



Full wwPDB EM Validation Report ⓘ

Aug 26, 2026 – 01:36 am BST

PDB ID : 9SUM / pdb_00009sum
EMDB ID : EMD-55225
Title : CryoEM structure of Candida auris 80S ribosome in complex with Cycloheximide and Geneticin G418
Authors : Atamas, A.; Stetsenko, A.; Incarnato, D.; Macia Valero, A.; Rogachev, A.; Billerbeck, S.; Guskov, A.
Deposited on : 2025-09-29
Resolution : 1.99 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:

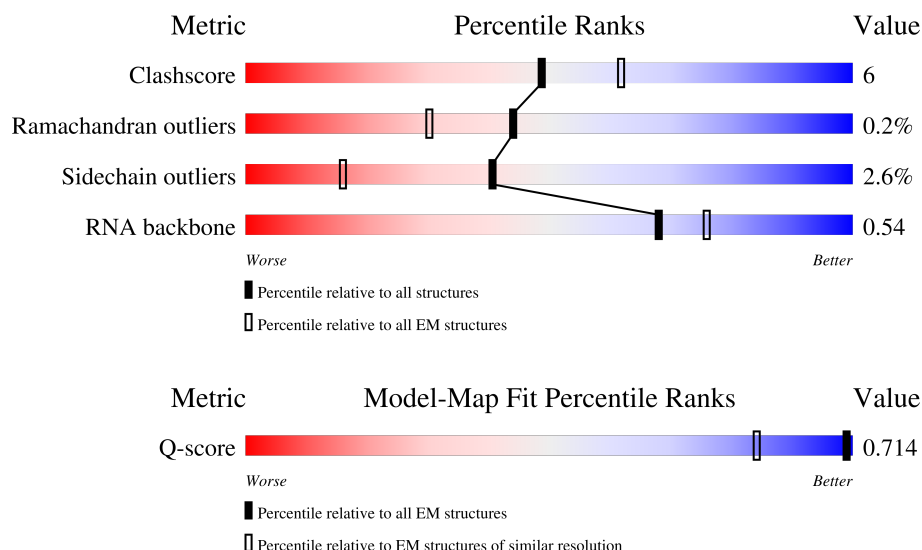
EMDB validation analysis : 0.0.1.dev133
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

1 Overall quality at a glance

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

The reported resolution of this entry is 1.99 Å.

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



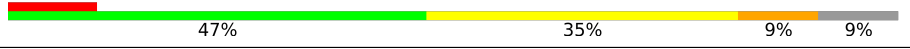
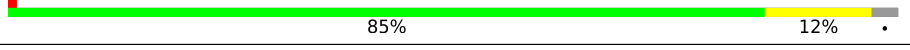
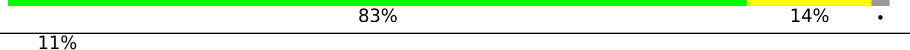
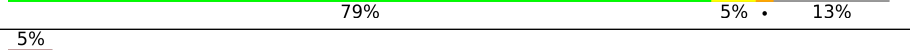
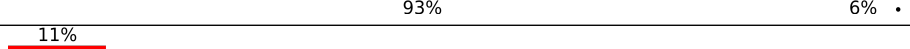
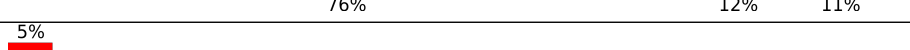
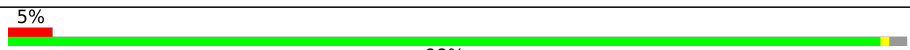
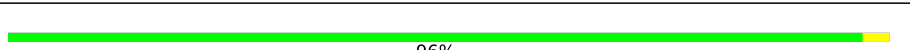
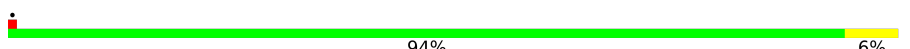
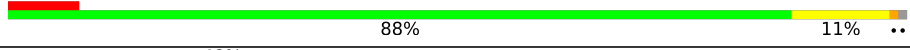
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	1416 (1.50 - 2.49)

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	1	76	
2	2	3	
3	A	3283	

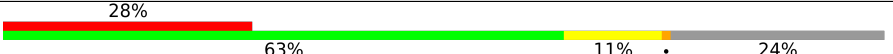
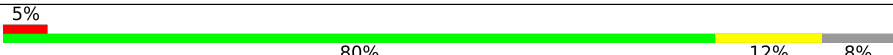
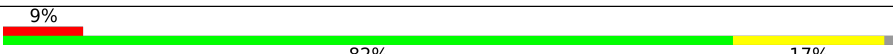
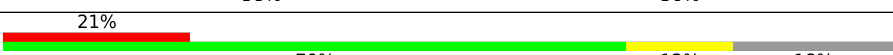
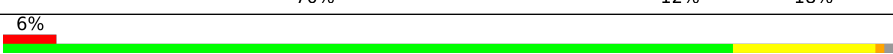
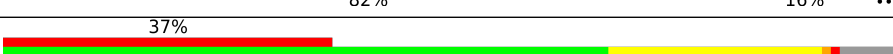
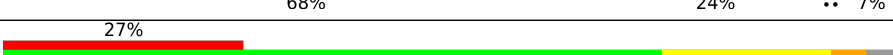
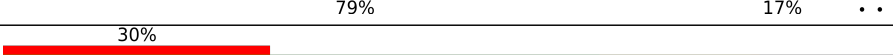
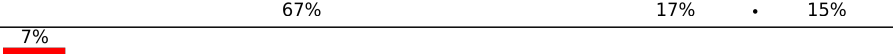
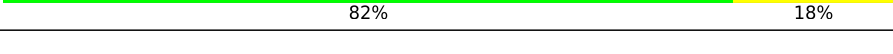
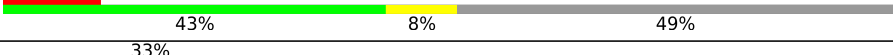
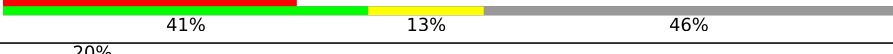
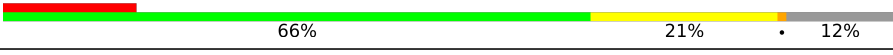
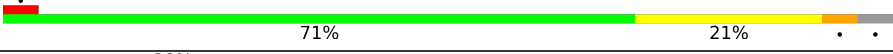
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	B	122	
5	C	158	
6	CA	1775	
7	D	254	
8	E	389	
9	F	363	
10	G	298	
11	H	165	
12	I	241	
13	J	263	
14	K	191	
15	L	220	
16	M	172	
17	N	198	
18	O	131	
19	P	204	
20	Q	200	
21	R	185	
22	S	186	
23	T	208	
24	U	186	
25	V	160	
26	W	119	
27	X	137	
28	Y	156	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	Z	140	
30	ZA	204	
31	ZB	189	
32	ZC	123	
33	ZD	155	
34	ZE	151	
35	ZF	132	
36	ZG	141	
37	ZH	142	
38	ZI	137	
39	ZJ	145	
40	ZK	145	
41	ZL	118	
42	ZM	87	
43	ZO	130	
44	ZP	145	
45	ZQ	135	
46	ZR	130	
47	ZS	182	
48	ZT	82	
49	ZU	67	
50	ZV	56	
51	ZW	63	
52	ZY	315	
53	a	127	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
54	b	136	
55	c	149	
56	d	76	
57	e	105	
58	f	113	
59	g	149	
60	h	107	
61	i	115	
62	j	120	
63	k	99	
64	l	85	
65	m	78	
66	n	51	
67	o	52	
68	p	25	
69	q	106	
70	r	99	
71	s	264	
72	t	256	
73	u	249	
74	v	250	
75	w	264	
76	x	223	
77	y	236	
78	z	188	

2 Entry composition [i](#)

There are 84 unique types of molecules in this entry. The entry contains 203205 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	1	35	Total	C	N	O	P	0	0
			748	334	137	242	35		

- Molecule 2 is a RNA chain called RNA (5'-R(P*CP*GP*A)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
2	2	3	Total	C	N	O	P	0	0
			65	29	13	20	3		

- Molecule 3 is a RNA chain called 25S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	2991	Total	C	N	O	P	0	0
			64000	28576	11576	20857	2991		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	B	122	Total	C	N	O	P	0	0
			2609	1164	470	853	122		

- Molecule 5 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	C	154	Total	C	N	O	P	0	0
			3274	1464	577	1079	154		

- Molecule 6 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	CA	1621	Total	C	N	O	P	0	0
			34619	15468	6203	11327	1621		

- Molecule 7 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	D	247	Total	C	N	O	S	0	0
			1873	1170	377	324	2		

- Molecule 8 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	E	387	Total	C	N	O	S	0	0
			3087	1957	579	544	7		

- Molecule 9 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	F	361	Total	C	N	O	S	0	0
			2786	1751	534	498	3		

- Molecule 10 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	G	291	Total	C	N	O	S	0	0
			2370	1506	411	449	4		

- Molecule 11 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	H	143	Total	C	N	O	0	0
			1126	725	204	197		

- Molecule 12 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	I	237	Total	C	N	O	S	0	0
			1913	1230	345	336	2		

- Molecule 13 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	J	233	Total	C	N	O	S	0	0
			1847	1182	339	322	4		

- Molecule 14 is a protein called 60S ribosomal protein L9-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	190	Total	C	N	O	S	0	0
			1519	965	272	278	4		

- Molecule 15 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	L	206	Total	C	N	O	S	0	0
			1680	1062	320	291	7		

- Molecule 16 is a protein called 60S ribosomal protein L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	M	170	Total	C	N	O	S	0	0
			1364	854	261	244	5		

- Molecule 17 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	N	194	Total	C	N	O	S	0	0
			1538	962	306	269	1		

- Molecule 18 is a protein called Large ribosomal subunit protein eL14 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	O	129	Total	C	N	O	S	0	0
			1030	657	194	178	1		

- Molecule 19 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	P	203	Total	C	N	O	S	0	0
			1703	1066	356	279	2		

- Molecule 20 is a protein called 60S ribosomal protein L16-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	Q	199	Total	C	N	O	S	0	0
			1587	1020	299	266	2		

- Molecule 21 is a protein called 60S ribosomal protein L17-B.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	R	172	Total	C	N	O	0	0
			1384	861	281	242		

- Molecule 22 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
22	S	185	Total	C	N	O	0	0
			1456	919	293	244		

- Molecule 23 is a protein called Ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	T	182	Total	C	N	O	S	0	0
			1469	908	316	241	4		

- Molecule 24 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	U	172	Total	C	N	O	S	0	0
			1448	941	261	242	4		

- Molecule 25 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	V	159	Total	C	N	O	S	0	0
			1282	816	242	221	3		

- Molecule 26 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	W	107	Total	C	N	O	0	0
			871	566	148	157		

- Molecule 27 is a protein called 60S ribosomal protein L23-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	X	136	Total	C	N	O	S	0	0
			1005	631	188	178	8		

- Molecule 28 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Y	62	Total	C	N	O	S	0	0
			517	330	103	83	1		

- Molecule 29 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Z	117	Total	C	N	O	S	0	0
			934	594	171	169			

- Molecule 30 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	ZA	194	Total	C	N	O	S	0	0
			1545	958	309	276	2		

- Molecule 31 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	ZB	178	Total	C	N	O	S	0	0
			1459	921	287	249	2		

- Molecule 32 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	ZC	93	Total	C	N	O	S	0	0
			786	513	128	144	1		

- Molecule 33 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	ZD	143	Total	C	N	O	S	0	0
			1150	735	219	193	3		

- Molecule 34 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	ZE	150	Total	C	N	O	S	0	0
			1192	759	222	210	1		

- Molecule 35 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	ZF	127	Total	C	N	O	S	0	0
			945	578	188	176	3		

- Molecule 36 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	ZG	116	Total	C	N	O	S	0	0
			904	582	161	156	5		

- Molecule 37 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	ZH	141	Total	C	N	O	S	0	0
			1100	705	201	193	1		

- Molecule 38 is a protein called 40S ribosomal protein S17-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	ZI	128	Total	C	N	O	S	0	0
			1027	644	190	192	1		

- Molecule 39 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	ZJ	141	Total	C	N	O	S	0	0
			1162	727	228	203	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
40	ZK	141	Total	C	N	O	S	1	0
			1110	696	210	204			

- Molecule 41 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	ZL	100	Total	C	N	O	S	0	0
			782	496	142	142	2		

- Molecule 42 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	ZM	87	Total	C	N	O	S	0	0
			678	415	127	134	2		

- Molecule 43 is a protein called 40S ribosomal protein S22.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	ZO	129	Total	C	N	O	S	0	0
			1032	656	190	183	3		

- Molecule 44 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	ZP	143	Total	C	N	O	S	0	0
			1109	698	219	190	2		

- Molecule 45 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	ZQ	130	Total	C	N	O	S	0	0
			1060	670	205	185			

- Molecule 46 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	ZR	66	Total	C	N	O	S	0	0
			526	338	95	92	1		

- Molecule 47 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	ZS	98	Total	C	N	O	S	0	0
			785	484	166	129	6		

- Molecule 48 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	ZT	81	Total	C	N	O	S	0	0
			617	383	112	115	7		

- Molecule 49 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	ZU	59	Total	C	N	O	S	0	0
			458	281	89	86	2		

- Molecule 50 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	ZV	54	Total	C	N	O	S	0	0
			449	278	93	74	4		

- Molecule 51 is a protein called Small ribosomal subunit protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	ZW	54	Total	C	N	O	S	0	0
			432	270	87	73	2		

- Molecule 52 is a protein called Small ribosomal subunit protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	ZY	305	Total	C	N	O	S	0	0
			2359	1494	402	459	4		

- Molecule 53 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	a	126	Total	C	N	O	S	0	0
			994	624	188	181	1		

- Molecule 54 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	b	135	Total	C	N	O	S	0	0
			1081	691	207	182	1		

- Molecule 55 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	c	148	Total	C	N	O	S	1	0
			1183	747	236	198	2		

- Molecule 56 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
56	d	58	Total	C	N	O	0	0
			481	292	110	79		

- Molecule 57 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	e	99	Total	C	N	O	S	0	0
			744	476	125	139	4		

- Molecule 58 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	f	107	Total	C	N	O	S	0	0
			877	553	171	150	3		

- Molecule 59 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	g	123	Total	C	N	O	S	0	0
			1002	629	201	170	2		

- Molecule 60 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	h	106	Total	C	N	O	S	0	0
			859	544	168	146	1		

- Molecule 61 is a protein called 60S ribosomal protein L34-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	i	109	Total	C	N	O	S	0	0
			865	538	172	151	4		

- Molecule 62 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms				AltConf	Trace
62	j	118	Total	C	N	O	0	0
			956	603	191	162		

- Molecule 63 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	k	98	Total	C	N	O	S	0	0
			774	479	163	131	1		

- Molecule 64 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	l	83	Total	C	N	O	S	0	0
			654	396	142	109	7		

- Molecule 65 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	m	77	Total	C	N	O		0	0
			617	396	112	109			

- Molecule 66 is a protein called Large ribosomal subunit protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	n	50	Total	C	N	O		0	0
			442	277	98	67			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
n	50	ASN	GLY	conflict	UNP A0A1D8PDT4

- Molecule 67 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	o	51	Total	C	N	O	S	0	0
			411	255	85	66	5		

- Molecule 68 is a protein called Small ribosomal subunit protein eS32.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	p	24	Total	C	N	O	S	0	0
			227	138	61	27	1		

- Molecule 69 is a protein called 60S ribosomal protein L44.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	q	103	Total	C	N	O	S	0	0
			822	517	164	136	5		

- Molecule 70 is a protein called 60S ribosomal protein L43.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	r	90	Total	C	N	O	S	0	0
			691	425	141	121	4		

- Molecule 71 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	s	210	Total	C	N	O	S	0	0
			1655	1059	288	305	3		

- Molecule 72 is a protein called Small ribosomal subunit protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	t	210	Total	C	N	O	S	0	0
			1685	1070	310	301	4		

- Molecule 73 is a protein called Rps21 ribosomal protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	u	216	Total	C	N	O	S	0	0
			1636	1048	287	296	5		

- Molecule 74 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	v	209	Total	C	N	O	S	0	0
			1619	1033	297	284	5		

- Molecule 75 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	w	260	Total	C	N	O	S	0	0
			2056	1303	386	361	6		

- Molecule 76 is a protein called 40S ribosomal protein uS7 (formerly S5).

Mol	Chain	Residues	Atoms					AltConf	Trace
76	x	206	Total	C	N	O	S	0	0
			1610	1008	300	298	4		

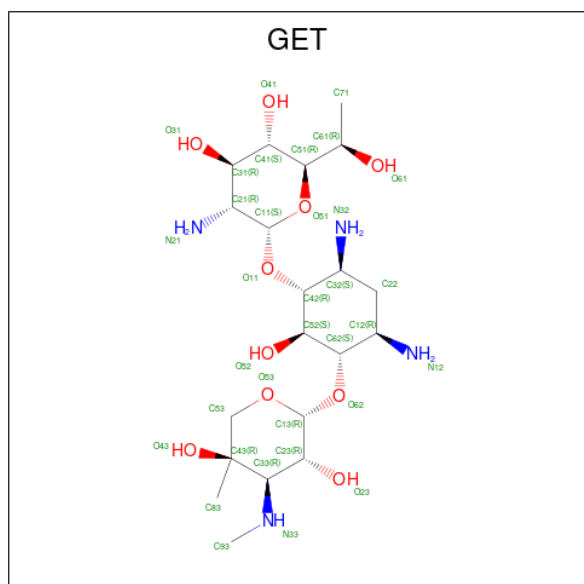
- Molecule 77 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	y	226	Total	C	N	O	S	0	0
			1819	1128	355	331	5		

- Molecule 78 is a protein called 40S ribosomal protein eS7 (formerly S7).

Mol	Chain	Residues	Atoms					AltConf	Trace
78	z	182	Total	C	N	O		0	0
			1466	939	264	263			

- Molecule 79 is GENETICIN (CCD ID: GET) (formula: $C_{20}H_{40}N_4O_{10}$).



Mol	Chain	Residues	Atoms					AltConf
79	A	1	Total	C	N	O		0
			34	20	4	10		
79	A	1	Total	C	N	O		0
			34	20	4	10		
79	A	1	Total	C	N	O		0
			34	20	4	10		
79	A	1	Total	C	N	O		0
			34	20	4	10		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms				AltConf
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	
79	A	1	Total	C	N	O	0
			34	20	4	10	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms				AltConf
79	A	1	Total 34	C 20	N 4	O 10	0
79	A	1	Total 34	C 20	N 4	O 10	0
79	A	1	Total 34	C 20	N 4	O 10	0
79	A	1	Total 34	C 20	N 4	O 10	0
79	A	1	Total 34	C 20	N 4	O 10	0
79	A	1	Total 34	C 20	N 4	O 10	0
79	B	1	Total 34	C 20	N 4	O 10	0
79	C	1	Total 34	C 20	N 4	O 10	0
79	C	1	Total 34	C 20	N 4	O 10	0
79	C	1	Total 34	C 20	N 4	O 10	0
79	C	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0
79	CA	1	Total 34	C 20	N 4	O 10	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms				AltConf
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	CA	1	Total	C	N	O	0
			34	20	4	10	
79	E	1	Total	C	N	O	0
			34	20	4	10	
79	T	1	Total	C	N	O	0
			34	20	4	10	

- Molecule 80 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

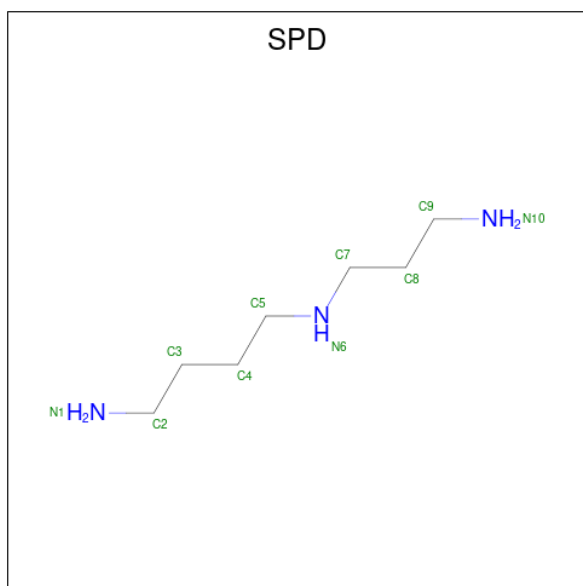
Mol	Chain	Residues	Atoms		AltConf
80	A	166	Total	Mg	0
			166	166	
80	B	2	Total	Mg	0
			2	2	
80	C	2	Total	Mg	0
			2	2	
80	CA	73	Total	Mg	0
			73	73	
80	E	1	Total	Mg	0
			1	1	
80	P	2	Total	Mg	0
			2	2	
80	R	1	Total	Mg	0
			1	1	
80	X	1	Total	Mg	0
			1	1	

Continued on next page...

Continued from previous page...

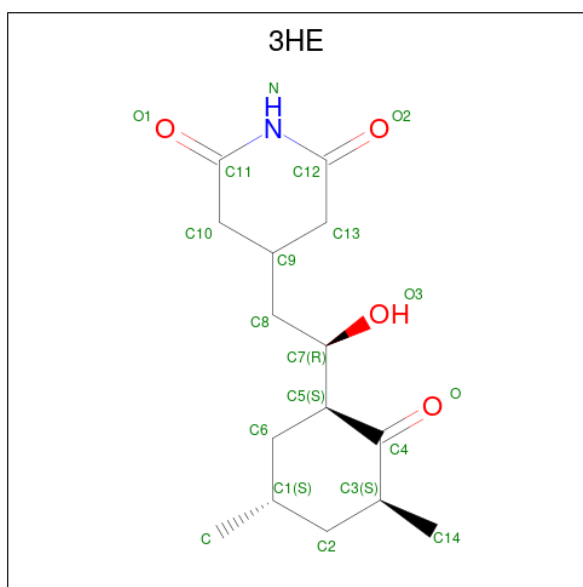
Mol	Chain	Residues	Atoms		AltConf
80	ZA	1	Total	Mg	0
			1	1	
80	ZK	1	Total	Mg	0
			1	1	
80	ZQ	1	Total	Mg	0
			1	1	
80	k	1	Total	Mg	0
			1	1	
80	x	1	Total	Mg	0
			1	1	

- Molecule 81 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$).



Mol	Chain	Residues	Atoms			AltConf
81	A	1	Total	C	N	0
			10	7	3	
81	A	1	Total	C	N	0
			10	7	3	
81	CA	1	Total	C	N	0
			10	7	3	

- Molecule 82 is 4-{(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl}piperidine-2,6-dione (CCD ID: 3HE) (formula: $C_{15}H_{23}NO_4$).



Mol	Chain	Residues	Atoms				AltConf
82	A	1	Total	C	N	O	0
			20	15	1	4	

- Molecule 83 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
83	ZS	1	Total	Zn	0
			1	1	
83	ZT	1	Total	Zn	0
			1	1	
83	ZV	1	Total	Zn	0
			1	1	
83	i	1	Total	Zn	0
			1	1	
83	l	1	Total	Zn	0
			1	1	
83	o	1	Total	Zn	0
			1	1	
83	q	1	Total	Zn	0
			1	1	
83	r	1	Total	Zn	0
			1	1	

- Molecule 84 is water.

Mol	Chain	Residues	Atoms		AltConf
84	A	5741	Total 5741	O 5741	0
84	B	58	Total 58	O 58	0
84	C	243	Total 243	O 243	0
84	CA	1595	Total 1595	O 1595	0
84	D	131	Total 131	O 131	0
84	E	153	Total 153	O 153	0
84	F	136	Total 136	O 136	0
84	G	36	Total 36	O 36	0
84	H	9	Total 9	O 9	0
84	I	70	Total 70	O 70	0
84	J	27	Total 27	O 27	0
84	K	17	Total 17	O 17	0
84	L	25	Total 25	O 25	0
84	M	1	Total 1	O 1	0
84	N	81	Total 81	O 81	0
84	O	21	Total 21	O 21	0
84	P	132	Total 132	O 132	0
84	Q	80	Total 80	O 80	0
84	R	60	Total 60	O 60	0
84	S	67	Total 67	O 67	0
84	T	47	Total 47	O 47	0
84	U	49	Total 49	O 49	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
84	V	49	Total 49	O 49	0
84	X	43	Total 43	O 43	0
84	Y	26	Total 26	O 26	0
84	Z	30	Total 30	O 30	0
84	ZA	55	Total 55	O 55	0
84	ZB	24	Total 24	O 24	0
84	ZD	70	Total 70	O 70	0
84	ZE	33	Total 33	O 33	0
84	ZF	1	Total 1	O 1	0
84	ZM	28	Total 28	O 28	0
84	ZO	69	Total 69	O 69	0
84	ZP	43	Total 43	O 43	0
84	ZQ	11	Total 11	O 11	0
84	ZS	7	Total 7	O 7	0
84	ZT	15	Total 15	O 15	0
84	ZW	3	Total 3	O 3	0
84	a	23	Total 23	O 23	0
84	b	8	Total 8	O 8	0
84	c	81	Total 81	O 81	0
84	d	24	Total 24	O 24	0
84	e	10	Total 10	O 10	0

Continued on next page...

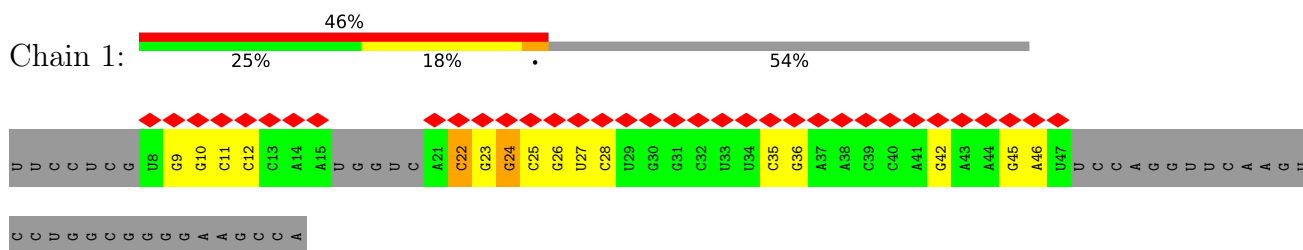
Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
84	f	18	Total 18	O 18	0
84	g	67	Total 67	O 67	0
84	h	49	Total 49	O 49	0
84	i	40	Total 40	O 40	0
84	j	32	Total 32	O 32	0
84	k	26	Total 26	O 26	0
84	l	47	Total 47	O 47	0
84	m	4	Total 4	O 4	0
84	n	19	Total 19	O 19	0
84	o	5	Total 5	O 5	0
84	p	2	Total 2	O 2	0
84	q	38	Total 38	O 38	0
84	r	30	Total 30	O 30	0
84	s	11	Total 11	O 11	0
84	t	1	Total 1	O 1	0
84	u	45	Total 45	O 45	0
84	w	50	Total 50	O 50	0
84	y	29	Total 29	O 29	0
84	z	14	Total 14	O 14	0

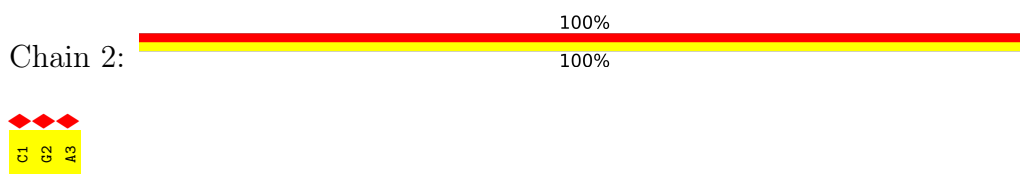
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

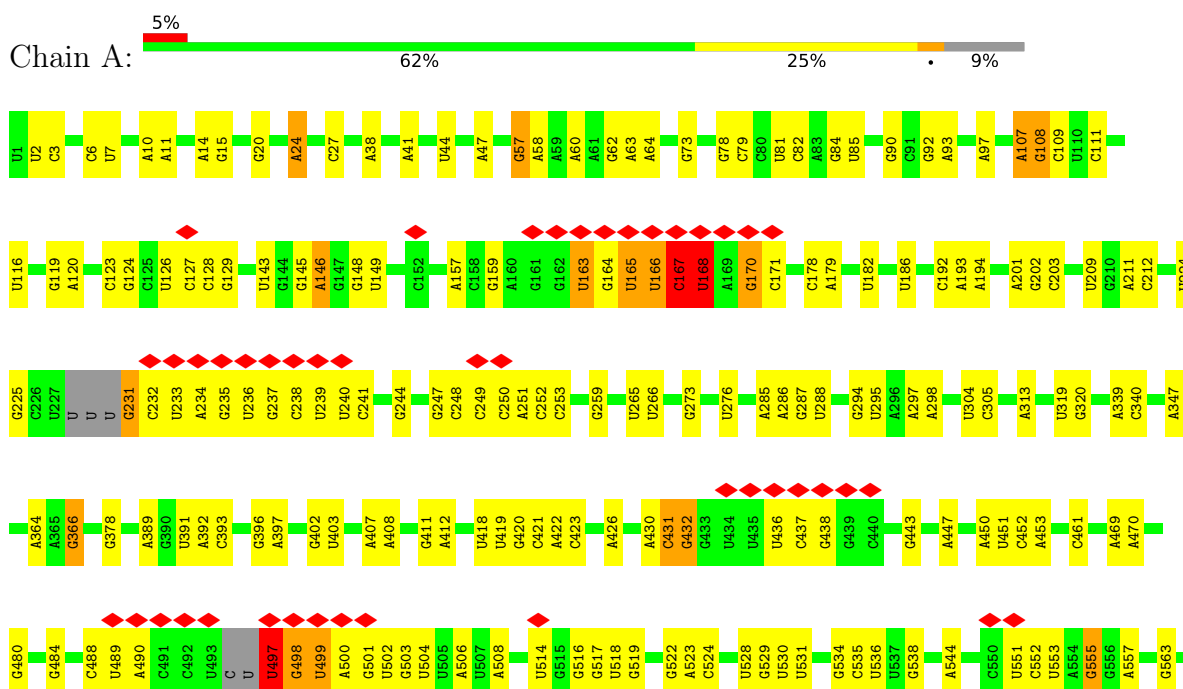
- Molecule 1: P-site tRNA



- Molecule 2: RNA (5'-R(P*CP*GP*A)-3')

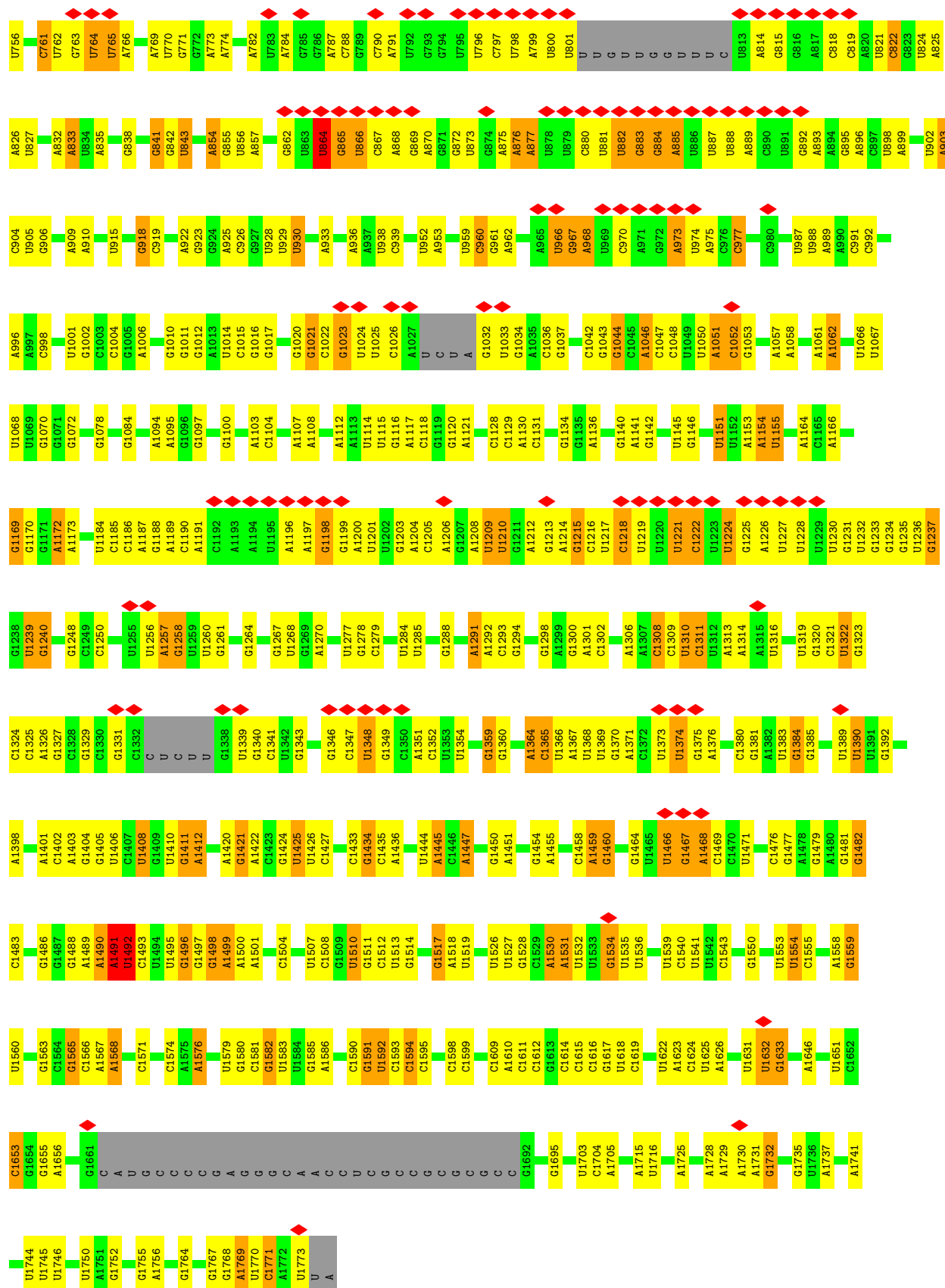


- Molecule 3: 25S rRNA



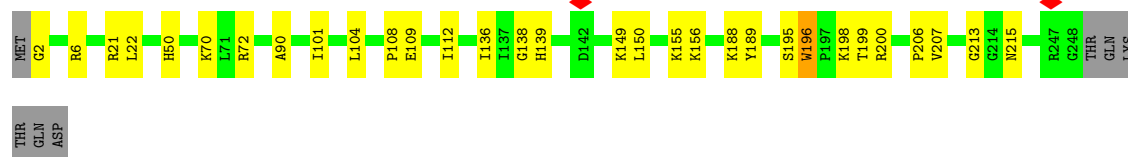






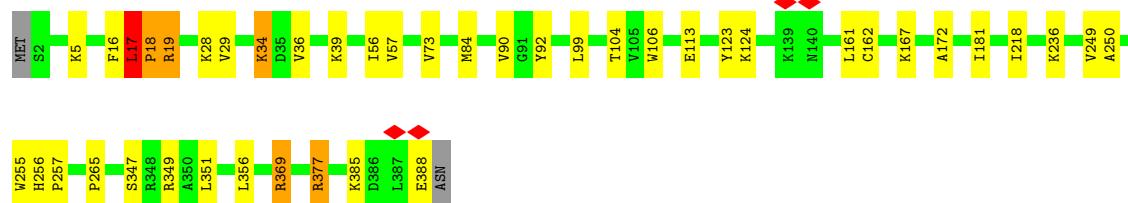
- Molecule 7: 60S ribosomal protein L2-A

Chain D:  85% 12% .



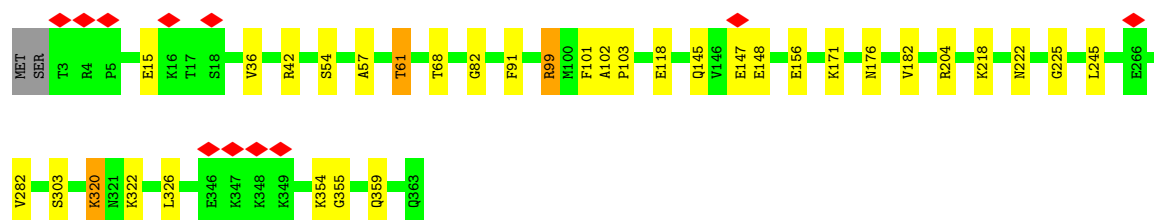
- Molecule 8: Large ribosomal subunit protein uL3

Chain E:  88% 10% ..



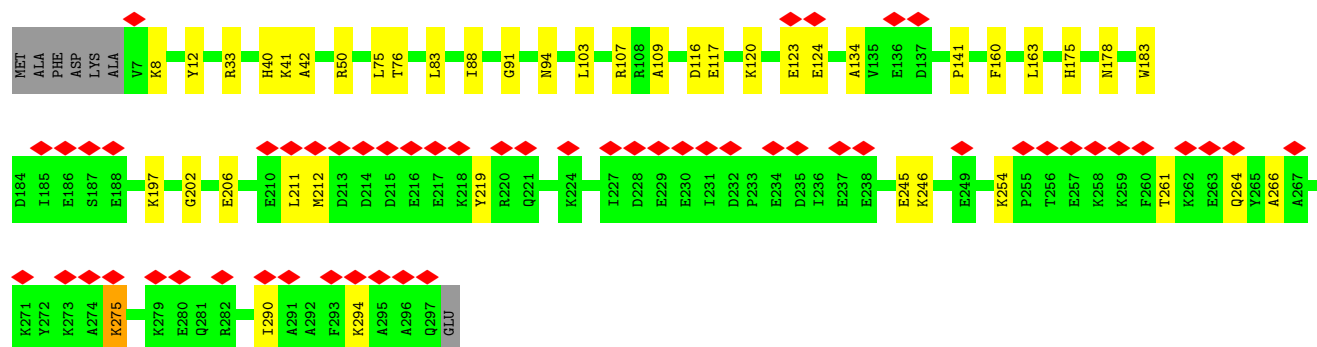
- Molecule 9: 60S ribosomal protein L4-A

Chain F:  90% 9% ..



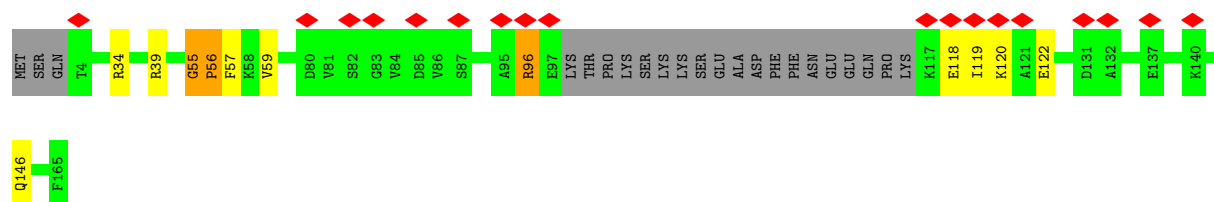
- Molecule 10: 60S ribosomal protein L5

Chain G:  19% 83% 14% .

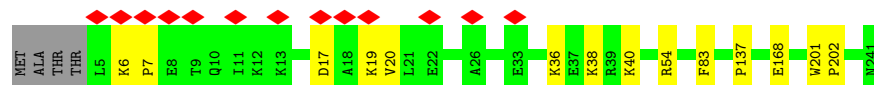
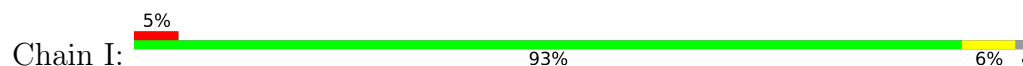


- Molecule 11: 60S ribosomal protein L6

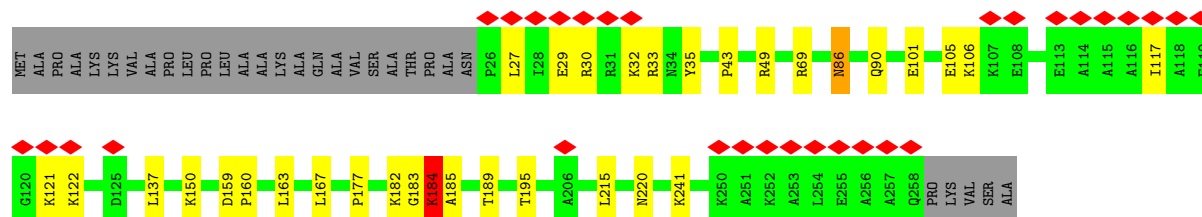
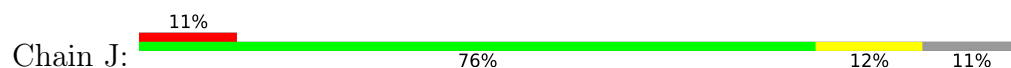
Chain H:  11% 79% 5% 13%



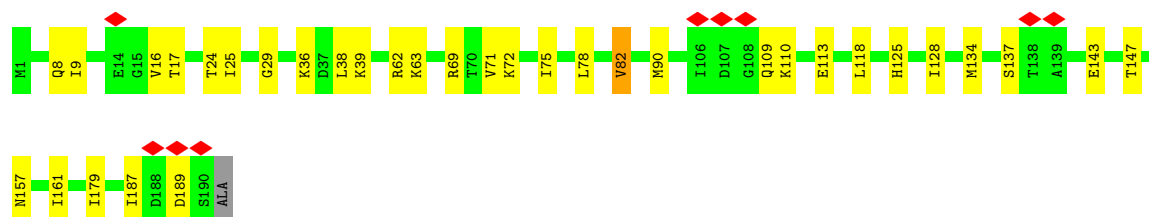
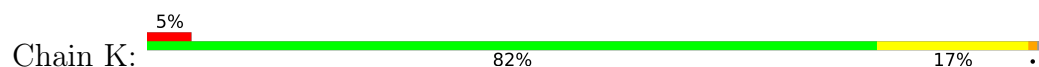
- Molecule 12: 60S ribosomal protein L7



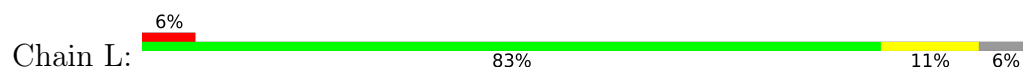
- Molecule 13: 60S ribosomal protein L8



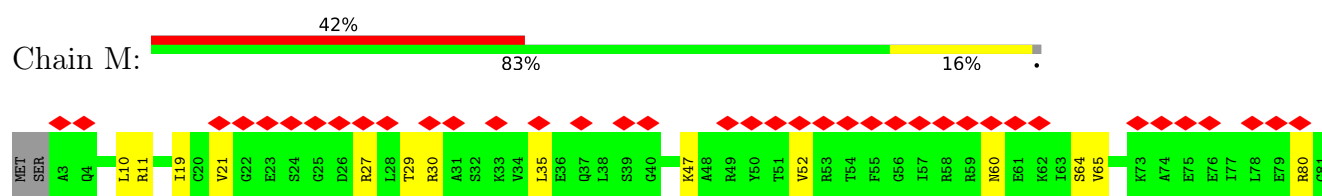
- Molecule 14: 60S ribosomal protein L9-B



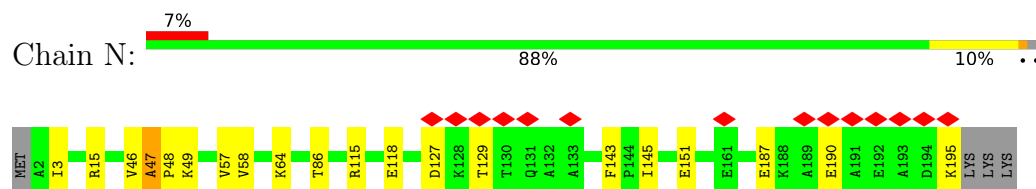
- Molecule 15: 60S ribosomal protein L10



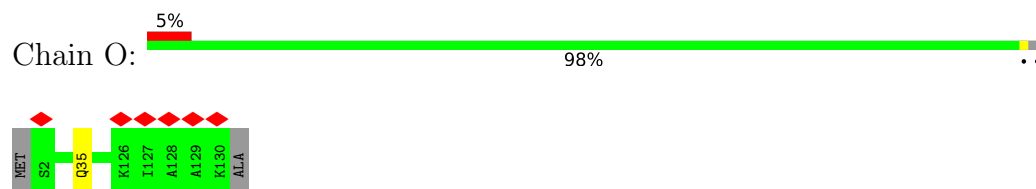
- Molecule 16: 60S ribosomal protein L11-A



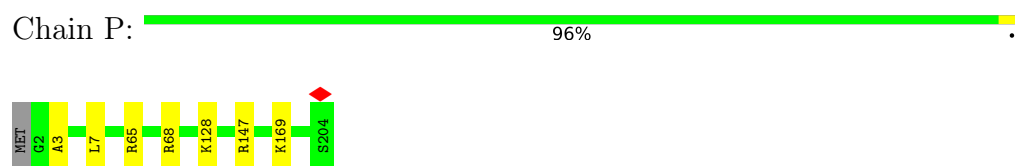
- Molecule 17: 60S ribosomal protein L13



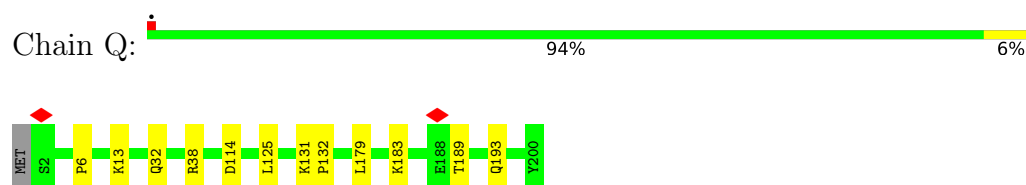
- Molecule 18: Large ribosomal subunit protein eL14 domain-containing protein



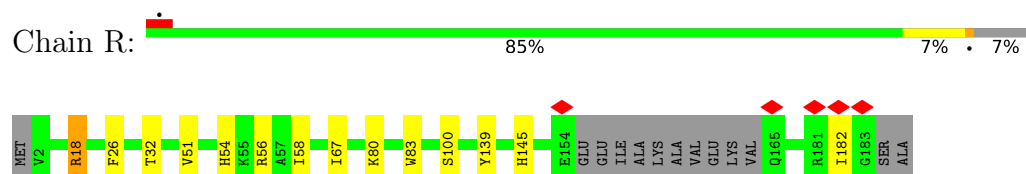
- Molecule 19: Ribosomal protein L15



- Molecule 20: 60S ribosomal protein L16-B

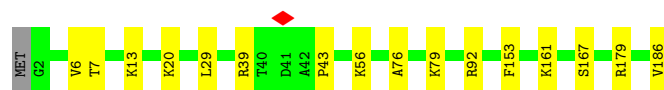


- Molecule 21: 60S ribosomal protein L17-B



- Molecule 22: 60S ribosomal protein L18-A

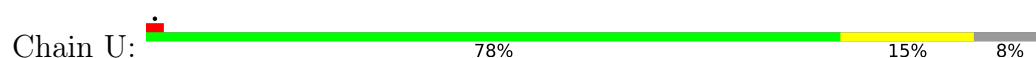




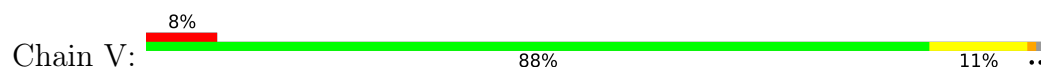
- Molecule 23: Ribosomal protein L19



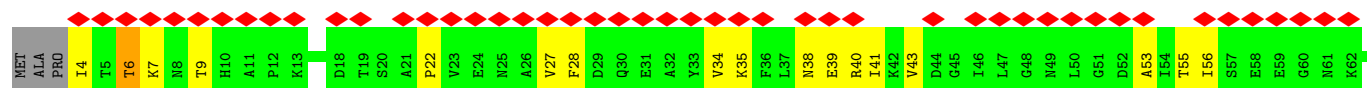
- Molecule 24: 60S ribosomal protein L20-A



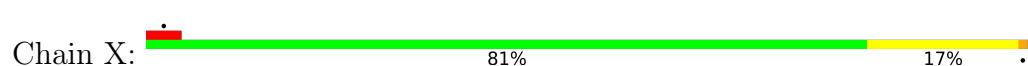
- Molecule 25: 60S ribosomal protein L21-A

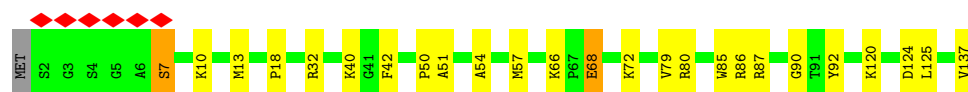


- Molecule 26: 60S ribosomal protein L22



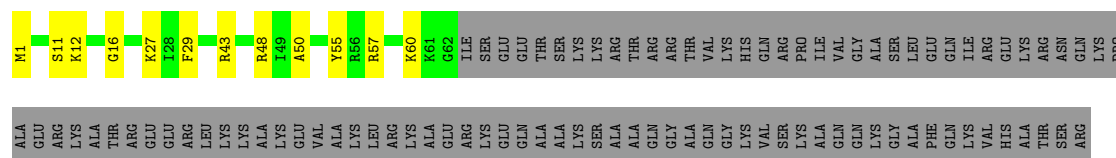
- Molecule 27: 60S ribosomal protein L23-B





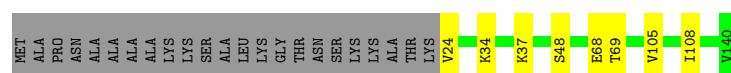
- Molecule 28: 60S ribosomal protein L24

Chain Y: 32% 8% 60%



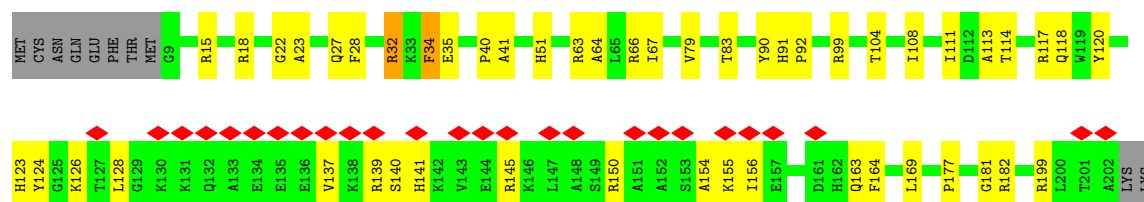
- Molecule 29: Large ribosomal subunit protein uL23

Chain Z: 78% 6% 16%



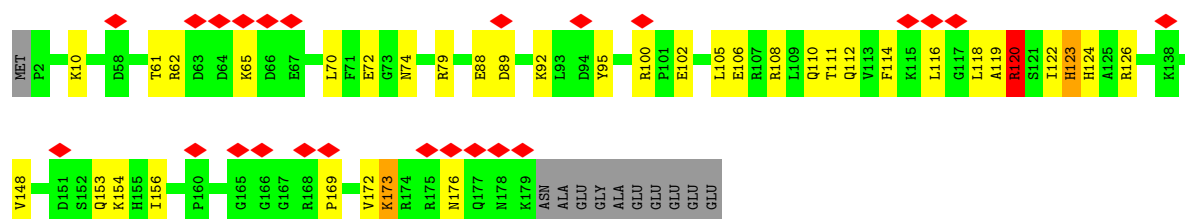
- Molecule 30: 40S ribosomal protein S8

Chain ZA: 13% 71% 24% 5%



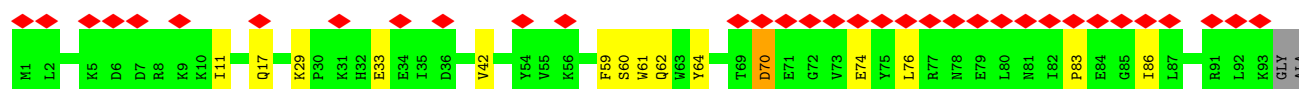
- Molecule 31: 40S ribosomal protein S9-A

Chain ZB: 13% 75% 18% 6%



- Molecule 32: 40S ribosomal protein S10-A

Chain ZC: 28% 63% 11% 24%



PRO ALA ALA GLN ARG PRO PRO PRO ILE ARG GLY GLY PRO GLN ARG PHE ARG GLY GLY ASP SER SER TYR ARG ARG ALA ARG ASP

- Molecule 33: 40S ribosomal protein S11-A

Chain ZD: 

MET ALA THR GLU L5 T6 R11 A12 K24 T25 E26 G27 N28 K29 K30 K36 K43 T49 E50 M80 T83 P95 R103 P113 R116 C128 L131 S132 K133 K146 A147 LYS SER LYS GLN PHE THR LYS PHE

- Molecule 34: 40S ribosomal protein S13

Chain ZE: 

MET G2 S7 ASP G8 K9 S14 A15 I16 F26 K27 L28 D31 G44 R55 D56 S61 Q62 A63 V66 T67 E83 D87 L88 Y89 K94 E103 R104 N105 R106 K107 D110 R114 P136 W139 A144 S147 A148 L149 V150 R151

- Molecule 35: Small ribosomal subunit protein uS11

Chain ZF: 

MET SER ALA ASP ARG S6 Q7 V8 F9 G10 V11 A12 R13 T14 Y15 A16 S17 F18 N19 D20 T21 F22 V23 H24 V25 T26 D27 L28 S29 G30 S31 E32 T33 I34 S35 R36 V37 T38 G39 G40 M41 K42 V43 K44 A45 D46 R47 D48 E49 S50 S51 P52 Y53 A54 A55 M56 L57 A58 A59 Q60

D61 V62 A63 A64 K65 C66 K67 E68 V69 G70 I71 T72 A73 V74 H75 V76 K77 I78 R79 A80 T81 G82 G83 T84 K85 T86 K87 T88 P89 G90 P91 G92 G93 Q94 S95 A96 L97 R98 A99 L100 A101 R102 S103 G104 L105 R106 I107 G108 R109 I110 E111 D112 V113 T114 P115 V116 P117 D119 S120

- Molecule 36: 40S ribosomal protein S15

Chain ZG: 

MET ALA THR ASN ARG LYS S14 F15 K18 D21 L22 E23 Q24 L25 L26 K27 L28 D29 T30 E31 E32 L36 V41 R42 R43 G50 P53 M54 R61 L65 A66 A67 P68 A69 N70 E71 K72 R81 M82 M83 E88 E106 I107

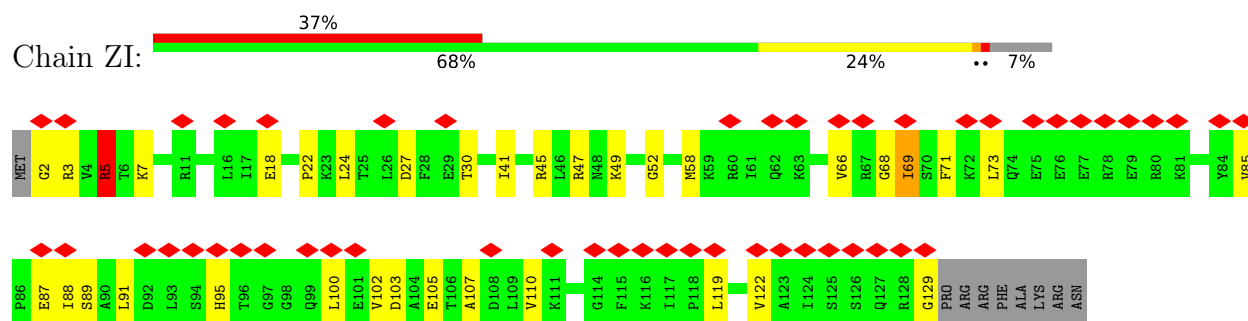
E110 M111 S120 R127 H128 G129 LYS ALA GLY ASN ALA SER SER ARG ARG PHE PHE PRO LEU ARG

- Molecule 37: Small ribosomal subunit protein uS9

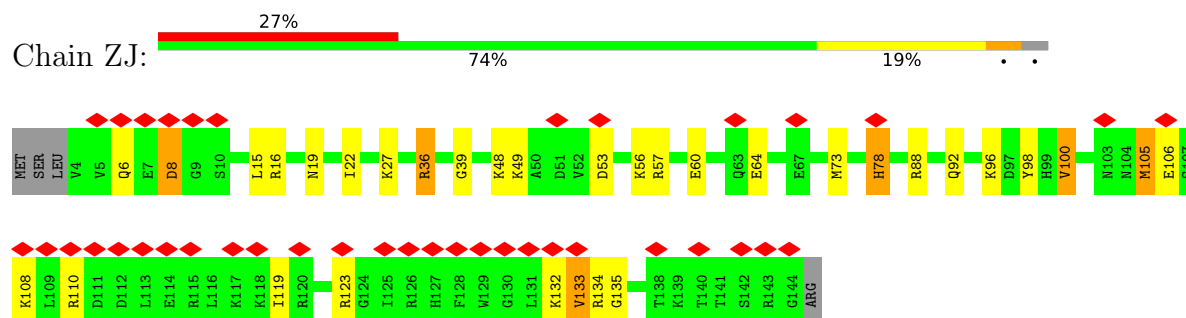
Chain ZH: 

MET S2 T3 T16 K22 K25 G26 L27 I28 K29 E39 P40 R44 P45 K46 V47 Y48 E49 D63 I64 Q82 L88 D97 E98 A99 E103 D112 K113 T114 V117 A118 R121 F128 R136 R142

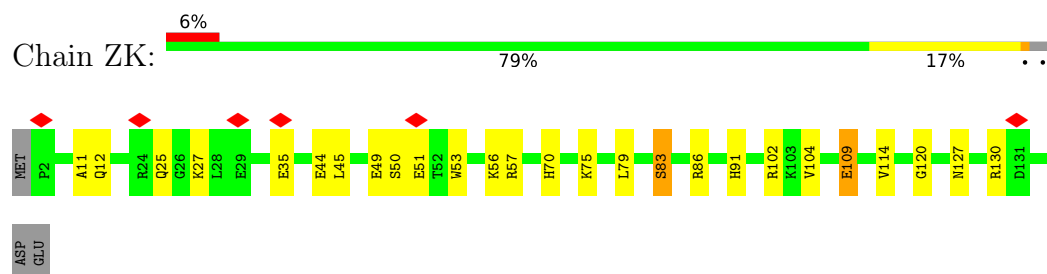
- Molecule 38: 40S ribosomal protein S17-B



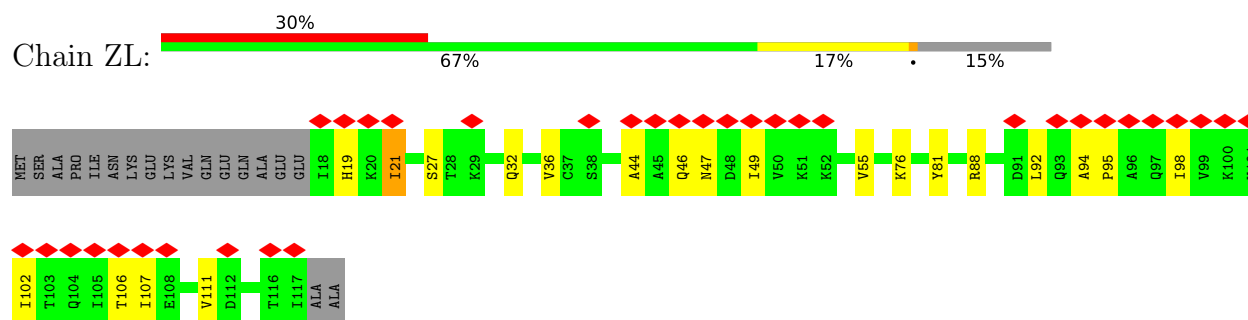
- Molecule 39: 40S ribosomal protein S18



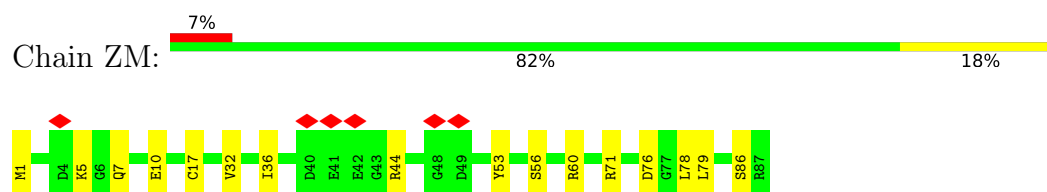
- Molecule 40: 40S ribosomal protein S19-A



- Molecule 41: Small ribosomal subunit protein uS10



- Molecule 42: 40S ribosomal protein S21



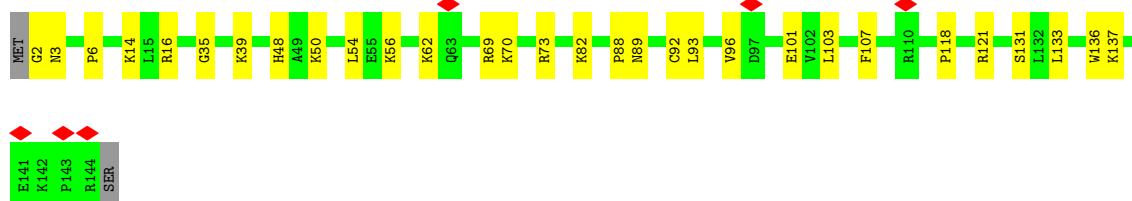
- Molecule 43: 40S ribosomal protein S22

Chain ZO:  79% 20%



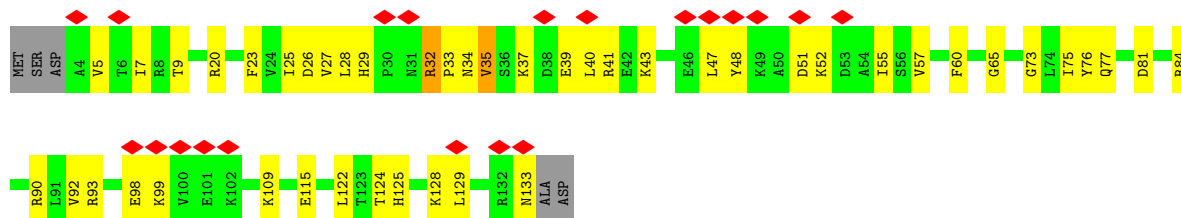
- Molecule 44: 40S ribosomal protein S23

Chain ZP:  78% 21%

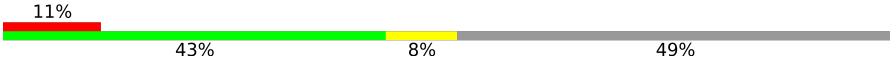


- Molecule 45: 40S ribosomal protein S24

Chain ZQ:  15% 62% 33%

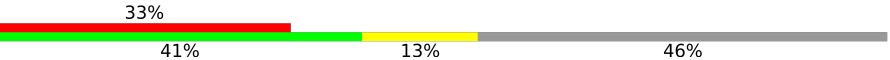


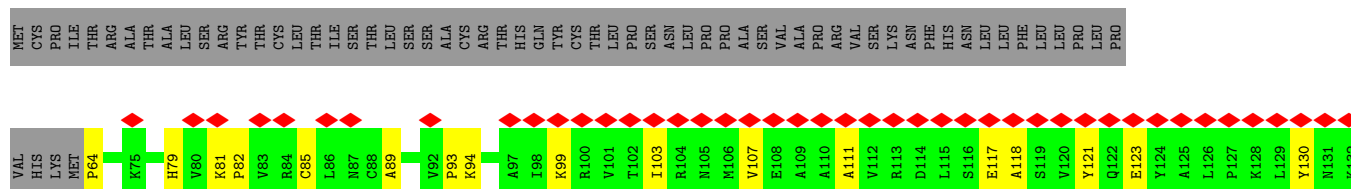
- Molecule 46: 40S ribosomal protein S25

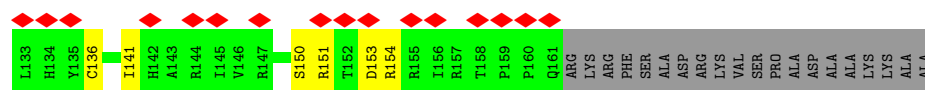
Chain ZR:  11% 43% 8% 49%



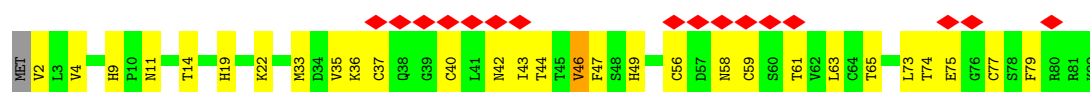
- Molecule 47: 40S ribosomal protein S26

Chain ZS:  33% 41% 13% 46%

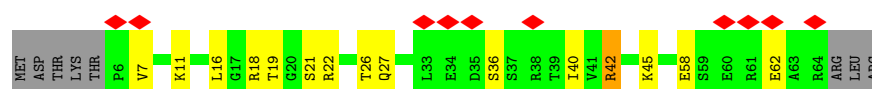




- Molecule 48: 40S ribosomal protein S27



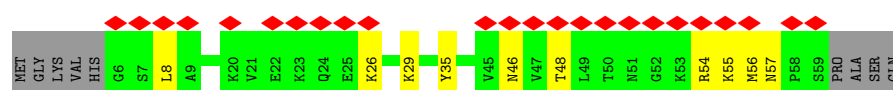
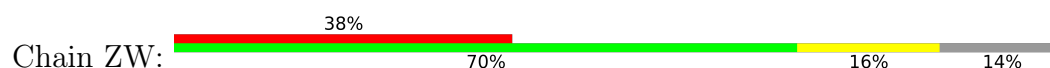
- Molecule 49: 40S ribosomal protein S28-A



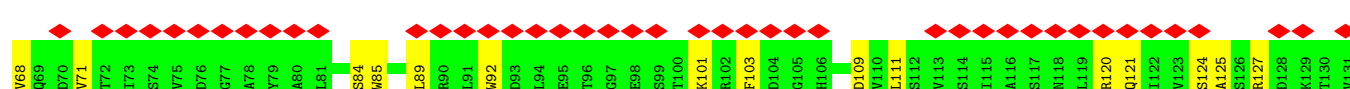
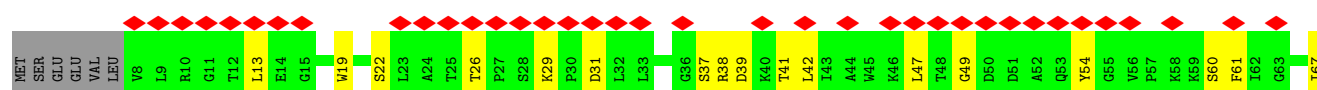
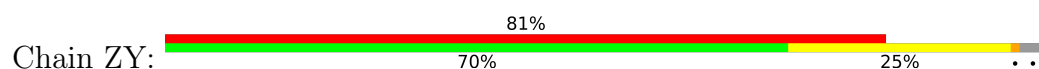
- Molecule 50: Small ribosomal subunit protein uS14

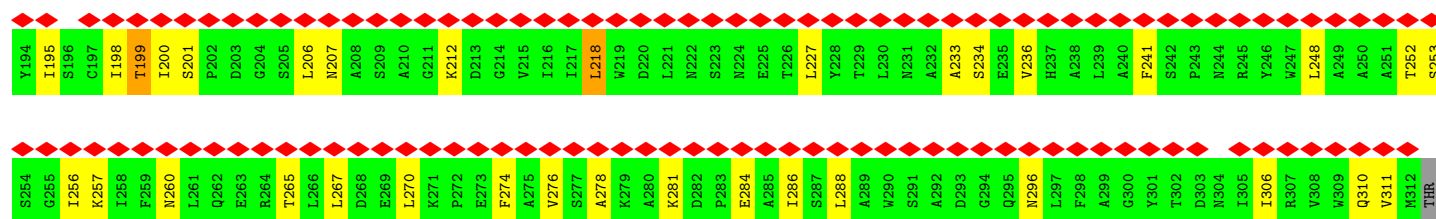


- Molecule 51: Small ribosomal subunit protein eS30



- Molecule 52: Small ribosomal subunit protein RACK1





SER
SER
ALA

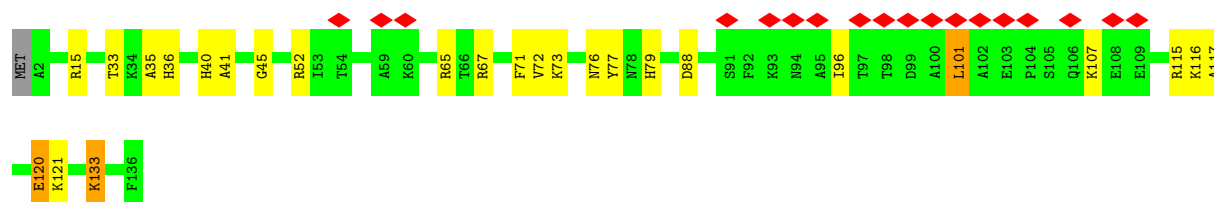
• Molecule 53: Ribosomal protein L24

Chain a: 81% 17% ..



• Molecule 54: 60S ribosomal protein L27

Chain b: 13% 80% 17% ..



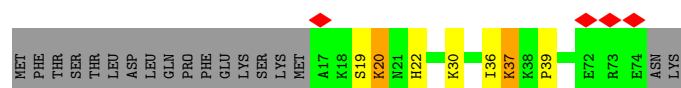
• Molecule 55: 60S ribosomal protein L28

Chain c: 87% 13% .



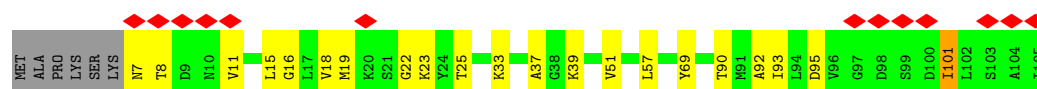
• Molecule 56: 60S ribosomal protein L29

Chain d: 5% 67% 7% 24%

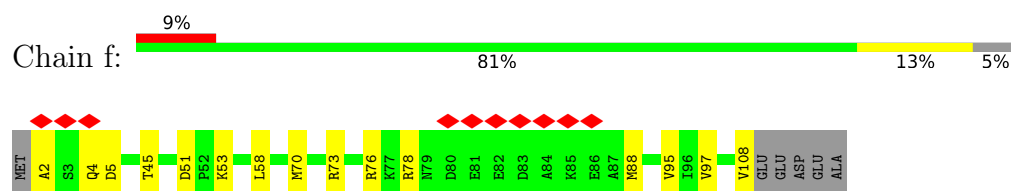


• Molecule 57: 60S ribosomal protein L30

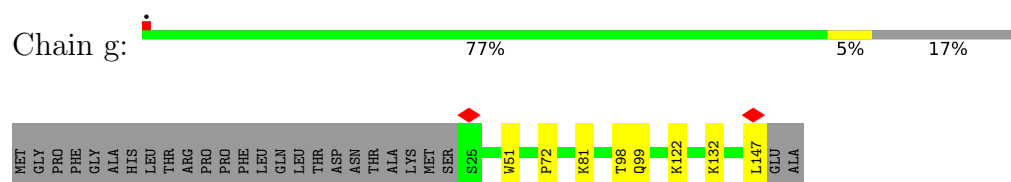
Chain e: 12% 74% 19% 6%



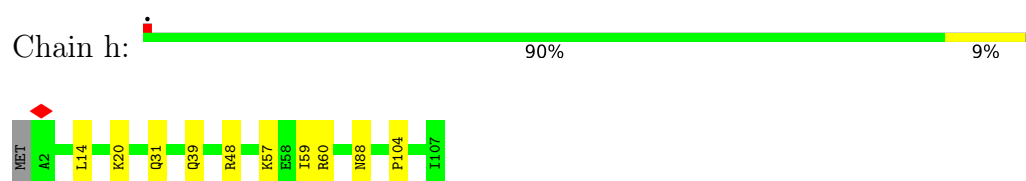
- Molecule 58: 60S ribosomal protein L31-A



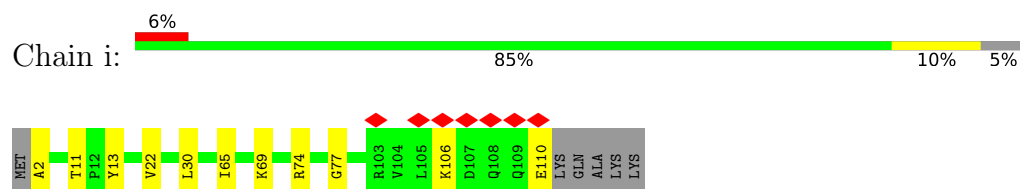
- Molecule 59: 60S ribosomal protein L32



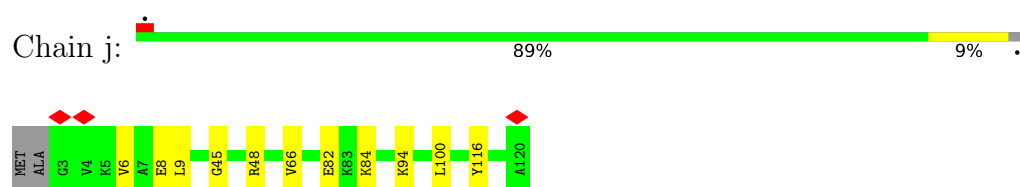
- Molecule 60: 60S ribosomal protein L33-A



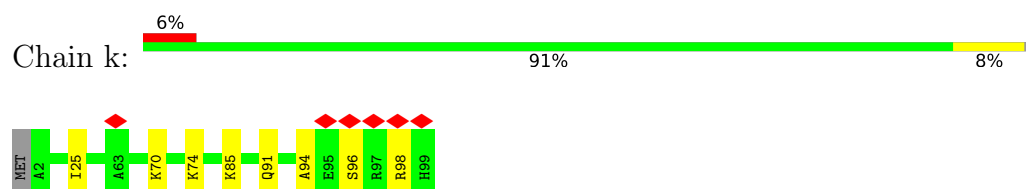
- Molecule 61: 60S ribosomal protein L34-B



- Molecule 62: 60S ribosomal protein L35

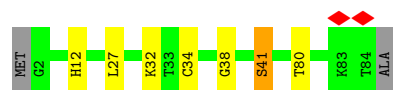


- Molecule 63: 60S ribosomal protein L36



- Molecule 64: Ribosomal protein L37

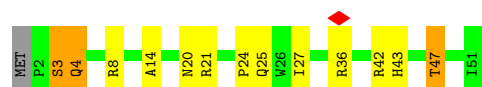




- Molecule 65: Large ribosomal subunit protein eL38



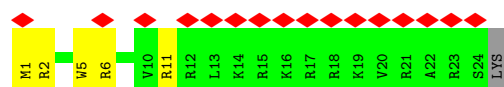
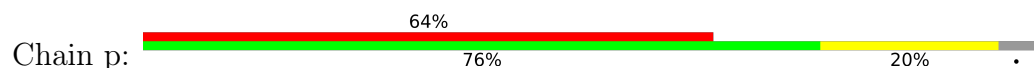
- Molecule 66: Large ribosomal subunit protein eL39



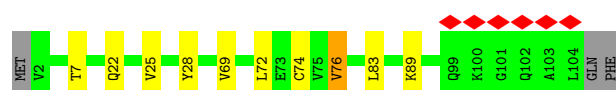
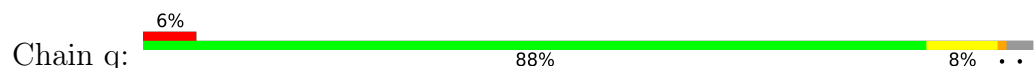
- Molecule 67: Large ribosomal subunit protein eL40



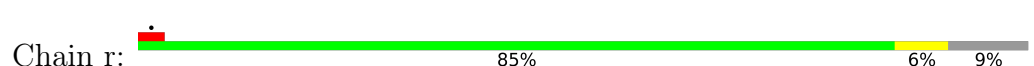
- Molecule 68: Small ribosomal subunit protein eS32



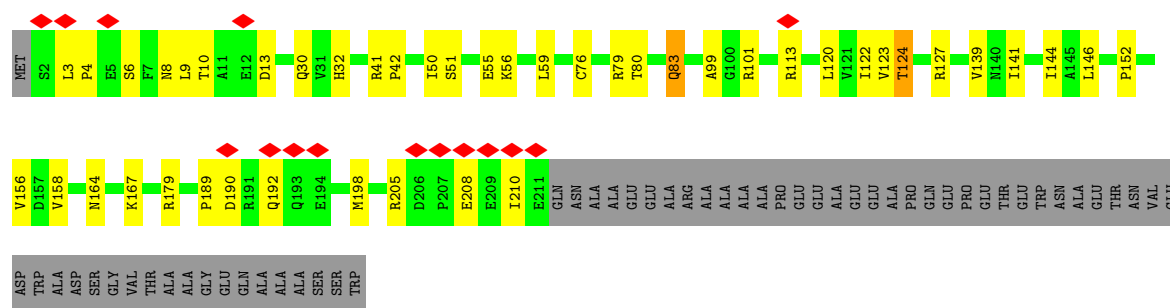
- Molecule 69: 60S ribosomal protein L44



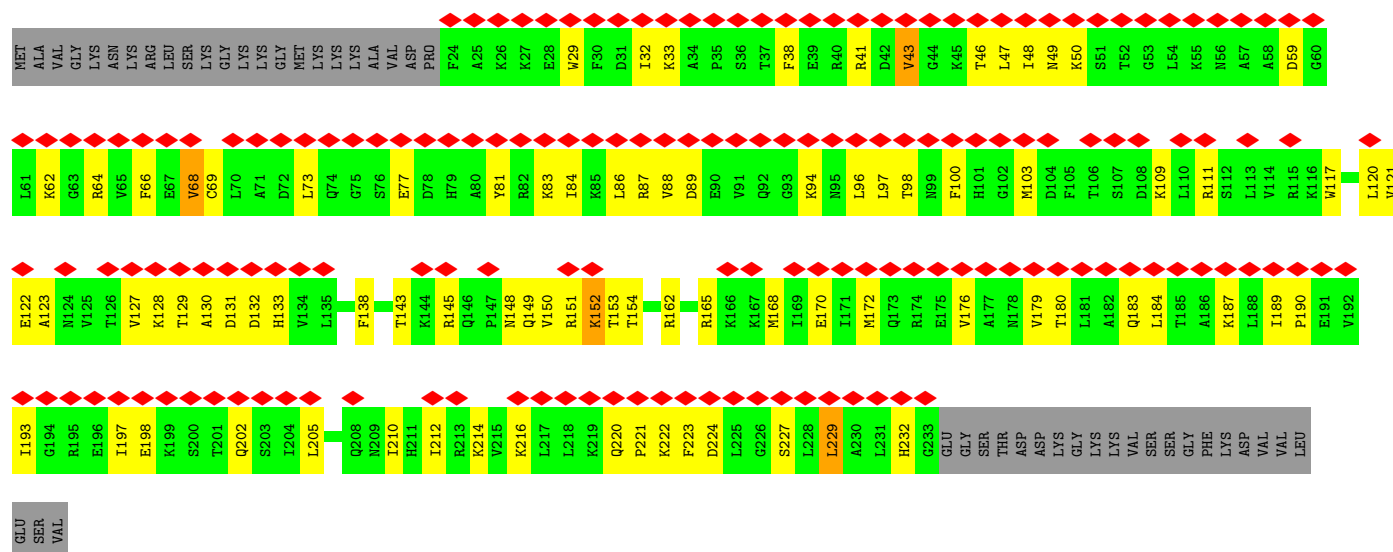
- Molecule 70: 60S ribosomal protein L43



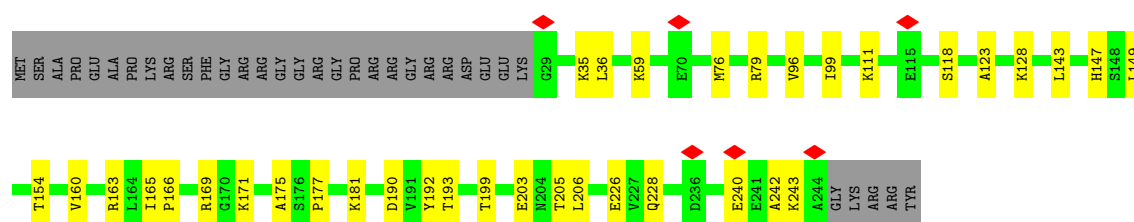
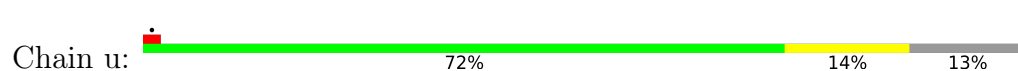
- Molecule 71: Small ribosomal subunit protein uS2



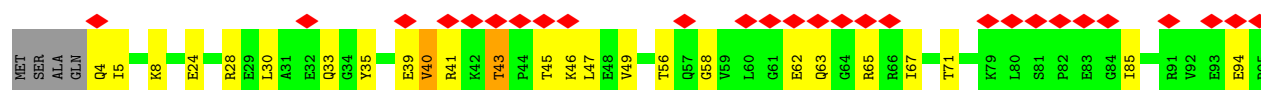
• Molecule 72: Small ribosomal subunit protein eS1

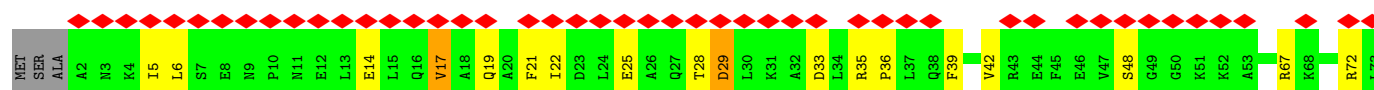


• Molecule 73: Rps21 ribosomal protein



• Molecule 74: Small ribosomal subunit protein uS3







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	573853	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	3.971	Depositor
Minimum map value	-0.267	Depositor
Average map value	0.037	Depositor
Map value standard deviation	0.111	Depositor
Recommended contour level	0.39	Depositor
Map size (Å)	376.2, 376.2, 376.2	wwPDB
Map dimensions	450, 450, 450	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.836, 0.836, 0.836	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: GET, SPD, ZN, 3HE, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	1	0.11	0/835	0.24	0/1297
2	2	0.16	0/72	0.45	0/110
3	A	0.30	0/71627	0.46	30/111663 (0.0%)
4	B	0.23	0/2918	0.35	0/4548
5	C	0.30	0/3659	0.42	0/5698
6	CA	0.31	0/38730	0.49	48/60351 (0.1%)
7	D	0.39	0/1907	0.55	0/2560
8	E	0.40	0/3155	0.59	4/4246 (0.1%)
9	F	0.30	0/2835	0.46	2/3823 (0.1%)
10	G	0.27	0/2419	0.43	0/3253
11	H	0.43	0/1144	0.64	2/1541 (0.1%)
12	I	0.23	0/1950	0.41	0/2621
13	J	0.33	0/1879	0.57	3/2525 (0.1%)
14	K	0.19	0/1539	0.31	0/2068
15	L	0.17	0/1716	0.32	0/2303
16	M	0.16	0/1385	0.36	0/1854
17	N	0.23	0/1564	0.38	0/2104
18	O	0.18	0/1044	0.33	0/1410
19	P	0.29	0/1743	0.41	0/2340
20	Q	0.22	0/1618	0.38	0/2169
21	R	0.35	0/1410	0.49	1/1898 (0.1%)
22	S	0.20	0/1479	0.37	0/1985
23	T	0.42	0/1488	0.69	1/1981 (0.1%)
24	U	0.21	0/1483	0.38	0/1996
25	V	0.20	0/1308	0.35	0/1758
26	W	0.32	0/887	0.56	2/1194 (0.2%)
27	X	0.22	0/1022	0.42	0/1377
28	Y	0.28	0/530	0.43	0/704
29	Z	0.22	0/949	0.35	0/1283
30	ZA	0.39	0/1571	0.57	1/2103 (0.0%)
31	ZB	0.25	0/1485	0.43	1/1991 (0.1%)
32	ZC	0.13	0/805	0.23	0/1088

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	ZD	0.31	0/1174	0.41	0/1578
34	ZE	0.22	0/1215	0.35	0/1637
35	ZF	0.31	0/956	0.51	0/1284
36	ZG	0.16	0/922	0.28	0/1239
37	ZH	0.27	0/1119	0.41	0/1500
38	ZI	0.21	0/1039	0.41	0/1392
39	ZJ	0.29	0/1180	0.43	0/1580
40	ZK	0.27	0/1131	0.40	0/1522
41	ZL	0.18	0/791	0.35	0/1069
42	ZM	0.19	0/686	0.28	0/924
43	ZO	0.29	0/1049	0.43	0/1410
44	ZP	0.22	0/1127	0.38	0/1505
45	ZQ	0.30	0/1077	0.48	0/1439
46	ZR	0.17	0/534	0.32	0/717
47	ZS	0.13	0/797	0.27	0/1068
48	ZT	0.34	0/627	0.45	0/847
49	ZU	0.32	0/460	0.48	0/616
50	ZV	0.39	0/461	0.71	0/613
51	ZW	0.15	0/438	0.35	0/582
52	ZY	0.13	0/2413	0.34	0/3287
53	a	0.20	0/1005	0.36	0/1339
54	b	0.41	0/1104	0.55	0/1480
55	c	0.24	0/1212	0.39	0/1623
56	d	0.39	0/489	0.46	0/648
57	e	0.24	0/752	0.43	0/1011
58	f	0.22	0/893	0.37	0/1199
59	g	0.38	0/1019	0.52	0/1362
60	h	0.22	0/877	0.36	0/1180
61	i	0.21	0/874	0.33	0/1168
62	j	0.19	0/963	0.32	0/1284
63	k	0.20	0/780	0.37	0/1034
64	l	0.23	0/666	0.36	0/883
65	m	0.30	0/623	0.48	0/828
66	n	0.25	0/451	0.38	0/600
67	o	0.20	0/417	0.38	0/553
68	p	0.11	0/228	0.26	0/293
69	q	0.26	0/834	0.38	0/1103
70	r	0.21	0/699	0.38	0/933
71	s	0.26	0/1694	0.41	1/2311 (0.0%)
72	t	0.13	0/1709	0.35	0/2294
73	u	0.29	0/1664	0.36	0/2253
74	v	0.18	0/1642	0.32	0/2201
75	w	0.24	0/2094	0.36	0/2816

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	x	0.18	0/1628	0.28	0/2195
77	y	0.19	0/1845	0.31	0/2467
78	z	0.18	0/1490	0.35	0/2004
All	All	0.29	0/205004	0.45	96/300713 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
7	D	0	1
8	E	0	3
9	F	0	1
10	G	0	2
11	H	0	2
13	J	0	1
21	R	0	1
23	T	0	8
30	ZA	0	1
31	ZB	0	1
33	ZD	0	1
35	ZF	0	2
38	ZI	0	1
39	ZJ	0	1
40	ZK	0	3
49	ZU	0	1
50	ZV	0	1
54	b	0	1
75	w	0	1
77	y	0	1
All	All	0	34

There are no bond length outliers.

All (96) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	CA	1200	A	P-O3'-C3'	-9.56	105.85	120.20
6	CA	869	G	P-O3'-C3'	-9.41	106.08	120.20
3	A	170	G	P-O3'-C3'	-9.09	106.56	120.20
3	A	2121	G	P-O3'-C3'	-8.90	106.85	120.20
3	A	2120	U	P-O3'-C3'	-8.73	107.10	120.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	CA	887	U	P-O3'-C3'	-8.70	107.14	120.20
3	A	166	U	P-O3'-C3'	-8.69	107.17	120.20
6	CA	967	G	P-O3'-C3'	-8.55	107.37	120.20
6	CA	1455	A	P-O3'-C3'	-8.51	107.44	120.20
6	CA	467	A	P-O3'-C3'	-8.50	107.45	120.20
11	H	55	GLY	N-CA-C	-8.38	95.25	112.34
6	CA	1454	G	P-O3'-C3'	-8.37	107.65	120.20
6	CA	1488	G	P-O3'-C3'	-8.26	107.81	120.20
3	A	3156	A	P-O3'-C3'	-8.25	107.83	120.20
6	CA	1217	U	P-O3'-C3'	-8.23	107.86	120.20
6	CA	822	C	P-O3'-C3'	-8.19	107.92	120.20
3	A	233	U	P-O3'-C3'	-8.10	108.05	120.20
6	CA	1322	U	P-O3'-C3'	-8.01	108.18	120.20
3	A	231	G	P-O3'-C3'	-7.97	108.25	120.20
3	A	171	C	P-O3'-C3'	-7.96	108.27	120.20
6	CA	1203	G	P-O3'-C3'	-7.82	108.47	120.20
3	A	234	A	P-O3'-C3'	-7.62	108.77	120.20
9	F	101	PHE	CA-C-N	-7.57	113.24	123.46
9	F	101	PHE	C-N-CA	-7.57	113.24	123.46
6	CA	235	G	P-O3'-C3'	-7.56	108.86	120.20
6	CA	876	A	P-O3'-C3'	-7.53	108.91	120.20
6	CA	1491	A	P-O3'-C3'	-7.26	109.30	120.20
6	CA	277	A	P-O3'-C3'	-7.15	109.48	120.20
3	A	737	U	P-O3'-C3'	-7.12	109.52	120.20
6	CA	87	U	P-O3'-C3'	-7.09	109.57	120.20
6	CA	977	C	P-O3'-C3'	-7.06	109.61	120.20
8	E	18	PRO	CB-CA-C	6.98	123.08	111.56
6	CA	865	G	P-O3'-C3'	-6.95	109.78	120.20
6	CA	1218	C	P-O3'-C3'	-6.81	109.98	120.20
3	A	2120	U	C1'-O4'-C4'	-6.73	103.17	109.90
6	CA	761	C	P-O3'-C3'	-6.70	110.15	120.20
3	A	167	C	P-O3'-C3'	-6.57	110.35	120.20
3	A	168	U	P-O3'-C3'	-6.41	110.58	120.20
3	A	1723	G	P-O3'-C3'	-6.39	110.61	120.20
6	CA	6	G	P-O3'-C3'	-6.36	110.65	120.20
3	A	1722	C	P-O3'-C3'	-6.36	110.66	120.20
8	E	18	PRO	N-CA-C	-6.36	99.37	112.47
3	A	2122	A	P-O3'-C3'	-6.33	110.71	120.20
6	CA	1464	G	P-O3'-C3'	-6.31	110.74	120.20
6	CA	238	U	P-O3'-C3'	-6.28	110.78	120.20
26	W	68	THR	N-CA-C	-6.23	104.31	112.41
6	CA	255	A	P-O3'-C3'	-6.21	110.88	120.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	W	6	THR	N-CA-C	-6.12	105.77	113.18
6	CA	1215	G	P-O3'-C3'	-6.11	111.03	120.20
6	CA	1504	C	P-O3'-C3'	-6.04	111.14	120.20
6	CA	233	A	P-O3'-C3'	-6.03	111.15	120.20
21	R	145	HIS	CA-CB-CG	6.03	119.83	113.80
3	A	640	C	P-O3'-C3'	-5.99	111.22	120.20
3	A	2558	G	P-O3'-C3'	-5.93	111.30	120.20
6	CA	1078	G	P-O3'-C3'	-5.93	111.30	120.20
13	J	184	LYS	N-CA-CB	5.93	120.52	110.49
6	CA	1490	A	P-O3'-C3'	-5.91	111.34	120.20
6	CA	877	A	P-O3'-C3'	-5.82	111.47	120.20
6	CA	1492	U	P-O3'-C3'	-5.82	111.47	120.20
3	A	613	C	P-O3'-C3'	-5.81	111.49	120.20
13	J	184	LYS	N-CA-C	-5.81	98.43	110.80
6	CA	870	A	P-O3'-C3'	-5.76	111.56	120.20
6	CA	966	U	P-O3'-C3'	-5.71	111.63	120.20
11	H	55	GLY	CA-C-O	-5.66	113.42	121.52
6	CA	1348	U	P-O3'-C3'	-5.65	111.72	120.20
6	CA	843	U	P-O3'-C3'	-5.65	111.72	120.20
3	A	658	G	P-O3'-C3'	-5.63	111.76	120.20
6	CA	923	G	P-O3'-C3'	-5.58	111.84	120.20
3	A	3158	U	C4'-C3'-O3'	5.55	117.72	109.40
6	CA	885	A	P-O3'-C3'	-5.54	111.89	120.20
6	CA	841	G	C4'-C3'-O3'	-5.54	104.69	113.00
6	CA	317	A	P-O3'-C3'	-5.52	111.92	120.20
6	CA	1016	G	P-O3'-C3'	-5.50	111.95	120.20
3	A	2063	U	P-O3'-C3'	-5.39	112.11	120.20
3	A	186	U	P-O3'-C3'	-5.30	112.25	120.20
23	T	173	LYS	N-CA-C	-5.29	105.62	111.71
8	E	16	PHE	N-CA-C	-5.28	103.68	111.81
31	ZB	123	HIS	N-CA-C	-5.27	106.81	113.18
6	CA	730	G	P-O3'-C3'	-5.24	112.34	120.20
6	CA	519	C	P-O3'-C3'	-5.24	112.34	120.20
6	CA	1321	C	P-O3'-C3'	-5.23	112.35	120.20
3	A	2462	U	P-O3'-C3'	5.22	128.04	120.20
3	A	2308	G	C4'-C3'-O3'	-5.21	101.59	109.40
30	ZA	34	PHE	CA-CB-CG	5.18	118.98	113.80
6	CA	254	A	P-O3'-C3'	-5.16	112.47	120.20
71	s	6	SER	N-CA-C	-5.14	106.97	113.20
3	A	2124	U	P-O3'-C3'	-5.12	112.52	120.20
6	CA	381	G	P-O3'-C3'	-5.11	112.54	120.20
6	CA	864	U	P-O3'-C3'	-5.10	112.55	120.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	497	U	P-O3'-C3'	5.07	127.81	120.20
3	A	1721	G	P-O3'-C3'	-5.06	112.60	120.20
6	CA	17	C	P-O3'-C3'	-5.05	112.62	120.20
8	E	17	LEU	N-CA-C	5.05	119.11	112.35
3	A	2066	C	P-O3'-C3'	-5.04	112.64	120.20
3	A	2046	A	C1'-C2'-O2'	5.03	115.95	108.40
13	J	182	LYS	N-CA-C	-5.01	101.94	109.15

There are no chirality outliers.

All (34) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
7	D	200	ARG	Sidechain
8	E	19	ARG	Sidechain
8	E	369	ARG	Sidechain
8	E	377	ARG	Sidechain
9	F	99	ARG	Sidechain
10	G	33	ARG	Sidechain
10	G	50	ARG	Sidechain
11	H	34	ARG	Sidechain
11	H	39	ARG	Sidechain
13	J	33	ARG	Sidechain
21	R	18	ARG	Sidechain
23	T	156	ARG	Sidechain
23	T	171	ARG	Sidechain
23	T	182	ARG	Sidechain
23	T	185	ARG	Sidechain
23	T	190	ARG	Sidechain
23	T	192	ARG	Sidechain
23	T	193	ARG	Sidechain
23	T	196	ARG	Sidechain
30	ZA	32	ARG	Sidechain
31	ZB	120	ARG	Sidechain
33	ZD	103	ARG	Sidechain
35	ZF	31	ARG	Sidechain
35	ZF	36	ARG	Sidechain
38	ZI	5	ARG	Sidechain
39	ZJ	36	ARG	Sidechain
40	ZK	11	ALA	Mainchain
40	ZK	12[A]	GLN	Mainchain
49	ZU	42	ARG	Sidechain
50	ZV	12	ARG	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	b	65	ARG	Sidechain
75	w	3	ARG	Sidechain
77	y	88	ARG	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	748	0	381	15	0
2	2	65	0	34	5	0
3	A	64000	0	32201	512	0
4	B	2609	0	1315	20	0
5	C	3274	0	1654	38	0
6	CA	34619	0	17423	469	0
7	D	1873	0	1943	20	0
8	E	3087	0	3173	27	0
9	F	2786	0	2912	23	0
10	G	2370	0	2360	27	0
11	H	1126	0	1215	8	0
12	I	1913	0	1998	6	0
13	J	1847	0	1970	20	0
14	K	1519	0	1588	19	0
15	L	1680	0	1714	19	0
16	M	1364	0	1396	16	0
17	N	1538	0	1614	12	0
18	O	1030	0	1113	1	0
19	P	1703	0	1747	7	0
20	Q	1587	0	1695	9	0
21	R	1384	0	1412	9	0
22	S	1456	0	1570	12	0
23	T	1469	0	1579	21	0
24	U	1448	0	1511	22	0
25	V	1282	0	1341	12	0
26	W	871	0	903	18	0
27	X	1005	0	1045	18	0
28	Y	517	0	535	8	0
29	Z	934	0	987	5	0
30	ZA	1545	0	1580	39	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	ZB	1459	0	1531	28	0
32	ZC	786	0	797	10	0
33	ZD	1150	0	1218	14	0
34	ZE	1192	0	1252	17	0
35	ZF	945	0	979	36	0
36	ZG	904	0	944	10	0
37	ZH	1100	0	1162	15	0
38	ZI	1027	0	1080	28	0
39	ZJ	1162	0	1202	26	0
40	ZK	1110	0	1120	19	0
41	ZL	782	0	854	13	0
42	ZM	678	0	671	10	0
43	ZO	1032	0	1072	19	0
44	ZP	1109	0	1173	18	0
45	ZQ	1060	0	1117	31	0
46	ZR	526	0	558	7	0
47	ZS	785	0	835	19	0
48	ZT	617	0	628	22	0
49	ZU	458	0	486	10	0
50	ZV	449	0	425	8	0
51	ZW	432	0	471	8	0
52	ZY	2359	0	2318	50	0
53	a	994	0	1075	14	0
54	b	1081	0	1134	16	0
55	c	1183	0	1211	13	0
56	d	481	0	498	7	0
57	e	744	0	784	14	0
58	f	877	0	915	11	0
59	g	1002	0	1062	1	0
60	h	859	0	889	7	0
61	i	865	0	931	8	0
62	j	956	0	1067	8	0
63	k	774	0	847	8	0
64	l	654	0	668	5	0
65	m	617	0	685	10	0
66	n	442	0	478	11	0
67	o	411	0	448	3	0
68	p	227	0	272	4	0
69	q	822	0	886	7	0
70	r	691	0	723	4	0
71	s	1655	0	1670	28	0
72	t	1685	0	1779	56	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
73	u	1636	0	1743	22	0
74	v	1619	0	1718	33	0
75	w	2056	0	2145	29	0
76	x	1610	0	1687	17	0
77	y	1819	0	1882	22	0
78	z	1466	0	1554	23	0
79	A	1054	0	1240	32	0
79	B	34	0	40	1	0
79	C	136	0	160	6	0
79	CA	646	0	760	25	0
79	E	34	0	40	1	0
79	T	34	0	40	5	0
80	A	166	0	0	0	0
80	B	2	0	0	0	0
80	C	2	0	0	0	0
80	CA	73	0	0	0	0
80	E	1	0	0	0	0
80	P	2	0	0	0	0
80	R	1	0	0	0	0
80	X	1	0	0	0	0
80	ZA	1	0	0	0	0
80	ZK	1	0	0	0	0
80	ZQ	1	0	0	0	0
80	k	1	0	0	0	0
80	x	1	0	0	0	0
81	A	20	0	38	1	0
81	CA	10	0	19	0	0
82	A	20	0	23	0	0
83	ZS	1	0	0	0	0
83	ZT	1	0	0	0	0
83	ZV	1	0	0	0	0
83	i	1	0	0	0	0
83	l	1	0	0	0	0
83	o	1	0	0	0	0
83	q	1	0	0	0	0
83	r	1	0	0	0	0
84	A	5741	0	0	22	0
84	B	58	0	0	0	0
84	C	243	0	0	3	0
84	CA	1595	0	0	18	0
84	D	131	0	0	0	0
84	E	153	0	0	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
84	F	136	0	0	0	0
84	G	36	0	0	0	0
84	H	9	0	0	0	0
84	I	70	0	0	0	0
84	J	27	0	0	0	0
84	K	17	0	0	0	0
84	L	25	0	0	0	0
84	M	1	0	0	0	0
84	N	81	0	0	1	0
84	O	21	0	0	0	0
84	P	132	0	0	2	0
84	Q	80	0	0	0	0
84	R	60	0	0	0	0
84	S	67	0	0	0	0
84	T	47	0	0	0	0
84	U	49	0	0	1	0
84	V	49	0	0	0	0
84	X	43	0	0	0	0
84	Y	26	0	0	0	0
84	Z	30	0	0	0	0
84	ZA	55	0	0	2	0
84	ZB	24	0	0	0	0
84	ZD	70	0	0	3	0
84	ZE	33	0	0	0	0
84	ZF	1	0	0	0	0
84	ZM	28	0	0	0	0
84	ZO	69	0	0	3	0
84	ZP	43	0	0	1	0
84	ZQ	11	0	0	0	0
84	ZS	7	0	0	1	0
84	ZT	15	0	0	0	0
84	ZW	3	0	0	0	0
84	a	23	0	0	0	0
84	b	8	0	0	0	0
84	c	81	0	0	1	0
84	d	24	0	0	1	0
84	e	10	0	0	0	0
84	f	18	0	0	0	0
84	g	67	0	0	0	0
84	h	49	0	0	0	0
84	i	40	0	0	0	0
84	j	32	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
84	k	26	0	0	0	0
84	l	47	0	0	0	0
84	m	4	0	0	0	0
84	n	19	0	0	0	0
84	o	5	0	0	0	0
84	p	2	0	0	0	0
84	q	38	0	0	0	0
84	r	30	0	0	0	0
84	s	11	0	0	0	0
84	t	1	0	0	0	0
84	u	45	0	0	3	0
84	w	50	0	0	2	0
84	y	29	0	0	1	0
84	z	14	0	0	0	0
All	All	203205	0	144913	1954	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 6.

All (1954) 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)
6:CA:638:G:H1	6:CA:672:U:H3	0.96	0.96
3:A:2271:A:H61	3:A:2883:C:H5	1.13	0.92
3:A:3126:G:H1	3:A:3145:U:H3	1.18	0.91
6:CA:1563:G:H1	6:CA:1583:U:H3	1.19	0.90
3:A:2052:U:H3	3:A:2057:U:H5	1.22	0.87
31:ZB:120:ARG:H	31:ZB:124:HIS:HD2	1.22	0.86
6:CA:838:G:H1	6:CA:930:U:H3	1.21	0.85
4:B:19:G:H1	4:B:62:U:H3	1.19	0.84
3:A:3069:G:H1	3:A:3171:C:H5	1.27	0.83
45:ZQ:27:VAL:HG11	45:ZQ:35:VAL:HG11	1.61	0.82
15:L:30:LYS:HG3	15:L:63:GLU:HG3	1.61	0.82
3:A:1781:A:H5''	79:A:3492:GET:H712	1.60	0.82
6:CA:864:U:H5	6:CA:888:U:H3	1.28	0.81
77:y:79:GLU:HG3	77:y:86:PRO:HG3	1.61	0.81
11:H:55:GLY:O	11:H:56:PRO:C	2.24	0.80
3:A:2119:C:H2'	3:A:2120:U:H4'	1.63	0.80
43:ZO:84:LYS:HE2	43:ZO:84:LYS:H	1.47	0.78
6:CA:1476:C:H5	6:CA:1481:G:H1	1.29	0.77
75:w:87:MET:HE1	75:w:237:ILE:HD13	1.66	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:40:A:H62	6:CA:456:G:H8	1.31	0.77
6:CA:4:C:H5	6:CA:20:G:H1	1.32	0.77
6:CA:1004:C:HO2'	43:ZO:2:THR:N	1.83	0.77
14:K:128:ILE:HG12	14:K:134:MET:HE3	1.67	0.76
6:CA:453:A:H3'	79:CA:1893:GET:H933	1.68	0.76
26:W:22:PRO:HB2	26:W:28:PHE:HB3	1.68	0.75
6:CA:153:C:OP2	45:ZQ:133:ASN:ND2	2.20	0.75
39:ZJ:123:ARG:HG2	39:ZJ:133:VAL:HG22	1.69	0.75
10:G:197:LYS:HG2	10:G:202:GLY:HA3	1.69	0.74
3:A:516:G:OP1	9:F:354:LYS:NZ	2.21	0.74
52:ZY:89:LEU:HB2	52:ZY:103:PHE:HB2	1.67	0.74
72:t:62:LYS:HA	72:t:88:VAL:HB	1.69	0.74
52:ZY:101:LYS:NZ	52:ZY:137:ILE:O	2.20	0.73
17:N:47:ALA:HB1	17:N:48:PRO:HD2	1.69	0.73
31:ZB:70:LEU:O	31:ZB:74:ASN:ND2	2.21	0.73
3:A:3125:U:H3	3:A:3146:G:H1	1.35	0.73
3:A:1530:A:C5	66:n:4:GLN:HG3	2.23	0.73
78:z:146:GLN:HB2	78:z:177:VAL:HG22	1.69	0.73
52:ZY:42:LEU:HB2	52:ZY:61:PHE:HB2	1.69	0.73
3:A:3014:A:H4'	14:K:69:ARG:HG2	1.70	0.73
6:CA:1051:A:O2'	6:CA:1053:G:N7	2.22	0.72
3:A:1622:U:O4	26:W:90:ARG:NH1	2.21	0.72
24:U:15:MET:HB2	24:U:121:TYR:HB3	1.71	0.72
27:X:40:LYS:HG3	27:X:57:MET:HG2	1.71	0.72
15:L:78:LYS:HG2	15:L:79:MET:HE2	1.72	0.71
43:ZO:23:ARG:HG3	48:ZT:4:VAL:HG22	1.70	0.71
54:b:33:THR:HG22	54:b:35:ALA:H	1.54	0.71
30:ZA:126:LYS:HE3	30:ZA:154:ALA:HB1	1.70	0.71
35:ZF:56:MET:HG3	35:ZF:99:ALA:HB2	1.72	0.70
16:M:47:LYS:HD3	16:M:60:ASN:HD22	1.56	0.70
3:A:3016:C:OP1	14:K:62:ARG:NH2	2.25	0.70
52:ZY:145:THR:O	52:ZY:147:HIS:N	2.24	0.70
3:A:2121:G:H4'	6:CA:883:G:H22	1.56	0.70
6:CA:1261:G:H1	6:CA:1294:G:H22	1.40	0.70
36:ZG:54:MET:HA	36:ZG:54:MET:HE3	1.74	0.70
39:ZJ:49:LYS:NZ	40:ZK:35:GLU:OE2	2.25	0.69
72:t:87:ARG:NH1	72:t:100:PHE:O	2.24	0.69
3:A:1290:A:H5''	22:S:13:LYS:HD3	1.74	0.69
6:CA:28:A:N7	84:CA:1927:HOH:O	2.25	0.69
3:A:591:G:N2	3:A:2287:A:O2'	2.25	0.69
6:CA:204:U:O2	30:ZA:182:ARG:NH2	2.21	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:1656:A:O3'	77:y:31:ARG:NH2	2.25	0.69
33:ZD:113:PRO:O	33:ZD:116:ARG:NH2	2.26	0.68
52:ZY:135:ASN:HD21	52:ZY:139:GLU:HB2	1.58	0.68
3:A:480:G:N7	79:A:3475:GET:O61	2.25	0.68
3:A:2614:G:H5'	3:A:2616:U:C6	2.27	0.68
20:Q:125:LEU:HD13	24:U:182:PRO:HG3	1.76	0.68
24:U:146:THR:HG23	24:U:158:LEU:HD23	1.75	0.68
6:CA:12:U:H2'	6:CA:13:C:C6	2.29	0.68
6:CA:580:A:H2'	6:CA:581:A:C8	2.28	0.68
48:ZT:36:LYS:HD2	48:ZT:43:ILE:HG12	1.75	0.68
6:CA:1750:U:OP1	68:p:11:ARG:NH2	2.27	0.68
6:CA:1729:A:H2'	79:CA:1882:GET:H931	1.74	0.68
78:z:48:SER:OG	78:z:167:GLN:NE2	2.27	0.67
2:2:3:A:OP1	6:CA:1615:C:N4	2.27	0.67
6:CA:1527:U:OP2	36:ZG:43:ARG:NH2	2.25	0.67
31:ZB:120:ARG:H	31:ZB:124:HIS:CD2	2.09	0.67
71:s:3:LEU:HD12	71:s:4:PRO:HD2	1.76	0.67
78:z:29:ASP:N	78:z:29:ASP:OD1	2.27	0.67
6:CA:1024:U:H3	6:CA:1034:G:H1	1.43	0.67
31:ZB:88:GLU:OE2	31:ZB:88:GLU:N	2.25	0.67
3:A:2573:A:OP1	16:M:92:LYS:NZ	2.28	0.67
49:ZU:16:LEU:HD12	49:ZU:27:GLN:HB3	1.76	0.67
6:CA:1141:A:H2'	6:CA:1142:G:C8	2.29	0.67
43:ZO:15:ASN:HD21	43:ZO:71:LYS:HA	1.60	0.67
75:w:243:LYS:O	75:w:243:LYS:HD3	1.95	0.67
3:A:489:U:H2'	3:A:490:A:H8	1.59	0.67
4:B:113:G:H2'	4:B:114:C:C6	2.30	0.66
15:L:28:ASP:OD2	15:L:32:ARG:NH1	2.29	0.66
36:ZG:81:ARG:NH2	36:ZG:120:SER:O	2.28	0.66
65:m:63:LYS:O	65:m:67:GLN:HG2	1.95	0.66
8:E:36:VAL:HB	8:E:39:LYS:HD2	1.78	0.66
35:ZF:106:ARG:HA	47:ZS:118:ALA:HB1	1.77	0.66
3:A:1579:C:OP2	61:i:74:ARG:NH1	2.20	0.66
6:CA:1459:A:H2'	6:CA:1460:G:C8	2.31	0.66
6:CA:71:G:H21	6:CA:79:A:H62	1.43	0.66
9:F:36:VAL:HG21	9:F:245:LEU:HD21	1.78	0.66
37:ZH:98:GLU:OE2	52:ZY:60:SER:N	2.28	0.66
3:A:1636:A:H2'	3:A:1637:A:C8	2.31	0.66
66:n:20:ASN:ND2	66:n:42:ARG:O	2.28	0.66
9:F:147:GLU:HG2	9:F:148:GLU:HG2	1.78	0.65
6:CA:456:G:N2	79:CA:1883:GET:H221	2.11	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:ZJ:100:VAL:HG11	39:ZJ:108:LYS:HG3	1.77	0.65
76:x:38:GLN:N	76:x:38:GLN:OE1	2.28	0.65
38:ZI:85:VAL:HG22	71:s:198:MET:HE2	1.79	0.65
78:z:125:LEU:HD21	78:z:168:LEU:HD22	1.78	0.65
6:CA:190:C:O2	30:ZA:145:ARG:NH1	2.29	0.65
10:G:261:THR:HG23	10:G:264:GLN:HE21	1.61	0.65
48:ZT:59:CYS:HB3	48:ZT:61:THR:HG22	1.78	0.65
6:CA:633:U:H3	6:CA:677:G:H1	1.43	0.65
3:A:2509:A:OP1	79:A:3480:GET:H832	1.97	0.65
49:ZU:45:LYS:NZ	76:x:145:ASP:OD2	2.30	0.65
3:A:2484:C:H1'	13:J:241:LYS:HD2	1.78	0.65
69:q:7:THR:HB	69:q:22:GLN:NE2	2.12	0.65
3:A:2123:A:H1'	3:A:2124:U:H5'	1.78	0.65
23:T:87:ALA:HB2	79:T:301:GET:H712	1.77	0.65
6:CA:503:G:H1	6:CA:532:C:H5	1.41	0.64
16:M:88:GLN:HE22	16:M:168:GLU:HB2	1.62	0.64
35:ZF:43:VAL:HG12	35:ZF:45:ALA:H	1.62	0.64
72:t:128:LYS:NZ	72:t:132:ASP:OD1	2.30	0.64
12:I:6:LYS:HG2	12:I:7:PRO:HD2	1.78	0.64
23:T:192:ARG:HB3	23:T:196:ARG:HH11	1.62	0.64
6:CA:1190:C:H2'	6:CA:1191:A:H8	1.62	0.64
6:CA:1656:A:H1'	77:y:66:GLY:HA2	1.78	0.64
41:ZL:36:VAL:HG22	41:ZL:106:THR:HG21	1.79	0.64
6:CA:632:G:H22	6:CA:678:A:H2	1.44	0.64
52:ZY:256:ILE:HB	52:ZY:270:LEU:HB2	1.79	0.64
17:N:57:VAL:HG22	17:N:145:ILE:HG12	1.78	0.64
6:CA:867:C:O2'	6:CA:884:G:N2	2.31	0.64
3:A:2176:G:O2'	3:A:2178:C:N4	2.30	0.64
6:CA:1398:A:N7	79:CA:1892:GET:O61	2.30	0.64
6:CA:1590:C:N4	76:x:80:LYS:O	2.32	0.63
6:CA:1260:U:H2'	6:CA:1261:G:C8	2.34	0.63
79:T:301:GET:H322	79:T:301:GET:H713	1.61	0.63
40:ZK:57:ARG:HG2	40:ZK:104:VAL:HG21	1.81	0.63
6:CA:1466:U:OP2	74:v:4:GLN:NE2	2.31	0.63
26:W:41:ILE:HD12	26:W:56:ILE:HD11	1.80	0.63
35:ZF:76:VAL:HG21	35:ZF:97:LEU:HD13	1.81	0.63
38:ZI:129:GLY:HA2	72:t:148:ASN:HA	1.81	0.63
3:A:1057:U:H2'	3:A:1058:U:C6	2.34	0.63
3:A:1438:U:H5	3:A:1777:A:N1	1.97	0.63
3:A:1569:C:H4'	3:A:1571:C:H5'	1.81	0.63
17:N:15:ARG:NH1	84:N:201:HOH:O	2.31	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:i:11:THR:HG22	61:i:13:TYR:H	1.64	0.62
63:k:94:ALA:O	63:k:98:ARG:HB2	1.98	0.62
6:CA:733:A:OP1	31:ZB:79:ARG:NH1	2.32	0.62
1:1:22:C:OP2	1:1:46:A:N6	2.32	0.62
6:CA:576:C:OP1	51:ZW:26:LYS:NZ	2.32	0.62
52:ZY:13:LEU:HB2	52:ZY:306:ILE:HB	1.82	0.62
6:CA:308:U:H4'	6:CA:312:A:C8	2.34	0.62
69:q:7:THR:HB	69:q:22:GLN:HE21	1.65	0.62
71:s:79:ARG:NH1	71:s:164:ASN:O	2.32	0.62
6:CA:125:A:H5''	75:w:134:ARG:HH12	1.64	0.62
6:CA:1298:G:OP1	74:v:160:HIS:N	2.29	0.62
45:ZQ:125:HIS:H	45:ZQ:128:LYS:HG3	1.63	0.62
3:A:1461:U:OP1	66:n:21:ARG:NH2	2.30	0.62
6:CA:902:U:O2	47:ZS:94:LYS:NZ	2.32	0.62
45:ZQ:81:ASP:OD1	45:ZQ:84:ARG:NH2	2.29	0.62
3:A:888:C:H2'	3:A:889:U:C6	2.34	0.62
20:Q:131:LYS:HD3	20:Q:132:PRO:HD2	1.82	0.62
31:ZB:100:ARG:HH11	31:ZB:102:GLU:HB2	1.65	0.62
79:A:3488:GET:N33	4:B:91:A:OP1	2.33	0.62
3:A:1601:G:H2'	3:A:1602:G:C8	2.35	0.61
6:CA:883:G:O2'	6:CA:884:G:OP1	2.18	0.61
54:b:116:LYS:NZ	54:b:120:GLU:OE2	2.33	0.61
6:CA:1022:C:H3'	6:CA:1023:G:H21	1.64	0.61
26:W:53:ALA:HB1	26:W:69:ALA:HB2	1.80	0.61
44:ZP:92:CYS:HG	44:ZP:136:TRP:CD1	2.18	0.61
73:u:143:LEU:O	73:u:169:ARG:NH2	2.32	0.61
73:u:165:ILE:HB	73:u:192:TYR:HB2	1.82	0.61
3:A:2023:C:H1'	3:A:3232:A:C8	2.35	0.61
6:CA:1261:G:H22	6:CA:1294:G:N2	1.98	0.61
6:CA:1495:U:OP2	40:ZK:75:LYS:NZ	2.33	0.61
6:CA:1616:C:H2'	6:CA:1617:G:C8	2.36	0.61
40:ZK:49:GLU:N	40:ZK:49:GLU:OE1	2.33	0.61
52:ZY:26:THR:HG23	52:ZY:29:LYS:H	1.64	0.61
35:ZF:82:GLY:HA3	35:ZF:115:PRO:HG2	1.83	0.61
39:ZJ:64:GLU:OE1	39:ZJ:64:GLU:N	2.22	0.61
44:ZP:70:LYS:HB3	44:ZP:93:LEU:HD22	1.81	0.61
76:x:80:LYS:HG3	76:x:83:ARG:HH21	1.65	0.61
3:A:777:U:H5'	79:A:3482:GET:H611	1.82	0.61
8:E:29:VAL:HG22	8:E:218:ILE:HD13	1.81	0.61
72:t:33:LYS:HB3	72:t:41:ARG:HH12	1.63	0.61
3:A:719:U:H5	3:A:2619:U:O2	1.84	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2321:C:H2'	3:A:2322:C:C6	2.35	0.61
6:CA:898:U:OP1	47:ZS:81:LYS:NZ	2.28	0.61
3:A:3240:U:H4'	3:A:3241:G:O5'	2.01	0.61
5:C:55:U:O2'	5:C:87:C:N4	2.34	0.61
6:CA:1116:G:H2'	6:CA:1117:A:C8	2.36	0.61
25:V:83:ARG:HB2	56:d:37:LYS:HG3	1.83	0.61
3:A:1759:G:H2'	3:A:1760:U:C6	2.35	0.60
3:A:2860:C:H2'	3:A:2861:G:C8	2.36	0.60
3:A:3068:U:H3	3:A:3172:G:H1	1.48	0.60
5:C:51:G:O6	79:C:204:GET:N21	2.34	0.60
6:CA:595:A:N1	84:CA:1963:HOH:O	2.31	0.60
6:CA:1450:G:H2'	6:CA:1451:A:C8	2.36	0.60
8:E:92:TYR:HB3	8:E:99:LEU:HD22	1.82	0.60
3:A:1506:C:O2'	3:A:1507:C:OP1	2.18	0.60
43:ZO:88:ARG:NH1	84:ZO:205:HOH:O	2.25	0.60
52:ZY:120:ARG:HH21	52:ZY:121:GLN:HG2	1.65	0.60
29:Z:105:VAL:HG11	29:Z:108:ILE:HG13	1.82	0.60
77:y:57:ASP:OD2	77:y:72:ARG:NH1	2.34	0.60
3:A:921:G:O2'	3:A:1050:A:N1	2.31	0.60
52:ZY:135:ASN:OD1	52:ZY:138:GLY:N	2.29	0.60
43:ZO:113:HIS:HD2	43:ZO:117:ARG:HH21	1.49	0.60
52:ZY:281:LYS:O	52:ZY:281:LYS:HG3	2.00	0.60
71:s:30:GLN:HE22	71:s:32:HIS:CD2	2.20	0.60
8:E:90:VAL:HG22	8:E:104:THR:HG23	1.84	0.60
3:A:1041:U:H5''	3:A:1042:A:OP2	2.02	0.60
6:CA:1590:C:H5'	6:CA:1591:G:H5'	1.83	0.60
79:T:301:GET:H713	79:T:301:GET:N32	2.16	0.60
3:A:765:A:H2'	3:A:766:C:C6	2.37	0.59
3:A:3149:G:H3'	3:A:3150:G:H8	1.65	0.59
14:K:90:MET:HE2	14:K:179:ILE:HG22	1.83	0.59
3:A:2488:C:OP1	13:J:49:ARG:NH2	2.23	0.59
6:CA:107:A:H2'	6:CA:108:G:C8	2.37	0.59
58:f:58:LEU:HD23	58:f:70:MET:HE1	1.84	0.59
3:A:2128:A:H2'	3:A:2129:A:C8	2.36	0.59
6:CA:765:U:H3'	6:CA:766:A:H8	1.67	0.59
30:ZA:91:HIS:O	33:ZD:11:ARG:NH2	2.33	0.59
74:v:139:ILE:HG12	74:v:185:ILE:HG22	1.85	0.59
6:CA:822:C:H5''	23:T:196:ARG:NH2	2.17	0.59
45:ZQ:27:VAL:HG11	45:ZQ:35:VAL:CG1	2.31	0.59
3:A:1780:G:H5''	3:A:1781:A:H5'	1.84	0.59
65:m:9:LYS:O	65:m:13:GLU:HG2	2.02	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:1051:A:H8	6:CA:1052:C:N3	2.00	0.59
35:ZF:76:VAL:HG13	35:ZF:110:ILE:HG23	1.85	0.59
6:CA:154:A:H2'	6:CA:155:A:O4'	2.03	0.59
6:CA:1447:A:OP1	76:x:185:ARG:NE	2.33	0.59
16:M:30:ARG:HD2	16:M:118:ILE:HA	1.83	0.59
48:ZT:37:CYS:HA	48:ZT:77:CYS:HB3	1.85	0.59
52:ZY:22:SER:HB3	52:ZY:71:VAL:HG22	1.84	0.59
72:t:87:ARG:NH2	72:t:220:GLN:OE1	2.36	0.59
3:A:3129:U:H2'	3:A:3130:C:C6	2.38	0.59
6:CA:1444:U:O2'	6:CA:1445:A:O5'	2.20	0.59
73:u:240:GLU:OE1	73:u:243:LYS:NZ	2.35	0.59
40:ZK:51:GLU:H	40:ZK:51:GLU:CD	2.10	0.58
3:A:1750:G:OP1	54:b:133:LYS:NZ	2.30	0.58
6:CA:273:G:N7	77:y:188:ARG:NH2	2.50	0.58
6:CA:1310:U:H2'	6:CA:1311:C:C6	2.38	0.58
6:CA:1499:A:H2'	6:CA:1500:A:C8	2.38	0.58
50:ZV:20:GLN:HB2	50:ZV:25:SER:HA	1.84	0.58
73:u:35:LYS:HB3	73:u:242:ALA:HB1	1.85	0.58
73:u:147:HIS:ND1	73:u:190:ASP:OD2	2.29	0.58
6:CA:594:A:N7	84:CA:1965:HOH:O	2.32	0.58
6:CA:909:A:H2'	6:CA:910:A:C8	2.39	0.58
48:ZT:74:THR:HG1	48:ZT:77:CYS:HG	1.51	0.58
71:s:30:GLN:NE2	71:s:32:HIS:H	2.01	0.58
78:z:67:ARG:HH22	78:z:124:ASP:HB3	1.68	0.58
3:A:752:G:OP1	79:A:3480:GET:N12	2.36	0.58
4:B:19:G:N2	4:B:62:U:O2	2.27	0.58
26:W:34:VAL:O	26:W:38:ASN:ND2	2.35	0.58
6:CA:357:U:H2'	6:CA:358:A:O4'	2.02	0.58
6:CA:500:A:OP2	31:ZB:176:ASN:ND2	2.33	0.58
40:ZK:51:GLU:OE1	40:ZK:51:GLU:N	2.36	0.58
50:ZV:30:LEU:H	50:ZV:39:CYS:HA	1.69	0.58
3:A:27:C:H4'	3:A:60:A:H4'	1.86	0.58
10:G:211:LEU:HB3	10:G:219:TYR:HB2	1.86	0.58
30:ZA:124:TYR:O	30:ZA:126:LYS:NZ	2.37	0.58
3:A:250:C:H2'	3:A:251:A:C8	2.38	0.58
6:CA:12:U:OP1	73:u:79:ARG:NH1	2.37	0.58
6:CA:875:A:OP1	35:ZF:47:ARG:NH1	2.29	0.58
6:CA:1444:U:O2'	6:CA:1445:A:O4'	2.19	0.58
31:ZB:114:PHE:HA	31:ZB:119:ALA:HB3	1.84	0.58
22:S:92:ARG:HG2	55:c:76:GLU:HG3	1.85	0.58
40:ZK:109:GLU:HG3	40:ZK:114:VAL:HG23	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:u:166:PRO:HG3	84:u:324:HOH:O	2.03	0.58
30:ZA:32:ARG:HG2	30:ZA:34:PHE:CE2	2.39	0.58
3:A:2738:A:OP1	15:L:154:ARG:NH1	2.37	0.57
6:CA:856:U:OP1	72:t:214:LYS:NZ	2.37	0.57
3:A:2023:C:H1'	3:A:3232:A:H8	1.69	0.57
6:CA:137:A:OP2	77:y:187:LYS:NZ	2.34	0.57
6:CA:144:U:H2'	6:CA:145:A:H8	1.69	0.57
31:ZB:108:ARG:HH21	31:ZB:110:GLN:HE21	1.52	0.57
72:t:179:VAL:HG21	72:t:187:LYS:HE3	1.86	0.57
1:l:22:C:H5	1:l:46:A:H61	1.53	0.57
10:G:116:ASP:OD1	10:G:116:ASP:N	2.38	0.57
34:ZE:55:ARG:HD3	48:ZT:47:PHE:CD2	2.39	0.57
74:v:63:GLN:N	74:v:63:GLN:OE1	2.36	0.57
3:A:765:A:H2'	3:A:766:C:H6	1.68	0.57
6:CA:69:A:N1	6:CA:81:U:H5	2.03	0.57
6:CA:343:C:H5''	30:ZA:23:ALA:HB2	1.86	0.57
74:v:33:GLN:HE21	74:v:58:GLY:HA3	1.68	0.57
6:CA:1261:G:H22	6:CA:1294:G:H22	1.52	0.57
3:A:1270:G:H4'	24:U:15:MET:HG3	1.87	0.57
6:CA:1169:G:N2	50:ZV:29:GLY:O	2.38	0.57
31:ZB:112:GLN:NE2	31:ZB:153:GLN:HE22	2.02	0.57
55:c:128:ARG:HG2	55:c:149:ALA:HB3	1.86	0.57
3:A:489:U:H2'	3:A:490:A:C8	2.40	0.57
3:A:1538:C:H2'	3:A:1539:U:C6	2.40	0.57
3:A:610:U:H2'	3:A:611:A:C8	2.39	0.57
6:CA:596:G:H5'	6:CA:602:G:N2	2.20	0.57
3:A:1476:U:OP2	79:A:3493:GET:N12	2.38	0.57
6:CA:279:G:N2	84:CA:1987:HOH:O	2.36	0.57
31:ZB:112:GLN:HE21	31:ZB:148:VAL:HB	1.70	0.57
52:ZY:199:THR:OG1	52:ZY:200:ILE:N	2.37	0.57
77:y:163:GLU:OE1	77:y:163:GLU:N	2.37	0.57
3:A:497:U:H2'	3:A:498:G:H8	1.70	0.56
6:CA:1510:U:OP2	46:ZR:38:HIS:ND1	2.28	0.56
3:A:2583:U:H2'	3:A:2584:C:C6	2.40	0.56
6:CA:1050:U:O2'	6:CA:1051:A:H5'	2.06	0.56
3:A:239:U:H2'	3:A:240:U:C6	2.41	0.56
3:A:1327:G:OP1	9:F:204:ARG:NH1	2.38	0.56
3:A:2027:U:OP2	28:Y:48:ARG:NH2	2.38	0.56
3:A:2956:A:H1'	3:A:2958:U:OP2	2.05	0.56
3:A:3163:A:H5''	3:A:3165:G:OP2	2.05	0.56
45:ZQ:29:HIS:HB2	45:ZQ:32:ARG:HB3	1.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZY:19:TRP:HB2	52:ZY:38:ARG:HG3	1.87	0.56
72:t:131:ASP:N	72:t:131:ASP:OD1	2.38	0.56
1:1:35:C:H2'	1:1:36:G:C8	2.41	0.56
3:A:608:U:H2'	3:A:609:C:C6	2.40	0.56
3:A:2668:U:H2'	3:A:2669:A:H8	1.69	0.56
3:A:2958:U:H5	84:A:9190:HOH:O	1.88	0.56
6:CA:36:C:H2'	6:CA:37:U:C6	2.41	0.56
6:CA:635:U:H2'	6:CA:636:U:H6	1.70	0.56
6:CA:635:U:H2'	6:CA:636:U:C6	2.41	0.56
6:CA:1239:U:H4'	6:CA:1240:G:O5'	2.03	0.56
30:ZA:124:TYR:HB3	30:ZA:126:LYS:NZ	2.20	0.56
60:h:48:ARG:HG3	60:h:104:PRO:HD3	1.87	0.56
3:A:2597:A:H2'	3:A:2598:G:C8	2.40	0.56
6:CA:1450:G:H2'	6:CA:1451:A:H8	1.69	0.56
57:e:23:LYS:HB2	57:e:95:ASP:HB3	1.87	0.56
71:s:83:GLN:HG2	71:s:99:ALA:HB1	1.88	0.56
6:CA:868:A:N6	6:CA:882:U:H5''	2.20	0.56
6:CA:992:C:O2'	6:CA:1095:A:N1	2.34	0.56
6:CA:1539:U:H2'	6:CA:1540:C:C6	2.41	0.56
6:CA:1566:C:H2'	6:CA:1567:A:H8	1.70	0.56
45:ZQ:55:ILE:HG12	45:ZQ:75:ILE:HD13	1.87	0.56
72:t:224:ASP:HB3	72:t:227:SER:HB2	1.87	0.56
3:A:297:A:H2'	3:A:298:A:C8	2.40	0.56
3:A:1525:G:N7	79:A:3493:GET:O31	2.34	0.56
3:A:2861:G:H2'	3:A:2862:U:C6	2.41	0.56
6:CA:1267:G:N2	6:CA:1270:A:OP2	2.33	0.56
52:ZY:206:LEU:HD11	52:ZY:227:LEU:HD12	1.88	0.56
76:x:50:ASP:OD1	76:x:50:ASP:N	2.37	0.56
32:ZC:70:ASP:OD1	32:ZC:70:ASP:N	2.34	0.56
41:ZL:46:GLN:OE1	41:ZL:47:ASN:ND2	2.39	0.56
72:t:143:THR:HG22	72:t:205:LEU:HD21	1.86	0.56
3:A:178:C:OP2	53:a:122:ARG:NH1	2.36	0.56
3:A:2672:C:H4'	3:A:2673:C:H5'	1.88	0.56
79:A:3481:GET:H111	84:A:5781:HOH:O	2.06	0.56
6:CA:72:A:H2'	6:CA:74:U:H1'	1.87	0.56
6:CA:822:C:H5''	23:T:196:ARG:HH22	1.71	0.56
6:CA:970:C:H5	6:CA:973:A:H5''	1.71	0.56
6:CA:1567:A:H2'	6:CA:1568:A:H8	1.71	0.56
17:N:118:GLU:HG2	17:N:143:PHE:HE2	1.71	0.56
41:ZL:44:ALA:HA	41:ZL:49:ILE:HD12	1.87	0.56
45:ZQ:57:VAL:HB	45:ZQ:60:PHE:HE2	1.71	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:v:107:LYS:NZ	74:v:175:HIS:O	2.39	0.56
26:W:6:THR:HG21	26:W:70:LYS:HB2	1.88	0.55
6:CA:584:G:N7	84:CA:1969:HOH:O	2.33	0.55
6:CA:872:G:H22	6:CA:876:A:H5''	1.71	0.55
6:CA:1500:A:H2'	6:CA:1501:A:C8	2.42	0.55
3:A:1741:A:H2'	3:A:1742:A:C8	2.41	0.55
6:CA:1594:C:H2'	6:CA:1595:C:H6	1.71	0.55
8:E:84:MET:HE1	8:E:181:ILE:CD1	2.36	0.55
9:F:303:SER:OG	22:S:39:ARG:NH2	2.40	0.55
3:A:1575:G:N7	54:b:73:LYS:NZ	2.55	0.55
6:CA:960:C:H2'	6:CA:961:G:O4'	2.07	0.55
9:F:156:GLU:CD	9:F:156:GLU:H	2.14	0.55
27:X:7:SER:O	27:X:7:SER:OG	2.25	0.55
43:ZO:41:MET:HG2	43:ZO:129:VAL:HG21	1.87	0.55
3:A:2008:G:OP1	23:T:134:LYS:NZ	2.40	0.55
3:A:2611:C:O2'	3:A:2644:U:OP1	2.24	0.55
30:ZA:141:HIS:O	30:ZA:145:ARG:NH1	2.40	0.55
58:f:2:ALA:N	58:f:5:ASP:OD1	2.39	0.55
3:A:522:G:H2'	3:A:523:A:C8	2.42	0.55
3:A:702:A:H2'	3:A:703:G:O4'	2.07	0.55
3:A:2079:A:H5''	84:P:518:HOH:O	2.06	0.55
75:w:45:ILE:HG13	75:w:61:VAL:HG21	1.88	0.55
6:CA:1341:C:O3'	37:ZH:29:LYS:NZ	2.39	0.55
66:n:42:ARG:HG3	66:n:47:THR:OG1	2.07	0.55
41:ZL:27:SER:HB2	41:ZL:111:VAL:HA	1.89	0.55
48:ZT:42:ASN:ND2	48:ZT:56:CYS:SG	2.65	0.55
74:v:67:ILE:O	74:v:71:THR:OG1	2.23	0.55
3:A:601:C:H2'	3:A:602:A:C8	2.42	0.55
3:A:601:C:H2'	3:A:602:A:H8	1.72	0.55
33:ZD:36:LYS:NZ	84:ZD:206:HOH:O	2.32	0.55
35:ZF:106:ARG:NH2	47:ZS:117:GLU:O	2.40	0.55
3:A:1125:G:O6	60:h:20:LYS:NZ	2.39	0.54
3:A:2027:U:H4'	3:A:2028:A:H5'	1.89	0.54
3:A:2668:U:H2'	3:A:2669:A:C8	2.42	0.54
3:A:2780:U:H1'	8:E:250:ALA:HB3	1.89	0.54
6:CA:1130:A:H2'	6:CA:1131:C:C6	2.42	0.54
6:CA:1646:A:OP2	79:CA:1879:GET:H21	2.07	0.54
72:t:48:ILE:HD12	72:t:49:ASN:H	1.72	0.54
75:w:100:ARG:HH21	75:w:118:GLU:HG2	1.72	0.54
6:CA:1617:G:OP2	79:CA:1882:GET:O61	2.20	0.54
6:CA:1618:U:H3	79:CA:1882:GET:H212	1.54	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:ZP:54:LEU:HD11	44:ZP:82:LYS:HZ2	1.72	0.54
3:A:2905:C:OP2	8:E:28:LYS:NZ	2.39	0.54
6:CA:247:C:O2	30:ZA:182:ARG:NH2	2.40	0.54
48:ZT:11:ASN:HB3	48:ZT:14:THR:HG23	1.88	0.54
52:ZY:218:LEU:HD11	52:ZY:241:PHE:HZ	1.73	0.54
53:a:72:THR:HG23	53:a:81:GLN:HB2	1.90	0.54
72:t:138:PHE:HE2	72:t:216:LYS:HD3	1.73	0.54
74:v:173:ILE:HG12	74:v:186:LYS:HG2	1.89	0.54
6:CA:604:A:O2'	6:CA:610:A:N1	2.40	0.54
6:CA:1594:C:O4'	49:ZU:21:SER:OG	2.25	0.54
30:ZA:137:VAL:O	30:ZA:139:ARG:NH2	2.41	0.54
75:w:179:ARG:HD3	75:w:230:GLU:HA	1.90	0.54
3:A:2334:A:H2'	3:A:2335:C:C6	2.42	0.54
6:CA:1534:G:H5''	39:ZJ:135:GLY:HA3	1.90	0.54
3:A:347:A:O4'	9:F:82:GLY:HA3	2.07	0.54
3:A:790:A:H2'	3:A:791:A:C8	2.43	0.54
6:CA:614:C:H2'	6:CA:615:U:C6	2.43	0.54
52:ZY:39:ASP:OD1	52:ZY:41:THR:OG1	2.23	0.54
3:A:2614:G:H5'	3:A:2616:U:H6	1.72	0.54
3:A:2795:G:O2'	67:o:24:TYR:O	2.22	0.54
5:C:92:A:OP1	64:l:80:THR:OG1	2.24	0.54
6:CA:1037:G:H5''	72:t:150:VAL:HG13	1.90	0.54
3:A:678:C:H4'	3:A:679:G:O5'	2.08	0.54
26:W:56:ILE:HG12	26:W:65:VAL:HG22	1.88	0.54
3:A:1444:U:O2'	3:A:1445:C:H5'	2.08	0.54
3:A:2662:A:H2'	3:A:2663:U:H6	1.73	0.54
6:CA:841:G:H2'	6:CA:842:G:C8	2.42	0.54
16:M:19:ILE:HD11	16:M:123:MET:HE2	1.90	0.54
35:ZF:81:THR:HG21	35:ZF:85:LYS:HD2	1.88	0.54
43:ZO:23:ARG:CG	48:ZT:4:VAL:HG22	2.38	0.54
63:k:70:LYS:NZ	63:k:70:LYS:HB2	2.23	0.54
6:CA:1728:A:H2'	6:CA:1729:A:C8	2.43	0.54
15:L:71:CYS:SG	15:L:154:ARG:HB3	2.48	0.54
34:ZE:103:GLU:HA	34:ZE:106:ARG:NH2	2.23	0.54
35:ZF:60:GLN:HE22	35:ZF:99:ALA:HB1	1.73	0.54
35:ZF:123:ARG:CZ	47:ZS:89:ALA:HB2	2.37	0.54
52:ZY:111:LEU:HD21	52:ZY:127:ARG:HE	1.73	0.54
69:q:72:LEU:HD11	69:q:83:LEU:HD12	1.90	0.54
74:v:165:THR:HA	74:v:169:ILE:HD12	1.90	0.54
3:A:1504:C:OP2	29:Z:37:LYS:NZ	2.38	0.53
78:z:77:LEU:HD22	78:z:86:VAL:HG21	1.88	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:57:G:H2'	5:C:33:A:O2'	2.08	0.53
7:D:196:TRP:O	7:D:198:LYS:HG3	2.07	0.53
15:L:36:LEU:HD21	15:L:69:ARG:HH11	1.72	0.53
43:ZO:28:ARG:HA	43:ZO:60:LYS:HG2	1.89	0.53
3:A:1757:A:H1'	3:A:1759:G:C5	2.43	0.53
3:A:2869:A:N7	7:D:215:ASN:ND2	2.54	0.53
6:CA:144:U:H2'	6:CA:145:A:C8	2.43	0.53
6:CA:1230:U:H2'	6:CA:1231:G:H8	1.73	0.53
53:a:38:GLU:CD	53:a:38:GLU:H	2.15	0.53
3:A:2596:A:H2'	3:A:2597:A:C8	2.44	0.53
6:CA:390:A:H5''	84:CA:2170:HOH:O	2.08	0.53
6:CA:1623:A:H2'	6:CA:1624:C:C6	2.43	0.53
65:m:8:ILE:HG13	65:m:65:LEU:HD13	1.89	0.53
3:A:2574:A:H5''	16:M:103:GLY:HA3	1.90	0.53
6:CA:54:C:O2'	6:CA:448:G:N7	2.34	0.53
6:CA:71:G:N2	6:CA:79:A:H62	2.05	0.53
37:ZH:112:ASP:OD1	37:ZH:114:THR:N	2.42	0.53
13:J:163:LEU:HD23	19:P:7:LEU:HD11	1.91	0.53
30:ZA:141:HIS:O	30:ZA:145:ARG:HD3	2.08	0.53
31:ZB:112:GLN:HE22	31:ZB:153:GLN:HE22	1.57	0.53
41:ZL:81:TYR:HB3	50:ZV:52:PHE:HB3	1.89	0.53
6:CA:1482:G:OP1	6:CA:1526:U:H5''	2.09	0.53
54:b:72:VAL:HG12	54:b:101:LEU:HD21	1.90	0.53
3:A:851:G:C4	79:A:3480:GET:H833	2.44	0.53
84:A:7440:HOH:O	55:c:32:ARG:HB3	2.09	0.53
53:a:38:GLU:OE2	53:a:38:GLU:N	2.41	0.53
71:s:139:VAL:HG23	71:s:141:ILE:HG13	1.91	0.53
3:A:1491:A:H8	3:A:1492:C:O2'	1.92	0.53
3:A:2575:C:OP2	3:A:2576:A:O2'	2.22	0.53
6:CA:722:G:H2'	6:CA:723:A:H8	1.74	0.53
48:ZT:44:THR:HG21	48:ZT:63:LEU:HD13	1.91	0.53
78:z:33:ASP:OD1	78:z:33:ASP:N	2.39	0.53
3:A:2827:C:H2'	3:A:2828:C:C6	2.44	0.53
6:CA:884:G:H4'	6:CA:885:A:H5'	1.90	0.53
6:CA:888:U:H2'	6:CA:889:A:C8	2.44	0.53
6:CA:1390:U:H5''	38:ZI:3:ARG:HH11	1.73	0.53
16:M:35:LEU:HD12	16:M:65:VAL:HG13	1.91	0.53
6:CA:1374:U:O2'	6:CA:1376:A:N7	2.41	0.52
28:Y:27:LYS:HD3	28:Y:29:PHE:CZ	2.44	0.52
39:ZJ:8:ASP:OD1	39:ZJ:8:ASP:N	2.39	0.52
44:ZP:48:HIS:HB3	44:ZP:103:LEU:HD11	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZY:38:ARG:HA	52:ZY:67:ILE:HG23	1.91	0.52
3:A:3156:A:H2'	11:H:57:PHE:CZ	2.45	0.52
6:CA:1566:C:H2'	6:CA:1567:A:C8	2.44	0.52
7:D:104:LEU:HD22	7:D:136:ILE:HD11	1.90	0.52
72:t:180:THR:OG1	72:t:183:GLN:OE1	2.26	0.52
3:A:2342:U:H2'	3:A:2343:U:C6	2.44	0.52
3:A:3185:U:H2'	3:A:3186:C:C6	2.45	0.52
6:CA:115:U:H2'	6:CA:116:U:C6	2.45	0.52
31:ZB:108:ARG:HH21	31:ZB:110:GLN:NE2	2.07	0.52
33:ZD:43:LYS:HE2	33:ZD:43:LYS:N	2.25	0.52
71:s:208:GLU:HG2	71:s:210:ILE:HG12	1.91	0.52
3:A:2095:G:H2'	3:A:2096:C:C6	2.44	0.52
6:CA:67:A:O2'	6:CA:69:A:OP1	2.27	0.52
62:j:94:LYS:HA	62:j:94:LYS:HE2	1.92	0.52
6:CA:140:G:H2'	6:CA:141:G:C8	2.43	0.52
6:CA:1359:G:H5'	41:ZL:88:ARG:HH21	1.73	0.52
17:N:151:GLU:HG2	55:c:101:VAL:HG11	1.90	0.52
3:A:163:U:H2'	3:A:164:G:O4'	2.09	0.52
6:CA:1264:G:O2'	6:CA:1291:A:N1	2.36	0.52
6:CA:1500:A:O3'	40:ZK:83:SER:OG	2.28	0.52
16:M:108:ILE:HD12	39:ZJ:16:ARG:NH2	2.25	0.52
29:Z:48:SER:HB2	62:j:66:VAL:HG11	1.92	0.52
74:v:159:ILE:HG13	74:v:169:ILE:HD11	1.92	0.52
3:A:159:G:H4'	62:j:100:LEU:HD12	1.91	0.52
3:A:1123:C:H2'	3:A:1124:G:N2	2.24	0.52
6:CA:925:A:H4'	6:CA:1043:G:O2'	2.09	0.52
10:G:261:THR:H	10:G:264:GLN:HE21	1.58	0.52
72:t:222:LYS:NZ	72:t:223:PHE:O	2.33	0.52
3:A:3129:U:H2'	3:A:3130:C:H6	1.75	0.52
5:C:26:U:H2'	5:C:27:U:C6	2.45	0.52
6:CA:118:A:H1'	6:CA:386:A:C5	2.45	0.52
6:CA:725:U:H5'	6:CA:726:A:OP2	2.10	0.52
8:E:113:GLU:OE2	8:E:167:LYS:N	2.32	0.52
23:T:83:ALA:HB1	79:T:301:GET:H711	1.92	0.52
38:ZI:103:ASP:OD2	71:s:41:ARG:HD2	2.09	0.52
53:a:87:LYS:HE2	53:a:95:ILE:HD11	1.92	0.52
3:A:3109:A:H2	11:H:146:GLN:HG2	1.75	0.52
6:CA:1190:C:H2'	6:CA:1191:A:C8	2.43	0.52
14:K:9:ILE:O	14:K:72:LYS:NZ	2.43	0.52
24:U:23:ILE:HD11	24:U:51:ALA:HB1	1.91	0.52
52:ZY:296:ASN:HA	52:ZY:310:GLN:HA	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:w:126:VAL:HG13	75:w:139:VAL:HG23	1.92	0.52
6:CA:1250:C:P	50:ZV:44:ARG:HH22	2.33	0.51
6:CA:1769:A:H1'	47:ZS:141:ILE:HD12	1.91	0.51
32:ZC:29:LYS:NZ	32:ZC:33:GLU:OE2	2.42	0.51
71:s:113:ARG:NH1	71:s:113:ARG:HA	2.25	0.51
3:A:1075:U:H2'	3:A:1076:A:O4'	2.10	0.51
3:A:3023:A:O2'	14:K:63:LYS:HD2	2.10	0.51
5:C:107:A:OP1	64:l:32:LYS:NZ	2.40	0.51
6:CA:100:U:OP1	79:CA:1875:GET:N32	2.43	0.51
6:CA:1313:A:H2'	6:CA:1314:A:C8	2.45	0.51
6:CA:1567:A:H2'	6:CA:1568:A:C8	2.45	0.51
58:f:73:ARG:NH1	58:f:108:VAL:HG21	2.26	0.51
60:h:39:GLN:CD	60:h:39:GLN:H	2.18	0.51
3:A:452:C:H2'	3:A:453:A:H8	1.74	0.51
3:A:898:U:H2'	3:A:899:U:C6	2.45	0.51
3:A:2511:U:H2'	3:A:2512:U:C6	2.45	0.51
6:CA:748:C:H5'	6:CA:749:G:OP2	2.10	0.51
6:CA:856:U:C2	6:CA:857:A:C8	2.98	0.51
8:E:256:HIS:HA	8:E:257:PRO:C	2.34	0.51
12:I:17:ASP:HB2	12:I:20:VAL:HG23	1.92	0.51
13:J:183:GLY:O	13:J:184:LYS:HB3	2.10	0.51
35:ZF:11:VAL:HG23	35:ZF:75:HIS:HB2	1.91	0.51
74:v:39:GLU:OE2	74:v:41:ARG:NH1	2.43	0.51
1:1:36:G:H22	2:2:1:C:H5	1.58	0.51
3:A:735:G:H2'	3:A:736:C:C6	2.45	0.51
3:A:993:A:H2'	3:A:996:C:C5	2.46	0.51
3:A:2701:A:O2'	3:A:2702:A:H2'	2.11	0.51
4:B:114:C:H2'	4:B:115:U:O4'	2.11	0.51
37:ZH:27:LEU:HD11	37:ZH:29:LYS:HZ1	1.76	0.51
52:ZY:158:PRO:HD2	52:ZY:200:ILE:HG21	1.93	0.51
54:b:33:THR:HG22	54:b:35:ALA:N	2.25	0.51
58:f:76:ARG:HG2	58:f:88:MET:HE3	1.92	0.51
3:A:488:C:H2'	3:A:489:U:C6	2.46	0.51
3:A:2948:U:O2'	3:A:2949:A:H5'	2.10	0.51
6:CA:436:U:H2'	6:CA:437:C:O4'	2.11	0.51
6:CA:865:G:H2'	6:CA:866:U:C6	2.46	0.51
40:ZK:127:ASN:OD1	40:ZK:130:ARG:NH2	2.44	0.51
76:x:161:ASP:OD1	76:x:161:ASP:N	2.40	0.51
3:A:813:G:C4	79:A:3484:GET:H531	2.46	0.51
3:A:843:G:H1'	3:A:1531:A:N6	2.24	0.51
3:A:928:A:N6	3:A:1049:U:H3	2.08	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2914:U:H2'	3:A:2915:U:C6	2.46	0.51
4:B:3:U:H2'	4:B:4:U:C6	2.46	0.51
7:D:112:ILE:HG13	70:r:86:VAL:HG22	1.93	0.51
30:ZA:120:TYR:HE2	30:ZA:156:ILE:HG21	1.74	0.51
37:ZH:45:PHE:O	37:ZH:49:GLU:HG3	2.10	0.51
52:ZY:61:PHE:HB3	52:ZY:92:TRP:CE3	2.46	0.51
74:v:109:LYS:HB3	74:v:114:LEU:HD11	1.92	0.51
3:A:201:A:H4'	3:A:203:C:C5	2.46	0.51
3:A:1491:A:H2'	3:A:1491:A:N3	2.26	0.51
3:A:1855:G:N3	3:A:2035:A:H2'	2.26	0.51
3:A:2662:A:H2'	3:A:2663:U:C6	2.45	0.51
3:A:2917:A:H2'	3:A:2918:A:C8	2.45	0.51
3:A:3028:A:H2'	3:A:3029:G:O4'	2.11	0.51
6:CA:406:A:H4'	6:CA:407:G:O5'	2.11	0.51
6:CA:676:A:H2'	6:CA:677:G:H8	1.74	0.51
6:CA:751:A:H1'	6:CA:753:G:C5	2.46	0.51
6:CA:855:G:H2'	6:CA:856:U:C6	2.46	0.51
6:CA:1057:A:H2'	6:CA:1058:A:C8	2.46	0.51
14:K:36:LYS:HB2	14:K:78:LEU:HD11	1.92	0.51
48:ZT:74:THR:OG1	48:ZT:77:CYS:SG	2.59	0.51
72:t:152:LYS:HD3	72:t:153:THR:HG23	1.93	0.51
3:A:1557:U:H2'	3:A:1558:U:C6	2.45	0.51
6:CA:1458:C:H2'	6:CA:1459:A:H5''	1.93	0.51
3:A:119:G:O2'	13:J:106:LYS:NZ	2.37	0.51
3:A:1273:A:H2'	3:A:1274:C:O4'	2.11	0.51
3:A:1491:A:H4'	3:A:1492:C:OP1	2.11	0.51
74:v:104:GLU:OE1	74:v:174:ARG:NE	2.41	0.51
1:1:9:G:H5'	1:1:11:C:OP2	2.11	0.51
3:A:1135:U:OP1	3:A:1157:U:O2'	2.25	0.51
79:A:3491:GET:H713	84:A:4061:HOH:O	2.11	0.51
5:C:59:A:H5''	5:C:61:A:C8	2.46	0.51
6:CA:1:U:N3	6:CA:3:U:O4	2.44	0.51
6:CA:125:A:H5''	75:w:134:ARG:NH1	2.26	0.51
7:D:70:LYS:HD2	7:D:72:ARG:CZ	2.41	0.51
45:ZQ:52:LYS:HA	45:ZQ:55:ILE:HD12	1.92	0.51
45:ZQ:115:GLU:HG2	45:ZQ:122:LEU:HD21	1.92	0.51
46:ZR:60:VAL:HB	46:ZR:101:TYR:HB2	1.93	0.51
6:CA:959:U:H2'	6:CA:960:C:C6	2.45	0.50
6:CA:1037:G:OP1	72:t:151:ARG:HG2	2.11	0.50
6:CA:1057:A:H5'	6:CA:1268:U:C5	2.46	0.50
30:ZA:155:LYS:O	30:ZA:156:ILE:HG13	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:ZI:88:ILE:HB	38:ZI:95:HIS:NE2	2.27	0.50
43:ZO:23:ARG:HH22	43:ZO:66:THR:C	2.19	0.50
63:k:91:GLN:OE1	63:k:91:GLN:HA	2.11	0.50
72:t:179:VAL:HG13	72:t:183:GLN:HB2	1.92	0.50
73:u:160:VAL:HG11	73:u:205:THR:HA	1.92	0.50
3:A:774:G:O2'	3:A:1806:A:N3	2.37	0.50
3:A:2581:U:H2'	3:A:2582:C:H6	1.77	0.50
3:A:3281:U:H2'	3:A:3282:U:C6	2.46	0.50
6:CA:821:U:H2'	6:CA:822:C:O4'	2.11	0.50
52:ZY:154:VAL:O	52:ZY:155:ARG:NE	2.42	0.50
52:ZY:256:ILE:HD12	52:ZY:288:LEU:HD21	1.92	0.50
55:c:94:ALA:HB3	55:c:121:VAL:HG13	1.93	0.50
1:1:9:G:H1'	1:1:45:G:H2'	1.93	0.50
6:CA:1033:U:H2'	6:CA:1034:G:C8	2.47	0.50
6:CA:1598:C:H2'	6:CA:1599:C:H6	1.77	0.50
26:W:39:GLU:HG3	26:W:40:ARG:HD3	1.92	0.50
57:e:33:LYS:NZ	57:e:33:LYS:HB3	2.26	0.50
1:1:9:G:H2'	1:1:11:C:H41	1.75	0.50
6:CA:404:C:O2'	6:CA:407:G:O6	2.28	0.50
6:CA:1051:A:O2'	79:CA:1887:GET:N12	2.45	0.50
6:CA:1390:U:O2'	6:CA:1392:G:OP2	2.26	0.50
1:1:36:G:H1	2:2:1:C:H5	1.59	0.50
3:A:1640:G:H2'	3:A:1641:C:C6	2.46	0.50
25:V:84:TYR:HB2	56:d:39:PRO:HD3	1.92	0.50
51:ZW:29:LYS:HE2	51:ZW:35:TYR:CE1	2.47	0.50
6:CA:521:U:OP1	45:ZQ:65:GLY:N	2.43	0.50
6:CA:1224:U:H2'	6:CA:1225:G:C8	2.46	0.50
6:CA:1308:C:H2'	6:CA:1309:C:H6	1.76	0.50
8:E:249:VAL:HG21	8:E:265:PRO:HG2	1.94	0.50
9:F:182:VAL:HG11	9:F:225:GLY:HA3	1.93	0.50
52:ZY:199:THR:O	52:ZY:200:ILE:HG13	2.11	0.50
71:s:190:ASP:OD1	71:s:192:GLN:N	2.42	0.50
3:A:165:U:O4	3:A:236:U:H5	1.95	0.50
3:A:431:C:H2'	3:A:432:G:H8	1.76	0.50
3:A:987:A:N3	15:L:198:LYS:NZ	2.59	0.50
3:A:1066:C:H2'	3:A:1067:A:H8	1.77	0.50
3:A:1263:C:C2	20:Q:131:LYS:HE3	2.46	0.50
6:CA:638:G:H2'	6:CA:639:A:H8	1.76	0.50
6:CA:774:A:C8	43:ZO:107:SER:HA	2.47	0.50
6:CA:1201:U:H3	6:CA:1224:U:H3	1.60	0.50
71:s:76:CYS:HB2	71:s:123:VAL:HG12	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:v:47:LEU:HB3	74:v:85:ILE:HD13	1.94	0.50
3:A:517:G:H2'	3:A:518:U:C6	2.47	0.50
3:A:1413:U:H2'	3:A:1414:U:C6	2.46	0.50
3:A:3022:U:H1'	3:A:3023:A:H5''	1.94	0.50
6:CA:1565:G:OP1	40:ZK:91:HIS:HB2	2.12	0.50
6:CA:1581:C:H2'	6:CA:1582:G:C8	2.47	0.50
6:CA:1590:C:OP1	49:ZU:18:ARG:NH2	2.44	0.50
26:W:27:VAL:HG21	26:W:107:PHE:HE2	1.75	0.50
26:W:53:ALA:HB1	26:W:69:ALA:CB	2.42	0.50
36:ZG:107:ILE:HA	36:ZG:111:MET:HE2	1.94	0.50
70:r:13:LYS:HG2	70:r:14:LYS:HZ2	1.77	0.50
72:t:69:CYS:HA	72:t:83:LYS:HA	1.94	0.50
3:A:927:A:H5'	79:A:3486:GET:H32	1.94	0.50
3:A:2022:A:O4'	30:ZA:99:ARG:NH2	2.45	0.50
3:A:2197:U:O2	3:A:2225:U:H4'	2.12	0.50
3:A:2284:G:H2'	3:A:2285:G:C8	2.47	0.50
3:A:2917:A:H2'	3:A:2918:A:H8	1.76	0.50
30:ZA:18:ARG:NH1	30:ZA:22:GLY:O	2.44	0.50
44:ZP:62:LYS:HE3	44:ZP:118:PRO:HB3	1.93	0.50
57:e:18:VAL:HG11	57:e:93:ILE:HD12	1.93	0.50
3:A:452:C:H2'	3:A:453:A:C8	2.47	0.49
3:A:1013:G:H2'	3:A:1014:U:C6	2.47	0.49
3:A:2170:A:N1	6:CA:1619:C:O2'	2.36	0.49
3:A:2282:A:H2'	3:A:2283:A:C8	2.47	0.49
3:A:2667:U:H2'	3:A:2668:U:C6	2.46	0.49
3:A:3185:U:H2'	3:A:3186:C:H6	1.77	0.49
6:CA:1261:G:N2	6:CA:1294:G:H22	2.10	0.49
6:CA:1278:G:H2'	6:CA:1279:C:C6	2.47	0.49
6:CA:1536:U:H4'	6:CA:1574:C:H4'	1.93	0.49
79:CA:1883:GET:H322	79:CA:1883:GET:H311	1.76	0.49
8:E:57:VAL:HG22	8:E:73:VAL:HG22	1.94	0.49
38:ZI:89:SER:C	38:ZI:91:LEU:H	2.20	0.49
65:m:7:ASP:OD1	65:m:10:GLU:HB3	2.12	0.49
76:x:71:SER:O	76:x:71:SER:OG	2.27	0.49
3:A:1015:C:H5'	25:V:110:LYS:HE2	1.93	0.49
3:A:1757:A:H1'	3:A:1759:G:C4	2.47	0.49
3:A:1759:G:O2'	3:A:1760:U:OP1	2.28	0.49
3:A:2614:G:H8	3:A:2651:G:H2'	1.77	0.49
6:CA:552:U:H5	6:CA:569:A:N7	2.11	0.49
6:CA:676:A:H2'	6:CA:677:G:C8	2.47	0.49
6:CA:1319:U:H2'	6:CA:1320:G:C8	2.47	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:ZB:105:LEU:O	31:ZB:111:THR:OG1	2.23	0.49
75:w:122:LYS:HD2	75:w:164:LEU:HD21	1.93	0.49
3:A:2:U:H2'	3:A:3:C:C6	2.46	0.49
3:A:202:G:C2	9:F:218:LYS:HE3	2.47	0.49
3:A:2122:A:H5''	3:A:2123:A:N7	2.28	0.49
3:A:2321:C:H2'	3:A:2322:C:H6	1.76	0.49
6:CA:753:G:O2'	6:CA:754:C:O5'	2.30	0.49
6:CA:1301:A:OP1	38:ZI:45:ARG:NH2	2.44	0.49
6:CA:1625:U:H2'	6:CA:1626:A:C8	2.48	0.49
33:ZD:26:ARG:O	33:ZD:29:LYS:HG3	2.12	0.49
39:ZJ:53:ASP:HB3	39:ZJ:56:LYS:HD2	1.93	0.49
6:CA:500:A:H5''	31:ZB:172:VAL:HG12	1.94	0.49
6:CA:1141:A:H2'	6:CA:1142:G:H8	1.74	0.49
65:m:29:LYS:HD3	65:m:39:LYS:NZ	2.27	0.49
72:t:68:VAL:O	72:t:84:ILE:N	2.43	0.49
3:A:822:U:O2	3:A:2272:A:H1'	2.13	0.49
4:B:102:G:N7	24:U:66:LYS:NZ	2.48	0.49
6:CA:1528:G:H4'	50:ZV:14:PHE:CE2	2.47	0.49
6:CA:91:A:OP1	84:CA:1901:HOH:O	2.20	0.49
14:K:147:THR:HB	14:K:187:ILE:HD11	1.95	0.49
31:ZB:154:LYS:N	31:ZB:154:LYS:HD3	2.28	0.49
61:i:65:ILE:HD12	61:i:69:LYS:HB2	1.94	0.49
78:z:6:LEU:N	78:z:39:PHE:O	2.38	0.49
3:A:265:U:H2'	3:A:266:U:C6	2.48	0.49
3:A:1167:U:OP1	3:A:1168:A:O2'	2.31	0.49
3:A:1645:U:O2	3:A:1729:G:O2'	2.31	0.49
3:A:2811:A:H4'	3:A:2812:G:C8	2.48	0.49
6:CA:251:U:H2'	6:CA:252:C:C6	2.48	0.49
6:CA:270:G:H2'	6:CA:271:C:C6	2.48	0.49
6:CA:832:A:O2'	6:CA:933:A:N6	2.40	0.49
6:CA:903:A:OP2	47:ZS:99:LYS:NZ	2.31	0.49
6:CA:987:U:H2'	6:CA:988:U:C6	2.48	0.49
6:CA:1477:G:N7	40:ZK:102:ARG:NH2	2.49	0.49
15:L:36:LEU:HD11	15:L:69:ARG:HD2	1.94	0.49
52:ZY:161:LYS:NZ	52:ZY:162:SER:OG	2.45	0.49
72:t:145:ARG:HH22	72:t:152:LYS:HA	1.77	0.49
3:A:2589:G:H2'	3:A:2589:G:N3	2.28	0.49
6:CA:281:U:H2'	6:CA:282:U:C6	2.48	0.49
52:ZY:218:LEU:HD21	52:ZY:248:LEU:HD22	1.93	0.49
77:y:5:ILE:HD12	77:y:16:ILE:HD12	1.93	0.49
3:A:868:A:O2'	79:A:3480:GET:H32	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2796:A:H5''	67:o:19:ILE:HD12	1.94	0.49
6:CA:74:U:H2'	6:CA:75:A:C4	2.48	0.49
6:CA:1291:A:H4'	6:CA:1292:A:O5'	2.13	0.49
6:CA:1491:A:O2'	6:CA:1492:U:H5'	2.12	0.49
24:U:15:MET:HG2	24:U:122:GLN:OE1	2.12	0.49
47:ZS:151:ARG:NH2	84:ZS:301:HOH:O	2.46	0.49
48:ZT:58:ASN:OD1	48:ZT:58:ASN:N	2.41	0.49
58:f:4:GLN:O	58:f:78:ARG:NH1	2.46	0.49
72:t:32:ILE:HA	72:t:96:LEU:HB2	1.95	0.49
3:A:1306:G:H2'	3:A:1307:C:C6	2.47	0.49
5:C:5:U:H2'	5:C:6:U:C6	2.48	0.49
6:CA:574:A:H2'	6:CA:575:G:C8	2.48	0.49
6:CA:1114:U:H2'	6:CA:1115:U:C6	2.48	0.49
13:J:159:ASP:HB3	13:J:160:PRO:HD3	1.94	0.49
17:N:49:LYS:HD3	62:j:116:TYR:CE1	2.47	0.49
42:ZM:1:MET:HB3	42:ZM:10:GLU:HG2	1.93	0.49
84:A:5296:HOH:O	9:F:68:THR:HG21	2.12	0.48
6:CA:1001:U:H4'	6:CA:1002:G:OP2	2.12	0.48
6:CA:1221:U:H2'	6:CA:1222:C:C6	2.47	0.48
7:D:189:TYR:CG	7:D:196:TRP:HB2	2.48	0.48
11:H:120:LYS:HE2	11:H:122:GLU:OE1	2.14	0.48
27:X:120:LYS:HD2	27:X:124:ASP:OD1	2.12	0.48
3:A:620:G:O6	22:S:56:LYS:NZ	2.46	0.48
84:A:6021:HOH:O	7:D:195:SER:HB3	2.13	0.48
6:CA:638:G:N2	6:CA:672:U:O2	2.31	0.48
6:CA:864:U:H1'	35:ZF:31:ARG:HB3	1.95	0.48
6:CA:987:U:H2'	6:CA:988:U:H6	1.79	0.48
10:G:91:GLY:HA3	10:G:94:ASN:HD22	1.78	0.48
27:X:86:ARG:HB2	27:X:92:TYR:CE2	2.48	0.48
72:t:189:ILE:HB	72:t:190:PRO:HD3	1.95	0.48
3:A:419:U:H2'	3:A:420:G:H8	1.79	0.48
3:A:2010:A:H2'	3:A:2011:A:C8	2.49	0.48
3:A:2291:G:H2'	3:A:2292:G:C8	2.47	0.48
3:A:2783:U:H2'	3:A:2784:C:C6	2.48	0.48
6:CA:527:A:H5'	6:CA:532:C:H42	1.78	0.48
6:CA:638:G:H2'	6:CA:639:A:C8	2.49	0.48
6:CA:1061:A:H4'	6:CA:1062:A:O4'	2.13	0.48
40:ZK:25:GLN:HG2	40:ZK:27:LYS:HG3	1.95	0.48
3:A:167:C:H2'	3:A:168:U:C6	2.48	0.48
3:A:1803:G:OP1	79:T:301:GET:N32	2.46	0.48
3:A:2853:U:H2'	3:A:2854:U:H2'	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:102:A:H4'	6:CA:104:A:C8	2.48	0.48
6:CA:1021:G:H1	6:CA:1037:G:H1	1.61	0.48
8:E:106:TRP:CH2	8:E:161:LEU:HD13	2.49	0.48
31:ZB:65:LYS:HA	31:ZB:70:LEU:HD11	1.96	0.48
31:ZB:148:VAL:HG11	31:ZB:156:ILE:HD11	1.95	0.48
35:ZF:15:TYR:HB3	35:ZF:22:PHE:HB2	1.93	0.48
47:ZS:82:PRO:HA	47:ZS:93:PRO:HA	1.95	0.48
54:b:36:HIS:HB2	54:b:40:HIS:CE1	2.49	0.48
6:CA:722:G:H2'	6:CA:723:A:C8	2.48	0.48
8:E:172:ALA:HA	79:E:402:GET:H833	1.95	0.48
27:X:13:MET:HE3	27:X:85:TRP:CE2	2.47	0.48
45:ZQ:51:ASP:OD1	45:ZQ:52:LYS:N	2.47	0.48
53:a:32:SER:HA	53:a:49:PRO:HA	1.95	0.48
74:v:43:THR:HG22	74:v:46:LYS:H	1.76	0.48
76:x:72:HIS:CD2	76:x:107:LYS:HG2	2.48	0.48
3:A:851:G:O6	79:A:3480:GET:H12	2.13	0.48
3:A:2485:C:H41	5:C:147:C:H3'	1.77	0.48
3:A:3125:U:O2	3:A:3146:G:N2	2.41	0.48
6:CA:973:A:O2'	6:CA:974:U:H5'	2.14	0.48
6:CA:1410:U:H4'	50:ZV:24:CYS:HB2	1.94	0.48
6:CA:1653:C:OP1	30:ZA:66:ARG:NH2	2.46	0.48
43:ZO:28:ARG:HB3	43:ZO:29:PRO:HD3	1.96	0.48
3:A:1367:C:OP1	79:A:3490:GET:H21	2.14	0.48
3:A:1729:G:H2'	3:A:1730:A:C8	2.48	0.48
3:A:2122:A:H3'	3:A:2123:A:C8	2.49	0.48
3:A:2181:U:H2'	3:A:2182:C:H6	1.79	0.48
3:A:3283:G:N2	3:A:3284:U:O4	2.33	0.48
6:CA:188:U:N3	6:CA:189:U:O4	2.47	0.48
6:CA:1021:G:H22	6:CA:1037:G:N2	2.11	0.48
6:CA:1339:U:H2'	6:CA:1340:G:H8	1.78	0.48
6:CA:1530:A:O2'	6:CA:1531:A:OP1	2.30	0.48
13:J:101:GLU:HB2	13:J:105:GLU:HG3	1.95	0.48
52:ZY:236:VAL:HG22	52:ZY:252:THR:HG22	1.95	0.48
57:e:22:GLY:C	57:e:23:LYS:HD3	2.38	0.48
3:A:422:A:H2'	3:A:423:C:C6	2.48	0.48
3:A:3111:A:C4	21:R:182:ILE:HD12	2.48	0.48
6:CA:1405:G:H2'	6:CA:1406:U:C6	2.48	0.48
6:CA:1618:U:OP2	79:CA:1882:GET:O31	2.31	0.48
6:CA:1631:U:H5''	6:CA:1632:U:OP2	2.14	0.48
6:CA:1764:G:OP1	47:ZS:79:HIS:NE2	2.41	0.48
14:K:137:SER:HB2	14:K:143:GLU:HG2	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:ZF:98:ARG:NH2	47:ZS:111:ALA:O	2.47	0.48
53:a:53:GLU:OE2	53:a:69:LYS:NZ	2.41	0.48
53:a:88:GLU:H	53:a:88:GLU:CD	2.21	0.48
54:b:41:ALA:HB2	54:b:77:TYR:HE1	1.78	0.48
77:y:70:PRO:HB2	77:y:103:ASN:HD22	1.78	0.48
3:A:2742:U:O2'	3:A:2743:A:OP1	2.28	0.48
6:CA:184:C:H2'	6:CA:185:G:O4'	2.14	0.48
6:CA:396:A:O2'	6:CA:1646:A:N3	2.40	0.48
6:CA:770:U:H2'	6:CA:771:G:C8	2.48	0.48
13:J:86:ASN:OD1	13:J:90:GLN:NE2	2.46	0.48
48:ZT:19:HIS:HB3	48:ZT:22:LYS:HG3	1.95	0.48
56:d:20:LYS:O	84:d:101:HOH:O	2.20	0.48
69:q:28:TYR:HB3	69:q:69:VAL:HB	1.96	0.48
72:t:86:LEU:HB3	72:t:98:THR:HB	1.96	0.48
3:A:249:C:H2'	3:A:250:C:C6	2.48	0.48
3:A:1238:A:H2'	3:A:1239:C:O4'	2.14	0.48
3:A:2009:C:H2'	3:A:2010:A:C8	2.49	0.48
6:CA:152:G:H3'	45:ZQ:133:ASN:HD22	1.78	0.48
6:CA:348:A:N6	84:CA:2059:HOH:O	2.46	0.48
6:CA:447:G:OP1	45:ZQ:109:LYS:NZ	2.46	0.48
6:CA:579:C:H2'	6:CA:580:A:C8	2.47	0.48
6:CA:952:U:H2'	6:CA:953:A:C8	2.48	0.48
6:CA:989:A:P	34:ZE:107:LYS:HE2	2.53	0.48
6:CA:1496:G:O2'	6:CA:1498:G:OP2	2.22	0.48
23:T:192:ARG:O	23:T:196:ARG:HG2	2.14	0.48
37:ZH:128:PHE:O	37:ZH:136:ARG:NH1	2.41	0.48
71:s:124:THR:HA	71:s:146:LEU:HB2	1.96	0.48
3:A:2934:A:H2'	3:A:2935:C:H6	1.78	0.47
79:A:3486:GET:H322	79:A:3486:GET:H713	1.79	0.47
84:C:375:HOH:O	66:n:14:ALA:HB3	2.13	0.47
6:CA:835:A:H8	84:CA:2195:HOH:O	1.97	0.47
10:G:178:ASN:HA	10:G:183:TRP:CD2	2.48	0.47
15:L:69:ARG:HH11	15:L:69:ARG:HG2	1.79	0.47
25:V:122:LYS:HE3	25:V:124:GLU:OE1	2.14	0.47
31:ZB:110:GLN:OE1	31:ZB:126:ARG:HB2	2.14	0.47
73:u:199:THR:O	84:u:301:HOH:O	2.20	0.47
75:w:207:VAL:HG13	75:w:219:VAL:HG13	1.96	0.47
3:A:3112:A:O2'	3:A:3167:C:H5	1.97	0.47
6:CA:502:U:H2'	6:CA:503:G:C8	2.50	0.47
6:CA:551:G:H2'	6:CA:552:U:O2	2.14	0.47
6:CA:1704:C:H2'	6:CA:1705:A:O4'	2.13	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:ZI:105:GLU:OE2	71:s:42:PRO:HD3	2.14	0.47
42:ZM:32:VAL:HG22	42:ZM:60:ARG:HD2	1.96	0.47
54:b:45:GLY:HA3	54:b:71:PHE:CZ	2.48	0.47
69:q:74:CYS:SG	69:q:76:VAL:HG13	2.54	0.47
1:1:10:G:H2'	1:1:11:C:C6	2.48	0.47
3:A:568:A:H2'	3:A:569:U:O4'	2.13	0.47
3:A:730:G:H2'	3:A:731:C:C6	2.49	0.47
3:A:1797:U:H5'	84:A:6481:HOH:O	2.14	0.47
3:A:2119:C:C2'	3:A:2120:U:H4'	2.41	0.47
3:A:2173:U:C2	3:A:2174:A:C8	3.03	0.47
3:A:2626:C:H5	84:A:9149:HOH:O	1.97	0.47
3:A:3238:C:HO2'	3:A:3239:U:H6	1.62	0.47
4:B:3:U:H2'	4:B:4:U:H6	1.79	0.47
5:C:103:G:H4'	5:C:134:A:H5'	1.97	0.47
6:CA:291:U:O2	84:CA:1902:HOH:O	2.20	0.47
19:P:68:ARG:HG2	19:P:128:LYS:HG3	1.96	0.47
45:ZQ:39:GLU:O	45:ZQ:43:LYS:HD3	2.14	0.47
65:m:14:LEU:HD21	65:m:52:TYR:CG	2.49	0.47
75:w:118:GLU:HA	75:w:121:TYR:HE1	1.79	0.47
3:A:2942:U:H2'	3:A:2943:U:C6	2.49	0.47
4:B:28:A:H2'	4:B:29:C:C6	2.50	0.47
6:CA:320:A:H5'	30:ZA:40:PRO:HA	1.95	0.47
6:CA:382:C:H2'	6:CA:383:C:C6	2.49	0.47
6:CA:1319:U:H2'	6:CA:1320:G:H8	1.79	0.47
6:CA:1326:A:H2'	6:CA:1327:G:H8	1.78	0.47
6:CA:1703:U:H2'	6:CA:1704:C:C6	2.49	0.47
8:E:369:ARG:HH11	28:Y:11:SER:HB3	1.80	0.47
10:G:202:GLY:O	10:G:206:GLU:HG3	2.15	0.47
13:J:184:LYS:HG3	13:J:195:THR:HG23	1.96	0.47
17:N:187:GLU:O	17:N:190:GLU:HG3	2.14	0.47
57:e:57:LEU:HD11	57:e:90:THR:HG21	1.94	0.47
3:A:231:G:H2'	3:A:232:C:C6	2.49	0.47
3:A:518:U:H2'	3:A:519:G:O4'	2.14	0.47
3:A:1168:A:H3'	3:A:1169:G:H5'	1.96	0.47
3:A:2222:G:O2'	3:A:2225:U:OP2	2.23	0.47
3:A:2973:C:H2'	3:A:2974:A:O4'	2.14	0.47
6:CA:674:C:H2'	6:CA:675:A:O4'	2.15	0.47
6:CA:1033:U:H2'	6:CA:1034:G:H8	1.80	0.47
6:CA:1410:U:H2'	6:CA:1412:A:H5'	1.96	0.47
6:CA:1576:A:P	40:ZK:86:ARG:HH22	2.38	0.47
7:D:6:ARG:NH2	7:D:199:THR:O	2.38	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:4:ARG:NH1	15:L:99:ILE:HG13	2.28	0.47
33:ZD:50:GLU:OE1	33:ZD:50:GLU:N	2.48	0.47
78:z:72:ARG:HG2	78:z:75:ARG:NH2	2.30	0.47
3:A:252:C:H2'	3:A:253:C:O4'	2.15	0.47
3:A:421:C:H2'	3:A:422:A:C8	2.50	0.47
3:A:1630:U:H2'	3:A:1631:C:C6	2.49	0.47
3:A:1726:U:H2'	3:A:1727:A:C8	2.50	0.47
3:A:2900:U:H2'	3:A:2901:G:C8	2.50	0.47
6:CA:293:U:H2'	6:CA:294:C:C6	2.50	0.47
6:CA:427:A:H61	79:CA:1893:GET:H311	1.79	0.47
6:CA:1022:C:H42	6:CA:1036:C:H42	1.63	0.47
6:CA:1032:G:H2'	6:CA:1033:U:C6	2.49	0.47
6:CA:1145:U:H2'	6:CA:1146:G:C8	2.50	0.47
6:CA:1467:G:N2	6:CA:1467:G:OP2	2.47	0.47
6:CA:1534:G:C4	39:ZJ:134:ARG:HG2	2.50	0.47
8:E:56:ILE:HD13	8:E:356:LEU:HD22	1.96	0.47
15:L:140:THR:HG23	15:L:141:LYS:O	2.15	0.47
17:N:118:GLU:HG2	17:N:143:PHE:CE2	2.50	0.47
24:U:37:LYS:HD3	24:U:37:LYS:HA	1.71	0.47
35:ZF:11:VAL:HG12	35:ZF:27:ASP:O	2.14	0.47
38:ZI:68:GLY:O	38:ZI:69:ILE:HD12	2.15	0.47
38:ZI:87:GLU:OE1	38:ZI:87:GLU:N	2.42	0.47
41:ZL:94:ALA:HB3	41:ZL:98:ILE:HD13	1.96	0.47
48:ZT:40:CYS:SG	48:ZT:59:CYS:HB2	2.55	0.47
54:b:88:ASP:O	54:b:121:LYS:HE3	2.15	0.47
72:t:32:ILE:HB	72:t:43:VAL:HG22	1.96	0.47
73:u:163:ARG:HD3	73:u:165:ILE:HD11	1.96	0.47
3:A:419:U:H2'	3:A:420:G:C8	2.50	0.47
3:A:675:U:H5	3:A:680:G:O6	1.97	0.47
3:A:1064:G:OP1	56:d:19:SER:HB2	2.15	0.47
3:A:1759:G:H2'	3:A:1760:U:H6	1.79	0.47
3:A:2181:U:H2'	3:A:2182:C:C6	2.49	0.47
3:A:3098:C:OP1	84:A:3601:HOH:O	2.20	0.47
5:C:121:U:O2'	5:C:122:A:H5'	2.15	0.47
6:CA:326:G:H3'	33:ZD:133:LYS:HB2	1.97	0.47
6:CA:843:U:O2'	6:CA:1017:G:H5''	2.15	0.47
6:CA:868:A:C2	6:CA:885:A:C5	3.03	0.47
6:CA:1012:G:H22	6:CA:1046:A:H2	1.63	0.47
6:CA:1390:U:H5''	38:ZI:3:ARG:HD3	1.97	0.47
6:CA:1434:G:H2'	6:CA:1434:G:N3	2.29	0.47
24:U:16:SER:O	24:U:118:GLU:HG2	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:ZQ:124:THR:O	45:ZQ:125:HIS:HB3	2.14	0.47
60:h:14:LEU:HD11	60:h:31:GLN:HB2	1.97	0.47
3:A:10:A:H2'	3:A:11:A:C8	2.50	0.47
3:A:447:A:O2'	3:A:3162:A:N1	2.47	0.47
3:A:2147:A:H2'	3:A:2148:A:C8	2.50	0.47
6:CA:544:A:OP1	84:CA:1903:HOH:O	2.21	0.47
6:CA:636:U:H2'	6:CA:637:G:H8	1.78	0.47
6:CA:1624:C:H2'	6:CA:1625:U:C6	2.50	0.47
10:G:160:PHE:HA	10:G:163:LEU:HB3	1.97	0.47
23:T:192:ARG:O	23:T:193:ARG:C	2.57	0.47
24:U:22:GLN:HB2	24:U:78:ILE:HD11	1.97	0.47
25:V:5:HIS:ND1	25:V:5:HIS:O	2.48	0.47
41:ZL:32:GLN:O	41:ZL:36:VAL:HG23	2.15	0.47
52:ZY:135:ASN:ND2	52:ZY:139:GLU:HB2	2.28	0.47
73:u:226:GLU:OE1	73:u:228:GLN:NE2	2.48	0.47
74:v:30:LEU:HB2	74:v:35:TYR:HB2	1.97	0.47
75:w:92:LEU:HD12	75:w:99:PHE:HE1	1.80	0.47
78:z:153:LYS:HG2	78:z:154:ASP:OD1	2.15	0.47
3:A:1341:U:H4'	5:C:10:A:OP1	2.15	0.47
3:A:1539:U:H2'	3:A:1540:G:C8	2.50	0.47
3:A:2009:C:H2'	3:A:2010:A:H8	1.80	0.47
6:CA:263:G:H2'	6:CA:264:C:C6	2.50	0.47
6:CA:888:U:H2'	6:CA:889:A:H8	1.80	0.47
6:CA:1021:G:N2	6:CA:1037:G:H22	2.12	0.47
17:N:64:LYS:HG3	55:c:69:TRP:CD1	2.50	0.47
43:ZO:83:ILE:HG13	43:ZO:122:SER:HB2	1.96	0.47
52:ZY:178:ASP:OD1	52:ZY:178:ASP:N	2.48	0.47
68:p:1:MET:HE3	68:p:6:ARG:HD3	1.97	0.47
3:A:566:C:H4'	3:A:567:A:O5'	2.15	0.46
3:A:602:A:H2'	3:A:603:A:C8	2.50	0.46
3:A:703:G:O2'	3:A:714:A:N6	2.49	0.46
3:A:1539:U:H5'	3:A:1636:A:H1'	1.97	0.46
3:A:1748:C:H2'	3:A:1749:A:H8	1.80	0.46
79:CA:1892:GET:H23	79:CA:1892:GET:H52	1.63	0.46
26:W:27:VAL:HG21	26:W:107:PHE:CE2	2.50	0.46
3:A:78:G:H2'	3:A:79:C:H6	1.80	0.46
3:A:2597:A:H2'	3:A:2598:G:H8	1.79	0.46
3:A:2845:G:O2'	3:A:2848:C:OP2	2.30	0.46
10:G:178:ASN:HA	10:G:183:TRP:CG	2.50	0.46
15:L:66:GLU:HA	15:L:66:GLU:OE2	2.16	0.46
39:ZJ:27:LYS:HB3	39:ZJ:27:LYS:HE2	1.68	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:ZQ:90:ARG:HA	45:ZQ:93:ARG:HD2	1.97	0.46
65:m:42:LYS:HG2	65:m:55:VAL:HG22	1.96	0.46
74:v:40:VAL:HG22	74:v:49:VAL:HG22	1.97	0.46
74:v:43:THR:HG22	74:v:45:THR:H	1.79	0.46
77:y:148:SER:OG	77:y:150:GLU:OE1	2.26	0.46
78:z:21:PHE:O	78:z:25:GLU:HG3	2.15	0.46
3:A:1067:A:H2'	3:A:1068:U:C6	2.50	0.46
6:CA:77:A:C8	77:y:154:ARG:HD3	2.50	0.46
6:CA:1390:U:H5'	38:ZI:2:GLY:O	2.15	0.46
6:CA:1745:U:H2'	6:CA:1746:U:C6	2.51	0.46
9:F:322:LYS:O	9:F:326:LEU:HG	2.16	0.46
16:M:108:ILE:HD12	39:ZJ:16:ARG:HH21	1.81	0.46
22:S:20:LYS:HE2	22:S:20:LYS:HB3	1.67	0.46
48:ZT:33:MET:HG3	48:ZT:35:VAL:HG23	1.96	0.46
72:t:59:ASP:O	72:t:62:LYS:HG2	2.16	0.46
3:A:1607:G:H2'	3:A:1608:G:C8	2.50	0.46
3:A:1828:A:O4'	3:A:3195:A:H5'	2.16	0.46
3:A:2764:A:H5''	15:L:114:GLY:HA2	1.98	0.46
3:A:2912:A:N1	3:A:2944:C:O2'	2.43	0.46
3:A:2998:U:OP1	8:E:349:ARG:NH2	2.48	0.46
6:CA:1257:A:H4'	6:CA:1258:G:H5'	1.96	0.46
6:CA:1369:U:H2'	6:CA:1370:G:C8	2.51	0.46
26:W:22:PRO:HB3	26:W:93:ILE:HD12	1.96	0.46
31:ZB:120:ARG:N	31:ZB:124:HIS:HD2	2.03	0.46
35:ZF:98:ARG:HA	35:ZF:98:ARG:NH1	2.31	0.46
47:ZS:123:GLU:O	72:t:77:GLU:HG2	2.14	0.46
52:ZY:276:VAL:O	52:ZY:278:ALA:N	2.47	0.46
78:z:14:GLU:HG2	78:z:42:VAL:HG23	1.97	0.46
3:A:126:U:H2'	3:A:128:C:C5	2.51	0.46
3:A:497:U:H2'	3:A:498:G:C8	2.51	0.46
3:A:655:A:OP1	22:S:179:ARG:NH2	2.42	0.46
3:A:910:A:OP1	55:c:47:LYS:NZ	2.41	0.46
3:A:1463:G:N7	84:A:3649:HOH:O	2.36	0.46
3:A:2138:A:H2'	3:A:2139:A:C8	2.51	0.46
6:CA:36:C:H2'	6:CA:37:U:H6	1.80	0.46
6:CA:186:A:OP1	30:ZA:140:SER:OG	2.27	0.46
6:CA:764:U:H3	33:ZD:95:PRO:HG3	1.80	0.46
22:S:161:LYS:HD2	22:S:161:LYS:HA	1.69	0.46
37:ZH:39:GLU:O	37:ZH:40:PRO:C	2.57	0.46
71:s:167:LYS:HE2	71:s:167:LYS:HB3	1.72	0.46
73:u:111:LYS:HB2	73:u:123:ALA:HB2	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2783:U:H2'	3:A:2784:C:H6	1.81	0.46
3:A:2896:C:H2'	79:A:3498:GET:H933	1.96	0.46
5:C:5:U:H2'	5:C:6:U:H6	1.80	0.46
16:M:27:ARG:HG2	16:M:27:ARG:HH11	1.80	0.46
44:ZP:56:LYS:HE3	44:ZP:96:VAL:O	2.15	0.46
47:ZS:130:TYR:HB2	72:t:111:ARG:HB3	1.97	0.46
51:ZW:54:ARG:HH11	51:ZW:56:MET:CE	2.29	0.46
52:ZY:68:VAL:HA	52:ZY:84:SER:HA	1.97	0.46
54:b:101:LEU:HA	54:b:107:LYS:HG3	1.97	0.46
66:n:24:PRO:HB2	66:n:27:ILE:HD13	1.97	0.46
3:A:164:G:H2'	3:A:165:U:C5	2.50	0.46
3:A:813:G:O6	79:A:3484:GET:H311	2.15	0.46
3:A:1424:A:N1	61:i:2:ALA:HB1	2.31	0.46
7:D:109:GLU:HG3	7:D:138:GLY:HA2	1.97	0.46
30:ZA:15:ARG:HD3	30:ZA:28:PHE:HB3	1.98	0.46
30:ZA:41:ALA:HB2	30:ZA:63:ARG:HG3	1.97	0.46
32:ZC:76:LEU:HD23	32:ZC:76:LEU:HA	1.78	0.46
32:ZC:83:PRO:HG2	32:ZC:86:ILE:HD13	1.96	0.46
34:ZE:55:ARG:HD3	48:ZT:47:PHE:CG	2.51	0.46
46:ZR:70:LYS:HD3	46:ZR:70:LYS:HA	1.76	0.46
61:i:106:LYS:O	61:i:110:GLU:HG2	2.16	0.46
68:p:2:ARG:HB3	68:p:5:TRP:CD1	2.50	0.46
72:t:149:GLN:HE21	72:t:151:ARG:HG3	1.80	0.46
3:A:378:G:H4'	21:R:18:ARG:O	2.16	0.46
3:A:2451:C:N4	3:A:2458:C:O4'	2.47	0.46
6:CA:1278:G:H2'	6:CA:1279:C:H6	1.80	0.46
7:D:189:TYR:CD2	7:D:196:TRP:HB2	2.51	0.46
13:J:150:LYS:O	13:J:177:PRO:HG2	2.15	0.46
14:K:137:SER:CB	14:K:143:GLU:HG2	2.46	0.46
16:M:114:TYR:O	16:M:114:TYR:HD1	1.99	0.46
22:S:153:PHE:O	22:S:161:LYS:HG3	2.15	0.46
26:W:93:ILE:C	26:W:108:TYR:HE1	2.24	0.46
36:ZG:14:SER:OG	36:ZG:15:PHE:N	2.42	0.46
43:ZO:18:GLU:HG3	43:ZO:69:LEU:HD23	1.97	0.46
71:s:144:ILE:HG12	71:s:158:VAL:HB	1.97	0.46
3:A:1440:C:H2'	3:A:1441:A:C8	2.51	0.46
3:A:2860:C:H2'	3:A:2861:G:H8	1.77	0.46
6:CA:370:C:OP1	75:w:10:LYS:HE2	2.16	0.46
6:CA:511:U:O2'	45:ZQ:60:PHE:O	2.34	0.46
9:F:355:GLY:O	9:F:359:GLN:HG3	2.15	0.46
27:X:42:PHE:CZ	27:X:50:PRO:HA	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:ZD:24:LYS:HB3	33:ZD:24:LYS:HE3	1.64	0.46
34:ZE:87:ASP:OD1	34:ZE:88:LEU:N	2.49	0.46
59:g:51:TRP:CZ2	59:g:72:PRO:HD2	2.50	0.46
6:CA:987:U:C2	6:CA:988:U:C5	3.04	0.46
6:CA:1383:U:O2'	6:CA:1384:G:H5'	2.15	0.46
6:CA:1408:U:H5''	6:CA:1410:U:OP2	2.16	0.46
6:CA:1539:U:H2'	6:CA:1540:C:H6	1.80	0.46
42:ZM:5:LYS:HB2	42:ZM:7:GLN:HE21	1.81	0.46
72:t:103:MET:HE1	72:t:212:ILE:O	2.16	0.46
3:A:703:G:H2'	3:A:713:G:N2	2.30	0.45
3:A:2429:U:H5'	13:J:69:ARG:HG3	1.98	0.45
4:B:66:G:N7	79:B:203:GET:O43	2.44	0.45
4:B:76:G:H1'	4:B:105:A:H61	1.80	0.45
5:C:146:G:N7	79:C:206:GET:H832	2.31	0.45
6:CA:12:U:H5''	73:u:79:ARG:HH12	1.81	0.45
6:CA:773:A:C4	78:z:100:ARG:HG3	2.50	0.45
6:CA:1519:U:H5''	39:ZJ:132:LYS:HE2	1.98	0.45
25:V:84:TYR:CE1	56:d:36:ILE:HG22	2.51	0.45
31:ZB:169:PRO:HB2	31:ZB:173:LYS:HB3	1.98	0.45
34:ZE:136:PRO:HG2	34:ZE:139:TRP:HB2	1.97	0.45
41:ZL:76:LYS:HA	41:ZL:76:LYS:HD3	1.71	0.45
42:ZM:44:ARG:NH1	71:s:189:PRO:O	2.49	0.45
44:ZP:6:PRO:HG3	44:ZP:14:LYS:HG2	1.97	0.45
72:t:168:MET:O	72:t:172:MET:HB2	2.15	0.45
74:v:114:LEU:HD11	74:v:119:ALA:HB2	1.98	0.45
1:1:22:C:H2'	1:1:23:G:O4'	2.16	0.45
3:A:647:G:H2'	3:A:648:C:C6	2.52	0.45
3:A:927:A:C2'	3:A:928:A:H5'	2.46	0.45
3:A:2797:A:H2'	3:A:2799:C:H5''	1.97	0.45
3:A:3130:C:H2'	3:A:3131:A:C8	2.51	0.45
6:CA:346:G:OP1	79:CA:1875:GET:O23	2.31	0.45
6:CA:755:U:H2'	6:CA:756:U:O4'	2.16	0.45
6:CA:1006:A:H1'	43:ZO:9:ASP:OD1	2.16	0.45
6:CA:1136:A:N1	6:CA:1554:U:H5	2.14	0.45
6:CA:1339:U:H2'	6:CA:1340:G:C8	2.51	0.45
6:CA:1420:A:H4'	6:CA:1421:G:H5'	1.97	0.45
38:ZI:107:ALA:HA	38:ZI:110:VAL:HG12	1.99	0.45
61:i:22:VAL:CG1	61:i:30:LEU:HG	2.47	0.45
3:A:44:U:OP2	81:A:3470:SPD:H51	2.15	0.45
3:A:396:G:O6	79:A:3471:GET:N12	2.49	0.45
3:A:523:A:H2'	3:A:524:C:C6	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:928:A:H62	3:A:1049:U:H3	1.62	0.45
3:A:1628:U:H2'	3:A:1629:U:C6	2.51	0.45
3:A:3182:G:H2'	3:A:3183:G:O4'	2.16	0.45
5:C:63:G:OP1	79:C:204:GET:N32	2.49	0.45
6:CA:1300:G:H2'	6:CA:1301:A:O4'	2.15	0.45
10:G:40:HIS:CE1	10:G:42:ALA:HB3	2.51	0.45
15:L:72:ALA:HB2	15:L:155:ALA:HB2	1.97	0.45
30:ZA:114:THR:O	30:ZA:118:GLN:HG3	2.16	0.45
39:ZJ:36:ARG:HE	39:ZJ:105:MET:HE1	1.81	0.45
40:ZK:44:GLU:HG3	40:ZK:45:LEU:HG	1.98	0.45
40:ZK:70:HIS:HB2	40:ZK:120:GLY:O	2.16	0.45
49:ZU:11:LYS:HB3	49:ZU:11:LYS:HE2	1.61	0.45
3:A:1066:C:H2'	3:A:1067:A:C8	2.51	0.45
3:A:1558:U:H2'	3:A:1559:G:C8	2.52	0.45
3:A:3081:A:H8	20:Q:6:PRO:HG2	1.82	0.45
79:A:3497:GET:H931	84:A:4132:HOH:O	2.16	0.45
5:C:6:U:H2'	5:C:7:U:C6	2.52	0.45
6:CA:952:U:H2'	6:CA:953:A:H8	1.82	0.45
6:CA:1026:C:O2'	72:t:202:GLN:NE2	2.48	0.45
7:D:206:PRO:HG3	7:D:213:GLY:HA3	1.99	0.45
10:G:212:MET:HG3	10:G:212:MET:O	2.15	0.45
27:X:13:MET:HE1	27:X:54:ALA:HB3	1.99	0.45
27:X:57:MET:HE3	27:X:57:MET:HB2	1.90	0.45
3:A:402:G:H2'	3:A:403:U:C6	2.52	0.45
3:A:578:G:H2'	3:A:579:C:C6	2.51	0.45
3:A:2059:A:H1'	3:A:2196:A:N6	2.32	0.45
3:A:2875:U:H5	84:A:4450:HOH:O	1.99	0.45
6:CA:17:C:H2'	6:CA:18:C:C6	2.51	0.45
6:CA:528:G:H21	79:CA:1886:GET:H21	1.81	0.45
6:CA:621:U:O4	79:CA:1880:GET:N12	2.48	0.45
6:CA:1365:C:O2'	38:ZI:52:GLY:HA3	2.17	0.45
30:ZA:64:ALA:HB2	30:ZA:181:GLY:HA2	1.97	0.45
30:ZA:139:ARG:NH1	30:ZA:139:ARG:HB2	2.32	0.45
35:ZF:74:VAL:O	35:ZF:108:GLY:N	2.48	0.45
35:ZF:79:ARG:HB2	35:ZF:114:THR:HA	1.97	0.45
52:ZY:260:ASN:HB2	52:ZY:267:LEU:HD13	1.99	0.45
57:e:11:VAL:HG11	57:e:69:TYR:CZ	2.52	0.45
2:2:3:A:N6	6:CA:1612:C:H5'	2.31	0.45
3:A:364:A:N3	3:A:366:G:H5''	2.32	0.45
3:A:816:C:H5''	3:A:817:U:O5'	2.17	0.45
3:A:995:A:H2'	15:L:22:TYR:CZ	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1739:G:H5''	7:D:22:LEU:HD22	1.97	0.45
3:A:3241:G:H1'	3:A:3244:G:O4'	2.16	0.45
5:C:78:G:OP2	79:C:205:GET:H531	2.17	0.45
6:CA:290:A:H3'	84:CA:2001:HOH:O	2.17	0.45
6:CA:467:A:H4'	31:ZB:123:HIS:O	2.16	0.45
6:CA:1011:G:H2'	6:CA:1012:G:C8	2.52	0.45
6:CA:1097:G:OP1	68:p:11:ARG:NH2	2.49	0.45
14:K:24:THR:OG1	14:K:39:LYS:NZ	2.50	0.45
27:X:86:ARG:HD2	27:X:92:TYR:CZ	2.52	0.45
52:ZY:296:ASN:N	52:ZY:296:ASN:OD1	2.49	0.45
1:1:11:C:H2'	1:1:12:C:C6	2.52	0.45
3:A:589:U:O2'	3:A:1100:A:N1	2.49	0.45
3:A:2267:A:H5''	21:R:83:TRP:O	2.17	0.45
3:A:2288:A:N3	3:A:2724:G:O2'	2.36	0.45
3:A:2485:C:N4	5:C:147:C:H3'	2.31	0.45
3:A:3098:C:H2'	3:A:3099:G:C8	2.51	0.45
6:CA:280:G:H2'	6:CA:281:U:C6	2.52	0.45
6:CA:621:U:H5	84:CA:2573:HOH:O	1.99	0.45
6:CA:1068:U:OP1	73:u:154:THR:OG1	2.33	0.45
6:CA:1117:A:H2'	6:CA:1118:C:C6	2.52	0.45
6:CA:1592:U:H2'	6:CA:1593:C:C6	2.52	0.45
6:CA:1611:C:H4'	6:CA:1612:C:H5''	1.99	0.45
6:CA:1735:G:H1'	6:CA:1756:A:H2	1.81	0.45
9:F:282:VAL:HG12	22:S:29:LEU:HG	1.99	0.45
10:G:75:LEU:HG	10:G:76:THR:HG23	1.99	0.45
10:G:254:LYS:HB3	10:G:254:LYS:HE3	1.77	0.45
35:ZF:40:GLY:CA	35:ZF:49:GLU:HG2	2.46	0.45
54:b:15:ARG:HD2	54:b:79:HIS:CD2	2.51	0.45
76:x:159:ALA:HB3	76:x:225:ARG:HA	1.99	0.45
3:A:167:C:H42	3:A:235:G:H1	1.64	0.45
3:A:1496:A:H1'	3:A:1497:U:C5	2.52	0.45
3:A:2349:U:H5	3:A:2494:C:OP2	2.00	0.45
3:A:3126:G:O6	3:A:3145:U:O4	2.35	0.45
6:CA:22:A:OP1	79:CA:1884:GET:O23	2.35	0.45
6:CA:30:G:H4'	44:ZP:131:SER:HB2	1.97	0.45
6:CA:899:A:C8	35:ZF:118:SER:HA	2.52	0.45
29:Z:68:GLU:HG2	29:Z:69:THR:N	2.31	0.45
34:ZE:56:ASP:O	48:ZT:46:VAL:HA	2.17	0.45
42:ZM:86:SER:OG	48:ZT:9:HIS:O	2.32	0.45
72:t:176:VAL:HG12	72:t:184:LEU:HD13	1.99	0.45
6:CA:93:U:H5''	84:w:307:HOH:O	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:743:G:H5''	75:w:23:LEU:HD11	1.98	0.45
6:CA:1715:A:H2'	6:CA:1716:U:C6	2.52	0.45
12:I:83:PHE:HB2	12:I:137:PRO:HG3	1.99	0.45
26:W:6:THR:O	26:W:7:LYS:C	2.58	0.45
49:ZU:22:ARG:NH2	76:x:148:ARG:HD3	2.31	0.45
52:ZY:198:ILE:HG13	52:ZY:199:THR:N	2.31	0.45
71:s:9:LEU:HD21	71:s:50:ILE:HD12	1.99	0.45
78:z:171:LYS:HA	78:z:171:LYS:HD3	1.74	0.45
3:A:247:G:H2'	3:A:248:C:C6	2.51	0.45
3:A:418:U:H2'	3:A:419:U:C6	2.51	0.45
3:A:1869:G:C8	70:r:23:VAL:HG12	2.52	0.45
3:A:3111:A:C5	21:R:182:ILE:HG23	2.52	0.45
6:CA:1632:U:H5''	6:CA:1633:G:H5''	1.99	0.45
8:E:34:LYS:HA	8:E:34:LYS:HD2	1.66	0.45
16:M:80:ARG:O	16:M:84:VAL:HG23	2.17	0.45
26:W:82:LYS:HE3	26:W:82:LYS:HB3	1.62	0.45
53:a:41:GLU:O	53:a:44:LYS:HE2	2.17	0.45
75:w:211:LYS:HB2	75:w:211:LYS:HE3	1.76	0.45
3:A:2131:G:OP1	63:k:74:LYS:HE3	2.17	0.44
3:A:3119:G:H22	3:A:3149:G:N2	2.15	0.44
4:B:61:A:H2'	4:B:62:U:H6	1.82	0.44
6:CA:876:A:H2	6:CA:968:A:H1'	1.82	0.44
16:M:164:LYS:HG2	16:M:165:TYR:CE1	2.52	0.44
38:ZI:41:ILE:HD13	38:ZI:47:ARG:HG2	1.98	0.44
66:n:8:ARG:HB3	66:n:8:ARG:NH1	2.33	0.44
77:y:39:GLU:OE1	77:y:40:SER:N	2.50	0.44
3:A:193:A:H2'	3:A:194:A:C8	2.51	0.44
3:A:596:C:H2'	3:A:597:G:C8	2.51	0.44
3:A:1041:U:H3'	3:A:1042:A:H5'	1.98	0.44
3:A:1539:U:H2'	3:A:1540:G:H8	1.81	0.44
3:A:2169:U:H2'	3:A:2176:G:N2	2.31	0.44
3:A:2270:G:H4'	21:R:139:TYR:CZ	2.52	0.44
3:A:2451:C:H2'	3:A:2457:A:C2	2.53	0.44
84:C:452:HOH:O	13:J:183:GLY:HA2	2.17	0.44
6:CA:882:U:O2	6:CA:884:G:N1	2.49	0.44
6:CA:1233:G:H2'	6:CA:1234:G:O4'	2.16	0.44
6:CA:1771:C:O2	47:ZS:154:ARG:HB3	2.17	0.44
22:S:76:ALA:HA	22:S:79:LYS:HG3	1.99	0.44
58:f:51:ASP:OD1	58:f:53:LYS:HG2	2.17	0.44
72:t:129:THR:OG1	72:t:133:HIS:HB2	2.17	0.44
3:A:422:A:H2'	3:A:423:C:H6	1.82	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:606:A:N1	3:A:884:G:O2'	2.47	0.44
3:A:2583:U:H2'	3:A:2584:C:H6	1.82	0.44
5:C:129:A:H2'	5:C:130:A:C8	2.52	0.44
6:CA:555:C:H2'	6:CA:556:A:O4'	2.18	0.44
6:CA:636:U:H2'	6:CA:637:G:C8	2.53	0.44
6:CA:765:U:H3'	6:CA:766:A:C8	2.50	0.44
6:CA:1116:G:H2'	6:CA:1117:A:H8	1.79	0.44
7:D:108:PRO:HB2	70:r:93:LEU:HD22	2.00	0.44
23:T:136:ASP:OD2	23:T:138:HIS:HD2	2.01	0.44
26:W:94:ARG:HG2	26:W:96:VAL:HG23	2.00	0.44
30:ZA:113:ALA:HB2	30:ZA:169:LEU:HG	1.99	0.44
33:ZD:131:LEU:O	84:ZD:201:HOH:O	2.21	0.44
37:ZH:22:LYS:HB2	37:ZH:22:LYS:HE2	1.82	0.44
41:ZL:98:ILE:O	41:ZL:102:ILE:HG13	2.17	0.44
49:ZU:18:ARG:HD3	49:ZU:26:THR:HG23	2.00	0.44
49:ZU:40:ILE:HG13	49:ZU:62:GLU:HG2	1.99	0.44
52:ZY:199:THR:O	52:ZY:207:ASN:ND2	2.51	0.44
58:f:70:MET:HE3	58:f:70:MET:HB2	1.85	0.44
71:s:13:ASP:OD2	71:s:179:ARG:NH2	2.44	0.44
71:s:56:LYS:HA	71:s:56:LYS:HD2	1.76	0.44
78:z:5:ILE:HD12	78:z:5:ILE:N	2.32	0.44
2:2:2:G:OP2	2:2:2:G:N2	2.45	0.44
3:A:431:C:H2'	3:A:432:G:C8	2.51	0.44
3:A:1161:U:H2'	3:A:1162:U:C6	2.53	0.44
3:A:1333:A:N6	3:A:1361:A:O2'	2.50	0.44
3:A:2171:A:C5	6:CA:1732:G:H5''	2.52	0.44
5:C:68:A:H2'	5:C:69:U:C6	2.52	0.44
6:CA:761:C:H2'	6:CA:762:U:C6	2.52	0.44
8:E:17:LEU:O	8:E:19:ARG:N	2.50	0.44
23:T:115:TRP:CZ2	23:T:119:LEU:HD22	2.52	0.44
37:ZH:99:ALA:O	37:ZH:103:GLU:HG2	2.16	0.44
51:ZW:57:ASN:OD1	51:ZW:57:ASN:N	2.50	0.44
58:f:73:ARG:HH12	58:f:108:VAL:HG21	1.83	0.44
75:w:66:MET:SD	84:w:326:HOH:O	2.61	0.44
3:A:85:U:OP1	22:S:167:SER:OG	2.29	0.44
3:A:502:U:H2'	3:A:503:G:O4'	2.18	0.44
3:A:1421:C:H2'	3:A:1422:U:C6	2.52	0.44
3:A:1566:G:O2'	3:A:1583:A:N1	2.41	0.44
3:A:2448:G:H2'	3:A:2449:G:C8	2.52	0.44
3:A:3234:U:H2'	3:A:3235:A:C8	2.52	0.44
6:CA:854:A:H62	6:CA:898:U:H3	1.65	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:856:U:H2'	6:CA:857:A:H8	1.82	0.44
6:CA:888:U:H4'	35:ZF:13:ARG:HD3	1.98	0.44
6:CA:1411:G:O6	32:ZC:64:TYR:OH	2.22	0.44
7:D:90:ALA:HB2	7:D:101:ILE:HD12	2.00	0.44
23:T:182:ARG:HA	23:T:185:ARG:HE	1.82	0.44
37:ZH:26:GLY:HA3	76:x:25:LEU:HD22	2.00	0.44
38:ZI:5:ARG:N	38:ZI:5:ARG:HD3	2.33	0.44
52:ZY:154:VAL:HG23	52:ZY:167:SER:HB3	1.99	0.44
71:s:30:GLN:HE22	71:s:32:HIS:CG	2.35	0.44
72:t:94:LYS:HE2	72:t:94:LYS:HB3	1.60	0.44
3:A:450:A:H2'	3:A:451:U:C6	2.53	0.44
3:A:2990:C:H2'	3:A:2991:U:O4'	2.17	0.44
6:CA:918:G:H2'	6:CA:919:C:C6	2.52	0.44
7:D:149:LYS:HD2	7:D:155:LYS:HE2	1.99	0.44
24:U:149:VAL:HG21	24:U:158:LEU:HD21	2.00	0.44
38:ZI:18:GLU:HA	38:ZI:71:PHE:HB3	2.00	0.44
40:ZK:56:LYS:HB2	40:ZK:56:LYS:HE2	1.75	0.44
47:ZS:85:CYS:HB2	47:ZS:136:CYS:HB3	1.99	0.44
72:t:88:VAL:HA	72:t:98:THR:HG22	1.98	0.44
3:A:1434:A:H5'	64:l:12:HIS:O	2.18	0.44
3:A:1753:A:H2'	3:A:1754:G:C8	2.53	0.44
3:A:2907:A:H2'	3:A:2908:U:O4'	2.18	0.44
3:A:3130:C:H2'	3:A:3131:A:H8	1.83	0.44
6:CA:105:U:OP1	30:ZA:15:ARG:NH2	2.47	0.44
11:H:118:GLU:OE1	11:H:118:GLU:N	2.51	0.44
35:ZF:98:ARG:HH21	47:ZS:111:ALA:HB1	1.82	0.44
54:b:117:ALA:O	54:b:121:LYS:HG3	2.18	0.44
60:h:57:LYS:HD3	60:h:59:ILE:HD11	1.99	0.44
75:w:104:ASP:O	75:w:190:GLY:HA3	2.17	0.44
3:A:247:G:H2'	3:A:248:C:H6	1.83	0.44
3:A:2186:A:H2'	3:A:2187:G:O4'	2.18	0.44
84:A:4134:HOH:O	19:P:169:LYS:HE3	2.18	0.44
4:B:57:A:H4'	16:M:150:HIS:HB2	2.00	0.44
6:CA:45:U:O2	6:CA:423:G:H1'	2.17	0.44
6:CA:1308:C:H2'	6:CA:1309:C:C6	2.52	0.44
20:Q:13:LYS:HD3	20:Q:38:ARG:NH2	2.33	0.44
38:ZI:71:PHE:CE1	38:ZI:73:LEU:HB3	2.53	0.44
38:ZI:71:PHE:HE1	38:ZI:73:LEU:HB3	1.82	0.44
3:A:2:U:H2'	3:A:3:C:H6	1.83	0.44
3:A:420:G:H2'	3:A:421:C:C6	2.53	0.44
3:A:569:U:OP2	79:A:3473:GET:O41	2.25	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:940:G:N3	3:A:2537:A:H2'	2.33	0.44
3:A:1441:A:H2'	3:A:1442:U:C6	2.53	0.44
5:C:125:C:H2'	5:C:126:C:H6	1.82	0.44
6:CA:145:A:H4'	79:CA:1888:GET:H712	2.00	0.44
6:CA:348:A:C2	44:ZP:35:GLY:HA3	2.53	0.44
6:CA:770:U:H2'	6:CA:771:G:H8	1.83	0.44
6:CA:929:U:H5'	34:ZE:15:ALA:O	2.18	0.44
6:CA:1468:A:H2'	6:CA:1469:C:H6	1.83	0.44
14:K:134:MET:HE1	14:K:161:ILE:HD11	1.99	0.44
30:ZA:156:ILE:HD12	30:ZA:156:ILE:O	2.18	0.44
31:ZB:116:LEU:HB3	31:ZB:118:LEU:HG	2.00	0.44
42:ZM:79:LEU:HD21	71:s:59:LEU:HD22	2.00	0.44
45:ZQ:25:ILE:HD11	45:ZQ:73:GLY:HA3	1.99	0.44
3:A:238:C:H2'	3:A:239:U:C6	2.53	0.43
3:A:568:A:OP1	60:h:60:ARG:NH1	2.48	0.43
3:A:911:G:H2'	3:A:912:C:C6	2.53	0.43
3:A:1414:U:H2'	3:A:1415:U:C6	2.53	0.43
3:A:2112:C:N4	3:A:2156:U:H2'	2.33	0.43
6:CA:546:G:OP1	51:ZW:55:LYS:HG3	2.17	0.43
6:CA:1116:G:N3	6:CA:1610:A:H2	2.15	0.43
10:G:41:LYS:HB2	25:V:68:THR:O	2.17	0.43
25:V:93:ILE:H	25:V:93:ILE:HG13	1.65	0.43
30:ZA:32:ARG:O	30:ZA:35:GLU:HG2	2.18	0.43
39:ZJ:16:ARG:NH1	39:ZJ:19:ASN:HA	2.32	0.43
45:ZQ:7:ILE:HG22	45:ZQ:27:VAL:HG13	2.00	0.43
50:ZV:31:ILE:N	50:ZV:38:LEU:O	2.49	0.43
72:t:46:THR:OG1	72:t:47:LEU:N	2.48	0.43
3:A:209:U:H4'	53:a:100:HIS:CD2	2.53	0.43
3:A:3126:G:H2'	3:A:3127:G:C8	2.53	0.43
4:B:76:G:H1'	4:B:105:A:N6	2.33	0.43
5:C:7:U:H2'	5:C:8:C:C6	2.53	0.43
6:CA:522:U:H2'	6:CA:523:A:H5''	1.99	0.43
6:CA:928:U:H2'	34:ZE:14:SER:OG	2.18	0.43
6:CA:1140:G:C2	6:CA:1141:A:C8	3.06	0.43
6:CA:1205:C:H2'	6:CA:1206:A:H8	1.82	0.43
14:K:25:ILE:HD13	14:K:38:LEU:HD12	1.99	0.43
30:ZA:117:ARG:NH1	30:ZA:117:ARG:HG3	2.32	0.43
49:ZU:19:THR:HG21	49:ZU:27:GLN:HG3	1.99	0.43
71:s:127:ARG:HH21	71:s:152:PRO:HD3	1.83	0.43
74:v:124:LEU:HD22	74:v:135:VAL:HG13	2.00	0.43
3:A:111:C:P	19:P:147:ARG:HE	2.42	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:419:U:H4'	60:h:88:ASN:O	2.18	0.43
3:A:2602:A:O2'	79:A:3495:GET:N33	2.51	0.43
3:A:2831:C:OP1	27:X:40:LYS:NZ	2.51	0.43
3:A:3040:A:O4'	8:E:18:PRO:HG2	2.18	0.43
3:A:3240:U:H5'	3:A:3241:G:C2	2.54	0.43
4:B:12:U:OP2	4:B:69:C:O2'	2.35	0.43
5:C:124:U:H5''	5:C:125:C:H5	1.82	0.43
6:CA:256:U:H2'	6:CA:257:C:C6	2.53	0.43
6:CA:888:U:H4'	35:ZF:13:ARG:CD	2.48	0.43
79:CA:1876:GET:H12	79:CA:1876:GET:H131	1.87	0.43
10:G:117:GLU:OE2	10:G:120:LYS:NZ	2.48	0.43
24:U:15:MET:HG3	24:U:16:SER:N	2.32	0.43
30:ZA:92:PRO:HB3	33:ZD:12:ALA:HB2	2.00	0.43
30:ZA:199:ARG:H	30:ZA:199:ARG:HG2	1.61	0.43
34:ZE:26:PHE:CZ	34:ZE:28:LEU:HB2	2.54	0.43
37:ZH:88:LEU:HD12	37:ZH:88:LEU:HA	1.80	0.43
39:ZJ:36:ARG:HE	39:ZJ:36:ARG:HB3	1.69	0.43
43:ZO:91:ASP:OD1	84:ZO:201:HOH:O	2.21	0.43
57:e:16:GLY:O	57:e:19:MET:HB2	2.18	0.43
72:t:33:LYS:HB3	72:t:33:LYS:HE2	1.90	0.43
3:A:1131:A:H2'	3:A:1132:C:C6	2.53	0.43
3:A:2171:A:C6	6:CA:1732:G:H5''	2.52	0.43
5:C:4:C:H2'	5:C:5:U:C6	2.53	0.43
6:CA:798:U:O4	6:CA:799:A:N6	2.51	0.43
6:CA:1084:G:O2'	6:CA:1100:G:O6	2.32	0.43
6:CA:1145:U:H2'	6:CA:1146:G:H8	1.83	0.43
6:CA:1196:A:O2'	6:CA:1226:A:N1	2.39	0.43
6:CA:1625:U:H2'	6:CA:1626:A:H8	1.83	0.43
7:D:2:GLY:HA2	7:D:207:VAL:HG23	2.00	0.43
14:K:29:GLY:HA3	14:K:82:VAL:HG13	2.00	0.43
23:T:94:ARG:O	23:T:96:MET:HG2	2.19	0.43
34:ZE:110:ASP:O	34:ZE:114:ARG:HG2	2.18	0.43
35:ZF:70:GLY:HA3	72:t:29:TRP:HH2	1.82	0.43
39:ZJ:88:ARG:HB3	39:ZJ:98:TYR:O	2.18	0.43
48:ZT:73:LEU:HD21	48:ZT:79:PHE:HB3	2.00	0.43
49:ZU:19:THR:CG2	49:ZU:27:GLN:HG3	2.49	0.43
52:ZY:121:GLN:OE1	52:ZY:163:ASN:ND2	2.47	0.43
52:ZY:233:ALA:H	52:ZY:257:LYS:HE3	1.83	0.43
72:t:81:TYR:HB2	72:t:109:LYS:HB2	2.00	0.43
3:A:2531:U:OP1	3:A:2657:U:O2'	2.28	0.43
3:A:3126:G:H2'	3:A:3127:G:H8	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:37:A:H5''	5:C:39:G:O4'	2.18	0.43
6:CA:4:C:H5	6:CA:20:G:N1	2.08	0.43
6:CA:136:A:H1'	6:CA:137:A:OP2	2.19	0.43
6:CA:503:G:H8	6:CA:503:G:OP2	2.02	0.43
6:CA:824:U:O2'	6:CA:825:A:H5'	2.18	0.43
6:CA:872:G:H2'	6:CA:873:U:C6	2.54	0.43
6:CA:1047:C:H2'	6:CA:1048:C:H6	1.84	0.43
6:CA:1301:A:H61	74:v:162:GLY:HA3	1.82	0.43
6:CA:1554:U:H2'	6:CA:1555:C:C6	2.54	0.43
8:E:123:TYR:CZ	8:E:124:LYS:HG3	2.53	0.43
10:G:8:LYS:HB3	10:G:12:TYR:CD1	2.53	0.43
10:G:76:THR:HG21	10:G:109:ALA:HA	2.01	0.43
13:J:35:TYR:CD1	13:J:43:PRO:HD3	2.52	0.43
13:J:177:PRO:HB3	13:J:220:ASN:OD1	2.18	0.43
27:X:18:PRO:HA	27:X:51:ALA:HA	2.00	0.43
27:X:72:LYS:HB3	27:X:72:LYS:HE3	1.78	0.43
28:Y:57:ARG:O	28:Y:60:LYS:HD2	2.18	0.43
30:ZA:177:PRO:HB3	84:ZA:437:HOH:O	2.18	0.43
35:ZF:26:THR:OG1	35:ZF:30:GLY:HA2	2.17	0.43
38:ZI:89:SER:HA	71:s:198:MET:HE3	1.99	0.43
45:ZQ:9:THR:HG23	45:ZQ:23:PHE:HB2	2.00	0.43
73:u:175:ALA:HB2	73:u:193:THR:HG21	2.01	0.43
3:A:741:G:H5''	84:A:7440:HOH:O	2.18	0.43
3:A:767:C:H5''	7:D:21:ARG:HD3	2.01	0.43
3:A:842:U:O4	79:A:3481:GET:H32	2.19	0.43
3:A:1003:U:H5	84:A:5492:HOH:O	2.02	0.43
3:A:2577:G:H2'	3:A:2577:G:N3	2.33	0.43
5:C:57:C:H4'	5:C:63:G:N7	2.34	0.43
6:CA:282:U:H2'	6:CA:283:C:C6	2.54	0.43
6:CA:1112:A:H5''	47:ZS:64:PRO:HG3	2.01	0.43
11:H:96:ARG:H	11:H:96:ARG:HG2	1.59	0.43
33:ZD:80:MET:HE3	33:ZD:83:THR:HB	1.99	0.43
39:ZJ:57:ARG:HB2	39:ZJ:60:GLU:HG3	2.01	0.43
40:ZK:135:ILE:HD13	40:ZK:135:ILE:HA	1.87	0.43
41:ZL:19:HIS:CE1	41:ZL:95:PRO:HA	2.53	0.43
71:s:122:ILE:HA	71:s:144:ILE:O	2.18	0.43
74:v:196:ASN:ND2	74:v:199:GLY:HA3	2.34	0.43
3:A:81:U:H2'	3:A:82:C:O4'	2.19	0.43
3:A:203:C:OP2	9:F:222:ASN:HB2	2.18	0.43
3:A:238:C:H2'	3:A:239:U:H6	1.83	0.43
3:A:704:A:C2	3:A:714:A:H1'	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:909:U:H5	84:A:7841:HOH:O	2.02	0.43
3:A:1563:G:H2'	3:A:1564:C:C6	2.54	0.43
3:A:1858:U:H2'	3:A:1859:C:C6	2.53	0.43
3:A:2506:G:H2'	3:A:2506:G:N3	2.34	0.43
4:B:26:G:H2'	4:B:27:C:O4'	2.19	0.43
5:C:6:U:H2'	5:C:7:U:H6	1.83	0.43
6:CA:15:U:H2'	6:CA:16:G:O4'	2.19	0.43
6:CA:30:G:H2'	6:CA:31:C:C6	2.53	0.43
6:CA:938:U:H2'	6:CA:939:C:O4'	2.18	0.43
21:R:51:VAL:HA	21:R:56:ARG:O	2.19	0.43
23:T:170:ALA:C	23:T:172:GLU:H	2.27	0.43
30:ZA:117:ARG:NH1	30:ZA:128:LEU:HB2	2.34	0.43
33:ZD:128:CYS:O	84:ZD:202:HOH:O	2.21	0.43
38:ZI:103:ASP:OD1	38:ZI:105:GLU:N	2.51	0.43
46:ZR:47:TYR:O	46:ZR:51:MET:HG2	2.19	0.43
52:ZY:89:LEU:HD21	52:ZY:124:SER:HB3	2.00	0.43
3:A:563:G:OP2	79:A:3478:GET:N32	2.51	0.43
3:A:1438:U:C5	3:A:1777:A:N1	2.83	0.43
3:A:1518:G:H2'	3:A:1519:G:C8	2.53	0.43
3:A:1657:U:H2'	3:A:1658:G:C8	2.54	0.43
6:CA:61:A:H2'	6:CA:62:A:O4'	2.19	0.43
6:CA:381:G:H5''	6:CA:1704:C:O2'	2.19	0.43
6:CA:726:A:H2'	6:CA:727:A:C8	2.53	0.43
6:CA:1151:U:O2	6:CA:1155:U:H5	2.01	0.43
6:CA:1154:A:H5''	6:CA:1155:U:OP2	2.18	0.43
6:CA:1209:U:O2'	6:CA:1210:U:O5'	2.32	0.43
6:CA:1614:C:H2'	6:CA:1615:C:O4'	2.18	0.43
10:G:197:LYS:HE2	10:G:197:LYS:HB3	1.79	0.43
13:J:185:ALA:O	13:J:189:THR:HG23	2.18	0.43
23:T:175:LEU:H	23:T:175:LEU:HG	1.67	0.43
31:ZB:92:LYS:HB2	31:ZB:95:TYR:CD2	2.54	0.43
38:ZI:89:SER:O	38:ZI:91:LEU:N	2.52	0.43
74:v:33:GLN:OE1	74:v:33:GLN:N	2.52	0.43
78:z:17:VAL:HG23	78:z:81:PHE:HE2	1.82	0.43
3:A:273:G:O6	3:A:294:G:H1'	2.19	0.43
3:A:443:G:O6	79:A:3478:GET:H931	2.19	0.43
3:A:1768:C:OP2	65:m:48:LYS:HG2	2.18	0.43
3:A:2465:C:H2'	57:e:51:VAL:HG11	2.01	0.43
6:CA:347:U:O2'	6:CA:349:A:H5''	2.19	0.43
6:CA:1208:A:C2'	6:CA:1209:U:H5'	2.49	0.43
6:CA:1302:C:H4'	74:v:204:PRO:HB3	2.01	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:84:MET:HE3	8:E:162:CYS:HB3	2.00	0.43
10:G:290:ILE:O	10:G:294:LYS:HG2	2.19	0.43
14:K:109:GLN:HG3	14:K:110:LYS:N	2.31	0.43
16:M:10:LEU:HD23	16:M:10:LEU:HA	1.79	0.43
21:R:67:ILE:HD11	21:R:80:LYS:HB3	2.01	0.43
23:T:190:ARG:O	23:T:191:GLU:C	2.60	0.43
24:U:172:LYS:HD3	24:U:172:LYS:HA	1.56	0.43
35:ZF:40:GLY:HA2	35:ZF:49:GLU:HG2	2.01	0.43
44:ZP:3:ASN:OD1	84:ZP:201:HOH:O	2.21	0.43
55:c:36:GLY:HA3	55:c:40:HIS:CE1	2.54	0.43
55:c:92:LYS:HD3	55:c:92:LYS:HA	1.64	0.43
57:e:7:ASN:HB3	57:e:8:THR:H	1.62	0.43
73:u:177:PRO:O	73:u:181:LYS:HD2	2.18	0.43
78:z:29:ASP:OD2	78:z:72:ARG:NH1	2.43	0.43
3:A:20:G:H1'	5:C:100:A:N3	2.34	0.43
3:A:407:A:H2'	3:A:408:A:C8	2.54	0.43
3:A:1727:A:H2'	3:A:1728:C:O4'	2.18	0.43
3:A:1760:U:H2'	3:A:1761:U:C6	2.54	0.43
3:A:2801:G:O2'	3:A:2925:A:N1	2.48	0.43
3:A:3210:A:H2'	3:A:3211:A:C8	2.54	0.43
6:CA:424:C:H5''	44:ZP:50:LYS:HE3	2.01	0.43
6:CA:875:A:H5''	35:ZF:47:ARG:CZ	2.49	0.43
6:CA:1326:A:H2'	6:CA:1327:G:C8	2.54	0.43
12:I:201:TRP:CD1	12:I:202:PRO:HD2	2.54	0.43
35:ZF:37:VAL:HG12	35:ZF:62:VAL:HG13	1.99	0.43
38:ZI:100:LEU:HB3	38:ZI:102:VAL:HG13	2.00	0.43
39:ZJ:48:LYS:HB3	40:ZK:35:GLU:OE1	2.18	0.43
55:c:72[A]:GLN:NE2	84:c:202:HOH:O	2.52	0.43
72:t:29:TRP:N	72:t:29:TRP:CD1	2.87	0.43
72:t:120:LEU:HD21	72:t:122:GLU:HG3	2.01	0.43
73:u:206:LEU:HD23	73:u:206:LEU:HA	1.91	0.43
3:A:6:C:H2'	3:A:7:U:C6	2.54	0.42
3:A:1067:A:H2'	3:A:1068:U:H6	1.84	0.42
3:A:1570:U:O4	54:b:115:ARG:HD2	2.18	0.42
3:A:3072:G:H4'	3:A:3073:C:OP1	2.19	0.42
4:B:1:G:C4	10:G:266:ALA:HA	2.54	0.42
5:C:49:G:OP2	62:j:48:ARG:NH1	2.52	0.42
6:CA:752:C:C4	45:ZQ:48:TYR:HD1	2.37	0.42
6:CA:1047:C:H2'	6:CA:1048:C:C6	2.54	0.42
31:ZB:106:GLU:HA	31:ZB:111:THR:HG21	2.01	0.42
44:ZP:73:ARG:HD2	44:ZP:73:ARG:HA	1.82	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2796:A:P	67:o:26:ARG:HH21	2.41	0.42
3:A:2807:G:OP1	79:A:3496:GET:N32	2.52	0.42
6:CA:99:A:H2'	6:CA:100:U:O4'	2.20	0.42
6:CA:1468:A:H2'	6:CA:1469:C:C6	2.54	0.42
9:F:182:VAL:HG11	9:F:225:GLY:CA	2.49	0.42
9:F:320:LYS:HE3	9:F:320:LYS:HB3	1.80	0.42
24:U:139:LYS:HG2	24:U:141:VAL:HG23	2.01	0.42
57:e:22:GLY:O	57:e:23:LYS:HD3	2.20	0.42
64:l:38:GLY:O	64:l:41:SER:HB3	2.20	0.42
3:A:62:G:OP2	19:P:169:LYS:NZ	2.51	0.42
3:A:92:G:H2'	3:A:93:A:C8	2.54	0.42
3:A:240:U:H2'	3:A:241:C:C6	2.55	0.42
3:A:1279:A:H2'	3:A:1280:C:C6	2.54	0.42
3:A:2310:G:H5''	8:E:255:TRP:CD1	2.53	0.42
3:A:2647:A:H5'	10:G:175:HIS:HA	2.01	0.42
6:CA:726:A:H2'	6:CA:727:A:H8	1.84	0.42
6:CA:1173:A:C2	6:CA:1531:A:C4	3.07	0.42
6:CA:1325:C:H2'	6:CA:1326:A:H8	1.83	0.42
6:CA:1489:A:C6	74:v:5:ILE:HD11	2.55	0.42
6:CA:1559:G:O2'	6:CA:1585:G:O6	2.30	0.42
9:F:54:SER:OG	9:F:57:ALA:HB2	2.18	0.42
13:J:215:LEU:HD23	13:J:215:LEU:HA	1.89	0.42
35:ZF:43:VAL:HG21	35:ZF:48:ASP:HB2	2.00	0.42
38:ZI:85:VAL:HG21	71:s:198:MET:HG2	2.00	0.42
43:ZO:84:LYS:H	43:ZO:84:LYS:CE	2.25	0.42
47:ZS:103:ILE:HD12	47:ZS:130:TYR:CD2	2.55	0.42
74:v:8:LYS:HD3	74:v:8:LYS:HA	1.75	0.42
75:w:194:VAL:HG11	75:w:232:ALA:HB2	2.01	0.42
76:x:42:LEU:HD21	76:x:90:ILE:HG12	2.01	0.42
3:A:928:A:H1'	84:A:8071:HOH:O	2.18	0.42
3:A:1502:G:N2	29:Z:34:LYS:HE3	2.35	0.42
3:A:1552:A:H2'	3:A:1553:G:O4'	2.19	0.42
3:A:1747:G:H2'	3:A:1748:C:O4'	2.19	0.42
84:A:6593:HOH:O	15:L:92:HIS:HD2	2.03	0.42
6:CA:105:U:OP1	79:CA:1891:GET:H832	2.18	0.42
6:CA:472:G:N2	6:CA:495:A:OP1	2.52	0.42
6:CA:1559:G:OP2	37:ZH:121:ARG:HG2	2.19	0.42
6:CA:1656:A:C2	6:CA:1695:G:N2	2.85	0.42
7:D:150:LEU:HD11	7:D:156:LYS:HD2	2.02	0.42
14:K:71:VAL:O	14:K:75:ILE:HG13	2.19	0.42
17:N:46:VAL:O	17:N:49:LYS:HB2	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:ZF:29:SER:HB2	72:t:66:PHE:CE1	2.54	0.42
45:ZQ:20:ARG:HB3	45:ZQ:76:TYR:CD1	2.54	0.42
45:ZQ:41:ARG:NH2	45:ZQ:52:LYS:O	2.51	0.42
52:ZY:19:TRP:HB3	52:ZY:286:ILE:HD11	2.01	0.42
52:ZY:253:SER:HA	52:ZY:284:GLU:OE1	2.20	0.42
58:f:4:GLN:HB3	58:f:78:ARG:HH22	1.84	0.42
1:1:10:G:P	1:1:46:A:H5'	2.60	0.42
1:1:27:U:H2'	1:1:28:C:H6	1.84	0.42
3:A:676:C:O2'	3:A:679:G:O6	2.36	0.42
3:A:1043:C:O2'	79:A:3486:GET:N21	2.47	0.42
3:A:1725:C:H2'	3:A:1726:U:O4'	2.19	0.42
3:A:1837:A:O2'	3:A:2954:G:H4'	2.19	0.42
3:A:2262:U:H2'	3:A:2263:A:O4'	2.19	0.42
3:A:2424:U:O2'	3:A:2425:U:H5'	2.20	0.42
3:A:2623:U:H2'	3:A:2624:U:C6	2.55	0.42
3:A:2778:G:OP1	8:E:5:LYS:NZ	2.48	0.42
3:A:2934:A:H2'	3:A:2935:C:C6	2.54	0.42
6:CA:1617:G:H2'	6:CA:1618:U:O2	2.19	0.42
9:F:42:ARG:NH2	9:F:118:GLU:OE1	2.52	0.42
14:K:113:GLU:HG3	14:K:125:HIS:CD2	2.53	0.42
15:L:69:ARG:HG2	15:L:69:ARG:NH1	2.34	0.42
17:N:57:VAL:HG23	17:N:115:ARG:HD2	2.01	0.42
27:X:32:ARG:HG3	27:X:32:ARG:HH11	1.84	0.42
30:ZA:117:ARG:NH2	30:ZA:164:PHE:HB3	2.34	0.42
37:ZH:44:ARG:O	37:ZH:47:VAL:HG22	2.19	0.42
41:ZL:107:ILE:HG22	41:ZL:107:ILE:O	2.19	0.42
52:ZY:234:SER:HB2	52:ZY:253:SER:HB2	2.01	0.42
53:a:27:ARG:HG2	53:a:78:PHE:CE1	2.54	0.42
72:t:130:ALA:HB2	72:t:179:VAL:N	2.34	0.42
73:u:171:LYS:HD3	73:u:171:LYS:HA	1.76	0.42
74:v:94:GLU:O	74:v:96:ALA:N	2.52	0.42
78:z:5:ILE:HD12	78:z:5:ILE:H	1.85	0.42
3:A:202:G:N2	9:F:218:LYS:HE3	2.35	0.42
3:A:933:U:H5	84:A:8238:HOH:O	2.03	0.42
3:A:1757:A:H1'	3:A:1759:G:C6	2.55	0.42
3:A:1775:G:O2'	66:n:3:SER:O	2.34	0.42
6:CA:151:G:OP1	77:y:15:SER:OG	2.24	0.42
6:CA:926:C:OP1	6:CA:1042:C:O2'	2.36	0.42
6:CA:1517:G:N2	6:CA:1543:C:H1'	2.35	0.42
7:D:109:GLU:OE2	7:D:139:HIS:HD2	2.02	0.42
19:P:65:ARG:NH1	84:P:401:HOH:O	2.41	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:T:169:ALA:O	23:T:172:GLU:HG3	2.20	0.42
32:ZC:59:PHE:CZ	32:ZC:62:GLN:HA	2.55	0.42
63:k:94:ALA:O	63:k:98:ARG:CB	2.66	0.42
75:w:175:PHE:HE1	75:w:198:ARG:HD2	1.85	0.42
3:A:1160:G:H4'	24:U:104:MET:HE2	2.02	0.42
3:A:1558:U:H2'	3:A:1559:G:H8	1.85	0.42
3:A:2026:G:H4'	3:A:2027:U:OP2	2.20	0.42
3:A:2423:U:H2'	3:A:2424:U:C6	2.55	0.42
3:A:2785:C:O2'	3:A:2786:U:H5'	2.20	0.42
4:B:97:U:H4'	24:U:133:ARG:HB2	2.02	0.42
6:CA:873:U:O2'	6:CA:875:A:N7	2.41	0.42
13:J:117:ILE:HD13	13:J:121:LYS:O	2.18	0.42
27:X:79:VAL:HG23	27:X:80:ARG:HG2	2.02	0.42
27:X:90:GLY:O	28:Y:16:GLY:HA2	2.19	0.42
28:Y:50:ALA:HA	28:Y:55:TYR:CG	2.55	0.42
40:ZK:50:SER:HA	40:ZK:53:TRP:HD1	1.84	0.42
66:n:8:ARG:HB3	66:n:8:ARG:HH11	1.84	0.42
72:t:117:TRP:HB3	72:t:153:THR:HG22	2.02	0.42
73:u:59:LYS:NZ	84:u:303:HOH:O	2.42	0.42
73:u:76:MET:HE3	73:u:76:MET:HB3	1.85	0.42
75:w:62:LYS:HD2	75:w:66:MET:HG2	2.01	0.42
3:A:73:G:H5'	17:N:58:VAL:HB	2.01	0.42
3:A:1863:A:OP2	79:A:3482:GET:H933	2.20	0.42
3:A:2713:A:H2'	3:A:2714:G:O4'	2.20	0.42
3:A:2765:U:H5	84:A:5555:HOH:O	2.02	0.42
6:CA:245:A:H2'	6:CA:246:A:O4'	2.20	0.42
6:CA:579:C:H2'	6:CA:580:A:H8	1.85	0.42
6:CA:1598:C:H2'	6:CA:1599:C:C6	2.53	0.42
12:I:38:LYS:HE3	12:I:168:GLU:OE2	2.20	0.42
13:J:30:ARG:HA	13:J:30:ARG:HD2	1.68	0.42
26:W:88:GLN:OE1	26:W:88:GLN:N	2.53	0.42
27:X:66:LYS:HG3	27:X:68:GLU:OE1	2.19	0.42
72:t:97:LEU:HG	72:t:232:HIS:CG	2.55	0.42
3:A:123:C:H2'	3:A:124:G:H8	1.85	0.42
3:A:157:A:H2'	3:A:157:A:N3	2.35	0.42
3:A:1093:C:H4'	3:A:1278:U:C4	2.55	0.42
3:A:2328:A:H2'	3:A:2329:G:H8	1.84	0.42
3:A:2782:U:H2'	3:A:2783:U:C6	2.55	0.42
3:A:3237:C:H2'	3:A:3238:C:C6	2.54	0.42
6:CA:581:A:H2'	6:CA:582:G:O4'	2.20	0.42
6:CA:906:G:OP1	6:CA:1044:G:N2	2.40	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CA:1508:C:H4'	6:CA:1514:G:O6	2.19	0.42
8:E:236:LYS:HE2	8:E:236:LYS:HB2	1.86	0.42
8:E:347:SER:O	8:E:351:LEU:HG	2.20	0.42
10:G:275:LYS:H	10:G:275:LYS:HG2	1.63	0.42
25:V:111:THR:O	25:V:115:LEU:HG	2.20	0.42
28:Y:60:LYS:HA	28:Y:60:LYS:HE3	2.01	0.42
38:ZI:24:LEU:HB3	38:ZI:58:MET:HE2	2.01	0.42
62:j:82:GLU:HG2	62:j:84:LYS:HG3	2.02	0.42
3:A:304:U:H2'	3:A:305:C:C6	2.55	0.42
3:A:534:G:H2'	3:A:535:C:C6	2.55	0.42
3:A:1137:A:H5''	3:A:1138:U:OP1	2.19	0.42
3:A:1537:U:C2	3:A:1538:C:C5	3.08	0.42
3:A:2018:U:H2'	3:A:2019:A:C8	2.54	0.42
6:CA:175:G:N2	84:CA:2039:HOH:O	2.43	0.42
6:CA:720:U:H2'	6:CA:721:U:C6	2.55	0.42
6:CA:1541:U:H5'	39:ZJ:39:GLY:N	2.35	0.42
6:CA:1651:U:OP1	30:ZA:51:HIS:ND1	2.38	0.42
10:G:246:LYS:HA	10:G:246:LYS:HD3	1.85	0.42
25:V:14:MET:HE1	25:V:55:LYS:HB2	2.02	0.42
30:ZA:83:THR:HG21	30:ZA:111:ILE:HD12	2.01	0.42
34:ZE:89:TYR:CD1	34:ZE:150:VAL:HG12	2.55	0.42
38:ZI:27:ASP:OD1	38:ZI:30:THR:OG1	2.24	0.42
45:ZQ:35:VAL:HG22	45:ZQ:40:LEU:HG	2.02	0.42
48:ZT:47:PHE:CE2	48:ZT:49:HIS:HB2	2.55	0.42
51:ZW:54:ARG:HD3	51:ZW:56:MET:HE2	2.02	0.42
73:u:96:VAL:HG21	73:u:203:GLU:HG3	2.02	0.42
77:y:46:LYS:HE3	77:y:46:LYS:HB3	1.90	0.42
77:y:182:GLN:NE2	84:y:303:HOH:O	2.35	0.42
3:A:286:A:O2'	3:A:287:G:H5'	2.20	0.41
3:A:397:A:C2	5:C:17:A:H1'	2.54	0.41
3:A:685:G:OP1	79:A:3479:GET:O61	2.32	0.41
3:A:1530:A:N7	66:n:4:GLN:HG3	2.34	0.41
3:A:1557:U:H2'	3:A:1558:U:H6	1.85	0.41
3:A:1857:A:H5'	23:T:102:LYS:O	2.20	0.41
3:A:2614:G:H4'	3:A:2615:A:H5''	2.01	0.41
6:CA:396:A:H2'	6:CA:397:C:C6	2.55	0.41
6:CA:454:G:C5	6:CA:455:U:C5	3.07	0.41
6:CA:501:A:N7	31:ZB:172:VAL:HG21	2.35	0.41
6:CA:1197:A:H5''	6:CA:1198:G:C8	2.55	0.41
6:CA:1236:U:H2'	6:CA:1237:G:H5''	2.01	0.41
9:F:171:LYS:HA	9:F:176:ASN:HB2	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:32:GLN:HG2	84:U:205:HOH:O	2.19	0.41
36:ZG:61:ARG:NH1	36:ZG:88:GLU:OE2	2.53	0.41
37:ZH:82:GLN:HE22	37:ZH:118:ALA:HA	1.85	0.41
39:ZJ:96:LYS:HD3	39:ZJ:98:TYR:OH	2.20	0.41
74:v:63:GLN:HE22	74:v:65:ARG:HB2	1.85	0.41
77:y:1:MET:HE3	77:y:1:MET:HB2	1.80	0.41
3:A:298:A:H1'	3:A:2137:A:N3	2.35	0.41
3:A:677:U:H5''	3:A:678:C:H5	1.85	0.41
3:A:1289:C:OP2	79:A:3489:GET:O23	2.35	0.41
3:A:2204:U:H2'	3:A:2205:C:C6	2.55	0.41
5:C:77:A:H2'	5:C:78:G:O4'	2.19	0.41
6:CA:416:C:H2'	6:CA:417:A:O4'	2.20	0.41
6:CA:470:A:H2'	6:CA:471:U:C6	2.54	0.41
6:CA:732:G:H4'	31:ZB:72:GLU:OE1	2.19	0.41
6:CA:762:U:H2'	6:CA:763:G:O4'	2.21	0.41
6:CA:832:A:H4'	6:CA:833:A:O5'	2.21	0.41
79:CA:1876:GET:H833	72:t:162:ARG:NH2	2.35	0.41
38:ZI:22:PRO:HA	52:ZY:212:LYS:NZ	2.35	0.41
44:ZP:56:LYS:HE2	44:ZP:93:LEU:HG	2.02	0.41
51:ZW:48:THR:O	51:ZW:48:THR:OG1	2.36	0.41
63:k:85:LYS:HD3	63:k:85:LYS:HA	1.82	0.41
72:t:198:GLU:HB2	72:t:210:ILE:HD13	2.01	0.41
3:A:544:A:H2'	3:A:555:G:O6	2.20	0.41
3:A:869:A:H2'	3:A:870:C:C6	2.56	0.41
3:A:3194:U:H5	84:A:9072:HOH:O	2.02	0.41
5:C:18:U:H5	84:C:414:HOH:O	2.03	0.41
5:C:52:A:H2'	5:C:53:A:O4'	2.19	0.41
6:CA:496:U:H2'	6:CA:497:U:C6	2.56	0.41
6:CA:769:A:N7	84:CA:1990:HOH:O	2.37	0.41
6:CA:868:A:C8	6:CA:882:U:C4	3.08	0.41
6:CA:1020:G:H2'	6:CA:1021:G:C8	2.56	0.41
6:CA:1103:A:H2'	6:CA:1104:C:O4'	2.20	0.41
6:CA:1476:C:H5	6:CA:1481:G:N1	2.08	0.41
6:CA:1568:A:H5''	79:CA:1878:GET:H931	2.02	0.41
6:CA:1571:C:O2	79:CA:1878:GET:N12	2.52	0.41
9:F:102:ALA:O	9:F:103:PRO:C	2.63	0.41
15:L:99:ILE:HG22	15:L:123:HIS:HB2	2.02	0.41
35:ZF:28:LEU:HD12	35:ZF:28:LEU:HA	1.80	0.41
37:ZH:114:THR:HA	37:ZH:117:VAL:O	2.20	0.41
39:ZJ:15:LEU:HB2	39:ZJ:22:ILE:HB	2.01	0.41
43:ZO:22:LYS:O	84:ZO:202:HOH:O	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:e:25:THR:HG22	57:e:92:ALA:HB3	2.02	0.41
61:i:106:LYS:HE3	61:i:106:LYS:HB3	1.79	0.41
75:w:158:ASP:OD2	75:w:174:LYS:HE2	2.20	0.41
77:y:20:ASP:HB3	77:y:23:LYS:HG3	2.03	0.41
3:A:1496:A:H1'	3:A:1497:U:C6	2.55	0.41
3:A:1748:C:H5'	61:i:77:GLY:O	2.20	0.41
8:E:385:LYS:HA	8:E:388:GLU:HG3	2.03	0.41
13:J:137:LEU:HG	19:P:3:ALA:HB2	2.02	0.41
23:T:187:LYS:HE3	23:T:187:LYS:HB2	1.31	0.41
35:ZF:44:LYS:H	35:ZF:44:LYS:HG3	1.61	0.41
39:ZJ:78:HIS:ND1	39:ZJ:78:HIS:C	2.78	0.41
39:ZJ:106:GLU:O	39:ZJ:110:ARG:HG3	2.21	0.41
51:ZW:46:ASN:OD1	51:ZW:46:ASN:N	2.53	0.41
57:e:37:ALA:HB1	57:e:39:LYS:NZ	2.36	0.41
77:y:31:ARG:HH11	77:y:34:GLN:NE2	2.19	0.41
78:z:110:ARG:HD3	78:z:110:ARG:HA	1.65	0.41
1:1:10:G:N2	1:1:26:G:H1'	2.36	0.41
3:A:484:G:OP1	24:U:160:LYS:NZ	2.52	0.41
3:A:901:C:C4	3:A:903:U:H1'	2.56	0.41
3:A:911:G:O2'	56:d:30:LYS:HE2	2.21	0.41
3:A:2197:U:OP1	3:A:2873:G:O2'	2.28	0.41
3:A:2640:A:H2'	3:A:2641:C:O4'	2.21	0.41
6:CA:47:A:N1	6:CA:375:G:H1'	2.35	0.41
6:CA:52:U:H2'	6:CA:53:G:C8	2.55	0.41
6:CA:522:U:C2'	6:CA:523:A:H5''	2.50	0.41
6:CA:744:C:H5''	75:w:21:ASP:CG	2.45	0.41
6:CA:1623:A:H2'	6:CA:1624:C:H6	1.83	0.41
14:K:189:ASP:OD1	14:K:189:ASP:N	2.54	0.41
20:Q:179:LEU:HG	20:Q:183:LYS:HD2	2.02	0.41
32:ZC:70:ASP:O	32:ZC:74:GLU:HG2	2.20	0.41
36:ZG:25:LEU:HD12	36:ZG:25:LEU:HA	1.79	0.41
44:ZP:39:LYS:HZ2	44:ZP:39:LYS:HB3	1.85	0.41
44:ZP:133:LEU:HG	44:ZP:137:LYS:HE2	2.03	0.41
45:ZQ:98:GLU:OE1	45:ZQ:99:LYS:N	2.54	0.41
53:a:121:LYS:HB3	53:a:121:LYS:HE3	1.66	0.41
71:s:120:LEU:HD21	71:s:144:ILE:HD12	2.03	0.41
72:t:38:PHE:CD2	72:t:73:LEU:HD13	2.55	0.41
72:t:64:ARG:O	72:t:87:ARG:HA	2.20	0.41
72:t:123:ALA:HB2	72:t:165:ARG:HG3	2.02	0.41
77:y:58:LYS:HA	77:y:107:SER:HB3	2.01	0.41
3:A:656:A:H2'	3:A:657:A:C8	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2044:U:H2'	3:A:2045:G:C8	2.56	0.41
3:A:2255:U:H5	84:E:633:HOH:O	2.03	0.41
5:C:79:A:C2	79:C:205:GET:H833	2.55	0.41
5:C:146:G:O2'	5:C:148:G:OP1	2.30	0.41
6:CA:818:C:H2'	6:CA:819:C:C6	2.56	0.41
6:CA:904:C:N3	6:CA:1047:C:H4'	2.34	0.41
6:CA:1293:C:H2'	6:CA:1294:G:O4'	2.19	0.41
10:G:83:LEU:HB3	10:G:88:ILE:HB	2.03	0.41
24:U:160:LYS:HD2	24:U:160:LYS:HA	1.80	0.41
26:W:35:LYS:HA	26:W:38:ASN:HD22	1.86	0.41
33:ZD:49:ILE:HB	33:ZD:50:GLU:OE1	2.21	0.41
45:ZQ:92:VAL:HG11	45:ZQ:99:LYS:HD2	2.02	0.41
47:ZS:150:SER:OG	47:ZS:153:ASP:HB2	2.21	0.41
52:ZY:31:ASP:HA	52:ZY:47:LEU:HD12	2.03	0.41
52:ZY:125:ALA:HB2	52:ZY:154:VAL:HB	2.02	0.41
58:f:95:VAL:HG12	58:f:97:VAL:HG13	2.03	0.41
64:l:27:LEU:HA	64:l:34:CYS:HA	2.01	0.41
75:w:181:VAL:HG12	75:w:227:VAL:HA	2.03	0.41
3:A:1010:G:C6	25:V:109:VAL:HG22	2.56	0.41
3:A:2063:U:H2'	3:A:2064:A:C5	2.56	0.41
3:A:2492:G:H4'	3:A:2494:C:C2	2.55	0.41
6:CA:152:G:OP2	45:ZQ:133:ASN:HB2	2.20	0.41
6:CA:558:C:H41	44:ZP:69:ARG:NH2	2.19	0.41
6:CA:567:U:H4'	6:CA:568:A:H5''	2.02	0.41
6:CA:899:A:O4'	35:ZF:119:ASP:HB2	2.21	0.41
6:CA:1172:A:N6	6:CA:1433:C:O5'	2.54	0.41
11:H:56:PRO:O	11:H:59:VAL:N	2.44	0.41
11:H:120:LYS:HE2	11:H:120:LYS:HB3	1.78	0.41
24:U:104:MET:HE3	24:U:104:MET:HB2	1.93	0.41
39:ZJ:6:GLN:HE22	46:ZR:44:GLN:HA	1.86	0.41
45:ZQ:129:LEU:HD23	45:ZQ:129:LEU:HA	1.97	0.41
48:ZT:44:THR:HG21	48:ZT:63:LEU:CD1	2.50	0.41
57:e:15:LEU:HD12	57:e:15:LEU:HA	1.84	0.41
66:n:43:HIS:O	66:n:47:THR:HG23	2.21	0.41
3:A:535:C:H2'	3:A:536:U:C6	2.56	0.41
3:A:2861:G:H2'	3:A:2862:U:H6	1.85	0.41
5:C:142:U:H2'	5:C:143:U:C6	2.56	0.41
6:CA:126:G:C2	77:y:195:ILE:HG13	2.55	0.41
6:CA:241:U:H2'	6:CA:242:A:H8	1.86	0.41
6:CA:511:U:OP1	45:ZQ:37:LYS:HE2	2.21	0.41
6:CA:1014:U:H2'	6:CA:1015:C:C6	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:61:THR:HG23	9:F:91:PHE:CE1	2.56	0.41
23:T:167:ALA:O	23:T:168:GLU:C	2.63	0.41
27:X:10:LYS:HD3	27:X:125:LEU:HD22	2.02	0.41
27:X:87:ARG:HH22	27:X:137:VAL:C	2.29	0.41
35:ZF:34:ILE:HG12	35:ZF:71:ILE:HD11	2.03	0.41
38:ZI:49:LYS:HE2	38:ZI:49:LYS:HB3	1.76	0.41
52:ZY:201:SER:HB3	52:ZY:206:LEU:HB2	2.01	0.41
58:f:73:ARG:NH1	58:f:73:ARG:HG3	2.35	0.41
65:m:30:LYS:HB2	65:m:38:PHE:CZ	2.56	0.41
75:w:31:ALA:HB3	75:w:38:LEU:HG	2.03	0.41
76:x:34:GLN:O	76:x:37:GLN:HG3	2.21	0.41
77:y:61:PHE:HA	77:y:62:PRO:HD3	1.95	0.41
3:A:530:U:H2'	3:A:531:U:C6	2.55	0.41
3:A:956:A:O3'	15:L:39:LYS:HE3	2.21	0.41
3:A:1104:G:H2'	3:A:1105:A:O4'	2.21	0.41
3:A:1114:U:H2'	3:A:1115:U:O4'	2.20	0.41
3:A:1301:A:H2'	3:A:1302:G:H8	1.84	0.41
3:A:1576:C:H1'	54:b:76:ASN:HB2	2.02	0.41
3:A:1598:G:H2'	3:A:1599:C:C6	2.56	0.41
3:A:2334:A:H2'	3:A:2335:C:H6	1.84	0.41
3:A:2339:A:H2'	3:A:2340:G:O4'	2.21	0.41
3:A:2553:C:OP1	69:q:89:LYS:HB2	2.20	0.41
3:A:2776:C:H2'	3:A:2777:G:O4'	2.20	0.41
3:A:2967:U:H2'	3:A:2968:C:C6	2.56	0.41
3:A:3008:U:H2'	3:A:3009:G:C8	2.56	0.41
4:B:60:C:H2'	4:B:61:A:H8	1.86	0.41
6:CA:206:U:H2'	6:CA:207:A:C8	2.56	0.41
6:CA:892:G:O2'	6:CA:893:A:H5'	2.21	0.41
6:CA:929:U:H5''	34:ZE:14:SER:HB3	2.01	0.41
6:CA:1364:A:H4'	6:CA:1365:C:O5'	2.21	0.41
6:CA:1425:U:H2'	6:CA:1426:U:C6	2.55	0.41
6:CA:1476:C:N4	6:CA:1482:G:O6	2.54	0.41
6:CA:1622:U:H2'	6:CA:1623:A:H8	1.85	0.41
10:G:103:LEU:O	10:G:107:ARG:HG2	2.21	0.41
10:G:134:ALA:HA	10:G:141:PRO:HD3	2.03	0.41
14:K:8:GLN:OE1	14:K:8:GLN:HA	2.21	0.41
24:U:59:LEU:HG	24:U:65:VAL:HB	2.03	0.41
34:ZE:66:VAL:HG23	34:ZE:67:THR:HG23	2.03	0.41
34:ZE:94:LYS:HB2	34:ZE:94:LYS:HE3	1.90	0.41
36:ZG:18:LYS:HD2	36:ZG:36:LEU:O	2.21	0.41
36:ZG:111:MET:HG2	39:ZJ:119:ILE:HB	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:ZM:17:CYS:HB2	42:ZM:56:SER:HB3	2.03	0.41
57:e:101:ILE:H	57:e:101:ILE:HG13	1.51	0.41
62:j:8:GLU:HG3	62:j:9:LEU:N	2.35	0.41
62:j:45:GLY:HA2	62:j:48:ARG:HH11	1.86	0.41
71:s:51:SER:O	71:s:55:GLU:HG3	2.21	0.41
3:A:636:A:H4'	3:A:637:A:OP1	2.21	0.41
3:A:934:U:H2'	3:A:935:U:C6	2.56	0.41
3:A:1061:U:H5''	55:c:22:ILE:HD12	2.03	0.41
3:A:1477:A:H2'	3:A:1478:A:C8	2.56	0.41
3:A:2223:C:OP1	3:A:2224:A:O2'	2.35	0.41
3:A:2614:G:C8	3:A:2651:G:H2'	2.54	0.41
3:A:3174:G:H2'	3:A:3175:C:C6	2.56	0.41
5:C:86:U:OP1	79:C:204:GET:N12	2.53	0.41
6:CA:136:A:O4'	6:CA:138:U:H5'	2.20	0.41
6:CA:1426:U:C2	6:CA:1427:C:C5	3.09	0.41
12:I:19:LYS:HG3	12:I:20:VAL:N	2.35	0.41
21:R:32:THR:HA	21:R:58:ILE:HD13	2.02	0.41
23:T:193:ARG:O	23:T:197:ILE:HG12	2.21	0.41
39:ZJ:6:GLN:NE2	46:ZR:44:GLN:HA	2.35	0.41
65:m:70:PRO:HA	65:m:71:PRO:HD3	1.94	0.41
72:t:193:ILE:O	72:t:197:ILE:HG13	2.20	0.41
77:y:142:ARG:HG2	77:y:147:LEU:HB2	2.03	0.41
78:z:33:ASP:O	78:z:36:PRO:HD2	2.21	0.41
78:z:120:LYS:HD3	78:z:120:LYS:HA	1.89	0.41
3:A:251:A:H2'	3:A:252:C:C6	2.56	0.40
3:A:499:U:C2	3:A:500:A:C8	3.09	0.40
3:A:961:U:H2'	3:A:962:C:C6	2.56	0.40
3:A:1591:U:H2'	3:A:1592:G:C8	2.56	0.40
3:A:1640:G:H2'	3:A:1641:C:H6	1.86	0.40
3:A:1738:U:H2'	7:D:50:HIS:CD2	2.56	0.40
3:A:2328:A:H2'	3:A:2329:G:C8	2.57	0.40
3:A:2555:U:H4'	3:A:2556:A:O4'	2.21	0.40
3:A:2576:A:H5'	3:A:2577:G:C8	2.56	0.40
4:B:24:A:H2'	4:B:25:A:C8	2.57	0.40
6:CA:152:G:C8	45:ZQ:133:ASN:HB3	2.56	0.40
6:CA:468:C:H4'	31:ZB:120:ARG:NE	2.35	0.40
6:CA:1209:U:O2'	6:CA:1210:U:H6	2.04	0.40
6:CA:1225:G:H8	6:CA:1225:G:OP2	2.04	0.40
6:CA:1351:A:H2'	6:CA:1352:C:O4'	2.21	0.40
6:CA:1624:C:H2'	6:CA:1625:U:H6	1.86	0.40
13:J:167:LEU:HD23	13:J:167:LEU:HA	1.91	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:114:ASP:OD1	20:Q:114:ASP:N	2.52	0.40
23:T:197:ILE:HG12	23:T:197:ILE:H	1.51	0.40
28:Y:43:ARG:HH11	28:Y:43:ARG:HG3	1.86	0.40
32:ZC:60:SER:HB2	74:v:28:ARG:HD2	2.03	0.40
36:ZG:53:PRO:HB3	36:ZG:83:MET:SD	2.61	0.40
42:ZM:36:ILE:HD13	42:ZM:78:LEU:HD23	2.04	0.40
42:ZM:53:TYR:OH	42:ZM:76:ASP:OD2	2.26	0.40
44:ZP:88:PRO:O	44:ZP:89:ASN:HB2	2.20	0.40
52:ZY:85:TRP:HA	52:ZY:109:ASP:HB3	2.02	0.40
69:q:25:VAL:HG22	69:q:72:LEU:HD22	2.02	0.40
74:v:62:GLU:HB2	74:v:63:GLN:OE1	2.20	0.40
74:v:160:HIS:C	74:v:165:THR:HG21	2.46	0.40
75:w:200:LYS:HE2	75:w:200:LYS:HB2	1.88	0.40
78:z:161:LYS:O	78:z:164:SER:OG	2.33	0.40
3:A:24:A:C4	3:A:320:G:C8	3.09	0.40
3:A:107:A:H4'	3:A:108:G:H5'	2.03	0.40
3:A:402:G:H5'	21:R:26:PHE:HZ	1.85	0.40
3:A:671:A:H5''	22:S:43:PRO:HB2	2.03	0.40
3:A:758:G:C6	3:A:849:A:C4	3.09	0.40
3:A:948:G:N3	3:A:988:U:H5'	2.36	0.40
3:A:1082:A:H5'	56:d:22:HIS:O	2.20	0.40
3:A:1127:A:C4	3:A:1129:G:C8	3.09	0.40
3:A:1491:A:N3	3:A:1491:A:C2'	2.83	0.40
3:A:1748:C:H2'	3:A:1749:A:C8	2.56	0.40
3:A:2266:U:H5	84:A:3776:HOH:O	2.03	0.40
6:CA:72:A:O2'	6:CA:73:U:OP1	2.36	0.40
6:CA:411:G:H5''	79:CA:1889:GET:H713	2.03	0.40
6:CA:929:U:O2	34:ZE:61:SER:HB2	2.21	0.40
6:CA:1426:U:H2'	6:CA:1427:C:H6	1.86	0.40
25:V:112:ASN:HB3	25:V:128:LEU:HD13	2.04	0.40
30:ZA:67:ILE:HG13	84:ZA:437:HOH:O	2.21	0.40
32:ZC:11:ILE:HG12	32:ZC:42:VAL:HG22	2.03	0.40
32:ZC:61:TRP:HE1	74:v:24:GLU:CD	2.27	0.40
35:ZF:68:GLU:HG3	35:ZF:69:VAL:N	2.36	0.40
41:ZL:21:ILE:HD13	41:ZL:92:LEU:HB2	2.04	0.40
42:ZM:71:ARG:NE	48:ZT:4:VAL:HG21	2.36	0.40
43:ZO:23:ARG:HH22	43:ZO:67:GLY:N	2.19	0.40
53:a:42:LYS:HG2	53:a:43:TYR:CD1	2.56	0.40
53:a:86:THR:HG22	53:a:96:PRO:HA	2.03	0.40
74:v:158:MET:SD	74:v:190:MET:HB2	2.60	0.40
75:w:127:LYS:HA	75:w:127:LYS:HD2	1.92	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:x:118:LEU:HD22	76:x:129:PRO:HB2	2.03	0.40
3:A:224:U:H2'	3:A:225:G:C8	2.56	0.40
3:A:888:C:H2'	3:A:889:U:H6	1.83	0.40
3:A:1166:C:O2'	3:A:1233:A:N1	2.32	0.40
3:A:3064:C:H2'	3:A:3065:G:H8	1.85	0.40
6:CA:454:G:C8	79:CA:1893:GET:H931	2.57	0.40
6:CA:1094:A:H2'	6:CA:1095:A:C8	2.56	0.40
6:CA:1185:C:H2'	6:CA:1186:C:C6	2.57	0.40
6:CA:1507:U:OP1	46:ZR:81:ARG:NH2	2.54	0.40
9:F:99:ARG:CZ	9:F:99:ARG:HB3	2.50	0.40
18:O:35:GLN:OE1	24:U:157:TYR:OH	2.37	0.40
20:Q:189:THR:O	20:Q:193:GLN:HG3	2.20	0.40
24:U:120:MET:SD	24:U:120:MET:C	3.04	0.40
52:ZY:49:GLY:HA2	52:ZY:54:TYR:CE1	2.57	0.40
55:c:7:LYS:HD3	55:c:7:LYS:HA	1.96	0.40
63:k:74:LYS:HZ3	63:k:74:LYS:HG3	1.79	0.40
72:t:229:LEU:HD13	72:t:229:LEU:HA	1.87	0.40
75:w:243:LYS:HD2	75:w:245:ILE:HG12	2.03	0.40
1:l:24:G:H2'	1:l:25:C:C6	2.56	0.40
3:A:148:G:H2'	3:A:149:U:H6	1.86	0.40
3:A:2742:U:HO2'	3:A:2743:A:P	2.43	0.40
6:CA:466:A:H61	6:CA:528:G:N2	2.20	0.40
6:CA:1044:G:OP1	34:ZE:9:LYS:HB2	2.22	0.40
6:CA:1072:G:N7	44:ZP:2:GLY:N	2.68	0.40
6:CA:1653:C:OP2	84:CA:1907:HOH:O	2.22	0.40
55:c:100:PRO:HG2	55:c:123:ILE:HG22	2.04	0.40
73:u:99:ILE:HD13	73:u:128:LYS:HG2	2.04	0.40
75:w:243:LYS:HD3	75:w:243:LYS:C	2.46	0.40
76:x:89:ILE:HD12	76:x:89:ILE:HA	1.88	0.40
3:A:146:A:N7	63:k:25:ILE:HG12	2.36	0.40
3:A:632:G:C2	3:A:633:U:H1'	2.56	0.40
3:A:1526:G:N7	79:A:3493:GET:H32	2.36	0.40
3:A:2345:A:H2'	3:A:2346:C:C6	2.57	0.40
3:A:2998:U:H5''	8:E:349:ARG:HH22	1.87	0.40
3:A:3139:G:H2'	3:A:3140:U:C6	2.57	0.40
3:A:3268:U:H2'	3:A:3269:C:C6	2.55	0.40
5:C:100:A:C8	5:C:101:A:C8	3.09	0.40
6:CA:542:G:OP2	84:CA:1908:HOH:O	2.22	0.40
6:CA:557:G:N2	84:CA:2083:HOH:O	2.53	0.40
6:CA:640:G:N2	6:CA:670:U:H3	2.19	0.40
16:M:11:ARG:CZ	16:M:11:ARG:HB2	2.52	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:ZA:90:TYR:HB3	30:ZA:108:ILE:HB	2.02	0.40
30:ZA:123:HIS:O	30:ZA:150:ARG:HD2	2.21	0.40
54:b:96:ILE:HD13	54:b:96:ILE:N	2.36	0.40
72:t:127:VAL:HG11	72:t:176:VAL:HG21	2.02	0.40
72:t:132:ASP:HB3	72:t:221:PRO:HB3	2.03	0.40
75:w:118:GLU:HA	75:w:121:TYR:CE1	2.57	0.40
76:x:143:ARG:HE	76:x:143:ARG:HB2	1.66	0.40
78:z:19:GLN:HA	78:z:22:ILE:HD12	2.04	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	
7	D	245/254 (96%)	236 (96%)	8 (3%)	1 (0%)	30	27
8	E	385/389 (99%)	379 (98%)	6 (2%)	0	100	100
9	F	359/363 (99%)	353 (98%)	6 (2%)	0	100	100
10	G	289/298 (97%)	281 (97%)	8 (3%)	0	100	100
11	H	139/165 (84%)	132 (95%)	5 (4%)	2 (1%)	9	4
12	I	235/241 (98%)	229 (97%)	6 (3%)	0	100	100
13	J	231/263 (88%)	227 (98%)	3 (1%)	1 (0%)	30	27
14	K	188/191 (98%)	182 (97%)	6 (3%)	0	100	100
15	L	202/220 (92%)	201 (100%)	1 (0%)	0	100	100
16	M	168/172 (98%)	161 (96%)	7 (4%)	0	100	100
17	N	192/198 (97%)	184 (96%)	7 (4%)	1 (0%)	24	21
18	O	127/131 (97%)	126 (99%)	1 (1%)	0	100	100
19	P	201/204 (98%)	196 (98%)	5 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	Q	197/200 (98%)	195 (99%)	2 (1%)	0	100	100
21	R	168/185 (91%)	165 (98%)	3 (2%)	0	100	100
22	S	183/186 (98%)	178 (97%)	5 (3%)	0	100	100
23	T	180/208 (86%)	169 (94%)	11 (6%)	0	100	100
24	U	170/186 (91%)	165 (97%)	5 (3%)	0	100	100
25	V	157/160 (98%)	155 (99%)	2 (1%)	0	100	100
26	W	105/119 (88%)	94 (90%)	11 (10%)	0	100	100
27	X	134/137 (98%)	132 (98%)	2 (2%)	0	100	100
28	Y	60/156 (38%)	59 (98%)	1 (2%)	0	100	100
29	Z	115/140 (82%)	115 (100%)	0	0	100	100
30	ZA	192/204 (94%)	184 (96%)	8 (4%)	0	100	100
31	ZB	176/189 (93%)	172 (98%)	4 (2%)	0	100	100
32	ZC	91/123 (74%)	88 (97%)	3 (3%)	0	100	100
33	ZD	141/155 (91%)	139 (99%)	2 (1%)	0	100	100
34	ZE	148/151 (98%)	142 (96%)	5 (3%)	1 (1%)	18	14
35	ZF	125/132 (95%)	114 (91%)	10 (8%)	1 (1%)	16	11
36	ZG	114/141 (81%)	111 (97%)	3 (3%)	0	100	100
37	ZH	139/142 (98%)	131 (94%)	8 (6%)	0	100	100
38	ZI	126/137 (92%)	118 (94%)	7 (6%)	1 (1%)	16	11
39	ZJ	139/145 (96%)	135 (97%)	4 (3%)	0	100	100
40	ZK	140/145 (97%)	136 (97%)	4 (3%)	0	100	100
41	ZL	98/118 (83%)	89 (91%)	9 (9%)	0	100	100
42	ZM	85/87 (98%)	84 (99%)	1 (1%)	0	100	100
43	ZO	127/130 (98%)	124 (98%)	3 (2%)	0	100	100
44	ZP	141/145 (97%)	139 (99%)	2 (1%)	0	100	100
45	ZQ	128/135 (95%)	120 (94%)	6 (5%)	2 (2%)	7	3
46	ZR	64/130 (49%)	61 (95%)	3 (5%)	0	100	100
47	ZS	96/182 (53%)	94 (98%)	2 (2%)	0	100	100
48	ZT	79/82 (96%)	75 (95%)	4 (5%)	0	100	100
49	ZU	57/67 (85%)	53 (93%)	4 (7%)	0	100	100
50	ZV	52/56 (93%)	41 (79%)	10 (19%)	1 (2%)	6	3

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	ZW	52/63 (82%)	50 (96%)	2 (4%)	0	100	100
52	ZY	303/315 (96%)	278 (92%)	22 (7%)	3 (1%)	12	8
53	a	124/127 (98%)	122 (98%)	2 (2%)	0	100	100
54	b	133/136 (98%)	130 (98%)	3 (2%)	0	100	100
55	c	147/149 (99%)	139 (95%)	7 (5%)	1 (1%)	18	14
56	d	56/76 (74%)	56 (100%)	0	0	100	100
57	e	97/105 (92%)	97 (100%)	0	0	100	100
58	f	105/113 (93%)	104 (99%)	1 (1%)	0	100	100
59	g	121/149 (81%)	120 (99%)	1 (1%)	0	100	100
60	h	104/107 (97%)	102 (98%)	2 (2%)	0	100	100
61	i	107/115 (93%)	104 (97%)	3 (3%)	0	100	100
62	j	116/120 (97%)	115 (99%)	1 (1%)	0	100	100
63	k	96/99 (97%)	94 (98%)	2 (2%)	0	100	100
64	l	81/85 (95%)	79 (98%)	2 (2%)	0	100	100
65	m	75/78 (96%)	75 (100%)	0	0	100	100
66	n	48/51 (94%)	46 (96%)	2 (4%)	0	100	100
67	o	49/52 (94%)	49 (100%)	0	0	100	100
68	p	22/25 (88%)	22 (100%)	0	0	100	100
69	q	101/106 (95%)	100 (99%)	1 (1%)	0	100	100
70	r	88/99 (89%)	86 (98%)	2 (2%)	0	100	100
71	s	208/264 (79%)	200 (96%)	8 (4%)	0	100	100
72	t	208/256 (81%)	189 (91%)	19 (9%)	0	100	100
73	u	214/249 (86%)	211 (99%)	3 (1%)	0	100	100
74	v	207/250 (83%)	197 (95%)	9 (4%)	1 (0%)	24	21
75	w	258/264 (98%)	253 (98%)	5 (2%)	0	100	100
76	x	204/223 (92%)	198 (97%)	6 (3%)	0	100	100
77	y	224/236 (95%)	219 (98%)	5 (2%)	0	100	100
78	z	180/188 (96%)	172 (96%)	8 (4%)	0	100	100
All	All	10616/11662 (91%)	10271 (97%)	329 (3%)	16 (0%)	44	42

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
11	H	119	ILE
17	N	47	ALA
34	ZE	63	ALA
52	ZY	146	SER
52	ZY	199	THR
11	H	56	PRO
13	J	184	LYS
52	ZY	311	VAL
35	ZF	121	THR
50	ZV	14	PHE
74	v	40	VAL
7	D	196	TRP
45	ZQ	5	VAL
45	ZQ	33	PRO
38	ZI	69	ILE
55	c	15	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
7	D	186/193 (96%)	185 (100%)	1 (0%)	81	87
8	E	328/330 (99%)	325 (99%)	3 (1%)	70	78
9	F	298/300 (99%)	294 (99%)	4 (1%)	61	68
10	G	247/252 (98%)	243 (98%)	4 (2%)	55	62
11	H	124/145 (86%)	123 (99%)	1 (1%)	73	80
12	I	199/202 (98%)	196 (98%)	3 (2%)	57	64
13	J	196/216 (91%)	190 (97%)	6 (3%)	35	37
14	K	168/168 (100%)	163 (97%)	5 (3%)	36	38
15	L	178/189 (94%)	177 (99%)	1 (1%)	78	85
16	M	143/145 (99%)	138 (96%)	5 (4%)	32	32
17	N	156/160 (98%)	151 (97%)	5 (3%)	34	35
18	O	110/111 (99%)	110 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	P	175/176 (99%)	175 (100%)	0	100	100
20	Q	166/167 (99%)	166 (100%)	0	100	100
21	R	142/152 (93%)	140 (99%)	2 (1%)	59	66
22	S	153/154 (99%)	150 (98%)	3 (2%)	48	54
23	T	146/170 (86%)	128 (88%)	18 (12%)	4	3
24	U	154/168 (92%)	152 (99%)	2 (1%)	61	68
25	V	138/139 (99%)	134 (97%)	4 (3%)	37	40
26	W	96/106 (91%)	89 (93%)	7 (7%)	13	9
27	X	104/105 (99%)	102 (98%)	2 (2%)	50	56
28	Y	55/131 (42%)	53 (96%)	2 (4%)	31	31
29	Z	103/118 (87%)	102 (99%)	1 (1%)	68	75
30	ZA	157/167 (94%)	153 (98%)	4 (2%)	42	45
31	ZB	155/163 (95%)	148 (96%)	7 (4%)	24	23
32	ZC	87/108 (81%)	85 (98%)	2 (2%)	44	49
33	ZD	127/138 (92%)	126 (99%)	1 (1%)	73	80
34	ZE	130/131 (99%)	127 (98%)	3 (2%)	44	49
35	ZF	98/102 (96%)	89 (91%)	9 (9%)	8	5
36	ZG	97/118 (82%)	95 (98%)	2 (2%)	47	52
37	ZH	115/116 (99%)	112 (97%)	3 (3%)	40	44
38	ZI	113/121 (93%)	108 (96%)	5 (4%)	25	24
39	ZJ	125/129 (97%)	118 (94%)	7 (6%)	19	16
40	ZK	115/118 (98%)	112 (97%)	3 (3%)	40	44
41	ZL	90/104 (86%)	88 (98%)	2 (2%)	45	50
42	ZM	72/72 (100%)	72 (100%)	0	100	100
43	ZO	113/114 (99%)	110 (97%)	3 (3%)	39	42
44	ZP	117/119 (98%)	113 (97%)	4 (3%)	32	33
45	ZQ	114/118 (97%)	107 (94%)	7 (6%)	17	14
46	ZR	59/107 (55%)	57 (97%)	2 (3%)	32	33
47	ZS	85/158 (54%)	83 (98%)	2 (2%)	43	47
48	ZT	72/73 (99%)	68 (94%)	4 (6%)	19	16
49	ZU	52/60 (87%)	48 (92%)	4 (8%)	12	8

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	ZV	47/48 (98%)	44 (94%)	3 (6%)	16	12
51	ZW	47/54 (87%)	46 (98%)	1 (2%)	47	52
52	ZY	258/267 (97%)	250 (97%)	8 (3%)	35	37
53	a	111/112 (99%)	108 (97%)	3 (3%)	39	42
54	b	113/114 (99%)	108 (96%)	5 (4%)	25	24
55	c	120/120 (100%)	119 (99%)	1 (1%)	73	80
56	d	48/66 (73%)	46 (96%)	2 (4%)	26	25
57	e	79/84 (94%)	78 (99%)	1 (1%)	61	68
58	f	95/100 (95%)	94 (99%)	1 (1%)	65	73
59	g	109/130 (84%)	103 (94%)	6 (6%)	19	17
60	h	92/93 (99%)	92 (100%)	0	100	100
61	i	94/99 (95%)	94 (100%)	0	100	100
62	j	101/102 (99%)	100 (99%)	1 (1%)	68	75
63	k	80/81 (99%)	79 (99%)	1 (1%)	61	68
64	l	69/70 (99%)	68 (99%)	1 (1%)	59	66
65	m	69/70 (99%)	67 (97%)	2 (3%)	37	40
66	n	47/48 (98%)	42 (89%)	5 (11%)	6	4
67	o	46/47 (98%)	46 (100%)	0	100	100
68	p	23/24 (96%)	23 (100%)	0	100	100
69	q	87/90 (97%)	86 (99%)	1 (1%)	65	73
70	r	70/76 (92%)	69 (99%)	1 (1%)	59	66
71	s	182/218 (84%)	174 (96%)	8 (4%)	25	24
72	t	185/223 (83%)	176 (95%)	9 (5%)	22	20
73	u	178/203 (88%)	175 (98%)	3 (2%)	53	60
74	v	165/192 (86%)	163 (99%)	2 (1%)	63	70
75	w	219/222 (99%)	214 (98%)	5 (2%)	44	49
76	x	175/192 (91%)	171 (98%)	4 (2%)	44	49
77	y	194/202 (96%)	187 (96%)	7 (4%)	31	31
78	z	163/168 (97%)	157 (96%)	6 (4%)	30	30
All	All	9124/9848 (93%)	8884 (97%)	240 (3%)	41	44

All (240) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
7	D	188	LYS
8	E	17	LEU
8	E	34	LYS
8	E	377	ARG
9	F	15	GLU
9	F	61	THR
9	F	145	GLN
9	F	320	LYS
10	G	123	GLU
10	G	124	GLU
10	G	245	GLU
10	G	275	LYS
11	H	96	ARG
12	I	36	LYS
12	I	40	LYS
12	I	54	ARG
13	J	27	LEU
13	J	29	GLU
13	J	32	LYS
13	J	86	ASN
13	J	122	LYS
13	J	184	LYS
14	K	16	VAL
14	K	17	THR
14	K	82	VAL
14	K	118	LEU
14	K	157	ASN
15	L	193	ASP
16	M	21	VAL
16	M	29	THR
16	M	52	VAL
16	M	64	SER
16	M	109	ASP
17	N	3	ILE
17	N	86	THR
17	N	127	ASP
17	N	129	THR
17	N	195	LYS
21	R	54	HIS
21	R	100	SER
22	S	6	VAL
22	S	7	THR
22	S	186	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
23	T	89	SER
23	T	168	GLU
23	T	171	ARG
23	T	172	GLU
23	T	173	LYS
23	T	175	LEU
23	T	176	LYS
23	T	178	GLU
23	T	180	GLU
23	T	182	ARG
23	T	184	LEU
23	T	185	ARG
23	T	187	LYS
23	T	191	GLU
23	T	193	ARG
23	T	195	GLN
23	T	196	ARG
23	T	197	ILE
24	U	94	ARG
24	U	114	VAL
25	V	3	HIS
25	V	52	MET
25	V	101	CYS
25	V	110	LYS
26	W	4	ILE
26	W	9	THR
26	W	43	VAL
26	W	55	THR
26	W	68	THR
26	W	96	VAL
26	W	105	LEU
27	X	7	SER
27	X	68	GLU
28	Y	1	MET
28	Y	12	LYS
29	Z	24	VAL
30	ZA	27	GLN
30	ZA	79	VAL
30	ZA	104	THR
30	ZA	163	GLN
31	ZB	10	LYS
31	ZB	61	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
31	ZB	62	ARG
31	ZB	89	ASP
31	ZB	120	ARG
31	ZB	122	ILE
31	ZB	173	LYS
32	ZC	17	GLN
32	ZC	70	ASP
33	ZD	30	LYS
34	ZE	7	SER
34	ZE	16	ILE
34	ZE	62	GLN
35	ZF	9	PHE
35	ZF	31	ARG
35	ZF	32	GLU
35	ZF	36	ARG
35	ZF	72	THR
35	ZF	74	VAL
35	ZF	94	GLN
35	ZF	105	LEU
35	ZF	121	THR
36	ZG	41	VAL
36	ZG	110	GLU
37	ZH	16	THR
37	ZH	39	GLU
37	ZH	64	ILE
38	ZI	5	ARG
38	ZI	7	LYS
38	ZI	66	VAL
38	ZI	119	LEU
38	ZI	122	VAL
39	ZJ	8	ASP
39	ZJ	73	MET
39	ZJ	78	HIS
39	ZJ	92	GLN
39	ZJ	100	VAL
39	ZJ	105	MET
39	ZJ	133	VAL
40	ZK	79	LEU
40	ZK	83	SER
40	ZK	109	GLU
41	ZL	21	ILE
41	ZL	55	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
43	ZO	43	LYS
43	ZO	58	SER
43	ZO	65	LEU
44	ZP	16	ARG
44	ZP	101	GLU
44	ZP	107	PHE
44	ZP	121	ARG
45	ZQ	26	ASP
45	ZQ	28	LEU
45	ZQ	32	ARG
45	ZQ	34	ASN
45	ZQ	35	VAL
45	ZQ	47	LEU
45	ZQ	77	GLN
46	ZR	39	VAL
46	ZR	90	LYS
47	ZS	107	VAL
47	ZS	121	TYR
48	ZT	2	VAL
48	ZT	46	VAL
48	ZT	65	THR
48	ZT	75	GLU
49	ZU	7	VAL
49	ZU	36	SER
49	ZU	42	ARG
49	ZU	58	GLU
50	ZV	12	ARG
50	ZV	13	ASN
50	ZV	16	LYS
51	ZW	8	LEU
52	ZY	37	SER
52	ZY	137	ILE
52	ZY	187	ASP
52	ZY	192	THR
52	ZY	195	ILE
52	ZY	218	LEU
52	ZY	265	THR
52	ZY	274	PHE
53	a	72	THR
53	a	94	THR
53	a	118	LEU
54	b	52	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	b	67	ARG
54	b	101	LEU
54	b	120	GLU
54	b	133	LYS
55	c	85	GLU
56	d	20	LYS
56	d	37	LYS
57	e	101	ILE
58	f	45	THR
59	g	81	LYS
59	g	98	THR
59	g	99	GLN
59	g	122	LYS
59	g	132	LYS
59	g	147	LEU
62	j	6	VAL
63	k	96	SER
64	l	41	SER
65	m	6	LYS
65	m	64	LYS
66	n	3	SER
66	n	4	GLN
66	n	25	GLN
66	n	36	ARG
66	n	47	THR
69	q	76	VAL
70	r	89	THR
71	s	8	ASN
71	s	10	THR
71	s	80	THR
71	s	83	GLN
71	s	101	ARG
71	s	124	THR
71	s	156	VAL
71	s	205	ARG
72	t	43	VAL
72	t	50	LYS
72	t	68	VAL
72	t	89	ASP
72	t	121	VAL
72	t	152	LYS
72	t	154	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
72	t	170	GLU
72	t	229	LEU
73	u	36	LEU
73	u	118	SER
73	u	149	LEU
74	v	43	THR
74	v	56	THR
75	w	44	LEU
75	w	101	LEU
75	w	102	VAL
75	w	170	SER
75	w	260	GLN
76	x	59	VAL
76	x	64	ILE
76	x	161	ASP
76	x	225	ARG
77	y	40	SER
77	y	88	ARG
77	y	119	THR
77	y	132	ARG
77	y	153	VAL
77	y	169	TYR
77	y	225	GLU
78	z	17	VAL
78	z	28	THR
78	z	29	ASP
78	z	35	ARG
78	z	89	LEU
78	z	161	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
8	E	24	ASN
8	E	165	GLN
8	E	224	HIS
8	E	243	HIS
8	E	259	ASN
8	E	316	ASN
8	E	318	ASN
9	F	321	ASN
10	G	111	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	G	242	ASN
10	G	244	HIS
10	G	264	GLN
11	H	90	ASN
13	J	90	GLN
14	K	96	HIS
15	L	92	HIS
16	M	41	GLN
16	M	60	ASN
19	P	32	GLN
21	R	28	ASN
21	R	50	GLN
21	R	116	HIS
21	R	121	GLN
21	R	133	HIS
21	R	142	HIS
23	T	67	ASN
24	U	19	ASN
24	U	60	GLN
24	U	152	GLN
25	V	16	GLN
25	V	77	ASN
26	W	38	ASN
26	W	61	ASN
26	W	102	GLN
27	X	9	ASN
28	Y	42	GLN
29	Z	83	GLN
29	Z	135	ASN
30	ZA	110	GLN
30	ZA	123	HIS
31	ZB	74	ASN
31	ZB	110	GLN
31	ZB	112	GLN
32	ZC	62	GLN
34	ZE	5	HIS
34	ZE	69	ASN
34	ZE	78	ASN
34	ZE	105	ASN
36	ZG	103	ASN
37	ZH	138	GLN
39	ZJ	137	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
41	ZL	43	ASN
43	ZO	12	ASN
43	ZO	64	GLN
44	ZP	75	GLN
46	ZR	44	GLN
47	ZS	87	ASN
48	ZT	17	GLN
49	ZU	27	GLN
51	ZW	51	ASN
52	ZY	237	HIS
53	a	6	GLN
53	a	15	ASN
54	b	51	GLN
54	b	122	HIS
55	c	38	GLN
58	f	20	HIS
61	i	61	GLN
62	j	62	GLN
63	k	62	ASN
65	m	51	GLN
66	n	11	GLN
69	q	22	GLN
71	s	30	GLN
71	s	83	GLN
71	s	168	HIS
72	t	74	GLN
72	t	99	ASN
72	t	146	GLN
73	u	184	GLN
78	z	3	ASN
78	z	9	ASN
78	z	167	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	33/76 (43%)	3 (9%)	0
2	2	2/3 (66%)	0	0
3	A	2980/3283 (90%)	369 (12%)	30 (1%)
4	B	121/122 (99%)	13 (10%)	1 (0%)
5	C	153/158 (96%)	21 (13%)	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
6	CA	1611/1775 (90%)	356 (22%)	20 (1%)
All	All	4900/5417 (90%)	762 (15%)	51 (1%)

All (762) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	22	C
1	1	24	G
1	1	42	G
3	A	14	A
3	A	15	G
3	A	24	A
3	A	38	A
3	A	47	A
3	A	57	G
3	A	58	A
3	A	63	A
3	A	64	A
3	A	84	G
3	A	90	G
3	A	97	A
3	A	107	A
3	A	108	G
3	A	109	C
3	A	116	U
3	A	120	A
3	A	127	C
3	A	129	G
3	A	143	U
3	A	145	G
3	A	146	A
3	A	163	U
3	A	165	U
3	A	166	U
3	A	167	C
3	A	168	U
3	A	170	G
3	A	179	A
3	A	182	U
3	A	192	C
3	A	211	A
3	A	212	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	237	G
3	A	244	G
3	A	259	G
3	A	276	U
3	A	285	A
3	A	288	U
3	A	295	U
3	A	313	A
3	A	319	U
3	A	339	A
3	A	340	C
3	A	366	G
3	A	389	A
3	A	391	U
3	A	392	A
3	A	393	C
3	A	411	G
3	A	412	A
3	A	426	A
3	A	430	A
3	A	431	C
3	A	432	G
3	A	436	U
3	A	437	C
3	A	438	G
3	A	461	C
3	A	469	A
3	A	470	A
3	A	498	G
3	A	499	U
3	A	501	G
3	A	504	U
3	A	506	A
3	A	508	A
3	A	514	U
3	A	528	U
3	A	529	G
3	A	551	U
3	A	552	C
3	A	553	U
3	A	555	G
3	A	557	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	566	C
3	A	567	A
3	A	595	A
3	A	606	A
3	A	623	A
3	A	627	U
3	A	635	A
3	A	636	A
3	A	651	A
3	A	658	G
3	A	661	A
3	A	663	A
3	A	668	G
3	A	677	U
3	A	678	C
3	A	679	G
3	A	680	G
3	A	710	U
3	A	716	G
3	A	719	U
3	A	724	G
3	A	728	G
3	A	729	A
3	A	743	G
3	A	749	A
3	A	760	A
3	A	773	A
3	A	792	C
3	A	804	C
3	A	808	U
3	A	817	U
3	A	822	U
3	A	839	A
3	A	840	U
3	A	850	G
3	A	851	G
3	A	857	A
3	A	859	G
3	A	860	A
3	A	866	C
3	A	867	G
3	A	868	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	880	G
3	A	887	C
3	A	902	C
3	A	903	U
3	A	923	U
3	A	925	C
3	A	927	A
3	A	928	A
3	A	941	G
3	A	948	G
3	A	949	A
3	A	957	G
3	A	994	A
3	A	996	C
3	A	1010	G
3	A	1011	A
3	A	1028	U
3	A	1029	U
3	A	1042	A
3	A	1044	G
3	A	1045	A
3	A	1051	G
3	A	1064	G
3	A	1078	G
3	A	1106	A
3	A	1127	A
3	A	1128	U
3	A	1129	G
3	A	1139	C
3	A	1148	C
3	A	1159	A
3	A	1165	U
3	A	1168	A
3	A	1169	G
3	A	1170	A
3	A	1233	A
3	A	1234	A
3	A	1254	G
3	A	1255	A
3	A	1256	U
3	A	1277	A
3	A	1296	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	1299	G
3	A	1342	U
3	A	1343	G
3	A	1362	A
3	A	1368	C
3	A	1377	G
3	A	1380	C
3	A	1389	A
3	A	1410	A
3	A	1418	A
3	A	1424	A
3	A	1450	G
3	A	1451	C
3	A	1454	A
3	A	1476	U
3	A	1492	C
3	A	1498	G
3	A	1503	U
3	A	1504	C
3	A	1506	C
3	A	1507	C
3	A	1525	G
3	A	1529	A
3	A	1531	A
3	A	1535	A
3	A	1571	C
3	A	1582	A
3	A	1583	A
3	A	1664	U
3	A	1690	A
3	A	1691	G
3	A	1710	C
3	A	1723	G
3	A	1740	A
3	A	1756	A
3	A	1757	A
3	A	1758	U
3	A	1759	G
3	A	1760	U
3	A	1763	U
3	A	1781	A
3	A	1784	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	1791	C
3	A	1792	A
3	A	1820	G
3	A	1822	U
3	A	1828	A
3	A	1835	A
3	A	1848	G
3	A	1876	G
3	A	2007	U
3	A	2008	G
3	A	2015	A
3	A	2026	G
3	A	2027	U
3	A	2028	A
3	A	2036	G
3	A	2037	G
3	A	2046	A
3	A	2055	U
3	A	2073	A
3	A	2084	G
3	A	2120	U
3	A	2121	G
3	A	2123	A
3	A	2124	U
3	A	2125	G
3	A	2159	A
3	A	2164	G
3	A	2171	A
3	A	2187	G
3	A	2188	G
3	A	2196	A
3	A	2222	G
3	A	2225	U
3	A	2228	A
3	A	2229	U
3	A	2230	G
3	A	2249	U
3	A	2250	G
3	A	2251	U
3	A	2288	A
3	A	2289	C
3	A	2290	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	2300	G
3	A	2303	U
3	A	2308	G
3	A	2309	G
3	A	2312	A
3	A	2317	A
3	A	2318	G
3	A	2319	A
3	A	2326	U
3	A	2350	G
3	A	2426	A
3	A	2429	U
3	A	2450	U
3	A	2462	U
3	A	2463	U
3	A	2465	C
3	A	2467	U
3	A	2468	G
3	A	2485	C
3	A	2493	A
3	A	2506	G
3	A	2507	G
3	A	2514	G
3	A	2526	A
3	A	2552	U
3	A	2556	A
3	A	2574	A
3	A	2577	G
3	A	2589	G
3	A	2590	G
3	A	2591	A
3	A	2594	A
3	A	2604	A
3	A	2619	U
3	A	2628	G
3	A	2629	U
3	A	2652	U
3	A	2653	G
3	A	2655	C
3	A	2662	A
3	A	2677	G
3	A	2678	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	2696	G
3	A	2699	A
3	A	2700	G
3	A	2701	A
3	A	2702	A
3	A	2703	A
3	A	2705	G
3	A	2710	C
3	A	2714	G
3	A	2717	A
3	A	2742	U
3	A	2743	A
3	A	2744	C
3	A	2745	A
3	A	2747	A
3	A	2760	U
3	A	2767	C
3	A	2771	G
3	A	2772	A
3	A	2787	A
3	A	2799	C
3	A	2810	A
3	A	2814	G
3	A	2823	U
3	A	2835	U
3	A	2836	A
3	A	2842	C
3	A	2847	G
3	A	2883	C
3	A	2890	G
3	A	2897	C
3	A	2898	G
3	A	2913	A
3	A	2960	G
3	A	2979	C
3	A	2993	C
3	A	3023	A
3	A	3031	A
3	A	3032	U
3	A	3043	C
3	A	3052	A
3	A	3053	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	3070	C
3	A	3072	G
3	A	3074	U
3	A	3076	G
3	A	3079	G
3	A	3082	U
3	A	3084	C
3	A	3090	A
3	A	3094	A
3	A	3096	G
3	A	3097	G
3	A	3109	A
3	A	3111	A
3	A	3112	A
3	A	3113	G
3	A	3121	U
3	A	3135	A
3	A	3137	A
3	A	3139	G
3	A	3142	G
3	A	3149	G
3	A	3158	U
3	A	3159	U
3	A	3165	G
3	A	3175	C
3	A	3182	G
3	A	3192	C
3	A	3204	A
3	A	3207	U
3	A	3229	U
3	A	3230	A
3	A	3233	G
3	A	3239	U
3	A	3240	U
3	A	3241	G
3	A	3242	U
3	A	3243	U
3	A	3244	G
3	A	3257	G
3	A	3266	C
3	A	3271	G
3	A	3277	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	B	7	G
4	B	11	A
4	B	23	A
4	B	43	A
4	B	55	U
4	B	56	A
4	B	66	G
4	B	74	G
4	B	77	A
4	B	79	U
4	B	100	G
4	B	113	G
4	B	122	U
5	C	22	U
5	C	34	U
5	C	35	C
5	C	52	A
5	C	59	A
5	C	62	C
5	C	63	G
5	C	83	G
5	C	88	A
5	C	91	G
5	C	100	A
5	C	101	A
5	C	102	C
5	C	107	A
5	C	109	U
5	C	112	G
5	C	121	U
5	C	122	A
5	C	123	U
5	C	148	G
5	C	153	G
6	CA	4	C
6	CA	25	C
6	CA	26	A
6	CA	27	U
6	CA	34	G
6	CA	35	U
6	CA	47	A
6	CA	57	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	60	U
6	CA	62	A
6	CA	72	A
6	CA	73	U
6	CA	74	U
6	CA	75	A
6	CA	76	U
6	CA	77	A
6	CA	103	A
6	CA	113	C
6	CA	115	U
6	CA	126	G
6	CA	127	U
6	CA	137	A
6	CA	138	U
6	CA	142	C
6	CA	143	A
6	CA	151	G
6	CA	156	U
6	CA	157	U
6	CA	162	A
6	CA	163	G
6	CA	166	A
6	CA	173	G
6	CA	176	C
6	CA	177	A
6	CA	179	A
6	CA	182	C
6	CA	183	C
6	CA	188	U
6	CA	189	U
6	CA	190	C
6	CA	191	U
6	CA	192	G
6	CA	193	G
6	CA	197	G
6	CA	238	U
6	CA	246	A
6	CA	254	A
6	CA	261	U
6	CA	267	C
6	CA	269	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	270	G
6	CA	282	U
6	CA	288	A
6	CA	298	C
6	CA	303	C
6	CA	305	A
6	CA	309	U
6	CA	310	C
6	CA	311	G
6	CA	318	G
6	CA	326	G
6	CA	327	C
6	CA	341	A
6	CA	348	A
6	CA	349	A
6	CA	350	C
6	CA	359	A
6	CA	379	G
6	CA	383	C
6	CA	389	A
6	CA	390	A
6	CA	391	C
6	CA	392	G
6	CA	393	G
6	CA	404	C
6	CA	405	A
6	CA	407	G
6	CA	412	G
6	CA	413	C
6	CA	414	A
6	CA	415	G
6	CA	423	G
6	CA	428	U
6	CA	429	U
6	CA	433	C
6	CA	437	C
6	CA	448	G
6	CA	449	A
6	CA	450	G
6	CA	457	A
6	CA	466	A
6	CA	469	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	496	U
6	CA	499	G
6	CA	500	A
6	CA	503	G
6	CA	516	A
6	CA	523	A
6	CA	527	A
6	CA	529	G
6	CA	530	A
6	CA	531	A
6	CA	546	G
6	CA	547	U
6	CA	548	C
6	CA	554	C
6	CA	557	G
6	CA	567	U
6	CA	568	A
6	CA	571	U
6	CA	572	C
6	CA	583	A
6	CA	584	G
6	CA	595	A
6	CA	608	A
6	CA	609	A
6	CA	612	A
6	CA	628	U
6	CA	633	U
6	CA	639	A
6	CA	674	C
6	CA	675	A
6	CA	676	A
6	CA	678	A
6	CA	679	C
6	CA	683	U
6	CA	714	A
6	CA	726	A
6	CA	727	A
6	CA	736	G
6	CA	737	U
6	CA	745	A
6	CA	746	G
6	CA	749	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	750	C
6	CA	751	A
6	CA	752	C
6	CA	753	G
6	CA	754	C
6	CA	755	U
6	CA	764	U
6	CA	765	U
6	CA	782	A
6	CA	784	A
6	CA	787	A
6	CA	788	C
6	CA	790	C
6	CA	791	A
6	CA	796	U
6	CA	797	C
6	CA	800	U
6	CA	801	U
6	CA	814	A
6	CA	815	G
6	CA	826	A
6	CA	827	U
6	CA	833	A
6	CA	854	A
6	CA	862	G
6	CA	864	U
6	CA	866	U
6	CA	877	A
6	CA	880	C
6	CA	881	U
6	CA	882	U
6	CA	883	G
6	CA	884	G
6	CA	895	G
6	CA	896	A
6	CA	903	A
6	CA	905	U
6	CA	915	U
6	CA	918	G
6	CA	922	A
6	CA	930	U
6	CA	936	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	960	C
6	CA	962	A
6	CA	966	U
6	CA	967	G
6	CA	968	A
6	CA	973	A
6	CA	975	A
6	CA	977	C
6	CA	991	C
6	CA	996	A
6	CA	998	C
6	CA	1010	G
6	CA	1021	G
6	CA	1023	G
6	CA	1025	U
6	CA	1044	G
6	CA	1046	A
6	CA	1051	A
6	CA	1052	C
6	CA	1062	A
6	CA	1066	U
6	CA	1067	U
6	CA	1070	G
6	CA	1108	A
6	CA	1120	G
6	CA	1121	A
6	CA	1128	C
6	CA	1129	C
6	CA	1134	G
6	CA	1151	U
6	CA	1153	A
6	CA	1154	A
6	CA	1155	U
6	CA	1164	A
6	CA	1166	A
6	CA	1169	G
6	CA	1170	G
6	CA	1172	A
6	CA	1184	U
6	CA	1187	A
6	CA	1188	G
6	CA	1189	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	1198	G
6	CA	1199	G
6	CA	1204	A
6	CA	1209	U
6	CA	1210	U
6	CA	1212	A
6	CA	1213	G
6	CA	1214	A
6	CA	1215	G
6	CA	1216	C
6	CA	1218	C
6	CA	1219	U
6	CA	1221	U
6	CA	1222	C
6	CA	1224	U
6	CA	1227	U
6	CA	1228	U
6	CA	1232	U
6	CA	1235	G
6	CA	1237	G
6	CA	1240	G
6	CA	1248	G
6	CA	1256	U
6	CA	1257	A
6	CA	1258	G
6	CA	1277	U
6	CA	1284	U
6	CA	1285	U
6	CA	1288	G
6	CA	1291	A
6	CA	1306	A
6	CA	1308	C
6	CA	1311	C
6	CA	1316	U
6	CA	1322	U
6	CA	1323	G
6	CA	1324	C
6	CA	1329	G
6	CA	1331	G
6	CA	1343	G
6	CA	1346	G
6	CA	1347	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	1348	U
6	CA	1349	G
6	CA	1354	U
6	CA	1359	G
6	CA	1360	G
6	CA	1365	C
6	CA	1366	U
6	CA	1367	A
6	CA	1368	U
6	CA	1371	A
6	CA	1373	U
6	CA	1374	U
6	CA	1375	G
6	CA	1380	C
6	CA	1381	G
6	CA	1384	G
6	CA	1385	G
6	CA	1389	U
6	CA	1390	U
6	CA	1401	A
6	CA	1402	C
6	CA	1403	A
6	CA	1404	G
6	CA	1408	U
6	CA	1411	G
6	CA	1412	A
6	CA	1421	G
6	CA	1422	A
6	CA	1425	U
6	CA	1435	C
6	CA	1436	A
6	CA	1445	A
6	CA	1447	A
6	CA	1459	A
6	CA	1460	G
6	CA	1466	U
6	CA	1468	A
6	CA	1471	U
6	CA	1479	G
6	CA	1482	G
6	CA	1483	C
6	CA	1486	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	1490	A
6	CA	1491	A
6	CA	1492	U
6	CA	1493	C
6	CA	1496	G
6	CA	1497	G
6	CA	1498	G
6	CA	1499	A
6	CA	1510	U
6	CA	1511	G
6	CA	1512	C
6	CA	1513	U
6	CA	1517	G
6	CA	1518	A
6	CA	1531	A
6	CA	1532	U
6	CA	1534	G
6	CA	1535	U
6	CA	1550	G
6	CA	1553	U
6	CA	1554	U
6	CA	1558	A
6	CA	1559	G
6	CA	1560	U
6	CA	1565	G
6	CA	1568	A
6	CA	1576	A
6	CA	1579	U
6	CA	1580	G
6	CA	1582	G
6	CA	1586	A
6	CA	1591	G
6	CA	1592	U
6	CA	1594	C
6	CA	1609	C
6	CA	1632	U
6	CA	1633	G
6	CA	1653	C
6	CA	1655	G
6	CA	1725	A
6	CA	1730	A
6	CA	1731	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	CA	1732	G
6	CA	1737	A
6	CA	1741	A
6	CA	1744	U
6	CA	1752	G
6	CA	1755	G
6	CA	1767	G
6	CA	1768	G
6	CA	1769	A
6	CA	1770	U
6	CA	1771	C
6	CA	1773	U

All (51) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	A	41	A
3	A	431	C
3	A	437	C
3	A	497	U
3	A	538	G
3	A	566	C
3	A	678	C
3	A	816	C
3	A	839	A
3	A	859	G
3	A	1333	A
3	A	1491	A
3	A	1506	C
3	A	1759	G
3	A	2027	U
3	A	2123	A
3	A	2124	U
3	A	2196	A
3	A	2462	U
3	A	2628	G
3	A	2652	U
3	A	2701	A
3	A	2742	U
3	A	2897	C
3	A	2958	U
3	A	3022	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	3158	U
3	A	3238	C
3	A	3240	U
3	A	3270	U
4	B	121	C
6	CA	61	A
6	CA	72	A
6	CA	73	U
6	CA	136	A
6	CA	176	C
6	CA	389	A
6	CA	406	A
6	CA	546	G
6	CA	674	C
6	CA	1107	A
6	CA	1204	A
6	CA	1221	U
6	CA	1239	U
6	CA	1310	U
6	CA	1346	G
6	CA	1364	A
6	CA	1424	G
6	CA	1434	G
6	CA	1467	G
6	CA	1530	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 322 ligands modelled in this entry, 261 are monoatomic - leaving 61 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
79	GET	CA	1889	-	33,36,36	0.72	0	43,55,55	0.88	1 (2%)
79	GET	CA	1890	-	33,36,36	0.52	0	43,55,55	0.91	2 (4%)
79	GET	A	3476	-	33,36,36	0.84	0	43,55,55	1.11	3 (6%)
79	GET	CA	1891	-	33,36,36	0.71	0	43,55,55	1.18	4 (9%)
79	GET	A	3486	-	33,36,36	0.75	0	43,55,55	1.02	3 (6%)
79	GET	A	3498	-	33,36,36	0.78	0	43,55,55	1.15	5 (11%)
79	GET	B	203	-	33,36,36	0.76	0	43,55,55	0.91	2 (4%)
79	GET	A	3478	-	33,36,36	0.69	0	43,55,55	1.35	6 (13%)
79	GET	A	3482	-	33,36,36	0.77	0	43,55,55	0.91	1 (2%)
79	GET	A	3488	-	33,36,36	0.79	0	43,55,55	1.08	2 (4%)
79	GET	C	203	-	33,36,36	0.75	0	43,55,55	1.03	3 (6%)
79	GET	CA	1877	-	33,36,36	0.82	0	43,55,55	1.12	6 (13%)
79	GET	CA	1880	-	33,36,36	0.72	0	43,55,55	1.32	5 (11%)
79	GET	A	3477	-	33,36,36	0.46	0	43,55,55	0.81	1 (2%)
79	GET	A	3496	-	33,36,36	0.74	0	43,55,55	1.24	4 (9%)
79	GET	CA	1886	-	33,36,36	0.72	0	43,55,55	1.63	11 (25%)
79	GET	A	3473	-	33,36,36	0.76	0	43,55,55	1.11	4 (9%)
79	GET	A	3499	-	33,36,36	0.74	0	43,55,55	1.13	5 (11%)
79	GET	A	3497	-	33,36,36	0.79	0	43,55,55	0.99	2 (4%)
79	GET	CA	1882	-	33,36,36	0.72	0	43,55,55	1.54	11 (25%)
79	GET	A	3301	-	33,36,36	0.77	0	43,55,55	1.01	3 (6%)
79	GET	A	3479	-	33,36,36	0.78	0	43,55,55	0.94	2 (4%)
79	GET	C	204	-	33,36,36	0.76	0	43,55,55	0.88	2 (4%)
79	GET	A	3492	-	33,36,36	0.77	0	43,55,55	0.95	2 (4%)
79	GET	A	3483	-	33,36,36	0.75	0	43,55,55	0.99	3 (6%)
79	GET	A	3490	-	33,36,36	0.83	0	43,55,55	1.42	7 (16%)
79	GET	A	3491	-	33,36,36	0.75	0	43,55,55	1.47	9 (20%)
81	SPD	CA	1881	-	9,9,9	0.27	0	8,8,8	0.27	0
79	GET	CA	1878	-	33,36,36	0.80	0	43,55,55	1.00	3 (6%)
79	GET	CA	1879	-	33,36,36	0.75	0	43,55,55	1.14	4 (9%)
79	GET	C	205	-	33,36,36	0.77	0	43,55,55	1.11	3 (6%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
79	GET	CA	1883	-	33,36,36	0.54	0	43,55,55	1.20	7 (16%)
79	GET	CA	1885	-	33,36,36	0.74	0	43,55,55	1.06	3 (6%)
79	GET	A	3480	-	33,36,36	0.84	1 (3%)	43,55,55	1.04	4 (9%)
79	GET	E	402	-	33,36,36	0.73	0	43,55,55	1.18	3 (6%)
79	GET	A	3494	-	33,36,36	0.75	0	43,55,55	1.29	5 (11%)
79	GET	A	3484	-	33,36,36	0.82	0	43,55,55	1.11	5 (11%)
79	GET	A	3472	-	33,36,36	0.79	0	43,55,55	0.88	0
79	GET	A	3489	-	33,36,36	0.76	0	43,55,55	1.01	3 (6%)
79	GET	CA	1893	-	33,36,36	0.49	0	43,55,55	1.00	4 (9%)
79	GET	A	3487	-	33,36,36	0.76	0	43,55,55	1.04	3 (6%)
79	GET	CA	1875	-	33,36,36	0.77	0	43,55,55	1.17	4 (9%)
79	GET	CA	1876	-	33,36,36	0.74	0	43,55,55	1.19	4 (9%)
79	GET	A	3475	-	33,36,36	0.73	0	43,55,55	0.99	1 (2%)
81	SPD	A	3470	-	9,9,9	0.29	0	8,8,8	0.32	0
79	GET	A	3493	-	33,36,36	0.68	0	43,55,55	1.15	3 (6%)
81	SPD	A	3468	-	9,9,9	0.30	0	8,8,8	0.25	0
82	3HE	A	3469	-	21,21,21	0.57	0	19,30,30	0.95	0
79	GET	C	206	-	33,36,36	0.77	0	43,55,55	0.83	1 (2%)
79	GET	T	301	-	33,36,36	0.79	0	43,55,55	1.22	4 (9%)
79	GET	A	3471	-	33,36,36	0.80	0	43,55,55	1.16	5 (11%)
79	GET	CA	1884	-	33,36,36	0.75	0	43,55,55	1.09	4 (9%)
79	GET	A	3495	-	33,36,36	0.73	0	43,55,55	0.95	3 (6%)
79	GET	CA	1888	-	33,36,36	0.72	0	43,55,55	0.94	2 (4%)
79	GET	A	3485	-	33,36,36	0.79	0	43,55,55	1.20	6 (13%)
79	GET	A	3474	-	33,36,36	0.79	0	43,55,55	1.04	1 (2%)
79	GET	CA	1874	-	33,36,36	0.76	0	43,55,55	0.96	3 (6%)
79	GET	A	3500	-	33,36,36	0.75	0	43,55,55	1.03	3 (6%)
79	GET	A	3481	-	33,36,36	0.82	0	43,55,55	1.04	2 (4%)
79	GET	CA	1892	-	33,36,36	0.71	0	43,55,55	0.88	1 (2%)
79	GET	CA	1887	-	33,36,36	0.77	0	43,55,55	1.45	8 (18%)

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
79	GET	CA	1889	-	-	5/13/74/74	0/3/3/3
79	GET	CA	1890	-	-	0/13/74/74	0/3/3/3
79	GET	A	3476	-	-	1/13/74/74	0/3/3/3
79	GET	CA	1891	-	-	2/13/74/74	0/3/3/3
79	GET	A	3486	-	-	1/13/74/74	0/3/3/3
79	GET	A	3498	-	-	5/13/74/74	0/3/3/3
79	GET	B	203	-	-	3/13/74/74	0/3/3/3
79	GET	A	3478	-	-	3/13/74/74	0/3/3/3
79	GET	A	3482	-	-	3/13/74/74	0/3/3/3
79	GET	A	3488	-	-	3/13/74/74	0/3/3/3
79	GET	C	203	-	-	4/13/74/74	0/3/3/3
79	GET	CA	1877	-	-	2/13/74/74	0/3/3/3
79	GET	CA	1880	-	-	2/13/74/74	0/3/3/3
79	GET	A	3477	-	-	4/13/74/74	0/3/3/3
79	GET	A	3496	-	-	1/13/74/74	0/3/3/3
79	GET	CA	1886	-	-	4/13/74/74	0/3/3/3
79	GET	A	3473	-	-	1/13/74/74	0/3/3/3
79	GET	A	3499	-	-	1/13/74/74	0/3/3/3
79	GET	A	3497	-	-	4/13/74/74	0/3/3/3
79	GET	CA	1882	-	-	9/13/74/74	0/3/3/3
79	GET	A	3301	-	-	1/13/74/74	0/3/3/3
79	GET	A	3479	-	-	1/13/74/74	0/3/3/3
79	GET	C	204	-	-	1/13/74/74	0/3/3/3
79	GET	A	3492	-	-	2/13/74/74	0/3/3/3
79	GET	A	3483	-	-	1/13/74/74	0/3/3/3
79	GET	A	3490	-	-	3/13/74/74	1/3/3/3
79	GET	A	3491	-	-	5/13/74/74	0/3/3/3
81	SPD	CA	1881	-	-	0/7/7/7	-
79	GET	CA	1878	-	-	1/13/74/74	0/3/3/3
79	GET	CA	1879	-	-	3/13/74/74	0/3/3/3
79	GET	C	205	-	-	3/13/74/74	0/3/3/3
79	GET	CA	1883	-	-	7/13/74/74	0/3/3/3
79	GET	CA	1885	-	-	1/13/74/74	0/3/3/3
79	GET	A	3480	-	-	5/13/74/74	0/3/3/3
79	GET	E	402	-	-	1/13/74/74	0/3/3/3
79	GET	A	3494	-	-	3/13/74/74	0/3/3/3
79	GET	A	3484	-	-	4/13/74/74	0/3/3/3
79	GET	A	3472	-	-	2/13/74/74	0/3/3/3

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
79	GET	A	3489	-	-	1/13/74/74	0/3/3/3
79	GET	CA	1893	-	-	9/13/74/74	1/3/3/3
79	GET	A	3487	-	-	5/13/74/74	0/3/3/3
79	GET	CA	1875	-	-	4/13/74/74	0/3/3/3
79	GET	CA	1876	-	-	2/13/74/74	0/3/3/3
79	GET	A	3475	-	-	5/13/74/74	0/3/3/3
81	SPD	A	3470	-	-	0/7/7/7	-
79	GET	A	3493	-	-	1/13/74/74	0/3/3/3
81	SPD	A	3468	-	-	0/7/7/7	-
82	3HE	A	3469	-	-	0/8/36/36	0/2/2/2
79	GET	C	206	-	-	1/13/74/74	0/3/3/3
79	GET	T	301	-	-	5/13/74/74	0/3/3/3
79	GET	A	3471	-	-	5/13/74/74	0/3/3/3
79	GET	CA	1884	-	-	1/13/74/74	0/3/3/3
79	GET	A	3495	-	-	1/13/74/74	0/3/3/3
79	GET	CA	1888	-	-	4/13/74/74	0/3/3/3
79	GET	A	3485	-	-	1/13/74/74	0/3/3/3
79	GET	A	3474	-	-	2/13/74/74	0/3/3/3
79	GET	CA	1874	-	-	1/13/74/74	0/3/3/3
79	GET	A	3500	-	-	1/13/74/74	0/3/3/3
79	GET	A	3481	-	-	1/13/74/74	0/3/3/3
79	GET	CA	1892	-	-	4/13/74/74	0/3/3/3
79	GET	CA	1887	-	-	7/13/74/74	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	A	3480	GET	O53-C53	-2.34	1.40	1.43

All (211) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	CA	1886	GET	C11-O51-C51	5.99	122.71	113.06
79	CA	1887	GET	C11-O51-C51	4.84	120.86	113.06
79	A	3490	GET	O11-C42-C32	-4.81	97.71	109.18
79	CA	1882	GET	C11-O51-C51	4.62	120.50	113.06
79	A	3491	GET	C11-O51-C51	4.57	120.42	113.06
79	CA	1880	GET	C11-O51-C51	4.21	119.84	113.06
79	A	3496	GET	C11-O51-C51	4.06	119.60	113.06

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	A	3478	GET	C11-O51-C51	3.94	119.41	113.06
79	A	3485	GET	C11-O51-C51	3.86	119.28	113.06
79	A	3499	GET	C11-O51-C51	3.83	119.23	113.06
79	A	3487	GET	C11-O51-C51	3.80	119.19	113.06
79	CA	1879	GET	C11-O51-C51	3.78	119.15	113.06
79	A	3473	GET	C11-O51-C51	3.73	119.07	113.06
79	A	3496	GET	O51-C51-C41	3.68	113.04	107.87
79	A	3476	GET	C11-O51-C51	3.65	118.94	113.06
79	A	3488	GET	C11-O51-C51	3.64	118.92	113.06
79	CA	1886	GET	O51-C51-C41	3.63	112.97	107.87
79	CA	1884	GET	C11-O51-C51	3.62	118.89	113.06
79	CA	1880	GET	O51-C51-C41	3.62	112.95	107.87
79	CA	1876	GET	C11-O51-C51	3.57	118.81	113.06
79	CA	1875	GET	C11-O51-C51	3.51	118.72	113.06
79	A	3474	GET	C11-O51-C51	3.49	118.69	113.06
79	A	3498	GET	C11-O51-C51	3.44	118.61	113.06
79	T	301	GET	C93-N33-C33	3.41	119.35	114.38
79	A	3494	GET	O11-C42-C52	3.39	116.30	107.28
79	T	301	GET	C41-C51-C61	3.36	119.71	113.15
79	CA	1893	GET	C71-C61-C51	3.35	115.95	112.02
79	E	402	GET	C11-O51-C51	3.29	118.37	113.06
79	A	3493	GET	C93-N33-C33	3.23	119.08	114.38
79	A	3493	GET	C11-O51-C51	3.18	118.18	113.06
79	CA	1891	GET	C11-O51-C51	3.18	118.18	113.06
79	E	402	GET	C93-N33-C33	3.17	119.00	114.38
79	A	3497	GET	C11-O51-C51	3.16	118.15	113.06
79	A	3471	GET	C53-O53-C13	3.14	116.59	111.53
79	A	3494	GET	C93-N33-C33	3.14	118.95	114.38
79	A	3490	GET	C11-O51-C51	3.07	118.01	113.06
79	C	205	GET	C13-C23-C33	3.05	114.39	109.34
79	CA	1878	GET	C11-O51-C51	3.05	117.98	113.06
79	A	3471	GET	C11-O51-C51	2.91	117.75	113.06
79	CA	1891	GET	O11-C42-C52	2.91	115.01	107.28
79	C	203	GET	C11-O51-C51	2.91	117.74	113.06
79	A	3492	GET	O61-C61-C51	2.89	114.38	108.72
79	A	3480	GET	C71-C61-C51	-2.89	108.63	112.02
79	CA	1883	GET	C11-O51-C51	2.88	117.69	113.06
79	CA	1877	GET	C71-C61-C51	-2.85	108.68	112.02
79	A	3480	GET	O61-C61-C51	2.83	114.26	108.72
79	CA	1883	GET	C22-C32-C42	2.83	116.68	109.53
79	A	3500	GET	C53-O53-C13	2.82	116.08	111.53
79	A	3486	GET	C11-O51-C51	2.81	117.59	113.06

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	A	3490	GET	O11-C42-C52	2.80	114.74	107.28
79	CA	1882	GET	O51-C11-C21	2.80	116.36	110.06
79	A	3485	GET	O61-C61-C51	2.79	114.18	108.72
79	CA	1886	GET	O11-C42-C52	2.79	114.70	107.28
79	C	205	GET	C11-O51-C51	2.78	117.54	113.06
79	T	301	GET	C31-C41-C51	-2.75	103.39	109.68
79	A	3491	GET	O61-C61-C51	2.75	114.11	108.72
79	CA	1887	GET	O51-C51-C41	2.75	111.72	107.87
79	CA	1887	GET	C53-O53-C13	2.74	115.95	111.53
79	A	3488	GET	O61-C61-C51	2.74	114.08	108.72
79	A	3498	GET	O61-C61-C51	2.74	114.07	108.72
79	A	3471	GET	O61-C61-C51	2.72	114.05	108.72
79	CA	1885	GET	O51-C51-C41	2.71	111.68	107.87
79	CA	1875	GET	O61-C61-C51	2.71	114.01	108.72
79	A	3478	GET	C53-O53-C13	2.69	115.87	111.53
79	A	3489	GET	C11-O51-C51	2.68	117.38	113.06
79	B	203	GET	C11-O51-C51	2.68	117.37	113.06
79	A	3478	GET	O11-C42-C52	2.66	114.35	107.28
79	A	3481	GET	C93-N33-C33	2.65	118.25	114.38
79	A	3491	GET	O11-C42-C32	-2.65	102.85	109.18
79	A	3475	GET	C11-O51-C51	2.63	117.30	113.06
79	A	3483	GET	C11-O51-C51	2.62	117.28	113.06
79	A	3491	GET	C71-C61-C51	-2.61	108.97	112.02
79	CA	1877	GET	C41-C51-C61	2.60	118.22	113.15
79	C	204	GET	C11-O51-C51	2.59	117.24	113.06
79	A	3499	GET	C93-N33-C33	2.59	118.16	114.38
79	A	3491	GET	O51-C51-C61	-2.59	100.72	107.18
79	CA	1891	GET	O61-C61-C51	2.58	113.77	108.72
79	CA	1882	GET	O11-C42-C32	-2.58	103.02	109.18
79	CA	1882	GET	O11-C42-C52	2.57	114.13	107.28
79	CA	1877	GET	O53-C13-C23	2.56	113.97	110.04
79	CA	1877	GET	O61-C61-C51	2.56	113.73	108.72
79	A	3485	GET	C93-N33-C33	2.55	118.10	114.38
79	A	3487	GET	O61-C61-C51	2.55	113.70	108.72
79	A	3491	GET	O11-C42-C52	2.55	114.05	107.28
79	CA	1877	GET	C13-C23-C33	2.54	113.55	109.34
79	C	203	GET	C93-N33-C33	2.54	118.09	114.38
79	CA	1889	GET	C11-O51-C51	2.54	117.15	113.06
79	CA	1888	GET	C11-O51-C51	2.53	117.14	113.06
79	A	3301	GET	C93-N33-C33	2.53	118.06	114.38
79	A	3484	GET	C41-C51-C61	2.52	118.08	113.15
79	A	3495	GET	C11-O51-C51	2.52	117.13	113.06

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	CA	1880	GET	C93-N33-C33	2.52	118.05	114.38
79	C	203	GET	O61-C61-C51	2.51	113.63	108.72
79	CA	1885	GET	C11-O51-C51	2.51	117.11	113.06
79	A	3484	GET	C62-C52-C42	2.49	114.13	108.96
79	A	3491	GET	C11-O11-C42	2.49	124.12	117.96
79	A	3478	GET	C62-C52-C42	2.49	114.12	108.96
79	CA	1883	GET	C62-C52-C42	2.48	114.11	108.96
79	A	3478	GET	O11-C42-C32	-2.46	103.30	109.18
79	CA	1887	GET	O61-C61-C51	2.46	113.54	108.72
79	A	3480	GET	C93-N33-C33	2.46	117.97	114.38
79	A	3476	GET	O51-C51-C61	-2.46	101.04	107.18
79	A	3477	GET	C13-C23-C33	2.45	113.39	109.34
79	CA	1886	GET	C93-N33-C33	2.44	117.94	114.38
79	CA	1882	GET	C13-O62-C62	2.44	124.00	117.96
79	C	206	GET	C93-N33-C33	2.44	117.94	114.38
79	CA	1882	GET	C11-C21-C31	2.44	116.59	110.21
79	T	301	GET	C71-C61-C51	-2.44	109.16	112.02
79	A	3479	GET	O61-C61-C51	2.43	113.48	108.72
79	CA	1874	GET	C11-O51-C51	2.42	116.96	113.06
79	CA	1874	GET	O61-C61-C51	2.40	113.42	108.72
79	A	3478	GET	O61-C61-C51	2.40	113.42	108.72
79	CA	1880	GET	O51-C51-C61	-2.39	101.21	107.18
79	A	3490	GET	O51-C51-C41	2.39	111.23	107.87
79	A	3490	GET	C11-O11-C42	2.39	123.87	117.96
79	CA	1887	GET	O11-C42-C52	2.37	113.59	107.28
79	A	3494	GET	C41-C51-C61	2.37	117.78	113.15
79	A	3473	GET	O61-C61-C51	2.37	113.35	108.72
79	A	3494	GET	C71-C61-C51	-2.36	109.25	112.02
79	A	3480	GET	O51-C51-C41	2.35	111.17	107.87
79	CA	1876	GET	O62-C62-C12	2.35	114.78	109.18
79	CA	1886	GET	O53-C13-C23	2.35	113.64	110.04
79	A	3485	GET	O51-C51-C61	-2.34	101.33	107.18
79	CA	1888	GET	O61-C61-C51	2.34	113.30	108.72
79	A	3496	GET	O61-C61-C51	2.33	113.28	108.72
79	C	205	GET	O53-C13-C23	2.31	113.59	110.04
79	CA	1879	GET	O51-C51-C41	2.30	111.11	107.87
79	CA	1890	GET	O53-C13-C23	2.29	113.56	110.04
79	CA	1887	GET	O53-C13-C23	2.29	113.55	110.04
79	CA	1886	GET	O61-C61-C51	2.29	113.19	108.72
79	CA	1884	GET	O51-C51-C41	2.28	111.08	107.87
79	A	3500	GET	C11-O51-C51	2.28	116.74	113.06
79	A	3497	GET	O61-C61-C51	2.28	113.18	108.72

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	CA	1893	GET	O51-C51-C41	2.28	111.07	107.87
79	CA	1879	GET	O61-C61-C51	2.27	113.17	108.72
79	CA	1882	GET	O61-C61-C51	2.27	113.15	108.72
79	CA	1891	GET	C53-O53-C13	2.27	115.18	111.53
79	CA	1887	GET	O11-C42-C32	-2.26	103.78	109.18
79	A	3496	GET	O51-C51-C61	-2.26	101.53	107.18
79	CA	1886	GET	O11-C11-O51	2.26	116.99	110.67
79	CA	1893	GET	O62-C62-C12	-2.26	103.79	109.18
79	CA	1876	GET	O61-C61-C51	2.26	113.14	108.72
79	A	3485	GET	O51-C51-C41	2.26	111.04	107.87
79	B	203	GET	O61-C61-C51	2.25	113.12	108.72
79	CA	1886	GET	C13-C23-C33	2.25	113.06	109.34
79	CA	1875	GET	O11-C42-C52	2.24	113.25	107.28
79	A	3490	GET	O51-C51-C61	-2.24	101.59	107.18
79	A	3484	GET	O61-C61-C51	2.24	113.10	108.72
79	CA	1886	GET	O11-C42-C32	-2.23	103.86	109.18
79	CA	1887	GET	O51-C51-C61	-2.23	101.62	107.18
79	CA	1876	GET	C13-C23-C33	2.23	113.03	109.34
79	A	3494	GET	O61-C61-C51	2.23	113.07	108.72
79	A	3499	GET	O51-C51-C41	2.22	110.99	107.87
79	A	3473	GET	O11-C42-C52	2.22	113.19	107.28
79	CA	1886	GET	C53-O53-C13	2.22	115.10	111.53
79	CA	1893	GET	O62-C62-C52	2.21	113.17	107.28
79	A	3495	GET	C53-O53-C13	2.21	115.09	111.53
79	A	3479	GET	C11-O51-C51	2.21	116.61	113.06
79	CA	1883	GET	C11-O11-C42	2.20	123.42	117.96
79	CA	1879	GET	O11-C42-C52	2.20	113.12	107.28
79	A	3493	GET	C53-O53-C13	2.19	115.06	111.53
79	CA	1875	GET	C41-C51-C61	2.19	117.43	113.15
79	CA	1882	GET	O62-C62-C52	2.19	113.10	107.28
79	CA	1884	GET	O61-C61-C51	2.18	112.98	108.72
79	A	3471	GET	C71-C61-C51	-2.18	109.47	112.02
79	CA	1886	GET	C11-O11-C42	2.18	123.35	117.96
79	CA	1882	GET	C71-C61-C51	-2.17	109.48	112.02
79	A	3486	GET	O61-C61-C51	2.17	112.96	108.72
79	A	3492	GET	C11-O51-C51	2.16	116.55	113.06
79	CA	1882	GET	C31-C41-C51	-2.16	104.75	109.68
79	CA	1878	GET	C53-O53-C13	2.16	115.01	111.53
79	A	3489	GET	O61-C61-C51	2.15	112.93	108.72
79	CA	1880	GET	O61-C61-C51	2.15	112.93	108.72
79	A	3491	GET	C53-O53-C13	2.15	115.00	111.53
79	A	3471	GET	C41-C51-C61	2.15	117.34	113.15

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	A	3498	GET	O11-C42-C52	2.14	112.98	107.28
79	CA	1883	GET	C71-C61-C51	2.14	114.53	112.02
79	A	3498	GET	C41-C51-C61	2.13	117.32	113.15
79	A	3491	GET	O51-C51-C41	2.13	110.86	107.87
79	CA	1882	GET	C53-O53-C13	2.13	114.96	111.53
79	A	3499	GET	O61-C61-C51	2.12	112.87	108.72
79	A	3476	GET	C41-C51-C61	2.12	117.30	113.15
79	CA	1883	GET	O51-C11-C21	2.12	114.83	110.06
79	A	3487	GET	O51-C51-C41	2.12	110.85	107.87
79	CA	1878	GET	O61-C61-C51	2.12	112.86	108.72
79	CA	1885	GET	O61-C61-C51	2.11	112.85	108.72
79	A	3301	GET	O61-C61-C51	2.11	112.85	108.72
79	A	3484	GET	C13-C23-C33	2.11	112.83	109.34
79	CA	1892	GET	O61-C61-C51	2.10	112.82	108.72
79	CA	1874	GET	O51-C51-C41	2.09	110.80	107.87
79	A	3481	GET	C41-C51-C61	2.08	117.21	113.15
79	A	3495	GET	O61-C61-C51	2.07	112.77	108.72
79	A	3500	GET	C41-C51-C61	2.06	117.18	113.15
79	A	3489	GET	O51-C51-C41	2.06	110.77	107.87
79	A	3485	GET	O31-C31-C41	-2.06	105.58	110.35
79	CA	1884	GET	O11-C42-C52	2.06	112.76	107.28
79	A	3486	GET	C71-C61-C51	-2.05	109.61	112.02
79	CA	1877	GET	C53-O53-C13	2.05	114.84	111.53
79	A	3482	GET	C71-C61-C51	-2.04	109.62	112.02
79	C	204	GET	O61-C61-C51	2.04	112.71	108.72
79	A	3301	GET	O11-C11-C21	2.04	111.73	108.22
79	A	3484	GET	C53-O53-C13	2.04	114.81	111.53
79	CA	1883	GET	C41-C31-C21	-2.04	107.57	111.07
79	A	3483	GET	O61-C61-C51	2.03	112.70	108.72
79	A	3498	GET	C13-C23-C33	2.03	112.70	109.34
79	A	3499	GET	O11-C42-C52	2.03	112.67	107.28
79	A	3483	GET	C53-O53-C13	2.02	114.79	111.53
79	CA	1890	GET	C13-C23-C33	2.02	112.69	109.34
79	E	402	GET	C53-O53-C13	2.01	114.78	111.53
79	A	3473	GET	C93-N33-C33	2.01	117.31	114.38
79	A	3490	GET	O11-C11-O51	2.00	116.27	110.67

There are no chirality outliers.

All (163) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
79	A	3301	GET	C23-C33-N33-C93

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
79	A	3471	GET	C41-C51-C61-O61
79	A	3471	GET	C41-C51-C61-C71
79	A	3471	GET	C23-C33-N33-C93
79	A	3472	GET	C23-C33-N33-C93
79	A	3473	GET	C23-C33-N33-C93
79	A	3474	GET	C23-C33-N33-C93
79	A	3475	GET	C41-C51-C61-O61
79	A	3475	GET	C41-C51-C61-C71
79	A	3475	GET	O51-C51-C61-O61
79	A	3475	GET	C23-C33-N33-C93
79	A	3476	GET	C23-C33-N33-C93
79	A	3477	GET	C41-C51-C61-O61
79	A	3477	GET	C41-C51-C61-C71
79	A	3477	GET	O51-C51-C61-O61
79	A	3478	GET	C23-C33-N33-C93
79	A	3479	GET	C23-C33-N33-C93
79	A	3480	GET	C41-C51-C61-O61
79	A	3480	GET	C41-C51-C61-C71
79	A	3480	GET	O51-C51-C61-O61
79	A	3480	GET	O51-C51-C61-C71
79	A	3480	GET	C23-C33-N33-C93
79	A	3482	GET	C21-C11-O11-C42
79	A	3482	GET	C23-C33-N33-C93
79	A	3483	GET	C23-C33-N33-C93
79	A	3484	GET	C41-C51-C61-O61
79	A	3484	GET	O51-C51-C61-O61
79	A	3484	GET	C23-C33-N33-C93
79	A	3485	GET	C23-C33-N33-C93
79	A	3486	GET	C23-C33-N33-C93
79	A	3487	GET	C41-C51-C61-O61
79	A	3487	GET	C41-C51-C61-C71
79	A	3487	GET	O51-C51-C61-O61
79	A	3487	GET	C23-C33-N33-C93
79	A	3488	GET	C23-C33-N33-C93
79	A	3489	GET	C23-C33-N33-C93
79	A	3490	GET	C23-C33-N33-C93
79	A	3491	GET	C23-C33-N33-C93
79	A	3492	GET	C23-C33-N33-C93
79	A	3493	GET	C23-C33-N33-C93
79	A	3494	GET	C23-C33-N33-C93
79	A	3495	GET	C23-C33-N33-C93
79	A	3497	GET	O51-C51-C61-O61

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
79	A	3497	GET	C23-C33-N33-C93
79	A	3498	GET	O51-C51-C61-C71
79	A	3499	GET	C23-C33-N33-C93
79	A	3500	GET	C23-C33-N33-C93
79	B	203	GET	O51-C51-C61-O61
79	B	203	GET	C23-C33-N33-C93
79	C	203	GET	C23-C33-N33-C93
79	C	204	GET	C23-C33-N33-C93
79	C	205	GET	C23-C33-N33-C93
79	CA	1874	GET	C23-C33-N33-C93
79	CA	1875	GET	C23-C33-N33-C93
79	CA	1876	GET	C12-C62-O62-C13
79	CA	1876	GET	C23-C33-N33-C93
79	CA	1877	GET	C23-C33-N33-C93
79	CA	1878	GET	C23-C33-N33-C93
79	CA	1879	GET	C23-C33-N33-C93
79	CA	1880	GET	C23-C33-N33-C93
79	CA	1882	GET	C41-C51-C61-O61
79	CA	1882	GET	C41-C51-C61-C71
79	CA	1882	GET	O51-C51-C61-O61
79	CA	1882	GET	O51-C51-C61-C71
79	CA	1882	GET	C23-C33-N33-C93
79	CA	1883	GET	C21-C11-O11-C42
79	CA	1883	GET	C41-C51-C61-O61
79	CA	1883	GET	C41-C51-C61-C71
79	CA	1883	GET	C23-C33-N33-C93
79	CA	1884	GET	C23-C33-N33-C93
79	CA	1885	GET	C23-C33-N33-C93
79	CA	1886	GET	C23-C33-N33-C93
79	CA	1887	GET	C41-C51-C61-O61
79	CA	1887	GET	C41-C51-C61-C71
79	CA	1887	GET	O51-C51-C61-O61
79	CA	1887	GET	O51-C51-C61-C71
79	CA	1887	GET	C23-C33-N33-C93
79	CA	1888	GET	O51-C51-C61-O61
79	CA	1888	GET	C23-C33-N33-C93
79	CA	1889	GET	C41-C51-C61-O61
79	CA	1889	GET	C41-C51-C61-C71
79	CA	1889	GET	O51-C51-C61-O61
79	CA	1889	GET	C23-C33-N33-C93
79	CA	1891	GET	C23-C33-N33-C93
79	CA	1892	GET	C41-C51-C61-O61

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
79	CA	1892	GET	C23-C33-N33-C93
79	CA	1893	GET	C21-C11-O11-C42
79	CA	1893	GET	C41-C51-C61-O61
79	CA	1893	GET	C41-C51-C61-C71
79	CA	1893	GET	O51-C51-C61-O61
79	T	301	GET	C41-C51-C61-O61
79	T	301	GET	C41-C51-C61-C71
79	T	301	GET	O51-C51-C61-O61
79	T	301	GET	O51-C51-C61-C71
79	T	301	GET	C23-C33-N33-C93
79	CA	1886	GET	O51-C11-O11-C42
79	CA	1882	GET	C52-C62-O62-C13
79	A	3494	GET	C52-C42-O11-C11
79	A	3490	GET	O51-C11-O11-C42
79	CA	1891	GET	C52-C42-O11-C11
79	A	3478	GET	C52-C42-O11-C11
79	CA	1893	GET	O51-C11-O11-C42
79	CA	1887	GET	O51-C11-O11-C42
79	CA	1892	GET	C52-C62-O62-C13
79	A	3491	GET	O51-C11-O11-C42
79	C	205	GET	C52-C62-O62-C13
79	A	3478	GET	O51-C11-O11-C42
79	A	3488	GET	O51-C11-O11-C42
79	A	3471	GET	O51-C51-C61-C71
79	C	203	GET	O51-C51-C61-C71
79	CA	1893	GET	O51-C51-C61-C71
79	A	3482	GET	O51-C11-O11-C42
79	CA	1882	GET	C52-C42-O11-C11
79	CA	1875	GET	O51-C11-O11-C42
79	CA	1875	GET	C52-C42-O11-C11
79	A	3475	GET	O51-C51-C61-C71
79	A	3487	GET	O51-C51-C61-C71
79	CA	1880	GET	O51-C11-O11-C42
79	CA	1886	GET	C52-C42-O11-C11
79	A	3491	GET	C52-C42-O11-C11
79	A	3491	GET	O53-C13-O62-C62
79	A	3491	GET	C23-C13-O62-C62
79	CA	1892	GET	C52-C42-O11-C11
79	CA	1893	GET	C52-C62-O62-C13
79	A	3494	GET	C21-C11-O11-C42
79	CA	1882	GET	O51-C11-O11-C42
79	A	3490	GET	C52-C42-O11-C11

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
79	CA	1883	GET	O51-C11-O11-C42
79	A	3477	GET	O51-C51-C61-C71
79	CA	1883	GET	O51-C51-C61-C71
79	A	3471	GET	O51-C51-C61-O61
79	CA	1887	GET	C52-C42-O11-C11
79	A	3488	GET	C52-C42-O11-C11
79	CA	1875	GET	C32-C42-O11-C11
79	CA	1882	GET	C32-C42-O11-C11
79	A	3497	GET	C41-C51-C61-O61
79	A	3498	GET	C41-C51-C61-C71
79	C	203	GET	C41-C51-C61-C71
79	CA	1888	GET	C41-C51-C61-O61
79	CA	1889	GET	O51-C51-C61-C71
79	CA	1893	GET	O53-C13-O62-C62
79	A	3498	GET	C52-C42-O11-C11
79	CA	1893	GET	C23-C13-O62-C62
79	CA	1877	GET	C21-C11-O11-C42
79	CA	1879	GET	C21-C11-O11-C42
79	A	3472	GET	C52-C42-O11-C11
79	CA	1883	GET	O53-C13-O62-C62
79	E	402	GET	C52-C62-O62-C13
79	A	3497	GET	O51-C51-C61-C71
79	CA	1888	GET	O51-C51-C61-C71
79	CA	1879	GET	C52-C42-O11-C11
79	A	3481	GET	C23-C33-N33-C93
79	A	3496	GET	C23-C33-N33-C93
79	A	3498	GET	C23-C33-N33-C93
79	C	206	GET	C23-C33-N33-C93
79	A	3492	GET	C52-C62-O62-C13
79	C	205	GET	C12-C62-O62-C13
79	CA	1886	GET	C32-C42-O11-C11
79	A	3474	GET	C21-C11-O11-C42
79	A	3484	GET	C41-C51-C61-C71
79	A	3498	GET	C41-C51-C61-O61
79	B	203	GET	C41-C51-C61-O61
79	C	203	GET	C41-C51-C61-O61

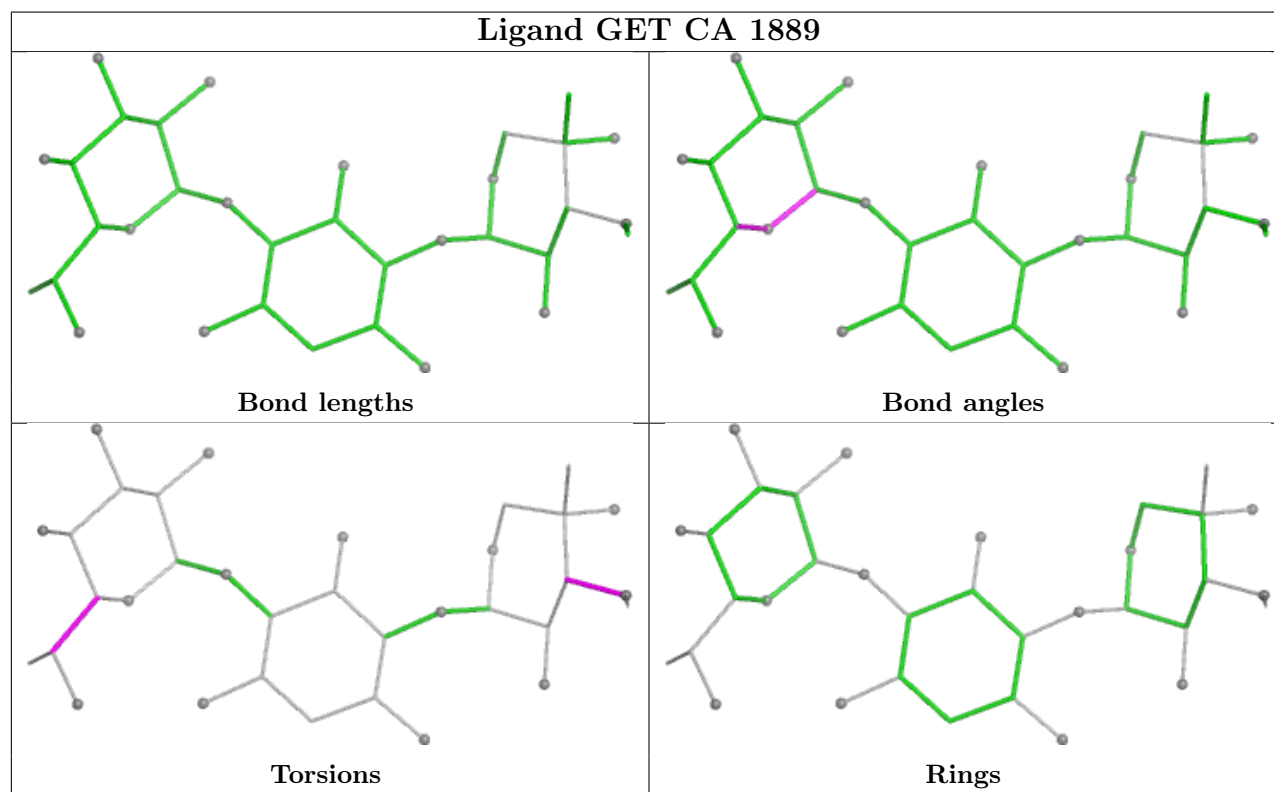
All (2) ring outliers are listed below:

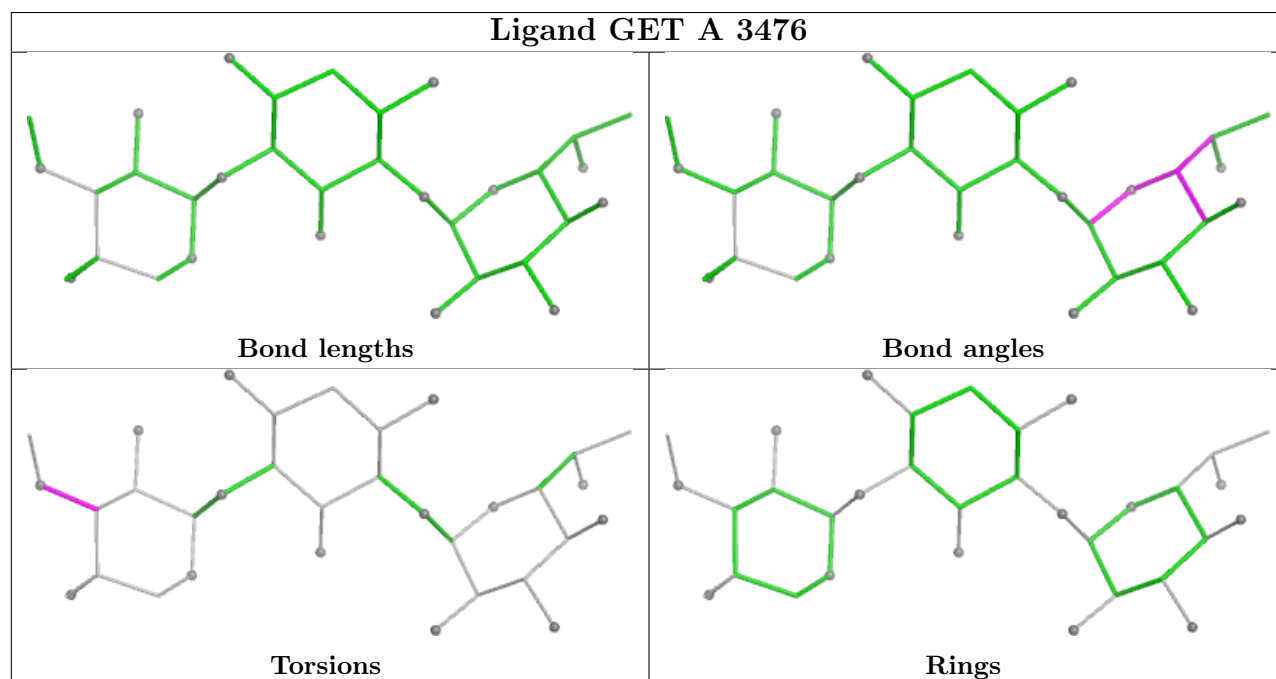
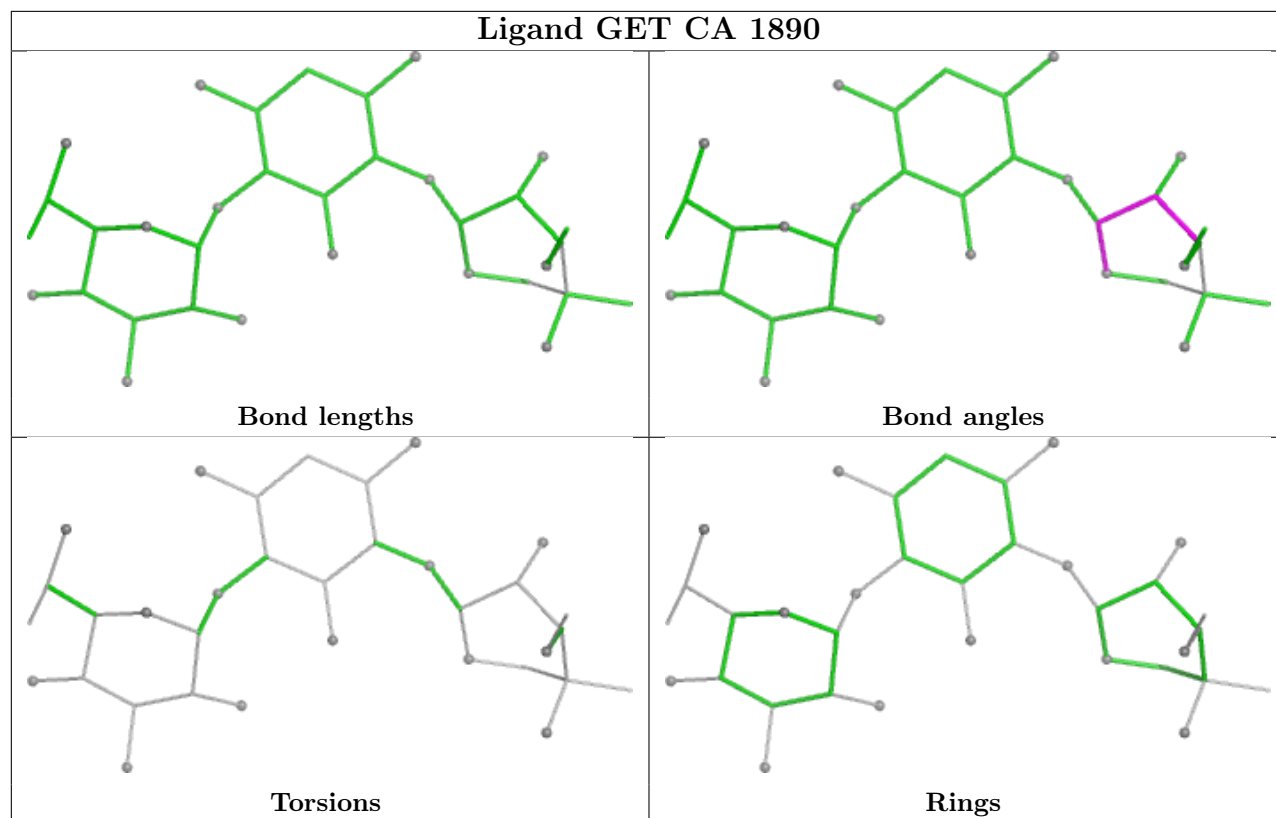
Mol	Chain	Res	Type	Atoms
79	CA	1893	GET	C11-C21-C31-C41-C51-O51
79	A	3490	GET	C11-C21-C31-C41-C51-O51

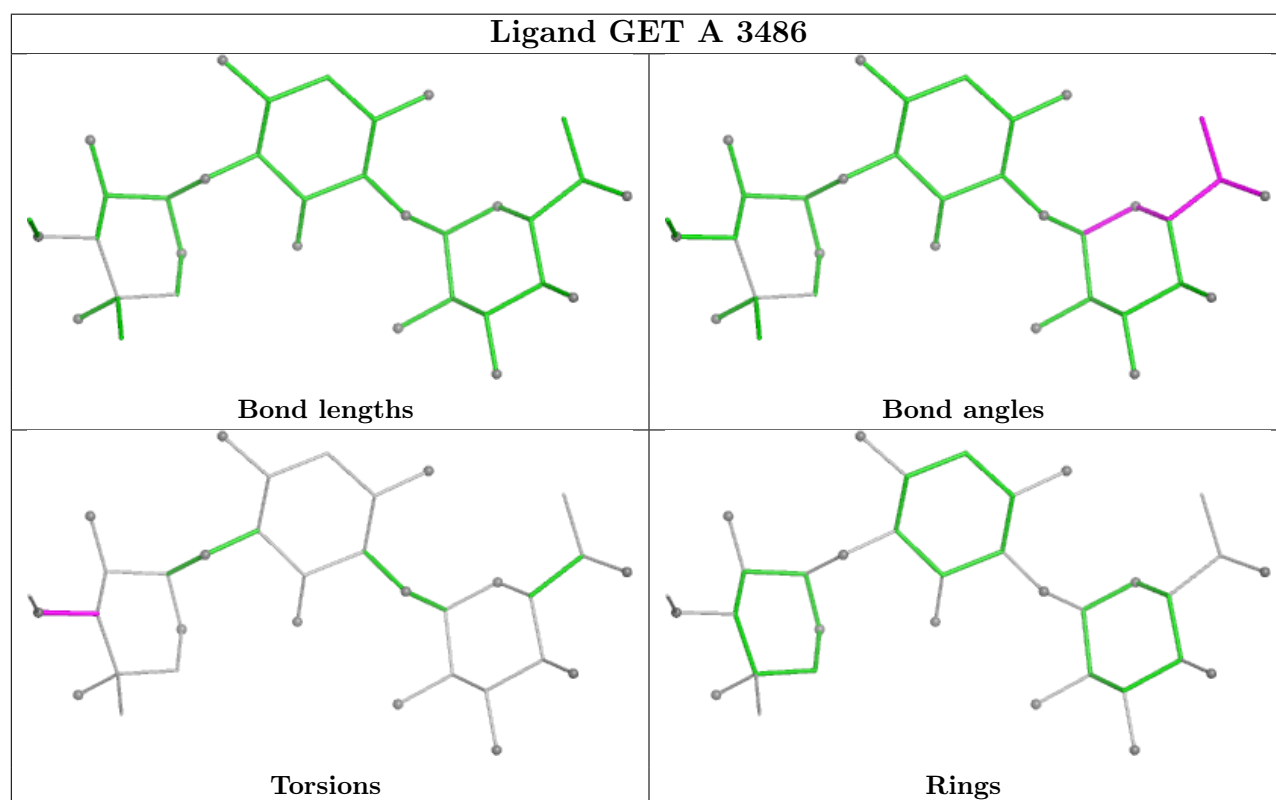
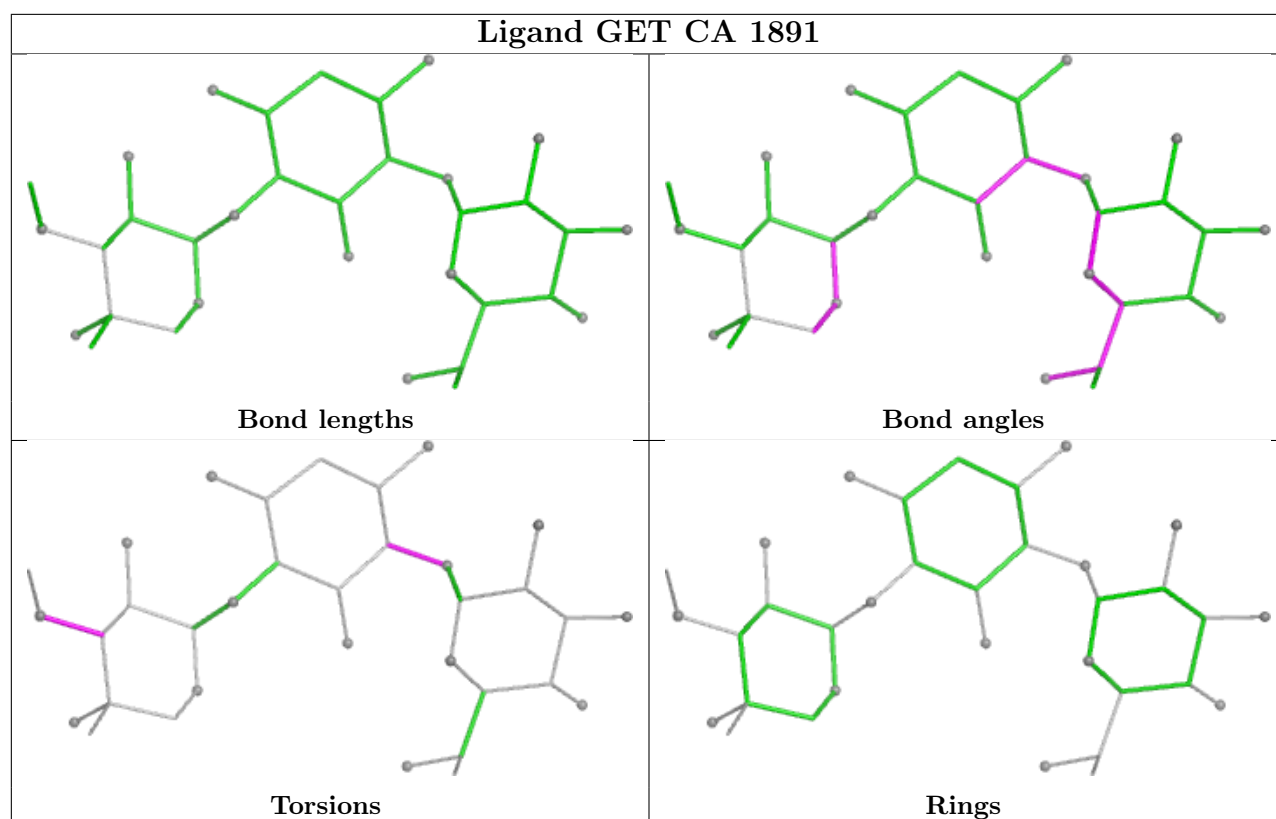
42 monomers are involved in 71 short contacts:

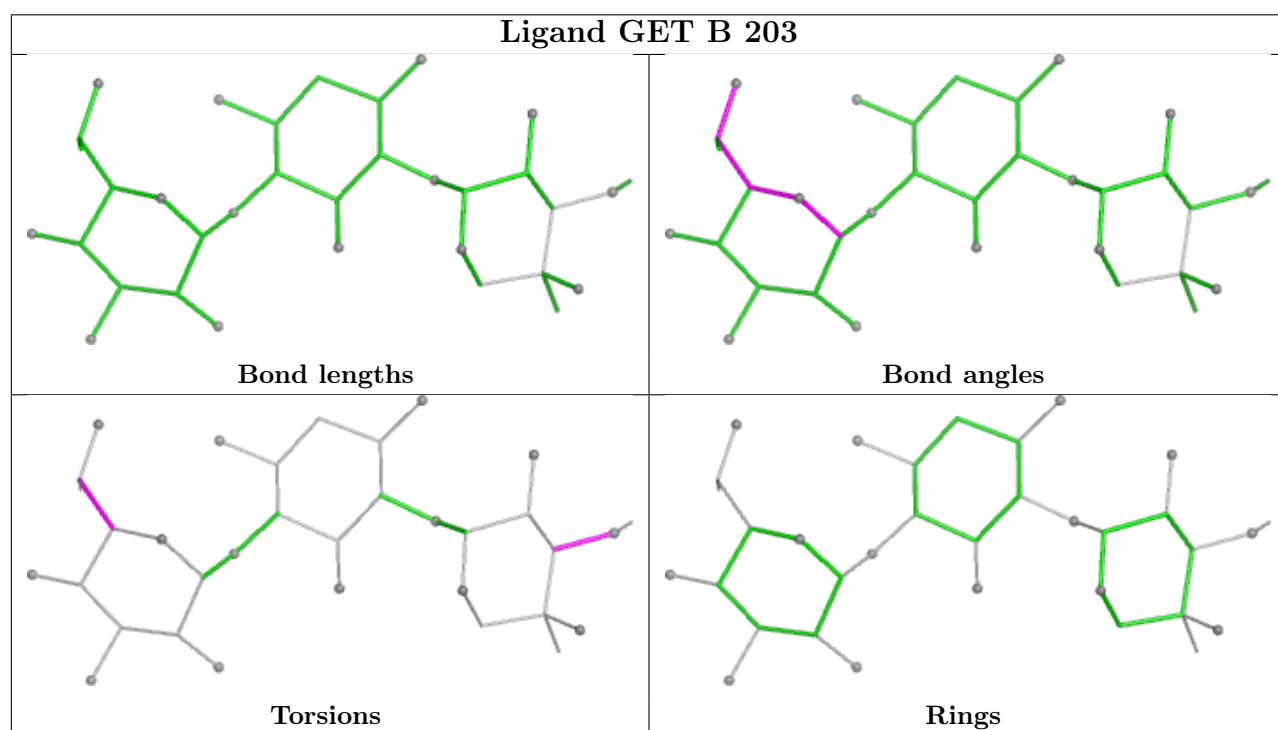
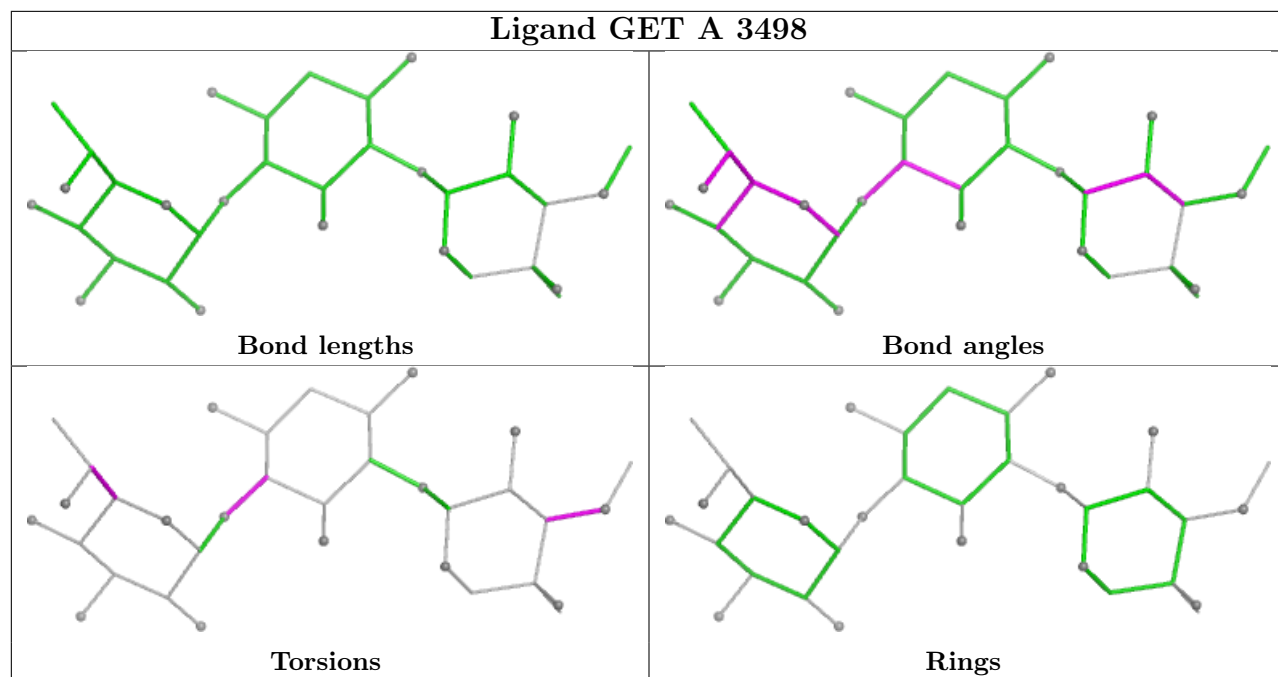
Mol	Chain	Res	Type	Clashes	Symm-Clashes
79	CA	1889	GET	1	0
79	CA	1891	GET	1	0
79	A	3486	GET	3	0
79	A	3498	GET	1	0
79	B	203	GET	1	0
79	A	3478	GET	2	0
79	A	3482	GET	2	0
79	A	3488	GET	1	0
79	CA	1880	GET	1	0
79	A	3496	GET	1	0
79	CA	1886	GET	1	0
79	A	3473	GET	1	0
79	A	3497	GET	1	0
79	CA	1882	GET	4	0
79	A	3479	GET	1	0
79	C	204	GET	3	0
79	A	3492	GET	1	0
79	A	3490	GET	1	0
79	A	3491	GET	1	0
79	CA	1878	GET	2	0
79	CA	1879	GET	1	0
79	C	205	GET	2	0
79	CA	1883	GET	2	0
79	A	3480	GET	5	0
79	E	402	GET	1	0
79	A	3484	GET	2	0
79	A	3489	GET	1	0
79	CA	1893	GET	3	0
79	CA	1875	GET	2	0
79	CA	1876	GET	2	0
79	A	3475	GET	1	0
81	A	3470	SPD	1	0
79	A	3493	GET	3	0
79	C	206	GET	1	0
79	T	301	GET	5	0
79	A	3471	GET	1	0
79	CA	1884	GET	1	0
79	A	3495	GET	1	0
79	CA	1888	GET	1	0
79	A	3481	GET	2	0
79	CA	1892	GET	2	0
79	CA	1887	GET	1	0

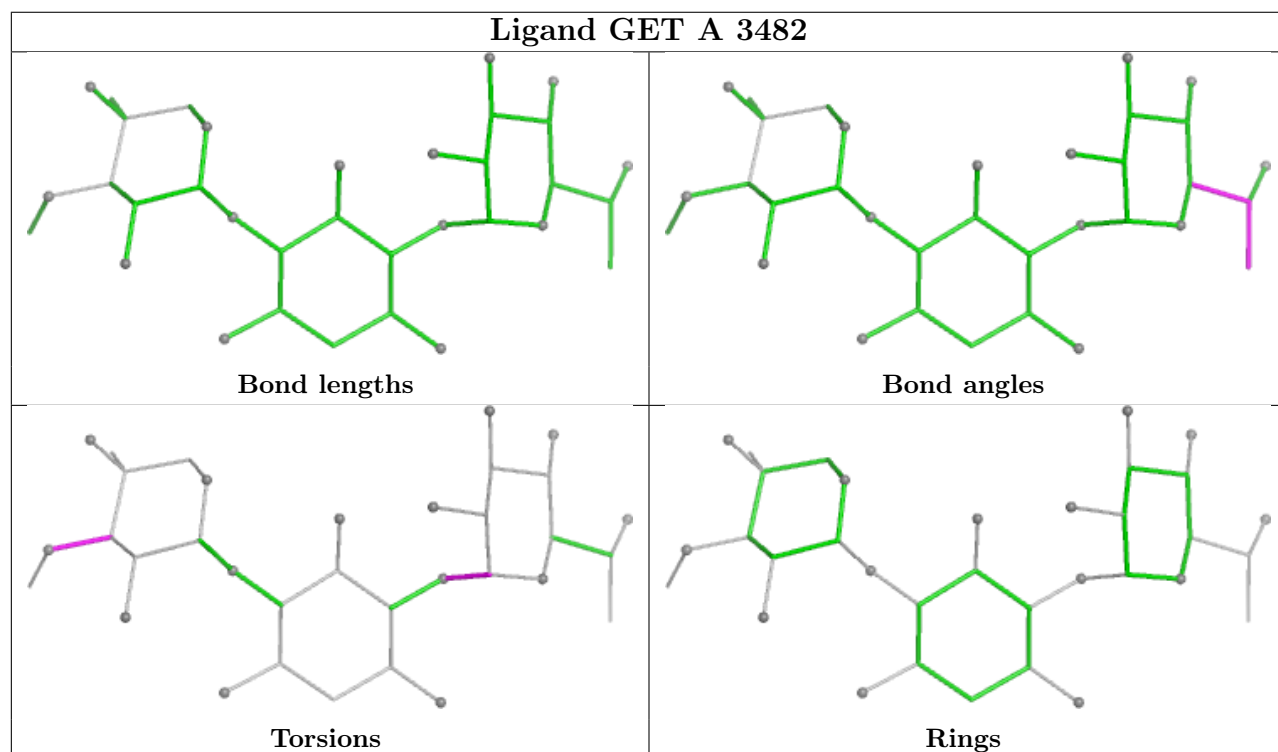
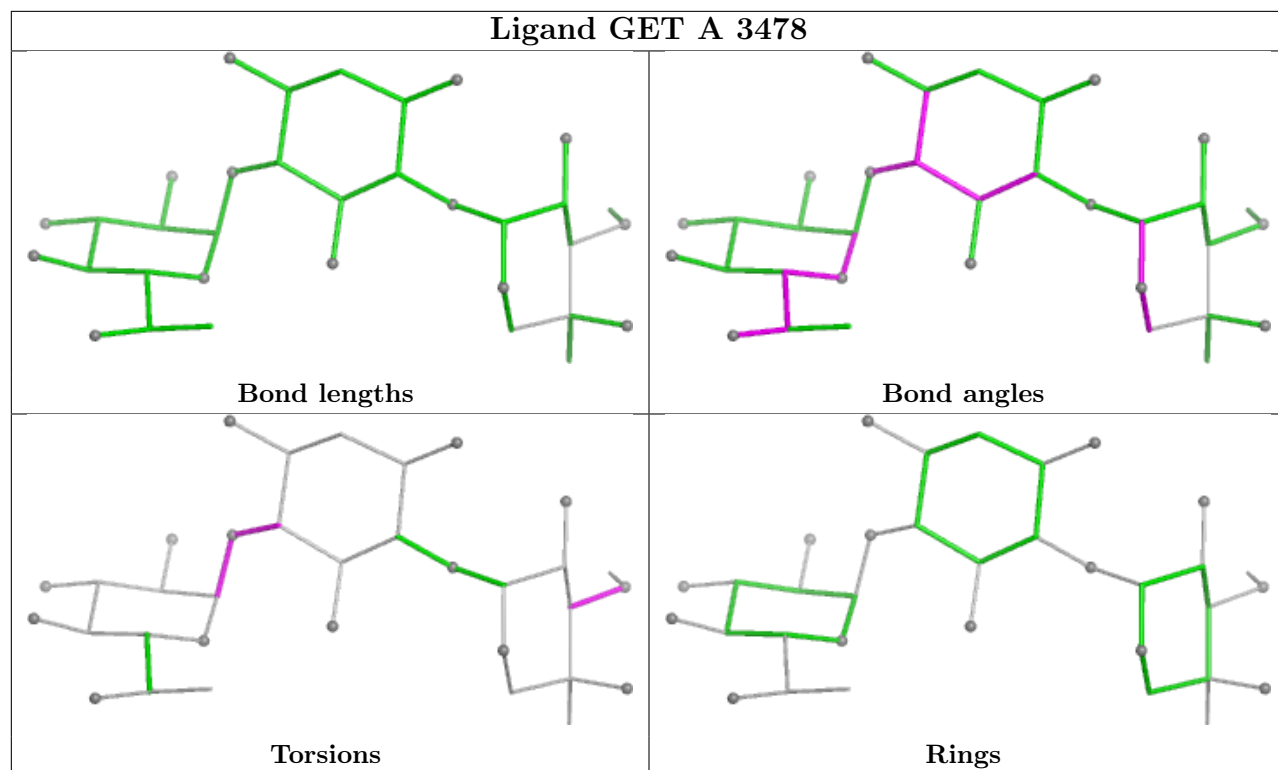
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

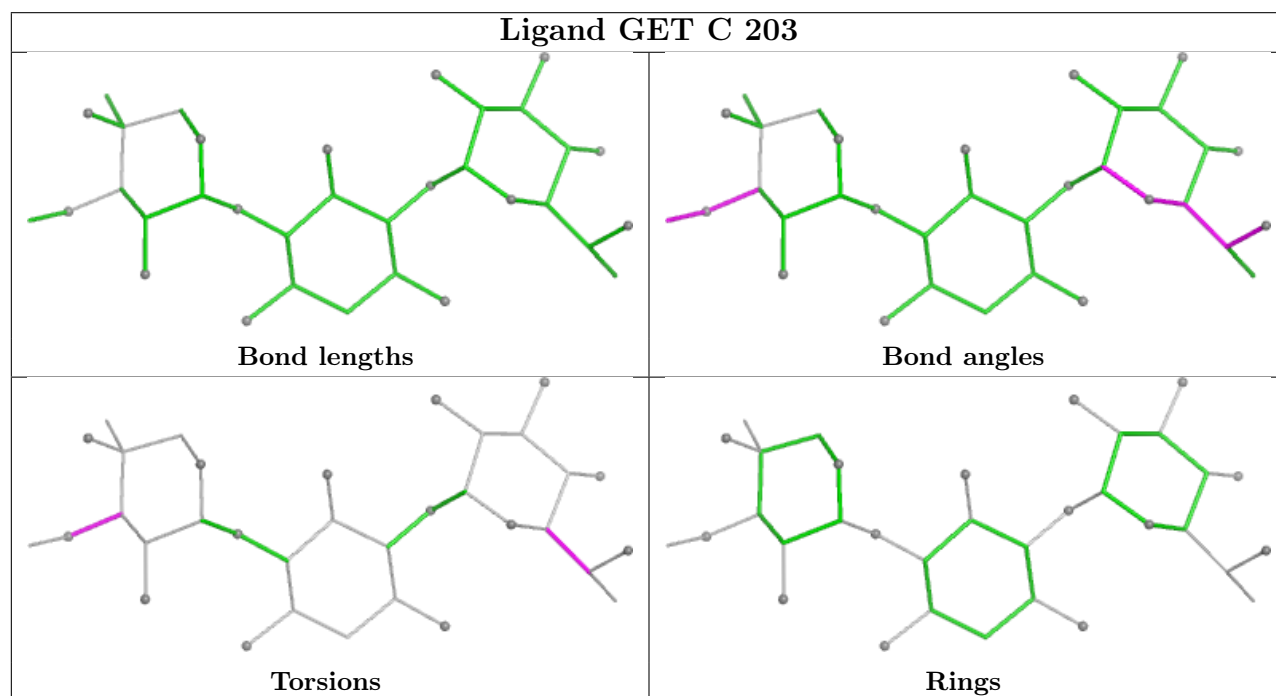
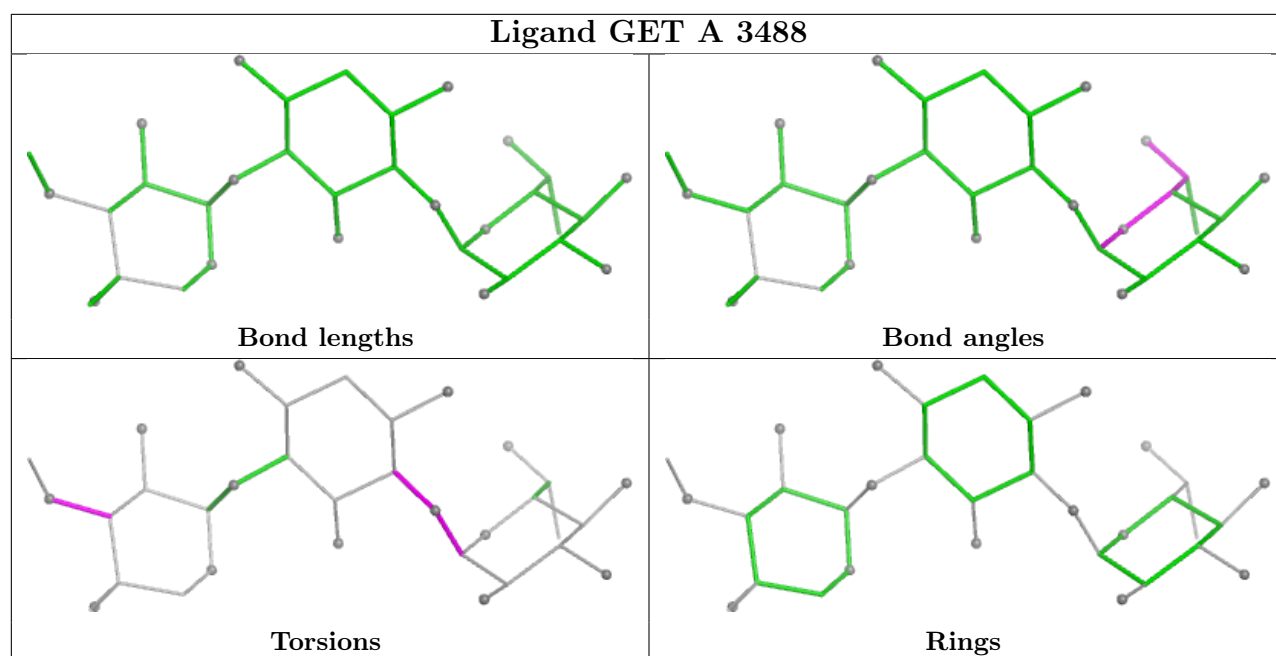




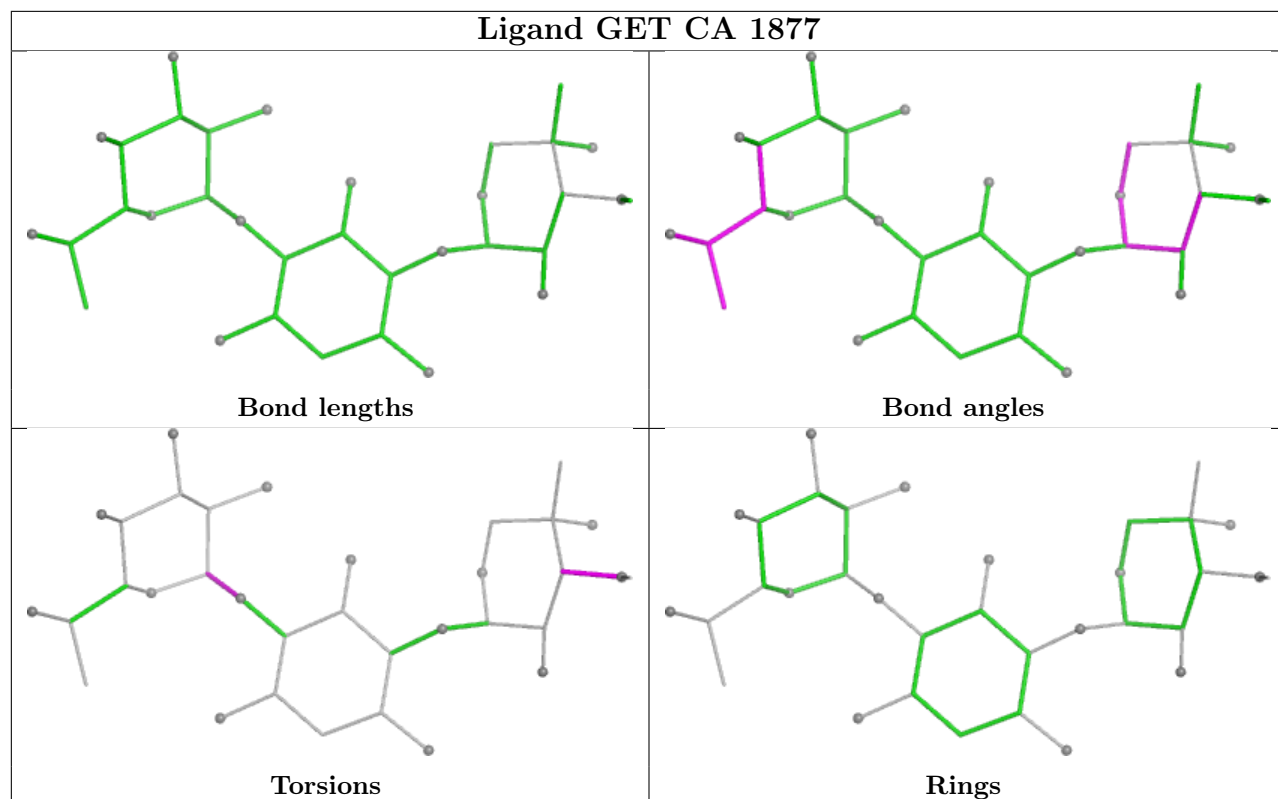




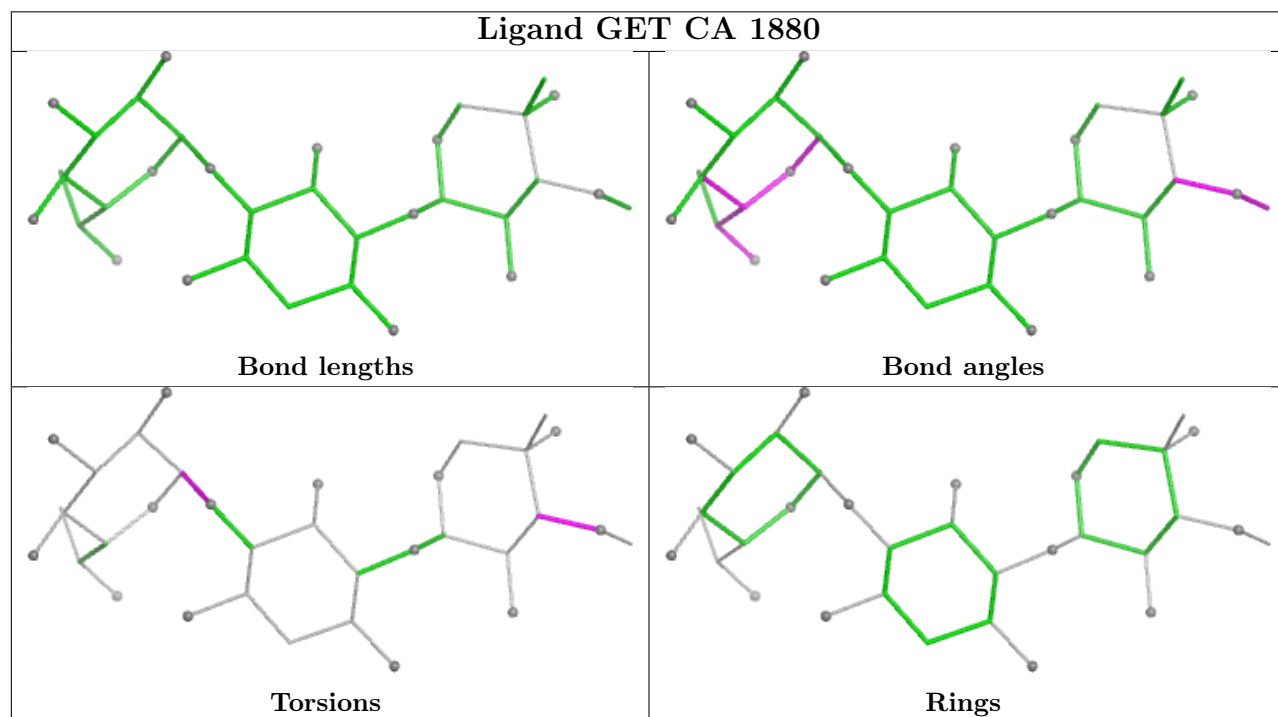


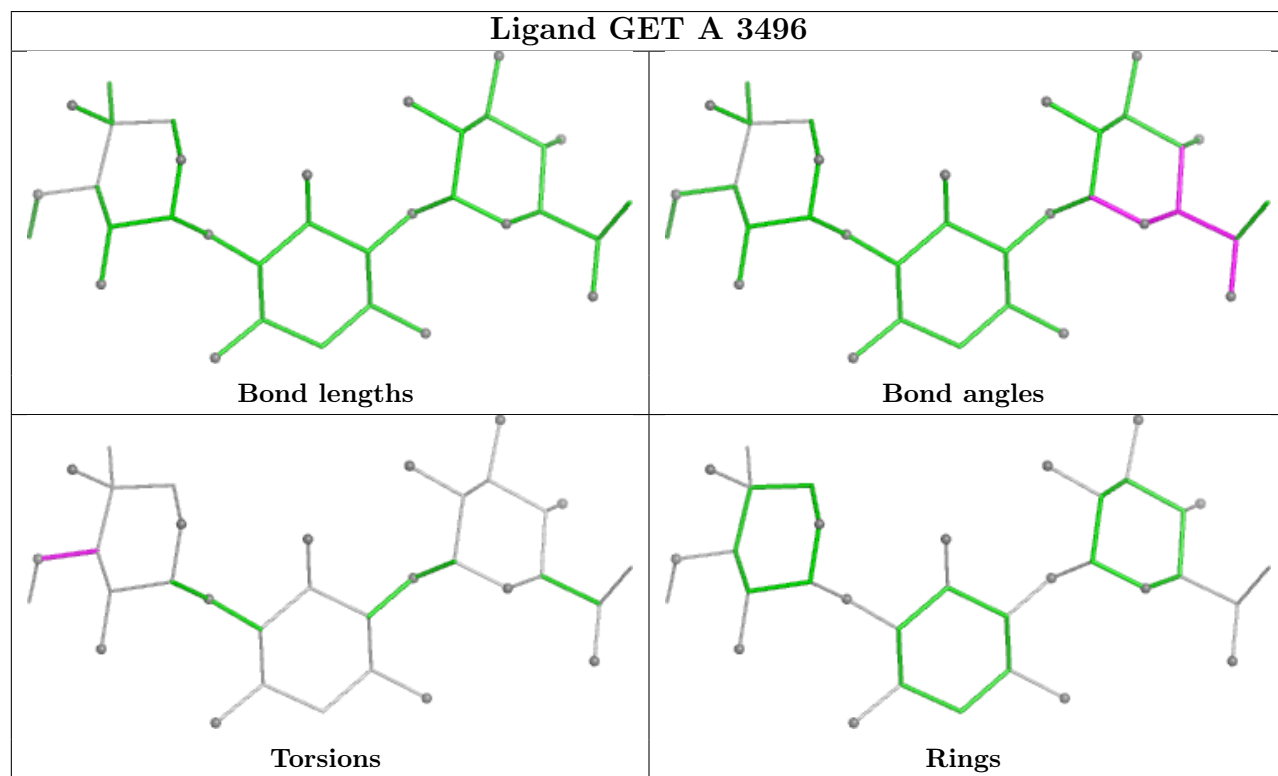
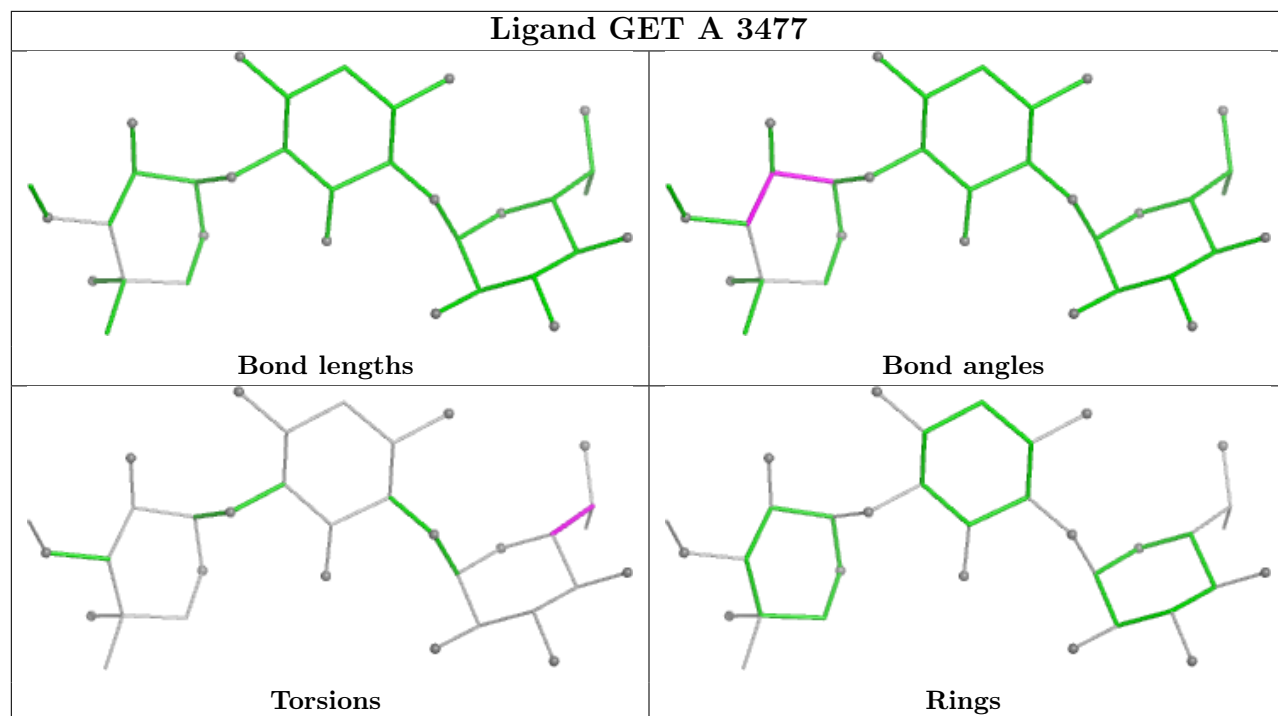


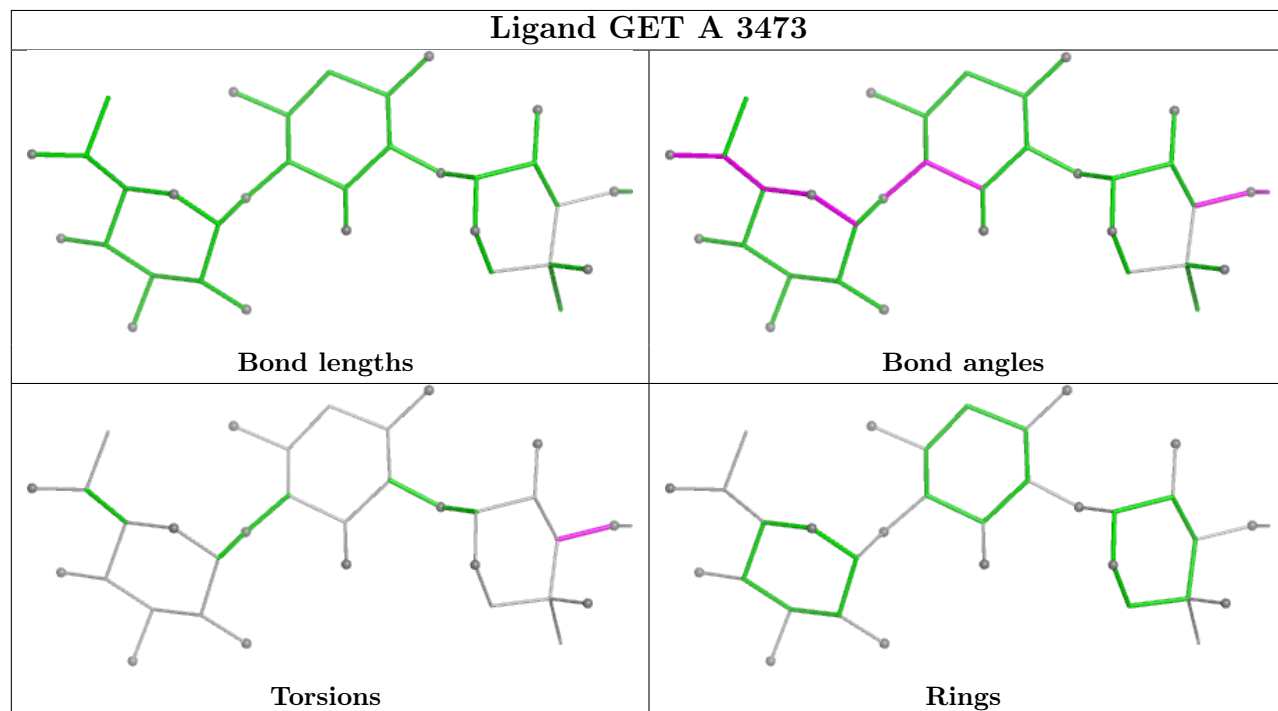
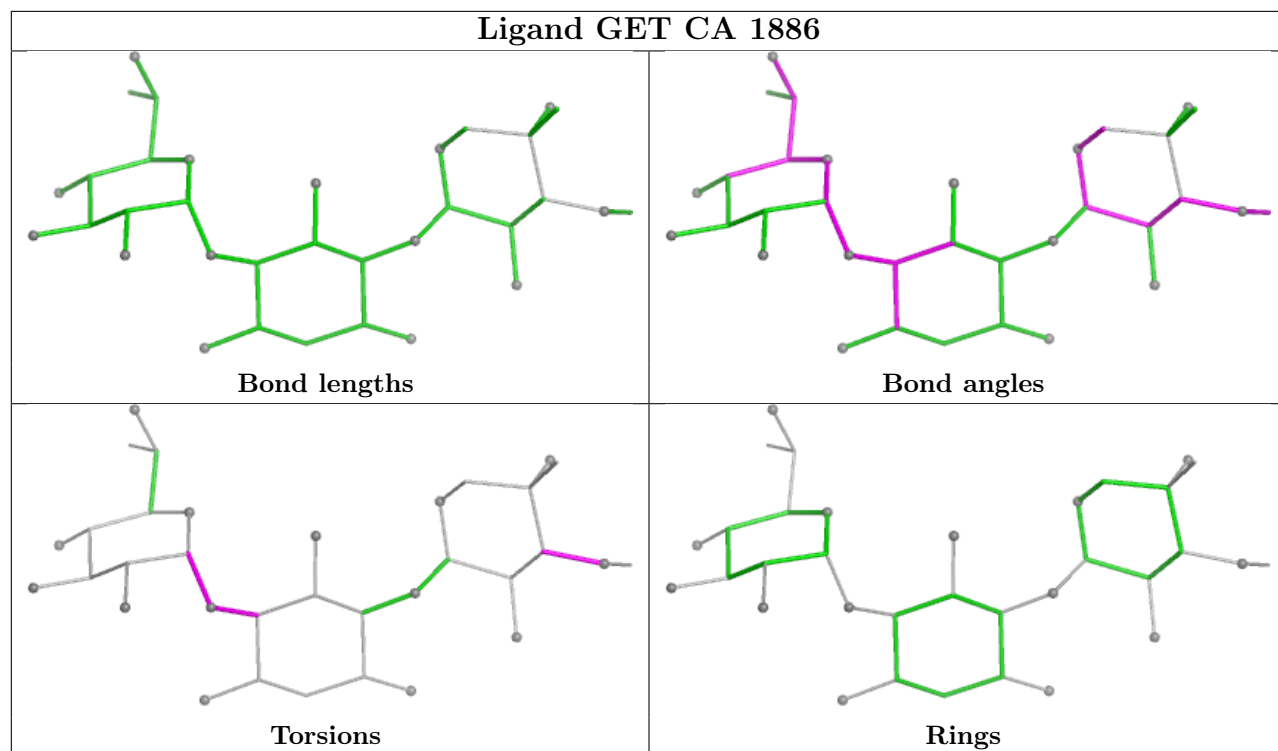
Ligand GET CA 1877

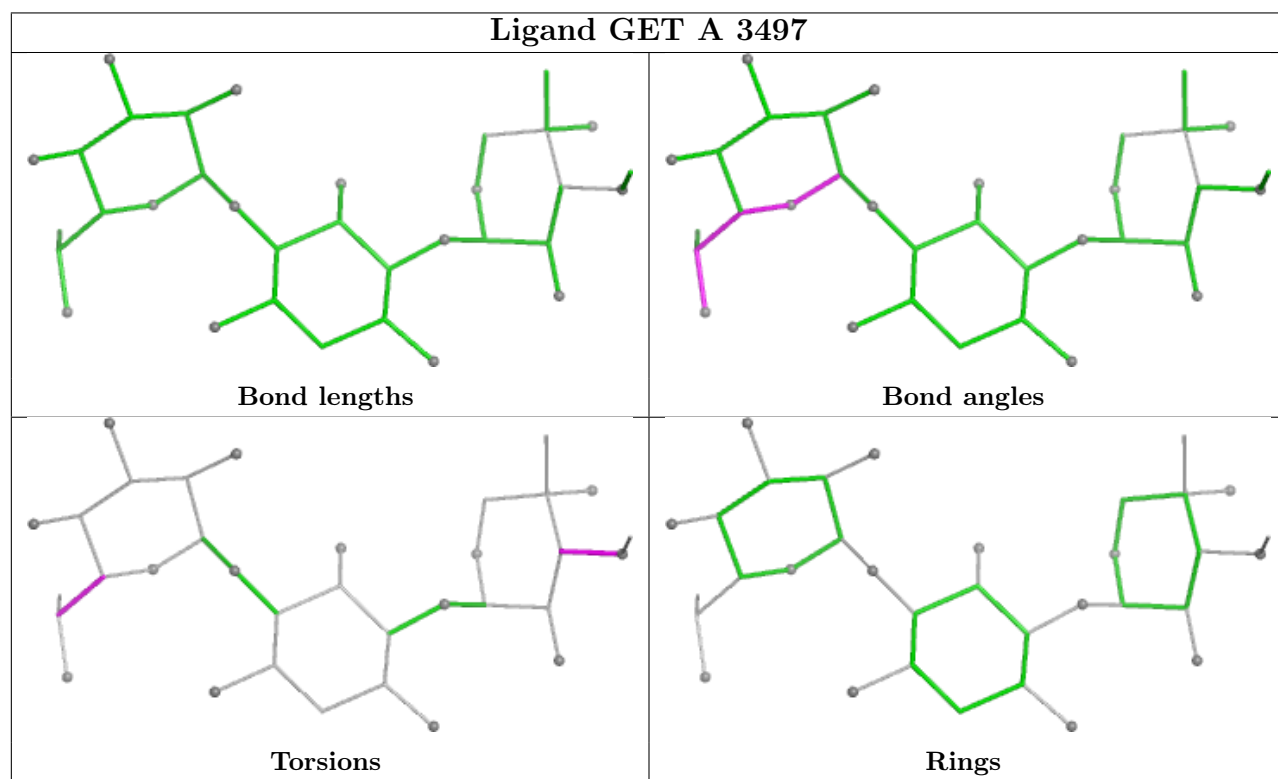
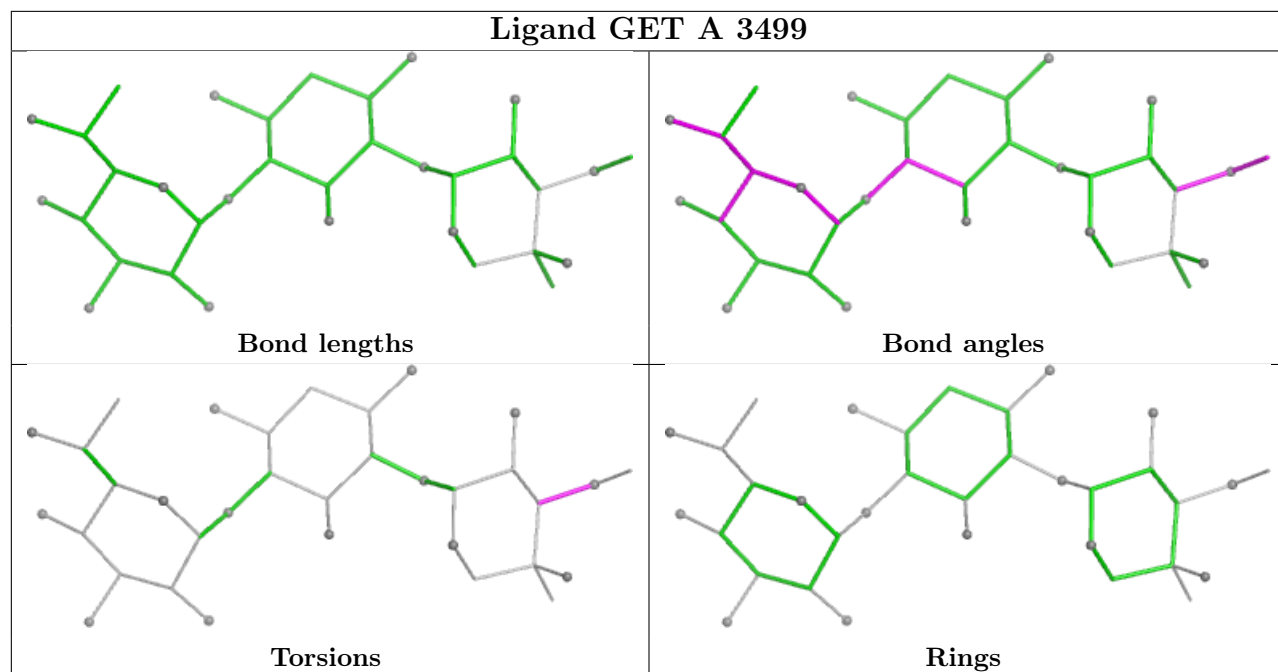


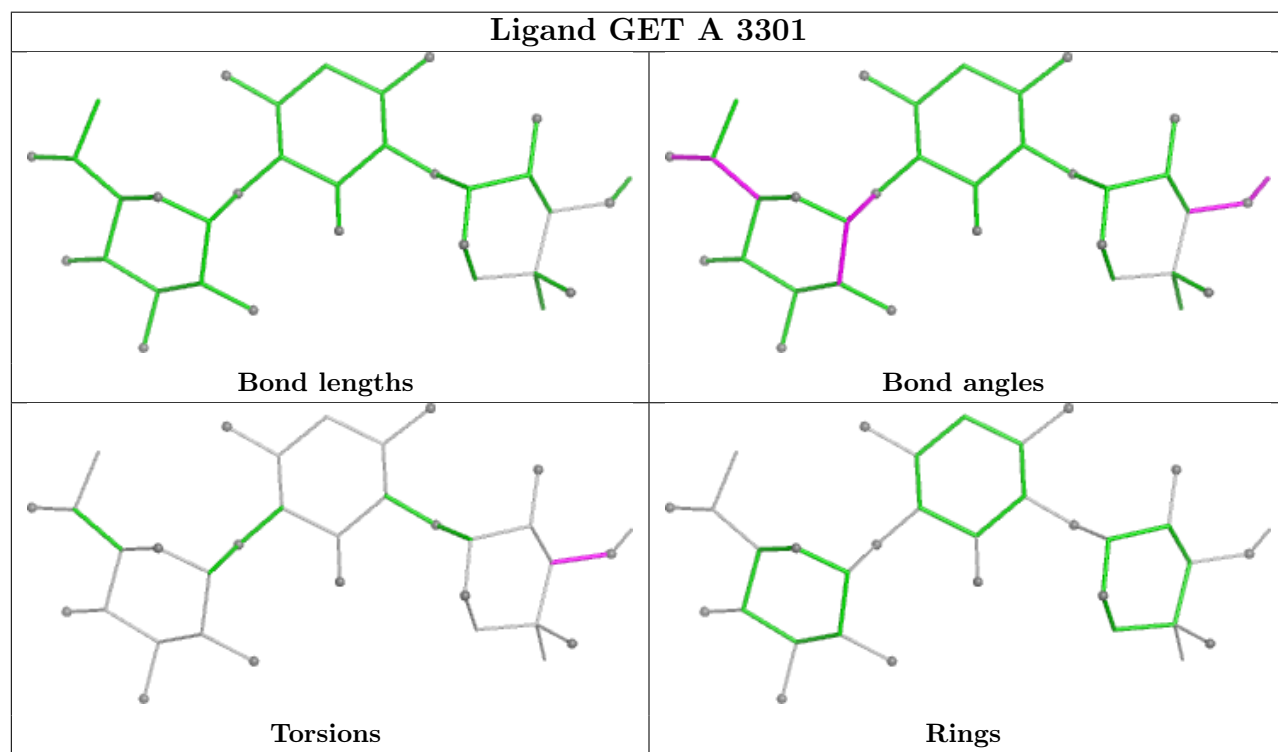
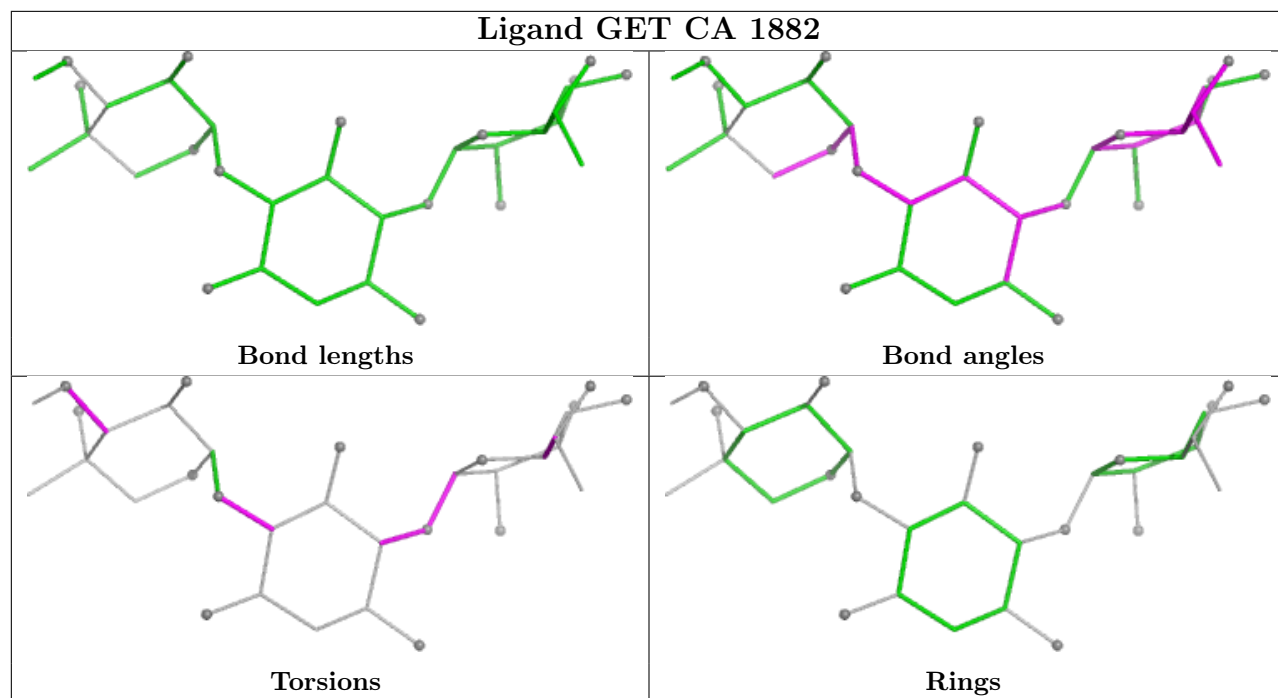
Ligand GET CA 1880

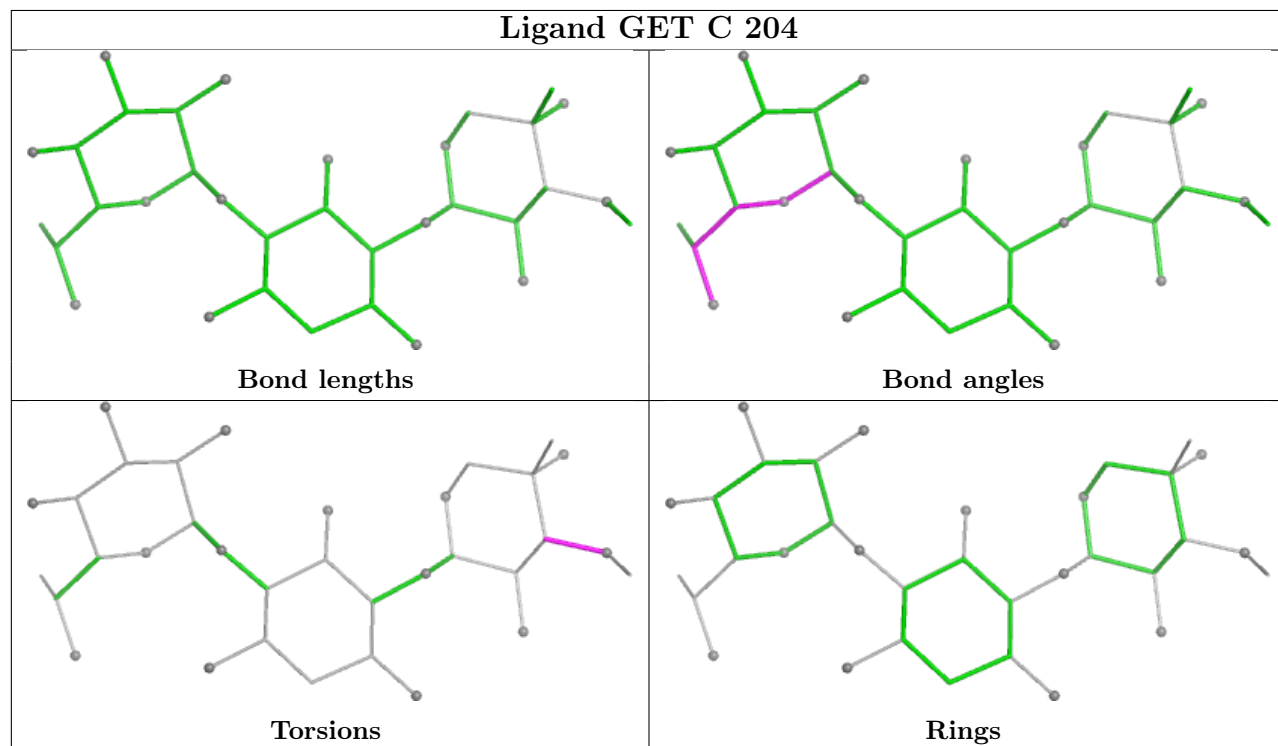
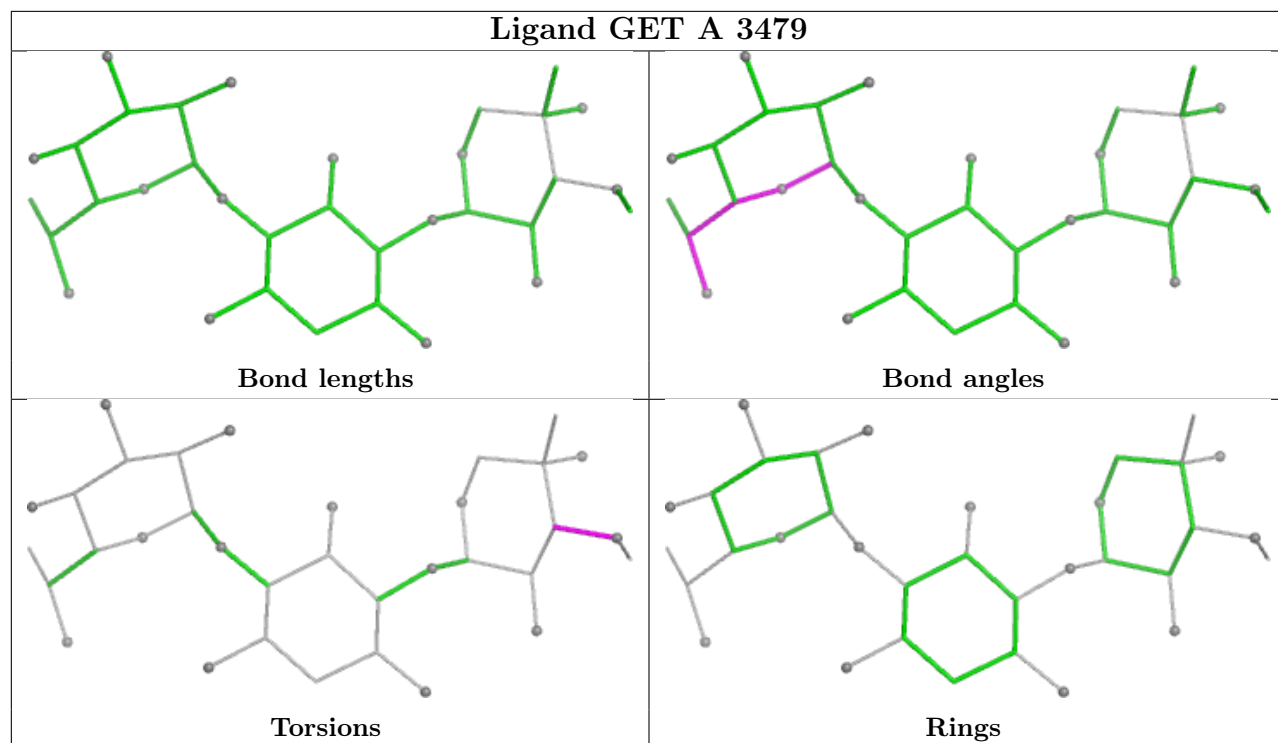


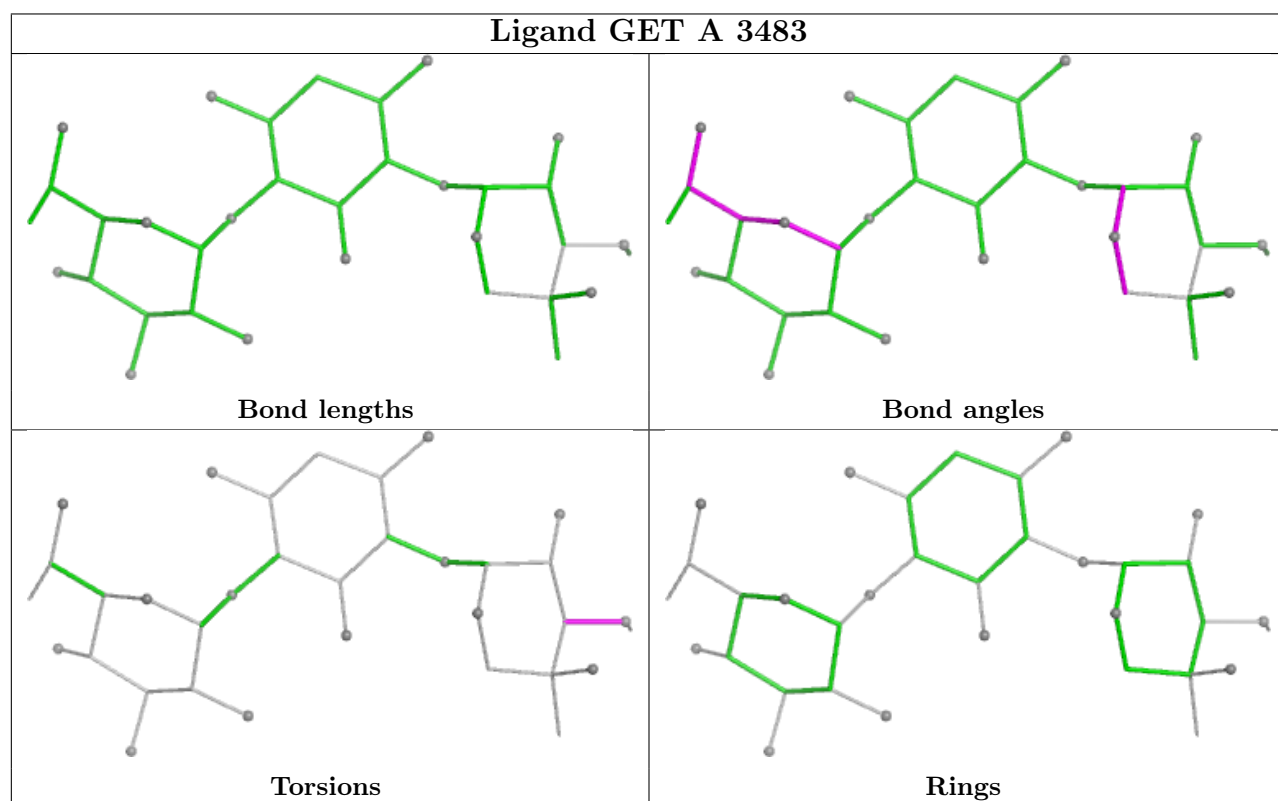
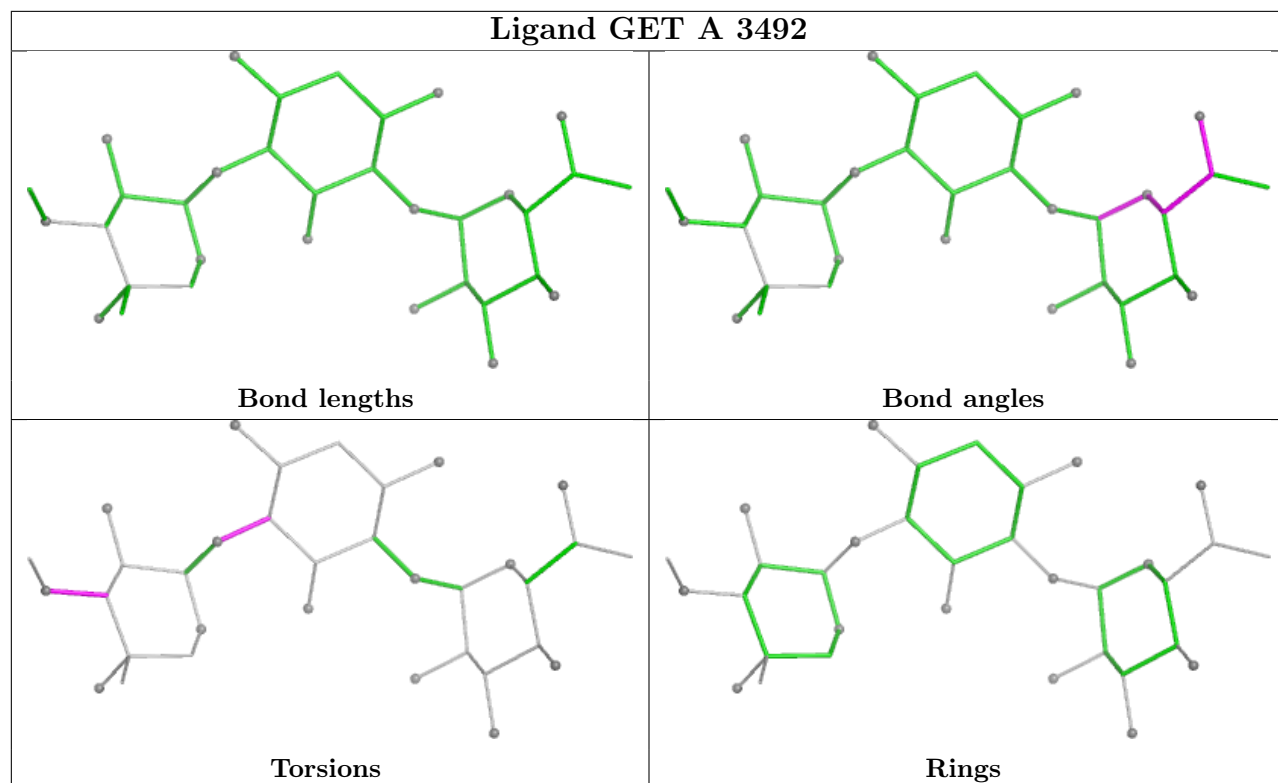


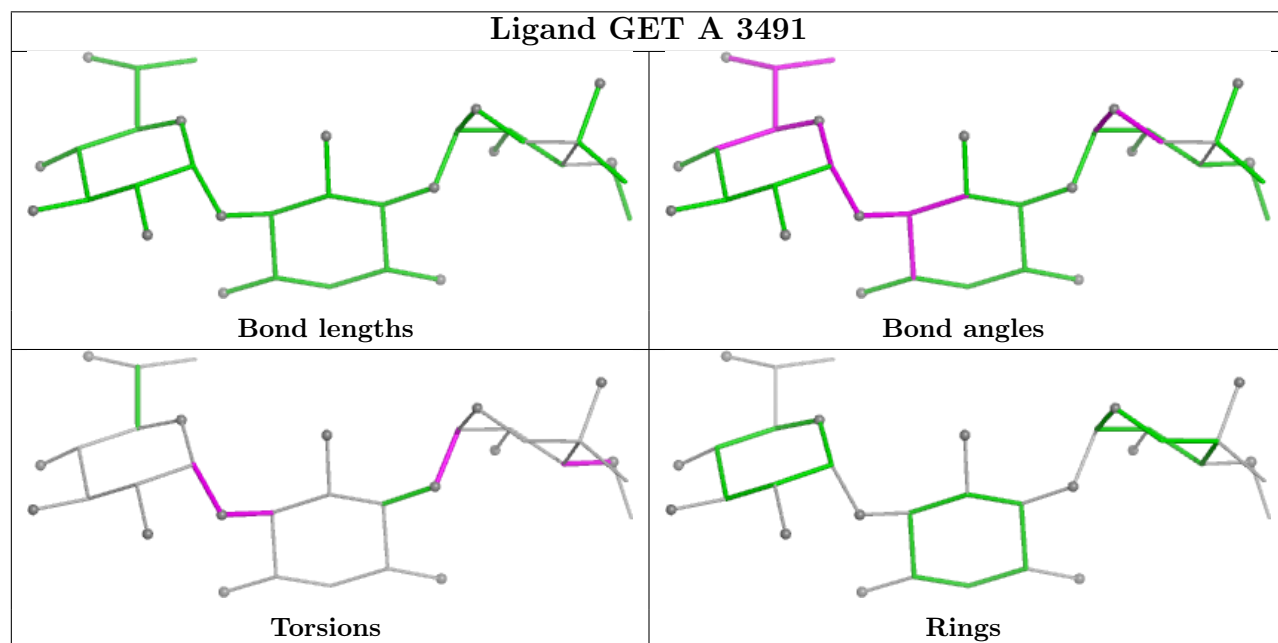
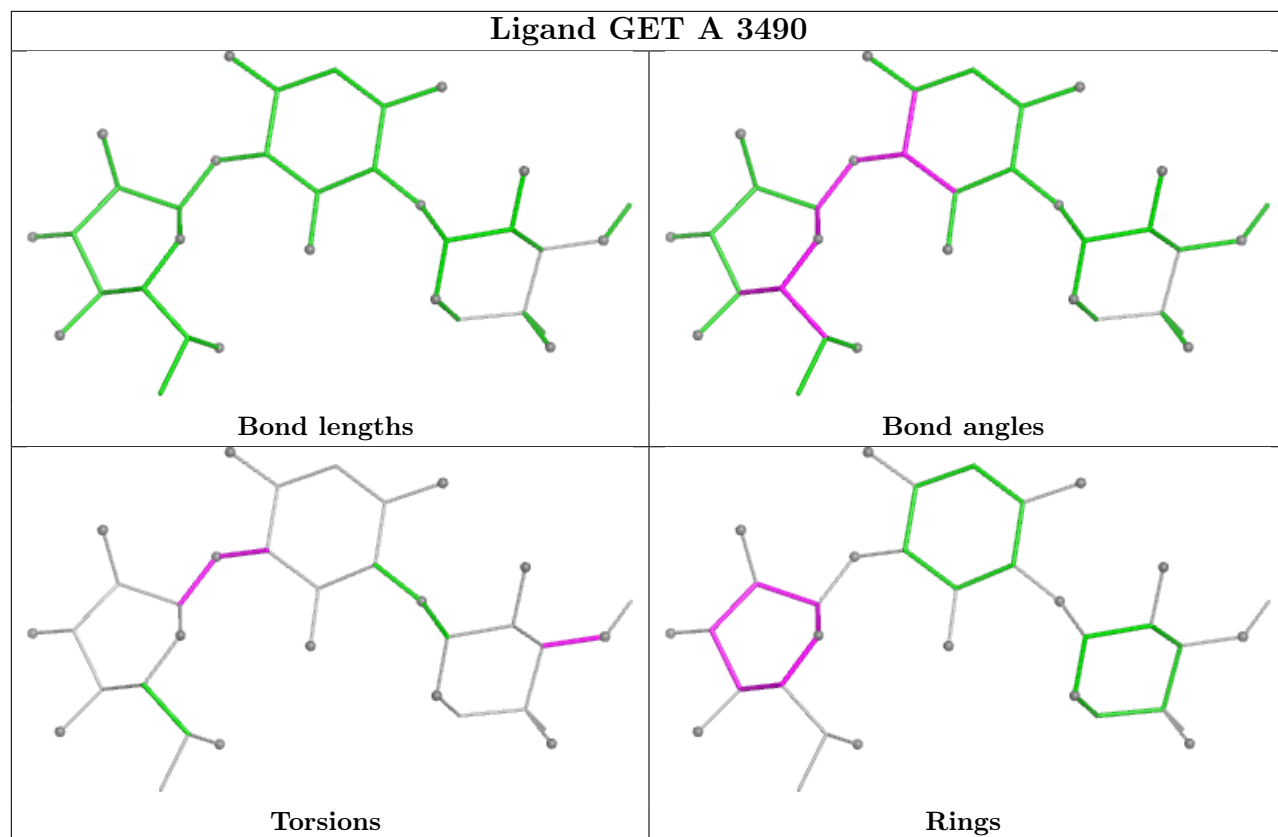


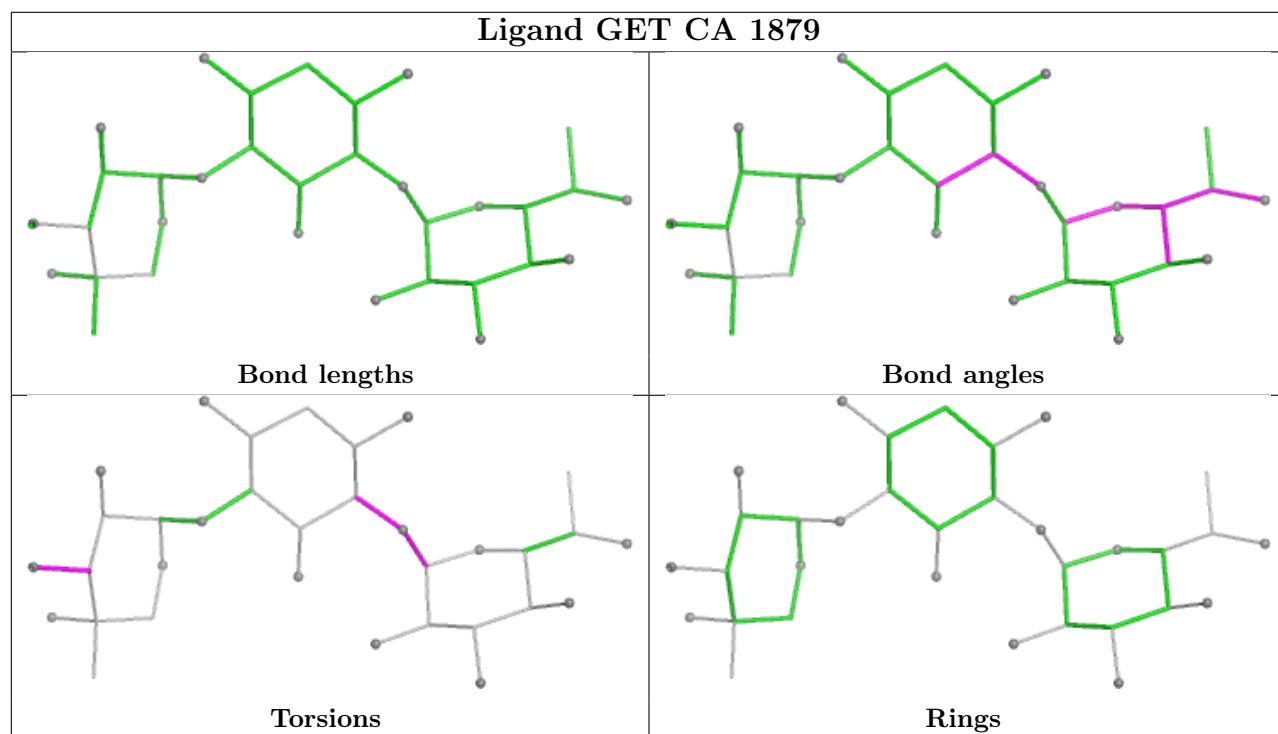
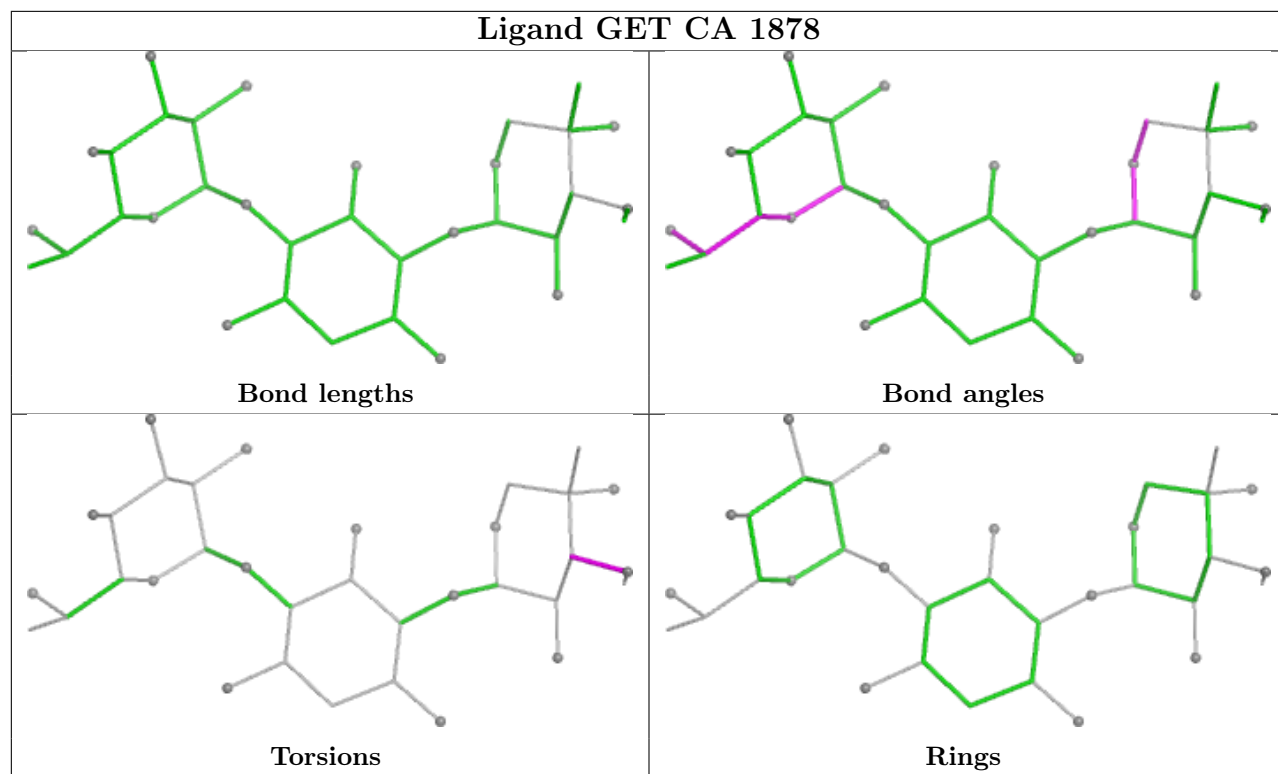


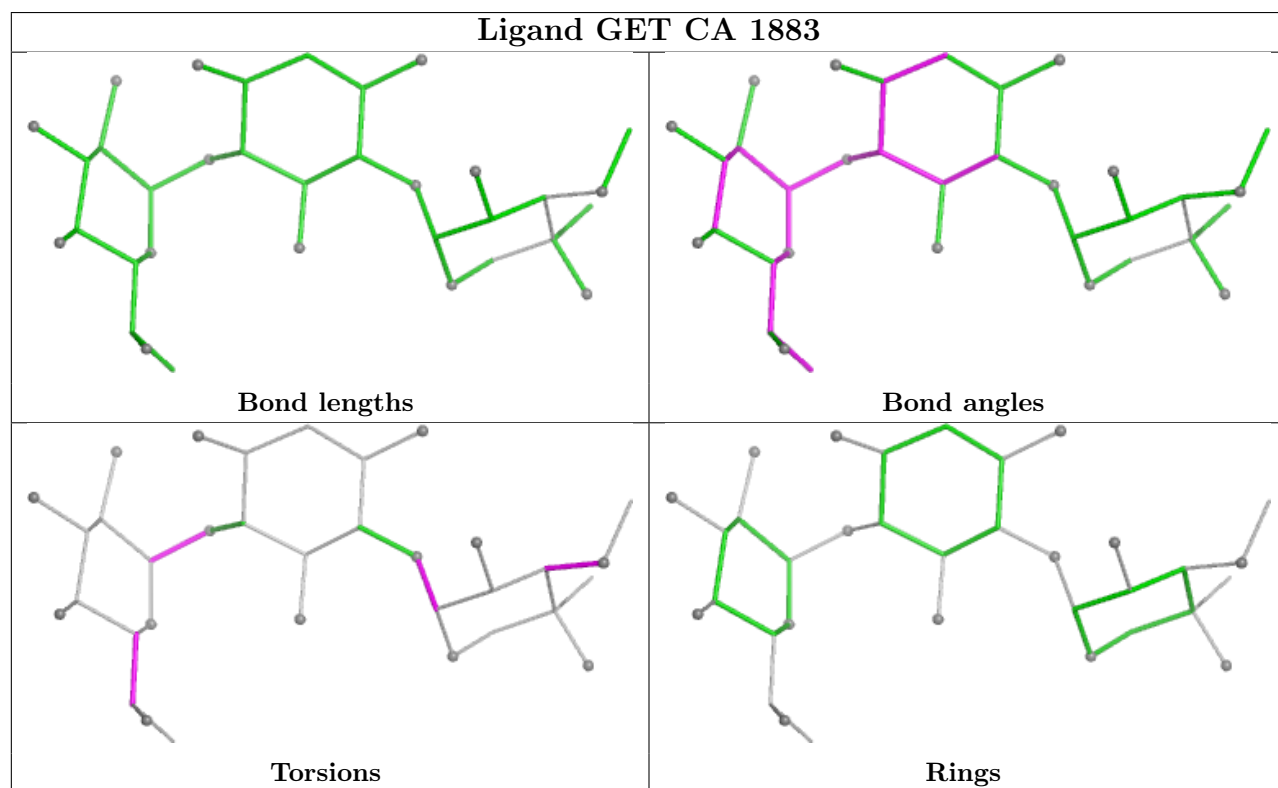
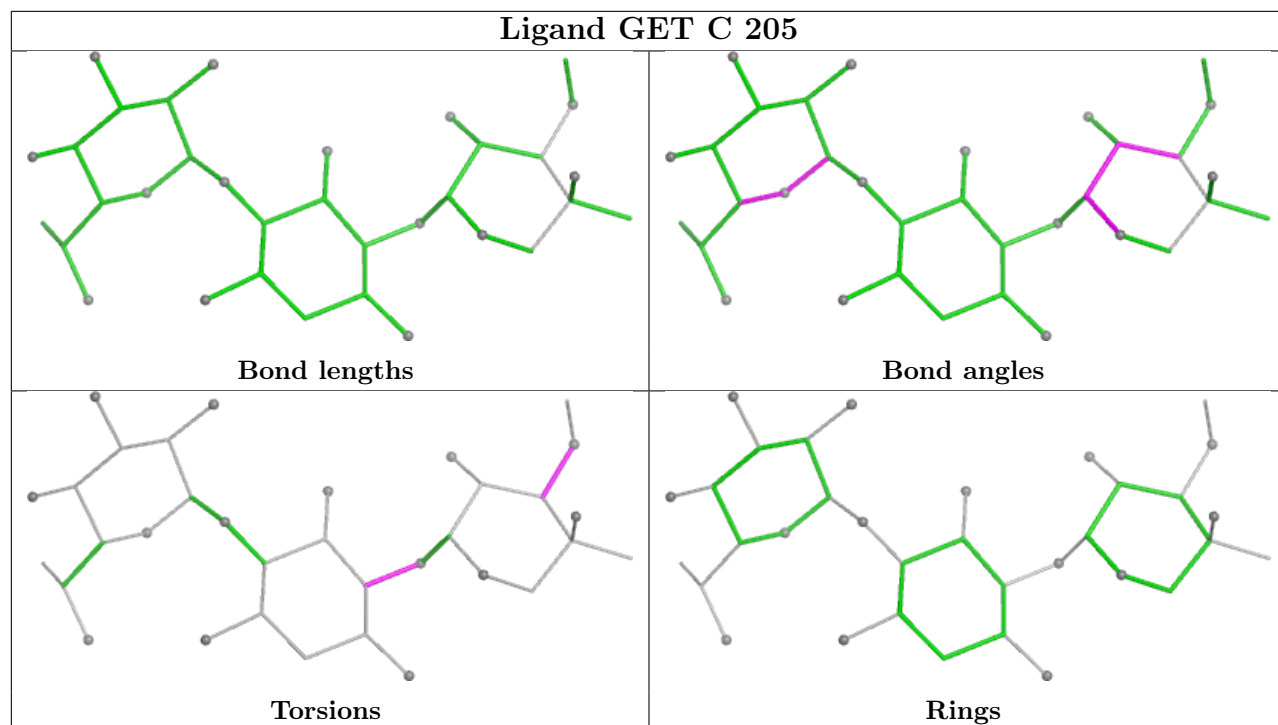




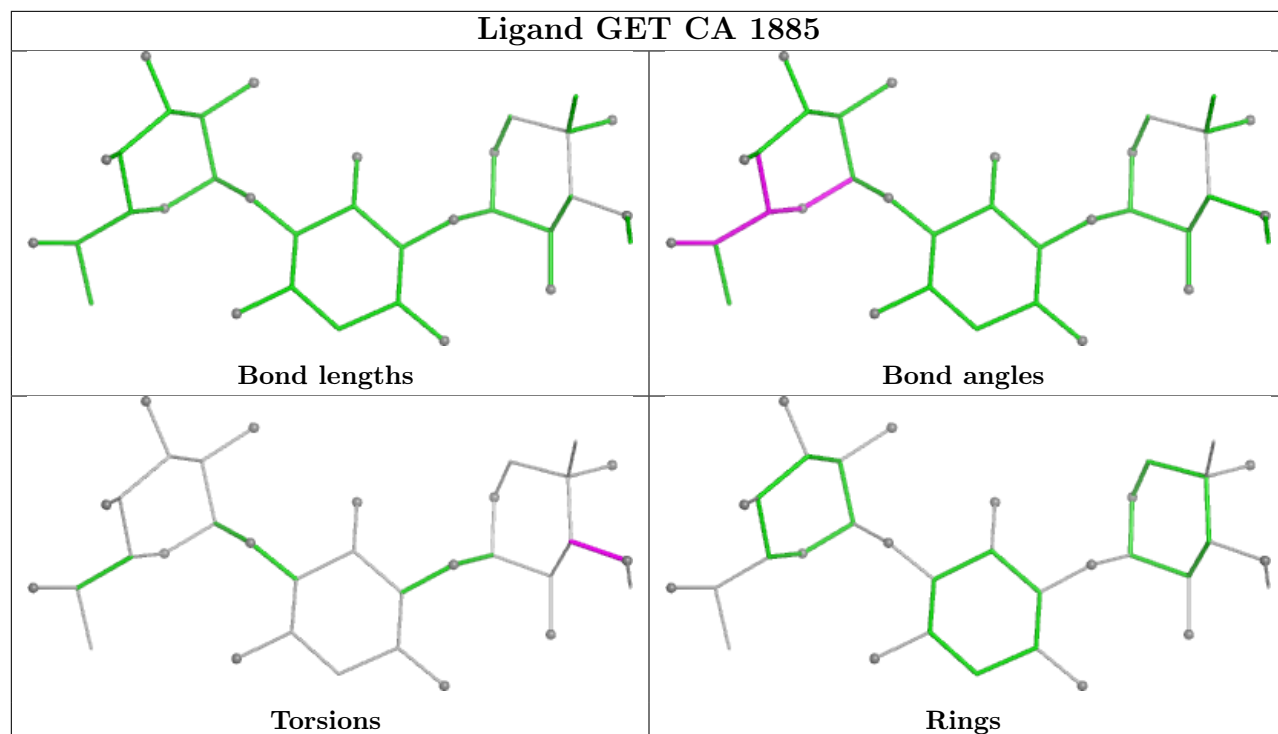




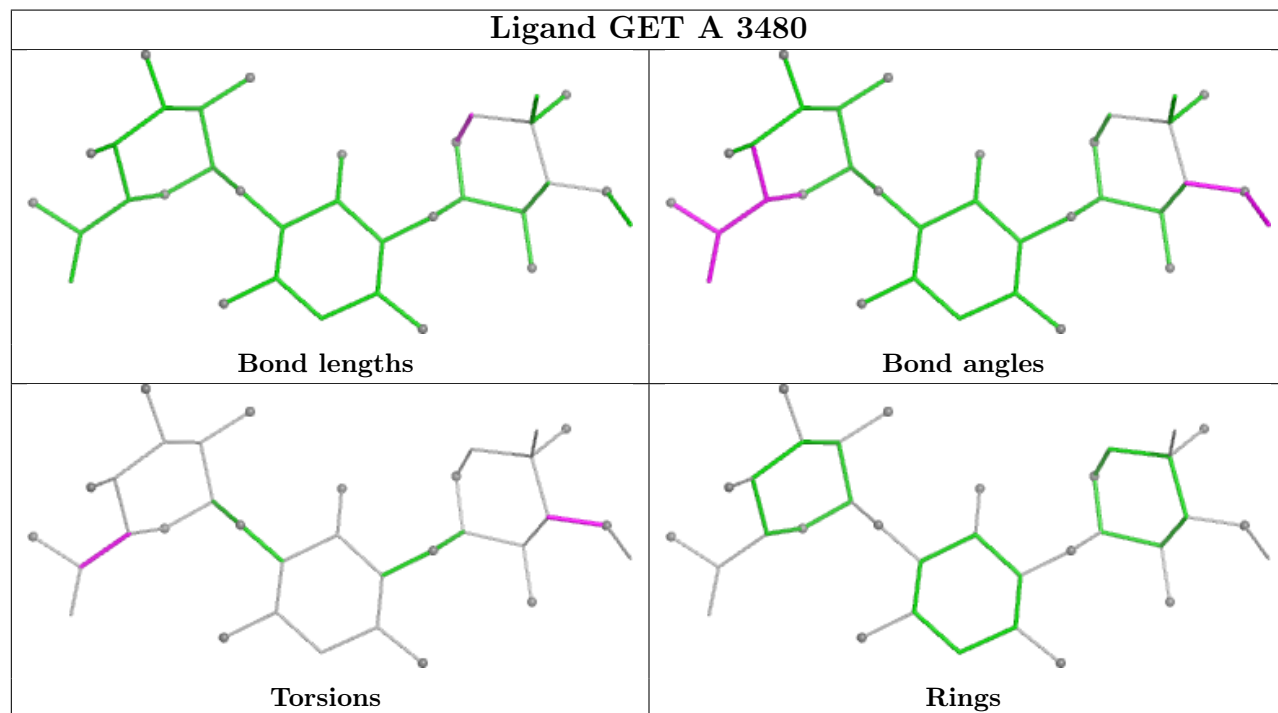


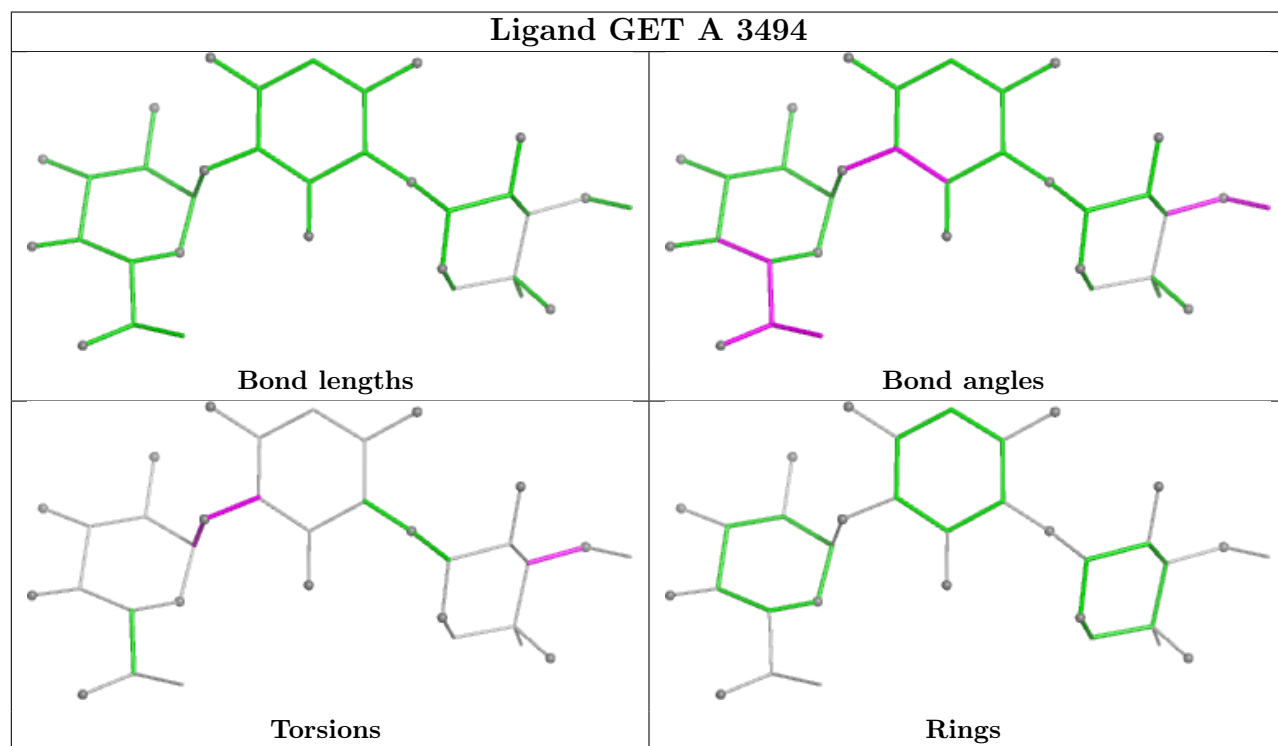
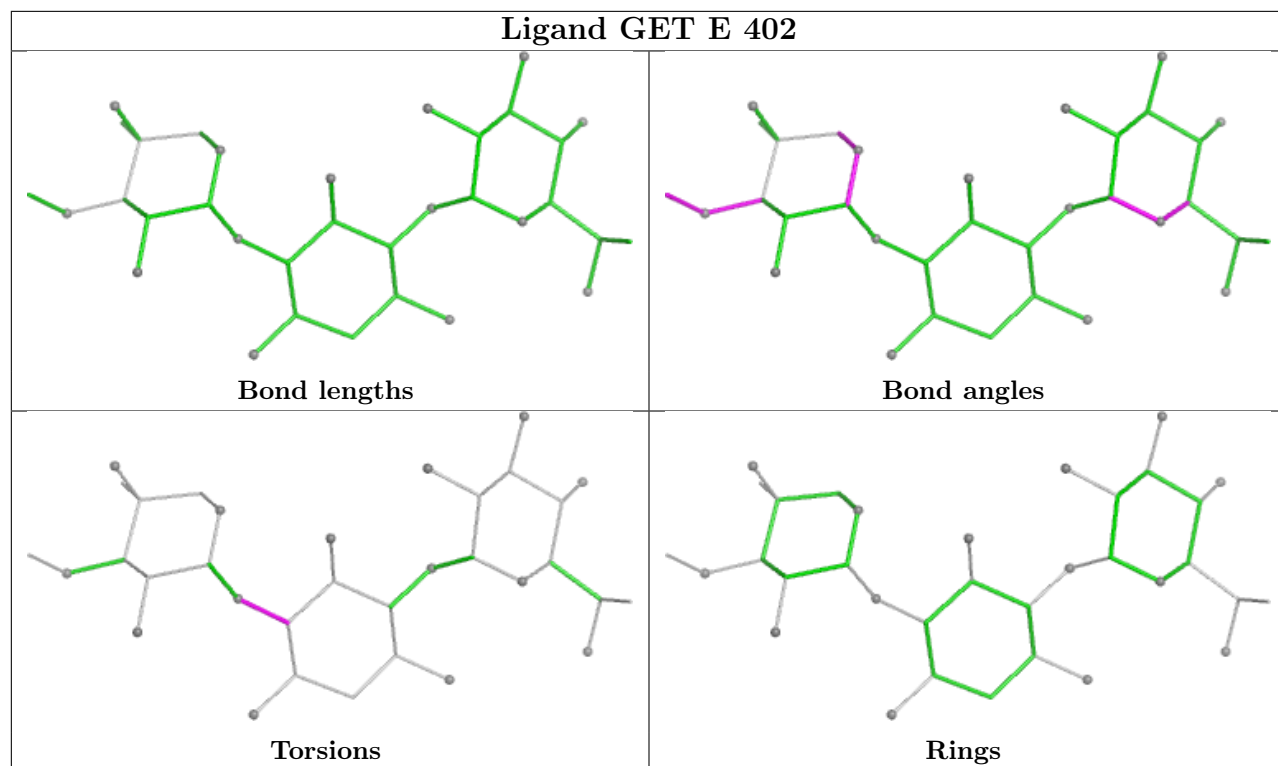


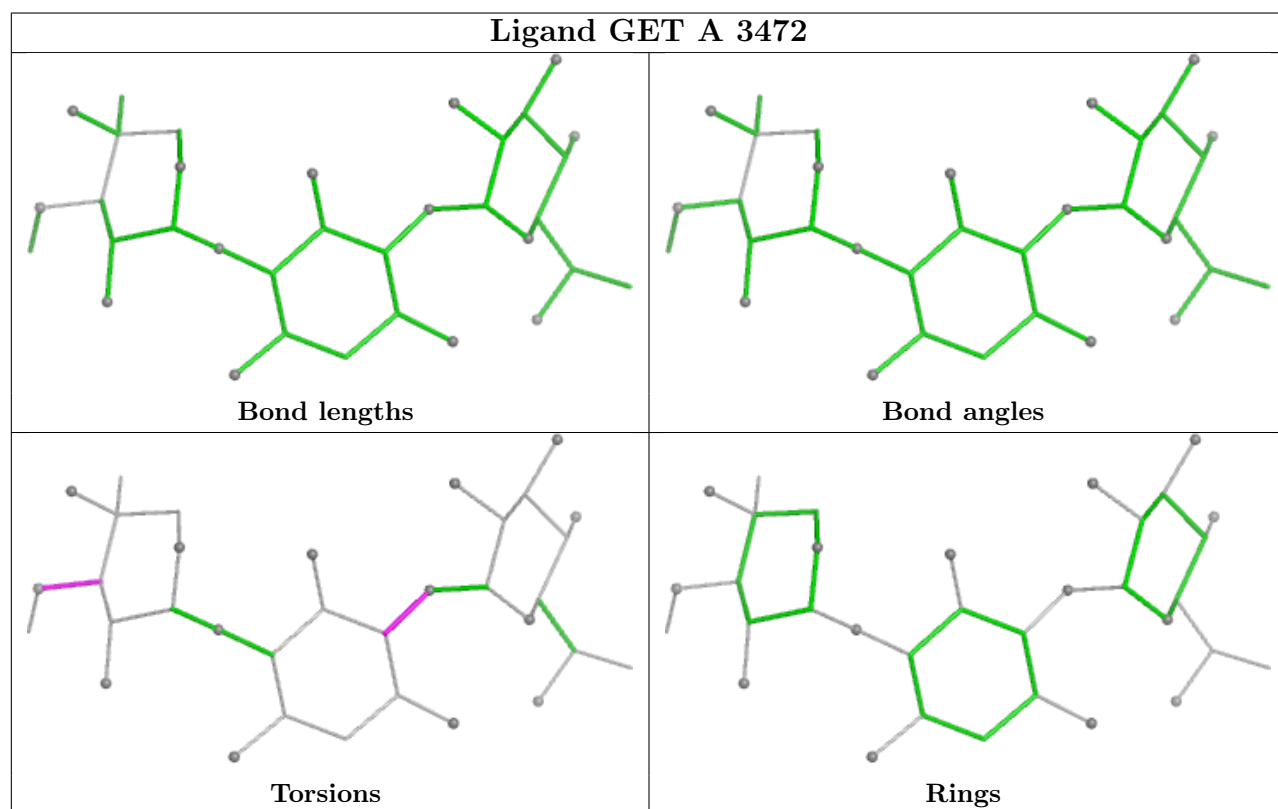
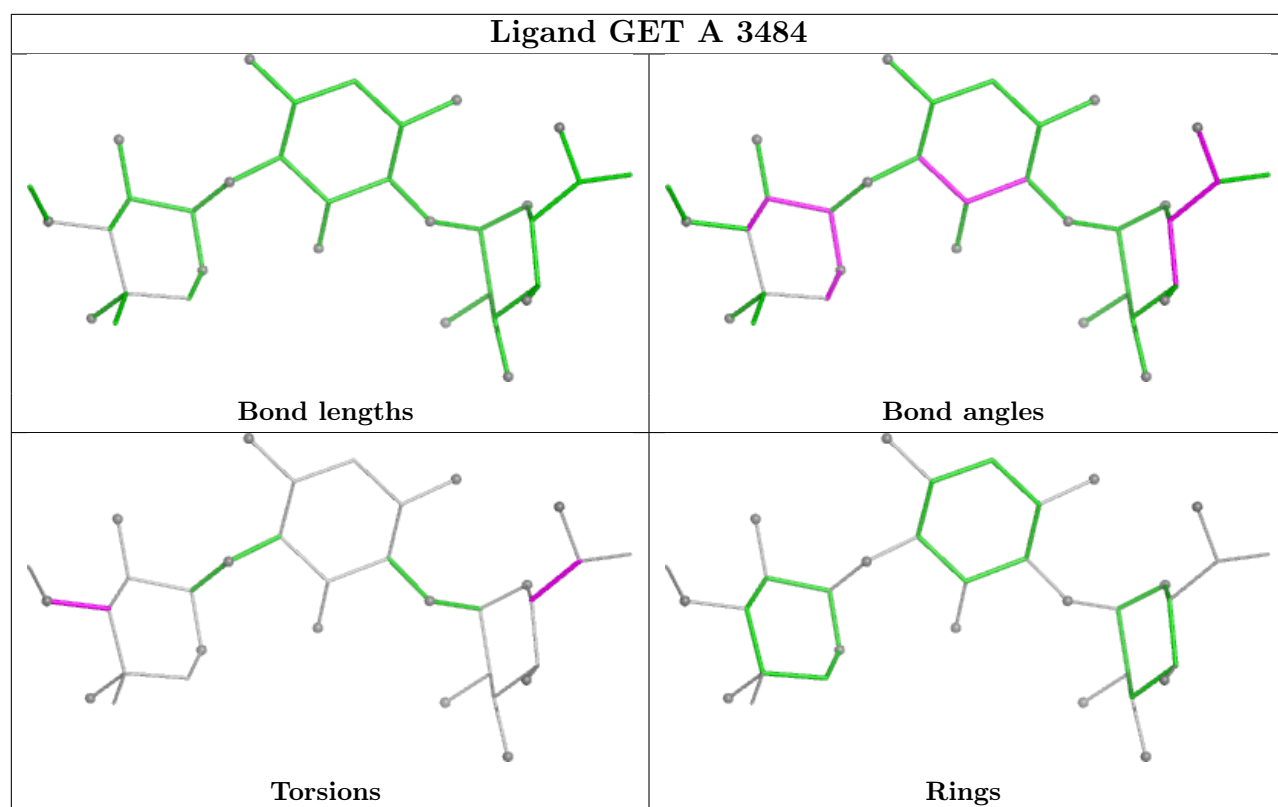
Ligand GET CA 1885

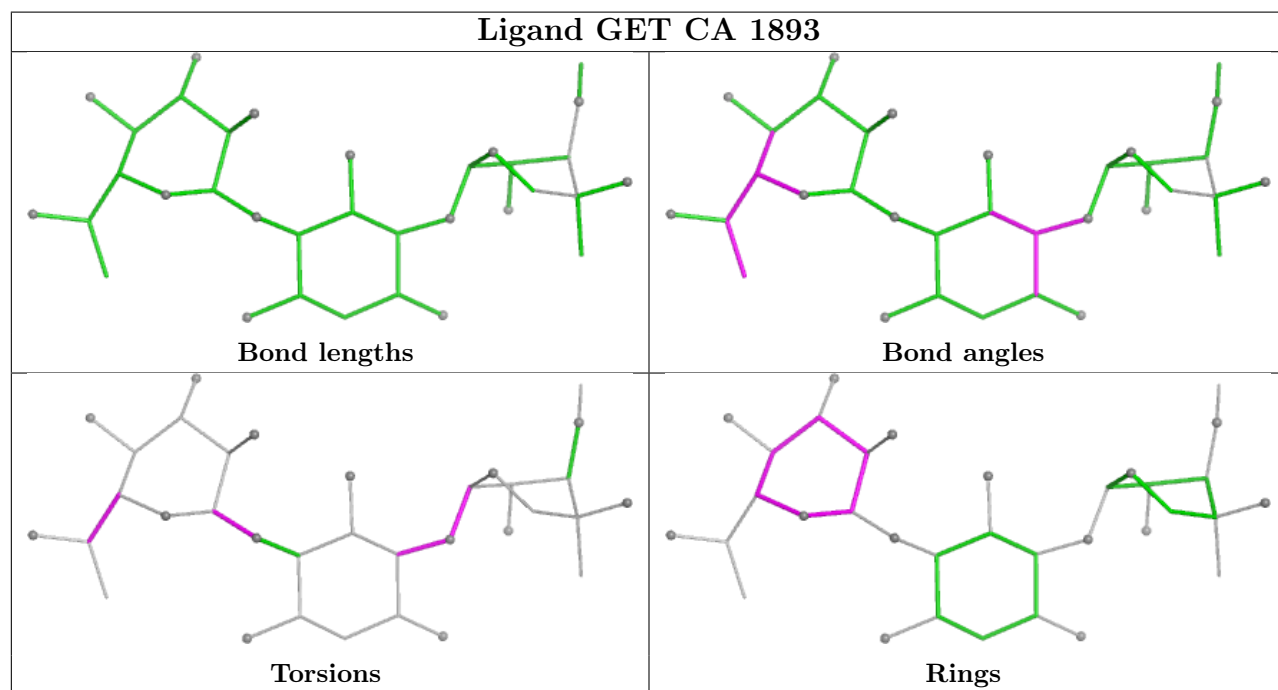
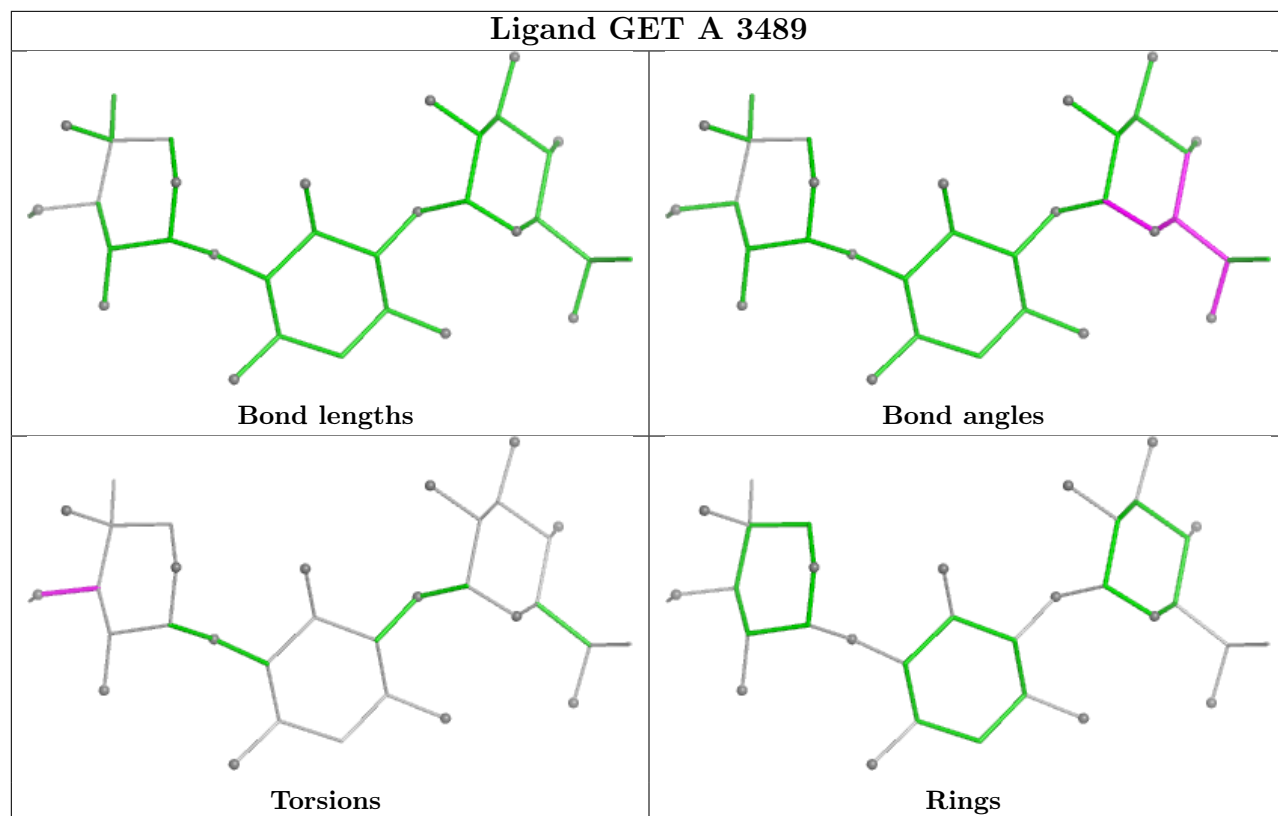


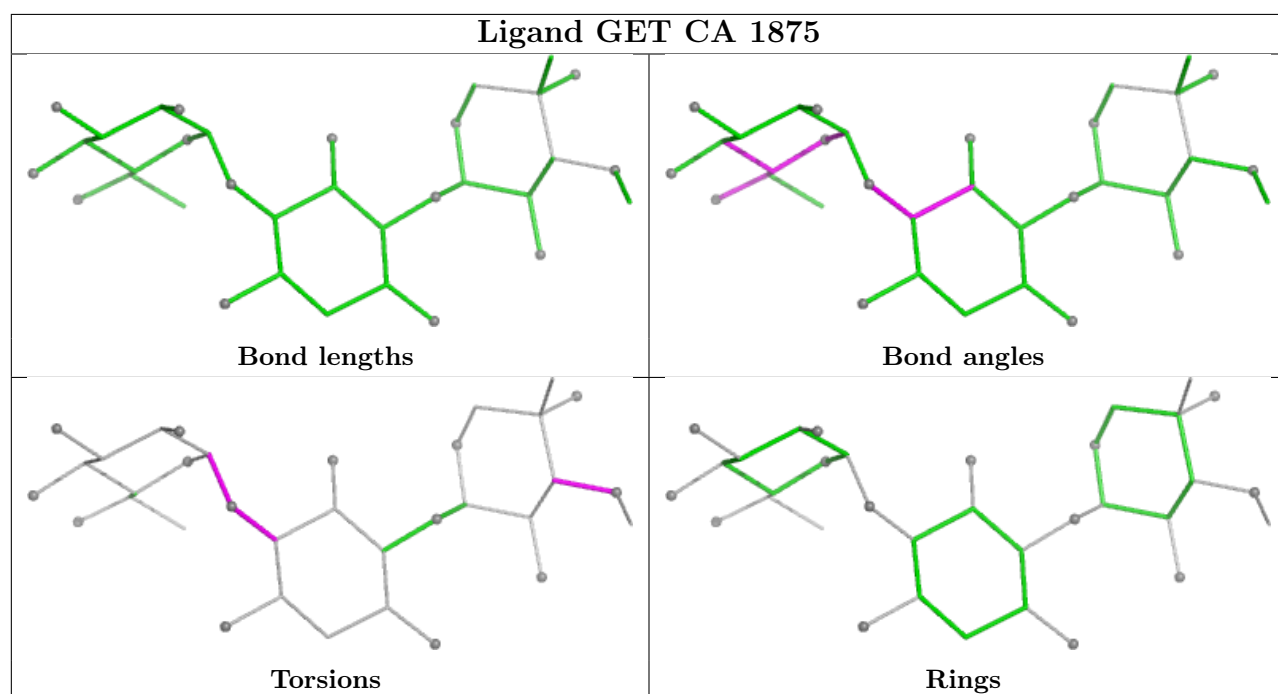
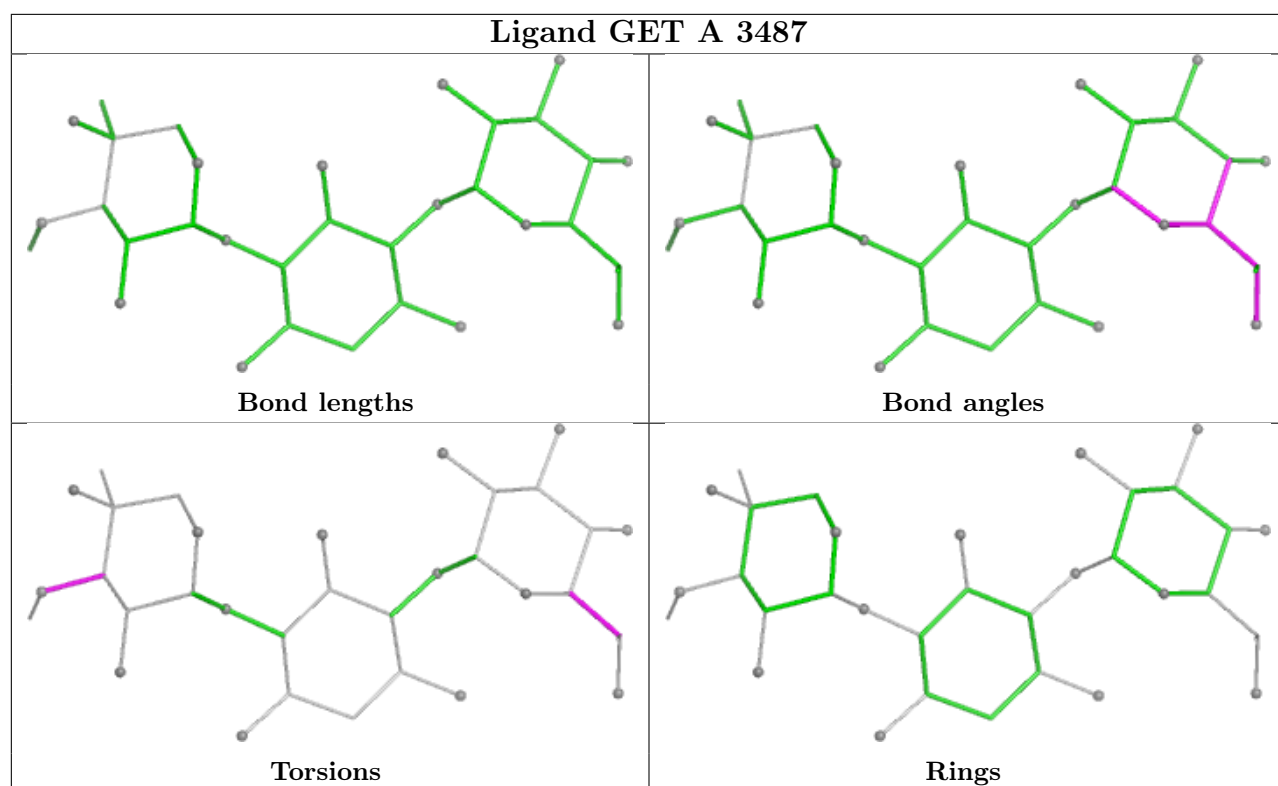
Ligand GET A 3480



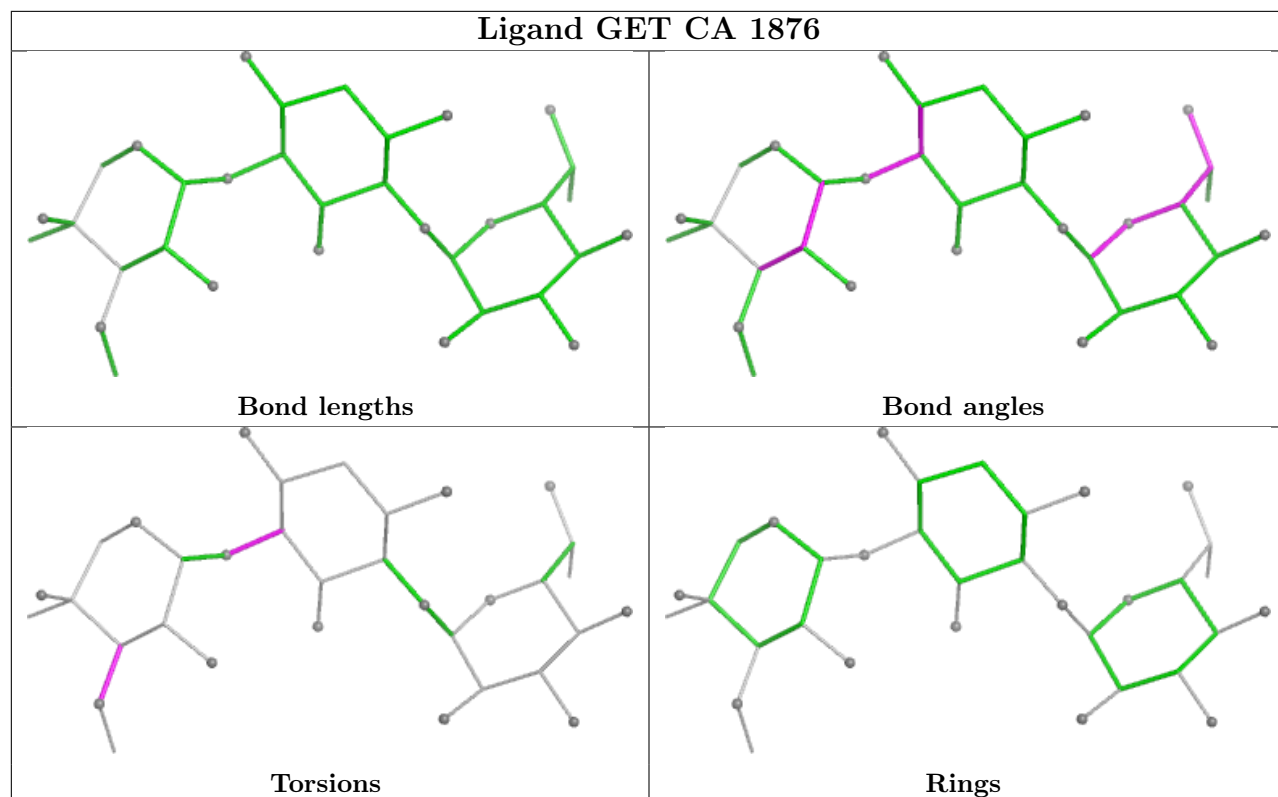




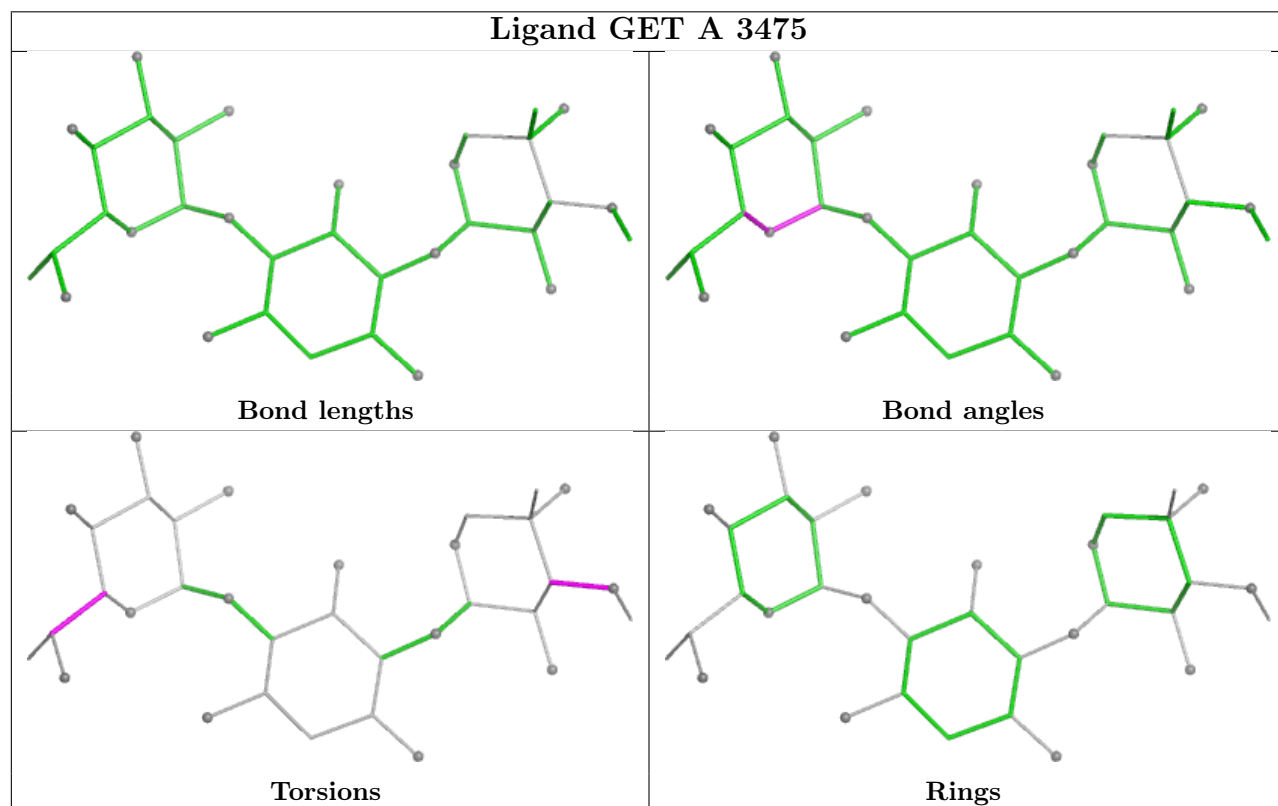




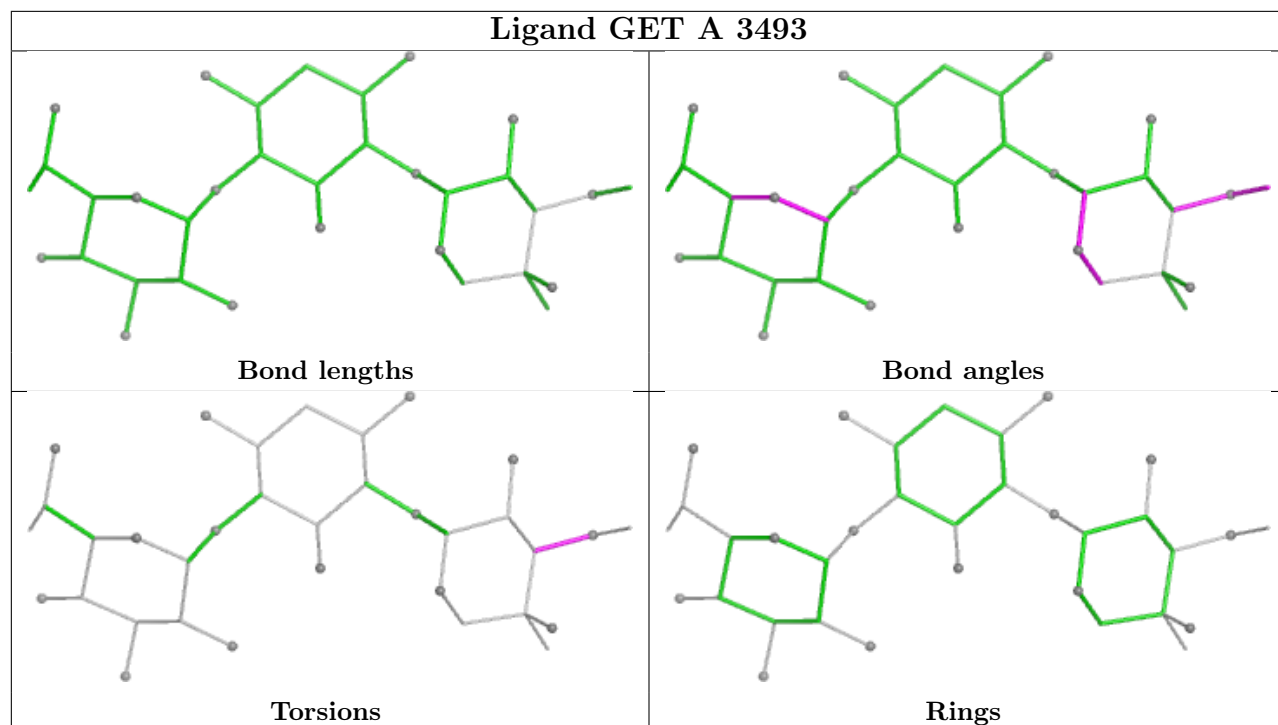
Ligand GET CA 1876



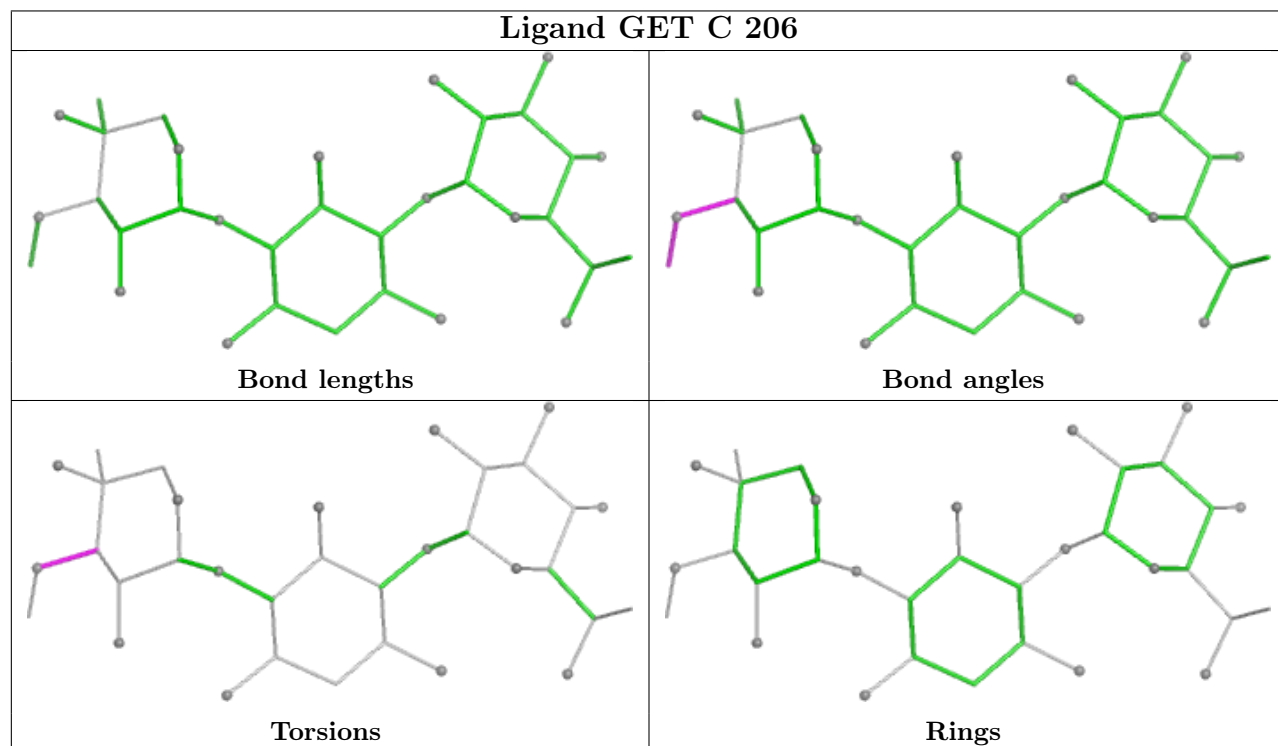
Ligand GET A 3475



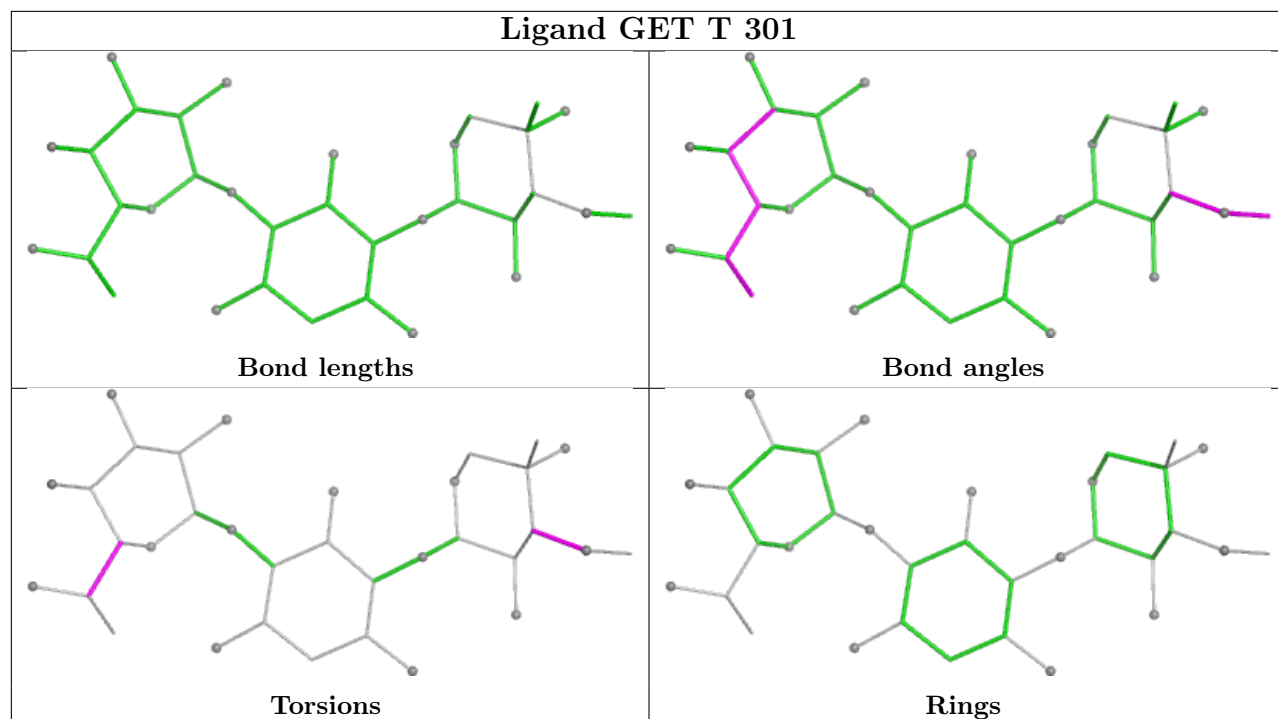
Ligand GET A 3493



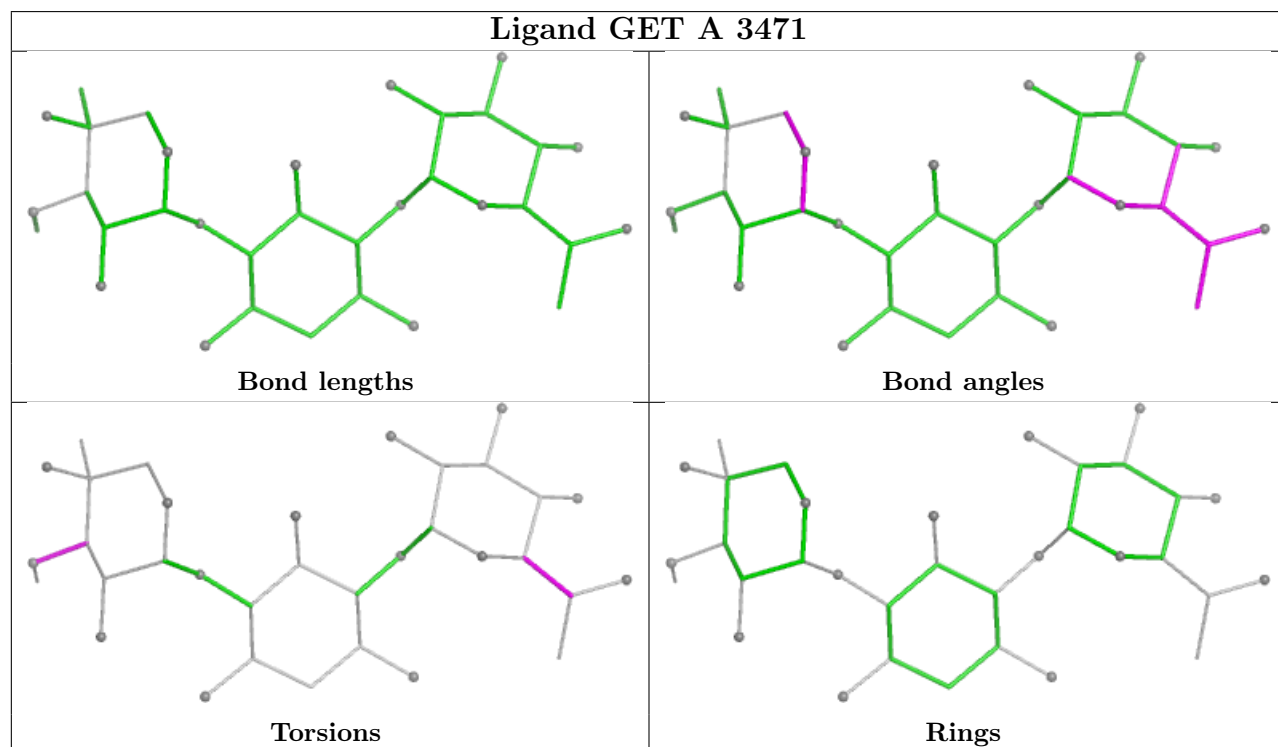
Ligand GET C 206



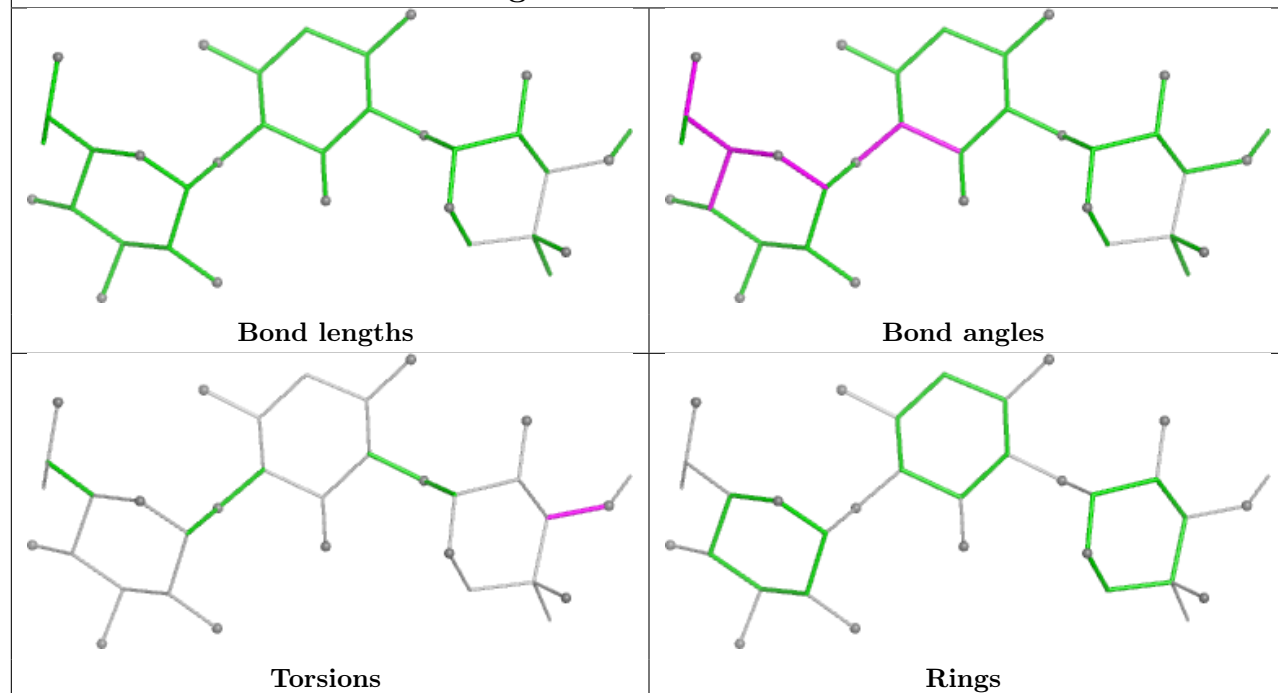
Ligand GET T 301



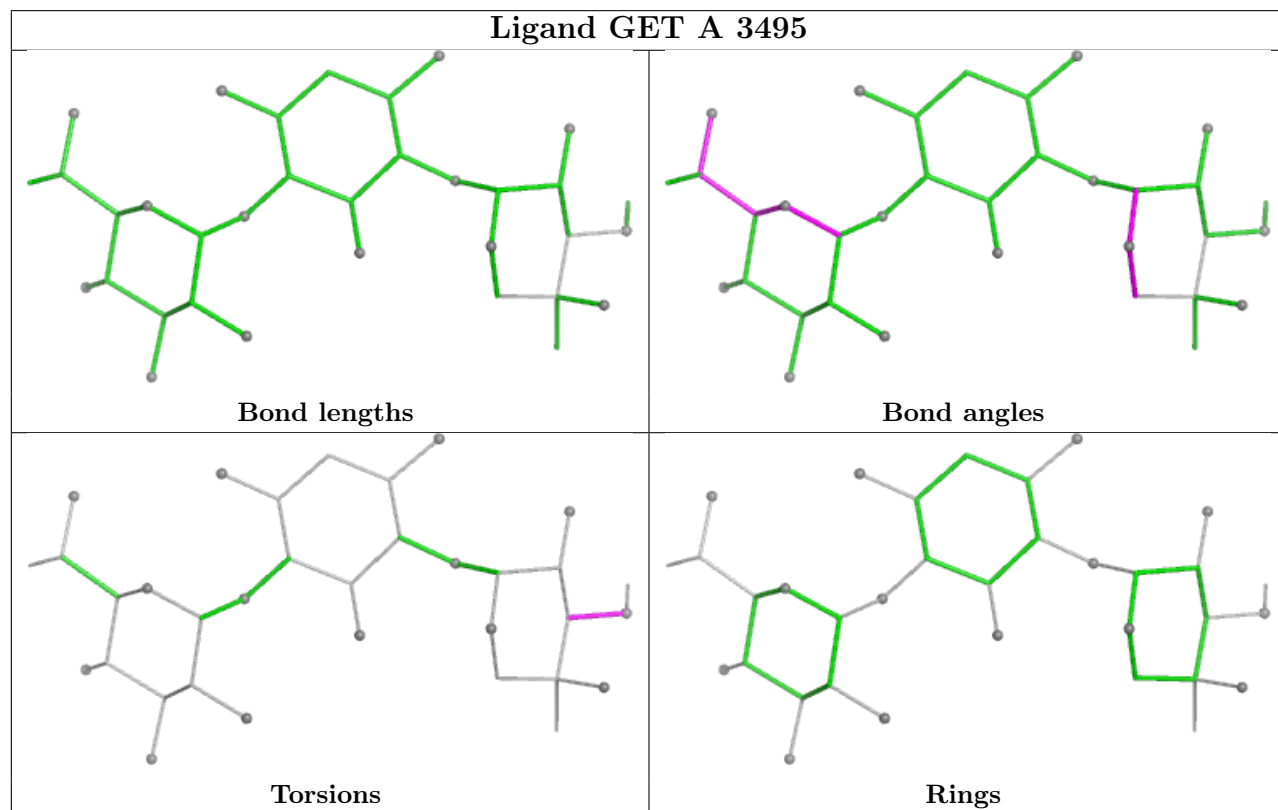
Ligand GET A 3471

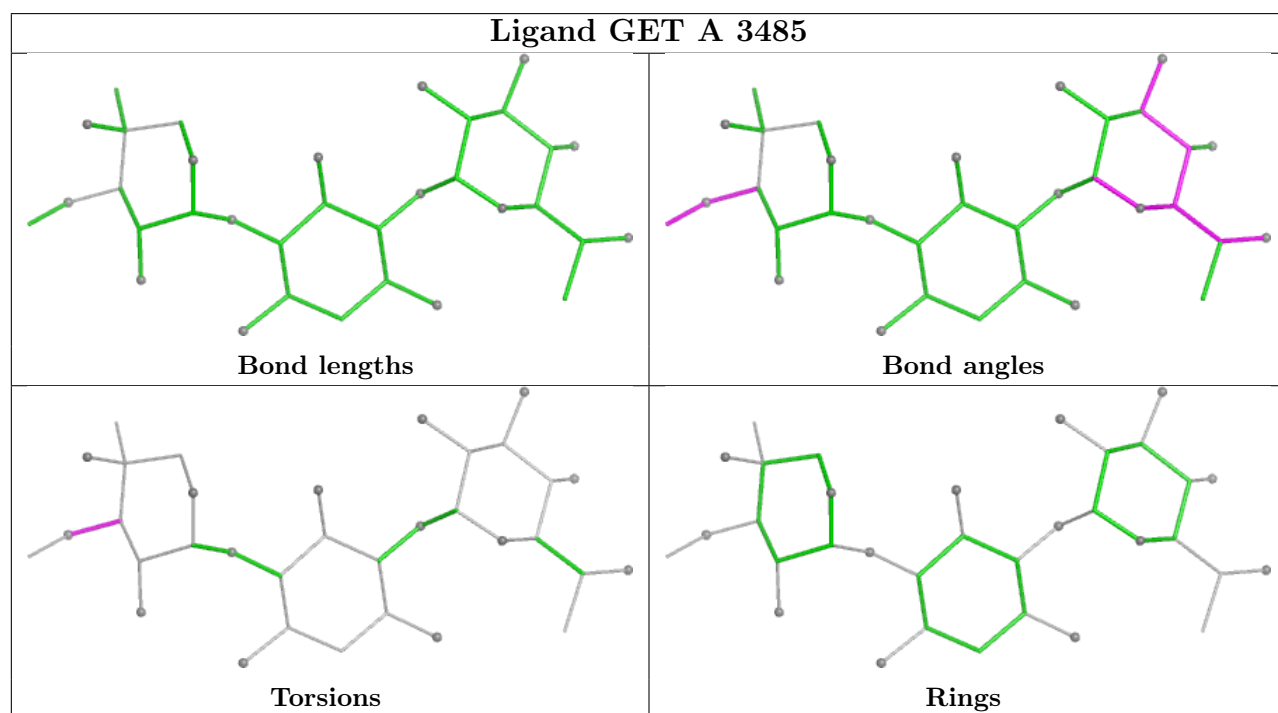
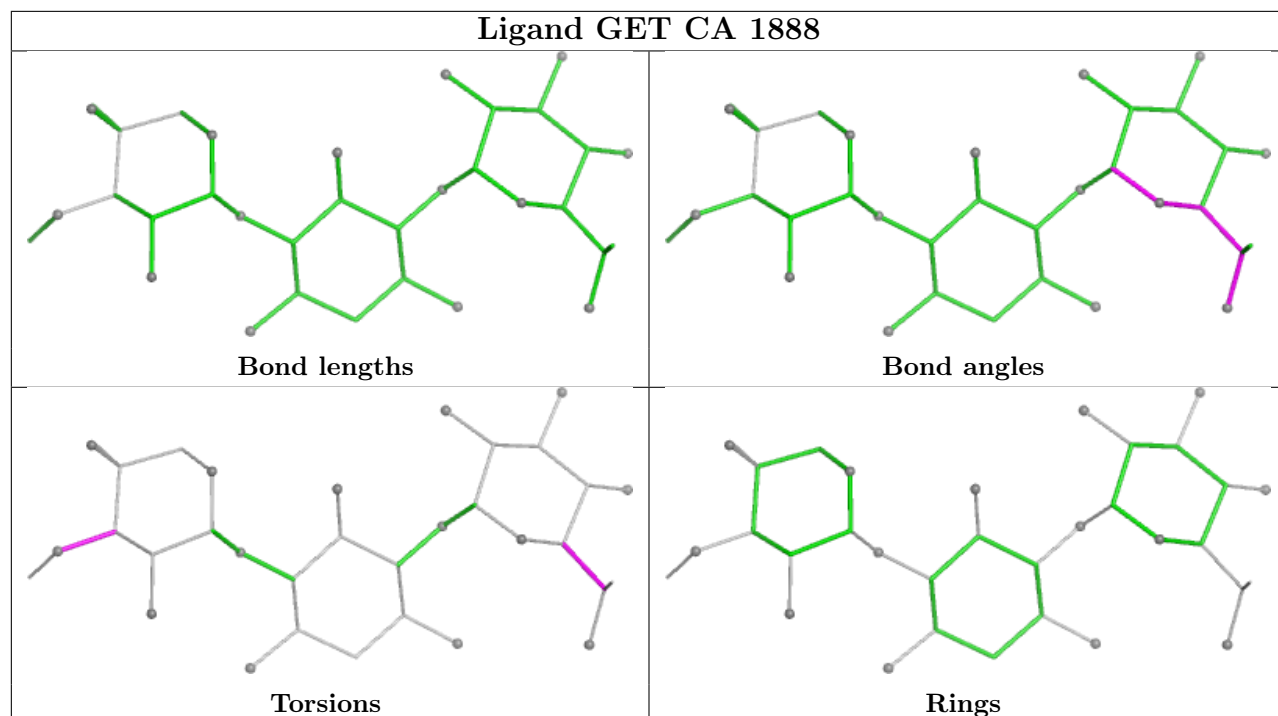


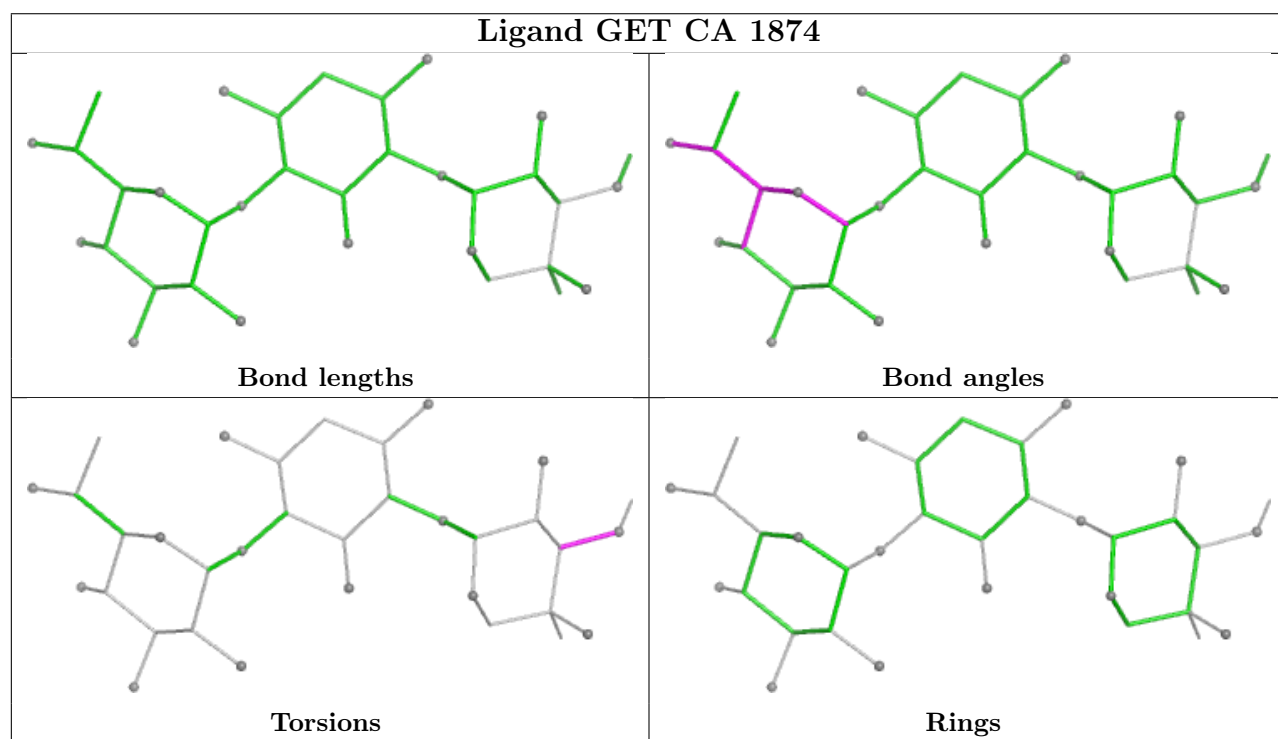
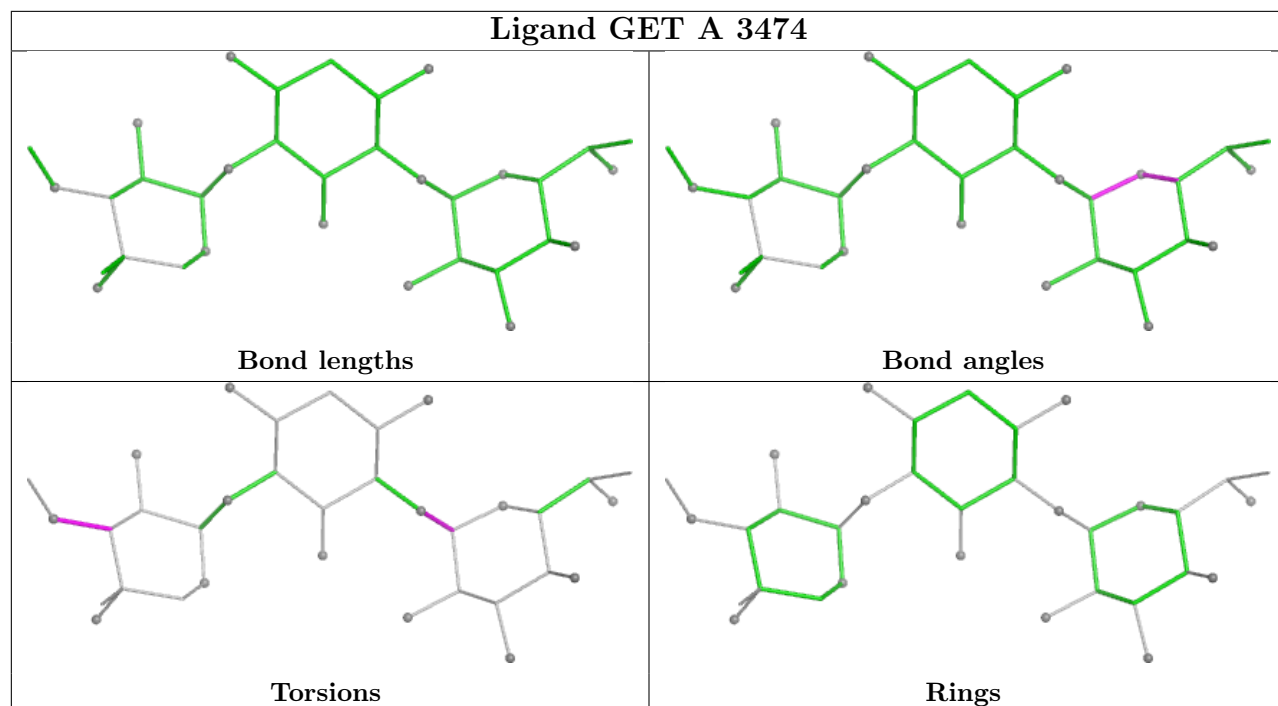
Ligand GET CA 1884

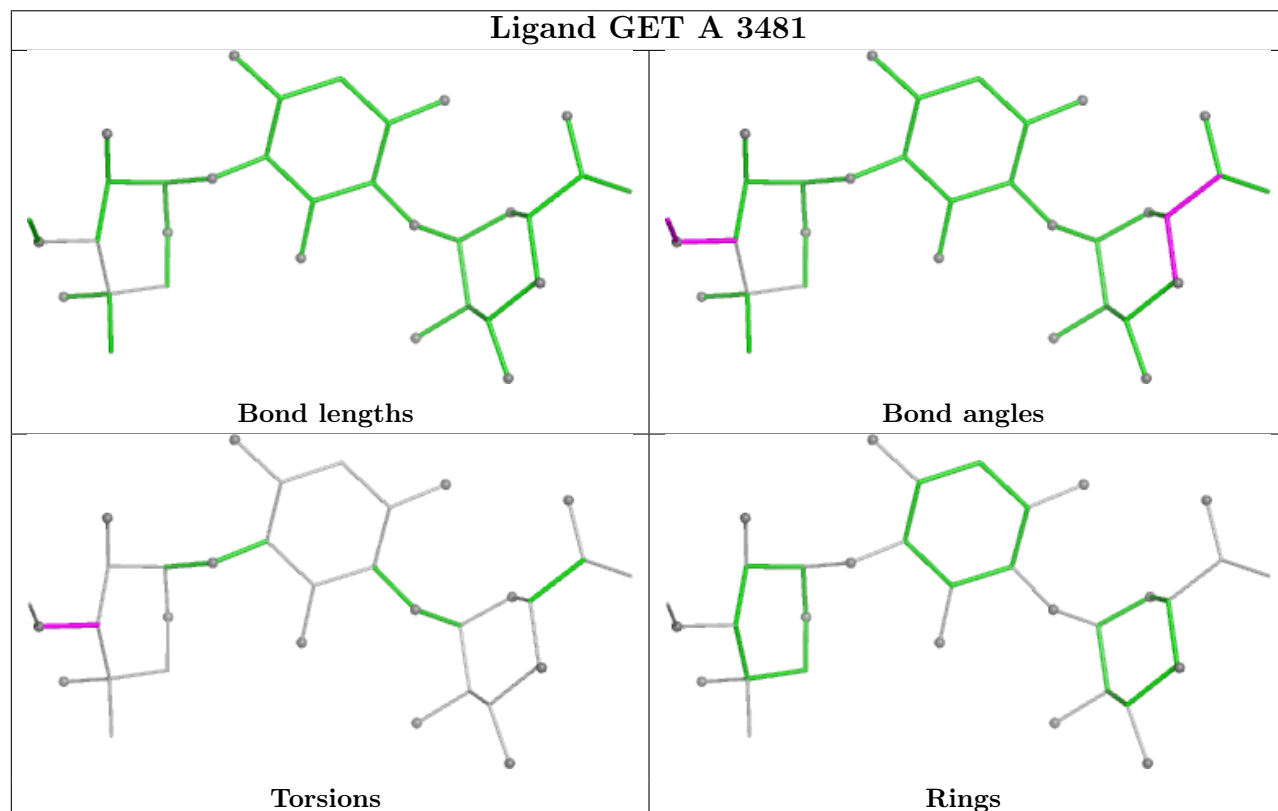
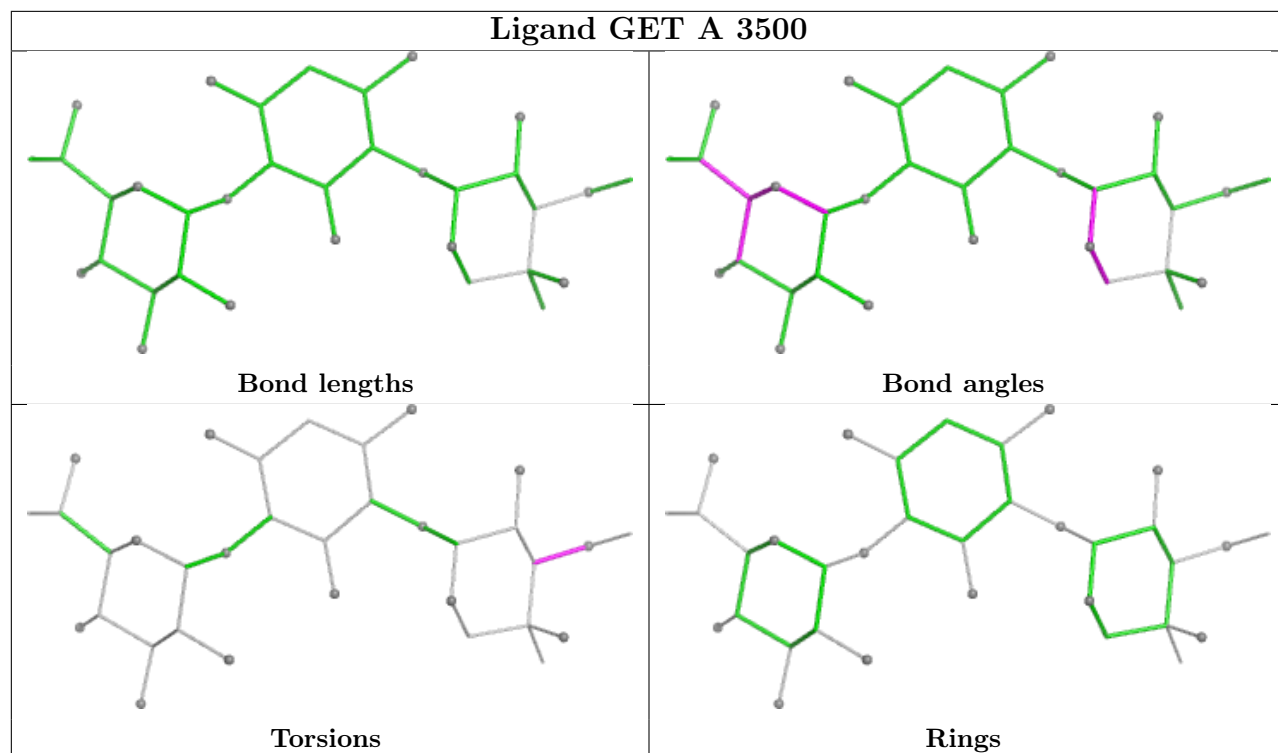


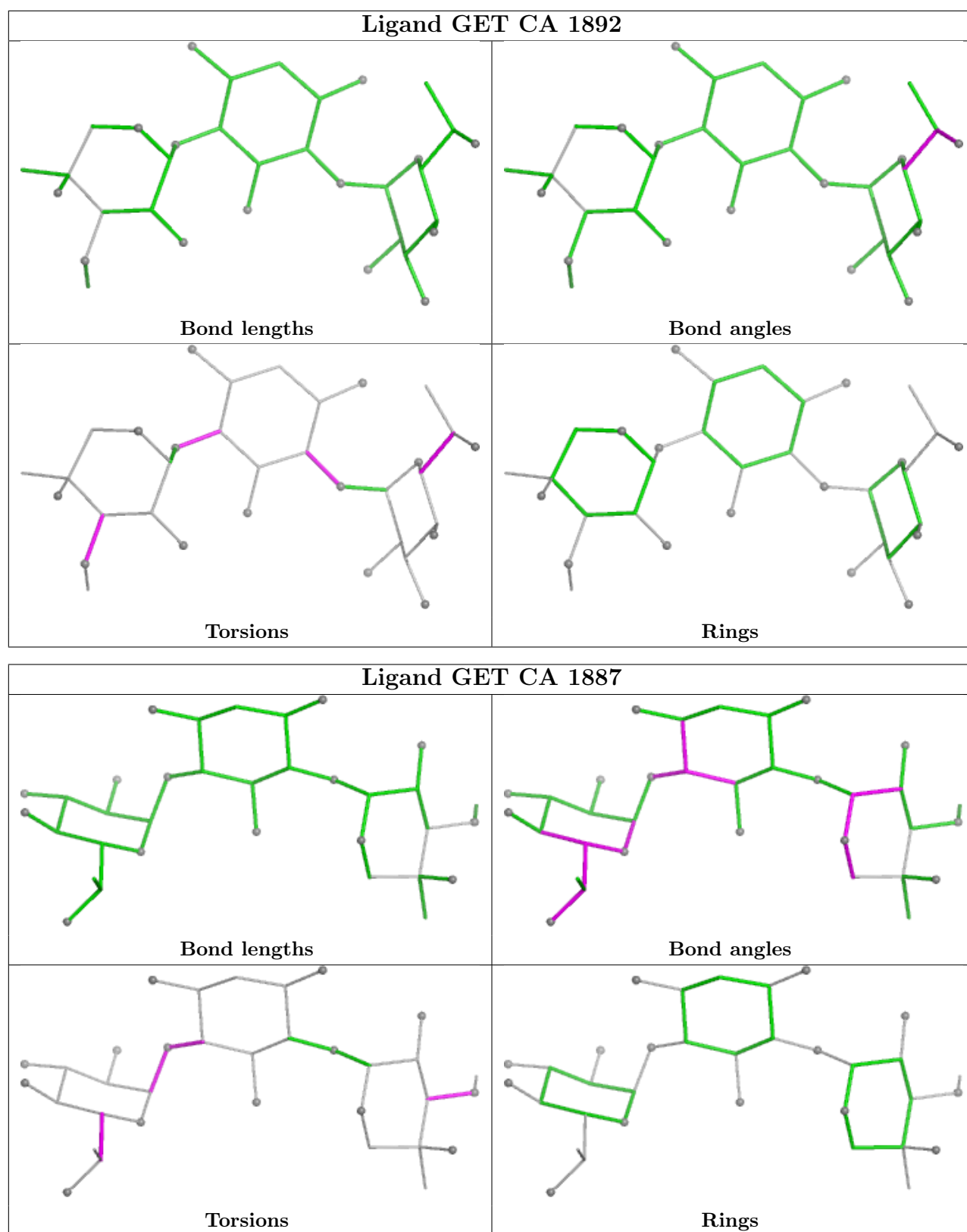
Ligand GET A 3495











5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

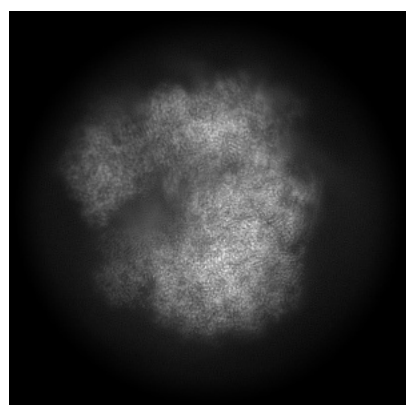
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-55225. These allow visual inspection of the internal detail of the map and identification of artifacts.

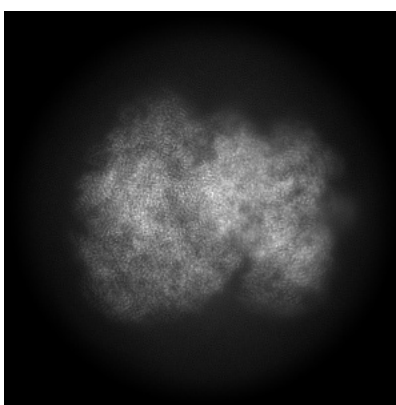
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

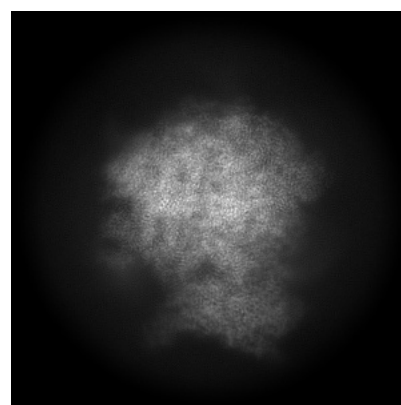
6.1.1 Primary map



X



Y

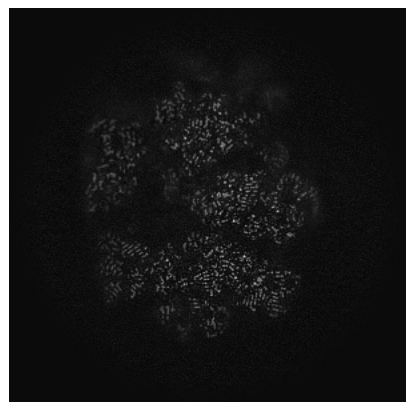


Z

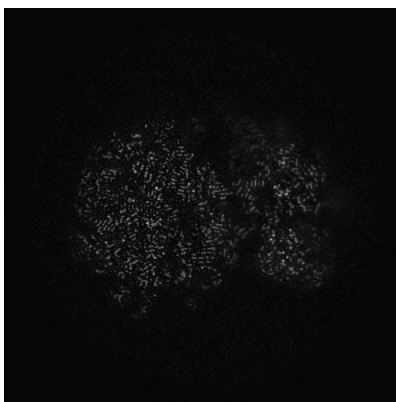
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

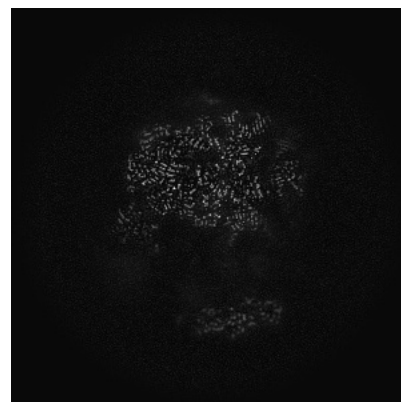
6.2.1 Primary map



X Index: 225



Y Index: 225

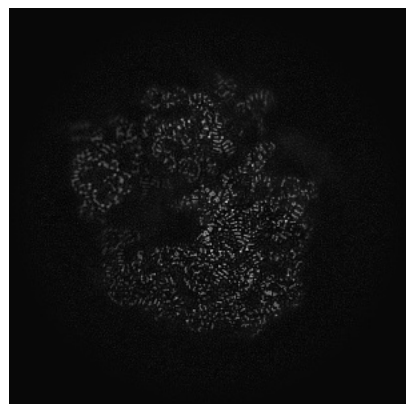


Z Index: 225

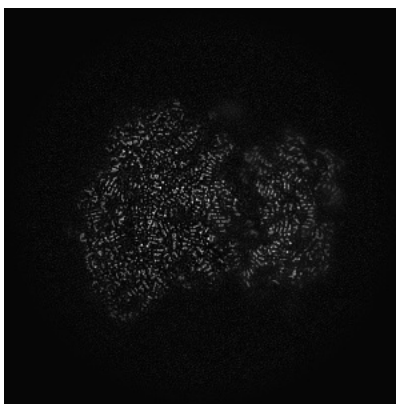
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

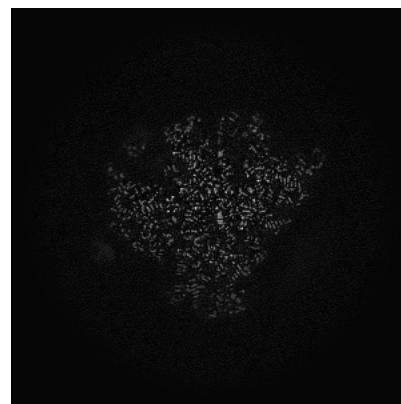
6.3.1 Primary map



X Index: 248



Y Index: 237

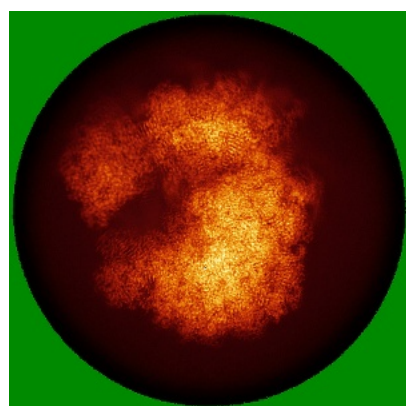


Z Index: 161

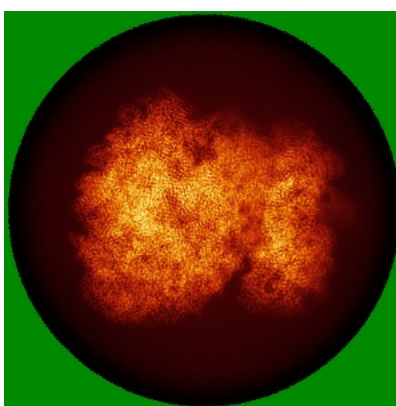
The images above show the largest variance slices of the map in three orthogonal directions.

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

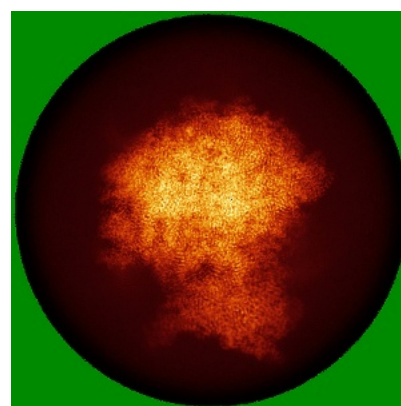
6.4.1 Primary map



X



Y

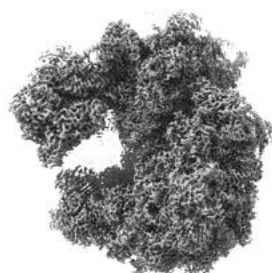


Z

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 0.39. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

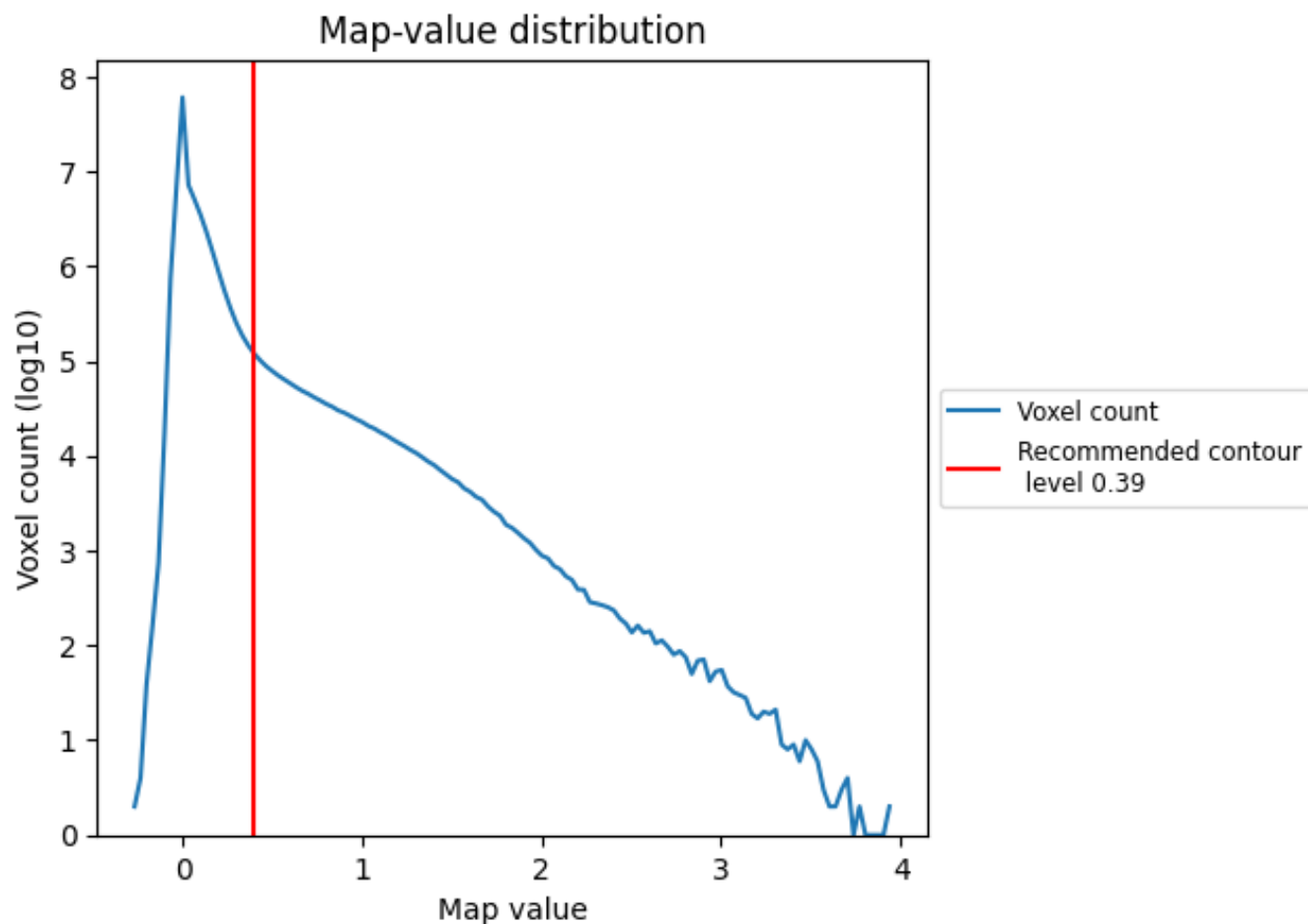
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

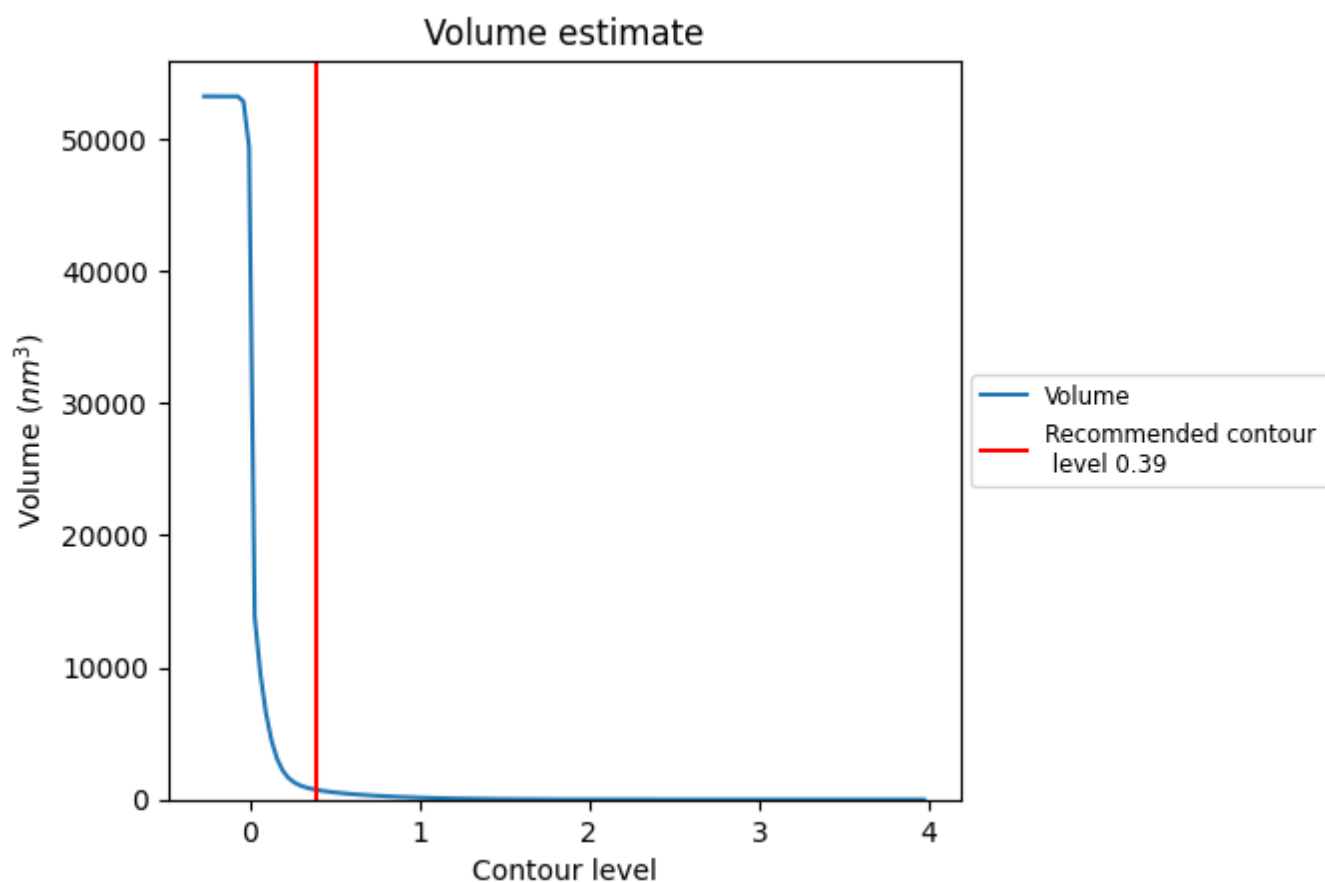
This section contains the results of statistical analysis of the map.

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.

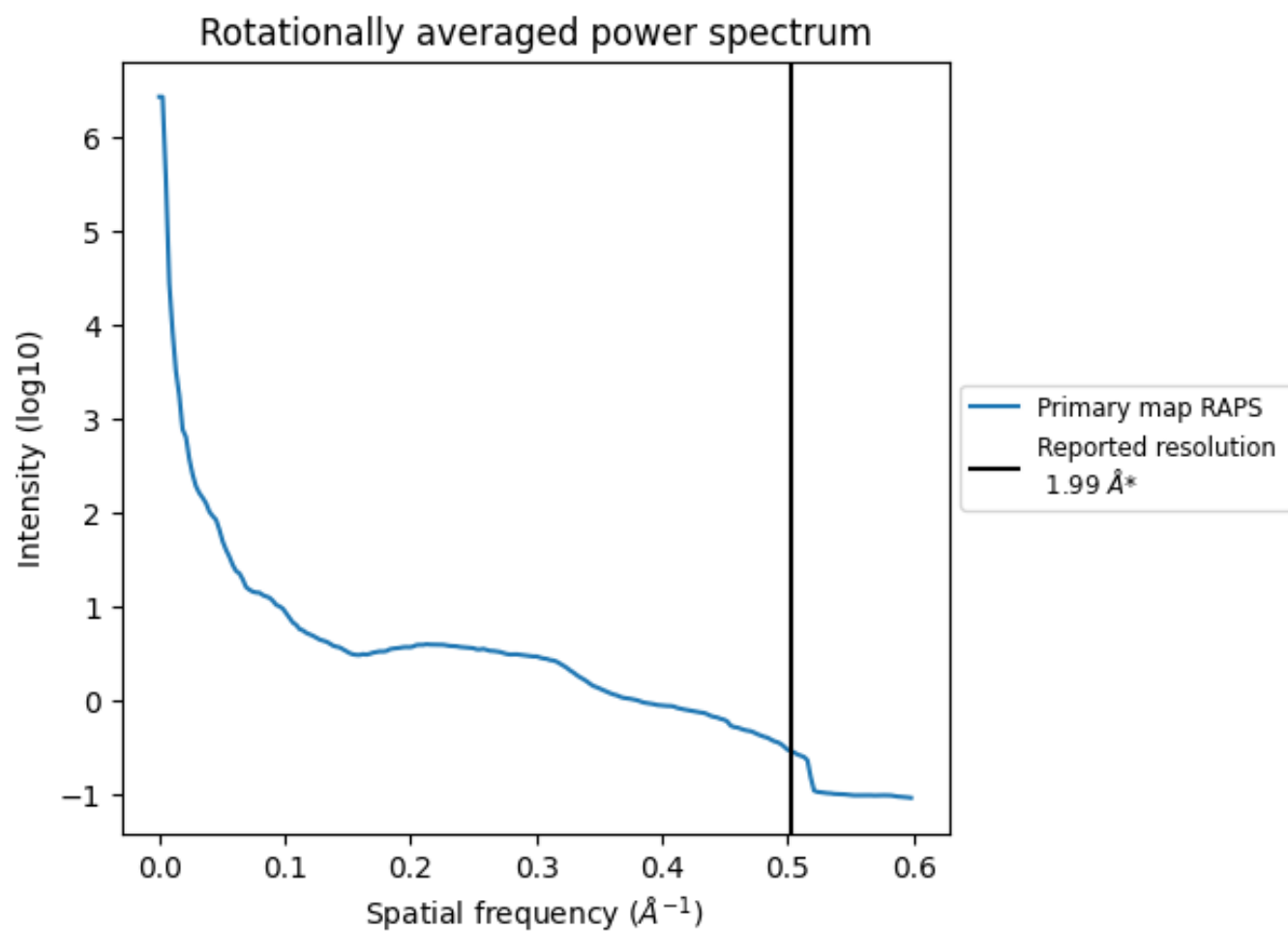
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 745 nm³; this corresponds to an approximate mass of 673 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 ⓘ



*Reported resolution corresponds to spatial frequency of 0.503 Å⁻¹

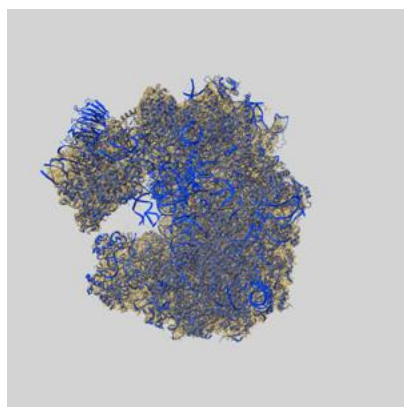
8 Fourier-Shell correlation

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

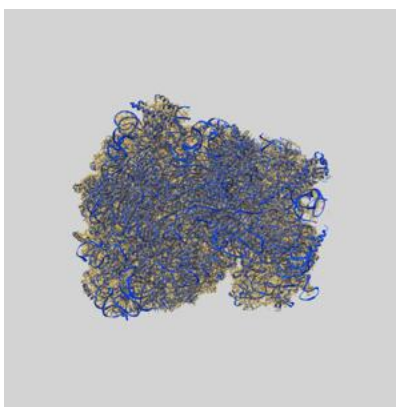
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-55225 and PDB model 9SUM. Per-residue inclusion information can be found in [section 3](#) on [page 26](#).

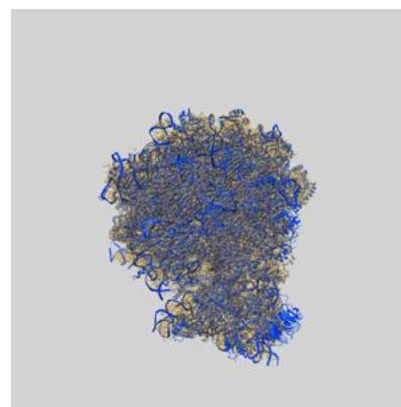
9.1 Map-model overlay [i](#)



X



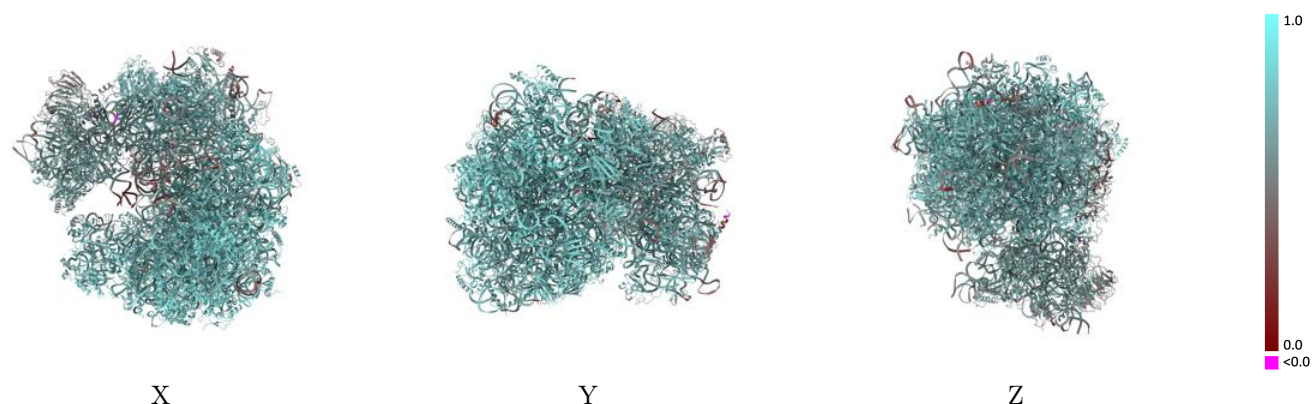
Y



Z

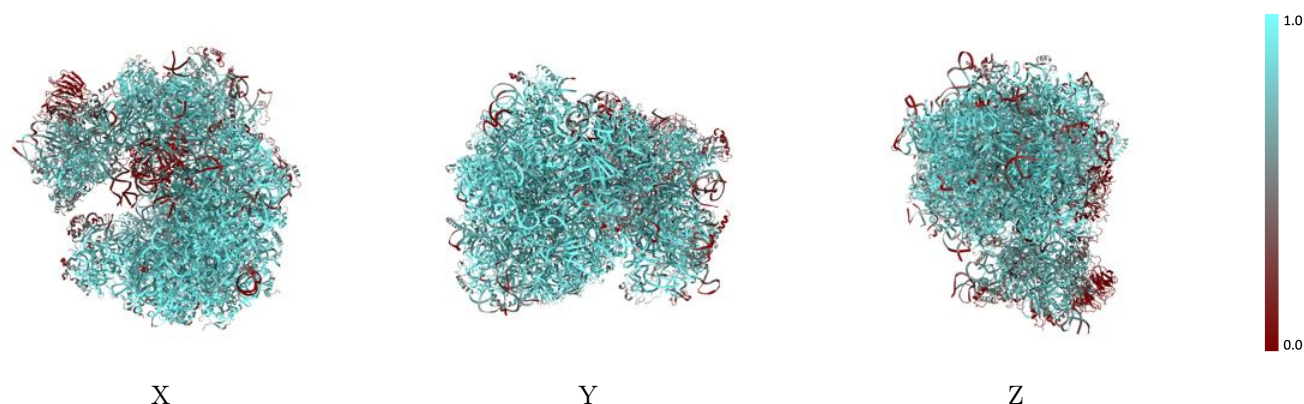
The images above show the 3D surface view of the map at the recommended contour level 0.39 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



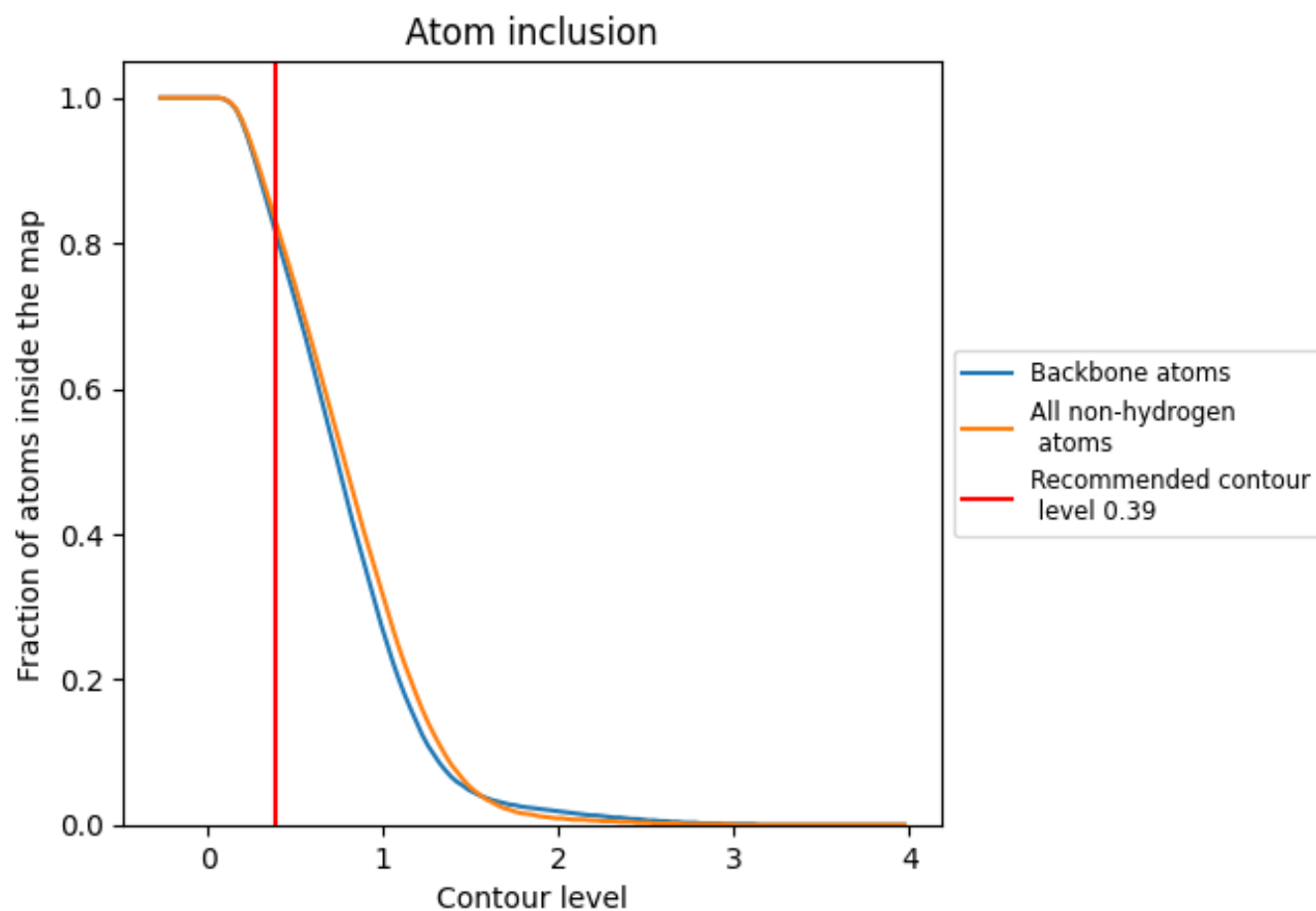
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.39).

9.4 Atom inclusion [i](#)



At the recommended contour level, 81% of all backbone atoms, 83% 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 (0.39) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8290	 0.7140
1	 0.0840	 0.3820
2	 0.2000	 0.5380
A	 0.9170	 0.7510
B	 0.8890	 0.7210
C	 0.9300	 0.7570
CA	 0.8190	 0.6410
D	 0.9640	 0.8190
E	 0.9400	 0.8030
F	 0.9250	 0.8020
G	 0.7420	 0.7300
H	 0.8160	 0.7590
I	 0.8920	 0.7930
J	 0.8090	 0.7540
K	 0.8690	 0.7660
L	 0.8300	 0.7590
M	 0.4980	 0.6450
N	 0.8800	 0.7780
O	 0.8970	 0.7850
P	 0.9900	 0.8300
Q	 0.9360	 0.8080
R	 0.9330	 0.8020
S	 0.9650	 0.8140
T	 0.8310	 0.7310
U	 0.9210	 0.7900
V	 0.8740	 0.7800
W	 0.4540	 0.5990
X	 0.9340	 0.7980
Y	 0.9420	 0.7980
Z	 0.9370	 0.7970
ZA	 0.8180	 0.6920
ZB	 0.7070	 0.6660
ZC	 0.4860	 0.5890
ZD	 0.8850	 0.7390
ZE	 0.8250	 0.6970



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
ZF	 0.1750	 0.5160
ZG	 0.5900	 0.6020
ZH	 0.6810	 0.6330
ZI	 0.4740	 0.5670
ZJ	 0.5840	 0.6060
ZK	 0.7120	 0.6270
ZL	 0.4860	 0.5530
ZM	 0.8480	 0.7170
ZO	 0.9620	 0.7560
ZP	 0.8370	 0.7190
ZQ	 0.7100	 0.6650
ZR	 0.5930	 0.6060
ZS	 0.3260	 0.6130
ZT	 0.7190	 0.6650
ZU	 0.5610	 0.5970
ZV	 0.7900	 0.6370
ZW	 0.5070	 0.6100
ZY	 0.1630	 0.5100
a	 0.8820	 0.7780
b	 0.7810	 0.7370
c	 0.9580	 0.8180
d	 0.9030	 0.7870
e	 0.7980	 0.7440
f	 0.8580	 0.7690
g	 0.9410	 0.8130
h	 0.9650	 0.8200
i	 0.9110	 0.7870
j	 0.8780	 0.7820
k	 0.8400	 0.7590
l	 0.9710	 0.8200
m	 0.6520	 0.7030
n	 0.8930	 0.7720
o	 0.8670	 0.7760
p	 0.3840	 0.6770
q	 0.8670	 0.7820
r	 0.9080	 0.7900
s	 0.8410	 0.6940
t	 0.2020	 0.5030
u	 0.8880	 0.7200
v	 0.5470	 0.5880
w	 0.8130	 0.7000
x	 0.6670	 0.6140

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
y	 0.7180	 0.6560
z	 0.5670	 0.6120