MG	RA	3147	1/1	0.32	-	49,49,49,49	0
56	MG	RA	3007	1/1	0.14	-	8,8,8,8	0
56	MG	RA	3202	1/1	0.25	-	84,84,84,84	0
56	MG	YA	3003	1/1	0.14	-	13,13,13,13	0
56	MG	YA	3237	1/1	0.08	-	15,15,15,15	0
56	MG	RA	3119	1/1	0.31	-	34,34,34,34	0
56	MG	XA	1639	1/1	0.18	-	32,32,32,32	0
56	MG	YA	3213	1/1	0.12	-	41,41,41,41	0
56	MG	QA	1620	1/1	0.51	-	40,40,40,40	0
56	MG	XA	1627	1/1	0.29	-	31,31,31,31	0
56	MG	RA	3024	1/1	0.44	-	4,4,4,4	0
56	MG	RA	3096	1/1	0.16	-	8,8,8,8	0
56	MG	XA	1646	1/1	0.18	-	23,23,23,23	0
56	MG	YA	3019	1/1	0.41	-	21,21,21,21	0
56	MG	XA	1658	1/1	0.24	-	50,50,50,50	0
56	MG	YA	3135	1/1	0.05	-	33,33,33,33	0
56	MG	RA	3056	1/1	0.16	-	26,26,26,26	0
56	MG	YA	3119	1/1	0.36	-	35,35,35,35	0
56	MG	YA	3120	1/1	0.24	-	36,36,36,36	0
56	MG	QA	1604	1/1	0.09	-	33,33,33,33	0
56	MG	YA	3035	1/1	0.22	-	10,10,10,10	0
56	MG	YA	3075	1/1	0.09	-	14,14,14,14	0
56	MG	YA	3160	1/1	0.19	-	37,37,37,37	0
56	MG	RA	3029	1/1	0.17	-	2,2,2,2	0
56	MG	YA	3128	1/1	0.25	-	23,23,23,23	0
56	MG	YA	3015	1/1	0.42	-	10,10,10,10	0
56	MG	YA	3009	1/1	0.52	-	27,27,27,27	0
56	MG	YA	3046	1/1	0.08	-	4,4,4,4	0
56	MG	RA	3136	1/1	0.25	-	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	YA	3051	1/1	0.23	-	4,4,4,4	0
56	MG	RA	3128	1/1	0.24	-	27,27,27,27	0
56	MG	RA	3106	1/1	0.50	-	24,24,24,24	0
56	MG	RA	3191	1/1	0.15	-	62,62,62,62	0
56	MG	RA	3169	1/1	0.14	-	23,23,23,23	0
56	MG	QA	1655	1/1	0.44	-	50,50,50,50	0
56	MG	XA	1610	1/1	0.25	-	37,37,37,37	0
56	MG	RA	3159	1/1	0.41	-	26,26,26,26	0
56	MG	YA	3221	1/1	0.17	-	26,26,26,26	0
56	MG	XA	1617	1/1	0.15	-	26,26,26,26	0
56	MG	XA	1649	1/1	0.31	-	28,28,28,28	0
56	MG	YA	3226	1/1	0.15	-	14,14,14,14	0
56	MG	RA	3079	1/1	0.20	-	32,32,32,32	0
56	MG	YA	3091	1/1	0.11	-	23,23,23,23	0
56	MG	YA	3225	1/1	0.14	-	32,32,32,32	0
56	MG	RA	3195	1/1	0.25	-	28,28,28,28	0
56	MG	XA	1615	1/1	0.13	-	19,19,19,19	0
56	MG	YA	3081	1/1	0.20	-	18,18,18,18	0
56	MG	YA	3134	1/1	0.09	-	29,29,29,29	0
56	MG	YA	3180	1/1	0.11	-	53,53,53,53	0
56	MG	RA	3005	1/1	0.25	-	8,8,8,8	0
56	MG	QA	1628	1/1	0.22	-	14,14,14,14	0
56	MG	RA	3105	1/1	0.18	-	50,50,50,50	0
56	MG	RA	3175	1/1	0.24	-	99,99,99,99	0
56	MG	RA	3018	1/1	0.23	-	6,6,6,6	0
56	MG	RA	3093	1/1	0.11	-	24,24,24,24	0
56	MG	YA	3025	1/1	0.15	-	6,6,6,6	0
56	MG	YA	3039	1/1	0.20	-	30,30,30,30	0
56	MG	XA	1640	1/1	0.21	-	47,47,47,47	0
56	MG	RA	3162	1/1	0.24	-	56,56,56,56	0
56	MG	XA	1653	1/1	0.31	-	44,44,44,44	0
56	MG	RA	3109	1/1	0.06	-	26,26,26,26	0
56	MG	YA	3101	1/1	0.28	-	5,5,5,5	0
56	MG	YA	3133	1/1	0.63	-	43,43,43,43	0
56	MG	YA	3107	1/1	0.20	-	25,25,25,25	0
56	MG	RA	3110	1/1	0.12	-	51,51,51,51	0
56	MG	YA	3082	1/1	0.17	-	13,13,13,13	0
58	ZN	XD	301	1/1	0.23	-	49,49,49,49	0
56	MG	QA	1645	1/1	0.18	-	22,22,22,22	0
56	MG	YA	3097	1/1	0.24	-	19,19,19,19	0
56	MG	RA	3166	1/1	0.27	-	56,56,56,56	0
56	MG	YA	3067	1/1	0.11	-	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	YA	3218	1/1	0.11	-	19,19,19,19	0
56	MG	YA	3056	1/1	0.18	-	9,9,9,9	0
56	MG	YA	3032	1/1	0.19	-	9,9,9,9	0
56	MG	RA	3064	1/1	0.38	-	25,25,25,25	0
56	MG	YA	3216	1/1	0.08	-	42,42,42,42	0
56	MG	XA	1637	1/1	0.12	-	39,39,39,39	0
56	MG	YA	3092	1/1	0.14	-	11,11,11,11	0
56	MG	RA	3204	1/1	0.26	-	30,30,30,30	0
56	MG	RA	3004	1/1	0.10	-	5,5,5,5	0
56	MG	RA	3103	1/1	0.57	-	48,48,48,48	0
58	ZN	QD	301	1/1	0.19	-	59,59,59,59	0
56	MG	RA	3133	1/1	0.15	-	32,32,32,32	0
56	MG	YA	3077	1/1	0.12	-	8,8,8,8	0
56	MG	QA	1654	1/1	0.14	-	14,14,14,14	0
56	MG	RA	3063	1/1	0.21	-	27,27,27,27	0
56	MG	RA	3172	1/1	0.21	-	29,29,29,29	0
56	MG	RB	202	1/1	0.07	-	31,31,31,31	0
56	MG	XA	1613	1/1	0.11	-	45,45,45,45	0
56	MG	YA	3230	1/1	0.20	-	43,43,43,43	0
56	MG	QA	1632	1/1	0.25	-	41,41,41,41	0
56	MG	YA	3168	1/1	0.27	-	65,65,65,65	0
56	MG	RF	301	1/1	0.20	-	45,45,45,45	0
56	MG	RA	3170	1/1	0.10	-	41,41,41,41	0
56	MG	QA	1622	1/1	0.28	-	60,60,60,60	0
56	MG	XA	1656	1/1	0.15	-	37,37,37,37	0
56	MG	YA	3086	1/1	0.15	-	3,3,3,3	0
56	MG	YA	3083	1/1	0.34	-	21,21,21,21	0
56	MG	YA	3099	1/1	0.31	-	11,11,11,11	0
56	MG	RA	3043	1/1	0.09	-	30,30,30,30	0
56	MG	QA	1634	1/1	0.10	-	48,48,48,48	0
56	MG	YA	3167	1/1	0.07	-	12,12,12,12	0
56	MG	QA	1606	1/1	0.17	-	7,7,7,7	0
56	MG	RA	3003	1/1	0.24	-	17,17,17,17	0
56	MG	RA	3129	1/1	0.19	-	26,26,26,26	0
56	MG	YA	3121	1/1	0.14	-	23,23,23,23	0
56	MG	YA	3110	1/1	0.07	-	10,10,10,10	0
56	MG	YA	3190	1/1	0.20	-	51,51,51,51	0
56	MG	RA	3180	1/1	0.18	-	28,28,28,28	0
56	MG	QA	1623	1/1	0.16	-	28,28,28,28	0
56	MG	RA	3116	1/1	0.21	-	69,69,69,69	0
56	MG	YA	3005	1/1	0.12	-	19,19,19,19	0
56	MG	QA	1610	1/1	0.14	-	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	RA	3111	1/1	0.19	-	52,52,52,52	0
56	MG	YA	3115	1/1	0.17	-	21,21,21,21	0
56	MG	RA	3025	1/1	0.18	-	9,9,9,9	0
56	MG	RA	3040	1/1	0.16	-	9,9,9,9	0
56	MG	RA	3080	1/1	0.30	-	44,44,44,44	0
56	MG	QA	1659	1/1	0.26	-	79,79,79,79	0
56	MG	RA	3054	1/1	0.19	-	5,5,5,5	0
56	MG	RA	3022	1/1	0.28	-	3,3,3,3	0
56	MG	YA	3050	1/1	0.20	-	2,2,2,2	0
56	MG	YA	3141	1/1	0.37	-	43,43,43,43	0
56	MG	XA	1605	1/1	0.34	-	126,126,126,126	0
56	MG	YA	3143	1/1	0.12	-	33,33,33,33	0
56	MG	RA	3155	1/1	0.19	-	12,12,12,12	0
56	MG	RA	3090	1/1	0.14	-	14,14,14,14	0
56	MG	YA	3195	1/1	0.07	-	55,55,55,55	0
56	MG	RA	3199	1/1	0.27	-	47,47,47,47	0
56	MG	YA	3189	1/1	0.10	-	31,31,31,31	0
56	MG	XA	1661	1/1	0.15	-	38,38,38,38	0
56	MG	XA	1638	1/1	0.26	-	55,55,55,55	0
56	MG	RA	3026	1/1	0.25	-	6,6,6,6	0
56	MG	YA	3201	1/1	0.10	-	122,122,122,122	0
56	MG	RA	3108	1/1	0.17	-	26,26,26,26	0
56	MG	XA	1644	1/1	0.24	-	59,59,59,59	0
56	MG	QA	1608	1/1	0.15	-	27,27,27,27	0
56	MG	YE	301	1/1	0.12	-	1,1,1,1	0
57	PAR	QA	1661	42/42	0.23	-	75,75,75,75	0
56	MG	RA	3206	1/1	0.22	-	38,38,38,38	0
56	MG	RA	3197	1/1	0.13	-	50,50,50,50	0
56	MG	YA	3100	1/1	0.33	-	1,1,1,1	0
56	MG	RA	3130	1/1	0.40	-	44,44,44,44	0
56	MG	XA	1609	1/1	0.18	-	15,15,15,15	0
56	MG	QA	1639	1/1	0.13	-	44,44,44,44	0
56	MG	RA	3114	1/1	0.09	-	30,30,30,30	0
56	MG	XA	1602	1/1	0.17	-	15,15,15,15	0
56	MG	YA	3094	1/1	0.27	-	10,10,10,10	0
56	MG	YA	3068	1/1	0.32	-	12,12,12,12	0
56	MG	RA	3051	1/1	0.39	-	1,1,1,1	0
56	MG	RA	3068	1/1	0.14	-	16,16,16,16	0
56	MG	RA	3041	1/1	0.14	-	5,5,5,5	0
56	MG	YA	3241	1/1	0.28	-	33,33,33,33	0
56	MG	YA	3211	1/1	0.19	-	42,42,42,42	0
56	MG	RA	3149	1/1	0.24	-	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	YA	3031	1/1	0.33	-	6,6,6,6	0
56	MG	YA	3079	1/1	0.28	-	18,18,18,18	0
56	MG	YA	3174	1/1	0.14	-	29,29,29,29	0
56	MG	XA	1660	1/1	0.08	-	61,61,61,61	0
56	MG	RA	3020	1/1	0.19	-	29,29,29,29	0
56	MG	YA	3151	1/1	0.36	-	26,26,26,26	0
56	MG	RA	3076	1/1	0.33	-	22,22,22,22	0
56	MG	YA	3072	1/1	0.13	-	10,10,10,10	0
56	MG	YA	3132	1/1	0.05	-	13,13,13,13	0
56	MG	RA	3104	1/1	0.29	-	44,44,44,44	0
56	MG	XM	202	1/1	0.27	-	43,43,43,43	0
56	MG	YA	3183	1/1	0.12	-	36,36,36,36	0
56	MG	XA	1616	1/1	0.21	-	20,20,20,20	0
56	MG	YA	3184	1/1	0.15	-	33,33,33,33	0
56	MG	RA	3071	1/1	0.14	-	32,32,32,32	0
56	MG	QX	102	1/1	0.09	-	42,42,42,42	0
56	MG	XA	1622	1/1	0.09	-	40,40,40,40	0
56	MG	YA	3208	1/1	0.20	-	53,53,53,53	0
56	MG	XA	1632	1/1	0.14	-	11,11,11,11	0
56	MG	RA	3211	1/1	0.26	-	13,13,13,13	0
56	MG	QA	1635	1/1	0.25	-	31,31,31,31	0
56	MG	RA	3198	1/1	0.04	-	53,53,53,53	0
56	MG	QA	1633	1/1	0.36	-	50,50,50,50	0
56	MG	XA	1655	1/1	0.20	-	33,33,33,33	0
56	MG	RA	3208	1/1	0.18	-	47,47,47,47	0
56	MG	QA	1642	1/1	0.09	-	49,49,49,49	0
56	MG	RA	3008	1/1	0.21	-	13,13,13,13	0
56	MG	RA	3037	1/1	0.19	-	10,10,10,10	0
56	MG	QV	101	1/1	0.17	-	17,17,17,17	0
56	MG	RA	3126	1/1	0.22	-	27,27,27,27	0
56	MG	RA	3083	1/1	0.19	-	26,26,26,26	0
56	MG	RA	3098	1/1	0.15	-	11,11,11,11	0
56	MG	QA	1615	1/1	0.65	-	46,46,46,46	0
56	MG	RA	3014	1/1	0.21	-	10,10,10,10	0
56	MG	YA	3001	1/1	0.37	-	13,13,13,13	0
56	MG	XA	1619	1/1	0.17	-	46,46,46,46	0
56	MG	YA	3078	1/1	0.28	-	25,25,25,25	0
56	MG	QA	1613	1/1	0.31	-	56,56,56,56	0
56	MG	YA	3111	1/1	0.18	-	30,30,30,30	0
56	MG	YA	3089	1/1	0.24	-	2,2,2,2	0
56	MG	QF	201	1/1	0.17	-	56,56,56,56	0
56	MG	YA	3017	1/1	0.10	-	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	YA	3065	1/1	0.12	-	12,12,12,12	0
56	MG	YA	3228	1/1	0.18	-	45,45,45,45	0
56	MG	YA	3048	1/1	0.17	-	4,4,4,4	0
56	MG	YA	3057	1/1	0.45	-	22,22,22,22	0
56	MG	QA	1652	1/1	0.17	-	36,36,36,36	0
56	MG	XA	1659	1/1	0.09	-	60,60,60,60	0
56	MG	RA	3113	1/1	0.30	-	24,24,24,24	0
56	MG	RA	3006	1/1	0.12	-	3,3,3,3	0
56	MG	RA	3046	1/1	0.35	-	31,31,31,31	0
56	MG	YA	3122	1/1	0.17	-	35,35,35,35	0
56	MG	RA	3021	1/1	0.37	-	27,27,27,27	0
56	MG	XA	1608	1/1	0.13	-	7,7,7,7	0
56	MG	RA	3182	1/1	0.35	-	25,25,25,25	0
56	MG	RA	3154	1/1	0.13	-	12,12,12,12	0
56	MG	RA	3137	1/1	0.17	-	36,36,36,36	0
56	MG	RA	3092	1/1	0.14	-	18,18,18,18	0
56	MG	RA	3212	1/1	0.27	-	18,18,18,18	0
56	MG	RA	3188	1/1	0.31	-	58,58,58,58	0
56	MG	YA	3140	1/1	0.25	-	2,2,2,2	0
56	MG	YA	3194	1/1	0.43	-	42,42,42,42	0
56	MG	QA	1624	1/1	0.40	-	24,24,24,24	0
56	MG	RA	3011	1/1	0.22	-	30,30,30,30	0
56	MG	RA	3023	1/1	0.28	-	24,24,24,24	0
56	MG	RA	3181	1/1	0.29	-	34,34,34,34	0
56	MG	RA	3203	1/1	0.27	-	73,73,73,73	0
56	MG	QA	1621	1/1	0.17	-	48,48,48,48	0

6.5 Other polymers ⓘ

There are no such residues in this entry.