Full wwPDB/EMDataBank EM Map/Model Validation Report (i)

Sep 3, 2017 – 03:58 PM EDT

PDB ID	:	5JUU
EMDB ID:	:	EMD-6647
Title	:	Saccharomyces cerevisiae 80S ribosome bound with elongation factor eEF2-GDP-sordarin and Taura Syndrome Virus IRES, Structure V (least rotated 40S subunit)
Authors	:	Abeyrathne, P.; Koh, C.S.; Grant, T.; Grigorieff, N.; Korostelev, A.A.
Deposited on	:	unknown
Resolution	:	4.00 Å(reported)

This is a Full wwPDB/EMDataBank EM Map/Model Validation Report for a publicly released PDB/EMDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
http://wwpdb.org/validation/2016/EMValidationReportHelp
with specific help available everywhere you see the (i) symbol.

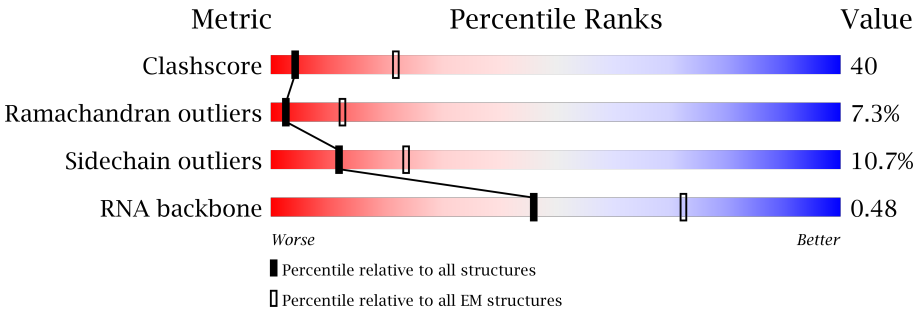
MolProbity	:	4.02b-467
Mogul	:	1.7.2 (RC1), CSD as538be (2017)
Percentile statistics	:	20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	rb-20029824

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Mol	Chain	Length	Quality of chain
1	A	1798	22% 62% 15%
2	B	3396	20% 62% 14%
3	C	158	20% 64% 13%
4	D	121	17% 73% 11%
5	E	217	30% 38% 9% 21%
6	F	254	29% 59% 11%
7	G	387	29% 58% 12%
8	H	362	33% 56% 11%

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Mol	Chain	Length	Quality of chain
9	I	297	34% 58% 7%
10	J	176	31% 53% 15%
11	K	244	25% 54% 11% 9%
12	L	256	33% 46% 12% 9%
13	M	191	31% 61% 7%
14	N	221	32% 56% 8% 5%
15	O	174	31% 51% 13%
16	P	165	18% 31% 8% 43%
17	Q	199	35% 49% 13%
18	R	138	27% 58% 14%
19	S	204	21% 68% 10%
20	T	199	35% 55% 8%
21	U	184	32% 55% 13%
22	V	186	26% 64% 9%
23	W	189	35% 58% 6%
24	X	172	32% 51% 15%
25	Y	160	32% 53% 14%
26	Z	121	36% 41% 6% 17%
27	AA	137	36% 51% 12%
28	BA	155	12% 21% 7% 61%
29	CA	142	21% 50% 14% 15%
30	DA	127	33% 54% 9%
31	EA	136	26% 60% 14%
32	FA	149	38% 54% 7%
33	GA	59	46% 42% 10%

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Mol	Chain	Length	Quality of chain
34	HA	105	29% 55% 9% 8%
35	IA	113	34% 54% 9%
36	JA	130	32% 57% 8%
37	KA	107	26% 61% 12%
38	LA	121	28% 53% 11% 7%
39	MA	120	37% 53% 8%
40	NA	100	27% 51% 18%
41	OA	88	28% 63% 8%
42	PA	78	35% 58% 6%
43	QA	51	24% 51% 22%
44	RA	128	15% 20% 5% 59%
45	SA	25	36% 48% 16%
46	TA	106	31% 58% 9%
47	UA	92	28% 57% 14%
48	VA	312	17% 36% 7% 39%
49	WA	319	35% 55% 9%
50	XA	252	22% 50% 8% 18%
51	YA	255	22% 51% 10% 16%
52	ZA	254	28% 50% 7% 15%
53	AB	240	30% 55% 6% 7%
54	BB	261	25% 61% 13%
55	CB	225	30% 54% 8% 8%
56	DB	236	31% 55% 9%
57	EB	190	28% 59% 9%
58	FB	200	32% 53% 9% 6%

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Mol	Chain	Length	Quality of chain
59	GB	197	24% 59% 10% • 6%
60	HB	105	26% 53% 12% 9%
61	IB	156	35% 54% 9% ••
62	JB	143	78% 9% 13%
63	KB	151	33% 58% 7% ••
64	LB	137	29% 50% 12% • 7%
65	MB	142	29% 45% 11% • 14%
66	NB	143	27% 62% 10% ••
67	OB	136	32% 41% 11% • 14%
68	PB	146	39% 48% 10% ••
69	QB	144	30% 56% 13% •
70	RB	121	28% 52% 8% 12%
71	SB	87	28% 59% 13% •
72	TB	130	29% 56% 13% ••
73	UB	145	32% 57% 10% ••
74	VB	135	36% 54% 10% •
75	WB	108	16% 43% 6% 35%
76	XB	119	25% 43% 13% • 18%
77	YB	82	32% 59% 9% •
78	ZB	67	33% 51% 10% 6%
79	AC	56	25% 63% 7% 5%
80	BC	63	48% 40% 8% 5%
81	CC	152	39% 7% 53%
82	DC	842	29% 60% 9% •
83	EC	201	28% 31% 24% 15% •

2 Entry composition

There are 86 unique types of molecules in this entry. The entry contains 215045 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A	1781	37658	16811	6630	12436	1781	0	0

- Molecule 2 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	3307	70248	31336	12590	23015	3307	0	0

- Molecule 3 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	C	158	3354	1500	586	1110	158	0	0

- Molecule 4 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	D	121	2580	1152	461	846	121	0	0

- Molecule 5 is a protein called uL1 (yeast L1).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	171	1359	869	232	251	7	0	0

- Molecule 6 is a protein called uL2 (yeast L2).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	252	1918	1193	389	335	1	0	0

- Molecule 7 is a protein called uL3 (yeast L3).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	386	Total	C	N	O	S	0	0
			3082	1956	584	534	8		

- Molecule 8 is a protein called uL4 (yeast L4).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	361	Total	C	N	O	S	0	0
			2750	1730	522	495	3		

- Molecule 9 is a protein called uL18 (yeast L5).

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	296	Total	C	N	O	S	0	0
			2376	1501	414	459	2		

- Molecule 10 is a protein called eL6 (yeast L6).

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	175	Total	C	N	O	S	0	0
			1401	902	251	247	1		

- Molecule 11 is a protein called uL30 (yeast L7).

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	222	Total	C	N	O	S	0	0
			1785	1151	324	309	1		

- Molecule 12 is a protein called eL8 (yeast L8).

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	233	Total	C	N	O	S	0	0
			1818	1159	326	330	3		

- Molecule 13 is a protein called uL6 (yeast L9).

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	191	Total	C	N	O	S	0	0
			1519	963	274	278	4		

- Molecule 14 is a protein called uL16 (yeast L10).

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	211	Total	C	N	O	S	0	0
			1718	1089	325	298	6		

- Molecule 15 is a protein called uL5 (yeast L11).

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	169	Total	C	N	O	S	0	0
			1354	847	253	250	4		

- Molecule 16 is a protein called uL11 (yeast L12).

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	94	Total	C	N	O	S	0	0
			723	448	138	135	2		

- Molecule 17 is a protein called eL13 (yeast L13).

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Q	193	Total	C	N	O	0	0
			1543	962	315	266		

- Molecule 18 is a protein called eL14 (yeast L14).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	136	Total	C	N	O	S	0	0
			1054	675	199	178	2		

- Molecule 19 is a protein called eL15 (yeast L15).

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	203	Total	C	N	O	S	0	0
			1721	1077	361	282	1		

- Molecule 20 is a protein called uL13 (yeast L16).

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	197	Total	C	N	O	S	0	0
			1556	1003	289	263	1		

- Molecule 21 is a protein called uL22 (yeast L17).

Mol	Chain	Residues	Atoms				AltConf	Trace
21	U	183	Total	C	N	O	0	0
			1443	896	287	260		

- Molecule 22 is a protein called eL18 (yeast L18).

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	185	Total	C	N	O	S	0	0
			1442	908	290	242	2		

- Molecule 23 is a protein called eL19 (yeast L19).

Mol	Chain	Residues	Atoms				AltConf	Trace
23	W	188	Total	C	N	O	0	0
			1522	935	326	261		

- Molecule 24 is a protein called eL20 (yeast L20).

Mol	Chain	Residues	Atoms					AltConf	Trace
24	X	172	Total	C	N	O	S	0	0
			1446	930	267	245	4		

- Molecule 25 is a protein called eL21 (yeast L21).

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Y	159	Total	C	N	O	S	0	0
			1277	805	246	222	4		

- Molecule 26 is a protein called eL22 (yeast L22).

Mol	Chain	Residues	Atoms				AltConf	Trace
26	Z	100	Total	C	N	O	0	0
			796	516	131	149		

- Molecule 27 is a protein called uL14 (yeast L23).

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AA	136	Total	C	N	O	S	0	0
			1004	628	189	180	7		

- Molecule 28 is a protein called eL24 (yeast L24).

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BA	61	Total	C	N	O	S	0	0
			509	328	100	80	1		

- Molecule 29 is a protein called uL23 (yeast L25).

Mol	Chain	Residues	Atoms					AltConf	Trace
29	CA	121	Total	C	N	O	S	0	0
			969	623	170	174	2		

- Molecule 30 is a protein called uL24 (yeast L26).

Mol	Chain	Residues	Atoms				AltConf	Trace
30	DA	126	Total	C	N	O	0	0
			994	625	192	177		

- Molecule 31 is a protein called eL27 (yeast L27).

Mol	Chain	Residues	Atoms				AltConf	Trace
31	EA	135	Total	C	N	O	0	0
			1093	710	202	181		

- Molecule 32 is a protein called uL15 (yeast L28).

Mol	Chain	Residues	Atoms					AltConf	Trace
32	FA	148	Total	C	N	O	S	0	0
			1174	749	231	191	3		

- Molecule 33 is a protein called eL29 (yeast L29).

Mol	Chain	Residues	Atoms				AltConf	Trace
33	GA	58	Total	C	N	O	0	0
			463	289	100	74		

- Molecule 34 is a protein called eL30 (yeast L30).

Mol	Chain	Residues	Atoms					AltConf	Trace
34	HA	97	Total	C	N	O	S	0	0
			743	479	124	139	1		

- Molecule 35 is a protein called eL31 (yeast L31).

Mol	Chain	Residues	Atoms					AltConf	Trace
35	IA	109	Total	C	N	O	S	0	0
			890	565	168	156	1		

- Molecule 36 is a protein called eL32 (yeast L32).

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

- Molecule 37 is a protein called eL33 (yeast L33).

Mol	Chain	Residues	Atoms					AltConf	Trace
37	KA	106	Total	C	N	O	S	0	0
			851	540	165	145	1		

- Molecule 38 is a protein called eL34 (yeast L34).

Mol	Chain	Residues	Atoms					AltConf	Trace
38	LA	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 39 is a protein called uL29 (yeast L35).

Mol	Chain	Residues	Atoms					AltConf	Trace
39	MA	119	Total	C	N	O	S	0	0
			970	615	186	168	1		

- Molecule 40 is a protein called eL36 (yeast L36).

Mol	Chain	Residues	Atoms					AltConf	Trace
40	NA	99	Total	C	N	O	S	0	0
			772	481	156	133	2		

- Molecule 41 is a protein called eL37 (yeast L37).

Mol	Chain	Residues	Atoms					AltConf	Trace
41	OA	87	Total	C	N	O	S	0	0
			682	414	148	115	5		

- Molecule 42 is a protein called eL38 (yeast L38).

Mol	Chain	Residues	Atoms				AltConf	Trace
42	PA	77	Total	C	N	O	0	0
			613	391	115	107		

- Molecule 43 is a protein called eL39 (yeast L39).

Mol	Chain	Residues	Atoms					AltConf	Trace
43	QA	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 44 is a protein called eL40 (yeast L40).

Mol	Chain	Residues	Atoms					AltConf	Trace
44	RA	52	Total	C	N	O	S	0	0
			418	259	86	68	5		

- Molecule 45 is a protein called eL41 (yeast L41).

Mol	Chain	Residues	Atoms					AltConf	Trace
45	SA	25	Total	C	N	O	S	0	0
			234	142	63	28	1		

- Molecule 46 is a protein called eL42 (yeast L42).

Mol	Chain	Residues	Atoms					AltConf	Trace
46	TA	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 47 is a protein called eL43 (yeast L43).

Mol	Chain	Residues	Atoms					AltConf	Trace
47	UA	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 48 is a protein called uL10 (yeast P0).

Mol	Chain	Residues	Atoms					AltConf	Trace
48	VA	189	Total	C	N	O	S	0	0
			1473	942	257	270	4		

- Molecule 49 is a protein called RACK1 (yeast Asc1).

Mol	Chain	Residues	Atoms					AltConf	Trace
49	WA	318	Total	C	N	O	S	0	0
			2445	1546	419	472	8		

- Molecule 50 is a protein called uS2 (yeast S0).

Mol	Chain	Residues	Atoms					AltConf	Trace
50	XA	206	Total	C	N	O	S	0	0
			1612	1034	285	291	2		

- Molecule 51 is a protein called eS1 (yeast S1).

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

- Molecule 52 is a protein called uS5 (yeast S2).

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

- Molecule 53 is a protein called uS3 (yeast S3).

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

- Molecule 54 is a protein called eS4 (yeast S4).

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BB	260	Total	C	N	O	S	0	0
			2069	1316	389	361	3		

- Molecule 55 is a protein called uS7 (yeast S5).

Mol	Chain	Residues	Atoms					AltConf	Trace
55	CB	206	Total	C	N	O	S	0	0
			1610	1007	300	300	3		

- Molecule 56 is a protein called eS6 (yeast S6).

Mol	Chain	Residues	Atoms					AltConf	Trace
56	DB	226	Total	C	N	O	S	0	0
			1820	1142	350	325	3		

- Molecule 57 is a protein called eS7 (yeast S7).

Mol	Chain	Residues	Atoms				AltConf	Trace
57	EB	184	Total	C	N	O	0	0
			1481	951	265	265		

- Molecule 58 is a protein called eS8 (yeast S8).

Mol	Chain	Residues	Atoms					AltConf	Trace
58	FB	188	Total	C	N	O	S	0	0
			1490	925	298	265	2		

- Molecule 59 is a protein called uS4 (yeast S9).

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

- Molecule 60 is a protein called eS10 (yeast S10).

Mol	Chain	Residues	Atoms					AltConf	Trace
60	HB	96	Total	C	N	O	S	0	0
			817	529	133	153	2		

- Molecule 61 is a protein called uS17 (yeast S11).

Mol	Chain	Residues	Atoms					AltConf	Trace
61	IB	155	Total	C	N	O	S	0	0
			1245	798	235	209	3		

- Molecule 62 is a protein called eS12 (yeast S12).

Mol	Chain	Residues	Atoms				AltConf	Trace
62	JB	124	Total	C	N	O	0	0
			496	248	124	124		

- Molecule 63 is a protein called uS15 (yeast S13).

Mol	Chain	Residues	Atoms					AltConf	Trace
63	KB	150	Total	C	N	O	S	0	0
			1193	759	224	208	2		

- Molecule 64 is a protein called uS11 (yeast S14).

Mol	Chain	Residues	Atoms					AltConf	Trace
64	LB	127	Total	C	N	O	S	0	0
			942	578	186	175	3		

- Molecule 65 is a protein called uS19 (yeast S15).

Mol	Chain	Residues	Atoms					AltConf	Trace
65	MB	122	Total	C	N	O	S	0	0
			975	622	182	164	7		

- Molecule 66 is a protein called uS9 (yeast S16).

Mol	Chain	Residues	Atoms				AltConf	Trace
66	NB	141	Total	C	N	O	0	0
			1106	708	203	195		

- Molecule 67 is a protein called eS17 (yeast S17).

Mol	Chain	Residues	Atoms					AltConf	Trace
67	OB	117	Total	C	N	O	S	0	0
			836	515	166	153	2		

- Molecule 68 is a protein called uS13 (yeast S18).

Mol	Chain	Residues	Atoms					AltConf	Trace
68	PB	145	Total	C	N	O	S	0	0
			1193	743	237	211	2		

- Molecule 69 is a protein called eS19 (yeast S19).

Mol	Chain	Residues	Atoms					AltConf	Trace
69	QB	143	Total	C	N	O	S	0	0
			1113	694	208	209	2		

- Molecule 70 is a protein called uS10 (yeast S20).

Mol	Chain	Residues	Atoms					AltConf	Trace
70	RB	107	Total	C	N	O	S	0	0
			856	539	156	160	1		

- Molecule 71 is a protein called eS21 (yeast S21).

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SB	87	Total	C	N	O	S	0	0
			685	420	125	138	2		

- Molecule 72 is a protein called uS8 (yeast S22).

Mol	Chain	Residues	Atoms					AltConf	Trace
72	TB	129	Total	C	N	O	S	0	0
			1022	650	188	181	3		

- Molecule 73 is a protein called uS12 (yeast S23).

Mol	Chain	Residues	Atoms					AltConf	Trace
73	UB	144	Total	C	N	O	S	0	0
			1122	708	220	192	2		

- Molecule 74 is a protein called eS24 (yeast S24).

Mol	Chain	Residues	Atoms				AltConf	Trace
74	VB	134	Total	C	N	O	0	0
			1074	676	208	190		

- Molecule 75 is a protein called eS25 (yeast S25).

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

- Molecule 76 is a protein called eS26 (yeast S26).

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

- Molecule 77 is a protein called eS27 (yeast S27).

Mol	Chain	Residues	Atoms					AltConf	Trace
77	YB	81	Total	C	N	O	S	0	0
			611	382	110	114	5		

- Molecule 78 is a protein called eS28 (yeast S28).

Mol	Chain	Residues	Atoms					AltConf	Trace
78	ZB	63	Total	C	N	O	S	0	0
			498	306	99	92	1		

- Molecule 79 is a protein called uS14 (yeast S29).

Mol	Chain	Residues	Atoms					AltConf	Trace
79	AC	53	Total	C	N	O	S	0	0
			444	275	92	73	4		

- Molecule 80 is a protein called eS30 (yeast S30).

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

- Molecule 81 is a protein called eS31 (yeast S31).

Mol	Chain	Residues	Atoms				AltConf	Trace
81	CC	71	Total	C	N	O	0	0
			284	142	71	71		

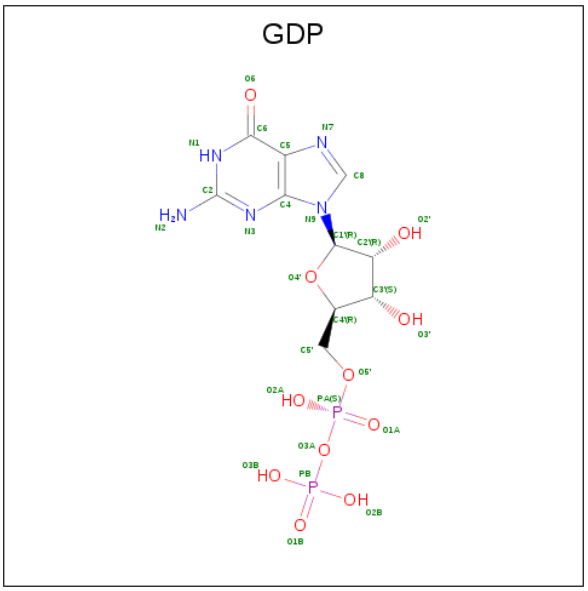
- Molecule 82 is a protein called yeast eEF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	DC	824	Total	C	N	O	S	0	0
			6419	4085	1096	1208	30		

- Molecule 83 is a RNA chain called IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	EC	198	Total	C	N	O	P	0	0
			3968	1753	669	1348	198		

- Molecule 84 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).

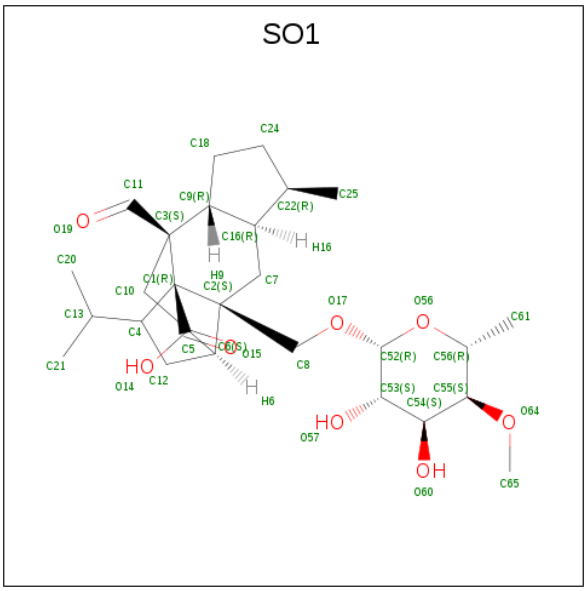


Mol	Chain	Residues	Atoms					AltConf
84	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- Molecule 85 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
85	DC	1	Total	Mg	0
			1	1	

- Molecule 86 is [1R-(1.ALPHA.,3A.BETA.,4.BETA.,4A.BETA.,7.BETA.,7A.ALPHA.,8A.BETA.)]8A-[(6-DEOXY-4-O-METHYL-BETA-D-ALTROPYRANOSYLOXY)METHYL]-4-FORMYL-4,4A,5,6,7,7A,8,8A-OCTAHYDRO-7-METHYL-3-(1-METHYLETHYL)-1,4-METHANO-S-INDACENE-3A(1H)-CARBOXYLIC ACID (three-letter code: SO1) (formula: $C_{27}H_{42}O_8$).



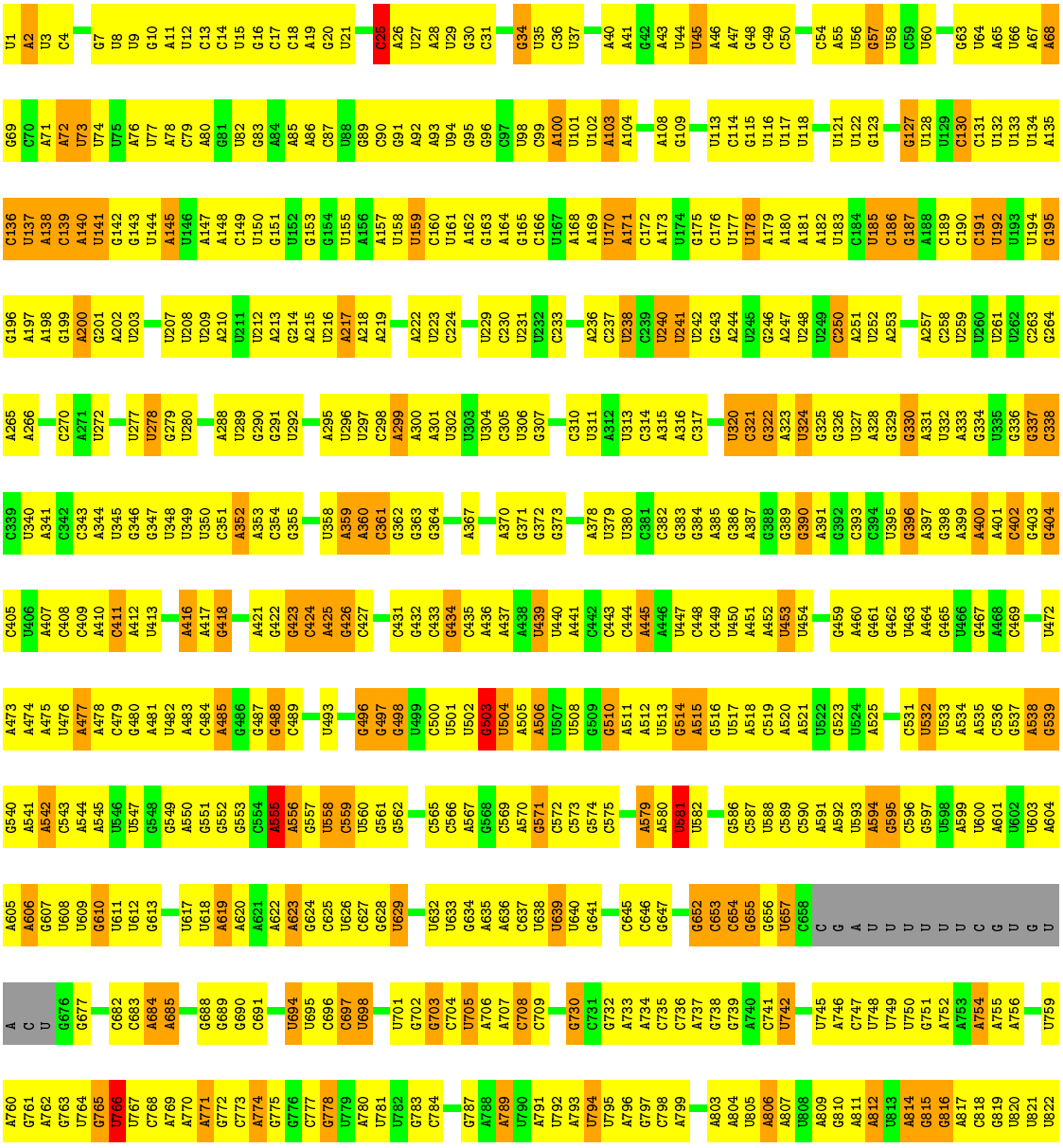
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
86	DC	1	35	27	8	0

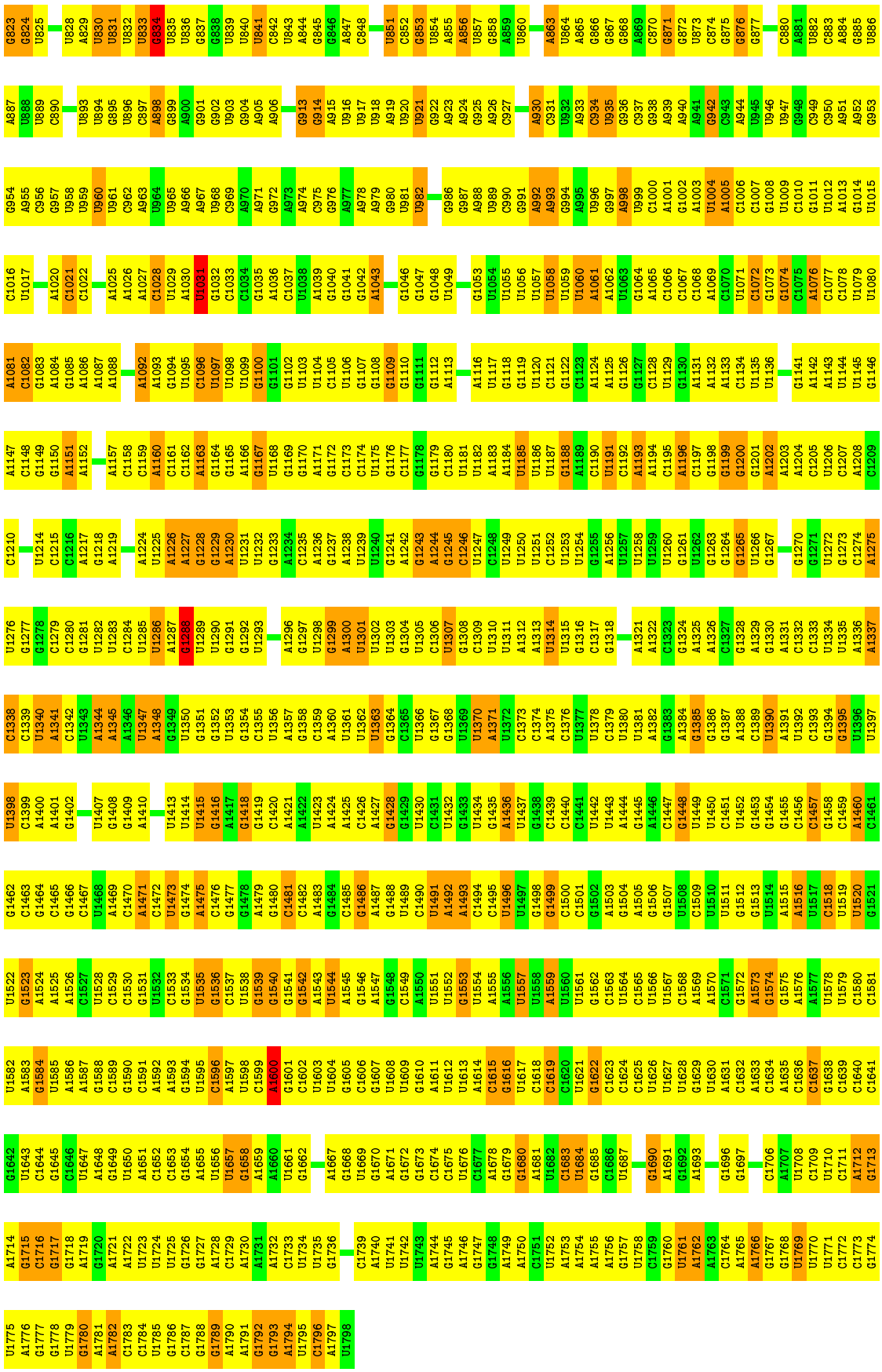
3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 18S ribosomal RNA

Chain A: 22% 62% 15%





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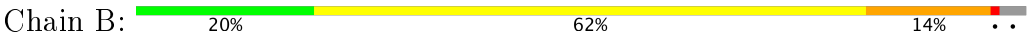
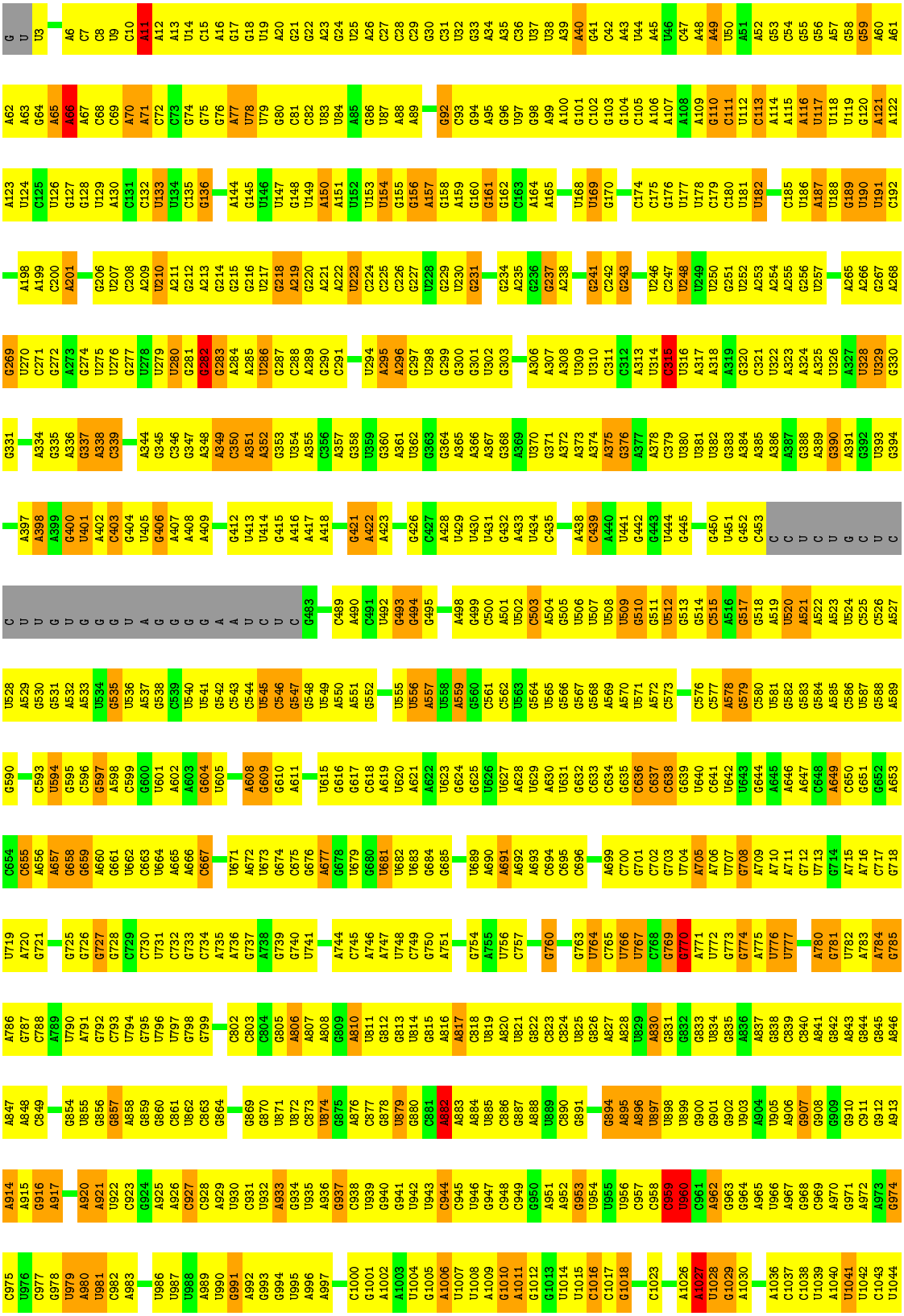
- Molecule 2: 25S ribosomal RNA

Chain B:





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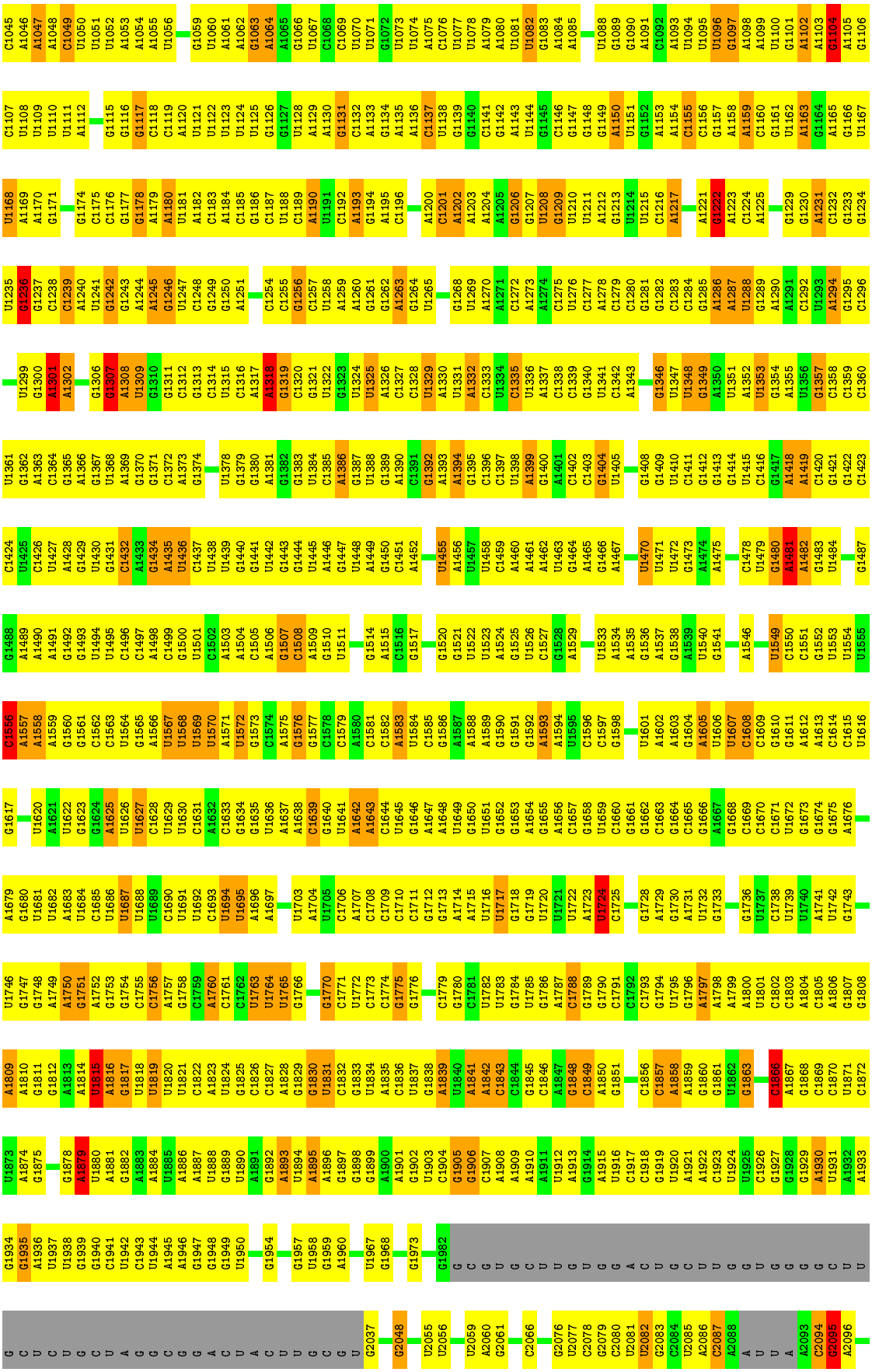

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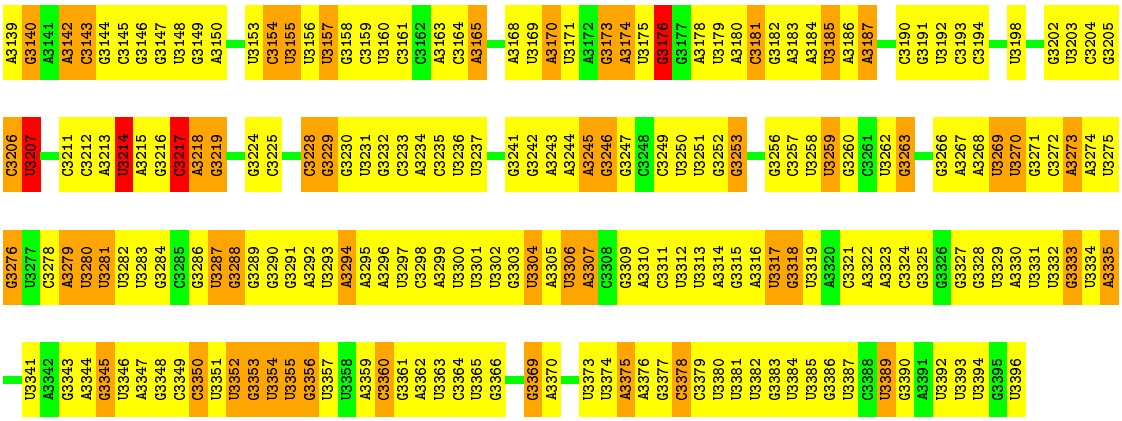
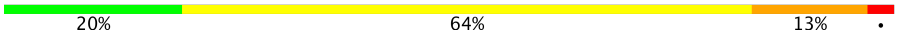
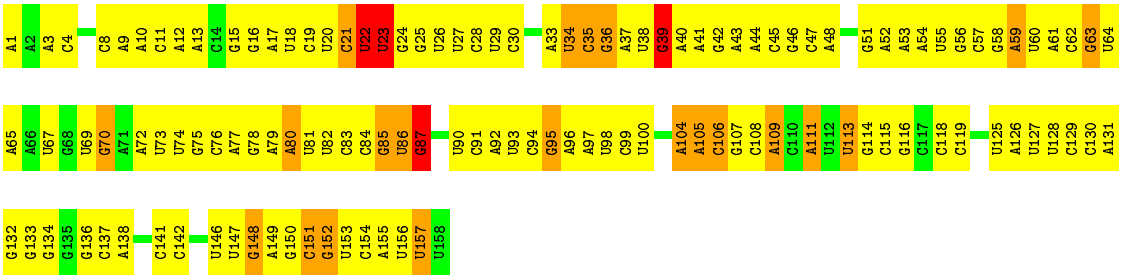
WORLDWIDE PDB PROTEIN DATA BANK
EMDataBank Unified Data Resource for 3DEM



• Molecule 3: 5.8S ribosomal RNA

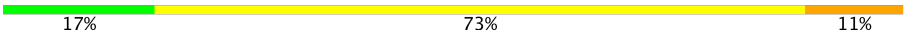
Chain C:

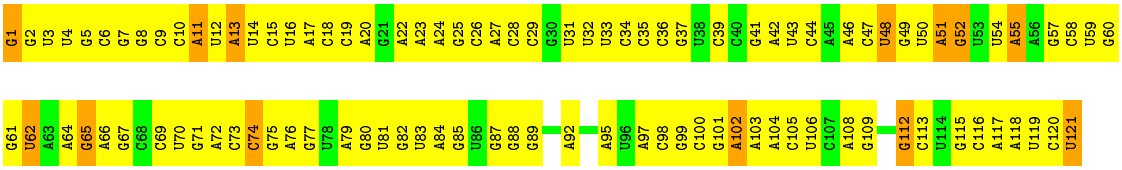




• Molecule 4: 5S ribosomal RNA

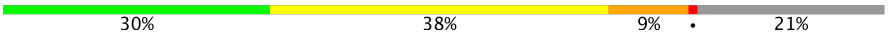
Chain D:

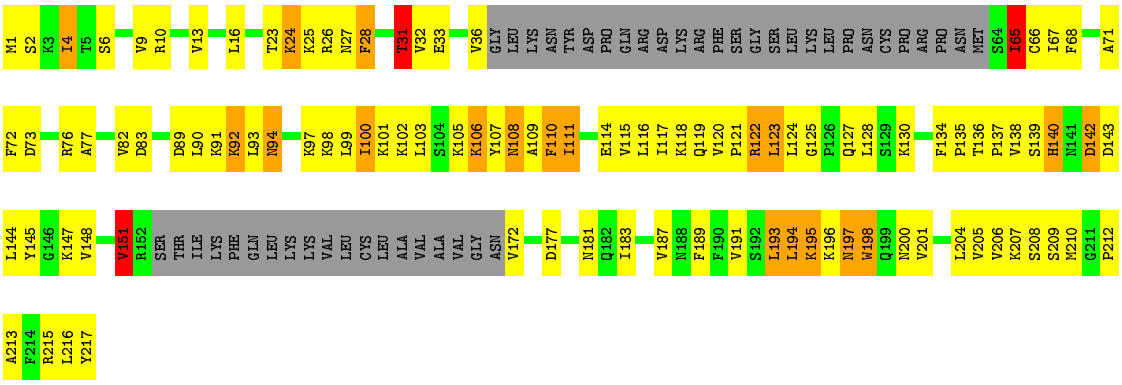




• Molecule 5: uL1 (yeast L1)

Chain E:





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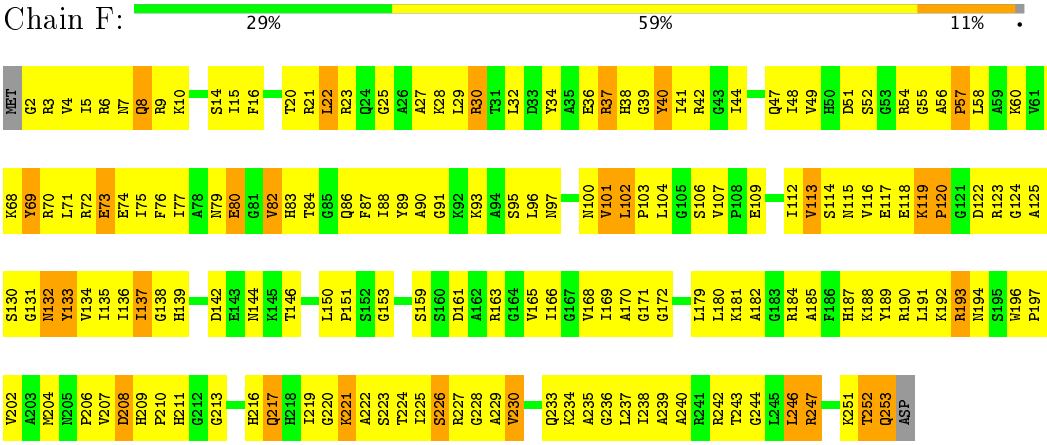
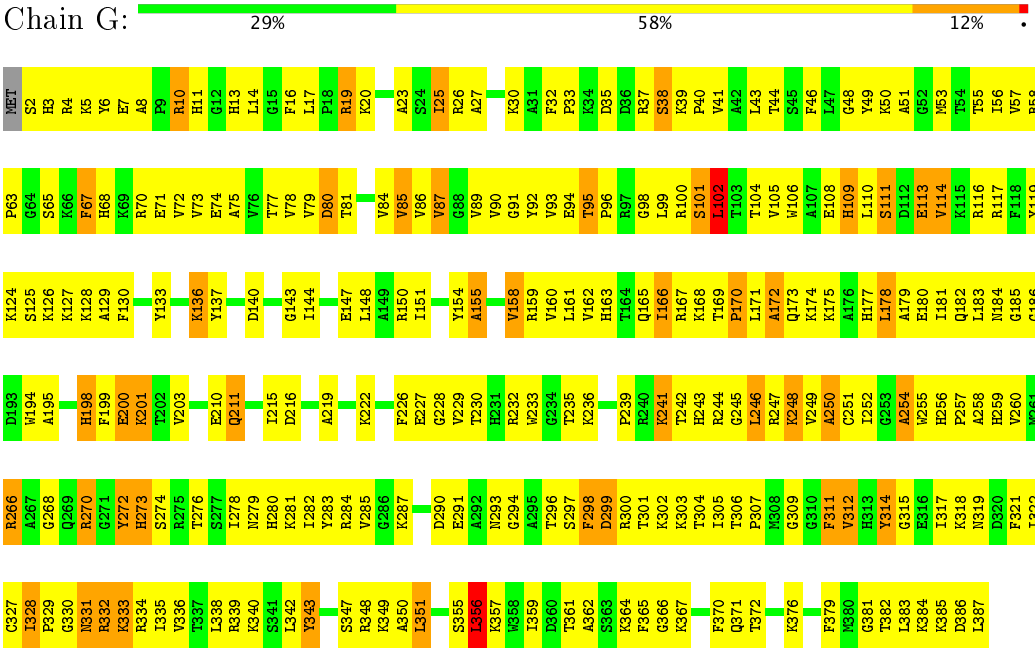
- Molecule 6: uL2 (yeast L2)

Chain F:



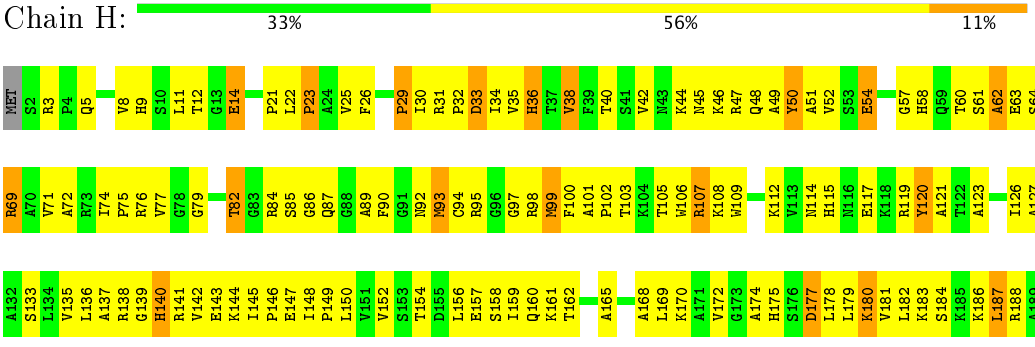
- Molecule 7: uL3 (yeast L3)

Chain G:



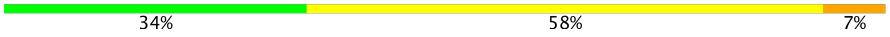
- Molecule 8: uL4 (yeast L4)

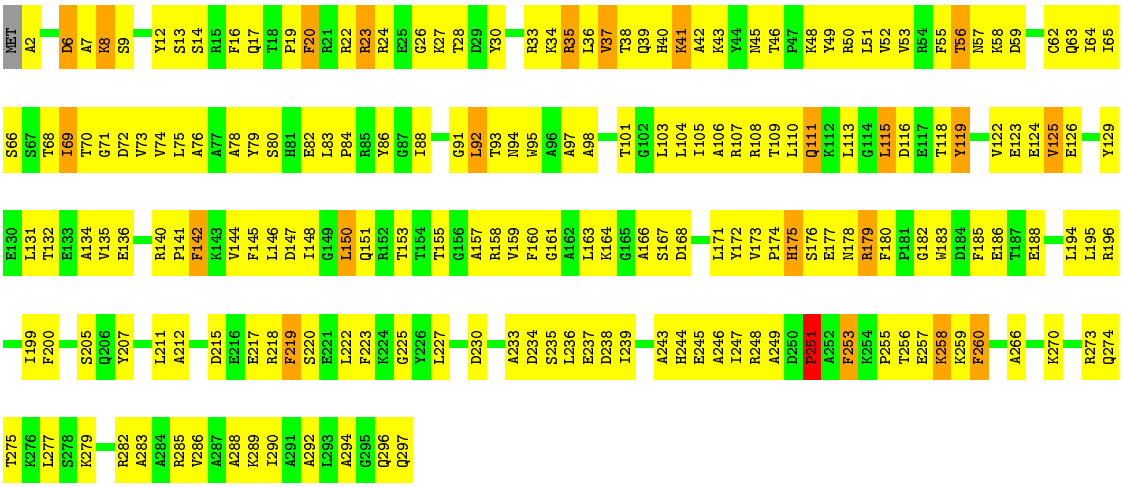
Chain H:



• Molecule 9: uL18 (yeast L5)

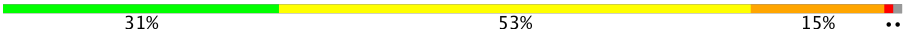
Chain I:

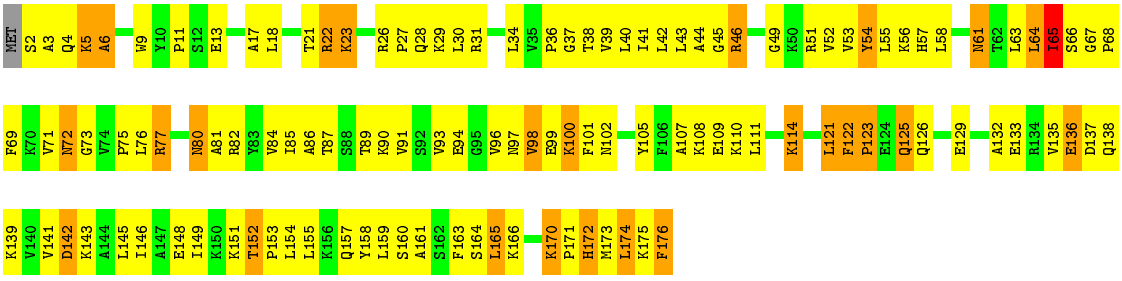




• Molecule 10: eL6 (yeast L6)

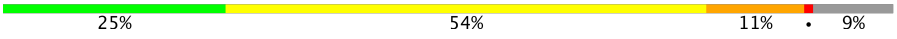
Chain J:

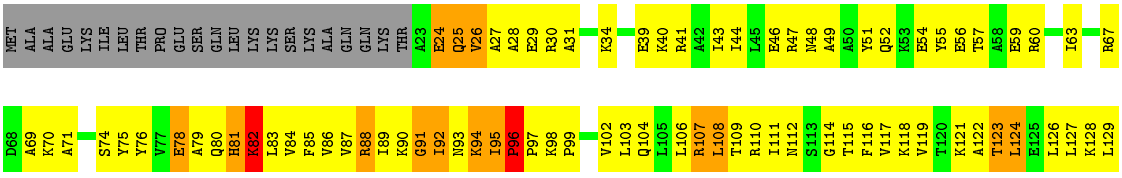




• Molecule 11: uL30 (yeast L7)

Chain K:





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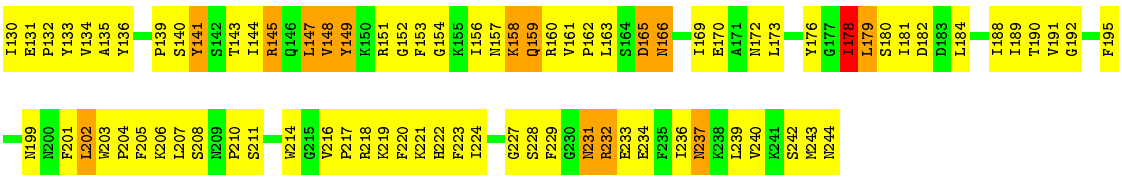
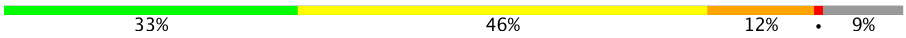
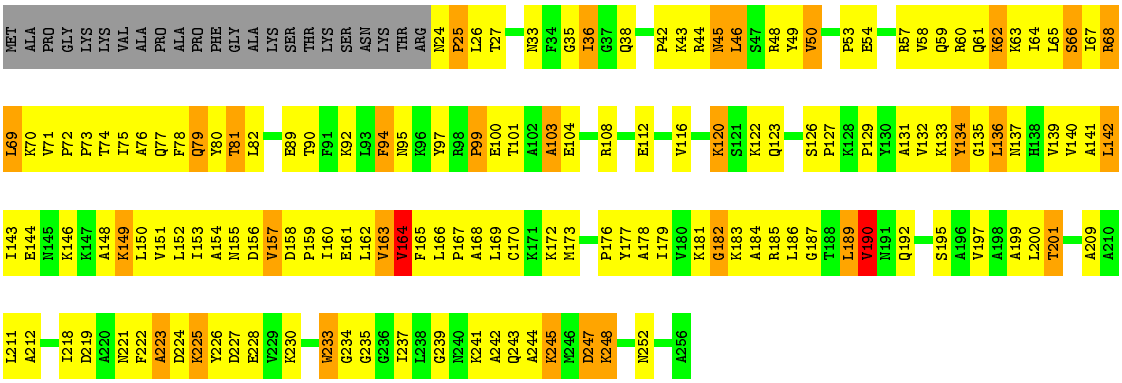


- Molecule 12: eL8 (yeast L8)

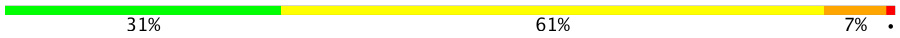
Chain L:

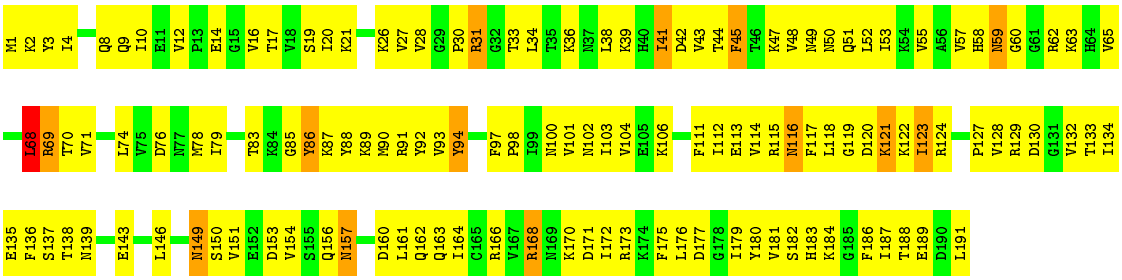




- Molecule 13: uL6 (yeast L9)

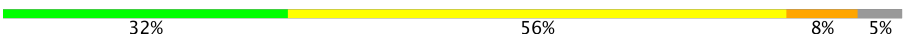
Chain M:

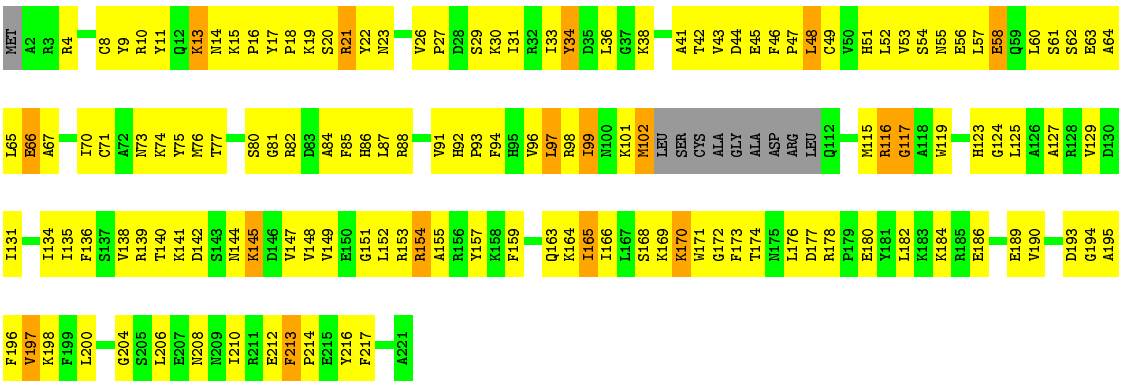




- Molecule 14: uL16 (yeast L10)

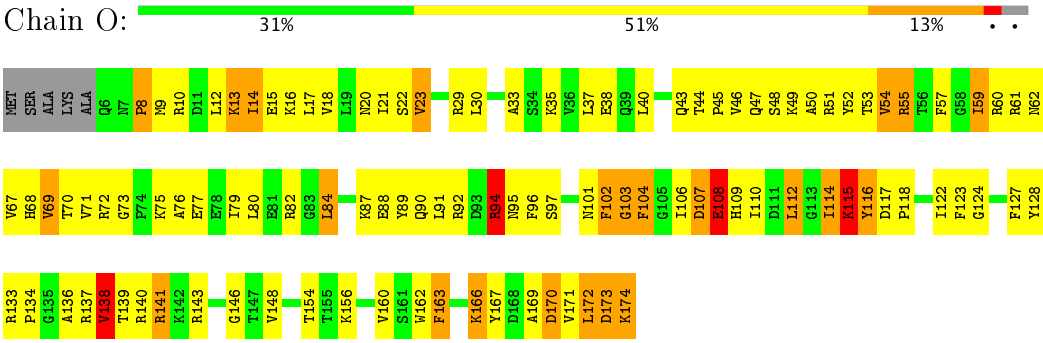
Chain N:





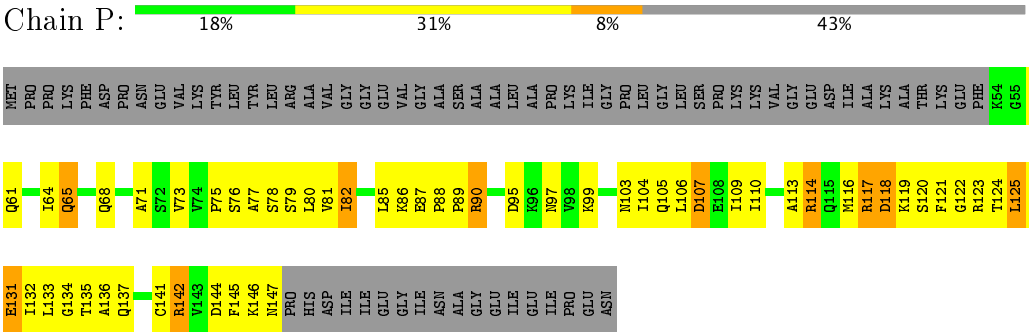
- Molecule 15: uL5 (yeast L11)

Chain O:



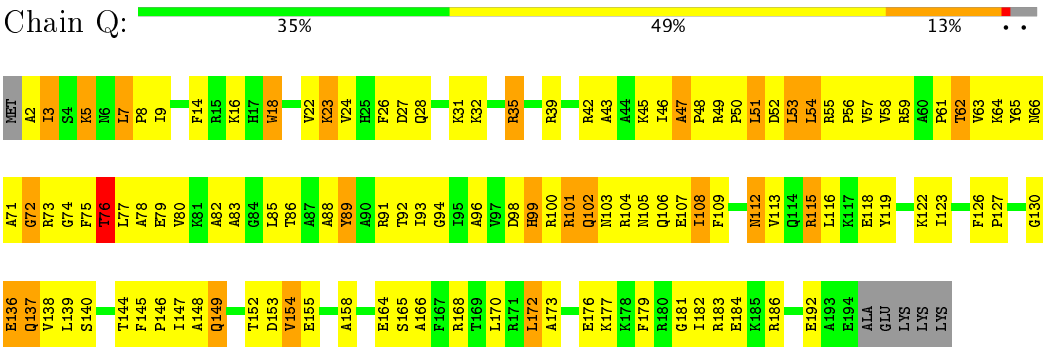
- Molecule 16: uL11 (yeast L12)

Chain P:



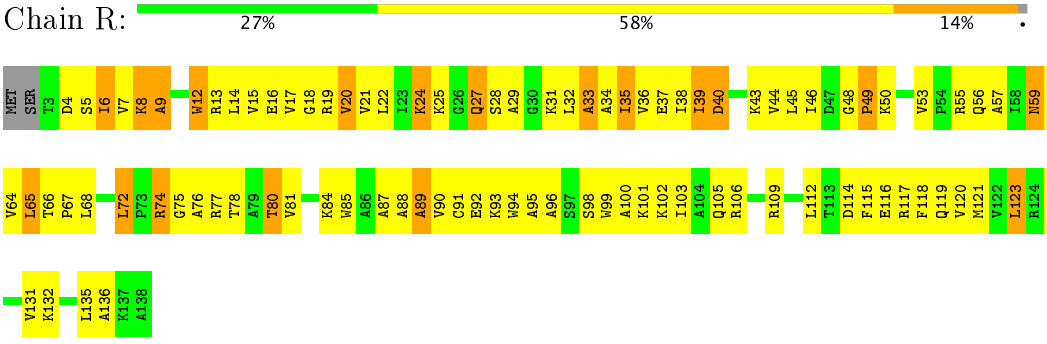
- Molecule 17: eL13 (yeast L13)

Chain Q:



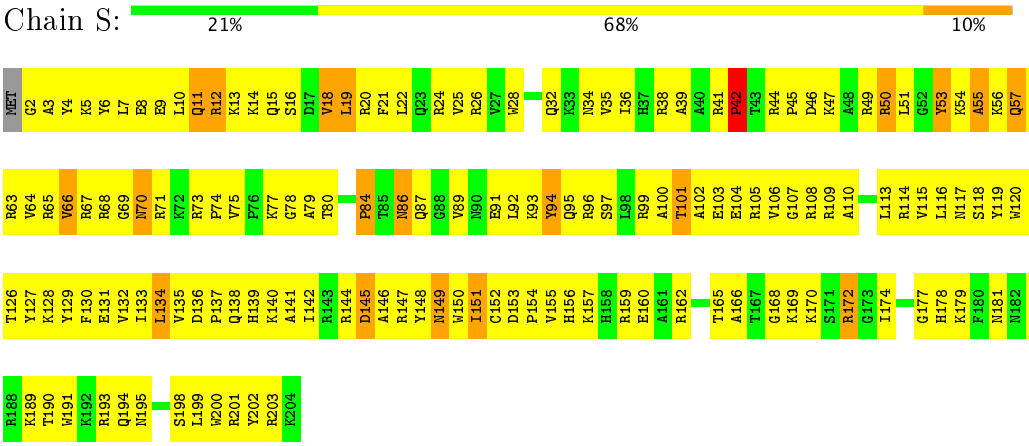
- Molecule 18: eL14 (yeast L14)

Chain R:



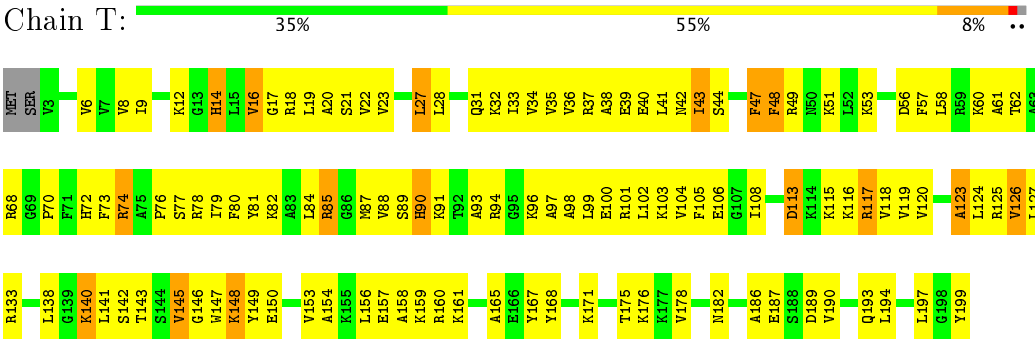
- Molecule 19: eL15 (yeast L15)

Chain S:



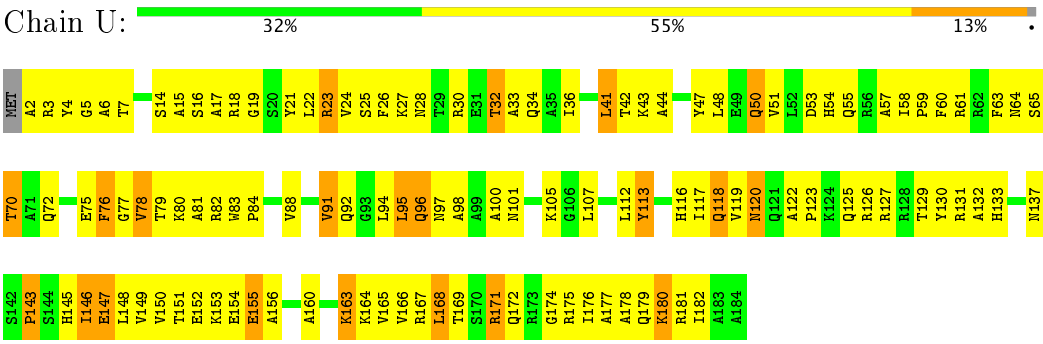
- Molecule 20: uL13 (yeast L16)

Chain T:



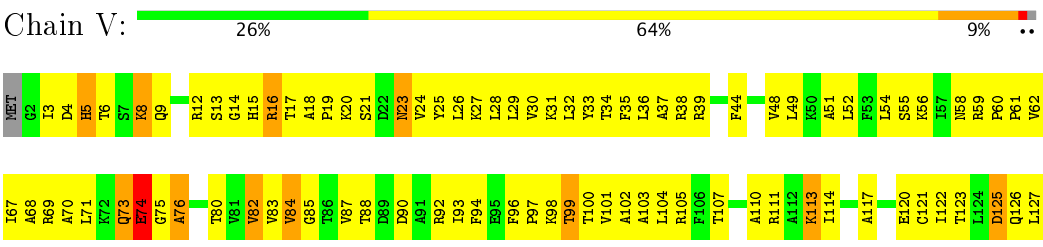
- Molecule 21: uL22 (yeast L17)

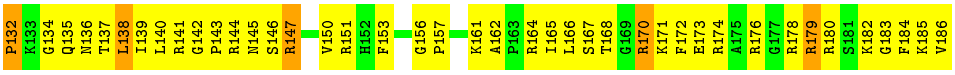
Chain U:



- Molecule 22: eL18 (yeast L18)

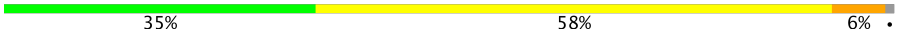
Chain V:

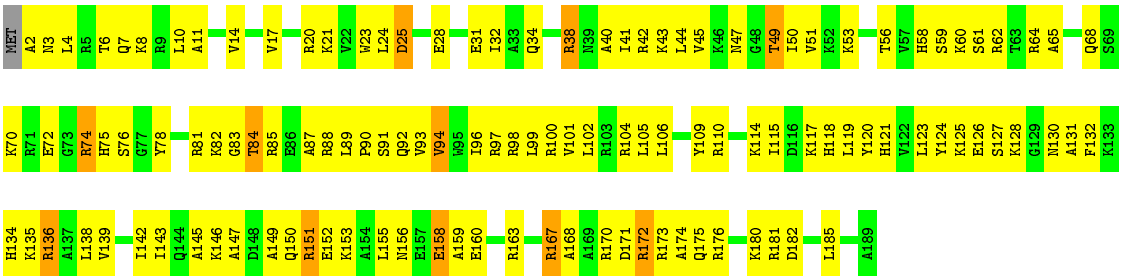




- Molecule 23: eL19 (yeast L19)

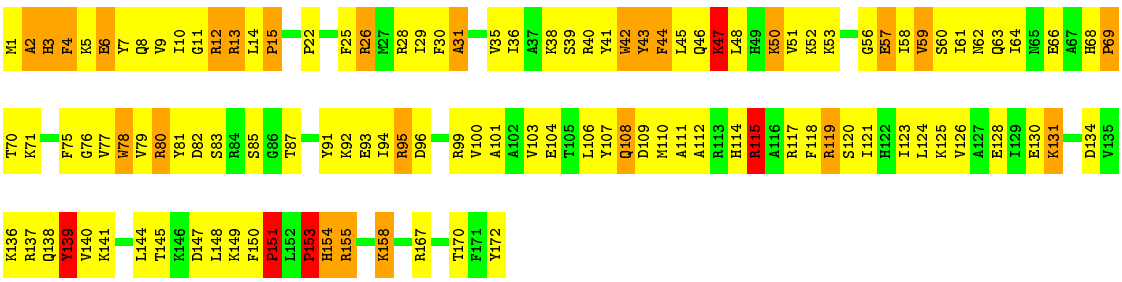
Chain W:





- Molecule 24: eL20 (yeast L20)

Chain X:

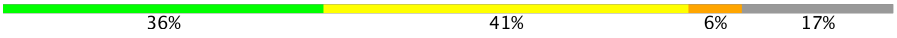


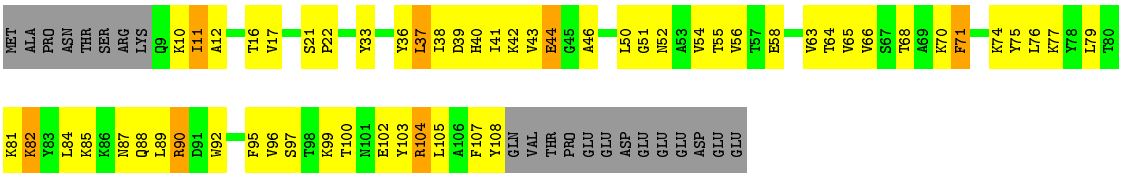
- Molecule 25: eL21 (yeast L21)

Chain Y:

- Molecule 26: eL22 (yeast L22)

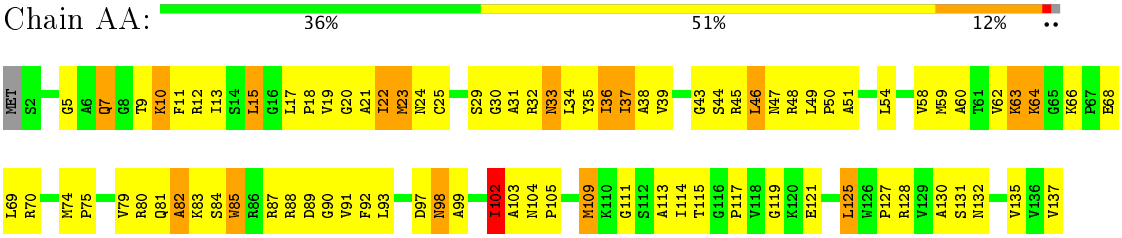
Chain Z:





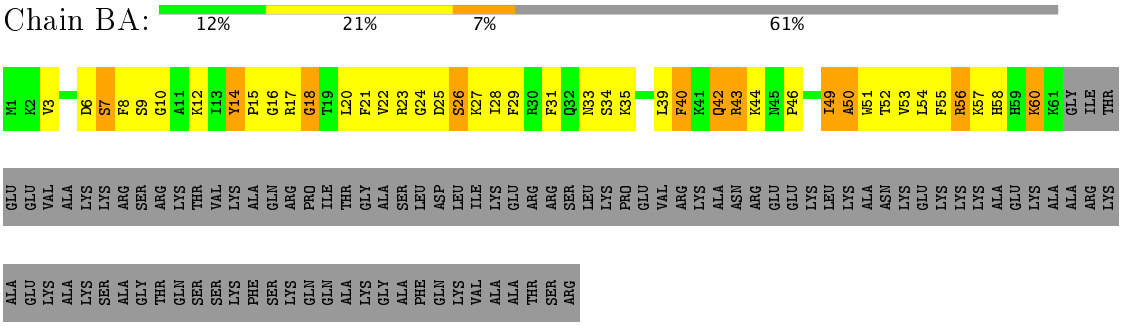
- Molecule 27: uL14 (yeast L23)

Chain AA:



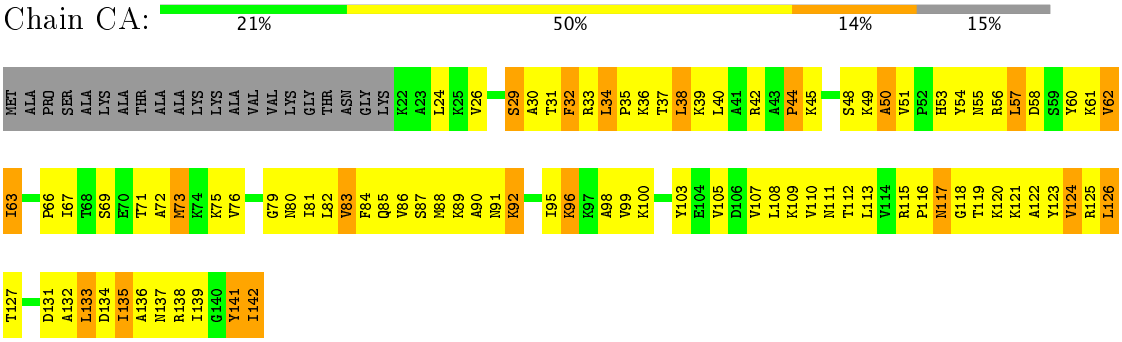
- Molecule 28: eL24 (yeast L24)

Chain BA:



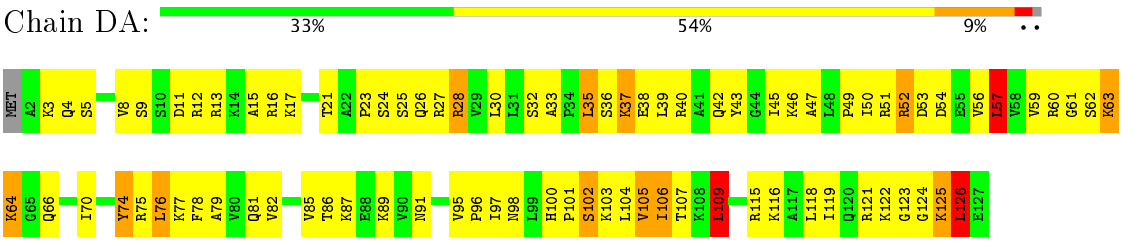
- Molecule 29: uL23 (yeast L25)

Chain CA:



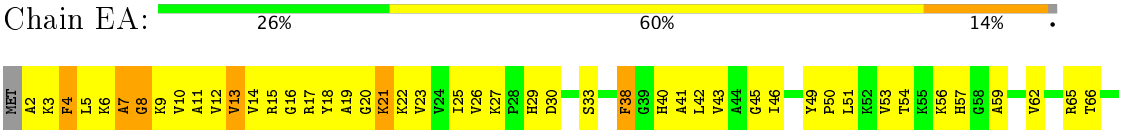
- Molecule 30: uL24 (yeast L26)

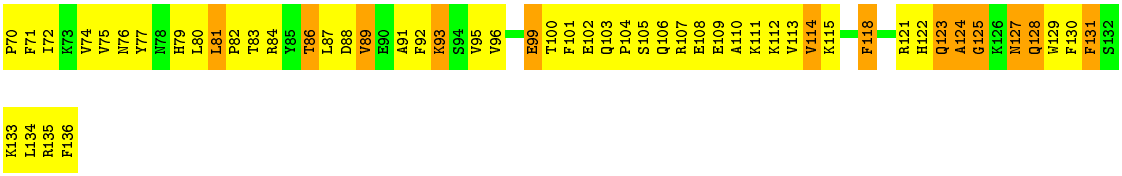
Chain DA:



- Molecule 31: eL27 (yeast L27)

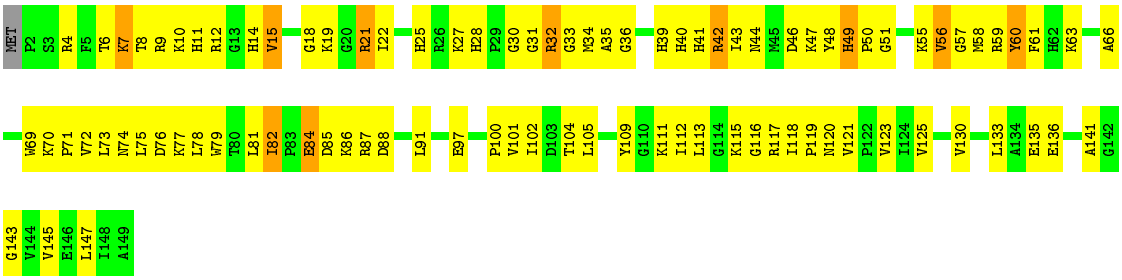
Chain EA:





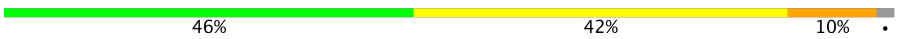
- Molecule 32: uL15 (yeast L28)

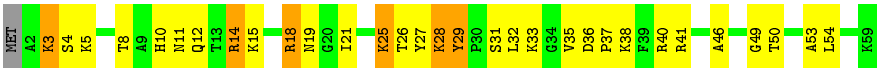
Chain FA:



- Molecule 33: eL29 (yeast L29)

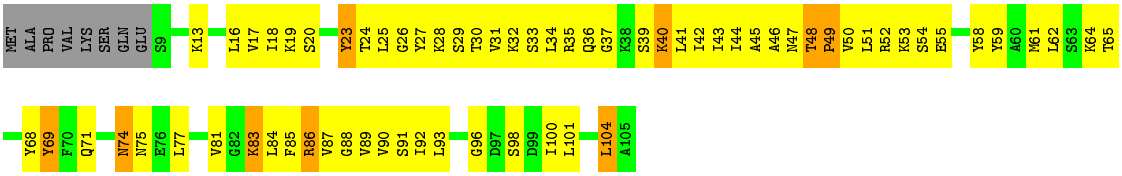
Chain GA:





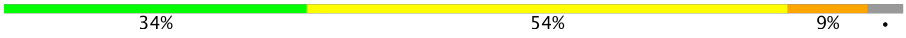
- Molecule 34: eL30 (yeast L30)

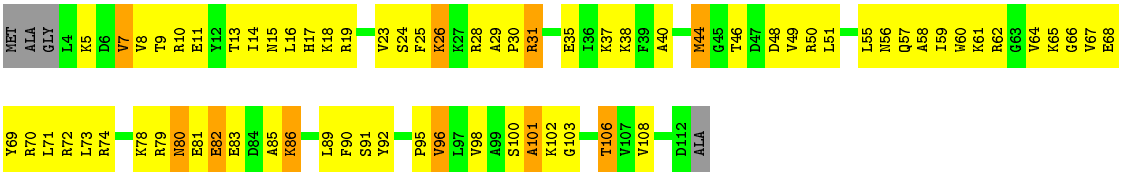
Chain HA:



- Molecule 35: eL31 (yeast L31)

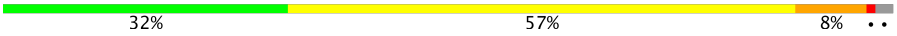
Chain IA:





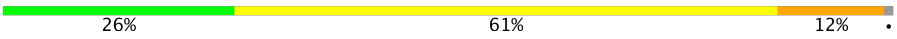
- Molecule 36: eL32 (yeast L32)

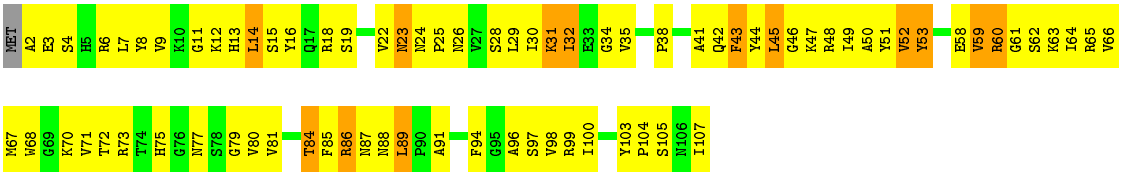
Chain JA:



- Molecule 37: eL33 (yeast L33)

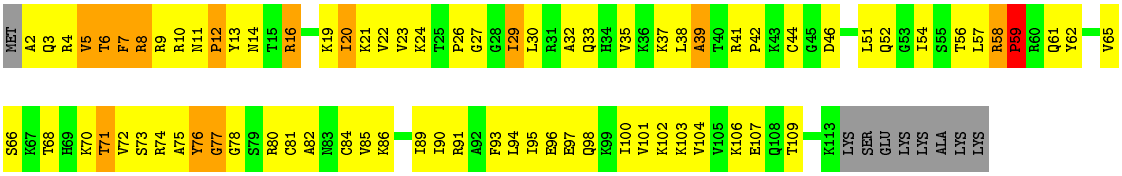
Chain KA:





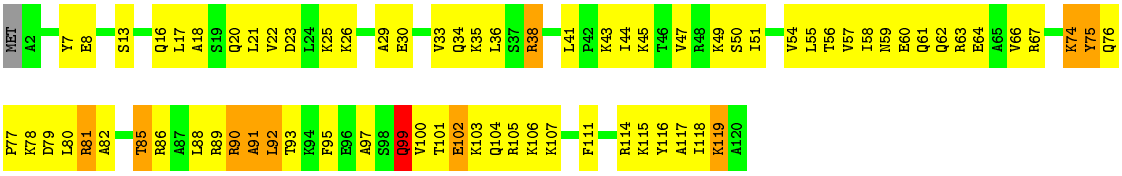
- Molecule 38: eL34 (yeast L34)

Chain LA:



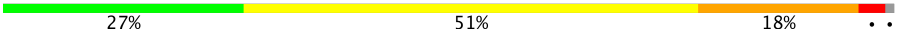
- Molecule 39: uL29 (yeast L35)

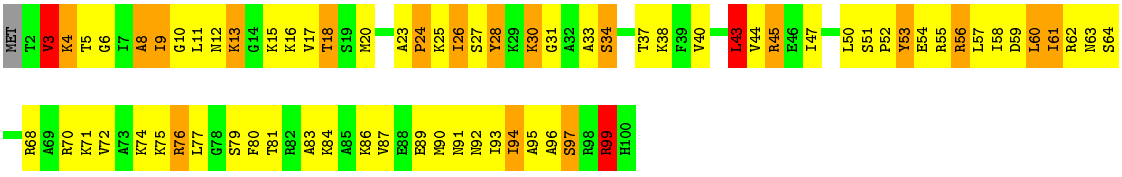
Chain MA:



- Molecule 40: eL36 (yeast L36)

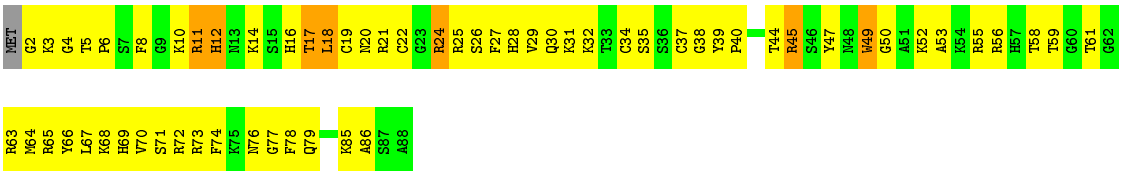
Chain NA:





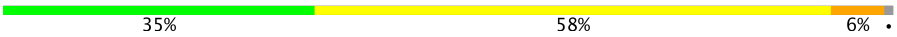
- Molecule 41: eL37 (yeast L37)

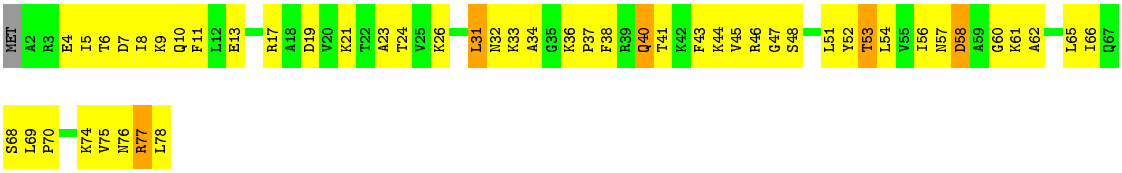
Chain OA:



- Molecule 42: eL38 (yeast L38)

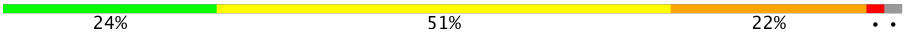
Chain PA:





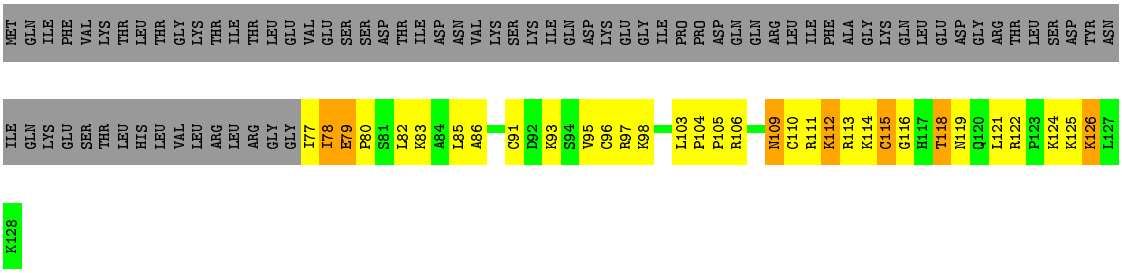
- Molecule 43: eL39 (yeast L39)

Chain QA:



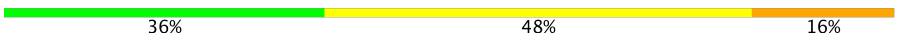
- Molecule 44: eL40 (yeast L40)

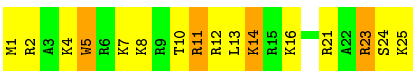
Chain RA:



- Molecule 45: eL41 (yeast L41)

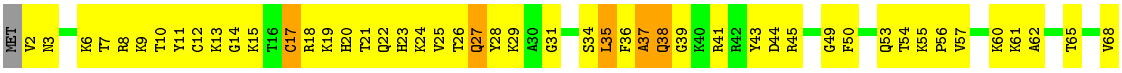
Chain SA:





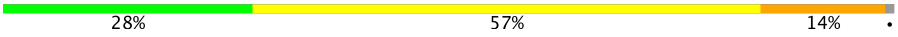
- Molecule 46: eL42 (yeast L42)

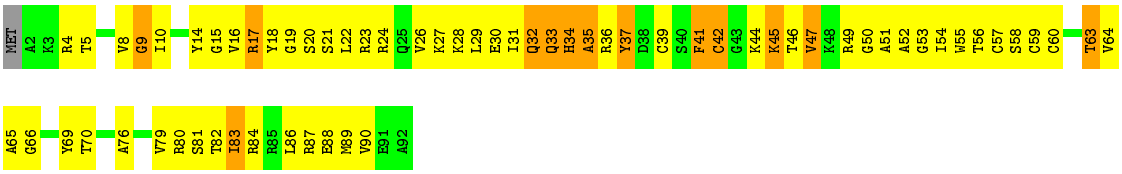
Chain TA:



• Molecule 47: eL43 (yeast L43)

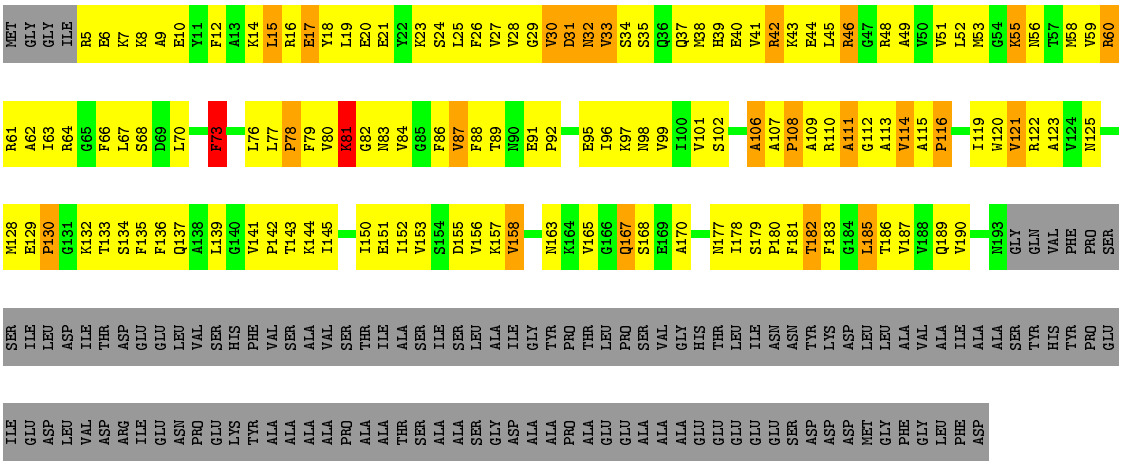
Chain UA:





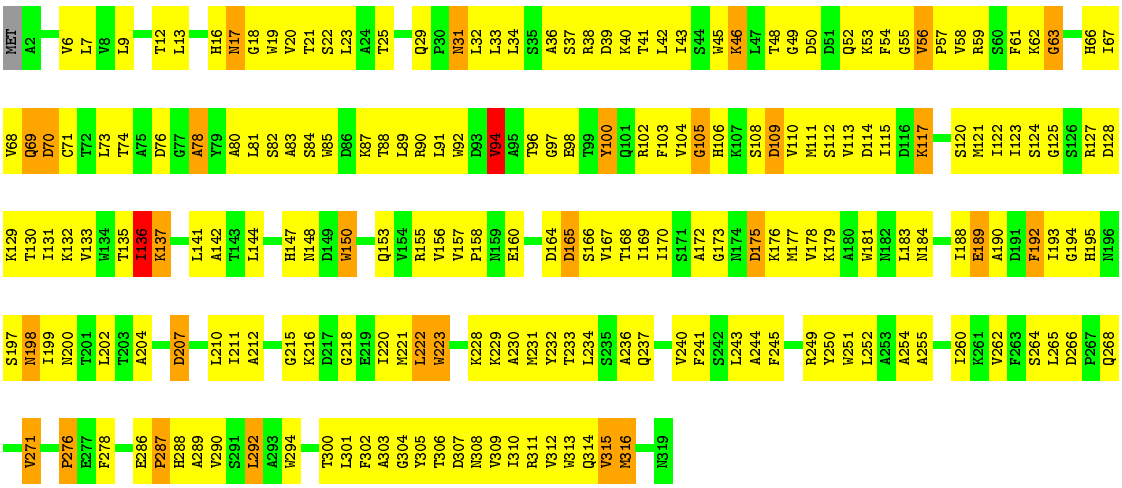
• Molecule 48: uL10 (yeast P0)

Chain VA:



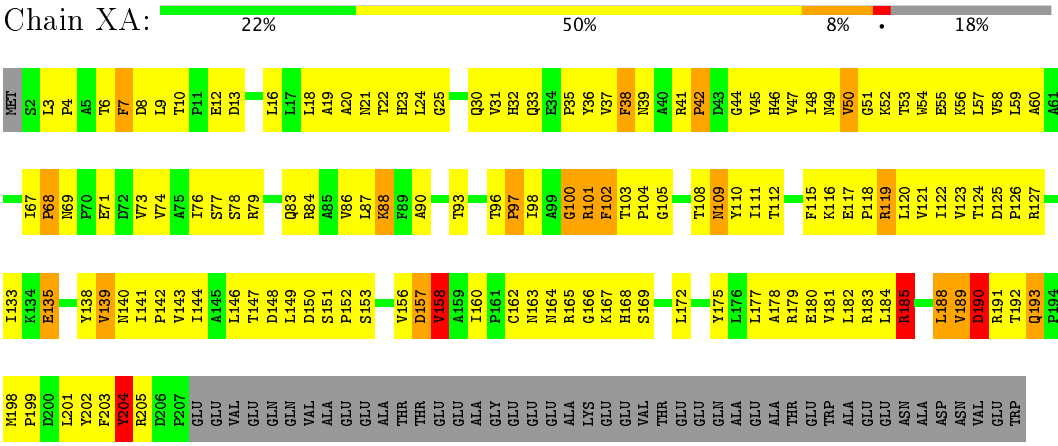
• Molecule 49: RACK1 (yeast Asc1)

Chain WA:



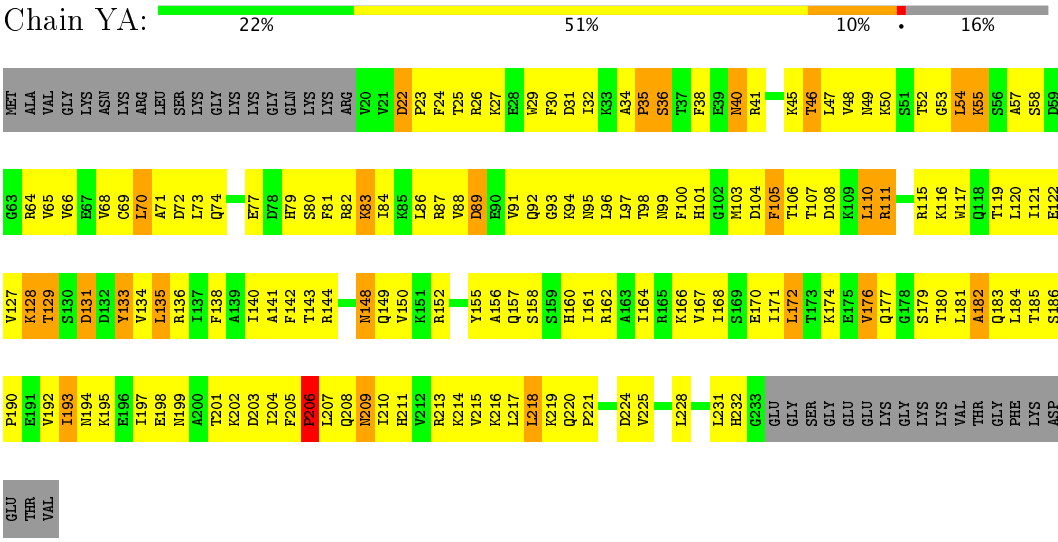
• Molecule 50: uS2 (yeast S0)

Chain XA:



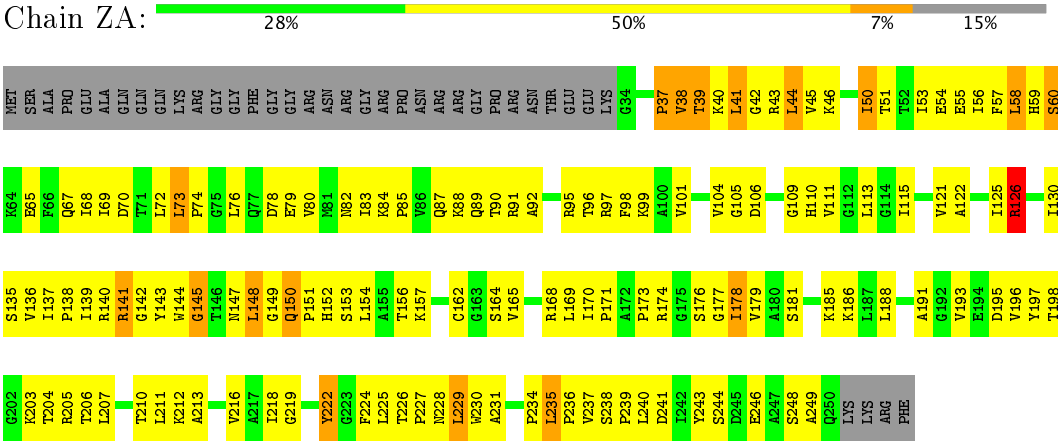
- Molecule 51: eS1 (yeast S1)

Chain YA:



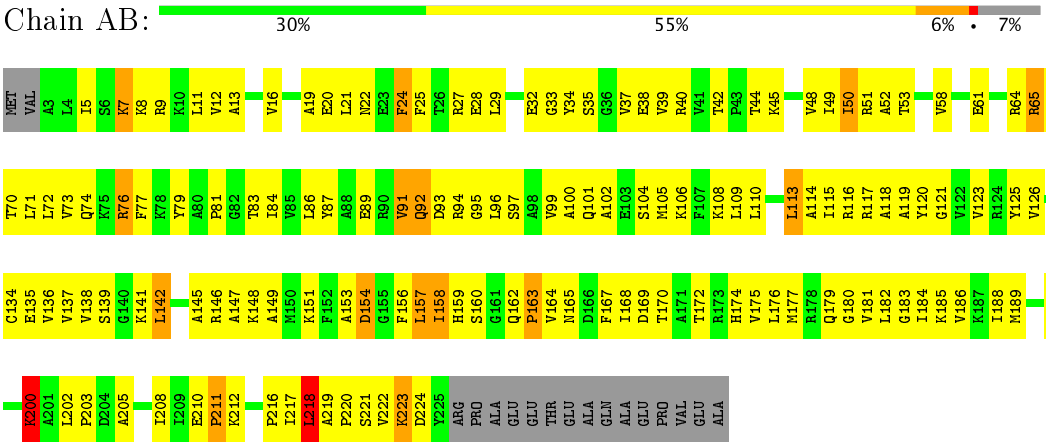
- Molecule 52: uS5 (yeast S2)

Chain ZA:



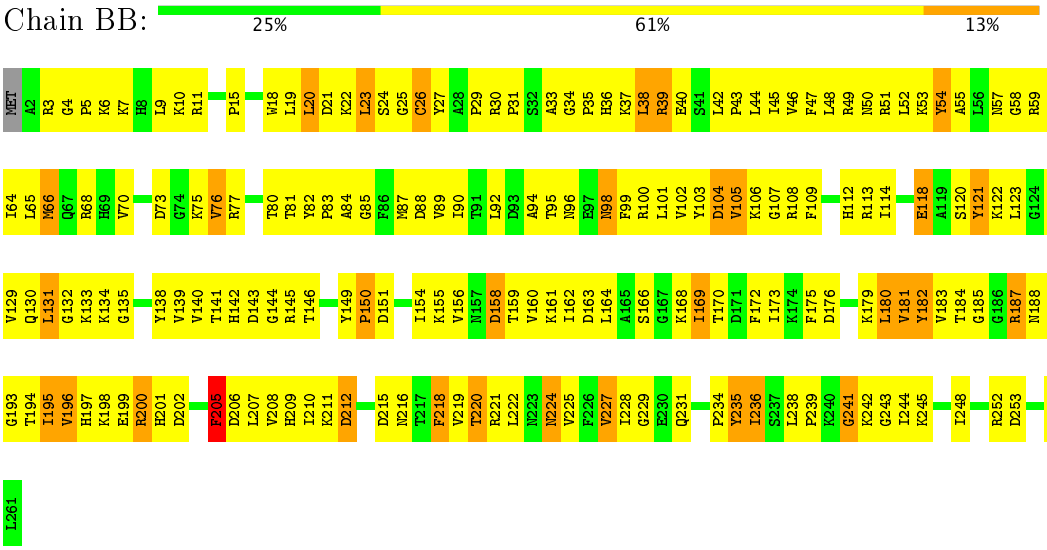
- Molecule 53: uS3 (yeast S3)

Chain AB:



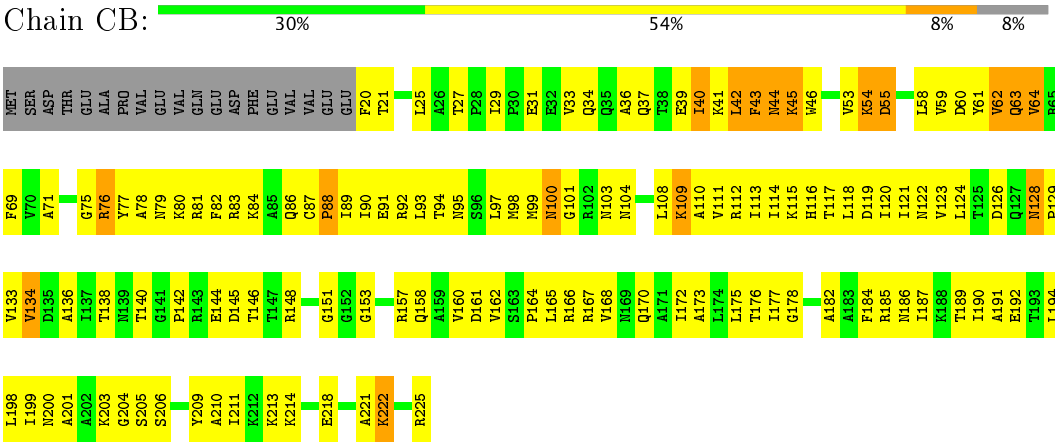
- Molecule 54: eS4 (yeast S4)

Chain BB:



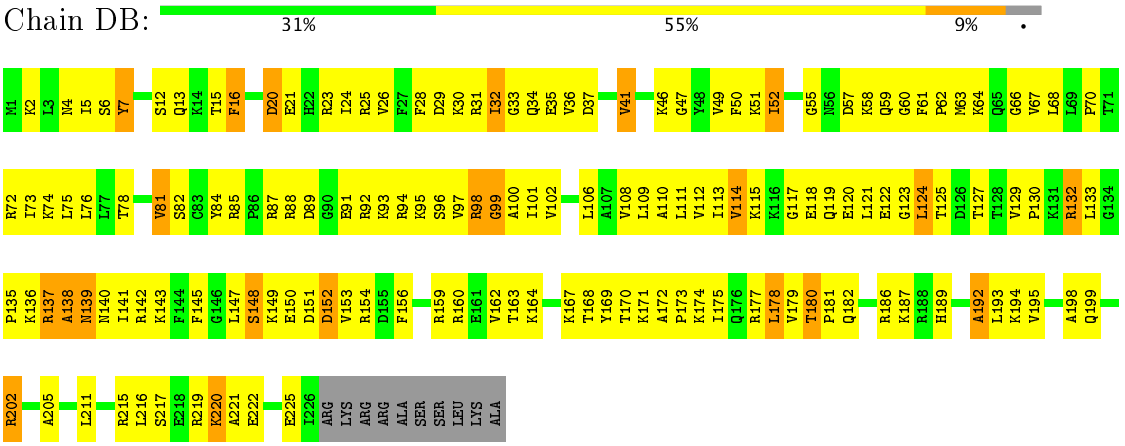
- Molecule 55: uS7 (yeast S5)

Chain CB:



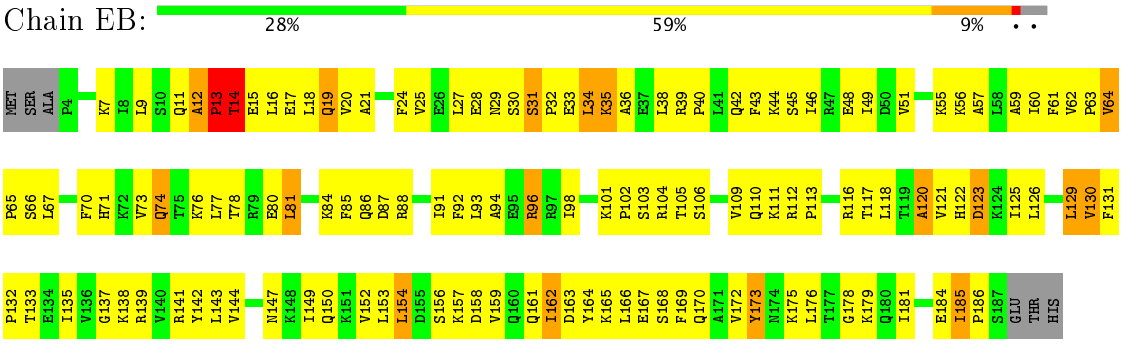
- Molecule 56: eS6 (yeast S6)

Chain DB:



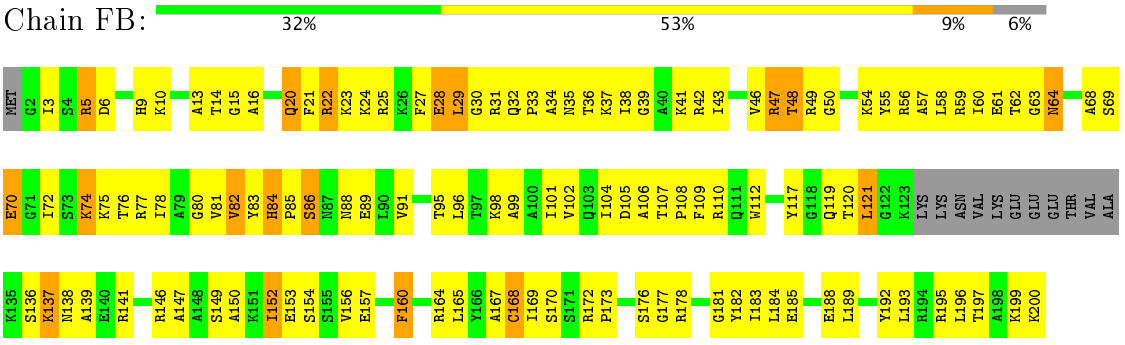
- Molecule 57: eS7 (yeast S7)

Chain EB:



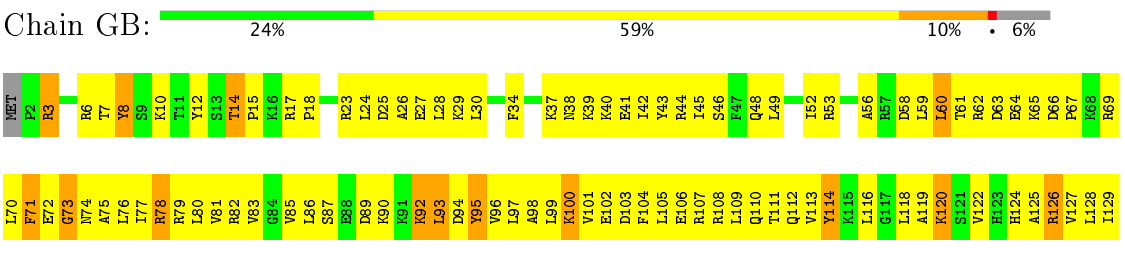
- Molecule 58: eS8 (yeast S8)

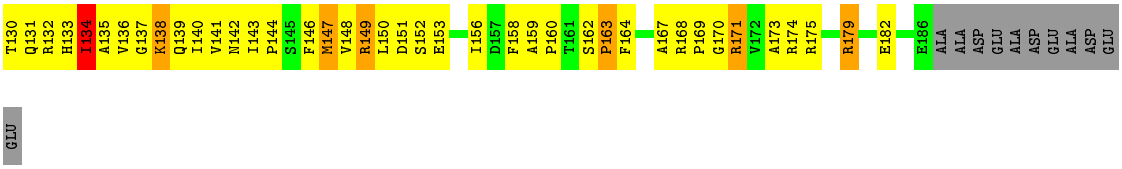
Chain FB:



- Molecule 59: uS4 (yeast S9)

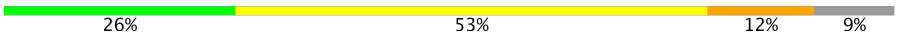
Chain GB:

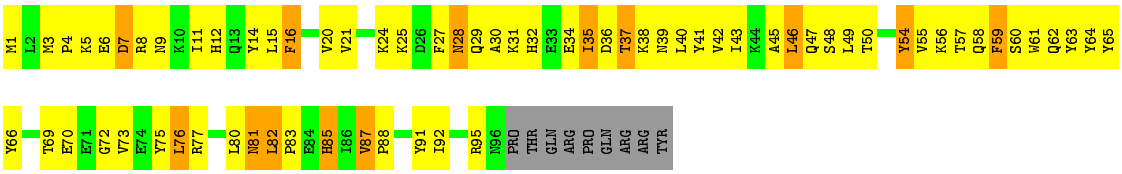




• Molecule 60: eS10 (yeast S10)

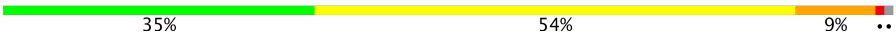
Chain HB:

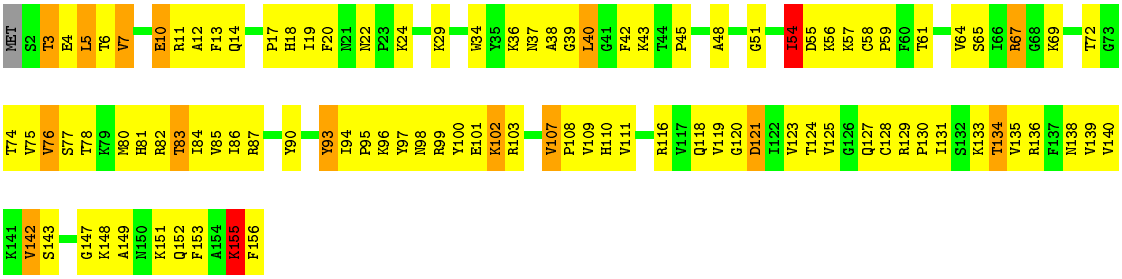




• Molecule 61: uS17 (yeast S11)

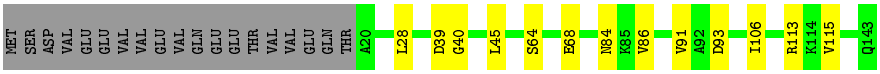
Chain IB:





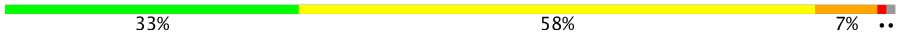
• Molecule 62: eS12 (yeast S12)

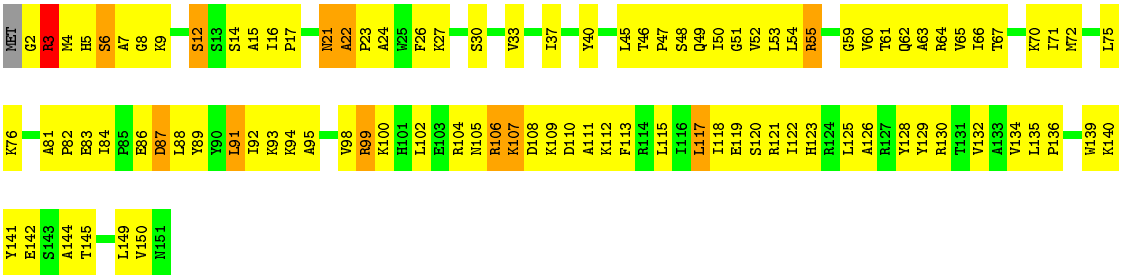
Chain JB:



• Molecule 63: uS15 (yeast S13)

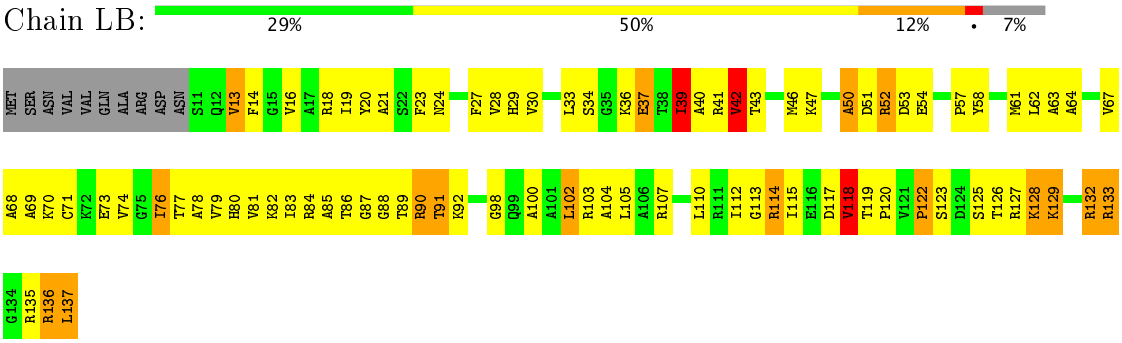
Chain KB:





• Molecule 64: uS11 (yeast S14)

Chain LB:

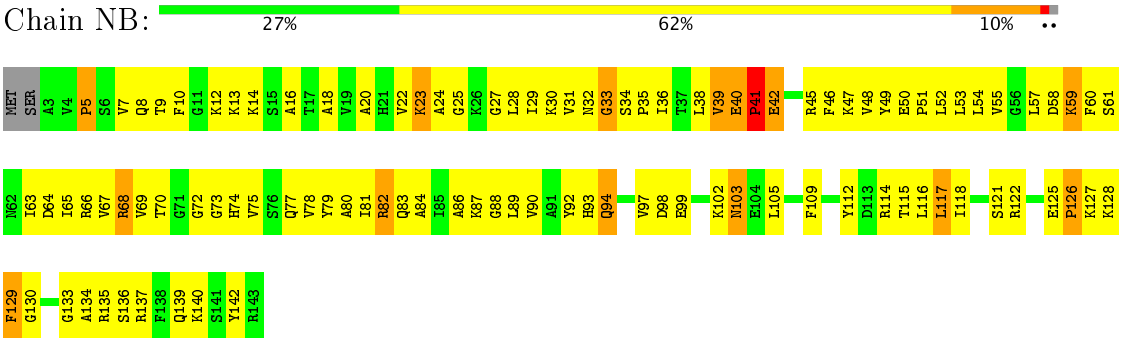


- Molecule 65: uS19 (yeast S15)

Chain MB:

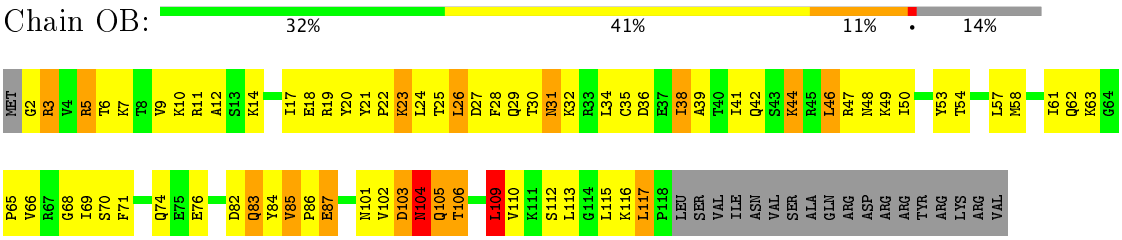
- Molecule 66: uS9 (yeast S16)

Chain NB:



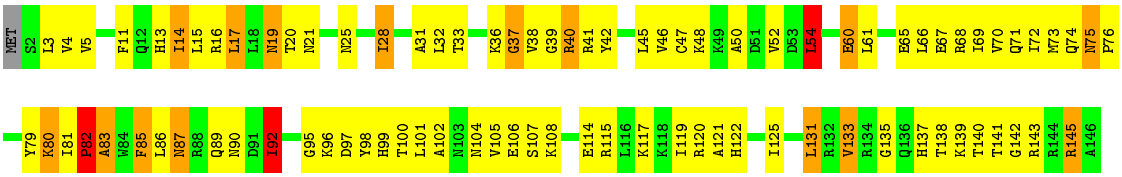
- Molecule 67: eS17 (yeast S17)

Chain OB:



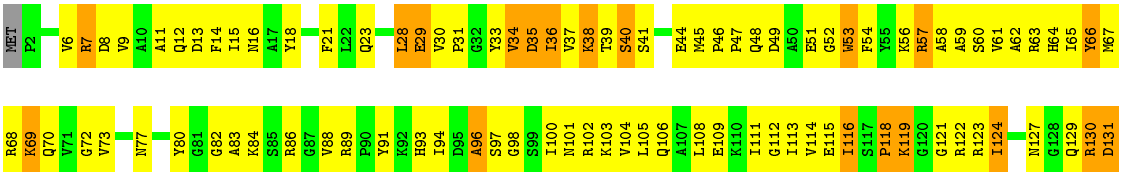
- Molecule 68: uS13 (yeast S18)

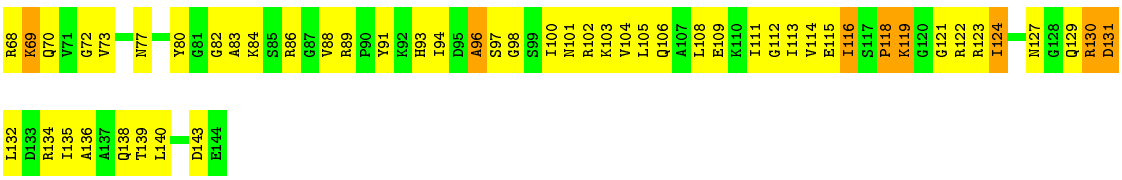
Chain PB:



- Molecule 69: eS19 (yeast S19)

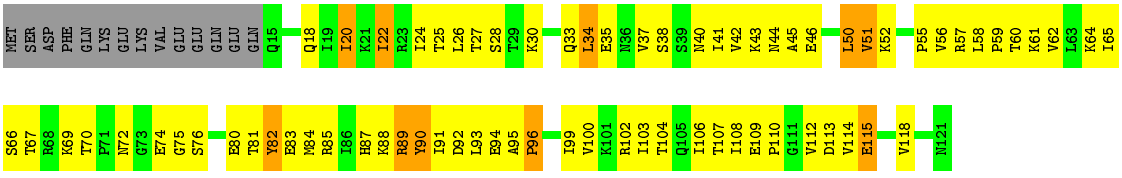
Chain QB:





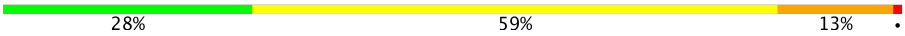
- Molecule 70: uS10 (yeast S20)

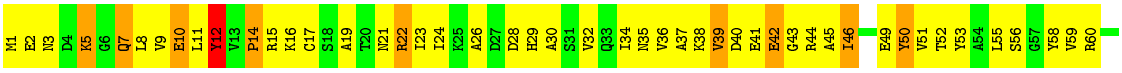
Chain RB:

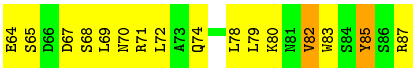


- Molecule 71: eS21 (yeast S21)

Chain SB:

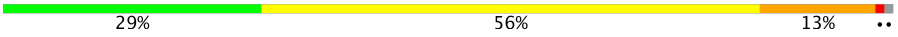


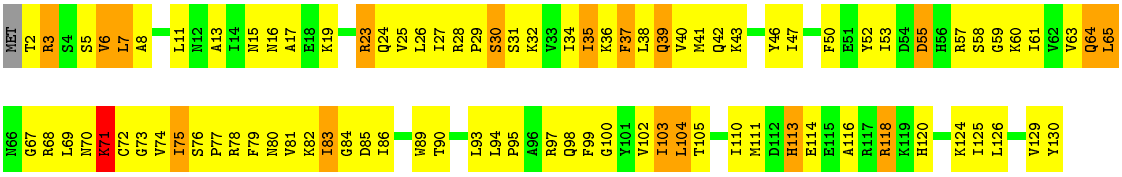




- Molecule 72: uS8 (yeast S22)

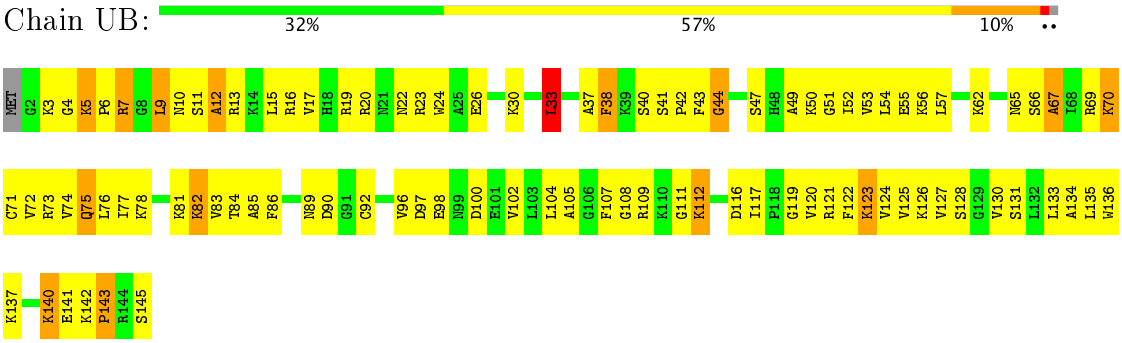
Chain TB:





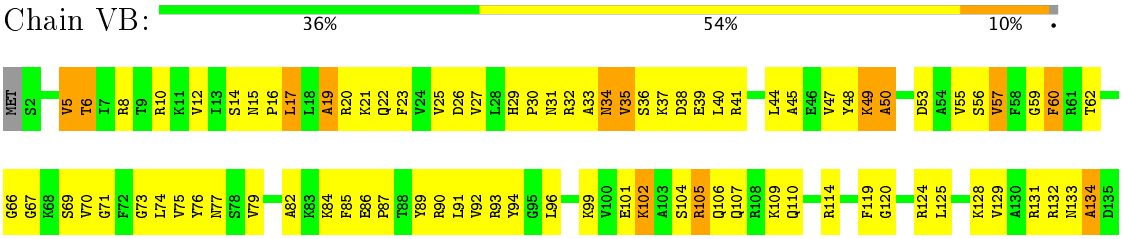
- Molecule 73: uS12 (yeast S23)

Chain UB:



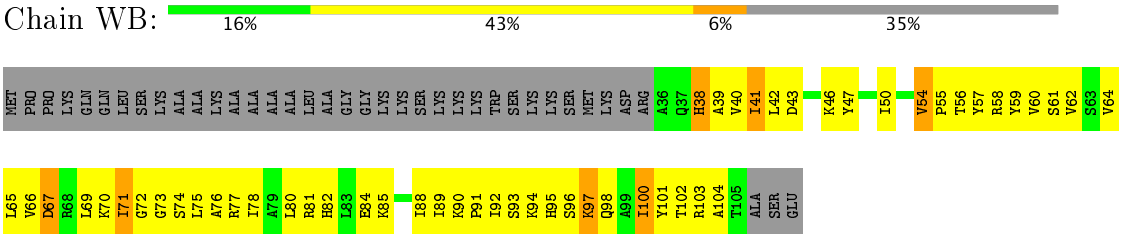
- Molecule 74: eS24 (yeast S24)

Chain VB:



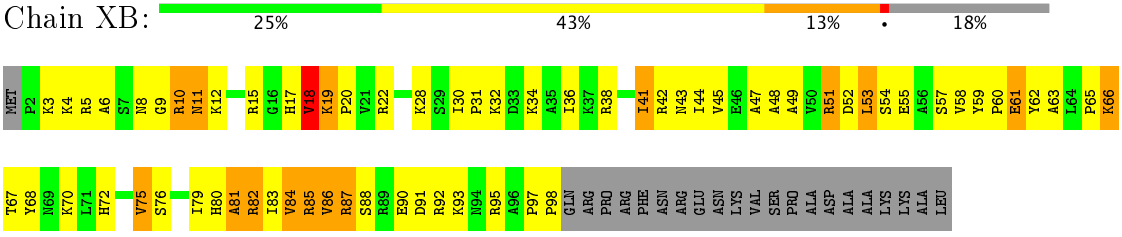
- Molecule 75: eS25 (yeast S25)

Chain WB:



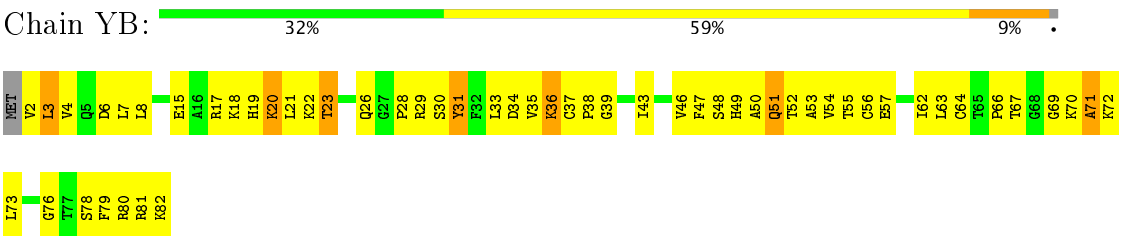
- Molecule 76: eS26 (yeast S26)

Chain XB:



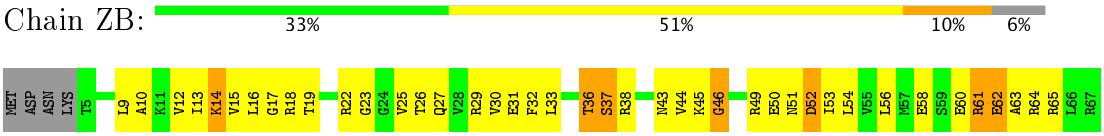
- Molecule 77: eS27 (yeast S27)

Chain YB:



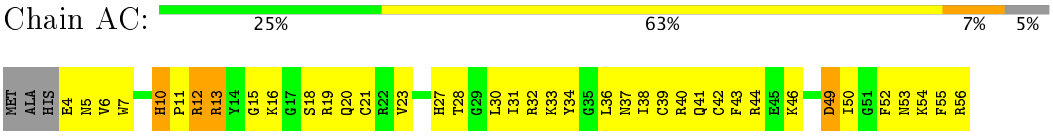
- Molecule 78: eS28 (yeast S28)

Chain ZB:



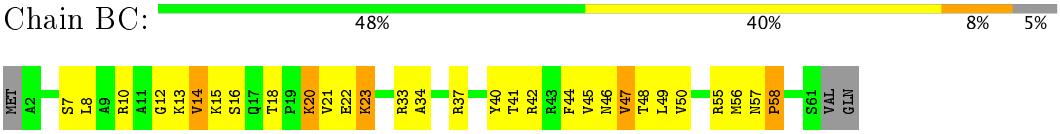
- Molecule 79: uS14 (yeast S29)

Chain AC:



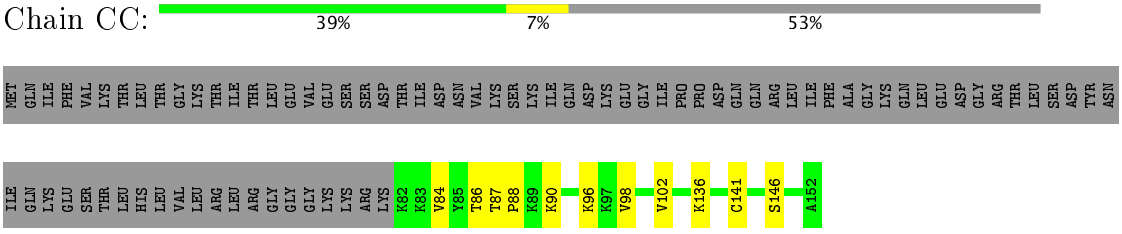
- Molecule 80: eS30 (yeast S30)

Chain BC:



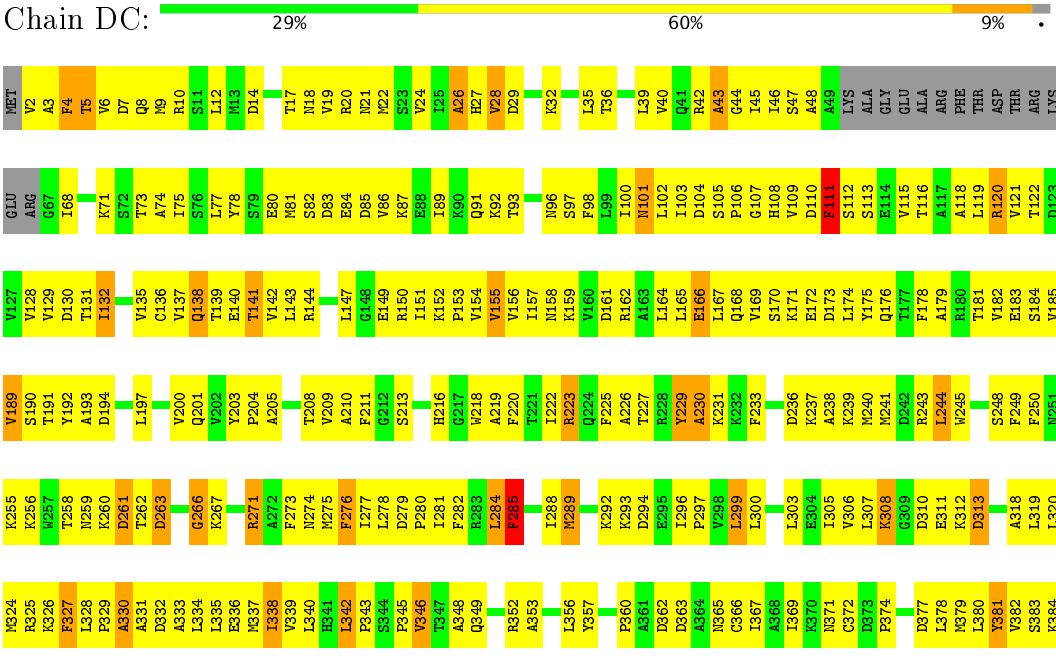
- Molecule 81: eS31 (yeast S31)

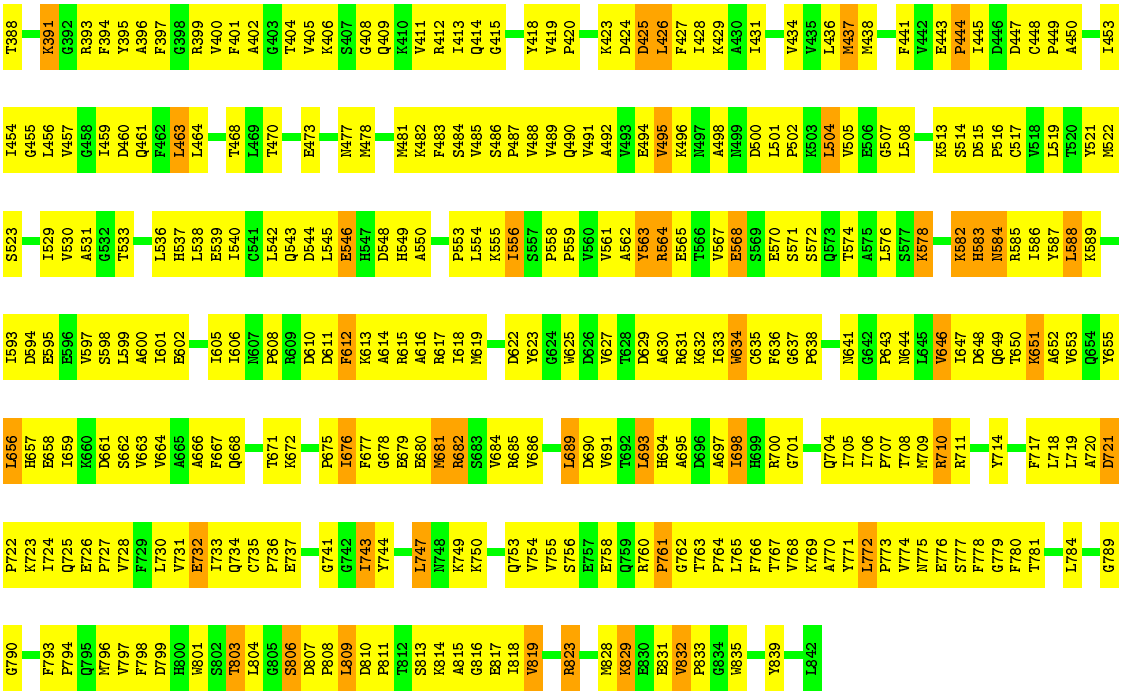
Chain CC:



- Molecule 82: yeast eEF2

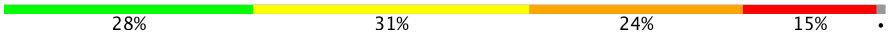
Chain DC:

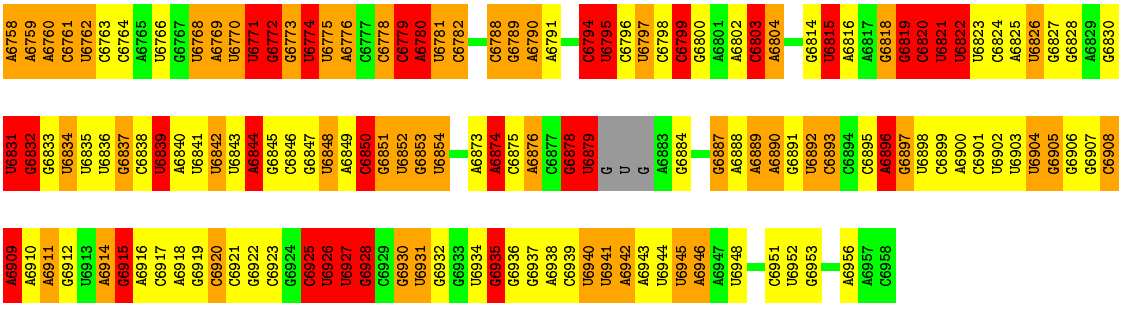




- Molecule 83: IRES

Chain EC:





WORLDWIDE PDB PROTEIN DATA BANK
EMDataBank Unified Data Resource for 3DEM

4 Experimental information (i)

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	35045	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	1.4	Depositor
Minimum defocus (nm)	Not provided	Depositor
Maximum defocus (nm)	Not provided	Depositor
Magnification	Not provided	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GDP, SO1, MG, DDE

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	#$\|Z\|>2$	RMSZ	#$\|Z\|>2$
1	A	0.85	1/42096 (0.0%)	0.75	16/65570 (0.0%)
10	J	1.09	0/1425	0.76	1/1912 (0.1%)
11	K	1.13	0/1822	0.68	0/2451
12	L	0.95	0/1850	0.64	0/2495
13	M	1.05	0/1540	0.67	1/2073 (0.0%)
14	N	1.09	0/1754	0.64	0/2350
15	O	0.87	0/1375	0.63	0/1842
16	P	1.81	0/728	0.79	0/975
17	Q	1.03	0/1568	0.68	0/2106
18	R	1.16	0/1069	0.67	0/1438
19	S	1.13	0/1758	0.68	0/2354
2	B	1.16	20/78587 (0.0%)	0.77	40/122484 (0.0%)
20	T	1.11	0/1586	0.65	0/2128
21	U	1.12	0/1466	0.65	0/1968
22	V	1.09	0/1466	0.68	0/1965
23	W	0.90	0/1539	0.62	0/2050
24	X	1.18	0/1482	0.69	0/1990
25	Y	1.17	0/1301	0.68	0/1743
26	Z	0.82	0/812	0.58	0/1099
27	AA	1.04	0/1019	0.67	0/1369
28	BA	1.17	0/521	0.68	0/691
29	CA	1.06	0/984	0.66	0/1325
3	C	1.17	3/3747 (0.1%)	0.76	3/5832 (0.1%)
30	DA	1.09	0/1005	0.67	2/1341 (0.1%)
31	EA	0.85	0/1119	0.59	0/1497
32	FA	1.04	0/1205	0.65	0/1612
33	GA	1.02	0/474	0.66	0/629
34	HA	0.83	0/751	0.65	0/1008
35	IA	0.95	0/904	0.64	0/1213
36	JA	1.15	0/1041	0.62	0/1394
37	KA	1.14	0/869	0.69	0/1168
38	LA	0.98	0/891	0.67	0/1191

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >2	RMSZ	#|Z| >2
39	MA	1.02	0/979	0.66	0/1301
4	D	1.08	1/2884 (0.0%)	0.73	1/4491 (0.0%)
40	NA	0.94	0/779	0.70	1/1034 (0.1%)
41	OA	1.20	0/697	0.69	0/923
42	PA	0.92	0/619	0.61	0/826
43	QA	1.16	0/444	0.71	0/588
44	RA	1.11	0/424	0.65	0/562
45	SA	0.96	0/235	0.62	0/300
46	TA	1.04	0/861	0.66	0/1136
47	UA	1.02	0/702	0.65	0/934
48	VA	1.72	0/1498	0.83	1/2025 (0.0%)
49	WA	0.83	0/2498	0.58	0/3398
5	E	1.90	2/1377 (0.1%)	0.82	1/1844 (0.1%)
50	XA	0.67	0/1653	0.64	1/2261 (0.0%)
51	YA	0.71	0/1735	0.59	0/2335
52	ZA	0.71	0/1665	0.58	0/2263
53	AB	0.84	0/1759	0.60	0/2368
54	BB	0.72	0/2110	0.63	0/2839
55	CB	0.74	0/1630	0.61	0/2202
56	DB	0.74	0/1844	0.61	0/2464
57	EB	0.81	0/1506	0.61	0/2028
58	FB	0.86	0/1515	0.59	0/2021
59	GB	0.70	0/1519	0.61	0/2035
6	F	1.03	0/1952	0.71	0/2622
60	HB	0.98	0/837	0.59	0/1131
61	IB	0.92	0/1273	0.61	0/1712
62	JB	1.10	0/495	0.56	0/617
63	KB	0.80	0/1216	0.62	0/1638
64	LB	0.64	0/953	0.60	0/1279
65	MB	1.05	0/996	0.64	0/1335
66	NB	0.80	0/1126	0.60	0/1510
67	OB	0.77	0/844	0.76	1/1120 (0.1%)
68	PB	0.86	0/1212	0.62	0/1628
69	QB	0.79	0/1131	0.57	0/1517
7	G	1.00	0/3153	0.65	0/4239
70	RB	0.86	0/866	0.60	0/1169
71	SB	0.68	0/694	0.56	0/935
72	TB	0.75	0/1039	0.62	0/1395
73	UB	0.87	0/1140	0.65	1/1518 (0.1%)
74	VB	0.71	0/1088	0.59	0/1449
75	WB	0.80	0/571	0.60	0/768
76	XB	0.69	0/782	0.60	0/1047
77	YB	0.74	0/621	0.62	0/838

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >2	RMSZ	#|Z| >2
78	ZB	0.72	0/500	0.59	0/670
79	AC	0.94	0/454	0.58	0/602
8	H	1.11	0/2802	0.70	1/3792 (0.0%)
80	BC	0.83	0/483	0.57	0/643
81	CC	1.05	0/283	0.63	0/352
82	DC	1.41	0/6521	0.71	2/8830 (0.0%)
83	EC	2.21	71/4413 (1.6%)	1.02	23/6849 (0.3%)
9	I	0.93	0/2426	0.65	0/3271
All	All	1.08	98/230558 (0.0%)	0.73	96/337917 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	19
2	B	0	65
3	C	0	4
4	D	0	1
83	EC	0	8
All	All	0	97

All (98) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	EC	6875	C	N1-C2	7.27	1.47	1.40
83	EC	6831	U	N1-C2	7.18	1.45	1.38
83	EC	6879	U	N1-C2	7.00	1.44	1.38
83	EC	6843	U	N1-C2	6.99	1.44	1.38
83	EC	6775	U	N1-C2	6.94	1.44	1.38
4	D	1	G	OP3-P	-6.94	1.52	1.61
1	A	1	U	OP3-P	-6.88	1.52	1.61
83	EC	6826	U	N1-C2	6.75	1.44	1.38
83	EC	6794	C	N1-C2	6.74	1.46	1.40
83	EC	6758	A	P-O5'	6.66	1.66	1.59
83	EC	6848	U	N1-C2	6.61	1.44	1.38
83	EC	6842	U	N1-C2	6.54	1.44	1.38
83	EC	6796	C	N1-C2	6.53	1.46	1.40
83	EC	6835	U	N1-C2	6.47	1.44	1.38
83	EC	6850	C	N1-C2	6.45	1.46	1.40
83	EC	6839	U	N1-C2	6.43	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	EC	6763	C	N1-C2	6.39	1.46	1.40
83	EC	6774	U	N1-C2	6.38	1.44	1.38
83	EC	6799	C	N1-C2	6.38	1.46	1.40
83	EC	6798	C	N1-C2	6.38	1.46	1.40
83	EC	6771	U	N1-C2	6.23	1.44	1.38
5	E	66	CYS	CB-SG	6.21	1.92	1.82
5	E	198	TRP	CB-CG	6.19	1.61	1.50
3	C	1	A	OP3-P	-6.14	1.53	1.61
83	EC	6928	G	C5-C6	6.07	1.48	1.42
2	B	2504	U	N1-C2	6.02	1.44	1.38
83	EC	6797	U	N1-C2	6.01	1.44	1.38
83	EC	6852	U	N1-C2	5.99	1.44	1.38
2	B	1137	C	N1-C2	5.99	1.46	1.40
83	EC	6821	U	N1-C2	5.98	1.44	1.38
83	EC	6815	U	N1-C2	5.97	1.44	1.38
83	EC	6844	A	C5-C6	5.94	1.46	1.41
83	EC	6758	A	OP3-P	-5.93	1.54	1.61
83	EC	6889	A	C5-C6	5.91	1.46	1.41
2	B	2505	U	N1-C2	5.86	1.43	1.38
83	EC	6841	U	N1-C2	5.84	1.43	1.38
83	EC	6941	U	N1-C2	5.83	1.43	1.38
83	EC	6834	U	N1-C2	5.80	1.43	1.38
83	EC	6803	C	N1-C2	5.77	1.46	1.40
2	B	315	C	N1-C2	5.68	1.45	1.40
83	EC	6896	A	C5-C6	5.67	1.46	1.41
83	EC	6764	C	N1-C2	5.65	1.45	1.40
2	B	2501	U	N1-C2	5.63	1.43	1.38
83	EC	6940	U	N1-C2	5.63	1.43	1.38
83	EC	6762	U	N1-C2	5.62	1.43	1.38
83	EC	6925	C	N1-C2	5.61	1.45	1.40
83	EC	6904	U	N1-C2	5.59	1.43	1.38
83	EC	6761	C	N1-C2	5.58	1.45	1.40
83	EC	6773	G	N9-C4	5.56	1.42	1.38
83	EC	6892	U	N1-C2	5.54	1.43	1.38
83	EC	6781	U	N1-C2	5.54	1.43	1.38
83	EC	6908	C	N1-C2	5.52	1.45	1.40
83	EC	6778	C	N1-C2	5.52	1.45	1.40
83	EC	6836	U	N1-C2	5.50	1.43	1.38
83	EC	6930	G	C5-C6	5.50	1.47	1.42
83	EC	6926	U	N1-C2	5.49	1.43	1.38
83	EC	6832	G	C5-C6	5.45	1.47	1.42
83	EC	6830	G	C5-C6	5.44	1.47	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	EC	6759	A	C5-C6	5.44	1.46	1.41
2	B	2875	U	N1-C2	5.43	1.43	1.38
3	C	23	U	N1-C2	5.42	1.43	1.38
83	EC	6820	C	N1-C2	5.42	1.45	1.40
2	B	1866	C	N1-C2	5.41	1.45	1.40
3	C	1	A	P-O5'	5.40	1.65	1.59
83	EC	6853	G	C5-C6	5.39	1.47	1.42
83	EC	6795	U	N1-C2	5.39	1.43	1.38
83	EC	6779	C	N1-C2	5.38	1.45	1.40
83	EC	6819	G	C5-C6	5.38	1.47	1.42
83	EC	6847	G	C5-C6	5.37	1.47	1.42
83	EC	6932	G	C5-C6	5.36	1.47	1.42
83	EC	6874	A	C5-C6	5.31	1.45	1.41
2	B	655	C	N1-C2	5.29	1.45	1.40
83	EC	6944	U	N1-C2	5.29	1.43	1.38
2	B	1830	G	C5-C6	5.26	1.47	1.42
83	EC	6893	C	N1-C2	5.25	1.45	1.40
83	EC	6846	C	N1-C2	5.23	1.45	1.40
83	EC	6854	U	N1-C2	5.23	1.43	1.38
83	EC	6921	C	N1-C2	5.20	1.45	1.40
83	EC	6780	A	C5-C6	5.19	1.45	1.41
83	EC	6887	G	C5-C6	5.18	1.47	1.42
2	B	2507	C	N1-C2	5.17	1.45	1.40
2	B	280	U	N1-C2	5.17	1.43	1.38
2	B	2189	U	N1-C2	5.14	1.43	1.38
83	EC	6878	G	C5-C6	5.12	1.47	1.42
2	B	2037	G	P-O5'	5.12	1.64	1.59
2	B	2318	U	N1-C2	5.10	1.43	1.38
83	EC	6923	C	N1-C2	5.09	1.45	1.40
2	B	3	U	P-O5'	5.09	1.64	1.59
2	B	1857	C	N1-C2	5.09	1.45	1.40
2	B	2620	G	C5-C6	5.09	1.47	1.42
83	EC	6760	A	C5-C6	5.09	1.45	1.41
2	B	1045	C	N1-C2	5.07	1.45	1.40
83	EC	6819	G	N9-C4	5.07	1.42	1.38
83	EC	6898	U	N1-C2	5.05	1.43	1.38
2	B	3214	U	N1-C2	5.03	1.43	1.38
83	EC	6822	U	N1-C6	5.03	1.42	1.38
83	EC	6841	U	N1-C6	5.02	1.42	1.38
2	B	927	C	N1-C2	5.00	1.45	1.40

All (96) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
83	EC	6799	C	N1-C1'-C2'	8.09	124.52	114.00
48	VA	182	THR	N-CA-C	7.73	131.88	111.00
10	J	126	GLN	N-CA-C	-7.47	90.83	111.00
83	EC	6774	U	N1-C1'-C2'	7.36	123.57	114.00
2	B	3360	C	N1-C1'-C2'	7.26	123.44	114.00
83	EC	6837	G	N9-C1'-C2'	7.21	123.37	114.00
2	B	282	G	C2'-C3'-O3'	7.04	125.00	109.50
67	OB	109	LEU	CA-CB-CG	6.84	131.03	115.30
1	A	103	A	C2'-C3'-O3'	6.78	124.55	113.70
83	EC	6773	G	N9-C1'-C2'	6.71	122.72	114.00
2	B	2375	G	N9-C1'-C2'	6.63	122.62	114.00
2	B	1104	G	N9-C1'-C2'	6.60	122.58	114.00
2	B	1879	A	N9-C1'-C2'	6.55	122.51	114.00
2	B	1480	G	N9-C1'-C2'	6.49	122.44	114.00
83	EC	6935	G	C2'-C3'-O3'	6.47	124.05	113.70
2	B	2525	G	C2'-C3'-O3'	6.43	123.99	113.70
2	B	1318	A	N9-C1'-C2'	6.42	122.35	114.00
3	C	157	U	N1-C1'-C2'	6.41	122.33	114.00
1	A	934	C	N1-C1'-C2'	6.37	122.29	114.00
8	H	313	LEU	CA-CB-CG	6.37	129.95	115.30
83	EC	6830	G	N9-C1'-C2'	6.37	122.28	114.00
2	B	2495	C	N1-C1'-C2'	6.26	122.14	114.00
1	A	1600	A	N9-C1'-C2'	6.26	122.13	114.00
82	DC	319	LEU	CA-CB-CG	6.24	129.66	115.30
2	B	1027	A	N9-C1'-C2'	6.22	122.09	114.00
2	B	3217	C	N1-C1'-C2'	6.12	121.96	114.00
2	B	3350	C	N1-C1'-C2'	6.05	121.87	114.00
1	A	1031	U	N1-C1'-C2'	6.03	121.84	114.00
1	A	555	A	C2'-C3'-O3'	5.95	123.23	113.70
1	A	1060	U	N1-C1'-C2'	5.95	121.73	114.00
2	B	960	U	N1-C1'-C2'	5.95	121.73	114.00
2	B	1866	C	N1-C1'-C2'	5.95	121.73	114.00
2	B	1572	U	N1-C1'-C2'	5.91	121.69	114.00
83	EC	6848	U	N1-C1'-C2'	5.89	121.66	114.00
5	E	194	LEU	CA-CB-CG	5.81	128.66	115.30
73	UB	111	GLY	N-CA-C	-5.78	98.64	113.10
30	DA	57	LEU	CA-CB-CG	5.78	128.59	115.30
83	EC	6832	G	N9-C1'-C2'	5.76	121.49	114.00
1	A	418	G	N9-C1'-C2'	5.74	121.46	114.00
83	EC	6778	C	N1-C1'-C2'	5.74	121.46	114.00
83	EC	6920	C	N1-C1'-C2'	5.71	121.43	114.00
1	A	730	G	N9-C1'-C2'	5.65	121.35	114.00
2	B	2298	U	N1-C1'-C2'	5.62	121.31	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	581	U	N1-C1'-C2'	5.61	121.29	114.00
2	B	3214	U	N1-C1'-C2'	5.60	121.28	114.00
83	EC	6824	C	N1-C1'-C2'	5.56	121.23	114.00
83	EC	6774	U	O4'-C1'-N1	5.55	112.64	108.20
83	EC	6896	A	C2'-C3'-O3'	5.53	122.54	113.70
83	EC	6758	A	OP1-P-OP2	-5.50	111.35	119.60
82	DC	342	LEU	CA-CB-CG	5.50	127.95	115.30
2	B	882	A	N9-C1'-C2'	5.49	121.13	114.00
2	B	3176	G	N9-C1'-C2'	5.47	121.12	114.00
2	B	1724	U	N1-C1'-C2'	5.47	121.11	114.00
1	A	453	U	N1-C1'-C2'	5.42	121.04	114.00
2	B	11	A	N9-C1'-C2'	5.42	121.04	114.00
83	EC	6925	C	N1-C1'-C2'	5.41	121.04	114.00
2	B	1815	U	C2'-C3'-O3'	5.41	122.35	113.70
1	A	191	C	N1-C1'-C2'	5.41	121.03	114.00
1	A	25	C	C2'-C3'-O3'	5.40	122.33	113.70
83	EC	6876	A	N9-C1'-C2'	5.39	121.01	114.00
2	B	933	A	N9-C1'-C2'	5.38	121.00	114.00
1	A	657	U	N1-C1'-C2'	5.37	120.98	114.00
3	C	22	U	N1-C1'-C2'	5.36	120.97	114.00
83	EC	6831	U	N1-C1'-C2'	5.32	120.91	114.00
83	EC	6838	C	N1-C1'-C2'	5.32	120.91	114.00
2	B	1481	A	N9-C1'-C2'	5.30	120.90	114.00
2	B	1608	C	N1-C1'-C2'	5.30	120.89	114.00
40	NA	43	LEU	CA-CB-CG	5.29	127.46	115.30
30	DA	76	LEU	CA-CB-CG	5.29	127.46	115.30
1	A	192	U	N1-C1'-C2'	5.28	120.86	114.00
2	B	2197	C	N1-C1'-C2'	5.27	120.85	114.00
2	B	3047	U	N1-C1'-C2'	5.25	120.83	114.00
83	EC	6922	G	O4'-C1'-N9	5.25	112.40	108.20
83	EC	6802	A	N9-C1'-C2'	5.25	120.82	114.00
1	A	834	G	N9-C1'-C2'	5.24	120.81	114.00
2	B	1418	A	N9-C1'-C2'	5.24	120.81	114.00
83	EC	6839	U	N1-C1'-C2'	5.24	120.81	114.00
2	B	3207	U	N1-C1'-C2'	5.23	120.79	114.00
1	A	503	G	C2'-C3'-O3'	5.21	122.05	113.70
2	B	1023	C	N1-C1'-C2'	5.21	120.77	114.00
3	C	1	A	OP1-P-OP2	-5.19	111.82	119.60
2	B	2208	A	N9-C1'-C2'	5.19	120.75	114.00
2	B	2794	G	N9-C1'-C2'	5.16	120.71	114.00
4	D	73	C	N1-C1'-C2'	5.15	120.70	114.00
2	B	770	G	O4'-C1'-N9	5.13	112.31	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1556	C	N1-C1'-C2'	5.12	120.65	114.00
50	XA	204	TYR	N-CA-C	5.11	124.79	111.00
2	B	1307	G	C2'-C3'-O3'	5.10	121.86	113.70
83	EC	6788	C	N1-C1'-C2'	5.08	120.61	114.00
2	B	1533	U	N1-C1'-C2'	5.08	120.61	114.00
2	B	2037	G	OP1-P-OP2	-5.08	111.98	119.60
2	B	1236	G	N9-C1'-C2'	5.05	120.56	114.00
2	B	3218	A	C2'-C3'-O3'	5.04	121.77	113.70
2	B	1026	A	N9-C1'-C2'	5.04	120.55	114.00
83	EC	6879	U	N1-C1'-C2'	5.04	120.55	114.00
13	M	68	LEU	CA-CB-CG	5.03	126.87	115.30

There are no chirality outliers.

All (97) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1031	U	Sidechain
1	A	1085	G	Sidechain
1	A	1122	G	Sidechain
1	A	1288	G	Sidechain
1	A	1542	G	Sidechain
1	A	1544	U	Sidechain
1	A	1553	G	Sidechain
1	A	1715	G	Sidechain
1	A	313	U	Sidechain
1	A	322	G	Sidechain
1	A	324	U	Sidechain
1	A	330	G	Sidechain
1	A	396	G	Sidechain
1	A	447	U	Sidechain
1	A	581	U	Sidechain
1	A	766	U	Sidechain
1	A	834	G	Sidechain
1	A	854	U	Sidechain
1	A	871	G	Sidechain
2	B	1011	A	Sidechain
2	B	1027	A	Sidechain
2	B	1128	U	Sidechain
2	B	1190	A	Sidechain
2	B	1222	G	Sidechain
2	B	1262	G	Sidechain
2	B	1294	A	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1301	A	Sidechain
2	B	1318	A	Sidechain
2	B	1394	A	Sidechain
2	B	1404	G	Sidechain
2	B	1432	C	Sidechain
2	B	1536	G	Sidechain
2	B	1607	U	Sidechain
2	B	1627	U	Sidechain
2	B	1646	G	Sidechain
2	B	1694	U	Sidechain
2	B	1695	U	Sidechain
2	B	1724	U	Sidechain
2	B	1749	A	Sidechain
2	B	1809	A	Sidechain
2	B	1863	G	Sidechain
2	B	1879	A	Sidechain
2	B	2095	G	Sidechain
2	B	2100	A	Sidechain
2	B	2187	G	Sidechain
2	B	2193	U	Sidechain
2	B	223	U	Sidechain
2	B	2278	C	Sidechain
2	B	2286	U	Sidechain
2	B	2295	A	Sidechain
2	B	2385	G	Sidechain
2	B	2510	U	Sidechain
2	B	2613	U	Sidechain
2	B	2788	C	Sidechain
2	B	2798	C	Sidechain
2	B	2859	U	Sidechain
2	B	2886	U	Sidechain
2	B	2898	G	Sidechain
2	B	296	A	Sidechain
2	B	3008	A	Sidechain
2	B	3047	U	Sidechain
2	B	3059	G	Sidechain
2	B	3140	G	Sidechain
2	B	3214	U	Sidechain
2	B	328	U	Sidechain
2	B	3280	U	Sidechain
2	B	3288	G	Sidechain
2	B	3306	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	3333	G	Sidechain
2	B	371	G	Sidechain
2	B	400	G	Sidechain
2	B	406	G	Sidechain
2	B	512	U	Sidechain
2	B	517	G	Sidechain
2	B	657	A	Sidechain
2	B	66	A	Sidechain
2	B	760	G	Sidechain
2	B	769	G	Sidechain
2	B	770	G	Sidechain
2	B	78	U	Sidechain
2	B	810	A	Sidechain
2	B	857	G	Sidechain
2	B	882	A	Sidechain
2	B	959	C	Sidechain
3	C	36	G	Sidechain
3	C	39	G	Sidechain
3	C	70	G	Sidechain
3	C	87	G	Sidechain
4	D	62	U	Sidechain
83	EC	6766	U	Sidechain
83	EC	6772	G	Sidechain
83	EC	6788	C	Sidechain
83	EC	6799	C	Sidechain
83	EC	6879	U	Sidechain
83	EC	6909	A	Sidechain
83	EC	6915	G	Sidechain
83	EC	6927	U	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	37658	0	18908	1739	0
2	B	70248	0	35241	3748	0
3	C	3354	0	1695	184	0
4	D	2580	0	1304	123	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	E	1359	0	1425	113	0
6	F	1918	0	1987	279	0
7	G	3082	0	3165	364	0
8	H	2750	0	2863	343	0
9	I	2376	0	2325	266	0
10	J	1401	0	1501	161	0
11	K	1785	0	1862	230	0
12	L	1818	0	1908	203	0
13	M	1519	0	1587	161	0
14	N	1718	0	1754	166	0
15	O	1354	0	1383	182	0
16	P	723	0	774	107	0
17	Q	1543	0	1608	188	0
18	R	1054	0	1149	174	0
19	S	1721	0	1779	243	0
20	T	1556	0	1659	150	0
21	U	1443	0	1485	166	0
22	V	1442	0	1543	200	0
23	W	1522	0	1617	164	0
24	X	1446	0	1487	179	0
25	Y	1277	0	1323	152	0
26	Z	796	0	812	60	0
27	AA	1004	0	1048	113	0
28	BA	509	0	537	51	0
29	CA	969	0	1036	133	0
30	DA	994	0	1081	124	0
31	EA	1093	0	1155	140	0
32	FA	1174	0	1215	132	0
33	GA	463	0	491	41	0
34	HA	743	0	797	90	0
35	IA	890	0	938	84	0
36	JA	1020	0	1090	89	0
37	KA	851	0	880	121	0
38	LA	881	0	949	128	0
39	MA	970	0	1078	122	0
40	NA	772	0	849	109	0
41	OA	682	0	687	83	0
42	PA	613	0	682	52	0
43	QA	437	0	475	72	0
44	RA	418	0	459	43	0
45	SA	234	0	284	20	0
46	TA	848	0	918	69	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	UA	695	0	738	87	0
48	VA	1473	0	1514	176	0
49	WA	2445	0	2401	191	0
50	XA	1612	0	1623	176	0
51	YA	1709	0	1784	217	0
52	ZA	1635	0	1723	207	0
53	AB	1734	0	1817	169	0
54	BB	2069	0	2154	255	0
55	CB	1610	0	1675	180	0
56	DB	1820	0	1918	158	0
57	EB	1481	0	1572	152	0
58	FB	1490	0	1525	155	0
59	GB	1494	0	1573	181	0
60	HB	817	0	804	72	0
61	IB	1245	0	1314	123	0
62	JB	496	0	141	0	0
63	KB	1193	0	1255	126	0
64	LB	942	0	979	148	0
65	MB	975	0	1017	91	0
66	NB	1106	0	1166	141	0
67	OB	836	0	827	75	0
68	PB	1193	0	1222	100	0
69	QB	1113	0	1124	140	0
70	RB	856	0	917	97	0
71	SB	685	0	672	107	0
72	TB	1022	0	1060	133	0
73	UB	1122	0	1196	121	0
74	VB	1074	0	1132	119	0
75	WB	563	0	603	85	0
76	XB	769	0	818	104	0
77	YB	611	0	633	76	0
78	ZB	498	0	535	56	0
79	AC	444	0	436	61	0
80	BC	475	0	525	38	0
81	CC	284	0	76	0	0
82	DC	6419	0	6493	727	0
83	EC	3968	0	1973	103	0
84	DC	28	0	12	2	0
85	DC	1	0	0	0	0
86	DC	35	0	40	6	0
All	All	215045	0	159780	14774	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including

hydrogen atoms). The all-atom clashscore for this structure is 40.

All (14774) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:509:U:H2'	2:B:510:G:H5"	1.22	1.20
56:DB:64:LYS:HE3	56:DB:81:VAL:HG21	1.24	1.19
2:B:1948:G:H5'	23:W:101:VAL:HG11	1.25	1.17
19:S:73:ARG:HE	19:S:92:LEU:HD21	1.11	1.15
18:R:21:VAL:HG12	18:R:65:LEU:HA	1.27	1.15
1:A:1004:U:H3'	1:A:1005:A:H5"	1.29	1.14
2:B:2086:A:H5"	2:B:2087:C:H5'	1.30	1.14
1:A:1788:G:H2'	1:A:1789:G:H5"	1.14	1.12
15:O:103:GLY:HA3	15:O:128:TYR:HA	1.32	1.12
72:TB:81:VAL:HG13	72:TB:85:ASP:HB2	1.32	1.12
29:CA:80:ASN:HA	29:CA:132:ALA:HB2	1.29	1.11
2:B:296:A:H3'	2:B:297:G:H21	1.16	1.11
1:A:1073:G:H2'	1:A:1074:G:H5"	1.26	1.11
54:BB:126:VAL:HG22	54:BB:158:ASP:H	1.04	1.10
7:G:211:GLN:HE21	7:G:285:VAL:HG23	1.15	1.10
2:B:2504:U:H4'	40:NA:55:ARG:HH21	1.12	1.09
1:A:1636:C:H4'	1:A:1637:C:H5'	1.29	1.09
1:A:1485:C:H2'	1:A:1486:G:H4'	1.29	1.08
2:B:3286:G:H2'	2:B:3287:U:H5"	1.35	1.07
2:B:2210:G:N2	2:B:2236:G:H1'	1.65	1.07
2:B:1203:A:H2'	2:B:1204:A:C8	1.88	1.07
1:A:71:A:H2'	1:A:72:A:H4'	1.32	1.07
1:A:992:A:H2'	1:A:993:A:H5'	1.28	1.07
6:F:32:LEU:HA	6:F:36:GLU:HG3	1.36	1.07
2:B:1711:C:H5"	31:EA:38:PHE:HB3	1.37	1.06
6:F:39:GLY:HA2	6:F:93:LYS:HB2	1.38	1.06
1:A:1498:G:H2'	1:A:1499:G:H5"	1.37	1.06
1:A:320:U:H3'	1:A:321:C:H5"	1.38	1.06
2:B:3163:A:H2'	2:B:3164:C:H5"	1.31	1.06
63:KB:22:ALA:HB1	63:KB:23:PRO:HA	1.32	1.06
74:VB:56:SER:HB3	74:VB:74:LEU:HB2	1.38	1.06
46:TA:26:THR:HB	46:TA:71:ARG:HB3	1.35	1.05
6:F:227:ARG:HB2	6:F:239:ALA:HB2	1.36	1.05
66:NB:60:PHE:HA	66:NB:63:ILE:HD11	1.38	1.05
2:B:1567:U:H3'	2:B:1568:U:H5"	1.38	1.05
2:B:2521:U:H2'	2:B:2522:G:H5'	1.37	1.05
10:J:46:ARG:HH11	10:J:46:ARG:HB2	1.22	1.05
82:DC:737:GLU:HB2	82:DC:764:PRO:HB3	1.38	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:24:VAL:HG12	82:DC:126:LEU:HB3	1.38	1.04
50:XA:189:VAL:HG13	50:XA:190:ASP:H	1.23	1.04
72:TB:11:LEU:HD12	72:TB:74:VAL:HB	1.39	1.04
1:A:770:A:H3'	1:A:771:A:H5"	1.39	1.04
83:EC:6769:A:H3'	83:EC:6770:U:H5"	1.38	1.04
82:DC:369:ILE:HD11	82:DC:379:MET:HG3	1.39	1.03
63:KB:107:LYS:HE2	63:KB:109:LYS:HD3	1.35	1.03
2:B:1054:A:H5"	2:B:2637:A:H61	1.23	1.03
9:I:65:ILE:HG21	9:I:72:ASP:HB3	1.34	1.03
1:A:531:C:H2'	1:A:532:U:H5"	1.38	1.02
59:GB:14:THR:HG22	59:GB:15:PRO:HD2	1.40	1.02
57:EB:102:PRO:HD3	57:EB:112:ARG:HD3	1.37	1.02
2:B:2108:C:H1'	2:B:3344:A:H8	1.22	1.02
83:EC:6771:U:H1'	83:EC:6821:U:H2'	1.37	1.02
82:DC:89:ILE:HG12	82:DC:340:LEU:HA	1.37	1.02
22:V:16:ARG:HH12	22:V:55:SER:HB3	1.22	1.02
2:B:268:A:H61	2:B:295:A:H3'	1.14	1.02
64:LB:85:ALA:H	64:LB:119:THR:HG22	1.21	1.01
1:A:1049:U:H5"	77:YB:70:LYS:HE3	1.43	1.01
82:DC:629:ASP:HA	82:DC:632:LYS:HB2	1.39	1.01
50:XA:184:LEU:HA	71:SB:43:GLY:HA2	1.37	1.01
73:UB:69:ARG:HG3	73:UB:117:ILE:HG12	1.40	1.01
51:YA:176:VAL:HG12	51:YA:177:GLN:H	1.18	1.01
2:B:215:G:H5"	30:DA:12:ARG:HH11	1.25	1.01
1:A:1580:C:H4'	66:NB:137:ARG:HB3	1.38	1.01
2:B:3146:G:H4'	7:G:100:ARG:HD2	1.40	1.01
1:A:629:U:H1'	2:B:846:A:H62	1.22	1.01
19:S:41:ARG:HD3	19:S:42:PRO:HD2	1.37	1.01
82:DC:24:VAL:HG21	82:DC:36:THR:HG21	1.43	1.01
31:EA:89:VAL:HA	31:EA:92:PHE:CZ	1.96	1.01
76:XB:84:VAL:HG13	76:XB:85:ARG:H	1.22	1.01
33:GA:14:ARG:HH11	33:GA:18:ARG:HD3	1.20	1.01
70:RB:28:SER:HB2	70:RB:112:VAL:HG13	1.42	1.01
24:X:48:LEU:HD12	25:Y:151:LEU:HD12	1.40	1.01
28:BA:6:ASP:HB3	28:BA:10:GLY:H	1.26	1.00
39:MA:22:VAL:HG12	39:MA:26:LYS:HE3	1.40	1.00
51:YA:40:ASN:H	51:YA:40:ASN:ND2	1.58	1.00
64:LB:76:ILE:HD12	64:LB:76:ILE:H	1.26	1.00
23:W:23:TRP:HB3	23:W:51:VAL:HG22	1.42	1.00
1:A:1201:G:H21	1:A:1600:A:H5'	1.25	1.00
9:I:236:LEU:HD12	9:I:239:ILE:HD12	1.44	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:21:LYS:HA	23:W:53:LYS:HD2	1.41	1.00
1:A:512:A:H2'	59:GB:131:GLN:HE22	1.24	1.00
2:B:3113:A:H4'	13:M:69:ARG:HD2	1.43	1.00
55:CB:63:GLN:HB2	55:CB:89:ILE:HG13	1.41	1.00
37:KA:45:LEU:HA	37:KA:71:VAL:HG11	1.40	1.00
67:OB:41:ILE:HG22	67:OB:42:GLN:H	1.26	1.00
76:XB:84:VAL:HG22	76:XB:86:VAL:H	1.24	1.00
82:DC:395:TYR:HB3	82:DC:457:VAL:HB	1.42	0.99
31:EA:51:LEU:HB2	31:EA:65:ARG:HD2	1.43	0.99
15:O:87:LYS:HE2	15:O:91:LEU:HD23	1.44	0.99
1:A:1788:G:C2'	1:A:1789:G:H5"	1.91	0.99
55:CB:63:GLN:HG3	55:CB:88:PRO:HA	1.42	0.99
1:A:684:A:H3'	1:A:685:A:H5"	1.43	0.99
82:DC:17:THR:HG22	82:DC:346:VAL:HG21	1.43	0.99
1:A:832:U:H2'	1:A:833:U:H5"	1.44	0.99
17:Q:67:ARG:HD3	17:Q:68:LYS:H	1.24	0.99
1:A:1087:A:H5'	1:A:1299:G:O6	1.62	0.99
12:L:133:LYS:HB2	12:L:199:ALA:HB3	1.40	0.99
2:B:24:G:H2'	2:B:25:U:H5'	1.41	0.99
2:B:707:U:H2'	2:B:708:G:H5"	1.45	0.99
65:MB:34:VAL:HG12	65:MB:41:VAL:HG12	1.44	0.99
16:P:106:LEU:H	16:P:142:ARG:HG3	1.24	0.99
56:DB:76:LEU:HD11	56:DB:92:ARG:HB3	1.44	0.99
14:N:49:CYS:HB2	14:N:172:GLY:HA2	1.44	0.99
25:Y:96:ILE:HG22	25:Y:97:LYS:H	1.25	0.99
20:T:27:LEU:HD11	20:T:102:LEU:HB2	1.43	0.98
22:V:147:ARG:HB3	22:V:147:ARG:HH11	1.25	0.98
14:N:91:VAL:HG12	14:N:127:ALA:HB1	1.46	0.98
20:T:61:ALA:HA	20:T:70:PRO:HD2	1.44	0.98
82:DC:305:ILE:HG21	82:DC:323:VAL:HG13	1.46	0.98
54:BB:10:LYS:HA	54:BB:27:TYR:HA	1.41	0.98
14:N:174:THR:HG22	14:N:176:LEU:H	1.28	0.98
72:TB:8:ALA:HA	72:TB:74:VAL:HG11	1.46	0.98
53:AB:126:VAL:HG21	53:AB:188:ILE:HD13	1.46	0.97
13:M:85:GLY:HA3	13:M:187:ILE:HB	1.43	0.97
17:Q:57:VAL:HG13	17:Q:147:ILE:HG23	1.42	0.97
2:B:1934:G:H2'	2:B:1935:G:H5"	1.46	0.97
11:K:151:ARG:HG3	11:K:244:ASN:HD21	1.25	0.97
2:B:1234:G:H5"	16:P:118:ASP:HB2	1.43	0.97
2:B:1235:U:H4'	2:B:1236:G:H5'	1.43	0.97
29:CA:111:ASN:HB2	29:CA:123:TYR:HB2	1.44	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:117:THR:HG21	55:CB:194:LEU:HD12	1.46	0.97
61:IB:125:VAL:HG12	61:IB:139:VAL:HA	1.45	0.97
12:L:148:ALA:HA	12:L:201:THR:HG22	1.44	0.97
2:B:2896:A:H8	2:B:2896:A:H5'	1.29	0.97
82:DC:22:MET:HA	82:DC:122:THR:HB	1.46	0.97
23:W:167:ARG:HH21	23:W:168:ALA:HB2	1.26	0.96
7:G:165:GLN:HB3	7:G:168:LYS:HD3	1.42	0.96
20:T:34:VAL:HG12	20:T:103:LYS:HB2	1.46	0.96
69:QB:66:TYR:HD2	69:QB:132:LEU:HD13	1.28	0.96
39:MA:64:GLU:HA	39:MA:67:ARG:HD2	1.44	0.96
44:RA:98:LYS:HG3	44:RA:118:THR:HG21	1.47	0.96
77:YB:73:LEU:HD11	77:YB:79:PHE:HB3	1.48	0.96
2:B:349:A:H3'	2:B:350:C:H5"	1.45	0.96
33:GA:14:ARG:NH1	33:GA:18:ARG:HD3	1.79	0.96
12:L:67:ILE:HB	12:L:237:ILE:HD13	1.46	0.96
41:OA:14:LYS:HE2	41:OA:17:THR:HG23	1.48	0.96
50:XA:31:VAL:HG23	50:XA:150:ASP:HA	1.45	0.96
55:CB:62:VAL:HG13	55:CB:89:ILE:HG21	1.46	0.95
49:WA:12:THR:HG22	49:WA:311:ARG:HG2	1.48	0.95
7:G:303:LYS:HD3	7:G:372:THR:HG22	1.48	0.95
49:WA:148:ASN:HB2	49:WA:175:ASP:HB3	1.46	0.95
56:DB:163:THR:HA	56:DB:168:THR:HG22	1.49	0.95
31:EA:25:ILE:HA	31:EA:43:VAL:HG12	1.44	0.95
6:F:102:LEU:HD13	6:F:106:SER:HB2	1.47	0.95
77:YB:33:LEU:HD23	77:YB:81:ARG:HA	1.46	0.95
1:A:1001:A:H5'	83:EC:6910:A:H4'	1.45	0.95
51:YA:40:ASN:HD22	51:YA:40:ASN:N	1.61	0.95
1:A:1171:A:H2'	1:A:1172:G:H8	1.29	0.95
53:AB:142:LEU:HD23	53:AB:148:LYS:HE3	1.45	0.95
1:A:189:C:H2'	1:A:190:C:H5"	1.45	0.95
1:A:1279:C:H4'	79:AC:44:ARG:HH22	1.29	0.95
2:B:2882:U:H2'	2:B:2883:U:C6	2.01	0.95
2:B:509:U:C2'	2:B:510:G:H5"	1.96	0.95
8:H:74:ILE:HD12	8:H:75:PRO:HD2	1.48	0.95
64:LB:29:HIS:HB3	64:LB:41:ARG:HA	1.47	0.95
18:R:80:THR:HG22	18:R:84:LYS:HG2	1.49	0.95
21:U:126:ARG:HA	21:U:140:GLU:HG3	1.49	0.95
2:B:1040:A:H3'	2:B:1041:U:H5"	1.46	0.94
53:AB:19:ALA:HB1	79:AC:46:LYS:HD2	1.49	0.94
49:WA:89:LEU:HB2	49:WA:103:PHE:HB2	1.45	0.94
2:B:1294:A:HO2'	2:B:1295:G:H8	0.96	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:96:ILE:HG22	36:JA:100:ILE:HG13	1.48	0.94
49:WA:96:THR:HG23	49:WA:97:GLY:H	1.29	0.94
2:B:3334:U:H4'	2:B:3335:A:H5"	1.46	0.94
82:DC:126:LEU:HA	82:DC:154:VAL:HB	1.50	0.94
34:HA:30:THR:HG21	34:HA:89:VAL:HG22	1.49	0.94
68:PB:81:ILE:HG23	68:PB:82:PRO:HD2	1.49	0.94
36:JA:105:ARG:HH21	36:JA:124:GLY:HA3	1.32	0.94
38:LA:81:CYS:SG	38:LA:84:CYS:HB2	2.07	0.94
1:A:396:G:H22	1:A:399:A:H5"	1.29	0.94
2:B:70:A:H2	2:B:72:C:H42	0.98	0.94
58:FB:185:GLU:HA	58:FB:189:LEU:HD22	1.49	0.94
38:LA:20:ILE:H	38:LA:20:ILE:HD13	1.31	0.94
64:LB:29:HIS:HB3	64:LB:41:ARG:HG3	1.47	0.94
51:YA:31:ASP:HA	51:YA:45:LYS:HA	1.47	0.94
1:A:1073:G:C2'	1:A:1074:G:H5"	1.98	0.94
1:A:162:A:H3'	1:A:163:G:H21	1.33	0.94
82:DC:491:VAL:HG13	82:DC:538:LEU:HD21	1.48	0.94
19:S:5:LYS:HE2	19:S:9:GLU:HB2	1.50	0.94
48:VA:28:VAL:HG12	48:VA:187:VAL:HG22	1.50	0.94
54:BB:122:LYS:HD3	54:BB:164:LEU:HD21	1.47	0.94
2:B:291:C:H5"	19:S:68:ARG:HH12	1.31	0.93
4:D:27:A:H2'	4:D:28:C:C6	2.02	0.93
5:E:100:ILE:HG12	5:E:124:LEU:HD11	1.48	0.93
11:K:109:THR:HB	22:V:3:ILE:HG23	1.47	0.93
13:M:90:MET:HG2	13:M:181:VAL:HG13	1.50	0.93
12:L:61:GLN:HA	12:L:64:ILE:HD12	1.49	0.93
50:XA:162:CYS:SG	50:XA:169:SER:HB3	2.07	0.93
1:A:512:A:H2'	59:GB:131:GLN:NE2	1.83	0.93
2:B:1195:A:H2'	2:B:1309:U:O2	1.67	0.93
2:B:2775:U:H4'	2:B:2777:G:N2	1.82	0.93
69:QB:37:VAL:HG21	69:QB:100:ILE:HD11	1.51	0.93
23:W:123:LEU:HD22	23:W:132:PHE:HZ	1.34	0.93
71:SB:15:ARG:HH21	71:SB:24:ILE:HG21	1.32	0.93
38:LA:8:ARG:HG3	38:LA:32:ALA:HB3	1.50	0.93
38:LA:3:GLN:HE22	38:LA:29:ILE:HB	1.33	0.93
2:B:2108:C:H1'	2:B:3344:A:C8	2.04	0.93
3:C:113:U:H5"	43:QA:7:PHE:HB2	1.49	0.93
52:ZA:45:VAL:HG22	52:ZA:50:ILE:HB	1.49	0.93
2:B:1640:G:H5'	2:B:1738:C:H5"	1.50	0.93
30:DA:54:ASP:HB2	30:DA:70:ILE:HD12	1.51	0.93
53:AB:72:LEU:HD23	60:HB:20:VAL:HG13	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:19:LYS:HA	14:N:23:ASN:HD22	1.34	0.93
11:K:88:ARG:HA	11:K:134:VAL:HG12	1.48	0.93
1:A:1714:A:H2'	1:A:1715:G:H8	1.34	0.92
20:T:32:LYS:HA	20:T:101:ARG:HB3	1.48	0.92
2:B:2615:G:H2'	2:B:2616:C:H6	1.33	0.92
2:B:2764:C:H42	2:B:2794:G:H1	1.15	0.92
2:B:2960:C:H2'	2:B:2961:G:H8	1.32	0.92
2:B:3006:A:H2'	2:B:3007:U:O4'	1.68	0.92
48:VA:29:GLY:HA3	48:VA:84:VAL:HG22	1.50	0.92
82:DC:454:ILE:HG13	82:DC:455:GLY:H	1.35	0.92
2:B:3092:C:H2'	27:AA:12:ARG:NH2	1.84	0.92
2:B:1256:G:H1'	16:P:123:ARG:HB2	1.49	0.92
2:B:1785:U:H2'	2:B:1786:G:C8	2.05	0.92
22:V:26:LEU:HA	22:V:29:LEU:HD12	1.49	0.92
52:ZA:63:VAL:HG13	52:ZA:68:ILE:HD12	1.52	0.92
8:H:188:ARG:HH21	8:H:197:ARG:HB3	1.35	0.92
48:VA:61:ARG:HA	48:VA:64:ARG:HB3	1.49	0.92
1:A:1714:A:H2'	1:A:1715:G:C8	2.04	0.92
66:NB:94:GLN:HE22	66:NB:99:GLU:HB2	1.35	0.92
41:OA:25:ARG:HE	43:QA:51:ILE:HD13	1.35	0.92
2:B:3164:C:HO2'	2:B:3165:A:H8	0.95	0.92
1:A:629:U:C1'	2:B:846:A:H62	1.82	0.92
2:B:2775:U:H2'	2:B:2776:C:C6	2.04	0.92
60:HB:25:LYS:HD2	60:HB:59:PHE:HZ	1.34	0.92
17:Q:74:GLY:H	17:Q:98:ASP:HB2	1.34	0.92
2:B:149:U:H2'	2:B:150:A:H5"	1.52	0.91
54:BB:65:LEU:HD23	54:BB:70:VAL:HG11	1.49	0.91
49:WA:45:TRP:HA	49:WA:57:PRO:HA	1.53	0.91
2:B:1234:G:H5"	16:P:118:ASP:CB	1.99	0.91
2:B:2615:G:H2'	2:B:2616:C:C6	2.05	0.91
1:A:884:A:H2'	1:A:885:G:C8	2.04	0.91
17:Q:62:THR:HG22	17:Q:63:VAL:H	1.35	0.91
18:R:55:ARG:HD2	24:X:70:THR:HB	1.51	0.91
22:V:85:GLY:HA2	22:V:104:LEU:HD12	1.52	0.91
2:B:2477:G:H2'	2:B:2478:C:H5'	1.50	0.91
2:B:1048:A:H2'	14:N:22:TYR:HE1	1.35	0.91
2:B:3092:C:H2'	27:AA:12:ARG:HH21	1.35	0.91
8:H:60:THR:HG21	8:H:77:VAL:HG22	1.53	0.91
1:A:1559:A:H5"	68:PB:135:GLY:HA3	1.51	0.91
52:ZA:38:VAL:HG22	52:ZA:39:THR:H	1.36	0.91
30:DA:35:LEU:HD12	30:DA:45:ILE:HB	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:152:GLY:O	11:K:163:LEU:HG	1.71	0.91
37:KA:52:VAL:HG21	37:KA:99:ARG:HE	1.36	0.91
1:A:148:A:H62	1:A:166:C:H42	1.19	0.90
2:B:666:A:H2'	2:B:667:C:H5"	1.53	0.90
8:H:158:SER:HA	8:H:213:ASN:HB3	1.53	0.90
1:A:853:G:H5'	23:W:173:ARG:NH1	1.85	0.90
57:EB:153:LEU:HG	57:EB:184:GLU:HB3	1.50	0.90
25:Y:39:ILE:HG12	25:Y:63:VAL:HG13	1.52	0.90
47:UA:56:THR:HG22	47:UA:63:THR:HG23	1.51	0.90
78:ZB:14:LYS:HB3	78:ZB:29:ARG:HB3	1.53	0.90
2:B:2471:U:H3	2:B:2474:G:H21	1.05	0.90
54:BB:126:VAL:HG22	54:BB:158:ASP:N	1.87	0.90
56:DB:50:PHE:HB3	56:DB:111:LEU:HB3	1.53	0.90
83:EC:6895:C:H2'	83:EC:6896:A:H5"	1.53	0.90
11:K:98:LYS:HB3	11:K:99:PRO:HD3	1.51	0.90
52:ZA:156:THR:HG22	72:TB:99:PHE:HZ	1.36	0.90
2:B:3312:U:H5"	7:G:25:ILE:HD12	1.50	0.90
8:H:179:LEU:HD23	8:H:183:LYS:HG3	1.52	0.90
72:TB:30:SER:HA	72:TB:34:ILE:HD12	1.51	0.90
82:DC:226:ALA:HA	82:DC:240:MET:CE	2.01	0.90
68:PB:45:LEU:HD11	68:PB:81:ILE:HG12	1.53	0.90
2:B:2611:U:H2'	2:B:2612:U:C6	2.07	0.90
22:V:68:ALA:HA	22:V:71:LEU:HD12	1.52	0.90
74:VB:12:VAL:HA	74:VB:23:PHE:HB3	1.53	0.90
21:U:146:ILE:HD12	21:U:146:ILE:H	1.36	0.90
48:VA:33:VAL:HG22	48:VA:34:SER:H	1.36	0.90
64:LB:132:ARG:HH11	64:LB:132:ARG:HB2	1.36	0.90
51:YA:40:ASN:HD22	51:YA:40:ASN:H	0.94	0.90
59:GB:141:VAL:HG13	59:GB:143:ILE:HD12	1.52	0.89
15:O:90:GLN:HA	15:O:170:ASP:HB2	1.52	0.89
49:WA:41:THR:HG21	49:WA:62:LYS:HD3	1.54	0.89
1:A:1171:A:H2'	1:A:1172:G:C8	2.06	0.89
1:A:865:A:H4'	72:TB:2:THR:HG21	1.50	0.89
2:B:1203:A:H2'	2:B:1204:A:H8	1.30	0.89
2:B:149:U:H5"	19:S:54:LYS:HG3	1.54	0.89
11:K:110:ARG:CZ	22:V:3:ILE:HD11	2.02	0.89
27:AA:103:ALA:HA	27:AA:109:MET:HA	1.55	0.89
2:B:1719:G:H4'	2:B:1732:U:H4'	1.53	0.89
2:B:1838:G:H5"	2:B:1839:A:O4'	1.72	0.89
82:DC:730:LEU:HB2	82:DC:799:ASP:HB2	1.54	0.89
1:A:487:G:H2'	1:A:488:G:H5"	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:46:LYS:HB3	56:DB:119:GLN:HB2	1.54	0.89
82:DC:250:PHE:HZ	82:DC:255:LYS:HD3	1.36	0.89
7:G:280:HIS:HB3	7:G:324:VAL:HG21	1.54	0.89
18:R:78:THR:HA	18:R:81:VAL:HB	1.55	0.89
49:WA:136:ILE:H	49:WA:136:ILE:HD13	1.35	0.89
49:WA:188:ILE:HG13	49:WA:189:GLU:H	1.37	0.89
56:DB:137:ARG:HD3	56:DB:177:ARG:HD3	1.52	0.89
6:F:32:LEU:HB2	6:F:163:ARG:HH22	1.37	0.89
72:TB:26:LEU:HD21	72:TB:60:LYS:HB3	1.53	0.89
24:X:131:LYS:HB2	24:X:134:ASP:HB2	1.54	0.89
2:B:637:C:H2'	2:B:638:C:C6	2.08	0.89
29:CA:86:VAL:HG21	29:CA:95:ILE:HG12	1.54	0.89
2:B:3109:G:H1'	13:M:163:GLN:NE2	1.88	0.89
17:Q:92:THR:HG21	39:MA:111:PHE:HB3	1.53	0.89
61:IB:101:GLU:HB3	73:UB:12:ALA:HB3	1.55	0.89
77:YB:17:ARG:HG3	77:YB:18:LYS:H	1.38	0.89
2:B:409:A:H61	3:C:15:G:H1'	1.35	0.88
7:G:332:ARG:HD3	7:G:332:ARG:H	1.36	0.88
3:C:36:G:H3'	39:MA:86:ARG:HD2	1.54	0.88
18:R:123:LEU:HB3	20:T:194:LEU:HD21	1.54	0.88
2:B:2149:A:H5"	6:F:179:LEU:HD23	1.54	0.88
2:B:3300:U:H2'	2:B:3301:U:H5'	1.54	0.88
75:WB:98:GLN:HA	75:WB:98:GLN:HE21	1.38	0.88
51:YA:29:TRP:HH2	64:LB:76:ILE:HG13	1.37	0.88
2:B:2081:U:H2'	2:B:2082:U:H4'	1.55	0.88
3:C:154:C:H5"	12:L:181:LYS:HD3	1.56	0.88
51:YA:193:ILE:H	51:YA:193:ILE:HD12	1.36	0.88
82:DC:342:LEU:HD22	82:DC:343:PRO:HD2	1.56	0.88
8:H:280:ILE:HG22	22:V:105:ARG:HB3	1.52	0.88
12:L:178:ALA:HB2	12:L:218:ILE:HD13	1.56	0.88
1:A:569:C:H5	73:UB:69:ARG:HH22	1.18	0.88
73:UB:86:PHE:HB2	73:UB:120:VAL:HG11	1.55	0.88
1:A:1035:G:H4'	72:TB:2:THR:HA	1.55	0.88
1:A:1202:A:H61	1:A:1457:C:H5"	1.37	0.88
2:B:1336:U:H2'	2:B:1337:A:H8	1.36	0.88
24:X:141:LYS:HA	24:X:144:LEU:HD12	1.54	0.88
1:A:606:A:H1'	1:A:609:U:OP1	1.74	0.88
2:B:2160:G:H2'	2:B:2161:G:H8	1.37	0.88
7:G:293:ASN:HB2	7:G:304:THR:HA	1.56	0.88
10:J:46:ARG:NH1	10:J:46:ARG:HB2	1.88	0.88
2:B:1662:G:H4'	23:W:92:GLN:HE22	1.39	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:406:LYS:HB2	82:DC:409:GLN:HB2	1.55	0.88
40:NA:45:ARG:HH11	40:NA:45:ARG:HB3	1.37	0.88
59:GB:113:VAL:HG12	59:GB:125:ALA:HB1	1.54	0.87
17:Q:57:VAL:HG22	17:Q:147:ILE:HD12	1.55	0.87
74:VB:8:ARG:HB2	74:VB:26:ASP:HB3	1.55	0.87
1:A:1498:G:C2'	1:A:1499:G:H5"	2.03	0.87
1:A:690:G:H2'	1:A:691:C:C6	2.08	0.87
28:BA:20:LEU:HD21	28:BA:28:ILE:HG23	1.56	0.87
82:DC:35:LEU:HD11	82:DC:156:VAL:HG11	1.56	0.87
58:FB:156:VAL:HG13	58:FB:189:LEU:HD21	1.55	0.87
2:B:1234:G:N2	16:P:131:GLU:HB2	1.89	0.87
1:A:1201:G:N2	1:A:1600:A:H5'	1.89	0.87
6:F:80:GLU:HG2	47:UA:76:ALA:HB1	1.57	0.87
2:B:3046:A:H2	7:G:327:CYS:HG	1.22	0.87
71:SB:38:LYS:HD2	71:SB:49:GLU:HG3	1.55	0.87
22:V:82:VAL:HG23	22:V:139:ILE:HA	1.55	0.87
1:A:1451:C:H5"	79:AC:10:HIS:HB3	1.54	0.87
34:HA:86:ARG:HD3	47:UA:44:LYS:HE3	1.57	0.87
63:KB:108:ASP:HB3	63:KB:111:ALA:HB3	1.55	0.87
1:A:348:U:H4'	58:FB:14:THR:HG22	1.56	0.87
83:EC:6818:G:H3'	83:EC:6819:G:H4'	1.56	0.87
8:H:23:PRO:HD3	8:H:255:PHE:HE1	1.40	0.87
9:I:58:LYS:HD3	9:I:93:THR:HG21	1.56	0.87
13:M:176:LEU:HB3	44:RA:86:ALA:HB1	1.56	0.87
48:VA:28:VAL:HG21	48:VA:87:VAL:HG23	1.53	0.87
52:ZA:56:ILE:HG23	52:ZA:61:LEU:HB2	1.55	0.87
82:DC:306:VAL:HG23	82:DC:308:LYS:HE3	1.57	0.87
2:B:1108:U:H2'	2:B:1109:U:H6	1.39	0.87
2:B:2203:U:H2'	2:B:2204:C:C6	2.10	0.87
2:B:653:A:H4'	2:B:2361:A:H5"	1.56	0.87
2:B:629:U:H2'	2:B:630:A:C8	2.10	0.87
14:N:4:ARG:NH1	14:N:99:ILE:HG13	1.88	0.87
1:A:1067:C:H5'	51:YA:148:ASN:O	1.74	0.87
1:A:792:U:H2'	1:A:793:A:H5'	1.57	0.87
2:B:1828:A:H2'	2:B:1829:G:C8	2.10	0.87
82:DC:156:VAL:HG22	82:DC:210:ALA:HB3	1.56	0.87
82:DC:616:ALA:HB1	82:DC:627:VAL:HG23	1.57	0.87
16:P:123:ARG:HH12	48:VA:42:ARG:HB2	1.39	0.87
48:VA:111:ALA:HB1	48:VA:167:GLN:HA	1.54	0.87
74:VB:91:LEU:HB2	74:VB:96:LEU:HD22	1.55	0.87
51:YA:129:THR:HB	51:YA:180:THR:HA	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:879:U:H4'	21:U:132:ALA:HB3	1.54	0.87
5:E:67:ILE:HG13	5:E:144:LEU:HD13	1.54	0.87
9:I:104:LEU:HA	9:I:247:ILE:HG21	1.55	0.87
35:IA:55:LEU:HB2	35:IA:95:PRO:HD3	1.57	0.87
61:IB:75:VAL:O	61:IB:120:GLY:HA2	1.75	0.87
63:KB:4:MET:HG3	63:KB:5:HIS:H	1.40	0.87
48:VA:115:ALA:HB2	48:VA:165:VAL:HG23	1.56	0.87
2:B:2735:U:H4'	25:Y:51:GLY:H	1.38	0.87
2:B:2476:C:H2'	2:B:2477:G:H4'	1.55	0.86
58:FB:34:ALA:HB2	58:FB:56:ARG:HD2	1.57	0.86
7:G:166:ILE:HG21	7:G:174:LYS:HA	1.56	0.86
2:B:584:G:H4'	37:KA:46:GLY:HA3	1.57	0.86
80:BC:49:LEU:HD11	80:BC:55:ARG:HG3	1.58	0.86
82:DC:655:TYR:HB2	82:DC:693:LEU:HD13	1.55	0.86
31:EA:95:VAL:HG11	31:EA:113:VAL:HG21	1.56	0.86
59:GB:119:ALA:HB3	59:GB:125:ALA:HA	1.56	0.86
9:I:40:HIS:HD2	9:I:42:ALA:H	1.22	0.86
5:E:124:LEU:HD12	5:E:127:GLN:HB3	1.56	0.86
8:H:325:LEU:HD23	8:H:331:ALA:HB3	1.54	0.86
12:L:187:GLY:HA2	12:L:190:VAL:HG12	1.54	0.86
51:YA:172:LEU:O	51:YA:176:VAL:HG23	1.76	0.86
29:CA:57:LEU:HA	29:CA:61:LYS:HD2	1.57	0.86
8:H:300:ARG:HB2	8:H:301:PRO:HD2	1.56	0.86
2:B:1655:G:H5"	38:LA:58:ARG:HH21	1.38	0.86
21:U:4:TYR:HA	21:U:18:ARG:HH21	1.39	0.86
60:HB:29:GLN:HB3	60:HB:39:ASN:HB2	1.57	0.86
46:TA:26:THR:HG22	46:TA:27:GLN:H	1.39	0.86
1:A:252:U:H2'	1:A:253:A:H8	1.40	0.86
22:V:24:VAL:HA	22:V:27:LYS:HE2	1.56	0.86
25:Y:115:LYS:O	25:Y:119:ALA:HB3	1.76	0.86
1:A:654:C:H2'	1:A:655:G:H4'	1.58	0.86
2:B:3298:C:H2'	2:B:3299:A:H8	1.39	0.86
50:XA:41:ARG:HE	50:XA:45:VAL:HB	1.40	0.86
51:YA:134:VAL:HB	51:YA:219:LYS:HB2	1.56	0.86
2:B:2393:G:H4'	7:G:252:ILE:HD11	1.58	0.86
5:E:6:SER:HA	5:E:9:VAL:HB	1.55	0.86
32:FA:6:THR:HG22	32:FA:8:THR:H	1.40	0.86
59:GB:90:LYS:HG3	59:GB:95:TYR:HD2	1.40	0.86
61:IB:45:PRO:HG2	61:IB:48:ALA:HB2	1.57	0.86
2:B:2661:G:H2'	2:B:2662:G:H8	1.41	0.86
3:C:81:U:H4'	3:C:82:U:H5'	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:31:ARG:HB2	56:DB:34:GLN:HE21	1.41	0.86
31:EA:87:LEU:HG	31:EA:88:ASP:H	1.40	0.86
17:Q:7:LEU:HD23	17:Q:8:PRO:HD2	1.58	0.86
73:UB:73:ARG:HH21	73:UB:82:LYS:HG2	1.39	0.86
53:AB:137:VAL:HG22	53:AB:151:LYS:HB3	1.57	0.86
2:B:1257:C:H42	2:B:1261:G:H22	1.24	0.86
2:B:1967:U:H5"	2:B:1968:G:H5'	1.57	0.86
5:E:111:ILE:HG21	5:E:144:LEU:HD22	1.58	0.86
57:EB:185:ILE:H	57:EB:185:ILE:HD13	1.37	0.86
2:B:2549:G:H2'	12:L:33:ASN:HD21	1.41	0.86
2:B:979:U:H1'	2:B:980:A:N7	1.91	0.85
30:DA:43:TYR:HA	30:DA:125:LYS:HG2	1.56	0.85
82:DC:338:ILE:O	82:DC:342:LEU:HB3	1.76	0.85
47:UA:39:CYS:HB2	47:UA:47:VAL:HB	1.58	0.85
49:WA:133:VAL:HB	49:WA:142:ALA:HB3	1.56	0.85
1:A:830:U:H2'	1:A:831:U:C6	2.10	0.85
32:FA:43:ILE:H	32:FA:43:ILE:HD12	1.40	0.85
2:B:699:A:H2'	2:B:700:C:O4'	1.76	0.85
64:LB:14:PHE:HA	64:LB:78:ALA:HB3	1.57	0.85
19:S:150:TRP:CZ3	19:S:151:ILE:HG12	2.11	0.85
1:A:1293:U:H1'	50:XA:111:ILE:HG21	1.58	0.85
2:B:286:U:H2'	2:B:287:G:C8	2.11	0.85
1:A:629:U:H4'	2:B:846:A:N7	1.90	0.85
43:QA:41:ARG:HE	43:QA:41:ARG:HA	1.40	0.85
69:QB:130:ARG:HH11	69:QB:134:ARG:HB2	1.40	0.85
69:QB:134:ARG:HH11	69:QB:138:GLN:NE2	1.73	0.85
49:WA:309:VAL:HG12	49:WA:311:ARG:HG3	1.57	0.85
2:B:2700:G:H5"	25:Y:17:ARG:HD3	1.56	0.85
71:SB:64:GLU:HG3	77:YB:3:LEU:HD23	1.58	0.85
1:A:1519:U:H2'	1:A:1520:U:C5	2.12	0.85
5:E:33:GLU:HG3	5:E:207:LYS:HD3	1.59	0.85
7:G:161:LEU:HA	7:G:180:GLU:HA	1.58	0.85
34:HA:77:LEU:HD23	34:HA:88:GLY:HA2	1.59	0.85
2:B:3353:G:H2'	2:B:3354:U:H5"	1.59	0.85
2:B:431:U:H2'	2:B:432:G:C8	2.11	0.85
54:BB:195:ILE:HG22	54:BB:196:VAL:H	1.40	0.85
54:BB:234:PRO:HG2	54:BB:238:LEU:HD11	1.58	0.85
82:DC:77:LEU:HD23	82:DC:100:ILE:HB	1.59	0.85
82:DC:806:SER:HB3	82:DC:813:SER:HB2	1.57	0.85
32:FA:14:HIS:HA	36:JA:36:LYS:HE3	1.57	0.85
21:U:78:VAL:HG12	21:U:79:THR:H	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:5:ARG:HA	48:VA:8:LYS:HD3	1.58	0.85
2:B:1308:A:H62	2:B:2367:A:H2	1.25	0.85
2:B:2909:U:H3'	2:B:2910:A:H5"	1.58	0.85
82:DC:823:ARG:HH11	82:DC:823:ARG:HB3	1.42	0.85
57:EB:86:GLN:HG2	57:EB:87:ASP:H	1.40	0.85
8:H:92:ASN:HB2	8:H:100:PHE:N	1.90	0.85
2:B:185:C:H2'	2:B:186:U:O4'	1.77	0.85
2:B:2960:C:H2'	2:B:2961:G:C8	2.11	0.85
2:B:417:A:H2'	2:B:418:A:C8	2.12	0.85
82:DC:20:ARG:HB3	82:DC:100:ILE:HG23	1.59	0.85
61:IB:93:TYR:HE2	61:IB:95:PRO:HA	1.42	0.85
2:B:1521:G:H5'	29:CA:71:THR:HG21	1.56	0.85
34:HA:33:SER:HB2	34:HA:93:LEU:HD21	1.58	0.85
38:LA:72:VAL:HG22	38:LA:77:GLY:HA2	1.58	0.85
2:B:2796:G:H2'	46:TA:62:ALA:HB1	1.56	0.85
72:TB:79:PHE:O	72:TB:124:LYS:HA	1.77	0.85
54:BB:34:GLY:HA3	54:BB:83:PRO:HG3	1.56	0.84
55:CB:61:TYR:HB3	55:CB:165:LEU:HD21	1.57	0.84
49:WA:7:LEU:HG	49:WA:315:VAL:HG13	1.57	0.84
29:CA:58:ASP:O	29:CA:62:VAL:HG23	1.76	0.84
17:Q:115:ARG:HB2	17:Q:115:ARG:HH11	1.40	0.84
24:X:78:TRP:HB3	24:X:124:LEU:HB2	1.56	0.84
2:B:1604:G:H4'	2:B:1835:A:H4'	1.59	0.84
2:B:2210:G:C2	2:B:2236:G:H1'	2.12	0.84
2:B:2626:A:H1'	2:B:2644:C:H5'	1.58	0.84
51:YA:120:LEU:HD21	51:YA:122:GLU:HG3	1.59	0.84
1:A:1371:A:H1'	1:A:1373:C:OP2	1.77	0.84
2:B:1921:A:H61	2:B:1929:G:H2'	1.40	0.84
2:B:649:A:H4'	2:B:2869:U:H4'	1.59	0.84
82:DC:829:LYS:HA	82:DC:829:LYS:HE3	1.58	0.84
12:L:166:LEU:HB2	12:L:167:PRO:HD3	1.59	0.84
12:L:75:ILE:HG22	12:L:76:ALA:H	1.43	0.84
2:B:1000:C:H42	2:B:1046:A:H62	1.26	0.84
5:E:93:LEU:HG	5:E:100:ILE:HD11	1.59	0.84
19:S:8:GLU:HG3	19:S:50:ARG:HH22	1.43	0.84
78:ZB:12:VAL:HG12	78:ZB:50:GLU:HA	1.57	0.84
1:A:741:C:O2'	1:A:742:U:H5"	1.78	0.84
31:EA:54:THR:H	31:EA:57:HIS:HB2	1.40	0.84
36:JA:71:HIS:HB3	36:JA:93:ALA:HB2	1.58	0.84
64:LB:29:HIS:CB	64:LB:41:ARG:HA	2.06	0.84
69:QB:134:ARG:HH11	69:QB:138:GLN:HE22	1.23	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:40:LYS:O	52:ZA:44:LEU:HB2	1.77	0.84
2:B:1779:C:O2	23:W:90:PRO:HD2	1.77	0.84
58:FB:197:THR:HA	58:FB:200:LYS:HD2	1.57	0.84
1:A:1350:U:H5'	66:NB:68:ARG:HH11	1.42	0.84
49:WA:169:ILE:HD11	49:WA:181:TRP:HB2	1.58	0.84
2:B:2395:G:H4'	7:G:258:ALA:HB1	1.56	0.84
5:E:67:ILE:CG1	5:E:144:LEU:HD13	2.07	0.84
7:G:37:ARG:HG3	7:G:186:GLY:HA2	1.57	0.84
50:XA:98:ILE:HD11	50:XA:116:LYS:HG3	1.57	0.84
1:A:992:A:C2'	1:A:993:A:H5'	2.08	0.84
2:B:2982:A:O2'	2:B:2983:C:H5"	1.78	0.84
60:HB:1:MET:HB3	60:HB:3:MET:HE1	1.60	0.84
38:LA:62:TYR:HB3	38:LA:70:LYS:HD3	1.59	0.84
20:T:78:ARG:HA	20:T:78:ARG:HE	1.42	0.84
48:VA:114:VAL:O	48:VA:116:PRO:HD3	1.77	0.84
2:B:2909:U:C3'	2:B:2910:A:H5"	2.08	0.84
82:DC:220:PHE:HB3	82:DC:328:LEU:HD23	1.60	0.84
1:A:143:G:H2'	1:A:144:U:H5"	1.57	0.83
1:A:503:G:H2'	1:A:504:U:C6	2.13	0.83
55:CB:97:LEU:HG	55:CB:114:ILE:HD11	1.58	0.83
18:R:123:LEU:HD22	20:T:194:LEU:HG	1.59	0.83
50:XA:112:THR:HG23	50:XA:115:PHE:HB2	1.60	0.83
1:A:1792:G:H3'	1:A:1793:G:H5"	1.60	0.83
1:A:454:U:H4'	54:BB:62:LYS:HE3	1.59	0.83
60:HB:12:HIS:NE2	60:HB:49:LEU:HD21	1.92	0.83
66:NB:29:ILE:HG12	66:NB:65:ILE:HG13	1.58	0.83
44:RA:80:PRO:HG3	48:VA:168:SER:OG	1.76	0.83
19:S:139:HIS:CD2	19:S:141:ALA:HB3	2.13	0.83
76:XB:84:VAL:HG22	76:XB:86:VAL:N	1.93	0.83
4:D:55:A:H2	15:O:134:PRO:HB2	1.42	0.83
30:DA:33:ALA:HB3	30:DA:50:ILE:HD11	1.60	0.83
82:DC:150:ARG:HA	82:DC:197:LEU:HD11	1.60	0.83
23:W:14:VAL:HG22	23:W:38:ARG:HD2	1.58	0.83
2:B:1097:G:H4'	25:Y:129:LYS:HE2	1.59	0.83
82:DC:32:LYS:O	82:DC:36:THR:HG23	1.76	0.83
57:EB:135:ILE:HD13	57:EB:152:VAL:HG11	1.60	0.83
48:VA:115:ALA:HB3	48:VA:163:ASN:O	1.79	0.83
2:B:584:G:H2'	2:B:585:A:C8	2.13	0.83
82:DC:213:SER:OG	82:DC:216:HIS:HB2	1.78	0.83
82:DC:413:ILE:HD11	82:DC:459:ILE:HD11	1.58	0.83
2:B:2402:A:H5"	8:H:67:THR:OG1	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:99:PRO:HB3	11:K:130:ILE:HG22	1.61	0.83
1:A:1454:G:H4'	65:MB:122:THR:HG21	1.61	0.83
1:A:839:U:H2'	1:A:840:U:H5"	1.58	0.83
2:B:247:C:H2'	2:B:248:U:H4'	1.59	0.83
34:HA:44:ILE:HG21	34:HA:53:LYS:HG3	1.61	0.83
73:UB:71:CYS:HB3	73:UB:85:ALA:O	1.79	0.83
2:B:707:U:C2'	2:B:708:G:H5"	2.08	0.83
82:DC:164:LEU:HD21	82:DC:174:LEU:HD22	1.59	0.83
10:J:146:ILE:HA	10:J:149:ILE:HD12	1.60	0.83
16:P:119:LYS:HG3	16:P:121:PHE:HE2	1.44	0.83
49:WA:177:MET:HG2	49:WA:193:ILE:HG12	1.60	0.83
1:A:144:U:O2'	1:A:145:A:H5'	1.78	0.83
2:B:2571:U:H1'	2:B:2572:C:H2'	1.57	0.83
57:EB:130:VAL:HA	57:EB:162:ILE:HD11	1.59	0.83
49:WA:221:MET:HG2	49:WA:233:THR:HG23	1.59	0.83
2:B:3275:U:H3'	2:B:3276:G:H5"	1.60	0.83
2:B:3295:A:H2'	2:B:3296:A:C8	2.13	0.83
5:E:196:LYS:HD3	5:E:200:ASN:HD21	1.42	0.83
7:G:215:ILE:HD12	7:G:338:LEU:HD12	1.61	0.83
22:V:64:VAL:HA	22:V:67:ILE:HD12	1.60	0.83
48:VA:52:LEU:HB3	48:VA:86:PHE:HD2	1.43	0.83
1:A:828:U:H2'	1:A:829:A:H5"	1.60	0.83
6:F:3:ARG:HG2	6:F:4:VAL:H	1.44	0.83
2:B:2881:C:H4'	7:G:249:VAL:HG13	1.60	0.83
17:Q:89:TYR:O	17:Q:93:ILE:HG12	1.79	0.83
1:A:1693:A:H2	1:A:1709:C:H42	1.27	0.82
82:DC:248:SER:HA	82:DC:259:ASN:HA	1.59	0.82
12:L:62:LYS:HE2	12:L:63:LYS:N	1.92	0.82
15:O:54:VAL:HB	15:O:59:ILE:HG13	1.60	0.82
1:A:100:A:H2'	1:A:101:U:H5'	1.61	0.82
2:B:1223:A:H62	2:B:1285:G:H21	1.27	0.82
2:B:70:A:H2	2:B:72:C:N4	1.75	0.82
83:EC:6890:A:H2'	83:EC:6891:G:C8	2.14	0.82
39:MA:21:LEU:HB2	39:MA:54:VAL:HG11	1.60	0.82
69:QB:65:ILE:HD11	69:QB:122:ARG:O	1.79	0.82
49:WA:137:LYS:HA	49:WA:137:LYS:HE3	1.59	0.82
50:XA:64:ILE:HD12	50:XA:64:ILE:H	1.44	0.82
51:YA:48:VAL:HG12	51:YA:49:ASN:H	1.41	0.82
1:A:55:A:C6	1:A:403:G:H1'	2.13	0.82
2:B:109:A:H4'	2:B:110:G:H5'	1.59	0.82
63:KB:37:ILE:HD13	63:KB:71:ILE:HG23	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:82:GLY:O	69:QB:93:HIS:HA	1.79	0.82
22:V:65:SER:HA	22:V:93:ILE:HD13	1.61	0.82
1:A:1281:G:H4'	70:RB:76:SER:H	1.44	0.82
2:B:2922:G:H3'	2:B:2923:U:H5"	1.60	0.82
3:C:154:C:H2'	3:C:155:A:C8	2.14	0.82
57:EB:109:VAL:HG13	57:EB:110:GLN:H	1.42	0.82
11:K:151:ARG:HG3	11:K:244:ASN:ND2	1.94	0.82
2:B:1655:G:H5"	38:LA:58:ARG:NH2	1.93	0.82
70:RB:66:SER:HB2	70:RB:81:THR:HB	1.61	0.82
19:S:159:ARG:HA	19:S:162:ARG:HH21	1.43	0.82
51:YA:111:ARG:HB3	76:XB:68:TYR:HB2	1.59	0.82
25:Y:17:ARG:NH2	25:Y:47:SER:HB3	1.94	0.82
1:A:1297:G:H2'	1:A:1299:G:OP2	1.77	0.82
1:A:697:C:H3'	1:A:698:U:H5"	1.61	0.82
15:O:48:SER:HB2	15:O:66:ALA:O	1.79	0.82
15:O:46:VAL:HG12	15:O:68:HIS:O	1.79	0.82
2:B:2661:G:H2'	2:B:2662:G:C8	2.14	0.82
82:DC:140:GLU:HA	82:DC:188:ILE:HD13	1.61	0.82
31:EA:89:VAL:HG22	31:EA:93:LYS:HB2	1.61	0.82
7:G:296:THR:HG22	7:G:299:ASP:HB2	1.60	0.82
2:B:1921:A:N6	2:B:1929:G:H2'	1.95	0.82
2:B:268:A:N1	2:B:295:A:H5'	1.94	0.82
2:B:3327:G:H2'	2:B:3328:G:H8	1.43	0.82
55:CB:187:ILE:HD12	55:CB:187:ILE:H	1.43	0.82
9:I:91:GLY:HA3	9:I:94:ASN:HD22	1.45	0.82
15:O:138:VAL:HA	15:O:141:ARG:HD3	1.60	0.82
52:ZA:59:HIS:HE1	52:ZA:236:PRO:HB2	1.42	0.82
1:A:886:U:O2'	64:LB:122:PRO:HA	1.79	0.82
2:B:2896:A:C8	2:B:2896:A:H5'	2.15	0.82
2:B:3163:A:C2'	2:B:3164:C:H5"	2.09	0.82
60:HB:25:LYS:HD2	60:HB:59:PHE:CZ	2.15	0.82
71:SB:36:VAL:HB	71:SB:51:VAL:HB	1.61	0.82
2:B:2741:C:H4'	46:TA:19:LYS:HA	1.62	0.82
2:B:990:U:H2'	2:B:991:G:H5"	1.62	0.82
82:DC:135:VAL:HG21	82:DC:184:SER:HB3	1.59	0.82
8:H:60:THR:HG22	8:H:62:ALA:H	1.44	0.82
52:ZA:110:HIS:HE1	71:SB:11:LEU:HD22	1.45	0.82
25:Y:143:THR:HG23	25:Y:144:GLU:H	1.44	0.82
78:ZB:33:LEU:HD11	78:ZB:53:ILE:HG21	1.60	0.82
1:A:1187:U:H2'	1:A:1188:G:H8	1.42	0.81
1:A:884:A:H2'	1:A:885:G:H8	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3317:U:H5"	2:B:3318:G:H5'	1.62	0.81
31:EA:13:VAL:HB	31:EA:19:ALA:HA	1.62	0.81
4:D:57:G:H1'	15:O:138:VAL:HG21	1.61	0.81
13:M:93:VAL:HG22	44:RA:82:LEU:HD22	1.61	0.81
2:B:763:G:H3'	2:B:764:U:H5"	1.60	0.81
2:B:811:U:H2'	2:B:812:G:C8	2.15	0.81
54:BB:193:GLY:HA2	54:BB:212:ASP:HA	1.61	0.81
22:V:94:PHE:CE2	32:FA:119:PRO:HD3	2.14	0.81
7:G:293:ASN:HD22	7:G:304:THR:HG22	1.45	0.81
42:PA:31:LEU:H	42:PA:31:LEU:HD23	1.45	0.81
2:B:2131:A:H61	47:UA:18:TYR:H	1.28	0.81
2:B:2266:U:H2'	2:B:2267:C:C6	2.14	0.81
2:B:3028:G:H5"	82:DC:28:VAL:HG11	1.62	0.81
2:B:873:C:H4'	2:B:1907:C:O2'	1.81	0.81
80:BC:20:LYS:HE2	80:BC:20:LYS:HA	1.59	0.81
6:F:117:GLU:HG3	6:F:163:ARG:H	1.45	0.81
8:H:23:PRO:HB3	8:H:259:ASP:HA	1.63	0.81
12:L:139:VAL:HA	12:L:142:LEU:HB2	1.62	0.81
71:SB:60:ARG:HA	71:SB:65:SER:HB2	1.60	0.81
2:B:841:A:H4'	23:W:126:GLU:HA	1.62	0.81
54:BB:128:LYS:HA	54:BB:156:VAL:HG13	1.62	0.81
1:A:162:A:OP1	56:DB:82:SER:HB2	1.80	0.81
6:F:82:VAL:HG22	47:UA:65:ALA:HB2	1.62	0.81
2:B:151:A:H5"	39:MA:102:GLU:HG3	1.62	0.81
2:B:1517:G:H5"	43:QA:22:PRO:HG2	1.61	0.81
56:DB:62:PRO:HG2	56:DB:97:VAL:HG13	1.62	0.81
8:H:126:ILE:HG13	8:H:238:LEU:HD13	1.62	0.81
12:L:33:ASN:HB3	12:L:38:GLN:NE2	1.95	0.81
49:WA:178:VAL:HB	49:WA:192:PHE:HB2	1.61	0.81
2:B:120:G:H4'	2:B:121:A:O4'	1.79	0.81
4:D:51:A:H2'	4:D:52:G:O4'	1.79	0.81
32:FA:121:VAL:H	32:FA:141:ALA:HB1	1.46	0.81
9:I:107:ARG:NH1	9:I:248:ARG:HH22	1.79	0.81
2:B:1216:C:H2'	2:B:1217:A:H4'	1.63	0.81
31:EA:26:VAL:HG22	31:EA:42:LEU:O	1.81	0.81
66:NB:34:SER:HB3	69:QB:7:ARG:HB3	1.61	0.81
66:NB:24:ALA:HB2	66:NB:92:TYR:OH	1.81	0.81
16:P:88:PRO:HB2	16:P:89:PRO:HD3	1.63	0.81
19:S:117:ASN:ND2	19:S:166:ALA:H	1.78	0.81
52:ZA:85:PRO:HB3	52:ZA:98:PHE:HD1	1.43	0.81
1:A:617:U:H5'	1:A:1031:U:O4'	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:82:LEU:HD13	60:HB:87:VAL:HG11	1.63	0.81
22:V:71:LEU:HD13	22:V:97:PRO:HG2	1.62	0.81
1:A:250:C:H5'	1:A:250:C:H6	1.46	0.81
4:D:55:A:C2	15:O:134:PRO:HB2	2.16	0.81
82:DC:126:LEU:HA	82:DC:154:VAL:CB	2.09	0.81
40:NA:26:ILE:HD12	40:NA:26:ILE:H	1.45	0.81
48:VA:27:VAL:HB	48:VA:189:GLN:HB3	1.62	0.81
49:WA:88:THR:HG22	49:WA:104:VAL:HG13	1.62	0.81
78:ZB:19:THR:O	78:ZB:23:GLY:HA2	1.81	0.81
53:AB:74:GLN:HB2	53:AB:84:ILE:HG13	1.61	0.81
2:B:2643:A:H2'	2:B:2645:G:H5"	1.62	0.81
82:DC:725:GLN:HG2	82:DC:801:TRP:HB3	1.63	0.81
59:GB:109:LEU:HB2	59:GB:146:PHE:HB3	1.62	0.81
9:I:163:LEU:HD11	9:I:175:HIS:CD2	2.15	0.81
35:IA:46:THR:HG23	35:IA:91:SER:HB2	1.63	0.81
61:IB:22:ASN:HD21	61:IB:24:LYS:HB3	1.45	0.81
20:T:140:LYS:HE3	20:T:140:LYS:HA	1.62	0.81
1:A:780:A:C8	74:VB:8:ARG:HB3	2.16	0.81
1:A:1636:C:C4'	1:A:1637:C:H5'	2.11	0.81
2:B:2343:C:H2'	2:B:2344:U:C6	2.16	0.81
7:G:211:GLN:NE2	7:G:285:VAL:HG23	1.96	0.81
37:KA:49:ILE:HD11	37:KA:71:VAL:HG23	1.60	0.81
13:M:30:PRO:HD2	13:M:83:THR:HG22	1.59	0.81
9:I:294:ALA:HB1	14:N:217:PHE:HB3	1.63	0.81
15:O:15:GLU:HB3	15:O:130:VAL:HG13	1.61	0.81
18:R:12:TRP:NE1	24:X:153:PRO:HG3	1.96	0.81
2:B:1039:U:H2'	2:B:1040:A:C8	2.16	0.80
2:B:548:G:H2'	2:B:549:U:C6	2.16	0.80
67:OB:61:ILE:HG23	67:OB:66:VAL:HG21	1.63	0.80
16:P:78:SER:HA	16:P:117:ARG:HE	1.44	0.80
54:BB:39:ARG:HH11	54:BB:39:ARG:HB3	1.43	0.80
82:DC:633:ILE:HG22	82:DC:647:ILE:HD11	1.63	0.80
82:DC:710:ARG:HG2	82:DC:711:ARG:N	1.95	0.80
1:A:386:G:H5"	58:FB:23:LYS:HE2	1.62	0.80
9:I:34:LYS:HE2	9:I:38:THR:HG21	1.63	0.80
2:B:2563:G:H4'	12:L:27:THR:HG23	1.62	0.80
16:P:123:ARG:NH1	48:VA:42:ARG:HB2	1.96	0.80
17:Q:74:GLY:HA3	17:Q:98:ASP:N	1.94	0.80
19:S:148:TYR:HA	19:S:150:TRP:NE1	1.96	0.80
77:YB:33:LEU:CD2	77:YB:81:ARG:HA	2.11	0.80
1:A:830:U:H2'	1:A:831:U:H6	1.43	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1108:U:H2'	2:B:1109:U:C6	2.15	0.80
2:B:1336:U:H2'	2:B:1337:A:C8	2.15	0.80
2:B:3037:U:H2'	2:B:3038:U:C6	2.15	0.80
12:L:89:GLU:HG2	12:L:92:LYS:HZ1	1.46	0.80
39:MA:78:LYS:HG2	39:MA:81:ARG:HH22	1.46	0.80
74:VB:35:VAL:HG21	74:VB:40:LEU:HD21	1.62	0.80
23:W:45:VAL:HG22	23:W:50:ILE:HB	1.63	0.80
29:CA:131:ASP:HB3	29:CA:134:ASP:HB2	1.63	0.80
31:EA:10:VAL:HG13	31:EA:23:VAL:O	1.81	0.80
2:B:2551:U:O4	6:F:95:SER:HB3	1.80	0.80
60:HB:27:PHE:HB3	60:HB:40:LEU:HD11	1.61	0.80
61:IB:142:VAL:HG12	61:IB:143:SER:H	1.46	0.80
66:NB:41:PRO:O	66:NB:42:GLU:HB3	1.80	0.80
19:S:12:ARG:H	19:S:12:ARG:HD2	1.46	0.80
1:A:913:G:H3'	1:A:914:G:H5'	1.62	0.80
29:CA:81:ILE:HG22	29:CA:125:ARG:HA	1.61	0.80
5:E:24:LYS:HG2	5:E:25:LYS:H	1.47	0.80
11:K:124:LEU:HA	11:K:127:LEU:HD12	1.64	0.80
12:L:75:ILE:HA	12:L:78:PHE:HE1	1.44	0.80
2:B:1230:G:O3'	48:VA:34:SER:HA	1.81	0.80
2:B:655:C:H2'	2:B:656:A:C8	2.16	0.80
5:E:4:ILE:HD13	5:E:4:ILE:H	1.46	0.80
66:NB:9:THR:HB	66:NB:87:LYS:HD2	1.64	0.80
2:B:805:G:H2'	2:B:936:A:H61	1.47	0.80
31:EA:134:LEU:HD12	31:EA:136:PHE:HB3	1.63	0.80
2:B:911:C:H3'	6:F:9:ARG:NH1	1.96	0.80
59:GB:133:HIS:O	59:GB:134:ILE:HG12	1.82	0.80
70:RB:24:ILE:HD12	70:RB:91:ILE:HB	1.64	0.80
20:T:6:VAL:HA	20:T:32:LYS:O	1.81	0.80
1:A:1340:U:H3'	1:A:1341:A:C5'	2.11	0.80
83:EC:6820:C:H3'	83:EC:6821:U:H5"	1.62	0.80
61:IB:111:VAL:HB	61:IB:139:VAL:HG21	1.64	0.80
22:V:34:THR:HA	22:V:49:LEU:HD11	1.64	0.80
2:B:3322:A:H2'	2:B:3323:A:H8	1.47	0.80
65:MB:108:ARG:HB2	68:PB:119:ILE:HD11	1.63	0.80
21:U:168:LEU:H	21:U:168:LEU:HD12	1.47	0.80
48:VA:112:GLY:HA2	48:VA:165:VAL:O	1.80	0.80
1:A:200:A:H2'	1:A:201:G:C8	2.17	0.80
2:B:1110:U:H2'	2:B:1111:U:C6	2.16	0.80
82:DC:19:VAL:HG13	82:DC:21:ASN:HD22	1.45	0.80
39:MA:17:LEU:HD13	39:MA:58:ILE:HG12	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1579:U:O2'	66:NB:139:GLN:HA	1.82	0.80
82:DC:727:PRO:O	82:DC:774:VAL:HG23	1.81	0.79
7:G:56:ILE:HG12	7:G:57:VAL:H	1.46	0.79
35:IA:26:LYS:HA	35:IA:26:LYS:HE2	1.64	0.79
25:Y:14:MET:HG3	25:Y:15:PHE:CD2	2.18	0.79
52:ZA:59:HIS:CD2	52:ZA:239:PRO:HD3	2.17	0.79
70:RB:65:ILE:HD11	79:AC:34:TYR:HE2	1.45	0.79
2:B:266:A:N6	40:NA:30:LYS:HA	1.96	0.79
2:B:3362:A:H2'	2:B:3363:U:O4'	1.82	0.79
28:BA:14:TYR:HD1	28:BA:15:PRO:HD2	1.45	0.79
3:C:107:G:H4'	3:C:138:A:H5'	1.63	0.79
82:DC:588:LEU:HD13	82:DC:686:VAL:HG13	1.61	0.79
58:FB:84:HIS:CE1	58:FB:86:SER:HB2	2.16	0.79
16:P:105:GLN:HA	16:P:142:ARG:HA	1.64	0.79
42:PA:69:LEU:HD21	42:PA:75:VAL:HG21	1.64	0.79
1:A:864:U:H3'	72:TB:28:ARG:HH12	1.45	0.79
2:B:1257:C:H1'	16:P:123:ARG:NE	1.97	0.79
2:B:3174:A:H2'	2:B:3175:U:H5'	1.65	0.79
2:B:657:A:H5'	3:C:17:A:O2'	1.82	0.79
2:B:763:G:H3'	2:B:764:U:C5'	2.12	0.79
29:CA:72:ALA:O	29:CA:76:VAL:HG23	1.82	0.79
31:EA:6:LYS:HA	31:EA:6:LYS:HE2	1.64	0.79
63:KB:33:VAL:HG11	63:KB:66:ILE:HG12	1.63	0.79
74:VB:14:SER:HA	74:VB:21:LYS:HG3	1.65	0.79
24:X:9:VAL:HG22	24:X:61:ILE:HD12	1.63	0.79
1:A:829:A:H4'	1:A:830:U:H5'	1.63	0.79
2:B:821:U:H2'	2:B:822:G:H8	1.45	0.79
54:BB:220:THR:HB	54:BB:224:ASN:ND2	1.96	0.79
54:BB:59:ARG:HH11	54:BB:60:GLU:HG2	1.47	0.79
31:EA:9:LYS:HB3	31:EA:25:ILE:HD12	1.64	0.79
57:EB:117:THR:HG22	57:EB:120:ALA:HB2	1.64	0.79
9:I:153:THR:HG22	9:I:179:ARG:HE	1.46	0.79
14:N:11:TYR:HB2	14:N:13:LYS:HE3	1.63	0.79
72:TB:39:GLN:O	72:TB:43:LYS:HB2	1.82	0.79
49:WA:176:LYS:HB3	49:WA:195:HIS:HB2	1.63	0.79
1:A:1106:U:H2'	1:A:1107:G:H8	1.45	0.79
2:B:1162:U:H2'	2:B:1163:A:H5"	1.64	0.79
2:B:1232:C:C5	2:B:1261:G:H2'	2.18	0.79
2:B:2129:U:H2'	2:B:2130:G:H8	1.47	0.79
2:B:2193:U:H5'	2:B:2194:G:H5'	1.63	0.79
2:B:2510:U:O2'	2:B:2511:A:H5'	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:74:ALA:HB2	82:DC:103:ILE:HG22	1.62	0.79
40:NA:64:SER:HB2	40:NA:68:ARG:HH21	1.47	0.79
15:O:47:GLN:HA	15:O:67:VAL:HG12	1.64	0.79
17:Q:39:ARG:HB2	17:Q:51:LEU:HD11	1.64	0.79
43:QA:48:LYS:HA	43:QA:48:LYS:HE3	1.64	0.79
18:R:35:ILE:HG21	18:R:44:VAL:HB	1.62	0.79
1:A:1060:U:H2'	1:A:1061:A:H4'	1.65	0.79
53:AB:200:LYS:HE3	53:AB:200:LYS:HA	1.64	0.79
2:B:2494:A:H2'	2:B:2495:C:H5"	1.65	0.79
35:IA:37:LYS:HA	35:IA:49:VAL:HG11	1.64	0.79
4:D:39:C:H4'	15:O:44:THR:OG1	1.83	0.79
74:VB:106:GLN:HG3	74:VB:107:GLN:OE1	1.83	0.79
2:B:3011:A:N3	2:B:3012:A:H1'	1.98	0.79
64:LB:69:ALA:O	64:LB:73:GLU:HG2	1.83	0.79
25:Y:96:ILE:HG22	25:Y:97:LYS:N	1.96	0.79
1:A:199:G:O2'	1:A:200:A:H5'	1.82	0.79
1:A:487:G:H1	1:A:500:C:H42	1.30	0.79
27:AA:15:LEU:H	27:AA:15:LEU:HD12	1.47	0.79
2:B:88:A:H2'	2:B:89:A:O4'	1.83	0.79
82:DC:835:TRP:O	82:DC:839:TYR:HB2	1.83	0.79
5:E:134:PHE:CZ	5:E:137:PRO:HD3	2.17	0.79
61:IB:78:THR:HA	61:IB:84:ILE:HG22	1.63	0.79
18:R:49:PRO:HG3	18:R:81:VAL:HG12	1.65	0.79
1:A:354:C:H2'	1:A:355:G:H8	1.47	0.79
1:A:625:C:H2'	1:A:626:U:C6	2.17	0.79
2:B:1581:C:H2'	2:B:1582:C:H5'	1.63	0.79
2:B:715:A:H5"	32:FA:133:LEU:HD22	1.64	0.79
82:DC:218:TRP:HB3	82:DC:324:MET:HB3	1.64	0.79
82:DC:681:MET:HB3	82:DC:684:VAL:HG21	1.65	0.79
14:N:43:VAL:HG21	14:N:197:VAL:HB	1.65	0.79
2:B:1489:A:H2'	2:B:1490:A:H8	1.48	0.79
2:B:787:G:H2'	2:B:788:C:C6	2.17	0.79
2:B:807:A:H2	2:B:808:A:C8	2.01	0.79
82:DC:338:ILE:HG12	82:DC:342:LEU:HG	1.64	0.79
11:K:98:LYS:HE2	11:K:129:LEU:HD11	1.65	0.79
64:LB:47:LYS:NZ	64:LB:63:ALA:HA	1.98	0.79
65:MB:98:ASN:HB2	65:MB:122:THR:HA	1.64	0.79
72:TB:34:ILE:O	72:TB:38:LEU:HG	1.83	0.79
23:W:31:GLU:O	23:W:34:GLN:HG2	1.82	0.79
9:I:69:ILE:HG23	25:Y:31:LEU:HB2	1.65	0.79
52:ZA:165:VAL:HG11	52:ZA:210:THR:HA	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1792:G:H3'	1:A:1793:G:C5'	2.13	0.78
2:B:24:G:C2'	2:B:25:U:H5'	2.13	0.78
2:B:269:G:N2	2:B:294:U:H2'	1.97	0.78
82:DC:423:LYS:HG3	82:DC:426:LEU:HD23	1.65	0.78
58:FB:62:THR:O	58:FB:78:ILE:HG13	1.83	0.78
11:K:184:LEU:HD23	11:K:188:ILE:HD13	1.65	0.78
1:A:1534:G:H21	1:A:1535:U:H3	1.28	0.78
1:A:1653:C:H4'	45:SA:21:ARG:HD2	1.66	0.78
1:A:989:U:H2'	1:A:990:C:O4'	1.83	0.78
2:B:1301:A:H4'	2:B:1302:A:O5'	1.82	0.78
2:B:3108:G:N2	13:M:163:GLN:HE22	1.81	0.78
3:C:4:C:H5'	21:U:61:ARG:HB3	1.64	0.78
61:IB:67:ARG:N	61:IB:67:ARG:HD3	1.98	0.78
1:A:410:A:H2'	1:A:411:C:O4'	1.82	0.78
2:B:1286:A:H4'	2:B:1287:A:H4'	1.64	0.78
2:B:2131:A:H2'	2:B:2132:C:H5'	1.65	0.78
59:GB:29:LYS:HA	80:BC:40:TYR:CE2	2.18	0.78
34:HA:31:VAL:HG12	34:HA:35:ARG:HE	1.46	0.78
4:D:15:C:H4'	9:I:8:LYS:HD2	1.63	0.78
35:IA:59:ILE:O	35:IA:67:VAL:HG12	1.83	0.78
15:O:14:ILE:H	15:O:14:ILE:HD12	1.48	0.78
46:TA:9:LYS:HA	46:TA:21:THR:O	1.83	0.78
21:U:166:VAL:HG13	21:U:168:LEU:HD11	1.66	0.78
1:A:147:A:H2'	1:A:148:A:C8	2.18	0.78
2:B:3023:U:H4'	82:DC:162:ARG:NH1	1.96	0.78
2:B:920:A:H5"	2:B:922:U:H3	1.47	0.78
9:I:134:ALA:HB2	9:I:141:PRO:HD3	1.64	0.78
1:A:1190:C:H4'	1:A:1191:U:H5'	1.65	0.78
82:DC:697:ALA:HA	82:DC:700:ARG:HB3	1.64	0.78
7:G:51:ALA:HA	7:G:314:TYR:CD2	2.18	0.78
38:LA:41:ARG:HG2	38:LA:56:THR:HG21	1.64	0.78
1:A:123:G:H21	54:BB:146:THR:HG21	1.48	0.78
2:B:2764:C:N4	2:B:2794:G:H1	1.80	0.78
2:B:627:U:H2'	2:B:628:A:C8	2.19	0.78
1:A:629:U:H1'	2:B:846:A:N6	1.97	0.78
54:BB:43:PRO:HB2	54:BB:46:VAL:HG23	1.65	0.78
82:DC:489:VAL:O	82:DC:490:GLN:HG3	1.83	0.78
82:DC:823:ARG:HH12	82:DC:828:MET:HB2	1.48	0.78
7:G:39:LYS:O	7:G:185:GLY:HA2	1.84	0.78
8:H:188:ARG:HG3	8:H:190:GLY:H	1.47	0.78
9:I:22:ARG:HD3	9:I:28:THR:OG1	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:40:LEU:HD23	10:J:86:ALA:HA	1.64	0.78
12:L:183:LYS:HA	12:L:186:LEU:HD12	1.65	0.78
12:L:69:LEU:HD12	12:L:69:LEU:H	1.47	0.78
22:V:19:PRO:C	22:V:21:SER:H	1.86	0.78
50:XA:102:PHE:CZ	50:XA:135:GLU:HG3	2.18	0.78
1:A:101:U:H2'	1:A:102:U:H5'	1.65	0.78
2:B:1221:A:H3'	2:B:1222:G:C5'	2.13	0.78
2:B:1421:G:H2'	2:B:1422:G:H8	1.47	0.78
38:LA:5:VAL:HG22	38:LA:6:THR:H	1.47	0.78
1:A:1004:U:H3'	1:A:1005:A:C5'	2.12	0.78
1:A:1272:U:H2'	1:A:1275:A:OP2	1.83	0.78
1:A:1524:A:H2'	1:A:1525:A:C8	2.18	0.78
2:B:3040:A:H5"	27:AA:12:ARG:HB2	1.66	0.78
3:C:104:A:H5'	3:C:105:A:H8	1.47	0.78
55:CB:46:TRP:HE1	55:CB:122:ASN:ND2	1.82	0.78
82:DC:488:VAL:HB	82:DC:796:MET:HE3	1.66	0.78
13:M:48:VAL:HG11	13:M:52:LEU:HD23	1.66	0.78
17:Q:42:ARG:HD3	17:Q:51:LEU:HD23	1.65	0.78
71:SB:55:LEU:HD11	71:SB:69:LEU:HG	1.63	0.78
73:UB:24:TRP:HE3	73:UB:30:LYS:HD2	1.47	0.78
24:X:12:ARG:HD2	24:X:22:PRO:HD2	1.65	0.78
3:C:19:C:H2'	3:C:20:U:O4'	1.84	0.78
82:DC:39:LEU:HD22	82:DC:331:ALA:N	1.99	0.78
13:M:28:VAL:HA	13:M:33:THR:HG22	1.65	0.78
19:S:19:LEU:HG	19:S:22:LEU:HD22	1.65	0.78
1:A:962:C:H5"	63:KB:72:MET:SD	2.24	0.78
28:BA:17:ARG:HG2	28:BA:18:GLY:H	1.47	0.78
29:CA:119:THR:HG22	29:CA:120:LYS:H	1.48	0.78
82:DC:414:GLN:HB2	82:DC:468:THR:HB	1.66	0.78
6:F:216:HIS:O	6:F:217:GLN:HB2	1.82	0.78
32:FA:79:TRP:HE1	32:FA:119:PRO:HD2	1.47	0.78
1:A:1503:A:H2'	1:A:1504:G:O4'	1.83	0.77
2:B:1934:G:C2'	2:B:1935:G:H5"	2.12	0.77
56:DB:5:ILE:HG21	56:DB:50:PHE:CE1	2.19	0.77
6:F:48:ILE:HD11	47:UA:54:ILE:HG23	1.66	0.77
8:H:92:ASN:HB2	8:H:100:PHE:H	1.47	0.77
34:HA:45:ALA:HB2	34:HA:77:LEU:HD22	1.65	0.77
13:M:114:VAL:HB	13:M:124:ARG:HB3	1.66	0.77
25:Y:51:GLY:HA3	25:Y:92:ARG:HG3	1.65	0.77
1:A:320:U:H3'	1:A:321:C:C5'	2.14	0.77
27:AA:33:ASN:H	27:AA:33:ASN:HD22	1.30	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1155:C:H2'	2:B:1156:C:C6	2.19	0.77
2:B:2205:U:H2'	2:B:2206:G:H5'	1.66	0.77
2:B:2897:A:H5"	44:RA:125:LYS:CG	2.15	0.77
15:O:60:ARG:HB2	15:O:60:ARG:NH1	1.99	0.77
1:A:981:U:O2'	1:A:982:U:H5'	1.83	0.77
2:B:1216:C:H2'	2:B:1217:A:C4'	2.14	0.77
2:B:1830:G:H5"	29:CA:92:LYS:HD3	1.65	0.77
2:B:1906:G:H21	2:B:1909:A:H61	1.30	0.77
54:BB:220:THR:HB	54:BB:224:ASN:HD22	1.50	0.77
1:A:142:G:H5"	56:DB:139:ASN:ND2	1.99	0.77
82:DC:382:VAL:HG11	82:DC:396:ALA:HB1	1.66	0.77
7:G:94:GLU:HG2	7:G:99:LEU:HD21	1.64	0.77
39:MA:77:PRO:HD2	39:MA:80:LEU:HD12	1.67	0.77
23:W:96:ILE:HG12	23:W:100:ARG:HH22	1.48	0.77
2:B:1892:G:H2'	2:B:1893:A:H5"	1.65	0.77
55:CB:94:THR:HG22	55:CB:114:ILE:HG21	1.67	0.77
56:DB:21:GLU:HA	56:DB:24:ILE:HD12	1.67	0.77
59:GB:141:VAL:HG12	59:GB:143:ILE:H	1.50	0.77
59:GB:90:LYS:HG3	59:GB:95:TYR:CD2	2.19	0.77
2:B:1210:U:H5'	13:M:63:LYS:HE3	1.66	0.77
50:XA:84:ARG:HD2	50:XA:205:ARG:HB3	1.66	0.77
1:A:1674:C:H2'	1:A:1675:C:C6	2.19	0.77
2:B:290:G:H2'	2:B:291:C:C6	2.19	0.77
2:B:6:A:H61	3:C:153:U:H3	1.32	0.77
82:DC:20:ARG:HB2	82:DC:100:ILE:HA	1.64	0.77
34:HA:74:ASN:HD22	34:HA:75:ASN:N	1.82	0.77
2:B:1233:G:H4'	16:P:120:SER:CB	2.14	0.77
19:S:16:SER:HG	19:S:19:LEU:HB2	1.48	0.77
52:ZA:168:ARG:O	52:ZA:198:THR:HA	1.84	0.77
53:AB:137:VAL:HG13	53:AB:151:LYS:HG2	1.65	0.77
2:B:2210:G:N2	2:B:2236:G:C1'	2.47	0.77
2:B:2993:G:H4'	21:U:79:THR:HG22	1.66	0.77
2:B:916:G:C5	6:F:207:VAL:HG21	2.20	0.77
14:N:42:THR:HG22	14:N:45:GLU:HG3	1.67	0.77
68:PB:100:THR:HG22	68:PB:108:LYS:HG2	1.65	0.77
49:WA:300:THR:HA	49:WA:314:GLN:HG2	1.65	0.77
2:B:2567:C:H3'	2:B:2568:C:H5"	1.66	0.77
55:CB:128:ASN:HD22	55:CB:129:PRO:HD2	1.50	0.77
82:DC:288:ILE:HG21	82:DC:320:LEU:HB2	1.67	0.77
6:F:128:ARG:O	6:F:169:ILE:HD13	1.85	0.77
6:F:32:LEU:HA	6:F:36:GLU:CG	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:184:LYS:HG2	14:N:190:VAL:HG23	1.66	0.77
16:P:106:LEU:H	16:P:142:ARG:CG	1.97	0.77
16:P:85:LEU:HD11	16:P:106:LEU:HD22	1.67	0.77
46:TA:28:TYR:HB3	46:TA:69:VAL:HB	1.66	0.77
74:VB:29:HIS:NE2	74:VB:69:SER:HB2	2.00	0.77
51:YA:171:ILE:HD12	51:YA:197:ILE:HD13	1.67	0.77
1:A:751:G:H2'	1:A:752:A:O4'	1.85	0.77
1:A:968:U:H5"	1:A:1033:C:O2'	1.85	0.77
2:B:3051:U:H1'	27:AA:92:PHE:CE1	2.19	0.77
2:B:274:G:H2'	2:B:275:U:C6	2.20	0.77
2:B:650:C:H2'	2:B:651:G:C8	2.19	0.77
29:CA:113:LEU:HD23	29:CA:121:LYS:HD2	1.65	0.77
14:N:67:ALA:O	14:N:70:ILE:HG22	1.85	0.77
68:PB:82:PRO:HB2	68:PB:85:PHE:HB2	1.65	0.77
17:Q:67:ARG:HD3	17:Q:68:LYS:N	2.00	0.77
19:S:100:ALA:O	19:S:104:GLU:HG2	1.85	0.77
23:W:10:LEU:O	23:W:14:VAL:HG23	1.84	0.77
2:B:105:C:H2'	2:B:106:A:H8	1.48	0.77
2:B:2736:A:H2'	2:B:2737:C:H5"	1.65	0.77
59:GB:92:LYS:HA	59:GB:92:LYS:HE3	1.67	0.77
34:HA:41:LEU:HB3	34:HA:92:ILE:HB	1.65	0.77
16:P:128:VAL:O	16:P:131:GLU:HG2	1.84	0.77
19:S:15:GLN:HG3	40:NA:52:PRO:HD2	1.65	0.77
50:XA:119:ARG:HD2	52:ZA:240:LEU:HB3	1.67	0.77
2:B:2511:A:H2'	2:B:2512:C:H6	1.50	0.77
2:B:2775:U:H2'	2:B:2776:C:H6	1.48	0.77
82:DC:564:ARG:HG3	82:DC:682:ARG:HB2	1.66	0.77
6:F:5:ILE:HG22	6:F:208:ASP:O	1.84	0.77
72:TB:52:TYR:HA	72:TB:61:ILE:HG12	1.66	0.77
76:XB:51:ARG:HD2	78:ZB:38:ARG:HG3	1.66	0.77
2:B:2632:G:H5"	25:Y:12:ARG:HB2	1.66	0.77
1:A:1485:C:H2'	1:A:1486:G:C4'	2.11	0.76
2:B:1724:U:H1'	2:B:1725:C:C6	2.19	0.76
28:BA:14:TYR:CD1	28:BA:15:PRO:HD2	2.20	0.76
58:FB:43:ILE:HG12	58:FB:57:ALA:HA	1.66	0.76
7:G:158:VAL:HG21	7:G:188:ILE:HG23	1.67	0.76
13:M:86:TYR:CE1	13:M:151:VAL:HG13	2.20	0.76
41:OA:21:ARG:HD2	41:OA:39:TYR:HB2	1.65	0.76
19:S:8:GLU:HG3	19:S:50:ARG:NH2	1.99	0.76
48:VA:29:GLY:HA2	48:VA:84:VAL:HA	1.65	0.76
75:WB:50:ILE:O	75:WB:54:VAL:HG22	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:96:G:H5'	1:A:460:A:O2'	1.85	0.76
1:A:852:C:H2'	1:A:853:G:H4'	1.67	0.76
54:BB:19:LEU:HD21	54:BB:108:ARG:HD2	1.67	0.76
54:BB:195:ILE:HG22	54:BB:196:VAL:N	1.99	0.76
8:H:93:MET:H	8:H:93:MET:HE3	1.50	0.76
13:M:115:ARG:HH21	13:M:123:ILE:HA	1.50	0.76
13:M:21:LYS:HG2	18:R:8:LYS:HG2	1.67	0.76
14:N:77:THR:HA	14:N:81:GLY:O	1.85	0.76
72:TB:65:LEU:H	72:TB:65:LEU:HD13	1.50	0.76
1:A:823:G:H5'	1:A:824:G:H8	1.48	0.76
2:B:1005:G:H2'	2:B:1006:A:H5"	1.65	0.76
2:B:1750:A:H4'	2:B:1751:G:H5'	1.67	0.76
2:B:242:C:H3'	39:MA:115:LYS:NZ	2.00	0.76
29:CA:105:VAL:HG11	29:CA:126:LEU:HD22	1.68	0.76
82:DC:382:VAL:HG13	82:DC:397:PHE:H	1.47	0.76
11:K:145:ARG:NH1	11:K:145:ARG:HB3	1.99	0.76
10:J:170:LYS:HG2	37:KA:34:GLY:HA3	1.66	0.76
10:J:172:HIS:HB3	37:KA:43:PHE:HD2	1.51	0.76
19:S:117:ASN:HD22	19:S:165:THR:HB	1.50	0.76
46:TA:35:LEU:HD23	46:TA:36:PHE:N	2.00	0.76
51:YA:30:PHE:HD1	51:YA:94:LYS:HA	1.51	0.76
1:A:1282:U:H2'	1:A:1283:U:C6	2.21	0.76
2:B:1464:G:H1'	2:B:1511:U:H3	1.51	0.76
2:B:1742:U:H2'	2:B:1743:G:C8	2.20	0.76
2:B:3011:A:O3'	2:B:3012:A:H4'	1.86	0.76
2:B:3036:G:H2'	2:B:3037:U:H5'	1.67	0.76
58:FB:24:LYS:H	58:FB:24:LYS:HD2	1.48	0.76
12:L:100:GLU:OE2	12:L:108:ARG:HD3	1.84	0.76
78:ZB:16:LEU:HD13	78:ZB:64:ARG:HH21	1.49	0.76
1:A:1615:C:H5"	1:A:1616:G:O5'	1.84	0.76
1:A:1681:A:H1'	56:DB:66:GLY:CA	2.16	0.76
2:B:1553:U:H4'	2:B:1554:U:H5'	1.67	0.76
2:B:2076:G:H2'	2:B:2077:U:H5"	1.65	0.76
7:G:60:LEU:HD11	7:G:62:ARG:HE	1.48	0.76
9:I:40:HIS:CD2	9:I:42:ALA:H	2.03	0.76
14:N:54:SER:HB2	14:N:163:GLN:HE22	1.51	0.76
50:XA:76:ILE:HD12	50:XA:98:ILE:HB	1.67	0.76
1:A:770:A:H3'	1:A:771:A:C5'	2.14	0.76
1:A:884:A:H5"	51:YA:136:ARG:NH2	2.00	0.76
2:B:179:C:H2'	2:B:180:C:C6	2.20	0.76
82:DC:496:LYS:HD2	82:DC:553:PRO:HB3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:74:LYS:H	58:FB:109:PHE:HZ	1.32	0.76
59:GB:92:LYS:O	59:GB:93:LEU:HD23	1.85	0.76
37:KA:31:LYS:NZ	37:KA:31:LYS:HA	2.00	0.76
12:L:45:ASN:OD1	29:CA:26:VAL:HG23	1.86	0.76
44:RA:79:GLU:O	44:RA:83:LYS:HG3	1.85	0.76
21:U:98:ALA:HB2	21:U:148:LEU:HD11	1.68	0.76
52:ZA:76:LEU:HG	52:ZA:105:GLY:HA2	1.66	0.76
1:A:1067:C:H5"	51:YA:150:VAL:HG23	1.67	0.76
1:A:1106:U:H2'	1:A:1107:G:C8	2.20	0.76
1:A:697:C:H3'	1:A:698:U:C5'	2.16	0.76
2:B:1663:C:H2'	2:B:1664:G:C8	2.21	0.76
2:B:3298:C:H2'	2:B:3299:A:C8	2.19	0.76
82:DC:823:ARG:HH12	82:DC:828:MET:CB	1.98	0.76
59:GB:37:LYS:HB3	80:BC:33:ARG:HA	1.66	0.76
34:HA:74:ASN:HD22	34:HA:75:ASN:H	1.33	0.76
11:K:191:VAL:HG13	11:K:195:PHE:HD1	1.49	0.76
14:N:141:LYS:HD3	14:N:142:ASP:N	2.01	0.76
17:Q:138:VAL:HG12	17:Q:140:SER:H	1.50	0.76
48:VA:30:VAL:HG22	48:VA:31:ASP:H	1.49	0.76
1:A:1146:G:H4'	52:ZA:90:THR:HA	1.66	0.76
2:B:608:A:H5'	8:H:322:GLN:OE1	1.85	0.76
2:B:291:C:H5"	19:S:68:ARG:NH1	2.00	0.76
2:B:398:A:H5'	21:U:3:ARG:HD2	1.68	0.76
52:ZA:174:ARG:HA	52:ZA:195:ASP:OD2	1.84	0.76
2:B:2357:A:H2'	2:B:2358:A:H8	1.50	0.76
55:CB:89:ILE:HG22	55:CB:92:ARG:HH21	1.51	0.76
35:IA:23:VAL:HB	35:IA:28:ARG:HG3	1.67	0.76
51:YA:69:CYS:CB	64:LB:114:ARG:HD3	2.15	0.76
2:B:3113:A:H1'	13:M:70:THR:OG1	1.84	0.76
19:S:128:LYS:HB3	19:S:130:PHE:CE2	2.21	0.76
74:VB:27:VAL:HB	74:VB:69:SER:HB3	1.67	0.76
49:WA:166:SER:HA	49:WA:184:ASN:HD21	1.49	0.76
1:A:1042:G:H2'	1:A:1043:A:H5"	1.67	0.76
2:B:1281:G:H5'	48:VA:55:LYS:HB3	1.67	0.76
2:B:1805:C:H2'	2:B:1806:A:H8	1.51	0.76
29:CA:80:ASN:CA	29:CA:132:ALA:HB2	2.12	0.76
30:DA:63:LYS:HE3	30:DA:63:LYS:HA	1.68	0.76
56:DB:98:ARG:HD3	56:DB:99:GLY:N	2.01	0.76
5:E:128:LEU:HD23	5:E:135:PRO:HG3	1.68	0.76
9:I:244:HIS:O	9:I:248:ARG:HG3	1.86	0.76
37:KA:13:HIS:CE1	37:KA:89:LEU:HD22	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:684:G:H5”	17:Q:35:ARG:HH12	1.49	0.76
1:A:1382:A:OP1	70:RB:60:THR:HG22	1.85	0.76
50:XA:59:LEU:O	50:XA:63:ILE:HG13	1.85	0.76
1:A:407:A:H2’	1:A:408:C:H6	1.50	0.75
27:AA:137:VAL:HG12	28:BA:28:ILE:HD11	1.66	0.75
2:B:1729:A:N6	47:UA:42:CYS:HA	2.01	0.75
2:B:2154:U:H2’	2:B:2155:G:H8	1.51	0.75
2:B:499:G:H2’	2:B:500:C:C6	2.20	0.75
2:B:623:U:H4’	37:KA:86:ARG:HH21	1.50	0.75
6:F:113:VAL:CG1	6:F:166:ILE:HD13	2.16	0.75
11:K:47:ARG:NH2	11:K:179:LEU:HD11	2.01	0.75
17:Q:102:GLN:HE21	17:Q:102:GLN:HA	1.50	0.75
26:Z:96:VAL:HG12	26:Z:97:SER:H	1.51	0.75
2:B:2638:C:H2’	2:B:2639:G:O4’	1.87	0.75
2:B:2775:U:H4’	2:B:2777:G:H22	1.48	0.75
2:B:3190:C:H2’	2:B:3191:G:C8	2.21	0.75
54:BB:188:ASN:HD22	54:BB:220:THR:HG23	1.51	0.75
55:CB:71:ALA:HB1	55:CB:91:GLU:HA	1.67	0.75
57:EB:162:ILE:HG22	57:EB:165:LYS:HD2	1.67	0.75
57:EB:62:VAL:HG11	57:EB:67:LEU:HA	1.67	0.75
2:B:2139:A:C4	41:OA:3:LYS:HE2	2.21	0.75
49:WA:170:ILE:HD11	49:WA:204:ALA:HB2	1.69	0.75
76:XB:84:VAL:HG13	76:XB:85:ARG:N	1.98	0.75
52:ZA:133:LYS:O	52:ZA:136:VAL:HG23	1.86	0.75
2:B:1121:U:H2’	2:B:1122:U:C6	2.21	0.75
2:B:2882:U:H2’	2:B:2883:U:H6	1.50	0.75
83:EC:6890:A:H2’	83:EC:6891:G:H8	1.51	0.75
2:B:209:A:H2’	8:H:162:THR:HG21	1.67	0.75
63:KB:76:LYS:HA	63:KB:81:ALA:HB2	1.68	0.75
46:TA:7:THR:HA	46:TA:23:HIS:O	1.85	0.75
76:XB:85:ARG:O	76:XB:86:VAL:HG12	1.87	0.75
77:YB:36:LYS:HD3	77:YB:36:LYS:H	1.52	0.75
52:ZA:65:GLU:HB2	52:ZA:68:ILE:HG13	1.68	0.75
2:B:105:C:H2’	2:B:106:A:C8	2.21	0.75
54:BB:59:ARG:NH1	54:BB:60:GLU:HG2	2.01	0.75
30:DA:102:SER:OG	30:DA:103:LYS:HE3	1.85	0.75
82:DC:538:LEU:O	82:DC:542:LEU:HG	1.86	0.75
2:B:2486:A:H62	5:E:101:LYS:NZ	1.84	0.75
31:EA:134:LEU:HB3	31:EA:136:PHE:CD1	2.21	0.75
15:O:132:ASN:HD22	15:O:136:ALA:HB2	1.51	0.75
17:Q:74:GLY:N	17:Q:98:ASP:HB2	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:91:GLU:HB3	48:VA:92:PRO:HD2	1.67	0.75
1:A:1287:A:H4'	1:A:1288:G:H5'	1.67	0.75
1:A:606:A:C8	1:A:608:U:H2'	2.22	0.75
2:B:1649:U:H2'	2:B:1650:G:O4'	1.85	0.75
2:B:2924:U:H2'	2:B:2925:C:H5'	1.68	0.75
83:EC:6908:C:H3'	83:EC:6909:A:H5"	1.67	0.75
60:HB:32:HIS:HE1	60:HB:35:ILE:HD12	1.50	0.75
14:N:55:ASN:HB2	14:N:164:LYS:HD3	1.69	0.75
17:Q:98:ASP:CG	17:Q:101:ARG:HB2	2.06	0.75
18:R:80:THR:HG22	18:R:84:LYS:CG	2.16	0.75
1:A:1016:C:H2'	1:A:1017:U:C6	2.22	0.75
2:B:1639:C:H41	38:LA:73:SER:HB2	1.50	0.75
2:B:2356:A:H61	2:B:2983:C:H5	1.34	0.75
2:B:296:A:H3'	2:B:297:G:N2	1.99	0.75
2:B:3286:G:C2'	2:B:3287:U:H5"	2.13	0.75
2:B:65:A:H5"	2:B:66:A:H4'	1.69	0.75
1:A:450:U:H5"	54:BB:7:LYS:HD3	1.68	0.75
57:EB:168:SER:O	57:EB:172:VAL:HG23	1.86	0.75
7:G:198:HIS:HA	7:G:201:LYS:HB3	1.68	0.75
4:D:62:U:H5"	9:I:277:LEU:HD22	1.67	0.75
36:JA:101:SER:HB3	36:JA:104:ASN:HB2	1.68	0.75
1:A:1604:U:H5"	66:NB:129:PHE:HA	1.69	0.75
69:QB:100:ILE:O	69:QB:104:VAL:HG23	1.87	0.75
69:QB:104:VAL:O	69:QB:108:LEU:HG	1.87	0.75
18:R:49:PRO:HG2	18:R:50:LYS:H	1.52	0.75
20:T:14:HIS:ND1	20:T:19:LEU:HD22	2.02	0.75
48:VA:8:LYS:H	48:VA:8:LYS:HD2	1.50	0.75
54:BB:94:ALA:HB1	74:VB:16:PRO:HB2	1.68	0.75
2:B:1771:C:H2'	2:B:1772:U:H5'	1.67	0.75
2:B:3170:A:H2'	2:B:3171:U:C6	2.22	0.75
55:CB:77:TYR:O	55:CB:84:LYS:HG3	1.85	0.75
2:B:335:G:H5"	30:DA:9:SER:HB2	1.69	0.75
5:E:205:VAL:HG12	5:E:215:ARG:HA	1.66	0.75
58:FB:72:ILE:HG21	58:FB:112:TRP:CZ2	2.22	0.75
58:FB:184:LEU:HD11	58:FB:188:GLU:HB2	1.69	0.75
33:GA:38:LYS:HA	33:GA:41:ARG:NH1	2.01	0.75
8:H:359:LEU:CD2	24:X:64:ILE:HG12	2.17	0.75
36:JA:86:THR:HG23	36:JA:115:LEU:HD22	1.69	0.75
2:B:517:G:H5'	11:K:67:ARG:NH2	2.01	0.75
15:O:17:LEU:HD23	15:O:71:VAL:HB	1.67	0.75
41:OA:47:TYR:HB3	41:OA:49:TRP:NE1	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:45:MET:SD	69:QB:46:PRO:HD2	2.27	0.75
18:R:66:THR:HG22	18:R:68:LEU:HD23	1.66	0.75
72:TB:24:GLN:HB3	72:TB:64:GLN:HG3	1.67	0.75
2:B:879:U:O2'	21:U:131:ARG:HB3	1.87	0.75
48:VA:16:ARG:HG3	48:VA:64:ARG:NH1	2.02	0.75
1:A:1169:G:H21	1:A:1576:A:H62	1.34	0.75
83:EC:6825:A:H2'	83:EC:6826:U:C5	2.21	0.75
70:RB:42:VAL:O	70:RB:46:GLU:HB2	1.87	0.75
19:S:139:HIS:HD2	19:S:142:ILE:HD13	1.52	0.75
18:R:120:VAL:HG22	20:T:197:LEU:HD22	1.69	0.75
72:TB:29:PRO:HB2	72:TB:58:SER:HB2	1.69	0.75
2:B:990:U:H1'	25:Y:101:CYS:HB3	1.66	0.75
77:YB:31:TYR:CE2	77:YB:33:LEU:HD21	2.22	0.75
77:YB:81:ARG:HG2	77:YB:82:LYS:HG3	1.68	0.75
1:A:72:A:H3'	1:A:73:U:H5"	1.68	0.75
2:B:1567:U:H3'	2:B:1568:U:C5'	2.16	0.75
2:B:3309:G:H3'	2:B:3310:A:H8	1.52	0.75
2:B:344:A:H2'	2:B:345:G:O4'	1.87	0.75
54:BB:43:PRO:HD2	54:BB:46:VAL:HG21	1.66	0.75
4:D:119:U:H2'	4:D:120:C:C6	2.21	0.75
59:GB:129:ILE:O	59:GB:142:ASN:HA	1.85	0.75
63:KB:22:ALA:CB	63:KB:23:PRO:HA	2.16	0.75
1:A:959:U:H1'	63:KB:61:THR:HB	1.68	0.75
68:PB:86:LEU:HG	68:PB:99:HIS:HB2	1.69	0.75
17:Q:2:ALA:HA	32:FA:33:GLY:H	1.50	0.75
1:A:1475:A:H2'	1:A:1476:C:C6	2.22	0.74
27:AA:10:LYS:N	27:AA:10:LYS:HE2	2.02	0.74
2:B:2747:A:H2'	2:B:2748:A:C8	2.22	0.74
2:B:830:A:H2'	2:B:831:G:O4'	1.86	0.74
31:EA:104:PRO:HA	31:EA:107:ARG:HB2	1.68	0.74
57:EB:143:LEU:HD23	57:EB:147:ASN:HB3	1.69	0.74
2:B:2178:A:H5"	6:F:132:ASN:ND2	2.02	0.74
14:N:51:HIS:O	14:N:165:ILE:HB	1.87	0.74
18:R:21:VAL:HB	18:R:63:VAL:HG22	1.68	0.74
22:V:147:ARG:CB	22:V:147:ARG:HH11	2.00	0.74
1:A:1235:C:H2'	1:A:1236:A:H8	1.52	0.74
1:A:138:A:H61	1:A:266:A:H61	1.35	0.74
1:A:886:U:H2'	1:A:887:A:C8	2.22	0.74
2:B:2186:U:O2'	2:B:2187:G:H5'	1.87	0.74
2:B:2353:G:H2'	2:B:2354:C:C6	2.22	0.74
55:CB:118:LEU:HD23	55:CB:121:ILE:HD12	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:296:THR:CG2	7:G:299:ASP:H	2.00	0.74
10:J:38:THR:HA	10:J:90:LYS:HA	1.69	0.74
14:N:49:CYS:HB2	14:N:172:GLY:CA	2.17	0.74
40:NA:5:THR:HG23	40:NA:12:ASN:HB2	1.69	0.74
52:ZA:41:LEU:HD23	52:ZA:61:LEU:HD13	1.67	0.74
2:B:3262:U:H2'	2:B:3263:G:C4'	2.16	0.74
2:B:646:A:H2'	2:B:647:A:O4'	1.87	0.74
30:DA:86:THR:HG22	30:DA:96:PRO:HA	1.69	0.74
2:B:3176:G:OP1	37:KA:6:ARG:HD3	1.86	0.74
68:PB:54:LEU:HD13	68:PB:54:LEU:H	1.52	0.74
12:L:162:LEU:HD23	19:S:7:LEU:HD21	1.70	0.74
72:TB:36:LYS:O	72:TB:40:VAL:HG23	1.86	0.74
2:B:1606:U:O4	38:LA:9:ARG:HG3	1.87	0.74
2:B:2921:U:H2'	2:B:2923:U:C5'	2.17	0.74
2:B:2953:U:H2'	2:B:2954:U:H2'	1.68	0.74
2:B:3191:G:H2'	2:B:3192:U:O4'	1.86	0.74
54:BB:169:ILE:HD12	54:BB:169:ILE:H	1.53	0.74
6:F:103:PRO:HB3	6:F:161:ASP:HA	1.68	0.74
17:Q:74:GLY:HA3	17:Q:98:ASP:H	1.50	0.74
23:W:93:VAL:O	23:W:96:ILE:HG22	1.86	0.74
24:X:104:GLU:O	24:X:108:GLN:HG2	1.87	0.74
1:A:7:G:H2'	1:A:8:U:H5"	1.70	0.74
53:AB:210:GLU:HG2	53:AB:211:PRO:HD2	1.68	0.74
2:B:1567:U:C3'	2:B:1568:U:H5"	2.16	0.74
2:B:1783:U:H2'	2:B:1784:G:C8	2.22	0.74
2:B:2129:U:H2'	2:B:2130:G:C8	2.23	0.74
2:B:296:A:O2'	2:B:297:G:H5'	1.87	0.74
30:DA:39:LEU:HD11	30:DA:107:THR:O	1.88	0.74
2:B:215:G:H5"	30:DA:12:ARG:NH1	2.00	0.74
57:EB:130:VAL:HA	57:EB:162:ILE:CD1	2.17	0.74
6:F:134:VAL:HG12	6:F:150:LEU:HA	1.69	0.74
32:FA:85:ASP:OD1	32:FA:86:LYS:HG2	1.86	0.74
13:M:45:PHE:HB3	13:M:55:VAL:HA	1.69	0.74
40:NA:9:ILE:HA	40:NA:13:LYS:HG3	1.67	0.74
72:TB:81:VAL:HG11	72:TB:86:ILE:HG23	1.67	0.74
2:B:2681:U:H4'	15:O:66:ALA:HB3	1.69	0.74
2:B:676:G:N2	22:V:61:PRO:HG3	2.02	0.74
3:C:13:A:H1'	21:U:120:ASN:OD1	1.88	0.74
7:G:278:ILE:HG22	7:G:279:ASN:H	1.52	0.74
39:MA:34:GLN:HB3	39:MA:38:ARG:HH22	1.52	0.74
1:A:1241:G:H1'	65:MB:79:HIS:HB2	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:77:THR:HG22	14:N:82:ARG:HA	1.69	0.74
25:Y:92:ARG:HB3	25:Y:94:GLU:OE2	1.88	0.74
52:ZA:145:GLY:HA2	72:TB:98:GLN:HG2	1.70	0.74
1:A:1281:G:H4'	70:RB:76:SER:N	2.02	0.74
27:AA:85:TRP:HZ2	27:AA:121:GLU:HG3	1.52	0.74
2:B:2203:U:H2'	2:B:2204:C:C5	2.23	0.74
54:BB:182:TYR:HE2	54:BB:190:GLY:HA2	1.49	0.74
4:D:27:A:H2'	4:D:28:C:H6	1.50	0.74
82:DC:27:HIS:ND1	82:DC:28:VAL:HG12	2.03	0.74
6:F:79:ASN:O	6:F:82:VAL:HG13	1.87	0.74
9:I:51:LEU:HA	9:I:64:ILE:HG12	1.68	0.74
10:J:66:SER:HB3	10:J:76:LEU:HD23	1.68	0.74
11:K:90:LYS:HB3	11:K:133:TYR:HB3	1.69	0.74
16:P:114:ARG:NH2	16:P:121:PHE:HB3	2.01	0.74
42:PA:8:ILE:HG23	42:PA:65:LEU:HD11	1.68	0.74
22:V:88:THR:HG22	22:V:107:THR:HG21	1.69	0.74
1:A:1525:A:H2'	1:A:1526:A:C8	2.23	0.74
1:A:632:U:H5"	73:UB:10:ASN:O	1.87	0.74
2:B:1668:G:H2'	2:B:1669:C:C6	2.23	0.74
2:B:962:A:O2'	2:B:963:G:H5'	1.88	0.74
57:EB:16:LEU:O	57:EB:20:VAL:HG23	1.87	0.74
53:AB:71:LEU:HB2	60:HB:20:VAL:HG21	1.69	0.74
9:I:58:LYS:HE2	9:I:58:LYS:H	1.53	0.74
65:MB:81:ARG:HA	65:MB:116:LEU:HB2	1.69	0.74
2:B:1256:G:O2'	16:P:123:ARG:HB3	1.87	0.74
2:B:1534:A:H2'	2:B:1535:A:C8	2.22	0.74
2:B:181:U:H3'	2:B:182:U:H5"	1.70	0.74
2:B:1948:G:H5'	23:W:101:VAL:CG1	2.10	0.74
3:C:8:C:H2'	3:C:9:A:C8	2.22	0.74
56:DB:159:ARG:HG2	56:DB:172:ALA:HB2	1.70	0.74
82:DC:399:ARG:HB2	82:DC:453:ILE:HG13	1.70	0.74
23:W:185:LEU:HD11	57:EB:42:GLN:NE2	2.02	0.74
15:O:13:LYS:H	15:O:13:LYS:HD3	1.52	0.74
19:S:128:LYS:HD2	19:S:130:PHE:CZ	2.23	0.74
19:S:136:ASP:OD1	19:S:139:HIS:HB2	1.87	0.74
19:S:16:SER:OG	19:S:19:LEU:HB2	1.88	0.74
19:S:53:TYR:OH	19:S:55:ALA:HA	1.88	0.74
2:B:617:G:H4'	21:U:171:ARG:NE	2.01	0.74
1:A:885:G:H2'	1:A:886:U:C6	2.22	0.74
2:B:1450:G:H22	2:B:2354:C:H42	1.34	0.74
2:B:2185:G:H2'	2:B:2186:U:C6	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2486:A:H62	5:E:101:LYS:HZ1	1.36	0.74
4:D:4:U:H2'	4:D:5:G:H8	1.53	0.74
82:DC:718:LEU:HA	82:DC:722:PRO:HG3	1.67	0.74
2:B:2943:G:N7	7:G:2:SER:HB3	2.02	0.74
9:I:148:ILE:HG23	9:I:151:GLN:HB2	1.68	0.74
43:QA:3:ALA:H	43:QA:5:LYS:HE2	1.50	0.74
19:S:73:ARG:NE	19:S:92:LEU:HD21	1.96	0.74
73:UB:52:ILE:O	73:UB:74:VAL:HG13	1.87	0.74
1:A:1587:A:H1'	55:CB:104:ASN:HD22	1.53	0.73
1:A:606:A:H4'	1:A:607:G:H3'	1.70	0.73
2:B:631:U:H2'	2:B:632:G:C8	2.23	0.73
2:B:767:U:H4'	17:Q:186:ARG:HH12	1.50	0.73
54:BB:118:GLU:HG3	54:BB:121:TYR:HE1	1.53	0.73
82:DC:262:THR:HB	82:DC:266:GLY:HA2	1.70	0.73
82:DC:436:LEU:HG	82:DC:445:ILE:HG21	1.68	0.73
21:U:168:LEU:HB3	21:U:172:GLN:HG2	1.71	0.73
73:UB:109:ARG:HB3	73:UB:112:LYS:HB2	1.69	0.73
50:XA:109:ASN:OD1	50:XA:111:ILE:HG22	1.88	0.73
50:XA:197:ILE:HG13	50:XA:198:MET:H	1.51	0.73
1:A:158:U:O2'	1:A:159:U:H3'	1.88	0.73
1:A:735:C:HO2'	1:A:736:C:H6	1.37	0.73
1:A:895:G:H1	1:A:917:U:H3	1.36	0.73
53:AB:70:THR:HG22	53:AB:86:LEU:HD13	1.70	0.73
2:B:334:A:H61	3:C:29:U:H3	1.36	0.73
2:B:916:G:HO2'	2:B:917:A:H8	1.36	0.73
3:C:53:A:H2'	3:C:54:A:O4'	1.88	0.73
3:C:69:U:H2'	3:C:70:G:O4'	1.88	0.73
37:KA:52:VAL:HG11	37:KA:99:ARG:HH21	1.51	0.73
12:L:75:ILE:HA	12:L:78:PHE:CE1	2.23	0.73
15:O:60:ARG:HB2	15:O:60:ARG:HH11	1.53	0.73
15:O:91:LEU:O	15:O:172:LEU:HB2	1.87	0.73
17:Q:62:THR:HG21	32:FA:66:ALA:HB1	1.68	0.73
2:B:2430:A:H2'	2:B:2431:C:C6	2.23	0.73
2:B:3030:G:H5'	2:B:3031:G:OP2	1.87	0.73
2:B:3057:U:H5'	2:B:3086:A:H61	1.52	0.73
55:CB:53:VAL:HG22	55:CB:134:VAL:HG13	1.68	0.73
82:DC:205:ALA:HB2	82:DC:245:TRP:HB3	1.70	0.73
2:B:3086:A:H4'	7:G:366:GLY:HA2	1.70	0.73
9:I:129:TYR:CD2	9:I:177:GLU:HB3	2.23	0.73
2:B:2549:G:N2	12:L:35:GLY:HA3	2.04	0.73
66:NB:40:GLU:HA	66:NB:41:PRO:C	2.09	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:93:HIS:HB3	66:NB:102:LYS:HB2	1.70	0.73
66:NB:9:THR:OG1	66:NB:20:ALA:HB3	1.88	0.73
48:VA:129:GLU:HB3	48:VA:130:PRO:HD2	1.70	0.73
48:VA:12:PHE:HB3	48:VA:60:ARG:NH1	2.04	0.73
51:YA:119:THR:HG21	51:YA:161:ILE:HD11	1.68	0.73
1:A:209:U:H2'	1:A:210:A:C8	2.24	0.73
2:B:916:G:O2'	2:B:917:A:H8	1.71	0.73
9:I:58:LYS:N	9:I:58:LYS:HE2	2.03	0.73
11:K:43:ILE:O	11:K:46:GLU:HG2	1.88	0.73
64:LB:61:MET:HG2	64:LB:104:ALA:HB2	1.70	0.73
39:MA:85:THR:HG22	39:MA:88:LEU:H	1.53	0.73
26:Z:41:ILE:HG22	26:Z:43:VAL:HG22	1.69	0.73
52:ZA:168:ARG:HE	52:ZA:170:ILE:HD11	1.52	0.73
52:ZA:56:ILE:HA	52:ZA:61:LEU:HD12	1.68	0.73
2:B:1011:A:H2'	2:B:1012:G:C8	2.23	0.73
2:B:2726:C:O2'	2:B:2727:A:H2'	1.87	0.73
2:B:2909:U:C2'	2:B:2910:A:H5"	2.19	0.73
2:B:422:A:C2	2:B:2363:A:H4'	2.24	0.73
2:B:499:G:H2'	2:B:500:C:H6	1.54	0.73
31:EA:134:LEU:HB3	31:EA:136:PHE:HD1	1.52	0.73
7:G:311:PHE:HB3	7:G:314:TYR:HB3	1.71	0.73
61:IB:110:HIS:HD2	61:IB:131:ILE:HG21	1.52	0.73
43:QA:32:ASN:HD22	43:QA:32:ASN:N	1.86	0.73
13:M:176:LEU:HD12	44:RA:78:ILE:HD13	1.68	0.73
19:S:5:LYS:HD2	19:S:8:GLU:HB3	1.71	0.73
23:W:168:ALA:O	23:W:172:ARG:HG2	1.87	0.73
1:A:1655:A:H5'	45:SA:24:SER:HB3	1.70	0.73
2:B:2242:A:H5"	6:F:244:GLY:HA3	1.69	0.73
2:B:2351:U:H2'	2:B:2352:A:H8	1.53	0.73
2:B:664:U:H2'	2:B:665:A:C8	2.24	0.73
30:DA:35:LEU:CD1	30:DA:45:ILE:HB	2.18	0.73
82:DC:27:HIS:CD2	82:DC:136:CYS:HB2	2.23	0.73
57:EB:98:ILE:HG23	57:EB:118:LEU:HA	1.69	0.73
40:NA:91:ASN:HA	40:NA:94:ILE:HD12	1.70	0.73
25:Y:40:VAL:HG12	25:Y:98:HIS:HA	1.70	0.73
1:A:1299:G:OP2	1:A:1299:G:H8	1.70	0.73
1:A:423:G:H8	1:A:423:G:H5"	1.52	0.73
2:B:1234:G:N3	16:P:132:ILE:HG12	2.03	0.73
2:B:12:A:H2'	2:B:13:A:C8	2.24	0.73
2:B:1551:C:H2'	2:B:1552:G:O4'	1.88	0.73
2:B:3322:A:H2'	2:B:3323:A:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:35:C:OP1	39:MA:85:THR:HG21	1.87	0.73
82:DC:806:SER:CB	82:DC:813:SER:HB2	2.17	0.73
11:K:102:VAL:HG21	11:K:129:LEU:HD22	1.69	0.73
39:MA:92:LEU:HB2	39:MA:97:ALA:HB2	1.71	0.73
42:PA:43:PHE:HE2	42:PA:56:ILE:HB	1.52	0.73
69:QB:80:TYR:O	69:QB:96:ALA:HB2	1.88	0.73
71:SB:39:VAL:HG12	71:SB:45:ALA:HA	1.71	0.73
47:UA:28:LYS:O	47:UA:32:GLN:HG3	1.87	0.73
75:WB:47:TYR:HA	75:WB:50:ILE:HD12	1.69	0.73
2:B:2894:C:H2'	2:B:2895:G:C8	2.24	0.73
2:B:364:G:H5"	8:H:84:ARG:HG2	1.71	0.73
70:RB:64:LYS:HG2	70:RB:83:GLU:HB3	1.71	0.73
48:VA:125:ASN:HA	48:VA:151:GLU:HA	1.69	0.73
50:XA:102:PHE:HZ	50:XA:135:GLU:HG3	1.52	0.73
2:B:2799:A:H1'	32:FA:42:ARG:HE	1.54	0.73
23:W:185:LEU:HD21	57:EB:42:GLN:HE21	1.54	0.73
25:Y:137:GLU:CD	25:Y:137:GLU:H	1.92	0.73
1:A:805:U:H2'	1:A:806:A:H5'	1.69	0.73
2:B:2510:U:HO2'	2:B:2511:A:H8	1.37	0.73
3:C:83:C:H4'	3:C:84:C:H5"	1.70	0.73
29:CA:116:PRO:O	43:QA:14:ALA:HA	1.89	0.73
57:EB:48:GLU:HG2	57:EB:56:LYS:HD3	1.70	0.73
37:KA:51:TYR:HA	37:KA:98:VAL:HG23	1.71	0.73
67:OB:54:THR:O	67:OB:58:MET:HG2	1.89	0.73
18:R:38:ILE:HG13	18:R:44:VAL:HG12	1.71	0.73
2:B:268:A:H5"	19:S:47:LYS:NZ	2.04	0.73
48:VA:49:ALA:HA	48:VA:88:PHE:O	1.89	0.73
79:AC:39:CYS:HB2	79:AC:42:CYS:HB2	1.70	0.72
2:B:1475:A:H4'	35:IA:57:GLN:HG3	1.71	0.72
2:B:2873:U:O2'	2:B:2874:G:H5'	1.89	0.72
2:B:268:A:N6	2:B:295:A:H3'	1.98	0.72
2:B:617:G:H4'	21:U:171:ARG:HE	1.54	0.72
82:DC:777:SER:HB2	82:DC:780:PHE:HB2	1.70	0.72
11:K:191:VAL:HG13	11:K:195:PHE:CD1	2.24	0.72
14:N:153:ARG:HG2	14:N:153:ARG:HH11	1.53	0.72
66:NB:31:VAL:HG12	66:NB:32:ASN:OD1	1.89	0.72
15:O:75:LYS:NZ	15:O:79:ILE:HD11	2.04	0.72
41:OA:19:CYS:HB2	41:OA:27:PHE:HB2	1.71	0.72
41:OA:69:HIS:O	41:OA:73:ARG:HG3	1.89	0.72
2:B:1672:U:H5"	23:W:64:ARG:HE	1.53	0.72
50:XA:179:ARG:HD3	50:XA:183:ARG:HH11	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:25:PHE:HB3	25:Y:151:LEU:HD21	1.70	0.72
51:YA:105:PHE:H	51:YA:214:LYS:HG2	1.53	0.72
1:A:617:U:H5'	1:A:1031:U:C4'	2.19	0.72
2:B:1148:G:O2'	2:B:1171:G:H4'	1.88	0.72
2:B:1571:A:H2'	2:B:1572:U:O4'	1.89	0.72
2:B:894:G:H4'	2:B:895:A:O4'	1.89	0.72
70:RB:55:PRO:HA	70:RB:91:ILE:HG12	1.71	0.72
19:S:172:ARG:HB2	19:S:172:ARG:NH1	2.04	0.72
19:S:46:ASP:O	19:S:50:ARG:HB3	1.88	0.72
72:TB:6:VAL:HG12	72:TB:34:ILE:HD11	1.71	0.72
1:A:1384:A:H2'	1:A:1385:G:H5"	1.71	0.72
1:A:215:A:H62	1:A:242:U:H3'	1.54	0.72
2:B:2086:A:C5'	2:B:2087:C:H5'	2.15	0.72
2:B:2197:C:N4	2:B:2241:U:H2'	2.04	0.72
2:B:247:C:H3'	2:B:248:U:H5"	1.70	0.72
8:H:60:THR:HB	8:H:90:PHE:HE2	1.54	0.72
63:KB:107:LYS:HE2	63:KB:109:LYS:CD	2.18	0.72
12:L:245:LYS:O	12:L:245:LYS:HE3	1.88	0.72
16:P:106:LEU:N	16:P:142:ARG:HG3	2.01	0.72
20:T:143:THR:OG1	20:T:150:GLU:HG3	1.89	0.72
1:A:157:A:H2'	1:A:158:U:H5"	1.70	0.72
1:A:460:A:H2'	54:BB:27:TYR:OH	1.89	0.72
2:B:1663:C:H2'	2:B:1664:G:H8	1.53	0.72
4:D:16:U:H2'	4:D:17:A:C8	2.24	0.72
82:DC:595:GLU:HA	82:DC:598:SER:HB2	1.70	0.72
33:GA:28:LYS:O	33:GA:29:TYR:HB2	1.88	0.72
54:BB:252:ARG:HH21	59:GB:78:ARG:HH11	1.36	0.72
10:J:54:TYR:HA	10:J:65:ILE:HG22	1.71	0.72
12:L:187:GLY:HA2	12:L:190:VAL:CG1	2.18	0.72
2:B:265:A:H4'	40:NA:37:THR:HG21	1.71	0.72
68:PB:38:VAL:HG13	68:PB:42:TYR:HD2	1.54	0.72
25:Y:96:ILE:CG2	25:Y:97:LYS:H	1.99	0.72
1:A:1117:U:H2'	1:A:1118:G:C8	2.24	0.72
1:A:1779:U:H2'	1:A:1781:A:OP2	1.89	0.72
53:AB:29:LEU:HD21	53:AB:69:LEU:HD11	1.71	0.72
2:B:2521:U:C2'	2:B:2522:G:H5'	2.18	0.72
2:B:2536:A:H2'	2:B:2537:U:H5"	1.72	0.72
2:B:3160:U:H5"	2:B:3396:U:H2'	1.69	0.72
82:DC:655:TYR:HB3	82:DC:658:GLU:OE1	1.90	0.72
6:F:117:GLU:HG3	6:F:163:ARG:N	2.04	0.72
8:H:178:LEU:HD21	8:H:225:VAL:HG23	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:245:GLU:HA	9:I:248:ARG:HB2	1.70	0.72
11:K:117:VAL:HG11	11:K:123:THR:HG21	1.71	0.72
11:K:90:LYS:HA	11:K:220:PHE:HE1	1.54	0.72
15:O:50:ALA:HB3	15:O:61:ARG:HA	1.70	0.72
52:ZA:63:VAL:HG13	52:ZA:68:ILE:CD1	2.18	0.72
52:ZA:72:LEU:O	52:ZA:73:LEU:HB2	1.89	0.72
1:A:1444:A:H4'	1:A:1445:G:H3'	1.71	0.72
1:A:1765:A:H8	1:A:1768:G:H22	1.35	0.72
1:A:223:U:H2'	1:A:224:C:C6	2.24	0.72
2:B:353:G:N2	2:B:364:G:H2'	2.03	0.72
2:B:655:C:OP2	36:JA:27:ARG:HD3	1.88	0.72
2:B:692:A:H2'	2:B:693:A:H5'	1.70	0.72
55:CB:46:TRP:HE1	55:CB:122:ASN:HD22	1.34	0.72
57:EB:11:GLN:HG3	57:EB:13:PRO:HD2	1.72	0.72
59:GB:108:ARG:HH12	59:GB:110:GLN:HB3	1.55	0.72
60:HB:5:LYS:O	60:HB:9:ASN:HB2	1.90	0.72
39:MA:59:ASN:O	39:MA:63:ARG:HB2	1.89	0.72
1:A:127:G:H4'	56:DB:194:LYS:HE2	1.72	0.72
1:A:886:U:H2'	1:A:887:A:H8	1.54	0.72
2:B:1566:A:H2'	2:B:1567:U:H4'	1.69	0.72
2:B:2662:G:H2'	2:B:2663:G:C8	2.25	0.72
2:B:321:C:H5"	19:S:150:TRP:CE3	2.25	0.72
6:F:113:VAL:HG12	6:F:166:ILE:HA	1.71	0.72
6:F:32:LEU:HB2	6:F:163:ARG:NH2	2.04	0.72
11:K:124:LEU:HD11	11:K:128:LYS:NZ	2.04	0.72
16:P:79:SER:O	16:P:82:ILE:HG13	1.89	0.72
70:RB:30:LYS:O	70:RB:34:LEU:HB2	1.90	0.72
21:U:15:ALA:O	21:U:150:VAL:HG12	1.90	0.72
50:XA:126:PRO:HB2	50:XA:152:PRO:CG	2.20	0.72
76:XB:51:ARG:HH22	76:XB:55:GLU:HG2	1.55	0.72
1:A:1797:A:N6	76:XB:84:VAL:HG23	2.05	0.72
1:A:1064:G:H2'	1:A:1065:A:C8	2.24	0.72
1:A:1650:U:H2'	1:A:1651:A:C8	2.25	0.72
2:B:284:A:H5"	2:B:285:A:O4'	1.89	0.72
2:B:883:A:O4'	21:U:133:HIS:HA	1.88	0.72
28:BA:42:GLN:HB3	28:BA:44:LYS:HE2	1.70	0.72
3:C:118:C:H2'	3:C:119:C:H6	1.55	0.72
30:DA:27:ARG:HA	30:DA:30:LEU:HB2	1.71	0.72
56:DB:73:ILE:O	56:DB:75:LEU:HG	1.90	0.72
82:DC:226:ALA:HA	82:DC:240:MET:HE3	1.69	0.72
82:DC:395:TYR:HB3	82:DC:457:VAL:CB	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:462:G:OP1	59:GB:3:ARG:HG3	1.89	0.72
9:I:27:LYS:HA	9:I:150:LEU:HD21	1.72	0.72
13:M:117:PHE:O	13:M:120:ASP:HB2	1.88	0.72
66:NB:20:ALA:HB2	66:NB:84:ALA:HB1	1.70	0.72
20:T:28:LEU:HD22	20:T:94:ARG:NH2	2.05	0.72
73:UB:92:CYS:O	73:UB:96:VAL:HG23	1.89	0.72
2:B:1235:U:C4'	2:B:1236:G:H5'	2.20	0.72
2:B:1639:C:H2'	2:B:1640:G:C8	2.24	0.72
2:B:492:U:H3'	2:B:493:G:H5'	1.71	0.72
82:DC:250:PHE:HB3	82:DC:275:MET:HE1	1.70	0.72
82:DC:171:LYS:HE2	82:DC:279:ASP:HA	1.70	0.72
5:E:116:LEU:O	5:E:120:VAL:HG23	1.90	0.72
5:E:114:GLU:HA	5:E:117:ILE:HB	1.72	0.72
57:EB:159:VAL:O	57:EB:163:ASP:HB2	1.89	0.72
57:EB:73:VAL:CG1	57:EB:77:LEU:HG	2.19	0.72
8:H:219:LEU:HD22	8:H:225:VAL:HG11	1.72	0.72
61:IB:55:ASP:OD2	61:IB:58:CYS:HB2	1.90	0.72
14:N:60:LEU:HG	14:N:129:VAL:CG2	2.20	0.72
14:N:38:LYS:HG3	14:N:41:ALA:HB2	1.70	0.72
40:NA:64:SER:HB2	40:NA:68:ARG:NH2	2.05	0.72
15:O:103:GLY:CA	15:O:128:TYR:HA	2.15	0.72
15:O:62:ASN:O	46:TA:103:ALA:HB2	1.90	0.72
19:S:146:ALA:HA	19:S:149:ASN:HD22	1.53	0.72
77:YB:18:LYS:HE2	77:YB:22:LYS:HB3	1.70	0.72
2:B:1682:U:C6	26:Z:85:LYS:HG2	2.25	0.72
1:A:1184:A:H2'	1:A:1185:U:H4'	1.72	0.72
1:A:986:G:H2'	1:A:987:G:O4'	1.89	0.72
2:B:1048:A:H2'	14:N:22:TYR:CE1	2.21	0.72
2:B:1662:G:H22	2:B:1787:A:H2	1.33	0.72
2:B:2361:A:H2'	2:B:2362:C:C6	2.25	0.72
2:B:3037:U:H5"	7:G:348:ARG:HH11	1.53	0.72
2:B:3066:U:H3	2:B:3075:G:H1	1.36	0.72
2:B:3334:U:H4'	2:B:3335:A:C5'	2.20	0.72
2:B:7:C:H2'	2:B:8:C:C6	2.25	0.72
57:EB:32:PRO:HA	57:EB:36:ALA:HB2	1.72	0.72
57:EB:35:LYS:HG2	57:EB:36:ALA:H	1.55	0.72
6:F:62:VAL:HA	6:F:73:GLU:HA	1.72	0.72
17:Q:168:ARG:O	17:Q:172:LEU:HB2	1.89	0.72
72:TB:94:LEU:HD11	72:TB:102:VAL:H	1.52	0.72
23:W:109:TYR:HD2	23:W:115:ILE:HD13	1.55	0.72
25:Y:39:ILE:HA	25:Y:63:VAL:HA	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1315:U:H5"	1:A:1329:A:N3	2.05	0.71
1:A:1761:U:C4	83:EC:6951:C:H5"	2.24	0.71
2:B:2586:G:OP1	2:B:2586:G:H2'	1.89	0.71
2:B:2683:U:H2'	2:B:2684:C:C6	2.25	0.71
28:BA:9:SER:HA	28:BA:52:THR:HB	1.71	0.71
54:BB:184:THR:OG1	54:BB:224:ASN:HA	1.90	0.71
6:F:5:ILE:HG21	6:F:209:HIS:HA	1.71	0.71
58:FB:46:VAL:HG22	58:FB:54:LYS:O	1.90	0.71
60:HB:59:PHE:CZ	60:HB:62:GLN:HA	2.25	0.71
37:KA:42:GLN:O	37:KA:45:LEU:HB2	1.89	0.71
39:MA:57:VAL:HG12	39:MA:61:GLN:HE21	1.54	0.71
14:N:60:LEU:HG	14:N:129:VAL:HG22	1.71	0.71
15:O:16:LYS:HE2	15:O:72:ARG:NH2	2.05	0.71
17:Q:118:GLU:O	17:Q:122:LYS:HB2	1.90	0.71
74:VB:47:VAL:HG23	74:VB:48:TYR:HD2	1.53	0.71
26:Z:87:ASN:HB3	26:Z:89:LEU:HG	1.71	0.71
1:A:1032:G:H2'	1:A:1033:C:H6	1.55	0.71
1:A:955:A:H2'	1:A:956:C:O4'	1.89	0.71
27:AA:87:ARG:CZ	27:AA:93:LEU:HD11	2.20	0.71
2:B:1286:A:N3	2:B:1287:A:H1'	2.04	0.71
2:B:1596:C:H5'	38:LA:8:ARG:HH12	1.55	0.71
2:B:2213:A:H2'	2:B:2214:A:O4'	1.89	0.71
2:B:2540:A:O2'	2:B:2541:U:H5"	1.89	0.71
2:B:3393:U:H2'	2:B:3394:U:C6	2.24	0.71
2:B:821:U:H2'	2:B:822:G:C8	2.25	0.71
54:BB:73:ASP:HB3	54:BB:164:LEU:HD22	1.70	0.71
82:DC:296:ILE:HB	82:DC:297:PRO:HD3	1.71	0.71
9:I:290:ILE:O	9:I:294:ALA:HB3	1.90	0.71
12:L:154:ALA:HB2	12:L:186:LEU:HD11	1.71	0.71
2:B:2139:A:C5	41:OA:3:LYS:HE2	2.25	0.71
19:S:12:ARG:HG2	19:S:12:ARG:HH11	1.55	0.71
21:U:23:ARG:HD3	21:U:125:GLN:HG3	1.72	0.71
24:X:3:HIS:HE1	24:X:101:ALA:HB2	1.53	0.71
1:A:1102:G:H2'	1:A:1103:U:O4'	1.89	0.71
2:B:1263:A:N6	16:P:136:ALA:HB2	2.05	0.71
2:B:718:G:C2	2:B:721:G:H1'	2.25	0.71
54:BB:256:ARG:HA	54:BB:259:GLN:HB3	1.72	0.71
3:C:40:A:H2'	3:C:41:A:H8	1.55	0.71
82:DC:254:THR:O	82:DC:256:LYS:HD2	1.90	0.71
82:DC:454:ILE:HG13	82:DC:455:GLY:N	2.03	0.71
36:JA:20:HIS:O	36:JA:21:HIS:HB2	1.88	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:64:ILE:HD12	37:KA:64:ILE:H	1.55	0.71
1:A:181:A:H2'	1:A:182:A:C8	2.26	0.71
2:B:2438:A:H2'	2:B:2439:A:C8	2.26	0.71
4:D:17:A:H5"	9:I:2:ALA:HA	1.72	0.71
56:DB:55:GLY:O	56:DB:63:MET:HG2	1.90	0.71
11:K:39:GLU:O	11:K:43:ILE:HG13	1.90	0.71
15:O:57:PHE:HB2	15:O:59:ILE:HD11	1.71	0.71
23:W:167:ARG:O	23:W:171:ASP:HB2	1.89	0.71
78:ZB:14:LYS:HA	78:ZB:14:LYS:HE3	1.71	0.71
1:A:482:U:H2'	1:A:483:A:C8	2.26	0.71
2:B:75:G:OP1	17:Q:58:VAL:HG13	1.89	0.71
28:BA:39:LEU:HD12	28:BA:44:LYS:HG3	1.70	0.71
3:C:98:U:H2'	3:C:99:C:H5'	1.72	0.71
83:EC:6800:G:H1'	83:EC:6884:G:N2	2.05	0.71
7:G:53:MET:HG3	7:G:77:THR:HG22	1.71	0.71
37:KA:16:TYR:CE2	37:KA:25:PRO:HA	2.25	0.71
12:L:241:LYS:O	12:L:245:LYS:HB2	1.90	0.71
41:OA:63:ARG:O	41:OA:68:LYS:HE2	1.88	0.71
18:R:28:SER:HB3	18:R:31:LYS:HD2	1.70	0.71
20:T:124:LEU:HD21	24:X:167:ARG:HE	1.55	0.71
22:V:113:LYS:NZ	22:V:113:LYS:HA	2.05	0.71
49:WA:223:TRP:HA	49:WA:230:ALA:HA	1.72	0.71
25:Y:93:VAL:HA	25:Y:96:ILE:HD13	1.71	0.71
77:YB:53:ALA:HA	77:YB:66:PRO:HD3	1.71	0.71
52:ZA:207:LEU:O	52:ZA:210:THR:HG22	1.91	0.71
27:AA:21:ALA:O	27:AA:36:ILE:HG13	1.91	0.71
2:B:1240:A:H2'	2:B:1241:U:H5"	1.73	0.71
2:B:1456:A:C8	35:IA:26:LYS:HG3	2.26	0.71
2:B:1922:A:H2'	2:B:1923:C:O4'	1.90	0.71
2:B:19:U:H1'	19:S:138:GLN:HE22	1.56	0.71
2:B:2957:G:H2'	2:B:2958:A:H5'	1.72	0.71
54:BB:150:PRO:HA	54:BB:169:ILE:HG12	1.73	0.71
56:DB:57:ASP:HA	56:DB:106:LEU:HA	1.72	0.71
31:EA:33:SER:HB2	31:EA:40:HIS:CE1	2.25	0.71
31:EA:46:ILE:O	31:EA:46:ILE:HD12	1.89	0.71
23:W:10:LEU:HD12	23:W:38:ARG:NH1	2.04	0.71
26:Z:38:ILE:HD12	26:Z:56:VAL:H	1.54	0.71
1:A:1469:A:H2'	1:A:1470:C:C6	2.26	0.71
1:A:628:G:H2'	1:A:629:U:H5"	1.73	0.71
2:B:2131:A:H2	2:B:2320:A:H61	1.37	0.71
2:B:279:U:H2'	2:B:280:U:O4'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:126:VAL:HG23	54:BB:126:VAL:O	1.90	0.71
82:DC:147:LEU:HB3	82:DC:193:ALA:HA	1.73	0.71
2:B:911:C:H5"	6:F:15:ILE:HD13	1.73	0.71
12:L:146:LYS:HG3	12:L:173:MET:HE3	1.73	0.71
38:LA:75:ALA:O	38:LA:76:TYR:HB2	1.90	0.71
69:QB:105:LEU:HD23	69:QB:108:LEU:HD12	1.71	0.71
12:L:160:ILE:HG12	19:S:26:ARG:HH22	1.56	0.71
22:V:85:GLY:O	22:V:104:LEU:HB2	1.91	0.71
24:X:8:GLN:HB2	24:X:64:ILE:HD11	1.71	0.71
51:YA:70:LEU:HD11	51:YA:79:HIS:HB3	1.72	0.71
1:A:1546:G:H2'	1:A:1547:A:C8	2.25	0.71
1:A:472:U:H2'	1:A:473:A:H8	1.54	0.71
53:AB:113:LEU:HD13	53:AB:114:ALA:H	1.54	0.71
70:RB:83:GLU:HG2	79:AC:55:PHE:HD2	1.56	0.71
2:B:2821:C:H42	2:B:2869:U:H3	1.35	0.71
2:B:2971:A:H5"	2:B:2972:G:C5'	2.21	0.71
2:B:502:U:H2'	2:B:503:C:H5"	1.71	0.71
2:B:712:G:H2'	2:B:713:U:C6	2.26	0.71
80:BC:49:LEU:HD21	80:BC:55:ARG:HB2	1.71	0.71
82:DC:501:LEU:HB3	82:DC:502:PRO:HD3	1.72	0.71
6:F:70:ARG:HE	6:F:72:ARG:HD3	1.55	0.71
12:L:116:VAL:O	12:L:120:LYS:HA	1.90	0.71
17:Q:46:ILE:CG2	17:Q:49:ARG:HD2	2.20	0.71
69:QB:61:VAL:HG21	69:QB:104:VAL:HG11	1.73	0.71
21:U:98:ALA:CB	21:U:148:LEU:HD11	2.21	0.71
49:WA:90:ARG:HG2	49:WA:102:ARG:HA	1.73	0.71
25:Y:72:VAL:HG13	25:Y:93:VAL:HG12	1.71	0.71
1:A:558:U:H1'	1:A:581:U:O4'	1.90	0.71
1:A:855:A:H3'	1:A:856:A:H5"	1.73	0.71
2:B:1182:A:H2'	2:B:1183:C:C6	2.26	0.71
2:B:2588:U:H2'	2:B:2589:G:C8	2.26	0.71
2:B:715:A:C6	2:B:782:U:H5'	2.26	0.71
30:DA:33:ALA:HB2	30:DA:101:PRO:HB3	1.72	0.71
82:DC:143:LEU:HD22	82:DC:188:ILE:CG2	2.20	0.71
6:F:41:ILE:O	6:F:89:TYR:HA	1.90	0.71
7:G:109:HIS:C	7:G:110:LEU:HD12	2.11	0.71
8:H:210:ALA:HA	8:H:230:VAL:HG23	1.72	0.71
10:J:51:ARG:HD3	10:J:158:TYR:CE2	2.25	0.71
26:Z:84:LEU:HB3	26:Z:90:ARG:HG2	1.73	0.71
1:A:195:G:H2'	1:A:196:G:H5"	1.73	0.71
1:A:836:U:H2'	1:A:837:G:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2215:A:H2'	2:B:2216:G:O4'	1.90	0.71
2:B:2469:G:H4'	5:E:27:ASN:HA	1.73	0.71
2:B:2988:C:H2'	2:B:2989:U:C6	2.26	0.71
56:DB:147:LEU:HD12	56:DB:153:VAL:HG22	1.72	0.71
82:DC:222:ILE:HG22	82:DC:241:MET:HB2	1.71	0.71
82:DC:644:ASN:OD1	82:DC:681:MET:HB2	1.91	0.71
6:F:116:VAL:CG1	6:F:126:LEU:HB2	2.21	0.71
7:G:35:ASP:OD2	7:G:184:ASN:HA	1.91	0.71
8:H:317:PRO:HB3	8:H:324:LEU:HA	1.73	0.71
8:H:60:THR:HG22	8:H:61:SER:H	1.55	0.71
1:A:959:U:C6	63:KB:61:THR:HG21	2.26	0.71
63:KB:99:ARG:HH21	63:KB:115:LEU:HD21	1.56	0.71
12:L:164:VAL:O	12:L:167:PRO:HD2	1.89	0.71
12:L:244:ALA:HA	12:L:247:ASP:HB2	1.72	0.71
14:N:66:GLU:OE1	14:N:66:GLU:HA	1.90	0.71
40:NA:26:ILE:HD12	40:NA:26:ILE:N	2.05	0.71
21:U:33:ALA:O	21:U:36:ILE:HG22	1.91	0.71
73:UB:24:TRP:CH2	73:UB:33:LEU:HB3	2.26	0.71
48:VA:37:GLN:O	48:VA:41:VAL:HG23	1.91	0.71
51:YA:206:PRO:O	51:YA:207:LEU:HB2	1.91	0.71
77:YB:64:CYS:HB2	77:YB:72:LYS:O	1.91	0.71
2:B:1233:G:O3'	16:P:120:SER:HB2	1.90	0.70
2:B:283:G:OP2	2:B:285:A:H4'	1.91	0.70
2:B:713:U:O2'	2:B:754:G:H5"	1.91	0.70
1:A:1471:A:H5'	55:CB:184:PHE:HE2	1.55	0.70
82:DC:226:ALA:HA	82:DC:240:MET:HE1	1.71	0.70
5:E:103:LEU:O	5:E:107:TYR:HB2	1.91	0.70
58:FB:170:SER:OG	58:FB:181:GLY:HA2	1.92	0.70
59:GB:42:ILE:HG23	59:GB:101:VAL:HG11	1.72	0.70
2:B:338:A:H5"	8:H:197:ARG:HH21	1.55	0.70
8:H:23:PRO:HD3	8:H:255:PHE:CE1	2.26	0.70
12:L:219:ASP:O	12:L:223:ALA:HB3	1.91	0.70
66:NB:16:ALA:HB1	66:NB:80:ALA:HB2	1.72	0.70
67:OB:50:ILE:O	67:OB:54:THR:HG23	1.91	0.70
71:SB:15:ARG:NH2	71:SB:24:ILE:HG21	2.05	0.70
47:UA:49:ARG:HB2	47:UA:55:TRP:CZ3	2.25	0.70
2:B:2497:U:H2'	2:B:2499:U:C4	2.26	0.70
2:B:3153:U:H5"	2:B:3154:C:OP1	1.90	0.70
2:B:947:G:H2'	2:B:948:C:C6	2.27	0.70
2:B:8:C:H2'	2:B:9:U:H6	1.56	0.70
55:CB:123:VAL:HG13	75:WB:58:ARG:NH1	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:263:ASP:OD1	82:DC:267:LYS:HB2	1.91	0.70
82:DC:380:LEU:HD13	82:DC:456:LEU:HD11	1.71	0.70
57:EB:59:ALA:HB1	57:EB:93:LEU:HD12	1.73	0.70
7:G:169:THR:HG22	7:G:171:LEU:HG	1.70	0.70
13:M:89:LYS:HD2	13:M:183:HIS:HB3	1.73	0.70
39:MA:74:LYS:HE3	39:MA:75:TYR:HB2	1.73	0.70
14:N:174:THR:HG22	14:N:176:LEU:N	2.05	0.70
20:T:189:ASP:O	20:T:193:GLN:HG3	1.90	0.70
2:B:2713:U:OP1	46:TA:9:LYS:HD2	1.91	0.70
51:YA:105:PHE:CD1	51:YA:213:ARG:HA	2.26	0.70
1:A:17:C:H2'	1:A:18:C:H6	1.55	0.70
79:AC:4:GLU:HG3	79:AC:5:ASN:H	1.56	0.70
2:B:1888:U:H2'	2:B:1889:G:O4'	1.91	0.70
2:B:3217:C:N3	21:U:182:ILE:HG23	2.06	0.70
2:B:3327:G:H2'	2:B:3328:G:C8	2.26	0.70
2:B:749:C:H5"	33:GA:32:LEU:HD11	1.73	0.70
2:B:872:U:H2'	2:B:873:C:C6	2.26	0.70
10:J:55:LEU:HD12	10:J:65:ILE:HA	1.73	0.70
14:N:58:GLU:H	14:N:129:VAL:HB	1.54	0.70
15:O:9:MET:O	15:O:134:PRO:HG2	1.90	0.70
25:Y:14:MET:HG3	25:Y:15:PHE:HD2	1.54	0.70
25:Y:36:VAL:HA	25:Y:64:VAL:O	1.91	0.70
77:YB:35:VAL:HG22	77:YB:79:PHE:HA	1.73	0.70
1:A:1042:G:H2'	1:A:1043:A:O4'	1.92	0.70
1:A:937:C:N4	76:XB:15:ARG:HG2	2.07	0.70
2:B:2637:A:O2'	2:B:2638:C:H5"	1.92	0.70
2:B:580:C:H2'	2:B:581:U:O4'	1.91	0.70
2:B:956:U:H2'	2:B:957:C:C6	2.26	0.70
82:DC:219:ALA:O	82:DC:328:LEU:HB3	1.90	0.70
2:B:3027:A:C1'	82:DC:790:GLY:H	2.05	0.70
38:LA:85:VAL:HG12	38:LA:89:ILE:HD11	1.73	0.70
65:MB:33:PHE:O	65:MB:36:LEU:HD23	1.91	0.70
22:V:54:LEU:HB3	22:V:58:ASN:HB3	1.73	0.70
25:Y:116:ARG:O	25:Y:120:LYS:HB2	1.91	0.70
26:Z:99:LYS:HB2	26:Z:102:GLU:HB2	1.72	0.70
2:B:1275:C:H2'	2:B:1276:U:H5'	1.73	0.70
2:B:1786:G:H2'	2:B:1787:A:C8	2.26	0.70
2:B:2434:U:H5"	19:S:24:ARG:HD3	1.72	0.70
2:B:438:A:H2'	2:B:439:C:H4'	1.72	0.70
54:BB:47:PHE:CZ	54:BB:52:LEU:HD11	2.27	0.70
55:CB:129:PRO:O	55:CB:133:VAL:HG23	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:199:A:H3'	30:DA:60:ARG:HD2	1.74	0.70
32:FA:19:LYS:HB3	32:FA:25:HIS:HB2	1.71	0.70
8:H:361:HIS:HB2	24:X:26:ARG:HE	1.56	0.70
11:K:31:ALA:HA	11:K:34:LYS:HB2	1.71	0.70
37:KA:45:LEU:HD23	37:KA:71:VAL:HG12	1.74	0.70
18:R:15:VAL:HA	18:R:19:ARG:HG2	1.72	0.70
71:SB:36:VAL:HG11	71:SB:78:LEU:HD13	1.73	0.70
52:ZA:78:ASP:HA	52:ZA:104:VAL:HG12	1.71	0.70
1:A:100:A:C2'	1:A:101:U:H5'	2.22	0.70
2:B:217:U:H4'	30:DA:100:HIS:CD2	2.26	0.70
2:B:352:A:H61	2:B:365:A:H5"	1.57	0.70
2:B:36:C:H4'	2:B:808:A:N1	2.06	0.70
82:DC:124:GLY:HA2	82:DC:151:ILE:HG23	1.73	0.70
31:EA:49:TYR:CE2	31:EA:133:LYS:HA	2.26	0.70
6:F:184:ARG:O	6:F:188:LYS:HB2	1.90	0.70
34:HA:30:THR:HB	34:HA:91:SER:HB2	1.73	0.70
2:B:623:U:H4'	37:KA:86:ARG:NH2	2.06	0.70
67:OB:19:ARG:HG3	67:OB:20:TYR:HD1	1.56	0.70
67:OB:24:LEU:HA	67:OB:34:LEU:HD13	1.73	0.70
43:QA:41:ARG:NE	43:QA:41:ARG:HA	2.05	0.70
72:TB:103:ILE:HG12	72:TB:111:MET:O	1.91	0.70
48:VA:128:MET:HG3	48:VA:150:ILE:HD12	1.72	0.70
74:VB:105:ARG:HH11	74:VB:105:ARG:HB3	1.55	0.70
23:W:89:LEU:HD11	23:W:94:VAL:HG22	1.73	0.70
50:XA:59:LEU:H	50:XA:59:LEU:HD12	1.55	0.70
1:A:1316:G:H2'	1:A:1317:C:C6	2.27	0.70
1:A:980:G:H5'	1:A:1776:A:H4'	1.73	0.70
1:A:866:G:H2'	1:A:867:G:H8	1.56	0.70
2:B:149:U:C2'	2:B:150:A:H5"	2.20	0.70
2:B:375:A:H1'	30:DA:87:LYS:HE2	1.74	0.70
2:B:666:A:C2'	2:B:667:C:H5"	2.21	0.70
57:EB:73:VAL:HG12	57:EB:76:LYS:HB2	1.74	0.70
58:FB:110:ARG:HG3	58:FB:121:LEU:HD23	1.73	0.70
34:HA:18:ILE:HG13	34:HA:23:TYR:HE2	1.55	0.70
2:B:3323:A:H2	35:IA:106:THR:HG21	1.56	0.70
2:B:814:U:H5'	41:OA:45:ARG:NH1	2.07	0.70
61:IB:100:TYR:O	73:UB:10:ASN:HA	1.92	0.70
48:VA:33:VAL:HG22	48:VA:34:SER:N	2.07	0.70
50:XA:88:LYS:HA	50:XA:88:LYS:HE2	1.74	0.70
76:XB:32:LYS:HB2	76:XB:32:LYS:NZ	2.07	0.70
51:YA:131:ASP:HB2	51:YA:180:THR:HG21	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1755:C:H2'	2:B:1756:C:C4'	2.21	0.70
2:B:2223:A:H4'	40:NA:80:PHE:CZ	2.27	0.70
2:B:2897:A:H5"	44:RA:125:LYS:HG3	1.74	0.70
82:DC:586:ILE:HD12	82:DC:708:THR:HG22	1.73	0.70
82:DC:760:ARG:HD2	82:DC:763:THR:OG1	1.92	0.70
32:FA:74:ASN:HD22	32:FA:115:LYS:HB2	1.56	0.70
2:B:3354:U:H4'	58:FB:164:ARG:HH12	1.56	0.70
2:B:3385:U:H4'	35:IA:108:VAL:HG23	1.74	0.70
13:M:3:TYR:O	13:M:59:ASN:HA	1.91	0.70
42:PA:74:LYS:HD2	42:PA:74:LYS:N	2.07	0.70
19:S:75:VAL:HB	19:S:79:ALA:O	1.92	0.70
75:WB:55:PRO:HA	75:WB:103:ARG:HG3	1.72	0.70
1:A:962:C:OP1	63:KB:72:MET:HB2	1.91	0.70
2:B:1166:G:H2'	2:B:1167:U:H6	1.57	0.70
2:B:1231:A:H1'	2:B:1278:A:H62	1.56	0.70
2:B:1811:G:H2'	2:B:1812:G:O4'	1.91	0.70
2:B:1941:C:H4'	2:B:3362:A:H5'	1.73	0.70
2:B:3375:A:O2'	2:B:3378:C:H5'	1.92	0.70
2:B:640:U:H2'	2:B:641:C:C6	2.27	0.70
55:CB:213:LYS:HE2	55:CB:213:LYS:HA	1.73	0.70
5:E:201:VAL:HB	5:E:204:LEU:HD21	1.73	0.70
6:F:20:THR:O	6:F:22:LEU:HD12	1.91	0.70
6:F:54:ARG:NE	6:F:58:LEU:HD21	2.07	0.70
7:G:158:VAL:CG2	7:G:188:ILE:HG23	2.21	0.70
59:GB:105:LEU:HD12	59:GB:108:ARG:HD3	1.74	0.70
10:J:26:ARG:HB3	10:J:27:PRO:HD2	1.73	0.70
15:O:90:GLN:HB3	15:O:172:LEU:HD11	1.74	0.70
2:B:1234:G:O2'	16:P:132:ILE:HD13	1.91	0.70
70:RB:30:LYS:HB3	70:RB:33:GLN:HB2	1.72	0.70
19:S:58:GLY:HA3	19:S:142:ILE:CD1	2.22	0.70
72:TB:69:LEU:HD12	72:TB:130:TYR:OXT	1.91	0.70
21:U:122:ALA:HB3	21:U:143:PRO:HB2	1.74	0.70
23:W:123:LEU:HD22	23:W:132:PHE:CZ	2.23	0.70
75:WB:71:ILE:HB	75:WB:75:LEU:HB2	1.73	0.70
1:A:1394:G:H2'	1:A:1395:G:C8	2.27	0.70
53:AB:135:GLU:HG3	53:AB:153:ALA:HB2	1.74	0.70
2:B:242:C:O2'	2:B:243:G:H5'	1.91	0.70
55:CB:140:THR:HG21	55:CB:175:LEU:HD21	1.73	0.70
8:H:230:VAL:O	8:H:233:LEU:HD11	1.92	0.70
2:B:3270:U:C2	10:J:46:ARG:HB3	2.27	0.70
64:LB:87:GLY:HA3	64:LB:120:PRO:HG2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:29:HIS:HB3	64:LB:41:ARG:CG	2.21	0.70
13:M:20:ILE:HD13	13:M:45:PHE:HE2	1.57	0.70
15:O:84:LEU:HD11	15:O:163:PHE:HZ	1.57	0.70
49:WA:144:LEU:HB3	49:WA:181:TRP:HZ3	1.56	0.70
49:WA:179:LYS:HB3	49:WA:188:ILE:HD11	1.72	0.70
1:A:1552:U:O2'	1:A:1597:A:H2'	1.91	0.69
2:B:1695:U:H1'	38:LA:26:PRO:HG3	1.73	0.69
2:B:17:G:H2'	2:B:18:G:O4'	1.91	0.69
2:B:2601:A:H2'	2:B:2602:G:H8	1.56	0.69
2:B:1054:A:C5'	2:B:2637:A:H61	2.03	0.69
4:D:39:C:H1'	15:O:69:VAL:HG23	1.74	0.69
30:DA:16:ARG:HH11	30:DA:16:ARG:HG2	1.56	0.69
83:EC:6782:C:H6	83:EC:6782:C:H5'	1.56	0.69
6:F:42:ARG:HD2	6:F:87:PHE:CD2	2.27	0.69
32:FA:73:LEU:HB2	32:FA:109:TYR:CD2	2.26	0.69
58:FB:192:TYR:O	58:FB:196:LEU:HD13	1.92	0.69
9:I:146:LEU:HD22	9:I:163:LEU:HD23	1.74	0.69
14:N:135:ILE:HG22	14:N:136:PHE:CD1	2.27	0.69
19:S:67:ARG:HA	19:S:126:THR:O	1.92	0.69
19:S:4:TYR:HA	19:S:7:LEU:HD13	1.72	0.69
2:B:1307:G:H5"	20:T:60:LYS:HE2	1.72	0.69
73:UB:11:SER:O	73:UB:15:LEU:HG	1.92	0.69
23:W:139:VAL:HA	23:W:142:ILE:HD12	1.72	0.69
51:YA:48:VAL:HG12	51:YA:49:ASN:N	2.06	0.69
1:A:1628:U:H2'	1:A:1629:G:C8	2.26	0.69
1:A:532:U:O2'	74:VB:33:ALA:HB1	1.92	0.69
2:B:1217:A:H1'	2:B:1289:G:N2	2.06	0.69
2:B:1692:U:H1'	2:B:1755:C:H4'	1.75	0.69
2:B:2474:G:H2'	2:B:2475:G:C8	2.27	0.69
82:DC:44:GLY:HA2	82:DC:77:LEU:HD12	1.75	0.69
31:EA:72:ILE:HD12	31:EA:100:THR:HG21	1.73	0.69
9:I:155:THR:CA	9:I:179:ARG:HD3	2.22	0.69
68:PB:121:ALA:O	68:PB:125:ILE:HG12	1.91	0.69
75:WB:62:VAL:HG22	75:WB:77:ARG:HG2	1.71	0.69
1:A:1329:A:H2'	1:A:1330:G:O4'	1.92	0.69
2:B:2366:C:H2'	2:B:2367:A:H8	1.56	0.69
7:G:67:PHE:CE1	27:AA:88:ARG:HB2	2.26	0.69
60:HB:25:LYS:HB3	60:HB:62:GLN:CG	2.23	0.69
10:J:135:VAL:O	10:J:139:LYS:HG3	1.93	0.69
63:KB:22:ALA:HB1	63:KB:23:PRO:CA	2.16	0.69
63:KB:84:ILE:HD12	63:KB:88:LEU:HD23	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:29:HIS:HB3	64:LB:41:ARG:CA	2.22	0.69
14:N:57:LEU:HB2	14:N:131:ILE:HG13	1.73	0.69
66:NB:90:VAL:HG12	66:NB:105:LEU:HD22	1.73	0.69
15:O:84:LEU:HD11	15:O:163:PHE:CZ	2.27	0.69
17:Q:57:VAL:HG22	17:Q:147:ILE:CD1	2.22	0.69
21:U:47:TYR:O	21:U:50:GLN:HB2	1.91	0.69
48:VA:42:ARG:HG2	48:VA:42:ARG:HH11	1.57	0.69
2:B:2349:U:H5"	2:B:2390:A:O3'	1.91	0.69
2:B:2351:U:H2'	2:B:2352:A:C8	2.27	0.69
2:B:3294:A:H2'	2:B:3295:A:O4'	1.92	0.69
2:B:952:A:H4'	2:B:968:G:N2	2.07	0.69
3:C:37:A:H2	39:MA:86:ARG:HH21	1.39	0.69
29:CA:136:ALA:HB1	29:CA:142:ILE:HG12	1.74	0.69
55:CB:77:TYR:HA	55:CB:83:ARG:HG2	1.75	0.69
82:DC:539:GLU:HA	82:DC:542:LEU:HD12	1.74	0.69
2:B:2256:A:H1'	82:DC:707:PRO:HG3	1.74	0.69
82:DC:563:TYR:HB3	82:DC:726:GLU:HA	1.74	0.69
11:K:156:ILE:HB	11:K:161:VAL:HG21	1.73	0.69
14:N:61:SER:HB3	14:N:63:GLU:HG2	1.75	0.69
74:VB:20:ARG:HD2	74:VB:74:LEU:HD22	1.74	0.69
1:A:1764:C:OP1	1:A:1771:U:H4'	1.91	0.69
1:A:979:A:H4'	1:A:1786:G:N2	2.07	0.69
2:B:1556:C:H3'	2:B:2169:G:N2	2.08	0.69
2:B:3282:U:H2'	2:B:3283:U:C6	2.26	0.69
2:B:3295:A:H2'	2:B:3296:A:H8	1.57	0.69
2:B:429:U:H2'	2:B:430:U:H6	1.56	0.69
3:C:147:U:H2'	3:C:148:G:H5"	1.74	0.69
29:CA:99:VAL:HG13	29:CA:103:TYR:HD2	1.55	0.69
82:DC:184:SER:O	82:DC:187:VAL:HG12	1.92	0.69
5:E:10:ARG:O	5:E:13:VAL:HG22	1.92	0.69
6:F:3:ARG:CG	6:F:4:VAL:H	2.04	0.69
58:FB:106:ALA:HB2	58:FB:165:LEU:H	1.57	0.69
2:B:747:A:O2'	33:GA:27:TYR:HB3	1.93	0.69
33:GA:38:LYS:HA	33:GA:41:ARG:HH12	1.57	0.69
35:IA:16:LEU:HD23	35:IA:68:GLU:O	1.93	0.69
66:NB:29:ILE:HA	66:NB:65:ILE:HB	1.75	0.69
66:NB:79:TYR:HA	66:NB:82:ARG:HD2	1.75	0.69
19:S:49:ARG:HA	19:S:53:TYR:HB3	1.73	0.69
2:B:1281:G:H21	48:VA:83:ASN:HD21	1.40	0.69
1:A:1606:C:OP2	66:NB:126:PRO:HA	1.92	0.69
1:A:1733:C:H2'	1:A:1734:U:C6	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2822:U:H2'	2:B:2823:G:O4'	1.92	0.69
2:B:366:A:H2'	2:B:367:A:O4'	1.91	0.69
55:CB:123:VAL:HG21	75:WB:100:ILE:HD11	1.75	0.69
57:EB:25:VAL:HA	57:EB:28:GLU:HB2	1.75	0.69
83:EC:6772:G:H1'	83:EC:6822:U:OP2	1.93	0.69
44:RA:80:PRO:HA	44:RA:83:LYS:HD2	1.73	0.69
46:TA:35:LEU:HD23	46:TA:36:PHE:H	1.53	0.69
47:UA:82:THR:O	47:UA:86:LEU:HG	1.92	0.69
50:XA:151:SER:HB3	50:XA:152:PRO:HD2	1.74	0.69
52:ZA:177:GLY:O	52:ZA:195:ASP:HA	1.92	0.69
52:ZA:37:PRO:HG3	52:ZA:46:LYS:HG3	1.74	0.69
1:A:1373:C:H2'	1:A:1374:C:C6	2.28	0.69
1:A:1584:G:N7	66:NB:14:LYS:HD2	2.08	0.69
1:A:629:U:C4'	2:B:846:A:N7	2.56	0.69
2:B:144:A:H2'	2:B:145:G:H5'	1.74	0.69
2:B:1489:A:H2'	2:B:1490:A:C8	2.26	0.69
2:B:1508:C:H4'	2:B:2353:G:O2'	1.92	0.69
2:B:2154:U:H2'	2:B:2155:G:C8	2.27	0.69
2:B:2667:A:H2'	2:B:2668:U:O4'	1.91	0.69
2:B:3127:A:H2'	2:B:3128:G:O4'	1.93	0.69
2:B:3143:C:H4'	2:B:3144:G:H5"	1.75	0.69
2:B:3241:G:H2'	2:B:3245:A:N3	2.08	0.69
30:DA:37:LYS:HA	30:DA:40:ARG:NH1	2.08	0.69
82:DC:338:ILE:HA	82:DC:342:LEU:HB2	1.73	0.69
82:DC:756:SER:OG	82:DC:769:LYS:HD2	1.92	0.69
37:KA:8:TYR:CE2	37:KA:99:ARG:HG2	2.27	0.69
12:L:73:PRO:HD3	12:L:233:TRP:CE3	2.26	0.69
15:O:96:PHE:HA	15:O:102:PHE:CB	2.22	0.69
67:OB:21:TYR:N	67:OB:22:PRO:HD2	2.08	0.69
67:OB:41:ILE:HG22	67:OB:42:GLN:N	2.05	0.69
42:PA:11:PHE:HB2	42:PA:54:LEU:HD22	1.72	0.69
43:QA:32:ASN:ND2	43:QA:32:ASN:N	2.39	0.69
19:S:128:LYS:HB3	19:S:130:PHE:HE2	1.57	0.69
2:B:1221:A:H1'	48:VA:12:PHE:HZ	1.56	0.69
74:VB:76:TYR:CZ	74:VB:86:GLU:HG2	2.27	0.69
23:W:150:GLN:HA	23:W:153:LYS:HB3	1.74	0.69
1:A:1032:G:H2'	1:A:1033:C:C6	2.27	0.69
1:A:122:U:H4'	54:BB:82:TYR:OH	1.93	0.69
1:A:1784:C:H2'	1:A:1785:U:C6	2.27	0.69
1:A:400:A:H4'	1:A:401:A:H5'	1.75	0.69
2:B:1257:C:H42	2:B:1261:G:N2	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1717:U:H2'	2:B:1718:G:C8	2.27	0.69
2:B:2397:A:OP1	2:B:2398:A:H4'	1.92	0.69
2:B:2845:A:H2	2:B:2850:G:H1	1.41	0.69
2:B:595:G:H1	2:B:609:G:H5"	1.58	0.69
2:B:958:C:H1'	32:FA:40:HIS:HB3	1.73	0.69
37:KA:89:LEU:H	37:KA:89:LEU:HD12	1.58	0.69
63:KB:30:SER:HA	63:KB:33:VAL:HG22	1.73	0.69
14:N:93:PRO:HA	14:N:127:ALA:HA	1.75	0.69
70:RB:50:LEU:HD12	70:RB:51:VAL:H	1.56	0.69
54:BB:63:ALA:HB1	74:VB:85:PHE:HE1	1.58	0.69
1:A:1769:U:O2'	1:A:1770:U:H5'	1.93	0.69
27:AA:13:ILE:HG23	27:AA:85:TRP:CD1	2.28	0.69
2:B:156:G:OP2	40:NA:25:LYS:HB3	1.93	0.69
2:B:452:G:H2'	2:B:453:C:H5'	1.74	0.69
2:B:720:A:H2	2:B:784:A:O4'	1.76	0.69
57:EB:63:PRO:C	57:EB:65:PRO:HD2	2.13	0.69
59:GB:93:LEU:O	59:GB:96:VAL:HG22	1.93	0.69
2:B:790:U:H4'	8:H:112:LYS:O	1.92	0.69
39:MA:29:ALA:O	39:MA:33:VAL:HG23	1.92	0.69
2:B:1233:G:H4'	16:P:120:SER:HB2	1.74	0.69
43:QA:3:ALA:N	43:QA:5:LYS:HE2	2.08	0.69
46:TA:93:LEU:H	46:TA:93:LEU:HD23	1.58	0.69
23:W:114:LYS:O	23:W:146:LYS:HD2	1.91	0.69
24:X:77:VAL:HG13	24:X:106:LEU:HD11	1.74	0.69
78:ZB:12:VAL:HA	78:ZB:30:VAL:HG12	1.73	0.69
1:A:1282:U:H2'	1:A:1283:U:H6	1.58	0.69
2:B:2157:G:N2	2:B:2177:G:H1'	2.08	0.69
2:B:2858:U:H2'	2:B:2859:U:C2	2.27	0.69
3:C:40:A:H2'	3:C:41:A:C8	2.27	0.69
9:I:55:PHE:CZ	9:I:158:ARG:HB2	2.28	0.69
63:KB:140:LYS:HE2	63:KB:142:GLU:HB3	1.75	0.69
14:N:151:GLY:HA2	14:N:154:ARG:HD2	1.75	0.69
66:NB:38:LEU:HD11	69:QB:7:ARG:O	1.93	0.69
18:R:50:LYS:HD3	18:R:85:TRP:CG	2.28	0.69
2:B:282:G:N2	19:S:179:LYS:HA	2.08	0.69
23:W:127:SER:HA	23:W:132:PHE:HD2	1.56	0.69
51:YA:205:PHE:O	51:YA:207:LEU:HD13	1.93	0.69
52:ZA:137:ILE:HG13	52:ZA:138:PRO:HD2	1.75	0.69
1:A:1419:G:O2'	79:AC:54:LYS:HB3	1.93	0.69
1:A:590:C:H2'	1:A:591:A:C8	2.28	0.69
2:B:2533:G:H2'	2:B:2534:G:O4'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3112:G:O6	2:B:3119:U:H3'	1.92	0.69
2:B:3190:C:H2'	2:B:3191:G:H8	1.56	0.69
2:B:80:G:H2'	2:B:81:C:H6	1.58	0.69
57:EB:86:GLN:HG2	57:EB:87:ASP:N	2.07	0.69
7:G:293:ASN:HB2	7:G:304:THR:CA	2.23	0.69
8:H:181:VAL:HG11	8:H:224:GLY:HA3	1.75	0.69
9:I:94:ASN:ND2	9:I:97:ALA:HB2	2.08	0.69
10:J:82:ARG:HB3	37:KA:104:PRO:HB3	1.73	0.69
63:KB:107:LYS:CE	63:KB:109:LYS:HD3	2.19	0.69
15:O:54:VAL:HG11	15:O:57:PHE:HB2	1.75	0.69
42:PA:17:ARG:HH22	42:PA:52:TYR:HE2	1.41	0.69
2:B:1915:A:H4'	23:W:83:GLY:O	1.92	0.69
52:ZA:50:ILE:HG23	52:ZA:55:GLU:HG3	1.74	0.69
1:A:1674:C:H2'	1:A:1675:C:H6	1.55	0.68
1:A:55:A:N6	1:A:403:G:H1'	2.07	0.68
2:B:2369:G:H2'	2:B:2370:G:C8	2.27	0.68
2:B:431:U:H2'	2:B:432:G:H8	1.59	0.68
2:B:551:A:HO2'	2:B:552:G:H8	1.39	0.68
2:B:847:A:H2'	2:B:848:A:O4'	1.92	0.68
56:DB:25:ARG:HH11	56:DB:25:ARG:HB3	1.58	0.68
31:EA:106:GLN:HA	31:EA:109:GLU:HB3	1.75	0.68
57:EB:150:GLN:NE2	57:EB:179:LYS:HD3	2.09	0.68
32:FA:43:ILE:N	32:FA:43:ILE:HD12	2.07	0.68
2:B:3037:U:H5"	7:G:348:ARG:NH1	2.07	0.68
7:G:56:ILE:HG13	7:G:359:ILE:HG12	1.74	0.68
61:IB:80:MET:HB2	61:IB:83:THR:HG23	1.74	0.68
11:K:140:SER:O	11:K:143:THR:HB	1.93	0.68
13:M:31:ARG:HD2	13:M:149:ASN:HB3	1.74	0.68
15:O:75:LYS:HZ2	15:O:79:ILE:HD11	1.57	0.68
72:TB:94:LEU:HG	72:TB:102:VAL:HG23	1.75	0.68
47:UA:46:THR:HB	47:UA:58:SER:HB2	1.75	0.68
73:UB:130:VAL:HB	73:UB:140:LYS:HE3	1.75	0.68
1:A:101:U:C2'	1:A:102:U:H5'	2.23	0.68
1:A:1336:A:H2'	1:A:1337:A:O4'	1.92	0.68
1:A:593:U:H4'	1:A:595:G:H4'	1.75	0.68
1:A:823:G:H5'	1:A:824:G:C8	2.28	0.68
2:B:1818:U:H2'	2:B:1819:U:C4'	2.23	0.68
2:B:3159:C:H2'	2:B:3160:U:C6	2.27	0.68
2:B:3375:A:H5'	35:IA:18:LYS:HB3	1.73	0.68
2:B:413:U:H2'	2:B:414:U:C6	2.29	0.68
2:B:677:A:H2'	2:B:785:G:O6	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:100:HIS:ND1	30:DA:101:PRO:HD2	2.07	0.68
82:DC:384:LYS:HG2	82:DC:385:MET:H	1.58	0.68
82:DC:543:GLN:HA	82:DC:546:GLU:OE2	1.92	0.68
5:E:108:ASN:HB2	5:E:151:VAL:HG22	1.75	0.68
83:EC:6914:A:H2'	83:EC:6915:G:N7	2.09	0.68
6:F:68:LYS:NZ	6:F:70:ARG:HD2	2.08	0.68
58:FB:104:ILE:HD11	58:FB:165:LEU:HB2	1.76	0.68
8:H:23:PRO:HG2	8:H:258:LEU:HG	1.73	0.68
12:L:151:VAL:HB	12:L:177:TYR:HA	1.74	0.68
69:QB:65:ILE:HG12	69:QB:114:VAL:HG23	1.76	0.68
49:WA:155:ARG:HG3	49:WA:202:LEU:HD22	1.74	0.68
1:A:1419:G:C2'	1:A:1420:C:H5'	2.24	0.68
1:A:1675:C:H1'	58:FB:32:GLN:OE1	1.93	0.68
1:A:979:A:H1'	1:A:1775:U:O2'	1.94	0.68
2:B:2344:U:H2'	2:B:2345:A:C8	2.29	0.68
2:B:2415:C:H5"	6:F:2:GLY:HA2	1.75	0.68
2:B:2909:U:H2'	2:B:2910:A:H5"	1.73	0.68
82:DC:3:ALA:HA	82:DC:46:ILE:HB	1.75	0.68
82:DC:574:THR:HG23	82:DC:689:LEU:HD12	1.74	0.68
64:LB:13:VAL:CG2	64:LB:76:ILE:HA	2.23	0.68
18:R:135:LEU:HD11	20:T:178:VAL:HG22	1.74	0.68
50:XA:74:VAL:HG23	50:XA:118:PRO:HB3	1.74	0.68
51:YA:84:ILE:HD12	51:YA:100:PHE:HE2	1.58	0.68
1:A:1498:G:H5"	69:QB:72:GLY:HA3	1.75	0.68
2:B:1166:G:H2'	2:B:1167:U:C6	2.28	0.68
2:B:1256:G:H1'	16:P:123:ARG:CB	2.22	0.68
2:B:1655:G:O4'	38:LA:59:PRO:HG2	1.94	0.68
2:B:2796:G:H2'	46:TA:62:ALA:CB	2.24	0.68
29:CA:111:ASN:HD22	29:CA:123:TYR:HB2	1.58	0.68
31:EA:5:LEU:HD13	31:EA:77:TYR:CE2	2.29	0.68
60:HB:30:ALA:O	60:HB:38:LYS:HA	1.94	0.68
39:MA:38:ARG:NH1	39:MA:38:ARG:HB2	2.09	0.68
14:N:97:LEU:HD12	14:N:124:GLY:O	1.94	0.68
19:S:6:TYR:CE2	40:NA:40:VAL:HG13	2.29	0.68
15:O:48:SER:O	15:O:64:LYS:HA	1.93	0.68
42:PA:74:LYS:HD2	42:PA:74:LYS:H	1.57	0.68
69:QB:6:VAL:HG12	69:QB:7:ARG:HD2	1.74	0.68
73:UB:143:PRO:HB3	82:DC:461:GLN:O	1.94	0.68
74:VB:53:ASP:HB3	74:VB:79:VAL:HG13	1.75	0.68
51:YA:160:HIS:O	51:YA:164:ILE:HG13	1.93	0.68
2:B:3268:A:C4'	10:J:75:PRO:HG3	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:444:U:H3	2:B:490:A:H61	1.39	0.68
2:B:655:C:H2'	2:B:656:A:H8	1.58	0.68
29:CA:56:ARG:O	29:CA:57:LEU:HB2	1.94	0.68
55:CB:206:SER:HA	55:CB:211:ILE:HB	1.75	0.68
6:F:116:VAL:HG12	6:F:126:LEU:HB2	1.75	0.68
6:F:137:ILE:HD12	6:F:137:ILE:N	2.08	0.68
33:GA:5:LYS:HE2	33:GA:8:THR:HB	1.75	0.68
31:EA:2:ALA:O	34:HA:37:GLY:HA3	1.93	0.68
10:J:146:ILE:HD13	10:J:149:ILE:HD12	1.74	0.68
12:L:75:ILE:HG22	12:L:76:ALA:N	2.07	0.68
39:MA:20:GLN:HA	39:MA:23:ASP:OD2	1.94	0.68
15:O:82:ARG:HG2	15:O:112:LEU:HB2	1.75	0.68
52:ZA:58:LEU:HG	71:SB:12:TYR:CD1	2.29	0.68
73:UB:119:GLY:O	73:UB:121:ARG:HG3	1.92	0.68
49:WA:218:GLY:O	49:WA:236:ALA:HB3	1.94	0.68
1:A:968:U:H4'	1:A:1033:C:O2	1.92	0.68
1:A:1573:A:H4'	1:A:1574:G:H5'	1.74	0.68
2:B:1105:A:H2'	2:B:1106:G:C8	2.29	0.68
2:B:1308:A:N6	2:B:2367:A:C2	2.61	0.68
2:B:2585:G:H8	12:L:48:ARG:HA	1.58	0.68
2:B:3191:G:H5"	20:T:176:LYS:HG2	1.76	0.68
2:B:776:U:H3'	2:B:777:U:C5'	2.23	0.68
82:DC:143:LEU:HD22	82:DC:188:ILE:HG22	1.74	0.68
82:DC:637:GLY:HA2	82:DC:668:GLN:HE22	1.59	0.68
5:E:93:LEU:HG	5:E:100:ILE:CD1	2.23	0.68
83:EC:6820:C:H3'	83:EC:6821:U:C5'	2.23	0.68
59:GB:133:HIS:C	59:GB:134:ILE:HG12	2.14	0.68
60:HB:28:ASN:H	60:HB:40:LEU:CD2	2.07	0.68
9:I:95:TRP:CH2	9:I:161:GLY:HA2	2.28	0.68
12:L:149:LYS:HA	12:L:149:LYS:HE3	1.74	0.68
15:O:8:PRO:HD2	15:O:10:ARG:HG2	1.76	0.68
2:B:1836:C:H41	43:QA:3:ALA:HB2	1.56	0.68
44:RA:126:LYS:NZ	44:RA:126:LYS:HA	2.09	0.68
49:WA:96:THR:HG23	49:WA:97:GLY:N	2.08	0.68
51:YA:129:THR:OG1	51:YA:180:THR:HG22	1.93	0.68
51:YA:176:VAL:HG12	51:YA:177:GLN:N	1.98	0.68
1:A:423:G:C8	1:A:423:G:H5"	2.29	0.68
1:A:431:C:H2'	1:A:432:G:C8	2.28	0.68
1:A:435:C:H5"	73:UB:50:LYS:HG3	1.76	0.68
2:B:118:U:H2'	2:B:119:U:O4'	1.94	0.68
2:B:1359:C:H2'	2:B:1360:C:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:522:A:C2	2:B:523:A:H1'	2.28	0.68
55:CB:99:MET:O	55:CB:100:ASN:HB2	1.93	0.68
5:E:143:ASP:C	5:E:145:TYR:H	1.97	0.68
31:EA:13:VAL:HG23	31:EA:21:LYS:O	1.93	0.68
11:K:132:PRO:HA	11:K:229:PHE:CE1	2.28	0.68
2:B:1210:U:H5'	13:M:63:LYS:HG3	1.73	0.68
14:N:36:LEU:HD22	14:N:73:ASN:HB2	1.76	0.68
40:NA:26:ILE:CD1	40:NA:26:ILE:H	2.03	0.68
69:QB:66:TYR:CD2	69:QB:132:LEU:HD13	2.21	0.68
46:TA:29:LYS:HZ3	46:TA:31:GLY:H	1.42	0.68
23:W:81:ARG:NH2	23:W:85:ARG:HG2	2.09	0.68
49:WA:49:GLY:HA2	49:WA:54:PHE:CD1	2.27	0.68
50:XA:105:GLY:O	50:XA:112:THR:HG21	1.94	0.68
51:YA:144:ARG:HB3	51:YA:208:GLN:HB3	1.75	0.68
1:A:1493:A:H4'	1:A:1494:C:H6	1.58	0.68
1:A:936:G:O6	76:XB:15:ARG:HD2	1.94	0.68
2:B:3039:C:H1'	27:AA:9:THR:CG2	2.24	0.68
70:RB:82:TYR:HB3	79:AC:52:PHE:HB3	1.75	0.68
1:A:1758:U:H5'	2:B:2255:A:O2'	1.93	0.68
2:B:2549:G:C6	12:L:33:ASN:HA	2.29	0.68
2:B:815:G:OP1	41:OA:28:HIS:HB2	1.94	0.68
82:DC:8:GLN:HG3	82:DC:9:MET:SD	2.34	0.68
6:F:5:ILE:CG2	6:F:209:HIS:HA	2.24	0.68
4:D:49:G:N7	9:I:58:LYS:HG3	2.08	0.68
11:K:83:LEU:HD22	11:K:84:VAL:H	1.59	0.68
64:LB:16:VAL:HG12	64:LB:80:HIS:HB2	1.76	0.68
2:B:3108:G:H21	13:M:163:GLN:HE22	1.41	0.68
39:MA:44:ILE:O	39:MA:47:VAL:HG12	1.94	0.68
15:O:17:LEU:O	15:O:70:THR:HB	1.94	0.68
19:S:172:ARG:HH11	19:S:172:ARG:HB2	1.57	0.68
22:V:94:PHE:HE2	32:FA:119:PRO:HD3	1.58	0.68
48:VA:17:GLU:O	48:VA:21:GLU:HG2	1.93	0.68
51:YA:176:VAL:CG1	51:YA:177:GLN:H	2.01	0.68
78:ZB:33:LEU:HD11	78:ZB:53:ILE:HD13	1.75	0.68
1:A:252:U:H2'	1:A:253:A:C8	2.26	0.68
1:A:567:A:OP2	73:UB:67:ALA:HB1	1.94	0.68
2:B:1482:A:H5"	2:B:1858:A:C2	2.29	0.68
2:B:1614:C:H2'	2:B:1615:C:H6	1.59	0.68
2:B:3121:U:H1'	2:B:3122:A:H5"	1.76	0.68
2:B:660:A:H5"	8:H:100:PHE:CD1	2.29	0.68
2:B:824:C:H5"	6:F:21:ARG:HE	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:900:G:H1'	2:B:1589:A:N6	2.09	0.68
82:DC:379:MET:HA	82:DC:470:THR:HG22	1.76	0.68
5:E:195:LYS:H	5:E:195:LYS:HD3	1.59	0.68
31:EA:13:VAL:HB	31:EA:20:GLY:H	1.59	0.68
58:FB:13:ALA:N	61:IB:133:LYS:HE3	2.09	0.68
58:FB:81:VAL:HG22	58:FB:102:VAL:HG12	1.74	0.68
59:GB:15:PRO:HD3	59:GB:43:TYR:CE1	2.28	0.68
1:A:918:U:H5'	64:LB:29:HIS:HE2	1.59	0.68
67:OB:57:LEU:HB3	67:OB:61:ILE:HD11	1.75	0.68
19:S:114:ARG:HG2	19:S:137:PRO:HG3	1.76	0.68
46:TA:85:LEU:HD12	46:TA:86:LYS:H	1.59	0.68
46:TA:9:LYS:HE2	46:TA:22:GLN:OE1	1.94	0.68
24:X:66:GLU:HB3	24:X:69:PRO:HG3	1.76	0.68
51:YA:24:PHE:HA	51:YA:27:LYS:HB2	1.76	0.68
1:A:1184:A:H2'	1:A:1185:U:C4'	2.24	0.68
1:A:514:G:H1	1:A:543:C:H5	1.41	0.68
2:B:1783:U:H2'	2:B:1784:G:H8	1.57	0.68
2:B:2102:U:H2'	2:B:2103:U:C6	2.29	0.68
2:B:2387:A:H3'	2:B:2388:U:H5"	1.74	0.68
2:B:2423:U:H2'	2:B:2424:A:C8	2.28	0.68
2:B:2871:G:H5'	2:B:2872:A:H5'	1.74	0.68
2:B:3057:U:C5'	2:B:3086:A:H61	2.07	0.68
2:B:604:G:H2'	2:B:605:U:O4'	1.93	0.68
54:BB:22:LYS:N	54:BB:22:LYS:HD2	2.09	0.68
55:CB:117:THR:HG21	55:CB:194:LEU:CD1	2.22	0.68
82:DC:612:PHE:O	82:DC:616:ALA:HB2	1.94	0.68
59:GB:119:ALA:CB	59:GB:125:ALA:HA	2.24	0.68
8:H:11:LEU:HD22	8:H:156:LEU:HB2	1.76	0.68
61:IB:130:PRO:HB3	61:IB:136:ARG:NH1	2.08	0.68
11:K:114:GLY:O	11:K:205:PHE:HB2	1.93	0.68
14:N:58:GLU:HG3	14:N:129:VAL:HG21	1.75	0.68
14:N:170:LYS:HE3	14:N:177:ASP:HA	1.76	0.68
22:V:165:ILE:HD11	22:V:168:THR:HA	1.76	0.68
75:WB:91:PRO:HA	75:WB:101:TYR:CE1	2.28	0.68
24:X:42:TRP:CD1	24:X:53:LYS:HG3	2.29	0.68
1:A:343:C:H2'	1:A:344:A:C8	2.29	0.67
1:A:382:C:H2'	1:A:383:G:C8	2.30	0.67
1:A:627:C:H5"	63:KB:5:HIS:CD2	2.30	0.67
1:A:684:A:C3'	1:A:685:A:H5"	2.23	0.67
27:AA:45:ARG:HB3	27:AA:48:ARG:CB	2.24	0.67
53:AB:79:TYR:CD2	53:AB:84:ILE:HD11	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1499:C:H2'	2:B:1500:G:H8	1.59	0.67
2:B:1661:G:H2'	2:B:1662:G:C8	2.28	0.67
2:B:398:A:C5'	21:U:3:ARG:HD2	2.24	0.67
3:C:75:G:H5'	43:QA:30:ARG:HA	1.76	0.67
55:CB:77:TYR:HA	55:CB:83:ARG:CG	2.25	0.67
7:G:61:ASP:O	7:G:63:PRO:HD3	1.92	0.67
9:I:205:SER:HB2	9:I:233:ALA:HB1	1.74	0.67
65:MB:90:ILE:HD11	65:MB:112:LEU:HD21	1.76	0.67
14:N:47:PRO:HG2	14:N:142:ASP:OD2	1.94	0.67
69:QB:7:ARG:HH22	69:QB:67:MET:HA	1.58	0.67
19:S:35:VAL:HA	19:S:65:ARG:HE	1.56	0.67
51:YA:70:LEU:HA	51:YA:73:LEU:HG	1.75	0.67
1:A:1673:G:H22	1:A:1728:A:H2	1.41	0.67
1:A:17:C:H2'	1:A:18:C:C6	2.28	0.67
27:AA:45:ARG:HB3	27:AA:48:ARG:HB2	1.75	0.67
2:B:1100:U:H2'	2:B:1101:G:C8	2.29	0.67
2:B:2673:A:H4'	15:O:104:PHE:HA	1.76	0.67
2:B:3230:G:H5"	18:R:132:LYS:HE3	1.76	0.67
2:B:702:C:H2'	2:B:703:G:C8	2.29	0.67
3:C:113:U:H5"	43:QA:7:PHE:CB	2.23	0.67
30:DA:43:TYR:HA	30:DA:125:LYS:CG	2.24	0.67
32:FA:112:ILE:HB	32:FA:130:VAL:HG12	1.77	0.67
8:H:114:ASN:HB2	8:H:117:GLU:HB3	1.75	0.67
68:PB:66:LEU:HA	68:PB:69:ILE:HD12	1.76	0.67
70:RB:30:LYS:CB	70:RB:33:GLN:HB2	2.25	0.67
1:A:1035:G:C4'	72:TB:2:THR:HA	2.25	0.67
73:UB:19:ARG:O	73:UB:23:ARG:HG2	1.94	0.67
23:W:100:ARG:O	23:W:104:ARG:HB2	1.93	0.67
77:YB:55:THR:HG22	77:YB:56:CYS:H	1.59	0.67
1:A:1603:U:H2'	1:A:1604:U:C6	2.28	0.67
1:A:1629:G:H2'	1:A:1630:U:O4'	1.95	0.67
1:A:25:C:H2'	59:GB:8:TYR:OH	1.94	0.67
2:B:1235:U:H4'	2:B:1236:G:C5'	2.23	0.67
2:B:1359:C:H2'	2:B:1360:C:H6	1.59	0.67
2:B:1742:U:H2'	2:B:1743:G:H8	1.57	0.67
2:B:946:U:H2'	2:B:947:G:H8	1.58	0.67
54:BB:68:ARG:HD3	54:BB:76:VAL:HG11	1.75	0.67
82:DC:250:PHE:CZ	82:DC:255:LYS:HD3	2.25	0.67
59:GB:77:ILE:O	59:GB:81:VAL:HG23	1.95	0.67
8:H:74:ILE:CD1	8:H:75:PRO:HD2	2.24	0.67
60:HB:30:ALA:HA	60:HB:38:LYS:HG3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:80:SER:O	9:I:83:LEU:HG	1.94	0.67
11:K:41:ARG:HA	11:K:44:ILE:HD12	1.76	0.67
38:LA:20:ILE:HD13	38:LA:20:ILE:N	2.08	0.67
64:LB:90:ARG:HH21	64:LB:90:ARG:HG3	1.60	0.67
13:M:166:ARG:HB3	13:M:166:ARG:NH1	2.09	0.67
14:N:213:PHE:N	14:N:214:PRO:HD3	2.10	0.67
2:B:316:U:O4	40:NA:28:TYR:HA	1.94	0.67
42:PA:7:ASP:HB3	42:PA:10:GLN:HB2	1.76	0.67
69:QB:114:VAL:HG22	69:QB:115:GLU:H	1.60	0.67
18:R:93:LYS:O	18:R:96:ALA:HB3	1.94	0.67
46:TA:28:TYR:CB	46:TA:69:VAL:HB	2.24	0.67
75:WB:89:ILE:HD12	75:WB:89:ILE:O	1.94	0.67
64:LB:103:ARG:NH2	76:XB:52:ASP:HB2	2.09	0.67
26:Z:75:TYR:O	26:Z:79:LEU:HG	1.94	0.67
52:ZA:85:PRO:HB3	52:ZA:98:PHE:CD1	2.28	0.67
53:AB:106:LYS:O	53:AB:110:LEU:HB2	1.93	0.67
2:B:1229:G:O2'	48:VA:32:ASN:HA	1.95	0.67
2:B:2726:C:H3'	2:B:2728:G:H21	1.58	0.67
2:B:2813:A:H2'	2:B:2814:G:O4'	1.95	0.67
2:B:299:G:H2'	2:B:300:G:H8	1.58	0.67
2:B:3090:U:H2'	2:B:3091:A:C8	2.30	0.67
29:CA:86:VAL:HG22	29:CA:90:ALA:HB3	1.76	0.67
82:DC:172:GLU:O	82:DC:176:GLN:HG2	1.94	0.67
82:DC:26:ALA:HB3	82:DC:32:LYS:HD3	1.76	0.67
5:E:183:ILE:O	5:E:187:VAL:HB	1.94	0.67
57:EB:135:ILE:HD13	57:EB:152:VAL:CG1	2.24	0.67
6:F:225:ILE:HG21	6:F:234:LYS:HA	1.76	0.67
7:G:178:LEU:H	7:G:178:LEU:CD2	2.07	0.67
8:H:60:THR:HG22	8:H:61:SER:N	2.09	0.67
11:K:85:PHE:HE1	11:K:87:VAL:HG13	1.57	0.67
63:KB:55:ARG:HA	63:KB:60:VAL:O	1.93	0.67
13:M:129:ARG:HB2	13:M:132:VAL:HG12	1.75	0.67
13:M:45:PHE:CD1	13:M:55:VAL:HG12	2.29	0.67
40:NA:16:LYS:NZ	40:NA:16:LYS:HB3	2.10	0.67
50:XA:47:VAL:HG11	67:OB:109:LEU:HD11	1.76	0.67
1:A:1384:A:C3'	1:A:1385:G:H5"	2.25	0.67
1:A:407:A:H2'	1:A:408:C:C6	2.30	0.67
1:A:603:U:H2'	1:A:604:A:C8	2.28	0.67
2:B:1367:G:HO2'	2:B:1368:U:H6	1.43	0.67
2:B:2479:C:O2'	5:E:102:LYS:HG3	1.95	0.67
2:B:2523:A:H1'	2:B:2587:U:H1'	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:428:A:H2'	2:B:429:U:O4'	1.93	0.67
55:CB:63:GLN:HG3	55:CB:88:PRO:CA	2.23	0.67
31:EA:109:GLU:O	31:EA:113:VAL:HG23	1.95	0.67
8:H:65:TRP:HE3	8:H:71:VAL:HG11	1.60	0.67
61:IB:80:MET:CB	61:IB:83:THR:HG23	2.25	0.67
2:B:501:A:H4'	10:J:28:GLN:HG3	1.76	0.67
13:M:12:VAL:CG1	13:M:16:VAL:HB	2.25	0.67
18:R:45:LEU:HG	18:R:55:ARG:HG2	1.76	0.67
73:UB:116:ASP:OD2	73:UB:117:ILE:HG13	1.94	0.67
1:A:1289:U:H4'	1:A:1423:U:O2	1.94	0.67
1:A:209:U:H2'	1:A:210:A:H8	1.58	0.67
1:A:3:U:H5'	52:ZA:179:VAL:HG12	1.76	0.67
1:A:478:A:H2'	1:A:479:C:C6	2.28	0.67
1:A:627:C:H4'	63:KB:117:LEU:HD22	1.77	0.67
2:B:1317:A:H4'	20:T:18:ARG:HH22	1.60	0.67
2:B:2561:A:H2'	2:B:2562:A:C8	2.30	0.67
2:B:429:U:H2'	2:B:430:U:C6	2.29	0.67
3:C:48:A:H4'	39:MA:45:LYS:NZ	2.09	0.67
6:F:44:ILE:HD12	6:F:44:ILE:H	1.58	0.67
2:B:3273:A:H4'	10:J:45:GLY:N	2.10	0.67
11:K:47:ARG:HH22	11:K:179:LEU:HD11	1.60	0.67
1:A:1177:C:H41	68:PB:140:THR:HG22	1.60	0.67
17:Q:62:THR:HG22	17:Q:63:VAL:N	2.08	0.67
2:B:1259:A:H62	48:VA:38:MET:HG2	1.59	0.67
24:X:155:ARG:HH21	24:X:155:ARG:HG3	1.60	0.67
50:XA:38:PHE:CE1	67:OB:109:LEU:HG	2.30	0.67
1:A:531:C:C2'	1:A:532:U:H5"	2.20	0.67
1:A:87:C:H1'	1:A:168:A:N1	2.09	0.67
2:B:1073:U:H1'	33:GA:50:THR:OG1	1.94	0.67
2:B:1639:C:H2'	2:B:1640:G:H8	1.59	0.67
2:B:65:A:C5'	2:B:66:A:H4'	2.24	0.67
55:CB:222:LYS:HA	55:CB:225:ARG:NH2	2.10	0.67
30:DA:3:LYS:HD2	30:DA:8:VAL:HG13	1.75	0.67
82:DC:32:LYS:HB2	82:DC:128:VAL:HG21	1.75	0.67
82:DC:495:VAL:HG21	82:DC:498:ALA:HA	1.77	0.67
82:DC:629:ASP:CA	82:DC:632:LYS:HB2	2.23	0.67
83:EC:6934:U:H2'	83:EC:6935:G:H4'	1.77	0.67
37:KA:45:LEU:HA	37:KA:71:VAL:CG1	2.23	0.67
12:L:179:ILE:H	12:L:179:ILE:HD12	1.60	0.67
38:LA:80:ARG:HB2	38:LA:85:VAL:HG22	1.76	0.67
70:RB:44:ASN:ND2	70:RB:107:THR:HG21	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:5:THR:HB	47:UA:8:VAL:HG22	1.77	0.67
23:W:31:GLU:HG3	23:W:34:GLN:OE1	1.95	0.67
75:WB:98:GLN:NE2	75:WB:98:GLN:HA	2.09	0.67
24:X:92:LYS:NZ	24:X:92:LYS:HB3	2.10	0.67
1:A:1350:U:H5'	66:NB:68:ARG:NH1	2.10	0.67
1:A:320:U:H2'	1:A:321:C:C6	2.29	0.67
2:B:1094:U:H1'	2:B:1096:U:H2'	1.76	0.67
2:B:1107:C:H2'	2:B:1108:U:C6	2.29	0.67
2:B:1139:G:O2'	11:K:94:LYS:HD3	1.94	0.67
2:B:1328:C:H5"	37:KA:75:HIS:CE1	2.29	0.67
2:B:3256:G:H2'	2:B:3257:C:C6	2.30	0.67
82:DC:491:VAL:CG1	82:DC:538:LEU:HD21	2.23	0.67
82:DC:733:ILE:HD12	82:DC:733:ILE:H	1.60	0.67
82:DC:780:PHE:O	82:DC:784:LEU:HD13	1.95	0.67
5:E:24:LYS:HG2	5:E:25:LYS:N	2.09	0.67
83:EC:6834:U:H2'	83:EC:6874:A:H62	1.60	0.67
14:N:4:ARG:HH11	14:N:99:ILE:HG13	1.57	0.67
66:NB:93:HIS:HA	66:NB:97:VAL:HB	1.76	0.67
2:B:1747:G:O2'	42:PA:53:THR:HG21	1.94	0.67
69:QB:37:VAL:CG2	69:QB:100:ILE:HD11	2.24	0.67
20:T:108:ILE:HD12	20:T:160:ARG:CZ	2.25	0.67
22:V:83:VAL:HG22	22:V:140:LEU:HB2	1.77	0.67
50:XA:189:VAL:HG13	50:XA:190:ASP:N	2.03	0.67
51:YA:110:LEU:HD22	51:YA:111:ARG:NH2	2.10	0.67
1:A:29:U:H2'	1:A:30:G:C8	2.30	0.67
2:B:1629:U:O2'	2:B:1630:U:H4'	1.94	0.67
2:B:1917:C:H2'	2:B:1918:C:H6	1.59	0.67
2:B:268:A:H5"	19:S:47:LYS:HZ1	1.59	0.67
2:B:299:G:C6	40:NA:30:LYS:HB3	2.29	0.67
4:D:34:C:H2'	4:D:35:C:C6	2.30	0.67
1:A:155:U:H4'	56:DB:59:GLN:C	2.15	0.67
82:DC:92:LYS:O	82:DC:346:VAL:HG11	1.95	0.67
5:E:189:PHE:O	5:E:193:LEU:HB2	1.95	0.67
83:EC:6800:G:H1'	83:EC:6884:G:H21	1.59	0.67
83:EC:6941:U:H3'	83:EC:6942:A:H5"	1.75	0.67
9:I:282:ARG:O	9:I:286:VAL:HG23	1.94	0.67
2:B:987:U:H4'	11:K:122:ALA:HA	1.77	0.67
63:KB:16:ILE:HD11	63:KB:62:GLN:CD	2.15	0.67
40:NA:4:LYS:HB3	40:NA:12:ASN:O	1.95	0.67
18:R:46:ILE:HD11	18:R:56:GLN:HB2	1.77	0.67
70:RB:50:LEU:HD23	70:RB:95:ALA:HB2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:64:VAL:O	22:V:67:ILE:HB	1.95	0.67
1:A:359:A:H1'	73:UB:38:PHE:CD2	2.30	0.67
1:A:555:A:H2'	1:A:556:A:C8	2.30	0.67
1:A:603:U:H2'	1:A:604:A:H8	1.58	0.67
1:A:980:G:C5'	1:A:1776:A:H4'	2.25	0.67
2:B:2108:C:O4'	2:B:3344:A:H1'	1.94	0.67
2:B:598:A:H2'	2:B:599:C:C6	2.29	0.67
2:B:649:A:H2'	2:B:650:C:C6	2.30	0.67
29:CA:87:SER:C	29:CA:89:LYS:H	1.99	0.67
5:E:10:ARG:HA	5:E:13:VAL:HG13	1.77	0.67
57:EB:166:LEU:HD23	57:EB:167:GLU:H	1.60	0.67
6:F:185:ALA:O	6:F:188:LYS:HB3	1.93	0.67
58:FB:24:LYS:O	58:FB:25:ARG:HD3	1.95	0.67
33:GA:5:LYS:CE	33:GA:8:THR:HB	2.25	0.67
52:ZA:144:TRP:HH2	59:GB:61:THR:HG22	1.59	0.67
1:A:894:U:H4'	64:LB:36:LYS:NZ	2.10	0.67
67:OB:24:LEU:HA	67:OB:34:LEU:CD1	2.24	0.67
2:B:1233:G:H1'	16:P:121:PHE:HA	1.77	0.67
69:QB:11:ALA:HA	69:QB:14:PHE:HB3	1.77	0.67
70:RB:40:ASN:ND2	70:RB:107:THR:HB	2.09	0.67
20:T:74:ARG:HG2	20:T:74:ARG:HH11	1.60	0.67
77:YB:31:TYR:HE2	77:YB:33:LEU:HD21	1.58	0.67
77:YB:38:PRO:HD2	77:YB:76:GLY:O	1.95	0.67
1:A:1235:C:H2'	1:A:1236:A:C8	2.29	0.66
2:B:1308:A:N6	2:B:2367:A:H2	1.93	0.66
2:B:2344:U:H2'	2:B:2345:A:H8	1.58	0.66
2:B:2494:A:C2'	2:B:2495:C:H5"	2.26	0.66
2:B:2682:C:O2'	2:B:2683:U:H5'	1.96	0.66
2:B:501:A:H2'	2:B:502:U:C6	2.30	0.66
54:BB:195:ILE:CG2	54:BB:196:VAL:H	2.09	0.66
83:EC:6902:U:H2'	83:EC:6903:U:C5	2.30	0.66
6:F:5:ILE:HG13	6:F:7:ASN:OD1	1.94	0.66
38:LA:3:GLN:HG2	38:LA:30:LEU:HB2	1.75	0.66
38:LA:16:ARG:O	38:LA:37:LYS:HD3	1.95	0.66
42:PA:4:GLU:HA	42:PA:53:THR:HG23	1.77	0.66
2:B:684:G:H5"	17:Q:35:ARG:NH1	2.10	0.66
1:A:1774:G:H5"	45:SA:7:LYS:NZ	2.09	0.66
8:H:299:ILE:CD1	22:V:39:ARG:HB3	2.26	0.66
2:B:1112:A:OP2	17:Q:5:LYS:HE3	1.96	0.66
2:B:3123:A:H2'	2:B:3124:G:H5'	1.77	0.66
54:BB:45:ILE:CG2	54:BB:81:THR:HG22	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:40:ARG:HH21	30:DA:46:LYS:HD3	1.61	0.66
82:DC:539:GLU:HG2	82:DC:543:GLN:HE21	1.61	0.66
82:DC:644:ASN:HD22	82:DC:684:VAL:H	1.41	0.66
54:BB:23:LEU:HG	59:GB:6:ARG:HH11	1.61	0.66
10:J:165:LEU:HD11	10:J:171:PRO:HG3	1.76	0.66
67:OB:44:LYS:HG3	67:OB:47:ARG:CZ	2.25	0.66
17:Q:75:PHE:O	17:Q:79:GLU:HB2	1.95	0.66
18:R:15:VAL:HG22	24:X:150:PHE:O	1.94	0.66
48:VA:77:LEU:N	48:VA:78:PRO:HD2	2.10	0.66
1:A:690:G:H2'	1:A:691:C:H6	1.59	0.66
1:A:871:G:H2'	1:A:872:G:C8	2.30	0.66
1:A:946:U:H2'	1:A:947:U:C6	2.30	0.66
2:B:2204:C:H2'	2:B:2206:G:N7	2.09	0.66
2:B:2907:G:H2'	2:B:2908:G:H8	1.60	0.66
2:B:3365:U:H2'	2:B:3366:G:H8	1.60	0.66
54:BB:37:LYS:HB2	54:BB:40:GLU:HG2	1.77	0.66
55:CB:76:ARG:H	55:CB:76:ARG:HD3	1.60	0.66
82:DC:155:VAL:HG23	82:DC:208:THR:O	1.95	0.66
82:DC:360:PRO:HB2	82:DC:363:ASP:HB2	1.78	0.66
82:DC:369:ILE:HD13	82:DC:402:ALA:HB2	1.78	0.66
57:EB:91:ILE:HD11	57:EB:129:LEU:HA	1.75	0.66
6:F:227:ARG:CB	6:F:239:ALA:HB2	2.20	0.66
63:KB:17:PRO:HG3	77:YB:28:PRO:HD3	1.76	0.66
20:T:76:PRO:HB3	20:T:138:LEU:CD2	2.24	0.66
74:VB:20:ARG:C	74:VB:21:LYS:HD2	2.16	0.66
23:W:138:LEU:HG	23:W:142:ILE:HD11	1.76	0.66
51:YA:105:PHE:N	51:YA:214:LYS:HG2	2.11	0.66
52:ZA:80:VAL:HG22	52:ZA:83:ILE:HD11	1.76	0.66
1:A:385:A:H2'	1:A:386:G:C8	2.31	0.66
27:AA:62:VAL:HB	27:AA:70:ARG:HA	1.77	0.66
2:B:1387:G:HO2'	10:J:2:SER:N	1.92	0.66
2:B:1439:U:H2'	2:B:1440:G:C8	2.30	0.66
2:B:1589:A:OP1	38:LA:11:ASN:HB2	1.95	0.66
2:B:2275:A:N6	2:B:2311:G:H1'	2.10	0.66
2:B:2343:C:H2'	2:B:2344:U:H6	1.60	0.66
54:BB:19:LEU:HD11	54:BB:108:ARG:NE	2.10	0.66
82:DC:155:VAL:HB	82:DC:209:VAL:HG22	1.78	0.66
82:DC:241:MET:HA	82:DC:244:LEU:HB2	1.76	0.66
57:EB:102:PRO:O	57:EB:106:SER:HB3	1.94	0.66
33:GA:11:ASN:O	33:GA:15:LYS:HG3	1.95	0.66
34:HA:25:LEU:HD22	34:HA:87:VAL:HG11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:24:SER:O	35:IA:28:ARG:HB2	1.95	0.66
2:B:429:U:H4'	37:KA:88:ASN:O	1.95	0.66
64:LB:81:VAL:HG11	64:LB:102:LEU:HD21	1.76	0.66
64:LB:58:TYR:O	64:LB:62:LEU:HG	1.93	0.66
65:MB:31:GLU:HG3	65:MB:49:MET:HE1	1.78	0.66
15:O:107:ASP:HA	15:O:124:GLY:HA2	1.78	0.66
69:QB:102:ARG:HB3	69:QB:102:ARG:NH1	2.10	0.66
1:A:1504:G:H5"	69:QB:97:SER:HA	1.77	0.66
19:S:114:ARG:NE	19:S:114:ARG:HA	2.10	0.66
19:S:21:PHE:O	19:S:25:VAL:HG23	1.96	0.66
74:VB:14:SER:HB2	74:VB:21:LYS:HE3	1.76	0.66
25:Y:56:PHE:CZ	25:Y:78:LYS:HG3	2.30	0.66
51:YA:30:PHE:CD1	51:YA:94:LYS:HA	2.29	0.66
1:A:1064:G:H2'	1:A:1065:A:H8	1.59	0.66
1:A:1626:U:H2'	1:A:1627:U:C6	2.31	0.66
1:A:208:U:H2'	1:A:209:U:C6	2.30	0.66
2:B:1221:A:H3'	2:B:1222:G:H5"	1.78	0.66
2:B:3060:C:H1'	2:B:3332:U:O2'	1.95	0.66
2:B:564:G:H2'	2:B:565:U:C6	2.31	0.66
2:B:845:G:H1'	2:B:848:A:N6	2.11	0.66
82:DC:698:ILE:HG13	83:EC:6953:G:N7	2.10	0.66
7:G:303:LYS:HD2	7:G:361:THR:HG21	1.77	0.66
8:H:279:HIS:HB3	8:H:281:ILE:O	1.94	0.66
36:JA:97:ALA:HB3	36:JA:100:ILE:HG12	1.76	0.66
37:KA:32:ILE:HD12	37:KA:35:VAL:HG21	1.78	0.66
2:B:265:A:H4'	40:NA:37:THR:CG2	2.25	0.66
66:NB:55:VAL:HG22	66:NB:59:LYS:HE3	1.77	0.66
66:NB:60:PHE:HA	66:NB:63:ILE:CD1	2.21	0.66
1:A:1172:G:N2	69:QB:88:VAL:HG21	2.11	0.66
19:S:5:LYS:HA	19:S:8:GLU:HB2	1.77	0.66
72:TB:53:ILE:O	72:TB:53:ILE:HG13	1.94	0.66
50:XA:60:ALA:O	50:XA:64:ILE:HD12	1.96	0.66
1:A:1437:U:H1'	53:AB:181:VAL:HG21	1.76	0.66
1:A:961:U:H2'	1:A:962:C:C6	2.30	0.66
2:B:1084:A:H5"	25:Y:35:LYS:HE3	1.78	0.66
2:B:114:A:H2'	2:B:115:A:O4'	1.95	0.66
2:B:572:A:H2'	2:B:573:C:O4'	1.96	0.66
54:BB:191:ARG:C	54:BB:192:ILE:HD12	2.14	0.66
3:C:118:C:H2'	3:C:119:C:C6	2.30	0.66
29:CA:111:ASN:HD22	29:CA:123:TYR:CB	2.09	0.66
29:CA:63:ILE:HG12	29:CA:84:PHE:HB3	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:155:GLU:O	32:FA:100:PRO:HA	1.95	0.66
3:C:28:C:H4'	8:H:49:ALA:CB	2.25	0.66
2:B:2402:A:H2'	8:H:67:THR:OG1	1.96	0.66
9:I:22:ARG:HB3	9:I:28:THR:HB	1.77	0.66
9:I:83:LEU:HD22	9:I:88:ILE:HB	1.77	0.66
11:K:83:LEU:HD21	11:K:116:PHE:HB3	1.78	0.66
67:OB:32:LYS:HG3	67:OB:47:ARG:HD3	1.78	0.66
1:A:1524:A:H4'	69:QB:93:HIS:CD2	2.31	0.66
46:TA:26:THR:HG22	46:TA:27:GLN:N	2.09	0.66
48:VA:113:ALA:HB3	48:VA:181:PHE:HD1	1.60	0.66
74:VB:35:VAL:HG22	74:VB:36:SER:H	1.60	0.66
50:XA:126:PRO:HG3	50:XA:151:SER:HB3	1.77	0.66
1:A:1474:G:H2'	1:A:1475:A:C8	2.31	0.66
1:A:607:G:H5'	1:A:613:G:N2	2.10	0.66
1:A:876:G:H2'	1:A:936:G:N2	2.11	0.66
70:RB:67:THR:HG22	79:AC:40:ARG:HH11	1.61	0.66
2:B:1083:G:H2'	2:B:1084:A:C8	2.31	0.66
2:B:2503:G:H2'	2:B:2504:U:O4'	1.96	0.66
2:B:3106:A:H2'	2:B:3107:U:O4'	1.96	0.66
82:DC:587:TYR:HD2	82:DC:690:ASP:O	1.77	0.66
57:EB:172:VAL:HG12	57:EB:176:LEU:HD12	1.76	0.66
36:JA:2:ALA:O	36:JA:90:LYS:HA	1.96	0.66
14:N:135:ILE:HG22	14:N:136:PHE:HD1	1.60	0.66
2:B:299:G:C4	40:NA:31:GLY:HA3	2.30	0.66
72:TB:41:MET:HG2	72:TB:129:VAL:HG11	1.78	0.66
21:U:125:GLN:HB2	21:U:141:SER:HB2	1.78	0.66
47:UA:22:LEU:O	47:UA:26:VAL:HG23	1.95	0.66
1:A:1293:U:H1'	50:XA:111:ILE:CG2	2.25	0.66
1:A:638:U:H1'	57:EB:112:ARG:HH12	1.60	0.66
2:B:1135:A:OP2	33:GA:5:LYS:HG3	1.96	0.66
2:B:2895:G:H2'	2:B:2896:A:H5"	1.77	0.66
2:B:3305:A:H5"	7:G:272:TYR:CE2	2.30	0.66
2:B:674:G:H2'	2:B:675:C:O4'	1.96	0.66
2:B:958:C:H1'	32:FA:40:HIS:CB	2.26	0.66
28:BA:17:ARG:HG2	28:BA:18:GLY:N	2.10	0.66
3:C:27:U:H4'	8:H:51:ALA:HB3	1.78	0.66
82:DC:595:GLU:HB3	82:DC:599:LEU:HD13	1.76	0.66
7:G:178:LEU:H	7:G:178:LEU:HD23	1.61	0.66
8:H:11:LEU:CD2	8:H:156:LEU:HB2	2.26	0.66
12:L:146:LYS:HG3	12:L:173:MET:CE	2.25	0.66
2:B:3113:A:O2'	13:M:69:ARG:HB3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:119:TYR:HH	39:MA:116:TYR:HE1	1.44	0.66
15:O:49:LYS:HA	15:O:64:LYS:HA	1.77	0.66
16:P:134:GLY:H	16:P:137:GLN:HB2	1.61	0.66
71:SB:14:PRO:HB3	71:SB:23:ILE:HD11	1.77	0.66
73:UB:134:ALA:HB1	73:UB:140:LYS:HZ3	1.61	0.66
1:A:1471:A:H5'	55:CB:184:PHE:CE2	2.31	0.66
1:A:330:G:H2'	1:A:331:A:C8	2.29	0.66
2:B:2407:C:H2'	2:B:2408:U:C6	2.31	0.66
2:B:2491:A:H2'	2:B:2492:C:H5'	1.78	0.66
54:BB:31:PRO:HG2	54:BB:38:LEU:HD22	1.78	0.66
4:D:101:G:O2'	4:D:102:A:H5"	1.96	0.66
30:DA:119:ILE:HG22	30:DA:124:GLY:HA3	1.78	0.66
82:DC:220:PHE:HB3	82:DC:328:LEU:CD2	2.25	0.66
10:J:72:ASN:HB3	10:J:160:SER:HA	1.78	0.66
63:KB:126:ALA:O	63:KB:130:ARG:HG3	1.95	0.66
64:LB:13:VAL:HG23	64:LB:77:THR:H	1.60	0.66
19:S:146:ALA:HB2	39:MA:99:GLN:O	1.95	0.66
43:QA:10:LYS:HA	43:QA:13:MET:CE	2.26	0.66
19:S:93:LYS:O	19:S:94:TYR:HB3	1.96	0.66
22:V:64:VAL:HA	22:V:67:ILE:CD1	2.26	0.66
2:B:2735:U:C4'	25:Y:51:GLY:H	2.09	0.66
26:Z:97:SER:HA	26:Z:103:TYR:HA	1.78	0.66
1:A:918:U:H5'	64:LB:29:HIS:NE2	2.11	0.66
2:B:1234:G:H4'	16:P:114:ARG:HH12	1.61	0.66
2:B:3035:A:H1'	13:M:121:LYS:O	1.96	0.66
2:B:692:A:C2'	2:B:693:A:H5'	2.26	0.66
1:A:241:U:H5'	56:DB:216:LEU:HD11	1.76	0.66
60:HB:24:LYS:O	60:HB:43:ILE:HD11	1.96	0.66
67:OB:27:ASP:OD2	67:OB:30:THR:HG22	1.95	0.66
1:A:1414:U:H5"	67:OB:3:ARG:CD	2.25	0.66
17:Q:39:ARG:HA	17:Q:51:LEU:HD21	1.78	0.66
70:RB:43:LYS:HA	70:RB:46:GLU:HB3	1.78	0.66
20:T:158:ALA:HA	20:T:161:LYS:HD2	1.78	0.66
22:V:131:ALA:HB1	22:V:134:GLY:HA2	1.77	0.66
1:A:340:U:H2'	1:A:341:A:H8	1.60	0.65
2:B:1084:A:H2'	2:B:1085:A:C8	2.31	0.65
2:B:1122:U:H2'	2:B:1123:U:C6	2.31	0.65
2:B:1508:C:H4'	2:B:2353:G:HO2'	1.61	0.65
2:B:1836:C:H2'	2:B:1837:U:C6	2.31	0.65
2:B:1942:U:OP2	23:W:74:ARG:HD3	1.96	0.65
2:B:41:G:N2	2:B:2803:A:H62	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:968:G:H2'	2:B:969:C:C6	2.31	0.65
55:CB:195:ALA:O	55:CB:199:ILE:HG13	1.96	0.65
56:DB:216:LEU:HG	56:DB:219:ARG:HH11	1.61	0.65
6:F:62:VAL:HB	6:F:73:GLU:OE2	1.95	0.65
7:G:126:LYS:HB2	7:G:128:LYS:HG2	1.77	0.65
37:KA:49:ILE:HG12	37:KA:100:ILE:HG12	1.78	0.65
39:MA:85:THR:HB	39:MA:88:LEU:HD12	1.78	0.65
65:MB:68:PRO:HG2	65:MB:71:GLU:HB3	1.76	0.65
40:NA:45:ARG:NH1	40:NA:45:ARG:HB3	2.11	0.65
15:O:97:SER:HB3	15:O:128:TYR:OH	1.95	0.65
2:B:1234:G:H21	16:P:131:GLU:HB2	1.60	0.65
20:T:43:ILE:HG22	20:T:44:SER:H	1.61	0.65
21:U:112:LEU:HG	21:U:150:VAL:HG22	1.77	0.65
22:V:173:GLU:O	22:V:178:ARG:HG3	1.96	0.65
74:VB:12:VAL:HG13	74:VB:23:PHE:HD2	1.61	0.65
49:WA:71:CYS:HB2	49:WA:81:LEU:O	1.95	0.65
75:WB:54:VAL:H	75:WB:55:PRO:HD2	1.60	0.65
1:A:1627:U:H2'	1:A:1628:U:H5'	1.77	0.65
1:A:460:A:H3'	1:A:461:G:H8	1.61	0.65
1:A:542:A:O2'	1:A:543:C:H5'	1.96	0.65
27:AA:135:VAL:HG11	28:BA:26:SER:CB	2.27	0.65
2:B:1588:A:H3'	2:B:1589:A:C5'	2.25	0.65
2:B:1805:C:H2'	2:B:1806:A:C8	2.31	0.65
2:B:2881:C:H2'	2:B:2882:U:C6	2.31	0.65
28:BA:3:VAL:HG11	28:BA:12:LYS:HE2	1.76	0.65
54:BB:129:VAL:HA	54:BB:139:VAL:HG12	1.78	0.65
82:DC:676:ILE:HD11	82:DC:722:PRO:HB3	1.78	0.65
82:DC:74:ALA:CB	82:DC:103:ILE:HG22	2.26	0.65
7:G:248:LYS:HB2	7:G:248:LYS:NZ	2.12	0.65
8:H:140:HIS:HA	8:H:177:ASP:OD2	1.96	0.65
12:L:156:ASP:CG	12:L:183:LYS:HB3	2.15	0.65
3:C:94:C:OP2	41:OA:72:ARG:HG2	1.97	0.65
16:P:106:LEU:O	16:P:107:ASP:HB2	1.96	0.65
71:SB:67:ASP:HA	71:SB:70:ASN:HD22	1.61	0.65
24:X:154:HIS:CD2	24:X:170:THR:HG22	2.30	0.65
1:A:1340:U:H3'	1:A:1341:A:H5"	1.77	0.65
1:A:138:A:H2'	1:A:139:C:H5'	1.78	0.65
1:A:1202:A:N6	1:A:1457:C:H5"	2.11	0.65
1:A:1579:U:H2'	1:A:1580:C:C6	2.31	0.65
2:B:1622:U:H2'	2:B:1623:G:C8	2.31	0.65
2:B:2799:A:H5"	2:B:2800:G:O5'	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3344:A:C2	2:B:3345:G:H1'	2.30	0.65
2:B:39:A:C5'	2:B:40:A:H4'	2.27	0.65
2:B:945:C:H2'	2:B:946:U:C6	2.30	0.65
11:K:115:THR:CG2	11:K:204:PRO:HA	2.27	0.65
12:L:221:ASN:O	12:L:225:LYS:HD3	1.95	0.65
38:LA:8:ARG:HD2	38:LA:32:ALA:O	1.97	0.65
40:NA:15:LYS:CG	40:NA:17:VAL:HG23	2.25	0.65
17:Q:75:PHE:HD2	17:Q:96:ALA:O	1.79	0.65
1:A:1368:G:H5"	69:QB:69:LYS:HE3	1.78	0.65
22:V:55:SER:H	22:V:58:ASN:HD22	1.42	0.65
75:WB:41:ILE:HG23	75:WB:42:LEU:H	1.61	0.65
51:YA:117:TRP:HE1	51:YA:152:ARG:HE	1.43	0.65
1:A:1280:C:O2'	70:RB:70:THR:HB	1.95	0.65
1:A:1546:G:H2'	1:A:1547:A:H8	1.60	0.65
1:A:82:U:H2'	1:A:83:G:O4'	1.96	0.65
1:A:898:A:N3	1:A:899:G:H1'	2.12	0.65
2:B:1170:A:H2'	2:B:1171:G:O4'	1.96	0.65
2:B:1755:C:H2'	2:B:1756:C:O4'	1.96	0.65
2:B:2205:U:C2'	2:B:2206:G:H5'	2.27	0.65
2:B:2342:U:H2'	2:B:2343:C:C6	2.30	0.65
2:B:2366:C:H2'	2:B:2367:A:C8	2.30	0.65
2:B:2372:A:H3'	2:B:2373:A:C5'	2.26	0.65
2:B:2511:A:H2'	2:B:2512:C:C6	2.31	0.65
2:B:790:U:H2'	2:B:791:A:C8	2.32	0.65
30:DA:102:SER:O	30:DA:103:LYS:HD3	1.96	0.65
56:DB:159:ARG:CZ	56:DB:170:THR:HG23	2.26	0.65
82:DC:284:LEU:HD22	82:DC:303:LEU:HD11	1.79	0.65
63:KB:15:ALA:H	77:YB:20:LYS:HZ1	1.44	0.65
40:NA:15:LYS:HG3	40:NA:17:VAL:HG23	1.77	0.65
21:U:66:SER:C	21:U:67:ILE:HD12	2.17	0.65
8:H:31:ARG:HD2	22:V:24:VAL:HG22	1.78	0.65
76:XB:44:ILE:HG13	76:XB:65:PRO:O	1.96	0.65
26:Z:76:LEU:HA	26:Z:79:LEU:HD12	1.79	0.65
1:A:153:G:H5'	74:VB:131:ARG:HH12	1.61	0.65
1:A:1565:C:H2'	1:A:1566:U:O4'	1.96	0.65
2:B:1764:U:H3'	2:B:1765:U:H5"	1.78	0.65
2:B:2081:U:C2'	2:B:2082:U:H4'	2.26	0.65
2:B:2458:A:H5'	2:B:2459:A:C2	2.31	0.65
2:B:2857:C:H2'	2:B:2858:U:C6	2.31	0.65
2:B:685:G:H5"	17:Q:39:ARG:NH2	2.11	0.65
54:BB:182:TYR:HD2	54:BB:183:VAL:H	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:77:LEU:HD23	82:DC:100:ILE:CB	2.26	0.65
31:EA:16:GLY:N	31:EA:19:ALA:HB2	2.11	0.65
6:F:101:VAL:HB	6:F:165:VAL:HA	1.77	0.65
7:G:252:ILE:HG23	7:G:264:VAL:HG21	1.77	0.65
2:B:1419:A:H62	8:H:187:LEU:HD13	1.60	0.65
34:HA:41:LEU:HD13	34:HA:42:ILE:N	2.11	0.65
9:I:34:LYS:C	9:I:34:LYS:HD3	2.17	0.65
37:KA:51:TYR:O	37:KA:66:VAL:HG13	1.97	0.65
38:LA:100:ILE:O	38:LA:104:VAL:HG23	1.96	0.65
2:B:3198:U:H3	13:M:26:LYS:HB2	1.62	0.65
19:S:84:PRO:HA	19:S:87:GLN:HB2	1.77	0.65
72:TB:32:LYS:O	72:TB:35:ILE:HB	1.96	0.65
1:A:1425:A:O2'	1:A:1426:C:H5'	1.96	0.65
1:A:767:U:H6	59:GB:141:VAL:HA	1.62	0.65
2:B:168:U:H2'	2:B:169:U:C6	2.31	0.65
2:B:2606:G:H2'	2:B:2606:G:N3	2.11	0.65
2:B:2957:G:C2'	2:B:2958:A:H5'	2.25	0.65
2:B:509:U:H2'	2:B:510:G:C5'	2.14	0.65
2:B:745:C:H5"	22:V:145:ASN:HD22	1.62	0.65
2:B:986:U:H2'	2:B:987:U:H6	1.61	0.65
82:DC:277:ILE:O	82:DC:280:PRO:HD2	1.96	0.65
31:EA:127:ASN:HB3	31:EA:131:PHE:CE1	2.31	0.65
83:EC:6789:G:H2'	83:EC:6878:G:H21	1.62	0.65
7:G:339:ARG:CZ	7:G:342:LEU:HD21	2.27	0.65
25:Y:82:ASN:O	33:GA:21:ILE:HA	1.97	0.65
8:H:235:LEU:O	8:H:235:LEU:HD12	1.97	0.65
34:HA:25:LEU:HD21	34:HA:81:VAL:HG11	1.79	0.65
34:HA:86:ARG:CD	47:UA:44:LYS:HE3	2.26	0.65
11:K:202:LEU:HD22	11:K:205:PHE:HE1	1.61	0.65
63:KB:102:LEU:HD21	63:KB:112:LYS:HA	1.78	0.65
63:KB:40:TYR:CD1	63:KB:53:LEU:HD21	2.31	0.65
13:M:1:MET:HG3	13:M:2:LYS:N	2.12	0.65
65:MB:37:ALA:HB1	65:MB:38:PRO:HD2	1.79	0.65
20:T:113:ASP:HA	20:T:117:ARG:NH1	2.10	0.65
21:U:122:ALA:HA	21:U:145:HIS:CE1	2.31	0.65
25:Y:29:THR:O	25:Y:29:THR:HG22	1.96	0.65
71:SB:85:TYR:CG	77:YB:6:ASP:HB2	2.31	0.65
52:ZA:85:PRO:HA	52:ZA:98:PHE:HA	1.77	0.65
1:A:913:G:H3'	1:A:914:G:C5'	2.26	0.65
27:AA:135:VAL:HG11	28:BA:26:SER:HB3	1.78	0.65
2:B:1609:C:H2'	2:B:1610:G:H8	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:107:VAL:HG11	29:CA:124:VAL:HG12	1.79	0.65
55:CB:62:VAL:CG1	55:CB:89:ILE:HG21	2.23	0.65
31:EA:41:ALA:HB2	31:EA:77:TYR:HE1	1.61	0.65
2:B:2881:C:H4'	7:G:249:VAL:CG1	2.27	0.65
1:A:478:A:HO2'	59:GB:124:HIS:CG	2.15	0.65
8:H:337:GLU:HB3	8:H:339:LEU:HD13	1.77	0.65
60:HB:31:LYS:HA	60:HB:37:THR:O	1.95	0.65
66:NB:99:GLU:O	66:NB:103:ASN:HB2	1.96	0.65
3:C:67:U:OP1	41:OA:85:LYS:HE3	1.95	0.65
68:PB:16:ARG:HB2	68:PB:21:ASN:HA	1.79	0.65
19:S:41:ARG:HD3	19:S:42:PRO:CD	2.20	0.65
21:U:119:VAL:HA	21:U:145:HIS:O	1.97	0.65
48:VA:60:ARG:HA	48:VA:63:ILE:HD12	1.78	0.65
50:XA:55:GLU:O	50:XA:58:VAL:HB	1.97	0.65
76:XB:41:ILE:HA	76:XB:67:THR:O	1.96	0.65
52:ZA:203:LYS:O	52:ZA:206:THR:HG22	1.96	0.65
1:A:842:C:H2'	1:A:843:U:O4'	1.97	0.65
53:AB:69:LEU:HA	53:AB:72:LEU:HD12	1.78	0.65
2:B:1189:C:H4'	2:B:1190:A:C8	2.32	0.65
2:B:1286:A:C4'	2:B:1287:A:H4'	2.27	0.65
2:B:2148:U:H2'	2:B:2149:A:C8	2.32	0.65
2:B:2173:U:H2'	2:B:2174:G:C8	2.32	0.65
2:B:970:A:H2'	2:B:971:G:C8	2.32	0.65
55:CB:146:THR:CG2	55:CB:157:ARG:HB3	2.27	0.65
56:DB:32:ILE:HA	56:DB:52:ILE:HB	1.78	0.65
82:DC:230:ALA:HB2	82:DC:237:LYS:HB3	1.79	0.65
59:GB:69:ARG:HH12	59:GB:92:LYS:HE2	1.61	0.65
9:I:273:ARG:HG2	9:I:274:GLN:N	2.11	0.65
35:IA:29:ALA:HB2	35:IA:64:VAL:HA	1.77	0.65
10:J:52:VAL:HG22	10:J:53:VAL:H	1.61	0.65
2:B:517:G:H5'	11:K:67:ARG:HH21	1.59	0.65
66:NB:18:ALA:HA	66:NB:69:VAL:HG12	1.78	0.65
46:TA:75:VAL:HG23	46:TA:76:LYS:HE3	1.79	0.65
49:WA:23:LEU:HD11	49:WA:303:ALA:HA	1.79	0.65
18:R:39:ILE:HA	24:X:95:ARG:HE	1.61	0.65
51:YA:62:LYS:HA	51:YA:88:VAL:HB	1.79	0.65
54:BB:10:LYS:HA	54:BB:27:TYR:CA	2.23	0.65
1:A:155:U:H4'	56:DB:59:GLN:CA	2.26	0.65
5:E:114:GLU:HG3	5:E:139:SER:HA	1.79	0.65
31:EA:25:ILE:CA	31:EA:43:VAL:HG12	2.23	0.65
57:EB:80:GLU:O	57:EB:84:LYS:HD3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:21:PHE:CE1	58:FB:22:ARG:HD3	2.32	0.65
7:G:332:ARG:HH11	7:G:332:ARG:HG2	1.60	0.65
60:HB:37:THR:HG22	60:HB:41:TYR:HD1	1.61	0.65
4:D:20:A:H1'	9:I:274:GLN:NE2	2.12	0.65
36:JA:105:ARG:HA	36:JA:108:ILE:HD12	1.78	0.65
11:K:85:PHE:CE1	11:K:87:VAL:HG13	2.32	0.65
38:LA:74:ARG:CZ	38:LA:85:VAL:HG21	2.27	0.65
51:YA:45:LYS:HG3	64:LB:13:VAL:HG12	1.79	0.65
39:MA:30:GLU:O	39:MA:33:VAL:HB	1.95	0.65
42:PA:19:ASP:O	42:PA:21:LYS:HE2	1.97	0.65
17:Q:59:ARG:HA	17:Q:69:VAL:HA	1.78	0.65
70:RB:27:THR:OG1	70:RB:113:ASP:HB3	1.97	0.65
20:T:73:PHE:CG	20:T:78:ARG:HG2	2.32	0.65
20:T:98:ALA:HA	20:T:101:ARG:NH1	2.12	0.65
48:VA:43:LYS:HA	48:VA:46:ARG:HG2	1.77	0.65
52:ZA:111:VAL:HG13	52:ZA:139:ILE:HD11	1.78	0.65
2:B:118:U:H3'	2:B:119:U:C6	2.32	0.65
2:B:3270:U:O4'	21:U:174:GLY:HA3	1.96	0.65
2:B:3275:U:H3'	2:B:3276:G:C5'	2.25	0.65
2:B:556:U:H3	2:B:559:A:H62	1.43	0.65
54:BB:31:PRO:HG2	54:BB:38:LEU:CD2	2.27	0.65
54:BB:34:GLY:HA3	54:BB:83:PRO:CG	2.24	0.65
3:C:57:C:H4'	3:C:63:G:N7	2.12	0.65
56:DB:62:PRO:O	56:DB:98:ARG:HB3	1.97	0.65
82:DC:671:THR:HA	82:DC:681:MET:HG3	1.79	0.65
32:FA:104:THR:HG21	32:FA:112:ILE:HD11	1.79	0.65
37:KA:30:ILE:HG22	37:KA:31:LYS:N	2.12	0.65
64:LB:90:ARG:HD3	64:LB:91:THR:H	1.62	0.65
66:NB:36:ILE:HG12	66:NB:49:TYR:HE1	1.60	0.65
19:S:73:ARG:HE	19:S:92:LEU:CD2	1.98	0.65
48:VA:45:LEU:HD21	48:VA:99:VAL:HG11	1.79	0.65
1:A:1716:C:O2'	1:A:1717:G:H5"	1.97	0.64
1:A:291:G:H2'	1:A:292:U:C5	2.32	0.64
1:A:889:U:H2'	1:A:890:C:C6	2.33	0.64
2:B:1491:A:H61	2:B:1837:U:H3	1.44	0.64
2:B:2254:U:C2'	2:B:2255:A:H5"	2.27	0.64
2:B:3157:U:H4'	2:B:3158:G:H8	1.61	0.64
2:B:3313:U:O2'	7:G:173:GLN:HA	1.98	0.64
2:B:807:A:C2	2:B:808:A:C8	2.84	0.64
3:C:142:C:H4'	19:S:60:VAL:HG21	1.78	0.64
82:DC:158:ASN:CG	82:DC:159:LYS:H	2.00	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:387:PRO:HA	82:DC:394:PHE:HB3	1.79	0.64
82:DC:655:TYR:HB2	82:DC:693:LEU:CD1	2.27	0.64
6:F:56:ALA:HA	6:F:170:ALA:O	1.97	0.64
33:GA:14:ARG:HH11	33:GA:18:ARG:CD	2.04	0.64
34:HA:30:THR:O	34:HA:34:LEU:HB2	1.97	0.64
61:IB:22:ASN:ND2	61:IB:24:LYS:HB3	2.10	0.64
12:L:155:ASN:HB3	12:L:179:ILE:HG22	1.79	0.64
41:OA:8:PHE:O	41:OA:11:ARG:HG3	1.97	0.64
19:S:146:ALA:HA	19:S:149:ASN:HB3	1.79	0.64
49:WA:82:SER:O	49:WA:89:LEU:HA	1.97	0.64
1:A:1214:U:H4'	1:A:1244:A:H8	1.61	0.64
1:A:484:C:H2'	1:A:485:A:C8	2.31	0.64
1:A:703:G:H2'	1:A:704:C:H5'	1.79	0.64
2:B:1711:C:H2'	2:B:1712:G:O4'	1.97	0.64
2:B:27:C:O2'	2:B:28:C:H5'	1.97	0.64
2:B:3300:U:H2'	2:B:3301:U:C5'	2.27	0.64
2:B:948:C:H2'	2:B:949:C:C6	2.32	0.64
55:CB:100:ASN:N	55:CB:103:ASN:HB2	2.11	0.64
82:DC:697:ALA:HB2	82:DC:700:ARG:HE	1.62	0.64
5:E:207:LYS:HA	5:E:213:ALA:HA	1.80	0.64
31:EA:23:VAL:HG21	31:EA:43:VAL:HG21	1.78	0.64
2:B:1793:C:OP1	6:F:184:ARG:HD3	1.98	0.64
2:B:40:A:H5"	32:FA:35:ALA:HB1	1.79	0.64
59:GB:53:ARG:CZ	59:GB:53:ARG:HB3	2.27	0.64
2:B:1385:C:HO2'	10:J:2:SER:N	1.95	0.64
37:KA:50:ALA:HB2	37:KA:68:TRP:CE2	2.33	0.64
13:M:3:TYR:CD2	13:M:65:VAL:HG21	2.32	0.64
1:A:1460:A:OP2	68:PB:145:ARG:HD2	1.97	0.64
25:Y:11:THR:HA	25:Y:14:MET:HB3	1.78	0.64
1:A:1135:U:H2'	1:A:1136:U:C6	2.32	0.64
1:A:1136:U:H5"	73:UB:62:LYS:HE2	1.78	0.64
1:A:1477:G:H5"	69:QB:45:MET:O	1.97	0.64
1:A:1711:C:H2'	1:A:1712:A:O4'	1.96	0.64
1:A:520:A:H2'	1:A:521:A:C8	2.33	0.64
1:A:992:A:C2	1:A:1012:U:N3	2.64	0.64
2:B:1566:A:H2'	2:B:1567:U:C4'	2.27	0.64
2:B:1643:A:N3	2:B:1822:C:H1'	2.12	0.64
2:B:2177:G:H4'	2:B:2180:G:H1'	1.80	0.64
2:B:2894:C:H2'	2:B:2895:G:H8	1.60	0.64
2:B:2939:G:H2'	2:B:2940:A:O4'	1.98	0.64
2:B:659:G:H2'	2:B:1432:C:H42	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:996:A:H2'	2:B:997:A:O4'	1.97	0.64
82:DC:816:GLY:HA2	82:DC:819:VAL:HB	1.79	0.64
57:EB:125:ILE:O	57:EB:129:LEU:HG	1.96	0.64
32:FA:123:VAL:H	32:FA:143:GLY:HA2	1.61	0.64
7:G:229:VAL:HG11	7:G:248:LYS:HA	1.77	0.64
2:B:1404:G:OP2	36:JA:11:LYS:HE3	1.97	0.64
12:L:140:VAL:O	12:L:144:GLU:HG3	1.98	0.64
51:YA:69:CYS:HB3	64:LB:114:ARG:HD3	1.76	0.64
51:YA:32:ILE:HD13	64:LB:33:LEU:HD21	1.79	0.64
19:S:7:LEU:O	19:S:10:LEU:HB3	1.98	0.64
20:T:12:LYS:HA	20:T:40:GLU:O	1.97	0.64
72:TB:80:ASN:ND2	72:TB:124:LYS:HG2	2.12	0.64
74:VB:35:VAL:HG13	74:VB:36:SER:N	2.13	0.64
49:WA:222:LEU:HB3	49:WA:231:MET:HB2	1.79	0.64
51:YA:179:SER:O	51:YA:182:ALA:HB3	1.97	0.64
27:AA:85:TRP:HZ2	27:AA:121:GLU:CG	2.11	0.64
27:AA:91:VAL:HG23	27:AA:93:LEU:HD22	1.79	0.64
2:B:1008:U:H2'	2:B:1009:A:C8	2.33	0.64
2:B:219:A:O2'	2:B:220:G:H5'	1.97	0.64
2:B:2538:U:H2'	2:B:2539:C:C6	2.32	0.64
2:B:3035:A:C4	13:M:121:LYS:HB3	2.32	0.64
2:B:3066:U:H2'	2:B:3067:C:C6	2.32	0.64
2:B:62:A:H2'	2:B:63:A:H5'	1.78	0.64
2:B:351:A:N3	3:C:53:A:H1'	2.13	0.64
2:B:1521:G:C5'	29:CA:71:THR:HG21	2.26	0.64
55:CB:112:ARG:HH12	75:WB:94:LYS:HD3	1.62	0.64
30:DA:115:ARG:O	30:DA:119:ILE:HG13	1.98	0.64
82:DC:412:ARG:NE	82:DC:473:GLU:HA	2.12	0.64
6:F:150:LEU:HB3	6:F:151:PRO:HD2	1.79	0.64
11:K:141:TYR:CE2	11:K:145:ARG:HG3	2.32	0.64
63:KB:132:VAL:HG23	63:KB:134:VAL:HG13	1.79	0.64
64:LB:47:LYS:HZ2	64:LB:63:ALA:HA	1.62	0.64
14:N:53:VAL:HG21	14:N:166:ILE:HD12	1.78	0.64
17:Q:77:LEU:HD12	17:Q:77:LEU:H	1.63	0.64
46:TA:21:THR:HG21	46:TA:76:LYS:HG3	1.78	0.64
73:UB:112:LYS:N	73:UB:112:LYS:HE2	2.12	0.64
22:V:178:ARG:HA	22:V:178:ARG:HE	1.62	0.64
1:A:1313:A:C4	1:A:1315:U:H5'	2.32	0.64
2:B:1005:G:C2'	2:B:1006:A:H5"	2.27	0.64
2:B:1238:C:H2'	2:B:1239:C:O4'	1.98	0.64
2:B:132:C:H2'	2:B:133:U:H5"	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:951:A:N6	2:B:1369:A:H1'	2.11	0.64
2:B:981:U:H2'	2:B:982:C:C6	2.32	0.64
73:UB:70:LYS:HE3	80:BC:8:LEU:HD22	1.78	0.64
30:DA:38:GLU:O	30:DA:42:GLN:HG2	1.97	0.64
82:DC:178:PHE:HE1	82:DC:211:PHE:HD1	1.45	0.64
5:E:89:ASP:HA	5:E:92:LYS:HG3	1.79	0.64
32:FA:12:ARG:HG3	32:FA:12:ARG:HH11	1.61	0.64
32:FA:75:LEU:HD23	32:FA:78:LEU:HD22	1.79	0.64
7:G:106:TRP:HB2	7:G:133:TYR:HE2	1.62	0.64
7:G:188:ILE:HD12	7:G:188:ILE:H	1.62	0.64
7:G:278:ILE:HG22	7:G:279:ASN:N	2.13	0.64
7:G:59:ASP:HA	7:G:70:ARG:O	1.96	0.64
2:B:3049:A:C6	7:G:75:ALA:HB2	2.32	0.64
61:IB:20:PHE:CZ	61:IB:22:ASN:HA	2.32	0.64
37:KA:91:ALA:HA	37:KA:94:PHE:CD1	2.32	0.64
39:MA:104:GLN:NE2	39:MA:107:LYS:HD3	2.13	0.64
46:TA:12:CYS:HB3	46:TA:17:CYS:SG	2.37	0.64
73:UB:130:VAL:HG11	73:UB:143:PRO:HD3	1.79	0.64
75:WB:91:PRO:HA	75:WB:101:TYR:CD1	2.32	0.64
50:XA:126:PRO:HB2	50:XA:152:PRO:HG2	1.78	0.64
50:XA:198:MET:HB2	50:XA:201:LEU:HB2	1.79	0.64
1:A:200:A:H2'	1:A:201:G:H8	1.62	0.64
1:A:633:U:H2'	1:A:634:G:H8	1.62	0.64
27:AA:25:CYS:HB2	27:AA:34:LEU:HG	1.79	0.64
2:B:1634:G:OP1	31:EA:107:ARG:HD3	1.98	0.64
2:B:1832:C:H2'	2:B:1833:G:C8	2.33	0.64
2:B:2428:U:H2'	2:B:2429:G:C8	2.33	0.64
2:B:2567:C:C3'	2:B:2568:C:H5"	2.27	0.64
2:B:2897:A:H2'	2:B:2899:C:C5'	2.27	0.64
2:B:314:U:H2'	2:B:315:C:C6	2.32	0.64
2:B:3279:A:O2'	2:B:3280:U:H5'	1.97	0.64
2:B:561:C:H2'	2:B:562:C:O4'	1.97	0.64
2:B:708:G:H2'	2:B:710:A:N7	2.12	0.64
3:C:104:A:O5'	3:C:105:A:H5"	1.97	0.64
3:C:63:G:O2'	39:MA:49:LYS:HE3	1.97	0.64
82:DC:144:ARG:HG3	82:DC:192:TYR:CG	2.31	0.64
82:DC:152:LYS:HB3	82:DC:343:PRO:HD3	1.78	0.64
31:EA:23:VAL:HG12	31:EA:45:GLY:HA3	1.78	0.64
58:FB:21:PHE:O	58:FB:22:ARG:HG2	1.97	0.64
8:H:126:ILE:HG23	8:H:250:TRP:HH2	1.60	0.64
10:J:3:ALA:HB1	36:JA:75:LEU:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:87:LEU:HD23	14:N:88:ARG:N	2.11	0.64
3:C:75:G:O4'	43:QA:30:ARG:HG2	1.97	0.64
24:X:138:GLN:C	24:X:140:VAL:H	2.01	0.64
51:YA:31:ASP:C	51:YA:32:ILE:HD12	2.17	0.64
51:YA:66:VAL:HB	51:YA:86:LEU:HD23	1.78	0.64
1:A:1198:G:OP1	1:A:1199:G:H1'	1.97	0.64
1:A:1384:A:C2'	1:A:1385:G:H5"	2.28	0.64
1:A:1482:C:O2	66:NB:73:GLY:HA2	1.97	0.64
1:A:1561:U:H2'	1:A:1562:G:H8	1.63	0.64
1:A:1753:A:H2'	1:A:1754:A:C8	2.33	0.64
1:A:130:C:H4'	1:A:176:C:OP1	1.97	0.64
1:A:45:U:H3	1:A:434:G:H1'	1.63	0.64
2:B:1240:A:C3'	2:B:1241:U:H5"	2.28	0.64
2:B:1571:A:H2'	2:B:1572:U:C4'	2.28	0.64
2:B:1755:C:H3'	2:B:1756:C:H5"	1.78	0.64
2:B:2649:A:O2'	2:B:2650:U:H5'	1.97	0.64
2:B:2778:G:H2'	2:B:2779:A:C5'	2.28	0.64
2:B:365:A:H3'	2:B:366:A:H8	1.63	0.64
54:BB:45:ILE:CG1	54:BB:61:VAL:HG21	2.28	0.64
82:DC:77:LEU:CD2	82:DC:100:ILE:HB	2.28	0.64
57:EB:109:VAL:HG13	57:EB:110:GLN:N	2.11	0.64
2:B:912:G:H1	6:F:208:ASP:HB3	1.63	0.64
7:G:382:THR:HA	7:G:387:LEU:HB2	1.80	0.64
8:H:188:ARG:NH2	8:H:197:ARG:HB3	2.11	0.64
11:K:136:TYR:O	11:K:231:ASN:HA	1.96	0.64
2:B:2549:G:C2'	12:L:33:ASN:HD21	2.10	0.64
43:QA:47:THR:HG22	43:QA:48:LYS:H	1.62	0.64
46:TA:99:GLN:O	46:TA:102:GLN:HG2	1.97	0.64
21:U:118:GLN:O	21:U:147:GLU:HG3	1.97	0.64
22:V:102:ALA:HA	22:V:122:ILE:HB	1.80	0.64
8:H:290:ILE:HG23	22:V:35:PHE:CE2	2.33	0.64
22:V:33:TYR:HA	22:V:36:LEU:HD12	1.80	0.64
23:W:109:TYR:CD2	23:W:115:ILE:HD13	2.32	0.64
11:K:233:GLU:HG3	24:X:35:VAL:HG22	1.80	0.64
24:X:42:TRP:HD1	24:X:53:LYS:HE3	1.62	0.64
50:XA:74:VAL:CG2	50:XA:118:PRO:HB3	2.27	0.64
1:A:1128:C:H2'	1:A:1129:U:C6	2.33	0.64
53:AB:192:PRO:HG3	53:AB:202:LEU:HD22	1.80	0.64
2:B:1436:U:C5	8:H:72:ALA:HA	2.32	0.64
2:B:2743:A:O2'	2:B:2744:U:H5'	1.97	0.64
2:B:2907:G:H2'	2:B:2908:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3380:U:O2'	2:B:3381:U:H5'	1.96	0.64
2:B:952:A:H4'	2:B:968:G:H21	1.63	0.64
28:BA:57:LYS:HA	28:BA:57:LYS:NZ	2.12	0.64
3:C:107:G:O4'	3:C:137:C:H2'	1.97	0.64
55:CB:196:GLU:HA	55:CB:199:ILE:HD12	1.78	0.64
55:CB:36:ALA:HA	55:CB:42:LEU:HD21	1.80	0.64
82:DC:487:PRO:HG2	82:DC:519:LEU:HD23	1.78	0.64
82:DC:651:LYS:HG2	82:DC:652:ALA:H	1.62	0.64
31:EA:100:THR:C	31:EA:102:GLU:H	2.01	0.64
6:F:115:ASN:HB3	6:F:165:VAL:HG11	1.79	0.64
32:FA:72:VAL:HB	32:FA:113:LEU:HD13	1.80	0.64
38:LA:19:LYS:NZ	38:LA:37:LYS:HA	2.13	0.64
14:N:55:ASN:HB2	14:N:164:LYS:CD	2.28	0.64
22:V:165:ILE:HD13	22:V:168:THR:HG22	1.80	0.64
49:WA:173:GLY:O	49:WA:199:ILE:HB	1.97	0.64
52:ZA:153:SER:C	52:ZA:154:LEU:HD12	2.19	0.64
78:ZB:32:PHE:O	78:ZB:36:THR:HB	1.98	0.64
1:A:1419:G:H2'	1:A:1420:C:H5'	1.80	0.64
1:A:1435:G:H4'	1:A:1436:A:H5'	1.79	0.64
1:A:1554:U:H2'	1:A:1555:A:H5'	1.79	0.64
1:A:689:G:H2'	1:A:690:G:C8	2.33	0.64
1:A:93:A:O2'	54:BB:4:GLY:HA3	1.97	0.64
1:A:962:C:H2'	1:A:963:A:O4'	1.98	0.64
2:B:1221:A:H1'	48:VA:12:PHE:CZ	2.32	0.64
2:B:1346:G:H1'	8:H:307:GLN:HE22	1.61	0.64
2:B:1565:G:H1'	2:B:1575:A:C2	2.33	0.64
2:B:1787:A:H2'	2:B:1788:C:H5"	1.80	0.64
2:B:2079:G:H2'	2:B:2080:C:H5'	1.80	0.64
2:B:2617:U:H5"	33:GA:3:LYS:NZ	2.13	0.64
2:B:3355:U:H3'	2:B:3356:G:H5"	1.78	0.64
2:B:630:A:H2'	2:B:631:U:O4'	1.98	0.64
2:B:817:A:C5	41:OA:14:LYS:HA	2.33	0.64
2:B:877:C:O2'	2:B:880:G:H1'	1.98	0.64
4:D:4:U:H2'	4:D:5:G:C8	2.32	0.64
5:E:65:ILE:HG23	5:E:109:ALA:HB3	1.80	0.64
31:EA:105:SER:O	31:EA:109:GLU:HB2	1.98	0.64
58:FB:117:TYR:CZ	58:FB:150:ALA:HB2	2.31	0.64
2:B:338:A:C5'	8:H:197:ARG:HH21	2.11	0.64
11:K:111:ILE:O	11:K:112:ASN:HB2	1.97	0.64
15:O:57:PHE:CB	15:O:59:ILE:HD11	2.28	0.64
69:QB:33:TYR:O	69:QB:35:ASP:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:58:GLY:HA3	19:S:142:ILE:HD11	1.79	0.64
50:XA:84:ARG:HB2	50:XA:205:ARG:HD2	1.80	0.64
51:YA:205:PHE:CD1	51:YA:206:PRO:HD2	2.33	0.64
2:B:2149:A:N1	2:B:2188:A:H4'	2.12	0.64
2:B:381:U:H2'	2:B:382:U:C6	2.33	0.64
54:BB:31:PRO:HD2	54:BB:38:LEU:HD11	1.79	0.64
56:DB:135:PRO:HB2	56:DB:141:ILE:HG12	1.80	0.64
82:DC:77:LEU:HB3	82:DC:100:ILE:HB	1.80	0.64
31:EA:21:LYS:HD2	31:EA:21:LYS:N	2.13	0.64
38:LA:23:VAL:HB	38:LA:33:GLN:OE1	1.97	0.64
1:A:1452:U:O2'	65:MB:79:HIS:HB3	1.97	0.64
1:A:153:G:C5'	74:VB:131:ARG:HH22	2.11	0.64
74:VB:44:LEU:O	74:VB:44:LEU:HD23	1.98	0.64
23:W:28:GLU:O	23:W:32:ILE:HG13	1.98	0.64
49:WA:34:LEU:HB2	49:WA:73:LEU:HD12	1.79	0.64
1:A:1290:U:H2'	1:A:1291:G:C8	2.33	0.63
1:A:1483:A:C2	1:A:1607:G:H1'	2.33	0.63
1:A:166:C:H2'	1:A:166:C:O2	1.97	0.63
1:A:768:C:H1'	59:GB:143:ILE:HG21	1.80	0.63
2:B:1066:G:H2'	2:B:1067:U:C6	2.33	0.63
2:B:2160:G:H2'	2:B:2161:G:C8	2.26	0.63
2:B:2474:G:H2'	2:B:2475:G:H8	1.63	0.63
2:B:3206:C:H1'	24:X:155:ARG:HH12	1.63	0.63
83:EC:6771:U:C1'	83:EC:6821:U:H2'	2.22	0.63
2:B:1794:G:H5'	6:F:188:LYS:HA	1.79	0.63
6:F:5:ILE:CD1	6:F:7:ASN:HD21	2.11	0.63
58:FB:24:LYS:HA	58:FB:28:GLU:OE2	1.99	0.63
7:G:43:LEU:HD11	7:G:194:TRP:HH2	1.62	0.63
7:G:252:ILE:N	7:G:252:ILE:HD12	2.12	0.63
61:IB:19:ILE:HG13	61:IB:34:TRP:HB2	1.80	0.63
64:LB:87:GLY:HA3	64:LB:120:PRO:CG	2.29	0.63
13:M:170:LYS:HB3	13:M:175:PHE:CD2	2.33	0.63
39:MA:85:THR:O	39:MA:89:ARG:HB2	1.98	0.63
14:N:47:PRO:O	14:N:178:ARG:HD3	1.98	0.63
1:A:1177:C:N4	68:PB:140:THR:HG22	2.13	0.63
19:S:190:THR:HG23	19:S:191:TRP:H	1.63	0.63
72:TB:75:ILE:HG22	72:TB:126:LEU:O	1.98	0.63
22:V:130:ARG:O	22:V:132:PRO:HD3	1.99	0.63
49:WA:262:VAL:O	49:WA:271:VAL:HB	1.98	0.63
1:A:1442:U:H2'	1:A:1443:U:C6	2.33	0.63
1:A:1672:G:H2'	1:A:1673:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:168:A:H2'	1:A:169:A:C8	2.33	0.63
1:A:91:G:C2	1:A:92:A:H1'	2.33	0.63
2:B:1217:A:H61	2:B:1288:U:H3	1.46	0.63
2:B:1411:C:P	36:JA:98:HIS:HB3	2.39	0.63
2:B:153:U:H4'	2:B:158:G:O2'	1.98	0.63
2:B:1858:A:H2'	2:B:1858:A:OP2	1.97	0.63
2:B:925:A:OP2	2:B:2414:G:H5'	1.98	0.63
2:B:2470:C:C4'	5:E:26:ARG:HA	2.29	0.63
2:B:298:U:H5"	2:B:299:G:O4'	1.98	0.63
2:B:3075:G:H2'	2:B:3076:C:C6	2.33	0.63
2:B:585:A:H2'	2:B:586:C:C6	2.33	0.63
2:B:827:A:H5"	38:LA:14:ASN:O	1.98	0.63
54:BB:159:THR:CG2	54:BB:173:ILE:HB	2.27	0.63
56:DB:153:VAL:HG13	56:DB:156:PHE:HB2	1.80	0.63
82:DC:427:PHE:HD1	82:DC:429:LYS:HE2	1.63	0.63
82:DC:714:TYR:O	82:DC:718:LEU:HD13	1.99	0.63
82:DC:814:LYS:O	82:DC:818:ILE:HG13	1.98	0.63
6:F:104:LEU:HD23	6:F:146:THR:HG21	1.81	0.63
59:GB:175:ARG:HH21	59:GB:179:ARG:NE	1.96	0.63
9:I:134:ALA:HB2	9:I:141:PRO:CD	2.28	0.63
61:IB:149:ALA:O	61:IB:152:GLN:HG3	1.98	0.63
11:K:131:GLU:N	11:K:132:PRO:HD2	2.13	0.63
12:L:126:SER:HB3	12:L:127:PRO:HD2	1.80	0.63
38:LA:71:THR:HG22	38:LA:77:GLY:HA3	1.80	0.63
66:NB:9:THR:HG21	66:NB:88:GLY:HA2	1.78	0.63
68:PB:66:LEU:O	68:PB:70:VAL:HG23	1.98	0.63
69:QB:140:LEU:HA	69:QB:143:ASP:HB3	1.80	0.63
19:S:103:GLU:HA	19:S:106:VAL:HG22	1.78	0.63
52:ZA:62:PRO:HA	71:SB:29:HIS:CE1	2.34	0.63
1:A:396:G:H22	1:A:399:A:C5'	2.08	0.63
1:A:533:U:H5'	74:VB:33:ALA:CB	2.28	0.63
2:B:2750:U:H2'	2:B:2751:G:H8	1.63	0.63
2:B:2999:U:O3'	2:B:3296:A:H4'	1.99	0.63
2:B:869:G:H2'	2:B:870:G:C8	2.33	0.63
54:BB:39:ARG:HB3	54:BB:39:ARG:NH1	2.12	0.63
3:C:141:C:H4'	19:S:110:ALA:HB2	1.79	0.63
82:DC:185:VAL:O	82:DC:189:VAL:HG23	1.98	0.63
83:EC:6930:G:H2'	83:EC:6931:U:H5"	1.80	0.63
33:GA:18:ARG:HA	33:GA:18:ARG:NE	2.13	0.63
9:I:288:ALA:O	9:I:292:ALA:HB2	1.99	0.63
40:NA:53:TYR:HB2	40:NA:56:ARG:HH21	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:43:GLN:NE2	15:O:71:VAL:HG22	2.13	0.63
16:P:78:SER:HA	16:P:117:ARG:HG2	1.80	0.63
2:B:63:A:H4'	19:S:185:ALA:HB1	1.79	0.63
73:UB:24:TRP:CE3	73:UB:30:LYS:HD2	2.31	0.63
48:VA:42:ARG:HB3	48:VA:46:ARG:HH21	1.63	0.63
1:A:830:U:O4	1:A:844:A:H1'	1.99	0.63
1:A:924:A:H2'	1:A:925:G:C8	2.34	0.63
2:B:101:G:O2'	2:B:102:C:H5'	1.97	0.63
2:B:1195:A:H2	2:B:1313:G:H22	1.47	0.63
2:B:2946:A:O5'	2:B:2946:A:H8	1.80	0.63
2:B:766:U:O2	2:B:766:U:H2'	1.97	0.63
3:C:48:A:H61	3:C:54:A:N6	1.97	0.63
55:CB:164:PRO:HD3	78:ZB:54:LEU:HG	1.78	0.63
30:DA:27:ARG:NH1	30:DA:76:LEU:HA	2.13	0.63
82:DC:533:THR:H	82:DC:537:HIS:CD2	2.16	0.63
7:G:361:THR:HG22	7:G:371:GLN:OE1	1.98	0.63
60:HB:32:HIS:NE2	60:HB:42:VAL:HG21	2.12	0.63
11:K:60:ARG:HH21	11:K:63:ILE:CD1	2.12	0.63
1:A:960:U:H5	63:KB:14:SER:HG	1.47	0.63
39:MA:85:THR:HG23	39:MA:86:ARG:N	2.12	0.63
40:NA:54:GLU:O	40:NA:58:ILE:HG23	1.98	0.63
75:WB:65:LEU:HD12	75:WB:76:ALA:HA	1.81	0.63
9:I:40:HIS:NE2	25:Y:69:LYS:HA	2.12	0.63
51:YA:218:LEU:N	51:YA:218:LEU:HD13	2.13	0.63
52:ZA:44:LEU:HD22	52:ZA:50:ILE:HD11	1.79	0.63
1:A:138:A:N6	1:A:266:A:H61	1.97	0.63
1:A:1525:A:H2'	1:A:1526:A:H8	1.63	0.63
2:B:1122:U:H2'	2:B:1123:U:H6	1.64	0.63
2:B:1157:G:C2	2:B:1158:A:H1'	2.34	0.63
2:B:2452:G:H2'	2:B:2461:A:H5"	1.80	0.63
2:B:2651:G:H5"	2:B:2652:U:O4'	1.99	0.63
2:B:3117:C:H2'	2:B:3118:C:H5'	1.81	0.63
2:B:3233:C:H2'	2:B:3234:A:C8	2.32	0.63
2:B:674:G:H5"	8:H:120:TYR:CE2	2.34	0.63
2:B:744:A:H2'	2:B:745:C:O4'	1.99	0.63
54:BB:208:VAL:O	54:BB:219:VAL:HG13	1.98	0.63
54:BB:188:ASN:HD22	54:BB:220:THR:CG2	2.11	0.63
29:CA:135:ILE:O	29:CA:135:ILE:HD13	1.99	0.63
82:DC:138:GLN:O	82:DC:142:VAL:HG23	1.98	0.63
82:DC:697:ALA:CB	82:DC:700:ARG:HE	2.12	0.63
61:IB:125:VAL:HA	61:IB:140:VAL:HG12	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:58:ILE:HG23	39:MA:62:GLN:NE2	2.13	0.63
66:NB:67:VAL:HG12	66:NB:69:VAL:HG13	1.80	0.63
2:B:1234:G:C5'	16:P:118:ASP:O	2.47	0.63
1:A:1458:G:OP1	68:PB:137:HIS:HA	1.99	0.63
68:PB:92:ILE:HG21	68:PB:115:ARG:NH2	2.12	0.63
17:Q:46:ILE:CG2	17:Q:49:ARG:HB2	2.28	0.63
46:TA:15:LYS:HA	46:TA:15:LYS:HE2	1.80	0.63
50:XA:157:ASP:O	50:XA:158:VAL:HG12	1.99	0.63
50:XA:50:VAL:HG23	50:XA:51:GLY:H	1.63	0.63
77:YB:67:THR:H	77:YB:71:ALA:HA	1.64	0.63
76:XB:51:ARG:CD	78:ZB:38:ARG:HG3	2.27	0.63
1:A:1789:G:H5'	1:A:1789:G:H8	1.64	0.63
1:A:806:A:H2'	1:A:807:A:O4'	1.98	0.63
53:AB:172:THR:HA	53:AB:184:ILE:O	1.99	0.63
2:B:1458:U:H2'	2:B:1459:C:C6	2.34	0.63
2:B:1836:C:H2'	2:B:1837:U:H6	1.63	0.63
2:B:213:A:H2'	2:B:214:G:O4'	1.99	0.63
2:B:32:U:H2'	2:B:33:G:C8	2.34	0.63
2:B:3302:U:H2'	2:B:3303:G:C8	2.34	0.63
54:BB:125:LYS:HE2	54:BB:127:LYS:HD3	1.81	0.63
55:CB:130:ILE:O	55:CB:134:VAL:HG23	1.99	0.63
82:DC:149:GLU:HB3	82:DC:151:ILE:HG13	1.79	0.63
82:DC:17:THR:HB	82:DC:93:THR:HA	1.81	0.63
82:DC:418:TYR:HA	82:DC:424:ASP:O	1.99	0.63
82:DC:725:GLN:NE2	82:DC:803:THR:HG23	2.13	0.63
7:G:243:HIS:O	7:G:244:ARG:HG2	1.98	0.63
10:J:30:LEU:HD22	10:J:34:LEU:HD12	1.80	0.63
12:L:75:ILE:C	12:L:77:GLN:H	2.01	0.63
64:LB:13:VAL:HG21	64:LB:76:ILE:HA	1.81	0.63
74:VB:44:LEU:HD13	74:VB:55:VAL:HG11	1.78	0.63
1:A:1796:C:O2	76:XB:92:ARG:HB3	1.98	0.63
51:YA:133:TYR:OH	51:YA:217:LEU:HD21	1.98	0.63
1:A:1375:A:H2'	1:A:1376:C:C6	2.34	0.63
1:A:1760:G:H1'	1:A:1781:A:H2	1.64	0.63
1:A:600:U:H2'	1:A:601:A:H8	1.64	0.63
1:A:618:U:H2'	1:A:619:A:H5"	1.81	0.63
1:A:765:G:C6	59:GB:149:ARG:HG3	2.32	0.63
27:AA:81:GLN:HG2	27:AA:82:ALA:H	1.63	0.63
2:B:1347:U:H2'	2:B:1355:A:N1	2.13	0.63
2:B:2356:A:N6	2:B:2983:C:H5	1.95	0.63
2:B:2431:C:H2'	2:B:2432:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2571:U:H4'	2:B:2572:C:H5'	1.80	0.63
2:B:289:A:H2'	2:B:290:G:H8	1.62	0.63
2:B:36:C:H2'	2:B:37:U:H5'	1.81	0.63
54:BB:234:PRO:C	54:BB:236:ILE:H	2.02	0.63
82:DC:226:ALA:HB2	82:DC:241:MET:HB3	1.80	0.63
5:E:216:LEU:HG	5:E:217:TYR:H	1.64	0.63
1:A:187:G:H5"	58:FB:138:ASN:HD22	1.63	0.63
7:G:296:THR:HG23	7:G:299:ASP:H	1.63	0.63
51:YA:69:CYS:HB2	64:LB:114:ARG:HD3	1.81	0.63
39:MA:50:SER:O	39:MA:54:VAL:HG23	1.98	0.63
19:S:153:ASP:OD2	39:MA:92:LEU:HD21	1.99	0.63
40:NA:89:GLU:O	40:NA:92:ASN:HB2	1.99	0.63
15:O:166:LYS:O	15:O:167:TYR:HB2	1.99	0.63
47:UA:26:VAL:O	47:UA:30:GLU:HG2	1.97	0.63
2:B:3078:U:OP1	2:B:3080:G:H5'	1.98	0.63
2:B:3083:G:H2'	2:B:3084:C:H6	1.62	0.63
2:B:432:G:H2'	2:B:433:A:C8	2.33	0.63
2:B:842:G:H2'	2:B:843:A:H8	1.64	0.63
4:D:101:G:C2'	4:D:102:A:H5"	2.28	0.63
82:DC:140:GLU:HG3	82:DC:188:ILE:HG12	1.81	0.63
32:FA:74:ASN:HA	32:FA:113:LEU:O	1.99	0.63
59:GB:171:ARG:HE	59:GB:171:ARG:HA	1.63	0.63
8:H:136:LEU:HD13	8:H:143:GLU:HG2	1.80	0.63
8:H:170:LYS:HE2	8:H:175:HIS:ND1	2.14	0.63
9:I:109:THR:HG23	9:I:110:LEU:HD12	1.81	0.63
9:I:142:PHE:O	9:I:172:TYR:HB3	1.98	0.63
13:M:34:LEU:HD11	13:M:150:SER:HA	1.80	0.63
13:M:3:TYR:HD2	13:M:65:VAL:HG21	1.63	0.63
40:NA:30:LYS:C	40:NA:30:LYS:HD3	2.18	0.63
40:NA:58:ILE:O	40:NA:61:ILE:HB	1.99	0.63
15:O:71:VAL:HG12	15:O:72:ARG:N	2.14	0.63
19:S:104:GLU:O	19:S:108:ARG:HG3	1.99	0.63
72:TB:94:LEU:CD1	72:TB:102:VAL:HG23	2.29	0.63
21:U:26:PHE:HE1	21:U:120:ASN:HA	1.63	0.63
73:UB:54:LEU:HB2	73:UB:55:GLU:OE2	1.99	0.63
23:W:23:TRP:CB	23:W:51:VAL:HG22	2.24	0.63
50:XA:78:SER:HA	50:XA:100:GLY:HA2	1.79	0.63
1:A:1370:U:H1'	1:A:1371:A:OP2	1.98	0.63
1:A:162:A:H3'	1:A:163:G:N2	2.09	0.63
53:AB:208:ILE:HD13	67:OB:39:ALA:HB2	1.79	0.63
2:B:1881:A:H2'	2:B:1882:G:H8	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2105:G:O2'	2:B:2106:A:H5'	1.98	0.63
2:B:2777:G:H1	32:FA:58:MET:HE3	1.64	0.63
2:B:3282:U:H2'	2:B:3283:U:H6	1.64	0.63
30:DA:45:ILE:HD11	30:DA:124:GLY:HA2	1.81	0.63
56:DB:137:ARG:HB3	56:DB:140:ASN:HB2	1.81	0.63
82:DC:611:ASP:HB3	82:DC:614:ALA:HB3	1.79	0.63
57:EB:162:ILE:CG2	57:EB:165:LYS:HD2	2.29	0.63
6:F:170:ALA:HB1	47:UA:66:GLY:O	1.99	0.63
11:K:216:VAL:HG21	11:K:228:SER:OG	1.99	0.63
13:M:100:ASN:HB3	13:M:115:ARG:HB2	1.81	0.63
65:MB:52:LYS:HB3	65:MB:53:PRO:HD3	1.81	0.63
66:NB:50:GLU:O	66:NB:54:LEU:HB2	1.99	0.63
22:V:32:LEU:O	22:V:35:PHE:HB3	1.99	0.63
74:VB:45:ALA:O	74:VB:49:LYS:HA	1.99	0.63
2:B:1915:A:O3'	23:W:84:THR:HA	1.99	0.63
77:YB:56:CYS:HB2	77:YB:63:LEU:HD21	1.81	0.63
78:ZB:12:VAL:CG1	78:ZB:50:GLU:HA	2.29	0.63
1:A:1087:A:C2	1:A:1142:A:H4'	2.34	0.62
2:B:1211:U:H2'	2:B:1212:A:C8	2.34	0.62
2:B:1638:A:H5'	31:EA:15:ARG:NE	2.14	0.62
2:B:1771:C:C2'	2:B:1772:U:H5'	2.29	0.62
2:B:2513:U:H4'	2:B:2514:U:OP1	1.98	0.62
2:B:2673:A:H5'	15:O:95:ASN:HA	1.80	0.62
2:B:3083:G:H2'	2:B:3084:C:C6	2.33	0.62
4:D:59:U:H2'	4:D:60:G:H8	1.63	0.62
56:DB:47:GLY:HA3	56:DB:117:GLY:HA3	1.80	0.62
82:DC:22:MET:SD	82:DC:102:LEU:HD13	2.39	0.62
82:DC:331:ALA:O	82:DC:335:LEU:HG	1.99	0.62
82:DC:353:ALA:HA	82:DC:356:LEU:HD12	1.81	0.62
57:EB:185:ILE:N	57:EB:185:ILE:HD13	2.12	0.62
6:F:120:PRO:HB3	6:F:161:ASP:O	1.98	0.62
6:F:201:GLY:HA2	6:F:204:MET:HE3	1.80	0.62
58:FB:47:ARG:NH2	58:FB:47:ARG:HB3	2.14	0.62
34:HA:27:TYR:CD1	34:HA:52:ARG:HD3	2.34	0.62
9:I:52:VAL:HB	9:I:63:GLN:O	1.98	0.62
61:IB:78:THR:OG1	61:IB:119:VAL:HG22	1.99	0.62
12:L:97:TYR:HB3	12:L:131:ALA:HA	1.81	0.62
13:M:10:ILE:HD12	13:M:10:ILE:N	2.14	0.62
67:OB:109:LEU:HD23	67:OB:110:VAL:N	2.14	0.62
73:UB:43:PHE:HZ	73:UB:104:LEU:HB2	1.63	0.62
49:WA:188:ILE:HG13	49:WA:189:GLU:N	2.10	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:158:LYS:HD3	24:X:158:LYS:H	1.64	0.62
51:YA:167:VAL:O	51:YA:171:ILE:HG13	1.99	0.62
52:ZA:76:LEU:HG	52:ZA:105:GLY:CA	2.29	0.62
1:A:1073:G:H2'	1:A:1074:G:C5'	2.18	0.62
1:A:142:G:H22	1:A:173:A:H2	1.47	0.62
1:A:1472:C:H4'	1:A:1473:U:H5'	1.81	0.62
1:A:1722:A:H2'	1:A:1723:U:O4'	2.00	0.62
1:A:875:G:H2'	1:A:877:G:OP2	1.99	0.62
27:AA:30:GLY:HA3	27:AA:66:LYS:HG3	1.80	0.62
2:B:1146:C:H2'	2:B:1147:G:H8	1.64	0.62
2:B:2439:A:H2'	2:B:2440:G:C8	2.34	0.62
2:B:2921:U:H2'	2:B:2923:U:H5'	1.79	0.62
2:B:3312:U:H4'	7:G:25:ILE:HG21	1.80	0.62
2:B:993:G:N3	2:B:2637:A:H2'	2.14	0.62
54:BB:118:GLU:HG3	54:BB:121:TYR:CE1	2.34	0.62
54:BB:89:VAL:HG22	54:BB:100:ARG:HE	1.64	0.62
55:CB:117:THR:O	55:CB:121:ILE:HG13	1.98	0.62
82:DC:561:VAL:HG12	82:DC:562:ALA:H	1.64	0.62
5:E:134:PHE:HZ	5:E:137:PRO:HD3	1.61	0.62
5:E:23:THR:HG22	5:E:24:LYS:H	1.64	0.62
2:B:2339:C:H5"	7:G:236:LYS:NZ	2.14	0.62
34:HA:17:VAL:HG13	34:HA:96:GLY:H	1.64	0.62
9:I:86:TYR:CE2	9:I:247:ILE:HG12	2.33	0.62
61:IB:6:THR:O	61:IB:7:VAL:HG12	1.99	0.62
10:J:56:LYS:HB2	10:J:98:VAL:HG13	1.80	0.62
10:J:43:LEU:HD21	10:J:85:ILE:CD1	2.29	0.62
14:N:55:ASN:HA	14:N:131:ILE:HG23	1.81	0.62
15:O:108:GLU:HA	15:O:122:ILE:HG23	1.81	0.62
69:QB:131:ASP:O	69:QB:135:ILE:HG23	2.00	0.62
18:R:123:LEU:HB3	20:T:194:LEU:CD2	2.26	0.62
18:R:55:ARG:HD2	24:X:70:THR:CB	2.28	0.62
19:S:135:VAL:CG1	19:S:142:ILE:HG21	2.29	0.62
19:S:156:HIS:HA	19:S:162:ARG:HH22	1.64	0.62
1:A:937:C:H41	76:XB:15:ARG:HG2	1.64	0.62
51:YA:100:PHE:CD1	51:YA:181:LEU:HD11	2.34	0.62
2:B:1686:U:O4	26:Z:82:LYS:HE3	1.98	0.62
1:A:1195:C:OP1	1:A:1197:C:H1'	1.99	0.62
1:A:1299:G:OP2	1:A:1299:G:C8	2.52	0.62
1:A:1382:A:H4'	70:RB:57:ARG:HB3	1.81	0.62
1:A:148:A:H62	1:A:166:C:N4	1.93	0.62
1:A:1612:U:H2'	1:A:1613:U:O4'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1741:U:H2'	1:A:1742:U:H6	1.63	0.62
1:A:870:C:H2'	1:A:871:G:C8	2.33	0.62
27:AA:10:LYS:HB3	27:AA:125:LEU:HD22	1.81	0.62
53:AB:37:VAL:HG12	53:AB:50:ILE:HA	1.81	0.62
2:B:1439:U:H4'	8:H:95:ARG:HD3	1.81	0.62
2:B:1859:A:O2'	2:B:1860:G:H5'	1.99	0.62
2:B:1915:A:H2'	2:B:1916:U:C6	2.34	0.62
2:B:2439:A:H2'	2:B:2440:G:H8	1.64	0.62
2:B:3119:U:H2'	2:B:3121:U:OP1	1.99	0.62
54:BB:199:GLU:HB2	54:BB:207:LEU:HB2	1.80	0.62
54:BB:209:HIS:HA	54:BB:219:VAL:HG22	1.80	0.62
3:C:35:C:H2'	3:C:36:G:H8	1.65	0.62
82:DC:463:LEU:HG	82:DC:464:LEU:H	1.63	0.62
82:DC:574:THR:CG2	82:DC:689:LEU:HD12	2.28	0.62
6:F:34:TYR:HA	6:F:37:ARG:NH2	2.14	0.62
6:F:51:ASP:HB2	6:F:58:LEU:HD11	1.80	0.62
59:GB:12:TYR:HA	59:GB:44:ARG:HA	1.80	0.62
8:H:351:PRO:HB3	11:K:70:LYS:HB3	1.80	0.62
11:K:102:VAL:HG13	11:K:126:LEU:HB3	1.80	0.62
37:KA:23:ASN:H	37:KA:23:ASN:HD22	1.47	0.62
51:YA:29:TRP:CH2	64:LB:76:ILE:HG13	2.27	0.62
2:B:19:U:H5"	39:MA:90:ARG:HD2	1.81	0.62
2:B:1239:C:OP1	16:P:57:LYS:HE3	1.99	0.62
18:R:67:PRO:HG2	18:R:68:LEU:HD22	1.79	0.62
19:S:117:ASN:HD22	19:S:166:ALA:H	1.45	0.62
21:U:107:LEU:HG	21:U:152:GLU:CD	2.19	0.62
22:V:83:VAL:O	22:V:103:ALA:HB1	1.99	0.62
48:VA:142:PRO:O	48:VA:153:VAL:HB	1.99	0.62
77:YB:46:VAL:HG12	77:YB:47:PHE:H	1.63	0.62
27:AA:114:ILE:HD12	27:AA:132:ASN:O	1.99	0.62
2:B:1234:G:H2'	2:B:1235:U:C5	2.34	0.62
2:B:2131:A:C2'	2:B:2132:C:H5'	2.29	0.62
2:B:23:A:H2'	2:B:24:G:O4'	2.00	0.62
2:B:995:U:H1'	2:B:2637:A:H5'	1.82	0.62
2:B:2735:U:H4'	25:Y:51:GLY:N	2.13	0.62
2:B:2739:A:OP1	33:GA:38:LYS:HD3	1.99	0.62
54:BB:180:LEU:HD21	54:BB:192:ILE:HG23	1.81	0.62
3:C:83:C:H4'	3:C:84:C:C5'	2.29	0.62
55:CB:168:VAL:HG12	55:CB:172:ILE:HD11	1.81	0.62
82:DC:538:LEU:HG	82:DC:542:LEU:HD11	1.82	0.62
82:DC:86:VAL:HG13	82:DC:89:ILE:HD12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2943:G:C8	7:G:2:SER:HB3	2.35	0.62
9:I:243:ALA:O	9:I:247:ILE:HG13	1.98	0.62
12:L:156:ASP:OD2	12:L:183:LYS:HB3	1.98	0.62
64:LB:88:GLY:N	64:LB:120:PRO:HG2	2.14	0.62
3:C:38:U:C4	39:MA:89:ARG:HD2	2.34	0.62
13:M:176:LEU:HB3	44:RA:86:ALA:CB	2.29	0.62
70:RB:100:VAL:O	70:RB:104:THR:HG23	2.00	0.62
19:S:47:LYS:HA	19:S:50:ARG:HG2	1.81	0.62
22:V:70:ALA:O	22:V:73:GLN:HB2	1.99	0.62
74:VB:27:VAL:HG12	74:VB:29:HIS:HD2	1.63	0.62
20:T:119:VAL:HG21	24:X:167:ARG:HA	1.80	0.62
50:XA:41:ARG:NE	50:XA:45:VAL:HB	2.13	0.62
1:A:295:A:H2'	1:A:296:U:C6	2.35	0.62
53:AB:66:ILE:O	53:AB:70:THR:HG23	2.00	0.62
53:AB:92:GLN:H	53:AB:92:GLN:CD	2.02	0.62
2:B:1272:C:H2'	2:B:1273:A:O4'	1.99	0.62
2:B:1719:G:C4'	2:B:1732:U:H4'	2.26	0.62
2:B:451:U:H2'	2:B:452:G:C8	2.33	0.62
2:B:517:G:H2'	2:B:518:G:H5'	1.80	0.62
2:B:637:C:H2'	2:B:638:C:H6	1.61	0.62
82:DC:418:TYR:HB2	82:DC:425:ASP:HB2	1.80	0.62
31:EA:111:LYS:O	31:EA:115:LYS:HB2	1.99	0.62
58:FB:74:LYS:HB2	58:FB:109:PHE:CE1	2.34	0.62
1:A:765:G:O6	59:GB:149:ARG:HG3	2.00	0.62
59:GB:75:ALA:O	59:GB:78:ARG:HG3	1.99	0.62
60:HB:16:PHE:HE2	60:HB:77:ARG:HA	1.65	0.62
4:D:46:A:OP1	9:I:158:ARG:HG3	2.00	0.62
37:KA:3:GLU:HG3	37:KA:4:SER:H	1.62	0.62
50:XA:50:VAL:CG2	67:OB:113:LEU:HD21	2.30	0.62
67:OB:57:LEU:O	67:OB:61:ILE:HG13	2.00	0.62
70:RB:25:THR:HB	70:RB:115:GLU:O	1.99	0.62
47:UA:5:THR:HB	47:UA:8:VAL:CG2	2.30	0.62
2:B:672:A:OP2	22:V:55:SER:HB2	1.99	0.62
74:VB:125:LEU:O	74:VB:129:VAL:HG23	1.99	0.62
74:VB:35:VAL:HG13	74:VB:36:SER:H	1.63	0.62
50:XA:83:GLN:O	50:XA:86:VAL:HG22	2.00	0.62
51:YA:70:LEU:CD1	51:YA:79:HIS:HB3	2.29	0.62
52:ZA:145:GLY:CA	72:TB:98:GLN:HG2	2.30	0.62
52:ZA:156:THR:HG22	72:TB:99:PHE:CZ	2.27	0.62
1:A:1231:U:H3	1:A:1254:U:H3	1.48	0.62
1:A:1791:A:H5"	76:XB:8:ASN:HD22	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:792:U:C2'	1:A:793:A:H5'	2.28	0.62
1:A:79:C:O2'	1:A:80:A:H5'	2.00	0.62
2:B:1724:U:H1'	2:B:1725:C:C5	2.34	0.62
2:B:2291:A:H2'	2:B:2292:U:C6	2.34	0.62
2:B:2922:G:H2'	2:B:2923:U:H4'	1.82	0.62
2:B:3281:U:H2'	2:B:3282:U:C6	2.34	0.62
2:B:44:U:H2'	2:B:45:A:O4'	1.99	0.62
2:B:506:U:H2'	2:B:507:U:O4'	1.99	0.62
54:BB:35:PRO:HB2	54:BB:143:ASP:O	1.99	0.62
3:C:93:U:H2'	3:C:94:C:O4'	1.99	0.62
29:CA:62:VAL:HG11	29:CA:95:ILE:HA	1.82	0.62
55:CB:146:THR:HG21	55:CB:157:ARG:HB3	1.80	0.62
82:DC:27:HIS:CD2	82:DC:138:GLN:HE21	2.16	0.62
82:DC:28:VAL:HG13	82:DC:29:ASP:N	2.13	0.62
57:EB:70:PHE:HB3	57:EB:92:PHE:HE2	1.64	0.62
6:F:10:LYS:HG2	6:F:16:PHE:CE1	2.34	0.62
8:H:156:LEU:O	8:H:159:ILE:HG12	1.99	0.62
34:HA:104:LEU:HD23	34:HA:104:LEU:H	1.64	0.62
35:IA:7:VAL:HG13	35:IA:78:LYS:HA	1.80	0.62
1:A:327:U:O2'	61:IB:10:GLU:HG2	1.99	0.62
37:KA:64:ILE:HD12	37:KA:64:ILE:N	2.15	0.62
13:M:106:LYS:HB3	13:M:111:PHE:HE2	1.64	0.62
70:RB:96:PRO:HG2	70:RB:99:ILE:HG22	1.80	0.62
19:S:120:TRP:HZ2	19:S:123:GLN:HG2	1.64	0.62
19:S:146:ALA:CB	39:MA:100:VAL:HA	2.30	0.62
24:X:79:VAL:HG11	24:X:110:MET:HE2	1.82	0.62
51:YA:121:ILE:HG21	51:YA:164:ILE:CG2	2.30	0.62
1:A:1303:U:H2'	1:A:1304:G:H5'	1.82	0.62
1:A:1638:G:H2'	1:A:1639:C:O4'	1.99	0.62
1:A:1715:G:H2'	1:A:1716:C:C5'	2.30	0.62
2:B:1378:U:H2'	2:B:1379:G:H8	1.64	0.62
2:B:337:G:H21	8:H:50:TYR:HB2	1.64	0.62
2:B:858:A:H2'	2:B:859:G:O4'	2.00	0.62
2:B:971:G:H2'	2:B:972:A:O4'	1.99	0.62
82:DC:545:LEU:HG	82:DC:554:LEU:CD1	2.29	0.62
57:EB:39:ARG:N	57:EB:40:PRO:HD2	2.14	0.62
83:EC:6839:U:H5	83:EC:6844:A:H61	1.48	0.62
2:B:3139:A:O3'	7:G:20:LYS:HD3	1.99	0.62
54:BB:252:ARG:NH2	59:GB:78:ARG:HH11	1.97	0.62
61:IB:93:TYR:HB2	61:IB:100:TYR:CE1	2.35	0.62
65:MB:121:ILE:HD12	65:MB:123:TYR:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:131:VAL:O	18:R:135:LEU:HB2	1.99	0.62
72:TB:69:LEU:HD11	72:TB:72:CYS:HB3	1.81	0.62
73:UB:89:ASN:HB2	73:UB:92:CYS:SG	2.39	0.62
22:V:19:PRO:C	22:V:21:SER:N	2.53	0.62
25:Y:61:THR:O	25:Y:76:ILE:HD13	1.99	0.62
1:A:449:C:H4'	54:BB:7:LYS:O	1.99	0.62
1:A:635:A:O3'	72:TB:6:VAL:HG21	1.99	0.62
79:AC:39:CYS:HB2	79:AC:42:CYS:CB	2.30	0.62
2:B:1672:U:O2'	2:B:1673:G:H5'	1.99	0.62
2:B:2257:C:H2'	2:B:2258:U:O4'	2.00	0.62
2:B:3023:U:H4'	82:DC:162:ARG:HH12	1.65	0.62
2:B:3343:G:H2'	2:B:3361:G:N2	2.14	0.62
2:B:656:A:H2'	2:B:657:A:C8	2.35	0.62
82:DC:646:VAL:HA	82:DC:686:VAL:HB	1.82	0.62
9:I:253:PHE:CE1	9:I:255:PRO:HB3	2.34	0.62
35:IA:11:GLU:HA	35:IA:73:LEU:O	2.00	0.62
38:LA:3:GLN:CD	38:LA:30:LEU:H	2.02	0.62
2:B:1822:C:OP1	38:LA:66:SER:HB2	1.99	0.62
64:LB:29:HIS:CB	64:LB:41:ARG:HG3	2.25	0.62
29:CA:51:VAL:HG21	39:MA:63:ARG:NH1	2.15	0.62
14:N:42:THR:HG23	14:N:44:ASP:H	1.63	0.62
15:O:95:ASN:O	15:O:102:PHE:HB2	1.99	0.62
20:T:31:GLN:HG2	20:T:33:ILE:CD1	2.29	0.62
74:VB:20:ARG:HA	74:VB:75:VAL:O	2.00	0.62
49:WA:190:ALA:HB1	49:WA:192:PHE:HE2	1.64	0.62
1:A:1533:C:H3'	75:WB:74:SER:OG	2.00	0.62
1:A:1797:A:H61	76:XB:84:VAL:HG23	1.65	0.62
1:A:354:C:OP1	58:FB:16:ALA:HB2	2.00	0.62
1:A:866:G:H2'	1:A:867:G:C8	2.34	0.62
2:B:1234:G:C4'	16:P:114:ARG:HH12	2.12	0.62
2:B:217:U:H3'	2:B:218:G:C5'	2.29	0.62
2:B:2874:G:H2'	2:B:2945:G:O6	1.98	0.62
2:B:2954:U:H4'	2:B:2955:U:H5'	1.81	0.62
2:B:3268:A:H4'	10:J:75:PRO:HG3	1.82	0.62
2:B:49:A:H2'	19:S:187:ARG:HH22	1.64	0.62
2:B:502:U:C3'	2:B:503:C:H5"	2.30	0.62
2:B:839:C:H4'	2:B:1724:U:O2'	1.99	0.62
2:B:905:U:O2	2:B:911:C:H5'	1.99	0.62
54:BB:90:ILE:HD11	54:BB:101:LEU:HG	1.82	0.62
3:C:4:C:C5'	21:U:61:ARG:HB3	2.28	0.62
55:CB:77:TYR:O	55:CB:83:ARG:HB3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:129:ILE:HA	59:GB:134:ILE:HD11	1.81	0.62
2:B:1730:G:N7	34:HA:28:LYS:HD3	2.15	0.62
9:I:155:THR:CB	9:I:179:ARG:HA	2.30	0.62
35:IA:29:ALA:HB3	35:IA:30:PRO:HD3	1.82	0.62
2:B:1169:A:H4'	11:K:219:LYS:HD3	1.82	0.62
2:B:1210:U:C5'	13:M:63:LYS:HG3	2.30	0.62
66:NB:109:PHE:CD1	66:NB:116:LEU:HG	2.35	0.62
1:A:1387:G:N7	67:OB:44:LYS:HE2	2.15	0.62
16:P:130:LYS:O	16:P:146:LYS:HG2	1.99	0.62
42:PA:31:LEU:HA	42:PA:37:PRO:HA	1.82	0.62
72:TB:70:ASN:HB2	72:TB:130:TYR:O	1.99	0.62
8:H:299:ILE:HD11	22:V:39:ARG:HB3	1.82	0.62
1:A:1042:G:C2'	1:A:1043:A:H5"	2.30	0.62
1:A:1252:C:H2'	1:A:1253:U:H5'	1.81	0.62
1:A:472:U:H2'	1:A:473:A:C8	2.34	0.62
53:AB:126:VAL:HG11	53:AB:134:CYS:HB3	1.82	0.62
2:B:1159:A:O2'	2:B:1160:C:H5"	2.00	0.62
2:B:1175:C:H2'	2:B:1176:C:C6	2.35	0.62
2:B:1494:U:O2	2:B:1521:G:N1	2.32	0.62
2:B:2085:U:H2'	2:B:2086:A:H5'	1.82	0.62
2:B:2682:C:H5"	15:O:68:HIS:CE1	2.35	0.62
2:B:2897:A:H2'	2:B:2899:C:H5"	1.81	0.62
2:B:2971:A:H5"	2:B:2972:G:H5"	1.79	0.62
2:B:3096:C:H2'	2:B:3097:C:C6	2.35	0.62
3:C:11:C:H2'	3:C:12:A:H8	1.65	0.62
4:D:8:G:H2'	4:D:9:C:C6	2.33	0.62
30:DA:45:ILE:N	30:DA:45:ILE:HD12	2.15	0.62
82:DC:178:PHE:O	82:DC:182:VAL:HG23	2.00	0.62
7:G:51:ALA:HB1	7:G:317:ILE:HD11	1.80	0.62
25:Y:88:ARG:NH1	33:GA:33:LYS:HD2	2.15	0.62
59:GB:114:TYR:HB2	59:GB:122:VAL:HA	1.81	0.62
8:H:274:TYR:OH	8:H:277:PRO:HD3	2.00	0.62
8:H:359:LEU:HG	24:X:8:GLN:HE22	1.65	0.62
11:K:151:ARG:CG	11:K:244:ASN:HD21	2.06	0.62
38:LA:85:VAL:O	38:LA:89:ILE:HG13	2.00	0.62
14:N:189:GLU:HG2	14:N:200:LEU:HD22	1.82	0.62
43:QA:21:ARG:HH12	43:QA:24:PRO:HG3	1.65	0.62
1:A:1280:C:H4'	70:RB:69:LYS:C	2.20	0.62
2:B:148:G:H4'	19:S:55:ALA:CB	2.30	0.62
71:SB:39:VAL:HG12	71:SB:45:ALA:CB	2.30	0.62
23:W:10:LEU:HD12	23:W:38:ARG:HH11	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:250:TYR:HD1	49:WA:265:LEU:HB2	1.65	0.62
49:WA:31:ASN:ND2	49:WA:46:LYS:HE3	2.15	0.62
49:WA:45:TRP:CD1	49:WA:57:PRO:HB3	2.35	0.62
76:XB:30:ILE:HD11	76:XB:34:LYS:HE3	1.81	0.62
1:A:1208:A:H4'	1:A:1270:G:P	2.40	0.61
1:A:329:G:H2'	1:A:330:G:C8	2.35	0.61
1:A:534:A:H3'	1:A:535:A:H8	1.64	0.61
1:A:79:C:C2'	1:A:80:A:H5'	2.30	0.61
2:B:1346:G:H2'	2:B:1347:U:O4'	2.00	0.61
2:B:1934:G:C3'	2:B:1935:G:H5"	2.29	0.61
2:B:207:U:H2'	2:B:208:C:C6	2.35	0.61
2:B:2135:U:O2'	2:B:2136:C:H5'	1.99	0.61
2:B:3349:C:H2'	2:B:3350:C:C1'	2.30	0.61
2:B:3355:U:OP1	2:B:3356:G:H5"	2.00	0.61
82:DC:335:LEU:HA	82:DC:338:ILE:HB	1.81	0.61
82:DC:374:PRO:HB3	82:DC:404:THR:HG23	1.82	0.61
57:EB:73:VAL:HG13	57:EB:76:LYS:CE	2.30	0.61
2:B:3379:C:O3'	7:G:315:GLY:HA2	2.00	0.61
9:I:109:THR:HG21	9:I:171:LEU:HD21	1.82	0.61
35:IA:5:LYS:HG2	35:IA:7:VAL:HG23	1.82	0.61
63:KB:129:TYR:CD1	63:KB:134:VAL:HG21	2.35	0.61
13:M:90:MET:SD	13:M:161:LEU:HD12	2.40	0.61
65:MB:31:GLU:HG3	65:MB:49:MET:CE	2.30	0.61
15:O:52:TYR:HA	15:O:61:ARG:HB2	1.80	0.61
17:Q:102:GLN:NE2	17:Q:102:GLN:HA	2.14	0.61
17:Q:113:VAL:HA	17:Q:116:LEU:HD12	1.82	0.61
69:QB:139:THR:O	69:QB:143:ASP:HB2	2.00	0.61
72:TB:111:MET:SD	72:TB:116:ALA:HA	2.40	0.61
76:XB:84:VAL:CG1	76:XB:85:ARG:H	2.04	0.61
27:AA:128:ARG:NE	27:AA:128:ARG:HA	2.15	0.61
2:B:147:U:H5'	12:L:136:LEU:HD12	1.83	0.61
2:B:1576:G:H2'	2:B:1577:G:H5'	1.81	0.61
2:B:19:U:H2'	2:B:20:A:C8	2.34	0.61
2:B:2549:G:O2'	2:B:2550:U:H5'	2.00	0.61
2:B:2711:C:O2'	2:B:2744:U:H5"	1.99	0.61
2:B:3039:C:H2'	2:B:3040:A:H8	1.65	0.61
58:FB:36:THR:HG21	58:FB:173:PRO:HB2	1.81	0.61
8:H:312:VAL:HG23	8:H:313:LEU:N	2.15	0.61
8:H:93:MET:CE	8:H:93:MET:H	2.14	0.61
9:I:155:THR:HB	9:I:179:ARG:HH11	1.64	0.61
12:L:61:GLN:HA	12:L:64:ILE:CD1	2.28	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1579:U:H1'	66:NB:139:GLN:HG3	1.82	0.61
19:S:117:ASN:ND2	19:S:165:THR:HB	2.14	0.61
46:TA:29:LYS:NZ	46:TA:31:GLY:H	1.98	0.61
23:W:176:ARG:O	23:W:180:LYS:HB2	2.01	0.61
23:W:96:ILE:CG1	23:W:100:ARG:HH22	2.12	0.61
49:WA:29:GLN:HG2	49:WA:76:ASP:O	2.00	0.61
75:WB:46:LYS:O	75:WB:50:ILE:HG13	1.99	0.61
24:X:14:LEU:HD11	25:Y:136:ARG:HD3	1.81	0.61
51:YA:26:ARG:HG2	51:YA:50:LYS:H	1.65	0.61
52:ZA:162:CYS:SG	52:ZA:212:LYS:HB2	2.40	0.61
1:A:1057:U:C4	1:A:1060:U:H5"	2.36	0.61
1:A:514:G:N1	1:A:543:C:H5	1.98	0.61
1:A:990:C:H2'	1:A:991:G:O4'	2.01	0.61
2:B:980:A:H1'	2:B:1105:A:H4'	1.82	0.61
2:B:1317:A:O2'	2:B:1318:A:H3'	2.00	0.61
2:B:1584:U:H2'	2:B:1585:C:H6	1.66	0.61
2:B:229:G:H2'	2:B:230:U:C6	2.35	0.61
2:B:2436:U:H2'	2:B:2437:G:O4'	2.00	0.61
2:B:3329:U:H4'	7:G:309:GLY:HA3	1.83	0.61
3:C:146:U:O2'	29:CA:38:LEU:HD12	1.99	0.61
30:DA:45:ILE:HG22	30:DA:47:ALA:H	1.65	0.61
82:DC:338:ILE:HA	82:DC:342:LEU:CB	2.29	0.61
31:EA:87:LEU:CG	31:EA:88:ASP:H	2.12	0.61
57:EB:71:HIS:HA	57:EB:74:GLN:HB2	1.83	0.61
83:EC:6769:A:H3'	83:EC:6770:U:C5'	2.21	0.61
17:Q:9:ILE:HG13	32:FA:49:HIS:NE2	2.15	0.61
7:G:125:SER:O	7:G:127:LYS:HD2	2.00	0.61
60:HB:54:TYR:CD1	60:HB:72:GLY:HA2	2.35	0.61
61:IB:59:PRO:HD3	61:IB:138:ASN:OD1	1.99	0.61
11:K:160:ARG:NH2	11:K:206:LYS:HD3	2.15	0.61
11:K:60:ARG:HE	11:K:60:ARG:HA	1.65	0.61
12:L:154:ALA:HB1	12:L:156:ASP:OD2	1.99	0.61
2:B:136:G:H4'	39:MA:95:PHE:CD1	2.35	0.61
66:NB:41:PRO:O	66:NB:42:GLU:CB	2.48	0.61
19:S:150:TRP:CH2	19:S:151:ILE:HG12	2.35	0.61
21:U:36:ILE:HD11	21:U:95:LEU:HD11	1.80	0.61
73:UB:73:ARG:NH2	73:UB:82:LYS:HG2	2.14	0.61
25:Y:42:ILE:HB	25:Y:57:TYR:O	2.00	0.61
51:YA:69:CYS:SG	51:YA:71:ALA:HB3	2.39	0.61
1:A:1145:U:O2'	52:ZA:88:LYS:HG2	2.01	0.61
1:A:1741:U:H2'	1:A:1742:U:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:895:G:H2'	1:A:896:U:C6	2.35	0.61
53:AB:167:PHE:CE1	53:AB:192:PRO:HB3	2.35	0.61
2:B:1319:G:H2'	2:B:1320:C:C6	2.35	0.61
2:B:1647:A:C4	2:B:1809:A:H1'	2.35	0.61
2:B:1836:C:N4	43:QA:3:ALA:HB2	2.15	0.61
2:B:2468:A:C6	2:B:2478:C:H5"	2.35	0.61
2:B:2711:C:H2'	2:B:2712:U:O4'	2.01	0.61
2:B:2744:U:H2'	2:B:2745:G:C8	2.35	0.61
2:B:2806:U:H2'	2:B:2807:U:C6	2.35	0.61
2:B:421:G:N3	2:B:421:G:H3'	2.15	0.61
2:B:702:C:H2'	2:B:703:G:H8	1.63	0.61
82:DC:226:ALA:CB	82:DC:241:MET:HB3	2.30	0.61
82:DC:426:LEU:HD11	82:DC:428:ILE:HG13	1.82	0.61
82:DC:399:ARG:HA	82:DC:453:ILE:HA	1.83	0.61
82:DC:727:PRO:HB2	82:DC:798:PHE:CE1	2.35	0.61
57:EB:9:LEU:HD21	57:EB:17:GLU:OE2	2.01	0.61
2:B:642:U:OP1	32:FA:22:ILE:HG23	1.99	0.61
7:G:350:ALA:O	7:G:351:LEU:HB3	2.00	0.61
7:G:98:GLY:HA2	20:T:149:TYR:CZ	2.36	0.61
9:I:51:LEU:HB3	9:I:146:LEU:HA	1.83	0.61
1:A:632:U:OP1	61:IB:102:LYS:HB2	1.99	0.61
61:IB:128:CYS:SG	61:IB:129:ARG:N	2.74	0.61
61:IB:3:THR:O	61:IB:4:GLU:HG2	1.99	0.61
11:K:222:HIS:HA	11:K:229:PHE:O	2.00	0.61
12:L:82:LEU:HD22	12:L:178:ALA:HB1	1.81	0.61
12:L:186:LEU:O	12:L:190:VAL:HB	2.00	0.61
20:T:76:PRO:HA	20:T:79:ILE:CG1	2.30	0.61
48:VA:33:VAL:HG21	48:VA:38:MET:HB2	1.82	0.61
74:VB:57:VAL:HG22	74:VB:60:PHE:CE2	2.35	0.61
49:WA:115:ILE:HG13	49:WA:121:MET:O	2.01	0.61
24:X:14:LEU:CD1	25:Y:136:ARG:HD3	2.30	0.61
52:ZA:140:ARG:NH2	52:ZA:229:LEU:HD22	2.16	0.61
1:A:121:U:H2'	1:A:122:U:C6	2.35	0.61
1:A:1475:A:H2'	1:A:1476:C:H6	1.65	0.61
1:A:777:C:H41	74:VB:10:ARG:HD3	1.64	0.61
2:B:2156:C:O2'	2:B:2157:G:H5'	2.01	0.61
2:B:247:C:H3'	2:B:248:U:C5'	2.31	0.61
2:B:3279:A:C2'	2:B:3280:U:H5'	2.30	0.61
2:B:3287:U:H2'	2:B:3288:G:O4'	2.01	0.61
2:B:3351:U:H3'	2:B:3352:U:C5'	2.30	0.61
28:BA:20:LEU:CD2	28:BA:28:ILE:HG23	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:163:ASP:OD1	54:BB:166:SER:HB2	2.01	0.61
54:BB:173:ILE:N	54:BB:173:ILE:HD12	2.16	0.61
54:BB:180:LEU:CD2	54:BB:192:ILE:HG23	2.31	0.61
73:UB:70:LYS:CD	80:BC:8:LEU:HD22	2.30	0.61
2:B:824:C:H5"	6:F:21:ARG:NE	2.14	0.61
59:GB:110:GLN:HE22	59:GB:125:ALA:HB3	1.66	0.61
59:GB:56:ALA:O	59:GB:60:LEU:HB2	2.00	0.61
8:H:239:ALA:N	8:H:240:PRO:HD3	2.13	0.61
12:L:63:LYS:O	12:L:66:SER:HB2	2.00	0.61
22:V:19:PRO:HB2	22:V:21:SER:HB3	1.81	0.61
74:VB:35:VAL:HG21	74:VB:40:LEU:CD2	2.30	0.61
54:BB:63:ALA:HB1	74:VB:85:PHE:CE1	2.35	0.61
23:W:84:THR:HG23	23:W:87:ALA:HB2	1.82	0.61
9:I:40:HIS:CD2	25:Y:69:LYS:HA	2.34	0.61
1:A:1415:U:H2'	1:A:1416:G:C8	2.36	0.61
1:A:404:G:H2'	1:A:405:C:H6	1.66	0.61
1:A:539:G:H1'	1:A:540:G:N2	2.14	0.61
2:B:1175:C:H2'	2:B:1176:C:H6	1.66	0.61
2:B:1184:A:O2'	2:B:1185:C:H5'	2.00	0.61
2:B:1445:U:O3'	2:B:2984:C:H4'	2.00	0.61
2:B:1553:U:C4'	2:B:1554:U:H5'	2.30	0.61
2:B:1775:G:H2'	2:B:1776:G:O4'	2.00	0.61
2:B:2131:A:H61	47:UA:18:TYR:N	1.99	0.61
2:B:3383:G:H2'	2:B:3384:U:C6	2.35	0.61
2:B:583:G:H2'	2:B:584:G:H8	1.65	0.61
2:B:986:U:H2'	2:B:987:U:C6	2.35	0.61
2:B:990:U:C2'	2:B:991:G:H5"	2.30	0.61
28:BA:33:ASN:OD1	28:BA:35:LYS:HB3	2.01	0.61
3:C:27:U:H2'	3:C:28:C:C6	2.36	0.61
55:CB:29:ILE:HG22	55:CB:33:VAL:HB	1.81	0.61
82:DC:183:GLU:HA	82:DC:186:ASN:HB3	1.83	0.61
5:E:115:VAL:HB	5:E:140:HIS:HB2	1.81	0.61
6:F:5:ILE:HG21	6:F:210:PRO:HD3	1.82	0.61
58:FB:55:TYR:HB2	58:FB:176:SER:O	2.00	0.61
7:G:94:GLU:HA	7:G:99:LEU:HD23	1.83	0.61
2:B:1695:U:C1'	38:LA:26:PRO:HG3	2.31	0.61
69:QB:30:VAL:HG12	69:QB:54:PHE:CD2	2.36	0.61
72:TB:79:PHE:HB2	72:TB:125:ILE:HG22	1.81	0.61
23:W:21:LYS:CA	23:W:53:LYS:HD2	2.24	0.61
76:XB:52:ASP:HA	76:XB:55:GLU:HB3	1.81	0.61
1:A:1151:A:H4'	1:A:1766:A:N7	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1479:A:OP1	69:QB:57:ARG:HD3	2.00	0.61
1:A:1712:A:H2'	1:A:1713:G:H5"	1.83	0.61
1:A:1746:A:H2'	1:A:1747:G:O4'	2.00	0.61
2:B:1240:A:C2'	2:B:1241:U:H5"	2.31	0.61
2:B:1832:C:H2'	2:B:1833:G:H8	1.65	0.61
55:CB:118:LEU:HD22	55:CB:129:PRO:HB2	1.81	0.61
55:CB:173:ALA:O	55:CB:177:ILE:HG13	1.99	0.61
30:DA:27:ARG:NE	30:DA:78:PHE:CZ	2.67	0.61
6:F:115:ASN:HB3	6:F:165:VAL:CG1	2.31	0.61
8:H:327:LEU:N	8:H:327:LEU:HD22	2.15	0.61
9:I:109:THR:HG23	9:I:110:LEU:H	1.64	0.61
10:J:34:LEU:HD23	10:J:86:ALA:HB2	1.82	0.61
37:KA:15:SER:HA	37:KA:94:PHE:CE2	2.36	0.61
39:MA:93:THR:O	39:MA:97:ALA:HB3	2.01	0.61
40:NA:92:ASN:O	40:NA:96:ALA:HB3	2.01	0.61
69:QB:57:ARG:HH11	69:QB:57:ARG:HB2	1.65	0.61
10:J:89:THR:HG21	18:R:115:PHE:HD1	1.66	0.61
2:B:3230:G:H5'	18:R:132:LYS:HB3	1.83	0.61
72:TB:94:LEU:HD11	72:TB:102:VAL:N	2.15	0.61
47:UA:18:TYR:O	47:UA:22:LEU:HD12	2.01	0.61
22:V:178:ARG:HA	22:V:178:ARG:NE	2.16	0.61
2:B:3099:C:H42	2:B:3135:U:H3	1.47	0.61
2:B:3365:U:H2'	2:B:3366:G:C8	2.35	0.61
2:B:388:G:O2'	21:U:17:ALA:HA	2.00	0.61
2:B:700:C:H2'	2:B:701:G:H8	1.66	0.61
54:BB:118:GLU:C	54:BB:120:SER:H	2.04	0.61
54:BB:159:THR:HG23	54:BB:173:ILE:HB	1.83	0.61
54:BB:210:ILE:HG22	54:BB:211:LYS:H	1.66	0.61
55:CB:77:TYR:CD2	55:CB:87:CYS:HB2	2.36	0.61
56:DB:138:ALA:HB2	56:DB:177:ARG:HB3	1.82	0.61
82:DC:743:ILE:O	82:DC:747:LEU:HD23	2.00	0.61
6:F:68:LYS:HZ1	6:F:70:ARG:HD2	1.65	0.61
7:G:35:ASP:CG	7:G:184:ASN:HA	2.21	0.61
9:I:65:ILE:CG2	9:I:72:ASP:HB3	2.21	0.61
36:JA:103:LYS:O	36:JA:106:VAL:HG12	2.00	0.61
64:LB:132:ARG:O	76:XB:28:LYS:HG3	2.00	0.61
13:M:85:GLY:HA3	13:M:187:ILE:CB	2.26	0.61
65:MB:47:ARG:NH2	65:MB:47:ARG:HB3	2.16	0.61
14:N:99:ILE:HD11	14:N:101:LYS:HE3	1.82	0.61
15:O:174:LYS:HD3	15:O:174:LYS:H	1.65	0.61
41:OA:64:MET:O	41:OA:66:TYR:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:79:SER:HA	16:P:82:ILE:HD11	1.83	0.61
44:RA:96:CYS:SG	44:RA:98:LYS:HB2	2.40	0.61
19:S:101:THR:HA	19:S:104:GLU:HG3	1.81	0.61
19:S:35:VAL:HG13	19:S:65:ARG:HG2	1.81	0.61
20:T:113:ASP:C	20:T:117:ARG:HH12	2.04	0.61
2:B:2656:A:OP1	46:TA:97:LYS:HA	2.00	0.61
72:TB:110:ILE:HD12	72:TB:110:ILE:N	2.16	0.61
47:UA:55:TRP:HE1	47:UA:66:GLY:HA3	1.65	0.61
74:VB:82:ALA:O	74:VB:86:GLU:HB2	2.00	0.61
1:A:143:G:C2'	1:A:144:U:H5"	2.31	0.61
1:A:1569:A:H2'	1:A:1570:A:C8	2.36	0.61
1:A:480:G:H2'	1:A:481:A:H5'	1.82	0.61
2:B:1606:U:C5	38:LA:8:ARG:HB3	2.36	0.61
2:B:1788:C:H2'	2:B:1789:G:H8	1.66	0.61
2:B:53:G:C4'	2:B:812:G:H4'	2.31	0.61
28:BA:21:PHE:HE2	28:BA:23:ARG:HB2	1.65	0.61
3:C:133:G:H2'	3:C:134:G:H8	1.65	0.61
55:CB:53:VAL:HG22	55:CB:134:VAL:CG1	2.31	0.61
6:F:3:ARG:HB2	6:F:207:VAL:HG12	1.82	0.61
2:B:3004:C:H4'	7:G:99:LEU:O	2.01	0.61
2:B:747:A:H4'	33:GA:27:TYR:CG	2.36	0.61
59:GB:125:ALA:O	59:GB:129:ILE:HG13	2.00	0.61
36:JA:60:ASN:OD1	36:JA:62:LYS:HB2	2.01	0.61
38:LA:74:ARG:HG2	38:LA:74:ARG:HH11	1.65	0.61
64:LB:41:ARG:O	64:LB:42:VAL:HG22	2.01	0.61
39:MA:21:LEU:HB2	39:MA:54:VAL:CG1	2.30	0.61
14:N:197:VAL:HG22	14:N:198:LYS:H	1.64	0.61
40:NA:57:LEU:O	40:NA:61:ILE:HG13	2.01	0.61
19:S:190:THR:HG23	19:S:191:TRP:N	2.15	0.61
49:WA:89:LEU:O	49:WA:90:ARG:HG3	2.01	0.61
24:X:93:GLU:C	24:X:94:ILE:HD12	2.21	0.61
25:Y:39:ILE:O	25:Y:99:SER:HB2	2.01	0.61
51:YA:82:ARG:HH22	51:YA:189:ILE:HA	1.65	0.61
1:A:1347:U:H5"	1:A:1370:U:O4	2.00	0.61
1:A:157:A:C2'	1:A:158:U:H5"	2.31	0.61
1:A:769:A:H2'	1:A:770:A:C8	2.36	0.61
2:B:1256:G:N3	16:P:123:ARG:HG3	2.16	0.61
2:B:1460:A:H2'	2:B:1461:A:C8	2.36	0.61
2:B:1715:A:N1	34:HA:85:PHE:HB3	2.16	0.61
2:B:2504:U:H4'	40:NA:55:ARG:NH2	1.98	0.61
2:B:3297:U:H2'	2:B:3298:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:996:A:C2	2:B:997:A:H1'	2.36	0.61
54:BB:191:ARG:HD3	54:BB:245:LYS:HB2	1.81	0.61
82:DC:274:ASN:HA	82:DC:278:LEU:CD1	2.30	0.61
82:DC:404:THR:HA	82:DC:448:CYS:O	2.00	0.61
10:J:65:ILE:O	10:J:76:LEU:HA	2.00	0.61
2:B:2549:G:H5'	12:L:36:ILE:HD12	1.83	0.61
65:MB:64:LYS:HA	65:MB:73:PRO:HG3	1.83	0.61
66:NB:28:LEU:HD12	66:NB:28:LEU:O	2.01	0.61
73:UB:112:LYS:H	73:UB:112:LYS:HE2	1.66	0.61
48:VA:108:PRO:HA	48:VA:179:SER:HA	1.83	0.61
75:WB:41:ILE:O	75:WB:75:LEU:HD11	2.00	0.61
51:YA:117:TRP:HE1	51:YA:152:ARG:NE	1.98	0.61
1:A:1606:C:H2'	1:A:1607:G:C8	2.35	0.60
27:AA:80:ARG:HB2	27:AA:99:ALA:HB3	1.82	0.60
49:WA:194:GLY:HA2	53:AB:220:PRO:HA	1.81	0.60
2:B:1248:C:H2'	2:B:1249:G:H5'	1.83	0.60
2:B:1415:U:H2'	2:B:1416:C:O4'	1.99	0.60
2:B:1694:U:H4'	38:LA:24:LYS:HE3	1.82	0.60
2:B:2149:A:C2	2:B:2188:A:H4'	2.36	0.60
2:B:3170:A:H2'	2:B:3171:U:H6	1.66	0.60
28:BA:50:ALA:HA	28:BA:55:PHE:CD1	2.36	0.60
4:D:85:G:H1	4:D:95:A:H61	1.48	0.60
82:DC:204:PRO:HB3	82:DC:209:VAL:CG2	2.31	0.60
6:F:32:LEU:CG	6:F:163:ARG:HH12	2.13	0.60
8:H:51:ALA:HA	8:H:103:THR:CG2	2.31	0.60
3:C:28:C:H4'	8:H:49:ALA:HB3	1.83	0.60
10:J:122:PHE:HB3	10:J:123:PRO:O	2.00	0.60
11:K:232:ARG:HB2	11:K:236:ILE:HB	1.83	0.60
63:KB:55:ARG:HG2	63:KB:55:ARG:HH11	1.66	0.60
2:B:157:A:C8	40:NA:26:ILE:HG12	2.36	0.60
15:O:46:VAL:O	15:O:46:VAL:HG13	2.01	0.60
68:PB:15:LEU:H	68:PB:15:LEU:HD23	1.64	0.60
68:PB:28:ILE:HA	68:PB:31:ALA:HB3	1.83	0.60
49:WA:13:LEU:HD12	49:WA:310:ILE:HG22	1.81	0.60
49:WA:303:ALA:O	49:WA:310:ILE:HG23	2.00	0.60
26:Z:96:VAL:HG12	26:Z:97:SER:N	2.15	0.60
78:ZB:43:ASN:HD21	78:ZB:63:ALA:HB3	1.65	0.60
2:B:1641:U:O2'	2:B:1642:A:H3'	2.01	0.60
2:B:216:G:H2'	2:B:217:U:O4'	2.01	0.60
2:B:2404:A:H5'	2:B:2405:C:OP2	2.01	0.60
2:B:3000:A:H2'	2:B:3001:C:C6	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3073:A:H2'	2:B:3074:G:O4'	2.01	0.60
2:B:3102:G:H2'	2:B:3103:A:O4'	2.01	0.60
2:B:3311:C:C2'	2:B:3312:U:H5'	2.31	0.60
2:B:379:C:H2'	2:B:380:U:H6	1.67	0.60
2:B:616:G:H1'	2:B:3274:A:H61	1.66	0.60
2:B:887:G:H2'	2:B:888:A:C8	2.36	0.60
56:DB:72:ARG:HG2	56:DB:98:ARG:HA	1.83	0.60
82:DC:664:VAL:O	82:DC:668:GLN:HG2	2.01	0.60
82:DC:7:ASP:O	82:DC:10:ARG:HB3	2.01	0.60
82:DC:806:SER:HB3	82:DC:813:SER:CB	2.29	0.60
82:DC:823:ARG:NH1	82:DC:828:MET:HB2	2.15	0.60
6:F:113:VAL:HG12	6:F:166:ILE:HD13	1.81	0.60
6:F:196:TRP:CD1	6:F:197:PRO:HA	2.36	0.60
58:FB:37:LYS:HD3	58:FB:95:THR:HA	1.81	0.60
63:KB:15:ALA:H	77:YB:20:LYS:NZ	1.99	0.60
14:N:166:ILE:HD12	25:Y:160:ILE:HD13	1.83	0.60
41:OA:21:ARG:CD	41:OA:39:TYR:HB2	2.30	0.60
75:WB:61:SER:OG	75:WB:64:VAL:HG23	2.00	0.60
24:X:12:ARG:O	24:X:13:ARG:HB2	2.01	0.60
52:ZA:140:ARG:HH22	52:ZA:226:THR:HG22	1.66	0.60
52:ZA:69:ILE:HD11	52:ZA:133:LYS:HB3	1.83	0.60
1:A:1183:A:N1	65:MB:99:GLY:HA3	2.15	0.60
1:A:1595:U:H2'	1:A:1596:C:H5'	1.82	0.60
1:A:208:U:H2'	1:A:209:U:H6	1.66	0.60
1:A:320:U:C6	1:A:321:C:H2'	2.35	0.60
1:A:754:A:C6	1:A:793:A:H2'	2.36	0.60
2:B:1059:G:H2'	2:B:1060:U:C6	2.37	0.60
2:B:2523:A:H1'	2:B:2587:U:C1'	2.31	0.60
2:B:2407:C:H4'	2:B:2620:G:H4'	1.83	0.60
2:B:3185:U:O2'	24:X:170:THR:HG21	2.01	0.60
2:B:994:G:N2	2:B:1053:A:H2'	2.15	0.60
59:GB:149:ARG:O	59:GB:150:LEU:HB3	2.01	0.60
8:H:170:LYS:HA	8:H:175:HIS:HB2	1.83	0.60
10:J:39:VAL:O	10:J:87:THR:HG23	2.00	0.60
11:K:83:LEU:HD11	11:K:116:PHE:HD1	1.65	0.60
12:L:60:ARG:O	12:L:64:ILE:HG13	2.01	0.60
64:LB:71:CYS:SG	64:LB:76:ILE:HB	2.41	0.60
14:N:190:VAL:HG12	14:N:197:VAL:HG21	1.81	0.60
2:B:360:G:H5"	41:OA:26:SER:OG	2.01	0.60
18:R:20:VAL:HA	18:R:34:ALA:HA	1.83	0.60
73:UB:134:ALA:HB1	73:UB:140:LYS:NZ	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:6:GLU:O	48:VA:10:GLU:HG2	2.01	0.60
48:VA:123:ALA:HA	48:VA:152:ILE:HB	1.82	0.60
49:WA:156:VAL:O	49:WA:158:PRO:HD3	2.02	0.60
26:Z:96:VAL:O	26:Z:103:TYR:HB3	2.01	0.60
1:A:320:U:H2'	1:A:321:C:H6	1.64	0.60
1:A:832:U:C2'	1:A:833:U:H5"	2.27	0.60
2:B:1005:G:C3'	2:B:1006:A:H5"	2.31	0.60
2:B:1239:C:H2'	2:B:1240:A:O4'	2.01	0.60
2:B:1421:G:H2'	2:B:1422:G:C8	2.34	0.60
2:B:2526:C:H2'	2:B:2527:G:C8	2.35	0.60
2:B:3039:C:H1'	27:AA:9:THR:HG21	1.83	0.60
2:B:444:U:H2'	2:B:445:G:C8	2.36	0.60
28:BA:6:ASP:HB3	28:BA:10:GLY:N	2.09	0.60
54:BB:192:ILE:HD13	54:BB:243:GLY:HA3	1.82	0.60
54:BB:45:ILE:HG13	54:BB:61:VAL:HG21	1.83	0.60
56:DB:7:TYR:HE1	56:DB:125:THR:HG23	1.64	0.60
82:DC:155:VAL:HG13	82:DC:185:VAL:HG11	1.82	0.60
82:DC:155:VAL:O	82:DC:209:VAL:HG13	2.01	0.60
82:DC:216:HIS:HA	82:DC:321:LYS:HG3	1.82	0.60
82:DC:586:ILE:HG21	82:DC:709:MET:HE3	1.83	0.60
2:B:2468:A:H4'	5:E:27:ASN:O	2.02	0.60
5:E:91:LYS:H	5:E:91:LYS:HD3	1.66	0.60
57:EB:73:VAL:HA	57:EB:76:LYS:HD3	1.83	0.60
57:EB:73:VAL:HG11	57:EB:77:LEU:HG	1.82	0.60
32:FA:121:VAL:N	32:FA:141:ALA:HB1	2.17	0.60
59:GB:127:VAL:O	59:GB:131:GLN:HG3	2.02	0.60
8:H:126:ILE:HG13	8:H:238:LEU:CD1	2.29	0.60
8:H:291:ASN:HA	8:H:296:GLN:HG2	1.83	0.60
31:EA:4:PHE:HB3	34:HA:62:LEU:HB3	1.82	0.60
36:JA:71:HIS:HA	36:JA:91:THR:O	2.01	0.60
12:L:163:VAL:HA	12:L:166:LEU:CD1	2.32	0.60
38:LA:5:VAL:HG22	38:LA:32:ALA:HB2	1.84	0.60
2:B:1738:C:O2'	38:LA:52:GLN:HB2	2.01	0.60
13:M:10:ILE:HD11	13:M:55:VAL:HG22	1.83	0.60
40:NA:90:MET:HA	40:NA:90:MET:HE2	1.84	0.60
15:O:20:ASN:HA	15:O:68:HIS:HB3	1.82	0.60
20:T:16:VAL:HG22	20:T:80:PHE:HE1	1.64	0.60
1:A:153:G:H5"	74:VB:131:ARG:HH22	1.66	0.60
49:WA:96:THR:CG2	49:WA:97:GLY:H	2.10	0.60
1:A:1161:C:H2'	1:A:1162:C:C6	2.36	0.60
1:A:1553:G:H1'	1:A:1597:A:H2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1586:A:H2'	1:A:1587:A:O4'	2.02	0.60
1:A:372:G:H1'	1:A:612:U:O2	2.01	0.60
2:B:1674:G:H2'	2:B:1675:G:O4'	2.01	0.60
2:B:3181:C:H2'	2:B:3182:G:O4'	2.00	0.60
2:B:353:G:H21	2:B:364:G:H2'	1.67	0.60
54:BB:150:PRO:HG2	54:BB:151:ASP:H	1.66	0.60
2:B:2481:G:OP1	5:E:98:LYS:HB2	2.01	0.60
6:F:144:ASN:O	6:F:159:SER:HA	2.02	0.60
2:B:1427:U:H5	32:FA:4:ARG:CZ	2.13	0.60
34:HA:23:TYR:H	34:HA:23:TYR:HD1	1.48	0.60
9:I:101:THR:HA	9:I:104:LEU:HB3	1.83	0.60
9:I:256:THR:C	9:I:258:LYS:H	2.03	0.60
11:K:239:LEU:O	11:K:243:MET:HG3	2.00	0.60
18:R:78:THR:CA	18:R:81:VAL:HB	2.31	0.60
75:WB:61:SER:O	75:WB:65:LEU:HG	2.00	0.60
75:WB:92:ILE:HD11	75:WB:100:ILE:HD12	1.83	0.60
24:X:12:ARG:NH2	24:X:15:PRO:HG3	2.16	0.60
8:H:359:LEU:HD23	24:X:64:ILE:HG12	1.82	0.60
26:Z:99:LYS:HE3	26:Z:102:GLU:CB	2.32	0.60
78:ZB:19:THR:HG21	78:ZB:65:ARG:HA	1.83	0.60
1:A:1174:C:H42	1:A:1465:C:N4	2.00	0.60
1:A:1187:U:H2'	1:A:1188:G:C8	2.32	0.60
1:A:1466:G:H2'	1:A:1467:C:C6	2.36	0.60
1:A:1622:G:O2'	1:A:1623:C:H5"	2.01	0.60
1:A:777:C:H3'	1:A:778:G:H5"	1.83	0.60
1:A:7:G:C2'	1:A:8:U:H5"	2.31	0.60
53:AB:223:LYS:N	53:AB:223:LYS:HE2	2.17	0.60
2:B:103:G:H4'	17:Q:65:TYR:CD2	2.37	0.60
2:B:1040:A:H3'	2:B:1041:U:C5'	2.27	0.60
2:B:1463:U:H2'	2:B:1464:G:O4'	2.00	0.60
2:B:39:A:H5"	2:B:40:A:H4'	1.83	0.60
55:CB:136:ALA:O	55:CB:175:LEU:HD11	2.02	0.60
82:DC:12:LEU:HD11	82:DC:97:SER:HB2	1.82	0.60
82:DC:399:ARG:CB	82:DC:453:ILE:HG13	2.30	0.60
82:DC:722:PRO:HD2	82:DC:809:LEU:HD21	1.84	0.60
82:DC:772:LEU:HD11	82:DC:777:SER:HB3	1.82	0.60
31:EA:54:THR:HG22	31:EA:57:HIS:CD2	2.37	0.60
57:EB:138:LYS:C	57:EB:139:ARG:HD3	2.22	0.60
2:B:2947:G:OP2	7:G:244:ARG:HD2	2.00	0.60
8:H:361:HIS:HB3	24:X:28:ARG:HH22	1.67	0.60
34:HA:18:ILE:HG13	34:HA:23:TYR:CE2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:50:VAL:HA	34:HA:53:LYS:HB2	1.84	0.60
4:D:1:G:O4'	9:I:270:LYS:HE3	2.01	0.60
9:I:88:ILE:HD11	9:I:243:ALA:HB1	1.81	0.60
9:I:9:SER:HB2	9:I:12:TYR:HB2	1.82	0.60
17:Q:170:LEU:HG	32:FA:147:LEU:HD13	1.82	0.60
17:Q:77:LEU:H	17:Q:77:LEU:CD1	2.15	0.60
19:S:198:SER:O	19:S:199:LEU:HD23	2.01	0.60
22:V:165:ILE:CD1	22:V:168:THR:HA	2.32	0.60
24:X:107:TYR:CE1	24:X:118:PHE:HD1	2.20	0.60
50:XA:56:LYS:HE2	71:SB:79:LEU:HD11	1.82	0.60
2:B:2724:U:H5"	25:Y:54:HIS:ND1	2.16	0.60
55:CB:82:PHE:CE2	78:ZB:49:ARG:HB3	2.36	0.60
1:A:1203:A:H5'	1:A:1457:C:N4	2.17	0.60
1:A:1480:G:H2'	1:A:1481:C:H5'	1.83	0.60
1:A:1500:C:H5"	69:QB:102:ARG:HD3	1.82	0.60
1:A:1791:A:HO2'	1:A:1793:G:H8	1.49	0.60
1:A:640:U:N3	57:EB:118:LEU:HD11	2.17	0.60
53:AB:114:ALA:HB3	53:AB:117:ARG:HB2	1.83	0.60
2:B:2461:A:C2	2:B:2486:A:H5'	2.36	0.60
55:CB:109:LYS:HB2	55:CB:109:LYS:NZ	2.17	0.60
55:CB:182:ALA:O	55:CB:186:ASN:HB2	2.01	0.60
4:D:116:C:H1'	9:I:72:ASP:O	2.02	0.60
56:DB:78:THR:HG22	56:DB:92:ARG:HG2	1.82	0.60
82:DC:119:LEU:HB3	82:DC:151:ILE:HD11	1.83	0.60
5:E:196:LYS:HB3	5:E:200:ASN:OD1	2.01	0.60
31:EA:74:VAL:HG23	31:EA:101:PHE:CZ	2.37	0.60
32:FA:19:LYS:HE2	32:FA:19:LYS:HA	1.83	0.60
32:FA:84:GLU:HA	32:FA:87:ARG:HB3	1.83	0.60
58:FB:37:LYS:O	58:FB:59:ARG:HA	2.02	0.60
7:G:159:ARG:NH1	7:G:180:GLU:OE2	2.35	0.60
7:G:266:ARG:HE	7:G:266:ARG:HA	1.66	0.60
59:GB:141:VAL:HG11	59:GB:146:PHE:CD2	2.37	0.60
2:B:1429:G:C2	8:H:99:MET:HG2	2.37	0.60
11:K:60:ARG:HA	11:K:60:ARG:NE	2.16	0.60
11:K:79:ALA:HA	25:Y:138:SER:H	1.66	0.60
66:NB:22:VAL:HG11	66:NB:92:TYR:HB2	1.83	0.60
41:OA:55:ARG:O	41:OA:61:THR:HG21	2.02	0.60
42:PA:65:LEU:HA	42:PA:68:SER:HB3	1.83	0.60
2:B:1779:C:C2	23:W:90:PRO:HD2	2.35	0.60
49:WA:255:ALA:HB2	49:WA:292:LEU:HD13	1.83	0.60
51:YA:135:LEU:HB3	51:YA:217:LEU:HD12	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1355:C:H2'	1:A:1356:U:H5'	1.81	0.60
1:A:1419:G:O2'	1:A:1420:C:H5'	2.01	0.60
1:A:1534:G:N2	1:A:1535:U:H3	1.98	0.60
1:A:1681:A:H1'	56:DB:66:GLY:HA3	1.83	0.60
1:A:329:G:H2'	1:A:330:G:H8	1.65	0.60
1:A:847:A:H2'	1:A:848:C:O4'	2.02	0.60
2:B:1000:C:N4	2:B:1046:A:H62	1.97	0.60
2:B:1929:G:H3'	2:B:1930:A:H5"	1.84	0.60
2:B:2150:G:H2'	2:B:2151:C:H6	1.65	0.60
2:B:2515:A:H5"	19:S:28:TRP:CD1	2.37	0.60
2:B:2562:A:H2'	2:B:2563:G:O4'	2.00	0.60
82:DC:131:THR:OG1	82:DC:157:ILE:HG22	2.01	0.60
82:DC:382:VAL:HG21	82:DC:396:ALA:HB1	1.84	0.60
82:DC:600:ALA:HB1	82:DC:605:ILE:HB	1.83	0.60
82:DC:813:SER:O	82:DC:817:GLU:HG3	2.02	0.60
31:EA:127:ASN:O	31:EA:128:GLN:HB3	2.01	0.60
83:EC:6761:C:H2'	83:EC:6762:U:C6	2.36	0.60
58:FB:60:ILE:HD11	58:FB:177:GLY:O	2.02	0.60
7:G:56:ILE:HD11	7:G:356:LEU:HB2	1.83	0.60
8:H:206:LEU:HD12	8:H:237:GLN:HB2	1.84	0.60
10:J:77:ARG:HH11	10:J:77:ARG:HB3	1.65	0.60
11:K:117:VAL:CG1	11:K:123:THR:HG21	2.32	0.60
63:KB:140:LYS:HG2	63:KB:141:TYR:N	2.16	0.60
1:A:867:G:H21	63:KB:87:ASP:HB2	1.67	0.60
65:MB:121:ILE:HD11	65:MB:123:TYR:CE1	2.35	0.60
65:MB:87:PRO:HG3	65:MB:112:LEU:HD21	1.83	0.60
14:N:216:TYR:O	14:N:217:PHE:HB2	2.02	0.60
19:S:66:VAL:O	19:S:127:TYR:HA	2.01	0.60
71:SB:64:GLU:OE1	77:YB:3:LEU:HB2	2.02	0.60
48:VA:9:ALA:HA	48:VA:12:PHE:CD2	2.37	0.60
23:W:167:ARG:NH2	23:W:168:ALA:HB2	2.09	0.60
49:WA:42:LEU:HD22	49:WA:71:CYS:SG	2.42	0.60
1:A:1362:U:O2'	1:A:1363:U:H5"	2.00	0.60
1:A:1592:A:H2'	1:A:1593:A:O4'	2.02	0.60
2:B:1153:A:O2'	2:B:1154:A:H5'	2.02	0.60
2:B:1231:A:H1'	2:B:1278:A:N6	2.16	0.60
2:B:1324:U:H2'	2:B:1325:U:O4'	2.01	0.60
2:B:1565:G:H1'	2:B:1575:A:H2	1.64	0.60
2:B:1709:C:H2'	2:B:1710:C:C6	2.37	0.60
2:B:2130:G:N2	2:B:2132:C:H5"	2.17	0.60
2:B:2434:U:H5	2:B:2594:C:OP2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2417:U:H2'	2:B:2606:G:H22	1.67	0.60
2:B:353:G:N7	41:OA:55:ARG:HD2	2.17	0.60
2:B:815:G:H2'	2:B:906:A:N6	2.17	0.60
82:DC:353:ALA:HA	82:DC:356:LEU:HB2	1.84	0.60
6:F:131:GLY:HA2	6:F:169:ILE:O	2.02	0.60
6:F:150:LEU:HB3	6:F:151:PRO:CD	2.32	0.60
8:H:106:TRP:CE3	17:Q:22:VAL:HG11	2.36	0.60
10:J:175:LYS:HD3	10:J:175:LYS:O	2.01	0.60
40:NA:34:SER:HB3	40:NA:37:THR:OG1	2.02	0.60
68:PB:41:ARG:HH12	69:QB:38:LYS:HG2	1.67	0.60
18:R:20:VAL:HG13	18:R:68:LEU:O	2.02	0.60
72:TB:13:ALA:HB3	72:TB:27:ILE:HG22	1.84	0.60
21:U:25:SER:OG	21:U:28:ASN:HB2	2.01	0.60
22:V:101:VAL:HB	22:V:120:GLU:O	2.02	0.60
50:XA:54:TRP:O	50:XA:58:VAL:HG23	2.02	0.60
1:A:258:C:O2'	1:A:259:U:H5'	2.02	0.60
2:B:1101:G:H2'	2:B:1102:A:C8	2.37	0.60
2:B:219:A:H8	2:B:1390:A:C8	2.20	0.60
2:B:1581:C:C2'	2:B:1582:C:H5'	2.31	0.60
2:B:2470:C:H5'	5:E:26:ARG:HA	1.84	0.60
2:B:2599:U:H5"	19:S:70:ASN:OD1	2.02	0.60
2:B:3266:G:H2'	2:B:3267:A:C8	2.37	0.60
2:B:845:G:H1'	2:B:848:A:H62	1.67	0.60
3:C:64:U:H5'	39:MA:49:LYS:HG2	1.83	0.60
82:DC:204:PRO:HB3	82:DC:209:VAL:HB	1.82	0.60
82:DC:28:VAL:HG13	82:DC:29:ASP:H	1.67	0.60
82:DC:318:ALA:O	82:DC:322:VAL:HG23	2.01	0.60
82:DC:408:GLY:HA2	82:DC:431:ILE:O	2.02	0.60
5:E:97:LYS:HA	5:E:127:GLN:NE2	2.17	0.60
2:B:2484:A:H4'	5:E:130:LYS:HG2	1.83	0.60
5:E:76:ARG:HD3	5:E:145:TYR:HB2	1.84	0.60
2:B:1794:G:O3'	6:F:191:LEU:HD12	2.02	0.60
9:I:107:ARG:HD3	9:I:248:ARG:HA	1.84	0.60
9:I:148:ILE:CG2	9:I:151:GLN:HB2	2.32	0.60
9:I:106:ALA:HB2	9:I:166:ALA:HA	1.82	0.60
9:I:33:ARG:HH12	9:I:50:ARG:NH1	2.00	0.60
9:I:91:GLY:CA	9:I:94:ASN:HD22	2.15	0.60
11:K:107:ARG:CB	11:K:204:PRO:HB3	2.32	0.60
2:B:1481:A:N1	38:LA:2:ALA:HA	2.16	0.60
14:N:80:SER:CB	14:N:144:ASN:HD21	2.15	0.60
42:PA:23:ALA:HB2	42:PA:45:VAL:HG12	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:767:U:H4'	17:Q:186:ARG:NH1	2.15	0.60
43:QA:47:THR:HG22	43:QA:48:LYS:N	2.16	0.60
73:UB:140:LYS:HB3	73:UB:140:LYS:HZ3	1.67	0.60
22:V:54:LEU:HB3	22:V:58:ASN:CB	2.32	0.60
74:VB:91:LEU:HD12	74:VB:92:VAL:HG23	1.83	0.60
24:X:29:ILE:HD11	24:X:41:TYR:HA	1.84	0.60
50:XA:108:THR:HG23	50:XA:135:GLU:OE1	2.02	0.60
2:B:1049:C:H5'	25:Y:12:ARG:HH21	1.67	0.60
52:ZA:79:GLU:OE2	52:ZA:186:LYS:HE3	2.02	0.60
27:AA:18:PRO:HA	27:AA:51:ALA:CB	2.32	0.59
1:A:1279:C:C4'	79:AC:44:ARG:HH22	2.10	0.59
2:B:129:U:H2'	2:B:130:A:C8	2.37	0.59
2:B:858:A:H4'	2:B:1791:C:H5'	1.83	0.59
2:B:2389:C:H1'	21:U:69:ARG:NH2	2.17	0.59
2:B:2397:A:O5'	2:B:2398:A:H5'	2.02	0.59
2:B:2469:G:H1'	5:E:27:ASN:OD1	2.01	0.59
2:B:266:A:C6	40:NA:30:LYS:HA	2.37	0.59
2:B:3025:C:H2'	2:B:3026:G:O4'	2.02	0.59
2:B:502:U:C2'	2:B:503:C:H5"	2.31	0.59
2:B:1585:C:H5'	3:C:109:A:O2'	2.01	0.59
30:DA:106:ILE:HG21	30:DA:109:LEU:HD23	1.82	0.59
82:DC:19:VAL:HB	82:DC:345:PRO:HD2	1.84	0.59
82:DC:4:PHE:HD2	82:DC:45:ILE:HG23	1.65	0.59
5:E:118:LYS:O	5:E:122:ARG:HB2	2.01	0.59
5:E:67:ILE:HG21	5:E:77:ALA:HB2	1.83	0.59
83:EC:6819:G:N3	83:EC:6819:G:H3'	2.17	0.59
2:B:662:U:OP1	32:FA:8:THR:HG21	2.01	0.59
60:HB:4:PRO:HG2	60:HB:7:ASP:OD1	2.02	0.59
10:J:137:ASP:O	10:J:141:VAL:HG23	2.02	0.59
37:KA:31:LYS:HZ2	37:KA:31:LYS:HA	1.66	0.59
12:L:89:GLU:HG2	12:L:92:LYS:NZ	2.17	0.59
66:NB:125:GLU:OE1	66:NB:134:ALA:HB1	2.02	0.59
17:Q:76:THR:O	17:Q:80:VAL:HG23	2.01	0.59
2:B:562:C:OP2	18:R:77:ARG:HD2	2.02	0.59
18:R:84:LYS:HA	18:R:87:ALA:HB2	1.82	0.59
70:RB:65:ILE:HD11	79:AC:34:TYR:CE2	2.34	0.59
47:UA:31:ILE:HG23	47:UA:32:GLN:N	2.17	0.59
23:W:84:THR:O	23:W:87:ALA:HB3	2.02	0.59
49:WA:157:VAL:HB	49:WA:168:THR:O	2.02	0.59
49:WA:289:ALA:HB2	49:WA:305:TYR:CE2	2.37	0.59
76:XB:53:LEU:C	76:XB:55:GLU:H	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1397:U:H2'	1:A:1398:U:H5"	1.84	0.59
1:A:1421:A:H4'	53:AB:160:SER:HB3	1.84	0.59
1:A:1201:G:N2	1:A:1600:A:H2'	2.17	0.59
1:A:215:A:N6	1:A:242:U:H3'	2.17	0.59
1:A:64:U:H2'	1:A:65:A:H5"	1.83	0.59
1:A:762:A:H2'	1:A:763:G:O4'	2.02	0.59
2:B:1043:C:H2'	2:B:1044:U:C6	2.37	0.59
2:B:1788:C:H2'	2:B:1789:G:C8	2.37	0.59
2:B:2358:A:H2'	2:B:2359:C:O4'	2.02	0.59
2:B:26:A:O2'	2:B:328:U:H4'	2.02	0.59
2:B:2779:A:H2'	2:B:2780:A:O4'	2.02	0.59
28:BA:22:VAL:HG22	28:BA:28:ILE:HG12	1.83	0.59
3:C:153:U:H2'	3:C:154:C:C6	2.37	0.59
29:CA:96:LYS:HE2	29:CA:107:VAL:O	2.02	0.59
29:CA:67:ILE:HD12	29:CA:121:LYS:HG3	1.83	0.59
29:CA:33:ARG:O	29:CA:35:PRO:HD3	2.01	0.59
57:EB:56:LYS:HB2	57:EB:88:ARG:NH1	2.16	0.59
8:H:23:PRO:HG3	8:H:259:ASP:HB2	1.84	0.59
11:K:95:ILE:HG22	11:K:133:TYR:CZ	2.36	0.59
3:C:64:U:H5'	39:MA:49:LYS:CG	2.32	0.59
14:N:51:HIS:ND1	14:N:134:ILE:HG21	2.17	0.59
41:OA:67:LEU:HD23	41:OA:67:LEU:O	2.02	0.59
1:A:1414:U:H5"	67:OB:3:ARG:NE	2.16	0.59
2:B:2655:U:OP2	46:TA:2:VAL:HA	2.02	0.59
21:U:14:SER:HA	21:U:151:THR:HA	1.84	0.59
21:U:4:TYR:HB3	21:U:147:GLU:OE1	2.02	0.59
73:UB:133:LEU:HD12	73:UB:137:LYS:HD2	1.82	0.59
73:UB:37:ALA:O	73:UB:44:GLY:HA2	2.03	0.59
48:VA:28:VAL:HA	48:VA:187:VAL:HA	1.84	0.59
2:B:1258:U:H4'	48:VA:42:ARG:HH12	1.66	0.59
49:WA:255:ALA:HA	49:WA:260:ILE:HG12	1.85	0.59
75:WB:72:GLY:H	75:WB:75:LEU:HD12	1.65	0.59
26:Z:36:TYR:O	26:Z:40:HIS:HB2	2.03	0.59
78:ZB:10:ALA:HB2	78:ZB:56:LEU:HD22	1.83	0.59
1:A:117:U:H2'	1:A:118:U:O4'	2.02	0.59
27:AA:63:LYS:O	27:AA:64:LYS:HG3	2.02	0.59
53:AB:29:LEU:HD11	53:AB:69:LEU:HD13	1.83	0.59
79:AC:13:ARG:HH11	79:AC:13:ARG:N	1.99	0.59
70:RB:83:GLU:HG2	79:AC:55:PHE:CD2	2.35	0.59
2:B:1062:A:H5"	2:B:1063:G:H5'	1.85	0.59
2:B:1245:A:H3'	2:B:1246:G:H5"	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1317:A:H3'	2:B:1317:A:OP2	2.01	0.59
2:B:1338:C:H5"	36:JA:60:ASN:HD22	1.66	0.59
2:B:1937:U:H2'	2:B:1938:U:C6	2.37	0.59
2:B:2510:U:O2'	2:B:2511:A:H8	1.85	0.59
2:B:594:U:H3	8:H:304:GLN:HE22	1.49	0.59
54:BB:161:LYS:HE2	54:BB:170:THR:OG1	2.02	0.59
54:BB:176:ASP:HB2	54:BB:179:LYS:NZ	2.18	0.59
2:B:6:A:N6	3:C:153:U:H3	2.00	0.59
4:D:31:U:O2'	4:D:32:U:H5'	2.02	0.59
30:DA:82:VAL:HG11	30:DA:85:VAL:HB	1.84	0.59
82:DC:413:ILE:HB	82:DC:427:PHE:HB2	1.84	0.59
82:DC:4:PHE:HB3	82:DC:8:GLN:HG2	1.84	0.59
31:EA:127:ASN:HB3	31:EA:131:PHE:HE1	1.66	0.59
83:EC:6895:C:H2'	83:EC:6896:A:C5'	2.30	0.59
34:HA:77:LEU:HD23	34:HA:88:GLY:CA	2.30	0.59
61:IB:64:VAL:HA	61:IB:129:ARG:NH1	2.17	0.59
11:K:26:VAL:O	11:K:30:ARG:HB2	2.02	0.59
12:L:158:ASP:HB3	12:L:159:PRO:HD3	1.85	0.59
38:LA:57:LEU:HD13	38:LA:61:GLN:HB3	1.83	0.59
2:B:1257:C:H1'	16:P:123:ARG:CZ	2.32	0.59
43:QA:21:ARG:NH1	43:QA:24:PRO:HG3	2.18	0.59
2:B:269:G:H5'	19:S:14:LYS:HE2	1.83	0.59
21:U:57:ALA:HB2	21:U:72:GLN:HB2	1.83	0.59
22:V:60:PRO:HB2	22:V:142:GLY:HA3	1.84	0.59
22:V:62:VAL:HG13	22:V:66:ARG:HD3	1.84	0.59
48:VA:28:VAL:HG11	48:VA:87:VAL:HG21	1.85	0.59
23:W:128:LYS:O	23:W:128:LYS:HG2	2.02	0.59
23:W:43:LYS:O	23:W:47:ASN:HB2	2.02	0.59
49:WA:133:VAL:CB	49:WA:142:ALA:HB3	2.30	0.59
49:WA:38:ARG:HA	49:WA:67:ILE:HG23	1.83	0.59
77:YB:50:ALA:O	77:YB:51:GLN:HB2	2.01	0.59
77:YB:50:ALA:HB3	77:YB:71:ALA:HB2	1.84	0.59
1:A:1134:C:H2'	1:A:1135:U:C6	2.38	0.59
1:A:216:U:H5"	1:A:217:A:O2'	2.02	0.59
1:A:925:G:H1'	1:A:988:A:C8	2.37	0.59
2:B:1494:U:H4'	2:B:1495:U:O5'	2.02	0.59
2:B:1659:U:H2'	2:B:1660:C:C6	2.38	0.59
2:B:1717:U:H2'	2:B:1718:G:H8	1.67	0.59
2:B:2311:G:H4'	2:B:2316:G:H4'	1.84	0.59
2:B:3360:C:H2'	2:B:3360:C:O2	2.03	0.59
55:CB:122:ASN:O	55:CB:126:ASP:HA	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:44:ASN:O	55:CB:45:LYS:HB2	2.03	0.59
4:D:58:C:H2'	4:D:59:U:C6	2.37	0.59
82:DC:73:THR:HG22	82:DC:74:ALA:H	1.66	0.59
82:DC:831:GLU:O	82:DC:833:PRO:HD3	2.02	0.59
31:EA:53:VAL:HG23	31:EA:57:HIS:HB3	1.82	0.59
57:EB:9:LEU:HD23	57:EB:9:LEU:O	2.02	0.59
2:B:3377:G:H21	7:G:332:ARG:HH12	1.50	0.59
8:H:180:LYS:HZ2	8:H:180:LYS:HB3	1.66	0.59
60:HB:11:ILE:HD13	60:HB:35:ILE:HG21	1.84	0.59
38:LA:51:LEU:HD21	38:LA:78:GLY:HA2	1.83	0.59
13:M:101:VAL:HG21	13:M:179:ILE:HD12	1.84	0.59
39:MA:102:GLU:HA	39:MA:105:ARG:HD3	1.84	0.59
15:O:96:PHE:HA	15:O:102:PHE:HB2	1.85	0.59
41:OA:39:TYR:CE1	41:OA:40:PRO:HB3	2.38	0.59
42:PA:36:LYS:HB3	42:PA:37:PRO:HD2	1.84	0.59
68:PB:67:GLU:O	68:PB:71:GLN:HG2	2.02	0.59
18:R:116:GLU:O	18:R:119:GLN:HB2	2.02	0.59
53:AB:40:ARG:HG3	70:RB:110:PRO:HB3	1.84	0.59
1:A:609:U:C4	73:UB:26:GLU:HG2	2.37	0.59
22:V:165:ILE:HD11	22:V:167:SER:O	2.02	0.59
48:VA:28:VAL:HG12	48:VA:187:VAL:CG2	2.29	0.59
49:WA:123:ILE:HD12	49:WA:124:SER:N	2.17	0.59
50:XA:147:THR:HB	50:XA:151:SER:HB2	1.83	0.59
50:XA:3:LEU:H	50:XA:3:LEU:HD12	1.68	0.59
1:A:1590:G:H5"	69:QB:91:TYR:O	2.03	0.59
1:A:28:A:O2'	1:A:29:U:H5'	2.01	0.59
1:A:600:U:H2'	1:A:601:A:C8	2.37	0.59
1:A:856:A:C6	57:EB:96:ARG:HB3	2.37	0.59
2:B:1233:G:N2	16:P:128:VAL:HG13	2.17	0.59
2:B:1472:U:H5'	23:W:4:LEU:HD12	1.84	0.59
2:B:388:G:H2'	2:B:389:A:O4'	2.02	0.59
2:B:583:G:H2'	2:B:584:G:C8	2.38	0.59
2:B:676:G:H22	22:V:61:PRO:HG3	1.66	0.59
2:B:716:A:N7	32:FA:117:ARG:HG3	2.18	0.59
54:BB:212:ASP:OD2	54:BB:216:ASN:HB2	2.02	0.59
2:B:334:A:N6	3:C:29:U:H3	2.00	0.59
2:B:1523:U:H4'	29:CA:112:THR:O	2.03	0.59
82:DC:321:LYS:O	82:DC:325:ARG:HG3	2.02	0.59
82:DC:542:LEU:O	82:DC:546:GLU:HB2	2.02	0.59
58:FB:137:LYS:O	58:FB:141:ARG:HG3	2.03	0.59
58:FB:152:ILE:HG22	58:FB:153:GLU:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:195:ALA:O	7:G:199:PHE:HD1	1.85	0.59
59:GB:83:VAL:HG23	59:GB:85:VAL:HG23	1.83	0.59
8:H:60:THR:CG2	8:H:77:VAL:HG22	2.30	0.59
60:HB:69:THR:HG22	60:HB:70:GLU:H	1.68	0.59
13:M:94:TYR:CD2	13:M:98:PRO:HA	2.37	0.59
15:O:104:PHE:HE1	15:O:106:ILE:HG23	1.67	0.59
42:PA:62:ALA:O	42:PA:66:ILE:HG13	2.01	0.59
65:MB:18:ARG:HD3	68:PB:90:ASN:HB3	1.83	0.59
17:Q:83:ALA:HB2	17:Q:116:LEU:HD13	1.84	0.59
69:QB:6:VAL:CG1	69:QB:7:ARG:HD2	2.33	0.59
13:M:47:LYS:HB2	18:R:7:VAL:CG2	2.32	0.59
13:M:47:LYS:HB2	18:R:7:VAL:HG23	1.83	0.59
19:S:54:LYS:HB2	19:S:59:PHE:CE2	2.38	0.59
20:T:126:VAL:HG13	20:T:127:LEU:HD12	1.82	0.59
20:T:78:ARG:HA	20:T:78:ARG:NE	2.15	0.59
2:B:1109:U:H4'	22:V:153:PHE:CZ	2.37	0.59
24:X:30:PHE:O	24:X:31:ALA:HB2	2.02	0.59
24:X:81:TYR:CE2	24:X:83:SER:HB3	2.37	0.59
25:Y:11:THR:C	25:Y:14:MET:HB3	2.23	0.59
77:YB:36:LYS:HE2	77:YB:78:SER:OG	2.01	0.59
1:A:139:C:H1'	1:A:140:A:OP2	2.02	0.59
1:A:343:C:H2'	1:A:344:A:H8	1.66	0.59
27:AA:23:MET:HB2	27:AA:98:ASN:HB2	1.85	0.59
53:AB:192:PRO:HA	53:AB:195:SER:HB2	1.84	0.59
2:B:1162:U:C2'	2:B:1163:A:H5"	2.32	0.59
2:B:1787:A:C3'	2:B:1788:C:H5"	2.32	0.59
2:B:2514:U:H5'	12:L:68:ARG:HH11	1.68	0.59
2:B:2974:U:H2'	2:B:2975:U:C6	2.37	0.59
2:B:886:C:H2'	2:B:887:G:C8	2.37	0.59
54:BB:133:LYS:O	54:BB:134:LYS:HB2	2.03	0.59
29:CA:81:ILE:CG2	29:CA:125:ARG:HG2	2.33	0.59
29:CA:92:LYS:NZ	29:CA:112:THR:HG23	2.17	0.59
55:CB:95:ASN:HA	55:CB:98:MET:HG2	1.83	0.59
2:B:221:A:N6	30:DA:103:LYS:HE2	2.16	0.59
56:DB:50:PHE:HA	56:DB:112:VAL:O	2.02	0.59
82:DC:307:LEU:HD22	82:DC:311:GLU:HB3	1.83	0.59
1:A:1675:C:H1'	58:FB:32:GLN:NE2	2.18	0.59
7:G:282:ILE:HD11	7:G:322:ILE:HG23	1.85	0.59
7:G:222:LYS:HB2	7:G:331:ASN:HB3	1.83	0.59
8:H:84:ARG:HD2	8:H:87:GLN:OE1	2.02	0.59
60:HB:28:ASN:H	60:HB:40:LEU:HD22	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:38:LYS:HD3	60:HB:41:TYR:CE1	2.37	0.59
35:IA:55:LEU:HD13	35:IA:59:ILE:HD11	1.84	0.59
10:J:71:VAL:HG12	10:J:160:SER:HB3	1.84	0.59
36:JA:100:ILE:O	36:JA:105:ARG:HD2	2.01	0.59
1:A:1035:G:OP1	63:KB:2:GLY:HA3	2.02	0.59
2:B:147:U:N3	12:L:157:VAL:HG13	2.17	0.59
15:O:80:LEU:HD13	15:O:129:VAL:HG11	1.83	0.59
2:B:814:U:H5'	41:OA:45:ARG:HH12	1.67	0.59
68:PB:52:VAL:HG22	68:PB:68:ARG:NH2	2.17	0.59
17:Q:28:GLN:OE1	19:S:201:ARG:HG3	2.03	0.59
19:S:80:THR:OG1	19:S:87:GLN:HA	2.02	0.59
20:T:12:LYS:HB3	20:T:12:LYS:NZ	2.18	0.59
72:TB:5:SER:HB3	72:TB:8:ALA:HB3	1.84	0.59
50:XA:93:THR:CG2	50:XA:181:VAL:HG21	2.31	0.59
52:ZA:44:LEU:HD22	52:ZA:50:ILE:CD1	2.32	0.59
52:ZA:69:ILE:HA	52:ZA:72:LEU:HB3	1.83	0.59
1:A:100:A:H2'	1:A:101:U:C5'	2.32	0.59
1:A:1087:A:H2'	1:A:1088:A:O4'	2.02	0.59
1:A:1358:G:H2'	1:A:1359:C:C6	2.37	0.59
1:A:1381:U:H4'	70:RB:59:PRO:HG3	1.83	0.59
53:AB:69:LEU:CB	53:AB:86:LEU:HD21	2.33	0.59
2:B:1249:G:H2'	2:B:1250:G:C8	2.37	0.59
2:B:1280:C:H2'	2:B:1281:G:H8	1.67	0.59
2:B:1694:U:O3'	38:LA:24:LYS:HG2	2.03	0.59
2:B:176:G:H3'	2:B:177:U:C6	2.38	0.59
2:B:2341:A:H2'	2:B:2342:U:C6	2.37	0.59
2:B:2605:G:H4'	6:F:233:GLN:HE22	1.68	0.59
2:B:321:C:H5"	19:S:150:TRP:CZ3	2.38	0.59
2:B:811:U:H2'	2:B:812:G:H8	1.65	0.59
2:B:820:A:C2	2:B:911:C:H4'	2.37	0.59
2:B:846:A:C2	2:B:847:A:C5	2.91	0.59
2:B:873:C:H4'	2:B:1907:C:HO2'	1.67	0.59
29:CA:92:LYS:HZ2	29:CA:112:THR:HG23	1.66	0.59
29:CA:73:MET:HA	29:CA:73:MET:CE	2.33	0.59
55:CB:58:LEU:HD22	55:CB:168:VAL:HG23	1.83	0.59
4:D:18:C:H2'	4:D:19:C:C6	2.38	0.59
82:DC:523:SER:HB3	82:DC:529:ILE:HG12	1.83	0.59
5:E:67:ILE:HG21	5:E:77:ALA:CB	2.33	0.59
2:B:916:G:C6	6:F:207:VAL:HG21	2.37	0.59
32:FA:74:ASN:ND2	32:FA:115:LYS:HB2	2.17	0.59
58:FB:117:TYR:O	58:FB:119:GLN:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:147:GLU:O	7:G:150:ARG:HB3	2.02	0.59
2:B:3312:U:H4'	7:G:25:ILE:CG2	2.33	0.59
8:H:349:THR:HG22	11:K:71:ALA:HB2	1.84	0.59
8:H:8:VAL:HG12	8:H:9:HIS:H	1.67	0.59
9:I:212:ALA:HB2	9:I:219:PHE:CE1	2.38	0.59
9:I:24:ARG:HG3	9:I:24:ARG:HH11	1.67	0.59
1:A:1581:C:H5"	66:NB:135:ARG:HB3	1.85	0.59
9:I:27:LYS:HE2	15:O:143:ARG:NH1	2.17	0.59
20:T:23:VAL:O	20:T:27:LEU:HB2	2.02	0.59
74:VB:35:VAL:HG22	74:VB:36:SER:N	2.16	0.59
23:W:145:ALA:O	23:W:149:ALA:HB3	2.03	0.59
23:W:28:GLU:OE1	23:W:31:GLU:HB3	2.03	0.59
49:WA:155:ARG:CG	49:WA:202:LEU:HD22	2.33	0.59
1:A:1202:A:H2'	1:A:1203:A:H5"	1.83	0.59
1:A:951:A:H2'	1:A:952:A:H5'	1.84	0.59
79:AC:13:ARG:HH11	79:AC:13:ARG:H	1.51	0.59
2:B:116:A:N6	2:B:153:U:H1'	2.18	0.59
2:B:2305:G:N3	2:B:2305:G:H2'	2.18	0.59
2:B:2338:C:H1'	27:AA:49:LEU:HD12	1.84	0.59
2:B:2431:C:H2'	2:B:2432:A:H8	1.68	0.59
2:B:3303:G:N2	2:B:3312:U:H1'	2.18	0.59
2:B:62:A:C2'	2:B:63:A:H5'	2.33	0.59
2:B:691:A:N1	8:H:48:GLN:HG3	2.17	0.59
2:B:810:A:H2'	2:B:811:U:C6	2.37	0.59
2:B:947:G:H2'	2:B:948:C:H6	1.67	0.59
2:B:956:U:O5'	2:B:956:U:H6	1.86	0.59
2:B:8:C:H2'	2:B:9:U:C6	2.38	0.59
28:BA:56:ARG:NH1	28:BA:56:ARG:HB3	2.18	0.59
54:BB:169:ILE:N	54:BB:169:ILE:HD12	2.17	0.59
55:CB:42:LEU:HG	55:CB:43:PHE:H	1.68	0.59
31:EA:23:VAL:HA	31:EA:45:GLY:HA2	1.85	0.59
57:EB:63:PRO:HG2	57:EB:66:SER:OG	2.03	0.59
6:F:51:ASP:HB2	6:F:58:LEU:CD1	2.33	0.59
7:G:56:ILE:HG22	7:G:74:GLU:HB2	1.85	0.59
8:H:338:LYS:C	8:H:340:GLY:H	2.04	0.59
36:JA:96:ILE:HB	36:JA:121:ASN:HD21	1.67	0.59
64:LB:128:LYS:HD3	76:XB:22:ARG:HG3	1.85	0.59
64:LB:51:ASP:O	64:LB:53:ASP:N	2.35	0.59
40:NA:40:VAL:O	40:NA:44:VAL:HG23	2.03	0.59
2:B:1825:G:OP1	42:PA:48:SER:HB2	2.03	0.59
68:PB:104:ASN:HA	68:PB:107:SER:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:28:LEU:H	69:QB:28:LEU:HD13	1.67	0.59
71:SB:71:ARG:HG2	71:SB:83:TRP:CZ3	2.38	0.59
2:B:1314:C:H5'	20:T:17:GLY:HA3	1.85	0.59
22:V:102:ALA:HB1	22:V:127:LEU:HB2	1.83	0.59
22:V:176:ARG:HA	22:V:182:LYS:O	2.02	0.59
48:VA:16:ARG:HG3	48:VA:64:ARG:CZ	2.32	0.59
23:W:4:LEU:HA	23:W:7:GLN:OE1	2.03	0.59
49:WA:222:LEU:HD12	49:WA:231:MET:SD	2.43	0.59
1:A:115:G:C8	61:IB:129:ARG:HB2	2.37	0.59
1:A:1511:U:H2'	1:A:1512:G:H8	1.67	0.59
1:A:187:G:H5"	58:FB:138:ASN:HB3	1.85	0.59
1:A:86:A:H2'	1:A:87:C:C6	2.38	0.59
2:B:101:G:C2'	2:B:102:C:H5'	2.33	0.59
2:B:176:G:H3'	2:B:177:U:H6	1.68	0.59
2:B:2750:U:H2'	2:B:2751:G:C8	2.38	0.59
2:B:2884:C:O2'	2:B:2885:C:H5'	2.03	0.59
2:B:581:U:O2'	2:B:582:G:H5'	2.02	0.59
2:B:960:U:H4'	2:B:963:G:C2	2.37	0.59
57:EB:137:GLY:HA3	57:EB:153:LEU:HB2	1.84	0.59
6:F:10:LYS:HA	6:F:16:PHE:CG	2.38	0.59
2:B:2184:U:O4'	6:F:236:GLY:HA2	2.03	0.59
7:G:232:ARG:CD	7:G:268:GLY:H	2.16	0.59
9:I:64:ILE:HD13	9:I:144:VAL:HG21	1.84	0.59
1:A:1605:G:H5"	66:NB:127:LYS:HB3	1.85	0.59
16:P:82:ILE:HG12	16:P:137:GLN:HE22	1.68	0.59
70:RB:20:ILE:HD13	70:RB:118:VAL:HG23	1.85	0.59
71:SB:41:GLU:H	71:SB:41:GLU:CD	2.05	0.59
71:SB:21:ASN:HB2	72:TB:67:GLY:HA3	1.84	0.59
73:UB:127:VAL:O	73:UB:130:VAL:HG22	2.02	0.59
23:W:62:ARG:HA	23:W:65:ALA:HB3	1.85	0.59
76:XB:82:ARG:HE	76:XB:82:ARG:HA	1.68	0.59
52:ZA:44:LEU:HD11	52:ZA:239:PRO:O	2.03	0.59
1:A:1350:U:H2'	1:A:1351:G:C8	2.38	0.59
1:A:1780:G:H2'	1:A:1781:A:O4'	2.03	0.59
1:A:556:A:H4'	80:BC:56:MET:SD	2.43	0.59
27:AA:33:ASN:H	27:AA:33:ASN:ND2	2.00	0.59
2:B:119:U:H4'	2:B:120:G:O5'	2.02	0.59
2:B:1231:A:H5'	48:VA:35:SER:HB2	1.84	0.59
2:B:1643:A:P	38:LA:68:THR:HG21	2.43	0.59
2:B:1690:C:H2'	2:B:1691:U:O4'	2.03	0.59
2:B:3192:U:H2'	2:B:3193:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3343:G:H21	2:B:3361:G:H2'	1.68	0.59
2:B:578:A:H4'	8:H:324:LEU:HD21	1.83	0.59
2:B:616:G:H1'	2:B:3274:A:N6	2.17	0.59
2:B:744:A:H1'	22:V:141:ARG:HD3	1.84	0.59
4:D:24:A:H2'	4:D:25:G:O4'	2.02	0.59
4:D:33:U:H2'	4:D:34:C:C6	2.37	0.59
5:E:103:LEU:HD22	5:E:107:TYR:CE1	2.37	0.59
7:G:117:ARG:HG2	7:G:178:LEU:CD2	2.33	0.59
8:H:168:ALA:O	8:H:172:VAL:HG23	2.03	0.59
8:H:180:LYS:HB3	8:H:180:LYS:NZ	2.17	0.59
8:H:32:PRO:O	8:H:36:HIS:HB2	2.03	0.59
2:B:1079:A:C2	9:I:113:LEU:HD21	2.38	0.59
10:J:18:LEU:N	10:J:18:LEU:HD22	2.18	0.59
11:K:83:LEU:HD13	11:K:84:VAL:N	2.17	0.59
63:KB:94:LYS:O	63:KB:98:VAL:HG23	2.02	0.59
67:OB:106:THR:O	67:OB:109:LEU:HD22	2.03	0.59
17:Q:62:THR:O	17:Q:66:ASN:HB3	2.02	0.59
69:QB:130:ARG:HH11	69:QB:134:ARG:CB	2.15	0.59
69:QB:134:ARG:NH1	69:QB:138:GLN:HE22	1.97	0.59
20:T:129:LEU:HD11	20:T:133:ARG:HB2	1.85	0.59
22:V:147:ARG:HB3	22:V:147:ARG:NH1	2.08	0.59
52:ZA:38:VAL:HG22	52:ZA:39:THR:N	2.11	0.59
52:ZA:83:ILE:N	52:ZA:83:ILE:HD12	2.18	0.59
1:A:969:C:O2'	1:A:1104:U:H4'	2.03	0.58
1:A:997:G:C3'	1:A:998:A:H5"	2.33	0.58
27:AA:135:VAL:HG21	28:BA:26:SER:OG	2.03	0.58
2:B:1230:G:H4'	48:VA:33:VAL:C	2.23	0.58
2:B:1294:A:O2'	2:B:1295:G:H8	1.76	0.58
2:B:11:A:H2'	2:B:12:A:C8	2.38	0.58
2:B:168:U:H2'	2:B:169:U:C5	2.38	0.58
2:B:2883:U:H2'	2:B:2884:C:C6	2.38	0.58
2:B:2922:G:H2'	2:B:2923:U:C4'	2.33	0.58
82:DC:22:MET:HB3	82:DC:124:GLY:H	1.67	0.58
82:DC:249:PHE:HB2	82:DC:258:THR:O	2.03	0.58
82:DC:274:ASN:HA	82:DC:278:LEU:HD12	1.83	0.58
6:F:5:ILE:HD12	6:F:7:ASN:HD21	1.68	0.58
8:H:255:PHE:O	8:H:258:LEU:HB3	2.03	0.58
60:HB:59:PHE:CE2	60:HB:62:GLN:HA	2.38	0.58
4:D:10:C:N3	9:I:20:PHE:HB3	2.18	0.58
36:JA:118:LYS:HE2	36:JA:120:THR:HG22	1.85	0.58
11:K:27:ALA:HA	11:K:30:ARG:HB3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3034:C:O2'	13:M:122:LYS:HD2	2.02	0.58
66:NB:114:ARG:H	66:NB:116:LEU:HD23	1.66	0.58
15:O:92:ARG:HG2	15:O:173:ASP:OD2	2.03	0.58
42:PA:9:LYS:O	42:PA:13:GLU:HG2	2.03	0.58
2:B:75:G:H5"	17:Q:58:VAL:HG12	1.85	0.58
24:X:15:PRO:HB3	24:X:22:PRO:HD3	1.85	0.58
50:XA:139:VAL:HG22	50:XA:139:VAL:O	2.03	0.58
14:N:53:VAL:HG21	25:Y:160:ILE:HD13	1.85	0.58
77:YB:49:HIS:CE1	77:YB:70:LYS:HE2	2.38	0.58
1:A:1771:U:H2'	1:A:1772:C:O4'	2.03	0.58
1:A:852:C:H6	1:A:853:G:H5"	1.68	0.58
2:B:1295:G:H2'	2:B:1296:C:C6	2.38	0.58
2:B:186:U:H5"	2:B:187:A:OP1	2.04	0.58
2:B:2282:U:H5'	2:B:2282:U:H6	1.67	0.58
2:B:255:A:H2'	2:B:256:G:C8	2.37	0.58
2:B:2948:C:H2'	2:B:2949:U:O4'	2.03	0.58
2:B:3375:A:H5'	35:IA:18:LYS:CB	2.32	0.58
2:B:528:U:H2'	2:B:529:A:C8	2.38	0.58
2:B:584:G:H2'	2:B:585:A:H8	1.63	0.58
2:B:784:A:N1	22:V:93:ILE:HG22	2.19	0.58
2:B:943:U:OP1	32:FA:15:VAL:HA	2.03	0.58
54:BB:112:HIS:CE1	54:BB:239:PRO:HA	2.37	0.58
3:C:91:C:O4'	30:DA:24:SER:HB3	2.03	0.58
56:DB:132:ARG:C	56:DB:133:LEU:HD12	2.23	0.58
82:DC:275:MET:HG2	82:DC:276:PHE:N	2.18	0.58
82:DC:453:ILE:N	82:DC:453:ILE:HD12	2.18	0.58
57:EB:129:LEU:HD13	57:EB:169:PHE:HB3	1.85	0.58
83:EC:6825:A:H2'	83:EC:6826:U:C6	2.37	0.58
6:F:27:ALA:HA	6:F:75:ILE:CG2	2.33	0.58
7:G:114:VAL:HG22	7:G:163:HIS:CE1	2.38	0.58
7:G:166:ILE:HG21	7:G:174:LYS:CA	2.29	0.58
59:GB:113:VAL:CG1	59:GB:125:ALA:HB1	2.32	0.58
59:GB:59:LEU:HD21	59:GB:72:GLU:OE1	2.03	0.58
13:M:43:VAL:HG23	13:M:45:PHE:HE1	1.69	0.58
14:N:17:TYR:CD1	14:N:96:VAL:HB	2.38	0.58
69:QB:13:ASP:HA	69:QB:16:ASN:HD22	1.68	0.58
72:TB:31:SER:O	72:TB:35:ILE:HG12	2.03	0.58
2:B:2389:C:C1'	21:U:69:ARG:HH21	2.14	0.58
16:P:123:ARG:NH2	48:VA:39:HIS:HA	2.17	0.58
2:B:1875:G:N7	23:W:20:ARG:HD2	2.17	0.58
49:WA:250:TYR:CD1	49:WA:265:LEU:HB2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:49:ALA:O	76:XB:53:LEU:HB2	2.02	0.58
1:A:1205:C:H1'	79:AC:12:ARG:HD2	1.85	0.58
1:A:189:C:C2'	1:A:190:C:H5"	2.26	0.58
1:A:754:A:N1	1:A:793:A:H2'	2.19	0.58
53:AB:19:ALA:HB2	79:AC:49:ASP:HB3	1.85	0.58
2:B:201:A:OP1	2:B:221:A:H5'	2.04	0.58
2:B:2307:G:N2	2:B:2310:U:H1'	2.18	0.58
2:B:2347:U:H3'	2:B:2348:A:C8	2.38	0.58
2:B:878:G:H1'	2:B:880:G:H21	1.68	0.58
54:BB:193:GLY:HA3	54:BB:210:ILE:HG22	1.86	0.58
1:A:246:G:O4'	54:BB:202:ASP:HB3	2.02	0.58
56:DB:5:ILE:HG21	56:DB:50:PHE:HE1	1.66	0.58
6:F:54:ARG:HE	6:F:58:LEU:HD21	1.69	0.58
59:GB:28:LEU:O	59:GB:28:LEU:HD13	2.02	0.58
59:GB:49:LEU:CD1	59:GB:53:ARG:HD3	2.33	0.58
8:H:170:LYS:HG3	8:H:175:HIS:HB2	1.85	0.58
61:IB:156:PHE:HB3	63:KB:82:PRO:O	2.03	0.58
10:J:172:HIS:HD2	10:J:173:MET:N	2.02	0.58
10:J:52:VAL:HG21	10:J:65:ILE:HG12	1.85	0.58
40:NA:44:VAL:O	40:NA:47:ILE:HG22	2.02	0.58
18:R:32:LEU:O	18:R:33:ALA:HB2	2.02	0.58
49:WA:91:LEU:HG	49:WA:100:TYR:HB2	1.85	0.58
1:A:1419:G:H2'	1:A:1420:C:C5'	2.33	0.58
1:A:1533:C:O2'	1:A:1534:G:H5'	2.02	0.58
1:A:449:C:H2'	1:A:450:U:C6	2.37	0.58
1:A:461:G:H4'	54:BB:26:CYS:SG	2.43	0.58
1:A:579:A:N3	1:A:579:A:H3'	2.19	0.58
2:B:1585:C:H2'	2:B:1586:G:C8	2.38	0.58
2:B:2465:G:H22	2:B:2486:A:H3'	1.68	0.58
2:B:2938:G:O2'	2:B:2939:G:H5'	2.03	0.58
2:B:3349:C:H2'	2:B:3350:C:H1'	1.84	0.58
3:C:92:A:H2'	3:C:93:U:C6	2.39	0.58
29:CA:111:ASN:CB	29:CA:123:TYR:HB2	2.28	0.58
55:CB:178:GLY:HA3	55:CB:209:TYR:HB3	1.84	0.58
30:DA:45:ILE:HD11	30:DA:124:GLY:CA	2.33	0.58
7:G:321:PHE:O	7:G:322:ILE:HD13	2.04	0.58
7:G:43:LEU:HD12	7:G:43:LEU:H	1.68	0.58
8:H:351:PRO:HB3	11:K:70:LYS:HD3	1.84	0.58
60:HB:50:THR:HG21	60:HB:57:THR:OG1	2.04	0.58
9:I:132:THR:OG1	9:I:172:TYR:HA	2.02	0.58
2:B:1078:U:H3'	9:I:140:ARG:NH1	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:66:LEU:HD23	36:JA:72:LYS:N	2.18	0.58
11:K:88:ARG:CA	11:K:134:VAL:HG12	2.28	0.58
11:K:90:LYS:HG2	11:K:95:ILE:CG2	2.34	0.58
37:KA:58:GLU:HG3	37:KA:62:SER:C	2.24	0.58
17:Q:173:ALA:O	40:NA:10:GLY:HA2	2.03	0.58
19:S:13:LYS:O	19:S:19:LEU:HD13	2.03	0.58
21:U:23:ARG:CD	21:U:125:GLN:HG3	2.32	0.58
23:W:138:LEU:O	23:W:142:ILE:HG13	2.02	0.58
76:XB:66:LYS:N	76:XB:66:LYS:HD2	2.17	0.58
51:YA:125:VAL:HG12	51:YA:172:LEU:HD12	1.85	0.58
52:ZA:168:ARG:NE	52:ZA:170:ILE:HD11	2.19	0.58
78:ZB:9:LEU:HD13	78:ZB:33:LEU:HD12	1.85	0.58
1:A:1586:A:H1'	1:A:1611:A:C6	2.39	0.58
1:A:1650:U:H2'	1:A:1651:A:H8	1.69	0.58
1:A:361:C:H2'	1:A:362:G:C8	2.38	0.58
1:A:431:C:H2'	1:A:432:G:O4'	2.03	0.58
1:A:448:C:H5'	54:BB:29:PRO:HG3	1.84	0.58
1:A:454:U:C5	54:BB:66:MET:HB3	2.38	0.58
1:A:625:C:H2'	1:A:626:U:H6	1.69	0.58
1:A:707:A:H3'	1:A:708:C:H5"	1.85	0.58
1:A:748:U:H5"	72:TB:81:VAL:O	2.03	0.58
79:AC:39:CYS:HB2	79:AC:42:CYS:SG	2.44	0.58
70:RB:83:GLU:CG	79:AC:55:PHE:HD2	2.15	0.58
2:B:1571:A:H2'	2:B:1572:U:C1'	2.32	0.58
2:B:1650:G:H2'	2:B:1651:U:H6	1.68	0.58
2:B:374:A:HO2'	2:B:376:G:H8	1.50	0.58
2:B:639:G:OP1	36:JA:37:GLY:HA3	2.04	0.58
2:B:916:G:O2'	2:B:917:A:C8	2.56	0.58
3:C:130:C:H2'	3:C:131:A:H8	1.68	0.58
29:CA:133:LEU:CD1	29:CA:137:ASN:HD21	2.16	0.58
56:DB:5:ILE:HG23	56:DB:111:LEU:O	2.03	0.58
1:A:1681:A:H1'	56:DB:66:GLY:HA2	1.86	0.58
82:DC:345:PRO:HA	82:DC:348:ALA:HB3	1.86	0.58
31:EA:8:GLY:HA3	31:EA:87:LEU:O	2.04	0.58
58:FB:83:TYR:HB3	58:FB:101:ILE:HG13	1.85	0.58
7:G:169:THR:CG2	7:G:171:LEU:HG	2.33	0.58
7:G:87:VAL:HG12	7:G:110:LEU:HG	1.84	0.58
37:KA:85:PHE:HB3	37:KA:87:ASN:O	2.03	0.58
1:A:867:G:H4'	63:KB:121:ARG:HD3	1.86	0.58
15:O:14:ILE:HA	15:O:131:MET:SD	2.43	0.58
50:XA:38:PHE:CZ	67:OB:109:LEU:HG	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:62:THR:CG2	17:Q:63:VAL:H	2.14	0.58
1:A:1501:C:H5	69:QB:102:ARG:HE	1.50	0.58
44:RA:96:CYS:HA	44:RA:121:LEU:HD23	1.84	0.58
71:SB:28:ASP:C	71:SB:30:ALA:H	2.06	0.58
2:B:1729:A:H61	47:UA:42:CYS:HA	1.67	0.58
73:UB:140:LYS:HG2	73:UB:141:GLU:N	2.18	0.58
49:WA:111:MET:HB2	49:WA:125:GLY:O	2.03	0.58
51:YA:107:THR:O	51:YA:111:ARG:HD2	2.04	0.58
1:A:622:A:H4'	1:A:623:A:H5"	1.86	0.58
1:A:902:G:H2'	1:A:903:U:C6	2.38	0.58
1:A:967:A:OP1	63:KB:4:MET:HB3	2.02	0.58
2:B:1361:U:H2'	2:B:1362:G:C8	2.38	0.58
2:B:287:G:H2'	2:B:288:C:C6	2.39	0.58
2:B:927:C:H2'	2:B:928:C:C6	2.39	0.58
31:EA:7:ALA:O	31:EA:25:ILE:HB	2.03	0.58
6:F:240:ALA:HB1	6:F:242:ARG:O	2.03	0.58
7:G:160:VAL:CG2	7:G:183:LEU:HD21	2.33	0.58
8:H:313:LEU:HD12	8:H:315:LYS:HE2	1.86	0.58
34:HA:74:ASN:ND2	34:HA:75:ASN:N	2.51	0.58
11:K:153:PHE:CD1	11:K:162:PRO:HA	2.39	0.58
14:N:60:LEU:HD13	14:N:159:PHE:CE1	2.39	0.58
66:NB:75:VAL:O	66:NB:78:VAL:HB	2.02	0.58
18:R:21:VAL:HA	18:R:66:THR:H	1.68	0.58
19:S:151:ILE:HD13	19:S:156:HIS:CD2	2.38	0.58
52:ZA:157:LYS:HG3	72:TB:95:PRO:O	2.02	0.58
22:V:30:VAL:HG22	22:V:52:LEU:HD12	1.86	0.58
50:XA:62:ARG:NH1	71:SB:78:LEU:HD22	2.17	0.58
76:XB:86:VAL:HG22	76:XB:87:ARG:H	1.67	0.58
76:XB:92:ARG:HH11	76:XB:92:ARG:HG2	1.68	0.58
51:YA:65:VAL:O	64:LB:34:SER:HA	2.03	0.58
1:A:1733:C:H2'	1:A:1734:U:H6	1.67	0.58
1:A:35:U:O2'	1:A:36:C:H5'	2.02	0.58
1:A:397:A:H2'	1:A:398:G:O4'	2.04	0.58
1:A:595:G:H2'	1:A:596:C:C6	2.39	0.58
2:B:2338:C:H4'	27:AA:49:LEU:HG	1.86	0.58
2:B:1165:A:H2'	2:B:1166:G:C8	2.39	0.58
2:B:1327:C:H2'	2:B:1328:C:H6	1.68	0.58
2:B:1609:C:H2'	2:B:1610:G:C8	2.38	0.58
2:B:1841:A:O2'	2:B:1842:A:H5"	2.04	0.58
2:B:1902:G:H2'	2:B:1903:U:O4'	2.04	0.58
2:B:2731:U:H2'	2:B:2732:G:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BA:35:LYS:HE2	28:BA:51:TRP:CZ2	2.39	0.58
54:BB:44:LEU:HG	54:BB:82:TYR:HB3	1.85	0.58
3:C:38:U:C6	39:MA:78:LYS:HB3	2.39	0.58
4:D:59:U:H2'	4:D:60:G:C8	2.38	0.58
57:EB:77:LEU:O	57:EB:81:LEU:HB2	2.03	0.58
7:G:216:ASP:OD1	7:G:278:ILE:HA	2.04	0.58
59:GB:150:LEU:C	59:GB:152:SER:H	2.07	0.58
35:IA:56:ASN:HA	35:IA:59:ILE:HD12	1.86	0.58
12:L:101:THR:HG23	12:L:103:ALA:H	1.67	0.58
12:L:182:GLY:O	12:L:186:LEU:HG	2.03	0.58
2:B:3108:G:H21	13:M:163:GLN:NE2	2.02	0.58
13:M:90:MET:HG2	13:M:181:VAL:HA	1.86	0.58
14:N:93:PRO:HA	14:N:127:ALA:CA	2.34	0.58
42:PA:77:ARG:HG3	42:PA:78:LEU:CD2	2.33	0.58
68:PB:73:MET:HB3	68:PB:101:LEU:HD11	1.86	0.58
18:R:63:VAL:HG13	18:R:63:VAL:O	2.03	0.58
19:S:97:SER:O	19:S:100:ALA:HB3	2.04	0.58
20:T:41:LEU:HD21	20:T:80:PHE:CZ	2.39	0.58
3:C:12:A:OP1	21:U:3:ARG:HD3	2.04	0.58
50:XA:172:LEU:O	50:XA:175:TYR:HB3	2.04	0.58
76:XB:86:VAL:O	76:XB:87:ARG:HD2	2.03	0.58
1:A:1310:U:O2'	1:A:1311:U:H5'	2.04	0.58
1:A:1518:C:H5'	1:A:1518:C:H6	1.68	0.58
1:A:404:G:H2'	1:A:405:C:C6	2.38	0.58
1:A:918:U:H2'	1:A:919:A:C8	2.39	0.58
2:B:1234:G:H21	16:P:132:ILE:N	2.02	0.58
2:B:1498:A:OP1	23:W:6:THR:HG23	2.04	0.58
2:B:1694:U:O2'	2:B:1695:U:H5'	2.03	0.58
2:B:1722:U:C2'	2:B:1723:A:H5'	2.34	0.58
2:B:2756:C:O2'	2:B:2757:U:H5'	2.04	0.58
2:B:2778:G:H2'	2:B:2779:A:H5"	1.85	0.58
2:B:2801:A:O2'	2:B:2802:A:H2'	2.04	0.58
2:B:656:A:H2'	2:B:657:A:H8	1.68	0.58
54:BB:51:ARG:NE	54:BB:51:ARG:HA	2.19	0.58
2:B:1523:U:H1'	29:CA:111:ASN:HB3	1.86	0.58
55:CB:54:LYS:HD2	55:CB:55:ASP:N	2.19	0.58
82:DC:374:PRO:HG3	82:DC:450:ALA:H	1.67	0.58
1:A:512:A:OP2	59:GB:170:GLY:HA3	2.03	0.58
60:HB:25:LYS:HB3	60:HB:62:GLN:HG2	1.84	0.58
9:I:109:THR:HG23	9:I:110:LEU:N	2.17	0.58
35:IA:59:ILE:HB	35:IA:60:TRP:HD1	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:130:PRO:HB3	61:IB:136:ARG:HH11	1.67	0.58
38:LA:8:ARG:CG	38:LA:32:ALA:HB3	2.29	0.58
64:LB:47:LYS:HZ1	64:LB:63:ALA:HA	1.67	0.58
13:M:171:ASP:C	13:M:173:ARG:H	2.07	0.58
39:MA:74:LYS:CE	39:MA:75:TYR:HB2	2.33	0.58
14:N:99:ILE:CD1	14:N:101:LYS:HE3	2.34	0.58
40:NA:55:ARG:O	40:NA:58:ILE:HG12	2.04	0.58
40:NA:93:ILE:O	40:NA:97:SER:HB3	2.04	0.58
42:PA:77:ARG:HG3	42:PA:78:LEU:HD22	1.84	0.58
22:V:60:PRO:HG3	22:V:144:ARG:HG2	1.85	0.58
25:Y:50:LYS:HG3	25:Y:92:ARG:HH11	1.69	0.58
1:A:1049:U:C5'	77:YB:70:LYS:HE3	2.27	0.58
77:YB:73:LEU:CD1	77:YB:79:PHE:HB3	2.29	0.58
1:A:121:U:H1'	54:BB:33:ALA:O	2.03	0.58
1:A:1384:A:H3'	1:A:1385:G:H5"	1.84	0.58
1:A:998:A:H2'	1:A:999:U:C6	2.39	0.58
53:AB:19:ALA:CB	79:AC:46:LYS:HD2	2.28	0.58
2:B:1212:A:H2'	2:B:1213:G:O4'	2.04	0.58
2:B:1405:U:H4'	36:JA:57:TYR:HB3	1.86	0.58
2:B:1451:C:H2'	2:B:1880:U:C5	2.39	0.58
2:B:1896:A:H3'	2:B:1897:G:H8	1.68	0.58
2:B:1450:G:H22	2:B:2354:C:N4	2.02	0.58
3:C:48:A:H61	3:C:54:A:H62	1.51	0.58
4:D:65:G:H2'	4:D:66:A:C8	2.39	0.58
56:DB:180:THR:HG22	56:DB:181:PRO:HD2	1.86	0.58
82:DC:129:VAL:HG11	82:DC:181:THR:HG23	1.86	0.58
82:DC:45:ILE:HD11	82:DC:77:LEU:O	2.04	0.58
57:EB:73:VAL:HG13	57:EB:76:LYS:HE2	1.84	0.58
6:F:34:TYR:HA	6:F:37:ARG:HH22	1.69	0.58
7:G:165:GLN:CB	7:G:168:LYS:HD3	2.26	0.58
8:H:23:PRO:HB3	8:H:259:ASP:CA	2.32	0.58
58:FB:83:TYR:OH	61:IB:11:ARG:HG2	2.04	0.58
11:K:24:GLU:C	11:K:26:VAL:H	2.06	0.58
13:M:12:VAL:HG12	13:M:16:VAL:HB	1.84	0.58
19:S:115:VAL:HB	19:S:160:GLU:OE1	2.04	0.58
19:S:28:TRP:O	19:S:32:GLN:HG2	2.04	0.58
20:T:97:ALA:HA	20:T:100:GLU:HG2	1.84	0.58
72:TB:103:ILE:HD11	72:TB:110:ILE:HG23	1.85	0.58
47:UA:59:CYS:O	47:UA:60:CYS:HB2	2.04	0.58
2:B:780:A:H4'	22:V:162:ALA:HB2	1.86	0.58
22:V:176:ARG:HG3	22:V:183:GLY:HA3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:55:SER:H	22:V:58:ASN:HB2	1.69	0.58
48:VA:132:LYS:HB3	48:VA:135:PHE:CD1	2.38	0.58
2:B:1872:C:H5"	23:W:56:THR:HG21	1.85	0.58
51:YA:70:LEU:O	51:YA:74:GLN:HB2	2.04	0.58
1:A:1118:G:H2'	1:A:1119:G:H8	1.69	0.58
1:A:1286:U:H2'	1:A:1287:A:C8	2.38	0.58
1:A:298:C:H5"	54:BB:38:LEU:HB2	1.85	0.58
1:A:519:C:H3'	1:A:520:A:H8	1.67	0.58
53:AB:40:ARG:HB2	53:AB:49:ILE:HD11	1.85	0.58
2:B:2528:G:H2'	2:B:2529:A:O4'	2.03	0.58
2:B:2674:A:C4	15:O:124:GLY:HA3	2.38	0.58
2:B:3030:G:H3'	2:B:3031:G:C8	2.38	0.58
2:B:3044:G:H2'	2:B:3045:G:H8	1.69	0.58
2:B:3136:G:H2'	2:B:3137:C:C6	2.39	0.58
2:B:529:A:H2'	2:B:530:G:C8	2.39	0.58
2:B:974:G:H5"	22:V:14:GLY:O	2.04	0.58
83:EC:6782:C:C6	83:EC:6782:C:H5'	2.39	0.58
2:B:1088:U:H5'	33:GA:54:LEU:HD11	1.85	0.58
8:H:361:HIS:CB	24:X:26:ARG:HE	2.16	0.58
34:HA:52:ARG:O	34:HA:55:GLU:HB3	2.04	0.58
9:I:109:THR:HG21	9:I:171:LEU:HD11	1.84	0.58
9:I:65:ILE:HG23	9:I:73:VAL:O	2.03	0.58
35:IA:55:LEU:CD1	35:IA:59:ILE:HD11	2.33	0.58
10:J:40:LEU:CD2	10:J:86:ALA:HA	2.34	0.58
11:K:117:VAL:HG11	11:K:123:THR:CG2	2.34	0.58
63:KB:108:ASP:CB	63:KB:111:ALA:HB3	2.31	0.58
1:A:867:G:OP1	63:KB:3:ARG:HD3	2.03	0.58
34:HA:55:GLU:HA	38:LA:94:LEU:HD11	1.86	0.58
64:LB:103:ARG:O	64:LB:107:ARG:HB2	2.03	0.58
2:B:242:C:H3'	39:MA:115:LYS:HZ1	1.66	0.58
1:A:1459:C:H5'	68:PB:131:LEU:CD1	2.34	0.58
17:Q:46:ILE:HG22	17:Q:49:ARG:HB2	1.84	0.58
46:TA:22:GLN:O	46:TA:75:VAL:HG22	2.02	0.58
72:TB:94:LEU:CG	72:TB:102:VAL:HG23	2.33	0.58
52:ZA:143:TYR:HB2	72:TB:98:GLN:NE2	2.19	0.58
21:U:171:ARG:H	21:U:171:ARG:HD3	1.69	0.58
49:WA:41:THR:HG21	49:WA:62:LYS:CD	2.32	0.58
51:YA:213:ARG:HG2	51:YA:214:LYS:N	2.19	0.58
1:A:1535:U:H1'	1:A:1536:G:N2	2.18	0.57
1:A:477:A:H2'	1:A:478:A:C8	2.39	0.57
1:A:605:A:H3'	1:A:606:A:H2'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1405:U:O2	36:JA:55:ILE:HA	2.03	0.57
2:B:1625:A:H5'	2:B:1643:A:C6	2.39	0.57
2:B:1665:C:H2'	2:B:1666:G:H8	1.67	0.57
2:B:2542:U:HO2'	2:B:2543:U:H5	1.51	0.57
2:B:2882:U:H4'	7:G:264:VAL:HG12	1.84	0.57
2:B:3123:A:C2'	2:B:3124:G:H5'	2.34	0.57
2:B:3280:U:O2'	2:B:3281:U:H5'	2.04	0.57
2:B:666:A:H2'	2:B:667:C:C5'	2.32	0.57
54:BB:9:LEU:O	54:BB:27:TYR:HB3	2.03	0.57
80:BC:10:ARG:HB2	80:BC:10:ARG:CZ	2.34	0.57
29:CA:92:LYS:HG2	29:CA:110:VAL:HB	1.85	0.57
82:DC:307:LEU:HD13	82:DC:312:LYS:HB3	1.85	0.57
5:E:151:VAL:HG13	5:E:151:VAL:O	2.04	0.57
5:E:216:LEU:HG	5:E:217:TYR:N	2.20	0.57
57:EB:153:LEU:HG	57:EB:184:GLU:CB	2.28	0.57
6:F:44:ILE:N	6:F:44:ILE:HD12	2.19	0.57
59:GB:15:PRO:HG2	59:GB:17:ARG:O	2.04	0.57
12:L:154:ALA:C	12:L:156:ASP:H	2.07	0.57
40:NA:51:SER:H	40:NA:54:GLU:HB2	1.68	0.57
15:O:46:VAL:HG12	15:O:68:HIS:C	2.24	0.57
18:R:20:VAL:HG22	18:R:66:THR:HB	1.85	0.57
21:U:57:ALA:CB	21:U:72:GLN:HB2	2.34	0.57
50:XA:79:ARG:HD2	50:XA:125:ASP:HB2	1.85	0.57
1:A:1066:C:H4'	51:YA:149:GLN:NE2	2.19	0.57
51:YA:100:PHE:HD1	51:YA:181:LEU:HD11	1.67	0.57
26:Z:42:LYS:HD3	26:Z:46:ALA:HA	1.84	0.57
1:A:1002:G:C6	1:A:1003:A:N7	2.72	0.57
1:A:142:G:H5"	56:DB:139:ASN:HD22	1.69	0.57
1:A:865:A:H2'	1:A:866:G:O4'	2.04	0.57
1:A:919:A:H2'	1:A:920:U:C6	2.38	0.57
27:AA:66:LYS:HB2	27:AA:69:LEU:HD13	1.86	0.57
2:B:1439:U:H2'	2:B:1440:G:H8	1.68	0.57
2:B:1857:C:O2	2:B:1857:C:H2'	2.02	0.57
2:B:2632:G:O3'	25:Y:12:ARG:HD3	2.03	0.57
2:B:3283:U:H2'	2:B:3284:G:C8	2.39	0.57
55:CB:123:VAL:CG2	75:WB:100:ILE:HD11	2.34	0.57
82:DC:143:LEU:HD13	82:DC:188:ILE:HD12	1.85	0.57
82:DC:322:VAL:HG12	82:DC:326:LYS:HE2	1.85	0.57
31:EA:54:THR:N	31:EA:57:HIS:HB2	2.16	0.57
6:F:77:ILE:CG2	6:F:169:ILE:HG12	2.34	0.57
2:B:3304:U:O2	7:G:334:ARG:HA	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:334:PHE:CE1	8:H:339:LEU:HB3	2.38	0.57
2:B:3325:G:H5"	35:IA:103:GLY:HA2	1.86	0.57
36:JA:118:LYS:HD3	36:JA:118:LYS:C	2.24	0.57
14:N:20:SER:H	14:N:23:ASN:HB3	1.69	0.57
15:O:137:ARG:HG2	15:O:141:ARG:HB3	1.86	0.57
15:O:18:VAL:HA	15:O:70:THR:HG22	1.86	0.57
41:OA:76:ASN:ND2	41:OA:79:GLN:HB2	2.19	0.57
69:QB:28:LEU:HD22	69:QB:29:GLU:N	2.19	0.57
19:S:116:LEU:HB3	19:S:133:ILE:HG23	1.85	0.57
72:TB:90:THR:HG21	72:TB:113:HIS:HD2	1.70	0.57
73:UB:71:CYS:SG	73:UB:120:VAL:HG21	2.44	0.57
48:VA:52:LEU:HB3	48:VA:86:PHE:CD2	2.33	0.57
49:WA:6:VAL:O	49:WA:315:VAL:HA	2.03	0.57
2:B:519:A:H5"	24:X:62:ASN:HD21	1.69	0.57
24:X:92:LYS:HE3	24:X:109:ASP:OD2	2.04	0.57
25:Y:11:THR:CA	25:Y:14:MET:HB3	2.33	0.57
25:Y:89:LEU:HD22	25:Y:91:LEU:HD21	1.86	0.57
51:YA:121:ILE:HD12	51:YA:121:ILE:N	2.20	0.57
51:YA:122:GLU:HG2	51:YA:140:ILE:HD12	1.86	0.57
1:A:140:A:H4'	1:A:141:U:H5'	1.86	0.57
1:A:1535:U:OP1	1:A:1535:U:H4'	2.05	0.57
1:A:1559:A:H5"	68:PB:135:GLY:CA	2.30	0.57
1:A:448:C:O2'	1:A:449:C:H5'	2.04	0.57
1:A:754:A:C3'	1:A:755:A:H5'	2.35	0.57
27:AA:62:VAL:CG1	27:AA:70:ARG:HG2	2.35	0.57
53:AB:74:GLN:HA	53:AB:79:TYR:HD2	1.69	0.57
2:B:1892:G:C2'	2:B:1893:A:H5"	2.34	0.57
2:B:2254:U:H2'	2:B:2255:A:H5"	1.85	0.57
2:B:2436:U:H6	2:B:2436:U:O5'	1.87	0.57
2:B:807:A:H5'	2:B:2812:C:H4'	1.86	0.57
2:B:3251:U:H2'	2:B:3252:G:C8	2.39	0.57
2:B:66:A:H5"	2:B:316:U:OP1	2.03	0.57
2:B:675:C:O2'	2:B:679:U:H5"	2.04	0.57
2:B:707:U:C3'	2:B:708:G:H5"	2.35	0.57
2:B:772:U:H2'	2:B:773:G:C8	2.39	0.57
54:BB:45:ILE:HG21	54:BB:81:THR:HG22	1.86	0.57
30:DA:109:LEU:HD22	30:DA:115:ARG:NH1	2.18	0.57
56:DB:7:TYR:HB2	56:DB:124:LEU:HD21	1.85	0.57
82:DC:587:TYR:CD2	82:DC:690:ASP:O	2.57	0.57
5:E:198:TRP:C	5:E:200:ASN:H	2.07	0.57
5:E:196:LYS:HD3	5:E:200:ASN:ND2	2.14	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:128:GLN:O	31:EA:131:PHE:HD1	1.87	0.57
7:G:332:ARG:H	7:G:332:ARG:CD	2.10	0.57
59:GB:170:GLY:O	59:GB:174:ARG:HG2	2.04	0.57
14:N:184:LYS:NZ	14:N:190:VAL:HG22	2.19	0.57
42:PA:23:ALA:CB	42:PA:45:VAL:HG12	2.34	0.57
17:Q:47:ALA:HB3	17:Q:48:PRO:CD	2.35	0.57
19:S:159:ARG:CA	19:S:162:ARG:HH21	2.13	0.57
22:V:157:PRO:HA	22:V:186:VAL:HG12	1.85	0.57
48:VA:77:LEU:O	48:VA:80:VAL:HG23	2.04	0.57
74:VB:132:ARG:HD3	74:VB:132:ARG:O	2.04	0.57
23:W:182:ASP:HA	23:W:185:LEU:HD12	1.85	0.57
75:WB:103:ARG:HG2	75:WB:104:ALA:N	2.19	0.57
77:YB:62:ILE:HD12	77:YB:63:LEU:H	1.69	0.57
52:ZA:115:ILE:HD12	52:ZA:115:ILE:O	2.04	0.57
1:A:1483:A:H2	1:A:1607:G:H1'	1.68	0.57
2:B:1055:A:H5"	4:D:100:C:O2'	2.04	0.57
2:B:1275:C:C2'	2:B:1276:U:H5'	2.34	0.57
2:B:1640:G:H2'	2:B:1641:U:C6	2.40	0.57
2:B:2338:C:H2'	2:B:2339:C:C5	2.39	0.57
2:B:2742:C:H1'	46:TA:20:HIS:CD2	2.40	0.57
2:B:2776:C:H5"	2:B:2777:G:O5'	2.03	0.57
2:B:53:G:H4'	2:B:812:G:H4'	1.86	0.57
55:CB:146:THR:HG23	55:CB:158:GLN:C	2.25	0.57
55:CB:196:GLU:HG2	55:CB:200:ASN:HD21	1.70	0.57
56:DB:57:ASP:OD2	56:DB:61:PHE:HB2	2.05	0.57
82:DC:169:VAL:HG12	82:DC:170:SER:N	2.20	0.57
82:DC:238:ALA:HA	82:DC:241:MET:HE3	1.86	0.57
83:EC:6794:C:C2'	83:EC:6795:U:H5'	2.34	0.57
6:F:37:ARG:HD2	6:F:38:HIS:NE2	2.19	0.57
58:FB:110:ARG:HG3	58:FB:121:LEU:CD2	2.34	0.57
7:G:252:ILE:CG2	7:G:264:VAL:HG21	2.33	0.57
2:B:696:C:OP2	8:H:119:ARG:NH2	2.37	0.57
8:H:58:HIS:CD2	8:H:98:ARG:HB2	2.39	0.57
9:I:78:ALA:HB2	9:I:105:ILE:HB	1.85	0.57
9:I:27:LYS:HE2	15:O:143:ARG:HH11	1.69	0.57
2:B:3271:G:H4'	10:J:77:ARG:HH22	1.69	0.57
37:KA:11:GLY:O	37:KA:97:SER:HA	2.04	0.57
1:A:1366:U:H5'	66:NB:30:LYS:HZ1	1.69	0.57
15:O:15:GLU:OE2	15:O:132:ASN:HB3	2.04	0.57
43:QA:10:LYS:HA	43:QA:13:MET:HE3	1.85	0.57
71:SB:21:ASN:HB2	72:TB:67:GLY:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:28:LYS:HB3	47:UA:28:LYS:NZ	2.19	0.57
73:UB:53:VAL:HG13	73:UB:72:VAL:HG11	1.86	0.57
24:X:2:ALA:O	24:X:4:PHE:N	2.37	0.57
24:X:45:LEU:HB3	24:X:51:VAL:HG21	1.86	0.57
50:XA:110:TYR:HA	50:XA:115:PHE:CD1	2.38	0.57
25:Y:88:ARG:NH2	33:GA:33:LYS:HB2	2.19	0.57
52:ZA:153:SER:OG	52:ZA:171:PRO:HA	2.05	0.57
52:ZA:73:LEU:O	52:ZA:76:LEU:HD13	2.04	0.57
52:ZA:95:ARG:HG3	52:ZA:97:ARG:HG2	1.86	0.57
78:ZB:36:THR:HG23	78:ZB:37:SER:H	1.69	0.57
1:A:1288:G:N2	1:A:1328:G:H1'	2.19	0.57
2:B:1556:C:H3'	2:B:2169:G:C2	2.38	0.57
2:B:1879:A:H3'	2:B:1880:U:H5'	1.85	0.57
2:B:2342:U:H2'	2:B:2343:C:H6	1.70	0.57
2:B:2708:C:H2'	2:B:2709:C:C6	2.39	0.57
2:B:2853:A:O3'	14:N:64:ALA:HB2	2.05	0.57
2:B:321:C:O2'	2:B:322:U:H5'	2.04	0.57
2:B:700:C:H2'	2:B:701:G:C8	2.39	0.57
2:B:790:U:H2'	2:B:791:A:H8	1.68	0.57
55:CB:68:ILE:HD12	55:CB:71:ALA:HA	1.87	0.57
30:DA:35:LEU:H	30:DA:47:ALA:HA	1.69	0.57
82:DC:523:SER:HB3	82:DC:529:ILE:CG1	2.35	0.57
57:EB:21:ALA:O	57:EB:25:VAL:HG23	2.04	0.57
57:EB:63:PRO:O	57:EB:65:PRO:HD2	2.04	0.57
6:F:30:ARG:HB3	6:F:36:GLU:OE2	2.03	0.57
6:F:83:HIS:HA	47:UA:63:THR:O	2.05	0.57
58:FB:137:LYS:HD3	58:FB:137:LYS:H	1.69	0.57
2:B:3049:A:N1	7:G:75:ALA:HB2	2.18	0.57
8:H:23:PRO:HG2	8:H:258:LEU:CG	2.33	0.57
60:HB:73:VAL:HG12	60:HB:77:ARG:HE	1.69	0.57
9:I:178:ASN:O	9:I:179:ARG:HG2	2.04	0.57
12:L:227:ASP:HA	12:L:230:LYS:HB2	1.86	0.57
39:MA:41:LEU:O	39:MA:44:ILE:HG22	2.04	0.57
17:Q:62:THR:CG2	32:FA:66:ALA:HB1	2.34	0.57
69:QB:28:LEU:H	69:QB:28:LEU:CD1	2.16	0.57
70:RB:50:LEU:CD1	70:RB:51:VAL:H	2.16	0.57
52:ZA:54:GLU:HB3	71:SB:12:TYR:HB2	1.87	0.57
72:TB:50:PHE:HB3	72:TB:63:VAL:HA	1.86	0.57
72:TB:71:LYS:HD3	72:TB:71:LYS:C	2.25	0.57
73:UB:54:LEU:HD11	73:UB:75:GLN:HB2	1.87	0.57
48:VA:27:VAL:HG12	48:VA:84:VAL:HG11	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:47:ALA:C	76:XB:49:ALA:H	2.07	0.57
25:Y:92:ARG:HB3	25:Y:94:GLU:CD	2.24	0.57
1:A:1132:A:H2'	1:A:1133:A:C8	2.39	0.57
1:A:1459:C:H5"	68:PB:138:THR:OG1	2.05	0.57
1:A:1489:U:H1'	1:A:1494:C:C2	2.39	0.57
1:A:222:A:H2'	1:A:223:U:H5'	1.87	0.57
1:A:96:G:H1	1:A:387:A:H61	1.52	0.57
1:A:96:G:H4'	1:A:460:A:O3'	2.05	0.57
1:A:54:C:H4'	74:VB:109:LYS:HD2	1.86	0.57
53:AB:12:VAL:HA	70:RB:84:MET:HE1	1.87	0.57
2:B:1285:G:HO2'	2:B:1286:A:H8	1.51	0.57
2:B:1625:A:H5'	2:B:1643:A:N6	2.20	0.57
2:B:164:A:H2'	2:B:165:A:O4'	2.05	0.57
2:B:2225:U:H2'	2:B:2226:U:H6	1.69	0.57
2:B:2562:A:H2'	2:B:2563:G:H8	1.70	0.57
2:B:2899:C:H2'	2:B:2900:A:H5"	1.87	0.57
2:B:1902:G:OP1	2:B:2918:G:H5'	2.05	0.57
56:DB:137:ARG:HG3	56:DB:137:ARG:HH21	1.70	0.57
56:DB:6:SER:HB3	56:DB:13:GLN:HB3	1.87	0.57
82:DC:164:LEU:HD21	82:DC:174:LEU:HD13	1.87	0.57
82:DC:585:ARG:O	82:DC:691:VAL:HG13	2.05	0.57
82:DC:586:ILE:HA	82:DC:691:VAL:HG22	1.85	0.57
5:E:67:ILE:HG12	5:E:144:LEU:HD13	1.87	0.57
5:E:23:THR:HG22	5:E:24:LYS:HD3	1.86	0.57
1:A:1675:C:H1'	58:FB:32:GLN:CD	2.25	0.57
59:GB:109:LEU:HD12	59:GB:129:ILE:HD13	1.85	0.57
64:LB:117:ASP:O	64:LB:118:VAL:HG13	2.04	0.57
13:M:8:GLN:HE22	13:M:69:ARG:HG2	1.68	0.57
16:P:64:ILE:CG1	16:P:71:ALA:HB3	2.34	0.57
17:Q:42:ARG:O	17:Q:46:ILE:HG12	2.04	0.57
43:QA:27:ILE:HG23	43:QA:30:ARG:HH21	1.70	0.57
69:QB:37:VAL:HG11	69:QB:53:TRP:CZ2	2.40	0.57
21:U:165:VAL:HG13	21:U:165:VAL:O	2.05	0.57
48:VA:45:LEU:HD11	48:VA:99:VAL:HB	1.84	0.57
75:WB:41:ILE:HG13	75:WB:42:LEU:N	2.20	0.57
50:XA:76:ILE:CD1	50:XA:98:ILE:HB	2.33	0.57
55:CB:82:PHE:CD2	78:ZB:49:ARG:HD2	2.40	0.57
1:A:1119:G:H2'	1:A:1120:U:C6	2.40	0.57
1:A:1196:A:H4'	1:A:1197:C:H5"	1.86	0.57
1:A:1317:C:H2'	1:A:1318:G:O4'	2.04	0.57
1:A:393:C:H41	1:A:400:A:H1'	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:569:C:H5	73:UB:69:ARG:NH2	1.96	0.57
2:B:1221:A:H2'	2:B:1221:A:N3	2.18	0.57
2:B:1332:A:H2'	2:B:1333:C:C6	2.39	0.57
2:B:1339:C:H2'	2:B:1340:G:C8	2.40	0.57
2:B:3311:C:H2'	2:B:3312:U:H5'	1.84	0.57
2:B:58:G:H2'	2:B:59:G:C8	2.38	0.57
57:EB:35:LYS:HG2	57:EB:36:ALA:N	2.18	0.57
2:B:824:C:H5"	6:F:21:ARG:HD3	1.87	0.57
7:G:50:LYS:NZ	7:G:328:ILE:HB	2.19	0.57
8:H:138:ARG:HD2	8:H:244:LEU:O	2.05	0.57
61:IB:135:VAL:O	61:IB:136:ARG:HD3	2.04	0.57
13:M:87:LYS:HE2	13:M:89:LYS:HE2	1.87	0.57
15:O:137:ARG:C	15:O:139:THR:H	2.06	0.57
18:R:95:ALA:HA	18:R:100:ALA:HB1	1.86	0.57
19:S:45:PRO:O	19:S:49:ARG:HB3	2.03	0.57
2:B:3243:A:C8	20:T:156:LEU:HD22	2.39	0.57
20:T:73:PHE:CD1	20:T:78:ARG:HG2	2.40	0.57
74:VB:91:LEU:HA	74:VB:94:TYR:CD2	2.39	0.57
49:WA:136:ILE:H	49:WA:136:ILE:CD1	2.08	0.57
78:ZB:56:LEU:HD12	78:ZB:58:GLU:O	2.04	0.57
1:A:1715:G:H2'	1:A:1716:C:H5"	1.87	0.57
1:A:752:A:H2	1:A:797:G:H1	1.53	0.57
1:A:896:U:H2'	1:A:897:C:C6	2.40	0.57
1:A:93:A:HO2'	54:BB:4:GLY:HA3	1.69	0.57
53:AB:146:ARG:NH1	83:EC:6956:A:C8	2.71	0.57
53:AB:222:VAL:C	53:AB:223:LYS:HE2	2.25	0.57
2:B:105:C:O2'	2:B:106:A:H5'	2.04	0.57
2:B:1146:C:H2'	2:B:1147:G:C8	2.40	0.57
2:B:1248:C:C2'	2:B:1249:G:H5'	2.35	0.57
2:B:1422:G:H2'	2:B:1423:C:C6	2.40	0.57
2:B:1494:U:H1'	2:B:1496:C:H41	1.69	0.57
2:B:1650:G:H2'	2:B:1651:U:C6	2.40	0.57
2:B:1481:A:N3	2:B:1858:A:H4'	2.20	0.57
2:B:1898:G:H1'	27:AA:18:PRO:CG	2.35	0.57
2:B:2865:U:O2'	2:B:2866:U:H5'	2.04	0.57
2:B:297:G:H4'	2:B:299:G:H4'	1.85	0.57
3:C:153:U:H2'	3:C:154:C:H6	1.70	0.57
3:C:53:A:H4'	43:QA:40:LYS:HE2	1.86	0.57
30:DA:33:ALA:CB	30:DA:50:ILE:HD11	2.34	0.57
82:DC:147:LEU:HD13	82:DC:193:ALA:HB2	1.86	0.57
82:DC:124:GLY:HA2	82:DC:151:ILE:CG2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:279:ASP:HB3	82:DC:280:PRO:HD3	1.87	0.57
82:DC:565:GLU:O	82:DC:681:MET:HA	2.05	0.57
82:DC:570:GLU:C	82:DC:720:ALA:HA	2.25	0.57
82:DC:728:VAL:CG1	82:DC:771:TYR:HB3	2.35	0.57
83:EC:6781:U:H4'	83:EC:6782:C:H5	1.69	0.57
6:F:68:LYS:HE2	6:F:70:ARG:HB2	1.85	0.57
8:H:154:THR:OG1	8:H:252:GLU:HB3	2.04	0.57
8:H:69:ARG:HB3	8:H:71:VAL:HG12	1.87	0.57
9:I:155:THR:HA	9:I:179:ARG:HD3	1.86	0.57
40:NA:50:LEU:HB3	40:NA:54:GLU:HB2	1.87	0.57
41:OA:47:TYR:HB3	41:OA:49:TRP:CD1	2.39	0.57
18:R:45:LEU:HA	18:R:57:ALA:HA	1.85	0.57
21:U:126:ARG:HA	21:U:140:GLU:CG	2.31	0.57
6:F:184:ARG:HH22	47:UA:14:TYR:HE1	1.53	0.57
24:X:11:GLY:HA2	24:X:58:ILE:HA	1.85	0.57
25:Y:3:LYS:HE2	25:Y:3:LYS:HA	1.85	0.57
1:A:1169:G:N2	1:A:1576:A:H62	2.02	0.57
1:A:1617:U:O2'	1:A:1618:C:H5'	2.05	0.57
1:A:1740:A:H2'	1:A:1741:U:C6	2.39	0.57
1:A:980:G:H4'	1:A:1776:A:H4'	1.87	0.57
1:A:449:C:H2'	1:A:450:U:H6	1.70	0.57
1:A:487:G:H1	1:A:500:C:N4	2.00	0.57
53:AB:135:GLU:HB2	53:AB:157:LEU:HD13	1.87	0.57
2:B:1420:C:O2'	2:B:1421:G:H5'	2.05	0.57
2:B:1881:A:H2'	2:B:1882:G:C8	2.40	0.57
2:B:2419:A:H2'	2:B:2420:C:C6	2.40	0.57
2:B:2736:A:C2'	2:B:2737:C:H5"	2.35	0.57
2:B:2922:G:N3	2:B:2952:G:H1'	2.20	0.57
2:B:316:U:H4'	2:B:317:A:H5'	1.86	0.57
2:B:36:C:H4'	2:B:808:A:C2	2.40	0.57
1:A:94:U:H4'	54:BB:6:LYS:HA	1.87	0.57
82:DC:20:ARG:CB	82:DC:100:ILE:HG23	2.32	0.57
82:DC:587:TYR:HB2	82:DC:690:ASP:O	2.05	0.57
31:EA:4:PHE:CZ	34:HA:35:ARG:HA	2.40	0.57
6:F:206:PRO:HG3	6:F:213:GLY:HA3	1.87	0.57
58:FB:170:SER:HB3	58:FB:182:TYR:HD1	1.69	0.57
2:B:3003:G:H4'	7:G:180:GLU:OE2	2.05	0.57
59:GB:140:ILE:HG12	59:GB:159:ALA:CB	2.35	0.57
59:GB:46:SER:HA	59:GB:49:LEU:HB3	1.86	0.57
9:I:17:GLN:HE22	25:Y:23:GLY:N	2.03	0.57
9:I:200:PHE:HB3	9:I:237:GLU:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:207:LEU:HD22	11:K:244:ASN:HD22	1.69	0.57
37:KA:26:ASN:HA	37:KA:88:ASN:OD1	2.05	0.57
61:IB:155:LYS:HB2	63:KB:83:GLU:HA	1.86	0.57
12:L:135:GLY:H	12:L:197:VAL:HG23	1.69	0.57
12:L:73:PRO:HA	12:L:233:TRP:HA	1.87	0.57
12:L:46:LEU:HD12	29:CA:30:ALA:HB2	1.86	0.57
13:M:10:ILE:O	13:M:52:LEU:HD12	2.05	0.57
69:QB:140:LEU:HA	69:QB:143:ASP:CB	2.35	0.57
18:R:123:LEU:HD23	20:T:190:VAL:HG23	1.87	0.57
18:R:17:VAL:HG12	18:R:72:LEU:HD11	1.86	0.57
18:R:59:ASN:HB3	18:R:62:GLN:HE21	1.70	0.57
18:R:66:THR:CG2	18:R:68:LEU:HD23	2.35	0.57
70:RB:51:VAL:HG12	70:RB:94:GLU:HB2	1.86	0.57
46:TA:76:LYS:HE2	46:TA:76:LYS:HA	1.87	0.57
23:W:96:ILE:HG12	23:W:100:ARG:NH2	2.19	0.57
25:Y:34:TYR:CE2	25:Y:93:VAL:HB	2.40	0.57
1:A:144:U:HO2'	1:A:145:A:H5'	1.69	0.57
1:A:1657:U:C5	2:B:2125:A:H4'	2.40	0.57
1:A:560:U:H2'	1:A:561:G:C8	2.39	0.57
1:A:72:A:H3'	1:A:73:U:C5'	2.34	0.57
1:A:747:C:H1'	72:TB:124:LYS:NZ	2.20	0.57
53:AB:42:THR:HG21	53:AB:45:LYS:HB2	1.85	0.57
2:B:1319:G:H2'	2:B:1320:C:H6	1.68	0.57
2:B:1915:A:H4'	23:W:83:GLY:C	2.24	0.57
2:B:2227:C:H2'	2:B:2228:A:C8	2.39	0.57
2:B:2370:G:H2'	2:B:2371:G:O4'	2.05	0.57
2:B:2534:G:H2'	2:B:2535:A:H8	1.69	0.57
2:B:2890:A:H61	2:B:2913:C:H42	1.53	0.57
2:B:3214:U:C5	18:R:121:MET:HG3	2.39	0.57
2:B:681:U:H2'	2:B:696:C:N4	2.19	0.57
80:BC:47:VAL:HG22	80:BC:48:THR:H	1.69	0.57
3:C:156:U:H2'	3:C:157:U:O4'	2.03	0.57
29:CA:135:ILE:HA	29:CA:138:ARG:HB2	1.86	0.57
55:CB:117:THR:OG1	55:CB:191:ALA:HA	2.05	0.57
55:CB:40:ILE:HG13	55:CB:41:LYS:H	1.70	0.57
2:B:225:C:H4'	30:DA:32:SER:O	2.05	0.57
82:DC:271:ARG:HB3	82:DC:274:ASN:CG	2.25	0.57
5:E:108:ASN:HB2	5:E:151:VAL:CG2	2.34	0.57
31:EA:13:VAL:CB	31:EA:19:ALA:HA	2.32	0.57
6:F:3:ARG:HG2	6:F:4:VAL:N	2.19	0.57
32:FA:47:LYS:HE2	32:FA:48:TYR:CE2	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:296:THR:C	7:G:298:PHE:H	2.08	0.57
34:HA:18:ILE:HG12	34:HA:81:VAL:HA	1.87	0.57
9:I:273:ARG:HG2	9:I:274:GLN:H	1.69	0.57
10:J:42:LEU:O	10:J:43:LEU:HD23	2.04	0.57
37:KA:59:VAL:HG13	37:KA:65:ARG:HE	1.70	0.57
68:PB:81:ILE:HG23	68:PB:82:PRO:CD	2.29	0.57
20:T:18:ARG:CB	20:T:123:ALA:HA	2.35	0.57
73:UB:7:ARG:HB2	73:UB:7:ARG:HH11	1.70	0.57
73:UB:89:ASN:HB3	73:UB:136:TRP:CE2	2.40	0.57
11:K:110:ARG:NH2	22:V:3:ILE:HD11	2.19	0.57
23:W:14:VAL:CG1	23:W:42:ARG:HD3	2.35	0.57
49:WA:198:ASN:O	49:WA:215:GLY:HA3	2.05	0.57
1:A:1235:C:OP2	1:A:1245:G:H8	1.88	0.56
1:A:1201:G:N2	1:A:1599:C:H2'	2.20	0.56
1:A:363:G:O2'	1:A:364:G:H5'	2.05	0.56
1:A:777:C:C3'	1:A:778:G:H5"	2.34	0.56
1:A:93:A:H1'	54:BB:3:ARG:O	2.04	0.56
2:B:954:U:O4	2:B:1115:G:H1'	2.04	0.56
2:B:1472:U:H2'	2:B:1473:G:C8	2.40	0.56
2:B:174:C:H2'	2:B:175:C:C6	2.40	0.56
2:B:2854:U:H2'	2:B:2855:U:C6	2.39	0.56
2:B:2895:G:C2'	2:B:2896:A:H5"	2.34	0.56
3:C:104:A:H5'	3:C:105:A:C8	2.35	0.56
29:CA:125:ARG:NH2	29:CA:127:THR:HA	2.19	0.56
30:DA:26:GLN:O	30:DA:30:LEU:HG	2.05	0.56
57:EB:71:HIS:HB3	57:EB:131:PHE:CZ	2.40	0.56
59:GB:122:VAL:O	59:GB:125:ALA:HB3	2.05	0.56
8:H:34:ILE:O	8:H:38:VAL:HG23	2.04	0.56
10:J:145:LEU:O	10:J:149:ILE:HG13	2.06	0.56
11:K:145:ARG:HH11	11:K:145:ARG:HB3	1.69	0.56
12:L:244:ALA:HA	12:L:247:ASP:CB	2.35	0.56
64:LB:16:VAL:O	64:LB:30:VAL:HG23	2.05	0.56
2:B:818:C:H5"	41:OA:10:LYS:HB2	1.86	0.56
1:A:1559:A:C5'	68:PB:135:GLY:HA3	2.31	0.56
18:R:45:LEU:CG	18:R:55:ARG:HG2	2.35	0.56
18:R:50:LYS:HD3	18:R:85:TRP:CD1	2.40	0.56
18:R:49:PRO:CG	18:R:81:VAL:HG12	2.34	0.56
71:SB:39:VAL:HG12	71:SB:45:ALA:CA	2.33	0.56
71:SB:45:ALA:O	71:SB:46:ILE:HB	2.03	0.56
47:UA:33:GLN:HG3	47:UA:34:HIS:N	2.20	0.56
73:UB:13:ARG:HA	73:UB:16:ARG:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:40:GLU:O	48:VA:44:GLU:HG2	2.05	0.56
24:X:118:PHE:HA	24:X:121:ILE:HD12	1.85	0.56
1:A:1012:U:H4'	6:F:247:ARG:HG3	1.87	0.56
53:AB:92:GLN:NE2	53:AB:92:GLN:H	2.03	0.56
70:RB:67:THR:HG22	79:AC:40:ARG:NH1	2.19	0.56
2:B:128:G:H2'	2:B:129:U:C6	2.39	0.56
2:B:1782:U:H2'	2:B:1783:U:H5'	1.87	0.56
2:B:179:C:H2'	2:B:180:C:H6	1.67	0.56
2:B:1908:A:H2'	2:B:1909:A:O4'	2.05	0.56
2:B:2150:G:H2'	2:B:2151:C:C6	2.39	0.56
2:B:2277:C:C4'	2:B:2317:A:H4'	2.35	0.56
2:B:493:G:H1'	2:B:494:G:OP2	2.05	0.56
2:B:776:U:H1'	33:GA:37:PRO:HG3	1.87	0.56
54:BB:154:ILE:HD13	54:BB:160:VAL:HG21	1.87	0.56
55:CB:77:TYR:C	55:CB:83:ARG:HB3	2.25	0.56
56:DB:29:ASP:HA	56:DB:101:ILE:CG2	2.36	0.56
82:DC:197:LEU:HD22	82:DC:200:VAL:HG11	1.86	0.56
82:DC:646:VAL:O	82:DC:647:ILE:HD12	2.05	0.56
7:G:229:VAL:HG13	7:G:230:THR:N	2.20	0.56
59:GB:108:ARG:NH1	59:GB:110:GLN:HB3	2.19	0.56
59:GB:12:TYR:CD2	59:GB:40:LYS:HG3	2.40	0.56
2:B:1419:A:N7	8:H:187:LEU:HD22	2.21	0.56
9:I:40:HIS:NE2	9:I:42:ALA:HB3	2.20	0.56
10:J:108:LYS:NZ	10:J:111:LEU:HD13	2.19	0.56
10:J:23:LYS:HE3	10:J:23:LYS:HA	1.87	0.56
12:L:239:GLY:O	12:L:243:GLN:HB2	2.05	0.56
31:EA:14:VAL:CG2	38:LA:90:ILE:HD11	2.35	0.56
38:LA:98:GLN:O	38:LA:102:LYS:HB2	2.05	0.56
14:N:8:CYS:HB2	14:N:9:TYR:CD1	2.40	0.56
41:OA:16:HIS:HB3	41:OA:26:SER:HA	1.86	0.56
69:QB:62:ALA:O	69:QB:65:ILE:HG22	2.05	0.56
24:X:117:ARG:HB2	24:X:119:ARG:HG2	1.87	0.56
50:XA:143:VAL:HB	50:XA:157:ASP:OD1	2.05	0.56
51:YA:116:LYS:O	51:YA:117:TRP:HB2	2.05	0.56
51:YA:53:GLY:O	51:YA:54:LEU:HB2	2.06	0.56
52:ZA:228:ASN:HB3	71:SB:1:MET:CG	2.34	0.56
1:A:1214:U:H4'	1:A:1244:A:C8	2.38	0.56
1:A:1671:A:N6	1:A:1730:A:O2'	2.38	0.56
1:A:247:A:H1'	61:IB:38:ALA:HA	1.86	0.56
1:A:749:U:H2'	1:A:750:U:C6	2.40	0.56
53:AB:192:PRO:HG3	53:AB:202:LEU:CD2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:32:GLU:HB3	53:AB:58:VAL:HG22	1.88	0.56
2:B:1232:C:O2'	2:B:1233:G:H5'	2.04	0.56
2:B:627:U:H4'	2:B:1399:A:H1'	1.88	0.56
2:B:1522:U:H3'	29:CA:113:LEU:CD1	2.34	0.56
2:B:2200:U:H2'	2:B:2201:G:O4'	2.04	0.56
2:B:2202:C:H2'	2:B:2203:U:C6	2.41	0.56
2:B:2759:U:H5"	2:B:2760:C:H5'	1.88	0.56
2:B:286:U:H2'	2:B:287:G:H8	1.64	0.56
2:B:3230:G:H2'	2:B:3231:U:O4'	2.05	0.56
2:B:405:U:H2'	2:B:406:G:H5'	1.85	0.56
2:B:556:U:H5'	2:B:557:A:C2	2.39	0.56
2:B:730:C:OP1	22:V:135:GLN:HA	2.05	0.56
2:B:975:C:OP2	22:V:15:HIS:HA	2.05	0.56
30:DA:51:ARG:HG3	30:DA:54:ASP:OD2	2.05	0.56
82:DC:595:GLU:O	82:DC:599:LEU:HB2	2.06	0.56
83:EC:6905:G:H1	83:EC:6952:U:H3	1.52	0.56
6:F:62:VAL:HA	6:F:73:GLU:HG3	1.86	0.56
58:FB:70:GLU:HB3	58:FB:72:ILE:HG13	1.86	0.56
8:H:187:LEU:HD12	8:H:187:LEU:H	1.70	0.56
11:K:234:GLU:O	11:K:237:ASN:HB2	2.05	0.56
12:L:71:VAL:HB	12:L:76:ALA:HB2	1.88	0.56
34:HA:51:LEU:HD22	38:LA:91:ARG:HH21	1.71	0.56
64:LB:89:THR:HG21	64:LB:126:THR:OG1	2.06	0.56
13:M:150:SER:O	13:M:154:VAL:HG23	2.05	0.56
13:M:1:MET:HE1	13:M:3:TYR:HA	1.87	0.56
14:N:190:VAL:CG1	14:N:197:VAL:HG21	2.34	0.56
15:O:101:ASN:HB2	15:O:130:VAL:HA	1.86	0.56
70:RB:24:ILE:HG21	70:RB:91:ILE:HD12	1.87	0.56
19:S:103:GLU:OE2	19:S:160:GLU:HB2	2.05	0.56
20:T:14:HIS:O	20:T:42:ASN:HB2	2.05	0.56
73:UB:43:PHE:HD2	73:UB:47:SER:O	1.88	0.56
48:VA:15:LEU:HD12	48:VA:19:LEU:HD12	1.86	0.56
50:XA:120:LEU:HD12	50:XA:121:VAL:H	1.70	0.56
50:XA:35:PRO:C	50:XA:37:VAL:H	2.08	0.56
52:ZA:179:VAL:HG21	52:ZA:197:TYR:CD1	2.40	0.56
52:ZA:54:GLU:O	52:ZA:58:LEU:HB2	2.05	0.56
1:A:1118:G:H2'	1:A:1119:G:C8	2.40	0.56
1:A:760:A:H2'	1:A:761:G:O4'	2.05	0.56
1:A:238:U:OP1	1:A:834:G:H4'	2.05	0.56
53:AB:19:ALA:HB1	79:AC:46:LYS:CD	2.32	0.56
2:B:1465:A:H2'	2:B:1466:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1779:C:P	23:W:97:ARG:HH22	2.28	0.56
2:B:230:U:H2'	2:B:231:G:C1'	2.35	0.56
2:B:2465:G:H1	2:B:2486:A:H2'	1.69	0.56
2:B:2630:C:H1'	2:B:2758:A:N3	2.21	0.56
2:B:3283:U:H2'	2:B:3284:G:H8	1.70	0.56
2:B:492:U:H3'	2:B:493:G:C5'	2.34	0.56
2:B:748:U:H2'	2:B:749:C:C6	2.40	0.56
2:B:931:C:H3'	2:B:932:U:H2'	1.88	0.56
2:B:944:C:H4'	36:JA:33:ARG:NH1	2.19	0.56
3:C:43:A:H2'	3:C:44:A:O4'	2.04	0.56
3:C:57:C:H4'	3:C:63:G:C8	2.40	0.56
29:CA:110:VAL:HG22	29:CA:124:VAL:HG12	1.87	0.56
82:DC:363:ASP:O	82:DC:367:ILE:HG12	2.05	0.56
82:DC:445:ILE:HD11	82:DC:447:ASP:O	2.04	0.56
82:DC:656:LEU:HD23	82:DC:657:HIS:H	1.70	0.56
31:EA:81:LEU:HD22	38:LA:93:PHE:CD2	2.41	0.56
57:EB:13:PRO:O	57:EB:14:THR:HG22	2.05	0.56
57:EB:43:PHE:CD1	57:EB:44:LYS:N	2.74	0.56
6:F:192:LYS:HB3	6:F:193:ARG:NE	2.21	0.56
58:FB:76:THR:HG23	58:FB:109:PHE:HE1	1.70	0.56
9:I:64:ILE:HB	9:I:76:ALA:HB3	1.87	0.56
36:JA:100:ILE:HG22	36:JA:105:ARG:HG3	1.85	0.56
37:KA:60:ARG:HB3	37:KA:60:ARG:HH21	1.69	0.56
12:L:73:PRO:HD3	12:L:233:TRP:CZ3	2.40	0.56
64:LB:112:ILE:HB	76:XB:57:SER:OG	2.06	0.56
1:A:1552:U:OP2	65:MB:43:ARG:NH2	2.38	0.56
18:R:95:ALA:HA	18:R:100:ALA:CB	2.36	0.56
71:SB:16:LYS:HG3	71:SB:22:ARG:O	2.05	0.56
48:VA:70:LEU:O	48:VA:73:PHE:HB2	2.06	0.56
24:X:47:LYS:C	24:X:48:LEU:HD23	2.26	0.56
25:Y:40:VAL:HB	25:Y:96:ILE:CG2	2.35	0.56
52:ZA:154:LEU:HD12	52:ZA:154:LEU:N	2.21	0.56
1:A:1250:U:O2'	1:A:1251:U:H5'	2.06	0.56
1:A:1366:U:H2'	1:A:1367:G:O4'	2.05	0.56
1:A:25:C:H3'	1:A:367:A:H5'	1.86	0.56
1:A:505:A:H3'	1:A:506:A:H5"	1.86	0.56
2:B:1340:G:O2'	2:B:1341:U:H5'	2.05	0.56
2:B:1867:A:H2	2:B:2119:A:H4'	1.71	0.56
2:B:2318:U:H2'	2:B:2319:U:O4'	2.05	0.56
2:B:2536:A:C2'	2:B:2537:U:H5"	2.33	0.56
2:B:3033:A:O2'	2:B:3034:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:93:C:C2	32:FA:55:LYS:HE2	2.40	0.56
28:BA:3:VAL:HG11	28:BA:12:LYS:CE	2.34	0.56
54:BB:126:VAL:O	54:BB:126:VAL:CG2	2.54	0.56
3:C:95:G:OP1	41:OA:76:ASN:ND2	2.37	0.56
3:C:91:C:C4'	30:DA:24:SER:HB3	2.35	0.56
56:DB:23:ARG:HB3	56:DB:41:VAL:O	2.06	0.56
5:E:116:LEU:HD22	5:E:119:GLN:OE1	2.05	0.56
31:EA:46:ILE:HA	31:EA:70:PRO:HA	1.86	0.56
57:EB:117:THR:O	57:EB:120:ALA:HB3	2.05	0.56
57:EB:38:LEU:HD23	57:EB:38:LEU:O	2.05	0.56
57:EB:51:VAL:HG22	57:EB:55:LYS:O	2.05	0.56
83:EC:6953:G:H2'	83:EC:6953:G:N3	2.21	0.56
58:FB:13:ALA:H	61:IB:133:LYS:HE3	1.70	0.56
8:H:181:VAL:C	8:H:183:LYS:H	2.09	0.56
8:H:92:ASN:HA	8:H:98:ARG:O	2.06	0.56
9:I:22:ARG:HD3	9:I:28:THR:CB	2.34	0.56
10:J:64:LEU:HA	10:J:77:ARG:O	2.05	0.56
11:K:156:ILE:HD12	11:K:161:VAL:HG21	1.88	0.56
12:L:72:PRO:HG2	12:L:75:ILE:HB	1.88	0.56
2:B:1606:U:C4	38:LA:8:ARG:HB3	2.41	0.56
64:LB:74:VAL:HB	64:LB:76:ILE:CD1	2.35	0.56
15:O:140:ARG:HE	15:O:140:ARG:HA	1.71	0.56
2:B:817:A:O2'	41:OA:11:ARG:HB3	2.06	0.56
41:OA:47:TYR:HB3	41:OA:49:TRP:CE2	2.41	0.56
2:B:1254:C:O2'	16:P:135:THR:HG21	2.06	0.56
10:J:174:LEU:HD22	18:R:117:ARG:NH2	2.20	0.56
21:U:120:ASN:HD22	21:U:145:HIS:HB2	1.70	0.56
2:B:1447:G:OP1	21:U:65:SER:HB3	2.06	0.56
23:W:151:ARG:NH2	61:IB:116:ARG:HG3	2.20	0.56
75:WB:66:VAL:HG21	75:WB:73:GLY:HA2	1.86	0.56
50:XA:41:ARG:HB3	50:XA:45:VAL:O	2.06	0.56
78:ZB:43:ASN:HD21	78:ZB:63:ALA:CB	2.19	0.56
1:A:1305:U:H1'	1:A:1314:U:O4	2.06	0.56
1:A:201:G:H2'	1:A:202:A:O4'	2.04	0.56
1:A:798:C:H2'	1:A:799:A:H8	1.70	0.56
27:AA:33:ASN:HD22	27:AA:33:ASN:N	1.98	0.56
2:B:1232:C:H5	2:B:1261:G:H2'	1.67	0.56
2:B:2095:G:H2'	2:B:2096:A:C8	2.40	0.56
2:B:2207:A:N3	2:B:2207:A:H5"	2.21	0.56
2:B:2570:U:H1'	2:B:2571:U:H2'	1.87	0.56
2:B:2767:U:H2'	2:B:2768:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2985:C:H2'	2:B:2986:U:C6	2.40	0.56
2:B:3103:A:H2'	2:B:3104:U:O4'	2.05	0.56
2:B:3353:G:C2'	2:B:3354:U:H5"	2.33	0.56
2:B:628:A:H2'	2:B:629:U:O4'	2.06	0.56
2:B:671:U:H2'	2:B:672:A:H8	1.69	0.56
54:BB:36:HIS:CE1	54:BB:143:ASP:HA	2.40	0.56
3:C:106:C:C6	3:C:106:C:O5'	2.58	0.56
55:CB:200:ASN:O	55:CB:204:GLY:N	2.39	0.56
4:D:33:U:H2'	4:D:34:C:H6	1.70	0.56
82:DC:126:LEU:HG	82:DC:154:VAL:HG11	1.86	0.56
82:DC:418:TYR:CE1	82:DC:426:LEU:HB2	2.41	0.56
82:DC:767:THR:O	82:DC:767:THR:HG23	2.05	0.56
2:B:2607:G:H5'	6:F:233:GLN:HA	1.87	0.56
9:I:33:ARG:HH11	9:I:33:ARG:HG3	1.71	0.56
10:J:172:HIS:HD2	10:J:173:MET:H	1.53	0.56
11:K:83:LEU:HD11	11:K:116:PHE:CD1	2.41	0.56
63:KB:134:VAL:HG23	63:KB:135:LEU:HG	1.87	0.56
12:L:225:LYS:HA	12:L:228:GLU:HB2	1.87	0.56
2:B:1655:G:C5'	38:LA:58:ARG:HH21	2.14	0.56
38:LA:86:LYS:O	38:LA:90:ILE:HG12	2.05	0.56
64:LB:19:ILE:HB	64:LB:83:ILE:HD12	1.87	0.56
40:NA:57:LEU:HA	40:NA:60:LEU:HB2	1.86	0.56
15:O:71:VAL:HG12	15:O:72:ARG:H	1.70	0.56
17:Q:39:ARG:CA	17:Q:51:LEU:HD21	2.36	0.56
41:OA:25:ARG:NE	43:QA:51:ILE:HD13	2.14	0.56
2:B:68:C:H4'	19:S:177:GLY:N	2.20	0.56
20:T:39:GLU:HG3	20:T:153:VAL:HG11	1.86	0.56
21:U:22:LEU:HD12	21:U:146:ILE:CD1	2.36	0.56
47:UA:42:CYS:HG	47:UA:57:CYS:HG	1.52	0.56
74:VB:48:TYR:HB3	74:VB:75:VAL:HG21	1.88	0.56
51:YA:134:VAL:HG12	51:YA:218:LEU:HD21	1.87	0.56
52:ZA:168:ARG:HD3	52:ZA:199:GLN:HB3	1.87	0.56
1:A:1013:A:H2'	1:A:1014:G:O4'	2.05	0.56
1:A:1494:C:H2'	1:A:1495:C:C5	2.41	0.56
1:A:1623:C:O2'	1:A:1624:C:H5'	2.05	0.56
1:A:250:C:H5'	1:A:250:C:C6	2.36	0.56
2:B:1240:A:H3'	2:B:1241:U:H5"	1.88	0.56
2:B:1402:C:H2'	2:B:1403:C:H6	1.71	0.56
2:B:1466:G:H2'	2:B:1467:A:H5'	1.86	0.56
2:B:1612:A:OP1	42:PA:46:ARG:HD2	2.06	0.56
2:B:1774:C:H3'	2:B:1775:G:H5"	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1845:G:H4'	41:OA:8:PHE:CD2	2.41	0.56
2:B:2181:C:H2'	2:B:2182:A:O4'	2.05	0.56
54:BB:87:MET:SD	54:BB:100:ARG:HD3	2.45	0.56
3:C:11:C:H2'	3:C:12:A:C8	2.40	0.56
55:CB:109:LYS:HB2	55:CB:109:LYS:HZ3	1.69	0.56
55:CB:124:LEU:C	55:CB:126:ASP:H	2.08	0.56
56:DB:73:ILE:HD12	56:DB:75:LEU:HD21	1.87	0.56
57:EB:46:ILE:HA	57:EB:59:ALA:O	2.06	0.56
59:GB:119:ALA:HB3	59:GB:125:ALA:CA	2.32	0.56
34:HA:18:ILE:HG21	34:HA:81:VAL:O	2.05	0.56
35:IA:11:GLU:HA	35:IA:74:ARG:HA	1.86	0.56
10:J:54:TYR:HD2	10:J:55:LEU:N	2.04	0.56
10:J:67:GLY:HA3	10:J:72:ASN:OD1	2.05	0.56
11:K:154:GLY:HA3	11:K:201:PHE:CZ	2.40	0.56
63:KB:142:GLU:HG3	63:KB:145:THR:H	1.69	0.56
2:B:2853:A:H5'	14:N:63:GLU:HB2	1.88	0.56
40:NA:8:ALA:O	40:NA:13:LYS:HA	2.06	0.56
40:NA:53:TYR:CD1	40:NA:76:ARG:HG2	2.41	0.56
18:R:59:ASN:OD1	18:R:62:GLN:HG3	2.05	0.56
20:T:19:LEU:HD23	20:T:80:PHE:HE2	1.71	0.56
21:U:64:ASN:HD22	21:U:80:LYS:HD3	1.71	0.56
22:V:55:SER:N	22:V:58:ASN:HB2	2.20	0.56
22:V:54:LEU:HD22	22:V:58:ASN:HB3	1.88	0.56
74:VB:25:VAL:HG23	74:VB:73:GLY:H	1.70	0.56
49:WA:212:ALA:HA	49:WA:221:MET:O	2.06	0.56
49:WA:9:LEU:HD12	49:WA:312:VAL:O	2.04	0.56
51:YA:27:LYS:HA	51:YA:48:VAL:O	2.06	0.56
52:ZA:101:VAL:HG22	52:ZA:115:ILE:HG22	1.88	0.56
52:ZA:67:GLN:HA	52:ZA:70:ASP:HB3	1.87	0.56
1:A:1246:C:H2'	1:A:1247:U:O4'	2.05	0.56
1:A:431:C:H2'	1:A:432:G:H8	1.71	0.56
1:A:611:U:H2'	1:A:612:U:H5'	1.87	0.56
27:AA:87:ARG:HH22	27:AA:137:VAL:HG21	1.69	0.56
52:ZA:122:ALA:H	53:AB:116:ARG:NH1	2.04	0.56
2:B:1639:C:H5'	38:LA:52:GLN:OE1	2.05	0.56
2:B:1639:C:N4	38:LA:73:SER:HB2	2.21	0.56
2:B:1810:A:H2'	2:B:1811:G:C8	2.40	0.56
2:B:1936:A:H2'	2:B:1937:U:O4'	2.06	0.56
2:B:2468:A:H1'	2:B:2477:G:N2	2.20	0.56
2:B:282:G:H22	19:S:179:LYS:HA	1.71	0.56
2:B:3174:A:C2'	2:B:3175:U:H5'	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3309:G:H3'	2:B:3310:A:C8	2.38	0.56
2:B:41:G:H22	2:B:2803:A:H62	1.54	0.56
2:B:595:G:H1	2:B:609:G:C5'	2.19	0.56
3:C:9:A:H2'	3:C:10:A:C8	2.40	0.56
29:CA:135:ILE:HA	29:CA:138:ARG:CB	2.35	0.56
82:DC:178:PHE:CE1	82:DC:211:PHE:HD1	2.22	0.56
58:FB:85:PRO:HB3	61:IB:12:ALA:N	2.20	0.56
7:G:41:VAL:HA	7:G:184:ASN:O	2.06	0.56
9:I:33:ARG:NH1	9:I:50:ARG:NH1	2.54	0.56
11:K:107:ARG:HB2	11:K:204:PRO:HB3	1.87	0.56
12:L:182:GLY:HA3	12:L:185:ARG:HB2	1.88	0.56
12:L:82:LEU:HD13	12:L:222:PHE:HE2	1.71	0.56
67:OB:23:LYS:HE3	67:OB:23:LYS:HA	1.87	0.56
68:PB:70:VAL:O	68:PB:74:GLN:HG2	2.06	0.56
2:B:1834:U:OP2	43:QA:10:LYS:HE3	2.06	0.56
19:S:169:LYS:HA	19:S:172:ARG:NH1	2.20	0.56
71:SB:67:ASP:HA	71:SB:70:ASN:ND2	2.21	0.56
47:UA:31:ILE:CG2	47:UA:32:GLN:N	2.69	0.56
22:V:100:THR:HG22	22:V:120:GLU:HG3	1.88	0.56
23:W:102:LEU:HD13	23:W:127:SER:HB3	1.88	0.56
2:B:1473:G:H5"	23:W:23:TRP:CD1	2.40	0.56
49:WA:32:LEU:HG	49:WA:73:LEU:HD11	1.86	0.56
52:ZA:222:TYR:CE1	71:SB:14:PRO:HG3	2.41	0.56
1:A:1535:U:H3	55:CB:187:ILE:HA	1.70	0.56
1:A:15:U:H2'	1:A:16:G:O4'	2.05	0.56
27:AA:10:LYS:H	27:AA:10:LYS:HE2	1.71	0.56
2:B:1499:C:H2'	2:B:1500:G:C8	2.40	0.56
2:B:1633:C:H2'	2:B:1634:G:C8	2.41	0.56
2:B:2082:U:H2'	2:B:2085:U:H3	1.70	0.56
2:B:2095:G:H2'	2:B:2096:A:H8	1.71	0.56
2:B:2350:C:O2'	2:B:2351:U:H5'	2.06	0.56
2:B:562:C:C5'	24:X:71:LYS:HE3	2.36	0.56
4:D:7:G:H5'	9:I:33:ARG:NE	2.20	0.56
30:DA:35:LEU:N	30:DA:47:ALA:HA	2.21	0.56
57:EB:73:VAL:CG1	57:EB:76:LYS:HB2	2.35	0.56
83:EC:6930:G:H2'	83:EC:6931:U:C5'	2.35	0.56
6:F:117:GLU:HA	6:F:122:ASP:OD1	2.04	0.56
58:FB:184:LEU:HD11	58:FB:188:GLU:CB	2.34	0.56
7:G:94:GLU:HG2	7:G:99:LEU:CD2	2.34	0.56
10:J:72:ASN:HD22	10:J:159:LEU:C	2.08	0.56
11:K:169:ILE:O	11:K:173:LEU:HB2	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:42:PRO:O	38:LA:51:LEU:HB3	2.06	0.56
64:LB:114:ARG:N	76:XB:59:TYR:HE2	2.03	0.56
13:M:16:VAL:HG13	13:M:28:VAL:O	2.06	0.56
14:N:58:GLU:N	14:N:129:VAL:HB	2.20	0.56
18:R:88:ALA:O	18:R:90:VAL:N	2.39	0.56
19:S:101:THR:HA	19:S:104:GLU:CG	2.35	0.56
72:TB:26:LEU:CD2	72:TB:60:LYS:HB3	2.33	0.56
74:VB:79:VAL:O	74:VB:82:ALA:HB3	2.05	0.56
49:WA:200:ASN:H	49:WA:215:GLY:HA2	1.69	0.56
75:WB:71:ILE:HG22	75:WB:75:LEU:HD13	1.88	0.56
68:PB:4:VAL:HG21	75:WB:82:HIS:HB2	1.88	0.56
25:Y:143:THR:HG23	25:Y:144:GLU:N	2.17	0.56
1:A:1068:C:H2'	1:A:1069:A:C8	2.41	0.56
1:A:1076:A:O2'	1:A:1077:C:H5'	2.06	0.56
1:A:1627:U:O3'	76:XB:88:SER:HA	2.06	0.56
1:A:874:C:H2'	1:A:875:G:C8	2.40	0.56
2:B:1054:A:H5"	2:B:2637:A:N6	2.08	0.56
2:B:1478:C:H2'	2:B:1479:U:O4'	2.05	0.56
2:B:1959:G:H2'	2:B:1960:A:H5'	1.87	0.56
2:B:2145:A:H2'	2:B:2146:C:O4'	2.05	0.56
2:B:21:G:H3'	2:B:22:G:H8	1.71	0.56
2:B:2372:A:H3'	2:B:2373:A:H5"	1.86	0.56
2:B:2511:A:O2'	2:B:2512:C:H5'	2.06	0.56
2:B:2748:A:H4'	9:I:145:PHE:CD1	2.41	0.56
2:B:3304:U:H6	2:B:3304:U:H5"	1.70	0.56
2:B:658:G:H3'	2:B:659:G:H8	1.71	0.56
2:B:822:G:H4'	6:F:194:ASN:HB2	1.86	0.56
54:BB:182:TYR:CE2	54:BB:190:GLY:HA2	2.37	0.56
30:DA:43:TYR:CA	30:DA:125:LYS:HG2	2.32	0.56
31:EA:123:GLN:O	31:EA:124:ALA:HB3	2.06	0.56
57:EB:121:VAL:O	57:EB:125:ILE:HG13	2.06	0.56
58:FB:81:VAL:HA	58:FB:102:VAL:HA	1.87	0.56
7:G:92:TYR:O	7:G:155:ALA:HA	2.05	0.56
7:G:79:VAL:HG12	7:G:322:ILE:O	2.05	0.56
10:J:135:VAL:HG12	10:J:139:LYS:CE	2.36	0.56
10:J:30:LEU:HD13	10:J:34:LEU:HB3	1.86	0.56
11:K:48:ASN:HA	11:K:51:TYR:HB2	1.86	0.56
11:K:87:VAL:O	11:K:134:VAL:HA	2.05	0.56
37:KA:35:VAL:HG12	37:KA:79:GLY:HA3	1.88	0.56
37:KA:49:ILE:HG23	37:KA:99:ARG:O	2.05	0.56
39:MA:76:GLN:HG2	39:MA:81:ARG:HG3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:85:LEU:HD23	17:Q:85:LEU:H	1.69	0.56
17:Q:9:ILE:HG13	32:FA:49:HIS:CE1	2.40	0.56
18:R:117:ARG:NH1	18:R:117:ARG:HB2	2.21	0.56
71:SB:82:VAL:HG12	71:SB:83:TRP:N	2.21	0.56
20:T:53:LYS:HA	20:T:56:ASP:OD2	2.05	0.56
72:TB:70:ASN:O	72:TB:71:LYS:HB2	2.05	0.56
21:U:168:LEU:N	21:U:168:LEU:HD12	2.18	0.56
22:V:85:GLY:CA	22:V:104:LEU:HD12	2.32	0.56
22:V:139:ILE:N	22:V:139:ILE:HD12	2.20	0.56
24:X:91:TYR:CE1	24:X:136:LYS:HD2	2.41	0.56
51:YA:161:ILE:HA	51:YA:164:ILE:HD12	1.86	0.56
77:YB:56:CYS:SG	77:YB:57:GLU:N	2.77	0.56
52:ZA:179:VAL:HG21	52:ZA:197:TYR:CE1	2.41	0.56
1:A:1066:C:H2'	1:A:1067:C:C6	2.41	0.56
1:A:1341:A:H2'	1:A:1342:C:H6	1.70	0.56
1:A:575:C:H41	73:UB:65:ASN:ND2	2.04	0.56
1:A:590:C:H2'	1:A:591:A:H8	1.70	0.56
2:B:2170:U:O2'	2:B:2171:G:H5'	2.06	0.56
2:B:219:A:C8	2:B:1390:A:C8	2.93	0.56
2:B:2610:G:H2'	2:B:2611:U:O4'	2.06	0.56
2:B:2730:G:H4'	22:V:184:PHE:CD2	2.41	0.56
2:B:3296:A:O2'	2:B:3297:U:H5'	2.07	0.56
2:B:3376:A:H5'	2:B:3377:G:H5"	1.87	0.56
54:BB:129:VAL:HG13	54:BB:129:VAL:O	2.06	0.56
54:BB:122:LYS:HG2	54:BB:164:LEU:HD11	1.87	0.56
2:B:406:G:H4'	3:C:17:A:H61	1.71	0.56
82:DC:218:TRP:HB2	82:DC:328:LEU:HD13	1.88	0.56
82:DC:281:ILE:HA	82:DC:284:LEU:CD1	2.36	0.56
82:DC:39:LEU:HD22	82:DC:331:ALA:CA	2.36	0.56
82:DC:651:LYS:HG2	82:DC:652:ALA:N	2.21	0.56
31:EA:18:TYR:HB3	31:EA:71:PHE:CE2	2.41	0.56
32:FA:102:ILE:HG23	32:FA:125:VAL:HA	1.86	0.56
7:G:215:ILE:HG12	7:G:280:HIS:O	2.06	0.56
34:HA:20:SER:O	34:HA:96:GLY:HA3	2.06	0.56
1:A:1219:A:O2'	60:HB:48:SER:HA	2.06	0.56
9:I:146:LEU:HD12	9:I:147:ASP:H	1.71	0.56
61:IB:11:ARG:HH11	61:IB:11:ARG:HG3	1.69	0.56
10:J:155:LEU:O	10:J:159:LEU:HG	2.06	0.56
65:MB:43:ARG:HG2	65:MB:43:ARG:HH11	1.71	0.56
66:NB:94:GLN:NE2	66:NB:99:GLU:HB2	2.14	0.56
15:O:118:PRO:HD3	68:PB:13:HIS:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:25:ASN:HB3	75:WB:40:VAL:HG11	1.88	0.56
17:Q:53:LEU:HB3	17:Q:94:GLY:O	2.06	0.56
18:R:12:TRP:CE2	24:X:153:PRO:HG3	2.41	0.56
18:R:12:TRP:HE1	24:X:153:PRO:HG3	1.71	0.56
72:TB:103:ILE:HD13	72:TB:104:LEU:N	2.21	0.56
73:UB:50:LYS:HA	73:UB:102:VAL:O	2.05	0.56
50:XA:31:VAL:HG23	50:XA:150:ASP:CA	2.28	0.56
50:XA:41:ARG:HD2	50:XA:42:PRO:O	2.06	0.56
26:Z:37:LEU:HD21	26:Z:65:VAL:HG21	1.87	0.56
1:A:1651:A:H2'	1:A:1652:C:H6	1.71	0.55
2:B:1492:G:H1'	2:B:1843:C:H5'	1.87	0.55
2:B:2430:A:H2'	2:B:2431:C:H6	1.68	0.55
2:B:1048:A:O4'	2:B:2633:U:H4'	2.06	0.55
2:B:2890:A:O2'	2:B:2891:U:H5'	2.06	0.55
2:B:289:A:H4'	19:S:96:ARG:O	2.06	0.55
2:B:28:C:O2'	2:B:29:C:H5'	2.05	0.55
2:B:3041:U:H2'	2:B:3042:U:C6	2.41	0.55
2:B:3231:U:H2'	2:B:3232:G:C8	2.41	0.55
2:B:324:A:H2'	2:B:325:A:C8	2.41	0.55
2:B:3348:G:H2'	2:B:3349:C:C6	2.40	0.55
2:B:739:G:H2'	2:B:740:G:H8	1.71	0.55
55:CB:225:ARG:HD2	64:LB:58:TYR:CE1	2.41	0.55
82:DC:386:VAL:HG13	82:DC:395:TYR:CD2	2.42	0.55
82:DC:382:VAL:HA	82:DC:397:PHE:O	2.06	0.55
6:F:77:ILE:HD13	6:F:115:ASN:CG	2.26	0.55
2:B:209:A:H2'	8:H:162:THR:CG2	2.37	0.55
9:I:182:GLY:HA2	9:I:194:LEU:HD22	1.88	0.55
61:IB:67:ARG:H	61:IB:67:ARG:HD3	1.71	0.55
40:NA:4:LYS:HA	40:NA:12:ASN:HB3	1.87	0.55
16:P:73:VAL:O	16:P:75:PRO:HD3	2.05	0.55
2:B:1751:G:H5"	42:PA:26:LYS:NZ	2.21	0.55
69:QB:112:GLY:O	69:QB:127:ASN:HB3	2.06	0.55
69:QB:65:ILE:HG13	69:QB:123:ARG:HA	1.87	0.55
71:SB:37:ALA:HB1	71:SB:45:ALA:HB1	1.88	0.55
22:V:147:ARG:HH12	22:V:150:VAL:HG13	1.71	0.55
8:H:33:ASP:OD2	22:V:24:VAL:HG13	2.06	0.55
75:WB:47:TYR:HA	75:WB:50:ILE:HB	1.87	0.55
51:YA:133:TYR:CE1	51:YA:217:LEU:HD11	2.41	0.55
52:ZA:165:VAL:HG13	52:ZA:204:THR:HG22	1.89	0.55
1:A:1003:A:H4'	1:A:1004:U:C5'	2.35	0.55
1:A:1010:C:H2'	1:A:1011:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:29:U:H2'	1:A:30:G:H8	1.70	0.55
1:A:327:U:H2'	1:A:328:A:C8	2.41	0.55
2:B:1078:U:H2'	2:B:1080:A:OP2	2.07	0.55
2:B:1187:C:C2'	2:B:1188:U:H5'	2.36	0.55
2:B:1237:G:H22	2:B:1251:A:H2	1.53	0.55
2:B:1339:C:H4'	36:JA:58:GLY:O	2.05	0.55
2:B:1410:U:H4'	36:JA:75:LEU:HD11	1.88	0.55
2:B:2200:U:H2'	2:B:2201:G:C1'	2.36	0.55
2:B:267:G:H2'	2:B:318:A:C5	2.41	0.55
2:B:659:G:H2'	2:B:660:A:N7	2.21	0.55
3:C:157:U:O2	3:C:157:U:H2'	2.05	0.55
56:DB:33:GLY:H	56:DB:52:ILE:HG13	1.71	0.55
82:DC:254:THR:HB	82:DC:256:LYS:HD3	1.89	0.55
82:DC:32:LYS:CB	82:DC:128:VAL:HG21	2.35	0.55
6:F:88:ILE:N	6:F:88:ILE:HD12	2.22	0.55
58:FB:42:ARG:HB3	58:FB:59:ARG:HB2	1.89	0.55
58:FB:62:THR:HA	58:FB:77:ARG:HA	1.89	0.55
59:GB:37:LYS:HB3	80:BC:33:ARG:CA	2.34	0.55
8:H:210:ALA:HA	8:H:230:VAL:CG2	2.36	0.55
41:OA:38:GLY:N	41:OA:45:ARG:HB2	2.22	0.55
16:P:82:ILE:HG12	16:P:137:GLN:NE2	2.21	0.55
43:QA:9:ILE:HG23	43:QA:51:ILE:HG23	1.87	0.55
69:QB:115:GLU:HG2	69:QB:123:ARG:O	2.06	0.55
20:T:76:PRO:HA	20:T:79:ILE:HG12	1.88	0.55
49:WA:42:LEU:O	49:WA:43:ILE:HD13	2.07	0.55
50:XA:93:THR:HG21	50:XA:181:VAL:HG21	1.87	0.55
25:Y:20:ARG:HG3	25:Y:20:ARG:HH11	1.71	0.55
1:A:1678:A:C2	1:A:1724:U:H1'	2.42	0.55
1:A:980:G:C4'	1:A:1776:A:H4'	2.37	0.55
1:A:258:C:H2'	1:A:259:U:C6	2.42	0.55
1:A:40:A:H1'	1:A:469:C:N3	2.22	0.55
1:A:705:U:H2'	1:A:706:A:C8	2.42	0.55
53:AB:21:LEU:HA	53:AB:24:PHE:HB3	1.87	0.55
70:RB:67:THR:HG21	79:AC:40:ARG:HB2	1.88	0.55
2:B:1178:G:H21	2:B:1329:U:H5'	1.71	0.55
2:B:1860:G:H2'	2:B:1861:G:O4'	2.07	0.55
2:B:1874:A:N7	23:W:20:ARG:NH1	2.54	0.55
2:B:2682:C:C2'	2:B:2683:U:H5'	2.37	0.55
2:B:692:A:H2'	2:B:693:A:C5'	2.35	0.55
29:CA:38:LEU:HD21	29:CA:40:LEU:HD13	1.88	0.55
55:CB:79:ASN:HB2	55:CB:83:ARG:NH2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:3:U:O2'	4:D:25:G:H1'	2.07	0.55
30:DA:52:ARG:O	30:DA:70:ILE:HB	2.05	0.55
5:E:68:PHE:HZ	5:E:90:LEU:HA	1.71	0.55
6:F:181:LYS:HE2	6:F:184:ARG:NE	2.22	0.55
6:F:187:HIS:HA	6:F:190:ARG:HH21	1.71	0.55
7:G:56:ILE:CG2	7:G:74:GLU:HB2	2.37	0.55
2:B:3004:C:O3'	7:G:99:LEU:HB2	2.07	0.55
59:GB:26:ALA:O	59:GB:30:LEU:HG	2.06	0.55
8:H:181:VAL:O	8:H:182:LEU:HB3	2.06	0.55
9:I:106:ALA:O	9:I:110:LEU:HD13	2.07	0.55
10:J:101:PHE:HZ	10:J:137:ASP:HB3	1.71	0.55
37:KA:9:VAL:HG23	37:KA:100:ILE:HB	1.88	0.55
12:L:164:VAL:HG23	12:L:165:PHE:H	1.71	0.55
13:M:166:ARG:HH11	13:M:166:ARG:HB3	1.70	0.55
13:M:27:VAL:HB	13:M:34:LEU:O	2.07	0.55
68:PB:45:LEU:HD21	68:PB:81:ILE:HG23	1.88	0.55
2:B:75:G:H4'	17:Q:61:PRO:HD3	1.88	0.55
18:R:131:VAL:HG12	18:R:132:LYS:HD2	1.88	0.55
44:RA:103:LEU:HD23	44:RA:111:ARG:NH2	2.21	0.55
71:SB:9:VAL:O	71:SB:10:GLU:HB3	2.06	0.55
2:B:1926:C:H5"	47:UA:8:VAL:HG11	1.89	0.55
74:VB:76:TYR:OH	74:VB:86:GLU:HG2	2.06	0.55
75:WB:54:VAL:N	75:WB:55:PRO:HD2	2.21	0.55
24:X:29:ILE:HG13	24:X:41:TYR:HB2	1.88	0.55
1:A:896:U:H5"	51:YA:23:PRO:HG2	1.87	0.55
51:YA:91:VAL:HG23	51:YA:96:LEU:HD23	1.88	0.55
77:YB:19:HIS:ND1	77:YB:20:LYS:HG2	2.20	0.55
1:A:1109:G:O2'	1:A:1110:G:H5'	2.06	0.55
1:A:1531:G:H5'	75:WB:81:ARG:HH22	1.71	0.55
1:A:171:A:H2'	1:A:172:C:H5'	1.88	0.55
1:A:1740:A:H2'	1:A:1741:U:H6	1.72	0.55
1:A:828:U:C2'	1:A:829:A:H5"	2.34	0.55
1:A:893:U:C2'	1:A:894:U:H5'	2.35	0.55
2:B:1614:C:H2'	2:B:1615:C:C6	2.41	0.55
2:B:1652:G:O2'	2:B:1653:G:H5'	2.05	0.55
2:B:1823:A:H2'	2:B:1824:U:O4'	2.07	0.55
2:B:2501:U:HO2'	2:B:2502:A:H8	1.49	0.55
2:B:2631:U:H2'	2:B:2632:G:C8	2.41	0.55
2:B:2806:U:H2'	2:B:2807:U:H6	1.71	0.55
2:B:3059:G:N2	2:B:3085:G:H1'	2.22	0.55
2:B:3243:A:HO2'	2:B:3244:A:H8	1.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:526:C:H2'	2:B:527:A:C8	2.42	0.55
2:B:564:G:H2'	2:B:565:U:H6	1.70	0.55
2:B:661:G:N7	32:FA:19:LYS:HG3	2.22	0.55
2:B:671:U:H2'	2:B:672:A:C8	2.42	0.55
2:B:787:G:H2'	2:B:788:C:H6	1.65	0.55
2:B:894:G:H4'	2:B:895:A:C1'	2.37	0.55
82:DC:24:VAL:HG13	82:DC:102:LEU:HD11	1.87	0.55
82:DC:131:THR:HG21	82:DC:178:PHE:CE2	2.41	0.55
82:DC:369:ILE:CD1	82:DC:379:MET:HG3	2.24	0.55
1:A:400:A:H61	58:FB:29:LEU:HD12	1.72	0.55
60:HB:14:TYR:CD2	60:HB:35:ILE:HD11	2.42	0.55
60:HB:43:ILE:O	60:HB:47:GLN:HB2	2.06	0.55
2:B:1456:A:C6	35:IA:64:VAL:HG11	2.41	0.55
37:KA:3:GLU:HG3	37:KA:4:SER:N	2.21	0.55
2:B:112:U:H3'	39:MA:103:LYS:CD	2.36	0.55
65:MB:85:ILE:HG21	65:MB:107:ILE:HG21	1.87	0.55
14:N:141:LYS:HD3	14:N:142:ASP:H	1.69	0.55
15:O:9:MET:O	15:O:9:MET:HG2	2.07	0.55
2:B:884:A:OP2	41:OA:4:GLY:HA3	2.06	0.55
19:S:139:HIS:NE2	19:S:141:ALA:HB3	2.20	0.55
20:T:78:ARG:HH21	20:T:81:TYR:HB2	1.71	0.55
21:U:112:LEU:CD1	21:U:150:VAL:HG22	2.37	0.55
22:V:67:ILE:HD11	22:V:87:VAL:HG11	1.89	0.55
49:WA:309:VAL:CG1	49:WA:311:ARG:HG3	2.33	0.55
24:X:82:ASP:HB2	24:X:120:SER:HB3	1.87	0.55
50:XA:122:ILE:N	50:XA:122:ILE:HD12	2.21	0.55
2:B:2723:U:H4'	25:Y:89:LEU:HB3	1.89	0.55
51:YA:100:PHE:HB3	51:YA:181:LEU:HD21	1.88	0.55
77:YB:17:ARG:HG3	77:YB:18:LYS:N	2.15	0.55
26:Z:70:LYS:O	26:Z:71:PHE:HB2	2.05	0.55
1:A:1608:U:OP2	66:NB:14:LYS:HE2	2.06	0.55
1:A:354:C:H2'	1:A:355:G:C8	2.35	0.55
1:A:448:C:H2'	1:A:449:C:C6	2.42	0.55
1:A:478:A:H2	1:A:510:G:H22	1.54	0.55
27:AA:10:LYS:H	27:AA:10:LYS:CE	2.20	0.55
27:AA:54:LEU:HD11	27:AA:119:GLY:HA3	1.88	0.55
53:AB:69:LEU:HB2	53:AB:86:LEU:HD21	1.89	0.55
2:B:1826:C:O2'	2:B:1827:C:H5'	2.07	0.55
28:BA:39:LEU:HD12	28:BA:44:LYS:CG	2.36	0.55
3:C:37:A:H5"	3:C:39:G:O4'	2.07	0.55
29:CA:84:PHE:O	29:CA:121:LYS:HA	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:14:VAL:CG2	38:LA:86:LYS:HG3	2.36	0.55
2:B:3305:A:H5"	7:G:272:TYR:HE2	1.70	0.55
7:G:334:ARG:HG2	7:G:335:ILE:N	2.21	0.55
7:G:56:ILE:HG12	7:G:57:VAL:N	2.20	0.55
59:GB:110:GLN:NE2	59:GB:122:VAL:O	2.40	0.55
59:GB:27:GLU:HB2	59:GB:39:LYS:HZ2	1.71	0.55
59:GB:37:LYS:HE2	59:GB:38:ASN:OD1	2.07	0.55
8:H:325:LEU:CD2	8:H:331:ALA:HB3	2.30	0.55
9:I:110:LEU:HD11	9:I:171:LEU:HG	1.89	0.55
35:IA:72:ARG:HG2	35:IA:96:VAL:CG2	2.37	0.55
11:K:207:LEU:CD2	11:K:244:ASN:HD22	2.20	0.55
37:KA:42:GLN:NE2	37:KA:45:LEU:HD12	2.21	0.55
12:L:179:ILE:N	12:L:179:ILE:HD12	2.21	0.55
16:P:57:LYS:H	16:P:57:LYS:HD3	1.71	0.55
3:C:46:G:OP2	43:QA:15:LYS:HE3	2.06	0.55
69:QB:111:ILE:HG23	69:QB:112:GLY:H	1.71	0.55
18:R:102:LYS:HA	18:R:105:GLN:HB2	1.88	0.55
70:RB:18:GLN:O	70:RB:96:PRO:HA	2.06	0.55
19:S:159:ARG:HA	19:S:162:ARG:NH2	2.19	0.55
22:V:157:PRO:HA	22:V:186:VAL:CG1	2.37	0.55
23:W:97:ARG:O	23:W:101:VAL:HG23	2.05	0.55
49:WA:169:ILE:HD12	49:WA:169:ILE:O	2.06	0.55
75:WB:65:LEU:HD12	75:WB:76:ALA:CA	2.36	0.55
76:XB:20:PRO:HA	76:XB:31:PRO:HA	1.86	0.55
25:Y:152:ALA:HB1	25:Y:153:PRO:HD2	1.89	0.55
51:YA:70:LEU:HD13	51:YA:71:ALA:N	2.20	0.55
78:ZB:10:ALA:O	78:ZB:53:ILE:HG23	2.06	0.55
78:ZB:36:THR:C	78:ZB:38:ARG:H	2.10	0.55
1:A:1553:G:H1'	1:A:1597:A:C2	2.41	0.55
1:A:884:A:H5"	51:YA:136:ARG:CZ	2.36	0.55
2:B:1180:A:O2'	2:B:1182:A:H5"	2.07	0.55
2:B:1282:G:H5'	48:VA:83:ASN:HA	1.89	0.55
2:B:1492:G:O4'	2:B:1843:C:H4'	2.06	0.55
2:B:1591:G:C2'	2:B:1592:G:H5'	2.36	0.55
2:B:1643:A:H2'	2:B:1644:C:C2	2.42	0.55
2:B:1703:U:O2'	2:B:1704:A:H5'	2.06	0.55
2:B:1709:C:H2'	2:B:1710:C:H6	1.72	0.55
2:B:1782:U:C2'	2:B:1783:U:H5'	2.37	0.55
2:B:2163:C:H4'	6:F:8:GLN:HA	1.89	0.55
2:B:2347:U:H2'	2:B:2348:A:O4'	2.07	0.55
2:B:2536:A:C3'	2:B:2537:U:H5"	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2417:U:H2'	2:B:2606:G:N2	2.22	0.55
2:B:313:A:H2'	2:B:314:U:O4'	2.06	0.55
2:B:3281:U:H2'	2:B:3282:U:O4'	2.06	0.55
2:B:3352:U:OP1	2:B:3352:U:H2'	2.06	0.55
2:B:412:G:O2'	2:B:413:U:H5'	2.07	0.55
2:B:837:A:N6	2:B:856:G:H1'	2.21	0.55
3:C:98:U:C2'	3:C:99:C:H5'	2.36	0.55
55:CB:76:ARG:HD2	66:NB:122:ARG:HD3	1.88	0.55
56:DB:137:ARG:HD3	56:DB:177:ARG:CD	2.31	0.55
82:DC:338:ILE:CG1	82:DC:342:LEU:HG	2.33	0.55
82:DC:377:ASP:O	82:DC:379:MET:HG2	2.07	0.55
6:F:240:ALA:C	6:F:242:ARG:H	2.08	0.55
32:FA:12:ARG:HG3	32:FA:12:ARG:NH1	2.21	0.55
32:FA:43:ILE:H	32:FA:43:ILE:CD1	2.14	0.55
8:H:22:LEU:HD22	8:H:26:PHE:CD2	2.42	0.55
35:IA:23:VAL:HG12	35:IA:24:SER:N	2.22	0.55
36:JA:83:GLU:C	36:JA:85:LEU:H	2.10	0.55
11:K:124:LEU:HD11	11:K:128:LYS:HZ3	1.71	0.55
39:MA:21:LEU:CB	39:MA:54:VAL:HG11	2.35	0.55
65:MB:28:MET:HE3	65:MB:33:PHE:HA	1.89	0.55
40:NA:90:MET:O	40:NA:94:ILE:HG13	2.06	0.55
15:O:17:LEU:HD12	15:O:18:VAL:N	2.21	0.55
69:QB:115:GLU:O	69:QB:122:ARG:HA	2.06	0.55
69:QB:124:ILE:HG13	69:QB:129:GLN:HG3	1.89	0.55
18:R:39:ILE:HG13	18:R:44:VAL:HA	1.89	0.55
20:T:18:ARG:HB3	20:T:123:ALA:HA	1.89	0.55
72:TB:36:LYS:HD2	72:TB:110:ILE:HD13	1.88	0.55
50:XA:63:ILE:HG22	50:XA:120:LEU:HD22	1.89	0.55
50:XA:25:GLY:HA3	50:XA:46:HIS:O	2.05	0.55
50:XA:69:ASN:HD22	50:XA:71:GLU:HG2	1.70	0.55
1:A:1519:U:H2'	1:A:1520:U:C6	2.42	0.55
1:A:56:U:H4'	1:A:57:G:H5'	1.88	0.55
1:A:610:G:H2'	1:A:610:G:N3	2.21	0.55
79:AC:16:LYS:HE2	79:AC:28:THR:HA	1.89	0.55
2:B:1917:C:H2'	2:B:1918:C:C6	2.41	0.55
2:B:2102:U:H2'	2:B:2103:U:H6	1.70	0.55
2:B:2225:U:H2'	2:B:2226:U:C6	2.41	0.55
2:B:2470:C:C5'	5:E:26:ARG:HA	2.36	0.55
2:B:2651:G:H5"	2:B:2652:U:C1'	2.36	0.55
2:B:2828:G:H2'	2:B:2829:U:O4'	2.07	0.55
2:B:640:U:H2'	2:B:641:C:C5	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:693:A:H2'	2:B:694:C:C6	2.41	0.55
28:BA:33:ASN:CG	28:BA:35:LYS:HB3	2.27	0.55
28:BA:56:ARG:HH11	28:BA:56:ARG:HB3	1.72	0.55
55:CB:201:ALA:C	55:CB:203:LYS:H	2.08	0.55
56:DB:72:ARG:HH11	56:DB:72:ARG:HG3	1.71	0.55
82:DC:165:LEU:HD13	82:DC:285:PHE:HE1	1.70	0.55
82:DC:241:MET:C	82:DC:243:ARG:H	2.08	0.55
82:DC:610:ASP:OD2	82:DC:615:ARG:HB2	2.07	0.55
82:DC:758:GLU:O	82:DC:767:THR:HG22	2.07	0.55
5:E:28:PHE:HE1	5:E:209:SER:HB3	1.72	0.55
57:EB:101:LYS:HG2	57:EB:103:SER:H	1.72	0.55
57:EB:45:SER:HB2	57:EB:61:PHE:HD2	1.71	0.55
83:EC:6917:C:H2'	83:EC:6918:A:O4'	2.06	0.55
32:FA:87:ARG:O	32:FA:91:LEU:HD23	2.07	0.55
2:B:2882:U:C4'	7:G:264:VAL:HG12	2.37	0.55
2:B:1074:U:O4'	33:GA:46:ALA:HA	2.06	0.55
8:H:300:ARG:HB2	8:H:301:PRO:CD	2.32	0.55
9:I:95:TRP:HE1	9:I:157:ALA:C	2.10	0.55
10:J:108:LYS:O	10:J:108:LYS:HD3	2.07	0.55
10:J:55:LEU:HD12	10:J:65:ILE:CA	2.35	0.55
36:JA:2:ALA:HA	36:JA:90:LYS:HG3	1.88	0.55
37:KA:52:VAL:HG21	37:KA:99:ARG:NE	2.15	0.55
12:L:155:ASN:OD1	12:L:181:LYS:HA	2.06	0.55
66:NB:133:GLY:H	66:NB:136:SER:HB3	1.70	0.55
16:P:133:LEU:HA	16:P:137:GLN:CG	2.35	0.55
42:PA:8:ILE:O	42:PA:11:PHE:HB3	2.07	0.55
17:Q:48:PRO:O	17:Q:137:GLN:HB3	2.06	0.55
17:Q:39:ARG:HB3	17:Q:39:ARG:NH1	2.22	0.55
69:QB:53:TRP:CD2	69:QB:54:PHE:N	2.75	0.55
20:T:38:ALA:HB3	20:T:106:GLU:OE1	2.06	0.55
21:U:24:VAL:HG12	21:U:25:SER:N	2.22	0.55
73:UB:66:SER:O	73:UB:67:ALA:HB2	2.07	0.55
22:V:71:LEU:HD13	22:V:97:PRO:CG	2.34	0.55
48:VA:139:LEU:HG	48:VA:141:VAL:HG23	1.87	0.55
24:X:93:GLU:OE1	24:X:137:ARG:HB2	2.07	0.55
76:XB:84:VAL:O	76:XB:85:ARG:HB2	2.07	0.55
1:A:212:U:O2'	1:A:213:A:H5'	2.07	0.55
1:A:478:A:O4'	59:GB:127:VAL:HG21	2.07	0.55
1:A:925:G:H2'	1:A:926:A:O4'	2.07	0.55
53:AB:146:ARG:HG2	53:AB:147:ALA:H	1.71	0.55
2:B:1027:A:H2'	2:B:1029:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1464:G:H1'	2:B:1511:U:N3	2.20	0.55
2:B:808:A:O2'	2:B:2413:A:H5'	2.07	0.55
2:B:2443:A:H2'	2:B:2444:C:O4'	2.06	0.55
2:B:2765:C:H2'	2:B:2766:U:C6	2.42	0.55
2:B:2769:A:H2'	2:B:2770:G:O4'	2.06	0.55
2:B:2931:C:C2'	2:B:2932:U:H5'	2.37	0.55
2:B:3301:U:H1'	2:B:3314:A:C2	2.42	0.55
2:B:36:C:C2'	2:B:37:U:H5'	2.36	0.55
2:B:926:A:H2'	2:B:927:C:O4'	2.07	0.55
54:BB:35:PRO:HD2	54:BB:83:PRO:HG2	1.88	0.55
54:BB:58:GLY:O	54:BB:61:VAL:HG22	2.06	0.55
2:B:1832:C:H4'	3:C:113:U:H5'	1.87	0.55
82:DC:599:LEU:HD11	82:DC:682:ARG:HH22	1.72	0.55
83:EC:6827:G:H2'	83:EC:6828:G:C8	2.41	0.55
83:EC:6919:G:N2	83:EC:6920:C:H1'	2.22	0.55
17:Q:158:ALA:HA	32:FA:97:GLU:O	2.07	0.55
7:G:314:TYR:HD1	7:G:315:GLY:N	2.05	0.55
7:G:46:PHE:CZ	7:G:84:VAL:HG23	2.41	0.55
60:HB:54:TYR:HD1	60:HB:72:GLY:HA2	1.71	0.55
9:I:107:ARG:HH11	9:I:248:ARG:HH12	1.55	0.55
11:K:170:GLU:HG2	11:K:179:LEU:CB	2.37	0.55
11:K:43:ILE:HA	11:K:46:GLU:CD	2.27	0.55
63:KB:125:LEU:HD12	63:KB:129:TYR:CE2	2.42	0.55
13:M:134:ILE:CG2	13:M:135:GLU:N	2.69	0.55
13:M:10:ILE:HD13	13:M:53:ILE:O	2.07	0.55
65:MB:52:LYS:H	65:MB:53:PRO:HD2	1.72	0.55
68:PB:82:PRO:O	68:PB:83:ALA:CB	2.55	0.55
71:SB:23:ILE:HG12	71:SB:24:ILE:N	2.22	0.55
75:WB:41:ILE:HG23	75:WB:42:LEU:N	2.21	0.55
24:X:42:TRP:CD1	24:X:53:LYS:HE3	2.42	0.55
51:YA:164:ILE:O	51:YA:168:ILE:HG13	2.07	0.55
1:A:1004:U:C3'	1:A:1005:A:H5"	2.21	0.55
1:A:12:U:H2'	1:A:13:C:C6	2.41	0.55
1:A:1487:A:H2'	1:A:1488:G:C8	2.42	0.55
27:AA:19:VAL:HG23	27:AA:50:PRO:O	2.07	0.55
79:AC:23:VAL:HG21	79:AC:38:ILE:HG23	1.87	0.55
2:B:1903:U:C2	2:B:1905:G:H5"	2.42	0.55
2:B:1945:A:H2'	2:B:1946:A:C8	2.42	0.55
2:B:2722:U:H4'	25:Y:88:ARG:HB2	1.89	0.55
2:B:959:C:H41	2:B:2801:A:H5"	1.69	0.55
82:DC:586:ILE:HG21	82:DC:709:MET:CE	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:196:LYS:CD	5:E:200:ASN:HD21	2.18	0.55
57:EB:138:LYS:O	57:EB:139:ARG:HD3	2.07	0.55
6:F:230:VAL:H	6:F:233:GLN:HB3	1.71	0.55
32:FA:79:TRP:O	32:FA:82:ILE:HD12	2.07	0.55
59:GB:116:LEU:O	59:GB:118:LEU:HG	2.06	0.55
8:H:144:LYS:HG3	8:H:144:LYS:O	2.06	0.55
34:HA:69:TYR:N	34:HA:69:TYR:CD1	2.75	0.55
9:I:108:ARG:HA	9:I:251:PRO:HG2	1.87	0.55
2:B:2746:A:C6	9:I:148:ILE:HD12	2.42	0.55
9:I:56:THR:OG1	9:I:59:ASP:HB2	2.06	0.55
10:J:17:ALA:C	10:J:18:LEU:HD22	2.27	0.55
13:M:90:MET:HE2	13:M:179:ILE:HG22	1.87	0.55
15:O:104:PHE:CE1	15:O:106:ILE:HG23	2.42	0.55
15:O:54:VAL:HG12	15:O:57:PHE:H	1.72	0.55
70:RB:42:VAL:HG13	70:RB:52:LYS:HD3	1.89	0.55
20:T:142:SER:HA	20:T:145:VAL:HG22	1.89	0.55
22:V:125:ASP:O	22:V:129:VAL:HG23	2.07	0.55
23:W:44:LEU:O	23:W:49:THR:HB	2.06	0.55
75:WB:55:PRO:C	75:WB:57:TYR:H	2.09	0.55
24:X:108:GLN:HE21	24:X:108:GLN:HA	1.70	0.55
51:YA:171:ILE:CD1	51:YA:197:ILE:HA	2.37	0.55
53:AB:102:ALA:HB2	53:AB:186:VAL:HG21	1.88	0.55
53:AB:114:ALA:HB3	53:AB:117:ARG:HG3	1.89	0.55
53:AB:116:ARG:O	53:AB:120:TYR:HB2	2.07	0.55
53:AB:142:LEU:HD23	53:AB:148:LYS:CE	2.30	0.55
2:B:149:U:C3'	2:B:150:A:H5"	2.37	0.55
2:B:1774:C:C3'	2:B:1775:G:H5"	2.37	0.55
2:B:1787:A:H3'	2:B:1788:C:H5"	1.89	0.55
2:B:23:A:OP1	41:OA:44:THR:HB	2.06	0.55
2:B:276:U:H2'	2:B:277:G:C8	2.42	0.55
2:B:2942:C:H5"	2:B:2943:G:H5"	1.89	0.55
2:B:3392:U:H2'	2:B:3393:U:C6	2.42	0.55
2:B:339:C:H5'	2:B:339:C:H6	1.71	0.55
2:B:352:A:N6	2:B:365:A:H5"	2.20	0.55
54:BB:197:HIS:ND1	54:BB:209:HIS:HB2	2.21	0.55
29:CA:131:ASP:O	29:CA:134:ASP:HB3	2.06	0.55
29:CA:75:LYS:O	29:CA:79:GLY:HA3	2.07	0.55
82:DC:593:ILE:CG1	82:DC:685:ARG:HB2	2.37	0.55
1:A:767:U:O2'	59:GB:141:VAL:HG22	2.07	0.55
59:GB:82:ARG:O	59:GB:149:ARG:HB2	2.06	0.55
59:GB:135:ALA:HB2	59:GB:159:ALA:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:44:LYS:CG	8:H:47:ARG:HD2	2.36	0.55
9:I:94:ASN:OD1	9:I:97:ALA:N	2.40	0.55
61:IB:109:VAL:HG21	61:IB:125:VAL:HG11	1.89	0.55
10:J:84:VAL:HG22	10:J:85:ILE:N	2.22	0.55
65:MB:47:ARG:HH21	65:MB:47:ARG:HB3	1.72	0.55
65:MB:57:MET:HA	65:MB:60:LEU:HB3	1.89	0.55
66:NB:97:VAL:HG12	66:NB:98:ASP:N	2.22	0.55
15:O:53:THR:HA	15:O:60:ARG:HA	1.88	0.55
67:OB:14:LYS:O	67:OB:18:GLU:HG3	2.07	0.55
69:QB:38:LYS:NZ	69:QB:40:SER:O	2.40	0.55
20:T:16:VAL:HA	20:T:80:PHE:CZ	2.40	0.55
73:UB:104:LEU:HD23	73:UB:124:VAL:HA	1.89	0.55
22:V:96:PHE:O	22:V:117:ALA:HB1	2.07	0.55
22:V:143:PRO:HB2	22:V:146:SER:HB2	1.89	0.55
75:WB:62:VAL:O	75:WB:66:VAL:HG23	2.06	0.55
51:YA:143:THR:HB	51:YA:205:PHE:CE1	2.42	0.55
52:ZA:179:VAL:HB	52:ZA:197:TYR:HA	1.89	0.55
1:A:1042:G:C3'	1:A:1043:A:H5"	2.37	0.54
1:A:1107:G:O2'	1:A:1108:G:H5'	2.08	0.54
1:A:439:U:O2'	1:A:440:U:H4'	2.07	0.54
1:A:533:U:H5'	74:VB:33:ALA:HB3	1.87	0.54
1:A:855:A:C6	1:A:857:U:H1'	2.42	0.54
1:A:872:G:H2'	1:A:873:U:O4'	2.07	0.54
1:A:920:U:H2'	1:A:921:U:O4'	2.07	0.54
2:B:153:U:C3'	2:B:154:U:H5"	2.37	0.54
2:B:1665:C:H2'	2:B:1666:G:C8	2.42	0.54
2:B:1838:G:H4'	2:B:1839:A:N3	2.22	0.54
2:B:1514:G:H2'	2:B:1841:A:N1	2.22	0.54
2:B:2108:C:C1'	2:B:3344:A:H1'	2.37	0.54
1:A:913:G:N7	2:B:2208:A:H5'	2.22	0.54
2:B:226:C:H2'	2:B:227:G:O4'	2.07	0.54
2:B:299:G:C4	2:B:300:G:C8	2.95	0.54
2:B:529:A:H2'	2:B:530:G:H8	1.73	0.54
4:D:47:C:H2'	4:D:48:U:C6	2.42	0.54
30:DA:56:VAL:HA	30:DA:107:THR:H	1.71	0.54
82:DC:412:ARG:HH22	82:DC:414:GLN:HE21	1.55	0.54
6:F:62:VAL:CA	6:F:73:GLU:HG3	2.36	0.54
32:FA:35:ALA:O	32:FA:41:HIS:ND1	2.40	0.54
8:H:329:PRO:HB3	11:K:41:ARG:NH2	2.21	0.54
8:H:359:LEU:HA	24:X:8:GLN:NE2	2.22	0.54
34:HA:42:ILE:HA	34:HA:90:VAL:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:22:ARG:CB	9:I:28:THR:HB	2.35	0.54
2:B:1412:G:OP2	36:JA:98:HIS:HA	2.08	0.54
37:KA:52:VAL:HG11	37:KA:99:ARG:NH2	2.21	0.54
64:LB:29:HIS:CA	64:LB:41:ARG:HA	2.36	0.54
64:LB:39:ILE:O	64:LB:40:ALA:HB3	2.07	0.54
39:MA:21:LEU:CD1	39:MA:51:ILE:HG23	2.37	0.54
66:NB:27:GLY:HA2	66:NB:63:ILE:O	2.06	0.54
2:B:76:G:C5	17:Q:101:ARG:HA	2.42	0.54
43:QA:16:ALA:HB2	43:QA:49:MET:CE	2.36	0.54
72:TB:104:LEU:HB3	72:TB:125:ILE:HA	1.89	0.54
48:VA:51:VAL:HG13	48:VA:86:PHE:O	2.07	0.54
74:VB:29:HIS:N	74:VB:30:PRO:HD3	2.22	0.54
49:WA:236:ALA:O	49:WA:237:GLN:HB2	2.07	0.54
24:X:83:SER:C	24:X:85:SER:H	2.09	0.54
24:X:8:GLN:HB3	24:X:62:ASN:O	2.07	0.54
52:ZA:243:TYR:HB3	52:ZA:246:GLU:HB2	1.89	0.54
52:ZA:45:VAL:HG13	52:ZA:50:ILE:O	2.06	0.54
1:A:1020:A:H2'	1:A:1021:C:O4'	2.07	0.54
1:A:1142:A:H2'	1:A:1143:A:O4'	2.07	0.54
1:A:1253:U:H2'	1:A:1254:U:C6	2.43	0.54
1:A:1280:C:H2'	1:A:1281:G:C8	2.42	0.54
1:A:1483:A:H4'	66:NB:72:GLY:N	2.23	0.54
1:A:336:G:O2'	1:A:337:G:H5'	2.08	0.54
53:AB:195:SER:O	53:AB:196:ARG:HB3	2.07	0.54
53:AB:34:TYR:HE2	53:AB:37:VAL:HG13	1.72	0.54
2:B:1141:C:H2'	2:B:1142:G:O4'	2.06	0.54
2:B:1168:U:O2'	2:B:1169:A:H5'	2.07	0.54
2:B:1348:U:H4'	2:B:1349:G:O5'	2.07	0.54
2:B:1504:A:N1	2:B:1515:A:O2'	2.40	0.54
2:B:1639:C:H4'	2:B:1738:C:H5'	1.88	0.54
2:B:211:A:H3'	8:H:221:ASN:OD1	2.07	0.54
2:B:2369:G:C6	2:B:2370:G:C6	2.95	0.54
2:B:2889:C:O2'	2:B:2890:A:H5'	2.07	0.54
2:B:1861:G:O2'	2:B:3066:U:H5"	2.08	0.54
2:B:67:A:C5	2:B:317:A:H1'	2.42	0.54
2:B:3204:C:H2'	2:B:3205:G:C8	2.42	0.54
54:BB:188:ASN:ND2	54:BB:220:THR:HG23	2.19	0.54
1:A:399:A:H1'	54:BB:3:ARG:HD3	1.88	0.54
80:BC:20:LYS:HA	80:BC:20:LYS:CE	2.34	0.54
3:C:133:G:H4'	29:CA:55:ASN:ND2	2.22	0.54
82:DC:155:VAL:CG1	82:DC:185:VAL:HG11	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:306:VAL:CG2	82:DC:308:LYS:HE3	2.34	0.54
82:DC:382:VAL:HG13	82:DC:397:PHE:N	2.19	0.54
82:DC:618:ILE:O	82:DC:622:ASP:HB2	2.07	0.54
82:DC:733:ILE:HB	82:DC:743:ILE:HD11	1.89	0.54
82:DC:743:ILE:HG22	82:DC:744:TYR:N	2.21	0.54
83:EC:6831:U:H3'	83:EC:6832:G:H4'	1.88	0.54
83:EC:6900:A:H2'	83:EC:6901:C:O4'	2.08	0.54
60:HB:30:ALA:C	60:HB:38:LYS:HA	2.26	0.54
60:HB:37:THR:HG22	60:HB:41:TYR:CD1	2.40	0.54
9:I:155:THR:N	9:I:179:ARG:HD3	2.22	0.54
2:B:3324:C:H1'	35:IA:106:THR:HG22	1.89	0.54
36:JA:97:ALA:HB3	36:JA:100:ILE:CG1	2.37	0.54
2:B:1338:C:H5"	36:JA:60:ASN:ND2	2.22	0.54
37:KA:23:ASN:H	37:KA:23:ASN:ND2	2.04	0.54
12:L:248:LYS:O	12:L:252:ASN:HB2	2.07	0.54
43:QA:11:GLN:O	43:QA:14:ALA:HB3	2.06	0.54
71:SB:19:ALA:HA	71:SB:71:ARG:NH1	2.22	0.54
73:UB:7:ARG:HB2	73:UB:7:ARG:NH1	2.23	0.54
22:V:88:THR:HA	22:V:107:THR:OG1	2.08	0.54
23:W:117:LYS:HE2	23:W:118:HIS:CE1	2.42	0.54
24:X:1:MET:HE1	24:X:31:ALA:HB1	1.88	0.54
51:YA:171:ILE:CD1	51:YA:197:ILE:HD13	2.37	0.54
77:YB:2:VAL:HG22	77:YB:3:LEU:N	2.22	0.54
52:ZA:169:LEU:HD23	52:ZA:198:THR:HG22	1.88	0.54
1:A:1435:G:C4'	1:A:1436:A:H5'	2.36	0.54
1:A:177:U:H3'	1:A:178:U:H5"	1.89	0.54
1:A:482:U:H2'	1:A:483:A:H8	1.71	0.54
1:A:94:U:H2'	1:A:95:G:O4'	2.08	0.54
70:RB:82:TYR:CZ	79:AC:54:LYS:HG2	2.42	0.54
2:B:132:C:C2'	2:B:133:U:H5"	2.37	0.54
2:B:1441:G:O2'	2:B:1442:U:H5'	2.07	0.54
2:B:1658:G:H2'	2:B:1659:U:C6	2.41	0.54
2:B:2780:A:H2'	2:B:2781:U:C6	2.42	0.54
2:B:287:G:H2'	2:B:288:C:O4'	2.06	0.54
2:B:3176:G:C2	2:B:3213:A:H1'	2.42	0.54
2:B:360:G:H2'	2:B:361:A:C8	2.42	0.54
2:B:452:G:C2'	2:B:453:C:H5'	2.37	0.54
2:B:587:U:O2'	2:B:588:G:H5'	2.07	0.54
56:DB:74:LYS:HA	56:DB:95:LYS:O	2.07	0.54
82:DC:438:MET:HB2	82:DC:441:PHE:O	2.07	0.54
82:DC:489:VAL:O	82:DC:531:ALA:HA	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:719:LEU:HD21	82:DC:835:TRP:CH2	2.42	0.54
2:B:2470:C:H4'	5:E:26:ARG:HA	1.90	0.54
8:H:23:PRO:C	8:H:25:VAL:H	2.09	0.54
35:IA:14:ILE:CG2	35:IA:71:LEU:HB2	2.36	0.54
61:IB:111:VAL:CB	61:IB:139:VAL:HG21	2.37	0.54
61:IB:74:THR:OG1	61:IB:87:ARG:HB3	2.07	0.54
11:K:41:ARG:HG2	11:K:41:ARG:HH11	1.72	0.54
63:KB:40:TYR:O	63:KB:45:LEU:HB2	2.07	0.54
14:N:13:LYS:N	14:N:13:LYS:HD2	2.23	0.54
2:B:157:A:N7	40:NA:26:ILE:HG12	2.22	0.54
1:A:1579:U:O2'	66:NB:139:GLN:HG3	2.06	0.54
15:O:16:LYS:HE2	15:O:72:ARG:HH21	1.71	0.54
2:B:817:A:C6	41:OA:14:LYS:HA	2.43	0.54
67:OB:44:LYS:HG3	67:OB:47:ARG:NH1	2.22	0.54
19:S:20:ARG:CZ	40:NA:52:PRO:HG2	2.38	0.54
2:B:1347:U:C5	22:V:38:ARG:HD2	2.42	0.54
48:VA:111:ALA:HA	48:VA:170:ALA:CB	2.36	0.54
49:WA:148:ASN:HB2	49:WA:175:ASP:CB	2.29	0.54
49:WA:25:THR:HG22	49:WA:33:LEU:CD1	2.37	0.54
11:K:223:PHE:O	24:X:36:ILE:HD11	2.08	0.54
26:Z:92:TRP:HB3	26:Z:107:PHE:CD1	2.42	0.54
52:ZA:148:LEU:HD13	52:ZA:149:GLY:N	2.22	0.54
1:A:139:C:H42	1:A:175:G:H21	1.56	0.54
1:A:1528:U:H5'	55:CB:108:LEU:HG	1.89	0.54
1:A:1687:U:H1'	1:A:1715:G:N2	2.22	0.54
1:A:386:G:H2'	1:A:387:A:C8	2.43	0.54
1:A:72:A:C3'	1:A:73:U:H5"	2.35	0.54
27:AA:87:ARG:NH2	27:AA:93:LEU:HD11	2.22	0.54
2:B:1141:C:H2'	2:B:1142:G:C8	2.43	0.54
2:B:1896:A:H3'	2:B:1897:G:C8	2.42	0.54
2:B:2470:C:H41	2:B:2476:C:H42	1.55	0.54
2:B:2497:U:H4'	2:B:2498:U:C5	2.43	0.54
2:B:2298:U:H2'	2:B:2920:U:O2'	2.07	0.54
2:B:408:A:H2'	2:B:409:A:O4'	2.07	0.54
2:B:822:G:H2'	2:B:823:C:C6	2.41	0.54
3:C:24:G:N7	30:DA:13:ARG:HD3	2.21	0.54
55:CB:88:PRO:O	55:CB:91:GLU:HB3	2.08	0.54
57:EB:27:LEU:HD21	57:EB:80:GLU:HB3	1.88	0.54
83:EC:6905:G:N3	83:EC:6905:G:H2'	2.20	0.54
83:EC:6927:U:H3'	83:EC:6928:G:H5'	1.88	0.54
58:FB:184:LEU:CD1	58:FB:188:GLU:HB2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:44:LYS:HG2	8:H:47:ARG:HD2	1.89	0.54
36:JA:21:HIS:CD2	36:JA:24:ARG:HD2	2.41	0.54
2:B:426:G:H5'	36:JA:50:ILE:HG22	1.89	0.54
37:KA:52:VAL:HA	37:KA:66:VAL:HG22	1.89	0.54
38:LA:21:LYS:O	38:LA:33:GLN:HB2	2.07	0.54
14:N:85:PHE:HB3	14:N:140:THR:HG23	1.90	0.54
14:N:38:LYS:CG	14:N:41:ALA:HB2	2.38	0.54
16:P:110:ILE:HA	16:P:113:ALA:HB3	1.90	0.54
17:Q:45:LYS:HB2	17:Q:45:LYS:NZ	2.22	0.54
69:QB:98:GLY:O	69:QB:102:ARG:HB2	2.07	0.54
18:R:120:VAL:HG22	20:T:197:LEU:CD2	2.36	0.54
44:RA:126:LYS:HZ2	44:RA:126:LYS:HA	1.72	0.54
20:T:126:VAL:HG22	20:T:126:VAL:O	2.08	0.54
73:UB:9:LEU:HD12	73:UB:9:LEU:H	1.71	0.54
48:VA:134:SER:O	48:VA:137:GLN:HB2	2.07	0.54
23:W:10:LEU:CD1	23:W:38:ARG:HH11	2.20	0.54
49:WA:20:VAL:CG1	49:WA:304:GLY:HA3	2.38	0.54
2:B:2724:U:H4'	25:Y:54:HIS:CE1	2.43	0.54
1:A:1022:C:H4'	1:A:1124:A:N6	2.23	0.54
1:A:1390:U:O2'	1:A:1391:A:N7	2.41	0.54
1:A:1585:U:C2	1:A:1611:A:H2	2.26	0.54
1:A:511:A:H5'	59:GB:173:ALA:HB2	1.90	0.54
1:A:632:U:H4'	73:UB:11:SER:HB3	1.90	0.54
53:AB:113:LEU:HD13	53:AB:114:ALA:N	2.21	0.54
2:B:1233:G:H21	16:P:128:VAL:CG1	2.21	0.54
2:B:1690:C:OP1	23:W:60:LYS:HD3	2.07	0.54
2:B:1741:A:H2'	2:B:1742:U:O4'	2.08	0.54
2:B:1887:A:H4'	7:G:227:GLU:C	2.28	0.54
2:B:1904:C:H5"	2:B:2923:U:OP1	2.07	0.54
2:B:201:A:H5'	2:B:220:G:O2'	2.07	0.54
2:B:241:G:C2'	2:B:242:C:H5'	2.36	0.54
2:B:2948:C:O2'	7:G:242:THR:HA	2.07	0.54
2:B:840:C:O3'	23:W:125:LYS:HD3	2.07	0.54
3:C:72:A:H5'	30:DA:75:ARG:HD2	1.89	0.54
82:DC:391:LYS:HE3	82:DC:393:ARG:HG3	1.89	0.54
5:E:198:TRP:C	5:E:200:ASN:N	2.60	0.54
31:EA:22:LYS:HD3	31:EA:130:PHE:HA	1.87	0.54
57:EB:157:LYS:HE2	57:EB:158:ASP:OD1	2.08	0.54
6:F:113:VAL:HG23	6:F:134:VAL:HG23	1.90	0.54
2:B:2394:G:N3	7:G:259:HIS:HA	2.22	0.54
7:G:281:LYS:HD2	7:G:283:TYR:HE1	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:206:LEU:HD21	8:H:227:THR:O	2.08	0.54
8:H:283:THR:HB	8:H:289:ILE:HD11	1.89	0.54
9:I:80:SER:C	9:I:82:GLU:H	2.10	0.54
9:I:92:LEU:HD12	9:I:93:THR:HG22	1.89	0.54
61:IB:14:GLN:HB3	61:IB:54:ILE:HG21	1.89	0.54
36:JA:95:GLU:HA	36:JA:121:ASN:OD1	2.07	0.54
37:KA:49:ILE:HD12	37:KA:70:LYS:HA	1.88	0.54
37:KA:51:TYR:CA	37:KA:98:VAL:HG23	2.35	0.54
64:LB:127:ARG:HG3	76:XB:22:ARG:NH1	2.23	0.54
13:M:90:MET:CG	13:M:181:VAL:HG13	2.33	0.54
13:M:38:LEU:HD22	13:M:41:ILE:HG22	1.89	0.54
13:M:90:MET:HG2	13:M:181:VAL:CG1	2.31	0.54
39:MA:102:GLU:HA	39:MA:105:ARG:HB3	1.90	0.54
14:N:189:GLU:HA	14:N:200:LEU:HD13	1.90	0.54
1:A:1579:U:H4'	66:NB:140:LYS:H	1.72	0.54
15:O:115:LYS:O	15:O:116:TYR:HB2	2.06	0.54
15:O:65:ILE:HD12	15:O:66:ALA:N	2.22	0.54
16:P:119:LYS:HG3	16:P:121:PHE:CE2	2.34	0.54
1:A:1476:C:H5"	69:QB:44:GLU:OE1	2.07	0.54
19:S:132:VAL:HG12	19:S:133:ILE:N	2.23	0.54
2:B:30:G:O2'	19:S:96:ARG:HD2	2.07	0.54
1:A:609:U:N3	73:UB:26:GLU:HG2	2.22	0.54
22:V:12:ARG:HB3	22:V:12:ARG:HH11	1.73	0.54
48:VA:145:ILE:HD13	48:VA:150:ILE:HA	1.90	0.54
24:X:40:ARG:CZ	24:X:43:TYR:HE1	2.20	0.54
50:XA:175:TYR:CZ	50:XA:199:PRO:HB3	2.43	0.54
25:Y:136:ARG:HB3	25:Y:139:ARG:HH11	1.71	0.54
51:YA:138:PHE:HB3	51:YA:213:ARG:HD3	1.90	0.54
52:ZA:63:VAL:HG12	52:ZA:134:LEU:HD12	1.89	0.54
1:A:10:G:H21	52:ZA:88:LYS:HA	1.73	0.54
1:A:1188:G:H2'	1:A:1188:G:N3	2.22	0.54
1:A:1291:G:H2'	1:A:1292:G:H8	1.73	0.54
1:A:1360:A:H1'	1:A:1364:G:N2	2.23	0.54
53:AB:105:MET:HA	53:AB:108:LYS:HB2	1.90	0.54
53:AB:170:THR:HA	53:AB:186:VAL:O	2.07	0.54
2:B:1340:G:H2'	2:B:1341:U:C6	2.43	0.54
2:B:1362:G:H4'	11:K:160:ARG:O	2.07	0.54
2:B:177:U:O2'	2:B:178:U:H5'	2.08	0.54
2:B:1827:C:H2'	2:B:1828:A:C8	2.43	0.54
2:B:2603:G:H2'	2:B:2604:U:O4'	2.08	0.54
2:B:3287:U:C2'	2:B:3288:G:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:382:U:O4'	21:U:100:ALA:HB1	2.06	0.54
2:B:569:A:H2'	2:B:570:A:C8	2.43	0.54
55:CB:62:VAL:CG2	55:CB:168:VAL:HG21	2.37	0.54
4:D:118:A:H5"	9:I:253:PHE:CZ	2.43	0.54
4:D:58:C:H2'	4:D:59:U:H6	1.71	0.54
30:DA:3:LYS:CD	30:DA:8:VAL:HG13	2.37	0.54
82:DC:21:ASN:OD1	82:DC:101:ASN:HB3	2.08	0.54
82:DC:32:LYS:HG2	84:DC:901:GDP:O2B	2.08	0.54
57:EB:143:LEU:CD2	57:EB:147:ASN:HB3	2.38	0.54
57:EB:150:GLN:HE22	57:EB:179:LYS:HD3	1.72	0.54
83:EC:6925:C:H3'	83:EC:6926:U:C6	2.41	0.54
6:F:196:TRP:CG	6:F:197:PRO:HA	2.42	0.54
2:B:705:A:H62	32:FA:74:ASN:HD21	1.55	0.54
7:G:101:SER:O	7:G:102:LEU:HB3	2.07	0.54
7:G:50:LYS:HZ3	7:G:328:ILE:H	1.54	0.54
9:I:107:ARG:NH1	9:I:248:ARG:NH2	2.54	0.54
9:I:205:SER:CB	9:I:233:ALA:HB1	2.38	0.54
36:JA:120:THR:O	36:JA:122:PRO:HD2	2.07	0.54
12:L:75:ILE:CG2	12:L:76:ALA:H	2.18	0.54
65:MB:77:ARG:HA	65:MB:95:GLY:HA3	1.89	0.54
45:SA:10:THR:O	45:SA:14:LYS:HB2	2.06	0.54
21:U:164:LYS:NZ	21:U:166:VAL:HA	2.23	0.54
17:Q:8:PRO:HG3	22:V:164:ARG:HB3	1.90	0.54
49:WA:129:LYS:O	49:WA:129:LYS:HG3	2.07	0.54
2:B:1213:G:OP1	24:X:137:ARG:HG2	2.07	0.54
50:XA:117:GLU:CD	52:ZA:40:LYS:H	2.11	0.54
1:A:1087:A:H2'	1:A:1088:A:C8	2.42	0.54
1:A:1451:C:H5"	79:AC:10:HIS:CB	2.34	0.54
1:A:1480:G:OP2	1:A:1481:C:H5	1.90	0.54
1:A:1586:A:H3'	1:A:1587:A:H8	1.71	0.54
1:A:410:A:H2'	1:A:411:C:C4'	2.36	0.54
1:A:629:U:H4'	2:B:846:A:C8	2.43	0.54
2:B:1155:C:H2'	2:B:1156:C:H6	1.69	0.54
2:B:1194:G:H8	2:B:1194:G:O5'	1.89	0.54
2:B:1238:C:H2'	2:B:1239:C:C1'	2.38	0.54
2:B:1472:U:H2'	2:B:1473:G:O4'	2.07	0.54
2:B:1822:C:H2'	2:B:1823:A:C8	2.42	0.54
2:B:2131:A:H2'	2:B:2132:C:C5'	2.36	0.54
2:B:2256:A:O2'	82:DC:707:PRO:HG3	2.07	0.54
2:B:2277:C:H5'	2:B:2317:A:H4'	1.88	0.54
2:B:2359:C:H2'	2:B:2360:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2417:U:H5'	2:B:2966:G:H1'	1.90	0.54
2:B:2618:G:H2'	14:N:115:MET:HB3	1.90	0.54
2:B:1202:A:C2	2:B:2857:C:H5'	2.43	0.54
2:B:2909:U:H3'	2:B:2910:A:C5'	2.33	0.54
2:B:3063:C:H2'	2:B:3064:U:C6	2.42	0.54
2:B:3271:G:H4'	10:J:77:ARG:NH2	2.22	0.54
2:B:3273:A:O2'	2:B:3274:A:H5'	2.08	0.54
2:B:379:C:H2'	2:B:380:U:C6	2.42	0.54
2:B:537:A:H2'	2:B:538:G:O4'	2.08	0.54
2:B:854:G:H2'	2:B:855:U:O4'	2.07	0.54
2:B:941:G:H2'	2:B:942:U:O4'	2.08	0.54
54:BB:23:LEU:HG	59:GB:6:ARG:NH1	2.21	0.54
3:C:75:G:O2'	3:C:76:C:H5'	2.07	0.54
29:CA:85:GLN:HA	29:CA:120:LYS:O	2.07	0.54
55:CB:117:THR:HG22	55:CB:121:ILE:HD11	1.90	0.54
82:DC:488:VAL:HG12	82:DC:796:MET:H	1.72	0.54
82:DC:650:THR:HG22	82:DC:690:ASP:HA	1.89	0.54
57:EB:102:PRO:HD3	57:EB:112:ARG:CD	2.26	0.54
83:EC:6794:C:H2'	83:EC:6795:U:H5'	1.89	0.54
6:F:77:ILE:HG21	6:F:169:ILE:HG12	1.90	0.54
6:F:252:THR:HG23	6:F:253:GLN:N	2.23	0.54
32:FA:7:LYS:HE3	32:FA:7:LYS:HA	1.89	0.54
7:G:252:ILE:H	7:G:252:ILE:HD12	1.70	0.54
2:B:681:U:OP1	8:H:115:HIS:HB2	2.07	0.54
34:HA:55:GLU:CA	38:LA:94:LEU:HD11	2.38	0.54
9:I:150:LEU:HD13	15:O:143:ARG:HG3	1.89	0.54
61:IB:78:THR:HG22	61:IB:84:ILE:HG21	1.89	0.54
61:IB:93:TYR:CE2	61:IB:95:PRO:HA	2.34	0.54
12:L:183:LYS:O	12:L:186:LEU:HB2	2.06	0.54
38:LA:41:ARG:HG2	38:LA:56:THR:CG2	2.37	0.54
14:N:27:PRO:HG2	14:N:123:HIS:O	2.07	0.54
67:OB:41:ILE:HG21	67:OB:46:LEU:HB3	1.90	0.54
16:P:64:ILE:HG13	16:P:64:ILE:O	2.08	0.54
42:PA:31:LEU:N	42:PA:31:LEU:HD23	2.21	0.54
69:QB:73:VAL:HG12	69:QB:77:ASN:HD21	1.72	0.54
18:R:103:ILE:O	18:R:106:ARG:HG3	2.08	0.54
70:RB:66:SER:HA	70:RB:81:THR:HA	1.88	0.54
19:S:68:ARG:HE	19:S:128:LYS:HG3	1.73	0.54
19:S:139:HIS:CD2	19:S:142:ILE:HD13	2.39	0.54
19:S:159:ARG:HG3	19:S:160:GLU:N	2.22	0.54
2:B:99:A:OP1	19:S:194:GLN:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:5:LYS:HA	19:S:8:GLU:CB	2.37	0.54
21:U:22:LEU:HD12	21:U:146:ILE:HD13	1.90	0.54
73:UB:6:PRO:HG2	73:UB:15:LEU:HD21	1.89	0.54
48:VA:113:ALA:HB3	48:VA:181:PHE:CD1	2.43	0.54
48:VA:42:ARG:CZ	48:VA:51:VAL:HB	2.38	0.54
1:A:814:A:C2	23:W:170:ARG:HG3	2.43	0.54
49:WA:38:ARG:HG2	49:WA:67:ILE:CG2	2.38	0.54
50:XA:112:THR:CG2	50:XA:115:PHE:HB2	2.33	0.54
51:YA:27:LYS:HD3	51:YA:48:VAL:O	2.07	0.54
1:A:1072:C:H2'	1:A:1073:G:C8	2.42	0.54
1:A:1328:G:H2'	1:A:1329:A:H5'	1.90	0.54
1:A:1587:A:H1'	55:CB:104:ASN:ND2	2.21	0.54
1:A:1598:U:O2'	1:A:1599:C:H5'	2.08	0.54
1:A:880:C:H6	1:A:880:C:O5'	1.90	0.54
2:B:1018:G:H4'	83:EC:6925:C:H41	1.72	0.54
2:B:1046:A:H2'	2:B:1049:C:C5	2.42	0.54
2:B:1229:G:H2'	2:B:1230:G:H8	1.73	0.54
2:B:2742:C:H2'	2:B:2743:A:H8	1.73	0.54
2:B:2988:C:H2'	2:B:2989:U:H6	1.71	0.54
2:B:372:A:H2'	2:B:373:A:C8	2.43	0.54
2:B:594:U:H3'	2:B:595:G:H8	1.73	0.54
2:B:741:U:H5"	22:V:74:GLU:HB2	1.88	0.54
2:B:880:G:H2'	2:B:882:A:N7	2.23	0.54
2:B:916:G:OP1	2:B:2957:G:H5"	2.08	0.54
2:B:956:U:H2'	2:B:957:C:H6	1.72	0.54
54:BB:192:ILE:CD1	54:BB:243:GLY:HA3	2.38	0.54
3:C:30:C:OP1	17:Q:27:ASP:HB2	2.08	0.54
2:B:1522:U:H3'	29:CA:113:LEU:HD11	1.88	0.54
56:DB:141:ILE:HB	56:DB:153:VAL:HG21	1.90	0.54
6:F:219:ILE:HD13	6:F:223:SER:HB3	1.90	0.54
6:F:47:GLN:HG2	6:F:48:ILE:H	1.73	0.54
17:Q:166:ALA:HB1	32:FA:147:LEU:HD11	1.90	0.54
1:A:332:U:H5"	58:FB:31:ARG:HH21	1.73	0.54
58:FB:76:THR:HB	58:FB:105:ASP:CB	2.37	0.54
7:G:150:ARG:HG2	7:G:150:ARG:HH11	1.72	0.54
59:GB:49:LEU:HD13	59:GB:53:ARG:HD3	1.90	0.54
8:H:138:ARG:O	8:H:138:ARG:HD3	2.08	0.54
8:H:138:ARG:HD2	8:H:245:GLY:O	2.07	0.54
60:HB:15:LEU:HD13	60:HB:46:LEU:HD11	1.90	0.54
9:I:296:GLN:O	9:I:297:GLN:HB2	2.07	0.54
61:IB:85:VAL:HG13	61:IB:107:VAL:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:97:TYR:C	61:IB:99:ARG:H	2.11	0.54
12:L:168:ALA:HB3	40:NA:47:ILE:HD12	1.89	0.54
64:LB:132:ARG:HH11	64:LB:132:ARG:CB	2.15	0.54
65:MB:68:PRO:HG2	65:MB:71:GLU:CB	2.37	0.54
9:I:150:LEU:HD22	15:O:143:ARG:CG	2.38	0.54
15:O:21:ILE:O	15:O:66:ALA:HA	2.08	0.54
18:R:98:SER:HA	18:R:101:LYS:HD2	1.90	0.54
74:VB:12:VAL:HG13	74:VB:23:PHE:CD2	2.41	0.54
74:VB:29:HIS:CE1	74:VB:34:ASN:H	2.25	0.54
1:A:780:A:H8	74:VB:8:ARG:HB3	1.69	0.54
51:YA:83:LYS:HD2	51:YA:106:THR:HG22	1.90	0.54
51:YA:209:ASN:C	51:YA:210:ILE:HD12	2.29	0.54
1:A:1452:U:H2'	1:A:1453:G:C8	2.43	0.54
1:A:575:C:H41	73:UB:65:ASN:CG	2.11	0.54
1:A:754:A:N6	1:A:793:A:H2'	2.22	0.54
1:A:870:C:H2'	1:A:871:G:H8	1.71	0.54
27:AA:31:ALA:HB2	27:AA:69:LEU:HD23	1.90	0.54
2:B:1828:A:H2'	2:B:1829:G:H8	1.66	0.54
2:B:1845:G:H3'	2:B:1849:C:H42	1.73	0.54
2:B:3006:A:OP1	20:T:148:LYS:HE2	2.07	0.54
2:B:26:A:H4'	2:B:329:U:H2'	1.89	0.54
2:B:3313:U:H2'	2:B:3314:A:C8	2.43	0.54
54:BB:103:TYR:CE1	54:BB:189:LEU:HD11	2.42	0.54
3:C:24:G:O2'	3:C:25:G:H5'	2.07	0.54
4:D:112:G:H2'	4:D:113:C:C6	2.43	0.54
4:D:74:C:O2'	4:D:75:G:H5'	2.07	0.54
56:DB:211:LEU:HD13	56:DB:211:LEU:O	2.08	0.54
82:DC:135:VAL:CG2	82:DC:184:SER:HB3	2.35	0.54
82:DC:733:ILE:HD12	82:DC:733:ILE:N	2.23	0.54
5:E:120:VAL:HB	5:E:121:PRO:CD	2.38	0.54
83:EC:6899:C:H2'	83:EC:6900:A:H5'	1.90	0.54
83:EC:6927:U:H5"	83:EC:6928:G:H5'	1.89	0.54
6:F:202:VAL:HB	6:F:217:GLN:O	2.08	0.54
58:FB:117:TYR:CE1	58:FB:150:ALA:HB2	2.42	0.54
7:G:166:ILE:CG2	7:G:174:LYS:HA	2.34	0.54
2:B:2879:C:OP2	7:G:5:LYS:HG2	2.08	0.54
59:GB:108:ARG:O	59:GB:111:THR:HG22	2.07	0.54
8:H:152:VAL:CG2	8:H:251:THR:HA	2.38	0.54
10:J:135:VAL:HG12	10:J:139:LYS:HE3	1.89	0.54
37:KA:103:TYR:HA	37:KA:105:SER:N	2.23	0.54
2:B:1557:A:H5"	12:L:54:GLU:CD	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:97:PHE:CB	13:M:118:LEU:HA	2.38	0.54
69:QB:83:ALA:HB1	69:QB:91:TYR:CD2	2.43	0.54
18:R:90:VAL:HA	18:R:93:LYS:HB3	1.89	0.54
70:RB:26:LEU:HB2	70:RB:89:ARG:HB2	1.90	0.54
19:S:119:TYR:CE2	19:S:121:VAL:HG22	2.43	0.54
20:T:57:PHE:CE2	20:T:72:HIS:HA	2.43	0.54
47:UA:23:ARG:HA	47:UA:26:VAL:CG2	2.38	0.54
48:VA:7:LYS:HA	48:VA:10:GLU:CG	2.37	0.54
48:VA:123:ALA:HA	48:VA:152:ILE:CG2	2.38	0.54
49:WA:127:ARG:HA	49:WA:150:TRP:HB3	1.88	0.54
50:XA:193:GLN:C	50:XA:195:TRP:H	2.10	0.54
24:X:44:PHE:CZ	25:Y:153:PRO:HG3	2.43	0.54
51:YA:140:ILE:HG23	51:YA:211:HIS:H	1.72	0.54
52:ZA:169:LEU:HA	52:ZA:197:TYR:O	2.08	0.54
1:A:1215:C:OP1	1:A:1246:C:H5"	2.08	0.54
1:A:1762:A:O2'	1:A:1783:C:H5"	2.08	0.54
1:A:358:U:O2'	1:A:360:A:H5"	2.08	0.54
2:B:1348:U:H4'	2:B:1349:G:C5'	2.38	0.54
2:B:1537:A:H2'	2:B:1538:G:O4'	2.07	0.54
2:B:1751:G:C4	42:PA:26:LYS:HE3	2.43	0.54
2:B:2234:G:H2'	2:B:2235:C:C6	2.42	0.54
2:B:2916:U:H5	2:B:2935:U:HO2'	1.55	0.54
2:B:3121:U:C1'	2:B:3122:A:H5"	2.37	0.54
2:B:3129:A:C2'	2:B:3130:A:H5"	2.38	0.54
2:B:666:A:C3'	2:B:667:C:H5"	2.37	0.54
54:BB:107:GLY:HA2	54:BB:189:LEU:HG	1.90	0.54
54:BB:57:ASN:HB2	54:BB:60:GLU:HG3	1.88	0.54
3:C:114:G:O2'	3:C:115:C:H5'	2.08	0.54
56:DB:189:HIS:O	56:DB:192:ALA:HB3	2.08	0.54
56:DB:215:ARG:O	56:DB:219:ARG:HB2	2.07	0.54
82:DC:755:VAL:HG23	82:DC:770:ALA:HA	1.89	0.54
5:E:110:PHE:HB3	5:E:128:LEU:HD21	1.90	0.54
6:F:29:LEU:HD12	6:F:124:GLY:N	2.23	0.54
7:G:298:PHE:O	7:G:300:ARG:HG2	2.07	0.54
34:HA:41:LEU:HD12	34:HA:92:ILE:HB	1.89	0.54
60:HB:63:TYR:O	60:HB:64:TYR:HB2	2.07	0.54
2:B:2746:A:H5'	9:I:178:ASN:O	2.08	0.54
9:I:107:ARG:CD	9:I:248:ARG:HA	2.38	0.54
37:KA:50:ALA:HB2	37:KA:68:TRP:CD2	2.43	0.54
12:L:43:LYS:HA	12:L:43:LYS:HE2	1.89	0.54
64:LB:87:GLY:HA3	64:LB:120:PRO:HD2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:148:VAL:HG12	14:N:152:LEU:HG	1.89	0.54
67:OB:25:THR:OG1	67:OB:30:THR:HG23	2.07	0.54
1:A:1459:C:H5'	68:PB:131:LEU:HD13	1.89	0.54
17:Q:98:ASP:OD1	17:Q:101:ARG:HB2	2.07	0.54
43:QA:23:LEU:HB3	43:QA:38:ASN:HB2	1.90	0.54
18:R:8:LYS:O	18:R:9:ALA:HB2	2.08	0.54
72:TB:89:TRP:CE3	72:TB:125:ILE:HD13	2.42	0.54
21:U:67:ILE:HG23	21:U:82:ARG:HE	1.72	0.54
48:VA:79:PHE:CD1	48:VA:189:GLN:HG3	2.43	0.54
24:X:63:GLN:HG2	24:X:64:ILE:N	2.22	0.54
24:X:6:GLU:OE2	24:X:64:ILE:HD12	2.07	0.54
50:XA:182:LEU:HB3	50:XA:188:LEU:HD23	1.90	0.54
51:YA:86:LEU:HB3	51:YA:98:THR:OG1	2.08	0.54
1:A:1083:G:O2'	1:A:1084:A:H5'	2.08	0.53
1:A:1227:A:H4'	1:A:1228:G:H5"	1.90	0.53
1:A:1793:G:C2	76:XB:75:VAL:HG11	2.43	0.53
1:A:2:A:H2'	52:ZA:179:VAL:HG11	1.89	0.53
1:A:525:A:H4'	74:VB:89:TYR:HB3	1.89	0.53
2:B:144:A:C2'	2:B:145:G:H5'	2.38	0.53
2:B:1560:G:O2'	2:B:1561:G:H5'	2.08	0.53
2:B:1584:U:H2'	2:B:1585:C:C6	2.41	0.53
2:B:200:C:H5	30:DA:103:LYS:HZ1	1.56	0.53
2:B:2273:G:N2	2:B:2311:G:H2'	2.23	0.53
2:B:2425:G:H2'	2:B:2426:U:O4'	2.07	0.53
2:B:2641:U:H5"	2:B:2642:A:OP1	2.08	0.53
2:B:2374:C:N4	2:B:2823:G:H4'	2.23	0.53
2:B:3138:U:H2'	2:B:3139:A:C8	2.43	0.53
2:B:349:A:H4'	2:B:350:C:OP2	2.09	0.53
2:B:672:A:P	22:V:55:SER:HB2	2.48	0.53
29:CA:86:VAL:HG12	29:CA:120:LYS:HG2	1.89	0.53
30:DA:105:VAL:HG12	30:DA:105:VAL:O	2.08	0.53
82:DC:584:ASN:HB3	82:DC:693:LEU:HA	1.90	0.53
82:DC:633:ILE:O	82:DC:633:ILE:HD12	2.08	0.53
82:DC:637:GLY:O	82:DC:644:ASN:HB2	2.08	0.53
82:DC:701:GLY:O	82:DC:705:ILE:HG13	2.07	0.53
82:DC:559:PRO:HB2	86:DC:903:SO1:C20	2.38	0.53
57:EB:123:ASP:HA	57:EB:126:LEU:HD23	1.90	0.53
6:F:206:PRO:HD3	6:F:213:GLY:CA	2.38	0.53
2:B:911:C:H3'	6:F:9:ARG:HH12	1.69	0.53
7:G:92:TYR:HD2	7:G:99:LEU:O	1.90	0.53
8:H:149:PRO:C	8:H:150:LEU:HD12	2.28	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:24:THR:HG23	34:HA:30:THR:HG22	1.89	0.53
36:JA:101:SER:O	36:JA:105:ARG:HG3	2.07	0.53
63:KB:21:ASN:O	63:KB:65:VAL:HG13	2.07	0.53
39:MA:54:VAL:HG12	39:MA:58:ILE:HD12	1.90	0.53
68:PB:28:ILE:HA	68:PB:31:ALA:CB	2.38	0.53
43:QA:10:LYS:HA	43:QA:13:MET:HE2	1.91	0.53
19:S:148:TYR:HA	19:S:150:TRP:CD1	2.43	0.53
19:S:53:TYR:CZ	19:S:55:ALA:HA	2.43	0.53
20:T:126:VAL:O	20:T:127:LEU:HD12	2.07	0.53
49:WA:42:LEU:HD11	49:WA:82:SER:HB3	1.90	0.53
49:WA:68:VAL:HA	49:WA:84:SER:HA	1.89	0.53
1:A:1530:C:OP2	75:WB:95:HIS:HB2	2.08	0.53
50:XA:130:ALA:HA	50:XA:133:ILE:HD12	1.89	0.53
50:XA:31:VAL:HG12	50:XA:33:GLN:H	1.73	0.53
25:Y:79:MET:HB2	25:Y:84:TYR:HE2	1.72	0.53
78:ZB:60:GLU:O	78:ZB:61:ARG:HB2	2.08	0.53
1:A:1183:A:H1'	1:A:1210:C:O2'	2.08	0.53
1:A:148:A:N6	1:A:166:C:H42	1.98	0.53
1:A:1680:G:H1'	1:A:1721:A:N6	2.24	0.53
1:A:463:U:H2'	1:A:464:A:C8	2.43	0.53
1:A:463:U:H2'	1:A:464:A:H8	1.73	0.53
1:A:704:C:O2'	1:A:705:U:H4'	2.08	0.53
1:A:93:A:H5'	1:A:94:U:C5	2.43	0.53
2:B:1088:U:H2'	2:B:1089:G:C8	2.42	0.53
2:B:1090:G:H2'	2:B:1091:A:H8	1.73	0.53
2:B:1383:G:H2'	2:B:1384:U:O4'	2.08	0.53
2:B:2470:C:H2'	2:B:2471:U:H5'	1.89	0.53
2:B:3184:A:C2'	2:B:3185:U:H5'	2.37	0.53
2:B:3315:G:OP1	7:G:116:ARG:NH2	2.41	0.53
2:B:966:U:H2'	2:B:967:A:C8	2.42	0.53
3:C:82:U:H1'	3:C:87:G:H4'	1.90	0.53
56:DB:5:ILE:HG12	56:DB:111:LEU:HB2	1.90	0.53
56:DB:67:VAL:HB	56:DB:73:ILE:HD11	1.91	0.53
82:DC:205:ALA:CB	82:DC:245:TRP:HB3	2.38	0.53
82:DC:32:LYS:HA	82:DC:128:VAL:HG21	1.90	0.53
82:DC:823:ARG:HH11	82:DC:823:ARG:CB	2.16	0.53
5:E:191:VAL:HA	5:E:197:ASN:ND2	2.23	0.53
83:EC:6911:A:H2'	83:EC:6912:G:C8	2.44	0.53
6:F:63:PHE:O	6:F:71:LEU:HA	2.08	0.53
2:B:716:A:H62	32:FA:117:ARG:H	1.56	0.53
7:G:343:TYR:CD1	7:G:343:TYR:N	2.75	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:385:LYS:O	7:G:386:ASP:HB2	2.07	0.53
7:G:51:ALA:HA	7:G:314:TYR:CE2	2.42	0.53
8:H:60:THR:HB	8:H:90:PHE:CE2	2.37	0.53
60:HB:25:LYS:HB3	60:HB:62:GLN:HG3	1.88	0.53
60:HB:7:ASP:O	60:HB:11:ILE:HG12	2.07	0.53
9:I:95:TRP:CH2	9:I:161:GLY:CA	2.91	0.53
11:K:85:PHE:HD1	11:K:236:ILE:HD11	1.72	0.53
37:KA:31:LYS:HZ1	37:KA:31:LYS:HA	1.70	0.53
40:NA:16:LYS:HZ3	40:NA:16:LYS:HB3	1.73	0.53
15:O:54:VAL:HG11	15:O:57:PHE:CD2	2.44	0.53
15:O:54:VAL:CB	15:O:59:ILE:HG13	2.36	0.53
16:P:57:LYS:N	16:P:57:LYS:HD3	2.23	0.53
72:TB:105:THR:OG1	72:TB:110:ILE:HG13	2.08	0.53
21:U:19:GLY:HA3	21:U:146:ILE:HD13	1.90	0.53
22:V:24:VAL:O	22:V:28:LEU:HG	2.08	0.53
74:VB:21:LYS:HB2	74:VB:75:VAL:CG1	2.39	0.53
74:VB:57:VAL:HG22	74:VB:60:PHE:HE2	1.73	0.53
49:WA:265:LEU:HD22	49:WA:265:LEU:N	2.22	0.53
50:XA:10:THR:OG1	50:XA:12:GLU:HG2	2.08	0.53
2:B:1049:C:H5'	25:Y:12:ARG:NH2	2.23	0.53
51:YA:144:ARG:HG3	51:YA:206:PRO:HB2	1.89	0.53
26:Z:16:THR:HG22	26:Z:64:THR:HG23	1.89	0.53
52:ZA:222:TYR:O	71:SB:23:ILE:HD13	2.07	0.53
1:A:1772:C:OP2	45:SA:2:ARG:HD2	2.09	0.53
1:A:43:A:H2'	1:A:44:U:H5'	1.90	0.53
52:ZA:122:ALA:H	53:AB:116:ARG:HH12	1.57	0.53
2:B:1149:G:H3'	2:B:1150:A:C5'	2.37	0.53
2:B:1495:U:H4'	2:B:1514:G:C4'	2.37	0.53
2:B:2590:A:H2'	2:B:2591:A:C8	2.43	0.53
2:B:2642:A:O2'	2:B:2643:A:H5'	2.08	0.53
2:B:2817:A:H3'	2:B:2818:U:H6	1.73	0.53
2:B:2948:C:H4'	7:G:243:HIS:H	1.73	0.53
2:B:3290:G:H2'	2:B:3291:G:O4'	2.07	0.53
2:B:413:U:H2'	2:B:414:U:H6	1.70	0.53
2:B:820:A:H2'	2:B:821:U:C6	2.43	0.53
54:BB:45:ILE:HG13	54:BB:61:VAL:HG11	1.90	0.53
30:DA:39:LEU:HA	30:DA:42:GLN:HB2	1.88	0.53
82:DC:436:LEU:HD23	82:DC:437:MET:SD	2.47	0.53
31:EA:27:LYS:HD3	31:EA:93:LYS:HE3	1.90	0.53
2:B:2574:G:OP2	31:EA:56:LYS:HD2	2.09	0.53
83:EC:6930:G:C3'	83:EC:6931:U:H5"	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:6:ARG:HD3	6:F:10:LYS:HE3	1.90	0.53
6:F:133:TYR:HB3	6:F:168:VAL:HG12	1.91	0.53
6:F:47:GLN:HG2	6:F:48:ILE:N	2.23	0.53
6:F:82:VAL:HG22	47:UA:65:ALA:CB	2.35	0.53
32:FA:47:LYS:HG3	32:FA:48:TYR:CD2	2.44	0.53
7:G:219:ALA:HB3	7:G:329:PRO:O	2.08	0.53
9:I:211:LEU:HD22	9:I:219:PHE:CG	2.44	0.53
35:IA:23:VAL:HB	35:IA:28:ARG:CG	2.38	0.53
61:IB:67:ARG:HG3	61:IB:67:ARG:HH11	1.73	0.53
2:B:617:G:OP2	10:J:111:LEU:HD22	2.09	0.53
11:K:60:ARG:HH21	11:K:63:ILE:HD13	1.72	0.53
21:U:172:GLN:NE2	37:KA:61:GLY:HA3	2.22	0.53
63:KB:142:GLU:OE1	63:KB:144:ALA:HB3	2.08	0.53
12:L:243:GLN:O	12:L:247:ASP:HB2	2.08	0.53
12:L:72:PRO:HG2	12:L:75:ILE:H	1.74	0.53
65:MB:80:MET:C	65:MB:82:ASN:H	2.11	0.53
14:N:92:HIS:HB3	14:N:94:PHE:CE2	2.44	0.53
15:O:54:VAL:O	15:O:55:ARG:HB3	2.08	0.53
16:P:103:ASN:HA	16:P:141:CYS:HB2	1.90	0.53
69:QB:131:ASP:O	69:QB:135:ILE:HG12	2.08	0.53
18:R:49:PRO:HB3	18:R:78:THR:HG23	1.90	0.53
20:T:99:LEU:O	20:T:102:LEU:HB3	2.08	0.53
74:VB:47:VAL:HG23	74:VB:48:TYR:CD2	2.40	0.53
49:WA:127:ARG:HG2	49:WA:150:TRP:HB3	1.90	0.53
2:B:2735:U:H5"	25:Y:50:LYS:HA	1.89	0.53
1:A:1229:G:H21	1:A:1256:A:H62	1.56	0.53
1:A:1472:C:H2'	1:A:1535:U:O4	2.07	0.53
1:A:55:A:N1	1:A:403:G:H1'	2.22	0.53
1:A:596:C:H2'	1:A:597:G:H8	1.73	0.53
1:A:918:U:H5'	64:LB:29:HIS:CE1	2.43	0.53
2:B:1060:U:O2'	2:B:1061:A:H5'	2.07	0.53
2:B:2922:G:H1'	2:B:2951:G:H21	1.73	0.53
2:B:299:G:H2'	2:B:300:G:C8	2.42	0.53
2:B:725:G:H2'	2:B:726:G:O4'	2.09	0.53
54:BB:180:LEU:HD22	54:BB:228:ILE:HD11	1.89	0.53
73:UB:70:LYS:CE	80:BC:8:LEU:HD22	2.38	0.53
3:C:37:A:H2'	3:C:37:A:N3	2.23	0.53
29:CA:29:SER:HB3	29:CA:33:ARG:HH12	1.73	0.53
30:DA:125:LYS:O	30:DA:126:LEU:HG	2.07	0.53
30:DA:56:VAL:HG23	30:DA:105:VAL:C	2.29	0.53
82:DC:27:HIS:CD2	82:DC:138:GLN:NE2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:399:ARG:HD3	82:DC:401:PHE:CE1	2.43	0.53
82:DC:559:PRO:HG2	82:DC:778:PHE:CE1	2.43	0.53
83:EC:6939:C:H2'	83:EC:6941:U:OP1	2.09	0.53
2:B:911:C:N4	6:F:3:ARG:HD3	2.24	0.53
7:G:299:ASP:C	7:G:301:THR:H	2.12	0.53
59:GB:147:MET:O	59:GB:149:ARG:HD3	2.08	0.53
8:H:206:LEU:HD23	8:H:207:VAL:H	1.73	0.53
8:H:181:VAL:HG21	8:H:223:PRO:O	2.08	0.53
8:H:230:VAL:HG11	8:H:257:LYS:HG2	1.90	0.53
8:H:38:VAL:O	8:H:42:VAL:HG23	2.08	0.53
34:HA:69:TYR:HD1	34:HA:69:TYR:N	2.06	0.53
13:M:48:VAL:HG12	13:M:52:LEU:O	2.08	0.53
14:N:170:LYS:HA	14:N:177:ASP:HA	1.89	0.53
66:NB:79:TYR:HA	66:NB:82:ARG:CD	2.39	0.53
67:OB:26:LEU:HG	67:OB:62:GLN:OE1	2.09	0.53
16:P:133:LEU:HA	16:P:137:GLN:HG3	1.89	0.53
68:PB:28:ILE:HD11	68:PB:32:LEU:HD11	1.91	0.53
68:PB:80:LYS:O	68:PB:81:ILE:HG13	2.08	0.53
43:QA:23:LEU:HD21	43:QA:35:ILE:HG22	1.91	0.53
69:QB:52:GLY:O	69:QB:54:PHE:N	2.42	0.53
19:S:73:ARG:HH12	19:S:86:ASN:CB	2.21	0.53
45:SA:13:LEU:HD23	45:SA:16:LYS:HD3	1.89	0.53
71:SB:53:TYR:HE1	71:SB:72:LEU:HD22	1.73	0.53
20:T:91:LYS:HA	20:T:96:LYS:HE3	1.90	0.53
2:B:44:U:H4'	46:TA:54:THR:HG22	1.90	0.53
21:U:47:TYR:O	21:U:51:VAL:HG23	2.07	0.53
73:UB:23:ARG:HA	73:UB:26:GLU:OE1	2.08	0.53
23:W:135:LYS:O	23:W:138:LEU:HB3	2.08	0.53
24:X:79:VAL:HG11	24:X:110:MET:CE	2.38	0.53
77:YB:53:ALA:HA	77:YB:66:PRO:CD	2.36	0.53
77:YB:66:PRO:HA	77:YB:71:ALA:HB2	1.91	0.53
26:Z:41:ILE:HG22	26:Z:43:VAL:CG2	2.36	0.53
1:A:1300:A:H5'	52:ZA:99:LYS:NZ	2.23	0.53
1:A:1104:U:H2'	1:A:1105:C:O4'	2.08	0.53
1:A:1338:C:H2'	1:A:1339:C:O4'	2.07	0.53
1:A:1458:G:N2	65:MB:128:HIS:NE2	2.57	0.53
1:A:1569:A:H2'	1:A:1570:A:H8	1.73	0.53
1:A:1752:U:H2'	1:A:1753:A:C8	2.43	0.53
1:A:182:A:H2'	1:A:183:U:C6	2.43	0.53
1:A:218:A:H2	1:A:845:G:H4'	1.72	0.53
79:AC:12:ARG:C	79:AC:18:SER:HB2	2.28	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2419:A:O2'	2:B:2420:C:H5'	2.09	0.53
2:B:3279:A:H8	2:B:3279:A:H5'	1.72	0.53
2:B:354:U:H2'	2:B:355:A:H8	1.73	0.53
2:B:693:A:H2'	2:B:694:C:O4'	2.08	0.53
54:BB:191:ARG:HD2	54:BB:218:PHE:CE1	2.44	0.53
54:BB:211:LYS:O	54:BB:211:LYS:HG3	2.08	0.53
55:CB:191:ALA:O	55:CB:195:ALA:HB2	2.08	0.53
82:DC:412:ARG:HG2	82:DC:428:ILE:HG12	1.90	0.53
82:DC:775:ASN:HA	82:DC:778:PHE:CZ	2.44	0.53
82:DC:84:GLU:HA	82:DC:87:LYS:HD2	1.89	0.53
31:EA:26:VAL:HG21	31:EA:96:VAL:HG12	1.89	0.53
57:EB:101:LYS:C	57:EB:103:SER:H	2.11	0.53
59:GB:23:ARG:HG2	59:GB:23:ARG:HH11	1.74	0.53
34:HA:41:LEU:HB3	34:HA:92:ILE:CB	2.37	0.53
58:FB:188:GLU:HG2	61:IB:13:PHE:CE2	2.43	0.53
40:NA:3:VAL:HG22	40:NA:16:LYS:HA	1.91	0.53
40:NA:95:ALA:HA	40:NA:99:ARG:HD3	1.90	0.53
66:NB:46:PHE:HA	66:NB:49:TYR:HB2	1.91	0.53
2:B:2674:A:C5	15:O:124:GLY:HA3	2.44	0.53
15:O:62:ASN:HB2	46:TA:103:ALA:HA	1.90	0.53
17:Q:23:LYS:NZ	17:Q:23:LYS:HB2	2.24	0.53
71:SB:17:CYS:HB3	71:SB:22:ARG:H	1.72	0.53
47:UA:45:LYS:HB3	47:UA:45:LYS:NZ	2.23	0.53
22:V:122:ILE:HG22	22:V:123:THR:N	2.24	0.53
48:VA:119:ILE:O	48:VA:157:LYS:HA	2.09	0.53
49:WA:287:PRO:HB2	49:WA:307:ASP:OD1	2.08	0.53
49:WA:52:GLN:HG2	49:WA:53:LYS:N	2.24	0.53
24:X:125:LYS:NZ	24:X:125:LYS:HB3	2.24	0.53
51:YA:190:PRO:HG2	51:YA:192:VAL:HG23	1.90	0.53
1:A:1384:A:H2'	1:A:1385:G:C5'	2.38	0.53
1:A:646:C:H2'	1:A:647:G:C8	2.44	0.53
2:B:1898:G:H1'	27:AA:18:PRO:HG3	1.90	0.53
2:B:1166:G:O2'	2:B:1167:U:H5'	2.08	0.53
2:B:117:U:H1'	2:B:119:U:OP2	2.08	0.53
2:B:1357:G:O2'	2:B:1358:C:H5'	2.08	0.53
2:B:1459:C:H2'	2:B:1460:A:H8	1.74	0.53
2:B:1520:G:H2'	2:B:1521:G:O4'	2.08	0.53
2:B:1635:G:N2	2:B:1637:A:H3'	2.24	0.53
2:B:1650:G:H1'	6:F:69:TYR:CE2	2.43	0.53
2:B:1676:A:H62	26:Z:74:LYS:NZ	2.06	0.53
2:B:2217:U:H2'	2:B:2218:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2344:U:H4'	2:B:3056:U:C5	2.44	0.53
2:B:3236:U:H2'	2:B:3237:U:C6	2.43	0.53
2:B:511:G:H2'	2:B:512:U:O4'	2.08	0.53
3:C:83:C:H42	30:DA:52:ARG:HH22	1.55	0.53
55:CB:221:ALA:O	55:CB:225:ARG:HB2	2.08	0.53
56:DB:76:LEU:HB2	56:DB:94:ARG:HD3	1.91	0.53
82:DC:611:ASP:O	82:DC:615:ARG:HB3	2.09	0.53
82:DC:798:PHE:H	86:DC:903:SO1:C53	2.22	0.53
31:EA:23:VAL:HG12	31:EA:45:GLY:CA	2.38	0.53
2:B:824:C:H5"	6:F:21:ARG:CD	2.39	0.53
6:F:37:ARG:HG3	6:F:38:HIS:CD2	2.44	0.53
2:B:2882:U:H4'	7:G:263:SER:O	2.08	0.53
7:G:92:TYR:HA	7:G:101:SER:HA	1.90	0.53
61:IB:67:ARG:HH21	61:IB:129:ARG:HA	1.74	0.53
12:L:182:GLY:CA	12:L:185:ARG:HB2	2.39	0.53
31:EA:14:VAL:HG21	38:LA:86:LYS:HG3	1.89	0.53
13:M:68:LEU:HD13	13:M:69:ARG:N	2.23	0.53
40:NA:74:LYS:NZ	40:NA:79:SER:HA	2.23	0.53
15:O:15:GLU:HB3	15:O:130:VAL:O	2.08	0.53
15:O:138:VAL:O	15:O:138:VAL:HG13	2.08	0.53
15:O:53:THR:HG23	15:O:60:ARG:HA	1.90	0.53
16:P:57:LYS:HE2	16:P:79:SER:HB3	1.91	0.53
68:PB:38:VAL:HG13	68:PB:42:TYR:CD2	2.41	0.53
69:QB:37:VAL:HG21	69:QB:100:ILE:CD1	2.31	0.53
23:W:100:ARG:HG3	23:W:100:ARG:HH11	1.74	0.53
2:B:1722:U:O4'	23:W:96:ILE:HG13	2.08	0.53
49:WA:172:ALA:HB2	49:WA:178:VAL:HA	1.89	0.53
26:Z:17:VAL:HG22	26:Z:103:TYR:HD2	1.73	0.53
52:ZA:69:ILE:HD12	52:ZA:70:ASP:N	2.23	0.53
1:A:1648:A:H2'	1:A:1649:G:O4'	2.08	0.53
1:A:735:C:O2'	1:A:736:C:H6	1.91	0.53
1:A:766:U:H5"	1:A:768:C:OP2	2.08	0.53
1:A:218:A:C2	1:A:845:G:H4'	2.44	0.53
1:A:852:C:H2'	1:A:853:G:C4'	2.38	0.53
1:A:864:U:H3'	72:TB:28:ARG:NH1	2.18	0.53
1:A:953:G:H2'	1:A:954:G:H8	1.74	0.53
27:AA:39:VAL:HG21	27:AA:51:ALA:O	2.07	0.53
53:AB:53:THR:CG2	53:AB:94:ARG:HG2	2.39	0.53
2:B:1583:A:H2'	2:B:1584:U:H5'	1.90	0.53
2:B:2139:A:H4'	2:B:2140:U:H5"	1.90	0.53
2:B:2210:G:H22	2:B:2236:G:C1'	2.18	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2638:C:C2'	2:B:2639:G:H5'	2.39	0.53
2:B:3130:A:H3'	2:B:3131:U:C5'	2.38	0.53
2:B:3211:C:H2'	2:B:3212:C:O4'	2.08	0.53
2:B:80:G:H2'	2:B:81:C:C6	2.41	0.53
2:B:842:G:H2'	2:B:843:A:C8	2.44	0.53
3:C:36:G:C5	39:MA:86:ARG:HD3	2.44	0.53
55:CB:63:GLN:O	55:CB:64:VAL:HB	2.08	0.53
82:DC:218:TRP:HZ3	82:DC:220:PHE:CD2	2.27	0.53
82:DC:4:PHE:O	82:DC:47:SER:HA	2.09	0.53
82:DC:653:VAL:CG1	82:DC:693:LEU:HD21	2.39	0.53
82:DC:772:LEU:HD21	82:DC:777:SER:HB3	1.91	0.53
7:G:252:ILE:HG21	7:G:260:VAL:HG13	1.91	0.53
7:G:61:ASP:C	7:G:63:PRO:HD3	2.29	0.53
8:H:274:TYR:OH	8:H:276:LEU:HD23	2.09	0.53
8:H:326:ARG:HB3	8:H:327:LEU:HD22	1.90	0.53
8:H:65:TRP:CE3	8:H:71:VAL:HG11	2.41	0.53
10:J:31:ARG:HG3	10:J:34:LEU:H	1.73	0.53
11:K:147:LEU:HD22	11:K:205:PHE:CE2	2.44	0.53
11:K:169:ILE:HD11	11:K:181:ILE:HG12	1.90	0.53
37:KA:32:ILE:HB	37:KA:35:VAL:CG2	2.38	0.53
12:L:75:ILE:HD11	12:L:160:ILE:HD12	1.90	0.53
12:L:71:VAL:HG12	12:L:72:PRO:HD2	1.90	0.53
64:LB:29:HIS:HA	64:LB:41:ARG:HA	1.91	0.53
65:MB:28:MET:HE1	65:MB:36:LEU:HD21	1.91	0.53
65:MB:87:PRO:HA	65:MB:90:ILE:HG13	1.90	0.53
14:N:102:MET:H	14:N:102:MET:CE	2.22	0.53
14:N:60:LEU:HD11	14:N:135:ILE:HD13	1.91	0.53
2:B:2854:U:H5'	14:N:64:ALA:HB2	1.90	0.53
2:B:299:G:N1	40:NA:30:LYS:HB3	2.24	0.53
15:O:156:LYS:O	15:O:160:VAL:HG23	2.09	0.53
67:OB:9:VAL:HG21	67:OB:49:LYS:HG2	1.90	0.53
16:P:75:PRO:O	16:P:116:MET:O	2.27	0.53
17:Q:177:LYS:HA	40:NA:11:LEU:HD11	1.90	0.53
43:QA:26:TRP:CE3	43:QA:30:ARG:HD3	2.44	0.53
44:RA:105:PRO:HG2	44:RA:106:ARG:H	1.74	0.53
19:S:12:ARG:HG2	19:S:12:ARG:NH1	2.23	0.53
2:B:665:A:OP1	19:S:203:ARG:HD2	2.08	0.53
19:S:57:GLN:O	19:S:142:ILE:HD11	2.08	0.53
21:U:112:LEU:HD12	21:U:151:THR:O	2.08	0.53
49:WA:41:THR:CG2	49:WA:62:LYS:HA	2.38	0.53
50:XA:189:VAL:CG1	50:XA:190:ASP:H	2.05	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1342:C:H5"	49:WA:102:ARG:NH2	2.24	0.53
1:A:1504:G:OP1	69:QB:97:SER:HB2	2.09	0.53
1:A:1574:G:H5"	1:A:1575:G:OP1	2.09	0.53
1:A:36:C:H2'	1:A:37:U:C6	2.43	0.53
1:A:816:G:H2'	1:A:817:A:C8	2.44	0.53
1:A:918:U:H2'	1:A:919:A:H8	1.72	0.53
2:B:1078:U:H1'	2:B:1082:U:N3	2.24	0.53
2:B:126:U:C4'	19:S:141:ALA:HB2	2.38	0.53
2:B:1448:U:C5	2:B:2355:G:N2	2.76	0.53
2:B:2185:G:H2'	2:B:2186:U:H6	1.73	0.53
2:B:2334:U:O2'	2:B:2335:G:H5"	2.08	0.53
2:B:2373:A:H8	2:B:2373:A:H5'	1.73	0.53
2:B:1202:A:H2	2:B:2856:G:HO2'	1.55	0.53
2:B:3036:G:H2'	2:B:3037:U:C5'	2.38	0.53
2:B:2895:G:H5'	2:B:3107:U:O2'	2.09	0.53
2:B:3375:A:N3	2:B:3378:C:H5"	2.24	0.53
2:B:3389:U:H5'	2:B:3389:U:H6	1.74	0.53
2:B:351:A:C2	3:C:52:A:H2	2.27	0.53
2:B:509:U:C3'	2:B:510:G:H5"	2.39	0.53
2:B:658:G:H3'	2:B:659:G:C8	2.43	0.53
2:B:822:G:H2'	2:B:823:C:H6	1.74	0.53
29:CA:131:ASP:HB3	29:CA:134:ASP:CB	2.37	0.53
55:CB:196:GLU:HG2	55:CB:200:ASN:ND2	2.23	0.53
57:EB:31:SER:HB2	57:EB:32:PRO:CD	2.39	0.53
35:IA:10:ARG:O	35:IA:74:ARG:HA	2.09	0.53
61:IB:85:VAL:HG22	61:IB:108:PRO:HB3	1.91	0.53
10:J:66:SER:CB	10:J:76:LEU:HD23	2.37	0.53
11:K:82:LYS:C	11:K:119:VAL:HB	2.29	0.53
37:KA:48:ARG:HG3	37:KA:104:PRO:HD3	1.89	0.53
4:D:92:A:N3	14:N:56:GLU:HG3	2.24	0.53
66:NB:35:PRO:HG2	66:NB:38:LEU:HG	1.90	0.53
18:R:123:LEU:C	20:T:194:LEU:HD11	2.28	0.53
18:R:119:GLN:O	18:R:123:LEU:HB2	2.09	0.53
44:RA:79:GLU:OE2	44:RA:80:PRO:HD2	2.09	0.53
18:R:120:VAL:HA	20:T:194:LEU:CD2	2.38	0.53
20:T:82:LYS:HA	20:T:85:ARG:HB2	1.89	0.53
46:TA:72:LEU:HD11	46:TA:83:LEU:HD22	1.90	0.53
21:U:112:LEU:CG	21:U:150:VAL:HG22	2.39	0.53
21:U:116:HIS:H	21:U:149:VAL:HB	1.74	0.53
22:V:71:LEU:HD22	22:V:99:THR:HG21	1.90	0.53
48:VA:42:ARG:CB	48:VA:46:ARG:HH21	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:19:ALA:CB	74:VB:77:ASN:HD22	2.22	0.53
24:X:92:LYS:O	24:X:93:GLU:HG3	2.08	0.53
50:XA:56:LYS:HE3	71:SB:82:VAL:HG11	1.90	0.53
51:YA:22:ASP:O	51:YA:25:THR:HB	2.08	0.53
51:YA:61:LEU:HD13	51:YA:61:LEU:H	1.74	0.53
26:Z:90:ARG:O	26:Z:92:TRP:N	2.40	0.53
1:A:1302:U:OP1	52:ZA:88:LYS:HD2	2.09	0.53
1:A:1036:A:H2'	1:A:1037:C:O4'	2.09	0.53
1:A:1187:U:H3	1:A:1198:G:H1	1.57	0.53
1:A:1242:A:H2'	1:A:1243:G:H3'	1.91	0.53
1:A:1546:G:N2	68:PB:87:ASN:HB3	2.23	0.53
1:A:1782:A:N7	1:A:1783:C:H1'	2.24	0.53
2:B:1683:A:H2'	2:B:1684:U:H6	1.74	0.53
2:B:2291:A:H2'	2:B:2292:U:O4'	2.09	0.53
2:B:2765:C:H2'	2:B:2766:U:H6	1.74	0.53
2:B:2904:U:O2'	2:B:2905:U:H5'	2.09	0.53
2:B:3120:C:O2'	2:B:3121:U:H2'	2.08	0.53
2:B:3313:U:H2'	2:B:3314:A:H8	1.73	0.53
2:B:70:A:H3'	2:B:71:A:H8	1.74	0.53
54:BB:229:GLY:HA2	54:BB:235:TYR:CD2	2.44	0.53
3:C:106:C:H5"	3:C:108:C:OP2	2.09	0.53
2:B:1523:U:H5'	29:CA:113:LEU:HD13	1.91	0.53
29:CA:86:VAL:HG21	29:CA:95:ILE:CG1	2.31	0.53
82:DC:219:ALA:H	82:DC:328:LEU:HB2	1.74	0.53
82:DC:615:ARG:O	82:DC:619:MET:HG3	2.09	0.53
82:DC:562:ALA:HB1	82:DC:679:GLU:OE2	2.09	0.53
82:DC:659:ILE:HG22	82:DC:705:ILE:HD13	1.90	0.53
6:F:9:ARG:HH21	6:F:9:ARG:HG3	1.74	0.53
58:FB:84:HIS:HE1	58:FB:86:SER:HB2	1.69	0.53
2:B:2883:U:H5'	7:G:263:SER:CB	2.38	0.53
7:G:32:PHE:CD2	7:G:182:GLN:HB2	2.44	0.53
61:IB:110:HIS:CD2	61:IB:131:ILE:HG21	2.38	0.53
1:A:960:U:O4'	63:KB:52:VAL:HG22	2.09	0.53
12:L:67:ILE:CB	12:L:237:ILE:HD13	2.32	0.53
64:LB:19:ILE:HG22	64:LB:20:TYR:N	2.23	0.53
39:MA:78:LYS:HG2	39:MA:81:ARG:NH2	2.20	0.53
65:MB:96:ILE:HD12	65:MB:120:SER:HB2	1.90	0.53
14:N:10:ARG:O	14:N:58:GLU:HB2	2.08	0.53
14:N:87:LEU:HB2	14:N:138:VAL:HG13	1.91	0.53
14:N:151:GLY:HA2	14:N:154:ARG:CD	2.38	0.53
66:NB:117:LEU:N	66:NB:117:LEU:HD22	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:74:HIS:O	66:NB:78:VAL:HG23	2.07	0.53
66:NB:8:GLN:HA	66:NB:20:ALA:O	2.08	0.53
41:OA:67:LEU:O	41:OA:70:VAL:HG23	2.08	0.53
42:PA:5:ILE:HG22	42:PA:6:THR:H	1.73	0.53
69:QB:57:ARG:HD2	69:QB:61:VAL:HG23	1.91	0.53
47:UA:76:ALA:O	47:UA:79:VAL:HB	2.08	0.53
22:V:145:ASN:HA	22:V:150:VAL:HG21	1.90	0.53
74:VB:91:LEU:O	74:VB:96:LEU:HD13	2.09	0.53
49:WA:59:ARG:CD	49:WA:96:THR:HA	2.39	0.53
50:XA:153:SER:O	50:XA:156:VAL:HG22	2.09	0.53
76:XB:10:ARG:HH11	76:XB:11:ASN:HB2	1.74	0.53
76:XB:12:LYS:HA	76:XB:15:ARG:NH2	2.23	0.53
1:A:1796:C:C2	76:XB:92:ARG:HB3	2.44	0.53
1:A:559:C:H2'	1:A:560:U:H6	1.73	0.53
53:AB:25:PHE:CD1	53:AB:29:LEU:HD12	2.44	0.53
2:B:1341:U:H2'	2:B:1342:C:C6	2.44	0.53
2:B:1525:G:H3'	2:B:1526:U:C6	2.43	0.53
2:B:2423:U:O5'	2:B:2423:U:H6	1.92	0.53
2:B:2666:C:H1'	2:B:2691:A:C2	2.44	0.53
2:B:3030:G:H3'	2:B:3031:G:H8	1.74	0.53
2:B:495:G:H22	2:B:619:A:H1'	1.73	0.53
2:B:794:U:H2'	2:B:795:G:C8	2.43	0.53
54:BB:197:HIS:HE1	54:BB:209:HIS:CD2	2.28	0.53
30:DA:40:ARG:NH2	30:DA:46:LYS:HD3	2.23	0.53
56:DB:74:LYS:HG3	56:DB:96:SER:OG	2.09	0.53
82:DC:105:SER:HB2	82:DC:115:VAL:HA	1.91	0.53
5:E:31:THR:HA	5:E:172:VAL:HG13	1.91	0.53
57:EB:64:VAL:C	57:EB:66:SER:H	2.13	0.53
83:EC:6873:A:H5'	83:EC:6874:A:OP1	2.08	0.53
6:F:77:ILE:HG21	6:F:169:ILE:CD1	2.39	0.53
7:G:169:THR:HG23	7:G:170:PRO:HD2	1.90	0.53
61:IB:133:LYS:HD3	61:IB:134:THR:HG23	1.90	0.53
36:JA:35:GLN:HA	36:JA:35:GLN:NE2	2.23	0.53
37:KA:64:ILE:HG22	37:KA:65:ARG:N	2.24	0.53
1:A:990:C:H5"	64:LB:129:LYS:HB3	1.91	0.53
13:M:30:PRO:O	13:M:31:ARG:HB2	2.08	0.53
2:B:136:G:H4'	39:MA:95:PHE:CG	2.44	0.53
41:OA:45:ARG:NE	41:OA:47:TYR:HE2	2.07	0.53
67:OB:82:ASP:O	67:OB:83:GLN:C	2.47	0.53
17:Q:56:PRO:HG2	17:Q:72:GLY:HA3	1.91	0.53
22:V:100:THR:HA	22:V:120:GLU:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:10:GLU:O	48:VA:14:LYS:HG3	2.09	0.53
23:W:31:GLU:HA	23:W:34:GLN:NE2	2.23	0.53
75:WB:90:LYS:HE3	75:WB:104:ALA:HA	1.91	0.53
8:H:361:HIS:HB2	24:X:26:ARG:HH21	1.74	0.53
50:XA:73:VAL:O	50:XA:96:THR:HG22	2.08	0.53
25:Y:118:GLU:O	25:Y:122:GLN:HB2	2.10	0.53
51:YA:201:THR:HG21	51:YA:207:LEU:HD21	1.91	0.53
78:ZB:26:THR:HB	78:ZB:44:VAL:CG2	2.37	0.53
78:ZB:36:THR:C	78:ZB:38:ARG:N	2.63	0.53
1:A:1058:U:C5	1:A:1061:A:N1	2.77	0.52
1:A:1266:U:H2'	1:A:1267:G:O4'	2.08	0.52
1:A:1588:G:O2'	1:A:1589:C:H5'	2.09	0.52
1:A:538:A:H5'	1:A:543:C:H42	1.74	0.52
2:B:1166:G:H2'	2:B:1167:U:O4'	2.09	0.52
2:B:158:G:H2'	2:B:159:A:H8	1.74	0.52
2:B:1597:C:H5'	2:B:1696:A:H1'	1.91	0.52
2:B:160:G:H2'	2:B:161:G:H5"	1.90	0.52
2:B:1950:U:H3	2:B:2096:A:H61	1.57	0.52
2:B:280:U:H2'	2:B:282:G:OP2	2.09	0.52
2:B:667:C:H4'	22:V:166:LEU:HD11	1.90	0.52
82:DC:405:VAL:HG22	82:DC:434:VAL:HG21	1.91	0.52
82:DC:610:ASP:HB3	82:DC:615:ARG:CZ	2.40	0.52
82:DC:704:GLN:C	82:DC:707:PRO:HD2	2.29	0.52
5:E:191:VAL:HA	5:E:197:ASN:CG	2.29	0.52
32:FA:6:THR:HG22	32:FA:8:THR:N	2.17	0.52
7:G:178:LEU:N	7:G:178:LEU:HD23	2.24	0.52
7:G:294:GLY:HA3	7:G:303:LYS:HG3	1.91	0.52
7:G:312:VAL:C	7:G:314:TYR:H	2.12	0.52
60:HB:58:GLN:O	60:HB:65:TYR:HB2	2.09	0.52
10:J:136:GLU:HA	10:J:139:LYS:HD2	1.91	0.52
36:JA:79:VAL:O	36:JA:82:LEU:HB3	2.09	0.52
15:O:112:LEU:H	15:O:112:LEU:HD23	1.73	0.52
2:B:2139:A:N7	41:OA:3:LYS:HG2	2.24	0.52
2:B:64:G:OP1	19:S:174:ILE:HG22	2.09	0.52
52:ZA:225:LEU:HD21	71:SB:22:ARG:C	2.29	0.52
46:TA:104:LEU:HD12	46:TA:104:LEU:N	2.24	0.52
2:B:277:G:H5"	46:TA:49:GLY:HA2	1.89	0.52
73:UB:75:GLN:CA	73:UB:75:GLN:HE21	2.22	0.52
48:VA:106:ALA:HB3	48:VA:182:THR:HG21	1.90	0.52
23:W:72:GLU:HB3	23:W:74:ARG:NH1	2.24	0.52
49:WA:210:LEU:HB3	49:WA:222:LEU:HD11	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:179:ARG:HG2	50:XA:183:ARG:HD3	1.91	0.52
52:ZA:111:VAL:O	52:ZA:136:VAL:HA	2.08	0.52
1:A:1554:U:C2'	1:A:1555:A:H5'	2.38	0.52
1:A:894:U:H4'	64:LB:36:LYS:HZ1	1.75	0.52
53:AB:72:LEU:O	53:AB:76:ARG:HB2	2.09	0.52
2:B:1738:C:H2'	2:B:1739:U:H6	1.73	0.52
2:B:1787:A:C2'	2:B:1788:C:H5"	2.39	0.52
2:B:1943:C:H2'	2:B:1944:U:H5'	1.90	0.52
2:B:2189:U:O2'	2:B:2190:U:H5'	2.08	0.52
2:B:2318:U:H2'	2:B:2319:U:C6	2.44	0.52
2:B:2551:U:H3'	2:B:2551:U:OP1	2.10	0.52
2:B:2650:U:H2'	2:B:2651:G:C8	2.44	0.52
2:B:2683:U:H2'	2:B:2684:C:H6	1.71	0.52
2:B:2778:G:H2'	2:B:2779:A:H5'	1.90	0.52
2:B:3273:A:O2'	10:J:44:ALA:HB1	2.09	0.52
2:B:34:A:H2'	2:B:35:A:C8	2.43	0.52
2:B:896:A:N7	2:B:2134:G:H1'	2.24	0.52
80:BC:56:MET:HG2	80:BC:57:ASN:N	2.25	0.52
30:DA:50:ILE:HG23	30:DA:70:ILE:HD13	1.90	0.52
82:DC:597:VAL:HG13	82:DC:623:TYR:CD2	2.44	0.52
83:EC:6789:G:H3'	83:EC:6790:A:H5'	1.91	0.52
83:EC:6895:C:C2'	83:EC:6896:A:H5"	2.34	0.52
2:B:716:A:C5	32:FA:117:ARG:HG3	2.44	0.52
7:G:16:PHE:C	7:G:17:LEU:HD12	2.29	0.52
7:G:25:ILE:H	7:G:25:ILE:HD13	1.74	0.52
2:B:3138:U:H5"	7:G:274:SER:O	2.09	0.52
7:G:79:VAL:O	7:G:81:THR:HG23	2.09	0.52
8:H:206:LEU:HD21	8:H:227:THR:C	2.29	0.52
8:H:271:LYS:O	8:H:274:TYR:HB3	2.09	0.52
8:H:325:LEU:HD21	8:H:332:LYS:N	2.23	0.52
9:I:195:LEU:O	9:I:199:ILE:HG13	2.09	0.52
9:I:34:LYS:C	9:I:36:LEU:H	2.11	0.52
36:JA:19:ARG:HD2	36:JA:28:VAL:CG1	2.39	0.52
11:K:102:VAL:CG1	11:K:126:LEU:HB3	2.39	0.52
17:Q:48:PRO:HB2	39:MA:117:ALA:HB2	1.91	0.52
66:NB:90:VAL:HG12	66:NB:105:LEU:CD2	2.39	0.52
48:VA:178:ILE:C	48:VA:180:PRO:HD3	2.29	0.52
23:W:147:ALA:O	23:W:151:ARG:HB2	2.10	0.52
49:WA:17:ASN:HB3	49:WA:39:ASP:HB3	1.91	0.52
24:X:3:HIS:CE1	24:X:101:ALA:HB2	2.41	0.52
52:ZA:137:ILE:CG1	52:ZA:138:PRO:HD2	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:ZB:61:ARG:O	78:ZB:62:GLU:HB2	2.07	0.52
1:A:1424:A:H2'	1:A:1425:A:O4'	2.09	0.52
1:A:1753:A:H2'	1:A:1754:A:H8	1.75	0.52
1:A:1761:U:O5'	1:A:1761:U:O2	2.27	0.52
1:A:396:G:N2	1:A:399:A:H5"	2.11	0.52
1:A:525:A:H4'	74:VB:89:TYR:CB	2.39	0.52
1:A:628:G:C2'	1:A:629:U:H5"	2.38	0.52
1:A:868:G:H1	1:A:960:U:H3	1.57	0.52
2:B:1017:C:H2'	2:B:1017:C:O2	2.08	0.52
2:B:1494:U:H1'	2:B:1496:C:N4	2.23	0.52
2:B:2207:A:H5'	2:B:2208:A:H8	1.75	0.52
2:B:720:A:N3	2:B:720:A:H2'	2.22	0.52
2:B:763:G:H3'	2:B:764:U:C4'	2.39	0.52
2:B:820:A:H2	2:B:911:C:C4'	2.22	0.52
55:CB:131:GLN:O	55:CB:134:VAL:HB	2.09	0.52
4:D:2:G:O2'	4:D:3:U:H5'	2.09	0.52
82:DC:823:ARG:HH12	82:DC:828:MET:HB3	1.75	0.52
57:EB:24:PHE:O	57:EB:28:GLU:HG3	2.10	0.52
83:EC:6911:A:H2'	83:EC:6912:G:H8	1.75	0.52
6:F:126:LEU:HD22	6:F:150:LEU:HD13	1.92	0.52
6:F:48:ILE:HG13	6:F:48:ILE:O	2.09	0.52
2:B:695:C:OP2	8:H:115:HIS:NE2	2.42	0.52
60:HB:85:HIS:CD2	60:HB:88:PRO:HG3	2.44	0.52
9:I:35:ARG:HD2	9:I:35:ARG:H	1.74	0.52
2:B:3076:C:OP1	35:IA:65:LYS:HE2	2.09	0.52
11:K:224:ILE:HA	24:X:36:ILE:HG12	1.90	0.52
63:KB:70:LYS:NZ	63:KB:70:LYS:HB2	2.24	0.52
40:NA:74:LYS:HZ3	40:NA:80:PHE:HD2	1.56	0.52
15:O:21:ILE:HD13	15:O:33:ALA:HB1	1.91	0.52
69:QB:9:VAL:HG21	69:QB:136:ALA:HB1	1.91	0.52
18:R:65:LEU:HD13	18:R:65:LEU:H	1.72	0.52
70:RB:24:ILE:HB	70:RB:91:ILE:HB	1.91	0.52
2:B:1175:C:O2	20:T:87:MET:HG2	2.10	0.52
46:TA:72:LEU:O	46:TA:80:ARG:HA	2.09	0.52
71:SB:21:ASN:HB2	72:TB:67:GLY:CA	2.39	0.52
21:U:113:TYR:CD2	21:U:153:LYS:HB2	2.44	0.52
21:U:32:THR:HG22	21:U:33:ALA:N	2.23	0.52
2:B:1916:U:H5"	23:W:85:ARG:HG3	1.91	0.52
50:XA:178:ALA:O	50:XA:181:VAL:HG22	2.10	0.52
51:YA:129:THR:CB	51:YA:180:THR:HA	2.35	0.52
52:ZA:126:ARG:O	52:ZA:130:ILE:HD13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:168:ARG:HE	52:ZA:170:ILE:CD1	2.19	0.52
1:A:1192:C:H3'	1:A:1193:A:H8	1.74	0.52
1:A:25:C:H6	1:A:25:C:H5"	1.74	0.52
1:A:889:U:H2'	1:A:890:C:H6	1.75	0.52
1:A:934:C:C4	76:XB:95:ARG:HD2	2.45	0.52
27:AA:128:ARG:HH21	27:AA:131:SER:HB2	1.74	0.52
2:B:1649:U:H6	2:B:1649:U:O5'	1.92	0.52
2:B:191:U:H2'	2:B:192:C:H6	1.74	0.52
2:B:2140:U:O5'	2:B:2140:U:H6	1.93	0.52
2:B:2461:A:N6	2:B:2483:G:H21	2.06	0.52
2:B:3076:C:N4	2:B:3077:A:H62	2.08	0.52
2:B:3076:C:N4	2:B:3077:A:N6	2.57	0.52
2:B:374:A:H4'	2:B:375:A:H5'	1.91	0.52
2:B:49:A:H2'	19:S:187:ARG:NH2	2.25	0.52
2:B:847:A:H5'	63:KB:123:HIS:NE2	2.25	0.52
54:BB:99:PHE:CE1	54:BB:113:ARG:HG2	2.44	0.52
59:GB:37:LYS:CB	80:BC:33:ARG:HA	2.36	0.52
30:DA:116:LYS:HE3	30:DA:126:LEU:HD13	1.92	0.52
1:A:401:A:H2	56:DB:88:ARG:NH2	2.08	0.52
82:DC:728:VAL:HG11	82:DC:771:TYR:HB3	1.91	0.52
6:F:83:HIS:CE1	6:F:86:GLN:HB2	2.44	0.52
2:B:95:A:O3'	32:FA:34:MET:HB2	2.10	0.52
2:B:748:U:H5'	33:GA:29:TYR:O	2.08	0.52
10:J:138:GLN:O	10:J:141:VAL:HB	2.09	0.52
10:J:42:LEU:O	10:J:49:GLY:HA2	2.09	0.52
36:JA:96:ILE:HG22	36:JA:100:ILE:CG1	2.32	0.52
12:L:94:PHE:CE1	12:L:200:LEU:HD12	2.44	0.52
66:NB:50:GLU:N	66:NB:51:PRO:HD2	2.24	0.52
17:Q:67:ARG:HG2	32:FA:105:LEU:HD11	1.90	0.52
70:RB:40:ASN:HD21	70:RB:107:THR:HB	1.73	0.52
19:S:13:LYS:HD2	19:S:13:LYS:N	2.25	0.52
21:U:117:ILE:O	21:U:117:ILE:HG23	2.09	0.52
21:U:116:HIS:O	21:U:149:VAL:HG23	2.09	0.52
11:K:110:ARG:NE	22:V:3:ILE:HD11	2.24	0.52
22:V:65:SER:HB3	22:V:90:ASP:OD2	2.09	0.52
1:A:819:G:H22	23:W:173:ARG:NH2	2.07	0.52
49:WA:302:PHE:HA	49:WA:312:VAL:HG12	1.91	0.52
49:WA:59:ARG:NE	49:WA:96:THR:HA	2.25	0.52
4:D:100:C:OP2	24:X:52:LYS:HD2	2.09	0.52
50:XA:127:ARG:NH1	50:XA:151:SER:HA	2.24	0.52
50:XA:197:ILE:HG23	50:XA:198:MET:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:66:LYS:HD3	76:XB:68:TYR:OH	2.09	0.52
77:YB:2:VAL:HG22	77:YB:3:LEU:H	1.74	0.52
52:ZA:169:LEU:HD22	52:ZA:196:VAL:HG21	1.92	0.52
1:A:1132:A:H2'	1:A:1133:A:H8	1.74	0.52
1:A:12:U:H2'	1:A:13:C:H6	1.73	0.52
1:A:1565:C:H4'	68:PB:85:PHE:CD1	2.44	0.52
1:A:1579:U:HO2'	66:NB:139:GLN:HA	1.73	0.52
1:A:306:U:H2'	1:A:307:G:H8	1.74	0.52
1:A:384:G:H2'	1:A:385:A:C8	2.45	0.52
1:A:401:A:O2'	1:A:402:C:H4'	2.08	0.52
1:A:425:A:H5'	1:A:425:A:H8	1.75	0.52
1:A:608:U:H6	1:A:608:U:O5'	1.92	0.52
1:A:766:U:H1'	1:A:771:A:N1	2.25	0.52
1:A:893:U:H2'	1:A:894:U:H5'	1.91	0.52
1:A:951:A:C2'	1:A:952:A:H5'	2.39	0.52
2:B:2447:A:H61	2:B:2500:A:H2'	1.74	0.52
2:B:308:A:H2'	2:B:309:U:O4'	2.09	0.52
2:B:374:A:O2'	2:B:376:G:H8	1.93	0.52
2:B:806:A:N3	2:B:2812:C:O2'	2.36	0.52
2:B:839:C:H4'	2:B:1724:U:C2'	2.40	0.52
2:B:929:A:O2'	41:OA:50:GLY:HA2	2.10	0.52
2:B:937:G:H22	2:B:960:U:H5"	1.74	0.52
2:B:939:U:H2'	2:B:940:G:H8	1.74	0.52
2:B:995:U:C1'	2:B:2637:A:H5'	2.39	0.52
54:BB:94:ALA:C	54:BB:96:ASN:H	2.13	0.52
4:D:69:C:O2'	4:D:70:U:H5'	2.10	0.52
56:DB:123:GLY:O	56:DB:124:LEU:HB2	2.08	0.52
82:DC:278:LEU:HA	82:DC:281:ILE:HD12	1.91	0.52
82:DC:411:VAL:O	82:DC:428:ILE:HA	2.10	0.52
82:DC:605:ILE:HD13	82:DC:623:TYR:OH	2.09	0.52
57:EB:131:PHE:N	57:EB:132:PRO:HD2	2.24	0.52
8:H:207:VAL:HG22	8:H:249:ILE:HB	1.92	0.52
8:H:35:VAL:HG21	8:H:244:LEU:HD21	1.91	0.52
63:KB:46:THR:O	63:KB:50:ILE:HG13	2.08	0.52
13:M:90:MET:SD	13:M:181:VAL:HG22	2.50	0.52
2:B:1233:G:H4'	16:P:120:SER:HB3	1.90	0.52
68:PB:105:VAL:HG13	68:PB:106:GLU:N	2.24	0.52
43:QA:26:TRP:CZ3	43:QA:30:ARG:HD3	2.44	0.52
18:R:112:LEU:HD23	18:R:116:GLU:OE2	2.10	0.52
70:RB:102:ARG:O	70:RB:106:ILE:HG22	2.08	0.52
19:S:12:ARG:HD2	19:S:12:ARG:N	2.19	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:14:HIS:CE1	20:T:19:LEU:HD13	2.45	0.52
20:T:85:ARG:HH11	20:T:90:HIS:CD2	2.27	0.52
73:UB:13:ARG:O	73:UB:17:VAL:HG23	2.09	0.52
22:V:130:ARG:C	22:V:132:PRO:HD3	2.30	0.52
48:VA:178:ILE:O	48:VA:180:PRO:HD3	2.10	0.52
23:W:160:GLU:HA	23:W:163:ARG:HH21	1.75	0.52
1:A:853:G:OP1	23:W:176:ARG:HD2	2.10	0.52
49:WA:39:ASP:O	49:WA:40:LYS:HB2	2.10	0.52
49:WA:42:LEU:HD12	49:WA:61:PHE:HD2	1.73	0.52
49:WA:21:THR:HB	49:WA:69:GLN:O	2.10	0.52
50:XA:60:ALA:O	50:XA:63:ILE:HB	2.08	0.52
51:YA:115:ARG:HA	51:YA:115:ARG:NE	2.23	0.52
51:YA:48:VAL:HG11	51:YA:61:LEU:HD11	1.92	0.52
1:A:1042:G:H2'	1:A:1043:A:C5'	2.39	0.52
1:A:1180:C:H2'	1:A:1181:U:C6	2.45	0.52
2:B:1681:U:O4	26:Z:81:LYS:HD2	2.09	0.52
2:B:1856:C:C4	2:B:1857:C:H5	2.27	0.52
2:B:2982:A:C2'	2:B:2983:C:H5"	2.39	0.52
2:B:3393:U:H2'	2:B:3394:U:H6	1.73	0.52
2:B:827:A:H2'	2:B:828:A:H8	1.75	0.52
29:CA:141:TYR:HB3	39:MA:33:VAL:CG1	2.39	0.52
29:CA:91:ASN:HA	29:CA:95:ILE:HD11	1.92	0.52
55:CB:41:LYS:HZ1	55:CB:68:ILE:HA	1.74	0.52
4:D:64:A:H5'	4:D:65:G:H5"	1.90	0.52
30:DA:36:SER:HB3	30:DA:39:LEU:CG	2.40	0.52
83:EC:6930:G:C2'	83:EC:6931:U:H5"	2.39	0.52
33:GA:28:LYS:O	33:GA:29:TYR:CB	2.58	0.52
8:H:329:PRO:C	8:H:331:ALA:N	2.63	0.52
8:H:334:PHE:HE1	8:H:339:LEU:HB3	1.74	0.52
9:I:40:HIS:CE1	25:Y:69:LYS:HA	2.45	0.52
35:IA:46:THR:CG2	35:IA:91:SER:HB2	2.37	0.52
36:JA:43:ARG:HH11	36:JA:43:ARG:HG2	1.72	0.52
2:B:947:G:H5"	36:JA:55:ILE:HB	1.92	0.52
2:B:1858:A:H5'	38:LA:4:ARG:CG	2.40	0.52
1:A:1366:U:H5"	66:NB:33:GLY:HA2	1.92	0.52
15:O:16:LYS:HG2	15:O:130:VAL:CG1	2.40	0.52
3:C:111:A:C5	41:OA:29:VAL:HG21	2.44	0.52
16:P:114:ARG:CZ	16:P:121:PHE:HB3	2.39	0.52
19:S:50:ARG:HG3	19:S:51:LEU:N	2.25	0.52
20:T:23:VAL:HG11	20:T:84:LEU:HD11	1.91	0.52
51:YA:62:LYS:C	51:YA:64:ARG:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:64:ARG:HB2	64:LB:34:SER:OG	2.10	0.52
52:ZA:225:LEU:HD21	71:SB:22:ARG:HA	1.92	0.52
1:A:1081:A:H5"	1:A:1082:C:OP1	2.10	0.52
1:A:144:U:HO2'	1:A:145:A:H8	1.58	0.52
1:A:1573:A:H4'	1:A:1574:G:C5'	2.39	0.52
1:A:1199:G:O6	79:AC:31:ILE:HD11	2.10	0.52
2:B:1550:C:O2'	2:B:1551:C:H5'	2.10	0.52
2:B:1872:C:H5"	23:W:56:THR:CG2	2.39	0.52
2:B:1906:G:H21	2:B:1909:A:N6	2.02	0.52
2:B:1967:U:OP1	2:B:1968:G:H5"	2.09	0.52
2:B:209:A:H3'	8:H:162:THR:HB	1.91	0.52
2:B:2921:U:H2'	2:B:2923:U:H5"	1.89	0.52
2:B:674:G:H1'	8:H:117:GLU:HB2	1.92	0.52
54:BB:200:ARG:O	54:BB:206:ASP:HA	2.09	0.52
3:C:24:G:OP2	30:DA:13:ARG:HG2	2.10	0.52
30:DA:51:ARG:HH21	30:DA:52:ARG:HB3	1.75	0.52
82:DC:400:VAL:HG23	82:DC:454:ILE:HG22	1.92	0.52
83:EC:6781:U:H4'	83:EC:6782:C:C5	2.45	0.52
6:F:222:ALA:C	6:F:224:THR:H	2.12	0.52
6:F:32:LEU:CA	6:F:36:GLU:HG3	2.24	0.52
6:F:82:VAL:HG23	6:F:83:HIS:N	2.25	0.52
58:FB:193:LEU:HD23	58:FB:193:LEU:O	2.09	0.52
7:G:162:VAL:HG22	7:G:179:ALA:O	2.10	0.52
7:G:230:THR:OG1	7:G:247:ARG:HB3	2.10	0.52
2:B:2395:G:C4'	7:G:258:ALA:HB1	2.36	0.52
2:B:3312:U:C5'	7:G:25:ILE:HD12	2.33	0.52
59:GB:29:LYS:HE3	80:BC:44:PHE:CG	2.44	0.52
1:A:866:G:H5"	63:KB:3:ARG:H	1.74	0.52
64:LB:77:THR:O	64:LB:110:LEU:HD22	2.09	0.52
13:M:76:ASP:HA	13:M:79:ILE:HG12	1.91	0.52
69:QB:39:THR:O	69:QB:40:SER:HB2	2.09	0.52
18:R:128:ARG:O	18:R:131:VAL:HB	2.10	0.52
71:SB:53:TYR:CE1	71:SB:72:LEU:HD22	2.44	0.52
2:B:2741:C:H5"	46:TA:18:ARG:O	2.10	0.52
73:UB:140:LYS:HB3	73:UB:140:LYS:NZ	2.24	0.52
22:V:12:ARG:NH1	22:V:12:ARG:CB	2.73	0.52
48:VA:29:GLY:CA	48:VA:84:VAL:HG22	2.30	0.52
74:VB:110:GLN:O	74:VB:114:ARG:HG3	2.10	0.52
74:VB:37:LYS:HD2	74:VB:57:VAL:HG13	1.91	0.52
74:VB:91:LEU:HD12	74:VB:92:VAL:N	2.24	0.52
75:WB:62:VAL:HG13	75:WB:76:ALA:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:14:MET:SD	25:Y:58:GLN:HG2	2.50	0.52
25:Y:50:LYS:HD2	25:Y:92:ARG:NH1	2.25	0.52
52:ZA:168:ARG:HH21	52:ZA:170:ILE:HD11	1.73	0.52
52:ZA:41:LEU:CD1	52:ZA:68:ILE:HD13	2.39	0.52
1:A:1358:G:H2'	1:A:1359:C:H6	1.73	0.52
1:A:1388:A:N6	1:A:1409:G:H1'	2.24	0.52
1:A:843:U:H2'	1:A:844:A:H8	1.74	0.52
1:A:851:U:H2'	1:A:852:C:C5	2.45	0.52
49:WA:228:LYS:HD2	53:AB:224:ASP:OD1	2.08	0.52
2:B:1899:G:H5"	27:AA:20:GLY:O	2.10	0.52
2:B:1904:C:H2'	2:B:1905:G:O4'	2.10	0.52
2:B:2234:G:H2'	2:B:2235:C:H6	1.75	0.52
2:B:2284:C:H2'	2:B:2285:C:O4'	2.09	0.52
2:B:2302:G:H2'	2:B:2303:A:O4'	2.09	0.52
2:B:2467:G:O6	2:B:2479:C:H5"	2.10	0.52
2:B:2718:U:H2'	2:B:2719:U:O4'	2.10	0.52
2:B:3304:U:H3'	2:B:3305:A:H5'	1.91	0.52
2:B:3343:G:N2	2:B:3361:G:H2'	2.25	0.52
2:B:451:U:H2'	2:B:452:G:H8	1.73	0.52
54:BB:43:PRO:HB3	54:BB:81:THR:HB	1.91	0.52
29:CA:31:THR:HB	29:CA:33:ARG:NH2	2.25	0.52
30:DA:27:ARG:HD3	30:DA:75:ARG:O	2.10	0.52
6:F:114:SER:HB2	6:F:127:ALA:O	2.10	0.52
7:G:252:ILE:O	7:G:264:VAL:HG11	2.10	0.52
7:G:58:ARG:HA	7:G:357:LYS:HG3	1.92	0.52
9:I:155:THR:HB	9:I:179:ARG:HA	1.92	0.52
10:J:174:LEU:CD2	18:R:117:ARG:NH2	2.73	0.52
12:L:53:PRO:HD3	29:CA:32:PHE:CD2	2.45	0.52
12:L:69:LEU:HD12	12:L:69:LEU:N	2.22	0.52
13:M:4:ILE:HA	13:M:59:ASN:HA	1.92	0.52
65:MB:39:ALA:O	65:MB:43:ARG:HB2	2.08	0.52
14:N:86:HIS:HB3	14:N:139:ARG:CG	2.40	0.52
42:PA:38:PHE:HE1	42:PA:40:GLN:HG2	1.75	0.52
42:PA:24:THR:HG23	42:PA:44:LYS:HG3	1.91	0.52
18:R:60:LEU:C	18:R:62:GLN:H	2.13	0.52
71:SB:39:VAL:CG1	71:SB:45:ALA:HA	2.39	0.52
20:T:168:TYR:HA	20:T:171:LYS:HB3	1.92	0.52
48:VA:33:VAL:HG13	48:VA:34:SER:N	2.24	0.52
48:VA:63:ILE:O	48:VA:66:PHE:HB3	2.10	0.52
2:B:1690:C:H5"	23:W:58:HIS:O	2.10	0.52
51:YA:103:MET:HB3	51:YA:215:VAL:CG1	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:115:ARG:HA	51:YA:115:ARG:HE	1.74	0.52
51:YA:225:VAL:HA	51:YA:228:LEU:HB3	1.92	0.52
51:YA:31:ASP:O	51:YA:96:LEU:HD12	2.10	0.52
51:YA:54:LEU:O	51:YA:55:LYS:HB3	2.10	0.52
1:A:138:A:H2'	1:A:141:U:OP1	2.09	0.52
2:B:1523:U:C5'	29:CA:113:LEU:HD13	2.40	0.52
2:B:1585:C:H2'	2:B:1586:G:H8	1.75	0.52
2:B:1671:C:H2'	2:B:1672:U:C6	2.45	0.52
2:B:19:U:C1'	19:S:138:GLN:HE22	2.20	0.52
2:B:2643:A:H2'	2:B:2645:G:C5'	2.36	0.52
2:B:2930:A:H2'	2:B:2931:C:C6	2.44	0.52
2:B:3111:U:O4	2:B:3121:U:H5	1.93	0.52
2:B:3379:C:H2'	2:B:3380:U:O4'	2.09	0.52
2:B:362:U:H6	2:B:362:U:OP2	1.93	0.52
2:B:877:C:H2'	2:B:878:G:O4'	2.10	0.52
2:B:878:G:H1'	2:B:880:G:N2	2.25	0.52
28:BA:6:ASP:O	28:BA:8:PHE:N	2.43	0.52
54:BB:45:ILE:HG22	54:BB:81:THR:HG22	1.91	0.52
56:DB:137:ARG:HD2	56:DB:138:ALA:N	2.24	0.52
82:DC:453:ILE:H	82:DC:453:ILE:HD12	1.73	0.52
83:EC:6769:A:C3'	83:EC:6770:U:H5"	2.25	0.52
83:EC:6794:C:H41	83:EC:6797:U:H5	1.58	0.52
2:B:2157:G:C2	6:F:126:LEU:HD23	2.45	0.52
6:F:209:HIS:HD2	6:F:211:HIS:HB2	1.75	0.52
6:F:4:VAL:HG12	6:F:8:GLN:NE2	2.25	0.52
6:F:47:GLN:HA	6:F:84:THR:HG22	1.91	0.52
32:FA:104:THR:HG21	32:FA:112:ILE:CD1	2.40	0.52
59:GB:128:LEU:HD22	59:GB:133:HIS:CD2	2.44	0.52
59:GB:141:VAL:CG1	59:GB:143:ILE:HD12	2.32	0.52
9:I:164:LYS:HG2	9:I:180:PHE:HE1	1.75	0.52
36:JA:76:VAL:HG21	36:JA:94:ALA:HB1	1.92	0.52
39:MA:114:ARG:NH1	39:MA:114:ARG:HB3	2.24	0.52
17:Q:164:GLU:O	17:Q:165:SER:HB3	2.10	0.52
17:Q:43:ALA:HB2	17:Q:139:LEU:HD21	1.91	0.52
43:QA:23:LEU:HD11	43:QA:35:ILE:HG21	1.92	0.52
22:V:151:ARG:O	22:V:161:LYS:HD2	2.10	0.52
74:VB:128:LYS:O	74:VB:131:ARG:HB2	2.09	0.52
49:WA:66:HIS:ND1	49:WA:67:ILE:N	2.58	0.52
75:WB:88:ILE:HD12	75:WB:88:ILE:N	2.25	0.52
50:XA:22:THR:HG22	50:XA:169:SER:OG	2.09	0.52
9:I:17:GLN:HG3	25:Y:20:ARG:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:104:ASP:HA	51:YA:214:LYS:HG2	1.91	0.52
1:A:1175:U:H2'	1:A:1176:G:C8	2.45	0.52
1:A:1204:A:OP2	1:A:1205:C:H5	1.93	0.52
1:A:1200:G:H22	1:A:1208:A:N6	2.07	0.52
1:A:1712:A:C2'	1:A:1713:G:H5"	2.40	0.52
1:A:68:A:H5"	56:DB:160:ARG:HH12	1.75	0.52
53:AB:49:ILE:HD12	53:AB:49:ILE:N	2.24	0.52
2:B:1327:C:H2'	2:B:1328:C:C6	2.44	0.52
2:B:1370:G:OP1	32:FA:18:GLY:HA2	2.10	0.52
2:B:1558:A:O2'	2:B:1559:A:H5'	2.10	0.52
2:B:1648:A:H2'	2:B:1649:U:C6	2.45	0.52
2:B:2334:U:C2'	2:B:2335:G:H5"	2.39	0.52
2:B:2767:U:O2'	46:TA:31:GLY:HA3	2.10	0.52
2:B:2778:G:C2'	2:B:2779:A:H5"	2.39	0.52
2:B:2787:G:H4'	32:FA:58:MET:N	2.24	0.52
2:B:3206:C:H5"	2:B:3207:U:O4'	2.10	0.52
2:B:3379:C:O2'	2:B:3380:U:H5'	2.09	0.52
2:B:385:A:H2'	2:B:386:A:C8	2.45	0.52
2:B:545:U:H5"	2:B:547:G:N2	2.25	0.52
2:B:627:U:H2'	2:B:628:A:H8	1.73	0.52
2:B:718:G:N2	2:B:721:G:H1'	2.26	0.52
2:B:877:C:HO2'	2:B:880:G:H1'	1.74	0.52
54:BB:42:LEU:CD2	54:BB:46:VAL:HB	2.39	0.52
82:DC:152:LYS:HB2	82:DC:343:PRO:HG3	1.90	0.52
82:DC:239:LYS:HE2	82:DC:243:ARG:HD2	1.91	0.52
82:DC:718:LEU:HA	82:DC:722:PRO:CG	2.36	0.52
57:EB:63:PRO:O	57:EB:64:VAL:HB	2.10	0.52
83:EC:6772:G:C8	83:EC:6822:U:H5"	2.44	0.52
7:G:229:VAL:HG23	7:G:265:ALA:HB1	1.92	0.52
7:G:281:LYS:O	7:G:324:VAL:HG23	2.09	0.52
61:IB:108:PRO:HG2	61:IB:135:VAL:HA	1.92	0.52
10:J:165:LEU:HD11	10:J:171:PRO:CG	2.40	0.52
10:J:17:ALA:O	10:J:18:LEU:HD13	2.10	0.52
63:KB:136:PRO:HG2	63:KB:139:TRP:HB2	1.91	0.52
69:QB:123:ARG:HD2	69:QB:124:ILE:O	2.10	0.52
69:QB:86:ARG:HB3	69:QB:89:ARG:HB2	1.91	0.52
20:T:14:HIS:HD1	20:T:19:LEU:HD22	1.75	0.52
20:T:76:PRO:O	20:T:79:ILE:HB	2.10	0.52
22:V:16:ARG:NH1	22:V:55:SER:HB3	2.07	0.52
49:WA:130:THR:HB	49:WA:144:LEU:O	2.10	0.52
49:WA:20:VAL:HG11	49:WA:304:GLY:HA3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:39:ALA:HB1	75:WB:71:ILE:CA	2.40	0.52
75:WB:41:ILE:HG13	75:WB:42:LEU:H	1.73	0.52
51:YA:66:VAL:HB	51:YA:86:LEU:HB2	1.92	0.52
1:A:1389:C:H6	67:OB:28:PHE:CD2	2.29	0.51
1:A:1203:A:H5'	1:A:1457:C:H41	1.76	0.51
1:A:1724:U:H2'	1:A:1725:U:C5	2.45	0.51
1:A:36:C:H2'	1:A:37:U:H6	1.74	0.51
1:A:399:A:OP1	58:FB:27:PHE:HD1	1.93	0.51
53:AB:176:LEU:HD23	53:AB:176:LEU:H	1.76	0.51
2:B:1233:G:H2'	2:B:1234:G:C8	2.45	0.51
2:B:1234:G:H5'	16:P:118:ASP:O	2.09	0.51
2:B:1257:C:N4	2:B:1261:G:H22	2.01	0.51
2:B:1481:A:H4'	2:B:1481:A:OP1	2.10	0.51
2:B:1722:U:H2'	2:B:1723:A:H5'	1.92	0.51
2:B:1833:G:C2'	2:B:1834:U:H5'	2.40	0.51
2:B:208:C:H2'	2:B:209:A:O4'	2.10	0.51
2:B:3251:U:H2'	2:B:3252:G:H8	1.74	0.51
2:B:3305:A:H2'	2:B:3306:U:O4'	2.09	0.51
2:B:349:A:C3'	2:B:350:C:H5"	2.31	0.51
2:B:544:C:H2'	2:B:547:G:N2	2.24	0.51
2:B:638:C:H2'	2:B:639:G:C8	2.44	0.51
2:B:677:A:H2'	2:B:785:G:C6	2.45	0.51
54:BB:192:ILE:HD13	54:BB:242:LYS:O	2.10	0.51
29:CA:24:LEU:HD12	29:CA:24:LEU:N	2.25	0.51
4:D:41:G:C4'	4:D:44:C:H42	2.23	0.51
1:A:155:U:H4'	56:DB:59:GLN:N	2.25	0.51
5:E:32:VAL:HG22	5:E:33:GLU:H	1.75	0.51
2:B:1709:C:H4'	31:EA:15:ARG:CZ	2.40	0.51
2:B:1369:A:H5'	32:FA:21:ARG:HH22	1.75	0.51
58:FB:39:GLY:O	58:FB:61:GLU:HB3	2.10	0.51
2:B:1887:A:H4'	7:G:228:GLY:N	2.25	0.51
7:G:347:SER:HB3	7:G:350:ALA:HB3	1.92	0.51
59:GB:41:GLU:O	59:GB:45:ILE:HG12	2.10	0.51
8:H:109:TRP:CD1	17:Q:26:PHE:HE1	2.29	0.51
2:B:1730:G:O6	34:HA:28:LYS:N	2.43	0.51
35:IA:37:LYS:HG2	35:IA:49:VAL:HB	1.92	0.51
61:IB:86:ILE:HD12	61:IB:86:ILE:O	2.09	0.51
36:JA:102:ALA:HA	36:JA:105:ARG:HD3	1.91	0.51
11:K:60:ARG:HE	11:K:60:ARG:CA	2.24	0.51
63:KB:75:LEU:HB3	63:KB:81:ALA:HA	1.92	0.51
12:L:78:PHE:O	12:L:79:GLN:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:34:GLN:HB3	39:MA:38:ARG:NH2	2.24	0.51
66:NB:115:THR:HA	66:NB:118:ILE:O	2.10	0.51
66:NB:36:ILE:HG12	66:NB:49:TYR:CE1	2.44	0.51
1:A:1312:A:OP1	67:OB:2:GLY:HA3	2.09	0.51
68:PB:73:MET:HB3	68:PB:101:LEU:CD1	2.39	0.51
2:B:77:A:H5'	17:Q:100:ARG:CZ	2.39	0.51
17:Q:145:PHE:HE2	39:MA:118:ILE:HD13	1.75	0.51
1:A:1477:G:H5'	69:QB:45:MET:HB2	1.92	0.51
21:U:83:TRP:N	21:U:84:PRO:HD3	2.25	0.51
2:B:1258:U:H4'	48:VA:42:ARG:NH1	2.25	0.51
74:VB:41:ARG:NH1	74:VB:41:ARG:HB2	2.25	0.51
49:WA:135:THR:C	49:WA:137:LYS:H	2.12	0.51
49:WA:22:SER:HB2	49:WA:70:ASP:HA	1.92	0.51
51:YA:117:TRP:NE1	51:YA:152:ARG:NE	2.54	0.51
52:ZA:227:PRO:HA	52:ZA:230:TRP:CD2	2.45	0.51
52:ZA:234:PRO:O	52:ZA:235:LEU:HB2	2.10	0.51
1:A:1057:U:N3	1:A:1060:U:H5"	2.24	0.51
1:A:1611:A:H2'	1:A:1612:U:O4'	2.09	0.51
1:A:347:G:OP1	61:IB:77:SER:HB3	2.09	0.51
1:A:478:A:C4'	59:GB:127:VAL:HG21	2.40	0.51
79:AC:19:ARG:HD2	79:AC:32:ARG:CZ	2.40	0.51
2:B:1146:C:H4'	2:B:1331:U:C5	2.45	0.51
2:B:1221:A:C8	48:VA:60:ARG:HG3	2.45	0.51
2:B:1508:C:H2'	2:B:1509:A:O4'	2.09	0.51
2:B:116:A:H62	2:B:153:U:H1'	1.74	0.51
2:B:1684:U:H2'	2:B:1685:C:C6	2.44	0.51
2:B:1708:C:H2'	2:B:1709:C:C6	2.46	0.51
2:B:2372:A:C3'	2:B:2373:A:C5'	2.87	0.51
2:B:2612:U:H1'	2:B:2803:A:N3	2.26	0.51
2:B:298:U:H5"	2:B:299:G:H8	1.74	0.51
2:B:3117:C:C2'	2:B:3118:C:H5'	2.41	0.51
2:B:536:U:O2'	2:B:537:A:H5'	2.10	0.51
2:B:545:U:H5"	2:B:547:G:H21	1.74	0.51
2:B:971:G:H2'	2:B:972:A:C8	2.45	0.51
54:BB:102:VAL:HG22	54:BB:103:TYR:N	2.25	0.51
55:CB:88:PRO:HB2	55:CB:91:GLU:HB3	1.91	0.51
56:DB:142:ARG:NH2	56:DB:152:ASP:HA	2.25	0.51
82:DC:244:LEU:O	82:DC:273:PHE:HB2	2.09	0.51
82:DC:427:PHE:HB3	82:DC:429:LYS:HD3	1.92	0.51
82:DC:662:SER:OG	82:DC:705:ILE:HB	2.11	0.51
82:DC:675:PRO:HG3	82:DC:714:TYR:CD1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:737:GLU:CB	82:DC:764:PRO:HB3	2.26	0.51
83:EC:6850:C:H2'	83:EC:6851:G:C8	2.45	0.51
6:F:102:LEU:HD11	6:F:107:VAL:HG12	1.91	0.51
6:F:128:ARG:C	6:F:169:ILE:HD13	2.30	0.51
6:F:181:LYS:HE2	6:F:184:ARG:HE	1.75	0.51
53:AB:20:GLU:HA	60:HB:61:TRP:NE1	2.25	0.51
36:JA:89:THR:HG21	36:JA:115:LEU:O	2.10	0.51
1:A:974:A:H4'	63:KB:112:LYS:HE2	1.92	0.51
38:LA:102:LYS:HZ2	38:LA:106:LYS:HZ2	1.58	0.51
2:B:2901:G:H5'	13:M:175:PHE:HZ	1.74	0.51
13:M:4:ILE:HA	13:M:59:ASN:H	1.75	0.51
55:CB:37:GLN:NE2	66:NB:53:LEU:HB2	2.25	0.51
41:OA:24:ARG:O	41:OA:25:ARG:HB3	2.10	0.51
68:PB:138:THR:HA	68:PB:141:THR:OG1	2.11	0.51
44:RA:124:LYS:O	44:RA:126:LYS:HE2	2.09	0.51
70:RB:40:ASN:O	70:RB:44:ASN:HB2	2.10	0.51
46:TA:26:THR:CG2	46:TA:27:GLN:H	2.17	0.51
72:TB:6:VAL:HG13	72:TB:29:PRO:HD2	1.92	0.51
47:UA:55:TRP:NE1	47:UA:66:GLY:HA3	2.24	0.51
22:V:170:ARG:HG3	22:V:171:LYS:HG3	1.92	0.51
22:V:51:ALA:CB	22:V:84:VAL:HG21	2.41	0.51
48:VA:5:ARG:CA	48:VA:8:LYS:HD3	2.37	0.51
23:W:138:LEU:CG	23:W:142:ILE:HD11	2.40	0.51
49:WA:136:ILE:N	49:WA:136:ILE:HD13	2.15	0.51
18:R:55:ARG:CD	24:X:70:THR:HB	2.34	0.51
50:XA:76:ILE:HG22	50:XA:77:SER:H	1.75	0.51
2:B:1687:U:C2	26:Z:70:LYS:HD2	2.45	0.51
1:A:1175:U:H2'	1:A:1176:G:H8	1.76	0.51
1:A:382:C:H2'	1:A:383:G:H8	1.75	0.51
1:A:560:U:H2'	1:A:561:G:H8	1.75	0.51
1:A:63:G:O4'	1:A:170:U:H5	1.93	0.51
1:A:798:C:H2'	1:A:799:A:C8	2.45	0.51
1:A:811:A:C2	1:A:858:G:H1'	2.44	0.51
27:AA:68:GLU:N	27:AA:68:GLU:CD	2.64	0.51
2:B:1187:C:H2'	2:B:1188:U:H5'	1.92	0.51
2:B:1216:C:H3'	2:B:1217:A:H5"	1.90	0.51
2:B:1269:U:H1'	2:B:1272:C:H5	1.76	0.51
2:B:1588:A:H3'	2:B:1589:A:H5'	1.92	0.51
2:B:160:G:H2'	2:B:161:G:C5'	2.40	0.51
2:B:2208:A:H4'	2:B:2209:U:OP1	2.10	0.51
2:B:26:A:H2	2:B:328:U:O2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:650:C:H2'	2:B:651:G:H8	1.72	0.51
2:B:784:A:C2	22:V:93:ILE:HG22	2.45	0.51
2:B:860:G:H2'	2:B:2133:U:H1'	1.92	0.51
2:B:861:C:H2'	2:B:862:U:C6	2.45	0.51
2:B:93:C:O2'	32:FA:55:LYS:HE3	2.10	0.51
82:DC:22:MET:HE2	82:DC:125:ALA:HA	1.90	0.51
82:DC:612:PHE:O	82:DC:631:ARG:HG2	2.09	0.51
2:B:1638:A:H5'	31:EA:15:ARG:HE	1.74	0.51
31:EA:21:LYS:HB3	31:EA:46:ILE:HD12	1.93	0.51
57:EB:142:TYR:C	57:EB:143:LEU:HD22	2.31	0.51
57:EB:15:GLU:O	57:EB:19:GLN:HB2	2.10	0.51
60:HB:28:ASN:N	60:HB:40:LEU:HD21	2.25	0.51
61:IB:93:TYR:HB2	61:IB:100:TYR:CZ	2.46	0.51
10:J:102:ASN:ND2	10:J:105:TYR:HB2	2.25	0.51
10:J:172:HIS:HB3	37:KA:43:PHE:CD2	2.38	0.51
10:J:176:PHE:N	10:J:176:PHE:CD1	2.78	0.51
10:J:72:ASN:ND2	10:J:159:LEU:HB3	2.24	0.51
12:L:69:LEU:H	12:L:69:LEU:CD1	2.18	0.51
38:LA:81:CYS:O	38:LA:82:ALA:HB3	2.11	0.51
2:B:3186:A:H2	13:M:57:VAL:HA	1.76	0.51
13:M:71:VAL:O	13:M:74:LEU:HB3	2.10	0.51
39:MA:64:GLU:HA	39:MA:67:ARG:CD	2.29	0.51
14:N:182:LEU:O	14:N:186:GLU:HG3	2.09	0.51
14:N:23:ASN:HD21	14:N:96:VAL:HG21	1.75	0.51
66:NB:82:ARG:HH11	66:NB:82:ARG:HG3	1.76	0.51
42:PA:7:ASP:HB3	42:PA:10:GLN:CB	2.38	0.51
68:PB:52:VAL:HG22	68:PB:68:ARG:HH21	1.74	0.51
17:Q:49:ARG:HD3	39:MA:116:TYR:HE2	1.75	0.51
69:QB:119:LYS:HB2	69:QB:119:LYS:HZ3	1.75	0.51
18:R:80:THR:O	18:R:84:LYS:HB2	2.09	0.51
70:RB:28:SER:O	70:RB:87:HIS:HB2	2.10	0.51
46:TA:95:GLY:O	46:TA:96:GLU:HB2	2.10	0.51
72:TB:80:ASN:HD21	72:TB:124:LYS:HG2	1.74	0.51
22:V:12:ARG:HB2	22:V:12:ARG:NH1	2.25	0.51
51:YA:34:ALA:HB3	51:YA:41:ARG:HA	1.93	0.51
52:ZA:188:LEU:HD13	52:ZA:196:VAL:HG11	1.92	0.51
52:ZA:101:VAL:HG11	52:ZA:211:LEU:HD12	1.93	0.51
78:ZB:12:VAL:HG23	78:ZB:52:ASP:O	2.10	0.51
1:A:1025:A:H2'	1:A:1027:A:OP1	2.10	0.51
1:A:623:A:C2	1:A:1105:C:H1'	2.45	0.51
1:A:1144:U:H2'	1:A:1145:U:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1632:C:H2'	1:A:1633:A:C8	2.45	0.51
1:A:329:G:H5"	58:FB:98:LYS:HB3	1.91	0.51
1:A:997:G:H2'	1:A:998:A:H5"	1.92	0.51
2:B:1408:G:H2'	2:B:1409:G:H8	1.74	0.51
2:B:1462:A:H2'	2:B:1463:U:C6	2.46	0.51
2:B:1540:U:O2'	2:B:1541:G:H5'	2.10	0.51
2:B:1643:A:H5'	38:LA:68:THR:CG2	2.40	0.51
2:B:1718:G:O2'	2:B:1719:G:H5'	2.11	0.51
2:B:1838:G:H4'	2:B:1839:A:C4	2.45	0.51
2:B:2076:G:C2'	2:B:2077:U:H5"	2.39	0.51
2:B:2636:A:H5"	2:B:2637:A:C5'	2.41	0.51
2:B:3089:C:H2'	2:B:3090:U:O4'	2.10	0.51
2:B:3184:A:H2	2:B:3187:A:N3	2.08	0.51
2:B:562:C:H4'	24:X:71:LYS:NZ	2.25	0.51
2:B:58:G:OP1	19:S:154:PRO:HB2	2.09	0.51
2:B:59:G:H2'	3:C:33:A:O2'	2.10	0.51
54:BB:42:LEU:HD23	54:BB:46:VAL:HB	1.93	0.51
29:CA:115:ARG:HH11	29:CA:117:ASN:HD21	1.57	0.51
4:D:103:A:H2'	4:D:104:A:C8	2.46	0.51
4:D:35:C:H2'	4:D:36:C:H5'	1.92	0.51
2:B:198:A:H4'	30:DA:61:GLY:C	2.31	0.51
56:DB:147:LEU:O	56:DB:151:ASP:HB2	2.11	0.51
56:DB:179:VAL:HG13	56:DB:179:VAL:O	2.11	0.51
82:DC:164:LEU:HD21	82:DC:174:LEU:CD2	2.36	0.51
82:DC:415:GLY:HA3	82:DC:425:ASP:HB3	1.92	0.51
2:B:2256:A:C1'	82:DC:707:PRO:HG3	2.40	0.51
31:EA:4:PHE:O	31:EA:9:LYS:HE3	2.10	0.51
57:EB:132:PRO:HB2	57:EB:161:GLN:HG3	1.92	0.51
57:EB:91:ILE:HD11	57:EB:129:LEU:O	2.11	0.51
83:EC:6773:G:O2'	83:EC:6776:A:H5'	2.10	0.51
6:F:202:VAL:HA	6:F:211:HIS:O	2.11	0.51
6:F:32:LEU:CB	6:F:163:ARG:HH12	2.23	0.51
34:HA:54:SER:HB2	38:LA:94:LEU:HD13	1.92	0.51
12:L:82:LEU:HD22	12:L:178:ALA:CB	2.40	0.51
14:N:87:LEU:HG	14:N:138:VAL:HG22	1.92	0.51
68:PB:90:ASN:O	68:PB:95:GLY:HA2	2.10	0.51
17:Q:181:GLY:O	17:Q:184:GLU:HB2	2.11	0.51
66:NB:35:PRO:HD3	69:QB:8:ASP:HA	1.92	0.51
19:S:15:GLN:HG3	40:NA:52:PRO:CD	2.36	0.51
71:SB:35:ASN:HB3	71:SB:50:TYR:HB3	1.91	0.51
20:T:156:LEU:O	20:T:159:LYS:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:11:LEU:HD11	72:TB:37:PHE:CE2	2.46	0.51
21:U:76:PHE:HB2	21:U:78:VAL:HG23	1.92	0.51
74:VB:19:ALA:CA	74:VB:77:ASN:HD22	2.23	0.51
74:VB:19:ALA:HA	74:VB:77:ASN:ND2	2.26	0.51
75:WB:55:PRO:HB3	75:WB:88:ILE:HG21	1.91	0.51
24:X:158:LYS:HD3	24:X:158:LYS:N	2.24	0.51
50:XA:16:LEU:HB3	50:XA:172:LEU:HD21	1.92	0.51
1:A:773:C:H4'	1:A:774:A:H5'	1.93	0.51
53:AB:196:ARG:HH11	53:AB:196:ARG:HG3	1.74	0.51
2:B:1329:U:O5'	2:B:1329:U:H6	1.94	0.51
2:B:1722:U:H6	2:B:1722:U:O5'	1.94	0.51
2:B:1714:A:N6	2:B:1730:G:H1'	2.25	0.51
2:B:1923:C:O2'	2:B:1924:U:H5'	2.10	0.51
2:B:2333:C:H2'	2:B:2334:U:C6	2.46	0.51
2:B:2489:C:O2	5:E:27:ASN:HB2	2.10	0.51
2:B:2754:G:C3'	2:B:2755:C:H5"	2.41	0.51
2:B:2948:C:O2'	2:B:2949:U:H5'	2.10	0.51
2:B:3249:C:O2'	2:B:3250:U:H5'	2.11	0.51
2:B:95:A:H5"	32:FA:34:MET:HB3	1.91	0.51
28:BA:49:ILE:N	28:BA:49:ILE:HD13	2.26	0.51
54:BB:206:ASP:H	54:BB:222:LEU:HD22	1.75	0.51
4:D:97:A:H2'	4:D:98:C:C6	2.46	0.51
82:DC:380:LEU:HD23	82:DC:381:TYR:H	1.75	0.51
2:B:2486:A:N6	5:E:101:LYS:HZ1	2.05	0.51
7:G:229:VAL:CG1	7:G:248:LYS:HA	2.40	0.51
7:G:339:ARG:NH1	7:G:342:LEU:HD21	2.26	0.51
7:G:63:PRO:HG3	7:G:68:HIS:CE1	2.45	0.51
8:H:179:LEU:O	8:H:183:LYS:HB2	2.10	0.51
8:H:23:PRO:CG	8:H:258:LEU:HG	2.40	0.51
8:H:64:SER:HA	8:H:75:PRO:HA	1.90	0.51
61:IB:67:ARG:O	61:IB:67:ARG:HG2	2.10	0.51
10:J:157:GLN:CD	10:J:157:GLN:H	2.12	0.51
12:L:151:VAL:HB	12:L:177:TYR:CA	2.39	0.51
12:L:78:PHE:C	12:L:80:TYR:N	2.64	0.51
55:CB:225:ARG:HB3	64:LB:58:TYR:CE2	2.46	0.51
13:M:146:LEU:HD23	13:M:157:ASN:HB3	1.92	0.51
39:MA:34:GLN:HB3	39:MA:38:ARG:HH12	1.75	0.51
40:NA:45:ARG:CB	40:NA:45:ARG:HH11	2.16	0.51
66:NB:34:SER:CB	69:QB:7:ARG:HB3	2.36	0.51
19:S:42:PRO:HG2	19:S:53:TYR:CE1	2.44	0.51
2:B:2355:G:OP1	21:U:141:SER:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:48:LEU:HD13	21:U:92:GLN:HB2	1.92	0.51
47:UA:39:CYS:SG	47:UA:41:PHE:HB2	2.51	0.51
49:WA:117:LYS:H	49:WA:117:LYS:HD2	1.76	0.51
49:WA:244:ALA:O	49:WA:252:LEU:HD12	2.10	0.51
75:WB:100:ILE:HD13	75:WB:101:TYR:N	2.25	0.51
75:WB:80:LEU:HD13	75:WB:101:TYR:CE2	2.46	0.51
50:XA:182:LEU:O	50:XA:188:LEU:HB2	2.11	0.51
50:XA:90:ALA:HB1	50:XA:97:PRO:HD3	1.91	0.51
24:X:26:ARG:HB2	25:Y:148:PRO:HB3	1.92	0.51
26:Z:37:LEU:O	26:Z:41:ILE:HG13	2.11	0.51
1:A:812:A:H5'	1:A:814:A:O4'	2.10	0.51
1:A:816:G:H2'	1:A:817:A:H8	1.76	0.51
2:B:1633:C:H2'	2:B:1634:G:H8	1.75	0.51
2:B:1939:G:H2'	2:B:1940:G:C8	2.46	0.51
2:B:198:A:H2'	2:B:199:A:H5'	1.93	0.51
2:B:2427:U:H2'	2:B:2428:U:C6	2.45	0.51
2:B:2467:G:N2	2:B:2488:A:H61	2.09	0.51
2:B:2666:C:H1'	2:B:2691:A:N3	2.26	0.51
2:B:2853:A:C5'	14:N:63:GLU:HB2	2.40	0.51
2:B:2895:G:H2'	2:B:2896:A:C5'	2.39	0.51
2:B:3081:C:H2'	2:B:3082:C:H6	1.75	0.51
2:B:3160:U:H2'	2:B:3161:C:C6	2.46	0.51
2:B:3269:U:O2	2:B:3269:U:H5'	2.10	0.51
2:B:684:G:O5'	2:B:684:G:H8	1.93	0.51
2:B:858:A:O2'	2:B:859:G:H5'	2.10	0.51
2:B:869:G:H2'	2:B:870:G:H8	1.73	0.51
2:B:933:A:H3'	2:B:934:G:H5'	1.93	0.51
2:B:40:A:H61	2:B:963:G:H21	1.59	0.51
2:B:995:U:H2'	2:B:996:A:H8	1.76	0.51
54:BB:241:GLY:O	54:BB:244:ILE:HG12	2.11	0.51
2:B:1831:U:OP1	29:CA:92:LYS:HD2	2.11	0.51
55:CB:142:PRO:HG2	55:CB:170:GLN:NE2	2.25	0.51
3:C:74:U:OP2	30:DA:76:LEU:HB2	2.10	0.51
56:DB:85:ARG:O	56:DB:87:ARG:NH1	2.44	0.51
82:DC:819:VAL:O	82:DC:823:ARG:HG3	2.11	0.51
31:EA:114:VAL:O	31:EA:118:PHE:HB2	2.10	0.51
7:G:198:HIS:CA	7:G:201:LYS:HB3	2.40	0.51
59:GB:119:ALA:O	59:GB:124:HIS:HB3	2.11	0.51
34:HA:30:THR:CB	34:HA:91:SER:HB2	2.39	0.51
9:I:146:LEU:HD12	9:I:147:ASP:N	2.26	0.51
9:I:211:LEU:HD23	9:I:215:ASP:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:9:SER:O	9:I:12:TYR:HB3	2.10	0.51
63:KB:66:ILE:HG23	63:KB:67:THR:HG23	1.93	0.51
13:M:106:LYS:HB3	13:M:111:PHE:CE2	2.43	0.51
65:MB:60:LEU:HD11	65:MB:88:GLU:HG2	1.92	0.51
14:N:58:GLU:HG3	14:N:129:VAL:CG2	2.41	0.51
14:N:171:TRP:HB3	14:N:174:THR:OG1	2.11	0.51
40:NA:34:SER:O	40:NA:38:LYS:HB2	2.10	0.51
66:NB:10:PHE:HA	66:NB:18:ALA:O	2.11	0.51
55:CB:29:ILE:HD12	66:NB:53:LEU:HD11	1.93	0.51
66:NB:50:GLU:HB3	66:NB:54:LEU:HD13	1.91	0.51
2:B:1233:G:N2	16:P:128:VAL:CG1	2.73	0.51
42:PA:46:ARG:HE	42:PA:47:GLY:N	2.09	0.51
68:PB:52:VAL:O	68:PB:54:LEU:HD13	2.10	0.51
69:QB:70:GLN:HA	69:QB:122:ARG:O	2.10	0.51
72:TB:90:THR:HG22	72:TB:94:LEU:HD12	1.93	0.51
21:U:64:ASN:HB2	21:U:80:LYS:HD3	1.92	0.51
74:VB:19:ALA:HB1	74:VB:77:ASN:HB2	1.93	0.51
74:VB:91:LEU:CD1	74:VB:92:VAL:HG23	2.41	0.51
11:K:75:TYR:HB2	25:Y:141:VAL:CG2	2.40	0.51
51:YA:48:VAL:CG1	51:YA:61:LEU:HD11	2.40	0.51
26:Z:38:ILE:HA	26:Z:41:ILE:CD1	2.41	0.51
1:A:1314:U:H4'	1:A:1315:U:H5	1.75	0.51
1:A:139:C:C5	1:A:176:C:H1'	2.46	0.51
1:A:1522:U:H4'	1:A:1523:G:OP2	2.11	0.51
1:A:1545:A:H2	1:A:1566:U:O2	1.94	0.51
1:A:1667:A:H2'	1:A:1668:G:C8	2.45	0.51
2:B:1132:C:O2'	2:B:1133:A:H5'	2.10	0.51
2:B:117:U:OP1	12:L:141:ALA:HB2	2.11	0.51
2:B:1711:C:H5"	31:EA:38:PHE:CB	2.26	0.51
2:B:1870:C:H2'	2:B:1871:U:O4'	2.10	0.51
2:B:215:G:OP1	30:DA:12:ARG:HD2	2.11	0.51
2:B:2273:G:H1'	2:B:2311:G:N1	2.26	0.51
2:B:2356:A:H4'	21:U:138:LYS:O	2.10	0.51
2:B:271:C:H2'	2:B:272:G:O4'	2.10	0.51
2:B:269:G:H22	2:B:294:U:H2'	1.75	0.51
2:B:2994:A:H2'	2:B:2995:A:O4'	2.09	0.51
2:B:741:U:H4'	22:V:74:GLU:O	2.11	0.51
54:BB:221:ARG:H	54:BB:224:ASN:HD21	1.57	0.51
54:BB:52:LEU:HB3	54:BB:54:TYR:HD2	1.76	0.51
3:C:152:G:H5'	12:L:59:GLN:HE21	1.75	0.51
2:B:407:A:C8	3:C:17:A:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:82:U:C6	3:C:83:C:H5	2.28	0.51
29:CA:107:VAL:HG21	29:CA:124:VAL:HB	1.93	0.51
55:CB:200:ASN:HB3	55:CB:205:SER:HB3	1.92	0.51
55:CB:59:VAL:O	55:CB:60:ASP:HB2	2.11	0.51
56:DB:76:LEU:CD1	56:DB:92:ARG:HB3	2.29	0.51
82:DC:335:LEU:O	82:DC:338:ILE:HG22	2.11	0.51
31:EA:75:VAL:HG11	31:EA:80:LEU:HD21	1.91	0.51
57:EB:156:SER:OG	57:EB:186:PRO:HB2	2.10	0.51
6:F:209:HIS:CD2	6:F:211:HIS:HB2	2.46	0.51
58:FB:107:THR:OG1	58:FB:108:PRO:HD3	2.11	0.51
58:FB:188:GLU:HG2	61:IB:13:PHE:CD2	2.45	0.51
58:FB:9:HIS:O	58:FB:10:LYS:HG2	2.11	0.51
7:G:89:VAL:HG23	7:G:159:ARG:O	2.11	0.51
7:G:73:VAL:HG21	27:AA:90:GLY:HA3	1.92	0.51
8:H:142:VAL:HB	8:H:145:ILE:HG23	1.92	0.51
9:I:131:LEU:HD11	9:I:174:PRO:HA	1.93	0.51
9:I:244:HIS:C	9:I:248:ARG:HG3	2.31	0.51
61:IB:142:VAL:HG12	61:IB:143:SER:N	2.21	0.51
61:IB:43:LYS:HB3	61:IB:43:LYS:NZ	2.26	0.51
10:J:101:PHE:CZ	10:J:137:ASP:HB3	2.46	0.51
2:B:987:U:C4'	11:K:122:ALA:HA	2.40	0.51
63:KB:55:ARG:O	63:KB:59:GLY:HA2	2.11	0.51
2:B:1857:C:H2'	38:LA:4:ARG:HG2	1.91	0.51
13:M:128:VAL:HG13	13:M:134:ILE:HD13	1.93	0.51
40:NA:58:ILE:HG13	40:NA:59:ASP:N	2.25	0.51
68:PB:131:LEU:HD23	68:PB:145:ARG:NH2	2.26	0.51
17:Q:57:VAL:H	17:Q:112:ASN:HD21	1.58	0.51
69:QB:57:ARG:HD2	69:QB:61:VAL:CG2	2.41	0.51
18:R:115:PHE:O	18:R:119:GLN:HG3	2.10	0.51
70:RB:85:ARG:HH11	70:RB:85:ARG:HG2	1.76	0.51
19:S:136:ASP:OD2	19:S:138:GLN:HG2	2.10	0.51
19:S:146:ALA:HB3	39:MA:100:VAL:HA	1.92	0.51
45:SA:13:LEU:CD2	45:SA:16:LYS:HD3	2.40	0.51
20:T:197:LEU:HD23	20:T:197:LEU:O	2.10	0.51
72:TB:29:PRO:HB2	72:TB:58:SER:CB	2.38	0.51
21:U:112:LEU:HD11	21:U:150:VAL:HG13	1.92	0.51
73:UB:126:LYS:HA	73:UB:131:SER:HA	1.93	0.51
48:VA:97:LYS:NZ	48:VA:101:VAL:HG21	2.25	0.51
74:VB:49:LYS:O	74:VB:50:ALA:CB	2.59	0.51
50:XA:64:ILE:N	50:XA:64:ILE:HD12	2.19	0.51
25:Y:31:LEU:O	25:Y:32:LYS:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:80:VAL:HG13	25:Y:80:VAL:O	2.11	0.51
51:YA:68:VAL:HG22	51:YA:69:CYS:N	2.25	0.51
77:YB:18:LYS:O	77:YB:29:ARG:NH2	2.44	0.51
1:A:1048:G:H5"	77:YB:69:GLY:HA2	1.93	0.51
1:A:1120:U:H2'	1:A:1121:C:C6	2.46	0.51
1:A:115:G:H22	1:A:302:U:H1'	1.76	0.51
1:A:1159:C:O5'	1:A:1160:A:H5'	2.11	0.51
2:B:117:U:O2	2:B:119:U:H2'	2.11	0.51
2:B:1235:U:H5	16:P:132:ILE:HG23	1.76	0.51
2:B:1306:G:C6	20:T:62:THR:HA	2.45	0.51
2:B:1627:U:O2'	2:B:1628:C:H5'	2.11	0.51
2:B:2931:C:H2'	2:B:2932:U:H5'	1.91	0.51
2:B:3028:G:C5'	82:DC:28:VAL:HG11	2.36	0.51
2:B:508:U:H2'	2:B:509:U:C6	2.45	0.51
2:B:715:A:N6	2:B:782:U:H5'	2.25	0.51
80:BC:49:LEU:HD11	80:BC:55:ARG:CG	2.38	0.51
55:CB:168:VAL:O	55:CB:172:ILE:HG13	2.11	0.51
55:CB:43:PHE:C	55:CB:45:LYS:H	2.14	0.51
4:D:7:G:OP1	9:I:33:ARG:HD2	2.11	0.51
56:DB:88:ARG:HB3	56:DB:91:GLU:HB2	1.92	0.51
82:DC:388:THR:HB	82:DC:393:ARG:O	2.10	0.51
82:DC:723:LYS:HD3	82:DC:804:LEU:O	2.11	0.51
57:EB:173:TYR:CD1	57:EB:181:ILE:HD13	2.46	0.51
57:EB:39:ARG:N	57:EB:40:PRO:CD	2.74	0.51
22:V:173:GLU:HA	32:FA:51:GLY:O	2.09	0.51
1:A:1676:U:H5"	58:FB:58:LEU:HD21	1.91	0.51
7:G:92:TYR:CE2	7:G:101:SER:HB3	2.46	0.51
59:GB:3:ARG:HD2	59:GB:3:ARG:H	1.74	0.51
59:GB:87:SER:OG	59:GB:90:LYS:HB2	2.10	0.51
8:H:36:HIS:O	8:H:40:THR:HG23	2.10	0.51
8:H:60:THR:CG2	8:H:61:SER:H	2.23	0.51
34:HA:26:GLY:O	34:HA:30:THR:HG23	2.11	0.51
9:I:236:LEU:HD12	9:I:239:ILE:CD1	2.31	0.51
2:B:3059:G:H5'	35:IA:17:HIS:NE2	2.26	0.51
12:L:140:VAL:HG21	19:S:3:ALA:HB2	1.92	0.51
65:MB:83:MET:O	65:MB:116:LEU:HD22	2.11	0.51
14:N:145:LYS:O	14:N:149:VAL:HG23	2.10	0.51
66:NB:45:ARG:HG3	66:NB:49:TYR:CE2	2.46	0.51
42:PA:40:GLN:NE2	42:PA:57:ASN:HA	2.25	0.51
69:QB:7:ARG:NH2	69:QB:67:MET:HA	2.26	0.51
70:RB:44:ASN:HD21	70:RB:107:THR:HG21	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:26:LEU:CD2	70:RB:114:VAL:HG13	2.40	0.51
20:T:91:LYS:CA	20:T:96:LYS:HE3	2.41	0.51
72:TB:118:ARG:HH11	72:TB:118:ARG:HB3	1.76	0.51
2:B:839:C:N4	47:UA:4:ARG:NH2	2.59	0.51
1:A:633:U:OP2	73:UB:10:ASN:HB2	2.11	0.51
8:H:301:PRO:O	22:V:39:ARG:HD3	2.11	0.51
23:W:152:GLU:HG3	23:W:155:LEU:HD23	1.92	0.51
24:X:12:ARG:O	24:X:13:ARG:CB	2.59	0.51
50:XA:24:LEU:HD11	50:XA:41:ARG:HH12	1.76	0.51
50:XA:6:THR:O	50:XA:6:THR:HG22	2.09	0.51
78:ZB:36:THR:O	78:ZB:38:ARG:N	2.43	0.51
1:A:1498:G:C3'	1:A:1499:G:H5"	2.40	0.51
1:A:1607:G:O2'	1:A:1608:U:H5'	2.11	0.51
1:A:230:C:C3'	1:A:231:U:H5"	2.41	0.51
1:A:971:A:C2	1:A:972:G:H1'	2.46	0.51
53:AB:211:PRO:HD3	67:OB:20:TYR:CE1	2.46	0.51
53:AB:70:THR:HA	53:AB:84:ILE:HG21	1.92	0.51
2:B:1845:G:O2'	41:OA:5:THR:HG22	2.10	0.51
2:B:2186:U:HO2'	2:B:2315:G:H8	1.59	0.51
2:B:2258:U:H2'	2:B:2259:A:H8	1.76	0.51
2:B:2577:C:H2'	2:B:2578:U:C6	2.46	0.51
2:B:256:G:O2'	2:B:257:U:H5'	2.11	0.51
2:B:2638:C:H2'	2:B:2639:G:C5'	2.41	0.51
2:B:2858:U:H2'	2:B:2859:U:N1	2.26	0.51
2:B:705:A:C6	32:FA:113:LEU:HD23	2.46	0.51
2:B:773:G:H2'	2:B:774:G:C8	2.45	0.51
2:B:896:A:O2'	2:B:897:U:H5"	2.10	0.51
54:BB:126:VAL:HG21	54:BB:155:LYS:O	2.11	0.51
54:BB:205:PHE:HB3	54:BB:221:ARG:HD2	1.91	0.51
3:C:133:G:H2'	3:C:134:G:C8	2.45	0.51
2:B:1524:A:OP1	29:CA:111:ASN:HA	2.11	0.51
55:CB:168:VAL:CG1	55:CB:172:ILE:HD11	2.41	0.51
56:DB:2:LYS:O	56:DB:108:VAL:HA	2.10	0.51
82:DC:204:PRO:HB3	82:DC:209:VAL:CB	2.41	0.51
31:EA:7:ALA:HB1	31:EA:89:VAL:HG11	1.92	0.51
57:EB:42:GLN:N	57:EB:42:GLN:OE1	2.44	0.51
6:F:22:LEU:HD12	6:F:22:LEU:H	1.75	0.51
2:B:1073:U:O2'	33:GA:49:GLY:HA3	2.11	0.51
8:H:62:ALA:O	8:H:75:PRO:HB2	2.11	0.51
9:I:110:LEU:CD1	9:I:171:LEU:HG	2.41	0.51
61:IB:75:VAL:HB	61:IB:121:ASP:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:43:LEU:HD21	10:J:85:ILE:HD12	1.92	0.51
11:K:85:PHE:CZ	11:K:114:GLY:HA3	2.46	0.51
1:A:866:G:OP1	63:KB:2:GLY:HA2	2.10	0.51
12:L:78:PHE:C	12:L:80:TYR:H	2.14	0.51
14:N:152:LEU:HA	14:N:155:ALA:HB3	1.92	0.51
17:Q:131:LYS:HD3	17:Q:133:PRO:HD3	1.91	0.51
17:Q:76:THR:OG1	17:Q:79:GLU:HG3	2.11	0.51
18:R:49:PRO:CG	18:R:50:LYS:H	2.22	0.51
19:S:103:GLU:HA	19:S:106:VAL:CG2	2.41	0.51
19:S:199:LEU:HB3	19:S:203:ARG:NE	2.25	0.51
72:TB:17:ALA:HB2	72:TB:25:VAL:HG21	1.93	0.51
72:TB:55:ASP:OD2	72:TB:59:GLY:HA2	2.11	0.51
72:TB:71:LYS:HE2	72:TB:73:GLY:HA3	1.91	0.51
21:U:131:ARG:HG3	21:U:131:ARG:HH11	1.76	0.51
47:UA:46:THR:HB	47:UA:58:SER:H	1.75	0.51
49:WA:59:ARG:HD3	49:WA:96:THR:HA	1.93	0.51
49:WA:68:VAL:HG22	49:WA:84:SER:HB2	1.92	0.51
50:XA:122:ILE:HG13	50:XA:144:ILE:HB	1.92	0.51
52:ZA:203:LYS:HD3	52:ZA:205:ARG:HB2	1.93	0.51
52:ZA:38:VAL:CG2	52:ZA:39:THR:H	2.17	0.51
1:A:1011:G:H2'	1:A:1012:U:H5	1.76	0.51
1:A:913:G:C8	2:B:2208:A:H5'	2.46	0.51
53:AB:7:LYS:HE2	53:AB:11:LEU:HD12	1.93	0.51
2:B:1138:U:H2'	2:B:1139:G:O4'	2.11	0.51
2:B:129:U:H2'	2:B:130:A:H8	1.76	0.51
2:B:1596:C:H2'	2:B:1597:C:O4'	2.11	0.51
2:B:2565:U:H2'	2:B:2566:C:C6	2.45	0.51
2:B:2638:C:O2'	2:B:2639:G:H5'	2.11	0.51
2:B:2930:A:H2'	2:B:2931:C:H6	1.75	0.51
2:B:35:A:H2'	2:B:36:C:H6	1.76	0.51
2:B:370:U:H4'	2:B:404:G:H5'	1.92	0.51
2:B:863:C:H2'	2:B:864:G:H5'	1.92	0.51
54:BB:29:PRO:O	54:BB:31:PRO:HD3	2.11	0.51
4:D:65:G:H2'	4:D:66:A:H8	1.75	0.51
30:DA:36:SER:HB3	30:DA:39:LEU:HG	1.92	0.51
82:DC:327:PHE:CD1	82:DC:327:PHE:C	2.84	0.51
82:DC:39:LEU:HD13	82:DC:331:ALA:HA	1.93	0.51
7:G:287:LYS:HE3	7:G:290:ASP:HB2	1.93	0.51
59:GB:109:LEU:HB3	59:GB:144:PRO:O	2.10	0.51
1:A:768:C:N1	59:GB:143:ILE:HD13	2.26	0.51
8:H:190:GLY:O	8:H:193:LYS:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:32:HIS:CE1	60:HB:35:ILE:HD12	2.39	0.51
35:IA:50:ARG:O	35:IA:92:TYR:HD1	1.93	0.51
10:J:13:GLU:OE1	36:JA:88:HIS:HA	2.10	0.51
36:JA:94:ALA:HB3	36:JA:119:VAL:HG22	1.93	0.51
11:K:31:ALA:CA	11:K:34:LYS:HB2	2.41	0.51
12:L:160:ILE:O	12:L:164:VAL:HG13	2.11	0.51
2:B:1656:A:C5'	38:LA:16:ARG:HH12	2.24	0.51
38:LA:58:ARG:O	38:LA:61:GLN:HG2	2.11	0.51
1:A:1453:G:H4'	65:MB:81:ARG:HD3	1.91	0.51
66:NB:9:THR:HG21	66:NB:87:LYS:O	2.11	0.51
68:PB:90:ASN:H	68:PB:97:ASP:HA	1.75	0.51
69:QB:7:ARG:HH12	69:QB:67:MET:HA	1.76	0.51
18:R:94:TRP:CZ2	18:R:100:ALA:HA	2.46	0.51
20:T:140:LYS:HE3	20:T:140:LYS:CA	2.38	0.51
20:T:19:LEU:HD23	20:T:80:PHE:CE2	2.46	0.51
21:U:168:LEU:HB3	21:U:172:GLN:CG	2.41	0.51
22:V:48:VAL:O	22:V:51:ALA:HB3	2.11	0.51
23:W:89:LEU:CD1	23:W:94:VAL:HG22	2.41	0.51
24:X:115:ARG:HD2	24:X:115:ARG:H	1.75	0.51
50:XA:179:ARG:HG2	50:XA:183:ARG:CD	2.40	0.51
51:YA:195:LYS:O	51:YA:199:ASN:HB2	2.11	0.51
52:ZA:162:CYS:HB3	52:ZA:213:ALA:HB2	1.92	0.51
1:A:1428:G:H21	70:RB:74:GLU:CG	2.24	0.50
1:A:1518:C:H2'	1:A:1519:U:O4'	2.12	0.50
1:A:1624:C:H2'	1:A:1625:C:C6	2.46	0.50
1:A:1785:U:P	64:LB:133:ARG:HH22	2.34	0.50
1:A:559:C:H2'	1:A:560:U:C6	2.45	0.50
1:A:916:U:H2'	1:A:917:U:O4'	2.10	0.50
79:AC:36:LEU:HD12	79:AC:37:ASN:N	2.26	0.50
2:B:1090:G:H2'	2:B:1091:A:C8	2.46	0.50
2:B:1162:U:H4'	36:JA:57:TYR:CE1	2.47	0.50
2:B:1363:A:OP1	11:K:160:ARG:HD3	2.11	0.50
2:B:149:U:H4'	19:S:56:LYS:HD3	1.93	0.50
2:B:1738:C:H2'	2:B:1739:U:C6	2.46	0.50
2:B:2079:G:C2'	2:B:2080:C:H5'	2.41	0.50
2:B:2210:G:H22	2:B:2236:G:H1'	1.62	0.50
2:B:2420:C:O2'	2:B:2421:U:H5'	2.11	0.50
2:B:247:C:C2'	2:B:248:U:H4'	2.37	0.50
2:B:2491:A:N3	5:E:207:LYS:HD2	2.27	0.50
2:B:2933:A:OP1	2:B:3015:G:H4'	2.11	0.50
2:B:3262:U:H2'	2:B:3263:G:H4'	1.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:887:G:H2'	2:B:888:A:H8	1.76	0.50
55:CB:41:LYS:HD2	55:CB:69:PHE:CZ	2.46	0.50
56:DB:94:ARG:HG2	56:DB:94:ARG:HH11	1.76	0.50
56:DB:98:ARG:HD3	56:DB:99:GLY:H	1.76	0.50
82:DC:274:ASN:O	82:DC:278:LEU:HB2	2.11	0.50
82:DC:598:SER:O	82:DC:601:ILE:HB	2.10	0.50
82:DC:675:PRO:HG3	82:DC:714:TYR:CG	2.46	0.50
82:DC:83:ASP:O	82:DC:87:LYS:HG3	2.11	0.50
82:DC:559:PRO:HB2	86:DC:903:SO1:H201	1.92	0.50
5:E:65:ILE:HA	5:E:109:ALA:O	2.11	0.50
57:EB:35:LYS:HA	57:EB:38:LEU:HB3	1.92	0.50
6:F:90:ALA:HA	6:F:101:VAL:O	2.11	0.50
58:FB:37:LYS:HE2	58:FB:95:THR:OG1	2.11	0.50
2:B:1886:A:O2'	7:G:226:PHE:HB3	2.10	0.50
2:B:2939:G:OP2	7:G:2:SER:HA	2.11	0.50
59:GB:99:LEU:CD2	59:GB:103:ASP:HB3	2.41	0.50
8:H:205:PRO:CB	8:H:247:PHE:HD2	2.24	0.50
60:HB:29:GLN:HB3	60:HB:39:ASN:CB	2.35	0.50
10:J:152:THR:O	10:J:155:LEU:HD23	2.12	0.50
37:KA:71:VAL:HG13	37:KA:81:VAL:CG1	2.41	0.50
38:LA:102:LYS:HZ2	38:LA:106:LYS:NZ	2.09	0.50
38:LA:80:ARG:CB	38:LA:85:VAL:HG22	2.42	0.50
38:LA:81:CYS:H	38:LA:84:CYS:HB3	1.75	0.50
64:LB:83:ILE:HD11	64:LB:98:GLY:HA3	1.92	0.50
14:N:206:LEU:O	14:N:210:ILE:HG13	2.10	0.50
14:N:48:LEU:HG	14:N:145:LYS:CG	2.41	0.50
66:NB:86:ALA:HB2	66:NB:116:LEU:HD12	1.93	0.50
52:ZA:110:HIS:CE1	71:SB:11:LEU:HD22	2.35	0.50
49:WA:278:PHE:CE1	49:WA:286:GLU:HB2	2.46	0.50
50:XA:12:GLU:HG3	50:XA:13:ASP:N	2.25	0.50
52:ZA:157:LYS:HA	52:ZA:169:LEU:O	2.11	0.50
1:A:1097:U:O4	52:ZA:201:ASN:HB2	2.11	0.50
52:ZA:59:HIS:CE1	52:ZA:236:PRO:HB2	2.34	0.50
1:A:1003:A:H4'	1:A:1004:U:H5"	1.92	0.50
1:A:1048:G:O2'	1:A:1049:U:H5'	2.10	0.50
1:A:1260:U:H2'	1:A:1261:G:C8	2.46	0.50
1:A:1566:U:H2'	1:A:1567:U:H6	1.76	0.50
1:A:310:C:H2'	1:A:311:U:O4'	2.11	0.50
1:A:476:U:H5'	1:A:538:A:H61	1.76	0.50
1:A:618:U:O2	1:A:1142:A:H5'	2.12	0.50
27:AA:30:GLY:HA3	27:AA:66:LYS:HE2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1049:C:H2'	2:B:1050:U:C6	2.47	0.50
2:B:1525:G:H2'	2:B:1526:U:C6	2.45	0.50
2:B:1625:A:H5'	2:B:1643:A:C5	2.46	0.50
2:B:1676:A:O2'	2:B:1771:C:H4'	2.11	0.50
2:B:1949:G:OP1	23:W:104:ARG:HD2	2.12	0.50
2:B:2413:A:H2'	2:B:2414:G:H8	1.75	0.50
2:B:2649:A:H4'	2:B:2696:A:O4'	2.12	0.50
2:B:2880:U:H2'	2:B:2881:C:O4'	2.11	0.50
2:B:3090:U:H2'	2:B:3091:A:H8	1.76	0.50
2:B:518:G:H2'	2:B:520:U:H5'	1.92	0.50
2:B:68:C:O3'	19:S:177:GLY:HA2	2.10	0.50
2:B:44:U:O2	2:B:92:G:H5"	2.11	0.50
2:B:977:C:H2'	2:B:978:G:O4'	2.10	0.50
3:C:48:A:H4'	39:MA:45:LYS:HZ1	1.74	0.50
29:CA:82:LEU:HD21	29:CA:135:ILE:HG21	1.92	0.50
82:DC:584:ASN:HB3	82:DC:694:HIS:H	1.76	0.50
82:DC:668:GLN:O	82:DC:672:LYS:HB2	2.12	0.50
31:EA:110:ALA:O	31:EA:114:VAL:HG23	2.11	0.50
2:B:3150:A:H5'	7:G:130:PHE:H	1.76	0.50
59:GB:179:ARG:HA	59:GB:182:GLU:HG2	1.94	0.50
34:HA:28:LYS:O	34:HA:32:LYS:HG3	2.11	0.50
9:I:107:ARG:HD2	9:I:248:ARG:CZ	2.41	0.50
37:KA:64:ILE:CD1	37:KA:64:ILE:H	2.24	0.50
12:L:153:ILE:HG21	12:L:163:VAL:HG23	1.92	0.50
12:L:76:ALA:HB1	12:L:234:GLY:HA3	1.93	0.50
12:L:61:GLN:O	12:L:65:LEU:HD23	2.12	0.50
64:LB:114:ARG:H	76:XB:59:TYR:HE2	1.58	0.50
64:LB:87:GLY:CA	64:LB:120:PRO:HG2	2.41	0.50
13:M:36:LYS:CD	13:M:74:LEU:HD21	2.41	0.50
14:N:208:ASN:O	14:N:212:GLU:HG2	2.11	0.50
68:PB:133:VAL:HG22	68:PB:133:VAL:O	2.12	0.50
68:PB:28:ILE:O	68:PB:28:ILE:HD13	2.11	0.50
17:Q:31:LYS:O	17:Q:35:ARG:HB2	2.12	0.50
19:S:128:LYS:HD2	19:S:130:PHE:HZ	1.71	0.50
19:S:117:ASN:O	19:S:133:ILE:HG22	2.11	0.50
71:SB:32:VAL:HG11	71:SB:60:ARG:HD2	1.93	0.50
21:U:168:LEU:HA	21:U:172:GLN:OE1	2.11	0.50
73:UB:85:ALA:HA	73:UB:122:PHE:O	2.11	0.50
73:UB:135:LEU:HD21	73:UB:142:LYS:N	2.26	0.50
48:VA:156:VAL:HG13	48:VA:158:VAL:HG23	1.94	0.50
23:W:119:LEU:HD21	23:W:123:LEU:HD12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:39:ALA:HB1	75:WB:71:ILE:N	2.26	0.50
75:WB:58:ARG:HD3	75:WB:103:ARG:NH1	2.26	0.50
50:XA:109:ASN:O	50:XA:112:THR:HG22	2.11	0.50
52:ZA:130:ILE:O	52:ZA:134:LEU:HD22	2.11	0.50
1:A:1299:G:P	1:A:1299:G:H8	2.33	0.50
1:A:1562:G:C2'	1:A:1563:C:H5'	2.40	0.50
1:A:1610:G:OP1	66:NB:75:VAL:HG11	2.11	0.50
1:A:1734:U:H2'	1:A:1735:U:O4'	2.12	0.50
1:A:195:G:C2'	1:A:196:G:H5"	2.40	0.50
1:A:868:G:H21	63:KB:48:SER:CB	2.25	0.50
2:B:1402:C:O2'	2:B:1403:C:H5'	2.11	0.50
2:B:1500:G:H2'	2:B:1501:U:O4'	2.11	0.50
2:B:1797:A:H2'	2:B:1798:A:H8	1.75	0.50
2:B:2275:A:C2	2:B:2276:G:H1'	2.47	0.50
2:B:24:G:H2'	2:B:25:U:C5'	2.28	0.50
2:B:3035:A:H1'	13:M:121:LYS:C	2.32	0.50
2:B:414:U:H2'	2:B:415:G:C8	2.46	0.50
2:B:562:C:H5"	24:X:71:LYS:CG	2.41	0.50
2:B:830:A:H61	2:B:864:G:H1'	1.75	0.50
2:B:970:A:H2'	2:B:971:G:H8	1.76	0.50
3:C:141:C:H4'	19:S:110:ALA:CB	2.41	0.50
4:D:104:A:H2'	4:D:105:C:H5'	1.91	0.50
82:DC:158:ASN:CG	82:DC:159:LYS:N	2.65	0.50
82:DC:483:PHE:O	82:DC:484:SER:HB3	2.12	0.50
82:DC:697:ALA:CA	82:DC:700:ARG:HE	2.24	0.50
31:EA:13:VAL:CG1	31:EA:19:ALA:HA	2.41	0.50
31:EA:99:GLU:O	31:EA:102:GLU:HB3	2.12	0.50
59:GB:29:LYS:HA	80:BC:40:TYR:HE2	1.72	0.50
59:GB:99:LEU:HD22	59:GB:103:ASP:HB3	1.93	0.50
9:I:58:LYS:NZ	9:I:158:ARG:HH12	2.08	0.50
9:I:248:ARG:HG2	9:I:248:ARG:HH11	1.76	0.50
61:IB:54:ILE:O	61:IB:55:ASP:HB3	2.11	0.50
8:H:327:LEU:HD11	11:K:165:ASP:HA	1.94	0.50
63:KB:16:ILE:HD11	63:KB:62:GLN:OE1	2.11	0.50
63:KB:89:TYR:CE1	63:KB:93:LYS:HD2	2.47	0.50
51:YA:72:ASP:HB2	64:LB:114:ARG:NH1	2.27	0.50
3:C:79:A:H5"	39:MA:43:LYS:HE3	1.93	0.50
14:N:70:ILE:CG2	14:N:71:CYS:N	2.75	0.50
66:NB:73:GLY:O	66:NB:77:GLN:HG3	2.11	0.50
67:OB:24:LEU:HD23	67:OB:34:LEU:HD13	1.93	0.50
17:Q:47:ALA:CB	17:Q:48:PRO:CD	2.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:119:LYS:HB2	69:QB:119:LYS:NZ	2.26	0.50
68:PB:45:LEU:HD13	69:QB:36:ILE:HG21	1.93	0.50
69:QB:57:ARG:O	69:QB:61:VAL:HG23	2.12	0.50
19:S:41:ARG:NH1	19:S:53:TYR:OH	2.44	0.50
19:S:73:ARG:HH12	19:S:86:ASN:HB3	1.76	0.50
73:UB:13:ARG:O	73:UB:16:ARG:HB2	2.10	0.50
1:A:610:G:OP2	73:UB:19:ARG:HD3	2.11	0.50
2:B:728:G:H21	22:V:138:LEU:HB2	1.76	0.50
2:B:1282:G:H4'	48:VA:82:GLY:N	2.27	0.50
74:VB:19:ALA:HA	74:VB:77:ASN:HD22	1.75	0.50
74:VB:14:SER:CA	74:VB:21:LYS:HG3	2.39	0.50
74:VB:89:TYR:O	74:VB:93:ARG:HB2	2.11	0.50
75:WB:56:THR:H	75:WB:103:ARG:HD2	1.76	0.50
51:YA:170:GLU:O	51:YA:174:LYS:HG3	2.11	0.50
77:YB:30:SER:HB2	77:YB:48:SER:OG	2.11	0.50
1:A:101:U:H2'	1:A:102:U:C5'	2.37	0.50
1:A:1147:A:OP1	52:ZA:91:ARG:HB2	2.11	0.50
1:A:12:U:O2'	1:A:1300:A:H1'	2.12	0.50
1:A:1513:G:O4'	1:A:1518:C:H1'	2.12	0.50
1:A:160:C:H2'	1:A:161:U:O4'	2.10	0.50
1:A:1718:G:O2'	1:A:1719:A:H5'	2.12	0.50
1:A:1777:G:H2'	1:A:1778:G:O4'	2.11	0.50
1:A:202:A:O2'	1:A:203:U:H5'	2.11	0.50
1:A:20:G:H2'	1:A:21:U:H5'	1.93	0.50
1:A:314:C:O2	1:A:354:C:N3	2.44	0.50
1:A:738:G:H2'	1:A:739:G:H5'	1.93	0.50
53:AB:137:VAL:HB	53:AB:185:LYS:HB3	1.93	0.50
53:AB:141:LYS:CE	53:AB:180:GLY:HA3	2.41	0.50
53:AB:8:LYS:HE2	70:RB:61:LYS:HD3	1.93	0.50
79:AC:13:ARG:NH1	79:AC:13:ARG:HB2	2.26	0.50
70:RB:65:ILE:HB	79:AC:43:PHE:CZ	2.46	0.50
2:B:1008:U:H2'	2:B:1009:A:H8	1.76	0.50
2:B:1275:C:OP1	48:VA:110:ARG:HG3	2.12	0.50
2:B:1302:A:H61	2:B:2832:C:H1'	1.77	0.50
2:B:1337:A:H2'	2:B:1338:C:C6	2.46	0.50
2:B:1784:G:H2'	2:B:1785:U:O4'	2.11	0.50
2:B:1841:A:C3'	2:B:1842:A:H5"	2.42	0.50
2:B:1943:C:C2'	2:B:1944:U:H5'	2.42	0.50
2:B:2118:C:H2'	2:B:2119:A:O4'	2.11	0.50
2:B:3359:A:N3	2:B:3359:A:H2'	2.26	0.50
2:B:549:U:H2'	2:B:550:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:846:A:C2	2:B:847:A:N7	2.80	0.50
29:CA:49:LYS:HA	39:MA:79:ASP:OD2	2.11	0.50
29:CA:96:LYS:NZ	29:CA:100:LYS:HD2	2.26	0.50
4:D:35:C:C2'	4:D:36:C:H5'	2.42	0.50
4:D:3:U:H2'	4:D:4:U:C6	2.47	0.50
56:DB:137:ARG:HG3	56:DB:137:ARG:NH2	2.25	0.50
56:DB:64:LYS:O	56:DB:67:VAL:HG22	2.11	0.50
73:UB:141:GLU:HB2	82:DC:427:PHE:CZ	2.46	0.50
82:DC:426:LEU:CD1	82:DC:428:ILE:HG13	2.41	0.50
2:B:2555:G:H22	31:EA:135:ARG:HB2	1.77	0.50
83:EC:6930:G:H3'	83:EC:6931:U:H5"	1.94	0.50
58:FB:121:LEU:N	58:FB:121:LEU:HD22	2.26	0.50
58:FB:88:ASN:O	58:FB:91:VAL:HB	2.11	0.50
2:B:3046:A:C2	7:G:327:CYS:SG	3.04	0.50
34:HA:42:ILE:HG22	34:HA:91:SER:HA	1.93	0.50
35:IA:14:ILE:CD1	35:IA:16:LEU:HD13	2.41	0.50
61:IB:148:LYS:HA	61:IB:151:LYS:HB3	1.94	0.50
2:B:1412:G:P	36:JA:98:HIS:HA	2.52	0.50
11:K:60:ARG:NH2	11:K:63:ILE:HD13	2.27	0.50
12:L:94:PHE:HE1	12:L:150:LEU:HD12	1.77	0.50
14:N:54:SER:CB	14:N:163:GLN:HE22	2.23	0.50
40:NA:9:ILE:HA	40:NA:13:LYS:CG	2.37	0.50
2:B:361:A:H4'	41:OA:45:ARG:NH1	2.27	0.50
67:OB:34:LEU:O	67:OB:38:ILE:HG22	2.11	0.50
16:P:85:LEU:HD23	16:P:86:LYS:H	1.77	0.50
68:PB:16:ARG:CB	68:PB:21:ASN:HA	2.41	0.50
17:Q:102:GLN:HE21	17:Q:102:GLN:CA	2.17	0.50
18:R:116:GLU:O	18:R:120:VAL:HG23	2.10	0.50
18:R:24:LYS:HB3	18:R:24:LYS:NZ	2.27	0.50
18:R:39:ILE:HG22	18:R:40:ASP:N	2.26	0.50
18:R:65:LEU:N	18:R:65:LEU:CD1	2.74	0.50
44:RA:77:ILE:HG22	44:RA:78:ILE:N	2.27	0.50
70:RB:58:LEU:HD12	70:RB:88:LYS:HB3	1.93	0.50
71:SB:38:LYS:CD	71:SB:49:GLU:HG3	2.33	0.50
21:U:118:GLN:HB3	21:U:147:GLU:OE2	2.10	0.50
21:U:67:ILE:HB	21:U:80:LYS:HZ1	1.77	0.50
47:UA:86:LEU:O	47:UA:90:VAL:HG23	2.11	0.50
1:A:85:A:O2'	74:VB:120:GLY:HA2	2.11	0.50
50:XA:20:ALA:O	50:XA:167:LYS:HD3	2.10	0.50
25:Y:48:ILE:HB	25:Y:95:HIS:NE2	2.27	0.50
26:Z:104:ARG:C	26:Z:105:LEU:HD12	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:43:VAL:HG21	26:Z:54:VAL:HG21	1.93	0.50
52:ZA:121:VAL:O	52:ZA:125:ILE:HG13	2.12	0.50
1:A:1005:A:H2'	1:A:1006:C:C6	2.45	0.50
1:A:345:U:O2	1:A:346:G:H1'	2.12	0.50
1:A:549:G:H2'	1:A:550:A:H8	1.77	0.50
1:A:86:A:H2'	1:A:87:C:H6	1.75	0.50
1:A:1437:U:H1'	53:AB:181:VAL:CG2	2.41	0.50
2:B:1077:U:H2'	2:B:1078:U:O4'	2.11	0.50
2:B:1133:A:C2'	2:B:1134:G:H5'	2.42	0.50
2:B:1237:G:H2'	2:B:1237:G:N3	2.27	0.50
2:B:1472:U:H5'	23:W:4:LEU:HB2	1.93	0.50
2:B:1566:A:H3'	2:B:1567:U:H5"	1.93	0.50
2:B:1664:G:H2'	2:B:1665:C:C6	2.47	0.50
2:B:1814:A:H4'	2:B:1815:U:O4'	2.11	0.50
2:B:2206:G:N2	2:B:2207:A:H1'	2.26	0.50
2:B:2385:G:H5'	2:B:2385:G:H8	1.76	0.50
2:B:2562:A:H2'	2:B:2563:G:C8	2.47	0.50
2:B:3059:G:H2'	2:B:3060:C:C6	2.46	0.50
2:B:3145:C:H2'	2:B:3146:G:H8	1.76	0.50
2:B:3235:C:H2'	2:B:3236:U:H5'	1.94	0.50
2:B:744:A:C5'	22:V:66:ARG:HH21	2.25	0.50
2:B:797:U:H2'	2:B:798:G:C8	2.46	0.50
2:B:821:U:O2'	2:B:822:G:H5'	2.11	0.50
2:B:820:A:H2	2:B:911:C:H4'	1.76	0.50
28:BA:43:ARG:O	28:BA:44:LYS:HD3	2.12	0.50
55:CB:76:ARG:HD3	55:CB:76:ARG:N	2.24	0.50
30:DA:56:VAL:HG22	30:DA:57:LEU:H	1.76	0.50
3:C:73:U:OP2	30:DA:75:ARG:HB2	2.11	0.50
82:DC:399:ARG:HD3	82:DC:401:PHE:HE1	1.76	0.50
82:DC:488:VAL:HG11	82:DC:794:PRO:O	2.12	0.50
5:E:110:PHE:HB3	5:E:135:PRO:HB3	1.92	0.50
58:FB:27:PHE:HB3	58:FB:49:ARG:HH12	1.75	0.50
7:G:199:PHE:C	7:G:201:LYS:H	2.14	0.50
31:EA:4:PHE:HZ	34:HA:35:ARG:HA	1.76	0.50
9:I:219:PHE:HE2	9:I:223:PHE:HD1	1.58	0.50
35:IA:10:ARG:HG2	35:IA:108:VAL:HG22	1.93	0.50
10:J:158:TYR:HA	18:R:118:PHE:CE2	2.46	0.50
63:KB:55:ARG:NH1	63:KB:55:ARG:HG2	2.25	0.50
12:L:159:PRO:HB2	12:L:162:LEU:CD1	2.41	0.50
66:NB:28:LEU:HG	66:NB:64:ASP:OD2	2.11	0.50
41:OA:4:GLY:O	41:OA:8:PHE:HD1	1.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1263:A:H62	16:P:136:ALA:HB2	1.77	0.50
42:PA:24:THR:CG2	42:PA:44:LYS:HG3	2.41	0.50
2:B:1493:G:C5'	43:QA:44:TRP:HB2	2.42	0.50
69:QB:46:PRO:HB2	69:QB:47:PRO:CD	2.41	0.50
69:QB:86:ARG:HH21	69:QB:89:ARG:HD3	1.76	0.50
70:RB:67:THR:CG2	79:AC:40:ARG:HB2	2.41	0.50
2:B:148:G:C4'	19:S:55:ALA:HB2	2.42	0.50
21:U:177:ALA:HA	21:U:180:LYS:CG	2.42	0.50
21:U:75:GLU:HB3	21:U:76:PHE:CE1	2.47	0.50
73:UB:56:LYS:HG3	73:UB:98:GLU:HG2	1.92	0.50
2:B:745:C:H5"	22:V:145:ASN:ND2	2.26	0.50
48:VA:28:VAL:C	48:VA:84:VAL:HG13	2.32	0.50
49:WA:192:PHE:CD2	49:WA:192:PHE:N	2.80	0.50
24:X:107:TYR:CE2	24:X:123:ILE:HD11	2.47	0.50
24:X:77:VAL:HG21	24:X:94:ILE:HD13	1.93	0.50
51:YA:166:LYS:O	51:YA:170:GLU:HB2	2.11	0.50
77:YB:66:PRO:HA	77:YB:71:ALA:CB	2.41	0.50
26:Z:11:ILE:HG22	26:Z:11:ILE:O	2.11	0.50
52:ZA:212:LYS:O	52:ZA:216:VAL:HG23	2.11	0.50
1:A:108:A:H2'	1:A:109:G:C8	2.47	0.50
1:A:1459:C:C4	68:PB:139:LYS:HA	2.47	0.50
1:A:1616:G:H4'	78:ZB:18:ARG:HD2	1.94	0.50
1:A:1651:A:H2'	1:A:1652:C:C6	2.46	0.50
1:A:618:U:O5'	1:A:618:U:H6	1.94	0.50
1:A:795:U:H2'	1:A:796:A:C8	2.47	0.50
53:AB:113:LEU:HD12	53:AB:118:ALA:HB2	1.93	0.50
53:AB:33:GLY:O	53:AB:52:ALA:HB1	2.11	0.50
2:B:1157:G:H2'	2:B:1158:A:C8	2.46	0.50
2:B:1833:G:O2'	43:QA:4:GLN:HA	2.11	0.50
2:B:3107:U:H2'	2:B:3108:G:O4'	2.12	0.50
2:B:3113:A:H2'	2:B:3114:A:O4'	2.11	0.50
2:B:3321:C:H2'	2:B:3322:A:C8	2.47	0.50
2:B:744:A:H5"	22:V:66:ARG:HH21	1.77	0.50
54:BB:185:GLY:HA2	54:BB:189:LEU:HD13	1.94	0.50
54:BB:15:PRO:HB3	54:BB:39:ARG:HH12	1.76	0.50
3:C:9:A:H2'	3:C:10:A:H8	1.76	0.50
29:CA:31:THR:HB	29:CA:33:ARG:CZ	2.42	0.50
55:CB:53:VAL:HG12	55:CB:55:ASP:H	1.76	0.50
56:DB:137:ARG:O	56:DB:141:ILE:HG13	2.11	0.50
82:DC:633:ILE:HA	82:DC:647:ILE:CD1	2.41	0.50
82:DC:89:ILE:HD11	82:DC:339:VAL:HG12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:11:ALA:HB3	31:EA:80:LEU:HD22	1.94	0.50
31:EA:89:VAL:HA	31:EA:92:PHE:CE2	2.43	0.50
57:EB:33:GLU:O	57:EB:34:LEU:HB2	2.12	0.50
2:B:705:A:H62	32:FA:74:ASN:ND2	2.10	0.50
58:FB:76:THR:HG23	58:FB:109:PHE:CE1	2.46	0.50
7:G:201:LYS:HB2	7:G:201:LYS:NZ	2.26	0.50
7:G:317:ILE:C	7:G:319:ASN:H	2.14	0.50
7:G:342:LEU:C	7:G:343:TYR:HD1	2.15	0.50
59:GB:109:LEU:CB	59:GB:146:PHE:HB3	2.37	0.50
59:GB:27:GLU:HB2	59:GB:39:LYS:NZ	2.27	0.50
59:GB:96:VAL:CG2	59:GB:97:LEU:N	2.75	0.50
8:H:22:LEU:HD23	8:H:255:PHE:HZ	1.76	0.50
36:JA:40:SER:O	36:JA:44:ARG:HG3	2.11	0.50
11:K:118:LYS:HG3	11:K:191:VAL:CG1	2.41	0.50
11:K:221:LYS:C	11:K:227:GLY:HA3	2.30	0.50
37:KA:46:GLY:N	37:KA:71:VAL:HB	2.27	0.50
13:M:120:ASP:OD2	13:M:122:LYS:HB3	2.11	0.50
39:MA:13:SER:HB2	39:MA:16:GLN:HG3	1.93	0.50
39:MA:74:LYS:CD	39:MA:75:TYR:HB2	2.41	0.50
2:B:1237:G:C5'	16:P:58:VAL:HG11	2.41	0.50
18:R:21:VAL:HG23	18:R:63:VAL:HG21	1.92	0.50
21:U:169:THR:N	21:U:172:GLN:HB3	2.27	0.50
21:U:48:LEU:HD22	21:U:88:VAL:HG13	1.94	0.50
48:VA:186:THR:HG22	48:VA:187:VAL:H	1.76	0.50
48:VA:61:ARG:CA	48:VA:64:ARG:HB3	2.31	0.50
1:A:85:A:O3'	74:VB:120:GLY:HA2	2.11	0.50
24:X:91:TYR:CZ	24:X:136:LYS:HD2	2.47	0.50
50:XA:77:SER:HB2	50:XA:124:THR:OG1	2.12	0.50
51:YA:171:ILE:HD13	51:YA:197:ILE:HA	1.94	0.50
51:YA:72:ASP:HB2	64:LB:114:ARG:HH11	1.77	0.50
51:YA:93:GLY:O	51:YA:94:LYS:HB2	2.12	0.50
1:A:1633:A:H2	52:ZA:89:GLN:HG2	1.76	0.50
1:A:1002:G:H1	1:A:1003:A:N6	2.10	0.50
1:A:1227:A:H4'	1:A:1228:G:C5'	2.42	0.50
1:A:1308:G:H2'	1:A:1309:C:C6	2.47	0.50
1:A:1547:A:H1'	68:PB:87:ASN:O	2.12	0.50
1:A:1592:A:H61	1:A:1604:U:H3	1.59	0.50
1:A:40:A:H62	1:A:467:G:H21	1.60	0.50
1:A:974:A:H2'	1:A:975:C:C6	2.47	0.50
2:B:1224:C:H2'	2:B:1225:A:H8	1.77	0.50
2:B:1311:G:H8	2:B:1311:G:O5'	1.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1324:U:H2'	2:B:1325:U:C1'	2.42	0.50
2:B:1459:C:H2'	2:B:1460:A:C8	2.47	0.50
2:B:1653:G:H2'	2:B:1654:A:O4'	2.12	0.50
2:B:1896:A:N3	27:AA:83:LYS:HD3	2.27	0.50
2:B:2403:G:H1'	2:B:2872:A:N7	2.27	0.50
2:B:3024:A:H4'	13:M:97:PHE:CD2	2.47	0.50
2:B:3029:A:O5'	2:B:3029:A:H8	1.94	0.50
2:B:3081:C:H2'	2:B:3082:C:C6	2.47	0.50
2:B:3304:U:H3'	2:B:3305:A:C5'	2.41	0.50
2:B:576:C:H2'	2:B:577:C:H6	1.77	0.50
2:B:705:A:C2	2:B:715:A:C5	2.99	0.50
2:B:734:C:H2'	2:B:735:A:O4'	2.11	0.50
2:B:839:C:N4	47:UA:4:ARG:HH22	2.10	0.50
2:B:946:U:H2'	2:B:947:G:C8	2.41	0.50
54:BB:131:LEU:N	54:BB:131:LEU:HD22	2.26	0.50
54:BB:48:LEU:HD23	54:BB:64:ILE:HD13	1.93	0.50
55:CB:192:GLU:O	55:CB:195:ALA:HB3	2.12	0.50
56:DB:25:ARG:NH1	56:DB:25:ARG:HB3	2.26	0.50
82:DC:258:THR:C	82:DC:260:LYS:H	2.14	0.50
82:DC:384:LYS:HB3	82:DC:397:PHE:CD2	2.47	0.50
82:DC:710:ARG:HG2	82:DC:711:ARG:H	1.72	0.50
6:F:252:THR:HG23	6:F:253:GLN:H	1.77	0.50
58:FB:110:ARG:CG	58:FB:121:LEU:HD23	2.41	0.50
1:A:338:C:O2'	58:FB:5:ARG:HA	2.11	0.50
59:GB:90:LYS:CG	59:GB:95:TYR:HD2	2.17	0.50
34:HA:39:SER:HA	34:HA:93:LEU:HA	1.94	0.50
60:HB:3:MET:HE3	60:HB:8:ARG:HD2	1.94	0.50
9:I:212:ALA:HB2	9:I:219:PHE:HE1	1.76	0.50
35:IA:14:ILE:HD13	35:IA:16:LEU:HD13	1.92	0.50
35:IA:79:ARG:HA	35:IA:89:LEU:HA	1.92	0.50
36:JA:64:LYS:O	36:JA:65:PHE:HB2	2.11	0.50
11:K:83:LEU:HD22	11:K:84:VAL:N	2.27	0.50
37:KA:38:PRO:HA	37:KA:41:ALA:HB3	1.94	0.50
1:A:1074:G:OP1	63:KB:9:LYS:HD3	2.12	0.50
12:L:178:ALA:CB	12:L:218:ILE:HD13	2.34	0.50
12:L:72:PRO:HA	12:L:233:TRP:CE3	2.46	0.50
13:M:168:ARG:O	13:M:168:ARG:HD3	2.11	0.50
39:MA:74:LYS:HD3	39:MA:75:TYR:HB2	1.93	0.50
39:MA:76:GLN:O	39:MA:81:ARG:HD3	2.12	0.50
1:A:1241:G:H4'	65:MB:78:THR:HA	1.93	0.50
14:N:76:MET:HB3	14:N:85:PHE:CE2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:177:LYS:HA	40:NA:11:LEU:CD1	2.41	0.50
15:O:87:LYS:HE2	15:O:91:LEU:CD2	2.31	0.50
16:P:110:ILE:HA	16:P:113:ALA:CB	2.42	0.50
69:QB:53:TRP:CG	69:QB:54:PHE:N	2.79	0.50
13:M:44:THR:HG21	18:R:12:TRP:CZ3	2.46	0.50
2:B:3005:A:H5"	20:T:149:TYR:OH	2.12	0.50
46:TA:21:THR:CG2	46:TA:76:LYS:HG3	2.42	0.50
72:TB:89:TRP:CZ3	72:TB:125:ILE:HD13	2.46	0.50
21:U:2:ALA:O	21:U:3:ARG:HB2	2.12	0.50
48:VA:111:ALA:HA	48:VA:170:ALA:HB2	1.93	0.50
23:W:171:ASP:O	23:W:175:GLN:HG2	2.11	0.50
49:WA:228:LYS:HB2	53:AB:224:ASP:OD2	2.12	0.50
49:WA:292:LEU:HD23	49:WA:292:LEU:N	2.26	0.50
76:XB:44:ILE:HD13	76:XB:45:VAL:HG13	1.94	0.50
76:XB:6:ALA:C	76:XB:8:ASN:H	2.14	0.50
25:Y:76:ILE:HD12	25:Y:77:ASN:H	1.76	0.50
26:Z:38:ILE:HG12	26:Z:50:LEU:HD13	1.93	0.50
52:ZA:109:GLY:HA2	52:ZA:191:ALA:O	2.12	0.50
52:ZA:222:TYR:C	52:ZA:224:PHE:H	2.14	0.50
1:A:1545:A:H2'	1:A:1546:G:C8	2.47	0.50
1:A:172:C:H2'	1:A:173:A:C8	2.47	0.50
1:A:180:A:H2'	1:A:181:A:O4'	2.12	0.50
1:A:694:U:O2'	1:A:695:U:H5'	2.11	0.50
1:A:746:A:H2'	1:A:747:C:H6	1.77	0.50
2:B:1184:A:HO2'	2:B:1185:C:H5'	1.77	0.50
2:B:1830:G:C2'	2:B:1831:U:H5'	2.42	0.50
2:B:896:A:C8	2:B:2134:G:H1'	2.47	0.50
2:B:2885:C:H2'	2:B:2886:U:C6	2.47	0.50
2:B:3331:U:H2'	2:B:3332:U:O4'	2.10	0.50
2:B:542:G:H2'	2:B:543:C:O4'	2.10	0.50
2:B:55:G:O2'	2:B:56:G:H5'	2.11	0.50
2:B:907:G:H2'	2:B:926:A:H62	1.77	0.50
54:BB:125:LYS:HB3	54:BB:142:HIS:HB3	1.92	0.50
82:DC:218:TRP:HZ3	82:DC:220:PHE:HD2	1.59	0.50
57:EB:162:ILE:HG22	57:EB:165:LYS:CD	2.40	0.50
57:EB:30:SER:HB2	57:EB:34:LEU:CB	2.42	0.50
83:EC:6917:C:H3'	83:EC:6918:A:C8	2.47	0.50
6:F:131:GLY:H	6:F:169:ILE:HG22	1.77	0.50
6:F:20:THR:O	6:F:21:ARG:HB3	2.12	0.50
2:B:2547:A:H5'	6:F:93:LYS:NZ	2.26	0.50
7:G:177:HIS:ND1	7:G:335:ILE:HB	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:305:ILE:HD12	7:G:306:THR:N	2.26	0.50
8:H:26:PHE:HE1	8:H:129:THR:OG1	1.95	0.50
8:H:312:VAL:HG23	8:H:313:LEU:H	1.75	0.50
8:H:84:ARG:O	8:H:87:GLN:HB3	2.12	0.50
36:JA:89:THR:HB	36:JA:116:GLY:O	2.12	0.50
38:LA:38:LEU:O	38:LA:39:ALA:HB2	2.12	0.50
38:LA:72:VAL:HG23	38:LA:73:SER:N	2.27	0.50
14:N:115:MET:O	14:N:117:GLY:N	2.41	0.50
40:NA:15:LYS:HG3	40:NA:17:VAL:H	1.76	0.50
18:R:77:ARG:O	18:R:81:VAL:HG23	2.11	0.50
19:S:53:TYR:HA	19:S:59:PHE:CE1	2.47	0.50
19:S:93:LYS:O	19:S:94:TYR:CB	2.59	0.50
2:B:2994:A:H5'	21:U:77:GLY:O	2.12	0.50
22:V:23:ASN:O	22:V:27:LYS:HG3	2.12	0.50
48:VA:42:ARG:HB3	48:VA:46:ARG:NH2	2.27	0.50
48:VA:64:ARG:HD2	48:VA:67:LEU:HD13	1.93	0.50
74:VB:19:ALA:HB1	74:VB:77:ASN:HD22	1.77	0.50
2:B:1947:G:OP1	23:W:136:ARG:HB2	2.12	0.50
49:WA:127:ARG:C	49:WA:129:LYS:H	2.15	0.50
55:CB:120:ILE:HG12	75:WB:100:ILE:HG12	1.94	0.50
76:XB:41:ILE:HD13	76:XB:41:ILE:H	1.77	0.50
51:YA:61:LEU:HG	51:YA:64:ARG:NH2	2.27	0.50
1:A:1011:G:H2'	1:A:1012:U:C5	2.47	0.50
1:A:1448:G:H2'	1:A:1449:U:O4'	2.10	0.50
1:A:1523:G:H4'	1:A:1524:A:OP2	2.11	0.50
1:A:108:A:H4'	1:A:363:G:O2'	2.11	0.50
1:A:497:G:N3	1:A:497:G:H2'	2.27	0.50
2:B:2275:A:H61	2:B:2311:G:H1'	1.77	0.50
2:B:2534:G:H2'	2:B:2535:A:C8	2.47	0.50
2:B:3182:G:H2'	2:B:3183:A:O4'	2.12	0.50
2:B:3300:U:C2'	2:B:3301:U:H5'	2.36	0.50
2:B:3348:G:H1	2:B:3357:U:H3	1.59	0.50
2:B:911:C:H3'	6:F:9:ARG:HH11	1.73	0.50
54:BB:129:VAL:HG12	54:BB:156:VAL:HG22	1.94	0.50
54:BB:187:ARG:HA	54:BB:187:ARG:NE	2.27	0.50
55:CB:62:VAL:HG12	55:CB:89:ILE:HG12	1.93	0.50
56:DB:52:ILE:HG22	56:DB:109:LEU:HD21	1.93	0.50
82:DC:250:PHE:O	82:DC:252:PRO:HD3	2.12	0.50
82:DC:659:ILE:O	82:DC:663:VAL:HG23	2.12	0.50
82:DC:777:SER:CB	82:DC:780:PHE:HB2	2.40	0.50
83:EC:6779:C:H3'	83:EC:6780:A:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:136:LYS:HE3	7:G:143:GLY:C	2.32	0.50
7:G:91:GLY:HA3	7:G:151:ILE:HG23	1.92	0.50
9:I:86:TYR:CZ	9:I:247:ILE:HG12	2.47	0.50
10:J:51:ARG:NH1	10:J:163:PHE:HB2	2.27	0.50
2:B:1362:G:H1'	11:K:159:GLN:HG2	1.93	0.50
11:K:169:ILE:CD1	11:K:181:ILE:HA	2.41	0.50
63:KB:47:PRO:HG3	63:KB:75:LEU:HD11	1.93	0.50
2:B:1639:C:H5'	38:LA:52:GLN:CD	2.32	0.50
64:LB:133:ARG:HB2	64:LB:136:ARG:HH21	1.76	0.50
9:I:290:ILE:HG22	14:N:206:LEU:HD11	1.93	0.50
14:N:29:SER:HA	14:N:125:LEU:HD12	1.94	0.50
15:O:43:GLN:HE22	15:O:71:VAL:HG22	1.74	0.50
41:OA:35:SER:O	41:OA:45:ARG:HD3	2.12	0.50
16:P:87:GLU:HB2	16:P:88:PRO:HD2	1.94	0.50
17:Q:14:PHE:HB3	17:Q:18:TRP:NE1	2.27	0.50
44:RA:96:CYS:HA	44:RA:121:LEU:CD2	2.42	0.50
73:UB:124:VAL:HG12	73:UB:125:VAL:N	2.26	0.50
74:VB:44:LEU:O	74:VB:47:VAL:HG22	2.12	0.50
23:W:60:LYS:HB3	23:W:64:ARG:HD2	1.93	0.50
24:X:77:VAL:HG22	24:X:106:LEU:HD12	1.93	0.50
50:XA:68:PRO:HB3	52:ZA:244:SER:HB2	1.92	0.50
25:Y:54:HIS:CD2	25:Y:55:LYS:H	2.29	0.50
51:YA:61:LEU:HD22	51:YA:61:LEU:H	1.77	0.50
52:ZA:53:ILE:HD13	52:ZA:73:LEU:HD21	1.94	0.50
1:A:131:C:H4'	1:A:137:U:C4	2.47	0.49
1:A:1397:U:C2'	1:A:1398:U:H5"	2.41	0.49
1:A:1543:A:N6	1:A:1568:C:O4'	2.45	0.49
1:A:1760:G:O2'	1:A:1761:U:H5'	2.11	0.49
1:A:555:A:H8	1:A:555:A:O5'	1.94	0.49
1:A:754:A:H61	1:A:793:A:H3'	1.76	0.49
1:A:804:A:N3	72:TB:105:THR:HG22	2.25	0.49
1:A:882:U:H3	1:A:946:U:H3	1.60	0.49
1:A:971:A:H2'	1:A:972:G:O4'	2.11	0.49
53:AB:167:PHE:HE2	53:AB:202:LEU:HD13	1.77	0.49
2:B:1016:C:O2'	2:B:1028:U:H4'	2.12	0.49
2:B:1029:G:H2'	2:B:1030:A:C8	2.46	0.49
2:B:1217:A:H1'	2:B:1289:G:C2	2.47	0.49
2:B:1373:A:H2'	2:B:1374:G:C8	2.47	0.49
2:B:1440:G:H2'	2:B:1441:G:H8	1.77	0.49
2:B:1522:U:OP2	29:CA:113:LEU:HD21	2.11	0.49
2:B:1594:A:N3	2:B:1615:C:H1'	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1706:C:H2'	2:B:1707:A:C8	2.47	0.49
2:B:1763:U:H5'	2:B:1765:U:C2	2.46	0.49
2:B:2505:U:H2'	2:B:2506:U:C6	2.47	0.49
2:B:2599:U:H2'	2:B:2600:C:C6	2.47	0.49
2:B:2611:U:H2'	2:B:2612:U:H6	1.72	0.49
2:B:2843:U:H5"	2:B:2844:C:C5	2.46	0.49
2:B:310:U:H2'	2:B:311:C:O4'	2.12	0.49
2:B:3329:U:H2'	2:B:3330:A:C8	2.47	0.49
2:B:642:U:H2'	2:B:644:G:OP2	2.12	0.49
54:BB:123:LEU:HD23	54:BB:159:THR:OG1	2.11	0.49
54:BB:235:TYR:O	54:BB:236:ILE:HG23	2.12	0.49
80:BC:14:VAL:O	80:BC:18:THR:HG23	2.12	0.49
2:B:409:A:N6	3:C:15:G:H1'	2.16	0.49
4:D:5:G:H2'	4:D:6:C:C6	2.46	0.49
82:DC:504:LEU:O	82:DC:508:LEU:HG	2.12	0.49
82:DC:610:ASP:HB3	82:DC:615:ARG:NE	2.26	0.49
82:DC:750:LYS:HB3	82:DC:776:GLU:HB3	1.93	0.49
31:EA:33:SER:HB2	31:EA:40:HIS:HE1	1.76	0.49
6:F:189:TYR:HA	6:F:192:LYS:HB2	1.94	0.49
7:G:113:GLU:HA	7:G:116:ARG:HB2	1.94	0.49
7:G:293:ASN:HD22	7:G:304:THR:CG2	2.18	0.49
4:D:11:A:N6	9:I:13:SER:O	2.40	0.49
9:I:164:LYS:HE3	9:I:168:ASP:OD1	2.12	0.49
10:J:64:LEU:HD23	10:J:65:ILE:N	2.26	0.49
36:JA:96:ILE:HD11	36:JA:109:LEU:HD21	1.93	0.49
11:K:148:VAL:O	11:K:152:GLY:HA3	2.12	0.49
11:K:210:PRO:HD3	11:K:243:MET:HE2	1.94	0.49
11:K:221:LYS:CB	11:K:227:GLY:HA3	2.42	0.49
11:K:75:TYR:HD1	24:X:60:SER:HG	1.60	0.49
13:M:176:LEU:HD12	44:RA:78:ILE:CD1	2.40	0.49
13:M:28:VAL:HG22	13:M:33:THR:CG2	2.42	0.49
65:MB:100:LYS:HE2	65:MB:101:ALA:HB2	1.92	0.49
1:A:1366:U:H5"	66:NB:33:GLY:CA	2.42	0.49
15:O:17:LEU:HD12	15:O:18:VAL:H	1.77	0.49
72:TB:75:ILE:HD13	72:TB:76:SER:N	2.27	0.49
72:TB:83:ILE:O	72:TB:83:ILE:HG13	2.11	0.49
22:V:65:SER:HA	22:V:93:ILE:CD1	2.35	0.49
48:VA:43:LYS:HA	48:VA:46:ARG:CG	2.40	0.49
2:B:1281:G:H5'	48:VA:55:LYS:HG2	1.93	0.49
23:W:127:SER:HA	23:W:132:PHE:CD2	2.44	0.49
49:WA:13:LEU:HB2	49:WA:310:ILE:HB	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:88:ILE:HG23	75:WB:104:ALA:HB3	1.94	0.49
24:X:1:MET:O	24:X:2:ALA:HB2	2.12	0.49
24:X:7:TYR:HA	24:X:63:GLN:HA	1.94	0.49
50:XA:56:LYS:HA	50:XA:59:LEU:HD13	1.93	0.49
76:XB:97:PRO:HB2	76:XB:98:PRO:HD3	1.94	0.49
51:YA:127:VAL:HG22	51:YA:128:LYS:N	2.26	0.49
77:YB:54:VAL:HG21	77:YB:64:CYS:SG	2.52	0.49
1:A:1168:U:O2'	1:A:1169:G:H5'	2.12	0.49
1:A:1345:A:H2'	1:A:1348:A:N7	2.27	0.49
1:A:1435:G:C3'	1:A:1436:A:H5'	2.42	0.49
1:A:1634:C:O2'	1:A:1635:A:H5'	2.13	0.49
1:A:1669:U:H2'	1:A:1670:G:O4'	2.12	0.49
1:A:291:G:H2'	1:A:292:U:C6	2.47	0.49
1:A:330:G:H2'	1:A:331:A:H8	1.72	0.49
1:A:497:G:H3'	1:A:498:G:O4'	2.12	0.49
2:B:1610:G:H2'	2:B:1611:G:C8	2.47	0.49
2:B:2140:U:H2'	2:B:2141:U:H5'	1.94	0.49
2:B:2211:U:H2'	2:B:2212:C:O4'	2.12	0.49
2:B:2871:G:H5'	2:B:2872:A:C5'	2.41	0.49
2:B:636:C:O2'	2:B:637:C:H5'	2.13	0.49
2:B:683:U:H2'	2:B:683:U:O2	2.10	0.49
2:B:82:C:H2'	2:B:83:U:O4'	2.12	0.49
54:BB:200:ARG:O	54:BB:201:HIS:HB2	2.12	0.49
54:BB:44:LEU:CG	54:BB:82:TYR:HB3	2.41	0.49
3:C:129:C:H2'	3:C:130:C:C6	2.48	0.49
3:C:48:A:H4'	39:MA:45:LYS:HZ3	1.75	0.49
29:CA:118:GLY:N	43:QA:14:ALA:HB1	2.27	0.49
30:DA:79:ALA:CB	30:DA:98:ASN:HB3	2.42	0.49
82:DC:119:LEU:HB3	82:DC:149:GLU:HG3	1.94	0.49
57:EB:141:ARG:HB2	57:EB:149:ILE:HB	1.94	0.49
6:F:20:THR:OG1	6:F:21:ARG:N	2.44	0.49
6:F:64:ARG:HA	6:F:71:LEU:HD23	1.93	0.49
59:GB:73:GLY:O	59:GB:76:LEU:HB3	2.11	0.49
8:H:133:SER:O	8:H:137:ALA:HB2	2.12	0.49
8:H:272:VAL:C	8:H:274:TYR:H	2.15	0.49
34:HA:40:LYS:HD2	34:HA:40:LYS:N	2.27	0.49
9:I:95:TRP:NE1	9:I:157:ALA:C	2.65	0.49
9:I:79:TYR:HB2	9:I:82:GLU:HG2	1.92	0.49
61:IB:34:TRP:HH2	61:IB:36:LYS:HD3	1.77	0.49
37:KA:16:TYR:CE1	37:KA:94:PHE:HE1	2.30	0.49
63:KB:62:GLN:HB2	63:KB:65:VAL:HG23	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:156:ASP:HB3	12:L:183:LYS:HD3	1.94	0.49
17:Q:106:GLN:HB3	40:NA:18:THR:CG2	2.42	0.49
15:O:17:LEU:O	15:O:70:THR:CB	2.58	0.49
68:PB:96:LYS:HB2	68:PB:98:TYR:CE2	2.47	0.49
69:QB:34:VAL:HG23	69:QB:53:TRP:CE2	2.46	0.49
45:SA:1:MET:O	45:SA:2:ARG:C	2.50	0.49
71:SB:21:ASN:HB2	72:TB:67:GLY:H	1.74	0.49
20:T:12:LYS:HB3	20:T:12:LYS:HZ2	1.76	0.49
73:UB:134:ALA:CB	73:UB:140:LYS:NZ	2.74	0.49
22:V:90:ASP:OD2	22:V:92:ARG:HB2	2.11	0.49
2:B:785:G:P	22:V:92:ARG:HH12	2.35	0.49
75:WB:46:LYS:HD3	75:WB:70:LYS:HD3	1.94	0.49
50:XA:112:THR:HG23	50:XA:115:PHE:CB	2.39	0.49
51:YA:129:THR:OG1	51:YA:133:TYR:HB2	2.12	0.49
78:ZB:13:ILE:HD13	78:ZB:31:GLU:HB3	1.94	0.49
1:A:1163:A:H2'	1:A:1164:G:O4'	2.12	0.49
1:A:1332:C:H3'	1:A:1333:C:H6	1.78	0.49
1:A:1727:G:H2'	1:A:1728:A:C8	2.48	0.49
1:A:1651:A:N1	1:A:1749:A:H2	2.10	0.49
1:A:1762:A:H1'	1:A:1783:C:H5'	1.94	0.49
1:A:796:A:H2'	1:A:797:G:O4'	2.11	0.49
53:AB:218:LEU:HD23	53:AB:219:ALA:H	1.78	0.49
2:B:1009:A:H2'	2:B:1010:G:C8	2.47	0.49
2:B:1411:C:O2'	2:B:1412:G:H5'	2.13	0.49
2:B:1967:U:H5"	2:B:1968:G:C5'	2.36	0.49
2:B:2221:G:O6	40:NA:71:LYS:HD3	2.12	0.49
2:B:2277:C:C5'	2:B:2317:A:H4'	2.43	0.49
2:B:2469:G:C4'	5:E:27:ASN:HA	2.41	0.49
2:B:114:A:N1	2:B:266:A:H4'	2.27	0.49
2:B:1448:U:HO2'	2:B:2983:C:H6	1.60	0.49
2:B:298:U:H5"	2:B:299:G:C8	2.47	0.49
2:B:3376:A:H2	35:IA:17:HIS:HD1	1.60	0.49
2:B:638:C:H2'	2:B:639:G:H8	1.76	0.49
2:B:640:U:P	36:JA:37:GLY:HA2	2.52	0.49
29:CA:81:ILE:HG22	29:CA:125:ARG:HG2	1.95	0.49
4:D:34:C:H2'	4:D:35:C:C5	2.47	0.49
1:A:151:G:H21	56:DB:13:GLN:NE2	2.10	0.49
56:DB:31:ARG:HB2	56:DB:34:GLN:NE2	2.19	0.49
82:DC:289:MET:HA	82:DC:289:MET:CE	2.42	0.49
82:DC:35:LEU:C	82:DC:35:LEU:HD23	2.32	0.49
82:DC:494:GLU:HG3	82:DC:495:VAL:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:634:TRP:CB	82:DC:646:VAL:HG12	2.42	0.49
31:EA:53:VAL:HG23	31:EA:62:VAL:HG22	1.93	0.49
57:EB:153:LEU:HA	57:EB:184:GLU:HB3	1.93	0.49
6:F:68:LYS:CE	6:F:70:ARG:HB2	2.42	0.49
2:B:1369:A:C5'	32:FA:21:ARG:NH2	2.76	0.49
7:G:117:ARG:HG2	7:G:178:LEU:HD21	1.94	0.49
7:G:27:ALA:HB2	7:G:219:ALA:HA	1.93	0.49
7:G:273:HIS:CD2	7:G:273:HIS:N	2.80	0.49
52:ZA:144:TRP:CH2	59:GB:61:THR:HG22	2.44	0.49
2:B:1346:G:C1'	8:H:307:GLN:HE22	2.25	0.49
8:H:338:LYS:C	8:H:340:GLY:N	2.64	0.49
9:I:106:ALA:HA	9:I:171:LEU:HD12	1.95	0.49
11:K:172:ASN:C	11:K:173:LEU:HD12	2.33	0.49
37:KA:35:VAL:HG12	37:KA:79:GLY:CA	2.43	0.49
64:LB:52:ARG:CG	64:LB:53:ASP:N	2.76	0.49
39:MA:18:ALA:O	39:MA:22:VAL:HG23	2.12	0.49
65:MB:84:ILE:HG22	65:MB:85:ILE:N	2.26	0.49
14:N:193:ASP:HB3	14:N:197:VAL:HA	1.94	0.49
14:N:75:TYR:CD1	14:N:76:MET:N	2.81	0.49
68:PB:114:GLU:OE1	68:PB:117:LYS:HE3	2.12	0.49
2:B:29:C:O2	19:S:162:ARG:HG2	2.13	0.49
47:UA:55:TRP:HE1	47:UA:66:GLY:CA	2.26	0.49
73:UB:73:ARG:HA	73:UB:84:THR:HA	1.93	0.49
22:V:62:VAL:HG22	22:V:142:GLY:N	2.28	0.49
8:H:299:ILE:HD12	22:V:39:ARG:HB3	1.93	0.49
50:XA:56:LYS:CE	71:SB:82:VAL:HG11	2.42	0.49
51:YA:117:TRP:HA	51:YA:117:TRP:CE3	2.47	0.49
51:YA:203:ASP:O	51:YA:204:ILE:HD13	2.13	0.49
51:YA:144:ARG:HG3	51:YA:206:PRO:CB	2.42	0.49
26:Z:99:LYS:HE3	26:Z:102:GLU:HB3	1.92	0.49
64:LB:107:ARG:HG2	78:ZB:60:GLU:HB2	1.93	0.49
1:A:140:A:C4'	1:A:141:U:H5'	2.42	0.49
1:A:1764:C:P	1:A:1771:U:H4'	2.51	0.49
1:A:853:G:H5'	23:W:173:ARG:CZ	2.41	0.49
2:B:1224:C:N4	2:B:1225:A:H62	2.11	0.49
2:B:1289:G:H2'	2:B:1290:A:C8	2.47	0.49
2:B:1322:U:OP1	24:X:117:ARG:HD2	2.13	0.49
2:B:1557:A:O2'	2:B:1558:A:H5"	2.13	0.49
2:B:1558:A:P	12:L:54:GLU:HG2	2.53	0.49
2:B:1639:C:O3'	2:B:1738:C:H5"	2.12	0.49
2:B:1691:U:H2'	2:B:1692:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:188:U:C2	2:B:223:U:H4'	2.47	0.49
2:B:2575:G:H2'	2:B:2576:G:C8	2.48	0.49
2:B:2874:G:H2'	2:B:2945:G:C6	2.47	0.49
2:B:3004:C:H2'	2:B:3005:A:H5'	1.93	0.49
2:B:3008:A:H4'	20:T:66:LYS:O	2.12	0.49
2:B:3067:C:OP1	23:W:58:HIS:NE2	2.45	0.49
2:B:3118:C:H2'	2:B:3119:U:O4'	2.12	0.49
2:B:438:A:N3	2:B:495:G:H1'	2.26	0.49
80:BC:34:ALA:O	80:BC:37:ARG:HB3	2.12	0.49
29:CA:38:LEU:HD22	29:CA:40:LEU:HB2	1.95	0.49
29:CA:63:ILE:HG13	29:CA:84:PHE:CD2	2.47	0.49
56:DB:141:ILE:CD1	56:DB:175:ILE:HD12	2.43	0.49
82:DC:27:HIS:CD2	82:DC:138:GLN:HB3	2.48	0.49
82:DC:495:VAL:HG13	82:DC:504:LEU:HD23	1.95	0.49
2:B:2555:G:N2	31:EA:135:ARG:HB2	2.27	0.49
31:EA:21:LYS:HE2	31:EA:136:PHE:CZ	2.47	0.49
83:EC:6818:G:H3'	83:EC:6819:G:C4'	2.36	0.49
7:G:160:VAL:HG23	7:G:183:LEU:HD21	1.94	0.49
59:GB:133:HIS:O	59:GB:134:ILE:O	2.31	0.49
8:H:52:VAL:HG12	8:H:103:THR:HB	1.94	0.49
8:H:169:LEU:O	8:H:174:ALA:HB3	2.12	0.49
8:H:351:PRO:HB3	11:K:70:LYS:CB	2.42	0.49
9:I:6:ASP:O	9:I:7:ALA:HB3	2.13	0.49
61:IB:80:MET:HB3	61:IB:83:THR:HG23	1.94	0.49
10:J:171:PRO:HA	10:J:174:LEU:HB2	1.94	0.49
11:K:132:PRO:HA	11:K:229:PHE:CD1	2.48	0.49
37:KA:103:TYR:HA	37:KA:104:PRO:C	2.32	0.49
12:L:143:ILE:O	12:L:173:MET:HE3	2.13	0.49
64:LB:29:HIS:HB3	64:LB:41:ARG:CB	2.42	0.49
13:M:160:ASP:O	13:M:164:ILE:HG12	2.13	0.49
13:M:2:LYS:HA	13:M:60:GLY:O	2.12	0.49
15:O:35:LYS:HA	15:O:38:GLU:OE2	2.12	0.49
4:D:39:C:C6	15:O:46:VAL:HB	2.48	0.49
2:B:2677:G:N1	15:O:57:PHE:CE1	2.81	0.49
1:A:1316:G:H4'	67:OB:10:LYS:HD2	1.94	0.49
17:Q:77:LEU:HD12	17:Q:77:LEU:N	2.25	0.49
70:RB:50:LEU:O	70:RB:51:VAL:HB	2.13	0.49
19:S:183:THR:HG23	19:S:183:THR:O	2.12	0.49
20:T:47:PHE:HE2	20:T:141:LEU:HA	1.76	0.49
46:TA:8:ARG:HG3	46:TA:25:VAL:CG2	2.42	0.49
2:B:389:A:H1'	21:U:101:ASN:OD1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1232:C:O4'	48:VA:35:SER:HB3	2.13	0.49
24:X:36:ILE:HA	24:X:39:SER:HB3	1.94	0.49
50:XA:178:ALA:HA	50:XA:181:VAL:HG22	1.95	0.49
26:Z:55:THR:OG1	26:Z:66:VAL:HB	2.12	0.49
78:ZB:43:ASN:ND2	78:ZB:63:ALA:HB3	2.27	0.49
1:A:1488:G:N3	1:A:1495:C:H1'	2.27	0.49
1:A:1586:A:H1'	1:A:1611:A:N6	2.26	0.49
1:A:230:C:H3'	1:A:231:U:H5"	1.94	0.49
1:A:28:A:C2'	1:A:29:U:H5'	2.42	0.49
1:A:340:U:H2'	1:A:341:A:C8	2.43	0.49
1:A:763:G:H2'	1:A:764:U:C6	2.47	0.49
2:B:1028:U:H3'	2:B:1029:G:H5"	1.93	0.49
2:B:1234:G:H2'	2:B:1235:U:H5	1.75	0.49
2:B:1563:C:H2'	2:B:1564:U:O4'	2.12	0.49
2:B:191:U:H2'	2:B:192:C:C6	2.48	0.49
2:B:2461:A:N1	2:B:2486:A:H5'	2.28	0.49
2:B:2213:A:H1'	2:B:2601:A:O2'	2.13	0.49
2:B:2912:G:C2	2:B:3130:A:H2'	2.48	0.49
54:BB:11:ARG:HD2	54:BB:26:CYS:H	1.78	0.49
54:BB:11:ARG:HD2	54:BB:26:CYS:N	2.28	0.49
3:C:17:A:H2'	3:C:18:U:O4'	2.12	0.49
3:C:27:U:O2'	3:C:28:C:H5'	2.13	0.49
55:CB:42:LEU:HB2	55:CB:46:TRP:O	2.13	0.49
56:DB:198:ALA:HB1	56:DB:202:ARG:NH2	2.27	0.49
82:DC:280:PRO:O	82:DC:284:LEU:HG	2.12	0.49
82:DC:382:VAL:CG1	82:DC:396:ALA:HB1	2.40	0.49
5:E:71:ALA:C	5:E:73:ASP:H	2.15	0.49
31:EA:26:VAL:HG21	31:EA:96:VAL:CG1	2.42	0.49
57:EB:91:ILE:HD11	57:EB:129:LEU:CA	2.41	0.49
58:FB:57:ALA:HB2	58:FB:177:GLY:HA2	1.94	0.49
7:G:162:VAL:O	7:G:163:HIS:HB3	2.12	0.49
2:B:3138:U:OP2	7:G:30:LYS:HD3	2.12	0.49
7:G:370:PHE:CE1	7:G:376:LYS:HA	2.48	0.49
59:GB:119:ALA:HB2	59:GB:128:LEU:HD12	1.93	0.49
59:GB:83:VAL:HA	59:GB:149:ARG:HA	1.94	0.49
2:B:2748:A:C2	9:I:35:ARG:HB2	2.48	0.49
13:M:28:VAL:HG22	13:M:33:THR:HG22	1.95	0.49
13:M:91:ARG:HG2	13:M:92:TYR:H	1.77	0.49
2:B:1125:U:H5"	14:N:15:LYS:HE3	1.93	0.49
14:N:30:LYS:HB2	14:N:62:SER:HB2	1.94	0.49
40:NA:25:LYS:O	40:NA:28:TYR:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:47:LYS:HA	66:NB:50:GLU:HG3	1.93	0.49
15:O:110:ILE:HD13	15:O:116:TYR:CD2	2.47	0.49
15:O:141:ARG:HG3	15:O:143:ARG:O	2.12	0.49
43:QA:51:ILE:HD12	43:QA:51:ILE:N	2.28	0.49
69:QB:45:MET:CE	69:QB:46:PRO:HD2	2.43	0.49
1:A:1479:A:H5"	69:QB:60:SER:HB2	1.94	0.49
1:A:1172:G:H22	69:QB:88:VAL:HG21	1.76	0.49
18:R:39:ILE:HG22	18:R:40:ASP:H	1.75	0.49
70:RB:26:LEU:HB2	70:RB:89:ARG:CB	2.42	0.49
19:S:190:THR:O	19:S:194:GLN:HG2	2.11	0.49
2:B:3243:A:N1	20:T:108:ILE:N	2.60	0.49
20:T:8:VAL:O	20:T:118:VAL:HG22	2.11	0.49
46:TA:69:VAL:HG12	46:TA:70:LEU:N	2.28	0.49
2:B:2131:A:N6	47:UA:18:TYR:H	2.05	0.49
48:VA:55:LYS:HD3	48:VA:56:ASN:H	1.78	0.49
50:XA:143:VAL:HG11	50:XA:156:VAL:HA	1.94	0.49
1:A:992:A:H2	1:A:1012:U:N3	2.11	0.49
1:A:305:C:H2'	1:A:306:U:C6	2.48	0.49
1:A:98:U:H2'	1:A:99:C:C6	2.47	0.49
70:RB:82:TYR:CE1	79:AC:54:LYS:HG2	2.47	0.49
2:B:1118:C:H2'	2:B:1119:C:C6	2.48	0.49
2:B:1439:U:H5"	8:H:87:GLN:HG3	1.95	0.49
2:B:1525:G:H3'	2:B:1526:U:C5	2.48	0.49
2:B:1731:A:C2'	2:B:1732:U:H5'	2.43	0.49
2:B:2395:G:H4'	7:G:258:ALA:CB	2.37	0.49
2:B:2726:C:H1'	2:B:2729:U:H5	1.76	0.49
2:B:405:U:C2'	2:B:406:G:H5'	2.43	0.49
2:B:566:G:O2'	2:B:567:G:H5'	2.12	0.49
2:B:879:U:H4'	21:U:132:ALA:CB	2.34	0.49
28:BA:9:SER:HA	28:BA:52:THR:CB	2.39	0.49
3:C:59:A:N3	3:C:59:A:H5'	2.27	0.49
29:CA:110:VAL:HG22	29:CA:124:VAL:CG1	2.43	0.49
30:DA:85:VAL:HG12	30:DA:97:ILE:HD12	1.95	0.49
82:DC:363:ASP:HB3	82:DC:366:CYS:SG	2.53	0.49
5:E:67:ILE:HG13	5:E:144:LEU:CD1	2.35	0.49
31:EA:45:GLY:HA3	31:EA:71:PHE:CZ	2.48	0.49
7:G:163:HIS:HA	7:G:178:LEU:HA	1.94	0.49
2:B:1887:A:O2'	7:G:228:GLY:HA2	2.13	0.49
25:Y:79:MET:SD	33:GA:21:ILE:HD12	2.52	0.49
59:GB:120:LYS:HB3	59:GB:120:LYS:NZ	2.27	0.49
8:H:64:SER:CA	8:H:75:PRO:HA	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:42:ILE:HD12	34:HA:42:ILE:C	2.33	0.49
35:IA:58:ALA:HA	35:IA:61:LYS:HB2	1.94	0.49
61:IB:54:ILE:N	61:IB:54:ILE:HD12	2.28	0.49
61:IB:75:VAL:HG12	61:IB:120:GLY:H	1.78	0.49
2:B:1405:U:C2	36:JA:55:ILE:HD12	2.47	0.49
36:JA:87:MET:HB2	36:JA:88:HIS:CE1	2.46	0.49
11:K:170:GLU:HG2	11:K:179:LEU:HB2	1.94	0.49
64:LB:87:GLY:HA3	64:LB:120:PRO:CD	2.43	0.49
13:M:34:LEU:HD22	13:M:78:MET:SD	2.52	0.49
65:MB:126:VAL:O	65:MB:127:ARG:HB2	2.12	0.49
65:MB:16:SER:HB2	65:MB:20:VAL:O	2.12	0.49
14:N:16:PRO:O	14:N:18:PRO:HD3	2.12	0.49
66:NB:114:ARG:H	66:NB:116:LEU:CD2	2.25	0.49
15:O:89:TYR:HB3	15:O:169:ALA:HA	1.94	0.49
15:O:40:LEU:HD13	15:O:40:LEU:O	2.13	0.49
17:Q:149:GLN:CD	17:Q:149:GLN:H	2.15	0.49
69:QB:30:VAL:HG12	69:QB:54:PHE:HD2	1.78	0.49
18:R:5:SER:O	18:R:6:ILE:HB	2.12	0.49
70:RB:45:ALA:HB1	70:RB:50:LEU:HD21	1.94	0.49
19:S:148:TYR:HA	19:S:150:TRP:HE1	1.74	0.49
2:B:277:G:C5'	46:TA:49:GLY:HA2	2.42	0.49
1:A:637:C:OP1	72:TB:32:LYS:HG3	2.13	0.49
21:U:97:ASN:O	21:U:100:ALA:HB3	2.13	0.49
22:V:126:GLN:O	22:V:129:VAL:HB	2.12	0.49
22:V:34:THR:O	22:V:38:ARG:HB2	2.12	0.49
48:VA:76:LEU:HA	48:VA:189:GLN:NE2	2.27	0.49
23:W:170:ARG:O	23:W:174:ALA:HB2	2.13	0.49
51:YA:140:ILE:HG13	51:YA:141:ALA:N	2.27	0.49
52:ZA:141:ARG:O	52:ZA:151:PRO:HB3	2.12	0.49
52:ZA:38:VAL:O	52:ZA:42:GLY:HA3	2.12	0.49
1:A:1016:C:H2'	1:A:1017:U:H6	1.76	0.49
1:A:1105:C:O2'	1:A:1106:U:H5'	2.12	0.49
1:A:1124:A:H2'	1:A:1125:A:C8	2.47	0.49
1:A:1202:A:H2'	1:A:1456:C:N4	2.28	0.49
1:A:1227:A:OP1	1:A:1228:G:H3'	2.12	0.49
1:A:1315:U:H2'	1:A:1316:G:O4'	2.13	0.49
1:A:1381:U:O3'	70:RB:59:PRO:HA	2.12	0.49
1:A:1528:U:H2'	1:A:1529:C:C6	2.47	0.49
1:A:195:G:O6	58:FB:141:ARG:NH1	2.46	0.49
1:A:297:U:O2	54:BB:33:ALA:HB1	2.13	0.49
1:A:617:U:H5'	1:A:1031:U:H4'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:86:A:H4'	1:A:148:A:H4'	1.95	0.49
1:A:927:C:H1'	64:LB:125:SER:HA	1.95	0.49
27:AA:83:LYS:O	27:AA:85:TRP:N	2.45	0.49
2:B:1014:U:H2'	2:B:1015:U:H5'	1.94	0.49
2:B:1160:C:O2'	2:B:1161:G:H5'	2.12	0.49
2:B:1282:G:H4'	48:VA:82:GLY:C	2.33	0.49
2:B:1348:U:H4'	2:B:1349:G:H5"	1.95	0.49
2:B:1495:U:H4'	2:B:1514:G:O4'	2.12	0.49
2:B:1627:U:H5'	2:B:1631:C:OP1	2.12	0.49
2:B:2277:C:H2'	2:B:2278:C:C6	2.48	0.49
2:B:2352:A:H5"	21:U:83:TRP:O	2.13	0.49
2:B:285:A:H5"	2:B:286:U:OP1	2.13	0.49
2:B:2916:U:H2'	2:B:2917:G:H8	1.77	0.49
2:B:3131:U:O2'	2:B:3132:C:H5'	2.12	0.49
2:B:3154:C:H3'	2:B:3155:U:H5'	1.95	0.49
2:B:561:C:H4'	18:R:75:GLY:HA3	1.95	0.49
2:B:965:A:O2'	32:FA:44:ASN:HB2	2.12	0.49
54:BB:15:PRO:HG2	54:BB:18:TRP:CE2	2.47	0.49
54:BB:31:PRO:HA	54:BB:81:THR:OG1	2.12	0.49
54:BB:95:THR:HG22	74:VB:16:PRO:HG2	1.93	0.49
55:CB:76:ARG:CD	55:CB:76:ARG:H	2.26	0.49
3:C:83:C:H42	30:DA:52:ARG:NH2	2.10	0.49
56:DB:164:LYS:HE3	56:DB:167:LYS:HD2	1.95	0.49
82:DC:40:VAL:HG13	82:DC:44:GLY:HA3	1.94	0.49
6:F:103:PRO:O	6:F:106:SER:HB2	2.12	0.49
6:F:55:GLY:O	6:F:130:SER:OG	2.28	0.49
32:FA:27:LYS:HB3	32:FA:28:HIS:ND1	2.28	0.49
7:G:27:ALA:CB	7:G:219:ALA:HA	2.42	0.49
7:G:293:ASN:ND2	7:G:304:THR:HG22	2.21	0.49
7:G:314:TYR:CD1	7:G:315:GLY:N	2.80	0.49
59:GB:153:GLU:HA	59:GB:156:ILE:HD11	1.95	0.49
11:K:144:ILE:HA	11:K:147:LEU:HB2	1.93	0.49
1:A:1787:C:H5"	64:LB:127:ARG:NH1	2.28	0.49
40:NA:11:LEU:N	40:NA:11:LEU:HD22	2.27	0.49
40:NA:74:LYS:HZ1	40:NA:79:SER:HA	1.77	0.49
17:Q:103:ASN:ND2	17:Q:109:PHE:HD2	2.10	0.49
18:R:109:ARG:O	18:R:112:LEU:HD12	2.12	0.49
18:R:116:GLU:HA	18:R:119:GLN:NE2	2.27	0.49
44:RA:103:LEU:HD23	44:RA:111:ARG:CZ	2.42	0.49
44:RA:95:VAL:HB	44:RA:122:ARG:CZ	2.42	0.49
19:S:36:ILE:HD11	19:S:105:ARG:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:60:ARG:HG2	71:SB:65:SER:HB2	1.95	0.49
72:TB:30:SER:CA	72:TB:34:ILE:HD12	2.34	0.49
48:VA:122:ARG:O	48:VA:152:ILE:HG21	2.12	0.49
74:VB:94:TYR:HB2	74:VB:96:LEU:CD1	2.43	0.49
24:X:99:ARG:O	24:X:103:VAL:HG23	2.13	0.49
24:X:47:LYS:HB2	24:X:47:LYS:NZ	2.28	0.49
50:XA:191:ARG:HG3	50:XA:192:THR:HG23	1.95	0.49
25:Y:17:ARG:HB3	25:Y:22:HIS:CD2	2.48	0.49
1:A:1291:G:H22	1:A:1324:G:N2	2.11	0.49
1:A:1775:U:O2'	1:A:1776:A:H5'	2.12	0.49
1:A:1791:A:H4'	1:A:1792:G:N2	2.28	0.49
1:A:901:G:C6	1:A:902:G:C6	3.01	0.49
53:AB:162:GLN:N	53:AB:163:PRO:CD	2.75	0.49
2:B:994:G:H21	2:B:1053:A:H2'	1.78	0.49
2:B:1259:A:O2'	2:B:1280:C:H4'	2.13	0.49
2:B:1361:U:H2'	2:B:1362:G:H8	1.78	0.49
2:B:1393:A:H1'	2:B:1418:A:C2	2.48	0.49
2:B:1449:A:H2'	2:B:1450:G:O4'	2.13	0.49
2:B:1480:G:H4'	2:B:1483:G:C4	2.48	0.49
2:B:1803:C:H2'	2:B:1804:A:O4'	2.13	0.49
2:B:1841:A:C2'	2:B:1842:A:H5"	2.43	0.49
2:B:1845:G:H5"	2:B:1846:C:H5"	1.95	0.49
2:B:2603:G:O2'	2:B:2604:U:H5'	2.13	0.49
2:B:2888:U:O4	2:B:2910:A:H2'	2.13	0.49
2:B:2897:A:H2'	2:B:2899:C:H5'	1.94	0.49
2:B:744:A:C2'	2:B:745:C:H5'	2.43	0.49
2:B:763:G:C2	2:B:764:U:H1'	2.48	0.49
2:B:953:G:C8	2:B:1117:G:N7	2.81	0.49
29:CA:62:VAL:HG13	29:CA:90:ALA:HB1	1.94	0.49
4:D:10:C:C4	9:I:20:PHE:HB3	2.48	0.49
30:DA:50:ILE:HG22	30:DA:51:ARG:N	2.28	0.49
82:DC:152:LYS:CB	82:DC:343:PRO:HD3	2.43	0.49
82:DC:391:LYS:HE3	82:DC:393:ARG:CG	2.43	0.49
31:EA:45:GLY:HA3	31:EA:71:PHE:CE1	2.47	0.49
31:EA:93:LYS:HD3	31:EA:93:LYS:C	2.33	0.49
6:F:133:TYR:HD2	6:F:168:VAL:HB	1.77	0.49
2:B:2881:C:C4'	7:G:249:VAL:HG13	2.37	0.49
7:G:382:THR:O	7:G:383:LEU:HD23	2.11	0.49
7:G:58:ARG:O	7:G:71:GLU:HA	2.12	0.49
7:G:60:LEU:HG	7:G:62:ARG:HG3	1.94	0.49
8:H:136:LEU:HD21	8:H:142:VAL:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:330:TYR:O	8:H:333:VAL:HG12	2.13	0.49
1:A:115:G:N7	61:IB:129:ARG:HB2	2.27	0.49
12:L:78:PHE:N	12:L:78:PHE:CD1	2.81	0.49
65:MB:32:ASP:O	65:MB:36:LEU:HD22	2.11	0.49
40:NA:76:ARG:NE	40:NA:76:ARG:HA	2.27	0.49
15:O:77:GLU:HA	15:O:80:LEU:HB3	1.95	0.49
16:P:114:ARG:HH21	16:P:128:VAL:HG11	1.78	0.49
17:Q:119:TYR:OH	39:MA:116:TYR:HE1	1.96	0.49
1:A:1368:G:H5"	69:QB:69:LYS:HG2	1.94	0.49
19:S:170:LYS:O	19:S:170:LYS:HD3	2.13	0.49
20:T:32:LYS:CA	20:T:101:ARG:HB3	2.34	0.49
21:U:30:ARG:C	21:U:30:ARG:HD3	2.33	0.49
73:UB:70:LYS:HE3	80:BC:8:LEU:CD2	2.43	0.49
22:V:113:LYS:HA	22:V:113:LYS:HZ1	1.75	0.49
2:B:2630:C:H3'	25:Y:4:SER:OG	2.13	0.49
1:A:1072:C:H2'	1:A:1073:G:H8	1.76	0.49
1:A:1449:U:H2'	1:A:1450:U:C6	2.47	0.49
1:A:566:C:H2'	1:A:567:A:O4'	2.13	0.49
2:B:1010:G:H1'	14:N:195:ALA:HB2	1.95	0.49
2:B:1188:U:H4'	2:B:1296:C:O2'	2.13	0.49
2:B:1784:G:O2'	2:B:1785:U:H5'	2.12	0.49
2:B:188:U:O2	2:B:223:U:H4'	2.12	0.49
2:B:2135:U:H3	2:B:2145:A:H61	1.60	0.49
2:B:3064:U:H2'	2:B:3065:G:C8	2.48	0.49
2:B:40:A:O2'	2:B:41:G:H5'	2.12	0.49
2:B:542:G:H1	2:B:549:U:H3	1.60	0.49
54:BB:36:HIS:NE2	54:BB:143:ASP:HA	2.28	0.49
80:BC:7:SER:C	80:BC:8:LEU:HD23	2.33	0.49
55:CB:37:GLN:O	55:CB:40:ILE:N	2.46	0.49
30:DA:28:ARG:NH2	30:DA:49:PRO:HB2	2.28	0.49
30:DA:56:VAL:HG22	30:DA:57:LEU:N	2.28	0.49
56:DB:135:PRO:CB	56:DB:141:ILE:HG12	2.42	0.49
82:DC:488:VAL:HG12	82:DC:796:MET:HB2	1.94	0.49
82:DC:80:GLU:HA	82:DC:96:ASN:O	2.12	0.49
31:EA:12:VAL:HB	31:EA:81:LEU:HB3	1.95	0.49
1:A:640:U:H3	57:EB:118:LEU:HD11	1.78	0.49
57:EB:163:ASP:O	57:EB:166:LEU:HD22	2.13	0.49
6:F:29:LEU:HB2	6:F:123:ARG:HA	1.94	0.49
2:B:794:U:OP1	32:FA:6:THR:HG23	2.13	0.49
7:G:110:LEU:O	7:G:111:SER:O	2.30	0.49
1:A:513:U:H4'	59:GB:131:GLN:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:129:ILE:HG21	59:GB:144:PRO:HA	1.93	0.49
59:GB:8:TYR:H	59:GB:8:TYR:HD2	1.60	0.49
8:H:126:ILE:HA	8:H:129:THR:HG23	1.95	0.49
8:H:160:GLN:O	8:H:161:LYS:HD2	2.13	0.49
8:H:195:ARG:HB3	8:H:197:ARG:NH1	2.27	0.49
8:H:296:GLN:NE2	8:H:299:ILE:HG21	2.27	0.49
2:B:2401:A:O3'	8:H:68:GLY:HA2	2.13	0.49
60:HB:28:ASN:H	60:HB:40:LEU:HD21	1.78	0.49
9:I:110:LEU:HB3	9:I:116:ASP:HA	1.95	0.49
35:IA:72:ARG:HG3	35:IA:96:VAL:HG13	1.95	0.49
10:J:139:LYS:O	10:J:143:LYS:HG3	2.13	0.49
64:LB:115:ILE:O	76:XB:65:PRO:HG3	2.12	0.49
64:LB:129:LYS:HB2	64:LB:129:LYS:NZ	2.27	0.49
13:M:103:ILE:HG13	13:M:136:PHE:CZ	2.47	0.49
13:M:90:MET:HE3	13:M:181:VAL:HG22	1.94	0.49
14:N:61:SER:HB3	14:N:63:GLU:CG	2.43	0.49
15:O:84:LEU:HD22	15:O:89:TYR:HD1	1.78	0.49
15:O:94:ARG:HD3	15:O:94:ARG:H	1.77	0.49
72:TB:41:MET:HB3	72:TB:46:TYR:HB2	1.95	0.49
22:V:180:ARG:N	22:V:185:LYS:HG2	2.27	0.49
2:B:3068:U:OP1	23:W:58:HIS:HA	2.13	0.49
24:X:117:ARG:O	24:X:121:ILE:HG13	2.13	0.49
51:YA:81:PHE:O	51:YA:82:ARG:HB2	2.13	0.49
52:ZA:147:ASN:O	52:ZA:148:LEU:C	2.51	0.49
52:ZA:165:VAL:HG22	52:ZA:204:THR:HA	1.94	0.49
52:ZA:70:ASP:OD2	52:ZA:133:LYS:NZ	2.44	0.49
1:A:108:A:H3'	1:A:109:G:C8	2.48	0.49
1:A:1276:U:O2'	1:A:1277:G:H5'	2.13	0.49
1:A:143:G:H2'	1:A:144:U:C5'	2.36	0.49
1:A:899:G:H4'	64:LB:46:MET:CE	2.43	0.49
2:B:1159:A:C2'	2:B:1160:C:H5"	2.42	0.49
2:B:1259:A:H5'	48:VA:53:MET:O	2.13	0.49
2:B:1373:A:H2'	2:B:1374:G:H8	1.77	0.49
2:B:1818:U:H2'	2:B:1819:U:C5'	2.43	0.49
2:B:1830:G:H2'	2:B:1831:U:O4'	2.12	0.49
2:B:1481:A:O2'	2:B:1858:A:N3	2.40	0.49
2:B:2186:U:O2'	2:B:2315:G:C8	2.66	0.49
2:B:2488:A:H62	2:B:2490:C:H41	1.61	0.49
2:B:2742:C:H2'	2:B:2743:A:C8	2.47	0.49
2:B:3135:U:C5	2:B:3136:G:N7	2.81	0.49
1:A:972:G:H21	2:B:847:A:N6	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:141:THR:OG1	54:BB:145:ARG:HB2	2.13	0.49
54:BB:162:ILE:HG22	54:BB:163:ASP:N	2.28	0.49
3:C:3:A:H2'	3:C:4:C:O4'	2.12	0.49
82:DC:567:VAL:HA	82:DC:721:ASP:O	2.12	0.49
82:DC:599:LEU:HA	82:DC:602:GLU:OE2	2.13	0.49
82:DC:646:VAL:HG23	82:DC:667:PHE:CE1	2.48	0.49
82:DC:730:LEU:HG	82:DC:732:GLU:OE2	2.13	0.49
5:E:115:VAL:CB	5:E:140:HIS:HB2	2.42	0.49
83:EC:6935:G:H8	83:EC:6935:G:H5'	1.77	0.49
2:B:2148:U:O2'	6:F:182:ALA:HB2	2.13	0.49
58:FB:3:ILE:N	58:FB:3:ILE:HD12	2.28	0.49
7:G:49:TYR:O	7:G:79:VAL:HG23	2.13	0.49
59:GB:174:ARG:N	59:GB:174:ARG:HE	2.10	0.49
59:GB:82:ARG:NH1	59:GB:82:ARG:HB3	2.28	0.49
8:H:231:ALA:O	8:H:233:LEU:HG	2.13	0.49
10:J:67:GLY:N	10:J:68:PRO:HA	2.27	0.49
11:K:82:LYS:H	11:K:82:LYS:HD2	1.77	0.49
2:B:1159:A:H5'	11:K:92:ILE:CG2	2.42	0.49
38:LA:97:GLU:O	38:LA:101:VAL:HB	2.12	0.49
34:HA:51:LEU:HD22	38:LA:91:ARG:NH2	2.28	0.49
64:LB:79:VAL:HG13	64:LB:79:VAL:O	2.12	0.49
14:N:176:LEU:HB3	14:N:180:GLU:CG	2.43	0.49
66:NB:93:HIS:O	66:NB:102:LYS:HG3	2.12	0.49
41:OA:18:LEU:C	41:OA:18:LEU:HD13	2.33	0.49
42:PA:38:PHE:CE1	42:PA:40:GLN:HG2	2.48	0.49
2:B:47:C:H5"	17:Q:16:LYS:HG3	1.95	0.49
17:Q:176:GLU:HB3	40:NA:11:LEU:HD21	1.95	0.49
17:Q:3:ILE:HG12	32:FA:33:GLY:O	2.13	0.49
69:QB:103:LYS:HA	69:QB:106:GLN:HB2	1.95	0.49
70:RB:50:LEU:CD2	70:RB:95:ALA:HB2	2.41	0.49
2:B:1307:G:C5'	20:T:60:LYS:HE2	2.42	0.49
46:TA:12:CYS:C	46:TA:14:GLY:H	2.16	0.49
47:UA:28:LYS:O	47:UA:31:ILE:HG22	2.12	0.49
2:B:87:U:H5"	22:V:172:PHE:CZ	2.48	0.49
48:VA:120:TRP:HB2	48:VA:157:LYS:HE2	1.95	0.49
48:VA:59:VAL:O	48:VA:62:ALA:HB3	2.11	0.49
23:W:119:LEU:HD23	23:W:119:LEU:C	2.33	0.49
23:W:139:VAL:O	23:W:143:ILE:HG13	2.13	0.49
2:B:1472:U:C5'	23:W:4:LEU:HD12	2.42	0.49
75:WB:47:TYR:O	75:WB:50:ILE:HB	2.13	0.49
50:XA:127:ARG:HG3	50:XA:152:PRO:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:57:LEU:O	50:XA:60:ALA:HB3	2.13	0.49
9:I:38:THR:HG22	25:Y:30:TYR:CD1	2.47	0.49
51:YA:127:VAL:HG22	51:YA:128:LYS:H	1.78	0.49
26:Z:50:LEU:HB3	26:Z:54:VAL:HG23	1.95	0.49
52:ZA:165:VAL:CG2	52:ZA:204:THR:HA	2.42	0.49
1:A:1146:G:N3	1:A:1635:A:H2	2.11	0.48
1:A:1463:C:O2'	1:A:1464:G:H5'	2.12	0.48
1:A:1561:U:H2'	1:A:1562:G:C8	2.44	0.48
1:A:1589:C:H2'	1:A:1590:G:C8	2.48	0.48
1:A:304:U:H2'	1:A:305:C:O4'	2.13	0.48
1:A:625:C:H4'	1:A:940:A:H4'	1.95	0.48
27:AA:18:PRO:HA	27:AA:51:ALA:HB2	1.94	0.48
27:AA:66:LYS:CB	27:AA:69:LEU:HD13	2.43	0.48
2:B:1157:G:H2'	2:B:1158:A:H8	1.78	0.48
2:B:1211:U:H2'	2:B:1212:A:H8	1.74	0.48
2:B:1371:G:H2'	2:B:1372:C:O4'	2.13	0.48
2:B:1380:G:O2'	2:B:1381:A:H5'	2.12	0.48
2:B:148:G:H4'	19:S:55:ALA:HB2	1.94	0.48
2:B:1811:G:H2'	2:B:1812:G:C1'	2.43	0.48
2:B:1833:G:N7	2:B:1834:U:C5	2.81	0.48
2:B:2175:U:O2	6:F:25:GLY:HA2	2.13	0.48
2:B:2228:A:H2'	2:B:2229:A:C8	2.48	0.48
2:B:2361:A:H2'	2:B:2362:C:H6	1.73	0.48
2:B:3252:G:H2'	2:B:3253:G:O4'	2.12	0.48
2:B:422:A:H2'	2:B:423:A:O4'	2.13	0.48
2:B:630:A:H8	2:B:630:A:O5'	1.96	0.48
2:B:750:G:H2'	2:B:751:A:C8	2.48	0.48
2:B:706:A:H4'	2:B:781:G:O2'	2.13	0.48
54:BB:105:VAL:C	54:BB:107:GLY:H	2.16	0.48
59:GB:29:LYS:HG2	80:BC:44:PHE:CE2	2.47	0.48
29:CA:80:ASN:HA	29:CA:132:ALA:CB	2.21	0.48
4:D:88:G:H2'	4:D:89:G:C8	2.48	0.48
30:DA:28:ARG:HH12	30:DA:118:LEU:HD22	1.78	0.48
2:B:376:G:OP2	30:DA:89:LYS:HD2	2.13	0.48
56:DB:186:ARG:O	56:DB:189:HIS:HB3	2.13	0.48
82:DC:495:VAL:CG2	82:DC:498:ALA:HA	2.43	0.48
82:DC:808:PRO:O	82:DC:819:VAL:HG21	2.13	0.48
5:E:67:ILE:HG12	5:E:77:ALA:CB	2.43	0.48
31:EA:109:GLU:OE2	31:EA:112:LYS:HD2	2.13	0.48
31:EA:15:ARG:C	31:EA:19:ALA:HB2	2.34	0.48
6:F:182:ALA:O	6:F:185:ALA:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:19:LYS:CB	32:FA:25:HIS:HB2	2.41	0.48
58:FB:102:VAL:HG11	58:FB:169:ILE:HD11	1.94	0.48
59:GB:107:ARG:NH2	59:GB:148:VAL:HG12	2.28	0.48
59:GB:14:THR:CG2	59:GB:15:PRO:HD2	2.27	0.48
8:H:157:GLU:OE2	8:H:209:TYR:HB2	2.13	0.48
8:H:329:PRO:C	8:H:331:ALA:H	2.15	0.48
9:I:283:ALA:HA	9:I:286:VAL:HB	1.94	0.48
11:K:87:VAL:CG2	11:K:135:ALA:HB3	2.43	0.48
13:M:168:ARG:C	13:M:168:ARG:HD3	2.33	0.48
65:MB:28:MET:O	65:MB:29:SER:CB	2.61	0.48
66:NB:30:LYS:HA	66:NB:34:SER:O	2.12	0.48
41:OA:74:PHE:HA	41:OA:78:PHE:CE2	2.47	0.48
2:B:77:A:H5'	17:Q:100:ARG:NH1	2.27	0.48
18:R:66:THR:HG22	18:R:67:PRO:HD2	1.94	0.48
20:T:77:SER:HB3	20:T:106:GLU:HG2	1.94	0.48
73:UB:37:ALA:HA	73:UB:41:SER:HB3	1.94	0.48
22:V:25:TYR:O	22:V:29:LEU:HG	2.13	0.48
49:WA:9:LEU:HD13	49:WA:313:TRP:NE1	2.28	0.48
24:X:82:ASP:HB2	24:X:120:SER:CB	2.43	0.48
50:XA:22:THR:HG22	50:XA:169:SER:CB	2.42	0.48
76:XB:58:VAL:HG23	76:XB:59:TYR:CD2	2.47	0.48
2:B:2735:U:O2'	25:Y:51:GLY:HA2	2.13	0.48
1:A:1066:C:C5'	51:YA:149:GLN:HE22	2.26	0.48
78:ZB:61:ARG:HH11	78:ZB:61:ARG:HG2	1.77	0.48
1:A:1534:G:N2	55:CB:187:ILE:HA	2.28	0.48
53:AB:73:VAL:HG13	53:AB:77:PHE:CE2	2.48	0.48
2:B:1283:C:O2'	2:B:1284:C:H5'	2.12	0.48
2:B:1470:U:H2'	2:B:1471:U:H6	1.78	0.48
2:B:1479:U:H1'	2:B:1484:U:C5	2.49	0.48
2:B:1496:C:OP2	2:B:1497:C:H5	1.96	0.48
2:B:1558:A:C4	29:CA:34:LEU:HD22	2.47	0.48
2:B:1638:A:O3'	38:LA:52:GLN:NE2	2.46	0.48
2:B:1818:U:H2'	2:B:1819:U:H5"	1.94	0.48
2:B:1851:G:O5'	2:B:1851:G:H8	1.97	0.48
2:B:198:A:C2'	2:B:199:A:H5'	2.42	0.48
2:B:20:A:H2'	2:B:21:G:C8	2.48	0.48
2:B:2100:A:C5	2:B:2101:C:N4	2.81	0.48
2:B:2178:A:H5"	6:F:132:ASN:CG	2.33	0.48
2:B:2390:A:C2'	2:B:2391:G:O5'	2.61	0.48
2:B:2626:A:C1'	2:B:2644:C:H5'	2.38	0.48
2:B:1201:C:N4	2:B:2857:C:H5"	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:301:G:O2'	2:B:302:U:H5'	2.13	0.48
2:B:3324:C:H4'	35:IA:13:THR:O	2.13	0.48
2:B:521:A:H2'	2:B:522:A:C8	2.47	0.48
54:BB:219:VAL:O	54:BB:220:THR:HG23	2.12	0.48
2:B:406:G:H1'	3:C:16:G:N2	2.28	0.48
3:C:57:C:H4'	3:C:63:G:C5	2.48	0.48
55:CB:25:LEU:HD12	66:NB:61:SER:HA	1.96	0.48
4:D:11:A:O2'	4:D:12:U:H3'	2.13	0.48
30:DA:86:THR:HG22	30:DA:96:PRO:CA	2.39	0.48
56:DB:222:GLU:HA	56:DB:225:GLU:OE2	2.13	0.48
56:DB:87:ARG:HH11	56:DB:87:ARG:HG3	1.78	0.48
5:E:16:LEU:HD21	5:E:208:SER:OG	2.13	0.48
2:B:705:A:N6	32:FA:74:ASN:HD21	2.11	0.48
7:G:43:LEU:HD12	7:G:43:LEU:N	2.28	0.48
59:GB:53:ARG:HH21	59:GB:53:ARG:HG2	1.78	0.48
59:GB:93:LEU:HA	59:GB:96:VAL:HG13	1.95	0.48
9:I:95:TRP:O	9:I:98:ALA:HB3	2.13	0.48
10:J:172:HIS:CD2	10:J:173:MET:N	2.80	0.48
37:KA:45:LEU:HD21	37:KA:73:ARG:HA	1.95	0.48
63:KB:23:PRO:O	63:KB:24:ALA:HB3	2.14	0.48
2:B:1654:A:O2'	38:LA:59:PRO:HG3	2.12	0.48
38:LA:5:VAL:HG13	38:LA:6:THR:N	2.27	0.48
13:M:117:PHE:N	13:M:120:ASP:HB3	2.27	0.48
40:NA:50:LEU:HD22	40:NA:54:GLU:HB3	1.94	0.48
18:R:13:ARG:HD3	18:R:65:LEU:O	2.13	0.48
71:SB:17:CYS:HB3	71:SB:22:ARG:N	2.28	0.48
71:SB:53:TYR:CD1	71:SB:72:LEU:HD13	2.48	0.48
46:TA:77:CYS:C	46:TA:78:LYS:HD3	2.33	0.48
72:TB:11:LEU:HD12	72:TB:74:VAL:CB	2.27	0.48
47:UA:55:TRP:CZ2	47:UA:70:THR:C	2.86	0.48
22:V:4:ASP:O	22:V:6:THR:N	2.44	0.48
22:V:51:ALA:HB1	22:V:84:VAL:HG21	1.96	0.48
74:VB:15:ASN:HD21	74:VB:22:GLN:HG2	1.77	0.48
49:WA:23:LEU:CD1	49:WA:303:ALA:HA	2.43	0.48
77:YB:36:LYS:CD	77:YB:36:LYS:H	2.24	0.48
52:ZA:151:PRO:HG3	71:SB:9:VAL:CG2	2.43	0.48
78:ZB:64:ARG:HH11	78:ZB:64:ARG:HG2	1.77	0.48
1:A:1291:G:N2	1:A:1324:G:H22	2.10	0.48
1:A:1566:U:O2'	1:A:1567:U:H5'	2.14	0.48
1:A:452:A:O2'	1:A:453:U:H5'	2.13	0.48
1:A:454:U:H4'	54:BB:62:LYS:CE	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1269:U:H1'	2:B:1272:C:C5	2.49	0.48
2:B:1340:G:H2'	2:B:1341:U:H6	1.78	0.48
2:B:1498:A:H2'	2:B:1499:C:C6	2.48	0.48
2:B:113:C:H3'	2:B:154:U:O4	2.13	0.48
2:B:1708:C:H2'	2:B:1709:C:H6	1.78	0.48
2:B:1672:U:H3	2:B:1775:G:H1	1.61	0.48
2:B:1784:G:C2	2:B:1785:U:H1'	2.48	0.48
2:B:1662:G:N2	2:B:1787:A:H2	2.06	0.48
2:B:217:U:H2'	30:DA:103:LYS:NZ	2.28	0.48
2:B:2471:U:H3	2:B:2474:G:N2	1.90	0.48
2:B:2835:U:H3'	2:B:2836:C:O2	2.14	0.48
2:B:2923:U:H2'	2:B:2924:U:C6	2.48	0.48
2:B:2973:G:H2'	2:B:2974:U:O4'	2.13	0.48
2:B:3000:A:H2'	2:B:3001:C:H6	1.76	0.48
2:B:3027:A:H2'	2:B:3028:G:O4'	2.13	0.48
2:B:52:A:H2'	2:B:53:G:H8	1.77	0.48
2:B:897:U:O2'	2:B:898:U:H5'	2.14	0.48
2:B:935:U:H6	2:B:935:U:O5'	1.97	0.48
54:BB:180:LEU:HD13	54:BB:228:ILE:HG13	1.95	0.48
54:BB:195:ILE:HA	54:BB:210:ILE:HG23	1.95	0.48
54:BB:58:GLY:HA2	54:BB:61:VAL:HG13	1.95	0.48
3:C:29:U:OP1	17:Q:26:PHE:HB2	2.12	0.48
2:B:1399:A:C6	3:C:8:C:O4'	2.67	0.48
29:CA:136:ALA:HB1	29:CA:142:ILE:CG1	2.43	0.48
29:CA:73:MET:HA	29:CA:73:MET:HE2	1.95	0.48
4:D:65:G:H4'	14:N:204:GLY:C	2.33	0.48
30:DA:109:LEU:HD22	30:DA:115:ARG:HH12	1.76	0.48
82:DC:485:VAL:HG11	82:DC:533:THR:HG23	1.95	0.48
82:DC:495:VAL:HG13	82:DC:504:LEU:CD2	2.43	0.48
82:DC:545:LEU:HG	82:DC:554:LEU:HD11	1.95	0.48
82:DC:627:VAL:HA	82:DC:630:ALA:HB3	1.95	0.48
82:DC:587:TYR:H	82:DC:691:VAL:HG22	1.78	0.48
6:F:62:VAL:HG22	6:F:71:LEU:HB3	1.95	0.48
7:G:195:ALA:O	7:G:199:PHE:CD1	2.66	0.48
2:B:2393:G:O3'	7:G:252:ILE:HD13	2.14	0.48
59:GB:102:GLU:O	59:GB:106:GLU:HB2	2.13	0.48
59:GB:34:PHE:CD1	59:GB:105:LEU:HG	2.47	0.48
9:I:235:SER:O	9:I:239:ILE:HG13	2.14	0.48
61:IB:93:TYR:CD2	61:IB:93:TYR:C	2.86	0.48
36:JA:8:LYS:O	36:JA:10:VAL:HG23	2.13	0.48
2:B:1138:U:O3'	11:K:97:PRO:HD3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:30:ILE:HG22	37:KA:31:LYS:H	1.77	0.48
63:KB:110:ASP:O	63:KB:113:PHE:HB3	2.13	0.48
12:L:163:VAL:HA	12:L:166:LEU:HG	1.95	0.48
64:LB:135:ARG:HH11	64:LB:135:ARG:HG2	1.79	0.48
14:N:144:ASN:O	14:N:147:VAL:HB	2.14	0.48
40:NA:58:ILE:HA	40:NA:61:ILE:HD12	1.95	0.48
66:NB:57:LEU:O	66:NB:57:LEU:HD23	2.13	0.48
67:OB:41:ILE:CG2	67:OB:42:GLN:H	2.10	0.48
69:QB:103:LYS:HA	69:QB:106:GLN:CB	2.43	0.48
70:RB:66:SER:HB2	70:RB:81:THR:CB	2.39	0.48
19:S:18:VAL:O	19:S:21:PHE:HB3	2.13	0.48
21:U:130:TYR:CD1	21:U:130:TYR:N	2.81	0.48
21:U:131:ARG:NH1	21:U:131:ARG:HG3	2.29	0.48
47:UA:30:GLU:HG3	47:UA:31:ILE:H	1.78	0.48
47:UA:56:THR:HG22	47:UA:63:THR:CG2	2.33	0.48
73:UB:69:ARG:O	73:UB:70:LYS:HB2	2.13	0.48
50:XA:41:ARG:HH11	50:XA:45:VAL:HB	1.77	0.48
76:XB:79:ILE:O	76:XB:79:ILE:HG22	2.14	0.48
1:A:1335:U:H2'	1:A:1336:A:C8	2.47	0.48
1:A:1615:C:H4'	1:A:1616:G:H8	1.78	0.48
1:A:1770:U:O2'	1:A:1771:U:H5'	2.14	0.48
1:A:517:U:H2'	1:A:518:A:O4'	2.14	0.48
1:A:20:G:H5"	1:A:571:G:C8	2.48	0.48
1:A:373:G:N2	1:A:604:A:H5'	2.28	0.48
53:AB:159:HIS:O	53:AB:164:VAL:HG21	2.14	0.48
2:B:1190:A:C4	2:B:1193:A:H1'	2.48	0.48
2:B:1263:A:H4'	2:B:1264:G:H5'	1.94	0.48
2:B:1438:U:H2'	2:B:1439:U:C6	2.47	0.48
2:B:1505:C:H2'	2:B:1506:A:H8	1.78	0.48
2:B:16:A:O2'	29:CA:45:LYS:HD2	2.13	0.48
2:B:2110:G:O2'	2:B:2111:G:H5"	2.13	0.48
2:B:2186:U:H2'	2:B:2187:G:O4'	2.12	0.48
2:B:189:G:H5'	2:B:224:C:OP2	2.12	0.48
2:B:2418:G:H2'	2:B:2418:G:N3	2.29	0.48
2:B:2637:A:HO2'	2:B:2638:C:H5"	1.77	0.48
2:B:2728:G:N7	25:Y:87:LYS:HE2	2.29	0.48
2:B:2824:G:H2'	2:B:2825:C:C6	2.48	0.48
2:B:2861:U:H2'	2:B:2862:U:O4'	2.13	0.48
2:B:2941:A:OP1	7:G:255:TRP:HB3	2.13	0.48
2:B:3039:C:H2'	2:B:3040:A:C8	2.46	0.48
2:B:3202:G:H2'	2:B:3203:U:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3297:U:H2'	2:B:3298:C:H6	1.77	0.48
2:B:3335:A:C8	2:B:3335:A:H5'	2.49	0.48
2:B:701:G:H2'	2:B:702:C:O4'	2.12	0.48
2:B:769:G:H2'	2:B:770:G:O4'	2.13	0.48
2:B:827:A:H2'	2:B:828:A:C8	2.48	0.48
3:C:37:A:H2	39:MA:86:ARG:NH2	2.09	0.48
29:CA:125:ARG:HD3	29:CA:125:ARG:C	2.34	0.48
55:CB:37:GLN:HG2	55:CB:69:PHE:CZ	2.48	0.48
4:D:103:A:H2'	4:D:104:A:H8	1.77	0.48
56:DB:178:LEU:HD12	56:DB:179:VAL:N	2.29	0.48
82:DC:519:LEU:HG	82:DC:521:TYR:HD2	1.78	0.48
82:DC:558:PRO:HB3	82:DC:778:PHE:HB3	1.95	0.48
83:EC:6769:A:H2'	83:EC:6770:U:O4'	2.13	0.48
6:F:51:ASP:CB	6:F:58:LEU:HD11	2.43	0.48
25:Y:88:ARG:CZ	33:GA:33:LYS:HB2	2.43	0.48
34:HA:87:VAL:HG13	34:HA:87:VAL:O	2.13	0.48
11:K:135:ALA:HB1	11:K:232:ARG:HG3	1.95	0.48
11:K:25:GLN:HA	11:K:28:ALA:HB3	1.94	0.48
38:LA:3:GLN:CG	38:LA:30:LEU:HB2	2.43	0.48
39:MA:17:LEU:HD11	39:MA:61:GLN:CD	2.33	0.48
65:MB:94:VAL:O	65:MB:104:GLN:HA	2.13	0.48
65:MB:60:LEU:HD11	65:MB:88:GLU:O	2.14	0.48
41:OA:25:ARG:HE	43:QA:51:ILE:CD1	2.18	0.48
43:QA:42:ARG:HH22	43:QA:44:TRP:HA	1.78	0.48
71:SB:41:GLU:O	71:SB:42:GLU:HB3	2.11	0.48
72:TB:37:PHE:O	72:TB:40:VAL:HB	2.12	0.48
21:U:150:VAL:HG13	21:U:150:VAL:O	2.14	0.48
48:VA:45:LEU:CD2	48:VA:99:VAL:HG11	2.42	0.48
49:WA:264:SER:N	49:WA:271:VAL:HG23	2.27	0.48
75:WB:92:ILE:HG13	75:WB:100:ILE:HG23	1.95	0.48
50:XA:48:ILE:HG22	50:XA:49:ASN:N	2.28	0.48
52:ZA:53:ILE:HG23	52:ZA:72:LEU:HG	1.95	0.48
1:A:100:A:O2'	1:A:101:U:H5'	2.13	0.48
1:A:1144:U:H2'	1:A:1145:U:C6	2.49	0.48
1:A:1479:A:H5"	69:QB:60:SER:CB	2.42	0.48
1:A:14:C:OP1	52:ZA:164:SER:HB2	2.14	0.48
1:A:478:A:N6	1:A:539:G:H22	2.12	0.48
53:AB:156:PHE:C	53:AB:157:LEU:HD23	2.33	0.48
53:AB:158:ILE:H	53:AB:158:ILE:HD13	1.78	0.48
53:AB:53:THR:HG21	53:AB:94:ARG:HG2	1.95	0.48
79:AC:21:CYS:HB2	79:AC:30:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1604:G:H2'	2:B:1605:A:O4'	2.13	0.48
2:B:1609:C:O2'	2:B:1610:G:H5'	2.14	0.48
2:B:1680:G:H2'	2:B:1681:U:C6	2.48	0.48
2:B:1868:G:H21	2:B:2118:C:H1'	1.78	0.48
2:B:1920:U:H2'	2:B:1930:A:N6	2.29	0.48
2:B:2407:C:H2'	2:B:2408:U:H6	1.78	0.48
2:B:1048:A:C4'	2:B:2633:U:H4'	2.43	0.48
2:B:2692:A:O5'	2:B:2692:A:H8	1.96	0.48
2:B:2837:A:H2'	2:B:2845:A:C6	2.49	0.48
2:B:296:A:H2'	2:B:297:G:N3	2.28	0.48
2:B:3036:G:C2'	2:B:3037:U:H5'	2.40	0.48
2:B:3095:U:H2'	2:B:3096:C:C6	2.49	0.48
2:B:3246:G:H4'	2:B:3247:G:C8	2.48	0.48
2:B:375:A:H2	2:B:394:G:O4'	1.97	0.48
2:B:68:C:H2'	2:B:69:C:O4'	2.14	0.48
2:B:745:C:H2'	2:B:746:A:C8	2.49	0.48
2:B:7:C:O2'	12:L:183:LYS:HE3	2.13	0.48
2:B:871:U:H2'	2:B:872:U:C6	2.48	0.48
3:C:42:G:O2'	3:C:43:A:H5'	2.14	0.48
29:CA:87:SER:C	29:CA:89:LYS:N	2.64	0.48
55:CB:168:VAL:HG12	55:CB:172:ILE:CD1	2.43	0.48
4:D:27:A:H1'	4:D:57:G:N2	2.28	0.48
82:DC:22:MET:HA	82:DC:122:THR:CB	2.33	0.48
82:DC:307:LEU:HD21	82:DC:323:VAL:HG22	1.96	0.48
82:DC:369:ILE:HD11	82:DC:379:MET:CG	2.27	0.48
82:DC:576:LEU:HD23	82:DC:839:TYR:CZ	2.48	0.48
82:DC:89:ILE:HG22	82:DC:91:GLN:HB3	1.93	0.48
57:EB:96:ARG:HD2	57:EB:121:VAL:HG22	1.94	0.48
83:EC:6768:U:C2	83:EC:6770:U:C5	3.01	0.48
6:F:10:LYS:HG2	6:F:16:PHE:CD1	2.49	0.48
59:GB:109:LEU:HB2	59:GB:146:PHE:CB	2.40	0.48
59:GB:162:SER:HB3	59:GB:163:PRO:HD2	1.94	0.48
8:H:129:THR:OG1	8:H:250:TRP:HZ2	1.95	0.48
8:H:142:VAL:HB	8:H:145:ILE:CG2	2.42	0.48
8:H:206:LEU:HG	8:H:226:GLU:HG3	1.95	0.48
8:H:225:VAL:HG12	8:H:226:GLU:N	2.28	0.48
8:H:206:LEU:HD23	8:H:226:GLU:O	2.14	0.48
8:H:84:ARG:HA	8:H:87:GLN:CD	2.34	0.48
9:I:119:TYR:CZ	9:I:134:ALA:HA	2.49	0.48
9:I:246:ALA:O	9:I:249:ALA:HB3	2.12	0.48
61:IB:34:TRP:O	61:IB:61:THR:HG22	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:190:VAL:CG1	12:L:192:GLN:H	2.27	0.48
38:LA:7:PHE:O	38:LA:9:ARG:N	2.47	0.48
1:A:1453:G:H5'	65:MB:79:HIS:O	2.14	0.48
67:OB:85:VAL:O	67:OB:86:PRO:C	2.52	0.48
42:PA:43:PHE:HB2	42:PA:54:LEU:HB3	1.96	0.48
69:QB:101:ASN:HA	69:QB:104:VAL:CG2	2.43	0.48
53:AB:7:LYS:HD3	70:RB:27:THR:HG21	1.95	0.48
70:RB:74:GLU:HG3	70:RB:75:GLY:N	2.29	0.48
71:SB:79:LEU:HD13	71:SB:82:VAL:HG21	1.95	0.48
46:TA:65:THR:CG2	46:TA:89:LYS:HD3	2.43	0.48
2:B:1506:A:OP1	21:U:127:ARG:HD2	2.14	0.48
48:VA:28:VAL:HG12	48:VA:187:VAL:HG13	1.95	0.48
1:A:780:A:O2'	74:VB:8:ARG:HA	2.14	0.48
49:WA:192:PHE:HD2	49:WA:192:PHE:N	2.11	0.48
1:A:1531:G:H5'	75:WB:81:ARG:NH2	2.28	0.48
75:WB:96:SER:O	75:WB:98:GLN:N	2.47	0.48
24:X:10:ILE:HG23	24:X:26:ARG:HA	1.94	0.48
24:X:10:ILE:O	24:X:59:VAL:HB	2.13	0.48
50:XA:126:PRO:CG	50:XA:151:SER:HB3	2.43	0.48
51:YA:117:TRP:HE3	51:YA:117:TRP:HA	1.79	0.48
51:YA:144:ARG:HG2	51:YA:207:LEU:O	2.13	0.48
51:YA:65:VAL:HA	51:YA:86:LEU:O	2.13	0.48
52:ZA:143:TYR:HB2	72:TB:98:GLN:HE22	1.78	0.48
52:ZA:96:THR:HG23	52:ZA:96:THR:O	2.14	0.48
1:A:1013:A:H3'	1:A:1014:G:H8	1.78	0.48
1:A:1146:G:H1'	52:ZA:89:GLN:CG	2.43	0.48
1:A:1179:G:N2	1:A:1460:A:C2	2.75	0.48
1:A:1543:A:H2'	1:A:1544:U:O4'	2.14	0.48
1:A:1580:C:O2'	1:A:1581:C:H5'	2.13	0.48
2:B:121:A:C2	12:L:108:ARG:HD2	2.48	0.48
2:B:1308:A:OP2	2:B:2368:A:H4'	2.13	0.48
2:B:1867:A:C2	2:B:2119:A:H4'	2.48	0.48
2:B:2147:A:H2'	2:B:2148:U:H6	1.78	0.48
2:B:2249:G:N2	2:B:2267:C:O2	2.39	0.48
2:B:2270:A:H2'	2:B:2271:A:O4'	2.14	0.48
2:B:2338:C:H2'	2:B:2339:C:C6	2.48	0.48
2:B:2532:U:H6	2:B:2532:U:OP2	1.96	0.48
2:B:2737:C:H2'	2:B:2738:A:O4'	2.13	0.48
2:B:3297:U:O4	7:G:124:LYS:HE2	2.14	0.48
2:B:561:C:O2'	2:B:562:C:H5'	2.12	0.48
2:B:693:A:H4'	8:H:234:ASN:OD1	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:187:ARG:HA	54:BB:187:ARG:HE	1.78	0.48
3:C:41:A:H2'	3:C:42:G:H5'	1.95	0.48
3:C:98:U:C3'	3:C:99:C:H5'	2.44	0.48
29:CA:54:TYR:H	29:CA:54:TYR:HD1	1.59	0.48
55:CB:162:VAL:HA	78:ZB:45:LYS:HB2	1.95	0.48
30:DA:77:LYS:O	30:DA:78:PHE:HB2	2.12	0.48
56:DB:138:ALA:C	56:DB:140:ASN:H	2.17	0.48
56:DB:189:HIS:CE1	56:DB:193:LEU:HD11	2.48	0.48
82:DC:113:SER:HB3	82:DC:517:CYS:SG	2.54	0.48
82:DC:137:VAL:HG23	82:DC:138:GLN:N	2.29	0.48
82:DC:277:ILE:HG22	82:DC:281:ILE:HD11	1.95	0.48
82:DC:296:ILE:HG22	82:DC:300:LEU:HD13	1.95	0.48
82:DC:404:THR:HB	82:DC:447:ASP:OD2	2.14	0.48
82:DC:815:ALA:O	82:DC:818:ILE:HB	2.13	0.48
5:E:110:PHE:CB	5:E:128:LEU:HD21	2.43	0.48
83:EC:6834:U:H2'	83:EC:6874:A:N6	2.28	0.48
83:EC:6900:A:O2'	83:EC:6901:C:H5'	2.14	0.48
83:EC:6927:U:H3'	83:EC:6928:G:C5'	2.43	0.48
6:F:192:LYS:HB3	6:F:193:ARG:HE	1.78	0.48
32:FA:84:GLU:HA	32:FA:87:ARG:CB	2.44	0.48
1:A:348:U:C4'	58:FB:14:THR:HG22	2.37	0.48
2:B:2940:A:OP2	7:G:2:SER:N	2.46	0.48
9:I:124:GLU:HG3	9:I:126:GLU:HG3	1.96	0.48
9:I:164:LYS:HG2	9:I:180:PHE:CE1	2.49	0.48
9:I:40:HIS:CG	9:I:43:LYS:HG3	2.49	0.48
10:J:53:VAL:O	10:J:65:ILE:HB	2.13	0.48
11:K:210:PRO:HD3	11:K:243:MET:CE	2.44	0.48
2:B:1557:A:H4'	12:L:54:GLU:CG	2.44	0.48
38:LA:102:LYS:NZ	38:LA:106:LYS:NZ	2.62	0.48
64:LB:119:THR:HB	64:LB:120:PRO:HD2	1.96	0.48
39:MA:17:LEU:HD11	39:MA:61:GLN:NE2	2.29	0.48
42:PA:58:ASP:HB2	42:PA:61:LYS:HD3	1.94	0.48
2:B:561:C:H5'	18:R:76:ALA:N	2.29	0.48
71:SB:80:LYS:O	71:SB:82:VAL:HG23	2.13	0.48
18:R:109:ARG:HD3	20:T:199:TYR:CE1	2.48	0.48
46:TA:11:TYR:CE1	46:TA:18:ARG:HA	2.49	0.48
6:F:180:LEU:HD22	47:UA:18:TYR:HB3	1.94	0.48
73:UB:5:LYS:HG2	73:UB:5:LYS:O	2.14	0.48
48:VA:119:ILE:HD12	48:VA:178:ILE:HG21	1.95	0.48
48:VA:24:SER:HB2	48:VA:89:THR:HG23	1.95	0.48
23:W:106:LEU:HD22	23:W:120:TYR:HD1	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:79:VAL:HG12	24:X:80:ARG:N	2.29	0.48
24:X:81:TYR:HB2	24:X:120:SER:O	2.14	0.48
25:Y:92:ARG:O	25:Y:94:GLU:N	2.47	0.48
51:YA:119:THR:HG21	51:YA:161:ILE:CD1	2.39	0.48
51:YA:40:ASN:N	51:YA:40:ASN:ND2	2.32	0.48
77:YB:36:LYS:HB3	77:YB:43:ILE:HG22	1.96	0.48
1:A:1008:G:H2'	1:A:1009:U:C6	2.49	0.48
1:A:1116:A:H2'	1:A:1117:U:O4'	2.13	0.48
1:A:1605:G:H5"	66:NB:127:LYS:CB	2.43	0.48
1:A:399:A:O3'	54:BB:3:ARG:HG3	2.14	0.48
1:A:551:G:O2'	1:A:552:G:H5'	2.13	0.48
2:B:1038:C:H2'	2:B:1039:U:C6	2.48	0.48
2:B:1482:A:OP2	2:B:1858:A:H1'	2.14	0.48
2:B:1505:C:H2'	2:B:1506:A:C8	2.48	0.48
2:B:1556:C:H3'	2:B:2169:G:H22	1.77	0.48
2:B:1596:C:H5'	38:LA:8:ARG:NH1	2.24	0.48
2:B:15:C:O3'	29:CA:42:ARG:HA	2.12	0.48
2:B:2186:U:C2'	2:B:2187:G:H5'	2.42	0.48
2:B:2189:U:C2'	2:B:2190:U:H5'	2.44	0.48
2:B:2875:U:H2'	2:B:2875:U:O2	2.14	0.48
2:B:2932:U:H2'	2:B:2934:A:OP2	2.14	0.48
2:B:2983:C:O2'	2:B:2984:C:H5'	2.13	0.48
2:B:3049:A:C2'	2:B:3050:U:H5'	2.44	0.48
2:B:1869:C:H4'	2:B:3077:A:O2'	2.12	0.48
2:B:3229:G:H1	2:B:3258:U:H3	1.62	0.48
2:B:61:A:H2'	2:B:62:A:C8	2.48	0.48
2:B:772:U:H2'	2:B:773:G:H8	1.77	0.48
2:B:80:G:H4'	2:B:326:U:O2'	2.13	0.48
54:BB:218:PHE:N	54:BB:218:PHE:CD2	2.81	0.48
3:C:136:G:O2'	3:C:137:C:H5'	2.13	0.48
3:C:80:A:OP2	3:C:80:A:H8	1.95	0.48
55:CB:144:GLU:HA	55:CB:162:VAL:H	1.77	0.48
82:DC:227:THR:C	82:DC:229:TYR:H	2.17	0.48
57:EB:113:PRO:HG2	57:EB:116:ARG:HB2	1.96	0.48
32:FA:27:LYS:HB3	32:FA:28:HIS:CE1	2.48	0.48
1:A:331:A:H62	58:FB:172:ARG:HH12	1.62	0.48
2:B:3313:U:H4'	7:G:173:GLN:HB2	1.94	0.48
10:J:148:GLU:OE2	10:J:151:LYS:HG3	2.14	0.48
10:J:154:LEU:HA	10:J:157:GLN:CG	2.44	0.48
10:J:56:LYS:HB2	10:J:98:VAL:CG1	2.44	0.48
13:M:48:VAL:HG13	13:M:49:ASN:ND2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:9:GLN:HB3	13:M:52:LEU:HD11	1.94	0.48
14:N:153:ARG:CG	14:N:153:ARG:HH11	2.24	0.48
68:PB:100:THR:CG2	68:PB:108:LYS:HG2	2.39	0.48
68:PB:41:ARG:CD	69:QB:46:PRO:HD3	2.43	0.48
44:RA:79:GLU:C	44:RA:83:LYS:HG3	2.32	0.48
19:S:39:ALA:O	19:S:61:ILE:HG12	2.14	0.48
71:SB:14:PRO:CB	71:SB:23:ILE:HD11	2.43	0.48
52:ZA:57:PHE:HD1	71:SB:26:ALA:HB1	1.79	0.48
72:TB:95:PRO:HD3	72:TB:130:TYR:CD1	2.47	0.48
47:UA:23:ARG:HA	47:UA:26:VAL:HG23	1.96	0.48
47:UA:33:GLN:HE21	47:UA:34:HIS:HD2	1.62	0.48
47:UA:55:TRP:HB2	47:UA:64:VAL:HB	1.95	0.48
8:H:300:ARG:CG	22:V:39:ARG:HG2	2.43	0.48
49:WA:310:ILE:HG22	49:WA:310:ILE:O	2.14	0.48
75:WB:93:SER:HA	75:WB:100:ILE:HG22	1.95	0.48
24:X:137:ARG:HB3	24:X:139:TYR:CE1	2.49	0.48
24:X:42:TRP:CE3	24:X:42:TRP:HA	2.49	0.48
76:XB:75:VAL:HG12	76:XB:76:SER:N	2.27	0.48
25:Y:103:GLN:O	25:Y:107:GLU:HG3	2.14	0.48
25:Y:92:ARG:C	25:Y:94:GLU:H	2.17	0.48
51:YA:111:ARG:HE	51:YA:111:ARG:HA	1.77	0.48
51:YA:34:ALA:CB	51:YA:41:ARG:HA	2.44	0.48
51:YA:47:LEU:HD12	51:YA:47:LEU:N	2.29	0.48
52:ZA:149:GLY:O	52:ZA:150:GLN:HB2	2.13	0.48
52:ZA:218:ILE:HD12	52:ZA:219:GLY:N	2.28	0.48
52:ZA:41:LEU:HD11	52:ZA:63:VAL:HG22	1.94	0.48
1:A:1092:A:O2'	1:A:1093:A:H3'	2.14	0.48
1:A:139:C:H5'	1:A:141:U:OP1	2.14	0.48
1:A:421:A:H2'	1:A:422:G:H8	1.79	0.48
1:A:625:C:O2	1:A:939:A:H2	1.97	0.48
53:AB:167:PHE:CZ	53:AB:192:PRO:HB3	2.49	0.48
53:AB:53:THR:HB	53:AB:94:ARG:HG2	1.95	0.48
2:B:1157:G:H5"	11:K:220:PHE:CE2	2.49	0.48
2:B:1170:A:OP1	11:K:218:ARG:HA	2.14	0.48
2:B:1706:C:H4'	2:B:1787:A:H4'	1.95	0.48
2:B:1866:C:H2'	2:B:1866:C:O2	2.14	0.48
2:B:2137:U:C6	2:B:2141:U:C4	3.02	0.48
2:B:2198:A:H2'	2:B:2199:G:H8	1.77	0.48
2:B:2530:G:H2'	2:B:2531:C:C6	2.49	0.48
2:B:2606:G:H5"	2:B:2606:G:N3	2.29	0.48
2:B:2774:C:H2'	2:B:2775:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3262:U:H2'	2:B:3263:G:C5'	2.43	0.48
2:B:346:C:N4	2:B:348:A:H2'	2.29	0.48
2:B:594:U:H2'	8:H:308:LYS:NZ	2.29	0.48
2:B:596:C:H2'	2:B:597:G:C1'	2.44	0.48
2:B:62:A:H8	2:B:62:A:O5'	1.97	0.48
1:A:123:G:OP1	54:BB:75:LYS:HD3	2.14	0.48
1:A:586:G:OP1	80:BC:23:LYS:HE2	2.13	0.48
2:B:1831:U:OP1	29:CA:91:ASN:HB2	2.13	0.48
55:CB:108:LEU:H	55:CB:108:LEU:HD22	1.79	0.48
82:DC:222:ILE:CG2	82:DC:241:MET:HB2	2.39	0.48
82:DC:305:ILE:HG21	82:DC:323:VAL:CG1	2.32	0.48
82:DC:98:PHE:CE2	82:DC:339:VAL:HG11	2.49	0.48
82:DC:4:PHE:CD2	82:DC:45:ILE:HG23	2.47	0.48
82:DC:78:TYR:HE1	82:DC:97:SER:HB3	1.79	0.48
5:E:4:ILE:H	5:E:4:ILE:CD1	2.22	0.48
2:B:2550:U:H3'	6:F:40:TYR:OH	2.14	0.48
7:G:171:LEU:O	7:G:172:ALA:HB2	2.13	0.48
7:G:278:ILE:CG2	7:G:279:ASN:H	2.23	0.48
7:G:77:THR:HG23	7:G:326:GLY:O	2.13	0.48
59:GB:74:ASN:HA	59:GB:77:ILE:HD12	1.95	0.48
59:GB:83:VAL:HA	59:GB:149:ARG:CB	2.43	0.48
10:J:80:ASN:OD1	10:J:82:ARG:HB2	2.14	0.48
36:JA:100:ILE:HB	36:JA:105:ARG:HH11	1.79	0.48
11:K:135:ALA:HB1	11:K:232:ARG:CG	2.44	0.48
11:K:56:GLU:O	11:K:60:ARG:HG2	2.13	0.48
37:KA:16:TYR:CD2	37:KA:25:PRO:HA	2.49	0.48
65:MB:50:THR:O	65:MB:51:SER:HB2	2.13	0.48
17:Q:50:PRO:O	17:Q:52:ASP:N	2.47	0.48
18:R:37:GLU:OE1	18:R:74:ARG:HG3	2.14	0.48
13:M:91:ARG:HD2	44:RA:82:LEU:HD21	1.94	0.48
70:RB:28:SER:HB3	70:RB:34:LEU:HD12	1.95	0.48
71:SB:39:VAL:CB	71:SB:45:ALA:HA	2.44	0.48
72:TB:15:ASN:O	72:TB:19:LYS:HB2	2.14	0.48
72:TB:94:LEU:HD13	72:TB:100:GLY:C	2.34	0.48
48:VA:109:ALA:HA	48:VA:181:PHE:CD1	2.49	0.48
2:B:1949:G:OP1	23:W:101:VAL:HG13	2.13	0.48
23:W:138:LEU:HG	23:W:142:ILE:CD1	2.44	0.48
76:XB:53:LEU:C	76:XB:55:GLU:N	2.67	0.48
25:Y:75:ILE:HD13	25:Y:75:ILE:C	2.34	0.48
51:YA:136:ARG:HD3	51:YA:138:PHE:CE1	2.49	0.48
52:ZA:37:PRO:CG	52:ZA:46:LYS:HG3	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1578:U:H2'	1:A:1579:U:C6	2.48	0.48
1:A:1641:C:O5'	1:A:1641:C:H6	1.97	0.48
1:A:385:A:H5"	58:FB:22:ARG:CB	2.43	0.48
1:A:40:A:H2'	1:A:41:A:O4'	2.14	0.48
1:A:624:G:C6	1:A:976:G:C2	3.01	0.48
79:AC:53:ASN:HB2	79:AC:55:PHE:CZ	2.48	0.48
2:B:1774:C:H2'	2:B:1775:G:O4'	2.13	0.48
2:B:1797:A:C4	2:B:1798:A:C8	3.01	0.48
2:B:1893:A:O2'	2:B:1894:U:H5'	2.13	0.48
2:B:2637:A:C2'	2:B:2638:C:H5"	2.43	0.48
2:B:3048:A:H4'	2:B:3049:A:H5'	1.96	0.48
2:B:3215:A:O2'	2:B:3216:G:H5'	2.14	0.48
2:B:500:C:H4'	10:J:80:ASN:HD21	1.79	0.48
2:B:739:G:H2'	2:B:740:G:C8	2.49	0.48
2:B:914:A:H2	6:F:208:ASP:HB2	1.78	0.48
1:A:296:U:H5'	54:BB:140:VAL:HG11	1.96	0.48
55:CB:113:ILE:HG21	55:CB:190:ILE:HB	1.96	0.48
30:DA:116:LYS:HE3	30:DA:126:LEU:CD1	2.43	0.48
30:DA:17:LYS:O	30:DA:21:THR:HG23	2.13	0.48
6:F:97:ASN:O	6:F:100:ASN:HB2	2.13	0.48
8:H:12:THR:O	8:H:14:GLU:HG2	2.14	0.48
8:H:290:ILE:HG22	8:H:291:ASN:N	2.28	0.48
8:H:289:ILE:HA	8:H:292:SER:HB2	1.95	0.48
10:J:4:GLN:CD	10:J:5:LYS:H	2.17	0.48
11:K:96:PRO:HD2	11:K:133:TYR:OH	2.14	0.48
11:K:202:LEU:HD22	11:K:205:PHE:CE1	2.45	0.48
13:M:88:TYR:CE1	13:M:184:LYS:HB3	2.49	0.48
1:A:1551:U:H3'	65:MB:43:ARG:HH21	1.79	0.48
15:O:30:LEU:O	15:O:30:LEU:HD13	2.13	0.48
15:O:37:LEU:CD1	15:O:67:VAL:HG23	2.44	0.48
15:O:90:GLN:HB3	15:O:172:LEU:CD1	2.41	0.48
67:OB:58:MET:O	67:OB:62:GLN:OE1	2.31	0.48
17:Q:46:ILE:HG21	17:Q:49:ARG:HB2	1.95	0.48
19:S:119:TYR:CE1	19:S:131:GLU:HB3	2.49	0.48
72:TB:26:LEU:HD23	72:TB:27:ILE:N	2.29	0.48
21:U:16:SER:CB	21:U:149:VAL:HG22	2.43	0.48
21:U:67:ILE:CG2	21:U:82:ARG:HE	2.27	0.48
73:UB:81:LYS:HB2	73:UB:81:LYS:NZ	2.28	0.48
22:V:12:ARG:HH11	22:V:12:ARG:CB	2.26	0.48
22:V:19:PRO:O	22:V:21:SER:N	2.46	0.48
22:V:75:GLY:O	22:V:76:ALA:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:62:VAL:O	22:V:87:VAL:HA	2.14	0.48
23:W:101:VAL:O	23:W:104:ARG:HB3	2.13	0.48
1:A:1627:U:H4'	76:XB:88:SER:HB3	1.96	0.48
51:YA:199:ASN:O	51:YA:202:LYS:HG2	2.13	0.48
51:YA:105:PHE:H	51:YA:214:LYS:HE2	1.78	0.48
26:Z:75:TYR:CZ	26:Z:79:LEU:HD21	2.49	0.48
52:ZA:142:GLY:H	52:ZA:154:LEU:HA	1.78	0.48
1:A:1332:C:H3'	1:A:1333:C:C6	2.49	0.48
1:A:1494:C:H2'	1:A:1495:C:C6	2.49	0.48
1:A:18:C:H2'	1:A:19:A:H8	1.78	0.48
1:A:569:C:C2'	1:A:570:A:H5'	2.44	0.48
1:A:898:A:H62	1:A:914:G:H21	1.61	0.48
1:A:935:U:O2'	1:A:936:G:H5'	2.14	0.48
53:AB:167:PHE:CE2	53:AB:202:LEU:HD13	2.49	0.48
2:B:1358:C:H2'	2:B:1359:C:O4'	2.12	0.48
2:B:1558:A:OP2	12:L:53:PRO:HA	2.14	0.48
2:B:1637:A:H4'	31:EA:15:ARG:HD3	1.96	0.48
2:B:1643:A:H5"	2:B:1644:C:N4	2.29	0.48
2:B:200:C:H41	2:B:217:U:H2'	1.78	0.48
2:B:2174:G:OP1	2:B:2174:G:H8	1.97	0.48
2:B:2310:U:H2'	2:B:2311:G:C8	2.48	0.48
2:B:2467:G:H21	2:B:2488:A:H61	1.60	0.48
2:B:2814:G:H2'	2:B:2815:G:C8	2.48	0.48
2:B:2838:A:N6	2:B:2850:G:O2'	2.47	0.48
2:B:3049:A:H2'	2:B:3050:U:H5'	1.96	0.48
2:B:3279:A:H2'	2:B:3280:U:H5'	1.95	0.48
54:BB:182:TYR:HD2	54:BB:183:VAL:N	2.10	0.48
3:C:107:G:H2'	3:C:108:C:C6	2.49	0.48
29:CA:107:VAL:CG2	29:CA:124:VAL:HB	2.44	0.48
82:DC:619:MET:HA	82:DC:623:TYR:HB2	1.96	0.48
57:EB:12:ALA:HB3	57:EB:13:PRO:HD3	1.96	0.48
57:EB:64:VAL:CG2	57:EB:94:ALA:HB1	2.44	0.48
58:FB:74:LYS:N	58:FB:109:PHE:CZ	2.74	0.48
7:G:307:PRO:HB3	7:G:362:ALA:O	2.14	0.48
8:H:220:ARG:NH2	30:DA:4:GLN:HB2	2.29	0.48
8:H:349:THR:CG2	11:K:71:ALA:HB2	2.43	0.48
35:IA:49:VAL:HA	35:IA:91:SER:O	2.14	0.48
36:JA:45:ARG:NE	36:JA:54:LYS:HZ1	2.12	0.48
37:KA:46:GLY:H	37:KA:71:VAL:CG1	2.27	0.48
38:LA:35:VAL:HG12	38:LA:37:LYS:H	1.78	0.48
64:LB:103:ARG:HH11	78:ZB:38:ARG:HD3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:123:SER:C	64:LB:125:SER:H	2.17	0.48
13:M:36:LYS:HD3	13:M:74:LEU:HD21	1.95	0.48
39:MA:118:ILE:O	39:MA:119:LYS:HD2	2.14	0.48
65:MB:11:VAL:O	65:MB:12:PHE:HB3	2.14	0.48
14:N:54:SER:O	14:N:131:ILE:HA	2.14	0.48
40:NA:44:VAL:HA	40:NA:47:ILE:HG22	1.95	0.48
15:O:84:LEU:HB3	15:O:89:TYR:CE1	2.49	0.48
67:OB:41:ILE:HD12	67:OB:47:ARG:HA	1.96	0.48
17:Q:42:ARG:CD	17:Q:51:LEU:HD23	2.39	0.48
17:Q:98:ASP:HB3	17:Q:101:ARG:HH11	1.79	0.48
43:QA:23:LEU:H	43:QA:38:ASN:HB2	1.79	0.48
70:RB:43:LYS:HA	70:RB:46:GLU:CB	2.44	0.48
52:ZA:58:LEU:HG	71:SB:12:TYR:HD1	1.77	0.48
22:V:96:PHE:CE1	22:V:114:ILE:HA	2.49	0.48
75:WB:70:LYS:C	75:WB:71:ILE:HG13	2.33	0.48
25:Y:72:VAL:CG1	25:Y:93:VAL:HG12	2.42	0.48
51:YA:105:PHE:HB3	51:YA:110:LEU:HD12	1.96	0.48
1:A:874:C:H4'	1:A:1046:G:H4'	1.96	0.47
1:A:1391:A:H61	1:A:1407:U:H3	1.61	0.47
1:A:1503:A:N7	1:A:1564:U:H4'	2.28	0.47
1:A:1675:C:H1'	58:FB:32:GLN:HE22	1.77	0.47
1:A:222:A:C2'	1:A:223:U:H5'	2.44	0.47
1:A:523:G:H5"	74:VB:59:GLY:O	2.14	0.47
1:A:639:U:H1'	1:A:640:U:C5	2.48	0.47
1:A:645:C:H2'	1:A:646:C:O4'	2.14	0.47
1:A:766:U:H3'	1:A:768:C:OP2	2.13	0.47
2:B:1246:G:O2'	2:B:1264:G:H2'	2.14	0.47
2:B:1287:A:H5'	2:B:1288:U:OP2	2.14	0.47
2:B:155:G:H5'	2:B:157:A:H1'	1.95	0.47
2:B:1643:A:H2'	2:B:1644:C:C4	2.48	0.47
2:B:188:U:H2'	2:B:223:U:O2'	2.14	0.47
2:B:2817:A:H3'	2:B:2818:U:C6	2.49	0.47
2:B:281:G:C6	2:B:282:G:C6	3.02	0.47
2:B:595:G:H2'	2:B:596:C:C6	2.48	0.47
1:A:454:U:C4'	54:BB:62:LYS:HE3	2.38	0.47
3:C:27:U:H2'	3:C:28:C:H6	1.76	0.47
2:B:1558:A:N3	29:CA:34:LEU:HD22	2.28	0.47
29:CA:63:ILE:HG13	29:CA:84:PHE:CG	2.49	0.47
55:CB:117:THR:HG22	55:CB:121:ILE:CD1	2.44	0.47
56:DB:62:PRO:HG2	56:DB:97:VAL:CG1	2.41	0.47
82:DC:7:ASP:C	82:DC:10:ARG:HB3	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:126:LEU:CA	82:DC:154:VAL:HB	2.34	0.47
82:DC:170:SER:HB2	82:DC:173:ASP:HB2	1.95	0.47
82:DC:229:TYR:HH	82:DC:276:PHE:HD1	1.62	0.47
82:DC:454:ILE:CG1	82:DC:455:GLY:H	2.17	0.47
82:DC:728:VAL:HG22	82:DC:773:PRO:HG3	1.96	0.47
82:DC:798:PHE:H	86:DC:903:SO1:H53	1.77	0.47
5:E:117:ILE:O	5:E:121:PRO:HD2	2.14	0.47
58:FB:76:THR:HB	58:FB:105:ASP:HB3	1.95	0.47
58:FB:77:ARG:N	58:FB:105:ASP:HB2	2.29	0.47
2:B:1386:A:O2'	8:H:184:SER:HB3	2.13	0.47
8:H:60:THR:HG22	8:H:62:ALA:N	2.20	0.47
60:HB:54:TYR:CE1	60:HB:75:TYR:HB2	2.49	0.47
9:I:160:PHE:CE2	9:I:179:ARG:HD2	2.49	0.47
38:LA:96:GLU:OE2	38:LA:97:GLU:HG2	2.14	0.47
13:M:138:THR:HG22	13:M:139:ASN:H	1.79	0.47
13:M:49:ASN:O	13:M:51:GLN:N	2.47	0.47
17:Q:50:PRO:HA	17:Q:138:VAL:O	2.14	0.47
2:B:1493:G:H5"	43:QA:44:TRP:CB	2.44	0.47
69:QB:34:VAL:HG22	69:QB:34:VAL:O	2.14	0.47
2:B:148:G:H5"	19:S:55:ALA:HB2	1.96	0.47
20:T:64:PHE:O	20:T:65:ASN:HB2	2.14	0.47
72:TB:41:MET:CG	72:TB:129:VAL:HG11	2.43	0.47
1:A:864:U:OP2	72:TB:57:ARG:HG2	2.14	0.47
2:B:1720:U:P	23:W:110:ARG:HH12	2.37	0.47
49:WA:144:LEU:HB3	49:WA:181:TRP:CZ3	2.42	0.47
24:X:76:GLY:O	24:X:126:VAL:HA	2.14	0.47
50:XA:74:VAL:HA	50:XA:96:THR:O	2.13	0.47
51:YA:58:SER:HA	51:YA:91:VAL:HG11	1.96	0.47
1:A:1104:U:OP2	73:UB:6:PRO:HB3	2.12	0.47
1:A:1184:A:H3'	1:A:1185:U:H5"	1.95	0.47
1:A:1428:G:H5'	1:A:1428:G:H8	1.79	0.47
1:A:410:A:C2	1:A:411:C:H1'	2.49	0.47
1:A:599:A:H2'	1:A:600:U:C6	2.49	0.47
1:A:805:U:C2'	1:A:806:A:H5'	2.41	0.47
1:A:922:G:H2'	1:A:923:A:C8	2.50	0.47
1:A:942:G:H5"	76:XB:17:HIS:CB	2.44	0.47
7:G:73:VAL:HG21	27:AA:90:GLY:CA	2.44	0.47
53:AB:66:ILE:O	53:AB:86:LEU:HD22	2.13	0.47
70:RB:67:THR:CG2	79:AC:40:ARG:HH11	2.25	0.47
2:B:1069:C:O2'	2:B:1070:U:H5'	2.13	0.47
2:B:1247:U:H2'	2:B:1268:G:O6	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1684:U:H2'	2:B:1685:C:H6	1.79	0.47
2:B:1764:U:H3'	2:B:1765:U:C5'	2.43	0.47
2:B:2448:G:H2'	2:B:2449:A:H5'	1.96	0.47
2:B:246:U:H2'	2:B:247:C:C6	2.49	0.47
2:B:2517:U:H2'	2:B:2518:C:H6	1.79	0.47
2:B:268:A:O4'	2:B:270:U:H1'	2.14	0.47
2:B:2781:U:H5"	17:Q:182:ILE:HD13	1.96	0.47
2:B:3060:C:H2'	2:B:3061:G:O4'	2.14	0.47
2:B:3219:G:N7	37:KA:2:ALA:HA	2.30	0.47
2:B:953:G:C8	2:B:1117:G:C8	3.03	0.47
54:BB:100:ARG:NH2	54:BB:121:TYR:O	2.47	0.47
54:BB:102:VAL:HG22	54:BB:103:TYR:H	1.76	0.47
29:CA:111:ASN:ND2	29:CA:123:TYR:HB2	2.28	0.47
4:D:9:C:C2'	4:D:10:C:H5'	2.44	0.47
30:DA:13:ARG:CZ	30:DA:13:ARG:HB2	2.44	0.47
56:DB:35:GLU:HB3	56:DB:49:VAL:HG13	1.96	0.47
82:DC:21:ASN:CG	82:DC:453:ILE:HD13	2.34	0.47
82:DC:250:PHE:CZ	82:DC:255:LYS:HA	2.50	0.47
82:DC:310:ASP:HA	82:DC:313:ASP:HB2	1.95	0.47
82:DC:675:PRO:HD2	82:DC:717:PHE:CD2	2.49	0.47
5:E:139:SER:HB3	5:E:142:ASP:HB2	1.96	0.47
83:EC:6937:G:C2	83:EC:6938:A:H1'	2.48	0.47
83:EC:6945:U:H5'	83:EC:6946:A:OP2	2.14	0.47
2:B:3044:G:O2'	7:G:13:HIS:HB2	2.14	0.47
8:H:30:ILE:O	8:H:32:PRO:HD3	2.14	0.47
35:IA:78:LYS:O	35:IA:89:LEU:HB3	2.14	0.47
36:JA:118:LYS:HE2	36:JA:120:THR:CG2	2.43	0.47
11:K:27:ALA:HA	11:K:30:ARG:CB	2.44	0.47
37:KA:85:PHE:C	37:KA:87:ASN:N	2.67	0.47
2:B:498:A:OP1	37:KA:86:ARG:HG3	2.14	0.47
13:M:90:MET:CE	13:M:181:VAL:HG22	2.44	0.47
39:MA:38:ARG:CZ	39:MA:38:ARG:HB2	2.43	0.47
14:N:84:ALA:O	14:N:140:THR:HG23	2.14	0.47
14:N:17:TYR:HD1	14:N:96:VAL:HB	1.78	0.47
40:NA:30:LYS:O	40:NA:30:LYS:HD3	2.13	0.47
1:A:1167:G:H21	66:NB:139:GLN:HE22	1.60	0.47
41:OA:22:CYS:SG	41:OA:37:CYS:HB3	2.55	0.47
41:OA:53:ALA:HA	41:OA:56:ARG:HG2	1.96	0.47
1:A:1566:U:H5"	68:PB:39:GLY:N	2.28	0.47
17:Q:49:ARG:HB3	17:Q:50:PRO:HD2	1.95	0.47
69:QB:114:VAL:CG2	69:QB:122:ARG:HB3	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:65:LEU:N	18:R:65:LEU:HD13	2.30	0.47
18:R:88:ALA:O	18:R:89:ALA:C	2.52	0.47
70:RB:95:ALA:HB1	70:RB:96:PRO:HD2	1.95	0.47
20:T:153:VAL:HG12	20:T:154:ALA:N	2.29	0.47
2:B:619:A:H5'	21:U:167:ARG:NH1	2.29	0.47
21:U:59:PRO:HD3	21:U:76:PHE:CE1	2.49	0.47
48:VA:14:LYS:O	48:VA:18:TYR:HD1	1.97	0.47
24:X:151:PRO:HG2	24:X:153:PRO:HD3	1.96	0.47
51:YA:128:LYS:HA	51:YA:133:TYR:O	2.14	0.47
52:ZA:144:TRP:CE2	52:ZA:173:PRO:HG3	2.48	0.47
1:A:1389:C:H6	67:OB:28:PHE:CE2	2.33	0.47
1:A:1584:G:H5"	66:NB:122:ARG:HG2	1.95	0.47
1:A:1684:U:H2'	1:A:1685:G:C8	2.49	0.47
1:A:1790:A:H2'	1:A:1791:A:C8	2.48	0.47
1:A:202:A:H2'	1:A:203:U:O4'	2.13	0.47
27:AA:29:SER:O	27:AA:66:LYS:HD2	2.15	0.47
53:AB:141:LYS:NZ	53:AB:180:GLY:HA3	2.30	0.47
2:B:1263:A:C4'	2:B:1264:G:H5'	2.44	0.47
2:B:1346:G:H1'	8:H:307:GLN:NE2	2.27	0.47
2:B:1475:A:H5'	35:IA:57:GLN:HE21	1.78	0.47
2:B:1823:A:O2'	2:B:1824:U:H5'	2.15	0.47
2:B:198:A:C6	2:B:219:A:C6	3.02	0.47
2:B:2156:C:H2'	2:B:2178:A:H61	1.78	0.47
2:B:2390:A:H2'	2:B:2391:G:O5'	2.15	0.47
2:B:2482:U:H3	2:B:2486:A:H61	1.62	0.47
2:B:290:G:H4'	19:S:69:GLY:O	2.15	0.47
2:B:3062:G:H2'	2:B:3063:C:O4'	2.14	0.47
2:B:3163:A:H2'	2:B:3164:C:C5'	2.22	0.47
2:B:415:G:H2'	2:B:416:A:H8	1.80	0.47
2:B:416:A:H2'	2:B:417:A:C8	2.49	0.47
2:B:77:A:H2'	2:B:78:U:O4'	2.15	0.47
2:B:796:U:O2'	2:B:797:U:H5'	2.14	0.47
30:DA:16:ARG:HG2	30:DA:16:ARG:NH1	2.26	0.47
1:A:161:U:P	56:DB:85:ARG:H	2.36	0.47
82:DC:39:LEU:HD22	82:DC:331:ALA:HA	1.96	0.47
82:DC:378:LEU:HD23	82:DC:378:LEU:C	2.35	0.47
82:DC:627:VAL:HA	82:DC:630:ALA:CB	2.44	0.47
82:DC:730:LEU:HD22	82:DC:799:ASP:OD2	2.14	0.47
82:DC:749:LYS:HD3	82:DC:750:LYS:HE3	1.94	0.47
82:DC:806:SER:OG	82:DC:813:SER:HB2	2.14	0.47
5:E:205:VAL:HG12	5:E:215:ARG:CA	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:31:THR:H	5:E:209:SER:HB2	1.78	0.47
6:F:201:GLY:HA2	6:F:204:MET:CE	2.44	0.47
2:B:964:G:N3	32:FA:40:HIS:HD2	2.13	0.47
59:GB:82:ARG:HH11	59:GB:82:ARG:CB	2.26	0.47
8:H:3:ARG:NE	8:H:3:ARG:HA	2.29	0.47
8:H:93:MET:O	8:H:93:MET:HG2	2.13	0.47
34:HA:87:VAL:HG22	34:HA:89:VAL:H	1.78	0.47
35:IA:23:VAL:CB	35:IA:28:ARG:HG3	2.39	0.47
10:J:98:VAL:O	10:J:100:LYS:N	2.47	0.47
11:K:88:ARG:HD2	11:K:103:LEU:HD13	1.95	0.47
37:KA:25:PRO:O	37:KA:88:ASN:HB3	2.14	0.47
37:KA:67:MET:HE3	37:KA:89:LEU:HA	1.97	0.47
2:B:2580:A:H1'	12:L:44:ARG:HH21	1.78	0.47
38:LA:57:LEU:HD13	38:LA:61:GLN:CB	2.44	0.47
13:M:103:ILE:HG13	13:M:136:PHE:HZ	1.79	0.47
17:Q:119:TYR:CE1	39:MA:118:ILE:HD11	2.49	0.47
39:MA:63:ARG:O	39:MA:67:ARG:HG3	2.14	0.47
39:MA:74:LYS:HE3	39:MA:75:TYR:CG	2.49	0.47
65:MB:76:VAL:O	65:MB:94:VAL:HG13	2.13	0.47
66:NB:42:GLU:O	66:NB:45:ARG:HB2	2.15	0.47
15:O:17:LEU:HD23	15:O:71:VAL:CB	2.39	0.47
15:O:96:PHE:CZ	15:O:160:VAL:HG22	2.49	0.47
41:OA:76:ASN:O	41:OA:79:GLN:HG3	2.15	0.47
69:QB:134:ARG:HD2	69:QB:138:GLN:HE21	1.80	0.47
18:R:49:PRO:HG2	18:R:50:LYS:N	2.26	0.47
44:RA:109:ASN:HA	44:RA:119:ASN:HA	1.95	0.47
19:S:99:ARG:HG3	19:S:130:PHE:CD1	2.50	0.47
12:L:140:VAL:HG21	19:S:3:ALA:CB	2.44	0.47
2:B:3185:U:C2	20:T:126:VAL:HG21	2.49	0.47
46:TA:75:VAL:O	46:TA:76:LYS:HE2	2.14	0.47
22:V:16:ARG:HG2	22:V:18:ALA:O	2.13	0.47
48:VA:87:VAL:HG12	48:VA:87:VAL:O	2.13	0.47
74:VB:20:ARG:O	74:VB:21:LYS:HD2	2.14	0.47
75:WB:60:VAL:O	75:WB:101:TYR:HB2	2.14	0.47
24:X:61:ILE:O	24:X:61:ILE:HG13	2.13	0.47
76:XB:88:SER:C	76:XB:92:ARG:HG3	2.34	0.47
51:YA:91:VAL:O	51:YA:91:VAL:HG13	2.14	0.47
26:Z:58:GLU:HB3	26:Z:63:VAL:HG13	1.96	0.47
2:B:1687:U:N3	26:Z:70:LYS:HD2	2.29	0.47
52:ZA:207:LEU:C	52:ZA:210:THR:HG22	2.34	0.47
52:ZA:237:VAL:HG11	71:SB:50:TYR:HE2	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:53:ILE:HD13	52:ZA:73:LEU:CD2	2.45	0.47
78:ZB:33:LEU:CD1	78:ZB:53:ILE:HG21	2.39	0.47
1:A:1086:A:H2	1:A:1141:G:N3	2.11	0.47
1:A:1375:A:H2'	1:A:1376:C:H6	1.79	0.47
1:A:427:C:H5'	1:A:460:A:OP2	2.14	0.47
1:A:855:A:O2'	1:A:856:A:H3'	2.14	0.47
1:A:981:U:C2'	1:A:982:U:H5'	2.45	0.47
53:AB:69:LEU:HB2	53:AB:86:LEU:CD2	2.45	0.47
2:B:1138:U:O2'	2:B:1139:G:H5'	2.15	0.47
2:B:1321:G:O2'	24:X:111:ALA:HB1	2.14	0.47
2:B:1569:U:H5	2:B:1570:U:H5	1.60	0.47
2:B:1583:A:C2'	2:B:1584:U:H5'	2.44	0.47
2:B:1662:G:H4'	23:W:92:GLN:NE2	2.18	0.47
2:B:1715:A:O4'	2:B:1717:U:H4'	2.15	0.47
2:B:1816:A:H2'	2:B:1817:G:C8	2.49	0.47
2:B:2079:G:H2'	2:B:2080:C:C5'	2.45	0.47
2:B:2204:C:H2'	2:B:2206:G:C5	2.49	0.47
2:B:2338:C:H3'	2:B:2339:C:H2'	1.95	0.47
2:B:3066:U:H2'	2:B:3067:C:H6	1.76	0.47
2:B:3360:C:H5'	2:B:3361:G:OP2	2.15	0.47
2:B:39:A:O5'	2:B:40:A:H4'	2.14	0.47
2:B:434:U:H2'	2:B:435:C:C6	2.49	0.47
2:B:93:C:H4'	2:B:94:G:H5"	1.95	0.47
54:BB:18:TRP:C	54:BB:20:LEU:H	2.17	0.47
54:BB:198:LYS:HG3	54:BB:208:VAL:HG12	1.97	0.47
80:BC:10:ARG:HG3	80:BC:10:ARG:HH11	1.78	0.47
29:CA:33:ARG:HD2	29:CA:33:ARG:N	2.29	0.47
29:CA:38:LEU:HD11	29:CA:40:LEU:HD22	1.96	0.47
82:DC:418:TYR:HB2	82:DC:425:ASP:CB	2.44	0.47
82:DC:490:GLN:HA	82:DC:530:VAL:O	2.14	0.47
82:DC:724:ILE:O	82:DC:724:ILE:HD12	2.14	0.47
5:E:94:ASN:HB2	5:E:123:LEU:HB3	1.96	0.47
31:EA:108:GLU:HA	31:EA:111:LYS:HD2	1.95	0.47
83:EC:6916:A:H2'	83:EC:6917:C:O4'	2.14	0.47
6:F:32:LEU:HG	6:F:163:ARG:HH12	1.79	0.47
32:FA:82:ILE:H	32:FA:82:ILE:HD12	1.78	0.47
58:FB:152:ILE:HG22	58:FB:153:GLU:N	2.29	0.47
7:G:119:TYR:OH	7:G:129:ALA:N	2.46	0.47
7:G:25:ILE:N	7:G:25:ILE:HD13	2.29	0.47
7:G:332:ARG:NH1	7:G:332:ARG:HG2	2.27	0.47
8:H:165:ALA:O	8:H:168:ALA:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:196:ARG:HG2	9:I:200:PHE:CE2	2.49	0.47
2:B:3323:A:C2	35:IA:106:THR:HG21	2.42	0.47
11:K:85:PHE:HZ	11:K:207:LEU:HD11	1.80	0.47
37:KA:14:LEU:HD11	37:KA:31:LYS:CB	2.44	0.47
2:B:1328:C:H5"	37:KA:75:HIS:NE2	2.29	0.47
63:KB:4:MET:HG3	63:KB:5:HIS:N	2.17	0.47
12:L:54:GLU:O	12:L:58:VAL:HG23	2.14	0.47
13:M:8:GLN:OE1	13:M:69:ARG:HA	2.15	0.47
65:MB:77:ARG:HA	65:MB:95:GLY:CA	2.45	0.47
2:B:156:G:OP2	40:NA:27:SER:HB3	2.14	0.47
15:O:54:VAL:HG12	15:O:55:ARG:N	2.28	0.47
41:OA:17:THR:HG22	41:OA:18:LEU:H	1.78	0.47
41:OA:28:HIS:CE1	41:OA:30:GLN:HB2	2.48	0.47
16:P:128:VAL:C	16:P:131:GLU:HG2	2.34	0.47
17:Q:152:THR:O	17:Q:153:ASP:HB2	2.15	0.47
2:B:107:A:OP1	17:Q:39:ARG:NH1	2.46	0.47
18:R:17:VAL:HA	18:R:35:ILE:O	2.14	0.47
18:R:36:VAL:O	18:R:37:GLU:HB2	2.14	0.47
18:R:35:ILE:HA	18:R:46:ILE:HA	1.95	0.47
71:SB:38:LYS:HZ1	71:SB:51:VAL:HA	1.78	0.47
20:T:186:ALA:O	20:T:187:GLU:HB3	2.13	0.47
48:VA:45:LEU:CG	48:VA:99:VAL:HG11	2.44	0.47
74:VB:75:VAL:O	74:VB:75:VAL:HG13	2.15	0.47
74:VB:89:TYR:CE1	74:VB:90:ARG:HG3	2.49	0.47
50:XA:148:ASP:HB2	50:XA:164:ASN:ND2	2.29	0.47
25:Y:13:TYR:O	25:Y:16:GLN:HB3	2.13	0.47
51:YA:31:ASP:OD2	51:YA:95:ASN:HA	2.14	0.47
26:Z:17:VAL:HG22	26:Z:103:TYR:CD2	2.49	0.47
52:ZA:230:TRP:CE3	72:TB:68:ARG:HD2	2.50	0.47
1:A:1162:C:H4'	78:ZB:22:ARG:HD3	1.97	0.47
1:A:1310:U:H2'	1:A:1311:U:C6	2.49	0.47
1:A:1524:A:H2'	1:A:1525:A:H8	1.74	0.47
1:A:839:U:C2'	1:A:840:U:H5"	2.38	0.47
27:AA:62:VAL:HG12	27:AA:63:LYS:N	2.28	0.47
2:B:1236:G:H2'	16:P:60:VAL:HG22	1.96	0.47
2:B:1362:G:H2'	2:B:1363:A:C8	2.49	0.47
2:B:1419:A:H2'	2:B:1420:C:H6	1.79	0.47
2:B:1493:G:H5"	43:QA:44:TRP:HB2	1.97	0.47
2:B:1695:U:H4'	38:LA:26:PRO:HD3	1.96	0.47
2:B:1774:C:H2'	2:B:1775:G:C4'	2.44	0.47
2:B:876:A:H5"	2:B:1890:U:H5"	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2133:U:H2'	2:B:2134:G:O4'	2.14	0.47
2:B:2203:U:H2'	2:B:2204:C:H6	1.75	0.47
2:B:224:C:O2'	2:B:225:C:H5'	2.15	0.47
2:B:2553:U:C4	38:LA:95:ILE:HG12	2.50	0.47
2:B:2585:G:H1	3:C:151:C:H5'	1.80	0.47
2:B:2700:G:H2'	2:B:2701:U:O4'	2.13	0.47
2:B:2932:U:O2	2:B:2934:A:H8	1.97	0.47
2:B:357:A:H2'	2:B:358:G:O4'	2.14	0.47
2:B:641:C:H2'	2:B:642:U:O4'	2.14	0.47
2:B:733:G:H1'	2:B:736:A:N6	2.29	0.47
4:D:60:G:H21	9:I:274:GLN:NE2	2.11	0.47
4:D:87:G:C2	4:D:95:A:C6	3.02	0.47
82:DC:249:PHE:CZ	82:DC:261:ASP:HB3	2.50	0.47
82:DC:412:ARG:CZ	82:DC:473:GLU:HA	2.45	0.47
82:DC:44:GLY:CA	82:DC:77:LEU:HD12	2.43	0.47
9:I:105:ILE:O	9:I:109:THR:HG22	2.13	0.47
9:I:122:VAL:CG2	9:I:168:ASP:HB3	2.45	0.47
9:I:17:GLN:OE1	25:Y:22:HIS:N	2.41	0.47
11:K:25:GLN:HG2	11:K:29:GLU:HB2	1.96	0.47
11:K:90:LYS:HG2	11:K:95:ILE:HG21	1.95	0.47
61:IB:156:PHE:CE1	63:KB:83:GLU:HG2	2.50	0.47
12:L:122:LYS:O	12:L:123:GLN:HB3	2.15	0.47
39:MA:74:LYS:HD3	39:MA:74:LYS:C	2.34	0.47
39:MA:74:LYS:HE3	39:MA:75:TYR:CB	2.43	0.47
65:MB:16:SER:HB3	65:MB:21:ASP:CG	2.35	0.47
41:OA:37:CYS:SG	41:OA:39:TYR:HB3	2.54	0.47
16:P:105:GLN:HA	16:P:142:ARG:CA	2.41	0.47
16:P:126:ALA:O	16:P:130:LYS:HG2	2.13	0.47
68:PB:73:MET:C	68:PB:101:LEU:HD11	2.35	0.47
69:QB:45:MET:HE3	69:QB:46:PRO:HD2	1.96	0.47
18:R:27:GLN:C	18:R:29:ALA:H	2.18	0.47
20:T:89:SER:C	20:T:91:LYS:H	2.17	0.47
22:V:60:PRO:HG2	22:V:142:GLY:O	2.14	0.47
49:WA:85:TRP:C	49:WA:87:LYS:H	2.16	0.47
24:X:155:ARG:O	24:X:155:ARG:HG2	2.15	0.47
24:X:8:GLN:HB2	24:X:64:ILE:CD1	2.42	0.47
51:YA:61:LEU:HD13	51:YA:61:LEU:N	2.29	0.47
1:A:1535:U:C5	55:CB:185:ARG:HA	2.49	0.47
1:A:409:C:O4'	1:A:1732:A:H4'	2.15	0.47
1:A:295:A:H2'	1:A:296:U:H6	1.79	0.47
1:A:306:U:H2'	1:A:307:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:5:GLY:C	27:AA:7:GLN:H	2.17	0.47
53:AB:12:VAL:O	53:AB:16:VAL:HG23	2.13	0.47
53:AB:29:LEU:HD11	53:AB:69:LEU:CD1	2.43	0.47
53:AB:32:GLU:HG2	53:AB:58:VAL:HA	1.97	0.47
2:B:1312:C:H2'	2:B:1313:G:O4'	2.14	0.47
2:B:1676:A:H62	26:Z:74:LYS:HZ1	1.60	0.47
2:B:1801:U:H2'	2:B:1802:C:C6	2.49	0.47
2:B:2122:G:O2'	2:B:2123:G:H5'	2.14	0.47
2:B:2541:U:H1'	2:B:2542:U:C4'	2.44	0.47
2:B:2571:U:C4'	2:B:2572:C:H5'	2.43	0.47
2:B:2635:A:H4'	2:B:2636:A:N3	2.30	0.47
2:B:2645:G:O2'	2:B:2646:C:H5'	2.15	0.47
2:B:2688:U:H5'	2:B:2689:A:C8	2.49	0.47
2:B:66:A:H2'	2:B:316:U:OP1	2.14	0.47
80:BC:41:THR:O	80:BC:45:VAL:HB	2.13	0.47
29:CA:92:LYS:HG3	29:CA:110:VAL:CG1	2.45	0.47
55:CB:225:ARG:HD3	78:ZB:58:GLU:HG2	1.96	0.47
82:DC:138:GLN:NE2	82:DC:139:THR:N	2.62	0.47
82:DC:182:VAL:O	82:DC:186:ASN:HB2	2.14	0.47
82:DC:240:MET:O	82:DC:243:ARG:HB2	2.14	0.47
1:A:432:G:OP1	82:DC:391:LYS:HG3	2.15	0.47
83:EC:6902:U:H2'	83:EC:6903:U:C6	2.50	0.47
83:EC:6930:G:H2'	83:EC:6931:U:C4'	2.45	0.47
2:B:641:C:OP2	32:FA:21:ARG:HD2	2.15	0.47
2:B:964:G:N2	32:FA:40:HIS:HB2	2.30	0.47
32:FA:60:TYR:CD1	32:FA:63:LYS:HB2	2.50	0.47
7:G:11:HIS:HB3	7:G:233:TRP:HB3	1.97	0.47
7:G:293:ASN:O	7:G:305:ILE:HG23	2.15	0.47
9:I:13:SER:O	9:I:16:PHE:HB3	2.14	0.47
9:I:211:LEU:HD22	9:I:219:PHE:CD2	2.50	0.47
9:I:247:ILE:C	9:I:249:ALA:H	2.16	0.47
35:IA:81:GLU:OE2	35:IA:82:GLU:HB2	2.15	0.47
61:IB:75:VAL:C	61:IB:120:GLY:HA2	2.35	0.47
1:A:113:U:H5'	61:IB:67:ARG:NH1	2.29	0.47
10:J:54:TYR:OH	10:J:57:HIS:HB2	2.14	0.47
11:K:160:ARG:HD2	11:K:203:TRP:CE2	2.50	0.47
11:K:189:ILE:HG23	11:K:190:THR:N	2.30	0.47
11:K:90:LYS:HD2	11:K:91:GLY:H	1.80	0.47
15:O:12:LEU:HD21	15:O:154:THR:HG22	1.96	0.47
17:Q:179:PHE:HB2	17:Q:183:ARG:NH1	2.29	0.47
13:M:180:TYR:HB2	44:RA:85:LEU:HG	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:114:ARG:HB2	19:S:137:PRO:HD3	1.95	0.47
19:S:91:GLU:HB2	46:TA:50:PHE:HZ	1.79	0.47
71:SB:45:ALA:O	71:SB:46:ILE:CB	2.62	0.47
72:TB:41:MET:HG2	72:TB:129:VAL:HG21	1.96	0.47
21:U:41:LEU:O	21:U:44:ALA:HB3	2.14	0.47
22:V:80:THR:HG22	22:V:136:ASN:O	2.14	0.47
24:X:103:VAL:HG12	24:X:107:TYR:HD2	1.78	0.47
24:X:68:HIS:N	24:X:69:PRO:HD3	2.29	0.47
50:XA:179:ARG:CD	50:XA:183:ARG:HH11	2.25	0.47
76:XB:10:ARG:NH1	76:XB:11:ASN:HB2	2.30	0.47
76:XB:32:LYS:HB2	76:XB:32:LYS:HZ3	1.75	0.47
78:ZB:9:LEU:HB3	78:ZB:33:LEU:HD12	1.96	0.47
1:A:1055:U:O2'	1:A:1056:U:H5'	2.14	0.47
1:A:1469:A:H4'	1:A:1541:G:H4'	1.96	0.47
1:A:1716:C:H3'	1:A:1716:C:OP2	2.15	0.47
1:A:1796:C:H5'	1:A:1797:A:C8	2.50	0.47
1:A:20:G:H4'	1:A:553:G:N2	2.30	0.47
1:A:552:G:H2'	1:A:553:G:O4'	2.15	0.47
1:A:897:C:H42	1:A:914:G:H1'	1.80	0.47
1:A:981:U:H2'	1:A:982:U:C6	2.50	0.47
27:AA:74:MET:HB3	27:AA:102:ILE:HD13	1.97	0.47
2:B:1123:U:C2'	2:B:1124:U:H5'	2.43	0.47
2:B:111:C:H2'	2:B:112:U:H5'	1.96	0.47
2:B:1498:A:H1'	2:B:1602:A:H2	1.80	0.47
2:B:1941:C:O2'	2:B:1942:U:H5'	2.15	0.47
2:B:2147:A:H2'	2:B:2148:U:C6	2.50	0.47
2:B:215:G:H2'	2:B:216:G:H8	1.79	0.47
2:B:253:A:H2'	2:B:254:A:C8	2.49	0.47
2:B:33:G:H1'	2:B:52:A:H61	1.80	0.47
2:B:503:C:H2'	2:B:504:A:C8	2.50	0.47
2:B:513:G:H2'	2:B:514:G:C8	2.49	0.47
2:B:820:A:H2'	2:B:821:U:H6	1.79	0.47
2:B:944:C:H4'	36:JA:33:ARG:HH11	1.80	0.47
29:CA:82:LEU:HB2	29:CA:124:VAL:HG23	1.96	0.47
82:DC:238:ALA:HA	82:DC:241:MET:CE	2.43	0.47
82:DC:399:ARG:CG	82:DC:453:ILE:HG13	2.45	0.47
82:DC:637:GLY:HA2	82:DC:668:GLN:NE2	2.26	0.47
82:DC:82:SER:O	82:DC:86:VAL:HG23	2.14	0.47
83:EC:6908:C:C3'	83:EC:6909:A:H5"	2.41	0.47
6:F:229:ALA:HB1	6:F:233:GLN:HB3	1.96	0.47
32:FA:31:GLY:HA3	32:FA:35:ALA:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:141:VAL:HG11	59:GB:146:PHE:HD2	1.76	0.47
59:GB:109:LEU:HA	59:GB:148:VAL:HG23	1.97	0.47
59:GB:73:GLY:O	59:GB:77:ILE:HG13	2.14	0.47
8:H:156:LEU:C	8:H:156:LEU:HD23	2.35	0.47
2:B:1728:G:H8	34:HA:25:LEU:O	1.96	0.47
9:I:94:ASN:O	9:I:97:ALA:HB3	2.15	0.47
10:J:93:VAL:O	10:J:96:VAL:HG23	2.15	0.47
63:KB:30:SER:CA	63:KB:33:VAL:HG22	2.41	0.47
14:N:30:LYS:HB2	14:N:62:SER:CB	2.45	0.47
66:NB:36:ILE:O	66:NB:39:VAL:HG23	2.14	0.47
15:O:109:HIS:HD2	15:O:123:PHE:H	1.63	0.47
15:O:139:THR:HG22	15:O:146:GLY:O	2.15	0.47
15:O:54:VAL:HG11	15:O:57:PHE:CB	2.44	0.47
16:P:123:ARG:HH12	48:VA:42:ARG:CB	2.19	0.47
42:PA:11:PHE:HE2	42:PA:43:PHE:HB3	1.80	0.47
69:QB:34:VAL:HG23	69:QB:53:TRP:CZ2	2.49	0.47
69:QB:70:GLN:O	69:QB:70:GLN:HG2	2.14	0.47
18:R:45:LEU:HD21	18:R:55:ARG:CD	2.45	0.47
71:SB:38:LYS:NZ	71:SB:51:VAL:HG22	2.30	0.47
72:TB:16:ASN:HA	72:TB:19:LYS:HB2	1.96	0.47
21:U:41:LEU:HD13	21:U:41:LEU:C	2.35	0.47
22:V:23:ASN:HB3	22:V:26:LEU:HB3	1.97	0.47
23:W:45:VAL:HA	23:W:50:ILE:O	2.15	0.47
23:W:60:LYS:HB2	23:W:64:ARG:NH1	2.29	0.47
49:WA:19:TRP:O	49:WA:37:SER:HA	2.13	0.47
24:X:155:ARG:HD2	24:X:172:TYR:CD1	2.49	0.47
76:XB:70:LYS:HD3	76:XB:72:HIS:CE1	2.49	0.47
25:Y:11:THR:HA	25:Y:14:MET:CB	2.44	0.47
25:Y:50:LYS:HD2	25:Y:92:ARG:HH12	1.80	0.47
25:Y:63:VAL:HG23	25:Y:75:ILE:HG23	1.97	0.47
51:YA:127:VAL:O	51:YA:134:VAL:HA	2.15	0.47
51:YA:142:PHE:O	51:YA:207:LEU:HA	2.14	0.47
51:YA:46:THR:C	51:YA:47:LEU:HD12	2.35	0.47
52:ZA:53:ILE:HD11	52:ZA:110:HIS:CE1	2.49	0.47
1:A:1066:C:H2'	1:A:1067:C:H6	1.79	0.47
1:A:1126:G:H5'	45:SA:11:ARG:NE	2.29	0.47
1:A:1128:C:C4	1:A:1129:U:C4	3.03	0.47
1:A:1203:A:H5"	1:A:1456:C:H42	1.79	0.47
1:A:1534:G:H21	55:CB:187:ILE:HA	1.79	0.47
1:A:338:C:H4'	58:FB:6:ASP:O	2.14	0.47
1:A:804:A:O2'	72:TB:105:THR:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:42:THR:HB	53:AB:45:LYS:O	2.14	0.47
53:AB:77:PHE:HB2	53:AB:79:TYR:CE2	2.50	0.47
2:B:1123:U:H2'	2:B:1124:U:H5'	1.97	0.47
2:B:1174:G:C6	2:B:1318:A:C2	3.02	0.47
2:B:1656:A:N6	2:B:1799:A:OP2	2.46	0.47
2:B:1901:A:H2'	2:B:1902:G:H5'	1.96	0.47
2:B:190:U:C5	30:DA:59:VAL:HG11	2.49	0.47
2:B:1946:A:O2'	2:B:1947:G:H5'	2.15	0.47
2:B:2256:A:H1'	82:DC:707:PRO:CG	2.44	0.47
2:B:2513:U:H5"	12:L:242:ALA:HB2	1.97	0.47
2:B:2746:A:H2'	2:B:2747:A:O4'	2.14	0.47
2:B:289:A:H2'	2:B:290:G:C8	2.47	0.47
2:B:3129:A:C6	2:B:3131:U:C2	3.03	0.47
2:B:3306:U:H2'	2:B:3307:A:H5"	1.97	0.47
2:B:3382:U:H2'	2:B:3382:U:O2	2.14	0.47
2:B:389:A:H2'	2:B:390:G:O4'	2.15	0.47
3:C:26:U:H2'	3:C:27:U:C6	2.50	0.47
3:C:28:C:C4'	8:H:49:ALA:HB3	2.44	0.47
4:D:11:A:H4'	4:D:13:A:C5	2.50	0.47
82:DC:109:VAL:HG23	82:DC:138:GLN:HG2	1.96	0.47
82:DC:597:VAL:O	82:DC:600:ALA:HB3	2.15	0.47
82:DC:643:PRO:HG2	82:DC:682:ARG:HA	1.96	0.47
31:EA:122:HIS:O	31:EA:125:GLY:N	2.48	0.47
6:F:117:GLU:O	6:F:118:GLU:HG3	2.13	0.47
6:F:37:ARG:HD2	6:F:38:HIS:CE1	2.50	0.47
6:F:60:LYS:HD2	6:F:73:GLU:HG2	1.97	0.47
2:B:3243:A:H4'	7:G:95:THR:HB	1.96	0.47
60:HB:1:MET:HB3	60:HB:3:MET:CE	2.38	0.47
9:I:101:THR:O	9:I:104:LEU:HB3	2.14	0.47
9:I:55:PHE:CE1	9:I:158:ARG:HB2	2.49	0.47
9:I:33:ARG:NH1	9:I:33:ARG:HG3	2.29	0.47
9:I:68:THR:HB	9:I:71:GLY:H	1.80	0.47
10:J:49:GLY:HA3	37:KA:7:LEU:HD21	1.96	0.47
12:L:70:LYS:NZ	12:L:233:TRP:HB2	2.30	0.47
38:LA:57:LEU:HB3	38:LA:61:GLN:HB2	1.97	0.47
64:LB:128:LYS:HD2	64:LB:128:LYS:H	1.80	0.47
1:A:1610:G:P	66:NB:75:VAL:HG11	2.55	0.47
17:Q:46:ILE:HG22	17:Q:49:ARG:CG	2.45	0.47
43:QA:3:ALA:CA	43:QA:5:LYS:HE2	2.44	0.47
70:RB:28:SER:HB3	70:RB:34:LEU:CD1	2.44	0.47
19:S:199:LEU:HB3	19:S:203:ARG:CD	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:79:LEU:HD13	71:SB:82:VAL:HG11	1.97	0.47
47:UA:86:LEU:HA	47:UA:89:MET:SD	2.54	0.47
73:UB:86:PHE:HD1	73:UB:107:PHE:CZ	2.32	0.47
8:H:286:VAL:CG2	22:V:28:LEU:HB3	2.45	0.47
23:W:45:VAL:HG13	23:W:50:ILE:O	2.15	0.47
49:WA:177:MET:H	49:WA:199:ILE:HD11	1.79	0.47
24:X:30:PHE:O	24:X:31:ALA:CB	2.63	0.47
9:I:40:HIS:HA	25:Y:69:LYS:O	2.15	0.47
25:Y:34:TYR:CG	25:Y:72:VAL:HG11	2.49	0.47
51:YA:64:ARG:HD3	64:LB:34:SER:CB	2.44	0.47
1:A:136:C:O2'	1:A:137:U:H2'	2.15	0.47
1:A:1488:G:H2'	1:A:1515:A:H61	1.80	0.47
1:A:1533:C:C2'	1:A:1534:G:H5'	2.45	0.47
1:A:1572:G:H2'	1:A:1572:G:N3	2.29	0.47
1:A:1739:C:H2'	1:A:1740:A:C8	2.50	0.47
1:A:2:A:N1	52:ZA:170:ILE:HD12	2.30	0.47
1:A:754:A:H3'	1:A:755:A:H5'	1.97	0.47
1:A:818:C:O2'	1:A:819:G:H5'	2.15	0.47
2:B:1169:A:H4'	11:K:219:LYS:CE	2.44	0.47
2:B:1397:C:H2'	2:B:1398:U:O4'	2.15	0.47
2:B:1456:A:N7	35:IA:26:LYS:HG3	2.29	0.47
2:B:1757:A:H2'	2:B:1758:G:C8	2.49	0.47
2:B:1907:C:H2'	2:B:1907:C:O2	2.15	0.47
2:B:1867:A:H2	2:B:2119:A:C4'	2.28	0.47
2:B:2154:U:OP1	6:F:242:ARG:HD3	2.15	0.47
2:B:2228:A:H2'	2:B:2229:A:O4'	2.15	0.47
2:B:2865:U:H2'	2:B:2866:U:O4'	2.14	0.47
2:B:2880:U:H1'	7:G:250:ALA:HB3	1.97	0.47
2:B:2883:U:H2'	2:B:2884:C:H6	1.80	0.47
2:B:3042:U:H2'	2:B:3043:C:O4'	2.15	0.47
2:B:796:U:H2'	2:B:797:U:O4'	2.15	0.47
54:BB:175:PHE:CD1	54:BB:227:VAL:HG22	2.50	0.47
54:BB:100:ARG:NH1	54:BB:236:ILE:HG22	2.30	0.47
3:C:53:A:H2'	3:C:54:A:C8	2.50	0.47
55:CB:112:ARG:HE	55:CB:112:ARG:C	2.18	0.47
4:D:77:G:N2	4:D:101:G:H2'	2.30	0.47
30:DA:11:ASP:O	30:DA:15:ALA:HB2	2.14	0.47
56:DB:162:VAL:O	56:DB:168:THR:HA	2.15	0.47
82:DC:488:VAL:HB	82:DC:796:MET:CE	2.40	0.47
82:DC:718:LEU:HB3	82:DC:835:TRP:CD1	2.50	0.47
32:FA:70:LYS:N	32:FA:71:PRO:HD3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:33:PRO:HD2	7:G:44:THR:HB	1.97	0.47
59:GB:141:VAL:HG21	59:GB:146:PHE:CE2	2.49	0.47
59:GB:48:GLN:O	59:GB:52:ILE:HG13	2.14	0.47
9:I:160:PHE:HA	9:I:163:LEU:CB	2.44	0.47
9:I:27:LYS:O	9:I:150:LEU:HD11	2.15	0.47
61:IB:57:LYS:HD3	61:IB:131:ILE:CG2	2.45	0.47
11:K:103:LEU:CD2	11:K:108:LEU:HD12	2.45	0.47
11:K:107:ARG:HB3	11:K:204:PRO:HB3	1.96	0.47
11:K:195:PHE:CE2	11:K:199:ASN:HB3	2.50	0.47
11:K:160:ARG:HH21	11:K:206:LYS:HD3	1.79	0.47
11:K:75:TYR:HB2	25:Y:141:VAL:HG23	1.96	0.47
63:KB:40:TYR:CG	63:KB:53:LEU:HD21	2.50	0.47
12:L:104:GLU:O	12:L:108:ARG:HB2	2.15	0.47
40:NA:33:ALA:O	40:NA:37:THR:OG1	2.31	0.47
15:O:96:PHE:HA	15:O:102:PHE:HB3	1.94	0.47
16:P:125:LEU:HD12	16:P:125:LEU:N	2.30	0.47
2:B:1234:G:H22	16:P:131:GLU:HB2	1.76	0.47
17:Q:67:ARG:HB3	32:FA:105:LEU:HD21	1.96	0.47
69:QB:65:ILE:HG12	69:QB:114:VAL:CG2	2.44	0.47
71:SB:16:LYS:HA	71:SB:23:ILE:HA	1.96	0.47
20:T:141:LEU:O	20:T:145:VAL:HG13	2.14	0.47
46:TA:27:GLN:HG3	46:TA:91:PHE:HE2	1.79	0.47
72:TB:55:ASP:O	72:TB:57:ARG:N	2.43	0.47
47:UA:47:VAL:HA	47:UA:56:THR:O	2.15	0.47
48:VA:8:LYS:CD	48:VA:8:LYS:H	2.24	0.47
74:VB:94:TYR:HB2	74:VB:96:LEU:HD13	1.97	0.47
23:W:109:TYR:HB3	23:W:115:ILE:HD13	1.96	0.47
24:X:15:PRO:HA	24:X:22:PRO:HG3	1.97	0.47
11:K:223:PHE:HD2	24:X:35:VAL:HG11	1.80	0.47
25:Y:114:ALA:O	25:Y:118:GLU:HB3	2.15	0.47
25:Y:143:THR:CG2	25:Y:144:GLU:H	2.24	0.47
25:Y:51:GLY:HA3	25:Y:92:ARG:CG	2.41	0.47
51:YA:26:ARG:O	51:YA:50:LYS:HB2	2.14	0.47
77:YB:67:THR:HG23	77:YB:72:LYS:H	1.80	0.47
52:ZA:58:LEU:HA	71:SB:12:TYR:CE1	2.50	0.47
1:A:1183:A:C2	65:MB:99:GLY:HA3	2.50	0.47
1:A:1315:U:H5"	1:A:1329:A:C2	2.50	0.47
1:A:1386:G:H2'	1:A:1387:G:C8	2.50	0.47
1:A:150:U:H2'	1:A:151:G:O4'	2.14	0.47
1:A:395:U:H2'	1:A:396:G:O4'	2.15	0.47
1:A:54:C:H4'	74:VB:109:LYS:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:G:N2	1:A:91:G:H1'	2.30	0.47
1:A:793:A:H4'	1:A:794:U:O2	2.15	0.47
79:AC:12:ARG:HG3	79:AC:18:SER:HA	1.96	0.47
2:B:1094:U:H1'	2:B:1096:U:C2'	2.43	0.47
2:B:1806:A:H2'	2:B:1807:G:O4'	2.15	0.47
2:B:1934:G:H2'	2:B:1935:G:C5'	2.30	0.47
2:B:2339:C:H5"	7:G:236:LYS:HZ1	1.78	0.47
2:B:3203:U:H2'	2:B:3204:C:C6	2.50	0.47
2:B:3164:C:H42	2:B:3286:G:H1	1.63	0.47
2:B:422:A:N1	2:B:2362:C:H2'	2.30	0.47
2:B:594:U:H5"	2:B:595:G:C8	2.50	0.47
2:B:659:G:H2'	2:B:660:A:C8	2.50	0.47
2:B:663:C:O5'	2:B:663:C:H6	1.97	0.47
2:B:929:A:H2'	2:B:930:U:C6	2.50	0.47
2:B:1523:U:O5'	29:CA:113:LEU:HD13	2.14	0.47
29:CA:99:VAL:HG13	29:CA:103:TYR:CD2	2.42	0.47
55:CB:201:ALA:C	55:CB:203:LYS:N	2.68	0.47
55:CB:34:GLN:HA	66:NB:53:LEU:CD2	2.45	0.47
82:DC:522:MET:HG2	82:DC:523:SER:N	2.30	0.47
82:DC:600:ALA:HA	82:DC:605:ILE:HD12	1.95	0.47
31:EA:42:LEU:HD12	31:EA:74:VAL:HG13	1.97	0.47
57:EB:130:VAL:HB	57:EB:133:THR:OG1	2.15	0.47
6:F:112:ILE:HG13	6:F:133:TYR:HB2	1.97	0.47
6:F:112:ILE:CG1	6:F:133:TYR:HB2	2.45	0.47
6:F:51:ASP:OD1	6:F:58:LEU:HD11	2.15	0.47
32:FA:14:HIS:O	32:FA:15:VAL:HB	2.14	0.47
7:G:35:ASP:OD1	7:G:184:ASN:HA	2.14	0.47
8:H:157:GLU:HG2	8:H:251:THR:HG21	1.96	0.47
9:I:279:LYS:HG2	9:I:282:ARG:NH1	2.30	0.47
10:J:114:LYS:HD2	10:J:114:LYS:C	2.35	0.47
12:L:75:ILE:C	12:L:77:GLN:N	2.68	0.47
38:LA:54:ILE:HD13	38:LA:71:THR:HA	1.95	0.47
39:MA:104:GLN:HE22	39:MA:107:LYS:HD3	1.78	0.47
14:N:168:SER:HA	25:Y:160:ILE:O	2.15	0.47
66:NB:12:LYS:HA	66:NB:16:ALA:O	2.15	0.47
15:O:114:ILE:HG22	15:O:115:LYS:N	2.29	0.47
15:O:16:LYS:HG2	15:O:130:VAL:HG12	1.96	0.47
67:OB:32:LYS:HD2	67:OB:47:ARG:NH1	2.29	0.47
68:PB:42:TYR:CE2	68:PB:101:LEU:HD21	2.50	0.47
17:Q:145:PHE:N	17:Q:146:PRO:CD	2.78	0.47
43:QA:12:LYS:HD3	43:QA:51:ILE:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:70:GLN:HB2	69:QB:121:GLY:C	2.35	0.47
46:TA:72:LEU:HD11	46:TA:83:LEU:CD2	2.45	0.47
47:UA:24:ARG:O	47:UA:28:LYS:HG3	2.15	0.47
47:UA:50:GLY:O	47:UA:51:ALA:HB3	2.15	0.47
23:W:114:LYS:O	23:W:115:ILE:HD12	2.15	0.47
23:W:156:ASN:O	23:W:156:ASN:ND2	2.48	0.47
2:B:1690:C:H5'	23:W:59:SER:HA	1.97	0.47
49:WA:105:GLY:O	49:WA:132:LYS:HE3	2.14	0.47
24:X:107:TYR:CE1	24:X:121:ILE:HG21	2.50	0.47
50:XA:41:ARG:HH11	50:XA:45:VAL:CB	2.28	0.47
50:XA:6:THR:C	50:XA:8:ASP:H	2.16	0.47
26:Z:21:SER:N	26:Z:22:PRO:HD2	2.30	0.47
52:ZA:212:LYS:HB3	52:ZA:212:LYS:NZ	2.30	0.47
1:A:1020:A:H3'	1:A:1021:C:H5"	1.97	0.47
1:A:1286:U:OP2	1:A:1286:U:H3'	2.14	0.47
1:A:1552:U:HO2'	1:A:1597:A:H2'	1.79	0.47
1:A:1605:G:OP2	66:NB:127:LYS:HB3	2.14	0.47
1:A:1627:U:C2'	1:A:1628:U:H5'	2.42	0.47
1:A:1716:C:H1'	1:A:1717:G:O4'	2.15	0.47
1:A:171:A:C2'	1:A:172:C:H5'	2.45	0.47
1:A:214:G:H21	1:A:251:A:H62	1.62	0.47
1:A:30:G:H2'	1:A:31:C:C6	2.50	0.47
1:A:536:C:H2'	1:A:537:G:H5'	1.97	0.47
1:A:925:G:H4'	1:A:986:G:O2'	2.15	0.47
27:AA:17:LEU:HD22	27:AA:36:ILE:HD11	1.96	0.47
27:AA:37:ILE:HG13	27:AA:59:MET:O	2.15	0.47
27:AA:81:GLN:HG2	27:AA:82:ALA:N	2.29	0.47
53:AB:27:ARG:HG3	53:AB:27:ARG:HH11	1.80	0.47
2:B:1088:U:H2'	2:B:1089:G:O4'	2.15	0.47
2:B:1149:G:H3'	2:B:1150:A:H5"	1.96	0.47
2:B:1193:A:C2	2:B:1317:A:N6	2.81	0.47
2:B:1943:C:H4'	2:B:3346:U:C5'	2.45	0.47
2:B:2109:U:O2'	2:B:2110:G:H5'	2.15	0.47
2:B:3335:A:H8	2:B:3335:A:H5'	1.80	0.47
2:B:595:G:H2'	2:B:596:C:O4'	2.15	0.47
2:B:75:G:H5"	17:Q:58:VAL:CG1	2.45	0.47
30:DA:81:GLN:OE1	30:DA:81:GLN:N	2.48	0.47
82:DC:147:LEU:CD1	82:DC:189:VAL:HA	2.44	0.47
82:DC:169:VAL:CG1	82:DC:170:SER:N	2.78	0.47
82:DC:277:ILE:C	82:DC:280:PRO:HD2	2.35	0.47
82:DC:171:LYS:HB3	82:DC:278:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:349:GLN:HA	82:DC:352:ARG:HB2	1.97	0.47
82:DC:608:PRO:HB3	82:DC:636:PHE:CD2	2.50	0.47
82:DC:656:LEU:HD23	82:DC:657:HIS:N	2.30	0.47
82:DC:706:ILE:HB	82:DC:707:PRO:HD3	1.97	0.47
82:DC:736:PRO:HA	82:DC:765:LEU:HA	1.96	0.47
82:DC:784:LEU:HD22	82:DC:794:PRO:HG3	1.97	0.47
6:F:8:GLN:HE21	6:F:8:GLN:HB2	1.56	0.47
32:FA:113:LEU:N	32:FA:113:LEU:HD12	2.30	0.47
32:FA:55:LYS:HG2	32:FA:56:VAL:H	1.80	0.47
58:FB:120:THR:C	58:FB:121:LEU:HD22	2.36	0.47
10:J:155:LEU:HA	10:J:155:LEU:HD13	1.82	0.47
11:K:147:LEU:O	11:K:149:TYR:N	2.47	0.47
63:KB:98:VAL:CG1	63:KB:115:LEU:HD23	2.45	0.47
13:M:48:VAL:CG1	13:M:52:LEU:HB3	2.46	0.47
2:B:1235:U:OP2	16:P:77:ALA:HA	2.15	0.47
17:Q:54:LEU:HD12	17:Q:119:TYR:HB2	1.97	0.47
44:RA:78:ILE:O	44:RA:82:LEU:HB2	2.15	0.47
44:RA:96:CYS:C	44:RA:98:LYS:H	2.19	0.47
17:Q:24:VAL:HG13	19:S:203:ARG:NH2	2.30	0.47
72:TB:94:LEU:HD11	72:TB:102:VAL:HG23	1.97	0.47
73:UB:74:VAL:HG12	73:UB:75:GLN:N	2.30	0.47
23:W:81:ARG:NH2	23:W:85:ARG:CG	2.78	0.47
49:WA:115:ILE:HD12	49:WA:122:ILE:HG12	1.97	0.47
49:WA:48:THR:HB	49:WA:50:ASP:OD1	2.15	0.47
24:X:4:PHE:HA	24:X:31:ALA:O	2.14	0.47
26:Z:41:ILE:CG2	26:Z:43:VAL:HG22	2.41	0.47
52:ZA:121:VAL:H	53:AB:116:ARG:HH22	1.63	0.47
52:ZA:51:THR:C	52:ZA:72:LEU:HD11	2.35	0.47
52:ZA:82:ASN:C	52:ZA:83:ILE:HD12	2.35	0.47
1:A:1379:C:O2'	1:A:1380:U:H5'	2.15	0.46
1:A:359:A:H1'	73:UB:38:PHE:CE2	2.50	0.46
1:A:628:G:H4'	2:B:847:A:C2	2.49	0.46
1:A:66:U:O2	56:DB:160:ARG:NE	2.46	0.46
1:A:822:U:H2'	1:A:823:G:O4'	2.16	0.46
2:B:1158:A:H2'	2:B:1159:A:H4'	1.97	0.46
2:B:1245:A:H3'	2:B:1246:G:C5'	2.46	0.46
2:B:1494:U:H6	2:B:1494:U:O5'	1.98	0.46
2:B:185:C:H4'	30:DA:122:LYS:HA	1.97	0.46
2:B:2085:U:C2'	2:B:2086:A:H5'	2.44	0.46
2:B:2223:A:H4'	40:NA:80:PHE:CE1	2.49	0.46
2:B:2476:C:C2'	2:B:2477:G:H4'	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2541:U:H1'	2:B:2542:U:O5'	2.15	0.46
2:B:2709:C:H2'	2:B:2710:C:C6	2.49	0.46
2:B:2987:A:H5"	20:T:68:ARG:HH12	1.80	0.46
2:B:3013:U:H2'	2:B:3014:U:C6	2.50	0.46
2:B:307:A:H2'	2:B:308:A:C8	2.51	0.46
2:B:3091:A:O2'	2:B:3093:C:H2'	2.14	0.46
2:B:3311:C:O2'	2:B:3312:U:H5'	2.15	0.46
2:B:817:A:H2'	2:B:920:A:N1	2.30	0.46
2:B:982:C:O2'	2:B:983:A:H5'	2.15	0.46
54:BB:18:TRP:C	54:BB:20:LEU:N	2.67	0.46
30:DA:28:ARG:O	30:DA:49:PRO:HB3	2.15	0.46
30:DA:59:VAL:O	30:DA:64:LYS:HA	2.16	0.46
56:DB:159:ARG:NH2	56:DB:170:THR:HG23	2.30	0.46
1:A:431:C:H5"	82:DC:391:LYS:HB2	1.97	0.46
82:DC:399:ARG:HG3	82:DC:453:ILE:HG13	1.98	0.46
82:DC:412:ARG:HB3	82:DC:412:ARG:HH11	1.80	0.46
82:DC:529:ILE:HD12	82:DC:559:PRO:HB3	1.96	0.46
82:DC:808:PRO:HB3	82:DC:815:ALA:HB1	1.96	0.46
57:EB:64:VAL:HG22	57:EB:94:ALA:HB1	1.97	0.46
2:B:916:G:N7	6:F:207:VAL:HG21	2.29	0.46
32:FA:133:LEU:O	32:FA:136:GLU:HB2	2.15	0.46
58:FB:106:ALA:HB2	58:FB:165:LEU:N	2.26	0.46
1:A:329:G:H5'	58:FB:99:ALA:HB3	1.97	0.46
2:B:3379:C:H1'	7:G:309:GLY:O	2.16	0.46
7:G:4:ARG:NH1	7:G:6:TYR:O	2.48	0.46
9:I:65:ILE:HG23	9:I:73:VAL:C	2.36	0.46
35:IA:98:VAL:HG13	35:IA:101:ALA:HB2	1.96	0.46
2:B:3267:A:C2	10:J:73:GLY:HA3	2.50	0.46
11:K:85:PHE:H	11:K:139:PRO:HD3	1.79	0.46
11:K:115:THR:HG23	11:K:204:PRO:HA	1.98	0.46
37:KA:85:PHE:CE2	37:KA:89:LEU:HD11	2.50	0.46
63:KB:45:LEU:HD12	63:KB:49:GLN:HB3	1.97	0.46
12:L:62:LYS:HE2	12:L:63:LYS:CA	2.45	0.46
38:LA:23:VAL:HG12	38:LA:24:LYS:N	2.29	0.46
2:B:1596:C:H5'	38:LA:8:ARG:HH22	1.81	0.46
64:LB:19:ILE:HG22	64:LB:20:TYR:H	1.80	0.46
66:NB:45:ARG:HG2	66:NB:45:ARG:NH1	2.29	0.46
41:OA:64:MET:HB2	41:OA:68:LYS:HG3	1.97	0.46
43:QA:16:ALA:HB2	43:QA:49:MET:HE1	1.97	0.46
19:S:151:ILE:HD11	19:S:159:ARG:NH2	2.29	0.46
73:UB:74:VAL:C	73:UB:75:GLN:HE21	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2729:U:H4'	22:V:157:PRO:CB	2.46	0.46
23:W:158:GLU:HG3	23:W:159:ALA:N	2.30	0.46
77:YB:20:LYS:O	77:YB:26:GLN:HA	2.15	0.46
1:A:1533:C:H4'	1:A:1539:G:C6	2.50	0.46
1:A:1683:C:O2'	1:A:1684:U:O5'	2.32	0.46
1:A:569:C:H2'	1:A:570:A:H5'	1.97	0.46
1:A:830:U:H3'	1:A:831:U:H5"	1.98	0.46
1:A:85:A:H2'	1:A:86:A:O4'	2.15	0.46
1:A:91:G:N2	1:A:92:A:H1'	2.30	0.46
27:AA:85:TRP:CZ2	27:AA:121:GLU:HG3	2.41	0.46
2:B:2930:A:H4'	27:AA:37:ILE:HD11	1.97	0.46
2:B:1378:U:H2'	2:B:1379:G:C8	2.48	0.46
2:B:153:U:H3'	2:B:154:U:H5"	1.96	0.46
2:B:1590:G:C8	2:B:1590:G:O5'	2.68	0.46
2:B:1879:A:C3'	2:B:1880:U:H5'	2.45	0.46
2:B:2190:U:H2'	2:B:2191:U:O4'	2.15	0.46
2:B:2246:G:H2'	2:B:2247:G:H8	1.80	0.46
2:B:2255:A:C5'	2:B:2261:G:H22	2.28	0.46
2:B:2353:G:H2'	2:B:2354:C:H6	1.75	0.46
2:B:234:G:C2'	2:B:235:A:H5'	2.45	0.46
2:B:3110:C:H2'	2:B:3111:U:C6	2.49	0.46
2:B:3378:C:H1'	7:G:365:PHE:CE1	2.50	0.46
2:B:793:C:H2'	2:B:794:U:O4'	2.14	0.46
2:B:833:G:H5'	23:W:84:THR:HG21	1.98	0.46
2:B:96:G:O2'	2:B:97:U:H5'	2.15	0.46
2:B:989:A:H2'	2:B:990:U:C6	2.50	0.46
28:BA:8:PHE:CE1	28:BA:46:PRO:HD3	2.49	0.46
3:C:29:U:H2'	3:C:30:C:C6	2.50	0.46
29:CA:53:HIS:CE1	29:CA:56:ARG:HD3	2.51	0.46
4:D:11:A:OP1	4:D:11:A:H3'	2.15	0.46
4:D:98:C:OP1	11:K:224:ILE:HD13	2.16	0.46
3:C:91:C:H4'	30:DA:24:SER:HB3	1.98	0.46
82:DC:164:LEU:CD2	82:DC:174:LEU:HD22	2.40	0.46
82:DC:333:ALA:O	82:DC:336:GLU:HB2	2.15	0.46
82:DC:18:ASN:ND2	82:DC:93:THR:HG23	2.30	0.46
6:F:137:ILE:HG22	6:F:138:GLY:N	2.29	0.46
7:G:186:GLY:O	7:G:187:SER:O	2.33	0.46
7:G:307:PRO:HA	7:G:361:THR:O	2.15	0.46
2:B:1117:G:OP1	33:GA:4:SER:HB2	2.15	0.46
59:GB:175:ARG:NH2	59:GB:179:ARG:HE	2.13	0.46
59:GB:15:PRO:C	59:GB:17:ARG:H	2.17	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:133:SER:O	8:H:137:ALA:CB	2.63	0.46
8:H:98:ARG:HD2	8:H:98:ARG:O	2.15	0.46
34:HA:24:THR:OG1	34:HA:29:SER:HB2	2.14	0.46
34:HA:41:LEU:CB	34:HA:92:ILE:HB	2.41	0.46
60:HB:28:ASN:N	60:HB:40:LEU:CD2	2.77	0.46
61:IB:111:VAL:HG23	61:IB:139:VAL:HG11	1.97	0.46
10:J:34:LEU:CD2	10:J:86:ALA:HB2	2.44	0.46
11:K:89:ILE:HG12	11:K:134:VAL:HA	1.97	0.46
37:KA:50:ALA:HB1	37:KA:66:VAL:CG1	2.44	0.46
2:B:585:A:C5'	37:KA:70:LYS:HE2	2.45	0.46
63:KB:91:LEU:HD22	63:KB:122:ILE:HG13	1.97	0.46
1:A:960:U:H4'	63:KB:51:GLY:C	2.35	0.46
63:KB:60:VAL:HG12	63:KB:61:THR:N	2.30	0.46
12:L:157:VAL:HG12	12:L:159:PRO:HD2	1.96	0.46
12:L:160:ILE:HG13	12:L:161:GLU:OE2	2.15	0.46
12:L:170:CYS:HB3	12:L:177:TYR:CD2	2.50	0.46
12:L:226:TYR:C	12:L:228:GLU:H	2.17	0.46
12:L:80:TYR:O	12:L:81:THR:O	2.34	0.46
64:LB:90:ARG:NH2	64:LB:90:ARG:HG3	2.29	0.46
15:O:160:VAL:HG11	15:O:171:VAL:CG2	2.46	0.46
15:O:73:GLY:O	15:O:76:ALA:HB3	2.14	0.46
15:O:96:PHE:HB2	15:O:156:LYS:HE3	1.95	0.46
42:PA:5:ILE:HG22	42:PA:6:THR:N	2.30	0.46
17:Q:126:PHE:O	39:MA:114:ARG:NH1	2.44	0.46
43:QA:37:TYR:CE1	43:QA:39:ALA:HB2	2.49	0.46
69:QB:49:ASP:C	69:QB:51:GLU:H	2.19	0.46
20:T:41:LEU:HD21	20:T:80:PHE:CE1	2.50	0.46
72:TB:94:LEU:HD23	72:TB:130:TYR:CD1	2.50	0.46
21:U:32:THR:CG2	21:U:33:ALA:N	2.78	0.46
21:U:70:THR:HB	21:U:83:TRP:HH2	1.81	0.46
48:VA:98:ASN:O	48:VA:102:SER:HB2	2.16	0.46
48:VA:123:ALA:HA	48:VA:152:ILE:CB	2.45	0.46
74:VB:14:SER:O	74:VB:16:PRO:HD3	2.14	0.46
49:WA:13:LEU:HD21	49:WA:54:PHE:HB3	1.97	0.46
75:WB:57:TYR:C	75:WB:59:TYR:H	2.19	0.46
51:YA:183:GLN:O	51:YA:187:LYS:HG3	2.15	0.46
51:YA:185:THR:O	51:YA:189:ILE:HG13	2.14	0.46
51:YA:34:ALA:H	51:YA:41:ARG:HB3	1.81	0.46
51:YA:62:LYS:HD2	51:YA:89:ASP:O	2.15	0.46
52:ZA:140:ARG:HH22	52:ZA:226:THR:CG2	2.28	0.46
52:ZA:87:GLN:HA	52:ZA:95:ARG:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1557:U:H3'	1:A:1557:U:OP2	2.16	0.46
1:A:1586:A:H3'	1:A:1587:A:C8	2.51	0.46
1:A:351:C:N3	61:IB:102:LYS:HD3	2.31	0.46
1:A:35:U:O2	1:A:473:A:H2	1.98	0.46
1:A:534:A:H3'	1:A:535:A:C8	2.48	0.46
53:AB:202:LEU:O	53:AB:205:ALA:HB2	2.16	0.46
1:A:1419:G:HO2'	79:AC:54:LYS:HB3	1.80	0.46
2:B:1157:G:H2'	2:B:1158:A:O4'	2.15	0.46
2:B:1187:C:O2'	2:B:1188:U:H5'	2.15	0.46
2:B:2128:C:H2'	2:B:2129:U:O4'	2.16	0.46
2:B:2146:C:H2'	2:B:2147:A:O4'	2.16	0.46
2:B:2656:A:C5	2:B:2658:G:C8	3.04	0.46
2:B:2942:C:H5"	2:B:2943:G:C5'	2.45	0.46
2:B:3099:C:O2'	2:B:3100:U:H5'	2.16	0.46
2:B:3153:U:H3	2:B:3293:U:H3	1.62	0.46
2:B:498:A:H2'	2:B:499:G:H8	1.80	0.46
29:CA:111:ASN:O	29:CA:122:ALA:HA	2.15	0.46
29:CA:63:ILE:C	29:CA:63:ILE:HD13	2.36	0.46
55:CB:89:ILE:HG22	55:CB:92:ARG:NH2	2.26	0.46
82:DC:164:LEU:HD11	82:DC:174:LEU:CD2	2.46	0.46
57:EB:167:GLU:HA	57:EB:170:GLN:HE21	1.81	0.46
6:F:56:ALA:HB1	6:F:169:ILE:CG2	2.45	0.46
33:GA:3:LYS:HE3	33:GA:3:LYS:HA	1.97	0.46
59:GB:63:ASP:O	59:GB:66:ASP:HB2	2.16	0.46
10:J:148:GLU:O	10:J:151:LYS:HB2	2.14	0.46
11:K:96:PRO:O	11:K:99:PRO:HD2	2.16	0.46
64:LB:16:VAL:HG21	64:LB:18:ARG:CZ	2.44	0.46
14:N:184:LYS:HZ3	14:N:190:VAL:HG22	1.81	0.46
67:OB:116:LYS:C	67:OB:117:LEU:HD13	2.35	0.46
67:OB:53:TYR:O	67:OB:57:LEU:HG	2.16	0.46
2:B:1255:C:O2	16:P:131:GLU:HG3	2.14	0.46
2:B:328:U:OP2	17:Q:23:LYS:HE3	2.14	0.46
70:RB:52:LYS:HA	70:RB:93:LEU:HD23	1.96	0.46
21:U:169:THR:H	21:U:172:GLN:HB3	1.80	0.46
73:UB:117:ILE:HG22	73:UB:120:VAL:HB	1.96	0.46
68:PB:4:VAL:CG2	75:WB:82:HIS:HB2	2.45	0.46
24:X:38:LYS:HD2	24:X:58:ILE:HD12	1.97	0.46
50:XA:64:ILE:O	50:XA:67:ILE:HB	2.15	0.46
51:YA:116:LYS:HE3	51:YA:117:TRP:CE2	2.50	0.46
77:YB:21:LEU:HA	77:YB:26:GLN:HE21	1.80	0.46
1:A:1105:C:H2'	1:A:1106:U:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1183:A:O2'	1:A:1210:C:H4'	2.15	0.46
1:A:1344:A:H2'	1:A:1345:A:C8	2.50	0.46
1:A:1643:U:H2'	1:A:1644:C:O4'	2.15	0.46
1:A:263:C:H2'	1:A:264:G:O4'	2.16	0.46
1:A:894:U:H2'	1:A:895:G:C8	2.51	0.46
1:A:942:G:H5"	76:XB:17:HIS:CG	2.50	0.46
1:A:981:U:H2'	1:A:982:U:H6	1.81	0.46
27:AA:85:TRP:CZ2	27:AA:121:GLU:CG	2.97	0.46
27:AA:5:GLY:O	27:AA:127:PRO:HG2	2.15	0.46
2:B:101:G:H2'	2:B:102:C:O4'	2.15	0.46
2:B:1177:G:H5'	37:KA:18:ARG:NH2	2.31	0.46
2:B:1309:U:H5"	2:B:1311:G:OP1	2.15	0.46
2:B:1385:C:H2'	2:B:1387:G:O4'	2.14	0.46
2:B:1590:G:H8	2:B:1590:G:O5'	1.98	0.46
2:B:2127:U:O2'	2:B:2128:C:H5'	2.15	0.46
2:B:2183:A:O2'	6:F:236:GLY:N	2.49	0.46
2:B:709:A:C8	2:B:2788:C:H4'	2.50	0.46
2:B:2858:U:H2'	2:B:2859:U:C6	2.49	0.46
2:B:2890:A:C2'	2:B:2891:U:H5'	2.45	0.46
2:B:3184:A:H4'	13:M:39:LYS:NZ	2.31	0.46
2:B:3230:G:H5"	18:R:132:LYS:CE	2.44	0.46
2:B:500:C:H5"	10:J:82:ARG:HG3	1.97	0.46
2:B:59:G:H2'	3:C:33:A:C2'	2.46	0.46
2:B:772:U:H2'	2:B:773:G:O4'	2.16	0.46
2:B:873:C:H5"	2:B:874:U:OP2	2.15	0.46
2:B:901:G:O2'	2:B:902:G:H5'	2.16	0.46
2:B:96:G:N2	2:B:97:U:H1'	2.30	0.46
29:CA:92:LYS:HG3	29:CA:110:VAL:HG11	1.96	0.46
29:CA:96:LYS:HZ2	29:CA:100:LYS:HD2	1.80	0.46
82:DC:357:TYR:CE1	82:DC:478:MET:HG2	2.50	0.46
82:DC:561:VAL:HB	82:DC:563:TYR:CZ	2.50	0.46
57:EB:31:SER:CB	57:EB:32:PRO:CD	2.94	0.46
32:FA:75:LEU:CD2	32:FA:78:LEU:HD22	2.44	0.46
58:FB:117:TYR:CE2	58:FB:150:ALA:HB2	2.50	0.46
58:FB:74:LYS:N	58:FB:74:LYS:HD2	2.30	0.46
8:H:3:ARG:HG3	8:H:21:PRO:HB3	1.97	0.46
8:H:62:ALA:HA	8:H:76:ARG:O	2.15	0.46
8:H:76:ARG:HD3	8:H:86:GLY:O	2.15	0.46
34:HA:42:ILE:HG22	34:HA:91:SER:CB	2.44	0.46
61:IB:155:LYS:HB3	63:KB:83:GLU:O	2.16	0.46
36:JA:120:THR:C	36:JA:122:PRO:CD	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:93:ASN:O	11:K:94:LYS:HB2	2.15	0.46
13:M:4:ILE:HA	13:M:59:ASN:N	2.30	0.46
14:N:152:LEU:HA	14:N:155:ALA:CB	2.45	0.46
66:NB:18:ALA:CB	66:NB:69:VAL:HG12	2.46	0.46
66:NB:18:ALA:CA	66:NB:69:VAL:HG12	2.45	0.46
66:NB:83:GLN:O	66:NB:87:LYS:HB2	2.15	0.46
69:QB:7:ARG:H	69:QB:7:ARG:HD2	1.80	0.46
19:S:142:ILE:N	19:S:142:ILE:HD12	2.30	0.46
2:B:2318:U:H5"	45:SA:23:ARG:HH12	1.80	0.46
2:B:3178:A:N3	20:T:115:LYS:HG2	2.30	0.46
73:UB:43:PHE:CZ	73:UB:104:LEU:HB2	2.49	0.46
24:X:155:ARG:HG3	24:X:155:ARG:NH2	2.27	0.46
50:XA:126:PRO:HB2	50:XA:152:PRO:CD	2.46	0.46
50:XA:181:VAL:O	50:XA:185:ARG:O	2.34	0.46
76:XB:38:ARG:CZ	76:XB:83:ILE:HG21	2.45	0.46
25:Y:93:VAL:HG22	25:Y:94:GLU:OE1	2.15	0.46
26:Z:75:TYR:CE1	26:Z:79:LEU:HD21	2.51	0.46
1:A:1200:G:H22	1:A:1208:A:H62	1.62	0.46
1:A:1305:U:H1'	1:A:1314:U:C4	2.50	0.46
1:A:1586:A:H61	1:A:1610:G:H1'	1.81	0.46
1:A:1784:C:H2'	1:A:1785:U:H6	1.76	0.46
1:A:504:U:H2'	1:A:505:A:C4'	2.46	0.46
1:A:959:U:O2	1:A:959:U:H2'	2.15	0.46
27:AA:36:ILE:CG2	27:AA:58:VAL:HB	2.46	0.46
53:AB:208:ILE:HD13	67:OB:39:ALA:CB	2.45	0.46
2:B:1209:G:H2'	2:B:1210:U:C6	2.50	0.46
2:B:1236:G:O4'	2:B:1245:A:H1'	2.15	0.46
2:B:1248:C:H2'	2:B:1249:G:C5'	2.46	0.46
2:B:12:A:H2'	2:B:13:A:H8	1.79	0.46
2:B:1327:C:O2'	2:B:1328:C:H5'	2.16	0.46
2:B:1368:U:O2'	2:B:1369:A:H5'	2.15	0.46
2:B:1500:G:C2	2:B:1501:U:H1'	2.51	0.46
2:B:2174:G:C8	2:B:2176:U:H1'	2.51	0.46
2:B:3083:G:H21	2:B:3333:G:P	2.39	0.46
2:B:532:A:O2'	2:B:533:A:H5'	2.16	0.46
54:BB:130:GLN:HB3	54:BB:138:TYR:OH	2.16	0.46
54:BB:18:TRP:CZ2	54:BB:43:PRO:HD3	2.50	0.46
54:BB:180:LEU:HA	54:BB:194:THR:HA	1.97	0.46
55:CB:62:VAL:HA	55:CB:89:ILE:HG21	1.97	0.46
55:CB:90:ILE:O	55:CB:94:THR:HG23	2.15	0.46
4:D:11:A:H4'	4:D:13:A:C4	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:43:TYR:O	30:DA:124:GLY:HA2	2.16	0.46
82:DC:459:ILE:O	82:DC:459:ILE:HG13	2.15	0.46
82:DC:412:ARG:HE	82:DC:473:GLU:HA	1.78	0.46
82:DC:727:PRO:HG2	82:DC:774:VAL:HG21	1.97	0.46
2:B:2491:A:O2'	5:E:213:ALA:HB2	2.15	0.46
6:F:82:VAL:H	47:UA:65:ALA:HB3	1.81	0.46
58:FB:104:ILE:HD13	58:FB:183:ILE:HG12	1.97	0.46
59:GB:149:ARG:O	59:GB:150:LEU:CB	2.63	0.46
59:GB:25:ASP:O	59:GB:29:LYS:HG3	2.16	0.46
8:H:146:PRO:HG2	8:H:147:GLU:H	1.81	0.46
8:H:241:GLY:C	8:H:243:HIS:H	2.19	0.46
34:HA:43:ILE:HG23	34:HA:68:TYR:O	2.15	0.46
9:I:106:ALA:HA	9:I:171:LEU:CD1	2.46	0.46
10:J:108:LYS:HZ2	10:J:111:LEU:HD13	1.79	0.46
37:KA:30:ILE:CG2	37:KA:31:LYS:N	2.77	0.46
64:LB:28:VAL:CG1	64:LB:67:VAL:HG11	2.45	0.46
64:LB:43:THR:OG1	64:LB:46:MET:HG3	2.15	0.46
64:LB:28:VAL:O	64:LB:67:VAL:HG21	2.16	0.46
13:M:48:VAL:HG13	13:M:49:ASN:N	2.30	0.46
39:MA:7:TYR:CD1	39:MA:8:GLU:N	2.83	0.46
65:MB:107:ILE:HG22	65:MB:108:ARG:N	2.31	0.46
66:NB:121:SER:O	66:NB:122:ARG:HG3	2.16	0.46
2:B:2673:A:C5'	15:O:95:ASN:HA	2.44	0.46
2:B:1233:G:C4'	16:P:120:SER:HB2	2.43	0.46
19:S:36:ILE:HG23	19:S:106:VAL:HG12	1.96	0.46
20:T:28:LEU:HD22	20:T:94:ARG:HH21	1.80	0.46
21:U:123:PRO:HD3	21:U:145:HIS:CE1	2.50	0.46
21:U:78:VAL:HG12	21:U:80:LYS:H	1.79	0.46
22:V:122:ILE:CG2	22:V:126:GLN:HB2	2.46	0.46
22:V:82:VAL:HG23	22:V:139:ILE:CA	2.39	0.46
48:VA:25:LEU:HD23	48:VA:26:PHE:N	2.31	0.46
48:VA:91:GLU:HB2	48:VA:96:ILE:CG2	2.46	0.46
74:VB:27:VAL:HG12	74:VB:29:HIS:CD2	2.47	0.46
49:WA:18:GLY:C	49:WA:37:SER:HB3	2.36	0.46
1:A:1531:G:C5'	75:WB:81:ARG:HH22	2.28	0.46
24:X:115:ARG:HG3	24:X:115:ARG:HH11	1.80	0.46
24:X:150:PHE:HD1	24:X:151:PRO:O	1.99	0.46
24:X:41:TYR:CD1	24:X:41:TYR:C	2.89	0.46
51:YA:183:GLN:HA	51:YA:186:SER:HB2	1.97	0.46
1:A:1241:G:H2'	1:A:1242:A:O4'	2.15	0.46
1:A:1402:G:H5'	67:OB:3:ARG:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1428:G:H21	70:RB:74:GLU:HG2	1.80	0.46
1:A:1792:G:N3	1:A:1792:G:H5'	2.31	0.46
1:A:185:U:H2'	1:A:186:C:H5"	1.98	0.46
1:A:370:A:H2'	1:A:371:G:C8	2.51	0.46
1:A:611:U:C2'	1:A:612:U:H5'	2.45	0.46
1:A:694:U:H3'	1:A:695:U:H6	1.79	0.46
1:A:960:U:H5	63:KB:14:SER:CB	2.27	0.46
1:A:967:A:H8	1:A:967:A:O5'	1.99	0.46
53:AB:38:GLU:O	53:AB:49:ILE:HB	2.14	0.46
2:B:1321:G:O2'	2:B:1322:U:H5'	2.15	0.46
2:B:1326:A:H2'	2:B:1327:C:H6	1.81	0.46
2:B:2177:G:O2'	6:F:127:ALA:N	2.48	0.46
2:B:2412:G:H2'	2:B:2413:A:C8	2.51	0.46
2:B:2578:U:H2'	2:B:2579:G:O4'	2.16	0.46
2:B:2697:A:H2'	2:B:2698:G:H8	1.79	0.46
2:B:3048:A:N6	2:B:3091:A:OP2	2.47	0.46
2:B:3331:U:H2'	2:B:3332:U:C6	2.51	0.46
2:B:517:G:H5"	2:B:518:G:N2	2.31	0.46
54:BB:180:LEU:HD22	54:BB:228:ILE:CG1	2.46	0.46
1:A:586:G:H5'	80:BC:21:VAL:HG13	1.98	0.46
3:C:20:U:H2'	3:C:21:C:C6	2.51	0.46
56:DB:76:LEU:N	56:DB:94:ARG:HD3	2.30	0.46
82:DC:191:THR:HG22	82:DC:763:THR:HG22	1.98	0.46
57:EB:111:LYS:O	57:EB:112:ARG:HB3	2.15	0.46
83:EC:6839:U:O4	83:EC:6844:A:N1	2.49	0.46
8:H:198:ARG:O	8:H:198:ARG:HG2	2.15	0.46
34:HA:98:SER:OG	34:HA:100:ILE:HG13	2.15	0.46
34:HA:84:LEU:N	34:HA:84:LEU:HD12	2.31	0.46
61:IB:40:LEU:HB3	61:IB:42:PHE:CE2	2.50	0.46
61:IB:40:LEU:HB3	61:IB:42:PHE:CD2	2.50	0.46
11:K:153:PHE:CE1	11:K:162:PRO:HA	2.51	0.46
11:K:192:GLY:O	11:K:195:PHE:HB2	2.15	0.46
37:KA:44:TYR:O	37:KA:71:VAL:HG21	2.16	0.46
2:B:3173:G:C2	37:KA:96:ALA:HB2	2.51	0.46
12:L:75:ILE:CG2	12:L:76:ALA:N	2.78	0.46
38:LA:65:VAL:O	38:LA:70:LYS:HE2	2.16	0.46
38:LA:74:ARG:HB3	38:LA:74:ARG:CZ	2.45	0.46
13:M:31:ARG:NH1	13:M:187:ILE:HG21	2.31	0.46
15:O:30:LEU:HD13	15:O:30:LEU:C	2.36	0.46
18:R:17:VAL:HG12	18:R:72:LEU:CG	2.45	0.46
19:S:12:ARG:C	19:S:13:LYS:HD2	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:116:A:OP2	19:S:2:GLY:HA3	2.14	0.46
19:S:73:ARG:HB2	19:S:92:LEU:HD22	1.96	0.46
46:TA:68:VAL:O	46:TA:85:LEU:HB3	2.15	0.46
21:U:30:ARG:NH2	21:U:34:GLN:HG2	2.31	0.46
16:P:123:ARG:HH22	48:VA:42:ARG:HD3	1.79	0.46
24:X:80:ARG:O	24:X:80:ARG:HD3	2.16	0.46
76:XB:88:SER:O	76:XB:92:ARG:HG3	2.15	0.46
51:YA:120:LEU:HD23	51:YA:120:LEU:C	2.35	0.46
1:A:1167:G:H21	66:NB:139:GLN:NE2	2.14	0.46
1:A:1487:A:H2'	1:A:1488:G:H8	1.81	0.46
1:A:1573:A:H1'	1:A:1574:G:OP2	2.16	0.46
1:A:1789:G:H5'	1:A:1789:G:C8	2.48	0.46
1:A:48:G:O2'	1:A:49:C:H5'	2.15	0.46
1:A:68:A:C5'	56:DB:160:ARG:HH12	2.29	0.46
27:AA:68:GLU:C	27:AA:69:LEU:HD12	2.35	0.46
2:B:1064:A:H62	2:B:1096:U:H3	1.64	0.46
2:B:1696:A:H2'	2:B:1697:A:C8	2.51	0.46
2:B:1921:A:N6	2:B:1930:A:C8	2.83	0.46
2:B:2163:C:O2'	2:B:2164:A:H5'	2.15	0.46
2:B:2179:C:H2'	6:F:132:ASN:HD21	1.79	0.46
2:B:2575:G:H2'	2:B:2576:G:H8	1.80	0.46
2:B:2881:C:OP1	7:G:236:LYS:HB2	2.16	0.46
2:B:2916:U:O4	2:B:2935:U:H2'	2.16	0.46
2:B:3029:A:H2'	2:B:3030:G:O4'	2.16	0.46
2:B:3037:U:H2'	2:B:3038:U:H6	1.72	0.46
2:B:3089:C:H2'	2:B:3090:U:C6	2.51	0.46
2:B:3130:A:H3'	2:B:3131:U:H5'	1.98	0.46
2:B:3224:G:H2'	2:B:3225:C:H6	1.80	0.46
2:B:3317:U:C5'	2:B:3318:G:H5'	2.39	0.46
2:B:796:U:H2'	2:B:797:U:C6	2.50	0.46
54:BB:90:ILE:HD11	54:BB:101:LEU:CG	2.44	0.46
54:BB:25:GLY:O	54:BB:26:CYS:HB2	2.14	0.46
29:CA:32:PHE:HD1	29:CA:33:ARG:N	2.13	0.46
82:DC:380:LEU:HD23	82:DC:381:TYR:N	2.30	0.46
82:DC:453:ILE:CD1	82:DC:453:ILE:H	2.29	0.46
57:EB:45:SER:HB2	57:EB:61:PHE:CD2	2.51	0.46
32:FA:111:LYS:HG2	32:FA:113:LEU:HD12	1.97	0.46
32:FA:28:HIS:CG	32:FA:32:ARG:HG3	2.51	0.46
2:B:964:G:O2'	32:FA:30:GLY:HA3	2.16	0.46
2:B:96:G:P	32:FA:34:MET:HB2	2.56	0.46
7:G:62:ARG:O	7:G:65:SER:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:GA:50:THR:HA	33:GA:53:ALA:HB3	1.97	0.46
59:GB:129:ILE:HB	59:GB:144:PRO:HG3	1.96	0.46
59:GB:64:GLU:O	59:GB:65:LYS:HB2	2.16	0.46
8:H:291:ASN:O	8:H:293:SER:N	2.49	0.46
8:H:84:ARG:HA	8:H:87:GLN:OE1	2.15	0.46
53:AB:28:GLU:OE2	60:HB:58:GLN:HG3	2.15	0.46
36:JA:32:TRP:CH2	36:JA:52:GLN:HG2	2.51	0.46
12:L:92:LYS:NZ	12:L:92:LYS:HB3	2.30	0.46
38:LA:41:ARG:HA	38:LA:56:THR:HG22	1.97	0.46
64:LB:33:LEU:HD12	64:LB:34:SER:N	2.30	0.46
13:M:41:ILE:HD13	13:M:42:ASP:N	2.31	0.46
65:MB:86:VAL:O	65:MB:89:MET:HG2	2.16	0.46
40:NA:9:ILE:HD12	40:NA:10:GLY:N	2.30	0.46
15:O:77:GLU:HB2	15:O:167:TYR:OH	2.16	0.46
15:O:23:VAL:HG23	15:O:65:ILE:O	2.15	0.46
16:P:78:SER:HA	16:P:117:ARG:NE	2.22	0.46
68:PB:76:PRO:CB	68:PB:81:ILE:HD12	2.46	0.46
19:S:139:HIS:HD2	19:S:142:ILE:CD1	2.25	0.46
19:S:38:ARG:HG3	19:S:38:ARG:HH11	1.78	0.46
71:SB:11:LEU:H	71:SB:11:LEU:HD12	1.81	0.46
72:TB:98:GLN:HB2	72:TB:99:PHE:HD1	1.80	0.46
73:UB:51:GLY:HA2	73:UB:77:ILE:HG13	1.97	0.46
48:VA:144:LYS:HB2	48:VA:144:LYS:NZ	2.30	0.46
23:W:31:GLU:HA	23:W:34:GLN:CD	2.36	0.46
23:W:7:GLN:H	23:W:7:GLN:CD	2.19	0.46
51:YA:144:ARG:NE	51:YA:206:PRO:HB3	2.30	0.46
51:YA:181:LEU:HA	51:YA:184:LEU:HB3	1.98	0.46
51:YA:35:PRO:HG3	51:YA:99:ASN:HA	1.98	0.46
77:YB:73:LEU:HD11	77:YB:79:PHE:CB	2.34	0.46
78:ZB:33:LEU:HD11	78:ZB:53:ILE:CG2	2.36	0.46
1:A:10:G:N2	52:ZA:88:LYS:HA	2.31	0.46
1:A:1109:G:C2'	1:A:1110:G:H5'	2.46	0.46
1:A:1264:G:H2'	1:A:1265:G:H5"	1.97	0.46
1:A:1362:U:H1'	1:A:1363:U:C6	2.51	0.46
1:A:1338:C:H1'	1:A:1410:A:C8	2.51	0.46
1:A:144:U:C2'	1:A:145:A:H5'	2.46	0.46
1:A:68:A:H5"	56:DB:160:ARG:NH1	2.30	0.46
1:A:755:A:H2'	1:A:756:A:C8	2.51	0.46
1:A:803:A:H4'	1:A:804:A:H8	1.81	0.46
27:AA:45:ARG:HB3	27:AA:48:ARG:HB3	1.97	0.46
79:AC:31:ILE:O	79:AC:37:ASN:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1099:A:H2'	2:B:1100:U:O4'	2.16	0.46
2:B:1210:U:H5'	13:M:63:LYS:CE	2.39	0.46
2:B:1260:A:H4'	2:B:1279:C:O2'	2.16	0.46
2:B:1281:G:H5'	48:VA:55:LYS:CB	2.39	0.46
2:B:1455:U:C5	2:B:1478:C:H4'	2.51	0.46
2:B:1481:A:C2	2:B:1858:A:H4'	2.50	0.46
2:B:1495:U:H5"	2:B:1514:G:H4'	1.98	0.46
2:B:1879:A:H3'	2:B:1880:U:C5'	2.45	0.46
2:B:1889:G:H2'	2:B:1890:U:C6	2.50	0.46
2:B:2060:A:H2'	2:B:2061:G:H5'	1.97	0.46
2:B:3224:G:H2'	2:B:3225:C:C6	2.51	0.46
2:B:3311:C:H2'	2:B:3312:U:C5'	2.46	0.46
2:B:382:U:H2'	2:B:383:G:O4'	2.15	0.46
2:B:749:C:OP1	33:GA:32:LEU:HG	2.16	0.46
2:B:776:U:H3'	2:B:777:U:H5"	1.95	0.46
54:BB:130:GLN:HB3	54:BB:138:TYR:CZ	2.51	0.46
4:D:28:C:C4	4:D:29:C:C2	3.04	0.46
4:D:83:U:O2'	4:D:84:A:H5'	2.16	0.46
1:A:153:G:OP1	56:DB:15:THR:HG21	2.16	0.46
82:DC:126:LEU:HD23	82:DC:126:LEU:C	2.36	0.46
82:DC:229:TYR:O	82:DC:231:LYS:N	2.49	0.46
82:DC:292:LYS:O	82:DC:294:ASP:N	2.40	0.46
82:DC:635:CYS:HB3	82:DC:664:VAL:HG13	1.97	0.46
82:DC:710:ARG:CG	82:DC:711:ARG:N	2.75	0.46
5:E:65:ILE:HG21	5:E:148:VAL:HA	1.96	0.46
83:EC:6814:G:H3'	83:EC:6815:U:H5"	1.97	0.46
58:FB:81:VAL:HG12	58:FB:82:VAL:N	2.31	0.46
33:GA:8:THR:HG23	33:GA:8:THR:O	2.15	0.46
59:GB:128:LEU:O	59:GB:129:ILE:C	2.54	0.46
59:GB:158:PHE:CD2	59:GB:164:PHE:HB2	2.50	0.46
2:B:578:A:H2'	8:H:334:PHE:HD2	1.81	0.46
34:HA:30:THR:HG21	34:HA:89:VAL:CG2	2.34	0.46
9:I:119:TYR:OH	9:I:135:VAL:N	2.49	0.46
9:I:247:ILE:C	9:I:249:ALA:N	2.69	0.46
9:I:73:VAL:O	9:I:75:LEU:HD12	2.16	0.46
10:J:40:LEU:HB3	10:J:84:VAL:CG2	2.45	0.46
63:KB:37:ILE:CG1	63:KB:54:LEU:HD11	2.46	0.46
63:KB:64:ARG:HB2	63:KB:64:ARG:CZ	2.46	0.46
12:L:108:ARG:O	12:L:112:GLU:HG2	2.16	0.46
65:MB:14:THR:OG1	65:MB:22:LEU:HG	2.15	0.46
65:MB:45:PHE:CE1	65:MB:52:LYS:HD3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:87:PRO:HG3	65:MB:112:LEU:CD2	2.45	0.46
2:B:1008:U:H4'	14:N:34:TYR:CE1	2.50	0.46
15:O:114:ILE:N	15:O:114:ILE:HD12	2.30	0.46
67:OB:17:ILE:C	67:OB:19:ARG:H	2.18	0.46
17:Q:24:VAL:CG1	19:S:203:ARG:HH21	2.29	0.46
69:QB:102:ARG:HB3	69:QB:102:ARG:HH11	1.81	0.46
18:R:17:VAL:HG12	18:R:72:LEU:CD1	2.46	0.46
20:T:125:ARG:C	20:T:127:LEU:H	2.19	0.46
20:T:22:VAL:HG21	20:T:120:VAL:HG11	1.97	0.46
2:B:2767:U:OP1	46:TA:34:SER:HB2	2.16	0.46
72:TB:42:GLN:HB2	72:TB:47:ILE:HD11	1.97	0.46
72:TB:82:LYS:O	72:TB:84:GLY:N	2.48	0.46
73:UB:37:ALA:HA	73:UB:41:SER:CB	2.46	0.46
48:VA:55:LYS:CG	48:VA:56:ASN:H	2.28	0.46
23:W:14:VAL:CG2	23:W:38:ARG:HD2	2.38	0.46
49:WA:294:TRP:CZ3	49:WA:301:LEU:HD13	2.51	0.46
50:XA:86:VAL:HG23	50:XA:87:LEU:N	2.31	0.46
25:Y:19:PHE:CD2	25:Y:20:ARG:HB2	2.50	0.46
51:YA:140:ILE:CG2	51:YA:211:HIS:H	2.29	0.46
1:A:1161:C:H2'	1:A:1162:C:H6	1.78	0.46
1:A:1226:A:H1'	1:A:1256:A:C2	2.51	0.46
1:A:1554:U:H2'	1:A:1555:A:C5'	2.46	0.46
1:A:1744:A:H2'	1:A:1745:G:O4'	2.16	0.46
1:A:314:C:O2'	1:A:315:A:H5'	2.16	0.46
1:A:331:A:H5'	58:FB:33:PRO:HA	1.97	0.46
1:A:478:A:O2'	59:GB:124:HIS:CG	2.68	0.46
1:A:640:U:H2'	1:A:641:G:O4'	2.15	0.46
1:A:736:C:H2'	1:A:737:A:H5"	1.97	0.46
27:AA:102:ILE:O	27:AA:109:MET:HA	2.16	0.46
27:AA:13:ILE:HG12	27:AA:85:TRP:NE1	2.30	0.46
53:AB:53:THR:HG22	53:AB:91:VAL:CG1	2.46	0.46
2:B:1691:U:H2'	2:B:1692:U:C5	2.51	0.46
2:B:1666:G:O3'	2:B:1743:G:H4'	2.15	0.46
2:B:1784:G:C2'	2:B:1785:U:H5'	2.46	0.46
2:B:2059:U:H2'	2:B:2060:A:H5'	1.97	0.46
2:B:2359:C:H6	2:B:2359:C:O5'	1.99	0.46
2:B:2860:U:H2'	2:B:2861:U:H5'	1.98	0.46
2:B:2865:U:C2'	2:B:2866:U:H5'	2.46	0.46
2:B:790:U:O2'	2:B:791:A:H5'	2.14	0.46
2:B:79:U:H2'	2:B:80:G:C8	2.51	0.46
55:CB:178:GLY:HA3	55:CB:209:TYR:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:151:ASP:O	56:DB:152:ASP:HB3	2.15	0.46
1:A:270:C:H41	56:DB:182:GLN:HE22	1.64	0.46
57:EB:157:LYS:HG2	57:EB:158:ASP:OD1	2.16	0.46
57:EB:43:PHE:HD1	57:EB:44:LYS:H	1.64	0.46
1:A:856:A:N6	57:EB:96:ARG:HB3	2.31	0.46
6:F:39:GLY:HA3	12:L:36:ILE:HG21	1.98	0.46
32:FA:9:ARG:C	32:FA:11:HIS:H	2.19	0.46
58:FB:178:ARG:HH21	58:FB:178:ARG:HG3	1.81	0.46
7:G:50:LYS:HZ2	7:G:328:ILE:HB	1.81	0.46
7:G:43:LEU:HB3	7:G:181:ILE:HG21	1.97	0.46
2:B:3376:A:H1'	35:IA:18:LYS:HA	1.98	0.46
35:IA:14:ILE:O	35:IA:70:ARG:HA	2.16	0.46
10:J:139:LYS:O	10:J:142:ASP:HB2	2.15	0.46
10:J:54:TYR:CD2	10:J:55:LEU:N	2.83	0.46
37:KA:60:ARG:HH21	37:KA:60:ARG:CB	2.28	0.46
37:KA:59:VAL:HG23	37:KA:60:ARG:H	1.81	0.46
37:KA:67:MET:CE	37:KA:89:LEU:HA	2.46	0.46
12:L:65:LEU:CD1	12:L:69:LEU:HD11	2.46	0.46
12:L:71:VAL:CG1	12:L:72:PRO:HD2	2.46	0.46
39:MA:74:LYS:O	39:MA:74:LYS:HD3	2.14	0.46
40:NA:53:TYR:CB	40:NA:56:ARG:HH21	2.28	0.46
41:OA:77:GLY:C	41:OA:78:PHE:HD2	2.19	0.46
17:Q:47:ALA:CB	17:Q:48:PRO:HD3	2.46	0.46
17:Q:74:GLY:CA	17:Q:98:ASP:HB2	2.46	0.46
43:QA:37:TYR:HE1	43:QA:39:ALA:HB2	1.81	0.46
69:QB:18:TYR:O	69:QB:21:PHE:HB3	2.16	0.46
18:R:16:GLU:H	18:R:19:ARG:HB3	1.81	0.46
18:R:39:ILE:HA	24:X:95:ARG:NE	2.29	0.46
17:Q:28:GLN:HE21	19:S:200:TRP:HE3	1.64	0.46
21:U:112:LEU:HG	21:U:150:VAL:CG2	2.44	0.46
21:U:177:ALA:HA	21:U:180:LYS:HG2	1.98	0.46
21:U:42:THR:HG23	21:U:43:LYS:H	1.80	0.46
47:UA:64:VAL:HG12	47:UA:65:ALA:N	2.31	0.46
22:V:139:ILE:H	22:V:139:ILE:HD12	1.79	0.46
74:VB:30:PRO:O	74:VB:31:ASN:HB3	2.16	0.46
23:W:40:ALA:O	23:W:44:LEU:HG	2.15	0.46
49:WA:192:PHE:HE1	49:WA:211:ILE:HD12	1.81	0.46
49:WA:16:HIS:CE1	49:WA:43:ILE:HG13	2.50	0.46
2:B:2701:U:OP1	25:Y:22:HIS:HB3	2.15	0.46
1:A:1067:C:H5"	51:YA:150:VAL:CG2	2.43	0.46
1:A:1263:G:H2'	1:A:1264:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1370:U:H4'	1:A:1371:A:C5'	2.46	0.46
1:A:79:C:H2'	1:A:80:A:H5'	1.97	0.46
2:B:1146:C:H4'	2:B:1331:U:H5	1.80	0.46
2:B:1174:G:O2'	20:T:21:SER:HB3	2.16	0.46
2:B:1242:G:N2	82:DC:753:GLN:HA	2.30	0.46
2:B:1446:A:N1	2:B:2356:A:H5"	2.31	0.46
2:B:1509:A:O2'	2:B:1510:G:H5'	2.15	0.46
2:B:1849:C:OP2	2:B:1849:C:H2'	2.16	0.46
2:B:2299:A:C2	2:B:2328:U:H4'	2.51	0.46
2:B:234:G:H2'	2:B:235:A:H5'	1.98	0.46
2:B:2601:A:H2'	2:B:2602:G:C8	2.43	0.46
2:B:2719:U:H2'	2:B:2720:G:H8	1.81	0.46
2:B:2844:C:O2'	2:B:2845:A:H5'	2.15	0.46
2:B:3117:C:H2'	2:B:3118:C:C5'	2.45	0.46
2:B:401:U:H4'	2:B:403:C:C2	2.51	0.46
2:B:543:C:H2'	2:B:544:C:O4'	2.16	0.46
2:B:837:A:H61	2:B:856:G:H1'	1.81	0.46
2:B:935:U:H2'	2:B:936:A:O4'	2.15	0.46
2:B:9:U:H2'	2:B:10:C:O4'	2.15	0.46
3:C:106:C:H6	3:C:106:C:O5'	1.98	0.46
3:C:129:C:H2'	3:C:130:C:H6	1.81	0.46
3:C:131:A:H2'	3:C:132:G:H5'	1.98	0.46
29:CA:83:VAL:HG12	29:CA:121:LYS:HD3	1.97	0.46
56:DB:136:LYS:NZ	56:DB:174:LYS:HB3	2.31	0.46
82:DC:10:ARG:HG3	82:DC:10:ARG:HH11	1.80	0.46
82:DC:635:CYS:SG	82:DC:664:VAL:HG22	2.56	0.46
82:DC:707:PRO:HA	82:DC:710:ARG:HD2	1.98	0.46
82:DC:743:ILE:CG2	82:DC:744:TYR:N	2.79	0.46
31:EA:109:GLU:OE2	31:EA:109:GLU:HA	2.16	0.46
2:B:1638:A:H4'	31:EA:15:ARG:HH21	1.81	0.46
31:EA:38:PHE:CD1	31:EA:38:PHE:N	2.84	0.46
57:EB:73:VAL:HG12	57:EB:77:LEU:HG	1.96	0.46
83:EC:6789:G:H2'	83:EC:6878:G:N2	2.28	0.46
6:F:216:HIS:O	6:F:217:GLN:CB	2.61	0.46
6:F:32:LEU:HA	6:F:36:GLU:CB	2.44	0.46
58:FB:195:ARG:O	58:FB:196:LEU:HD12	2.16	0.46
58:FB:63:GLY:O	58:FB:75:LYS:HA	2.16	0.46
7:G:334:ARG:HG2	7:G:335:ILE:H	1.81	0.46
59:GB:85:VAL:HG22	59:GB:107:ARG:HG3	1.98	0.46
8:H:51:ALA:CB	8:H:105:THR:HG23	2.46	0.46
53:AB:72:LEU:HA	60:HB:20:VAL:HG11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:72:THR:CG2	61:IB:124:THR:HA	2.46	0.46
10:J:154:LEU:HA	10:J:157:GLN:HG2	1.98	0.46
10:J:58:LEU:HD21	10:J:101:PHE:O	2.15	0.46
36:JA:105:ARG:O	36:JA:109:LEU:HG	2.16	0.46
11:K:130:ILE:C	11:K:132:PRO:HD2	2.36	0.46
11:K:98:LYS:HB3	11:K:99:PRO:CD	2.34	0.46
12:L:134:TYR:HE1	12:L:192:GLN:NE2	2.14	0.46
65:MB:18:ARG:HG3	65:MB:18:ARG:HH11	1.81	0.46
65:MB:61:ARG:O	65:MB:65:LEU:HB2	2.15	0.46
66:NB:99:GLU:HA	66:NB:102:LYS:HB3	1.98	0.46
15:O:166:LYS:HE2	15:O:167:TYR:CE2	2.51	0.46
19:S:110:ALA:HB1	19:S:113:LEU:HG	1.98	0.46
72:TB:53:ILE:HG12	72:TB:60:LYS:O	2.16	0.46
24:X:83:SER:C	24:X:85:SER:N	2.70	0.46
8:H:359:LEU:CG	24:X:8:GLN:HE22	2.30	0.46
50:XA:146:LEU:HD23	50:XA:160:ILE:O	2.15	0.46
50:XA:23:HIS:O	50:XA:47:VAL:HG13	2.16	0.46
51:YA:111:ARG:HB3	76:XB:68:TYR:CB	2.39	0.46
1:A:1661:U:H2'	1:A:1662:G:C8	2.50	0.45
1:A:315:A:N1	1:A:349:U:O2'	2.50	0.45
1:A:320:U:C5	1:A:321:C:H2'	2.51	0.45
1:A:488:G:H2'	1:A:489:C:O4'	2.17	0.45
1:A:701:U:H6	1:A:701:U:O5'	1.99	0.45
27:AA:24:ASN:ND2	27:AA:97:ASP:OD1	2.49	0.45
27:AA:24:ASN:O	27:AA:99:ALA:HA	2.16	0.45
2:B:1200:A:C6	2:B:2370:G:H5"	2.51	0.45
2:B:1276:U:H2'	2:B:1277:C:C6	2.50	0.45
2:B:1395:G:H2'	2:B:1396:C:O4'	2.15	0.45
2:B:188:U:H5"	2:B:189:G:OP2	2.16	0.45
2:B:2764:C:N4	2:B:2794:G:N1	2.55	0.45
2:B:2909:U:C3'	2:B:2910:A:C5'	2.88	0.45
2:B:2947:G:C2	7:G:250:ALA:HB1	2.51	0.45
2:B:3041:U:O2'	27:AA:43:GLY:HA3	2.17	0.45
2:B:3129:A:H2'	2:B:3130:A:H5"	1.97	0.45
2:B:3157:U:C4'	2:B:3158:G:H8	2.28	0.45
2:B:3364:C:H2'	2:B:3365:U:C6	2.50	0.45
2:B:3370:A:H5'	7:G:384:LYS:HB2	1.97	0.45
2:B:706:A:H2'	2:B:707:U:O4'	2.17	0.45
2:B:953:G:H1'	2:B:1115:G:H5'	1.98	0.45
2:B:960:U:H4'	2:B:963:G:N1	2.32	0.45
2:B:981:U:H2'	2:B:982:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:104:ASP:OD1	54:BB:105:VAL:N	2.49	0.45
1:A:448:C:C5'	54:BB:29:PRO:HG3	2.46	0.45
80:BC:56:MET:HG2	80:BC:57:ASN:H	1.81	0.45
3:C:77:A:C2	3:C:78:G:H1'	2.51	0.45
55:CB:142:PRO:HA	55:CB:214:LYS:HE2	1.98	0.45
55:CB:97:LEU:HA	55:CB:176:THR:HB	1.98	0.45
82:DC:129:VAL:HG11	82:DC:181:THR:CG2	2.47	0.45
1:A:397:A:O3'	58:FB:50:GLY:HA2	2.16	0.45
7:G:165:GLN:HB3	7:G:168:LYS:CD	2.30	0.45
7:G:80:ASP:HB3	7:G:314:TYR:OH	2.15	0.45
59:GB:92:LYS:O	59:GB:94:ASP:N	2.49	0.45
8:H:216:VAL:HA	8:H:227:THR:HG21	1.98	0.45
8:H:52:VAL:CG1	8:H:103:THR:H	2.29	0.45
9:I:259:LYS:HG2	9:I:260:PHE:CZ	2.51	0.45
61:IB:17:PRO:O	61:IB:18:HIS:HB2	2.16	0.45
11:K:88:ARG:NE	11:K:103:LEU:HD13	2.31	0.45
11:K:102:VAL:HB	11:K:130:ILE:HG21	1.97	0.45
1:A:965:U:H1'	63:KB:128:TYR:CD2	2.50	0.45
12:L:187:GLY:CA	12:L:190:VAL:HG12	2.36	0.45
2:B:1741:A:H4'	38:LA:38:LEU:HD23	1.98	0.45
13:M:129:ARG:HG3	13:M:153:ASP:HB3	1.98	0.45
66:NB:67:VAL:CG1	66:NB:81:ILE:HG22	2.46	0.45
15:O:106:ILE:HD11	15:O:127:PHE:HE1	1.81	0.45
15:O:54:VAL:O	15:O:55:ARG:CB	2.64	0.45
41:OA:38:GLY:CA	41:OA:45:ARG:HB2	2.46	0.45
67:OB:109:LEU:O	67:OB:112:SER:HB2	2.15	0.45
67:OB:12:ALA:CB	67:OB:50:ILE:HD13	2.46	0.45
16:P:85:LEU:CD1	16:P:106:LEU:HD22	2.44	0.45
19:S:121:VAL:HG21	19:S:131:GLU:HB2	1.98	0.45
19:S:201:ARG:HB2	19:S:202:TYR:CD1	2.51	0.45
20:T:16:VAL:HA	20:T:80:PHE:CE1	2.51	0.45
20:T:43:ILE:HD12	20:T:43:ILE:N	2.31	0.45
22:V:26:LEU:O	22:V:29:LEU:HB2	2.16	0.45
22:V:56:LYS:HA	22:V:59:ARG:NH2	2.31	0.45
48:VA:28:VAL:HG11	48:VA:87:VAL:CG2	2.46	0.45
48:VA:42:ARG:CG	48:VA:42:ARG:HH11	2.28	0.45
24:X:100:VAL:O	24:X:104:GLU:HB2	2.16	0.45
24:X:92:LYS:HZ2	24:X:92:LYS:HB3	1.81	0.45
50:XA:124:THR:O	50:XA:146:LEU:HB3	2.16	0.45
50:XA:7:PHE:HA	50:XA:191:ARG:HH22	1.81	0.45
1:A:930:A:H5"	76:XB:70:LYS:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:46:VAL:HG12	77:YB:47:PHE:N	2.30	0.45
26:Z:84:LEU:HD23	26:Z:89:LEU:HB2	1.97	0.45
1:A:1148:C:H2'	1:A:1149:G:C8	2.51	0.45
1:A:1182:U:H2'	1:A:1183:A:H8	1.81	0.45
1:A:1224:A:O2'	1:A:1225:U:H5'	2.16	0.45
1:A:1339:C:H2'	1:A:1339:C:O2	2.17	0.45
1:A:1340:U:H3'	1:A:1341:A:H5'	1.93	0.45
1:A:27:U:H2'	1:A:28:A:O4'	2.16	0.45
1:A:35:U:H4'	1:A:515:A:O3'	2.16	0.45
1:A:627:C:H4'	63:KB:117:LEU:CD2	2.44	0.45
1:A:852:C:H2'	1:A:853:G:C5'	2.45	0.45
1:A:903:U:H2'	1:A:905:A:OP2	2.16	0.45
27:AA:12:ARG:HG3	27:AA:12:ARG:HH11	1.80	0.45
53:AB:119:ALA:O	53:AB:123:VAL:HG23	2.16	0.45
2:B:1638:A:N1	2:B:1736:G:O2'	2.32	0.45
2:B:1696:A:H2'	2:B:1697:A:H8	1.80	0.45
2:B:1719:G:H4'	2:B:1732:U:C4'	2.36	0.45
2:B:1590:G:H1'	2:B:1797:A:H61	1.81	0.45
2:B:2081:U:C3'	2:B:2082:U:H4'	2.47	0.45
2:B:2260:U:H2'	2:B:2261:G:C8	2.51	0.45
2:B:2144:A:H1'	2:B:2281:A:N6	2.30	0.45
2:B:2490:C:H4'	2:B:2491:A:O4'	2.16	0.45
2:B:2585:G:C3'	2:B:2586:G:H5"	2.47	0.45
2:B:2954:U:H4'	2:B:2955:U:C5'	2.46	0.45
2:B:3176:G:N2	2:B:3213:A:H1'	2.31	0.45
2:B:3242:G:O4'	2:B:3245:A:H1'	2.16	0.45
2:B:39:A:H2'	2:B:42:C:N4	2.31	0.45
2:B:596:C:H2'	2:B:597:G:C8	2.51	0.45
2:B:634:C:O2'	2:B:635:G:H5'	2.16	0.45
2:B:69:C:O2	2:B:70:A:H1'	2.16	0.45
2:B:797:U:H5"	17:Q:2:ALA:O	2.16	0.45
2:B:820:A:C2	2:B:911:C:C4'	2.99	0.45
2:B:93:C:H4'	2:B:94:G:C5'	2.46	0.45
54:BB:68:ARG:HD3	54:BB:76:VAL:CG1	2.45	0.45
29:CA:96:LYS:O	29:CA:100:LYS:HB2	2.16	0.45
56:DB:81:VAL:HG22	56:DB:82:SER:N	2.31	0.45
56:DB:94:ARG:NH1	56:DB:94:ARG:HG2	2.32	0.45
82:DC:164:LEU:CD2	82:DC:174:LEU:HD13	2.45	0.45
82:DC:709:MET:HA	82:DC:709:MET:CE	2.46	0.45
57:EB:30:SER:O	57:EB:32:PRO:HD2	2.16	0.45
83:EC:6758:A:H2'	83:EC:6759:A:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3000:A:H5”	7:G:120:LYS:HG3	1.98	0.45
59:GB:53:ARG:HH21	59:GB:53:ARG:CG	2.29	0.45
8:H:99:MET:CE	8:H:102:PRO:HA	2.46	0.45
8:H:202:ARG:NE	8:H:202:ARG:HA	2.31	0.45
8:H:82:THR:C	8:H:84:ARG:H	2.18	0.45
8:H:92:ASN:OD1	8:H:93:MET:HE2	2.16	0.45
34:HA:27:TYR:HD1	34:HA:52:ARG:HD3	1.80	0.45
60:HB:21:VAL:HB	60:HB:66:TYR:HB2	1.98	0.45
9:I:101:THR:HA	9:I:104:LEU:CB	2.47	0.45
35:IA:80:ASN:HA	35:IA:80:ASN:HD22	1.53	0.45
61:IB:155:LYS:HB2	61:IB:156:PHE:H	1.54	0.45
36:JA:32:TRP:HH2	36:JA:52:GLN:HG2	1.81	0.45
11:K:83:LEU:C	11:K:83:LEU:HD13	2.37	0.45
11:K:95:ILE:HD13	11:K:95:ILE:N	2.32	0.45
2:B:633:C:O2’	37:KA:22:VAL:HA	2.16	0.45
64:LB:76:ILE:CD1	64:LB:76:ILE:H	2.04	0.45
40:NA:70:ARG:C	40:NA:72:VAL:H	2.17	0.45
66:NB:34:SER:HB2	66:NB:35:PRO:HD2	1.99	0.45
68:PB:42:TYR:HE2	68:PB:101:LEU:HD21	1.81	0.45
17:Q:46:ILE:HG23	17:Q:49:ARG:HD2	1.98	0.45
44:RA:126:LYS:HZ3	44:RA:126:LYS:HA	1.80	0.45
19:S:159:ARG:HG3	19:S:160:GLU:H	1.81	0.45
2:B:1347:U:H5	22:V:38:ARG:HD2	1.81	0.45
22:V:67:ILE:HG22	22:V:71:LEU:HD11	1.98	0.45
48:VA:26:PHE:CD1	48:VA:190:VAL:HA	2.52	0.45
49:WA:265:LEU:HA	49:WA:268:GLN:OE1	2.17	0.45
24:X:42:TRP:CE2	24:X:53:LYS:HA	2.51	0.45
50:XA:143:VAL:CG1	50:XA:156:VAL:HA	2.47	0.45
25:Y:42:ILE:HD13	25:Y:57:TYR:HB3	1.98	0.45
51:YA:144:ARG:HG2	51:YA:207:LEU:C	2.37	0.45
51:YA:48:VAL:CG1	51:YA:49:ASN:N	2.78	0.45
51:YA:87:ARG:HD3	51:YA:101:HIS:CE1	2.51	0.45
26:Z:96:VAL:CG1	26:Z:97:SER:H	2.26	0.45
1:A:1462:G:O2’	1:A:1463:C:H5’	2.16	0.45
1:A:1667:A:H2’	1:A:1668:G:H8	1.81	0.45
1:A:1734:U:O2’	1:A:1735:U:H5’	2.17	0.45
1:A:317:C:O4’	1:A:353:A:H2	1.99	0.45
1:A:682:C:O2’	1:A:683:C:H5’	2.17	0.45
53:AB:79:TYR:HB3	53:AB:83:THR:OG1	2.16	0.45
79:AC:33:LYS:O	79:AC:36:LEU:HG	2.16	0.45
2:B:1206:G:N3	2:B:1206:G:H2’	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1313:G:O5'	2:B:1313:G:H8	2.00	0.45
2:B:1449:A:H3'	2:B:1450:G:C8	2.52	0.45
2:B:1724:U:H2'	2:B:1724:U:OP1	2.16	0.45
2:B:1851:G:O5'	2:B:1851:G:C8	2.69	0.45
2:B:2278:C:H2'	2:B:2279:A:H5"	1.98	0.45
2:B:1447:G:N2	2:B:2355:G:H2'	2.31	0.45
2:B:2403:G:C8	2:B:2870:C:H4'	2.52	0.45
2:B:2843:U:H5	2:B:2844:C:C2	2.35	0.45
2:B:3193:C:H2'	2:B:3194:C:C6	2.52	0.45
2:B:432:G:H2'	2:B:433:A:H8	1.80	0.45
2:B:660:A:H2	2:B:941:G:N3	2.14	0.45
54:BB:193:GLY:HA3	54:BB:210:ILE:CG2	2.46	0.45
54:BB:239:PRO:C	54:BB:241:GLY:H	2.19	0.45
1:A:93:A:C1'	54:BB:3:ARG:HD2	2.46	0.45
29:CA:86:VAL:O	29:CA:120:LYS:HB3	2.17	0.45
30:DA:37:LYS:HB3	30:DA:40:ARG:HH12	1.82	0.45
56:DB:159:ARG:HB3	56:DB:170:THR:OG1	2.16	0.45
82:DC:226:ALA:CA	82:DC:240:MET:HE3	2.42	0.45
82:DC:327:PHE:HD1	82:DC:327:PHE:C	2.20	0.45
82:DC:210:ALA:HA	82:DC:337:MET:HE1	1.97	0.45
82:DC:815:ALA:O	82:DC:819:VAL:HG23	2.17	0.45
5:E:65:ILE:CG2	5:E:109:ALA:HB3	2.46	0.45
31:EA:22:LYS:CD	31:EA:130:PHE:HA	2.46	0.45
83:EC:6900:A:C2'	83:EC:6901:C:H5'	2.46	0.45
6:F:234:LYS:HD3	6:F:238:ILE:HD13	1.99	0.45
7:G:108:GLU:HB3	7:G:109:HIS:CE1	2.51	0.45
7:G:10:ARG:HH11	7:G:10:ARG:HG3	1.81	0.45
7:G:19:ARG:HG3	7:G:273:HIS:CE1	2.51	0.45
7:G:247:ARG:O	7:G:248:LYS:HG3	2.16	0.45
9:I:144:VAL:CG1	9:I:173:VAL:HG22	2.47	0.45
9:I:103:LEU:HD11	9:I:248:ARG:NH1	2.31	0.45
35:IA:72:ARG:HG2	35:IA:96:VAL:HG21	1.99	0.45
37:KA:16:TYR:HA	37:KA:28:SER:HA	1.98	0.45
63:KB:129:TYR:HA	63:KB:132:VAL:HG22	1.97	0.45
12:L:49:TYR:O	12:L:50:VAL:HB	2.16	0.45
12:L:75:ILE:O	12:L:76:ALA:HB3	2.17	0.45
12:L:94:PHE:CD1	12:L:200:LEU:HD12	2.51	0.45
64:LB:136:ARG:O	64:LB:137:LEU:HB3	2.16	0.45
64:LB:21:ALA:HB2	64:LB:83:ILE:HD11	1.98	0.45
64:LB:90:ARG:HD2	64:LB:91:THR:HG22	1.98	0.45
29:CA:51:VAL:HG21	39:MA:63:ARG:HH12	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:176:GLU:O	40:NA:11:LEU:HD11	2.16	0.45
40:NA:43:LEU:HD22	40:NA:43:LEU:O	2.17	0.45
15:O:101:ASN:CG	15:O:130:VAL:HG23	2.36	0.45
15:O:109:HIS:HD2	15:O:123:PHE:N	2.13	0.45
15:O:21:ILE:HG22	15:O:23:VAL:HG22	1.99	0.45
2:B:2681:U:OP2	15:O:51:ARG:HD3	2.16	0.45
1:A:1504:G:O2'	69:QB:41:SER:HB3	2.15	0.45
18:R:46:ILE:HG13	18:R:56:GLN:O	2.16	0.45
20:T:9:ILE:O	20:T:36:VAL:HG22	2.16	0.45
72:TB:31:SER:OG	72:TB:34:ILE:HG13	2.16	0.45
72:TB:79:PHE:HB2	72:TB:125:ILE:CG2	2.45	0.45
21:U:120:ASN:ND2	21:U:145:HIS:HB2	2.30	0.45
21:U:127:ARG:HB3	21:U:139:TYR:O	2.17	0.45
1:A:600:U:OP2	73:UB:108:GLY:HA2	2.15	0.45
2:B:1282:G:H4'	48:VA:82:GLY:CA	2.46	0.45
2:B:1916:U:C5'	23:W:85:ARG:HG3	2.47	0.45
49:WA:167:VAL:HB	49:WA:183:LEU:HB2	1.99	0.45
49:WA:58:VAL:O	49:WA:59:ARG:HG3	2.16	0.45
75:WB:80:LEU:HD13	75:WB:101:TYR:CD2	2.51	0.45
24:X:45:LEU:C	24:X:47:LYS:H	2.19	0.45
24:X:6:GLU:HB3	24:X:64:ILE:HB	1.99	0.45
76:XB:60:PRO:HG2	76:XB:61:GLU:H	1.80	0.45
51:YA:194:ASN:HB3	51:YA:195:LYS:NZ	2.31	0.45
52:ZA:122:ALA:N	53:AB:116:ARG:HH12	2.13	0.45
64:LB:103:ARG:NH1	78:ZB:38:ARG:HD3	2.32	0.45
1:A:1125:A:C5	1:A:1126:G:H1'	2.52	0.45
1:A:1691:A:H2	1:A:1710:U:H3	1.64	0.45
1:A:1752:U:H2'	1:A:1753:A:H8	1.82	0.45
1:A:449:C:O2'	1:A:450:U:H5'	2.17	0.45
1:A:997:G:C2'	1:A:998:A:H5"	2.47	0.45
53:AB:157:LEU:HD23	53:AB:157:LEU:N	2.31	0.45
2:B:1151:U:H6	2:B:1151:U:O5'	2.00	0.45
2:B:1165:A:H2'	2:B:1166:G:H8	1.82	0.45
2:B:161:G:H2'	2:B:162:G:O4'	2.17	0.45
2:B:1755:C:C3'	2:B:1756:C:H5"	2.45	0.45
2:B:207:U:O5'	2:B:207:U:H6	1.99	0.45
2:B:200:C:H5'	2:B:221:A:C2	2.51	0.45
2:B:422:A:H61	2:B:2362:C:C2'	2.29	0.45
2:B:2675:C:H3'	2:B:2676:A:H8	1.81	0.45
2:B:2922:G:H3'	2:B:2923:U:C5'	2.38	0.45
2:B:3345:G:H2'	2:B:3346:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:782:U:H2'	2:B:783:A:C8	2.52	0.45
2:B:882:A:C3'	2:B:883:A:H5"	2.46	0.45
3:C:97:A:H2'	3:C:98:U:O4'	2.17	0.45
55:CB:161:ASP:O	78:ZB:44:VAL:HA	2.16	0.45
55:CB:63:GLN:NE2	55:CB:66:GLN:HB3	2.31	0.45
4:D:79:A:H2'	4:D:80:G:C8	2.52	0.45
6:F:56:ALA:HB1	6:F:169:ILE:HG23	1.97	0.45
7:G:84:VAL:CG1	7:G:162:VAL:HB	2.46	0.45
2:B:3137:C:H5"	7:G:276:THR:HB	1.98	0.45
59:GB:38:ASN:O	59:GB:41:GLU:HB2	2.16	0.45
8:H:60:THR:CG2	8:H:61:SER:N	2.78	0.45
8:H:68:GLY:O	8:H:69:ARG:HG2	2.16	0.45
9:I:108:ARG:HG3	9:I:251:PRO:O	2.16	0.45
9:I:160:PHE:CD2	9:I:179:ARG:HB3	2.51	0.45
4:D:62:U:OP1	9:I:277:LEU:HB2	2.16	0.45
36:JA:19:ARG:HD2	36:JA:28:VAL:HG13	1.98	0.45
11:K:55:TYR:O	11:K:59:GLU:HG3	2.15	0.45
64:LB:52:ARG:CG	64:LB:53:ASP:H	2.30	0.45
64:LB:81:VAL:HG11	64:LB:102:LEU:CD2	2.44	0.45
39:MA:21:LEU:HD13	39:MA:54:VAL:CG1	2.46	0.45
65:MB:121:ILE:O	65:MB:121:ILE:HG23	2.15	0.45
66:NB:135:ARG:HG3	66:NB:135:ARG:HH11	1.81	0.45
66:NB:66:ARG:HG2	66:NB:66:ARG:HH11	1.81	0.45
18:R:32:LEU:HD21	18:R:94:TRP:CD2	2.51	0.45
20:T:43:ILE:HD12	20:T:43:ILE:H	1.82	0.45
72:TB:104:LEU:N	72:TB:104:LEU:HD13	2.31	0.45
47:UA:57:CYS:SG	47:UA:59:CYS:O	2.75	0.45
73:UB:19:ARG:HE	73:UB:19:ARG:HA	1.81	0.45
22:V:26:LEU:C	22:V:26:LEU:HD23	2.37	0.45
74:VB:125:LEU:O	74:VB:125:LEU:HD23	2.16	0.45
23:W:87:ALA:O	23:W:88:ARG:C	2.55	0.45
49:WA:197:SER:OG	49:WA:216:LYS:HB3	2.16	0.45
49:WA:276:PRO:HG3	49:WA:305:TYR:OH	2.17	0.45
75:WB:59:TYR:O	75:WB:64:VAL:HG11	2.17	0.45
2:B:1212:A:N3	24:X:114:HIS:HE1	2.14	0.45
64:LB:113:GLY:HA3	76:XB:58:VAL:HG22	1.98	0.45
25:Y:89:LEU:HD13	25:Y:89:LEU:O	2.16	0.45
51:YA:64:ARG:O	51:YA:87:ARG:HA	2.16	0.45
71:SB:64:GLU:HB3	77:YB:3:LEU:HG	1.98	0.45
26:Z:77:LYS:HE2	26:Z:95:PHE:HB3	1.97	0.45
1:A:2:A:C2'	52:ZA:179:VAL:HG11	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:116:U:H2'	1:A:117:U:C6	2.52	0.45
1:A:1388:A:OP2	67:OB:32:LYS:HE3	2.17	0.45
1:A:1456:C:H3'	1:A:1457:C:C5'	2.46	0.45
1:A:1744:A:C2'	1:A:1745:G:H5'	2.47	0.45
1:A:410:A:N3	1:A:411:C:H1'	2.32	0.45
1:A:863:A:O2'	1:A:864:U:H5'	2.16	0.45
27:AA:109:MET:HG2	27:AA:111:GLY:O	2.17	0.45
27:AA:38:ALA:HB3	27:AA:59:MET:HB2	1.98	0.45
2:B:1070:U:C2'	2:B:1071:U:H5'	2.46	0.45
2:B:1133:A:O2'	2:B:1134:G:H5'	2.17	0.45
2:B:1311:G:C8	2:B:1311:G:O5'	2.70	0.45
2:B:1402:C:H2'	2:B:1403:C:C6	2.52	0.45
2:B:639:G:H4'	2:B:1434:G:O6	2.16	0.45
2:B:1493:G:H2'	2:B:1493:G:N3	2.31	0.45
2:B:1828:A:H2'	2:B:1829:G:O4'	2.17	0.45
2:B:1871:U:O2'	2:B:3067:C:H4'	2.16	0.45
2:B:2127:U:H2'	2:B:2128:C:C6	2.52	0.45
2:B:2515:A:H2'	2:B:2516:U:H5'	1.98	0.45
2:B:2555:G:N2	31:EA:135:ARG:CB	2.79	0.45
2:B:2556:C:H6	2:B:2556:C:O5'	1.99	0.45
2:B:993:G:H1'	2:B:2637:A:O2'	2.17	0.45
2:B:2667:A:H1'	2:B:2691:A:O5'	2.17	0.45
2:B:303:G:H5'	19:S:178:HIS:HE1	1.81	0.45
2:B:3045:G:H2'	2:B:3046:A:O4'	2.17	0.45
2:B:3178:A:C2	20:T:115:LYS:HG2	2.52	0.45
2:B:792:G:O2'	2:B:793:C:H5'	2.17	0.45
2:B:807:A:H61	2:B:934:G:H22	1.64	0.45
29:CA:66:PRO:HG3	29:CA:84:PHE:CE1	2.52	0.45
1:A:78:A:N6	56:DB:180:THR:HG21	2.32	0.45
56:DB:30:LYS:HE2	56:DB:30:LYS:HA	1.99	0.45
56:DB:4:ASN:O	56:DB:110:ALA:HA	2.17	0.45
82:DC:26:ALA:CB	82:DC:128:VAL:HB	2.47	0.45
82:DC:132:ILE:HG21	82:DC:162:ARG:HH21	1.81	0.45
82:DC:419:VAL:HG13	82:DC:420:PRO:HD2	1.98	0.45
82:DC:42:ARG:O	82:DC:43:ALA:HB2	2.16	0.45
82:DC:487:PRO:HG2	82:DC:519:LEU:CD2	2.44	0.45
82:DC:582:LYS:O	82:DC:583:HIS:CG	2.69	0.45
82:DC:608:PRO:HA	82:DC:636:PHE:CE2	2.52	0.45
31:EA:54:THR:HG22	31:EA:57:HIS:HD2	1.81	0.45
57:EB:133:THR:CB	57:EB:154:LEU:HD21	2.46	0.45
57:EB:51:VAL:HG22	57:EB:55:LYS:C	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:98:ILE:HD11	57:EB:121:VAL:HB	1.98	0.45
6:F:5:ILE:HG13	6:F:7:ASN:CG	2.36	0.45
7:G:90:VAL:HG22	7:G:104:THR:HG23	1.98	0.45
7:G:229:VAL:CG1	7:G:230:THR:N	2.79	0.45
59:GB:40:LYS:HA	59:GB:43:TYR:HD2	1.81	0.45
8:H:205:PRO:HB2	8:H:247:PHE:HD2	1.82	0.45
8:H:300:ARG:CB	8:H:301:PRO:HD2	2.39	0.45
9:I:135:VAL:O	9:I:135:VAL:HG23	2.16	0.45
35:IA:100:SER:O	35:IA:102:LYS:N	2.49	0.45
35:IA:15:ASN:OD1	35:IA:18:LYS:HG2	2.17	0.45
35:IA:48:ASP:HB3	35:IA:90:PHE:CB	2.47	0.45
61:IB:75:VAL:HB	61:IB:121:ASP:N	2.32	0.45
61:IB:75:VAL:HG22	61:IB:84:ILE:HD13	1.99	0.45
12:L:134:TYR:HE1	12:L:192:GLN:HE22	1.64	0.45
64:LB:13:VAL:HB	64:LB:76:ILE:HG23	1.98	0.45
39:MA:60:GLU:OE2	39:MA:60:GLU:HA	2.17	0.45
39:MA:58:ILE:O	39:MA:62:GLN:HB2	2.17	0.45
14:N:213:PHE:N	14:N:213:PHE:CD1	2.84	0.45
14:N:53:VAL:HG21	25:Y:160:ILE:CD1	2.45	0.45
40:NA:74:LYS:HD3	40:NA:74:LYS:C	2.37	0.45
15:O:23:VAL:HG21	15:O:30:LEU:HD23	1.98	0.45
67:OB:27:ASP:O	67:OB:31:ASN:HB2	2.16	0.45
43:QA:33:ASN:ND2	43:QA:35:ILE:HD13	2.31	0.45
71:SB:56:SER:OG	71:SB:59:VAL:HG23	2.17	0.45
21:U:60:PHE:CE2	21:U:82:ARG:HB2	2.51	0.45
74:VB:44:LEU:HD13	74:VB:55:VAL:CG1	2.43	0.45
23:W:8:LYS:HG3	23:W:24:LEU:HD11	1.99	0.45
23:W:3:ASN:O	23:W:4:LEU:HD23	2.16	0.45
23:W:81:ARG:HG2	23:W:88:ARG:CZ	2.47	0.45
23:W:96:ILE:HG23	23:W:100:ARG:NH2	2.32	0.45
49:WA:106:HIS:CE1	49:WA:132:LYS:HD2	2.51	0.45
51:YA:197:ILE:HG21	51:YA:210:ILE:CG2	2.47	0.45
51:YA:26:ARG:NH1	51:YA:52:THR:HG22	2.32	0.45
26:Z:38:ILE:HA	26:Z:41:ILE:HG13	1.99	0.45
1:A:1144:U:O2'	1:A:1145:U:H5'	2.17	0.45
1:A:1170:G:N3	1:A:1170:G:H2'	2.31	0.45
1:A:1647:U:H2'	1:A:1648:A:C8	2.52	0.45
1:A:1761:U:H1'	1:A:1762:A:OP2	2.17	0.45
1:A:304:U:OP1	61:IB:136:ARG:HG3	2.16	0.45
1:A:333:A:N7	1:A:334:G:C5	2.84	0.45
1:A:520:A:H2'	1:A:521:A:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:750:U:H2'	1:A:751:G:C8	2.52	0.45
53:AB:9:ARG:O	53:AB:13:ALA:HB2	2.17	0.45
2:B:1076:C:H2'	2:B:1077:U:O4'	2.17	0.45
2:B:1697:A:N6	2:B:1748:G:H1'	2.32	0.45
2:B:2617:U:H5"	33:GA:3:LYS:HZ2	1.80	0.45
2:B:2844:C:C2'	2:B:2845:A:H5'	2.46	0.45
2:B:290:G:N3	19:S:93:LYS:NZ	2.59	0.45
2:B:2909:U:H2'	2:B:2910:A:C5'	2.42	0.45
2:B:493:G:H1'	2:B:494:G:P	2.57	0.45
2:B:556:U:H4'	2:B:557:A:O5'	2.17	0.45
2:B:615:U:H2'	2:B:616:G:C8	2.51	0.45
3:C:107:G:C4'	3:C:138:A:H5'	2.42	0.45
55:CB:119:ASP:O	55:CB:123:VAL:HG23	2.17	0.45
55:CB:146:THR:HG22	55:CB:157:ARG:HB3	1.99	0.45
30:DA:100:HIS:CD2	30:DA:102:SER:HB3	2.52	0.45
56:DB:102:VAL:HG13	56:DB:106:LEU:HD12	1.98	0.45
56:DB:143:LYS:HA	56:DB:143:LYS:HE3	1.98	0.45
56:DB:87:ARG:NH1	56:DB:87:ARG:HG3	2.31	0.45
82:DC:153:PRO:HD2	82:DC:200:VAL:HG21	1.99	0.45
82:DC:412:ARG:CB	82:DC:412:ARG:NH1	2.79	0.45
82:DC:659:ILE:CG2	82:DC:705:ILE:HD13	2.46	0.45
31:EA:9:LYS:HA	31:EA:86:THR:HB	1.99	0.45
57:EB:173:TYR:HE1	57:EB:179:LYS:HD2	1.80	0.45
6:F:211:HIS:CD2	6:F:219:ILE:HG23	2.52	0.45
6:F:226:SER:C	6:F:228:GLY:H	2.18	0.45
2:B:2727:A:C2	32:FA:43:ILE:HG23	2.52	0.45
7:G:111:SER:O	7:G:114:VAL:HG23	2.16	0.45
7:G:137:TYR:CD1	7:G:144:ILE:HD13	2.52	0.45
7:G:305:ILE:HD11	7:G:317:ILE:HG21	1.97	0.45
7:G:74:GLU:OE1	7:G:325:LYS:HG3	2.16	0.45
59:GB:37:LYS:HD2	80:BC:33:ARG:HB2	1.98	0.45
8:H:135:VAL:HG21	8:H:148:ILE:HG21	1.99	0.45
61:IB:93:TYR:HE2	61:IB:95:PRO:CA	2.20	0.45
11:K:52:GLN:HA	11:K:55:TYR:HD2	1.81	0.45
11:K:78:GLU:C	11:K:80:GLN:H	2.19	0.45
63:KB:26:PHE:CE2	63:KB:66:ILE:HD13	2.51	0.45
63:KB:95:ALA:O	63:KB:99:ARG:HB2	2.16	0.45
12:L:57:ARG:O	12:L:61:GLN:HG3	2.17	0.45
38:LA:12:PRO:HG2	38:LA:13:TYR:CE2	2.51	0.45
29:CA:50:ALA:HB1	39:MA:66:VAL:HG11	1.98	0.45
65:MB:50:THR:O	65:MB:50:THR:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:193:ASP:HB2	14:N:198:LYS:HG3	1.98	0.45
14:N:57:LEU:HD23	14:N:58:GLU:N	2.32	0.45
2:B:2854:U:OP1	14:N:63:GLU:HG3	2.16	0.45
40:NA:9:ILE:HG22	40:NA:13:LYS:CD	2.47	0.45
40:NA:83:ALA:O	40:NA:86:LYS:HB3	2.17	0.45
66:NB:65:ILE:HG22	66:NB:66:ARG:H	1.82	0.45
15:O:141:ARG:HH11	15:O:141:ARG:HB2	1.81	0.45
41:OA:24:ARG:NH1	41:OA:24:ARG:HB3	2.32	0.45
41:OA:52:LYS:HA	41:OA:55:ARG:NH1	2.32	0.45
2:B:1751:G:H5"	42:PA:26:LYS:HZ2	1.81	0.45
17:Q:28:GLN:O	17:Q:32:LYS:HB2	2.16	0.45
2:B:110:G:H5"	17:Q:91:ARG:NE	2.31	0.45
70:RB:28:SER:HB3	70:RB:34:LEU:HG	1.97	0.45
1:A:1774:G:N7	45:SA:4:LYS:HE2	2.30	0.45
20:T:126:VAL:C	20:T:127:LEU:HD12	2.37	0.45
2:B:1316:C:O2	20:T:130:LYS:HD3	2.17	0.45
18:R:123:LEU:CD2	20:T:190:VAL:HG23	2.47	0.45
20:T:28:LEU:HD22	20:T:94:ARG:CZ	2.45	0.45
74:VB:101:GLU:C	74:VB:102:LYS:HD2	2.37	0.45
74:VB:56:SER:HA	74:VB:94:TYR:OH	2.16	0.45
49:WA:87:LYS:HE3	49:WA:108:SER:N	2.32	0.45
24:X:77:VAL:HB	24:X:92:LYS:C	2.36	0.45
76:XB:36:ILE:HD11	76:XB:83:ILE:HB	1.98	0.45
25:Y:119:ALA:HA	25:Y:122:GLN:HB2	1.99	0.45
1:A:1172:G:H2'	1:A:1173:C:O4'	2.16	0.45
1:A:9:U:C6	1:A:11:A:OP2	2.70	0.45
1:A:636:A:O2'	1:A:637:C:H5'	2.17	0.45
1:A:960:U:H5	63:KB:14:SER:HB3	1.82	0.45
53:AB:105:MET:HE3	53:AB:119:ALA:N	2.32	0.45
53:AB:79:TYR:CE2	53:AB:84:ILE:HD11	2.51	0.45
79:AC:40:ARG:HG2	79:AC:41:GLN:OE1	2.16	0.45
2:B:1082:U:H2'	2:B:1083:G:H5'	1.98	0.45
2:B:126:U:H4'	19:S:141:ALA:HB2	1.98	0.45
2:B:1656:A:H5'	38:LA:16:ARG:HH12	1.82	0.45
2:B:1857:C:O2	2:B:1857:C:C2'	2.64	0.45
2:B:2372:A:H4'	2:B:2373:A:C8	2.51	0.45
2:B:2359:C:H4'	2:B:2399:A:H4'	1.99	0.45
2:B:2521:U:H2'	2:B:2522:G:C5'	2.25	0.45
2:B:2712:U:H2'	2:B:2713:U:C6	2.51	0.45
2:B:2738:A:H5"	33:GA:38:LYS:HE2	1.98	0.45
2:B:2847:A:C2	2:B:2898:G:H2'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:287:G:H2'	2:B:288:C:H6	1.77	0.45
28:BA:8:PHE:CE2	28:BA:49:ILE:HG13	2.52	0.45
4:D:2:G:N2	4:D:120:C:H1'	2.32	0.45
56:DB:129:VAL:HG13	56:DB:130:PRO:HD2	1.98	0.45
56:DB:159:ARG:HH21	56:DB:171:LYS:HA	1.82	0.45
82:DC:727:PRO:HG2	82:DC:774:VAL:CG2	2.47	0.45
82:DC:141:THR:HG1	82:DC:793:PHE:HE2	1.63	0.45
1:A:803:A:C4	57:EB:104:ARG:HG3	2.51	0.45
57:EB:109:VAL:CG1	57:EB:110:GLN:H	2.20	0.45
7:G:332:ARG:O	7:G:333:LYS:HB3	2.17	0.45
59:GB:137:GLY:O	59:GB:138:LYS:HB3	2.16	0.45
8:H:57:GLY:HA3	8:H:97:GLY:HA2	1.99	0.45
34:HA:51:LEU:HD13	38:LA:91:ARG:HG3	1.98	0.45
9:I:13:SER:HA	9:I:16:PHE:CB	2.46	0.45
10:J:86:ALA:HB3	37:KA:107:ILE:OXT	2.16	0.45
11:K:104:GLN:HG2	22:V:6:THR:HG22	1.99	0.45
11:K:131:GLU:N	11:K:132:PRO:CD	2.78	0.45
10:J:171:PRO:HB2	37:KA:43:PHE:HE2	1.81	0.45
63:KB:30:SER:HA	63:KB:33:VAL:CG2	2.42	0.45
38:LA:103:LYS:O	38:LA:107:GLU:HG3	2.17	0.45
13:M:101:VAL:HA	13:M:113:GLU:O	2.17	0.45
14:N:197:VAL:HG22	14:N:198:LYS:N	2.29	0.45
66:NB:140:LYS:HG3	66:NB:140:LYS:O	2.16	0.45
15:O:101:ASN:ND2	15:O:130:VAL:HG23	2.31	0.45
67:OB:9:VAL:HG13	67:OB:50:ILE:HA	1.99	0.45
67:OB:9:VAL:HG21	67:OB:49:LYS:CG	2.47	0.45
16:P:109:ILE:HG23	16:P:110:ILE:CD1	2.46	0.45
16:P:87:GLU:HB2	16:P:88:PRO:CD	2.47	0.45
68:PB:86:LEU:HB2	68:PB:89:GLN:HB3	1.98	0.45
19:S:65:ARG:HB2	19:S:129:TYR:CD1	2.52	0.45
20:T:91:LYS:C	20:T:96:LYS:HE3	2.37	0.45
72:TB:23:ARG:HH11	72:TB:23:ARG:HG3	1.81	0.45
72:TB:65:LEU:CD1	72:TB:65:LEU:H	2.26	0.45
21:U:169:THR:OG1	21:U:172:GLN:HB2	2.17	0.45
21:U:175:ARG:HH11	21:U:176:ILE:HG12	1.81	0.45
22:V:179:ARG:NH1	22:V:179:ARG:HB3	2.32	0.45
48:VA:30:VAL:HG13	48:VA:31:ASP:N	2.32	0.45
75:WB:47:TYR:HA	75:WB:50:ILE:CD1	2.43	0.45
18:R:38:ILE:CD1	24:X:150:PHE:HE2	2.29	0.45
24:X:11:GLY:HA2	24:X:59:VAL:H	1.82	0.45
76:XB:10:ARG:HE	76:XB:11:ASN:H	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:193:ILE:O	51:YA:197:ILE:HG12	2.17	0.45
51:YA:34:ALA:HB3	51:YA:41:ARG:HG2	1.97	0.45
52:ZA:154:LEU:HD11	52:ZA:193:VAL:HG11	1.98	0.45
1:A:1207:C:OP1	1:A:1207:C:H6	2.00	0.45
1:A:1393:C:O2'	1:A:1394:G:H5'	2.17	0.45
1:A:1493:A:H4'	1:A:1494:C:C6	2.46	0.45
1:A:1552:U:H2'	1:A:1553:G:O4'	2.17	0.45
1:A:1525:A:N1	1:A:1608:U:H1'	2.32	0.45
1:A:1626:U:H2'	1:A:1627:U:H6	1.78	0.45
1:A:391:A:O2'	1:A:1730:A:H4'	2.16	0.45
1:A:177:U:C3'	1:A:178:U:H5"	2.47	0.45
1:A:451:A:H3'	1:A:453:U:H5	1.81	0.45
1:A:589:C:H2'	1:A:590:C:H6	1.81	0.45
1:A:611:U:C2	61:IB:97:TYR:HA	2.52	0.45
1:A:899:G:H4'	64:LB:46:MET:HG2	1.98	0.45
1:A:90:C:H2'	1:A:91:G:O4'	2.17	0.45
1:A:1332:C:O2'	53:AB:163:PRO:HD3	2.16	0.45
53:AB:162:GLN:NE2	53:AB:165:ASN:HB2	2.31	0.45
2:B:1169:A:H4'	11:K:219:LYS:CD	2.46	0.45
2:B:1394:A:H2'	2:B:1395:G:O4'	2.16	0.45
2:B:1602:A:N7	2:B:1603:A:C6	2.85	0.45
2:B:1706:C:H2'	2:B:1707:A:O4'	2.17	0.45
2:B:913:A:H2	2:B:2134:G:N3	2.14	0.45
2:B:2541:U:H1'	2:B:2542:U:H4'	1.99	0.45
2:B:2608:G:O2'	2:B:2609:A:H5'	2.16	0.45
2:B:2682:C:H5"	15:O:68:HIS:NE2	2.31	0.45
2:B:268:A:C4'	2:B:270:U:H1'	2.47	0.45
2:B:2854:U:H2'	2:B:2855:U:H6	1.82	0.45
2:B:3053:G:H2'	2:B:3054:U:O4'	2.17	0.45
2:B:3344:A:H2	2:B:3345:G:H1'	1.79	0.45
2:B:35:A:O2'	2:B:36:C:H5'	2.16	0.45
2:B:640:U:H4'	2:B:941:G:OP1	2.17	0.45
2:B:731:U:H2'	2:B:732:C:C6	2.52	0.45
2:B:741:U:C5'	22:V:74:GLU:HB2	2.47	0.45
2:B:899:U:H2'	2:B:900:G:H8	1.81	0.45
55:CB:63:GLN:HA	55:CB:63:GLN:OE1	2.17	0.45
4:D:7:G:P	9:I:50:ARG:HH22	2.39	0.45
4:D:80:G:H2'	4:D:81:U:C6	2.52	0.45
30:DA:23:PRO:O	30:DA:26:GLN:HB2	2.17	0.45
82:DC:138:GLN:HE21	82:DC:139:THR:N	2.14	0.45
82:DC:369:ILE:HD12	82:DC:401:PHE:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:491:VAL:HG22	82:DC:530:VAL:HB	1.98	0.45
82:DC:77:LEU:CB	82:DC:100:ILE:O	2.64	0.45
5:E:36:VAL:HG22	5:E:206:VAL:HG12	1.99	0.45
31:EA:49:TYR:CD2	31:EA:133:LYS:HA	2.51	0.45
83:EC:6803:C:H2'	83:EC:6804:A:H5"	1.99	0.45
6:F:100:ASN:O	6:F:166:ILE:HG12	2.16	0.45
2:B:2187:G:O6	6:F:200:ARG:HD3	2.16	0.45
6:F:62:VAL:CG2	6:F:71:LEU:HB3	2.47	0.45
58:FB:20:GLN:OE1	58:FB:20:GLN:HA	2.17	0.45
58:FB:30:GLY:O	58:FB:31:ARG:HG3	2.17	0.45
7:G:252:ILE:CD1	7:G:252:ILE:N	2.80	0.45
7:G:302:LYS:HB3	7:G:302:LYS:NZ	2.32	0.45
59:GB:153:GLU:HA	59:GB:156:ILE:CD1	2.47	0.45
8:H:52:VAL:HG12	8:H:103:THR:H	1.82	0.45
8:H:188:ARG:HG3	8:H:190:GLY:N	2.24	0.45
8:H:23:PRO:HG2	8:H:258:LEU:CD2	2.47	0.45
60:HB:73:VAL:HA	60:HB:76:LEU:HB2	1.99	0.45
9:I:258:LYS:O	9:I:259:LYS:HB3	2.17	0.45
9:I:41:LYS:HG2	25:Y:93:VAL:HG11	1.98	0.45
61:IB:75:VAL:HG23	61:IB:123:VAL:HG12	1.99	0.45
61:IB:155:LYS:H	61:IB:155:LYS:HD3	1.82	0.45
11:K:173:LEU:HD23	11:K:178:ILE:HD12	1.99	0.45
11:K:166:ASN:HB3	11:K:180:SER:HA	1.99	0.45
37:KA:52:VAL:HG13	37:KA:66:VAL:CG2	2.47	0.45
63:KB:145:THR:HG22	63:KB:149:LEU:HD12	1.99	0.45
64:LB:20:TYR:HB3	64:LB:27:PHE:HB2	1.99	0.45
13:M:86:TYR:CD2	13:M:151:VAL:HG22	2.50	0.45
19:S:146:ALA:HB2	39:MA:100:VAL:HA	1.99	0.45
14:N:49:CYS:CB	14:N:172:GLY:HA2	2.31	0.45
41:OA:5:THR:N	41:OA:6:PRO:HD2	2.32	0.45
67:OB:117:LEU:N	67:OB:117:LEU:HD22	2.32	0.45
68:PB:82:PRO:HG3	69:QB:36:ILE:HD12	1.98	0.45
8:H:105:THR:O	17:Q:24:VAL:HG21	2.16	0.45
17:Q:28:GLN:CD	19:S:201:ARG:HG3	2.37	0.45
17:Q:56:PRO:HG3	17:Q:74:GLY:O	2.17	0.45
43:QA:30:ARG:HH11	43:QA:30:ARG:HB3	1.82	0.45
69:QB:58:ALA:HA	69:QB:104:VAL:HG13	1.99	0.45
69:QB:34:VAL:HA	69:QB:53:TRP:HZ2	1.82	0.45
18:R:102:LYS:CA	18:R:105:GLN:HB2	2.46	0.45
18:R:21:VAL:CB	18:R:63:VAL:HG22	2.44	0.45
18:R:67:PRO:HD3	18:R:99:TRP:CZ3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:37:VAL:O	70:RB:41:ILE:HD13	2.16	0.45
19:S:35:VAL:HA	19:S:65:ARG:NE	2.29	0.45
2:B:2424:A:H1'	19:S:78:GLY:HA3	1.98	0.45
71:SB:56:SER:C	71:SB:58:TYR:N	2.69	0.45
72:TB:42:GLN:HB2	72:TB:47:ILE:CG1	2.47	0.45
72:TB:90:THR:HG21	72:TB:113:HIS:CD2	2.49	0.45
72:TB:98:GLN:HB2	72:TB:99:PHE:CD1	2.52	0.45
74:VB:29:HIS:HB2	74:VB:32:ARG:O	2.15	0.45
49:WA:38:ARG:HG2	49:WA:67:ILE:HG23	1.99	0.45
49:WA:52:GLN:HG2	49:WA:53:LYS:H	1.82	0.45
24:X:6:GLU:O	24:X:64:ILE:HB	2.16	0.45
25:Y:75:ILE:O	25:Y:75:ILE:HD13	2.16	0.45
51:YA:48:VAL:CG1	51:YA:49:ASN:H	2.20	0.45
52:ZA:238:SER:C	52:ZA:240:LEU:H	2.20	0.45
1:A:1020:A:C3'	1:A:1021:C:H5"	2.46	0.45
1:A:1338:C:O5'	1:A:1338:C:H6	2.00	0.45
1:A:1549:C:H6	1:A:1549:C:O5'	1.99	0.45
1:A:1582:U:H3	1:A:1613:U:H3	1.65	0.45
1:A:1714:A:C2'	1:A:1715:G:H8	2.18	0.45
1:A:979:A:C1'	1:A:1775:U:O2'	2.65	0.45
1:A:43:A:H4'	1:A:99:C:OP1	2.17	0.45
1:A:812:A:H5'	1:A:814:A:C1'	2.47	0.45
1:A:883:C:H2'	1:A:884:A:C8	2.52	0.45
53:AB:7:LYS:HE3	53:AB:7:LYS:HA	1.97	0.45
2:B:10:C:H2'	2:B:11:A:H5"	1.97	0.45
2:B:1217:A:H1'	2:B:1289:G:H22	1.80	0.45
2:B:1299:U:H2'	2:B:1300:G:O4'	2.16	0.45
2:B:1364:C:H2'	2:B:1365:G:C8	2.52	0.45
2:B:1472:U:H2'	2:B:1473:G:H8	1.81	0.45
2:B:151:A:H5"	39:MA:102:GLU:CG	2.42	0.45
2:B:1661:G:H2'	2:B:1662:G:H8	1.79	0.45
2:B:2322:C:C2'	2:B:2323:G:H5'	2.47	0.45
2:B:2467:G:N2	2:B:2488:A:N6	2.65	0.45
2:B:2684:C:H2'	2:B:2685:C:C6	2.52	0.45
2:B:2829:U:OP1	14:N:4:ARG:HA	2.17	0.45
2:B:296:A:C2'	2:B:297:G:H5'	2.47	0.45
2:B:3065:G:H2'	2:B:3066:U:O4'	2.16	0.45
2:B:3235:C:C2'	2:B:3236:U:H5'	2.47	0.45
2:B:335:G:H2'	2:B:336:A:O4'	2.17	0.45
2:B:760:G:H1'	2:B:771:A:N6	2.32	0.45
2:B:886:C:H2'	2:B:887:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:BC:49:LEU:HD23	80:BC:49:LEU:H	1.81	0.45
3:C:36:G:N7	39:MA:86:ARG:HD3	2.31	0.45
29:CA:49:LYS:C	29:CA:51:VAL:H	2.20	0.45
4:D:41:G:H4'	4:D:44:C:H42	1.80	0.45
4:D:88:G:H5"	24:X:117:ARG:NH1	2.31	0.45
30:DA:104:LEU:O	30:DA:105:VAL:HG23	2.16	0.45
82:DC:116:THR:HA	82:DC:119:LEU:HG	1.98	0.45
82:DC:129:VAL:HG12	82:DC:130:ASP:H	1.81	0.45
82:DC:597:VAL:HA	82:DC:600:ALA:HB3	1.99	0.45
82:DC:615:ARG:HG2	82:DC:619:MET:SD	2.57	0.45
82:DC:734:GLN:HE22	82:DC:767:THR:HB	1.82	0.45
31:EA:123:GLN:O	31:EA:124:ALA:CB	2.65	0.45
57:EB:28:GLU:HB3	57:EB:35:LYS:HD3	1.98	0.45
83:EC:6887:G:H2'	83:EC:6888:A:C8	2.52	0.45
6:F:70:ARG:HG3	6:F:70:ARG:HH11	1.81	0.45
58:FB:76:THR:HG22	58:FB:108:PRO:CG	2.47	0.45
7:G:173:GLN:O	7:G:174:LYS:HB2	2.16	0.45
7:G:26:ARG:HH11	7:G:26:ARG:HG2	1.81	0.45
59:GB:49:LEU:HD11	59:GB:53:ARG:HD3	1.99	0.45
59:GB:77:ILE:HA	59:GB:80:LEU:CD1	2.47	0.45
8:H:107:ARG:HH11	8:H:107:ARG:HG3	1.82	0.45
8:H:152:VAL:HG22	8:H:251:THR:HA	1.98	0.45
8:H:312:VAL:CG2	8:H:313:LEU:N	2.80	0.45
8:H:89:ALA:O	8:H:90:PHE:HB2	2.17	0.45
8:H:93:MET:HG2	8:H:94:CYS:SG	2.57	0.45
10:J:41:ILE:HB	10:J:85:ILE:HB	1.99	0.45
36:JA:22:SER:HB2	36:JA:28:VAL:O	2.16	0.45
11:K:115:THR:HB	11:K:116:PHE:H	1.64	0.45
11:K:98:LYS:NZ	11:K:129:LEU:HG	2.32	0.45
12:L:25:PRO:C	12:L:26:LEU:HD12	2.37	0.45
64:LB:57:PRO:HB3	64:LB:100:ALA:CB	2.47	0.45
65:MB:28:MET:O	65:MB:29:SER:HB3	2.16	0.45
15:O:116:TYR:CZ	68:PB:14:ILE:HG21	2.52	0.45
15:O:132:ASN:ND2	15:O:136:ALA:HB2	2.26	0.45
15:O:48:SER:OG	15:O:68:HIS:HE1	2.00	0.45
18:R:14:LEU:HD23	24:X:149:LYS:HB2	1.99	0.45
18:R:17:VAL:HG11	18:R:74:ARG:HA	1.99	0.45
44:RA:104:PRO:HD3	44:RA:111:ARG:HH21	1.82	0.45
70:RB:28:SER:OG	70:RB:112:VAL:HG22	2.16	0.45
20:T:148:LYS:H	20:T:148:LYS:HD2	1.81	0.45
73:UB:19:ARG:HH11	73:UB:22:ASN:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:243:LEU:HD23	49:WA:254:ALA:HA	1.99	0.45
24:X:75:PHE:HD1	24:X:128:GLU:HA	1.80	0.45
50:XA:183:ARG:NH2	50:XA:191:ARG:HH21	2.15	0.45
50:XA:24:LEU:HD11	50:XA:41:ARG:NH1	2.32	0.45
1:A:1790:A:OP2	76:XB:31:PRO:HG2	2.17	0.45
1:A:1797:A:H61	76:XB:84:VAL:HA	1.81	0.45
26:Z:39:ASP:OD2	26:Z:40:HIS:N	2.50	0.45
1:A:1709:C:H2'	1:A:1710:U:H5'	1.99	0.45
1:A:594:A:H4'	1:A:595:G:H5'	1.99	0.45
1:A:755:A:H2'	1:A:756:A:H8	1.82	0.45
53:AB:175:VAL:HG13	53:AB:182:LEU:CB	2.46	0.45
53:AB:21:LEU:HD11	53:AB:77:PHE:CE2	2.52	0.45
2:B:1275:C:H2'	2:B:1276:U:C5'	2.42	0.45
2:B:1413:G:OP1	36:JA:125:ARG:HA	2.16	0.45
2:B:1524:A:H4'	2:B:1608:C:OP1	2.17	0.45
2:B:2298:U:O2'	2:B:2299:A:H5'	2.17	0.45
2:B:268:A:H5"	19:S:47:LYS:HZ3	1.79	0.45
2:B:660:A:C5'	8:H:100:PHE:CD1	2.97	0.45
2:B:720:A:H4'	2:B:721:G:H5'	1.99	0.45
2:B:989:A:C2	25:Y:101:CYS:HB2	2.52	0.45
54:BB:73:ASP:CB	54:BB:164:LEU:HD22	2.43	0.45
54:BB:192:ILE:HD13	54:BB:243:GLY:CA	2.46	0.45
80:BC:22:GLU:HG3	80:BC:23:LYS:H	1.82	0.45
3:C:132:G:H2'	3:C:133:G:O4'	2.17	0.45
3:C:91:C:O3'	30:DA:23:PRO:HB2	2.17	0.45
29:CA:36:LYS:H	29:CA:36:LYS:HD2	1.82	0.45
56:DB:153:VAL:O	56:DB:156:PHE:HD1	2.00	0.45
82:DC:116:THR:HG21	82:DC:483:PHE:H	1.82	0.45
82:DC:164:LEU:HA	82:DC:168:GLN:HA	1.99	0.45
82:DC:502:PRO:HA	82:DC:505:VAL:HG23	1.99	0.45
82:DC:731:VAL:HG22	82:DC:733:ILE:CD1	2.47	0.45
83:EC:6782:C:N4	83:EC:6815:U:H1'	2.32	0.45
6:F:109:GLU:HA	6:F:136:ILE:O	2.17	0.45
6:F:29:LEU:HD12	6:F:124:GLY:H	1.82	0.45
58:FB:25:ARG:O	58:FB:28:GLU:HG2	2.17	0.45
58:FB:3:ILE:HD12	58:FB:3:ILE:H	1.82	0.45
58:FB:43:ILE:HG23	58:FB:56:ARG:C	2.38	0.45
7:G:136:LYS:HE3	7:G:144:ILE:N	2.32	0.45
7:G:232:ARG:NE	7:G:268:GLY:H	2.14	0.45
8:H:181:VAL:HG11	8:H:224:GLY:CA	2.44	0.45
8:H:195:ARG:CB	8:H:197:ARG:HH12	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:150:LEU:HD22	15:O:143:ARG:HG2	1.99	0.45
10:J:5:LYS:O	10:J:6:ALA:HB3	2.16	0.45
10:J:65:ILE:N	10:J:65:ILE:CD1	2.80	0.45
36:JA:105:ARG:NH2	36:JA:124:GLY:HA3	2.15	0.45
37:KA:49:ILE:HD12	37:KA:70:LYS:CA	2.46	0.45
12:L:24:ASN:HB3	12:L:25:PRO:CD	2.47	0.45
38:LA:20:ILE:H	38:LA:20:ILE:CD1	2.07	0.45
38:LA:80:ARG:HD3	38:LA:84:CYS:SG	2.56	0.45
14:N:51:HIS:CE1	14:N:134:ILE:HD13	2.51	0.45
66:NB:30:LYS:NZ	66:NB:33:GLY:O	2.49	0.45
42:PA:8:ILE:CG2	42:PA:65:LEU:HD21	2.46	0.45
68:PB:47:CYS:HB3	68:PB:54:LEU:HD12	1.99	0.45
17:Q:108:ILE:H	17:Q:108:ILE:HG12	1.65	0.45
17:Q:49:ARG:HD3	39:MA:116:TYR:CE2	2.52	0.45
18:R:88:ALA:HB1	18:R:93:LYS:NZ	2.31	0.45
44:RA:93:LYS:HB3	44:RA:103:LEU:O	2.17	0.45
70:RB:30:LYS:HD2	70:RB:33:GLN:HG2	1.98	0.45
2:B:268:A:C5	19:S:12:ARG:HG3	2.52	0.45
17:Q:24:VAL:HG13	19:S:203:ARG:HH21	1.82	0.45
71:SB:71:ARG:HA	71:SB:83:TRP:CE3	2.52	0.45
20:T:74:ARG:CB	20:T:147:TRP:HB2	2.47	0.45
46:TA:61:LYS:HG2	46:TA:62:ALA:H	1.82	0.45
72:TB:77:PRO:HD2	72:TB:79:PHE:CZ	2.52	0.45
22:V:111:ARG:NE	22:V:121:CYS:SG	2.90	0.45
49:WA:38:ARG:HG2	49:WA:67:ILE:HG21	1.99	0.45
24:X:59:VAL:HG13	25:Y:141:VAL:HG21	1.98	0.45
50:XA:126:PRO:HB2	50:XA:152:PRO:HD2	1.98	0.45
9:I:69:ILE:CG2	25:Y:31:LEU:HB2	2.40	0.45
25:Y:78:LYS:HD3	25:Y:87:LYS:NZ	2.32	0.45
51:YA:216:LYS:HB2	51:YA:216:LYS:HE3	1.71	0.45
1:A:1459:C:H2'	68:PB:138:THR:OG1	2.17	0.44
1:A:1540:G:H2'	1:A:1541:G:H5'	1.99	0.44
1:A:1725:U:H2'	1:A:1726:G:C8	2.51	0.44
1:A:1767:G:H5'	1:A:1768:G:H21	1.82	0.44
1:A:1767:G:OP1	1:A:1767:G:H3'	2.17	0.44
1:A:289:U:H2'	1:A:290:G:C8	2.51	0.44
1:A:102:U:O4	1:A:360:A:H2'	2.17	0.44
53:AB:158:ILE:CD1	53:AB:158:ILE:H	2.30	0.44
2:B:1189:C:C4'	2:B:1190:A:C8	3.01	0.44
2:B:1443:G:H2'	2:B:1444:G:C8	2.52	0.44
2:B:1626:U:H2'	2:B:1627:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1643:A:H4'	2:B:1822:C:H5'	1.98	0.44
2:B:1639:C:H4'	2:B:1738:C:C5'	2.46	0.44
2:B:1799:A:H8	2:B:1799:A:O5'	1.99	0.44
2:B:201:A:H4'	2:B:220:G:C4	2.52	0.44
2:B:2423:U:H2'	2:B:2424:A:H8	1.78	0.44
2:B:2436:U:O2	2:B:2511:A:H2	2.00	0.44
2:B:2843:U:H5"	2:B:2844:C:H5	1.82	0.44
2:B:3273:A:H2'	2:B:3274:A:C8	2.53	0.44
2:B:517:G:C2'	2:B:518:G:H5'	2.46	0.44
2:B:637:C:H4'	2:B:638:C:OP1	2.18	0.44
2:B:843:A:H2'	2:B:844:G:C8	2.52	0.44
28:BA:25:ASP:OD1	28:BA:27:LYS:HB2	2.17	0.44
3:C:130:C:O2'	3:C:131:A:H5'	2.17	0.44
55:CB:142:PRO:O	55:CB:167:ARG:HG3	2.17	0.44
55:CB:63:GLN:HB2	55:CB:89:ILE:CG1	2.29	0.44
4:D:49:G:H4'	4:D:50:U:O4'	2.17	0.44
30:DA:35:LEU:HD23	30:DA:36:SER:N	2.32	0.44
56:DB:50:PHE:CE1	56:DB:113:ILE:HG12	2.52	0.44
82:DC:118:ALA:HA	82:DC:121:VAL:HG22	1.98	0.44
82:DC:35:LEU:HD21	82:DC:334:LEU:CD2	2.48	0.44
82:DC:424:ASP:O	82:DC:425:ASP:HB2	2.16	0.44
82:DC:613:LYS:HE2	82:DC:613:LYS:HB3	1.78	0.44
5:E:67:ILE:HG12	5:E:77:ALA:HB2	1.99	0.44
31:EA:21:LYS:HB3	31:EA:46:ILE:CD1	2.46	0.44
83:EC:6906:G:O2'	83:EC:6907:G:H5'	2.16	0.44
6:F:104:LEU:HD23	6:F:146:THR:CG2	2.47	0.44
6:F:47:GLN:CG	6:F:48:ILE:H	2.30	0.44
32:FA:73:LEU:CD2	32:FA:81:LEU:HD11	2.47	0.44
58:FB:197:THR:HA	58:FB:200:LYS:CD	2.40	0.44
7:G:122:TRP:O	7:G:127:LYS:NZ	2.50	0.44
7:G:43:LEU:HD11	7:G:194:TRP:CH2	2.48	0.44
59:GB:109:LEU:CG	59:GB:146:PHE:HB3	2.47	0.44
8:H:188:ARG:HB2	8:H:197:ARG:O	2.17	0.44
9:I:69:ILE:HD12	9:I:70:THR:N	2.31	0.44
36:JA:35:GLN:HE21	36:JA:35:GLN:HA	1.81	0.44
11:K:123:THR:O	11:K:126:LEU:HG	2.16	0.44
63:KB:66:ILE:HG23	63:KB:67:THR:N	2.32	0.44
64:LB:84:ARG:HG3	64:LB:119:THR:HA	2.00	0.44
13:M:97:PHE:HB3	13:M:118:LEU:HA	1.99	0.44
13:M:117:PHE:H	13:M:120:ASP:HB3	1.83	0.44
68:PB:82:PRO:HG2	68:PB:85:PHE:CD2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:684:G:C5'	17:Q:35:ARG:HH12	2.25	0.44
17:Q:99:HIS:CE1	17:Q:100:ARG:HB3	2.53	0.44
18:R:20:VAL:HG22	18:R:66:THR:CB	2.46	0.44
44:RA:122:ARG:HG3	44:RA:122:ARG:HH11	1.80	0.44
19:S:168:GLY:O	19:S:172:ARG:HD3	2.17	0.44
19:S:73:ARG:O	19:S:75:VAL:N	2.51	0.44
2:B:3270:U:O4	21:U:178:ALA:HB2	2.16	0.44
1:A:1102:G:OP2	73:UB:7:ARG:NH1	2.51	0.44
48:VA:7:LYS:HA	48:VA:10:GLU:HG2	1.98	0.44
23:W:23:TRP:HB3	23:W:51:VAL:CG2	2.31	0.44
49:WA:59:ARG:HD3	49:WA:96:THR:O	2.18	0.44
24:X:138:GLN:C	24:X:140:VAL:N	2.68	0.44
50:XA:71:GLU:CD	52:ZA:249:ALA:HB3	2.37	0.44
71:SB:83:TRP:HZ2	77:YB:4:VAL:O	2.01	0.44
1:A:1087:A:H2	1:A:1142:A:H4'	1.77	0.44
1:A:1113:A:N6	1:A:1131:A:H5"	2.32	0.44
1:A:1184:A:C6	1:A:1455:G:H4'	2.52	0.44
1:A:1615:C:H5"	1:A:1616:G:O4'	2.18	0.44
1:A:1675:C:H2'	1:A:1676:U:O4'	2.17	0.44
1:A:412:A:H2'	1:A:413:U:C6	2.52	0.44
27:AA:113:ALA:O	27:AA:114:ILE:HG13	2.17	0.44
79:AC:46:LYS:HA	79:AC:49:ASP:HB2	1.99	0.44
2:B:1078:U:H1'	2:B:1082:U:C4	2.52	0.44
2:B:1155:C:H2'	2:B:1156:C:C5	2.52	0.44
2:B:1231:A:H2'	2:B:1277:C:H41	1.82	0.44
2:B:1256:G:O2'	2:B:1257:C:H5'	2.16	0.44
2:B:1261:G:H4'	2:B:1278:A:N1	2.32	0.44
2:B:1279:C:H6	2:B:1279:C:O5'	1.99	0.44
2:B:1431:G:OP2	32:FA:12:ARG:NH1	2.47	0.44
2:B:1712:G:O2'	2:B:1713:G:H5'	2.17	0.44
2:B:1811:G:H2'	2:B:1812:G:C4'	2.46	0.44
2:B:2538:U:O2'	2:B:2539:C:H5'	2.17	0.44
2:B:2541:U:C1'	2:B:2542:U:H4'	2.47	0.44
2:B:2919:A:H61	2:B:2927:C:H42	1.64	0.44
2:B:3262:U:H2'	2:B:3263:G:O4'	2.17	0.44
2:B:3343:G:O2'	2:B:3362:A:N6	2.45	0.44
2:B:618:C:H2'	2:B:619:A:O4'	2.16	0.44
2:B:735:A:O2'	2:B:736:A:H5'	2.17	0.44
2:B:818:C:H5"	41:OA:10:LYS:CB	2.47	0.44
2:B:824:C:H2'	2:B:825:U:O4'	2.16	0.44
28:BA:17:ARG:CG	28:BA:18:GLY:H	2.24	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:70:G:OP2	3:C:70:G:H8	1.99	0.44
29:CA:37:THR:OG1	29:CA:38:LEU:N	2.49	0.44
55:CB:213:LYS:CA	55:CB:213:LYS:HE2	2.45	0.44
4:D:13:A:OP2	4:D:67:G:N2	2.51	0.44
82:DC:166:GLU:O	82:DC:167:LEU:HD12	2.16	0.44
82:DC:274:ASN:HA	82:DC:278:LEU:HG	1.98	0.44
82:DC:374:PRO:CB	82:DC:404:THR:HG23	2.45	0.44
5:E:102:LYS:HD3	5:E:103:LEU:HD23	1.99	0.44
31:EA:54:THR:HG23	31:EA:56:LYS:H	1.81	0.44
57:EB:143:LEU:CG	57:EB:147:ASN:HB3	2.47	0.44
58:FB:47:ARG:HH21	58:FB:47:ARG:HB3	1.82	0.44
58:FB:84:HIS:ND1	58:FB:86:SER:HB2	2.29	0.44
7:G:108:GLU:HG3	7:G:137:TYR:CD2	2.52	0.44
7:G:126:LYS:CB	7:G:128:LYS:HG2	2.46	0.44
2:B:1388:U:O4	8:H:186:LYS:HD2	2.17	0.44
8:H:304:GLN:O	8:H:306:THR:N	2.49	0.44
9:I:160:PHE:HE2	9:I:179:ARG:HD2	1.82	0.44
9:I:235:SER:HA	9:I:238:ASP:OD2	2.17	0.44
9:I:27:LYS:HE2	15:O:143:ARG:HD2	1.99	0.44
11:K:54:GLU:HA	11:K:57:THR:OG1	2.17	0.44
12:L:134:TYR:HB2	12:L:195:SER:OG	2.17	0.44
2:B:2549:G:H21	12:L:35:GLY:HA3	1.76	0.44
38:LA:74:ARG:CG	38:LA:74:ARG:HH11	2.29	0.44
64:LB:50:ALA:O	64:LB:51:ASP:HB2	2.16	0.44
64:LB:70:LYS:O	64:LB:74:VAL:HG23	2.17	0.44
13:M:14:GLU:HA	13:M:14:GLU:OE1	2.17	0.44
39:MA:51:ILE:O	39:MA:54:VAL:HB	2.17	0.44
65:MB:43:ARG:HG2	65:MB:43:ARG:NH1	2.32	0.44
14:N:52:LEU:HD21	14:N:163:GLN:HB3	1.98	0.44
66:NB:58:ASP:OD2	66:NB:59:LYS:N	2.51	0.44
55:CB:25:LEU:CD1	66:NB:61:SER:HA	2.47	0.44
2:B:361:A:O3'	41:OA:45:ARG:NH2	2.50	0.44
43:QA:27:ILE:HG23	43:QA:30:ARG:NH2	2.32	0.44
69:QB:105:LEU:HB3	69:QB:122:ARG:HD3	1.99	0.44
18:R:90:VAL:HA	18:R:93:LYS:CB	2.47	0.44
2:B:302:U:H5"	19:S:179:LYS:HE2	1.99	0.44
19:S:181:ASN:C	19:S:183:THR:N	2.70	0.44
20:T:36:VAL:HB	20:T:108:ILE:HG12	1.99	0.44
20:T:20:ALA:HA	20:T:84:LEU:HD21	2.00	0.44
46:TA:93:LEU:N	46:TA:93:LEU:HD23	2.28	0.44
73:UB:40:SER:O	73:UB:41:SER:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:92:CYS:C	73:UB:96:VAL:HG23	2.38	0.44
48:VA:144:LYS:HD3	82:DC:203:TYR:CZ	2.52	0.44
48:VA:81:LYS:O	48:VA:84:VAL:HG21	2.18	0.44
2:B:1601:U:OP1	23:W:38:ARG:HB3	2.17	0.44
49:WA:289:ALA:HA	49:WA:305:TYR:HA	1.99	0.44
49:WA:87:LYS:HG2	49:WA:108:SER:C	2.38	0.44
76:XB:18:VAL:O	76:XB:19:LYS:HB2	2.16	0.44
76:XB:42:ARG:HB2	76:XB:42:ARG:NH1	2.31	0.44
1:A:1794:A:C2	76:XB:76:SER:HA	2.53	0.44
1:A:1796:C:N3	76:XB:92:ARG:HB3	2.31	0.44
25:Y:104:GLU:HA	25:Y:107:GLU:OE2	2.16	0.44
51:YA:218:LEU:H	51:YA:218:LEU:HD13	1.80	0.44
51:YA:218:LEU:HD22	51:YA:219:LYS:N	2.32	0.44
52:ZA:140:ARG:HH12	52:ZA:226:THR:HG21	1.83	0.44
1:A:1015:U:H5"	1:A:1016:C:OP2	2.17	0.44
1:A:1180:C:H2'	1:A:1181:U:H6	1.82	0.44
1:A:1205:C:H2'	1:A:1206:U:O4'	2.17	0.44
1:A:144:U:O2'	1:A:145:A:H8	1.99	0.44
1:A:1604:U:OP1	66:NB:129:PHE:C	2.56	0.44
1:A:1715:G:H3'	1:A:1716:C:H5'	1.99	0.44
1:A:589:C:H2'	1:A:590:C:C6	2.53	0.44
1:A:592:A:O2'	1:A:593:U:H5'	2.17	0.44
1:A:637:C:H2'	1:A:638:U:H5'	1.98	0.44
53:AB:109:LEU:HD11	53:AB:115:ILE:HD12	1.99	0.44
53:AB:52:ALA:O	53:AB:91:VAL:HG12	2.18	0.44
2:B:1268:G:H21	2:B:1273:A:H62	1.65	0.44
2:B:127:G:O2'	2:B:128:G:H5'	2.16	0.44
2:B:338:A:O4'	2:B:1381:A:H4'	2.17	0.44
2:B:1409:G:O2'	2:B:1410:U:H5'	2.17	0.44
2:B:1597:C:H2'	2:B:1598:G:C8	2.51	0.44
2:B:1930:A:H8	2:B:1930:A:OP1	2.01	0.44
2:B:207:U:H2'	2:B:208:C:H6	1.80	0.44
2:B:215:G:H2'	2:B:216:G:C8	2.53	0.44
2:B:2334:U:H2'	2:B:2335:G:H5"	1.99	0.44
2:B:2407:C:O5'	2:B:2407:C:H6	2.01	0.44
2:B:2422:C:H2'	2:B:2423:U:C6	2.52	0.44
2:B:2765:C:O2'	2:B:2766:U:H5'	2.17	0.44
2:B:2923:U:H2'	2:B:2924:U:C5	2.52	0.44
2:B:3148:U:O2'	2:B:3149:G:H5'	2.17	0.44
2:B:3168:A:H2'	2:B:3169:U:O4'	2.16	0.44
2:B:540:U:O2'	2:B:541:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:546:C:H5'	2:B:547:G:O4'	2.17	0.44
2:B:898:U:H2'	2:B:899:U:O4'	2.16	0.44
54:BB:44:LEU:O	54:BB:48:LEU:HD13	2.17	0.44
3:C:45:C:H2'	3:C:46:G:C8	2.52	0.44
29:CA:133:LEU:O	29:CA:133:LEU:HD13	2.17	0.44
82:DC:35:LEU:CD1	82:DC:156:VAL:HG11	2.38	0.44
82:DC:274:ASN:HA	82:DC:278:LEU:CG	2.47	0.44
82:DC:412:ARG:HB2	82:DC:412:ARG:CZ	2.47	0.44
82:DC:598:SER:HA	82:DC:601:ILE:HD12	1.99	0.44
82:DC:697:ALA:HA	82:DC:700:ARG:HE	1.81	0.44
5:E:101:LYS:HE3	5:E:105:LYS:NZ	2.32	0.44
31:EA:70:PRO:HD2	31:EA:115:LYS:HE2	2.00	0.44
83:EC:6774:U:H3'	83:EC:6776:A:OP1	2.16	0.44
83:EC:6892:U:H2'	83:EC:6893:C:C5	2.52	0.44
6:F:179:LEU:CD2	6:F:185:ALA:HB2	2.47	0.44
2:B:2241:U:O2'	6:F:243:THR:HG22	2.17	0.44
7:G:11:HIS:O	7:G:233:TRP:HE3	2.01	0.44
59:GB:109:LEU:HD13	59:GB:113:VAL:HG21	2.00	0.44
59:GB:49:LEU:O	59:GB:53:ARG:HG3	2.18	0.44
8:H:244:LEU:HB3	8:H:245:GLY:H	1.65	0.44
8:H:30:ILE:HD11	8:H:127:ALA:O	2.16	0.44
2:B:1436:U:H5	8:H:72:ALA:HA	1.80	0.44
2:B:364:G:OP1	8:H:77:VAL:HG11	2.16	0.44
61:IB:34:TRP:CH2	61:IB:36:LYS:HB2	2.52	0.44
61:IB:37:ASN:C	61:IB:39:GLY:H	2.21	0.44
61:IB:3:THR:HG23	61:IB:81:HIS:CE1	2.53	0.44
64:LB:135:ARG:HG2	64:LB:135:ARG:NH1	2.32	0.44
64:LB:81:VAL:HG22	64:LB:115:ILE:HG22	1.99	0.44
19:S:6:TYR:CD2	40:NA:40:VAL:HG13	2.52	0.44
19:S:15:GLN:CG	40:NA:52:PRO:HD2	2.40	0.44
16:P:114:ARG:HH21	16:P:121:PHE:HB3	1.80	0.44
17:Q:46:ILE:HG22	17:Q:49:ARG:CB	2.48	0.44
17:Q:64:LYS:HG3	32:FA:69:TRP:CD1	2.52	0.44
53:AB:39:VAL:O	70:RB:110:PRO:HB2	2.17	0.44
52:ZA:222:TYR:OH	71:SB:10:GLU:OE1	2.30	0.44
20:T:35:VAL:O	20:T:105:PHE:HB2	2.17	0.44
2:B:1193:A:P	20:T:49:ARG:HH22	2.41	0.44
21:U:21:TYR:HD1	21:U:123:PRO:HD2	1.83	0.44
21:U:169:THR:OG1	21:U:171:ARG:HG2	2.18	0.44
21:U:65:SER:O	21:U:66:SER:HB2	2.17	0.44
47:UA:55:TRP:CZ2	47:UA:70:THR:O	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:147:HIS:HE1	49:WA:172:ALA:HA	1.82	0.44
49:WA:249:ARG:HB3	49:WA:251:TRP:CD1	2.52	0.44
24:X:80:ARG:HG2	24:X:80:ARG:HH21	1.82	0.44
50:XA:146:LEU:HA	50:XA:160:ILE:HB	1.98	0.44
77:YB:53:ALA:N	77:YB:66:PRO:HG3	2.32	0.44
1:A:1058:U:C6	1:A:1061:A:N1	2.86	0.44
1:A:1275:A:H4'	53:AB:145:ALA:HB1	2.00	0.44
1:A:138:A:N6	1:A:266:A:N6	2.66	0.44
1:A:1615:C:C5	55:CB:81:ARG:HA	2.52	0.44
1:A:1618:C:H4'	1:A:1619:C:O5'	2.16	0.44
1:A:1684:U:H2'	1:A:1685:G:H8	1.81	0.44
1:A:1791:A:H4'	1:A:1792:G:H21	1.82	0.44
1:A:325:G:O2'	1:A:326:G:H5'	2.17	0.44
1:A:400:A:H8	58:FB:24:LYS:O	1.99	0.44
1:A:515:A:H2'	1:A:516:G:O4'	2.18	0.44
1:A:569:C:H2'	1:A:570:A:C5'	2.47	0.44
1:A:684:A:H3'	1:A:685:A:C5'	2.30	0.44
1:A:754:A:H61	1:A:793:A:C3'	2.30	0.44
1:A:803:A:H4'	1:A:804:A:C8	2.52	0.44
1:A:965:U:H1'	63:KB:128:TYR:CE2	2.53	0.44
53:AB:113:LEU:HD12	53:AB:114:ALA:O	2.18	0.44
53:AB:69:LEU:HB3	53:AB:86:LEU:HD21	1.98	0.44
2:B:1005:G:H3'	2:B:1006:A:H5"	1.99	0.44
2:B:1242:G:N3	82:DC:754:VAL:HB	2.32	0.44
2:B:1256:G:N3	16:P:123:ARG:CG	2.79	0.44
2:B:1270:A:O4'	82:DC:741:GLY:HA2	2.17	0.44
2:B:1369:A:H5'	32:FA:21:ARG:NH2	2.32	0.44
2:B:1529:A:OP2	2:B:1592:G:N2	2.49	0.44
2:B:1714:A:N6	2:B:1730:G:C1'	2.80	0.44
2:B:1822:C:H2'	2:B:1823:A:H8	1.83	0.44
2:B:1831:U:P	29:CA:92:LYS:HD2	2.58	0.44
2:B:2094:C:O2'	2:B:2095:G:C8	2.62	0.44
2:B:2373:A:H5'	2:B:2373:A:C8	2.50	0.44
2:B:2539:C:H4'	2:B:2540:A:O4'	2.18	0.44
2:B:2675:C:N4	15:O:22:SER:HB2	2.33	0.44
2:B:2999:U:H2'	2:B:3000:A:H8	1.82	0.44
2:B:3026:G:N2	2:B:3029:A:OP2	2.48	0.44
2:B:634:C:H4'	36:JA:47:ARG:HH11	1.82	0.44
2:B:649:A:H2'	2:B:650:C:H6	1.81	0.44
2:B:877:C:O2'	2:B:882:A:N6	2.51	0.44
54:BB:163:ASP:HB2	54:BB:168:LYS:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:BC:46:ASN:O	80:BC:47:VAL:HG12	2.16	0.44
29:CA:121:LYS:HG2	29:CA:122:ALA:H	1.82	0.44
29:CA:67:ILE:HG13	29:CA:85:GLN:HB2	1.99	0.44
4:D:1:G:H1'	9:I:266:ALA:HA	1.99	0.44
4:D:31:U:H2'	4:D:32:U:C6	2.52	0.44
56:DB:172:ALA:HB1	56:DB:173:PRO:HD2	1.99	0.44
56:DB:182:GLN:O	56:DB:186:ARG:HG2	2.16	0.44
56:DB:64:LYS:O	56:DB:100:ALA:HB2	2.18	0.44
82:DC:204:PRO:HB3	82:DC:209:VAL:HG21	2.00	0.44
82:DC:244:LEU:CD1	82:DC:277:ILE:HD11	2.47	0.44
82:DC:365:ASN:O	82:DC:379:MET:HE2	2.17	0.44
82:DC:405:VAL:HG12	82:DC:448:CYS:N	2.32	0.44
82:DC:638:PRO:HG3	82:DC:680:GLU:HG3	2.00	0.44
82:DC:659:ILE:HG22	82:DC:705:ILE:CD1	2.47	0.44
57:EB:70:PHE:HB3	57:EB:92:PHE:CE2	2.49	0.44
1:A:257:A:O2'	58:FB:64:ASN:ND2	2.50	0.44
7:G:57:VAL:HG21	28:BA:15:PRO:CG	2.47	0.44
59:GB:105:LEU:CD1	59:GB:108:ARG:HD3	2.44	0.44
59:GB:112:GLN:O	59:GB:116:LEU:HD13	2.18	0.44
59:GB:23:ARG:O	59:GB:27:GLU:HG3	2.18	0.44
2:B:681:U:C2	8:H:115:HIS:CE1	3.05	0.44
8:H:178:LEU:HD21	8:H:225:VAL:CG2	2.42	0.44
9:I:22:ARG:HG2	9:I:22:ARG:NH2	2.32	0.44
35:IA:8:VAL:HG12	35:IA:9:THR:N	2.32	0.44
10:J:81:ALA:O	10:J:84:VAL:HG12	2.17	0.44
11:K:222:HIS:CE1	11:K:224:ILE:HG13	2.52	0.44
11:K:208:SER:O	11:K:243:MET:HB3	2.18	0.44
11:K:90:LYS:HA	11:K:220:PHE:CE1	2.43	0.44
37:KA:32:ILE:HB	37:KA:35:VAL:HG21	2.00	0.44
64:LB:64:ALA:O	64:LB:68:ALA:HB2	2.16	0.44
13:M:8:GLN:NE2	13:M:69:ARG:HG2	2.31	0.44
65:MB:98:ASN:HD22	65:MB:103:ASN:HD22	1.65	0.44
14:N:49:CYS:HB3	14:N:168:SER:HB3	2.00	0.44
66:NB:45:ARG:HG2	66:NB:45:ARG:HH11	1.83	0.44
66:NB:55:VAL:HG22	66:NB:59:LYS:CE	2.46	0.44
15:O:174:LYS:N	15:O:174:LYS:HD3	2.31	0.44
17:Q:115:ARG:HH21	17:Q:145:PHE:C	2.20	0.44
43:QA:16:ALA:HB1	43:QA:42:ARG:HD3	1.99	0.44
18:R:45:LEU:HD21	18:R:55:ARG:HD2	1.98	0.44
50:XA:62:ARG:HB3	71:SB:37:ALA:HB3	1.99	0.44
1:A:1100:G:C8	72:TB:75:ILE:HD11	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:42:THR:HG23	21:U:43:LYS:N	2.33	0.44
21:U:64:ASN:HB2	21:U:80:LYS:CE	2.47	0.44
47:UA:79:VAL:O	47:UA:83:ILE:HG12	2.17	0.44
22:V:156:GLY:HA3	22:V:157:PRO:HD2	1.72	0.44
22:V:58:ASN:O	22:V:60:PRO:HD3	2.16	0.44
48:VA:45:LEU:CD1	48:VA:49:ALA:HB3	2.48	0.44
74:VB:128:LYS:O	74:VB:128:LYS:HD3	2.17	0.44
49:WA:309:VAL:HG11	49:WA:311:ARG:NH1	2.32	0.44
75:WB:90:LYS:HB2	75:WB:102:THR:OG1	2.17	0.44
50:XA:117:GLU:OE2	52:ZA:39:THR:HA	2.17	0.44
76:XB:83:ILE:O	76:XB:84:VAL:HB	2.16	0.44
51:YA:220:GLN:HG2	51:YA:220:GLN:H	1.56	0.44
51:YA:228:LEU:HG	51:YA:232:HIS:CE1	2.52	0.44
71:SB:85:TYR:CD1	77:YB:6:ASP:HB2	2.52	0.44
1:A:1171:A:H4'	1:A:1570:A:O2'	2.16	0.44
1:A:142:G:OP2	56:DB:177:ARG:HG2	2.17	0.44
1:A:1439:C:H2'	1:A:1440:C:H6	1.83	0.44
1:A:1656:U:H6	1:A:1656:U:O5'	2.01	0.44
1:A:185:U:H2'	1:A:186:C:C5'	2.47	0.44
1:A:230:C:H2'	1:A:231:U:H5"	1.99	0.44
1:A:436:A:H2'	1:A:437:A:C8	2.52	0.44
1:A:872:G:H1	1:A:955:A:H61	1.64	0.44
27:AA:74:MET:HA	27:AA:75:PRO:HD3	1.78	0.44
1:A:1275:A:O2'	53:AB:145:ALA:HA	2.18	0.44
79:AC:19:ARG:CZ	79:AC:32:ARG:HD2	2.48	0.44
2:B:111:C:C2'	2:B:112:U:H5'	2.48	0.44
2:B:1335:C:H2'	2:B:1336:U:C6	2.52	0.44
2:B:136:G:H5'	39:MA:95:PHE:CD2	2.53	0.44
2:B:1523:U:H5'	29:CA:113:LEU:HA	1.98	0.44
2:B:1591:G:H2'	2:B:1592:G:H5'	1.98	0.44
2:B:1636:U:O2	2:B:1710:C:H4'	2.18	0.44
2:B:2155:G:H2'	2:B:2156:C:C6	2.52	0.44
2:B:2249:G:H2'	2:B:2250:G:C8	2.53	0.44
2:B:2341:A:H2'	2:B:2342:U:H6	1.80	0.44
2:B:2376:G:H8	2:B:2376:G:O5'	2.00	0.44
2:B:2675:C:H2'	2:B:2676:A:N7	2.33	0.44
2:B:2697:A:H2'	2:B:2698:G:C8	2.52	0.44
2:B:2826:U:O2'	2:B:2827:U:H5'	2.17	0.44
2:B:2916:U:O2'	2:B:2917:G:H5'	2.17	0.44
2:B:37:U:H4'	2:B:935:U:H5'	2.00	0.44
2:B:38:U:H2'	2:B:39:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:675:C:H42	22:V:56:LYS:NZ	2.15	0.44
2:B:882:A:H2'	2:B:883:A:H5"	1.99	0.44
2:B:900:G:H1'	2:B:1589:A:H61	1.81	0.44
28:BA:27:LYS:HB3	28:BA:29:PHE:CZ	2.52	0.44
28:BA:49:ILE:O	28:BA:51:TRP:N	2.51	0.44
1:A:253:A:H5"	54:BB:134:LYS:HA	1.98	0.44
54:BB:218:PHE:N	54:BB:218:PHE:HD2	2.15	0.44
4:D:5:G:H2'	4:D:6:C:H6	1.82	0.44
4:D:88:G:H5"	24:X:117:ARG:NH2	2.33	0.44
56:DB:160:ARG:O	56:DB:170:THR:HA	2.17	0.44
82:DC:463:LEU:CG	82:DC:464:LEU:H	2.28	0.44
82:DC:489:VAL:HG12	82:DC:538:LEU:HD23	1.99	0.44
82:DC:555:LYS:HD3	82:DC:556:ILE:N	2.32	0.44
82:DC:814:LYS:HA	82:DC:817:GLU:OE1	2.18	0.44
5:E:24:LYS:CG	5:E:25:LYS:H	2.22	0.44
57:EB:110:GLN:O	57:EB:112:ARG:N	2.46	0.44
57:EB:74:GLN:HG2	57:EB:131:PHE:CD1	2.52	0.44
58:FB:69:SER:HB3	58:FB:185:GLU:OE1	2.17	0.44
7:G:105:VAL:HG23	7:G:151:ILE:HD11	1.99	0.44
59:GB:109:LEU:HD13	59:GB:113:VAL:CG2	2.48	0.44
59:GB:66:ASP:OD1	59:GB:67:PRO:HD2	2.17	0.44
59:GB:66:ASP:O	59:GB:70:LEU:HG	2.17	0.44
59:GB:66:ASP:CG	59:GB:67:PRO:HD2	2.37	0.44
34:HA:58:TYR:O	34:HA:61:MET:HB3	2.17	0.44
35:IA:56:ASN:HA	35:IA:59:ILE:CD1	2.48	0.44
63:KB:89:TYR:CD1	63:KB:89:TYR:C	2.90	0.44
12:L:160:ILE:HD11	19:S:22:LEU:HG	2.00	0.44
6:F:38:HIS:O	12:L:36:ILE:HD13	2.18	0.44
64:LB:114:ARG:HE	64:LB:114:ARG:HA	1.83	0.44
13:M:45:PHE:CG	13:M:55:VAL:HG12	2.51	0.44
14:N:51:HIS:CD2	14:N:168:SER:HB2	2.52	0.44
15:O:137:ARG:C	15:O:139:THR:N	2.70	0.44
67:OB:5:ARG:HD3	67:OB:5:ARG:N	2.32	0.44
42:PA:68:SER:O	42:PA:70:PRO:HD3	2.17	0.44
2:B:57:A:H4'	19:S:157:LYS:HB2	1.98	0.44
2:B:57:A:OP1	19:S:157:LYS:HB3	2.17	0.44
12:L:72:PRO:HD3	19:S:21:PHE:CG	2.52	0.44
71:SB:87:ARG:NH2	77:YB:2:VAL:HG12	2.32	0.44
46:TA:36:PHE:O	46:TA:37:ALA:C	2.55	0.44
72:TB:95:PRO:HG2	72:TB:130:TYR:HB2	1.98	0.44
6:F:57:PRO:HG3	47:UA:53:GLY:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:44:PHE:O	22:V:48:VAL:HG23	2.17	0.44
48:VA:24:SER:CB	48:VA:89:THR:HG23	2.47	0.44
48:VA:33:VAL:CG2	48:VA:34:SER:H	2.07	0.44
48:VA:45:LEU:HD11	48:VA:99:VAL:CB	2.47	0.44
49:WA:193:ILE:HG22	49:WA:194:GLY:H	1.82	0.44
50:XA:55:GLU:HB3	71:SB:79:LEU:CD2	2.48	0.44
77:YB:47:PHE:CG	77:YB:48:SER:N	2.86	0.44
78:ZB:27:GLN:HE21	78:ZB:64:ARG:C	2.19	0.44
1:A:1087:A:C5'	1:A:1299:G:O6	2.49	0.44
1:A:1373:C:H2'	1:A:1374:C:H6	1.77	0.44
1:A:1415:U:H2'	1:A:1416:G:H8	1.78	0.44
1:A:1462:G:C8	68:PB:143:ARG:NH2	2.85	0.44
1:A:1760:G:H1'	1:A:1781:A:C2	2.49	0.44
1:A:519:C:H3'	1:A:520:A:C8	2.49	0.44
1:A:573:C:C4	1:A:574:G:H1'	2.52	0.44
1:A:993:A:H2'	1:A:994:G:O4'	2.17	0.44
27:AA:10:LYS:C	27:AA:10:LYS:HE2	2.38	0.44
2:B:1077:U:H2'	2:B:1078:U:H6	1.83	0.44
2:B:1079:A:O3'	9:I:140:ARG:HB3	2.17	0.44
2:B:1259:A:H2'	2:B:1260:A:C8	2.52	0.44
2:B:1335:C:H6	2:B:1335:C:O5'	2.00	0.44
2:B:1471:U:H1'	23:W:2:ALA:O	2.17	0.44
2:B:1546:A:H8	19:S:71:ARG:HD2	1.82	0.44
2:B:1613:A:H2'	2:B:1614:C:O4'	2.17	0.44
2:B:2383:C:H2'	2:B:2384:A:C8	2.53	0.44
2:B:2746:A:C2'	2:B:2747:A:H5'	2.47	0.44
2:B:3243:A:C2	20:T:108:ILE:N	2.86	0.44
2:B:354:U:H2'	2:B:355:A:C8	2.51	0.44
2:B:531:G:H2'	2:B:532:A:O4'	2.18	0.44
2:B:608:A:C5	10:J:22:ARG:HD3	2.53	0.44
2:B:615:U:H4'	2:B:3272:C:H41	1.83	0.44
2:B:639:G:OP1	36:JA:40:SER:HB2	2.16	0.44
2:B:659:G:H1'	8:H:93:MET:HB2	2.00	0.44
2:B:756:U:O2'	2:B:757:C:H5'	2.17	0.44
2:B:766:U:O2	2:B:766:U:C2'	2.66	0.44
2:B:802:C:H2'	2:B:803:C:C6	2.52	0.44
2:B:846:A:H2	2:B:847:A:N7	2.16	0.44
2:B:97:U:H2'	2:B:98:G:C8	2.53	0.44
54:BB:103:TYR:CZ	54:BB:189:LEU:HD11	2.53	0.44
54:BB:234:PRO:C	54:BB:236:ILE:N	2.69	0.44
54:BB:234:PRO:O	54:BB:236:ILE:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:48:LEU:HD23	54:BB:64:ILE:CD1	2.47	0.44
54:BB:52:LEU:O	54:BB:53:LYS:HB2	2.17	0.44
80:BC:42:ARG:HA	80:BC:46:ASN:HB2	1.99	0.44
55:CB:40:ILE:O	55:CB:42:LEU:HD23	2.17	0.44
4:D:71:G:H2'	4:D:72:A:C8	2.53	0.44
56:DB:52:ILE:HA	56:DB:111:LEU:HD23	1.99	0.44
82:DC:141:THR:HG22	82:DC:142:VAL:N	2.31	0.44
82:DC:24:VAL:HG13	82:DC:102:LEU:HD21	2.00	0.44
6:F:229:ALA:HB1	6:F:233:GLN:CG	2.48	0.44
32:FA:130:VAL:HG11	32:FA:145:VAL:HG11	1.99	0.44
58:FB:110:ARG:HB2	58:FB:160:PHE:CE1	2.53	0.44
58:FB:104:ILE:HG12	58:FB:165:LEU:O	2.18	0.44
58:FB:38:ILE:HG22	58:FB:39:GLY:N	2.33	0.44
2:B:1381:A:OP1	8:H:197:ARG:HD2	2.17	0.44
8:H:201:GLN:HE22	8:H:224:GLY:H	1.66	0.44
9:I:109:THR:CG2	9:I:171:LEU:HD21	2.48	0.44
9:I:19:PRO:HB2	9:I:23:ARG:HB3	1.98	0.44
10:J:36:PRO:HA	10:J:54:TYR:CD2	2.53	0.44
11:K:84:VAL:HA	11:K:139:PRO:HD2	1.99	0.44
12:L:149:LYS:HB2	12:L:200:LEU:O	2.17	0.44
12:L:90:THR:HG21	12:L:152:LEU:HD21	2.00	0.44
38:LA:104:VAL:HA	38:LA:107:GLU:CD	2.37	0.44
64:LB:79:VAL:CG1	64:LB:112:ILE:HD13	2.48	0.44
51:YA:66:VAL:HG13	64:LB:33:LEU:HD13	1.98	0.44
2:B:3126:C:H1'	13:M:156:GLN:NE2	2.33	0.44
13:M:20:ILE:HD13	13:M:45:PHE:CE2	2.46	0.44
39:MA:101:THR:C	39:MA:103:LYS:H	2.21	0.44
65:MB:80:MET:C	65:MB:82:ASN:N	2.71	0.44
14:N:184:LYS:HG2	14:N:190:VAL:CG2	2.44	0.44
66:NB:128:LYS:C	66:NB:130:GLY:H	2.21	0.44
2:B:1825:G:P	42:PA:48:SER:HB2	2.57	0.44
43:QA:33:ASN:C	43:QA:35:ILE:H	2.19	0.44
43:QA:9:ILE:HD13	43:QA:9:ILE:N	2.33	0.44
18:R:25:LYS:HD2	18:R:62:GLN:HG2	2.00	0.44
18:R:8:LYS:C	18:R:8:LYS:HE3	2.37	0.44
44:RA:79:GLU:OE1	44:RA:80:PRO:HG2	2.17	0.44
18:R:123:LEU:HD11	20:T:193:GLN:HE21	1.82	0.44
2:B:284:A:C2	46:TA:36:PHE:HB3	2.53	0.44
1:A:749:U:H4'	72:TB:120:HIS:O	2.18	0.44
21:U:70:THR:HB	21:U:83:TRP:CH2	2.52	0.44
47:UA:83:ILE:O	47:UA:87:ARG:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:30:VAL:HG22	48:VA:31:ASP:N	2.27	0.44
48:VA:33:VAL:CG2	48:VA:34:SER:N	2.75	0.44
49:WA:9:LEU:HB2	49:WA:313:TRP:CD1	2.53	0.44
76:XB:5:ARG:HH11	76:XB:5:ARG:HG2	1.83	0.44
51:YA:57:ALA:HA	51:YA:60:ALA:HB2	1.99	0.44
1:A:1078:C:H2'	1:A:1079:U:C6	2.53	0.44
1:A:187:G:H5"	58:FB:138:ASN:ND2	2.31	0.44
1:A:252:U:H5"	54:BB:132:GLY:C	2.38	0.44
2:B:1898:G:O2'	27:AA:18:PRO:HG2	2.18	0.44
79:AC:10:HIS:ND1	79:AC:11:PRO:HD2	2.33	0.44
2:B:1077:U:H2'	2:B:1078:U:C6	2.52	0.44
2:B:1088:U:H2'	2:B:1089:G:H8	1.81	0.44
2:B:1722:U:O2'	2:B:1723:A:H5'	2.18	0.44
2:B:2116:G:H5'	2:B:2116:G:N3	2.32	0.44
2:B:2127:U:H2'	2:B:2128:C:H6	1.83	0.44
2:B:2179:C:H2'	6:F:132:ASN:ND2	2.32	0.44
2:B:224:C:H2'	2:B:225:C:H6	1.83	0.44
2:B:2542:U:O2'	2:B:2543:U:H5	2.01	0.44
2:B:2719:U:H2'	2:B:2720:G:C8	2.53	0.44
2:B:2726:C:H3'	2:B:2728:G:N2	2.30	0.44
2:B:2949:U:C2'	2:B:2950:G:H5'	2.48	0.44
2:B:3018:C:H2'	2:B:3019:U:O4'	2.18	0.44
2:B:3080:G:H2'	2:B:3081:C:C6	2.52	0.44
2:B:860:G:OP1	47:UA:17:ARG:NH1	2.50	0.44
54:BB:49:ARG:HG3	54:BB:55:ALA:O	2.17	0.44
3:C:63:G:H2'	3:C:63:G:N3	2.32	0.44
55:CB:144:GLU:HB2	55:CB:160:VAL:O	2.17	0.44
4:D:102:A:H2'	4:D:103:A:H5'	1.98	0.44
4:D:6:C:O3'	9:I:50:ARG:NH1	2.39	0.44
4:D:74:C:H1'	4:D:106:U:O2	2.18	0.44
56:DB:195:VAL:O	56:DB:199:GLN:HG3	2.17	0.44
56:DB:24:ILE:HG22	56:DB:28:PHE:CE2	2.53	0.44
82:DC:426:LEU:HD12	82:DC:427:PHE:N	2.33	0.44
82:DC:693:LEU:HD13	82:DC:700:ARG:HH12	1.82	0.44
82:DC:750:LYS:HG3	82:DC:776:GLU:OE1	2.17	0.44
82:DC:823:ARG:HD2	82:DC:832:VAL:HG13	2.00	0.44
31:EA:134:LEU:HD12	31:EA:136:PHE:CB	2.41	0.44
57:EB:110:GLN:C	57:EB:112:ARG:H	2.21	0.44
6:F:113:VAL:HG23	6:F:134:VAL:CG2	2.48	0.44
6:F:30:ARG:HB2	6:F:76:PHE:HZ	1.82	0.44
7:G:60:LEU:HD11	7:G:62:ARG:NE	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:187:LEU:CD1	8:H:187:LEU:H	2.29	0.44
8:H:272:VAL:C	8:H:274:TYR:N	2.71	0.44
9:I:122:VAL:HG23	9:I:168:ASP:HB3	1.99	0.44
35:IA:17:HIS:HB2	35:IA:69:TYR:HB3	1.99	0.44
2:B:3376:A:H2	35:IA:17:HIS:ND1	2.16	0.44
35:IA:62:ARG:HB3	35:IA:66:GLY:O	2.18	0.44
35:IA:72:ARG:HG2	35:IA:96:VAL:HG22	2.00	0.44
61:IB:36:LYS:HG2	61:IB:37:ASN:N	2.32	0.44
37:KA:68:TRP:O	37:KA:85:PHE:HA	2.17	0.44
12:L:154:ALA:C	12:L:156:ASP:N	2.70	0.44
12:L:179:ILE:H	12:L:179:ILE:CD1	2.30	0.44
38:LA:85:VAL:CG1	38:LA:89:ILE:HD11	2.45	0.44
39:MA:61:GLN:C	39:MA:63:ARG:H	2.20	0.44
39:MA:92:LEU:HG	39:MA:92:LEU:H	1.40	0.44
66:NB:67:VAL:HG12	66:NB:81:ILE:HG22	2.00	0.44
67:OB:63:LYS:O	67:OB:65:PRO:HD2	2.18	0.44
68:PB:19:ASN:O	68:PB:20:THR:HG23	2.18	0.44
68:PB:42:TYR:O	68:PB:46:VAL:HG23	2.18	0.44
43:QA:16:ALA:HB2	43:QA:49:MET:HE3	1.98	0.44
69:QB:130:ARG:NH1	69:QB:134:ARG:HB2	2.21	0.44
19:S:153:ASP:C	19:S:155:VAL:H	2.20	0.44
45:SA:12:ARG:O	45:SA:16:LYS:HB2	2.18	0.44
2:B:632:G:OP1	20:T:93:ALA:HB3	2.18	0.44
21:U:155:GLU:O	21:U:156:ALA:HB3	2.18	0.44
21:U:50:GLN:HB3	21:U:50:GLN:HE21	1.64	0.44
47:UA:24:ARG:O	47:UA:27:LYS:HG2	2.17	0.44
73:UB:20:ARG:O	73:UB:23:ARG:HB2	2.18	0.44
73:UB:75:GLN:HE21	73:UB:75:GLN:N	2.15	0.44
74:VB:5:VAL:O	74:VB:6:THR:HB	2.18	0.44
23:W:130:ASN:O	23:W:132:PHE:N	2.50	0.44
75:WB:91:PRO:HA	75:WB:101:TYR:HE1	1.79	0.44
25:Y:52:MET:HA	25:Y:53:PRO:HD2	1.82	0.44
25:Y:34:TYR:CB	25:Y:72:VAL:HG11	2.48	0.44
51:YA:201:THR:CG2	51:YA:207:LEU:HD21	2.48	0.44
52:ZA:148:LEU:CD1	52:ZA:149:GLY:N	2.81	0.44
52:ZA:57:PHE:CD1	71:SB:26:ALA:HB1	2.53	0.44
1:A:1325:A:H2'	1:A:1326:A:H8	1.83	0.44
1:A:1335:U:H2'	1:A:1336:A:H8	1.83	0.44
1:A:1485:C:O4'	1:A:1606:C:H4'	2.18	0.44
1:A:1591:C:O2'	1:A:1592:A:H5'	2.18	0.44
1:A:330:G:OP2	58:FB:172:ARG:NE	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:45:U:N3	1:A:434:G:H1'	2.32	0.44
1:A:852:C:C6	1:A:853:G:H5"	2.51	0.44
1:A:934:C:C2	76:XB:95:ARG:NH1	2.86	0.44
1:A:949:C:O2'	1:A:950:C:H5'	2.17	0.44
1:A:997:G:H3'	1:A:998:A:H5"	1.99	0.44
53:AB:162:GLN:O	53:AB:164:VAL:N	2.51	0.44
1:A:1244:A:H4'	79:AC:7:TRP:HB3	2.00	0.44
2:B:1169:A:H2'	2:B:1170:A:O4'	2.17	0.44
2:B:1560:G:H22	2:B:1579:C:H1'	1.83	0.44
2:B:1760:A:H5'	2:B:1761:C:OP2	2.18	0.44
2:B:1789:G:H2'	2:B:1790:G:H8	1.83	0.44
2:B:1817:G:O2'	2:B:1818:U:H5'	2.18	0.44
2:B:2086:A:H4'	2:B:2087:C:O4'	2.18	0.44
2:B:2108:C:H2'	2:B:2109:U:C6	2.53	0.44
2:B:217:U:H4'	30:DA:100:HIS:HD2	1.79	0.44
2:B:1311:G:O2'	2:B:2381:G:H4'	2.17	0.44
2:B:2594:C:H2'	2:B:2595:A:N3	2.32	0.44
2:B:282:G:H2'	2:B:286:U:C6	2.53	0.44
2:B:3010:U:O2'	7:G:13:HIS:HE1	2.01	0.44
2:B:3061:G:H2'	2:B:3062:G:C8	2.52	0.44
2:B:3211:C:H2'	2:B:3212:C:C6	2.53	0.44
2:B:404:G:OP1	2:B:404:G:H3'	2.18	0.44
2:B:526:C:H2'	2:B:527:A:H8	1.80	0.44
2:B:663:C:H2'	2:B:664:U:O4'	2.18	0.44
2:B:764:U:H3	2:B:767:U:H3	1.66	0.44
2:B:45:A:N3	2:B:95:A:H2	2.15	0.44
3:C:56:G:H2'	3:C:57:C:H6	1.83	0.44
29:CA:125:ARG:HD3	29:CA:126:LEU:N	2.33	0.44
55:CB:203:LYS:HE3	55:CB:203:LYS:HA	2.00	0.44
55:CB:99:MET:O	55:CB:99:MET:HG3	2.17	0.44
30:DA:43:TYR:O	30:DA:125:LYS:HG2	2.17	0.44
30:DA:35:LEU:HB2	30:DA:47:ALA:CA	2.48	0.44
56:DB:145:PHE:HB2	56:DB:147:LEU:HG	2.00	0.44
82:DC:27:HIS:CE1	82:DC:28:VAL:HG12	2.51	0.44
82:DC:409:GLN:HG2	82:DC:411:VAL:HG23	1.99	0.44
82:DC:491:VAL:HG23	82:DC:492:ALA:N	2.33	0.44
82:DC:4:PHE:HB3	82:DC:8:GLN:CG	2.47	0.44
82:DC:732:GLU:HA	82:DC:768:VAL:O	2.18	0.44
57:EB:167:GLU:HA	57:EB:170:GLN:NE2	2.33	0.44
83:EC:6768:U:OP1	83:EC:6768:U:H4'	2.17	0.44
1:A:259:U:H1'	58:FB:178:ARG:HH11	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:361:THR:H	7:G:371:GLN:HE22	1.64	0.44
8:H:206:LEU:HD23	8:H:207:VAL:N	2.32	0.44
2:B:212:G:H5'	8:H:221:ASN:OD1	2.18	0.44
9:I:248:ARG:HG2	9:I:248:ARG:NH1	2.33	0.44
61:IB:56:LYS:HE2	61:IB:57:LYS:NZ	2.33	0.44
10:J:135:VAL:C	10:J:139:LYS:HE3	2.38	0.44
11:K:106:LEU:C	11:K:107:ARG:HE	2.20	0.44
37:KA:9:VAL:CG2	37:KA:100:ILE:HB	2.47	0.44
37:KA:89:LEU:H	37:KA:89:LEU:CD1	2.24	0.44
14:N:46:PHE:HB3	14:N:140:THR:N	2.32	0.44
14:N:139:ARG:HB3	14:N:173:PHE:CE1	2.53	0.44
40:NA:6:GLY:N	40:NA:16:LYS:HG3	2.33	0.44
15:O:166:LYS:HD3	15:O:167:TYR:CG	2.53	0.44
67:OB:21:TYR:N	67:OB:22:PRO:CD	2.77	0.44
67:OB:86:PRO:O	67:OB:87:GLU:C	2.55	0.44
2:B:1235:U:C5	16:P:132:ILE:HG23	2.53	0.44
16:P:81:VAL:HG21	16:P:117:ARG:HD2	2.00	0.44
42:PA:5:ILE:HB	42:PA:54:LEU:HD12	1.99	0.44
68:PB:65:GLU:O	68:PB:69:ILE:HG13	2.18	0.44
17:Q:57:VAL:H	17:Q:112:ASN:ND2	2.16	0.44
19:S:64:VAL:HG22	19:S:66:VAL:HG22	2.00	0.44
1:A:1098:U:O2	72:TB:71:LYS:HB2	2.18	0.44
21:U:67:ILE:HB	21:U:80:LYS:NZ	2.33	0.44
22:V:26:LEU:HD23	22:V:26:LEU:O	2.17	0.44
48:VA:132:LYS:HB3	48:VA:135:PHE:HD1	1.78	0.44
48:VA:42:ARG:NH1	48:VA:42:ARG:HG2	2.30	0.44
49:WA:55:GLY:O	49:WA:56:VAL:HG13	2.17	0.44
49:WA:87:LYS:HG2	49:WA:109:ASP:HA	2.00	0.44
24:X:94:ILE:HG22	24:X:96:ASP:HB2	2.00	0.44
1:A:1621:U:H2'	1:A:1621:U:O2	2.17	0.44
1:A:1718:G:H2'	1:A:1719:A:O4'	2.17	0.44
1:A:1789:G:H2'	1:A:1790:A:O4'	2.18	0.44
1:A:236:A:H2'	1:A:237:C:C6	2.53	0.44
1:A:478:A:H2'	1:A:479:C:H6	1.75	0.44
1:A:9:U:H3'	1:A:9:U:H6	1.82	0.44
27:AA:62:VAL:HG12	27:AA:63:LYS:H	1.83	0.44
53:AB:137:VAL:HG22	53:AB:151:LYS:CB	2.40	0.44
53:AB:175:VAL:HG13	53:AB:182:LEU:HB3	1.99	0.44
2:B:1005:G:H2'	2:B:1006:A:C5'	2.42	0.44
2:B:1135:A:O2'	2:B:1136:A:H5'	2.18	0.44
2:B:1682:U:H1'	2:B:1685:C:N4	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1712:G:C6	2:B:1713:G:C6	3.06	0.44
2:B:241:G:O2'	2:B:242:C:H5'	2.18	0.44
2:B:2755:C:O2'	2:B:2756:C:H5'	2.18	0.44
2:B:2982:A:HO2'	2:B:2983:C:H5"	1.78	0.44
2:B:3051:U:C2	2:B:3052:G:C8	3.05	0.44
2:B:44:U:O4	2:B:94:G:N2	2.47	0.44
2:B:541:U:H2'	2:B:542:G:C8	2.53	0.44
2:B:6:A:H3'	2:B:7:C:C6	2.52	0.44
54:BB:113:ARG:HG3	54:BB:113:ARG:HH11	1.83	0.44
54:BB:7:LYS:C	54:BB:30:ARG:HD2	2.39	0.44
3:C:127:U:O2'	3:C:128:U:H5'	2.17	0.44
4:D:61:G:H2'	4:D:62:U:C6	2.53	0.44
30:DA:89:LYS:HD3	30:DA:95:VAL:HG21	2.00	0.44
82:DC:19:VAL:O	82:DC:20:ARG:HD3	2.18	0.44
82:DC:223:ARG:HA	82:DC:226:ALA:HB3	1.98	0.44
82:DC:367:ILE:HG22	82:DC:371:ASN:HD22	1.83	0.44
82:DC:536:LEU:HG	82:DC:537:HIS:N	2.33	0.44
82:DC:540:ILE:HD13	82:DC:543:GLN:NE2	2.33	0.44
6:F:137:ILE:CD1	6:F:137:ILE:N	2.78	0.44
7:G:245:GLY:HA3	7:G:248:LYS:HE3	2.00	0.44
8:H:209:TYR:HA	8:H:254:ALA:HB2	1.99	0.44
60:HB:5:LYS:HG2	60:HB:5:LYS:H	1.60	0.44
60:HB:58:GLN:HB2	60:HB:65:TYR:HB2	2.00	0.44
9:I:40:HIS:HB3	9:I:43:LYS:HG3	2.00	0.44
9:I:83:LEU:N	9:I:84:PRO:CD	2.81	0.44
35:IA:10:ARG:HG2	35:IA:108:VAL:HG13	1.99	0.44
35:IA:29:ALA:HB2	35:IA:64:VAL:CA	2.47	0.44
10:J:30:LEU:HD13	10:J:34:LEU:CB	2.48	0.44
8:H:327:LEU:CD1	11:K:165:ASP:HA	2.47	0.44
63:KB:92:ILE:HG12	63:KB:122:ILE:HD13	1.98	0.44
12:L:148:ALA:CA	12:L:201:THR:HG22	2.30	0.44
12:L:64:ILE:C	12:L:66:SER:N	2.71	0.44
12:L:78:PHE:O	12:L:80:TYR:N	2.50	0.44
38:LA:3:GLN:HB3	38:LA:30:LEU:HD12	1.99	0.44
51:YA:64:ARG:NH2	64:LB:37:GLU:OE1	2.51	0.44
13:M:189:GLU:C	13:M:191:LEU:H	2.20	0.44
40:NA:74:LYS:HD3	40:NA:74:LYS:O	2.17	0.44
15:O:61:ARG:O	15:O:62:ASN:HB2	2.18	0.44
43:QA:21:ARG:HA	43:QA:22:PRO:HD3	1.84	0.44
2:B:2896:A:OP1	44:RA:124:LYS:NZ	2.51	0.44
19:S:152:CYS:HB2	39:MA:92:LEU:HD23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:23:ILE:CG1	71:SB:24:ILE:N	2.81	0.44
71:SB:34:ILE:O	71:SB:52:THR:HA	2.18	0.44
20:T:193:GLN:O	20:T:197:LEU:HB2	2.17	0.44
72:TB:104:LEU:CB	72:TB:125:ILE:HA	2.48	0.44
72:TB:16:ASN:HA	72:TB:19:LYS:CB	2.48	0.44
72:TB:23:ARG:O	72:TB:65:LEU:HD13	2.17	0.44
72:TB:7:LEU:CD2	72:TB:11:LEU:HG	2.48	0.44
34:HA:86:ARG:NE	47:UA:44:LYS:HG3	2.32	0.44
2:B:1221:A:O4'	48:VA:60:ARG:HB2	2.17	0.44
54:BB:95:THR:HG22	74:VB:16:PRO:CD	2.48	0.44
2:B:1940:G:H5"	23:W:75:HIS:CE1	2.52	0.44
49:WA:220:ILE:HG13	49:WA:236:ALA:HB2	1.98	0.44
49:WA:90:ARG:HB2	49:WA:92:TRP:HE1	1.83	0.44
76:XB:8:ASN:HB3	76:XB:9:GLY:H	1.67	0.44
51:YA:133:TYR:CZ	51:YA:217:LEU:HD21	2.53	0.44
77:YB:62:ILE:HD11	77:YB:64:CYS:O	2.18	0.44
77:YB:53:ALA:HA	77:YB:66:PRO:CG	2.48	0.44
26:Z:38:ILE:HB	26:Z:56:VAL:HB	1.99	0.44
52:ZA:225:LEU:HD21	71:SB:22:ARG:CA	2.48	0.44
1:A:1094:G:C6	1:A:1095:U:C4	3.06	0.43
1:A:1328:G:OP1	53:AB:158:ILE:HB	2.18	0.43
1:A:1522:U:C4	1:A:1592:A:H5"	2.53	0.43
1:A:248:U:O4'	61:IB:36:LYS:HD2	2.18	0.43
1:A:348:U:O2'	1:A:353:A:O2'	2.36	0.43
27:AA:127:PRO:O	27:AA:130:ALA:HB3	2.17	0.43
53:AB:42:THR:HG21	53:AB:45:LYS:HE2	1.99	0.43
2:B:1007:U:O2	2:B:1043:C:N3	2.51	0.43
2:B:1055:A:H2'	2:B:1056:U:O4'	2.17	0.43
2:B:1104:G:H5'	2:B:1105:A:OP2	2.18	0.43
2:B:1175:C:O2'	2:B:1176:C:H5'	2.18	0.43
2:B:1326:A:O2'	2:B:1327:C:H5'	2.18	0.43
2:B:1386:A:H5"	8:H:141:ARG:CZ	2.48	0.43
2:B:1616:U:H2'	2:B:1617:G:O4'	2.17	0.43
2:B:208:C:C2'	2:B:209:A:H5'	2.48	0.43
2:B:2111:G:N2	28:BA:39:LEU:HD11	2.32	0.43
2:B:2131:A:H3'	2:B:2131:A:C8	2.53	0.43
2:B:2250:G:H2'	2:B:2251:G:H8	1.83	0.43
2:B:2464:U:C2'	2:B:2465:G:H5'	2.48	0.43
2:B:2512:C:H2'	2:B:2513:U:C6	2.53	0.43
2:B:366:A:H5"	8:H:95:ARG:HH22	1.83	0.43
2:B:400:G:H4'	2:B:403:C:O2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:43:A:C6	2:B:2803:A:C6	3.06	0.43
2:B:704:U:H3'	2:B:705:A:C5'	2.48	0.43
54:BB:15:PRO:HA	54:BB:39:ARG:HH22	1.83	0.43
55:CB:88:PRO:HB2	55:CB:91:GLU:CB	2.48	0.43
4:D:1:G:C4	9:I:266:ALA:HA	2.53	0.43
82:DC:24:VAL:HG21	82:DC:36:THR:CG2	2.31	0.43
82:DC:568:GLU:HB3	82:DC:721:ASP:OD2	2.18	0.43
86:DC:903:SO1:O15	86:DC:903:SO1:H9	2.18	0.43
5:E:143:ASP:C	5:E:145:TYR:N	2.70	0.43
31:EA:25:ILE:HG12	31:EA:43:VAL:CG1	2.48	0.43
6:F:198:LYS:NZ	6:F:198:LYS:HB2	2.33	0.43
6:F:3:ARG:CG	6:F:4:VAL:N	2.76	0.43
6:F:68:LYS:CE	6:F:70:ARG:HD2	2.48	0.43
17:Q:3:ILE:HG12	32:FA:34:MET:HE2	1.99	0.43
58:FB:147:ALA:C	58:FB:149:SER:H	2.21	0.43
58:FB:33:PRO:O	58:FB:34:ALA:C	2.55	0.43
7:G:14:LEU:O	7:G:17:LEU:HD13	2.18	0.43
2:B:1729:A:C6	34:HA:49:PRO:HD3	2.53	0.43
4:D:118:A:H5"	9:I:253:PHE:CE2	2.52	0.43
9:I:258:LYS:NZ	9:I:258:LYS:HB2	2.33	0.43
9:I:34:LYS:HD3	9:I:35:ARG:N	2.32	0.43
9:I:88:ILE:HG22	9:I:88:ILE:O	2.17	0.43
61:IB:97:TYR:O	61:IB:99:ARG:HG2	2.18	0.43
63:KB:115:LEU:HD13	63:KB:115:LEU:C	2.39	0.43
63:KB:5:HIS:O	63:KB:6:SER:HB3	2.18	0.43
2:B:2525:G:H22	12:L:44:ARG:NH1	2.16	0.43
64:LB:136:ARG:HG2	64:LB:136:ARG:HH11	1.83	0.43
13:M:1:MET:CE	13:M:3:TYR:HA	2.47	0.43
9:I:294:ALA:CB	14:N:217:PHE:HB3	2.39	0.43
14:N:8:CYS:HB2	14:N:9:TYR:HD1	1.82	0.43
15:O:160:VAL:HG11	15:O:171:VAL:HG23	2.00	0.43
68:PB:38:VAL:HG22	68:PB:101:LEU:HD22	1.99	0.43
17:Q:119:TYR:HE1	39:MA:118:ILE:HD11	1.83	0.43
17:Q:78:ALA:O	17:Q:82:ALA:HB2	2.18	0.43
43:QA:17:LYS:O	43:QA:20:ASN:OD1	2.35	0.43
46:TA:27:GLN:HB2	46:TA:91:PHE:HE2	1.82	0.43
73:UB:49:ALA:CB	73:UB:78:LYS:HE3	2.48	0.43
48:VA:97:LYS:HZ2	48:VA:101:VAL:HG21	1.82	0.43
2:B:1222:G:H2'	48:VA:56:ASN:CG	2.38	0.43
24:X:110:MET:HE2	24:X:121:ILE:HG23	2.00	0.43
8:H:361:HIS:CB	24:X:26:ARG:HH21	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:39:ILE:CG2	24:X:95:ARG:HD3	2.48	0.43
50:XA:123:VAL:HG12	50:XA:124:THR:N	2.33	0.43
76:XB:44:ILE:HD12	76:XB:45:VAL:N	2.32	0.43
24:X:44:PHE:CE1	25:Y:153:PRO:HB3	2.53	0.43
25:Y:77:ASN:HA	25:Y:85:LEU:O	2.18	0.43
51:YA:156:ALA:CB	51:YA:161:ILE:HG13	2.48	0.43
51:YA:97:LEU:HD12	51:YA:232:HIS:CG	2.52	0.43
26:Z:33:TYR:CZ	26:Z:37:LEU:HD22	2.53	0.43
1:A:1307:U:H2'	1:A:1308:G:H5'	2.00	0.43
1:A:445:A:H4'	74:VB:89:TYR:CE2	2.53	0.43
1:A:14:C:O2'	1:A:619:A:N1	2.44	0.43
1:A:688:G:H2'	1:A:689:G:C8	2.53	0.43
1:A:707:A:C3'	1:A:708:C:H5"	2.47	0.43
1:A:988:A:N3	1:A:988:A:H2'	2.33	0.43
27:AA:11:PHE:CE1	27:AA:88:ARG:HG2	2.52	0.43
53:AB:97:SER:HB3	53:AB:100:ALA:HB3	1.99	0.43
2:B:1361:U:O5'	2:B:1361:U:H6	2.01	0.43
2:B:628:A:H5'	2:B:1399:A:C2	2.53	0.43
2:B:1874:A:O2'	2:B:1875:G:H5'	2.17	0.43
2:B:1910:A:O2'	2:B:2334:U:H5'	2.18	0.43
2:B:2348:A:C8	2:B:2349:U:C5	3.06	0.43
2:B:2513:U:H2'	2:B:2592:G:H1	1.82	0.43
2:B:2709:C:H2'	2:B:2710:C:H6	1.82	0.43
2:B:2761:G:H1'	2:B:2800:G:N2	2.33	0.43
2:B:2800:G:OP2	2:B:2801:A:OP1	2.35	0.43
2:B:3164:C:N4	2:B:3287:U:C4	2.86	0.43
2:B:3232:G:O2'	2:B:3233:C:H5'	2.18	0.43
2:B:3296:A:C2'	2:B:3297:U:H5'	2.48	0.43
2:B:330:G:O2'	2:B:331:G:H5'	2.17	0.43
2:B:524:U:H2'	2:B:525:C:H5'	1.99	0.43
2:B:675:C:H42	22:V:56:LYS:HZ1	1.65	0.43
2:B:692:A:C4'	8:H:46:LYS:HG2	2.48	0.43
2:B:769:G:C6	2:B:770:G:C6	3.06	0.43
28:BA:6:ASP:O	28:BA:7:SER:C	2.57	0.43
54:BB:154:ILE:HG12	54:BB:172:PHE:CB	2.48	0.43
55:CB:121:ILE:O	55:CB:124:LEU:O	2.35	0.43
55:CB:62:VAL:O	55:CB:63:GLN:C	2.55	0.43
56:DB:142:ARG:CZ	56:DB:152:ASP:HA	2.48	0.43
56:DB:5:ILE:HD11	56:DB:111:LEU:HD12	1.98	0.43
82:DC:342:LEU:CD2	82:DC:343:PRO:HD2	2.37	0.43
82:DC:427:PHE:HD1	82:DC:429:LYS:CE	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:772:LEU:HD21	82:DC:777:SER:CB	2.48	0.43
82:DC:725:GLN:CD	82:DC:803:THR:HG23	2.39	0.43
31:EA:82:PRO:HD2	34:HA:59:TYR:HE1	1.82	0.43
57:EB:60:ILE:HD12	57:EB:92:PHE:CE1	2.52	0.43
58:FB:192:TYR:HA	58:FB:195:ARG:HB2	2.00	0.43
7:G:252:ILE:CD1	7:G:252:ILE:H	2.30	0.43
7:G:299:ASP:C	7:G:301:THR:N	2.71	0.43
7:G:87:VAL:HB	7:G:110:LEU:HD23	2.00	0.43
8:H:123:ALA:HB2	8:H:262:TRP:CZ3	2.52	0.43
11:K:40:LYS:O	11:K:44:ILE:HG13	2.18	0.43
12:L:209:ALA:O	12:L:212:ALA:HB3	2.18	0.43
13:M:90:MET:HA	13:M:182:SER:H	1.83	0.43
16:P:78:SER:CA	16:P:117:ARG:HE	2.25	0.43
17:Q:51:LEU:HG	17:Q:139:LEU:CD2	2.48	0.43
43:QA:16:ALA:HB1	43:QA:42:ARG:CD	2.48	0.43
18:R:102:LYS:O	18:R:105:GLN:HB2	2.18	0.43
19:S:65:ARG:HG3	19:S:127:TYR:CD1	2.53	0.43
47:UA:8:VAL:O	47:UA:9:GLY:O	2.35	0.43
48:VA:9:ALA:HA	48:VA:12:PHE:CE2	2.53	0.43
48:VA:133:THR:O	48:VA:137:GLN:HG3	2.18	0.43
74:VB:38:ASP:HA	74:VB:41:ARG:NH1	2.33	0.43
74:VB:55:VAL:HA	74:VB:74:LEU:O	2.17	0.43
50:XA:102:PHE:CE2	50:XA:135:GLU:HG3	2.51	0.43
50:XA:60:ALA:O	50:XA:64:ILE:CD1	2.63	0.43
76:XB:66:LYS:H	76:XB:66:LYS:HD2	1.83	0.43
26:Z:36:TYR:O	26:Z:39:ASP:OD2	2.37	0.43
1:A:1077:C:H2'	1:A:1078:C:H6	1.83	0.43
1:A:127:G:O2'	1:A:128:U:H5'	2.19	0.43
1:A:1316:G:H2'	1:A:1317:C:H6	1.78	0.43
1:A:1506:G:H2'	1:A:1507:G:H8	1.82	0.43
1:A:1543:A:H1'	1:A:1569:A:C2	2.53	0.43
1:A:587:C:H2'	1:A:588:U:C6	2.53	0.43
1:A:588:U:H2'	1:A:589:C:O4'	2.18	0.43
1:A:64:U:C2'	1:A:65:A:H5"	2.48	0.43
1:A:789:A:H2'	1:A:789:A:N3	2.33	0.43
53:AB:126:VAL:CG1	53:AB:134:CYS:HB3	2.47	0.43
2:B:1210:U:H5'	13:M:63:LYS:CG	2.45	0.43
2:B:1393:A:C1'	2:B:1418:A:C2	3.01	0.43
2:B:1710:C:H5"	31:EA:79:HIS:HE1	1.83	0.43
2:B:185:C:O3'	30:DA:122:LYS:HA	2.18	0.43
2:B:2111:G:H21	28:BA:39:LEU:HD11	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2149:A:N1	2:B:2188:A:C4'	2.80	0.43
2:B:2513:U:O2'	2:B:2514:U:H2'	2.18	0.43
2:B:2587:U:H2'	2:B:2588:U:O4'	2.17	0.43
2:B:1202:A:H2	2:B:2856:G:O2'	2.00	0.43
2:B:308:A:H5"	40:NA:80:PHE:CD1	2.53	0.43
2:B:3135:U:C4	2:B:3136:G:C5	3.07	0.43
2:B:3356:G:H2'	2:B:3357:U:C6	2.53	0.43
2:B:355:A:N6	2:B:364:G:H1'	2.34	0.43
2:B:378:A:O2'	30:DA:91:ASN:HA	2.18	0.43
2:B:726:G:H5'	2:B:727:G:OP1	2.19	0.43
2:B:715:A:N1	2:B:781:G:H2'	2.32	0.43
2:B:782:U:H2'	2:B:783:A:O4'	2.19	0.43
2:B:914:A:H5'	2:B:915:A:N7	2.34	0.43
28:BA:57:LYS:HA	28:BA:57:LYS:HZ3	1.83	0.43
54:BB:11:ARG:HG2	54:BB:27:TYR:O	2.18	0.43
1:A:299:A:O2'	54:BB:5:PRO:HG3	2.19	0.43
54:BB:65:LEU:CD1	54:BB:80:THR:HA	2.48	0.43
4:D:5:G:C6	4:D:117:A:C6	3.06	0.43
4:D:74:C:C2'	4:D:75:G:H5'	2.49	0.43
56:DB:57:ASP:HB3	56:DB:98:ARG:HG3	2.00	0.43
82:DC:231:LYS:C	82:DC:233:PHE:H	2.20	0.43
82:DC:491:VAL:O	82:DC:529:ILE:HA	2.18	0.43
6:F:32:LEU:HB2	6:F:163:ARG:HH12	1.83	0.43
6:F:56:ALA:HA	6:F:57:PRO:HD2	1.74	0.43
6:F:51:ASP:CG	6:F:58:LEU:HD11	2.39	0.43
6:F:62:VAL:HB	6:F:73:GLU:HG3	1.99	0.43
58:FB:178:ARG:NH2	58:FB:178:ARG:HG3	2.33	0.43
7:G:249:VAL:O	7:G:250:ALA:C	2.57	0.43
7:G:49:TYR:C	7:G:79:VAL:HG23	2.37	0.43
59:GB:175:ARG:O	59:GB:179:ARG:HG3	2.19	0.43
8:H:191:LYS:C	8:H:193:LYS:N	2.70	0.43
35:IA:23:VAL:O	35:IA:28:ARG:HD3	2.18	0.43
35:IA:7:VAL:HG12	35:IA:7:VAL:O	2.18	0.43
61:IB:118:GLN:HG2	61:IB:119:VAL:N	2.34	0.43
61:IB:110:HIS:O	61:IB:139:VAL:HG23	2.17	0.43
10:J:51:ARG:HH11	10:J:51:ARG:HG2	1.83	0.43
36:JA:124:GLY:O	36:JA:126:LEU:HG	2.18	0.43
11:K:156:ILE:CB	11:K:161:VAL:HG21	2.47	0.43
11:K:154:GLY:HA3	11:K:201:PHE:CE2	2.53	0.43
13:M:31:ARG:HH12	13:M:187:ILE:HG21	1.84	0.43
2:B:3186:A:H1'	13:M:44:THR:OG1	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3112:G:O2'	13:M:70:THR:HG23	2.17	0.43
39:MA:102:GLU:HA	39:MA:105:ARG:CD	2.48	0.43
65:MB:84:ILE:CG2	65:MB:85:ILE:N	2.81	0.43
66:NB:5:PRO:O	66:NB:23:LYS:HA	2.19	0.43
15:O:92:ARG:HB2	15:O:95:ASN:OD1	2.18	0.43
49:WA:150:TRP:CH2	67:OB:34:LEU:HG	2.53	0.43
68:PB:69:ILE:HG22	68:PB:73:MET:CE	2.48	0.43
68:PB:50:ALA:HB2	68:PB:72:ILE:HD12	1.98	0.43
17:Q:136:GLU:HG3	17:Q:137:GLN:N	2.34	0.43
69:QB:84:LYS:HE2	69:QB:94:ILE:HB	2.00	0.43
18:R:15:VAL:CG1	18:R:65:LEU:HG	2.48	0.43
70:RB:58:LEU:HD21	70:RB:90:TYR:HD2	1.82	0.43
19:S:64:VAL:HG11	19:S:102:ALA:HB1	2.00	0.43
2:B:291:C:OP1	19:S:68:ARG:CZ	2.65	0.43
71:SB:1:MET:O	71:SB:9:VAL:HG12	2.18	0.43
20:T:65:ASN:C	20:T:67:THR:H	2.22	0.43
20:T:8:VAL:HG12	20:T:117:ARG:HA	2.00	0.43
21:U:41:LEU:O	21:U:41:LEU:HD13	2.18	0.43
47:UA:54:ILE:HG23	47:UA:63:THR:HG22	1.99	0.43
1:A:351:C:H4'	73:UB:13:ARG:NE	2.32	0.43
22:V:5:HIS:ND1	22:V:9:GLN:HG3	2.33	0.43
48:VA:92:PRO:O	48:VA:96:ILE:HG13	2.17	0.43
23:W:138:LEU:CD1	23:W:142:ILE:HD11	2.48	0.43
23:W:70:LYS:HG2	23:W:74:ARG:O	2.17	0.43
49:WA:190:ALA:HB1	49:WA:192:PHE:CE2	2.49	0.43
50:XA:55:GLU:HB3	71:SB:79:LEU:HD22	2.00	0.43
76:XB:82:ARG:NE	76:XB:82:ARG:HA	2.31	0.43
26:Z:50:LEU:HB3	26:Z:54:VAL:CG2	2.48	0.43
1:A:1251:U:H1'	1:A:1252:C:C5	2.54	0.43
1:A:1384:A:H2'	1:A:1385:G:O4'	2.18	0.43
1:A:240:U:OP1	1:A:240:U:H4'	2.17	0.43
1:A:408:C:H2'	1:A:409:C:C6	2.52	0.43
1:A:569:C:H2'	1:A:570:A:O4'	2.18	0.43
1:A:815:G:OP1	23:W:163:ARG:HG3	2.18	0.43
1:A:894:U:H4'	64:LB:36:LYS:HZ3	1.81	0.43
1:A:957:G:N7	63:KB:12:SER:OG	2.51	0.43
53:AB:158:ILE:HD12	53:AB:189:MET:SD	2.58	0.43
70:RB:80:GLU:CG	79:AC:54:LYS:HD3	2.48	0.43
2:B:1190:A:H2'	2:B:1190:A:N3	2.34	0.43
2:B:1369:A:H2'	2:B:1370:G:H5'	2.01	0.43
2:B:1549:U:H2'	2:B:1550:C:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1938:U:H1'	23:W:78:TYR:O	2.18	0.43
2:B:2137:U:H5	2:B:2957:G:H1'	1.83	0.43
2:B:2284:C:OP2	2:B:2284:C:H3'	2.18	0.43
2:B:2582:C:H2'	2:B:2583:C:C6	2.52	0.43
2:B:3095:U:O5'	2:B:3095:U:H6	2.01	0.43
2:B:3131:U:H2'	2:B:3132:C:C6	2.54	0.43
2:B:584:G:H4'	37:KA:46:GLY:CA	2.39	0.43
54:BB:65:LEU:HD23	54:BB:70:VAL:CG1	2.36	0.43
4:D:101:G:H2'	4:D:102:A:H5"	2.00	0.43
56:DB:73:ILE:HG13	56:DB:75:LEU:HD11	1.99	0.43
82:DC:32:LYS:HB2	82:DC:128:VAL:CG2	2.45	0.43
31:EA:11:ALA:O	31:EA:23:VAL:HG22	2.18	0.43
57:EB:30:SER:HB2	57:EB:34:LEU:HB2	2.01	0.43
57:EB:43:PHE:HD1	57:EB:44:LYS:N	2.17	0.43
6:F:118:GLU:HB2	6:F:119:LYS:HD2	1.99	0.43
2:B:2175:U:C4	6:F:20:THR:HG21	2.53	0.43
6:F:21:ARG:NH2	6:F:22:LEU:HG	2.33	0.43
7:G:11:HIS:NE2	7:G:235:THR:HA	2.34	0.43
7:G:5:LYS:HG3	7:G:6:TYR:CD1	2.54	0.43
59:GB:110:GLN:OE1	59:GB:126:ARG:HG2	2.18	0.43
59:GB:12:TYR:CG	59:GB:40:LYS:HG3	2.53	0.43
8:H:312:VAL:CG2	8:H:313:LEU:H	2.31	0.43
60:HB:38:LYS:HB2	60:HB:41:TYR:CD2	2.53	0.43
9:I:101:THR:CA	9:I:104:LEU:HB3	2.47	0.43
9:I:173:VAL:O	9:I:175:HIS:CD2	2.72	0.43
9:I:256:THR:C	9:I:258:LYS:N	2.71	0.43
9:I:58:LYS:CD	9:I:93:THR:HG21	2.38	0.43
2:B:500:C:H4'	10:J:82:ARG:HG3	2.00	0.43
11:K:107:ARG:NH2	11:K:115:THR:OG1	2.51	0.43
63:KB:142:GLU:CD	63:KB:144:ALA:HB3	2.38	0.43
12:L:245:LYS:C	12:L:245:LYS:HE3	2.39	0.43
12:L:244:ALA:CA	12:L:247:ASP:HB2	2.44	0.43
12:L:33:ASN:CB	12:L:38:GLN:NE2	2.77	0.43
64:LB:136:ARG:NH1	64:LB:136:ARG:HG2	2.32	0.43
13:M:104:VAL:HG11	13:M:113:GLU:CD	2.38	0.43
13:M:116:ASN:CG	13:M:116:ASN:O	2.56	0.43
13:M:97:PHE:CD1	13:M:119:GLY:N	2.87	0.43
16:P:122:GLY:HA2	48:VA:43:LYS:HD2	2.01	0.43
17:Q:112:ASN:O	17:Q:115:ARG:HB3	2.18	0.43
69:QB:6:VAL:HB	69:QB:66:TYR:CE2	2.54	0.43
18:R:90:VAL:O	18:R:90:VAL:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:120:TRP:CZ2	19:S:123:GLN:HG2	2.49	0.43
71:SB:39:VAL:HA	71:SB:45:ALA:HA	1.99	0.43
20:T:74:ARG:HB3	20:T:147:TRP:HB2	1.99	0.43
20:T:161:LYS:O	20:T:165:ALA:HB2	2.19	0.43
20:T:171:LYS:O	20:T:175:THR:HG23	2.17	0.43
21:U:36:ILE:HG21	21:U:117:ILE:HD13	2.00	0.43
2:B:2389:C:H5"	21:U:66:SER:HA	2.00	0.43
47:UA:10:ILE:HG12	47:UA:10:ILE:O	2.18	0.43
22:V:105:ARG:HG3	22:V:105:ARG:O	2.17	0.43
24:X:158:LYS:CD	24:X:158:LYS:H	2.30	0.43
24:X:42:TRP:HZ2	24:X:57:GLU:N	2.16	0.43
51:YA:36:SER:HB2	51:YA:231:LEU:O	2.17	0.43
51:YA:61:LEU:O	51:YA:62:LYS:HB2	2.19	0.43
52:ZA:168:ARG:NH2	52:ZA:170:ILE:HD11	2.33	0.43
1:A:1071:U:H2'	1:A:1072:C:C6	2.53	0.43
1:A:623:A:N1	1:A:1105:C:H1'	2.33	0.43
1:A:1104:U:O2'	1:A:1105:C:H5'	2.17	0.43
1:A:1454:G:H4'	65:MB:122:THR:CG2	2.39	0.43
1:A:1608:U:O3'	66:NB:73:GLY:HA3	2.19	0.43
1:A:1645:G:C6	1:A:1757:G:C6	3.07	0.43
1:A:54:C:H4'	74:VB:109:LYS:CD	2.49	0.43
1:A:747:C:C1'	72:TB:124:LYS:NZ	2.82	0.43
1:A:761:G:O2'	1:A:762:A:H5'	2.18	0.43
27:AA:18:PRO:HA	27:AA:51:ALA:HA	2.00	0.43
2:B:1349:G:H3'	2:B:1349:G:N3	2.33	0.43
2:B:1478:C:N3	2:B:1479:U:C4	2.86	0.43
2:B:2055:U:O2'	2:B:2056:U:H5'	2.18	0.43
2:B:2078:C:H2'	2:B:2079:G:H8	1.83	0.43
2:B:2202:C:H2'	2:B:2203:U:H6	1.83	0.43
2:B:2514:U:H5'	12:L:68:ARG:NH1	2.32	0.43
2:B:2877:G:H2'	2:B:2878:G:C8	2.54	0.43
2:B:3353:G:C8	58:FB:164:ARG:NH1	2.85	0.43
2:B:3373:U:H2'	2:B:3374:U:H6	1.83	0.43
2:B:513:G:H2'	2:B:514:G:H8	1.84	0.43
2:B:567:G:H2'	2:B:568:G:C8	2.53	0.43
2:B:819:U:H4'	2:B:2138:A:C6	2.54	0.43
2:B:855:U:C4	2:B:856:G:C6	3.06	0.43
28:BA:27:LYS:HB3	28:BA:29:PHE:CE1	2.53	0.43
54:BB:84:ALA:CB	54:BB:101:LEU:HD12	2.48	0.43
54:BB:163:ASP:O	54:BB:164:LEU:HB2	2.19	0.43
1:A:460:A:C2'	54:BB:27:TYR:OH	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:130:C:H2'	3:C:131:A:C8	2.52	0.43
55:CB:124:LEU:N	55:CB:124:LEU:HD12	2.34	0.43
55:CB:89:ILE:HD12	55:CB:90:ILE:H	1.83	0.43
56:DB:58:LYS:O	56:DB:59:GLN:CB	2.67	0.43
82:DC:121:VAL:HG11	82:DC:383:SER:HB2	2.01	0.43
82:DC:513:LYS:NZ	82:DC:513:LYS:HB3	2.33	0.43
82:DC:635:CYS:CB	82:DC:664:VAL:HG13	2.49	0.43
82:DC:634:TRP:HB2	82:DC:646:VAL:HG12	2.00	0.43
82:DC:762:GLY:O	82:DC:764:PRO:HD3	2.18	0.43
57:EB:18:LEU:O	57:EB:21:ALA:HB3	2.18	0.43
83:EC:6789:G:H3'	83:EC:6790:A:C5'	2.49	0.43
6:F:114:SER:O	6:F:115:ASN:C	2.56	0.43
6:F:223:SER:O	6:F:237:LEU:HG	2.19	0.43
7:G:44:THR:HG22	7:G:184:ASN:HD21	1.83	0.43
7:G:85:VAL:HG13	7:G:163:HIS:CD2	2.53	0.43
7:G:8:ALA:HB2	27:AA:46:LEU:HD13	2.00	0.43
59:GB:81:VAL:CG2	59:GB:86:LEU:HD23	2.48	0.43
34:HA:83:LYS:N	34:HA:83:LYS:HD2	2.33	0.43
61:IB:90:TYR:OH	61:IB:103:ARG:HG2	2.18	0.43
61:IB:54:ILE:HD12	61:IB:54:ILE:H	1.82	0.43
1:A:325:G:O2'	61:IB:83:THR:HG21	2.18	0.43
10:J:157:GLN:CD	10:J:157:GLN:N	2.72	0.43
36:JA:43:ARG:NH1	36:JA:43:ARG:HG2	2.34	0.43
63:KB:9:LYS:HD2	63:KB:9:LYS:N	2.32	0.43
39:MA:47:VAL:O	39:MA:51:ILE:HG13	2.19	0.43
14:N:169:LYS:HD2	14:N:169:LYS:HA	1.88	0.43
14:N:87:LEU:C	14:N:87:LEU:HD23	2.38	0.43
67:OB:104:ASN:O	67:OB:105:GLN:C	2.56	0.43
67:OB:29:GLN:HA	67:OB:32:LYS:NZ	2.33	0.43
67:OB:44:LYS:O	67:OB:47:ARG:HB3	2.18	0.43
17:Q:57:VAL:HG23	17:Q:115:ARG:HD2	1.99	0.43
69:QB:65:ILE:O	69:QB:68:ARG:O	2.37	0.43
18:R:109:ARG:HD3	20:T:199:TYR:HE1	1.83	0.43
1:A:1345:A:O4'	70:RB:56:VAL:HG21	2.19	0.43
21:U:16:SER:HB3	21:U:149:VAL:HG22	2.00	0.43
47:UA:31:ILE:CG2	47:UA:32:GLN:H	2.31	0.43
47:UA:84:ARG:O	47:UA:88:GLU:HG3	2.17	0.43
73:UB:42:PRO:HB3	73:UB:83:VAL:CG2	2.49	0.43
73:UB:56:LYS:HG3	73:UB:98:GLU:CG	2.48	0.43
22:V:12:ARG:O	22:V:14:GLY:N	2.51	0.43
48:VA:55:LYS:O	48:VA:58:MET:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:133:ASN:O	74:VB:134:ALA:HB2	2.18	0.43
23:W:119:LEU:CD2	23:W:123:LEU:HD12	2.49	0.43
23:W:181:ARG:O	23:W:185:LEU:HG	2.17	0.43
24:X:2:ALA:O	24:X:3:HIS:C	2.57	0.43
50:XA:156:VAL:O	50:XA:156:VAL:HG23	2.18	0.43
50:XA:59:LEU:H	50:XA:59:LEU:CD1	2.28	0.43
51:YA:121:ILE:HB	51:YA:141:ALA:HB3	2.01	0.43
77:YB:54:VAL:HG12	77:YB:63:LEU:HD12	1.99	0.43
26:Z:12:ALA:HA	26:Z:68:THR:HA	1.99	0.43
52:ZA:50:ILE:HG23	52:ZA:55:GLU:CG	2.47	0.43
1:A:1112:G:H1'	1:A:1133:A:H61	1.82	0.43
1:A:1160:A:H2'	1:A:1161:C:C6	2.53	0.43
1:A:1357:A:H2'	1:A:1358:G:O4'	2.18	0.43
1:A:1771:U:O2'	1:A:1772:C:H5'	2.19	0.43
1:A:189:C:H5	58:FB:137:LYS:HE3	1.83	0.43
1:A:496:G:H2'	1:A:497:G:C8	2.54	0.43
1:A:54:C:H2'	1:A:55:A:H8	1.83	0.43
1:A:547:U:O2'	1:A:596:C:O2	2.36	0.43
1:A:627:C:H5"	63:KB:5:HIS:NE2	2.33	0.43
1:A:956:C:H2'	1:A:957:G:C8	2.54	0.43
53:AB:101:GLN:O	53:AB:104:SER:HB3	2.17	0.43
79:AC:19:ARG:HD2	79:AC:32:ARG:NH1	2.34	0.43
79:AC:19:ARG:NH1	79:AC:32:ARG:HD2	2.33	0.43
2:B:1272:C:C2'	2:B:1273:A:H5'	2.49	0.43
2:B:1337:A:H2'	2:B:1338:C:H6	1.83	0.43
2:B:1371:G:H2'	2:B:1372:C:C6	2.53	0.43
2:B:1385:C:H5"	2:B:1386:A:OP2	2.19	0.43
2:B:1390:A:N3	2:B:1390:A:H5'	2.34	0.43
2:B:1405:U:H5'	36:JA:57:TYR:O	2.19	0.43
2:B:1814:A:C3'	2:B:1815:U:H5'	2.48	0.43
2:B:1828:A:C2'	2:B:1829:G:H8	2.32	0.43
2:B:2288:G:H2'	2:B:2288:G:N3	2.34	0.43
2:B:2527:G:H2'	2:B:2528:G:O4'	2.18	0.43
2:B:2656:A:OP2	46:TA:97:LYS:HD2	2.18	0.43
2:B:2838:A:H61	2:B:2850:G:H1'	1.83	0.43
2:B:3017:A:O2'	2:B:3018:C:H5'	2.19	0.43
2:B:3267:A:H2'	10:J:69:PHE:CZ	2.54	0.43
2:B:3275:U:O2'	37:KA:99:ARG:NH1	2.52	0.43
2:B:3279:A:H2'	2:B:3280:U:C5'	2.48	0.43
2:B:3287:U:O2'	2:B:3288:G:H5'	2.19	0.43
2:B:1886:A:O4'	2:B:3307:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:330:G:H2'	2:B:331:G:H8	1.83	0.43
2:B:628:A:O2'	2:B:629:U:H5'	2.18	0.43
2:B:640:U:OP2	36:JA:37:GLY:HA2	2.18	0.43
2:B:644:G:H8	2:B:644:G:O5'	2.01	0.43
2:B:74:G:H2'	2:B:75:G:O4'	2.18	0.43
2:B:750:G:H2'	2:B:751:A:H8	1.83	0.43
3:C:115:C:H2'	3:C:116:G:O4'	2.19	0.43
82:DC:179:ALA:HA	82:DC:182:VAL:HB	2.01	0.43
82:DC:144:ARG:HG3	82:DC:192:TYR:HB3	2.01	0.43
57:EB:135:ILE:HG21	57:EB:152:VAL:CG1	2.49	0.43
2:B:2148:U:H4'	6:F:196:TRP:HZ2	1.83	0.43
6:F:60:LYS:CD	6:F:73:GLU:HG2	2.49	0.43
6:F:91:GLY:O	6:F:102:LEU:HB3	2.17	0.43
2:B:3242:G:H5'	7:G:154:TYR:CZ	2.53	0.43
7:G:246:LEU:H	7:G:246:LEU:HD23	1.84	0.43
7:G:381:GLY:C	7:G:387:LEU:HD12	2.39	0.43
7:G:50:LYS:HD3	7:G:330:GLY:O	2.17	0.43
33:GA:32:LEU:HD13	33:GA:40:ARG:HG2	2.00	0.43
8:H:32:PRO:HG3	8:H:244:LEU:CD1	2.48	0.43
9:I:119:TYR:CE1	9:I:134:ALA:HA	2.54	0.43
9:I:37:VAL:HG11	25:Y:27:LEU:HD12	2.01	0.43
37:KA:15:SER:O	37:KA:29:LEU:HB2	2.18	0.43
1:A:958:U:O2'	63:KB:55:ARG:NH2	2.52	0.43
12:L:224:ASP:C	12:L:226:TYR:H	2.22	0.43
2:B:1856:C:O2	38:LA:7:PHE:HD2	2.02	0.43
39:MA:54:VAL:O	39:MA:58:ILE:HG13	2.18	0.43
14:N:154:ARG:HA	14:N:157:TYR:CE1	2.53	0.43
14:N:154:ARG:HA	14:N:157:TYR:CD1	2.53	0.43
15:O:108:GLU:HA	15:O:122:ILE:HD12	1.99	0.43
15:O:40:LEU:HD11	15:O:79:ILE:HG23	2.01	0.43
16:P:135:THR:HG22	16:P:147:ASN:HA	2.01	0.43
69:QB:102:ARG:O	69:QB:106:GLN:HB2	2.19	0.43
52:ZA:147:ASN:HB3	71:SB:2:GLU:O	2.19	0.43
47:UA:54:ILE:CG2	47:UA:63:THR:HG22	2.48	0.43
22:V:122:ILE:HG22	22:V:123:THR:H	1.83	0.43
75:WB:89:ILE:C	75:WB:89:ILE:HD12	2.38	0.43
24:X:14:LEU:HA	24:X:15:PRO:HD2	1.79	0.43
18:R:65:LEU:HD13	24:X:172:TYR:OH	2.18	0.43
50:XA:88:LYS:HG2	50:XA:201:LEU:HD22	2.00	0.43
25:Y:11:THR:O	25:Y:14:MET:HB3	2.19	0.43
25:Y:96:ILE:N	25:Y:96:ILE:HD12	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:129:THR:HG23	51:YA:133:TYR:HB3	2.00	0.43
51:YA:157:GLN:HB2	51:YA:160:HIS:CG	2.53	0.43
51:YA:225:VAL:HA	51:YA:228:LEU:CB	2.49	0.43
52:ZA:191:ALA:HB3	52:ZA:193:VAL:HG23	2.00	0.43
52:ZA:43:ARG:HA	52:ZA:46:LYS:HB3	2.00	0.43
1:A:108:A:C6	1:A:109:G:C6	3.07	0.43
1:A:1328:G:H2'	1:A:1329:A:C5'	2.47	0.43
1:A:1363:U:O2'	1:A:1364:G:H5'	2.18	0.43
1:A:1511:U:H2'	1:A:1512:G:C8	2.52	0.43
1:A:1789:G:O2'	1:A:1790:A:H5'	2.18	0.43
1:A:348:U:O2'	58:FB:14:THR:HB	2.19	0.43
1:A:606:A:H4'	1:A:607:G:H5"	2.00	0.43
1:A:89:G:H2'	1:A:90:C:O4'	2.19	0.43
27:AA:75:PRO:O	27:AA:103:ALA:O	2.36	0.43
53:AB:27:ARG:NH1	53:AB:27:ARG:HG3	2.33	0.43
79:AC:33:LYS:HE2	79:AC:34:TYR:OH	2.19	0.43
2:B:1434:G:O2'	2:B:1435:A:H5'	2.19	0.43
2:B:1643:A:H2'	2:B:1644:C:N3	2.34	0.43
2:B:1755:C:H2'	2:B:1756:C:H4'	2.00	0.43
2:B:1799:A:H2'	2:B:1800:A:C8	2.53	0.43
2:B:241:G:H2'	2:B:242:C:H5'	1.99	0.43
2:B:2469:G:H1	2:B:2477:G:H1'	1.84	0.43
2:B:2957:G:H2'	2:B:2958:A:C5'	2.45	0.43
2:B:3055:U:H1'	2:B:3057:U:OP1	2.18	0.43
2:B:3092:C:H5'	2:B:3093:C:OP1	2.19	0.43
2:B:3344:A:C2	2:B:3345:G:C1'	2.99	0.43
2:B:601:U:H2'	2:B:602:A:C8	2.54	0.43
2:B:799:G:HO2'	17:Q:18:TRP:HZ2	1.61	0.43
29:CA:139:ILE:HG23	29:CA:141:TYR:CE2	2.53	0.43
55:CB:145:ASP:O	55:CB:160:VAL:HG22	2.19	0.43
55:CB:77:TYR:HD2	55:CB:83:ARG:O	2.00	0.43
55:CB:99:MET:O	55:CB:100:ASN:CB	2.61	0.43
30:DA:11:ASP:O	30:DA:15:ALA:N	2.50	0.43
2:B:335:G:C5'	30:DA:9:SER:HB2	2.46	0.43
82:DC:143:LEU:HD13	82:DC:188:ILE:CD1	2.49	0.43
82:DC:308:LYS:HA	82:DC:312:LYS:HE3	2.00	0.43
82:DC:330:ALA:O	82:DC:334:LEU:HD12	2.18	0.43
82:DC:434:VAL:HB	82:DC:445:ILE:O	2.19	0.43
82:DC:564:ARG:HD3	82:DC:801:TRP:CH2	2.53	0.43
82:DC:571:SER:HB2	82:DC:589:LYS:HG2	2.00	0.43
82:DC:807:ASP:HA	82:DC:808:PRO:HD2	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1633:C:N4	31:EA:17:ARG:HD3	2.34	0.43
31:EA:87:LEU:HG	31:EA:88:ASP:N	2.19	0.43
6:F:27:ALA:HA	6:F:75:ILE:HG21	2.00	0.43
7:G:173:GLN:C	7:G:175:LYS:H	2.21	0.43
7:G:53:MET:CG	7:G:77:THR:HG22	2.43	0.43
59:GB:106:GLU:C	59:GB:111:THR:HG21	2.38	0.43
8:H:26:PHE:HA	8:H:127:ALA:HA	2.00	0.43
8:H:180:LYS:HZ1	8:H:202:ARG:HB2	1.84	0.43
9:I:20:PHE:HB2	9:I:30:TYR:HE1	1.83	0.43
9:I:83:LEU:HB3	9:I:88:ILE:HB	2.00	0.43
61:IB:54:ILE:HB	61:IB:55:ASP:H	1.55	0.43
10:J:123:PRO:HG2	10:J:125:GLN:H	1.83	0.43
36:JA:35:GLN:HG3	36:JA:42:VAL:HB	2.00	0.43
11:K:141:TYR:HE2	11:K:145:ARG:HG3	1.82	0.43
63:KB:21:ASN:O	63:KB:22:ALA:HB3	2.18	0.43
12:L:76:ALA:C	12:L:78:PHE:N	2.72	0.43
64:LB:29:HIS:CG	64:LB:41:ARG:HG3	2.53	0.43
64:LB:91:THR:HG23	64:LB:91:THR:O	2.18	0.43
40:NA:68:ARG:O	40:NA:72:VAL:HG23	2.19	0.43
15:O:139:THR:HG21	15:O:148:VAL:HG23	1.99	0.43
42:PA:69:LEU:CD2	42:PA:75:VAL:HG21	2.43	0.43
17:Q:48:PRO:HA	17:Q:137:GLN:CG	2.49	0.43
17:Q:71:ALA:O	17:Q:72:GLY:O	2.36	0.43
44:RA:95:VAL:HG11	44:RA:122:ARG:NH2	2.33	0.43
19:S:11:GLN:CG	19:S:44:ARG:NH2	2.82	0.43
2:B:32:U:H5"	19:S:71:ARG:HH21	1.83	0.43
72:TB:103:ILE:HD13	72:TB:103:ILE:C	2.38	0.43
72:TB:7:LEU:HD23	72:TB:11:LEU:HG	2.01	0.43
22:V:36:LEU:C	22:V:38:ARG:N	2.72	0.43
74:VB:91:LEU:CB	74:VB:96:LEU:HD22	2.38	0.43
23:W:11:ALA:HA	23:W:41:ILE:HG21	2.01	0.43
23:W:170:ARG:HD3	23:W:170:ARG:HA	1.84	0.43
75:WB:55:PRO:C	75:WB:57:TYR:N	2.72	0.43
50:XA:50:VAL:O	50:XA:53:THR:HB	2.18	0.43
76:XB:41:ILE:HB	76:XB:68:TYR:CD1	2.53	0.43
25:Y:17:ARG:HH21	25:Y:47:SER:HB3	1.81	0.43
2:B:2630:C:C5	25:Y:4:SER:HB2	2.54	0.43
51:YA:198:GLU:OE1	51:YA:210:ILE:HD13	2.18	0.43
77:YB:53:ALA:CA	77:YB:66:PRO:HG3	2.48	0.43
77:YB:51:GLN:O	77:YB:66:PRO:HB2	2.19	0.43
26:Z:43:VAL:O	26:Z:44:GLU:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:228:ASN:HB3	71:SB:1:MET:HG3	2.00	0.43
1:A:1264:G:C3'	1:A:1265:G:H5"	2.49	0.43
1:A:1279:C:H4'	79:AC:44:ARG:NH2	2.13	0.43
1:A:1678:A:C2'	1:A:1679:G:H5'	2.49	0.43
1:A:1676:U:H1'	1:A:1726:G:N2	2.34	0.43
1:A:243:G:C2'	1:A:244:A:H5'	2.48	0.43
1:A:351:C:H3'	1:A:352:A:C5'	2.49	0.43
1:A:931:C:P	76:XB:70:LYS:HE3	2.59	0.43
1:A:953:G:H2'	1:A:954:G:C8	2.54	0.43
27:AA:117:PRO:HG3	28:BA:22:VAL:CG1	2.49	0.43
27:AA:22:ILE:HA	27:AA:34:LEU:O	2.18	0.43
53:AB:7:LYS:HD3	70:RB:27:THR:CG2	2.48	0.43
79:AC:12:ARG:O	79:AC:18:SER:HB2	2.19	0.43
2:B:1109:U:H4'	22:V:153:PHE:CE1	2.54	0.43
2:B:1129:A:H2'	2:B:1130:A:C8	2.53	0.43
2:B:1389:G:O3'	2:B:1392:G:H5'	2.18	0.43
2:B:1507:G:N3	2:B:1507:G:H5'	2.32	0.43
2:B:1564:U:C2	2:B:1576:G:O6	2.72	0.43
2:B:1814:A:H3'	2:B:1815:U:H5'	2.01	0.43
2:B:1833:G:H2'	2:B:1834:U:H5'	2.00	0.43
2:B:1929:G:C3'	2:B:1930:A:H5"	2.47	0.43
2:B:1973:G:H4'	2:B:2048:G:H1	1.84	0.43
2:B:2144:A:C4	2:B:2281:A:C6	3.06	0.43
2:B:2131:A:C6	2:B:2188:A:H1'	2.54	0.43
2:B:2331:C:H2'	2:B:2332:A:O4'	2.19	0.43
2:B:2581:U:P	2:B:2581:U:H6	2.41	0.43
2:B:2703:A:O5'	2:B:2704:A:H5"	2.19	0.43
2:B:2799:A:H1'	32:FA:42:ARG:NE	2.29	0.43
2:B:2403:G:H1'	2:B:2872:A:C5	2.53	0.43
2:B:3158:G:H1	2:B:3292:A:H2	1.61	0.43
2:B:31:C:H2'	2:B:32:U:O4'	2.19	0.43
2:B:3349:C:H2'	2:B:3350:C:O4'	2.18	0.43
2:B:382:U:C4'	21:U:100:ALA:HB1	2.49	0.43
2:B:404:G:OP1	2:B:405:U:H5	2.02	0.43
2:B:86:G:N2	2:B:98:G:H2'	2.34	0.43
54:BB:180:LEU:HD21	54:BB:192:ILE:CG2	2.48	0.43
55:CB:20:PHE:HD1	55:CB:39:GLU:HG2	1.83	0.43
4:D:10:C:C5	9:I:20:PHE:HD2	2.37	0.43
56:DB:51:LYS:HB2	56:DB:112:VAL:HB	2.01	0.43
56:DB:6:SER:HA	56:DB:12:SER:O	2.19	0.43
82:DC:230:ALA:HB2	82:DC:237:LYS:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:578:LYS:HB3	82:DC:585:ARG:HA	2.00	0.43
82:DC:5:THR:O	82:DC:8:GLN:HB3	2.19	0.43
82:DC:629:ASP:HA	82:DC:632:LYS:CB	2.29	0.43
82:DC:747:LEU:C	82:DC:749:LYS:H	2.22	0.43
82:DC:558:PRO:HB3	82:DC:778:PHE:CG	2.54	0.43
31:EA:104:PRO:HA	31:EA:107:ARG:CB	2.44	0.43
1:A:768:C:C6	59:GB:143:ILE:HD13	2.54	0.43
35:IA:30:PRO:HG3	35:IA:60:TRP:CH2	2.54	0.43
10:J:51:ARG:HD2	10:J:161:ALA:O	2.19	0.43
2:B:3268:A:O4'	10:J:75:PRO:HG3	2.19	0.43
11:K:86:VAL:O	11:K:114:GLY:HA2	2.18	0.43
63:KB:128:TYR:O	63:KB:132:VAL:HG22	2.19	0.43
12:L:160:ILE:HG12	19:S:26:ARG:NH2	2.30	0.43
64:LB:20:TYR:CB	64:LB:27:PHE:HB2	2.48	0.43
51:YA:64:ARG:HD3	64:LB:34:SER:OG	2.19	0.43
39:MA:89:ARG:HG2	39:MA:89:ARG:HH11	1.84	0.43
14:N:9:TYR:CD2	14:N:97:LEU:HB3	2.54	0.43
66:NB:102:LYS:O	66:NB:105:LEU:HB3	2.19	0.43
66:NB:25:GLY:HA3	66:NB:64:ASP:CG	2.38	0.43
15:O:94:ARG:C	15:O:96:PHE:H	2.21	0.43
17:Q:119:TYR:CE2	17:Q:123:ILE:HG21	2.54	0.43
18:R:18:GLY:HA2	18:R:72:LEU:HD23	1.99	0.43
19:S:129:TYR:CD2	19:S:129:TYR:N	2.87	0.43
19:S:12:ARG:CG	19:S:12:ARG:HH11	2.30	0.43
71:SB:38:LYS:HB2	71:SB:49:GLU:CG	2.49	0.43
20:T:62:THR:HB	20:T:65:ASN:O	2.19	0.43
2:B:2765:C:O3'	46:TA:39:GLY:HA3	2.18	0.43
72:TB:113:HIS:ND1	72:TB:114:GLU:N	2.66	0.43
21:U:48:LEU:HD11	21:U:91:VAL:CG1	2.49	0.43
48:VA:82:GLY:C	48:VA:84:VAL:HG23	2.37	0.43
23:W:123:LEU:HD23	23:W:126:GLU:OE2	2.19	0.43
49:WA:113:VAL:HG23	49:WA:123:ILE:O	2.18	0.43
18:R:16:GLU:HB3	24:X:149:LYS:HG2	2.01	0.43
1:A:1322:A:O2'	50:XA:104:PRO:HB2	2.19	0.43
50:XA:202:TYR:O	50:XA:203:PHE:HB2	2.19	0.43
25:Y:66:ASN:OD1	33:GA:35:VAL:HA	2.18	0.43
51:YA:84:ILE:HD13	51:YA:103:MET:HG3	2.01	0.43
26:Z:77:LYS:HG3	26:Z:81:LYS:HE2	2.00	0.43
1:A:1291:G:H22	1:A:1324:G:H22	1.67	0.43
1:A:1419:G:O2'	79:AC:54:LYS:HE3	2.19	0.43
1:A:1481:C:OP2	69:QB:63:ARG:NH2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:304:U:H1'	61:IB:127:GLN:OE1	2.19	0.43
1:A:926:A:H2'	1:A:927:C:C6	2.54	0.43
1:A:972:G:HO2'	2:B:848:A:H2	1.58	0.43
27:AA:10:LYS:HE2	27:AA:10:LYS:CA	2.48	0.43
53:AB:65:ARG:HD3	53:AB:65:ARG:O	2.19	0.43
2:B:1064:A:N6	2:B:1096:U:H3	2.17	0.43
2:B:10:C:C3'	2:B:11:A:H5"	2.48	0.43
2:B:1282:G:H4'	48:VA:82:GLY:H	1.83	0.43
2:B:149:U:O2'	19:S:56:LYS:HD3	2.18	0.43
2:B:1506:A:H1'	2:B:1848:G:O6	2.19	0.43
2:B:1508:C:H3'	2:B:1509:A:C8	2.53	0.43
2:B:1731:A:H2'	2:B:1732:U:H5'	2.00	0.43
2:B:1878:G:N3	2:B:1878:G:H3'	2.33	0.43
2:B:2201:G:C6	2:B:2202:C:C4	3.06	0.43
2:B:2185:G:O2'	2:B:2314:U:OP2	2.35	0.43
2:B:237:G:H2'	2:B:238:A:O4'	2.19	0.43
2:B:2408:U:O2'	2:B:2409:G:H5'	2.19	0.43
2:B:2602:G:O2'	2:B:2603:G:H5'	2.18	0.43
2:B:2688:U:H4'	2:B:2689:A:C5'	2.48	0.43
2:B:3148:U:H2'	2:B:3149:G:H8	1.83	0.43
2:B:112:U:C4	2:B:320:G:C6	3.07	0.43
2:B:3270:U:C6	10:J:46:ARG:HD2	2.54	0.43
2:B:3313:U:H4'	7:G:173:GLN:CB	2.49	0.43
2:B:374:A:C4'	2:B:375:A:H5'	2.49	0.43
2:B:501:A:H5'	10:J:28:GLN:HE21	1.84	0.43
2:B:579:G:O2'	2:B:580:C:H5'	2.19	0.43
2:B:841:A:H5'	23:W:125:LYS:HB3	2.01	0.43
2:B:3052:G:OP1	28:BA:34:SER:HB2	2.19	0.43
54:BB:160:VAL:HG22	54:BB:172:PHE:HA	2.01	0.43
3:C:37:A:N7	3:C:104:A:N7	2.67	0.43
82:DC:239:LYS:O	82:DC:243:ARG:HG3	2.19	0.43
82:DC:561:VAL:HG22	82:DC:774:VAL:CG1	2.49	0.43
31:EA:29:HIS:CD2	31:EA:42:LEU:HD13	2.54	0.43
31:EA:27:LYS:O	31:EA:29:HIS:HD2	2.01	0.43
31:EA:50:PRO:HB3	31:EA:66:THR:HA	2.01	0.43
2:B:2148:U:H5'	6:F:197:PRO:HB3	2.00	0.43
32:FA:59:ARG:CZ	32:FA:61:PHE:CZ	3.01	0.43
32:FA:75:LEU:C	32:FA:77:LYS:N	2.70	0.43
58:FB:32:GLN:HA	58:FB:33:PRO:HD3	1.81	0.43
7:G:105:VAL:HG12	7:G:106:TRP:N	2.33	0.43
59:GB:80:LEU:C	59:GB:83:VAL:HG22	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:140:HIS:CE1	8:H:247:PHE:HB3	2.54	0.43
2:B:1730:G:C8	34:HA:28:LYS:HD3	2.54	0.43
9:I:33:ARG:O	9:I:37:VAL:HG23	2.19	0.43
35:IA:40:ALA:O	35:IA:44:MET:HG2	2.19	0.43
10:J:51:ARG:HD3	10:J:158:TYR:CZ	2.54	0.43
36:JA:66:LEU:CD2	36:JA:72:LYS:HG3	2.49	0.43
11:K:202:LEU:CD2	11:K:205:PHE:HE1	2.30	0.43
2:B:1178:G:N3	37:KA:19:SER:HA	2.33	0.43
37:KA:30:ILE:CG2	37:KA:31:LYS:H	2.32	0.43
63:KB:129:TYR:HD1	63:KB:134:VAL:HG21	1.82	0.43
63:KB:30:SER:O	63:KB:33:VAL:HG22	2.18	0.43
12:L:225:LYS:O	12:L:228:GLU:HB3	2.19	0.43
2:B:1696:A:C8	38:LA:26:PRO:HG2	2.53	0.43
39:MA:85:THR:CG2	39:MA:86:ARG:N	2.80	0.43
14:N:139:ARG:HD2	14:N:173:PHE:CE2	2.52	0.43
14:N:29:SER:CA	14:N:125:LEU:HD12	2.49	0.43
66:NB:127:LYS:C	66:NB:128:LYS:HD2	2.39	0.43
15:O:107:ASP:HA	15:O:124:GLY:CA	2.46	0.43
15:O:37:LEU:HD11	15:O:67:VAL:HG23	2.00	0.43
15:O:92:ARG:HA	15:O:173:ASP:OD2	2.18	0.43
15:O:96:PHE:CE1	15:O:160:VAL:HG22	2.54	0.43
41:OA:21:ARG:HD2	41:OA:37:CYS:HB2	2.00	0.43
50:XA:50:VAL:HG23	67:OB:113:LEU:HD21	1.98	0.43
67:OB:44:LYS:HG2	67:OB:48:ASN:ND2	2.34	0.43
1:A:1401:A:H5"	67:OB:53:TYR:OH	2.19	0.43
68:PB:142:GLY:HA2	68:PB:145:ARG:HH11	1.83	0.43
20:T:12:LYS:HB2	20:T:37:ARG:NH2	2.34	0.43
46:TA:104:LEU:HD12	46:TA:104:LEU:H	1.83	0.43
72:TB:78:ARG:HD2	72:TB:126:LEU:HD23	1.99	0.43
47:UA:35:ALA:O	47:UA:37:TYR:N	2.51	0.43
73:UB:43:PHE:CD2	73:UB:47:SER:O	2.71	0.43
50:XA:168:HIS:HB3	50:XA:203:PHE:CG	2.54	0.43
25:Y:78:LYS:HD3	25:Y:87:LYS:HZ2	1.83	0.43
25:Y:96:ILE:CG2	25:Y:97:LYS:N	2.67	0.43
51:YA:120:LEU:CD2	51:YA:122:GLU:HG3	2.38	0.43
52:ZA:228:ASN:O	52:ZA:229:LEU:HB2	2.18	0.43
1:A:1639:C:H2'	1:A:1640:C:O4'	2.19	0.43
1:A:1708:U:H6	1:A:1708:U:H3'	1.84	0.43
1:A:195:G:C3'	1:A:196:G:H5"	2.49	0.43
1:A:443:C:H3'	74:VB:105:ARG:HD2	2.01	0.43
1:A:864:U:H5	77:YB:22:LYS:HE2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:877:G:H4'	1:A:937:C:O2	2.19	0.43
27:AA:104:ASN:HB2	27:AA:105:PRO:HD2	2.01	0.43
53:AB:115:ILE:HA	53:AB:115:ILE:HD12	1.91	0.43
2:B:1079:A:C2'	2:B:1080:A:H5'	2.48	0.43
2:B:1101:G:C6	2:B:1102:A:C6	3.07	0.43
2:B:113:C:O2'	2:B:114:A:H5'	2.19	0.43
2:B:1263:A:H2'	2:B:1263:A:N3	2.34	0.43
2:B:1408:G:H2'	2:B:1409:G:C8	2.54	0.43
2:B:1422:G:H2'	2:B:1423:C:H6	1.83	0.43
2:B:1650:G:H4'	6:F:69:TYR:O	2.19	0.43
2:B:1801:U:H2'	2:B:1802:C:H6	1.84	0.43
2:B:1800:A:H2'	2:B:1801:U:O4'	2.19	0.43
2:B:1892:G:C3'	2:B:1893:A:H5"	2.48	0.43
2:B:1927:G:N7	47:UA:16:VAL:HG12	2.34	0.43
2:B:2633:U:H2'	2:B:2634:U:O4'	2.18	0.43
2:B:2778:G:C2'	2:B:2779:A:C5'	2.95	0.43
2:B:501:A:H2'	2:B:502:U:O4'	2.18	0.43
2:B:684:G:C8	2:B:684:G:O5'	2.72	0.43
1:A:123:G:N2	54:BB:146:THR:HG21	2.26	0.43
54:BB:55:ALA:CB	54:BB:61:VAL:HG12	2.48	0.43
80:BC:13:LYS:O	80:BC:16:SER:HB3	2.19	0.43
3:C:65:A:C2	3:C:96:A:C5	3.06	0.43
55:CB:63:GLN:HE22	55:CB:66:GLN:HB3	1.84	0.43
1:A:141:U:O4	56:DB:187:LYS:HB2	2.19	0.43
82:DC:362:ASP:HA	82:DC:367:ILE:HD11	2.01	0.43
82:DC:611:ASP:CB	82:DC:614:ALA:HB3	2.49	0.43
82:DC:84:GLU:HA	82:DC:87:LYS:CD	2.49	0.43
5:E:108:ASN:CB	5:E:151:VAL:HG22	2.47	0.43
57:EB:31:SER:HB2	57:EB:32:PRO:HD2	2.00	0.43
57:EB:74:GLN:HE22	57:EB:78:THR:HG21	1.84	0.43
2:B:2551:U:C4	6:F:95:SER:HB3	2.51	0.43
2:B:1369:A:H5"	32:FA:21:ARG:NH2	2.34	0.43
32:FA:47:LYS:O	32:FA:48:TYR:HB2	2.19	0.43
1:A:385:A:H5'	58:FB:21:PHE:CZ	2.54	0.43
7:G:160:VAL:HG21	7:G:183:LEU:HD21	1.99	0.43
7:G:296:THR:C	7:G:298:PHE:N	2.73	0.43
7:G:216:ASP:HB2	7:G:339:ARG:HB3	1.99	0.43
33:GA:25:LYS:HB3	33:GA:26:THR:H	1.65	0.43
8:H:216:VAL:HG23	8:H:217:LYS:N	2.34	0.43
8:H:247:PHE:CE2	8:H:249:ILE:HD11	2.54	0.43
34:HA:33:SER:CB	34:HA:93:LEU:HD21	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:54:TYR:CG	10:J:63:LEU:HD21	2.53	0.43
11:K:140:SER:HB2	11:K:237:ASN:HD21	1.84	0.43
37:KA:31:LYS:HE3	37:KA:32:ILE:H	1.84	0.43
63:KB:45:LEU:HB3	63:KB:50:ILE:HG13	2.01	0.43
17:Q:126:PHE:C	39:MA:114:ARG:HH22	2.22	0.43
40:NA:70:ARG:HG3	40:NA:87:VAL:HG21	2.01	0.43
40:NA:61:ILE:CD1	40:NA:94:ILE:HD11	2.48	0.43
2:B:24:G:C5'	41:OA:59:THR:HG23	2.49	0.43
2:B:684:G:C5'	17:Q:35:ARG:HH22	2.32	0.43
2:B:77:A:OP2	17:Q:73:ARG:HD2	2.19	0.43
18:R:89:ALA:O	18:R:92:GLU:HG2	2.19	0.43
19:S:61:ILE:HD13	19:S:61:ILE:N	2.33	0.43
71:SB:34:ILE:HB	71:SB:53:TYR:HB2	2.00	0.43
20:T:113:ASP:HB2	20:T:160:ARG:HD2	2.01	0.43
21:U:112:LEU:HD11	21:U:150:VAL:HG22	2.01	0.43
47:UA:49:ARG:HB2	47:UA:55:TRP:CE3	2.52	0.43
22:V:157:PRO:HD3	32:FA:47:LYS:CB	2.48	0.43
74:VB:15:ASN:ND2	74:VB:22:GLN:HG2	2.34	0.43
74:VB:32:ARG:NH1	74:VB:39:GLU:OE2	2.51	0.43
2:B:1720:U:C4	23:W:124:TYR:CE2	3.06	0.43
49:WA:13:LEU:HD12	49:WA:310:ILE:CG2	2.47	0.43
49:WA:20:VAL:HA	49:WA:36:ALA:O	2.19	0.43
50:XA:169:SER:O	50:XA:172:LEU:HB3	2.19	0.43
51:YA:140:ILE:HG13	51:YA:141:ALA:H	1.84	0.43
51:YA:205:PHE:CD1	51:YA:206:PRO:CD	3.01	0.43
1:A:1087:A:N3	1:A:1142:A:H4'	2.34	0.42
1:A:1252:C:C2'	1:A:1253:U:H5'	2.46	0.42
1:A:1301:U:H2'	1:A:1302:U:C6	2.54	0.42
1:A:1341:A:H2'	1:A:1342:C:C6	2.53	0.42
1:A:1776:A:H2'	1:A:1777:G:C8	2.54	0.42
1:A:759:U:H2'	1:A:760:A:H8	1.84	0.42
1:A:824:G:H2'	1:A:825:U:C6	2.54	0.42
1:A:906:A:OP1	64:LB:51:ASP:HB2	2.18	0.42
53:AB:177:MET:SD	53:AB:182:LEU:HD13	2.58	0.42
53:AB:72:LEU:HD23	60:HB:20:VAL:CG1	2.36	0.42
53:AB:53:THR:CB	53:AB:94:ARG:HG2	2.49	0.42
2:B:1052:U:H2'	2:B:1053:A:H5'	2.01	0.42
2:B:1326:A:H2'	2:B:1327:C:C6	2.54	0.42
2:B:2164:A:H2'	2:B:2165:G:C8	2.54	0.42
2:B:2389:C:O2'	2:B:2390:A:H5'	2.19	0.42
2:B:254:A:H2'	2:B:255:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2619:G:H2'	2:B:2620:G:O4'	2.19	0.42
2:B:3051:U:H2'	2:B:3052:G:H8	1.84	0.42
2:B:306:A:H2'	2:B:306:A:N3	2.34	0.42
29:CA:111:ASN:HD22	29:CA:123:TYR:HB3	1.83	0.42
55:CB:157:ARG:HG3	55:CB:157:ARG:HH11	1.84	0.42
55:CB:166:ARG:HD2	78:ZB:46:GLY:HA3	2.01	0.42
2:B:198:A:H4'	30:DA:62:SER:N	2.34	0.42
82:DC:135:VAL:HG22	82:DC:185:VAL:HG23	2.00	0.42
82:DC:299:LEU:O	82:DC:303:LEU:HG	2.18	0.42
82:DC:334:LEU:H	82:DC:334:LEU:HD12	1.83	0.42
82:DC:561:VAL:HG12	82:DC:562:ALA:N	2.32	0.42
5:E:67:ILE:HD11	5:E:148:VAL:HG11	2.01	0.42
31:EA:21:LYS:HD2	31:EA:21:LYS:H	1.82	0.42
57:EB:164:TYR:CE1	57:EB:165:LYS:HG3	2.54	0.42
6:F:116:VAL:HG22	6:F:117:GLU:N	2.33	0.42
17:Q:67:ARG:HB3	32:FA:105:LEU:CD2	2.48	0.42
7:G:85:VAL:HG13	7:G:163:HIS:NE2	2.34	0.42
60:HB:92:ILE:HG13	60:HB:92:ILE:O	2.19	0.42
9:I:188:GLU:O	9:I:188:GLU:HG3	2.19	0.42
9:I:30:TYR:HA	9:I:33:ARG:HB3	2.01	0.42
35:IA:31:ARG:O	35:IA:35:GLU:HB2	2.19	0.42
10:J:21:THR:HG22	10:J:23:LYS:HG2	2.00	0.42
11:K:145:ARG:CZ	11:K:145:ARG:HB3	2.48	0.42
37:KA:72:THR:HG21	37:KA:84:THR:HG23	1.99	0.42
63:KB:119:GLU:HA	63:KB:122:ILE:HB	2.00	0.42
12:L:71:VAL:O	12:L:233:TRP:HB3	2.19	0.42
64:LB:102:LEU:HD12	76:XB:53:LEU:HD21	2.00	0.42
65:MB:44:ARG:HG3	65:MB:115:TYR:HE1	1.84	0.42
65:MB:60:LEU:HD21	65:MB:89:MET:HB3	2.01	0.42
14:N:48:LEU:O	14:N:139:ARG:HA	2.19	0.42
2:B:1234:G:H5"	16:P:118:ASP:O	2.18	0.42
16:P:60:VAL:O	16:P:75:PRO:HD2	2.18	0.42
68:PB:48:LYS:HE2	68:PB:54:LEU:HD11	2.01	0.42
19:S:127:TYR:HB2	19:S:129:TYR:CZ	2.54	0.42
19:S:12:ARG:H	19:S:12:ARG:CD	2.22	0.42
19:S:145:ASP:OD1	19:S:147:ARG:HB2	2.19	0.42
71:SB:71:ARG:HG2	71:SB:83:TRP:CH2	2.54	0.42
20:T:48:PHE:O	20:T:51:LYS:HB3	2.19	0.42
20:T:85:ARG:NH1	20:T:90:HIS:CD2	2.86	0.42
72:TB:99:PHE:N	72:TB:99:PHE:CD1	2.87	0.42
21:U:18:ARG:CZ	21:U:147:GLU:HB3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:16:SER:HA	21:U:149:VAL:HA	2.01	0.42
2:B:1281:G:C5'	48:VA:55:LYS:HB3	2.43	0.42
23:W:150:GLN:CA	23:W:153:LYS:HB3	2.47	0.42
49:WA:176:LYS:CB	49:WA:195:HIS:HB2	2.43	0.42
49:WA:40:LYS:HG2	49:WA:66:HIS:C	2.39	0.42
75:WB:57:TYR:O	75:WB:103:ARG:HB2	2.20	0.42
24:X:107:TYR:CE1	24:X:118:PHE:CD1	3.05	0.42
50:XA:109:ASN:ND2	50:XA:112:THR:HB	2.34	0.42
50:XA:118:PRO:HG2	50:XA:141:ILE:HD13	2.01	0.42
50:XA:79:ARG:HD2	50:XA:125:ASP:CB	2.48	0.42
76:XB:53:LEU:O	76:XB:55:GLU:N	2.52	0.42
51:YA:144:ARG:HE	51:YA:206:PRO:HB3	1.84	0.42
77:YB:37:CYS:C	77:YB:39:GLY:H	2.22	0.42
1:A:873:U:O2'	1:A:1047:G:H5"	2.18	0.42
1:A:1096:C:C4'	1:A:1099:U:H4'	2.49	0.42
1:A:1172:G:N2	69:QB:88:VAL:CG2	2.81	0.42
1:A:1562:G:O2'	1:A:1563:C:H5'	2.18	0.42
1:A:1615:C:H4'	1:A:1616:G:C8	2.54	0.42
1:A:1687:U:H1'	1:A:1715:G:C2	2.53	0.42
1:A:1724:U:H2'	1:A:1725:U:C6	2.54	0.42
1:A:652:G:H2'	1:A:653:C:O4'	2.19	0.42
1:A:94:U:O5'	1:A:94:U:H6	2.02	0.42
27:AA:90:GLY:HA3	28:BA:16:GLY:HA2	2.01	0.42
53:AB:126:VAL:HA	53:AB:129:SER:HB2	2.01	0.42
53:AB:51:ARG:HG2	53:AB:89:GLU:OE2	2.19	0.42
79:AC:49:ASP:C	79:AC:50:ILE:HG13	2.39	0.42
2:B:644:G:H1'	2:B:1153:A:N6	2.34	0.42
2:B:1523:U:H5'	29:CA:113:LEU:CD1	2.48	0.42
2:B:1719:G:C5	2:B:1720:U:C4	3.07	0.42
2:B:1753:G:H2'	2:B:1754:G:H8	1.84	0.42
2:B:2131:A:C5	2:B:2188:A:H1'	2.54	0.42
2:B:2339:C:H5"	7:G:236:LYS:HZ2	1.80	0.42
2:B:2638:C:H2'	2:B:2639:G:H5'	2.01	0.42
2:B:2714:G:H5'	2:B:2716:U:O4'	2.20	0.42
2:B:3029:A:C5	2:B:3030:G:H1'	2.54	0.42
2:B:3206:C:C2	18:R:99:TRP:CZ2	3.07	0.42
2:B:3389:U:C6	2:B:3389:U:H5'	2.53	0.42
2:B:375:A:H3'	2:B:376:G:H5"	2.01	0.42
2:B:533:A:N3	2:B:535:G:H5"	2.34	0.42
2:B:662:U:H2'	2:B:663:C:C6	2.54	0.42
2:B:684:G:H5"	17:Q:35:ARG:HH22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:991:G:H2'	2:B:992:A:O4'	2.18	0.42
2:B:3333:G:C8	28:BA:51:TRP:CD1	3.08	0.42
54:BB:221:ARG:O	54:BB:225:VAL:HG23	2.19	0.42
3:C:149:A:H2'	3:C:150:G:C8	2.54	0.42
3:C:41:A:C2'	3:C:42:G:H5'	2.49	0.42
3:C:55:U:H2'	3:C:56:G:H8	1.83	0.42
3:C:8:C:H2'	3:C:9:A:H8	1.74	0.42
29:CA:121:LYS:HG2	29:CA:122:ALA:N	2.33	0.42
56:DB:20:ASP:O	56:DB:24:ILE:HG13	2.19	0.42
82:DC:21:ASN:HA	82:DC:101:ASN:O	2.19	0.42
82:DC:155:VAL:CB	82:DC:209:VAL:HG22	2.46	0.42
82:DC:676:ILE:HD11	82:DC:722:PRO:CB	2.46	0.42
82:DC:780:PHE:CE2	82:DC:784:LEU:HD11	2.54	0.42
5:E:91:LYS:N	5:E:91:LYS:HD3	2.34	0.42
57:EB:17:GLU:HG2	57:EB:46:ILE:HG12	2.00	0.42
6:F:112:ILE:O	6:F:113:VAL:HG13	2.19	0.42
6:F:21:ARG:CZ	6:F:22:LEU:HG	2.49	0.42
7:G:248:LYS:HB2	7:G:248:LYS:HZ3	1.82	0.42
7:G:383:LEU:HB2	7:G:385:LYS:O	2.18	0.42
8:H:23:PRO:HA	8:H:259:ASP:OD1	2.19	0.42
8:H:359:LEU:HG	24:X:8:GLN:NE2	2.32	0.42
9:I:108:ARG:HB2	9:I:251:PRO:HB2	2.00	0.42
9:I:125:VAL:O	9:I:125:VAL:HG12	2.18	0.42
9:I:146:LEU:HD22	9:I:163:LEU:CD2	2.47	0.42
61:IB:111:VAL:O	61:IB:111:VAL:HG13	2.19	0.42
10:J:105:TYR:O	10:J:107:ALA:N	2.50	0.42
10:J:37:GLY:O	10:J:91:VAL:HG22	2.19	0.42
11:K:121:LYS:HD3	11:K:121:LYS:O	2.19	0.42
11:K:126:LEU:O	11:K:129:LEU:HB3	2.19	0.42
2:B:517:G:C5'	11:K:67:ARG:NH2	2.79	0.42
37:KA:91:ALA:O	37:KA:94:PHE:HB2	2.20	0.42
63:KB:70:LYS:HZ3	63:KB:72:MET:HB3	1.84	0.42
64:LB:128:LYS:CD	64:LB:128:LYS:H	2.32	0.42
13:M:171:ASP:C	13:M:173:ARG:N	2.73	0.42
13:M:48:VAL:HG12	13:M:52:LEU:C	2.39	0.42
65:MB:11:VAL:HG12	65:MB:11:VAL:O	2.18	0.42
14:N:166:ILE:HG21	25:Y:160:ILE:CG2	2.48	0.42
66:NB:7:VAL:HG22	66:NB:22:VAL:HB	2.00	0.42
15:O:87:LYS:HG2	15:O:91:LEU:HG	2.00	0.42
65:MB:18:ARG:O	68:PB:95:GLY:HA3	2.19	0.42
17:Q:166:ALA:HB1	32:FA:147:LEU:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:59:ARG:HA	17:Q:69:VAL:HG23	2.00	0.42
18:R:17:VAL:CG1	18:R:72:LEU:HD11	2.49	0.42
70:RB:30:LYS:HB2	70:RB:33:GLN:HB2	1.98	0.42
19:S:193:ARG:C	19:S:195:ASN:H	2.23	0.42
52:ZA:225:LEU:HD11	71:SB:23:ILE:HG22	2.01	0.42
20:T:76:PRO:HA	20:T:79:ILE:HG13	2.01	0.42
47:UA:28:LYS:HZ2	47:UA:28:LYS:HB3	1.84	0.42
73:UB:43:PHE:CE1	73:UB:76:LEU:HD11	2.54	0.42
48:VA:107:ALA:HB1	48:VA:108:PRO:HD2	2.01	0.42
74:VB:37:LYS:HD2	74:VB:57:VAL:CG1	2.49	0.42
23:W:23:TRP:CH2	23:W:25:ASP:HB3	2.54	0.42
24:X:3:HIS:HA	24:X:104:GLU:OE2	2.19	0.42
24:X:63:GLN:CG	24:X:64:ILE:N	2.82	0.42
76:XB:18:VAL:O	76:XB:19:LYS:HE3	2.19	0.42
25:Y:92:ARG:C	25:Y:94:GLU:N	2.72	0.42
77:YB:53:ALA:HA	77:YB:66:PRO:HG3	2.00	0.42
52:ZA:141:ARG:NH2	52:ZA:141:ARG:HG3	2.33	0.42
1:A:99:C:H1'	1:A:100:A:N7	2.34	0.42
1:A:1236:A:H61	1:A:1249:U:H3	1.67	0.42
1:A:1509:C:O5'	1:A:1509:C:H6	2.01	0.42
1:A:20:G:C2'	1:A:21:U:H5'	2.50	0.42
53:AB:212:LYS:HB3	53:AB:212:LYS:NZ	2.34	0.42
53:AB:91:VAL:HG22	53:AB:92:GLN:N	2.33	0.42
2:B:1004:U:H2'	2:B:1005:G:O4'	2.20	0.42
2:B:1137:C:H2'	2:B:1138:U:O4'	2.19	0.42
2:B:1505:C:N4	2:B:1506:A:H62	2.17	0.42
2:B:1522:U:C2	2:B:1835:A:C8	3.07	0.42
2:B:1593:A:H2	2:B:1616:U:O4'	2.00	0.42
2:B:1787:A:H2'	2:B:1788:C:C5'	2.47	0.42
2:B:1643:A:H2	2:B:1822:C:O2	2.03	0.42
2:B:1957:G:H2'	2:B:1958:U:O4'	2.19	0.42
2:B:200:C:H5	30:DA:103:LYS:NZ	2.17	0.42
2:B:2124:G:C2	2:B:2330:C:C2	3.07	0.42
2:B:2147:A:OP2	6:F:200:ARG:NH1	2.53	0.42
2:B:2307:G:C2	2:B:2310:U:H1'	2.54	0.42
2:B:255:A:H2'	2:B:256:G:H8	1.84	0.42
2:B:2685:C:H2'	2:B:2686:A:H8	1.83	0.42
2:B:2714:G:O4'	2:B:2716:U:C6	2.72	0.42
2:B:2746:A:O2'	2:B:2747:A:H5'	2.18	0.42
2:B:277:G:N3	19:S:93:LYS:HG3	2.34	0.42
2:B:2780:A:H2'	2:B:2781:U:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2922:G:C3'	2:B:2923:U:H5"	2.42	0.42
2:B:2943:G:O5'	2:B:2943:G:H8	2.02	0.42
2:B:2965:U:O2'	6:F:221:LYS:HE2	2.18	0.42
2:B:3039:C:H1'	27:AA:9:THR:HG22	2.01	0.42
2:B:432:G:C6	2:B:433:A:C6	3.07	0.42
2:B:588:G:H21	2:B:611:A:H5"	1.84	0.42
2:B:693:A:H2'	2:B:694:C:H6	1.83	0.42
2:B:902:G:H2'	2:B:903:U:O4'	2.19	0.42
54:BB:154:ILE:O	54:BB:155:LYS:HD3	2.19	0.42
3:C:155:A:H2'	3:C:156:U:O4'	2.19	0.42
30:DA:24:SER:HA	30:DA:27:ARG:HD2	2.00	0.42
30:DA:50:ILE:HG23	30:DA:70:ILE:CD1	2.49	0.42
56:DB:32:ILE:HD12	56:DB:63:MET:HB3	2.00	0.42
82:DC:329:PRO:HG2	82:DC:332:ASP:HB2	2.01	0.42
82:DC:360:PRO:O	82:DC:363:ASP:HB2	2.19	0.42
1:A:431:C:OP1	82:DC:391:LYS:HD3	2.19	0.42
82:DC:666:ALA:HB2	82:DC:706:ILE:HG12	2.02	0.42
5:E:134:PHE:CE1	83:EC:6776:A:N6	2.87	0.42
83:EC:6852:U:H2'	83:EC:6853:G:C8	2.55	0.42
6:F:137:ILE:HG22	6:F:138:GLY:H	1.84	0.42
32:FA:118:ILE:HB	32:FA:119:PRO:HD2	2.01	0.42
22:V:178:ARG:HG2	32:FA:51:GLY:HA3	2.01	0.42
7:G:339:ARG:HG2	7:G:340:LYS:O	2.19	0.42
7:G:37:ARG:O	7:G:38:SER:HB2	2.19	0.42
8:H:145:ILE:O	8:H:145:ILE:HD12	2.19	0.42
8:H:216:VAL:HG23	8:H:217:LYS:H	1.84	0.42
9:I:51:LEU:HD13	9:I:64:ILE:HD11	2.00	0.42
10:J:136:GLU:N	10:J:139:LYS:HE3	2.34	0.42
10:J:152:THR:HB	10:J:155:LEU:HD23	2.00	0.42
10:J:175:LYS:C	10:J:175:LYS:HD3	2.39	0.42
36:JA:32:TRP:CZ2	36:JA:53:PRO:HD2	2.53	0.42
11:K:80:GLN:O	11:K:81:HIS:C	2.58	0.42
12:L:72:PRO:C	12:L:74:THR:N	2.71	0.42
38:LA:85:VAL:HG12	38:LA:89:ILE:CD1	2.46	0.42
64:LB:23:PHE:O	64:LB:24:ASN:HB2	2.19	0.42
40:NA:90:MET:HA	40:NA:90:MET:CE	2.47	0.42
2:B:813:G:H1'	41:OA:49:TRP:CH2	2.54	0.42
67:OB:14:LYS:HE2	67:OB:68:GLY:O	2.19	0.42
16:P:114:ARG:HG2	16:P:129:THR:HG23	2.01	0.42
68:PB:16:ARG:HH11	68:PB:16:ARG:HG3	1.83	0.42
17:Q:119:TYR:O	17:Q:123:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QA:32:ASN:HD22	43:QA:32:ASN:H	1.65	0.42
18:R:32:LEU:O	18:R:33:ALA:CB	2.67	0.42
18:R:37:GLU:CD	18:R:74:ARG:HG3	2.40	0.42
70:RB:20:ILE:H	70:RB:20:ILE:HD12	1.84	0.42
70:RB:30:LYS:HE2	70:RB:112:VAL:HG22	2.01	0.42
2:B:126:U:H5'	19:S:141:ALA:HA	2.00	0.42
19:S:38:ARG:NH1	19:S:60:VAL:HG13	2.34	0.42
71:SB:28:ASP:C	71:SB:30:ALA:N	2.73	0.42
21:U:105:LYS:HG2	21:U:107:LEU:HD13	2.01	0.42
21:U:129:THR:HG1	21:U:139:TYR:HD2	1.65	0.42
21:U:171:ARG:HG3	21:U:171:ARG:HH11	1.83	0.42
73:UB:49:ALA:HB1	73:UB:78:LYS:HE3	2.01	0.42
22:V:51:ALA:HB1	22:V:84:VAL:HG11	2.01	0.42
74:VB:41:ARG:HG2	74:VB:55:VAL:HG12	2.01	0.42
75:WB:46:LYS:HD3	75:WB:70:LYS:CD	2.49	0.42
24:X:5:LYS:O	24:X:30:PHE:HD1	2.02	0.42
76:XB:44:ILE:CD1	76:XB:45:VAL:HG13	2.49	0.42
51:YA:121:ILE:HG21	51:YA:164:ILE:HG22	2.01	0.42
51:YA:70:LEU:H	51:YA:70:LEU:HD12	1.85	0.42
52:ZA:168:ARG:HB3	52:ZA:199:GLN:O	2.18	0.42
52:ZA:89:GLN:HA	52:ZA:89:GLN:NE2	2.34	0.42
1:A:1040:G:O2'	1:A:1041:G:H5'	2.20	0.42
1:A:1535:U:O2	1:A:1535:U:O4'	2.38	0.42
1:A:1658:G:H2'	1:A:1659:A:O4'	2.19	0.42
1:A:198:A:C2'	1:A:199:G:H5'	2.49	0.42
1:A:243:G:H2'	1:A:244:A:H5'	2.01	0.42
1:A:386:G:N3	1:A:425:A:H2	2.17	0.42
1:A:561:G:H2'	1:A:562:G:C8	2.54	0.42
1:A:809:A:H2'	1:A:810:G:C8	2.55	0.42
1:A:851:U:H2'	1:A:852:C:C6	2.54	0.42
1:A:884:A:H5"	51:YA:136:ARG:HH21	1.81	0.42
27:AA:62:VAL:HB	27:AA:70:ARG:HG2	2.01	0.42
53:AB:114:ALA:HB3	53:AB:117:ARG:CG	2.49	0.42
53:AB:105:MET:HE2	53:AB:118:ALA:HB1	2.01	0.42
53:AB:153:ALA:O	53:AB:154:ASP:HB2	2.19	0.42
2:B:1234:G:O2'	16:P:132:ILE:HG21	2.19	0.42
2:B:1503:A:O2'	2:B:1504:A:H5'	2.18	0.42
2:B:1654:A:C2'	38:LA:59:PRO:HG3	2.49	0.42
2:B:1746:U:H2'	2:B:1747:G:O4'	2.20	0.42
2:B:1886:A:O2'	7:G:226:PHE:O	2.38	0.42
2:B:1902:G:OP2	2:B:1903:U:H5	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1912:U:C4	2:B:1913:A:C6	3.07	0.42
2:B:1923:C:H5"	45:SA:25:LYS:HG2	2.01	0.42
2:B:2249:G:H2'	2:B:2250:G:H8	1.83	0.42
2:B:2192:C:O2'	2:B:2312:A:N1	2.49	0.42
2:B:2465:G:H1	2:B:2486:A:C2'	2.30	0.42
2:B:2618:G:H5"	2:B:2618:G:N3	2.34	0.42
2:B:2662:G:H2'	2:B:2663:G:H8	1.79	0.42
2:B:2730:G:H4'	22:V:184:PHE:CE2	2.54	0.42
2:B:2754:G:H5"	2:B:2755:C:O3'	2.19	0.42
2:B:3101:G:O2'	2:B:3102:G:H5'	2.18	0.42
2:B:3180:A:H4'	20:T:116:LYS:HA	2.01	0.42
2:B:413:U:O4'	21:U:118:GLN:HB2	2.18	0.42
2:B:41:G:N2	2:B:2803:A:N6	2.66	0.42
2:B:569:A:H2'	2:B:570:A:H8	1.83	0.42
2:B:615:U:H2'	2:B:616:G:H8	1.84	0.42
2:B:623:U:H2'	2:B:624:G:C8	2.55	0.42
2:B:65:A:H4'	2:B:66:A:O5'	2.19	0.42
2:B:975:C:H5"	22:V:54:LEU:CD2	2.49	0.42
54:BB:142:HIS:C	54:BB:144:GLY:H	2.23	0.42
54:BB:169:ILE:CD1	54:BB:169:ILE:H	2.27	0.42
54:BB:199:GLU:CB	54:BB:207:LEU:HB2	2.47	0.42
3:C:35:C:H2'	3:C:36:G:C8	2.51	0.42
55:CB:172:ILE:O	55:CB:176:THR:HG23	2.19	0.42
55:CB:58:LEU:HD21	55:CB:167:ARG:HD2	2.01	0.42
4:D:23:A:H4'	4:D:121:U:O3'	2.19	0.42
56:DB:148:SER:C	56:DB:150:GLU:H	2.22	0.42
82:DC:229:TYR:HB3	82:DC:240:MET:HE2	2.01	0.42
82:DC:35:LEU:HD21	82:DC:334:LEU:HD22	2.01	0.42
82:DC:378:LEU:O	82:DC:378:LEU:HD23	2.19	0.42
2:B:2202:C:H5"	6:F:226:SER:CB	2.49	0.42
7:G:160:VAL:CG2	7:G:183:LEU:HD11	2.50	0.42
7:G:272:TYR:O	7:G:272:TYR:HD1	2.03	0.42
7:G:382:THR:N	7:G:387:LEU:HD12	2.34	0.42
2:B:3049:A:H2	7:G:55:THR:HG23	1.83	0.42
7:G:93:VAL:HG13	7:G:95:THR:CG2	2.49	0.42
33:GA:12:GLN:HA	33:GA:15:LYS:HE2	2.00	0.42
35:IA:23:VAL:CG1	35:IA:28:ARG:HG3	2.49	0.42
35:IA:55:LEU:O	35:IA:59:ILE:HG13	2.19	0.42
61:IB:3:THR:OG1	61:IB:82:ARG:HG3	2.20	0.42
36:JA:20:HIS:CG	36:JA:42:VAL:HG21	2.55	0.42
11:K:69:ALA:HB1	11:K:74:SER:C	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:164:SER:HB2	37:KA:6:ARG:N	2.35	0.42
12:L:151:VAL:N	12:L:176:PRO:O	2.52	0.42
2:B:1695:U:O2	38:LA:26:PRO:HB3	2.20	0.42
38:LA:8:ARG:HG3	38:LA:32:ALA:CB	2.35	0.42
13:M:4:ILE:O	13:M:58:HIS:HA	2.20	0.42
2:B:3115:C:H5	13:M:62:ARG:HH21	1.68	0.42
65:MB:84:ILE:CG2	65:MB:113:GLY:HA2	2.49	0.42
14:N:173:PHE:CD1	14:N:173:PHE:N	2.87	0.42
14:N:213:PHE:N	14:N:214:PRO:CD	2.82	0.42
1:A:1581:C:H4'	66:NB:135:ARG:HB2	2.00	0.42
15:O:49:LYS:HA	15:O:64:LYS:CA	2.48	0.42
2:B:361:A:H5'	41:OA:35:SER:OG	2.19	0.42
42:PA:60:GLY:C	42:PA:62:ALA:N	2.72	0.42
17:Q:106:GLN:HB3	40:NA:18:THR:HG23	2.01	0.42
2:B:1588:A:C5	43:QA:4:GLN:HG3	2.55	0.42
69:QB:108:LEU:CD2	69:QB:113:ILE:HD12	2.49	0.42
69:QB:53:TRP:HA	69:QB:56:LYS:HG2	2.01	0.42
18:R:102:LYS:C	18:R:105:GLN:HB2	2.39	0.42
18:R:66:THR:CG2	18:R:67:PRO:HD2	2.49	0.42
18:R:84:LYS:O	18:R:87:ALA:HB3	2.19	0.42
19:S:169:LYS:HA	19:S:172:ARG:HH12	1.83	0.42
47:UA:47:VAL:CG1	47:UA:47:VAL:O	2.67	0.42
74:VB:87:PRO:HB2	74:VB:89:TYR:CE2	2.53	0.42
23:W:84:THR:HG23	23:W:87:ALA:CB	2.47	0.42
23:W:90:PRO:HB2	23:W:93:VAL:CG2	2.50	0.42
49:WA:106:HIS:NE2	49:WA:110:VAL:HG22	2.35	0.42
49:WA:303:ALA:O	49:WA:310:ILE:HA	2.19	0.42
75:WB:66:VAL:HA	75:WB:70:LYS:O	2.20	0.42
50:XA:79:ARG:CD	50:XA:125:ASP:HB2	2.49	0.42
50:XA:22:THR:HG22	50:XA:169:SER:HA	2.02	0.42
76:XB:32:LYS:HB2	76:XB:32:LYS:HZ2	1.83	0.42
76:XB:38:ARG:HD3	76:XB:38:ARG:HA	1.86	0.42
25:Y:143:THR:O	25:Y:144:GLU:C	2.57	0.42
1:A:957:G:O2'	77:YB:49:HIS:CD2	2.73	0.42
77:YB:62:ILE:HD12	77:YB:63:LEU:N	2.33	0.42
1:A:864:U:H5	77:YB:22:LYS:CE	2.32	0.42
1:A:893:U:H2'	1:A:894:U:C5'	2.50	0.42
53:AB:138:VAL:HG13	53:AB:183:GLY:O	2.20	0.42
2:B:1084:A:H5"	25:Y:35:LYS:CE	2.48	0.42
2:B:1116:G:H3'	2:B:1117:G:H5"	2.01	0.42
2:B:1186:G:H1'	24:X:112:ALA:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1234:G:H5”	16:P:118:ASP:HB3	1.96	0.42
2:B:1255:C:O2’	2:B:1256:G:H8	2.01	0.42
2:B:1321:G:H1’	24:X:111:ALA:O	2.20	0.42
2:B:1463:U:H3	2:B:1467:A:H62	1.68	0.42
2:B:161:G:H5’	2:B:161:G:H8	1.85	0.42
2:B:1669:C:H2’	2:B:1670:C:O4’	2.19	0.42
2:B:1887:A:O3’	7:G:228:GLY:HA3	2.20	0.42
2:B:1919:G:C2’	2:B:1933:A:H61	2.32	0.42
2:B:2610:G:C2	2:B:2611:U:C2	3.08	0.42
2:B:2746:A:H1’	9:I:160:PHE:CE1	2.55	0.42
2:B:2765:C:H42	2:B:2793:G:H1	1.67	0.42
2:B:2892:A:O2’	2:B:2893:C:H5’	2.19	0.42
2:B:301:G:H2’	2:B:302:U:H6	1.84	0.42
2:B:3021:A:H61	2:B:3032:A:H3’	1.84	0.42
2:B:3025:C:H2’	2:B:3026:G:C8	2.54	0.42
2:B:3125:U:O2’	2:B:3126:C:H5’	2.20	0.42
2:B:3126:C:O2’	2:B:3127:A:H5’	2.20	0.42
2:B:3273:A:H4’	10:J:44:ALA:CB	2.49	0.42
2:B:384:A:H2’	2:B:385:A:O4’	2.19	0.42
2:B:502:U:H3’	2:B:503:C:H5”	2.02	0.42
2:B:55:G:C2’	2:B:56:G:H5’	2.49	0.42
2:B:649:A:H4’	2:B:2869:U:C4’	2.42	0.42
3:C:47:C:H4’	3:C:61:A:C5	2.54	0.42
29:CA:73:MET:HE3	29:CA:76:VAL:HG21	2.00	0.42
56:DB:216:LEU:HG	56:DB:219:ARG:NH1	2.32	0.42
82:DC:274:ASN:N	82:DC:274:ASN:HD22	2.16	0.42
82:DC:507:GLY:HA3	82:DC:550:ALA:HB2	2.01	0.42
82:DC:595:GLU:HB3	82:DC:599:LEU:CD1	2.46	0.42
5:E:115:VAL:CG2	5:E:140:HIS:HB2	2.49	0.42
5:E:65:ILE:HG12	5:E:148:VAL:O	2.19	0.42
32:FA:70:LYS:O	32:FA:70:LYS:HG2	2.19	0.42
58:FB:77:ARG:H	58:FB:105:ASP:HB2	1.84	0.42
7:G:160:VAL:HB	7:G:183:LEU:HD11	2.02	0.42
7:G:19:ARG:HG3	7:G:273:HIS:HE1	1.85	0.42
7:G:67:PHE:HD1	7:G:72:VAL:CG1	2.32	0.42
8:H:180:LYS:NZ	8:H:202:ARG:HB2	2.34	0.42
34:HA:24:THR:CG2	34:HA:91:SER:HB3	2.49	0.42
34:HA:48:THR:OG1	34:HA:49:PRO:HD2	2.20	0.42
9:I:157:ALA:C	9:I:159:VAL:N	2.73	0.42
9:I:40:HIS:HB3	9:I:43:LYS:CD	2.50	0.42
35:IA:86:LYS:HD2	35:IA:86:LYS:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:136:LEU:O	12:L:137:ASN:C	2.58	0.42
2:B:2585:G:C8	12:L:48:ARG:HA	2.46	0.42
12:L:90:THR:O	12:L:94:PHE:HB2	2.19	0.42
64:LB:122:PRO:HB2	64:LB:123:SER:H	1.60	0.42
64:LB:20:TYR:OH	64:LB:86:THR:HA	2.19	0.42
65:MB:93:VAL:HG22	65:MB:106:GLU:HB2	2.00	0.42
40:NA:23:ALA:HA	40:NA:24:PRO:HD2	1.85	0.42
40:NA:76:ARG:HA	40:NA:76:ARG:HE	1.84	0.42
15:O:71:VAL:CG1	15:O:72:ARG:N	2.81	0.42
15:O:94:ARG:C	15:O:96:PHE:N	2.71	0.42
16:P:109:ILE:HG23	16:P:110:ILE:HD12	2.00	0.42
16:P:124:THR:HB	16:P:127:SER:HB2	2.01	0.42
69:QB:65:ILE:HD12	69:QB:65:ILE:HA	1.96	0.42
70:RB:38:SER:O	70:RB:42:VAL:HG23	2.20	0.42
45:SA:7:LYS:HE2	45:SA:11:ARG:HH12	1.85	0.42
71:SB:5:LYS:H	71:SB:5:LYS:HD3	1.83	0.42
48:VA:178:ILE:N	48:VA:178:ILE:HD12	2.33	0.42
2:B:1281:G:N2	48:VA:83:ASN:HD21	2.14	0.42
49:WA:232:TYR:HD1	49:WA:234:LEU:HD11	1.84	0.42
24:X:145:THR:OG1	24:X:148:LEU:HD13	2.19	0.42
50:XA:141:ILE:HA	50:XA:142:PRO:HD3	1.84	0.42
50:XA:21:ASN:HD22	50:XA:167:LYS:HE2	1.83	0.42
52:ZA:53:ILE:HG13	52:ZA:54:GLU:OE2	2.19	0.42
78:ZB:56:LEU:H	78:ZB:56:LEU:HD23	1.83	0.42
1:A:1305:U:H5"	1:A:1306:C:C5	2.54	0.42
1:A:1304:G:H5'	1:A:1322:A:OP2	2.19	0.42
1:A:1614:A:H2'	1:A:1615:C:H5'	2.01	0.42
1:A:1709:C:C2'	1:A:1710:U:H5'	2.49	0.42
1:A:300:A:O2'	1:A:301:A:H5'	2.18	0.42
1:A:50:C:N4	1:A:424:C:H2'	2.35	0.42
1:A:628:G:H21	1:A:971:A:H62	1.67	0.42
1:A:633:U:H2'	1:A:634:G:C8	2.48	0.42
2:B:1063:G:HO2'	2:B:1097:G:N2	2.17	0.42
2:B:1261:G:N7	48:VA:35:SER:HB2	2.35	0.42
2:B:158:G:H2'	2:B:159:A:C8	2.54	0.42
2:B:1732:U:H2'	2:B:1733:G:H5'	2.01	0.42
2:B:1779:C:P	23:W:97:ARG:NH2	2.92	0.42
2:B:1863:G:H4'	23:W:82:LYS:HD2	2.01	0.42
2:B:2784:G:H2'	2:B:2785:A:O4'	2.20	0.42
2:B:2873:U:O4'	2:B:2873:U:O2	2.37	0.42
2:B:2998:U:H4'	2:B:3394:U:O2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3024:A:H4'	13:M:97:PHE:HD2	1.84	0.42
2:B:3383:G:H2'	2:B:3384:U:H6	1.82	0.42
54:BB:154:ILE:HG12	54:BB:172:PHE:HB2	2.00	0.42
54:BB:52:LEU:HD13	54:BB:54:TYR:CD2	2.54	0.42
3:C:75:G:C1'	43:QA:30:ARG:HG2	2.49	0.42
1:A:1535:U:N3	55:CB:187:ILE:HA	2.35	0.42
4:D:88:G:H2'	4:D:89:G:H8	1.84	0.42
56:DB:217:SER:HA	56:DB:220:LYS:HG3	2.01	0.42
82:DC:211:PHE:HB2	82:DC:220:PHE:CE2	2.55	0.42
82:DC:244:LEU:HD11	82:DC:277:ILE:HD11	2.02	0.42
82:DC:382:VAL:CG1	82:DC:397:PHE:H	2.26	0.42
82:DC:418:TYR:HE1	82:DC:426:LEU:HB2	1.85	0.42
82:DC:697:ALA:HA	82:DC:700:ARG:NE	2.35	0.42
82:DC:710:ARG:HB3	82:DC:710:ARG:HH11	1.83	0.42
5:E:195:LYS:H	5:E:195:LYS:CD	2.31	0.42
57:EB:185:ILE:CD1	57:EB:185:ILE:H	2.11	0.42
83:EC:6769:A:C3'	83:EC:6770:U:C5'	2.94	0.42
83:EC:6896:A:H4'	83:EC:6897:G:OP1	2.19	0.42
6:F:40:TYR:CD1	6:F:40:TYR:N	2.88	0.42
58:FB:83:TYR:O	58:FB:84:HIS:HB2	2.19	0.42
7:G:136:LYS:O	7:G:136:LYS:HD2	2.19	0.42
7:G:39:LYS:HA	7:G:40:PRO:HD3	1.83	0.42
59:GB:83:VAL:HA	59:GB:149:ARG:CA	2.49	0.42
8:H:239:ALA:N	8:H:240:PRO:CD	2.81	0.42
8:H:300:ARG:HG2	22:V:39:ARG:HG2	2.01	0.42
60:HB:3:MET:SD	60:HB:8:ARG:HB2	2.59	0.42
9:I:273:ARG:HH21	9:I:275:THR:HB	1.84	0.42
9:I:86:TYR:CD2	9:I:247:ILE:HG12	2.55	0.42
11:K:157:ASN:O	11:K:158:LYS:CB	2.68	0.42
11:K:147:LEU:HD22	11:K:205:PHE:CD2	2.54	0.42
8:H:329:PRO:HB3	11:K:41:ARG:CZ	2.50	0.42
63:KB:45:LEU:HB3	63:KB:50:ILE:CG1	2.49	0.42
12:L:153:ILE:CG2	12:L:163:VAL:HG23	2.49	0.42
12:L:77:GLN:HG2	12:L:78:PHE:CE1	2.54	0.42
64:LB:82:LYS:HD3	64:LB:118:VAL:HG21	2.01	0.42
64:LB:13:VAL:HG23	64:LB:77:THR:N	2.29	0.42
64:LB:87:GLY:C	64:LB:120:PRO:HG2	2.40	0.42
13:M:74:LEU:C	13:M:74:LEU:HD23	2.38	0.42
65:MB:34:VAL:HG11	65:MB:45:PHE:HB2	2.01	0.42
2:B:156:G:P	40:NA:27:SER:HB3	2.60	0.42
66:NB:9:THR:CG2	66:NB:88:GLY:HA2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1234:G:C1'	16:P:114:ARG:HH22	2.32	0.42
42:PA:5:ILE:C	42:PA:54:LEU:HD12	2.39	0.42
68:PB:33:THR:HG21	68:PB:40:ARG:HD2	2.01	0.42
17:Q:47:ALA:HB3	17:Q:48:PRO:HD3	2.01	0.42
17:Q:57:VAL:HG12	17:Q:69:VAL:HG21	2.02	0.42
43:QA:16:ALA:HA	43:QA:19:GLN:HB2	2.01	0.42
18:R:22:LEU:O	18:R:63:VAL:HA	2.20	0.42
18:R:84:LYS:HA	18:R:84:LYS:HD2	1.92	0.42
19:S:59:PHE:CZ	19:S:135:VAL:HG22	2.54	0.42
20:T:119:VAL:HG23	20:T:119:VAL:O	2.19	0.42
72:TB:27:ILE:O	72:TB:60:LYS:HA	2.20	0.42
21:U:163:LYS:NZ	21:U:163:LYS:HB3	2.34	0.42
21:U:19:GLY:CA	21:U:94:LEU:HD21	2.50	0.42
22:V:12:ARG:CZ	22:V:12:ARG:HB2	2.49	0.42
22:V:54:LEU:CB	22:V:58:ASN:HB3	2.46	0.42
22:V:8:LYS:NZ	33:GA:18:ARG:HH21	2.17	0.42
48:VA:26:PHE:HE1	48:VA:190:VAL:HG12	1.85	0.42
23:W:74:ARG:O	23:W:75:HIS:HB2	2.18	0.42
49:WA:18:GLY:O	49:WA:308:ASN:OD1	2.37	0.42
75:WB:46:LYS:HB3	75:WB:70:LYS:HD2	2.02	0.42
50:XA:18:LEU:HD23	50:XA:23:HIS:HB3	2.01	0.42
50:XA:67:ILE:HD13	50:XA:67:ILE:HA	1.92	0.42
25:Y:45:ASN:C	25:Y:47:SER:H	2.22	0.42
77:YB:43:ILE:HG13	77:YB:43:ILE:O	2.20	0.42
52:ZA:140:ARG:NH2	52:ZA:226:THR:HG22	2.32	0.42
1:A:1340:U:H4'	1:A:1378:U:OP1	2.20	0.42
1:A:1340:U:O2'	49:WA:63:GLY:HA2	2.20	0.42
1:A:1451:C:O2'	1:A:1452:U:H5'	2.19	0.42
1:A:179:A:O2'	1:A:180:A:H5'	2.20	0.42
1:A:185:U:H5'	58:FB:146:ARG:HH22	1.84	0.42
1:A:421:A:H2'	1:A:422:G:C8	2.55	0.42
1:A:7:G:H4'	1:A:573:C:O2'	2.19	0.42
1:A:857:U:O4	23:W:170:ARG:HB3	2.19	0.42
2:B:2295:A:C2	27:AA:37:ILE:HD13	2.54	0.42
2:B:1215:U:H2'	2:B:1216:C:O4'	2.19	0.42
2:B:1216:C:H2'	2:B:1217:A:C5'	2.49	0.42
2:B:1837:U:H2'	2:B:1838:G:H5'	2.01	0.42
2:B:3028:G:H2'	2:B:3029:A:C8	2.54	0.42
2:B:3139:A:O2'	2:B:3140:G:H5'	2.19	0.42
2:B:64:G:C6	2:B:322:U:C5	3.07	0.42
2:B:334:A:N1	2:B:335:G:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:32:U:C4	2:B:33:G:C6	3.08	0.42
2:B:33:G:H1'	2:B:52:A:N6	2.35	0.42
2:B:624:G:H2'	2:B:625:G:O4'	2.19	0.42
2:B:63:A:H2'	2:B:64:G:O4'	2.19	0.42
2:B:663:C:O2'	2:B:664:U:H5'	2.20	0.42
2:B:672:A:H2'	2:B:673:U:O4'	2.20	0.42
3:C:131:A:C2'	3:C:132:G:H5'	2.49	0.42
2:B:59:G:H2'	3:C:33:A:H2'	2.02	0.42
3:C:36:G:C8	39:MA:86:ARG:HD3	2.55	0.42
3:C:77:A:H2'	3:C:78:G:O4'	2.20	0.42
29:CA:62:VAL:CG1	29:CA:95:ILE:HA	2.49	0.42
55:CB:222:LYS:O	55:CB:225:ARG:HB2	2.19	0.42
4:D:52:G:H2'	4:D:52:G:N3	2.35	0.42
4:D:70:U:H2'	4:D:71:G:O4'	2.19	0.42
56:DB:36:VAL:HG12	56:DB:37:ASP:H	1.85	0.42
82:DC:724:ILE:HD11	82:DC:804:LEU:HD12	2.01	0.42
31:EA:21:LYS:HE2	31:EA:136:PHE:HZ	1.85	0.42
2:B:2181:C:H5"	6:F:193:ARG:NH2	2.34	0.42
6:F:2:GLY:HA2	6:F:207:VAL:HA	2.02	0.42
6:F:206:PRO:HD3	6:F:213:GLY:N	2.34	0.42
6:F:251:LYS:O	6:F:251:LYS:HD3	2.19	0.42
6:F:56:ALA:HB2	6:F:130:SER:HA	2.01	0.42
32:FA:49:HIS:N	32:FA:50:PRO:CD	2.83	0.42
7:G:158:VAL:HG22	7:G:188:ILE:HG23	1.99	0.42
7:G:262:TRP:CD1	7:G:262:TRP:N	2.86	0.42
59:GB:168:ARG:HG2	59:GB:171:ARG:HH12	1.83	0.42
8:H:136:LEU:C	8:H:138:ARG:H	2.22	0.42
8:H:328:ASN:CG	8:H:328:ASN:O	2.58	0.42
60:HB:69:THR:HG22	60:HB:70:GLU:N	2.32	0.42
9:I:111:GLN:HE21	9:I:111:GLN:HB3	1.72	0.42
9:I:225:GLY:C	9:I:227:LEU:H	2.22	0.42
1:A:960:U:O2'	63:KB:51:GLY:HA3	2.19	0.42
38:LA:74:ARG:NH1	38:LA:75:ALA:O	2.52	0.42
13:M:188:THR:O	13:M:191:LEU:O	2.37	0.42
3:C:38:U:N3	39:MA:89:ARG:HD2	2.35	0.42
39:MA:90:ARG:HB2	39:MA:91:ALA:H	1.68	0.42
14:N:19:LYS:HA	14:N:23:ASN:ND2	2.16	0.42
15:O:80:LEU:O	15:O:84:LEU:N	2.53	0.42
17:Q:105:ASN:HB3	17:Q:108:ILE:CG1	2.49	0.42
17:Q:131:LYS:C	17:Q:131:LYS:HD3	2.40	0.42
69:QB:28:LEU:N	69:QB:28:LEU:HD13	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:39:ILE:HB	18:R:43:LYS:O	2.19	0.42
13:M:17:THR:HB	18:R:4:ASP:O	2.19	0.42
19:S:94:TYR:CZ	19:S:96:ARG:HB2	2.54	0.42
71:SB:32:VAL:HB	71:SB:60:ARG:HH21	1.84	0.42
71:SB:38:LYS:NZ	71:SB:51:VAL:HA	2.34	0.42
20:T:18:ARG:HB2	20:T:123:ALA:HA	2.00	0.42
20:T:20:ALA:HB1	20:T:84:LEU:HD23	2.02	0.42
2:B:277:G:O5'	46:TA:49:GLY:HA2	2.20	0.42
21:U:117:ILE:HA	21:U:148:LEU:HA	2.02	0.42
21:U:16:SER:HB3	21:U:149:VAL:HG13	2.01	0.42
21:U:179:GLN:C	21:U:181:ARG:H	2.23	0.42
47:UA:33:GLN:HB3	47:UA:69:TYR:HA	2.01	0.42
73:UB:57:LEU:HD11	73:UB:73:ARG:HB2	2.01	0.42
48:VA:45:LEU:HD22	48:VA:48:ARG:HB2	2.02	0.42
48:VA:91:GLU:HB2	48:VA:96:ILE:HG21	2.02	0.42
74:VB:104:SER:HB3	74:VB:107:GLN:OE1	2.20	0.42
74:VB:41:ARG:HB2	74:VB:41:ARG:HH11	1.84	0.42
49:WA:160:GLU:OE2	49:WA:207:ASP:HB2	2.20	0.42
75:WB:71:ILE:HB	75:WB:75:LEU:CB	2.46	0.42
76:XB:36:ILE:HD11	76:XB:38:ARG:HH21	1.85	0.42
25:Y:20:ARG:CZ	25:Y:20:ARG:HB3	2.50	0.42
52:ZA:169:LEU:HD21	52:ZA:188:LEU:HD11	2.02	0.42
1:A:999:U:C5	1:A:1000:C:C4	3.07	0.42
1:A:1073:G:C2	1:A:1074:G:C8	3.07	0.42
1:A:1191:U:C4	1:A:1192:C:C5	3.08	0.42
1:A:1477:G:H1'	69:QB:48:GLN:HG2	2.02	0.42
1:A:1580:C:C2'	1:A:1581:C:H5'	2.50	0.42
1:A:1722:A:H3'	1:A:1723:U:H6	1.84	0.42
1:A:552:G:O2'	1:A:553:G:H5'	2.19	0.42
1:A:763:G:OP1	59:GB:75:ALA:HB1	2.19	0.42
1:A:834:G:H2'	1:A:835:U:C6	2.54	0.42
27:AA:54:LEU:HB2	27:AA:81:GLN:HB2	2.01	0.42
2:B:103:G:H2'	2:B:104:G:H8	1.83	0.42
2:B:1125:U:H2'	2:B:1126:G:O4'	2.20	0.42
2:B:1364:C:H5"	22:V:3:ILE:CG1	2.49	0.42
2:B:1496:C:OP1	2:B:1497:C:OP2	2.37	0.42
2:B:1714:A:H61	2:B:1730:G:C1'	2.33	0.42
2:B:1910:A:H2	2:B:2333:C:O2	2.03	0.42
2:B:2545:C:H6	2:B:2545:C:O5'	2.01	0.42
2:B:280:U:O5'	2:B:280:U:H6	2.02	0.42
2:B:282:G:H22	19:S:178:HIS:C	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3063:C:H2'	2:B:3064:U:C5	2.55	0.42
2:B:3355:U:H3'	2:B:3356:G:C5'	2.46	0.42
2:B:514:G:H2'	2:B:515:C:O4'	2.20	0.42
2:B:788:C:H6	2:B:788:C:O5'	2.03	0.42
28:BA:53:VAL:HA	28:BA:56:ARG:HG3	2.01	0.42
54:BB:55:ALA:HB1	54:BB:61:VAL:HG12	2.02	0.42
54:BB:90:ILE:HG22	54:BB:92:LEU:CD1	2.50	0.42
55:CB:112:ARG:O	55:CB:116:HIS:HB2	2.18	0.42
55:CB:117:THR:HG23	55:CB:191:ALA:O	2.20	0.42
82:DC:135:VAL:CG2	82:DC:185:VAL:HG23	2.49	0.42
82:DC:3:ALA:CA	82:DC:46:ILE:HB	2.45	0.42
82:DC:693:LEU:HD13	82:DC:700:ARG:NH1	2.35	0.42
82:DC:718:LEU:HG	82:DC:722:PRO:HG2	2.02	0.42
83:EC:6915:G:O5'	83:EC:6915:G:H8	2.03	0.42
83:EC:6934:U:H6	83:EC:6934:U:O5'	2.03	0.42
6:F:10:LYS:HA	6:F:16:PHE:CD2	2.54	0.42
6:F:153:GLY:HA3	6:F:251:LYS:HE2	2.01	0.42
32:FA:36:GLY:CA	32:FA:39:HIS:HB2	2.49	0.42
7:G:26:ARG:NH1	7:G:26:ARG:HG2	2.34	0.42
2:B:3005:A:H5"	7:G:98:GLY:HA3	2.02	0.42
8:H:131:VAL:O	8:H:135:VAL:HG23	2.18	0.42
8:H:145:ILE:HB	8:H:146:PRO:HD2	2.02	0.42
8:H:142:VAL:HG13	8:H:177:ASP:OD1	2.20	0.42
8:H:316:ASN:HA	8:H:317:PRO:HD3	1.83	0.42
8:H:361:HIS:HB2	24:X:26:ARG:NE	2.30	0.42
60:HB:6:GLU:HA	60:HB:9:ASN:HB2	2.01	0.42
9:I:183:TRP:CH2	9:I:188:GLU:HA	2.55	0.42
10:J:5:LYS:HE3	10:J:5:LYS:HA	2.00	0.42
37:KA:12:LYS:O	37:KA:30:ILE:HG23	2.20	0.42
37:KA:44:TYR:O	37:KA:47:LYS:HG2	2.19	0.42
63:KB:93:LYS:HA	63:KB:150:VAL:HG23	2.02	0.42
63:KB:63:ALA:HB3	63:KB:70:LYS:HA	2.01	0.42
12:L:172:LYS:HD2	12:L:172:LYS:HA	1.79	0.42
12:L:24:ASN:N	12:L:27:THR:HG1	2.18	0.42
38:LA:72:VAL:CG2	38:LA:77:GLY:HA2	2.38	0.42
13:M:58:HIS:O	13:M:59:ASN:HB3	2.20	0.42
14:N:184:LYS:HZ2	14:N:190:VAL:HG22	1.85	0.42
2:B:2853:A:O2'	14:N:64:ALA:HA	2.20	0.42
17:Q:106:GLN:HA	40:NA:20:MET:SD	2.59	0.42
15:O:84:LEU:HD22	15:O:89:TYR:HA	2.00	0.42
67:OB:7:LYS:O	67:OB:11:ARG:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:PA:33:LYS:HB3	42:PA:34:ALA:H	1.53	0.42
42:PA:26:LYS:O	42:PA:41:THR:HA	2.20	0.42
68:PB:45:LEU:HD21	68:PB:81:ILE:CG2	2.50	0.42
3:C:113:U:C5'	43:QA:7:PHE:HB2	2.36	0.42
1:A:1477:G:H1'	69:QB:48:GLN:CG	2.49	0.42
18:R:120:VAL:HG11	20:T:199:TYR:HB2	2.01	0.42
18:R:123:LEU:O	18:R:126:GLN:HB3	2.20	0.42
18:R:24:LYS:HZ2	18:R:24:LYS:HB3	1.85	0.42
70:RB:51:VAL:HG13	70:RB:51:VAL:O	2.20	0.42
71:SB:71:ARG:HE	77:YB:4:VAL:HG11	1.85	0.42
20:T:16:VAL:HG13	20:T:80:PHE:CE1	2.54	0.42
72:TB:103:ILE:C	72:TB:104:LEU:HD13	2.40	0.42
73:UB:109:ARG:HA	73:UB:109:ARG:HD2	1.88	0.42
22:V:174:ARG:HG2	22:V:174:ARG:HH11	1.85	0.42
2:B:1229:G:H4'	48:VA:32:ASN:OD1	2.18	0.42
48:VA:45:LEU:HD13	48:VA:49:ALA:HB3	2.01	0.42
74:VB:44:LEU:HD23	74:VB:47:VAL:CG2	2.49	0.42
24:X:10:ILE:HG23	24:X:26:ARG:CA	2.49	0.42
8:H:359:LEU:HD11	24:X:62:ASN:ND2	2.34	0.42
50:XA:31:VAL:HG12	50:XA:33:GLN:HB2	2.01	0.42
52:ZA:106:ASP:OD2	52:ZA:110:HIS:HB2	2.19	0.42
1:A:138:A:H8	1:A:141:U:P	2.43	0.42
1:A:1424:A:O2'	1:A:1425:A:H5'	2.20	0.42
1:A:306:U:O2'	1:A:307:G:H5'	2.20	0.42
1:A:606:A:C4'	1:A:607:G:H3'	2.45	0.42
1:A:774:A:OP2	1:A:787:G:N1	2.52	0.42
53:AB:139:SER:OG	53:AB:149:ALA:HA	2.19	0.42
53:AB:74:GLN:CB	53:AB:84:ILE:HG13	2.43	0.42
2:B:121:A:C2	12:L:129:PRO:HB3	2.55	0.42
2:B:1233:G:H21	16:P:128:VAL:HG11	1.83	0.42
2:B:1386:A:H5"	8:H:141:ARG:NH1	2.34	0.42
2:B:19:U:H2'	2:B:20:A:H8	1.83	0.42
2:B:2117:A:H3'	2:B:2118:C:C6	2.54	0.42
2:B:2207:A:H3'	2:B:2208:A:C5'	2.50	0.42
2:B:2248:C:O4'	2:B:2271:A:C2	2.73	0.42
2:B:2259:A:H2'	2:B:2260:U:O4'	2.20	0.42
2:B:2397:A:H1'	2:B:2941:A:H61	1.85	0.42
2:B:2482:U:H6	2:B:2482:U:H3'	1.84	0.42
2:B:1135:A:O5'	2:B:2642:A:H1'	2.20	0.42
2:B:2771:U:H5	2:B:2772:C:C6	2.38	0.42
2:B:277:G:C6	2:B:289:A:N1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2817:A:H2'	2:B:2818:U:H5	1.85	0.42
2:B:3146:G:O2'	2:B:3147:G:H5'	2.20	0.42
2:B:378:A:N7	2:B:391:A:H2	2.16	0.42
2:B:381:U:H2'	2:B:382:U:C5	2.55	0.42
2:B:583:G:C4	2:B:584:G:C8	3.08	0.42
2:B:608:A:O2'	8:H:326:ARG:NH1	2.52	0.42
2:B:763:G:C6	2:B:764:U:H1'	2.55	0.42
2:B:890:C:H2'	2:B:891:G:H8	1.84	0.42
2:B:897:U:H2'	2:B:898:U:O4'	2.19	0.42
28:BA:18:GLY:HA3	28:BA:31:PHE:O	2.20	0.42
55:CB:187:ILE:CD1	55:CB:187:ILE:H	2.16	0.42
4:D:36:C:H2'	4:D:37:G:C8	2.55	0.42
56:DB:72:ARG:NH1	56:DB:72:ARG:HG3	2.34	0.42
82:DC:404:THR:HG22	82:DC:449:PRO:HA	2.01	0.42
82:DC:630:ALA:O	82:DC:633:ILE:HG13	2.20	0.42
82:DC:81:MET:HB3	82:DC:85:ASP:HB2	2.01	0.42
5:E:121:PRO:HA	5:E:125:GLY:N	2.35	0.42
31:EA:56:LYS:NZ	31:EA:56:LYS:HB2	2.34	0.42
57:EB:117:THR:HG23	57:EB:120:ALA:H	1.84	0.42
57:EB:122:HIS:O	57:EB:125:ILE:HB	2.20	0.42
57:EB:133:THR:HB	57:EB:154:LEU:HD21	2.01	0.42
83:EC:6820:C:H5"	83:EC:6821:U:OP2	2.20	0.42
2:B:2153:U:OP1	6:F:246:LEU:HB2	2.20	0.42
7:G:188:ILE:HD12	7:G:188:ILE:N	2.32	0.42
8:H:136:LEU:HD21	8:H:142:VAL:CG2	2.49	0.42
8:H:280:ILE:O	22:V:123:THR:HB	2.20	0.42
8:H:288:ARG:HG2	8:H:288:ARG:HH11	1.85	0.42
8:H:330:TYR:CE1	11:K:49:ALA:HA	2.54	0.42
8:H:40:THR:O	8:H:44:LYS:HB2	2.20	0.42
9:I:294:ALA:HB1	14:N:217:PHE:CB	2.42	0.42
9:I:62:CYS:O	9:I:78:ALA:HB3	2.20	0.42
61:IB:75:VAL:HA	61:IB:86:ILE:HG22	2.02	0.42
2:B:946:U:OP1	36:JA:34:LYS:HD2	2.19	0.42
11:K:169:ILE:CD1	11:K:181:ILE:HG12	2.50	0.42
12:L:150:LEU:HD13	12:L:151:VAL:N	2.35	0.42
12:L:233:TRP:N	12:L:233:TRP:CD1	2.88	0.42
38:LA:57:LEU:HB2	38:LA:62:TYR:CE1	2.54	0.42
38:LA:44:CYS:SG	38:LA:80:ARG:HA	2.60	0.42
51:YA:45:LYS:CG	64:LB:13:VAL:HG12	2.49	0.42
39:MA:55:LEU:O	39:MA:59:ASN:HB2	2.20	0.42
66:NB:51:PRO:HG2	66:NB:52:LEU:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:128:VAL:O	16:P:132:ILE:HG13	2.20	0.42
16:P:127:SER:O	16:P:131:GLU:OE1	2.37	0.42
16:P:65:GLN:HB3	16:P:65:GLN:HE21	1.65	0.42
68:PB:16:ARG:C	68:PB:17:LEU:HD23	2.40	0.42
43:QA:42:ARG:HG2	43:QA:42:ARG:HH11	1.85	0.42
69:QB:18:TYR:CD2	69:QB:59:ALA:HB1	2.55	0.42
18:R:94:TRP:C	18:R:96:ALA:H	2.23	0.42
44:RA:116:GLY:C	44:RA:118:THR:H	2.23	0.42
19:S:134:LEU:HD12	19:S:134:LEU:N	2.34	0.42
20:T:74:ARG:HG3	20:T:146:GLY:HA3	2.01	0.42
72:TB:17:ALA:HB2	72:TB:25:VAL:HG11	2.01	0.42
21:U:168:LEU:H	21:U:168:LEU:CD1	2.23	0.42
21:U:4:TYR:CE1	21:U:18:ARG:HG3	2.55	0.42
21:U:96:GLN:HG2	21:U:97:ASN:N	2.34	0.42
22:V:62:VAL:CG2	22:V:83:VAL:HG13	2.50	0.42
22:V:62:VAL:HG21	22:V:83:VAL:HG13	2.02	0.42
48:VA:143:THR:HA	48:VA:153:VAL:HG23	2.02	0.42
48:VA:25:LEU:HD11	48:VA:86:PHE:CD1	2.55	0.42
23:W:61:SER:O	23:W:65:ALA:HB2	2.19	0.42
49:WA:112:SER:CB	49:WA:153:GLN:HA	2.50	0.42
49:WA:218:GLY:CA	49:WA:240:VAL:HG23	2.49	0.42
50:XA:111:ILE:HG23	50:XA:111:ILE:O	2.19	0.42
50:XA:30:GLN:OE1	50:XA:149:LEU:HB3	2.20	0.42
50:XA:79:ARG:HG2	50:XA:79:ARG:HH11	1.84	0.42
2:B:2632:G:H4'	25:Y:12:ARG:HD2	2.02	0.42
52:ZA:141:ARG:HG3	52:ZA:141:ARG:HH21	1.85	0.42
52:ZA:176:SER:HB2	52:ZA:195:ASP:HB3	2.01	0.42
50:XA:68:PRO:HG2	52:ZA:241:ASP:HA	2.01	0.42
78:ZB:17:GLY:O	78:ZB:26:THR:HG23	2.20	0.42
1:A:1028:C:H4'	1:A:1029:U:O5'	2.20	0.42
1:A:632:U:O2'	1:A:1103:U:H5"	2.20	0.42
1:A:1157:A:H62	1:A:1618:C:H42	1.68	0.42
1:A:1232:U:H2'	1:A:1233:G:C8	2.55	0.42
1:A:1333:C:H2'	1:A:1334:U:C6	2.55	0.42
1:A:1371:A:C2	1:A:1373:C:H5'	2.54	0.42
1:A:1418:G:O2'	79:AC:56:ARG:HD2	2.19	0.42
1:A:166:C:O2	1:A:166:C:C2'	2.67	0.42
1:A:1789:G:H8	1:A:1789:G:C5'	2.31	0.42
1:A:1796:C:H2'	76:XB:93:LYS:HA	2.02	0.42
1:A:370:A:H2'	1:A:371:G:H8	1.85	0.42
1:A:426:G:N2	1:A:459:G:O2'	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:43:A:C2'	1:A:44:U:H5'	2.49	0.42
1:A:46:A:N6	1:A:433:C:H4'	2.35	0.42
1:A:35:U:O2	1:A:473:A:C2	2.73	0.42
1:A:771:A:H2'	1:A:772:G:H5'	2.02	0.42
1:A:778:G:C6	1:A:780:A:O4'	2.73	0.42
1:A:92:A:OP2	1:A:93:A:C2	2.73	0.42
79:AC:20:GLN:HB3	79:AC:27:HIS:CE1	2.53	0.42
2:B:1186:G:O2'	2:B:1187:C:H5'	2.20	0.42
2:B:1211:U:H6	2:B:1211:U:O5'	2.02	0.42
2:B:1282:G:C5'	48:VA:82:GLY:O	2.68	0.42
2:B:1372:C:H2'	2:B:1373:A:H8	1.84	0.42
2:B:1409:G:C2'	2:B:1410:U:H5'	2.50	0.42
2:B:2271:A:H3'	2:B:2272:G:H5"	2.02	0.42
2:B:2277:C:H4'	2:B:2317:A:H4'	2.01	0.42
2:B:2414:G:H1'	2:B:2809:C:N4	2.35	0.42
2:B:2464:U:O2'	2:B:2465:G:H5'	2.19	0.42
2:B:2756:C:C2'	2:B:2757:U:H5'	2.50	0.42
2:B:3049:A:H2'	2:B:3050:U:C5'	2.50	0.42
2:B:3386:G:O2'	2:B:3387:U:H5'	2.20	0.42
2:B:585:A:C6	2:B:586:C:N4	2.88	0.42
2:B:824:C:H2'	2:B:825:U:C6	2.55	0.42
28:BA:31:PHE:CZ	28:BA:40:PHE:HB3	2.55	0.42
3:C:147:U:C2'	3:C:148:G:H5"	2.47	0.42
55:CB:93:LEU:HA	55:CB:172:ILE:CG2	2.49	0.42
4:D:8:G:H2'	4:D:9:C:H6	1.81	0.42
30:DA:50:ILE:CG2	30:DA:51:ARG:N	2.83	0.42
82:DC:637:GLY:HA2	82:DC:638:PRO:HA	1.72	0.42
82:DC:7:ASP:HA	82:DC:10:ARG:HB3	2.01	0.42
31:EA:22:LYS:HD2	31:EA:130:PHE:O	2.20	0.42
31:EA:3:LYS:O	31:EA:6:LYS:HG2	2.20	0.42
57:EB:143:LEU:HD23	57:EB:147:ASN:O	2.20	0.42
57:EB:154:LEU:O	57:EB:186:PRO:HD3	2.20	0.42
32:FA:56:VAL:HG12	32:FA:57:GLY:N	2.35	0.42
1:A:333:A:OP2	58:FB:31:ARG:NH2	2.53	0.42
7:G:284:ARG:CG	7:G:321:PHE:CE1	3.03	0.42
59:GB:171:ARG:HE	59:GB:171:ARG:CA	2.33	0.42
59:GB:175:ARG:HH11	59:GB:175:ARG:HG3	1.85	0.42
8:H:206:LEU:HD21	8:H:228:ALA:HB2	2.02	0.42
8:H:92:ASN:ND2	8:H:100:PHE:HB2	2.35	0.42
34:HA:40:LYS:C	34:HA:65:THR:HG23	2.41	0.42
34:HA:43:ILE:HD13	34:HA:68:TYR:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:6:GLU:HA	60:HB:9:ASN:CB	2.50	0.42
4:D:67:G:O3'	9:I:14:SER:HA	2.19	0.42
36:JA:96:ILE:CB	36:JA:121:ASN:HD21	2.31	0.42
11:K:99:PRO:HB2	11:K:133:TYR:HE2	1.85	0.42
37:KA:45:LEU:HD23	37:KA:71:VAL:CG1	2.47	0.42
12:L:134:TYR:CD2	12:L:134:TYR:N	2.88	0.42
12:L:183:LYS:HG3	12:L:184:ALA:N	2.35	0.42
38:LA:57:LEU:HD12	38:LA:62:TYR:CE1	2.55	0.42
64:LB:51:ASP:O	64:LB:54:GLU:HG3	2.19	0.42
39:MA:17:LEU:HB3	39:MA:58:ILE:HD11	2.02	0.42
15:O:96:PHE:CG	15:O:102:PHE:HB3	2.54	0.42
17:Q:54:LEU:HD23	17:Q:55:ARG:N	2.35	0.42
17:Q:88:ALA:O	17:Q:92:THR:HG23	2.20	0.42
43:QA:15:LYS:O	43:QA:19:GLN:HG3	2.20	0.42
43:QA:9:ILE:HG23	43:QA:51:ILE:CG2	2.48	0.42
69:QB:118:PRO:O	69:QB:119:LYS:HB2	2.19	0.42
69:QB:15:ILE:HA	69:QB:18:TYR:HB3	2.01	0.42
44:RA:80:PRO:O	44:RA:83:LYS:HB2	2.20	0.42
70:RB:85:ARG:NH1	70:RB:85:ARG:HG2	2.35	0.42
2:B:2424:A:C1'	19:S:78:GLY:HA3	2.50	0.42
45:SA:7:LYS:HG2	45:SA:11:ARG:NH1	2.35	0.42
21:U:146:ILE:H	21:U:146:ILE:CD1	2.13	0.42
21:U:64:ASN:HB2	21:U:80:LYS:NZ	2.34	0.42
21:U:78:VAL:HG12	21:U:79:THR:N	2.22	0.42
73:UB:107:PHE:CE1	73:UB:123:LYS:HG2	2.55	0.42
74:VB:82:ALA:C	74:VB:84:LYS:H	2.23	0.42
49:WA:164:ASP:OD2	49:WA:164:ASP:N	2.48	0.42
49:WA:165:ASP:OD1	49:WA:166:SER:N	2.53	0.42
49:WA:23:LEU:HD12	49:WA:292:LEU:CA	2.50	0.42
49:WA:66:HIS:CE1	49:WA:67:ILE:HD13	2.55	0.42
50:XA:69:ASN:ND2	50:XA:71:GLU:HG2	2.35	0.42
76:XB:42:ARG:HB2	76:XB:42:ARG:CZ	2.50	0.42
11:K:75:TYR:HD2	25:Y:141:VAL:HB	1.85	0.42
51:YA:133:TYR:CE1	51:YA:217:LEU:HD21	2.55	0.42
51:YA:180:THR:HB	51:YA:181:LEU:H	1.68	0.42
51:YA:54:LEU:O	51:YA:55:LYS:CB	2.67	0.42
1:A:1030:A:OP1	76:XB:3:LYS:NZ	2.49	0.41
1:A:617:U:C5'	1:A:1031:U:O4'	2.62	0.41
1:A:1352:G:O2'	1:A:1353:U:H5'	2.20	0.41
1:A:1388:A:H62	1:A:1409:G:H1'	1.85	0.41
1:A:1483:A:H4'	66:NB:72:GLY:H	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1563:C:H2'	1:A:1564:U:C6	2.55	0.41
1:A:1593:A:O2'	1:A:1594:G:H5'	2.20	0.41
1:A:1585:U:N3	1:A:1611:A:H2	2.18	0.41
1:A:841:U:H2'	1:A:842:C:O4'	2.20	0.41
1:A:893:U:O2'	1:A:894:U:H5'	2.19	0.41
1:A:978:A:O2'	1:A:979:A:H5'	2.20	0.41
2:B:2338:C:H4'	27:AA:47:ASN:O	2.19	0.41
27:AA:69:LEU:HD12	27:AA:69:LEU:N	2.34	0.41
53:AB:167:PHE:CE2	53:AB:202:LEU:HD22	2.55	0.41
2:B:1174:G:C4	2:B:1318:A:C6	3.08	0.41
2:B:1470:U:H2'	2:B:1471:U:C6	2.55	0.41
2:B:1494:U:O2	2:B:1496:C:C4	2.73	0.41
2:B:1569:U:H5	2:B:1570:U:C5	2.37	0.41
2:B:1583:A:H2'	2:B:1584:U:C5'	2.50	0.41
2:B:2331:C:H2'	2:B:2332:A:H8	1.84	0.41
2:B:1508:C:C4'	2:B:2353:G:O2'	2.66	0.41
2:B:2397:A:H1'	2:B:2941:A:N6	2.34	0.41
2:B:2762:A:H2'	2:B:2763:U:H6	1.85	0.41
2:B:2931:C:H2'	2:B:2932:U:C5'	2.50	0.41
2:B:3304:U:C3'	2:B:3305:A:H5'	2.49	0.41
2:B:54:C:H2'	2:B:55:G:H8	1.85	0.41
2:B:717:C:H3'	2:B:718:G:C8	2.55	0.41
2:B:726:G:H21	2:B:744:A:H62	1.68	0.41
2:B:841:A:H2'	2:B:842:G:O4'	2.20	0.41
2:B:946:U:O2'	2:B:947:G:H5'	2.21	0.41
54:BB:120:SER:O	54:BB:163:ASP:O	2.37	0.41
54:BB:196:VAL:HG23	54:BB:210:ILE:HA	2.01	0.41
3:C:34:U:OP2	3:C:34:U:H3'	2.19	0.41
55:CB:40:ILE:HG13	55:CB:41:LYS:N	2.33	0.41
55:CB:36:ALA:CA	55:CB:42:LEU:HD21	2.48	0.41
4:D:61:G:H2'	4:D:62:U:H6	1.85	0.41
56:DB:16:PHE:HE2	56:DB:121:LEU:HD21	1.85	0.41
82:DC:101:ASN:HD22	82:DC:101:ASN:HA	1.65	0.41
82:DC:120:ARG:HD2	82:DC:481:MET:HE1	2.01	0.41
82:DC:178:PHE:CE1	82:DC:211:PHE:CD1	3.07	0.41
82:DC:19:VAL:CG1	82:DC:21:ASN:HD22	2.24	0.41
82:DC:405:VAL:CG2	82:DC:434:VAL:HG21	2.50	0.41
82:DC:597:VAL:HA	82:DC:600:ALA:CB	2.49	0.41
6:F:226:SER:C	6:F:228:GLY:N	2.73	0.41
6:F:48:ILE:HD12	47:UA:54:ILE:HG12	2.02	0.41
58:FB:153:GLU:O	58:FB:157:GLU:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:46:VAL:HG23	58:FB:48:THR:HG23	2.01	0.41
7:G:192:VAL:O	7:G:195:ALA:HB3	2.20	0.41
7:G:33:PRO:CD	7:G:44:THR:HB	2.50	0.41
7:G:48:GLY:O	7:G:335:ILE:HD12	2.20	0.41
8:H:25:VAL:HG22	8:H:276:LEU:HD11	2.02	0.41
53:AB:20:GLU:HG3	60:HB:61:TRP:CD1	2.55	0.41
9:I:58:LYS:NZ	9:I:158:ARG:HH22	2.16	0.41
9:I:39:GLN:NE2	9:I:46:THR:HB	2.34	0.41
4:D:117:A:C4'	9:I:74:VAL:HB	2.50	0.41
61:IB:20:PHE:CE1	61:IB:22:ASN:HB2	2.55	0.41
1:A:246:G:N3	61:IB:40:LEU:HD23	2.35	0.41
61:IB:94:ILE:HD12	61:IB:94:ILE:N	2.35	0.41
10:J:28:GLN:HB2	10:J:61:ASN:OD1	2.20	0.41
36:JA:41:VAL:HG23	36:JA:49:ASN:HD21	1.85	0.41
11:K:222:HIS:CE1	11:K:224:ILE:HD12	2.55	0.41
11:K:240:VAL:C	11:K:242:SER:H	2.22	0.41
63:KB:94:LYS:HG2	63:KB:118:ILE:HD13	2.02	0.41
64:LB:79:VAL:HG13	64:LB:112:ILE:HA	2.02	0.41
13:M:87:LYS:CE	13:M:89:LYS:HE2	2.50	0.41
65:MB:11:VAL:O	65:MB:12:PHE:CB	2.68	0.41
14:N:60:LEU:HG	14:N:129:VAL:HG21	1.98	0.41
17:Q:176:GLU:C	40:NA:11:LEU:HD21	2.40	0.41
15:O:10:ARG:HD3	15:O:133:ARG:NH2	2.35	0.41
41:OA:27:PHE:HA	41:OA:34:CYS:HA	2.01	0.41
41:OA:34:CYS:CB	41:OA:37:CYS:HG	2.32	0.41
41:OA:45:ARG:NE	41:OA:47:TYR:CE2	2.88	0.41
67:OB:103:ASP:O	67:OB:106:THR:HB	2.19	0.41
17:Q:85:LEU:HD23	17:Q:85:LEU:N	2.34	0.41
69:QB:134:ARG:NH1	69:QB:135:ILE:HG22	2.35	0.41
19:S:104:GLU:HB3	19:S:108:ARG:HH12	1.85	0.41
21:U:19:GLY:HA3	21:U:94:LEU:HD21	2.01	0.41
47:UA:15:GLY:N	47:UA:17:ARG:HH21	2.18	0.41
47:UA:29:LEU:O	47:UA:32:GLN:N	2.52	0.41
73:UB:90:ASP:OD2	80:BC:12:GLY:HA2	2.20	0.41
22:V:82:VAL:HA	22:V:102:ALA:O	2.20	0.41
22:V:88:THR:C	22:V:110:ALA:HB2	2.40	0.41
74:VB:60:PHE:CE1	74:VB:71:GLY:HA3	2.55	0.41
23:W:123:LEU:O	23:W:127:SER:OG	2.38	0.41
49:WA:255:ALA:HB2	49:WA:292:LEU:CD1	2.50	0.41
49:WA:20:VAL:O	49:WA:290:VAL:HB	2.20	0.41
75:WB:47:TYR:CA	75:WB:50:ILE:HB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:8:GLN:HG3	24:X:26:ARG:NH1	2.35	0.41
50:XA:127:ARG:HH11	50:XA:151:SER:HA	1.85	0.41
50:XA:140:ASN:ND2	52:ZA:60:SER:HB3	2.35	0.41
11:K:119:VAL:HG12	25:Y:135:PRO:HG3	2.02	0.41
2:B:1051:U:H5"	25:Y:19:PHE:HB2	2.02	0.41
25:Y:30:TYR:CZ	25:Y:94:GLU:HG3	2.55	0.41
51:YA:189:ILE:HB	51:YA:190:PRO:HD3	2.01	0.41
52:ZA:72:LEU:O	52:ZA:73:LEU:CB	2.62	0.41
55:CB:225:ARG:HD3	78:ZB:58:GLU:CG	2.50	0.41
1:A:1046:G:H2'	1:A:1047:G:H8	1.85	0.41
1:A:1049:U:OP1	77:YB:70:LYS:HG3	2.21	0.41
1:A:1097:U:H5	52:ZA:199:GLN:HE21	1.67	0.41
1:A:147:A:H2'	1:A:148:A:H8	1.81	0.41
1:A:1496:U:H3	1:A:1511:U:H3	1.68	0.41
1:A:1647:U:O2'	1:A:1648:A:H5'	2.20	0.41
1:A:164:A:O2'	1:A:165:G:H5'	2.20	0.41
1:A:1690:G:H2'	1:A:1691:A:O4'	2.20	0.41
1:A:1729:C:H2'	1:A:1730:A:H5'	2.02	0.41
1:A:370:A:H8	1:A:370:A:O5'	2.03	0.41
1:A:401:A:C2'	1:A:402:C:H4'	2.49	0.41
1:A:791:A:O2'	1:A:792:U:H5'	2.20	0.41
27:AA:62:VAL:HG21	27:AA:69:LEU:C	2.40	0.41
2:B:1029:G:H2'	2:B:1030:A:H8	1.85	0.41
2:B:1120:A:H2'	2:B:1121:U:C6	2.55	0.41
2:B:1235:U:H4'	2:B:1236:G:H3'	2.02	0.41
2:B:1193:A:H2	2:B:1317:A:H62	1.64	0.41
2:B:1521:G:C2	2:B:1522:U:C5	3.08	0.41
2:B:1679:A:O2'	2:B:1680:G:H5'	2.20	0.41
2:B:1795:U:C4	47:UA:51:ALA:HA	2.54	0.41
2:B:1939:G:H2'	2:B:1940:G:O4'	2.19	0.41
2:B:1940:G:H2'	2:B:1941:C:C6	2.55	0.41
2:B:219:A:H8	2:B:1390:A:N7	2.19	0.41
2:B:2291:A:C6	2:B:2302:G:C6	3.08	0.41
2:B:2385:G:H5'	2:B:2385:G:C8	2.55	0.41
2:B:958:C:H5"	2:B:2800:G:P	2.60	0.41
2:B:2934:A:H2'	2:B:2935:U:O4'	2.19	0.41
2:B:3228:C:H4'	2:B:3229:G:O5'	2.20	0.41
2:B:578:A:C4'	8:H:324:LEU:HD21	2.47	0.41
2:B:588:G:H21	2:B:611:A:C5'	2.33	0.41
2:B:409:A:H1'	2:B:655:C:H1'	2.02	0.41
2:B:716:A:N7	32:FA:116:GLY:HA2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:744:A:H2'	2:B:745:C:H5'	2.01	0.41
2:B:74:G:N7	17:Q:104:ARG:NH1	2.69	0.41
2:B:76:G:C6	17:Q:101:ARG:HA	2.55	0.41
2:B:816:A:H4'	2:B:817:A:H5'	2.02	0.41
54:BB:180:LEU:CD2	54:BB:228:ILE:HD11	2.48	0.41
54:BB:50:ASN:HD22	54:BB:50:ASN:N	2.19	0.41
54:BB:52:LEU:HD13	54:BB:54:TYR:HD2	1.85	0.41
29:CA:63:ILE:O	29:CA:63:ILE:HG23	2.21	0.41
55:CB:111:VAL:O	55:CB:112:ARG:C	2.57	0.41
55:CB:189:THR:OG1	55:CB:192:GLU:HG3	2.20	0.41
55:CB:62:VAL:O	55:CB:64:VAL:HG23	2.20	0.41
55:CB:89:ILE:HD12	55:CB:90:ILE:N	2.35	0.41
4:D:25:G:H2'	4:D:26:C:H6	1.84	0.41
56:DB:36:VAL:HG12	56:DB:37:ASP:N	2.35	0.41
56:DB:76:LEU:CB	56:DB:94:ARG:HD3	2.50	0.41
82:DC:111:PHE:C	82:DC:113:SER:H	2.23	0.41
82:DC:189:VAL:HG11	82:DC:201:GLN:HA	2.01	0.41
82:DC:281:ILE:H	82:DC:281:ILE:HG13	1.45	0.41
82:DC:307:LEU:CD1	82:DC:312:LYS:HB3	2.48	0.41
82:DC:427:PHE:CD1	82:DC:429:LYS:HE2	2.49	0.41
82:DC:453:ILE:CD1	82:DC:453:ILE:N	2.83	0.41
82:DC:492:ALA:O	82:DC:556:ILE:HA	2.20	0.41
82:DC:543:GLN:O	82:DC:546:GLU:HB3	2.20	0.41
31:EA:76:ASN:O	31:EA:79:HIS:HB2	2.20	0.41
6:F:192:LYS:C	6:F:193:ARG:HE	2.23	0.41
22:V:174:ARG:O	32:FA:56:VAL:HG22	2.20	0.41
1:A:400:A:N6	58:FB:29:LEU:HB2	2.35	0.41
1:A:396:G:N7	58:FB:47:ARG:NH2	2.67	0.41
7:G:273:HIS:CD2	7:G:273:HIS:H	2.38	0.41
8:H:29:PRO:HG3	8:H:279:HIS:ND1	2.34	0.41
8:H:85:SER:C	8:H:87:GLN:H	2.23	0.41
9:I:64:ILE:CD1	9:I:144:VAL:HG21	2.49	0.41
9:I:160:PHE:HA	9:I:163:LEU:HB2	2.02	0.41
11:K:149:TYR:CD2	11:K:149:TYR:N	2.87	0.41
63:KB:40:TYR:CE1	63:KB:53:LEU:HD21	2.54	0.41
38:LA:68:THR:C	38:LA:70:LYS:H	2.23	0.41
13:M:134:ILE:HG22	13:M:135:GLU:N	2.34	0.41
13:M:171:ASP:O	13:M:173:ARG:N	2.53	0.41
13:M:4:ILE:HA	13:M:59:ASN:CA	2.49	0.41
1:A:1454:G:C4'	65:MB:122:THR:HG21	2.42	0.41
15:O:52:TYR:CA	15:O:61:ARG:HB2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:36:LYS:O	68:PB:105:VAL:HB	2.20	0.41
17:Q:54:LEU:HD12	17:Q:119:TYR:CG	2.55	0.41
69:QB:6:VAL:HG11	69:QB:66:TYR:CD1	2.55	0.41
19:S:140:LYS:HB3	19:S:144:ARG:HE	1.84	0.41
19:S:15:GLN:HG2	40:NA:51:SER:HB3	2.01	0.41
52:ZA:237:VAL:HG11	71:SB:50:TYR:CE2	2.55	0.41
20:T:12:LYS:HD3	20:T:37:ARG:NH2	2.35	0.41
46:TA:53:GLN:NE2	46:TA:57:VAL:CG2	2.83	0.41
21:U:155:GLU:HB3	21:U:156:ALA:H	1.72	0.41
73:UB:107:PHE:CZ	73:UB:123:LYS:HB3	2.55	0.41
73:UB:53:VAL:HG13	73:UB:72:VAL:CG1	2.49	0.41
49:WA:176:LYS:O	49:WA:177:MET:HG3	2.20	0.41
49:WA:13:LEU:HB2	49:WA:310:ILE:O	2.21	0.41
49:WA:78:ALA:O	49:WA:94:VAL:HG23	2.20	0.41
75:WB:54:VAL:N	75:WB:55:PRO:CD	2.82	0.41
50:XA:64:ILE:CD1	50:XA:64:ILE:H	2.20	0.41
76:XB:92:ARG:NH1	76:XB:92:ARG:HG2	2.33	0.41
51:YA:73:LEU:C	51:YA:73:LEU:HD12	2.40	0.41
52:ZA:113:LEU:C	52:ZA:113:LEU:HD13	2.41	0.41
52:ZA:178:ILE:HG13	52:ZA:185:LYS:HE3	2.01	0.41
1:A:1055:U:C2'	1:A:1056:U:H5'	2.50	0.41
1:A:1562:G:H2'	1:A:1563:C:H5'	2.02	0.41
1:A:606:A:H4'	1:A:607:G:C5'	2.50	0.41
27:AA:102:ILE:O	27:AA:102:ILE:HG13	2.20	0.41
53:AB:121:GLY:O	53:AB:125:TYR:HB2	2.20	0.41
2:B:1254:C:C1'	16:P:135:THR:HG21	2.50	0.41
2:B:1217:A:N6	2:B:1288:U:H3	2.13	0.41
2:B:1348:U:O5'	2:B:1355:A:N6	2.53	0.41
2:B:1576:G:C2'	2:B:1577:G:H5'	2.48	0.41
2:B:1692:U:H2'	2:B:1693:C:C6	2.55	0.41
2:B:1770:G:N3	2:B:1770:G:H2'	2.36	0.41
2:B:2273:G:H1'	2:B:2311:G:C6	2.55	0.41
2:B:2348:A:OP2	2:B:2349:U:H5	2.02	0.41
2:B:2389:C:C1'	21:U:69:ARG:NH2	2.79	0.41
2:B:2397:A:N3	2:B:2397:A:H3'	2.35	0.41
2:B:2688:U:H4'	2:B:2689:A:O4'	2.19	0.41
2:B:2736:A:C3'	2:B:2737:C:H5"	2.50	0.41
2:B:2742:C:H1'	46:TA:20:HIS:HD2	1.84	0.41
2:B:2832:C:O2'	2:B:2833:A:H5'	2.20	0.41
2:B:2995:A:H2	2:B:3143:C:C5	2.38	0.41
2:B:3309:G:N3	2:B:3309:G:H5"	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3314:A:C5'	7:G:173:GLN:O	2.69	0.41
2:B:3314:A:H2'	2:B:3315:G:C8	2.56	0.41
2:B:745:C:H2'	2:B:746:A:H8	1.83	0.41
3:C:60:U:C5	39:MA:55:LEU:HB3	2.55	0.41
55:CB:42:LEU:O	55:CB:43:PHE:HB2	2.18	0.41
4:D:108:A:H2'	4:D:109:G:C8	2.54	0.41
4:D:33:U:O2'	4:D:34:C:H5'	2.21	0.41
4:D:81:U:H2'	4:D:82:G:H8	1.84	0.41
30:DA:27:ARG:HG2	30:DA:78:PHE:CE1	2.56	0.41
82:DC:225:PHE:O	82:DC:229:TYR:HB2	2.21	0.41
82:DC:443:GLU:HA	82:DC:444:PRO:HD3	1.95	0.41
82:DC:572:SER:HB2	82:DC:719:LEU:CD2	2.50	0.41
82:DC:586:ILE:HD12	82:DC:708:THR:CG2	2.46	0.41
31:EA:46:ILE:C	31:EA:46:ILE:HD12	2.40	0.41
31:EA:12:VAL:HB	31:EA:81:LEU:CB	2.50	0.41
57:EB:48:GLU:HA	57:EB:57:ALA:O	2.20	0.41
6:F:136:ILE:HG22	6:F:136:ILE:O	2.19	0.41
2:B:40:A:N9	32:FA:31:GLY:HA2	2.35	0.41
32:FA:31:GLY:O	32:FA:32:ARG:HB2	2.21	0.41
58:FB:98:LYS:HE3	58:FB:172:ARG:HG2	2.02	0.41
1:A:400:A:C8	58:FB:24:LYS:O	2.74	0.41
7:G:109:HIS:O	7:G:200:GLU:HG2	2.20	0.41
7:G:216:ASP:OD1	7:G:278:ILE:HG23	2.20	0.41
7:G:351:LEU:C	7:G:351:LEU:HD23	2.41	0.41
60:HB:14:TYR:CE2	60:HB:35:ILE:HD11	2.56	0.41
60:HB:50:THR:HG22	60:HB:55:VAL:O	2.20	0.41
10:J:52:VAL:HG22	10:J:53:VAL:N	2.33	0.41
10:J:54:TYR:CD2	10:J:63:LEU:HD21	2.54	0.41
11:K:184:LEU:O	11:K:188:ILE:HD13	2.19	0.41
11:K:24:GLU:C	11:K:26:VAL:N	2.73	0.41
63:KB:100:LYS:HB2	63:KB:104:ARG:HH11	1.85	0.41
63:KB:117:LEU:HA	63:KB:120:SER:HB2	2.02	0.41
12:L:154:ALA:O	12:L:156:ASP:N	2.43	0.41
12:L:95:ASN:HB3	12:L:189:LEU:HD23	2.02	0.41
38:LA:19:LYS:HZ3	38:LA:37:LYS:HA	1.84	0.41
13:M:128:VAL:CG1	13:M:134:ILE:HD13	2.50	0.41
13:M:91:ARG:HG3	13:M:143:GLU:HG3	2.03	0.41
13:M:19:SER:O	13:M:26:LYS:HB3	2.20	0.41
65:MB:22:LEU:O	65:MB:26:LEU:HD13	2.19	0.41
65:MB:63:ALA:O	65:MB:73:PRO:HB3	2.20	0.41
14:N:29:SER:C	14:N:31:ILE:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:109:PHE:HD1	66:NB:116:LEU:HG	1.85	0.41
66:NB:89:LEU:HD23	66:NB:109:PHE:CZ	2.55	0.41
3:C:111:A:N7	41:OA:29:VAL:HG21	2.35	0.41
41:OA:39:TYR:CG	41:OA:40:PRO:HA	2.56	0.41
41:OA:21:ARG:NE	41:OA:39:TYR:HB2	2.36	0.41
67:OB:69:ILE:HG22	67:OB:70:SER:N	2.33	0.41
68:PB:38:VAL:CG2	68:PB:101:LEU:HD22	2.50	0.41
17:Q:137:GLN:HB2	17:Q:138:VAL:H	1.54	0.41
17:Q:67:ARG:H	17:Q:67:ARG:HG3	1.53	0.41
18:R:48:GLY:HA3	18:R:53:VAL:CG1	2.50	0.41
18:R:94:TRP:C	18:R:96:ALA:N	2.73	0.41
44:RA:110:CYS:SG	44:RA:112:LYS:HB2	2.60	0.41
2:B:2434:U:C5'	19:S:24:ARG:HD3	2.46	0.41
52:ZA:54:GLU:OE1	71:SB:12:TYR:HB3	2.20	0.41
2:B:2655:U:H5'	46:TA:3:ASN:O	2.19	0.41
21:U:47:TYR:HE2	21:U:58:ILE:HD11	1.86	0.41
48:VA:95:GLU:O	48:VA:98:ASN:HB3	2.20	0.41
49:WA:229:LYS:HB3	49:WA:230:ALA:H	1.67	0.41
75:WB:70:LYS:O	75:WB:71:ILE:HG13	2.21	0.41
77:YB:31:TYR:CD2	77:YB:33:LEU:HD21	2.54	0.41
26:Z:77:LYS:CE	26:Z:95:PHE:HB3	2.50	0.41
52:ZA:38:VAL:O	52:ZA:39:THR:O	2.38	0.41
1:A:1165:G:H2'	1:A:1166:A:C8	2.55	0.41
1:A:1392:U:H2'	1:A:1393:C:C6	2.55	0.41
1:A:1586:A:N6	1:A:1610:G:H1'	2.34	0.41
1:A:350:U:H5"	1:A:352:A:O4'	2.21	0.41
1:A:412:A:C2	1:A:421:A:N1	2.88	0.41
1:A:506:A:OP1	1:A:506:A:H3'	2.21	0.41
1:A:851:U:C6	1:A:852:C:H5	2.38	0.41
1:A:898:A:H1'	1:A:899:G:C1'	2.51	0.41
1:A:904:G:H2'	1:A:905:A:O4'	2.21	0.41
27:AA:54:LEU:HD23	27:AA:54:LEU:C	2.40	0.41
2:B:100:A:H2'	2:B:101:G:N3	2.36	0.41
2:B:1235:U:C4	2:B:1237:G:H1'	2.55	0.41
2:B:1894:U:H2'	2:B:1895:A:O4'	2.21	0.41
2:B:2122:G:H2'	2:B:2123:G:O4'	2.20	0.41
2:B:2651:G:H1'	2:B:2760:C:N4	2.35	0.41
2:B:2825:C:H2'	2:B:2826:U:C6	2.55	0.41
2:B:649:A:O4'	2:B:2869:U:H5'	2.19	0.41
2:B:915:A:O3'	2:B:2957:G:H4'	2.20	0.41
2:B:3027:A:C8	82:DC:789:GLY:HA2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3184:A:H4'	13:M:39:LYS:HZ2	1.85	0.41
2:B:651:G:O3'	2:B:1436:U:H4'	2.19	0.41
54:BB:104:ASP:O	54:BB:105:VAL:HG23	2.20	0.41
54:BB:43:PRO:HB3	54:BB:81:THR:CB	2.50	0.41
3:C:22:U:H4'	3:C:23:U:OP1	2.20	0.41
3:C:45:C:H2'	3:C:46:G:H8	1.85	0.41
55:CB:164:PRO:HG2	78:ZB:52:ASP:OD2	2.19	0.41
55:CB:214:LYS:O	55:CB:218:GLU:HG3	2.19	0.41
55:CB:53:VAL:CG1	55:CB:138:THR:HG21	2.50	0.41
4:D:43:U:H4'	15:O:141:ARG:HA	2.02	0.41
56:DB:220:LYS:HD2	56:DB:221:ALA:N	2.35	0.41
82:DC:161:ASP:OD1	82:DC:216:HIS:CE1	2.73	0.41
82:DC:563:TYR:HB3	82:DC:726:GLU:CA	2.45	0.41
82:DC:606:ILE:N	82:DC:606:ILE:HD12	2.36	0.41
31:EA:22:LYS:HE2	31:EA:129:TRP:CH2	2.55	0.41
31:EA:13:VAL:HB	31:EA:20:GLY:N	2.29	0.41
31:EA:4:PHE:CD2	34:HA:62:LEU:HB2	2.56	0.41
31:EA:87:LEU:CG	31:EA:88:ASP:N	2.82	0.41
6:F:206:PRO:HD3	6:F:213:GLY:HA2	2.02	0.41
32:FA:119:PRO:O	32:FA:121:VAL:N	2.53	0.41
58:FB:136:SER:HB3	58:FB:139:ALA:CB	2.50	0.41
7:G:256:HIS:HA	7:G:257:PRO:C	2.41	0.41
7:G:284:ARG:CB	7:G:323:MET:HB2	2.50	0.41
7:G:339:ARG:HG2	7:G:340:LYS:N	2.35	0.41
7:G:361:THR:HG23	7:G:371:GLN:O	2.20	0.41
59:GB:53:ARG:HB3	59:GB:53:ARG:NH2	2.35	0.41
2:B:1424:C:H1'	8:H:243:HIS:CE1	2.55	0.41
8:H:44:LYS:HG3	8:H:47:ARG:HD2	2.02	0.41
34:HA:24:THR:HG22	34:HA:91:SER:HB3	2.02	0.41
9:I:157:ALA:C	9:I:159:VAL:H	2.24	0.41
58:FB:69:SER:O	61:IB:24:LYS:HD2	2.19	0.41
10:J:29:LYS:HB2	10:J:29:LYS:HE2	1.96	0.41
10:J:31:ARG:HD2	10:J:34:LEU:HG	2.01	0.41
10:J:89:THR:HG21	18:R:115:PHE:CD1	2.52	0.41
63:KB:84:ILE:CD1	63:KB:88:LEU:HD23	2.45	0.41
12:L:134:TYR:N	12:L:134:TYR:HD2	2.19	0.41
12:L:183:LYS:HA	12:L:186:LEU:CD1	2.45	0.41
64:LB:52:ARG:HG3	64:LB:53:ASP:N	2.35	0.41
67:OB:20:TYR:O	67:OB:24:LEU:HG	2.20	0.41
2:B:76:G:N3	17:Q:100:ARG:HG3	2.34	0.41
17:Q:144:THR:HG22	17:Q:144:THR:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:6:VAL:HG21	69:QB:132:LEU:HD22	2.02	0.41
2:B:524:U:P	18:R:77:ARG:HH22	2.43	0.41
70:RB:22:ILE:HG22	70:RB:93:LEU:HB2	2.01	0.41
1:A:1382:A:C4'	70:RB:57:ARG:HB3	2.50	0.41
2:B:268:A:H3'	19:S:47:LYS:HE2	2.03	0.41
20:T:87:MET:O	20:T:88:VAL:HG23	2.20	0.41
2:B:398:A:H5"	21:U:3:ARG:HD2	2.00	0.41
47:UA:29:LEU:O	47:UA:30:GLU:C	2.58	0.41
34:HA:86:ARG:NE	47:UA:44:LYS:HE3	2.34	0.41
73:UB:128:SER:HB3	73:UB:145:SER:CB	2.50	0.41
73:UB:13:ARG:HA	73:UB:16:ARG:CG	2.50	0.41
73:UB:19:ARG:NE	73:UB:19:ARG:HA	2.36	0.41
22:V:24:VAL:HG23	22:V:25:TYR:N	2.36	0.41
49:WA:23:LEU:HD11	49:WA:303:ALA:CA	2.49	0.41
18:R:39:ILE:HG23	24:X:95:ARG:HD3	2.02	0.41
50:XA:18:LEU:CD2	50:XA:23:HIS:HB3	2.51	0.41
50:XA:67:ILE:HG21	50:XA:73:VAL:CG2	2.50	0.41
25:Y:17:ARG:CZ	25:Y:47:SER:HB3	2.50	0.41
51:YA:213:ARG:HG2	51:YA:214:LYS:H	1.85	0.41
77:YB:55:THR:HG22	77:YB:56:CYS:N	2.30	0.41
52:ZA:154:LEU:CD1	52:ZA:154:LEU:N	2.83	0.41
1:A:1039:A:O2'	1:A:1040:G:H8	2.03	0.41
1:A:1230:A:N3	1:A:1258:U:C5	2.88	0.41
1:A:1385:G:H2'	1:A:1386:G:O4'	2.21	0.41
1:A:1647:U:H2'	1:A:1648:A:H8	1.85	0.41
1:A:372:G:H1'	1:A:612:U:C2	2.56	0.41
1:A:410:A:H3'	1:A:411:C:H5"	2.01	0.41
53:AB:141:LYS:HE3	53:AB:180:GLY:HA3	2.02	0.41
79:AC:15:GLY:O	79:AC:19:ARG:HG2	2.21	0.41
2:B:1051:U:H4'	25:Y:19:PHE:CG	2.56	0.41
2:B:112:U:H3'	39:MA:103:LYS:HD3	2.01	0.41
2:B:1162:U:C3'	2:B:1163:A:H5"	2.50	0.41
2:B:1207:G:H5"	2:B:1208:U:OP1	2.20	0.41
2:B:1326:A:H2'	2:B:1327:C:O4'	2.21	0.41
2:B:1662:G:O2'	2:B:1663:C:H5'	2.20	0.41
2:B:1818:U:H2'	2:B:1819:U:H4'	2.01	0.41
2:B:1818:U:H2'	2:B:1819:U:O4'	2.19	0.41
2:B:1830:G:H2'	2:B:1831:U:H5'	2.03	0.41
2:B:1916:U:H2'	2:B:1917:C:C6	2.55	0.41
2:B:222:A:H2'	2:B:223:U:H6	1.84	0.41
2:B:1884:A:C2	2:B:2349:U:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2413:A:H2'	2:B:2414:G:C8	2.54	0.41
2:B:2430:A:H2'	2:B:2431:C:O4'	2.21	0.41
2:B:2470:C:O2'	5:E:26:ARG:HD2	2.21	0.41
2:B:2488:A:N6	2:B:2490:C:H41	2.18	0.41
2:B:2595:A:H2'	2:B:2596:U:H5'	2.02	0.41
2:B:2612:U:H1'	2:B:2803:A:C2	2.55	0.41
2:B:2748:A:H4'	9:I:145:PHE:CE1	2.55	0.41
2:B:2883:U:H5'	7:G:263:SER:HB2	2.01	0.41
2:B:3262:U:H2'	2:B:3263:G:H5"	2.03	0.41
2:B:682:U:C5	8:H:112:LYS:HG3	2.56	0.41
2:B:83:U:H2'	2:B:84:U:O4'	2.20	0.41
2:B:929:A:H2'	2:B:930:U:H6	1.84	0.41
1:A:253:A:H5'	54:BB:135:GLY:N	2.35	0.41
54:BB:31:PRO:HG2	54:BB:38:LEU:HD21	2.02	0.41
4:D:104:A:C2'	4:D:105:C:H5'	2.50	0.41
30:DA:36:SER:OG	30:DA:38:GLU:HB3	2.19	0.41
82:DC:18:ASN:HA	82:DC:98:PHE:HE1	1.85	0.41
82:DC:28:VAL:CG1	82:DC:29:ASP:N	2.83	0.41
82:DC:644:ASN:ND2	82:DC:684:VAL:H	2.14	0.41
2:B:2470:C:H4'	5:E:26:ARG:CD	2.50	0.41
31:EA:83:THR:OG1	31:EA:84:ARG:N	2.53	0.41
31:EA:7:ALA:O	31:EA:9:LYS:N	2.54	0.41
6:F:142:ASP:C	6:F:144:ASN:H	2.24	0.41
58:FB:173:PRO:HA	58:FB:178:ARG:O	2.21	0.41
58:FB:195:ARG:C	58:FB:196:LEU:HD12	2.41	0.41
59:GB:126:ARG:O	59:GB:130:THR:HG22	2.21	0.41
8:H:334:PHE:CE1	8:H:339:LEU:CB	3.03	0.41
34:HA:16:LEU:HD22	34:HA:19:LYS:HE3	2.01	0.41
34:HA:18:ILE:HG12	34:HA:81:VAL:CA	2.49	0.41
35:IA:17:HIS:C	35:IA:19:ARG:H	2.24	0.41
35:IA:25:PHE:O	35:IA:64:VAL:HG23	2.20	0.41
61:IB:6:THR:O	61:IB:7:VAL:CG1	2.68	0.41
10:J:158:TYR:CD1	18:R:115:PHE:HA	2.56	0.41
11:K:95:ILE:O	11:K:96:PRO:C	2.58	0.41
37:KA:16:TYR:O	37:KA:29:LEU:HD12	2.20	0.41
63:KB:112:LYS:O	63:KB:115:LEU:HB3	2.19	0.41
12:L:94:PHE:CE1	12:L:150:LEU:HD12	2.55	0.41
12:L:49:TYR:N	12:L:49:TYR:CD1	2.88	0.41
12:L:82:LEU:HD12	12:L:82:LEU:HA	1.96	0.41
64:LB:30:VAL:HG13	64:LB:39:ILE:O	2.20	0.41
65:MB:28:MET:CE	65:MB:33:PHE:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:88:GLU:C	15:O:90:GLN:H	2.23	0.41
68:PB:75:ASN:HA	68:PB:75:ASN:HD22	1.61	0.41
3:C:113:U:OP2	43:QA:6:SER:HB2	2.20	0.41
71:SB:10:GLU:OE2	71:SB:10:GLU:HA	2.20	0.41
71:SB:3:ASN:HD22	71:SB:7:GLN:HB2	1.85	0.41
71:SB:8:LEU:HD22	71:SB:9:VAL:N	2.35	0.41
72:TB:5:SER:O	72:TB:6:VAL:C	2.57	0.41
21:U:70:THR:CG2	21:U:81:ALA:HB3	2.50	0.41
47:UA:44:LYS:HD2	47:UA:44:LYS:N	2.35	0.41
73:UB:66:SER:O	73:UB:67:ALA:CB	2.68	0.41
22:V:111:ARG:HG3	22:V:121:CYS:SG	2.61	0.41
23:W:24:LEU:HD12	23:W:24:LEU:N	2.36	0.41
49:WA:157:VAL:HG23	49:WA:169:ILE:HA	2.02	0.41
75:WB:67:ASP:C	75:WB:69:LEU:H	2.24	0.41
76:XB:52:ASP:CA	76:XB:55:GLU:HB3	2.47	0.41
25:Y:5:HIS:H	25:Y:5:HIS:CD2	2.38	0.41
51:YA:107:THR:O	51:YA:111:ARG:HB2	2.21	0.41
52:ZA:226:THR:O	52:ZA:227:PRO:C	2.59	0.41
52:ZA:43:ARG:HA	52:ZA:46:LYS:CB	2.51	0.41
52:ZA:73:LEU:H	52:ZA:74:PRO:HD3	1.86	0.41
1:A:1196:A:H1'	1:A:1602:C:O2'	2.19	0.41
1:A:1407:U:H2'	1:A:1408:G:C8	2.56	0.41
1:A:1449:U:H2'	1:A:1450:U:O4'	2.20	0.41
1:A:1654:G:N2	1:A:1745:G:H2'	2.35	0.41
1:A:385:A:H5"	58:FB:22:ARG:HB3	2.02	0.41
1:A:34:G:N1	1:A:474:A:H2	2.19	0.41
1:A:503:G:H2'	1:A:504:U:C5	2.53	0.41
1:A:549:G:H2'	1:A:550:A:C8	2.55	0.41
1:A:570:A:H1'	1:A:574:G:N1	2.36	0.41
1:A:937:C:O2'	1:A:938:G:H5'	2.21	0.41
1:A:960:U:H5'	63:KB:55:ARG:HE	1.86	0.41
1:A:98:U:C4	1:A:99:C:N4	2.88	0.41
2:B:2916:U:H1'	27:AA:44:SER:HB3	2.02	0.41
53:AB:136:VAL:HG12	53:AB:138:VAL:HG23	2.02	0.41
53:AB:25:PHE:HB2	53:AB:34:TYR:CE1	2.56	0.41
53:AB:42:THR:CG2	53:AB:45:LYS:HB2	2.51	0.41
2:B:1009:A:C2	2:B:1042:U:H1'	2.55	0.41
2:B:1010:G:H22	2:B:1040:A:H2	1.67	0.41
2:B:1216:C:C3'	2:B:1217:A:H5"	2.51	0.41
2:B:1427:U:O2'	2:B:1428:A:H5'	2.20	0.41
2:B:177:U:H2'	2:B:178:U:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1947:G:N2	2:B:2102:U:C2	2.89	0.41
2:B:2513:U:H5'	12:L:242:ALA:HB1	2.02	0.41
2:B:3136:G:H2'	2:B:3137:C:H6	1.83	0.41
2:B:3184:A:O2'	2:B:3185:U:H5'	2.21	0.41
2:B:3216:G:O4'	2:B:3259:U:O4	2.38	0.41
2:B:523:A:N6	2:B:570:A:C2	2.89	0.41
2:B:584:G:C2'	2:B:585:A:H8	2.31	0.41
2:B:711:A:H2'	2:B:712:G:H5'	2.03	0.41
2:B:791:A:H2'	2:B:792:G:C8	2.56	0.41
2:B:807:A:N6	2:B:934:G:H1	2.19	0.41
2:B:854:G:C2	2:B:855:U:H1'	2.55	0.41
2:B:830:A:N6	2:B:864:G:H1'	2.36	0.41
2:B:910:G:H2'	2:B:911:C:O4'	2.20	0.41
2:B:912:G:H2'	2:B:914:A:N7	2.36	0.41
54:BB:50:ASN:N	54:BB:50:ASN:ND2	2.68	0.41
2:B:59:G:H5"	3:C:33:A:O2'	2.20	0.41
3:C:60:U:O2'	3:C:61:A:H5'	2.20	0.41
29:CA:83:VAL:CG1	29:CA:121:LYS:HD3	2.51	0.41
55:CB:78:ALA:C	55:CB:80:LYS:H	2.24	0.41
55:CB:98:MET:O	55:CB:98:MET:HG3	2.20	0.41
4:D:102:A:C2'	4:D:103:A:H5'	2.51	0.41
30:DA:37:LYS:HD2	30:DA:38:GLU:N	2.35	0.41
1:A:141:U:O4	56:DB:187:LYS:HD2	2.21	0.41
56:DB:202:ARG:O	56:DB:205:ALA:HB3	2.20	0.41
82:DC:110:ASP:HB2	82:DC:536:LEU:HD21	2.02	0.41
82:DC:7:ASP:HA	82:DC:10:ARG:CB	2.51	0.41
31:EA:11:ALA:CB	31:EA:80:LEU:HD22	2.50	0.41
32:FA:123:VAL:HG23	32:FA:125:VAL:HG23	2.01	0.41
58:FB:80:GLY:O	58:FB:102:VAL:HB	2.21	0.41
2:B:3150:A:H4'	7:G:128:LYS:O	2.20	0.41
7:G:51:ALA:H	7:G:79:VAL:HA	1.85	0.41
8:H:263:GLY:HA2	8:H:269:SER:HA	2.03	0.41
2:B:610:G:N3	8:H:313:LEU:HB2	2.36	0.41
2:B:1079:A:C2	9:I:113:LEU:HD11	2.56	0.41
9:I:115:LEU:HD13	9:I:118:THR:HG23	2.01	0.41
9:I:49:TYR:CD1	9:I:66:SER:HB3	2.55	0.41
4:D:98:C:H1'	11:K:131:GLU:OE1	2.20	0.41
63:KB:105:ASN:O	63:KB:107:LYS:N	2.53	0.41
63:KB:70:LYS:NZ	63:KB:72:MET:HB3	2.36	0.41
14:N:34:TYR:CD1	14:N:34:TYR:N	2.89	0.41
40:NA:44:VAL:C	40:NA:47:ILE:HG22	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:102:PHE:CE2	15:O:129:VAL:HG23	2.56	0.41
15:O:63:GLU:O	15:O:64:LYS:HB2	2.20	0.41
41:OA:31:LYS:O	41:OA:32:LYS:HB2	2.21	0.41
2:B:884:A:OP1	41:OA:5:THR:HG23	2.20	0.41
41:OA:78:PHE:CD2	41:OA:78:PHE:N	2.89	0.41
67:OB:102:VAL:HB	67:OB:103:ASP:H	1.44	0.41
42:PA:77:ARG:NH1	42:PA:77:ARG:HB2	2.35	0.41
68:PB:65:GLU:HA	68:PB:68:ARG:NH1	2.35	0.41
69:QB:7:ARG:C	69:QB:9:VAL:H	2.23	0.41
18:R:15:VAL:HG12	18:R:65:LEU:HG	2.03	0.41
20:T:142:SER:HB3	20:T:147:TRP:HB3	2.02	0.41
21:U:16:SER:HB2	21:U:149:VAL:HG22	2.03	0.41
21:U:27:LYS:HG2	21:U:63:PHE:CE1	2.56	0.41
48:VA:130:PRO:HA	48:VA:150:ILE:HD11	2.02	0.41
48:VA:187:VAL:HG12	48:VA:189:GLN:H	1.86	0.41
74:VB:25:VAL:HG12	74:VB:27:VAL:HG23	2.01	0.41
74:VB:60:PHE:HA	74:VB:70:VAL:O	2.20	0.41
23:W:121:HIS:O	23:W:124:TYR:HB3	2.20	0.41
2:B:1473:G:H5'	23:W:24:LEU:O	2.20	0.41
49:WA:124:SER:O	49:WA:131:ILE:HG23	2.21	0.41
49:WA:70:ASP:O	49:WA:83:ALA:HB3	2.20	0.41
50:XA:164:ASN:C	50:XA:166:GLY:H	2.22	0.41
25:Y:9:SER:O	25:Y:11:THR:HG23	2.20	0.41
51:YA:158:SER:O	51:YA:162:ARG:HG3	2.20	0.41
51:YA:71:ALA:HB1	51:YA:77:GLU:HA	2.03	0.41
77:YB:34:ASP:O	77:YB:80:ARG:HB3	2.20	0.41
78:ZB:25:VAL:HG13	78:ZB:44:VAL:O	2.21	0.41
1:A:1003:A:H4'	1:A:1004:U:O5'	2.20	0.41
1:A:1125:A:C4	1:A:1126:G:H1'	2.55	0.41
1:A:1237:G:H2'	1:A:1238:A:O4'	2.21	0.41
1:A:1260:U:H2'	1:A:1261:G:H8	1.86	0.41
1:A:1281:G:O4'	70:RB:75:GLY:HA3	2.19	0.41
1:A:1381:U:H1'	1:A:1516:A:N6	2.35	0.41
1:A:1338:C:O4'	1:A:1410:A:H1'	2.20	0.41
1:A:1588:G:C2'	1:A:1589:C:H5'	2.51	0.41
1:A:331:A:N7	58:FB:172:ARG:NH2	2.66	0.41
1:A:416:A:H5'	1:A:417:A:N7	2.36	0.41
1:A:771:A:H2'	1:A:772:G:C5'	2.50	0.41
1:A:980:G:H4'	1:A:1776:A:H5"	2.03	0.41
2:B:1120:A:H2'	2:B:1121:U:H6	1.85	0.41
2:B:1662:G:H2'	2:B:1663:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1841:A:O2'	2:B:1842:A:O4'	2.38	0.41
2:B:1845:G:H3'	2:B:1846:C:H5"	2.03	0.41
2:B:1901:A:OP2	2:B:1903:U:O4	2.38	0.41
2:B:2149:A:H4'	6:F:179:LEU:HB3	2.02	0.41
2:B:2497:U:H4'	2:B:2498:U:C6	2.55	0.41
2:B:2901:G:H2'	2:B:2902:A:O4'	2.20	0.41
2:B:2912:G:H1'	2:B:3131:U:H5"	2.03	0.41
2:B:2928:C:H6	2:B:2928:C:H5"	1.86	0.41
2:B:450:G:H2'	2:B:451:U:O4'	2.21	0.41
2:B:653:A:H1'	2:B:2360:C:O2	2.20	0.41
2:B:846:A:C2	2:B:847:A:C6	3.09	0.41
3:C:91:C:O2	30:DA:25:SER:HB3	2.21	0.41
29:CA:58:ASP:OD1	29:CA:60:TYR:N	2.54	0.41
55:CB:111:VAL:O	55:CB:115:LYS:HB3	2.20	0.41
55:CB:175:LEU:HD13	55:CB:198:LEU:HD23	2.03	0.41
4:D:57:G:O2'	15:O:138:VAL:HG22	2.21	0.41
82:DC:164:LEU:HD11	82:DC:174:LEU:HD22	2.02	0.41
82:DC:229:TYR:HA	82:DC:229:TYR:HD1	1.68	0.41
82:DC:152:LYS:CB	82:DC:343:PRO:HG3	2.50	0.41
82:DC:103:ILE:HG21	82:DC:397:PHE:HZ	1.85	0.41
82:DC:402:ALA:HA	82:DC:450:ALA:HB1	2.02	0.41
82:DC:380:LEU:CD1	82:DC:456:LEU:HD11	2.47	0.41
82:DC:496:LYS:CD	82:DC:553:PRO:HB3	2.46	0.41
6:F:180:LEU:HD23	6:F:180:LEU:HA	1.76	0.41
2:B:2066:C:OP2	58:FB:154:SER:N	2.53	0.41
7:G:180:GLU:O	7:G:181:ILE:HG13	2.20	0.41
7:G:239:PRO:C	7:G:241:LYS:N	2.74	0.41
2:B:2940:A:C2	7:G:254:ALA:HB2	2.56	0.41
7:G:255:TRP:O	7:G:255:TRP:HD1	2.04	0.41
7:G:60:LEU:CG	7:G:62:ARG:HG3	2.51	0.41
8:H:187:LEU:HD12	8:H:187:LEU:N	2.35	0.41
8:H:23:PRO:HD2	8:H:26:PHE:CE2	2.55	0.41
8:H:51:ALA:HA	8:H:103:THR:HG21	2.01	0.41
8:H:51:ALA:HA	8:H:103:THR:HG22	2.01	0.41
9:I:233:ALA:C	9:I:235:SER:H	2.23	0.41
10:J:72:ASN:HD21	10:J:159:LEU:HB3	1.85	0.41
10:J:77:ARG:HH11	10:J:77:ARG:CB	2.31	0.41
11:K:140:SER:HB2	11:K:237:ASN:ND2	2.36	0.41
11:K:160:ARG:CZ	11:K:206:LYS:HD3	2.50	0.41
37:KA:8:TYR:CD1	37:KA:8:TYR:N	2.89	0.41
12:L:235:GLY:C	12:L:237:ILE:HD12	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:81:VAL:CG1	64:LB:102:LEU:HD21	2.47	0.41
14:N:38:LYS:HG3	14:N:41:ALA:CB	2.44	0.41
66:NB:117:LEU:HD22	66:NB:117:LEU:H	1.84	0.41
66:NB:35:PRO:HD2	69:QB:7:ARG:O	2.21	0.41
16:P:132:ILE:H	16:P:132:ILE:HG13	1.73	0.41
2:B:684:G:H5"	17:Q:35:ARG:NH2	2.36	0.41
18:R:44:VAL:HG22	18:R:60:LEU:HD23	2.02	0.41
44:RA:112:LYS:HB3	44:RA:115:CYS:SG	2.61	0.41
19:S:19:LEU:HA	19:S:22:LEU:HD13	2.03	0.41
20:T:77:SER:HB3	20:T:106:GLU:CD	2.40	0.41
22:V:113:LYS:CE	22:V:113:LYS:HA	2.50	0.41
22:V:173:GLU:HA	32:FA:51:GLY:C	2.41	0.41
22:V:33:TYR:CB	22:V:49:LEU:HD21	2.51	0.41
22:V:36:LEU:C	22:V:38:ARG:H	2.23	0.41
22:V:68:ALA:CA	22:V:71:LEU:HD12	2.37	0.41
48:VA:133:THR:HA	48:VA:136:PHE:HD2	1.86	0.41
76:XB:4:LYS:O	76:XB:4:LYS:HG3	2.20	0.41
4:D:9:C:OP1	25:Y:26:HIS:HB2	2.20	0.41
51:YA:117:TRP:HE3	51:YA:155:TYR:OH	2.04	0.41
52:ZA:157:LYS:HE2	52:ZA:170:ILE:HG23	2.02	0.41
52:ZA:229:LEU:C	52:ZA:231:ALA:H	2.23	0.41
1:A:1313:A:H2'	1:A:1315:U:H5'	2.02	0.41
1:A:1414:U:H2'	1:A:1416:G:OP1	2.20	0.41
27:AA:68:GLU:CD	27:AA:68:GLU:H	2.23	0.41
53:AB:120:TYR:HA	53:AB:123:VAL:CG2	2.51	0.41
53:AB:99:VAL:HG23	53:AB:169:ASP:OD2	2.21	0.41
2:B:1070:U:H2'	2:B:1071:U:H5'	2.02	0.41
2:B:1109:U:H2'	2:B:1110:U:O4'	2.21	0.41
2:B:1342:C:H2'	2:B:1343:A:O4'	2.20	0.41
2:B:1450:G:C2	2:B:1451:C:N3	2.88	0.41
2:B:1549:U:H2'	2:B:1550:C:C6	2.56	0.41
2:B:2101:C:H1'	2:B:2102:U:O5'	2.20	0.41
2:B:2186:U:O2'	2:B:2315:G:H8	2.03	0.41
2:B:2469:G:N1	2:B:2477:G:H1'	2.36	0.41
2:B:3107:U:H2'	2:B:3108:G:H8	1.86	0.41
2:B:3278:C:H2'	2:B:3278:C:O2	2.21	0.41
2:B:3349:C:H2'	2:B:3350:C:C4'	2.50	0.41
2:B:348:A:N3	2:B:352:A:O2'	2.53	0.41
2:B:350:C:N3	2:B:367:A:H2'	2.36	0.41
2:B:624:G:H2'	2:B:625:G:C8	2.56	0.41
2:B:657:A:H2'	2:B:658:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:763:G:C4	2:B:764:U:H1'	2.56	0.41
2:B:834:U:C2'	2:B:835:G:H5'	2.51	0.41
2:B:957:C:H4'	2:B:2799:A:N7	2.36	0.41
54:BB:49:ARG:HB2	54:BB:55:ALA:HB3	2.02	0.41
54:BB:36:HIS:CG	54:BB:85:GLY:HA3	2.56	0.41
80:BC:7:SER:O	80:BC:8:LEU:HD23	2.20	0.41
30:DA:37:LYS:CB	30:DA:40:ARG:HH12	2.32	0.41
82:DC:229:TYR:O	82:DC:230:ALA:C	2.59	0.41
82:DC:230:ALA:HB2	82:DC:237:LYS:CA	2.51	0.41
82:DC:381:TYR:HB2	82:DC:401:PHE:HE2	1.85	0.41
82:DC:634:TRP:HB3	82:DC:646:VAL:HG12	2.02	0.41
2:B:1242:G:C4	82:DC:754:VAL:HB	2.56	0.41
82:DC:797:VAL:HA	86:DC:903:SO1:H54	2.03	0.41
5:E:109:ALA:HB3	5:E:151:VAL:HG11	2.03	0.41
83:EC:6779:C:H3'	83:EC:6780:A:C5'	2.50	0.41
22:V:178:ARG:CG	32:FA:51:GLY:HA3	2.50	0.41
2:B:1887:A:H4'	7:G:227:GLU:CA	2.51	0.41
7:G:278:ILE:CG2	7:G:279:ASN:N	2.82	0.41
7:G:89:VAL:HG22	7:G:90:VAL:N	2.35	0.41
1:A:591:A:H5"	59:GB:24:LEU:HD13	2.02	0.41
1:A:473:A:OP1	59:GB:44:ARG:NH1	2.54	0.41
8:H:200:THR:HG23	8:H:200:THR:O	2.21	0.41
8:H:346:LYS:HG3	8:H:346:LYS:O	2.21	0.41
34:HA:28:LYS:O	34:HA:32:LYS:N	2.54	0.41
34:HA:32:LYS:O	34:HA:36:GLN:HG3	2.20	0.41
9:I:69:ILE:HG23	25:Y:31:LEU:CB	2.43	0.41
61:IB:111:VAL:HA	61:IB:139:VAL:HB	2.03	0.41
61:IB:65:SER:O	61:IB:67:ARG:HD2	2.21	0.41
61:IB:93:TYR:HD2	61:IB:93:TYR:C	2.24	0.41
10:J:51:ARG:CZ	10:J:163:PHE:HB2	2.51	0.41
11:K:103:LEU:HD22	11:K:108:LEU:HD12	2.02	0.41
2:B:1178:G:C2	37:KA:19:SER:HA	2.56	0.41
38:LA:109:THR:O	38:LA:109:THR:HG22	2.20	0.41
2:B:1489:A:OP1	38:LA:10:ARG:HD2	2.21	0.41
1:A:887:A:C4'	64:LB:122:PRO:HB3	2.50	0.41
2:B:3109:G:N2	13:M:156:GLN:OE1	2.54	0.41
65:MB:90:ILE:O	65:MB:90:ILE:HG22	2.21	0.41
66:NB:48:VAL:HG22	66:NB:48:VAL:O	2.20	0.41
16:P:90:ARG:HH11	16:P:99:LYS:HB3	1.86	0.41
68:PB:48:LYS:HD3	68:PB:48:LYS:HA	1.95	0.41
17:Q:154:VAL:O	32:FA:101:VAL:HB	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:111:ILE:HG23	69:QB:112:GLY:N	2.35	0.41
69:QB:37:VAL:HG22	69:QB:38:LYS:N	2.35	0.41
18:R:60:LEU:O	18:R:62:GLN:N	2.53	0.41
70:RB:26:LEU:O	70:RB:88:LYS:HA	2.21	0.41
19:S:106:VAL:HG23	19:S:107:GLY:N	2.35	0.41
19:S:118:SER:OG	19:S:130:PHE:HB3	2.21	0.41
71:SB:64:GLU:O	71:SB:68:SER:HB2	2.20	0.41
72:TB:39:GLN:O	72:TB:43:LYS:N	2.53	0.41
72:TB:3:ARG:N	72:TB:3:ARG:HD2	2.36	0.41
21:U:166:VAL:O	21:U:168:LEU:HD12	2.21	0.41
2:B:3270:U:C4	21:U:175:ARG:HA	2.56	0.41
47:UA:81:SER:O	47:UA:82:THR:C	2.59	0.41
73:UB:13:ARG:CZ	73:UB:13:ARG:HB3	2.51	0.41
48:VA:42:ARG:O	48:VA:46:ARG:HG2	2.20	0.41
74:VB:17:LEU:H	74:VB:17:LEU:HG	1.35	0.41
2:B:833:G:C5'	23:W:84:THR:HG21	2.51	0.41
49:WA:292:LEU:HA	49:WA:303:ALA:HA	2.03	0.41
75:WB:38:HIS:O	75:WB:39:ALA:HB3	2.21	0.41
68:PB:4:VAL:HG22	75:WB:78:ILE:HG22	2.02	0.41
50:XA:49:ASN:OD1	50:XA:52:LYS:HG3	2.21	0.41
76:XB:53:LEU:HD22	76:XB:53:LEU:HA	1.91	0.41
52:ZA:133:LYS:C	52:ZA:135:SER:N	2.74	0.41
52:ZA:84:LYS:HG3	52:ZA:84:LYS:O	2.21	0.41
78:ZB:64:ARG:HB3	78:ZB:65:ARG:H	1.69	0.41
1:A:1384:A:H2'	1:A:1385:G:C4'	2.51	0.41
1:A:158:U:HO2'	1:A:159:U:H3'	1.85	0.41
1:A:1783:C:H2'	1:A:1784:C:O4'	2.21	0.41
1:A:453:U:O2	1:A:453:U:H3'	2.21	0.41
1:A:64:U:C3'	1:A:65:A:H5"	2.51	0.41
1:A:7:G:N7	52:ZA:205:ARG:NH2	2.69	0.41
1:A:990:C:H5"	64:LB:129:LYS:CB	2.51	0.41
2:B:109:A:OP1	2:B:109:A:H8	2.04	0.41
2:B:10:C:H2'	2:B:11:A:O4'	2.21	0.41
2:B:1223:A:N6	2:B:1285:G:H21	2.07	0.41
2:B:1616:U:H6	2:B:1616:U:O5'	2.03	0.41
2:B:185:C:C2'	2:B:186:U:H5'	2.51	0.41
2:B:2117:A:C8	2:B:2118:C:C5	3.09	0.41
2:B:221:A:OP1	2:B:221:A:H3'	2.21	0.41
2:B:2291:A:H2'	2:B:2292:U:H6	1.82	0.41
2:B:2526:C:H2'	2:B:2527:G:H8	1.81	0.41
2:B:2600:C:H2'	2:B:2601:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2723:U:O2'	2:B:2724:U:H5'	2.21	0.41
2:B:2830:G:H1'	2:B:2861:U:C2	2.56	0.41
2:B:2835:U:C4	2:B:2836:C:C4	3.09	0.41
2:B:2907:G:O2'	2:B:2908:G:H5'	2.21	0.41
2:B:2918:G:O2'	2:B:2919:A:H5'	2.20	0.41
2:B:79:U:H2'	2:B:80:G:H8	1.85	0.41
2:B:912:G:C2	2:B:914:A:C2	3.09	0.41
54:BB:175:PHE:HE1	54:BB:181:VAL:HG21	1.85	0.41
82:DC:539:GLU:O	82:DC:543:GLN:HG3	2.21	0.41
82:DC:561:VAL:HB	82:DC:563:TYR:CE1	2.56	0.41
2:B:3027:A:H1'	82:DC:790:GLY:H	1.82	0.41
2:B:1634:G:N7	31:EA:17:ARG:NH1	2.69	0.41
6:F:22:LEU:HD13	6:F:52:SER:CB	2.51	0.41
2:B:1430:U:O4	32:FA:4:ARG:HA	2.20	0.41
2:B:1426:C:H3'	32:FA:4:ARG:HH22	1.86	0.41
7:G:136:LYS:HE2	7:G:144:ILE:CD1	2.51	0.41
8:H:351:PRO:CG	11:K:70:LYS:HD3	2.51	0.41
8:H:38:VAL:HG11	8:H:121:ALA:CB	2.51	0.41
9:I:285:ARG:O	9:I:289:LYS:HB2	2.20	0.41
9:I:58:LYS:HZ3	9:I:158:ARG:HH12	1.67	0.41
35:IA:35:GLU:OE2	35:IA:38:LYS:HD3	2.20	0.41
11:K:149:TYR:HD2	11:K:149:TYR:N	2.19	0.41
2:B:1168:U:OP1	11:K:211:SER:O	2.39	0.41
37:KA:38:PRO:CG	37:KA:77:ASN:HA	2.51	0.41
63:KB:37:ILE:HG13	63:KB:54:LEU:HD11	2.01	0.41
12:L:235:GLY:HA2	12:L:237:ILE:CD1	2.51	0.41
12:L:99:PRO:HD3	12:L:132:VAL:HG12	2.03	0.41
39:MA:21:LEU:HD11	39:MA:25:LYS:HE3	2.02	0.41
65:MB:100:LYS:HE2	65:MB:101:ALA:CB	2.50	0.41
14:N:91:VAL:CG1	14:N:127:ALA:HB1	2.34	0.41
14:N:21:ARG:H	14:N:21:ARG:HG3	1.69	0.41
68:PB:82:PRO:O	68:PB:83:ALA:HB2	2.20	0.41
17:Q:115:ARG:HB2	17:Q:115:ARG:NH1	2.21	0.41
18:R:35:ILE:HG22	18:R:37:GLU:O	2.21	0.41
70:RB:109:GLU:HG3	70:RB:110:PRO:HD2	2.03	0.41
71:SB:39:VAL:HG23	71:SB:40:ASP:N	2.35	0.41
72:TB:29:PRO:O	72:TB:30:SER:HB3	2.20	0.41
52:ZA:230:TRP:CD2	72:TB:68:ARG:HD2	2.56	0.41
47:UA:27:LYS:HA	47:UA:30:GLU:CG	2.51	0.41
73:UB:86:PHE:O	73:UB:123:LYS:HA	2.21	0.41
61:IB:99:ARG:HH12	73:UB:7:ARG:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:185:LEU:H	48:VA:185:LEU:HG	1.49	0.41
49:WA:179:LYS:HB2	49:WA:181:TRP:HE1	1.86	0.41
75:WB:56:THR:N	75:WB:103:ARG:HD2	2.36	0.41
50:XA:126:PRO:HG3	50:XA:151:SER:CB	2.46	0.41
50:XA:56:LYS:C	50:XA:58:VAL:N	2.73	0.41
51:YA:87:ARG:NE	51:YA:220:GLN:HE22	2.18	0.41
1:A:1116:A:C2'	1:A:1117:U:H5'	2.50	0.41
1:A:1505:A:H2'	1:A:1506:G:O4'	2.21	0.41
1:A:1657:U:C4	2:B:2125:A:H4'	2.56	0.41
1:A:19:A:C2'	1:A:20:G:H5'	2.51	0.41
1:A:58:U:O2'	1:A:451:A:N3	2.53	0.41
1:A:532:U:H2'	1:A:533:U:O4'	2.21	0.41
1:A:618:U:C2'	1:A:619:A:H5"	2.47	0.41
53:AB:95:GLY:HA3	53:AB:129:SER:OG	2.21	0.41
1:A:1244:A:OP2	79:AC:7:TRP:HB3	2.21	0.41
2:B:1106:G:H2'	2:B:1107:C:O4'	2.20	0.41
2:B:1131:G:N3	2:B:2373:A:C2	2.89	0.41
2:B:1348:U:C4'	2:B:1349:G:H5"	2.51	0.41
2:B:1494:U:OP1	43:QA:44:TRP:HB3	2.20	0.41
2:B:1886:A:N6	2:B:2349:U:O4'	2.53	0.41
2:B:2248:C:O4'	2:B:2271:A:H2	2.04	0.41
2:B:2664:C:O2'	2:B:2665:U:H5'	2.21	0.41
2:B:2681:U:H2'	2:B:2682:C:C6	2.56	0.41
2:B:2752:U:H6	2:B:2752:U:C5'	2.33	0.41
2:B:628:A:C2'	2:B:629:U:H5'	2.50	0.41
2:B:776:U:C5	2:B:2719:U:O2	2.74	0.41
54:BB:47:PHE:HA	54:BB:51:ARG:HB2	2.02	0.41
55:CB:123:VAL:HG13	75:WB:58:ARG:HH12	1.83	0.41
55:CB:206:SER:H	55:CB:211:ILE:HG13	1.86	0.41
55:CB:68:ILE:CD1	55:CB:71:ALA:HA	2.51	0.41
30:DA:82:VAL:CG1	30:DA:85:VAL:HB	2.50	0.41
56:DB:7:TYR:CE1	56:DB:125:THR:HG23	2.51	0.41
56:DB:84:TYR:HE2	56:DB:93:LYS:HB3	1.86	0.41
82:DC:27:HIS:NE2	82:DC:138:GLN:HB3	2.35	0.41
82:DC:249:PHE:CD1	82:DC:271:ARG:HA	2.55	0.41
57:EB:12:ALA:H	57:EB:13:PRO:HD2	1.86	0.41
57:EB:49:ILE:CG2	57:EB:175:LYS:HD3	2.50	0.41
83:EC:6941:U:H3'	83:EC:6942:A:C5'	2.49	0.41
2:B:2149:A:C5'	6:F:179:LEU:HD23	2.39	0.41
6:F:27:ALA:HB1	6:F:77:ILE:HD12	2.03	0.41
7:G:167:ARG:CZ	7:G:168:LYS:HE2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:339:ARG:NH2	7:G:342:LEU:HD11	2.36	0.41
59:GB:96:VAL:HG23	59:GB:97:LEU:N	2.35	0.41
8:H:183:LYS:NZ	8:H:183:LYS:HB3	2.36	0.41
34:HA:13:LYS:HD3	34:HA:100:ILE:CG2	2.51	0.41
34:HA:41:LEU:O	34:HA:92:ILE:N	2.54	0.41
9:I:109:THR:CG2	9:I:171:LEU:HD11	2.51	0.41
9:I:259:LYS:HG2	9:I:260:PHE:CE1	2.56	0.41
10:J:121:LEU:HB3	10:J:122:PHE:H	1.75	0.41
11:K:107:ARG:HB3	11:K:204:PRO:HG3	2.03	0.41
11:K:222:HIS:ND1	11:K:223:PHE:N	2.69	0.41
11:K:83:LEU:HA	11:K:119:VAL:HG23	2.03	0.41
37:KA:53:TYR:N	37:KA:53:TYR:CD1	2.88	0.41
63:KB:102:LEU:O	63:KB:106:ARG:HA	2.20	0.41
12:L:62:LYS:NZ	12:L:63:LYS:HB2	2.36	0.41
64:LB:85:ALA:O	64:LB:86:THR:C	2.60	0.41
39:MA:100:VAL:HG22	39:MA:101:THR:N	2.36	0.41
65:MB:88:GLU:O	65:MB:88:GLU:HG2	2.21	0.41
65:MB:96:ILE:HG13	65:MB:96:ILE:H	1.68	0.41
14:N:51:HIS:O	14:N:165:ILE:CB	2.62	0.41
40:NA:44:VAL:HA	40:NA:47:ILE:CG2	2.51	0.41
66:NB:40:GLU:HA	66:NB:42:GLU:N	2.35	0.41
66:NB:65:ILE:HG22	66:NB:66:ARG:N	2.35	0.41
68:PB:104:ASN:O	68:PB:108:LYS:HB2	2.20	0.41
17:Q:56:PRO:CG	17:Q:74:GLY:O	2.69	0.41
44:RA:77:ILE:CG2	44:RA:78:ILE:N	2.84	0.41
45:SA:8:LYS:HA	45:SA:11:ARG:HB2	2.03	0.41
46:TA:38:GLN:HA	46:TA:41:ARG:CZ	2.50	0.41
21:U:48:LEU:HD11	21:U:91:VAL:HG12	2.02	0.41
22:V:110:ALA:O	22:V:114:ILE:HG13	2.20	0.41
22:V:138:LEU:O	22:V:138:LEU:HD22	2.21	0.41
22:V:92:ARG:HB3	32:FA:76:ASP:OD1	2.21	0.41
48:VA:55:LYS:CD	48:VA:56:ASN:H	2.34	0.41
49:WA:133:VAL:CG2	49:WA:142:ALA:HB3	2.51	0.41
49:WA:34:LEU:CD2	49:WA:80:ALA:HB1	2.51	0.41
49:WA:41:THR:HG21	49:WA:62:LYS:HA	2.03	0.41
49:WA:22:SER:HB2	49:WA:70:ASP:CG	2.41	0.41
49:WA:74:THR:HB	49:WA:76:ASP:OD1	2.21	0.41
50:XA:191:ARG:HG3	50:XA:192:THR:N	2.35	0.41
50:XA:198:MET:O	50:XA:201:LEU:HB2	2.20	0.41
25:Y:112:ASN:OD1	25:Y:128:LEU:HD22	2.21	0.41
26:Z:100:THR:C	26:Z:102:GLU:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:76:LEU:O	26:Z:79:LEU:HB2	2.20	0.41
52:ZA:101:VAL:CG1	52:ZA:211:LEU:HD12	2.49	0.41
52:ZA:54:GLU:HB3	71:SB:12:TYR:CB	2.49	0.41
1:A:1105:C:H41	73:UB:4:GLY:HA2	1.86	0.41
1:A:1388:A:H4'	1:A:1389:C:O4'	2.21	0.41
1:A:1439:C:H2'	1:A:1440:C:C6	2.55	0.41
1:A:1449:U:H2'	1:A:1450:U:H6	1.85	0.41
1:A:160:C:O2'	56:DB:95:LYS:HE2	2.21	0.41
1:A:1661:U:H2'	1:A:1662:G:H8	1.86	0.41
1:A:993:A:N6	1:A:1012:U:C5	2.89	0.41
2:B:1007:U:H2'	2:B:1008:U:C6	2.56	0.41
2:B:1047:A:N3	2:B:2633:U:O2'	2.53	0.41
2:B:1138:U:H2'	2:B:1139:G:H8	1.86	0.41
2:B:123:A:H5'	2:B:124:U:OP2	2.20	0.41
2:B:1326:A:C2	2:B:1327:C:C2	3.09	0.41
2:B:1347:U:H2'	2:B:1355:A:C6	2.56	0.41
2:B:1520:G:O2'	2:B:1521:G:H5'	2.21	0.41
2:B:1591:G:O2'	2:B:1592:G:H5'	2.21	0.41
2:B:1738:C:O2'	2:B:1739:U:H5'	2.21	0.41
2:B:2649:A:C2'	2:B:2650:U:H5'	2.50	0.41
2:B:2878:G:O2'	2:B:2879:C:H5'	2.21	0.41
2:B:2881:C:H2'	2:B:2882:U:C5	2.54	0.41
2:B:3028:G:N1	2:B:3029:A:C2	2.89	0.41
2:B:3040:A:H5"	27:AA:12:ARG:CB	2.44	0.41
2:B:3143:C:H4'	2:B:3144:G:C5'	2.48	0.41
2:B:3377:G:H21	7:G:332:ARG:NH1	2.15	0.41
2:B:347:G:H2'	2:B:348:A:O4'	2.21	0.41
2:B:494:G:H8	2:B:494:G:OP2	2.04	0.41
2:B:572:A:H2'	2:B:573:C:C6	2.56	0.41
2:B:593:C:H2'	2:B:594:U:C6	2.55	0.41
2:B:595:G:H2'	2:B:596:C:H6	1.85	0.41
2:B:945:C:H2'	2:B:946:U:H6	1.80	0.41
54:BB:192:ILE:O	54:BB:212:ASP:HA	2.21	0.41
30:DA:104:LEU:HB3	30:DA:105:VAL:H	1.69	0.41
2:B:2556:C:H1'	31:EA:135:ARG:HD3	2.02	0.41
57:EB:63:PRO:O	57:EB:64:VAL:CB	2.67	0.41
23:W:185:LEU:HD22	57:EB:7:LYS:O	2.21	0.41
57:EB:9:LEU:HG	57:EB:17:GLU:HB3	2.03	0.41
6:F:47:GLN:CG	6:F:48:ILE:N	2.83	0.41
6:F:96:LEU:C	6:F:96:LEU:HD23	2.42	0.41
58:FB:99:ALA:HA	58:FB:168:CYS:SG	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:283:TYR:CE1	7:G:325:LYS:HB2	2.56	0.41
59:GB:150:LEU:C	59:GB:152:SER:N	2.73	0.41
8:H:247:PHE:HE2	8:H:249:ILE:HD11	1.86	0.41
8:H:42:VAL:O	8:H:45:ASN:HB2	2.21	0.41
8:H:61:SER:O	8:H:63:GLU:N	2.54	0.41
60:HB:38:LYS:O	60:HB:41:TYR:HB2	2.21	0.41
2:B:1456:A:H8	35:IA:26:LYS:HG3	1.78	0.41
35:IA:46:THR:OG1	35:IA:90:PHE:HA	2.21	0.41
61:IB:64:VAL:HA	61:IB:129:ARG:HH12	1.81	0.41
10:J:132:ALA:O	10:J:133:GLU:C	2.59	0.41
10:J:64:LEU:HD23	10:J:65:ILE:H	1.86	0.41
37:KA:31:LYS:NZ	37:KA:80:VAL:HA	2.35	0.41
38:LA:23:VAL:HB	38:LA:33:GLN:CD	2.41	0.41
13:M:92:TYR:HA	13:M:179:ILE:HG12	2.03	0.41
65:MB:96:ILE:HG21	65:MB:120:SER:HB3	2.02	0.41
14:N:17:TYR:CE2	14:N:119:TRP:HH2	2.39	0.41
14:N:65:LEU:HD23	14:N:159:PHE:HZ	1.85	0.41
14:N:17:TYR:CD2	14:N:98:ARG:NH1	2.88	0.41
66:NB:87:LYS:HD3	66:NB:87:LYS:O	2.21	0.41
15:O:166:LYS:HB2	15:O:166:LYS:HE3	1.95	0.41
41:OA:35:SER:O	41:OA:45:ARG:NH1	2.54	0.41
68:PB:37:GLY:HA3	68:PB:101:LEU:HA	2.03	0.41
18:R:99:TRP:O	18:R:103:ILE:HG13	2.20	0.41
10:J:154:LEU:HB2	18:R:115:PHE:HE2	1.85	0.41
18:R:45:LEU:HD12	18:R:56:GLN:C	2.41	0.41
18:R:22:LEU:HD23	18:R:64:VAL:HG11	2.02	0.41
70:RB:35:GLU:HA	70:RB:35:GLU:OE1	2.21	0.41
19:S:66:VAL:C	19:S:127:TYR:HD1	2.24	0.41
2:B:281:G:O6	19:S:181:ASN:HB2	2.21	0.41
21:U:131:ARG:HG3	21:U:137:ASN:OD1	2.21	0.41
21:U:70:THR:HG22	21:U:81:ALA:HB3	2.03	0.41
21:U:47:TYR:OH	21:U:76:PHE:CZ	2.72	0.41
48:VA:58:MET:HA	48:VA:61:ARG:HB2	2.02	0.41
23:W:64:ARG:O	23:W:68:GLN:HB3	2.20	0.41
24:X:138:GLN:O	24:X:140:VAL:N	2.54	0.41
24:X:48:LEU:HD12	25:Y:151:LEU:CD1	2.28	0.41
50:XA:120:LEU:HD12	50:XA:121:VAL:N	2.34	0.41
64:LB:103:ARG:HH22	76:XB:52:ASP:H	1.68	0.41
78:ZB:15:VAL:O	78:ZB:15:VAL:HG13	2.20	0.41
1:A:1151:A:H2'	1:A:1152:A:C8	2.56	0.40
1:A:1330:G:H2'	1:A:1331:A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:131:C:H4'	1:A:137:U:O4	2.21	0.40
1:A:1491:U:H6	1:A:1492:A:C8	2.39	0.40
1:A:1506:G:H2'	1:A:1507:G:C8	2.56	0.40
1:A:1641:C:O2'	45:SA:1:MET:HB2	2.21	0.40
1:A:1676:U:H5"	58:FB:58:LEU:CD2	2.51	0.40
1:A:389:G:OP2	1:A:390:G:N2	2.54	0.40
1:A:464:A:O2'	1:A:465:G:H5'	2.20	0.40
1:A:759:U:H2'	1:A:760:A:C8	2.56	0.40
1:A:767:U:H4'	59:GB:139:GLN:HG2	2.02	0.40
1:A:960:U:H5	63:KB:14:SER:OG	2.03	0.40
27:AA:31:ALA:HB2	27:AA:69:LEU:CD2	2.50	0.40
53:AB:96:LEU:HD21	53:AB:130:GLY:O	2.21	0.40
53:AB:35:SER:OG	53:AB:91:VAL:HG21	2.21	0.40
2:B:1481:A:H1'	38:LA:4:ARG:NH1	2.36	0.40
2:B:1495:U:H4'	2:B:1514:G:H4'	2.02	0.40
2:B:1752:A:H2'	2:B:1753:G:C8	2.56	0.40
2:B:1782:U:H2'	2:B:1783:U:C5'	2.49	0.40
2:B:1828:A:C2'	2:B:1829:G:C8	2.92	0.40
2:B:1927:G:H3'	2:B:1927:G:N3	2.36	0.40
2:B:222:A:H2'	2:B:223:U:C6	2.56	0.40
2:B:2521:U:C2'	2:B:2522:G:C5'	2.94	0.40
2:B:2550:U:O4'	2:B:2550:U:O2	2.40	0.40
2:B:2566:C:H2'	2:B:2567:C:H6	1.86	0.40
2:B:3066:U:C2	2:B:3067:C:C5	3.10	0.40
2:B:2892:A:C8	2:B:3130:A:N7	2.89	0.40
2:B:3299:A:H2	2:B:3315:G:H22	1.65	0.40
2:B:644:G:H2'	2:B:2372:A:N7	2.36	0.40
2:B:822:G:H4'	6:F:194:ASN:CB	2.52	0.40
2:B:805:G:C2'	2:B:936:A:H61	2.24	0.40
54:BB:98:ASN:O	54:BB:114:ILE:HG12	2.21	0.40
80:BC:14:VAL:C	80:BC:16:SER:H	2.25	0.40
29:CA:113:LEU:CD2	29:CA:123:TYR:HE2	2.34	0.40
4:D:7:G:C6	4:D:115:G:C6	3.09	0.40
30:DA:74:TYR:CD1	30:DA:77:LYS:HB2	2.56	0.40
56:DB:32:ILE:HG12	56:DB:52:ILE:HB	2.03	0.40
82:DC:156:VAL:HA	82:DC:210:ALA:O	2.21	0.40
82:DC:179:ALA:O	82:DC:182:VAL:HB	2.20	0.40
82:DC:282:PHE:O	82:DC:285:PHE:HB3	2.21	0.40
82:DC:594:ASP:HB3	82:DC:597:VAL:HG23	2.03	0.40
82:DC:727:PRO:HB3	82:DC:801:TRP:CZ3	2.57	0.40
82:DC:82:SER:HB3	82:DC:85:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6768:U:C2	83:EC:6770:U:H5	2.40	0.40
6:F:253:GLN:HB2	6:F:253:GLN:HE21	1.69	0.40
2:B:966:U:OP1	32:FA:44:ASN:ND2	2.54	0.40
7:G:150:ARG:NH1	7:G:150:ARG:HG2	2.35	0.40
7:G:160:VAL:HG23	7:G:183:LEU:CD2	2.51	0.40
8:H:107:ARG:HD2	8:H:109:TRP:CZ3	2.56	0.40
8:H:337:GLU:O	8:H:338:LYS:HB2	2.21	0.40
8:H:64:SER:N	8:H:75:PRO:HA	2.35	0.40
9:I:79:TYR:HB2	9:I:82:GLU:CG	2.50	0.40
35:IA:37:LYS:HG2	35:IA:49:VAL:CG1	2.50	0.40
10:J:51:ARG:HD2	10:J:158:TYR:O	2.21	0.40
10:J:3:ALA:HB3	36:JA:75:LEU:O	2.21	0.40
64:LB:135:ARG:NH1	64:LB:137:LEU:HD11	2.35	0.40
13:M:86:TYR:CE2	13:M:151:VAL:HG22	2.56	0.40
39:MA:105:ARG:HG2	39:MA:106:LYS:N	2.35	0.40
65:MB:64:LYS:HA	65:MB:73:PRO:CG	2.49	0.40
17:Q:176:GLU:CB	40:NA:11:LEU:HD21	2.50	0.40
40:NA:26:ILE:CD1	40:NA:26:ILE:N	2.71	0.40
1:A:1579:U:C1'	66:NB:139:GLN:HG3	2.50	0.40
42:PA:5:ILE:HD13	42:PA:10:GLN:HG2	2.02	0.40
69:QB:114:VAL:HG22	69:QB:122:ARG:HB3	2.02	0.40
18:R:128:ARG:O	18:R:128:ARG:HD2	2.20	0.40
18:R:18:GLY:CA	18:R:72:LEU:HD23	2.51	0.40
18:R:91:CYS:HA	18:R:94:TRP:HB3	2.02	0.40
19:S:106:VAL:O	19:S:109:ARG:HB3	2.21	0.40
19:S:10:LEU:O	19:S:13:LYS:HG2	2.22	0.40
19:S:95:GLN:OE1	19:S:95:GLN:HA	2.21	0.40
20:T:74:ARG:CG	20:T:74:ARG:HH11	2.32	0.40
20:T:85:ARG:HD3	20:T:90:HIS:NE2	2.36	0.40
22:V:104:LEU:HD23	22:V:104:LEU:HA	1.93	0.40
8:H:32:PRO:HD2	22:V:24:VAL:HG11	2.03	0.40
22:V:62:VAL:HB	22:V:83:VAL:HG11	2.02	0.40
24:X:150:PHE:CD1	24:X:150:PHE:C	2.93	0.40
50:XA:130:ALA:HA	50:XA:133:ILE:CD1	2.51	0.40
52:ZA:188:LEU:HA	52:ZA:191:ALA:CB	2.50	0.40
52:ZA:218:ILE:HD12	52:ZA:218:ILE:C	2.42	0.40
1:A:150:U:H1'	56:DB:132:ARG:HD3	2.02	0.40
1:A:1572:G:C2'	1:A:1572:G:N3	2.83	0.40
1:A:1773:C:H2'	1:A:1774:G:C8	2.56	0.40
1:A:1795:U:H3'	76:XB:5:ARG:HH22	1.86	0.40
1:A:202:A:H2'	1:A:203:U:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:324:U:OP1	61:IB:133:LYS:HE2	2.21	0.40
1:A:851:U:C6	1:A:852:C:C5	3.09	0.40
1:A:981:U:HO2'	1:A:982:U:H5'	1.79	0.40
27:AA:35:TYR:O	27:AA:60:ALA:HA	2.20	0.40
53:AB:176:LEU:HD23	53:AB:176:LEU:N	2.36	0.40
53:AB:48:VAL:HG12	53:AB:50:ILE:CD1	2.51	0.40
2:B:1126:G:OP1	14:N:14:ASN:HB3	2.21	0.40
2:B:1192:C:H42	2:B:1302:A:P	2.44	0.40
2:B:1194:G:H2'	2:B:1195:A:O4'	2.22	0.40
2:B:1248:C:O2'	2:B:1249:G:H5'	2.21	0.40
2:B:1353:U:O2'	2:B:1354:G:H5'	2.21	0.40
2:B:1650:G:C4	2:B:1651:U:C5	3.09	0.40
2:B:17:G:N3	2:B:18:G:H1'	2.36	0.40
2:B:2124:G:H2'	2:B:2125:A:H8	1.86	0.40
2:B:2653:C:O5'	2:B:2653:C:H6	2.04	0.40
2:B:2675:C:H3'	2:B:2676:A:C8	2.56	0.40
2:B:2682:C:H2'	2:B:2683:U:H5'	2.04	0.40
2:B:317:A:H2'	2:B:318:A:O4'	2.20	0.40
2:B:3278:C:H3'	2:B:3279:A:C5'	2.52	0.40
2:B:551:A:O2'	2:B:552:G:H8	2.02	0.40
2:B:570:A:H2'	2:B:571:U:C6	2.57	0.40
2:B:608:A:H5'	8:H:322:GLN:CD	2.41	0.40
2:B:684:G:H5"	17:Q:35:ARG:CZ	2.51	0.40
2:B:837:A:H3'	2:B:838:G:H8	1.86	0.40
2:B:847:A:O2'	2:B:848:A:H5'	2.21	0.40
54:BB:219:VAL:HG12	54:BB:220:THR:N	2.35	0.40
80:BC:56:MET:O	80:BC:58:PRO:HD3	2.22	0.40
3:C:41:A:O2'	41:OA:59:THR:HG22	2.21	0.40
3:C:58:G:C4	3:C:100:U:C5	3.09	0.40
30:DA:86:THR:HB	30:DA:87:LYS:H	1.69	0.40
82:DC:143:LEU:O	82:DC:143:LEU:HD23	2.20	0.40
82:DC:174:LEU:HG	82:DC:178:PHE:CE2	2.56	0.40
82:DC:203:TYR:HA	82:DC:204:PRO:HD2	1.84	0.40
82:DC:258:THR:C	82:DC:260:LYS:N	2.74	0.40
82:DC:2:VAL:O	82:DC:2:VAL:HG13	2.20	0.40
5:E:103:LEU:HA	5:E:107:TYR:CD1	2.56	0.40
5:E:6:SER:O	5:E:10:ARG:HB2	2.21	0.40
31:EA:128:GLN:O	31:EA:131:PHE:CD1	2.72	0.40
6:F:209:HIS:HA	6:F:210:PRO:HD3	1.94	0.40
7:G:105:VAL:HG11	7:G:148:LEU:HD21	2.03	0.40
7:G:86:VAL:HB	7:G:198:HIS:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:293:ASN:OD1	7:G:321:PHE:HE2	2.04	0.40
7:G:49:TYR:CD2	7:G:49:TYR:N	2.89	0.40
7:G:51:ALA:HB3	7:G:78:VAL:O	2.22	0.40
8:H:139:GLY:O	8:H:140:HIS:HB2	2.20	0.40
8:H:179:LEU:CD2	8:H:183:LYS:HG3	2.36	0.40
8:H:152:VAL:HG23	8:H:251:THR:HA	2.03	0.40
8:H:269:SER:C	8:H:271:LYS:H	2.24	0.40
34:HA:74:ASN:N	34:HA:74:ASN:HD22	2.20	0.40
35:IA:51:LEU:N	35:IA:51:LEU:HD12	2.37	0.40
61:IB:109:VAL:HG22	61:IB:110:HIS:N	2.37	0.40
10:J:65:ILE:N	10:J:65:ILE:HD13	2.37	0.40
37:KA:16:TYR:HB2	37:KA:23:ASN:HB2	2.03	0.40
12:L:135:GLY:N	12:L:197:VAL:HG23	2.36	0.40
64:LB:103:ARG:NH1	76:XB:52:ASP:OD1	2.54	0.40
64:LB:27:PHE:HE1	64:LB:43:THR:HG21	1.86	0.40
65:MB:72:LYS:HA	65:MB:73:PRO:HD3	1.86	0.40
14:N:142:ASP:O	14:N:145:LYS:HB2	2.21	0.40
14:N:153:ARG:HG2	14:N:153:ARG:NH1	2.29	0.40
66:NB:140:LYS:HZ1	66:NB:142:TYR:HE1	1.67	0.40
67:OB:104:ASN:HB3	67:OB:105:GLN:NE2	2.36	0.40
67:OB:61:ILE:HG12	67:OB:66:VAL:HG11	2.03	0.40
42:PA:5:ILE:HG22	42:PA:7:ASP:H	1.86	0.40
17:Q:7:LEU:HD23	17:Q:8:PRO:CD	2.39	0.40
41:OA:18:LEU:HD12	43:QA:8:ARG:HD2	2.03	0.40
18:R:116:GLU:HA	18:R:119:GLN:HE21	1.85	0.40
2:B:3260:G:H5"	18:R:125:LYS:HB3	2.02	0.40
19:S:103:GLU:HB3	19:S:160:GLU:HG3	2.03	0.40
19:S:63:ARG:CZ	19:S:63:ARG:HB2	2.50	0.40
73:UB:105:ALA:O	73:UB:122:PHE:HA	2.20	0.40
22:V:36:LEU:O	22:V:38:ARG:N	2.54	0.40
48:VA:121:VAL:HG13	48:VA:156:VAL:O	2.21	0.40
49:WA:311:ARG:HB3	49:WA:313:TRP:CZ2	2.56	0.40
68:PB:4:VAL:HG21	75:WB:82:HIS:CB	2.50	0.40
50:XA:163:ASN:C	50:XA:165:ARG:H	2.24	0.40
50:XA:189:VAL:HG22	50:XA:190:ASP:CG	2.41	0.40
2:B:2643:A:OP2	25:Y:3:LYS:HD2	2.21	0.40
26:Z:58:GLU:HA	26:Z:64:THR:H	1.86	0.40
52:ZA:152:HIS:ND1	52:ZA:153:SER:N	2.69	0.40
52:ZA:227:PRO:HA	52:ZA:230:TRP:CE2	2.56	0.40
1:A:1077:C:H2'	1:A:1078:C:C6	2.56	0.40
1:A:1238:A:H2'	1:A:1239:U:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:144:U:O2'	1:A:145:A:H2'	2.22	0.40
1:A:1608:U:C4	1:A:1609:U:C4	3.09	0.40
1:A:250:C:C2'	1:A:251:A:H5'	2.52	0.40
1:A:378:A:H2'	1:A:379:U:H5'	2.03	0.40
1:A:404:G:O2'	1:A:405:C:H5'	2.20	0.40
1:A:409:C:H4'	1:A:1732:A:O3'	2.21	0.40
1:A:566:C:C2'	1:A:567:A:H5'	2.51	0.40
1:A:876:G:H2'	1:A:936:G:H22	1.84	0.40
27:AA:45:ARG:HD2	27:AA:46:LEU:H	1.85	0.40
53:AB:68:GLU:O	53:AB:72:LEU:HG	2.21	0.40
2:B:1177:G:H1'	2:B:1178:G:N7	2.37	0.40
2:B:1360:C:H2'	2:B:1361:U:C6	2.56	0.40
2:B:1741:A:H4'	38:LA:38:LEU:CD2	2.51	0.40
2:B:187:A:N3	2:B:208:C:O2'	2.38	0.40
2:B:2148:U:H5"	6:F:196:TRP:HE1	1.86	0.40
2:B:2173:U:H2'	2:B:2174:G:N7	2.36	0.40
1:A:913:G:C5	2:B:2208:A:H5'	2.56	0.40
2:B:2270:A:H2'	2:B:2271:A:C8	2.56	0.40
2:B:2580:A:H8	2:B:2580:A:OP1	2.04	0.40
2:B:2726:C:O2'	2:B:2727:A:C8	2.74	0.40
2:B:2837:A:H2	2:B:2851:A:N7	2.19	0.40
2:B:2993:G:C6	2:B:3142:A:C4	3.10	0.40
2:B:3007:U:H2'	2:B:3008:A:C8	2.57	0.40
2:B:3091:A:C4	2:B:3094:A:C8	3.09	0.40
2:B:3107:U:H2'	2:B:3108:G:C8	2.56	0.40
2:B:3375:A:H2'	2:B:3378:C:C5	2.56	0.40
2:B:393:U:H2'	2:B:394:G:O4'	2.20	0.40
2:B:885:U:O2'	2:B:886:C:H5'	2.21	0.40
54:BB:180:LEU:HD23	54:BB:181:VAL:N	2.36	0.40
3:C:15:G:C6	3:C:16:G:N1	2.90	0.40
3:C:45:C:H2'	3:C:46:G:O4'	2.21	0.40
82:DC:100:ILE:N	82:DC:100:ILE:HD12	2.36	0.40
82:DC:110:ASP:HA	82:DC:533:THR:HG22	2.02	0.40
82:DC:22:MET:CE	82:DC:125:ALA:HA	2.52	0.40
82:DC:132:ILE:HD11	82:DC:162:ARG:HB3	2.02	0.40
82:DC:159:LYS:HE3	84:DC:901:GDP:N3	2.36	0.40
82:DC:153:PRO:HD2	82:DC:200:VAL:CG2	2.52	0.40
82:DC:772:LEU:HD22	82:DC:780:PHE:CE2	2.56	0.40
82:DC:724:ILE:HD11	82:DC:804:LEU:CD1	2.51	0.40
31:EA:81:LEU:HD13	38:LA:93:PHE:CD2	2.56	0.40
6:F:104:LEU:HG	6:F:136:ILE:HG12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:28:LYS:HB3	6:F:123:ARG:HB3	2.02	0.40
6:F:208:ASP:N	6:F:208:ASP:OD2	2.45	0.40
2:B:2966:G:H5"	6:F:220:GLY:CA	2.52	0.40
58:FB:43:ILE:HG23	58:FB:56:ARG:O	2.22	0.40
7:G:151:ILE:HG13	7:G:151:ILE:H	1.53	0.40
7:G:25:ILE:CD1	7:G:25:ILE:H	2.34	0.40
7:G:296:THR:O	7:G:298:PHE:N	2.47	0.40
7:G:335:ILE:HD12	7:G:336:VAL:H	1.86	0.40
7:G:303:LYS:CD	7:G:361:THR:HG21	2.49	0.40
8:H:154:THR:O	8:H:157:GLU:HG3	2.20	0.40
8:H:92:ASN:HA	8:H:99:MET:HA	2.04	0.40
34:HA:30:THR:O	34:HA:34:LEU:CB	2.66	0.40
34:HA:42:ILE:O	34:HA:42:ILE:HD12	2.22	0.40
60:HB:87:VAL:O	60:HB:87:VAL:HG22	2.21	0.40
9:I:153:THR:HG22	9:I:179:ARG:NE	2.25	0.40
9:I:167:SER:HA	9:I:171:LEU:O	2.21	0.40
9:I:256:THR:O	9:I:258:LYS:N	2.54	0.40
10:J:152:THR:HA	10:J:153:PRO:HD3	1.84	0.40
36:JA:41:VAL:HG23	36:JA:49:ASN:ND2	2.36	0.40
11:K:40:LYS:HA	11:K:43:ILE:HD12	2.02	0.40
37:KA:49:ILE:HD11	37:KA:71:VAL:CG2	2.41	0.40
12:L:151:VAL:O	12:L:152:LEU:HD23	2.22	0.40
38:LA:38:LEU:O	38:LA:39:ALA:CB	2.70	0.40
38:LA:54:ILE:HD11	38:LA:78:GLY:CA	2.51	0.40
13:M:101:VAL:HG21	13:M:179:ILE:CD1	2.49	0.40
14:N:140:THR:HG22	14:N:141:LYS:N	2.35	0.40
66:NB:116:LEU:C	66:NB:117:LEU:HD13	2.42	0.40
66:NB:129:PHE:N	66:NB:129:PHE:CD2	2.90	0.40
66:NB:38:LEU:O	66:NB:39:VAL:HB	2.21	0.40
15:O:96:PHE:CD1	15:O:102:PHE:HB3	2.56	0.40
2:B:2679:A:H2'	15:O:57:PHE:HE2	1.87	0.40
2:B:884:A:H3'	41:OA:2:GLY:N	2.36	0.40
41:OA:71:SER:HA	41:OA:74:PHE:HB3	2.03	0.40
17:Q:76:THR:HG23	17:Q:79:GLU:OE2	2.21	0.40
69:QB:61:VAL:CG2	69:QB:104:VAL:HG11	2.48	0.40
2:B:3243:A:N7	20:T:156:LEU:HB3	2.36	0.40
46:TA:29:LYS:NZ	46:TA:29:LYS:HB3	2.35	0.40
47:UA:29:LEU:O	47:UA:32:GLN:HB2	2.21	0.40
73:UB:84:THR:O	73:UB:120:VAL:HG22	2.21	0.40
73:UB:74:VAL:CG1	73:UB:75:GLN:N	2.85	0.40
22:V:28:LEU:O	22:V:31:LYS:HB2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:25:ASP:OD2	23:W:28:GLU:HB2	2.21	0.40
23:W:70:LYS:HE2	23:W:70:LYS:HB3	1.84	0.40
50:XA:6:THR:O	50:XA:8:ASP:N	2.39	0.40
76:XB:12:LYS:HA	76:XB:15:ARG:HH22	1.86	0.40
51:YA:201:THR:O	51:YA:201:THR:HG22	2.21	0.40
77:YB:64:CYS:CB	77:YB:73:LEU:HA	2.52	0.40
26:Z:33:TYR:HE2	26:Z:63:VAL:HG11	1.87	0.40
52:ZA:181:SER:O	52:ZA:185:LYS:HG3	2.22	0.40
1:A:1126:G:H5'	45:SA:11:ARG:HE	1.86	0.40
1:A:1151:A:H2'	1:A:1152:A:H8	1.86	0.40
1:A:1331:A:H3'	1:A:1332:C:H6	1.85	0.40
1:A:1277:G:H22	1:A:1434:U:H3	1.68	0.40
1:A:149:C:H2'	1:A:150:U:C6	2.56	0.40
1:A:213:A:H2'	1:A:214:G:O4'	2.22	0.40
1:A:217:A:H5'	1:A:738:G:H1'	2.04	0.40
1:A:278:U:OP1	1:A:279:G:N2	2.52	0.40
1:A:412:A:H2	1:A:421:A:N1	2.20	0.40
53:AB:5:ILE:HA	53:AB:9:ARG:HH11	1.87	0.40
2:B:1122:U:O5'	2:B:1122:U:H6	2.05	0.40
2:B:1178:G:C6	2:B:1179:A:N1	2.90	0.40
2:B:1394:A:O2'	2:B:1395:G:H5'	2.22	0.40
2:B:1524:A:O2'	2:B:1525:G:H5"	2.21	0.40
2:B:177:U:H2'	2:B:178:U:C6	2.57	0.40
2:B:210:U:C2	2:B:230:U:H4'	2.57	0.40
2:B:2303:A:OP1	45:SA:23:ARG:HD3	2.21	0.40
2:B:2645:G:C5	2:B:2646:C:C5	3.09	0.40
2:B:2665:U:O4	2:B:2703:A:H4'	2.22	0.40
2:B:3020:U:O2'	13:M:121:LYS:HD3	2.22	0.40
2:B:3178:A:H8	2:B:3178:A:O5'	2.05	0.40
2:B:3217:C:H2'	2:B:3217:C:O2	2.21	0.40
2:B:548:G:H2'	2:B:549:U:C5	2.56	0.40
2:B:692:A:H4'	8:H:46:LYS:HG2	2.03	0.40
2:B:764:U:H3'	2:B:766:U:H5	1.85	0.40
2:B:905:U:H2'	2:B:906:A:H5'	2.03	0.40
28:BA:58:HIS:C	28:BA:60:LYS:H	2.24	0.40
54:BB:106:LYS:HB2	54:BB:108:ARG:HD3	2.02	0.40
54:BB:199:GLU:HA	54:BB:199:GLU:OE1	2.20	0.40
1:A:93:A:O4'	54:BB:3:ARG:HD2	2.22	0.40
54:BB:42:LEU:HD23	54:BB:43:PRO:O	2.21	0.40
3:C:85:G:HO2'	3:C:86:U:C5'	2.33	0.40
29:CA:86:VAL:HG11	29:CA:95:ILE:HD11	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:25:G:H2'	4:D:26:C:C6	2.56	0.40
4:D:43:U:H2'	4:D:44:C:O4'	2.20	0.40
82:DC:32:LYS:CA	82:DC:128:VAL:HG21	2.51	0.40
82:DC:236:ASP:O	82:DC:240:MET:HB2	2.20	0.40
82:DC:254:THR:HB	82:DC:256:LYS:CD	2.50	0.40
82:DC:538:LEU:O	82:DC:542:LEU:N	2.54	0.40
82:DC:572:SER:HB2	82:DC:719:LEU:HD22	2.03	0.40
82:DC:810:ASP:O	82:DC:816:GLY:HA3	2.21	0.40
82:DC:718:LEU:HD22	82:DC:835:TRP:HB3	2.04	0.40
31:EA:100:THR:C	31:EA:102:GLU:N	2.72	0.40
57:EB:101:LYS:C	57:EB:103:SER:N	2.73	0.40
6:F:126:LEU:HD22	6:F:150:LEU:CD1	2.51	0.40
6:F:206:PRO:CG	6:F:213:GLY:HA3	2.51	0.40
6:F:77:ILE:HG21	6:F:169:ILE:CG1	2.51	0.40
32:FA:102:ILE:HG23	32:FA:102:ILE:O	2.21	0.40
58:FB:167:ALA:HA	58:FB:184:LEU:H	1.87	0.40
58:FB:36:THR:HG23	58:FB:96:LEU:HB2	2.04	0.40
58:FB:98:LYS:HE3	58:FB:172:ARG:CG	2.52	0.40
7:G:77:THR:CG2	7:G:327:CYS:HA	2.51	0.40
59:GB:23:ARG:HH12	59:GB:24:LEU:HD23	1.86	0.40
60:HB:45:ALA:O	60:HB:48:SER:HB2	2.21	0.40
2:B:2748:A:C2	9:I:36:LEU:HG	2.56	0.40
11:K:135:ALA:HB1	11:K:232:ARG:CD	2.52	0.40
11:K:161:VAL:CG1	11:K:162:PRO:HD2	2.51	0.40
11:K:169:ILE:HG23	11:K:173:LEU:HD22	2.04	0.40
11:K:224:ILE:CD1	24:X:39:SER:HB2	2.51	0.40
11:K:221:LYS:O	11:K:228:SER:N	2.54	0.40
11:K:210:PRO:CD	11:K:243:MET:HE2	2.52	0.40
11:K:76:TYR:CZ	25:Y:138:SER:HB2	2.56	0.40
63:KB:84:ILE:HD12	63:KB:88:LEU:HB3	2.03	0.40
40:NA:15:LYS:HG2	40:NA:17:VAL:HG23	2.01	0.40
66:NB:67:VAL:HG12	66:NB:69:VAL:CG1	2.48	0.40
15:O:14:ILE:HD12	15:O:14:ILE:N	2.26	0.40
41:OA:21:ARG:NH1	41:OA:37:CYS:O	2.52	0.40
2:B:1254:C:O2	16:P:131:GLU:CB	2.69	0.40
17:Q:57:VAL:HG13	17:Q:147:ILE:CG2	2.32	0.40
43:QA:3:ALA:H	43:QA:5:LYS:CE	2.26	0.40
69:QB:100:ILE:HG22	69:QB:101:ASN:N	2.36	0.40
69:QB:116:ILE:O	69:QB:116:ILE:HG22	2.20	0.40
2:B:561:C:C5'	18:R:76:ALA:HA	2.52	0.40
70:RB:108:ILE:HB	70:RB:109:GLU:H	1.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:57:GLN:HG3	19:S:57:GLN:H	1.57	0.40
22:V:80:THR:HG23	22:V:137:THR:HG22	2.02	0.40
22:V:134:GLY:O	22:V:137:THR:HG23	2.21	0.40
22:V:30:VAL:HG13	22:V:49:LEU:HD22	2.04	0.40
48:VA:76:LEU:HA	48:VA:189:GLN:HE22	1.85	0.40
48:VA:8:LYS:HD2	48:VA:8:LYS:N	2.26	0.40
74:VB:91:LEU:HA	74:VB:94:TYR:HD2	1.83	0.40
23:W:102:LEU:HD23	23:W:138:LEU:HD22	2.03	0.40
68:PB:4:VAL:HB	75:WB:82:HIS:CD2	2.56	0.40
24:X:155:ARG:HD2	24:X:172:TYR:CG	2.56	0.40
24:X:13:ARG:HA	24:X:56:GLY:CA	2.51	0.40
50:XA:19:ALA:O	50:XA:167:LYS:HE3	2.22	0.40
76:XB:80:HIS:O	76:XB:81:ALA:CB	2.68	0.40
1:A:1067:C:C5'	51:YA:150:VAL:HG23	2.43	0.40
51:YA:83:LYS:HD3	51:YA:83:LYS:H	1.87	0.40
77:YB:19:HIS:O	77:YB:23:THR:HG23	2.22	0.40
78:ZB:10:ALA:HB1	78:ZB:30:VAL:HG21	2.03	0.40
78:ZB:61:ARG:NH1	78:ZB:61:ARG:HG2	2.37	0.40
1:A:1186:U:H2'	1:A:1187:U:O4'	2.22	0.40
1:A:1379:C:H2'	1:A:1380:U:H6	1.86	0.40
1:A:198:A:H2'	1:A:199:G:O4'	2.21	0.40
1:A:57:G:H2'	1:A:58:U:C6	2.56	0.40
1:A:754:A:O2'	1:A:755:A:H5'	2.21	0.40
1:A:887:A:H4'	64:LB:122:PRO:HB3	2.02	0.40
27:AA:10:LYS:HE2	27:AA:10:LYS:O	2.21	0.40
79:AC:53:ASN:HB2	79:AC:55:PHE:CE2	2.55	0.40
2:B:1079:A:OP2	9:I:140:ARG:NH1	2.55	0.40
2:B:1358:C:H2'	2:B:1359:C:C6	2.57	0.40
2:B:1361:U:O2	11:K:159:GLN:NE2	2.54	0.40
2:B:1414:G:H2'	2:B:1415:U:C6	2.57	0.40
2:B:1939:G:H2'	2:B:1940:G:H8	1.82	0.40
2:B:2078:C:H2'	2:B:2079:G:C8	2.56	0.40
2:B:2135:U:H3	2:B:2145:A:N6	2.18	0.40
2:B:422:A:H61	2:B:2362:C:H2'	1.87	0.40
2:B:2777:G:H1	32:FA:58:MET:CE	2.31	0.40
2:B:3133:C:H2'	2:B:3134:A:H8	1.87	0.40
2:B:3164:C:O2'	2:B:3165:A:H8	1.77	0.40
2:B:3249:C:C2'	2:B:3250:U:H5'	2.51	0.40
2:B:3333:G:N2	2:B:3369:G:O2'	2.54	0.40
2:B:48:A:OP1	2:B:50:U:H1'	2.20	0.40
2:B:583:G:H2'	2:B:584:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:618:C:C2	2:B:619:A:H8	2.39	0.40
2:B:795:G:O2'	2:B:796:U:H5'	2.21	0.40
2:B:921:A:H3'	2:B:921:A:OP1	2.21	0.40
54:BB:154:ILE:HD13	54:BB:160:VAL:CG2	2.51	0.40
54:BB:164:LEU:HA	54:BB:164:LEU:HD23	1.98	0.40
54:BB:68:ARG:HH11	54:BB:68:ARG:HG2	1.85	0.40
3:C:73:U:C5	3:C:74:U:C4	3.09	0.40
30:DA:63:LYS:O	30:DA:64:LYS:C	2.60	0.40
1:A:151:G:H21	56:DB:13:GLN:HE22	1.68	0.40
56:DB:162:VAL:HG12	56:DB:169:TYR:H	1.87	0.40
56:DB:58:LYS:C	56:DB:60:GLY:H	2.25	0.40
82:DC:384:LYS:HB3	82:DC:397:PHE:HD2	1.85	0.40
82:DC:411:VAL:HG12	82:DC:412:ARG:N	2.36	0.40
31:EA:15:ARG:HB3	31:EA:79:HIS:CD2	2.56	0.40
31:EA:75:VAL:HG13	31:EA:80:LEU:HD11	2.04	0.40
6:F:102:LEU:HD22	6:F:106:SER:HB3	2.04	0.40
58:FB:136:SER:HB3	58:FB:139:ALA:HB2	2.02	0.40
7:G:105:VAL:HG21	7:G:148:LEU:HD23	2.04	0.40
7:G:270:ARG:HH11	7:G:270:ARG:HG3	1.86	0.40
7:G:347:SER:C	7:G:349:LYS:H	2.25	0.40
33:GA:8:THR:C	33:GA:10:HIS:H	2.25	0.40
59:GB:99:LEU:HB3	59:GB:100:LYS:H	1.60	0.40
59:GB:79:ARG:C	59:GB:81:VAL:N	2.75	0.40
8:H:292:SER:O	8:H:293:SER:HB2	2.22	0.40
2:B:505:G:H4'	8:H:313:LEU:HD11	2.03	0.40
8:H:65:TRP:HB3	8:H:69:ARG:HG3	2.03	0.40
34:HA:18:ILE:HD11	34:HA:81:VAL:HG12	2.04	0.40
60:HB:25:LYS:HG2	60:HB:27:PHE:CZ	2.56	0.40
9:I:196:ARG:CG	9:I:200:PHE:HE2	2.34	0.40
9:I:217:GLU:O	9:I:220:SER:HB2	2.22	0.40
35:IA:72:ARG:HG3	35:IA:96:VAL:CG1	2.51	0.40
10:J:172:HIS:ND1	37:KA:44:TYR:HE2	2.20	0.40
11:K:88:ARG:CD	11:K:103:LEU:HD13	2.51	0.40
37:KA:9:VAL:HG22	37:KA:100:ILE:O	2.21	0.40
37:KA:48:ARG:HB3	37:KA:68:TRP:CZ3	2.56	0.40
1:A:867:G:N2	63:KB:87:ASP:HB2	2.33	0.40
2:B:1643:A:O5'	38:LA:68:THR:HG21	2.21	0.40
65:MB:44:ARG:HG3	65:MB:115:TYR:CE1	2.56	0.40
66:NB:86:ALA:CB	66:NB:116:LEU:HD12	2.51	0.40
15:O:118:PRO:HD3	68:PB:13:HIS:CB	2.51	0.40
15:O:12:LEU:HD21	15:O:154:THR:CG2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:OA:77:GLY:C	41:OA:78:PHE:CD2	2.95	0.40
17:Q:115:ARG:HH11	17:Q:115:ARG:CB	2.22	0.40
44:RA:104:PRO:HD3	44:RA:111:ARG:NH2	2.37	0.40
44:RA:122:ARG:HG3	44:RA:122:ARG:NH1	2.36	0.40
1:A:1430:U:H4'	70:RB:72:ASN:ND2	2.37	0.40
19:S:36:ILE:CD1	19:S:105:ARG:HB3	2.51	0.40
45:SA:5:TRP:HE3	45:SA:5:TRP:HA	1.87	0.40
46:TA:10:THR:HG21	46:TA:72:LEU:HD13	2.04	0.40
46:TA:55:LYS:HA	46:TA:56:PRO:HD3	1.96	0.40
72:TB:24:GLN:OE1	77:YB:7:LEU:HG	2.22	0.40
72:TB:52:TYR:HE1	72:TB:59:GLY:HA3	1.87	0.40
21:U:59:PRO:HB2	21:U:78:VAL:HG21	2.03	0.40
75:WB:80:LEU:O	75:WB:84:GLU:HB2	2.21	0.40
20:T:119:VAL:HG11	24:X:167:ARG:HD3	2.03	0.40
24:X:50:LYS:NZ	24:X:50:LYS:HB3	2.36	0.40
24:X:80:ARG:HG2	24:X:80:ARG:NH2	2.37	0.40
25:Y:34:TYR:CD2	25:Y:93:VAL:HB	2.55	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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
5	E	165/217 (76%)	114 (69%)	40 (24%)	11 (7%)	1 22
6	F	250/254 (98%)	165 (66%)	71 (28%)	14 (6%)	2 26
7	G	384/387 (99%)	277 (72%)	79 (21%)	28 (7%)	1 20
8	H	359/362 (99%)	253 (70%)	76 (21%)	30 (8%)	1 15
9	I	294/297 (99%)	221 (75%)	57 (19%)	16 (5%)	2 27
10	J	173/176 (98%)	117 (68%)	40 (23%)	16 (9%)	1 14
11	K	220/244 (90%)	173 (79%)	30 (14%)	17 (8%)	1 18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
12	L	231/256 (90%)	165 (71%)	43 (19%)	23 (10%)	1 12
13	M	189/191 (99%)	146 (77%)	37 (20%)	6 (3%)	5 39
14	N	207/221 (94%)	157 (76%)	42 (20%)	8 (4%)	3 34
15	O	167/174 (96%)	125 (75%)	28 (17%)	14 (8%)	1 15
16	P	92/165 (56%)	63 (68%)	18 (20%)	11 (12%)	0 7
17	Q	191/199 (96%)	140 (73%)	38 (20%)	13 (7%)	1 22
18	R	134/138 (97%)	101 (75%)	24 (18%)	9 (7%)	1 22
19	S	201/204 (98%)	155 (77%)	33 (16%)	13 (6%)	1 23
20	T	195/199 (98%)	158 (81%)	30 (15%)	7 (4%)	4 37
21	U	181/184 (98%)	135 (75%)	35 (19%)	11 (6%)	2 24
22	V	183/186 (98%)	135 (74%)	34 (19%)	14 (8%)	1 18
23	W	186/189 (98%)	151 (81%)	30 (16%)	5 (3%)	6 43
24	X	170/172 (99%)	126 (74%)	25 (15%)	19 (11%)	0 9
25	Y	157/160 (98%)	102 (65%)	41 (26%)	14 (9%)	1 15
26	Z	98/121 (81%)	68 (69%)	22 (22%)	8 (8%)	1 16
27	AA	134/137 (98%)	95 (71%)	32 (24%)	7 (5%)	2 28
28	BA	59/155 (38%)	44 (75%)	8 (14%)	7 (12%)	0 7
29	CA	119/142 (84%)	90 (76%)	18 (15%)	11 (9%)	1 14
30	DA	124/127 (98%)	93 (75%)	21 (17%)	10 (8%)	1 17
31	EA	133/136 (98%)	93 (70%)	28 (21%)	12 (9%)	1 15
32	FA	146/149 (98%)	108 (74%)	31 (21%)	7 (5%)	2 29
33	GA	56/59 (95%)	45 (80%)	9 (16%)	2 (4%)	4 37
34	HA	95/105 (90%)	74 (78%)	16 (17%)	5 (5%)	2 27
35	IA	107/113 (95%)	84 (78%)	17 (16%)	6 (6%)	2 26
36	JA	125/130 (96%)	89 (71%)	27 (22%)	9 (7%)	1 20
37	KA	104/107 (97%)	82 (79%)	20 (19%)	2 (2%)	9 50
38	LA	110/121 (91%)	79 (72%)	23 (21%)	8 (7%)	1 20
39	MA	117/120 (98%)	89 (76%)	21 (18%)	7 (6%)	2 25
40	NA	97/100 (97%)	70 (72%)	13 (13%)	14 (14%)	0 5
41	OA	85/88 (97%)	65 (76%)	17 (20%)	3 (4%)	4 38
42	PA	75/78 (96%)	61 (81%)	14 (19%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
43	QA	48/51 (94%)	38 (79%)	6 (12%)	4 (8%)	1 16
44	RA	50/128 (39%)	32 (64%)	13 (26%)	5 (10%)	1 12
45	SA	23/25 (92%)	20 (87%)	3 (13%)	0	100 100
46	TA	103/106 (97%)	73 (71%)	19 (18%)	11 (11%)	0 10
47	UA	89/92 (97%)	55 (62%)	22 (25%)	12 (14%)	0 5
48	VA	187/312 (60%)	128 (68%)	42 (22%)	17 (9%)	1 14
49	WA	316/319 (99%)	229 (72%)	72 (23%)	15 (5%)	3 30
50	XA	204/252 (81%)	136 (67%)	49 (24%)	19 (9%)	1 14
51	YA	212/255 (83%)	146 (69%)	48 (23%)	18 (8%)	1 15
52	ZA	215/254 (85%)	165 (77%)	36 (17%)	14 (6%)	1 23
53	AB	221/240 (92%)	167 (76%)	39 (18%)	15 (7%)	1 22
54	BB	258/261 (99%)	178 (69%)	59 (23%)	21 (8%)	1 17
55	CB	204/225 (91%)	155 (76%)	31 (15%)	18 (9%)	1 15
56	DB	224/236 (95%)	167 (75%)	39 (17%)	18 (8%)	1 17
57	EB	182/190 (96%)	127 (70%)	40 (22%)	15 (8%)	1 16
58	FB	184/200 (92%)	149 (81%)	26 (14%)	9 (5%)	2 29
59	GB	183/197 (93%)	129 (70%)	35 (19%)	19 (10%)	0 10
60	HB	94/105 (90%)	67 (71%)	15 (16%)	12 (13%)	0 6
61	IB	153/156 (98%)	107 (70%)	34 (22%)	12 (8%)	1 18
62	JB	122/143 (85%)	74 (61%)	35 (29%)	13 (11%)	0 10
63	KB	148/151 (98%)	119 (80%)	21 (14%)	8 (5%)	2 27
64	LB	125/137 (91%)	83 (66%)	35 (28%)	7 (6%)	2 26
65	MB	120/142 (84%)	82 (68%)	25 (21%)	13 (11%)	0 9
66	NB	139/143 (97%)	104 (75%)	26 (19%)	9 (6%)	1 23
67	OB	115/136 (85%)	84 (73%)	21 (18%)	10 (9%)	1 15
68	PB	143/146 (98%)	109 (76%)	20 (14%)	14 (10%)	1 12
69	QB	141/144 (98%)	104 (74%)	23 (16%)	14 (10%)	1 12
70	RB	105/121 (87%)	73 (70%)	28 (27%)	4 (4%)	4 35
71	SB	85/87 (98%)	61 (72%)	14 (16%)	10 (12%)	0 8
72	TB	127/130 (98%)	93 (73%)	27 (21%)	7 (6%)	2 27
73	UB	142/145 (98%)	97 (68%)	36 (25%)	9 (6%)	1 24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
74	VB	132/135 (98%)	94 (71%)	26 (20%)	12 (9%)	1 14
75	WB	68/108 (63%)	41 (60%)	21 (31%)	6 (9%)	1 15
76	XB	95/119 (80%)	52 (55%)	26 (27%)	17 (18%)	0 3
77	YB	79/82 (96%)	53 (67%)	21 (27%)	5 (6%)	1 24
78	ZB	61/67 (91%)	46 (75%)	10 (16%)	5 (8%)	1 16
79	AC	51/56 (91%)	37 (72%)	12 (24%)	2 (4%)	3 34
80	BC	58/63 (92%)	38 (66%)	15 (26%)	5 (9%)	1 15
81	CC	69/152 (45%)	41 (59%)	17 (25%)	11 (16%)	0 4
82	DC	819/842 (97%)	620 (76%)	154 (19%)	45 (6%)	2 27
All	All	12207/13416 (91%)	8881 (73%)	2429 (20%)	897 (7%)	2 20

All (897) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	E	138	VAL
5	E	151	VAL
6	F	57	PRO
6	F	125	ALA
6	F	217	GLN
7	G	23	ALA
7	G	38	SER
7	G	102	LEU
7	G	111	SER
7	G	172	ALA
7	G	187	SER
7	G	314	TYR
8	H	62	ALA
8	H	232	SER
8	H	244	LEU
8	H	262	TRP
8	H	268	ALA
8	H	341	SER
9	I	20	PHE
9	I	179	ARG
9	I	251	PRO
10	J	99	GLU
10	J	109	GLU
10	J	123	PRO
11	K	147	LEU

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Mol	Chain	Res	Type
11	K	158	LYS
12	L	45	ASN
12	L	81	THR
13	M	31	ARG
15	O	94	ARG
15	O	108	GLU
15	O	114	ILE
15	O	116	TYR
16	P	107	ASP
16	P	125	LEU
17	Q	47	ALA
17	Q	72	GLY
18	R	9	ALA
18	R	89	ALA
19	S	34	ASN
19	S	53	TYR
19	S	55	ALA
19	S	74	PRO
19	S	125	SER
21	U	155	GLU
22	V	74	GLU
22	V	76	ALA
22	V	98	LYS
22	V	99	THR
23	W	131	ALA
24	X	4	PHE
24	X	31	ALA
24	X	59	VAL
24	X	130	GLU
25	Y	12	ARG
25	Y	128	LEU
26	Z	71	PHE
27	AA	64	LYS
27	AA	84	SER
28	BA	7	SER
28	BA	60	LYS
29	CA	48	SER
29	CA	57	LEU
30	DA	52	ARG
30	DA	105	VAL
30	DA	109	LEU
30	DA	126	LEU

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Mol	Chain	Res	Type
31	EA	7	ALA
31	EA	30	ASP
32	FA	32	ARG
34	HA	46	ALA
36	JA	15	LYS
38	LA	39	ALA
38	LA	59	PRO
39	MA	91	ALA
39	MA	119	LYS
40	NA	8	ALA
40	NA	13	LYS
41	OA	12	HIS
41	OA	65	ARG
44	RA	91	CYS
46	TA	38	GLN
46	TA	78	LYS
46	TA	100	LYS
47	UA	9	GLY
47	UA	20	SER
47	UA	35	ALA
48	VA	30	VAL
48	VA	158	VAL
49	WA	120	SER
50	XA	68	PRO
50	XA	204	TYR
51	YA	221	PRO
52	ZA	38	VAL
52	ZA	39	THR
52	ZA	73	LEU
52	ZA	148	LEU
52	ZA	229	LEU
53	AB	216	PRO
54	BB	76	VAL
54	BB	150	PRO
54	BB	195	ILE
54	BB	200	ARG
55	CB	64	VAL
55	CB	100	ASN
56	DB	114	VAL
56	DB	124	LEU
56	DB	127	THR
56	DB	138	ALA

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Mol	Chain	Res	Type
57	EB	12	ALA
57	EB	31	SER
57	EB	34	LEU
57	EB	64	VAL
58	FB	28	GLU
58	FB	86	SER
59	GB	3	ARG
59	GB	93	LEU
59	GB	98	ALA
59	GB	132	ARG
59	GB	134	ILE
59	GB	138	LYS
59	GB	169	PRO
60	HB	59	PHE
60	HB	81	ASN
61	IB	29	LYS
61	IB	96	LYS
61	IB	155	LYS
62	JB	28	LEU
62	JB	39	ASP
62	JB	64	SER
62	JB	86	VAL
62	JB	106	ILE
63	KB	6	SER
63	KB	106	ARG
64	LB	42	VAL
64	LB	52	ARG
65	MB	22	LEU
65	MB	73	PRO
65	MB	125	PRO
65	MB	126	VAL
66	NB	41	PRO
68	PB	92	ILE
69	QB	34	VAL
69	QB	53	TRP
70	RB	51	VAL
70	RB	96	PRO
71	SB	44	ARG
72	TB	71	LYS
73	UB	143	PRO
74	VB	35	VAL
74	VB	50	ALA

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Mol	Chain	Res	Type
74	VB	134	ALA
75	WB	43	ASP
75	WB	71	ILE
75	WB	97	LYS
76	XB	43	ASN
76	XB	81	ALA
76	XB	82	ARG
76	XB	84	VAL
76	XB	86	VAL
77	YB	71	ALA
78	ZB	51	ASN
80	BC	47	VAL
81	CC	84	VAL
81	CC	86	THR
81	CC	88	PRO
81	CC	141	CYS
81	CC	146	SER
82	DC	6	VAL
82	DC	43	ALA
82	DC	71	LYS
82	DC	108	HIS
82	DC	230	ALA
82	DC	330	ALA
82	DC	548	ASP
82	DC	549	HIS
82	DC	583	HIS
82	DC	676	ILE
82	DC	695	ALA
5	E	106	LYS
6	F	14	SER
6	F	132	ASN
6	F	137	ILE
6	F	172	GLY
7	G	10	ARG
7	G	101	SER
7	G	140	ASP
7	G	155	ALA
7	G	250	ALA
7	G	291	GLU
7	G	312	VAL
7	G	355	SER
7	G	379	PHE

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Mol	Chain	Res	Type
8	H	5	GLN
8	H	14	GLU
8	H	36	HIS
8	H	54	GLU
8	H	82	THR
8	H	245	GLY
8	H	264	SER
8	H	269	SER
8	H	292	SER
8	H	293	SER
8	H	309	ARG
9	I	26	GLY
9	I	186	GLU
9	I	253	PHE
10	J	61	ASN
10	J	98	VAL
11	K	81	HIS
11	K	94	LYS
11	K	108	LEU
11	K	148	VAL
11	K	159	GLN
11	K	178	ILE
12	L	36	ILE
12	L	50	VAL
12	L	66	SER
12	L	69	LEU
12	L	99	PRO
12	L	103	ALA
12	L	136	LEU
12	L	163	VAL
13	M	50	ASN
13	M	172	ILE
15	O	55	ARG
15	O	69	VAL
15	O	172	LEU
15	O	173	ASP
16	P	58	VAL
16	P	68	GLN
16	P	118	ASP
16	P	144	ASP
17	Q	18	TRP
17	Q	76	THR

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Mol	Chain	Res	Type
17	Q	136	GLU
18	R	6	ILE
18	R	33	ALA
18	R	39	ILE
18	R	61	GLY
18	R	136	ALA
20	T	126	VAL
21	U	23	ARG
22	V	13	SER
22	V	16	ARG
23	W	76	SER
24	X	2	ALA
24	X	115	ARG
24	X	131	LYS
24	X	147	ASP
25	Y	93	VAL
25	Y	126	VAL
25	Y	136	ARG
25	Y	144	GLU
26	Z	44	GLU
26	Z	52	ASN
27	AA	7	GLN
27	AA	82	ALA
27	AA	102	ILE
28	BA	43	ARG
28	BA	50	ALA
29	CA	44	PRO
29	CA	62	VAL
29	CA	92	LYS
29	CA	98	ALA
29	CA	126	LEU
31	EA	8	GLY
31	EA	91	ALA
31	EA	124	ALA
31	EA	125	GLY
31	EA	128	GLN
32	FA	120	ASN
35	IA	44	MET
35	IA	83	GLU
35	IA	85	ALA
35	IA	101	ALA
36	JA	37	GLY

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Mol	Chain	Res	Type
36	JA	47	ARG
36	JA	125	ARG
37	KA	59	VAL
38	LA	5	VAL
38	LA	8	ARG
38	LA	76	TYR
39	MA	81	ARG
39	MA	99	GLN
40	NA	3	VAL
40	NA	18	THR
40	NA	94	ILE
40	NA	97	SER
43	QA	44	TRP
44	RA	118	THR
46	TA	17	CYS
46	TA	37	ALA
46	TA	60	LYS
47	UA	17	ARG
47	UA	19	GLY
47	UA	21	SER
47	UA	36	ARG
47	UA	41	PHE
48	VA	31	ASP
48	VA	114	VAL
48	VA	116	PRO
49	WA	78	ALA
49	WA	136	ILE
49	WA	189	GLU
49	WA	198	ASN
50	XA	100	GLY
50	XA	189	VAL
50	XA	190	ASP
51	YA	35	PRO
51	YA	148	ASN
51	YA	172	LEU
52	ZA	248	SER
53	AB	44	THR
53	AB	142	LEU
53	AB	200	LYS
53	AB	211	PRO
53	AB	217	ILE
53	AB	218	LEU

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Mol	Chain	Res	Type
53	AB	221	SER
54	BB	26	CYS
54	BB	105	VAL
54	BB	205	PHE
54	BB	212	ASP
54	BB	236	ILE
55	CB	45	LYS
55	CB	63	GLN
55	CB	75	GLY
55	CB	110	ALA
55	CB	222	LYS
56	DB	81	VAL
56	DB	99	GLY
56	DB	115	LYS
58	FB	41	LYS
58	FB	48	THR
58	FB	68	ALA
59	GB	7	THR
60	HB	54	TYR
60	HB	60	SER
61	IB	7	VAL
61	IB	142	VAL
61	IB	147	GLY
62	JB	93	ASP
63	KB	3	ARG
63	KB	7	ALA
63	KB	8	GLY
63	KB	22	ALA
63	KB	107	LYS
64	LB	50	ALA
64	LB	91	THR
64	LB	118	VAL
65	MB	29	SER
65	MB	89	MET
65	MB	101	ALA
66	NB	39	VAL
66	NB	42	GLU
67	OB	6	THR
67	OB	104	ASN
68	PB	60	GLU
68	PB	82	PRO
68	PB	83	ALA

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Mol	Chain	Res	Type
68	PB	102	ALA
69	QB	12	GLN
69	QB	69	LYS
69	QB	96	ALA
71	SB	7	GLN
71	SB	22	ARG
71	SB	39	VAL
71	SB	42	GLU
73	UB	44	GLY
73	UB	67	ALA
74	VB	5	VAL
74	VB	60	PHE
74	VB	99	LYS
75	WB	41	ILE
76	XB	18	VAL
76	XB	75	VAL
78	ZB	37	SER
79	AC	6	VAL
80	BC	50	VAL
81	CC	98	VAL
81	CC	102	VAL
82	DC	4	PHE
82	DC	26	ALA
82	DC	28	VAL
82	DC	107	GLY
82	DC	111	PHE
82	DC	189	VAL
82	DC	266	GLY
82	DC	276	PHE
82	DC	482	LYS
82	DC	546	GLU
82	DC	564	ARG
82	DC	678	GLY
82	DC	689	LEU
5	E	2	SER
5	E	197	ASN
6	F	69	TYR
6	F	171	GLY
7	G	210	GLU
7	G	211	GLN
7	G	254	ALA
7	G	367	LYS

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Mol	Chain	Res	Type
8	H	29	PRO
8	H	69	ARG
8	H	131	VAL
9	I	136	GLU
9	I	175	HIS
9	I	257	GLU
10	J	65	ILE
10	J	100	LYS
10	J	122	PHE
11	K	214	TRP
12	L	25	PRO
12	L	120	LYS
12	L	201	THR
13	M	137	SER
14	N	58	GLU
14	N	74	LYS
14	N	196	PHE
15	O	8	PRO
15	O	54	VAL
15	O	115	LYS
16	P	145	PHE
17	Q	51	LEU
17	Q	62	THR
17	Q	148	ALA
18	R	40	ASP
19	S	124	ASP
19	S	185	ALA
19	S	186	GLY
20	T	65	ASN
20	T	90	HIS
20	T	123	ALA
21	U	66	SER
21	U	143	PRO
22	V	5	HIS
22	V	8	LYS
22	V	23	ASN
23	W	134	HIS
24	X	3	HIS
24	X	13	ARG
24	X	139	TYR
24	X	153	PRO
26	Z	90	ARG

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Mol	Chain	Res	Type
26	Z	104	ARG
27	AA	63	LYS
27	AA	125	LEU
28	BA	24	GLY
29	CA	50	ALA
29	CA	69	SER
30	DA	53	ASP
30	DA	64	LYS
30	DA	125	LYS
32	FA	15	VAL
32	FA	42	ARG
32	FA	84	GLU
33	GA	29	TYR
33	GA	31	SER
34	HA	47	ASN
35	IA	82	GLU
36	JA	40	SER
36	JA	69	SER
36	JA	79	VAL
38	LA	12	PRO
38	LA	77	GLY
39	MA	35	LYS
39	MA	102	GLU
43	QA	4	GLN
43	QA	5	LYS
46	TA	6	LYS
46	TA	35	LEU
48	VA	68	SER
48	VA	111	ALA
49	WA	98	GLU
49	WA	316	MET
50	XA	4	PRO
50	XA	7	PHE
50	XA	44	GLY
50	XA	101	ARG
50	XA	158	VAL
51	YA	36	SER
51	YA	55	LYS
51	YA	61	LEU
51	YA	176	VAL
51	YA	224	ASP
52	ZA	60	SER

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Mol	Chain	Res	Type
52	ZA	126	ARG
53	AB	61	GLU
53	AB	93	ASP
54	BB	21	ASP
54	BB	23	LEU
54	BB	104	ASP
54	BB	118	GLU
54	BB	235	TYR
55	CB	21	THR
55	CB	43	PHE
55	CB	210	ALA
56	DB	20	ASP
56	DB	148	SER
57	EB	35	LYS
57	EB	120	ALA
59	GB	18	PRO
59	GB	62	ARG
59	GB	100	LYS
59	GB	167	ALA
60	HB	85	HIS
61	IB	51	GLY
62	JB	45	LEU
62	JB	113	ARG
64	LB	122	PRO
65	MB	51	SER
66	NB	33	GLY
66	NB	129	PHE
67	OB	83	GLN
67	OB	84	TYR
68	PB	61	LEU
68	PB	80	LYS
69	QB	29	GLU
69	QB	35	ASP
69	QB	118	PRO
71	SB	10	GLU
71	SB	46	ILE
72	TB	6	VAL
73	UB	12	ALA
73	UB	70	LYS
73	UB	97	ASP
74	VB	34	ASN
74	VB	67	GLY

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Mol	Chain	Res	Type
76	XB	11	ASN
76	XB	63	ALA
77	YB	23	THR
78	ZB	61	ARG
78	ZB	62	GLU
80	BC	15	LYS
80	BC	58	PRO
81	CC	90	LYS
81	CC	136	LYS
82	DC	132	ILE
82	DC	190	SER
82	DC	444	PRO
82	DC	463	LEU
82	DC	516	PRO
82	DC	582	LYS
82	DC	641	ASN
82	DC	779	GLY
5	E	31	THR
5	E	212	PRO
6	F	252	THR
7	G	80	ASP
7	G	297	SER
7	G	318	LYS
7	G	333	LYS
7	G	356	LEU
8	H	108	LYS
8	H	287	THR
8	H	338	LYS
8	H	346	LYS
9	I	48	LYS
9	I	119	TYR
9	I	230	ASP
10	J	11	PRO
10	J	110	LYS
10	J	125	GLN
10	J	136	GLU
11	K	91	GLY
11	K	96	PRO
11	K	107	ARG
11	K	149	TYR
11	K	237	ASN
12	L	157	VAL

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Mol	Chain	Res	Type
13	M	116	ASN
14	N	99	ILE
14	N	117	GLY
14	N	194	GLY
15	O	117	ASP
16	P	76	SER
16	P	142	ARG
17	Q	5	LYS
19	S	77	LYS
21	U	6	ALA
21	U	41	LEU
21	U	54	HIS
21	U	70	THR
22	V	20	LYS
22	V	84	VAL
23	W	49	THR
24	X	47	LYS
25	Y	22	HIS
25	Y	32	LYS
25	Y	124	VAL
26	Z	37	LEU
28	BA	26	SER
29	CA	141	TYR
30	DA	66	GLN
31	EA	103	GLN
31	EA	123	GLN
31	EA	127	ASN
32	FA	56	VAL
34	HA	101	LEU
37	KA	14	LEU
39	MA	82	ALA
40	NA	4	LYS
40	NA	77	LEU
40	NA	81	THR
40	NA	99	ARG
41	OA	86	ALA
44	RA	79	GLU
46	TA	89	LYS
47	UA	32	GLN
47	UA	34	HIS
48	VA	73	PHE
48	VA	81	LYS

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Mol	Chain	Res	Type
48	VA	106	ALA
48	VA	177	ASN
49	WA	105	GLY
49	WA	287	PRO
50	XA	103	THR
50	XA	109	ASN
50	XA	185	ARG
50	XA	193	GLN
50	XA	195	TRP
51	YA	22	ASP
51	YA	54	LEU
51	YA	80	SER
51	YA	129	THR
51	YA	206	PRO
51	YA	209	ASN
52	ZA	37	PRO
52	ZA	150	GLN
52	ZA	235	LEU
53	AB	81	PRO
53	AB	91	VAL
54	BB	24	SER
54	BB	231	GLN
55	CB	40	ILE
55	CB	44	ASN
56	DB	118	GLU
56	DB	139	ASN
57	EB	13	PRO
57	EB	14	THR
57	EB	74	GLN
57	EB	96	ARG
57	EB	129	LEU
57	EB	178	GLY
58	FB	22	ARG
58	FB	152	ILE
60	HB	28	ASN
60	HB	95	ARG
62	JB	84	ASN
65	MB	71	GLU
65	MB	122	THR
66	NB	40	GLU
67	OB	76	GLU
67	OB	115	LEU

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Mol	Chain	Res	Type
68	PB	54	LEU
68	PB	120	ARG
68	PB	122	HIS
68	PB	133	VAL
68	PB	145	ARG
69	QB	36	ILE
69	QB	40	SER
69	QB	119	LYS
71	SB	12	TYR
71	SB	82	VAL
72	TB	35	ILE
72	TB	118	ARG
73	UB	38	PHE
73	UB	112	LYS
74	VB	6	THR
74	VB	49	LYS
75	WB	85	LYS
76	XB	48	ALA
76	XB	51	ARG
76	XB	54	SER
76	XB	61	GLU
76	XB	62	TYR
76	XB	90	GLU
76	XB	91	ASP
77	YB	51	GLN
81	CC	96	LYS
82	DC	48	ALA
82	DC	112	SER
82	DC	271	ARG
82	DC	285	PHE
82	DC	514	SER
82	DC	721	ASP
5	E	72	PHE
5	E	94	ASN
6	F	235	ALA
7	G	198	HIS
7	G	298	PHE
8	H	23	PRO
8	H	38	VAL
8	H	101	ALA
8	H	202	ARG
9	I	53	VAL

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Mol	Chain	Res	Type
9	I	92	LEU
9	I	125	VAL
10	J	97	ASN
10	J	142	ASP
11	K	82	LYS
12	L	42	PRO
12	L	68	ARG
12	L	79	GLN
12	L	190	VAL
12	L	223	ALA
12	L	233	TRP
13	M	59	ASN
14	N	116	ARG
16	P	56	ILE
16	P	104	ILE
17	Q	132	ALA
17	Q	154	VAL
19	S	94	TYR
20	T	16	VAL
21	U	160	ALA
24	X	69	PRO
24	X	151	PRO
25	Y	18	ASP
25	Y	25	VAL
25	Y	63	VAL
29	CA	96	LYS
30	DA	123	GLY
31	EA	59	ALA
36	JA	84	THR
38	LA	27	GLY
44	RA	78	ILE
44	RA	97	ARG
46	TA	13	LYS
48	VA	130	PRO
48	VA	183	PHE
49	WA	69	GLN
50	XA	36	TYR
50	XA	139	VAL
51	YA	38	PHE
51	YA	182	ALA
52	ZA	50	ILE
52	ZA	92	ALA

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Mol	Chain	Res	Type
53	AB	154	ASP
53	AB	163	PRO
53	AB	179	GLN
54	BB	77	ARG
55	CB	101	GLY
55	CB	151	GLY
56	DB	41	VAL
56	DB	122	GLU
56	DB	154	ARG
56	DB	192	ALA
59	GB	71	PHE
59	GB	120	LYS
59	GB	151	ASP
60	HB	34	GLU
60	HB	35	ILE
61	IB	3	THR
61	IB	10	GLU
61	IB	54	ILE
61	IB	76	VAL
62	JB	91	VAL
63	KB	12	SER
65	MB	12	PHE
65	MB	52	LYS
66	NB	13	LYS
66	NB	94	GLN
67	OB	106	THR
68	PB	14	ILE
70	RB	22	ILE
75	WB	38	HIS
76	XB	19	LYS
77	YB	8	LEU
77	YB	31	TYR
79	AC	12	ARG
81	CC	87	THR
82	DC	293	LYS
82	DC	391	LYS
5	E	193	LEU
6	F	113	VAL
6	F	120	PRO
8	H	140	HIS
10	J	22	ARG
11	K	217	PRO

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Mol	Chain	Res	Type
12	L	182	GLY
12	L	225	LYS
17	Q	130	GLY
19	S	89	VAL
20	T	58	LEU
22	V	37	ALA
22	V	179	ARG
24	X	12	ARG
24	X	46	GLN
24	X	154	HIS
25	Y	69	LYS
25	Y	127	GLN
26	Z	11	ILE
32	FA	49	HIS
34	HA	49	PRO
36	JA	70	GLY
40	NA	34	SER
47	UA	52	ALA
48	VA	33	VAL
49	WA	94	VAL
49	WA	288	HIS
50	XA	42	PRO
51	YA	92	GLN
52	ZA	145	GLY
54	BB	149	TYR
55	CB	62	VAL
55	CB	88	PRO
56	DB	149	LYS
56	DB	152	ASP
59	GB	136	VAL
60	HB	82	LEU
61	IB	5	LEU
62	JB	68	GLU
67	OB	74	GLN
67	OB	87	GLU
72	TB	30	SER
72	TB	39	GLN
72	TB	83	ILE
73	UB	33	LEU
74	VB	19	ALA
74	VB	66	GLY
82	DC	486	SER

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Mol	Chain	Res	Type
82	DC	811	PRO
5	E	65	ILE
9	I	37	VAL
10	J	6	ALA
12	L	164	VAL
14	N	197	VAL
17	Q	127	PRO
18	R	49	PRO
20	T	145	VAL
21	U	5	GLY
26	Z	51	GLY
28	BA	18	GLY
31	EA	89	VAL
40	NA	61	ILE
49	WA	271	VAL
56	DB	70	PRO
57	EB	162	ILE
62	JB	40	GLY
62	JB	115	VAL
64	LB	39	ILE
65	MB	19	GLY
80	BC	14	VAL
8	H	79	GLY
11	K	92	ILE
15	O	138	VAL
23	W	17	VAL
24	X	15	PRO
30	DA	106	ILE
48	VA	78	PRO
48	VA	87	VAL
50	XA	50	VAL
54	BB	196	VAL
55	CB	153	GLY
59	GB	163	PRO
66	NB	5	PRO
68	PB	37	GLY
78	ZB	46	GLY
82	DC	106	PRO
19	S	42	PRO
19	S	84	PRO
21	U	78	VAL
22	V	132	PRO

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Mol	Chain	Res	Type
35	IA	7	VAL
40	NA	9	ILE
46	TA	75	VAL
54	BB	169	ILE
54	BB	241	GLY
55	CB	134	VAL
57	EB	130	VAL
57	EB	144	VAL
58	FB	15	GLY
58	FB	84	HIS
67	OB	85	VAL
69	QB	31	PRO
69	QB	116	ILE
82	DC	761	PRO
7	G	170	PRO
15	O	103	GLY
34	HA	48	THR
43	QA	24	PRO
47	UA	83	ILE
48	VA	108	PRO
49	WA	276	PRO
59	GB	160	PRO
60	HB	83	PRO
60	HB	87	VAL
69	QB	124	ILE
70	RB	62	VAL
71	SB	14	PRO
82	DC	819	VAL
6	F	49	VAL
40	NA	24	PRO
49	WA	63	GLY
59	GB	73	GLY

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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
5	E	157/198 (79%)	130 (83%)	27 (17%)	2 17
6	F	194/196 (99%)	169 (87%)	25 (13%)	5 28
7	G	322/323 (100%)	283 (88%)	39 (12%)	6 30
8	H	288/289 (100%)	263 (91%)	25 (9%)	12 45
9	I	244/245 (100%)	220 (90%)	24 (10%)	9 39
10	J	152/153 (99%)	131 (86%)	21 (14%)	4 27
11	K	186/205 (91%)	165 (89%)	21 (11%)	7 34
12	L	191/208 (92%)	177 (93%)	14 (7%)	16 52
13	M	171/171 (100%)	152 (89%)	19 (11%)	7 34
14	N	180/187 (96%)	165 (92%)	15 (8%)	13 47
15	O	147/150 (98%)	126 (86%)	21 (14%)	4 25
16	P	81/136 (60%)	69 (85%)	12 (15%)	3 23
17	Q	154/159 (97%)	132 (86%)	22 (14%)	4 25
18	R	107/109 (98%)	94 (88%)	13 (12%)	6 30
19	S	175/176 (99%)	156 (89%)	19 (11%)	7 35
20	T	160/162 (99%)	144 (90%)	16 (10%)	9 38
21	U	145/146 (99%)	125 (86%)	20 (14%)	4 27
22	V	150/151 (99%)	140 (93%)	10 (7%)	19 55
23	W	153/154 (99%)	139 (91%)	14 (9%)	11 42
24	X	156/156 (100%)	136 (87%)	20 (13%)	5 29
25	Y	136/137 (99%)	109 (80%)	27 (20%)	1 12
26	Z	87/107 (81%)	83 (95%)	4 (5%)	31 66
27	AA	104/105 (99%)	88 (85%)	16 (15%)	3 22
28	BA	54/129 (42%)	48 (89%)	6 (11%)	7 34
29	CA	105/118 (89%)	88 (84%)	17 (16%)	3 20
30	DA	109/110 (99%)	98 (90%)	11 (10%)	9 38
31	EA	115/116 (99%)	103 (90%)	12 (10%)	8 37
32	FA	118/119 (99%)	110 (93%)	8 (7%)	18 55
33	GA	46/47 (98%)	39 (85%)	7 (15%)	3 22
34	HA	81/88 (92%)	72 (89%)	9 (11%)	7 34
35	IA	96/97 (99%)	90 (94%)	6 (6%)	21 57
36	JA	109/111 (98%)	95 (87%)	14 (13%)	5 29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
37	KA	90/91 (99%)	77 (86%)	13 (14%)	4 25
38	LA	95/103 (92%)	85 (90%)	10 (10%)	8 36
39	MA	104/105 (99%)	95 (91%)	9 (9%)	12 45
40	NA	81/82 (99%)	66 (82%)	15 (18%)	2 14
41	OA	70/71 (99%)	61 (87%)	9 (13%)	5 28
42	PA	68/69 (99%)	60 (88%)	8 (12%)	6 32
43	QA	45/46 (98%)	36 (80%)	9 (20%)	1 12
44	RA	47/116 (40%)	41 (87%)	6 (13%)	5 29
45	SA	23/23 (100%)	19 (83%)	4 (17%)	2 16
46	TA	90/91 (99%)	80 (89%)	10 (11%)	7 34
47	UA	71/72 (99%)	64 (90%)	7 (10%)	9 39
48	VA	160/254 (63%)	145 (91%)	15 (9%)	10 41
49	WA	261/262 (100%)	233 (89%)	28 (11%)	8 36
50	XA	173/210 (82%)	153 (88%)	20 (12%)	6 33
51	YA	191/224 (85%)	174 (91%)	17 (9%)	11 44
52	ZA	176/205 (86%)	169 (96%)	7 (4%)	36 69
53	AB	182/195 (93%)	164 (90%)	18 (10%)	9 39
54	BB	221/222 (100%)	197 (89%)	24 (11%)	7 35
55	CB	173/191 (91%)	162 (94%)	11 (6%)	20 57
56	DB	193/201 (96%)	177 (92%)	16 (8%)	13 47
57	EB	165/170 (97%)	154 (93%)	11 (7%)	19 55
58	FB	150/161 (93%)	135 (90%)	15 (10%)	9 38
59	GB	158/166 (95%)	140 (89%)	18 (11%)	7 33
60	HB	89/98 (91%)	79 (89%)	10 (11%)	7 34
61	IB	136/137 (99%)	121 (89%)	15 (11%)	7 35
63	KB	127/128 (99%)	118 (93%)	9 (7%)	17 53
64	LB	96/105 (91%)	79 (82%)	17 (18%)	2 16
65	MB	103/118 (87%)	95 (92%)	8 (8%)	15 50
66	NB	117/119 (98%)	107 (92%)	10 (8%)	12 47
67	OB	82/124 (66%)	65 (79%)	17 (21%)	1 10
68	PB	128/129 (99%)	112 (88%)	16 (12%)	5 29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
69	QB	115/116 (99%)	105 (91%)	10 (9%)	12 45
70	RB	100/114 (88%)	91 (91%)	9 (9%)	11 43
71	SB	74/74 (100%)	69 (93%)	5 (7%)	18 55
72	TB	110/111 (99%)	96 (87%)	14 (13%)	5 29
73	UB	119/120 (99%)	109 (92%)	10 (8%)	13 47
74	VB	112/113 (99%)	105 (94%)	7 (6%)	21 57
75	WB	61/89 (68%)	57 (93%)	4 (7%)	19 56
76	XB	83/101 (82%)	76 (92%)	7 (8%)	13 47
77	YB	70/71 (99%)	65 (93%)	5 (7%)	17 53
78	ZB	56/60 (93%)	53 (95%)	3 (5%)	26 62
79	AC	47/49 (96%)	44 (94%)	3 (6%)	20 57
80	BC	51/54 (94%)	49 (96%)	2 (4%)	37 70
82	DC	699/714 (98%)	622 (89%)	77 (11%)	7 35
All	All	10235/11032 (93%)	9143 (89%)	1092 (11%)	12 36

All (1092) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	E	1	MET
5	E	4	ILE
5	E	24	LYS
5	E	28	PHE
5	E	31	THR
5	E	65	ILE
5	E	82	VAL
5	E	83	ASP
5	E	92	LYS
5	E	99	LEU
5	E	100	ILE
5	E	106	LYS
5	E	108	ASN
5	E	110	PHE
5	E	111	ILE
5	E	122	ARG
5	E	123	LEU
5	E	136	THR
5	E	140	HIS

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Mol	Chain	Res	Type
5	E	142	ASP
5	E	147	LYS
5	E	151	VAL
5	E	177	ASP
5	E	181	ASN
5	E	194	LEU
5	E	195	LYS
5	E	210	MET
6	F	8	GLN
6	F	22	LEU
6	F	23	ARG
6	F	30	ARG
6	F	37	ARG
6	F	40	TYR
6	F	64	ARG
6	F	73	GLU
6	F	74	GLU
6	F	80	GLU
6	F	82	VAL
6	F	101	VAL
6	F	102	LEU
6	F	119	LYS
6	F	133	TYR
6	F	135	ILE
6	F	139	HIS
6	F	193	ARG
6	F	208	ASP
6	F	221	LYS
6	F	226	SER
6	F	230	VAL
6	F	246	LEU
6	F	247	ARG
6	F	253	GLN
7	G	3	HIS
7	G	7	GLU
7	G	19	ARG
7	G	25	ILE
7	G	67	PHE
7	G	85	VAL
7	G	87	VAL
7	G	95	THR
7	G	96	PRO

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Mol	Chain	Res	Type
7	G	102	LEU
7	G	109	HIS
7	G	113	GLU
7	G	114	VAL
7	G	120	LYS
7	G	123	TYR
7	G	136	LYS
7	G	158	VAL
7	G	166	ILE
7	G	178	LEU
7	G	200	GLU
7	G	201	LYS
7	G	203	VAL
7	G	241	LYS
7	G	246	LEU
7	G	248	LYS
7	G	251	CYS
7	G	266	ARG
7	G	270	ARG
7	G	272	TYR
7	G	273	HIS
7	G	299	ASP
7	G	311	PHE
7	G	328	ILE
7	G	331	ASN
7	G	332	ARG
7	G	343	TYR
7	G	351	LEU
7	G	356	LEU
7	G	364	LYS
8	H	33	ASP
8	H	50	TYR
8	H	54	GLU
8	H	93	MET
8	H	99	MET
8	H	107	ARG
8	H	120	TYR
8	H	177	ASP
8	H	180	LYS
8	H	187	LEU
8	H	194	TYR
8	H	206	LEU

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Mol	Chain	Res	Type
8	H	213	ASN
8	H	221	ASN
8	H	246	ARG
8	H	250	TRP
8	H	260	GLN
8	H	262	TRP
8	H	265	GLU
8	H	296	GLN
8	H	316	ASN
8	H	327	LEU
8	H	328	ASN
8	H	337	GLU
8	H	359	LEU
9	I	6	ASP
9	I	8	LYS
9	I	23	ARG
9	I	35	ARG
9	I	41	LYS
9	I	45	ASN
9	I	56	THR
9	I	57	ASN
9	I	69	ILE
9	I	111	GLN
9	I	115	LEU
9	I	123	GLU
9	I	142	PHE
9	I	150	LEU
9	I	176	SER
9	I	185	PHE
9	I	207	TYR
9	I	218	ARG
9	I	219	PHE
9	I	222	LEU
9	I	234	ASP
9	I	251	PRO
9	I	258	LYS
9	I	260	PHE
10	J	5	LYS
10	J	9	TRP
10	J	23	LYS
10	J	46	ARG
10	J	54	TYR

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Mol	Chain	Res	Type
10	J	64	LEU
10	J	65	ILE
10	J	72	ASN
10	J	77	ARG
10	J	80	ASN
10	J	94	GLU
10	J	114	LYS
10	J	121	LEU
10	J	129	GLU
10	J	152	THR
10	J	165	LEU
10	J	166	LYS
10	J	170	LYS
10	J	172	HIS
10	J	174	LEU
10	J	176	PHE
11	K	24	GLU
11	K	25	GLN
11	K	26	VAL
11	K	78	GLU
11	K	82	LYS
11	K	88	ARG
11	K	95	ILE
11	K	96	PRO
11	K	123	THR
11	K	124	LEU
11	K	141	TYR
11	K	145	ARG
11	K	165	ASP
11	K	166	ASN
11	K	176	TYR
11	K	178	ILE
11	K	179	LEU
11	K	182	ASP
11	K	202	LEU
11	K	231	ASN
11	K	232	ARG
12	L	46	LEU
12	L	62	LYS
12	L	94	PHE
12	L	134	TYR
12	L	142	LEU

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Mol	Chain	Res	Type
12	L	149	LYS
12	L	164	VAL
12	L	169	LEU
12	L	189	LEU
12	L	190	VAL
12	L	211	LEU
12	L	245	LYS
12	L	247	ASP
12	L	248	LYS
13	M	41	ILE
13	M	45	PHE
13	M	68	LEU
13	M	69	ARG
13	M	86	TYR
13	M	94	TYR
13	M	102	ASN
13	M	112	ILE
13	M	121	LYS
13	M	123	ILE
13	M	127	PRO
13	M	130	ASP
13	M	133	THR
13	M	149	ASN
13	M	157	ASN
13	M	162	GLN
13	M	168	ARG
13	M	177	ASP
13	M	186	PHE
14	N	13	LYS
14	N	21	ARG
14	N	26	VAL
14	N	33	ILE
14	N	34	TYR
14	N	48	LEU
14	N	66	GLU
14	N	97	LEU
14	N	102	MET
14	N	116	ARG
14	N	145	LYS
14	N	154	ARG
14	N	165	ILE
14	N	170	LYS

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Mol	Chain	Res	Type
14	N	213	PHE
15	O	13	LYS
15	O	14	ILE
15	O	23	VAL
15	O	29	ARG
15	O	45	PRO
15	O	59	ILE
15	O	84	LEU
15	O	94	ARG
15	O	102	PHE
15	O	104	PHE
15	O	107	ASP
15	O	108	GLU
15	O	112	LEU
15	O	115	LYS
15	O	138	VAL
15	O	141	ARG
15	O	162	TRP
15	O	163	PHE
15	O	166	LYS
15	O	170	ASP
15	O	174	LYS
16	P	57	LYS
16	P	60	VAL
16	P	61	GLN
16	P	65	GLN
16	P	80	LEU
16	P	82	ILE
16	P	90	ARG
16	P	95	ASP
16	P	97	ASN
16	P	114	ARG
16	P	117	ARG
16	P	131	GLU
17	Q	3	ILE
17	Q	7	LEU
17	Q	23	LYS
17	Q	35	ARG
17	Q	53	LEU
17	Q	54	LEU
17	Q	67	ARG
17	Q	76	THR

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Mol	Chain	Res	Type
17	Q	86	THR
17	Q	89	TYR
17	Q	99	HIS
17	Q	101	ARG
17	Q	102	GLN
17	Q	107	GLU
17	Q	108	ILE
17	Q	112	ASN
17	Q	115	ARG
17	Q	131	LYS
17	Q	137	GLN
17	Q	149	GLN
17	Q	172	LEU
17	Q	192	GLU
18	R	8	LYS
18	R	12	TRP
18	R	20	VAL
18	R	24	LYS
18	R	27	GLN
18	R	35	ILE
18	R	59	ASN
18	R	65	LEU
18	R	72	LEU
18	R	74	ARG
18	R	80	THR
18	R	114	ASP
18	R	123	LEU
19	S	11	GLN
19	S	12	ARG
19	S	18	VAL
19	S	19	LEU
19	S	42	PRO
19	S	50	ARG
19	S	57	GLN
19	S	61	ILE
19	S	62	TYR
19	S	66	VAL
19	S	70	ASN
19	S	86	ASN
19	S	101	THR
19	S	134	LEU
19	S	145	ASP

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Mol	Chain	Res	Type
19	S	149	ASN
19	S	151	ILE
19	S	172	ARG
19	S	189	LYS
20	T	14	HIS
20	T	27	LEU
20	T	43	ILE
20	T	47	PHE
20	T	48	PHE
20	T	65	ASN
20	T	74	ARG
20	T	85	ARG
20	T	104	VAL
20	T	113	ASP
20	T	117	ARG
20	T	140	LYS
20	T	148	LYS
20	T	157	GLU
20	T	167	TYR
20	T	182	ASN
21	U	7	THR
21	U	32	THR
21	U	50	GLN
21	U	53	ASP
21	U	55	GLN
21	U	76	PHE
21	U	91	VAL
21	U	95	LEU
21	U	96	GLN
21	U	113	TYR
21	U	118	GLN
21	U	120	ASN
21	U	138	LYS
21	U	146	ILE
21	U	147	GLU
21	U	154	GLU
21	U	163	LYS
21	U	168	LEU
21	U	171	ARG
21	U	180	LYS
22	V	17	THR
22	V	69	ARG

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Mol	Chain	Res	Type
22	V	73	GLN
22	V	74	GLU
22	V	82	VAL
22	V	113	LYS
22	V	125	ASP
22	V	138	LEU
22	V	147	ARG
22	V	170	ARG
23	W	25	ASP
23	W	38	ARG
23	W	74	ARG
23	W	84	THR
23	W	91	SER
23	W	94	VAL
23	W	98	ARG
23	W	99	LEU
23	W	105	LEU
23	W	136	ARG
23	W	151	ARG
23	W	158	GLU
23	W	167	ARG
23	W	172	ARG
24	X	6	GLU
24	X	26	ARG
24	X	42	TRP
24	X	43	TYR
24	X	44	PHE
24	X	47	LYS
24	X	50	LYS
24	X	57	GLU
24	X	78	TRP
24	X	80	ARG
24	X	87	THR
24	X	95	ARG
24	X	108	GLN
24	X	115	ARG
24	X	119	ARG
24	X	139	TYR
24	X	151	PRO
24	X	153	PRO
24	X	155	ARG
24	X	158	LYS

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Mol	Chain	Res	Type
25	Y	5	HIS
25	Y	10	ARG
25	Y	13	TYR
25	Y	20	ARG
25	Y	26	HIS
25	Y	30	TYR
25	Y	43	LYS
25	Y	48	ILE
25	Y	63	VAL
25	Y	75	ILE
25	Y	83	ARG
25	Y	84	TYR
25	Y	85	LEU
25	Y	89	LEU
25	Y	100	LYS
25	Y	122	GLN
25	Y	126	VAL
25	Y	127	GLN
25	Y	128	LEU
25	Y	137	GLU
25	Y	141	VAL
25	Y	146	ASN
25	Y	150	THR
25	Y	156	TYR
25	Y	157	GLU
25	Y	158	THR
25	Y	159	PHE
26	Z	10	LYS
26	Z	82	LYS
26	Z	88	GLN
26	Z	108	TYR
27	AA	10	LYS
27	AA	15	LEU
27	AA	22	ILE
27	AA	23	MET
27	AA	32	ARG
27	AA	33	ASN
27	AA	36	ILE
27	AA	37	ILE
27	AA	46	LEU
27	AA	79	VAL
27	AA	85	TRP

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Mol	Chain	Res	Type
27	AA	89	ASP
27	AA	98	ASN
27	AA	102	ILE
27	AA	109	MET
27	AA	115	THR
28	BA	14	TYR
28	BA	40	PHE
28	BA	42	GLN
28	BA	49	ILE
28	BA	54	LEU
28	BA	56	ARG
29	CA	29	SER
29	CA	32	PHE
29	CA	34	LEU
29	CA	38	LEU
29	CA	39	LYS
29	CA	44	PRO
29	CA	63	ILE
29	CA	73	MET
29	CA	83	VAL
29	CA	88	MET
29	CA	108	LEU
29	CA	109	LYS
29	CA	117	ASN
29	CA	124	VAL
29	CA	133	LEU
29	CA	135	ILE
29	CA	142	ILE
30	DA	5	SER
30	DA	28	ARG
30	DA	35	LEU
30	DA	37	LYS
30	DA	57	LEU
30	DA	63	LYS
30	DA	74	TYR
30	DA	102	SER
30	DA	109	LEU
30	DA	121	ARG
30	DA	126	LEU
31	EA	4	PHE
31	EA	13	VAL
31	EA	21	LYS

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Mol	Chain	Res	Type
31	EA	38	PHE
31	EA	81	LEU
31	EA	86	THR
31	EA	93	LYS
31	EA	99	GLU
31	EA	114	VAL
31	EA	118	PHE
31	EA	121	ARG
31	EA	131	PHE
32	FA	7	LYS
32	FA	10	LYS
32	FA	21	ARG
32	FA	46	ASP
32	FA	60	TYR
32	FA	82	ILE
32	FA	88	ASP
32	FA	135	GLU
33	GA	3	LYS
33	GA	14	ARG
33	GA	18	ARG
33	GA	19	ASN
33	GA	25	LYS
33	GA	28	LYS
33	GA	36	ASP
34	HA	23	TYR
34	HA	40	LYS
34	HA	64	LYS
34	HA	69	TYR
34	HA	71	GLN
34	HA	74	ASN
34	HA	83	LYS
34	HA	86	ARG
34	HA	104	LEU
35	IA	26	LYS
35	IA	31	ARG
35	IA	80	ASN
35	IA	86	LYS
35	IA	96	VAL
35	IA	106	THR
36	JA	21	HIS
36	JA	23	ASP
36	JA	33	ARG

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Mol	Chain	Res	Type
36	JA	38	ILE
36	JA	39	ASP
36	JA	41	VAL
36	JA	45	ARG
36	JA	61	LYS
36	JA	92	TYR
36	JA	98	HIS
36	JA	104	ASN
36	JA	118	LYS
36	JA	125	ARG
36	JA	128	LEU
37	KA	23	ASN
37	KA	24	ASN
37	KA	31	LYS
37	KA	32	ILE
37	KA	43	PHE
37	KA	45	LEU
37	KA	52	VAL
37	KA	53	TYR
37	KA	60	ARG
37	KA	63	LYS
37	KA	84	THR
37	KA	86	ARG
37	KA	89	LEU
38	LA	6	THR
38	LA	7	PHE
38	LA	16	ARG
38	LA	20	ILE
38	LA	22	VAL
38	LA	29	ILE
38	LA	46	ASP
38	LA	58	ARG
38	LA	59	PRO
38	LA	71	THR
39	MA	36	LEU
39	MA	38	ARG
39	MA	56	THR
39	MA	74	LYS
39	MA	75	TYR
39	MA	85	THR
39	MA	90	ARG
39	MA	92	LEU

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Mol	Chain	Res	Type
39	MA	99	GLN
40	NA	3	VAL
40	NA	26	ILE
40	NA	28	TYR
40	NA	30	LYS
40	NA	43	LEU
40	NA	45	ARG
40	NA	53	TYR
40	NA	56	ARG
40	NA	60	LEU
40	NA	62	ARG
40	NA	63	ASN
40	NA	75	LYS
40	NA	76	ARG
40	NA	84	LYS
40	NA	99	ARG
41	OA	11	ARG
41	OA	12	HIS
41	OA	17	THR
41	OA	18	LEU
41	OA	20	ASN
41	OA	24	ARG
41	OA	45	ARG
41	OA	49	TRP
41	OA	58	THR
42	PA	31	LEU
42	PA	32	ASN
42	PA	40	GLN
42	PA	51	LEU
42	PA	53	THR
42	PA	58	ASP
42	PA	76	ASN
42	PA	77	ARG
43	QA	5	LYS
43	QA	9	ILE
43	QA	20	ASN
43	QA	21	ARG
43	QA	23	LEU
43	QA	32	ASN
43	QA	41	ARG
43	QA	42	ARG
43	QA	48	LYS

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Mol	Chain	Res	Type
44	RA	109	ASN
44	RA	112	LYS
44	RA	113	ARG
44	RA	114	LYS
44	RA	115	CYS
44	RA	126	LYS
45	SA	5	TRP
45	SA	11	ARG
45	SA	14	LYS
45	SA	23	ARG
46	TA	24	LYS
46	TA	27	GLN
46	TA	43	TYR
46	TA	44	ASP
46	TA	45	ARG
46	TA	77	CYS
46	TA	78	LYS
46	TA	90	HIS
46	TA	93	LEU
46	TA	100	LYS
47	UA	33	GLN
47	UA	37	TYR
47	UA	42	CYS
47	UA	45	LYS
47	UA	47	VAL
47	UA	63	THR
47	UA	80	ARG
48	VA	15	LEU
48	VA	17	GLU
48	VA	20	GLU
48	VA	23	LYS
48	VA	32	ASN
48	VA	42	ARG
48	VA	46	ARG
48	VA	55	LYS
48	VA	60	ARG
48	VA	73	PHE
48	VA	81	LYS
48	VA	121	VAL
48	VA	155	ASP
48	VA	167	GLN
48	VA	185	LEU

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Mol	Chain	Res	Type
49	WA	17	ASN
49	WA	31	ASN
49	WA	46	LYS
49	WA	56	VAL
49	WA	70	ASP
49	WA	94	VAL
49	WA	100	TYR
49	WA	109	ASP
49	WA	114	ASP
49	WA	117	LYS
49	WA	128	ASP
49	WA	136	ILE
49	WA	137	LYS
49	WA	141	LEU
49	WA	150	TRP
49	WA	165	ASP
49	WA	175	ASP
49	WA	192	PHE
49	WA	207	ASP
49	WA	222	LEU
49	WA	223	TRP
49	WA	241	PHE
49	WA	245	PHE
49	WA	266	ASP
49	WA	292	LEU
49	WA	306	THR
49	WA	315	VAL
49	WA	316	MET
50	XA	9	LEU
50	XA	32	HIS
50	XA	38	PHE
50	XA	39	ASN
50	XA	88	LYS
50	XA	97	PRO
50	XA	101	ARG
50	XA	102	PHE
50	XA	119	ARG
50	XA	131	GLN
50	XA	135	GLU
50	XA	138	TYR
50	XA	157	ASP
50	XA	158	VAL

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Mol	Chain	Res	Type
50	XA	177	LEU
50	XA	180	GLU
50	XA	185	ARG
50	XA	188	LEU
50	XA	190	ASP
50	XA	204	TYR
51	YA	40	ASN
51	YA	46	THR
51	YA	61	LEU
51	YA	70	LEU
51	YA	83	LYS
51	YA	89	ASP
51	YA	105	PHE
51	YA	108	ASP
51	YA	110	LEU
51	YA	111	ARG
51	YA	128	LYS
51	YA	131	ASP
51	YA	133	TYR
51	YA	135	LEU
51	YA	193	ILE
51	YA	206	PRO
51	YA	218	LEU
52	ZA	41	LEU
52	ZA	44	LEU
52	ZA	58	LEU
52	ZA	126	ARG
52	ZA	141	ARG
52	ZA	178	ILE
52	ZA	222	TYR
53	AB	7	LYS
53	AB	22	ASN
53	AB	24	PHE
53	AB	50	ILE
53	AB	64	ARG
53	AB	65	ARG
53	AB	76	ARG
53	AB	87	TYR
53	AB	92	GLN
53	AB	113	LEU
53	AB	157	LEU
53	AB	158	ILE

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Mol	Chain	Res	Type
53	AB	168	ILE
53	AB	174	HIS
53	AB	200	LYS
53	AB	203	PRO
53	AB	218	LEU
53	AB	223	LYS
54	BB	20	LEU
54	BB	38	LEU
54	BB	39	ARG
54	BB	54	TYR
54	BB	66	MET
54	BB	88	ASP
54	BB	98	ASN
54	BB	109	PHE
54	BB	121	TYR
54	BB	131	LEU
54	BB	158	ASP
54	BB	180	LEU
54	BB	181	VAL
54	BB	182	TYR
54	BB	187	ARG
54	BB	191	ARG
54	BB	205	PHE
54	BB	215	ASP
54	BB	218	PHE
54	BB	220	THR
54	BB	224	ASN
54	BB	227	VAL
54	BB	248	ILE
54	BB	253	ASP
55	CB	27	THR
55	CB	31	GLU
55	CB	42	LEU
55	CB	54	LYS
55	CB	55	ASP
55	CB	76	ARG
55	CB	86	GLN
55	CB	109	LYS
55	CB	128	ASN
55	CB	130	ILE
55	CB	148	ARG
56	DB	7	TYR

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Mol	Chain	Res	Type
56	DB	16	PHE
56	DB	26	VAL
56	DB	32	ILE
56	DB	52	ILE
56	DB	68	LEU
56	DB	89	ASP
56	DB	98	ARG
56	DB	114	VAL
56	DB	120	GLU
56	DB	132	ARG
56	DB	137	ARG
56	DB	178	LEU
56	DB	180	THR
56	DB	202	ARG
56	DB	220	LYS
57	EB	13	PRO
57	EB	14	THR
57	EB	19	GLN
57	EB	29	ASN
57	EB	81	LEU
57	EB	85	PHE
57	EB	105	THR
57	EB	123	ASP
57	EB	154	LEU
57	EB	173	TYR
57	EB	185	ILE
58	FB	5	ARG
58	FB	20	GLN
58	FB	29	LEU
58	FB	35	ASN
58	FB	47	ARG
58	FB	64	ASN
58	FB	70	GLU
58	FB	74	LYS
58	FB	82	VAL
58	FB	89	GLU
58	FB	121	LEU
58	FB	137	LYS
58	FB	160	PHE
58	FB	168	CYS
58	FB	199	LYS
59	GB	8	TYR

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Mol	Chain	Res	Type
59	GB	10	LYS
59	GB	14	THR
59	GB	58	ASP
59	GB	60	LEU
59	GB	71	PHE
59	GB	78	ARG
59	GB	89	ASP
59	GB	92	LYS
59	GB	95	TYR
59	GB	104	PHE
59	GB	114	TYR
59	GB	126	ARG
59	GB	134	ILE
59	GB	147	MET
59	GB	149	ARG
59	GB	171	ARG
59	GB	179	ARG
60	HB	7	ASP
60	HB	16	PHE
60	HB	36	ASP
60	HB	37	THR
60	HB	46	LEU
60	HB	56	LYS
60	HB	76	LEU
60	HB	80	LEU
60	HB	81	ASN
60	HB	91	TYR
61	IB	5	LEU
61	IB	40	LEU
61	IB	54	ILE
61	IB	67	ARG
61	IB	69	LYS
61	IB	76	VAL
61	IB	83	THR
61	IB	93	TYR
61	IB	98	ASN
61	IB	102	LYS
61	IB	107	VAL
61	IB	121	ASP
61	IB	134	THR
61	IB	153	PHE
61	IB	155	LYS

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Mol	Chain	Res	Type
63	KB	3	ARG
63	KB	21	ASN
63	KB	27	LYS
63	KB	55	ARG
63	KB	86	GLU
63	KB	87	ASP
63	KB	91	LEU
63	KB	99	ARG
63	KB	117	LEU
64	LB	13	VAL
64	LB	37	GLU
64	LB	39	ILE
64	LB	42	VAL
64	LB	76	ILE
64	LB	90	ARG
64	LB	92	LYS
64	LB	102	LEU
64	LB	105	LEU
64	LB	114	ARG
64	LB	118	VAL
64	LB	128	LYS
64	LB	129	LYS
64	LB	132	ARG
64	LB	133	ARG
64	LB	136	ARG
64	LB	137	LEU
65	MB	22	LEU
65	MB	35	LYS
65	MB	44	ARG
65	MB	60	LEU
65	MB	81	ARG
65	MB	82	ASN
65	MB	100	LYS
65	MB	121	ILE
66	NB	23	LYS
66	NB	41	PRO
66	NB	59	LYS
66	NB	68	ARG
66	NB	70	THR
66	NB	82	ARG
66	NB	103	ASN
66	NB	112	TYR

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Mol	Chain	Res	Type
66	NB	117	LEU
66	NB	126	PRO
67	OB	3	ARG
67	OB	5	ARG
67	OB	23	LYS
67	OB	26	LEU
67	OB	31	ASN
67	OB	35	CYS
67	OB	36	ASP
67	OB	38	ILE
67	OB	44	LYS
67	OB	46	LEU
67	OB	71	PHE
67	OB	101	ASN
67	OB	103	ASP
67	OB	104	ASN
67	OB	105	GLN
67	OB	109	LEU
67	OB	117	LEU
68	PB	3	LEU
68	PB	5	VAL
68	PB	11	PHE
68	PB	17	LEU
68	PB	19	ASN
68	PB	28	ILE
68	PB	40	ARG
68	PB	54	LEU
68	PB	60	GLU
68	PB	75	ASN
68	PB	79	TYR
68	PB	82	PRO
68	PB	85	PHE
68	PB	87	ASN
68	PB	92	ILE
68	PB	131	LEU
69	QB	7	ARG
69	QB	23	GLN
69	QB	28	LEU
69	QB	38	LYS
69	QB	57	ARG
69	QB	64	HIS
69	QB	66	TYR

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Mol	Chain	Res	Type
69	QB	109	GLU
69	QB	130	ARG
69	QB	131	ASP
70	RB	20	ILE
70	RB	34	LEU
70	RB	50	LEU
70	RB	82	TYR
70	RB	89	ARG
70	RB	90	TYR
70	RB	92	ASP
70	RB	103	ILE
70	RB	115	GLU
71	SB	5	LYS
71	SB	12	TYR
71	SB	50	TYR
71	SB	74	GLN
71	SB	85	TYR
72	TB	3	ARG
72	TB	7	LEU
72	TB	23	ARG
72	TB	37	PHE
72	TB	55	ASP
72	TB	64	GLN
72	TB	65	LEU
72	TB	71	LYS
72	TB	75	ILE
72	TB	93	LEU
72	TB	97	ARG
72	TB	103	ILE
72	TB	104	LEU
72	TB	113	HIS
73	UB	3	LYS
73	UB	5	LYS
73	UB	7	ARG
73	UB	9	LEU
73	UB	33	LEU
73	UB	75	GLN
73	UB	82	LYS
73	UB	100	ASP
73	UB	123	LYS
73	UB	140	LYS
74	VB	17	LEU

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Mol	Chain	Res	Type
74	VB	57	VAL
74	VB	62	THR
74	VB	102	LYS
74	VB	105	ARG
74	VB	119	PHE
74	VB	124	ARG
75	WB	54	VAL
75	WB	67	ASP
75	WB	97	LYS
75	WB	100	ILE
76	XB	10	ARG
76	XB	18	VAL
76	XB	41	ILE
76	XB	53	LEU
76	XB	66	LYS
76	XB	85	ARG
76	XB	87	ARG
77	YB	3	LEU
77	YB	15	GLU
77	YB	20	LYS
77	YB	36	LYS
77	YB	52	THR
78	ZB	14	LYS
78	ZB	36	THR
78	ZB	52	ASP
79	AC	10	HIS
79	AC	13	ARG
79	AC	49	ASP
80	BC	20	LYS
80	BC	23	LYS
82	DC	5	THR
82	DC	14	ASP
82	DC	68	ILE
82	DC	75	ILE
82	DC	101	ASN
82	DC	104	ASP
82	DC	111	PHE
82	DC	120	ARG
82	DC	138	GLN
82	DC	141	THR
82	DC	155	VAL
82	DC	166	GLU

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Mol	Chain	Res	Type
82	DC	175	TYR
82	DC	194	ASP
82	DC	223	ARG
82	DC	229	TYR
82	DC	244	LEU
82	DC	261	ASP
82	DC	263	ASP
82	DC	284	LEU
82	DC	285	PHE
82	DC	289	MET
82	DC	299	LEU
82	DC	308	LYS
82	DC	313	ASP
82	DC	327	PHE
82	DC	338	ILE
82	DC	346	VAL
82	DC	372	CYS
82	DC	381	TYR
82	DC	386	VAL
82	DC	425	ASP
82	DC	426	LEU
82	DC	437	MET
82	DC	460	ASP
82	DC	477	ASN
82	DC	495	VAL
82	DC	500	ASP
82	DC	504	LEU
82	DC	515	ASP
82	DC	544	ASP
82	DC	556	ILE
82	DC	563	TYR
82	DC	568	GLU
82	DC	578	LYS
82	DC	584	ASN
82	DC	588	LEU
82	DC	612	PHE
82	DC	617	ARG
82	DC	625	TRP
82	DC	634	TRP
82	DC	646	VAL
82	DC	648	ASP
82	DC	649	GLN

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Mol	Chain	Res	Type
82	DC	651	LYS
82	DC	656	LEU
82	DC	661	ASP
82	DC	677	PHE
82	DC	681	MET
82	DC	682	ARG
82	DC	693	LEU
82	DC	698	ILE
82	DC	710	ARG
82	DC	732	GLU
82	DC	735	CYS
82	DC	743	ILE
82	DC	747	LEU
82	DC	761	PRO
82	DC	766	PHE
82	DC	772	LEU
82	DC	781	THR
82	DC	803	THR
82	DC	806	SER
82	DC	809	LEU
82	DC	823	ARG
82	DC	829	LYS
82	DC	832	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (315) such sidechains are listed below:

Mol	Chain	Res	Type
5	E	8	GLN
5	E	12	HIS
5	E	94	ASN
5	E	140	HIS
5	E	181	ASN
6	F	8	GLN
6	F	83	HIS
6	F	132	ASN
6	F	139	HIS
6	F	187	HIS
6	F	209	HIS
6	F	211	HIS
6	F	250	GLN
6	F	253	GLN
7	G	13	HIS

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Mol	Chain	Res	Type
7	G	68	HIS
7	G	139	GLN
7	G	163	HIS
7	G	173	GLN
7	G	211	GLN
7	G	273	HIS
7	G	293	ASN
8	H	116	ASN
8	H	229	ASN
8	H	296	GLN
8	H	304	GLN
8	H	307	GLN
8	H	361	HIS
9	I	40	HIS
9	I	45	ASN
9	I	57	ASN
9	I	111	GLN
9	I	151	GLN
9	I	175	HIS
9	I	264	GLN
9	I	274	GLN
10	J	28	GLN
10	J	80	ASN
10	J	167	ASN
11	K	25	GLN
11	K	61	ASN
11	K	64	GLN
11	K	172	ASN
11	K	197	GLN
11	K	231	ASN
11	K	237	ASN
11	K	244	ASN
12	L	33	ASN
12	L	38	GLN
12	L	59	GLN
12	L	145	ASN
13	M	49	ASN
13	M	50	ASN
13	M	51	GLN
13	M	64	HIS
13	M	100	ASN
13	M	125	ASN

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Mol	Chain	Res	Type
13	M	157	ASN
13	M	163	GLN
13	M	169	ASN
14	N	23	ASN
14	N	95	HIS
14	N	144	ASN
14	N	163	GLN
15	O	39	GLN
15	O	43	GLN
15	O	68	HIS
15	O	165	GLN
16	P	65	GLN
16	P	115	GLN
16	P	137	GLN
17	Q	25	HIS
17	Q	28	GLN
17	Q	37	ASN
17	Q	102	GLN
17	Q	103	ASN
17	Q	112	ASN
17	Q	137	GLN
18	R	62	GLN
18	R	119	GLN
18	R	126	GLN
19	S	90	ASN
19	S	117	ASN
19	S	138	GLN
19	S	139	HIS
19	S	149	ASN
19	S	156	HIS
20	T	26	GLN
20	T	65	ASN
20	T	182	ASN
20	T	193	GLN
21	U	50	GLN
21	U	55	GLN
21	U	120	ASN
22	V	15	HIS
22	V	58	ASN
22	V	73	GLN
22	V	145	ASN
23	W	27	ASN

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Mol	Chain	Res	Type
23	W	47	ASN
23	W	92	GLN
23	W	156	ASN
24	X	3	HIS
24	X	8	GLN
24	X	62	ASN
24	X	63	GLN
24	X	108	GLN
24	X	142	GLN
25	Y	5	HIS
25	Y	22	HIS
25	Y	49	GLN
25	Y	58	GLN
25	Y	127	GLN
25	Y	134	GLN
26	Z	25	ASN
26	Z	49	ASN
26	Z	88	GLN
27	AA	33	ASN
27	AA	132	ASN
29	CA	65	GLN
29	CA	91	ASN
29	CA	111	ASN
29	CA	117	ASN
29	CA	137	ASN
30	DA	4	GLN
30	DA	98	ASN
31	EA	29	HIS
31	EA	40	HIS
32	FA	14	HIS
32	FA	40	HIS
32	FA	44	ASN
32	FA	74	ASN
33	GA	11	ASN
33	GA	45	HIS
34	HA	12	GLN
34	HA	74	ASN
35	IA	56	ASN
35	IA	57	GLN
35	IA	80	ASN
35	IA	105	GLN
36	JA	20	HIS

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Mol	Chain	Res	Type
36	JA	31	ASN
36	JA	49	ASN
36	JA	104	ASN
37	KA	23	ASN
37	KA	24	ASN
37	KA	39	GLN
37	KA	42	GLN
37	KA	87	ASN
37	KA	106	ASN
38	LA	33	GLN
38	LA	52	GLN
38	LA	108	GLN
39	MA	59	ASN
39	MA	61	GLN
39	MA	68	GLN
39	MA	104	GLN
41	OA	28	HIS
41	OA	57	HIS
41	OA	76	ASN
42	PA	10	GLN
42	PA	76	ASN
43	QA	11	GLN
43	QA	20	ASN
43	QA	32	ASN
43	QA	33	ASN
43	QA	38	ASN
46	TA	20	HIS
46	TA	82	GLN
47	UA	34	HIS
48	VA	83	ASN
48	VA	167	GLN
48	VA	189	GLN
49	WA	16	HIS
49	WA	17	ASN
49	WA	31	ASN
49	WA	147	HIS
49	WA	153	GLN
49	WA	159	ASN
49	WA	184	ASN
49	WA	185	GLN
49	WA	200	ASN
49	WA	299	GLN

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Mol	Chain	Res	Type
50	XA	21	ASN
50	XA	39	ASN
50	XA	69	ASN
50	XA	131	GLN
51	YA	40	ASN
51	YA	92	GLN
51	YA	146	GLN
51	YA	149	GLN
51	YA	177	GLN
51	YA	220	GLN
52	ZA	59	HIS
52	ZA	82	ASN
52	ZA	89	GLN
52	ZA	94	GLN
52	ZA	110	HIS
52	ZA	189	GLN
52	ZA	199	GLN
52	ZA	220	ASN
52	ZA	233	GLN
53	AB	62	ASN
53	AB	92	GLN
53	AB	111	ASN
53	AB	162	GLN
54	BB	50	ASN
54	BB	67	GLN
54	BB	188	ASN
54	BB	197	HIS
54	BB	209	HIS
54	BB	258	GLN
55	CB	104	ASN
55	CB	116	HIS
55	CB	122	ASN
55	CB	128	ASN
55	CB	200	ASN
56	DB	34	GLN
56	DB	59	GLN
56	DB	80	ASN
56	DB	139	ASN
56	DB	197	ASN
57	EB	11	GLN
57	EB	22	GLN
57	EB	74	GLN

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Mol	Chain	Res	Type
57	EB	150	GLN
57	EB	170	GLN
57	EB	180	GLN
58	FB	9	HIS
58	FB	44	HIS
58	FB	64	ASN
58	FB	138	ASN
59	GB	112	GLN
59	GB	131	GLN
59	GB	133	HIS
60	HB	17	GLN
60	HB	62	GLN
61	IB	22	ASN
61	IB	81	HIS
61	IB	110	HIS
63	KB	78	ASN
63	KB	123	HIS
65	MB	103	ASN
65	MB	104	GLN
66	NB	8	GLN
66	NB	74	HIS
66	NB	83	GLN
66	NB	94	GLN
66	NB	103	ASN
66	NB	139	GLN
67	OB	29	GLN
67	OB	101	ASN
67	OB	104	ASN
67	OB	105	GLN
68	PB	12	GLN
68	PB	19	ASN
68	PB	75	ASN
69	QB	12	GLN
69	QB	16	ASN
69	QB	77	ASN
69	QB	138	GLN
70	RB	40	ASN
70	RB	98	GLN
71	SB	7	GLN
71	SB	21	ASN
71	SB	29	HIS
71	SB	33	GLN

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Mol	Chain	Res	Type
71	SB	35	ASN
71	SB	74	GLN
72	TB	64	GLN
72	TB	66	ASN
72	TB	70	ASN
72	TB	80	ASN
72	TB	98	GLN
73	UB	65	ASN
73	UB	75	GLN
74	VB	15	ASN
74	VB	34	ASN
74	VB	77	ASN
74	VB	133	ASN
75	WB	38	HIS
75	WB	82	HIS
75	WB	95	HIS
75	WB	98	GLN
76	XB	8	ASN
77	YB	26	GLN
78	ZB	27	GLN
79	AC	20	GLN
80	BC	17	GLN
80	BC	46	ASN
80	BC	51	ASN
82	DC	21	ASN
82	DC	41	GLN
82	DC	96	ASN
82	DC	101	ASN
82	DC	138	GLN
82	DC	201	GLN
82	DC	259	ASN
82	DC	274	ASN
82	DC	290	ASN
82	DC	365	ASN
82	DC	371	ASN
82	DC	409	GLN
82	DC	414	GLN
82	DC	477	ASN
82	DC	537	HIS
82	DC	543	GLN
82	DC	583	HIS
82	DC	644	ASN

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Mol	Chain	Res	Type
82	DC	668	GLN
82	DC	687	ASN
82	DC	734	GLN
82	DC	748	ASN
82	DC	753	GLN
82	DC	836	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1755/1798 (97%)	359 (20%)	19 (1%)
2	B	3265/3396 (96%)	569 (17%)	29 (0%)
3	C	157/158 (99%)	25 (15%)	2 (1%)
4	D	120/121 (99%)	17 (14%)	0
83	EC	176/201 (87%)	70 (39%)	4 (2%)
All	All	5473/5674 (96%)	1040 (19%)	54 (0%)

All (1040) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	2	A
1	A	4	C
1	A	25	C
1	A	26	A
1	A	34	G
1	A	45	U
1	A	47	A
1	A	57	G
1	A	60	U
1	A	67	A
1	A	68	A
1	A	69	G
1	A	72	A
1	A	73	U
1	A	74	U
1	A	76	A
1	A	77	U
1	A	100	A
1	A	104	A
1	A	114	C
1	A	127	G

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Mol	Chain	Res	Type
1	A	130	C
1	A	132	U
1	A	133	U
1	A	134	U
1	A	135	A
1	A	136	C
1	A	137	U
1	A	138	A
1	A	140	A
1	A	141	U
1	A	145	A
1	A	159	U
1	A	170	U
1	A	171	A
1	A	178	U
1	A	185	U
1	A	186	C
1	A	187	G
1	A	191	C
1	A	192	U
1	A	194	U
1	A	195	G
1	A	197	A
1	A	200	A
1	A	207	U
1	A	217	A
1	A	219	A
1	A	229	U
1	A	233	C
1	A	238	U
1	A	240	U
1	A	241	U
1	A	250	C
1	A	261	U
1	A	265	A
1	A	272	U
1	A	277	U
1	A	278	U
1	A	280	U
1	A	288	A
1	A	299	A
1	A	316	A

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Mol	Chain	Res	Type
1	A	320	U
1	A	321	C
1	A	322	G
1	A	323	A
1	A	337	G
1	A	338	C
1	A	352	A
1	A	359	A
1	A	360	A
1	A	361	C
1	A	380	U
1	A	390	G
1	A	400	A
1	A	402	C
1	A	404	G
1	A	411	C
1	A	416	A
1	A	418	G
1	A	423	G
1	A	424	C
1	A	425	A
1	A	426	G
1	A	434	G
1	A	439	U
1	A	441	A
1	A	444	C
1	A	445	A
1	A	475	A
1	A	477	A
1	A	485	A
1	A	488	G
1	A	493	U
1	A	496	G
1	A	497	G
1	A	498	G
1	A	502	U
1	A	504	U
1	A	506	A
1	A	508	U
1	A	510	G
1	A	514	G
1	A	515	A

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Mol	Chain	Res	Type
1	A	532	U
1	A	538	A
1	A	539	G
1	A	541	A
1	A	542	A
1	A	544	A
1	A	545	A
1	A	555	A
1	A	556	A
1	A	557	G
1	A	558	U
1	A	559	C
1	A	565	C
1	A	571	G
1	A	572	C
1	A	579	A
1	A	580	A
1	A	582	U
1	A	594	A
1	A	595	G
1	A	606	A
1	A	619	A
1	A	620	A
1	A	623	A
1	A	629	U
1	A	639	U
1	A	652	G
1	A	653	C
1	A	654	C
1	A	655	G
1	A	656	G
1	A	657	U
1	A	677	G
1	A	684	A
1	A	685	A
1	A	694	U
1	A	696	C
1	A	697	C
1	A	698	U
1	A	702	G
1	A	703	G
1	A	705	U

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Mol	Chain	Res	Type
1	A	708	C
1	A	709	C
1	A	730	G
1	A	732	G
1	A	733	A
1	A	734	A
1	A	742	U
1	A	745	U
1	A	754	A
1	A	765	G
1	A	766	U
1	A	771	A
1	A	774	A
1	A	775	G
1	A	778	G
1	A	781	U
1	A	783	G
1	A	784	C
1	A	789	A
1	A	794	U
1	A	806	A
1	A	812	A
1	A	814	A
1	A	815	G
1	A	816	G
1	A	820	U
1	A	821	U
1	A	823	G
1	A	824	G
1	A	831	U
1	A	833	U
1	A	841	U
1	A	851	U
1	A	853	G
1	A	856	A
1	A	860	U
1	A	863	A
1	A	876	G
1	A	898	A
1	A	913	G
1	A	914	G
1	A	915	A

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Mol	Chain	Res	Type
1	A	921	U
1	A	930	A
1	A	933	A
1	A	935	U
1	A	942	G
1	A	944	A
1	A	960	U
1	A	966	A
1	A	982	U
1	A	992	A
1	A	993	A
1	A	996	U
1	A	998	A
1	A	1004	U
1	A	1005	A
1	A	1007	C
1	A	1021	C
1	A	1026	A
1	A	1028	C
1	A	1043	A
1	A	1053	G
1	A	1058	U
1	A	1059	U
1	A	1061	A
1	A	1062	A
1	A	1072	C
1	A	1074	G
1	A	1076	A
1	A	1080	U
1	A	1082	C
1	A	1092	A
1	A	1096	C
1	A	1097	U
1	A	1100	G
1	A	1109	G
1	A	1150	G
1	A	1151	A
1	A	1158	C
1	A	1160	A
1	A	1163	A
1	A	1167	G
1	A	1185	U

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Mol	Chain	Res	Type
1	A	1188	G
1	A	1191	U
1	A	1193	A
1	A	1194	A
1	A	1196	A
1	A	1199	G
1	A	1200	G
1	A	1202	A
1	A	1217	A
1	A	1218	G
1	A	1226	A
1	A	1227	A
1	A	1228	G
1	A	1229	G
1	A	1230	A
1	A	1243	G
1	A	1244	A
1	A	1245	G
1	A	1246	C
1	A	1265	G
1	A	1273	G
1	A	1274	C
1	A	1275	A
1	A	1284	C
1	A	1285	U
1	A	1286	U
1	A	1288	G
1	A	1296	A
1	A	1298	U
1	A	1299	G
1	A	1300	A
1	A	1301	U
1	A	1307	U
1	A	1314	U
1	A	1321	A
1	A	1337	A
1	A	1338	C
1	A	1340	U
1	A	1341	A
1	A	1344	A
1	A	1345	A
1	A	1347	U

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Mol	Chain	Res	Type
1	A	1348	A
1	A	1354	G
1	A	1361	U
1	A	1363	U
1	A	1370	U
1	A	1371	A
1	A	1385	G
1	A	1390	U
1	A	1395	G
1	A	1398	U
1	A	1399	C
1	A	1400	A
1	A	1413	U
1	A	1415	U
1	A	1416	G
1	A	1418	G
1	A	1427	A
1	A	1428	G
1	A	1432	U
1	A	1436	A
1	A	1447	C
1	A	1448	G
1	A	1457	C
1	A	1460	A
1	A	1471	A
1	A	1473	U
1	A	1475	A
1	A	1481	C
1	A	1486	G
1	A	1490	C
1	A	1491	U
1	A	1492	A
1	A	1493	A
1	A	1496	U
1	A	1499	G
1	A	1516	A
1	A	1518	C
1	A	1520	U
1	A	1523	G
1	A	1535	U
1	A	1536	G
1	A	1537	C

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Mol	Chain	Res	Type
1	A	1538	U
1	A	1539	G
1	A	1540	G
1	A	1542	G
1	A	1557	U
1	A	1559	A
1	A	1573	A
1	A	1574	G
1	A	1583	A
1	A	1584	G
1	A	1596	C
1	A	1600	A
1	A	1601	G
1	A	1616	G
1	A	1619	C
1	A	1622	G
1	A	1631	A
1	A	1637	C
1	A	1657	U
1	A	1658	G
1	A	1680	G
1	A	1683	C
1	A	1684	U
1	A	1690	G
1	A	1697	G
1	A	1706	C
1	A	1712	A
1	A	1713	G
1	A	1716	C
1	A	1717	G
1	A	1736	G
1	A	1750	A
1	A	1755	A
1	A	1756	A
1	A	1762	A
1	A	1766	A
1	A	1769	U
1	A	1780	G
1	A	1782	A
1	A	1789	G
1	A	1792	G
1	A	1793	G

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Mol	Chain	Res	Type
1	A	1794	A
1	A	1796	C
2	B	11	A
2	B	14	U
2	B	40	A
2	B	49	A
2	B	59	G
2	B	60	A
2	B	66	A
2	B	70	A
2	B	71	A
2	B	77	A
2	B	92	G
2	B	110	G
2	B	111	C
2	B	113	C
2	B	116	A
2	B	117	U
2	B	121	A
2	B	122	A
2	B	133	U
2	B	135	C
2	B	136	G
2	B	150	A
2	B	154	U
2	B	156	G
2	B	157	A
2	B	161	G
2	B	169	U
2	B	170	G
2	B	182	U
2	B	187	A
2	B	189	G
2	B	190	U
2	B	191	U
2	B	201	A
2	B	206	G
2	B	210	U
2	B	218	G
2	B	219	A
2	B	231	G
2	B	237	G

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Mol	Chain	Res	Type
2	B	241	G
2	B	243	G
2	B	248	U
2	B	250	U
2	B	251	G
2	B	252	U
2	B	269	G
2	B	283	G
2	B	286	U
2	B	295	A
2	B	315	C
2	B	323	A
2	B	329	U
2	B	337	G
2	B	338	A
2	B	339	C
2	B	349	A
2	B	350	C
2	B	351	A
2	B	352	A
2	B	368	G
2	B	375	A
2	B	376	G
2	B	390	G
2	B	397	A
2	B	398	A
2	B	401	U
2	B	402	A
2	B	403	C
2	B	421	G
2	B	422	A
2	B	439	C
2	B	441	U
2	B	442	G
2	B	489	C
2	B	493	G
2	B	494	G
2	B	503	C
2	B	509	U
2	B	510	G
2	B	515	C
2	B	520	U

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Mol	Chain	Res	Type
2	B	521	A
2	B	535	G
2	B	545	U
2	B	546	C
2	B	547	G
2	B	555	U
2	B	556	U
2	B	557	A
2	B	559	A
2	B	578	A
2	B	579	G
2	B	589	A
2	B	590	G
2	B	594	U
2	B	597	G
2	B	604	G
2	B	608	A
2	B	609	G
2	B	620	U
2	B	621	A
2	B	636	C
2	B	637	C
2	B	638	C
2	B	649	A
2	B	659	G
2	B	667	C
2	B	677	A
2	B	681	U
2	B	689	U
2	B	690	A
2	B	691	A
2	B	705	A
2	B	708	G
2	B	719	U
2	B	727	G
2	B	737	G
2	B	764	U
2	B	765	C
2	B	766	U
2	B	767	U
2	B	774	G
2	B	775	A

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Mol	Chain	Res	Type
2	B	776	U
2	B	777	U
2	B	780	A
2	B	781	G
2	B	784	A
2	B	785	G
2	B	786	A
2	B	806	A
2	B	817	A
2	B	826	G
2	B	830	A
2	B	849	C
2	B	857	G
2	B	874	U
2	B	879	U
2	B	882	A
2	B	894	G
2	B	895	A
2	B	896	A
2	B	897	U
2	B	907	G
2	B	908	G
2	B	914	A
2	B	916	G
2	B	917	A
2	B	920	A
2	B	921	A
2	B	923	C
2	B	937	G
2	B	938	C
2	B	944	C
2	B	953	G
2	B	959	C
2	B	960	U
2	B	962	A
2	B	974	G
2	B	979	U
2	B	980	A
2	B	981	U
2	B	991	G
2	B	1001	G
2	B	1002	A

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Mol	Chain	Res	Type
2	B	1006	A
2	B	1010	G
2	B	1016	C
2	B	1018	G
2	B	1028	U
2	B	1029	G
2	B	1036	A
2	B	1037	C
2	B	1041	U
2	B	1047	A
2	B	1049	C
2	B	1063	G
2	B	1064	A
2	B	1075	A
2	B	1081	U
2	B	1082	U
2	B	1093	A
2	B	1095	U
2	B	1096	U
2	B	1097	G
2	B	1098	A
2	B	1102	A
2	B	1103	A
2	B	1104	G
2	B	1117	G
2	B	1131	G
2	B	1143	A
2	B	1144	U
2	B	1150	A
2	B	1155	C
2	B	1159	A
2	B	1163	A
2	B	1168	U
2	B	1178	G
2	B	1180	A
2	B	1181	U
2	B	1193	A
2	B	1196	C
2	B	1201	C
2	B	1202	A
2	B	1206	G
2	B	1208	U

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Mol	Chain	Res	Type
2	B	1209	G
2	B	1217	A
2	B	1222	G
2	B	1231	A
2	B	1236	G
2	B	1239	C
2	B	1242	G
2	B	1243	G
2	B	1244	A
2	B	1245	A
2	B	1246	G
2	B	1256	G
2	B	1263	A
2	B	1265	U
2	B	1286	A
2	B	1287	A
2	B	1288	U
2	B	1292	C
2	B	1302	A
2	B	1307	G
2	B	1308	A
2	B	1309	U
2	B	1315	U
2	B	1318	A
2	B	1319	G
2	B	1325	U
2	B	1330	A
2	B	1332	A
2	B	1335	C
2	B	1346	G
2	B	1348	U
2	B	1349	G
2	B	1351	U
2	B	1352	A
2	B	1353	U
2	B	1357	G
2	B	1366	A
2	B	1386	A
2	B	1392	G
2	B	1399	A
2	B	1400	G
2	B	1419	A

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Mol	Chain	Res	Type
2	B	1434	G
2	B	1435	A
2	B	1436	U
2	B	1437	C
2	B	1452	A
2	B	1455	U
2	B	1470	U
2	B	1481	A
2	B	1482	A
2	B	1487	G
2	B	1507	G
2	B	1508	C
2	B	1527	C
2	B	1549	U
2	B	1556	C
2	B	1557	A
2	B	1558	A
2	B	1562	C
2	B	1567	U
2	B	1568	U
2	B	1569	U
2	B	1570	U
2	B	1573	G
2	B	1576	G
2	B	1583	A
2	B	1593	A
2	B	1605	A
2	B	1607	U
2	B	1620	U
2	B	1625	A
2	B	1639	C
2	B	1642	A
2	B	1643	A
2	B	1645	U
2	B	1657	C
2	B	1687	U
2	B	1688	U
2	B	1716	U
2	B	1717	U
2	B	1724	U
2	B	1750	A
2	B	1751	G

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Mol	Chain	Res	Type
2	B	1756	C
2	B	1760	A
2	B	1763	U
2	B	1764	U
2	B	1765	U
2	B	1766	G
2	B	1770	G
2	B	1773	C
2	B	1775	G
2	B	1780	G
2	B	1788	C
2	B	1796	G
2	B	1797	A
2	B	1808	G
2	B	1816	A
2	B	1817	G
2	B	1819	U
2	B	1820	U
2	B	1821	U
2	B	1831	U
2	B	1839	A
2	B	1841	A
2	B	1842	A
2	B	1843	C
2	B	1848	G
2	B	1849	C
2	B	1850	A
2	B	1858	A
2	B	1866	C
2	B	1879	A
2	B	1893	A
2	B	1895	A
2	B	1905	G
2	B	1906	G
2	B	1930	A
2	B	1931	U
2	B	1935	G
2	B	1954	G
2	B	2048	G
2	B	2082	U
2	B	2083	G
2	B	2087	C

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Mol	Chain	Res	Type
2	B	2094	C
2	B	2095	G
2	B	2102	U
2	B	2111	G
2	B	2112	U
2	B	2121	G
2	B	2122	G
2	B	2131	A
2	B	2140	U
2	B	2158	A
2	B	2169	G
2	B	2178	A
2	B	2188	A
2	B	2201	G
2	B	2205	U
2	B	2207	A
2	B	2208	A
2	B	2209	U
2	B	2249	G
2	B	2255	A
2	B	2256	A
2	B	2257	C
2	B	2273	G
2	B	2281	A
2	B	2282	U
2	B	2284	C
2	B	2288	G
2	B	2307	G
2	B	2308	C
2	B	2313	A
2	B	2314	U
2	B	2315	G
2	B	2320	A
2	B	2336	U
2	B	2363	A
2	B	2373	A
2	B	2374	C
2	B	2375	G
2	B	2385	G
2	B	2386	A
2	B	2388	U
2	B	2393	G

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Mol	Chain	Res	Type
2	B	2394	G
2	B	2397	A
2	B	2402	A
2	B	2403	G
2	B	2404	A
2	B	2411	U
2	B	2418	G
2	B	2419	A
2	B	2434	U
2	B	2442	G
2	B	2443	A
2	B	2453	U
2	B	2454	G
2	B	2455	U
2	B	2458	A
2	B	2459	A
2	B	2460	U
2	B	2461	A
2	B	2467	G
2	B	2472	U
2	B	2473	C
2	B	2474	G
2	B	2478	C
2	B	2484	A
2	B	2486	A
2	B	2488	A
2	B	2495	C
2	B	2496	C
2	B	2497	U
2	B	2498	U
2	B	2499	U
2	B	2502	A
2	B	2503	G
2	B	2504	U
2	B	2511	A
2	B	2514	U
2	B	2515	A
2	B	2522	G
2	B	2523	A
2	B	2525	G
2	B	2526	C
2	B	2532	U

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Mol	Chain	Res	Type
2	B	2533	G
2	B	2538	U
2	B	2540	A
2	B	2541	U
2	B	2542	U
2	B	2543	U
2	B	2549	G
2	B	2554	A
2	B	2555	G
2	B	2561	A
2	B	2562	A
2	B	2569	A
2	B	2570	U
2	B	2571	U
2	B	2572	C
2	B	2573	G
2	B	2581	U
2	B	2585	G
2	B	2586	G
2	B	2587	U
2	B	2589	G
2	B	2593	A
2	B	2606	G
2	B	2607	G
2	B	2614	G
2	B	2628	A
2	B	2629	U
2	B	2637	A
2	B	2638	C
2	B	2640	A
2	B	2645	G
2	B	2652	U
2	B	2656	A
2	B	2657	A
2	B	2674	A
2	B	2677	G
2	B	2678	A
2	B	2681	U
2	B	2689	A
2	B	2694	A
2	B	2696	A
2	B	2699	G

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Mol	Chain	Res	Type
2	B	2720	G
2	B	2728	G
2	B	2729	U
2	B	2737	C
2	B	2742	C
2	B	2753	G
2	B	2762	A
2	B	2771	U
2	B	2777	G
2	B	2778	G
2	B	2779	A
2	B	2796	G
2	B	2799	A
2	B	2800	G
2	B	2801	A
2	B	2810	C
2	B	2816	G
2	B	2817	A
2	B	2837	A
2	B	2842	U
2	B	2844	C
2	B	2845	A
2	B	2859	U
2	B	2867	C
2	B	2871	G
2	B	2872	A
2	B	2873	U
2	B	2887	A
2	B	2889	C
2	B	2896	A
2	B	2899	C
2	B	2910	A
2	B	2923	U
2	B	2928	C
2	B	2935	U
2	B	2936	A
2	B	2947	G
2	B	2951	G
2	B	2954	U
2	B	2983	C
2	B	2990	G
2	B	2997	G

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Mol	Chain	Res	Type
2	B	3003	G
2	B	3012	A
2	B	3022	G
2	B	3046	A
2	B	3059	G
2	B	3078	U
2	B	3080	G
2	B	3086	A
2	B	3092	C
2	B	3094	A
2	B	3116	G
2	B	3122	A
2	B	3130	A
2	B	3131	U
2	B	3142	A
2	B	3143	C
2	B	3154	C
2	B	3155	U
2	B	3156	U
2	B	3157	U
2	B	3165	A
2	B	3170	A
2	B	3173	G
2	B	3174	A
2	B	3176	G
2	B	3179	U
2	B	3181	C
2	B	3185	U
2	B	3187	A
2	B	3206	C
2	B	3207	U
2	B	3217	C
2	B	3218	A
2	B	3219	G
2	B	3229	G
2	B	3245	A
2	B	3246	G
2	B	3253	G
2	B	3259	U
2	B	3263	G
2	B	3270	U
2	B	3273	A

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Mol	Chain	Res	Type
2	B	3276	G
2	B	3279	A
2	B	3281	U
2	B	3287	U
2	B	3289	G
2	B	3294	A
2	B	3304	U
2	B	3307	A
2	B	3316	A
2	B	3318	G
2	B	3319	U
2	B	3335	A
2	B	3341	U
2	B	3345	G
2	B	3347	A
2	B	3352	U
2	B	3353	G
2	B	3354	U
2	B	3355	U
2	B	3356	G
2	B	3369	G
2	B	3375	A
2	B	3378	C
2	B	3389	U
2	B	3390	G
3	C	21	C
3	C	23	U
3	C	34	U
3	C	35	C
3	C	39	G
3	C	51	G
3	C	59	A
3	C	62	C
3	C	63	G
3	C	80	A
3	C	86	U
3	C	87	G
3	C	90	U
3	C	95	G
3	C	104	A
3	C	105	A
3	C	106	C

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Mol	Chain	Res	Type
3	C	109	A
3	C	111	A
3	C	113	U
3	C	125	U
3	C	126	A
3	C	148	G
3	C	151	C
3	C	152	G
4	D	11	A
4	D	13	A
4	D	14	U
4	D	22	A
4	D	42	A
4	D	48	U
4	D	51	A
4	D	52	G
4	D	54	U
4	D	55	A
4	D	65	G
4	D	74	C
4	D	76	A
4	D	99	G
4	D	102	A
4	D	112	G
4	D	121	U
83	EC	6760	A
83	EC	6768	U
83	EC	6769	A
83	EC	6770	U
83	EC	6771	U
83	EC	6772	G
83	EC	6774	U
83	EC	6775	U
83	EC	6776	A
83	EC	6778	C
83	EC	6779	C
83	EC	6780	A
83	EC	6782	C
83	EC	6789	G
83	EC	6790	A
83	EC	6791	A
83	EC	6794	C

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Mol	Chain	Res	Type
83	EC	6795	U
83	EC	6799	C
83	EC	6803	C
83	EC	6804	A
83	EC	6815	U
83	EC	6816	A
83	EC	6818	G
83	EC	6819	G
83	EC	6820	C
83	EC	6821	U
83	EC	6822	U
83	EC	6823	U
83	EC	6831	U
83	EC	6832	G
83	EC	6833	G
83	EC	6837	G
83	EC	6839	U
83	EC	6840	A
83	EC	6842	U
83	EC	6844	A
83	EC	6845	G
83	EC	6848	U
83	EC	6849	A
83	EC	6850	C
83	EC	6851	G
83	EC	6854	U
83	EC	6874	A
83	EC	6876	A
83	EC	6878	G
83	EC	6879	U
83	EC	6889	A
83	EC	6890	A
83	EC	6896	A
83	EC	6897	G
83	EC	6904	U
83	EC	6905	G
83	EC	6909	A
83	EC	6911	A
83	EC	6914	A
83	EC	6915	G
83	EC	6925	C
83	EC	6926	U

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Mol	Chain	Res	Type
83	EC	6927	U
83	EC	6928	G
83	EC	6931	U
83	EC	6935	G
83	EC	6936	G
83	EC	6940	U
83	EC	6942	A
83	EC	6943	A
83	EC	6945	U
83	EC	6946	A
83	EC	6948	U

All (54) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	25	C
1	A	68	A
1	A	103	A
1	A	139	C
1	A	240	U
1	A	322	G
1	A	501	U
1	A	503	G
1	A	555	A
1	A	610	G
1	A	830	U
1	A	1061	A
1	A	1081	A
1	A	1344	A
1	A	1370	U
1	A	1573	A
1	A	1615	C
1	A	1696	G
1	A	1761	U
2	B	65	A
2	B	169	U
2	B	282	G
2	B	493	G
2	B	637	C
2	B	658	G
2	B	780	A
2	B	1301	A

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Mol	Chain	Res	Type
2	B	1307	G
2	B	1329	U
2	B	1352	A
2	B	1481	A
2	B	1815	U
2	B	1816	A
2	B	2101	C
2	B	2116	G
2	B	2501	U
2	B	2513	U
2	B	2525	G
2	B	2537	U
2	B	2541	U
2	B	2896	A
2	B	2950	G
2	B	3121	U
2	B	3218	A
2	B	3228	C
2	B	3269	U
2	B	3317	U
2	B	3335	A
3	C	22	U
3	C	85	G
83	EC	6832	G
83	EC	6896	A
83	EC	6926	U
83	EC	6935	G

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

1 non-standard protein/DNA/RNA residue is 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	$\#\|Z\| > 2$
82	DDE	DC	699	82	15,20,21	2.17	4 (26%)	15,28,30	2.09	5 (33%)

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
82	DDE	DC	699	82	-	0/19/21/23	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	OAG-CBI	2.14	1.27	1.23
82	DC	699	DDE	CAT-CE1	2.94	1.53	1.50
82	DC	699	DDE	CBW-CBI	4.07	1.59	1.53
82	DC	699	DDE	CA-C	5.38	1.57	1.50

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	DC	699	DDE	CAU-CBW-CBI	-4.74	101.78	111.12
82	DC	699	DDE	OAG-CBI-CBW	-3.92	115.81	120.64
82	DC	699	DDE	CG-CD2-NE2	-2.08	104.98	109.25
82	DC	699	DDE	CAC-NCB-CBW	2.19	116.07	110.51
82	DC	699	DDE	OAG-CBI-NAD	2.73	127.25	123.06

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 3 ligands modelled in this entry, 1 is 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	$\#\|Z\| > 2$
84	GDP	DC	901	85	25,30,30	2.21	10 (40%)	26,47,47	2.53	9 (34%)
86	SO1	DC	903	-	34,39,39	2.56	19 (55%)	35,64,64	2.07	9 (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
84	GDP	DC	901	85	-	0/12/32/32	0/3/3/3
86	SO1	DC	903	-	-	0/15/104/104	0/2/5/5

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	O56-C52	-4.52	1.30	1.41
84	DC	901	GDP	C8-N7	-2.16	1.30	1.34
86	DC	903	SO1	C24-C22	2.00	1.60	1.53
84	DC	901	GDP	PB-O3B	2.03	1.63	1.54
84	DC	901	GDP	C2-N1	2.03	1.39	1.35
86	DC	903	SO1	C24-C18	2.04	1.59	1.54
86	DC	903	SO1	C4-C13	2.24	1.59	1.54
86	DC	903	SO1	C2-C6	2.25	1.59	1.55
86	DC	903	SO1	C7-C16	2.38	1.56	1.53
86	DC	903	SO1	C16-C22	2.38	1.58	1.54
84	DC	901	GDP	C6-C5	2.50	1.46	1.41
86	DC	903	SO1	C53-C54	2.55	1.58	1.52
86	DC	903	SO1	C3-C9	2.89	1.63	1.56
84	DC	901	GDP	PA-O1A	3.05	1.62	1.50
86	DC	903	SO1	C7-C2	3.11	1.59	1.54
86	DC	903	SO1	C12-C4	3.17	1.61	1.54
84	DC	901	GDP	PB-O3A	3.18	1.65	1.60
86	DC	903	SO1	C8-C2	3.21	1.59	1.53
84	DC	901	GDP	C6-N1	3.22	1.38	1.33
86	DC	903	SO1	C3-C11	3.29	1.58	1.51
86	DC	903	SO1	C55-C56	3.47	1.59	1.52
86	DC	903	SO1	C10-C3	3.55	1.61	1.55
86	DC	903	SO1	C10-C6	3.68	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	C12-C6	3.71	1.62	1.53
84	DC	901	GDP	PB-O1B	3.73	1.63	1.50
86	DC	903	SO1	O17-C52	3.93	1.47	1.40
84	DC	901	GDP	C2-N2	4.32	1.42	1.34
86	DC	903	SO1	C1-C5	4.69	1.59	1.50
84	DC	901	GDP	O4'-C1'	4.93	1.48	1.41

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
86	DC	903	SO1	C12-C6-C10	-7.11	102.20	107.70
84	DC	901	GDP	N3-C2-N1	-6.21	118.40	127.46
84	DC	901	GDP	C5-C6-N1	-4.50	117.08	123.48
84	DC	901	GDP	C6-C5-C4	-3.26	117.60	120.84
86	DC	903	SO1	C7-C2-C8	-3.01	104.60	110.09
86	DC	903	SO1	C18-C9-C16	-2.76	99.68	103.64
86	DC	903	SO1	C61-C56-C55	-2.52	109.48	113.36
86	DC	903	SO1	C65-O64-C55	-2.49	107.73	114.54
84	DC	901	GDP	O5'-PA-O1A	-2.22	100.28	109.25
86	DC	903	SO1	C12-C6-C2	-2.19	101.29	104.95
86	DC	903	SO1	C8-O17-C52	-2.14	107.73	113.44
84	DC	901	GDP	O4'-C4'-C3'	2.12	109.38	105.17
84	DC	901	GDP	N2-C2-N1	2.65	121.47	117.24
84	DC	901	GDP	O2A-PA-O1A	2.68	126.14	112.28
86	DC	903	SO1	C1-C4-C13	2.92	121.54	118.50
84	DC	901	GDP	C6-N1-C2	5.18	123.52	116.06
86	DC	903	SO1	C25-C22-C24	5.32	130.48	113.54
84	DC	901	GDP	C2-N3-C4	5.88	122.03	115.16

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	DC	901	GDP	2	0
86	DC	903	SO1	6	0

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.