



Full wwPDB EM Validation Report ⓘ

Apr 23, 2024 – 07:20 am BST

PDB ID : 6ZQD
EMDB ID : EMD-11360
Title : Cryo-EM structure of the 90S pre-ribosome from *Saccharomyces cerevisiae*, state Post-A1
Authors : Cheng, J.; Lau, B.; Venuta, G.L.; Berninghausen, O.; Hurt, E.; Beckmann, R.
Deposited on : 2020-07-09
Resolution : 3.80 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

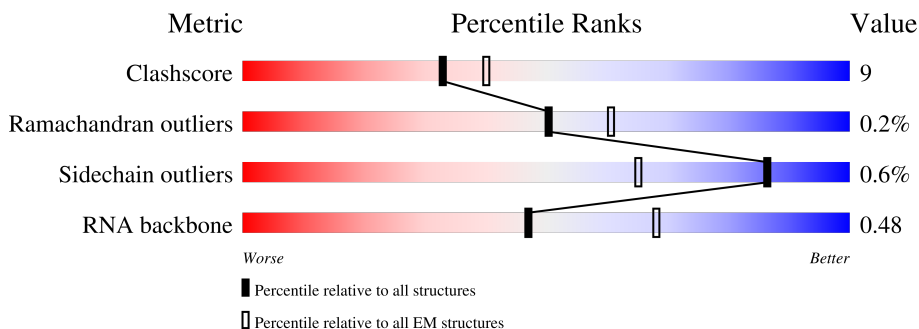
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 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.



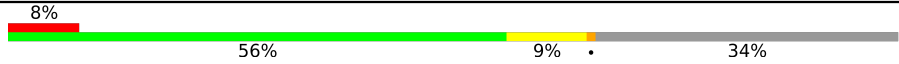




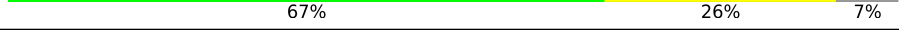
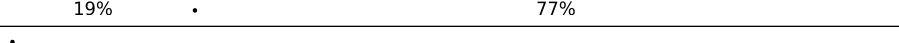
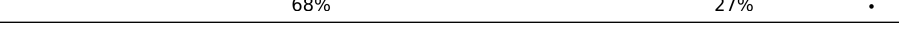
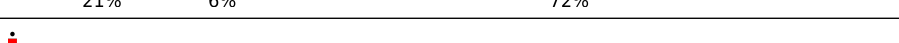
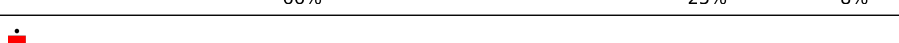


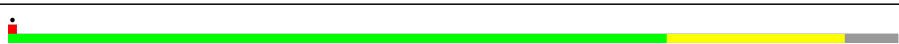












Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	UA	923	68% 18% 14%
2	UB	810	16% 54% 14% 32%
3	UC	610	13% 86%
4	UD	776	62% 22% 15%
5	UE	643	56% 17% 26%
6	UF	440	55% 12% 33%
7	UG	554	64% 20% 15%


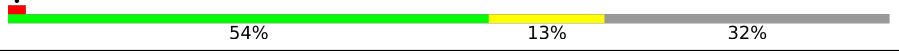

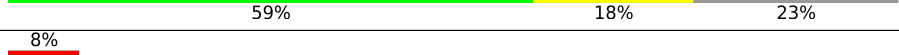
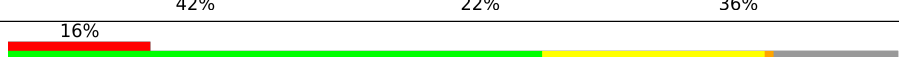
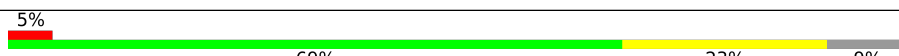



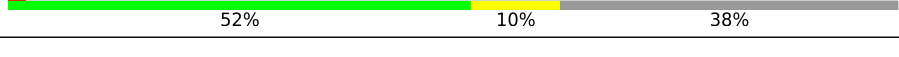

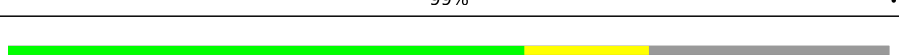






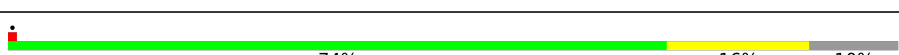
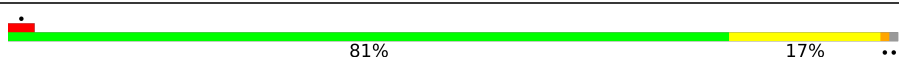

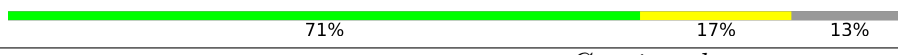



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Mol	Chain	Length	Quality of chain
8	UH	713	
9	UI	575	
10	UJ	1769	
11	UK	250	
12	UL	943	
13	UM	817	
14	UN	899	
15	UO	513	
16	UP	214	
17	UQ	896	
18	UR	594	
19	US	552	
20	UT	2493	
21	UU	939	
22	UV	1237	
23	UX	189	
24	CA	327	
24	CB	327	
25	CD	504	
26	CE	511	
27	CF	126	
27	CG	126	
28	CH	573	
29	CI	183	
30	CJ	290	




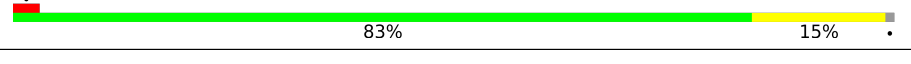

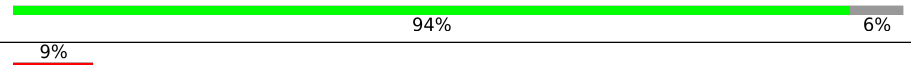
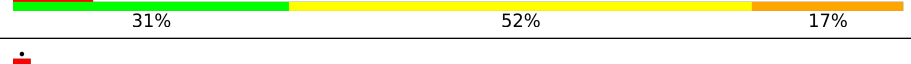
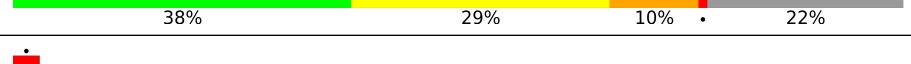
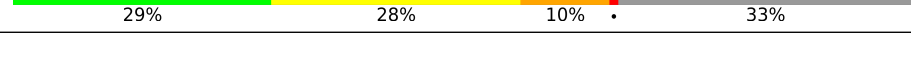
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Mol	Chain	Length	Quality of chain
31	CK	593	
32	CL	1183	
33	CM	367	
34	CN	297	
35	JD	1267	
36	JF	252	
36	JG	252	
37	JH	483	
38	JI	1729	
39	JL	318	
40	JM	217	
41	JP	489	
42	Db	82	
43	JJ	274	
44	DA	255	
45	DE	261	
46	DF	225	
47	DG	236	
48	DH	190	
49	DI	200	
50	DJ	197	
51	DL	156	
52	DN	151	
53	DO	137	
54	DQ	143	

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Mol	Chain	Length	Quality of chain
55	DS	146	
56	DT	144	
57	DW	130	
58	DX	145	
59	DY	135	
60	Dc	67	
61	D2	81	
62	D3	1802	
63	D4	333	

2 Entry composition [i](#)

There are 66 unique types of molecules in this entry. The entry contains 220657 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 protein called Periodic tryptophan protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	UA	792	6322	4040	1083	1181	18	0	0

- Molecule 2 is a protein called Nucleolar complex protein 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	UB	553	4105	2602	736	756	11	0	0

- Molecule 3 is a protein called Something about silencing protein 10.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
3	UC	86	694	430	139	125	0	0

- Molecule 4 is a protein called U3 small nucleolar RNA-associated protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	UD	663	5269	3339	915	994	21	0	0

- Molecule 5 is a protein called U3 small nucleolar RNA-associated protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	UE	475	3772	2400	649	710	13	0	0

- Molecule 6 is a protein called U3 small nucleolar RNA-associated protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	UF	293	2487	1605	435	434	13	0	0

- Molecule 7 is a protein called U3 small nucleolar RNA-associated protein 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	UG	470	3718	2345	664	698	11	0	0

- Molecule 8 is a protein called U3 small nucleolar RNA-associated protein 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	UH	474	2771	1706	513	549	3	0	0

- Molecule 9 is a protein called U3 small nucleolar RNA-associated protein 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	UI	88	723	462	131	128	2	0	0

- Molecule 10 is a protein called U3 small nucleolar RNA-associated protein 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	UJ	1116	8961	5802	1468	1666	25	0	0

- Molecule 11 is a protein called U3 small nucleolar RNA-associated protein 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	UK	219	1845	1150	356	332	7	0	0

- Molecule 12 is a protein called U3 small nucleolar RNA-associated protein 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	UL	779	6199	3974	1034	1164	27	0	0

- Molecule 13 is a protein called U3 small nucleolar RNA-associated protein 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	UM	762	5970	3787	1007	1148	28	0	0

- Molecule 14 is a protein called U3 small nucleolar RNA-associated protein 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	UN	203	1667	1038	313	314	2	0	0

- Molecule 15 is a protein called U3 small nucleolar RNA-associated protein 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	UO	493	3911	2462	702	735	12	0	0

- Molecule 16 is a protein called Bud site selection protein 21.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
16	UP	60	495	310	101	84	0	0

- Molecule 17 is a protein called NET1-associated nuclear protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	UQ	820	6557	4171	1107	1260	19	0	0

- Molecule 18 is a protein called U3 small nucleolar RNA-associated protein 18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	UR	481	3791	2399	668	714	10	0	0

- Molecule 19 is a protein called Nucleolar complex protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	US	487	3587	2305	610	660	12	0	0

- Molecule 20 is a protein called U3 small nucleolar RNA-associated protein 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	UT	2313	18789	12100	3144	3479	66	0	0

- Molecule 21 is a protein called U3 small nucleolar RNA-associated protein 21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	UU	878	6922	4386	1198	1316	22	0	0

- Molecule 22 is a protein called U3 small nucleolar RNA-associated protein 22.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	UV	1083	8753	5692	1442	1595	24	0	0

- Molecule 23 is a protein called rRNA-processing protein FCF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	UX	167	1330	854	241	225	10	0	0

- Molecule 24 is a protein called rRNA 2'-O-methyltransferase fibrillar.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	CA	242	1881	1193	338	340	10	0	0
24	CB	228	1782	1131	320	321	10	0	0

- Molecule 25 is a protein called Nucleolar protein 56.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	CD	380	2994	1898	513	574	9	0	0

- Molecule 26 is a protein called Nucleolar protein 58.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	CE	436	3326	2093	571	654	8	0	0

- Molecule 27 is a protein called 13 kDa ribonucleoprotein-associated protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	CF	121	916	583	158	171	4	0	0
27	CG	121	916	583	158	171	4	0	0

- Molecule 28 is a protein called Ribosomal RNA-processing protein 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	CH	467	3736	2371	655	700	10	0	0

- Molecule 29 is a protein called U3 small nucleolar ribonucleoprotein protein IMP3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	CI	175	1468	929	276	256	7	0	0

- Molecule 30 is a protein called U3 small nucleolar ribonucleoprotein protein IMP4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	CJ	256	2081	1306	394	374	7	0	0

- Molecule 31 is a protein called U3 small nucleolar RNA-associated protein MPP10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	CK	222	1789	1111	311	363	4	0	0

- Molecule 32 is a protein called Ribosome biogenesis protein BMS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	CL	808	6551	4187	1171	1165	28	0	0

- Molecule 33 is a protein called RNA 3'-terminal phosphate cyclase-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	CM	360	2781	1781	473	516	11	0	0

- Molecule 34 is a protein called Ribosomal RNA-processing protein 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	CN	229	1868	1197	317	347	7	0	0

- Molecule 35 is a protein called Probable ATP-dependent RNA helicase DHR1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	JD	811	6509	4163	1151	1160	35	0	0

- Molecule 36 is a protein called Ribosomal RNA small subunit methyltransferase NEP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	JF	216	1701	1079	296	315	11	0	0
36	JG	230	1799	1142	313	333	11	0	0

- Molecule 37 is a protein called Essential nuclear protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
37	JH	261	1295	773	261	261	0	0

- Molecule 38 is a protein called rRNA biogenesis protein RRP5.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
38	JI	265	1314	784	265	265	0	0

- Molecule 39 is a protein called Dimethyladenosine transferase.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	JL	283	2262	1439	401	408	14	0	0

- Molecule 40 is a protein called rRNA-processing protein FCF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
40	JM	134	1131	715	206	207	3	0	0

- Molecule 41 is a protein called Protein SOF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	JP	461	3765	2354	686	709	16	0	0

- Molecule 42 is a protein called 40S ribosomal protein S27-A.

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

- Molecule 43 is a protein called Pre-rRNA-processing protein PNO1.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	JJ	199	Total	C	N	O	S	0	0
			1573	1001	285	283	4		

- Molecule 44 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	DA	240	Total	C	N	O	S	0	0
			1912	1209	354	345	4		

- Molecule 45 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	DE	246	Total	C	N	O	S	0	0
			1950	1248	361	338	3		

- Molecule 46 is a protein called Rps5p.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	DF	213	Total	C	N	O	S	0	0
			1669	1045	307	314	3		

- Molecule 47 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	DG	218	Total	C	N	O	S	0	0
			1755	1102	337	313	3		

- Molecule 48 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	DH	170	Total	C	N	O	0	0
			1361	880	235	246		

- Molecule 49 is a protein called 40S ribosomal protein S8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	DI	177	Total	C	N	O	S	0	0
			1399	869	279	249	2		

- Molecule 50 is a protein called 40S ribosomal protein S9-A.

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

- Molecule 51 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	DL	140	Total	C	N	O	S	0	0
			1129	724	215	187	3		

- Molecule 52 is a protein called 40S ribosomal protein S13.

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

- Molecule 53 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	DO	127	Total	C	N	O	S	0	0
			922	567	185	167	3		

- Molecule 54 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
54	DQ	125	Total	C	N	O	0	0
			969	623	174	172		

- Molecule 55 is a protein called 40S ribosomal protein S18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	DS	105	Total	C	N	O	S	0	0
			861	545	160	154	2		

- Molecule 56 is a protein called 40S ribosomal protein S19-A.

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

- Molecule 57 is a protein called 40S ribosomal protein S22-A.

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

- Molecule 58 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
58	DX	143	1115	705	219	189	2	0	0

- Molecule 59 is a protein called 40S ribosomal protein S24-A.

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

- Molecule 60 is a protein called 40S ribosomal protein S28-A.

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

- Molecule 61 is a RNA chain called 5ETS RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
61	D2	81	1741	777	319	564	81	0	0

- Molecule 62 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
62	D3	1409	30041	13429	5342	9861	1409	0	0

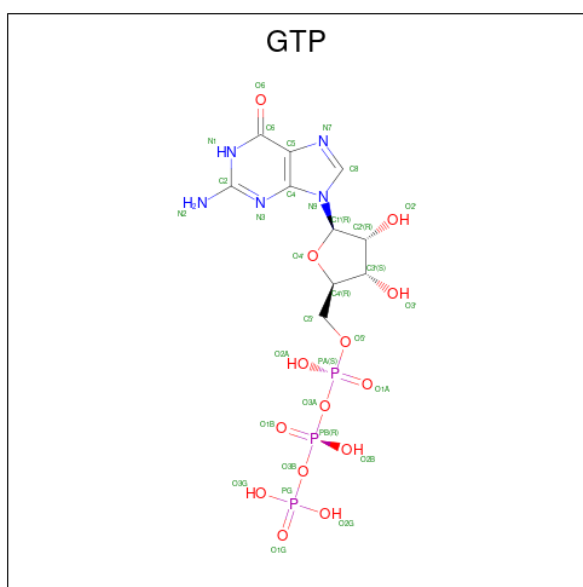
- Molecule 63 is a RNA chain called U3 snoRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
63	D4	223	4723	2114	819	1567	223	0	0

- Molecule 64 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
64	UX	1	1	1	0
64	Db	1	1	1	0

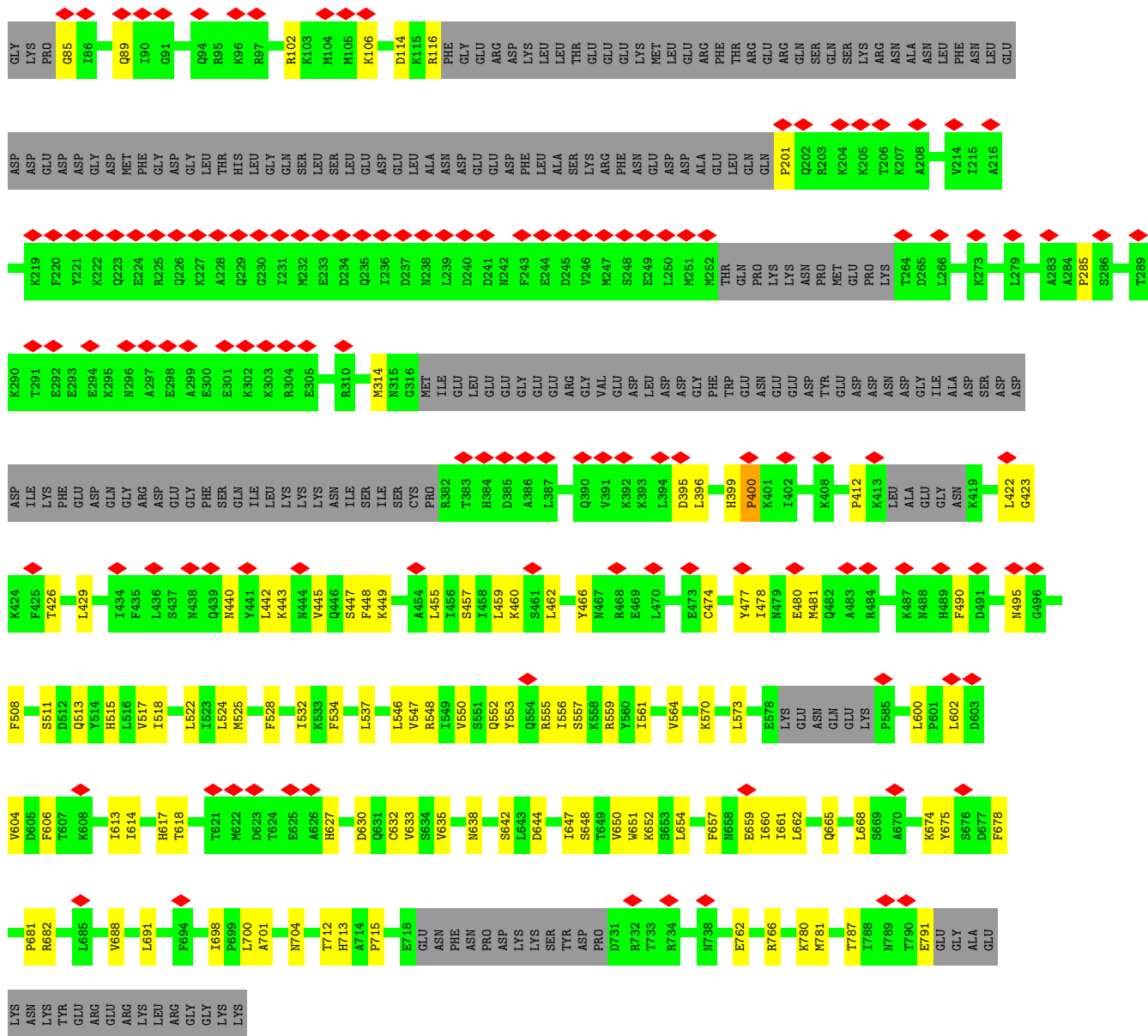
- Molecule 65 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: C₁₀H₁₆N₅O₁₄P₃).



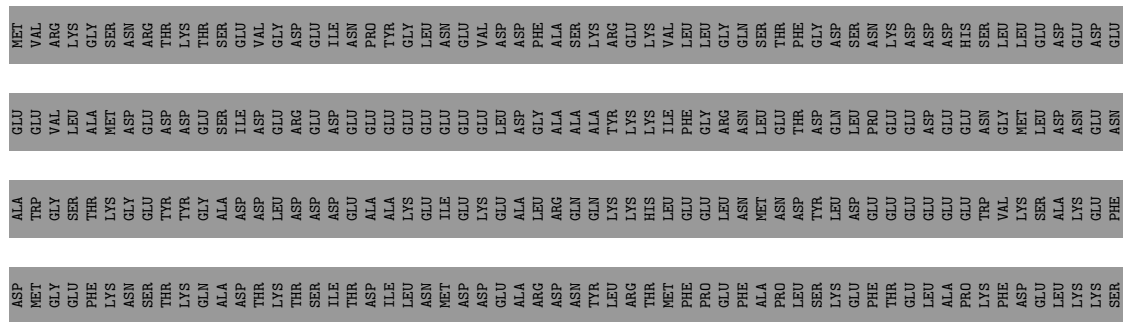
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
65	CL	1	32	10	5	14	3	0

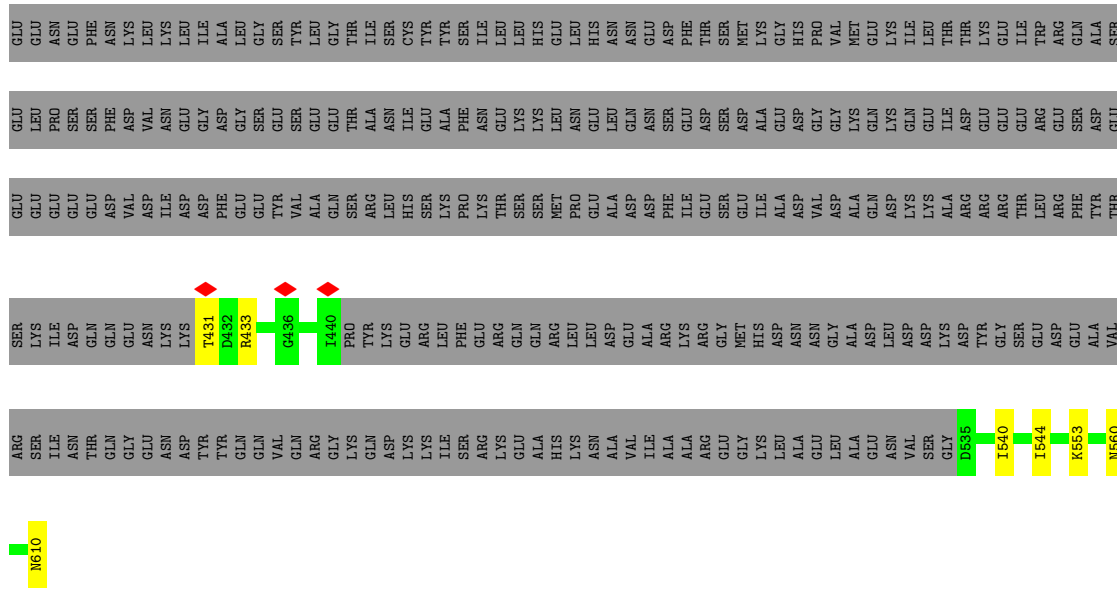
- Molecule 66 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
66	CL	1	1	1	0

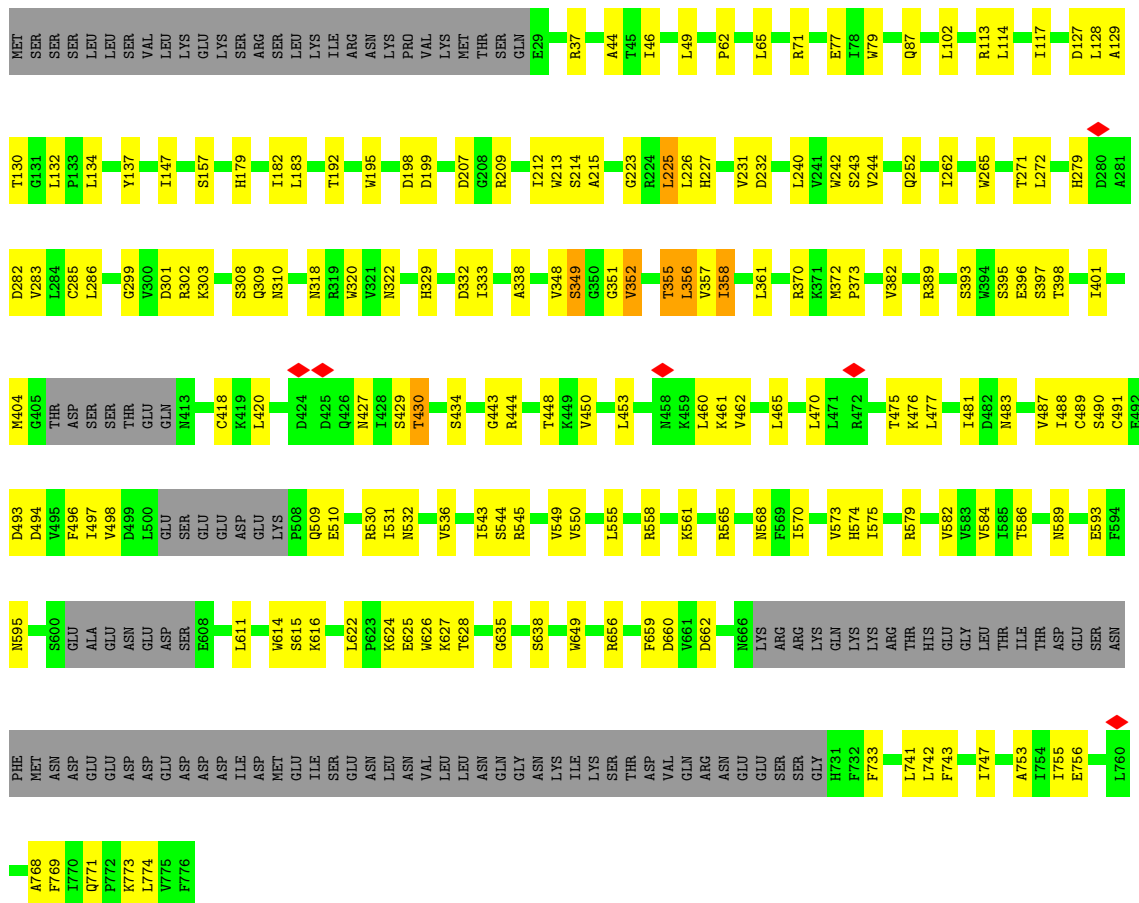


● Molecule 3: Something about silencing protein 10

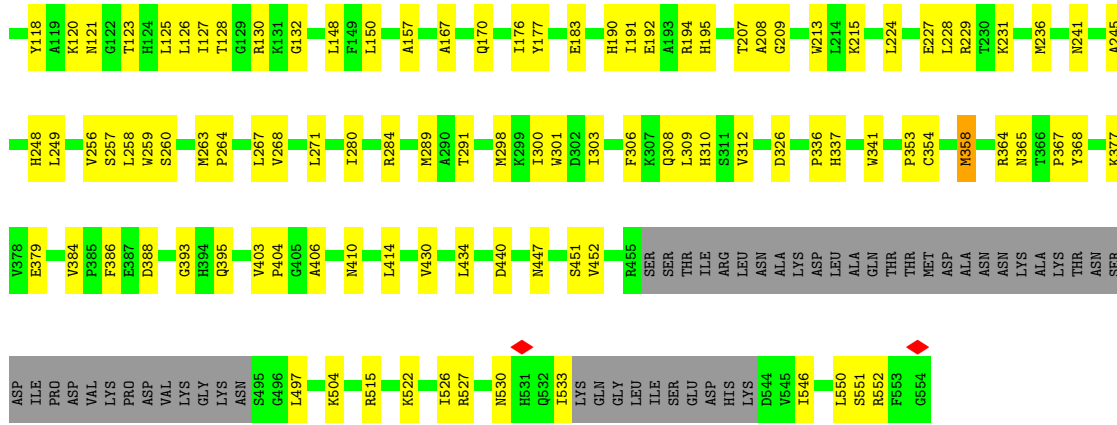




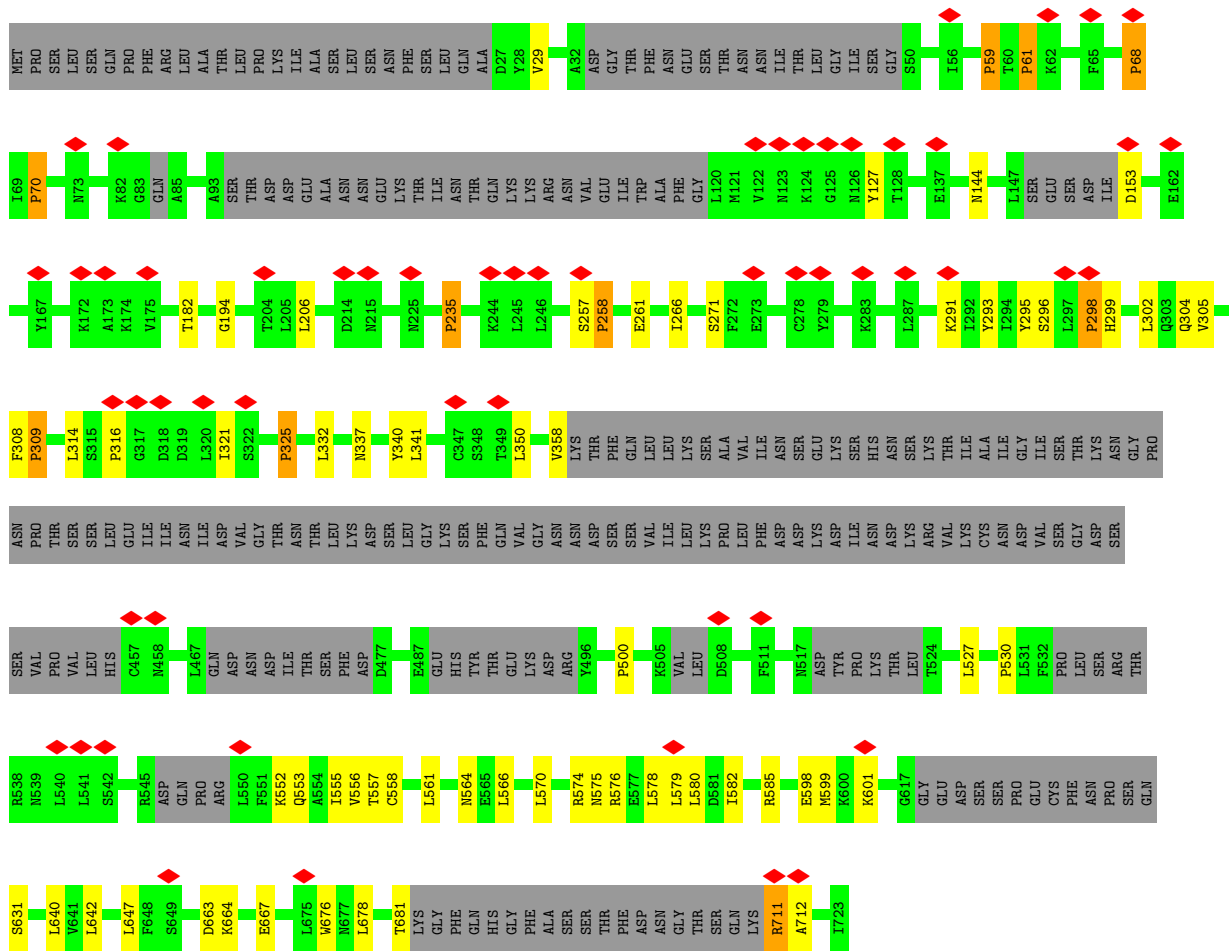
• Molecule 4: U3 small nucleolar RNA-associated protein 4



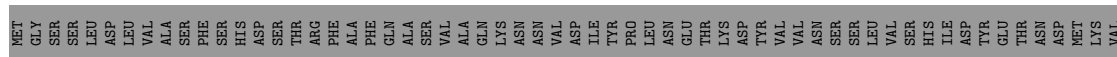
• Molecule 5: U3 small nucleolar RNA-associated protein 5

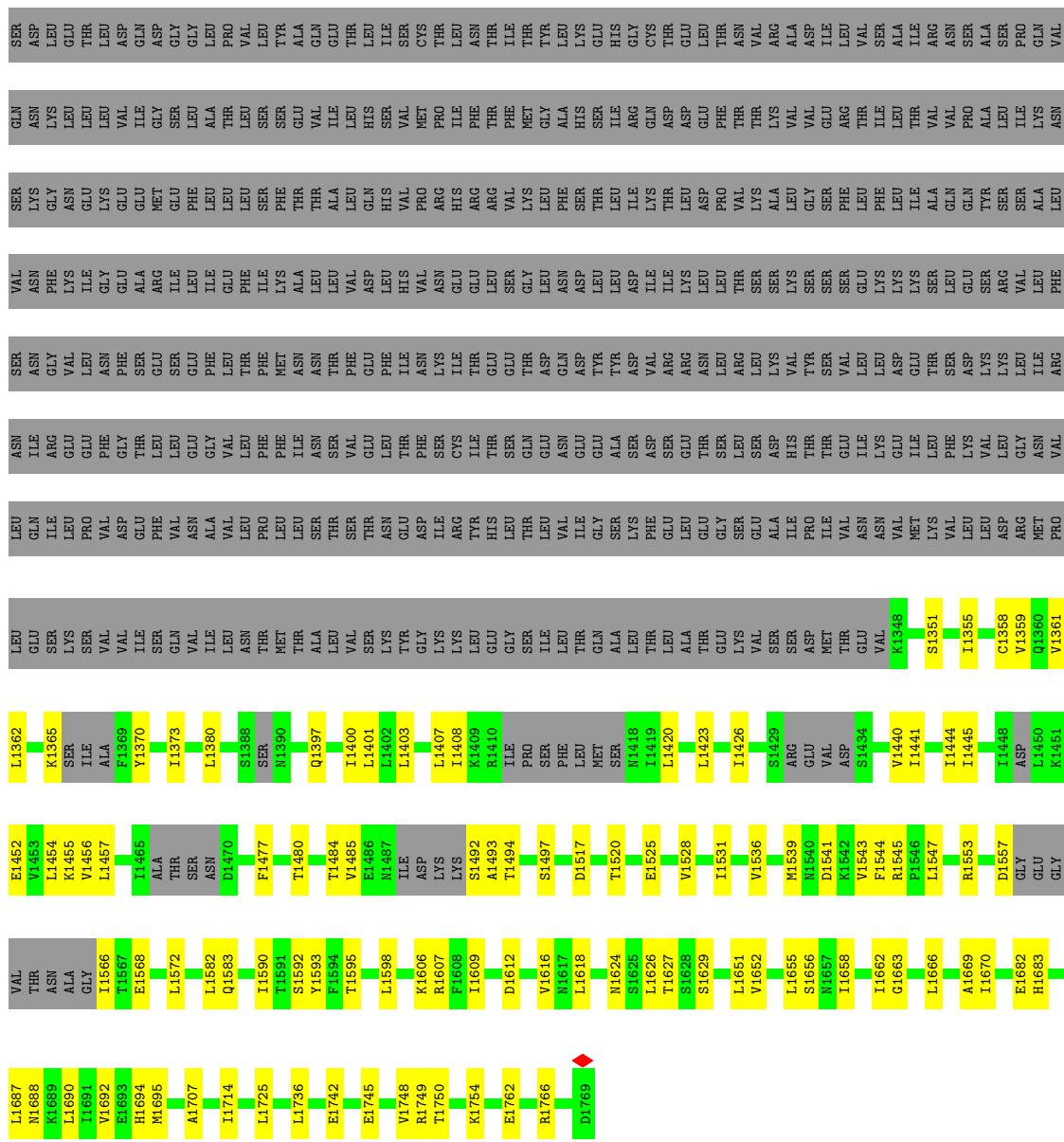


• Molecule 8: U3 small nucleolar RNA-associated protein 8

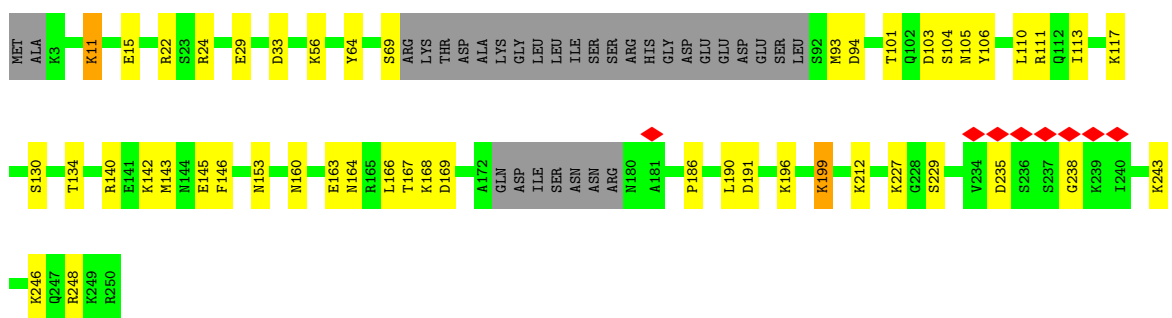


• Molecule 9: U3 small nucleolar RNA-associated protein 9



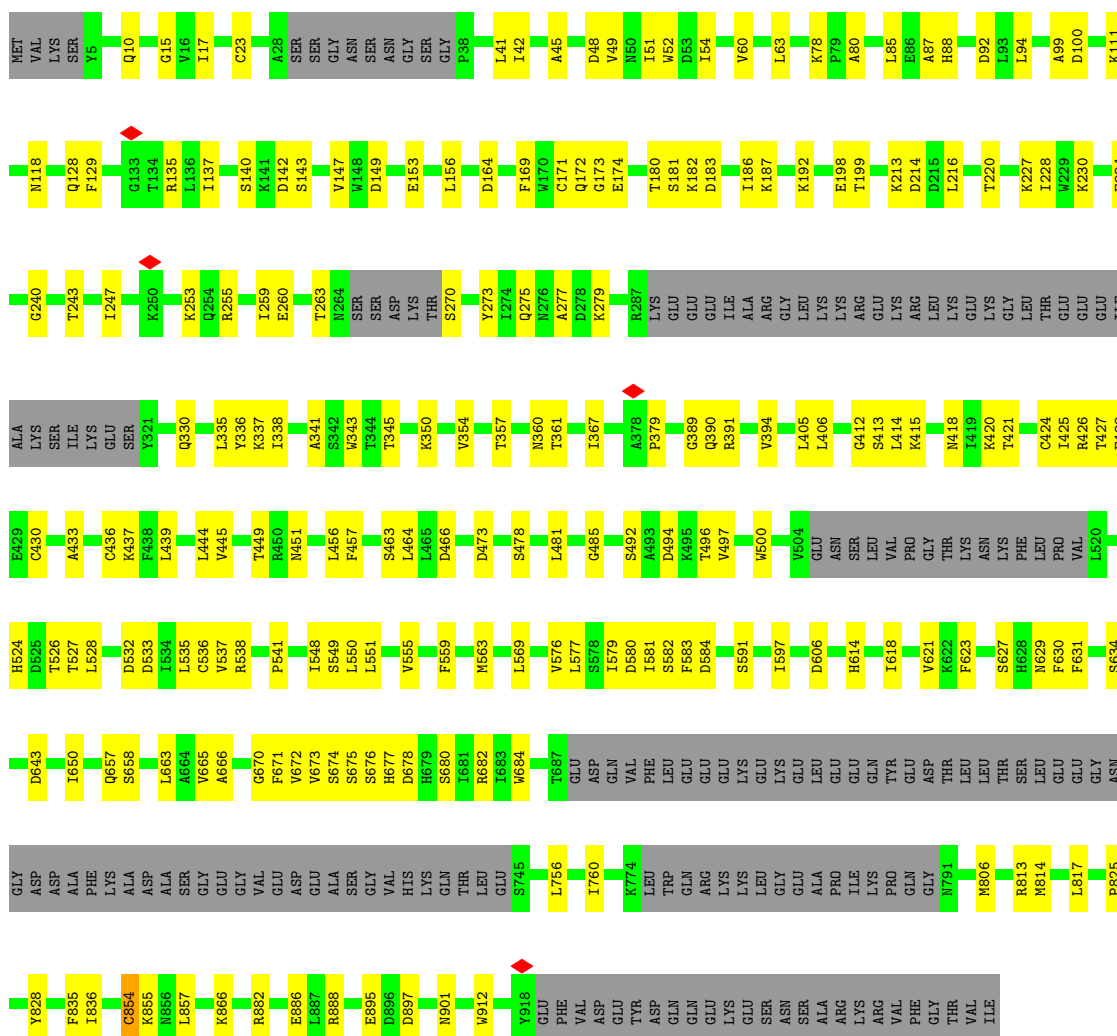


• Molecule 11: U3 small nucleolar RNA-associated protein 11



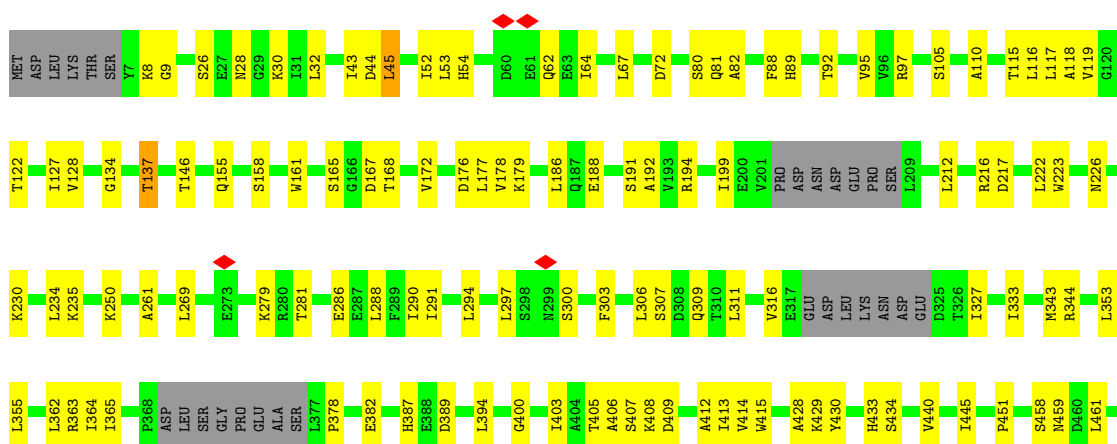
• Molecule 12: U3 small nucleolar RNA-associated protein 12

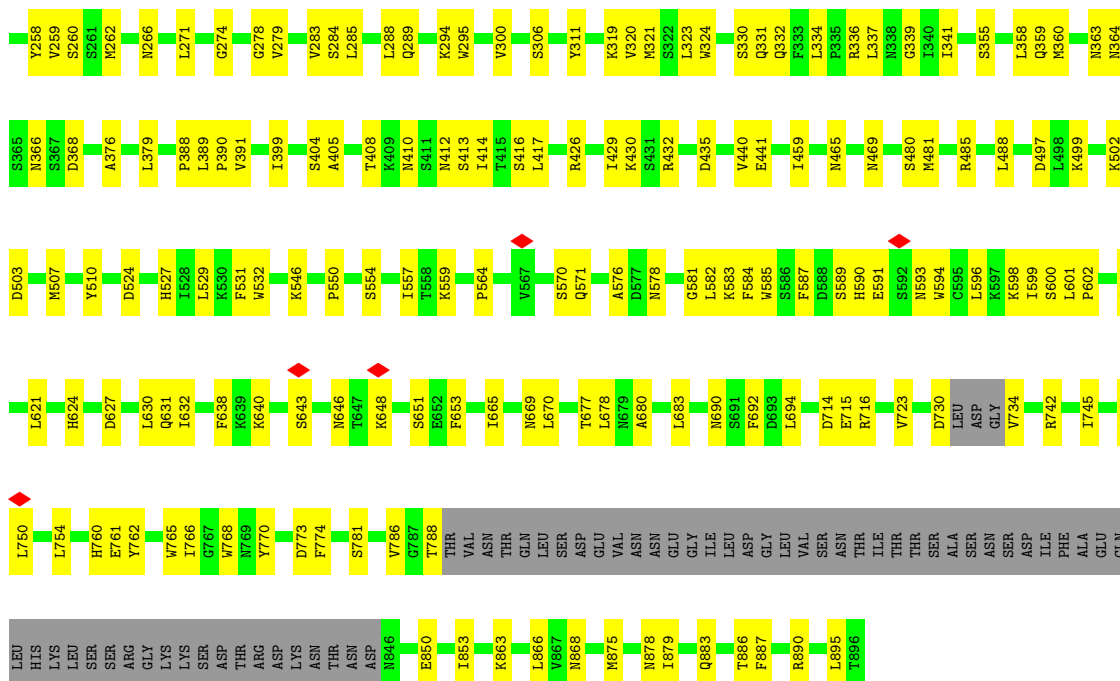
Chain UL:



• Molecule 13: U3 small nucleolar RNA-associated protein 13

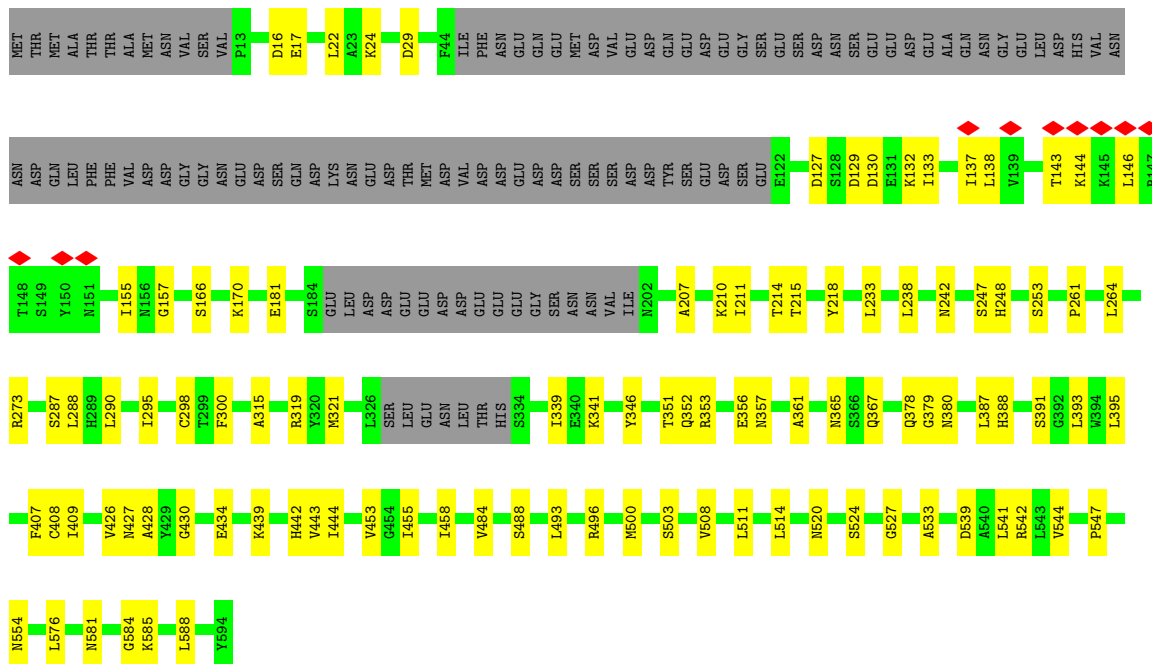
Chain UM:





● Molecule 18: U3 small nucleolar RNA-associated protein 18

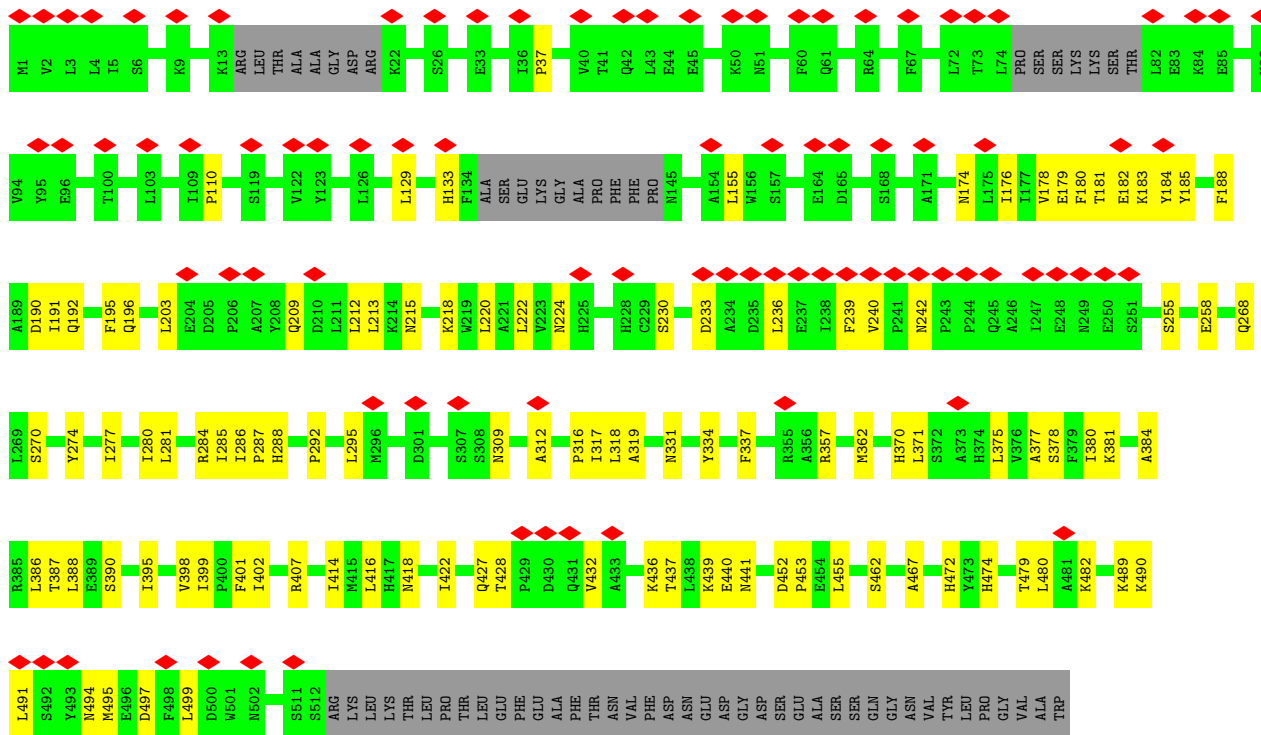
Chain UR:



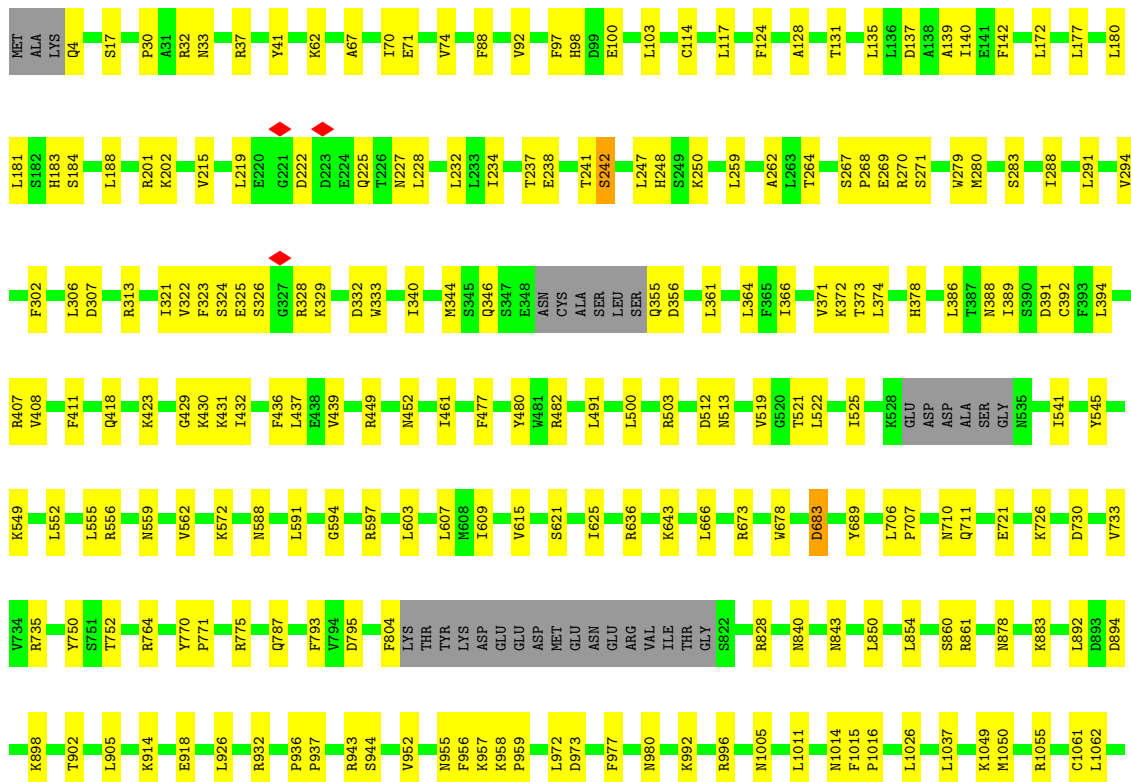
● Molecule 19: Nucleolar complex protein 4

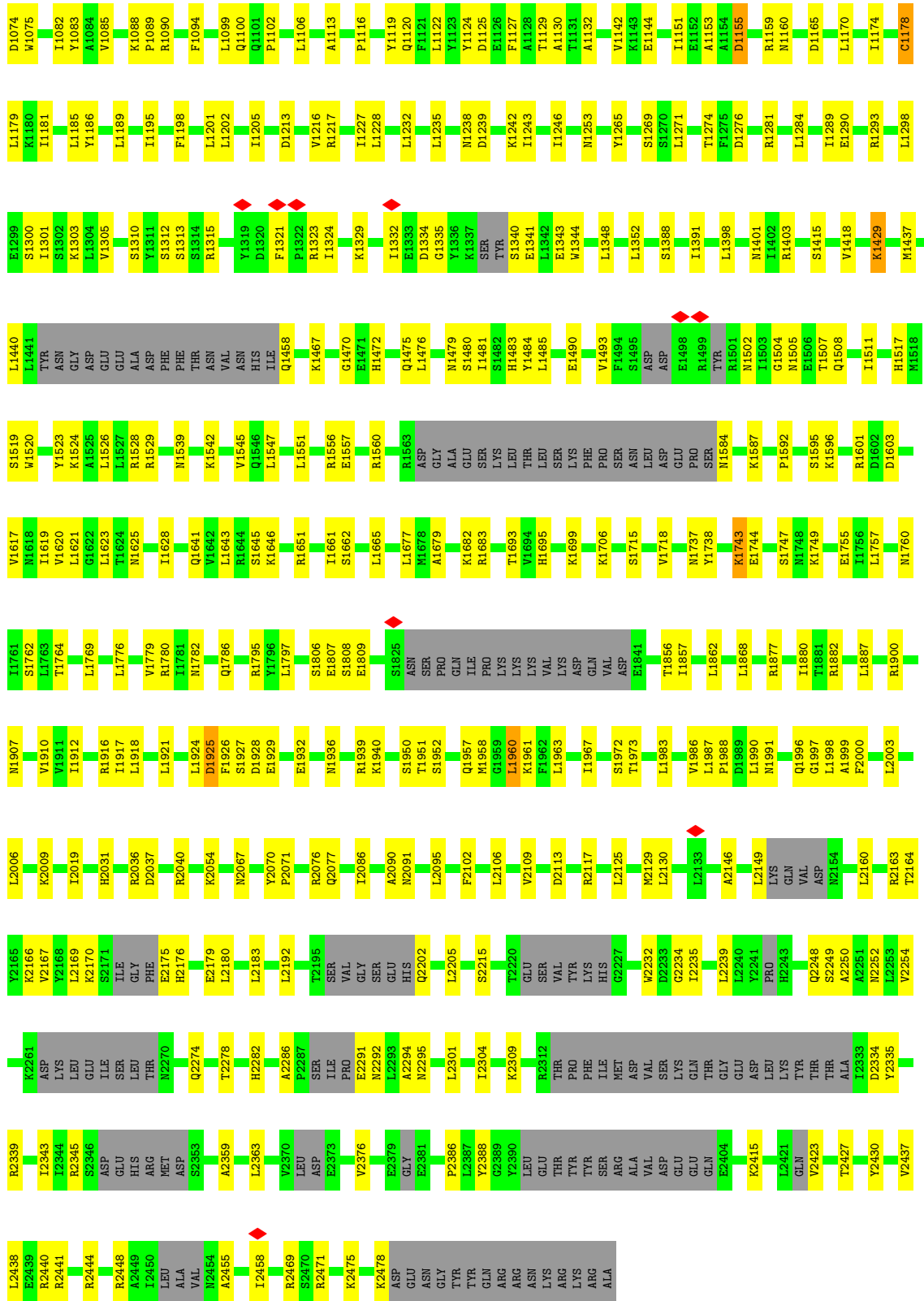
Chain US:



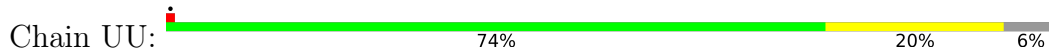


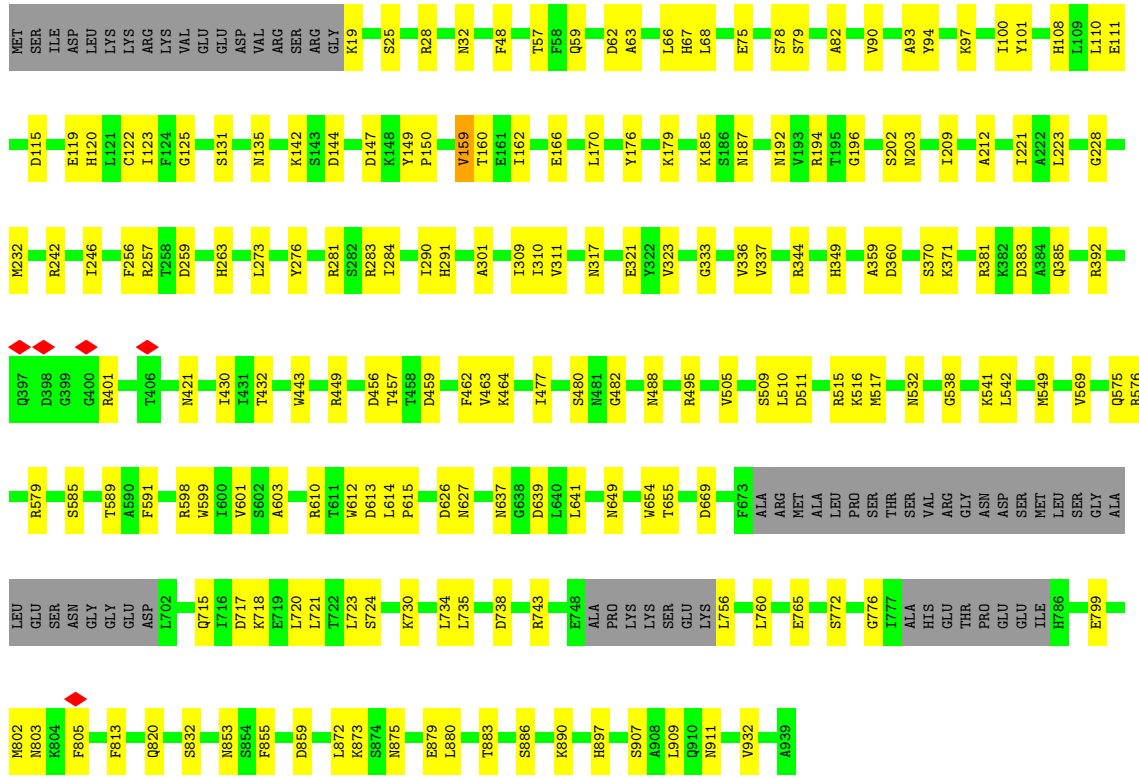
• Molecule 20: U3 small nucleolar RNA-associated protein 20



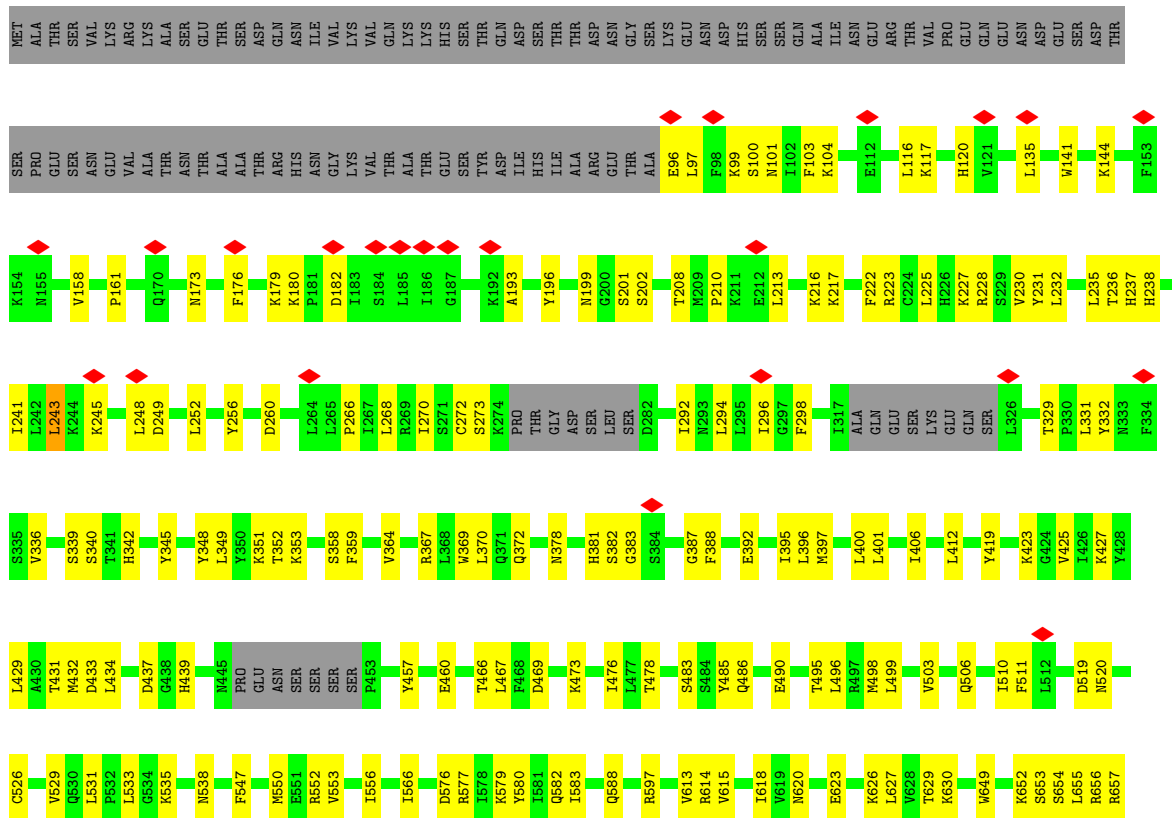


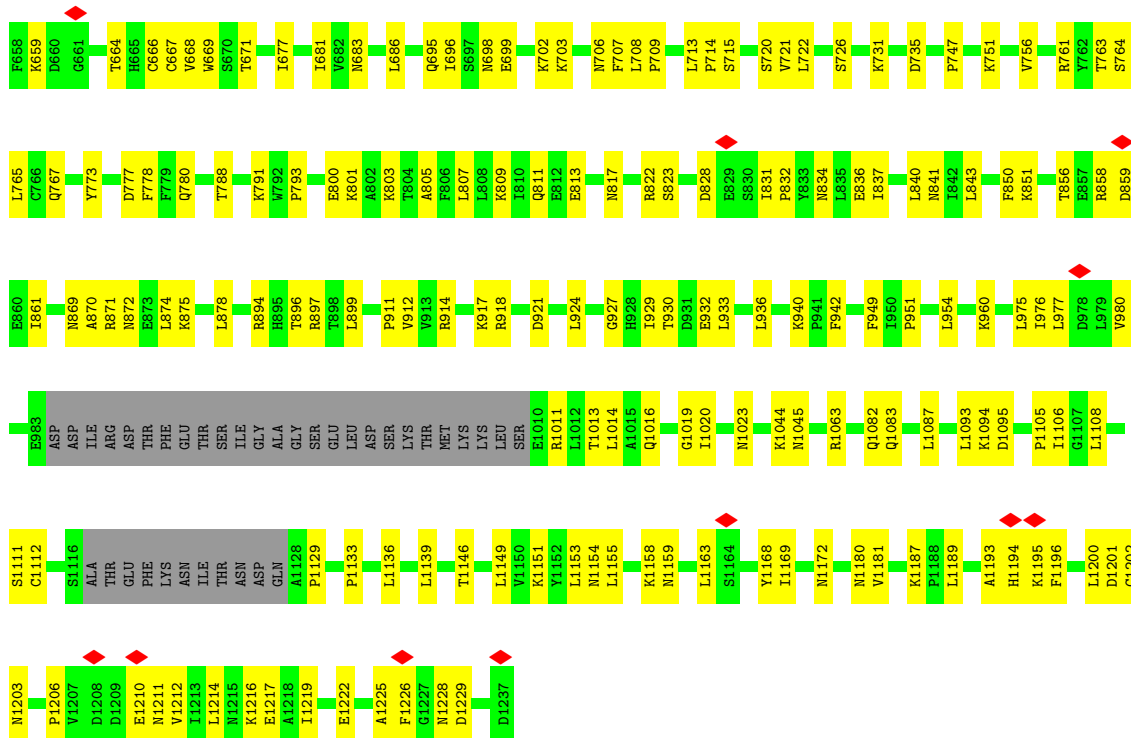
● Molecule 21: U3 small nucleolar RNA-associated protein 21



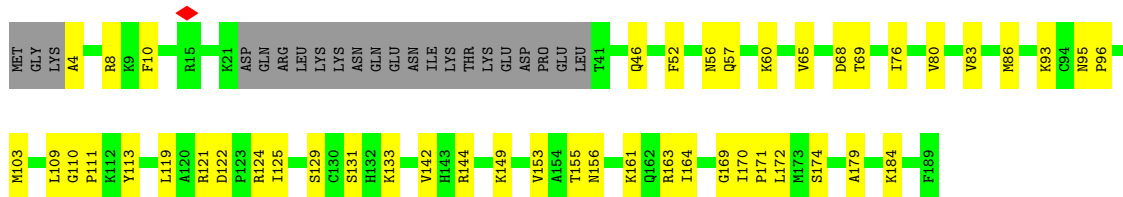


• Molecule 22: U3 small nucleolar RNA-associated protein 22

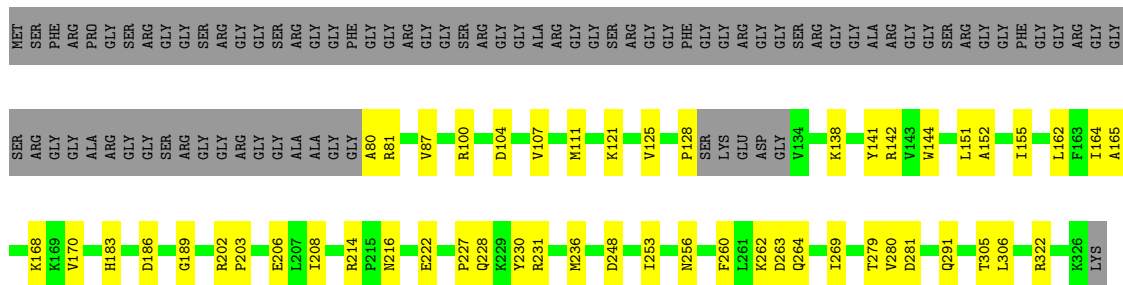




• Molecule 23: rRNA-processing protein FCF1



• Molecule 24: rRNA 2'-O-methyltransferase fibrillar



• Molecule 24: rRNA 2'-O-methyltransferase fibrillar



LYS
LYS
GLU
LYS
LYS
ASP
LYS
LYS
GLU
LYS
LYS
GLU
LYS
LYS
GLU
LYS
LYS
LYS
GLU
LYS
LYS
LYS
GLU
LYS
LYS
LYS

- Molecule 27: 13 kDa ribonucleoprotein-associated protein

Chain CF: 79% 13%

MET
SER
ALA
PRO
N5
D13
T17
L21
N29
L33
K34
N38
E39
L44
M45
R46
E50
M64
I61
L64
P68
C71
E72
S94
A100
S101
I102
D106
L125
ILE

- Molecule 27: 13 kDa ribonucleoprotein-associated protein

Chain CG: 76% 17%

MET
SER
ALA
PRO
N5
D13
T17
D22
Q25
L33
K34
E39
L44
M45
R46
E50
M64
I61
E62
I63
L64
L65
H66
L67
P68
L69
L70
C71
E72
S94
A100
S101
I102
D106
L125
ILE

- Molecule 28: Ribosomal RNA-processing protein 9

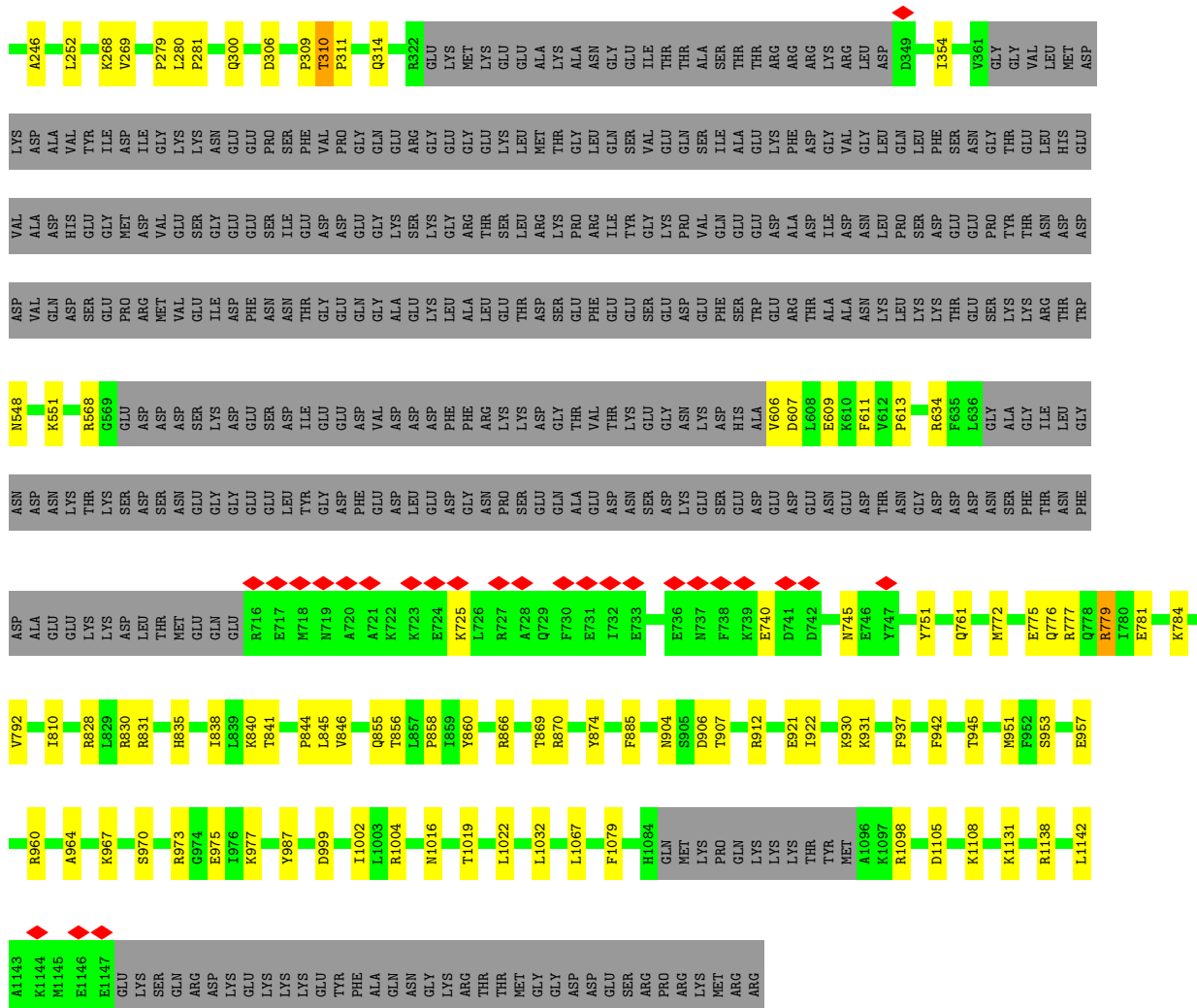
Chain CH: 63% 18% 18%

MET
SER
VAL
THR
GLN
GLN
LYS
ARG
LYS
ARG
ASN
ARG
SER
LYS
GLY
VAL
VAL
ASN
PRO
SER
LYS
GLU
THR
VAL
ASP
GLU
GLU
LYS
ILE
THR
ASN
PRO
SER
PHE
ASP
ALA
GLY
ASP
LEU
GLY
LYS
LYS
D115
D116
V132
VAL
SER
ASP
GLU
GLY
ASP
GLU
GLN
LEU
GLU
VAL
SER
ASP
GLU
ASP
GLU
ALA
ALA
LEU
GLU
SER
GLY
PHE
GLY
GLY
C162
D61
R64
L71
L74
R83
ASN
ASP
ARG
ASN
ALA
GLU
GLU
ASP
LEU
ASN
ASN
LEU
LYS
GLU
GLU
ARG
THR
THR
ILE
ASP
GLU
GLU
TYR
ILE
THR
ASN
ASN
PHE
ASP
ALA
GLY
ASP
LEU
ASP
LYS
D115
V132
F133
R134
I142
K146
Q147
T150
R151
V152
R305
T158
G159
I160
S161
C162
P165
V166
S175
G183
R184
L185
F186
A187
L196
T197
K198
T202
R207
R225
Y228
G234
H235
L240
T241
V242
T253
R256
D257
R258
K259
V262
K277
E282
S285
L286
S292
D293
S298
C299
A300
R305
T317
D323
V325
R333
E334
R335
D343
R344
L348
W349
E354
E364
F365
Q366
E375
ASN
ALA
LYS
GLY
GLY
GLY
ASP
GLY
GLU
VAL
LYS
TVR
PRO
ASP
GLU
SER
GLU
ALA
P394
V405
V408
D409
I414
T415
G416
S417
D418
N419
G420
M421
R437
F448
S452
G453
E454
T455
D456
L459
R460
Q463
L464
L470
Q471
W474
W480
I481
M485
S489
W492
S495
L496
W499
S502
D503
L511
L514
K523
L524
Q525
E528
E535
K545
E546
H547
R548
R551
W552
I553
A554
N555
R560
N561
D562
L563
R564
D569
Q570
E571
G572
PHE

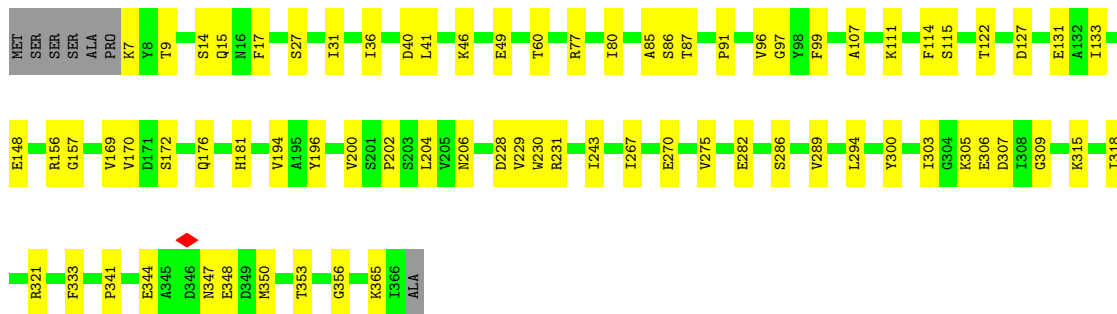
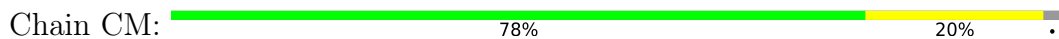
- Molecule 29: U3 small nucleolar ribonucleoprotein protein IMP3

Chain CI: 74% 21%

MET
V2
R3
K4
L5
L13
L19
GLU
TRP
LYS
GLN
ASP
GLY
H27
R28
D29
T30
V32
T35
Y36
H37
I38
Q39
M40
D43
C51
I54
R55
R56
M59
P65
P66
K73
K81
S92
K93
I94
S95
D96
L97
E98
R99
K100
C107
R108
R109
R110
R117
E122
T123
R137
L142
L149
R152
M153
M154
E155
T159
M160
V161
D162
K167
D179
S183

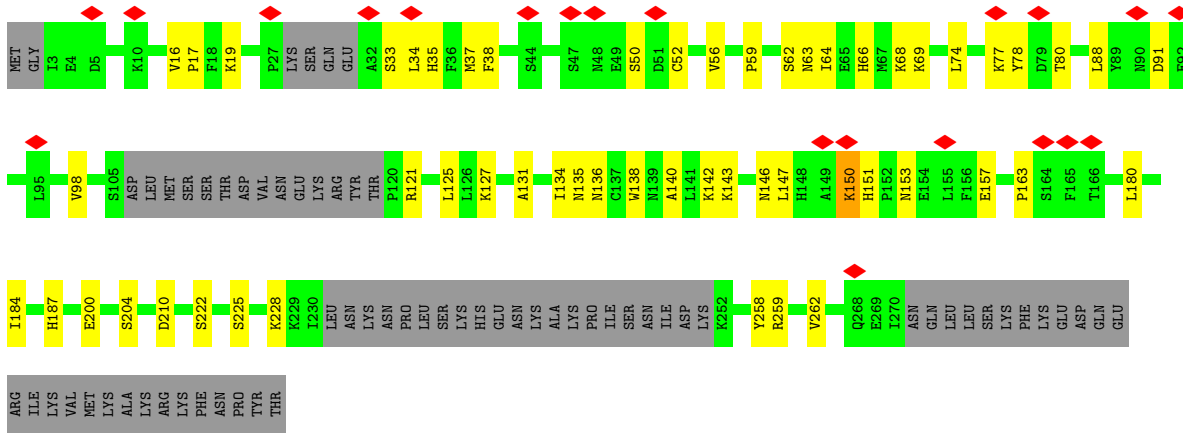


• Molecule 33: RNA 3'-terminal phosphate cyclase-like protein

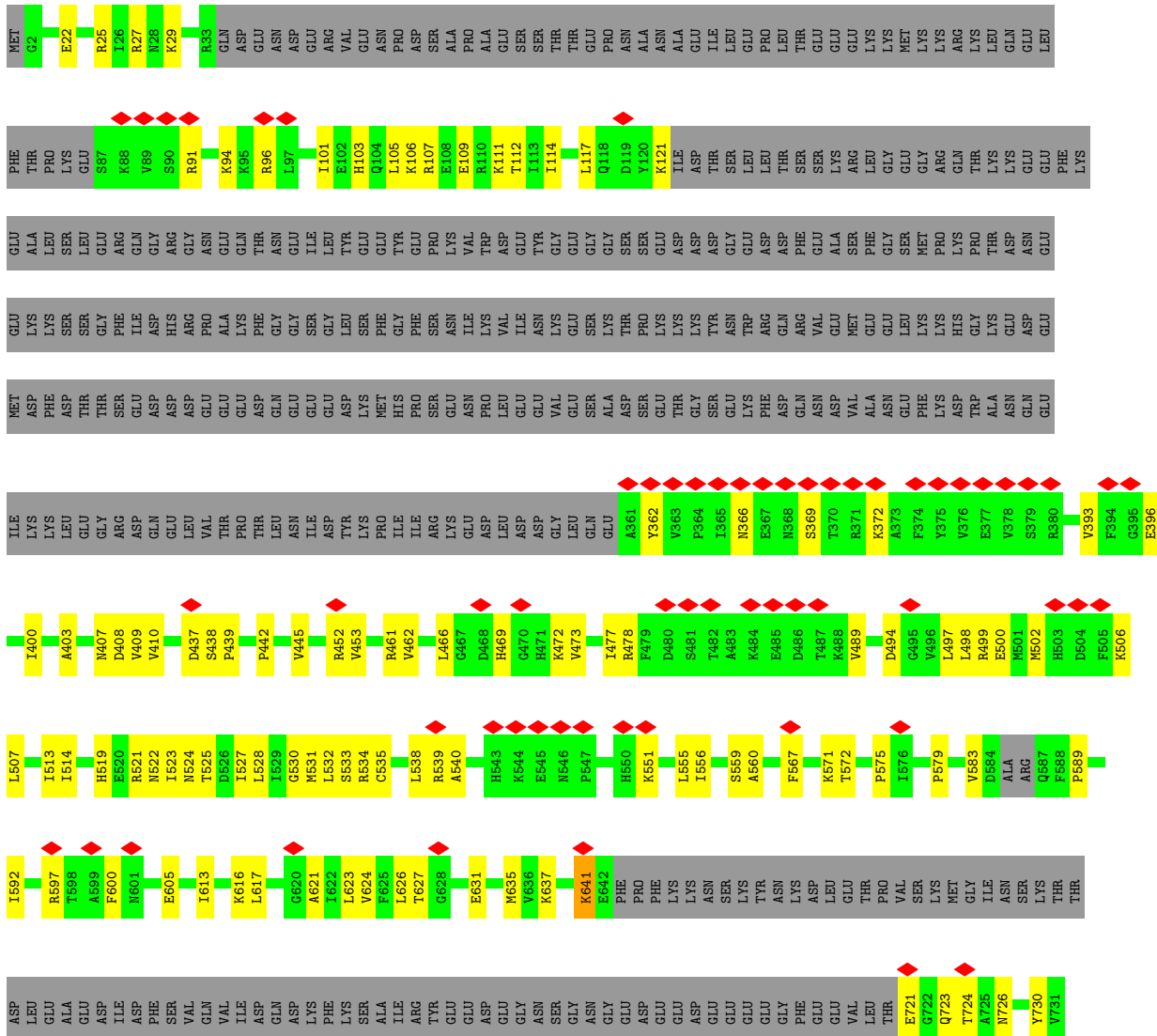


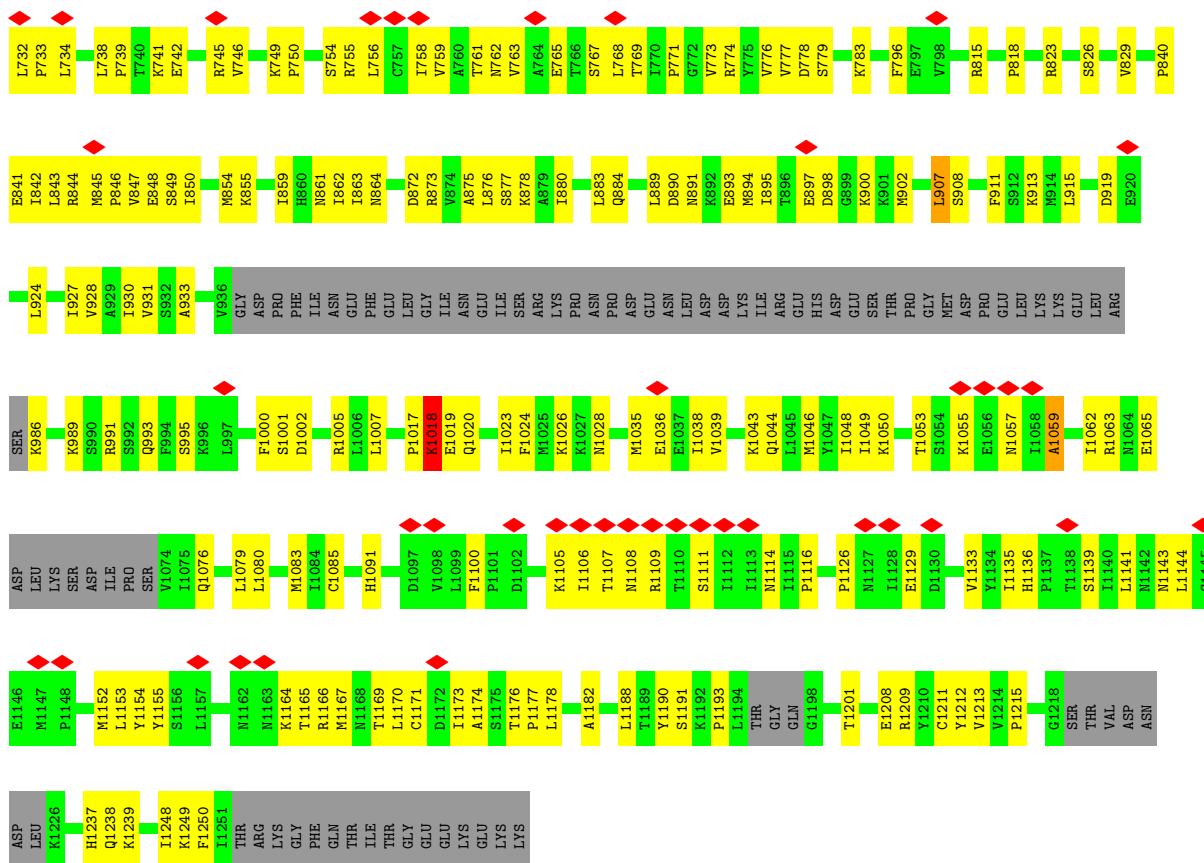
• Molecule 34: Ribosomal RNA-processing protein 7





● Molecule 35: Probable ATP-dependent RNA helicase DHR1





• Molecule 36: Ribosomal RNA small subunit methyltransferase NEP1



• Molecule 36: Ribosomal RNA small subunit methyltransferase NEP1



A1501	A1561	V1621	K1681
L1502	K1562	R1622	K1682
K1503	F1563	K1623	I1683
T1504	D1564	F1624	T1684
I1505	K1565	K1625	R1685
N1506	A1566	Q1626	K1686
F1507	A1567	L1627	Q1687
R1508	E1568	E1628	A1688
E1509	L1569	F1629	K1689
E1510	F1570	A1630	F1690
A1511	K1571	K1631	F1691
E1512	A1572	G1632	F1692
K1513	T1573	D1633	N1693
L1514	A1574	P1634	K1694
N1515	K1575	E1635	M1695
I1516	K1576	R1636	L1696
M1517	F1577	G1637	G1697
I1518	G1578	R1638	F1698
A1519	G1579	S1639	E1699
M1520	E1580	L1640	E1700
L1521	K1581	F1641	S1701
N1522	V1582	E1642	E1702
L1523	S1583	G1643	G1703
E1524	I1584	L1644	D1704
N1525	M1585	V1645	E1705
T1526	V1586	L1646	K1706
F1527	S1587	D1647	T1707
G1528	M1588	A1648	I1708
T1529	G1589	P1649	E1709
E1530	D1590	K1650	Y1710
E1531	F1591	K1651	V1711
T1532	L1592	I1652	K1712
L1533	I1593	D1653	A1713
E1534	S1594	L1654	K1714
E1535	H1595	M1655	A1715
V1536	N1596	M1656	T1716
F1537	E1597	L1657	E1717
S1538	E1598	Y1658	Y1718
R1539	Q1599	V1659	V1719
A1540	E1600	D1660	A1720
C1541	A1601	Q1661	S1721
Q1542	R1602	E1662	HIS
Y1543	T1603	V1663	GLU
M1544	I1604	K1664	GLN
D1545	L1605	A1665	LYS
S1546	G1606	K1666	ALA
Y1547	N1607	D1667	ASP
T1548	A1608	K1668	GLU
I1549	L1609	K1669	
H1550	K1610	K1670	
T1551	A1611	V1671	
K1552	L1612	E1672	
L1553	P1613	D1673	
L1554	K1614	L1674	
G1555	R1615	F1675	
I1556	N1616	E1676	
Y1557	H1617	R1677	
E1558	I1618	I1678	
I1559	E1619	I1679	
S1560	V1620	T1680	

• Molecule 39: Dimethyladenosine transferase



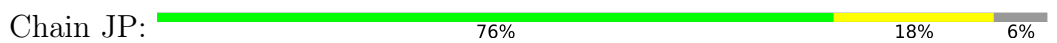
MET	M80	E203	F310
GLY	V84	S204	V813
LYS	E85	S205	V817
ALA	M86	V206	F317
LYS	D87	R207	S818
LYS	A92	L208	
TYR	T95	L209	
SER	V98	E210	
GLY	L107	I211	
ALA	F114	E222	
ALA	T117	L227	
THR	E118	R228	
SER	L119	R236	
SER	F122	A240	
GLN	D123	K243	
VAL	I124	S244	
SER	C125	T245	
LEU	M128	T246	
SER	P147	K253	
LEU	V150	L259	
LEU	S151	E264	
GLY	I152	M265	
GLY	L153	V266	
Q36	M154	D267	
L39	R157	D268	
K40	R162	T269	
M41	L163	K270	
Q46	L164	G271	
G47	A165	M272	
I48	R166	H273	
V49	C173	H274	
D50	R174	D275	
K51	R177	V276	
A52	H187	V277	
Q53	I188	K278	
I54	M189	E279	
R55	K190	K280	
P56	M194	I281	
S57	R197	D282	
D58	L290	T283	
V59	K293	V284	
V60	L299	E287	
R73	K293	L290	
I74	K293	E287	
L75	K293	L290	
L304	D299	L290	
R305	L304	R305	

• Molecule 40: rRNA-processing protein FCF2



MET	K76	S50	Q53
ASP	K77	Q53	T57
GLN	K78	T57	K60
SER	K79	K60	A73
VAL	L82	A73	M74
GLU	P83	M74	K75
LEU	S84	K75	
PHE	VAL	GLU	
GLY	THR	GLY	
ALA	GLU	ARG	
LEU	GLU	LYS	
LEU	ASP	ALA	
LEU	ASP	ALA	
LEU	LYS	THR	
LEU	ARG	LYS	
LEU	LYS	LYS	
LEU	PRO	LYS	
LEU	ASN	ASN	
GLU	SER	ASP	
VAL	SER	ASP	
VAL	ASP	ASP	
ASN	LYS	ASP	
ASN	LYS	LYS	
ALA	ASN	ASN	
ALA	ASP	ASP	
LYS	N101		
GLU	I149	I149	
GLN	G150	G150	
VAL	D155	D155	
SER	K156	K156	
GLN	S161	S161	
GLN	S162	S162	
GLU	R163	R163	
ASP	M164	M164	
LEU	N165	N165	
GLY	E168	E168	
ASN	R169	R169	
ASN	K170	K170	
GLY	E175	E175	
ASN	E181	E181	
ASP	K185	K185	
GLU	K188	K188	
GLU	T199	T199	
GLU	SER	SER	
ARG	GLY	GLY	
LYS	ARG	ARG	
LYS	LYS	LYS	
ALA	ALA	ALA	
HIS	HIS	HIS	
TYR	TYR	TYR	
LYS	LYS	LYS	

• Molecule 41: Protein SOF1

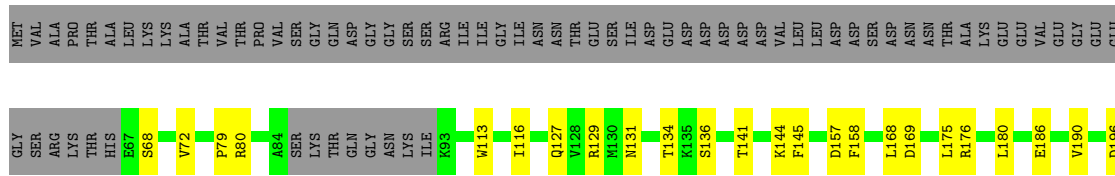




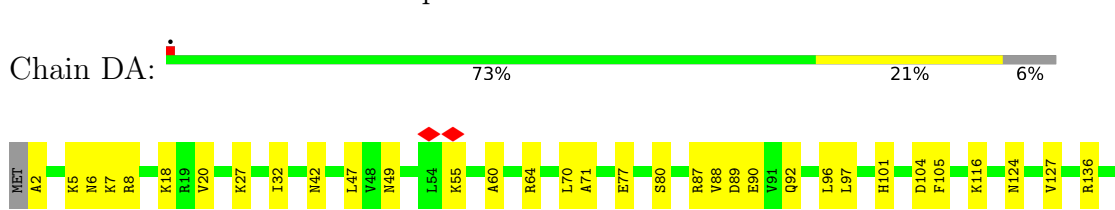
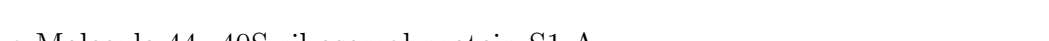
• Molecule 42: 40S ribosomal protein S27-A



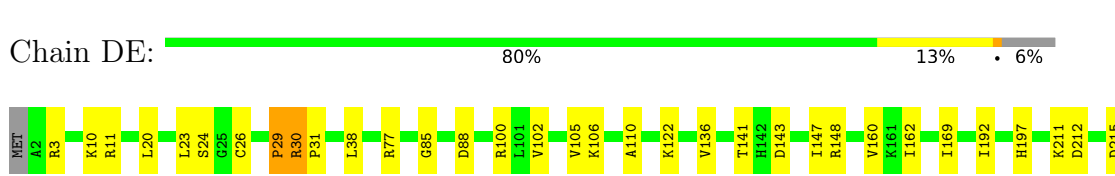
• Molecule 43: Pre-rRNA-processing protein PNO1

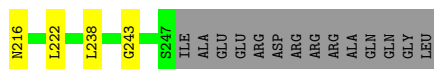


• Molecule 44: 40S ribosomal protein S1-A

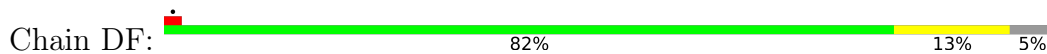


• Molecule 45: 40S ribosomal protein S4-A

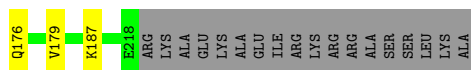
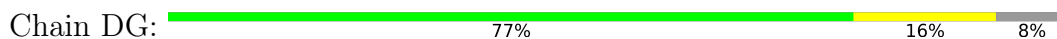




- Molecule 46: Rps5p



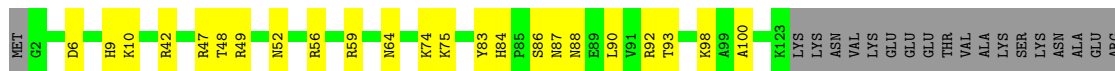
- Molecule 47: 40S ribosomal protein S6-A



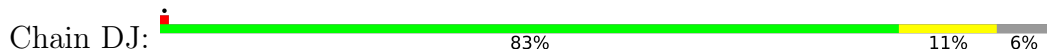
- Molecule 48: 40S ribosomal protein S7-A



- Molecule 49: 40S ribosomal protein S8-A

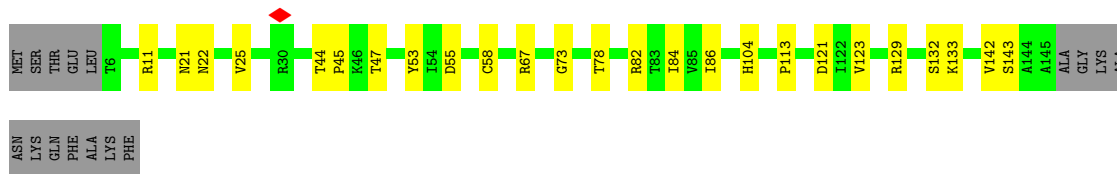
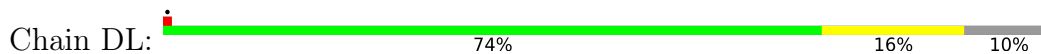


- Molecule 50: 40S ribosomal protein S9-A

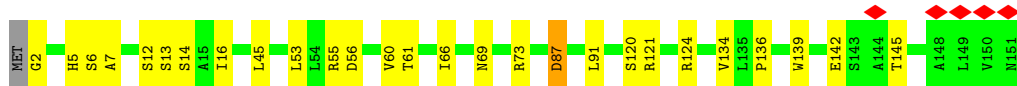
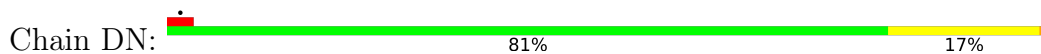




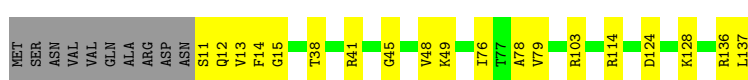
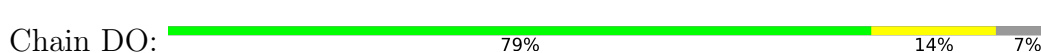
• Molecule 51: 40S ribosomal protein S11-A



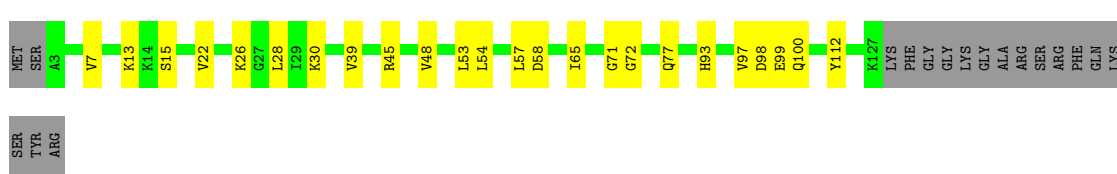
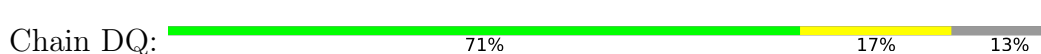
• Molecule 52: 40S ribosomal protein S13



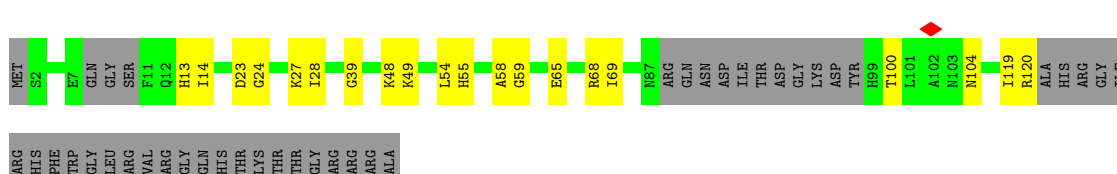
• Molecule 53: 40S ribosomal protein S14-A



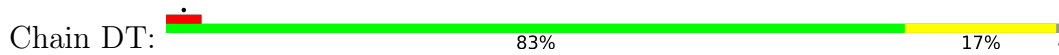
• Molecule 54: 40S ribosomal protein S16-A



• Molecule 55: 40S ribosomal protein S18-A



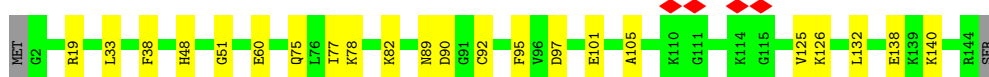
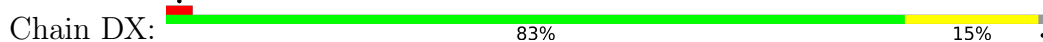
• Molecule 56: 40S ribosomal protein S19-A



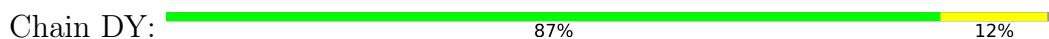
• Molecule 57: 40S ribosomal protein S22-A



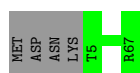
• Molecule 58: 40S ribosomal protein S23-A



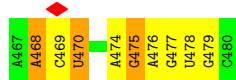
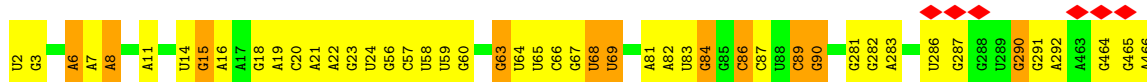
• Molecule 59: 40S ribosomal protein S24-A



• Molecule 60: 40S ribosomal protein S28-A

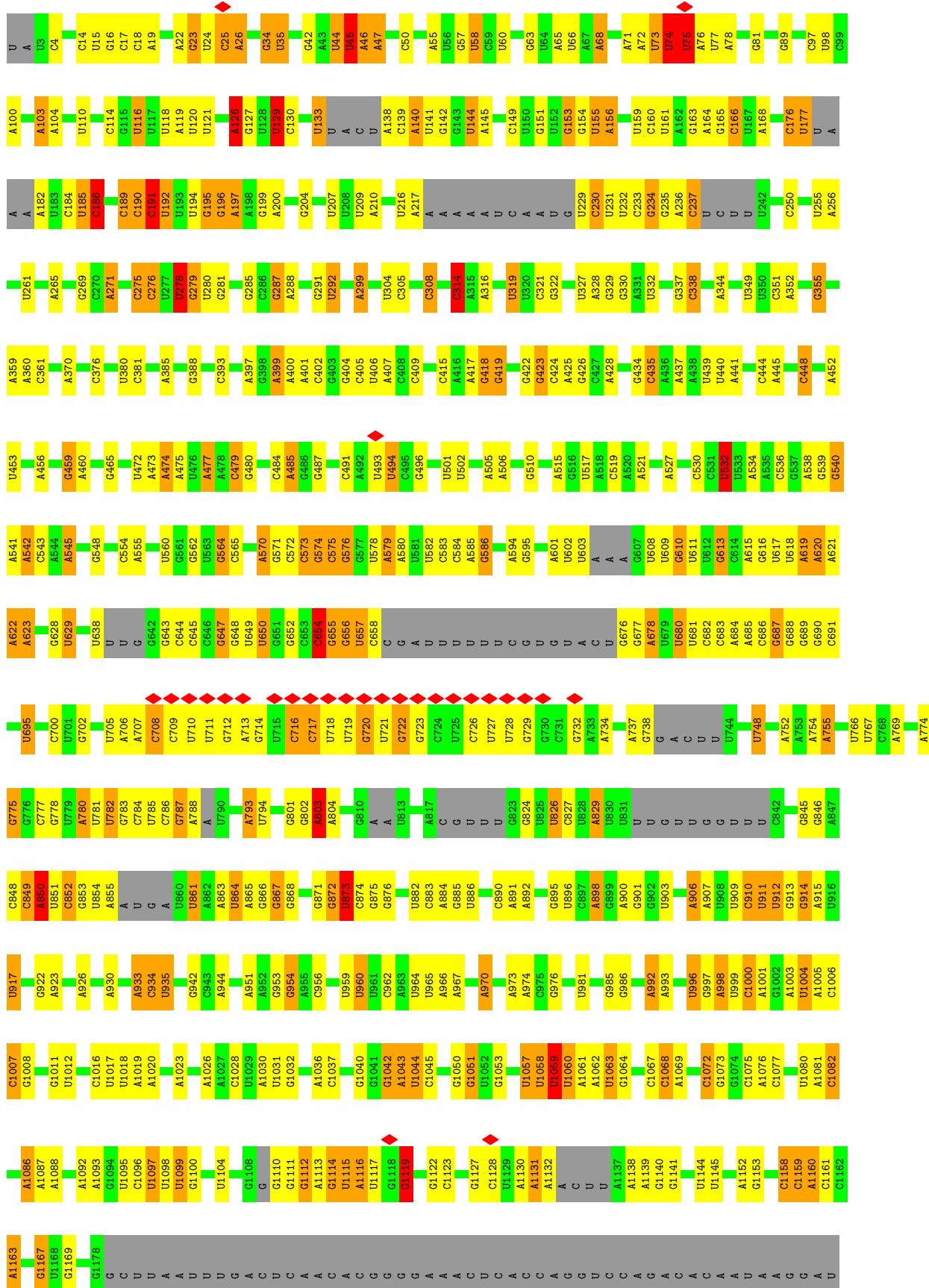


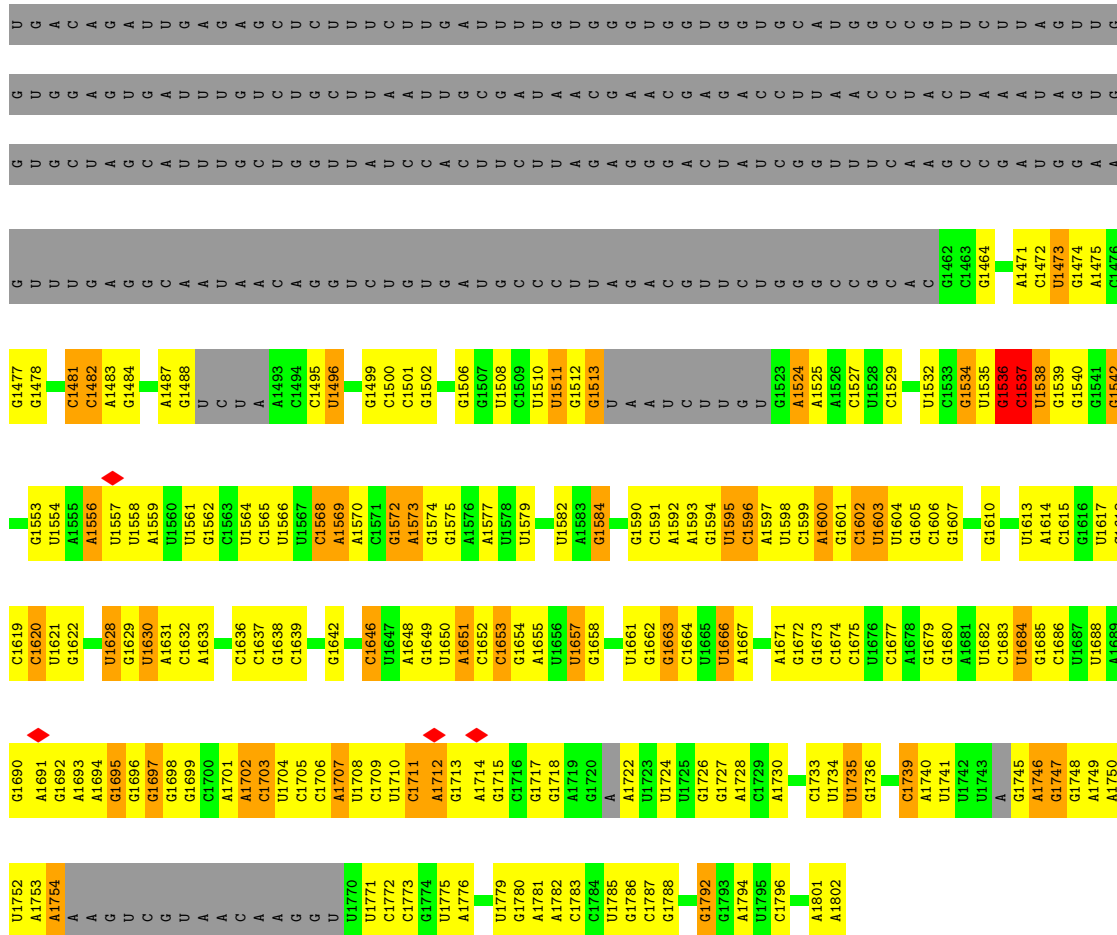
• Molecule 61: 5ETS RNA



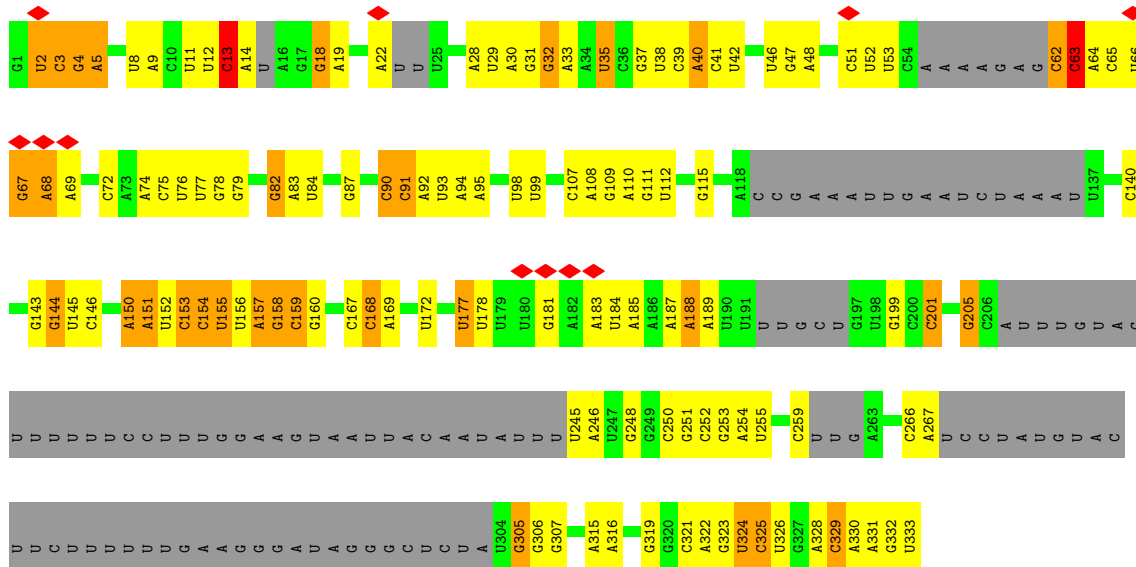
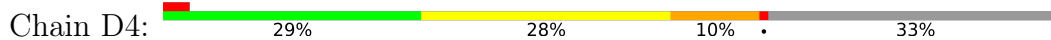
• Molecule 62: 18S rRNA







• Molecule 63: U3 snoRNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	176136	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 ($e^-/\text{\AA}^2$)	44, 28	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k), FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.126	Depositor
Minimum map value	-0.068	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.01	Depositor
Map size (\AA)	520.32, 520.32, 520.32	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.084, 1.084, 1.084	Depositor

5 Model quality i

5.1 Standard geometry i

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	UA	0.47	0/6465	0.57	1/8752 (0.0%)
2	UB	0.28	0/4158	0.53	4/5607 (0.1%)
3	UC	0.52	0/699	0.55	0/919
4	UD	0.33	0/5369	0.55	1/7272 (0.0%)
5	UE	0.35	0/3840	0.55	0/5208
6	UF	0.36	0/2538	0.47	0/3405
7	UG	0.41	0/3796	0.55	0/5126
8	UH	0.26	0/2773	0.58	12/3798 (0.3%)
9	UI	0.26	0/735	0.56	0/987
10	UJ	0.33	0/9111	0.53	1/12323 (0.0%)
11	UK	0.35	0/1869	0.50	0/2472
12	UL	0.34	0/6324	0.56	0/8546
13	UM	0.33	0/6071	0.58	2/8218 (0.0%)
14	UN	0.38	0/1697	0.50	0/2284
15	UO	0.31	0/3993	0.55	0/5413
16	UP	0.26	0/499	0.57	0/659
17	UQ	0.30	0/6688	0.53	1/9062 (0.0%)
18	UR	0.39	0/3875	0.54	0/5254
19	US	0.28	0/3667	0.53	3/5001 (0.1%)
20	UT	0.37	0/19132	0.53	3/25831 (0.0%)
21	UU	0.41	0/7059	0.52	0/9536
22	UV	0.30	0/8962	0.53	0/12120
23	UX	0.55	0/1353	0.61	0/1819
24	CA	0.60	1/1917 (0.1%)	0.58	0/2588
24	CB	0.36	0/1815	0.54	0/2448
25	CD	0.41	0/3041	0.52	1/4098 (0.0%)
26	CE	0.36	0/3364	0.54	0/4539
27	CF	0.45	0/928	0.59	1/1262 (0.1%)
27	CG	0.45	0/928	0.59	1/1262 (0.1%)
28	CH	0.49	0/3809	0.56	0/5128
29	CI	0.35	0/1494	0.57	0/2008
30	CJ	0.45	0/2118	0.60	0/2855

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
31	CK	0.34	0/1808	0.48	0/2424
32	CL	0.49	0/6691	0.57	1/9000 (0.0%)
33	CM	0.41	0/2832	0.53	0/3825
34	CN	0.30	0/1909	0.51	0/2571
35	JD	0.31	0/6634	0.58	0/8927
36	JF	0.29	0/1727	0.60	1/2329 (0.0%)
36	JG	0.29	0/1828	0.54	0/2470
37	JH	0.23	0/1293	0.36	0/1801
38	JI	0.27	0/1313	0.54	0/1830
39	JL	0.29	0/2305	0.53	0/3116
40	JM	0.40	0/1151	0.52	0/1535
41	JP	0.52	0/3844	0.58	2/5174 (0.0%)
42	Db	0.42	0/620	0.53	0/838
43	JJ	0.37	0/1600	0.53	1/2154 (0.0%)
44	DA	0.38	0/1937	0.52	0/2593
45	DE	0.60	0/1991	0.61	0/2683
46	DF	0.41	0/1690	0.52	0/2285
47	DG	0.44	0/1779	0.52	0/2379
48	DH	0.37	0/1383	0.54	0/1863
49	DI	0.50	0/1422	0.53	0/1899
50	DJ	0.59	0/1519	0.60	0/2035
51	DL	0.58	0/1155	0.54	0/1557
52	DN	0.45	0/1215	0.51	1/1638 (0.1%)
53	DO	0.39	0/933	0.55	0/1256
54	DQ	0.47	0/986	0.59	0/1330
55	DS	0.29	0/871	0.52	0/1171
56	DT	0.35	0/1130	0.49	0/1517
57	DW	0.58	0/1038	0.57	0/1395
58	DX	0.49	0/1133	0.56	0/1510
59	DY	0.61	0/1087	0.54	0/1449
60	Dc	0.43	0/499	0.57	0/670
61	D2	0.43	0/1946	1.08	3/3024 (0.1%)
62	D3	0.95	11/33585 (0.0%)	1.21	296/52288 (0.6%)
63	D4	0.63	0/5267	1.17	42/8178 (0.5%)
All	All	0.52	12/228208 (0.0%)	0.72	378/316514 (0.1%)

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
13	UM	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
15	UO	0	1
20	UT	0	1
21	UU	0	1
23	UX	0	1
25	CD	0	1
35	JD	0	2
49	DI	0	1
59	DY	0	1
All	All	0	10

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	D3	355	G	N3-C4	-6.66	1.30	1.35
62	D3	118	U	C2-N3	-6.49	1.33	1.37
62	D3	355	G	C2-N3	-6.38	1.27	1.32
62	D3	622	A	N9-C4	-6.38	1.34	1.37
62	D3	545	A	C5-C4	-6.18	1.34	1.38
24	CA	152	ALA	CA-C	-5.92	1.37	1.52
62	D3	355	G	C2-N2	-5.64	1.28	1.34
62	D3	456	A	N7-C5	-5.36	1.36	1.39
62	D3	545	A	N3-C4	-5.36	1.31	1.34
62	D3	623	A	N9-C4	5.16	1.41	1.37
62	D3	314	C	C2-O2	-5.07	1.19	1.24
62	D3	409	C	C2-O2	-5.04	1.20	1.24

All (378) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	1104	U	C2-N3-C4	-13.68	118.79	127.00
62	D3	850	A	OP1-P-OP2	12.73	138.70	119.60
62	D3	629	U	N3-C2-O2	-12.59	113.39	122.20
62	D3	355	G	N3-C2-N2	-12.17	111.38	119.90
13	UM	45	LEU	C-N-CA	11.65	150.84	121.70
62	D3	1572	G	N1-C6-O6	-11.53	112.98	119.90
62	D3	453	U	C2-N1-C1'	11.52	131.52	117.70
62	D3	849	C	OP2-P-O3'	-11.14	80.69	105.20
62	D3	1572	G	C5-C6-O6	11.02	135.21	128.60
62	D3	25	C	N1-C2-O2	10.90	125.44	118.90
62	D3	355	G	N9-C4-C5	10.44	109.57	105.40
62	D3	554	C	N1-C2-O2	10.43	125.16	118.90
62	D3	190	C	N3-C2-O2	-10.37	114.64	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	355	G	C5-C6-O6	10.31	134.79	128.60
62	D3	355	G	N1-C6-O6	-10.29	113.73	119.90
62	D3	1104	U	N3-C2-O2	-10.07	115.15	122.20
62	D3	453	U	N1-C2-O2	9.94	129.76	122.80
63	D4	63	C	N3-C2-O2	-9.81	115.03	121.90
62	D3	1104	U	C5-C4-O4	-9.80	120.02	125.90
62	D3	409	C	N3-C2-O2	-9.75	115.08	121.90
62	D3	355	G	N3-C4-N9	-9.71	120.18	126.00
62	D3	287	G	O4'-C1'-N9	9.32	115.66	108.20
63	D4	153	C	N3-C2-O2	-9.28	115.40	121.90
62	D3	849	C	N1-C2-O2	9.26	124.45	118.90
62	D3	1063	U	C2-N1-C1'	9.23	128.78	117.70
63	D4	201	C	N3-C2-O2	-9.22	115.45	121.90
62	D3	554	C	C6-N1-C2	-9.20	116.62	120.30
63	D4	266	C	N3-C2-O2	-9.19	115.47	121.90
62	D3	554	C	N3-C2-O2	-9.15	115.49	121.90
62	D3	554	C	C2-N1-C1'	9.05	128.75	118.80
62	D3	314	C	C5-C4-N4	8.97	126.48	120.20
62	D3	118	U	N3-C2-O2	-8.96	115.92	122.20
62	D3	74	U	N1-C2-O2	8.88	129.01	122.80
62	D3	75	U	C2-N1-C1'	8.88	128.35	117.70
62	D3	1653	C	C6-N1-C2	-8.75	116.80	120.30
62	D3	962	C	N3-C2-O2	-8.65	115.84	121.90
62	D3	453	U	N3-C2-O2	-8.63	116.16	122.20
62	D3	986	G	N3-C4-N9	-8.60	120.84	126.00
62	D3	74	U	N3-C2-O2	-8.59	116.19	122.20
62	D3	1653	C	N3-C2-O2	-8.58	115.89	121.90
62	D3	25	C	C2-N1-C1'	8.55	128.21	118.80
62	D3	849	C	N3-C2-O2	-8.47	115.97	121.90
62	D3	314	C	N3-C4-N4	-8.45	112.08	118.00
62	D3	74	U	C2-N1-C1'	8.42	127.80	117.70
62	D3	25	C	N3-C2-O2	-8.40	116.02	121.90
63	D4	72	C	N3-C2-O2	-8.34	116.06	121.90
62	D3	849	C	OP1-P-O3'	-8.34	86.86	105.20
62	D3	554	C	C5-C6-N1	8.32	125.16	121.00
63	D4	168	C	N3-C2-O2	-8.20	116.16	121.90
62	D3	1675	C	N3-C2-O2	-8.18	116.17	121.90
62	D3	276	C	N3-C2-O2	-8.15	116.19	121.90
62	D3	314	C	C6-N1-C1'	8.15	130.58	120.80
62	D3	956	C	N3-C2-O2	-8.14	116.20	121.90
62	D3	1495	C	N3-C2-O2	-8.14	116.20	121.90
62	D3	453	U	C6-N1-C1'	-8.12	109.83	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	1051	G	C5-C6-O6	7.94	133.37	128.60
62	D3	1703	C	N3-C2-O2	-7.93	116.35	121.90
62	D3	409	C	N1-C2-N3	7.89	124.72	119.20
63	D4	91	C	N1-C2-O2	7.88	123.63	118.90
62	D3	1104	U	N1-C2-N3	7.87	119.62	114.90
62	D3	849	C	C6-N1-C2	-7.81	117.17	120.30
62	D3	292	U	C5-C4-O4	-7.80	121.22	125.90
62	D3	1060	U	N1-C2-O2	7.78	128.25	122.80
62	D3	1063	U	N1-C2-O2	7.76	128.23	122.80
62	D3	409	C	C6-N1-C2	-7.71	117.21	120.30
62	D3	629	U	C2-N1-C1'	7.68	126.91	117.70
62	D3	1060	U	C2-N1-C1'	7.67	126.91	117.70
62	D3	716	C	N3-C2-O2	-7.64	116.55	121.90
62	D3	873	U	N3-C2-O2	-7.63	116.86	122.20
63	D4	153	C	N1-C2-O2	7.62	123.47	118.90
62	D3	1068	C	N3-C2-O2	-7.55	116.61	121.90
62	D3	1058	U	C2-N1-C1'	7.54	126.75	117.70
62	D3	623	A	C6-N1-C2	-7.53	114.08	118.60
62	D3	35	U	C5-C6-N1	7.48	126.44	122.70
63	D4	63	C	C6-N1-C2	-7.46	117.32	120.30
62	D3	474	A	O4'-C1'-N9	7.43	114.14	108.20
62	D3	1051	G	N1-C6-O6	-7.40	115.46	119.90
62	D3	629	U	N1-C2-O2	7.40	127.98	122.80
62	D3	1537	C	N3-C4-C5	7.36	124.84	121.90
62	D3	909	U	N3-C2-O2	-7.34	117.06	122.20
62	D3	1739	C	N3-C2-O2	-7.33	116.77	121.90
63	D4	91	C	N3-C2-O2	-7.33	116.77	121.90
62	D3	1077	C	N3-C2-O2	-7.28	116.81	121.90
62	D3	645	C	N3-C2-O2	-7.25	116.82	121.90
62	D3	873	U	N1-C2-O2	7.24	127.87	122.80
62	D3	1501	C	N3-C2-O2	-7.23	116.84	121.90
62	D3	650	U	C5-C6-N1	7.22	126.31	122.70
62	D3	133	U	C2-N1-C1'	7.20	126.34	117.70
62	D3	1068	C	C6-N1-C1'	7.20	129.44	120.80
62	D3	767	U	C2-N1-C1'	7.18	126.31	117.70
62	D3	1696	G	C5-C6-O6	7.16	132.90	128.60
62	D3	355	G	C6-C5-N7	7.11	134.67	130.40
62	D3	1652	C	N1-C2-O2	7.11	123.17	118.90
62	D3	849	C	C2-N1-C1'	7.10	126.61	118.80
62	D3	355	G	C4-C5-N7	-7.09	107.96	110.80
62	D3	1016	C	N3-C2-O2	-7.05	116.96	121.90
62	D3	25	C	C6-N1-C2	-7.02	117.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	34	G	P-O3'-C3'	7.01	128.12	119.70
62	D3	956	C	N1-C2-O2	6.99	123.09	118.90
62	D3	116	U	N3-C2-O2	-6.97	117.32	122.20
62	D3	794	U	C2-N1-C1'	6.96	126.05	117.70
62	D3	767	U	N3-C2-O2	-6.96	117.33	122.20
63	D4	168	C	C6-N1-C2	-6.91	117.54	120.30
62	D3	314	C	C2-N1-C1'	-6.87	111.24	118.80
63	D4	172	U	N3-C2-O2	-6.87	117.39	122.20
62	D3	1104	U	N3-C4-C5	6.85	118.71	114.60
62	D3	645	C	C6-N1-C2	-6.84	117.56	120.30
62	D3	1063	U	N3-C2-O2	-6.83	117.42	122.20
62	D3	191	C	O4'-C1'-N1	6.75	113.60	108.20
62	D3	1060	U	N3-C2-O2	-6.72	117.50	122.20
63	D4	177	U	N1-C2-O2	6.69	127.48	122.80
63	D4	154	C	C6-N1-C2	-6.68	117.63	120.30
63	D4	91	C	C2-N1-C1'	6.67	126.14	118.80
63	D4	266	C	N1-C2-O2	6.65	122.89	118.90
63	D4	13	C	N3-C2-O2	-6.64	117.25	121.90
62	D3	705	U	C2-N1-C1'	6.63	125.66	117.70
62	D3	75	U	N1-C2-O2	6.61	127.42	122.80
62	D3	909	U	N1-C2-O2	6.59	127.41	122.80
62	D3	4	C	N1-C2-O2	6.57	122.84	118.90
62	D3	867	G	C5-C6-O6	6.55	132.53	128.60
62	D3	1068	C	N1-C2-N3	6.54	123.78	119.20
62	D3	385	A	N1-C6-N6	-6.54	114.67	118.60
63	D4	177	U	N3-C2-O2	-6.53	117.63	122.20
62	D3	1097	U	C2-N1-C1'	6.53	125.53	117.70
62	D3	1696	G	N3-C4-N9	-6.51	122.09	126.00
62	D3	965	U	C2-N1-C1'	6.47	125.47	117.70
62	D3	1097	U	N1-C2-O2	6.47	127.33	122.80
62	D3	1675	C	C6-N1-C2	-6.45	117.72	120.30
62	D3	1696	G	N1-C6-O6	-6.44	116.04	119.90
62	D3	4	C	N3-C2-O2	-6.40	117.42	121.90
62	D3	1016	C	C6-N1-C2	-6.39	117.74	120.30
62	D3	1058	U	N1-C2-O2	6.37	127.26	122.80
62	D3	864	U	C2-N1-C1'	6.35	125.32	117.70
62	D3	419	G	C2-N3-C4	-6.33	108.74	111.90
8	UH	235	PRO	N-CA-CB	6.33	110.89	103.30
62	D3	186	C	C2-N1-C1'	6.32	125.76	118.80
19	US	37	PRO	N-CA-CB	6.32	110.88	103.30
62	D3	654	C	N1-C2-O2	6.31	122.69	118.90
2	UB	400	PRO	N-CA-CB	6.30	110.86	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	1063	U	C6-N1-C1'	-6.30	112.38	121.20
62	D3	415	C	C2-N1-C1'	-6.28	111.89	118.80
62	D3	622	A	N3-C4-N9	-6.28	122.38	127.40
62	D3	1537	C	N3-C4-N4	-6.28	113.61	118.00
8	UH	59	PRO	N-CA-CB	6.27	110.82	103.30
62	D3	1599	C	N3-C2-O2	-6.25	117.52	121.90
8	UH	68	PRO	N-CA-CB	6.24	110.79	103.30
63	D4	63	C	N1-C2-O2	6.24	122.64	118.90
62	D3	189	C	N1-C2-O2	6.23	122.64	118.90
62	D3	34	G	OP1-P-O3'	6.22	118.89	105.20
62	D3	491	C	N3-C2-O2	-6.22	117.55	121.90
62	D3	1104	U	C5-C6-N1	-6.22	119.59	122.70
62	D3	75	U	C6-N1-C1'	-6.21	112.50	121.20
8	UH	325	PRO	N-CA-CB	6.21	110.75	103.30
17	UQ	136	LEU	CA-CB-CG	6.18	129.53	115.30
8	UH	61	PRO	N-CA-CB	6.18	110.72	103.30
62	D3	1067	C	N3-C2-O2	-6.18	117.57	121.90
8	UH	70	PRO	N-CA-CB	6.18	110.72	103.30
62	D3	691	C	C2-N1-C1'	6.17	125.59	118.80
8	UH	530	PRO	N-CA-CB	6.15	110.68	103.30
62	D3	629	U	N1-C2-N3	6.13	118.58	114.90
62	D3	409	C	C6-N1-C1'	6.13	128.15	120.80
8	UH	258	PRO	N-CA-CB	6.12	110.65	103.30
8	UH	309	PRO	N-CA-CB	6.12	110.65	103.30
62	D3	1637	C	C6-N1-C1'	6.11	128.13	120.80
62	D3	1646	C	N3-C2-O2	-6.11	117.62	121.90
62	D3	1599	C	N1-C2-O2	6.09	122.56	118.90
19	US	110	PRO	N-CA-CB	6.09	110.61	103.30
62	D3	299	A	N1-C6-N6	-6.05	114.97	118.60
63	D4	160	G	N1-C2-N2	-6.05	110.76	116.20
62	D3	867	G	N1-C6-O6	-6.03	116.28	119.90
2	UB	285	PRO	N-CA-CB	6.02	110.53	103.30
2	UB	201	PRO	N-CA-CB	6.02	110.53	103.30
62	D3	415	C	C6-N1-C1'	6.01	128.01	120.80
62	D3	1473	U	C2-N1-C1'	6.00	124.90	117.70
2	UB	412	PRO	N-CA-CB	5.99	110.49	103.30
8	UH	298	PRO	N-CA-CB	5.97	110.47	103.30
62	D3	126	A	N1-C6-N6	5.97	122.18	118.60
62	D3	184	C	C2-N1-C1'	5.96	125.36	118.80
62	D3	275	C	N1-C2-O2	5.96	122.48	118.90
62	D3	1068	C	C6-N1-C2	-5.95	117.92	120.30
62	D3	25	C	C5-C6-N1	5.95	123.98	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	JF	148	LEU	CA-CB-CG	5.94	128.97	115.30
62	D3	872	G	C5-C6-O6	5.94	132.16	128.60
63	D4	150	A	P-O3'-C3'	5.94	126.83	119.70
62	D3	314	C	N1-C2-N3	5.94	123.36	119.20
62	D3	917	U	N3-C2-O2	-5.93	118.05	122.20
62	D3	1652	C	C2-N1-C1'	5.92	125.31	118.80
62	D3	638	U	N1-C2-O2	5.92	126.94	122.80
62	D3	1072	C	C5-C6-N1	5.92	123.96	121.00
8	UH	316	PRO	N-CA-CB	5.91	110.39	103.30
62	D3	1119	G	C5-C6-O6	5.90	132.14	128.60
62	D3	1513	G	C5-C6-O6	5.89	132.14	128.60
62	D3	767	U	N1-C2-O2	5.89	126.92	122.80
62	D3	554	C	N3-C4-N4	5.88	122.12	118.00
62	D3	644	C	N1-C2-O2	5.87	122.42	118.90
62	D3	491	C	C6-N1-C2	-5.87	117.95	120.30
62	D3	794	U	C5-C6-N1	5.86	125.63	122.70
62	D3	422	G	O4'-C1'-N9	5.85	112.88	108.20
62	D3	1495	C	C6-N1-C2	-5.84	117.96	120.30
62	D3	803	A	O4'-C1'-N9	5.83	112.87	108.20
62	D3	1067	C	N1-C2-O2	5.83	122.40	118.90
62	D3	1663	G	N3-C4-N9	-5.83	122.50	126.00
62	D3	1058	U	C6-N1-C1'	-5.82	113.05	121.20
62	D3	752	A	N1-C6-N6	-5.82	115.11	118.60
62	D3	867	G	N3-C4-N9	-5.82	122.51	126.00
62	D3	1674	C	N1-C2-O2	5.82	122.39	118.90
62	D3	1051	G	N9-C4-C5	5.81	107.72	105.40
62	D3	189	C	C2-N1-C1'	5.79	125.17	118.80
63	D4	72	C	N1-C2-O2	5.79	122.38	118.90
63	D4	107	C	N1-C2-O2	5.79	122.38	118.90
63	D4	201	C	C6-N1-C2	-5.79	117.98	120.30
62	D3	623	A	N3-C4-C5	-5.79	122.75	126.80
62	D3	1536	G	C4-N9-C1'	5.79	134.02	126.50
63	D4	248	G	N3-C4-N9	5.78	129.47	126.00
63	D4	153	C	C6-N1-C2	-5.77	117.99	120.30
62	D3	1068	C	C5-C4-N4	5.77	124.24	120.20
62	D3	986	G	N9-C4-C5	5.76	107.70	105.40
63	D4	157	A	P-O3'-C3'	5.75	126.60	119.70
62	D3	1163	A	C6-N1-C2	-5.75	115.15	118.60
63	D4	168	C	N1-C2-N3	5.74	123.22	119.20
62	D3	479	C	N1-C2-O2	5.73	122.34	118.90
62	D3	355	G	C8-N9-C1'	5.72	134.44	127.00
62	D3	1696	G	N9-C4-C5	5.72	107.69	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	376	C	C5-C6-N1	5.71	123.86	121.00
62	D3	986	G	C5-C6-O6	5.71	132.03	128.60
62	D3	314	C	C6-N1-C2	-5.71	118.02	120.30
62	D3	986	G	N3-C4-C5	5.71	131.45	128.60
62	D3	545	A	N7-C8-N9	-5.70	110.95	113.80
62	D3	716	C	N1-C2-O2	5.69	122.32	118.90
62	D3	1473	U	N1-C2-O2	5.69	126.78	122.80
62	D3	629	U	C6-N1-C2	-5.69	117.59	121.00
32	CL	141	LEU	CA-CB-CG	5.68	128.37	115.30
62	D3	44	U	N3-C2-O2	-5.68	118.22	122.20
13	UM	297	LEU	CA-CB-CG	5.67	128.33	115.30
63	D4	201	C	N1-C2-O2	5.67	122.30	118.90
62	D3	1568	C	P-O3'-C3'	5.66	126.50	119.70
62	D3	1573	A	P-O3'-C3'	5.65	126.48	119.70
62	D3	691	C	N1-C2-O2	5.64	122.28	118.90
62	D3	409	C	C5-C4-N4	5.64	124.14	120.20
63	D4	107	C	C2-N1-C1'	5.63	124.99	118.80
62	D3	133	U	N3-C2-O2	-5.62	118.27	122.20
62	D3	1051	G	N1-C2-N3	5.62	127.27	123.90
62	D3	1572	G	N9-C4-C5	5.61	107.64	105.40
62	D3	1068	C	C2-N1-C1'	-5.60	112.64	118.80
62	D3	1501	C	C6-N1-C2	-5.60	118.06	120.30
63	D4	151	A	O5'-P-OP1	5.60	117.42	110.70
62	D3	1637	C	C2-N1-C1'	-5.60	112.64	118.80
8	UH	500	PRO	N-CA-CB	5.59	110.00	103.30
62	D3	1097	U	N3-C2-O2	-5.58	118.29	122.20
62	D3	705	U	C5-C6-N1	5.58	125.49	122.70
63	D4	177	U	C2-N1-C1'	5.58	124.39	117.70
62	D3	453	U	C5-C6-N1	5.58	125.49	122.70
62	D3	376	C	C6-N1-C2	-5.57	118.07	120.30
62	D3	1057	U	P-O3'-C3'	5.57	126.38	119.70
62	D3	1500	C	N1-C2-O2	5.56	122.24	118.90
43	JJ	141	THR	C-N-CA	5.55	135.57	121.70
62	D3	1119	G	N3-C4-N9	-5.54	122.68	126.00
62	D3	1620	C	P-O3'-C3'	5.54	126.34	119.70
62	D3	1653	C	N1-C2-N3	5.54	123.08	119.20
4	UD	225	LEU	CA-CB-CG	5.53	128.03	115.30
62	D3	35	U	C2-N1-C1'	5.53	124.34	117.70
62	D3	44	U	C2-N1-C1'	5.53	124.34	117.70
62	D3	1112	G	N1-C6-O6	-5.51	116.59	119.90
41	JP	269	TRP	C-N-CA	-5.51	107.93	121.70
62	D3	638	U	C2-N1-C1'	5.50	124.30	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	1007	C	N1-C2-O2	5.49	122.20	118.90
62	D3	129	U	C5-C6-N1	5.49	125.45	122.70
62	D3	25	C	C6-N1-C1'	-5.48	114.23	120.80
62	D3	190	C	N1-C2-N3	5.47	123.03	119.20
62	D3	935	U	N1-C2-O2	5.47	126.63	122.80
62	D3	1060	U	C6-N1-C1'	-5.47	113.54	121.20
62	D3	185	U	C2-N1-C1'	5.47	124.26	117.70
62	D3	415	C	N3-C2-O2	-5.46	118.08	121.90
63	D4	154	C	N3-C2-O2	-5.46	118.08	121.90
62	D3	97	C	C6-N1-C2	-5.46	118.12	120.30
62	D3	1646	C	C6-N1-C2	-5.46	118.12	120.30
62	D3	1636	C	N1-C2-O2	5.45	122.17	118.90
62	D3	133	U	N1-C2-O2	5.45	126.61	122.80
62	D3	623	A	C5-C6-N1	5.45	120.42	117.70
62	D3	465	G	C6-N1-C2	-5.44	121.83	125.10
62	D3	230	C	N1-C2-O2	5.43	122.16	118.90
62	D3	849	C	C5-C6-N1	5.43	123.72	121.00
62	D3	278	U	P-O3'-C3'	5.43	126.21	119.70
62	D3	190	C	C6-N1-C1'	5.42	127.31	120.80
62	D3	1510	U	N1-C2-O2	5.42	126.59	122.80
62	D3	794	U	N1-C2-O2	5.41	126.58	122.80
63	D4	168	C	C6-N1-C1'	5.40	127.28	120.80
63	D4	144	G	N3-C4-N9	-5.40	122.76	126.00
62	D3	166	C	N1-C2-O2	5.40	122.14	118.90
62	D3	1059	U	C2-N1-C1'	5.38	124.15	117.70
10	UJ	567	LEU	CA-CB-CG	5.38	127.66	115.30
61	D2	57	C	C2-N1-C1'	5.37	124.71	118.80
62	D3	554	C	C6-N1-C1'	-5.37	114.36	120.80
62	D3	1739	C	C6-N1-C2	-5.36	118.16	120.30
62	D3	1473	U	N3-C2-O2	-5.35	118.45	122.20
62	D3	50	C	N1-C2-O2	5.35	122.11	118.90
62	D3	1536	G	N3-C4-N9	5.35	129.21	126.00
62	D3	314	C	N1-C2-O2	-5.34	115.69	118.90
62	D3	695	U	C2-N1-C1'	5.32	124.08	117.70
62	D3	4	C	C6-N1-C2	-5.32	118.17	120.30
20	UT	1440	LEU	CA-CB-CG	5.32	127.53	115.30
62	D3	986	G	C8-N9-C1'	5.32	133.91	127.00
63	D4	168	C	C5-C4-N4	5.32	123.92	120.20
62	D3	1536	G	C2-N3-C4	5.31	114.56	111.90
62	D3	75	U	N3-C2-O2	-5.31	118.48	122.20
63	D4	333	U	O4'-C1'-N1	5.31	112.45	108.20
62	D3	110	U	N3-C2-O2	-5.30	118.49	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	CD	182	ASP	CB-CG-OD1	5.30	123.07	118.30
62	D3	1112	G	C5-C6-O6	5.29	131.77	128.60
27	CG	44	LEU	CA-CB-CG	-5.27	103.17	115.30
62	D3	45	U	N3-C2-O2	-5.27	118.51	122.20
62	D3	680	U	C2-N1-C1'	5.27	124.02	117.70
63	D4	62	C	N1-C2-O2	5.26	122.06	118.90
62	D3	654	C	N3-C2-O2	-5.26	118.22	121.90
62	D3	74	U	C6-N1-C1'	-5.25	113.84	121.20
63	D4	91	C	C6-N1-C2	-5.25	118.20	120.30
62	D3	45	U	N1-C2-O2	5.25	126.47	122.80
62	D3	782	U	P-O3'-C3'	5.25	125.99	119.70
62	D3	418	G	C4-N9-C1'	5.24	133.31	126.50
27	CF	44	LEU	CA-CB-CG	-5.24	103.25	115.30
62	D3	861	U	C2-N1-C1'	5.24	123.99	117.70
62	D3	954	G	N3-C4-N9	5.24	129.14	126.00
62	D3	1536	G	N3-C4-C5	-5.23	125.98	128.60
62	D3	1696	G	C8-N9-C1'	5.22	133.79	127.00
62	D3	1082	C	N1-C2-O2	5.22	122.03	118.90
62	D3	532	U	C5-C6-N1	5.22	125.31	122.70
62	D3	44	U	N1-C2-O2	5.21	126.45	122.80
62	D3	867	G	N9-C4-C5	5.21	107.48	105.40
62	D3	1754	A	N1-C6-N6	-5.21	115.48	118.60
62	D3	1051	G	N3-C4-N9	-5.19	122.88	126.00
62	D3	415	C	C2-N3-C4	-5.18	117.31	119.90
62	D3	75	U	C5-C6-N1	5.18	125.29	122.70
62	D3	1059	U	N1-C2-O2	5.18	126.42	122.80
1	UA	339	LEU	CA-CB-CG	5.17	127.19	115.30
62	D3	58	U	N3-C2-O2	-5.16	118.59	122.20
62	D3	1042	G	C5-C6-O6	5.16	131.70	128.60
63	D4	160	G	N3-C2-N2	5.16	123.51	119.90
62	D3	748	U	C2-N1-C1'	5.14	123.87	117.70
62	D3	74	U	C5-C6-N1	5.14	125.27	122.70
62	D3	479	C	N3-C2-O2	-5.13	118.31	121.90
62	D3	1082	C	N3-C2-O2	-5.13	118.31	121.90
62	D3	536	C	C2-N1-C1'	5.12	124.44	118.80
62	D3	1664	C	N1-C2-O2	5.12	121.97	118.90
41	JP	83	LEU	CA-CB-CG	5.12	127.08	115.30
62	D3	912	U	P-O3'-C3'	5.12	125.84	119.70
62	D3	543	C	N1-C2-O2	5.11	121.97	118.90
62	D3	4	C	C2-N1-C1'	5.11	124.42	118.80
61	D2	57	C	C5-C6-N1	5.10	123.55	121.00
62	D3	1086	A	O4'-C1'-N9	5.10	112.28	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	D3	1058	U	N3-C2-O2	-5.09	118.63	122.20
62	D3	517	U	N3-C2-O2	-5.09	118.64	122.20
62	D3	190	C	N1-C2-O2	5.09	121.95	118.90
62	D3	1636	C	N3-C2-O2	-5.09	118.34	121.90
62	D3	962	C	N1-C2-N3	5.08	122.76	119.20
20	UT	683	ASP	CB-CG-OD1	5.08	122.87	118.30
19	US	222	LEU	CA-CB-CG	5.07	126.97	115.30
62	D3	622	A	N1-C2-N3	5.07	131.84	129.30
62	D3	623	A	N3-C4-N9	5.07	131.46	127.40
62	D3	1657	U	P-O3'-C3'	5.07	125.79	119.70
62	D3	276	C	C6-N1-C2	-5.07	118.27	120.30
61	D2	290	G	N3-C4-N9	5.07	129.04	126.00
62	D3	418	G	N3-C4-N9	5.07	129.04	126.00
62	D3	418	G	N3-C4-C5	-5.06	126.07	128.60
62	D3	1572	G	C6-C5-N7	5.06	133.44	130.40
62	D3	722	G	N3-C4-N9	5.05	129.03	126.00
62	D3	1057	U	OP1-P-O3'	5.05	116.32	105.20
62	D3	610	G	C4-N9-C1'	5.05	133.07	126.50
63	D4	144	G	C5-C6-O6	5.05	131.63	128.60
63	D4	266	C	C6-N1-C2	-5.04	118.28	120.30
62	D3	986	G	C6-C5-N7	5.03	133.42	130.40
62	D3	1513	G	N1-C2-N2	-5.03	111.67	116.20
62	D3	1664	C	C2-N1-C1'	5.03	124.34	118.80
62	D3	545	A	C2-N3-C4	5.03	113.11	110.60
62	D3	638	U	N3-C2-O2	-5.03	118.68	122.20
62	D3	1536	G	C8-N9-C1'	-5.03	120.47	127.00
52	DN	134	VAL	C-N-CA	5.02	134.26	121.70
20	UT	1960	LEU	CB-CG-CD2	-5.01	102.49	111.00
62	D3	1513	G	N1-C6-O6	-5.01	116.90	119.90

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
25	CD	240	LEU	Peptide
49	DI	49	ARG	Peptide
59	DY	33	ALA	Peptide
35	JD	1018	LYS	Peptide
35	JD	1059	ALA	Peptide
13	UM	400	GLY	Peptide
15	UO	278	ASP	Peptide
20	UT	1925	ASP	Peptide

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Mol	Chain	Res	Type	Group
21	UU	94	TYR	Peptide
23	UX	52	PHE	Peptide

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	UA	6322	0	6223	108	0
2	UB	4105	0	3846	77	0
3	UC	694	0	742	8	0
4	UD	5269	0	5281	126	0
5	UE	3772	0	3806	83	0
6	UF	2487	0	2533	32	0
7	UG	3718	0	3721	86	0
8	UH	2771	0	1817	33	0
9	UI	723	0	770	17	0
10	UJ	8961	0	9273	178	0
11	UK	1845	0	1926	38	0
12	UL	6199	0	6221	140	0
13	UM	5970	0	6008	146	0
14	UN	1667	0	1658	28	0
15	UO	3911	0	3906	100	0
16	UP	495	0	561	11	0
17	UQ	6557	0	6489	158	0
18	UR	3791	0	3772	67	0
19	US	3587	0	3200	64	0
20	UT	18789	0	19126	362	0
21	UU	6922	0	6886	123	0
22	UV	8753	0	8867	212	0
23	UX	1330	0	1416	29	0
24	CA	1881	0	1928	38	0
24	CB	1782	0	1826	52	0
25	CD	2994	0	3018	53	0
26	CE	3326	0	3406	70	0
27	CF	916	0	964	13	0
27	CG	916	0	964	16	0
28	CH	3736	0	3756	67	0
29	CI	1468	0	1519	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	CJ	2081	0	2112	58	0
31	CK	1789	0	1801	34	0
32	CL	6551	0	6706	117	0
33	CM	2781	0	2878	50	0
34	CN	1868	0	1845	37	0
35	JD	6509	0	6724	181	0
36	JF	1701	0	1767	47	0
36	JG	1799	0	1872	41	0
37	JH	1295	0	570	2	0
38	JI	1314	0	610	4	0
39	JL	2262	0	2330	53	0
40	JM	1131	0	1161	15	0
41	JP	3765	0	3714	59	0
42	Db	610	0	629	0	0
43	JJ	1573	0	1650	29	0
44	DA	1912	0	2023	42	0
45	DE	1950	0	2035	29	0
46	DF	1669	0	1724	19	0
47	DG	1755	0	1846	30	0
48	DH	1361	0	1437	22	0
49	DI	1399	0	1431	23	0
50	DJ	1494	0	1573	14	0
51	DL	1129	0	1196	14	0
52	DN	1192	0	1255	20	0
53	DO	922	0	946	13	0
54	DQ	969	0	1025	23	0
55	DS	861	0	896	16	0
56	DT	1112	0	1124	17	0
57	DW	1021	0	1060	12	0
58	DX	1115	0	1191	18	0
59	DY	1073	0	1132	13	0
60	Dc	497	0	535	0	0
61	D2	1741	0	876	60	0
62	D3	30041	0	15138	476	0
63	D4	4723	0	2398	104	0
64	Db	1	0	0	0	0
64	UX	1	0	0	0	0
65	CL	32	0	12	1	0
66	CL	1	0	0	0	0
All	All	220657	0	202651	3829	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 9.

All (3829) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:356:LEU:HD23	4:UD:372:MET:CB	1.55	1.35
1:UA:77:GLY:HA3	1:UA:95:PHE:O	1.26	1.31
32:CL:964:ALA:O	32:CL:975:GLU:HA	1.29	1.30
62:D3:618:U:C2	62:D3:1086:A:N6	2.03	1.26
15:UO:191:GLY:HA3	15:UO:211:HIS:O	1.07	1.25
15:UO:321:GLY:HA2	15:UO:326:LEU:O	1.38	1.24
15:UO:319:VAL:HA	15:UO:328:ALA:O	1.35	1.23
12:UL:671:PHE:HA	12:UL:684:TRP:O	1.12	1.23
21:UU:228:GLY:HA3	21:UU:246:ILE:O	1.08	1.22
12:UL:673:VAL:HA	12:UL:682:ARG:O	1.47	1.14
17:UQ:360:MET:HB2	17:UQ:368:ASP:O	1.48	1.12
15:UO:279:GLY:HA3	15:UO:298:PHE:O	1.50	1.11
15:UO:191:GLY:CA	15:UO:211:HIS:O	2.00	1.09
4:UD:356:LEU:CD2	4:UD:372:MET:HB2	1.81	1.09
45:DE:29:PRO:HD3	62:D3:448:C:OP1	1.50	1.09
62:D3:1043:A:H61	62:D3:1075:C:N4	1.48	1.08
12:UL:671:PHE:CA	12:UL:684:TRP:O	2.03	1.07
12:UL:675:SER:HA	12:UL:680:SER:O	1.52	1.07
4:UD:46:ILE:HD12	4:UD:355:THR:O	1.55	1.06
62:D3:1699:G:N2	62:D3:1702:A:H62	1.53	1.06
62:D3:1043:A:N6	62:D3:1075:C:H42	1.55	1.05
4:UD:199:ASP:HA	4:UD:215:ALA:O	1.57	1.05
13:UM:30:LYS:HA	13:UM:45:LEU:O	1.58	1.04
21:UU:228:GLY:CA	21:UU:246:ILE:O	2.05	1.03
62:D3:126:A:H62	62:D3:291:G:N2	1.55	1.03
62:D3:1677:C:N4	62:D3:1724:U:H3	1.56	1.03
36:JF:167:ILE:O	36:JF:171:LEU:HB2	1.59	1.02
19:US:495:MET:O	19:US:499:LEU:HB2	1.60	1.01
7:UG:132:GLY:HA3	7:UG:150:LEU:O	1.59	1.01
63:D4:95:A:H61	63:D4:321:C:N4	1.58	1.01
8:UH:341:LEU:HA	8:UH:358:VAL:O	1.60	1.00
62:D3:629:U:C2	62:D3:970:A:N6	2.31	0.98
7:UG:132:GLY:CA	7:UG:150:LEU:O	2.12	0.98
62:D3:1646:C:H42	62:D3:1754:A:N6	1.60	0.97
62:D3:1646:C:N4	62:D3:1754:A:H61	1.60	0.97
63:D4:205:G:O6	63:D4:245:U:C4	2.18	0.97
63:D4:95:A:H61	63:D4:321:C:H42	0.96	0.96
62:D3:717:C:H42	62:D3:720:G:N2	1.61	0.96
19:US:191:ILE:O	19:US:195:PHE:HB2	1.65	0.96
62:D3:231:U:C2	62:D3:234:G:C6	2.54	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:717:C:N4	62:D3:720:G:H22	1.64	0.95
63:D4:95:A:N6	63:D4:321:C:H42	1.65	0.94
62:D3:126:A:N6	62:D3:291:G:H21	1.64	0.94
61:D2:466:A:H61	63:D4:51:C:N4	1.66	0.94
36:JG:167:ILE:O	36:JG:171:LEU:HB2	1.67	0.94
62:D3:996:U:H3	62:D3:1008:G:H1	0.99	0.93
62:D3:826:U:C2	62:D3:846:G:O6	2.22	0.93
62:D3:231:U:O2	62:D3:234:G:C6	2.23	0.92
62:D3:1699:G:H21	62:D3:1702:A:N6	1.67	0.92
62:D3:1734:U:C2'	62:D3:1735:U:H5'	1.99	0.92
62:D3:629:U:N3	62:D3:970:A:C6	2.38	0.91
62:D3:717:C:H42	62:D3:720:G:H22	0.95	0.91
4:UD:356:LEU:CD2	4:UD:372:MET:CB	2.44	0.90
62:D3:231:U:C2	62:D3:234:G:O6	2.24	0.90
62:D3:71:A:C2	62:D3:81:G:N1	2.40	0.89
35:JD:613:ILE:O	35:JD:617:LEU:HB2	1.73	0.89
62:D3:71:A:C2	62:D3:81:G:C2	2.61	0.89
15:UO:358:GLN:O	15:UO:362:ARG:HB3	1.73	0.88
62:D3:23:G:O6	62:D3:602:U:C4	2.27	0.88
62:D3:126:A:H62	62:D3:291:G:H21	0.89	0.88
61:D2:287:G:O6	63:D4:67:G:C2	2.27	0.87
62:D3:618:U:N3	62:D3:1086:A:N6	2.22	0.86
62:D3:1699:G:H21	62:D3:1702:A:H62	0.88	0.86
61:D2:287:G:C6	63:D4:67:G:N2	2.44	0.86
4:UD:356:LEU:HD23	4:UD:372:MET:HB2	0.86	0.86
34:CN:200:GLU:O	34:CN:204:SER:HB3	1.76	0.85
4:UD:46:ILE:CD1	4:UD:355:THR:O	2.24	0.85
62:D3:1646:C:H42	62:D3:1754:A:H61	0.85	0.84
20:UT:2086:ILE:O	20:UT:2090:ALA:HB2	1.77	0.84
1:UA:537:GLY:O	1:UA:555:CYS:HB2	1.77	0.84
12:UL:413:SER:HA	12:UL:428:PHE:O	1.76	0.84
33:CM:306:GLU:HA	33:CM:356:GLY:O	1.77	0.84
62:D3:23:G:C6	62:D3:602:U:N3	2.47	0.83
63:D4:205:G:N1	63:D4:245:U:C2	2.47	0.83
22:UV:828:ASP:O	22:UV:837:ILE:HB	1.78	0.82
62:D3:555:A:H62	62:D3:571:G:H21	1.28	0.82
62:D3:1673:G:N1	62:D3:1728:A:C2	2.46	0.82
20:UT:2109:VAL:O	20:UT:2113:ASP:HB2	1.77	0.82
61:D2:290:G:C6	63:D4:64:A:C6	2.67	0.82
1:UA:77:GLY:CA	1:UA:95:PHE:O	2.21	0.81
62:D3:71:A:N1	62:D3:81:G:C6	2.48	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:263:THR:HG1	12:UL:270:SER:N	1.79	0.81
19:US:386:LEU:O	19:US:390:SER:HB2	1.81	0.80
32:CL:964:ALA:O	32:CL:975:GLU:CA	2.23	0.80
62:D3:23:G:N1	62:D3:602:U:C2	2.51	0.79
15:UO:321:GLY:CA	15:UO:326:LEU:O	2.27	0.79
62:D3:826:U:O2	62:D3:846:G:C6	2.36	0.79
62:D3:1673:G:H1	62:D3:1728:A:H2	1.29	0.78
33:CM:282:GLU:O	33:CM:286:SER:HB3	1.84	0.78
32:CL:855:GLN:HE22	32:CL:1032:LEU:H	1.30	0.78
62:D3:1499:G:H1	62:D3:1508:U:H3	1.29	0.78
62:D3:1734:U:O2'	62:D3:1735:U:H5'	1.84	0.77
62:D3:976:G:H1	62:D3:1023:A:HO2'	1.31	0.77
62:D3:802:G:N2	62:D3:804:A:H61	1.81	0.77
62:D3:231:U:N3	62:D3:234:G:N1	2.32	0.77
39:JL:60:VAL:HG12	39:JL:124:ILE:HB	1.65	0.77
62:D3:1553:G:H1	62:D3:1558:U:H3	1.31	0.77
63:D4:205:G:C6	63:D4:245:U:C4	2.73	0.77
17:UQ:875:MET:O	17:UQ:879:ILE:HB	1.85	0.76
62:D3:802:G:N2	62:D3:804:A:N6	2.34	0.76
24:CB:227:PRO:O	24:CB:231:ARG:HB3	1.86	0.75
62:D3:1472:C:C2	62:D3:1534:G:N2	2.53	0.75
62:D3:629:U:N3	62:D3:970:A:N6	2.34	0.75
4:UD:49:LEU:HD13	4:UD:348:VAL:HG23	1.68	0.75
34:CN:77:LYS:HE2	34:CN:147:LEU:HD11	1.67	0.75
13:UM:580:ARG:HB2	13:UM:593:CYS:HB3	1.69	0.74
13:UM:294:LEU:HB2	13:UM:303:PHE:HB2	1.68	0.74
62:D3:1158:C:N4	62:D3:1582:U:N3	2.36	0.74
4:UD:475:THR:HA	4:UD:490:SER:HA	1.68	0.73
30:CJ:150:THR:HA	30:CJ:167:LEU:O	1.89	0.73
62:D3:1677:C:H42	62:D3:1724:U:H3	0.82	0.73
61:D2:466:A:N6	63:D4:51:C:N4	2.35	0.73
48:DH:70:PHE:O	48:DH:74:GLN:HB2	1.89	0.73
4:UD:130:THR:HG23	4:UD:132:LEU:H	1.54	0.73
17:UQ:320:VAL:HA	17:UQ:334:LEU:O	1.89	0.73
26:CE:309:LEU:HG	26:CE:371:LEU:HD21	1.69	0.73
30:CJ:81:SER:HB3	31:CK:384:ARG:HD2	1.71	0.73
62:D3:1167:G:C6	62:D3:1579:U:N3	2.56	0.73
7:UG:132:GLY:HA2	7:UG:150:LEU:O	1.89	0.73
24:CB:264:GLN:HG3	24:CB:319:ARG:HH21	1.54	0.73
15:UO:32:SER:HG	15:UO:331:THR:HG1	1.37	0.72
19:US:380:ILE:HG13	19:US:402:ILE:HD12	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:626:MET:O	13:UM:630:ASP:HA	1.89	0.72
4:UD:358:ILE:CD1	4:UD:372:MET:HG2	2.19	0.72
20:UT:957:LYS:HG3	20:UT:959:PRO:HD2	1.71	0.72
61:D2:287:G:C6	63:D4:67:G:C2	2.78	0.72
15:UO:192:LEU:H	15:UO:211:HIS:H	1.39	0.71
63:D4:155:U:N3	63:D4:159:C:N4	2.38	0.71
29:CI:81:LYS:HE2	31:CK:445:VAL:HG23	1.72	0.71
41:JP:311:VAL:HG12	41:JP:322:THR:HG22	1.72	0.71
62:D3:71:A:C2	62:D3:81:G:C6	2.78	0.71
62:D3:1536:G:C6	62:D3:1538:U:C2	2.79	0.71
7:UG:150:LEU:HD13	7:UG:170:GLN:HE22	1.54	0.71
1:UA:190:HIS:HE1	1:UA:210:SER:HB2	1.56	0.71
62:D3:903:U:O2	62:D3:906:A:N7	2.23	0.71
18:UR:361:ALA:HB2	18:UR:409:ILE:HD13	1.71	0.71
2:UB:647:ILE:HA	2:UB:651:TRP:HB2	1.71	0.71
35:JD:1188:LEU:HD22	35:JD:1215:PRO:HB2	1.72	0.71
62:D3:23:G:O6	62:D3:601:A:N1	2.23	0.71
36:JF:44:VAL:HG12	36:JF:113:TYR:HB2	1.72	0.71
17:UQ:118:VAL:HB	17:UQ:130:LYS:HB2	1.73	0.70
20:UT:1592:PRO:O	20:UT:1595:SER:O	2.08	0.70
63:D4:155:U:C4	63:D4:159:C:N4	2.59	0.70
17:UQ:284:SER:O	17:UQ:288:LEU:HA	1.92	0.70
62:D3:654:C:N3	62:D3:680:U:O4	2.23	0.70
22:UV:1187:LYS:HB3	38:JI:1470:GLY:HA2	1.74	0.70
62:D3:23:G:O6	62:D3:601:A:C6	2.44	0.70
35:JD:523:ILE:HD12	35:JD:842:ILE:HG23	1.72	0.70
19:US:318:LEU:HD22	19:US:357:ARG:HH21	1.56	0.70
61:D2:466:A:N6	63:D4:51:C:H42	1.89	0.70
39:JL:59:VAL:HG13	39:JL:122:PHE:HA	1.74	0.70
24:CB:111:MET:SD	24:CB:216:ASN:ND2	2.65	0.69
32:CL:72:VAL:HG12	32:CL:137:LEU:HB3	1.73	0.69
24:CB:232:MET:SD	26:CE:61:ASN:ND2	2.66	0.69
48:DH:67:LEU:HD22	48:DH:94:ALA:HB2	1.75	0.69
4:UD:358:ILE:HD11	4:UD:372:MET:HG2	1.72	0.69
23:UX:155:THR:O	23:UX:174:SER:HA	1.92	0.69
20:UT:30:PRO:O	20:UT:33:ASN:O	2.09	0.69
62:D3:229:U:C4	62:D3:237:C:N3	2.61	0.69
7:UG:194:ARG:O	7:UG:208:ALA:O	2.10	0.69
10:UJ:408:ILE:HA	10:UJ:412:GLU:HB2	1.75	0.69
13:UM:194:ARG:HD3	13:UM:216:ARG:HD3	1.73	0.69
17:UQ:630:LEU:HB3	17:UQ:653:PHE:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:620:ASN:H	1:UA:626:THR:HG21	1.58	0.69
12:UL:412:GLY:HA3	12:UL:430:CYS:H	1.57	0.69
62:D3:1677:C:N3	62:D3:1724:U:O2	2.26	0.69
4:UD:443:GLY:HA2	4:UD:448:THR:HG22	1.75	0.69
22:UV:529:VAL:HA	22:UV:695:GLN:O	1.92	0.69
26:CE:158:LYS:HA	26:CE:283:ILE:HG12	1.73	0.69
58:DX:125:VAL:HG12	58:DX:126:LYS:HG3	1.76	0.68
30:CJ:235:GLN:HB3	30:CJ:250:VAL:O	1.93	0.68
30:CJ:275:TRP:HZ2	30:CJ:290:LEU:HA	1.58	0.68
15:UO:8:ILE:HD11	15:UO:420:GLU:HG3	1.74	0.68
12:UL:390:GLN:HG2	12:UL:394:VAL:HG22	1.75	0.68
62:D3:291:G:N2	62:D3:292:U:O4	2.27	0.68
11:UK:101:THR:HG21	32:CL:1098:ARG:HA	1.74	0.68
19:US:240:VAL:HG22	19:US:242:ASN:H	1.59	0.68
4:UD:573:VAL:HG12	4:UD:584:VAL:HG12	1.75	0.68
5:UE:438:THR:HG21	5:UE:471:ARG:HB3	1.76	0.68
20:UT:2167:VAL:HA	20:UT:2170:LYS:HD2	1.76	0.68
24:CA:155:ILE:HD11	24:CA:162:LEU:HD22	1.75	0.68
62:D3:555:A:H62	62:D3:571:G:N2	1.92	0.68
62:D3:1671:A:N6	62:D3:1730:A:O2'	2.27	0.68
63:D4:205:G:C6	63:D4:245:U:N3	2.62	0.68
61:D2:24:U:N3	61:D2:56:G:N1	2.39	0.67
22:UV:268:LEU:HB3	22:UV:294:LEU:HB2	1.76	0.67
35:JD:362:TYR:O	35:JD:366:ASN:HB2	1.93	0.67
36:JF:112:VAL:HB	36:JF:124:VAL:HB	1.76	0.67
50:DJ:23:ARG:NH1	50:DJ:27:GLU:OE2	2.27	0.67
28:CH:242:VAL:HG23	28:CH:253:THR:HG22	1.77	0.67
4:UD:212:ILE:HB	4:UD:227:HIS:HB2	1.77	0.67
7:UG:258:LEU:HB2	7:UG:268:VAL:HG12	1.76	0.67
10:UJ:218:ILE:HG23	10:UJ:263:VAL:HG11	1.76	0.67
27:CG:22:ASP:OD2	28:CH:344:ARG:NH2	2.28	0.67
36:JG:73:HIS:HB3	36:JG:76:LEU:HB2	1.76	0.67
62:D3:618:U:C2	62:D3:1086:A:C6	2.83	0.67
22:UV:260:ASP:HB3	22:UV:378:ASN:HA	1.77	0.67
56:DT:63:ARG:NH1	56:DT:67:MET:SD	2.67	0.67
62:D3:1472:C:O2	62:D3:1534:G:N2	2.28	0.67
13:UM:406:ALA:HB2	13:UM:440:VAL:HG13	1.77	0.67
26:CE:80:LYS:HG2	26:CE:103:LEU:HD21	1.76	0.67
62:D3:1536:G:C6	62:D3:1538:U:O2	2.48	0.67
28:CH:414:ILE:HD11	28:CH:480:ALA:HB2	1.77	0.67
41:JP:260:GLN:NE2	41:JP:289:TYR:OH	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:443:LYS:HB2	2:UB:448:PHE:HB2	1.77	0.66
20:UT:711:GLN:HE22	20:UT:770:TYR:H	1.42	0.66
35:JD:1154:TYR:HA	35:JD:1169:THR:O	1.95	0.66
10:UJ:638:SER:HB3	10:UJ:676:LYS:HD3	1.78	0.66
10:UJ:684:TYR:O	10:UJ:688:PHE:HB2	1.95	0.66
24:CA:128:PRO:HB3	63:D4:90:C:H5'	1.76	0.66
20:UT:2345:ARG:HH21	20:UT:2386:PRO:HD3	1.61	0.66
30:CJ:119:ARG:NH1	62:D3:1605:G:OP1	2.29	0.66
33:CM:7:LYS:HD3	33:CM:77:ARG:HD3	1.76	0.66
62:D3:1158:C:C4	62:D3:1582:U:C4	2.84	0.66
45:DE:212:ASP:O	45:DE:215:ASP:N	2.28	0.66
20:UT:549:LYS:HG2	20:UT:588:ASN:HD21	1.60	0.66
29:CI:96:ASP:O	29:CI:100:LYS:HB2	1.96	0.66
28:CH:207:ARG:NH2	63:D4:246:A:OP2	2.28	0.66
62:D3:1654:G:O5'	62:D3:1654:G:H8	1.78	0.66
62:D3:1673:G:O6	62:D3:1728:A:N1	2.28	0.66
13:UM:115:THR:HG21	43:JJ:79:PRO:HD2	1.78	0.66
15:UO:213:GLN:NE2	15:UO:233:ASN:OD1	2.29	0.66
62:D3:1734:U:H2'	62:D3:1735:U:H5'	1.74	0.66
8:UH:558:CYS:O	8:UH:585:ARG:NH1	2.29	0.66
30:CJ:100:LEU:HB2	30:CJ:144:GLU:HG2	1.78	0.66
63:D4:155:U:O2	63:D4:158:G:N1	2.26	0.66
30:CJ:77:TYR:O	30:CJ:81:SER:HB2	1.97	0.65
18:UR:408:CYS:SG	18:UR:409:ILE:N	2.69	0.65
25:CD:180:LEU:HD13	26:CE:183:ARG:HG2	1.78	0.65
61:D2:290:G:N1	63:D4:64:A:C6	2.64	0.65
4:UD:338:ALA:HB1	4:UD:361:LEU:HD11	1.78	0.65
15:UO:90:ARG:HH11	15:UO:95:LEU:HD13	1.61	0.65
21:UU:432:THR:HG1	21:UU:443:TRP:HE1	1.44	0.65
32:CL:977:LYS:NZ	62:D3:1598:U:OP2	2.28	0.65
20:UT:333:TRP:HB2	20:UT:373:THR:HG21	1.78	0.65
61:D2:478:U:H2'	61:D2:479:G:H8	1.62	0.65
62:D3:610:G:HO2'	62:D3:613:G:HO2'	1.39	0.65
4:UD:129:ALA:HB1	4:UD:530:ARG:HH11	1.61	0.65
11:UK:246:LYS:HD3	27:CF:29:ASN:HD21	1.59	0.65
12:UL:643:ASP:HB2	12:UL:650:ILE:HD11	1.77	0.65
20:UT:992:LYS:HE3	20:UT:996:ARG:HH11	1.62	0.65
27:CG:25:GLN:NE2	28:CH:323:ASP:OD1	2.30	0.65
8:UH:574:ARG:HD3	8:UH:576:ARG:HH21	1.61	0.65
62:D3:1536:G:N1	62:D3:1538:U:N3	2.44	0.65
13:UM:593:CYS:SG	13:UM:594:GLY:N	2.70	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:US:414:ILE:O	19:US:418:ASN:ND2	2.30	0.65
28:CH:489:SER:HG	28:CH:499:TRP:HE1	1.45	0.65
35:JD:617:LEU:O	35:JD:755:ARG:NH1	2.29	0.65
62:D3:706:A:H2	62:D3:732:G:H1	1.44	0.65
2:UB:712:THR:HG1	3:UC:431:THR:N	1.95	0.65
4:UD:448:THR:OG1	4:UD:470:LEU:O	2.13	0.65
7:UG:194:ARG:H	7:UG:209:GLY:HA2	1.62	0.65
13:UM:414:VAL:O	13:UM:428:ALA:HB3	1.96	0.65
26:CE:339:TYR:HB3	26:CE:343:TYR:HB2	1.78	0.65
47:DG:59:GLN:OE1	47:DG:72:ARG:NH1	2.30	0.65
4:UD:332:ASP:HB2	4:UD:352:VAL:HB	1.80	0.64
22:UV:535:LYS:H	22:UV:538:ASN:HB3	1.62	0.64
22:UV:583:ILE:HD11	22:UV:613:VAL:HB	1.77	0.64
39:JL:174:ARG:NH1	62:D3:1779:U:O4	2.29	0.64
21:UU:176:TYR:HB3	21:UU:179:LYS:HB2	1.79	0.64
50:DJ:120:LYS:H	50:DJ:124:HIS:HD2	1.43	0.64
62:D3:23:G:N1	62:D3:602:U:N3	2.45	0.64
30:CJ:94:ARG:NH2	62:D3:1606:C:OP2	2.30	0.64
39:JL:39:LEU:HD23	39:JL:41:ASN:H	1.62	0.64
52:DN:87:ASP:N	52:DN:87:ASP:OD1	2.28	0.64
12:UL:23:CYS:HB2	12:UL:41:LEU:HD11	1.77	0.64
30:CJ:282:ARG:NH2	62:D3:560:U:OP2	2.29	0.64
32:CL:855:GLN:HE21	32:CL:1016:ASN:HD22	1.45	0.64
35:JD:540:ALA:HB1	35:JD:551:LYS:HG3	1.77	0.64
41:JP:196:THR:HG1	41:JP:204:TRP:HE1	1.44	0.64
63:D4:155:U:N3	63:D4:159:C:C4	2.65	0.64
5:UE:469:ILE:HG21	5:UE:505:CYS:HA	1.79	0.64
59:DY:41:ARG:NH2	59:DY:52:LYS:O	2.30	0.64
62:D3:23:G:C6	62:D3:602:U:C4	2.86	0.64
21:UU:135:ASN:HB3	21:UU:159:VAL:HG23	1.80	0.64
62:D3:657:U:O2	62:D3:677:G:O6	2.16	0.64
13:UM:496:ALA:HB3	13:UM:509:ALA:HB3	1.80	0.64
20:UT:1679:ALA:O	20:UT:1682:LYS:NZ	2.31	0.64
36:JF:31:LEU:HD13	36:JF:40:ARG:HE	1.62	0.64
1:UA:382:THR:HG21	31:CK:477:GLU:HB3	1.80	0.64
15:UO:237:TRP:HA	15:UO:244:LYS:HA	1.79	0.64
22:UV:1153:LEU:HD22	22:UV:1163:LEU:HD11	1.80	0.64
1:UA:19:ASN:ND2	1:UA:61:ILE:O	2.31	0.64
15:UO:302:VAL:HA	15:UO:322:LEU:HA	1.80	0.64
23:UX:171:PRO:HA	23:UX:184:LYS:HB2	1.80	0.64
13:UM:281:THR:HA	13:UM:327:ILE:HB	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:1951:THR:HG23	20:UT:1996:GLN:HE22	1.62	0.64
35:JD:986:LYS:HB3	35:JD:989:LYS:HB2	1.79	0.64
62:D3:555:A:N6	62:D3:571:G:H21	1.96	0.64
22:UV:193:ALA:O	22:UV:367:ARG:NH2	2.31	0.63
20:UT:1921:LEU:O	20:UT:1924:LEU:O	2.17	0.63
26:CE:86:THR:HA	26:CE:106:ASN:O	1.97	0.63
62:D3:1167:G:C2	62:D3:1579:U:C2	2.86	0.63
8:UH:556:VAL:HG23	8:UH:557:THR:HG23	1.80	0.63
35:JD:478:ARG:HG3	35:JD:499:ARG:HH22	1.64	0.63
41:JP:327:LYS:HG2	41:JP:350:HIS:H	1.63	0.63
47:DG:137:ARG:NH1	62:D3:144:U:O4	2.30	0.63
4:UD:358:ILE:HG12	4:UD:370:ARG:O	1.97	0.63
10:UJ:1607:ARG:HG3	10:UJ:1612:ASP:HB3	1.80	0.63
15:UO:167:ALA:HA	15:UO:194:ARG:HH22	1.61	0.63
17:UQ:332:GLN:NE2	61:D2:87:C:O2	2.32	0.63
61:D2:290:G:O6	63:D4:64:A:N6	2.31	0.63
7:UG:170:GLN:O	7:UG:194:ARG:NH2	2.31	0.63
11:UK:29:GLU:HG3	11:UK:33:ASP:HB2	1.81	0.63
20:UT:1643:LEU:HD21	20:UT:1693:THR:HG21	1.81	0.63
61:D2:290:G:C6	63:D4:64:A:N1	2.67	0.63
62:D3:657:U:O2	62:D3:677:G:C6	2.51	0.63
11:UK:117:LYS:NZ	63:D4:321:C:OP1	2.32	0.63
17:UQ:116:VAL:HB	17:UQ:132:PHE:HB2	1.79	0.63
26:CE:183:ARG:NH1	26:CE:186:GLU:OE2	2.32	0.63
44:DA:92:GLN:HE21	44:DA:97:LEU:HD21	1.63	0.63
47:DG:187:LYS:NZ	62:D3:139:C:O2'	2.32	0.63
62:D3:1671:A:H62	62:D3:1730:A:HO2'	1.46	0.63
16:UP:208:ARG:HG2	16:UP:210:ALA:H	1.64	0.63
17:UQ:766:ILE:HD11	17:UQ:774:PHE:HB3	1.81	0.63
20:UT:283:SER:O	20:UT:329:LYS:NZ	2.32	0.63
10:UJ:166:ASN:HB2	26:CE:410:PRO:HD2	1.81	0.63
17:UQ:363:ASN:ND2	17:UQ:390:PRO:O	2.31	0.63
20:UT:30:PRO:HA	20:UT:33:ASN:HB3	1.81	0.63
22:UV:671:THR:HA	22:UV:677:ILE:HD11	1.80	0.63
29:CI:153:ASN:N	29:CI:153:ASN:OD1	2.32	0.63
34:CN:91:ASP:O	34:CN:121:ARG:NH1	2.32	0.63
35:JD:624:VAL:HG12	35:JD:777:VAL:HB	1.80	0.63
41:JP:447:THR:HG21	62:D3:1051:G:H21	1.63	0.63
13:UM:412:ALA:O	13:UM:430:TYR:HB2	1.99	0.63
32:CL:606:VAL:O	33:CM:15:GLN:NE2	2.32	0.63
32:CL:830:ARG:NH1	58:DX:138:GLU:OE2	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:415:LYS:HG3	12:UL:427:THR:HG22	1.81	0.62
25:CD:374:ARG:NH1	63:D4:259:C:OP2	2.32	0.62
35:JD:613:ILE:O	35:JD:616:LYS:O	2.17	0.62
35:JD:861:ASN:HB2	35:JD:864:ASN:HD22	1.63	0.62
53:DO:124:ASP:OD2	62:D3:885:G:N2	2.32	0.62
62:D3:1117:U:O2	62:D3:1119:G:C6	2.52	0.62
9:UI:508:ARG:HA	9:UI:511:LYS:HD2	1.81	0.62
23:UX:56:ASN:ND2	23:UX:169:GLY:O	2.32	0.62
35:JD:1035:MET:HA	35:JD:1038:ILE:HD12	1.79	0.62
7:UG:271:LEU:HB3	14:UN:828:ASN:HB3	1.79	0.62
17:UQ:341:ILE:HG22	17:UQ:358:LEU:HG	1.80	0.62
30:CJ:75:ASP:N	30:CJ:75:ASP:OD1	2.32	0.62
30:CJ:278:ARG:HD3	62:D3:1596:C:H41	1.64	0.62
41:JP:286:ALA:HB3	41:JP:301:PHE:HB2	1.82	0.62
61:D2:24:U:O2	61:D2:56:G:N2	2.31	0.62
4:UD:62:PRO:HG2	4:UD:65:LEU:HB2	1.79	0.62
15:UO:127:THR:HA	15:UO:144:SER:HA	1.80	0.62
32:CL:977:LYS:NZ	62:D3:1597:A:OP1	2.29	0.62
56:DT:14:PHE:HE2	56:DT:63:ARG:HB2	1.65	0.62
62:D3:1043:A:H61	62:D3:1075:C:H42	0.72	0.62
1:UA:523:MET:HG2	1:UA:530:VAL:HG22	1.81	0.62
10:UJ:556:LYS:O	10:UJ:592:ARG:NH2	2.33	0.62
22:UV:800:GLU:HG2	22:UV:836:GLU:HB2	1.81	0.62
24:CB:116:SER:H	24:CB:122:ARG:HH21	1.48	0.62
43:JJ:260:TYR:HA	43:JJ:263:LEU:HD12	1.82	0.62
62:D3:1673:G:C6	62:D3:1728:A:N1	2.67	0.62
10:UJ:550:TYR:O	10:UJ:553:SER:C	2.38	0.62
31:CK:401:SER:O	43:JJ:218:ASN:ND2	2.33	0.62
31:CK:478:ASP:N	31:CK:478:ASP:OD1	2.33	0.62
62:D3:58:U:O2	62:D3:452:A:N7	2.32	0.62
17:UQ:36:ARG:HH11	17:UQ:93:LEU:HG	1.64	0.62
20:UT:30:PRO:O	20:UT:33:ASN:C	2.38	0.62
35:JD:738:LEU:O	35:JD:741:LYS:NZ	2.29	0.62
55:DS:48:LYS:HD2	56:DT:35:ASP:HB2	1.81	0.62
62:D3:1117:U:O2	62:D3:1119:G:O6	2.18	0.62
2:UB:537:LEU:HD11	2:UB:635:VAL:HG11	1.82	0.62
4:UD:199:ASP:CA	4:UD:215:ALA:O	2.42	0.62
10:UJ:1485:VAL:HG21	10:UJ:1531:ILE:HG13	1.81	0.62
20:UT:1921:LEU:O	20:UT:1924:LEU:C	2.38	0.62
28:CH:235:HIS:ND1	28:CH:257:ASP:OD2	2.33	0.62
47:DG:85:ARG:O	47:DG:87:ARG:NH1	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DQ:98:ASP:N	54:DQ:98:ASP:OD1	2.32	0.62
4:UD:265:TRP:HA	4:UD:272:LEU:HA	1.82	0.62
10:UJ:754:GLU:HA	10:UJ:757:ILE:HD12	1.80	0.62
35:JD:1020:GLN:HA	35:JD:1023:ILE:HG12	1.81	0.62
2:UB:478:ILE:HG23	2:UB:524:LEU:HD11	1.79	0.61
18:UR:181:GLU:HB3	21:UU:281:ARG:HH21	1.65	0.61
20:UT:1151:ILE:HG22	20:UT:1201:LEU:HD23	1.82	0.61
22:UV:656:ARG:HH11	22:UV:668:VAL:HG21	1.65	0.61
30:CJ:119:ARG:NH2	30:CJ:124:MET:SD	2.73	0.61
35:JD:762:ASN:HA	35:JD:765:GLU:HB3	1.81	0.61
35:JD:1211:CYS:SG	35:JD:1238:GLN:NE2	2.67	0.61
39:JL:259:LEU:HD11	39:JL:264:GLU:HB2	1.81	0.61
62:D3:230:C:N4	62:D3:236:A:H61	1.98	0.61
10:UJ:40:ALA:O	10:UJ:123:ARG:NH1	2.33	0.61
20:UT:1743:LYS:O	20:UT:1747:SER:HB2	1.99	0.61
21:UU:125:GLY:HA2	26:CE:430:ASP:HA	1.81	0.61
25:CD:302:ASN:ND2	25:CD:397:SER:O	2.27	0.61
30:CJ:164:GLN:NE2	30:CJ:260:GLU:OE1	2.33	0.61
32:CL:841:THR:HG22	32:CL:860:TYR:H	1.66	0.61
46:DF:26:ALA:HB3	54:DQ:28:LEU:HB3	1.82	0.61
12:UL:357:THR:HG1	12:UL:361:THR:HG1	1.44	0.61
21:UU:122:CYS:SG	21:UU:123:ILE:N	2.73	0.61
23:UX:93:LYS:NZ	23:UX:95:ASN:OD1	2.29	0.61
26:CE:215:ARG:NH1	26:CE:242:SER:OG	2.33	0.61
5:UE:23:ALA:HB1	18:UR:261:PRO:HG3	1.82	0.61
5:UE:518:ASN:HB2	5:UE:521:SER:HB2	1.82	0.61
19:US:270:SER:O	19:US:274:TYR:HB2	2.00	0.61
20:UT:437:LEU:O	20:UT:764:ARG:NH2	2.33	0.61
30:CJ:249:GLU:OE2	30:CJ:253:ARG:NH2	2.33	0.61
32:CL:111:LYS:O	32:CL:310:THR:OG1	2.18	0.61
44:DA:32:ILE:HG22	44:DA:96:LEU:HD12	1.82	0.61
7:UG:74:LEU:HB2	7:UG:404:PRO:HG2	1.81	0.61
17:UQ:559:LYS:HG2	17:UQ:612:SER:HA	1.82	0.61
4:UD:352:VAL:HG13	4:UD:352:VAL:O	1.99	0.61
8:UH:642:LEU:HD22	9:UI:502:ARG:HD3	1.81	0.61
13:UM:622:ALA:HB3	13:UM:635:ALA:HB3	1.81	0.61
17:UQ:624:HIS:HB3	17:UQ:631:GLN:HB2	1.81	0.61
22:UV:1195:LYS:NZ	22:UV:1210:GLU:OE1	2.26	0.61
32:CL:831:ARG:NH2	32:CL:835:HIS:O	2.33	0.61
62:D3:992:A:O2'	62:D3:1785:U:O2	2.19	0.61
62:D3:1167:G:N1	62:D3:1579:U:C2	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:D4:63:C:H2'	63:D4:64:A:H8	1.65	0.61
19:US:316:PRO:HA	19:US:319:ALA:HB3	1.83	0.61
2:UB:440:ASN:HD21	2:UB:442:LEU:HG	1.66	0.61
6:UF:11:CYS:SG	6:UF:36:ARG:NH2	2.74	0.61
17:UQ:266:ASN:ND2	17:UQ:306:SER:O	2.34	0.61
19:US:371:LEU:HB3	19:US:375:LEU:HD22	1.83	0.61
22:UV:577:ARG:NH2	22:UV:626:LYS:O	2.34	0.61
35:JD:855:LYS:HG3	35:JD:889:LEU:HD21	1.82	0.61
36:JG:46:ALA:HA	36:JG:115:GLN:HB3	1.82	0.61
52:DN:121:ARG:NH1	62:D3:868:G:OP1	2.34	0.61
4:UD:356:LEU:HD23	4:UD:372:MET:CG	2.27	0.61
27:CF:46:ARG:NH1	63:D4:326:U:OP1	2.33	0.61
4:UD:356:LEU:CD2	4:UD:372:MET:CG	2.79	0.60
15:UO:224:THR:HG23	15:UO:225:GLN:HG3	1.83	0.60
32:CL:269:VAL:O	32:CL:792:VAL:HA	2.01	0.60
62:D3:18:C:H2'	62:D3:19:A:H8	1.66	0.60
1:UA:846:TYR:HE1	21:UU:909:LEU:HB3	1.66	0.60
10:UJ:246:LEU:O	10:UJ:285:ASN:ND2	2.34	0.60
20:UT:2031:HIS:NE2	48:DH:87:ASP:OD2	2.34	0.60
32:CL:174:LEU:HD12	32:CL:206:TYR:HB3	1.83	0.60
62:D3:826:U:C2	62:D3:846:G:C6	2.88	0.60
4:UD:743:PHE:HB3	4:UD:755:ILE:HD12	1.83	0.60
12:UL:135:ARG:NH2	12:UL:173:GLY:O	2.34	0.60
17:UQ:426:ARG:NH2	61:D2:67:G:OP2	2.32	0.60
20:UT:1228:LEU:HB3	20:UT:1271:LEU:HD21	1.83	0.60
40:JM:165:ASN:ND2	40:JM:168:GLU:OE2	2.30	0.60
49:DI:92:ARG:HE	49:DI:93:THR:HG23	1.66	0.60
62:D3:1030:A:C5	62:D3:1792:G:C6	2.89	0.60
63:D4:2:U:OP1	63:D4:3:C:H5''	2.02	0.60
5:UE:277:LYS:HG2	5:UE:324:ASN:HA	1.84	0.60
20:UT:1332:ILE:HD12	20:UT:2427:THR:HG23	1.83	0.60
24:CB:212:LYS:HZ1	26:CE:149:ARG:HH12	1.48	0.60
36:JG:179:THR:HB	36:JG:224:LYS:HG2	1.83	0.60
41:JP:109:HIS:HD2	41:JP:113:VAL:HG12	1.65	0.60
47:DG:56:ASN:HD22	62:D3:154:G:H1'	1.66	0.60
28:CH:152:VAL:HG13	28:CH:562:GLY:HA2	1.84	0.60
28:CH:333:MET:SD	28:CH:335:ARG:NH1	2.73	0.60
35:JD:621:ALA:HB3	35:JD:773:VAL:HA	1.83	0.60
35:JD:1152:MET:HG2	35:JD:1170:LEU:HD23	1.83	0.60
62:D3:126:A:N6	62:D3:291:G:N2	2.34	0.60
10:UJ:186:MET:HE1	10:UJ:233:GLN:HG3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:UV:222:PHE:HA	22:UV:225:LEU:HD13	1.83	0.60
23:UX:129:SER:O	23:UX:144:ARG:NH2	2.35	0.60
24:CA:230:TYR:OH	24:CA:256:ASN:OD1	2.19	0.60
35:JD:1133:VAL:HG13	35:JD:1165:THR:HG23	1.82	0.60
49:DI:178:ARG:NH1	62:D3:207:U:O2	2.31	0.60
52:DN:13:SER:OG	52:DN:14:SER:N	2.35	0.60
59:DY:61:ARG:NH2	62:D3:530:C:O2	2.33	0.60
62:D3:71:A:H2	62:D3:81:G:C2	2.19	0.60
62:D3:826:U:O2	62:D3:846:G:O6	2.20	0.60
15:UO:215:VAL:HA	15:UO:230:GLY:HA3	1.82	0.60
20:UT:1706:LYS:O	20:UT:1760:ASN:ND2	2.33	0.60
22:UV:1133:PRO:HG2	22:UV:1139:LEU:HD22	1.84	0.60
32:CL:210:VAL:HG23	32:CL:210:VAL:O	2.00	0.60
32:CL:945:THR:OG1	62:D3:1595:U:OP1	2.18	0.60
48:DH:130:VAL:HG21	48:DH:135:ILE:HG13	1.84	0.60
52:DN:124:ARG:NH1	62:D3:628:G:OP1	2.35	0.60
62:D3:23:G:C6	62:D3:601:A:N1	2.69	0.60
2:UB:548:ARG:HE	2:UB:642:SER:HB3	1.66	0.60
4:UD:127:ASP:HB2	4:UD:134:LEU:HB2	1.83	0.60
12:UL:888:ARG:HH22	13:UM:807:ASP:HB2	1.67	0.60
13:UM:464:LYS:HZ3	13:UM:466:TRP:HB2	1.67	0.60
15:UO:2:SER:OG	15:UO:3:THR:N	2.35	0.60
22:UV:856:THR:HG22	22:UV:858:ARG:H	1.66	0.60
32:CL:777:ARG:NH2	32:CL:781:GLU:OE2	2.35	0.60
41:JP:280:ALA:HB2	41:JP:311:VAL:HG13	1.84	0.60
61:D2:290:G:C6	63:D4:64:A:N6	2.70	0.60
3:UC:610:ASN:ND2	23:UX:131:SER:O	2.35	0.60
32:CL:123:ASP:OD1	32:CL:123:ASP:N	2.34	0.60
46:DF:94:THR:HG22	46:DF:114:ILE:HG13	1.83	0.60
62:D3:89:G:C6	62:D3:452:A:N6	2.70	0.60
62:D3:1553:G:C2	62:D3:1559:A:C2	2.90	0.60
63:D4:178:U:O2	63:D4:188:A:N7	2.34	0.60
13:UM:122:THR:HA	13:UM:146:THR:HG23	1.84	0.60
20:UT:1144:GLU:HG2	20:UT:1189:LEU:HA	1.84	0.60
62:D3:777:C:H3'	62:D3:778:G:H21	1.65	0.60
14:UN:336:THR:HG23	14:UN:339:GLN:H	1.67	0.59
20:UT:139:ALA:O	20:UT:142:PHE:O	2.20	0.59
20:UT:238:GLU:HA	20:UT:241:THR:HG22	1.82	0.59
20:UT:264:THR:O	20:UT:313:ARG:NH1	2.35	0.59
20:UT:2444:ARG:NH2	62:D3:829:A:OP2	2.35	0.59
24:CA:222:GLU:OE1	25:CD:158:TYR:OH	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JG:124:VAL:HG22	36:JG:160:LEU:HD22	1.84	0.59
51:DL:55:ASP:OD2	51:DL:82:ARG:NH1	2.35	0.59
57:DW:18:GLU:HB2	57:DW:65:LEU:HD11	1.84	0.59
58:DX:19:ARG:NH2	62:D3:609:U:O2	2.33	0.59
13:UM:62:GLN:HB3	13:UM:81:GLN:HB2	1.84	0.59
30:CJ:227:ARG:HH12	31:CK:365:LEU:HD13	1.66	0.59
33:CM:14:SER:HB2	33:CM:36:ILE:HG23	1.85	0.59
52:DN:55:ARG:NH1	52:DN:56:ASP:OD1	2.35	0.59
56:DT:63:ARG:NH1	62:D3:1481:C:OP1	2.34	0.59
13:UM:749:ASN:ND2	31:CK:511:ASN:O	2.34	0.59
36:JF:45:LEU:HD11	36:JF:208:ALA:HB2	1.84	0.59
36:JG:177:LYS:HG2	36:JG:221:VAL:HG12	1.85	0.59
41:JP:329:ILE:HG23	41:JP:343:TYR:HB2	1.83	0.59
57:DW:24:GLN:OE1	57:DW:64:GLN:NE2	2.34	0.59
15:UO:197:ASP:HB2	15:UO:206:ILE:HD11	1.84	0.59
22:UV:1189:LEU:O	22:UV:1194:HIS:NE2	2.35	0.59
26:CE:323:GLU:OE2	63:D4:324:U:N3	2.31	0.59
35:JD:506:LYS:HB2	35:JD:539:ARG:HB2	1.84	0.59
50:DJ:38:ASN:HB2	50:DJ:41:GLU:HG3	1.85	0.59
1:UA:556:ARG:NH2	1:UA:575:GLU:OE1	2.36	0.59
7:UG:284:ARG:NH1	7:UG:326:ASP:O	2.35	0.59
12:UL:330:GLN:HE22	12:UL:367:ILE:HG21	1.67	0.59
17:UQ:88:ILE:HA	17:UQ:111:THR:HA	1.83	0.59
18:UR:242:ASN:ND2	18:UR:584:GLY:O	2.35	0.59
19:US:180:PHE:O	19:US:184:TYR:HB3	2.03	0.59
20:UT:1185:LEU:HD22	20:UT:1195:ILE:HD13	1.83	0.59
22:UV:397:MET:HE1	22:UV:425:VAL:HG21	1.82	0.59
26:CE:33:ASP:OD1	26:CE:37:LYS:NZ	2.36	0.59
61:D2:281:G:H2'	61:D2:282:G:C8	2.37	0.59
7:UG:430:VAL:HG21	29:CI:3:ARG:HE	1.67	0.59
47:DG:140:ASN:ND2	62:D3:168:A:OP1	2.35	0.59
49:DI:166:TYR:HB3	49:DI:184:LEU:HD12	1.84	0.59
59:DY:34:ASN:ND2	62:D3:521:A:N3	2.51	0.59
6:UF:45:SER:OG	6:UF:46:ARG:N	2.36	0.59
15:UO:193:ILE:HD11	15:UO:215:VAL:HG21	1.84	0.59
20:UT:795:ASP:OD1	20:UT:795:ASP:N	2.34	0.59
26:CE:120:ILE:O	26:CE:124:LEU:HB2	2.03	0.59
27:CG:33:LEU:HD11	27:CG:100:ALA:HB1	1.85	0.59
36:JF:180:LEU:HD21	36:JF:206:VAL:HG13	1.84	0.59
4:UD:549:VAL:HG12	4:UD:565:ARG:HG2	1.85	0.59
15:UO:108:TYR:HB3	15:UO:117:LEU:H	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:550:PRO:HG2	17:UQ:557:ILE:HD13	1.85	0.59
21:UU:144:ASP:HB3	21:UU:147:ASP:HB2	1.84	0.59
21:UU:541:LYS:NZ	21:UU:542:LEU:O	2.36	0.59
21:UU:610:ARG:NH1	21:UU:669:ASP:OD2	2.34	0.59
22:UV:1108:LEU:O	22:UV:1112:CYS:HB2	2.02	0.59
25:CD:229:LEU:HD11	25:CD:255:ALA:HB3	1.85	0.59
35:JD:408:ASP:HB2	35:JD:551:LYS:HD2	1.84	0.59
1:UA:210:SER:OG	1:UA:211:LYS:N	2.35	0.59
1:UA:494:ASP:HB3	1:UA:496:THR:HG22	1.85	0.59
1:UA:510:GLU:OE2	46:DF:83:ARG:NH2	2.34	0.59
4:UD:44:ALA:HB3	4:UD:71:ARG:HB3	1.85	0.59
20:UT:952:VAL:O	20:UT:955:ASN:ND2	2.35	0.59
20:UT:1776:LEU:O	20:UT:1779:VAL:O	2.20	0.59
22:UV:173:ASN:HD21	62:D3:1699:G:H5'	1.67	0.59
32:CL:93:MET:SD	32:CL:109:SER:OG	2.61	0.59
32:CL:870:ARG:NH1	62:D3:574:G:OP1	2.36	0.59
62:D3:895:G:O6	62:D3:917:U:O4	2.21	0.59
62:D3:1594:G:O2'	62:D3:1600:A:N6	2.29	0.59
4:UD:282:ASP:OD1	4:UD:282:ASP:N	2.35	0.59
21:UU:765:GLU:OE2	43:JJ:273:ARG:NH1	2.36	0.59
27:CF:33:LEU:HD11	27:CF:100:ALA:HB1	1.85	0.59
36:JF:179:THR:HB	36:JF:224:LYS:HG2	1.85	0.59
1:UA:349:ASN:N	1:UA:363:ALA:O	2.35	0.58
62:D3:891:A:H2'	62:D3:892:A:H8	1.67	0.58
10:UJ:1595:THR:HA	10:UJ:1598:LEU:HD23	1.85	0.58
11:UK:235:ASP:O	11:UK:238:GLY:N	2.36	0.58
13:UM:583:PHE:HA	13:UM:590:LEU:HD22	1.85	0.58
17:UQ:578:ASN:HD21	61:D2:7:A:H62	1.50	0.58
21:UU:430:ILE:HB	21:UU:443:TRP:HB2	1.84	0.58
44:DA:214:LYS:NZ	62:D3:886:U:OP1	2.35	0.58
47:DG:57:ASP:HA	47:DG:106:LEU:HA	1.85	0.58
49:DI:172:ARG:HE	49:DI:175:GLN:HG3	1.67	0.58
4:UD:231:VAL:HG22	4:UD:265:TRP:HH2	1.67	0.58
5:UE:84:GLU:OE2	5:UE:86:TRP:NE1	2.35	0.58
10:UJ:1544:PHE:HA	10:UJ:1547:LEU:HD13	1.85	0.58
25:CD:223:ILE:HD11	25:CD:237:LEU:HD22	1.83	0.58
28:CH:551:ARG:NH1	63:D4:253:G:N7	2.51	0.58
35:JD:721:GLU:N	35:JD:724:THR:HG1	2.01	0.58
35:JD:1018:LYS:O	35:JD:1020:GLN:N	2.36	0.58
35:JD:1249:LYS:NZ	35:JD:1250:PHE:O	2.35	0.58
61:D2:287:G:O6	63:D4:67:G:N2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:UC:553:LYS:NZ	62:D3:586:G:O2'	2.36	0.58
13:UM:261:ALA:HB1	13:UM:290:ILE:HD13	1.85	0.58
21:UU:67:HIS:NE2	61:D2:292:A:OP1	2.30	0.58
39:JL:162:ARG:NH1	62:D3:1779:U:OP2	2.27	0.58
62:D3:1553:G:C6	62:D3:1559:A:N1	2.71	0.58
4:UD:579:ARG:NH2	4:UD:659:PHE:O	2.36	0.58
11:UK:140:ARG:NH1	16:UP:166:LEU:O	2.37	0.58
62:D3:973:A:H2'	62:D3:974:A:H8	1.69	0.58
30:CJ:119:ARG:HG3	30:CJ:122:TYR:HB2	1.84	0.58
5:UE:162:GLN:HB2	5:UE:172:LEU:HD11	1.85	0.58
5:UE:366:GLY:O	17:UQ:583:LYS:NZ	2.36	0.58
5:UE:445:LEU:HD22	5:UE:479:ILE:HG13	1.86	0.58
13:UM:602:TRP:HB3	13:UM:609:CYS:HA	1.86	0.58
18:UR:365:ASN:ND2	18:UR:367:GLN:OE1	2.37	0.58
21:UU:97:LYS:HG2	21:UU:111:GLU:HA	1.85	0.58
21:UU:637:ASN:ND2	21:UU:639:ASP:OD2	2.37	0.58
46:DF:189:THR:OG1	62:D3:1473:U:OP2	2.20	0.58
1:UA:502:ILE:O	1:UA:507:GLN:NE2	2.36	0.58
13:UM:542:CYS:O	13:UM:546:LYS:N	2.36	0.58
15:UO:233:ASN:ND2	15:UO:247:GLU:OE2	2.37	0.58
21:UU:28:ARG:NH2	21:UU:383:ASP:OD2	2.36	0.58
22:UV:400:LEU:HD12	22:UV:412:LEU:HD23	1.84	0.58
22:UV:656:ARG:HB3	44:DA:241:GLY:HA3	1.85	0.58
28:CH:228:TYR:HB2	28:CH:277:LYS:HE2	1.84	0.58
32:CL:846:VAL:HG22	32:CL:855:GLN:HB3	1.86	0.58
32:CL:840:LYS:NZ	62:D3:578:U:OP2	2.32	0.58
41:JP:119:THR:OG1	41:JP:120:GLN:N	2.36	0.58
41:JP:228:ASN:ND2	41:JP:230:ASN:O	2.37	0.58
41:JP:260:GLN:OE1	41:JP:281:ASN:ND2	2.36	0.58
58:DX:89:ASN:O	58:DX:92:CYS:N	2.37	0.58
10:UJ:560:ILE:HB	10:UJ:563:LEU:HB2	1.86	0.58
12:UL:180:THR:HB	12:UL:186:ILE:HG12	1.84	0.58
20:UT:1651:ARG:NH1	20:UT:1744:GLU:OE1	2.37	0.58
22:UV:686:LEU:HB2	22:UV:696:ILE:HD11	1.86	0.58
22:UV:751:LYS:NZ	44:DA:196:GLU:OE2	2.37	0.58
30:CJ:287:LYS:HG3	30:CJ:290:LEU:HB3	1.85	0.58
35:JD:855:LYS:HE2	35:JD:862:ILE:HD13	1.85	0.58
41:JP:61:GLN:OE1	41:JP:371:ASN:ND2	2.32	0.58
47:DG:31:ARG:HD2	47:DG:68:LEU:HD22	1.86	0.58
62:D3:1163:A:N3	62:D3:1613:U:O2'	2.32	0.58
62:D3:1655:A:OP1	62:D3:1655:A:H4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:D4:205:G:O6	63:D4:245:U:C5	2.57	0.58
19:US:386:LEU:O	19:US:390:SER:CB	2.50	0.57
20:UT:114:CYS:O	20:UT:117:LEU:O	2.22	0.57
20:UT:898:LYS:NZ	20:UT:944:SER:OG	2.37	0.57
24:CA:186:ASP:OD1	24:CA:214:ARG:NH1	2.37	0.57
28:CH:147:GLN:HB3	28:CH:564:TYR:HE1	1.69	0.57
35:JD:107:ARG:NH1	62:D3:1127:G:O6	2.37	0.57
35:JD:855:LYS:NZ	35:JD:893:GLU:OE1	2.35	0.57
35:JD:1176:THR:HG23	35:JD:1177:PRO:HD3	1.86	0.57
48:DH:44:LYS:HG3	48:DH:63:PRO:HD3	1.84	0.57
62:D3:1698:G:N1	62:D3:1704:U:N3	2.52	0.57
10:UJ:400:LEU:HA	10:UJ:403:LEU:HD12	1.86	0.57
17:UQ:388:PRO:HG2	17:UQ:781:SER:HB3	1.85	0.57
20:UT:436:PHE:HA	20:UT:439:VAL:HG22	1.84	0.57
20:UT:1755:GLU:HB3	20:UT:1795:ARG:HB3	1.85	0.57
22:UV:951:PRO:HG3	22:UV:960:LYS:HD2	1.85	0.57
28:CH:257:ASP:N	28:CH:257:ASP:OD1	2.32	0.57
32:CL:87:ARG:NH1	32:CL:98:LEU:O	2.37	0.57
35:JD:466:LEU:HD22	35:JD:472:LYS:HZ3	1.68	0.57
4:UD:71:ARG:NH1	4:UD:77:GLU:OE2	2.37	0.57
6:UF:323:PHE:O	6:UF:331:ARG:NH1	2.37	0.57
13:UM:689:ASP:OD2	31:CK:503:LYS:NZ	2.36	0.57
13:UM:702:LEU:HD12	13:UM:755:ILE:HG12	1.85	0.57
15:UO:424:ARG:NH1	17:UQ:481:MET:SD	2.78	0.57
22:UV:236:THR:HG22	22:UV:268:LEU:HD22	1.85	0.57
22:UV:439:HIS:HB2	22:UV:466:THR:HB	1.86	0.57
25:CD:197:GLU:OE1	26:CE:165:GLN:NE2	2.37	0.57
35:JD:877:SER:HA	35:JD:880:ILE:HD12	1.86	0.57
45:DE:88:ASP:O	45:DE:100:ARG:HA	2.04	0.57
61:D2:282:G:H2'	61:D2:283:A:H8	1.69	0.57
2:UB:56:ASN:ND2	31:CK:366:GLU:OE2	2.37	0.57
4:UD:401:ILE:HB	4:UD:418:CYS:HB2	1.86	0.57
6:UF:67:ARG:NH1	6:UF:84:SER:OG	2.37	0.57
13:UM:585:ASN:ND2	13:UM:627:ASN:O	2.37	0.57
15:UO:398:SER:HB2	15:UO:434:ARG:HH22	1.68	0.57
20:UT:4:GLN:HB3	62:D3:76:A:H62	1.68	0.57
21:UU:756:LEU:N	31:CK:414:GLU:OE1	2.37	0.57
25:CD:264:SER:OG	25:CD:267:ASP:OD1	2.21	0.57
7:UG:63:THR:HG21	41:JP:28:LEU:HG	1.87	0.57
7:UG:550:LEU:HD23	22:UV:747:PRO:HG2	1.85	0.57
10:UJ:675:ASN:ND2	10:UJ:684:TYR:OH	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:1420:LEU:HG	10:UJ:1456:VAL:HG22	1.86	0.57
13:UM:176:ASP:OD1	13:UM:179:LYS:N	2.38	0.57
20:UT:1587:LYS:HZ1	20:UT:1623:LEU:HD22	1.69	0.57
32:CL:246:ALA:HB3	32:CL:810:ILE:HG13	1.87	0.57
36:JF:167:ILE:HG13	36:JF:171:LEU:HD13	1.85	0.57
44:DA:149:GLN:HE21	44:DA:151:LYS:HB2	1.68	0.57
62:D3:1524:A:H2'	62:D3:1525:A:C8	2.40	0.57
13:UM:610:LEU:HG	13:UM:611:LYS:HG3	1.87	0.57
17:UQ:730:ASP:O	17:UQ:734:VAL:N	2.38	0.57
21:UU:579:ARG:NH1	21:UU:614:LEU:O	2.37	0.57
27:CG:46:ARG:NH1	63:D4:112:U:OP1	2.33	0.57
39:JL:280:LYS:HE3	39:JL:313:VAL:HG22	1.85	0.57
62:D3:1477:G:H2'	62:D3:1478:G:H8	1.69	0.57
62:D3:1688:U:H3	62:D3:1713:G:H22	1.52	0.57
1:UA:344:HIS:NE2	1:UA:362:THR:OG1	2.32	0.57
5:UE:168:HIS:H	5:UE:191:VAL:HG23	1.70	0.57
13:UM:445:ILE:HD12	13:UM:451:PRO:HA	1.85	0.57
20:UT:1310:SER:OG	20:UT:1323:ARG:O	2.23	0.57
20:UT:1856:THR:HG22	41:JP:107:LYS:HE3	1.86	0.57
32:CL:942:PHE:HB3	62:D3:1594:G:H5''	1.87	0.57
33:CM:341:PRO:HA	33:CM:350:MET:HG2	1.87	0.57
61:D2:466:A:N1	63:D4:51:C:N3	2.53	0.57
4:UD:589:ASN:ND2	4:UD:626:TRP:O	2.38	0.57
4:UD:742:LEU:N	4:UD:755:ILE:O	2.26	0.57
6:UF:36:ARG:NE	6:UF:60:GLU:OE2	2.37	0.57
10:UJ:689:GLU:HA	10:UJ:692:ILE:HD12	1.87	0.57
11:UK:163:GLU:O	24:CB:91:HIS:NE2	2.36	0.57
16:UP:170:SER:OG	16:UP:177:ARG:NH1	2.37	0.57
17:UQ:67:LYS:HB2	17:UQ:70:ASN:HB2	1.85	0.57
17:UQ:680:ALA:HB3	17:UQ:690:ASN:HB2	1.87	0.57
20:UT:1102:PRO:HA	20:UT:1106:LEU:HD23	1.87	0.57
35:JD:930:ILE:HD11	35:JD:1007:LEU:HG	1.85	0.57
36:JG:175:CYS:SG	36:JG:176:ARG:N	2.77	0.57
41:JP:131:LYS:HB3	41:JP:155:TYR:HD2	1.68	0.57
49:DI:98:LYS:HB3	62:D3:329:G:H5''	1.86	0.57
62:D3:1117:U:C2	62:D3:1119:G:O6	2.58	0.57
4:UD:333:ILE:HA	4:UD:351:GLY:HA2	1.87	0.57
10:UJ:1397:GLN:HA	10:UJ:1400:ILE:HD12	1.87	0.57
17:UQ:584:PHE:HB3	17:UQ:598:LYS:HB2	1.87	0.57
17:UQ:665:ILE:HG22	17:UQ:669:ASN:HB2	1.87	0.57
19:US:192:GLN:O	19:US:196:GLN:NE2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:UV:1013:THR:HG23	22:UV:1016:GLN:H	1.69	0.57
30:CJ:223:THR:O	30:CJ:233:VAL:HA	2.05	0.57
56:DT:12:GLN:NE2	62:D3:1529:C:O2	2.33	0.57
6:UF:358:LEU:HA	6:UF:361:LYS:HD2	1.86	0.57
10:UJ:275:ILE:HG23	10:UJ:302:LEU:HD23	1.87	0.57
15:UO:105:VAL:HG12	15:UO:127:THR:HG21	1.87	0.57
20:UT:418:GLN:HE21	20:UT:452:ASN:H	1.52	0.57
20:UT:2335:TYR:OH	20:UT:2339:ARG:NH2	2.38	0.57
25:CD:180:LEU:O	25:CD:184:LEU:HB2	2.04	0.57
30:CJ:220:ARG:HH11	30:CJ:235:GLN:HE22	1.53	0.57
32:CL:27:ASN:ND2	62:D3:314:C:OP1	2.33	0.57
62:D3:230:C:N3	62:D3:236:A:N1	2.53	0.57
13:UM:589:GLN:HA	13:UM:602:TRP:O	2.05	0.56
14:UN:779:GLU:OE1	14:UN:821:ARG:NH1	2.38	0.56
41:JP:393:LYS:NZ	63:D4:35:U:O2	2.38	0.56
7:UG:108:LEU:HD21	10:UJ:4:LEU:HB2	1.87	0.56
17:UQ:366:ASN:HA	17:UQ:399:ILE:HD13	1.87	0.56
20:UT:408:VAL:O	20:UT:411:PHE:C	2.43	0.56
20:UT:1185:LEU:HA	20:UT:1189:LEU:HB2	1.86	0.56
21:UU:108:HIS:HE1	21:UU:110:LEU:HD13	1.69	0.56
22:UV:135:LEU:O	22:UV:180:LYS:NZ	2.38	0.56
22:UV:1136:LEU:HA	22:UV:1139:LEU:HD23	1.87	0.56
31:CK:326:LEU:O	32:CL:930:LYS:NZ	2.38	0.56
32:CL:196:THR:O	58:DX:140:LYS:NZ	2.37	0.56
35:JD:1050:LYS:HE3	35:JD:1057:ASN:HD22	1.70	0.56
45:DE:3:ARG:NH1	62:D3:399:A:N3	2.51	0.56
62:D3:1169:G:N1	62:D3:1575:G:OP2	2.31	0.56
2:UB:552:GLN:HA	2:UB:555:ARG:HG2	1.88	0.56
5:UE:280:GLN:HB2	5:UE:327:THR:HG22	1.87	0.56
6:UF:143:ASN:HB3	6:UF:146:ILE:HG22	1.86	0.56
7:UG:358:MET:SD	7:UG:358:MET:N	2.76	0.56
9:UI:494:PRO:HA	9:UI:497:LEU:HD12	1.88	0.56
10:UJ:669:VAL:O	10:UJ:673:ASN:ND2	2.38	0.56
14:UN:789:PRO:O	43:JJ:113:TRP:NE1	2.35	0.56
15:UO:147:ARG:HG2	15:UO:170:TYR:H	1.70	0.56
16:UP:205:TRP:O	16:UP:208:ARG:NH2	2.38	0.56
18:UR:511:LEU:HD13	18:UR:544:VAL:HG21	1.87	0.56
22:UV:348:TYR:HA	22:UV:351:LYS:HE2	1.87	0.56
22:UV:777:ASP:O	22:UV:780:GLN:NE2	2.38	0.56
23:UX:103:MET:SD	23:UX:121:ARG:NH2	2.78	0.56
24:CA:100:ARG:NH1	24:CA:104:ASP:OD2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CB:155:ILE:HD11	24:CB:162:LEU:HD13	1.86	0.56
35:JD:783:LYS:HE2	35:JD:796:PHE:HB3	1.86	0.56
35:JD:875:ALA:HA	35:JD:878:LYS:HE3	1.88	0.56
36:JF:228:SER:HB3	36:JF:232:LEU:HD11	1.86	0.56
36:JG:97:LEU:HD22	36:JG:130:ILE:HD12	1.86	0.56
47:DG:92:ARG:O	62:D3:405:C:O2'	2.24	0.56
57:DW:55:ASP:N	57:DW:55:ASP:OD1	2.38	0.56
62:D3:618:U:O2	62:D3:1086:A:C6	2.59	0.56
12:UL:10:GLN:OE1	12:UL:682:ARG:NH1	2.35	0.56
12:UL:63:LEU:HD11	12:UL:111:LYS:HB3	1.86	0.56
12:UL:220:THR:HG22	12:UL:259:ILE:HD11	1.87	0.56
14:UN:817:ASN:HB3	14:UN:820:LYS:HG2	1.87	0.56
43:JJ:158:PHE:HB2	43:JJ:175:LEU:HG	1.86	0.56
50:DJ:109:LEU:HB2	50:DJ:146:PHE:HB3	1.87	0.56
58:DX:51:GLY:O	58:DX:101:GLU:HA	2.05	0.56
61:D2:468:A:O2'	61:D2:470:U:OP2	2.21	0.56
5:UE:233:LYS:HE2	5:UE:249:GLU:HG2	1.88	0.56
8:UH:575:ASN:HD22	8:UH:579:LEU:HD22	1.70	0.56
21:UU:242:ARG:HH22	21:UU:281:ARG:HG2	1.70	0.56
22:UV:726:SER:OG	22:UV:767:GLN:NE2	2.36	0.56
35:JD:750:PRO:HD3	35:JD:756:LEU:HD13	1.87	0.56
52:DN:124:ARG:NH2	62:D3:967:A:OP2	2.38	0.56
62:D3:647:G:H1	62:D3:687:G:H22	1.52	0.56
5:UE:335:ASN:ND2	15:UO:369:ASP:O	2.38	0.56
14:UN:834:LYS:HA	14:UN:837:LYS:HE3	1.88	0.56
17:UQ:459:ILE:HB	17:UQ:469:ASN:HB2	1.87	0.56
19:US:174:ASN:HD21	19:US:218:LYS:HE3	1.71	0.56
28:CH:134:ARG:NH2	28:CH:528:GLU:OE1	2.39	0.56
32:CL:922:ILE:O	33:CM:111:LYS:NZ	2.33	0.56
35:JD:103:HIS:HA	35:JD:106:LYS:HD2	1.88	0.56
35:JD:1153:LEU:HD23	35:JD:1173:ILE:HD12	1.86	0.56
4:UD:429:SER:HB3	4:UD:444:ARG:HA	1.88	0.56
5:UE:443:GLN:HE21	15:UO:252:ASN:HD21	1.54	0.56
13:UM:226:ASN:HB2	13:UM:230:LYS:HE3	1.86	0.56
19:US:215:ASN:HB3	19:US:218:LYS:HD3	1.87	0.56
20:UT:1475:GLN:OE1	20:UT:1517:HIS:ND1	2.38	0.56
30:CJ:279:ARG:NH1	32:CL:975:GLU:OE2	2.34	0.56
35:JD:907:LEU:HD23	35:JD:908:SER:H	1.69	0.56
4:UD:49:LEU:HD13	4:UD:348:VAL:CG2	2.33	0.56
10:UJ:59:LEU:HD11	10:UJ:114:THR:HG22	1.88	0.56
12:UL:186:ILE:O	12:UL:199:THR:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:286:GLU:HB3	13:UM:288:LEU:HD23	1.86	0.56
17:UQ:426:ARG:NH1	61:D2:68:U:OP2	2.38	0.56
20:UT:100:GLU:HA	20:UT:103:LEU:HB2	1.88	0.56
25:CD:222:PHE:O	25:CD:224:LYS:NZ	2.39	0.56
35:JD:393:VAL:HG12	35:JD:583:VAL:HG21	1.87	0.56
46:DF:37:GLN:HB3	54:DQ:53:LEU:HD22	1.86	0.56
2:UB:661:ILE:O	2:UB:665:GLN:N	2.38	0.56
7:UG:447:ASN:O	41:JP:37:ARG:NH1	2.37	0.56
9:UI:435:LEU:HD21	9:UI:475:THR:HG22	1.88	0.56
10:UJ:362:LYS:HB2	10:UJ:365:ILE:HB	1.88	0.56
10:UJ:1452:GLU:HA	10:UJ:1455:LYS:HD2	1.87	0.56
24:CA:236:MET:HG3	25:CD:133:LEU:HA	1.88	0.56
28:CH:343:ASP:N	28:CH:343:ASP:OD1	2.35	0.56
32:CL:931:LYS:HE3	32:CL:1004:ARG:HG3	1.88	0.56
33:CM:86:SER:OG	33:CM:87:THR:N	2.39	0.56
41:JP:306:SER:HB2	41:JP:326:ASP:HB2	1.87	0.56
48:DH:56:LYS:HB2	48:DH:88:ARG:HG3	1.87	0.56
56:DT:102:ARG:NH2	62:D3:1502:G:N7	2.53	0.56
13:UM:217:ASP:N	13:UM:217:ASP:OD1	2.38	0.56
17:UQ:600:SER:HB3	17:UQ:638:PHE:HB3	1.87	0.56
35:JD:854:MET:HB3	35:JD:859:ILE:HB	1.88	0.56
35:JD:1076:GLN:HB3	35:JD:1079:LEU:HD13	1.88	0.56
35:JD:1085:CYS:HB2	35:JD:1173:ILE:HD13	1.87	0.56
36:JG:70:CYS:HB2	36:JG:84:ILE:HG23	1.88	0.56
38:JI:1684:THR:O	38:JI:1688:ALA:HB2	2.06	0.56
47:DG:135:PRO:HB3	47:DG:140:ASN:HB3	1.88	0.56
49:DI:172:ARG:NH1	62:D3:330:G:OP2	2.39	0.56
62:D3:1474:G:H2'	62:D3:1475:A:H8	1.70	0.56
2:UB:715:PRO:HA	36:JG:152:SER:HA	1.87	0.55
11:UK:191:ASP:OD1	11:UK:191:ASP:N	2.37	0.55
20:UT:2031:HIS:O	20:UT:2036:ARG:NH1	2.37	0.55
22:UV:871:ARG:HB2	22:UV:874:LEU:HD23	1.87	0.55
26:CE:87:LEU:HB3	26:CE:107:VAL:HG12	1.87	0.55
27:CG:34:LYS:HB3	27:CG:39:GLU:HG3	1.88	0.55
35:JD:884:GLN:NE2	35:JD:890:ASP:O	2.40	0.55
62:D3:1472:C:O2	62:D3:1534:G:C2	2.59	0.55
7:UG:552:ARG:NH2	22:UV:791:LYS:O	2.39	0.55
17:UQ:875:MET:HB3	17:UQ:887:PHE:HE1	1.72	0.55
20:UT:1340:SER:O	20:UT:1344:TRP:N	2.37	0.55
20:UT:1493:VAL:HG13	20:UT:1508:GLN:HE22	1.70	0.55
24:CB:112:ALA:HB3	24:CB:214:ARG:HH21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:CE:385:ASP:N	26:CE:385:ASP:OD1	2.39	0.55
27:CF:13:ASP:O	27:CF:17:THR:OG1	2.24	0.55
32:CL:9:ARG:NH2	62:D3:620:A:OP1	2.38	0.55
32:CL:1138:ARG:NH2	62:D3:494:U:OP1	2.39	0.55
36:JF:113:TYR:HA	36:JF:122:ILE:O	2.07	0.55
41:JP:109:HIS:NE2	41:JP:138:SER:OG	2.29	0.55
46:DF:80:LYS:O	62:D3:1615:C:N4	2.40	0.55
49:DI:88:ASN:HD21	51:DL:11:ARG:HH22	1.53	0.55
56:DT:65:ILE:O	56:DT:68:ARG:O	2.23	0.55
62:D3:229:U:O4	62:D3:237:C:C4	2.58	0.55
62:D3:710:U:C2	62:D3:729:G:C2	2.94	0.55
62:D3:1554:U:O2'	62:D3:1556:A:N1	2.32	0.55
62:D3:1785:U:H2'	62:D3:1786:G:H8	1.71	0.55
2:UB:698:ILE:HG21	19:US:439:LYS:HE2	1.89	0.55
10:UJ:1441:ILE:HA	10:UJ:1444:ILE:HD12	1.87	0.55
15:UO:65:ILE:HB	15:UO:75:LYS:HB2	1.86	0.55
23:UX:161:LYS:HG2	23:UX:172:LEU:HD21	1.88	0.55
35:JD:730:TYR:HB2	35:JD:754:SER:HB3	1.88	0.55
62:D3:23:G:O6	62:D3:602:U:O4	2.24	0.55
1:UA:485:ASN:N	1:UA:485:ASN:OD1	2.40	0.55
10:UJ:614:LEU:HD21	10:UJ:653:PHE:HB2	1.87	0.55
13:UM:353:LEU:HB2	13:UM:365:ILE:HG22	1.88	0.55
15:UO:172:ARG:HH12	19:US:370:HIS:HA	1.71	0.55
20:UT:1300:SER:HB3	20:UT:1343:GLU:HG3	1.87	0.55
21:UU:125:GLY:HA3	26:CE:433:THR:HB	1.88	0.55
22:UV:381:HIS:NE2	22:UV:478:THR:O	2.39	0.55
22:UV:579:LYS:HE2	22:UV:620:ASN:HA	1.87	0.55
30:CJ:181:ASN:ND2	62:D3:1622:G:O2'	2.39	0.55
57:DW:30:SER:HA	57:DW:34:ILE:HD12	1.89	0.55
62:D3:1512:G:H2'	62:D3:1513:G:C8	2.42	0.55
1:UA:148:ASP:OD1	1:UA:148:ASP:N	2.39	0.55
1:UA:344:HIS:ND1	1:UA:364:SER:OG	2.40	0.55
5:UE:116:GLN:OE1	5:UE:128:GLN:NE2	2.40	0.55
7:UG:526:ILE:O	7:UG:530:ASN:ND2	2.39	0.55
10:UJ:562:THR:HG21	10:UJ:601:SER:HA	1.89	0.55
10:UJ:1652:VAL:HG11	10:UJ:1690:LEU:HB3	1.88	0.55
13:UM:677:ASP:HB3	13:UM:680:ASN:HD22	1.72	0.55
20:UT:2180:LEU:HD13	20:UT:2183:LEU:HD21	1.88	0.55
22:UV:369:TRP:HE3	22:UV:370:LEU:HD12	1.72	0.55
22:UV:822:ARG:NH2	22:UV:1133:PRO:O	2.40	0.55
25:CD:192:ALA:HB1	25:CD:213:ASN:HB2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CD:234:LEU:HB2	25:CD:252:ILE:HD11	1.89	0.55
31:CK:499:GLY:H	31:CK:508:ARG:HH21	1.54	0.55
33:CM:315:LYS:HA	33:CM:318:ILE:HD12	1.87	0.55
43:JJ:256:PRO:HA	43:JJ:259:VAL:HG12	1.88	0.55
50:DJ:18:PRO:O	50:DJ:23:ARG:NH2	2.38	0.55
62:D3:575:C:HO2'	62:D3:576:G:H8	1.54	0.55
62:D3:654:C:C4	62:D3:680:U:O4	2.59	0.55
1:UA:784:ASP:HA	1:UA:787:ILE:HD12	1.88	0.55
5:UE:112:LEU:HD11	5:UE:131:LEU:HD11	1.88	0.55
13:UM:110:ALA:HB2	13:UM:117:LEU:HD12	1.89	0.55
15:UO:133:HIS:CD2	15:UO:136:ASP:H	2.24	0.55
18:UR:290:LEU:HD12	18:UR:295:ILE:HD11	1.87	0.55
18:UR:539:ASP:OD2	21:UU:401:ARG:NH2	2.38	0.55
31:CK:350:THR:HG21	32:CL:975:GLU:HB3	1.87	0.55
62:D3:1666:U:H3	62:D3:1735:U:H3	1.53	0.55
63:D4:184:U:H3'	63:D4:185:A:H8	1.72	0.55
4:UD:214:SER:HB2	4:UD:226:LEU:HD22	1.89	0.55
4:UD:429:SER:OG	4:UD:430:THR:N	2.40	0.55
5:UE:7:GLN:NE2	5:UE:61:THR:O	2.39	0.55
5:UE:271:LYS:NZ	21:UU:585:SER:O	2.39	0.55
7:UG:451:SER:HB3	14:UN:843:GLN:HG2	1.89	0.55
20:UT:1519:SER:OG	20:UT:1520:TRP:N	2.39	0.55
24:CB:168:LYS:O	24:CB:192:GLY:HA3	2.07	0.55
26:CE:195:LEU:HA	26:CE:198:ILE:HG22	1.89	0.55
35:JD:732:LEU:HD12	35:JD:733:PRO:HD2	1.89	0.55
54:DQ:71:GLY:HA2	62:D3:1483:A:H4'	1.87	0.55
62:D3:1671:A:N6	62:D3:1730:A:HO2'	2.03	0.55
3:UC:433:ARG:HD3	36:JF:231:PRO:HG2	1.87	0.55
10:UJ:1545:ARG:NH2	10:UJ:1592:SER:OG	2.40	0.55
12:UL:143:SER:OG	31:CK:522:ARG:NH2	2.39	0.55
13:UM:394:LEU:HD13	13:UM:405:THR:HG22	1.89	0.55
20:UT:386:LEU:O	20:UT:423:LYS:NZ	2.40	0.55
20:UT:636:ARG:HH22	62:D3:165:G:H4'	1.71	0.55
20:UT:1986:VAL:O	20:UT:1990:LEU:N	2.39	0.55
22:UV:431:THR:HG23	22:UV:432:MET:HG2	1.87	0.55
24:CA:142:ARG:NH1	24:CA:186:ASP:OD2	2.40	0.55
27:CF:34:LYS:HB3	27:CF:39:GLU:HG3	1.88	0.55
32:CL:195:TRP:HB3	32:CL:200:GLN:HG2	1.88	0.55
49:DI:47:ARG:NH1	62:D3:397:A:OP2	2.39	0.55
59:DY:128:LYS:NZ	62:D3:154:G:O6	2.37	0.55
62:D3:1671:A:H3'	62:D3:1672:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:762:GLU:OE2	55:DS:120:ARG:NH1	2.37	0.55
4:UD:510:GLU:O	4:UD:558:ARG:NH1	2.40	0.55
15:UO:264:PHE:HB2	15:UO:316:ARG:HH21	1.72	0.55
17:UQ:430:LYS:HE2	61:D2:69:U:H4'	1.89	0.55
20:UT:1243:ILE:HA	20:UT:1246:ILE:HD12	1.88	0.55
20:UT:1737:ASN:ND2	62:D3:803:A:O2'	2.40	0.55
22:UV:228:ARG:NH1	22:UV:266:PRO:O	2.33	0.55
26:CE:343:TYR:OH	26:CE:356:LYS:NZ	2.38	0.55
45:DE:29:PRO:CD	62:D3:448:C:OP1	2.40	0.55
48:DH:25:VAL:O	48:DH:29:ASN:ND2	2.40	0.55
62:D3:1167:G:N1	62:D3:1579:U:N3	2.53	0.55
62:D3:1499:G:N2	62:D3:1508:U:O2	2.34	0.55
1:UA:408:ASP:HB3	1:UA:410:THR:HG22	1.88	0.55
4:UD:741:LEU:HA	4:UD:756:GLU:HA	1.89	0.55
7:UG:301:TRP:HA	7:UG:308:GLN:HA	1.87	0.55
8:UH:599:MET:HE1	8:UH:640:LEU:HB3	1.88	0.55
10:UJ:568:ILE:HA	10:UJ:571:LEU:HD12	1.89	0.55
12:UL:533:ASP:HB3	12:UL:551:LEU:HB2	1.88	0.55
20:UT:262:ALA:O	20:UT:313:ARG:NH1	2.37	0.55
20:UT:269:GLU:OE2	20:UT:313:ARG:NH2	2.33	0.55
20:UT:1228:LEU:HD13	20:UT:1271:LEU:HD11	1.89	0.55
22:UV:182:ASP:HB3	22:UV:208:THR:HB	1.88	0.55
33:CM:289:VAL:HG21	33:CM:294:LEU:HD13	1.89	0.55
35:JD:462:VAL:HG13	35:JD:473:VAL:HG11	1.89	0.55
39:JL:177:ALA:HB3	39:JL:227:LEU:HD21	1.89	0.55
62:D3:710:U:N3	62:D3:729:G:C6	2.74	0.55
62:D3:778:G:OP2	62:D3:780:A:N6	2.40	0.55
8:UH:291:LYS:N	8:UH:305:VAL:O	2.40	0.54
11:UK:248:ARG:NH2	27:CF:94:SER:OG	2.41	0.54
12:UL:439:LEU:HD12	12:UL:444:LEU:HB2	1.89	0.54
20:UT:98:HIS:HE1	20:UT:135:LEU:HA	1.71	0.54
20:UT:1290:GLU:HG2	20:UT:1293:ARG:HH22	1.70	0.54
36:JG:89:PRO:HG2	36:JG:134:PHE:HZ	1.72	0.54
46:DF:146:THR:HG21	46:DF:220:VAL:HG12	1.88	0.54
1:UA:758:ILE:HD11	1:UA:798:TRP:HZ2	1.71	0.54
4:UD:624:LYS:HA	4:UD:627:LYS:HD2	1.88	0.54
5:UE:469:ILE:HB	5:UE:508:ILE:HD12	1.89	0.54
7:UG:515:ARG:NH1	44:DA:150:VAL:O	2.41	0.54
12:UL:897:ASP:O	12:UL:901:ASN:ND2	2.40	0.54
13:UM:717:GLU:OE1	13:UM:761:ARG:NH1	2.41	0.54
18:UR:253:SER:OG	18:UR:298:CYS:SG	2.59	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:389:ILE:HB	20:UT:392:CYS:HB2	1.90	0.54
22:UV:1225:ALA:O	22:UV:1228:ASN:ND2	2.31	0.54
28:CH:419:ASN:ND2	28:CH:421:ASN:OD1	2.36	0.54
32:CL:91:ARG:HD3	32:CL:214:ARG:HD2	1.90	0.54
35:JD:403:ALA:O	35:JD:407:ASN:HB2	2.07	0.54
36:JG:99:LEU:HD21	36:JG:238:CYS:HB2	1.89	0.54
37:JH:399:ILE:HA	37:JH:409:ALA:HB1	1.88	0.54
51:DL:55:ASP:OD1	51:DL:58:CYS:N	2.38	0.54
54:DQ:39:VAL:O	54:DQ:45:ARG:NH2	2.38	0.54
57:DW:25:VAL:HG22	57:DW:63:VAL:HB	1.89	0.54
2:UB:713:HIS:ND1	36:JG:154:ASN:OD1	2.41	0.54
10:UJ:262:VAL:HG13	10:UJ:301:LYS:HG2	1.89	0.54
12:UL:414:LEU:O	12:UL:427:THR:HA	2.07	0.54
13:UM:88:PHE:HA	13:UM:95:VAL:HA	1.89	0.54
17:UQ:591:GLU:HG3	17:UQ:593:ASN:H	1.71	0.54
17:UQ:669:ASN:HB3	17:UQ:749:ASP:HB3	1.89	0.54
20:UT:1587:LYS:HD2	20:UT:1619:ILE:HB	1.90	0.54
22:UV:630:LYS:HZ3	22:UV:666:CYS:HB3	1.72	0.54
30:CJ:253:ARG:HH11	31:CK:357:ILE:HG21	1.73	0.54
31:CK:530:ARG:NH2	62:D3:1642:G:OP2	2.35	0.54
61:D2:89:C:H5''	61:D2:90:G:H5'	1.88	0.54
62:D3:676:G:H2'	62:D3:677:G:H8	1.73	0.54
12:UL:15:GLY:O	12:UL:360:ASN:ND2	2.40	0.54
20:UT:323:PHE:HB2	20:UT:364:LEU:HD13	1.88	0.54
20:UT:2301:LEU:HD23	20:UT:2363:LEU:HD11	1.88	0.54
21:UU:360:ASP:N	21:UU:360:ASP:OD1	2.39	0.54
21:UU:799:GLU:O	21:UU:803:ASN:ND2	2.40	0.54
25:CD:254:ASN:O	25:CD:258:SER:HB3	2.07	0.54
30:CJ:105:LYS:NZ	62:D3:1159:C:OP2	2.31	0.54
47:DG:132:ARG:NH1	62:D3:149:C:O2'	2.39	0.54
62:D3:655:G:N2	62:D3:656:G:O6	2.33	0.54
63:D4:305:G:H2'	63:D4:306:G:C8	2.42	0.54
1:UA:370:LYS:NZ	31:CK:477:GLU:OE1	2.41	0.54
1:UA:728:GLU:HA	1:UA:731:ARG:HD2	1.88	0.54
5:UE:536:LEU:HD22	15:UO:456:ALA:HB3	1.89	0.54
13:UM:665:GLN:HG3	13:UM:688:LEU:HD11	1.88	0.54
27:CG:54:MET:HB3	27:CG:64:LEU:HD12	1.90	0.54
35:JD:734:LEU:HD23	35:JD:758:ILE:HG23	1.90	0.54
39:JL:164:LEU:HD21	39:JL:187:HIS:HB2	1.90	0.54
56:DT:86:ARG:NE	56:DT:90:PRO:O	2.41	0.54
62:D3:1673:G:N1	62:D3:1728:A:H2	1.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:23:SER:OG	1:UA:24:ASP:N	2.40	0.54
10:UJ:491:TYR:OH	10:UJ:528:ARG:NH2	2.41	0.54
14:UN:894:LEU:O	41:JP:230:ASN:ND2	2.40	0.54
17:UQ:87:SER:H	17:UQ:112:ASN:HB2	1.73	0.54
20:UT:2102:PHE:O	20:UT:2106:LEU:HB2	2.07	0.54
20:UT:2334:ASP:N	20:UT:2334:ASP:OD1	2.41	0.54
22:UV:654:SER:OG	22:UV:655:LEU:N	2.41	0.54
35:JD:478:ARG:HA	35:JD:499:ARG:HH12	1.73	0.54
36:JG:36:LYS:HB3	36:JG:172:PRO:HA	1.89	0.54
62:D3:540:G:C6	62:D3:542:A:C6	2.95	0.54
62:D3:1131:A:H2'	62:D3:1132:A:C8	2.43	0.54
63:D4:47:G:H2'	63:D4:48:A:C8	2.42	0.54
1:UA:97:GLU:OE2	1:UA:120:GLN:NE2	2.40	0.54
4:UD:37:ARG:NH2	4:UD:756:GLU:OE1	2.40	0.54
4:UD:660:ASP:OD1	4:UD:660:ASP:N	2.41	0.54
7:UG:68:PRO:HD2	7:UG:410:ASN:HD22	1.73	0.54
39:JL:51:LYS:O	39:JL:208:ARG:NH2	2.36	0.54
39:JL:222:GLU:OE1	39:JL:317:PHE:N	2.41	0.54
41:JP:121:PRO:HB3	41:JP:206:VAL:HG11	1.89	0.54
47:DG:78:THR:OG1	47:DG:79:LYS:N	2.41	0.54
48:DH:8:ILE:HA	48:DH:42:GLN:HG2	1.89	0.54
2:UB:508:PHE:HB3	2:UB:518:ILE:HD11	1.89	0.54
5:UE:486:GLU:OE1	15:UO:18:GLN:NE2	2.41	0.54
8:UH:570:LEU:HD12	8:UH:582:ILE:HG22	1.90	0.54
8:UH:711:ARG:NH1	8:UH:712:ALA:O	2.40	0.54
11:UK:93:MET:N	11:UK:93:MET:SD	2.77	0.54
12:UL:137:ILE:HG12	12:UL:147:VAL:HG22	1.89	0.54
13:UM:155:GLN:HB2	13:UM:158:SER:HB3	1.90	0.54
17:UQ:59:THR:OG1	17:UQ:61:GLN:NE2	2.39	0.54
20:UT:541:ILE:O	20:UT:545:TYR:HB3	2.08	0.54
20:UT:1900:ARG:NH1	20:UT:1932:GLU:OE1	2.41	0.54
21:UU:735:LEU:O	21:UU:890:LYS:NZ	2.40	0.54
22:UV:96:GLU:O	22:UV:100:SER:HB2	2.08	0.54
24:CA:107:VAL:HA	24:CA:142:ARG:O	2.08	0.54
29:CI:179:ASP:HB2	54:DQ:7:VAL:HG23	1.90	0.54
36:JG:74:GLN:HG2	36:JG:84:ILE:HG12	1.89	0.54
58:DX:92:CYS:HA	58:DX:95:PHE:HD2	1.71	0.54
61:D2:24:U:O4	61:D2:56:G:O6	2.26	0.54
62:D3:479:C:O2	62:D3:510:G:N2	2.40	0.54
62:D3:985:G:C2	62:D3:1017:U:C2	2.96	0.54
62:D3:1158:C:N4	62:D3:1582:U:C4	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:1542:G:N2	62:D3:1569:A:OP2	2.39	0.54
1:UA:190:HIS:CE1	1:UA:210:SER:HB2	2.41	0.54
1:UA:453:PHE:HB3	1:UA:475:PRO:HA	1.88	0.54
6:UF:111:ALA:HB1	40:JM:73:ALA:HB2	1.89	0.54
6:UF:178:VAL:HG12	6:UF:181:LEU:H	1.72	0.54
7:UG:195:HIS:NE2	7:UG:236:MET:O	2.39	0.54
8:UH:574:ARG:HB2	8:UH:578:LEU:HD21	1.90	0.54
13:UM:355:LEU:HB2	13:UM:363:ARG:HB2	1.90	0.54
21:UU:730:LYS:HE3	21:UU:880:LEU:HD21	1.89	0.54
22:UV:803:LYS:NZ	22:UV:859:ASP:OD2	2.39	0.54
22:UV:894:ARG:NH2	22:UV:1045:ASN:O	2.41	0.54
44:DA:27:LYS:HG2	44:DA:49:ASN:HA	1.89	0.54
58:DX:75:GLN:HA	58:DX:82:LYS:HA	1.90	0.54
62:D3:73:U:H4'	62:D3:74:U:H5'	1.90	0.54
62:D3:711:U:H3	62:D3:727:U:H3	1.54	0.54
2:UB:490:PHE:HD1	2:UB:532:ILE:HD12	1.72	0.54
10:UJ:407:PHE:O	10:UJ:410:ILE:O	2.26	0.54
13:UM:364:ILE:HB	13:UM:382:GLU:HB2	1.89	0.54
22:UV:703:LYS:HA	22:UV:706:ASN:HD22	1.73	0.54
35:JD:1141:LEU:HD13	35:JD:1144:LEU:HD12	1.89	0.54
1:UA:718:ASP:OD2	1:UA:744:ARG:NH2	2.41	0.53
4:UD:192:THR:HG21	4:UD:243:SER:HA	1.89	0.53
6:UF:342:TRP:HZ2	6:UF:358:LEU:HD12	1.74	0.53
12:UL:436:CYS:SG	12:UL:437:LYS:N	2.80	0.53
13:UM:461:LEU:HD11	13:UM:490:HIS:H	1.73	0.53
15:UO:133:HIS:HD2	15:UO:136:ASP:H	1.56	0.53
15:UO:217:ASN:HB3	15:UO:229:CYS:HB3	1.90	0.53
18:UR:137:ILE:HD11	18:UR:155:ILE:HG22	1.89	0.53
18:UR:496:ARG:NH2	18:UR:500:MET:SD	2.81	0.53
20:UT:1458:GLN:OE1	20:UT:2415:LYS:NZ	2.41	0.53
20:UT:1808:SER:OG	20:UT:1809:GLU:N	2.41	0.53
22:UV:627:LEU:HD13	22:UV:671:THR:HG23	1.89	0.53
36:JF:228:SER:OG	36:JF:229:ASN:N	2.41	0.53
12:UL:497:VAL:HB	12:UL:528:LEU:HB2	1.89	0.53
12:UL:676:SER:OG	12:UL:678:ASP:OD1	2.24	0.53
15:UO:173:THR:HG21	15:UO:217:ASN:HA	1.90	0.53
20:UT:279:TRP:HE1	20:UT:321:ILE:HA	1.72	0.53
20:UT:1122:LEU:HD23	20:UT:1129:THR:HG23	1.89	0.53
22:UV:236:THR:HG21	22:UV:256:TYR:HE1	1.71	0.53
22:UV:878:LEU:HD21	34:CN:98:VAL:HG11	1.90	0.53
27:CG:5:ASN:OD1	28:CH:463:GLN:NE2	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CI:93:LYS:HG3	29:CI:95:SER:H	1.73	0.53
36:JF:114:ILE:HB	36:JF:122:ILE:HB	1.89	0.53
36:JF:121:LEU:HB3	36:JF:163:ILE:HG13	1.90	0.53
49:DI:64:ASN:O	49:DI:180:ASP:HA	2.07	0.53
54:DQ:22:VAL:HG22	54:DQ:65:ILE:HG12	1.91	0.53
62:D3:271:A:N1	62:D3:285:G:C6	2.76	0.53
62:D3:1672:G:H2'	62:D3:1673:G:C8	2.44	0.53
62:D3:1752:U:H2'	62:D3:1753:A:H8	1.74	0.53
63:D4:205:G:C2	63:D4:245:U:C2	2.97	0.53
2:UB:712:THR:HB	36:JG:129:ARG:HB2	1.89	0.53
4:UD:303:LYS:NZ	61:D2:84:G:OP2	2.36	0.53
18:UR:127:ASP:HB3	18:UR:130:ASP:HB2	1.89	0.53
20:UT:2129:MET:HG2	20:UT:2130:LEU:HD23	1.90	0.53
22:UV:427:LYS:HA	22:UV:496:LEU:HD22	1.89	0.53
27:CG:13:ASP:O	27:CG:17:THR:OG1	2.24	0.53
62:D3:985:G:N1	62:D3:1017:U:C2	2.76	0.53
62:D3:1739:C:H2'	62:D3:1740:A:H8	1.73	0.53
5:UE:296:ILE:HD12	5:UE:301:LEU:HD12	1.88	0.53
5:UE:490:ARG:HD3	15:UO:16:LEU:HD23	1.90	0.53
12:UL:492:SER:OG	12:UL:496:THR:OG1	2.23	0.53
20:UT:429:GLY:HA2	20:UT:432:ILE:HD12	1.89	0.53
20:UT:1155:ASP:HB3	20:UT:1201:LEU:HG	1.91	0.53
20:UT:1926:PHE:N	20:UT:1929:GLU:OE2	2.39	0.53
21:UU:509:SER:OG	21:UU:549:MET:SD	2.64	0.53
22:UV:483:SER:OG	22:UV:582:GLN:NE2	2.41	0.53
22:UV:924:LEU:HD21	22:UV:1181:VAL:HG13	1.89	0.53
30:CJ:138:ASP:N	30:CJ:138:ASP:OD1	2.40	0.53
62:D3:1011:G:N2	62:D3:1012:U:O4	2.41	0.53
62:D3:1167:G:C6	62:D3:1579:U:C4	2.96	0.53
63:D4:205:G:H22	63:D4:245:U:H1'	1.73	0.53
1:UA:63:LEU:HD11	1:UA:67:GLY:HA2	1.88	0.53
13:UM:403:ILE:HB	13:UM:415:TRP:HB2	1.91	0.53
13:UM:537:TRP:CD1	13:UM:553:GLY:HA2	2.43	0.53
17:UQ:868:ASN:ND2	63:D4:76:U:O2'	2.37	0.53
20:UT:1877:ARG:NH2	62:D3:652:G:OP1	2.41	0.53
20:UT:1988:PRO:O	20:UT:1991:ASN:ND2	2.42	0.53
21:UU:359:ALA:O	21:UU:421:ASN:ND2	2.36	0.53
22:UV:1063:ARG:HH22	22:UV:1095:ASP:HB2	1.74	0.53
24:CB:236:MET:HG3	26:CE:122:GLU:HG3	1.91	0.53
36:JF:46:ALA:HA	36:JF:115:GLN:HB3	1.90	0.53
45:DE:10:LYS:NZ	62:D3:381:C:OP1	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:277:ALA:HB2	18:UR:211:ILE:HD12	1.88	0.53
10:UJ:636:ASP:N	10:UJ:636:ASP:OD1	2.41	0.53
20:UT:1352:LEU:HD23	20:UT:1401:ASN:HD22	1.73	0.53
21:UU:907:SER:O	21:UU:911:ASN:ND2	2.42	0.53
33:CM:107:ALA:HB1	33:CM:170:VAL:HG11	1.91	0.53
39:JL:240:ALA:HA	39:JL:243:LYS:HB2	1.90	0.53
49:DI:87:ASN:HB3	49:DI:90:LEU:HG	1.90	0.53
2:UB:644:ASP:HA	2:UB:647:ILE:HD12	1.91	0.53
18:UR:143:THR:HA	18:UR:146:LEU:HD12	1.90	0.53
20:UT:1645:SER:OG	20:UT:1646:LYS:N	2.42	0.53
22:UV:531:LEU:HB3	22:UV:533:LEU:HD23	1.91	0.53
22:UV:936:LEU:HD12	22:UV:977:LEU:HD12	1.91	0.53
27:CF:54:MET:HB3	27:CF:64:LEU:HD12	1.90	0.53
32:CL:54:LEU:HD11	58:DX:78:LYS:HB3	1.90	0.53
35:JD:1155:TYR:HB2	35:JD:1169:THR:HG22	1.90	0.53
41:JP:244:ILE:HB	41:JP:258:ILE:HG23	1.90	0.53
55:DS:24:GLY:HA2	55:DS:58:ALA:HB3	1.90	0.53
56:DT:65:ILE:O	56:DT:68:ARG:C	2.47	0.53
62:D3:654:C:N3	62:D3:681:U:O4	2.42	0.53
62:D3:1553:G:N2	62:D3:1558:U:O2	2.42	0.53
1:UA:849:LEU:HD22	21:UU:897:HIS:HB2	1.91	0.53
2:UB:114:ASP:OD1	2:UB:116:ARG:NH1	2.41	0.53
12:UL:825:PRO:HD2	12:UL:828:TYR:HD2	1.74	0.53
17:UQ:363:ASN:HD21	17:UQ:391:VAL:HA	1.74	0.53
17:UQ:510:TYR:OH	17:UQ:527:HIS:ND1	2.38	0.53
17:UQ:670:LEU:HB2	17:UQ:683:LEU:HD21	1.90	0.53
20:UT:1556:ARG:NH1	20:UT:1557:GLU:OE2	2.42	0.53
20:UT:1882:ARG:HH22	62:D3:650:U:H5'	1.73	0.53
30:CJ:195:THR:O	30:CJ:200:LYS:NZ	2.39	0.53
30:CJ:247:ILE:HD11	31:CK:366:GLU:HB2	1.89	0.53
32:CL:634:ARG:NH1	33:CM:286:SER:O	2.41	0.53
39:JL:189:MET:HG2	39:JL:206:VAL:HB	1.90	0.53
41:JP:315:PRO:HG2	41:JP:360:SER:HB2	1.91	0.53
62:D3:271:A:C2	62:D3:285:G:C6	2.97	0.53
62:D3:1167:G:O6	62:D3:1579:U:C4	2.62	0.53
8:UH:678:LEU:O	8:UH:681:THR:OG1	2.23	0.53
10:UJ:232:ASN:HD21	18:UR:218:TYR:H	1.56	0.53
13:UM:586:LYS:NZ	13:UM:646:ASP:OD2	2.42	0.53
18:UR:233:LEU:O	18:UR:554:ASN:ND2	2.37	0.53
20:UT:67:ALA:O	20:UT:71:GLU:HB2	2.08	0.53
21:UU:772:SER:O	21:UU:776:GLY:HA2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:UV:406:ILE:HG13	22:UV:457:TYR:HB3	1.90	0.53
22:UV:1159:ASN:HD22	22:UV:1201:ASP:HB3	1.73	0.53
24:CA:111:MET:SD	24:CA:216:ASN:ND2	2.81	0.53
29:CI:55:ARG:NH1	29:CI:98:GLU:O	2.42	0.53
35:JD:117:LEU:HD22	39:JL:304:LEU:HD13	1.91	0.53
35:JD:453:VAL:HG22	35:JD:741:LYS:HE3	1.91	0.53
35:JD:592:ILE:O	35:JD:597:ARG:NH2	2.42	0.53
39:JL:194:ASN:O	39:JL:197:ARG:NH1	2.39	0.53
15:UO:362:ARG:NH2	18:UR:248:HIS:O	2.42	0.53
20:UT:519:VAL:HA	20:UT:522:LEU:HD12	1.90	0.53
20:UT:1912:ILE:HG23	20:UT:1958:MET:HG2	1.91	0.53
20:UT:1952:SER:O	20:UT:1957:GLN:NE2	2.42	0.53
22:UV:434:LEU:N	22:UV:485:TYR:OH	2.42	0.53
25:CD:110:LYS:NZ	25:CD:114:PRO:O	2.38	0.53
26:CE:40:LYS:HD3	26:CE:43:LYS:HD3	1.90	0.53
49:DI:56:ARG:HH22	62:D3:332:U:P	2.32	0.53
62:D3:1666:U:O4	62:D3:1667:A:N6	2.42	0.53
1:UA:411:VAL:HG13	1:UA:425:PHE:HB2	1.90	0.52
1:UA:806:SER:O	1:UA:806:SER:OG	2.28	0.52
4:UD:395:SER:OG	4:UD:398:THR:OG1	2.26	0.52
7:UG:414:LEU:HG	41:JP:26:ARG:HE	1.74	0.52
20:UT:1779:VAL:HG12	20:UT:1780:ARG:H	1.72	0.52
20:UT:1806:SER:OG	20:UT:1807:GLU:OE2	2.19	0.52
21:UU:32:ASN:OD1	21:UU:317:ASN:ND2	2.42	0.52
24:CA:228:GLN:O	24:CA:231:ARG:NH2	2.41	0.52
24:CB:230:TYR:OH	24:CB:256:ASN:OD1	2.23	0.52
25:CD:257:ILE:O	26:CE:138:LYS:NZ	2.36	0.52
48:DH:143:LEU:O	48:DH:146:GLY:N	2.40	0.52
52:DN:2:GLY:N	62:D3:866:G:OP1	2.43	0.52
63:D4:188:A:H3'	63:D4:189:A:H8	1.74	0.52
2:UB:700:LEU:HD21	19:US:467:ALA:HB2	1.90	0.52
14:UN:823:ASP:HA	14:UN:826:LEU:HD12	1.91	0.52
15:UO:273:ILE:HG22	15:UO:283:VAL:HG22	1.90	0.52
17:UQ:435:ASP:O	17:UQ:762:TYR:OH	2.26	0.52
33:CM:202:PRO:HD3	33:CM:231:ARG:HH11	1.74	0.52
33:CM:267:ILE:HB	33:CM:270:GLU:HB2	1.90	0.52
35:JD:848:GLU:HB2	35:JD:883:LEU:HD21	1.91	0.52
43:JJ:129:ARG:HH21	43:JJ:131:ASN:HD21	1.58	0.52
45:DE:30:ARG:HG3	45:DE:30:ARG:O	2.05	0.52
57:DW:56:HIS:O	62:D3:861:U:O2'	2.24	0.52
63:D4:306:G:H2'	63:D4:307:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:614:TRP:NE1	4:UD:662:ASP:OD1	2.40	0.52
7:UG:194:ARG:C	7:UG:208:ALA:O	2.47	0.52
11:UK:111:ARG:HE	11:UK:212:LYS:HB2	1.73	0.52
12:UL:234:GLU:HB3	12:UL:240:GLY:HA3	1.90	0.52
13:UM:508:THR:O	13:UM:515:CYS:HA	2.10	0.52
20:UT:689:TYR:OH	20:UT:787:GLN:NE2	2.42	0.52
20:UT:2037:ASP:OD1	20:UT:2040:ARG:NH2	2.42	0.52
22:UV:179:LYS:HB2	22:UV:210:PRO:HG2	1.90	0.52
22:UV:383:GLY:HA2	22:UV:583:ILE:HG23	1.91	0.52
23:UX:122:ASP:HB3	23:UX:125:ILE:HG12	1.92	0.52
29:CI:96:ASP:HA	29:CI:100:LYS:HD3	1.91	0.52
35:JD:778:ASP:HB3	35:JD:823:ARG:HA	1.91	0.52
35:JD:1080:LEU:HA	35:JD:1083:MET:HE2	1.90	0.52
41:JP:62:LEU:HB2	41:JP:372:VAL:HG13	1.91	0.52
3:UC:560:ASN:HD22	62:D3:477:A:H5'	1.74	0.52
4:UD:490:SER:O	4:UD:493:ASP:N	2.43	0.52
13:UM:188:GLU:OE2	22:UV:657:ARG:NH2	2.42	0.52
19:US:277:ILE:HA	19:US:280:ILE:HG22	1.92	0.52
20:UT:1276:ASP:OD1	20:UT:1276:ASP:N	2.41	0.52
20:UT:1699:LYS:NZ	62:D3:687:G:O3'	2.41	0.52
20:UT:1749:LYS:NZ	62:D3:688:G:OP1	2.40	0.52
20:UT:1776:LEU:O	20:UT:1779:VAL:C	2.48	0.52
22:UV:217:LYS:O	22:UV:223:ARG:NE	2.43	0.52
35:JD:732:LEU:HD21	35:JD:746:VAL:HG12	1.90	0.52
56:DT:105:LEU:HD22	56:DT:122:ARG:HG2	1.90	0.52
62:D3:126:A:N6	62:D3:291:G:C2	2.77	0.52
63:D4:12:U:H2'	63:D4:13:C:C6	2.44	0.52
7:UG:354:CYS:SG	7:UG:364:ARG:NH1	2.83	0.52
13:UM:32:LEU:HD22	13:UM:43:ILE:HD11	1.92	0.52
20:UT:326:SER:OG	20:UT:328:ARG:NE	2.39	0.52
20:UT:408:VAL:O	20:UT:411:PHE:O	2.27	0.52
20:UT:2469:ARG:HH21	62:D3:850:A:H61	1.57	0.52
21:UU:311:VAL:HG22	21:UU:321:GLU:HG2	1.92	0.52
21:UU:515:ARG:HH11	21:UU:532:ASN:HD22	1.57	0.52
21:UU:718:LYS:NZ	21:UU:873:LYS:O	2.42	0.52
25:CD:237:LEU:HA	25:CD:240:LEU:HB2	1.91	0.52
32:CL:921:GLU:HB3	33:CM:365:LYS:HG3	1.92	0.52
59:DY:105:ARG:NH2	62:D3:459:G:OP2	2.37	0.52
62:D3:291:G:C2	62:D3:292:U:O4	2.62	0.52
62:D3:683:C:H2'	62:D3:684:A:H8	1.75	0.52
62:D3:1592:A:H2'	62:D3:1593:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:1699:G:N2	62:D3:1702:A:N6	2.37	0.52
1:UA:36:ARG:NE	1:UA:53:GLU:OE2	2.42	0.52
4:UD:198:ASP:O	4:UD:215:ALA:O	2.28	0.52
5:UE:29:VAL:HG22	5:UE:51:LEU:HB3	1.92	0.52
5:UE:149:ASN:HD21	5:UE:190:PRO:HB3	1.75	0.52
7:UG:353:PRO:HA	7:UG:365:ASN:HB3	1.91	0.52
10:UJ:772:VAL:HA	10:UJ:775:ILE:HG12	1.91	0.52
12:UL:336:TYR:OH	12:UL:391:ARG:NE	2.41	0.52
20:UT:480:TYR:HE1	20:UT:521:THR:HG21	1.75	0.52
20:UT:1950:SER:OG	20:UT:1952:SER:OG	2.27	0.52
25:CD:15:TYR:HB2	25:CD:81:ILE:HD13	1.92	0.52
26:CE:318:GLN:OE1	63:D4:325:C:N4	2.43	0.52
36:JF:236:VAL:HG21	36:JG:103:PRO:HD3	1.92	0.52
43:JJ:72:VAL:HB	43:JJ:80:ARG:HB3	1.91	0.52
46:DF:200:ASN:ND2	46:DF:207:THR:OG1	2.42	0.52
10:UJ:336:LEU:HD21	10:UJ:348:ILE:HD11	1.91	0.52
10:UJ:760:PHE:O	10:UJ:768:LYS:NZ	2.38	0.52
12:UL:118:ASN:OD1	12:UL:118:ASN:N	2.42	0.52
12:UL:666:ALA:HB3	12:UL:670:GLY:H	1.75	0.52
17:UQ:111:THR:HG23	17:UQ:113:ASN:H	1.74	0.52
17:UQ:413:SER:OG	17:UQ:414:ILE:N	2.40	0.52
19:US:286:ILE:HG13	19:US:287:PRO:HD3	1.91	0.52
20:UT:70:ILE:HG22	20:UT:74:VAL:HG12	1.92	0.52
25:CD:172:ASN:HD22	26:CE:190:TRP:HE1	1.56	0.52
30:CJ:181:ASN:OD1	30:CJ:181:ASN:N	2.42	0.52
35:JD:1190:TYR:HB3	35:JD:1213:VAL:HG11	1.92	0.52
44:DA:32:ILE:HA	44:DA:96:LEU:HB2	1.92	0.52
62:D3:884:A:H2'	62:D3:885:G:C8	2.44	0.52
4:UD:302:ARG:NH1	4:UD:769:PHE:O	2.42	0.52
4:UD:434:SER:HB3	4:UD:483:ASN:HD22	1.74	0.52
10:UJ:33:LEU:O	10:UJ:150:ARG:NE	2.41	0.52
12:UL:48:ASP:OD1	12:UL:49:VAL:N	2.41	0.52
13:UM:161:TRP:HB3	13:UM:177:LEU:HD12	1.91	0.52
18:UR:541:LEU:O	18:UR:542:ARG:NH1	2.39	0.52
20:UT:2232:TRP:HD1	20:UT:2235:ILE:HD12	1.74	0.52
22:UV:1019:GLY:O	22:UV:1023:ASN:ND2	2.42	0.52
23:UX:142:VAL:HG21	23:UX:163:ARG:HE	1.73	0.52
28:CH:150:THR:OG1	28:CH:207:ARG:NH1	2.42	0.52
35:JD:1000:PHE:HB3	35:JD:1141:LEU:HD21	1.92	0.52
36:JF:75:GLY:O	36:JF:79:LYS:HG2	2.10	0.52
36:JF:243:HIS:HD2	36:JG:243:HIS:HD2	1.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JG:35:ASP:OD2	36:JG:40:ARG:NH2	2.42	0.52
36:JG:192:TYR:OH	36:JG:223:GLU:OE2	2.28	0.52
44:DA:180:THR:O	44:DA:184:LEU:N	2.41	0.52
48:DH:70:PHE:HA	48:DH:73:VAL:HG12	1.92	0.52
55:DS:27:LYS:NZ	55:DS:55:HIS:O	2.40	0.52
59:DY:57:VAL:O	59:DY:94:TYR:OH	2.27	0.52
63:D4:63:C:H2'	63:D4:64:A:C8	2.44	0.52
2:UB:557:SER:O	2:UB:559:ARG:NH1	2.42	0.52
5:UE:233:LYS:HB2	5:UE:249:GLU:HG2	1.91	0.52
10:UJ:304:GLN:NE2	10:UJ:343:VAL:O	2.43	0.52
13:UM:413:ILE:HG13	13:UM:415:TRP:HE1	1.74	0.52
20:UT:1055:ARG:NH2	62:D3:200:A:OP2	2.38	0.52
20:UT:1437:MET:HG2	20:UT:1476:LEU:HD13	1.91	0.52
23:UX:57:GLN:O	23:UX:60:LYS:NZ	2.42	0.52
26:CE:160:ASP:OD1	26:CE:160:ASP:N	2.42	0.52
31:CK:449:ASP:O	31:CK:453:SER:HB3	2.08	0.52
33:CM:60:THR:OG1	33:CM:80:ILE:O	2.22	0.52
36:JF:31:LEU:HD22	36:JF:40:ARG:HH21	1.75	0.52
36:JF:39:LYS:NZ	36:JF:200:GLU:O	2.42	0.52
36:JG:31:LEU:HD22	36:JG:40:ARG:HB3	1.92	0.52
51:DL:67:ARG:HH12	51:DL:129:ARG:N	2.08	0.52
62:D3:15:U:O2'	62:D3:619:A:N1	2.41	0.52
62:D3:1114:G:N1	63:D4:11:U:N3	2.58	0.52
2:UB:396:LEU:O	2:UB:400:PRO:N	2.43	0.52
4:UD:531:ILE:HA	4:UD:545:ARG:HG2	1.92	0.52
6:UF:186:VAL:HG21	6:UF:319:TYR:HE1	1.75	0.52
10:UJ:1566:ILE:HG22	10:UJ:1568:GLU:H	1.75	0.52
12:UL:584:ASP:OD1	12:UL:584:ASP:N	2.41	0.52
15:UO:319:VAL:CA	15:UO:328:ALA:O	2.30	0.52
20:UT:1683:ARG:HH21	62:D3:801:G:H1'	1.75	0.52
20:UT:2292:ASN:HA	20:UT:2295:ASN:HD22	1.75	0.52
22:UV:369:TRP:HE1	22:UV:495:THR:HG21	1.74	0.52
23:UX:76:ILE:HD11	23:UX:119:LEU:HD22	1.92	0.52
27:CF:68:PRO:HA	27:CF:71:CYS:HB2	1.92	0.52
35:JD:1059:ALA:HB1	43:JJ:68:SER:H	1.75	0.52
36:JF:161:LYS:HG2	36:JF:163:ILE:HG23	1.91	0.52
36:JF:175:CYS:SG	36:JF:201:SER:OG	2.63	0.52
44:DA:42:ASN:OD1	44:DA:42:ASN:N	2.42	0.52
62:D3:428:A:N3	62:D3:440:U:O2'	2.30	0.52
62:D3:578:U:H4'	62:D3:579:A:H5'	1.92	0.52
62:D3:1698:G:C6	62:D3:1704:U:N3	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:1726:G:H2'	62:D3:1727:G:C8	2.45	0.52
63:D4:168:C:H2'	63:D4:169:A:H8	1.75	0.52
4:UD:595:ASN:H	4:UD:611:LEU:HA	1.74	0.51
7:UG:115:HIS:HB3	7:UG:128:THR:HG23	1.93	0.51
12:UL:614:HIS:HB2	12:UL:618:ILE:HG13	1.92	0.51
12:UL:672:VAL:O	12:UL:682:ARG:O	2.28	0.51
13:UM:354:ALA:HB1	13:UM:362:LEU:HD11	1.92	0.51
20:UT:522:LEU:HA	20:UT:525:ILE:HG12	1.93	0.51
22:UV:976:ILE:HD12	22:UV:1020:ILE:HG21	1.92	0.51
23:UX:83:VAL:HG21	23:UX:124:ARG:HE	1.75	0.51
36:JG:178:VAL:HA	36:JG:223:GLU:O	2.09	0.51
43:JJ:169:ASP:N	43:JJ:169:ASP:OD1	2.42	0.51
2:UB:518:ILE:O	2:UB:522:LEU:N	2.42	0.51
2:UB:659:GLU:HA	2:UB:662:LEU:HG	1.90	0.51
8:UH:295:TYR:HA	8:UH:302:LEU:HA	1.91	0.51
9:UI:483:LYS:HB3	9:UI:487:ARG:HH22	1.75	0.51
15:UO:165:THR:HG22	15:UO:166:GLY:H	1.75	0.51
17:UQ:359:GLN:O	17:UQ:368:ASP:O	2.28	0.51
17:UQ:599:ILE:HD11	17:UQ:601:LEU:HD12	1.92	0.51
20:UT:2071:PRO:O	20:UT:2076:ARG:NH2	2.44	0.51
21:UU:370:SER:OG	21:UU:371:LYS:N	2.42	0.51
21:UU:760:LEU:HD13	43:JJ:176:ARG:HD3	1.92	0.51
22:UV:805:ALA:HB2	34:CN:184:ILE:HG21	1.93	0.51
32:CL:761:GLN:OE1	33:CM:181:HIS:NE2	2.42	0.51
32:CL:869:THR:O	32:CL:869:THR:OG1	2.29	0.51
33:CM:122:THR:OG1	33:CM:157:GLY:O	2.29	0.51
50:DJ:57:ARG:NH1	50:DJ:58:ASP:OD1	2.43	0.51
56:DT:48:GLN:HE22	62:D3:1532:U:H1'	1.74	0.51
61:D2:286:U:H3	63:D4:67:G:H22	1.59	0.51
1:UA:582:THR:HG21	1:UA:683:SER:HA	1.92	0.51
2:UB:550:VAL:HA	2:UB:553:TYR:HB2	1.91	0.51
4:UD:226:LEU:O	4:UD:227:HIS:ND1	2.43	0.51
10:UJ:1658:ILE:HD11	10:UJ:1663:GLY:HA2	1.92	0.51
12:UL:806:MET:HG3	12:UL:835:PHE:HZ	1.76	0.51
17:UQ:68:PHE:O	17:UQ:75:SER:OG	2.28	0.51
20:UT:356:ASP:N	20:UT:356:ASP:OD1	2.40	0.51
21:UU:78:SER:OG	21:UU:79:SER:N	2.42	0.51
22:UV:707:PHE:O	22:UV:918:ARG:NH1	2.42	0.51
22:UV:930:THR:OG1	22:UV:932:GLU:OE1	2.27	0.51
22:UV:949:PHE:O	22:UV:960:LYS:NZ	2.42	0.51
24:CA:248:ASP:OD1	24:CA:248:ASP:N	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CM:206:ASN:ND2	62:D3:1130:A:O2'	2.43	0.51
62:D3:1684:U:H3	62:D3:1717:G:H1	1.58	0.51
2:UB:528:PHE:HD2	2:UB:546:LEU:HD11	1.76	0.51
5:UE:299:ASP:OD2	5:UE:320:ARG:NH2	2.44	0.51
10:UJ:559:ASN:ND2	10:UJ:594:SER:OG	2.43	0.51
10:UJ:560:ILE:HG22	10:UJ:599:PHE:HB3	1.93	0.51
17:UQ:232:ASP:N	17:UQ:232:ASP:OD1	2.42	0.51
17:UQ:715:GLU:HG3	17:UQ:716:ARG:HG3	1.92	0.51
18:UR:166:SER:O	18:UR:170:LYS:NZ	2.43	0.51
20:UT:32:ARG:NH2	20:UT:242:SER:O	2.44	0.51
20:UT:512:ASP:OD1	20:UT:513:ASN:N	2.44	0.51
20:UT:721:GLU:HB2	20:UT:752:THR:HG23	1.92	0.51
20:UT:1011:LEU:HB3	20:UT:1015:PHE:HB3	1.92	0.51
22:UV:720:SER:OG	22:UV:721:VAL:N	2.44	0.51
23:UX:10:PHE:HE2	30:CJ:13:LEU:HB3	1.76	0.51
36:JG:55:ILE:O	36:JG:63:ASP:N	2.43	0.51
55:DS:100:THR:O	55:DS:104:ASN:ND2	2.44	0.51
62:D3:209:U:H2'	62:D3:210:A:H8	1.76	0.51
7:UG:191:ILE:HG22	7:UG:192:GLU:HG3	1.92	0.51
11:UK:105:ASN:HB3	26:CE:330:LEU:HD22	1.93	0.51
13:UM:62:GLN:HE22	13:UM:82:ALA:HB2	1.75	0.51
13:UM:559:ILE:HB	13:UM:569:LYS:HB2	1.91	0.51
16:UP:183:THR:HB	16:UP:185:GLN:HE21	1.74	0.51
20:UT:461:ILE:HG23	20:UT:482:ARG:HB3	1.93	0.51
20:UT:1100:GLN:NE2	62:D3:186:C:O2'	2.44	0.51
20:UT:1165:ASP:N	20:UT:1165:ASP:OD1	2.43	0.51
36:JF:104:ILE:HD13	36:JF:242:CYS:HB2	1.91	0.51
45:DE:3:ARG:HB3	62:D3:399:A:H4'	1.91	0.51
55:DS:39:GLY:H	62:D3:1566:U:H5''	1.75	0.51
63:D4:46:U:H2'	63:D4:47:G:H8	1.75	0.51
7:UG:298:MET:HB3	7:UG:312:VAL:HB	1.92	0.51
19:US:452:ASP:HB2	19:US:455:LEU:HB2	1.92	0.51
20:UT:288:ILE:HA	20:UT:291:LEU:HB2	1.93	0.51
20:UT:1289:ILE:HD13	20:UT:1305:VAL:HG21	1.92	0.51
20:UT:1877:ARG:HB2	20:UT:1917:ILE:HG22	1.92	0.51
20:UT:2109:VAL:O	20:UT:2113:ASP:CB	2.56	0.51
21:UU:202:SER:OG	21:UU:203:ASN:N	2.43	0.51
27:CG:68:PRO:HA	27:CG:71:CYS:HB2	1.92	0.51
32:CL:87:ARG:HH12	32:CL:99:ASN:HA	1.76	0.51
35:JD:1209:ARG:NH2	35:JD:1211:CYS:SG	2.83	0.51
62:D3:1114:G:C2	63:D4:11:U:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:1697:G:O6	62:D3:1705:C:N4	2.43	0.51
1:UA:67:GLY:O	1:UA:85:LYS:NZ	2.38	0.51
4:UD:308:SER:OG	4:UD:310:ASN:OD1	2.28	0.51
7:UG:215:LYS:HB3	7:UG:224:LEU:HD11	1.93	0.51
7:UG:452:VAL:HG22	14:UN:844:SER:HB3	1.92	0.51
15:UO:43:THR:O	15:UO:304:SER:OG	2.29	0.51
17:UQ:690:ASN:ND2	17:UQ:749:ASP:O	2.40	0.51
20:UT:1936:ASN:OD1	20:UT:1939:ARG:NH2	2.44	0.51
20:UT:2090:ALA:HB3	20:UT:2095:LEU:HD12	1.93	0.51
20:UT:2248:GLN:O	20:UT:2252:ASN:ND2	2.44	0.51
24:CB:144:TRP:CE2	24:CB:183:HIS:HB3	2.46	0.51
27:CF:61:ILE:HD12	27:CF:64:LEU:HD21	1.92	0.51
28:CH:405:VAL:HG23	28:CH:415:THR:HG22	1.92	0.51
28:CH:417:SER:OG	28:CH:418:ASP:N	2.44	0.51
32:CL:740:GLU:OE1	32:CL:745:ASN:ND2	2.44	0.51
32:CL:907:THR:HG21	32:CL:912:ARG:HH11	1.76	0.51
35:JD:623:LEU:HB2	35:JD:776:VAL:HG12	1.91	0.51
35:JD:1164:LYS:O	35:JD:1166:ARG:NH2	2.44	0.51
48:DH:96:ARG:HH12	48:DH:124:LYS:HB3	1.75	0.51
4:UD:481:ILE:HG12	4:UD:536:VAL:HG21	1.92	0.51
13:UM:30:LYS:O	13:UM:44:ASP:HA	2.11	0.51
17:UQ:440:VAL:HB	17:UQ:765:TRP:CE2	2.46	0.51
20:UT:850:LEU:O	20:UT:854:LEU:HB2	2.11	0.51
20:UT:952:VAL:HG22	20:UT:955:ASN:HD21	1.76	0.51
20:UT:1997:GLY:HA2	20:UT:2000:PHE:HD2	1.76	0.51
22:UV:227:LYS:O	22:UV:231:TYR:HB2	2.11	0.51
32:CL:179:SER:HB3	32:CL:182:THR:HG23	1.91	0.51
34:CN:151:HIS:CE1	34:CN:153:ASN:HB3	2.45	0.51
34:CN:210:ASP:N	34:CN:210:ASP:OD1	2.42	0.51
52:DN:5:HIS:NE2	52:DN:120:SER:OG	2.43	0.51
62:D3:871:G:H2'	62:D3:872:G:C8	2.46	0.51
62:D3:985:G:N1	62:D3:1017:U:N3	2.58	0.51
13:UM:191:SER:OG	13:UM:192:ALA:N	2.44	0.51
17:UQ:571:GLN:HB3	17:UQ:587:PHE:HB3	1.93	0.51
17:UQ:773:ASP:OD1	17:UQ:773:ASP:N	2.44	0.51
20:UT:184:SER:HA	20:UT:227:ASN:HD22	1.75	0.51
21:UU:62:ASP:OD1	21:UU:63:ALA:N	2.43	0.51
21:UU:591:PHE:HA	21:UU:601:VAL:O	2.11	0.51
22:UV:238:HIS:HA	22:UV:241:ILE:HG12	1.92	0.51
22:UV:870:ALA:O	22:UV:875:LYS:NZ	2.44	0.51
27:CG:61:ILE:HD12	27:CG:64:LEU:HD21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:JD:613:ILE:O	35:JD:616:LYS:C	2.49	0.51
55:DS:65:GLU:HG2	55:DS:68:ARG:HH22	1.74	0.51
62:D3:47:A:N7	62:D3:98:U:O2'	2.44	0.51
62:D3:900:A:H3'	62:D3:901:G:H21	1.76	0.51
1:UA:329:VAL:HB	1:UA:339:LEU:HG	1.93	0.51
7:UG:377:LYS:HB3	7:UG:395:GLN:HE21	1.75	0.51
12:UL:536:CYS:SG	12:UL:537:VAL:N	2.84	0.51
15:UO:315:ASN:N	15:UO:315:ASN:OD1	2.44	0.51
15:UO:463:VAL:HA	15:UO:466:VAL:HG12	1.92	0.51
17:UQ:11:LYS:O	17:UQ:786:VAL:HA	2.11	0.51
20:UT:1927:SER:OG	20:UT:1928:ASP:N	2.42	0.51
35:JD:439:PRO:HB2	35:JD:442:PRO:HD2	1.93	0.51
39:JL:273:MET:HA	39:JL:276:VAL:HG12	1.93	0.51
47:DG:174:LYS:HE2	47:DG:176:GLN:HE22	1.76	0.51
62:D3:269:G:O6	62:D3:287:G:C6	2.64	0.51
63:D4:181:G:H22	63:D4:183:A:H3'	1.76	0.51
5:UE:10:TYR:OH	5:UE:302:ASN:ND2	2.44	0.50
11:UK:146:PHE:O	16:UP:173:ARG:NH1	2.43	0.50
14:UN:879:ILE:HD13	41:JP:396:TYR:HB2	1.94	0.50
17:UQ:278:GLY:HA2	17:UQ:300:VAL:HG13	1.92	0.50
28:CH:234:GLY:O	28:CH:259:LYS:NZ	2.34	0.50
33:CM:27:SER:HB2	33:CM:333:PHE:HE1	1.76	0.50
44:DA:88:VAL:HG11	44:DA:96:LEU:HD13	1.93	0.50
4:UD:768:ALA:O	16:UP:214:GLY:N	2.38	0.50
7:UG:306:PHE:HB3	14:UN:829:VAL:HG21	1.92	0.50
10:UJ:1454:LEU:HD13	10:UJ:1457:LEU:HD12	1.93	0.50
13:UM:514:THR:HA	13:UM:529:LEU:O	2.11	0.50
20:UT:1617:VAL:HG11	20:UT:1661:ILE:HG12	1.93	0.50
20:UT:1641:GLN:HG3	45:DE:197:HIS:CD2	2.46	0.50
22:UV:1016:GLN:HE22	22:UV:1044:LYS:HE3	1.76	0.50
32:CL:8:HIS:HB3	62:D3:1792:G:N7	2.26	0.50
32:CL:306:ASP:N	32:CL:306:ASP:OD1	2.37	0.50
36:JF:178:VAL:HA	36:JF:223:GLU:O	2.10	0.50
41:JP:188:HIS:HB3	41:JP:193:THR:O	2.10	0.50
51:DL:132:SER:OG	51:DL:133:LYS:N	2.42	0.50
62:D3:953:G:H2'	62:D3:954:G:H8	1.75	0.50
1:UA:10:LEU:HD13	1:UA:702:LEU:HD23	1.93	0.50
1:UA:114:ALA:HB2	1:UA:152:LEU:HD12	1.93	0.50
1:UA:570:THR:HG23	1:UA:573:ASN:H	1.76	0.50
4:UD:427:ASN:O	4:UD:444:ARG:NH1	2.44	0.50
4:UD:450:VAL:HG13	4:UD:465:LEU:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:1492:SER:OG	10:UJ:1493:ALA:N	2.44	0.50
12:UL:171:CYS:SG	12:UL:172:GLN:N	2.85	0.50
20:UT:219:LEU:HD21	20:UT:270:ARG:HG2	1.93	0.50
21:UU:802:MET:O	35:JD:1212:TYR:OH	2.29	0.50
22:UV:495:THR:HA	22:UV:498:MET:HG2	1.92	0.50
25:CD:147:LEU:O	25:CD:151:GLN:HG2	2.12	0.50
48:DH:45:SER:OG	48:DH:46:ILE:N	2.44	0.50
48:DH:49:ILE:HD11	48:DH:172:VAL:HG22	1.93	0.50
52:DN:142:GLU:H	52:DN:145:THR:HB	1.77	0.50
6:UF:9:GLU:OE2	14:UN:871:SER:OG	2.24	0.50
10:UJ:137:LEU:HD11	10:UJ:191:LEU:HG	1.93	0.50
10:UJ:1688:ASN:HD22	10:UJ:1725:LEU:HB3	1.77	0.50
12:UL:48:ASP:OD1	12:UL:63:LEU:N	2.45	0.50
12:UL:214:ASP:OD1	12:UL:214:ASP:N	2.44	0.50
13:UM:787:PRO:HG3	31:CK:495:ILE:HD11	1.93	0.50
20:UT:1085:VAL:HA	20:UT:1088:LYS:HE2	1.93	0.50
20:UT:1490:GLU:OE1	20:UT:1529:ARG:NH1	2.44	0.50
22:UV:298:PHE:HB2	22:UV:340:SER:HA	1.93	0.50
26:CE:163:ILE:HD11	26:CE:280:MET:HG2	1.91	0.50
28:CH:364:GLU:OE1	28:CH:366:GLN:NE2	2.45	0.50
28:CH:502:SER:OG	28:CH:503:ASP:N	2.44	0.50
29:CI:162:ASP:OD1	29:CI:167:LYS:NZ	2.41	0.50
32:CL:82:LYS:HA	32:CL:141:LEU:HD21	1.93	0.50
35:JD:847:VAL:HA	35:JD:850:ILE:HG12	1.92	0.50
37:JH:260:TYR:HA	37:JH:306:ALA:HB2	1.92	0.50
45:DE:136:VAL:HG21	45:DE:148:ARG:HE	1.77	0.50
56:DT:7:ARG:NH2	56:DT:67:MET:O	2.44	0.50
62:D3:23:G:C2	62:D3:602:U:O2	2.65	0.50
4:UD:476:LYS:HG3	4:UD:491:CYS:HA	1.94	0.50
6:UF:25:THR:N	6:UF:28:GLU:OE1	2.37	0.50
20:UT:1178:CYS:HA	20:UT:1181:ILE:HD12	1.92	0.50
23:UX:149:LYS:HA	23:UX:170:ILE:HD11	1.94	0.50
25:CD:25:ASP:OD1	25:CD:25:ASP:N	2.44	0.50
41:JP:152:VAL:HG12	41:JP:154:ASP:H	1.76	0.50
63:D4:46:U:H2'	63:D4:47:G:C8	2.46	0.50
2:UB:600:LEU:O	2:UB:675:TYR:OH	2.30	0.50
4:UD:329:HIS:HE2	4:UD:349:SER:HB2	1.76	0.50
8:UH:341:LEU:CA	8:UH:358:VAL:O	2.45	0.50
10:UJ:121:LEU:HD23	10:UJ:127:ILE:HD13	1.94	0.50
13:UM:532:HIS:CD2	13:UM:533:LYS:H	2.29	0.50
20:UT:894:ASP:OD1	20:UT:932:ARG:NH1	2.33	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:UV:99:LYS:O	22:UV:103:PHE:HB2	2.12	0.50
22:UV:576:ASP:OD2	22:UV:626:LYS:NZ	2.45	0.50
22:UV:703:LYS:HG3	22:UV:1082:GLN:HB2	1.94	0.50
32:CL:10:LYS:NZ	62:D3:1773:C:OP1	2.32	0.50
34:CN:52:CYS:HB3	34:CN:125:LEU:HD11	1.94	0.50
41:JP:304:HIS:CE1	41:JP:324:SER:HB3	2.46	0.50
59:DY:42:GLU:HG2	59:DY:52:LYS:HD2	1.92	0.50
61:D2:290:G:C5	63:D4:64:A:N1	2.80	0.50
62:D3:1698:G:N1	62:D3:1704:U:C2	2.80	0.50
63:D4:47:G:H2'	63:D4:48:A:H8	1.76	0.50
2:UB:604:VAL:HG13	2:UB:606:PHE:HD2	1.76	0.50
10:UJ:283:LEU:HB3	10:UJ:322:LEU:HG	1.94	0.50
12:UL:142:ASP:N	12:UL:142:ASP:OD1	2.42	0.50
13:UM:679:THR:HG21	13:UM:723:GLU:HB2	1.94	0.50
17:UQ:138:ASP:OD1	17:UQ:138:ASP:N	2.36	0.50
20:UT:594:GLY:HA2	20:UT:597:ARG:HG2	1.92	0.50
20:UT:1321:PHE:HA	20:UT:1324:ILE:HG22	1.94	0.50
23:UX:129:SER:OG	24:CA:291:GLN:NE2	2.45	0.50
24:CB:122:ARG:NH2	63:D4:319:G:OP1	2.44	0.50
24:CB:212:LYS:NZ	25:CD:261:GLN:OE1	2.45	0.50
30:CJ:93:SER:OG	30:CJ:94:ARG:N	2.44	0.50
30:CJ:241:THR:N	30:CJ:244:GLY:O	2.34	0.50
32:CL:568:ARG:NH1	33:CM:315:LYS:O	2.45	0.50
32:CL:904:ASN:OD1	32:CL:912:ARG:NH1	2.45	0.50
35:JD:631:GLU:O	35:JD:635:MET:HG3	2.12	0.50
36:JF:230:TYR:HE2	36:JG:251:ILE:HD11	1.76	0.50
36:JG:112:VAL:HG13	36:JG:124:VAL:HB	1.92	0.50
39:JL:190:LYS:NZ	63:D4:5:A:OP1	2.45	0.50
40:JM:170:LYS:HD3	40:JM:175:GLU:HG2	1.94	0.50
43:JJ:204:ARG:NH1	43:JJ:250:LEU:O	2.45	0.50
5:UE:230:SER:OG	5:UE:231:ASP:N	2.43	0.50
7:UG:386:PHE:O	41:JP:8:ARG:NH2	2.34	0.50
10:UJ:600:LEU:HD23	10:UJ:603:LYS:HE2	1.93	0.50
10:UJ:1583:GLN:HE22	10:UJ:1629:SER:HB3	1.77	0.50
13:UM:80:SER:OG	13:UM:81:GLN:N	2.45	0.50
13:UM:539:VAL:HA	13:UM:549:ALA:O	2.11	0.50
18:UR:388:HIS:HB3	18:UR:393:LEU:HB2	1.94	0.50
20:UT:1313:SER:OG	20:UT:1323:ARG:NE	2.42	0.50
20:UT:1470:GLY:HA2	20:UT:1472:HIS:CE1	2.46	0.50
20:UT:1782:ASN:O	20:UT:1786:GLN:HB2	2.12	0.50
20:UT:2175:GLU:HG2	20:UT:2176:HIS:H	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:UU:131:SER:HB2	21:UU:170:LEU:HD11	1.93	0.50
22:UV:382:SER:O	22:UV:588:GLN:NE2	2.44	0.50
22:UV:1169:ILE:HG12	22:UV:1180:ASN:HD21	1.76	0.50
26:CE:15:LEU:HD11	26:CE:42:PHE:HB3	1.94	0.50
27:CF:38:ASN:ND2	63:D4:82:G:N7	2.58	0.50
30:CJ:139:LEU:HB2	30:CJ:157:PHE:CE2	2.47	0.50
57:DW:23:ARG:HH12	57:DW:66:ASN:HA	1.77	0.50
2:UB:668:LEU:HD12	2:UB:681:PRO:HB3	1.93	0.50
7:UG:440:ASP:OD1	7:UG:440:ASP:N	2.44	0.50
10:UJ:39:THR:HA	10:UJ:42:THR:HG22	1.94	0.50
12:UL:680:SER:HG	12:UL:682:ARG:HE	1.60	0.50
13:UM:590:LEU:HG	13:UM:604:CYS:HB3	1.93	0.50
18:UR:426:VAL:HG11	18:UR:458:ILE:HB	1.93	0.50
21:UU:538:GLY:HA3	21:UU:575:GLN:HE22	1.76	0.50
24:CB:264:GLN:HE21	24:CB:319:ARG:HE	1.60	0.50
31:CK:538:LYS:HZ3	62:D3:1628:U:H5'	1.77	0.50
32:CL:7:GLN:NE2	62:D3:1771:U:O2'	2.45	0.50
34:CN:50:SER:O	34:CN:127:LYS:NZ	2.37	0.50
35:JD:626:LEU:HD13	35:JD:779:SER:HB3	1.93	0.50
43:JJ:269:ARG:HH22	62:D3:1005:A:H62	1.59	0.50
10:UJ:70:SER:HA	10:UJ:74:PHE:HB2	1.94	0.49
10:UJ:1606:LYS:HA	10:UJ:1609:ILE:HG12	1.94	0.49
15:UO:69:ARG:HA	15:UO:315:ASN:HD21	1.77	0.49
15:UO:151:LEU:HB3	15:UO:162:LEU:HB2	1.94	0.49
17:UQ:47:PRO:HD3	17:UQ:91:ILE:HD11	1.94	0.49
20:UT:977:PHE:O	20:UT:980:ASN:O	2.29	0.49
22:UV:1105:PRO:HG2	22:UV:1106:ILE:HD12	1.94	0.49
23:UX:155:THR:OG1	23:UX:156:ASN:N	2.45	0.49
34:CN:19:LYS:NZ	34:CN:153:ASN:O	2.45	0.49
35:JD:461:ARG:NH1	35:JD:769:THR:O	2.45	0.49
35:JD:1126:PRO:HA	35:JD:1129:GLU:HB2	1.92	0.49
36:JG:167:ILE:HG22	36:JG:171:LEU:HD12	1.94	0.49
39:JL:57:SER:HB2	62:D3:1131:A:C5	2.47	0.49
61:D2:2:U:HO2'	61:D2:69:U:HO2'	1.55	0.49
62:D3:406:U:H2'	62:D3:407:A:C8	2.47	0.49
62:D3:1167:G:C2	62:D3:1579:U:O2	2.65	0.49
7:UG:263:MET:HB2	14:UN:835:VAL:HG13	1.93	0.49
8:UH:642:LEU:HD21	9:UI:506:LEU:HD11	1.93	0.49
14:UN:302:VAL:HG21	41:JP:273:GLU:HA	1.94	0.49
15:UO:415:LEU:HD12	15:UO:455:SER:HB3	1.93	0.49
18:UR:319:ARG:HB2	61:D2:89:C:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:180:LEU:HD11	20:UT:188:LEU:HD12	1.95	0.49
20:UT:324:SER:OG	20:UT:325:GLU:N	2.44	0.49
20:UT:1475:GLN:NE2	20:UT:1517:HIS:O	2.44	0.49
20:UT:1990:LEU:HA	20:UT:1996:GLN:HG3	1.93	0.49
22:UV:232:LEU:HD21	22:UV:266:PRO:HG2	1.93	0.49
22:UV:526:CYS:HA	22:UV:615:VAL:O	2.12	0.49
22:UV:708:LEU:HD12	22:UV:709:PRO:HD2	1.93	0.49
22:UV:801:LYS:HD2	34:CN:187:HIS:CG	2.47	0.49
33:CM:156:ARG:NH2	33:CM:228:ASP:OD2	2.45	0.49
35:JD:1091:HIS:HB3	35:JD:1154:TYR:CZ	2.47	0.49
36:JG:151:ARG:NH1	62:D3:1570:A:O3'	2.45	0.49
44:DA:8:ARG:HD3	62:D3:907:A:H5''	1.93	0.49
44:DA:90:GLU:HG3	44:DA:225:VAL:HG23	1.94	0.49
62:D3:1717:G:C2	62:D3:1718:G:C4	2.99	0.49
1:UA:200:SER:OG	1:UA:201:HIS:N	2.46	0.49
5:UE:281:ILE:HG12	5:UE:328:VAL:HB	1.93	0.49
10:UJ:151:ILE:O	10:UJ:155:ILE:HB	2.13	0.49
10:UJ:1525:GLU:HA	10:UJ:1528:VAL:HG12	1.94	0.49
12:UL:183:ASP:OD1	12:UL:183:ASP:N	2.40	0.49
12:UL:277:ALA:HB1	12:UL:337:LYS:HE3	1.94	0.49
12:UL:463:SER:OG	12:UL:464:LEU:N	2.46	0.49
13:UM:739:LEU:HD23	13:UM:763:ILE:HD11	1.93	0.49
15:UO:75:LYS:HE3	15:UO:111:TYR:HA	1.94	0.49
22:UV:249:ASP:N	22:UV:249:ASP:OD1	2.42	0.49
25:CD:24:GLN:HG3	25:CD:123:LEU:HD11	1.93	0.49
28:CH:241:THR:HG21	28:CH:285:SER:HA	1.92	0.49
34:CN:150:LYS:HD2	34:CN:151:HIS:HB2	1.95	0.49
59:DY:112:LYS:NZ	62:D3:55:A:OP1	2.46	0.49
62:D3:278:U:O2	62:D3:279:G:N1	2.45	0.49
1:UA:808:GLY:HA2	1:UA:811:ASN:HD22	1.77	0.49
12:UL:500:TRP:HA	12:UL:524:HIS:HA	1.94	0.49
13:UM:537:TRP:HD1	13:UM:553:GLY:HA2	1.76	0.49
15:UO:285:ASP:OD1	15:UO:285:ASP:N	2.43	0.49
15:UO:492:ARG:HA	15:UO:495:ILE:HD12	1.93	0.49
17:UQ:680:ALA:HB1	17:UQ:749:ASP:HB2	1.95	0.49
20:UT:1312:SER:OG	20:UT:1315:ARG:NH1	2.45	0.49
26:CE:91:GLU:HB2	26:CE:94:LEU:HB2	1.94	0.49
30:CJ:25:LEU:HG	30:CJ:29:ARG:HH11	1.77	0.49
30:CJ:170:VAL:HA	30:CJ:254:PHE:HB3	1.94	0.49
35:JD:439:PRO:HD2	35:JD:442:PRO:HG2	1.93	0.49
39:JL:284:VAL:HG11	39:JL:313:VAL:HG11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:JP:230:ASN:HB2	41:JP:274:ALA:HB2	1.94	0.49
43:JJ:190:VAL:O	53:DO:128:LYS:NZ	2.44	0.49
62:D3:230:C:H42	62:D3:236:A:N6	2.08	0.49
62:D3:255:U:O4	62:D3:256:A:N6	2.45	0.49
62:D3:1474:G:H2'	62:D3:1475:A:C8	2.46	0.49
62:D3:1584:G:O2'	62:D3:1610:G:O6	2.27	0.49
1:UA:363:ALA:HB1	1:UA:390:VAL:HB	1.94	0.49
12:UL:629:ASN:HD22	12:UL:643:ASP:HA	1.78	0.49
15:UO:409:MET:HG3	15:UO:413:LEU:HD23	1.95	0.49
20:UT:1738:TYR:HA	62:D3:803:A:H1'	1.95	0.49
22:UV:1196:PHE:HA	22:UV:1200:LEU:HD22	1.94	0.49
22:UV:1229:ASP:OD1	22:UV:1229:ASP:N	2.44	0.49
24:CB:212:LYS:HE2	26:CE:149:ARG:HH22	1.77	0.49
33:CM:228:ASP:OD2	33:CM:230:TRP:NE1	2.39	0.49
34:CN:131:ALA:HA	34:CN:134:ILE:HG22	1.94	0.49
62:D3:649:U:HO2'	62:D3:650:U:H6	1.59	0.49
62:D3:1661:U:H2'	62:D3:1662:G:C8	2.47	0.49
62:D3:1662:G:H2'	62:D3:1663:G:C8	2.47	0.49
63:D4:3:C:H2'	63:D4:4:G:C8	2.47	0.49
4:UD:207:ASP:HB3	4:UD:209:ARG:HE	1.78	0.49
5:UE:233:LYS:HG3	5:UE:234:GLU:HG2	1.94	0.49
8:UH:580:LEU:HD21	8:UH:631:SER:HA	1.94	0.49
18:UR:430:GLY:HA2	18:UR:455:ILE:HD12	1.93	0.49
20:UT:1281:ARG:HD2	20:UT:1284:LEU:HD21	1.95	0.49
46:DF:118:LEU:HD22	46:DF:129:PRO:HB2	1.95	0.49
5:UE:27:GLN:HB2	5:UE:53:LEU:HD12	1.94	0.49
5:UE:255:ILE:HD11	5:UE:277:LYS:HD2	1.93	0.49
15:UO:35:LEU:HD11	15:UO:326:LEU:HB3	1.93	0.49
15:UO:144:SER:OG	15:UO:145:ASP:N	2.46	0.49
15:UO:177:ILE:HG13	15:UO:179:ALA:H	1.77	0.49
17:UQ:678:LEU:HD23	17:UQ:694:LEU:HD11	1.95	0.49
17:UQ:863:LYS:HB3	18:UR:547:PRO:HB2	1.94	0.49
19:US:281:LEU:HA	19:US:285:ILE:HB	1.94	0.49
20:UT:562:VAL:HG21	20:UT:607:LEU:HD22	1.95	0.49
22:UV:1111:SER:HA	22:UV:1129:PRO:HD3	1.93	0.49
28:CH:452:SER:HB3	28:CH:460:ARG:HG2	1.93	0.49
35:JD:898:ASP:O	35:JD:902:MET:HG2	2.13	0.49
35:JD:1136:HIS:O	35:JD:1139:SER:OG	2.31	0.49
36:JF:177:LYS:HB2	36:JF:221:VAL:HA	1.94	0.49
36:JG:39:LYS:O	36:JG:109:LYS:NZ	2.37	0.49
44:DA:80:SER:O	53:DO:114:ARG:NH2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:229:U:O4	62:D3:237:C:N3	2.45	0.49
62:D3:706:A:H2	62:D3:732:G:H22	1.61	0.49
1:UA:283:GLU:OE1	1:UA:297:GLN:NE2	2.43	0.49
1:UA:582:THR:HG21	1:UA:684:VAL:H	1.78	0.49
2:UB:701:ALA:HB1	2:UB:704:ASN:HD22	1.77	0.49
5:UE:167:SER:O	5:UE:168:HIS:ND1	2.45	0.49
11:UK:11:LYS:NZ	62:D3:573:C:OP1	2.31	0.49
17:UQ:139:GLU:OE2	17:UQ:174:TYR:OH	2.30	0.49
18:UR:214:THR:HG23	18:UR:215:THR:HG23	1.95	0.49
19:US:174:ASN:HB2	19:US:178:VAL:HG13	1.94	0.49
19:US:292:PRO:HA	19:US:295:LEU:HB2	1.94	0.49
22:UV:228:ARG:HH21	22:UV:296:ILE:H	1.60	0.49
26:CE:361:ARG:NH1	63:D4:84:U:OP2	2.38	0.49
35:JD:559:SER:OG	35:JD:560:ALA:N	2.46	0.49
39:JL:162:ARG:NH1	39:JL:173:CYS:SG	2.86	0.49
47:DG:149:LYS:NZ	62:D3:138:A:O2'	2.46	0.49
62:D3:689:G:H2'	62:D3:690:G:C8	2.48	0.49
62:D3:873:U:O4	62:D3:954:G:O6	2.31	0.49
5:UE:485:ALA:HB2	5:UE:526:LEU:HG	1.93	0.49
10:UJ:696:LEU:HD13	10:UJ:740:ALA:HB2	1.95	0.49
10:UJ:1692:VAL:HA	10:UJ:1695:MET:HG2	1.94	0.49
11:UK:166:LEU:HD12	24:CB:92:ARG:HB3	1.95	0.49
13:UM:490:HIS:CE1	13:UM:516:LYS:HG2	2.48	0.49
13:UM:517:ILE:HD11	13:UM:527:ALA:HB3	1.95	0.49
17:UQ:279:VAL:HG13	17:UQ:294:LYS:HG2	1.95	0.49
20:UT:2169:LEU:HD22	20:UT:2215:SER:HB2	1.93	0.49
44:DA:60:ALA:HB1	44:DA:64:ARG:HH12	1.77	0.49
46:DF:133:VAL:HG22	46:DF:198:LEU:HD13	1.95	0.49
1:UA:563:ARG:HD3	1:UA:630:LEU:HG	1.95	0.49
4:UD:570:ILE:HA	4:UD:586:THR:HG22	1.95	0.49
6:UF:46:ARG:NH1	41:JP:21:GLU:OE2	2.45	0.49
7:UG:241:ASN:O	7:UG:245:ALA:N	2.46	0.49
10:UJ:778:SER:O	10:UJ:782:VAL:HB	2.13	0.49
13:UM:518:TRP:HB3	13:UM:525:LEU:HA	1.94	0.49
15:UO:177:ILE:HD11	15:UO:223:PRO:HA	1.95	0.49
17:UQ:321:MET:HB3	17:UQ:334:LEU:HB2	1.95	0.49
17:UQ:441:GLU:HG2	17:UQ:499:LYS:HA	1.95	0.49
21:UU:209:ILE:HD13	21:UU:223:LEU:HD13	1.94	0.49
23:UX:8:ARG:HB2	29:CI:117:ARG:HH11	1.77	0.49
33:CM:202:PRO:HG3	33:CM:229:VAL:HG11	1.94	0.49
35:JD:761:THR:HG22	35:JD:762:ASN:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DL:73:GLY:HA3	51:DL:86:ILE:HD12	1.95	0.49
61:D2:287:G:C5	63:D4:67:G:N2	2.81	0.49
62:D3:271:A:C2	62:D3:285:G:N1	2.81	0.49
62:D3:922:G:H2'	62:D3:923:A:H8	1.78	0.49
62:D3:1144:U:OP2	62:D3:1646:C:O2'	2.28	0.49
1:UA:125:PRO:HB3	1:UA:135:PRO:HB2	1.95	0.48
4:UD:113:ARG:HA	4:UD:128:LEU:HD11	1.95	0.48
10:UJ:1477:PHE:O	10:UJ:1480:THR:OG1	2.29	0.48
10:UJ:1656:SER:HB3	10:UJ:1694:HIS:CE1	2.48	0.48
12:UL:273:TYR:HE2	12:UL:343:TRP:HD1	1.60	0.48
22:UV:550:MET:HA	22:UV:553:VAL:HG12	1.93	0.48
22:UV:897:ARG:HD3	44:DA:180:THR:HG23	1.95	0.48
26:CE:196:ALA:HA	26:CE:205:TYR:HE1	1.77	0.48
32:CL:105:ILE:HG23	32:CL:117:PHE:HB2	1.95	0.48
32:CL:140:LEU:HD11	32:CL:152:THR:HG23	1.94	0.48
32:CL:831:ARG:HD3	32:CL:838:ILE:HA	1.95	0.48
51:DL:21:ASN:OD1	51:DL:21:ASN:N	2.40	0.48
62:D3:868:G:O6	62:D3:960:U:O4	2.30	0.48
62:D3:1776:A:N1	62:D3:1786:G:C6	2.81	0.48
63:D4:178:U:H1'	63:D4:188:A:N6	2.28	0.48
2:UB:630:ASP:HA	2:UB:633:VAL:HG12	1.94	0.48
12:UL:140:SER:OG	12:UL:142:ASP:OD1	2.31	0.48
13:UM:389:ASP:HB3	13:UM:408:LYS:HB3	1.96	0.48
17:UQ:245:LEU:HD22	17:UQ:249:THR:HG21	1.96	0.48
18:UR:129:ASP:OD2	21:UU:194:ARG:NH2	2.43	0.48
20:UT:340:ILE:HD12	20:UT:361:LEU:HD21	1.94	0.48
20:UT:1050:MET:SD	62:D3:130:C:O2'	2.71	0.48
20:UT:1584:ASN:N	20:UT:1584:ASN:OD1	2.47	0.48
20:UT:1907:ASN:HB3	20:UT:1910:VAL:HG12	1.96	0.48
20:UT:1987:LEU:HD12	20:UT:2019:ILE:HD13	1.95	0.48
20:UT:2249:SER:HA	20:UT:2252:ASN:HD22	1.78	0.48
21:UU:743:ARG:HE	31:CK:482:LEU:HA	1.78	0.48
22:UV:232:LEU:HA	22:UV:235:LEU:HD12	1.95	0.48
25:CD:306:LEU:HB3	25:CD:307:ILE:HD12	1.94	0.48
30:CJ:273:VAL:HG21	30:CJ:276:GLN:HB2	1.95	0.48
34:CN:88:LEU:HB2	34:CN:125:LEU:HB3	1.96	0.48
35:JD:1063:ARG:HH22	35:JD:1065:GLU:HB2	1.77	0.48
61:D2:2:U:H2'	61:D2:3:G:C8	2.48	0.48
62:D3:891:A:H2'	62:D3:892:A:C8	2.48	0.48
62:D3:1160:A:H2'	62:D3:1161:C:C6	2.48	0.48
1:UA:708:ASP:HB2	1:UA:710:ILE:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UG:126:LEU:HD21	7:UG:157:ALA:HB3	1.96	0.48
7:UG:241:ASN:HB2	7:UG:248:HIS:CE1	2.48	0.48
10:UJ:1370:TYR:HA	10:UJ:1373:ILE:HB	1.95	0.48
13:UM:576:ASN:HD21	44:DA:6:ASN:HA	1.77	0.48
22:UV:713:LEU:HD12	22:UV:714:PRO:HD2	1.95	0.48
26:CE:92:THR:O	26:CE:96:ASN:ND2	2.47	0.48
33:CM:46:LYS:N	33:CM:49:GLU:OE1	2.45	0.48
33:CM:91:PRO:HD2	33:CM:99:PHE:HE2	1.78	0.48
35:JD:721:GLU:N	35:JD:724:THR:OG1	2.46	0.48
35:JD:1193:PRO:HB2	35:JD:1201:THR:HG21	1.94	0.48
39:JL:166:ARG:NH2	62:D3:1123:C:O3'	2.46	0.48
44:DA:77:GLU:O	44:DA:80:SER:OG	2.31	0.48
62:D3:996:U:O2	62:D3:1008:G:N2	2.34	0.48
2:UB:511:SER:OG	2:UB:556:ILE:O	2.30	0.48
4:UD:497:ILE:HD11	4:UD:555:LEU:HD22	1.95	0.48
5:UE:245:ALA:HB1	5:UE:253:LEU:HD11	1.94	0.48
10:UJ:1553:ARG:O	10:UJ:1557:ASP:HB2	2.13	0.48
11:UK:103:ASP:OD1	11:UK:104:SER:N	2.44	0.48
12:UL:559:PHE:HE2	33:CM:267:ILE:HD11	1.79	0.48
20:UT:1239:ASP:HA	20:UT:1242:LYS:HD2	1.94	0.48
21:UU:715:GLN:NE2	21:UU:717:ASP:O	2.46	0.48
22:UV:99:LYS:NZ	22:UV:499:LEU:O	2.45	0.48
22:UV:652:LYS:HG3	22:UV:667:CYS:HB2	1.95	0.48
32:CL:751:TYR:HB2	58:DX:77:ILE:HG22	1.95	0.48
33:CM:85:ALA:HA	33:CM:115:SER:O	2.13	0.48
35:JD:1002:ASP:OD1	35:JD:1169:THR:OG1	2.32	0.48
36:JF:35:ASP:OD2	36:JF:40:ARG:NH2	2.44	0.48
36:JG:96:LEU:HD13	36:JG:130:ILE:HG21	1.94	0.48
43:JJ:116:ILE:HG12	43:JJ:168:LEU:HD11	1.94	0.48
62:D3:628:G:N1	62:D3:970:A:OP2	2.42	0.48
62:D3:1472:C:C2	62:D3:1534:G:C2	3.01	0.48
63:D4:74:A:H2'	63:D4:75:C:H6	1.78	0.48
1:UA:367:GLY:HA2	1:UA:390:VAL:HG23	1.94	0.48
2:UB:445:VAL:HG23	2:UB:449:LYS:HD3	1.95	0.48
6:UF:12:ILE:HG21	7:UG:62:ALA:HB1	1.95	0.48
7:UG:527:ARG:HA	7:UG:530:ASN:HD22	1.78	0.48
15:UO:403:ASN:HA	15:UO:406:VAL:HG13	1.96	0.48
17:UQ:71:ASN:O	17:UQ:75:SER:OG	2.29	0.48
18:UR:16:ASP:OD1	18:UR:17:GLU:N	2.46	0.48
19:US:230:SER:HB3	19:US:288:HIS:CD2	2.49	0.48
20:UT:1127:PHE:HB3	20:UT:1130:ALA:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:UU:488:ASN:HD21	54:DQ:100:GLN:HB3	1.78	0.48
22:UV:1206:PRO:HA	22:UV:1212:VAL:HA	1.95	0.48
24:CB:281:ASP:HB2	24:CB:284:THR:HG23	1.96	0.48
33:CM:96:VAL:HG22	33:CM:122:THR:HA	1.95	0.48
36:JF:43:VAL:HG23	36:JF:112:VAL:HA	1.96	0.48
45:DE:122:LYS:NZ	45:DE:143:ASP:OD2	2.34	0.48
62:D3:388:G:N7	62:D3:423:G:C2	2.81	0.48
62:D3:1484:G:H21	62:D3:1606:C:H1'	1.79	0.48
2:UB:648:SER:HA	2:UB:652:LYS:HE3	1.95	0.48
4:UD:420:LEU:HD11	4:UD:462:VAL:HG11	1.95	0.48
10:UJ:550:TYR:O	10:UJ:553:SER:O	2.31	0.48
13:UM:88:PHE:HB2	13:UM:95:VAL:HG12	1.95	0.48
14:UN:299:ASN:HA	14:UN:302:VAL:HG12	1.95	0.48
19:US:407:ARG:NE	19:US:490:LYS:O	2.43	0.48
22:UV:433:ASP:O	22:UV:457:TYR:OH	2.21	0.48
25:CD:277:ARG:NH2	26:CE:261:GLN:OE1	2.46	0.48
32:CL:613:PRO:HA	33:CM:321:ARG:HH12	1.79	0.48
35:JD:534:ARG:NH1	35:JD:864:ASN:O	2.47	0.48
35:JD:600:PHE:HB3	35:JD:605:GLU:HB3	1.95	0.48
36:JG:67:LEU:HD23	36:JG:138:SER:HB2	1.95	0.48
40:JM:57:THR:HA	40:JM:60:LYS:HG2	1.95	0.48
62:D3:710:U:C2	62:D3:729:G:N1	2.81	0.48
62:D3:1043:A:N6	62:D3:1075:C:N4	2.31	0.48
62:D3:1711:C:H2'	62:D3:1712:A:H5''	1.96	0.48
1:UA:68:THR:HG21	1:UA:127:VAL:HG21	1.95	0.48
1:UA:604:TYR:HA	1:UA:611:LEU:HA	1.95	0.48
4:UD:773:LYS:HA	61:D2:84:G:H1	1.78	0.48
7:UG:229:ARG:HB3	7:UG:231:LYS:HZ3	1.78	0.48
7:UG:403:VAL:HB	7:UG:406:ALA:HB2	1.94	0.48
13:UM:501:PRO:HG2	13:UM:543:GLN:HB2	1.96	0.48
14:UN:844:SER:OG	14:UN:845:SER:N	2.46	0.48
17:UQ:167:SER:O	17:UQ:167:SER:OG	2.32	0.48
19:US:181:THR:HA	19:US:185:TYR:HB3	1.96	0.48
20:UT:374:LEU:HD22	20:UT:407:ARG:HH21	1.78	0.48
20:UT:1620:VAL:HG12	20:UT:1628:ILE:HG13	1.96	0.48
21:UU:82:ALA:HB3	21:UU:93:ALA:HB3	1.95	0.48
22:UV:439:HIS:ND1	22:UV:460:GLU:O	2.45	0.48
22:UV:649:TRP:HB2	22:UV:653:SER:HB3	1.95	0.48
22:UV:858:ARG:HA	22:UV:861:ILE:HG12	1.94	0.48
22:UV:1203:ASN:ND2	22:UV:1222:GLU:OE2	2.47	0.48
28:CH:160:ILE:HG22	28:CH:523:LYS:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CL:218:ARG:HH22	62:D3:441:A:H4'	1.78	0.48
34:CN:63:ASN:OD1	34:CN:66:HIS:ND1	2.37	0.48
36:JF:36:LYS:HB3	36:JF:173:THR:HG23	1.96	0.48
40:JM:76:LYS:HE3	40:JM:78:LYS:HE2	1.96	0.48
2:UB:561:ILE:HB	2:UB:564:VAL:HG12	1.95	0.48
4:UD:358:ILE:HG13	4:UD:370:ARG:HB3	1.96	0.48
4:UD:509:GLN:HB3	4:UD:558:ARG:HH22	1.79	0.48
6:UF:364:MET:HA	6:UF:367:ILE:HG22	1.95	0.48
7:UG:388:ASP:OD1	7:UG:388:ASP:N	2.47	0.48
14:UN:796:GLY:HA3	43:JJ:127:GLN:HG2	1.95	0.48
15:UO:487:LEU:HA	15:UO:490:LYS:HZ3	1.78	0.48
17:UQ:33:ASN:ND2	17:UQ:355:SER:OG	2.46	0.48
20:UT:137:ASP:HA	20:UT:140:ILE:HD12	1.96	0.48
20:UT:977:PHE:O	20:UT:980:ASN:C	2.52	0.48
20:UT:1880:ILE:HG23	20:UT:1887:LEU:HB2	1.95	0.48
20:UT:2006:LEU:O	20:UT:2009:LYS:C	2.52	0.48
21:UU:641:LEU:HB3	21:UU:654:TRP:HB2	1.96	0.48
26:CE:36:ASP:O	26:CE:40:LYS:HG2	2.13	0.48
53:DO:14:PHE:HA	53:DO:78:ALA:O	2.13	0.48
62:D3:209:U:H2'	62:D3:210:A:C8	2.48	0.48
62:D3:231:U:C2	62:D3:234:G:N1	2.81	0.48
62:D3:895:G:N2	62:D3:917:U:O2	2.31	0.48
1:UA:593:VAL:HB	1:UA:686:PHE:HE1	1.79	0.48
1:UA:747:GLU:OE2	21:UU:598:ARG:NH2	2.47	0.48
3:UC:544:ILE:HD12	32:CL:153:MET:HG2	1.96	0.48
7:UG:280:ILE:HG22	7:UG:291:THR:HG22	1.96	0.48
7:UG:379:GLU:N	7:UG:393:GLY:O	2.46	0.48
10:UJ:1362:LEU:HA	10:UJ:1365:LYS:HB2	1.95	0.48
10:UJ:1736:LEU:HB3	10:UJ:1748:VAL:HG21	1.95	0.48
10:UJ:1742:GLU:HA	10:UJ:1745:GLU:HB3	1.96	0.48
20:UT:1159:ARG:NH2	20:UT:1160:ASN:OD1	2.47	0.48
21:UU:66:LEU:HD12	21:UU:344:ARG:HG3	1.96	0.48
22:UV:158:VAL:HG11	22:UV:237:HIS:HB2	1.96	0.48
22:UV:630:LYS:HZ2	22:UV:664:THR:HG1	1.58	0.48
24:CB:239:CYS:SG	24:CB:240:VAL:N	2.87	0.48
25:CD:198:TRP:HE1	26:CE:165:GLN:HB3	1.79	0.48
25:CD:389:ILE:HG22	27:CG:62:GLU:HB2	1.95	0.48
28:CH:185:LEU:HB2	28:CH:202:THR:HA	1.96	0.48
39:JL:95:THR:HA	39:JL:98:VAL:HG12	1.95	0.48
47:DG:58:LYS:HA	47:DG:107:ALA:HB2	1.95	0.48
54:DQ:58:ASP:OD1	54:DQ:58:ASP:N	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:210:SER:OG	1:UA:212:ASP:N	2.42	0.48
1:UA:269:HIS:NE2	1:UA:312:GLN:O	2.35	0.48
2:UB:423:GLY:O	2:UB:426:THR:OG1	2.29	0.48
5:UE:244:ILE:HD12	5:UE:259:PRO:HG3	1.95	0.48
10:UJ:1616:VAL:HG13	10:UJ:1662:ILE:HD11	1.96	0.48
12:UL:424:CYS:SG	12:UL:425:ILE:N	2.87	0.48
17:UQ:768:TRP:HA	17:UQ:774:PHE:HA	1.96	0.48
18:UR:576:LEU:HD23	18:UR:588:LEU:HD21	1.96	0.48
19:US:437:THR:O	19:US:441:ASN:ND2	2.47	0.48
20:UT:2448:ARG:HH22	62:D3:826:U:H3'	1.79	0.48
21:UU:257:ARG:HE	21:UU:259:ASP:HB3	1.79	0.48
22:UV:872:ASN:HA	22:UV:875:LYS:HD2	1.94	0.48
23:UX:80:VAL:HG11	23:UX:179:ALA:HA	1.95	0.48
24:CB:272:LYS:HG3	24:CB:275:CYS:HB3	1.96	0.48
32:CL:141:LEU:HB3	32:CL:170:VAL:HG22	1.95	0.48
32:CL:207:LEU:HD13	32:CL:215:TYR:CD2	2.49	0.48
32:CL:222:ASN:HD22	32:CL:225:ARG:HH12	1.60	0.48
32:CL:845:LEU:O	32:CL:855:GLN:HA	2.14	0.48
35:JD:519:HIS:HA	35:JD:567:PHE:HE2	1.79	0.48
35:JD:1100:PHE:HD1	35:JD:1116:PRO:HA	1.79	0.48
36:JG:227:LEU:HD22	36:JG:237:ALA:HA	1.96	0.48
39:JL:59:VAL:HA	39:JL:80:ASN:O	2.14	0.48
39:JL:84:VAL:HG21	39:JL:114:PHE:HB3	1.95	0.48
47:DG:171:LYS:NZ	62:D3:68:A:OP2	2.45	0.48
62:D3:103:A:O3'	62:D3:308:C:N4	2.47	0.48
62:D3:195:G:H2'	62:D3:196:G:C8	2.49	0.48
62:D3:1536:G:N1	62:D3:1538:U:C2	2.82	0.48
11:UK:134:THR:HG22	16:UP:177:ARG:HB3	1.95	0.47
12:UL:78:LYS:HD2	12:UL:657:GLN:HA	1.96	0.47
12:UL:549:SER:HB3	12:UL:579:ILE:HD11	1.96	0.47
12:UL:671:PHE:CB	12:UL:684:TRP:O	2.61	0.47
17:UQ:723:VAL:HG12	17:UQ:742:ARG:HB2	1.96	0.47
20:UT:591:LEU:O	20:UT:597:ARG:NH2	2.44	0.47
21:UU:32:ASN:HA	21:UU:317:ASN:HD21	1.79	0.47
24:CA:87:VAL:HG22	40:JM:149:ILE:HG22	1.96	0.47
28:CH:146:LYS:HB2	28:CH:146:LYS:HE3	1.64	0.47
32:CL:874:TYR:OH	62:D3:578:U:OP2	2.29	0.47
39:JL:46:GLN:HG3	39:JL:73:ARG:HH22	1.79	0.47
56:DT:28:LEU:HA	56:DT:111:ILE:HD11	1.96	0.47
61:D2:282:G:H2'	61:D2:283:A:C8	2.49	0.47
1:UA:97:GLU:OE2	1:UA:115:SER:OG	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:376:SER:O	1:UA:378:PHE:N	2.47	0.47
1:UA:429:GLU:N	1:UA:429:GLU:OE2	2.47	0.47
10:UJ:167:PHE:HE2	10:UJ:178:THR:HG21	1.78	0.47
12:UL:45:ALA:HB3	12:UL:48:ASP:HB3	1.95	0.47
12:UL:213:LYS:NZ	12:UL:214:ASP:OD1	2.33	0.47
13:UM:188:GLU:O	22:UV:657:ARG:NH2	2.47	0.47
13:UM:534:ARG:HG2	13:UM:554:ASP:HB3	1.95	0.47
15:UO:500:GLU:HA	15:UO:503:ARG:HD2	1.96	0.47
17:UQ:73:LEU:HD22	17:UQ:129:PRO:HG2	1.95	0.47
17:UQ:101:GLN:O	17:UQ:104:ALA:N	2.48	0.47
20:UT:1298:LEU:HD23	20:UT:1301:ILE:HG13	1.97	0.47
20:UT:1334:ASP:HA	20:UT:1335:GLY:HA3	1.62	0.47
20:UT:2091:ASN:O	20:UT:2095:LEU:N	2.48	0.47
22:UV:396:LEU:HD11	22:UV:429:LEU:HD21	1.95	0.47
26:CE:68:VAL:HG11	26:CE:101:LEU:HD11	1.96	0.47
28:CH:335:ARG:HA	28:CH:349:TRP:O	2.13	0.47
28:CH:418:ASP:HB2	28:CH:474:TRP:CE3	2.49	0.47
33:CM:97:GLY:HA2	33:CM:133:ILE:HD11	1.95	0.47
34:CN:69:LYS:NZ	34:CN:157:GLU:O	2.47	0.47
44:DA:71:ALA:HB1	44:DA:77:GLU:HA	1.96	0.47
45:DE:85:GLY:N	45:DE:88:ASP:OD2	2.47	0.47
61:D2:286:U:H2'	61:D2:287:G:H8	1.78	0.47
62:D3:656:G:N1	62:D3:678:A:N3	2.62	0.47
62:D3:898:A:C8	62:D3:914:G:N2	2.80	0.47
62:D3:1746:A:H8	62:D3:1746:A:OP2	1.97	0.47
62:D3:1801:A:H2'	62:D3:1802:A:C8	2.49	0.47
1:UA:111:PHE:HD1	1:UA:124:THR:HG22	1.78	0.47
1:UA:158:SER:O	1:UA:158:SER:OG	2.32	0.47
2:UB:515:HIS:HD2	2:UB:517:VAL:H	1.62	0.47
10:UJ:671:LEU:HD13	10:UJ:719:SER:HB2	1.95	0.47
12:UL:338:ILE:HA	12:UL:357:THR:HA	1.97	0.47
13:UM:64:ILE:HG21	13:UM:67:LEU:HD23	1.97	0.47
17:UQ:429:ILE:HG23	17:UQ:734:VAL:HG23	1.96	0.47
20:UT:177:LEU:O	20:UT:181:LEU:N	2.45	0.47
22:UV:765:LEU:HD13	22:UV:1168:TYR:CZ	2.49	0.47
23:UX:68:ASP:OD1	23:UX:69:THR:N	2.44	0.47
24:CA:202:ARG:HD2	27:CG:69:LEU:HD12	1.95	0.47
26:CE:422:THR:OG1	26:CE:423:GLU:N	2.48	0.47
35:JD:452:ARG:HB3	35:JD:477:ILE:HG21	1.95	0.47
35:JD:774:ARG:NH1	35:JD:818:PRO:O	2.37	0.47
35:JD:1182:ALA:HB3	35:JD:1188:LEU:HG	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JF:232:LEU:HD23	36:JF:236:VAL:HG13	1.96	0.47
41:JP:290:ASP:OD1	41:JP:291:MET:N	2.48	0.47
43:JJ:157:ASP:OD2	53:DO:103:ARG:NH2	2.37	0.47
6:UF:64:ASN:HB2	6:UF:88:ILE:HG21	1.96	0.47
8:UH:340:TYR:O	8:UH:358:VAL:O	2.32	0.47
10:UJ:1536:VAL:HG11	10:UJ:1582:LEU:HD21	1.96	0.47
10:UJ:1655:LEU:HD21	10:UJ:1707:ALA:HB2	1.95	0.47
11:UK:142:LYS:HA	11:UK:145:GLU:HG3	1.96	0.47
11:UK:243:LYS:HD2	11:UK:243:LYS:HA	1.66	0.47
12:UL:187:LYS:HA	12:UL:198:GLU:O	2.15	0.47
13:UM:97:ARG:HD2	13:UM:134:GLY:HA3	1.96	0.47
15:UO:212:ASP:N	15:UO:212:ASP:OD1	2.47	0.47
17:UQ:404:SER:OG	17:UQ:405:ALA:N	2.48	0.47
18:UR:427:ASN:OD1	18:UR:428:ALA:N	2.43	0.47
20:UT:280:MET:HG2	20:UT:733:VAL:HG21	1.96	0.47
20:UT:332:ASP:N	20:UT:332:ASP:OD1	2.46	0.47
20:UT:1213:ASP:HB2	20:UT:1216:VAL:HG23	1.95	0.47
21:UU:488:ASN:ND2	54:DQ:98:ASP:OD2	2.47	0.47
22:UV:683:ASN:HA	22:UV:696:ILE:HD12	1.96	0.47
22:UV:702:LYS:O	22:UV:706:ASN:ND2	2.46	0.47
22:UV:1214:LEU:HD21	22:UV:1216:LYS:HE2	1.97	0.47
33:CM:131:GLU:HG2	33:CM:194:VAL:HG11	1.97	0.47
35:JD:1046:MET:HB3	35:JD:1062:ILE:HG21	1.96	0.47
46:DF:33:VAL:HG12	54:DQ:53:LEU:HD21	1.97	0.47
62:D3:269:G:C6	62:D3:287:G:C6	3.02	0.47
62:D3:1483:A:H2	62:D3:1607:G:H1'	1.79	0.47
2:UB:429:LEU:HD11	2:UB:455:LEU:HD22	1.97	0.47
4:UD:382:VAL:HG22	4:UD:393:SER:HB3	1.97	0.47
4:UD:477:LEU:HB2	4:UD:489:CYS:HB3	1.95	0.47
12:UL:227:LYS:HG2	12:UL:247:ILE:HG12	1.96	0.47
12:UL:230:LYS:H	12:UL:243:THR:HG22	1.79	0.47
13:UM:269:LEU:HD12	13:UM:279:LYS:HB3	1.95	0.47
15:UO:391:ASN:ND2	15:UO:403:ASN:OD1	2.48	0.47
17:UQ:502:LYS:HG3	17:UQ:564:PRO:HA	1.97	0.47
20:UT:248:HIS:CD2	20:UT:250:LYS:HB2	2.50	0.47
20:UT:1005:ASN:OD1	20:UT:1061:CYS:HB3	2.15	0.47
20:UT:1202:LEU:HA	20:UT:1205:ILE:HD12	1.96	0.47
20:UT:1481:ILE:HA	20:UT:1485:LEU:HD12	1.96	0.47
20:UT:2077:GLN:HE22	20:UT:2117:ARG:HG2	1.79	0.47
21:UU:482:GLY:HA2	21:UU:505:VAL:HG23	1.95	0.47
21:UU:859:ASP:N	21:UU:859:ASP:OD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CA:144:TRP:CE2	24:CA:183:HIS:HB3	2.49	0.47
32:CL:970:SER:OG	32:CL:999:ASP:OD2	2.32	0.47
41:JP:131:LYS:HB3	41:JP:155:TYR:CD2	2.48	0.47
41:JP:347:ARG:O	41:JP:373:ARG:NH2	2.48	0.47
45:DE:143:ASP:N	45:DE:143:ASP:OD1	2.47	0.47
63:D4:152:U:H2'	63:D4:153:C:C6	2.50	0.47
1:UA:269:HIS:HE1	1:UA:271:ALA:HB3	1.79	0.47
6:UF:49:SER:N	6:UF:52:ASP:OD2	2.47	0.47
17:UQ:200:ASN:HD22	17:UQ:262:MET:HB2	1.80	0.47
17:UQ:319:LYS:HD3	17:UQ:339:GLY:H	1.79	0.47
20:UT:678:TRP:HH2	47:DG:146:GLY:HA3	1.80	0.47
21:UU:456:ASP:OD1	21:UU:457:THR:N	2.46	0.47
25:CD:185:ASP:OD1	25:CD:285:ARG:NE	2.47	0.47
34:CN:33:SER:OG	34:CN:34:LEU:N	2.48	0.47
35:JD:109:GLU:HA	35:JD:112:THR:HG22	1.97	0.47
43:JJ:196:ASP:OD2	43:JJ:200:ARG:NH1	2.48	0.47
45:DE:141:THR:OG1	45:DE:143:ASP:OD1	2.32	0.47
61:D2:6:A:N6	61:D2:8:A:C2	2.83	0.47
62:D3:852:C:HO2'	62:D3:853:G:H8	1.61	0.47
62:D3:910:C:HO2'	62:D3:911:U:H6	1.62	0.47
2:UB:495:ASN:HD22	2:UB:618:THR:HG22	1.80	0.47
4:UD:102:LEU:HD22	4:UD:114:LEU:HD22	1.96	0.47
4:UD:179:HIS:HE1	4:UD:182:ILE:HG13	1.79	0.47
4:UD:192:THR:HG23	4:UD:244:VAL:HG22	1.97	0.47
4:UD:574:HIS:HE2	4:UD:638:SER:HG	1.61	0.47
7:UG:260:SER:HB3	7:UG:267:LEU:HD11	1.96	0.47
7:UG:289:MET:HB2	7:UG:303:ILE:HD11	1.96	0.47
10:UJ:141:ASN:N	10:UJ:141:ASN:OD1	2.44	0.47
10:UJ:192:TYR:OH	10:UJ:209:GLN:NE2	2.48	0.47
10:UJ:286:LEU:HD21	10:UJ:292:LYS:HA	1.96	0.47
10:UJ:1658:ILE:HD12	10:UJ:1666:LEU:HD23	1.97	0.47
10:UJ:1670:ILE:HG22	10:UJ:1714:ILE:HD11	1.96	0.47
12:UL:263:THR:OG1	12:UL:270:SER:N	2.44	0.47
12:UL:367:ILE:HD11	12:UL:379:PRO:HB3	1.97	0.47
12:UL:418:ASN:OD1	12:UL:421:THR:OG1	2.31	0.47
12:UL:449:THR:OG1	12:UL:451:ASN:O	2.32	0.47
13:UM:165:SER:O	13:UM:172:VAL:HA	2.14	0.47
13:UM:515:CYS:HB3	13:UM:529:LEU:HB3	1.95	0.47
13:UM:576:ASN:ND2	44:DA:5:LYS:O	2.48	0.47
15:UO:125:HIS:HB3	15:UO:145:ASP:HB2	1.95	0.47
15:UO:134:THR:OG1	15:UO:135:GLN:OE1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:1621:LEU:HA	20:UT:1628:ILE:HD12	1.96	0.47
20:UT:2471:ARG:NH2	62:D3:845:G:OP2	2.44	0.47
21:UU:510:LEU:HD12	21:UU:517:MET:HB2	1.96	0.47
21:UU:805:PHE:O	35:JD:1212:TYR:OH	2.21	0.47
21:UU:820:GLN:HE21	21:UU:832:SER:HB2	1.80	0.47
22:UV:179:LYS:HG3	22:UV:213:LEU:HD21	1.96	0.47
22:UV:526:CYS:O	22:UV:698:ASN:ND2	2.48	0.47
22:UV:832:PRO:O	22:UV:834:ASN:ND2	2.48	0.47
27:CG:33:LEU:HD13	27:CG:102:ILE:HD13	1.97	0.47
28:CH:298:SER:OG	28:CH:325:VAL:O	2.33	0.47
31:CK:538:LYS:NZ	62:D3:1628:U:H5'	2.29	0.47
35:JD:409:VAL:HA	35:JD:555:LEU:O	2.15	0.47
35:JD:624:VAL:HG23	35:JD:759:VAL:HA	1.96	0.47
35:JD:723:GLN:HA	35:JD:726:ASN:HB3	1.96	0.47
35:JD:891:ASN:OD1	35:JD:891:ASN:N	2.46	0.47
35:JD:1208:GLU:OE2	35:JD:1237:HIS:NE2	2.45	0.47
39:JL:281:ILE:HD12	39:JL:310:PHE:HE1	1.79	0.47
44:DA:124:ASN:ND2	62:D3:884:A:O2'	2.46	0.47
47:DG:95:LYS:NZ	62:D3:160:C:O3'	2.47	0.47
58:DX:48:HIS:HD2	58:DX:105:ALA:HB2	1.80	0.47
62:D3:191:C:O2'	62:D3:192:U:O4'	2.26	0.47
62:D3:890:C:H2'	62:D3:891:A:H8	1.80	0.47
62:D3:999:U:H5'	62:D3:1000:C:H5'	1.96	0.47
62:D3:1030:A:N6	62:D3:1792:G:N7	2.63	0.47
8:UH:527:LEU:O	8:UH:553:GLN:NE2	2.48	0.47
10:UJ:170:SER:OG	10:UJ:171:GLU:N	2.47	0.47
13:UM:506:PHE:O	13:UM:517:ILE:HA	2.15	0.47
13:UM:616:HIS:CE1	13:UM:640:VAL:HG13	2.50	0.47
17:UQ:252:LEU:HD11	61:D2:81:A:H2'	1.97	0.47
17:UQ:283:VAL:HA	17:UQ:289:GLN:O	2.15	0.47
18:UR:264:LEU:HB2	18:UR:300:PHE:HE1	1.78	0.47
19:US:494:ASN:HB3	19:US:497:ASP:HB3	1.96	0.47
20:UT:92:VAL:HG13	20:UT:131:THR:HG21	1.95	0.47
22:UV:378:ASN:O	22:UV:387:GLY:N	2.47	0.47
33:CM:200:VAL:HG21	33:CM:204:LEU:HD22	1.97	0.47
33:CM:315:LYS:NZ	33:CM:348:GLU:OE1	2.46	0.47
35:JD:631:GLU:HG2	35:JD:635:MET:HE2	1.97	0.47
62:D3:199:G:H2'	62:D3:200:A:H8	1.80	0.47
62:D3:231:U:O2	62:D3:234:G:O6	2.19	0.47
62:D3:710:U:N3	62:D3:729:G:N1	2.63	0.47
62:D3:1661:U:H2'	62:D3:1662:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:240:LEU:HD11	4:UD:242:TRP:CE2	2.50	0.47
5:UE:17:LEU:HD21	5:UE:314:PHE:CE1	2.50	0.47
20:UT:225:GLN:HG3	20:UT:228:LEU:H	1.80	0.47
20:UT:621:SER:O	20:UT:625:ILE:HG12	2.14	0.47
21:UU:718:LYS:HZ3	21:UU:875:ASN:HB2	1.79	0.47
27:CF:33:LEU:HD13	27:CF:102:ILE:HD13	1.97	0.47
28:CH:560:ARG:HH12	63:D4:250:C:H41	1.63	0.47
33:CM:344:GLU:OE1	33:CM:347:ASN:N	2.45	0.47
44:DA:195:LYS:HE3	44:DA:199:ASN:HD21	1.80	0.47
46:DF:183:ALA:HB3	46:DF:190:ILE:HD13	1.97	0.47
52:DN:16:ILE:H	57:DW:57:ARG:HH22	1.63	0.47
2:UB:106:LYS:HE2	2:UB:106:LYS:HB3	1.67	0.47
2:UB:478:ILE:HD13	2:UB:481:MET:HE3	1.97	0.47
2:UB:678:PHE:HB3	2:UB:681:PRO:HD2	1.97	0.47
4:UD:461:LYS:NZ	4:UD:462:VAL:O	2.39	0.47
8:UH:561:LEU:HD13	8:UH:566:LEU:HD11	1.96	0.47
17:UQ:677:THR:OG1	17:UQ:692:PHE:O	2.26	0.47
19:US:255:SER:HA	19:US:258:GLU:HG2	1.96	0.47
20:UT:215:VAL:HG21	20:UT:232:LEU:HD11	1.97	0.47
20:UT:2006:LEU:O	20:UT:2009:LYS:O	2.33	0.47
20:UT:2192:LEU:HD13	20:UT:2234:GLY:HA3	1.96	0.47
22:UV:788:THR:O	22:UV:788:THR:OG1	2.32	0.47
32:CL:951:MET:SD	32:CL:987:TYR:OH	2.68	0.47
36:JG:41:MET:O	36:JG:110:LEU:HA	2.15	0.47
40:JM:161:SER:OG	40:JM:162:SER:N	2.47	0.47
62:D3:717:C:N3	62:D3:720:G:N1	2.52	0.47
10:UJ:377:ARG:HE	10:UJ:414:LEU:HD21	1.80	0.46
10:UJ:407:PHE:O	10:UJ:410:ILE:C	2.53	0.46
10:UJ:544:LEU:HD11	10:UJ:581:GLY:HA3	1.97	0.46
11:UK:64:TYR:HD2	32:CL:1079:PHE:HD2	1.62	0.46
13:UM:509:ALA:HB2	13:UM:539:VAL:HG13	1.97	0.46
17:UQ:175:ALA:HB3	17:UQ:188:ALA:HB3	1.96	0.46
17:UQ:651:SER:O	17:UQ:651:SER:OG	2.33	0.46
21:UU:301:ALA:HB1	21:UU:310:ILE:HD11	1.95	0.46
33:CM:243:ILE:HG23	33:CM:275:VAL:HG21	1.97	0.46
50:DJ:127:VAL:O	50:DJ:131:GLN:HG2	2.15	0.46
63:D4:330:A:H2'	63:D4:331:A:H8	1.81	0.46
5:UE:135:LYS:NZ	5:UE:136:LEU:O	2.48	0.46
8:UH:144:ASN:O	8:UH:153:ASP:N	2.48	0.46
10:UJ:1749:ARG:HH12	20:UT:37:ARG:NE	2.13	0.46
11:UK:196:LYS:HD2	11:UK:199:LYS:HE2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:623:PHE:HD1	12:UL:630:PHE:HB3	1.81	0.46
13:UM:407:SER:OG	13:UM:408:LYS:N	2.49	0.46
15:UO:255:VAL:HA	15:UO:276:SER:HA	1.95	0.46
20:UT:98:HIS:CE1	20:UT:135:LEU:HA	2.50	0.46
20:UT:2125:LEU:HD12	20:UT:2125:LEU:HA	1.83	0.46
21:UU:569:VAL:HB	21:UU:579:ARG:HB2	1.98	0.46
22:UV:721:VAL:HG23	22:UV:722:LEU:HD12	1.97	0.46
26:CE:208:ILE:HG13	26:CE:226:ILE:HG21	1.97	0.46
32:CL:844:PRO:HA	32:CL:856:THR:O	2.16	0.46
44:DA:154:SER:OG	44:DA:154:SER:O	2.30	0.46
45:DE:211:LYS:HA	45:DE:216:ASN:O	2.16	0.46
47:DG:73:ILE:O	47:DG:96:SER:HA	2.14	0.46
62:D3:787:G:H2'	62:D3:788:A:C8	2.50	0.46
62:D3:1630:U:H1'	62:D3:1631:A:H5''	1.96	0.46
5:UE:167:SER:O	5:UE:167:SER:OG	2.32	0.46
7:UG:257:SER:OG	7:UG:259:TRP:NE1	2.43	0.46
12:UL:135:ARG:HH22	12:UL:174:GLU:HA	1.81	0.46
15:UO:61:THR:H	15:UO:83:VAL:HG23	1.79	0.46
17:UQ:200:ASN:ND2	17:UQ:262:MET:O	2.48	0.46
19:US:334:TYR:HB3	19:US:337:PHE:HD1	1.80	0.46
20:UT:707:PRO:HG2	20:UT:775:ARG:HB2	1.97	0.46
20:UT:905:LEU:HD12	20:UT:956:PHE:HE1	1.79	0.46
20:UT:1348:LEU:HD11	20:UT:1398:LEU:HD21	1.97	0.46
22:UV:756:VAL:HA	22:UV:896:THR:HG21	1.97	0.46
22:UV:801:LYS:NZ	22:UV:836:GLU:OE1	2.46	0.46
26:CE:174:ASP:OD2	26:CE:269:ARG:NH2	2.41	0.46
31:CK:529:ARG:NH2	62:D3:1754:A:N7	2.63	0.46
35:JD:507:LEU:HD21	35:JD:531:MET:HE1	1.97	0.46
39:JL:48:ILE:HG23	39:JL:152:ILE:HG21	1.96	0.46
41:JP:235:LEU:HB3	41:JP:247:TYR:HB2	1.98	0.46
49:DI:86:SER:OG	62:D3:328:A:N3	2.44	0.46
58:DX:60:GLU:N	58:DX:60:GLU:OE2	2.48	0.46
61:D2:474:A:H2'	61:D2:475:G:H8	1.81	0.46
62:D3:1704:U:H2'	62:D3:1705:C:C6	2.50	0.46
5:UE:490:ARG:NH1	15:UO:18:GLN:O	2.47	0.46
6:UF:187:LYS:HG3	6:UF:322:LEU:HD11	1.96	0.46
7:UG:64:ASP:HA	7:UG:67:LEU:HG	1.97	0.46
10:UJ:541:LEU:HD13	10:UJ:544:LEU:HD22	1.98	0.46
10:UJ:763:LEU:HB3	10:UJ:768:LYS:HG2	1.97	0.46
20:UT:430:LYS:HZ3	20:UT:477:PHE:HE2	1.64	0.46
20:UT:1300:SER:HA	20:UT:1303:LYS:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:1940:LYS:HD2	20:UT:1940:LYS:HA	1.71	0.46
21:UU:212:ALA:HB1	21:UU:221:ILE:HD11	1.96	0.46
22:UV:176:PHE:HB3	22:UV:230:VAL:HG21	1.97	0.46
22:UV:927:GLY:O	22:UV:1151:LYS:NZ	2.49	0.46
24:CB:231:ARG:HA	24:CB:260:PHE:HZ	1.81	0.46
28:CH:448:PHE:HB2	28:CH:460:ARG:HB3	1.96	0.46
34:CN:143:LYS:HA	34:CN:146:ASN:HD22	1.80	0.46
35:JD:1001:SER:OG	35:JD:1170:LEU:O	2.29	0.46
39:JL:85:GLU:HG3	39:JL:87:ASP:H	1.80	0.46
43:JJ:186:GLU:HG2	43:JJ:230:LYS:HG3	1.97	0.46
49:DI:6:ASP:OD1	49:DI:9:HIS:ND1	2.44	0.46
62:D3:682:C:H2'	62:D3:683:C:H6	1.80	0.46
4:UD:157:SER:HB3	4:UD:195:TRP:HZ2	1.80	0.46
4:UD:301:ASP:O	4:UD:771:GLN:NE2	2.48	0.46
7:UG:115:HIS:O	7:UG:127:ILE:HA	2.15	0.46
10:UJ:522:ARG:HB3	10:UJ:523:ILE:H	1.62	0.46
11:UK:186:PRO:HA	11:UK:190:LEU:HD23	1.97	0.46
12:UL:614:HIS:HD1	12:UL:634:SER:HB3	1.80	0.46
13:UM:464:LYS:HB2	13:UM:486:THR:HG22	1.97	0.46
17:UQ:497:ASP:HB2	17:UQ:510:TYR:HB3	1.96	0.46
18:UR:264:LEU:HB2	18:UR:300:PHE:CE1	2.50	0.46
18:UR:315:ALA:HB2	18:UR:321:MET:HG3	1.95	0.46
20:UT:643:LYS:NZ	20:UT:683:ASP:OD2	2.32	0.46
20:UT:1083:TYR:HE2	20:UT:1125:ASP:HB2	1.80	0.46
21:UU:160:THR:HG23	21:UU:162:ILE:HG22	1.98	0.46
22:UV:423:LYS:HG2	22:UV:427:LYS:HE3	1.96	0.46
24:CA:281:ASP:OD1	24:CA:281:ASP:N	2.47	0.46
24:CB:142:ARG:NH2	24:CB:214:ARG:HH22	2.12	0.46
28:CH:474:TRP:HB2	28:CH:492:TRP:CZ3	2.51	0.46
30:CJ:117:LEU:HD12	30:CJ:117:LEU:HA	1.77	0.46
32:CL:1105:ASP:HA	32:CL:1108:LYS:HE2	1.97	0.46
33:CM:176:GLN:HG3	33:CM:305:LYS:HB3	1.96	0.46
34:CN:74:LEU:HD22	34:CN:140:ALA:HB1	1.98	0.46
53:DO:15:GLY:O	53:DO:79:VAL:HA	2.16	0.46
63:D4:68:A:H2'	63:D4:69:A:C8	2.51	0.46
63:D4:95:A:N6	63:D4:321:C:N4	2.39	0.46
2:UB:652:LYS:HA	2:UB:691:LEU:HD11	1.96	0.46
10:UJ:109:TRP:HH2	10:UJ:118:THR:HG21	1.80	0.46
10:UJ:600:LEU:HB3	10:UJ:604:LEU:HB2	1.98	0.46
12:UL:128:GLN:HB3	12:UL:169:PHE:HE2	1.80	0.46
13:UM:186:LEU:HD13	13:UM:223:TRP:CD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:300:SER:OG	13:UM:316:VAL:O	2.33	0.46
13:UM:743:CYS:HG	13:UM:759:THR:HG1	1.61	0.46
35:JD:469:HIS:HB3	35:JD:472:LYS:HD2	1.97	0.46
36:JF:121:LEU:HD21	36:JF:167:ILE:HD13	1.98	0.46
47:DG:174:LYS:HG3	62:D3:78:A:H2	1.80	0.46
62:D3:615:A:O2'	62:D3:621:A:N1	2.39	0.46
62:D3:683:C:H2'	62:D3:684:A:C8	2.51	0.46
62:D3:907:A:H1'	62:D3:998:A:H5'	1.98	0.46
62:D3:1707:A:H2'	62:D3:1708:U:H6	1.81	0.46
4:UD:262:ILE:HD11	4:UD:283:VAL:HG11	1.98	0.46
5:UE:301:LEU:HB2	5:UE:319:TRP:HD1	1.81	0.46
10:UJ:227:ASN:HB3	10:UJ:230:LYS:HB3	1.97	0.46
10:UJ:363:LEU:HA	10:UJ:366:ILE:HD12	1.97	0.46
12:UL:85:LEU:HD12	12:UL:94:LEU:HD11	1.97	0.46
14:UN:781:ASP:OD1	14:UN:781:ASP:N	2.43	0.46
17:UQ:524:ASP:OD1	17:UQ:524:ASP:N	2.41	0.46
18:UR:458:ILE:HG13	18:UR:484:VAL:HG22	1.96	0.46
19:US:399:ILE:HG21	19:US:480:LEU:HB3	1.97	0.46
21:UU:724:SER:OG	21:UU:879:GLU:OE2	2.24	0.46
22:UV:104:LYS:HZ3	22:UV:419:TYR:HB3	1.80	0.46
22:UV:715:SER:O	22:UV:715:SER:OG	2.28	0.46
22:UV:929:ILE:HG23	22:UV:933:LEU:HD23	1.98	0.46
28:CH:547:HIS:CD2	28:CH:548:ARG:H	2.33	0.46
30:CJ:173:ARG:HH22	30:CJ:181:ASN:N	2.13	0.46
32:CL:1142:LEU:HD21	62:D3:493:U:H4'	1.97	0.46
35:JD:1193:PRO:HB3	35:JD:1211:CYS:HB2	1.98	0.46
39:JL:150:VAL:HG12	39:JL:210:GLU:HG2	1.98	0.46
53:DO:41:ARG:NH2	62:D3:896:U:O2	2.49	0.46
62:D3:1739:C:H2'	62:D3:1740:A:C8	2.51	0.46
63:D4:75:C:H2'	63:D4:76:U:C6	2.51	0.46
1:UA:412:ARG:HG2	1:UA:424:THR:HG22	1.98	0.46
1:UA:558:ASP:OD1	1:UA:558:ASP:N	2.49	0.46
1:UA:559:ILE:HG23	1:UA:598:ASN:HD22	1.81	0.46
4:UD:157:SER:HB3	4:UD:195:TRP:CZ2	2.50	0.46
5:UE:109:ASP:OD2	5:UE:151:LEU:N	2.42	0.46
7:UG:434:LEU:HA	29:CI:13:LEU:HD11	1.98	0.46
9:UI:446:TRP:HZ2	9:UI:492:ILE:HD12	1.81	0.46
10:UJ:791:VAL:O	10:UJ:795:LEU:HB2	2.15	0.46
12:UL:854:CYS:SG	12:UL:855:LYS:N	2.89	0.46
12:UL:895:GLU:HG3	13:UM:793:PHE:HE1	1.80	0.46
15:UO:107:VAL:HG13	15:UO:118:LEU:HB3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:485:ARG:H	17:UQ:485:ARG:HG3	1.56	0.46
20:UT:322:VAL:HG23	20:UT:333:TRP:HZ3	1.80	0.46
20:UT:1099:LEU:HB2	20:UT:1142:VAL:HG12	1.97	0.46
24:CA:189:GLY:O	24:CA:216:ASN:ND2	2.49	0.46
32:CL:77:PRO:HB3	32:CL:78:PRO:HD2	1.98	0.46
35:JD:1152:MET:HA	35:JD:1171:CYS:O	2.15	0.46
43:JJ:223:ARG:HA	43:JJ:223:ARG:HD3	1.80	0.46
48:DH:51:VAL:HG21	48:DH:168:SER:HA	1.98	0.46
62:D3:570:A:H2'	62:D3:571:G:C8	2.50	0.46
62:D3:775:G:O6	62:D3:785:U:C4	2.69	0.46
62:D3:874:C:H2'	62:D3:875:G:C8	2.50	0.46
62:D3:1684:U:H2'	62:D3:1685:G:H8	1.81	0.46
1:UA:716:ASP:OD1	21:UU:576:ARG:NH1	2.39	0.46
2:UB:657:PHE:HD2	2:UB:691:LEU:HD22	1.81	0.46
5:UE:108:LYS:HE2	5:UE:149:ASN:HB3	1.98	0.46
5:UE:158:ASP:OD2	5:UE:158:ASP:N	2.45	0.46
5:UE:342:ASP:O	5:UE:350:LEU:N	2.49	0.46
12:UL:532:ASP:HB2	12:UL:550:LEU:HD13	1.97	0.46
13:UM:9:GLY:HA2	13:UM:643:PHE:O	2.16	0.46
13:UM:413:ILE:HG22	13:UM:429:LYS:HA	1.97	0.46
19:US:190:ASP:OD1	19:US:190:ASP:N	2.46	0.46
19:US:309:ASN:HB3	19:US:312:ALA:HB3	1.97	0.46
19:US:491:LEU:HD21	55:DS:13:HIS:CD2	2.51	0.46
20:UT:1329:LYS:HA	20:UT:1332:ILE:HG12	1.98	0.46
21:UU:599:TRP:HD1	21:UU:613:ASP:HA	1.80	0.46
36:JF:178:VAL:HG12	36:JF:223:GLU:HG3	1.98	0.46
39:JL:147:PRO:HB2	39:JL:211:ILE:HD13	1.98	0.46
39:JL:240:ALA:HA	39:JL:243:LYS:HD2	1.98	0.46
39:JL:290:LEU:HD11	39:JL:305:ARG:HH21	1.81	0.46
41:JP:450:ASP:OD1	41:JP:450:ASP:N	2.37	0.46
2:UB:102:ARG:NH1	55:DS:119:ILE:O	2.42	0.46
4:UD:213:TRP:HA	4:UD:225:LEU:HA	1.98	0.46
5:UE:148:LEU:HA	5:UE:167:SER:HB3	1.97	0.46
12:UL:341:ALA:HA	12:UL:354:VAL:O	2.16	0.46
13:UM:542:CYS:O	13:UM:546:LYS:CA	2.64	0.46
13:UM:758:ARG:HD2	13:UM:758:ARG:HA	1.62	0.46
17:UQ:11:LYS:NZ	17:UQ:788:THR:O	2.48	0.46
17:UQ:284:SER:O	17:UQ:288:LEU:CA	2.63	0.46
17:UQ:745:ILE:O	17:UQ:754:LEU:N	2.49	0.46
20:UT:62:LYS:HD2	20:UT:97:PHE:HD2	1.80	0.46
20:UT:234:ILE:HA	20:UT:237:THR:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:840:ASN:HD21	20:UT:843:ASN:HD22	1.63	0.46
20:UT:2146:ALA:HB2	20:UT:2164:THR:HG21	1.97	0.46
21:UU:462:PHE:N	21:UU:480:SER:OG	2.49	0.46
24:CA:279:THR:OG1	24:CA:280:VAL:N	2.49	0.46
32:CL:280:LEU:HD12	32:CL:281:PRO:HD2	1.98	0.46
32:CL:609:GLU:OE2	33:CM:17:PHE:N	2.49	0.46
35:JD:1036:GLU:HA	35:JD:1039:VAL:HG22	1.97	0.46
58:DX:97:ASP:OD1	58:DX:97:ASP:N	2.48	0.46
59:DY:3:ASP:OD1	59:DY:3:ASP:N	2.49	0.46
4:UD:616:LYS:NZ	10:UJ:627:LEU:O	2.50	0.45
5:UE:261:VAL:O	5:UE:273:LYS:NZ	2.38	0.45
5:UE:445:LEU:HB3	5:UE:479:ILE:HD11	1.97	0.45
12:UL:538:ARG:HD3	12:UL:580:ASP:HA	1.98	0.45
17:UQ:40:ASP:HB2	17:UQ:42:ARG:HD3	1.98	0.45
17:UQ:583:LYS:HE2	17:UQ:599:ILE:HD12	1.97	0.45
25:CD:388:ARG:HG3	27:CG:66:HIS:HB3	1.97	0.45
35:JD:521:ARG:HG2	35:JD:567:PHE:HZ	1.80	0.45
45:DE:11:ARG:HH11	45:DE:20:LEU:HD13	1.81	0.45
45:DE:105:VAL:HG22	45:DE:243:GLY:HA2	1.98	0.45
48:DH:162:ILE:HA	48:DH:165:LYS:HB2	1.99	0.45
62:D3:1679:G:H21	62:D3:1722:A:H62	1.64	0.45
4:UD:593:GLU:OE1	4:UD:615:SER:OG	2.34	0.45
5:UE:343:ARG:NH1	5:UE:347:GLY:O	2.47	0.45
12:UL:420:LYS:HA	12:UL:420:LYS:HD3	1.74	0.45
14:UN:879:ILE:HG21	41:JP:396:TYR:HA	1.98	0.45
15:UO:45:ILE:HG12	15:UO:57:VAL:HG23	1.98	0.45
17:UQ:113:ASN:O	17:UQ:115:HIS:ND1	2.41	0.45
17:UQ:295:TRP:HZ2	61:D2:86:C:H5'	1.81	0.45
17:UQ:550:PRO:HB2	17:UQ:557:ILE:HG21	1.98	0.45
20:UT:1170:LEU:O	20:UT:1174:ILE:HG12	2.17	0.45
20:UT:1186:TYR:CE2	20:UT:1227:ILE:HA	2.51	0.45
20:UT:2003:LEU:HD22	20:UT:2019:ILE:HG21	1.99	0.45
20:UT:2239:LEU:HD11	20:UT:2254:VAL:HG11	1.98	0.45
21:UU:57:THR:OG1	21:UU:75:GLU:OE1	2.33	0.45
22:UV:519:ASP:OD2	22:UV:614:ARG:NH1	2.49	0.45
24:CA:164:ILE:HG12	24:CA:170:VAL:HG11	1.99	0.45
25:CD:101:SER:HB2	25:CD:128:ILE:HD13	1.98	0.45
28:CH:470:LEU:O	28:CH:471:GLN:NE2	2.49	0.45
32:CL:129:ILE:HG22	32:CL:133:LYS:HE3	1.99	0.45
35:JD:842:ILE:HG22	35:JD:850:ILE:HD12	1.98	0.45
35:JD:919:ASP:HA	35:JD:924:LEU:HD21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JF:233:SER:HB3	36:JF:236:VAL:HG12	1.98	0.45
49:DI:42:ARG:HD2	49:DI:59:ARG:HH21	1.81	0.45
53:DO:38:THR:HG21	62:D3:895:G:H21	1.82	0.45
56:DT:37:VAL:HG22	56:DT:39:THR:H	1.81	0.45
57:DW:77:PRO:HG2	57:DW:79:PHE:CZ	2.52	0.45
62:D3:1537:C:N3	62:D3:1572:G:C6	2.84	0.45
63:D4:4:G:H2'	63:D4:5:A:C8	2.51	0.45
1:UA:62:ASP:OD2	1:UA:104:PHE:N	2.45	0.45
4:UD:774:LEU:HD23	61:D2:84:G:C2	2.52	0.45
5:UE:363:VAL:HG22	17:UQ:546:LYS:HB3	1.98	0.45
9:UI:459:LEU:HD23	9:UI:460:LEU:HD22	1.97	0.45
9:UI:495:VAL:O	9:UI:499:ILE:HG13	2.17	0.45
10:UJ:162:ASN:O	10:UJ:165:SER:OG	2.34	0.45
10:UJ:206:TYR:CZ	10:UJ:209:GLN:HB2	2.51	0.45
12:UL:128:GLN:OE1	12:UL:129:PHE:N	2.49	0.45
13:UM:250:LYS:HD3	13:UM:250:LYS:HA	1.75	0.45
15:UO:263:ASN:O	15:UO:310:SER:OG	2.28	0.45
15:UO:293:LYS:HD3	15:UO:293:LYS:HA	1.80	0.45
18:UR:488:SER:O	18:UR:488:SER:OG	2.34	0.45
19:US:155:LEU:HD22	19:US:176:ILE:HD12	1.97	0.45
20:UT:2106:LEU:HD21	20:UT:2125:LEU:HD23	1.97	0.45
24:CB:142:ARG:NH1	24:CB:186:ASP:OD2	2.49	0.45
51:DL:123:VAL:HG12	51:DL:142:VAL:HG13	1.98	0.45
53:DO:136:ARG:HB2	53:DO:137:LEU:HD12	1.98	0.45
54:DQ:7:VAL:HG13	54:DQ:22:VAL:HB	1.98	0.45
62:D3:1477:G:H2'	62:D3:1478:G:C8	2.48	0.45
63:D4:79:G:O2'	63:D4:328:A:N1	2.35	0.45
1:UA:71:ILE:HD11	1:UA:79:ALA:HB1	1.97	0.45
1:UA:322:SER:O	1:UA:322:SER:OG	2.31	0.45
2:UB:429:LEU:HD23	2:UB:462:LEU:HD21	1.97	0.45
2:UB:474:CYS:O	2:UB:478:ILE:HG12	2.16	0.45
8:UH:314:LEU:HA	8:UH:321:ILE:HA	1.97	0.45
10:UJ:611:ILE:HD12	10:UJ:612:PRO:HD2	1.99	0.45
10:UJ:1380:LEU:HD11	10:UJ:1400:ILE:HG12	1.97	0.45
11:UK:164:ASN:HB3	11:UK:166:LEU:HD13	1.98	0.45
12:UL:42:ILE:HG12	12:UL:51:ILE:HG22	1.98	0.45
15:UO:40:ASN:HB2	15:UO:60:SER:HB3	1.98	0.45
18:UR:138:LEU:HD22	18:UR:144:LYS:HD2	1.99	0.45
18:UR:524:SER:OG	18:UR:527:GLY:N	2.49	0.45
19:US:427:GLN:HE22	19:US:432:VAL:HG22	1.80	0.45
20:UT:67:ALA:O	20:UT:71:GLU:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:1120:GLN:O	20:UT:1124:TYR:HB2	2.17	0.45
21:UU:90:VAL:HG13	21:UU:101:TYR:HB2	1.97	0.45
23:UX:96:PRO:HG2	23:UX:125:ILE:HD13	1.99	0.45
26:CE:328:ARG:O	26:CE:332:THR:HG22	2.17	0.45
30:CJ:143:HIS:ND1	62:D3:1604:U:H5'	2.31	0.45
35:JD:1044:GLN:O	35:JD:1048:ILE:HG12	2.16	0.45
35:JD:1049:ILE:HG13	35:JD:1055:LYS:HD3	1.99	0.45
36:JF:48:ALA:HB3	36:JF:116:THR:HA	1.98	0.45
44:DA:18:LYS:HG3	44:DA:20:VAL:HG13	1.98	0.45
62:D3:676:G:H2'	62:D3:677:G:C8	2.50	0.45
62:D3:1694:A:H2'	62:D3:1695:G:C8	2.50	0.45
62:D3:1776:A:C6	62:D3:1786:G:C6	3.04	0.45
5:UE:65:TRP:HA	5:UE:76:ILE:HG22	1.98	0.45
6:UF:12:ILE:HD13	7:UG:62:ALA:HB1	1.98	0.45
10:UJ:303:PHE:HD2	10:UJ:347:PHE:HA	1.80	0.45
10:UJ:404:PHE:O	10:UJ:408:ILE:HG13	2.16	0.45
11:UK:106:TYR:CZ	11:UK:110:LEU:HD11	2.51	0.45
13:UM:32:LEU:HB3	13:UM:43:ILE:HG13	1.99	0.45
17:UQ:40:ASP:OD1	17:UQ:40:ASP:N	2.49	0.45
17:UQ:426:ARG:HH12	61:D2:67:G:H3'	1.82	0.45
32:CL:135:ALA:O	32:CL:238:ARG:NH2	2.32	0.45
32:CL:775:GLU:HA	32:CL:779:ARG:HE	1.80	0.45
33:CM:202:PRO:HG2	62:D3:1132:A:C6	2.52	0.45
44:DA:47:LEU:HD23	44:DA:47:LEU:HA	1.82	0.45
62:D3:473:A:N6	62:D3:474:A:C6	2.84	0.45
62:D3:1776:A:C6	62:D3:1786:G:O6	2.70	0.45
63:D4:205:G:N1	63:D4:245:U:N3	2.64	0.45
13:UM:333:ILE:HD11	13:UM:378:PRO:HB2	1.99	0.45
15:UO:54:ASP:OD1	15:UO:54:ASP:N	2.49	0.45
17:UQ:174:TYR:HD1	17:UQ:189:HIS:HA	1.80	0.45
20:UT:394:LEU:HD23	20:UT:431:LYS:HG2	1.98	0.45
21:UU:589:THR:OG1	21:UU:603:ALA:O	2.30	0.45
24:CA:208:ILE:HD11	25:CD:159:SER:HB3	1.98	0.45
26:CE:28:LEU:HA	26:CE:33:ASP:HB2	1.97	0.45
29:CI:5:LEU:H	29:CI:5:LEU:HG	1.55	0.45
30:CJ:187:PRO:HB3	30:CJ:220:ARG:HG3	1.98	0.45
32:CL:5:ASN:ND2	62:D3:1771:U:O4'	2.50	0.45
32:CL:203:LYS:HE3	32:CL:203:LYS:HB2	1.61	0.45
32:CL:607:ASP:N	32:CL:607:ASP:OD1	2.47	0.45
34:CN:59:PRO:O	34:CN:62:SER:OG	2.35	0.45
35:JD:863:ILE:O	35:JD:873:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:JP:109:HIS:CE1	41:JP:140:SER:HB2	2.52	0.45
48:DH:96:ARG:NH1	48:DH:124:LYS:HB3	2.32	0.45
62:D3:564:G:N2	62:D3:1596:C:N3	2.57	0.45
62:D3:1751:C:H2'	62:D3:1752:U:H6	1.82	0.45
62:D3:1752:U:H2'	62:D3:1753:A:C8	2.52	0.45
1:UA:492:SER:OG	1:UA:493:TRP:N	2.49	0.45
2:UB:704:ASN:HD21	19:US:422:ILE:HG21	1.81	0.45
4:UD:183:LEU:HD22	4:UD:223:GLY:HA2	1.99	0.45
12:UL:425:ILE:HG22	12:UL:426:ARG:HG2	1.98	0.45
15:UO:132:PHE:HA	15:UO:140:LEU:HD13	1.99	0.45
17:UQ:559:LYS:HB3	17:UQ:576:ALA:HB3	1.98	0.45
17:UQ:883:GLN:HB3	17:UQ:886:THR:HG23	1.97	0.45
18:UR:288:LEU:HD11	18:UR:339:ILE:HD11	1.98	0.45
20:UT:1662:SER:O	20:UT:1665:LEU:C	2.55	0.45
21:UU:135:ASN:HD21	21:UU:166:GLU:HA	1.81	0.45
22:UV:503:VAL:HG22	22:UV:1014:LEU:HD22	1.99	0.45
25:CD:182:ASP:OD1	25:CD:183:GLN:N	2.50	0.45
27:CF:50:GLU:N	27:CF:102:ILE:O	2.48	0.45
29:CI:55:ARG:O	29:CI:59:ASN:ND2	2.49	0.45
32:CL:906:ASP:N	32:CL:906:ASP:OD1	2.50	0.45
32:CL:953:SER:OG	32:CL:957:GLU:OE1	2.33	0.45
35:JD:506:LYS:HG3	35:JD:539:ARG:HD3	1.98	0.45
58:DX:38:PHE:HE1	62:D3:601:A:H4'	1.81	0.45
61:D2:2:U:H2'	61:D2:3:G:H8	1.82	0.45
62:D3:163:G:OP2	62:D3:163:G:N2	2.41	0.45
2:UB:651:TRP:HA	2:UB:654:LEU:HB2	1.99	0.45
10:UJ:671:LEU:HA	10:UJ:674:LEU:HD12	1.99	0.45
12:UL:582:SER:OG	12:UL:583:PHE:N	2.50	0.45
15:UO:426:LYS:HG3	15:UO:429:VAL:HG23	1.98	0.45
18:UR:211:ILE:HA	18:UR:214:THR:HG22	1.98	0.45
19:US:381:LYS:NZ	19:US:462:SER:O	2.50	0.45
20:UT:202:LYS:HD3	20:UT:202:LYS:HA	1.78	0.45
20:UT:344:MET:SD	20:UT:388:ASN:ND2	2.90	0.45
20:UT:1083:TYR:CE2	20:UT:1125:ASP:HB2	2.51	0.45
20:UT:1116:PRO:HA	20:UT:1119:TYR:CZ	2.52	0.45
20:UT:1715:SER:HA	20:UT:1718:VAL:HG22	1.99	0.45
20:UT:1924:LEU:HG	20:UT:1925:ASP:H	1.82	0.45
20:UT:1926:PHE:CZ	20:UT:1929:GLU:HG2	2.51	0.45
22:UV:490:GLU:OE1	22:UV:580:TYR:OH	2.30	0.45
22:UV:699:GLU:O	22:UV:703:LYS:HG2	2.16	0.45
23:UX:46:GLN:HE22	24:CA:305:THR:H	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CA:203:PRO:HA	24:CA:206:GLU:HG2	1.99	0.45
24:CA:227:PRO:HB3	24:CA:260:PHE:HE1	1.80	0.45
24:CA:263:ASP:OD1	24:CA:264:GLN:N	2.50	0.45
30:CJ:225:ALA:O	30:CJ:231:ILE:HA	2.16	0.45
31:CK:416:ASP:OD2	43:JJ:221:ARG:NH2	2.49	0.45
32:CL:21:LEU:HD13	32:CL:29:LYS:HG3	1.97	0.45
32:CL:77:PRO:HB2	32:CL:80:THR:HG23	1.99	0.45
35:JD:928:VAL:HA	35:JD:931:VAL:HG12	1.99	0.45
36:JF:236:VAL:HG21	36:JG:102:SER:HA	1.98	0.45
50:DJ:133:HIS:ND1	50:DJ:162:SER:HB2	2.32	0.45
62:D3:976:G:N1	62:D3:1023:A:O2'	2.37	0.45
62:D3:1115:U:H2'	62:D3:1116:A:C8	2.51	0.45
63:D4:74:A:H2'	63:D4:75:C:C6	2.52	0.45
1:UA:202:ASP:OD1	1:UA:202:ASP:N	2.46	0.45
1:UA:330:TYR:OH	1:UA:335:GLU:OE1	2.30	0.45
2:UB:422:LEU:HD13	2:UB:466:TYR:HE2	1.81	0.45
7:UG:177:TYR:HD1	7:UG:183:GLU:HA	1.82	0.45
9:UI:486:LEU:O	9:UI:489:SER:OG	2.34	0.45
10:UJ:488:GLY:HA2	10:UJ:491:TYR:HD2	1.82	0.45
10:UJ:1624:ASN:O	10:UJ:1627:THR:OG1	2.30	0.45
11:UK:94:ASP:OD1	11:UK:94:ASP:N	2.48	0.45
17:UQ:252:LEU:HD21	61:D2:81:A:H3'	1.99	0.45
20:UT:2455:ALA:HA	20:UT:2458:ILE:HD12	1.98	0.45
21:UU:880:LEU:HA	21:UU:883:THR:HG22	1.99	0.45
22:UV:272:CYS:SG	22:UV:273:SER:N	2.90	0.45
22:UV:566:ILE:HD11	22:UV:686:LEU:HD22	1.99	0.45
24:CB:264:GLN:N	24:CB:320:TYR:O	2.50	0.45
25:CD:209:LEU:HD11	25:CD:254:ASN:HD22	1.81	0.45
28:CH:459:LEU:HD23	28:CH:459:LEU:HA	1.85	0.45
28:CH:569:ASP:OD1	28:CH:570:GLN:N	2.47	0.45
36:JG:53:HIS:HB2	36:JG:68:LEU:HD21	1.99	0.45
36:JG:99:LEU:HA	36:JG:99:LEU:HD23	1.79	0.45
44:DA:116:LYS:NZ	62:D3:933:A:OP1	2.49	0.45
46:DF:106:LYS:HD3	46:DF:109:LYS:HZ3	1.82	0.45
52:DN:60:VAL:HG13	52:DN:66:ILE:HG13	1.99	0.45
53:DO:11:SER:HB3	53:DO:12:GLN:HE21	1.82	0.45
61:D2:18:G:H2'	61:D2:19:A:C8	2.52	0.45
61:D2:59:U:H2'	61:D2:60:G:C8	2.51	0.45
62:D3:1152:A:H2'	62:D3:1153:G:H8	1.82	0.45
2:UB:426:THR:HG22	2:UB:462:LEU:HD13	1.98	0.45
7:UG:228:LEU:HD22	7:UG:264:PRO:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:1682:GLU:HG2	10:UJ:1683:HIS:HD2	1.81	0.45
13:UM:234:LEU:HD23	13:UM:235:LYS:HB2	1.98	0.45
16:UP:206:LEU:HD23	16:UP:206:LEU:HA	1.81	0.45
18:UR:287:SER:O	18:UR:287:SER:OG	2.35	0.45
18:UR:352:GLN:HB3	18:UR:379:GLY:HA2	1.98	0.45
20:UT:1695:HIS:CE1	20:UT:1699:LYS:HD2	2.51	0.45
21:UU:100:ILE:HD13	21:UU:149:TYR:HB2	1.98	0.45
22:UV:980:VAL:HG11	22:UV:1011:ARG:HG3	1.97	0.45
22:UV:1146:THR:HA	22:UV:1149:LEU:HB2	1.99	0.45
24:CB:202:ARG:HH11	26:CE:376:LEU:HD23	1.80	0.45
24:CB:264:GLN:HA	24:CB:320:TYR:O	2.17	0.45
25:CD:48:ILE:HD13	25:CD:48:ILE:HA	1.84	0.45
28:CH:162:CYS:SG	28:CH:525:GLN:HB3	2.57	0.45
30:CJ:201:ARG:HD2	30:CJ:201:ARG:HA	1.82	0.45
35:JD:408:ASP:OD1	35:JD:408:ASP:N	2.47	0.45
39:JL:253:LYS:HE2	39:JL:253:LYS:HB3	1.86	0.45
47:DG:18:ILE:HD12	47:DG:23:ARG:HD2	1.99	0.45
53:DO:13:VAL:HG23	53:DO:76:ILE:HA	1.98	0.45
55:DS:24:GLY:O	55:DS:59:GLY:N	2.50	0.45
62:D3:196:G:O2'	62:D3:197:A:H8	1.99	0.45
62:D3:629:U:O2	62:D3:970:A:N6	2.41	0.45
62:D3:647:G:H22	62:D3:687:G:N2	2.14	0.45
63:D4:4:G:H2'	63:D4:5:A:H8	1.82	0.45
4:UD:593:GLU:HB3	4:UD:615:SER:OG	2.17	0.44
10:UJ:214:THR:O	10:UJ:218:ILE:HG12	2.17	0.44
13:UM:72:ASP:OD1	13:UM:72:ASP:N	2.46	0.44
14:UN:291:SER:OG	41:JP:248:ASP:OD2	2.35	0.44
15:UO:90:ARG:HD2	15:UO:95:LEU:HB2	1.98	0.44
19:US:213:LEU:HG	19:US:268:GLN:HB2	1.99	0.44
20:UT:88:PHE:CE2	20:UT:124:PHE:HB3	2.52	0.44
20:UT:1074:ASP:OD1	20:UT:1075:TRP:N	2.50	0.44
22:UV:161:PRO:HA	22:UV:597:ARG:HA	1.98	0.44
24:CA:138:LYS:HE3	24:CA:138:LYS:HB3	1.76	0.44
24:CB:170:VAL:O	24:CB:194:VAL:HA	2.17	0.44
25:CD:180:LEU:HD12	25:CD:180:LEU:HA	1.84	0.44
29:CI:56:ARG:HA	29:CI:59:ASN:HD22	1.81	0.44
29:CI:159:THR:OG1	29:CI:160:TRP:N	2.51	0.44
35:JD:1135:ILE:HG21	35:JD:1143:ASN:H	1.83	0.44
36:JF:176:ARG:HD2	36:JF:196:LEU:HD21	1.98	0.44
41:JP:438:LYS:HD2	41:JP:438:LYS:HA	1.80	0.44
47:DG:18:ILE:HD13	47:DG:18:ILE:HA	1.87	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:D2:15:G:N3	61:D2:67:G:N2	2.65	0.44
62:D3:1114:G:N1	63:D4:11:U:C2	2.85	0.44
63:D4:3:C:H2'	63:D4:4:G:H8	1.82	0.44
4:UD:137:TYR:OH	4:UD:179:HIS:N	2.50	0.44
6:UF:190:LEU:HD11	6:UF:323:PHE:HE1	1.82	0.44
10:UJ:646:ASN:OD1	10:UJ:646:ASN:N	2.50	0.44
10:UJ:1626:LEU:HD23	10:UJ:1651:LEU:HD21	1.99	0.44
12:UL:87:ALA:HB2	12:UL:94:LEU:HD13	1.97	0.44
13:UM:89:HIS:HD2	13:UM:92:THR:H	1.66	0.44
13:UM:119:VAL:HG22	13:UM:127:ILE:HG13	1.99	0.44
13:UM:699:LYS:HG3	13:UM:755:ILE:HD11	1.99	0.44
17:UQ:503:ASP:N	17:UQ:570:SER:OG	2.50	0.44
20:UT:2086:ILE:O	20:UT:2090:ALA:CB	2.57	0.44
22:UV:364:VAL:HG12	22:UV:367:ARG:HH21	1.83	0.44
22:UV:656:ARG:HG2	44:DA:243:LYS:HD3	1.99	0.44
24:CB:272:LYS:HE2	24:CB:274:ASN:HD21	1.82	0.44
28:CH:165:PRO:HG2	28:CH:183:GLY:HA2	1.99	0.44
34:CN:131:ALA:O	34:CN:135:ASN:ND2	2.50	0.44
46:DF:72:HIS:O	46:DF:72:HIS:ND1	2.49	0.44
62:D3:1751:C:H2'	62:D3:1752:U:C6	2.53	0.44
63:D4:153:C:H2'	63:D4:154:C:C6	2.52	0.44
63:D4:306:G:H2'	63:D4:307:G:C8	2.52	0.44
63:D4:315:A:H2'	63:D4:316:A:C8	2.52	0.44
1:UA:506:SER:OG	1:UA:507:GLN:N	2.49	0.44
2:UB:682:ARG:HA	2:UB:682:ARG:HD2	1.86	0.44
5:UE:120:ILE:HD12	5:UE:151:LEU:HB3	1.99	0.44
5:UE:251:GLY:O	5:UE:288:LYS:NZ	2.39	0.44
7:UG:300:ILE:O	7:UG:309:LEU:N	2.51	0.44
8:UH:293:TYR:HA	8:UH:304:GLN:HA	1.98	0.44
10:UJ:301:LYS:O	10:UJ:305:THR:HG23	2.17	0.44
10:UJ:1401:LEU:HD11	10:UJ:1440:VAL:HG11	1.99	0.44
12:UL:100:ASP:N	12:UL:100:ASP:OD1	2.43	0.44
12:UL:756:LEU:HG	12:UL:760:ILE:HD12	1.99	0.44
13:UM:43:ILE:HG22	13:UM:52:ILE:HG22	1.98	0.44
17:UQ:627:ASP:OD1	17:UQ:627:ASP:N	2.50	0.44
20:UT:1960:LEU:HD21	20:UT:1999:ALA:HA	1.98	0.44
21:UU:48:PHE:HD2	26:CE:421:MET:HE3	1.82	0.44
21:UU:166:GLU:HB3	21:UU:185:LYS:HE3	2.00	0.44
22:UV:1154:ASN:O	22:UV:1158:LYS:HB2	2.18	0.44
26:CE:28:LEU:HD13	26:CE:33:ASP:HB2	1.98	0.44
27:CG:125:LEU:HD23	27:CG:125:LEU:HA	1.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CI:65:PRO:HA	29:CI:66:PRO:HD3	1.87	0.44
29:CI:109:ARG:HD2	29:CI:109:ARG:HA	1.72	0.44
31:CK:314:LEU:HD23	31:CK:314:LEU:HA	1.85	0.44
32:CL:252:LEU:O	32:CL:268:LYS:HB3	2.16	0.44
35:JD:27:ARG:HD3	62:D3:355:G:H5'	1.99	0.44
38:JI:1684:THR:O	38:JI:1688:ALA:CB	2.66	0.44
44:DA:2:ALA:HA	53:DO:49:LYS:HA	1.98	0.44
46:DF:95:ASN:OD1	46:DF:107:LYS:NZ	2.31	0.44
58:DX:82:LYS:H	58:DX:82:LYS:HG2	1.67	0.44
62:D3:1553:G:C6	62:D3:1559:A:C6	3.06	0.44
62:D3:1648:A:H2'	62:D3:1649:G:H8	1.83	0.44
63:D4:154:C:H42	63:D4:159:C:H42	1.66	0.44
1:UA:491:ALA:HB2	1:UA:521:LEU:HD12	1.99	0.44
1:UA:679:VAL:HA	1:UA:698:THR:HG21	1.98	0.44
2:UB:534:PHE:HD2	2:UB:570:LYS:HD3	1.81	0.44
5:UE:536:LEU:HD11	15:UO:453:VAL:HG13	1.99	0.44
6:UF:280:THR:HA	6:UF:283:LYS:HE3	1.99	0.44
7:UG:504:LYS:NZ	62:D3:934:C:OP2	2.33	0.44
10:UJ:32:SER:OG	10:UJ:33:LEU:N	2.50	0.44
10:UJ:268:LEU:HD12	10:UJ:269:PRO:HD2	2.00	0.44
10:UJ:769:LEU:HA	10:UJ:772:VAL:HG12	2.00	0.44
10:UJ:1762:GLU:HB3	10:UJ:1766:ARG:HH12	1.83	0.44
12:UL:627:SER:OG	12:UL:629:ASN:OD1	2.35	0.44
15:UO:481:GLN:O	15:UO:485:ILE:HG12	2.16	0.44
17:UQ:260:SER:N	17:UQ:274:GLY:O	2.36	0.44
20:UT:222:ASP:HB3	20:UT:225:GLN:HB3	1.99	0.44
20:UT:1151:ILE:HD12	20:UT:1181:ILE:HD11	1.98	0.44
20:UT:1502:ASN:HA	20:UT:1505:ASN:HD22	1.82	0.44
20:UT:1601:ARG:NH2	20:UT:1603:ASP:OD1	2.50	0.44
22:UV:940:LYS:HG3	22:UV:975:LEU:HD21	2.00	0.44
28:CH:142:ILE:HD11	28:CH:511:LEU:HD23	1.99	0.44
29:CI:122:GLU:HG3	29:CI:123:THR:HG23	1.99	0.44
32:CL:72:VAL:HA	32:CL:137:LEU:O	2.17	0.44
35:JD:1108:ASN:ND2	35:JD:1111:SER:O	2.50	0.44
47:DG:56:ASN:HD21	62:D3:153:G:H21	1.66	0.44
57:DW:52:TYR:HE1	57:DW:59:GLY:HA3	1.82	0.44
62:D3:985:G:C6	62:D3:1017:U:N3	2.86	0.44
1:UA:842:ASN:HD21	21:UU:886:SER:HB2	1.82	0.44
2:UB:477:TYR:HA	2:UB:480:GLU:HG3	1.99	0.44
4:UD:361:LEU:HA	4:UD:361:LEU:HD23	1.79	0.44
5:UE:53:LEU:HD13	5:UE:58:LEU:HD12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:UK:56:LYS:HB3	11:UK:56:LYS:HE3	1.80	0.44
11:UK:153:ASN:HB2	11:UK:168:LYS:HE3	1.99	0.44
12:UL:192:LYS:HE2	12:UL:192:LYS:HB2	1.88	0.44
12:UL:577:LEU:N	12:UL:591:SER:O	2.50	0.44
13:UM:118:ALA:HA	13:UM:128:VAL:HA	2.00	0.44
13:UM:635:ALA:HB2	13:UM:641:PHE:CE2	2.52	0.44
14:UN:871:SER:OG	14:UN:872:ARG:N	2.50	0.44
15:UO:235:LYS:HG2	15:UO:247:GLU:HG3	2.00	0.44
15:UO:278:ASP:HA	19:US:331:ASN:HD22	1.81	0.44
17:UQ:258:TYR:CZ	17:UQ:414:ILE:HG12	2.52	0.44
18:UR:439:LYS:HE3	18:UR:442:HIS:HD2	1.83	0.44
20:UT:267:SER:O	20:UT:313:ARG:NH2	2.50	0.44
20:UT:1961:LYS:HD2	20:UT:1998:LEU:HD11	2.00	0.44
20:UT:2149:LEU:HD22	20:UT:2160:LEU:HD12	1.99	0.44
21:UU:464:LYS:HG2	21:UU:480:SER:HB3	1.99	0.44
26:CE:176:GLU:HA	26:CE:179:THR:HG22	2.00	0.44
29:CI:40:ASN:HB2	29:CI:43:ASP:HB2	2.00	0.44
33:CM:148:GLU:N	33:CM:172:SER:OG	2.36	0.44
35:JD:369:SER:HA	35:JD:372:LYS:HG2	1.98	0.44
35:JD:841:GLU:HA	35:JD:844:ARG:HB2	1.99	0.44
35:JD:1043:LYS:HZ3	35:JD:1063:ARG:HA	1.83	0.44
43:JJ:144:LYS:HE3	43:JJ:144:LYS:HB2	1.81	0.44
62:D3:647:G:H22	62:D3:687:G:H22	1.65	0.44
62:D3:1690:G:H2'	62:D3:1691:A:H8	1.81	0.44
1:UA:758:ILE:HD11	1:UA:798:TRP:CZ2	2.52	0.44
2:UB:604:VAL:HG21	2:UB:633:VAL:HG21	1.99	0.44
4:UD:453:LEU:HD12	4:UD:460:LEU:HB3	1.99	0.44
10:UJ:1351:SER:O	10:UJ:1355:ILE:HG12	2.17	0.44
10:UJ:1355:ILE:O	10:UJ:1359:VAL:HG23	2.18	0.44
13:UM:26:SER:OG	13:UM:28:ASN:OD1	2.25	0.44
13:UM:212:LEU:HD12	13:UM:222:LEU:HD21	2.00	0.44
13:UM:497:LEU:HB3	13:UM:506:PHE:CZ	2.53	0.44
13:UM:548:LEU:HD23	13:UM:560:TRP:HB2	1.99	0.44
17:UQ:507:MET:HB3	17:UQ:532:TRP:HB2	2.00	0.44
18:UR:137:ILE:HG23	18:UR:143:THR:HG22	1.99	0.44
19:US:395:ILE:HA	19:US:398:VAL:HG12	2.00	0.44
20:UT:201:ARG:NH1	20:UT:242:SER:OG	2.50	0.44
20:UT:958:LYS:NZ	20:UT:1014:ASN:O	2.49	0.44
23:UX:4:ALA:HA	23:UX:8:ARG:HD3	2.00	0.44
24:CB:222:GLU:HA	26:CE:151:LYS:HE2	2.00	0.44
26:CE:291:VAL:HG12	26:CE:363:LEU:HD21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CJ:154:ILE:O	30:CJ:162:THR:HA	2.18	0.44
35:JD:396:GLU:O	35:JD:400:ILE:HG12	2.17	0.44
36:JF:30:VAL:HG22	36:JF:127:THR:HG21	1.99	0.44
41:JP:270:ASN:HD21	41:JP:273:GLU:HB2	1.83	0.44
3:UC:540:ILE:HB	3:UC:544:ILE:HD11	1.99	0.44
6:UF:19:VAL:HB	6:UF:29:VAL:HG21	1.99	0.44
6:UF:194:THR:HA	6:UF:197:ILE:HG22	1.99	0.44
13:UM:306:LEU:O	13:UM:309:GLN:N	2.49	0.44
13:UM:535:GLY:O	13:UM:553:GLY:N	2.47	0.44
17:UQ:71:ASN:OD1	17:UQ:72:SER:N	2.50	0.44
18:UR:520:ASN:HB2	18:UR:533:ALA:HB3	1.98	0.44
20:UT:374:LEU:O	20:UT:378:HIS:HB3	2.17	0.44
20:UT:1232:LEU:HB2	20:UT:1235:LEU:HD23	2.00	0.44
24:CB:116:SER:N	24:CB:122:ARG:HH21	2.13	0.44
28:CH:496:LEU:HD22	28:CH:564:TYR:HE2	1.83	0.44
29:CI:40:ASN:HB2	29:CI:43:ASP:H	1.83	0.44
34:CN:17:PRO:HB2	34:CN:34:LEU:HD22	2.00	0.44
35:JD:840:PRO:HG2	35:JD:843:LEU:HG	1.99	0.44
39:JL:157:ARG:NH2	39:JL:204:SER:O	2.36	0.44
39:JL:236:ARG:NH2	62:D3:981:U:OP1	2.51	0.44
44:DA:89:ASP:N	44:DA:89:ASP:OD1	2.49	0.44
45:DE:11:ARG:NH2	45:DE:24:SER:HB3	2.32	0.44
62:D3:23:G:C2	62:D3:602:U:C2	3.06	0.44
62:D3:89:G:C6	62:D3:452:A:C6	3.06	0.44
63:D4:8:U:H2'	63:D4:9:A:C8	2.53	0.44
63:D4:67:G:H2'	63:D4:68:A:C8	2.52	0.44
7:UG:336:PRO:HG2	7:UG:337:HIS:CD2	2.53	0.44
10:UJ:152:LEU:HD23	10:UJ:152:LEU:HA	1.79	0.44
10:UJ:1408:ILE:HD12	10:UJ:1444:ILE:HG13	1.98	0.44
10:UJ:1539:MET:HE2	10:UJ:1543:VAL:HG23	2.00	0.44
13:UM:459:ASN:OD1	13:UM:459:ASN:N	2.50	0.44
17:UQ:87:SER:O	17:UQ:112:ASN:N	2.51	0.44
17:UQ:271:LEU:HB2	17:UQ:285:LEU:HD21	1.99	0.44
18:UR:238:LEU:HD13	18:UR:588:LEU:HD23	1.99	0.44
20:UT:355:GLN:HG3	20:UT:389:ILE:HG22	2.00	0.44
20:UT:1037:LEU:HD11	20:UT:1055:ARG:HH11	1.82	0.44
20:UT:2440:ARG:HB3	20:UT:2444:ARG:HH12	1.83	0.44
22:UV:352:THR:HB	22:UV:401:LEU:HD21	1.99	0.44
22:UV:520:ASN:N	22:UV:520:ASN:OD1	2.51	0.44
24:CB:253:ILE:HD13	24:CB:253:ILE:HA	1.78	0.44
30:CJ:77:TYR:O	30:CJ:81:SER:CA	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CJ:232:SER:HB3	30:CJ:255:GLU:HG2	1.99	0.44
32:CL:844:PRO:HG3	32:CL:1032:LEU:HG	2.00	0.44
45:DE:31:PRO:HD2	45:DE:38:LEU:HD11	2.00	0.44
45:DE:77:ARG:HA	45:DE:77:ARG:HD3	1.83	0.44
47:DG:137:ARG:HH22	62:D3:144:U:H5	1.64	0.44
47:DG:187:LYS:NZ	62:D3:140:A:OP2	2.29	0.44
50:DJ:132:ARG:NH2	62:D3:532:U:OP1	2.50	0.44
2:UB:660:ILE:HA	19:US:388:LEU:HD21	1.98	0.44
4:UD:396:GLU:OE2	4:UD:397:SER:OG	2.33	0.44
5:UE:212:LEU:HD11	5:UE:246:VAL:HG11	2.00	0.44
12:UL:255:ARG:NH2	62:D3:1653:C:OP1	2.51	0.44
12:UL:433:ALA:HA	12:UL:449:THR:HA	2.00	0.44
18:UR:341:LYS:HB2	18:UR:341:LYS:HE3	1.81	0.44
20:UT:555:LEU:HD11	20:UT:603:LEU:HD22	2.00	0.44
20:UT:902:THR:HG21	49:DI:75:LYS:HD3	1.99	0.44
20:UT:1062:LEU:HD23	20:UT:1062:LEU:HA	1.80	0.44
20:UT:1281:ARG:HG3	20:UT:1315:ARG:HH22	1.83	0.44
20:UT:1868:LEU:HD23	20:UT:1868:LEU:HA	1.84	0.44
21:UU:142:LYS:HE2	21:UU:150:PRO:HD3	2.00	0.44
22:UV:329:THR:O	22:UV:329:THR:OG1	2.30	0.44
28:CH:61:ASP:OD1	28:CH:64:ARG:NH2	2.48	0.44
28:CH:551:ARG:O	28:CH:553:ILE:N	2.51	0.44
30:CJ:196:THR:OG1	30:CJ:197:ALA:N	2.51	0.44
32:CL:55:HIS:HE1	62:D3:435:C:C2	2.36	0.44
34:CN:258:TYR:OH	52:DN:45:LEU:O	2.24	0.44
35:JD:111:LYS:HA	35:JD:114:ILE:HD12	2.00	0.44
35:JD:1002:ASP:HA	35:JD:1005:ARG:HB3	2.00	0.44
62:D3:151:G:C2	62:D3:164:A:C6	3.06	0.44
63:D4:18:G:H2'	63:D4:19:A:C8	2.53	0.44
4:UD:488:ILE:HB	4:UD:496:PHE:HB2	2.00	0.43
7:UG:125:LEU:HD21	7:UG:127:ILE:HG23	2.00	0.43
12:UL:253:LYS:HA	12:UL:253:LYS:HD3	1.83	0.43
12:UL:275:GLN:HE21	12:UL:338:ILE:HG13	1.83	0.43
12:UL:548:ILE:O	12:UL:555:VAL:HA	2.17	0.43
13:UM:433:HIS:NE2	13:UM:458:SER:HB2	2.33	0.43
17:UQ:714:ASP:HB2	17:UQ:774:PHE:CZ	2.52	0.43
19:US:203:LEU:HD23	19:US:209:GLN:HA	2.00	0.43
20:UT:1089:PRO:HG2	20:UT:1090:ARG:HG2	2.00	0.43
20:UT:2309:LYS:HZ3	20:UT:2376:VAL:HG21	1.83	0.43
20:UT:2448:ARG:HH12	62:D3:826:U:H5'	1.83	0.43
35:JD:846:PRO:HB2	35:JD:849:SER:OG	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:JD:872:ASP:OD2	35:JD:875:ALA:N	2.48	0.43
39:JL:50:ASP:O	39:JL:53:GLN:NE2	2.51	0.43
43:JJ:144:LYS:HG3	43:JJ:145:PHE:HD1	1.83	0.43
55:DS:49:LYS:HA	55:DS:49:LYS:HD2	1.83	0.43
62:D3:1695:G:C6	62:D3:1707:A:N6	2.85	0.43
5:UE:281:ILE:HB	5:UE:291:ILE:HD11	2.00	0.43
7:UG:207:THR:O	7:UG:207:THR:OG1	2.35	0.43
12:UL:88:HIS:O	12:UL:92:ASP:N	2.51	0.43
17:UQ:71:ASN:HB3	17:UQ:74:LEU:HB2	2.01	0.43
17:UQ:412:ASN:HD22	17:UQ:417:LEU:HD12	1.84	0.43
20:UT:500:LEU:HD12	20:UT:503:ARG:HH22	1.83	0.43
20:UT:1340:SER:HB2	20:UT:1343:GLU:HB3	2.00	0.43
20:UT:1857:ILE:HG22	41:JP:172:LEU:HD12	2.00	0.43
21:UU:626:ASP:OD1	21:UU:627:ASN:N	2.49	0.43
22:UV:469:ASP:O	22:UV:473:LYS:HA	2.19	0.43
22:UV:1216:LYS:HA	22:UV:1219:ILE:HD12	2.00	0.43
25:CD:171:ASP:OD1	25:CD:171:ASP:N	2.48	0.43
29:CI:32:VAL:HA	29:CI:35:THR:HG22	2.00	0.43
29:CI:51:CYS:HA	29:CI:54:ILE:HD12	2.00	0.43
35:JD:111:LYS:HA	35:JD:111:LYS:HD3	1.79	0.43
50:DJ:171:ARG:O	50:DJ:175:ARG:HB3	2.18	0.43
56:DT:33:TYR:OH	56:DT:99:SER:OG	2.31	0.43
62:D3:1044:U:H2'	62:D3:1045:C:C6	2.52	0.43
1:UA:261:ALA:HB1	1:UA:279:PHE:HB3	1.99	0.43
1:UA:431:ILE:HD12	1:UA:431:ILE:HA	1.92	0.43
2:UB:613:ILE:HG13	2:UB:614:ILE:H	1.83	0.43
8:UH:676:TRP:HB2	9:UI:486:LEU:HB3	1.99	0.43
10:UJ:1494:THR:O	10:UJ:1497:SER:OG	2.29	0.43
12:UL:555:VAL:HB	12:UL:569:LEU:HB2	2.00	0.43
15:UO:194:ARG:HG3	15:UO:208:SER:HB2	2.00	0.43
17:UQ:376:ALA:HB3	18:UR:391:SER:HB2	1.99	0.43
17:UQ:554:SER:O	17:UQ:554:SER:OG	2.34	0.43
20:UT:1592:PRO:O	20:UT:1595:SER:C	2.56	0.43
21:UU:192:ASN:O	21:UU:196:GLY:N	2.51	0.43
21:UU:349:HIS:O	21:UU:649:ASN:ND2	2.51	0.43
22:UV:392:GLU:HA	22:UV:395:ILE:HD12	2.00	0.43
22:UV:1202:CYS:SG	22:UV:1203:ASN:N	2.91	0.43
24:CB:205:ARG:HG2	26:CE:152:LEU:HD13	2.00	0.43
26:CE:72:LEU:O	26:CE:76:LEU:HB2	2.18	0.43
28:CH:292:SER:OG	28:CH:293:ASP:N	2.51	0.43
33:CM:27:SER:HB2	33:CM:333:PHE:CE1	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:JD:453:VAL:HG12	35:JD:768:LEU:HD21	1.99	0.43
35:JD:535:CYS:O	35:JD:539:ARG:HB3	2.18	0.43
36:JF:39:LYS:HE3	36:JF:249:TRP:HZ2	1.83	0.43
36:JF:42:ILE:HG22	36:JF:44:VAL:HG13	2.00	0.43
36:JG:189:VAL:HG21	36:JG:241:PHE:HA	2.00	0.43
62:D3:74:U:H1'	62:D3:75:U:H5'	2.00	0.43
1:UA:16:ARG:HB2	1:UA:33:VAL:HA	2.01	0.43
1:UA:415:ASP:OD1	1:UA:416:LEU:N	2.52	0.43
7:UG:190:HIS:HD2	7:UG:215:LYS:HD2	1.83	0.43
7:UG:249:LEU:O	7:UG:256:VAL:HA	2.19	0.43
13:UM:542:CYS:O	13:UM:546:LYS:HA	2.17	0.43
13:UM:736:LEU:HD11	13:UM:767:HIS:CE1	2.53	0.43
15:UO:57:VAL:HG11	15:UO:327:LEU:HD21	2.00	0.43
17:UQ:17:GLY:H	17:UQ:465:ASN:ND2	2.16	0.43
19:US:317:ILE:HG22	19:US:318:LEU:HD23	1.99	0.43
20:UT:88:PHE:HZ	20:UT:128:ALA:HB2	1.84	0.43
20:UT:1055:ARG:HH21	62:D3:200:A:P	2.41	0.43
22:UV:358:SER:O	22:UV:358:SER:OG	2.29	0.43
22:UV:372:GLN:NE2	22:UV:511:PHE:O	2.44	0.43
24:CB:165:ALA:H	24:CB:168:LYS:HD2	1.83	0.43
28:CH:158:THR:HG21	28:CH:240:LEU:HD12	1.99	0.43
28:CH:495:SER:HA	28:CH:514:LEU:O	2.18	0.43
30:CJ:77:TYR:O	30:CJ:81:SER:CB	2.65	0.43
32:CL:126:ASN:OD1	32:CL:126:ASN:N	2.46	0.43
32:CL:1131:LYS:HD3	32:CL:1131:LYS:HA	1.76	0.43
34:CN:35:HIS:CD2	34:CN:59:PRO:HG3	2.53	0.43
35:JD:850:ILE:O	35:JD:854:MET:HG3	2.18	0.43
35:JD:993:GLN:O	35:JD:993:GLN:NE2	2.52	0.43
35:JD:1239:LYS:HB2	35:JD:1248:ILE:HD11	2.00	0.43
52:DN:12:SER:O	52:DN:12:SER:OG	2.28	0.43
58:DX:33:LEU:HD23	58:DX:33:LEU:HA	1.83	0.43
1:UA:25:ASP:N	1:UA:25:ASP:OD1	2.48	0.43
2:UB:314:MET:O	2:UB:513:GLN:NE2	2.50	0.43
4:UD:356:LEU:HD21	4:UD:372:MET:CG	2.48	0.43
5:UE:66:VAL:HG22	5:UE:112:LEU:HD22	1.99	0.43
8:UH:261:GLU:HA	8:UH:271:SER:HA	2.00	0.43
10:UJ:335:PHE:HA	10:UJ:338:LYS:HG3	2.01	0.43
10:UJ:365:ILE:O	10:UJ:369:LEU:HG	2.18	0.43
11:UK:130:SER:O	11:UK:130:SER:OG	2.35	0.43
12:UL:181:SER:OG	12:UL:183:ASP:O	2.37	0.43
13:UM:128:VAL:HG13	13:UM:137:THR:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:290:ILE:HA	13:UM:306:LEU:HD13	2.01	0.43
13:UM:343:MET:HG2	13:UM:622:ALA:HB1	1.99	0.43
13:UM:489:ALA:HB1	13:UM:516:LYS:HG3	1.99	0.43
17:UQ:631:GLN:HE22	17:UQ:640:LYS:HE3	1.83	0.43
17:UQ:760:HIS:CD2	17:UQ:761:GLU:HG3	2.54	0.43
20:UT:1795:ARG:NH2	62:D3:686:C:O2'	2.52	0.43
20:UT:2067:ASN:HA	20:UT:2070:TYR:HB2	2.00	0.43
20:UT:2427:THR:HA	20:UT:2430:TYR:CD2	2.53	0.43
21:UU:290:ILE:O	21:UU:291:HIS:ND1	2.51	0.43
24:CA:165:ALA:HB3	24:CA:168:LYS:HG3	2.00	0.43
24:CB:92:ARG:NH1	24:CB:160:ASP:O	2.45	0.43
26:CE:167:ILE:HG21	26:CE:301:ALA:HB2	2.01	0.43
28:CH:256:ARG:NH2	28:CH:282:GLU:OE1	2.46	0.43
28:CH:305:ARG:HG2	28:CH:317:ILE:HG12	2.00	0.43
28:CH:354:GLU:OE1	59:DY:10:ARG:NH2	2.51	0.43
29:CI:39:GLN:OE1	29:CI:110:ARG:NH2	2.52	0.43
31:CK:453:SER:OG	31:CK:454:VAL:N	2.52	0.43
32:CL:611:PHE:HB3	33:CM:127:ASP:HA	1.99	0.43
34:CN:78:TYR:CG	34:CN:143:LYS:HE3	2.54	0.43
35:JD:734:LEU:HD13	35:JD:741:LYS:HG2	2.01	0.43
43:JJ:213:LYS:NZ	62:D3:1796:C:O2	2.41	0.43
45:DE:11:ARG:N	45:DE:26:CYS:O	2.51	0.43
47:DG:142:ARG:NH1	47:DG:151:ASP:O	2.51	0.43
48:DH:59:ALA:HA	48:DH:91:ILE:HG13	1.99	0.43
55:DS:14:ILE:HA	55:DS:23:ASP:HA	2.01	0.43
62:D3:1672:G:H2'	62:D3:1673:G:H8	1.82	0.43
62:D3:1747:G:H2'	62:D3:1748:G:C8	2.53	0.43
2:UB:525:MET:HE2	2:UB:525:MET:HB3	1.88	0.43
2:UB:547:VAL:HG22	2:UB:564:VAL:HG23	2.00	0.43
2:UB:650:VAL:HG13	2:UB:651:TRP:CD1	2.53	0.43
4:UD:252:GLN:HE22	4:UD:320:TRP:HE1	1.65	0.43
5:UE:470:PHE:HA	5:UE:508:ILE:HG21	2.01	0.43
6:UF:358:LEU:O	6:UF:362:THR:HG23	2.19	0.43
7:UG:551:SER:OG	7:UG:552:ARG:N	2.51	0.43
9:UI:435:LEU:HB3	9:UI:439:LYS:HZ2	1.83	0.43
10:UJ:1452:GLU:O	10:UJ:1456:VAL:HG23	2.18	0.43
13:UM:516:LYS:HD2	13:UM:528:THR:HG22	2.00	0.43
13:UM:808:TYR:HB2	21:UU:932:VAL:HG22	1.99	0.43
14:UN:339:GLN:O	14:UN:343:ASP:HB2	2.19	0.43
17:UQ:122:LYS:HD2	17:UQ:122:LYS:HA	1.79	0.43
18:UR:129:ASP:HA	18:UR:132:LYS:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:UR:247:SER:OG	18:UR:273:ARG:NH1	2.51	0.43
19:US:384:ALA:HA	19:US:387:THR:HG22	2.01	0.43
21:UU:717:ASP:HB3	21:UU:720:LEU:HD23	2.01	0.43
22:UV:141:TRP:NE1	22:UV:144:LYS:HG3	2.34	0.43
22:UV:620:ASN:HB3	22:UV:623:GLU:HB2	2.01	0.43
26:CE:359:ILE:HD13	26:CE:359:ILE:HA	1.90	0.43
32:CL:108:VAL:HG21	32:CL:311:PRO:HD3	2.01	0.43
51:DL:104:HIS:NE2	62:D3:349:U:OP1	2.45	0.43
62:D3:18:C:H2'	62:D3:19:A:C8	2.49	0.43
1:UA:30:LEU:HD22	1:UA:39:VAL:HG22	2.01	0.43
4:UD:232:ASP:N	4:UD:232:ASP:OD1	2.52	0.43
4:UD:490:SER:HB3	4:UD:494:ASP:HB2	2.01	0.43
4:UD:635:GLY:HA3	4:UD:649:TRP:CE2	2.54	0.43
10:UJ:111:LEU:HB2	10:UJ:114:THR:HG23	2.01	0.43
10:UJ:489:GLU:HA	10:UJ:492:LYS:HD2	2.00	0.43
12:UL:88:HIS:O	12:UL:92:ASP:HA	2.18	0.43
13:UM:53:LEU:HB3	13:UM:54:HIS:CD2	2.54	0.43
15:UO:248:ARG:NH2	15:UO:289:ASN:O	2.52	0.43
15:UO:279:GLY:H	15:UO:302:VAL:H	1.67	0.43
17:UQ:97:THR:HG22	17:UQ:178:PHE:HE2	1.83	0.43
18:UR:133:ILE:O	18:UR:157:GLY:N	2.52	0.43
19:US:129:LEU:O	19:US:133:HIS:CB	2.66	0.43
20:UT:1677:LEU:HD23	20:UT:1677:LEU:HA	1.83	0.43
21:UU:381:ARG:NH1	61:D2:292:A:O3'	2.52	0.43
22:UV:807:LEU:HD13	22:UV:840:LEU:HB2	2.01	0.43
24:CA:107:VAL:HG13	24:CA:141:TYR:HB3	2.01	0.43
24:CB:264:GLN:CA	24:CB:320:TYR:O	2.67	0.43
30:CJ:193:ASN:HB3	30:CJ:226:ASN:HB3	2.01	0.43
33:CM:40:ASP:OD1	33:CM:41:LEU:N	2.51	0.43
35:JD:890:ASP:OD1	35:JD:894:MET:N	2.52	0.43
35:JD:991:ARG:O	35:JD:995:SER:OG	2.27	0.43
47:DG:76:LEU:HD12	47:DG:76:LEU:HA	1.87	0.43
48:DH:151:LYS:HE3	48:DH:151:LYS:HB2	1.84	0.43
62:D3:45:U:O2'	62:D3:46:A:OP1	2.33	0.43
62:D3:1787:C:H2'	62:D3:1788:G:C8	2.52	0.43
63:D4:18:G:H2'	63:D4:19:A:H8	1.84	0.43
1:UA:216:PHE:HE1	1:UA:253:LYS:HD3	1.84	0.43
5:UE:285:ASP:N	5:UE:285:ASP:OD1	2.51	0.43
6:UF:142:THR:HA	6:UF:175:ASN:HD21	1.83	0.43
7:UG:121:ASN:HB2	7:UG:123:THR:HG22	2.00	0.43
8:UH:182:THR:HA	8:UH:206:LEU:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:706:CYS:SG	10:UJ:713:PHE:HB2	2.59	0.43
12:UL:52:TRP:HA	12:UL:60:VAL:HG23	2.00	0.43
12:UL:149:ASP:O	12:UL:153:GLU:N	2.52	0.43
13:UM:176:ASP:OD1	13:UM:178:VAL:N	2.52	0.43
13:UM:434:SER:O	13:UM:434:SER:OG	2.34	0.43
15:UO:183:LEU:HD21	15:UO:195:LEU:HD23	2.00	0.43
19:US:203:LEU:HD21	19:US:212:LEU:HD22	2.01	0.43
20:UT:2239:LEU:HG	20:UT:2250:ALA:HB1	1.99	0.43
21:UU:142:LYS:HA	21:UU:150:PRO:HA	2.01	0.43
22:UV:580:TYR:HB2	22:UV:618:ILE:HB	2.00	0.43
23:UX:110:GLY:HA3	23:UX:111:PRO:HD3	1.81	0.43
25:CD:69:ILE:HD13	25:CD:69:ILE:HA	1.85	0.43
26:CE:232:GLU:O	26:CE:236:LYS:HG2	2.19	0.43
30:CJ:220:ARG:HH11	30:CJ:235:GLN:NE2	2.17	0.43
32:CL:77:PRO:HB2	32:CL:80:THR:CG2	2.49	0.43
39:JL:227:LEU:HD12	39:JL:227:LEU:HA	1.91	0.43
62:D3:119:A:H2'	62:D3:120:U:O4'	2.19	0.43
62:D3:1707:A:H2'	62:D3:1708:U:C6	2.53	0.43
1:UA:431:ILE:HD11	1:UA:451:ASP:HB2	2.01	0.43
2:UB:573:LEU:HD12	2:UB:573:LEU:HA	1.86	0.43
4:UD:532:ASN:N	4:UD:544:SER:O	2.50	0.43
5:UE:248:THR:O	5:UE:251:GLY:N	2.44	0.43
7:UG:497:LEU:HA	7:UG:497:LEU:HD23	1.74	0.43
10:UJ:1426:ILE:HD13	10:UJ:1444:ILE:HD11	1.99	0.43
10:UJ:1517:ASP:O	10:UJ:1520:THR:OG1	2.33	0.43
13:UM:116:LEU:HD12	13:UM:128:VAL:HG22	2.01	0.43
17:UQ:111:THR:HG22	17:UQ:115:HIS:HB2	1.99	0.43
19:US:179:GLU:HA	19:US:182:GLU:HG2	2.00	0.43
20:UT:41:TYR:CD2	59:DY:49:LYS:HG2	2.54	0.43
20:UT:549:LYS:HG2	20:UT:588:ASN:ND2	2.32	0.43
20:UT:673:ARG:HD3	20:UT:771:PRO:HG2	2.00	0.43
20:UT:706:LEU:HD23	20:UT:706:LEU:HA	1.88	0.43
20:UT:1504:GLY:O	20:UT:1507:THR:OG1	2.32	0.43
20:UT:1625:ASN:HA	20:UT:1628:ILE:HG22	2.01	0.43
21:UU:187:ASN:N	21:UU:187:ASN:OD1	2.51	0.43
21:UU:257:ARG:HD3	21:UU:263:HIS:HD2	1.84	0.43
22:UV:201:SER:OG	22:UV:202:SER:N	2.51	0.43
22:UV:869:ASN:ND2	62:D3:1059:U:O4	2.42	0.43
25:CD:181:LEU:HD23	25:CD:181:LEU:HA	1.84	0.43
26:CE:286:ASN:ND2	26:CE:387:GLY:H	2.17	0.43
26:CE:366:LYS:NZ	63:D4:82:G:OP1	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CH:464:LEU:HD23	28:CH:464:LEU:HA	1.84	0.43
34:CN:38:PHE:HB2	34:CN:56:VAL:HB	2.01	0.43
34:CN:222:SER:HB3	34:CN:225:SER:HB3	2.01	0.43
40:JM:60:LYS:HE3	40:JM:60:LYS:HB3	1.84	0.43
41:JP:208:ARG:HD3	41:JP:208:ARG:HA	1.88	0.43
44:DA:179:SER:OG	44:DA:180:THR:N	2.51	0.43
45:DE:102:VAL:O	45:DE:110:ALA:HB3	2.19	0.43
48:DH:15:GLU:HA	48:DH:18:LEU:HD12	2.00	0.43
54:DQ:93:HIS:HA	54:DQ:97:VAL:HG22	2.00	0.43
62:D3:231:U:N3	62:D3:234:G:C6	2.78	0.43
62:D3:484:C:H2'	62:D3:485:A:C8	2.54	0.43
62:D3:890:C:H2'	62:D3:891:A:C8	2.54	0.43
62:D3:1496:U:H3	62:D3:1511:U:H3	1.67	0.43
62:D3:1691:A:H3'	62:D3:1692:G:H8	1.84	0.43
4:UD:79:TRP:CE2	4:UD:87:GLN:HB2	2.53	0.43
5:UE:526:LEU:HD23	5:UE:526:LEU:HA	1.86	0.43
5:UE:547:LEU:HD23	5:UE:547:LEU:HA	1.85	0.43
8:UH:552:LYS:HA	8:UH:555:ILE:HG12	2.01	0.43
8:UH:663:ASP:O	8:UH:667:GLU:HG2	2.19	0.43
10:UJ:137:LEU:HD13	10:UJ:195:TYR:HB2	2.01	0.43
13:UM:199:ILE:HD12	13:UM:199:ILE:HA	1.92	0.43
13:UM:498:SER:OG	13:UM:539:VAL:HG23	2.18	0.43
17:UQ:220:HIS:ND1	61:D2:21:A:H5''	2.34	0.43
17:UQ:259:VAL:N	61:D2:63:G:O6	2.51	0.43
19:US:472:HIS:HD2	19:US:474:HIS:H	1.67	0.43
21:UU:333:GLY:O	21:UU:336:VAL:C	2.56	0.43
21:UU:721:LEU:HD23	21:UU:721:LEU:HA	1.93	0.43
22:UV:210:PRO:HB2	22:UV:213:LEU:HG	2.01	0.43
22:UV:761:ARG:HG3	22:UV:763:THR:HG22	2.00	0.43
24:CB:258:HIS:ND1	24:CB:320:TYR:OH	2.44	0.43
25:CD:214:TYR:HE1	25:CD:279:ALA:HA	1.83	0.43
26:CE:381:ASP:OD1	26:CE:381:ASP:N	2.47	0.43
32:CL:548:ASN:N	32:CL:551:LYS:HZ1	2.16	0.43
32:CL:828:ARG:NH2	58:DX:97:ASP:HB3	2.34	0.43
32:CL:858:PRO:HA	32:CL:885:PHE:HB3	2.00	0.43
35:JD:1024:PHE:O	35:JD:1028:ASN:ND2	2.37	0.43
39:JL:125:CYS:O	39:JL:151:SER:HA	2.19	0.43
39:JL:174:ARG:HH22	39:JL:228:ARG:HH21	1.67	0.43
40:JM:181:GLU:O	40:JM:185:LYS:NZ	2.49	0.43
41:JP:50:LEU:HD23	41:JP:53:MET:HE1	2.01	0.43
43:JJ:269:ARG:NH2	62:D3:1005:A:H62	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DA:70:LEU:HD23	44:DA:70:LEU:HA	1.87	0.43
44:DA:220:GLN:HA	44:DA:221:PRO:HD3	1.90	0.43
45:DE:106:LYS:HA	45:DE:106:LYS:HD2	1.79	0.43
62:D3:1160:A:H2'	62:D3:1161:C:H6	1.84	0.43
2:UB:602:LEU:HD11	2:UB:674:LYS:HE3	2.01	0.42
4:UD:285:CYS:SG	4:UD:286:LEU:N	2.92	0.42
5:UE:333:ASN:OD1	5:UE:333:ASN:N	2.47	0.42
12:UL:335:LEU:HD23	12:UL:335:LEU:H	1.82	0.42
12:UL:680:SER:OG	12:UL:682:ARG:NE	2.49	0.42
13:UM:617:ASN:OD1	13:UM:617:ASN:N	2.48	0.42
17:UQ:643:SER:O	17:UQ:646:ASN:ND2	2.52	0.42
18:UR:387:LEU:HA	18:UR:393:LEU:O	2.19	0.42
20:UT:172:LEU:HD23	20:UT:172:LEU:HA	1.91	0.42
20:UT:1480:SER:HA	20:UT:1484:TYR:HD2	1.84	0.42
20:UT:1524:LYS:HE2	20:UT:1528:ARG:HH21	1.84	0.42
20:UT:1797:LEU:HD23	20:UT:1797:LEU:HA	1.88	0.42
20:UT:2291:GLU:O	20:UT:2295:ASN:ND2	2.52	0.42
20:UT:2301:LEU:HA	20:UT:2304:ILE:HD12	2.01	0.42
21:UU:273:LEU:HD12	21:UU:273:LEU:HA	1.91	0.42
22:UV:547:PHE:O	22:UV:552:ARG:NH1	2.52	0.42
22:UV:731:LYS:NZ	22:UV:735:ASP:OD1	2.52	0.42
22:UV:813:GLU:OE1	22:UV:817:ASN:ND2	2.50	0.42
24:CB:144:TRP:HE3	24:CB:152:ALA:HB2	1.83	0.42
24:CB:213:LYS:HA	24:CB:213:LYS:HD2	1.74	0.42
24:CB:242:ALA:HB3	24:CB:269:ILE:HG23	2.01	0.42
32:CL:131:ILE:HA	32:CL:134:ILE:HG22	2.01	0.42
40:JM:185:LYS:HA	40:JM:188:LYS:HG2	2.01	0.42
49:DI:83:TYR:HB2	49:DI:196:LEU:HD21	1.99	0.42
53:DO:45:GLY:O	53:DO:48:VAL:O	2.37	0.42
56:DT:4:VAL:HG21	56:DT:140:LEU:HD12	2.00	0.42
61:D2:59:U:H2'	61:D2:60:G:H8	1.84	0.42
62:D3:24:U:H2'	62:D3:26:A:C8	2.54	0.42
62:D3:1484:G:N2	62:D3:1606:C:O2	2.53	0.42
63:D4:329:C:H2'	63:D4:330:A:C8	2.54	0.42
2:UB:443:LYS:HD2	2:UB:448:PHE:HD2	1.84	0.42
2:UB:627:HIS:CE1	2:UB:632:CYS:HB2	2.54	0.42
5:UE:483:ARG:HA	5:UE:483:ARG:HD3	1.75	0.42
11:UK:22:ARG:NH1	32:CL:937:PHE:HB3	2.33	0.42
18:UR:207:ALA:HA	18:UR:210:LYS:HE3	2.01	0.42
20:UT:391:ASP:OD1	20:UT:391:ASP:N	2.51	0.42
20:UT:609:ILE:HG13	20:UT:615:VAL:HG11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:2475:LYS:HA	20:UT:2478:LYS:HD2	2.01	0.42
22:UV:1226:PHE:HD1	34:CN:163:PRO:HG2	1.84	0.42
23:UX:129:SER:H	24:CA:291:GLN:NE2	2.17	0.42
25:CD:180:LEU:HD21	26:CE:258:LEU:HD13	2.01	0.42
26:CE:227:LEU:HD23	26:CE:227:LEU:HA	1.91	0.42
30:CJ:100:LEU:HD13	30:CJ:144:GLU:HB3	2.01	0.42
32:CL:999:ASP:OD1	32:CL:999:ASP:N	2.52	0.42
35:JD:410:VAL:HG22	35:JD:579:PRO:HG2	2.00	0.42
46:DF:31:GLU:OE1	46:DF:35:GLN:NE2	2.52	0.42
47:DG:69:LEU:O	47:DG:71:THR:N	2.49	0.42
59:DY:131:ARG:NH2	62:D3:153:G:OP2	2.34	0.42
63:D4:39:C:H2'	63:D4:40:A:C8	2.54	0.42
63:D4:41:C:H2'	63:D4:42:U:H6	1.84	0.42
5:UE:523:LEU:HD12	5:UE:526:LEU:HB2	2.01	0.42
10:UJ:375:LEU:HA	10:UJ:375:LEU:HD23	1.85	0.42
10:UJ:558:VAL:O	10:UJ:592:ARG:NH2	2.53	0.42
10:UJ:615:ASN:HD22	10:UJ:617:LYS:H	1.67	0.42
10:UJ:1528:VAL:HA	10:UJ:1531:ILE:HG22	2.01	0.42
11:UK:140:ARG:HG3	11:UK:143:MET:HE2	2.01	0.42
12:UL:156:LEU:HD23	12:UL:156:LEU:HA	1.91	0.42
13:UM:291:ILE:HD11	13:UM:307:SER:HA	2.01	0.42
13:UM:311:LEU:HB2	13:UM:333:ILE:HG23	2.01	0.42
13:UM:601:ILE:O	13:UM:610:LEU:N	2.49	0.42
17:UQ:690:ASN:ND2	17:UQ:750:LEU:O	2.53	0.42
20:UT:552:LEU:HG	20:UT:556:ARG:HD2	2.01	0.42
20:UT:2286:ALA:HA	20:UT:2343:ILE:HD11	2.01	0.42
20:UT:2437:VAL:O	20:UT:2441:ARG:HG3	2.19	0.42
22:UV:331:LEU:HD21	22:UV:556:ILE:HG12	2.01	0.42
22:UV:498:MET:HG3	22:UV:510:ILE:HD11	2.01	0.42
24:CA:144:TRP:CZ2	24:CA:183:HIS:HB3	2.54	0.42
25:CD:127:LEU:HD23	25:CD:127:LEU:HA	1.81	0.42
26:CE:383:SER:OG	26:CE:384:GLY:N	2.53	0.42
28:CH:335:ARG:HD3	28:CH:348:LEU:HD21	2.01	0.42
35:JD:96:ARG:HD3	35:JD:96:ARG:HA	1.74	0.42
35:JD:897:GLU:HA	35:JD:900:LYS:HE2	2.02	0.42
44:DA:104:ASP:OD1	44:DA:105:PHE:N	2.52	0.42
45:DE:147:ILE:HG21	45:DE:169:ILE:HG13	2.01	0.42
54:DQ:13:LYS:HD2	54:DQ:13:LYS:HA	1.73	0.42
62:D3:1068:C:H2'	62:D3:1069:A:H8	1.83	0.42
62:D3:1471:A:H2	62:D3:1474:G:N3	2.17	0.42
62:D3:1592:A:H2'	62:D3:1593:A:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:457:SER:HA	2:UB:460:LYS:HD2	2.02	0.42
4:UD:389:ARG:HB3	4:UD:404:MET:HB3	2.01	0.42
4:UD:543:ILE:O	4:UD:550:VAL:HA	2.19	0.42
5:UE:209:ASP:OD1	5:UE:210:ARG:N	2.51	0.42
6:UF:69:LYS:HD3	6:UF:69:LYS:HA	1.86	0.42
7:UG:530:ASN:HA	7:UG:533:ILE:HG12	2.00	0.42
7:UG:552:ARG:HH12	22:UV:793:PRO:HG3	1.85	0.42
12:UL:473:ASP:N	12:UL:494:ASP:OD2	2.39	0.42
12:UL:526:THR:OG1	12:UL:527:THR:N	2.52	0.42
12:UL:813:ARG:O	12:UL:817:LEU:N	2.53	0.42
17:UQ:621:LEU:HD13	17:UQ:632:ILE:HG23	2.01	0.42
18:UR:346:TYR:CE2	18:UR:393:LEU:HD23	2.55	0.42
19:US:377:ALA:HA	19:US:380:ILE:HG22	2.01	0.42
20:UT:2106:LEU:HA	20:UT:2109:VAL:HG12	2.02	0.42
21:UU:717:ASP:OD1	21:UU:718:LYS:N	2.52	0.42
22:UV:627:LEU:HG	44:DA:240:LYS:HZ2	1.84	0.42
22:UV:659:LYS:H	22:UV:659:LYS:HG2	1.68	0.42
23:UX:65:VAL:HG11	23:UX:86:MET:SD	2.59	0.42
24:CA:151:LEU:HD11	24:CA:162:LEU:HD11	2.00	0.42
24:CB:227:PRO:HB3	24:CB:260:PHE:HE2	1.85	0.42
25:CD:332:THR:HA	25:CD:335:ILE:HG12	2.01	0.42
29:CI:137:ARG:HA	29:CI:142:LEU:HA	2.01	0.42
33:CM:9:THR:HB	33:CM:31:ILE:HG22	2.00	0.42
33:CM:114:PHE:O	33:CM:169:VAL:HA	2.19	0.42
35:JD:521:ARG:HB3	35:JD:840:PRO:HB3	2.02	0.42
35:JD:745:ARG:HD2	35:JD:745:ARG:HA	1.74	0.42
39:JL:40:LYS:HA	39:JL:40:LYS:HD3	1.84	0.42
41:JP:400:LEU:HD12	41:JP:400:LEU:HA	1.86	0.42
45:DE:160:VAL:HG12	45:DE:162:ILE:HG13	2.01	0.42
48:DH:174:ASN:ND2	48:DH:180:GLN:OE1	2.53	0.42
61:D2:477:G:H2'	61:D2:478:U:C6	2.54	0.42
62:D3:1538:U:HO2'	62:D3:1539:G:H8	1.68	0.42
4:UD:231:VAL:HG22	4:UD:265:TRP:CH2	2.52	0.42
4:UD:487:VAL:HA	4:UD:496:PHE:O	2.19	0.42
6:UF:85:ASP:OD1	6:UF:85:ASP:N	2.51	0.42
10:UJ:167:PHE:CE2	10:UJ:178:THR:HG21	2.55	0.42
10:UJ:1590:ILE:HA	10:UJ:1593:TYR:HD2	1.85	0.42
10:UJ:1627:THR:HG22	10:UJ:1669:ALA:HA	2.02	0.42
10:UJ:1750:THR:O	10:UJ:1754:LYS:HB2	2.20	0.42
11:UK:15:GLU:HB3	62:D3:555:A:H4'	2.00	0.42
15:UO:44:HIS:H	15:UO:58:THR:HG1	1.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:80:GLN:HG2	17:UQ:83:GLU:H	1.84	0.42
17:UQ:866:LEU:HD23	17:UQ:866:LEU:HA	1.87	0.42
20:UT:268:PRO:O	20:UT:271:SER:OG	2.24	0.42
20:UT:804:PHE:HB2	20:UT:828:ARG:HH21	1.85	0.42
20:UT:1560:ARG:HD3	20:UT:1560:ARG:HA	1.66	0.42
20:UT:2423:VAL:O	20:UT:2427:THR:HG22	2.20	0.42
22:UV:912:VAL:HG21	22:UV:942:PHE:HE2	1.84	0.42
22:UV:1193:ALA:HB1	22:UV:1211:ASN:HD21	1.84	0.42
25:CD:117:ASP:OD1	41:JP:131:LYS:NZ	2.52	0.42
29:CI:81:LYS:HE3	31:CK:448:LEU:HD12	2.02	0.42
29:CI:152:ARG:O	29:CI:155:GLU:HG3	2.19	0.42
30:CJ:237:VAL:HG22	30:CJ:248:ALA:HB3	2.02	0.42
35:JD:911:PHE:O	35:JD:915:LEU:HG	2.19	0.42
35:JD:1106:ILE:HA	35:JD:1107:THR:HA	1.71	0.42
41:JP:247:TYR:HD1	41:JP:254:PRO:HA	1.84	0.42
41:JP:362:TYR:OH	41:JP:383:SER:OG	2.37	0.42
44:DA:127:VAL:HG21	44:DA:176:VAL:HG21	2.01	0.42
50:DJ:127:VAL:HG13	50:DJ:131:GLN:HE21	1.85	0.42
62:D3:153:G:H2'	62:D3:154:G:H8	1.84	0.42
62:D3:1167:G:O6	62:D3:1579:U:O4	2.37	0.42
62:D3:1602:C:H2'	62:D3:1603:U:C6	2.54	0.42
62:D3:1717:G:N2	62:D3:1718:G:C4	2.88	0.42
2:UB:459:LEU:HA	2:UB:462:LEU:HG	2.01	0.42
4:UD:622:LEU:HB2	4:UD:627:LYS:HE3	2.01	0.42
4:UD:656:ARG:HB2	4:UD:733:PHE:HE1	1.84	0.42
9:UI:477:LYS:O	9:UI:480:LYS:HG3	2.19	0.42
10:UJ:158:PRO:HG2	10:UJ:161:PHE:CD1	2.55	0.42
10:UJ:564:VAL:O	10:UJ:567:LEU:HG	2.19	0.42
10:UJ:1541:ASP:HA	10:UJ:1544:PHE:CE1	2.54	0.42
17:UQ:364:ASN:ND2	17:UQ:410:ASN:OD1	2.52	0.42
20:UT:366:ILE:HD13	20:UT:366:ILE:HA	1.94	0.42
20:UT:1094:PHE:HD2	20:UT:1132:ALA:HB1	1.85	0.42
20:UT:1415:SER:HA	20:UT:1418:VAL:HG12	2.01	0.42
21:UU:463:VAL:HG13	21:UU:477:ILE:HG23	2.00	0.42
24:CB:169:LYS:HA	24:CB:193:VAL:O	2.19	0.42
24:CB:194:VAL:HG13	24:CB:217:ILE:HA	2.01	0.42
28:CH:71:LEU:HD23	28:CH:74:LEU:HD12	2.02	0.42
30:CJ:182:GLN:HE22	30:CJ:235:GLN:HG2	1.85	0.42
33:CM:300:TYR:HD1	33:CM:303:ILE:HD11	1.85	0.42
34:CN:138:TRP:CD1	34:CN:142:LYS:HD2	2.55	0.42
43:JJ:134:THR:OG1	43:JJ:136:SER:OG	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DH:48:GLU:HA	48:DH:57:ALA:O	2.20	0.42
52:DN:61:THR:HB	62:D3:959:U:C6	2.54	0.42
54:DQ:72:GLY:O	62:D3:1482:C:O2'	2.35	0.42
4:UD:561:LYS:HD2	4:UD:561:LYS:HA	1.92	0.42
4:UD:568:ASN:HD21	4:UD:586:THR:HB	1.84	0.42
6:UF:130:HIS:O	6:UF:134:ASN:ND2	2.52	0.42
10:UJ:364:ASN:OD1	10:UJ:364:ASN:N	2.51	0.42
10:UJ:759:ILE:O	10:UJ:763:LEU:HB2	2.20	0.42
10:UJ:789:VAL:HA	10:UJ:792:LEU:HG	2.00	0.42
11:UK:69:SER:O	11:UK:69:SER:OG	2.33	0.42
12:UL:41:LEU:HB3	12:UL:54:ILE:HD11	2.02	0.42
12:UL:541:PRO:HD2	12:UL:581:ILE:HD11	2.02	0.42
12:UL:549:SER:HB2	12:UL:576:VAL:HB	2.02	0.42
17:UQ:311:TYR:HA	17:UQ:324:TRP:O	2.19	0.42
17:UQ:368:ASP:HB3	17:UQ:389:LEU:HD22	2.01	0.42
17:UQ:768:TRP:CZ3	17:UQ:770:TYR:HA	2.54	0.42
19:US:362:MET:HG3	19:US:401:PHE:CZ	2.55	0.42
19:US:401:PHE:HD1	19:US:495:MET:HE1	1.85	0.42
20:UT:1026:LEU:HD23	20:UT:1026:LEU:HA	1.81	0.42
20:UT:1082:ILE:HA	20:UT:1085:VAL:HG22	2.01	0.42
22:UV:811:GLN:NE2	22:UV:823:SER:OG	2.49	0.42
22:UV:841:ASN:HA	22:UV:850:PHE:O	2.20	0.42
22:UV:1093:LEU:HD11	22:UV:1181:VAL:HG21	2.01	0.42
24:CB:165:ALA:HB3	24:CB:168:LYS:HG3	2.02	0.42
29:CI:149:LEU:HD11	31:CK:451:LEU:HD13	2.01	0.42
32:CL:967:LYS:HZ2	32:CL:1002:ILE:HD11	1.85	0.42
34:CN:16:VAL:N	34:CN:37:MET:O	2.48	0.42
35:JD:876:LEU:O	35:JD:880:ILE:HG13	2.20	0.42
35:JD:933:ALA:HA	35:JD:1038:ILE:HG12	2.02	0.42
41:JP:351:VAL:HA	41:JP:367:SER:HA	2.02	0.42
46:DF:58:LEU:HD12	46:DF:58:LEU:HA	1.90	0.42
49:DI:84:HIS:HD2	49:DI:87:ASN:H	1.67	0.42
49:DI:100:ALA:HB3	49:DI:169:ILE:HD12	2.02	0.42
49:DI:195:ARG:HA	49:DI:195:ARG:HD3	1.82	0.42
62:D3:706:A:H2'	62:D3:707:A:C8	2.54	0.42
2:UB:443:LYS:HB3	2:UB:447:SER:OG	2.20	0.42
4:UD:372:MET:HA	4:UD:373:PRO:HD3	1.83	0.42
7:UG:55:LYS:HE2	7:UG:55:LYS:HB2	1.89	0.42
10:UJ:158:PRO:HG2	10:UJ:161:PHE:HD1	1.84	0.42
12:UL:665:VAL:HG23	12:UL:672:VAL:HG22	2.00	0.42
12:UL:682:ARG:HA	12:UL:682:ARG:HD3	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UO:246:TYR:HB3	15:UO:248:ARG:HH12	1.85	0.42
17:UQ:878:ASN:HB3	17:UQ:890:ARG:HH12	1.85	0.42
19:US:220:LEU:O	19:US:224:ASN:ND2	2.53	0.42
20:UT:1185:LEU:HD11	20:UT:1198:PHE:HB3	2.02	0.42
20:UT:1504:GLY:O	20:UT:1508:GLN:HG2	2.20	0.42
20:UT:1539:ASN:OD1	20:UT:1539:ASN:N	2.53	0.42
21:UU:115:ASP:OD1	21:UU:115:ASP:N	2.40	0.42
21:UU:734:LEU:HD23	21:UU:734:LEU:HA	1.87	0.42
22:UV:669:TRP:CZ2	22:UV:681:ILE:HG12	2.54	0.42
22:UV:917:LYS:HE3	22:UV:917:LYS:HB2	1.76	0.42
27:CG:50:GLU:N	27:CG:102:ILE:O	2.48	0.42
32:CL:107:VAL:HG12	32:CL:354:ILE:HG22	2.02	0.42
33:CM:196:TYR:HA	33:CM:228:ASP:O	2.19	0.42
35:JD:461:ARG:HH12	35:JD:771:PRO:HD3	1.84	0.42
48:DH:9:LEU:HD12	48:DH:10:SER:H	1.85	0.42
54:DQ:54:LEU:HD11	54:DQ:112:TYR:CD2	2.54	0.42
62:D3:176:C:H2'	62:D3:177:U:O4'	2.19	0.42
62:D3:1018:U:H2'	62:D3:1019:A:H8	1.85	0.42
62:D3:1152:A:H2'	62:D3:1153:G:C8	2.55	0.42
63:D4:77:U:H2'	63:D4:78:G:C8	2.55	0.42
7:UG:118:TYR:CZ	7:UG:384:VAL:HG12	2.55	0.42
10:UJ:712:ASN:OD1	10:UJ:712:ASN:N	2.52	0.42
10:UJ:1651:LEU:HD23	10:UJ:1651:LEU:HA	1.90	0.42
12:UL:582:SER:OG	12:UL:584:ASP:OD1	2.27	0.42
13:UM:620:LEU:HD12	13:UM:620:LEU:HA	1.89	0.42
13:UM:743:CYS:SG	13:UM:759:THR:OG1	2.73	0.42
14:UN:773:LYS:HA	14:UN:773:LYS:HD3	1.80	0.42
18:UR:170:LYS:HA	18:UR:170:LYS:HD3	1.83	0.42
19:US:479:THR:HA	19:US:482:LYS:HG2	2.01	0.42
20:UT:183:HIS:O	20:UT:227:ASN:ND2	2.53	0.42
20:UT:247:LEU:HD11	20:UT:294:VAL:HG21	2.01	0.42
20:UT:730:ASP:OD1	20:UT:730:ASP:N	2.51	0.42
20:UT:1265:TYR:O	20:UT:1269:SER:HB3	2.20	0.42
22:UV:199:ASN:OD1	22:UV:199:ASN:N	2.53	0.42
24:CB:144:TRP:CZ2	24:CB:183:HIS:HB3	2.55	0.42
28:CH:196:LEU:HD22	28:CH:253:THR:HG21	2.02	0.42
34:CN:80:THR:HB	34:CN:136:ASN:HB3	2.01	0.42
34:CN:228:LYS:HA	34:CN:228:LYS:HD3	1.85	0.42
36:JG:167:ILE:H	36:JG:167:ILE:HD12	1.85	0.42
39:JL:55:ARG:HG2	39:JL:57:SER:H	1.84	0.42
39:JL:277:VAL:O	39:JL:281:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DE:136:VAL:HG21	45:DE:148:ARG:HH21	1.84	0.42
45:DE:222:LEU:HD12	45:DE:222:LEU:HA	1.91	0.42
58:DX:132:LEU:HD23	58:DX:132:LEU:HA	1.86	0.42
62:D3:16:G:H2'	62:D3:17:C:C6	2.55	0.42
62:D3:271:A:C2	62:D3:285:G:C2	3.08	0.42
62:D3:381:C:O2'	62:D3:755:A:N1	2.49	0.42
1:UA:269:HIS:ND1	1:UA:272:THR:HG22	2.35	0.42
2:UB:85:GLY:O	2:UB:89:GLN:HG2	2.20	0.42
4:UD:309:GLN:HE21	4:UD:318:ASN:HA	1.85	0.42
7:UG:284:ARG:HE	7:UG:326:ASP:HB3	1.85	0.42
7:UG:341:TRP:CD1	7:UG:367:PRO:HA	2.55	0.42
8:UH:564:ASN:ND2	8:UH:598:GLU:OE1	2.52	0.42
8:UH:601:LYS:HE3	8:UH:601:LYS:HB3	1.94	0.42
10:UJ:717:GLU:HA	10:UJ:720:LEU:HG	2.02	0.42
10:UJ:1380:LEU:HD22	10:UJ:1403:LEU:HD22	2.01	0.42
12:UL:80:ALA:HB1	12:UL:99:ALA:H	1.84	0.42
12:UL:658:SER:HB3	12:UL:677:HIS:HB3	2.01	0.42
13:UM:698:LEU:HD23	13:UM:698:LEU:HA	1.91	0.42
17:UQ:529:LEU:HD21	17:UQ:531:PHE:CZ	2.55	0.42
20:UT:307:ASP:OD1	20:UT:346:GLN:NE2	2.53	0.42
22:UV:117:LYS:HD3	22:UV:120:HIS:CE1	2.55	0.42
22:UV:652:LYS:HA	22:UV:652:LYS:HD2	1.76	0.42
24:CA:81:ARG:HD3	40:JM:164:MET:HG3	2.02	0.42
25:CD:250:ARG:O	25:CD:254:ASN:ND2	2.53	0.42
25:CD:267:ASP:OD2	26:CE:275:TYR:OH	2.26	0.42
31:CK:490:LEU:HD23	31:CK:490:LEU:HA	1.91	0.42
32:CL:309:PRO:HG2	32:CL:314:GLN:HE21	1.85	0.42
33:CM:148:GLU:H	33:CM:172:SER:HG	1.62	0.42
35:JD:437:ASP:HA	35:JD:438:SER:HA	1.86	0.42
36:JF:104:ILE:HD12	36:JF:104:ILE:H	1.83	0.42
44:DA:143:THR:O	44:DA:154:SER:OG	2.38	0.42
44:DA:143:THR:HG21	44:DA:156:ALA:HB2	2.01	0.42
62:D3:1707:A:O2'	62:D3:1708:U:H5'	2.19	0.42
63:D4:168:C:H2'	63:D4:169:A:C8	2.54	0.42
1:UA:306:ASN:HD22	1:UA:322:SER:H	1.67	0.41
1:UA:843:LYS:HE3	1:UA:847:ARG:HE	1.85	0.41
2:UB:662:LEU:HA	2:UB:665:GLN:HB2	2.01	0.41
3:UC:433:ARG:O	36:JF:211:ARG:NH1	2.51	0.41
4:UD:545:ARG:HB2	4:UD:549:VAL:HG23	2.01	0.41
11:UK:113:ILE:HD11	63:D4:323:G:C8	2.55	0.41
12:UL:216:LEU:HD12	12:UL:228:ILE:HG23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:UO:257:CYS:SG	15:UO:258:LEU:N	2.93	0.41
20:UT:892:LEU:HD23	20:UT:892:LEU:HA	1.75	0.41
20:UT:1178:CYS:SG	20:UT:1179:LEU:N	2.93	0.41
20:UT:1271:LEU:HA	20:UT:1274:THR:HG22	2.02	0.41
20:UT:1918:LEU:HD23	20:UT:1918:LEU:HA	1.85	0.41
21:UU:309:ILE:HG12	21:UU:323:VAL:HG23	2.00	0.41
21:UU:459:ASP:N	21:UU:459:ASP:OD1	2.53	0.41
22:UV:831:ILE:HD12	22:UV:831:ILE:HA	1.84	0.41
23:UX:109:LEU:HB3	23:UX:113:TYR:HD2	1.84	0.41
24:CB:244:VAL:O	24:CB:249:GLN:NE2	2.53	0.41
25:CD:197:GLU:HB3	26:CE:165:GLN:HE22	1.85	0.41
26:CE:229:GLU:HA	26:CE:232:GLU:HG2	2.02	0.41
30:CJ:99:ARG:HH11	62:D3:1464:G:H4'	1.85	0.41
32:CL:92:ARG:HH21	32:CL:221:LEU:HD13	1.85	0.41
32:CL:172:THR:HB	32:CL:173:HIS:HD2	1.85	0.41
52:DN:53:LEU:HD23	52:DN:53:LEU:HA	1.85	0.41
57:DW:52:TYR:CE1	57:DW:59:GLY:HA3	2.55	0.41
62:D3:922:G:H2'	62:D3:923:A:C8	2.55	0.41
62:D3:1110:G:H2'	62:D3:1111:G:C8	2.55	0.41
62:D3:1650:U:H2'	62:D3:1651:A:C8	2.54	0.41
62:D3:1787:C:H2'	62:D3:1788:G:H8	1.84	0.41
1:UA:480:SER:OG	1:UA:523:MET:SD	2.77	0.41
1:UA:505:ARG:NH1	62:D3:1617:U:OP2	2.53	0.41
2:UB:617:HIS:CE1	2:UB:618:THR:HG23	2.54	0.41
6:UF:360:LEU:HA	6:UF:363:VAL:HG22	2.02	0.41
9:UI:504:GLU:OE1	9:UI:507:ARG:NH1	2.53	0.41
10:UJ:563:LEU:HD11	10:UJ:600:LEU:HB2	2.01	0.41
10:UJ:720:LEU:HA	10:UJ:723:LEU:HD23	2.01	0.41
10:UJ:1545:ARG:HA	10:UJ:1593:TYR:HE1	1.85	0.41
12:UL:912:TRP:CD2	13:UM:779:VAL:HG21	2.55	0.41
17:UQ:895:LEU:HA	17:UQ:895:LEU:HD23	1.81	0.41
20:UT:431:LYS:HZ2	20:UT:750:TYR:HB3	1.85	0.41
20:UT:2438:LEU:HD23	20:UT:2438:LEU:HA	1.88	0.41
21:UU:232:MET:HE1	21:UU:256:PHE:HZ	1.84	0.41
22:UV:216:LYS:HD2	22:UV:216:LYS:HA	1.89	0.41
22:UV:345:TYR:O	22:UV:349:LEU:HG	2.19	0.41
22:UV:467:LEU:HD23	22:UV:476:ILE:HD11	2.02	0.41
25:CD:94:LYS:HD2	25:CD:94:LYS:HA	1.82	0.41
30:CJ:128:VAL:HG21	30:CJ:267:GLU:HB3	2.02	0.41
30:CJ:143:HIS:HB2	30:CJ:151:SER:HB3	2.02	0.41
31:CK:516:SER:HB2	31:CK:519:GLU:HG3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CL:772:MET:O	32:CL:776:GLN:HB2	2.20	0.41
35:JD:522:ASN:HB3	35:JD:525:THR:HG23	2.02	0.41
36:JG:177:LYS:HD2	36:JG:221:VAL:HA	2.02	0.41
41:JP:283:ASP:OD1	41:JP:283:ASP:N	2.44	0.41
44:DA:7:LYS:HD2	44:DA:7:LYS:HA	1.82	0.41
62:D3:155:U:O2'	62:D3:156:A:OP1	2.35	0.41
63:D4:167:C:H2'	63:D4:168:C:C6	2.55	0.41
1:UA:518:VAL:HA	1:UA:534:THR:HA	2.03	0.41
4:UD:279:HIS:NE2	4:UD:299:GLY:HA3	2.35	0.41
5:UE:259:PRO:O	5:UE:273:LYS:NZ	2.48	0.41
5:UE:369:PHE:HB3	5:UE:372:VAL:HG21	2.02	0.41
10:UJ:136:LEU:HD23	10:UJ:136:LEU:HA	1.84	0.41
10:UJ:568:ILE:HD11	10:UJ:622:TRP:HH2	1.84	0.41
11:UK:167:THR:HG22	11:UK:169:ASP:H	1.85	0.41
12:UL:15:GLY:HA2	12:UL:389:GLY:HA2	2.02	0.41
12:UL:597:ILE:HD11	12:UL:618:ILE:HG21	2.02	0.41
12:UL:882:ARG:O	12:UL:886:GLU:HG2	2.21	0.41
17:UQ:156:THR:HG23	17:UQ:169:GLN:HB3	2.02	0.41
19:US:185:TYR:CE1	19:US:192:GLN:HG2	2.56	0.41
19:US:236:LEU:HD23	19:US:236:LEU:HA	1.89	0.41
20:UT:17:SER:O	20:UT:17:SER:OG	2.38	0.41
20:UT:926:LEU:HD23	20:UT:926:LEU:HA	1.81	0.41
20:UT:1113:ALA:HB3	20:UT:1153:ALA:HB1	2.03	0.41
20:UT:1961:LYS:HB2	20:UT:1998:LEU:HD21	2.02	0.41
20:UT:2388:TYR:CE2	20:UT:2437:VAL:HG11	2.55	0.41
22:UV:270:ILE:HB	22:UV:292:ILE:HB	2.02	0.41
22:UV:1151:LYS:O	22:UV:1155:LEU:HG	2.21	0.41
22:UV:1217:GLU:HG2	34:CN:33:SER:HB2	2.02	0.41
25:CD:96:ILE:HG23	25:CD:116:VAL:HG23	2.02	0.41
30:CJ:93:SER:HB3	30:CJ:142:LEU:O	2.20	0.41
32:CL:86:ILE:HD12	32:CL:119:GLU:HB2	2.02	0.41
34:CN:180:LEU:O	34:CN:184:ILE:HG12	2.20	0.41
35:JD:523:ILE:O	35:JD:527:ILE:HG12	2.19	0.41
35:JD:826:SER:HB2	35:JD:829:VAL:HG23	2.03	0.41
39:JL:49:VAL:HG22	39:JL:74:ILE:HD11	2.02	0.41
39:JL:280:LYS:O	39:JL:283:THR:OG1	2.29	0.41
41:JP:326:ASP:OD1	41:JP:327:LYS:N	2.53	0.41
51:DL:22:ASN:HB3	51:DL:25:VAL:HB	2.00	0.41
54:DQ:30:LYS:HB3	54:DQ:30:LYS:HE2	1.68	0.41
62:D3:882:U:H2'	62:D3:883:C:C6	2.56	0.41
62:D3:1698:G:C2	62:D3:1704:U:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:D3:1775:U:H2'	62:D3:1776:A:C8	2.55	0.41
1:UA:323:LYS:HD3	1:UA:323:LYS:HA	1.90	0.41
4:UD:310:ASN:OD1	4:UD:310:ASN:N	2.53	0.41
5:UE:20:VAL:HB	5:UE:29:VAL:HG12	2.01	0.41
5:UE:548:ASP:HA	5:UE:551:ILE:HB	2.03	0.41
7:UG:546:ILE:HG21	22:UV:809:LYS:HB2	2.03	0.41
8:UH:552:LYS:O	8:UH:556:VAL:HG22	2.19	0.41
9:UI:502:ARG:NH2	15:UO:509:GLN:OE1	2.54	0.41
10:UJ:760:PHE:CG	10:UJ:795:LEU:HD11	2.55	0.41
17:UQ:581:GLY:HA2	17:UQ:602:PRO:HD2	2.01	0.41
18:UR:453:VAL:HG12	27:CF:21:LEU:HD13	2.03	0.41
19:US:233:ASP:OD1	19:US:233:ASP:N	2.50	0.41
20:UT:1542:LYS:HA	20:UT:1545:VAL:HG12	2.01	0.41
20:UT:2166:LYS:O	20:UT:2169:LEU:HG	2.21	0.41
21:UU:495:ARG:HD3	21:UU:495:ARG:HA	1.66	0.41
28:CH:535:GLU:H	28:CH:570:GLN:HE21	1.68	0.41
35:JD:524:ASN:O	35:JD:528:LEU:HG	2.21	0.41
35:JD:535:CYS:HA	35:JD:538:LEU:HG	2.02	0.41
41:JP:288:TYR:O	41:JP:298:LEU:N	2.52	0.41
45:DE:23:LEU:HD23	45:DE:23:LEU:HA	1.90	0.41
49:DI:10:LYS:HD2	62:D3:338:C:H5''	2.01	0.41
62:D3:129:U:C2	62:D3:182:A:C6	3.08	0.41
62:D3:826:U:O2	62:D3:846:G:C5	2.73	0.41
63:D4:41:C:H2'	63:D4:42:U:C6	2.55	0.41
1:UA:90:LEU:HD23	1:UA:90:LEU:HA	1.93	0.41
1:UA:170:ALA:O	1:UA:187:PHE:HB2	2.20	0.41
1:UA:186:THR:OG1	1:UA:187:PHE:N	2.54	0.41
1:UA:361:VAL:HG12	1:UA:371:VAL:HG13	2.01	0.41
1:UA:470:SER:OG	30:CJ:133:LYS:O	2.38	0.41
4:UD:117:ILE:HD11	4:UD:147:ILE:HD12	2.02	0.41
6:UF:281:LEU:HA	6:UF:281:LEU:HD23	1.84	0.41
7:UG:177:TYR:CD1	7:UG:183:GLU:HA	2.56	0.41
9:UI:458:TRP:HA	9:UI:461:THR:HG22	2.02	0.41
10:UJ:536:PRO:HD2	10:UJ:539:LEU:HD13	2.02	0.41
10:UJ:1358:CYS:HA	10:UJ:1361:VAL:HG12	2.03	0.41
12:UL:563:MET:N	12:UL:563:MET:SD	2.93	0.41
13:UM:461:LEU:HD23	13:UM:488:HIS:CE1	2.55	0.41
17:UQ:204:ASN:HD21	17:UQ:266:ASN:HB3	1.85	0.41
19:US:428:THR:O	19:US:432:VAL:HG23	2.20	0.41
20:UT:710:ASN:OD1	20:UT:711:GLN:N	2.54	0.41
20:UT:914:LYS:O	20:UT:918:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:UT:1511:ILE:HG21	20:UT:1547:LEU:HD11	2.03	0.41
20:UT:2282:HIS:HE2	20:UT:2301:LEU:HD21	1.84	0.41
22:UV:773:TYR:HA	22:UV:778:PHE:CG	2.55	0.41
26:CE:211:THR:HG21	26:CE:226:ILE:HD11	2.02	0.41
26:CE:320:LEU:HD12	26:CE:320:LEU:HA	1.90	0.41
28:CH:437:ARG:HA	28:CH:437:ARG:HD3	1.84	0.41
31:CK:459:LYS:HA	31:CK:460:PRO:HD3	1.95	0.41
35:JD:572:THR:HG22	35:JD:575:PRO:HG2	2.02	0.41
35:JD:637:LYS:O	35:JD:641:LYS:HG3	2.20	0.41
36:JF:107:ALA:HB1	36:JF:109:LYS:HE2	2.03	0.41
36:JF:243:HIS:CD2	36:JG:243:HIS:HD2	2.36	0.41
54:DQ:99:GLU:OE2	54:DQ:99:GLU:N	2.53	0.41
62:D3:151:G:N1	62:D3:164:A:C6	2.88	0.41
62:D3:686:C:H2'	62:D3:687:G:C8	2.55	0.41
63:D4:98:U:H2'	63:D4:99:U:C6	2.56	0.41
63:D4:330:A:H2'	63:D4:331:A:C8	2.55	0.41
1:UA:30:LEU:HD11	1:UA:63:LEU:HD22	2.03	0.41
5:UE:481:LEU:HD23	5:UE:481:LEU:HA	1.85	0.41
7:UG:213:TRP:HE1	7:UG:227:GLU:HG3	1.85	0.41
8:UH:642:LEU:HD23	15:UO:510:LEU:HD13	2.01	0.41
12:UL:260:GLU:HB3	12:UL:273:TYR:CE2	2.55	0.41
12:UL:814:MET:O	12:UL:817:LEU:N	2.53	0.41
13:UM:364:ILE:HD13	13:UM:364:ILE:HA	1.90	0.41
18:UR:24:LYS:HG3	18:UR:29:ASP:HB3	2.02	0.41
19:US:179:GLU:O	19:US:183:LYS:HG2	2.21	0.41
19:US:436:LYS:O	19:US:440:GLU:HG2	2.20	0.41
20:UT:326:SER:HG	20:UT:328:ARG:HE	1.65	0.41
20:UT:1239:ASP:O	20:UT:1243:ILE:HG13	2.20	0.41
20:UT:1467:LYS:HA	20:UT:1467:LYS:HD3	1.84	0.41
20:UT:1523:TYR:OH	20:UT:1551:LEU:O	2.25	0.41
20:UT:2202:GLN:HA	20:UT:2205:LEU:HD12	2.03	0.41
21:UU:909:LEU:HD23	21:UU:909:LEU:HA	1.90	0.41
22:UV:243:LEU:HD21	22:UV:249:ASP:HB3	2.02	0.41
22:UV:822:ARG:HB2	22:UV:843:LEU:HD12	2.01	0.41
24:CA:253:ILE:HG21	24:CA:269:ILE:HD11	2.01	0.41
24:CB:253:ILE:HG13	24:CB:269:ILE:HD12	2.02	0.41
24:CB:280:VAL:HG22	24:CB:281:ASP:H	1.86	0.41
30:CJ:156:HIS:HB3	30:CJ:160:GLY:HA3	2.02	0.41
32:CL:215:TYR:HB2	32:CL:220:ILE:HD11	2.02	0.41
35:JD:532:LEU:HA	35:JD:535:CYS:SG	2.60	0.41
35:JD:861:ASN:HD22	35:JD:864:ASN:HB2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:JD:1188:LEU:HD23	35:JD:1188:LEU:HA	1.89	0.41
36:JF:148:LEU:HD12	36:JF:162:VAL:HB	2.02	0.41
36:JG:227:LEU:HD21	36:JG:240:LYS:HB3	2.01	0.41
39:JL:193:LYS:N	39:JL:203:GLU:OE2	2.53	0.41
41:JP:460:GLN:H	41:JP:460:GLN:HG3	1.54	0.41
62:D3:472:U:O2'	62:D3:769:A:N3	2.40	0.41
62:D3:619:A:O2'	62:D3:1110:G:O4'	2.38	0.41
62:D3:754:A:C2	62:D3:793:A:H5''	2.56	0.41
62:D3:1004:U:H3'	62:D3:1005:A:H8	1.85	0.41
62:D3:1748:G:H2'	62:D3:1749:A:C8	2.56	0.41
1:UA:802:LEU:HD23	1:UA:802:LEU:HA	1.90	0.41
4:UD:271:THR:HG21	18:UR:443:VAL:HG21	2.02	0.41
5:UE:137:LEU:HD12	5:UE:137:LEU:HA	1.90	0.41
5:UE:522:THR:HG23	5:UE:523:LEU:HD22	2.03	0.41
5:UE:546:ARG:HG2	8:UH:681:THR:HG22	2.03	0.41
7:UG:67:LEU:HD23	7:UG:67:LEU:HA	1.92	0.41
7:UG:148:LEU:HD23	7:UG:148:LEU:HA	1.81	0.41
7:UG:310:HIS:CE1	7:UG:353:PRO:HD2	2.56	0.41
10:UJ:801:ILE:O	10:UJ:805:ILE:HG12	2.21	0.41
10:UJ:1403:LEU:HD23	10:UJ:1407:LEU:HD23	2.03	0.41
12:UL:456:LEU:HD21	12:UL:466:ASP:HB3	2.03	0.41
13:UM:407:SER:OG	13:UM:409:ASP:N	2.50	0.41
17:UQ:330:SER:OG	17:UQ:331:GLN:N	2.53	0.41
17:UQ:379:LEU:HD23	17:UQ:379:LEU:HA	1.85	0.41
18:UR:395:LEU:HD23	18:UR:395:LEU:HA	1.91	0.41
20:UT:878:ASN:OD1	20:UT:878:ASN:N	2.54	0.41
20:UT:883:LYS:HB2	20:UT:883:LYS:HE3	1.86	0.41
20:UT:1388:SER:HA	20:UT:1391:ILE:HB	2.03	0.41
20:UT:1963:LEU:HD12	20:UT:1963:LEU:HA	1.89	0.41
20:UT:2163:ARG:O	20:UT:2167:VAL:HG23	2.20	0.41
21:UU:585:SER:O	21:UU:585:SER:OG	2.39	0.41
22:UV:629:THR:OG1	22:UV:669:TRP:NE1	2.44	0.41
24:CA:80:ALA:O	24:CA:121:LYS:NZ	2.48	0.41
24:CA:262:LYS:HE3	24:CA:262:LYS:HB2	1.84	0.41
24:CA:322:ARG:HA	24:CA:322:ARG:HD2	1.87	0.41
25:CD:247:ILE:HD13	25:CD:247:ILE:HA	1.96	0.41
35:JD:497:LEU:O	35:JD:500:GLU:HG3	2.20	0.41
35:JD:514:ILE:HG13	35:JD:556:ILE:HB	2.01	0.41
35:JD:739:PRO:O	35:JD:742:GLU:HG2	2.21	0.41
39:JL:279:GLU:O	39:JL:283:THR:HG23	2.21	0.41
51:DL:121:ASP:HB2	51:DL:143:SER:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DN:6:SER:OG	52:DN:7:ALA:N	2.53	0.41
54:DQ:26:LYS:HA	54:DQ:26:LYS:HD3	1.84	0.41
62:D3:17:C:H2'	62:D3:18:C:C6	2.56	0.41
62:D3:1050:G:H2'	62:D3:1051:G:C8	2.54	0.41
62:D3:1714:A:H2'	62:D3:1715:G:H8	1.84	0.41
1:UA:476:VAL:HA	1:UA:492:SER:HB2	2.02	0.41
1:UA:775:LEU:HA	1:UA:775:LEU:HD23	1.90	0.41
2:UB:613:ILE:HG22	2:UB:638:ASN:HA	2.02	0.41
4:UD:213:TRP:CD1	4:UD:225:LEU:HB3	2.56	0.41
10:UJ:526:LEU:O	10:UJ:530:THR:HG23	2.19	0.41
10:UJ:564:VAL:O	10:UJ:568:ILE:HG12	2.21	0.41
10:UJ:1687:LEU:HD23	10:UJ:1687:LEU:HA	1.95	0.41
11:UK:229:SER:O	11:UK:229:SER:OG	2.36	0.41
12:UL:481:LEU:HD11	12:UL:485:GLY:HA2	2.03	0.41
12:UL:866:LYS:HB3	12:UL:866:LYS:HE2	1.75	0.41
13:UM:105:SER:HA	13:UM:121:GLY:HA2	2.02	0.41
13:UM:343:MET:O	13:UM:344:ARG:NE	2.51	0.41
13:UM:667:GLN:O	13:UM:671:ASN:ND2	2.53	0.41
14:UN:800:LYS:HE3	14:UN:800:LYS:HB2	1.91	0.41
17:UQ:174:TYR:CD1	17:UQ:189:HIS:HA	2.55	0.41
17:UQ:582:LEU:HD21	17:UQ:624:HIS:CD2	2.56	0.41
17:UQ:589:SER:OG	17:UQ:590:HIS:N	2.53	0.41
17:UQ:850:GLU:HA	17:UQ:853:ILE:HD12	2.02	0.41
17:UQ:878:ASN:HB3	17:UQ:890:ARG:NH1	2.35	0.41
18:UR:356:GLU:HG3	18:UR:357:ASN:HD22	1.84	0.41
18:UR:581:ASN:HD21	18:UR:585:LYS:HB2	1.86	0.41
19:US:378:SER:OG	19:US:453:PRO:O	2.38	0.41
20:UT:1757:LEU:HD22	20:UT:1769:LEU:HD21	2.03	0.41
20:UT:2294:ALA:HB1	20:UT:2359:ALA:HB2	2.03	0.41
22:UV:437:ASP:OD1	22:UV:437:ASP:N	2.53	0.41
22:UV:630:LYS:NZ	22:UV:664:THR:OG1	2.38	0.41
26:CE:285:PRO:O	26:CE:288:THR:OG1	2.29	0.41
28:CH:187:ALA:O	28:CH:198:LYS:HA	2.20	0.41
28:CH:408:VAL:HG23	28:CH:480:ALA:HB1	2.01	0.41
28:CH:485:ASN:OD1	28:CH:485:ASN:N	2.53	0.41
35:JD:22:GLU:OE1	35:JD:25:ARG:NH1	2.54	0.41
35:JD:101:ILE:O	35:JD:105:LEU:HG	2.20	0.41
35:JD:763:VAL:O	35:JD:767:SER:OG	2.27	0.41
36:JG:178:VAL:HG12	36:JG:223:GLU:HG3	2.03	0.41
41:JP:357:SER:OG	41:JP:358:MET:N	2.54	0.41
44:DA:202:LYS:HE3	44:DA:202:LYS:HB2	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DF:27:THR:HG23	54:DQ:28:LEU:HB2	2.02	0.41
50:DJ:40:LYS:HE3	50:DJ:40:LYS:HB2	1.85	0.41
55:DS:27:LYS:HA	55:DS:27:LYS:HD2	1.83	0.41
62:D3:229:U:H2'	62:D3:230:C:C6	2.55	0.41
63:D4:67:G:H2'	63:D4:68:A:H8	1.85	0.41
1:UA:410:THR:OG1	1:UA:411:VAL:N	2.54	0.41
4:UD:322:ASN:OD1	4:UD:322:ASN:N	2.53	0.41
4:UD:575:ILE:HG13	4:UD:582:VAL:HG12	2.03	0.41
5:UE:355:ASN:HD22	15:UO:6:PRO:HB3	1.86	0.41
7:UG:83:THR:OG1	7:UG:368:TYR:O	2.29	0.41
7:UG:130:ARG:NH2	7:UG:379:GLU:OE2	2.54	0.41
10:UJ:131:ASN:OD1	10:UJ:131:ASN:N	2.53	0.41
10:UJ:239:LEU:HD23	10:UJ:239:LEU:HA	1.90	0.41
10:UJ:387:LEU:HD12	10:UJ:387:LEU:HA	1.87	0.41
10:UJ:755:ARG:HA	10:UJ:755:ARG:HD2	1.79	0.41
10:UJ:1423:LEU:HA	10:UJ:1426:ILE:HD12	2.01	0.41
12:UL:164:ASP:HB3	12:UL:182:LYS:HB3	2.03	0.41
12:UL:279:LYS:HG2	12:UL:337:LYS:HA	2.02	0.41
12:UL:405:LEU:HD11	12:UL:673:VAL:HG21	2.02	0.41
12:UL:528:LEU:HD23	12:UL:528:LEU:HA	1.85	0.41
13:UM:389:ASP:HB2	13:UM:409:ASP:H	1.86	0.41
13:UM:430:TYR:CE2	13:UM:466:TRP:HB3	2.56	0.41
13:UM:461:LEU:HA	13:UM:461:LEU:HD12	1.74	0.41
15:UO:149:THR:OG1	15:UO:164:LEU:HB3	2.21	0.41
15:UO:291:GLN:HB3	15:UO:293:LYS:HE2	2.03	0.41
16:UP:190:LEU:HD13	16:UP:190:LEU:HA	1.88	0.41
17:UQ:158:LYS:HE2	17:UQ:158:LYS:HB2	1.90	0.41
18:UR:351:THR:O	18:UR:380:ASN:N	2.53	0.41
18:UR:378:GLN:HE21	18:UR:407:PHE:HE1	1.67	0.41
18:UR:434:GLU:O	18:UR:444:ILE:N	2.51	0.41
20:UT:302:PHE:O	20:UT:306:LEU:HB3	2.21	0.41
20:UT:371:VAL:HG23	20:UT:372:LYS:HD2	2.02	0.41
20:UT:666:LEU:HD23	20:UT:666:LEU:HA	1.90	0.41
20:UT:726:LYS:HE2	20:UT:726:LYS:HB2	1.89	0.41
20:UT:937:PRO:HB2	20:UT:943:ARG:HG2	2.03	0.41
20:UT:1049:LYS:HE3	20:UT:1049:LYS:HB2	1.89	0.41
20:UT:1762:SER:OG	20:UT:1764:THR:OG1	2.35	0.41
20:UT:2176:HIS:HD2	20:UT:2179:GLU:HB3	1.86	0.41
20:UT:2274:GLN:O	20:UT:2278:THR:HG23	2.21	0.41
21:UU:284:ILE:HD13	21:UU:337:VAL:HG11	2.02	0.41
21:UU:385:GLN:HE21	61:D2:292:A:H4'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:UU:511:ASP:OD2	21:UU:516:LYS:NZ	2.38	0.41
22:UV:339:SER:HA	22:UV:342:HIS:CD2	2.56	0.41
22:UV:353:LYS:HG3	22:UV:359:PHE:HB3	2.02	0.41
22:UV:370:LEU:HD21	22:UV:388:PHE:CD2	2.55	0.41
22:UV:486:GLN:HB3	22:UV:580:TYR:CE1	2.56	0.41
22:UV:498:MET:HB2	22:UV:506:GLN:HG3	2.03	0.41
22:UV:911:PRO:HB2	22:UV:954:LEU:HD13	2.03	0.41
22:UV:921:ASP:OD2	22:UV:1172:ASN:ND2	2.54	0.41
22:UV:1189:LEU:HD12	38:JI:1471:ASN:H	1.86	0.41
23:UX:133:LYS:HE3	63:D4:32:G:H5'	2.03	0.41
24:CA:125:VAL:HG12	40:JM:150:GLY:HA3	2.03	0.41
25:CD:147:LEU:HD23	25:CD:147:LEU:HA	1.83	0.41
25:CD:322:LEU:HD12	25:CD:322:LEU:HA	1.81	0.41
28:CH:282:GLU:O	28:CH:300:ALA:N	2.50	0.41
28:CH:456:ASP:HB3	28:CH:459:LEU:HB2	2.02	0.41
31:CK:439:GLU:HG3	31:CK:463:THR:HG21	2.03	0.41
32:CL:69:PRO:HB3	32:CL:114:ARG:HG3	2.02	0.41
32:CL:300:GLN:HB3	32:CL:792:VAL:HG22	2.02	0.41
32:CL:1019:THR:HB	32:CL:1022:LEU:HB2	2.02	0.41
34:CN:16:VAL:HB	34:CN:37:MET:HB2	2.03	0.41
35:JD:513:ILE:HB	35:JD:555:LEU:HD13	2.03	0.41
35:JD:514:ILE:HA	35:JD:556:ILE:O	2.21	0.41
36:JF:73:HIS:HB2	36:JF:76:LEU:HD13	2.03	0.41
36:JF:93:HIS:HD2	36:JF:137:PHE:HD2	1.68	0.41
39:JL:128:ASN:HA	39:JL:154:MET:HG2	2.02	0.41
41:JP:48:THR:HG21	41:JP:410:ILE:HG23	2.03	0.41
43:JJ:180:LEU:HD23	43:JJ:180:LEU:HA	1.87	0.41
49:DI:56:ARG:NH2	62:D3:332:U:OP1	2.36	0.41
50:DJ:60:LEU:HD13	50:DJ:60:LEU:HA	1.89	0.41
52:DN:5:HIS:CD2	52:DN:121:ARG:HG3	2.56	0.41
55:DS:39:GLY:N	62:D3:1566:U:H5''	2.35	0.41
61:D2:15:G:H2'	61:D2:16:A:H8	1.85	0.41
61:D2:465:G:H2'	61:D2:466:A:C8	2.56	0.41
62:D3:629:U:C2	62:D3:970:A:C6	2.98	0.41
62:D3:1068:C:H2'	62:D3:1069:A:C8	2.55	0.41
62:D3:1564:U:H2'	62:D3:1565:C:C6	2.55	0.41
62:D3:1701:A:H2'	62:D3:1702:A:C4	2.56	0.41
62:D3:1733:C:H2'	62:D3:1734:U:C6	2.56	0.41
63:D4:62:C:H2'	63:D4:63:C:C6	2.56	0.41
63:D4:65:C:H2'	63:D4:66:U:C6	2.55	0.41
1:UA:423:ARG:NH1	62:D3:1632:C:O2'	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:565:ARG:HB2	10:UJ:635:TYR:HB2	2.02	0.41
7:UG:112:GLY:HA3	7:UG:130:ARG:HB3	2.02	0.41
8:UH:647:LEU:O	9:UI:509:GLN:NE2	2.54	0.41
10:UJ:189:LEU:HD23	10:UJ:189:LEU:HA	1.80	0.41
10:UJ:581:GLY:O	10:UJ:585:ILE:HG12	2.20	0.41
11:UK:24:ARG:H	11:UK:24:ARG:HG3	1.65	0.41
12:UL:406:LEU:HD13	12:UL:445:VAL:HG12	2.03	0.41
12:UL:478:SER:OG	12:UL:535:LEU:O	2.36	0.41
15:UO:60:SER:HA	15:UO:83:VAL:HG23	2.02	0.41
17:UQ:587:PHE:HB2	17:UQ:594:TRP:CE2	2.55	0.41
20:UT:958:LYS:HD2	20:UT:1016:PRO:HB3	2.03	0.41
20:UT:1312:SER:HA	20:UT:1315:ARG:HE	1.86	0.41
20:UT:1862:LEU:H	20:UT:1862:LEU:HG	1.72	0.41
20:UT:1972:SER:OG	20:UT:1973:THR:N	2.53	0.41
21:UU:25:SER:OG	21:UU:655:THR:OG1	2.39	0.41
22:UV:332:TYR:O	22:UV:336:VAL:HG22	2.21	0.41
22:UV:519:ASP:OD1	22:UV:519:ASP:N	2.53	0.41
22:UV:851:LYS:HB3	22:UV:851:LYS:HE2	1.85	0.41
24:CB:171:LEU:HB2	24:CB:237:VAL:HG21	2.03	0.41
24:CB:199:PHE:HB2	24:CB:223:ASP:HA	2.03	0.41
25:CD:178:ILE:HD13	25:CD:178:ILE:HA	1.82	0.41
26:CE:191:HIS:ND1	26:CE:247:ILE:HG13	2.37	0.41
28:CH:555:ASN:HD22	28:CH:555:ASN:HA	1.78	0.41
32:CL:231:LYS:HB2	32:CL:231:LYS:HE3	1.95	0.41
32:CL:279:PRO:HB3	32:CL:784:LYS:HA	2.03	0.41
35:JD:589:PRO:O	35:JD:818:PRO:HA	2.21	0.41
35:JD:1174:ALA:O	35:JD:1178:LEU:HG	2.21	0.41
40:JM:75:LYS:HA	40:JM:75:LYS:HD2	1.79	0.41
47:DG:32:ILE:HD11	47:DG:63:MET:HB3	2.03	0.41
49:DI:74:LYS:HA	49:DI:74:LYS:HD3	1.91	0.41
51:DL:53:TYR:CD2	51:DL:113:PRO:HG2	2.56	0.41
55:DS:28:ILE:HD11	55:DS:54:LEU:HA	2.03	0.41
55:DS:65:GLU:O	55:DS:69:ILE:HG13	2.21	0.41
61:D2:20:C:H2'	61:D2:21:A:C8	2.56	0.41
62:D3:996:U:O4	62:D3:1008:G:O6	2.39	0.41
1:UA:207:TYR:HD1	1:UA:217:VAL:HG22	1.84	0.40
1:UA:712:PHE:CE1	21:UU:615:PRO:HG3	2.56	0.40
1:UA:785:PHE:O	1:UA:789:SER:HB2	2.22	0.40
2:UB:661:ILE:HG21	2:UB:688:VAL:HG11	2.03	0.40
5:UE:271:LYS:NZ	21:UU:585:SER:OG	2.49	0.40
5:UE:473:LYS:HE3	5:UE:473:LYS:HB3	1.72	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:104:LEU:HA	10:UJ:104:LEU:HD23	1.80	0.40
10:UJ:656:ASN:HA	10:UJ:659:LEU:HD12	2.03	0.40
10:UJ:705:SER:O	10:UJ:709:ASN:ND2	2.55	0.40
11:UK:248:ARG:NH1	18:UR:514:LEU:O	2.47	0.40
12:UL:345:THR:OG1	12:UL:350:LYS:O	2.26	0.40
12:UL:663:LEU:HD12	12:UL:674:SER:HB3	2.03	0.40
15:UO:179:ALA:HB2	15:UO:223:PRO:HB3	2.03	0.40
15:UO:182:HIS:HB2	15:UO:199:ARG:HG2	2.02	0.40
16:UP:158:LYS:O	16:UP:161:LYS:HG3	2.21	0.40
17:UQ:408:THR:HG21	17:UQ:488:LEU:HB3	2.04	0.40
17:UQ:510:TYR:HE1	17:UQ:527:HIS:HB3	1.86	0.40
20:UT:972:LEU:HB3	20:UT:973:ASP:H	1.79	0.40
20:UT:1341:GLU:HA	20:UT:1344:TRP:HB2	2.02	0.40
20:UT:1526:LEU:HD12	20:UT:1526:LEU:HA	1.92	0.40
21:UU:119:GLU:O	21:UU:120:HIS:ND1	2.54	0.40
21:UU:392:ARG:HE	21:UU:449:ARG:HH22	1.69	0.40
21:UU:723:LEU:HD22	21:UU:879:GLU:HG2	2.03	0.40
21:UU:853:ASN:HB3	21:UU:855:PHE:CE2	2.57	0.40
22:UV:761:ARG:HB2	22:UV:899:LEU:HD23	2.02	0.40
25:CD:240:LEU:HD23	25:CD:240:LEU:HA	1.87	0.40
26:CE:125:PRO:HA	26:CE:128:LEU:HG	2.03	0.40
28:CH:241:THR:HG21	28:CH:286:LEU:H	1.86	0.40
32:CL:174:LEU:CD1	32:CL:206:TYR:HB3	2.50	0.40
33:CM:309:GLY:O	33:CM:353:THR:HA	2.21	0.40
34:CN:259:ARG:HA	34:CN:262:VAL:HG22	2.03	0.40
35:JD:29:LYS:NZ	62:D3:319:U:OP2	2.54	0.40
35:JD:626:LEU:HB3	35:JD:627:THR:H	1.73	0.40
35:JD:855:LYS:HB3	35:JD:895:ILE:HG22	2.03	0.40
49:DI:48:THR:OG1	49:DI:52:ASN:O	2.25	0.40
51:DL:78:THR:HG23	51:DL:84:ILE:HG22	2.03	0.40
52:DN:69:ASN:HD21	52:DN:73:ARG:HD3	1.86	0.40
52:DN:136:PRO:HG2	52:DN:139:TRP:HB2	2.03	0.40
54:DQ:57:LEU:HD23	54:DQ:57:LEU:HA	1.87	0.40
61:D2:290:G:H2'	61:D2:291:G:C8	2.56	0.40
62:D3:327:U:H2'	62:D3:328:A:H8	1.86	0.40
62:D3:1036:A:H2'	62:D3:1037:C:C6	2.56	0.40
62:D3:1087:A:H2'	62:D3:1088:A:C8	2.56	0.40
63:D4:52:U:H2'	63:D4:53:U:C6	2.56	0.40
1:UA:209:VAL:HG21	1:UA:266:VAL:HG11	2.02	0.40
7:UG:522:LYS:HD2	7:UG:522:LYS:HA	1.92	0.40
10:UJ:558:VAL:HG23	10:UJ:599:PHE:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:1445:ILE:HD11	10:UJ:1484:THR:HA	2.04	0.40
12:UL:17:ILE:HB	12:UL:360:ASN:HB3	2.03	0.40
12:UL:606:ASP:OD1	12:UL:606:ASP:N	2.46	0.40
14:UN:838:LYS:HE3	14:UN:843:GLN:HE22	1.86	0.40
14:UN:878:LEU:HD23	14:UN:878:LEU:HA	1.92	0.40
15:UO:6:PRO:HD2	17:UQ:480:SER:HA	2.03	0.40
15:UO:192:LEU:HA	15:UO:210:ASN:HA	2.02	0.40
15:UO:357:PHE:O	15:UO:360:MET:HG3	2.21	0.40
17:UQ:323:LEU:O	17:UQ:331:GLN:HA	2.21	0.40
19:US:416:LEU:HD23	19:US:416:LEU:HA	1.94	0.40
20:UT:936:PRO:HA	20:UT:937:PRO:HD3	1.95	0.40
21:UU:276:TYR:CE1	21:UU:283:ARG:HG2	2.57	0.40
21:UU:599:TRP:HA	21:UU:612:TRP:O	2.20	0.40
21:UU:813:PHE:CD1	35:JD:1191:SER:HB3	2.56	0.40
22:UV:116:LEU:HA	22:UV:196:TYR:HB2	2.03	0.40
22:UV:245:LYS:HE3	22:UV:245:LYS:HB3	1.89	0.40
24:CA:151:LEU:HD12	24:CA:151:LEU:HA	1.88	0.40
24:CB:107:VAL:HG11	24:CB:141:TYR:HB3	2.01	0.40
26:CE:219:SER:HA	26:CE:236:LYS:HD2	2.03	0.40
30:CJ:74:ASP:O	30:CJ:78:ALA:HB2	2.21	0.40
32:CL:89:LEU:HD12	32:CL:89:LEU:HA	1.91	0.40
32:CL:129:ILE:HA	32:CL:158:ILE:HD12	2.03	0.40
35:JD:494:ASP:O	35:JD:498:LEU:HG	2.21	0.40
35:JD:855:LYS:HD3	35:JD:855:LYS:HA	1.88	0.40
43:JJ:226:LEU:HB2	62:D3:1796:C:H42	1.86	0.40
44:DA:136:ARG:CZ	62:D3:884:A:H5''	2.51	0.40
45:DE:192:ILE:HD13	45:DE:238:LEU:HD22	2.02	0.40
54:DQ:77:GLN:HE22	62:D3:1482:C:H4'	1.87	0.40
62:D3:707:A:H2'	62:D3:708:C:C6	2.56	0.40
62:D3:1582:U:H6	62:D3:1582:U:H2'	1.56	0.40
2:UB:561:ILE:O	2:UB:564:VAL:HG12	2.21	0.40
2:UB:787:THR:HG23	2:UB:791:GLU:HG3	2.04	0.40
4:UD:747:ILE:HG13	4:UD:753:ALA:HB2	2.02	0.40
5:UE:109:ASP:HB3	5:UE:151:LEU:HD23	2.03	0.40
7:UG:113:PRO:HB2	7:UG:379:GLU:HB2	2.03	0.40
7:UG:167:ALA:HB2	7:UG:176:ILE:HD13	2.02	0.40
10:UJ:1572:LEU:HB2	10:UJ:1618:LEU:HD11	2.04	0.40
10:UJ:1607:ARG:NH1	10:UJ:1612:ASP:OD2	2.54	0.40
12:UL:415:LYS:HB2	12:UL:415:LYS:HE2	1.89	0.40
13:UM:167:ASP:OD1	13:UM:168:THR:N	2.53	0.40
13:UM:588:LYS:O	13:UM:604:CYS:N	2.43	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:UN:330:THR:OG1	14:UN:331:GLN:N	2.54	0.40
17:UQ:152:ARG:NH1	17:UQ:175:ALA:HB2	2.36	0.40
17:UQ:488:LEU:HD12	17:UQ:488:LEU:HA	1.85	0.40
18:UR:493:LEU:O	18:UR:508:VAL:N	2.54	0.40
18:UR:503:SER:O	18:UR:503:SER:OG	2.39	0.40
20:UT:559:ASN:HA	20:UT:562:VAL:HG12	2.03	0.40
20:UT:572:LYS:HB3	20:UT:572:LYS:HE3	1.89	0.40
20:UT:1238:ASN:N	20:UT:1238:ASN:OD1	2.53	0.40
20:UT:1587:LYS:HZ1	20:UT:1623:LEU:HD13	1.85	0.40
20:UT:1983:LEU:HD23	20:UT:1983:LEU:HA	1.88	0.40
22:UV:97:LEU:O	22:UV:101:ASN:ND2	2.55	0.40
22:UV:248:LEU:HB3	22:UV:252:LEU:HD23	2.03	0.40
22:UV:1083:GLN:O	22:UV:1087:LEU:HG	2.21	0.40
28:CH:166:VAL:H	28:CH:175:SER:HB3	1.86	0.40
28:CH:454:GLU:O	28:CH:460:ARG:NE	2.53	0.40
29:CI:36:TYR:HD1	29:CI:36:TYR:HA	1.78	0.40
31:CK:415:ASP:O	31:CK:418:THR:OG1	2.37	0.40
32:CL:1067:LEU:HD23	32:CL:1067:LEU:H	1.86	0.40
35:JD:445:VAL:HB	35:JD:489:VAL:HG22	2.02	0.40
35:JD:924:LEU:HA	35:JD:927:ILE:HG22	2.03	0.40
35:JD:1105:LYS:HD3	35:JD:1114:ASN:HD21	1.86	0.40
36:JF:29:PRO:HB2	36:JF:30:VAL:H	1.62	0.40
39:JL:92:ALA:HA	39:JL:95:THR:HG22	2.03	0.40
39:JL:281:ILE:HA	39:JL:284:VAL:HG22	2.02	0.40
39:JL:293:LYS:HD2	39:JL:293:LYS:HA	1.82	0.40
40:JM:155:ASP:OD1	40:JM:156:LYS:N	2.55	0.40
44:DA:87:ARG:HG2	44:DA:101:HIS:HB2	2.03	0.40
46:DF:48:PHE:HE2	46:DF:68:ILE:H	1.69	0.40
50:DJ:30:LEU:HD23	50:DJ:30:LEU:HA	1.94	0.40
51:DL:45:PRO:HB2	51:DL:47:THR:HG22	2.02	0.40
57:DW:36:LYS:HB2	57:DW:110:ILE:HD12	2.03	0.40
61:D2:22:A:H2'	61:D2:23:G:C8	2.56	0.40
61:D2:474:A:H2'	61:D2:475:G:C8	2.55	0.40
62:D3:613:G:H5'	62:D3:1099:U:C5	2.57	0.40
62:D3:866:G:H2'	62:D3:867:G:C8	2.56	0.40
1:UA:446:CYS:HG	1:UA:481:PHE:HE1	1.70	0.40
5:UE:200:GLU:O	5:UE:216:ASP:HA	2.22	0.40
5:UE:453:LEU:HA	5:UE:456:VAL:HG12	2.03	0.40
6:UF:2:SER:OG	6:UF:3:LYS:N	2.50	0.40
10:UJ:630:TYR:HA	10:UJ:634:ASN:HD21	1.87	0.40
12:UL:621:VAL:HA	12:UL:631:PHE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:836:ILE:HG21	12:UL:857:LEU:HD22	2.04	0.40
17:UQ:55:TYR:CZ	17:UQ:62:CYS:HB2	2.57	0.40
17:UQ:92:LEU:HD23	17:UQ:92:LEU:HA	1.84	0.40
18:UR:22:LEU:HD23	18:UR:22:LEU:HA	1.91	0.40
20:UT:491:LEU:HD23	20:UT:491:LEU:HA	1.97	0.40
20:UT:860:SER:OG	20:UT:861:ARG:N	2.54	0.40
20:UT:1217:ARG:HE	20:UT:1253:ASN:ND2	2.20	0.40
20:UT:1479:ASN:HA	20:UT:1483:HIS:HD2	1.86	0.40
21:UU:872:LEU:HD23	21:UU:872:LEU:HA	1.90	0.40
22:UV:764:SER:O	22:UV:914:ARG:HG2	2.22	0.40
23:UX:153:VAL:HG21	23:UX:164:ILE:HD13	2.04	0.40
24:CB:185:SER:HB2	24:CB:217:ILE:HG13	2.03	0.40
28:CH:132:VAL:N	28:CH:409:ASP:OD2	2.54	0.40
28:CH:545:LYS:NZ	63:D4:251:G:N7	2.70	0.40
30:CJ:139:LEU:HB2	30:CJ:157:PHE:CZ	2.57	0.40
32:CL:81:GLY:HA2	65:CL:2001:GTP:PA	2.61	0.40
35:JD:91:ARG:HA	35:JD:94:LYS:HD3	2.02	0.40
35:JD:913:LYS:HD2	35:JD:913:LYS:HA	1.91	0.40
39:JL:75:LEU:HD21	39:JL:107:LEU:HB2	2.03	0.40
39:JL:245:THR:OG1	39:JL:246:THR:N	2.54	0.40
40:JM:50:SER:N	40:JM:53:GLN:OE1	2.54	0.40
41:JP:51:GLU:O	41:JP:380:TRP:NE1	2.46	0.40
56:DT:75:LYS:HA	56:DT:75:LYS:HD2	1.86	0.40
62:D3:1561:U:H2'	62:D3:1562:G:C8	2.57	0.40
62:D3:1591:C:H2'	62:D3:1592:A:C8	2.56	0.40
62:D3:1648:A:H2'	62:D3:1649:G:C8	2.57	0.40
62:D3:1671:A:H3'	62:D3:1672:G:C8	2.52	0.40
1:UA:687:SER:OG	1:UA:689:THR:OG1	2.33	0.40
2:UB:515:HIS:CG	2:UB:518:ILE:HD12	2.56	0.40
2:UB:780:LYS:HG2	2:UB:781:MET:HE2	2.03	0.40
4:UD:531:ILE:HG13	4:UD:545:ARG:HE	1.87	0.40
4:UD:625:GLU:HA	4:UD:628:THR:HG22	2.04	0.40
5:UE:255:ILE:HG12	5:UE:277:LYS:HB2	2.02	0.40
7:UG:120:LYS:HD3	7:UG:120:LYS:HA	1.91	0.40
11:UK:227:LYS:HD3	11:UK:227:LYS:HA	1.84	0.40
12:UL:430:CYS:HB3	12:UL:457:PHE:HZ	1.86	0.40
13:UM:387:HIS:CE1	13:UM:407:SER:HB2	2.56	0.40
15:UO:423:LYS:HE2	15:UO:423:LYS:HB3	1.97	0.40
17:UQ:124:LYS:HA	17:UQ:124:LYS:HD2	1.92	0.40
17:UQ:334:LEU:HB3	17:UQ:337:LEU:HD11	2.02	0.40
17:UQ:413:SER:H	17:UQ:416:SER:HB3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:585:TRP:CE2	17:UQ:596:LEU:HD13	2.57	0.40
19:US:188:PHE:CG	19:US:239:PHE:HB2	2.56	0.40
20:UT:259:LEU:HD12	20:UT:259:LEU:HA	1.85	0.40
20:UT:1877:ARG:HH21	20:UT:1916:ARG:HH11	1.69	0.40
20:UT:1967:ILE:HD13	20:UT:1967:ILE:HA	1.92	0.40
21:UU:59:GLN:HB3	21:UU:68:LEU:HD11	2.04	0.40
33:CM:305:LYS:O	33:CM:307:ASP:N	2.54	0.40
34:CN:64:ILE:HG13	34:CN:68:LYS:HE2	2.03	0.40
35:JD:530:GLY:O	35:JD:533:SER:OG	2.36	0.40
35:JD:1076:GLN:O	35:JD:1080:LEU:HG	2.22	0.40
39:JL:187:HIS:HA	39:JL:207:VAL:HG23	2.04	0.40
47:DG:179:VAL:HG21	62:D3:140:A:H1'	2.04	0.40
52:DN:91:LEU:HD23	52:DN:91:LEU:HA	1.92	0.40
54:DQ:15:SER:O	54:DQ:15:SER:OG	2.28	0.40
59:DY:132:ARG:HD2	59:DY:132:ARG:HA	1.93	0.40
62:D3:1534:G:O2'	62:D3:1535:U:O2	2.32	0.40
63:D4:8:U:H2'	63:D4:9:A:H8	1.86	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	
1	UA	786/923 (85%)	717 (91%)	69 (9%)	0	100	100
2	UB	535/810 (66%)	509 (95%)	24 (4%)	2 (0%)	34	70
3	UC	82/610 (13%)	72 (88%)	10 (12%)	0	100	100
4	UD	653/776 (84%)	598 (92%)	55 (8%)	0	100	100
5	UE	465/643 (72%)	426 (92%)	39 (8%)	0	100	100
6	UF	283/440 (64%)	277 (98%)	6 (2%)	0	100	100
7	UG	464/554 (84%)	421 (91%)	43 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	UH	446/713 (63%)	372 (83%)	54 (12%)	20 (4%)	2	25
9	UI	86/575 (15%)	83 (96%)	3 (4%)	0	100	100
10	UJ	1092/1769 (62%)	1040 (95%)	52 (5%)	0	100	100
11	UK	213/250 (85%)	198 (93%)	14 (7%)	1 (0%)	29	66
12	UL	765/943 (81%)	707 (92%)	58 (8%)	0	100	100
13	UM	750/817 (92%)	686 (92%)	64 (8%)	0	100	100
14	UN	197/899 (22%)	181 (92%)	16 (8%)	0	100	100
15	UO	489/513 (95%)	452 (92%)	37 (8%)	0	100	100
16	UP	58/214 (27%)	56 (97%)	2 (3%)	0	100	100
17	UQ	810/896 (90%)	752 (93%)	58 (7%)	0	100	100
18	UR	473/594 (80%)	436 (92%)	37 (8%)	0	100	100
19	US	479/552 (87%)	450 (94%)	29 (6%)	0	100	100
20	UT	2265/2493 (91%)	2125 (94%)	136 (6%)	4 (0%)	47	79
21	UU	870/939 (93%)	821 (94%)	49 (6%)	0	100	100
22	UV	1071/1237 (87%)	1025 (96%)	46 (4%)	0	100	100
23	UX	163/189 (86%)	154 (94%)	9 (6%)	0	100	100
24	CA	238/327 (73%)	217 (91%)	21 (9%)	0	100	100
24	CB	224/327 (68%)	211 (94%)	13 (6%)	0	100	100
25	CD	376/504 (75%)	359 (96%)	16 (4%)	1 (0%)	41	74
26	CE	434/511 (85%)	404 (93%)	30 (7%)	0	100	100
27	CF	119/126 (94%)	117 (98%)	2 (2%)	0	100	100
27	CG	119/126 (94%)	117 (98%)	2 (2%)	0	100	100
28	CH	461/573 (80%)	419 (91%)	41 (9%)	1 (0%)	47	79
29	CI	171/183 (93%)	161 (94%)	10 (6%)	0	100	100
30	CJ	252/290 (87%)	228 (90%)	24 (10%)	0	100	100
31	CK	214/593 (36%)	203 (95%)	11 (5%)	0	100	100
32	CL	796/1183 (67%)	751 (94%)	43 (5%)	2 (0%)	41	74
33	CM	358/367 (98%)	344 (96%)	14 (4%)	0	100	100
34	CN	221/297 (74%)	214 (97%)	7 (3%)	0	100	100
35	JD	793/1267 (63%)	726 (92%)	64 (8%)	3 (0%)	34	70
36	JF	212/252 (84%)	203 (96%)	9 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	JG	226/252 (90%)	215 (95%)	11 (5%)	0	100	100
37	JH	257/483 (53%)	250 (97%)	7 (3%)	0	100	100
38	JI	263/1729 (15%)	252 (96%)	11 (4%)	0	100	100
39	JL	281/318 (88%)	269 (96%)	12 (4%)	0	100	100
40	JM	130/217 (60%)	118 (91%)	12 (9%)	0	100	100
41	JP	457/489 (94%)	423 (93%)	34 (7%)	0	100	100
42	Db	79/82 (96%)	71 (90%)	8 (10%)	0	100	100
43	JJ	195/274 (71%)	188 (96%)	7 (4%)	0	100	100
44	DA	236/255 (92%)	218 (92%)	18 (8%)	0	100	100
45	DE	244/261 (94%)	233 (96%)	10 (4%)	1 (0%)	34	70
46	DF	211/225 (94%)	191 (90%)	20 (10%)	0	100	100
47	DG	216/236 (92%)	204 (94%)	12 (6%)	0	100	100
48	DH	166/190 (87%)	159 (96%)	7 (4%)	0	100	100
49	DI	173/200 (86%)	169 (98%)	4 (2%)	0	100	100
50	DJ	183/197 (93%)	171 (93%)	12 (7%)	0	100	100
51	DL	138/156 (88%)	128 (93%)	10 (7%)	0	100	100
52	DN	148/151 (98%)	138 (93%)	10 (7%)	0	100	100
53	DO	125/137 (91%)	112 (90%)	13 (10%)	0	100	100
54	DQ	123/143 (86%)	112 (91%)	11 (9%)	0	100	100
55	DS	99/146 (68%)	93 (94%)	6 (6%)	0	100	100
56	DT	141/144 (98%)	127 (90%)	14 (10%)	0	100	100
57	DW	127/130 (98%)	112 (88%)	14 (11%)	1 (1%)	19	57
58	DX	141/145 (97%)	128 (91%)	12 (8%)	1 (1%)	22	60
59	DY	132/135 (98%)	130 (98%)	2 (2%)	0	100	100
60	Dc	61/67 (91%)	58 (95%)	3 (5%)	0	100	100
All	All	23035/32037 (72%)	21501 (93%)	1497 (6%)	37 (0%)	50	79

All (37) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
8	UH	59	PRO
8	UH	61	PRO
8	UH	68	PRO

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Mol	Chain	Res	Type
8	UH	235	PRO
8	UH	258	PRO
8	UH	298	PRO
8	UH	308	PHE
8	UH	309	PRO
8	UH	325	PRO
8	UH	350	LEU
11	UK	11	LYS
35	JD	1019	GLU
2	UB	395	ASP
8	UH	29	VAL
8	UH	299	HIS
20	UT	1596	LYS
58	DX	90	ASP
8	UH	70	PRO
8	UH	127	TYR
8	UH	296	SER
32	CL	208	SER
35	JD	1018	LYS
20	UT	793	PHE
20	UT	1429	LYS
25	CD	241	LEU
28	CH	552	TRP
45	DE	29	PRO
57	DW	66	ASN
8	UH	194	GLY
8	UH	332	LEU
20	UT	242	SER
32	CL	78	PRO
8	UH	337	ASN
2	UB	399	HIS
8	UH	257	SER
35	JD	1017	PRO
8	UH	266	ILE

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	
1	UA	695/812 (86%)	694 (100%)	1 (0%)	93	97
2	UB	382/732 (52%)	381 (100%)	1 (0%)	92	96
3	UC	74/538 (14%)	74 (100%)	0	100	100
4	UD	604/713 (85%)	596 (99%)	8 (1%)	69	82
5	UE	428/574 (75%)	426 (100%)	2 (0%)	88	94
6	UF	277/414 (67%)	276 (100%)	1 (0%)	91	95
7	UG	405/480 (84%)	404 (100%)	1 (0%)	93	97
8	UH	125/657 (19%)	123 (98%)	2 (2%)	62	79
9	UI	83/533 (16%)	82 (99%)	1 (1%)	71	84
10	UJ	1031/1633 (63%)	1026 (100%)	5 (0%)	88	94
11	UK	207/234 (88%)	205 (99%)	2 (1%)	76	86
12	UL	690/832 (83%)	689 (100%)	1 (0%)	93	97
13	UM	668/719 (93%)	663 (99%)	5 (1%)	84	91
14	UN	183/808 (23%)	182 (100%)	1 (0%)	88	94
15	UO	437/454 (96%)	437 (100%)	0	100	100
16	UP	57/196 (29%)	56 (98%)	1 (2%)	59	77
17	UQ	756/826 (92%)	753 (100%)	3 (0%)	91	95
18	UR	424/529 (80%)	423 (100%)	1 (0%)	93	97
19	US	332/506 (66%)	330 (99%)	2 (1%)	86	92
20	UT	2134/2307 (92%)	2126 (100%)	8 (0%)	91	95
21	UU	768/819 (94%)	765 (100%)	3 (0%)	91	95
22	UV	988/1125 (88%)	986 (100%)	2 (0%)	93	97
23	UX	148/169 (88%)	148 (100%)	0	100	100
24	CA	202/240 (84%)	201 (100%)	1 (0%)	88	94
24	CB	192/240 (80%)	192 (100%)	0	100	100
25	CD	326/435 (75%)	325 (100%)	1 (0%)	92	96
26	CE	352/433 (81%)	348 (99%)	4 (1%)	73	85
27	CF	100/104 (96%)	94 (94%)	6 (6%)	19	50
27	CG	100/104 (96%)	94 (94%)	6 (6%)	19	50
28	CH	407/503 (81%)	405 (100%)	2 (0%)	88	94
29	CI	165/172 (96%)	162 (98%)	3 (2%)	59	77
30	CJ	227/258 (88%)	223 (98%)	4 (2%)	59	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
31	CK	201/535 (38%)	201 (100%)	0	100	100
32	CL	710/1039 (68%)	698 (98%)	12 (2%)	60	78
33	CM	307/312 (98%)	307 (100%)	0	100	100
34	CN	209/274 (76%)	208 (100%)	1 (0%)	88	94
35	JD	724/1140 (64%)	712 (98%)	12 (2%)	60	78
36	JF	195/222 (88%)	193 (99%)	2 (1%)	76	86
36	JG	206/222 (93%)	205 (100%)	1 (0%)	88	94
39	JL	255/283 (90%)	255 (100%)	0	100	100
40	JM	125/200 (62%)	124 (99%)	1 (1%)	81	89
41	JP	416/443 (94%)	412 (99%)	4 (1%)	76	86
42	Db	70/71 (99%)	70 (100%)	0	100	100
43	JJ	174/238 (73%)	174 (100%)	0	100	100
44	DA	212/224 (95%)	211 (100%)	1 (0%)	88	94
45	DE	210/222 (95%)	209 (100%)	1 (0%)	88	94
46	DF	180/191 (94%)	180 (100%)	0	100	100
47	DG	187/201 (93%)	187 (100%)	0	100	100
48	DH	151/170 (89%)	151 (100%)	0	100	100
49	DI	142/161 (88%)	142 (100%)	0	100	100
50	DJ	158/166 (95%)	157 (99%)	1 (1%)	86	92
51	DL	125/137 (91%)	124 (99%)	1 (1%)	81	89
52	DN	127/128 (99%)	126 (99%)	1 (1%)	81	89
53	DO	90/105 (86%)	90 (100%)	0	100	100
54	DQ	104/119 (87%)	103 (99%)	1 (1%)	76	86
55	DS	96/129 (74%)	96 (100%)	0	100	100
56	DT	115/116 (99%)	114 (99%)	1 (1%)	78	88
57	DW	110/111 (99%)	109 (99%)	1 (1%)	78	88
58	DX	118/120 (98%)	118 (100%)	0	100	100
59	DY	112/113 (99%)	112 (100%)	0	100	100
60	Dc	56/60 (93%)	56 (100%)	0	100	100
All	All	19852/26551 (75%)	19733 (99%)	119 (1%)	86	92

All (119) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	UA	619	ARG
2	UB	766	ARG
4	UD	349	SER
4	UD	352	VAL
4	UD	355	THR
4	UD	356	LEU
4	UD	357	VAL
4	UD	358	ILE
4	UD	430	THR
4	UD	498	VAL
5	UE	151	LEU
5	UE	436	THR
6	UF	266	ARG
7	UG	358	MET
8	UH	664	LYS
8	UH	711	ARG
9	UI	480	LYS
10	UJ	306	LEU
10	UJ	549	LYS
10	UJ	617	LYS
10	UJ	699	ARG
10	UJ	710	LYS
11	UK	160	ASN
11	UK	199	LYS
12	UL	854	CYS
13	UM	8	LYS
13	UM	137	THR
13	UM	487	ARG
13	UM	578	VAL
13	UM	593	CYS
14	UN	871	SER
16	UP	161	LYS
17	UQ	336	ARG
17	UQ	432	ARG
17	UQ	648	LYS
18	UR	353	ARG
19	US	284	ARG
19	US	489	LYS
20	UT	449	ARG
20	UT	735	ARG
20	UT	1155	ASP
20	UT	1178	CYS
20	UT	1403	ARG

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Mol	Chain	Res	Type
20	UT	1429	LYS
20	UT	1743	LYS
20	UT	2054	LYS
21	UU	19	LYS
21	UU	159	VAL
21	UU	738	ASP
22	UV	243	LEU
22	UV	1094	LYS
24	CA	306	LEU
25	CD	388	ARG
26	CE	80	LYS
26	CE	215	ARG
26	CE	408	THR
26	CE	425	ARG
27	CF	17	THR
27	CF	44	LEU
27	CF	46	ARG
27	CF	72	GLU
27	CF	94	SER
27	CF	106	ASP
27	CG	17	THR
27	CG	44	LEU
27	CG	46	ARG
27	CG	72	GLU
27	CG	94	SER
27	CG	106	ASP
28	CH	262	VAL
28	CH	481	ILE
29	CI	5	LEU
29	CI	73	LYS
29	CI	107	CYS
30	CJ	88	ILE
30	CJ	116	ARG
30	CJ	138	ASP
30	CJ	153	THR
32	CL	45	ARG
32	CL	78	PRO
32	CL	82	LYS
32	CL	84	THR
32	CL	119	GLU
32	CL	180	GLN
32	CL	310	THR

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Mol	Chain	Res	Type
32	CL	725	LYS
32	CL	779	ARG
32	CL	866	ARG
32	CL	960	ARG
32	CL	973	ARG
34	CN	150	LYS
35	JD	121	LYS
35	JD	502	MET
35	JD	571	LYS
35	JD	641	LYS
35	JD	749	LYS
35	JD	815	ARG
35	JD	845	MET
35	JD	907	LEU
35	JD	1026	LYS
35	JD	1053	THR
35	JD	1109	ARG
35	JD	1167	MET
36	JF	43	VAL
36	JF	204	VAL
36	JG	173	THR
40	JM	76	LYS
41	JP	7	LYS
41	JP	175	THR
41	JP	251	THR
41	JP	368	ASP
44	DA	55	LYS
45	DE	30	ARG
50	DJ	151	ASP
51	DL	44	THR
52	DN	87	ASP
54	DQ	48	VAL
56	DT	49	ASP
57	DW	66	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (290) such sidechains are listed below:

Mol	Chain	Res	Type
1	UA	203	GLN
1	UA	306	ASN
1	UA	811	ASN
1	UA	842	ASN

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Mol	Chain	Res	Type
2	UB	438	ASN
2	UB	488	ASN
2	UB	617	HIS
2	UB	683	ASN
2	UB	704	ASN
4	UD	140	ASN
4	UD	179	HIS
4	UD	252	GLN
4	UD	274	GLN
4	UD	292	ASN
4	UD	306	GLN
4	UD	317	ASN
4	UD	318	ASN
4	UD	731	HIS
5	UE	302	ASN
6	UF	41	HIS
6	UF	166	ASN
6	UF	169	GLN
6	UF	191	ASN
6	UF	370	ASN
7	UG	124	HIS
7	UG	170	GLN
7	UG	248	HIS
7	UG	321	ASN
7	UG	337	HIS
7	UG	395	GLN
7	UG	530	ASN
8	UH	553	GLN
8	UH	564	ASN
8	UH	575	ASN
8	UH	609	ASN
8	UH	657	ASN
10	UJ	10	GLN
10	UJ	29	HIS
10	UJ	144	GLN
10	UJ	209	GLN
10	UJ	232	ASN
10	UJ	559	ASN
10	UJ	615	ASN
10	UJ	673	ASN
10	UJ	675	ASN
10	UJ	694	HIS

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Mol	Chain	Res	Type
10	UJ	709	ASN
10	UJ	750	ASN
10	UJ	774	ASN
10	UJ	1397	GLN
10	UJ	1487	ASN
10	UJ	1583	GLN
10	UJ	1617	ASN
10	UJ	1683	HIS
10	UJ	1694	HIS
11	UK	105	ASN
11	UK	112	GLN
11	UK	132	ASN
11	UK	144	ASN
11	UK	213	GLN
12	UL	203	HIS
12	UL	330	GLN
12	UL	383	HIS
12	UL	390	GLN
12	UL	628	HIS
12	UL	656	HIS
12	UL	677	HIS
12	UL	798	ASN
13	UM	54	HIS
13	UM	89	HIS
13	UM	143	HIS
13	UM	299	ASN
13	UM	312	GLN
13	UM	418	ASN
13	UM	532	HIS
13	UM	576	ASN
13	UM	585	ASN
13	UM	680	ASN
13	UM	747	ASN
15	UO	64	GLN
15	UO	125	HIS
15	UO	133	HIS
15	UO	210	ASN
15	UO	213	GLN
15	UO	250	ASN
15	UO	252	ASN
15	UO	263	ASN
15	UO	372	HIS

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Mol	Chain	Res	Type
15	UO	391	ASN
16	UP	165	ASN
16	UP	185	GLN
17	UQ	33	ASN
17	UQ	51	GLN
17	UQ	61	GLN
17	UQ	120	ASN
17	UQ	131	HIS
17	UQ	393	ASN
17	UQ	412	ASN
17	UQ	540	ASN
17	UQ	605	ASN
17	UQ	606	HIS
17	UQ	646	ASN
18	UR	159	HIS
18	UR	167	GLN
18	UR	283	HIS
18	UR	306	ASN
18	UR	357	ASN
18	UR	365	ASN
18	UR	388	HIS
18	UR	442	HIS
19	US	159	ASN
19	US	174	ASN
19	US	215	ASN
19	US	224	ASN
19	US	256	ASN
19	US	418	ASN
19	US	434	ASN
19	US	472	HIS
19	US	508	ASN
20	UT	46	HIS
20	UT	98	HIS
20	UT	112	GLN
20	UT	227	ASN
20	UT	281	ASN
20	UT	346	GLN
20	UT	378	HIS
20	UT	379	GLN
20	UT	418	GLN
20	UT	588	ASN
20	UT	711	GLN

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Mol	Chain	Res	Type
20	UT	787	GLN
20	UT	802	ASN
20	UT	840	ASN
20	UT	843	ASN
20	UT	853	HIS
20	UT	955	ASN
20	UT	1071	ASN
20	UT	1098	ASN
20	UT	1100	GLN
20	UT	1253	ASN
20	UT	1366	ASN
20	UT	1401	ASN
20	UT	1427	ASN
20	UT	1505	ASN
20	UT	1508	GLN
20	UT	1618	ASN
20	UT	1630	ASN
20	UT	1695	HIS
20	UT	1737	ASN
20	UT	1817	GLN
20	UT	1907	ASN
20	UT	1957	GLN
20	UT	1996	GLN
20	UT	2077	GLN
20	UT	2176	HIS
20	UT	2252	ASN
20	UT	2295	ASN
20	UT	2303	ASN
20	UT	2362	GLN
21	UU	35	ASN
21	UU	108	HIS
21	UU	135	ASN
21	UU	263	HIS
21	UU	364	HIS
21	UU	490	GLN
21	UU	532	ASN
21	UU	552	HIS
21	UU	575	GLN
21	UU	627	ASN
21	UU	902	ASN
21	UU	911	ASN
22	UV	101	ASN

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Mol	Chain	Res	Type
22	UV	136	GLN
22	UV	226	HIS
22	UV	293	ASN
22	UV	414	HIS
22	UV	436	HIS
22	UV	506	GLN
22	UV	514	ASN
22	UV	568	ASN
22	UV	582	GLN
22	UV	665	HIS
22	UV	706	ASN
22	UV	729	ASN
22	UV	834	ASN
22	UV	1211	ASN
22	UV	1221	HIS
22	UV	1233	ASN
23	UX	43	ASN
23	UX	46	GLN
23	UX	70	ASN
23	UX	162	GLN
24	CA	216	ASN
24	CA	274	ASN
24	CA	291	GLN
24	CB	291	GLN
25	CD	85	ASN
25	CD	125	GLN
25	CD	134	HIS
25	CD	172	ASN
25	CD	254	ASN
26	CE	96	ASN
26	CE	104	ASN
26	CE	165	GLN
26	CE	286	ASN
27	CF	45	ASN
27	CG	45	ASN
28	CH	156	ASN
28	CH	322	HIS
28	CH	463	GLN
28	CH	532	HIS
28	CH	547	HIS
28	CH	555	ASN
28	CH	570	GLN

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Mol	Chain	Res	Type
29	CI	7	HIS
29	CI	59	ASN
30	CJ	159	HIS
30	CJ	164	GLN
30	CJ	174	HIS
30	CJ	226	ASN
30	CJ	235	GLN
32	CL	5	ASN
32	CL	7	GLN
32	CL	112	HIS
32	CL	173	HIS
32	CL	222	ASN
32	CL	239	ASN
32	CL	314	GLN
32	CL	761	GLN
32	CL	776	GLN
32	CL	855	GLN
33	CM	206	ASN
34	CN	43	GLN
34	CN	139	ASN
34	CN	146	ASN
34	CN	187	HIS
34	CN	219	ASN
35	JD	366	ASN
35	JD	469	HIS
35	JD	519	HIS
35	JD	546	ASN
35	JD	762	ASN
35	JD	807	ASN
35	JD	836	GLN
35	JD	861	ASN
35	JD	864	ASN
35	JD	1127	ASN
35	JD	1203	ASN
36	JF	115	GLN
36	JG	94	GLN
39	JL	77	GLN
40	JM	126	HIS
41	JP	81	ASN
41	JP	188	HIS
41	JP	230	ASN
41	JP	406	HIS

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Mol	Chain	Res	Type
41	JP	431	ASN
42	Db	19	HIS
42	Db	26	GLN
42	Db	49	HIS
43	JJ	131	ASN
43	JJ	239	HIS
43	JJ	262	ASN
44	DA	92	GLN
44	DA	124	ASN
44	DA	199	ASN
45	DE	50	ASN
45	DE	197	HIS
45	DE	201	HIS
45	DE	216	ASN
46	DF	35	GLN
46	DF	63	GLN
46	DF	104	ASN
46	DF	131	GLN
46	DF	200	ASN
47	DG	56	ASN
47	DG	176	GLN
48	DH	29	ASN
48	DH	174	ASN
48	DH	180	GLN
49	DI	84	HIS
49	DI	88	ASN
50	DJ	124	HIS
52	DN	62	GLN
53	DO	12	GLN
55	DS	19	ASN
55	DS	104	ASN
56	DT	48	GLN
58	DX	48	HIS
58	DX	94	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
61	D2	76/81 (93%)	24 (31%)	0
62	D3	1388/1802 (77%)	377 (27%)	18 (1%)
63	D4	214/333 (64%)	60 (28%)	4 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
All	All	1678/2216 (75%)	461 (27%)	22 (1%)

All (461) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
61	D2	6	A
61	D2	8	A
61	D2	11	A
61	D2	14	U
61	D2	15	G
61	D2	58	U
61	D2	63	G
61	D2	64	U
61	D2	65	U
61	D2	66	C
61	D2	68	U
61	D2	69	U
61	D2	82	A
61	D2	83	U
61	D2	84	G
61	D2	86	C
61	D2	89	C
61	D2	90	G
61	D2	464	G
61	D2	468	A
61	D2	469	C
61	D2	470	U
61	D2	475	G
61	D2	476	A
62	D3	14	C
62	D3	22	A
62	D3	23	G
62	D3	25	C
62	D3	26	A
62	D3	34	G
62	D3	35	U
62	D3	42	G
62	D3	44	U
62	D3	45	U
62	D3	46	A
62	D3	47	A
62	D3	57	G

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Mol	Chain	Res	Type
62	D3	60	U
62	D3	63	G
62	D3	65	A
62	D3	66	U
62	D3	68	A
62	D3	72	A
62	D3	73	U
62	D3	74	U
62	D3	75	U
62	D3	77	U
62	D3	100	A
62	D3	103	A
62	D3	104	A
62	D3	114	C
62	D3	116	U
62	D3	121	U
62	D3	126	A
62	D3	127	G
62	D3	129	U
62	D3	133	U
62	D3	140	A
62	D3	141	U
62	D3	142	G
62	D3	144	U
62	D3	145	A
62	D3	153	G
62	D3	155	U
62	D3	156	A
62	D3	159	U
62	D3	161	U
62	D3	166	C
62	D3	176	C
62	D3	177	U
62	D3	185	U
62	D3	186	C
62	D3	189	C
62	D3	190	C
62	D3	191	C
62	D3	192	U
62	D3	194	U
62	D3	195	G
62	D3	196	G

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Mol	Chain	Res	Type
62	D3	197	A
62	D3	204	G
62	D3	216	U
62	D3	217	A
62	D3	232	U
62	D3	233	C
62	D3	234	G
62	D3	235	G
62	D3	237	C
62	D3	250	C
62	D3	261	U
62	D3	265	A
62	D3	271	A
62	D3	275	C
62	D3	276	C
62	D3	278	U
62	D3	279	G
62	D3	280	U
62	D3	281	G
62	D3	288	A
62	D3	299	A
62	D3	304	U
62	D3	305	C
62	D3	308	C
62	D3	314	C
62	D3	316	A
62	D3	319	U
62	D3	321	C
62	D3	322	G
62	D3	337	G
62	D3	338	C
62	D3	344	A
62	D3	351	C
62	D3	352	A
62	D3	359	A
62	D3	360	A
62	D3	361	C
62	D3	370	A
62	D3	380	U
62	D3	393	C
62	D3	399	A
62	D3	400	A

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Mol	Chain	Res	Type
62	D3	401	A
62	D3	402	C
62	D3	404	G
62	D3	417	A
62	D3	418	G
62	D3	419	G
62	D3	423	G
62	D3	424	C
62	D3	425	A
62	D3	426	G
62	D3	434	G
62	D3	435	C
62	D3	437	A
62	D3	439	U
62	D3	444	C
62	D3	445	A
62	D3	448	C
62	D3	459	G
62	D3	460	A
62	D3	475	A
62	D3	477	A
62	D3	480	G
62	D3	485	A
62	D3	487	G
62	D3	494	U
62	D3	496	G
62	D3	501	U
62	D3	502	U
62	D3	505	A
62	D3	506	A
62	D3	515	A
62	D3	519	C
62	D3	527	A
62	D3	532	U
62	D3	534	A
62	D3	538	A
62	D3	539	G
62	D3	540	G
62	D3	541	A
62	D3	542	A
62	D3	545	A
62	D3	548	G

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Mol	Chain	Res	Type
62	D3	562	G
62	D3	564	G
62	D3	565	C
62	D3	570	A
62	D3	572	C
62	D3	573	C
62	D3	574	G
62	D3	575	C
62	D3	576	G
62	D3	579	A
62	D3	580	A
62	D3	582	U
62	D3	583	C
62	D3	584	C
62	D3	585	A
62	D3	586	G
62	D3	594	A
62	D3	595	G
62	D3	603	U
62	D3	608	U
62	D3	611	U
62	D3	613	G
62	D3	616	G
62	D3	617	U
62	D3	619	A
62	D3	620	A
62	D3	622	A
62	D3	623	A
62	D3	643	G
62	D3	647	G
62	D3	648	G
62	D3	654	C
62	D3	655	G
62	D3	656	G
62	D3	657	U
62	D3	658	C
62	D3	678	A
62	D3	685	A
62	D3	687	G
62	D3	695	U
62	D3	700	C
62	D3	702	G

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Mol	Chain	Res	Type
62	D3	708	C
62	D3	709	C
62	D3	712	G
62	D3	713	A
62	D3	714	G
62	D3	716	C
62	D3	717	C
62	D3	718	U
62	D3	719	U
62	D3	720	G
62	D3	721	U
62	D3	722	G
62	D3	723	G
62	D3	726	C
62	D3	728	U
62	D3	734	A
62	D3	737	A
62	D3	738	G
62	D3	748	U
62	D3	755	A
62	D3	766	U
62	D3	774	A
62	D3	775	G
62	D3	780	A
62	D3	781	U
62	D3	782	U
62	D3	783	G
62	D3	784	C
62	D3	786	C
62	D3	787	G
62	D3	793	A
62	D3	803	A
62	D3	824	G
62	D3	826	U
62	D3	827	C
62	D3	829	A
62	D3	848	C
62	D3	849	C
62	D3	850	A
62	D3	851	U
62	D3	852	C
62	D3	854	U

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Mol	Chain	Res	Type
62	D3	855	A
62	D3	863	A
62	D3	864	U
62	D3	865	A
62	D3	873	U
62	D3	876	G
62	D3	898	A
62	D3	906	A
62	D3	910	C
62	D3	911	U
62	D3	912	U
62	D3	913	G
62	D3	914	G
62	D3	915	A
62	D3	926	A
62	D3	930	A
62	D3	933	A
62	D3	934	C
62	D3	935	U
62	D3	942	G
62	D3	944	A
62	D3	951	A
62	D3	960	U
62	D3	964	U
62	D3	966	A
62	D3	970	A
62	D3	992	A
62	D3	993	A
62	D3	996	U
62	D3	998	A
62	D3	1000	C
62	D3	1001	A
62	D3	1003	A
62	D3	1004	U
62	D3	1006	C
62	D3	1007	C
62	D3	1020	A
62	D3	1026	A
62	D3	1028	C
62	D3	1031	U
62	D3	1032	G
62	D3	1040	G

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Mol	Chain	Res	Type
62	D3	1042	G
62	D3	1043	A
62	D3	1044	U
62	D3	1053	G
62	D3	1058	U
62	D3	1059	U
62	D3	1060	U
62	D3	1061	A
62	D3	1062	A
62	D3	1063	U
62	D3	1064	G
62	D3	1072	C
62	D3	1073	G
62	D3	1076	A
62	D3	1080	U
62	D3	1081	A
62	D3	1082	C
62	D3	1092	A
62	D3	1093	A
62	D3	1095	U
62	D3	1096	C
62	D3	1097	U
62	D3	1098	U
62	D3	1099	U
62	D3	1100	G
62	D3	1112	G
62	D3	1113	A
62	D3	1114	G
62	D3	1116	A
62	D3	1119	G
62	D3	1122	G
62	D3	1128	C
62	D3	1131	A
62	D3	1138	A
62	D3	1139	A
62	D3	1140	G
62	D3	1141	G
62	D3	1145	U
62	D3	1158	C
62	D3	1159	C
62	D3	1160	A
62	D3	1167	G

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Mol	Chain	Res	Type
62	D3	1481	C
62	D3	1482	C
62	D3	1487	A
62	D3	1488	G
62	D3	1496	U
62	D3	1506	G
62	D3	1511	U
62	D3	1524	A
62	D3	1527	C
62	D3	1534	G
62	D3	1536	G
62	D3	1537	C
62	D3	1538	U
62	D3	1540	G
62	D3	1542	G
62	D3	1556	A
62	D3	1557	U
62	D3	1569	A
62	D3	1574	G
62	D3	1577	A
62	D3	1584	G
62	D3	1590	G
62	D3	1595	U
62	D3	1596	C
62	D3	1601	G
62	D3	1602	C
62	D3	1603	U
62	D3	1614	A
62	D3	1618	C
62	D3	1619	C
62	D3	1621	U
62	D3	1628	U
62	D3	1629	G
62	D3	1630	U
62	D3	1633	A
62	D3	1638	G
62	D3	1639	C
62	D3	1651	A
62	D3	1657	U
62	D3	1658	G
62	D3	1666	U
62	D3	1680	G

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Mol	Chain	Res	Type
62	D3	1682	U
62	D3	1683	C
62	D3	1684	U
62	D3	1686	C
62	D3	1693	A
62	D3	1695	G
62	D3	1697	G
62	D3	1702	A
62	D3	1703	C
62	D3	1706	C
62	D3	1707	A
62	D3	1709	C
62	D3	1710	U
62	D3	1711	C
62	D3	1712	A
62	D3	1735	U
62	D3	1736	G
62	D3	1741	U
62	D3	1746	A
62	D3	1747	G
62	D3	1750	A
62	D3	1772	C
62	D3	1780	G
62	D3	1781	A
62	D3	1782	A
62	D3	1783	C
62	D3	1792	G
62	D3	1794	A
63	D4	2	U
63	D4	3	C
63	D4	4	G
63	D4	5	A
63	D4	13	C
63	D4	14	A
63	D4	18	G
63	D4	22	A
63	D4	28	A
63	D4	29	U
63	D4	30	A
63	D4	31	G
63	D4	32	G
63	D4	33	A

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Mol	Chain	Res	Type
63	D4	35	U
63	D4	37	G
63	D4	38	U
63	D4	40	A
63	D4	63	C
63	D4	67	G
63	D4	68	A
63	D4	82	G
63	D4	83	A
63	D4	87	G
63	D4	90	C
63	D4	91	C
63	D4	92	A
63	D4	93	U
63	D4	94	A
63	D4	108	A
63	D4	109	G
63	D4	110	A
63	D4	111	G
63	D4	115	G
63	D4	140	C
63	D4	143	G
63	D4	144	G
63	D4	145	U
63	D4	146	C
63	D4	151	A
63	D4	155	U
63	D4	157	A
63	D4	158	G
63	D4	159	C
63	D4	177	U
63	D4	187	A
63	D4	188	A
63	D4	199	G
63	D4	201	C
63	D4	205	G
63	D4	252	C
63	D4	254	A
63	D4	255	U
63	D4	267	A
63	D4	305	G
63	D4	322	A

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Mol	Chain	Res	Type
63	D4	324	U
63	D4	325	C
63	D4	329	C
63	D4	332	G

All (22) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
62	D3	34	G
62	D3	155	U
62	D3	278	U
62	D3	418	G
62	D3	782	U
62	D3	803	A
62	D3	912	U
62	D3	997	G
62	D3	1057	U
62	D3	1115	U
62	D3	1481	C
62	D3	1568	C
62	D3	1573	A
62	D3	1600	A
62	D3	1620	C
62	D3	1657	U
62	D3	1706	C
62	D3	1745	G
63	D4	143	G
63	D4	150	A
63	D4	156	U
63	D4	157	A

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 4 ligands modelled in this entry, 3 are monoatomic - leaving 1 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
65	GTP	CL	2001	66	26,34,34	0.91	1 (3%)	32,54,54	1.58	5 (15%)

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
65	GTP	CL	2001	66	-	4/18/38/38	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	CL	2001	GTP	C6-N1	-2.41	1.34	1.37

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	CL	2001	GTP	PA-O3A-PB	-4.23	118.32	132.83
65	CL	2001	GTP	PB-O3B-PG	-4.21	118.39	132.83
65	CL	2001	GTP	C3'-C2'-C1'	2.80	105.19	100.98
65	CL	2001	GTP	C5-C6-N1	2.38	118.15	113.95
65	CL	2001	GTP	C8-N7-C5	2.29	107.35	102.99

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
65	CL	2001	GTP	C5'-O5'-PA-O3A
65	CL	2001	GTP	C5'-O5'-PA-O2A

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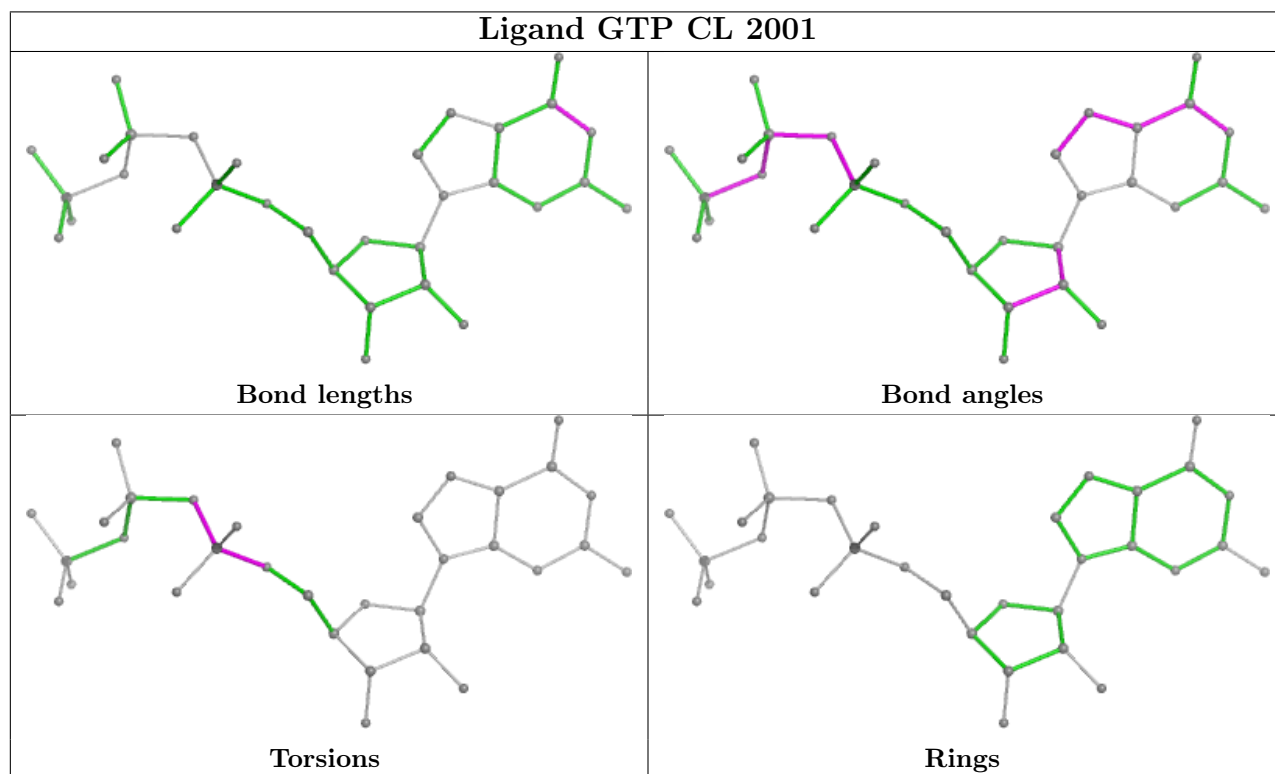
Mol	Chain	Res	Type	Atoms
65	CL	2001	GTP	PB-O3A-PA-O1A
65	CL	2001	GTP	PB-O3A-PA-O2A

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
65	CL	2001	GTP	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
61	D2	4

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D2	92:C	O3'	281:G	P	62.59
1	D2	292:A	O3'	463:A	P	45.89
1	D2	70:A	O3'	80:A	P	19.69
1	D2	24:U	O3'	56:G	P	14.77

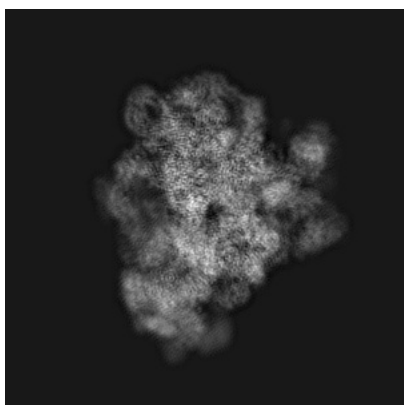
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-11360. These allow visual inspection of the internal detail of the map and identification of artifacts.

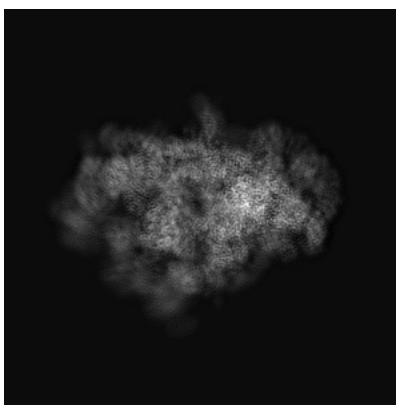
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

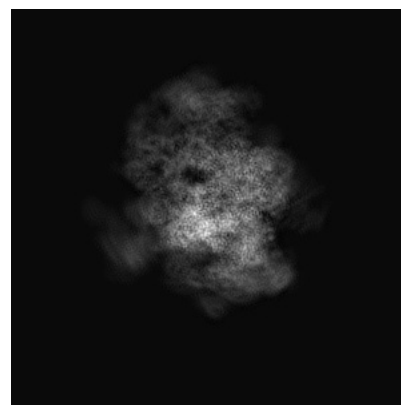
6.1.1 Primary map



X



Y

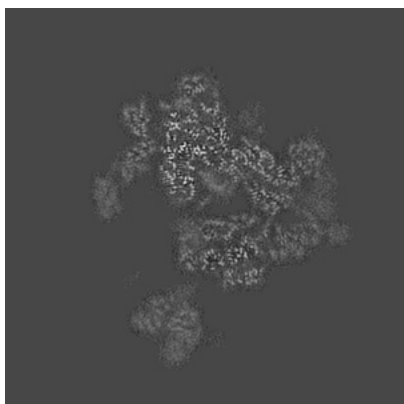


Z

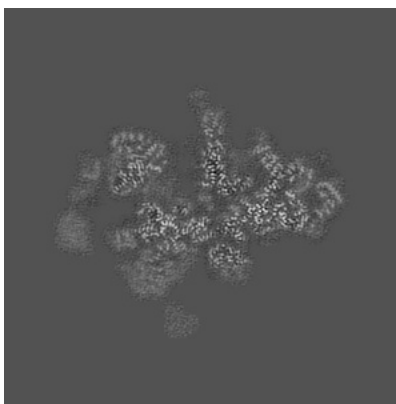
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

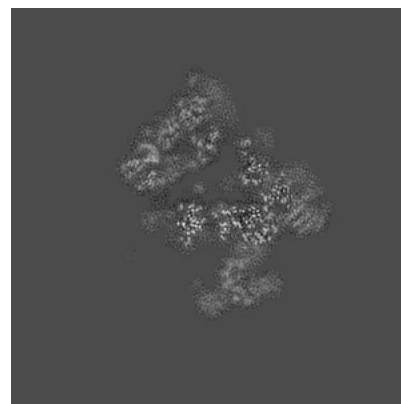
6.2.1 Primary map



X Index: 240



Y Index: 240

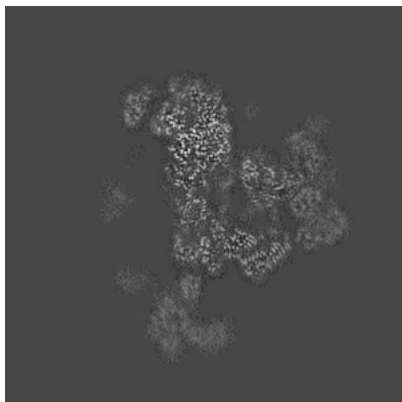


Z Index: 240

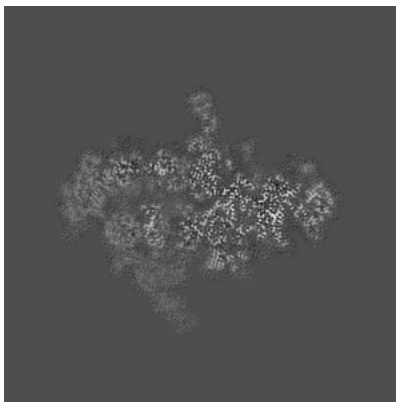
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [\(i\)](#)

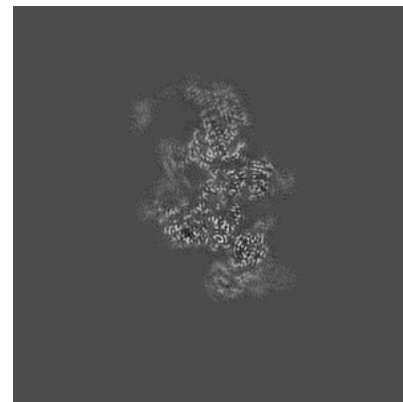
6.3.1 Primary map



X Index: 225



Y Index: 224

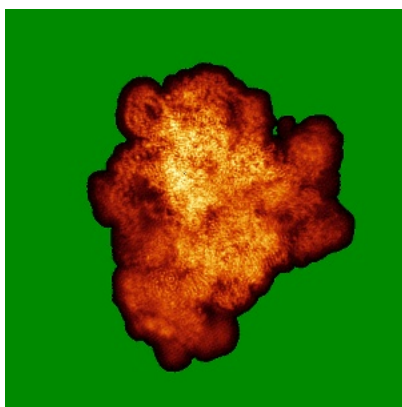


Z Index: 287

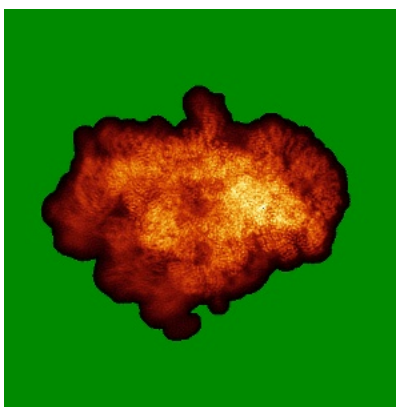
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [\(i\)](#)

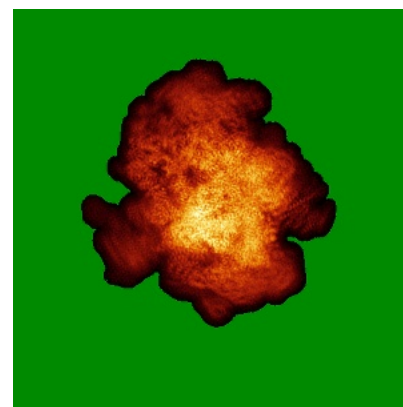
6.4.1 Primary map



X



Y

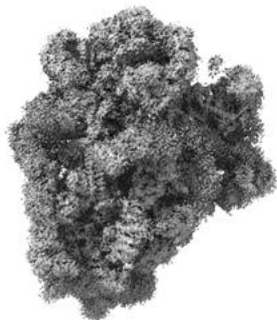


Z

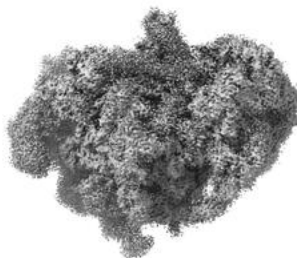
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

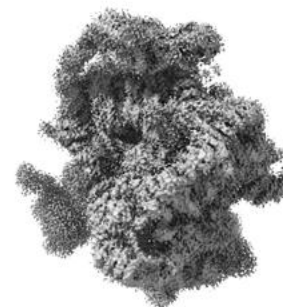
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

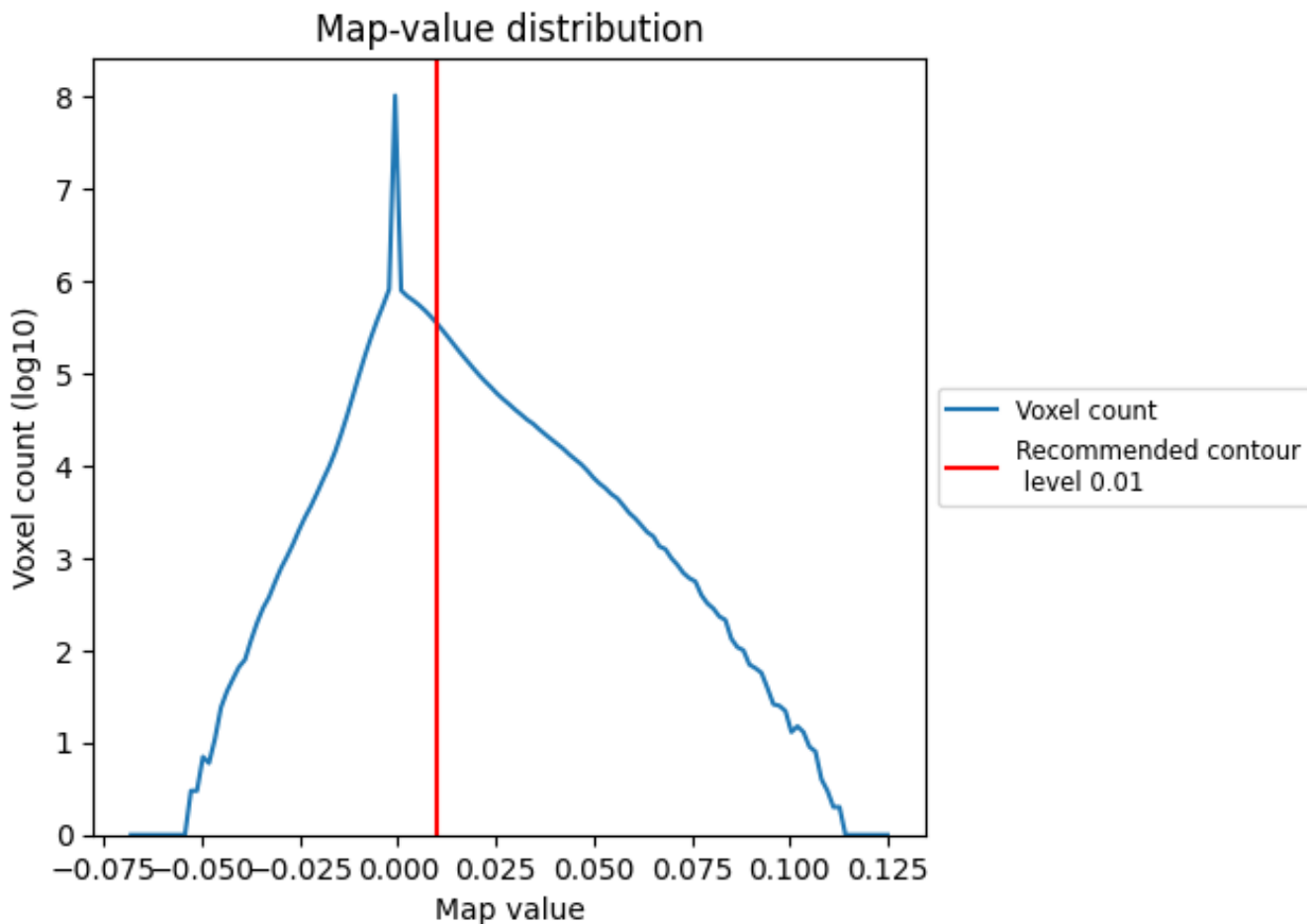
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

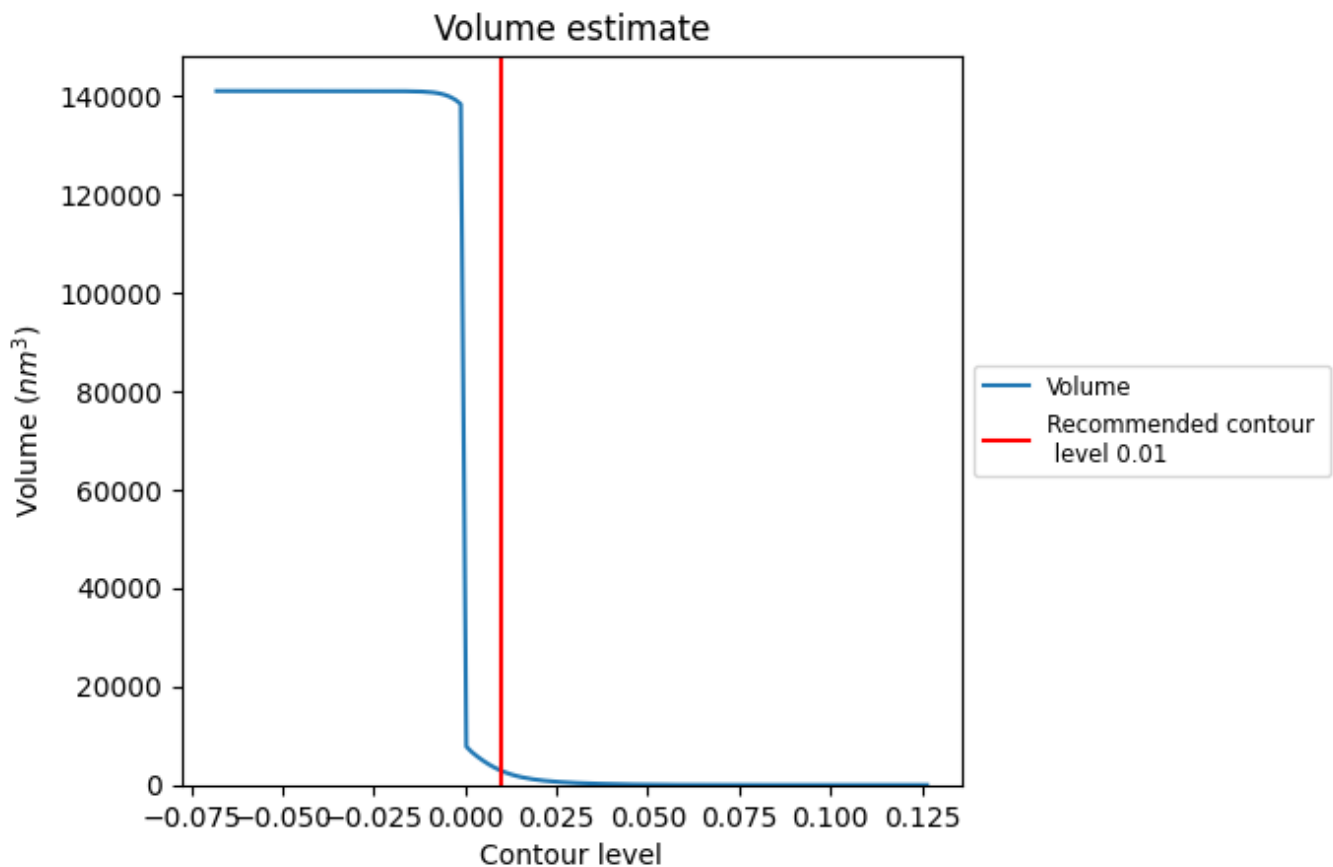
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

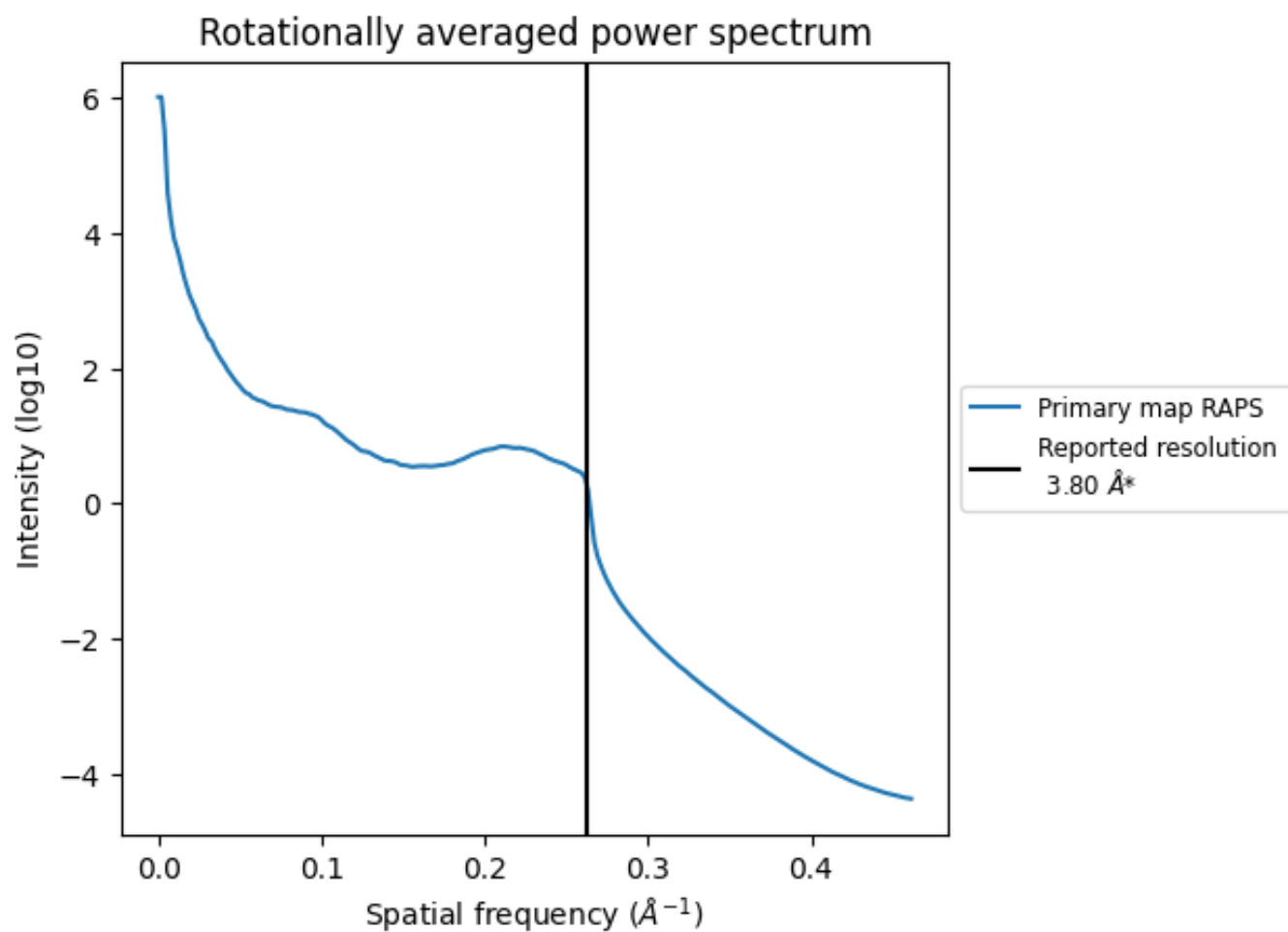
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 2852 nm^3 ; this corresponds to an approximate mass of 2576 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

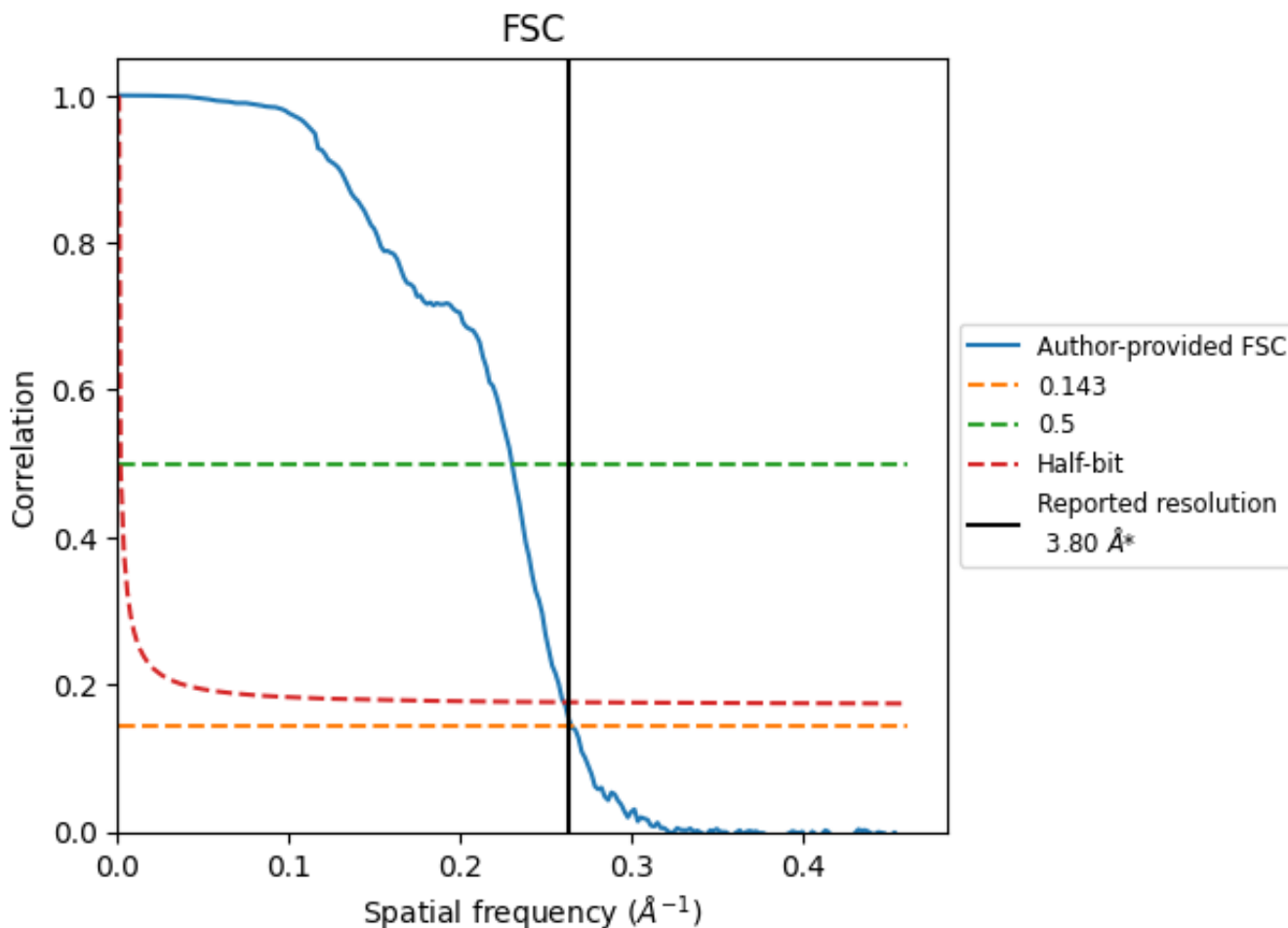


*Reported resolution corresponds to spatial frequency of 0.263\AA^{-1}

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.263 Å⁻¹

8.2 Resolution estimates [i](#)

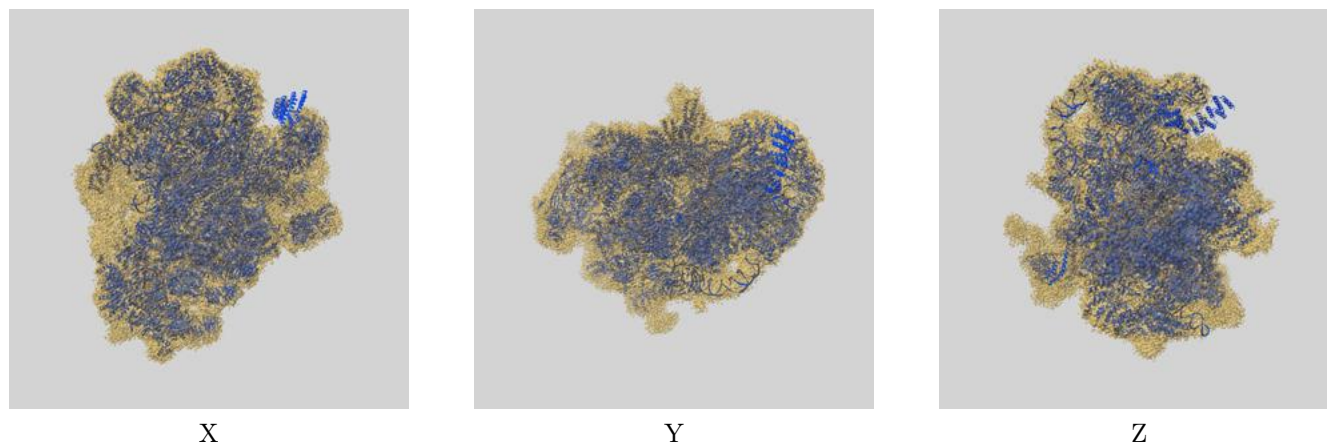
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	3.77	4.34	3.84
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

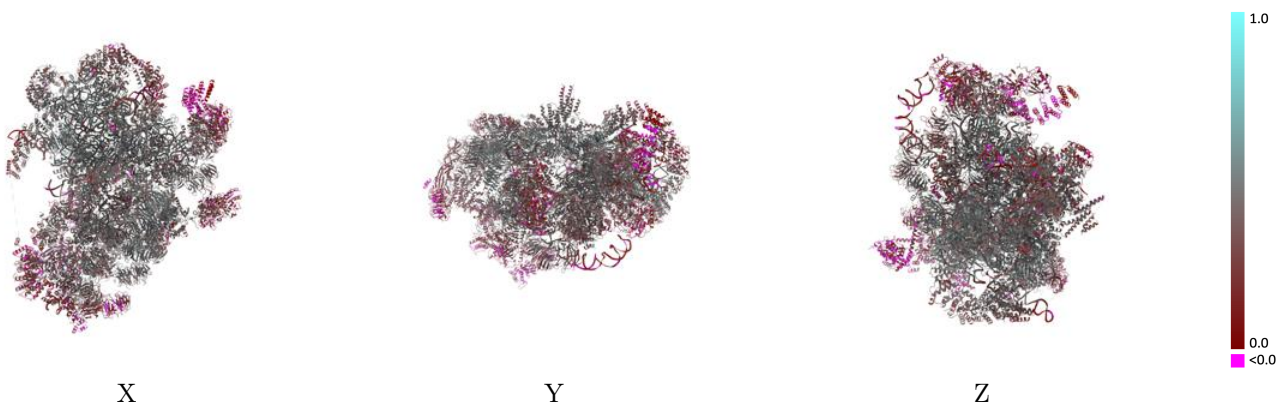
This section contains information regarding the fit between EMDB map EMD-11360 and PDB model 6ZQD. Per-residue inclusion information can be found in section 3 on page 16.

9.1 Map-model overlay [i](#)



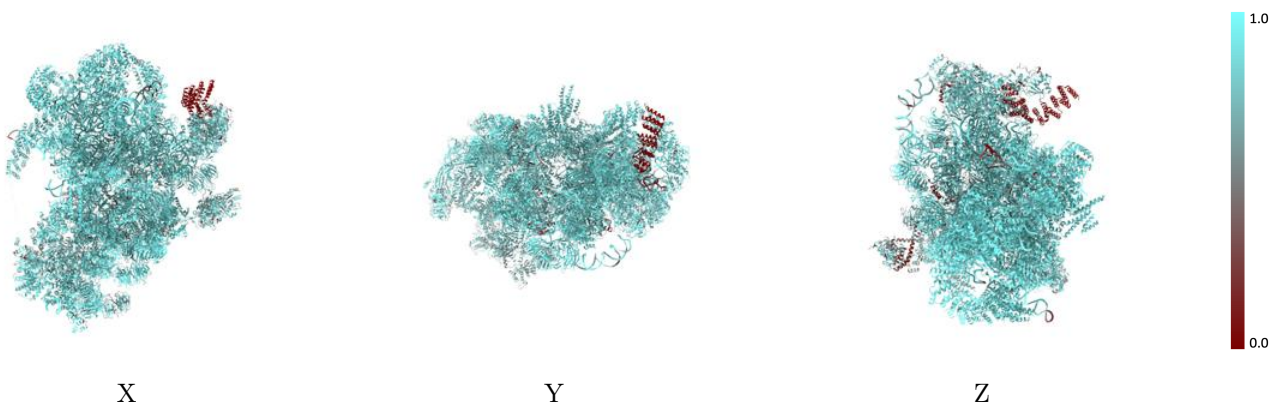
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



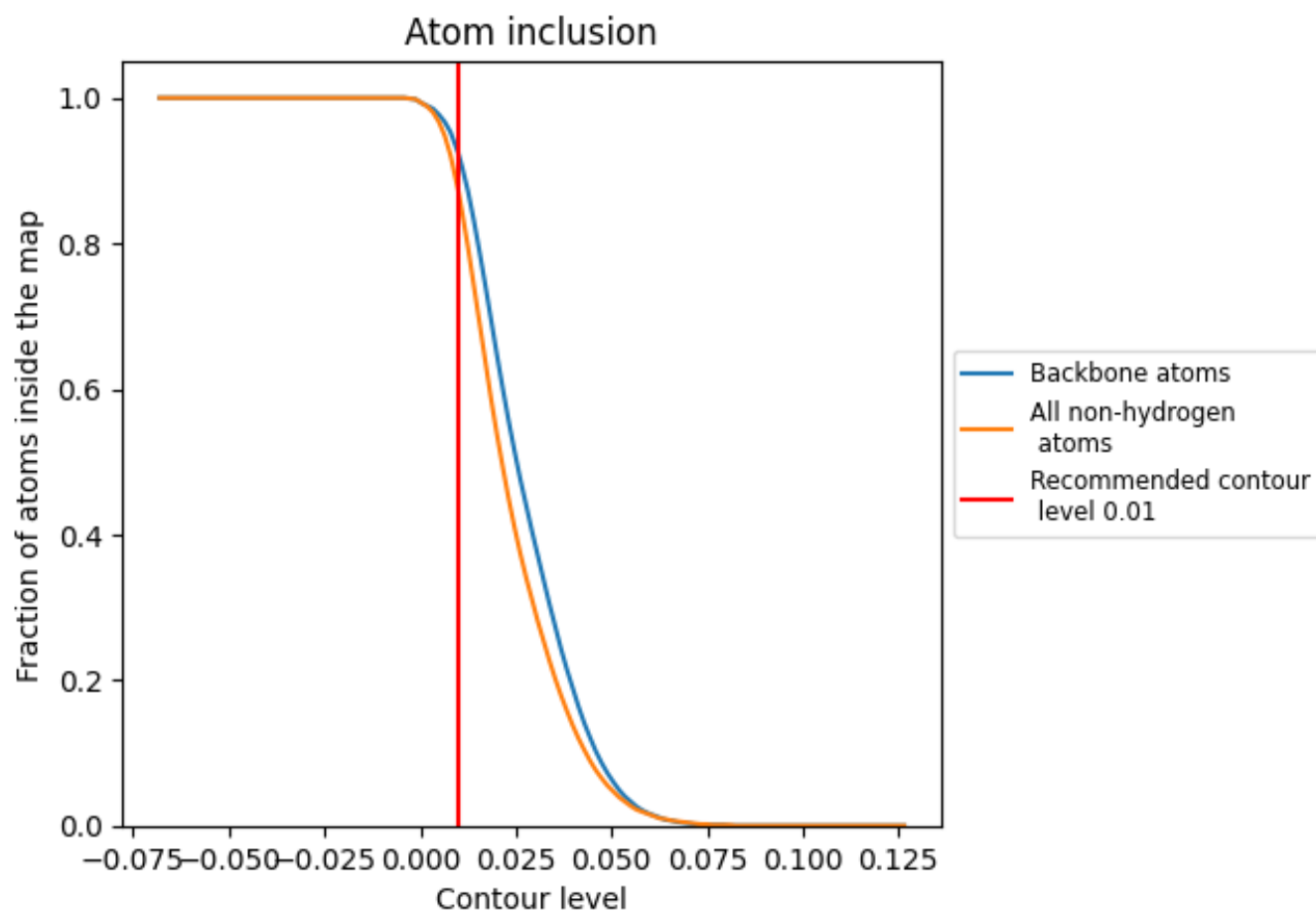
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.01).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 87% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

































































The table lists the average atom inclusion at the recommended contour level (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8710	 0.3870
CA	 0.9180	 0.5020
CB	 0.8960	 0.4430
CD	 0.9050	 0.4450
CE	 0.8640	 0.3960
CF	 0.9130	 0.4630
CG	 0.9170	 0.4750
CH	 0.9360	 0.4820
CI	 0.8230	 0.4020
CJ	 0.8630	 0.4600
CK	 0.8700	 0.4460
CL	 0.8990	 0.4660
CM	 0.9290	 0.4760
CN	 0.7520	 0.2680
D2	 0.8420	 0.2530
D3	 0.9420	 0.4040
D4	 0.8730	 0.3400
DA	 0.8840	 0.4580
DE	 0.9490	 0.5170
DF	 0.9100	 0.4710
DG	 0.9600	 0.4750
DH	 0.9060	 0.4330
DI	 0.9420	 0.4880
DJ	 0.9080	 0.5000
DL	 0.9540	 0.5110
DN	 0.9150	 0.4710
DO	 0.9200	 0.4600
DQ	 0.9360	 0.4940
DS	 0.8230	 0.3540
DT	 0.8780	 0.4290
DW	 0.9410	 0.5120
DX	 0.9030	 0.4850
DY	 0.9290	 0.5080
Db	 0.9370	 0.4970
Dc	 0.9160	 0.4830



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Chain	Atom inclusion	Q-score
JD	 0.6920	 0.2290
JF	 0.6590	 0.1780
JG	 0.7600	 0.2840
JH	 0.6170	 0.0740
JI	 0.0270	 0.0110
JJ	 0.8990	 0.4490
JL	 0.7640	 0.3440
JM	 0.8520	 0.4380
JP	 0.8950	 0.5000
UA	 0.9150	 0.4790
UB	 0.6440	 0.1960
UC	 0.8710	 0.4760
UD	 0.9010	 0.3780
UE	 0.8810	 0.3810
UF	 0.9150	 0.4150
UG	 0.8720	 0.4690
UH	 0.7860	 0.1730
UI	 0.8730	 0.2260
UJ	 0.8630	 0.3470
UK	 0.8600	 0.4230
UL	 0.9210	 0.4060
UM	 0.8860	 0.3680
UN	 0.8280	 0.4420
UO	 0.8630	 0.3290
UP	 0.7870	 0.3570
UQ	 0.8870	 0.3330
UR	 0.9060	 0.4530
US	 0.6880	 0.1740
UT	 0.9050	 0.3900
UU	 0.9190	 0.4570
UV	 0.7920	 0.2930
UX	 0.9140	 0.4930