



Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 10:22 PM EST

PDB ID : 7N6G
EMDB ID : EMD-24207
Title : C1 of central pair
Authors : Han, L.; Zhang, K.
Deposited on : 2021-06-08
Resolution : 3.60 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:

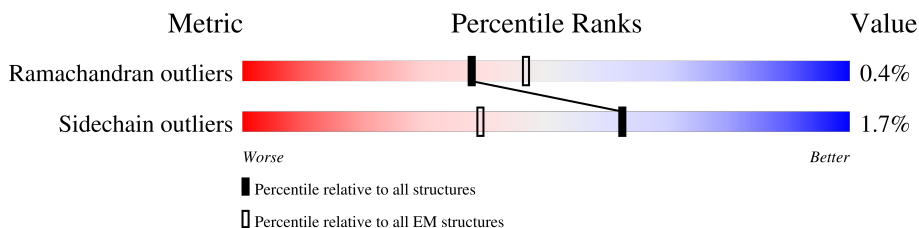
EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.60 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)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	0A	512	11% (red), 96% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0B	512	44% (red), 96% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0C	512	15% (red), 97% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0D	512	22% (red), 97% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0E	512	15% (red), 97% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0F	512	9% (red), 97% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0G	512	24% (red), 96% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0H	512	6% (red), 97% (green), 2% (yellow), 2% (grey), 1% (orange)
1	0I	512	21% (red), 97% (green), 2% (yellow), 2% (grey), 1% (orange)

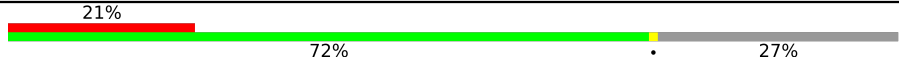
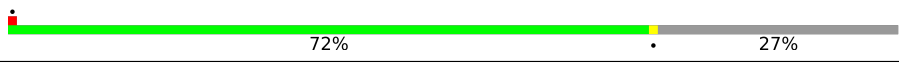
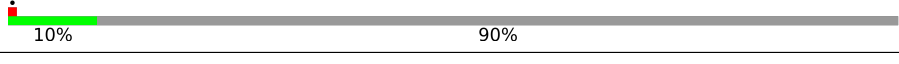
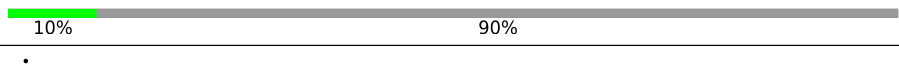

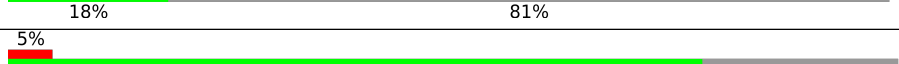
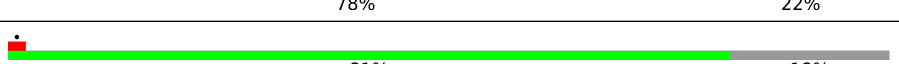
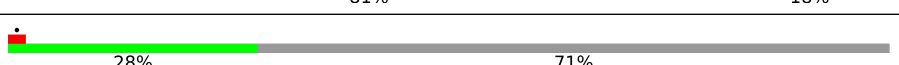



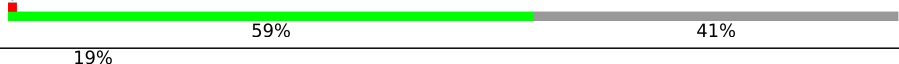
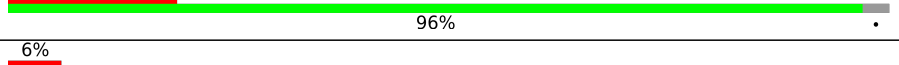
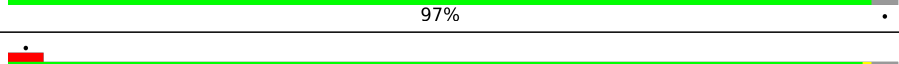
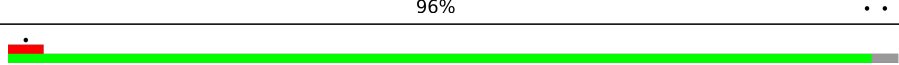
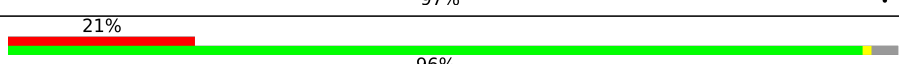
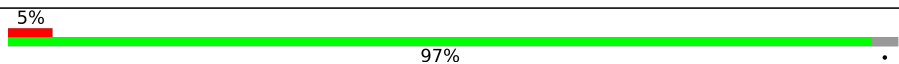
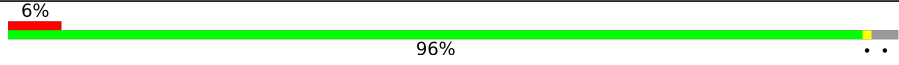
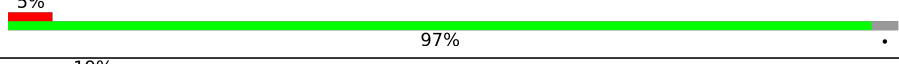
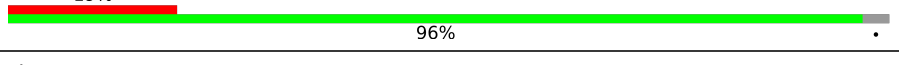
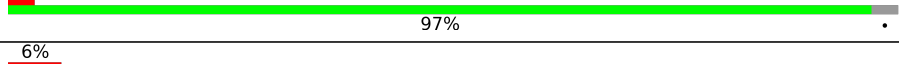
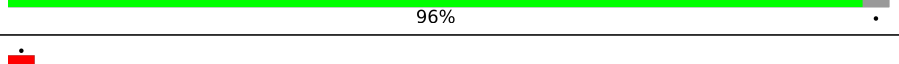
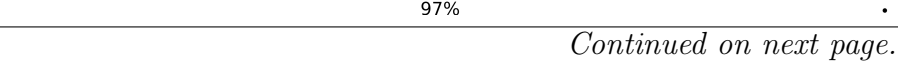


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Mol	Chain	Length	Quality of chain
1	0J	512	20% 97%
1	0K	512	11% 97%
1	0L	512	• 97%
1	0M	512	6% 97%
1	0N	512	• 97%
1	0O	512	5% 97%
1	0P	512	62% 97%
1	0Q	512	45% 97%
1	0R	512	7% 97%
1	0S	512	6% 97%
1	0T	512	5% 97%
1	0U	512	• 97%
1	0V	512	6% 97%
1	0W	512	10% 96%
1	0X	512	8% 97%
1	0Y	512	32% 96%
1	0Z	512	35% 97%
1	1A	512	13% 97%
1	1B	512	85% 97%
1	1C	512	70% 97%
2	1D	571	• 85% 12%
2	1E	571	43% 86% 12%
2	1F	571	• 88% 10%
2	1G	571	31% 88% 10%
3	1H	1102	• 71% 27%

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Mol	Chain	Length	Quality of chain
3	1I	1102	
3	6D	1102	
4	1J	3965	
4	1K	3965	
5	1L	2939	
5	1M	2939	
6	1N	2784	
7	1O	3225	
8	1P	1023	
9	1Q	945	
10	1R	446	
10	1S	446	
11	1T	1638	
12	1a	443	
12	1c	443	
12	1e	443	
12	1g	443	
12	2a	443	
12	2c	443	
12	2e	443	
12	2g	443	
12	3a	443	
12	3c	443	
12	3e	443	
12	3g	443	

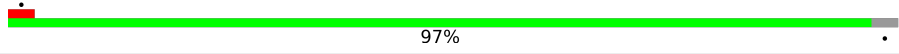
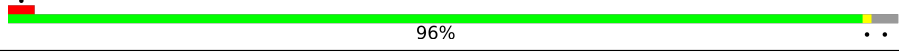
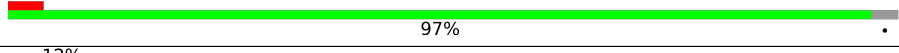
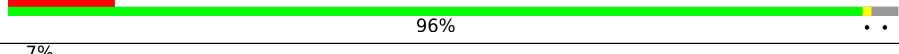
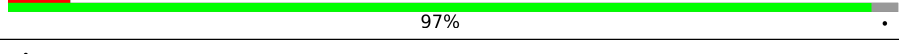
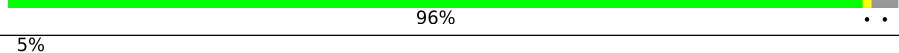
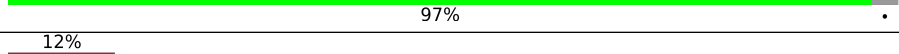
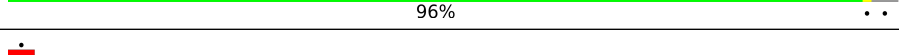
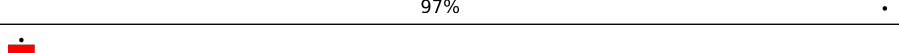
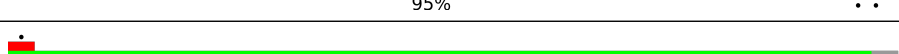
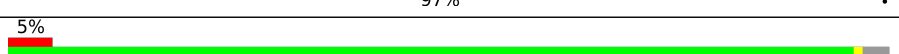
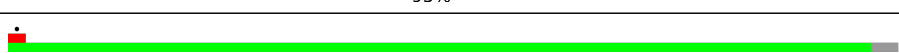
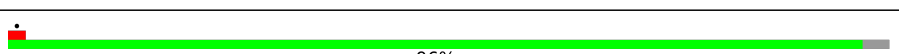
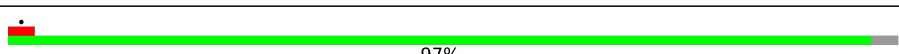
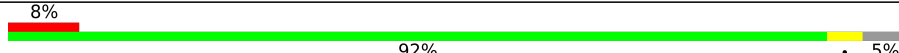
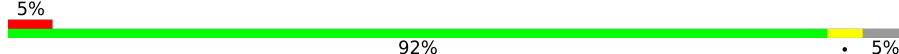
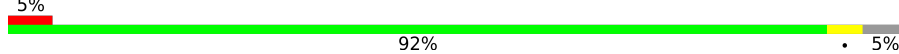
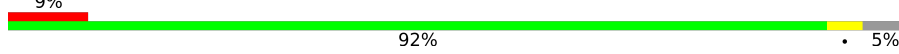
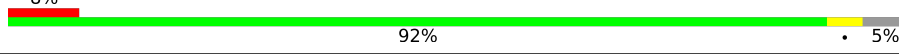
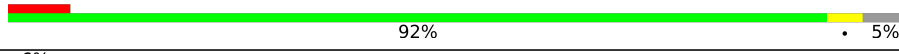
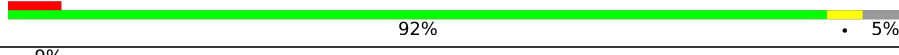
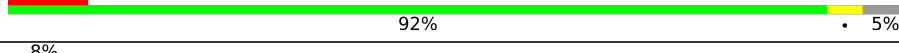
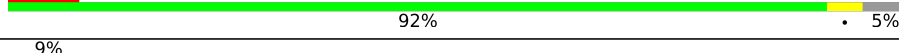
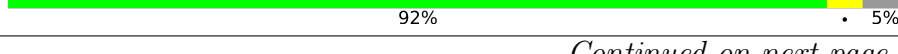

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Mol	Chain	Length	Quality of chain
12	4a	443	17% 95%
12	4c	443	5% 97%
12	4e	443	• 96%
12	4g	443	• 97%
12	5a	443	27% 96%
12	5c	443	6% 97%
12	5e	443	• 96%
12	5g	443	6% 97%
12	6a	443	30% 96%
12	6c	443	6% 97%
12	6e	443	• 96%
12	6g	443	• 97%
12	7a	443	23% 96%
12	7c	443	8% 97%
12	7e	443	5% 96%
12	7g	443	• 97%
12	8a	443	31% 96%
12	8c	443	5% 97%
12	8e	443	6% 96%
12	8g	443	5% 97%
12	9a	443	18% 95%
12	9c	443	• 97%
12	9e	443	5% 96%
12	9g	443	5% 97%
12	Aa	443	17% 96%

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Mol	Chain	Length	Quality of chain
12	Ac	443	 97%
12	Ae	443	 96%
12	Ag	443	 97%
12	Ba	443	 12% 96%
12	Bc	443	 7% 97%
12	Be	443	 96%
12	Bg	443	 5% 97%
12	Ca	443	 12% 96%
12	Cc	443	 97%
12	Ce	443	 95%
12	Cg	443	 97%
12	Da	443	 5% 95%
12	Dc	443	 97%
12	De	443	 96%
12	Dg	443	 97%
13	1b	451	 8% 92%
13	1d	451	 5% 92%
13	1f	451	 5% 92%
13	1h	451	 9% 92%
13	2b	451	 8% 92%
13	2d	451	 7% 92%
13	2f	451	 6% 92%
13	2h	451	 9% 92%
13	3b	451	 8% 92%
13	3d	451	 9% 92%

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Mol	Chain	Length	Quality of chain
13	3f	451	7% 92% 5%
13	3h	451	13% 92% 5%
13	4b	451	5% 92% 5%
13	4d	451	6% 92% 5%
13	4f	451	7% 92% 5%
13	4h	451	15% 92% 5%
13	5b	451	8% 92% 5%
13	5d	451	9% 92% 5%
13	5f	451	6% 92% 5%
13	5h	451	17% 92% 5%
13	6b	451	8% 92% 5%
13	6d	451	5% 92% 5%
13	6f	451	5% 92% 5%
13	6h	451	11% 92% 5%
13	7b	451	8% 92% 5%
13	7d	451	6% 92% 5%
13	7f	451	5% 92% 5%
13	7h	451	9% 92% 5%
13	8b	451	7% 92% 5%
13	8d	451	8% 92% 5%
13	8f	451	6% 92% 5%
13	8h	451	13% 92% 5%
13	9b	451	5% 92% 5%
13	9d	451	5% 92% 5%
13	9f	451	92% 5%

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Mol	Chain	Length	Quality of chain
13	9h	451	11% 92% 5%
13	Ab	451	5% 92% 5%
13	Ad	451	7% 92% 5%
13	Af	451	• 92% 5%
13	Ah	451	11% 92% 5%
13	Bb	451	• 92% 5%
13	Bd	451	• 92% 5%
13	Bf	451	• 92% 5%
13	Bh	451	10% 92% 5%
13	Cb	451	6% 92% 5%
13	Cd	451	• 92% 5%
13	Cf	451	• 92% 5%
13	Ch	451	10% 92% 5%
13	Db	451	• 92% 5%
13	Dd	451	• 92% 5%
13	Df	451	• 92% 5%
13	Dh	451	10% 92% 5%
14	2F	168	9% 92% • • •
14	2G	168	24% 92% • • •
15	2H	196	16% 95% 5%
16	2I	108	10% 96% •
17	2J	100	43% 93% 7%
17	2K	100	44% 96% •
18	2L	54	65% 87% 13%
19	2M	18	44% 100%

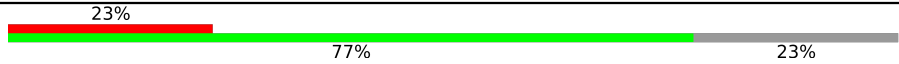
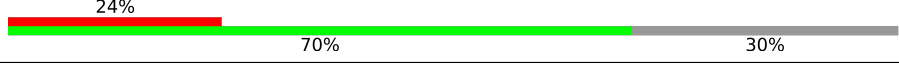
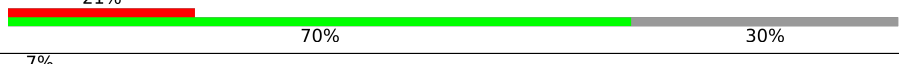


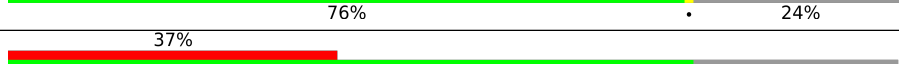
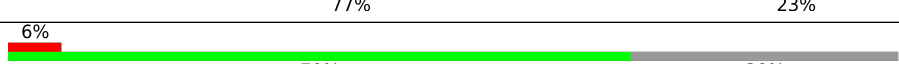
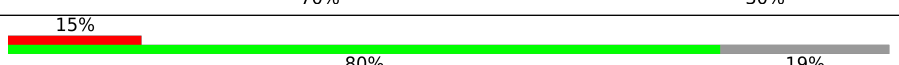
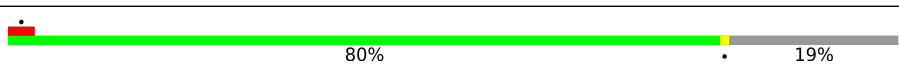


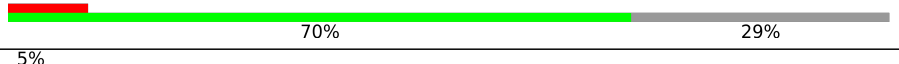


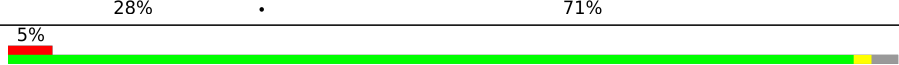
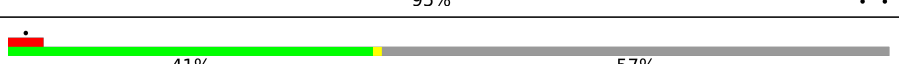
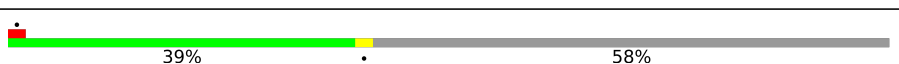








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Mol	Chain	Length	Quality of chain
20	2N	52	23% 98%
21	2O	47	21% 94% 6%
22	2P	106	6% 97%
23	2Q	110	5% 100%
23	2R	110	13% 99%
24	2S	447	20% 23% 77%
24	2T	447	24% 24% 76%
24	2U	447	20% 24% 75%
24	2V	447	21% 24% 76%
25	2W	167	7% 98%
25	2X	167	7% 99%
26	2Y	65	8% 100%
26	2Z	65	49% 100%
27	3A	36	100%
27	3B	36	56% 100%
28	3C	739	8% 92%
29	3E	1471	6% 94%
30	3F	795	22% 54% 44%
30	3G	795	30% 70%
31	3H	1940	16% 84%
31	3I	1940	20% 79%
32	3J	749	49% 50%
32	3K	749	16% 48% 51%
33	3L	401	48% 51%
34	3M	507	37% 76% 24%

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Mol	Chain	Length	Quality of chain
34	3N	507	
34	3O	507	
34	3P	507	
34	3Q	507	
34	3R	507	
34	3S	507	
34	3T	507	
34	3U	507	
34	3V	507	
34	3W	507	
34	3X	507	
34	3Y	507	
34	3Z	507	
34	4A	507	
34	4B	507	
35	4C	2215	
36	4D	304	
37	4E	2301	
37	4F	2301	
37	4G	2301	
37	4H	2301	
38	4I	110	
38	4J	110	
38	4K	110	
38	4L	110	

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Mol	Chain	Length	Quality of chain
38	4M	110	
38	4N	110	
38	4O	110	
38	4P	110	
39	4Q	427	
39	4R	427	
39	4S	427	
40	4T	835	
40	4U	835	
40	4V	835	
41	4W	173	
41	4X	173	
41	4Y	173	
41	4Z	173	
41	5A	173	
41	5B	173	
41	5C	173	
41	5D	173	
42	5E	286	
42	5F	286	
42	5G	286	
42	5H	286	
43	5I	306	
43	5J	306	
43	5K	306	



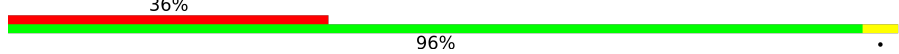
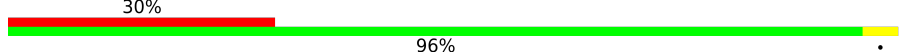

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Mol	Chain	Length	Quality of chain
43	5L	306	
44	5M	163	
44	5N	163	
44	5O	163	
44	5P	163	
44	5Q	163	
44	5R	163	
44	5S	163	
44	5T	163	
44	5U	163	
44	5V	163	
45	5W	137	
45	5X	137	
45	5Y	137	
46	5Z	181	
47	6A	1929	
47	6B	1929	
48	6E	1138	
48	6F	1138	
49	6G	477	
49	6H	477	
49	6I	477	
49	6J	477	
50	6K	651	
50	6L	651	

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Mol	Chain	Length	Quality of chain
51	6M	2540	 41% 58%
51	6N	2540	 41% 58%
52	6O	89	 36% 96%
52	6P	89	 30% 96%
52	6Q	89	 18% 96%

2 Entry composition [i](#)

There are 54 unique types of molecules in this entry. The entry contains 793756 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called PF16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0A	499	3528	2217	625	675	11	0	0
1	0B	499	3528	2217	625	675	11	0	0
1	0C	499	3528	2217	625	675	11	0	0
1	0D	499	3528	2217	625	675	11	0	0
1	0E	499	3528	2217	625	675	11	0	0
1	0F	499	3528	2217	625	675	11	0	0
1	0G	499	3528	2217	625	675	11	0	0
1	0L	499	3528	2217	625	675	11	0	0
1	0M	499	3528	2217	625	675	11	0	0
1	0N	499	3528	2217	625	675	11	0	0
1	0O	499	3528	2217	625	675	11	0	0
1	0P	499	3528	2217	625	675	11	0	0
1	0Q	499	3528	2217	625	675	11	0	0
1	0R	499	3526	2215	625	675	11	0	0
1	0S	499	3528	2217	625	675	11	0	0
1	0T	499	3528	2217	625	675	11	0	0
1	0U	499	3528	2217	625	675	11	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	0V	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0X	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0Y	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0Z	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	1A	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	1B	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	1C	499	Total	C	N	O	S	0	0
			3524	2214	624	675	11		
1	0H	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0J	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0W	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0I	499	Total	C	N	O	S	0	0
			3528	2217	625	675	11		
1	0K	499	Total	C	N	O	S	0	0
			3524	2214	624	675	11		

- Molecule 2 is a protein called FAP194.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1D	504	Total	C	N	O	S	0	0
			3213	1978	593	625	17		
2	1E	504	Total	C	N	O	S	0	0
			3213	1978	593	625	17		
2	1F	516	Total	C	N	O	S	0	0
			3292	2028	606	641	17		
2	1G	516	Total	C	N	O	S	0	0
			3292	2028	606	641	17		

- Molecule 3 is a protein called FAP69.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	1H	803	Total	C	N	O	S	0	0
			5778	3640	1042	1072	24		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	1I	803	Total	C	N	O	S	0	0
			5778	3640	1042	1072	24		
3	6D	801	Total	C	N	O	S	0	0
			6016	3811	1073	1105	27		

- Molecule 4 is a protein called HYDIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	1J	396	Total	C	N	O	S	0	0
			2856	1798	498	552	8		
4	1K	396	Total	C	N	O	S	0	0
			2856	1798	498	552	8		

- Molecule 5 is a protein called FAP47.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	1L	546	Total	C	N	O	S	0	0
			3368	2055	639	663	11		
5	1M	546	Total	C	N	O	S	0	0
			3368	2055	639	663	11		

- Molecule 6 is a protein called FAP46.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	1N	2179	Total	C	N	O	S	1	0
			16109	10108	2968	2963	70		

- Molecule 7 is a protein called FAP54.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	1O	2632	Total	C	N	O	S	0	0
			19593	12378	3583	3552	80		

- Molecule 8 is a protein called HTH_9 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	1P	295	Total	C	N	O	S	0	0
			2266	1435	393	431	7		

- Molecule 9 is a protein called FAP297.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	1Q	437	Total	C	N	O	S	0	0
			2335	1409	460	464	2		

- Molecule 10 is a protein called FAP108.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	1R	361	Total	C	N	O	S	0	0
			2753	1724	494	524	11		
10	1S	264	Total	C	N	O	S	0	0
			1984	1255	355	368	6		

- Molecule 11 is a protein called FAP76.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	1T	972	Total	C	N	O	0	0
			4804	2857	975	972		

- Molecule 12 is a protein called Tubulin beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	1a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	1c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	1e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	1g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	2a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	2c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	2e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	2g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	3a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	3c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	3e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		

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Mol	Chain	Residues	Atoms					AltConf	Trace
12	3g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	4a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	4c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	4e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	4g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	5a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	5c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	5e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	5g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	6a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	6c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	6e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	6g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	7a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	7c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	7e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	7g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	8a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	8c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	8e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	8g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		

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Mol	Chain	Residues	Atoms					AltConf	Trace
12	9a	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	9c	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	9e	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	9g	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Aa	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Ac	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Ae	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Ag	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Ba	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Bc	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Be	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Bg	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Ca	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Cc	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Ce	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Cg	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	Da	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Dc	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		
12	De	428	Total	C	N	O	S	0	0
			3359	2110	576	643	30		
12	Dg	431	Total	C	N	O	S	0	0
			3379	2121	579	649	30		

- Molecule 13 is a protein called Tubulin alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	1b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	1d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	1f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	1h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	2b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	2d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	2f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	2h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	3b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	3d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	3f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	3h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	4b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	4d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	4f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	4h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	5b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	5d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	5f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	5h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	6b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	6d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	6f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	6h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	7b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	7d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	7f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	7h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	8b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	8d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	8f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	8h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	9b	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	9d	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	9f	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	9h	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Ab	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Ad	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Af	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Ah	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Bb	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Bd	430	Total 3339	C 2115	N 568	O 634	S 22	0	0
13	Bf	430	Total 3339	C 2115	N 568	O 634	S 22	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	Bh	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Cb	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Cd	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Cf	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Ch	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Db	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Dd	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Df	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		
13	Dh	430	Total	C	N	O	S	0	0
			3339	2115	568	634	22		

- Molecule 14 is a protein called FAP275.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	2F	161	Total	C	N	O	S	0	0
			1228	758	238	228	4		
14	2G	161	Total	C	N	O	S	0	0
			1228	758	238	228	4		

- Molecule 15 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	2H	196	Total	C	N	O	0	0
			980	588	196	196		

- Molecule 16 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	2I	108	Total	C	N	O	0	0
			540	324	108	108		

- Molecule 17 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	2J	100	Total	C	N	O	0	0
			500	300	100	100		
17	2K	100	Total	C	N	O	0	0
			500	300	100	100		

- Molecule 18 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	2L	54	Total	C	N	O	0	0
			270	162	54	54		

- Molecule 19 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	2M	18	Total	C	N	O	0	0
			90	54	18	18		

- Molecule 20 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	2N	52	Total	C	N	O	0	0
			260	156	52	52		

- Molecule 21 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	2O	47	Total	C	N	O	0	0
			235	141	47	47		

- Molecule 22 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
22	2P	106	Total	C	N	O	0	0
			530	318	106	106		

- Molecule 23 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	2Q	110	Total	C	N	O	0	0
			550	330	110	110		
23	2R	110	Total	C	N	O	0	0
			550	330	110	110		

- Molecule 24 is a protein called FAP289.

Mol	Chain	Residues	Atoms				AltConf	Trace	
24	2S	105	Total	C	N	O	0	0	
			522	312	105	105			
24	2T	109	Total	C	N	O	S	0	0
			868	530	176	159	3		
24	2U	111	Total	C	N	O	S	0	0
			882	539	178	162	3		
24	2V	109	Total	C	N	O	S	0	0
			868	530	176	159	3		

- Molecule 25 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	2W	167	Total	C	N	O	0	0
			835	501	167	167		
25	2X	167	Total	C	N	O	0	0
			835	501	167	167		

- Molecule 26 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	2Y	65	Total	C	N	O	0	0
			325	195	65	65		
26	2Z	65	Total	C	N	O	0	0
			325	195	65	65		

- Molecule 27 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	3A	36	Total	C	N	O	0	0
			180	108	36	36		
27	3B	36	Total	C	N	O	0	0
			180	108	36	36		

- Molecule 28 is a protein called FAP216.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	3C	61	Total	C	N	O	S	0	0
			480	291	96	92	1		

- Molecule 29 is a protein called FAP92.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	3E	87	Total	C	N	O		
			671	406	142	123	0	0

- Molecule 30 is a protein called FAP99.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	3F	444	Total	C	N	O	S		
			3386	2041	688	650	7	0	0
30	3G	240	Total	C	N	O	S		
			1904	1142	391	367	4	0	0

- Molecule 31 is a protein called FAP74.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	3H	308	Total	C	N	O	S		
			1958	1190	379	387	2	0	0
31	3I	401	Total	C	N	O	S		
			3118	1904	606	601	7	0	0

- Molecule 32 is a protein called FAP360.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	3J	372	Total	C	N	O	S		
			2792	1758	501	519	14	0	0
32	3K	367	Total	C	N	O	S		
			2767	1745	495	513	14	0	0

- Molecule 33 is a protein called FAP279.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	3L	197	Total	C	N	O	S		
			1572	1001	278	287	6	0	0

- Molecule 34 is a protein called FAP7.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	3M	387	Total	C	N	O	S		
			2989	1825	572	580	12	0	0
34	3N	392	Total	C	N	O	S		
			3040	1861	578	589	12	0	0
34	3O	353	Total	C	N	O	S		
			2775	1696	535	532	12	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
34	3P	355	Total	C	N	O	S	0	0
			2795	1712	537	534	12		
34	3Q	353	Total	C	N	O	S	0	0
			2775	1696	535	532	12		
34	3R	358	Total	C	N	O	S	0	0
			2814	1723	540	539	12		
34	3S	387	Total	C	N	O	S	0	0
			2989	1825	572	580	12		
34	3T	392	Total	C	N	O	S	0	0
			3040	1861	578	589	12		
34	3U	355	Total	C	N	O	S	0	0
			2795	1712	537	534	12		
34	3V	410	Total	C	N	O	S	0	0
			3192	1954	611	614	13		
34	3W	411	Total	C	N	O	S	0	0
			3198	1956	612	617	13		
34	3X	358	Total	C	N	O	S	0	0
			2814	1723	540	539	12		
34	3Y	358	Total	C	N	O	S	0	0
			2814	1723	540	539	12		
34	3Z	358	Total	C	N	O	S	0	0
			2814	1723	540	539	12		
34	4A	410	Total	C	N	O	S	0	0
			3192	1954	611	614	13		
34	4B	411	Total	C	N	O	S	0	0
			3198	1956	612	617	13		

- Molecule 35 is a protein called FAP81.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	4C	634	Total	C	N	O	S	0	0
			4846	3052	870	902	22		

- Molecule 36 is a protein called FAP15.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	4D	295	Total	C	N	O	S	0	0
			2372	1515	397	442	18		

- Molecule 37 is a protein called PF6.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	4E	983	Total	C	N	O	S	0	0
			7227	4588	1245	1365	29		
37	4F	965	Total	C	N	O	S	0	0
			7056	4482	1212	1335	27		
37	4G	965	Total	C	N	O	S	0	0
			7056	4482	1212	1335	27		
37	4H	965	Total	C	N	O	S	0	0
			7056	4482	1212	1335	27		

- Molecule 38 is a protein called DPY30.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	4I	64	Total	C	N	O	S	0	0
			491	317	84	87	3		
38	4J	64	Total	C	N	O	S	0	0
			491	317	84	87	3		
38	4K	64	Total	C	N	O	S	0	0
			491	317	84	87	3		
38	4L	64	Total	C	N	O	S	0	0
			491	317	84	87	3		
38	4M	64	Total	C	N	O	S	0	0
			491	317	84	87	3		
38	4N	64	Total	C	N	O	S	0	0
			491	317	84	87	3		
38	4O	84	Total	C	N	O	S	0	0
			626	400	106	117	3		
38	4P	55	Total	C	N	O	S	0	0
			424	275	73	73	3		

- Molecule 39 is a protein called FAP305.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	4Q	216	Total	C	N	O	S	0	0
			1778	1127	344	302	5		
39	4R	216	Total	C	N	O	S	0	0
			1778	1127	344	302	5		
39	4S	216	Total	C	N	O	S	0	0
			1778	1127	344	302	5		

- Molecule 40 is a protein called FAP101.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	4T	602	Total	C	N	O	S	0	0
			4494	2824	814	839	17		
40	4U	602	Total	C	N	O	S	0	0
			4494	2824	814	839	17		
40	4V	602	Total	C	N	O	S	0	0
			4494	2824	814	839	17		

- Molecule 41 is a protein called FAP227.

Mol	Chain	Residues	Atoms				AltConf	Trace
41	4W	124	Total	C	N	O	0	0
			597	349	124	124		
41	4X	124	Total	C	N	O	0	0
			597	349	124	124		
41	4Y	124	Total	C	N	O	0	0
			597	349	124	124		
41	4Z	124	Total	C	N	O	0	0
			597	349	124	124		
41	5A	123	Total	C	N	O	0	0
			592	346	123	123		
41	5B	123	Total	C	N	O	0	0
			592	346	123	123		
41	5C	123	Total	C	N	O	0	0
			592	346	123	123		
41	5D	123	Total	C	N	O	0	0
			592	346	123	123		

- Molecule 42 is a protein called FAP114.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	5E	216	Total	C	N	O	S	0	0
			1562	993	272	292	5		
42	5F	216	Total	C	N	O	S	0	0
			1562	993	272	292	5		
42	5G	216	Total	C	N	O	S	0	0
			1562	993	272	292	5		
42	5H	165	Total	C	N	O	S	0	0
			1307	840	221	241	5		

- Molecule 43 is a protein called FAP119.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	5I	211	Total	C	N	O	S	0	0
			1594	1020	276	292	6		
43	5J	211	Total	C	N	O	S	0	0
			1594	1020	276	292	6		
43	5K	211	Total	C	N	O	S	0	0
			1594	1020	276	292	6		
43	5L	211	Total	C	N	O	S	0	0
			1594	1020	276	292	6		

- Molecule 44 is a protein called Calmodulin.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	5M	142	Total	C	N	O		0	0
			699	415	142	142			
44	5N	142	Total	C	N	O		0	0
			699	415	142	142			
44	5O	142	Total	C	N	O		0	0
			699	415	142	142			
44	5Q	146	Total	C	N	O	S	0	0
			1153	710	186	248	9		
44	5R	146	Total	C	N	O	S	0	0
			1153	710	186	248	9		
44	5S	145	Total	C	N	O	S	0	0
			1144	705	185	245	9		
44	5T	145	Total	C	N	O	S	0	0
			1144	705	185	245	9		
44	5U	145	Total	C	N	O	S	0	0
			1144	705	185	245	9		
44	5V	149	Total	C	N	O	S	0	0
			1166	714	190	253	9		
44	5P	146	Total	C	N	O	S	0	0
			1153	710	186	248	9		

- Molecule 45 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	5W	137	Total	C	N	O	0	0
			685	411	137	137		
45	5X	137	Total	C	N	O	0	0
			685	411	137	137		
45	5Y	137	Total	C	N	O	0	0
			685	411	137	137		

- Molecule 46 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	5Z	181	Total	C	N	O	S	0	0
			978	603	191	181	3		

- Molecule 47 is a protein called CPC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	6A	1558	Total	C	N	O	S	0	0
			11821	7347	2181	2246	47		
47	6B	1558	Total	C	N	O	S	0	0
			11821	7347	2181	2246	47		

- Molecule 48 is a protein called FAP246.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	6E	904	Total	C	N	O	S	0	0
			6892	4372	1255	1236	29		
48	6F	904	Total	C	N	O	S	0	0
			6892	4372	1255	1236	29		

- Molecule 49 is a protein called Phosphopyruvate hydratase.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	6G	476	Total	C	N	O	S	0	0
			3606	2262	615	707	22		
49	6H	476	Total	C	N	O	S	0	0
			3606	2262	615	707	22		
49	6I	476	Total	C	N	O	S	0	0
			3606	2262	615	707	22		
49	6J	476	Total	C	N	O	S	0	0
			3606	2262	615	707	22		

- Molecule 50 is a protein called Heat shock protein 70A.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	6K	609	Total	C	N	O	S	0	0
			4731	2963	821	927	20		
50	6L	609	Total	C	N	O	S	0	0
			4731	2963	821	927	20		

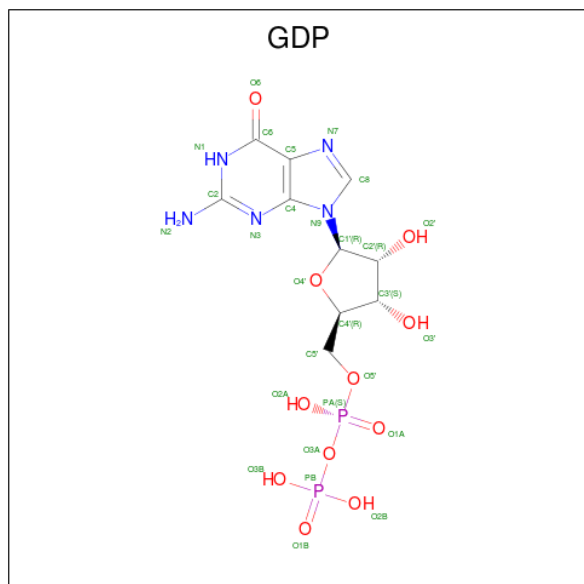
- Molecule 51 is a protein called FAP42.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
51	6M	1075	Total 8050	C 5038	N 1459	O 1512	S 41	0	0
51	6N	1075	Total 8050	C 5038	N 1459	O 1512	S 41	0	0

- Molecule 52 is a protein called Unknown protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
52	6O	89	Total 444	C 266	N 89	O 89	0	0
52	6P	89	Total 444	C 266	N 89	O 89	0	0
52	6Q	89	Total 444	C 266	N 89	O 89	0	0

- Molecule 53 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
53	1a	1	Total 28	C 10	N 5	O 11	P 2	0
53	1c	1	Total 28	C 10	N 5	O 11	P 2	0
53	1e	1	Total 28	C 10	N 5	O 11	P 2	0
53	1g	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
53	2a	1	Total 28	C 10	N 5	O 11	P 2	0
53	2c	1	Total 28	C 10	N 5	O 11	P 2	0
53	2e	1	Total 28	C 10	N 5	O 11	P 2	0
53	2g	1	Total 28	C 10	N 5	O 11	P 2	0
53	3a	1	Total 28	C 10	N 5	O 11	P 2	0
53	3c	1	Total 28	C 10	N 5	O 11	P 2	0
53	3e	1	Total 28	C 10	N 5	O 11	P 2	0
53	3g	1	Total 28	C 10	N 5	O 11	P 2	0
53	4a	1	Total 28	C 10	N 5	O 11	P 2	0
53	4c	1	Total 28	C 10	N 5	O 11	P 2	0
53	4e	1	Total 28	C 10	N 5	O 11	P 2	0
53	4g	1	Total 28	C 10	N 5	O 11	P 2	0
53	5a	1	Total 28	C 10	N 5	O 11	P 2	0
53	5c	1	Total 28	C 10	N 5	O 11	P 2	0
53	5e	1	Total 28	C 10	N 5	O 11	P 2	0
53	5g	1	Total 28	C 10	N 5	O 11	P 2	0
53	6a	1	Total 28	C 10	N 5	O 11	P 2	0
53	6c	1	Total 28	C 10	N 5	O 11	P 2	0
53	6e	1	Total 28	C 10	N 5	O 11	P 2	0
53	6g	1	Total 28	C 10	N 5	O 11	P 2	0
53	7a	1	Total 28	C 10	N 5	O 11	P 2	0

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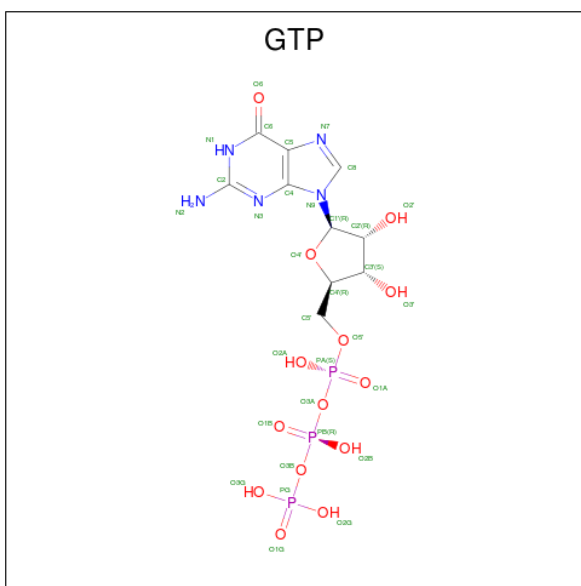
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
53	7c	1	Total 28	C 10	N 5	O 11	P 2	0
53	7e	1	Total 28	C 10	N 5	O 11	P 2	0
53	7g	1	Total 28	C 10	N 5	O 11	P 2	0
53	8a	1	Total 28	C 10	N 5	O 11	P 2	0
53	8c	1	Total 28	C 10	N 5	O 11	P 2	0
53	8e	1	Total 28	C 10	N 5	O 11	P 2	0
53	8g	1	Total 28	C 10	N 5	O 11	P 2	0
53	9a	1	Total 28	C 10	N 5	O 11	P 2	0
53	9c	1	Total 28	C 10	N 5	O 11	P 2	0
53	9e	1	Total 28	C 10	N 5	O 11	P 2	0
53	9g	1	Total 28	C 10	N 5	O 11	P 2	0
53	Aa	1	Total 28	C 10	N 5	O 11	P 2	0
53	Ac	1	Total 28	C 10	N 5	O 11	P 2	0
53	Ae	1	Total 28	C 10	N 5	O 11	P 2	0
53	Ag	1	Total 28	C 10	N 5	O 11	P 2	0
53	Ba	1	Total 28	C 10	N 5	O 11	P 2	0
53	Bc	1	Total 28	C 10	N 5	O 11	P 2	0
53	Be	1	Total 28	C 10	N 5	O 11	P 2	0
53	Bg	1	Total 28	C 10	N 5	O 11	P 2	0
53	Ca	1	Total 28	C 10	N 5	O 11	P 2	0
53	Cc	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
53	Ce	1	Total 28	C 10	N 5	O 11	P 2	0
53	Cg	1	Total 28	C 10	N 5	O 11	P 2	0
53	Da	1	Total 28	C 10	N 5	O 11	P 2	0
53	Dc	1	Total 28	C 10	N 5	O 11	P 2	0
53	De	1	Total 28	C 10	N 5	O 11	P 2	0
53	Dg	1	Total 28	C 10	N 5	O 11	P 2	0

- Molecule 54 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
54	1b	1	Total 32	C 10	N 5	O 14	P 3	0
54	1d	1	Total 32	C 10	N 5	O 14	P 3	0
54	1f	1	Total 32	C 10	N 5	O 14	P 3	0
54	1h	1	Total 32	C 10	N 5	O 14	P 3	0
54	2b	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
54	2d	1	Total 32	C 10	N 5	O 14	P 3	0
54	2f	1	Total 32	C 10	N 5	O 14	P 3	0
54	2h	1	Total 32	C 10	N 5	O 14	P 3	0
54	3c	1	Total 32	C 10	N 5	O 14	P 3	0
54	3d	1	Total 32	C 10	N 5	O 14	P 3	0
54	3f	1	Total 32	C 10	N 5	O 14	P 3	0
54	3h	1	Total 32	C 10	N 5	O 14	P 3	0
54	4b	1	Total 32	C 10	N 5	O 14	P 3	0
54	4d	1	Total 32	C 10	N 5	O 14	P 3	0
54	4f	1	Total 32	C 10	N 5	O 14	P 3	0
54	4h	1	Total 32	C 10	N 5	O 14	P 3	0
54	5c	1	Total 32	C 10	N 5	O 14	P 3	0
54	5d	1	Total 32	C 10	N 5	O 14	P 3	0
54	5f	1	Total 32	C 10	N 5	O 14	P 3	0
54	5h	1	Total 32	C 10	N 5	O 14	P 3	0
54	6c	1	Total 32	C 10	N 5	O 14	P 3	0
54	6e	1	Total 32	C 10	N 5	O 14	P 3	0
54	6g	1	Total 32	C 10	N 5	O 14	P 3	0
54	6h	1	Total 32	C 10	N 5	O 14	P 3	0
54	7b	1	Total 32	C 10	N 5	O 14	P 3	0
54	7e	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
54	7f	1	Total 32	C 10	N 5	O 14	P 3	0
54	7h	1	Total 32	C 10	N 5	O 14	P 3	0
54	8b	1	Total 32	C 10	N 5	O 14	P 3	0
54	8d	1	Total 32	C 10	N 5	O 14	P 3	0
54	8f	1	Total 32	C 10	N 5	O 14	P 3	0
54	8h	1	Total 32	C 10	N 5	O 14	P 3	0
54	9b	1	Total 32	C 10	N 5	O 14	P 3	0
54	9e	1	Total 32	C 10	N 5	O 14	P 3	0
54	9f	1	Total 32	C 10	N 5	O 14	P 3	0
54	9h	1	Total 32	C 10	N 5	O 14	P 3	0
54	Ab	1	Total 32	C 10	N 5	O 14	P 3	0
54	Ae	1	Total 32	C 10	N 5	O 14	P 3	0
54	Af	1	Total 32	C 10	N 5	O 14	P 3	0
54	Ah	1	Total 32	C 10	N 5	O 14	P 3	0
54	Bb	1	Total 32	C 10	N 5	O 14	P 3	0
54	Bd	1	Total 32	C 10	N 5	O 14	P 3	0
54	Bf	1	Total 32	C 10	N 5	O 14	P 3	0
54	Bh	1	Total 32	C 10	N 5	O 14	P 3	0
54	Cc	1	Total 32	C 10	N 5	O 14	P 3	0
54	Cd	1	Total 32	C 10	N 5	O 14	P 3	0
54	Cf	1	Total 32	C 10	N 5	O 14	P 3	0

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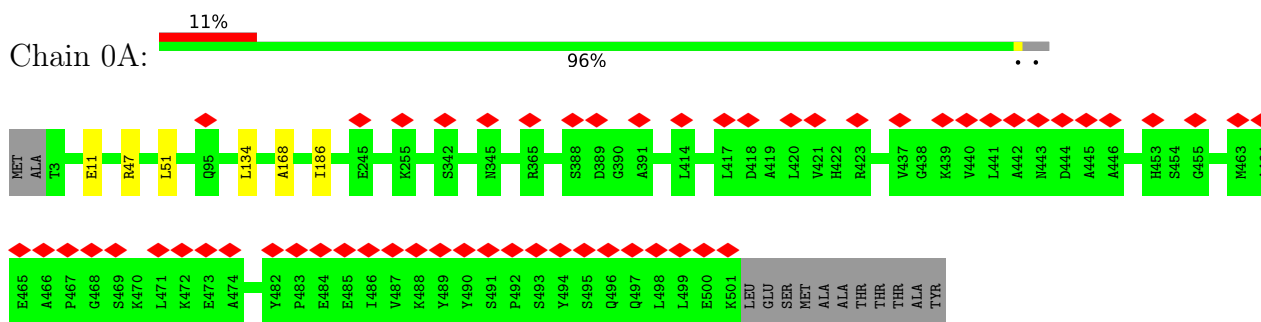
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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
54	Ch	1	Total 32	C 10	N 5	O 14	P 3	0
54	Db	1	Total 32	C 10	N 5	O 14	P 3	0
54	Dd	1	Total 32	C 10	N 5	O 14	P 3	0
54	Df	1	Total 32	C 10	N 5	O 14	P 3	0
54	Dh	1	Total 32	C 10	N 5	O 14	P 3	0

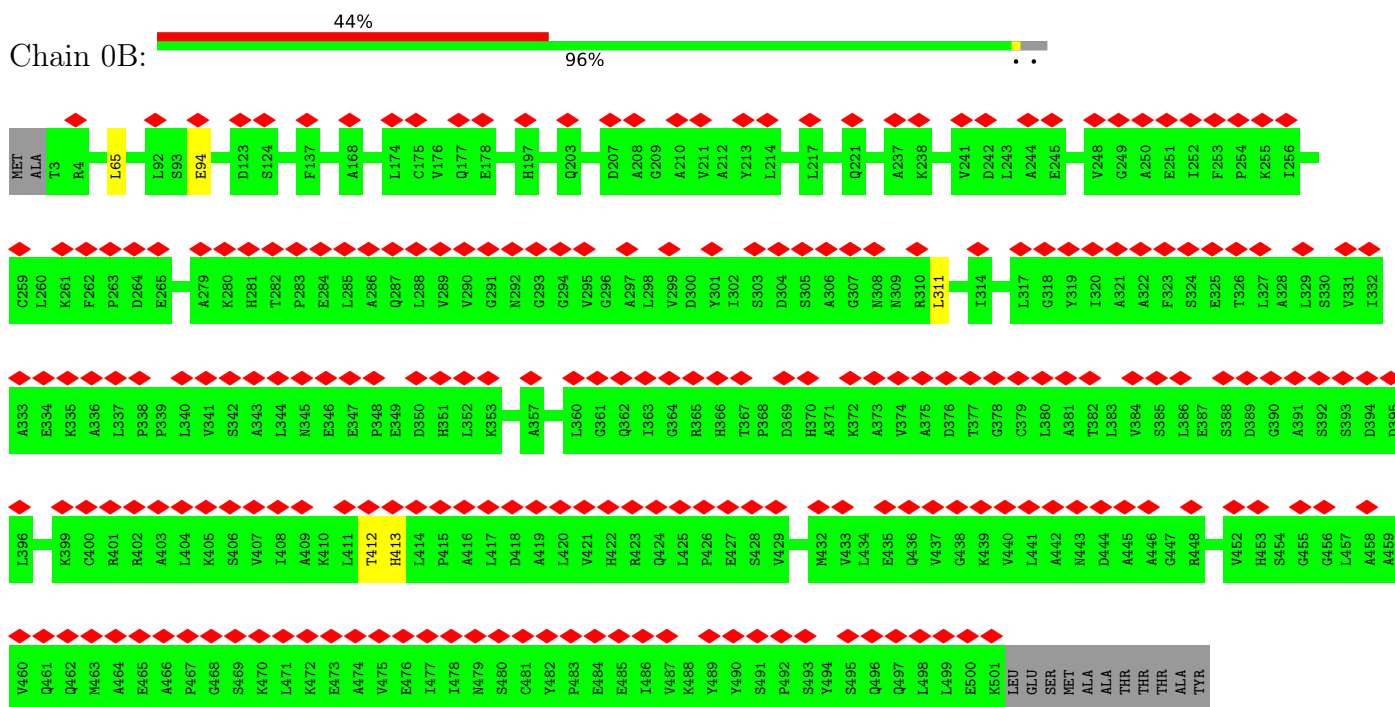
3 Residue-property plots

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: PF16

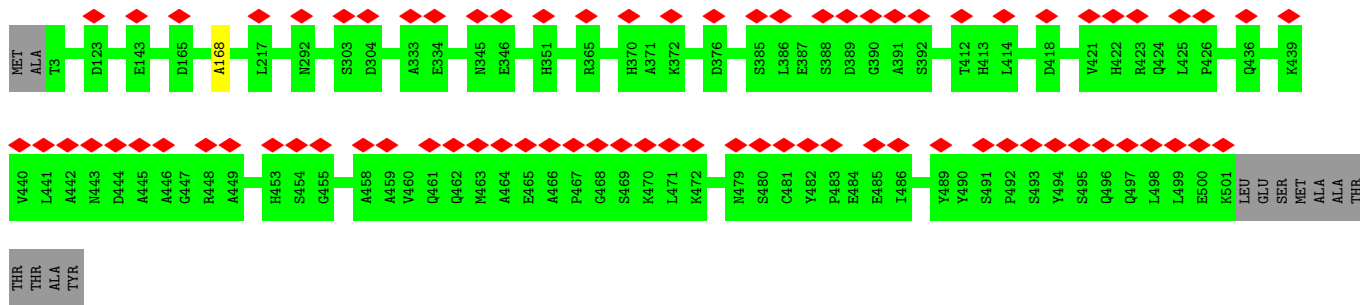


- Molecule 1: PF16

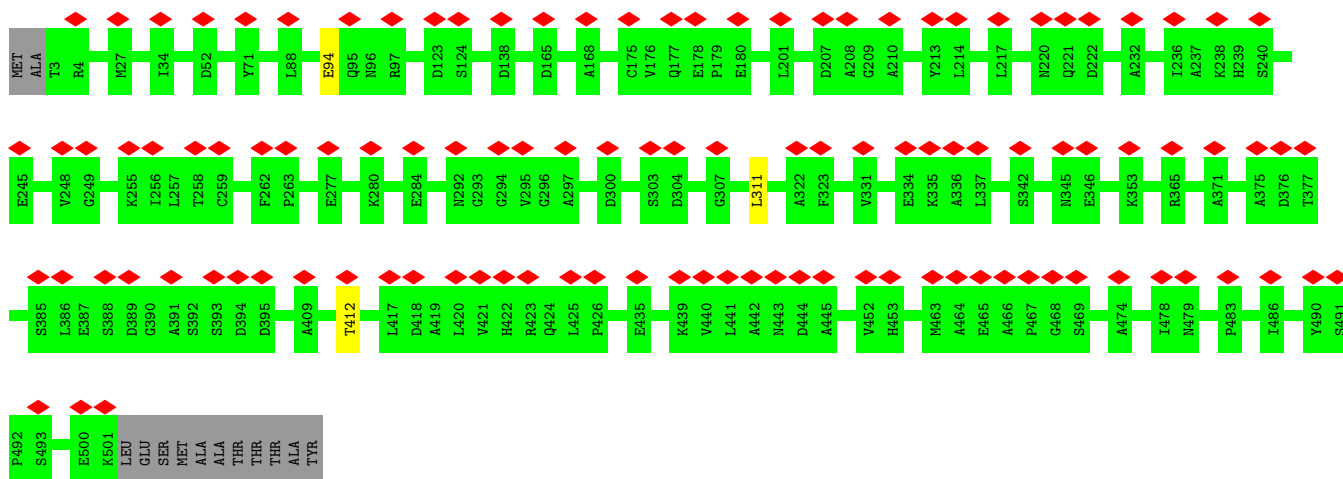


- Molecule 1: PF16

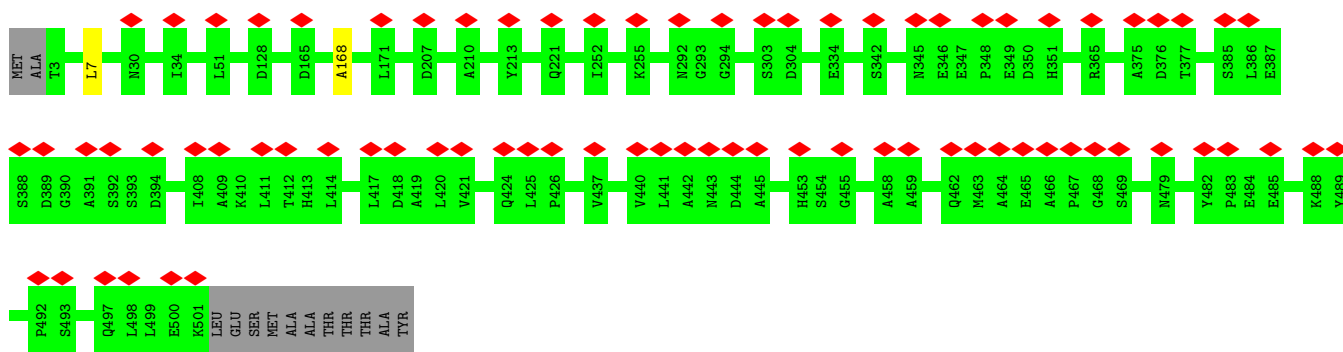




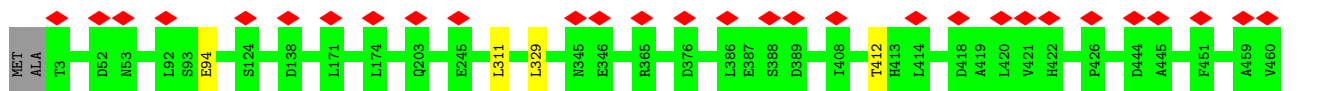
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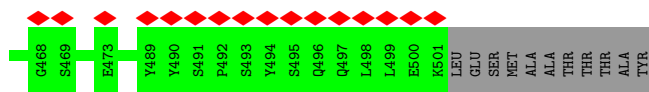


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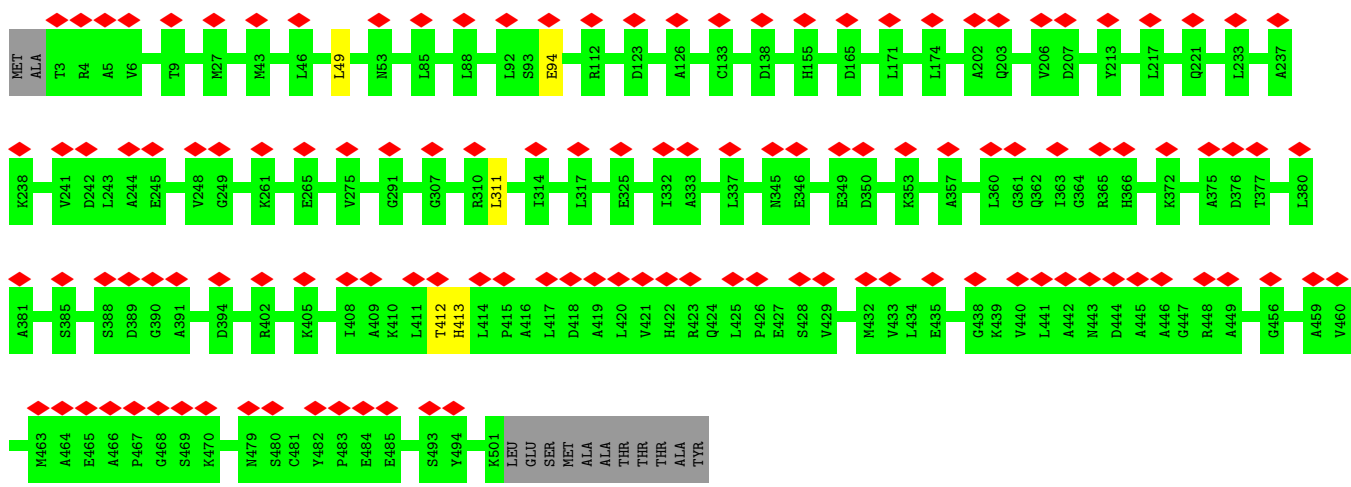


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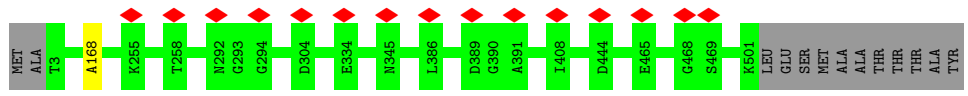




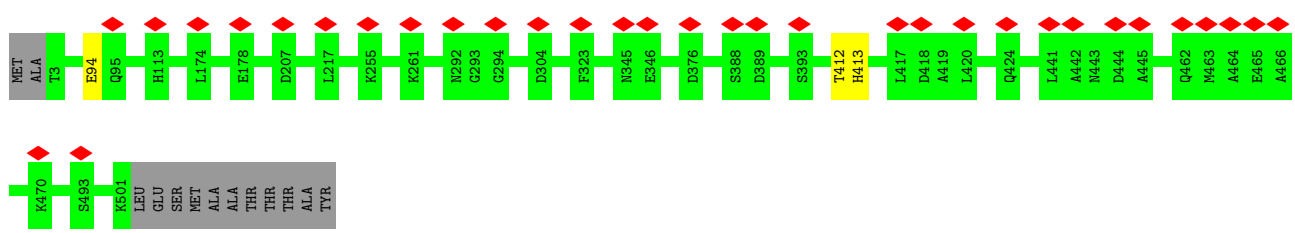
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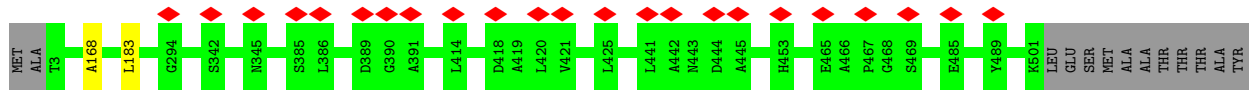
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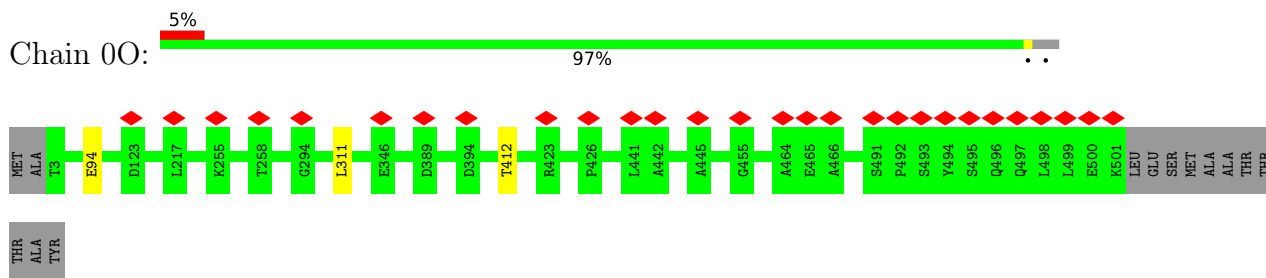
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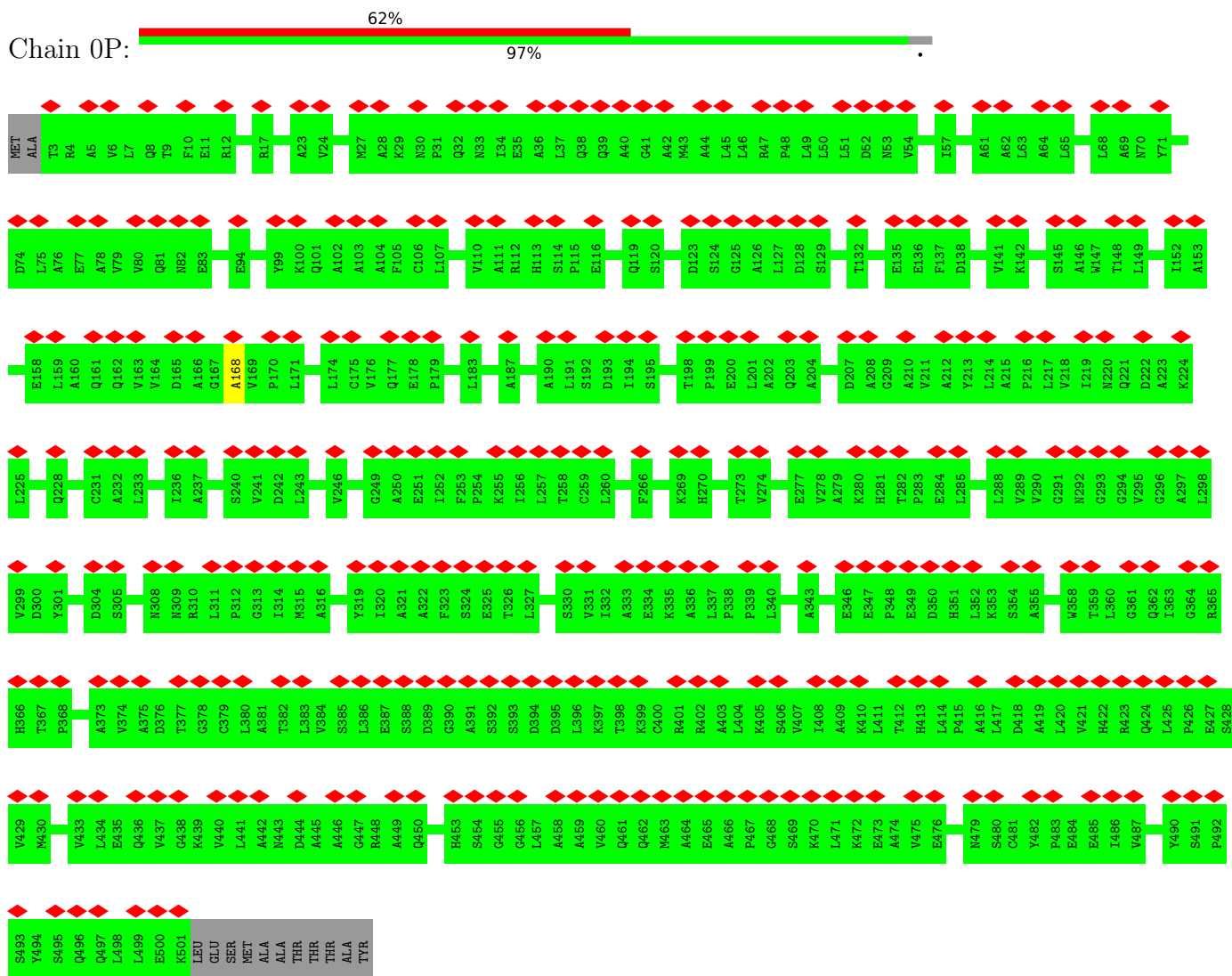
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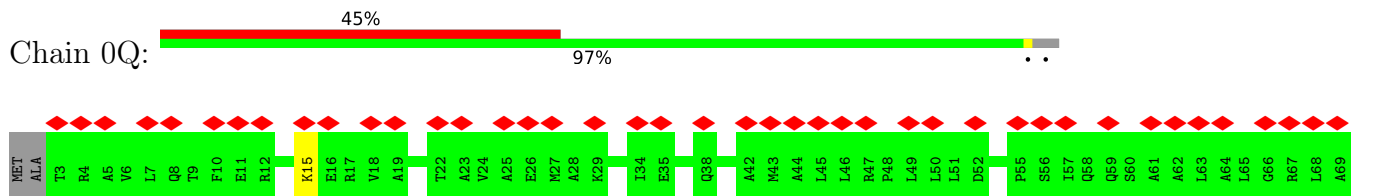
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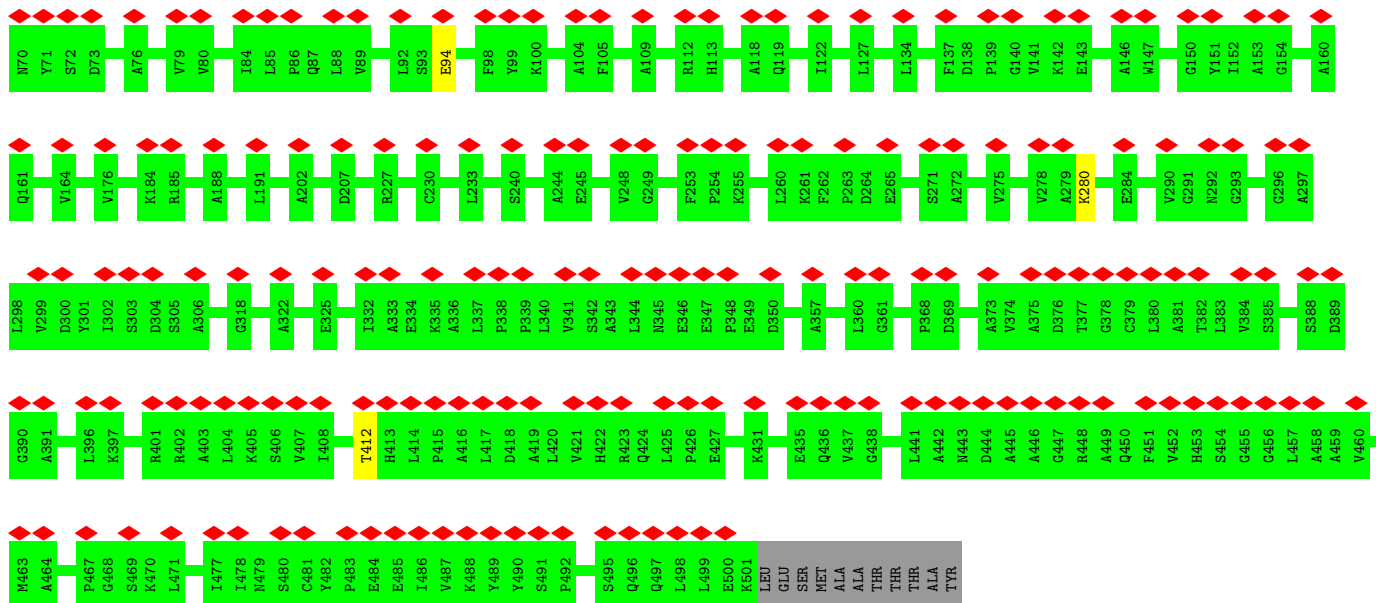


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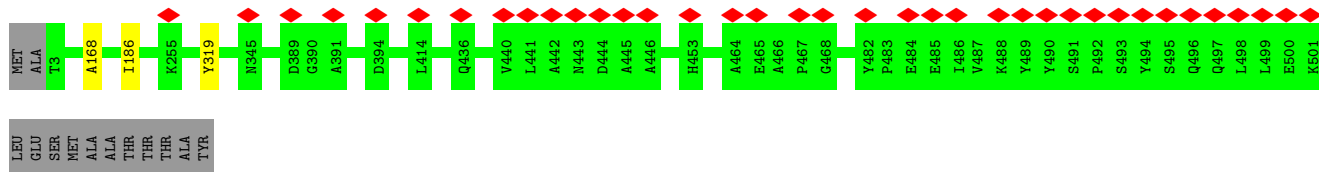


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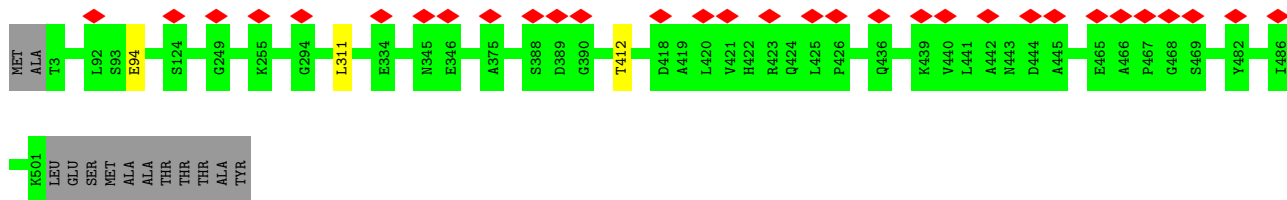




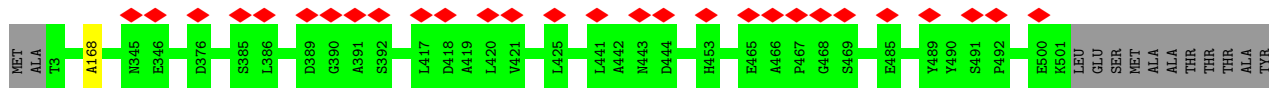
• Molecule 1: PF16



• Molecule 1: PF16

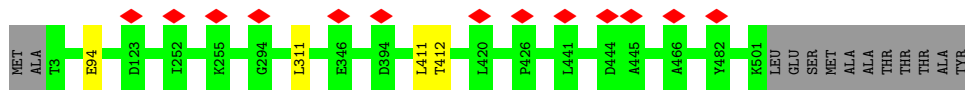


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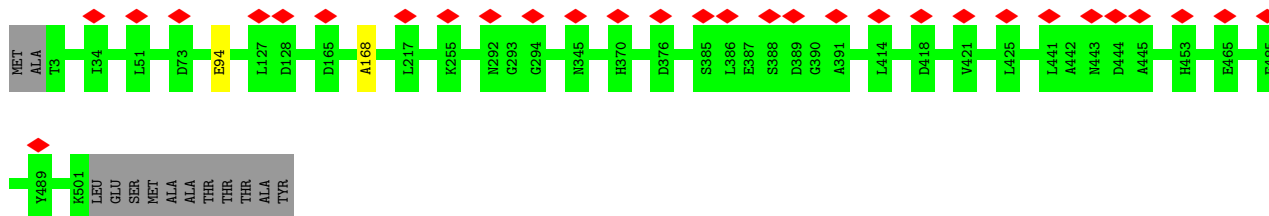


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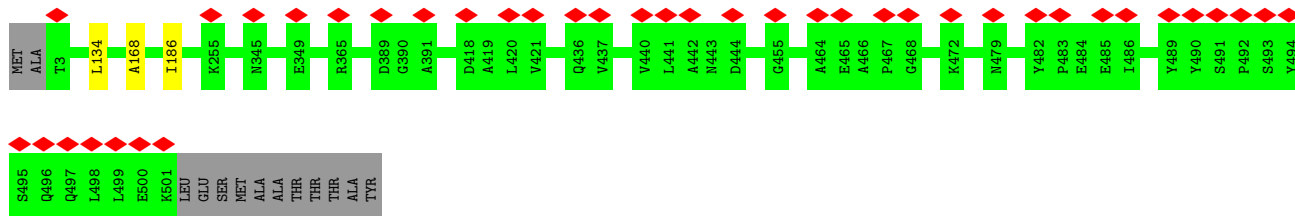




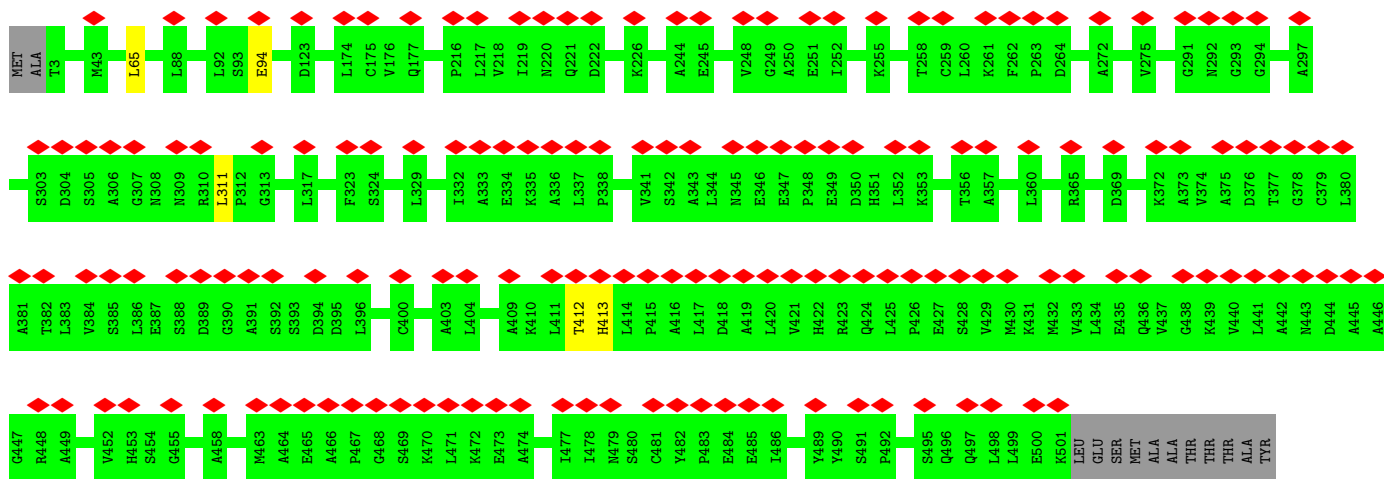
• Molecule 1: PF16



• Molecule 1: PF16



• Molecule 1: PF16

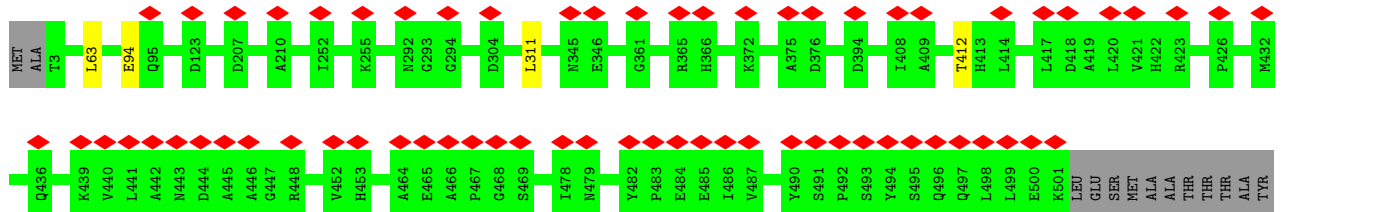


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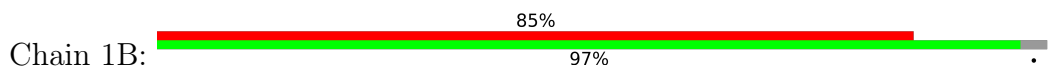


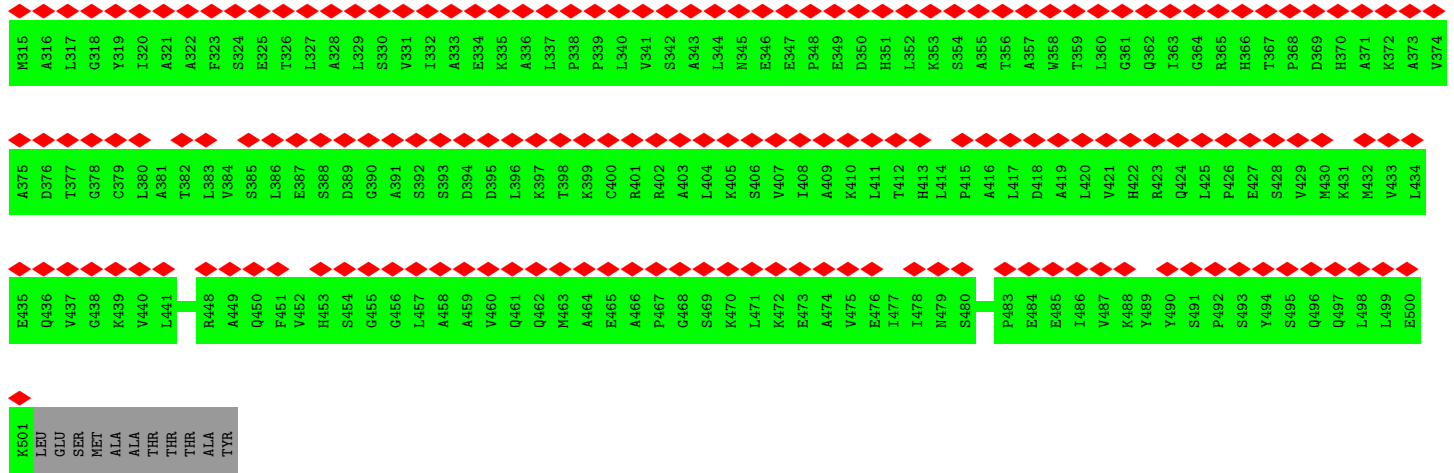


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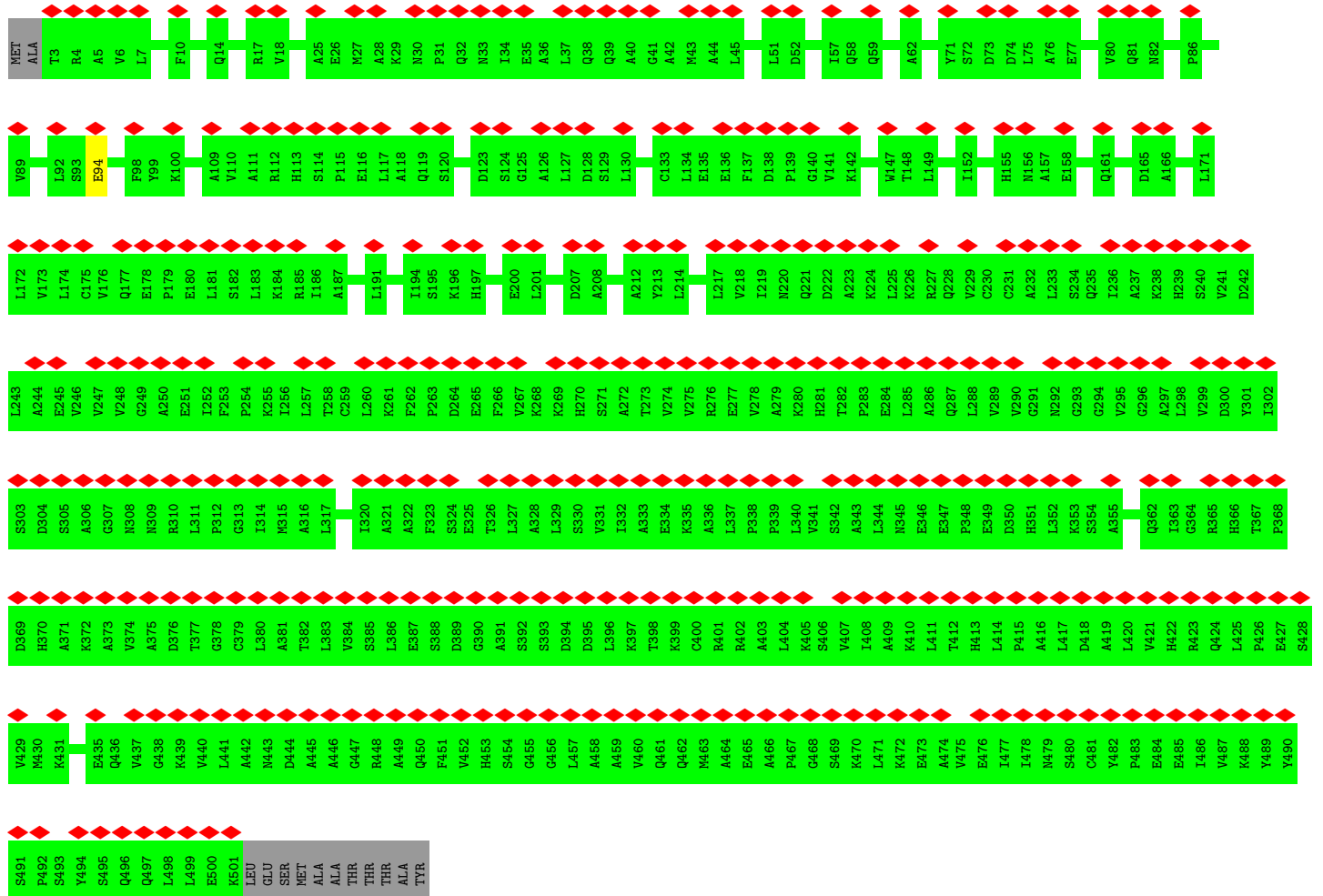


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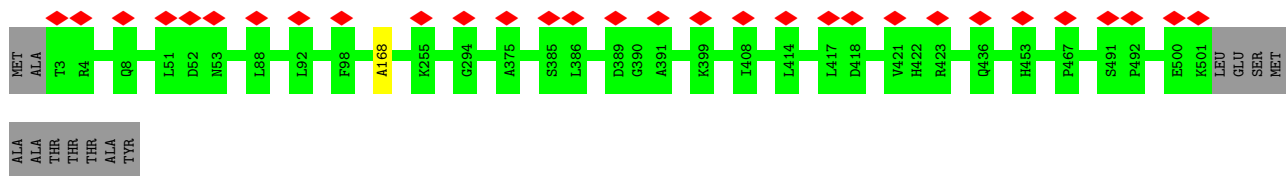


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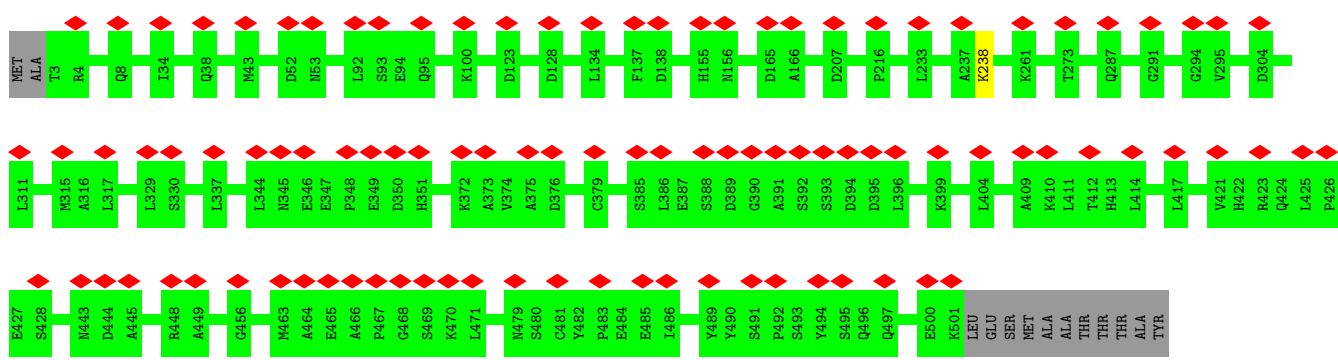


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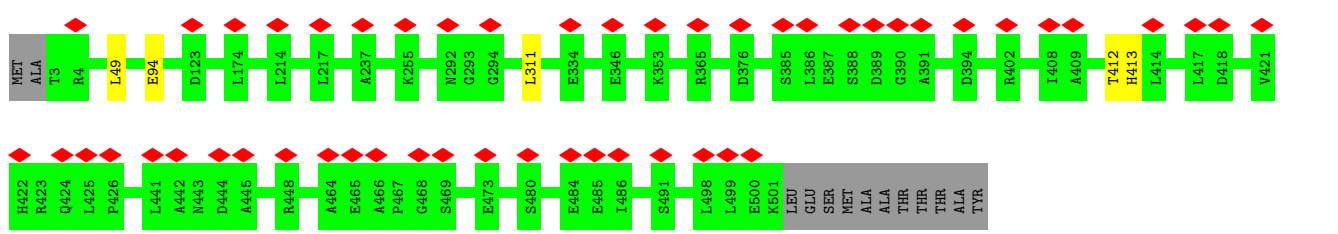




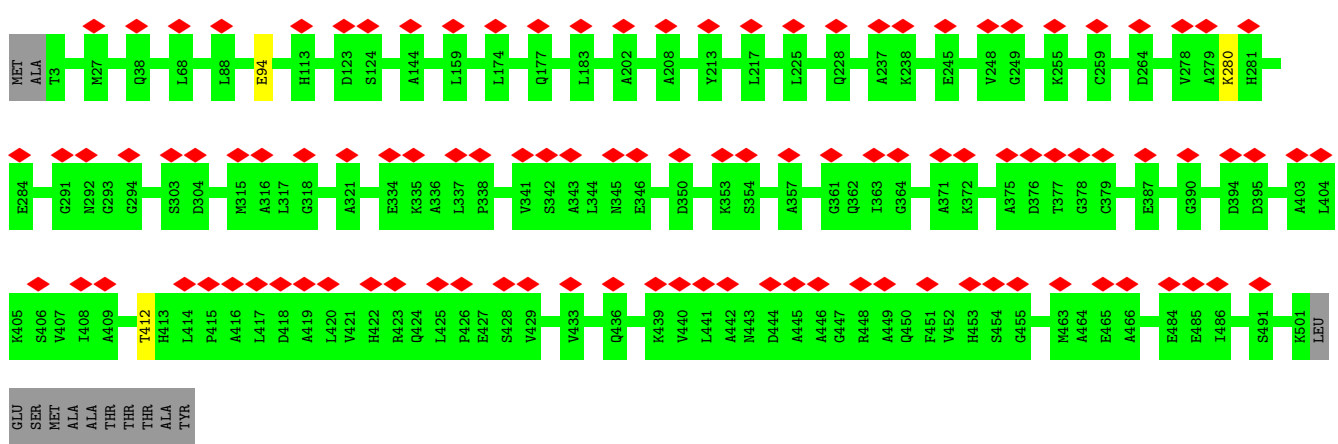
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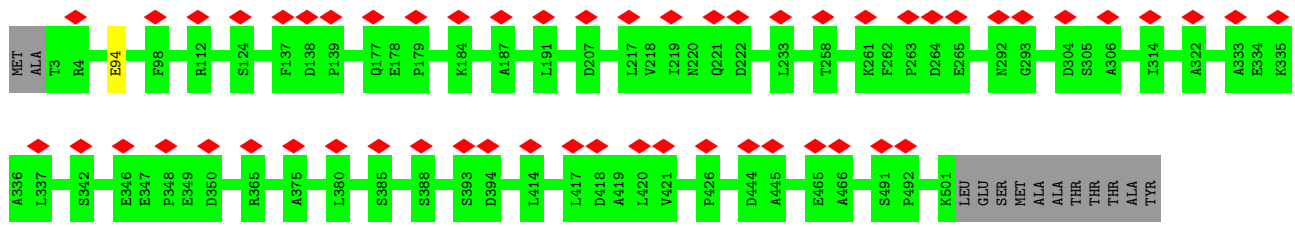
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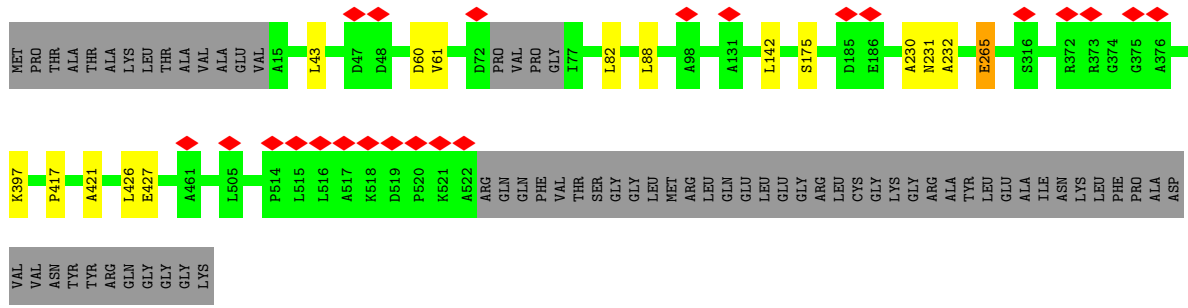
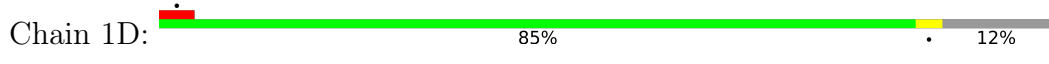
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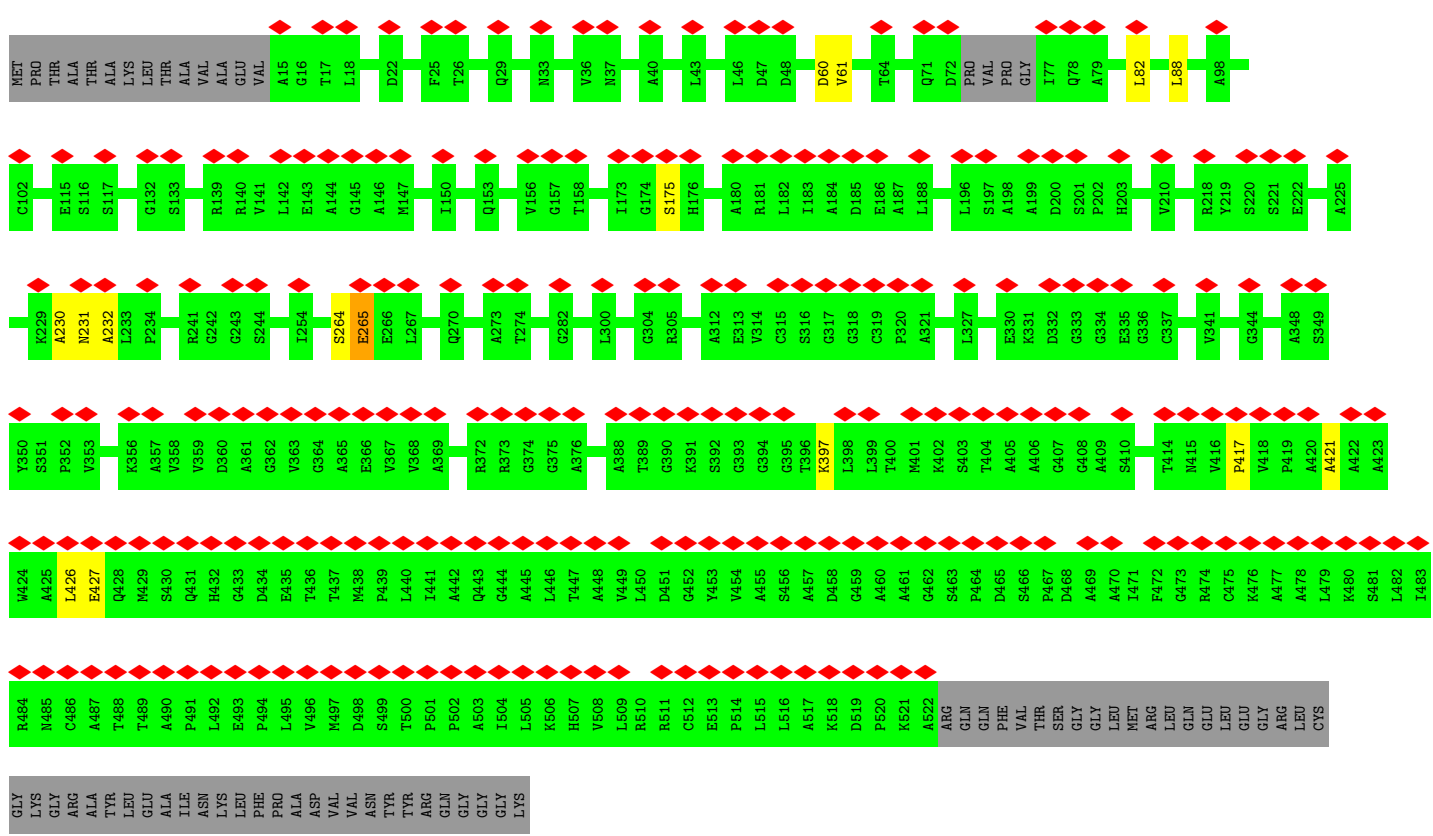
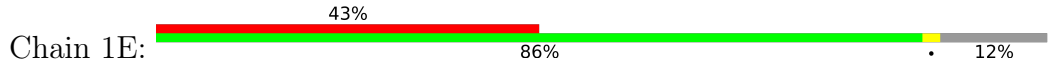
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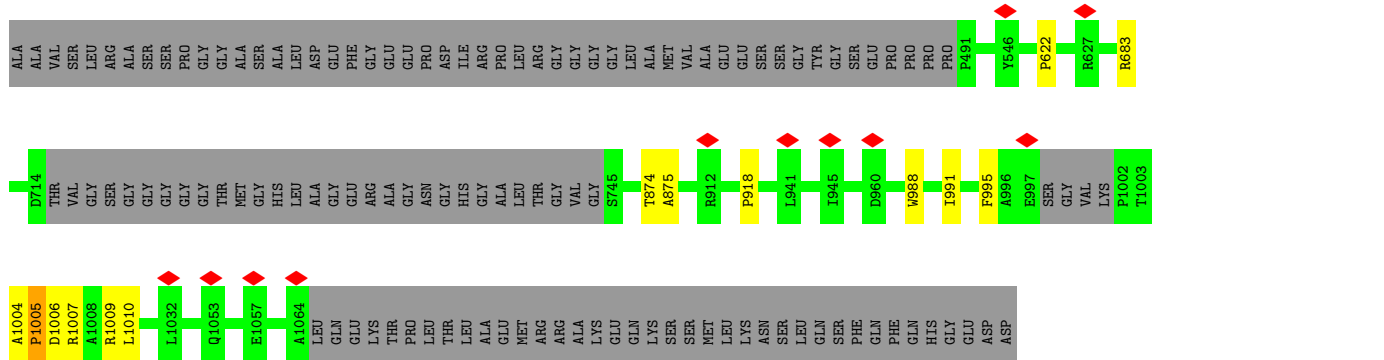


• Molecule 2: FAP194

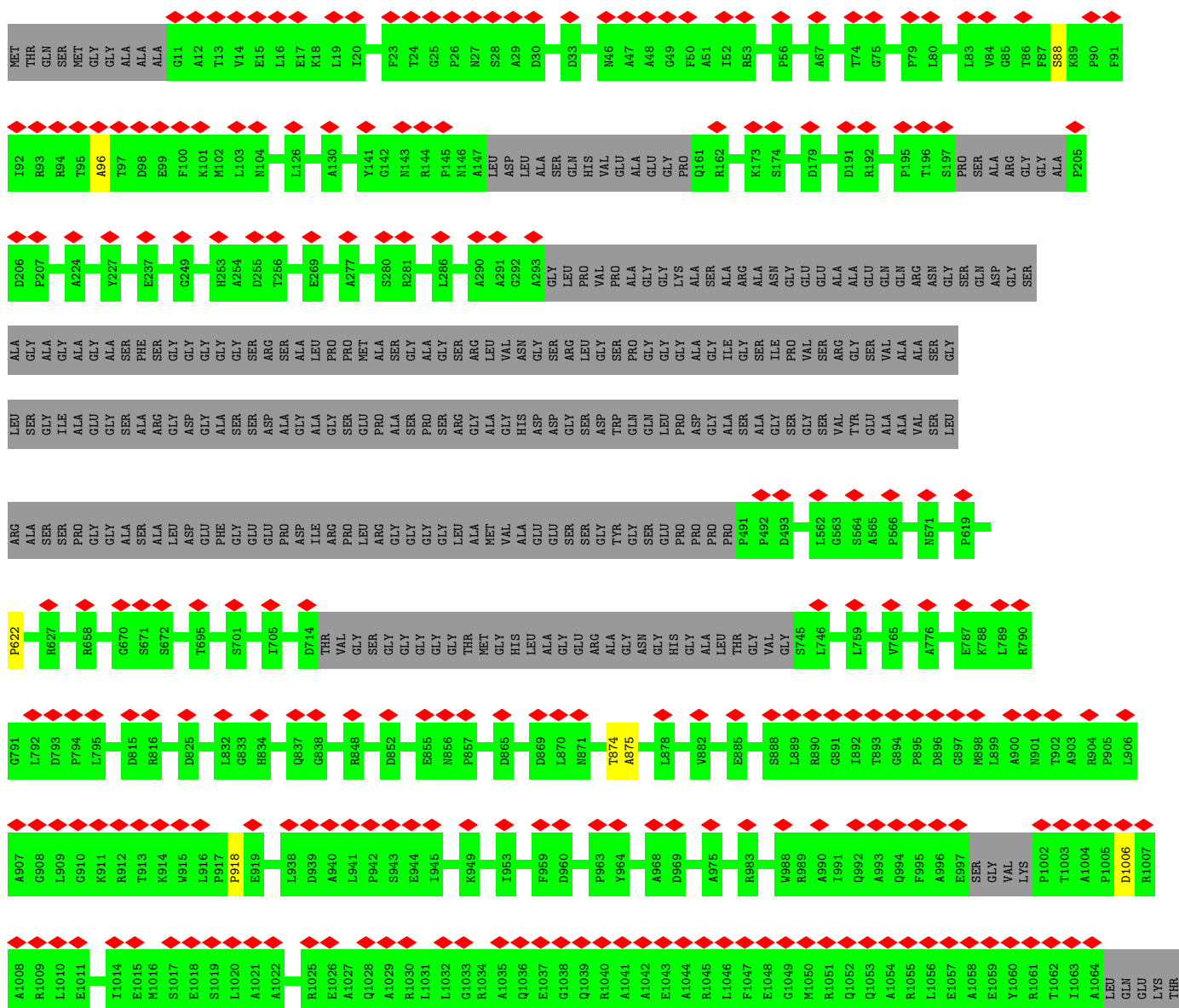
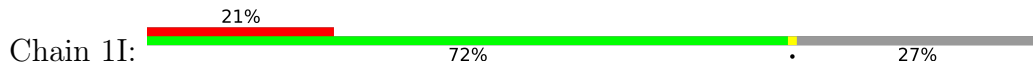


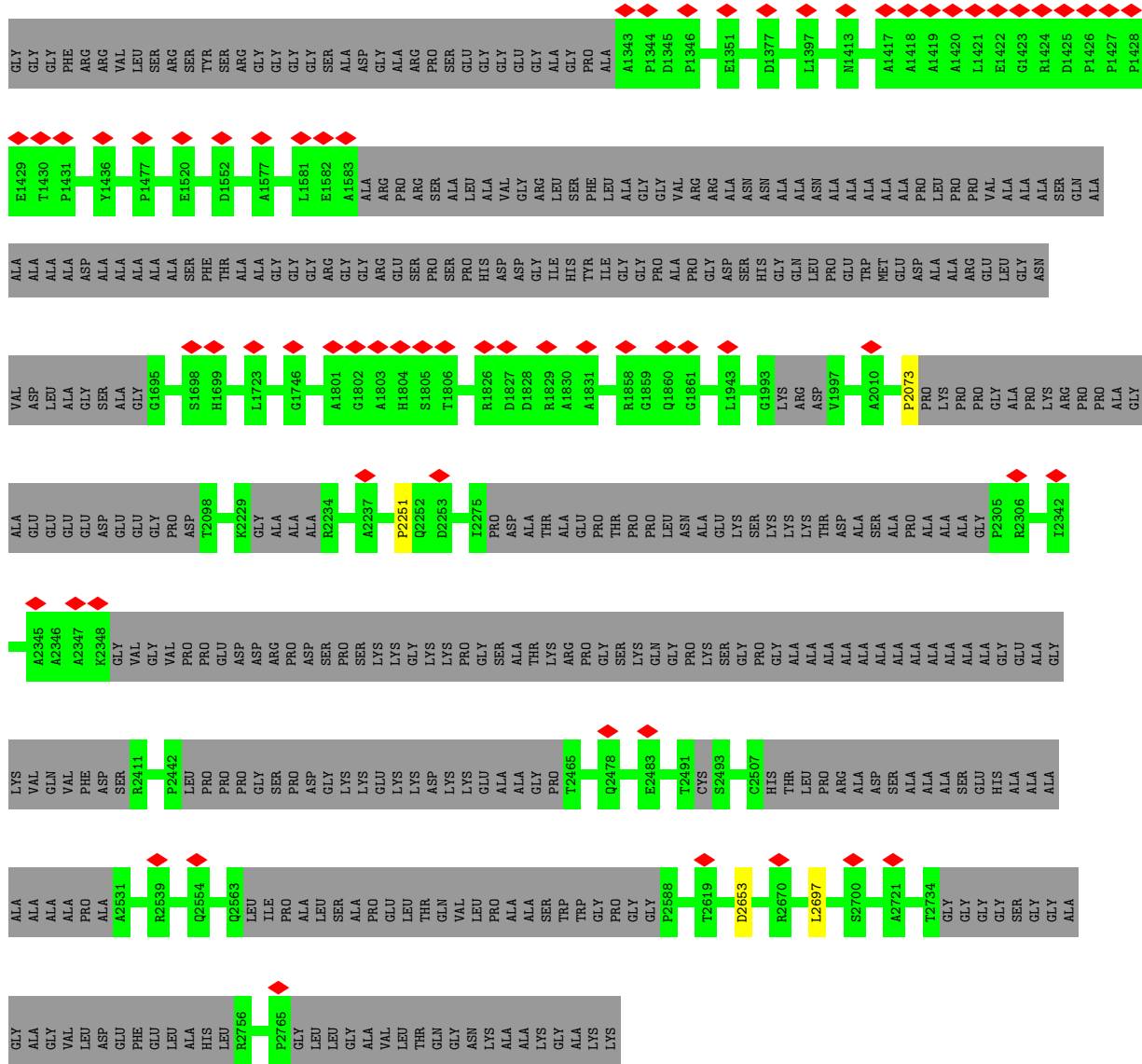
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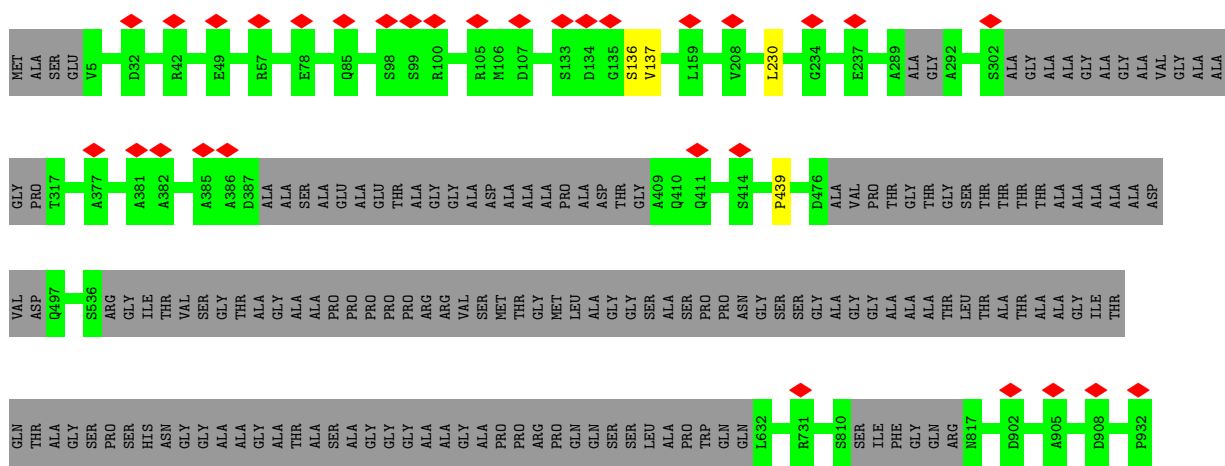
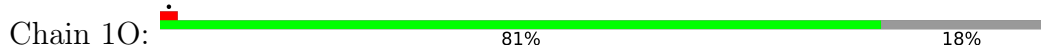


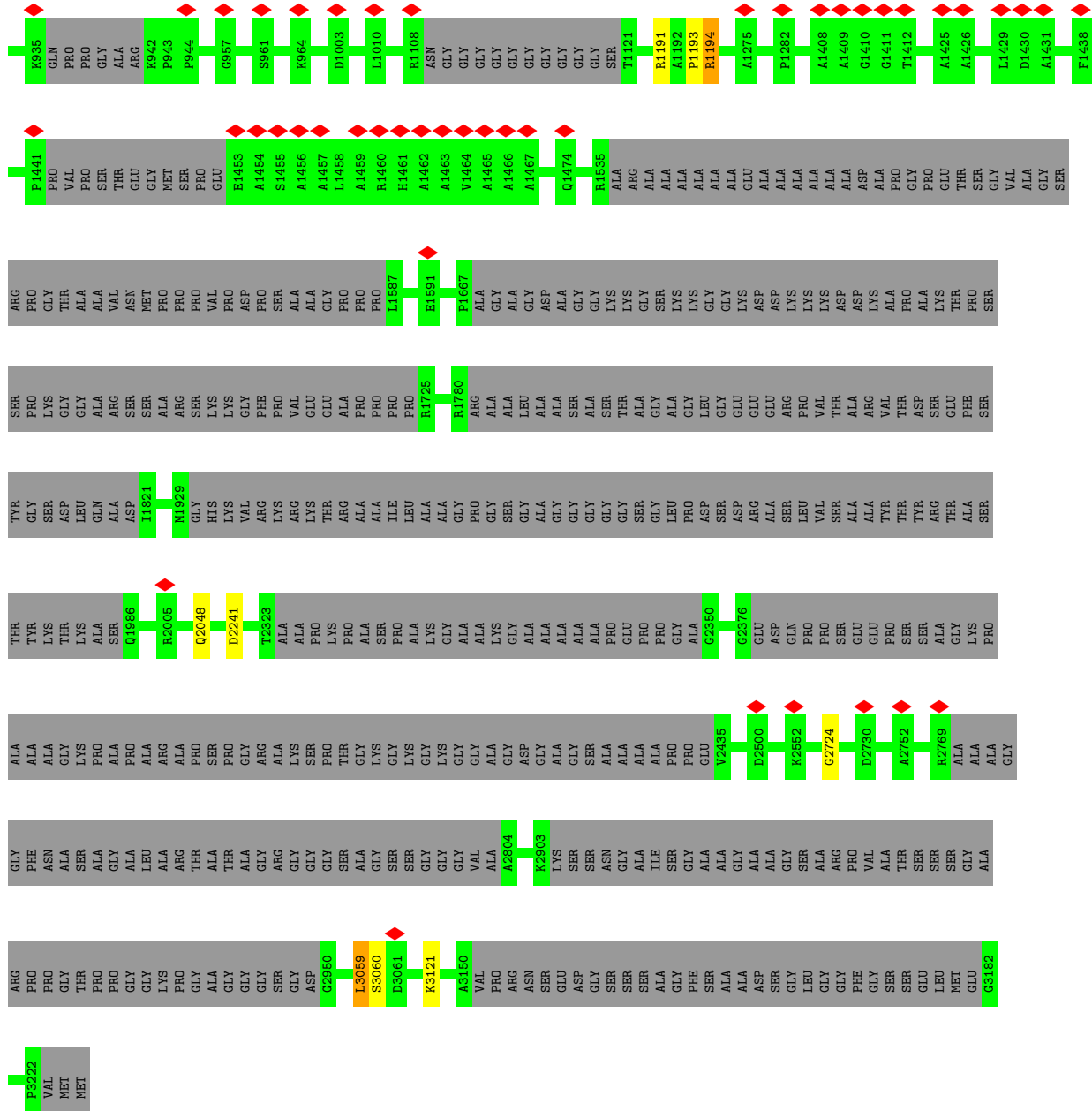
● Molecule 3: FAP69



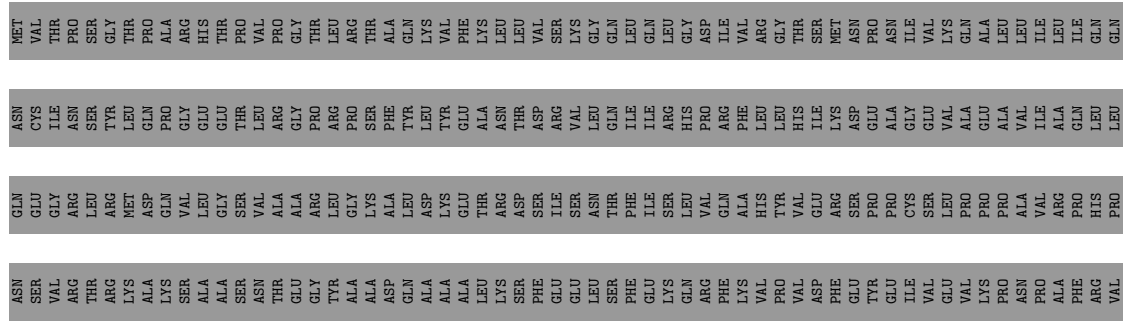


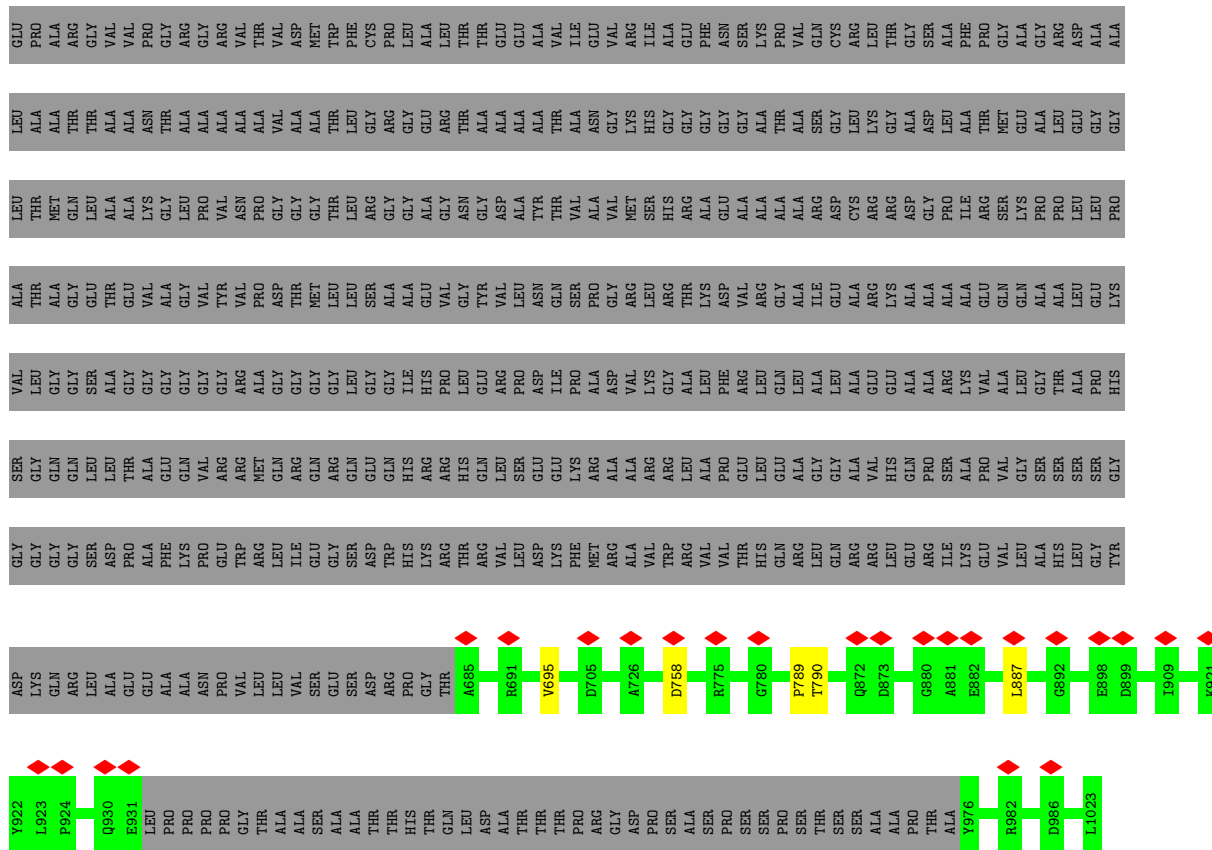
• Molecule 7: FAP54



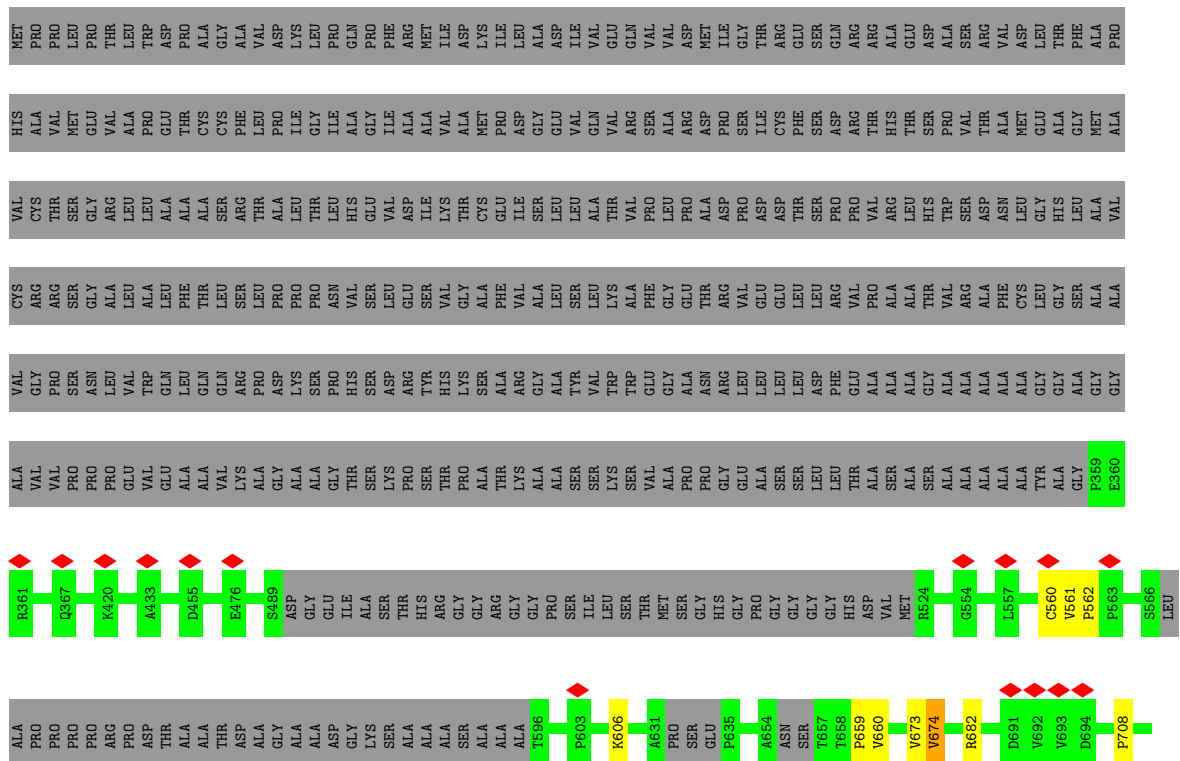


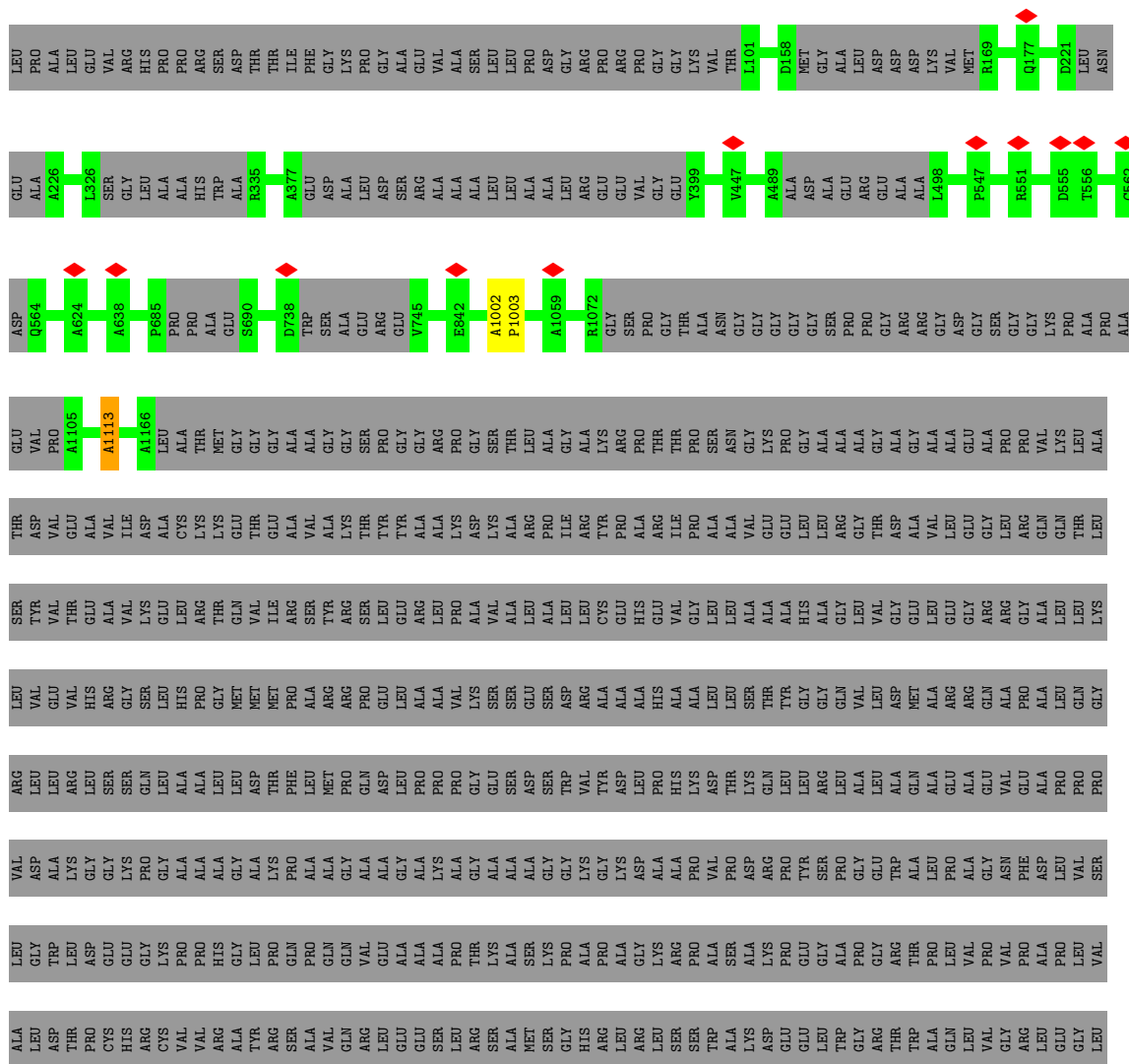
• Molecule 8: HTH_9 domain-containing protein



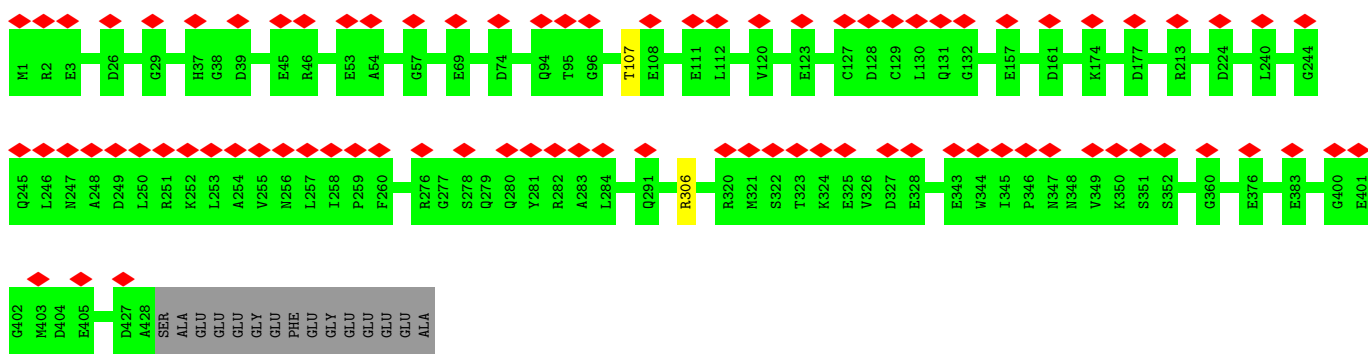


• Molecule 9: FAP297





• Molecule 12: Tubulin beta



• Molecule 12: Tubulin beta

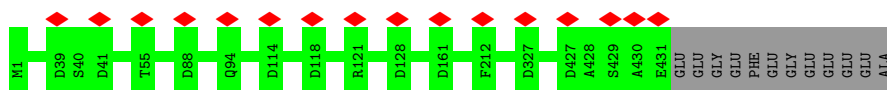




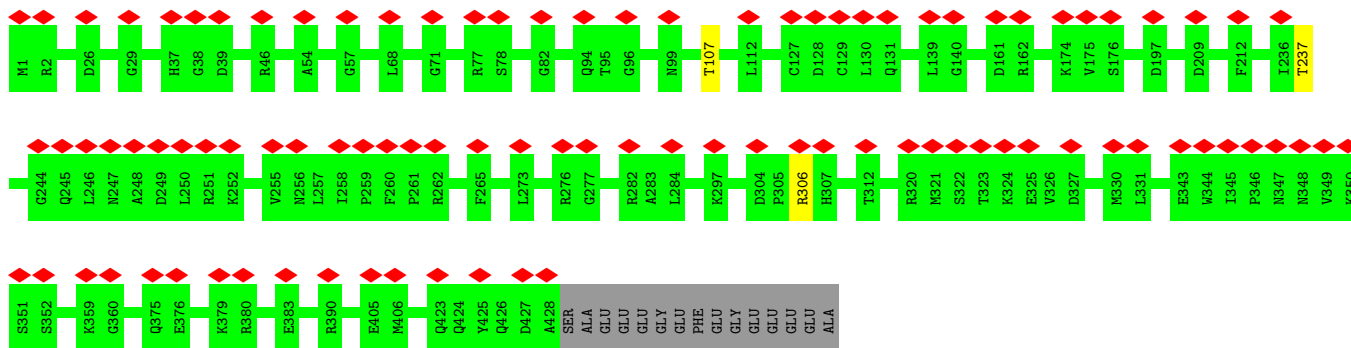
• Molecule 12: Tubulin beta



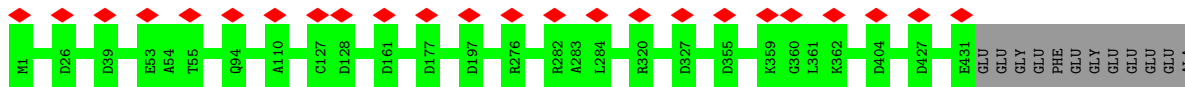
• Molecule 12: Tubulin beta



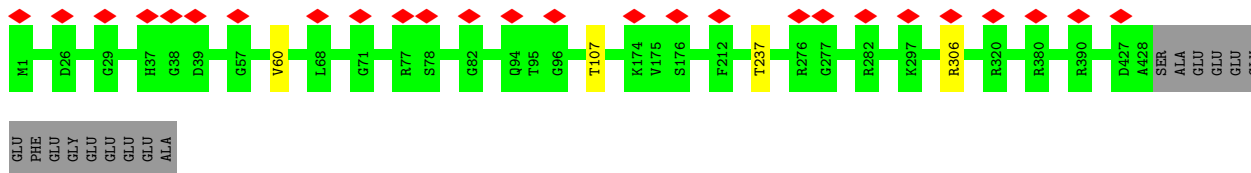
• Molecule 12: Tubulin beta



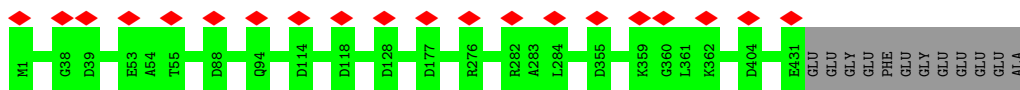
• Molecule 12: Tubulin beta



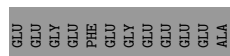
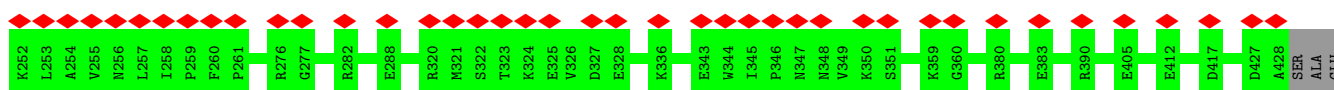
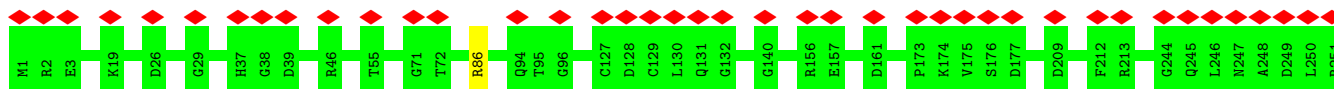
• Molecule 12: Tubulin beta



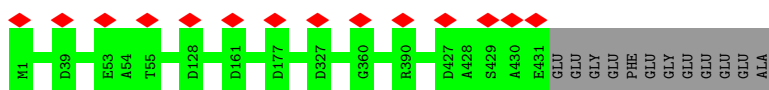
• Molecule 12: Tubulin beta



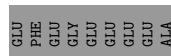
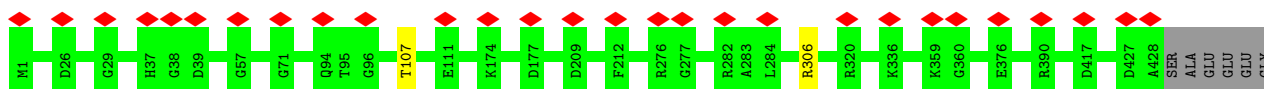
• Molecule 12: Tubulin beta



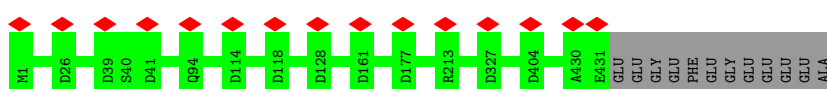
• Molecule 12: Tubulin beta



• Molecule 12: Tubulin beta

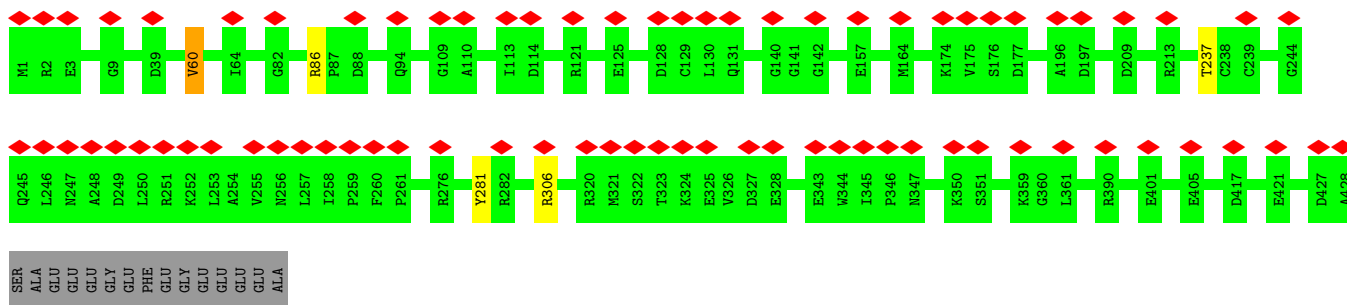


• Molecule 12: Tubulin beta

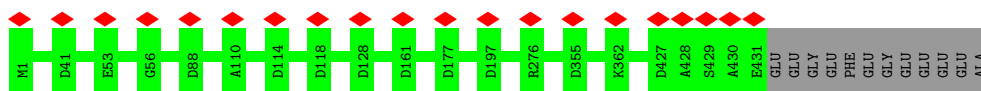


• Molecule 12: Tubulin beta

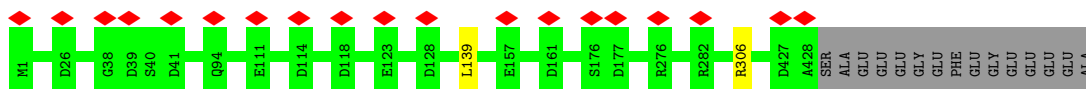




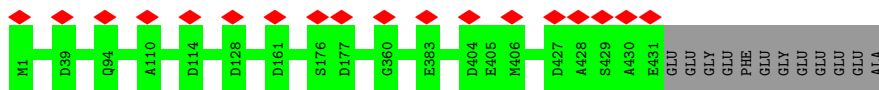
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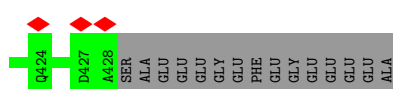
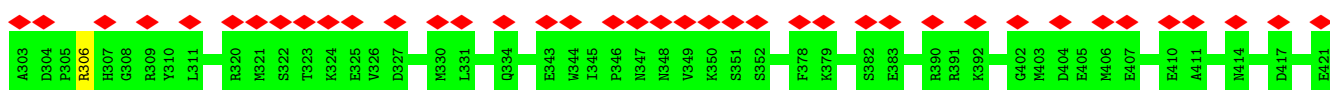
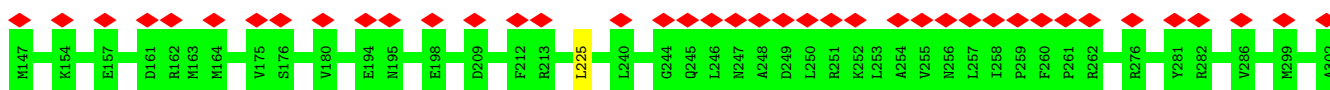
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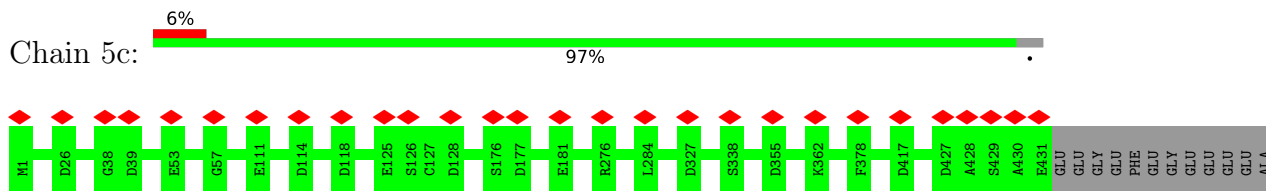
• Molecule 12: Tubulin beta



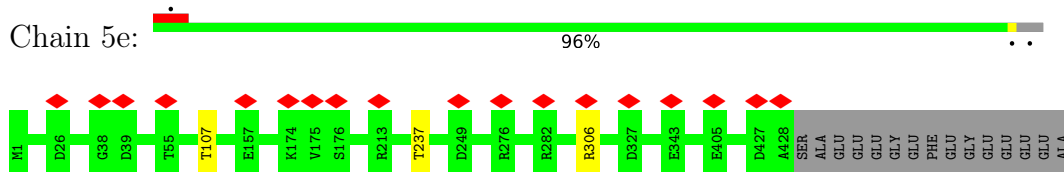
• Molecule 12: Tubulin beta



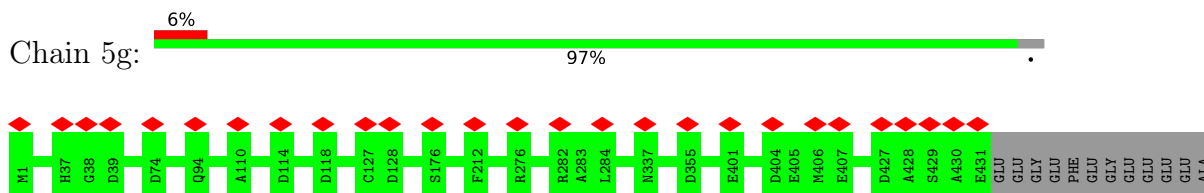
• Molecule 12: Tubulin beta



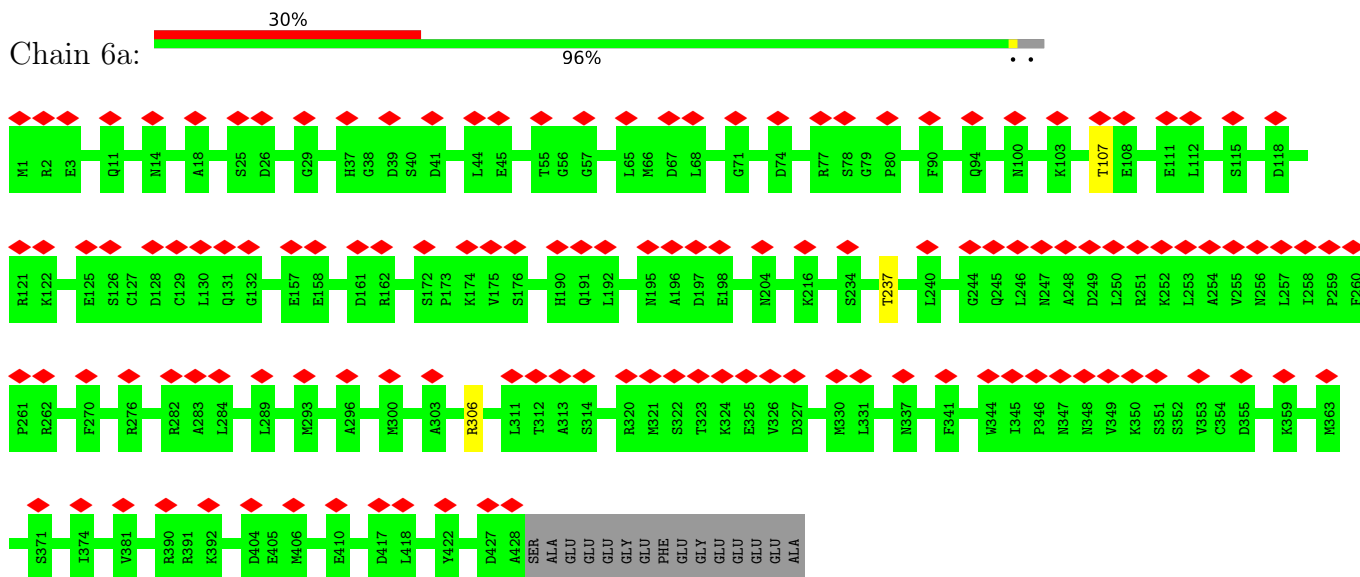
• Molecule 12: Tubulin beta



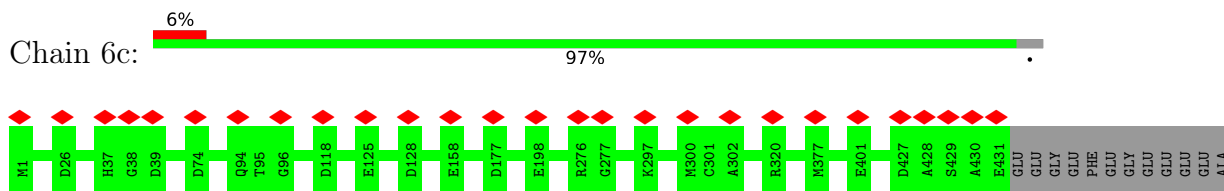
• Molecule 12: Tubulin beta



• Molecule 12: Tubulin beta

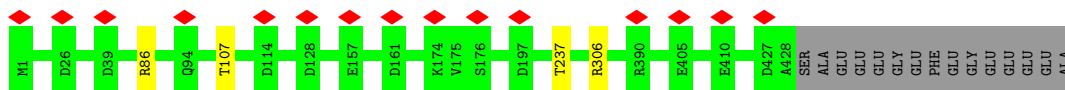


• Molecule 12: Tubulin beta



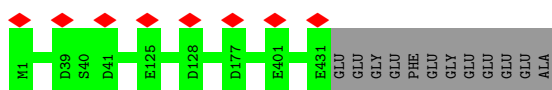
• Molecule 12: Tubulin beta

Chain 6e:  96%



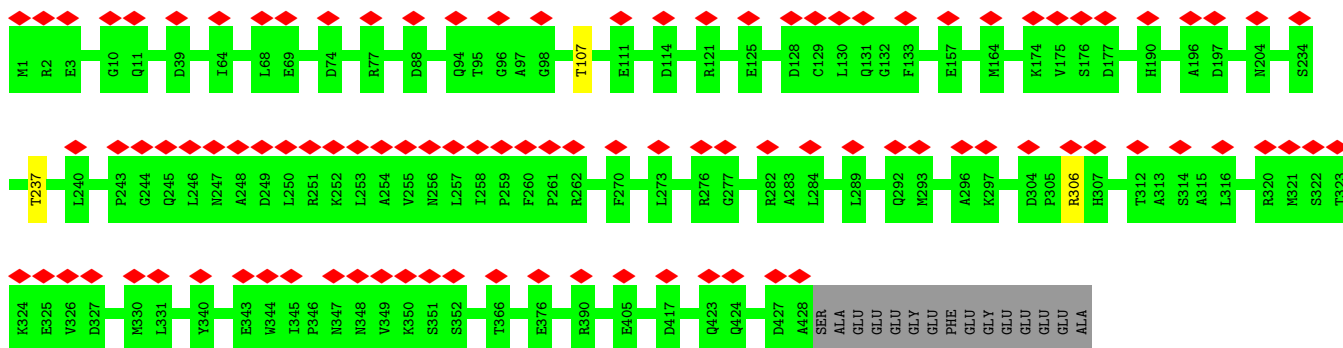
• Molecule 12: Tubulin beta

Chain 6g:  97%



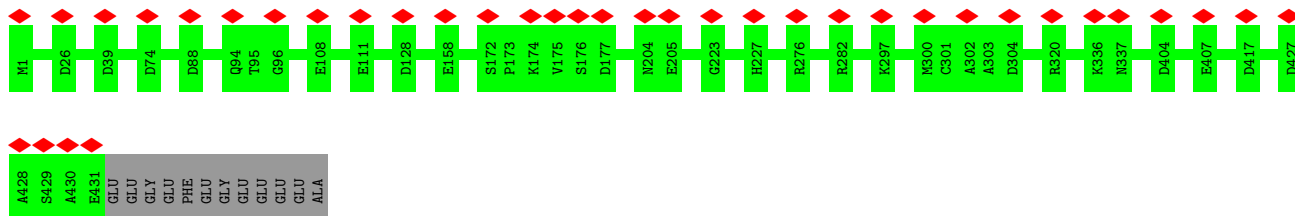
• Molecule 12: Tubulin beta

Chain 7a:  23% 96%



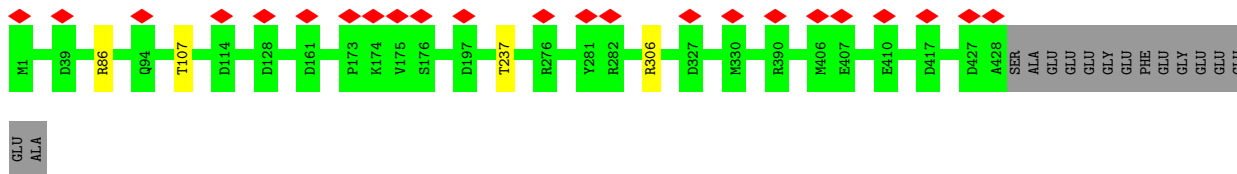
• Molecule 12: Tubulin beta

Chain 7c:  8% 97%

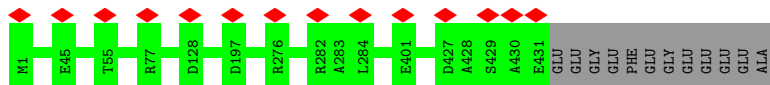


• Molecule 12: Tubulin beta

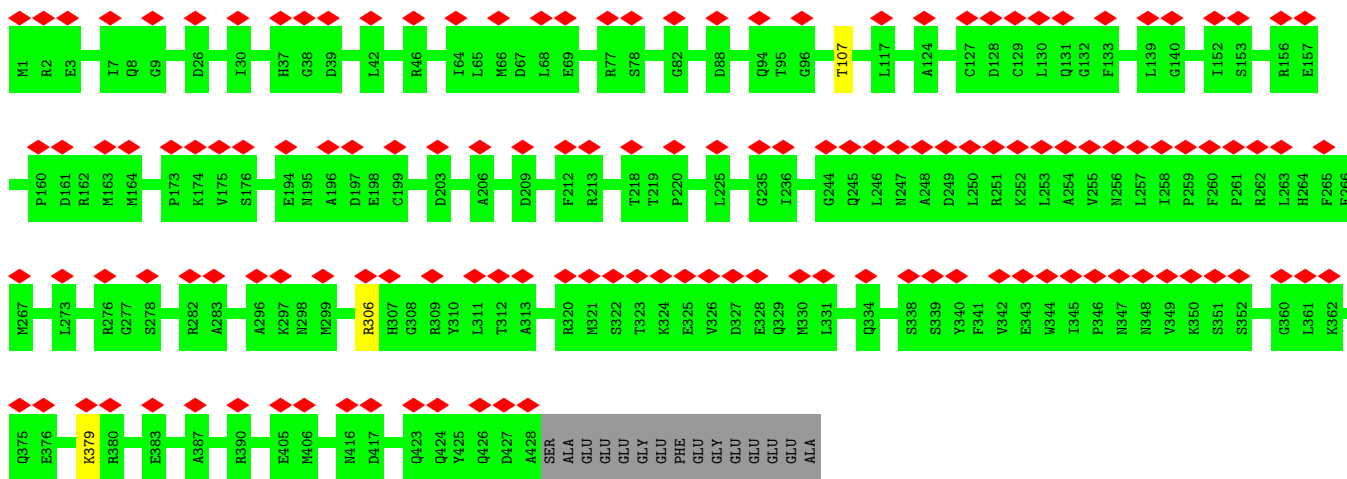
Chain 7e:  5% 96%



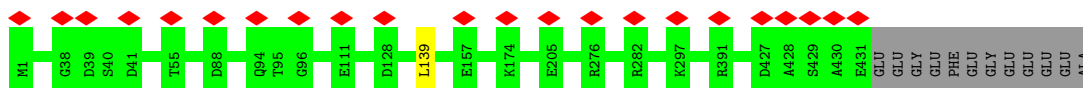
• Molecule 12: Tubulin beta



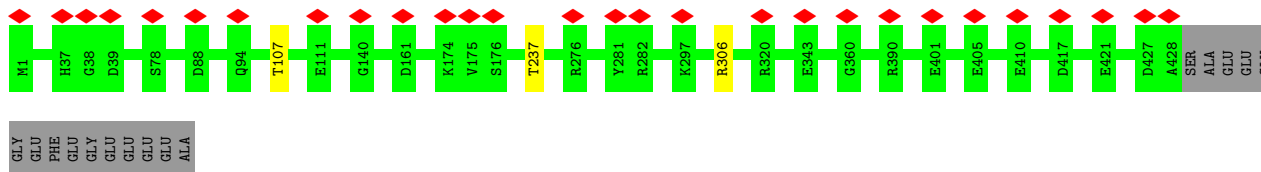
• Molecule 12: Tubulin beta



• Molecule 12: Tubulin beta



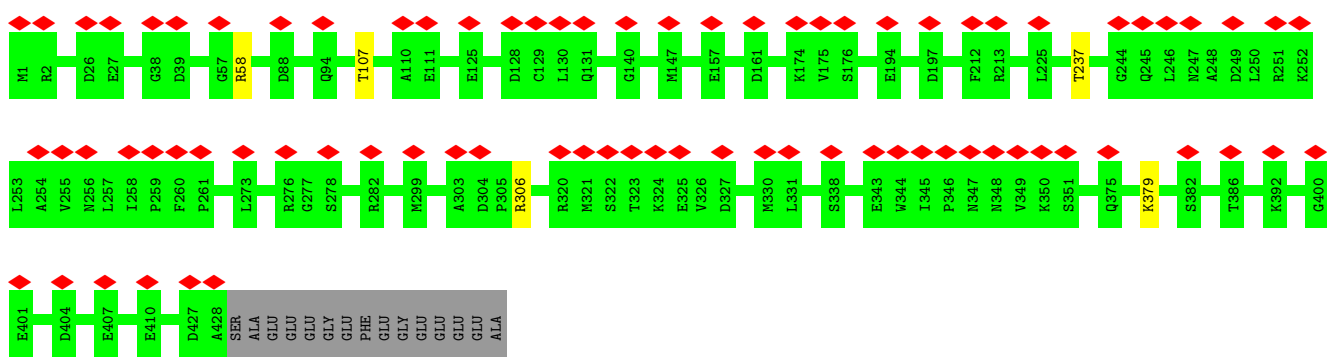
• Molecule 12: Tubulin beta



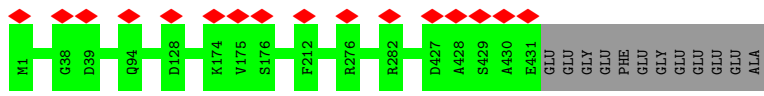
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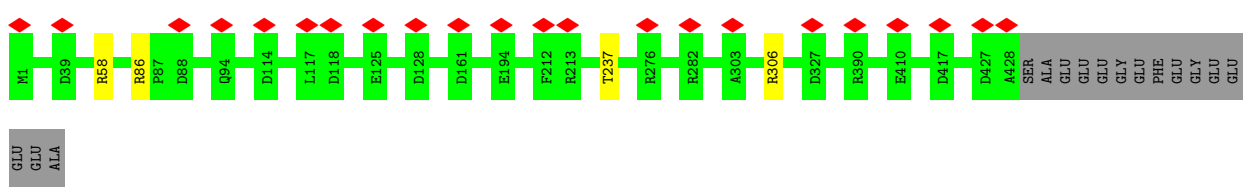
• Molecule 12: Tubulin beta



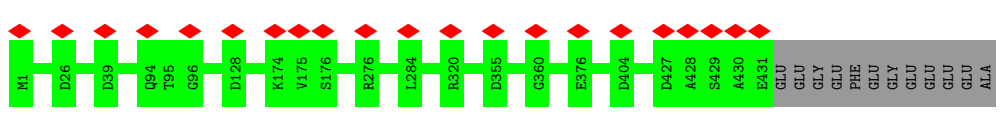
• Molecule 12: Tubulin beta



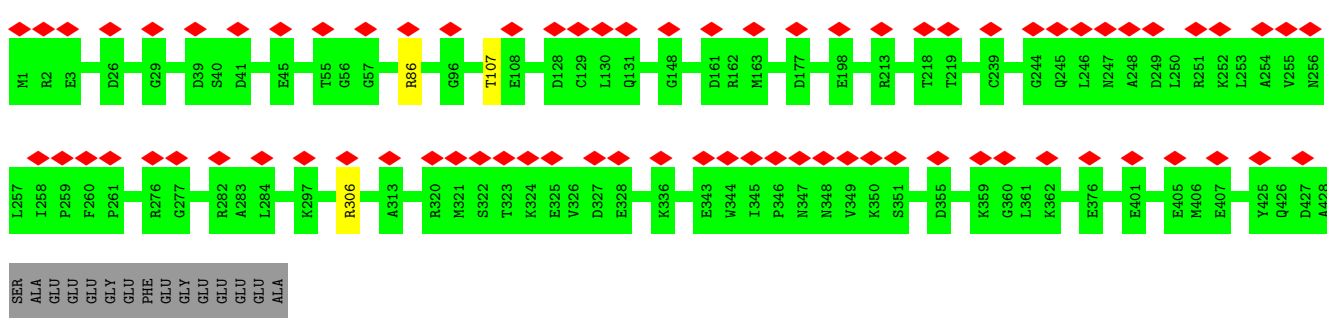
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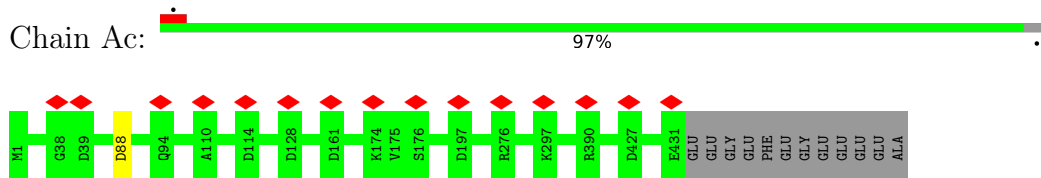
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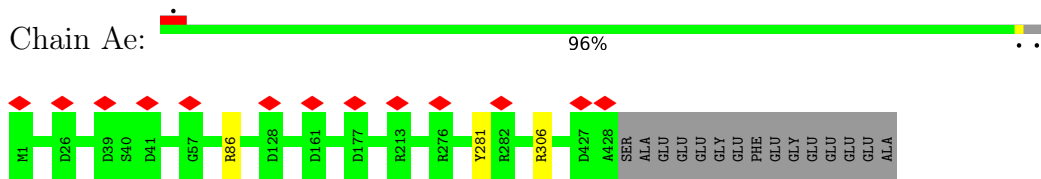
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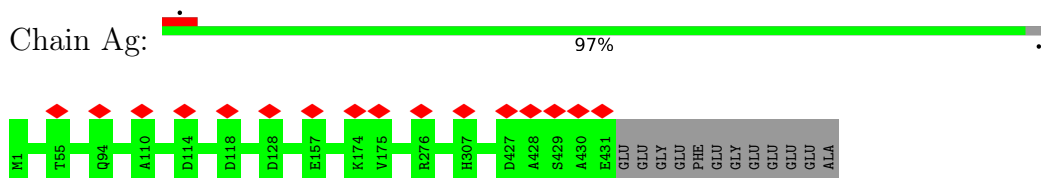
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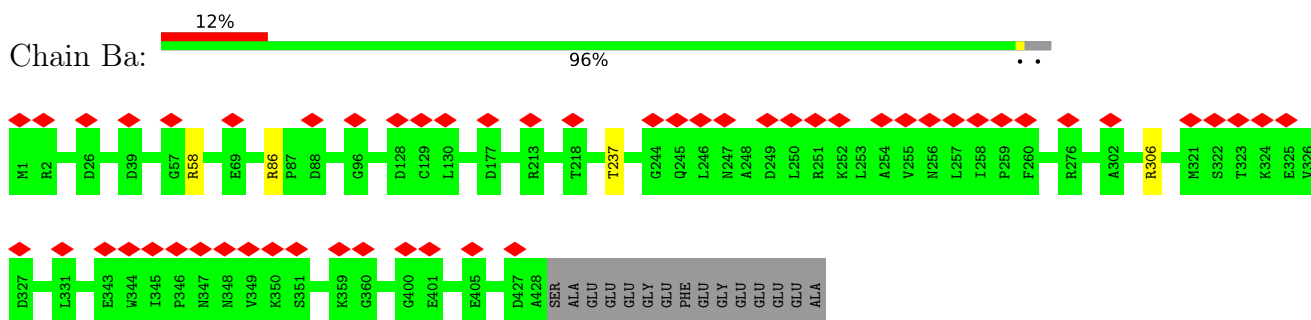
• Molecule 12: Tubulin beta



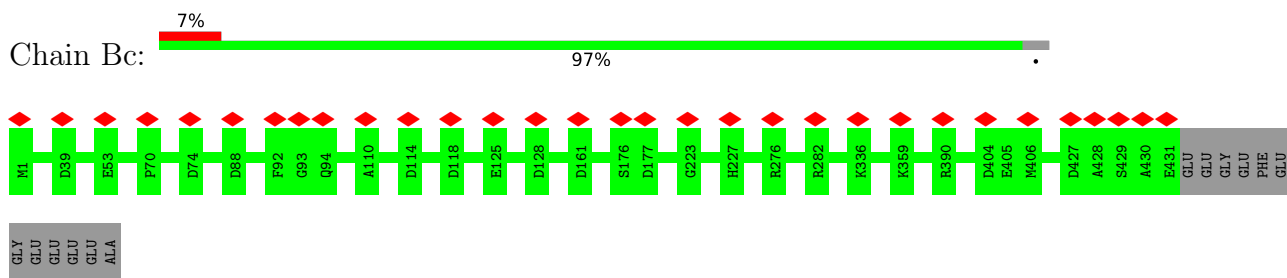
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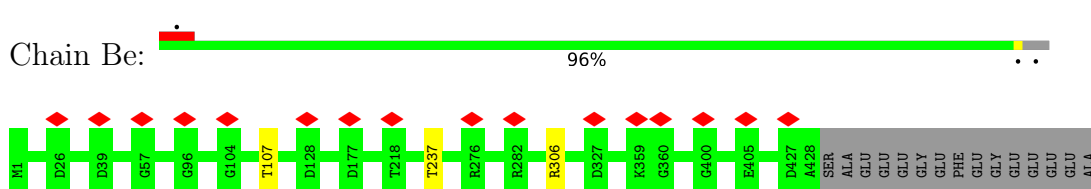
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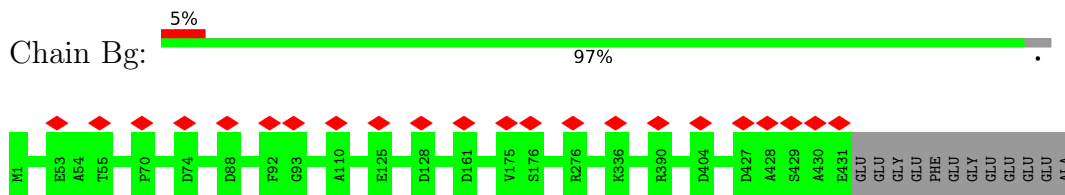
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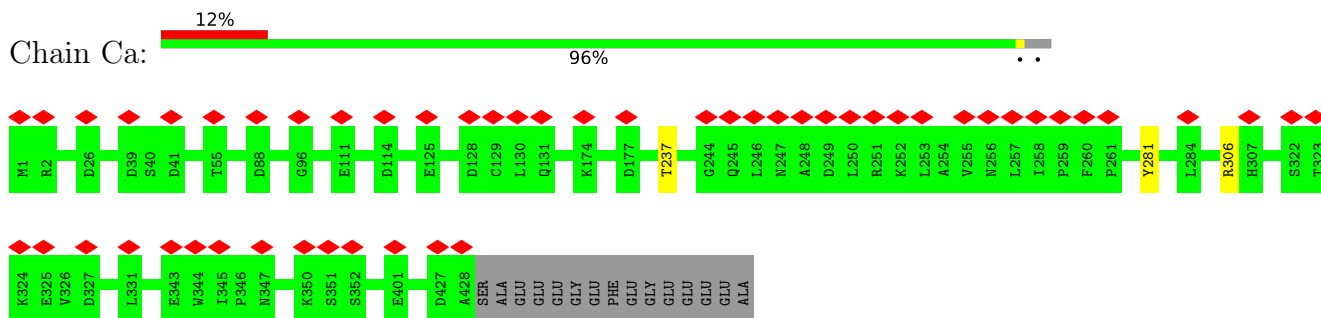
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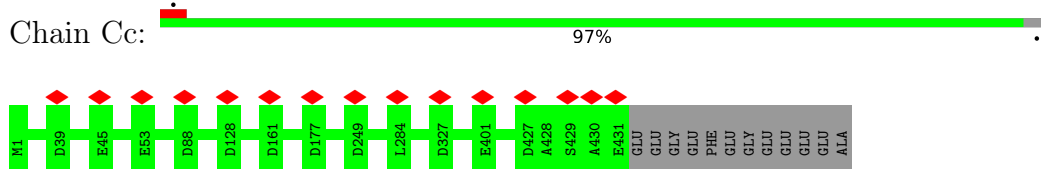
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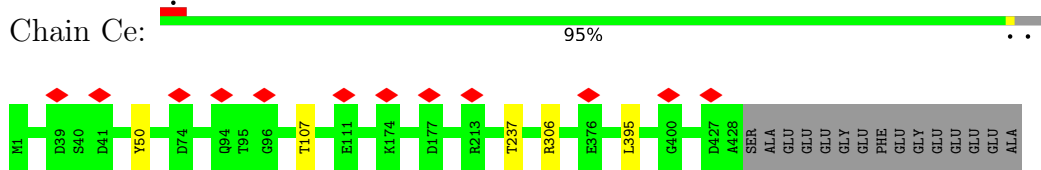
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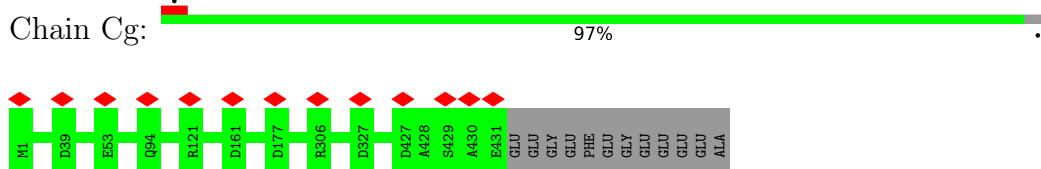
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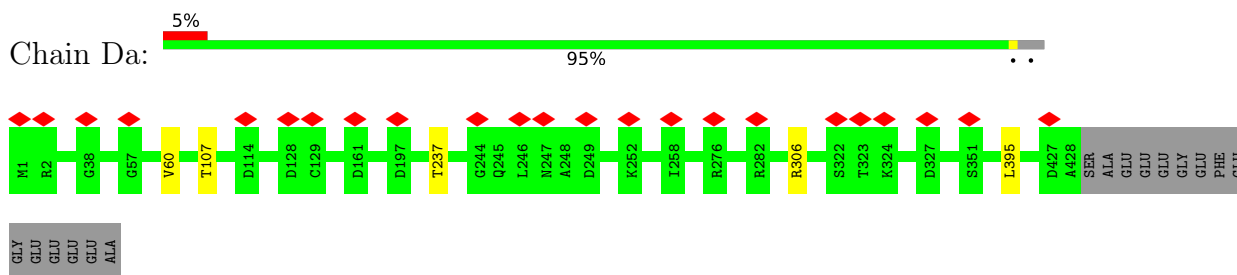
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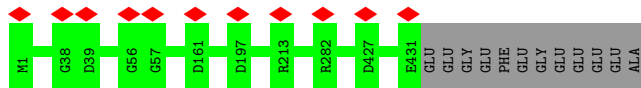
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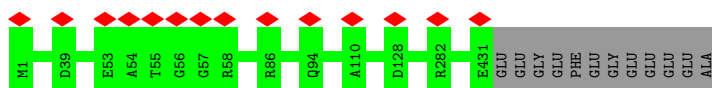
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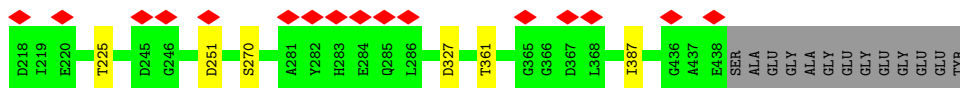
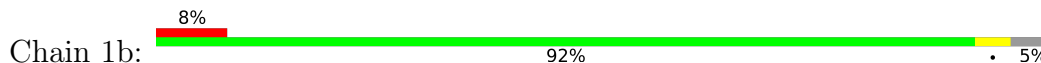
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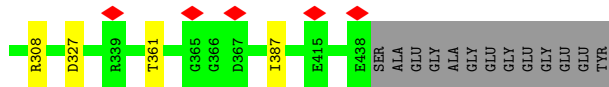
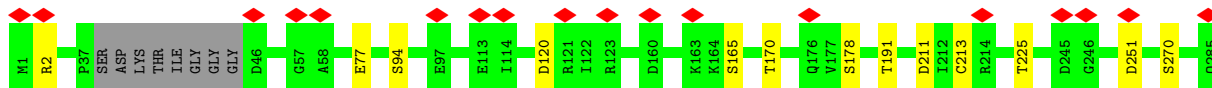
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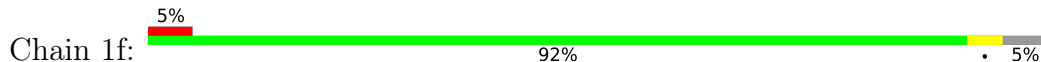
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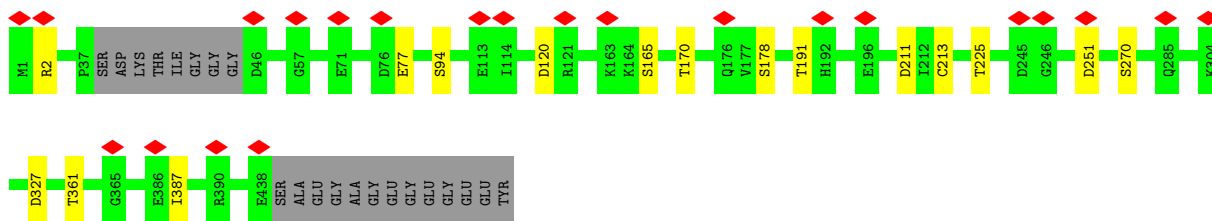


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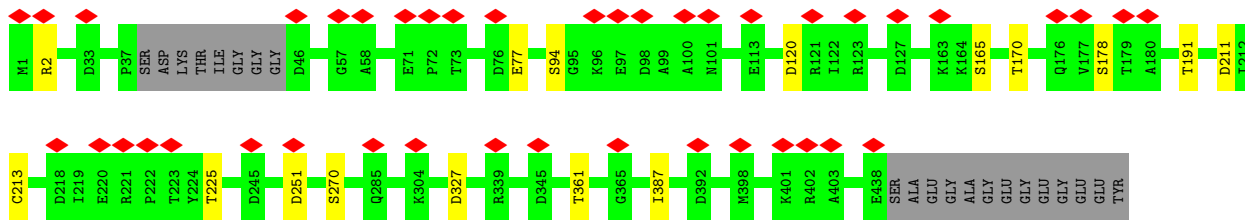


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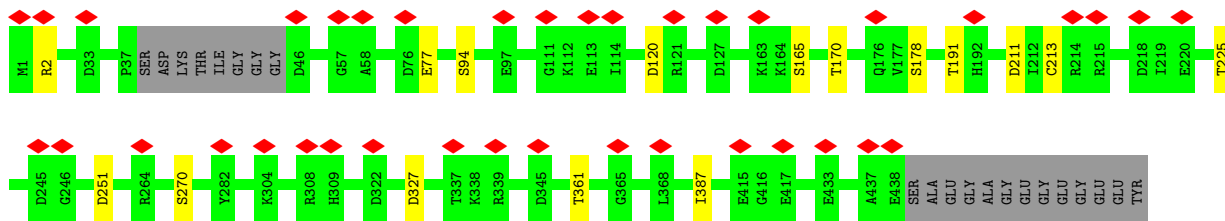




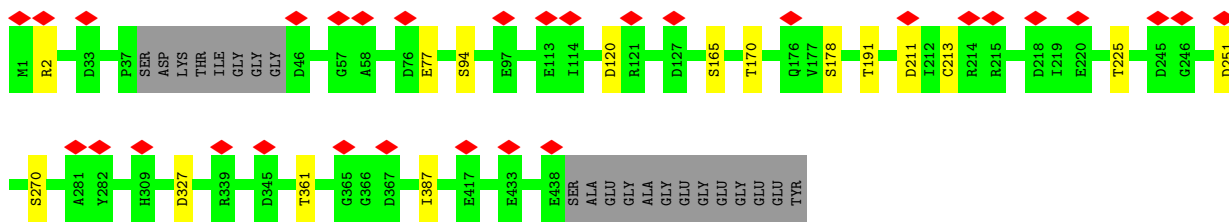
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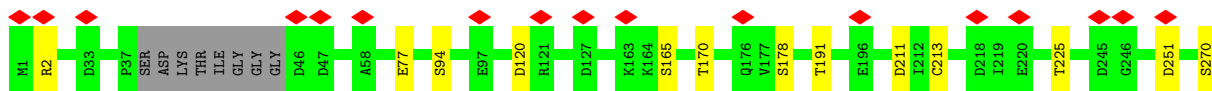
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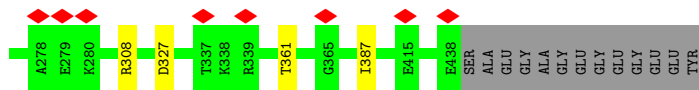


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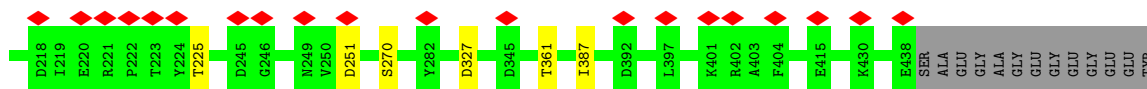
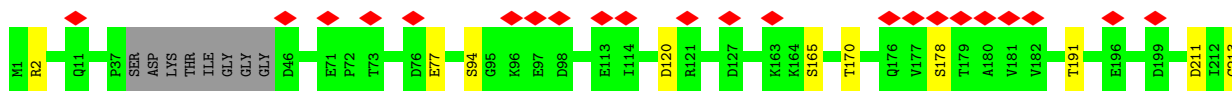
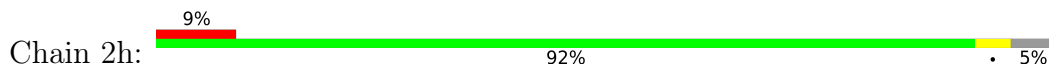


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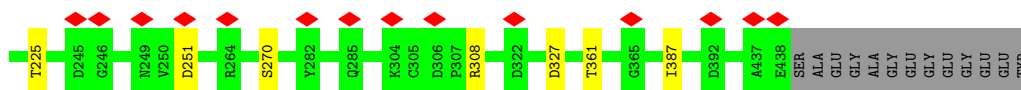
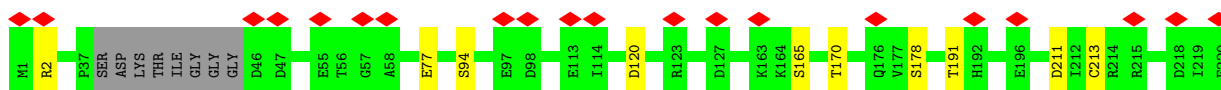
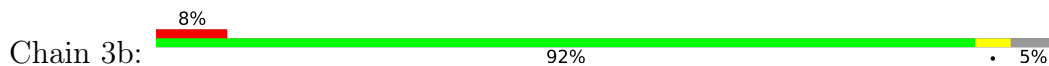




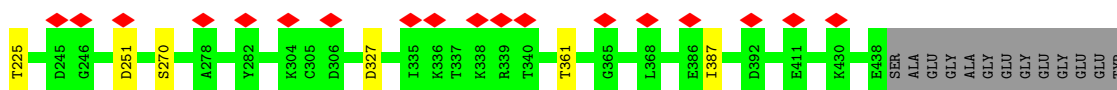
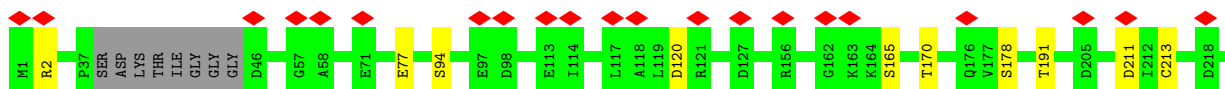
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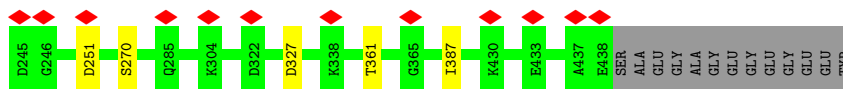
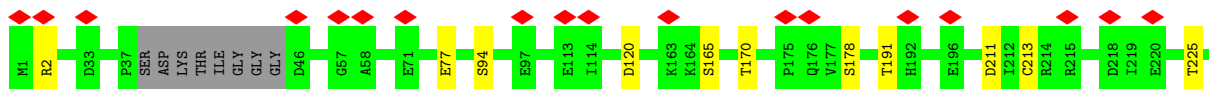
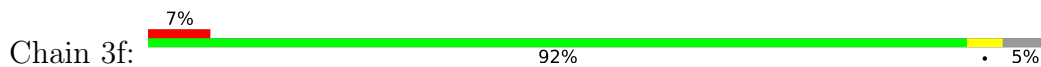
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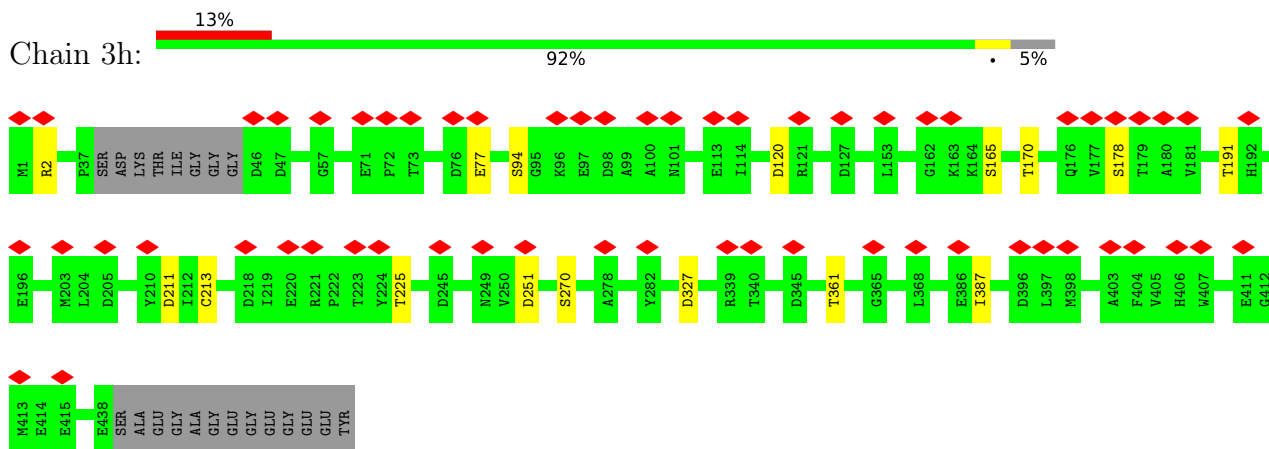
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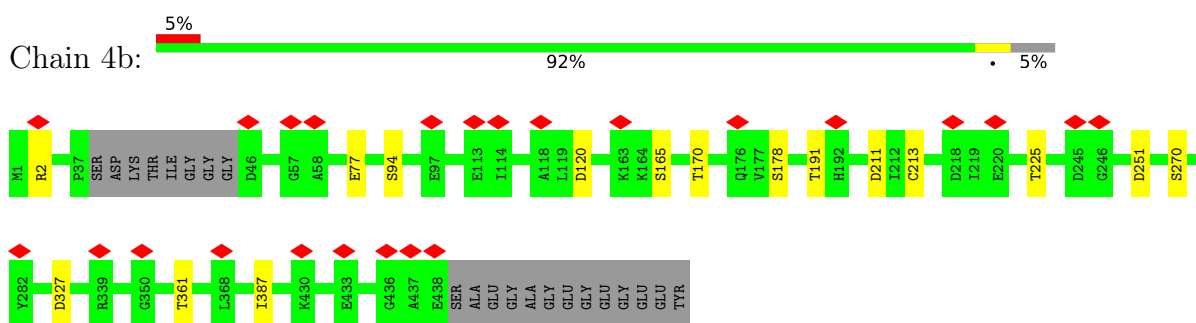
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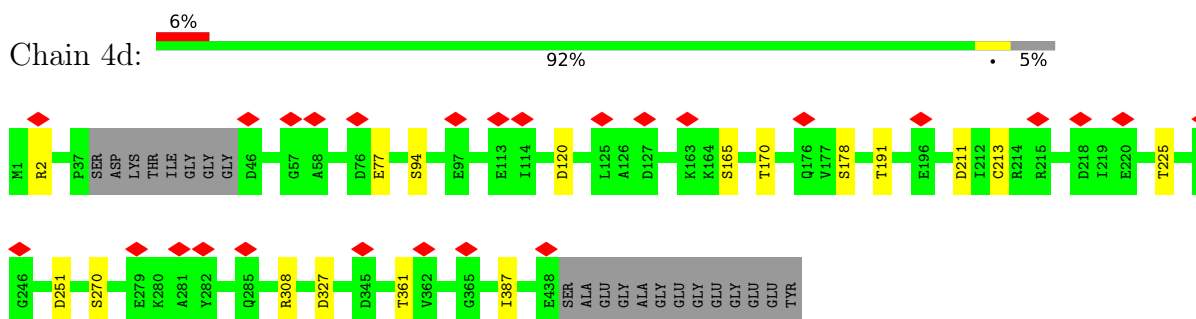
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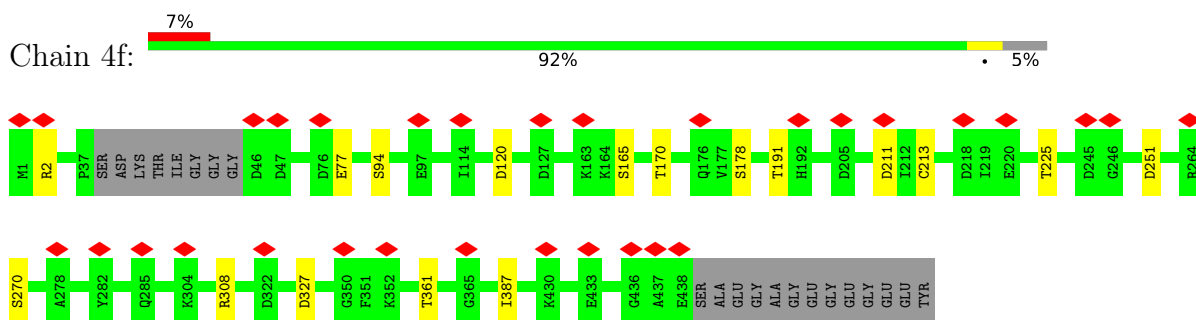
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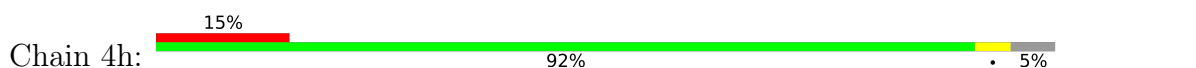
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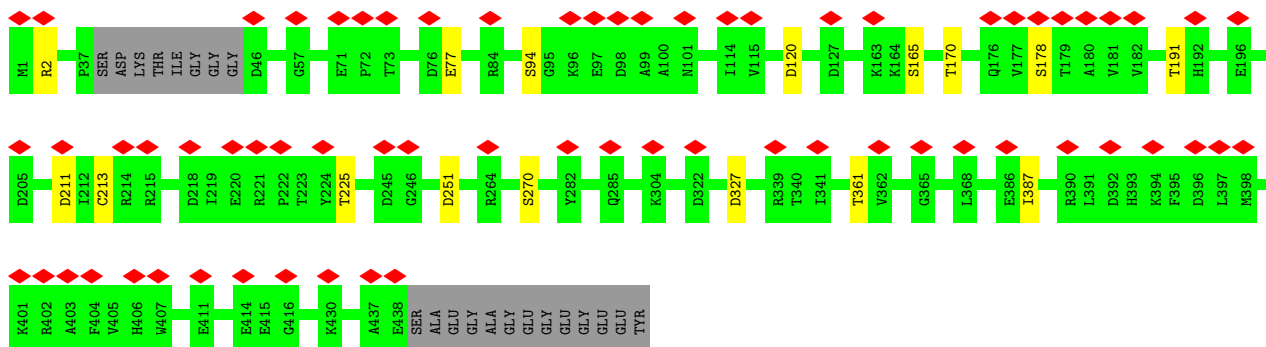


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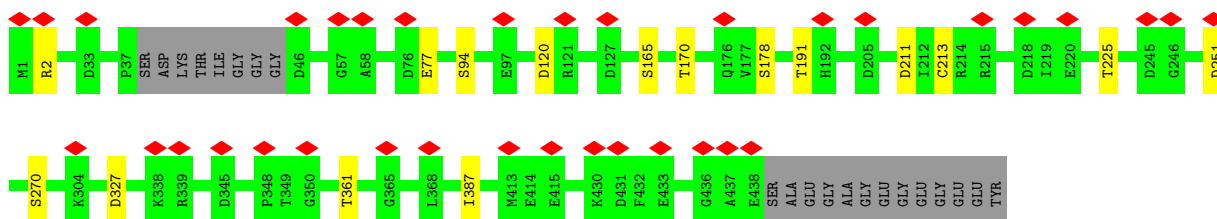


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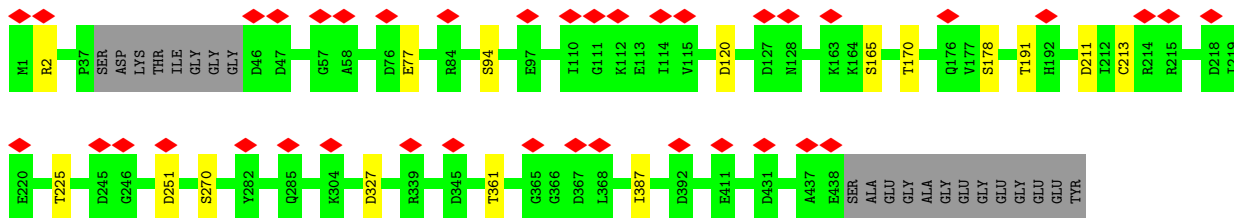




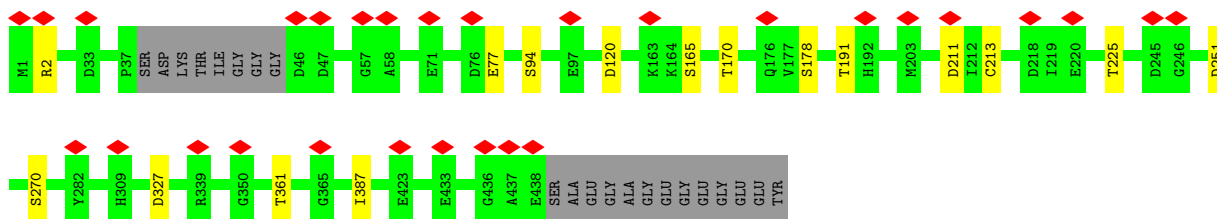
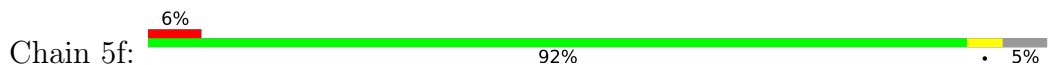
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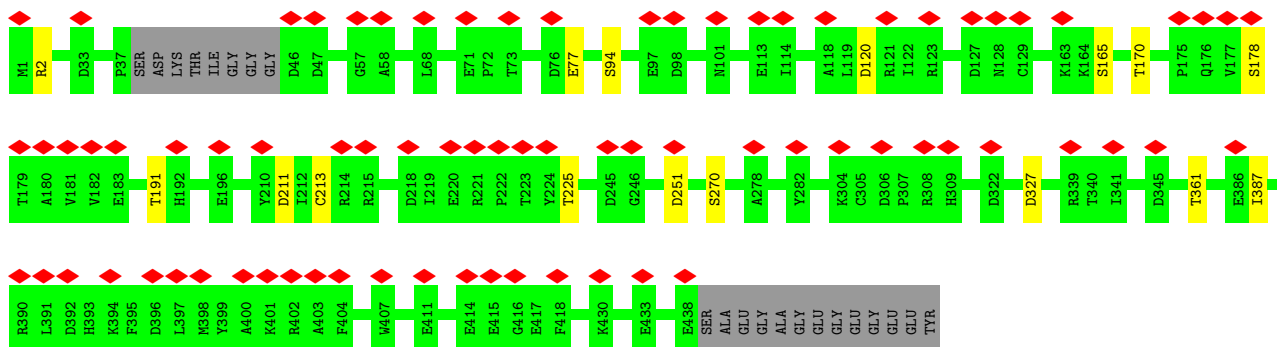


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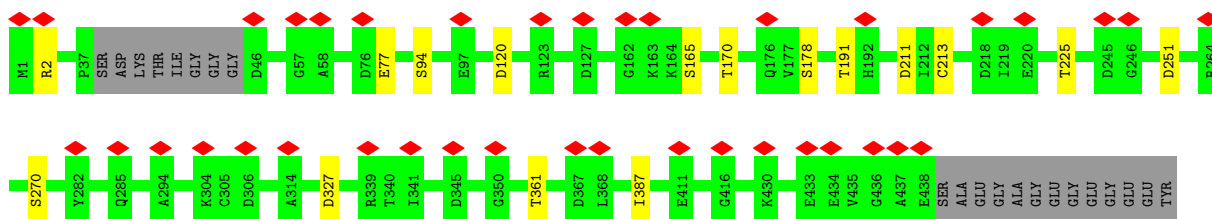


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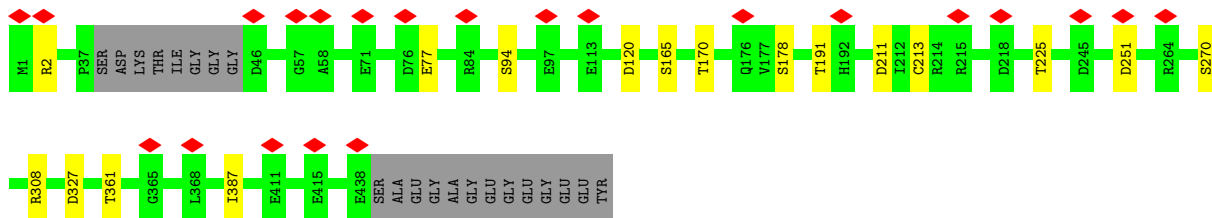




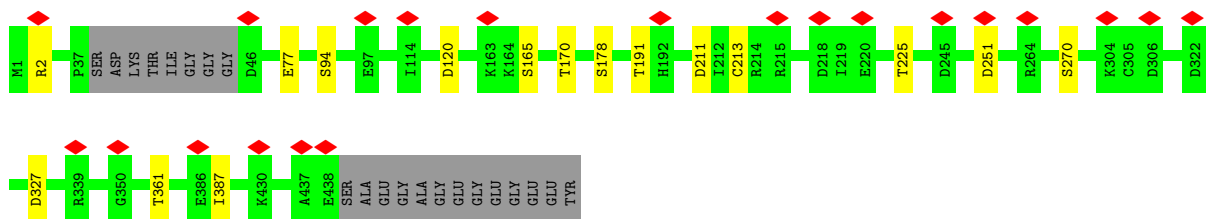
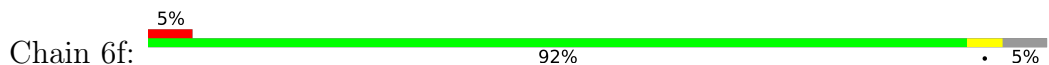
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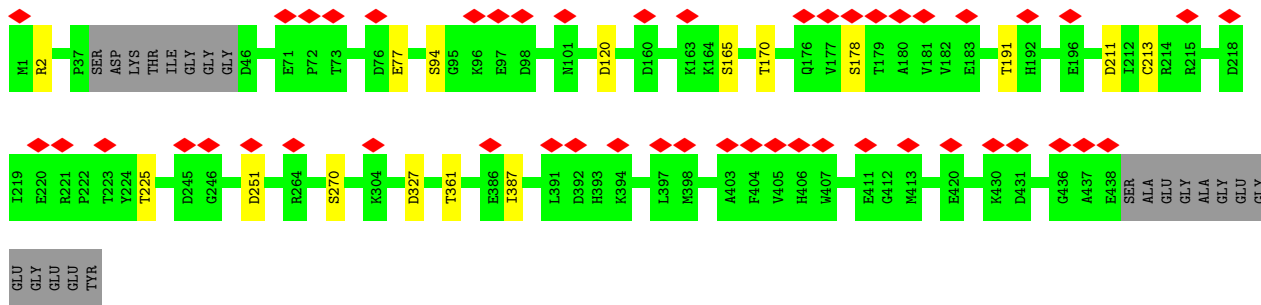


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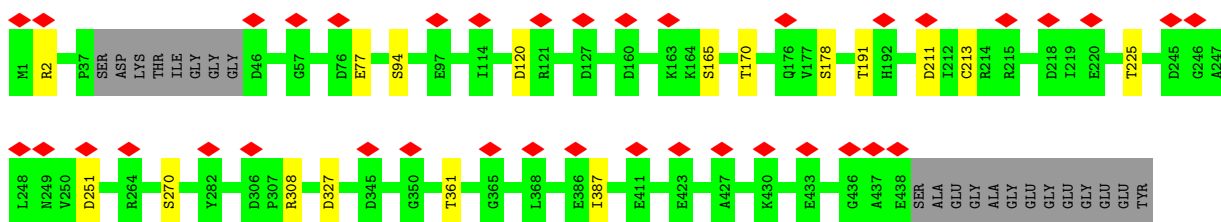


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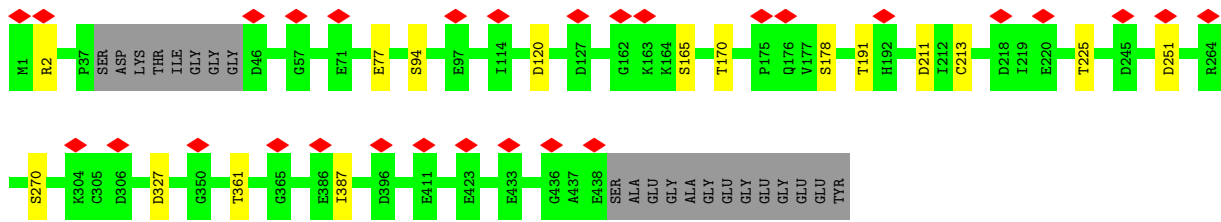




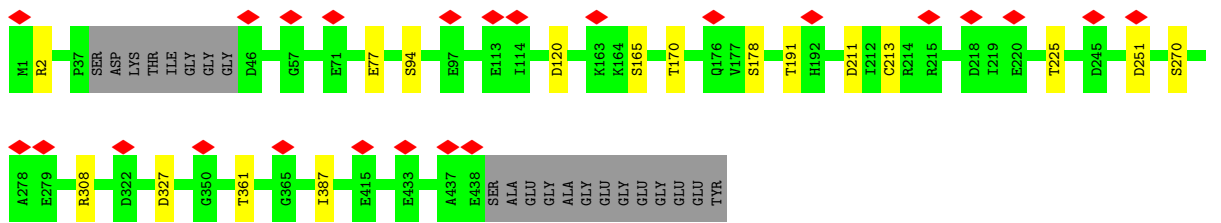
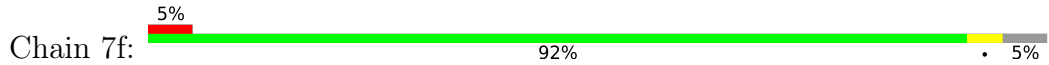
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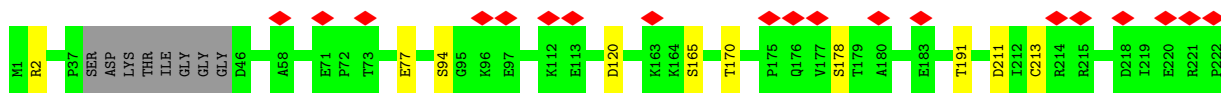
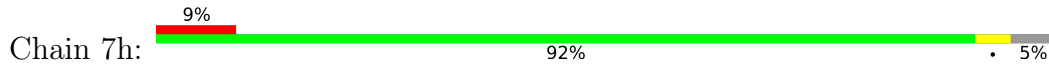
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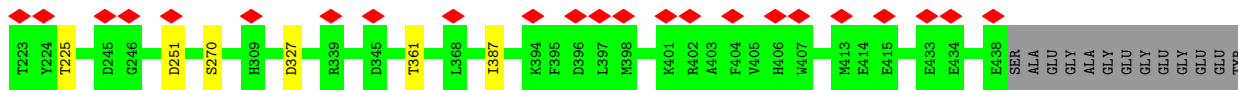


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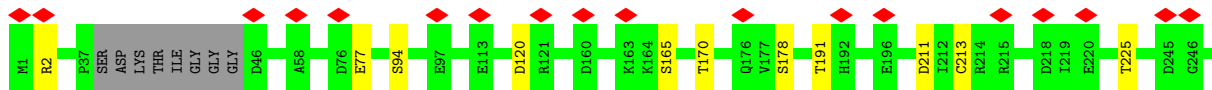
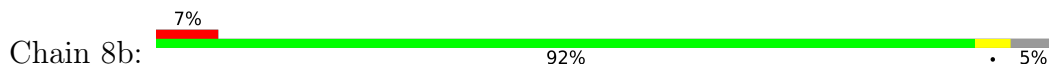


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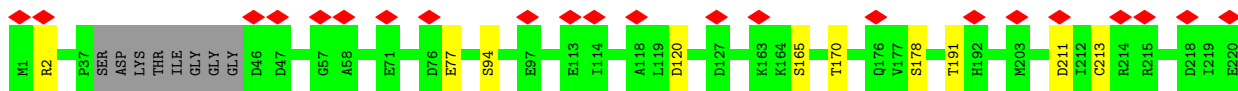
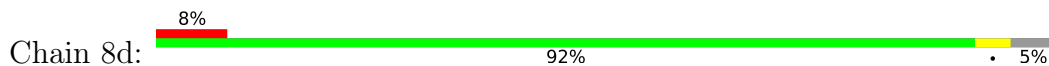




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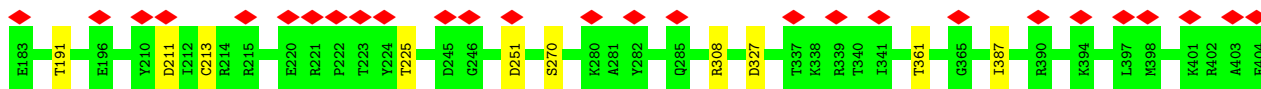
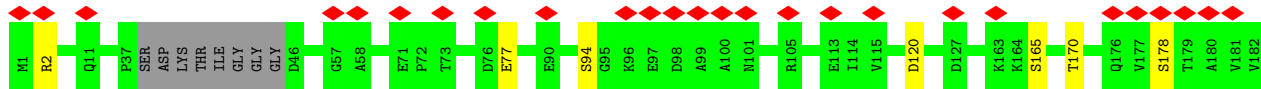
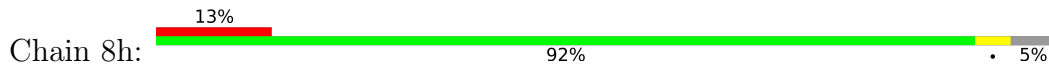
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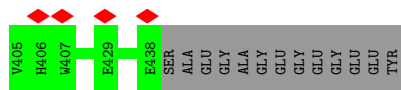


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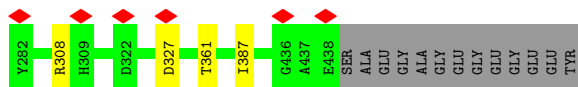
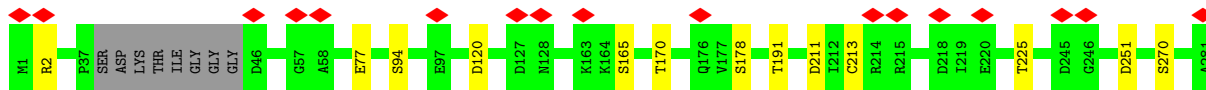
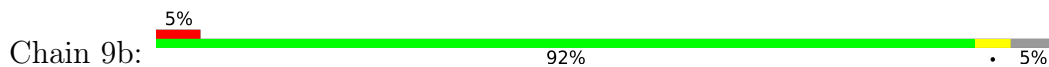


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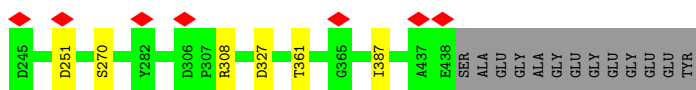
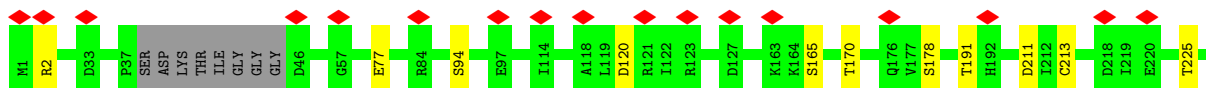
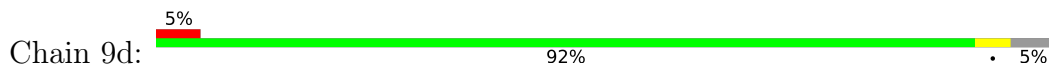




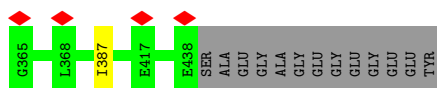
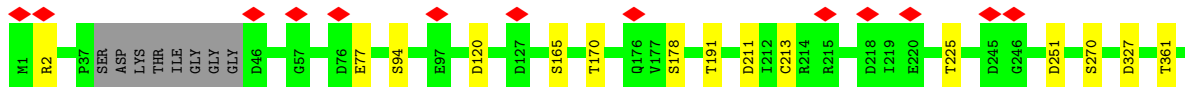
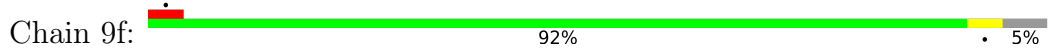
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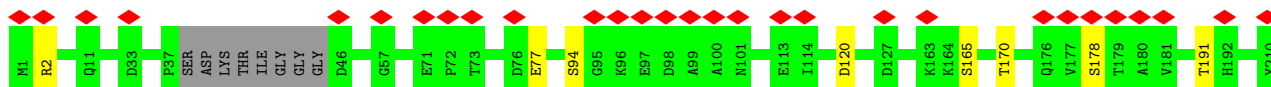
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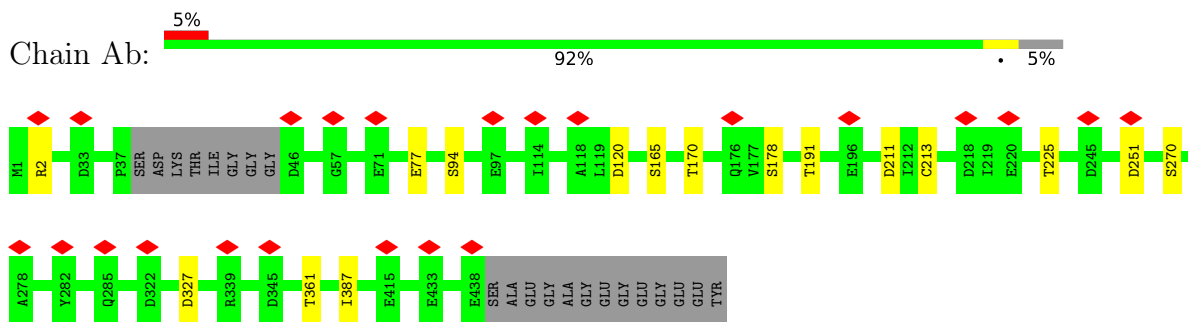
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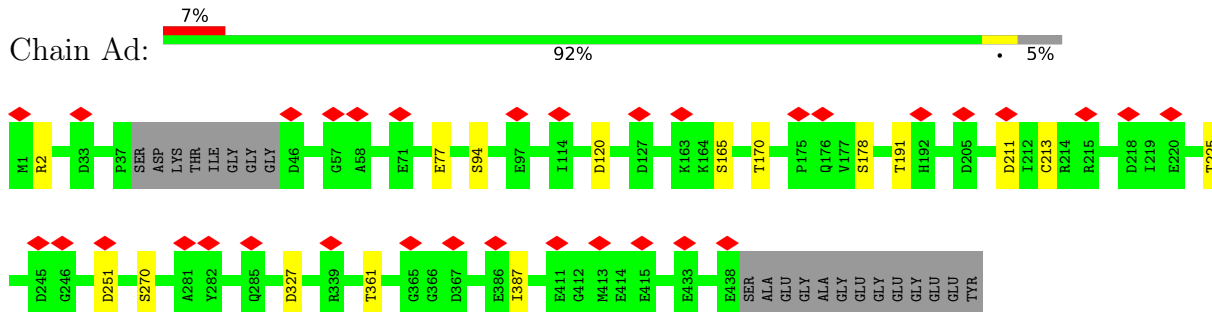
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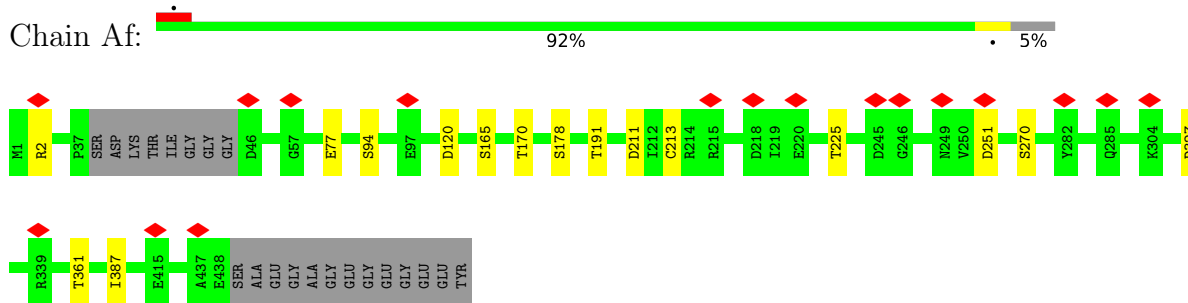
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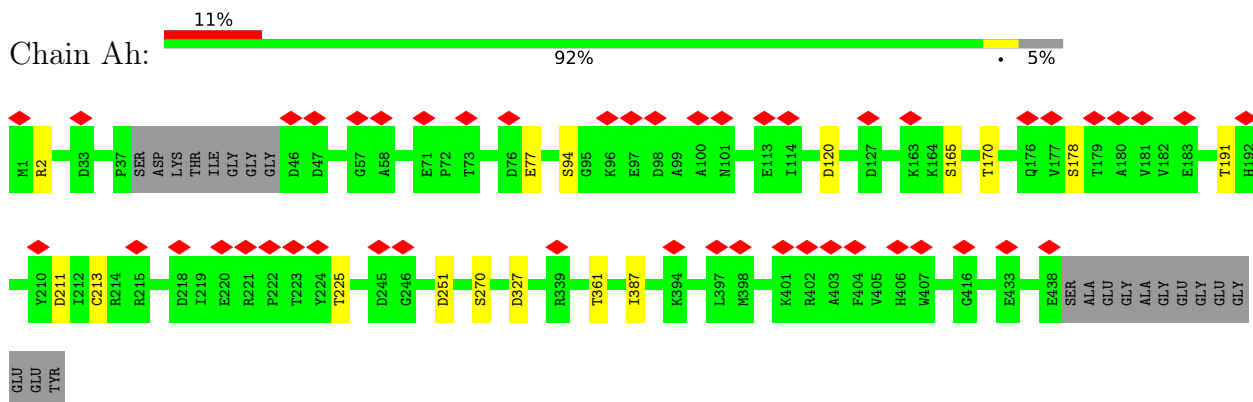
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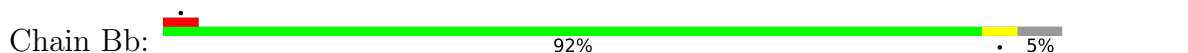
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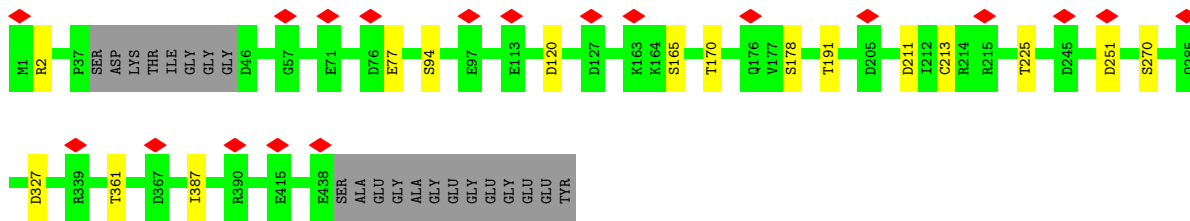


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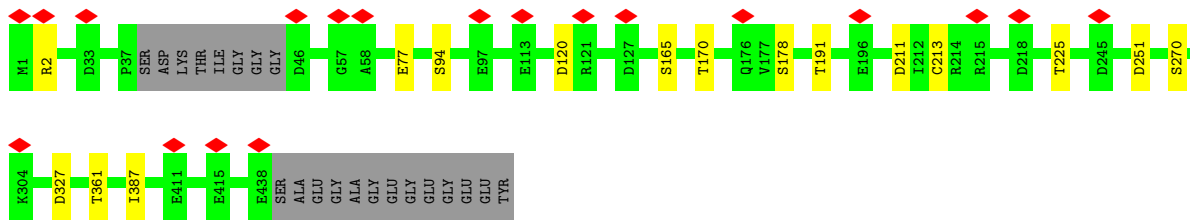


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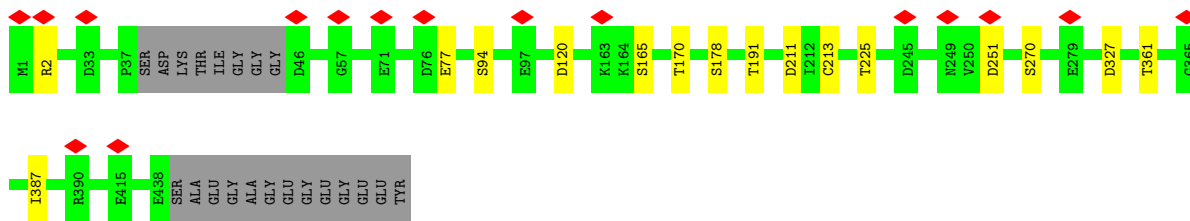
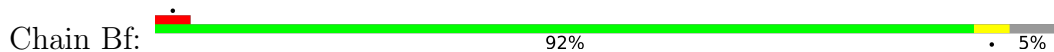




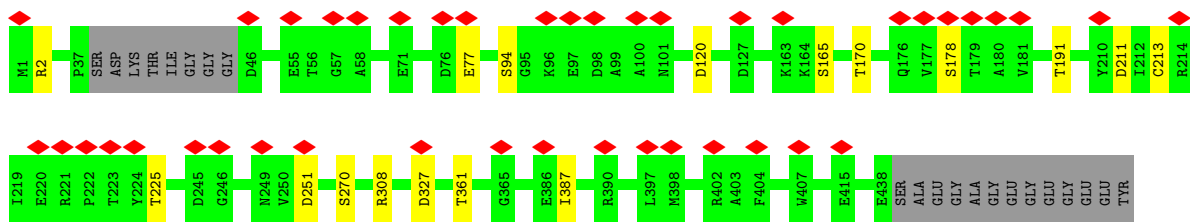
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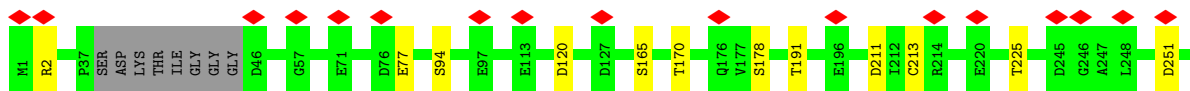
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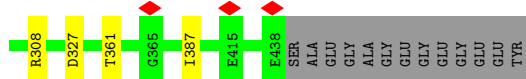
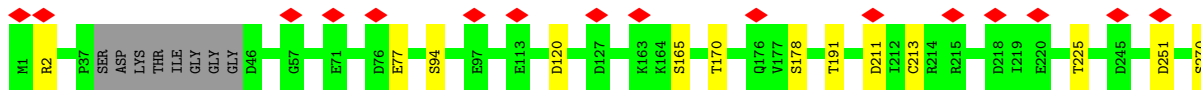


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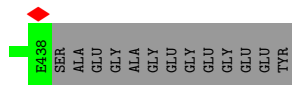
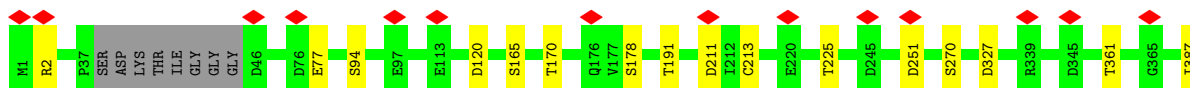
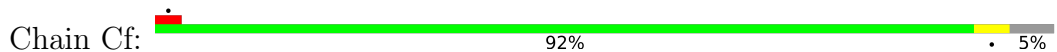




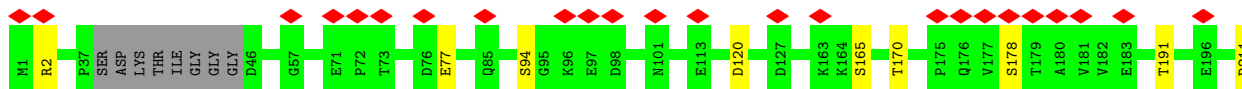
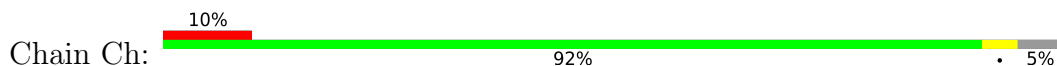
• Molecule 13: Tubulin alpha



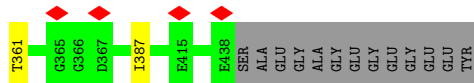
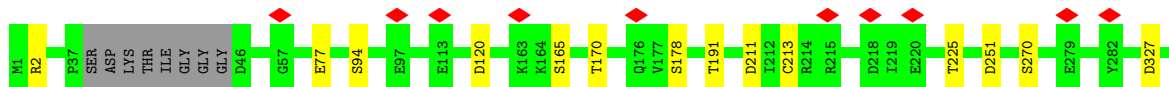
• Molecule 13: Tubulin alpha



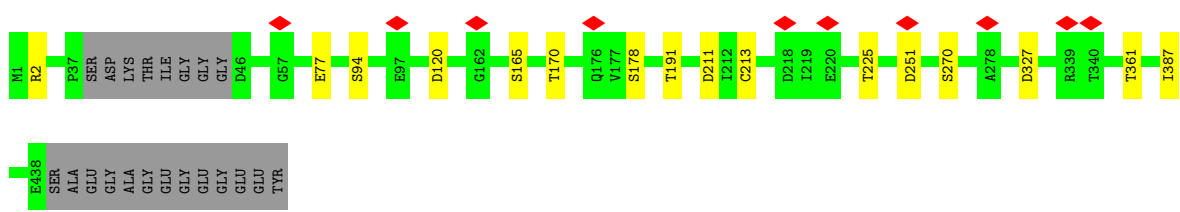
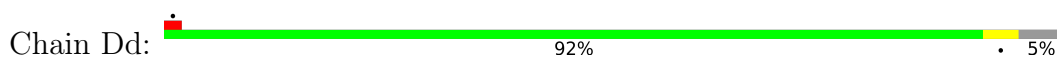
• Molecule 13: Tubulin alpha



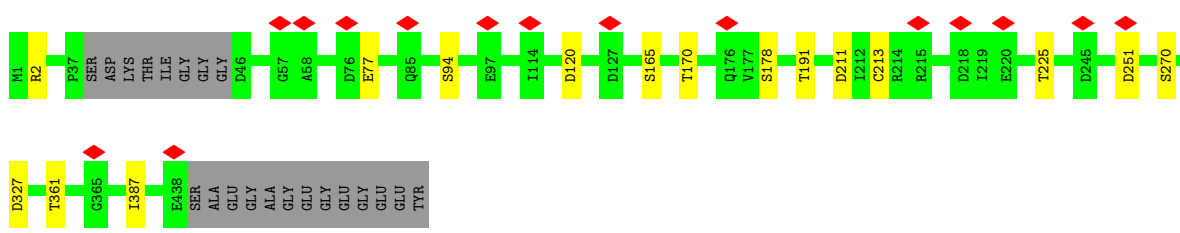
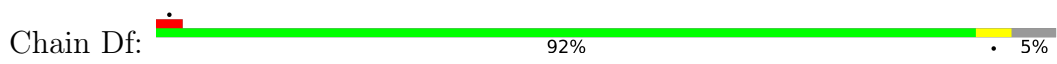
• Molecule 13: Tubulin alpha



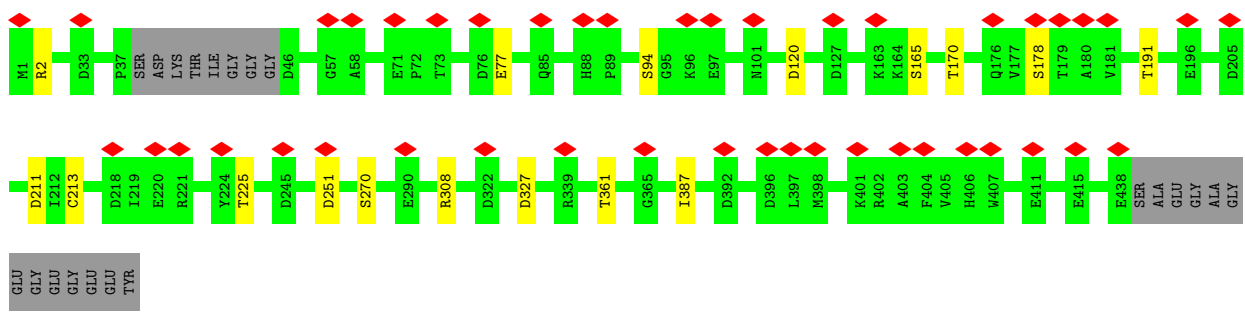
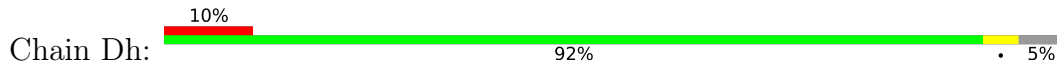
• Molecule 13: Tubulin alpha



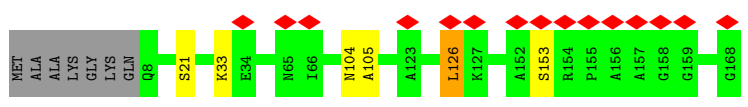
• Molecule 13: Tubulin alpha



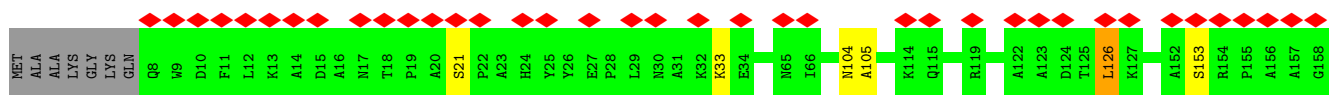
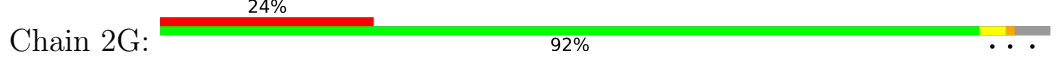
• Molecule 13: Tubulin alpha



• Molecule 14: FAP275

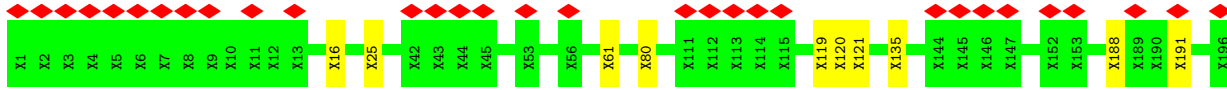


• Molecule 14: FAP275

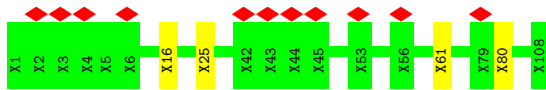




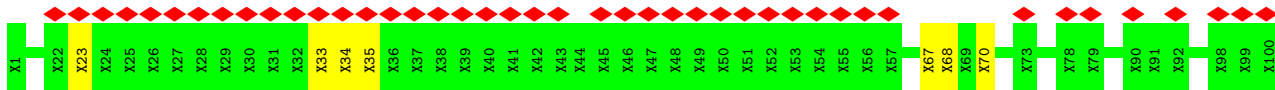
- Molecule 15: Unknown protein



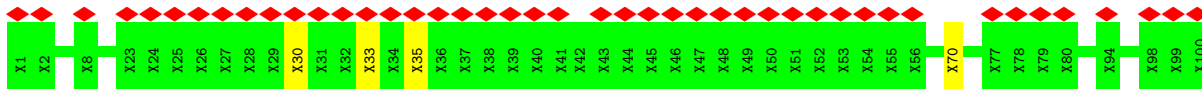
- Molecule 16: Unknown protein



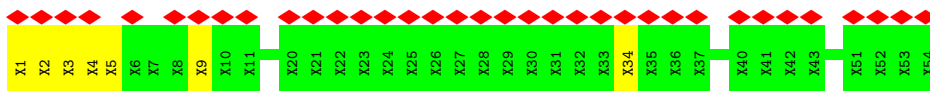
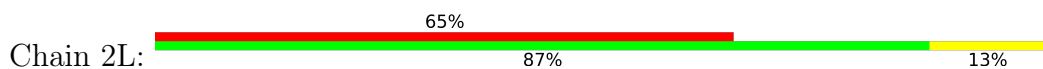
- Molecule 17: Unknown protein



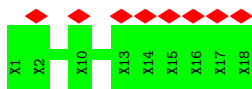
- Molecule 17: Unknown protein



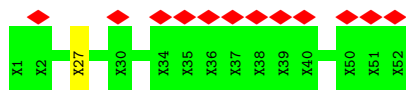
- Molecule 18: Unknown protein



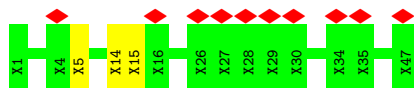
- Molecule 19: Unknown protein



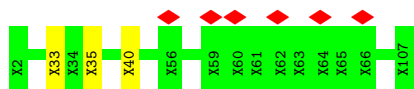
- Molecule 20: Unknown protein



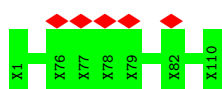
• Molecule 21: Unknown protein



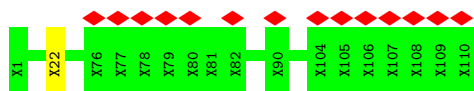
• Molecule 22: Unknown protein



• Molecule 23: Unknown protein



• Molecule 23: Unknown protein

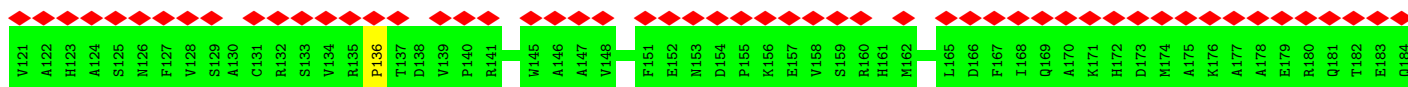


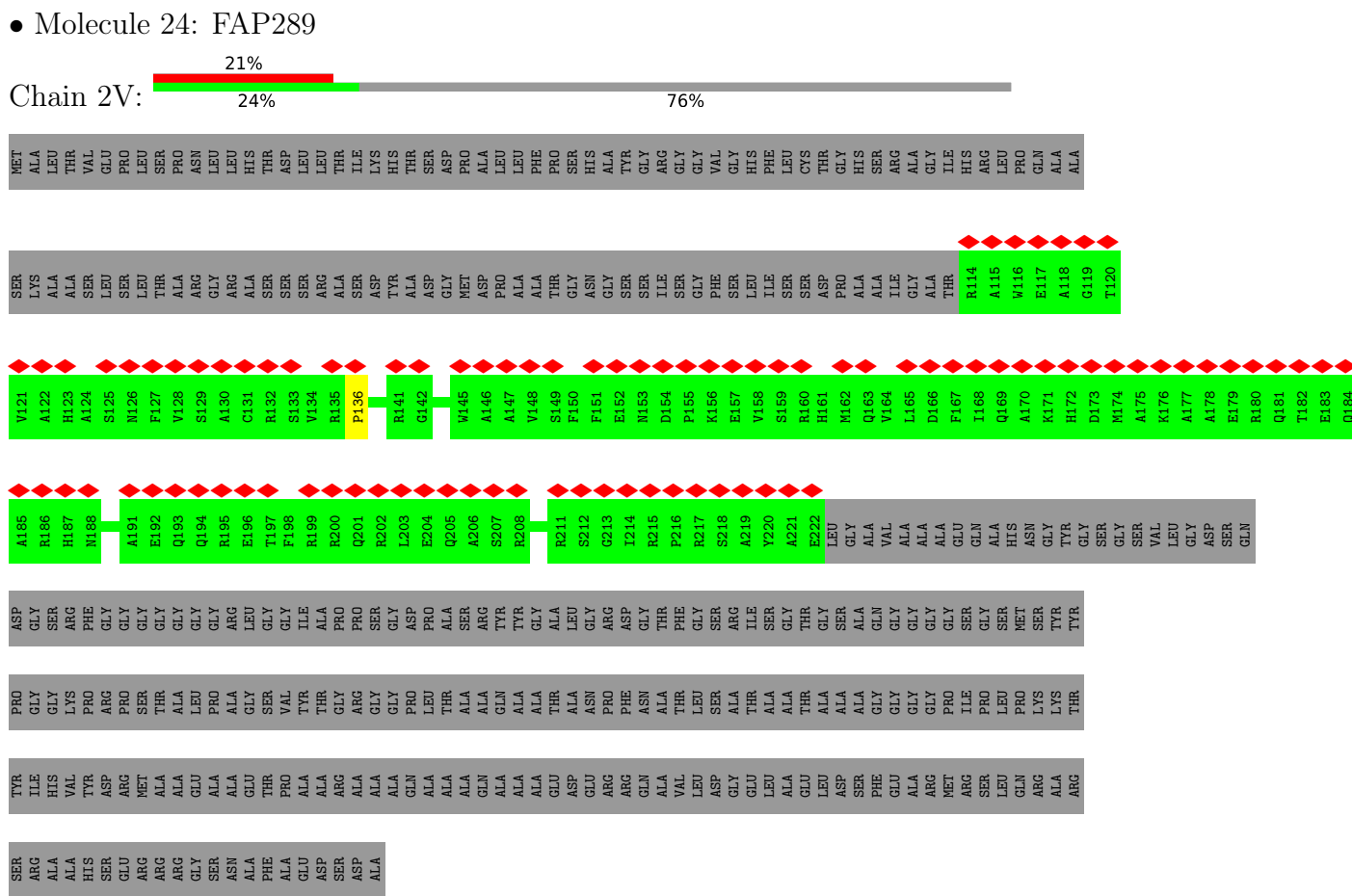
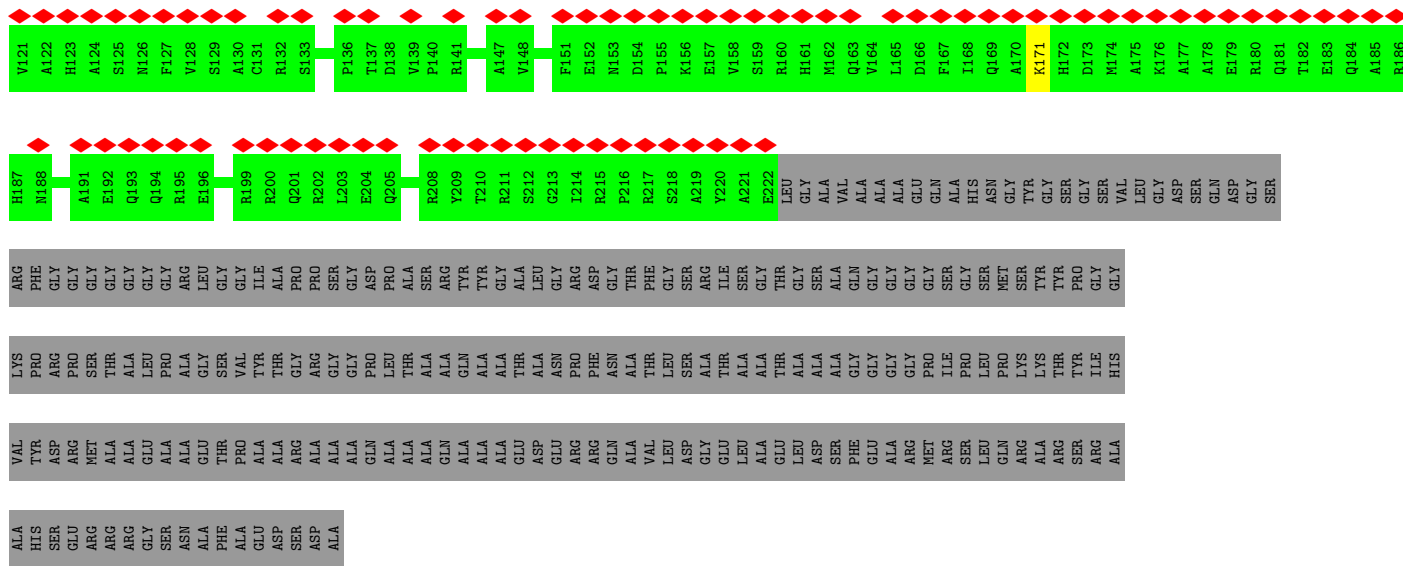
• Molecule 24: FAP289



MET ALA LEU THR VAL GLU PRO LEU SER PRO ALA ASN ARG LEU LEU HIS THR ASP LEU LEU THR ILE ASP LYS HIS THR SER ASP PRO ALA LEU LEU PHE PRO THR GLY ASN HIS ALA TYR SER ARG GLY VAL GLY PHE LEU ILE SER CYS THR THR HIS SER ALA ARG ALA GLY ILE HIS ARG ALA TRP LEU PRO GLN ALA

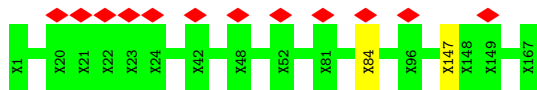
SER LYS ALA THR SER LEU SER THR ALA ARG GLY ARG ALA SER SER ARG ALA ASP ASP TYR ALA GLY MET ASP PRO ALA ALA THR GLY ASN SER ILE SER ARG SER PHE LEU ILE SER ASP PRO ALA ILE GLY ALA THR ARG ALA TRP LEU A118 G119 T120



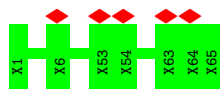




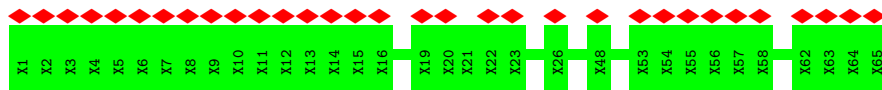
• Molecule 25: Unknown protein



• Molecule 26: Unknown protein



• Molecule 26: Unknown protein

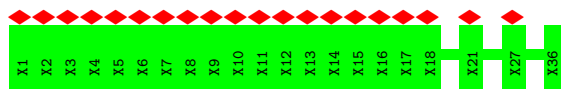


• Molecule 27: Unknown protein



There are no outlier residues recorded for this chain.

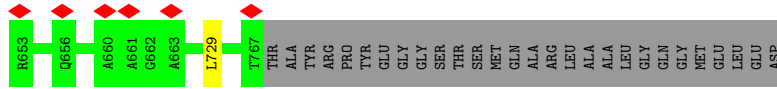
• Molecule 27: Unknown protein



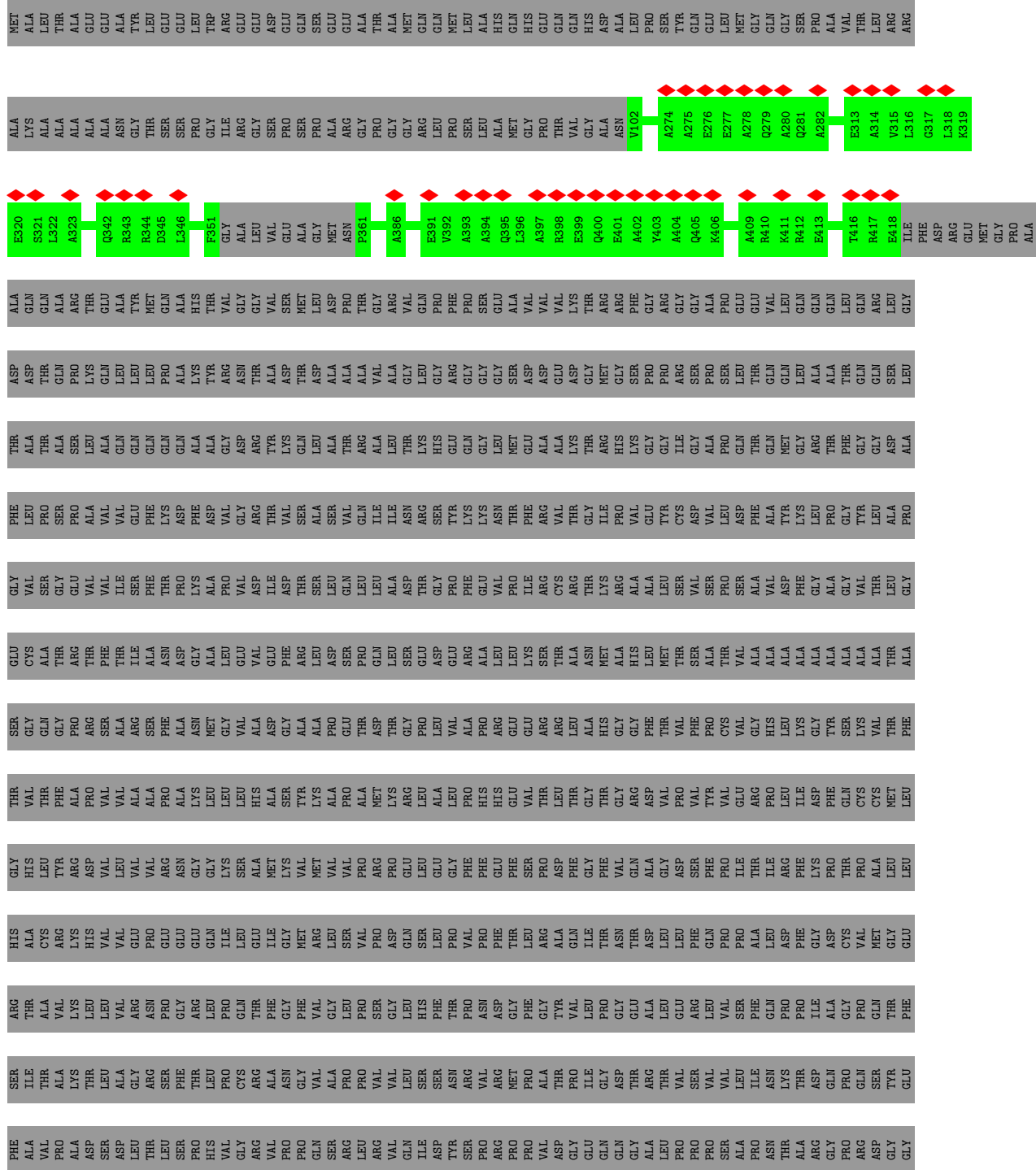
• Molecule 28: FAP216

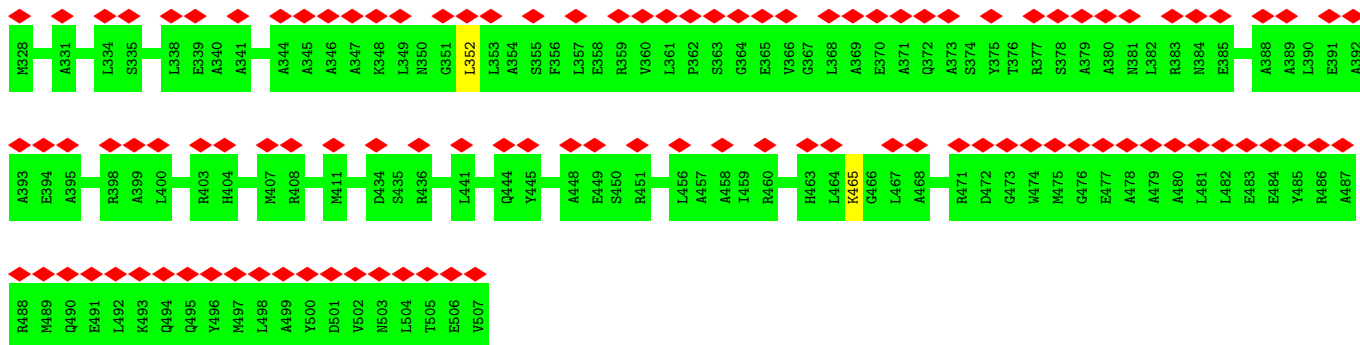


MET	ALA	ASP	ILE	GLY	SER	ALA	PRO	GLY	ASP	PRO	ASP	PRO	LEU	ARG	PRO	THR	SER	ASN	ALA	ALA	ALA	ALA	LYS	LYS	CYS	LEU	GLU	LEU	GLY	ASP	PRO	ASP	TYR	GLY	LEU	LEU	ALA	ARG	THR	THR	VAL	VAL	LYS	LYS	ARG	LYS	ARG	ILE	ILE	LYS	LEU	LEU	GLY	GLY	VAL	GLN	ASN	GLN	VAL	THR	THR	VAL	ASP	MET	PHE	ILE	TRP	LYS	SER	ARG	LYS	LEU	SER	PRO	ARG	CYS	LYS	LEU	THR	THR	VAL	THR	PRO	SER	PRO	THR	VAL	ILE	ALA	ARG	GLN	ALA	GLU	PHE
SER	ALA	GLN	MET	GLY	PRO	MET	LYS	PRO	ASN	GLU	ILE	ILE	LEU	ASP	PRO	ALA	LEU	SER	ARG	THR	SER	TRP	ALA	GLY	ASN	THR	THR	ASP	LEU	ASP	LEU	VAL	VAL	LEU	GLY	GLN	GLN	LEU	ARG	THR	THR	VAL	VAL	LYS	LYS	TRP	GLY	LEU	LEU	ASP	GLY	VAL	THR	GLY	ASN	GLN	VAL	THR	THR	THR	VAL	THR	PRO	SER	ARG	CYS	LYS	LEU	THR	THR	PRO	SER	PRO	THR	VAL	ILE	ALA	ARG	GLN	ALA	GLU	PHE												
ALA	ARG	ASP	MET	GLY	MET	MET	CYS	ASN	GLU	GLY	ILE	ILE	LEU	ASP	PRO	ALA	LEU	SER	ARG	THR	SER	TRP	ALA	GLY	ASN	THR	THR	ASP	LEU	ASP	LEU	VAL	VAL	LEU	GLY	GLN	GLN	LEU	ARG	THR	THR	VAL	VAL	LYS	LYS	TRP	GLY	LEU	LEU	ASP	GLY	VAL	THR	GLY	ASN	GLN	VAL	THR	THR	PRO	SER	ARG	CYS	LYS	LEU	THR	THR	PRO	SER	PRO	THR	VAL	ILE	ALA	ARG	GLN	ALA	GLU	PHE															

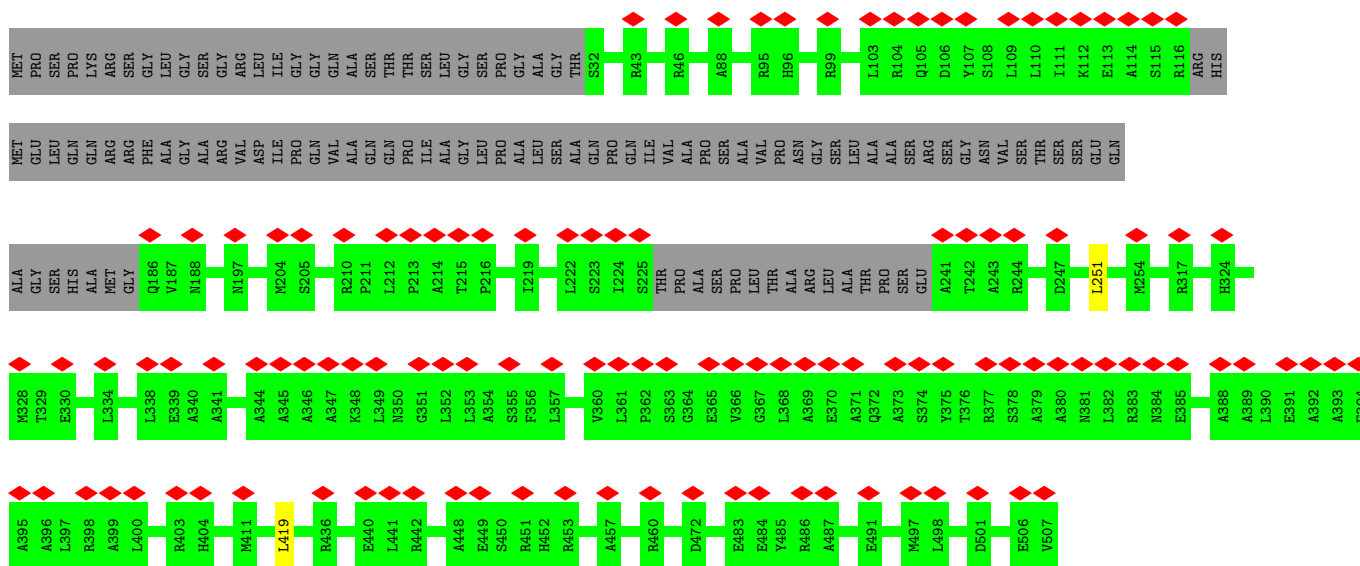
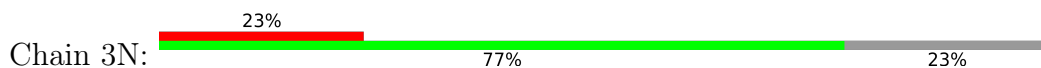


• Molecule 31: FAP74

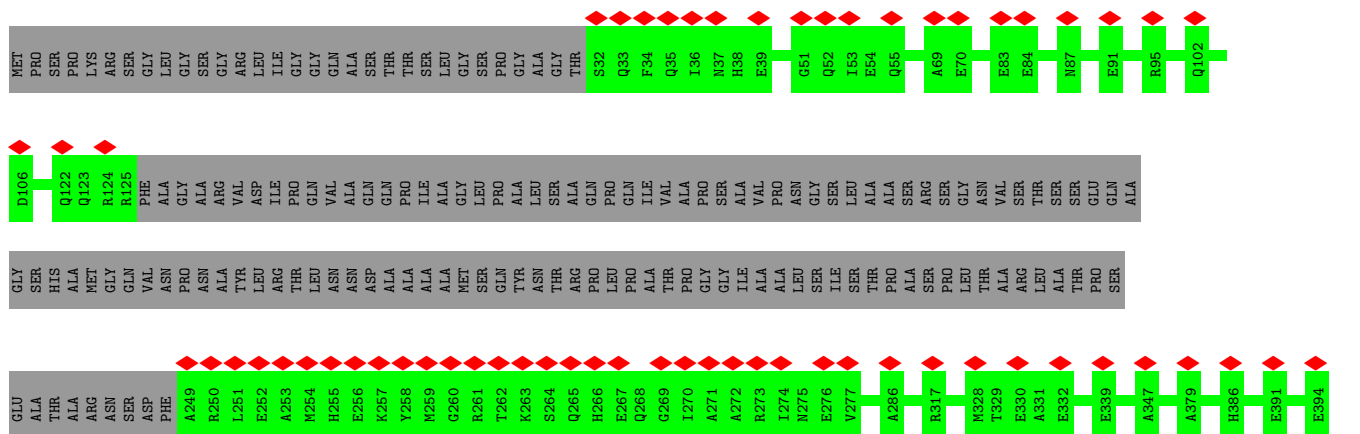


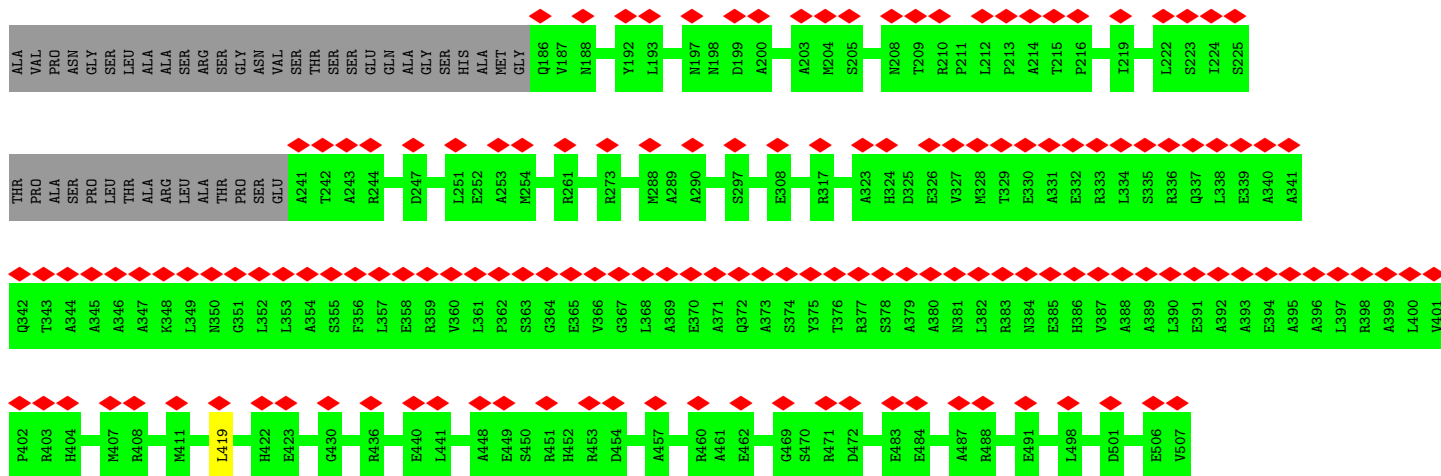


• Molecule 34: FAP7

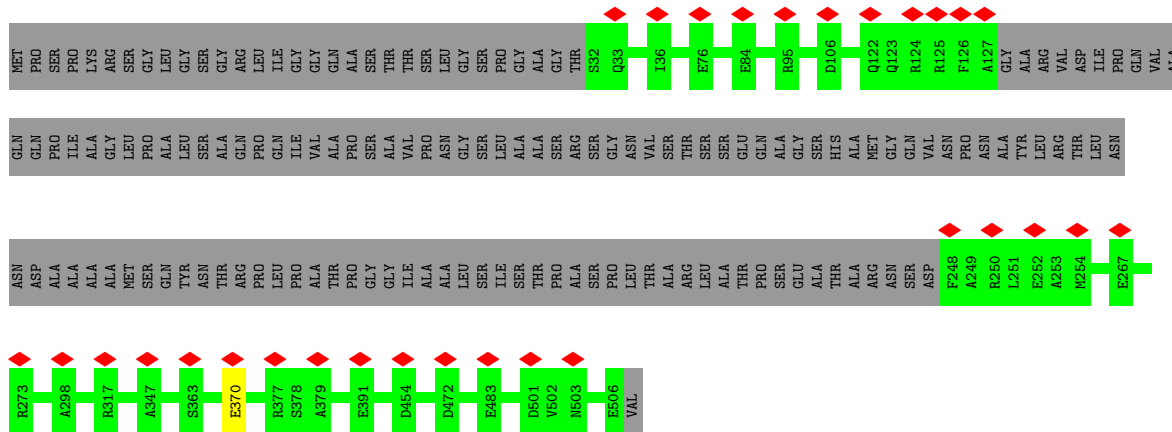


• Molecule 34: FAP7

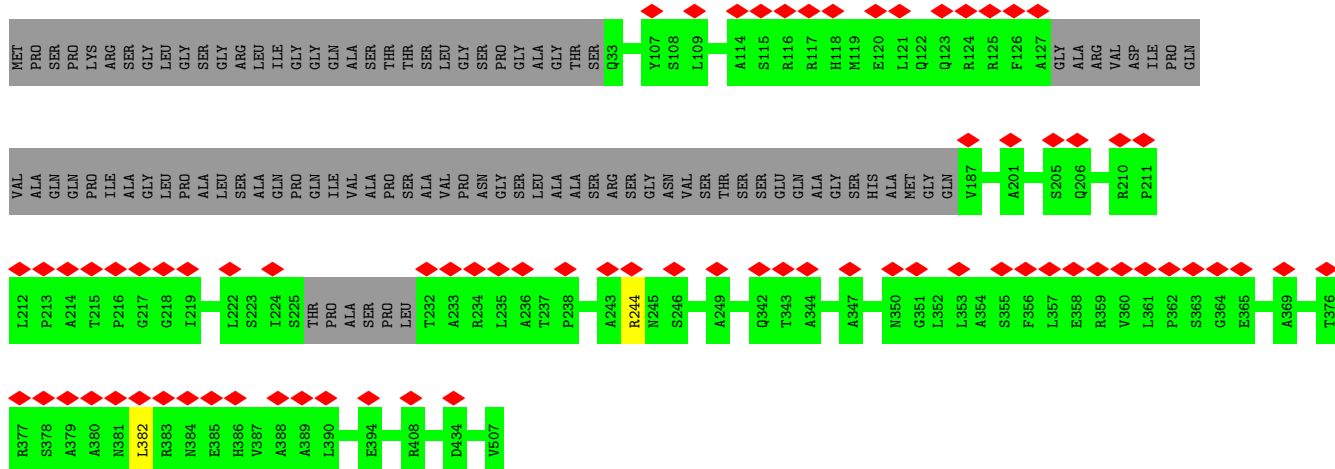
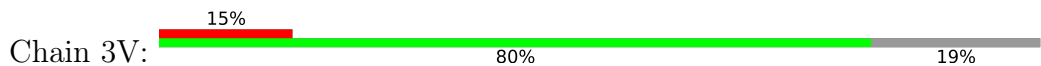




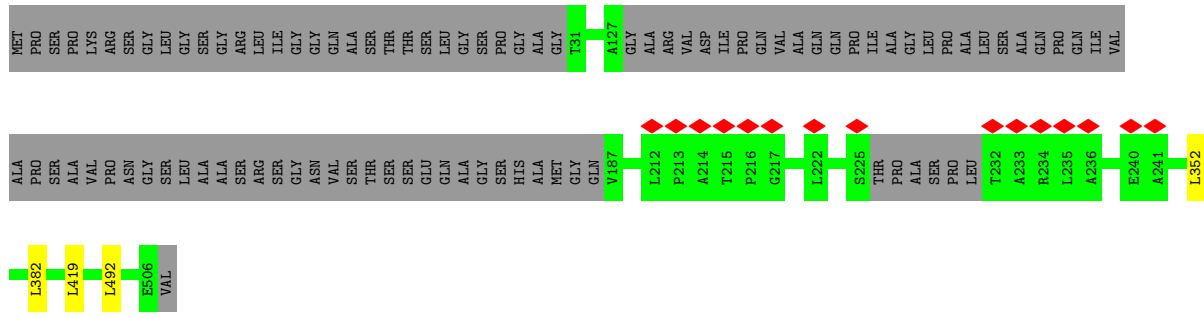
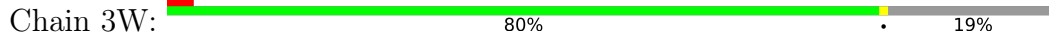
• Molecule 34: FAP7



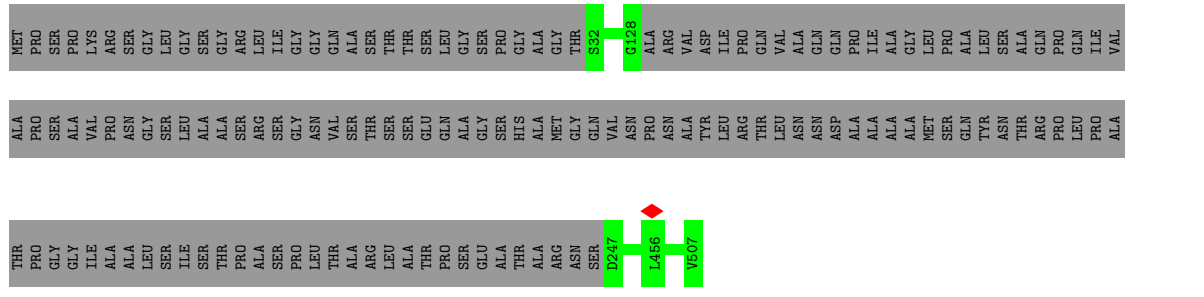
• Molecule 34: FAP7



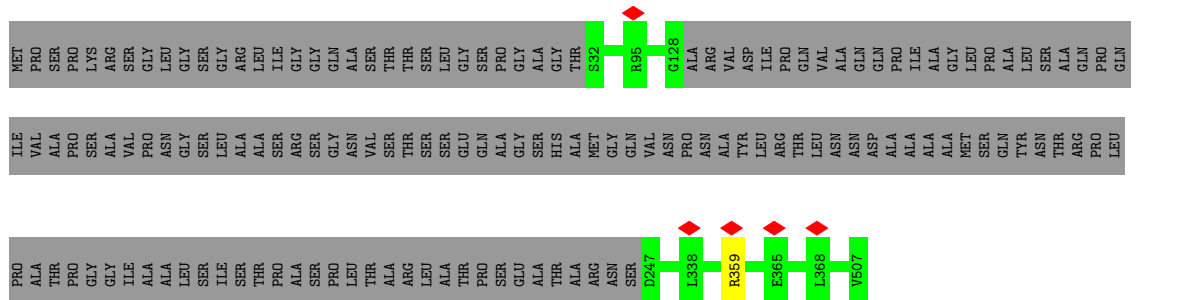
• Molecule 34: FAP7



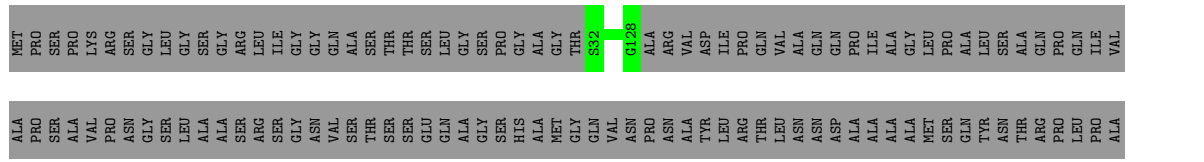
• Molecule 34: FAP7

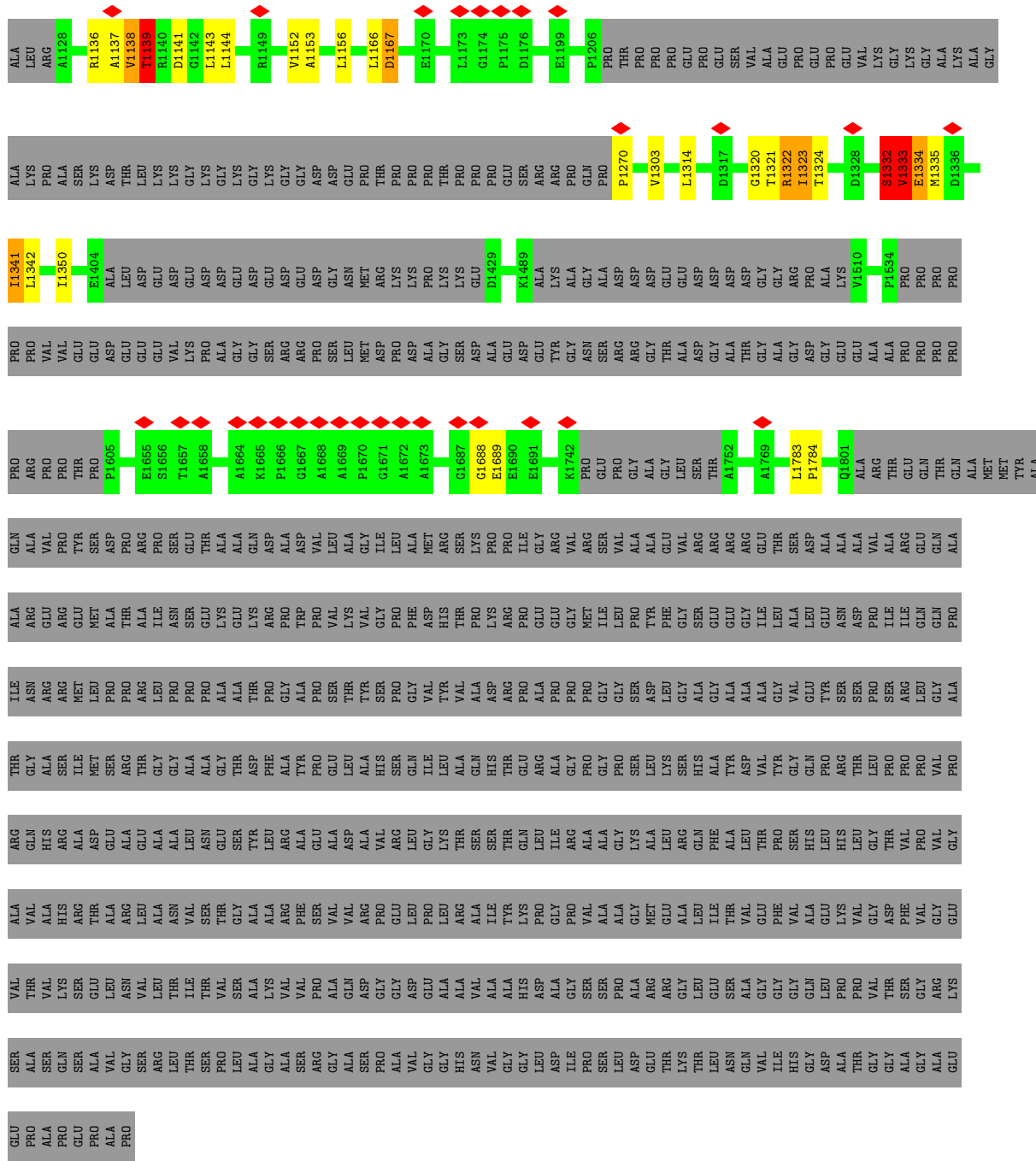


• Molecule 34: FAP7

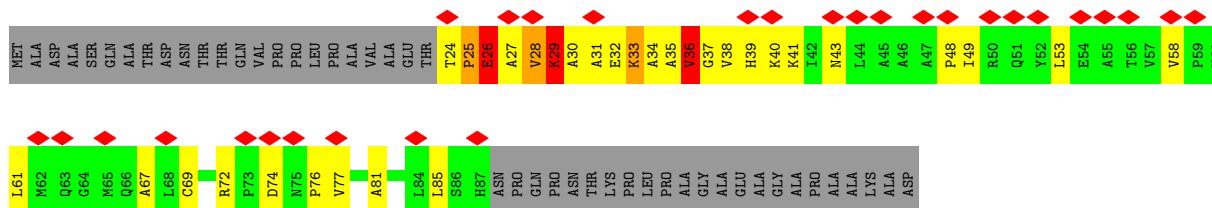
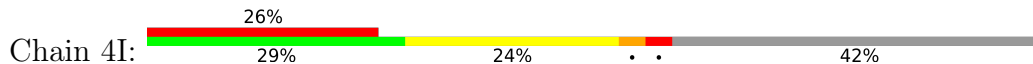


• Molecule 34: FAP7

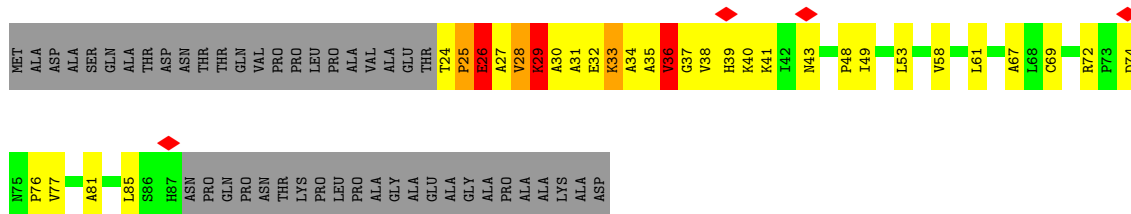
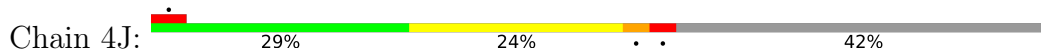




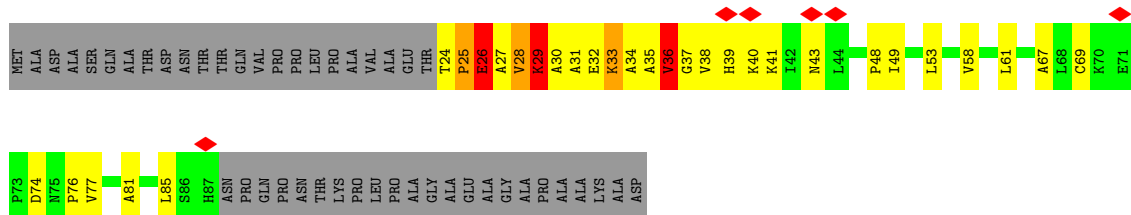
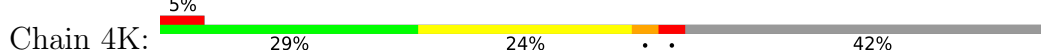
• Molecule 38: DPY30



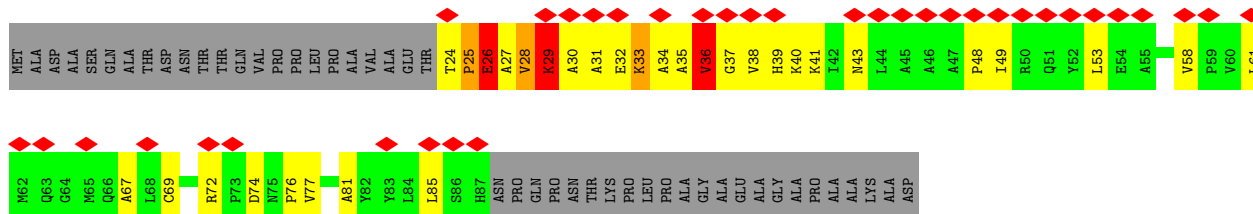
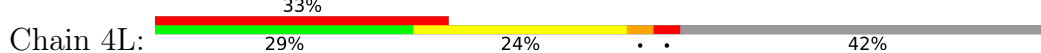
• Molecule 38: DPY30



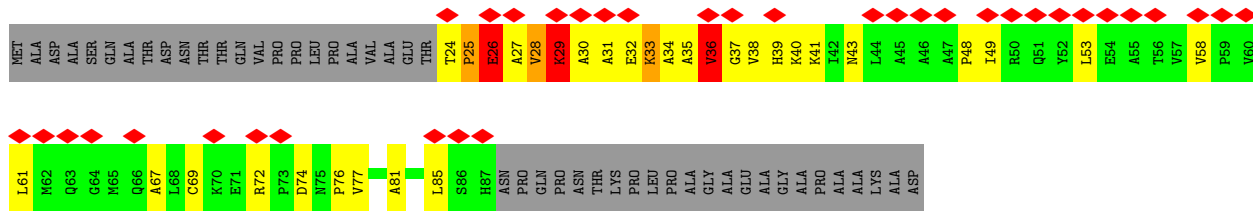
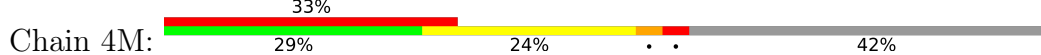
• Molecule 38: DPY30



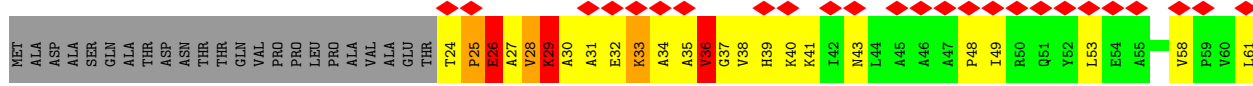
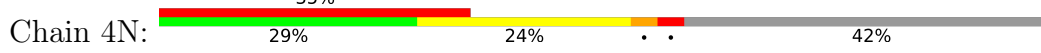
• Molecule 38: DPY30

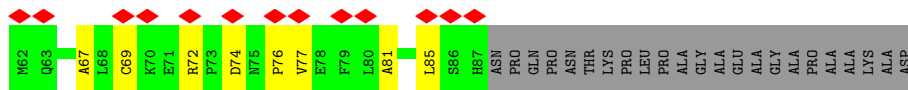


• Molecule 38: DPY30



• Molecule 38: DPY30

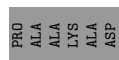
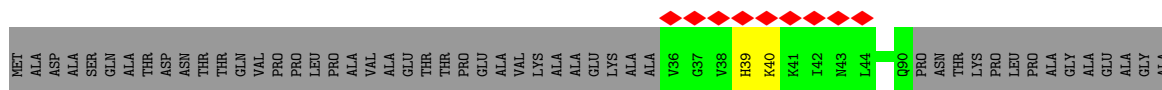




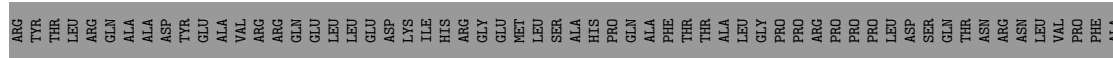
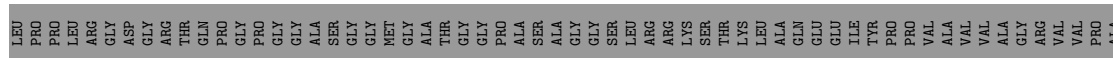
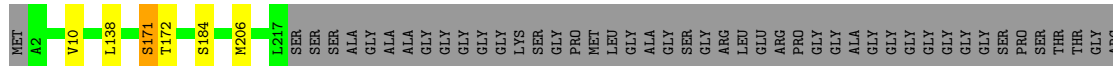
• Molecule 38: DPY30



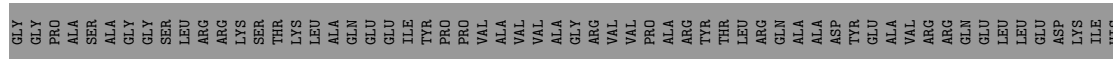
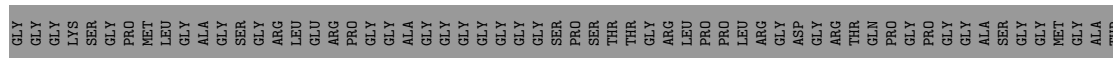
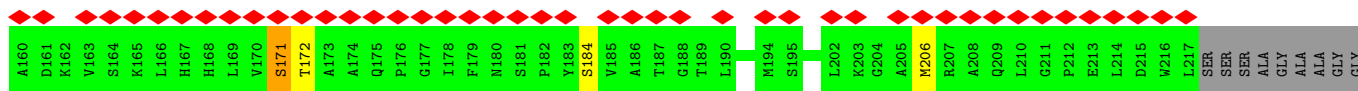
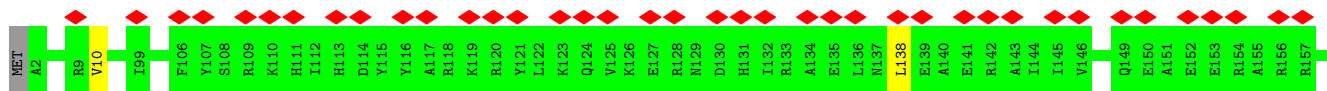
• Molecule 38: DPY30

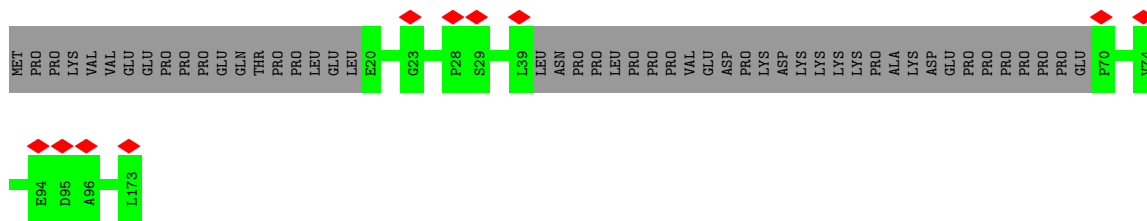
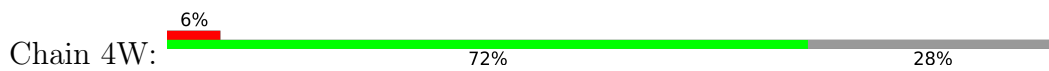


• Molecule 39: FAP305

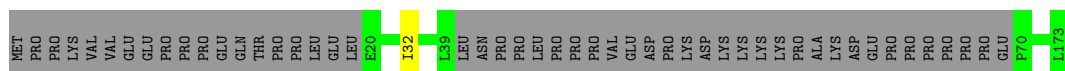


• Molecule 39: FAP305

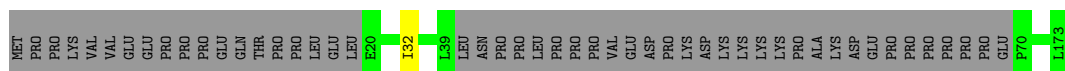




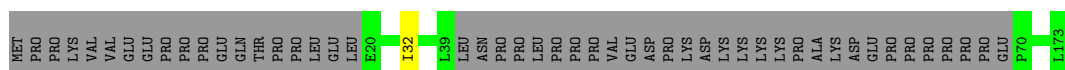
• Molecule 41: FAP227



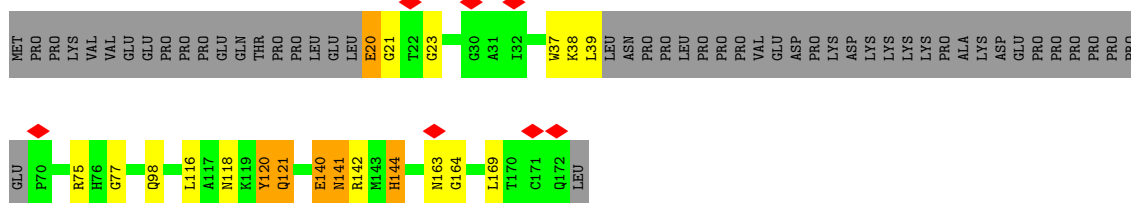
• Molecule 41: FAP227



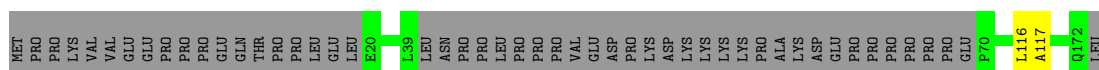
• Molecule 41: FAP227



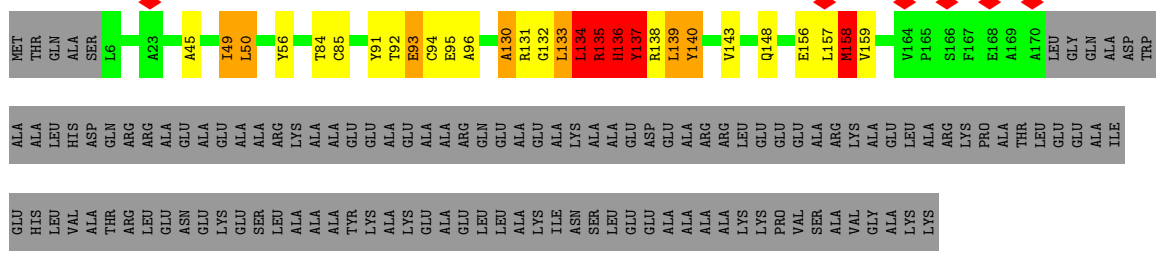
• Molecule 41: FAP227



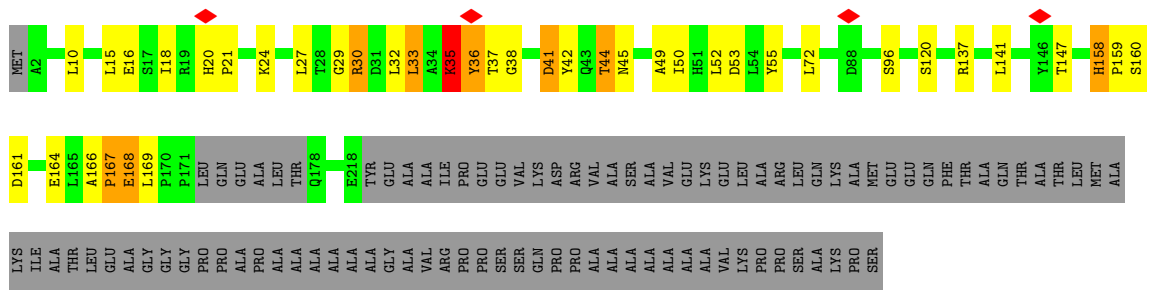
• Molecule 41: FAP227



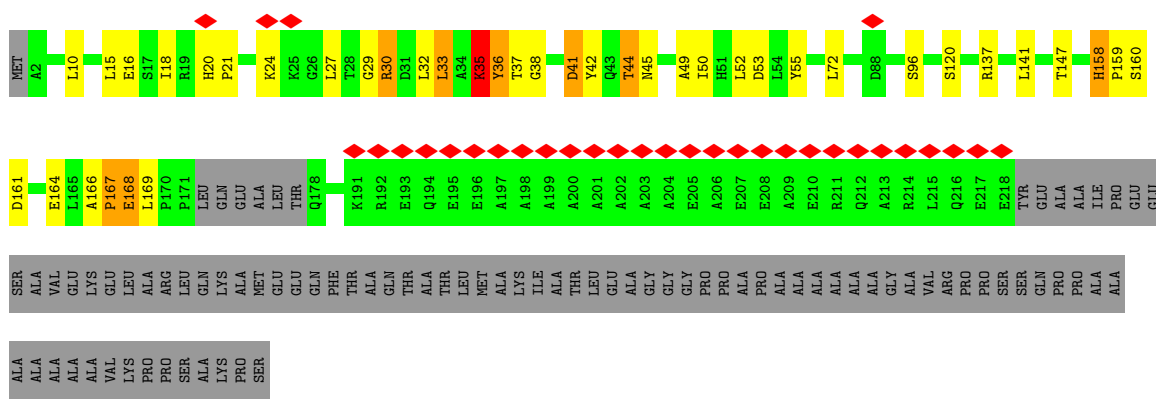
• Molecule 41: FAP227



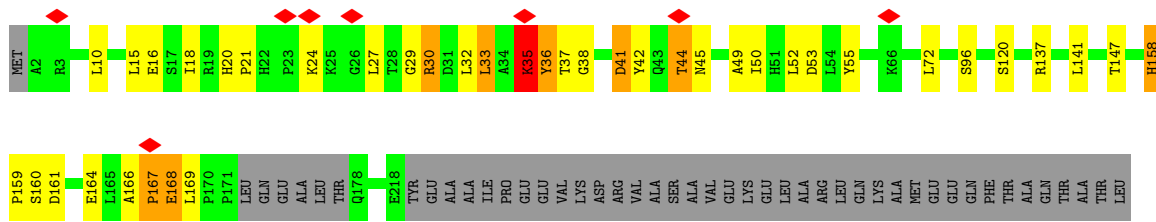
• Molecule 43: FAP119

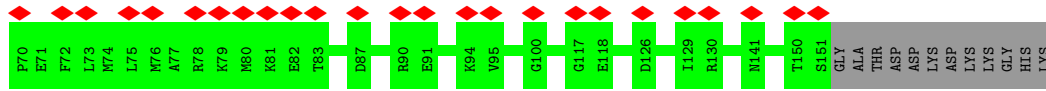


• Molecule 43: FAP119

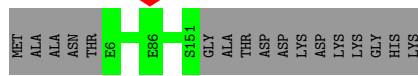
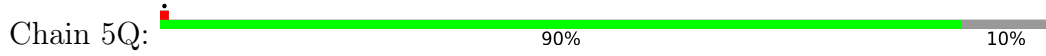


• Molecule 43: FAP119

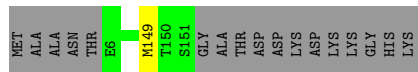
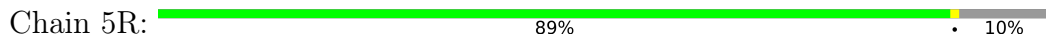




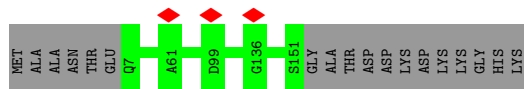
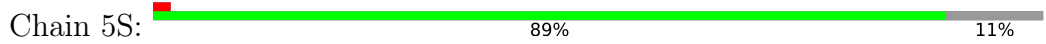
• Molecule 44: Calmodulin



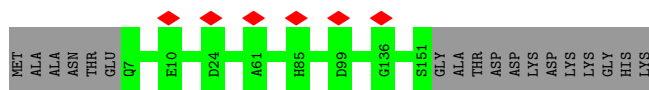
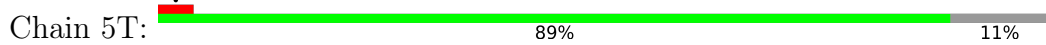
• Molecule 44: Calmodulin



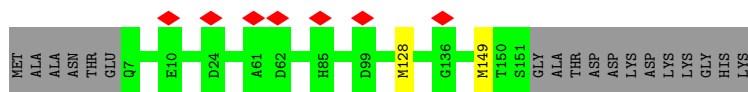
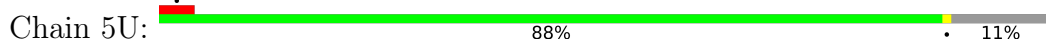
• Molecule 44: Calmodulin



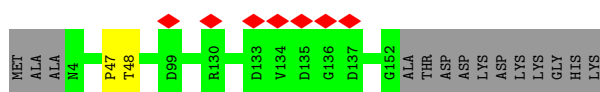
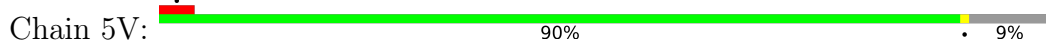
• Molecule 44: Calmodulin



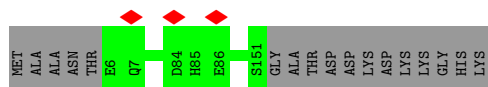
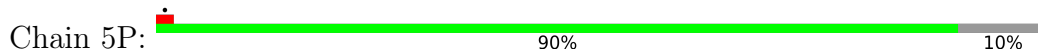
• Molecule 44: Calmodulin



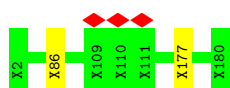
• Molecule 44: Calmodulin



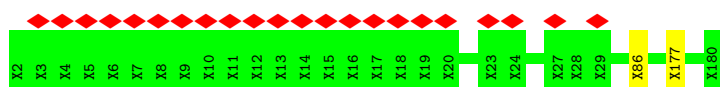
• Molecule 44: Calmodulin



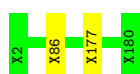
• Molecule 45: Unknown protein



• Molecule 45: Unknown protein



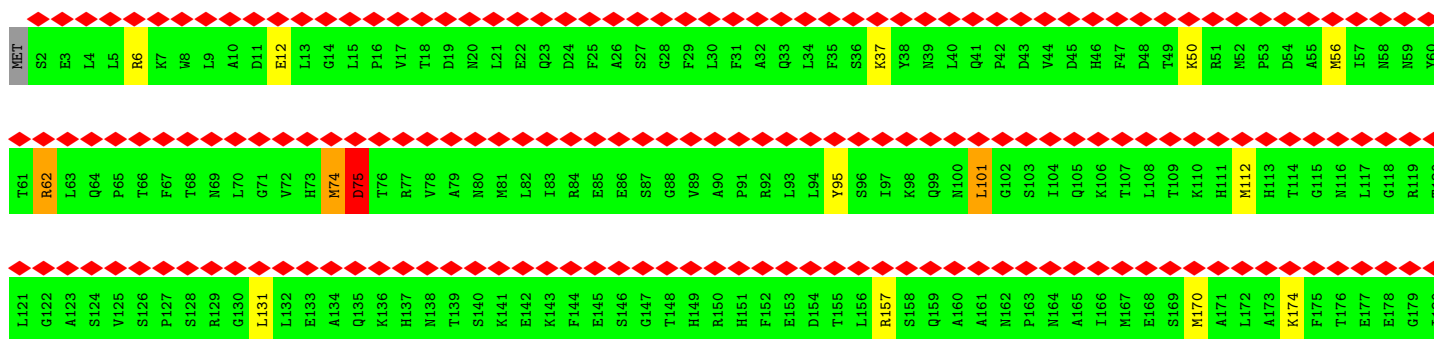
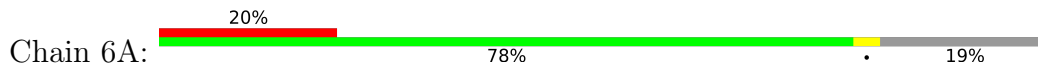
• Molecule 45: Unknown protein

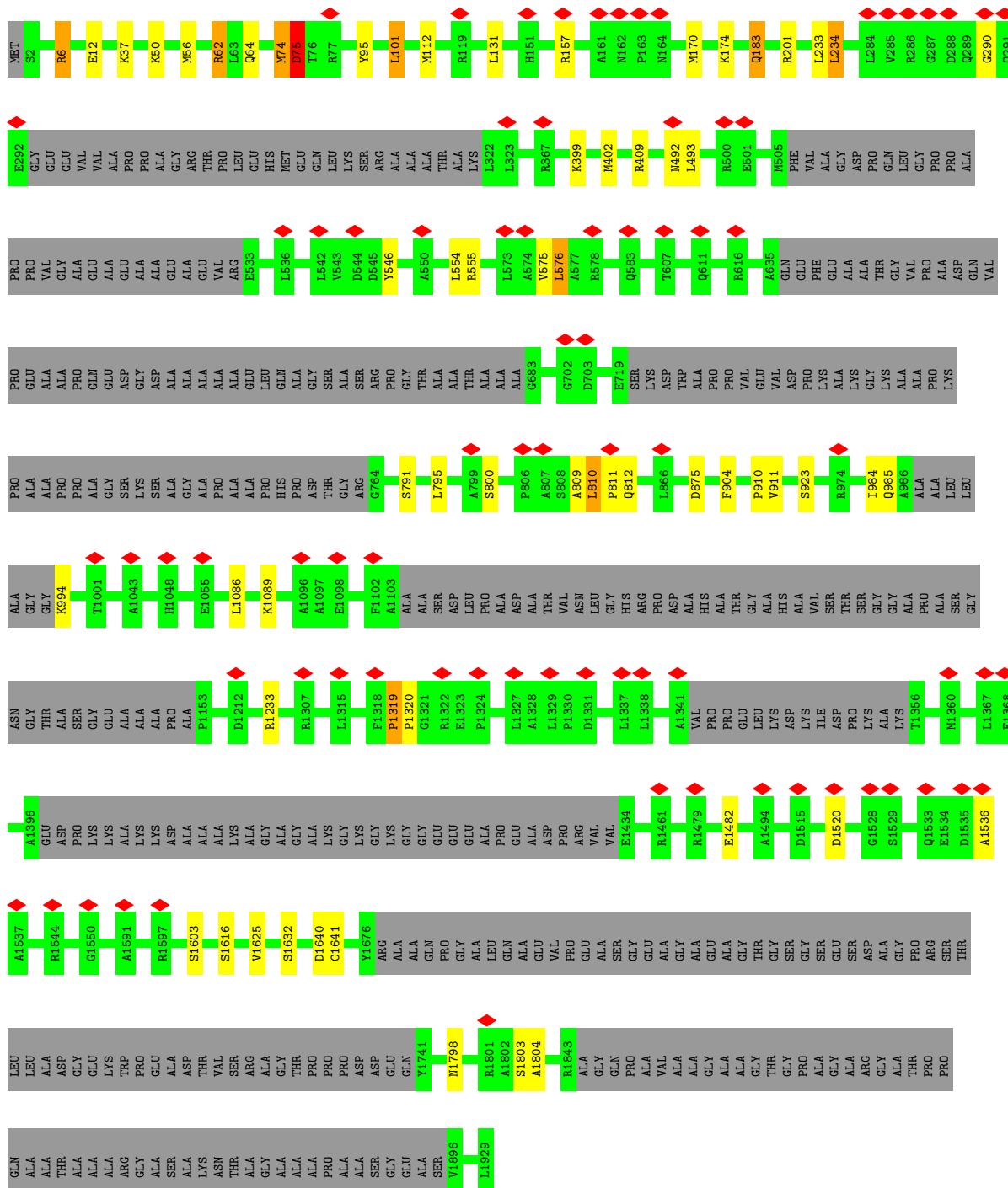


• Molecule 46: Unknown protein

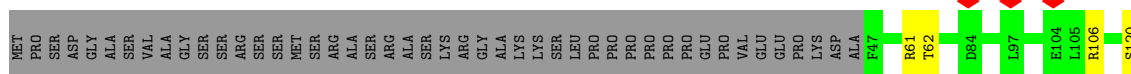
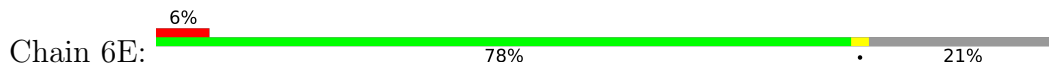


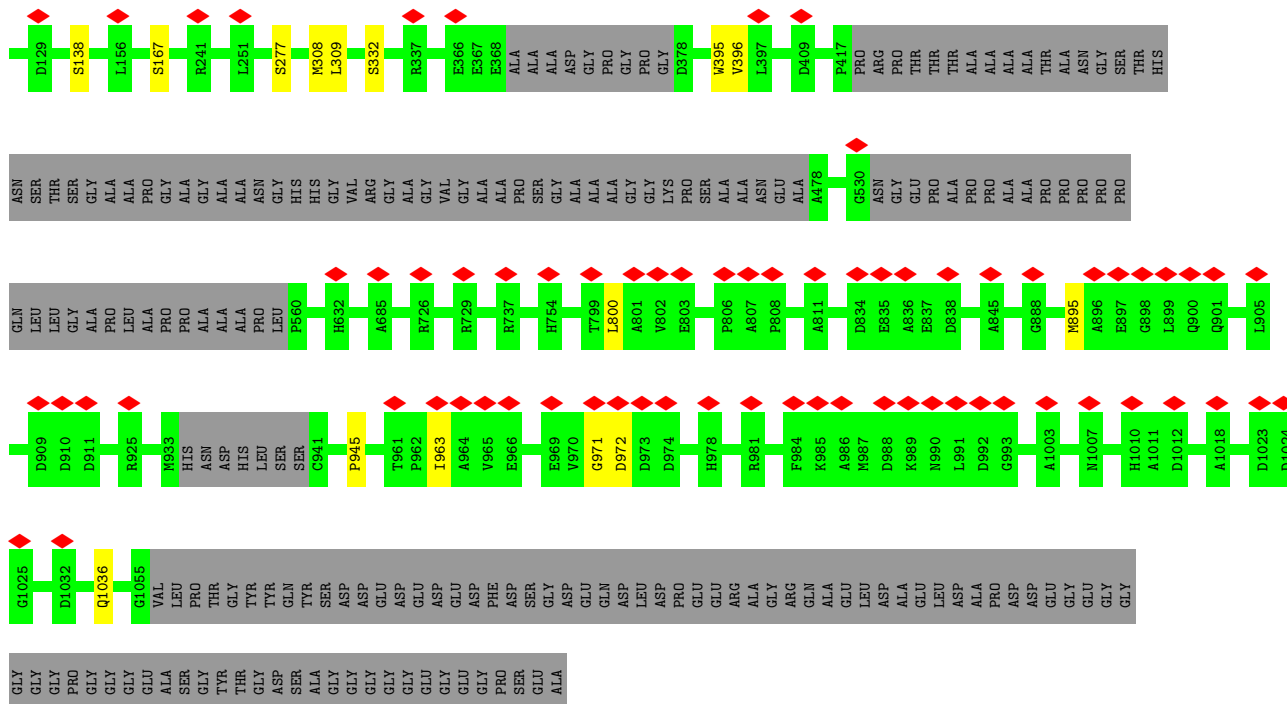
• Molecule 47: CPC1



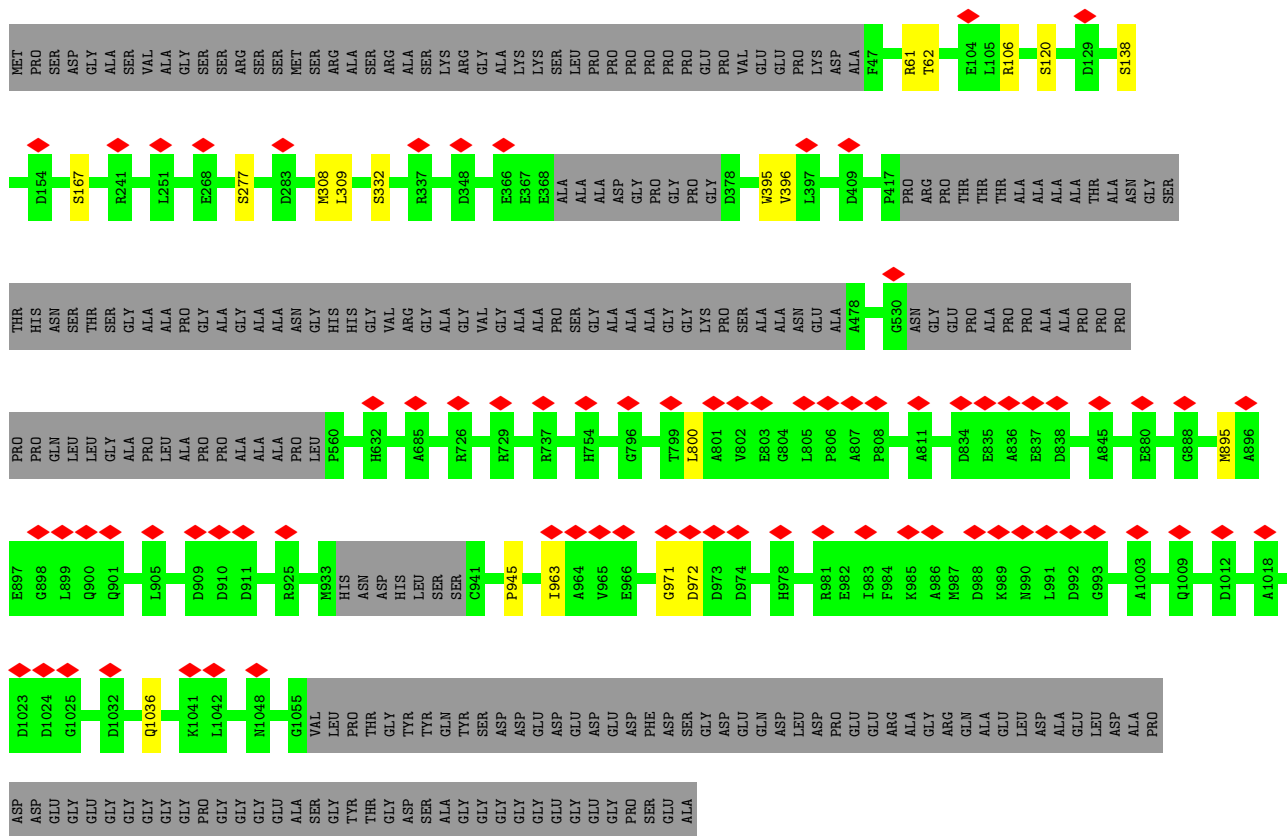
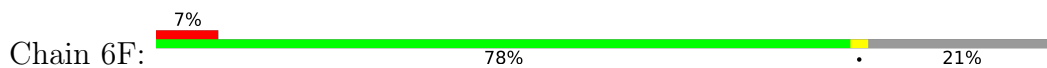


• Molecule 48: FAP246

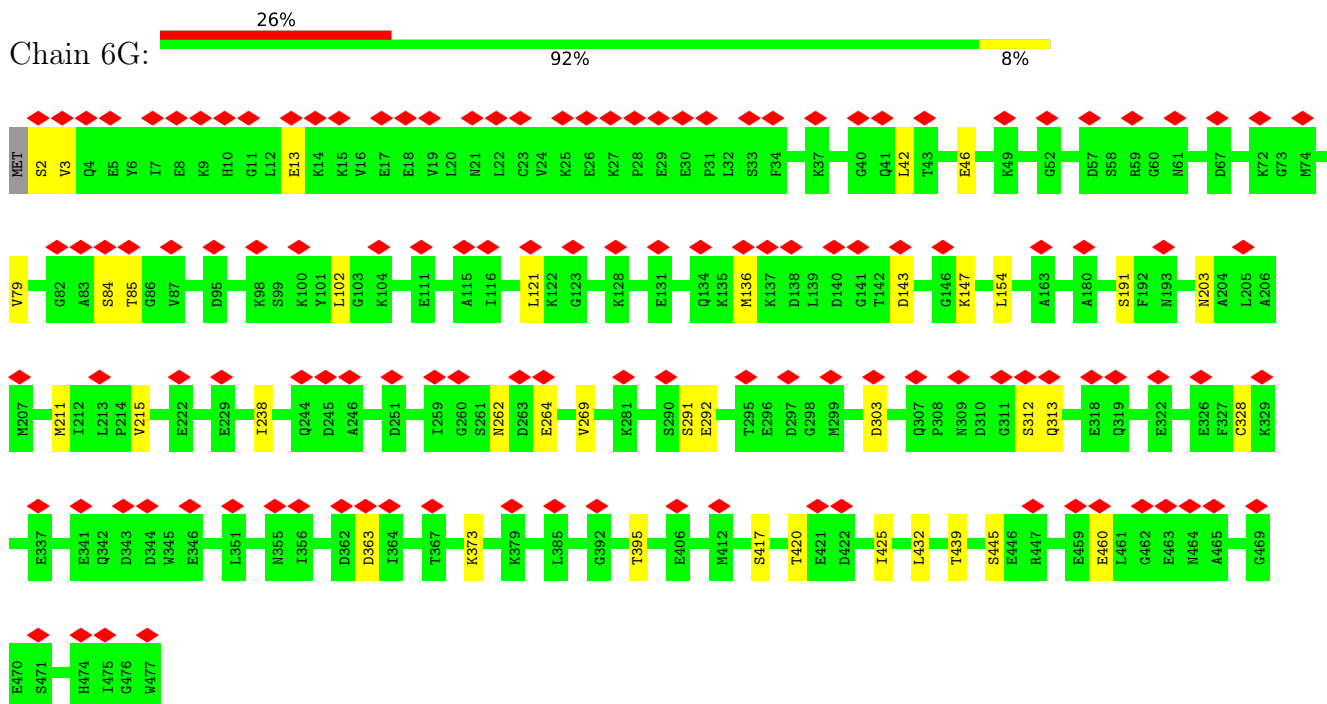




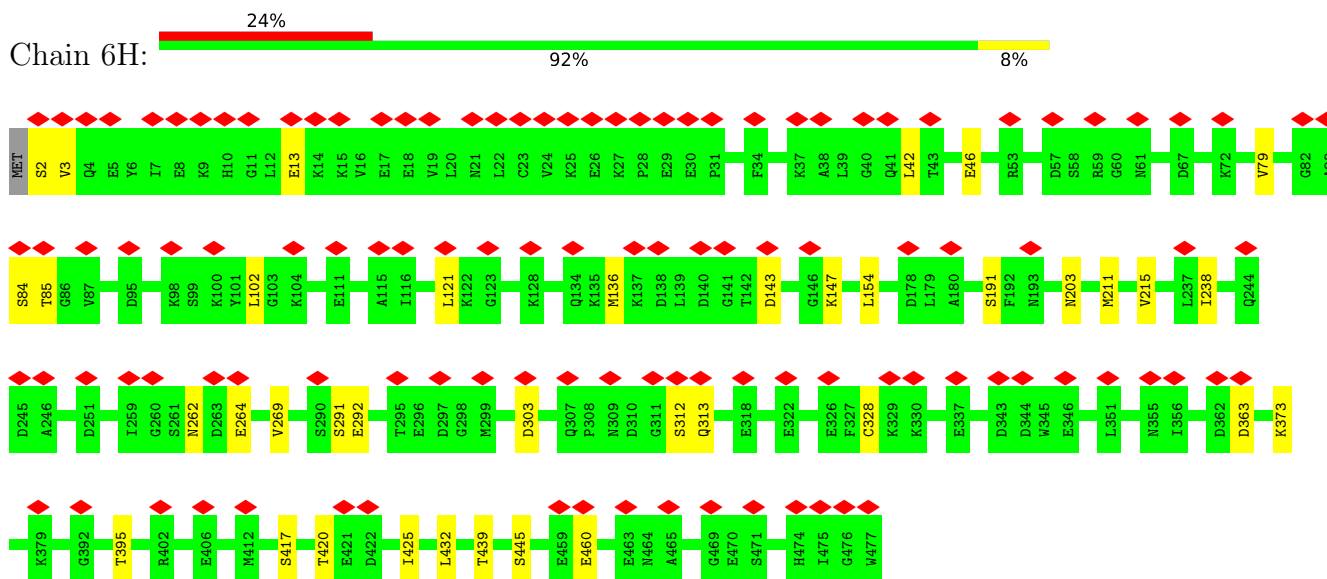
● Molecule 48: FAP246



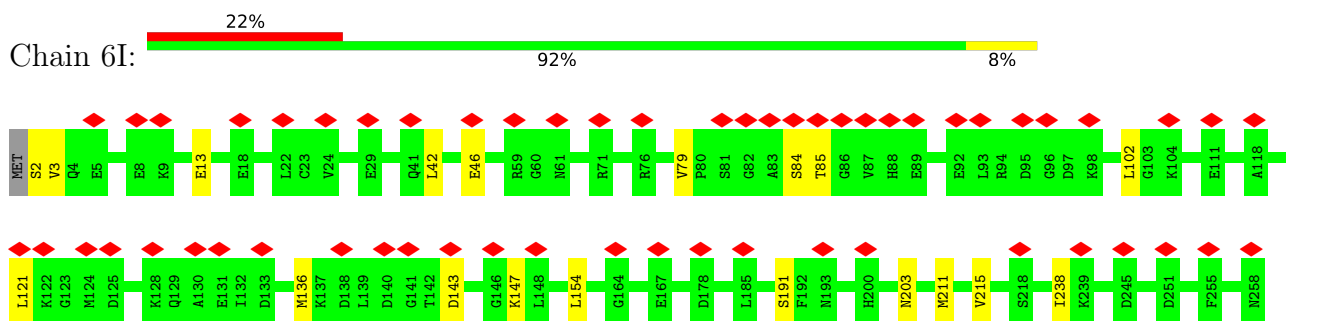
● Molecule 49: Phosphopyruvate hydratase

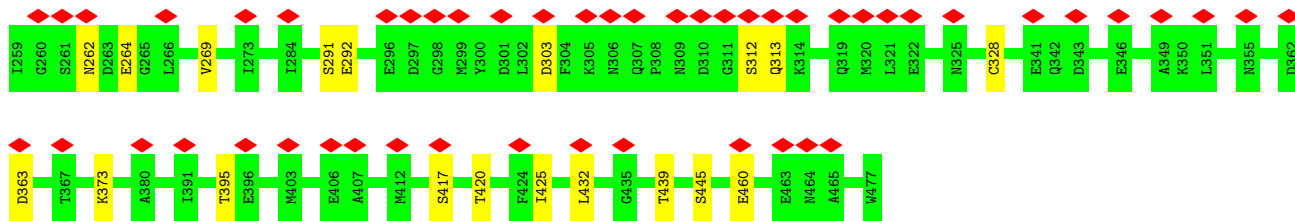


• Molecule 49: Phosphopyruvate hydratase

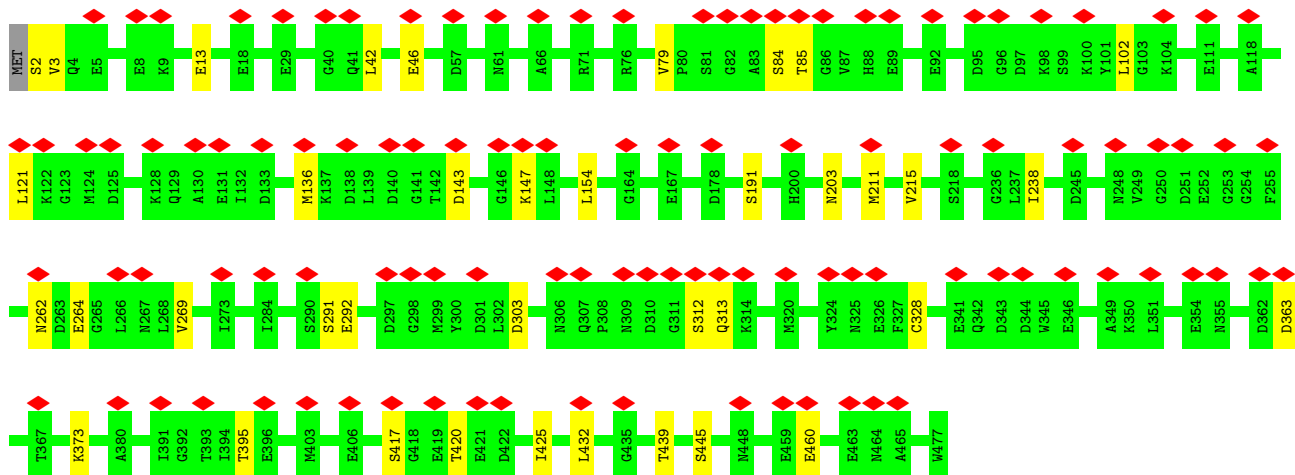
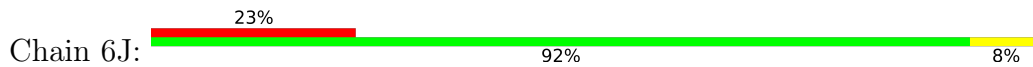


• Molecule 49: Phosphopyruvate hydratase

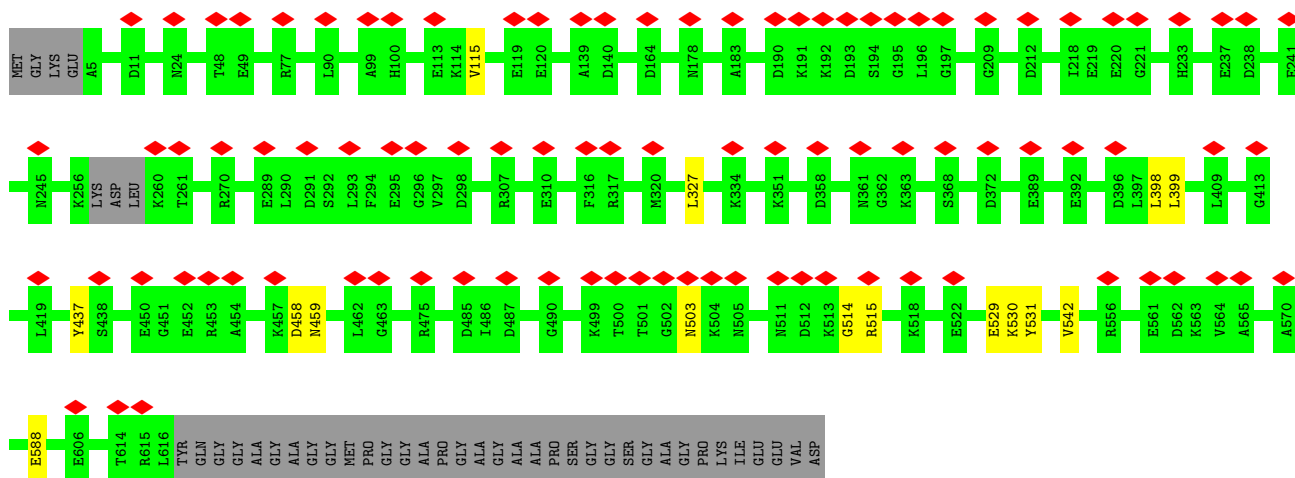




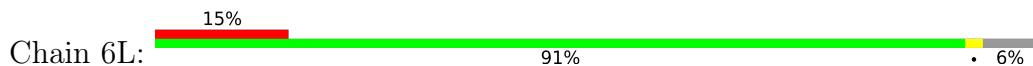
• Molecule 49: Phosphopyruvate hydratase

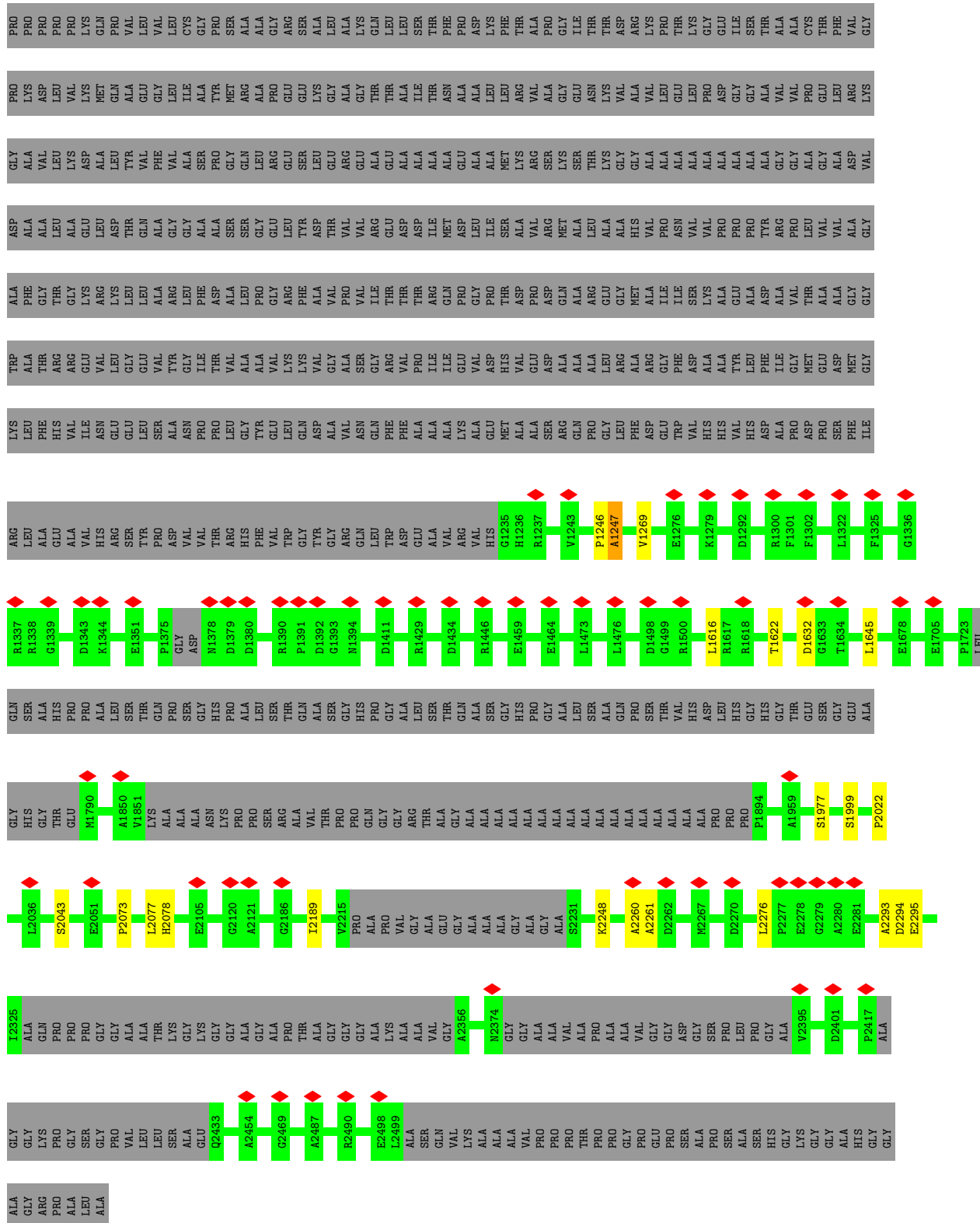


• Molecule 50: Heat shock protein 70A



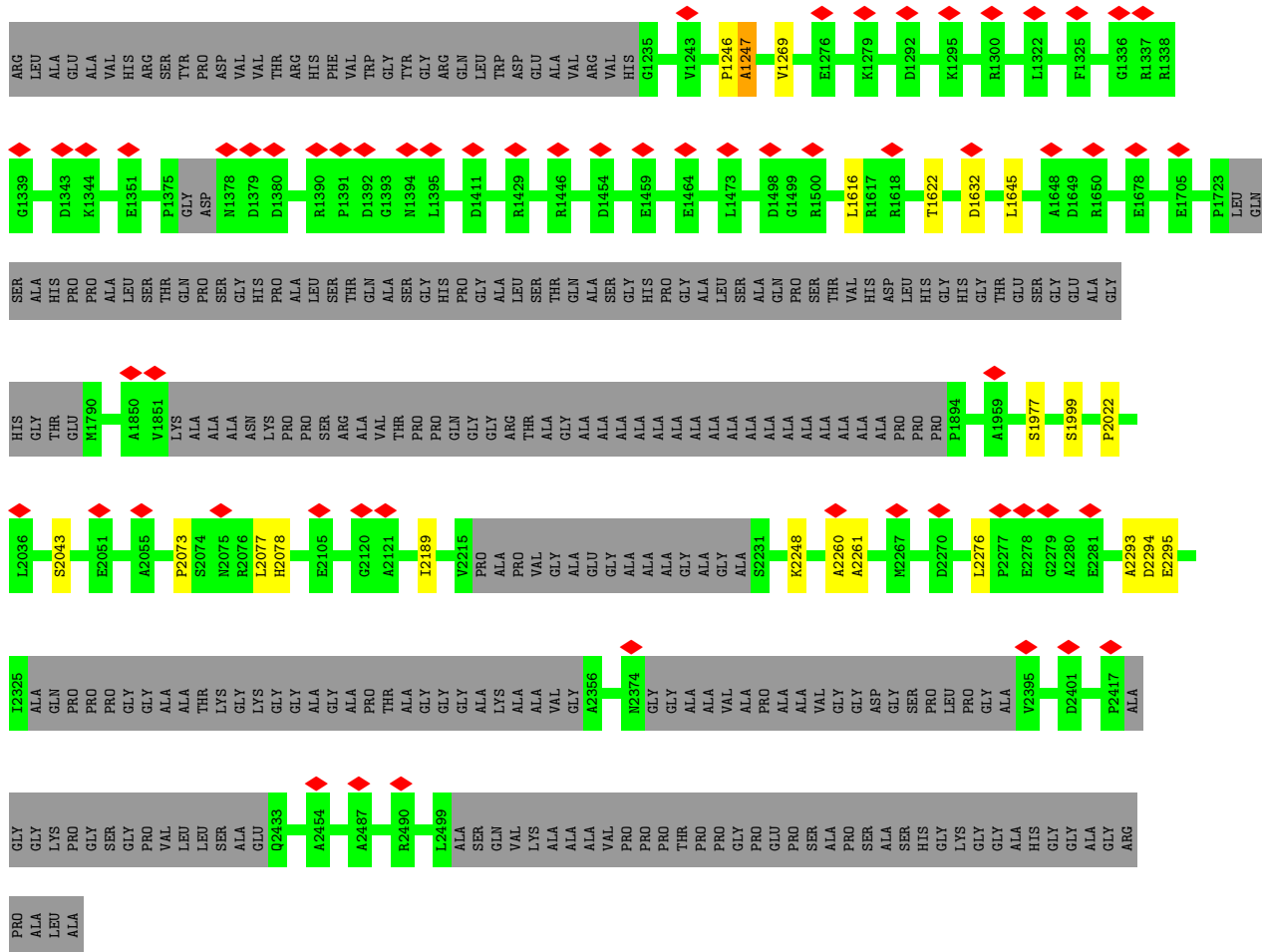
• Molecule 50: Heat shock protein 70A



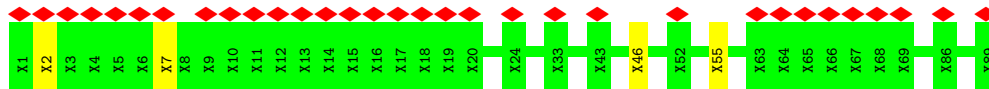


• Molecule 51: FAP42

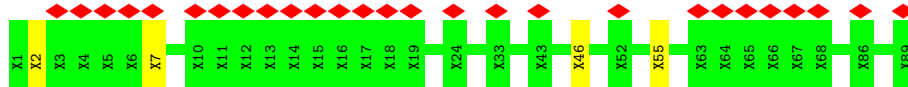




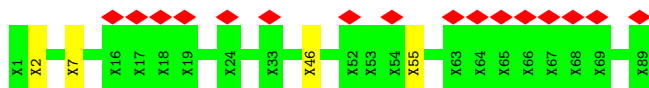
• Molecule 52: Unknown protein



• Molecule 52: Unknown protein



• Molecule 52: Unknown protein



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	190727	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	38.6	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	9.598	Depositor
Minimum map value	0.000	Depositor
Average map value	0.037	Depositor
Map value standard deviation	0.103	Depositor
Recommended contour level	0.5	Depositor
Map size (\AA)	1169.0691, 795.33936, 764.7494	wwPDB
Map dimensions	879, 598, 575	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.329999, 1.329999, 1.329999	Depositor

5 Model quality i

5.1 Standard geometry i

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

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	0A	0.42	2/3578 (0.1%)	0.52	4/4885 (0.1%)
1	0B	0.30	0/3578	0.49	2/4885 (0.0%)
1	0C	0.29	0/3578	0.45	0/4885
1	0D	0.29	0/3578	0.47	1/4885 (0.0%)
1	0E	0.35	0/3578	0.50	1/4885 (0.0%)
1	0F	0.33	0/3578	0.50	2/4885 (0.0%)
1	0G	0.30	0/3578	0.47	2/4885 (0.0%)
1	0H	0.29	0/3578	0.46	0/4885
1	0I	0.31	0/3578	0.46	0/4885
1	0J	0.29	0/3578	0.45	0/4885
1	0K	0.30	0/3574	0.45	0/4881
1	0L	0.30	0/3578	0.46	0/4885
1	0M	0.29	0/3578	0.45	0/4885
1	0N	0.32	0/3578	0.54	2/4885 (0.0%)
1	0O	0.29	0/3578	0.46	1/4885 (0.0%)
1	0P	0.30	0/3578	0.46	0/4885
1	0Q	0.33	0/3578	0.48	0/4885
1	0R	0.40	2/3575 (0.1%)	0.51	3/4880 (0.1%)
1	0S	0.29	0/3578	0.47	1/4885 (0.0%)
1	0T	0.29	0/3578	0.44	0/4885
1	0U	0.29	0/3578	0.47	2/4885 (0.0%)
1	0V	0.31	0/3578	0.46	0/4885
1	0W	0.30	0/3578	0.47	2/4885 (0.0%)
1	0X	0.31	0/3578	0.46	2/4885 (0.0%)
1	0Y	0.30	0/3578	0.49	2/4885 (0.0%)
1	0Z	0.30	0/3578	0.45	0/4885
1	1A	0.31	0/3578	0.48	2/4885 (0.0%)
1	1B	0.36	0/3578	0.52	1/4885 (0.0%)
1	1C	0.31	0/3574	0.46	0/4881
2	1D	0.31	0/3240	0.63	5/4420 (0.1%)
2	1E	0.31	0/3240	0.61	3/4420 (0.1%)
2	1F	0.34	1/3319 (0.0%)	0.73	4/4529 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
2	1G	0.31	0/3319	0.63	2/4529 (0.0%)
3	1H	0.40	2/5878 (0.0%)	0.57	10/8010 (0.1%)
3	1I	0.30	0/5878	0.46	0/8010
3	6D	0.38	2/6127 (0.0%)	0.55	7/8328 (0.1%)
4	1J	0.30	0/2918	0.56	0/3984
4	1K	0.30	0/2918	0.56	0/3984
5	1L	0.28	0/3404	0.56	0/4660
5	1M	0.28	0/3404	0.56	0/4660
6	1N	0.31	2/16403 (0.0%)	0.47	5/22333 (0.0%)
7	1O	0.29	0/19999	0.45	3/27280 (0.0%)
8	1P	0.30	0/2329	0.51	2/3190 (0.1%)
9	1Q	0.30	0/2347	0.65	1/3241 (0.0%)
10	1R	0.36	0/2816	0.60	2/3832 (0.1%)
10	1S	0.43	0/2034	0.67	2/2779 (0.1%)
11	1T	0.27	0/4794	0.35	0/6657
12	1a	0.31	0/3433	0.47	0/4646
12	1c	0.27	0/3453	0.45	0/4673
12	1e	0.32	0/3433	0.48	1/4646 (0.0%)
12	1g	0.28	0/3453	0.45	0/4673
12	2a	0.30	0/3433	0.47	1/4646 (0.0%)
12	2c	0.29	0/3453	0.45	0/4673
12	2e	0.32	0/3433	0.46	2/4646 (0.0%)
12	2g	0.28	0/3453	0.45	0/4673
12	3a	0.35	2/3433 (0.1%)	0.50	3/4646 (0.1%)
12	3c	0.27	0/3453	0.44	0/4673
12	3e	0.30	0/3433	0.46	0/4646
12	3g	0.27	0/3453	0.44	0/4673
12	4a	0.35	2/3433 (0.1%)	0.51	4/4646 (0.1%)
12	4c	0.28	0/3453	0.45	0/4673
12	4e	0.28	0/3433	0.47	1/4646 (0.0%)
12	4g	0.27	0/3453	0.44	0/4673
12	5a	0.31	0/3433	0.48	1/4646 (0.0%)
12	5c	0.28	0/3453	0.45	0/4673
12	5e	0.33	0/3433	0.48	1/4646 (0.0%)
12	5g	0.27	0/3453	0.45	0/4673
12	6a	0.31	0/3433	0.49	1/4646 (0.0%)
12	6c	0.28	0/3453	0.46	0/4673
12	6e	0.34	0/3433	0.57	4/4646 (0.1%)
12	6g	0.28	0/3453	0.45	0/4673
12	7a	0.32	0/3433	0.48	1/4646 (0.0%)
12	7c	0.28	0/3453	0.45	0/4673
12	7e	0.33	0/3433	0.51	2/4646 (0.0%)
12	7g	0.29	0/3453	0.46	0/4673

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
12	8a	0.31	0/3433	0.47	0/4646
12	8c	0.27	0/3453	0.46	1/4673 (0.0%)
12	8e	0.32	0/3433	0.49	1/4646 (0.0%)
12	8g	0.28	0/3453	0.45	0/4673
12	9a	0.32	0/3433	0.51	2/4646 (0.0%)
12	9c	0.27	0/3453	0.44	0/4673
12	9e	0.32	0/3433	0.50	2/4646 (0.0%)
12	9g	0.28	0/3453	0.44	0/4673
12	Aa	0.35	0/3433	0.51	1/4646 (0.0%)
12	Ac	0.29	0/3453	0.49	2/4673 (0.0%)
12	Ae	0.33	0/3433	0.49	2/4646 (0.0%)
12	Ag	0.27	0/3453	0.44	0/4673
12	Ba	0.34	0/3433	0.53	4/4646 (0.1%)
12	Bc	0.28	0/3453	0.44	0/4673
12	Be	0.34	0/3433	0.51	1/4646 (0.0%)
12	Bg	0.30	0/3453	0.46	0/4673
12	Ca	0.36	1/3433 (0.0%)	0.49	1/4646 (0.0%)
12	Cc	0.29	0/3453	0.45	0/4673
12	Ce	0.35	1/3433 (0.0%)	0.50	2/4646 (0.0%)
12	Cg	0.28	0/3453	0.46	0/4673
12	Da	0.35	1/3433 (0.0%)	0.51	3/4646 (0.1%)
12	Dc	0.28	0/3453	0.44	0/4673
12	De	0.31	0/3433	0.48	0/4646
12	Dg	0.28	0/3453	0.45	0/4673
13	1b	0.27	0/3410	0.43	0/4623
13	1d	0.27	0/3410	0.43	0/4623
13	1f	0.27	0/3410	0.43	0/4623
13	1h	0.27	0/3410	0.43	0/4623
13	2b	0.27	0/3410	0.43	0/4623
13	2d	0.27	0/3410	0.43	0/4623
13	2f	0.27	0/3410	0.43	0/4623
13	2h	0.27	0/3410	0.43	0/4623
13	3b	0.27	0/3410	0.43	0/4623
13	3d	0.27	0/3410	0.43	0/4623
13	3f	0.27	0/3410	0.43	0/4623
13	3h	0.27	0/3410	0.43	0/4623
13	4b	0.27	0/3410	0.43	0/4623
13	4d	0.27	0/3410	0.43	0/4623
13	4f	0.27	0/3410	0.43	0/4623
13	4h	0.27	0/3410	0.43	0/4623
13	5b	0.27	0/3410	0.43	0/4623
13	5d	0.27	0/3410	0.43	0/4623
13	5f	0.27	0/3410	0.43	0/4623

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
13	5h	0.27	0/3410	0.43	0/4623
13	6b	0.27	0/3410	0.43	0/4623
13	6d	0.27	0/3410	0.43	0/4623
13	6f	0.27	0/3410	0.43	0/4623
13	6h	0.27	0/3410	0.43	0/4623
13	7b	0.27	0/3410	0.43	0/4623
13	7d	0.27	0/3410	0.43	0/4623
13	7f	0.27	0/3410	0.43	0/4623
13	7h	0.27	0/3410	0.43	0/4623
13	8b	0.27	0/3410	0.43	0/4623
13	8d	0.27	0/3410	0.43	0/4623
13	8f	0.27	0/3410	0.43	0/4623
13	8h	0.27	0/3410	0.43	0/4623
13	9b	0.27	0/3410	0.43	0/4623
13	9d	0.27	0/3410	0.43	0/4623
13	9f	0.27	0/3410	0.43	0/4623
13	9h	0.27	0/3410	0.43	0/4623
13	Ab	0.27	0/3410	0.43	0/4623
13	Ad	0.27	0/3410	0.43	0/4623
13	Af	0.27	0/3410	0.43	0/4623
13	Ah	0.27	0/3410	0.43	0/4623
13	Bb	0.27	0/3410	0.43	0/4623
13	Bd	0.27	0/3410	0.43	0/4623
13	Bf	0.27	0/3410	0.43	0/4623
13	Bh	0.27	0/3410	0.43	0/4623
13	Cb	0.27	0/3410	0.43	0/4623
13	Cd	0.27	0/3410	0.43	0/4623
13	Cf	0.27	0/3410	0.43	0/4623
13	Ch	0.27	0/3410	0.43	0/4623
13	Db	0.27	0/3410	0.43	0/4623
13	Dd	0.27	0/3410	0.43	0/4623
13	Df	0.27	0/3410	0.43	0/4623
13	Dh	0.27	0/3410	0.43	0/4623
14	2F	0.34	0/1257	0.58	1/1700 (0.1%)
14	2G	0.34	0/1257	0.58	1/1700 (0.1%)
24	2S	0.27	0/521	0.38	0/726
24	2T	0.42	1/886 (0.1%)	0.52	0/1193
24	2U	0.42	0/900	0.51	0/1213
24	2V	0.35	0/886	0.51	0/1193
28	3C	0.30	0/484	0.45	0/651
29	3E	0.50	1/682 (0.1%)	0.53	0/926
30	3F	0.43	3/3405 (0.1%)	0.56	7/4572 (0.2%)
30	3G	0.32	0/1911	0.51	4/2553 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
31	3H	0.29	0/1966	0.40	0/2686
31	3I	0.30	0/3146	0.50	4/4233 (0.1%)
32	3J	0.35	0/2849	0.54	1/3878 (0.0%)
32	3K	0.35	1/2824 (0.0%)	0.49	0/3845
33	3L	0.36	0/1597	0.50	0/2147
34	3M	0.32	0/3035	0.49	1/4097 (0.0%)
34	3N	0.30	0/3089	0.49	2/4173 (0.0%)
34	3O	0.32	0/2819	0.48	0/3798
34	3P	0.33	0/2841	0.49	0/3827
34	3Q	0.33	1/2819 (0.0%)	0.48	0/3798
34	3R	0.33	0/2860	0.47	0/3853
34	3S	0.31	0/3035	0.48	2/4097 (0.0%)
34	3T	0.33	0/3089	0.51	1/4173 (0.0%)
34	3U	0.36	2/2841 (0.1%)	0.48	0/3827
34	3V	0.32	0/3244	0.49	1/4381 (0.0%)
34	3W	0.31	0/3250	0.49	4/4389 (0.1%)
34	3X	0.31	0/2860	0.46	0/3853
34	3Y	0.32	0/2860	0.46	1/3853 (0.0%)
34	3Z	0.30	0/2860	0.48	1/3853 (0.0%)
34	4A	0.29	0/3244	0.50	2/4381 (0.0%)
34	4B	0.29	0/3250	0.54	3/4389 (0.1%)
35	4C	0.35	0/4954	0.61	4/6754 (0.1%)
36	4D	0.43	1/2424 (0.0%)	0.58	2/3278 (0.1%)
37	4E	0.96	52/7406 (0.7%)	0.98	70/10145 (0.7%)
37	4F	1.18	59/7235 (0.8%)	1.25	114/9923 (1.1%)
37	4G	1.65	66/7235 (0.9%)	1.33	121/9923 (1.2%)
37	4H	1.06	46/7235 (0.6%)	1.25	100/9923 (1.0%)
38	4I	2.05	17/501 (3.4%)	1.99	22/681 (3.2%)
38	4J	2.05	17/501 (3.4%)	1.99	22/681 (3.2%)
38	4K	2.05	17/501 (3.4%)	1.99	22/681 (3.2%)
38	4L	2.05	17/501 (3.4%)	1.99	22/681 (3.2%)
38	4M	2.05	17/501 (3.4%)	1.99	22/681 (3.2%)
38	4N	2.05	17/501 (3.4%)	1.99	22/681 (3.2%)
38	4O	0.47	0/639	0.75	2/876 (0.2%)
38	4P	0.35	0/433	0.55	0/589
39	4Q	0.29	0/1813	0.53	1/2442 (0.0%)
39	4R	0.29	0/1813	0.53	1/2442 (0.0%)
39	4S	0.29	0/1813	0.53	1/2442 (0.0%)
40	4T	0.30	0/4582	0.55	3/6245 (0.0%)
40	4U	0.30	0/4582	0.55	3/6245 (0.0%)
40	4V	0.30	0/4582	0.55	3/6245 (0.0%)
41	4W	0.29	0/595	0.54	0/816
41	4X	0.25	0/595	0.52	0/816

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
41	4Y	0.25	0/595	0.53	0/816
41	4Z	0.26	0/595	0.54	0/816
41	5A	1.59	11/590 (1.9%)	1.95	23/809 (2.8%)
41	5B	0.24	0/590	0.54	0/809
41	5C	0.25	0/590	0.54	0/809
41	5D	0.25	0/590	0.55	0/809
42	5E	0.32	0/1599	0.53	3/2187 (0.1%)
42	5F	0.32	0/1599	0.53	3/2187 (0.1%)
42	5G	0.32	0/1599	0.53	3/2187 (0.1%)
42	5H	3.32	53/1345 (3.9%)	2.44	74/1833 (4.0%)
43	5I	1.35	15/1631 (0.9%)	1.41	37/2219 (1.7%)
43	5J	1.35	15/1631 (0.9%)	1.41	37/2219 (1.7%)
43	5K	1.35	15/1631 (0.9%)	1.41	37/2219 (1.7%)
43	5L	1.35	15/1631 (0.9%)	1.41	37/2219 (1.7%)
44	5M	0.26	0/698	0.38	0/969
44	5N	0.26	0/698	0.38	0/969
44	5O	0.26	0/698	0.38	0/969
44	5P	0.32	0/1166	0.47	0/1563
44	5Q	0.32	0/1166	0.47	0/1563
44	5R	0.33	0/1166	0.48	1/1563 (0.1%)
44	5S	0.32	0/1157	0.48	0/1551
44	5T	0.33	0/1157	0.48	0/1551
44	5U	0.35	0/1157	0.52	2/1551 (0.1%)
44	5V	0.37	0/1178	0.49	0/1580
46	5Z	0.27	0/270	0.37	0/367
47	6A	0.37	0/12005	0.69	23/16230 (0.1%)
47	6B	0.37	0/12005	0.69	25/16230 (0.2%)
48	6E	0.29	0/7053	0.57	3/9607 (0.0%)
48	6F	0.29	0/7053	0.57	3/9607 (0.0%)
49	6G	0.34	0/3663	0.64	3/4941 (0.1%)
49	6H	0.34	0/3663	0.64	3/4941 (0.1%)
49	6I	0.34	0/3663	0.64	3/4941 (0.1%)
49	6J	0.34	0/3663	0.64	3/4941 (0.1%)
50	6K	0.31	0/4798	0.57	0/6478
50	6L	0.31	0/4798	0.57	0/6478
51	6M	0.30	0/8204	0.53	2/11178 (0.0%)
51	6N	0.30	0/8204	0.53	2/11178 (0.0%)
52	6O	0.29	0/33	0.78	0/44
52	6P	0.29	0/33	0.78	0/44
52	6Q	0.29	0/33	0.77	0/44
All	All	0.44	477/793581 (0.1%)	0.58	1040/1077552 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0B	0	1
1	0D	0	1
1	0F	0	1
1	0G	0	1
1	0I	0	1
1	0K	0	1
1	0M	0	1
1	0O	0	1
1	0Q	0	1
1	0S	0	1
1	0U	0	1
1	0V	0	1
1	0W	0	1
1	0Y	0	1
1	1A	0	1
1	1C	0	1
2	1D	0	4
2	1E	0	4
2	1F	0	4
2	1G	0	4
3	1H	0	3
3	1I	0	3
3	6D	0	2
4	1J	0	7
4	1K	0	7
5	1L	0	8
5	1M	0	8
6	1N	0	2
7	1O	0	8
8	1P	0	1
9	1Q	0	16
10	1R	0	4
10	1S	0	7
11	1T	0	2
12	1a	0	1
12	1e	0	1
12	2a	0	1
12	2e	0	1
12	3e	0	1
12	5e	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
12	6a	0	1
12	6e	0	1
12	7a	0	1
12	7e	0	1
12	8a	0	1
12	8e	0	1
12	9a	0	1
12	Aa	0	1
12	Be	0	1
12	Ce	0	1
12	Da	0	1
14	2F	0	2
14	2G	0	2
15	2H	0	10
16	2I	0	4
17	2J	0	7
17	2K	0	4
18	2L	0	7
20	2N	0	1
21	2O	0	3
22	2P	0	3
23	2R	0	1
24	2T	0	1
24	2U	0	1
24	2V	0	1
25	2W	0	3
25	2X	0	2
30	3F	0	2
31	3I	0	1
32	3J	0	3
32	3K	0	2
33	3L	0	2
35	4C	0	8
36	4D	0	1
37	4E	0	18
37	4F	0	20
37	4G	1	24
37	4H	0	25
38	4I	0	8
38	4J	0	8
38	4K	0	8
38	4L	0	8

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Mol	Chain	#Chirality outliers	#Planarity outliers
38	4M	0	8
38	4N	0	8
38	4O	0	4
38	4P	0	1
40	4T	0	8
40	4U	0	8
40	4V	0	8
41	4X	0	1
41	4Y	0	1
41	4Z	0	1
41	5A	0	7
41	5B	0	1
41	5C	0	1
41	5D	0	1
42	5H	0	13
43	5I	0	5
43	5J	0	5
43	5K	0	5
43	5L	0	5
44	5V	0	1
45	5W	0	2
45	5X	0	2
45	5Y	0	2
46	5Z	0	2
47	6A	0	12
47	6B	0	12
48	6E	0	6
48	6F	0	6
49	6G	0	1
49	6H	0	1
49	6I	0	1
49	6J	0	1
50	6K	0	5
50	6L	0	5
51	6M	0	6
51	6N	0	6
52	6O	0	4
52	6P	0	4
52	6Q	0	4
All	All	1	491

All (477) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	4G	690	CYS	CB-SG	84.81	3.26	1.82
37	4G	854	TYR	CD2-CE2	60.16	2.29	1.39
42	5H	137	TYR	CB-CG	58.22	2.38	1.51
42	5H	135	ARG	CB-CG	55.04	3.01	1.52
42	5H	135	ARG	CG-CD	43.96	2.61	1.51
37	4H	1323	ILE	CB-CG2	30.55	2.47	1.52
37	4G	854	TYR	CD1-CE1	30.46	1.85	1.39
37	4F	1082	LEU	CG-CD1	25.86	2.47	1.51
37	4G	1333	VAL	CB-CG2	-24.87	1.00	1.52
37	4E	583	GLU	CB-CG	23.30	1.96	1.52
37	4G	854	TYR	CE1-CZ	22.72	1.68	1.38
42	5H	158	MET	CB-CG	22.18	2.22	1.51
42	5H	137	TYR	CA-CB	21.15	2.00	1.53
37	4H	1084	ARG	CB-CG	21.09	2.09	1.52
37	4F	1093	VAL	CB-CG1	-20.62	1.09	1.52
37	4F	1082	LEU	CB-CG	20.38	2.11	1.52
37	4H	1333	VAL	CB-CG1	-20.12	1.10	1.52
41	5A	120	TYR	CA-C	19.82	2.04	1.52
43	5L	168	GLU	CG-CD	19.72	1.81	1.51
37	4F	1083	ILE	N-CA	19.70	1.85	1.46
43	5J	168	GLU	CG-CD	19.70	1.81	1.51
43	5I	168	GLU	CG-CD	19.69	1.81	1.51
43	5K	168	GLU	CG-CD	19.68	1.81	1.51
37	4H	1091	VAL	CB-CG1	19.66	1.94	1.52
37	4G	1084	ARG	CB-CG	19.28	2.04	1.52
37	4H	1091	VAL	CA-CB	19.27	1.95	1.54
43	5L	44	THR	C-N	18.68	1.77	1.34
43	5J	44	THR	C-N	18.68	1.77	1.34
43	5I	44	THR	C-N	18.66	1.76	1.34
43	5K	44	THR	C-N	18.65	1.76	1.34
42	5H	139	LEU	CB-CG	18.41	2.06	1.52
37	4F	1333	VAL	CA-C	18.00	1.99	1.52
38	4L	26	GLU	CG-CD	17.80	1.78	1.51
38	4N	26	GLU	CG-CD	17.78	1.78	1.51
38	4M	26	GLU	CG-CD	17.77	1.78	1.51
38	4K	26	GLU	CG-CD	17.77	1.78	1.51
38	4J	26	GLU	CG-CD	17.76	1.78	1.51
38	4I	26	GLU	CG-CD	17.75	1.78	1.51
37	4F	1138	VAL	CB-CG2	-17.61	1.15	1.52
42	5H	156	GLU	CB-CG	17.61	1.85	1.52
37	4F	1334	GLU	N-CA	17.02	1.80	1.46
37	4H	1333	VAL	CB-CG2	16.82	1.88	1.52
37	4H	1091	VAL	CA-C	16.77	1.96	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	4F	1322	ARG	CB-CG	16.57	1.97	1.52
42	5H	139	LEU	CG-CD2	16.52	2.12	1.51
37	4F	1333	VAL	C-N	16.42	1.71	1.34
37	4F	1322	ARG	C-N	16.18	1.71	1.34
37	4G	854	TYR	CG-CD2	16.14	1.60	1.39
37	4H	1323	ILE	CG1-CD1	16.11	2.61	1.50
37	4F	972	PHE	CE2-CZ	-16.09	1.06	1.37
37	4E	1108	PHE	CB-CG	-16.03	1.24	1.51
37	4H	1084	ARG	CG-CD	15.54	1.90	1.51
37	4E	587	ALA	N-CA	15.47	1.77	1.46
42	5H	137	TYR	CE1-CZ	-15.33	1.18	1.38
37	4E	577	LEU	C-N	15.29	1.69	1.34
37	4E	581	LEU	CG-CD2	-15.23	0.95	1.51
37	4F	1082	LEU	C-N	15.19	1.69	1.34
37	4F	1323	ILE	N-CA	15.03	1.76	1.46
37	4F	972	PHE	CD1-CE1	-14.93	1.09	1.39
37	4F	1335	MET	CB-CG	14.78	1.98	1.51
37	4G	1093	VAL	CB-CG2	14.41	1.83	1.52
37	4H	972	PHE	CB-CG	14.39	1.75	1.51
43	5I	42	TYR	CG-CD1	-14.39	1.20	1.39
37	4F	1082	LEU	CG-CD2	-14.37	0.98	1.51
43	5J	42	TYR	CG-CD1	-14.35	1.20	1.39
43	5L	42	TYR	CG-CD1	-14.31	1.20	1.39
43	5K	42	TYR	CG-CD1	-14.30	1.20	1.39
37	4E	589	PRO	C-N	14.17	1.66	1.34
37	4G	1082	LEU	C-N	14.16	1.66	1.34
37	4E	582	GLN	CA-C	-14.11	1.16	1.52
42	5H	136	HIS	N-CA	14.00	1.74	1.46
37	4H	1138	VAL	CB-CG1	-13.49	1.24	1.52
37	4F	1083	ILE	C-N	13.46	1.65	1.34
37	4F	1323	ILE	C-N	13.37	1.64	1.34
42	5H	138	ARG	CB-CG	12.97	1.87	1.52
37	4E	582	GLN	CB-CG	-12.91	1.17	1.52
37	4E	1108	PHE	CD1-CE1	-12.88	1.13	1.39
37	4H	1322	ARG	CG-CD	12.59	1.83	1.51
37	4G	854	TYR	CZ-OH	12.45	1.59	1.37
37	4G	1075	VAL	CB-CG1	-12.39	1.26	1.52
37	4F	1323	ILE	CA-C	12.35	1.85	1.52
42	5H	135	ARG	CZ-NH2	12.23	1.49	1.33
37	4E	586	PHE	C-N	12.05	1.61	1.34
37	4E	590	LYS	N-CA	11.98	1.70	1.46
43	5L	42	TYR	CD1-CE1	-11.88	1.21	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	5K	42	TYR	CD1-CE1	-11.85	1.21	1.39
43	5I	42	TYR	CD1-CE1	-11.83	1.21	1.39
43	5J	42	TYR	CD1-CE1	-11.83	1.21	1.39
42	5H	138	ARG	CG-CD	11.81	1.81	1.51
37	4G	529	VAL	CB-CG1	-11.68	1.28	1.52
37	4E	578	ASP	N-CA	11.50	1.69	1.46
37	4E	581	LEU	CA-CB	11.45	1.80	1.53
37	4H	1091	VAL	C-N	11.41	1.60	1.34
37	4F	1082	LEU	CA-CB	11.38	1.79	1.53
37	4G	1083	ILE	N-CA	11.34	1.69	1.46
43	5L	168	GLU	CB-CG	11.23	1.73	1.52
43	5I	168	GLU	CB-CG	11.18	1.73	1.52
43	5J	168	GLU	CB-CG	11.17	1.73	1.52
37	4F	1322	ARG	N-CA	-11.16	1.24	1.46
42	5H	91	TYR	CB-CG	11.16	1.68	1.51
43	5K	168	GLU	CB-CG	11.14	1.73	1.52
37	4E	588	PRO	N-CA	11.13	1.66	1.47
37	4E	581	LEU	CB-CG	10.99	1.84	1.52
41	5A	140	GLU	C-N	10.96	1.59	1.34
37	4E	580	GLU	N-CA	10.94	1.68	1.46
42	5H	143	VAL	CB-CG2	-10.94	1.29	1.52
37	4G	1082	LEU	CG-CD1	-10.87	1.11	1.51
38	4J	38	VAL	CB-CG2	-10.86	1.30	1.52
38	4I	38	VAL	CB-CG2	-10.85	1.30	1.52
38	4L	38	VAL	CB-CG2	-10.83	1.30	1.52
38	4M	38	VAL	CB-CG2	-10.82	1.30	1.52
38	4K	38	VAL	CB-CG2	-10.80	1.30	1.52
38	4N	38	VAL	CB-CG2	-10.79	1.30	1.52
37	4H	1091	VAL	CB-CG2	10.75	1.75	1.52
37	4G	1323	ILE	CA-CB	10.73	1.79	1.54
37	4G	1083	ILE	CA-C	10.71	1.80	1.52
42	5H	137	TYR	CG-CD1	10.71	1.53	1.39
38	4K	26	GLU	CB-CG	-10.63	1.31	1.52
38	4I	26	GLU	CB-CG	-10.62	1.31	1.52
38	4M	26	GLU	CB-CG	-10.62	1.31	1.52
37	4E	585	VAL	CB-CG1	-10.61	1.30	1.52
38	4L	26	GLU	CB-CG	-10.61	1.31	1.52
38	4N	26	GLU	CB-CG	-10.60	1.32	1.52
38	4J	26	GLU	CB-CG	-10.57	1.32	1.52
37	4F	1082	LEU	CA-C	10.54	1.80	1.52
37	4F	1083	ILE	CB-CG1	-10.51	1.24	1.54
30	3F	301	VAL	CB-CG2	-10.43	1.30	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	5H	137	TYR	CD2-CE2	10.36	1.54	1.39
41	5A	141	ASN	N-CA	10.35	1.67	1.46
42	5H	135	ARG	N-CA	10.31	1.67	1.46
42	5H	135	ARG	C-N	10.29	1.57	1.34
42	5H	156	GLU	CG-CD	10.19	1.67	1.51
37	4G	1335	MET	CG-SD	10.14	2.07	1.81
37	4H	1074	GLN	CB-CG	10.12	1.79	1.52
42	5H	94	CYS	CB-SG	-10.12	1.65	1.82
37	4E	586	PHE	CE2-CZ	-10.12	1.18	1.37
37	4F	1075	VAL	CB-CG1	10.11	1.74	1.52
38	4N	41	LYS	CB-CG	-10.09	1.25	1.52
38	4L	41	LYS	CB-CG	-10.09	1.25	1.52
38	4K	41	LYS	CB-CG	-10.08	1.25	1.52
38	4I	41	LYS	CB-CG	-10.06	1.25	1.52
37	4E	589	PRO	CA-C	10.05	1.73	1.52
38	4M	41	LYS	CB-CG	-10.05	1.25	1.52
38	4J	41	LYS	CB-CG	-10.05	1.25	1.52
37	4G	690	CYS	CA-CB	-10.02	1.31	1.53
37	4E	583	GLU	CA-C	10.01	1.78	1.52
37	4G	1334	GLU	N-CA	9.97	1.66	1.46
37	4F	1073	LEU	C-N	9.94	1.56	1.34
37	4F	1074	GLN	CD-OE1	-9.75	1.02	1.24
42	5H	134	LEU	C-N	9.71	1.56	1.34
37	4G	538	GLU	CG-CD	-9.67	1.37	1.51
37	4E	582	GLN	CG-CD	-9.65	1.28	1.51
37	4G	1334	GLU	CG-CD	-9.60	1.37	1.51
30	3F	301	VAL	CB-CG1	-9.57	1.32	1.52
42	5H	95	GLU	CB-CG	9.55	1.70	1.52
38	4L	38	VAL	CB-CG1	-9.37	1.33	1.52
38	4M	38	VAL	CB-CG1	-9.36	1.33	1.52
37	4G	854	TYR	CG-CD1	-9.35	1.26	1.39
38	4N	38	VAL	CB-CG1	-9.35	1.33	1.52
37	4G	691	MET	CB-CG	9.35	1.81	1.51
38	4I	38	VAL	CB-CG1	-9.35	1.33	1.52
38	4J	38	VAL	CB-CG1	-9.34	1.33	1.52
38	4K	38	VAL	CB-CG1	-9.33	1.33	1.52
37	4E	579	THR	N-CA	9.29	1.65	1.46
43	5J	42	TYR	CD2-CE2	-9.16	1.25	1.39
43	5L	42	TYR	CD2-CE2	-9.15	1.25	1.39
43	5K	42	TYR	CD2-CE2	-9.14	1.25	1.39
43	5I	42	TYR	CD2-CE2	-9.13	1.25	1.39
42	5H	143	VAL	CB-CG1	-9.11	1.33	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	5H	159	VAL	CB-CG1	-9.08	1.33	1.52
41	5A	120	TYR	C-O	9.07	1.40	1.23
37	4H	1342	LEU	CG-CD2	-9.04	1.18	1.51
38	4N	26	GLU	CD-OE2	-9.03	1.15	1.25
37	4H	1092	LEU	N-CA	9.02	1.64	1.46
37	4F	972	PHE	CG-CD1	-8.97	1.25	1.38
38	4K	26	GLU	CD-OE2	-8.97	1.15	1.25
37	4E	578	ASP	CA-CB	-8.96	1.34	1.53
38	4L	26	GLU	CD-OE2	-8.94	1.15	1.25
38	4J	26	GLU	CD-OE2	-8.92	1.15	1.25
37	4G	854	TYR	CB-CG	8.90	1.65	1.51
37	4E	581	LEU	N-CA	8.90	1.64	1.46
37	4G	1335	MET	CB-CG	-8.88	1.23	1.51
38	4I	26	GLU	CD-OE2	-8.87	1.15	1.25
37	4H	954	SER	CA-CB	8.85	1.66	1.52
38	4M	26	GLU	CD-OE2	-8.85	1.16	1.25
37	4E	586	PHE	CE1-CZ	-8.83	1.20	1.37
41	5A	120	TYR	CA-CB	8.82	1.73	1.53
37	4H	972	PHE	CE1-CZ	-8.78	1.20	1.37
37	4H	1323	ILE	N-CA	8.77	1.63	1.46
38	4K	36	VAL	CB-CG1	-8.77	1.34	1.52
38	4J	36	VAL	CB-CG1	-8.75	1.34	1.52
42	5H	49	ILE	CB-CG2	8.75	1.79	1.52
37	4G	1083	ILE	C-N	8.74	1.54	1.34
37	4G	1322	ARG	CG-CD	8.74	1.73	1.51
37	4F	1075	VAL	N-CA	8.73	1.63	1.46
38	4L	36	VAL	CB-CG1	-8.73	1.34	1.52
38	4N	36	VAL	CB-CG1	-8.72	1.34	1.52
37	4H	540	VAL	CB-CG1	-8.72	1.34	1.52
38	4M	36	VAL	CB-CG1	-8.71	1.34	1.52
38	4I	36	VAL	CB-CG1	-8.71	1.34	1.52
37	4H	1136	ARG	C-N	8.69	1.54	1.34
36	4D	222	TYR	CD2-CE2	-8.69	1.26	1.39
1	0R	319	TYR	CD1-CE1	-8.68	1.26	1.39
43	5J	168	GLU	CD-OE1	8.67	1.35	1.25
43	5K	42	TYR	CB-CG	-8.67	1.38	1.51
37	4E	585	VAL	CB-CG2	8.66	1.71	1.52
43	5K	168	GLU	CD-OE1	8.66	1.35	1.25
42	5H	94	CYS	N-CA	8.65	1.63	1.46
43	5L	168	GLU	CD-OE1	8.64	1.35	1.25
43	5J	42	TYR	CB-CG	-8.62	1.38	1.51
38	4L	49	ILE	CB-CG2	-8.62	1.26	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	5L	42	TYR	CB-CG	-8.62	1.38	1.51
43	5I	42	TYR	CB-CG	-8.62	1.38	1.51
43	5I	168	GLU	CD-OE1	8.60	1.35	1.25
38	4K	49	ILE	CB-CG2	-8.60	1.26	1.52
38	4I	49	ILE	CB-CG2	-8.59	1.26	1.52
38	4M	49	ILE	CB-CG2	-8.59	1.26	1.52
38	4N	49	ILE	CB-CG2	-8.59	1.26	1.52
38	4J	49	ILE	CB-CG2	-8.59	1.26	1.52
37	4G	1338	PHE	CB-CG	-8.49	1.36	1.51
3	6D	1006	ASP	CB-CG	8.44	1.69	1.51
37	4E	581	LEU	C-N	8.44	1.53	1.34
42	5H	135	ARG	CA-C	8.40	1.74	1.52
37	4G	538	GLU	CB-CG	-8.40	1.36	1.52
43	5L	36	TYR	CE2-CZ	-8.38	1.27	1.38
43	5K	36	TYR	CE2-CZ	-8.36	1.27	1.38
38	4I	28	VAL	CB-CG2	-8.35	1.35	1.52
43	5I	36	TYR	CE2-CZ	-8.34	1.27	1.38
37	4F	1338	PHE	CD2-CE2	-8.33	1.22	1.39
38	4L	28	VAL	CB-CG2	-8.33	1.35	1.52
38	4K	28	VAL	CB-CG2	-8.32	1.35	1.52
43	5J	36	TYR	CE2-CZ	-8.32	1.27	1.38
38	4M	28	VAL	CB-CG2	-8.31	1.35	1.52
38	4N	28	VAL	CB-CG2	-8.31	1.35	1.52
38	4J	28	VAL	CB-CG2	-8.30	1.35	1.52
42	5H	91	TYR	CG-CD1	8.28	1.50	1.39
42	5H	137	TYR	CA-C	8.26	1.74	1.52
37	4G	1338	PHE	CG-CD1	-8.25	1.26	1.38
37	4E	1108	PHE	CD2-CE2	-8.21	1.22	1.39
37	4G	1333	VAL	CA-C	8.20	1.74	1.52
37	4F	1338	PHE	CD1-CE1	-8.18	1.22	1.39
42	5H	139	LEU	CA-CB	8.14	1.72	1.53
37	4F	1322	ARG	CA-C	8.13	1.74	1.52
2	1F	54	GLU	CB-CG	-8.12	1.36	1.52
37	4G	1334	GLU	CA-C	8.11	1.74	1.52
37	4F	1324	THR	CA-CB	8.03	1.74	1.53
37	4F	1358	LEU	CG-CD1	-7.98	1.22	1.51
34	3U	370	GLU	CG-CD	-7.91	1.40	1.51
37	4E	578	ASP	C-N	7.89	1.52	1.34
37	4G	1323	ILE	N-CA	7.86	1.62	1.46
42	5H	140	TYR	CD2-CE2	7.85	1.51	1.39
42	5H	137	TYR	CG-CD2	7.82	1.49	1.39
37	4F	1093	VAL	CA-C	7.81	1.73	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	4E	580	GLU	CA-C	7.80	1.73	1.52
37	4F	968	VAL	CB-CG1	-7.79	1.36	1.52
37	4G	1082	LEU	CG-CD2	7.76	1.80	1.51
38	4K	33	LYS	CD-CE	-7.76	1.31	1.51
37	4F	544	MET	CB-CG	-7.75	1.26	1.51
37	4H	1322	ARG	CB-CG	7.75	1.73	1.52
38	4I	33	LYS	CD-CE	-7.74	1.31	1.51
38	4N	33	LYS	CD-CE	-7.74	1.31	1.51
42	5H	136	HIS	CA-CB	7.74	1.71	1.53
38	4L	33	LYS	CD-CE	-7.74	1.31	1.51
38	4M	33	LYS	CD-CE	-7.73	1.31	1.51
37	4H	1322	ARG	C-N	7.73	1.51	1.34
37	4E	579	THR	CB-CG2	7.70	1.77	1.52
38	4J	33	LYS	CD-CE	-7.69	1.32	1.51
37	4F	1083	ILE	CB-CG2	7.65	1.76	1.52
12	Da	60	VAL	CB-CG1	-7.56	1.36	1.52
37	4G	1334	GLU	CB-CG	-7.56	1.37	1.52
37	4H	972	PHE	CE2-CZ	-7.54	1.23	1.37
37	4F	1324	THR	CB-CG2	7.52	1.77	1.52
37	4E	586	PHE	CG-CD1	-7.52	1.27	1.38
42	5H	148	GLN	CB-CG	7.50	1.72	1.52
37	4G	1333	VAL	C-N	7.48	1.51	1.34
42	5H	135	ARG	CZ-NH1	-7.44	1.23	1.33
37	4H	972	PHE	CG-CD2	-7.41	1.27	1.38
37	4F	972	PHE	CB-CG	-7.38	1.38	1.51
37	4G	1084	ARG	CG-CD	7.36	1.70	1.51
38	4I	32	GLU	CG-CD	-7.35	1.41	1.51
38	4N	32	GLU	CG-CD	-7.35	1.41	1.51
38	4K	32	GLU	CG-CD	-7.34	1.41	1.51
38	4J	32	GLU	CG-CD	-7.34	1.41	1.51
42	5H	137	TYR	C-N	7.33	1.50	1.34
37	4H	1137	ALA	N-CA	7.32	1.60	1.46
38	4M	32	GLU	CG-CD	-7.31	1.41	1.51
1	0A	11	GLU	CB-CG	-7.28	1.38	1.52
38	4L	32	GLU	CG-CD	-7.28	1.41	1.51
41	5A	20	GLU	N-CA	7.26	1.60	1.46
37	4H	1082	LEU	CB-CG	7.25	1.73	1.52
37	4E	589	PRO	CG-CD	7.15	1.74	1.50
43	5L	45	ASN	N-CA	7.14	1.60	1.46
43	5I	45	ASN	N-CA	7.14	1.60	1.46
37	4E	578	ASP	CA-C	7.13	1.71	1.52
41	5A	141	ASN	C-O	7.13	1.36	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	5H	56	TYR	CD2-CE2	-7.12	1.28	1.39
43	5K	45	ASN	N-CA	7.12	1.60	1.46
43	5J	45	ASN	N-CA	7.12	1.60	1.46
37	4H	1136	ARG	CB-CG	7.10	1.71	1.52
37	4G	1338	PHE	CE2-CZ	-7.08	1.23	1.37
38	4M	28	VAL	CB-CG1	-7.05	1.38	1.52
38	4L	28	VAL	CB-CG1	-7.05	1.38	1.52
38	4K	28	VAL	CB-CG1	-7.04	1.38	1.52
38	4J	69	CYS	CB-SG	-7.03	1.70	1.82
38	4N	28	VAL	CB-CG1	-7.03	1.38	1.52
38	4J	28	VAL	CB-CG1	-7.02	1.38	1.52
38	4I	28	VAL	CB-CG1	-7.01	1.38	1.52
38	4L	69	CYS	CB-SG	-7.00	1.70	1.82
38	4M	69	CYS	CB-SG	-6.99	1.70	1.82
38	4I	69	CYS	CB-SG	-6.99	1.70	1.82
38	4N	69	CYS	CB-SG	-6.99	1.70	1.82
37	4G	1092	LEU	N-CA	6.98	1.60	1.46
37	4G	1091	VAL	CB-CG1	-6.98	1.38	1.52
38	4K	69	CYS	CB-SG	-6.98	1.70	1.82
37	4E	576	ALA	N-CA	6.95	1.60	1.46
42	5H	137	TYR	N-CA	-6.92	1.32	1.46
37	4F	1338	PHE	CB-CG	-6.90	1.39	1.51
42	5H	136	HIS	CB-CG	6.89	1.62	1.50
42	5H	95	GLU	CG-CD	6.88	1.62	1.51
6	1N	641	TRP	CE2-CZ2	-6.86	1.28	1.39
37	4G	1321	THR	CB-CG2	-6.80	1.29	1.52
37	4G	935	ARG	CG-CD	-6.78	1.34	1.51
32	3K	228	GLU	CB-CG	-6.73	1.39	1.52
37	4F	1334	GLU	CA-C	6.72	1.70	1.52
37	4H	1323	ILE	C-N	6.71	1.49	1.34
12	3a	86	ARG	CB-CG	6.71	1.70	1.52
37	4F	1332	SER	C-N	6.71	1.49	1.34
37	4F	1083	ILE	CA-C	6.70	1.70	1.52
37	4G	1082	LEU	C-O	6.69	1.36	1.23
37	4G	1093	VAL	CB-CG1	6.67	1.66	1.52
37	4F	958	LEU	CG-CD1	-6.67	1.27	1.51
37	4G	1074	GLN	CD-NE2	-6.66	1.16	1.32
37	4E	583	GLU	CA-CB	6.65	1.68	1.53
37	4G	1083	ILE	CG1-CD1	6.62	1.96	1.50
37	4H	1144	LEU	CG-CD2	-6.60	1.27	1.51
37	4E	587	ALA	CA-C	6.59	1.70	1.52
37	4H	1074	GLN	CG-CD	6.58	1.66	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	5A	141	ASN	CA-C	-6.55	1.35	1.52
42	5H	140	TYR	CB-CG	6.53	1.61	1.51
37	4E	583	GLU	CG-CD	6.52	1.61	1.51
38	4L	32	GLU	CB-CG	-6.45	1.39	1.52
38	4N	32	GLU	CB-CG	-6.44	1.40	1.52
37	4G	540	VAL	CB-CG1	-6.44	1.39	1.52
42	5H	137	TYR	CD1-CE1	-6.42	1.29	1.39
38	4K	32	GLU	CB-CG	-6.41	1.40	1.52
37	4G	1338	PHE	CD1-CE1	-6.40	1.26	1.39
43	5J	52	LEU	C-N	6.40	1.48	1.34
43	5L	52	LEU	C-N	6.40	1.48	1.34
38	4I	32	GLU	CB-CG	-6.40	1.40	1.52
38	4M	32	GLU	CB-CG	-6.40	1.40	1.52
43	5K	52	LEU	C-N	6.39	1.48	1.34
38	4J	32	GLU	CB-CG	-6.38	1.40	1.52
37	4E	591	PRO	N-CD	6.38	1.56	1.47
37	4F	1335	MET	CG-SD	6.38	1.97	1.81
34	3U	370	GLU	CB-CG	-6.36	1.40	1.52
43	5I	52	LEU	C-N	6.36	1.48	1.34
37	4H	1137	ALA	C-O	-6.33	1.11	1.23
37	4G	1084	ARG	NE-CZ	6.33	1.41	1.33
37	4F	1084	ARG	N-CA	6.33	1.59	1.46
1	0A	11	GLU	CG-CD	-6.29	1.42	1.51
37	4G	1083	ILE	CB-CG2	6.28	1.72	1.52
37	4E	588	PRO	CG-CD	6.28	1.71	1.50
37	4F	856	MET	CG-SD	-6.28	1.64	1.81
37	4H	1084	ARG	CA-CB	6.27	1.67	1.53
37	4H	972	PHE	CD1-CE1	-6.26	1.26	1.39
37	4G	1083	ILE	CA-CB	6.25	1.69	1.54
37	4G	1084	ARG	N-CA	6.22	1.58	1.46
12	3a	86	ARG	CG-CD	6.22	1.67	1.51
30	3F	437	ILE	CB-CG2	-6.18	1.33	1.52
38	4J	24	THR	CA-C	6.18	1.69	1.52
38	4K	24	THR	CA-C	6.17	1.69	1.52
38	4I	24	THR	CA-C	6.16	1.69	1.52
38	4N	24	THR	CA-C	6.16	1.69	1.52
38	4M	24	THR	CA-C	6.16	1.69	1.52
37	4E	586	PHE	CD1-CE1	-6.14	1.26	1.39
38	4L	24	THR	CA-C	6.14	1.69	1.52
37	4F	1753	GLN	CG-CD	-6.13	1.36	1.51
37	4G	1338	PHE	CE1-CZ	-6.12	1.25	1.37
3	1H	988	TRP	CB-CG	6.09	1.61	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	4F	1094	ALA	N-CA	6.09	1.58	1.46
37	4E	583	GLU	N-CA	-6.09	1.34	1.46
29	3E	1191	TRP	CB-CG	-6.09	1.39	1.50
37	4G	692	MET	CG-SD	-6.08	1.65	1.81
37	4E	581	LEU	C-O	-6.07	1.11	1.23
37	4F	1074	GLN	CG-CD	6.07	1.65	1.51
37	4H	1323	ILE	CA-CB	-6.07	1.40	1.54
41	5A	141	ASN	C-N	-6.07	1.20	1.34
37	4E	590	LYS	CG-CD	-6.04	1.31	1.52
37	4H	1324	THR	CB-CG2	6.03	1.72	1.52
37	4H	1334	GLU	CD-OE1	-6.01	1.19	1.25
1	0R	319	TYR	CE1-CZ	-6.01	1.30	1.38
43	5J	42	TYR	CE1-CZ	-6.00	1.30	1.38
37	4E	587	ALA	C-N	5.97	1.45	1.34
37	4H	1136	ARG	CG-CD	-5.97	1.37	1.51
43	5K	42	TYR	CE1-CZ	-5.97	1.30	1.38
37	4G	1322	ARG	C-N	5.96	1.47	1.34
43	5I	42	TYR	CE1-CZ	-5.95	1.30	1.38
42	5H	158	MET	CG-SD	5.94	1.96	1.81
37	4F	1340	PRO	N-CA	5.92	1.57	1.47
37	4G	1323	ILE	CG1-CD1	5.92	1.91	1.50
43	5L	42	TYR	CE1-CZ	-5.91	1.30	1.38
37	4E	580	GLU	C-N	5.89	1.47	1.34
37	4H	1083	ILE	C-N	5.88	1.47	1.34
43	5L	158	HIS	CA-CB	5.88	1.66	1.53
37	4F	1333	VAL	N-CA	5.88	1.58	1.46
43	5J	158	HIS	CA-CB	5.88	1.66	1.53
37	4H	1341	ILE	CB-CG2	5.87	1.71	1.52
43	5I	158	HIS	CA-CB	5.86	1.66	1.53
43	5K	158	HIS	CA-CB	5.86	1.66	1.53
42	5H	139	LEU	CA-C	-5.84	1.37	1.52
37	4F	1074	GLN	CB-CG	-5.83	1.36	1.52
37	4E	1108	PHE	CG-CD2	-5.83	1.30	1.38
37	4H	1138	VAL	N-CA	5.82	1.57	1.46
42	5H	136	HIS	CA-C	-5.80	1.37	1.52
37	4F	1091	VAL	CB-CG2	-5.80	1.40	1.52
12	4a	60	VAL	CB-CG1	-5.79	1.40	1.52
12	4a	281	TYR	CB-CG	5.79	1.60	1.51
37	4G	567	LEU	CG-CD1	-5.76	1.30	1.51
41	5A	169	LEU	N-CA	-5.72	1.34	1.46
37	4E	1135	PHE	CB-CG	-5.71	1.41	1.51
37	4G	826	LEU	CG-CD2	5.71	1.73	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	Ce	50	TYR	CD1-CE1	-5.70	1.30	1.39
42	5H	138	ARG	CA-CB	5.66	1.66	1.53
37	4G	1323	ILE	CA-C	-5.65	1.38	1.52
38	4J	33	LYS	CG-CD	-5.60	1.33	1.52
38	4L	33	LYS	CG-CD	-5.60	1.33	1.52
38	4N	33	LYS	CG-CD	-5.60	1.33	1.52
38	4M	33	LYS	CG-CD	-5.58	1.33	1.52
38	4K	33	LYS	CG-CD	-5.58	1.33	1.52
24	2T	131	CYS	CB-SG	-5.58	1.72	1.81
38	4I	33	LYS	CG-CD	-5.58	1.33	1.52
37	4E	582	GLN	N-CA	5.58	1.57	1.46
37	4E	583	GLU	C-N	5.54	1.46	1.34
12	Ca	281	TYR	CE1-CZ	-5.54	1.31	1.38
3	6D	995	PHE	CB-CG	-5.53	1.42	1.51
37	4F	1092	LEU	C-N	5.51	1.46	1.34
37	4G	1084	ARG	CD-NE	5.51	1.55	1.46
41	5A	20	GLU	CA-C	5.51	1.67	1.52
43	5J	158	HIS	CB-CG	5.51	1.59	1.50
37	4E	1762	GLU	CD-OE1	-5.50	1.19	1.25
43	5L	158	HIS	CB-CG	5.49	1.59	1.50
42	5H	94	CYS	CA-C	5.48	1.67	1.52
43	5I	158	HIS	CB-CG	5.47	1.59	1.50
43	5K	158	HIS	CB-CG	5.47	1.59	1.50
37	4G	1322	ARG	CB-CG	5.46	1.67	1.52
37	4F	1074	GLN	N-CA	5.42	1.57	1.46
37	4F	1074	GLN	C-N	5.39	1.46	1.34
42	5H	135	ARG	CA-CB	5.37	1.65	1.53
42	5H	49	ILE	CA-CB	5.37	1.67	1.54
3	1H	995	PHE	CB-CG	-5.36	1.42	1.51
37	4G	1136	ARG	CG-CD	5.36	1.65	1.51
37	4H	1323	ILE	CB-CG1	5.35	1.69	1.54
37	4G	1333	VAL	CA-CB	-5.34	1.43	1.54
42	5H	56	TYR	CE2-CZ	-5.33	1.31	1.38
37	4E	591	PRO	CG-CD	5.30	1.68	1.50
34	3Q	496	TYR	CD2-CE2	-5.29	1.31	1.39
37	4F	1075	VAL	CA-C	5.29	1.66	1.52
6	1N	641	TRP	CB-CG	-5.28	1.40	1.50
37	4G	1323	ILE	CB-CG1	5.26	1.68	1.54
37	4F	1350	ILE	CB-CG1	5.25	1.68	1.54
37	4G	1323	ILE	C-N	-5.21	1.22	1.34
43	5L	36	TYR	CD2-CE2	-5.17	1.31	1.39
43	5I	36	TYR	CD2-CE2	-5.16	1.31	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	5J	36	TYR	CD2-CE2	-5.14	1.31	1.39
37	4H	1138	VAL	C-N	-5.13	1.22	1.34
38	4M	77	VAL	CB-CG2	-5.11	1.42	1.52
43	5K	36	TYR	CD2-CE2	-5.10	1.31	1.39
38	4N	77	VAL	CB-CG2	-5.08	1.42	1.52
42	5H	56	TYR	CB-CG	-5.08	1.44	1.51
38	4L	77	VAL	CB-CG2	-5.08	1.42	1.52
38	4K	77	VAL	CB-CG2	-5.07	1.42	1.52
38	4J	77	VAL	CB-CG2	-5.07	1.42	1.52
42	5H	138	ARG	CD-NE	5.06	1.55	1.46
37	4G	1084	ARG	CA-CB	5.05	1.65	1.53
38	4I	77	VAL	CB-CG2	-5.05	1.42	1.52
37	4H	1322	ARG	CD-NE	5.03	1.55	1.46
37	4H	1322	ARG	CA-CB	5.02	1.65	1.53

All (1040) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	5H	135	ARG	NE-CZ-NH1	-39.92	100.34	120.30
37	4G	854	TYR	CD1-CE1-CZ	29.02	145.92	119.80
37	4H	1144	LEU	CB-CG-CD2	-29.02	61.67	111.00
42	5H	134	LEU	CB-CG-CD1	-28.89	61.89	111.00
37	4H	1333	VAL	CA-CB-CG1	-28.06	68.80	110.90
37	4F	1335	MET	CA-CB-CG	26.56	158.45	113.30
37	4G	1082	LEU	CB-CG-CD2	25.73	154.74	111.00
37	4G	1093	VAL	CG1-CB-CG2	-23.39	73.48	110.90
42	5H	135	ARG	NE-CZ-NH2	22.20	131.40	120.30
37	4H	1092	LEU	CA-CB-CG	22.13	166.19	115.30
37	4H	1091	VAL	CG1-CB-CG2	-21.26	76.88	110.90
37	4F	958	LEU	CB-CG-CD1	-21.07	75.19	111.00
37	4E	581	LEU	CD1-CG-CD2	-20.99	47.54	110.50
2	1F	82	LEU	CB-CG-CD1	-20.79	75.66	111.00
2	1G	82	LEU	CB-CG-CD1	-20.64	75.90	111.00
42	5H	143	VAL	CG1-CB-CG2	-20.49	78.12	110.90
37	4G	1136	ARG	NE-CZ-NH1	20.43	130.52	120.30
37	4G	1082	LEU	CA-CB-CG	20.19	161.74	115.30
37	4F	544	MET	CG-SD-CE	-19.87	68.41	100.20
37	4G	1084	ARG	NE-CZ-NH1	19.28	129.94	120.30
37	4E	584	ALA	N-CA-CB	18.99	136.68	110.10
37	4F	1322	ARG	CA-CB-CG	18.93	155.04	113.40
2	1F	139	ARG	NE-CZ-NH2	-18.39	111.11	120.30
37	4G	1082	LEU	CB-CG-CD1	-18.36	79.78	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4H	1091	VAL	CA-CB-CG1	18.14	138.12	110.90
42	5H	139	LEU	CB-CG-CD2	18.04	141.68	111.00
42	5H	139	LEU	CB-CG-CD1	17.96	141.53	111.00
37	4G	1101	LEU	CB-CG-CD1	-17.92	80.54	111.00
2	1E	82	LEU	CB-CG-CD1	-17.91	80.55	111.00
37	4E	1123	LEU	CB-CG-CD2	-17.89	80.59	111.00
2	1D	82	LEU	CB-CG-CD1	-17.78	80.77	111.00
37	4F	1092	LEU	CB-CG-CD1	-17.69	80.93	111.00
37	4H	1082	LEU	CB-CG-CD2	17.54	140.81	111.00
37	4H	1082	LEU	CD1-CG-CD2	-17.40	58.31	110.50
12	6e	86	ARG	NE-CZ-NH2	-17.25	111.67	120.30
37	4H	972	PHE	CB-CG-CD1	17.14	132.80	120.80
38	4M	53	LEU	CB-CG-CD2	-16.89	82.29	111.00
38	4J	53	LEU	CB-CG-CD2	-16.86	82.33	111.00
38	4L	53	LEU	CB-CG-CD2	-16.86	82.33	111.00
38	4N	53	LEU	CB-CG-CD2	-16.86	82.33	111.00
38	4I	53	LEU	CB-CG-CD2	-16.85	82.36	111.00
38	4K	53	LEU	CB-CG-CD2	-16.84	82.37	111.00
37	4G	854	TYR	CE1-CZ-CE2	-16.78	92.95	119.80
37	4H	1082	LEU	CA-CB-CG	16.59	153.47	115.30
37	4F	1335	MET	CG-SD-CE	16.54	126.66	100.20
37	4G	1074	GLN	CA-CB-CG	15.98	148.55	113.40
41	5A	120	TYR	N-CA-CB	-15.87	82.03	110.60
42	5H	140	TYR	CD1-CE1-CZ	15.85	134.06	119.80
37	4G	1335	MET	CG-SD-CE	15.83	125.53	100.20
37	4F	1333	VAL	CB-CA-C	15.70	141.23	111.40
1	0N	183	LEU	CB-CG-CD2	-15.65	84.39	111.00
37	4F	1709	LEU	CB-CG-CD2	-15.48	84.68	111.00
37	4F	1082	LEU	CA-CB-CG	15.33	150.56	115.30
41	5A	141	ASN	CA-C-N	-15.26	83.62	117.20
41	5A	141	ASN	O-C-N	15.19	147.01	122.70
37	4F	1082	LEU	CB-CA-C	15.14	138.97	110.20
37	4E	583	GLU	CA-CB-CG	15.10	146.62	113.40
37	4F	1333	VAL	CG1-CB-CG2	-15.05	86.83	110.90
37	4H	1091	VAL	N-CA-CB	-14.78	78.98	111.50
41	5A	21	GLY	N-CA-C	14.46	149.25	113.10
37	4H	1101	LEU	CB-CG-CD1	-14.44	86.46	111.00
37	4F	1082	LEU	C-N-CA	14.40	157.69	121.70
37	4E	583	GLU	CB-CA-C	14.26	138.92	110.40
37	4G	1335	MET	CA-CB-CG	14.20	137.43	113.30
37	4H	1136	ARG	NE-CZ-NH1	14.10	127.35	120.30
37	4F	540	VAL	CG1-CB-CG2	-14.02	88.48	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4H	1333	VAL	CA-CB-CG2	14.01	131.92	110.90
37	4F	1341	ILE	CA-CB-CG1	14.00	137.61	111.00
42	5H	138	ARG	CA-CB-CG	13.98	144.15	113.40
37	4H	1323	ILE	CG1-CB-CG2	13.90	141.98	111.40
37	4E	581	LEU	C-N-CA	13.79	156.16	121.70
42	5H	91	TYR	CB-CG-CD1	13.74	129.24	121.00
42	5H	91	TYR	CA-CB-CG	13.72	139.47	113.40
42	5H	135	ARG	C-N-CA	13.66	155.85	121.70
37	4F	1350	ILE	CA-CB-CG2	-13.61	83.69	110.90
34	4B	382	LEU	CB-CG-CD1	-13.51	88.03	111.00
37	4G	1333	VAL	CA-CB-CG2	-13.39	90.82	110.90
37	4G	935	ARG	NE-CZ-NH1	-13.34	113.63	120.30
37	4H	1084	ARG	CA-CB-CG	13.25	142.55	113.40
37	4F	1322	ARG	NE-CZ-NH1	-13.03	113.78	120.30
37	4E	578	ASP	CB-CG-OD1	-13.01	106.59	118.30
37	4F	1333	VAL	CA-CB-CG2	12.97	130.36	110.90
37	4F	1335	MET	CB-CG-SD	12.90	151.09	112.40
42	5H	158	MET	CG-SD-CE	12.89	120.82	100.20
41	5A	141	ASN	N-CA-CB	12.77	133.59	110.60
37	4E	581	LEU	CB-CG-CD2	12.76	132.70	111.00
38	4L	41	LYS	CD-CE-NZ	-12.69	82.52	111.70
38	4M	41	LYS	CD-CE-NZ	-12.69	82.52	111.70
43	5I	168	GLU	OE1-CD-OE2	-12.69	108.08	123.30
38	4N	41	LYS	CD-CE-NZ	-12.68	82.53	111.70
38	4J	41	LYS	CD-CE-NZ	-12.68	82.54	111.70
38	4I	41	LYS	CD-CE-NZ	-12.67	82.56	111.70
38	4K	41	LYS	CD-CE-NZ	-12.66	82.57	111.70
43	5K	168	GLU	OE1-CD-OE2	-12.66	108.11	123.30
37	4H	1092	LEU	CB-CG-CD2	12.64	132.49	111.00
43	5J	168	GLU	OE1-CD-OE2	-12.63	108.14	123.30
43	5L	168	GLU	OE1-CD-OE2	-12.60	108.18	123.30
37	4H	1082	LEU	CB-CG-CD1	12.52	132.29	111.00
1	0E	7	LEU	CB-CG-CD2	-12.50	89.74	111.00
34	4B	352	LEU	CB-CG-CD1	-12.42	89.89	111.00
2	1F	139	ARG	NE-CZ-NH1	12.35	126.48	120.30
37	4H	1093	VAL	CG1-CB-CG2	-12.34	91.15	110.90
3	6D	1006	ASP	CB-CG-OD1	12.31	129.38	118.30
47	6B	402	MET	CG-SD-CE	12.23	119.77	100.20
37	4G	1093	VAL	CB-CA-C	-12.21	88.20	111.40
47	6A	402	MET	CG-SD-CE	12.21	119.73	100.20
37	4E	582	GLN	C-N-CA	-12.10	91.46	121.70
37	4H	1156	LEU	CB-CG-CD1	-12.03	90.56	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	5J	168	GLU	CA-CB-CG	12.01	139.82	113.40
43	5L	168	GLU	CA-CB-CG	12.00	139.80	113.40
43	5K	168	GLU	CA-CB-CG	11.99	139.78	113.40
43	5I	168	GLU	CA-CB-CG	11.99	139.78	113.40
42	5H	49	ILE	CA-CB-CG2	11.99	134.87	110.90
37	4F	1083	ILE	N-CA-CB	11.95	138.29	110.80
37	4H	1323	ILE	CA-CB-CG1	-11.93	88.34	111.00
37	4F	1082	LEU	CB-CG-CD2	-11.89	90.78	111.00
37	4H	974	VAL	CG1-CB-CG2	-11.89	91.87	110.90
37	4F	1350	ILE	CG1-CB-CG2	11.89	137.55	111.40
42	5H	137	TYR	CB-CG-CD2	11.86	128.11	121.00
37	4G	1082	LEU	CB-CA-C	11.85	132.72	110.20
37	4F	1324	THR	N-CA-CB	11.82	132.75	110.30
37	4E	577	LEU	CB-CG-CD2	11.74	130.96	111.00
37	4G	1082	LEU	N-CA-CB	-11.67	87.06	110.40
42	5H	137	TYR	CD1-CG-CD2	-11.64	105.10	117.90
37	4H	1084	ARG	NE-CZ-NH2	11.58	126.09	120.30
42	5H	136	HIS	N-CA-CB	11.57	131.42	110.60
37	4G	854	TYR	CB-CG-CD1	-11.56	114.06	121.00
37	4E	590	LYS	CD-CE-NZ	-11.56	85.12	111.70
37	4H	1341	ILE	CG1-CB-CG2	11.55	136.82	111.40
37	4H	1322	ARG	NE-CZ-NH1	11.53	126.06	120.30
37	4F	1322	ARG	CA-C-O	-11.53	95.89	120.10
42	5H	135	ARG	CB-CA-C	-11.46	87.49	110.40
37	4G	826	LEU	CB-CG-CD1	-11.40	91.61	111.00
37	4G	691	MET	CB-CG-SD	11.38	146.53	112.40
42	5H	139	LEU	CD1-CG-CD2	-11.32	76.55	110.50
43	5K	168	GLU	CB-CG-CD	11.29	144.67	114.20
43	5I	168	GLU	CB-CG-CD	11.28	144.66	114.20
43	5J	168	GLU	CB-CG-CD	11.28	144.64	114.20
43	5L	168	GLU	CB-CG-CD	11.27	144.63	114.20
37	4G	1334	GLU	N-CA-C	11.25	141.38	111.00
37	4G	1092	LEU	CB-CG-CD2	-11.21	91.94	111.00
37	4G	1333	VAL	CA-CB-CG1	11.15	127.62	110.90
37	4G	1084	ARG	CB-CG-CD	11.12	140.52	111.60
30	3F	301	VAL	CG1-CB-CG2	-11.09	93.15	110.90
37	4F	1350	ILE	CB-CG1-CD1	11.03	144.79	113.90
37	4G	1323	ILE	CA-CB-CG1	11.01	131.91	111.00
42	5H	137	TYR	CG-CD1-CE1	10.99	130.09	121.30
37	4G	1333	VAL	CB-CA-C	10.96	132.23	111.40
37	4G	1143	LEU	CA-CB-CG	10.91	140.40	115.30
37	4E	587	ALA	CB-CA-C	-10.87	93.79	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4G	1136	ARG	NH1-CZ-NH2	-10.86	107.46	119.40
37	4H	1136	ARG	CB-CA-C	10.85	132.10	110.40
37	4E	581	LEU	CA-CB-CG	10.81	140.17	115.30
37	4G	1323	ILE	CB-CG1-CD1	10.81	144.17	113.90
37	4E	578	ASP	O-C-N	-10.79	105.43	122.70
37	4E	588	PRO	CA-N-CD	-10.77	96.42	111.50
37	4G	687	MET	CA-CB-CG	10.74	131.57	113.30
47	6B	409	ARG	NE-CZ-NH1	10.74	125.67	120.30
37	4F	1083	ILE	CB-CA-C	-10.68	90.23	111.60
47	6A	409	ARG	NE-CZ-NH1	10.66	125.63	120.30
37	4G	1094	ALA	N-CA-C	10.64	139.72	111.00
37	4F	1333	VAL	N-CA-CB	-10.61	88.15	111.50
37	4E	589	PRO	C-N-CA	10.49	147.92	121.70
37	4G	671	LEU	CB-CG-CD1	-10.48	93.18	111.00
37	4H	1091	VAL	CB-CA-C	10.47	131.30	111.40
41	5A	163	ASN	C-N-CA	10.44	144.23	122.30
37	4G	1083	ILE	CA-CB-CG1	10.42	130.79	111.00
37	4E	585	VAL	CB-CA-C	10.40	131.16	111.40
43	5K	52	LEU	CB-CG-CD2	-10.36	93.39	111.00
43	5J	52	LEU	CB-CG-CD2	-10.34	93.42	111.00
43	5I	52	LEU	CB-CG-CD2	-10.34	93.43	111.00
37	4G	1083	ILE	CA-CB-CG2	10.32	131.55	110.90
43	5L	52	LEU	CB-CG-CD2	-10.32	93.45	111.00
37	4H	1091	VAL	CA-CB-CG2	10.31	126.37	110.90
43	5K	10	LEU	CA-CB-CG	-10.31	91.60	115.30
43	5I	10	LEU	CA-CB-CG	-10.29	91.62	115.30
43	5J	10	LEU	CA-CB-CG	-10.29	91.64	115.30
43	5L	10	LEU	CA-CB-CG	-10.28	91.67	115.30
37	4F	1094	ALA	CB-CA-C	-10.26	94.72	110.10
37	4E	581	LEU	CB-CG-CD1	10.23	128.39	111.00
37	4E	577	LEU	CD1-CG-CD2	-10.21	79.87	110.50
37	4H	1093	VAL	CA-CB-CG2	10.20	126.20	110.90
37	4F	1073	LEU	CB-CG-CD1	-10.18	93.69	111.00
37	4H	1322	ARG	N-CA-CB	-10.16	92.31	110.60
37	4G	1084	ARG	CA-CB-CG	10.16	135.75	113.40
37	4E	576	ALA	CB-CA-C	10.15	125.32	110.10
37	4G	1093	VAL	CA-CB-CG2	10.14	126.11	110.90
3	6D	683	ARG	NE-CZ-NH1	-10.14	115.23	120.30
31	3I	286	LEU	CB-CG-CD1	-10.14	93.77	111.00
37	4H	1324	THR	N-CA-CB	10.08	129.45	110.30
37	4H	1136	ARG	CB-CG-CD	10.07	137.79	111.60
43	5K	33	LEU	CB-CG-CD2	-10.05	93.92	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	5J	33	LEU	CB-CG-CD2	-10.04	93.92	111.00
37	4H	1094	ALA	CB-CA-C	-10.03	95.05	110.10
43	5L	33	LEU	CB-CG-CD2	-10.03	93.95	111.00
37	4G	691	MET	CA-CB-CG	10.03	130.34	113.30
43	5I	33	LEU	CB-CG-CD2	-10.03	93.96	111.00
38	4J	30	ALA	CB-CA-C	-9.99	95.12	110.10
38	4N	30	ALA	CB-CA-C	-9.98	95.13	110.10
38	4M	30	ALA	CB-CA-C	-9.97	95.14	110.10
38	4I	30	ALA	CB-CA-C	-9.97	95.15	110.10
38	4K	30	ALA	CB-CA-C	-9.96	95.16	110.10
38	4L	30	ALA	CB-CA-C	-9.96	95.17	110.10
37	4G	1322	ARG	C-N-CA	9.94	146.56	121.70
37	4F	1083	ILE	CA-CB-CG1	9.92	129.85	111.00
37	4G	692	MET	CA-CB-CG	-9.92	96.44	113.30
37	4E	587	ALA	N-CA-C	9.88	137.68	111.00
42	5H	138	ARG	CB-CG-CD	9.87	137.26	111.60
41	5A	121	GLN	N-CA-CB	-9.86	92.85	110.60
37	4G	1144	LEU	CA-CB-CG	9.86	137.97	115.30
37	4H	972	PHE	CD1-CG-CD2	-9.83	105.53	118.30
43	5K	52	LEU	CA-CB-CG	-9.83	92.70	115.30
43	5I	52	LEU	CA-CB-CG	-9.82	92.71	115.30
37	4E	586	PHE	CB-CG-CD2	9.81	127.67	120.80
43	5J	52	LEU	CA-CB-CG	-9.81	92.73	115.30
43	5L	52	LEU	CA-CB-CG	-9.81	92.73	115.30
42	5H	134	LEU	CA-C-N	9.78	138.72	117.20
37	4E	586	PHE	C-N-CA	9.73	146.03	121.70
47	6B	402	MET	CB-CG-SD	9.60	141.19	112.40
47	6A	402	MET	CB-CG-SD	9.59	141.17	112.40
37	4G	1074	GLN	CB-CA-C	-9.52	91.35	110.40
37	4G	690	CYS	CB-CA-C	-9.51	91.38	110.40
37	4H	1084	ARG	CB-CA-C	-9.50	91.39	110.40
37	4H	1322	ARG	CB-CG-CD	9.45	136.16	111.60
37	4F	1074	GLN	CG-CD-OE1	-9.41	102.78	121.60
3	1H	1009	ARG	CG-CD-NE	9.41	131.56	111.80
37	4G	854	TYR	CE1-CZ-OH	9.36	145.38	120.10
37	4G	567	LEU	CB-CG-CD1	-9.35	95.10	111.00
30	3F	301	VAL	CA-CB-CG1	9.34	124.90	110.90
41	5A	120	TYR	O-C-N	-9.32	107.79	122.70
43	5J	166	ALA	C-N-CD	-9.32	100.10	120.60
43	5K	166	ALA	C-N-CD	-9.31	100.11	120.60
43	5I	166	ALA	C-N-CD	-9.31	100.11	120.60
43	5L	166	ALA	C-N-CD	-9.30	100.15	120.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4E	1108	PHE	CB-CG-CD1	-9.27	114.31	120.80
42	5H	85	CYS	CA-CB-SG	9.21	130.59	114.00
37	4F	1322	ARG	CB-CA-C	9.12	128.63	110.40
37	4G	1094	ALA	N-CA-CB	-9.12	97.34	110.10
37	4H	1156	LEU	CA-CB-CG	9.11	136.26	115.30
12	Ac	88	ASP	CB-CG-OD2	-9.12	110.10	118.30
34	4A	382	LEU	CB-CG-CD1	-9.09	95.55	111.00
42	5H	135	ARG	CA-CB-CG	9.06	133.34	113.40
43	5I	42	TYR	CD1-CE1-CZ	9.04	127.94	119.80
43	5J	42	TYR	CD1-CE1-CZ	9.03	127.93	119.80
37	4H	954	SER	N-CA-CB	9.03	124.04	110.50
42	5H	157	LEU	CA-CB-CG	9.03	136.07	115.30
43	5K	42	TYR	CD1-CE1-CZ	9.02	127.92	119.80
37	4E	1159	ASP	CB-CG-OD1	-8.99	110.21	118.30
43	5L	42	TYR	CD1-CE1-CZ	8.99	127.89	119.80
42	5H	159	VAL	N-CA-CB	-8.98	91.75	111.50
37	4F	1333	VAL	CA-CB-CG1	8.94	124.31	110.90
37	4F	1316	GLN	CA-CB-CG	8.93	133.04	113.40
37	4F	1322	ARG	CG-CD-NE	8.78	130.24	111.80
37	4G	1084	ARG	N-CA-CB	8.78	126.40	110.60
38	4L	36	VAL	C-N-CA	-8.75	103.93	122.30
38	4I	36	VAL	C-N-CA	-8.73	103.96	122.30
38	4N	36	VAL	C-N-CA	-8.73	103.97	122.30
38	4M	36	VAL	C-N-CA	-8.72	103.98	122.30
38	4J	36	VAL	C-N-CA	-8.70	104.02	122.30
38	4K	36	VAL	C-N-CA	-8.70	104.03	122.30
37	4F	577	LEU	CB-CG-CD1	-8.69	96.22	111.00
34	3W	382	LEU	CB-CG-CD1	-8.68	96.25	111.00
37	4G	1082	LEU	CD1-CG-CD2	-8.68	84.46	110.50
37	4H	1324	THR	CA-CB-CG2	8.65	124.51	112.40
42	5H	136	HIS	CB-CA-C	-8.64	93.11	110.40
3	6D	1010	LEU	CA-CB-CG	-8.64	95.42	115.30
37	4G	1091	VAL	CG1-CB-CG2	-8.64	97.08	110.90
41	5A	140	GLU	C-N-CA	8.64	143.29	121.70
37	4H	577	LEU	CB-CG-CD1	-8.62	96.34	111.00
42	5H	49	ILE	CG1-CB-CG2	-8.62	92.44	111.40
37	4F	1094	ALA	N-CA-C	8.61	134.24	111.00
10	1R	263	ASP	CB-CG-OD2	8.58	126.02	118.30
37	4F	1082	LEU	CA-C-N	8.57	136.05	117.20
37	4G	687	MET	CB-CG-SD	8.52	137.97	112.40
37	4H	1090	GLN	C-N-CA	-8.51	100.43	121.70
37	4F	1082	LEU	CB-CG-CD1	8.49	125.44	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	5A	141	ASN	CB-CA-C	-8.48	93.43	110.40
37	4E	582	GLN	N-CA-CB	8.47	125.84	110.60
38	4I	36	VAL	CG1-CB-CG2	8.45	124.42	110.90
38	4K	36	VAL	CG1-CB-CG2	8.45	124.42	110.90
38	4L	36	VAL	CG1-CB-CG2	8.45	124.42	110.90
38	4M	36	VAL	CG1-CB-CG2	8.45	124.42	110.90
38	4N	36	VAL	CG1-CB-CG2	8.45	124.42	110.90
37	4E	584	ALA	CB-CA-C	-8.45	97.43	110.10
38	4J	36	VAL	CG1-CB-CG2	8.45	124.41	110.90
42	5H	156	GLU	CB-CA-C	8.42	127.25	110.40
32	3J	58	LEU	CB-CG-CD1	-8.41	96.70	111.00
37	4E	574	LEU	CB-CG-CD1	-8.40	96.71	111.00
42	5H	158	MET	O-C-N	-8.40	109.26	122.70
37	4H	1084	ARG	NE-CZ-NH1	-8.39	116.10	120.30
34	4A	352	LEU	CB-CG-CD1	-8.38	96.75	111.00
42	5H	133	LEU	CB-CG-CD1	8.38	125.25	111.00
43	5J	30	ARG	CG-CD-NE	8.38	129.40	111.80
37	4F	1093	VAL	CA-CB-CG1	8.36	123.45	110.90
37	4G	1323	ILE	CA-CB-CG2	8.36	127.61	110.90
43	5I	30	ARG	CG-CD-NE	8.35	129.34	111.80
42	5H	49	ILE	CB-CA-C	8.35	128.30	111.60
43	5K	30	ARG	CG-CD-NE	8.35	129.34	111.80
43	5L	33	LEU	CA-CB-CG	8.35	134.50	115.30
43	5L	30	ARG	CG-CD-NE	8.35	129.33	111.80
43	5I	33	LEU	CA-CB-CG	8.34	134.49	115.30
43	5J	33	LEU	CA-CB-CG	8.34	134.48	115.30
37	4F	1335	MET	N-CA-CB	8.34	125.61	110.60
43	5K	33	LEU	CA-CB-CG	8.32	134.43	115.30
41	5A	120	TYR	CB-CA-C	8.31	127.03	110.40
37	4H	1322	ARG	CA-C-O	-8.31	102.64	120.10
37	4F	1333	VAL	C-N-CA	8.30	142.44	121.70
38	4L	24	THR	C-N-CD	-8.30	102.34	120.60
38	4M	24	THR	C-N-CD	-8.29	102.37	120.60
42	5H	140	TYR	CB-CA-C	8.29	126.97	110.40
43	5K	18	ILE	CA-CB-CG1	-8.28	95.26	111.00
37	4F	1324	THR	CA-CB-CG2	8.28	123.99	112.40
38	4K	24	THR	C-N-CD	-8.27	102.40	120.60
1	1B	127	LEU	CB-CG-CD1	-8.27	96.94	111.00
38	4I	24	THR	C-N-CD	-8.27	102.40	120.60
38	4J	24	THR	C-N-CD	-8.27	102.40	120.60
38	4N	24	THR	C-N-CD	-8.27	102.40	120.60
43	5L	18	ILE	CA-CB-CG1	-8.27	95.30	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	5I	18	ILE	CA-CB-CG1	-8.26	95.30	111.00
37	4G	1083	ILE	CG1-CB-CG2	-8.25	93.25	111.40
43	5J	18	ILE	CA-CB-CG1	-8.25	95.33	111.00
12	Da	395	LEU	CB-CG-CD2	-8.20	97.06	111.00
37	4F	1322	ARG	C-N-CA	8.16	142.09	121.70
12	Ce	395	LEU	CB-CG-CD2	-8.16	97.13	111.00
37	4E	589	PRO	CB-CA-C	8.14	132.34	112.00
42	5H	134	LEU	CA-C-O	-8.12	103.06	120.10
37	4G	567	LEU	CA-CB-CG	-8.11	96.66	115.30
37	4F	1334	GLU	CG-CD-OE2	-8.10	102.09	118.30
34	3W	352	LEU	CB-CG-CD1	-8.10	97.23	111.00
37	4E	576	ALA	N-CA-CB	8.07	121.40	110.10
37	4E	1123	LEU	CA-CB-CG	-8.07	96.73	115.30
37	4H	1138	VAL	CA-CB-CG1	8.06	123.00	110.90
37	4F	1073	LEU	CB-CG-CD2	-8.04	97.33	111.00
37	4F	1092	LEU	CA-CB-CG	-8.04	96.81	115.30
1	0W	311	LEU	CB-CG-CD1	-8.04	97.34	111.00
37	4F	1334	GLU	CB-CA-C	-8.03	94.33	110.40
1	0G	311	LEU	CB-CG-CD1	-8.03	97.35	111.00
42	5H	138	ARG	N-CA-CB	8.00	125.00	110.60
1	0F	311	LEU	CB-CG-CD1	-7.97	97.44	111.00
30	3F	301	VAL	CA-CB-CG2	-7.97	98.94	110.90
37	4F	1144	LEU	CB-CG-CD2	-7.97	97.45	111.00
37	4G	1084	ARG	CB-CA-C	-7.95	94.50	110.40
37	4G	1091	VAL	CA-CB-CG2	-7.94	98.99	110.90
37	4G	935	ARG	CA-CB-CG	-7.94	95.94	113.40
37	4E	585	VAL	CA-CB-CG1	-7.93	99.00	110.90
2	1D	88	LEU	CA-CB-CG	-7.92	97.08	115.30
12	Ce	237	THR	CA-CB-CG2	-7.91	101.33	112.40
37	4F	1335	MET	CB-CA-C	-7.89	94.63	110.40
49	6G	102	LEU	CB-CG-CD2	-7.87	97.63	111.00
49	6H	102	LEU	CB-CG-CD2	-7.86	97.64	111.00
34	3V	382	LEU	CB-CG-CD1	-7.85	97.65	111.00
49	6J	102	LEU	CB-CG-CD2	-7.83	97.69	111.00
49	6I	102	LEU	CB-CG-CD2	-7.82	97.71	111.00
37	4H	1322	ARG	CD-NE-CZ	7.82	134.54	123.60
41	5A	140	GLU	CA-C-O	-7.82	103.68	120.10
37	4F	1341	ILE	CB-CA-C	-7.81	95.97	111.60
37	4H	1138	VAL	CG1-CB-CG2	-7.81	98.40	110.90
42	5H	137	TYR	OH-CZ-CE2	7.74	141.01	120.10
1	0B	311	LEU	CB-CG-CD1	-7.70	97.91	111.00
43	5J	30	ARG	CA-CB-CG	7.70	130.34	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4F	540	VAL	CA-CB-CG1	7.69	122.44	110.90
43	5L	30	ARG	CA-CB-CG	7.69	130.32	113.40
37	4G	1331	TRP	CA-CB-CG	7.69	128.31	113.70
12	Ba	86	ARG	NE-CZ-NH2	-7.69	116.46	120.30
43	5K	30	ARG	CA-CB-CG	7.69	130.31	113.40
3	6D	1056	LEU	CB-CG-CD1	-7.69	97.93	111.00
43	5I	30	ARG	CA-CB-CG	7.68	130.29	113.40
37	4H	1138	VAL	CA-CB-CG2	7.68	122.42	110.90
42	5H	137	TYR	CE1-CZ-OH	-7.67	99.38	120.10
37	4F	1083	ILE	CA-C-O	-7.67	104.00	120.10
37	4G	1084	ARG	CD-NE-CZ	7.66	134.33	123.60
31	3I	179	LEU	CB-CG-CD1	-7.66	97.98	111.00
37	4F	1314	LEU	CB-CG-CD1	-7.64	98.00	111.00
42	5H	158	MET	C-N-CA	-7.64	102.59	121.70
37	4G	1322	ARG	NE-CZ-NH2	-7.64	116.48	120.30
1	0S	311	LEU	CB-CG-CD1	-7.63	98.02	111.00
1	0Y	311	LEU	CB-CG-CD1	-7.61	98.07	111.00
42	5H	136	HIS	CA-CB-CG	7.60	126.53	113.60
42	5H	94	CYS	CA-CB-SG	-7.60	100.33	114.00
37	4G	1083	ILE	CB-CG1-CD1	7.59	135.14	113.90
1	0D	311	LEU	CB-CG-CD1	-7.58	98.11	111.00
42	5H	137	TYR	N-CA-CB	-7.58	96.95	110.60
38	4O	17	LEU	CB-CG-CD1	-7.56	98.15	111.00
43	5K	167	PRO	C-N-CA	7.55	140.58	121.70
43	5I	167	PRO	C-N-CA	7.55	140.57	121.70
38	4N	69	CYS	CA-CB-SG	7.54	127.57	114.00
41	5A	20	GLU	C-N-CA	7.54	138.13	122.30
43	5L	167	PRO	C-N-CA	7.54	140.54	121.70
38	4K	69	CYS	CA-CB-SG	7.53	127.56	114.00
43	5J	167	PRO	C-N-CA	7.53	140.53	121.70
38	4J	69	CYS	CA-CB-SG	7.53	127.56	114.00
38	4I	69	CYS	CA-CB-SG	7.53	127.55	114.00
38	4M	69	CYS	CA-CB-SG	7.53	127.55	114.00
38	4L	69	CYS	CA-CB-SG	7.52	127.54	114.00
37	4H	1144	LEU	CA-CB-CG	-7.51	98.02	115.30
42	5H	159	VAL	CG1-CB-CG2	7.50	122.90	110.90
42	5H	134	LEU	C-N-CA	7.49	140.43	121.70
41	5A	75	ARG	C-N-CA	-7.46	103.04	121.70
37	4F	1093	VAL	CB-CA-C	7.45	125.56	111.40
12	5a	225	LEU	CB-CG-CD1	-7.44	98.35	111.00
37	4G	860	LEU	CA-CB-CG	7.44	132.41	115.30
42	5H	50	LEU	CA-CB-CG	7.43	132.38	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1A	311	LEU	CB-CG-CD1	-7.42	98.39	111.00
6	1N	2697	LEU	CA-CB-CG	-7.40	98.28	115.30
37	4E	586	PHE	CA-C-O	-7.38	104.60	120.10
37	4F	1341	ILE	N-CA-CB	7.37	127.76	110.80
37	4H	1136	ARG	N-CA-CB	-7.37	97.33	110.60
37	4G	1348	LEU	CB-CG-CD2	-7.36	98.48	111.00
37	4F	1334	GLU	CG-CD-OE1	7.36	133.02	118.30
12	7e	86	ARG	NE-CZ-NH1	7.36	123.98	120.30
37	4H	1092	LEU	N-CA-CB	-7.35	95.69	110.40
1	0O	311	LEU	CB-CG-CD1	-7.35	98.51	111.00
43	5J	30	ARG	NE-CZ-NH1	7.33	123.97	120.30
37	4F	1322	ARG	CA-C-N	7.33	133.33	117.20
43	5I	30	ARG	NE-CZ-NH1	7.33	123.96	120.30
37	4F	1323	ILE	C-N-CA	7.31	139.98	121.70
37	4G	1092	LEU	CA-CB-CG	7.30	132.09	115.30
12	6e	86	ARG	NE-CZ-NH1	7.30	123.95	120.30
37	4H	1333	VAL	N-CA-C	7.28	130.66	111.00
37	4F	1083	ILE	CA-C-N	7.27	133.19	117.20
3	1H	1010	LEU	CB-CG-CD2	7.26	123.35	111.00
43	5L	30	ARG	NE-CZ-NH1	7.26	123.93	120.30
37	4F	972	PHE	CB-CG-CD1	-7.26	115.72	120.80
1	0N	183	LEU	CB-CG-CD1	-7.25	98.68	111.00
37	4G	1333	VAL	CG1-CB-CG2	-7.25	99.31	110.90
12	Ac	88	ASP	CB-CG-OD1	7.25	124.82	118.30
8	1P	887	LEU	CA-CB-CG	-7.24	98.64	115.30
43	5K	30	ARG	NE-CZ-NH1	7.24	123.92	120.30
12	3a	86	ARG	CB-CG-CD	7.22	130.38	111.60
37	4H	1136	ARG	CA-CB-CG	7.21	129.27	113.40
37	4H	1091	VAL	O-C-N	-7.21	111.16	122.70
37	4G	1073	LEU	CB-CG-CD1	-7.21	98.75	111.00
42	5H	137	TYR	CB-CA-C	7.20	124.80	110.40
37	4G	1323	ILE	CG1-CB-CG2	-7.20	95.57	111.40
42	5H	139	LEU	CA-CB-CG	7.20	131.85	115.30
37	4H	974	VAL	CA-CB-CG2	-7.18	100.13	110.90
37	4F	1342	LEU	CA-CB-CG	-7.18	98.79	115.30
38	4L	30	ALA	C-N-CA	-7.17	103.78	121.70
38	4K	30	ALA	C-N-CA	-7.16	103.80	121.70
37	4G	854	TYR	CG-CD1-CE1	-7.16	115.57	121.30
38	4I	30	ALA	C-N-CA	-7.16	103.81	121.70
37	4G	1074	GLN	N-CA-CB	7.16	123.48	110.60
42	5H	50	LEU	CB-CG-CD2	7.16	123.16	111.00
38	4M	30	ALA	C-N-CA	-7.15	103.82	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	4J	30	ALA	C-N-CA	-7.15	103.83	121.70
38	4N	30	ALA	C-N-CA	-7.14	103.86	121.70
42	5H	158	MET	CA-CB-CG	7.12	125.40	113.30
37	4H	958	LEU	CB-CG-CD2	7.10	123.08	111.00
37	4G	671	LEU	CB-CG-CD2	-7.09	98.94	111.00
37	4G	1084	ARG	NH1-CZ-NH2	-7.09	111.60	119.40
37	4F	537	LEU	CB-CG-CD2	-7.07	98.98	111.00
37	4F	960	LEU	CA-CB-CG	-7.07	99.04	115.30
12	6e	86	ARG	CG-CD-NE	-7.07	96.96	111.80
42	5H	158	MET	CB-CA-C	7.06	124.52	110.40
12	8c	139	LEU	CB-CG-CD2	-7.06	99.00	111.00
37	4G	671	LEU	CA-CB-CG	-7.05	99.08	115.30
37	4F	1083	ILE	C-N-CA	7.04	139.30	121.70
37	4H	1074	GLN	CB-CA-C	-7.04	96.32	110.40
37	4H	1138	VAL	CB-CA-C	-7.04	98.02	111.40
37	4G	1333	VAL	O-C-N	-7.01	111.48	122.70
43	5J	41	ASP	CB-CG-OD2	-7.01	111.99	118.30
37	4H	1332	SER	N-CA-C	-7.00	92.10	111.00
43	5K	41	ASP	CB-CG-OD2	-6.99	112.01	118.30
1	0W	49	LEU	CB-CG-CD2	-6.98	99.13	111.00
43	5I	41	ASP	CB-CG-OD2	-6.98	112.02	118.30
37	4E	1105	LEU	CA-CB-CG	-6.97	99.27	115.30
1	0G	49	LEU	CB-CG-CD2	-6.97	99.15	111.00
43	5L	10	LEU	N-CA-C	6.96	129.78	111.00
37	4F	1082	LEU	N-CA-CB	-6.95	96.50	110.40
43	5L	41	ASP	CB-CG-OD2	-6.95	112.05	118.30
43	5I	10	LEU	N-CA-C	6.94	129.75	111.00
43	5J	10	LEU	N-CA-C	6.94	129.74	111.00
37	4G	686	HIS	C-N-CA	-6.93	104.37	121.70
43	5K	10	LEU	N-CA-C	6.93	129.72	111.00
42	5H	49	ILE	N-CA-CB	-6.93	94.86	110.80
12	4e	139	LEU	CB-CG-CD2	-6.91	99.25	111.00
37	4G	958	LEU	CA-CB-CG	-6.89	99.45	115.30
38	4I	29	LYS	CD-CE-NZ	-6.89	95.85	111.70
38	4J	29	LYS	CD-CE-NZ	-6.89	95.86	111.70
38	4K	29	LYS	CD-CE-NZ	-6.88	95.87	111.70
37	4H	1084	ARG	N-CA-CB	6.88	122.99	110.60
37	4F	1144	LEU	CA-CB-CG	6.87	131.10	115.30
38	4L	29	LYS	CD-CE-NZ	-6.87	95.90	111.70
38	4M	29	LYS	CD-CE-NZ	-6.87	95.89	111.70
38	4N	29	LYS	CD-CE-NZ	-6.87	95.90	111.70
35	4C	285	SER	N-CA-CB	-6.86	100.20	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0A	186	ILE	CG1-CB-CG2	6.86	126.48	111.40
37	4E	580	GLU	OE1-CD-OE2	6.85	131.53	123.30
1	0X	186	ILE	CG1-CB-CG2	6.85	126.47	111.40
37	4F	1081	HIS	N-CA-CB	-6.85	98.27	110.60
1	0R	186	ILE	CG1-CB-CG2	6.84	126.45	111.40
1	0A	47	ARG	NE-CZ-NH2	-6.84	116.88	120.30
42	5H	130	ALA	CB-CA-C	6.84	120.36	110.10
37	4F	1321	THR	CB-CA-C	-6.82	93.19	111.60
1	0U	311	LEU	CB-CG-CD1	-6.81	99.42	111.00
37	4F	1341	ILE	CB-CG1-CD1	-6.81	94.84	113.90
38	4J	25	PRO	N-CA-C	6.79	129.76	112.10
1	0R	319	TYR	CB-CG-CD1	-6.79	116.93	121.00
38	4K	25	PRO	N-CA-C	6.78	129.74	112.10
38	4L	25	PRO	N-CA-C	6.78	129.74	112.10
38	4M	25	PRO	N-CA-C	6.78	129.74	112.10
41	5A	39	LEU	N-CA-C	6.78	129.31	111.00
1	0U	411	LEU	CA-CB-CG	6.78	130.88	115.30
38	4I	25	PRO	N-CA-C	6.78	129.72	112.10
38	4N	25	PRO	N-CA-C	6.78	129.72	112.10
38	4J	33	LYS	CD-CE-NZ	-6.77	96.13	111.70
37	4H	974	VAL	CA-CB-CG1	6.77	121.05	110.90
38	4K	33	LYS	CD-CE-NZ	-6.77	96.14	111.70
38	4M	33	LYS	CD-CE-NZ	-6.77	96.14	111.70
38	4L	33	LYS	CD-CE-NZ	-6.76	96.14	111.70
38	4I	33	LYS	CD-CE-NZ	-6.76	96.16	111.70
38	4N	33	LYS	CD-CE-NZ	-6.74	96.21	111.70
3	6D	1006	ASP	OD1-CG-OD2	-6.71	110.55	123.30
30	3G	539	LEU	CB-CG-CD2	-6.70	99.61	111.00
37	4H	854	TYR	CA-CB-CG	6.68	126.10	113.40
12	9a	58	ARG	CG-CD-NE	-6.68	97.78	111.80
37	4H	1324	THR	CA-CB-OG1	6.67	123.02	109.00
37	4H	1314	LEU	CB-CG-CD1	-6.66	99.67	111.00
37	4G	690	CYS	C-N-CA	-6.66	105.06	121.70
38	4N	30	ALA	N-CA-CB	6.66	119.42	110.10
3	6D	683	ARG	NE-CZ-NH2	6.66	123.63	120.30
37	4H	860	LEU	CA-CB-CG	6.66	130.61	115.30
43	5K	42	TYR	CZ-CE2-CD2	-6.65	113.82	119.80
48	6E	309	LEU	CA-CB-CG	6.63	130.56	115.30
38	4K	30	ALA	N-CA-CB	6.63	119.38	110.10
37	4E	582	GLN	CA-CB-CG	6.62	127.96	113.40
38	4J	30	ALA	N-CA-CB	6.62	119.37	110.10
38	4M	30	ALA	N-CA-CB	6.62	119.36	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	4I	30	ALA	N-CA-CB	6.62	119.36	110.10
48	6F	309	LEU	CA-CB-CG	6.62	130.52	115.30
37	4G	1321	THR	O-C-N	-6.61	112.12	122.70
38	4L	30	ALA	N-CA-CB	6.61	119.35	110.10
37	4F	972	PHE	CB-CG-CD2	6.60	125.42	120.80
37	4F	1323	ILE	O-C-N	-6.60	112.14	122.70
43	5L	42	TYR	CZ-CE2-CD2	-6.60	113.86	119.80
44	5U	128	MET	CG-SD-CE	-6.60	89.65	100.20
43	5J	42	TYR	CZ-CE2-CD2	-6.59	113.86	119.80
37	4E	578	ASP	CB-CG-OD2	6.59	124.23	118.30
43	5I	42	TYR	CZ-CE2-CD2	-6.59	113.87	119.80
37	4E	586	PHE	CB-CG-CD1	-6.58	116.19	120.80
34	3M	352	LEU	CB-CG-CD2	-6.58	99.82	111.00
37	4G	793	THR	N-CA-CB	6.57	122.78	110.30
41	5A	23	GLY	N-CA-C	6.57	129.51	113.10
37	4H	972	PHE	CG-CD1-CE1	6.56	128.02	120.80
47	6B	1319	PRO	N-CA-CB	6.56	111.17	103.30
42	5H	135	ARG	N-CA-C	6.56	128.70	111.00
37	4G	431	ALA	CB-CA-C	6.55	119.93	110.10
47	6A	1319	PRO	N-CA-CB	6.55	111.16	103.30
10	1S	75	LEU	CA-CB-CG	-6.54	100.25	115.30
37	4G	1334	GLU	OE1-CD-OE2	6.53	131.14	123.30
41	5A	120	TYR	C-N-CA	-6.53	105.37	121.70
34	3S	352	LEU	CB-CG-CD2	-6.49	99.96	111.00
37	4H	1143	LEU	CB-CG-CD1	-6.49	99.97	111.00
43	5J	18	ILE	CB-CG1-CD1	6.47	132.02	113.90
43	5L	18	ILE	CB-CG1-CD1	6.47	132.01	113.90
37	4G	1085	MET	CB-CG-SD	6.46	131.79	112.40
38	4L	35	ALA	C-N-CA	-6.46	105.54	121.70
37	4H	1139	THR	N-CA-C	-6.46	93.55	111.00
37	4G	1322	ARG	N-CA-C	6.46	128.44	111.00
43	5K	18	ILE	CB-CG1-CD1	6.46	131.98	113.90
38	4N	35	ALA	C-N-CA	-6.46	105.56	121.70
43	5I	18	ILE	CB-CG1-CD1	6.46	131.97	113.90
38	4K	35	ALA	C-N-CA	-6.45	105.57	121.70
38	4M	35	ALA	C-N-CA	-6.45	105.57	121.70
38	4I	35	ALA	C-N-CA	-6.45	105.58	121.70
38	4J	35	ALA	C-N-CA	-6.45	105.59	121.70
2	1D	43	LEU	CA-CB-CG	6.44	130.11	115.30
37	4E	722	ASP	CB-CG-OD1	-6.43	112.51	118.30
37	4F	1074	GLN	CB-CG-CD	6.43	128.33	111.60
35	4C	1078	LEU	CB-CG-CD1	-6.43	100.07	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4G	691	MET	CG-SD-CE	6.43	110.49	100.20
43	5L	35	LYS	CB-CG-CD	6.43	128.32	111.60
37	4G	1141	ASP	C-N-CA	-6.43	108.80	122.30
30	3F	328	ILE	CG1-CB-CG2	-6.43	97.26	111.40
43	5I	35	LYS	CB-CG-CD	6.43	128.32	111.60
43	5K	35	LYS	CB-CG-CD	6.43	128.31	111.60
43	5J	35	LYS	CB-CG-CD	6.43	128.31	111.60
37	4H	429	TYR	CA-CB-CG	6.42	125.60	113.40
37	4G	400	PRO	N-CA-CB	6.41	110.99	103.30
37	4H	400	PRO	N-CA-CB	6.40	110.98	103.30
6	1N	477	LEU	CA-CB-CG	-6.40	100.58	115.30
37	4E	579	THR	OG1-CB-CG2	-6.39	95.29	110.00
42	5H	157	LEU	CB-CG-CD1	6.38	121.85	111.00
37	4F	400	PRO	N-CA-CB	6.38	110.95	103.30
3	1H	991	ILE	CG1-CB-CG2	6.37	125.40	111.40
37	4H	1323	ILE	CB-CG1-CD1	6.36	131.70	113.90
37	4G	1073	LEU	CB-CG-CD2	-6.34	100.22	111.00
3	1H	988	TRP	CA-CB-CG	6.34	125.74	113.70
37	4E	587	ALA	N-CA-CB	-6.34	101.23	110.10
37	4F	972	PHE	CD1-CE1-CZ	6.33	127.69	120.10
37	4H	1139	THR	CA-CB-OG1	-6.33	95.71	109.00
51	6N	2073	PRO	N-CA-CB	6.31	110.88	103.30
37	4G	1314	LEU	CA-CB-CG	6.31	129.81	115.30
37	4E	580	GLU	N-CA-C	6.30	128.01	111.00
37	4F	1324	THR	CB-CA-C	-6.30	94.59	111.60
37	4G	1333	VAL	CA-C-N	6.30	131.05	117.20
37	4E	579	THR	N-CA-C	6.29	127.98	111.00
37	4H	958	LEU	CA-CB-CG	-6.28	100.86	115.30
51	6M	2073	PRO	N-CA-CB	6.28	110.83	103.30
47	6B	170	MET	CA-CB-CG	6.28	123.97	113.30
47	6B	101	LEU	CB-CG-CD2	-6.27	100.34	111.00
37	4F	1358	LEU	CB-CG-CD1	-6.26	100.36	111.00
37	4G	1322	ARG	CA-C-N	6.26	130.97	117.20
37	4F	1084	ARG	N-CA-CB	6.26	121.86	110.60
34	3N	419	LEU	CA-CB-CG	-6.25	100.92	115.30
2	1F	88	LEU	CA-CB-CG	-6.25	100.92	115.30
37	4E	590	LYS	CB-CA-C	-6.25	97.90	110.40
37	4H	540	VAL	CA-CB-CG1	-6.25	101.53	110.90
47	6A	170	MET	CA-CB-CG	6.25	123.92	113.30
47	6A	101	LEU	CB-CG-CD2	-6.25	100.38	111.00
30	3F	328	ILE	CA-CB-CG1	-6.24	99.14	111.00
37	4G	544	MET	CA-CB-CG	6.24	123.91	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	6A	409	ARG	CG-CD-NE	6.24	124.91	111.80
47	6B	409	ARG	CG-CD-NE	6.24	124.89	111.80
12	Ba	86	ARG	NE-CZ-NH1	6.24	123.42	120.30
37	4H	1137	ALA	N-CA-C	6.23	127.83	111.00
12	9e	58	ARG	CG-CD-NE	-6.23	98.72	111.80
37	4F	1321	THR	CA-C-N	-6.22	103.51	117.20
37	4G	1338	PHE	CB-CG-CD2	6.22	125.15	120.80
37	4E	582	GLN	CB-CA-C	-6.22	97.96	110.40
37	4H	1323	ILE	N-CA-C	6.22	127.78	111.00
43	5L	167	PRO	N-CA-C	6.19	128.19	112.10
2	1E	88	LEU	CA-CB-CG	-6.18	101.09	115.30
41	5A	118	ASN	C-N-CA	-6.18	106.25	121.70
38	4K	28	VAL	C-N-CA	-6.17	106.26	121.70
38	4J	28	VAL	C-N-CA	-6.17	106.27	121.70
38	4M	28	VAL	C-N-CA	-6.17	106.27	121.70
43	5I	167	PRO	N-CA-C	6.17	128.14	112.10
42	5H	91	TYR	CB-CG-CD2	-6.17	117.30	121.00
37	4E	580	GLU	O-C-N	-6.16	112.84	122.70
38	4N	28	VAL	C-N-CA	-6.16	106.30	121.70
37	4F	1315	VAL	CA-CB-CG2	6.16	120.14	110.90
38	4J	61	LEU	CA-CB-CG	6.16	129.47	115.30
38	4N	61	LEU	CA-CB-CG	6.16	129.47	115.30
38	4L	28	VAL	C-N-CA	-6.16	106.30	121.70
43	5K	167	PRO	N-CA-C	6.16	128.11	112.10
43	5J	167	PRO	N-CA-C	6.15	128.10	112.10
38	4I	28	VAL	C-N-CA	-6.15	106.32	121.70
37	4G	1333	VAL	N-CA-CB	-6.15	97.97	111.50
38	4M	61	LEU	CA-CB-CG	6.14	129.43	115.30
37	4G	605	LEU	CA-CB-CG	-6.14	101.17	115.30
37	4H	1341	ILE	CA-CB-CG1	-6.14	99.33	111.00
38	4L	61	LEU	CA-CB-CG	6.14	129.42	115.30
38	4K	61	LEU	CA-CB-CG	6.14	129.42	115.30
38	4I	61	LEU	CA-CB-CG	6.13	129.41	115.30
37	4E	579	THR	C-N-CA	6.13	137.03	121.70
3	1H	1005	PRO	CA-N-CD	-6.12	102.93	111.50
42	5F	139	LEU	CB-CG-CD1	6.12	121.41	111.00
37	4H	1323	ILE	CB-CA-C	-6.11	99.37	111.60
37	4E	588	PRO	N-CA-CB	6.11	110.63	103.30
48	6E	800	LEU	CB-CG-CD1	6.11	121.38	111.00
40	4T	714	ASP	CB-CG-OD1	6.10	123.79	118.30
42	5G	139	LEU	CB-CG-CD1	6.10	121.37	111.00
38	4K	38	VAL	CA-CB-CG1	-6.10	101.75	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	5K	42	TYR	CG-CD2-CE2	6.10	126.18	121.30
43	5L	42	TYR	CG-CD2-CE2	6.09	126.17	121.30
47	6A	56	MET	CB-CG-SD	-6.09	94.13	112.40
48	6F	800	LEU	CB-CG-CD1	6.09	121.36	111.00
37	4F	1082	LEU	O-C-N	-6.09	112.96	122.70
37	4F	1332	SER	CB-CA-C	6.09	121.67	110.10
37	4G	854	TYR	CA-CB-CG	-6.09	101.84	113.40
38	4M	38	VAL	CA-CB-CG1	-6.08	101.77	110.90
41	5A	163	ASN	CA-C-N	-6.08	104.03	116.20
42	5E	139	LEU	CB-CG-CD1	6.08	121.34	111.00
47	6B	56	MET	CB-CG-SD	-6.08	94.16	112.40
38	4N	38	VAL	CA-CB-CG1	-6.08	101.78	110.90
47	6B	1233	ARG	NE-CZ-NH1	-6.07	117.26	120.30
37	4G	1093	VAL	C-N-CA	6.07	136.88	121.70
38	4I	38	VAL	CA-CB-CG1	-6.07	101.80	110.90
43	5J	42	TYR	CG-CD2-CE2	6.07	126.16	121.30
37	4H	1334	GLU	N-CA-C	6.07	127.38	111.00
40	4V	714	ASP	CB-CG-OD1	6.07	123.76	118.30
47	6A	157	ARG	NE-CZ-NH1	-6.07	117.27	120.30
38	4L	38	VAL	CA-CB-CG1	-6.06	101.81	110.90
40	4U	714	ASP	CB-CG-OD1	6.06	123.75	118.30
38	4J	38	VAL	CA-CB-CG1	-6.05	101.82	110.90
34	3W	419	LEU	CA-CB-CG	-6.05	101.39	115.30
43	5I	42	TYR	CG-CD2-CE2	6.04	126.13	121.30
47	6A	1233	ARG	NE-CZ-NH1	-6.04	117.28	120.30
37	4E	583	GLU	CA-C-N	6.03	130.47	117.20
3	6D	1010	LEU	CB-CG-CD2	6.03	121.25	111.00
37	4E	577	LEU	CB-CG-CD1	6.02	121.23	111.00
47	6B	157	ARG	NE-CZ-NH1	-6.02	117.29	120.30
47	6A	1320	PRO	N-CA-CB	6.01	110.52	103.30
37	4F	1324	THR	N-CA-C	-6.01	94.77	111.00
37	4E	583	GLU	C-N-CA	-6.01	106.67	121.70
34	4B	419	LEU	CA-CB-CG	-6.01	101.48	115.30
37	4G	529	VAL	CA-CB-CG2	-6.01	101.89	110.90
6	1N	2073	PRO	N-CA-CB	6.00	110.51	103.30
37	4F	1322	ARG	N-CA-CB	-6.00	99.80	110.60
47	6B	1320	PRO	N-CA-CB	6.00	110.50	103.30
34	3Z	357	LEU	CA-CB-CG	-6.00	101.50	115.30
37	4H	1136	ARG	NE-CZ-NH2	-5.99	117.30	120.30
3	1H	1006	ASP	CB-CA-C	5.99	122.39	110.40
37	4G	1094	ALA	CB-CA-C	-5.99	101.11	110.10
37	4H	1139	THR	CB-CA-C	5.99	127.77	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	3F	386	MET	CB-CG-SD	5.98	130.34	112.40
37	4E	1762	GLU	CA-CB-CG	-5.98	100.24	113.40
37	4G	664	TYR	CA-CB-CG	5.98	124.76	113.40
38	4K	26	GLU	OE1-CD-OE2	-5.96	116.14	123.30
37	4F	1322	ARG	CB-CG-CD	5.96	127.10	111.60
37	4E	583	GLU	O-C-N	-5.96	113.17	122.70
38	4M	26	GLU	OE1-CD-OE2	-5.96	116.15	123.30
38	4I	26	GLU	OE1-CD-OE2	-5.96	116.15	123.30
2	1G	88	LEU	CA-CB-CG	-5.94	101.63	115.30
37	4F	1342	LEU	CB-CA-C	5.94	121.49	110.20
37	4H	1137	ALA	CA-C-N	5.94	130.27	117.20
12	4a	86	ARG	NE-CZ-NH2	-5.93	117.33	120.30
12	6a	237	THR	CA-CB-CG2	-5.93	104.09	112.40
38	4N	26	GLU	OE1-CD-OE2	-5.93	116.19	123.30
12	9e	237	THR	CA-CB-CG2	-5.93	104.10	112.40
12	Ba	58	ARG	NE-CZ-NH1	-5.93	117.34	120.30
38	4J	26	GLU	OE1-CD-OE2	-5.92	116.19	123.30
12	Ca	237	THR	CA-CB-CG2	-5.92	104.12	112.40
42	5H	135	ARG	CA-C-N	5.91	130.21	117.20
37	4G	1338	PHE	CD1-CE1-CZ	5.90	127.18	120.10
38	4L	26	GLU	OE1-CD-OE2	-5.90	116.22	123.30
43	5K	32	LEU	CA-CB-CG	-5.90	101.74	115.30
37	4F	1323	ILE	N-CA-C	5.90	126.92	111.00
30	3F	373	LEU	CA-CB-CG	-5.89	101.75	115.30
37	4F	1076	THR	N-CA-CB	5.89	121.49	110.30
43	5L	32	LEU	CA-CB-CG	-5.89	101.76	115.30
37	4G	826	LEU	CA-CB-CG	-5.89	101.76	115.30
41	5A	140	GLU	N-CA-CB	5.89	121.19	110.60
37	4F	1753	GLN	CA-CB-CG	-5.88	100.45	113.40
43	5J	32	LEU	CA-CB-CG	-5.88	101.76	115.30
43	5I	32	LEU	CA-CB-CG	-5.88	101.78	115.30
43	5L	42	TYR	CB-CG-CD2	5.87	124.52	121.00
12	9a	237	THR	CA-CB-CG2	-5.87	104.18	112.40
37	4G	1321	THR	OG1-CB-CG2	-5.87	96.50	110.00
37	4E	574	LEU	CB-CG-CD2	5.87	120.97	111.00
38	4L	25	PRO	O-C-N	-5.87	113.31	122.70
43	5J	42	TYR	CB-CG-CD2	5.87	124.52	121.00
43	5K	42	TYR	CB-CG-CD2	5.87	124.52	121.00
38	4M	25	PRO	O-C-N	-5.86	113.32	122.70
1	0A	51	LEU	CA-CB-CG	-5.86	101.83	115.30
37	4F	1093	VAL	N-CA-C	5.86	126.81	111.00
42	5H	135	ARG	CD-NE-CZ	5.85	131.79	123.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	6A	131	LEU	CA-CB-CG	5.85	128.76	115.30
12	1e	237	THR	CA-CB-CG2	-5.85	104.21	112.40
47	6B	131	LEU	CA-CB-CG	5.85	128.75	115.30
37	4F	1084	ARG	N-CA-C	-5.84	95.22	111.00
42	5H	158	MET	CB-CG-SD	5.84	129.93	112.40
1	0A	134	LEU	CA-CB-CG	5.84	128.73	115.30
38	4K	25	PRO	O-C-N	-5.83	113.37	122.70
39	4S	138	LEU	CA-CB-CG	5.83	128.71	115.30
38	4I	25	PRO	O-C-N	-5.83	113.37	122.70
38	4J	25	PRO	O-C-N	-5.83	113.38	122.70
42	5H	134	LEU	CB-CG-CD2	-5.83	101.10	111.00
38	4N	25	PRO	O-C-N	-5.82	113.39	122.70
39	4Q	138	LEU	CA-CB-CG	5.82	128.68	115.30
12	Da	237	THR	CA-CB-CG2	-5.82	104.26	112.40
39	4R	138	LEU	CA-CB-CG	5.81	128.67	115.30
42	5H	137	TYR	CA-CB-CG	5.81	124.44	113.40
37	4E	579	THR	CA-C-O	-5.81	107.90	120.10
30	3G	551	LEU	CA-CB-CG	5.80	128.65	115.30
38	4L	38	VAL	N-CA-CB	5.80	124.27	111.50
38	4J	38	VAL	N-CA-CB	5.80	124.26	111.50
3	1H	683	ARG	NE-CZ-NH1	-5.80	117.40	120.30
38	4I	38	VAL	N-CA-CB	5.80	124.25	111.50
12	7e	237	THR	CA-CB-CG2	-5.80	104.28	112.40
43	5I	42	TYR	CB-CG-CD2	5.79	124.47	121.00
38	4M	38	VAL	N-CA-CB	5.79	124.23	111.50
43	5J	30	ARG	NE-CZ-NH2	-5.79	117.41	120.30
36	4D	140	ARG	C-N-CA	5.79	136.16	121.70
12	6e	237	THR	CA-CB-CG2	-5.78	104.31	112.40
12	5e	237	THR	CA-CB-CG2	-5.78	104.31	112.40
12	2a	237	THR	CA-CB-CG2	-5.78	104.31	112.40
37	4F	1074	GLN	CB-CA-C	5.78	121.95	110.40
43	5L	30	ARG	CD-NE-CZ	5.78	131.69	123.60
38	4N	38	VAL	N-CA-CB	5.78	124.21	111.50
37	4H	1091	VAL	C-N-CA	5.77	136.14	121.70
12	2e	237	THR	CA-CB-CG2	-5.77	104.33	112.40
7	1O	439	PRO	N-CA-CB	5.77	110.22	103.30
38	4K	38	VAL	N-CA-CB	5.77	124.19	111.50
43	5K	30	ARG	CD-NE-CZ	5.76	131.67	123.60
6	1N	2251	PRO	N-CA-CB	5.76	110.22	103.30
12	7a	237	THR	CA-CB-CG2	-5.76	104.33	112.40
47	6A	409	ARG	CD-NE-CZ	5.76	131.66	123.60
43	5I	49	ALA	O-C-N	-5.76	113.49	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	Be	237	THR	CA-CB-CG2	-5.75	104.35	112.40
12	8e	237	THR	CA-CB-CG2	-5.75	104.36	112.40
41	5A	120	TYR	N-CA-C	5.74	126.51	111.00
43	5I	30	ARG	CD-NE-CZ	5.74	131.64	123.60
34	3T	419	LEU	CA-CB-CG	-5.74	102.10	115.30
12	Ba	237	THR	CA-CB-CG2	-5.74	104.37	112.40
43	5J	30	ARG	CD-NE-CZ	5.73	131.63	123.60
43	5L	49	ALA	O-C-N	-5.72	113.54	122.70
37	4F	1334	GLU	N-CA-C	5.72	126.44	111.00
42	5H	137	TYR	CD1-CE1-CZ	5.72	124.95	119.80
12	4a	237	THR	CA-CB-CG2	-5.71	104.40	112.40
43	5J	49	ALA	O-C-N	-5.71	113.56	122.70
47	6B	409	ARG	CD-NE-CZ	5.71	131.60	123.60
37	4F	1324	THR	OG1-CB-CG2	-5.71	96.88	110.00
42	5H	45	ALA	CB-CA-C	5.71	118.66	110.10
34	3S	251	LEU	CB-CG-CD1	-5.70	101.30	111.00
43	5K	49	ALA	O-C-N	-5.70	113.58	122.70
37	4H	1324	THR	N-CA-C	-5.70	95.61	111.00
42	5H	84	THR	N-CA-CB	-5.70	99.47	110.30
43	5L	30	ARG	NE-CZ-NH2	-5.68	117.46	120.30
43	5I	45	ASN	N-CA-C	5.67	126.31	111.00
37	4E	574	LEU	CA-CB-CG	-5.67	102.27	115.30
43	5L	45	ASN	N-CA-C	5.67	126.30	111.00
37	4E	576	ALA	CA-C-N	-5.66	104.75	117.20
43	5J	45	ASN	N-CA-C	5.66	126.28	111.00
43	5K	45	ASN	N-CA-C	5.66	126.28	111.00
38	4I	29	LYS	CB-CG-CD	-5.66	96.89	111.60
38	4K	29	LYS	CB-CG-CD	-5.65	96.90	111.60
38	4L	29	LYS	CB-CG-CD	-5.65	96.90	111.60
43	5I	30	ARG	NE-CZ-NH2	-5.65	117.47	120.30
37	4H	1074	GLN	N-CA-CB	5.65	120.77	110.60
38	4N	29	LYS	CB-CG-CD	-5.65	96.91	111.60
38	4J	29	LYS	CB-CG-CD	-5.65	96.92	111.60
38	4M	29	LYS	CB-CG-CD	-5.65	96.92	111.60
37	4G	854	TYR	CG-CD2-CE2	-5.64	116.78	121.30
47	6B	95	TYR	CB-CG-CD2	-5.64	117.61	121.00
44	5R	149	MET	CG-SD-CE	-5.64	91.18	100.20
37	4G	1083	ILE	CA-C-N	5.64	129.60	117.20
43	5K	30	ARG	NE-CZ-NH2	-5.62	117.49	120.30
37	4G	854	TYR	CB-CG-CD2	5.62	124.37	121.00
37	4F	1093	VAL	C-N-CA	5.62	135.74	121.70
1	1A	63	LEU	CB-CG-CD2	-5.61	101.47	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4F	960	LEU	CB-CG-CD1	-5.61	101.47	111.00
12	3a	86	ARG	NE-CZ-NH1	5.60	123.10	120.30
47	6B	233	LEU	CB-CG-CD2	5.60	120.52	111.00
12	2e	60	VAL	CG1-CB-CG2	-5.60	101.94	110.90
43	5I	27	LEU	CA-CB-CG	5.60	128.17	115.30
47	6A	233	LEU	CB-CG-CD2	5.59	120.51	111.00
14	2F	126	LEU	CB-CG-CD2	-5.59	101.49	111.00
37	4G	1270	PRO	N-CA-CB	5.59	110.01	103.30
1	0F	329	LEU	CB-CG-CD2	-5.59	101.50	111.00
37	4H	1270	PRO	N-CA-CB	5.59	110.01	103.30
47	6A	95	TYR	CB-CG-CD2	-5.59	117.65	121.00
37	4H	1350	ILE	CA-CB-CG1	-5.58	100.39	111.00
42	5H	156	GLU	OE1-CD-OE2	-5.58	116.60	123.30
37	4F	1270	PRO	N-CA-CB	5.58	109.99	103.30
43	5K	27	LEU	CA-CB-CG	5.58	128.13	115.30
47	6B	234	LEU	CB-CG-CD2	-5.58	101.52	111.00
31	3I	179	LEU	CA-CB-CG	5.58	128.12	115.30
43	5J	27	LEU	CA-CB-CG	5.58	128.12	115.30
37	4F	856	MET	CB-CG-SD	-5.57	95.68	112.40
37	4F	1316	GLN	CB-CA-C	-5.57	99.25	110.40
47	6B	1233	ARG	NE-CZ-NH2	5.57	123.09	120.30
43	5L	27	LEU	CA-CB-CG	5.57	128.11	115.30
47	6A	234	LEU	CB-CG-CD2	-5.57	101.54	111.00
14	2G	126	LEU	CB-CG-CD2	-5.56	101.54	111.00
37	4H	1085	MET	CA-CB-CG	-5.56	103.84	113.30
42	5H	138	ARG	NE-CZ-NH1	5.56	123.08	120.30
37	4F	1076	THR	CB-CA-C	-5.55	96.62	111.60
9	1Q	846	ILE	C-N-CA	5.55	135.57	121.70
6	1N	813	LEU	CA-CB-CG	-5.55	102.54	115.30
35	4C	705	ARG	NE-CZ-NH1	-5.54	117.53	120.30
37	4H	1322	ARG	CB-CA-C	-5.54	99.33	110.40
37	4E	577	LEU	C-N-CA	5.53	135.53	121.70
37	4H	1334	GLU	OE1-CD-OE2	-5.53	116.67	123.30
47	6B	809	ALA	C-N-CA	5.53	135.52	121.70
37	4G	972	PHE	N-CA-CB	5.53	120.55	110.60
37	4G	1334	GLU	N-CA-CB	-5.53	100.65	110.60
37	4E	578	ASP	N-CA-CB	-5.52	100.66	110.60
42	5H	140	TYR	CB-CG-CD2	5.52	124.31	121.00
35	4C	467	LEU	CB-CG-CD2	-5.52	101.61	111.00
47	6A	809	ALA	C-N-CA	5.51	135.49	121.70
37	4F	1712	LEU	CA-CB-CG	-5.50	102.66	115.30
37	4F	1318	TYR	N-CA-C	5.49	125.82	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	3N	251	LEU	CB-CG-CD1	-5.48	101.68	111.00
37	4E	579	THR	N-CA-CB	5.48	120.71	110.30
42	5H	132	GLY	C-N-CA	5.48	135.40	121.70
47	6B	409	ARG	NE-CZ-NH2	-5.47	117.56	120.30
37	4H	1094	ALA	N-CA-C	5.47	125.76	111.00
43	5J	168	GLU	CG-CD-OE2	5.46	129.23	118.30
47	6A	1233	ARG	NE-CZ-NH2	5.46	123.03	120.30
37	4E	583	GLU	CG-CD-OE2	5.46	129.22	118.30
43	5I	168	GLU	CG-CD-OE2	5.46	129.22	118.30
43	5L	168	GLU	CG-CD-OE2	5.46	129.22	118.30
43	5K	168	GLU	CG-CD-OE2	5.46	129.21	118.30
47	6A	409	ARG	NE-CZ-NH2	-5.45	117.57	120.30
7	1O	230	LEU	CA-CB-CG	5.45	127.84	115.30
42	5H	159	VAL	CA-CB-CG2	-5.45	102.72	110.90
43	5I	53	ASP	CB-CG-OD1	-5.45	113.40	118.30
43	5K	169	LEU	CB-CG-CD1	5.45	120.26	111.00
43	5L	53	ASP	CB-CG-OD1	-5.45	113.40	118.30
43	5L	169	LEU	CB-CG-CD1	5.44	120.25	111.00
43	5I	169	LEU	CB-CG-CD1	5.44	120.24	111.00
37	4G	1338	PHE	CB-CG-CD1	-5.43	117.00	120.80
37	4F	1341	ILE	CG1-CB-CG2	-5.43	99.45	111.40
43	5J	169	LEU	CB-CG-CD1	5.43	120.23	111.00
37	4F	430	ASP	C-N-CA	-5.43	108.13	121.70
12	Da	60	VAL	CG1-CB-CG2	-5.42	102.22	110.90
37	4G	1074	GLN	CB-CG-CD	5.42	125.69	111.60
37	4H	1083	ILE	CA-CB-CG1	5.42	121.30	111.00
43	5K	53	ASP	CB-CG-OD1	-5.41	113.43	118.30
37	4F	1085	MET	N-CA-C	-5.41	96.39	111.00
42	5H	135	ARG	NH1-CZ-NH2	5.41	125.35	119.40
42	5H	91	TYR	CD1-CG-CD2	-5.41	111.95	117.90
37	4F	1334	GLU	O-C-N	-5.40	114.06	122.70
37	4F	972	PHE	CG-CD1-CE1	-5.40	114.86	120.80
43	5J	53	ASP	CB-CG-OD1	-5.40	113.44	118.30
37	4G	1143	LEU	CB-CG-CD1	5.40	120.17	111.00
51	6M	1645	LEU	CA-CB-CG	5.38	127.67	115.30
43	5J	72	LEU	CB-CG-CD2	-5.37	101.87	111.00
1	0Y	65	LEU	CB-CG-CD2	-5.37	101.87	111.00
51	6N	1645	LEU	CA-CB-CG	5.37	127.64	115.30
43	5L	72	LEU	CB-CG-CD2	-5.37	101.88	111.00
38	4L	85	LEU	CA-CB-CG	5.36	127.64	115.30
1	0B	65	LEU	CB-CG-CD2	-5.36	101.89	111.00
30	3G	627	LEU	CB-CG-CD2	-5.36	101.89	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	4I	85	LEU	CA-CB-CG	5.36	127.63	115.30
43	5I	72	LEU	CB-CG-CD2	-5.36	101.89	111.00
38	4M	85	LEU	CA-CB-CG	5.36	127.62	115.30
34	3Y	359	ARG	NE-CZ-NH2	-5.36	117.62	120.30
43	5K	72	LEU	CB-CG-CD2	-5.36	101.89	111.00
38	4J	85	LEU	CA-CB-CG	5.35	127.61	115.30
38	4N	85	LEU	CA-CB-CG	5.35	127.61	115.30
38	4K	85	LEU	CA-CB-CG	5.34	127.59	115.30
12	4a	86	ARG	NE-CZ-NH1	5.34	122.97	120.30
37	4E	589	PRO	N-CA-CB	-5.34	96.73	102.60
7	1O	2241	ASP	CB-CG-OD1	-5.34	113.50	118.30
43	5I	141	LEU	CA-CB-CG	-5.34	103.03	115.30
1	0X	134	LEU	CA-CB-CG	5.33	127.56	115.30
37	4G	1136	ARG	CD-NE-CZ	-5.33	116.14	123.60
37	4E	580	GLU	CG-CD-OE2	-5.33	107.64	118.30
37	4E	583	GLU	N-CA-CB	-5.32	101.02	110.60
41	5A	140	GLU	CA-C-N	5.32	128.90	117.20
37	4E	584	ALA	C-N-CA	-5.32	108.40	121.70
43	5J	141	LEU	CA-CB-CG	-5.32	103.07	115.30
43	5K	141	LEU	CA-CB-CG	-5.32	103.07	115.30
2	1D	142	LEU	CA-CB-CG	5.32	127.52	115.30
43	5L	141	LEU	CA-CB-CG	-5.32	103.08	115.30
34	3W	492	LEU	CA-CB-CG	-5.31	103.09	115.30
37	4G	972	PHE	CB-CA-C	-5.31	99.78	110.40
37	4G	1092	LEU	CB-CG-CD1	5.31	120.03	111.00
37	4G	664	TYR	CB-CG-CD2	-5.30	117.82	121.00
37	4E	1156	LEU	CB-CG-CD2	-5.29	102.00	111.00
43	5L	30	ARG	CB-CA-C	5.29	120.99	110.40
37	4F	1333	VAL	O-C-N	-5.29	114.23	122.70
40	4V	311	VAL	CG1-CB-CG2	-5.29	102.43	110.90
37	4F	970	SER	CA-CB-OG	5.29	125.48	111.20
40	4T	311	VAL	CG1-CB-CG2	-5.29	102.44	110.90
47	6A	1086	LEU	CB-CG-CD2	-5.29	102.01	111.00
43	5L	55	TYR	CA-CB-CG	5.28	123.44	113.40
47	6B	1086	LEU	CB-CG-CD2	-5.28	102.02	111.00
37	4H	1141	ASP	C-N-CA	-5.28	111.21	122.30
43	5I	55	TYR	CA-CB-CG	5.28	123.44	113.40
44	5U	149	MET	CB-CG-SD	-5.28	96.56	112.40
49	6I	102	LEU	CB-CG-CD1	5.28	119.97	111.00
43	5J	55	TYR	CA-CB-CG	5.28	123.42	113.40
49	6G	102	LEU	CB-CG-CD1	5.28	119.97	111.00
40	4U	311	VAL	CG1-CB-CG2	-5.27	102.46	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	4G	528	SER	CA-C-N	-5.27	105.61	117.20
49	6J	102	LEU	CB-CG-CD1	5.27	119.96	111.00
37	4H	1322	ARG	CA-C-N	5.27	128.78	117.20
49	6H	102	LEU	CB-CG-CD1	5.27	119.95	111.00
43	5J	30	ARG	CB-CA-C	5.26	120.92	110.40
43	5K	55	TYR	CA-CB-CG	5.26	123.39	113.40
43	5K	30	ARG	CB-CA-C	5.25	120.91	110.40
37	4F	1093	VAL	N-CA-CB	-5.25	99.95	111.50
43	5I	30	ARG	CB-CA-C	5.25	120.90	110.40
37	4G	1139	THR	N-CA-CB	5.24	120.25	110.30
47	6B	62	ARG	CA-CB-CG	5.24	124.93	113.40
1	0R	319	TYR	CB-CG-CD2	5.24	124.14	121.00
30	3G	729	LEU	CB-CG-CD2	-5.24	102.10	111.00
41	5A	144	HIS	N-CA-CB	5.23	120.02	110.60
37	4H	954	SER	CB-CA-C	-5.22	100.17	110.10
38	4J	48	PRO	CA-C-N	-5.22	105.71	117.20
38	4L	48	PRO	CA-C-N	-5.22	105.71	117.20
38	4M	48	PRO	CA-C-N	-5.22	105.72	117.20
47	6A	62	ARG	CA-CB-CG	5.22	124.89	113.40
38	4I	48	PRO	CA-C-N	-5.22	105.72	117.20
38	4N	48	PRO	CA-C-N	-5.21	105.73	117.20
37	4G	538	GLU	CA-CB-CG	-5.21	101.94	113.40
37	4H	1324	THR	OG1-CB-CG2	-5.20	98.03	110.00
38	4K	48	PRO	CA-C-N	-5.20	105.76	117.20
42	5H	93	GLU	CA-CB-CG	5.20	124.84	113.40
12	Ae	281	TYR	CA-CB-CG	5.19	123.26	113.40
12	3a	86	ARG	CA-CB-CG	5.18	124.79	113.40
40	4T	251	LEU	CB-CG-CD2	-5.18	102.20	111.00
49	6J	42	LEU	CB-CG-CD1	-5.17	102.21	111.00
40	4V	251	LEU	CB-CG-CD2	-5.16	102.22	111.00
48	6E	800	LEU	CA-CB-CG	5.16	127.18	115.30
3	1H	1006	ASP	CB-CG-OD1	5.16	122.95	118.30
37	4E	733	LEU	CA-CB-CG	5.16	127.17	115.30
37	4H	1303	VAL	CG1-CB-CG2	-5.16	102.64	110.90
49	6H	42	LEU	CB-CG-CD1	-5.16	102.23	111.00
40	4U	251	LEU	CB-CG-CD2	-5.16	102.23	111.00
49	6G	42	LEU	CB-CG-CD1	-5.16	102.23	111.00
37	4F	1351	SER	N-CA-C	5.15	124.92	111.00
49	6I	42	LEU	CB-CG-CD1	-5.15	102.24	111.00
48	6F	800	LEU	CA-CB-CG	5.15	127.15	115.30
12	Ae	86	ARG	NE-CZ-NH2	5.14	122.87	120.30
37	4E	589	PRO	CA-CB-CG	5.14	114.56	104.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	1H	1004	ALA	C-N-CD	5.13	139.18	128.40
37	4E	578	ASP	CA-C-N	5.13	128.48	117.20
37	4F	1333	VAL	CA-C-N	5.13	128.48	117.20
37	4H	1082	LEU	CA-C-N	5.13	128.48	117.20
42	5H	84	THR	CA-CB-CG2	5.13	119.58	112.40
10	1R	369	LYS	CD-CE-NZ	-5.12	99.93	111.70
37	4G	792	VAL	C-N-CA	-5.11	108.92	121.70
31	3I	285	ARG	CG-CD-NE	-5.11	101.07	111.80
8	1P	758	ASP	CB-CG-OD2	5.11	122.90	118.30
43	5J	37	THR	CA-CB-CG2	5.10	119.54	112.40
43	5L	37	THR	CA-CB-CG2	5.10	119.54	112.40
37	4G	1083	ILE	N-CA-CB	5.09	122.52	110.80
43	5I	37	THR	CA-CB-CG2	5.09	119.53	112.40
12	Aa	86	ARG	NE-CZ-NH2	5.09	122.85	120.30
37	4F	1082	LEU	CA-C-O	-5.09	109.41	120.10
37	4F	1093	VAL	CA-CB-CG2	5.09	118.54	110.90
43	5K	37	THR	CA-CB-CG2	5.09	119.53	112.40
47	6B	75	ASP	N-CA-CB	5.09	119.76	110.60
37	4G	974	VAL	CG1-CB-CG2	-5.08	102.77	110.90
37	4H	1073	LEU	CB-CG-CD1	-5.08	102.37	111.00
42	5H	156	GLU	CB-CG-CD	5.08	127.91	114.20
42	5H	139	LEU	N-CA-C	-5.07	97.31	111.00
47	6A	75	ASP	N-CA-CB	5.07	119.73	110.60
47	6A	183	GLN	CA-CB-CG	5.07	124.55	113.40
47	6B	183	GLN	CA-CB-CG	5.07	124.54	113.40
36	4D	222	TYR	CA-CB-CG	-5.06	103.78	113.40
42	5G	103	LEU	CA-CB-CG	-5.06	103.67	115.30
42	5H	136	HIS	CA-C-N	-5.06	106.07	117.20
37	4E	590	LYS	N-CA-C	5.06	124.65	111.00
37	4H	1323	ILE	O-C-N	5.05	130.79	122.70
3	1H	1006	ASP	N-CA-CB	-5.05	101.51	110.60
42	5G	139	LEU	CB-CG-CD2	-5.04	102.43	111.00
42	5E	103	LEU	CA-CB-CG	-5.04	103.71	115.30
42	5F	139	LEU	CB-CG-CD2	-5.04	102.44	111.00
37	4H	1144	LEU	CB-CG-CD1	-5.04	102.44	111.00
2	1E	82	LEU	CA-CB-CG	5.04	126.88	115.30
10	1S	376	LEU	CB-CG-CD1	-5.04	102.44	111.00
37	4F	1084	ARG	CB-CG-CD	-5.03	98.52	111.60
42	5F	103	LEU	CA-CB-CG	-5.03	103.73	115.30
37	4G	689	ARG	CA-CB-CG	5.03	124.45	113.40
37	4G	1138	VAL	CA-CB-CG2	-5.03	103.36	110.90
37	4G	693	LEU	CA-CB-CG	-5.02	103.75	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	5H	135	ARG	CG-CD-NE	-5.02	101.25	111.80
2	1D	82	LEU	CA-CB-CG	5.02	126.84	115.30
47	6B	6	ARG	CD-NE-CZ	5.02	130.62	123.60
37	4H	1324	THR	CA-C-N	-5.01	106.17	117.20
42	5E	139	LEU	CB-CG-CD2	-5.01	102.47	111.00
38	4O	9	ASP	N-CA-CB	-5.01	101.59	110.60
47	6B	64	GLN	CA-CB-CG	-5.01	102.39	113.40
12	4a	60	VAL	CA-CB-CG1	-5.00	103.39	110.90

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
37	4G	793	THR	CB

All (491) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0B	94	GLU	Peptide
1	0D	94	GLU	Peptide
1	0F	94	GLU	Peptide
1	0G	94	GLU	Peptide
1	0I	94	GLU	Peptide
1	0K	94	GLU	Peptide
1	0M	94	GLU	Peptide
1	0O	94	GLU	Peptide
1	0Q	94	GLU	Peptide
1	0S	94	GLU	Peptide
1	0U	94	GLU	Peptide
1	0V	94	GLU	Peptide
1	0W	94	GLU	Peptide
1	0Y	94	GLU	Peptide
1	1A	94	GLU	Peptide
1	1C	94	GLU	Peptide
2	1D	230	ALA	Peptide
2	1D	265	GLU	Peptide
2	1D	421	ALA	Peptide
2	1D	60	ASP	Peptide
2	1E	230	ALA	Peptide
2	1E	265	GLU	Peptide
2	1E	421	ALA	Peptide
2	1E	60	ASP	Peptide
2	1F	230	ALA	Peptide

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Mol	Chain	Res	Type	Group
2	1F	425	ALA	Peptide
2	1F	426	LEU	Peptide
2	1F	60	ASP	Peptide
2	1G	230	ALA	Peptide
2	1G	425	ALA	Peptide
2	1G	426	LEU	Peptide
2	1G	60	ASP	Peptide
3	1H	1005	PRO	Peptide
3	1H	622	PRO	Peptide
3	1H	88	SER	Peptide
3	1I	1006	ASP	Peptide
3	1I	622	PRO	Peptide
3	1I	88	SER	Peptide
4	1J	176	THR	Peptide
4	1J	189	GLY	Peptide
4	1J	21	ILE	Peptide
4	1J	239	PRO	Peptide
4	1J	411	VAL	Peptide
4	1J	420	PRO	Peptide
4	1J	422	SER	Peptide
4	1K	176	THR	Peptide
4	1K	189	GLY	Peptide
4	1K	21	ILE	Peptide
4	1K	239	PRO	Peptide
4	1K	411	VAL	Peptide
4	1K	420	PRO	Peptide
4	1K	422	SER	Peptide
5	1L	121	PRO	Peptide
5	1L	162	GLU	Peptide
5	1L	243	GLY	Peptide
5	1L	32	ASP	Peptide
5	1L	358	LYS	Peptide
5	1L	5	GLN	Peptide
5	1L	606	TRP	Peptide
5	1L	95	SER	Peptide
5	1M	121	PRO	Peptide
5	1M	162	GLU	Peptide
5	1M	243	GLY	Peptide
5	1M	32	ASP	Peptide
5	1M	358	LYS	Peptide
5	1M	5	GLN	Peptide
5	1M	606	TRP	Peptide

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Mol	Chain	Res	Type	Group
5	1M	95	SER	Peptide
6	1N	1008	GLY	Peptide
6	1N	2653	ASP	Peptide
7	1O	1191	ARG	Peptide
7	1O	1193	PRO	Peptide
7	1O	1194	ARG	Mainchain
7	1O	136	SER	Peptide
7	1O	2048	GLN	Peptide
7	1O	2724	GLY	Peptide
7	1O	3059	LEU	Peptide
7	1O	3121	LYS	Peptide
8	1P	789	PRO	Peptide
9	1Q	560	CYS	Peptide
9	1Q	659	PRO	Peptide
9	1Q	673	VAL	Peptide
9	1Q	674	VAL	Peptide
9	1Q	717	TYR	Peptide
9	1Q	718	LYS	Peptide
9	1Q	726	LEU	Peptide
9	1Q	727	LEU	Mainchain
9	1Q	732	SER	Peptide
9	1Q	734	SER	Peptide
9	1Q	738	LYS	Peptide
9	1Q	739	VAL	Peptide
9	1Q	760	ARG	Peptide
9	1Q	800	THR	Peptide
9	1Q	836	LEU	Peptide
9	1Q	857	ALA	Peptide
10	1R	236	GLY	Peptide
10	1R	299	ASP	Peptide
10	1R	344	SER	Peptide
10	1R	38	PRO	Peptide
10	1S	329	ARG	Peptide
10	1S	340	ILE	Peptide
10	1S	354	VAL	Peptide
10	1S	358	ALA	Peptide
10	1S	38	PRO	Peptide
10	1S	39	MET	Mainchain
10	1S	390	MET	Peptide
11	1T	1002	ALA	Peptide
11	1T	1113	ALA	Peptide
12	1a	107	THR	Mainchain

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Mol	Chain	Res	Type	Group
12	1e	107	THR	Mainchain
14	2F	104	ASN	Peptide
14	2F	33	LYS	Peptide
14	2G	104	ASN	Peptide
14	2G	33	LYS	Peptide
15	2H	119	UNK	Peptide
15	2H	120	UNK	Peptide
15	2H	121	UNK	Peptide
15	2H	135	UNK	Peptide
15	2H	16	UNK	Peptide
15	2H	188	UNK	Peptide
15	2H	191	UNK	Peptide
15	2H	25	UNK	Peptide
15	2H	61	UNK	Peptide
15	2H	80	UNK	Peptide
16	2I	16	UNK	Peptide
16	2I	25	UNK	Peptide
16	2I	61	UNK	Peptide
16	2I	80	UNK	Peptide
17	2J	23	UNK	Peptide
17	2J	33	UNK	Peptide
17	2J	34	UNK	Peptide
17	2J	35	UNK	Peptide
17	2J	67	UNK	Peptide
17	2J	68	UNK	Peptide
17	2J	70	UNK	Peptide
17	2K	30	UNK	Peptide
17	2K	33	UNK	Peptide
17	2K	35	UNK	Peptide
17	2K	70	UNK	Peptide
18	2L	1	UNK	Peptide
18	2L	2	UNK	Peptide
18	2L	3	UNK	Peptide
18	2L	34	UNK	Peptide
18	2L	4	UNK	Peptide
18	2L	5	UNK	Peptide
18	2L	9	UNK	Peptide
20	2N	27	UNK	Peptide
21	2O	14	UNK	Peptide
21	2O	15	UNK	Peptide
21	2O	5	UNK	Peptide
22	2P	33	UNK	Peptide

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Mol	Chain	Res	Type	Group
22	2P	35	UNK	Peptide
22	2P	40	UNK	Peptide
23	2R	22	UNK	Peptide
24	2T	136	PRO	Peptide
24	2U	113	THR	Peptide
24	2V	136	PRO	Peptide
25	2W	147	UNK	Peptide
25	2W	39	UNK	Peptide
25	2W	84	UNK	Peptide
25	2X	147	UNK	Peptide
25	2X	84	UNK	Peptide
12	2a	107	THR	Mainchain
12	2e	107	THR	Mainchain
30	3F	239	LEU	Peptide
30	3F	248	PRO	Peptide
31	3I	485	ARG	Peptide
32	3J	113	PRO	Peptide
32	3J	193	PRO	Peptide
32	3J	48	PRO	Peptide
32	3K	113	PRO	Peptide
32	3K	193	PRO	Peptide
33	3L	174	VAL	Peptide
33	3L	178	LYS	Peptide
12	3e	107	THR	Mainchain
35	4C	1077	ALA	Peptide
35	4C	283	MET	Peptide
35	4C	295	PRO	Peptide
35	4C	377	ALA	Peptide
35	4C	423	GLY	Peptide
35	4C	781	LEU	Peptide
35	4C	794	PRO	Peptide
35	4C	907	LEU	Peptide
36	4D	220	VAL	Peptide
37	4E	1108	PHE	Sidechain
37	4E	1109	ARG	Peptide
37	4E	1166	LEU	Peptide
37	4E	1688	GLY	Peptide
37	4E	1743	PRO	Peptide
37	4E	574	LEU	Mainchain
37	4E	576	ALA	Mainchain,Peptide
37	4E	578	ASP	Mainchain,Sidechain
37	4E	579	THR	Mainchain

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Mol	Chain	Res	Type	Group
37	4E	582	GLN	Mainchain,Peptide
37	4E	583	GLU	Peptide
37	4E	584	ALA	Mainchain
37	4E	587	ALA	Peptide
37	4E	588	PRO	Mainchain,Peptide
37	4F	1083	ILE	Mainchain
37	4F	1092	LEU	Peptide
37	4F	1093	VAL	Peptide
37	4F	1094	ALA	Mainchain
37	4F	1138	VAL	Mainchain,Peptide
37	4F	1152	VAL	Peptide
37	4F	1166	LEU	Peptide
37	4F	1167	ASP	Mainchain
37	4F	1320	GLY	Peptide
37	4F	1321	THR	Mainchain
37	4F	1323	ILE	Peptide
37	4F	1332	SER	Peptide
37	4F	1335	MET	Peptide
37	4F	1688	GLY	Peptide
37	4F	1783	LEU	Peptide
37	4F	510	HIS	Sidechain
37	4F	663	SER	Peptide
37	4F	972	PHE	Sidechain
37	4F	974	VAL	Peptide
37	4G	1074	GLN	Mainchain
37	4G	1093	VAL	Peptide
37	4G	1094	ALA	Mainchain,Peptide
37	4G	1136	ARG	Mainchain
37	4G	1138	VAL	Peptide
37	4G	1152	VAL	Peptide
37	4G	1166	LEU	Peptide
37	4G	1167	ASP	Mainchain
37	4G	1330	ALA	Peptide
37	4G	1334	GLU	Peptide
37	4G	1336	ASP	Mainchain
37	4G	1688	GLY	Peptide
37	4G	1783	LEU	Peptide
37	4G	431	ALA	Peptide
37	4G	534	HIS	Sidechain
37	4G	663	SER	Peptide
37	4G	670	GLY	Peptide
37	4G	689	ARG	Peptide

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Mol	Chain	Res	Type	Group
37	4G	826	LEU	Peptide
37	4G	854	TYR	Mainchain,Sidechain
37	4G	954	SER	Peptide
37	4G	974	VAL	Peptide
37	4H	1081	HIS	Peptide
37	4H	1084	ARG	Mainchain
37	4H	1091	VAL	Peptide
37	4H	1092	LEU	Peptide
37	4H	1094	ALA	Mainchain,Peptide
37	4H	1138	VAL	Mainchain,Peptide
37	4H	1152	VAL	Peptide
37	4H	1166	LEU	Peptide
37	4H	1167	ASP	Mainchain
37	4H	1320	GLY	Peptide
37	4H	1332	SER	Peptide
37	4H	1333	VAL	Mainchain
37	4H	1335	MET	Peptide
37	4H	1688	GLY	Peptide
37	4H	1783	LEU	Peptide
37	4H	663	SER	Peptide
37	4H	953	PRO	Mainchain,Peptide
37	4H	954	SER	Peptide
37	4H	955	GLY	Peptide
37	4H	972	PHE	Mainchain,Sidechain
37	4H	974	VAL	Peptide
38	4I	26	GLU	Mainchain
38	4I	27	ALA	Peptide
38	4I	29	LYS	Mainchain
38	4I	31	ALA	Peptide
38	4I	34	ALA	Peptide
38	4I	36	VAL	Peptide
38	4I	43	ASN	Peptide
38	4I	67	ALA	Peptide
38	4J	26	GLU	Mainchain
38	4J	27	ALA	Peptide
38	4J	29	LYS	Mainchain
38	4J	31	ALA	Peptide
38	4J	34	ALA	Peptide
38	4J	36	VAL	Peptide
38	4J	43	ASN	Peptide
38	4J	67	ALA	Peptide
38	4K	26	GLU	Mainchain

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Mol	Chain	Res	Type	Group
38	4K	27	ALA	Peptide
38	4K	29	LYS	Mainchain
38	4K	31	ALA	Peptide
38	4K	34	ALA	Peptide
38	4K	36	VAL	Peptide
38	4K	43	ASN	Peptide
38	4K	67	ALA	Peptide
38	4L	26	GLU	Mainchain
38	4L	27	ALA	Peptide
38	4L	29	LYS	Mainchain
38	4L	31	ALA	Peptide
38	4L	34	ALA	Peptide
38	4L	36	VAL	Peptide
38	4L	43	ASN	Peptide
38	4L	67	ALA	Peptide
38	4M	26	GLU	Mainchain
38	4M	27	ALA	Peptide
38	4M	29	LYS	Mainchain
38	4M	31	ALA	Peptide
38	4M	34	ALA	Peptide
38	4M	36	VAL	Peptide
38	4M	43	ASN	Peptide
38	4M	67	ALA	Peptide
38	4N	26	GLU	Mainchain
38	4N	27	ALA	Peptide
38	4N	29	LYS	Mainchain
38	4N	31	ALA	Peptide
38	4N	34	ALA	Peptide
38	4N	36	VAL	Peptide
38	4N	43	ASN	Peptide
38	4N	67	ALA	Peptide
38	4O	18	PRO	Peptide
38	4O	39	HIS	Peptide
38	4O	7	ALA	Peptide
38	4O	8	THR	Peptide
38	4P	39	HIS	Peptide
40	4T	177	LEU	Peptide
40	4T	257	VAL	Peptide
40	4T	374	ALA	Peptide
40	4T	456	LEU	Peptide
40	4T	634	ARG	Peptide
40	4T	648	SER	Peptide

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Mol	Chain	Res	Type	Group
40	4T	649	ASP	Peptide
40	4T	692	ARG	Peptide
40	4U	177	LEU	Peptide
40	4U	257	VAL	Peptide
40	4U	374	ALA	Peptide
40	4U	456	LEU	Peptide
40	4U	634	ARG	Peptide
40	4U	648	SER	Peptide
40	4U	649	ASP	Peptide
40	4U	692	ARG	Peptide
40	4V	177	LEU	Peptide
40	4V	257	VAL	Peptide
40	4V	374	ALA	Peptide
40	4V	456	LEU	Peptide
40	4V	634	ARG	Peptide
40	4V	648	SER	Peptide
40	4V	649	ASP	Peptide
40	4V	692	ARG	Peptide
41	4X	32	ILE	Peptide
41	4Y	32	ILE	Peptide
41	4Z	32	ILE	Peptide
41	5A	116	LEU	Peptide
41	5A	120	TYR	Mainchain
41	5A	140	GLU	Mainchain
41	5A	142	ARG	Peptide
41	5A	164	GLY	Mainchain
41	5A	20	GLU	Peptide
41	5A	38	LYS	Mainchain
41	5B	116	LEU	Peptide
41	5C	116	LEU	Peptide
41	5D	116	LEU	Peptide
42	5H	133	LEU	Mainchain,Peptide
42	5H	134	LEU	Peptide
42	5H	135	ARG	Peptide,Sidechain
42	5H	136	HIS	Mainchain,Peptide
42	5H	137	TYR	Peptide,Sidechain
42	5H	158	MET	Peptide
42	5H	92	THR	Mainchain
42	5H	93	GLU	Mainchain
42	5H	96	ALA	Peptide
43	5I	16	GLU	Peptide
43	5I	164	GLU	Peptide

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Mol	Chain	Res	Type	Group
43	5I	20	HIS	Peptide
43	5I	35	LYS	Peptide
43	5I	38	GLY	Peptide
43	5J	16	GLU	Peptide
43	5J	164	GLU	Peptide
43	5J	20	HIS	Peptide
43	5J	35	LYS	Peptide
43	5J	38	GLY	Peptide
43	5K	16	GLU	Peptide
43	5K	164	GLU	Peptide
43	5K	20	HIS	Peptide
43	5K	35	LYS	Peptide
43	5K	38	GLY	Peptide
43	5L	16	GLU	Peptide
43	5L	164	GLU	Peptide
43	5L	20	HIS	Peptide
43	5L	35	LYS	Peptide
43	5L	38	GLY	Peptide
44	5V	47	PRO	Peptide
45	5W	177	UNK	Peptide
45	5W	86	UNK	Peptide
45	5X	177	UNK	Peptide
45	5X	86	UNK	Peptide
45	5Y	177	UNK	Peptide
45	5Y	86	UNK	Peptide
46	5Z	101	UNK	Peptide
46	5Z	148	UNK	Peptide
12	5e	107	THR	Mainchain
47	6A	290	GLY	Peptide
47	6A	492	ASN	Peptide
47	6A	576	LEU	Peptide
47	6A	74	MET	Peptide
47	6A	75	ASP	Peptide
47	6A	800	SER	Peptide
47	6A	810	LEU	Peptide
47	6A	811	PRO	Peptide
47	6A	875	ASP	Peptide
47	6A	904	PHE	Peptide
47	6A	910	PRO	Peptide
47	6A	984	ILE	Peptide
47	6B	290	GLY	Peptide
47	6B	492	ASN	Peptide

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Mol	Chain	Res	Type	Group
47	6B	576	LEU	Peptide
47	6B	74	MET	Peptide
47	6B	75	ASP	Peptide
47	6B	800	SER	Peptide
47	6B	810	LEU	Peptide
47	6B	811	PRO	Peptide
47	6B	875	ASP	Peptide
47	6B	904	PHE	Peptide
47	6B	910	PRO	Peptide
47	6B	984	ILE	Peptide
3	6D	1010	LEU	Peptide
3	6D	94	ARG	Peptide
48	6E	308	MET	Peptide
48	6E	395	TRP	Peptide
48	6E	61	ARG	Peptide
48	6E	945	PRO	Peptide
48	6E	971	GLY	Peptide
48	6E	972	ASP	Peptide
48	6F	308	MET	Peptide
48	6F	395	TRP	Peptide
48	6F	61	ARG	Peptide
48	6F	945	PRO	Peptide
48	6F	971	GLY	Peptide
48	6F	972	ASP	Peptide
49	6G	313	GLN	Peptide
49	6H	313	GLN	Peptide
49	6I	313	GLN	Peptide
49	6J	313	GLN	Peptide
50	6K	398	LEU	Peptide
50	6K	437	TYR	Peptide
50	6K	458	ASP	Peptide
50	6K	514	GLY	Peptide
50	6K	529	GLU	Peptide
50	6L	398	LEU	Peptide
50	6L	437	TYR	Peptide
50	6L	458	ASP	Peptide
50	6L	514	GLY	Peptide
50	6L	529	GLU	Peptide
51	6M	1246	PRO	Peptide
51	6M	1247	ALA	Peptide
51	6M	1616	LEU	Peptide
51	6M	2022	PRO	Peptide

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Mol	Chain	Res	Type	Group
51	6M	2077	LEU	Peptide
51	6M	2293	ALA	Peptide
51	6N	1246	PRO	Peptide
51	6N	1247	ALA	Peptide
51	6N	1616	LEU	Peptide
51	6N	2022	PRO	Peptide
51	6N	2077	LEU	Peptide
51	6N	2293	ALA	Peptide
52	6O	2	UNK	Peptide
52	6O	46	UNK	Peptide
52	6O	55	UNK	Peptide
52	6O	7	UNK	Peptide
52	6P	2	UNK	Peptide
52	6P	46	UNK	Peptide
52	6P	55	UNK	Peptide
52	6P	7	UNK	Peptide
52	6Q	2	UNK	Peptide
52	6Q	46	UNK	Peptide
52	6Q	55	UNK	Peptide
52	6Q	7	UNK	Peptide
12	6a	107	THR	Mainchain
12	6e	107	THR	Mainchain
12	7a	107	THR	Mainchain
12	7e	107	THR	Mainchain
12	8a	107	THR	Mainchain
12	8e	107	THR	Mainchain
12	9a	107	THR	Mainchain
12	Aa	107	THR	Mainchain
12	Be	107	THR	Mainchain
12	Ce	107	THR	Mainchain
12	Da	107	THR	Mainchain

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0A	497/512 (97%)	486 (98%)	10 (2%)	1 (0%)	47	79
1	0B	497/512 (97%)	485 (98%)	10 (2%)	2 (0%)	34	71
1	0C	497/512 (97%)	488 (98%)	8 (2%)	1 (0%)	47	79
1	0D	497/512 (97%)	486 (98%)	10 (2%)	1 (0%)	47	79
1	0E	497/512 (97%)	486 (98%)	10 (2%)	1 (0%)	47	79
1	0F	497/512 (97%)	484 (97%)	12 (2%)	1 (0%)	47	79
1	0G	497/512 (97%)	484 (97%)	11 (2%)	2 (0%)	34	71
1	0H	497/512 (97%)	484 (97%)	12 (2%)	1 (0%)	47	79
1	0I	497/512 (97%)	486 (98%)	10 (2%)	1 (0%)	47	79
1	0J	497/512 (97%)	489 (98%)	8 (2%)	0	100	100
1	0K	497/512 (97%)	492 (99%)	5 (1%)	0	100	100
1	0L	497/512 (97%)	487 (98%)	9 (2%)	1 (0%)	47	79
1	0M	497/512 (97%)	485 (98%)	10 (2%)	2 (0%)	34	71
1	0N	497/512 (97%)	487 (98%)	9 (2%)	1 (0%)	47	79
1	0O	497/512 (97%)	488 (98%)	8 (2%)	1 (0%)	47	79
1	0P	497/512 (97%)	484 (97%)	12 (2%)	1 (0%)	47	79
1	0Q	497/512 (97%)	486 (98%)	10 (2%)	1 (0%)	47	79
1	0R	497/512 (97%)	486 (98%)	10 (2%)	1 (0%)	47	79
1	0S	497/512 (97%)	485 (98%)	11 (2%)	1 (0%)	47	79
1	0T	497/512 (97%)	488 (98%)	8 (2%)	1 (0%)	47	79
1	0U	497/512 (97%)	487 (98%)	9 (2%)	1 (0%)	47	79
1	0V	497/512 (97%)	487 (98%)	9 (2%)	1 (0%)	47	79
1	0W	497/512 (97%)	485 (98%)	10 (2%)	2 (0%)	34	71
1	0X	497/512 (97%)	487 (98%)	9 (2%)	1 (0%)	47	79
1	0Y	497/512 (97%)	484 (97%)	11 (2%)	2 (0%)	34	71
1	0Z	497/512 (97%)	488 (98%)	8 (2%)	1 (0%)	47	79
1	1A	497/512 (97%)	487 (98%)	9 (2%)	1 (0%)	47	79
1	1B	497/512 (97%)	488 (98%)	9 (2%)	0	100	100
1	1C	497/512 (97%)	491 (99%)	6 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	1D	500/571 (88%)	453 (91%)	39 (8%)	8 (2%)	9	46
2	1E	500/571 (88%)	454 (91%)	37 (7%)	9 (2%)	8	43
2	1F	512/571 (90%)	464 (91%)	43 (8%)	5 (1%)	15	55
2	1G	512/571 (90%)	464 (91%)	41 (8%)	7 (1%)	11	48
3	1H	791/1102 (72%)	764 (97%)	22 (3%)	5 (1%)	25	64
3	1I	791/1102 (72%)	769 (97%)	18 (2%)	4 (0%)	29	68
3	6D	787/1102 (71%)	766 (97%)	18 (2%)	3 (0%)	34	71
4	1J	392/3965 (10%)	344 (88%)	39 (10%)	9 (2%)	6	38
4	1K	392/3965 (10%)	344 (88%)	39 (10%)	9 (2%)	6	38
5	1L	540/2939 (18%)	476 (88%)	61 (11%)	3 (1%)	25	64
5	1M	540/2939 (18%)	476 (88%)	61 (11%)	3 (1%)	25	64
6	1N	2132/2784 (77%)	2080 (98%)	51 (2%)	1 (0%)	100	100
7	1O	2594/3225 (80%)	2506 (97%)	84 (3%)	4 (0%)	47	79
8	1P	291/1023 (28%)	274 (94%)	15 (5%)	2 (1%)	22	61
9	1Q	423/945 (45%)	336 (79%)	59 (14%)	28 (7%)	1	16
10	1R	351/446 (79%)	326 (93%)	21 (6%)	4 (1%)	14	53
10	1S	260/446 (58%)	237 (91%)	17 (6%)	6 (2%)	6	38
11	1T	952/1638 (58%)	942 (99%)	8 (1%)	2 (0%)	47	79
12	1a	426/443 (96%)	410 (96%)	16 (4%)	0	100	100
12	1c	429/443 (97%)	408 (95%)	21 (5%)	0	100	100
12	1e	426/443 (96%)	411 (96%)	15 (4%)	0	100	100
12	1g	429/443 (97%)	406 (95%)	23 (5%)	0	100	100
12	2a	426/443 (96%)	410 (96%)	16 (4%)	0	100	100
12	2c	429/443 (97%)	407 (95%)	22 (5%)	0	100	100
12	2e	426/443 (96%)	412 (97%)	14 (3%)	0	100	100
12	2g	429/443 (97%)	407 (95%)	22 (5%)	0	100	100
12	3a	426/443 (96%)	411 (96%)	15 (4%)	0	100	100
12	3c	429/443 (97%)	406 (95%)	23 (5%)	0	100	100
12	3e	426/443 (96%)	411 (96%)	15 (4%)	0	100	100
12	3g	429/443 (97%)	406 (95%)	23 (5%)	0	100	100
12	4a	426/443 (96%)	408 (96%)	18 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	4c	429/443 (97%)	403 (94%)	26 (6%)	0	100	100
12	4e	426/443 (96%)	410 (96%)	16 (4%)	0	100	100
12	4g	429/443 (97%)	406 (95%)	23 (5%)	0	100	100
12	5a	426/443 (96%)	409 (96%)	17 (4%)	0	100	100
12	5c	429/443 (97%)	404 (94%)	25 (6%)	0	100	100
12	5e	426/443 (96%)	411 (96%)	15 (4%)	0	100	100
12	5g	429/443 (97%)	403 (94%)	26 (6%)	0	100	100
12	6a	426/443 (96%)	408 (96%)	18 (4%)	0	100	100
12	6c	429/443 (97%)	404 (94%)	25 (6%)	0	100	100
12	6e	426/443 (96%)	408 (96%)	18 (4%)	0	100	100
12	6g	429/443 (97%)	405 (94%)	24 (6%)	0	100	100
12	7a	426/443 (96%)	410 (96%)	16 (4%)	0	100	100
12	7c	429/443 (97%)	403 (94%)	26 (6%)	0	100	100
12	7e	426/443 (96%)	405 (95%)	21 (5%)	0	100	100
12	7g	429/443 (97%)	403 (94%)	26 (6%)	0	100	100
12	8a	426/443 (96%)	408 (96%)	18 (4%)	0	100	100
12	8c	429/443 (97%)	405 (94%)	24 (6%)	0	100	100
12	8e	426/443 (96%)	410 (96%)	16 (4%)	0	100	100
12	8g	429/443 (97%)	408 (95%)	21 (5%)	0	100	100
12	9a	426/443 (96%)	407 (96%)	19 (4%)	0	100	100
12	9c	429/443 (97%)	404 (94%)	25 (6%)	0	100	100
12	9e	426/443 (96%)	408 (96%)	18 (4%)	0	100	100
12	9g	429/443 (97%)	407 (95%)	22 (5%)	0	100	100
12	Aa	426/443 (96%)	412 (97%)	14 (3%)	0	100	100
12	Ac	429/443 (97%)	405 (94%)	24 (6%)	0	100	100
12	Ae	426/443 (96%)	413 (97%)	13 (3%)	0	100	100
12	Ag	429/443 (97%)	408 (95%)	21 (5%)	0	100	100
12	Ba	426/443 (96%)	408 (96%)	18 (4%)	0	100	100
12	Bc	429/443 (97%)	407 (95%)	22 (5%)	0	100	100
12	Be	426/443 (96%)	407 (96%)	19 (4%)	0	100	100
12	Bg	429/443 (97%)	403 (94%)	26 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	Ca	426/443 (96%)	414 (97%)	12 (3%)	0	100	100
12	Cc	429/443 (97%)	406 (95%)	23 (5%)	0	100	100
12	Ce	426/443 (96%)	408 (96%)	18 (4%)	0	100	100
12	Cg	429/443 (97%)	410 (96%)	19 (4%)	0	100	100
12	Da	426/443 (96%)	412 (97%)	14 (3%)	0	100	100
12	Dc	429/443 (97%)	407 (95%)	22 (5%)	0	100	100
12	De	426/443 (96%)	409 (96%)	17 (4%)	0	100	100
12	Dg	429/443 (97%)	404 (94%)	25 (6%)	0	100	100
13	1b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	1d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	1f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	1h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	2b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	2d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	2f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	2h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	3b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	3d	426/451 (94%)	410 (96%)	16 (4%)	0	100	100
13	3f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	3h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	4b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	4d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	4f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	4h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	5b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	5d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	5f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	5h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	6b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	6d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	6f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	6h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	7b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	7d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	7f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	7h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	8b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	8d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	8f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	8h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	9b	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	9d	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	9f	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	9h	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Ab	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Ad	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Af	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Ah	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Bb	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Bd	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Bf	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Bh	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Cb	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Cd	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Cf	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Ch	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Db	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Dd	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Df	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
13	Dh	426/451 (94%)	409 (96%)	17 (4%)	0	100	100
14	2F	159/168 (95%)	144 (91%)	14 (9%)	1 (1%)	25	64
14	2G	159/168 (95%)	144 (91%)	14 (9%)	1 (1%)	25	64

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	2S	103/447 (23%)	100 (97%)	2 (2%)	1 (1%)	15	55
24	2T	107/447 (24%)	104 (97%)	3 (3%)	0	100	100
24	2U	109/447 (24%)	100 (92%)	9 (8%)	0	100	100
24	2V	107/447 (24%)	103 (96%)	4 (4%)	0	100	100
28	3C	59/739 (8%)	59 (100%)	0	0	100	100
29	3E	85/1471 (6%)	79 (93%)	6 (7%)	0	100	100
30	3F	440/795 (55%)	426 (97%)	11 (2%)	3 (1%)	22	61
30	3G	236/795 (30%)	231 (98%)	5 (2%)	0	100	100
31	3H	304/1940 (16%)	304 (100%)	0	0	100	100
31	3I	399/1940 (21%)	393 (98%)	6 (2%)	0	100	100
32	3J	366/749 (49%)	349 (95%)	17 (5%)	0	100	100
32	3K	361/749 (48%)	345 (96%)	15 (4%)	1 (0%)	41	75
33	3L	193/401 (48%)	184 (95%)	7 (4%)	2 (1%)	15	55
34	3M	381/507 (75%)	369 (97%)	12 (3%)	0	100	100
34	3N	386/507 (76%)	379 (98%)	7 (2%)	0	100	100
34	3O	349/507 (69%)	342 (98%)	7 (2%)	0	100	100
34	3P	351/507 (69%)	347 (99%)	4 (1%)	0	100	100
34	3Q	349/507 (69%)	344 (99%)	5 (1%)	0	100	100
34	3R	354/507 (70%)	351 (99%)	3 (1%)	0	100	100
34	3S	381/507 (75%)	371 (97%)	10 (3%)	0	100	100
34	3T	386/507 (76%)	378 (98%)	8 (2%)	0	100	100
34	3U	351/507 (69%)	348 (99%)	3 (1%)	0	100	100
34	3V	404/507 (80%)	397 (98%)	6 (2%)	1 (0%)	47	79
34	3W	405/507 (80%)	399 (98%)	6 (2%)	0	100	100
34	3X	354/507 (70%)	349 (99%)	5 (1%)	0	100	100
34	3Y	354/507 (70%)	352 (99%)	2 (1%)	0	100	100
34	3Z	354/507 (70%)	349 (99%)	5 (1%)	0	100	100
34	4A	404/507 (80%)	396 (98%)	7 (2%)	1 (0%)	47	79
34	4B	405/507 (80%)	401 (99%)	4 (1%)	0	100	100
35	4C	618/2215 (28%)	585 (95%)	29 (5%)	4 (1%)	25	64
36	4D	293/304 (96%)	285 (97%)	6 (2%)	2 (1%)	22	61

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
37	4E	961/2301 (42%)	923 (96%)	28 (3%)	10 (1%)	15	55
37	4F	943/2301 (41%)	874 (93%)	49 (5%)	20 (2%)	7	40
37	4G	943/2301 (41%)	872 (92%)	57 (6%)	14 (2%)	10	47
37	4H	943/2301 (41%)	881 (93%)	47 (5%)	15 (2%)	9	46
38	4I	62/110 (56%)	41 (66%)	16 (26%)	5 (8%)	1	11
38	4J	62/110 (56%)	41 (66%)	16 (26%)	5 (8%)	1	11
38	4K	62/110 (56%)	41 (66%)	16 (26%)	5 (8%)	1	11
38	4L	62/110 (56%)	41 (66%)	16 (26%)	5 (8%)	1	11
38	4M	62/110 (56%)	41 (66%)	16 (26%)	5 (8%)	1	11
38	4N	62/110 (56%)	41 (66%)	16 (26%)	5 (8%)	1	11
38	4O	82/110 (74%)	71 (87%)	9 (11%)	2 (2%)	6	37
38	4P	53/110 (48%)	49 (92%)	3 (6%)	1 (2%)	8	42
39	4Q	214/427 (50%)	207 (97%)	5 (2%)	2 (1%)	17	57
39	4R	214/427 (50%)	207 (97%)	5 (2%)	2 (1%)	17	57
39	4S	214/427 (50%)	207 (97%)	5 (2%)	2 (1%)	17	57
40	4T	588/835 (70%)	544 (92%)	31 (5%)	13 (2%)	6	39
40	4U	588/835 (70%)	544 (92%)	31 (5%)	13 (2%)	6	39
40	4V	588/835 (70%)	544 (92%)	31 (5%)	13 (2%)	6	39
41	4W	120/173 (69%)	118 (98%)	2 (2%)	0	100	100
41	4X	120/173 (69%)	108 (90%)	12 (10%)	0	100	100
41	4Y	120/173 (69%)	107 (89%)	13 (11%)	0	100	100
41	4Z	120/173 (69%)	107 (89%)	13 (11%)	0	100	100
41	5A	119/173 (69%)	101 (85%)	12 (10%)	6 (5%)	2	21
41	5B	119/173 (69%)	106 (89%)	12 (10%)	1 (1%)	19	59
41	5C	119/173 (69%)	106 (89%)	12 (10%)	1 (1%)	19	59
41	5D	119/173 (69%)	106 (89%)	12 (10%)	1 (1%)	19	59
42	5E	212/286 (74%)	210 (99%)	2 (1%)	0	100	100
42	5F	212/286 (74%)	210 (99%)	2 (1%)	0	100	100
42	5G	212/286 (74%)	210 (99%)	2 (1%)	0	100	100
42	5H	163/286 (57%)	139 (85%)	16 (10%)	8 (5%)	2	21
43	5I	207/306 (68%)	179 (86%)	23 (11%)	5 (2%)	6	37

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	5J	207/306 (68%)	179 (86%)	23 (11%)	5 (2%)	6	37
43	5K	207/306 (68%)	179 (86%)	23 (11%)	5 (2%)	6	37
43	5L	207/306 (68%)	179 (86%)	23 (11%)	5 (2%)	6	37
44	5M	140/163 (86%)	137 (98%)	3 (2%)	0	100	100
44	5N	140/163 (86%)	137 (98%)	3 (2%)	0	100	100
44	5O	140/163 (86%)	137 (98%)	3 (2%)	0	100	100
44	5P	144/163 (88%)	139 (96%)	5 (4%)	0	100	100
44	5Q	144/163 (88%)	139 (96%)	5 (4%)	0	100	100
44	5R	144/163 (88%)	140 (97%)	4 (3%)	0	100	100
44	5S	143/163 (88%)	141 (99%)	2 (1%)	0	100	100
44	5T	143/163 (88%)	142 (99%)	1 (1%)	0	100	100
44	5U	143/163 (88%)	141 (99%)	2 (1%)	0	100	100
44	5V	147/163 (90%)	143 (97%)	3 (2%)	1 (1%)	22	61
46	5Z	39/181 (22%)	39 (100%)	0	0	100	100
47	6A	1536/1929 (80%)	1453 (95%)	64 (4%)	19 (1%)	13	51
47	6B	1536/1929 (80%)	1453 (95%)	64 (4%)	19 (1%)	13	51
48	6E	894/1138 (79%)	839 (94%)	52 (6%)	3 (0%)	41	75
48	6F	894/1138 (79%)	839 (94%)	52 (6%)	3 (0%)	41	75
49	6G	474/477 (99%)	456 (96%)	17 (4%)	1 (0%)	47	79
49	6H	474/477 (99%)	456 (96%)	17 (4%)	1 (0%)	47	79
49	6I	474/477 (99%)	456 (96%)	17 (4%)	1 (0%)	47	79
49	6J	474/477 (99%)	456 (96%)	17 (4%)	1 (0%)	47	79
50	6K	605/651 (93%)	580 (96%)	21 (4%)	4 (1%)	22	61
50	6L	605/651 (93%)	580 (96%)	21 (4%)	4 (1%)	22	61
51	6M	1059/2540 (42%)	1011 (96%)	40 (4%)	8 (1%)	19	59
51	6N	1059/2540 (42%)	1011 (96%)	40 (4%)	8 (1%)	19	59
52	6O	7/89 (8%)	6 (86%)	1 (14%)	0	100	100
52	6P	7/89 (8%)	6 (86%)	1 (14%)	0	100	100
52	6Q	7/89 (8%)	6 (86%)	1 (14%)	0	100	100
All	All	102979/147699 (70%)	98412 (96%)	4161 (4%)	406 (0%)	38	71

All (406) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	1D	61	VAL
2	1D	265	GLU
2	1D	427	GLU
2	1E	61	VAL
2	1E	265	GLU
2	1E	427	GLU
2	1F	61	VAL
2	1F	423	ALA
2	1G	61	VAL
2	1G	423	ALA
4	1J	22	LYS
4	1J	424	VAL
4	1K	22	LYS
4	1K	424	VAL
5	1L	244	PRO
5	1M	244	PRO
7	1O	1194	ARG
8	1P	790	THR
9	1Q	561	VAL
9	1Q	606	LYS
9	1Q	718	LYS
9	1Q	727	LEU
9	1Q	733	THR
9	1Q	734	SER
9	1Q	740	VAL
9	1Q	761	VAL
9	1Q	801	PHE
9	1Q	837	LYS
9	1Q	848	LYS
10	1R	39	MET
10	1S	39	MET
10	1S	330	VAL
14	2F	105	ALA
14	2G	105	ALA
30	3F	249	VAL
33	3L	175	ALA
33	3L	179	ARG
35	4C	284	THR
36	4D	221	SER
37	4E	576	ALA
37	4E	583	GLU
37	4E	589	PRO
37	4E	1743	PRO

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Mol	Chain	Res	Type
37	4F	400	PRO
37	4F	1094	ALA
37	4F	1139	THR
37	4F	1167	ASP
37	4F	1317	ASP
37	4F	1334	GLU
37	4G	400	PRO
37	4G	975	VAL
37	4G	1082	LEU
37	4G	1092	LEU
37	4G	1139	THR
37	4G	1167	ASP
37	4G	1322	ARG
37	4H	400	PRO
37	4H	953	PRO
37	4H	1092	LEU
37	4H	1167	ASP
37	4H	1322	ARG
39	4Q	172	THR
39	4R	172	THR
39	4S	172	THR
40	4T	178	SER
40	4T	258	LEU
40	4T	617	GLU
40	4T	635	LEU
40	4T	637	VAL
40	4T	639	TYR
40	4T	649	ASP
40	4U	178	SER
40	4U	258	LEU
40	4U	617	GLU
40	4U	635	LEU
40	4U	637	VAL
40	4U	639	TYR
40	4U	649	ASP
40	4V	178	SER
40	4V	258	LEU
40	4V	617	GLU
40	4V	635	LEU
40	4V	637	VAL
40	4V	639	TYR
40	4V	649	ASP

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Mol	Chain	Res	Type
41	5A	144	HIS
41	5B	117	ALA
41	5C	117	ALA
41	5D	117	ALA
42	5H	130	ALA
42	5H	135	ARG
47	6A	75	ASP
47	6A	493	LEU
47	6A	576	LEU
47	6A	812	GLN
47	6A	1319	PRO
47	6A	1536	ALA
47	6A	1641	CYS
47	6A	1798	ASN
47	6A	1804	ALA
47	6B	75	ASP
47	6B	493	LEU
47	6B	576	LEU
47	6B	812	GLN
47	6B	1319	PRO
47	6B	1536	ALA
47	6B	1641	CYS
47	6B	1798	ASN
47	6B	1804	ALA
3	6D	1011	GLU
48	6E	106	ARG
48	6F	106	ARG
49	6G	363	ASP
49	6H	363	ASP
49	6I	363	ASP
49	6J	363	ASP
50	6K	459	ASN
50	6K	530	LYS
50	6K	531	TYR
50	6L	459	ASN
50	6L	530	LYS
50	6L	531	TYR
51	6M	2078	HIS
51	6M	2294	ASP
51	6N	2078	HIS
51	6N	2294	ASP
1	0B	412	THR

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Mol	Chain	Res	Type
1	0C	168	ALA
1	0D	412	THR
1	0E	168	ALA
1	0F	412	THR
1	0G	412	THR
1	0L	168	ALA
1	0N	168	ALA
1	0O	412	THR
1	0P	168	ALA
1	0Q	412	THR
1	0S	412	THR
1	0T	168	ALA
1	0U	412	THR
1	0V	168	ALA
1	0Y	412	THR
1	0Z	168	ALA
1	1A	412	THR
2	1F	426	LEU
2	1G	426	LEU
4	1J	190	ALA
4	1J	410	SER
4	1J	411	VAL
4	1J	423	GLU
4	1K	190	ALA
4	1K	410	SER
4	1K	411	VAL
4	1K	421	ARG
4	1K	423	GLU
7	1O	3060	SER
9	1Q	682	ARG
9	1Q	719	VAL
9	1Q	739	VAL
9	1Q	762	LYS
9	1Q	780	PRO
10	1S	359	SER
11	1T	1003	PRO
32	3K	131	ASN
36	4D	142	ASN
37	4E	577	LEU
37	4F	975	VAL
37	4F	1082	LEU
37	4F	1083	ILE

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Mol	Chain	Res	Type
37	4F	1092	LEU
37	4F	1323	ILE
37	4F	1689	GLU
37	4G	1095	PRO
37	4G	1689	GLU
37	4H	975	VAL
37	4H	1089	GLY
37	4H	1689	GLU
38	4I	25	PRO
38	4I	81	ALA
38	4J	25	PRO
38	4J	81	ALA
38	4K	25	PRO
38	4K	81	ALA
38	4L	25	PRO
38	4L	81	ALA
38	4M	25	PRO
38	4M	81	ALA
38	4N	25	PRO
38	4N	81	ALA
39	4Q	171	SER
39	4R	171	SER
39	4S	171	SER
40	4T	177	LEU
40	4U	177	LEU
40	4V	177	LEU
41	5A	77	GLY
42	5H	131	ARG
42	5H	137	TYR
42	5H	140	TYR
44	5V	48	THR
47	6A	74	MET
47	6B	74	MET
48	6E	62	THR
48	6F	62	THR
50	6K	515	ARG
50	6L	515	ARG
51	6M	2295	GLU
51	6N	2295	GLU
1	0H	168	ALA
1	0W	412	THR
1	0I	412	THR

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Mol	Chain	Res	Type
1	0A	168	ALA
1	0M	412	THR
1	0R	168	ALA
1	0X	168	ALA
2	1D	231	ASN
2	1E	231	ASN
2	1F	231	ASN
2	1G	231	ASN
3	1H	875	ALA
3	1H	1007	ARG
3	1I	875	ALA
4	1J	191	SER
4	1J	421	ARG
4	1K	191	SER
5	1L	538	LYS
5	1M	538	LYS
7	1O	137	VAL
9	1Q	562	PRO
9	1Q	674	VAL
9	1Q	708	PRO
9	1Q	857	ALA
9	1Q	858	PRO
10	1R	373	SER
10	1S	341	SER
10	1S	358	ALA
35	4C	285	SER
35	4C	378	THR
37	4E	1167	ASP
37	4E	1742	LYS
37	4F	1079	SER
37	4G	953	PRO
37	4H	1139	THR
38	4O	40	LYS
40	4T	616	HIS
40	4T	648	SER
40	4T	650	ASP
40	4U	616	HIS
40	4U	648	SER
40	4U	650	ASP
40	4V	616	HIS
40	4V	648	SER
40	4V	650	ASP

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Mol	Chain	Res	Type
41	5A	98	GLN
41	5A	141	ASN
42	5H	136	HIS
47	6A	575	VAL
47	6B	575	VAL
51	6M	2261	ALA
51	6N	2261	ALA
4	1J	418	ILE
4	1K	418	ILE
7	1O	3059	LEU
9	1Q	717	TYR
10	1R	300	THR
10	1R	301	ALA
10	1S	336	PRO
34	3V	244	ARG
34	4A	244	ARG
35	4C	570	ALA
37	4E	581	LEU
37	4E	1689	GLU
37	4F	664	TYR
37	4H	664	TYR
38	4P	40	LYS
40	4T	638	THR
40	4T	693	THR
40	4U	638	THR
40	4U	693	THR
40	4V	638	THR
40	4V	693	THR
41	5A	37	TRP
42	5H	49	ILE
42	5H	134	LEU
43	5I	137	ARG
43	5J	137	ARG
43	5K	137	ARG
43	5L	137	ARG
47	6A	810	LEU
47	6A	1640	ASP
47	6B	810	LEU
47	6B	1640	ASP
3	6D	875	ALA
51	6M	1247	ALA
51	6M	2260	ALA

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Mol	Chain	Res	Type
51	6N	1247	ALA
51	6N	2260	ALA
1	0G	413	HIS
1	0M	413	HIS
1	0Y	413	HIS
2	1D	175	SER
2	1D	232	ALA
2	1D	426	LEU
2	1E	175	SER
2	1E	232	ALA
2	1E	426	LEU
2	1G	175	SER
3	1H	874	THR
3	1H	918	PRO
3	1I	96	ALA
3	1I	874	THR
3	1I	918	PRO
9	1Q	660	VAL
9	1Q	744	LEU
9	1Q	756	LYS
30	3F	250	GLU
37	4F	509	PRO
37	4F	1138	VAL
37	4G	1153	ALA
37	4H	1091	VAL
37	4H	1153	ALA
38	4I	28	VAL
38	4I	76	PRO
38	4J	28	VAL
38	4J	76	PRO
38	4K	28	VAL
38	4K	76	PRO
38	4L	28	VAL
38	4L	76	PRO
38	4M	28	VAL
38	4M	76	PRO
38	4N	28	VAL
38	4N	76	PRO
38	4O	8	THR
41	5A	121	GLN
43	5I	29	GLY
43	5I	41	ASP

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Mol	Chain	Res	Type
43	5J	29	GLY
43	5J	41	ASP
43	5K	29	GLY
43	5K	41	ASP
43	5L	29	GLY
43	5L	41	ASP
47	6A	546	TYR
47	6A	554	LEU
47	6A	555	ARG
47	6A	985	GLN
47	6A	1803	SER
47	6B	546	TYR
47	6B	554	LEU
47	6B	555	ARG
47	6B	985	GLN
47	6B	1803	SER
3	6D	874	THR
51	6M	2276	LEU
51	6N	2276	LEU
1	0W	413	HIS
1	0B	413	HIS
2	1E	264	SER
2	1F	265	GLU
2	1G	232	ALA
2	1G	265	GLU
3	1H	96	ALA
6	1N	546	PRO
9	1Q	738	LYS
11	1T	1113	ALA
37	4F	537	LEU
37	4F	1153	ALA
37	4H	1334	GLU
38	4I	37	GLY
38	4J	37	GLY
38	4K	37	GLY
38	4L	37	GLY
38	4M	37	GLY
38	4N	37	GLY
47	6A	911	VAL
47	6B	911	VAL
5	1L	243	GLY
5	1M	243	GLY

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Mol	Chain	Res	Type
8	1P	695	VAL
37	4F	1784	PRO
37	4G	1333	VAL
37	4G	1784	PRO
37	4H	1784	PRO
43	5I	159	PRO
43	5I	167	PRO
43	5J	159	PRO
43	5J	167	PRO
43	5K	159	PRO
43	5K	167	PRO
43	5L	159	PRO
43	5L	167	PRO
2	1D	417	PRO
2	1E	417	PRO
37	4E	585	VAL
37	4F	1095	PRO
37	4G	1323	ILE
37	4H	1095	PRO
48	6E	396	VAL
48	6F	396	VAL
30	3F	337	PRO
9	1Q	782	PRO
9	1Q	829	PRO
24	2S	136	PRO
51	6M	2189	ILE
51	6N	2189	ILE

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0A	333/408 (82%)	333 (100%)	0	100	100
1	0B	333/408 (82%)	333 (100%)	0	100	100
1	0C	333/408 (82%)	333 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0D	333/408 (82%)	333 (100%)	0	100	100
1	0E	333/408 (82%)	333 (100%)	0	100	100
1	0F	333/408 (82%)	333 (100%)	0	100	100
1	0G	333/408 (82%)	333 (100%)	0	100	100
1	0H	333/408 (82%)	333 (100%)	0	100	100
1	0I	333/408 (82%)	332 (100%)	1 (0%)	92	97
1	0J	333/408 (82%)	332 (100%)	1 (0%)	92	97
1	0K	332/408 (81%)	332 (100%)	0	100	100
1	0L	333/408 (82%)	333 (100%)	0	100	100
1	0M	333/408 (82%)	333 (100%)	0	100	100
1	0N	333/408 (82%)	333 (100%)	0	100	100
1	0O	333/408 (82%)	333 (100%)	0	100	100
1	0P	333/408 (82%)	333 (100%)	0	100	100
1	0Q	333/408 (82%)	331 (99%)	2 (1%)	86	94
1	0R	332/408 (81%)	332 (100%)	0	100	100
1	0S	333/408 (82%)	333 (100%)	0	100	100
1	0T	333/408 (82%)	333 (100%)	0	100	100
1	0U	333/408 (82%)	333 (100%)	0	100	100
1	0V	333/408 (82%)	333 (100%)	0	100	100
1	0W	333/408 (82%)	333 (100%)	0	100	100
1	0X	333/408 (82%)	333 (100%)	0	100	100
1	0Y	333/408 (82%)	333 (100%)	0	100	100
1	0Z	333/408 (82%)	333 (100%)	0	100	100
1	1A	333/408 (82%)	333 (100%)	0	100	100
1	1B	333/408 (82%)	332 (100%)	1 (0%)	92	97
1	1C	332/408 (81%)	332 (100%)	0	100	100
2	1D	256/415 (62%)	255 (100%)	1 (0%)	91	97
2	1E	256/415 (62%)	255 (100%)	1 (0%)	91	97
2	1F	263/415 (63%)	263 (100%)	0	100	100
2	1G	263/415 (63%)	263 (100%)	0	100	100
3	1H	547/811 (67%)	547 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	1I	547/811 (67%)	547 (100%)	0	100	100
3	6D	620/811 (76%)	620 (100%)	0	100	100
4	1J	278/3239 (9%)	275 (99%)	3 (1%)	73	88
4	1K	278/3239 (9%)	276 (99%)	2 (1%)	84	93
5	1L	201/2456 (8%)	196 (98%)	5 (2%)	47	75
5	1M	201/2456 (8%)	196 (98%)	5 (2%)	47	75
6	1N	1553/1962 (79%)	1552 (100%)	1 (0%)	93	98
7	1O	1932/2270 (85%)	1932 (100%)	0	100	100
8	1P	236/790 (30%)	236 (100%)	0	100	100
9	1Q	55/728 (8%)	55 (100%)	0	100	100
10	1R	295/353 (84%)	294 (100%)	1 (0%)	92	97
10	1S	195/353 (55%)	195 (100%)	0	100	100
11	1T	1/1185 (0%)	1 (100%)	0	100	100
12	1a	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	1c	370/379 (98%)	370 (100%)	0	100	100
12	1e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	1g	370/379 (98%)	370 (100%)	0	100	100
12	2a	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	2c	370/379 (98%)	370 (100%)	0	100	100
12	2e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	2g	370/379 (98%)	370 (100%)	0	100	100
12	3a	368/379 (97%)	368 (100%)	0	100	100
12	3c	370/379 (98%)	370 (100%)	0	100	100
12	3e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	3g	370/379 (98%)	370 (100%)	0	100	100
12	4a	368/379 (97%)	366 (100%)	2 (0%)	88	95
12	4c	370/379 (98%)	370 (100%)	0	100	100
12	4e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	4g	370/379 (98%)	370 (100%)	0	100	100
12	5a	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	5c	370/379 (98%)	370 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	5e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	5g	370/379 (98%)	370 (100%)	0	100	100
12	6a	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	6c	370/379 (98%)	370 (100%)	0	100	100
12	6e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	6g	370/379 (98%)	370 (100%)	0	100	100
12	7a	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	7c	370/379 (98%)	370 (100%)	0	100	100
12	7e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	7g	370/379 (98%)	370 (100%)	0	100	100
12	8a	368/379 (97%)	366 (100%)	2 (0%)	88	95
12	8c	370/379 (98%)	370 (100%)	0	100	100
12	8e	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	8g	370/379 (98%)	370 (100%)	0	100	100
12	9a	368/379 (97%)	366 (100%)	2 (0%)	88	95
12	9c	370/379 (98%)	370 (100%)	0	100	100
12	9e	368/379 (97%)	366 (100%)	2 (0%)	88	95
12	9g	370/379 (98%)	370 (100%)	0	100	100
12	Aa	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Ac	370/379 (98%)	370 (100%)	0	100	100
12	Ae	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Ag	370/379 (98%)	370 (100%)	0	100	100
12	Ba	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Bc	370/379 (98%)	370 (100%)	0	100	100
12	Be	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Bg	370/379 (98%)	370 (100%)	0	100	100
12	Ca	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Cc	370/379 (98%)	370 (100%)	0	100	100
12	Ce	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Cg	370/379 (98%)	370 (100%)	0	100	100
12	Da	368/379 (97%)	367 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	Dc	370/379 (98%)	370 (100%)	0	100	100
12	De	368/379 (97%)	367 (100%)	1 (0%)	92	97
12	Dg	370/379 (98%)	370 (100%)	0	100	100
13	1b	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	1d	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	1f	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	1h	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	2b	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	2d	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	2f	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	2h	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	3b	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	3d	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	3f	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	3h	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	4b	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	4d	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	4f	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	4h	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	5b	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	5d	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	5f	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	5h	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	6b	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	6d	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	6f	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	6h	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	7b	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	7d	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	7f	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	7h	361/374 (96%)	345 (96%)	16 (4%)	28	63

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	8b	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	8d	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	8f	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	8h	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	9b	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	9d	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	9f	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	9h	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	Ab	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Ad	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Af	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Ah	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Bb	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Bd	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Bf	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Bh	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	Cb	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Cd	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	Cf	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Ch	361/374 (96%)	344 (95%)	17 (5%)	26	61
13	Db	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Dd	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Df	361/374 (96%)	345 (96%)	16 (4%)	28	63
13	Dh	361/374 (96%)	344 (95%)	17 (5%)	26	61
14	2F	115/119 (97%)	112 (97%)	3 (3%)	46	74
14	2G	115/119 (97%)	112 (97%)	3 (3%)	46	74
24	2T	85/313 (27%)	84 (99%)	1 (1%)	71	87
24	2U	87/313 (28%)	86 (99%)	1 (1%)	73	88
24	2V	85/313 (27%)	85 (100%)	0	100	100
28	3C	45/580 (8%)	45 (100%)	0	100	100
29	3E	59/1095 (5%)	59 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	3F	303/642 (47%)	301 (99%)	2 (1%)	84	93
30	3G	187/642 (29%)	187 (100%)	0	100	100
31	3H	114/1457 (8%)	114 (100%)	0	100	100
31	3I	301/1457 (21%)	301 (100%)	0	100	100
32	3J	286/576 (50%)	286 (100%)	0	100	100
32	3K	285/576 (50%)	285 (100%)	0	100	100
33	3L	165/318 (52%)	165 (100%)	0	100	100
34	3M	291/386 (75%)	289 (99%)	2 (1%)	84	93
34	3N	302/386 (78%)	302 (100%)	0	100	100
34	3O	275/386 (71%)	275 (100%)	0	100	100
34	3P	276/386 (72%)	276 (100%)	0	100	100
34	3Q	275/386 (71%)	275 (100%)	0	100	100
34	3R	278/386 (72%)	278 (100%)	0	100	100
34	3S	291/386 (75%)	290 (100%)	1 (0%)	92	97
34	3T	302/386 (78%)	302 (100%)	0	100	100
34	3U	276/386 (72%)	276 (100%)	0	100	100
34	3V	317/386 (82%)	317 (100%)	0	100	100
34	3W	318/386 (82%)	318 (100%)	0	100	100
34	3X	278/386 (72%)	278 (100%)	0	100	100
34	3Y	278/386 (72%)	278 (100%)	0	100	100
34	3Z	278/386 (72%)	278 (100%)	0	100	100
34	4A	317/386 (82%)	317 (100%)	0	100	100
34	4B	318/386 (82%)	318 (100%)	0	100	100
35	4C	525/1698 (31%)	525 (100%)	0	100	100
36	4D	260/267 (97%)	259 (100%)	1 (0%)	91	97
37	4E	743/1694 (44%)	740 (100%)	3 (0%)	91	97
37	4F	722/1694 (43%)	715 (99%)	7 (1%)	76	88
37	4G	722/1694 (43%)	709 (98%)	13 (2%)	59	81
37	4H	722/1694 (43%)	711 (98%)	11 (2%)	65	84
38	4I	51/83 (61%)	42 (82%)	9 (18%)	2	12
38	4J	51/83 (61%)	42 (82%)	9 (18%)	2	12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	4K	51/83 (61%)	42 (82%)	9 (18%)	2	12
38	4L	51/83 (61%)	42 (82%)	9 (18%)	2	12
38	4M	51/83 (61%)	42 (82%)	9 (18%)	2	12
38	4N	51/83 (61%)	42 (82%)	9 (18%)	2	12
38	4O	65/83 (78%)	65 (100%)	0	100	100
38	4P	44/83 (53%)	44 (100%)	0	100	100
39	4Q	178/330 (54%)	174 (98%)	4 (2%)	52	77
39	4R	178/330 (54%)	174 (98%)	4 (2%)	52	77
39	4S	178/330 (54%)	174 (98%)	4 (2%)	52	77
40	4T	464/605 (77%)	454 (98%)	10 (2%)	52	77
40	4U	464/605 (77%)	454 (98%)	10 (2%)	52	77
40	4V	464/605 (77%)	454 (98%)	10 (2%)	52	77
42	5E	132/215 (61%)	129 (98%)	3 (2%)	50	76
42	5F	132/215 (61%)	129 (98%)	3 (2%)	50	76
42	5G	132/215 (61%)	129 (98%)	3 (2%)	50	76
42	5H	132/215 (61%)	127 (96%)	5 (4%)	33	66
43	5I	155/247 (63%)	139 (90%)	16 (10%)	7	34
43	5J	155/247 (63%)	139 (90%)	16 (10%)	7	34
43	5K	155/247 (63%)	139 (90%)	16 (10%)	7	34
43	5L	155/247 (63%)	139 (90%)	16 (10%)	7	34
44	5P	125/137 (91%)	125 (100%)	0	100	100
44	5Q	125/137 (91%)	125 (100%)	0	100	100
44	5R	125/137 (91%)	125 (100%)	0	100	100
44	5S	124/137 (90%)	124 (100%)	0	100	100
44	5T	124/137 (90%)	124 (100%)	0	100	100
44	5U	124/137 (90%)	124 (100%)	0	100	100
44	5V	126/137 (92%)	126 (100%)	0	100	100
46	5Z	22/22 (100%)	22 (100%)	0	100	100
47	6A	1147/1408 (82%)	1124 (98%)	23 (2%)	55	79
47	6B	1147/1408 (82%)	1124 (98%)	23 (2%)	55	79
48	6E	710/864 (82%)	702 (99%)	8 (1%)	73	88

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	6F	710/864 (82%)	702 (99%)	8 (1%)	73	88
49	6G	383/384 (100%)	349 (91%)	34 (9%)	9	40
49	6H	383/384 (100%)	349 (91%)	34 (9%)	9	40
49	6I	383/384 (100%)	349 (91%)	34 (9%)	9	40
49	6J	383/384 (100%)	349 (91%)	34 (9%)	9	40
50	6K	511/533 (96%)	505 (99%)	6 (1%)	71	87
50	6L	511/533 (96%)	505 (99%)	6 (1%)	71	87
51	6M	827/1940 (43%)	820 (99%)	7 (1%)	81	91
51	6N	827/1940 (43%)	820 (99%)	7 (1%)	81	91
All	All	78493/114873 (68%)	77144 (98%)	1349 (2%)	62	82

All (1349) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0Q	15	LYS
1	0Q	280	LYS
1	1B	238	LYS
2	1D	397	LYS
2	1E	397	LYS
4	1J	33	THR
4	1J	73	SER
4	1J	326	SER
4	1K	73	SER
4	1K	326	SER
5	1L	421	SER
5	1L	422	SER
5	1L	471	SER
5	1L	588	ARG
5	1L	609	ASP
5	1M	421	SER
5	1M	422	SER
5	1M	471	SER
5	1M	588	ARG
5	1M	609	ASP
6	1N	1186	LYS
10	1R	402	LYS
12	1a	306	ARG
13	1b	2	ARG
13	1b	77	GLU

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Mol	Chain	Res	Type
13	1b	94	SER
13	1b	120	ASP
13	1b	165	SER
13	1b	170	THR
13	1b	178	SER
13	1b	191	THR
13	1b	211	ASP
13	1b	213	CYS
13	1b	225	THR
13	1b	251	ASP
13	1b	270	SER
13	1b	327	ASP
13	1b	361	THR
13	1b	387	ILE
13	1d	2	ARG
13	1d	77	GLU
13	1d	94	SER
13	1d	120	ASP
13	1d	165	SER
13	1d	170	THR
13	1d	178	SER
13	1d	191	THR
13	1d	211	ASP
13	1d	213	CYS
13	1d	225	THR
13	1d	251	ASP
13	1d	270	SER
13	1d	308	ARG
13	1d	327	ASP
13	1d	361	THR
13	1d	387	ILE
12	1e	306	ARG
13	1f	2	ARG
13	1f	77	GLU
13	1f	94	SER
13	1f	120	ASP
13	1f	165	SER
13	1f	170	THR
13	1f	178	SER
13	1f	191	THR
13	1f	211	ASP
13	1f	213	CYS

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Mol	Chain	Res	Type
13	1f	225	THR
13	1f	251	ASP
13	1f	270	SER
13	1f	327	ASP
13	1f	361	THR
13	1f	387	ILE
13	1h	2	ARG
13	1h	77	GLU
13	1h	94	SER
13	1h	120	ASP
13	1h	165	SER
13	1h	170	THR
13	1h	178	SER
13	1h	191	THR
13	1h	211	ASP
13	1h	213	CYS
13	1h	225	THR
13	1h	251	ASP
13	1h	270	SER
13	1h	327	ASP
13	1h	361	THR
13	1h	387	ILE
14	2F	21	SER
14	2F	126	LEU
14	2F	153	SER
14	2G	21	SER
14	2G	126	LEU
14	2G	153	SER
24	2T	132	ARG
24	2U	171	LYS
12	2a	306	ARG
13	2b	2	ARG
13	2b	77	GLU
13	2b	94	SER
13	2b	120	ASP
13	2b	165	SER
13	2b	170	THR
13	2b	178	SER
13	2b	191	THR
13	2b	211	ASP
13	2b	213	CYS
13	2b	225	THR

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Mol	Chain	Res	Type
13	2b	251	ASP
13	2b	270	SER
13	2b	327	ASP
13	2b	361	THR
13	2b	387	ILE
13	2d	2	ARG
13	2d	77	GLU
13	2d	94	SER
13	2d	120	ASP
13	2d	165	SER
13	2d	170	THR
13	2d	178	SER
13	2d	191	THR
13	2d	211	ASP
13	2d	213	CYS
13	2d	225	THR
13	2d	251	ASP
13	2d	270	SER
13	2d	327	ASP
13	2d	361	THR
13	2d	387	ILE
12	2e	306	ARG
13	2f	2	ARG
13	2f	77	GLU
13	2f	94	SER
13	2f	120	ASP
13	2f	165	SER
13	2f	170	THR
13	2f	178	SER
13	2f	191	THR
13	2f	211	ASP
13	2f	213	CYS
13	2f	225	THR
13	2f	251	ASP
13	2f	270	SER
13	2f	308	ARG
13	2f	327	ASP
13	2f	361	THR
13	2f	387	ILE
13	2h	2	ARG
13	2h	77	GLU
13	2h	94	SER

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Mol	Chain	Res	Type
13	2h	120	ASP
13	2h	165	SER
13	2h	170	THR
13	2h	178	SER
13	2h	191	THR
13	2h	211	ASP
13	2h	213	CYS
13	2h	225	THR
13	2h	251	ASP
13	2h	270	SER
13	2h	327	ASP
13	2h	361	THR
13	2h	387	ILE
30	3F	328	ILE
30	3F	611	ARG
34	3M	257	LYS
34	3M	465	LYS
34	3S	257	LYS
13	3b	2	ARG
13	3b	77	GLU
13	3b	94	SER
13	3b	120	ASP
13	3b	165	SER
13	3b	170	THR
13	3b	178	SER
13	3b	191	THR
13	3b	211	ASP
13	3b	213	CYS
13	3b	225	THR
13	3b	251	ASP
13	3b	270	SER
13	3b	308	ARG
13	3b	327	ASP
13	3b	361	THR
13	3b	387	ILE
13	3d	2	ARG
13	3d	77	GLU
13	3d	94	SER
13	3d	120	ASP
13	3d	165	SER
13	3d	170	THR
13	3d	178	SER

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Mol	Chain	Res	Type
13	3d	191	THR
13	3d	211	ASP
13	3d	213	CYS
13	3d	225	THR
13	3d	251	ASP
13	3d	270	SER
13	3d	327	ASP
13	3d	361	THR
13	3d	387	ILE
12	3e	306	ARG
13	3f	2	ARG
13	3f	77	GLU
13	3f	94	SER
13	3f	120	ASP
13	3f	165	SER
13	3f	170	THR
13	3f	178	SER
13	3f	191	THR
13	3f	211	ASP
13	3f	213	CYS
13	3f	225	THR
13	3f	251	ASP
13	3f	270	SER
13	3f	327	ASP
13	3f	361	THR
13	3f	387	ILE
13	3h	2	ARG
13	3h	77	GLU
13	3h	94	SER
13	3h	120	ASP
13	3h	165	SER
13	3h	170	THR
13	3h	178	SER
13	3h	191	THR
13	3h	211	ASP
13	3h	213	CYS
13	3h	225	THR
13	3h	251	ASP
13	3h	270	SER
13	3h	327	ASP
13	3h	361	THR
13	3h	387	ILE

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Mol	Chain	Res	Type
36	4D	108	LYS
37	4E	583	GLU
37	4E	585	VAL
37	4E	588	PRO
37	4F	1075	VAL
37	4F	1082	LEU
37	4F	1083	ILE
37	4F	1093	VAL
37	4F	1322	ARG
37	4F	1332	SER
37	4F	1712	LEU
37	4G	856	MET
37	4G	1082	LEU
37	4G	1091	VAL
37	4G	1092	LEU
37	4G	1093	VAL
37	4G	1143	LEU
37	4G	1322	ARG
37	4G	1323	ILE
37	4G	1332	SER
37	4G	1333	VAL
37	4G	1335	MET
37	4G	1338	PHE
37	4G	1345	PRO
37	4H	954	SER
37	4H	1084	ARG
37	4H	1091	VAL
37	4H	1092	LEU
37	4H	1093	VAL
37	4H	1139	THR
37	4H	1321	THR
37	4H	1323	ILE
37	4H	1332	SER
37	4H	1333	VAL
37	4H	1341	ILE
38	4I	26	GLU
38	4I	29	LYS
38	4I	33	LYS
38	4I	36	VAL
38	4I	39	HIS
38	4I	40	LYS
38	4I	58	VAL

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Mol	Chain	Res	Type
38	4I	72	ARG
38	4I	74	ASP
38	4J	26	GLU
38	4J	29	LYS
38	4J	33	LYS
38	4J	36	VAL
38	4J	39	HIS
38	4J	40	LYS
38	4J	58	VAL
38	4J	72	ARG
38	4J	74	ASP
38	4K	26	GLU
38	4K	29	LYS
38	4K	33	LYS
38	4K	36	VAL
38	4K	39	HIS
38	4K	40	LYS
38	4K	58	VAL
38	4K	72	ARG
38	4K	74	ASP
38	4L	26	GLU
38	4L	29	LYS
38	4L	33	LYS
38	4L	36	VAL
38	4L	39	HIS
38	4L	40	LYS
38	4L	58	VAL
38	4L	72	ARG
38	4L	74	ASP
38	4M	26	GLU
38	4M	29	LYS
38	4M	33	LYS
38	4M	36	VAL
38	4M	39	HIS
38	4M	40	LYS
38	4M	58	VAL
38	4M	72	ARG
38	4M	74	ASP
38	4N	26	GLU
38	4N	29	LYS
38	4N	33	LYS
38	4N	36	VAL

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Mol	Chain	Res	Type
38	4N	39	HIS
38	4N	40	LYS
38	4N	58	VAL
38	4N	72	ARG
38	4N	74	ASP
39	4Q	10	VAL
39	4Q	171	SER
39	4Q	184	SER
39	4Q	206	MET
39	4R	10	VAL
39	4R	171	SER
39	4R	184	SER
39	4R	206	MET
39	4S	10	VAL
39	4S	171	SER
39	4S	184	SER
39	4S	206	MET
40	4T	291	VAL
40	4T	311	VAL
40	4T	363	VAL
40	4T	406	SER
40	4T	432	SER
40	4T	455	THR
40	4T	500	SER
40	4T	510	SER
40	4T	600	THR
40	4T	714	ASP
40	4U	291	VAL
40	4U	311	VAL
40	4U	363	VAL
40	4U	406	SER
40	4U	432	SER
40	4U	455	THR
40	4U	500	SER
40	4U	510	SER
40	4U	600	THR
40	4U	714	ASP
40	4V	291	VAL
40	4V	311	VAL
40	4V	363	VAL
40	4V	406	SER
40	4V	432	SER

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Mol	Chain	Res	Type
40	4V	455	THR
40	4V	500	SER
40	4V	510	SER
40	4V	600	THR
40	4V	714	ASP
12	4a	60	VAL
12	4a	306	ARG
13	4b	2	ARG
13	4b	77	GLU
13	4b	94	SER
13	4b	120	ASP
13	4b	165	SER
13	4b	170	THR
13	4b	178	SER
13	4b	191	THR
13	4b	211	ASP
13	4b	213	CYS
13	4b	225	THR
13	4b	251	ASP
13	4b	270	SER
13	4b	327	ASP
13	4b	361	THR
13	4b	387	ILE
13	4d	2	ARG
13	4d	77	GLU
13	4d	94	SER
13	4d	120	ASP
13	4d	165	SER
13	4d	170	THR
13	4d	178	SER
13	4d	191	THR
13	4d	211	ASP
13	4d	213	CYS
13	4d	225	THR
13	4d	251	ASP
13	4d	270	SER
13	4d	308	ARG
13	4d	327	ASP
13	4d	361	THR
13	4d	387	ILE
12	4e	306	ARG
13	4f	2	ARG

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Mol	Chain	Res	Type
13	4f	77	GLU
13	4f	94	SER
13	4f	120	ASP
13	4f	165	SER
13	4f	170	THR
13	4f	178	SER
13	4f	191	THR
13	4f	211	ASP
13	4f	213	CYS
13	4f	225	THR
13	4f	251	ASP
13	4f	270	SER
13	4f	308	ARG
13	4f	327	ASP
13	4f	361	THR
13	4f	387	ILE
13	4h	2	ARG
13	4h	77	GLU
13	4h	94	SER
13	4h	120	ASP
13	4h	165	SER
13	4h	170	THR
13	4h	178	SER
13	4h	191	THR
13	4h	211	ASP
13	4h	213	CYS
13	4h	225	THR
13	4h	251	ASP
13	4h	270	SER
13	4h	327	ASP
13	4h	361	THR
13	4h	387	ILE
42	5E	85	CYS
42	5E	120	ASP
42	5E	145	SER
42	5F	85	CYS
42	5F	120	ASP
42	5F	145	SER
42	5G	85	CYS
42	5G	120	ASP
42	5G	145	SER
42	5H	50	LEU

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Mol	Chain	Res	Type
42	5H	135	ARG
42	5H	136	HIS
42	5H	139	LEU
42	5H	158	MET
43	5I	15	LEU
43	5I	21	PRO
43	5I	24	LYS
43	5I	30	ARG
43	5I	33	LEU
43	5I	35	LYS
43	5I	36	TYR
43	5I	44	THR
43	5I	50	ILE
43	5I	96	SER
43	5I	120	SER
43	5I	147	THR
43	5I	158	HIS
43	5I	160	SER
43	5I	161	ASP
43	5I	168	GLU
43	5J	15	LEU
43	5J	21	PRO
43	5J	24	LYS
43	5J	30	ARG
43	5J	33	LEU
43	5J	35	LYS
43	5J	36	TYR
43	5J	44	THR
43	5J	50	ILE
43	5J	96	SER
43	5J	120	SER
43	5J	147	THR
43	5J	158	HIS
43	5J	160	SER
43	5J	161	ASP
43	5J	168	GLU
43	5K	15	LEU
43	5K	21	PRO
43	5K	24	LYS
43	5K	30	ARG
43	5K	33	LEU
43	5K	35	LYS

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Mol	Chain	Res	Type
43	5K	36	TYR
43	5K	44	THR
43	5K	50	ILE
43	5K	96	SER
43	5K	120	SER
43	5K	147	THR
43	5K	158	HIS
43	5K	160	SER
43	5K	161	ASP
43	5K	168	GLU
43	5L	15	LEU
43	5L	21	PRO
43	5L	24	LYS
43	5L	30	ARG
43	5L	33	LEU
43	5L	35	LYS
43	5L	36	TYR
43	5L	44	THR
43	5L	50	ILE
43	5L	96	SER
43	5L	120	SER
43	5L	147	THR
43	5L	158	HIS
43	5L	160	SER
43	5L	161	ASP
43	5L	168	GLU
12	5a	306	ARG
13	5b	2	ARG
13	5b	77	GLU
13	5b	94	SER
13	5b	120	ASP
13	5b	165	SER
13	5b	170	THR
13	5b	178	SER
13	5b	191	THR
13	5b	211	ASP
13	5b	213	CYS
13	5b	225	THR
13	5b	251	ASP
13	5b	270	SER
13	5b	327	ASP
13	5b	361	THR

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Mol	Chain	Res	Type
13	5b	387	ILE
13	5d	2	ARG
13	5d	77	GLU
13	5d	94	SER
13	5d	120	ASP
13	5d	165	SER
13	5d	170	THR
13	5d	178	SER
13	5d	191	THR
13	5d	211	ASP
13	5d	213	CYS
13	5d	225	THR
13	5d	251	ASP
13	5d	270	SER
13	5d	327	ASP
13	5d	361	THR
13	5d	387	ILE
12	5e	306	ARG
13	5f	2	ARG
13	5f	77	GLU
13	5f	94	SER
13	5f	120	ASP
13	5f	165	SER
13	5f	170	THR
13	5f	178	SER
13	5f	191	THR
13	5f	211	ASP
13	5f	213	CYS
13	5f	225	THR
13	5f	251	ASP
13	5f	270	SER
13	5f	327	ASP
13	5f	361	THR
13	5f	387	ILE
13	5h	2	ARG
13	5h	77	GLU
13	5h	94	SER
13	5h	120	ASP
13	5h	165	SER
13	5h	170	THR
13	5h	178	SER
13	5h	191	THR

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Mol	Chain	Res	Type
13	5h	211	ASP
13	5h	213	CYS
13	5h	225	THR
13	5h	251	ASP
13	5h	270	SER
13	5h	327	ASP
13	5h	361	THR
13	5h	387	ILE
47	6A	6	ARG
47	6A	12	GLU
47	6A	37	LYS
47	6A	50	LYS
47	6A	62	ARG
47	6A	101	LEU
47	6A	112	MET
47	6A	174	LYS
47	6A	183	GLN
47	6A	201	ARG
47	6A	234	LEU
47	6A	399	LYS
47	6A	791	SER
47	6A	795	LEU
47	6A	923	SER
47	6A	994	LYS
47	6A	1089	LYS
47	6A	1482	GLU
47	6A	1520	ASP
47	6A	1603	SER
47	6A	1616	SER
47	6A	1625	VAL
47	6A	1632	SER
47	6B	6	ARG
47	6B	12	GLU
47	6B	37	LYS
47	6B	50	LYS
47	6B	62	ARG
47	6B	101	LEU
47	6B	112	MET
47	6B	174	LYS
47	6B	183	GLN
47	6B	201	ARG
47	6B	234	LEU

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Mol	Chain	Res	Type
47	6B	399	LYS
47	6B	791	SER
47	6B	795	LEU
47	6B	923	SER
47	6B	994	LYS
47	6B	1089	LYS
47	6B	1482	GLU
47	6B	1520	ASP
47	6B	1603	SER
47	6B	1616	SER
47	6B	1625	VAL
47	6B	1632	SER
48	6E	120	SER
48	6E	138	SER
48	6E	167	SER
48	6E	277	SER
48	6E	332	SER
48	6E	895	MET
48	6E	963	ILE
48	6E	1036	GLN
48	6F	120	SER
48	6F	138	SER
48	6F	167	SER
48	6F	277	SER
48	6F	332	SER
48	6F	895	MET
48	6F	963	ILE
48	6F	1036	GLN
49	6G	2	SER
49	6G	3	VAL
49	6G	13	GLU
49	6G	46	GLU
49	6G	79	VAL
49	6G	84	SER
49	6G	85	THR
49	6G	121	LEU
49	6G	136	MET
49	6G	143	ASP
49	6G	147	LYS
49	6G	154	LEU
49	6G	191	SER
49	6G	203	ASN

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Mol	Chain	Res	Type
49	6G	211	MET
49	6G	215	VAL
49	6G	238	ILE
49	6G	262	ASN
49	6G	264	GLU
49	6G	269	VAL
49	6G	291	SER
49	6G	292	GLU
49	6G	303	ASP
49	6G	312	SER
49	6G	328	CYS
49	6G	373	LYS
49	6G	395	THR
49	6G	417	SER
49	6G	420	THR
49	6G	425	ILE
49	6G	432	LEU
49	6G	439	THR
49	6G	445	SER
49	6G	460	GLU
49	6H	2	SER
49	6H	3	VAL
49	6H	13	GLU
49	6H	46	GLU
49	6H	79	VAL
49	6H	84	SER
49	6H	85	THR
49	6H	121	LEU
49	6H	136	MET
49	6H	143	ASP
49	6H	147	LYS
49	6H	154	LEU
49	6H	191	SER
49	6H	203	ASN
49	6H	211	MET
49	6H	215	VAL
49	6H	238	ILE
49	6H	262	ASN
49	6H	264	GLU
49	6H	269	VAL
49	6H	291	SER
49	6H	292	GLU

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Mol	Chain	Res	Type
49	6H	303	ASP
49	6H	312	SER
49	6H	328	CYS
49	6H	373	LYS
49	6H	395	THR
49	6H	417	SER
49	6H	420	THR
49	6H	425	ILE
49	6H	432	LEU
49	6H	439	THR
49	6H	445	SER
49	6H	460	GLU
49	6I	2	SER
49	6I	3	VAL
49	6I	13	GLU
49	6I	46	GLU
49	6I	79	VAL
49	6I	84	SER
49	6I	85	THR
49	6I	121	LEU
49	6I	136	MET
49	6I	143	ASP
49	6I	147	LYS
49	6I	154	LEU
49	6I	191	SER
49	6I	203	ASN
49	6I	211	MET
49	6I	215	VAL
49	6I	238	ILE
49	6I	262	ASN
49	6I	264	GLU
49	6I	269	VAL
49	6I	291	SER
49	6I	292	GLU
49	6I	303	ASP
49	6I	312	SER
49	6I	328	CYS
49	6I	373	LYS
49	6I	395	THR
49	6I	417	SER
49	6I	420	THR
49	6I	425	ILE

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Mol	Chain	Res	Type
49	6I	432	LEU
49	6I	439	THR
49	6I	445	SER
49	6I	460	GLU
49	6J	2	SER
49	6J	3	VAL
49	6J	13	GLU
49	6J	46	GLU
49	6J	79	VAL
49	6J	84	SER
49	6J	85	THR
49	6J	121	LEU
49	6J	136	MET
49	6J	143	ASP
49	6J	147	LYS
49	6J	154	LEU
49	6J	191	SER
49	6J	203	ASN
49	6J	211	MET
49	6J	215	VAL
49	6J	238	ILE
49	6J	262	ASN
49	6J	264	GLU
49	6J	269	VAL
49	6J	291	SER
49	6J	292	GLU
49	6J	303	ASP
49	6J	312	SER
49	6J	328	CYS
49	6J	373	LYS
49	6J	395	THR
49	6J	417	SER
49	6J	420	THR
49	6J	425	ILE
49	6J	432	LEU
49	6J	439	THR
49	6J	445	SER
49	6J	460	GLU
50	6K	115	VAL
50	6K	327	LEU
50	6K	399	LEU
50	6K	503	ASN

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Mol	Chain	Res	Type
50	6K	542	VAL
50	6K	588	GLU
50	6L	115	VAL
50	6L	327	LEU
50	6L	399	LEU
50	6L	503	ASN
50	6L	542	VAL
50	6L	588	GLU
51	6M	1269	VAL
51	6M	1622	THR
51	6M	1632	ASP
51	6M	1977	SER
51	6M	1999	SER
51	6M	2043	SER
51	6M	2248	LYS
51	6N	1269	VAL
51	6N	1622	THR
51	6N	1632	ASP
51	6N	1977	SER
51	6N	1999	SER
51	6N	2043	SER
51	6N	2248	LYS
12	6a	306	ARG
13	6b	2	ARG
13	6b	77	GLU
13	6b	94	SER
13	6b	120	ASP
13	6b	165	SER
13	6b	170	THR
13	6b	178	SER
13	6b	191	THR
13	6b	211	ASP
13	6b	213	CYS
13	6b	225	THR
13	6b	251	ASP
13	6b	270	SER
13	6b	327	ASP
13	6b	361	THR
13	6b	387	ILE
13	6d	2	ARG
13	6d	77	GLU
13	6d	94	SER

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Mol	Chain	Res	Type
13	6d	120	ASP
13	6d	165	SER
13	6d	170	THR
13	6d	178	SER
13	6d	191	THR
13	6d	211	ASP
13	6d	213	CYS
13	6d	225	THR
13	6d	251	ASP
13	6d	270	SER
13	6d	308	ARG
13	6d	327	ASP
13	6d	361	THR
13	6d	387	ILE
12	6e	306	ARG
13	6f	2	ARG
13	6f	77	GLU
13	6f	94	SER
13	6f	120	ASP
13	6f	165	SER
13	6f	170	THR
13	6f	178	SER
13	6f	191	THR
13	6f	211	ASP
13	6f	213	CYS
13	6f	225	THR
13	6f	251	ASP
13	6f	270	SER
13	6f	327	ASP
13	6f	361	THR
13	6f	387	ILE
13	6h	2	ARG
13	6h	77	GLU
13	6h	94	SER
13	6h	120	ASP
13	6h	165	SER
13	6h	170	THR
13	6h	178	SER
13	6h	191	THR
13	6h	211	ASP
13	6h	213	CYS
13	6h	225	THR

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Mol	Chain	Res	Type
13	6h	251	ASP
13	6h	270	SER
13	6h	327	ASP
13	6h	361	THR
13	6h	387	ILE
12	7a	306	ARG
13	7b	2	ARG
13	7b	77	GLU
13	7b	94	SER
13	7b	120	ASP
13	7b	165	SER
13	7b	170	THR
13	7b	178	SER
13	7b	191	THR
13	7b	211	ASP
13	7b	213	CYS
13	7b	225	THR
13	7b	251	ASP
13	7b	270	SER
13	7b	308	ARG
13	7b	327	ASP
13	7b	361	THR
13	7b	387	ILE
13	7d	2	ARG
13	7d	77	GLU
13	7d	94	SER
13	7d	120	ASP
13	7d	165	SER
13	7d	170	THR
13	7d	178	SER
13	7d	191	THR
13	7d	211	ASP
13	7d	213	CYS
13	7d	225	THR
13	7d	251	ASP
13	7d	270	SER
13	7d	327	ASP
13	7d	361	THR
13	7d	387	ILE
12	7e	306	ARG
13	7f	2	ARG
13	7f	77	GLU

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Mol	Chain	Res	Type
13	7f	94	SER
13	7f	120	ASP
13	7f	165	SER
13	7f	170	THR
13	7f	178	SER
13	7f	191	THR
13	7f	211	ASP
13	7f	213	CYS
13	7f	225	THR
13	7f	251	ASP
13	7f	270	SER
13	7f	308	ARG
13	7f	327	ASP
13	7f	361	THR
13	7f	387	ILE
13	7h	2	ARG
13	7h	77	GLU
13	7h	94	SER
13	7h	120	ASP
13	7h	165	SER
13	7h	170	THR
13	7h	178	SER
13	7h	191	THR
13	7h	211	ASP
13	7h	213	CYS
13	7h	225	THR
13	7h	251	ASP
13	7h	270	SER
13	7h	327	ASP
13	7h	361	THR
13	7h	387	ILE
12	8a	306	ARG
12	8a	379	LYS
13	8b	2	ARG
13	8b	77	GLU
13	8b	94	SER
13	8b	120	ASP
13	8b	165	SER
13	8b	170	THR
13	8b	178	SER
13	8b	191	THR
13	8b	211	ASP

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Mol	Chain	Res	Type
13	8b	213	CYS
13	8b	225	THR
13	8b	251	ASP
13	8b	270	SER
13	8b	327	ASP
13	8b	361	THR
13	8b	387	ILE
13	8d	2	ARG
13	8d	77	GLU
13	8d	94	SER
13	8d	120	ASP
13	8d	165	SER
13	8d	170	THR
13	8d	178	SER
13	8d	191	THR
13	8d	211	ASP
13	8d	213	CYS
13	8d	225	THR
13	8d	251	ASP
13	8d	270	SER
13	8d	308	ARG
13	8d	327	ASP
13	8d	361	THR
13	8d	387	ILE
12	8e	306	ARG
13	8f	2	ARG
13	8f	77	GLU
13	8f	94	SER
13	8f	120	ASP
13	8f	165	SER
13	8f	170	THR
13	8f	178	SER
13	8f	191	THR
13	8f	211	ASP
13	8f	213	CYS
13	8f	225	THR
13	8f	251	ASP
13	8f	270	SER
13	8f	308	ARG
13	8f	327	ASP
13	8f	361	THR
13	8f	387	ILE

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Mol	Chain	Res	Type
13	8h	2	ARG
13	8h	77	GLU
13	8h	94	SER
13	8h	120	ASP
13	8h	165	SER
13	8h	170	THR
13	8h	178	SER
13	8h	191	THR
13	8h	211	ASP
13	8h	213	CYS
13	8h	225	THR
13	8h	251	ASP
13	8h	270	SER
13	8h	308	ARG
13	8h	327	ASP
13	8h	361	THR
13	8h	387	ILE
12	9a	306	ARG
12	9a	379	LYS
13	9b	2	ARG
13	9b	77	GLU
13	9b	94	SER
13	9b	120	ASP
13	9b	165	SER
13	9b	170	THR
13	9b	178	SER
13	9b	191	THR
13	9b	211	ASP
13	9b	213	CYS
13	9b	225	THR
13	9b	251	ASP
13	9b	270	SER
13	9b	308	ARG
13	9b	327	ASP
13	9b	361	THR
13	9b	387	ILE
13	9d	2	ARG
13	9d	77	GLU
13	9d	94	SER
13	9d	120	ASP
13	9d	165	SER
13	9d	170	THR

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Mol	Chain	Res	Type
13	9d	178	SER
13	9d	191	THR
13	9d	211	ASP
13	9d	213	CYS
13	9d	225	THR
13	9d	251	ASP
13	9d	270	SER
13	9d	308	ARG
13	9d	327	ASP
13	9d	361	THR
13	9d	387	ILE
12	9e	86	ARG
12	9e	306	ARG
13	9f	2	ARG
13	9f	77	GLU
13	9f	94	SER
13	9f	120	ASP
13	9f	165	SER
13	9f	170	THR
13	9f	178	SER
13	9f	191	THR
13	9f	211	ASP
13	9f	213	CYS
13	9f	225	THR
13	9f	251	ASP
13	9f	270	SER
13	9f	327	ASP
13	9f	361	THR
13	9f	387	ILE
13	9h	2	ARG
13	9h	77	GLU
13	9h	94	SER
13	9h	120	ASP
13	9h	165	SER
13	9h	170	THR
13	9h	178	SER
13	9h	191	THR
13	9h	211	ASP
13	9h	213	CYS
13	9h	225	THR
13	9h	251	ASP
13	9h	270	SER

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Mol	Chain	Res	Type
13	9h	308	ARG
13	9h	327	ASP
13	9h	361	THR
13	9h	387	ILE
12	Aa	306	ARG
13	Ab	2	ARG
13	Ab	77	GLU
13	Ab	94	SER
13	Ab	120	ASP
13	Ab	165	SER
13	Ab	170	THR
13	Ab	178	SER
13	Ab	191	THR
13	Ab	211	ASP
13	Ab	213	CYS
13	Ab	225	THR
13	Ab	251	ASP
13	Ab	270	SER
13	Ab	327	ASP
13	Ab	361	THR
13	Ab	387	ILE
13	Ad	2	ARG
13	Ad	77	GLU
13	Ad	94	SER
13	Ad	120	ASP
13	Ad	165	SER
13	Ad	170	THR
13	Ad	178	SER
13	Ad	191	THR
13	Ad	211	ASP
13	Ad	213	CYS
13	Ad	225	THR
13	Ad	251	ASP
13	Ad	270	SER
13	Ad	327	ASP
13	Ad	361	THR
13	Ad	387	ILE
12	Ae	306	ARG
13	Af	2	ARG
13	Af	77	GLU
13	Af	94	SER
13	Af	120	ASP

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Mol	Chain	Res	Type
13	Af	165	SER
13	Af	170	THR
13	Af	178	SER
13	Af	191	THR
13	Af	211	ASP
13	Af	213	CYS
13	Af	225	THR
13	Af	251	ASP
13	Af	270	SER
13	Af	327	ASP
13	Af	361	THR
13	Af	387	ILE
13	Ah	2	ARG
13	Ah	77	GLU
13	Ah	94	SER
13	Ah	120	ASP
13	Ah	165	SER
13	Ah	170	THR
13	Ah	178	SER
13	Ah	191	THR
13	Ah	211	ASP
13	Ah	213	CYS
13	Ah	225	THR
13	Ah	251	ASP
13	Ah	270	SER
13	Ah	327	ASP
13	Ah	361	THR
13	Ah	387	ILE
12	Ba	306	ARG
13	Bb	2	ARG
13	Bb	77	GLU
13	Bb	94	SER
13	Bb	120	ASP
13	Bb	165	SER
13	Bb	170	THR
13	Bb	178	SER
13	Bb	191	THR
13	Bb	211	ASP
13	Bb	213	CYS
13	Bb	225	THR
13	Bb	251	ASP
13	Bb	270	SER

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Mol	Chain	Res	Type
13	Bb	327	ASP
13	Bb	361	THR
13	Bb	387	ILE
13	Bd	2	ARG
13	Bd	77	GLU
13	Bd	94	SER
13	Bd	120	ASP
13	Bd	165	SER
13	Bd	170	THR
13	Bd	178	SER
13	Bd	191	THR
13	Bd	211	ASP
13	Bd	213	CYS
13	Bd	225	THR
13	Bd	251	ASP
13	Bd	270	SER
13	Bd	327	ASP
13	Bd	361	THR
13	Bd	387	ILE
12	Be	306	ARG
13	Bf	2	ARG
13	Bf	77	GLU
13	Bf	94	SER
13	Bf	120	ASP
13	Bf	165	SER
13	Bf	170	THR
13	Bf	178	SER
13	Bf	191	THR
13	Bf	211	ASP
13	Bf	213	CYS
13	Bf	225	THR
13	Bf	251	ASP
13	Bf	270	SER
13	Bf	327	ASP
13	Bf	361	THR
13	Bf	387	ILE
13	Bh	2	ARG
13	Bh	77	GLU
13	Bh	94	SER
13	Bh	120	ASP
13	Bh	165	SER
13	Bh	170	THR

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Mol	Chain	Res	Type
13	Bh	178	SER
13	Bh	191	THR
13	Bh	211	ASP
13	Bh	213	CYS
13	Bh	225	THR
13	Bh	251	ASP
13	Bh	270	SER
13	Bh	308	ARG
13	Bh	327	ASP
13	Bh	361	THR
13	Bh	387	ILE
12	Ca	306	ARG
13	Cb	2	ARG
13	Cb	77	GLU
13	Cb	94	SER
13	Cb	120	ASP
13	Cb	165	SER
13	Cb	170	THR
13	Cb	178	SER
13	Cb	191	THR
13	Cb	211	ASP
13	Cb	213	CYS
13	Cb	225	THR
13	Cb	251	ASP
13	Cb	270	SER
13	Cb	327	ASP
13	Cb	361	THR
13	Cb	387	ILE
13	Cd	2	ARG
13	Cd	77	GLU
13	Cd	94	SER
13	Cd	120	ASP
13	Cd	165	SER
13	Cd	170	THR
13	Cd	178	SER
13	Cd	191	THR
13	Cd	211	ASP
13	Cd	213	CYS
13	Cd	225	THR
13	Cd	251	ASP
13	Cd	270	SER
13	Cd	308	ARG

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Mol	Chain	Res	Type
13	Cd	327	ASP
13	Cd	361	THR
13	Cd	387	ILE
12	Ce	306	ARG
13	Cf	2	ARG
13	Cf	77	GLU
13	Cf	94	SER
13	Cf	120	ASP
13	Cf	165	SER
13	Cf	170	THR
13	Cf	178	SER
13	Cf	191	THR
13	Cf	211	ASP
13	Cf	213	CYS
13	Cf	225	THR
13	Cf	251	ASP
13	Cf	270	SER
13	Cf	327	ASP
13	Cf	361	THR
13	Cf	387	ILE
13	Ch	2	ARG
13	Ch	77	GLU
13	Ch	94	SER
13	Ch	120	ASP
13	Ch	165	SER
13	Ch	170	THR
13	Ch	178	SER
13	Ch	191	THR
13	Ch	211	ASP
13	Ch	213	CYS
13	Ch	225	THR
13	Ch	251	ASP
13	Ch	270	SER
13	Ch	308	ARG
13	Ch	327	ASP
13	Ch	361	THR
13	Ch	387	ILE
12	Da	306	ARG
13	Db	2	ARG
13	Db	77	GLU
13	Db	94	SER
13	Db	120	ASP

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Mol	Chain	Res	Type
13	Db	165	SER
13	Db	170	THR
13	Db	178	SER
13	Db	191	THR
13	Db	211	ASP
13	Db	213	CYS
13	Db	225	THR
13	Db	251	ASP
13	Db	270	SER
13	Db	327	ASP
13	Db	361	THR
13	Db	387	ILE
13	Dd	2	ARG
13	Dd	77	GLU
13	Dd	94	SER
13	Dd	120	ASP
13	Dd	165	SER
13	Dd	170	THR
13	Dd	178	SER
13	Dd	191	THR
13	Dd	211	ASP
13	Dd	213	CYS
13	Dd	225	THR
13	Dd	251	ASP
13	Dd	270	SER
13	Dd	327	ASP
13	Dd	361	THR
13	Dd	387	ILE
12	De	306	ARG
13	Df	2	ARG
13	Df	77	GLU
13	Df	94	SER
13	Df	120	ASP
13	Df	165	SER
13	Df	170	THR
13	Df	178	SER
13	Df	191	THR
13	Df	211	ASP
13	Df	213	CYS
13	Df	225	THR
13	Df	251	ASP
13	Df	270	SER

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Mol	Chain	Res	Type
13	Df	327	ASP
13	Df	361	THR
13	Df	387	ILE
13	Dh	2	ARG
13	Dh	77	GLU
13	Dh	94	SER
13	Dh	120	ASP
13	Dh	165	SER
13	Dh	170	THR
13	Dh	178	SER
13	Dh	191	THR
13	Dh	211	ASP
13	Dh	213	CYS
13	Dh	225	THR
13	Dh	251	ASP
13	Dh	270	SER
13	Dh	308	ARG
13	Dh	327	ASP
13	Dh	361	THR
13	Dh	387	ILE
1	0J	238	LYS
1	0I	280	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1246) such sidechains are listed below:

Mol	Chain	Res	Type
1	0A	39	GLN
1	0A	58	GLN
1	0A	87	GLN
1	0A	161	GLN
1	0A	177	GLN
1	0A	270	HIS
1	0A	292	ASN
1	0B	39	GLN
1	0B	119	GLN
1	0B	239	HIS
1	0B	270	HIS
1	0B	287	GLN
1	0B	292	ASN
1	0B	309	ASN
1	0B	351	HIS
1	0C	58	GLN

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Mol	Chain	Res	Type
1	0C	96	ASN
1	0C	161	GLN
1	0C	177	GLN
1	0C	203	GLN
1	0C	270	HIS
1	0C	292	ASN
1	0D	119	GLN
1	0D	162	GLN
1	0D	270	HIS
1	0D	292	ASN
1	0D	308	ASN
1	0D	309	ASN
1	0D	345	ASN
1	0E	58	GLN
1	0E	96	ASN
1	0E	161	GLN
1	0E	177	GLN
1	0E	239	HIS
1	0E	270	HIS
1	0E	292	ASN
1	0F	96	ASN
1	0F	113	HIS
1	0F	270	HIS
1	0F	292	ASN
1	0F	308	ASN
1	0F	309	ASN
1	0F	345	ASN
1	0F	351	HIS
1	0G	96	ASN
1	0G	203	GLN
1	0G	292	ASN
1	0G	308	ASN
1	0G	309	ASN
1	0G	345	ASN
1	0G	351	HIS
1	0G	370	HIS
1	0G	413	HIS
1	0L	32	GLN
1	0L	58	GLN
1	0L	87	GLN
1	0L	96	ASN
1	0L	161	GLN

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Mol	Chain	Res	Type
1	0L	177	GLN
1	0L	239	HIS
1	0L	270	HIS
1	0L	292	ASN
1	0L	345	ASN
1	0M	96	ASN
1	0M	119	GLN
1	0M	203	GLN
1	0M	292	ASN
1	0M	308	ASN
1	0M	309	ASN
1	0M	345	ASN
1	0M	370	HIS
1	0M	413	HIS
1	0N	58	GLN
1	0N	87	GLN
1	0N	161	GLN
1	0N	177	GLN
1	0N	270	HIS
1	0N	292	ASN
1	0N	345	ASN
1	0O	39	GLN
1	0O	59	GLN
1	0O	96	ASN
1	0O	203	GLN
1	0O	239	HIS
1	0O	292	ASN
1	0O	308	ASN
1	0O	309	ASN
1	0O	345	ASN
1	0O	370	HIS
1	0O	413	HIS
1	0P	33	ASN
1	0P	58	GLN
1	0P	59	GLN
1	0P	87	GLN
1	0P	96	ASN
1	0P	101	GLN
1	0P	161	GLN
1	0P	177	GLN
1	0P	270	HIS
1	0P	292	ASN

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Mol	Chain	Res	Type
1	0P	345	ASN
1	0P	351	HIS
1	0Q	87	GLN
1	0Q	281	HIS
1	0Q	292	ASN
1	0Q	308	ASN
1	0Q	309	ASN
1	0Q	345	ASN
1	0Q	351	HIS
1	0R	58	GLN
1	0R	87	GLN
1	0R	161	GLN
1	0R	177	GLN
1	0R	203	GLN
1	0R	270	HIS
1	0R	292	ASN
1	0R	345	ASN
1	0S	119	GLN
1	0S	203	GLN
1	0S	270	HIS
1	0S	292	ASN
1	0S	308	ASN
1	0S	309	ASN
1	0S	345	ASN
1	0S	351	HIS
1	0T	58	GLN
1	0T	96	ASN
1	0T	161	GLN
1	0T	177	GLN
1	0T	270	HIS
1	0T	292	ASN
1	0U	59	GLN
1	0U	96	ASN
1	0U	239	HIS
1	0U	270	HIS
1	0U	292	ASN
1	0U	309	ASN
1	0U	345	ASN
1	0V	58	GLN
1	0V	161	GLN
1	0V	177	GLN
1	0V	239	HIS

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Mol	Chain	Res	Type
1	0V	270	HIS
1	0V	292	ASN
1	0X	58	GLN
1	0X	161	GLN
1	0X	177	GLN
1	0X	270	HIS
1	0X	292	ASN
1	0X	345	ASN
1	0Y	33	ASN
1	0Y	119	GLN
1	0Y	270	HIS
1	0Y	292	ASN
1	0Y	308	ASN
1	0Y	309	ASN
1	0Z	58	GLN
1	0Z	96	ASN
1	0Z	161	GLN
1	0Z	177	GLN
1	0Z	203	GLN
1	0Z	270	HIS
1	0Z	292	ASN
1	0Z	345	ASN
1	1A	59	GLN
1	1A	96	ASN
1	1A	119	GLN
1	1A	162	GLN
1	1A	270	HIS
1	1A	292	ASN
1	1A	309	ASN
1	1A	345	ASN
1	1A	370	HIS
1	1B	58	GLN
1	1B	95	GLN
1	1B	96	ASN
1	1B	101	GLN
1	1B	119	GLN
1	1B	156	ASN
1	1B	177	GLN
1	1B	220	ASN
1	1B	270	HIS
1	1B	345	ASN
1	1C	95	GLN

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Mol	Chain	Res	Type
1	1C	113	HIS
1	1C	292	ASN
1	1C	308	ASN
1	1C	309	ASN
1	1C	345	ASN
2	1D	120	GLN
2	1D	153	GLN
2	1D	211	HIS
2	1E	33	ASN
2	1E	120	GLN
2	1E	153	GLN
2	1E	211	HIS
2	1F	78	GLN
2	1F	120	GLN
2	1F	153	GLN
2	1G	20	GLN
2	1G	78	GLN
2	1G	114	HIS
2	1G	120	GLN
2	1G	153	GLN
2	1G	231	ASN
3	1H	105	HIS
3	1H	228	ASN
3	1H	242	GLN
3	1H	623	HIS
3	1H	834	HIS
3	1H	842	HIS
3	1H	864	HIS
3	1H	925	ASN
3	1H	1053	GLN
3	1I	105	HIS
3	1I	228	ASN
3	1I	242	GLN
3	1I	623	HIS
3	1I	753	HIS
3	1I	834	HIS
3	1I	860	HIS
4	1J	26	GLN
4	1J	66	HIS
4	1J	75	HIS
4	1J	88	GLN
4	1J	251	GLN

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Mol	Chain	Res	Type
4	1J	271	GLN
4	1J	281	GLN
4	1J	329	GLN
4	1K	26	GLN
4	1K	88	GLN
4	1K	271	GLN
4	1K	281	GLN
4	1K	329	GLN
5	1L	459	GLN
5	1L	503	GLN
5	1L	563	GLN
5	1M	459	GLN
5	1M	503	GLN
5	1M	563	GLN
6	1N	3	GLN
6	1N	9	GLN
6	1N	37	GLN
6	1N	151	HIS
6	1N	727	ASN
6	1N	731	GLN
6	1N	818	ASN
6	1N	1189	ASN
6	1N	1203	GLN
6	1N	1213	HIS
6	1N	1386	HIS
6	1N	1733	GLN
6	1N	1860	GLN
6	1N	2159	GLN
6	1N	2215	ASN
6	1N	2555	GLN
7	1O	221	GLN
7	1O	238	GLN
7	1O	330	HIS
7	1O	533	GLN
7	1O	788	GLN
7	1O	862	GLN
7	1O	1076	GLN
7	1O	1206	HIS
7	1O	1315	GLN
7	1O	1869	ASN
7	1O	2028	ASN
7	1O	2072	HIS

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Mol	Chain	Res	Type
7	1O	2465	GLN
7	1O	2492	ASN
7	1O	3036	GLN
8	1P	878	GLN
8	1P	983	HIS
10	1R	40	HIS
10	1R	44	GLN
10	1R	63	GLN
10	1R	115	HIS
10	1R	418	ASN
10	1R	441	HIS
10	1S	40	HIS
10	1S	44	GLN
10	1S	115	HIS
10	1S	157	ASN
10	1S	418	ASN
10	1S	430	HIS
10	1S	441	HIS
12	1a	99	ASN
12	1a	204	ASN
12	1a	245	GLN
13	1b	15	GLN
13	1b	256	GLN
13	1b	283	HIS
13	1b	329	ASN
13	1b	342	GLN
12	1c	11	GLN
12	1c	83	GLN
12	1c	99	ASN
12	1c	245	GLN
12	1c	291	GLN
12	1c	347	ASN
12	1c	375	GLN
12	1c	384	GLN
12	1c	426	GLN
13	1d	15	GLN
13	1d	342	GLN
12	1e	99	ASN
12	1e	204	ASN
12	1e	245	GLN
12	1e	279	GLN
13	1f	15	GLN

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Mol	Chain	Res	Type
13	1f	283	HIS
13	1f	342	GLN
12	1g	11	GLN
12	1g	83	GLN
12	1g	99	ASN
12	1g	134	GLN
12	1g	190	HIS
12	1g	247	ASN
12	1g	291	GLN
12	1g	347	ASN
12	1g	375	GLN
12	1g	384	GLN
12	1g	426	GLN
13	1h	15	GLN
13	1h	329	ASN
13	1h	342	GLN
14	2F	30	ASN
14	2F	42	ASN
14	2F	63	GLN
14	2F	82	GLN
14	2G	30	ASN
14	2G	42	ASN
14	2G	63	GLN
14	2G	82	GLN
24	2T	188	ASN
24	2U	153	ASN
24	2U	163	GLN
24	2U	172	HIS
24	2U	187	HIS
24	2V	193	GLN
12	2a	99	ASN
12	2a	131	GLN
12	2a	204	ASN
12	2a	256	ASN
13	2b	15	GLN
13	2b	283	HIS
13	2b	342	GLN
12	2c	11	GLN
12	2c	83	GLN
12	2c	134	GLN
12	2c	245	GLN
12	2c	291	GLN

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Mol	Chain	Res	Type
12	2c	347	ASN
12	2c	375	GLN
12	2c	384	GLN
12	2c	426	GLN
13	2d	15	GLN
13	2d	283	HIS
13	2d	342	GLN
12	2e	99	ASN
12	2e	204	ASN
12	2e	245	GLN
13	2f	15	GLN
13	2f	283	HIS
13	2f	342	GLN
12	2g	11	GLN
12	2g	83	GLN
12	2g	134	GLN
12	2g	245	GLN
12	2g	247	ASN
12	2g	291	GLN
12	2g	347	ASN
12	2g	375	GLN
12	2g	384	GLN
12	2g	426	GLN
13	2h	15	GLN
13	2h	342	GLN
28	3C	577	GLN
30	3F	340	GLN
30	3F	344	ASN
30	3F	409	GLN
30	3F	658	GLN
30	3G	658	GLN
30	3G	686	GLN
31	3H	250	GLN
31	3I	119	HIS
31	3I	250	GLN
31	3I	279	GLN
31	3I	289	ASN
31	3I	331	GLN
31	3I	455	GLN
32	3J	25	ASN
32	3J	79	HIS
32	3J	137	HIS

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Mol	Chain	Res	Type
32	3J	143	ASN
32	3J	259	ASN
32	3J	401	GLN
32	3K	115	GLN
32	3K	137	HIS
32	3K	143	ASN
32	3K	160	GLN
32	3K	259	ASN
32	3K	315	GLN
33	3L	55	ASN
34	3M	38	HIS
34	3M	45	ASN
34	3M	52	GLN
34	3M	61	HIS
34	3M	64	HIS
34	3M	75	GLN
34	3M	206	GLN
34	3M	255	HIS
34	3M	266	HIS
34	3M	446	GLN
34	3M	463	HIS
34	3M	503	ASN
34	3N	38	HIS
34	3N	45	ASN
34	3N	255	HIS
34	3N	295	GLN
34	3N	452	HIS
34	3O	47	ASN
34	3O	61	HIS
34	3O	87	ASN
34	3O	118	HIS
34	3O	122	GLN
34	3O	265	GLN
34	3O	281	GLN
34	3O	313	HIS
34	3O	315	GLN
34	3O	490	GLN
34	3O	503	ASN
34	3P	52	GLN
34	3P	64	HIS
34	3P	295	GLN
34	3P	313	HIS

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Mol	Chain	Res	Type
34	3P	324	HIS
34	3P	372	GLN
34	3P	381	ASN
34	3P	452	HIS
34	3P	463	HIS
34	3Q	35	GLN
34	3Q	75	GLN
34	3Q	87	ASN
34	3Q	102	GLN
34	3Q	118	HIS
34	3Q	122	GLN
34	3Q	281	GLN
34	3Q	313	HIS
34	3Q	315	GLN
34	3Q	503	ASN
34	3R	35	GLN
34	3R	38	HIS
34	3R	47	ASN
34	3R	61	HIS
34	3R	64	HIS
34	3R	77	GLN
34	3R	313	HIS
34	3R	315	GLN
34	3R	337	GLN
34	3R	342	GLN
34	3R	452	HIS
34	3S	61	HIS
34	3S	64	HIS
34	3S	75	GLN
34	3S	190	ASN
34	3S	255	HIS
34	3S	315	GLN
34	3S	384	ASN
34	3T	33	GLN
34	3T	38	HIS
34	3T	40	ASN
34	3T	64	HIS
34	3T	197	ASN
34	3T	255	HIS
34	3T	295	GLN
34	3T	342	GLN
34	3T	350	ASN

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Mol	Chain	Res	Type
34	3T	381	ASN
34	3T	384	ASN
34	3T	452	HIS
34	3T	494	GLN
34	3U	64	HIS
34	3U	102	GLN
34	3U	118	HIS
34	3U	295	GLN
34	3U	313	HIS
34	3U	324	HIS
34	3U	372	GLN
34	3U	452	HIS
34	3U	463	HIS
34	3U	495	GLN
34	3V	47	ASN
34	3V	86	GLN
34	3V	118	HIS
34	3V	123	GLN
34	3V	245	ASN
34	3V	313	HIS
34	3V	324	HIS
34	3V	404	HIS
34	3V	422	HIS
34	3V	452	HIS
34	3V	495	GLN
34	3W	35	GLN
34	3W	61	HIS
34	3W	102	GLN
34	3W	118	HIS
34	3W	122	GLN
34	3W	198	ASN
34	3W	313	HIS
34	3W	315	GLN
34	3W	342	GLN
34	3W	452	HIS
34	3X	64	HIS
34	3X	75	GLN
34	3X	122	GLN
34	3X	313	HIS
34	3X	315	GLN
34	3X	342	GLN
34	3X	372	GLN

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Mol	Chain	Res	Type
34	3X	452	HIS
34	3X	463	HIS
34	3X	490	GLN
34	3Y	35	GLN
34	3Y	38	HIS
34	3Y	61	HIS
34	3Y	64	HIS
34	3Y	77	GLN
34	3Y	105	GLN
34	3Y	315	GLN
34	3Y	342	GLN
34	3Y	452	HIS
34	3Z	64	HIS
34	3Z	75	GLN
34	3Z	122	GLN
34	3Z	313	HIS
34	3Z	315	GLN
34	3Z	342	GLN
34	3Z	372	GLN
34	3Z	452	HIS
34	3Z	463	HIS
34	3Z	503	ASN
12	3a	37	HIS
12	3a	99	ASN
12	3a	131	GLN
12	3a	204	ASN
12	3a	247	ASN
12	3a	256	ASN
13	3b	15	GLN
13	3b	342	GLN
12	3c	11	GLN
12	3c	83	GLN
12	3c	134	GLN
12	3c	245	GLN
12	3c	247	ASN
12	3c	279	GLN
12	3c	332	ASN
12	3c	347	ASN
12	3c	375	GLN
12	3c	384	GLN
12	3c	426	GLN
13	3d	15	GLN

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Mol	Chain	Res	Type
13	3d	283	HIS
13	3d	342	GLN
12	3e	99	ASN
12	3e	204	ASN
12	3e	245	GLN
13	3f	15	GLN
13	3f	342	GLN
13	3f	406	HIS
12	3g	11	GLN
12	3g	83	GLN
12	3g	247	ASN
12	3g	256	ASN
12	3g	279	GLN
12	3g	332	ASN
12	3g	347	ASN
12	3g	375	GLN
12	3g	384	GLN
12	3g	426	GLN
13	3h	15	GLN
13	3h	342	GLN
34	4A	47	ASN
34	4A	86	GLN
34	4A	102	GLN
34	4A	118	HIS
34	4A	245	ASN
34	4A	313	HIS
34	4A	315	GLN
34	4A	324	HIS
34	4A	342	GLN
34	4A	404	HIS
34	4A	422	HIS
34	4A	452	HIS
34	4A	495	GLN
34	4B	35	GLN
34	4B	45	ASN
34	4B	61	HIS
34	4B	102	GLN
34	4B	118	HIS
34	4B	122	GLN
34	4B	313	HIS
34	4B	315	GLN
34	4B	316	GLN

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Mol	Chain	Res	Type
34	4B	342	GLN
34	4B	452	HIS
34	4B	463	HIS
35	4C	317	ASN
35	4C	451	GLN
35	4C	571	ASN
35	4C	575	GLN
35	4C	579	GLN
35	4C	817	ASN
35	4C	831	ASN
35	4C	960	GLN
35	4C	1088	GLN
35	4C	1105	HIS
36	4D	24	GLN
36	4D	63	HIS
36	4D	122	HIS
36	4D	236	HIS
36	4D	245	HIS
36	4D	275	ASN
37	4E	766	HIS
37	4E	1133	ASN
37	4E	1701	GLN
37	4E	1726	HIS
37	4E	1739	GLN
37	4E	1753	GLN
37	4F	539	GLN
37	4F	543	ASN
37	4F	582	GLN
37	4F	686	HIS
37	4F	697	GLN
37	4F	918	GLN
37	4F	1081	HIS
37	4F	1133	ASN
37	4F	1392	GLN
37	4G	539	GLN
37	4G	686	HIS
37	4G	697	GLN
37	4G	918	GLN
37	4G	1392	GLN
37	4H	510	HIS
37	4H	686	HIS
37	4H	697	GLN

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Mol	Chain	Res	Type
37	4H	818	ASN
37	4H	918	GLN
37	4H	1392	GLN
37	4H	1753	GLN
38	4I	63	GLN
38	4I	66	GLN
38	4J	39	HIS
38	4J	43	ASN
38	4J	63	GLN
38	4K	39	HIS
38	4K	43	ASN
38	4K	63	GLN
38	4M	39	HIS
38	4M	43	ASN
38	4N	39	HIS
38	4N	43	ASN
38	4O	39	HIS
38	4O	66	GLN
38	4P	63	GLN
39	4Q	167	HIS
40	4T	74	GLN
40	4T	171	HIS
40	4T	221	GLN
40	4T	262	GLN
40	4T	616	HIS
40	4T	662	HIS
40	4U	74	GLN
40	4U	171	HIS
40	4U	221	GLN
40	4U	262	GLN
40	4U	616	HIS
40	4U	662	HIS
40	4V	74	GLN
40	4V	171	HIS
40	4V	221	GLN
40	4V	262	GLN
40	4V	616	HIS
40	4V	662	HIS
12	4a	37	HIS
12	4a	204	ASN
13	4b	15	GLN
13	4b	342	GLN

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Mol	Chain	Res	Type
12	4c	83	GLN
12	4c	245	GLN
12	4c	279	GLN
12	4c	291	GLN
12	4c	347	ASN
12	4c	375	GLN
12	4c	384	GLN
12	4c	426	GLN
13	4d	15	GLN
13	4d	342	GLN
12	4e	37	HIS
12	4e	131	GLN
12	4e	204	ASN
12	4e	245	GLN
13	4f	15	GLN
13	4f	342	GLN
12	4g	83	GLN
12	4g	99	ASN
12	4g	134	GLN
12	4g	247	ASN
12	4g	256	ASN
12	4g	291	GLN
12	4g	347	ASN
12	4g	375	GLN
12	4g	426	GLN
13	4h	15	GLN
13	4h	309	HIS
13	4h	342	GLN
42	5E	9	HIS
42	5E	104	GLN
42	5E	148	GLN
42	5E	150	HIS
42	5F	9	HIS
42	5G	9	HIS
42	5H	9	HIS
42	5H	76	ASN
42	5H	97	HIS
42	5H	121	GLN
43	5I	22	HIS
43	5I	51	HIS
43	5I	83	HIS
43	5J	22	HIS

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Mol	Chain	Res	Type
43	5J	138	HIS
43	5K	22	HIS
43	5K	138	HIS
43	5L	20	HIS
43	5L	22	HIS
43	5L	45	ASN
43	5L	148	ASN
43	5L	158	HIS
44	5Q	64	ASN
44	5Q	101	ASN
44	5Q	115	ASN
44	5R	64	ASN
44	5R	115	ASN
44	5S	111	HIS
44	5T	111	HIS
44	5U	111	HIS
44	5V	7	GLN
12	5a	204	ASN
12	5a	247	ASN
12	5a	256	ASN
12	5a	424	GLN
13	5b	15	GLN
13	5b	342	GLN
12	5c	83	GLN
12	5c	247	ASN
12	5c	256	ASN
12	5c	279	GLN
12	5c	291	GLN
12	5c	347	ASN
12	5c	375	GLN
12	5c	426	GLN
13	5d	15	GLN
13	5d	283	HIS
13	5d	342	GLN
12	5e	37	HIS
12	5e	131	GLN
12	5e	204	ASN
12	5e	256	ASN
12	5e	416	ASN
13	5f	15	GLN
13	5f	283	HIS
13	5f	342	GLN

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Mol	Chain	Res	Type
12	5g	83	GLN
12	5g	99	ASN
12	5g	134	GLN
12	5g	247	ASN
12	5g	291	GLN
12	5g	347	ASN
12	5g	375	GLN
12	5g	426	GLN
13	5h	15	GLN
13	5h	283	HIS
13	5h	342	GLN
47	6A	73	HIS
47	6A	80	ASN
47	6A	137	HIS
47	6A	200	GLN
47	6A	230	HIS
47	6A	291	GLN
47	6A	381	GLN
47	6A	386	GLN
47	6A	412	GLN
47	6A	611	GLN
47	6A	812	GLN
47	6A	853	HIS
47	6A	890	GLN
47	6A	1059	HIS
47	6A	1287	GLN
47	6A	1647	GLN
47	6B	73	HIS
47	6B	80	ASN
47	6B	137	HIS
47	6B	200	GLN
47	6B	208	GLN
47	6B	291	GLN
47	6B	381	GLN
47	6B	386	GLN
47	6B	611	GLN
47	6B	812	GLN
47	6B	853	HIS
47	6B	890	GLN
47	6B	1059	HIS
47	6B	1287	GLN
47	6B	1647	GLN

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Mol	Chain	Res	Type
3	6D	46	ASN
3	6D	677	HIS
3	6D	769	ASN
3	6D	834	HIS
3	6D	842	HIS
3	6D	1053	GLN
48	6E	100	ASN
48	6E	122	ASN
48	6E	196	ASN
48	6E	520	GLN
48	6E	772	GLN
48	6E	920	GLN
48	6E	1022	GLN
48	6F	100	ASN
48	6F	122	ASN
48	6F	196	ASN
48	6F	520	GLN
48	6F	772	GLN
48	6F	920	GLN
48	6F	1022	GLN
49	6G	21	ASN
49	6G	88	HIS
49	6G	193	ASN
49	6G	267	ASN
49	6G	270	ASN
49	6G	307	GLN
49	6G	309	ASN
49	6G	342	GLN
49	6G	436	GLN
49	6G	448	ASN
49	6H	21	ASN
49	6H	88	HIS
49	6H	193	ASN
49	6H	267	ASN
49	6H	270	ASN
49	6H	309	ASN
49	6H	342	GLN
49	6H	436	GLN
49	6H	448	ASN
49	6I	88	HIS
49	6I	193	ASN
49	6I	267	ASN

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Mol	Chain	Res	Type
49	6I	270	ASN
49	6I	309	ASN
49	6I	342	GLN
49	6I	436	GLN
49	6I	448	ASN
49	6J	88	HIS
49	6J	193	ASN
49	6J	267	ASN
49	6J	270	ASN
49	6J	309	ASN
49	6J	342	GLN
49	6J	436	GLN
49	6J	448	ASN
50	6K	24	ASN
50	6K	111	ASN
50	6K	160	GLN
50	6K	178	ASN
50	6K	353	GLN
50	6K	382	GLN
50	6K	440	ASN
50	6K	511	ASN
50	6K	610	ASN
50	6L	24	ASN
50	6L	111	ASN
50	6L	160	GLN
50	6L	178	ASN
50	6L	285	GLN
50	6L	353	GLN
50	6L	382	GLN
50	6L	440	ASN
50	6L	511	ASN
50	6L	610	ASN
51	6M	1254	GLN
51	6M	1261	HIS
51	6M	1352	HIS
51	6M	1373	HIS
51	6M	1387	GLN
51	6M	1493	GLN
51	6M	1599	GLN
51	6M	1683	HIS
51	6M	1928	GLN
51	6M	1976	ASN

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Mol	Chain	Res	Type
51	6M	1983	HIS
51	6M	2038	GLN
51	6M	2049	ASN
51	6M	2433	GLN
51	6N	1254	GLN
51	6N	1261	HIS
51	6N	1352	HIS
51	6N	1373	HIS
51	6N	1387	GLN
51	6N	1493	GLN
51	6N	1599	GLN
51	6N	1683	HIS
51	6N	1928	GLN
51	6N	1976	ASN
51	6N	1983	HIS
51	6N	2038	GLN
51	6N	2049	ASN
51	6N	2078	HIS
51	6N	2433	GLN
12	6a	105	HIS
12	6a	204	ASN
12	6a	245	GLN
12	6a	256	ASN
13	6b	15	GLN
13	6b	342	GLN
12	6c	83	GLN
12	6c	99	ASN
12	6c	247	ASN
12	6c	256	ASN
12	6c	347	ASN
12	6c	375	GLN
12	6c	426	GLN
13	6d	15	GLN
13	6d	342	GLN
12	6e	204	ASN
12	6e	245	GLN
12	6e	424	GLN
13	6f	15	GLN
13	6f	342	GLN
12	6g	83	GLN
12	6g	247	ASN
12	6g	256	ASN

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Mol	Chain	Res	Type
12	6g	291	GLN
12	6g	332	ASN
12	6g	337	ASN
12	6g	347	ASN
12	6g	375	GLN
12	6g	384	GLN
12	6g	426	GLN
13	6h	15	GLN
13	6h	342	GLN
12	7a	94	GLN
12	7a	99	ASN
12	7a	131	GLN
12	7a	204	ASN
13	7b	15	GLN
13	7b	342	GLN
12	7c	83	GLN
12	7c	134	GLN
12	7c	191	GLN
12	7c	195	ASN
12	7c	247	ASN
12	7c	256	ASN
12	7c	279	GLN
12	7c	291	GLN
12	7c	307	HIS
12	7c	347	ASN
12	7c	375	GLN
12	7c	426	GLN
13	7d	11	GLN
13	7d	15	GLN
13	7d	283	HIS
12	7e	204	ASN
12	7e	292	GLN
13	7f	15	GLN
13	7f	342	GLN
12	7g	11	GLN
12	7g	83	GLN
12	7g	134	GLN
12	7g	245	GLN
12	7g	291	GLN
12	7g	347	ASN
12	7g	375	GLN
12	7g	384	GLN

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Mol	Chain	Res	Type
12	7g	426	GLN
13	7h	15	GLN
13	7h	283	HIS
13	7h	342	GLN
12	8a	99	ASN
12	8a	204	ASN
12	8a	256	ASN
12	8a	424	GLN
13	8b	15	GLN
13	8b	342	GLN
12	8c	83	GLN
12	8c	134	GLN
12	8c	247	ASN
12	8c	256	ASN
12	8c	291	GLN
12	8c	375	GLN
12	8c	384	GLN
12	8c	426	GLN
13	8d	15	GLN
13	8d	342	GLN
12	8e	131	GLN
12	8e	204	ASN
13	8f	15	GLN
13	8f	309	HIS
13	8f	342	GLN
12	8g	11	GLN
12	8g	83	GLN
12	8g	99	ASN
12	8g	247	ASN
12	8g	291	GLN
12	8g	347	ASN
12	8g	375	GLN
12	8g	426	GLN
13	8h	15	GLN
13	8h	283	HIS
13	8h	342	GLN
12	9a	99	ASN
12	9a	131	GLN
12	9a	204	ASN
12	9a	375	GLN
12	9a	416	ASN
12	9a	423	GLN

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Mol	Chain	Res	Type
12	9a	426	GLN
13	9b	15	GLN
13	9b	342	GLN
12	9c	83	GLN
12	9c	99	ASN
12	9c	245	GLN
12	9c	347	ASN
12	9c	375	GLN
12	9c	426	GLN
13	9d	15	GLN
13	9d	342	GLN
12	9e	99	ASN
12	9e	131	GLN
12	9e	204	ASN
13	9f	15	GLN
13	9f	342	GLN
12	9g	83	GLN
12	9g	134	GLN
12	9g	256	ASN
12	9g	347	ASN
12	9g	375	GLN
12	9g	426	GLN
13	9h	15	GLN
13	9h	342	GLN
13	9h	393	HIS
12	Aa	94	GLN
12	Aa	99	ASN
12	Aa	204	ASN
12	Aa	245	GLN
12	Aa	256	ASN
13	Ab	15	GLN
13	Ab	133	GLN
13	Ab	342	GLN
12	Ac	83	GLN
12	Ac	99	ASN
12	Ac	134	GLN
12	Ac	256	ASN
12	Ac	347	ASN
12	Ac	375	GLN
12	Ac	426	GLN
13	Ad	15	GLN
13	Ad	342	GLN

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Mol	Chain	Res	Type
12	Ae	99	ASN
12	Ae	131	GLN
12	Ae	204	ASN
13	Af	15	GLN
13	Af	128	ASN
13	Af	133	GLN
13	Af	342	GLN
12	Ag	83	GLN
12	Ag	99	ASN
12	Ag	134	GLN
12	Ag	347	ASN
12	Ag	375	GLN
12	Ag	426	GLN
13	Ah	15	GLN
13	Ah	192	HIS
13	Ah	342	GLN
12	Ba	48	ASN
12	Ba	99	ASN
12	Ba	131	GLN
12	Ba	204	ASN
12	Ba	279	GLN
13	Bb	15	GLN
13	Bb	133	GLN
13	Bb	283	HIS
13	Bb	342	GLN
12	Bc	83	GLN
12	Bc	94	GLN
12	Bc	99	ASN
12	Bc	247	ASN
12	Bc	332	ASN
12	Bc	347	ASN
12	Bc	375	GLN
12	Bc	426	GLN
13	Bd	15	GLN
13	Bd	342	GLN
12	Be	99	ASN
12	Be	131	GLN
12	Be	204	ASN
12	Be	256	ASN
13	Bf	15	GLN
13	Bf	133	GLN
13	Bf	283	HIS

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Mol	Chain	Res	Type
13	Bf	285	GLN
13	Bf	342	GLN
12	Bg	83	GLN
12	Bg	94	GLN
12	Bg	99	ASN
12	Bg	134	GLN
12	Bg	190	HIS
12	Bg	191	GLN
12	Bg	337	ASN
12	Bg	347	ASN
12	Bg	375	GLN
12	Bg	426	GLN
13	Bh	15	GLN
13	Bh	342	GLN
12	Ca	99	ASN
12	Ca	204	ASN
12	Ca	279	GLN
12	Ca	347	ASN
13	Cb	15	GLN
13	Cb	342	GLN
13	Cb	406	HIS
12	Cc	11	GLN
12	Cc	83	GLN
12	Cc	105	HIS
12	Cc	134	GLN
12	Cc	245	GLN
12	Cc	247	ASN
12	Cc	291	GLN
12	Cc	347	ASN
12	Cc	375	GLN
12	Cc	384	GLN
12	Cc	426	GLN
13	Cd	15	GLN
13	Cd	342	GLN
13	Cd	406	HIS
12	Ce	99	ASN
12	Ce	131	GLN
12	Ce	204	ASN
12	Ce	245	GLN
12	Ce	279	GLN
13	Cf	15	GLN
13	Cf	133	GLN

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Mol	Chain	Res	Type
13	Cf	342	GLN
12	Cg	11	GLN
12	Cg	83	GLN
12	Cg	105	HIS
12	Cg	195	ASN
12	Cg	245	GLN
12	Cg	291	GLN
12	Cg	329	GLN
12	Cg	347	ASN
12	Cg	375	GLN
12	Cg	426	GLN
13	Ch	15	GLN
13	Ch	342	GLN
12	Da	37	HIS
12	Da	99	ASN
12	Da	131	GLN
12	Da	204	ASN
12	Da	245	GLN
12	Da	247	ASN
13	Db	15	GLN
13	Db	50	ASN
13	Db	283	HIS
13	Db	342	GLN
12	Dc	11	GLN
12	Dc	83	GLN
12	Dc	99	ASN
12	Dc	245	GLN
12	Dc	279	GLN
12	Dc	291	GLN
12	Dc	332	ASN
12	Dc	347	ASN
12	Dc	375	GLN
12	Dc	384	GLN
12	Dc	426	GLN
13	Dd	15	GLN
13	Dd	50	ASN
13	Dd	176	GLN
13	Dd	342	GLN
12	De	99	ASN
12	De	204	ASN
12	De	245	GLN
13	Df	15	GLN

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Mol	Chain	Res	Type
13	Df	342	GLN
12	Dg	11	GLN
12	Dg	83	GLN
12	Dg	245	GLN
12	Dg	279	GLN
12	Dg	291	GLN
12	Dg	347	ASN
12	Dg	375	GLN
12	Dg	384	GLN
12	Dg	426	GLN
13	Dh	15	GLN
13	Dh	50	ASN
13	Dh	176	GLN
13	Dh	342	GLN
1	0H	33	ASN
1	0H	58	GLN
1	0H	87	GLN
1	0H	96	ASN
1	0H	161	GLN
1	0H	177	GLN
1	0H	270	HIS
1	0H	292	ASN
1	0H	345	ASN
1	0H	351	HIS
1	0J	58	GLN
1	0J	96	ASN
1	0J	161	GLN
1	0J	203	GLN
1	0J	270	HIS
1	0J	292	ASN
1	0J	345	ASN
1	0W	96	ASN
1	0W	203	GLN
1	0W	292	ASN
1	0W	308	ASN
1	0W	309	ASN
1	0W	345	ASN
1	0W	351	HIS
1	0W	370	HIS
1	0W	413	HIS
1	0I	87	GLN
1	0I	95	GLN

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Mol	Chain	Res	Type
1	0I	281	HIS
1	0I	292	ASN
1	0I	308	ASN
1	0I	309	ASN
1	0I	351	HIS
1	0K	113	HIS
1	0K	292	ASN
1	0K	308	ASN
1	0K	309	ASN
1	0K	345	ASN
44	5P	64	ASN
44	5P	115	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

104 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
53	GDP	Ac	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
54	GTP	9e	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Bh	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Cc	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.33	4 (13%)
54	GTP	8h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Dh	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Ae	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	2g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
54	GTP	4d	501	-	26,34,34	1.13	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	6e	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	4e	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.25	4 (13%)
54	GTP	Af	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Ca	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.27	4 (13%)
54	GTP	1f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	De	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.28	4 (13%)
54	GTP	2f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	8b	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	2h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	4g	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	4 (13%)
54	GTP	7f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	2b	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	2d	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	5c	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	9c	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	5g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	7e	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.27	4 (13%)
53	GDP	Ae	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.27	4 (13%)
53	GDP	1g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.29	4 (13%)
53	GDP	1e	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.30	4 (13%)
54	GTP	1d	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	2a	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
54	GTP	5h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Db	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Ch	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Ag	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	4 (13%)
54	GTP	Cc	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
54	GTP	Dd	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Ab	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	5f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Da	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.27	4 (13%)
53	GDP	1c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
54	GTP	5d	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	7e	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Be	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	8e	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	8g	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
53	GDP	Cg	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
53	GDP	2c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
53	GDP	6a	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.25	4 (13%)
54	GTP	9h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Aa	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	8c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	4 (13%)
54	GTP	Bd	501	-	26,34,34	1.13	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	7b	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	7c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
54	GTP	Ah	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	4h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	2e	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.25	4 (13%)
54	GTP	3f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	6c	501	12	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	8f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	5a	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
54	GTP	9f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Ce	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.29	4 (13%)
53	GDP	1a	501	-	24,30,30	0.98	1 (4%)	30,47,47	1.29	4 (13%)
54	GTP	4b	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	6g	502	-	24,30,30	0.93	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	3e	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
54	GTP	3h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	6g	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Bc	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
53	GDP	8a	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	7a	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
54	GTP	4f	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	3c	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	4c	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.29	4 (13%)
54	GTP	3d	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	5e	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
54	GTP	1b	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.51	7 (21%)
54	GTP	6h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	9b	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Cf	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	5c	501	12	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Dc	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.29	4 (13%)
54	GTP	Bb	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	3c	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	4a	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	9g	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.32	4 (13%)
54	GTP	8d	501	-	26,34,34	1.13	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	6c	502	-	24,30,30	0.94	1 (4%)	30,47,47	1.29	4 (13%)
53	GDP	6e	502	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
54	GTP	1h	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	Cd	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Dg	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.32	4 (13%)
53	GDP	Ba	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.29	4 (13%)
54	GTP	Bf	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
54	GTP	7h	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	7g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
53	GDP	9e	502	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	3a	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	9a	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.26	4 (13%)
53	GDP	3g	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.31	4 (13%)
54	GTP	Df	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
53	GDP	Bg	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.32	4 (13%)

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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
53	GDP	Ac	501	-	-	3/12/32/32	0/3/3/3
54	GTP	9e	501	12	-	2/18/38/38	0/3/3/3
54	GTP	Bh	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Cc	502	-	-	3/12/32/32	0/3/3/3
54	GTP	8h	501	-	-	2/18/38/38	0/3/3/3
54	GTP	Dh	501	-	-	2/18/38/38	0/3/3/3
54	GTP	Ae	501	12	-	2/18/38/38	0/3/3/3
53	GDP	2g	501	-	-	3/12/32/32	0/3/3/3
54	GTP	4d	501	-	-	2/18/38/38	0/3/3/3
54	GTP	6e	501	12	-	2/18/38/38	0/3/3/3
53	GDP	4e	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Af	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Ca	501	-	-	3/12/32/32	0/3/3/3
54	GTP	1f	501	-	-	2/18/38/38	0/3/3/3
53	GDP	De	501	-	-	3/12/32/32	0/3/3/3
54	GTP	2f	501	-	-	2/18/38/38	0/3/3/3
54	GTP	8b	501	-	-	2/18/38/38	0/3/3/3
54	GTP	2h	501	-	-	2/18/38/38	0/3/3/3
53	GDP	4g	501	-	-	3/12/32/32	0/3/3/3
54	GTP	7f	501	-	-	2/18/38/38	0/3/3/3
54	GTP	2b	501	-	-	2/18/38/38	0/3/3/3
54	GTP	2d	501	-	-	2/18/38/38	0/3/3/3
53	GDP	5c	502	-	-	3/12/32/32	0/3/3/3
53	GDP	9c	501	-	-	3/12/32/32	0/3/3/3
53	GDP	5g	501	-	-	3/12/32/32	0/3/3/3
53	GDP	7e	502	-	-	3/12/32/32	0/3/3/3
53	GDP	Ae	502	-	-	3/12/32/32	0/3/3/3
53	GDP	1g	501	-	-	3/12/32/32	0/3/3/3
53	GDP	1e	501	-	-	3/12/32/32	0/3/3/3
54	GTP	1d	501	-	-	2/18/38/38	0/3/3/3
53	GDP	2a	501	-	-	3/12/32/32	0/3/3/3
54	GTP	5h	501	-	-	2/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	GTP	Db	501	-	-	2/18/38/38	0/3/3/3
54	GTP	Ch	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Ag	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Cc	501	12	-	2/18/38/38	0/3/3/3
54	GTP	Dd	501	-	-	2/18/38/38	0/3/3/3
54	GTP	Ab	501	-	-	2/18/38/38	0/3/3/3
54	GTP	5f	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Da	501	-	-	3/12/32/32	0/3/3/3
53	GDP	1c	501	-	-	3/12/32/32	0/3/3/3
54	GTP	5d	501	-	-	2/18/38/38	0/3/3/3
54	GTP	7e	501	12	-	2/18/38/38	0/3/3/3
53	GDP	Be	501	-	-	3/12/32/32	0/3/3/3
53	GDP	8e	501	-	-	3/12/32/32	0/3/3/3
53	GDP	8g	501	-	-	3/12/32/32	0/3/3/3
53	GDP	Cg	501	-	-	3/12/32/32	0/3/3/3
53	GDP	2c	501	-	-	3/12/32/32	0/3/3/3
53	GDP	6a	501	-	-	3/12/32/32	0/3/3/3
54	GTP	9h	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Aa	501	-	-	3/12/32/32	0/3/3/3
53	GDP	8c	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Bd	501	-	-	2/18/38/38	0/3/3/3
54	GTP	7b	501	-	-	2/18/38/38	0/3/3/3
53	GDP	7c	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Ah	501	-	-	2/18/38/38	0/3/3/3
54	GTP	4h	501	-	-	2/18/38/38	0/3/3/3
53	GDP	2e	501	-	-	3/12/32/32	0/3/3/3
54	GTP	3f	501	-	-	2/18/38/38	0/3/3/3
54	GTP	6c	501	12	-	2/18/38/38	0/3/3/3
54	GTP	8f	501	-	-	2/18/38/38	0/3/3/3
53	GDP	5a	501	-	-	3/12/32/32	0/3/3/3
54	GTP	9f	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Ce	501	-	-	3/12/32/32	0/3/3/3
53	GDP	1a	501	-	-	3/12/32/32	0/3/3/3
54	GTP	4b	501	-	-	2/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
53	GDP	6g	502	-	-	3/12/32/32	0/3/3/3
53	GDP	3e	501	-	-	3/12/32/32	0/3/3/3
54	GTP	3h	501	-	-	2/18/38/38	0/3/3/3
54	GTP	6g	501	12	-	2/18/38/38	0/3/3/3
53	GDP	Bc	501	-	-	3/12/32/32	0/3/3/3
53	GDP	8a	501	-	-	3/12/32/32	0/3/3/3
53	GDP	7a	501	-	-	3/12/32/32	0/3/3/3
54	GTP	4f	501	-	-	2/18/38/38	0/3/3/3
54	GTP	3c	501	12	-	2/18/38/38	0/3/3/3
53	GDP	4c	501	-	-	3/12/32/32	0/3/3/3
54	GTP	3d	501	-	-	2/18/38/38	0/3/3/3
53	GDP	5e	501	-	-	3/12/32/32	0/3/3/3
54	GTP	1b	501	-	-	2/18/38/38	0/3/3/3
54	GTP	6h	501	-	-	2/18/38/38	0/3/3/3
54	GTP	9b	501	-	-	2/18/38/38	0/3/3/3
54	GTP	Cf	501	-	-	2/18/38/38	0/3/3/3
54	GTP	5c	501	12	-	2/18/38/38	0/3/3/3
53	GDP	Dc	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Bb	501	-	-	2/18/38/38	0/3/3/3
53	GDP	3c	502	-	-	3/12/32/32	0/3/3/3
53	GDP	4a	501	-	-	3/12/32/32	0/3/3/3
53	GDP	9g	501	-	-	3/12/32/32	0/3/3/3
54	GTP	8d	501	-	-	2/18/38/38	0/3/3/3
53	GDP	6c	502	-	-	3/12/32/32	0/3/3/3
53	GDP	6e	502	-	-	3/12/32/32	0/3/3/3
54	GTP	1h	501	-	-	2/18/38/38	0/3/3/3
54	GTP	Cd	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Dg	501	-	-	3/12/32/32	0/3/3/3
53	GDP	Ba	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Bf	501	-	-	2/18/38/38	0/3/3/3
54	GTP	7h	501	-	-	2/18/38/38	0/3/3/3
53	GDP	7g	501	-	-	3/12/32/32	0/3/3/3
53	GDP	9e	502	-	-	3/12/32/32	0/3/3/3
53	GDP	3a	501	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
53	GDP	9a	501	-	-	3/12/32/32	0/3/3/3
53	GDP	3g	501	-	-	3/12/32/32	0/3/3/3
54	GTP	Df	501	-	-	2/18/38/38	0/3/3/3
53	GDP	Bg	501	-	-	3/12/32/32	0/3/3/3

All (156) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	6c	501	GTP	C5-C6	-4.08	1.39	1.47
54	Af	501	GTP	C5-C6	-4.06	1.39	1.47
54	7b	501	GTP	C5-C6	-4.06	1.39	1.47
54	8b	501	GTP	C5-C6	-4.06	1.39	1.47
54	7h	501	GTP	C5-C6	-4.06	1.39	1.47
54	Bh	501	GTP	C5-C6	-4.06	1.39	1.47
54	Ae	501	GTP	C5-C6	-4.05	1.39	1.47
54	Cc	501	GTP	C5-C6	-4.05	1.39	1.47
54	9b	501	GTP	C5-C6	-4.04	1.39	1.47
54	3h	501	GTP	C5-C6	-4.04	1.39	1.47
54	Cd	501	GTP	C5-C6	-4.04	1.39	1.47
54	2f	501	GTP	C5-C6	-4.04	1.39	1.47
54	Dh	501	GTP	C5-C6	-4.04	1.39	1.47
54	4b	501	GTP	C5-C6	-4.04	1.39	1.47
54	1d	501	GTP	C5-C6	-4.04	1.39	1.47
54	3c	501	GTP	C5-C6	-4.03	1.39	1.47
54	3d	501	GTP	C5-C6	-4.03	1.39	1.47
54	Bb	501	GTP	C5-C6	-4.03	1.39	1.47
54	Dd	501	GTP	C5-C6	-4.03	1.39	1.47
54	2h	501	GTP	C5-C6	-4.03	1.39	1.47
54	1b	501	GTP	C5-C6	-4.03	1.39	1.47
54	6g	501	GTP	C5-C6	-4.03	1.39	1.47
54	9f	501	GTP	C5-C6	-4.03	1.39	1.47
54	Ch	501	GTP	C5-C6	-4.02	1.39	1.47
54	1f	501	GTP	C5-C6	-4.02	1.39	1.47
54	1h	501	GTP	C5-C6	-4.02	1.39	1.47
54	Ah	501	GTP	C5-C6	-4.02	1.39	1.47
54	8h	501	GTP	C5-C6	-4.02	1.39	1.47
54	Db	501	GTP	C5-C6	-4.02	1.39	1.47
54	7f	501	GTP	C5-C6	-4.02	1.39	1.47
54	8f	501	GTP	C5-C6	-4.02	1.39	1.47
54	4f	501	GTP	C5-C6	-4.02	1.39	1.47
54	Bf	501	GTP	C5-C6	-4.02	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	Cf	501	GTP	C5-C6	-4.02	1.39	1.47
54	2d	501	GTP	C5-C6	-4.01	1.39	1.47
54	2b	501	GTP	C5-C6	-4.01	1.39	1.47
54	3f	501	GTP	C5-C6	-4.01	1.39	1.47
54	4h	501	GTP	C5-C6	-4.01	1.39	1.47
54	5f	501	GTP	C5-C6	-4.01	1.39	1.47
54	6h	501	GTP	C5-C6	-4.01	1.39	1.47
54	5h	501	GTP	C5-C6	-4.01	1.39	1.47
54	5c	501	GTP	C5-C6	-4.01	1.39	1.47
54	Bd	501	GTP	C5-C6	-4.01	1.39	1.47
54	9e	501	GTP	C5-C6	-4.01	1.39	1.47
54	9h	501	GTP	C5-C6	-4.00	1.39	1.47
54	Ab	501	GTP	C5-C6	-4.00	1.39	1.47
54	6e	501	GTP	C5-C6	-4.00	1.39	1.47
54	7e	501	GTP	C5-C6	-4.00	1.39	1.47
54	4d	501	GTP	C5-C6	-3.99	1.39	1.47
54	Df	501	GTP	C5-C6	-3.99	1.39	1.47
54	8d	501	GTP	C5-C6	-3.99	1.39	1.47
54	5d	501	GTP	C5-C6	-3.98	1.39	1.47
53	4a	501	GDP	C6-N1	-2.43	1.34	1.37
53	1a	501	GDP	C6-N1	-2.42	1.34	1.37
53	Ba	501	GDP	C6-N1	-2.42	1.34	1.37
53	9e	502	GDP	C6-N1	-2.41	1.34	1.37
53	5a	501	GDP	C6-N1	-2.41	1.34	1.37
53	7a	501	GDP	C6-N1	-2.41	1.34	1.37
53	9a	501	GDP	C6-N1	-2.41	1.34	1.37
53	2a	501	GDP	C6-N1	-2.41	1.34	1.37
53	8a	501	GDP	C6-N1	-2.40	1.34	1.37
53	Be	501	GDP	C6-N1	-2.40	1.34	1.37
53	Ca	501	GDP	C6-N1	-2.40	1.34	1.37
53	3e	501	GDP	C6-N1	-2.39	1.34	1.37
53	3a	501	GDP	C6-N1	-2.38	1.34	1.37
53	De	501	GDP	C6-N1	-2.38	1.34	1.37
53	2e	501	GDP	C6-N1	-2.38	1.34	1.37
53	Aa	501	GDP	C6-N1	-2.38	1.34	1.37
53	7e	502	GDP	C6-N1	-2.37	1.34	1.37
53	6e	502	GDP	C6-N1	-2.37	1.34	1.37
53	8e	501	GDP	C6-N1	-2.37	1.34	1.37
53	7g	501	GDP	C6-N1	-2.37	1.34	1.37
53	1g	501	GDP	C6-N1	-2.36	1.34	1.37
53	Ae	502	GDP	C6-N1	-2.36	1.34	1.37
53	4e	501	GDP	C6-N1	-2.36	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	Dc	501	GDP	C6-N1	-2.35	1.34	1.37
53	5e	501	GDP	C6-N1	-2.35	1.34	1.37
53	Da	501	GDP	C6-N1	-2.35	1.34	1.37
53	5g	501	GDP	C6-N1	-2.34	1.34	1.37
53	6a	501	GDP	C6-N1	-2.34	1.34	1.37
53	5c	502	GDP	C6-N1	-2.34	1.34	1.37
53	7c	501	GDP	C6-N1	-2.34	1.34	1.37
53	6g	502	GDP	C6-N1	-2.34	1.34	1.37
53	1e	501	GDP	C6-N1	-2.34	1.34	1.37
53	Cg	501	GDP	C6-N1	-2.34	1.34	1.37
53	Ce	501	GDP	C6-N1	-2.33	1.34	1.37
53	2c	501	GDP	C6-N1	-2.33	1.34	1.37
53	2g	501	GDP	C6-N1	-2.33	1.34	1.37
53	8g	501	GDP	C6-N1	-2.32	1.34	1.37
53	3c	502	GDP	C6-N1	-2.32	1.34	1.37
53	6c	502	GDP	C6-N1	-2.32	1.34	1.37
53	1c	501	GDP	C6-N1	-2.32	1.34	1.37
53	8c	501	GDP	C6-N1	-2.31	1.34	1.37
53	3g	501	GDP	C6-N1	-2.31	1.34	1.37
53	4c	501	GDP	C6-N1	-2.31	1.34	1.37
53	Ag	501	GDP	C6-N1	-2.30	1.34	1.37
53	4g	501	GDP	C6-N1	-2.30	1.34	1.37
53	Dg	501	GDP	C6-N1	-2.29	1.34	1.37
54	9e	501	GTP	C2-N3	2.29	1.38	1.33
54	5d	501	GTP	C2-N3	2.29	1.38	1.33
54	7e	501	GTP	C2-N3	2.29	1.38	1.33
54	1b	501	GTP	C2-N3	2.28	1.38	1.33
54	Bb	501	GTP	C2-N3	2.28	1.38	1.33
53	9g	501	GDP	C6-N1	-2.28	1.34	1.37
54	4b	501	GTP	C2-N3	2.28	1.38	1.33
54	Cf	501	GTP	C2-N3	2.28	1.38	1.33
53	Ac	501	GDP	C6-N1	-2.28	1.34	1.37
54	Df	501	GTP	C2-N3	2.28	1.38	1.33
54	9b	501	GTP	C2-N3	2.28	1.38	1.33
54	7b	501	GTP	C2-N3	2.28	1.38	1.33
54	2f	501	GTP	C2-N3	2.27	1.38	1.33
54	4f	501	GTP	C2-N3	2.27	1.38	1.33
53	Bg	501	GDP	C6-N1	-2.27	1.34	1.37
53	Cc	502	GDP	C6-N1	-2.27	1.34	1.37
54	4h	501	GTP	C2-N3	2.27	1.38	1.33
54	6c	501	GTP	C2-N3	2.27	1.38	1.33
54	7h	501	GTP	C2-N3	2.27	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	3c	501	GTP	C2-N3	2.27	1.38	1.33
54	Dh	501	GTP	C2-N3	2.27	1.38	1.33
53	Bc	501	GDP	C6-N1	-2.27	1.34	1.37
54	3h	501	GTP	C2-N3	2.27	1.38	1.33
54	8h	501	GTP	C2-N3	2.27	1.38	1.33
54	Ah	501	GTP	C2-N3	2.27	1.38	1.33
54	3f	501	GTP	C2-N3	2.27	1.38	1.33
54	5c	501	GTP	C2-N3	2.27	1.38	1.33
54	Bf	501	GTP	C2-N3	2.27	1.38	1.33
54	5h	501	GTP	C2-N3	2.26	1.38	1.33
54	Dd	501	GTP	C2-N3	2.26	1.38	1.33
54	Cc	501	GTP	C2-N3	2.26	1.38	1.33
54	Cd	501	GTP	C2-N3	2.26	1.38	1.33
54	1f	501	GTP	C2-N3	2.26	1.38	1.33
54	6g	501	GTP	C2-N3	2.26	1.38	1.33
54	Db	501	GTP	C2-N3	2.26	1.38	1.33
53	9c	501	GDP	C6-N1	-2.25	1.34	1.37
54	Af	501	GTP	C2-N3	2.25	1.38	1.33
54	Ch	501	GTP	C2-N3	2.25	1.38	1.33
54	6e	501	GTP	C2-N3	2.25	1.38	1.33
54	8d	501	GTP	C2-N3	2.25	1.38	1.33
54	2h	501	GTP	C2-N3	2.25	1.38	1.33
54	Bd	501	GTP	C2-N3	2.25	1.38	1.33
54	9f	501	GTP	C2-N3	2.25	1.38	1.33
54	2b	501	GTP	C2-N3	2.25	1.38	1.33
54	Bh	501	GTP	C2-N3	2.25	1.38	1.33
54	2d	501	GTP	C2-N3	2.24	1.38	1.33
54	3d	501	GTP	C2-N3	2.24	1.38	1.33
54	5f	501	GTP	C2-N3	2.24	1.38	1.33
54	4d	501	GTP	C2-N3	2.24	1.38	1.33
54	7f	501	GTP	C2-N3	2.24	1.38	1.33
54	8b	501	GTP	C2-N3	2.24	1.38	1.33
54	Ab	501	GTP	C2-N3	2.24	1.38	1.33
54	6h	501	GTP	C2-N3	2.23	1.38	1.33
54	1h	501	GTP	C2-N3	2.23	1.38	1.33
54	9h	501	GTP	C2-N3	2.23	1.38	1.33
54	Ae	501	GTP	C2-N3	2.23	1.38	1.33
54	8f	501	GTP	C2-N3	2.22	1.38	1.33
54	1d	501	GTP	C2-N3	2.22	1.38	1.33

All (572) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	Be	501	GDP	PA-O3A-PB	-3.86	119.58	132.83
53	1e	501	GDP	PA-O3A-PB	-3.86	119.59	132.83
53	Cc	502	GDP	PA-O3A-PB	-3.81	119.74	132.83
53	Dg	501	GDP	PA-O3A-PB	-3.80	119.78	132.83
53	9g	501	GDP	PA-O3A-PB	-3.76	119.91	132.83
53	3g	501	GDP	PA-O3A-PB	-3.76	119.92	132.83
53	Ce	501	GDP	PA-O3A-PB	-3.76	119.92	132.83
53	8g	501	GDP	PA-O3A-PB	-3.75	119.94	132.83
53	Cg	501	GDP	PA-O3A-PB	-3.75	119.95	132.83
53	De	501	GDP	PA-O3A-PB	-3.75	119.97	132.83
53	6g	502	GDP	PA-O3A-PB	-3.73	120.04	132.83
53	2g	501	GDP	PA-O3A-PB	-3.72	120.05	132.83
53	Ba	501	GDP	PA-O3A-PB	-3.71	120.08	132.83
53	8c	501	GDP	PA-O3A-PB	-3.71	120.08	132.83
53	Da	501	GDP	PA-O3A-PB	-3.70	120.13	132.83
53	1a	501	GDP	PA-O3A-PB	-3.69	120.18	132.83
53	5c	502	GDP	PA-O3A-PB	-3.68	120.19	132.83
53	7c	501	GDP	PA-O3A-PB	-3.68	120.19	132.83
53	3c	502	GDP	PA-O3A-PB	-3.68	120.20	132.83
53	2c	501	GDP	PA-O3A-PB	-3.67	120.22	132.83
53	7g	501	GDP	PA-O3A-PB	-3.67	120.23	132.83
53	5g	501	GDP	PA-O3A-PB	-3.67	120.24	132.83
53	4g	501	GDP	PA-O3A-PB	-3.67	120.25	132.83
53	Bg	501	GDP	PA-O3A-PB	-3.66	120.25	132.83
53	1c	501	GDP	PA-O3A-PB	-3.66	120.27	132.83
53	9c	501	GDP	PA-O3A-PB	-3.65	120.29	132.83
53	4c	501	GDP	PA-O3A-PB	-3.65	120.30	132.83
53	1g	501	GDP	PA-O3A-PB	-3.65	120.31	132.83
53	Dc	501	GDP	PA-O3A-PB	-3.65	120.31	132.83
53	6c	502	GDP	PA-O3A-PB	-3.64	120.33	132.83
53	Ac	501	GDP	PA-O3A-PB	-3.64	120.34	132.83
53	Bc	501	GDP	PA-O3A-PB	-3.64	120.34	132.83
53	Aa	501	GDP	PA-O3A-PB	-3.63	120.36	132.83
53	Ag	501	GDP	PA-O3A-PB	-3.63	120.36	132.83
53	Ae	502	GDP	PA-O3A-PB	-3.61	120.43	132.83
53	Ca	501	GDP	PA-O3A-PB	-3.60	120.46	132.83
53	5a	501	GDP	PA-O3A-PB	-3.60	120.47	132.83
53	2e	501	GDP	PA-O3A-PB	-3.60	120.48	132.83
53	9e	502	GDP	PA-O3A-PB	-3.59	120.50	132.83
53	8a	501	GDP	PA-O3A-PB	-3.59	120.52	132.83
53	9a	501	GDP	PA-O3A-PB	-3.58	120.53	132.83
53	2a	501	GDP	PA-O3A-PB	-3.58	120.54	132.83
53	8e	501	GDP	PA-O3A-PB	-3.57	120.59	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	4a	501	GDP	PA-O3A-PB	-3.57	120.59	132.83
53	4e	501	GDP	PA-O3A-PB	-3.56	120.61	132.83
53	6a	501	GDP	PA-O3A-PB	-3.56	120.61	132.83
53	5e	501	GDP	PA-O3A-PB	-3.56	120.63	132.83
53	3a	501	GDP	PA-O3A-PB	-3.55	120.64	132.83
53	6e	502	GDP	PA-O3A-PB	-3.55	120.64	132.83
53	7a	501	GDP	PA-O3A-PB	-3.54	120.69	132.83
53	8c	501	GDP	C3'-C2'-C1'	3.54	106.30	100.98
53	Bg	501	GDP	C3'-C2'-C1'	3.53	106.29	100.98
53	3e	501	GDP	PA-O3A-PB	-3.52	120.73	132.83
53	7e	502	GDP	PA-O3A-PB	-3.51	120.77	132.83
53	Ba	501	GDP	C3'-C2'-C1'	3.46	106.19	100.98
53	2c	501	GDP	C3'-C2'-C1'	3.46	106.19	100.98
54	Bb	501	GTP	PA-O3A-PB	-3.43	121.05	132.83
54	Ab	501	GTP	PA-O3A-PB	-3.43	121.05	132.83
54	1f	501	GTP	PA-O3A-PB	-3.43	121.05	132.83
54	Cc	501	GTP	PA-O3A-PB	-3.43	121.05	132.83
54	2d	501	GTP	PA-O3A-PB	-3.43	121.06	132.83
54	Cf	501	GTP	PA-O3A-PB	-3.43	121.06	132.83
54	2b	501	GTP	PA-O3A-PB	-3.43	121.06	132.83
54	8d	501	GTP	PA-O3A-PB	-3.43	121.06	132.83
54	Bf	501	GTP	PA-O3A-PB	-3.43	121.06	132.83
54	Df	501	GTP	PA-O3A-PB	-3.43	121.06	132.83
54	3c	501	GTP	PA-O3A-PB	-3.43	121.07	132.83
54	1h	501	GTP	PA-O3A-PB	-3.43	121.07	132.83
54	9b	501	GTP	PA-O3A-PB	-3.43	121.07	132.83
54	Ch	501	GTP	PA-O3A-PB	-3.43	121.07	132.83
54	1d	501	GTP	PA-O3A-PB	-3.42	121.08	132.83
54	6h	501	GTP	PA-O3A-PB	-3.42	121.08	132.83
54	7b	501	GTP	PA-O3A-PB	-3.42	121.08	132.83
54	5f	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	6e	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	4b	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	Ae	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	Dh	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	8f	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	Bh	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	Db	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	9h	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	8b	501	GTP	PA-O3A-PB	-3.42	121.09	132.83
54	3f	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
54	1b	501	GTP	PA-O3A-PB	-3.42	121.10	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	6g	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
54	Dd	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
54	9f	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
54	3h	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
54	6c	501	GTP	PA-O3A-PB	-3.42	121.10	132.83
54	8h	501	GTP	PA-O3A-PB	-3.42	121.11	132.83
54	Ah	501	GTP	PA-O3A-PB	-3.42	121.11	132.83
54	4h	501	GTP	PA-O3A-PB	-3.42	121.11	132.83
54	5c	501	GTP	PA-O3A-PB	-3.41	121.11	132.83
54	5d	501	GTP	PA-O3A-PB	-3.41	121.11	132.83
54	9e	501	GTP	PA-O3A-PB	-3.41	121.11	132.83
54	Af	501	GTP	PA-O3A-PB	-3.41	121.11	132.83
54	4f	501	GTP	PA-O3A-PB	-3.41	121.11	132.83
54	Cd	501	GTP	PA-O3A-PB	-3.41	121.11	132.83
54	5h	501	GTP	PA-O3A-PB	-3.41	121.12	132.83
54	4d	501	GTP	PA-O3A-PB	-3.41	121.12	132.83
54	7f	501	GTP	PA-O3A-PB	-3.41	121.12	132.83
54	Bd	501	GTP	PA-O3A-PB	-3.41	121.12	132.83
54	7h	501	GTP	PA-O3A-PB	-3.41	121.13	132.83
54	2f	501	GTP	PA-O3A-PB	-3.41	121.13	132.83
54	7e	501	GTP	PA-O3A-PB	-3.41	121.13	132.83
54	2h	501	GTP	PA-O3A-PB	-3.41	121.13	132.83
54	3d	501	GTP	PA-O3A-PB	-3.41	121.13	132.83
53	Ce	501	GDP	C3'-C2'-C1'	3.37	106.05	100.98
53	2g	501	GDP	C3'-C2'-C1'	3.34	106.00	100.98
53	1a	501	GDP	C3'-C2'-C1'	3.33	105.99	100.98
53	Be	501	GDP	C3'-C2'-C1'	3.32	105.98	100.98
53	1c	501	GDP	C3'-C2'-C1'	3.32	105.98	100.98
53	Bc	501	GDP	C3'-C2'-C1'	3.31	105.96	100.98
54	3h	501	GTP	C5-C6-N1	3.30	119.79	113.95
54	1d	501	GTP	C5-C6-N1	3.30	119.78	113.95
54	Af	501	GTP	C5-C6-N1	3.30	119.78	113.95
54	1f	501	GTP	C5-C6-N1	3.30	119.78	113.95
53	5c	502	GDP	C3'-C2'-C1'	3.30	105.95	100.98
54	Cc	501	GTP	C5-C6-N1	3.30	119.78	113.95
54	7b	501	GTP	C5-C6-N1	3.30	119.78	113.95
54	8b	501	GTP	C5-C6-N1	3.30	119.77	113.95
54	2b	501	GTP	C5-C6-N1	3.30	119.77	113.95
54	2d	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	4b	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	Cd	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	Ch	501	GTP	C5-C6-N1	3.29	119.77	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	8f	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	8h	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	Dd	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	3c	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	6c	501	GTP	C5-C6-N1	3.29	119.77	113.95
54	2f	501	GTP	C5-C6-N1	3.29	119.76	113.95
54	3d	501	GTP	C5-C6-N1	3.29	119.76	113.95
54	7h	501	GTP	C5-C6-N1	3.29	119.75	113.95
54	6g	501	GTP	C5-C6-N1	3.28	119.75	113.95
54	Dh	501	GTP	C5-C6-N1	3.28	119.75	113.95
54	Bd	501	GTP	C5-C6-N1	3.28	119.75	113.95
54	6h	501	GTP	C5-C6-N1	3.28	119.75	113.95
54	Df	501	GTP	C5-C6-N1	3.28	119.75	113.95
54	9f	501	GTP	C5-C6-N1	3.28	119.74	113.95
54	Bb	501	GTP	C5-C6-N1	3.28	119.74	113.95
54	5c	501	GTP	C5-C6-N1	3.28	119.73	113.95
54	9h	501	GTP	C5-C6-N1	3.28	119.73	113.95
54	5h	501	GTP	C5-C6-N1	3.27	119.73	113.95
54	8d	501	GTP	C5-C6-N1	3.27	119.73	113.95
54	1h	501	GTP	C5-C6-N1	3.27	119.73	113.95
54	5d	501	GTP	C5-C6-N1	3.27	119.73	113.95
54	3f	501	GTP	C5-C6-N1	3.27	119.73	113.95
53	De	501	GDP	C3'-C2'-C1'	3.27	105.90	100.98
54	Ae	501	GTP	C5-C6-N1	3.27	119.72	113.95
54	Ab	501	GTP	C5-C6-N1	3.27	119.72	113.95
54	Bf	501	GTP	C5-C6-N1	3.27	119.72	113.95
54	5f	501	GTP	C5-C6-N1	3.27	119.72	113.95
54	Cf	501	GTP	C5-C6-N1	3.27	119.72	113.95
54	4f	501	GTP	C5-C6-N1	3.26	119.72	113.95
54	4h	501	GTP	C5-C6-N1	3.26	119.72	113.95
54	Db	501	GTP	C5-C6-N1	3.26	119.71	113.95
53	7c	501	GDP	C3'-C2'-C1'	3.26	105.89	100.98
54	7e	501	GTP	C5-C6-N1	3.26	119.71	113.95
54	Bh	501	GTP	C5-C6-N1	3.26	119.71	113.95
54	4d	501	GTP	C5-C6-N1	3.26	119.71	113.95
54	7f	501	GTP	C5-C6-N1	3.26	119.70	113.95
54	2h	501	GTP	C5-C6-N1	3.26	119.70	113.95
54	9e	501	GTP	C5-C6-N1	3.26	119.70	113.95
54	9b	501	GTP	C5-C6-N1	3.26	119.70	113.95
53	Ca	501	GDP	C3'-C2'-C1'	3.25	105.88	100.98
53	6c	502	GDP	C3'-C2'-C1'	3.25	105.88	100.98
54	Ah	501	GTP	C5-C6-N1	3.25	119.69	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	6e	501	GTP	C5-C6-N1	3.25	119.68	113.95
54	1b	501	GTP	C5-C6-N1	3.24	119.67	113.95
53	Aa	501	GDP	C3'-C2'-C1'	3.24	105.85	100.98
53	Cc	502	GDP	C3'-C2'-C1'	3.24	105.85	100.98
53	1e	501	GDP	C3'-C2'-C1'	3.24	105.85	100.98
53	5g	501	GDP	C3'-C2'-C1'	3.23	105.85	100.98
53	8g	501	GDP	C3'-C2'-C1'	3.23	105.85	100.98
53	Ac	501	GDP	C3'-C2'-C1'	3.23	105.84	100.98
53	4g	501	GDP	C3'-C2'-C1'	3.22	105.83	100.98
53	Ag	501	GDP	C3'-C2'-C1'	3.22	105.83	100.98
53	9c	501	GDP	C3'-C2'-C1'	3.22	105.83	100.98
53	8a	501	GDP	C3'-C2'-C1'	3.22	105.82	100.98
53	9g	501	GDP	C3'-C2'-C1'	3.21	105.82	100.98
53	6e	502	GDP	C3'-C2'-C1'	3.21	105.81	100.98
53	2a	501	GDP	C3'-C2'-C1'	3.21	105.81	100.98
53	6g	502	GDP	C3'-C2'-C1'	3.21	105.81	100.98
53	7e	502	GDP	C3'-C2'-C1'	3.21	105.81	100.98
53	9a	501	GDP	C3'-C2'-C1'	3.20	105.80	100.98
53	5e	501	GDP	C3'-C2'-C1'	3.20	105.80	100.98
53	Ae	502	GDP	C3'-C2'-C1'	3.20	105.80	100.98
53	3g	501	GDP	C3'-C2'-C1'	3.20	105.80	100.98
53	7g	501	GDP	C3'-C2'-C1'	3.20	105.80	100.98
53	8e	501	GDP	C3'-C2'-C1'	3.20	105.79	100.98
53	1g	501	GDP	C3'-C2'-C1'	3.20	105.79	100.98
53	5a	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
53	2e	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
53	7a	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
53	3c	502	GDP	C3'-C2'-C1'	3.18	105.77	100.98
53	3e	501	GDP	C3'-C2'-C1'	3.18	105.77	100.98
53	6a	501	GDP	C3'-C2'-C1'	3.18	105.76	100.98
53	Dg	501	GDP	C3'-C2'-C1'	3.17	105.75	100.98
53	4e	501	GDP	C3'-C2'-C1'	3.16	105.74	100.98
53	4c	501	GDP	C3'-C2'-C1'	3.16	105.74	100.98
53	Cg	501	GDP	C3'-C2'-C1'	3.16	105.73	100.98
53	3a	501	GDP	C3'-C2'-C1'	3.14	105.70	100.98
53	4a	501	GDP	C3'-C2'-C1'	3.14	105.70	100.98
53	9e	502	GDP	C3'-C2'-C1'	3.13	105.70	100.98
53	Da	501	GDP	C3'-C2'-C1'	3.07	105.61	100.98
54	9e	501	GTP	C8-N7-C5	3.05	108.81	102.99
54	6g	501	GTP	C8-N7-C5	3.05	108.80	102.99
54	Bh	501	GTP	C8-N7-C5	3.05	108.79	102.99
54	Ch	501	GTP	C8-N7-C5	3.04	108.79	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	3d	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	4d	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	5c	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	6h	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	2b	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	3c	501	GTP	C8-N7-C5	3.04	108.78	102.99
53	Dc	501	GDP	C3'-C2'-C1'	3.04	105.55	100.98
54	8b	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	Bf	501	GTP	C8-N7-C5	3.04	108.78	102.99
54	2f	501	GTP	C8-N7-C5	3.04	108.77	102.99
54	4b	501	GTP	C8-N7-C5	3.04	108.77	102.99
54	Cd	501	GTP	C8-N7-C5	3.04	108.77	102.99
54	1d	501	GTP	C8-N7-C5	3.04	108.77	102.99
54	4h	501	GTP	C8-N7-C5	3.04	108.77	102.99
54	5h	501	GTP	C8-N7-C5	3.03	108.77	102.99
54	7b	501	GTP	C8-N7-C5	3.03	108.77	102.99
54	4f	501	GTP	C8-N7-C5	3.03	108.77	102.99
54	Bd	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	1h	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	9f	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	Ab	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	8f	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	7h	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	6c	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	7e	501	GTP	C8-N7-C5	3.03	108.76	102.99
54	Bb	501	GTP	C8-N7-C5	3.03	108.75	102.99
54	Dd	501	GTP	C8-N7-C5	3.03	108.75	102.99
54	Ae	501	GTP	C8-N7-C5	3.03	108.75	102.99
54	3h	501	GTP	C8-N7-C5	3.02	108.75	102.99
54	Ah	501	GTP	C8-N7-C5	3.02	108.75	102.99
54	8h	501	GTP	C8-N7-C5	3.02	108.75	102.99
54	Cf	501	GTP	C8-N7-C5	3.02	108.75	102.99
54	Dh	501	GTP	C8-N7-C5	3.02	108.75	102.99
54	1f	501	GTP	C8-N7-C5	3.02	108.74	102.99
54	7f	501	GTP	C8-N7-C5	3.02	108.74	102.99
54	Af	501	GTP	C8-N7-C5	3.02	108.74	102.99
54	8d	501	GTP	C8-N7-C5	3.01	108.73	102.99
54	Db	501	GTP	C8-N7-C5	3.01	108.73	102.99
54	9h	501	GTP	C8-N7-C5	3.01	108.73	102.99
54	2h	501	GTP	C8-N7-C5	3.01	108.73	102.99
54	9b	501	GTP	C8-N7-C5	3.01	108.73	102.99
54	1b	501	GTP	C8-N7-C5	3.01	108.72	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	3f	501	GTP	C8-N7-C5	3.01	108.72	102.99
54	2d	501	GTP	C8-N7-C5	3.01	108.72	102.99
54	5f	501	GTP	C8-N7-C5	3.01	108.72	102.99
54	Cc	501	GTP	C8-N7-C5	3.00	108.71	102.99
54	5d	501	GTP	C8-N7-C5	3.00	108.70	102.99
54	Df	501	GTP	C8-N7-C5	3.00	108.70	102.99
54	6e	501	GTP	C8-N7-C5	2.99	108.69	102.99
54	2d	501	GTP	C2-N1-C6	-2.91	119.74	125.10
54	3h	501	GTP	C2-N1-C6	-2.90	119.76	125.10
54	1d	501	GTP	C2-N1-C6	-2.89	119.77	125.10
54	1f	501	GTP	C2-N1-C6	-2.89	119.78	125.10
54	6c	501	GTP	C2-N1-C6	-2.89	119.78	125.10
54	5f	501	GTP	C2-N1-C6	-2.89	119.78	125.10
54	Af	501	GTP	C2-N1-C6	-2.89	119.78	125.10
54	2f	501	GTP	C2-N1-C6	-2.89	119.78	125.10
54	1h	501	GTP	C2-N1-C6	-2.88	119.79	125.10
54	Cc	501	GTP	C2-N1-C6	-2.88	119.79	125.10
54	2b	501	GTP	C2-N1-C6	-2.88	119.79	125.10
54	6h	501	GTP	C2-N1-C6	-2.88	119.79	125.10
54	8b	501	GTP	C2-N1-C6	-2.88	119.80	125.10
54	3d	501	GTP	C2-N1-C6	-2.88	119.80	125.10
54	Ab	501	GTP	C2-N1-C6	-2.88	119.80	125.10
54	7b	501	GTP	C2-N1-C6	-2.88	119.80	125.10
54	8h	501	GTP	C2-N1-C6	-2.88	119.80	125.10
54	8d	501	GTP	C2-N1-C6	-2.88	119.80	125.10
54	7h	501	GTP	C2-N1-C6	-2.87	119.80	125.10
54	8f	501	GTP	C2-N1-C6	-2.87	119.81	125.10
54	Dh	501	GTP	C2-N1-C6	-2.87	119.81	125.10
54	Df	501	GTP	C2-N1-C6	-2.87	119.81	125.10
54	2h	501	GTP	C2-N1-C6	-2.87	119.81	125.10
54	5h	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	Ch	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	Dd	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	3c	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	9f	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	Ae	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	5c	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	Cd	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	Db	501	GTP	C2-N1-C6	-2.87	119.82	125.10
54	5d	501	GTP	C2-N1-C6	-2.86	119.82	125.10
54	6e	501	GTP	C2-N1-C6	-2.86	119.83	125.10
54	9h	501	GTP	C2-N1-C6	-2.86	119.83	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	Bf	501	GTP	C2-N1-C6	-2.86	119.83	125.10
54	Bh	501	GTP	C2-N1-C6	-2.86	119.83	125.10
54	6g	501	GTP	C2-N1-C6	-2.86	119.84	125.10
54	Cf	501	GTP	C2-N1-C6	-2.86	119.84	125.10
54	9b	501	GTP	C2-N1-C6	-2.85	119.84	125.10
54	4d	501	GTP	C2-N1-C6	-2.85	119.84	125.10
54	Bd	501	GTP	C2-N1-C6	-2.85	119.84	125.10
54	Bb	501	GTP	C2-N1-C6	-2.85	119.84	125.10
54	4h	501	GTP	C2-N1-C6	-2.85	119.85	125.10
54	4b	501	GTP	C2-N1-C6	-2.85	119.85	125.10
54	7f	501	GTP	C2-N1-C6	-2.85	119.85	125.10
54	4f	501	GTP	C2-N1-C6	-2.85	119.86	125.10
54	7e	501	GTP	C2-N1-C6	-2.85	119.86	125.10
54	3f	501	GTP	C2-N1-C6	-2.84	119.86	125.10
54	9e	501	GTP	C2-N1-C6	-2.84	119.87	125.10
54	Ah	501	GTP	C2-N1-C6	-2.84	119.87	125.10
54	1b	501	GTP	C2-N1-C6	-2.84	119.87	125.10
54	9h	501	GTP	C3'-C2'-C1'	2.81	105.21	100.98
54	2f	501	GTP	C3'-C2'-C1'	2.81	105.20	100.98
54	4h	501	GTP	C3'-C2'-C1'	2.81	105.20	100.98
54	2d	501	GTP	C3'-C2'-C1'	2.81	105.20	100.98
54	Ae	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
54	6c	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
54	7f	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
54	3h	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
54	5f	501	GTP	C3'-C2'-C1'	2.80	105.20	100.98
54	Cc	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
54	5c	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
54	2b	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
54	5d	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
54	8d	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
54	3f	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
54	8b	501	GTP	C3'-C2'-C1'	2.79	105.19	100.98
54	Af	501	GTP	C3'-C2'-C1'	2.79	105.19	100.98
54	5f	501	GTP	PB-O3B-PG	-2.79	123.24	132.83
54	Db	501	GTP	PB-O3B-PG	-2.79	123.24	132.83
54	8f	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	8h	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	2h	501	GTP	PB-O3B-PG	-2.79	123.24	132.83
54	Ae	501	GTP	PB-O3B-PG	-2.79	123.24	132.83
54	Ch	501	GTP	PB-O3B-PG	-2.79	123.24	132.83
54	3d	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	7e	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	Af	501	GTP	PB-O3B-PG	-2.79	123.25	132.83
54	Bd	501	GTP	PB-O3B-PG	-2.79	123.25	132.83
54	7b	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	9f	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	Cc	501	GTP	PB-O3B-PG	-2.79	123.25	132.83
54	Bf	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	6h	501	GTP	PB-O3B-PG	-2.79	123.25	132.83
54	6e	501	GTP	PB-O3B-PG	-2.79	123.25	132.83
54	7h	501	GTP	PB-O3B-PG	-2.79	123.25	132.83
54	6g	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	Ch	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	8f	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	6c	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	8d	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	6e	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	Dh	501	GTP	C3'-C2'-C1'	2.79	105.18	100.98
54	7f	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	5h	501	GTP	C3'-C2'-C1'	2.79	105.17	100.98
54	Bd	501	GTP	C3'-C2'-C1'	2.79	105.17	100.98
54	4f	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	8b	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	Dd	501	GTP	C3'-C2'-C1'	2.79	105.17	100.98
54	9h	501	GTP	PB-O3B-PG	-2.79	123.26	132.83
54	7b	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	Df	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	2f	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	8h	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	3c	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	6g	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	Cf	501	GTP	PB-O3B-PG	-2.79	123.27	132.83
54	6h	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	Bh	501	GTP	PB-O3B-PG	-2.78	123.27	132.83
54	9e	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	Db	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	Ab	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	4d	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
54	Bb	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
54	5c	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
54	Cd	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
54	Cf	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	4h	501	GTP	PB-O3B-PG	-2.78	123.28	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	5h	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
54	Bh	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	Cd	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
54	9f	501	GTP	PB-O3B-PG	-2.78	123.28	132.83
54	4b	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
54	7e	501	GTP	PB-O3B-PG	-2.78	123.29	132.83
54	Dh	501	GTP	PB-O3B-PG	-2.78	123.29	132.83
54	1d	501	GTP	PB-O3B-PG	-2.78	123.29	132.83
54	3h	501	GTP	PB-O3B-PG	-2.78	123.29	132.83
54	1h	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
54	3c	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
54	Ah	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
54	Bb	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
54	3f	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	1b	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	2b	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	1f	501	GTP	C3'-C2'-C1'	2.78	105.16	100.98
54	3d	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	Ab	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	1f	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	2d	501	GTP	PB-O3B-PG	-2.78	123.30	132.83
54	5d	501	GTP	PB-O3B-PG	-2.77	123.30	132.83
54	Bf	501	GTP	PB-O3B-PG	-2.77	123.30	132.83
54	1h	501	GTP	PB-O3B-PG	-2.77	123.31	132.83
54	9b	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
54	4b	501	GTP	PB-O3B-PG	-2.77	123.31	132.83
54	9e	501	GTP	PB-O3B-PG	-2.77	123.31	132.83
54	Ah	501	GTP	PB-O3B-PG	-2.77	123.31	132.83
54	4d	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
54	9b	501	GTP	PB-O3B-PG	-2.77	123.32	132.83
54	Dd	501	GTP	PB-O3B-PG	-2.77	123.32	132.83
54	1d	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
54	1b	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
54	4f	501	GTP	C3'-C2'-C1'	2.77	105.14	100.98
54	7h	501	GTP	C3'-C2'-C1'	2.76	105.13	100.98
54	Df	501	GTP	C3'-C2'-C1'	2.76	105.13	100.98
54	2h	501	GTP	C3'-C2'-C1'	2.75	105.12	100.98
53	Ae	502	GDP	C8-N7-C5	2.39	107.54	102.99
53	1e	501	GDP	C8-N7-C5	2.38	107.53	102.99
53	Bc	501	GDP	C8-N7-C5	2.38	107.52	102.99
53	9c	501	GDP	C8-N7-C5	2.38	107.52	102.99
53	Bc	501	GDP	C5-C6-N1	2.38	118.15	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	9g	501	GDP	C5-C6-N1	2.38	118.15	113.95
53	1a	501	GDP	C8-N7-C5	2.37	107.50	102.99
53	1g	501	GDP	C8-N7-C5	2.35	107.48	102.99
53	Cg	501	GDP	C8-N7-C5	2.35	107.47	102.99
53	4c	501	GDP	C8-N7-C5	2.35	107.47	102.99
53	Cc	502	GDP	C8-N7-C5	2.35	107.47	102.99
53	6c	502	GDP	C8-N7-C5	2.35	107.47	102.99
53	Ba	501	GDP	C8-N7-C5	2.35	107.47	102.99
53	9g	501	GDP	C8-N7-C5	2.35	107.46	102.99
53	8g	501	GDP	C8-N7-C5	2.35	107.46	102.99
53	3g	501	GDP	C8-N7-C5	2.35	107.46	102.99
53	6g	502	GDP	C8-N7-C5	2.35	107.46	102.99
53	Be	501	GDP	C8-N7-C5	2.35	107.46	102.99
53	6e	502	GDP	C8-N7-C5	2.35	107.46	102.99
53	5c	502	GDP	C8-N7-C5	2.34	107.46	102.99
53	5g	501	GDP	C8-N7-C5	2.34	107.46	102.99
53	Dc	501	GDP	C8-N7-C5	2.34	107.45	102.99
53	2g	501	GDP	C8-N7-C5	2.34	107.45	102.99
53	Ca	501	GDP	C8-N7-C5	2.34	107.45	102.99
53	1a	501	GDP	C5-C6-N1	2.34	118.09	113.95
53	9e	502	GDP	C8-N7-C5	2.34	107.45	102.99
53	Aa	501	GDP	C8-N7-C5	2.34	107.45	102.99
53	2c	501	GDP	C8-N7-C5	2.34	107.44	102.99
53	8a	501	GDP	C8-N7-C5	2.34	107.44	102.99
53	9c	501	GDP	C5-C6-N1	2.34	118.08	113.95
53	8c	501	GDP	C8-N7-C5	2.34	107.44	102.99
53	7c	501	GDP	C8-N7-C5	2.33	107.44	102.99
53	Ac	501	GDP	C8-N7-C5	2.33	107.44	102.99
53	7e	502	GDP	C8-N7-C5	2.33	107.43	102.99
53	Ce	501	GDP	C8-N7-C5	2.33	107.43	102.99
53	4a	501	GDP	C8-N7-C5	2.33	107.43	102.99
53	Ae	502	GDP	C5-C6-N1	2.33	118.07	113.95
53	8e	501	GDP	C8-N7-C5	2.33	107.43	102.99
53	3c	502	GDP	C8-N7-C5	2.33	107.43	102.99
53	2e	501	GDP	C8-N7-C5	2.33	107.43	102.99
53	7g	501	GDP	C8-N7-C5	2.33	107.43	102.99
53	6a	501	GDP	C8-N7-C5	2.33	107.42	102.99
53	Dg	501	GDP	C8-N7-C5	2.33	107.42	102.99
53	Be	501	GDP	C5-C6-N1	2.33	118.06	113.95
53	Dc	501	GDP	C5-C6-N1	2.32	118.06	113.95
53	4g	501	GDP	C8-N7-C5	2.32	107.42	102.99
53	4e	501	GDP	C8-N7-C5	2.32	107.41	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	1e	501	GDP	C5-C6-N1	2.32	118.05	113.95
53	Bg	501	GDP	C8-N7-C5	2.32	107.41	102.99
54	9h	501	GTP	O6-C6-C5	-2.32	119.84	124.37
53	5a	501	GDP	C8-N7-C5	2.32	107.41	102.99
53	2c	501	GDP	C5-C6-N1	2.32	118.04	113.95
53	2a	501	GDP	C8-N7-C5	2.32	107.40	102.99
53	1c	501	GDP	C8-N7-C5	2.31	107.40	102.99
53	5e	501	GDP	C8-N7-C5	2.31	107.40	102.99
53	8g	501	GDP	C5-C6-N1	2.31	118.04	113.95
54	4b	501	GTP	O6-C6-C5	-2.31	119.86	124.37
53	7c	501	GDP	C5-C6-N1	2.31	118.03	113.95
53	De	501	GDP	C8-N7-C5	2.31	107.39	102.99
53	Ag	501	GDP	C8-N7-C5	2.31	107.39	102.99
53	Da	501	GDP	C8-N7-C5	2.31	107.39	102.99
53	3c	502	GDP	C5-C6-N1	2.31	118.03	113.95
53	5g	501	GDP	C5-C6-N1	2.31	118.03	113.95
53	3a	501	GDP	C8-N7-C5	2.31	107.39	102.99
54	6g	501	GTP	O6-C6-C5	-2.31	119.87	124.37
54	Dd	501	GTP	O6-C6-C5	-2.31	119.87	124.37
53	5c	502	GDP	C5-C6-N1	2.31	118.02	113.95
53	9a	501	GDP	C8-N7-C5	2.31	107.38	102.99
53	7g	501	GDP	C5-C6-N1	2.30	118.02	113.95
54	3d	501	GTP	O6-C6-C5	-2.30	119.88	124.37
54	1d	501	GTP	O6-C6-C5	-2.30	119.88	124.37
53	Ce	501	GDP	C5-C6-N1	2.30	118.02	113.95
53	1c	501	GDP	C5-C6-N1	2.30	118.02	113.95
54	Df	501	GTP	O6-C6-C5	-2.30	119.88	124.37
54	8h	501	GTP	O6-C6-C5	-2.30	119.88	124.37
53	7a	501	GDP	C8-N7-C5	2.30	107.37	102.99
53	Cg	501	GDP	C5-C6-N1	2.30	118.01	113.95
53	3e	501	GDP	C8-N7-C5	2.30	107.37	102.99
54	1f	501	GTP	O6-C6-C5	-2.30	119.88	124.37
53	Dg	501	GDP	C5-C6-N1	2.30	118.01	113.95
54	5c	501	GTP	O6-C6-C5	-2.30	119.88	124.37
54	Bd	501	GTP	O6-C6-C5	-2.30	119.89	124.37
54	9e	501	GTP	O6-C6-C5	-2.30	119.89	124.37
54	8d	501	GTP	O6-C6-C5	-2.30	119.89	124.37
54	3f	501	GTP	O6-C6-C5	-2.29	119.89	124.37
54	Db	501	GTP	O6-C6-C5	-2.29	119.89	124.37
53	4g	501	GDP	C5-C6-N1	2.29	118.00	113.95
54	5d	501	GTP	O6-C6-C5	-2.29	119.89	124.37
54	3c	501	GTP	O6-C6-C5	-2.29	119.89	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	3g	501	GDP	C5-C6-N1	2.29	118.00	113.95
53	6g	502	GDP	C5-C6-N1	2.29	118.00	113.95
53	Bg	501	GDP	C5-C6-N1	2.29	118.00	113.95
53	Cc	502	GDP	C5-C6-N1	2.29	118.00	113.95
54	2b	501	GTP	O6-C6-C5	-2.29	119.89	124.37
54	8b	501	GTP	O6-C6-C5	-2.29	119.89	124.37
54	4d	501	GTP	O6-C6-C5	-2.29	119.90	124.37
54	4h	501	GTP	O6-C6-C5	-2.29	119.90	124.37
54	5h	501	GTP	O6-C6-C5	-2.29	119.90	124.37
54	8f	501	GTP	O6-C6-C5	-2.29	119.90	124.37
53	1g	501	GDP	C5-C6-N1	2.29	118.00	113.95
54	3h	501	GTP	O6-C6-C5	-2.29	119.90	124.37
54	2d	501	GTP	O6-C6-C5	-2.29	119.90	124.37
54	Dh	501	GTP	O6-C6-C5	-2.29	119.90	124.37
54	7e	501	GTP	O6-C6-C5	-2.29	119.91	124.37
54	Ah	501	GTP	O6-C6-C5	-2.29	119.91	124.37
54	Cd	501	GTP	O6-C6-C5	-2.29	119.91	124.37
54	Cf	501	GTP	O6-C6-C5	-2.29	119.91	124.37
53	9e	502	GDP	C5-C6-N1	2.29	117.99	113.95
53	Ac	501	GDP	C5-C6-N1	2.29	117.99	113.95
53	6c	502	GDP	C5-C6-N1	2.28	117.99	113.95
54	7f	501	GTP	O6-C6-C5	-2.28	119.91	124.37
54	Bf	501	GTP	O6-C6-C5	-2.28	119.91	124.37
54	Ch	501	GTP	O6-C6-C5	-2.28	119.91	124.37
53	4a	501	GDP	C5-C6-N1	2.28	117.98	113.95
53	8c	501	GDP	C5-C6-N1	2.28	117.98	113.95
54	6h	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	Ab	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	9f	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	6c	501	GTP	O6-C6-C5	-2.28	119.92	124.37
53	7e	502	GDP	C5-C6-N1	2.28	117.98	113.95
53	Ag	501	GDP	C5-C6-N1	2.28	117.98	113.95
53	6e	502	GDP	C5-C6-N1	2.28	117.97	113.95
54	1h	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	2h	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	4f	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	7b	501	GTP	O6-C6-C5	-2.28	119.92	124.37
54	Cc	501	GTP	O6-C6-C5	-2.27	119.93	124.37
54	2f	501	GTP	O6-C6-C5	-2.27	119.93	124.37
53	Ca	501	GDP	C5-C6-N1	2.27	117.97	113.95
53	8e	501	GDP	C5-C6-N1	2.27	117.96	113.95
53	5e	501	GDP	C5-C6-N1	2.27	117.96	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	Af	501	GTP	O6-C6-C5	-2.27	119.94	124.37
54	Bh	501	GTP	O6-C6-C5	-2.27	119.94	124.37
54	Bb	501	GTP	O6-C6-C5	-2.27	119.94	124.37
53	2a	501	GDP	C5-C6-N1	2.27	117.95	113.95
54	7h	501	GTP	O6-C6-C5	-2.27	119.95	124.37
54	5f	501	GTP	O6-C6-C5	-2.26	119.95	124.37
54	Ae	501	GTP	O6-C6-C5	-2.26	119.95	124.37
54	1b	501	GTP	O6-C6-C5	-2.26	119.95	124.37
54	6e	501	GTP	O6-C6-C5	-2.26	119.95	124.37
53	9a	501	GDP	C5-C6-N1	2.26	117.94	113.95
53	8a	501	GDP	C5-C6-N1	2.26	117.94	113.95
53	4c	501	GDP	C5-C6-N1	2.26	117.94	113.95
53	7a	501	GDP	C5-C6-N1	2.26	117.94	113.95
53	5a	501	GDP	C5-C6-N1	2.26	117.94	113.95
53	3a	501	GDP	C5-C6-N1	2.26	117.94	113.95
54	9b	501	GTP	O6-C6-C5	-2.25	119.97	124.37
53	2g	501	GDP	C5-C6-N1	2.25	117.92	113.95
53	Aa	501	GDP	C5-C6-N1	2.24	117.92	113.95
53	3e	501	GDP	C5-C6-N1	2.24	117.91	113.95
53	Da	501	GDP	C5-C6-N1	2.24	117.91	113.95
53	Ba	501	GDP	C5-C6-N1	2.24	117.90	113.95
53	2e	501	GDP	C5-C6-N1	2.23	117.88	113.95
53	De	501	GDP	C5-C6-N1	2.23	117.88	113.95
53	4e	501	GDP	C5-C6-N1	2.23	117.88	113.95
53	6a	501	GDP	C5-C6-N1	2.22	117.88	113.95

There are no chirality outliers.

All (260) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
53	1a	501	GDP	C5'-O5'-PA-O1A
53	1a	501	GDP	C5'-O5'-PA-O2A
53	1c	501	GDP	C5'-O5'-PA-O1A
53	1c	501	GDP	C5'-O5'-PA-O2A
53	1e	501	GDP	C5'-O5'-PA-O1A
53	1e	501	GDP	C5'-O5'-PA-O2A
53	1g	501	GDP	C5'-O5'-PA-O1A
53	1g	501	GDP	C5'-O5'-PA-O2A
53	2a	501	GDP	C5'-O5'-PA-O1A
53	2a	501	GDP	C5'-O5'-PA-O2A
53	2c	501	GDP	C5'-O5'-PA-O1A
53	2c	501	GDP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
53	2e	501	GDP	C5'-O5'-PA-O1A
53	2e	501	GDP	C5'-O5'-PA-O2A
53	2g	501	GDP	C5'-O5'-PA-O1A
53	2g	501	GDP	C5'-O5'-PA-O2A
53	3a	501	GDP	C5'-O5'-PA-O1A
53	3a	501	GDP	C5'-O5'-PA-O2A
53	3c	502	GDP	C5'-O5'-PA-O1A
53	3c	502	GDP	C5'-O5'-PA-O2A
53	3e	501	GDP	C5'-O5'-PA-O1A
53	3e	501	GDP	C5'-O5'-PA-O2A
53	3g	501	GDP	C5'-O5'-PA-O1A
53	3g	501	GDP	C5'-O5'-PA-O2A
53	4a	501	GDP	C5'-O5'-PA-O1A
53	4a	501	GDP	C5'-O5'-PA-O2A
53	4c	501	GDP	C5'-O5'-PA-O1A
53	4c	501	GDP	C5'-O5'-PA-O2A
53	4e	501	GDP	C5'-O5'-PA-O1A
53	4e	501	GDP	C5'-O5'-PA-O2A
53	4g	501	GDP	C5'-O5'-PA-O1A
53	4g	501	GDP	C5'-O5'-PA-O2A
53	5a	501	GDP	C5'-O5'-PA-O1A
53	5a	501	GDP	C5'-O5'-PA-O2A
53	5c	502	GDP	C5'-O5'-PA-O1A
53	5e	501	GDP	C5'-O5'-PA-O1A
53	5e	501	GDP	C5'-O5'-PA-O2A
53	5g	501	GDP	C5'-O5'-PA-O1A
53	5g	501	GDP	C5'-O5'-PA-O2A
53	6a	501	GDP	C5'-O5'-PA-O1A
53	6a	501	GDP	C5'-O5'-PA-O2A
53	6c	502	GDP	C5'-O5'-PA-O1A
53	6c	502	GDP	C5'-O5'-PA-O2A
53	6e	502	GDP	C5'-O5'-PA-O1A
53	6e	502	GDP	C5'-O5'-PA-O2A
53	6g	502	GDP	C5'-O5'-PA-O1A
53	6g	502	GDP	C5'-O5'-PA-O2A
53	7a	501	GDP	C5'-O5'-PA-O1A
53	7a	501	GDP	C5'-O5'-PA-O2A
53	7c	501	GDP	C5'-O5'-PA-O1A
53	7e	502	GDP	C5'-O5'-PA-O1A
53	7e	502	GDP	C5'-O5'-PA-O2A
53	7g	501	GDP	C5'-O5'-PA-O1A
53	7g	501	GDP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
53	8a	501	GDP	C5'-O5'-PA-O1A
53	8a	501	GDP	C5'-O5'-PA-O2A
53	8c	501	GDP	C5'-O5'-PA-O1A
53	8c	501	GDP	C5'-O5'-PA-O2A
53	8e	501	GDP	C5'-O5'-PA-O1A
53	8e	501	GDP	C5'-O5'-PA-O2A
53	8g	501	GDP	C5'-O5'-PA-O1A
53	8g	501	GDP	C5'-O5'-PA-O2A
53	9a	501	GDP	C5'-O5'-PA-O1A
53	9a	501	GDP	C5'-O5'-PA-O2A
53	9c	501	GDP	C5'-O5'-PA-O1A
53	9c	501	GDP	C5'-O5'-PA-O2A
53	9e	502	GDP	C5'-O5'-PA-O1A
53	9e	502	GDP	C5'-O5'-PA-O2A
53	9g	501	GDP	C5'-O5'-PA-O1A
53	9g	501	GDP	C5'-O5'-PA-O2A
53	Aa	501	GDP	C5'-O5'-PA-O1A
53	Aa	501	GDP	C5'-O5'-PA-O2A
53	Ac	501	GDP	C5'-O5'-PA-O1A
53	Ac	501	GDP	C5'-O5'-PA-O2A
53	Ae	502	GDP	C5'-O5'-PA-O1A
53	Ae	502	GDP	C5'-O5'-PA-O2A
53	Ag	501	GDP	C5'-O5'-PA-O1A
53	Ag	501	GDP	C5'-O5'-PA-O2A
53	Ba	501	GDP	C5'-O5'-PA-O1A
53	Ba	501	GDP	C5'-O5'-PA-O2A
53	Bc	501	GDP	C5'-O5'-PA-O1A
53	Bc	501	GDP	C5'-O5'-PA-O2A
53	Be	501	GDP	C5'-O5'-PA-O1A
53	Be	501	GDP	C5'-O5'-PA-O2A
53	Bg	501	GDP	C5'-O5'-PA-O1A
53	Bg	501	GDP	C5'-O5'-PA-O2A
53	Ca	501	GDP	C5'-O5'-PA-O1A
53	Ca	501	GDP	C5'-O5'-PA-O2A
53	Cc	502	GDP	C5'-O5'-PA-O1A
53	Cc	502	GDP	C5'-O5'-PA-O2A
53	Ce	501	GDP	C5'-O5'-PA-O1A
53	Ce	501	GDP	C5'-O5'-PA-O2A
53	Cg	501	GDP	C5'-O5'-PA-O1A
53	Cg	501	GDP	C5'-O5'-PA-O2A
53	Da	501	GDP	C5'-O5'-PA-O1A
53	Da	501	GDP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
53	Dc	501	GDP	C5'-O5'-PA-O1A
53	Dc	501	GDP	C5'-O5'-PA-O2A
53	De	501	GDP	C5'-O5'-PA-O1A
53	De	501	GDP	C5'-O5'-PA-O2A
53	Dg	501	GDP	C5'-O5'-PA-O1A
53	Dg	501	GDP	C5'-O5'-PA-O2A
54	1b	501	GTP	O4'-C4'-C5'-O5'
54	1b	501	GTP	C3'-C4'-C5'-O5'
54	1d	501	GTP	O4'-C4'-C5'-O5'
54	1d	501	GTP	C3'-C4'-C5'-O5'
54	1f	501	GTP	O4'-C4'-C5'-O5'
54	1f	501	GTP	C3'-C4'-C5'-O5'
54	1h	501	GTP	O4'-C4'-C5'-O5'
54	1h	501	GTP	C3'-C4'-C5'-O5'
54	2b	501	GTP	O4'-C4'-C5'-O5'
54	2b	501	GTP	C3'-C4'-C5'-O5'
54	2d	501	GTP	O4'-C4'-C5'-O5'
54	2d	501	GTP	C3'-C4'-C5'-O5'
54	2f	501	GTP	O4'-C4'-C5'-O5'
54	2f	501	GTP	C3'-C4'-C5'-O5'
54	2h	501	GTP	O4'-C4'-C5'-O5'
54	2h	501	GTP	C3'-C4'-C5'-O5'
54	3c	501	GTP	O4'-C4'-C5'-O5'
54	3c	501	GTP	C3'-C4'-C5'-O5'
54	3d	501	GTP	O4'-C4'-C5'-O5'
54	3d	501	GTP	C3'-C4'-C5'-O5'
54	3f	501	GTP	O4'-C4'-C5'-O5'
54	3f	501	GTP	C3'-C4'-C5'-O5'
54	3h	501	GTP	O4'-C4'-C5'-O5'
54	3h	501	GTP	C3'-C4'-C5'-O5'
54	4b	501	GTP	O4'-C4'-C5'-O5'
54	4b	501	GTP	C3'-C4'-C5'-O5'
54	4d	501	GTP	O4'-C4'-C5'-O5'
54	4d	501	GTP	C3'-C4'-C5'-O5'
54	4f	501	GTP	O4'-C4'-C5'-O5'
54	4f	501	GTP	C3'-C4'-C5'-O5'
54	4h	501	GTP	O4'-C4'-C5'-O5'
54	4h	501	GTP	C3'-C4'-C5'-O5'
54	5c	501	GTP	O4'-C4'-C5'-O5'
54	5c	501	GTP	C3'-C4'-C5'-O5'
54	5d	501	GTP	O4'-C4'-C5'-O5'
54	5d	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
54	5f	501	GTP	O4'-C4'-C5'-O5'
54	5f	501	GTP	C3'-C4'-C5'-O5'
54	5h	501	GTP	O4'-C4'-C5'-O5'
54	5h	501	GTP	C3'-C4'-C5'-O5'
54	6c	501	GTP	O4'-C4'-C5'-O5'
54	6c	501	GTP	C3'-C4'-C5'-O5'
54	6e	501	GTP	O4'-C4'-C5'-O5'
54	6e	501	GTP	C3'-C4'-C5'-O5'
54	6g	501	GTP	O4'-C4'-C5'-O5'
54	6g	501	GTP	C3'-C4'-C5'-O5'
54	6h	501	GTP	O4'-C4'-C5'-O5'
54	6h	501	GTP	C3'-C4'-C5'-O5'
54	7b	501	GTP	O4'-C4'-C5'-O5'
54	7b	501	GTP	C3'-C4'-C5'-O5'
54	7e	501	GTP	O4'-C4'-C5'-O5'
54	7e	501	GTP	C3'-C4'-C5'-O5'
54	7f	501	GTP	O4'-C4'-C5'-O5'
54	7f	501	GTP	C3'-C4'-C5'-O5'
54	7h	501	GTP	O4'-C4'-C5'-O5'
54	7h	501	GTP	C3'-C4'-C5'-O5'
54	8b	501	GTP	O4'-C4'-C5'-O5'
54	8b	501	GTP	C3'-C4'-C5'-O5'
54	8d	501	GTP	O4'-C4'-C5'-O5'
54	8d	501	GTP	C3'-C4'-C5'-O5'
54	8f	501	GTP	O4'-C4'-C5'-O5'
54	8f	501	GTP	C3'-C4'-C5'-O5'
54	8h	501	GTP	O4'-C4'-C5'-O5'
54	8h	501	GTP	C3'-C4'-C5'-O5'
54	9b	501	GTP	O4'-C4'-C5'-O5'
54	9b	501	GTP	C3'-C4'-C5'-O5'
54	9e	501	GTP	O4'-C4'-C5'-O5'
54	9e	501	GTP	C3'-C4'-C5'-O5'
54	9f	501	GTP	O4'-C4'-C5'-O5'
54	9f	501	GTP	C3'-C4'-C5'-O5'
54	9h	501	GTP	O4'-C4'-C5'-O5'
54	9h	501	GTP	C3'-C4'-C5'-O5'
54	Ab	501	GTP	O4'-C4'-C5'-O5'
54	Ab	501	GTP	C3'-C4'-C5'-O5'
54	Ae	501	GTP	O4'-C4'-C5'-O5'
54	Ae	501	GTP	C3'-C4'-C5'-O5'
54	Af	501	GTP	O4'-C4'-C5'-O5'
54	Af	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
54	Ah	501	GTP	O4'-C4'-C5'-O5'
54	Ah	501	GTP	C3'-C4'-C5'-O5'
54	Bb	501	GTP	O4'-C4'-C5'-O5'
54	Bb	501	GTP	C3'-C4'-C5'-O5'
54	Bd	501	GTP	O4'-C4'-C5'-O5'
54	Bd	501	GTP	C3'-C4'-C5'-O5'
54	Bf	501	GTP	O4'-C4'-C5'-O5'
54	Bf	501	GTP	C3'-C4'-C5'-O5'
54	Bh	501	GTP	O4'-C4'-C5'-O5'
54	Bh	501	GTP	C3'-C4'-C5'-O5'
54	Cc	501	GTP	O4'-C4'-C5'-O5'
54	Cc	501	GTP	C3'-C4'-C5'-O5'
54	Cd	501	GTP	O4'-C4'-C5'-O5'
54	Cd	501	GTP	C3'-C4'-C5'-O5'
54	Cf	501	GTP	O4'-C4'-C5'-O5'
54	Cf	501	GTP	C3'-C4'-C5'-O5'
54	Ch	501	GTP	O4'-C4'-C5'-O5'
54	Ch	501	GTP	C3'-C4'-C5'-O5'
54	Db	501	GTP	O4'-C4'-C5'-O5'
54	Db	501	GTP	C3'-C4'-C5'-O5'
54	Dd	501	GTP	O4'-C4'-C5'-O5'
54	Dd	501	GTP	C3'-C4'-C5'-O5'
54	Df	501	GTP	O4'-C4'-C5'-O5'
54	Df	501	GTP	C3'-C4'-C5'-O5'
54	Dh	501	GTP	O4'-C4'-C5'-O5'
54	Dh	501	GTP	C3'-C4'-C5'-O5'
53	2g	501	GDP	C5'-O5'-PA-O3A
53	3g	501	GDP	C5'-O5'-PA-O3A
53	5c	502	GDP	C5'-O5'-PA-O3A
53	6c	502	GDP	C5'-O5'-PA-O3A
53	7c	501	GDP	C5'-O5'-PA-O3A
53	8c	501	GDP	C5'-O5'-PA-O3A
53	Ac	501	GDP	C5'-O5'-PA-O3A
53	Ag	501	GDP	C5'-O5'-PA-O3A
53	Cc	502	GDP	C5'-O5'-PA-O3A
53	Dg	501	GDP	C5'-O5'-PA-O3A
53	5c	502	GDP	C5'-O5'-PA-O2A
53	7c	501	GDP	C5'-O5'-PA-O2A
53	1a	501	GDP	C5'-O5'-PA-O3A
53	1c	501	GDP	C5'-O5'-PA-O3A
53	1e	501	GDP	C5'-O5'-PA-O3A
53	1g	501	GDP	C5'-O5'-PA-O3A

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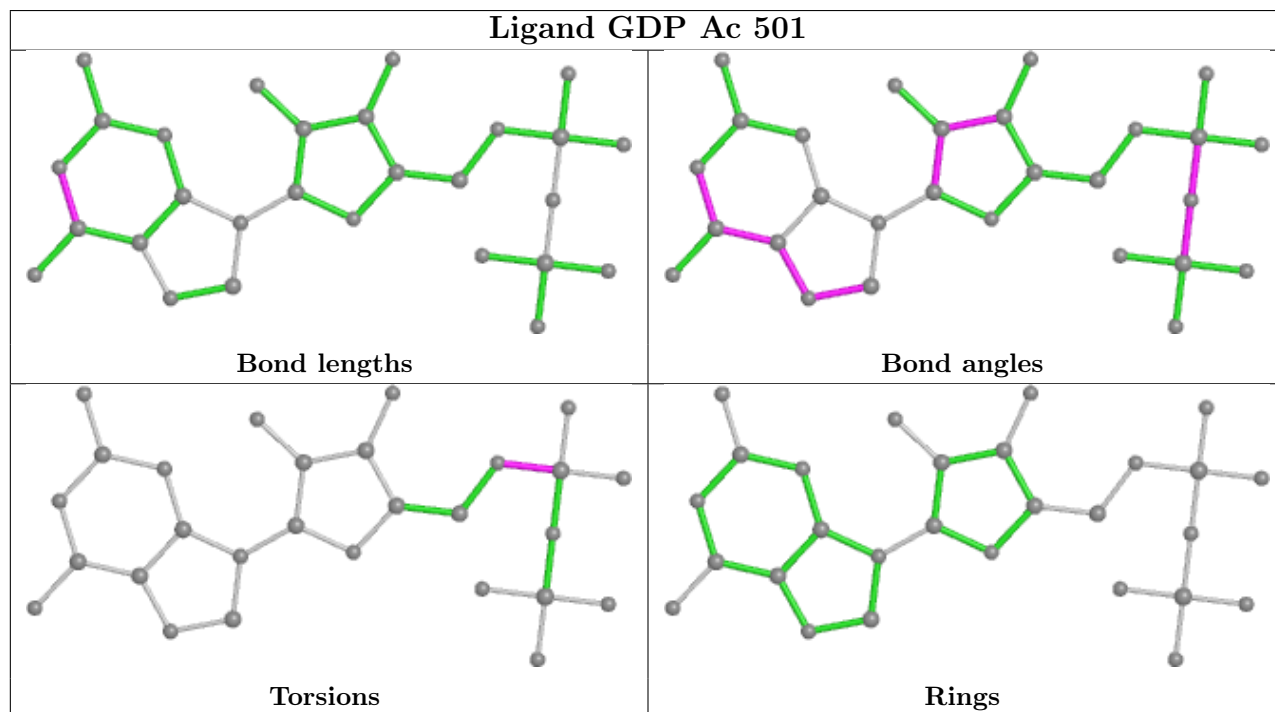
Mol	Chain	Res	Type	Atoms
53	2a	501	GDP	C5'-O5'-PA-O3A
53	2c	501	GDP	C5'-O5'-PA-O3A
53	2e	501	GDP	C5'-O5'-PA-O3A
53	3a	501	GDP	C5'-O5'-PA-O3A
53	3c	502	GDP	C5'-O5'-PA-O3A
53	3e	501	GDP	C5'-O5'-PA-O3A
53	4a	501	GDP	C5'-O5'-PA-O3A
53	4c	501	GDP	C5'-O5'-PA-O3A
53	4e	501	GDP	C5'-O5'-PA-O3A
53	4g	501	GDP	C5'-O5'-PA-O3A
53	5a	501	GDP	C5'-O5'-PA-O3A
53	5e	501	GDP	C5'-O5'-PA-O3A
53	5g	501	GDP	C5'-O5'-PA-O3A
53	6a	501	GDP	C5'-O5'-PA-O3A
53	6e	502	GDP	C5'-O5'-PA-O3A
53	6g	502	GDP	C5'-O5'-PA-O3A
53	7a	501	GDP	C5'-O5'-PA-O3A
53	7e	502	GDP	C5'-O5'-PA-O3A
53	7g	501	GDP	C5'-O5'-PA-O3A
53	8a	501	GDP	C5'-O5'-PA-O3A
53	8e	501	GDP	C5'-O5'-PA-O3A
53	8g	501	GDP	C5'-O5'-PA-O3A
53	9a	501	GDP	C5'-O5'-PA-O3A
53	9c	501	GDP	C5'-O5'-PA-O3A
53	9e	502	GDP	C5'-O5'-PA-O3A
53	9g	501	GDP	C5'-O5'-PA-O3A
53	Aa	501	GDP	C5'-O5'-PA-O3A
53	Ae	502	GDP	C5'-O5'-PA-O3A
53	Ba	501	GDP	C5'-O5'-PA-O3A
53	Bc	501	GDP	C5'-O5'-PA-O3A
53	Be	501	GDP	C5'-O5'-PA-O3A
53	Bg	501	GDP	C5'-O5'-PA-O3A
53	Ca	501	GDP	C5'-O5'-PA-O3A
53	Ce	501	GDP	C5'-O5'-PA-O3A
53	Cg	501	GDP	C5'-O5'-PA-O3A
53	Da	501	GDP	C5'-O5'-PA-O3A
53	Dc	501	GDP	C5'-O5'-PA-O3A
53	De	501	GDP	C5'-O5'-PA-O3A

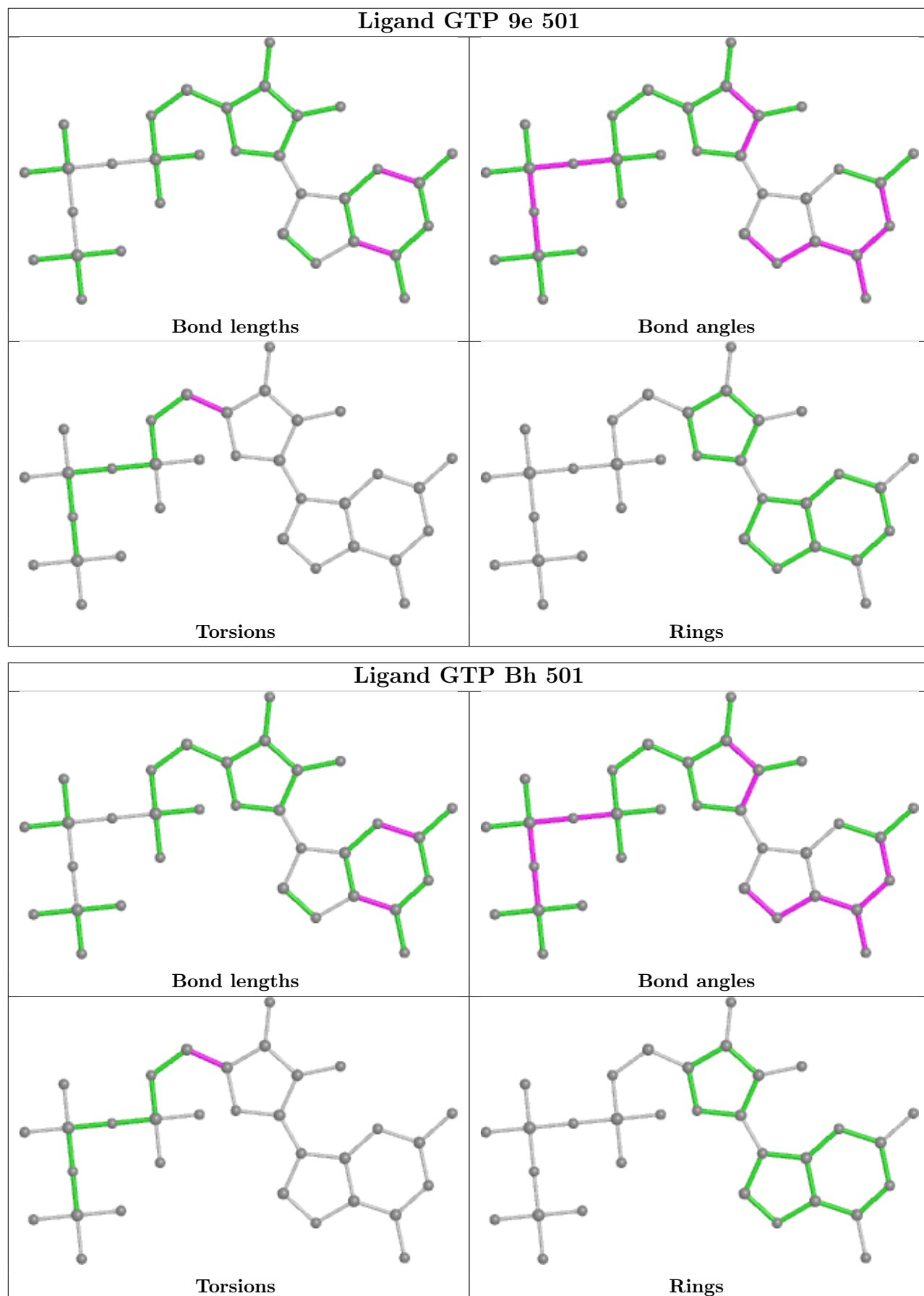
There are no ring outliers.

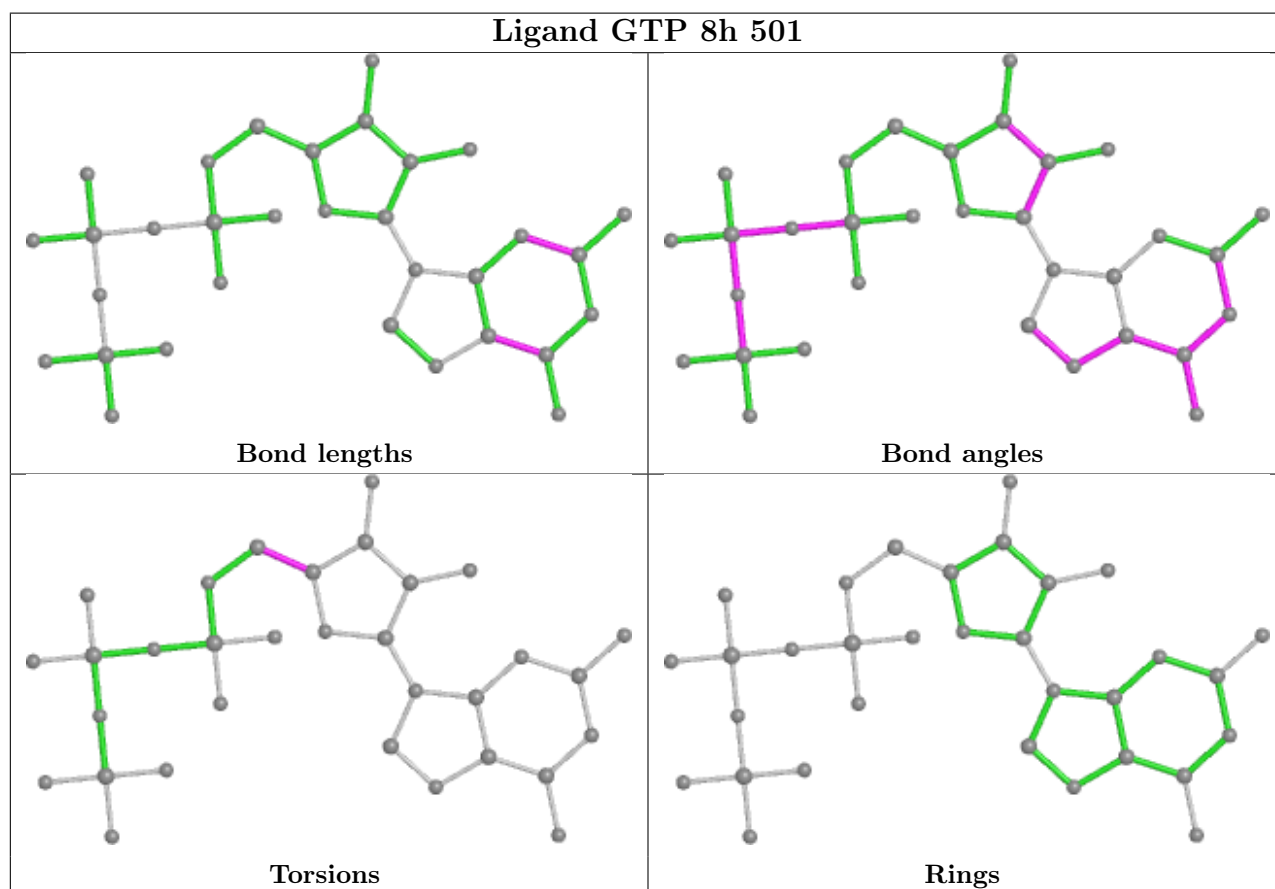
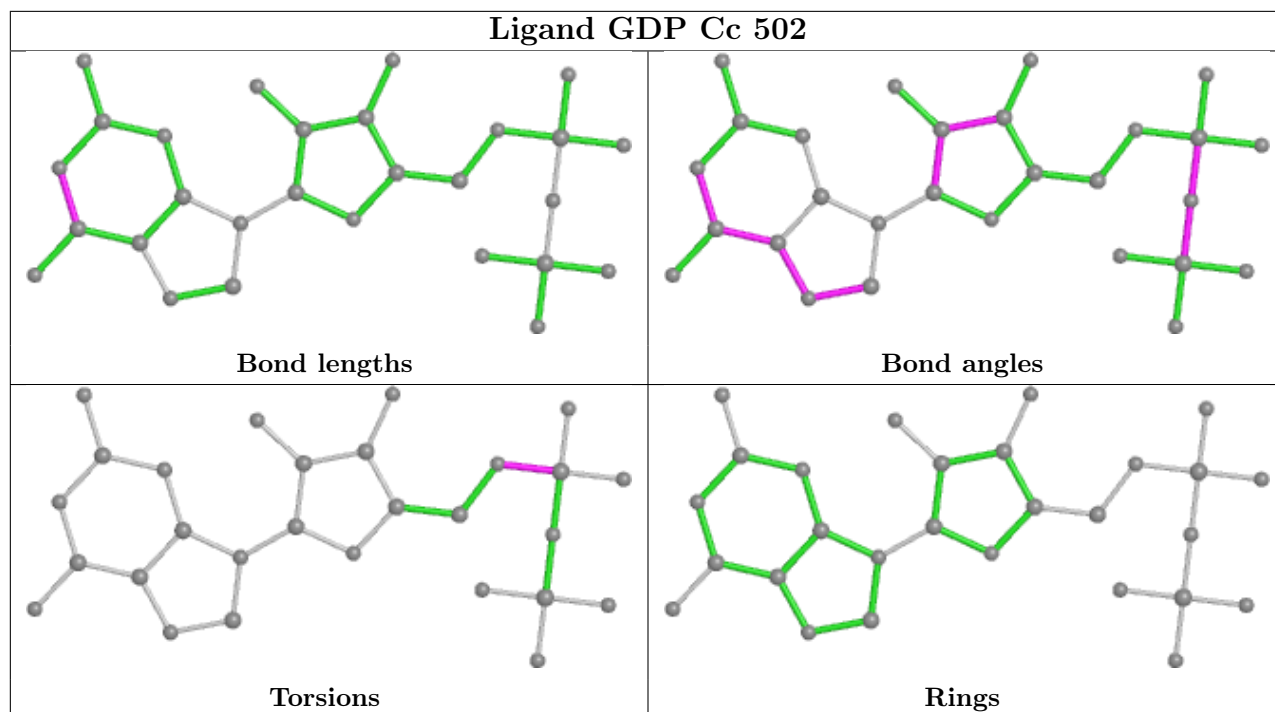
No monomer is involved in short contacts.

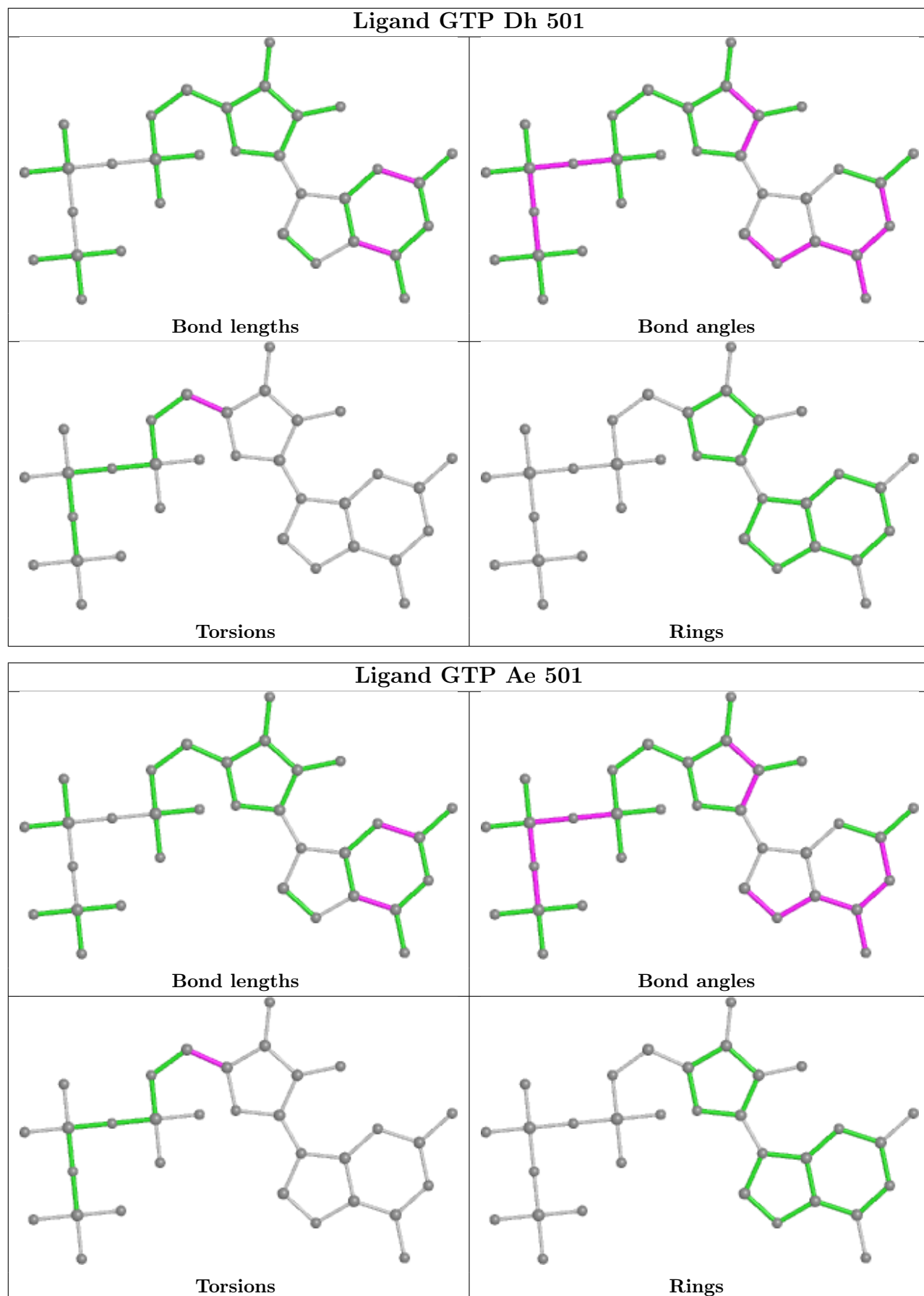
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths,

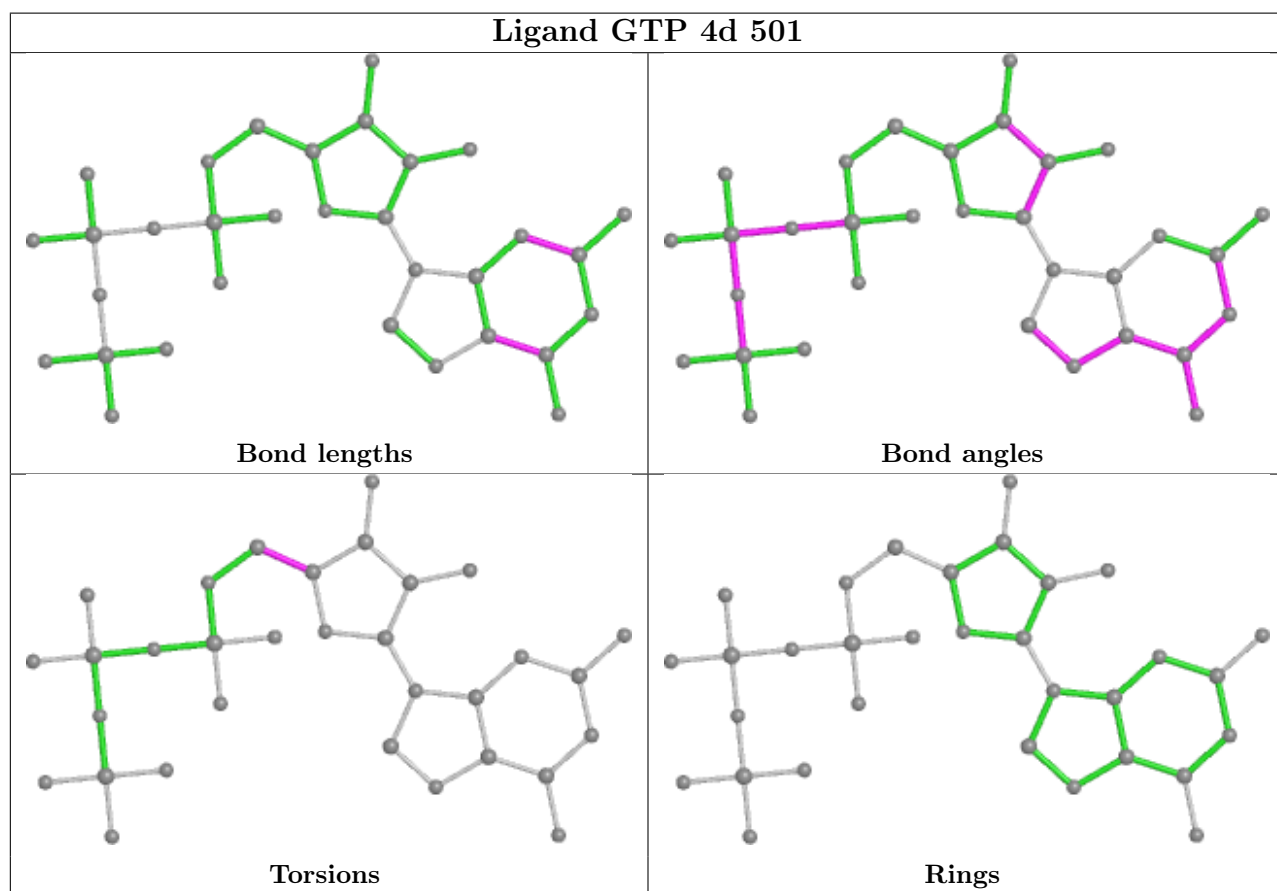
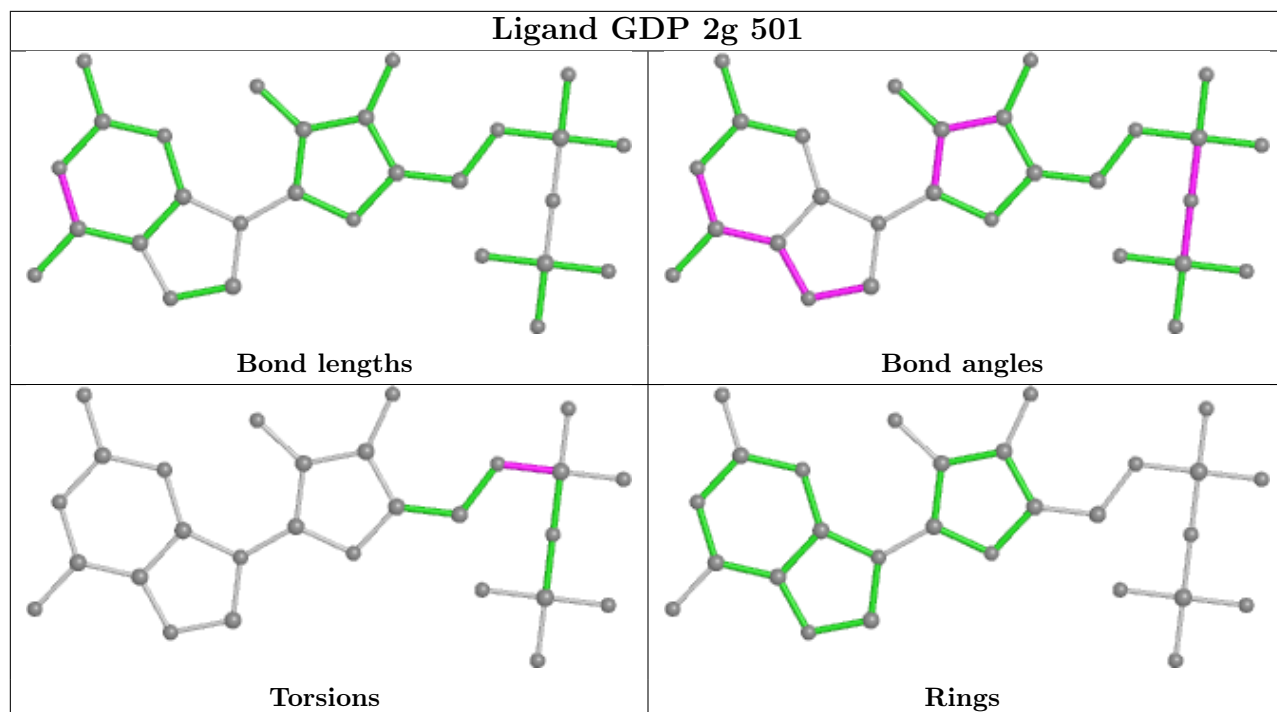
bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within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

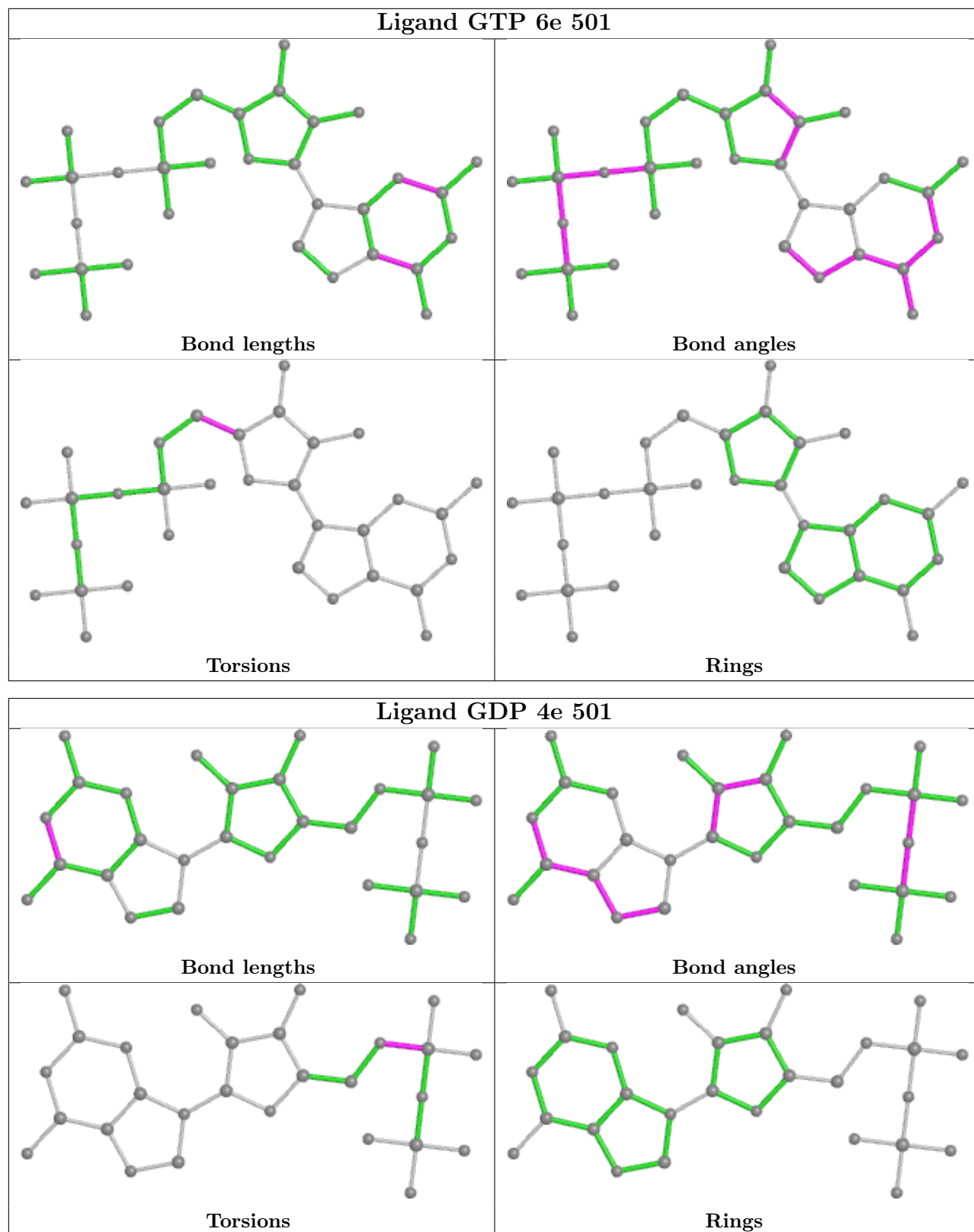


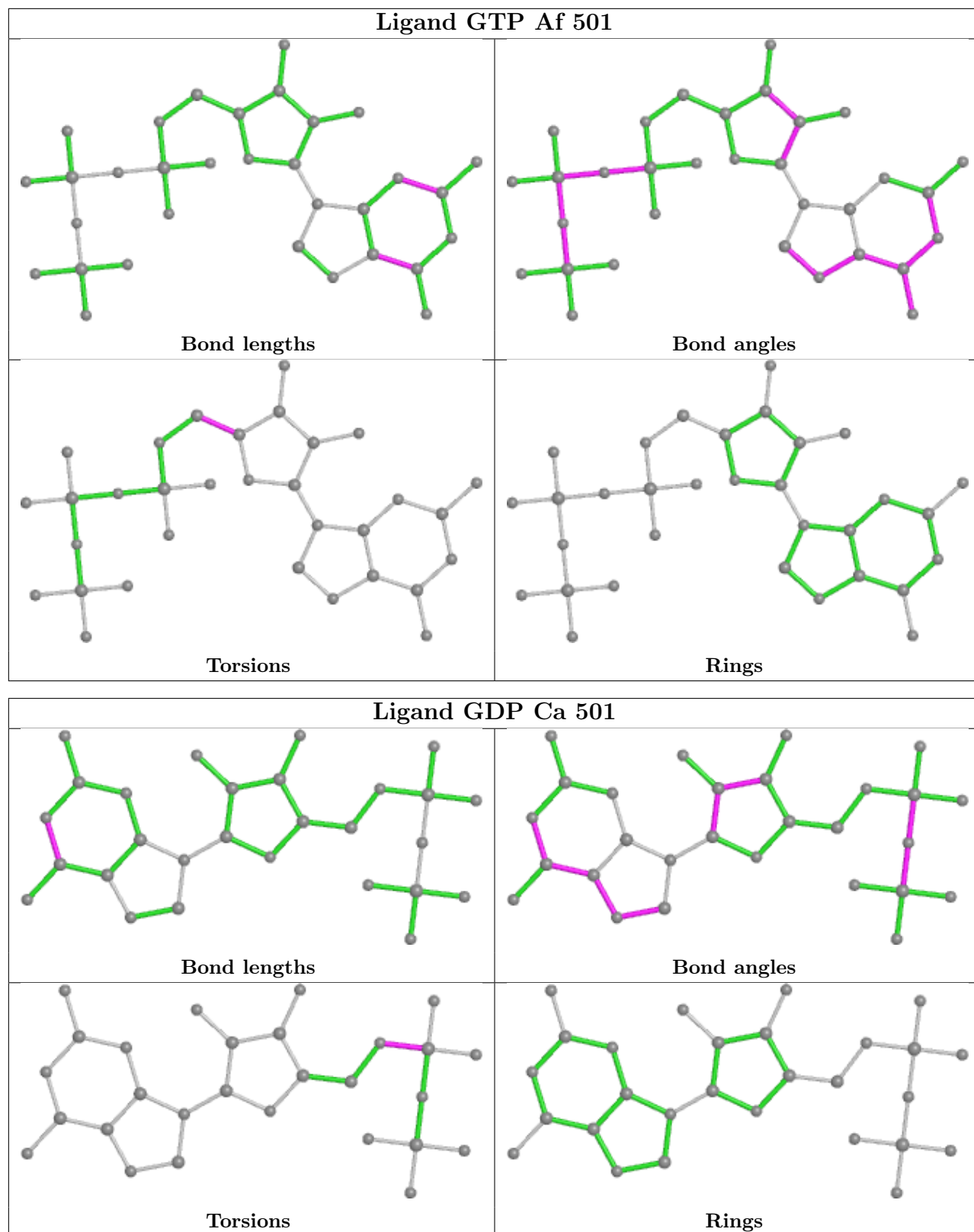


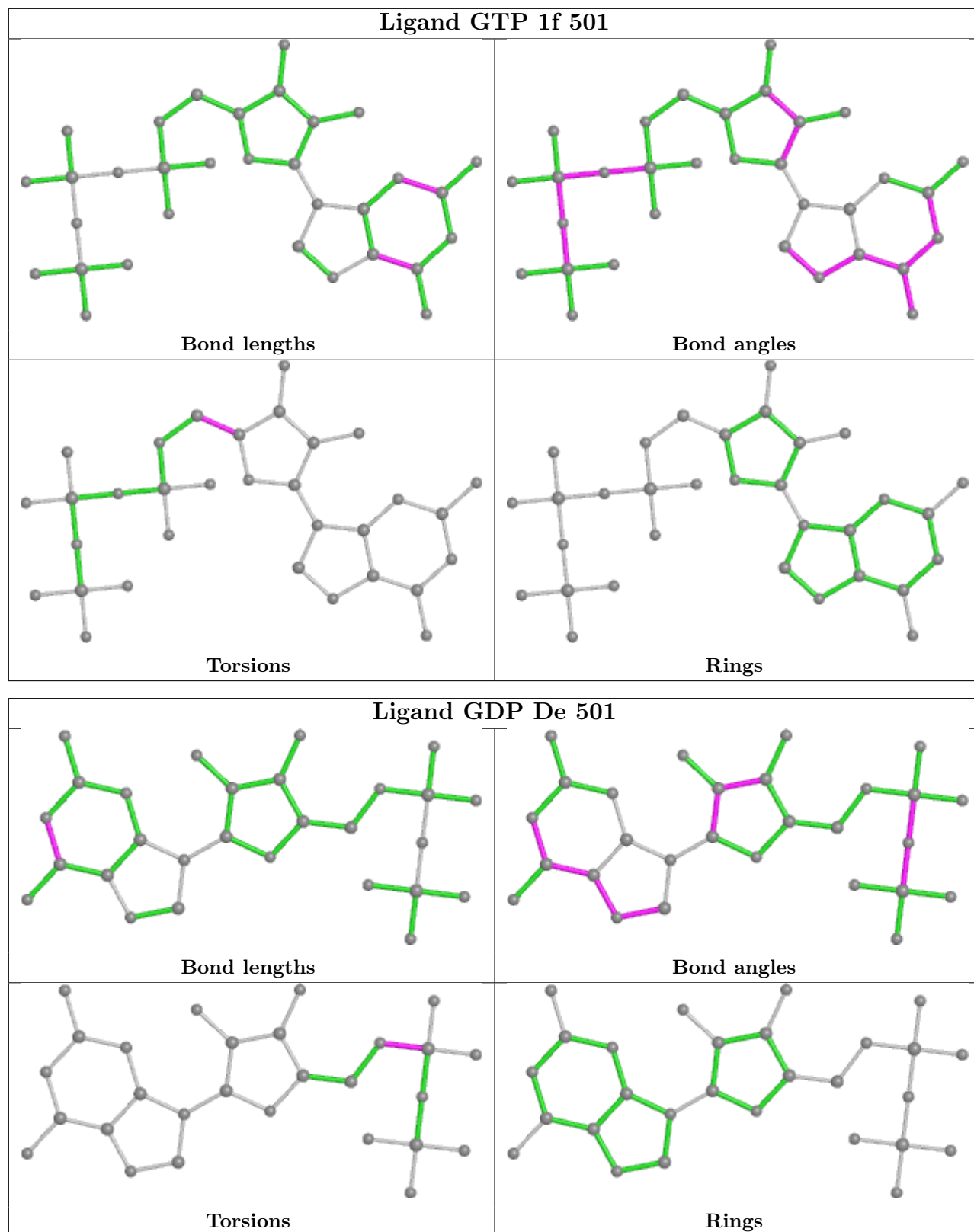


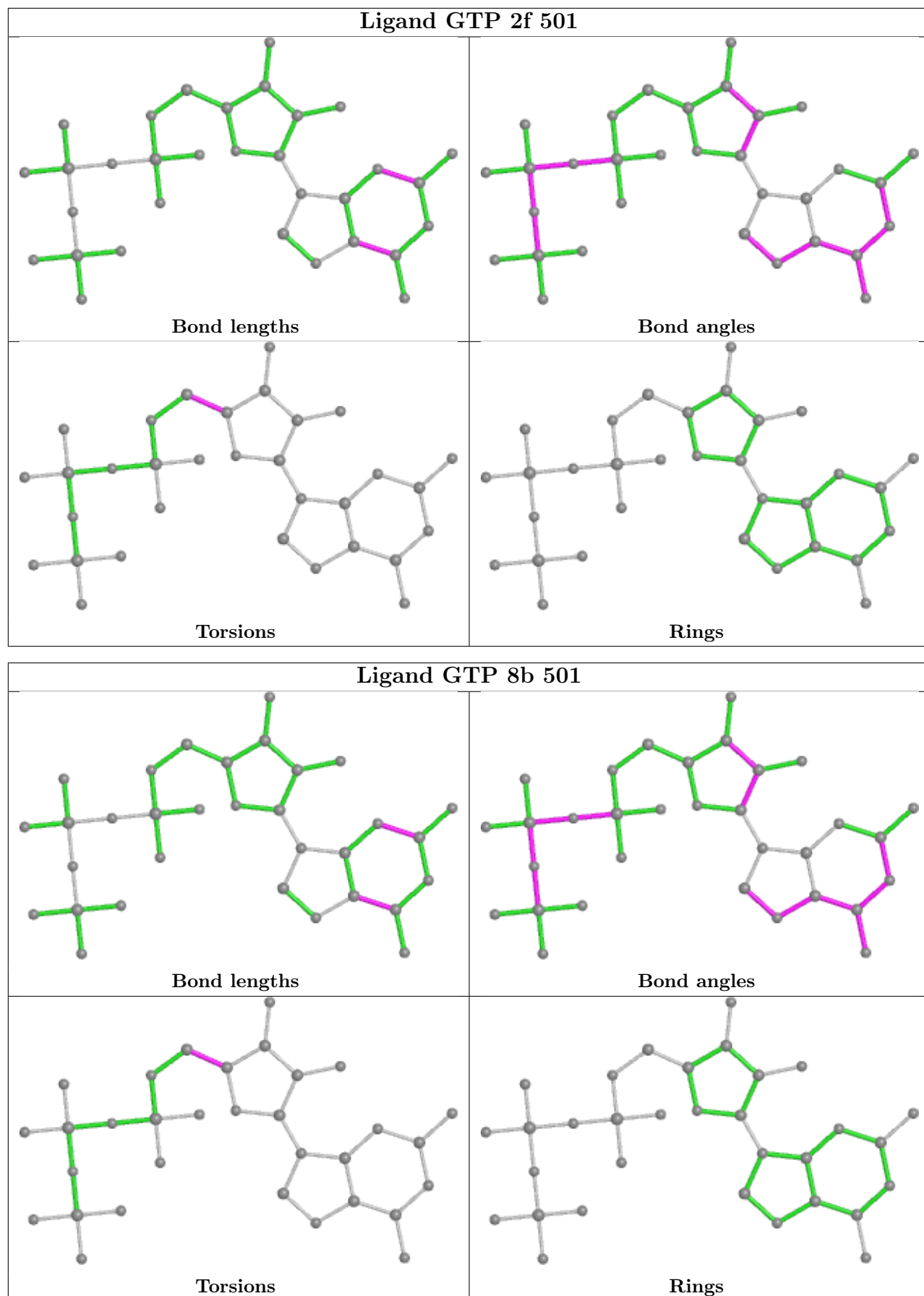


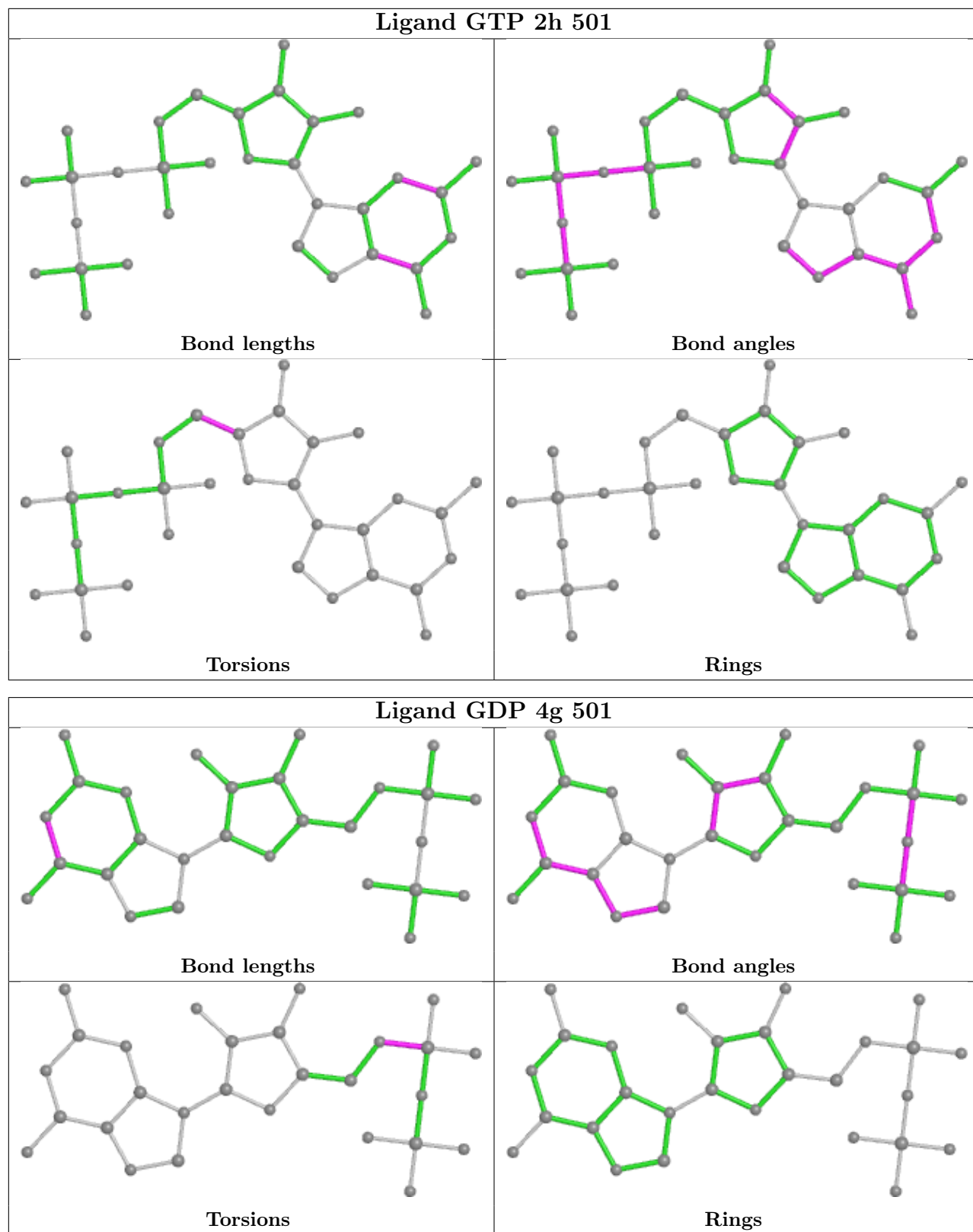


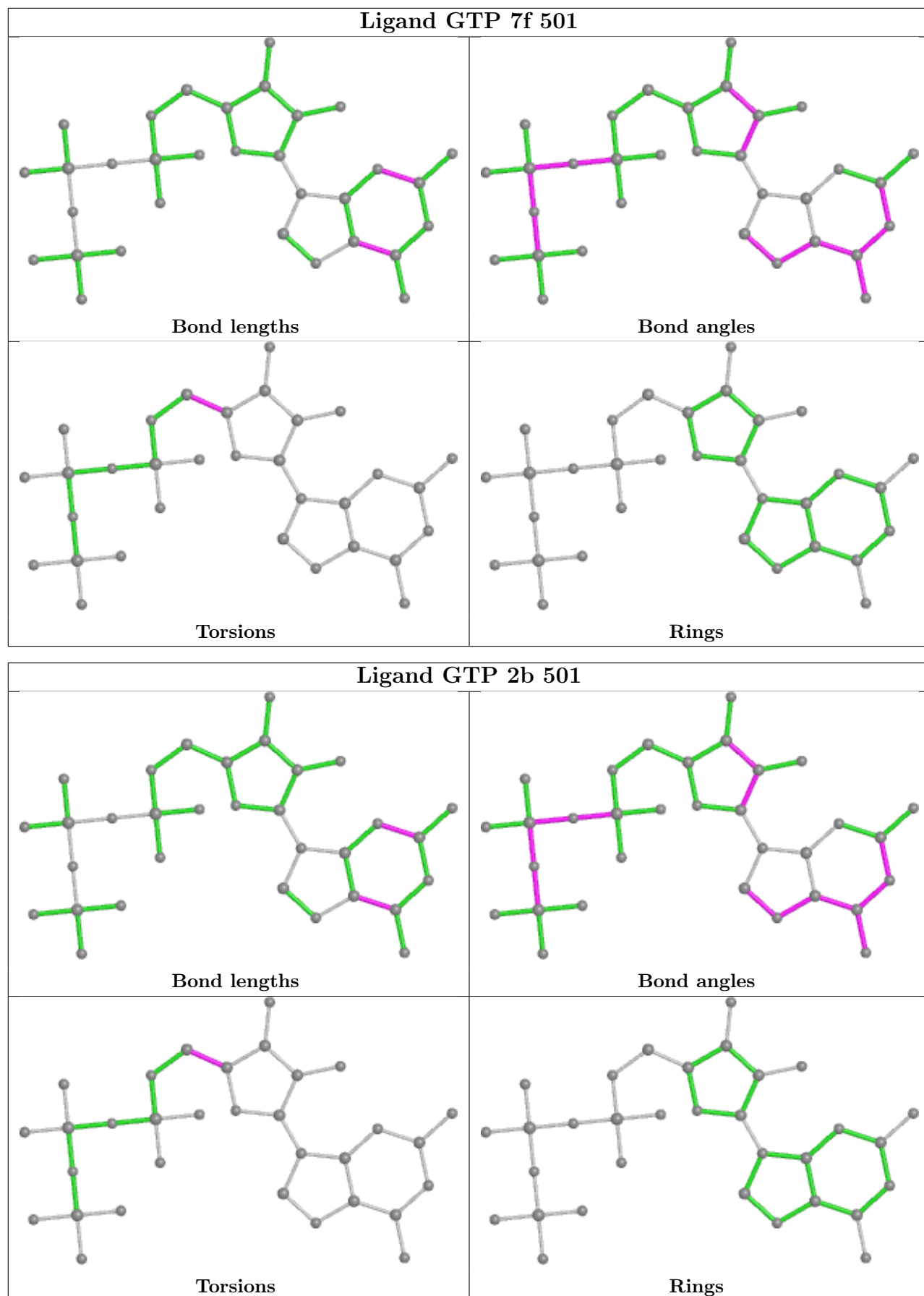


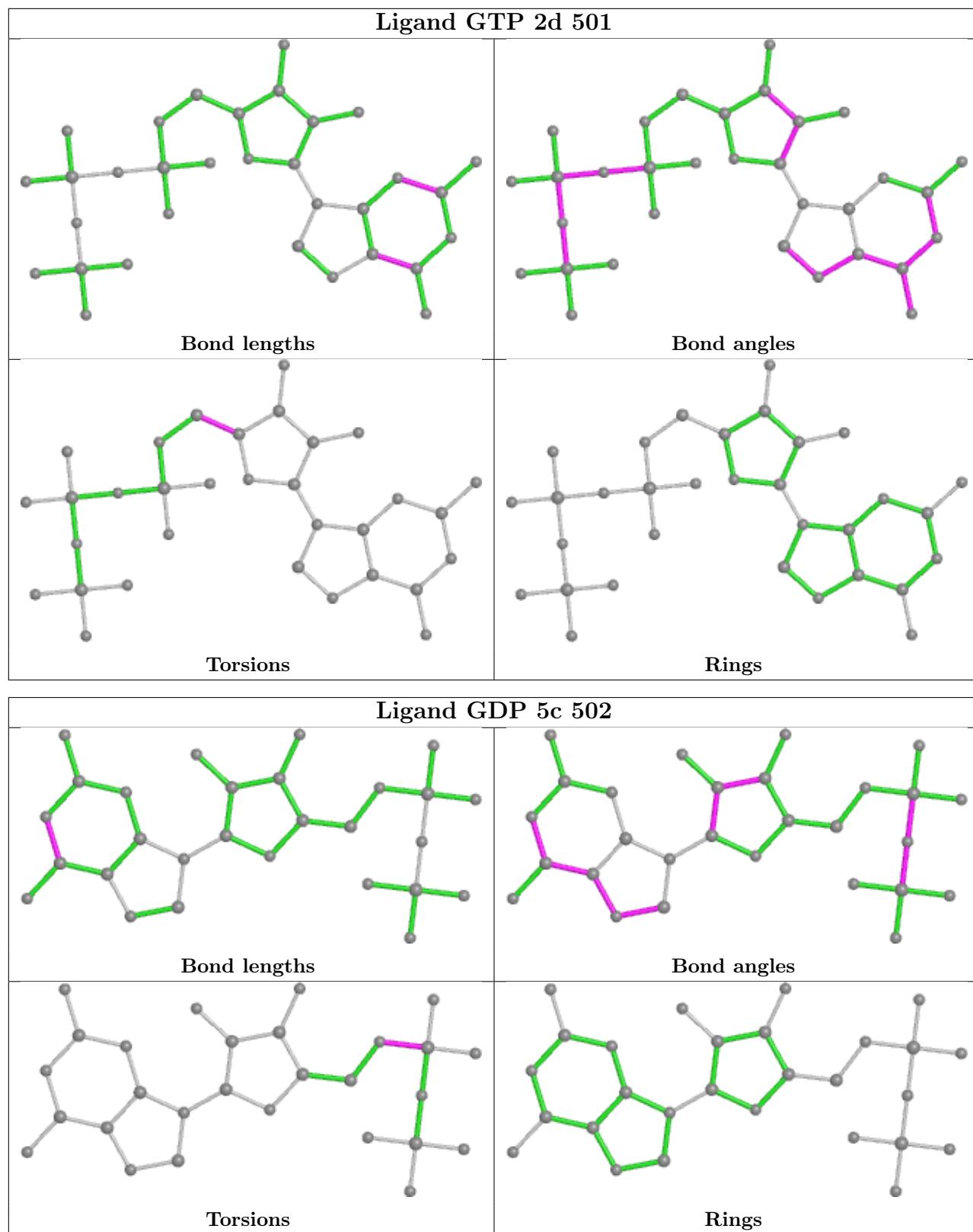


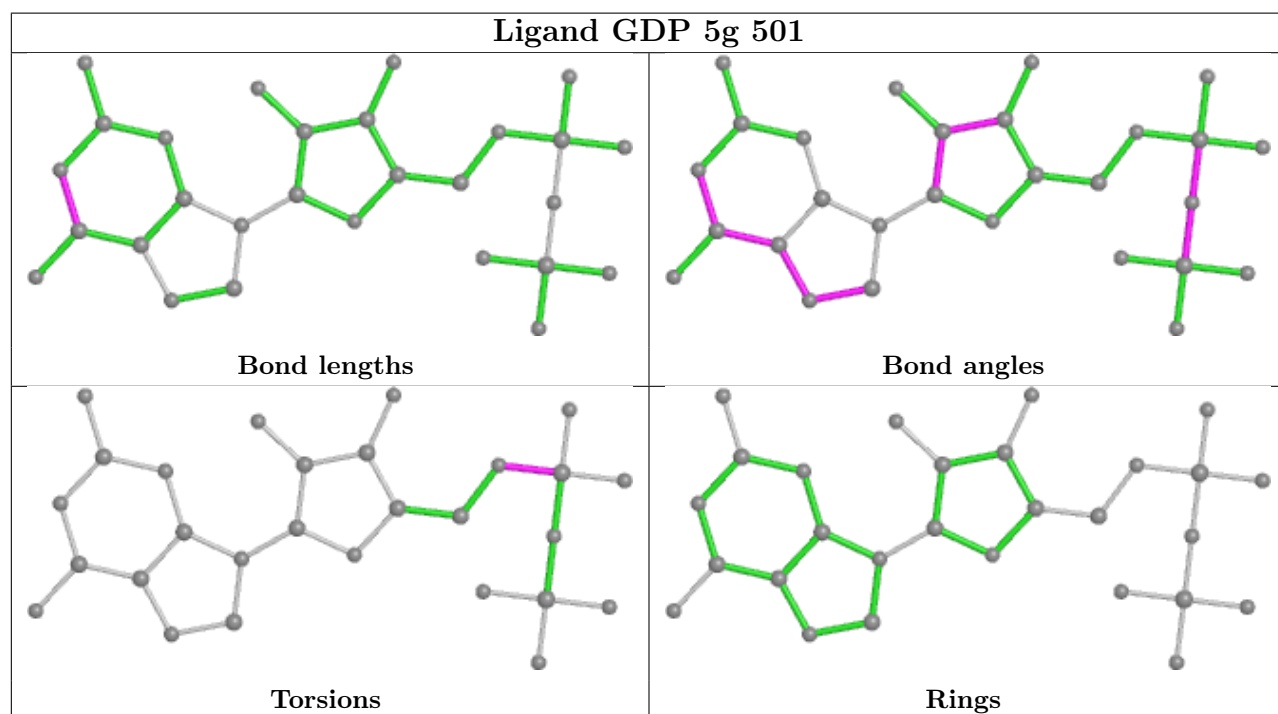
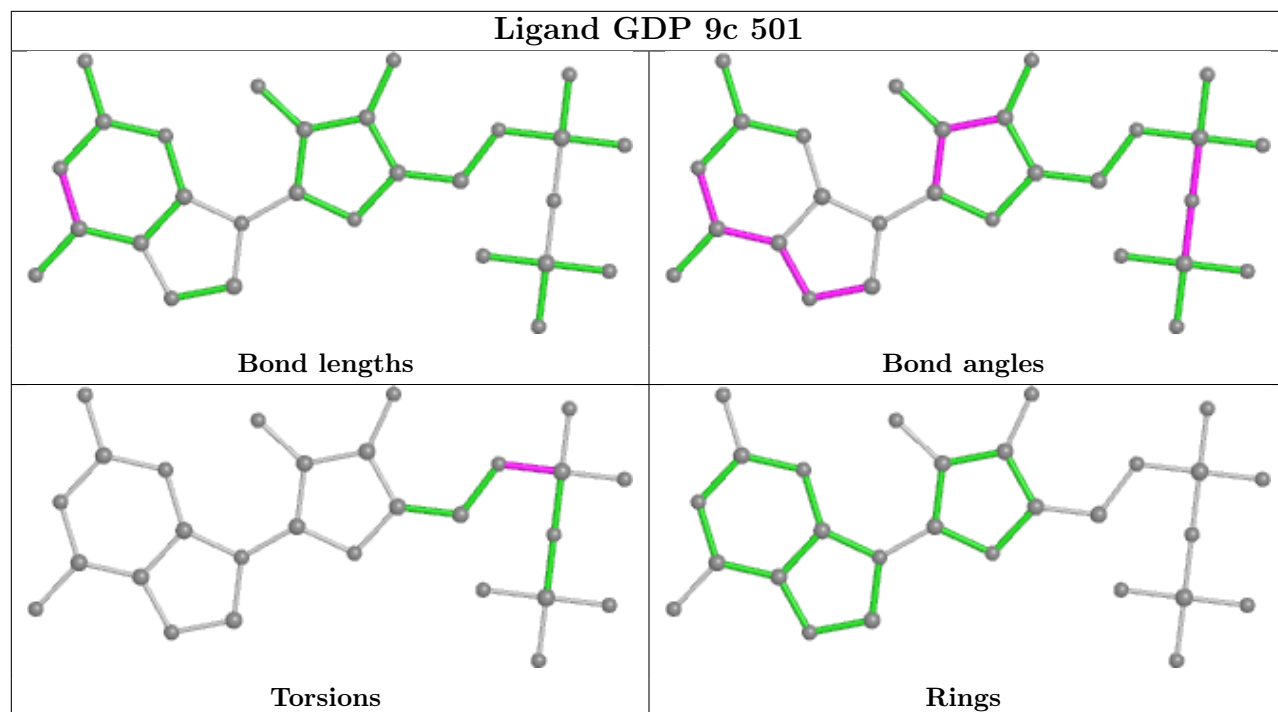


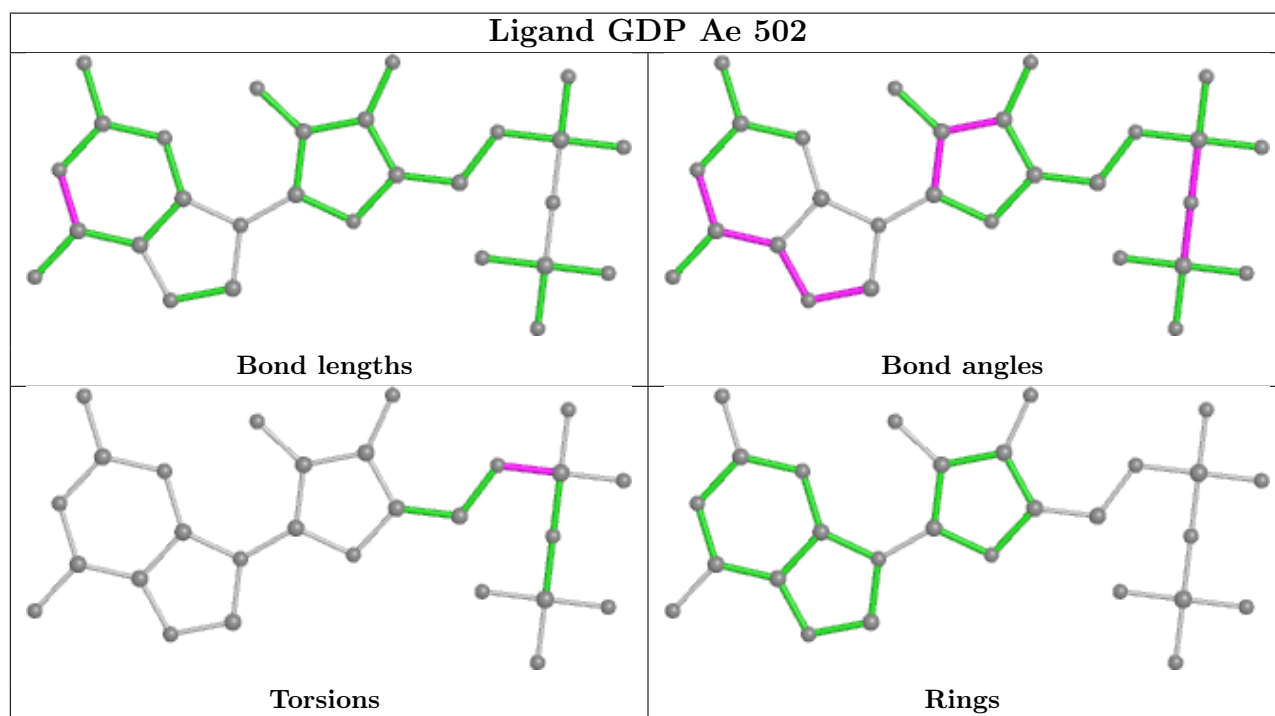
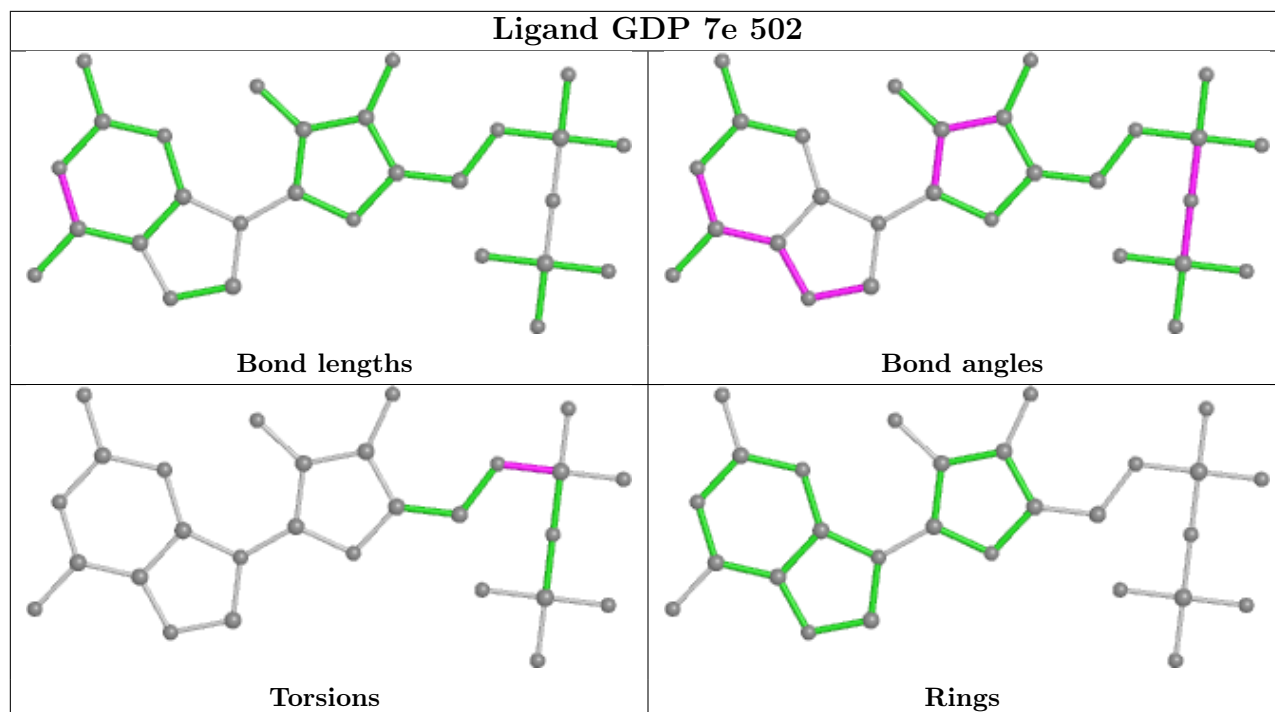


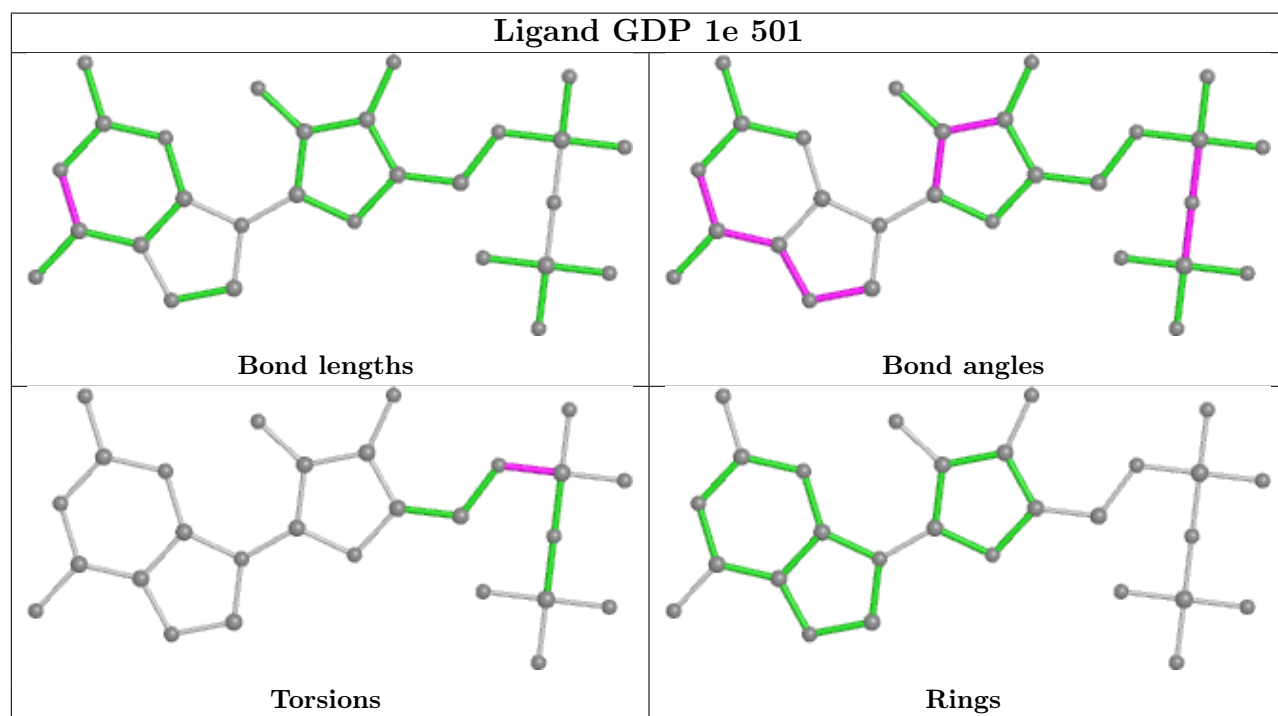
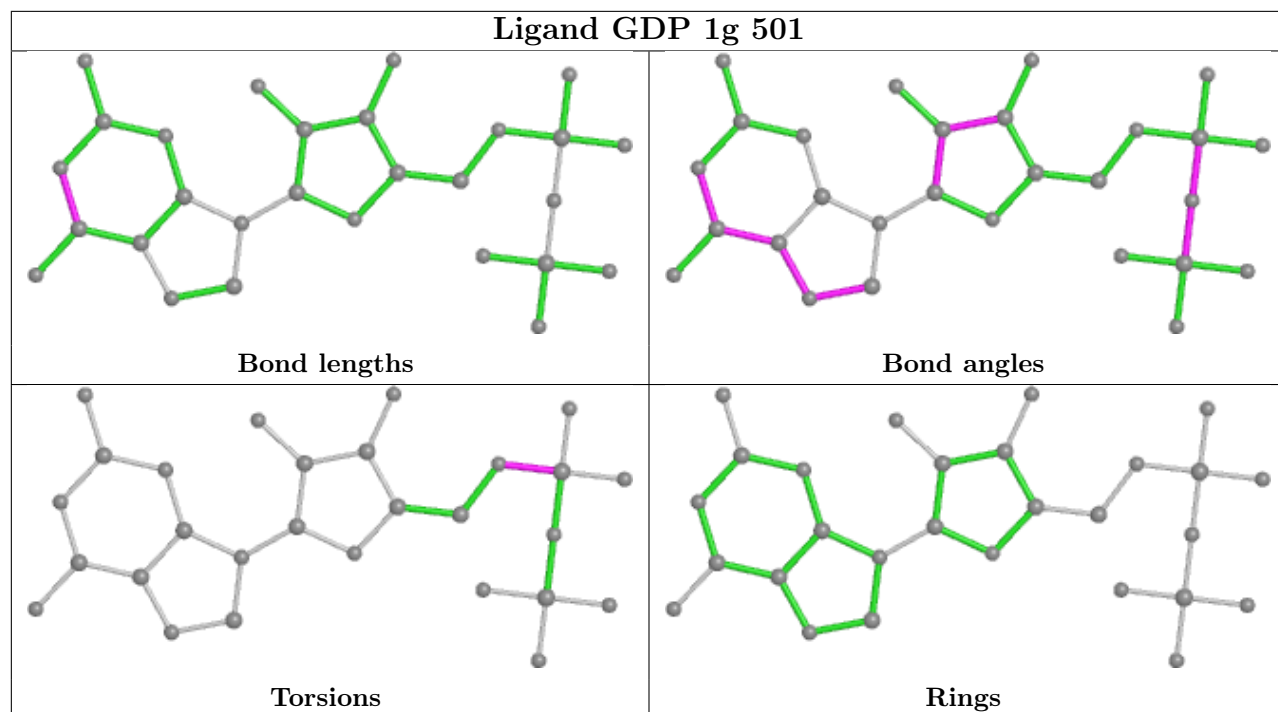


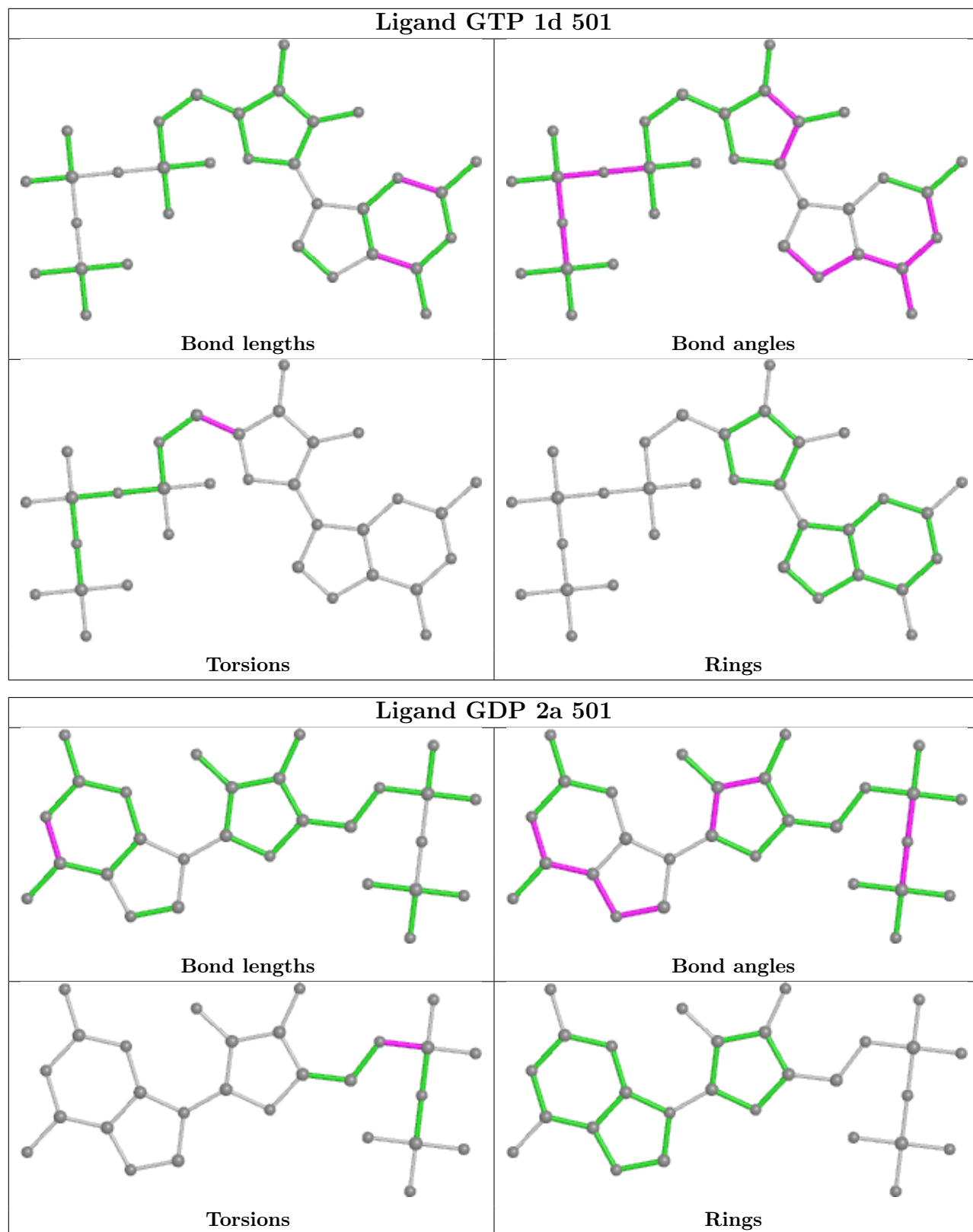


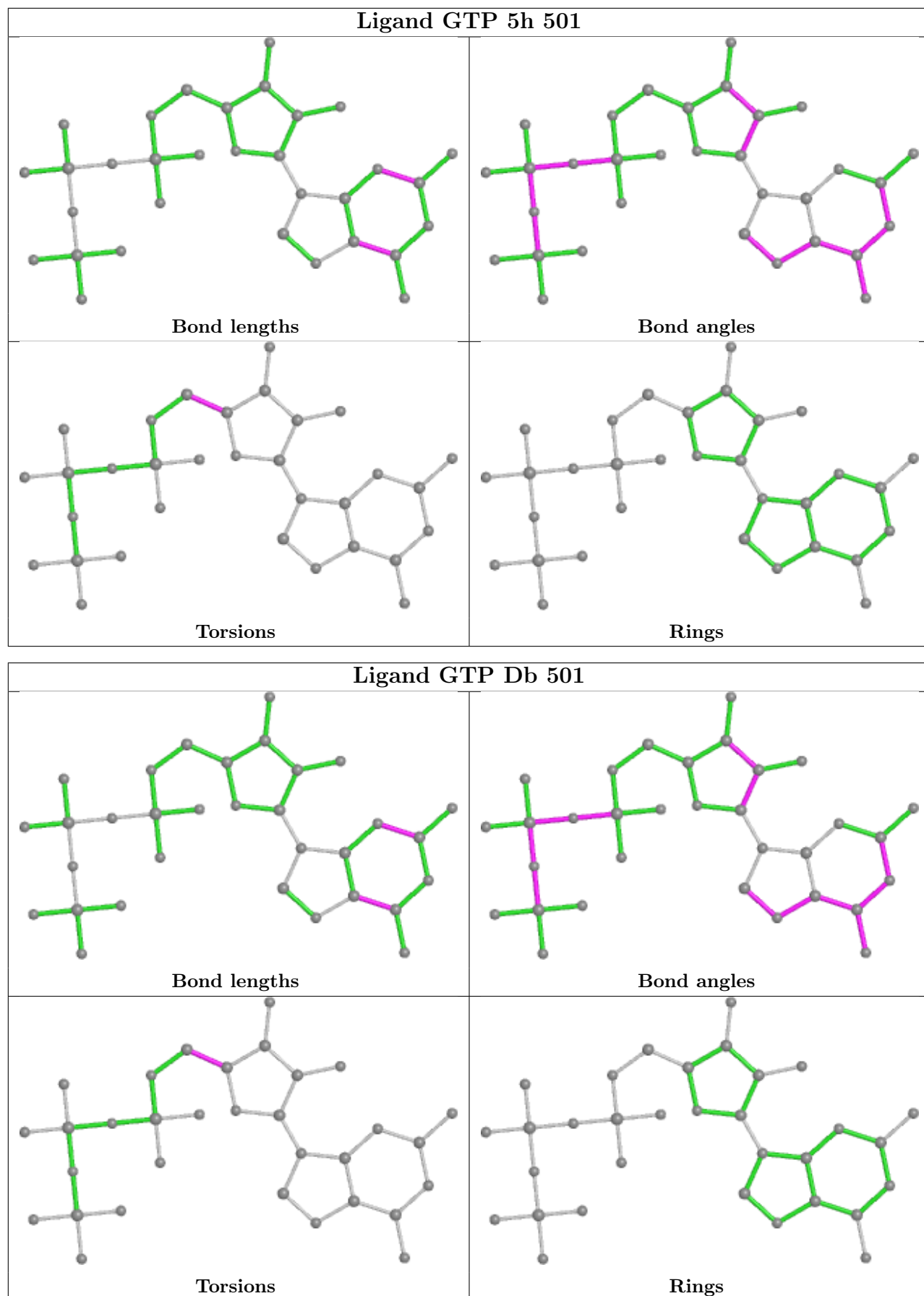


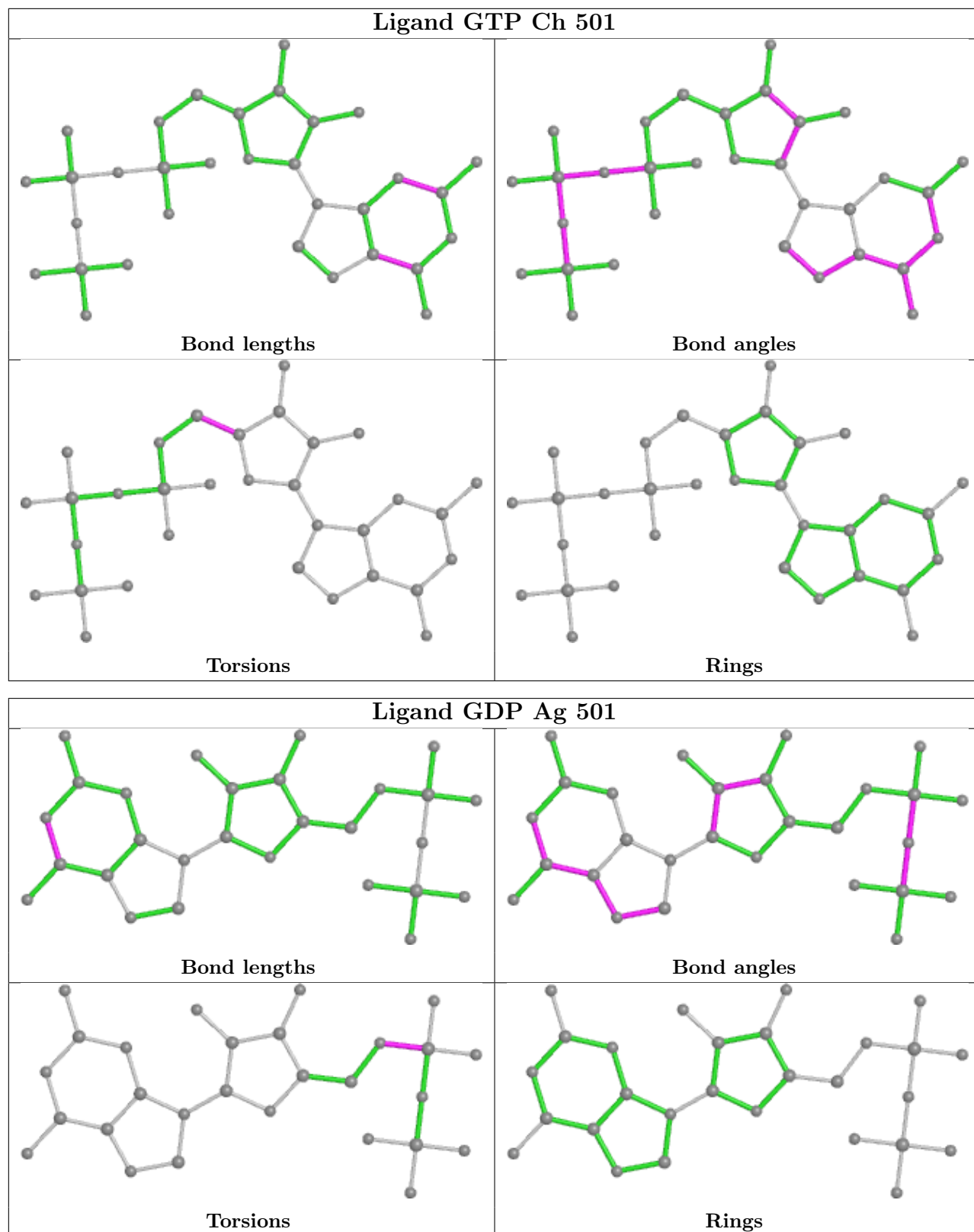


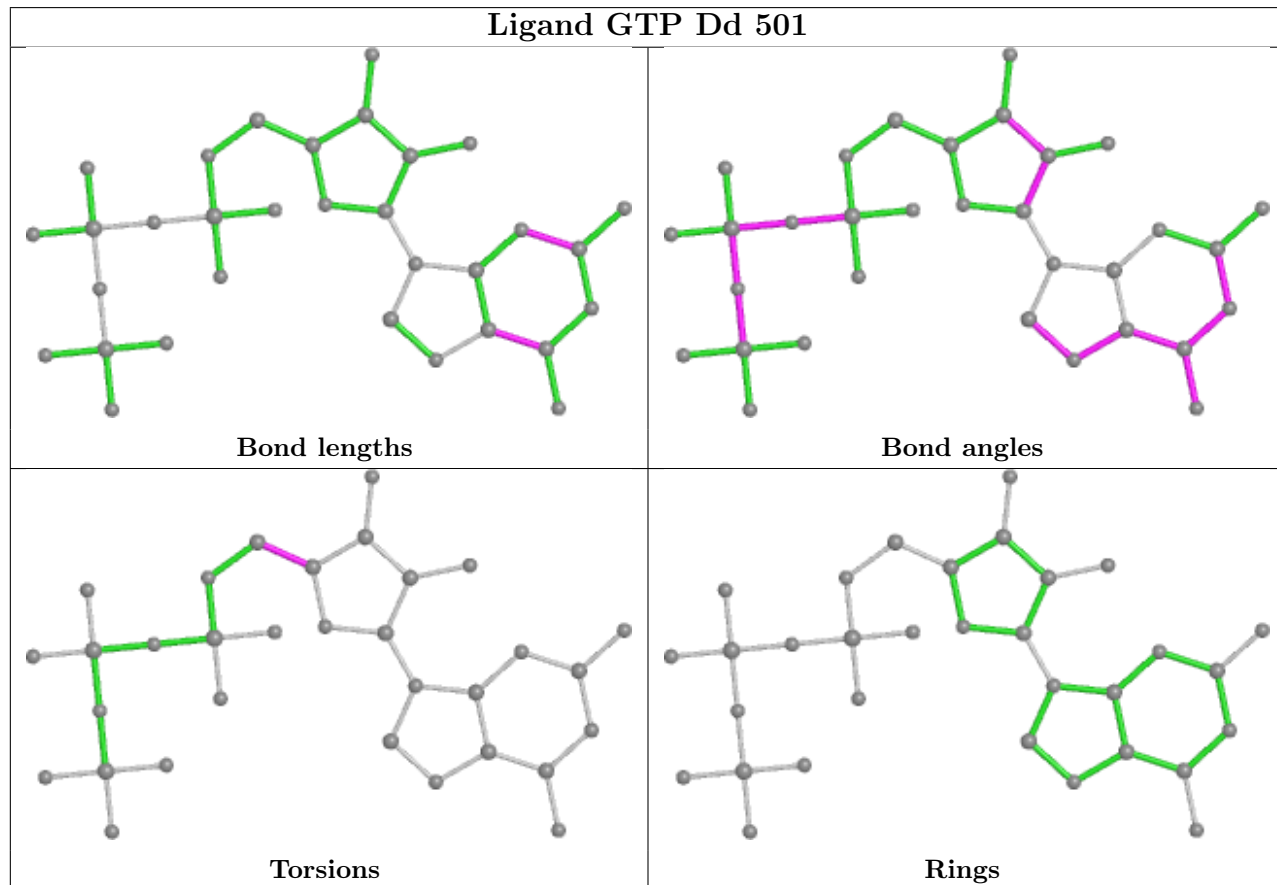
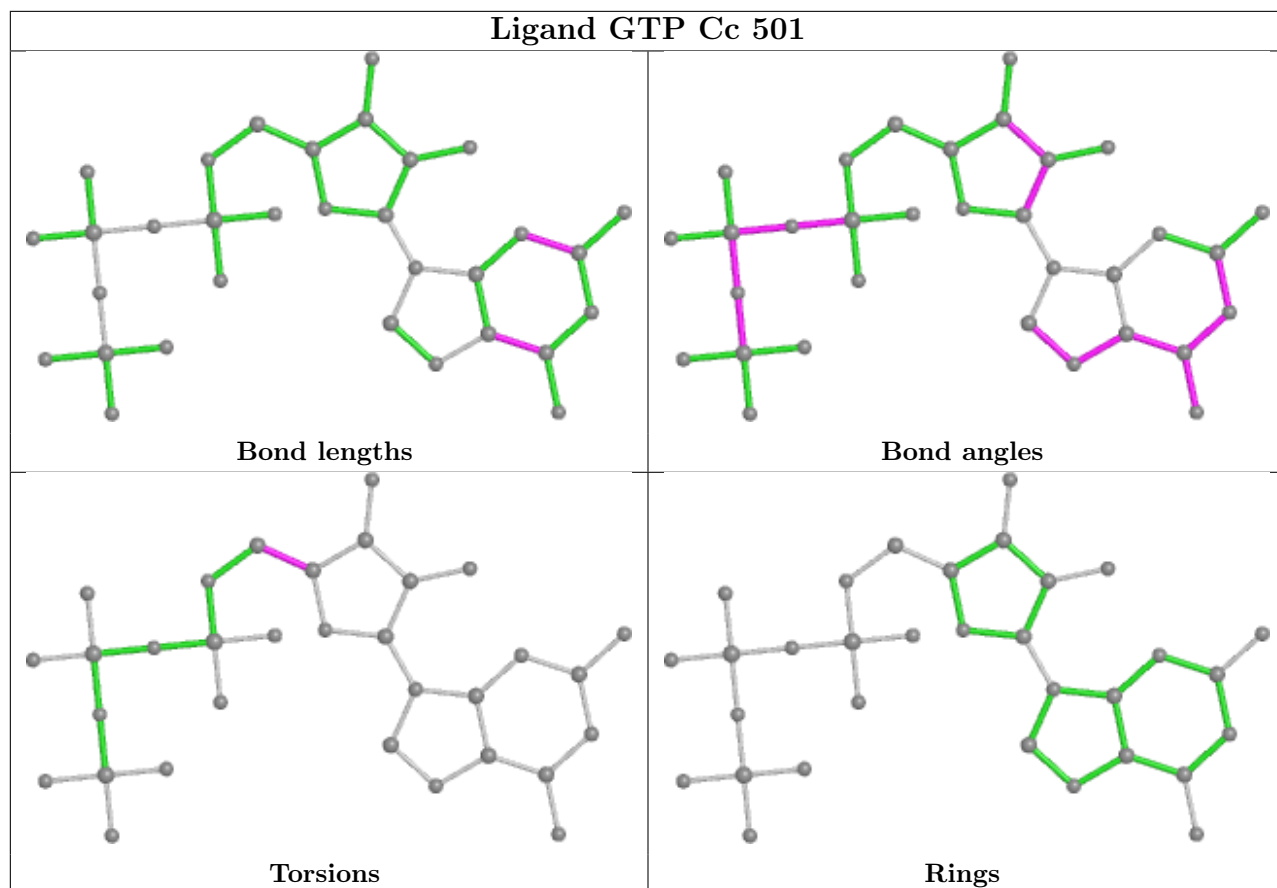


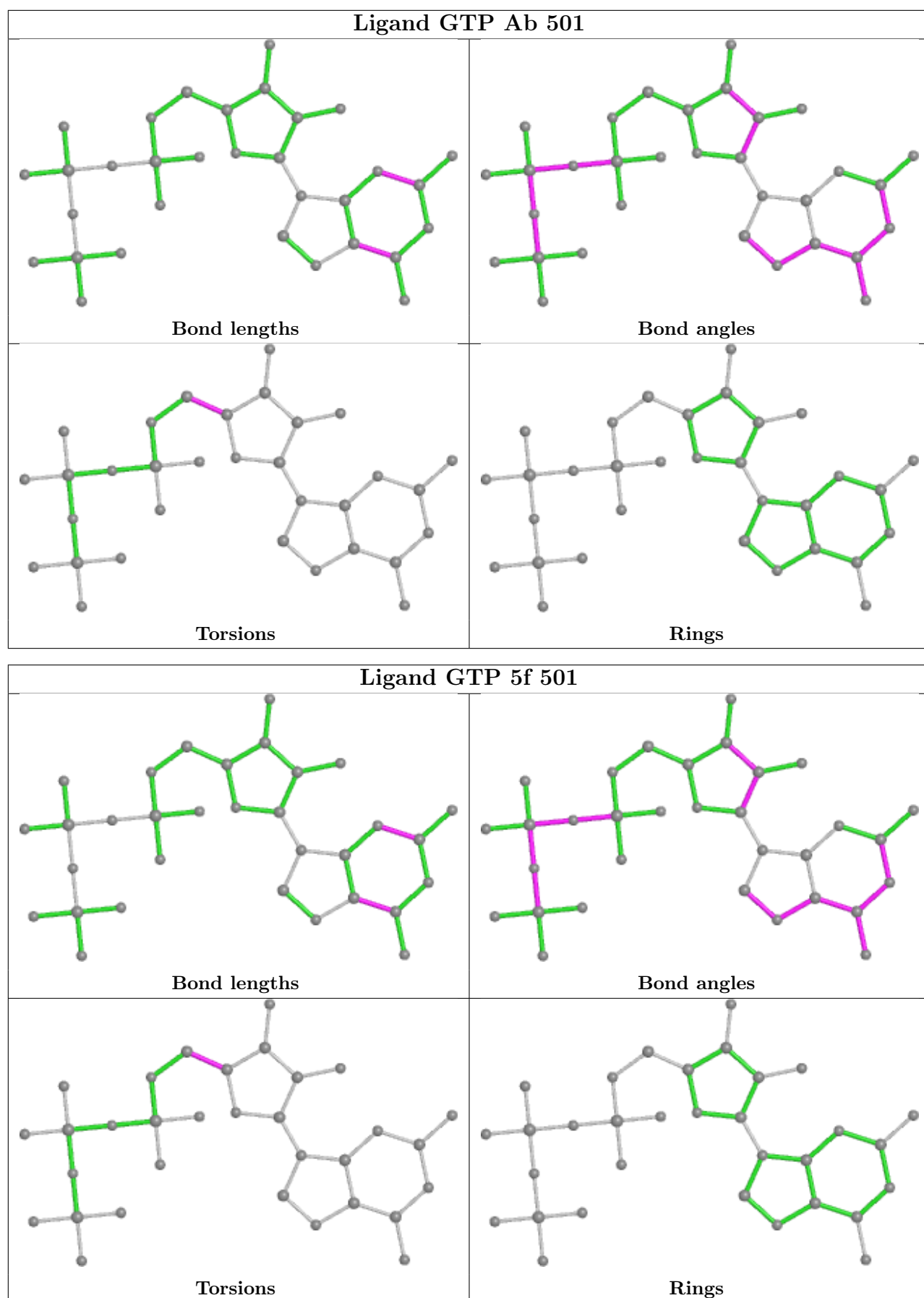


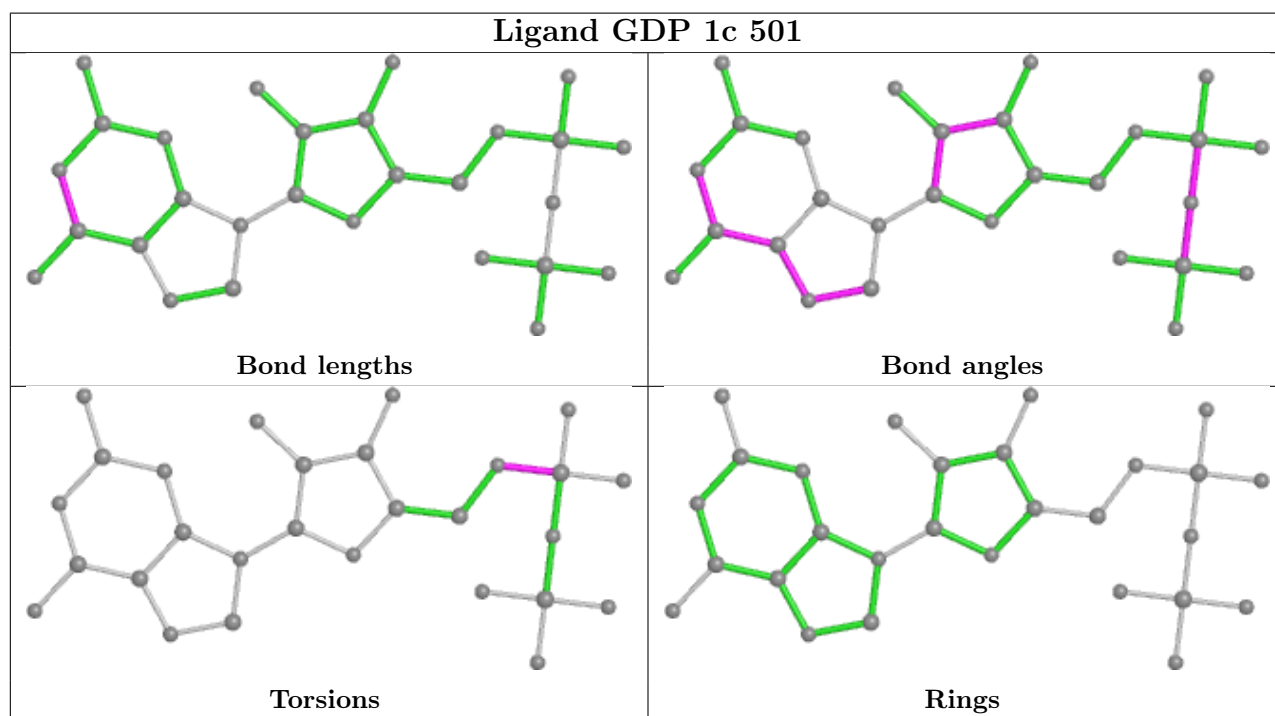
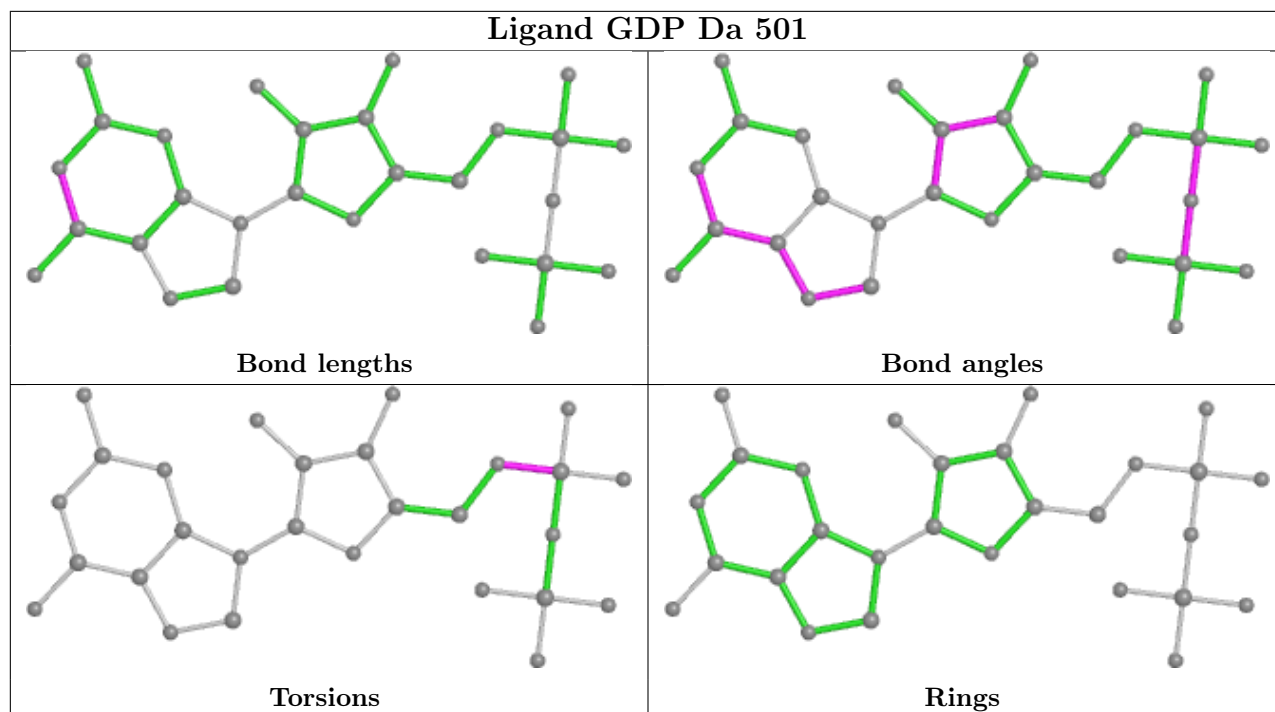


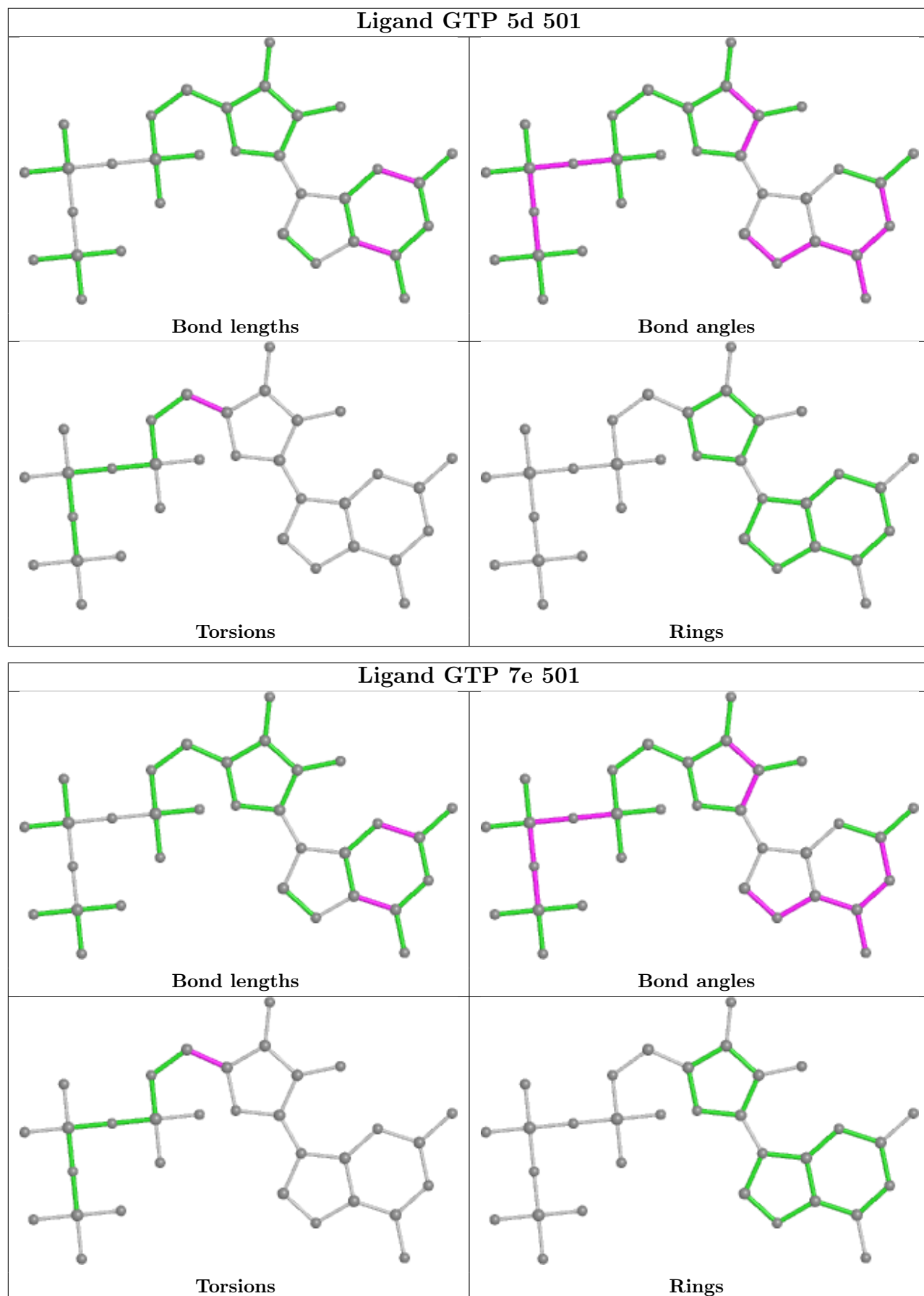


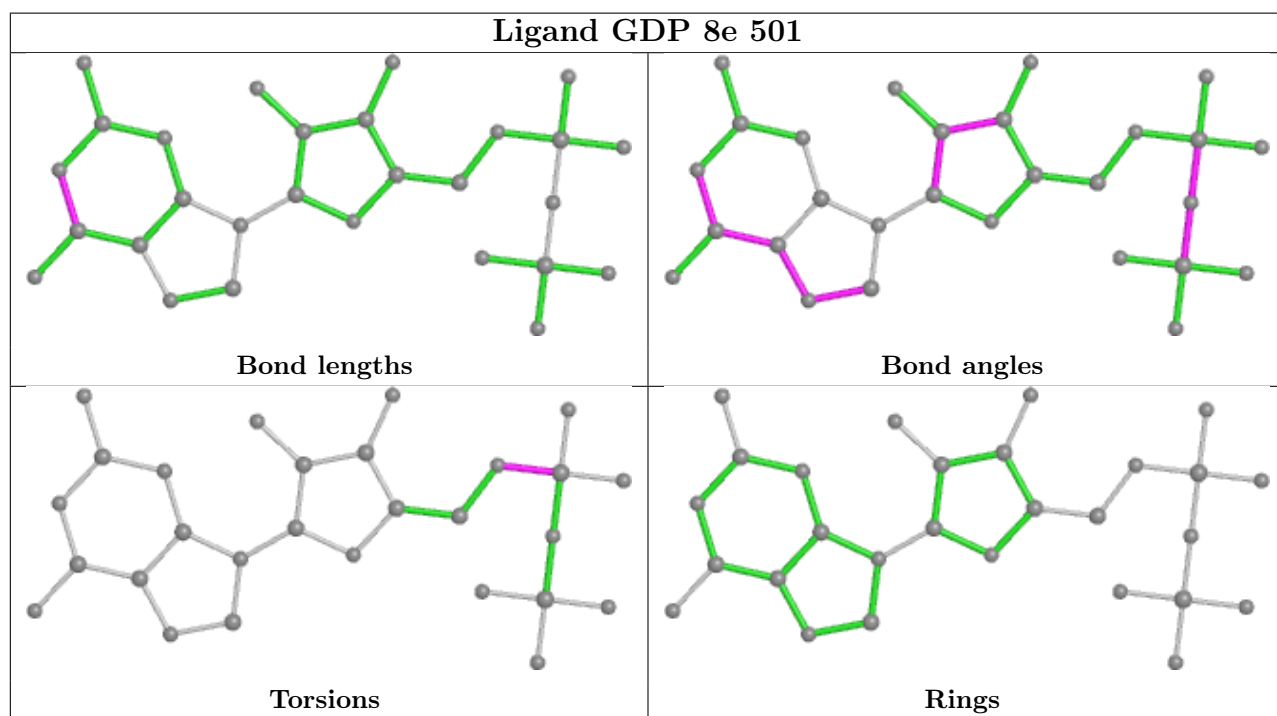
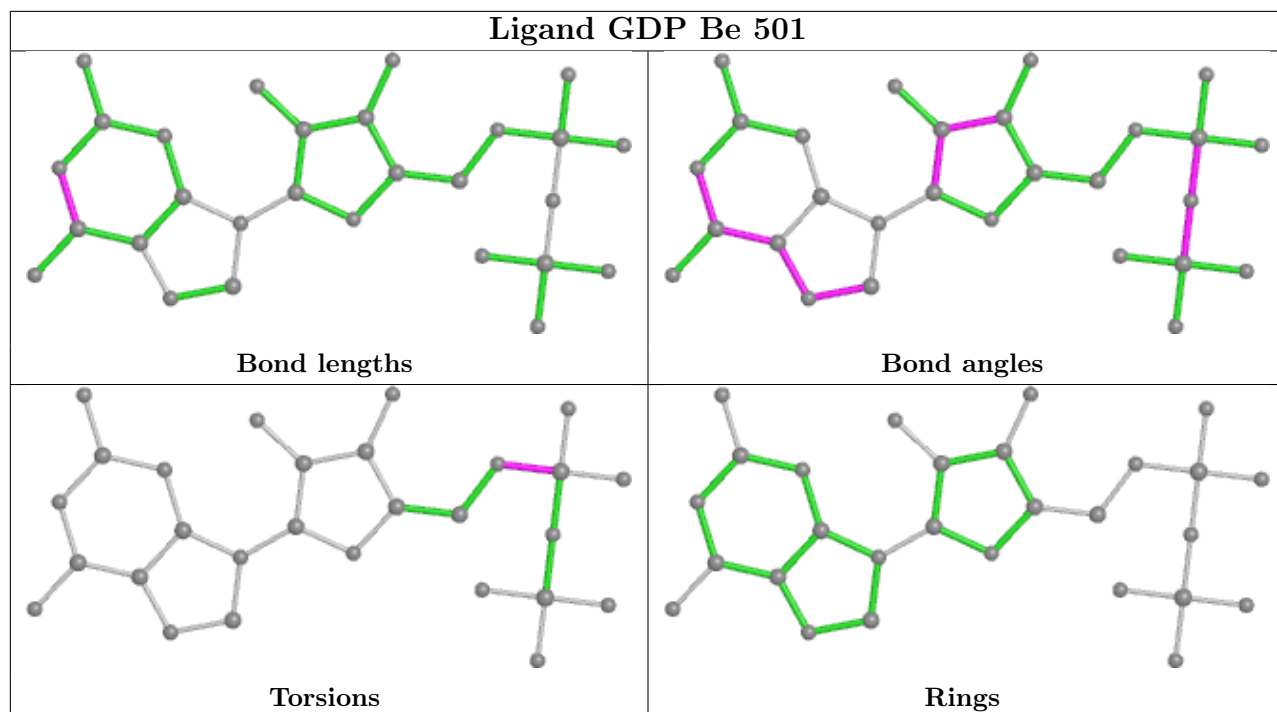


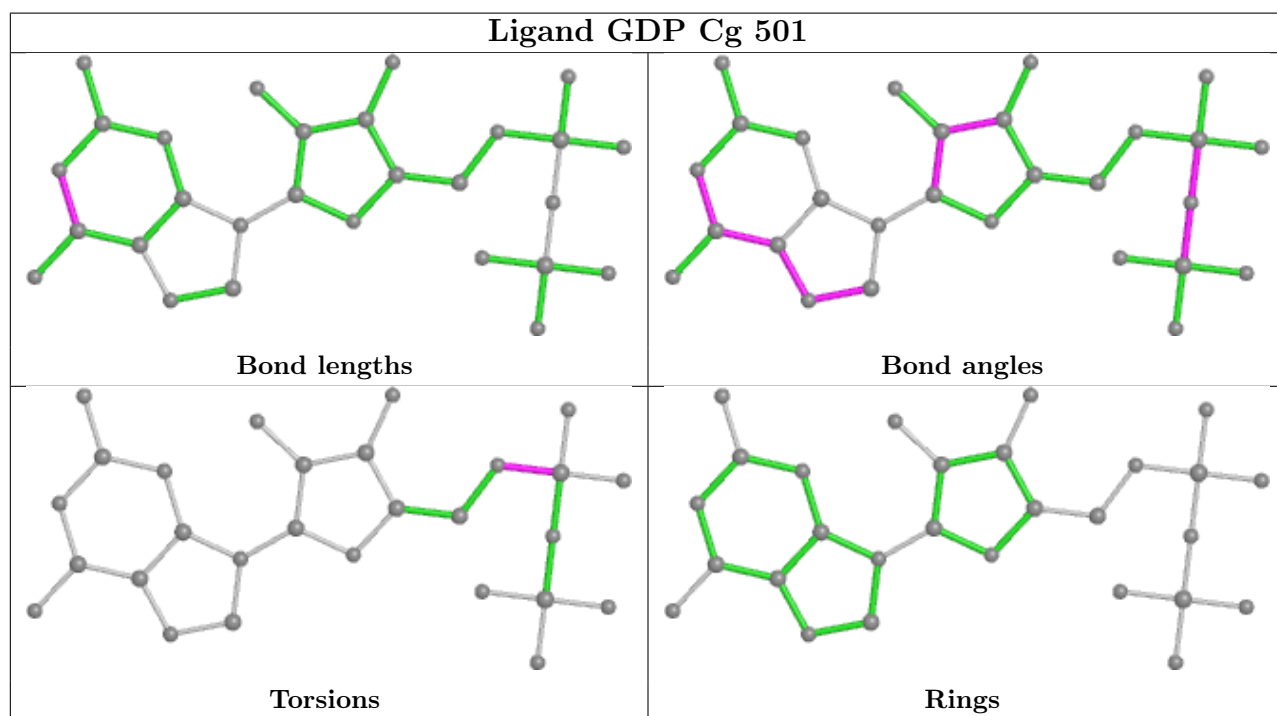
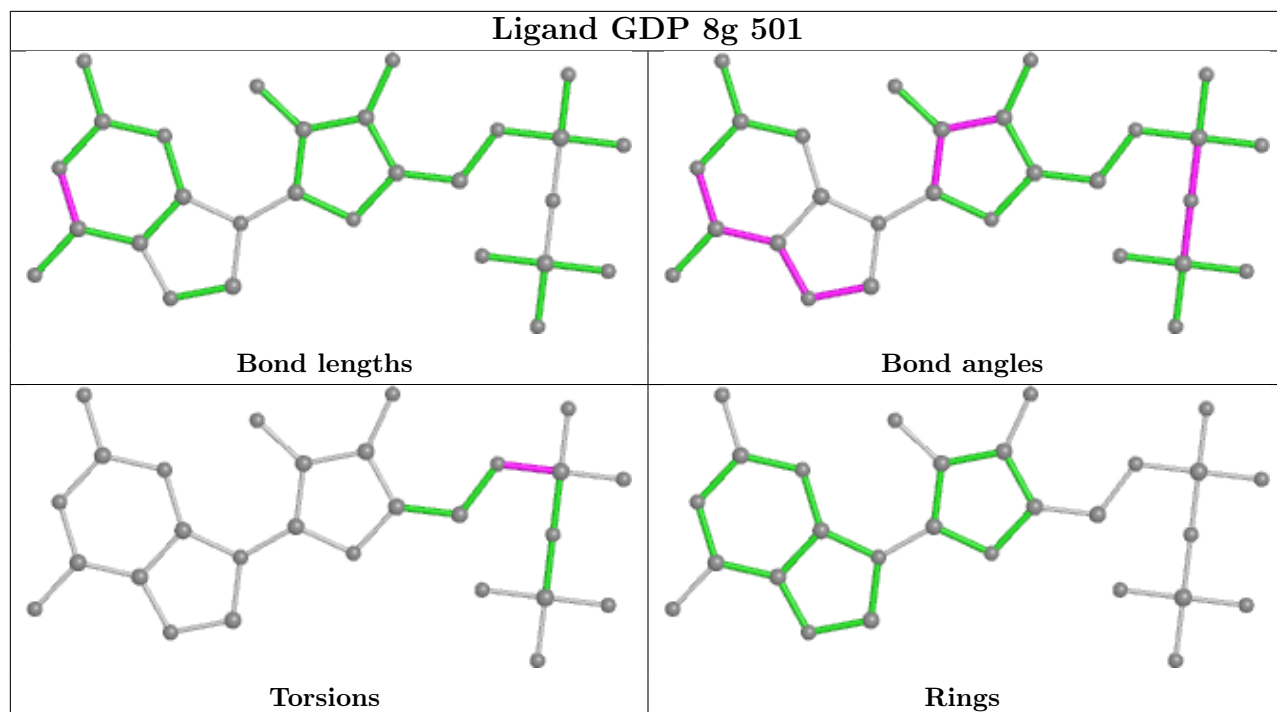


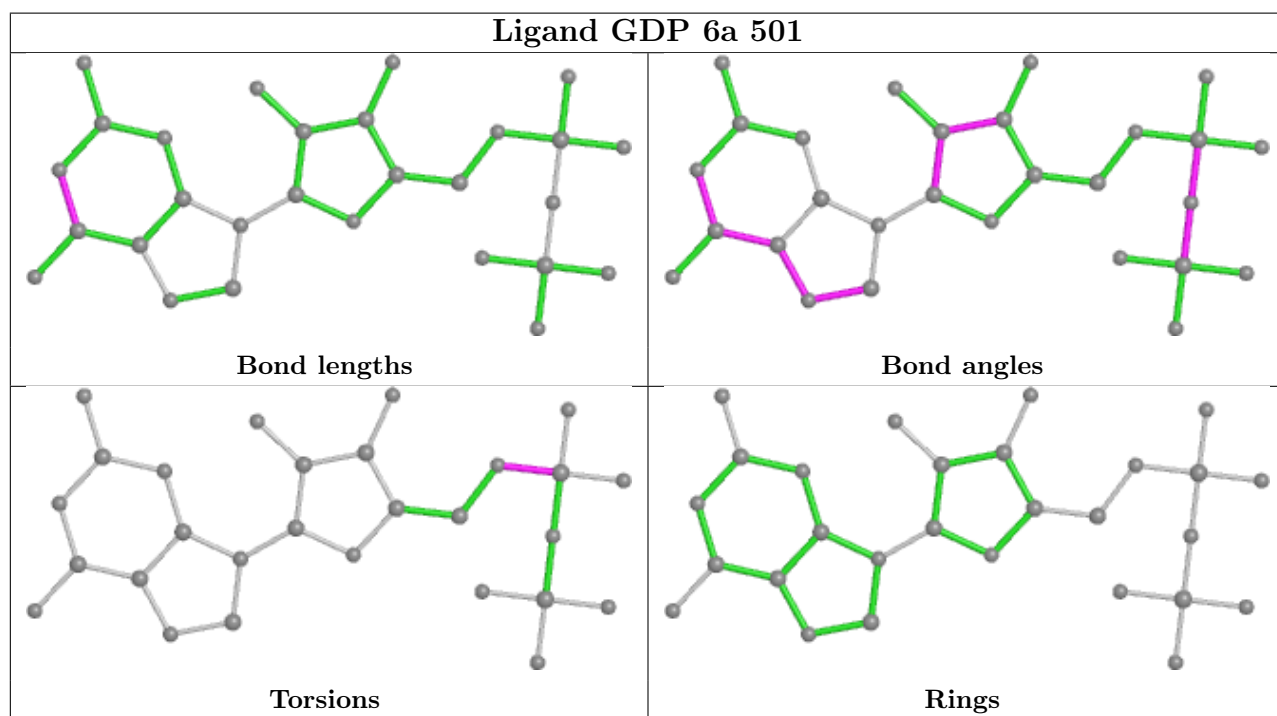
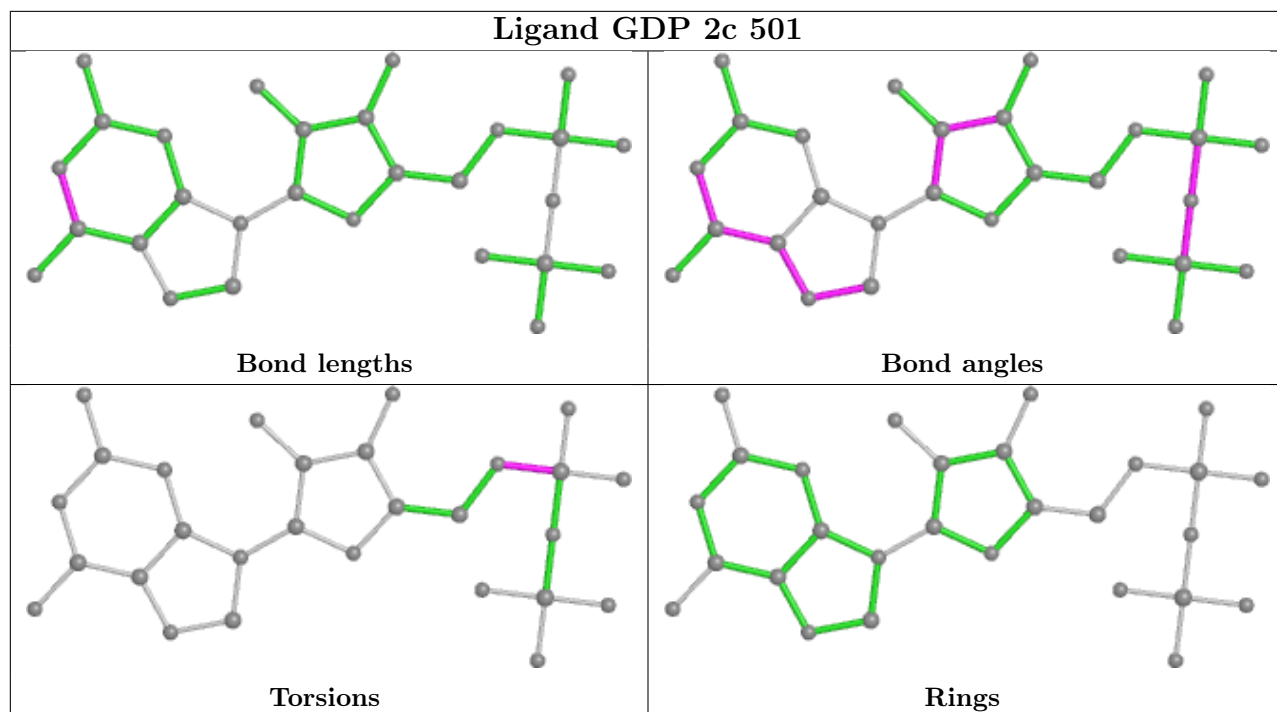


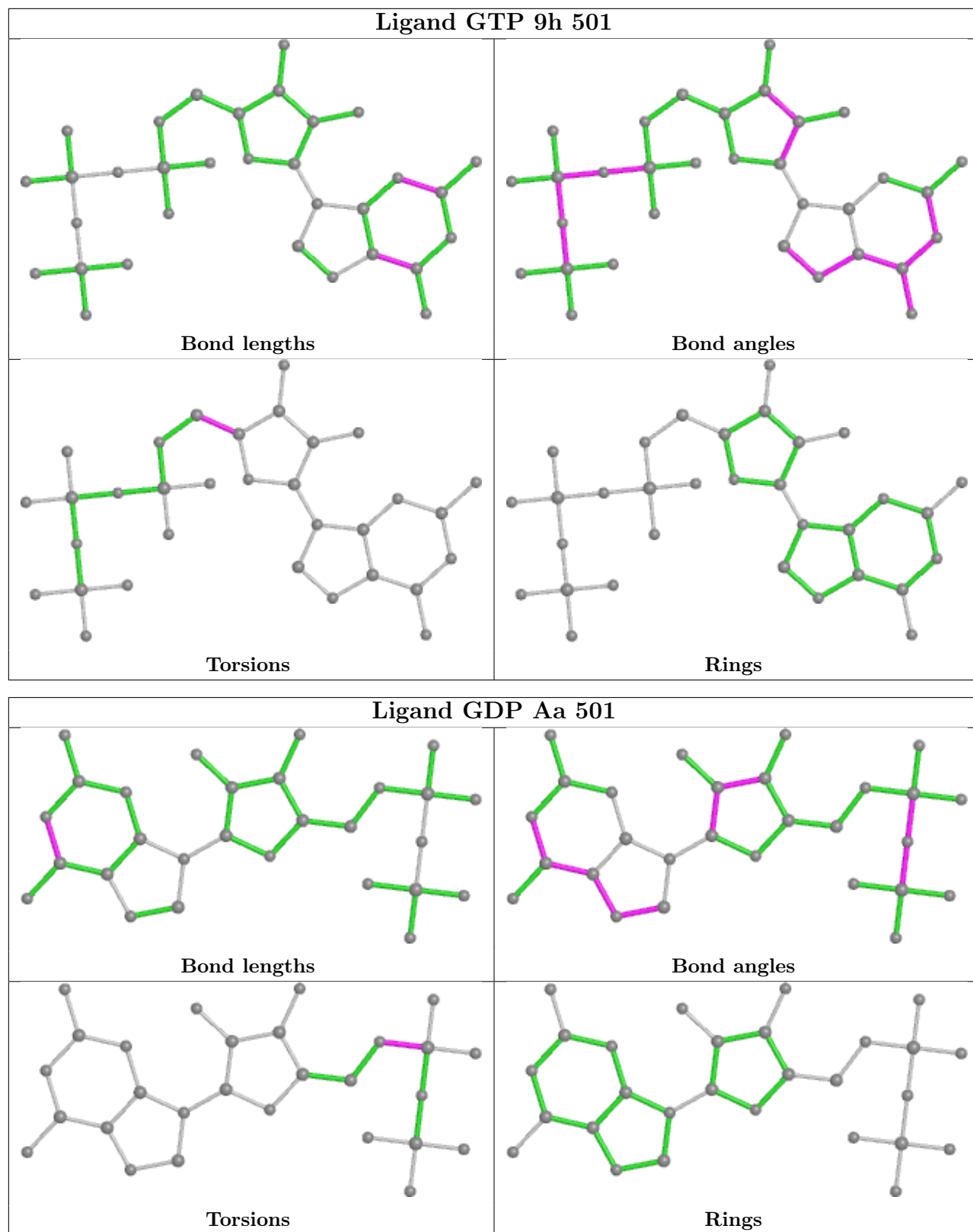


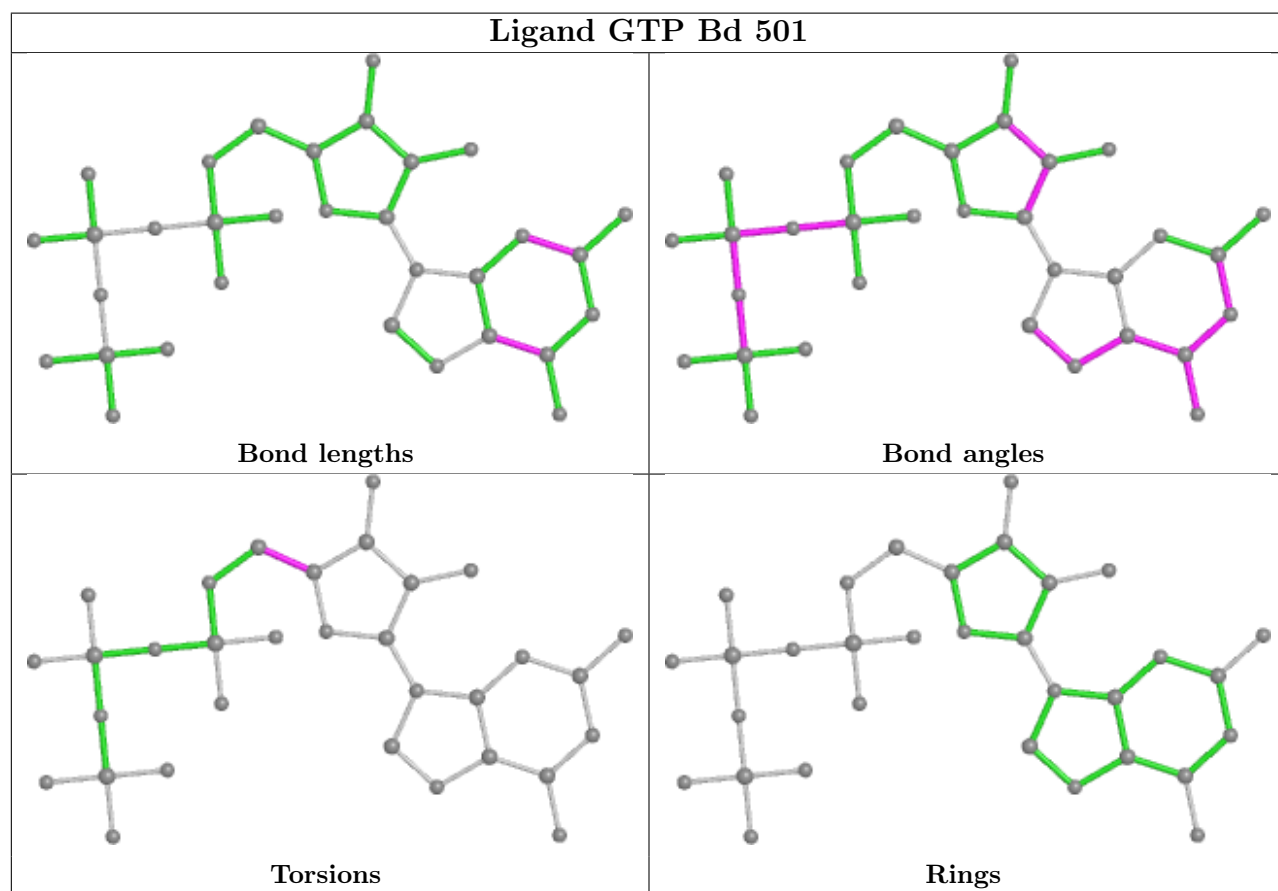
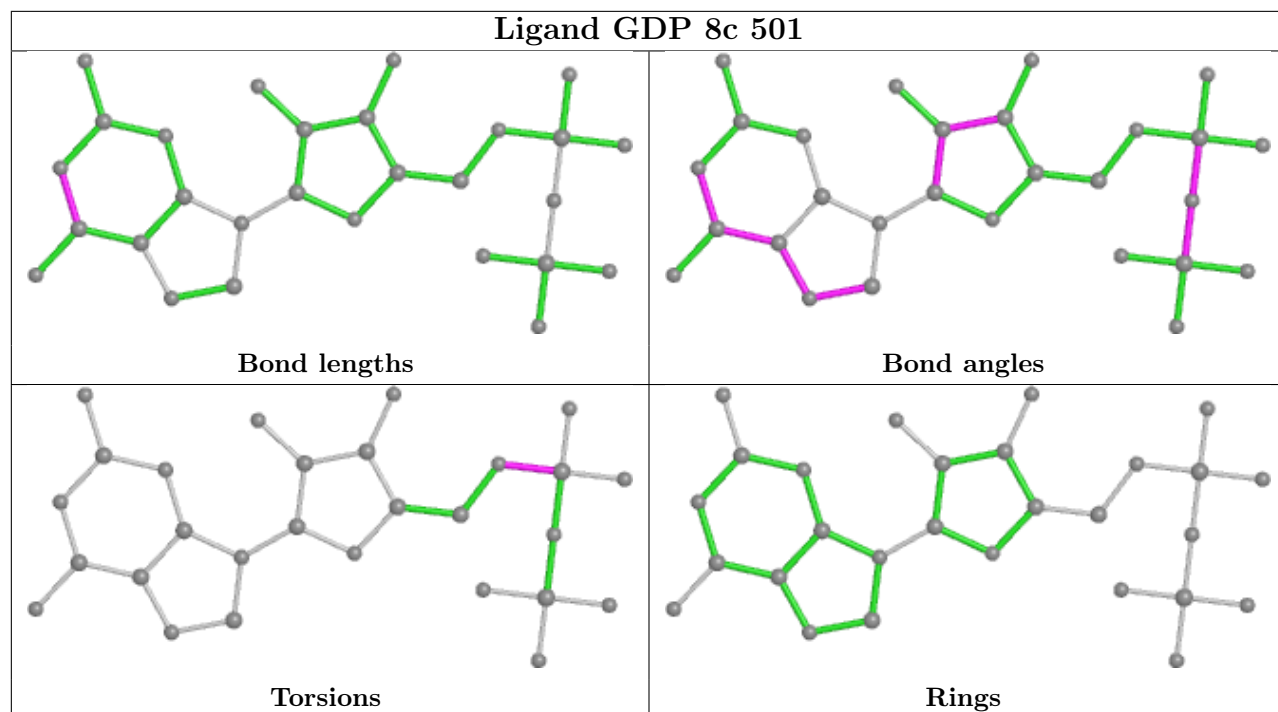


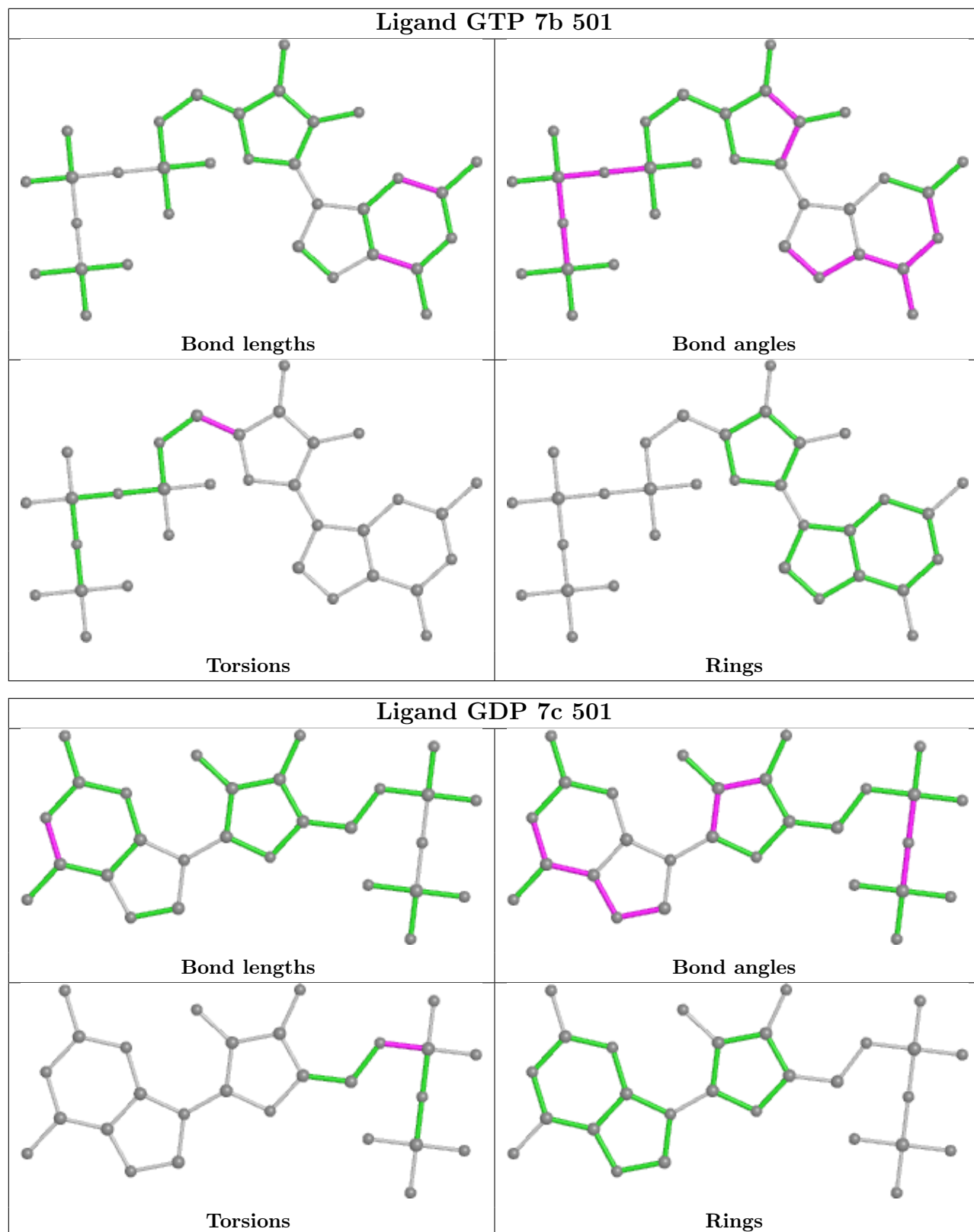


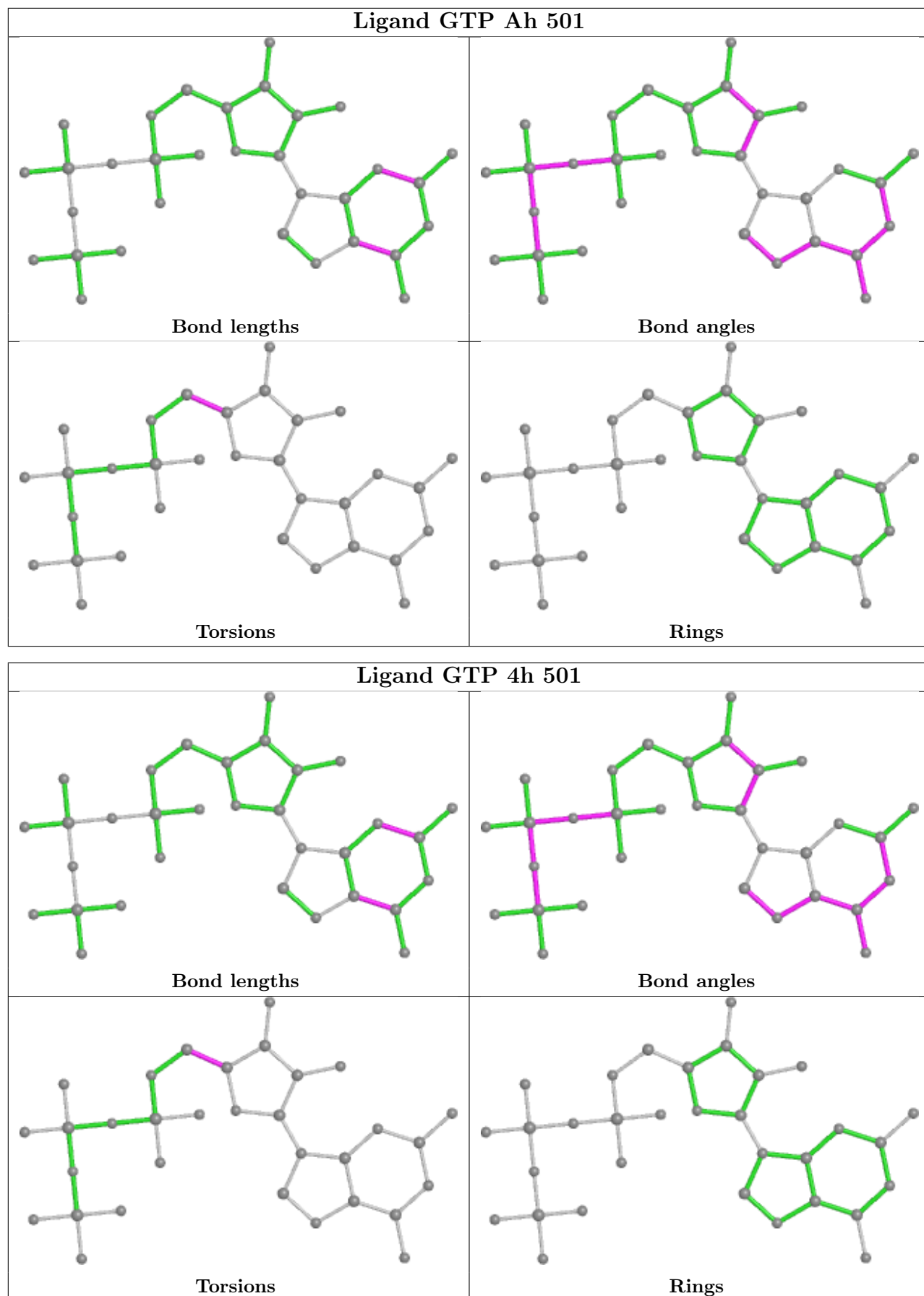


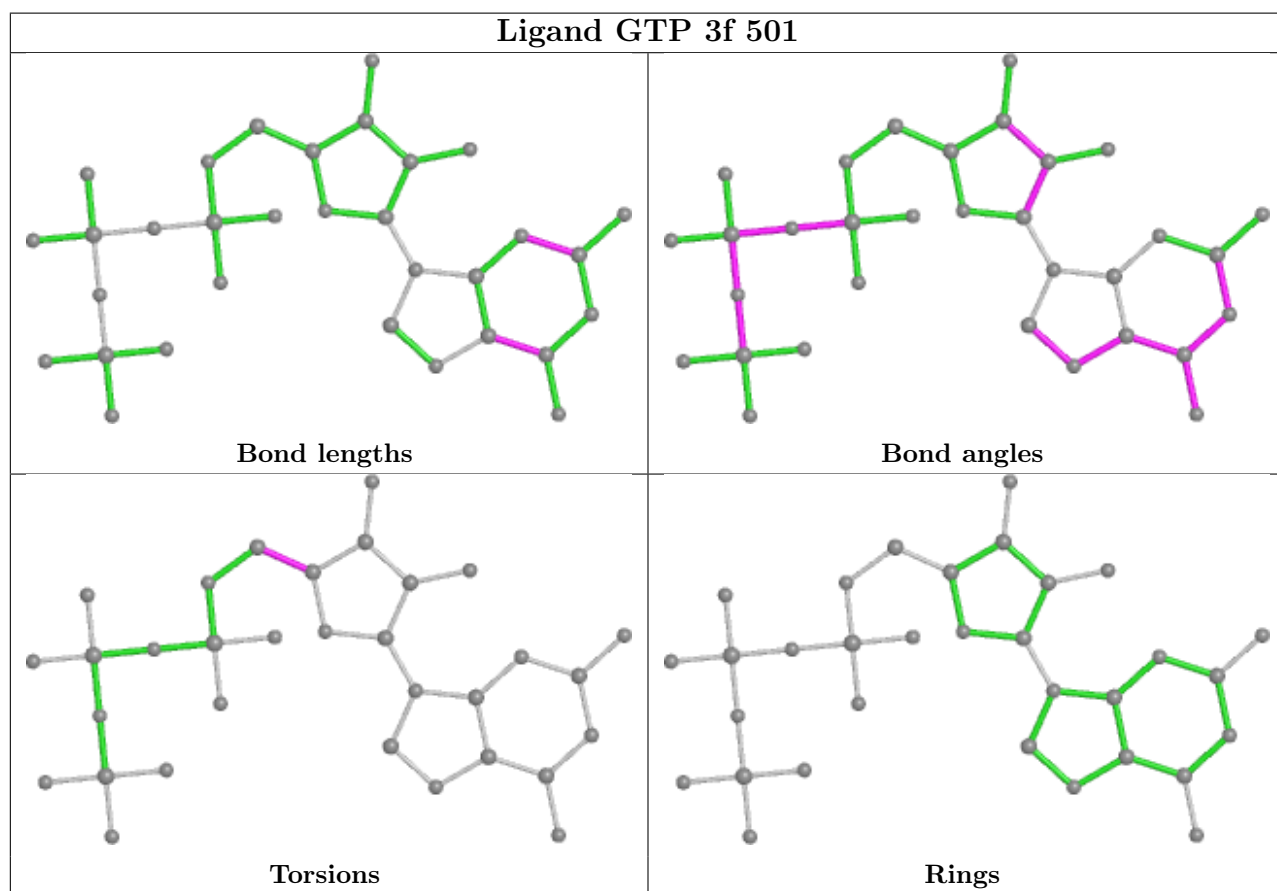
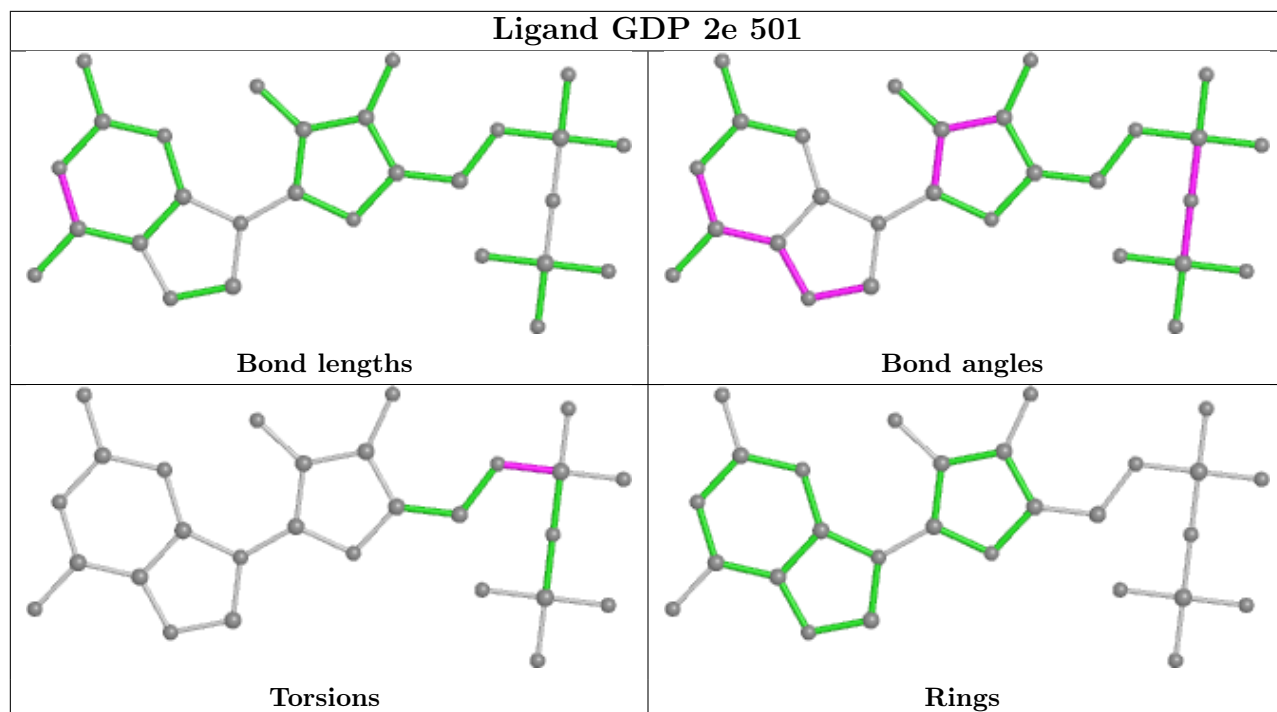


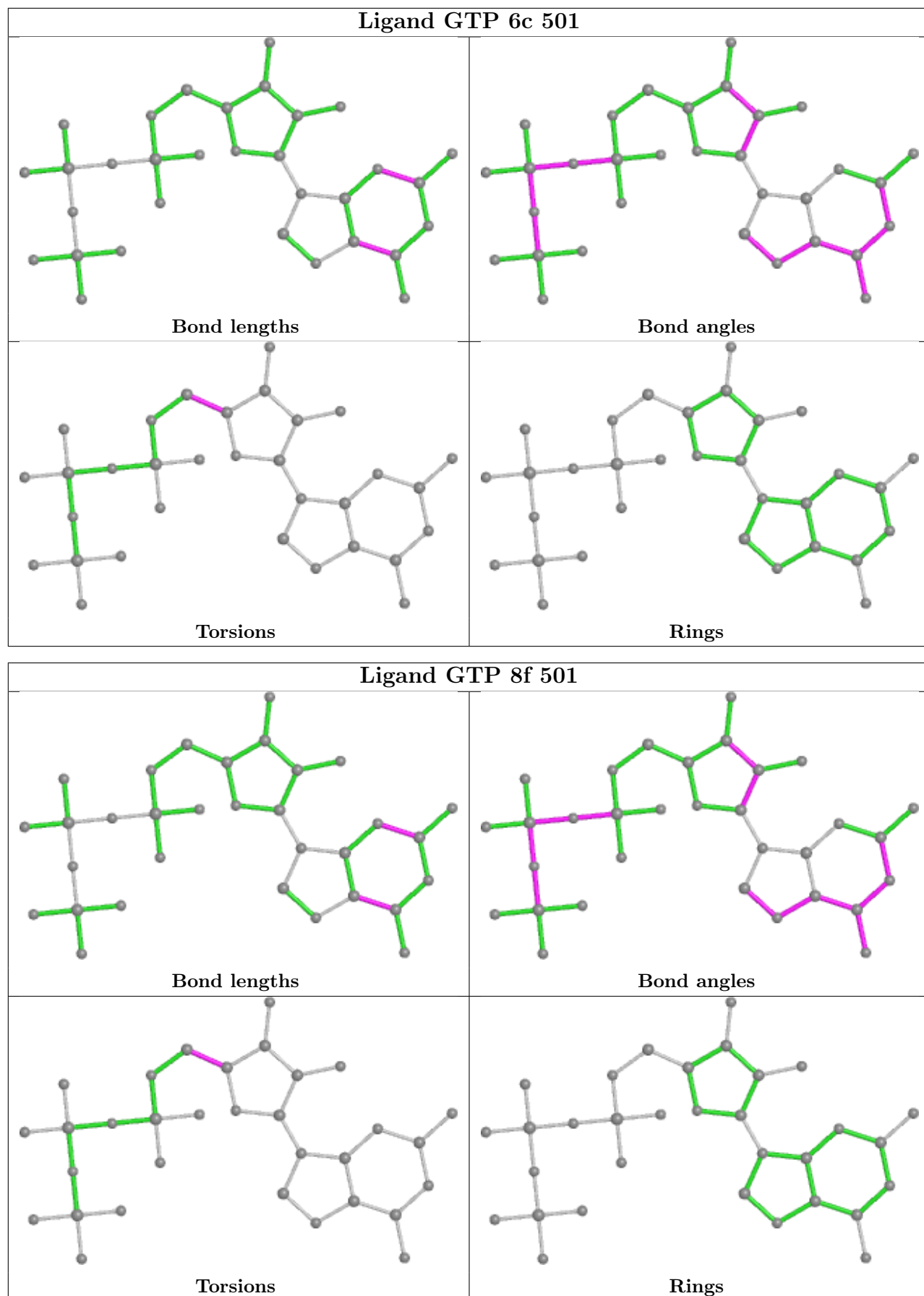


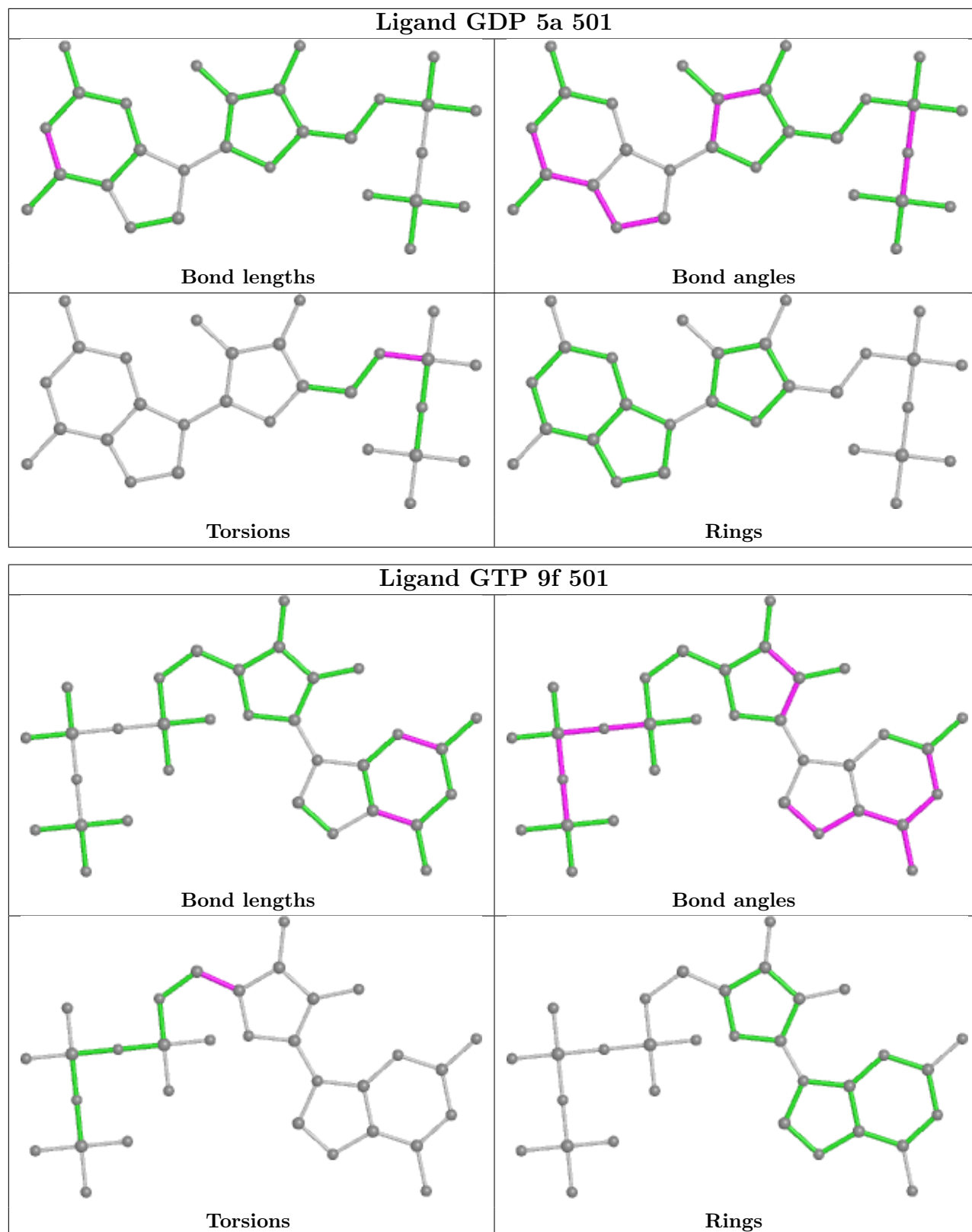


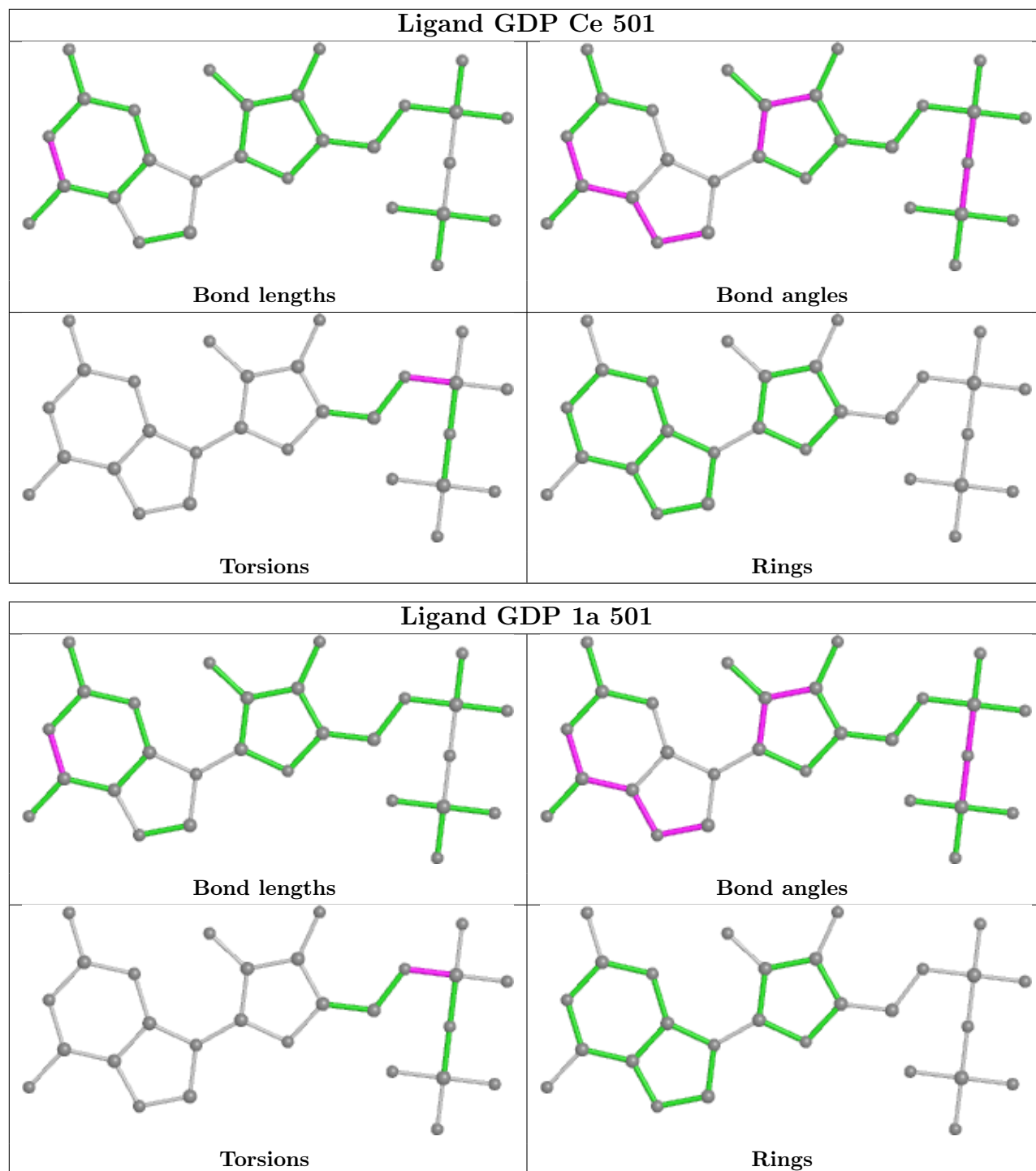


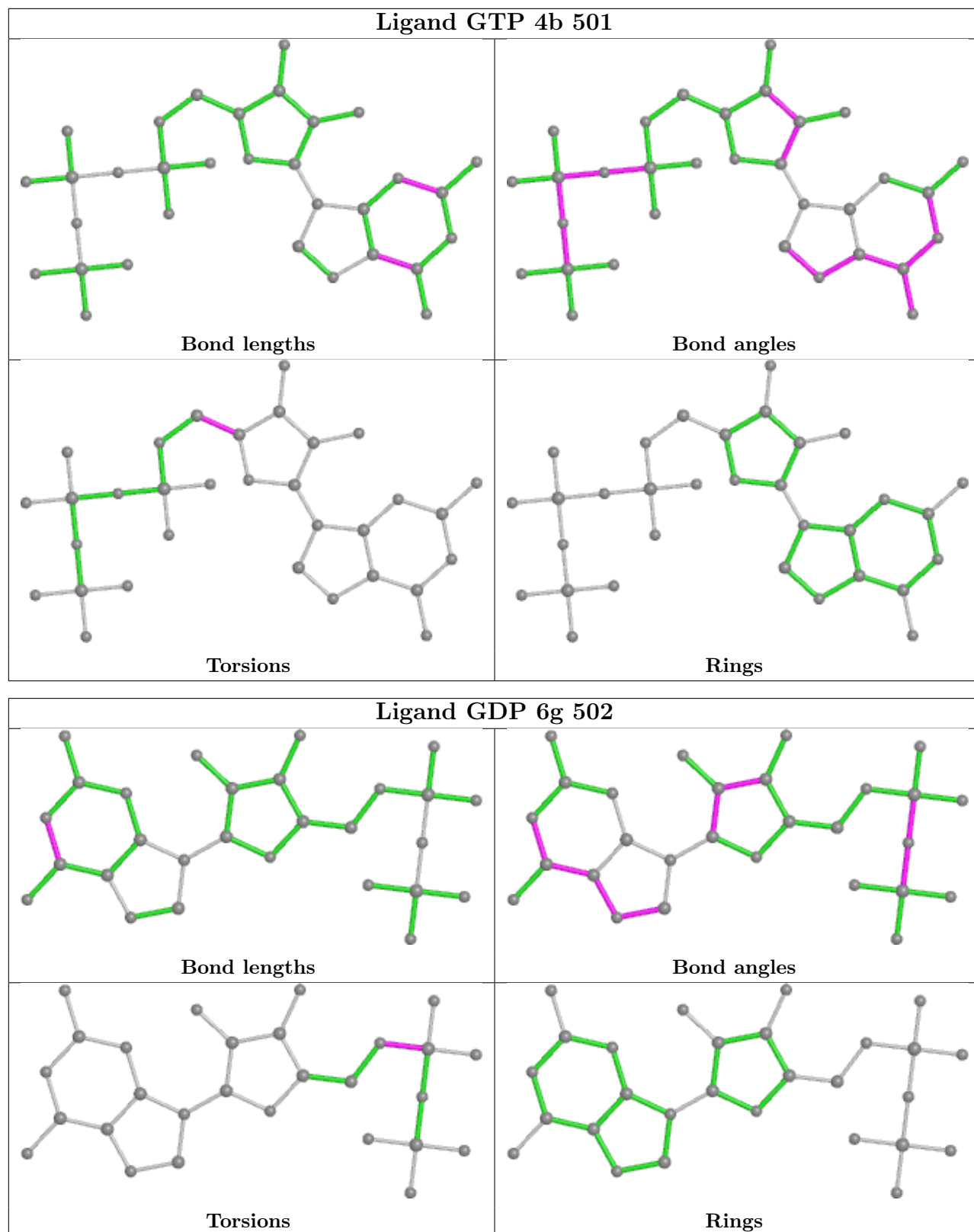


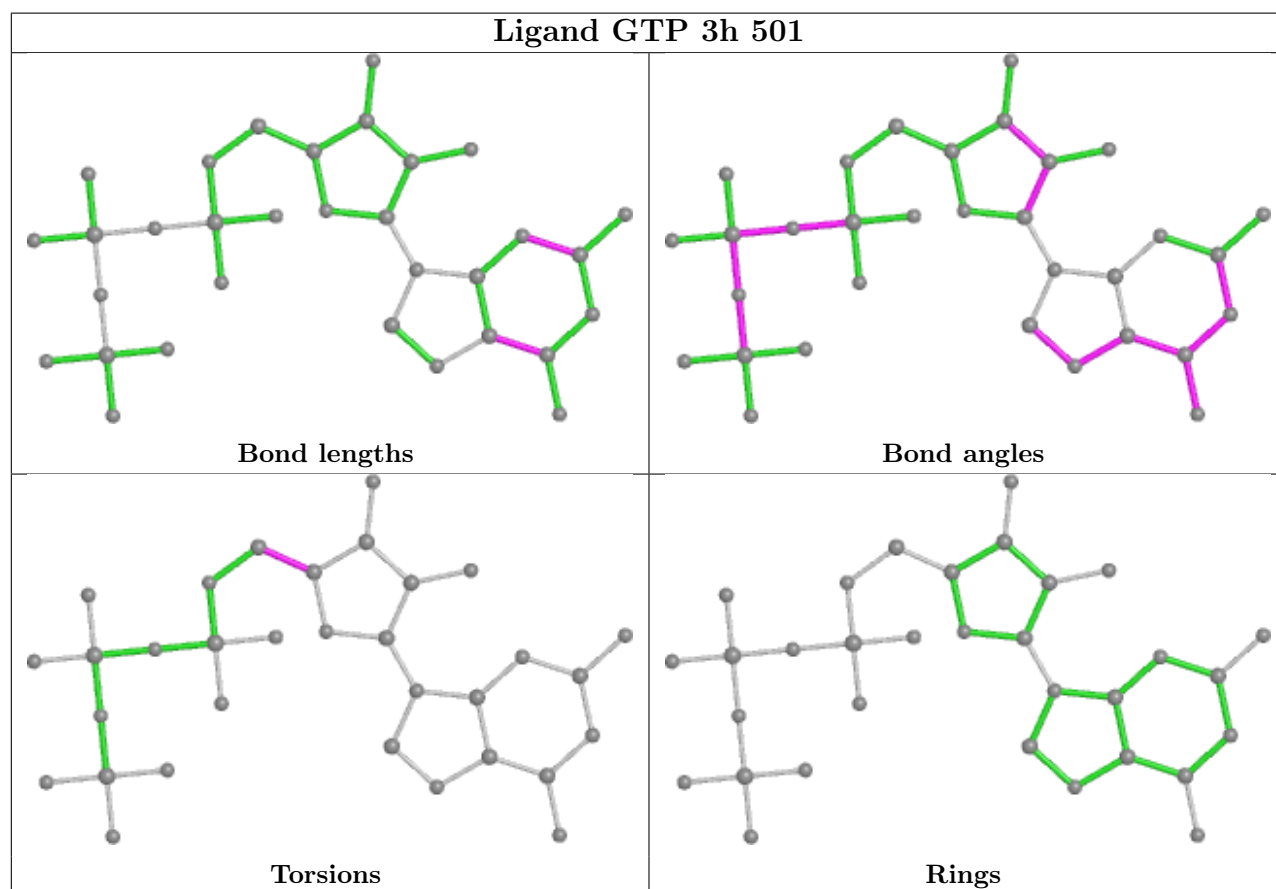
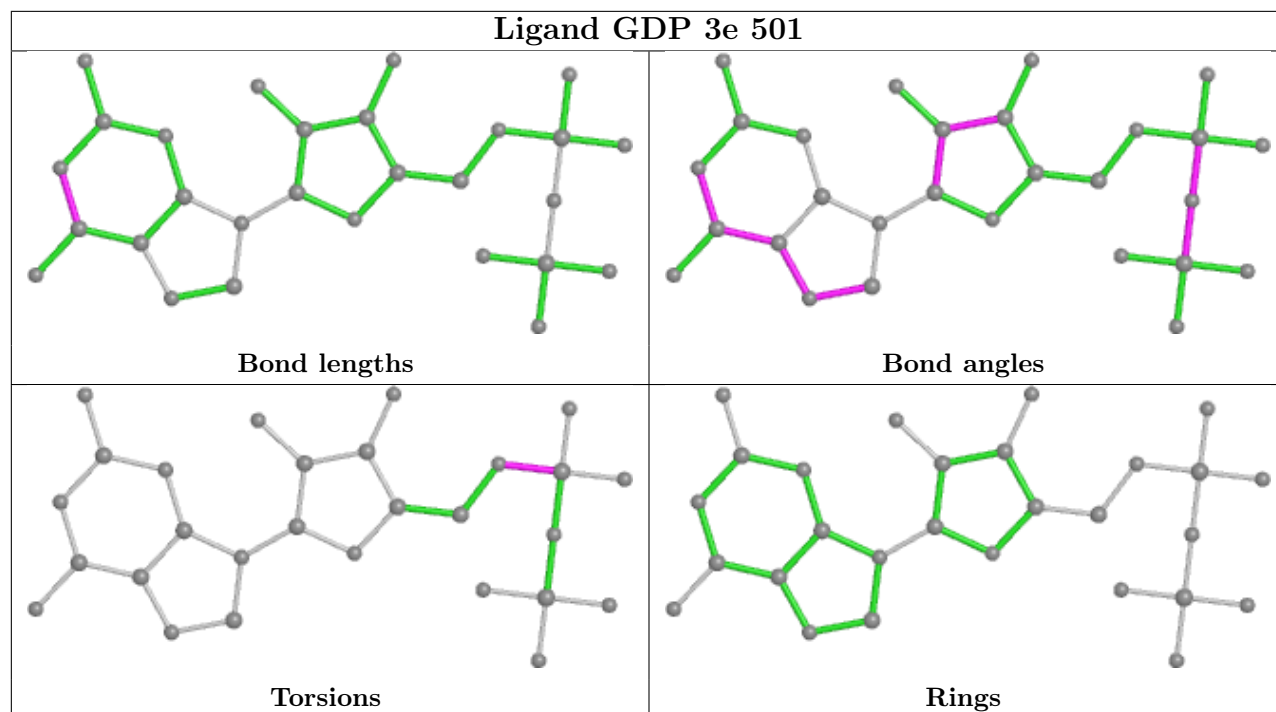


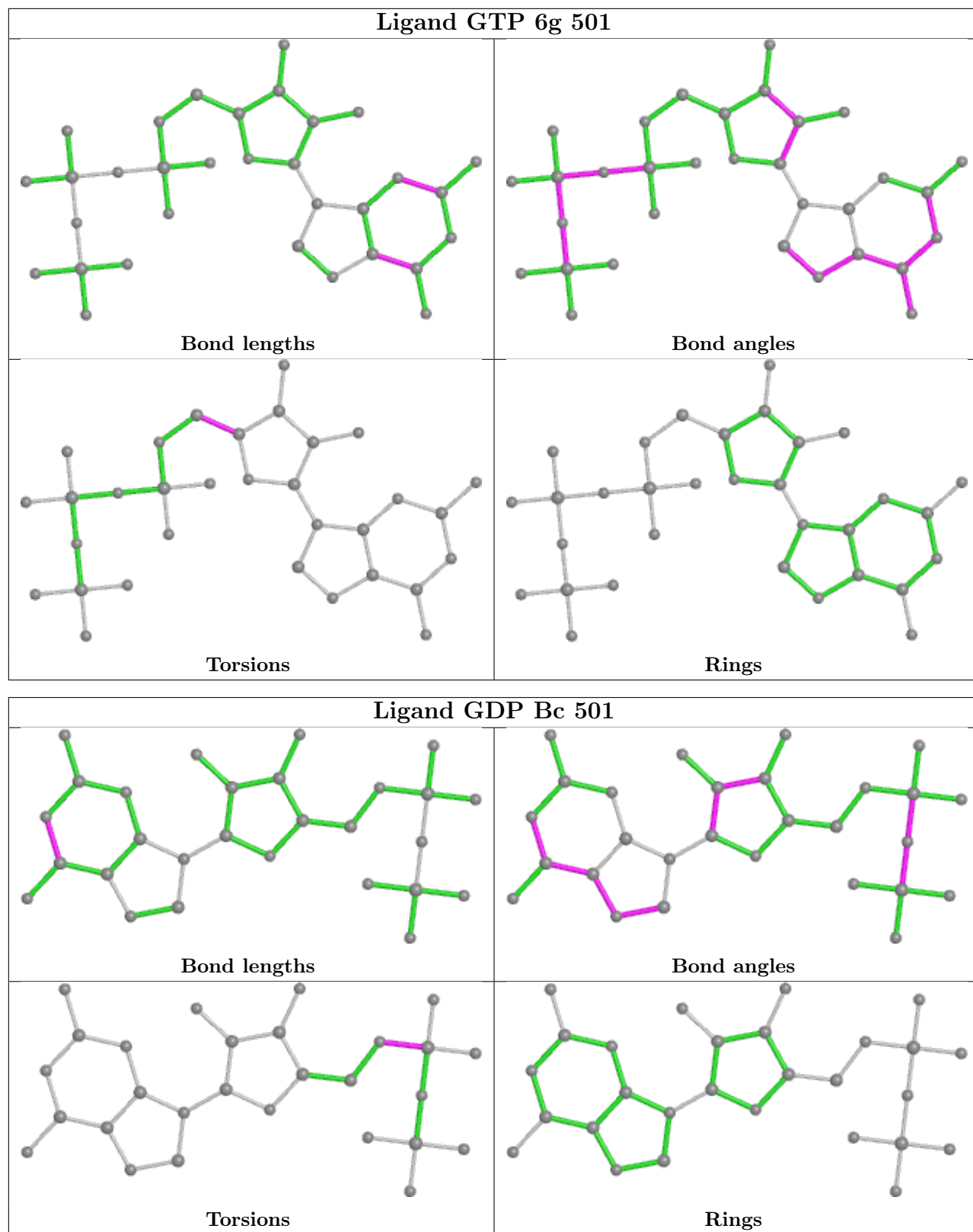


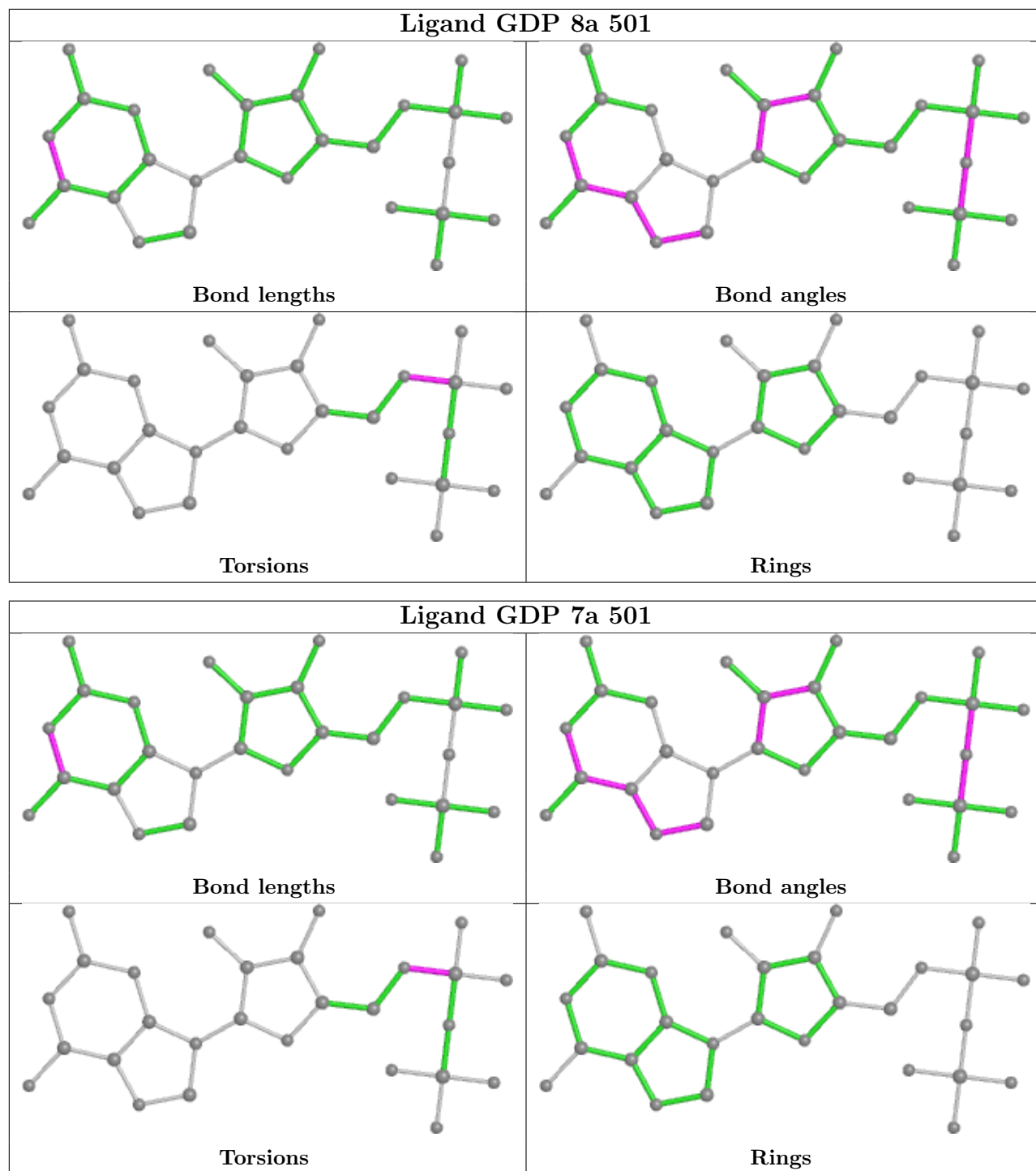


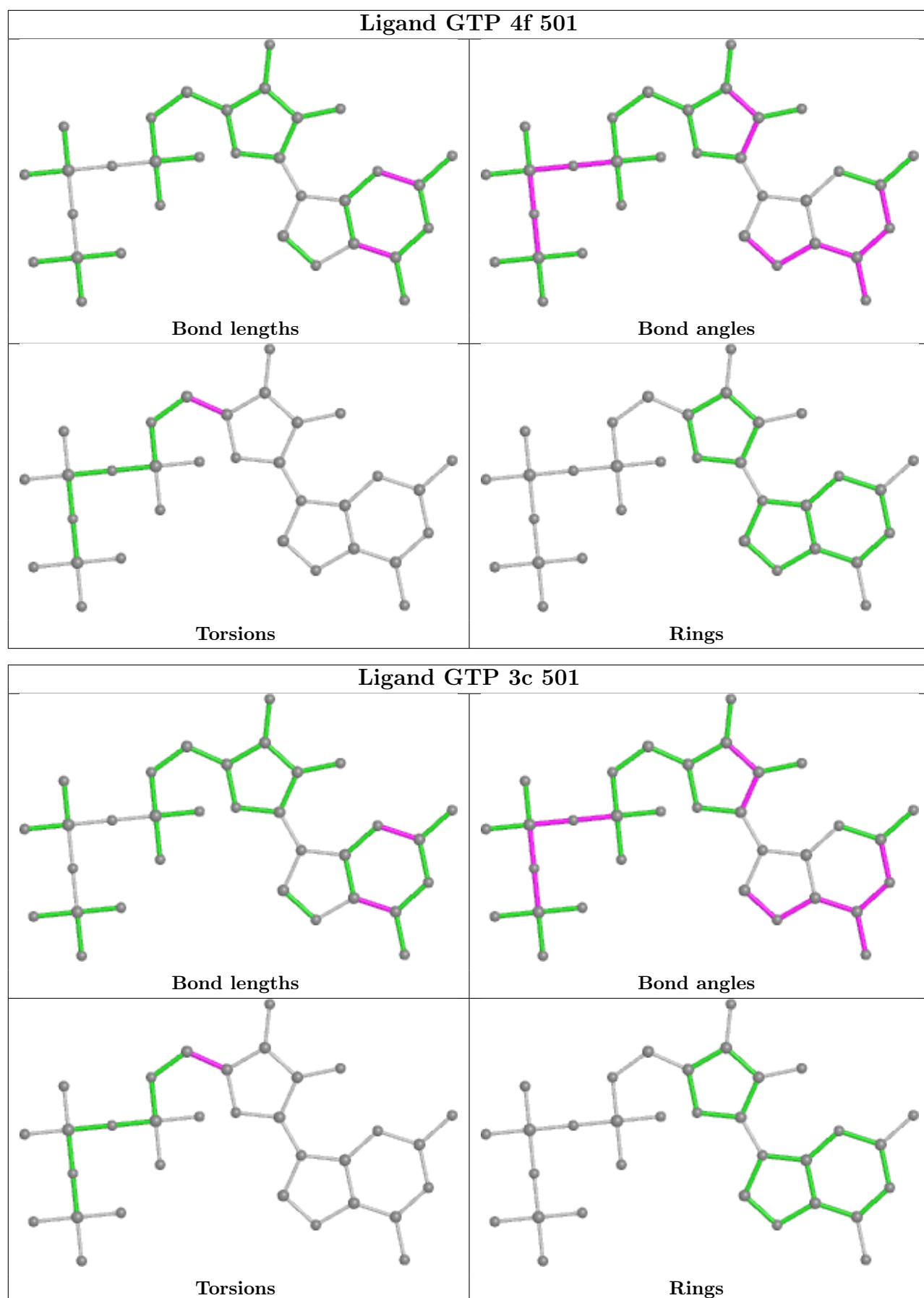


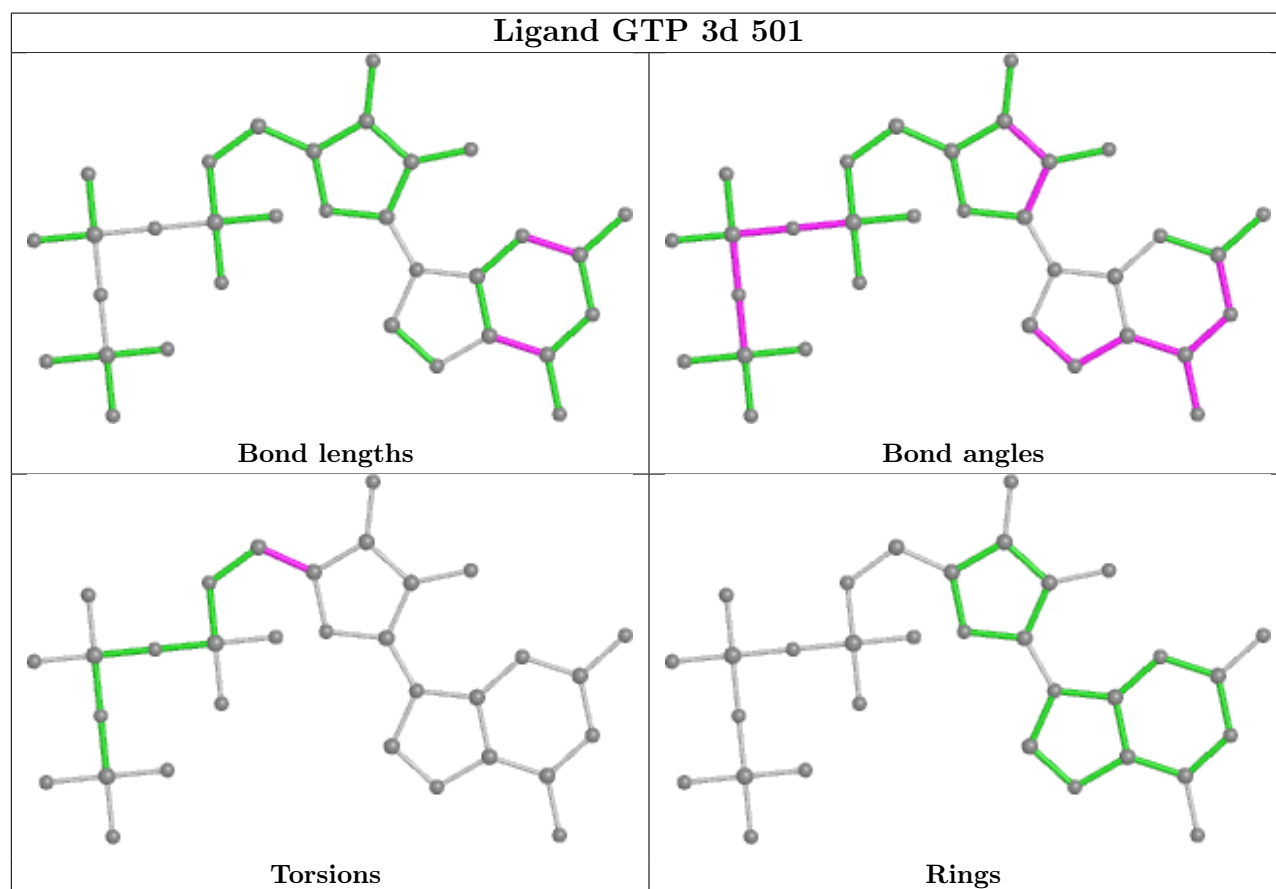
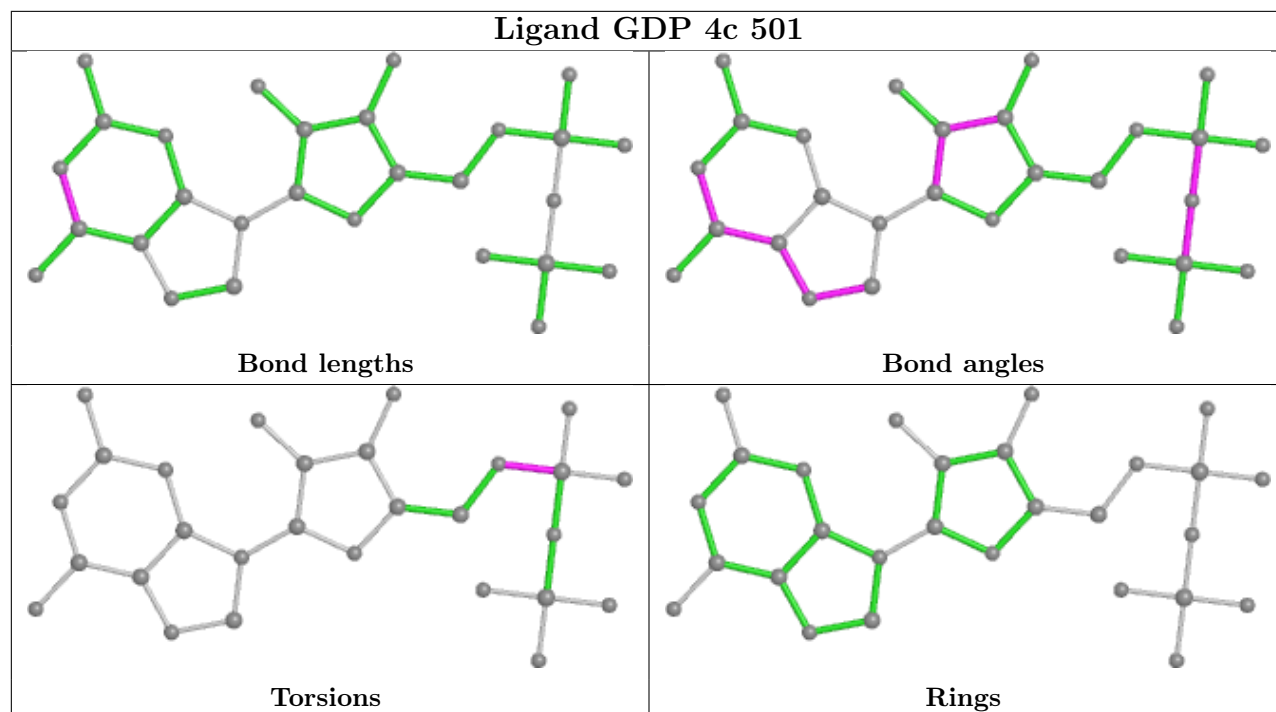


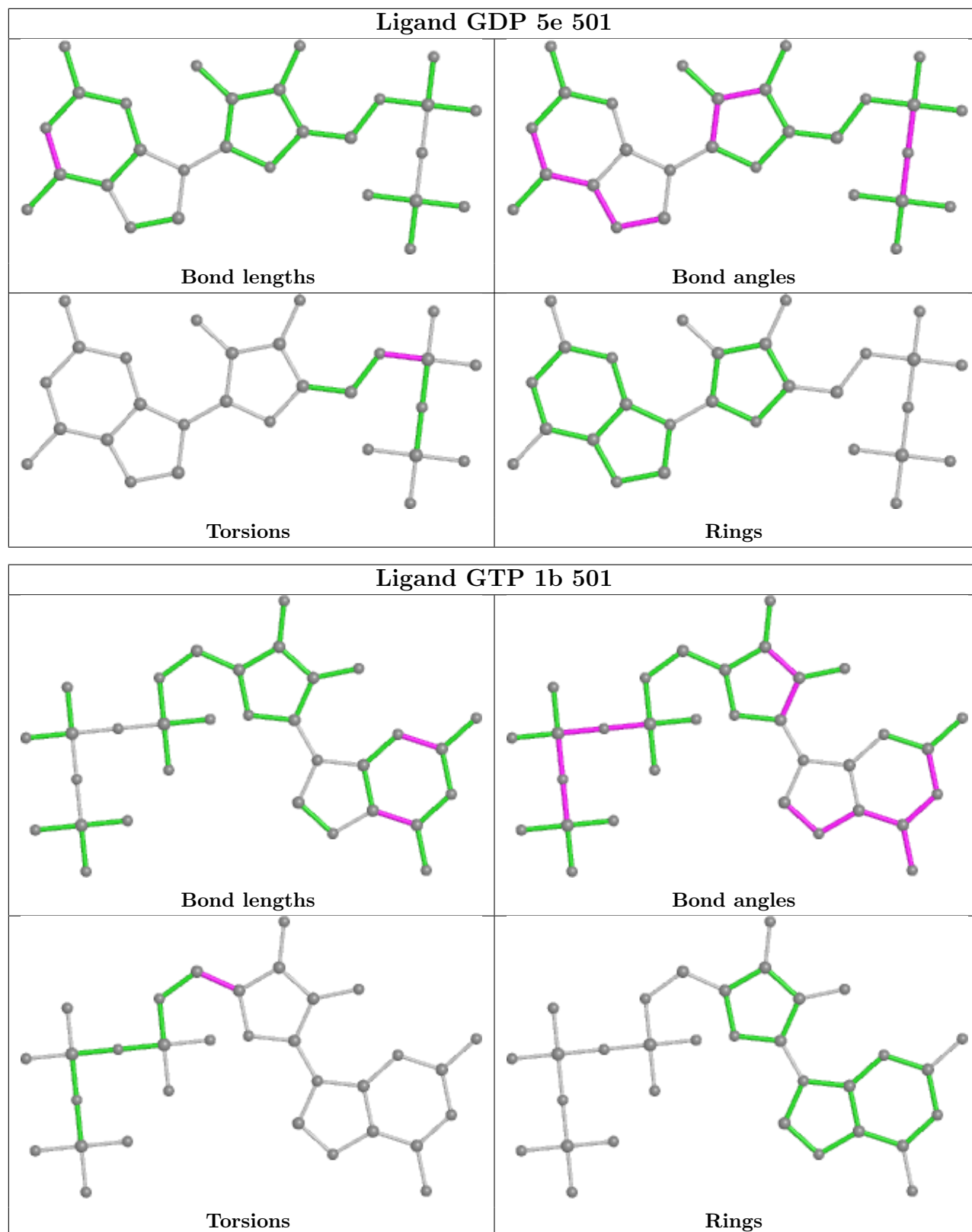


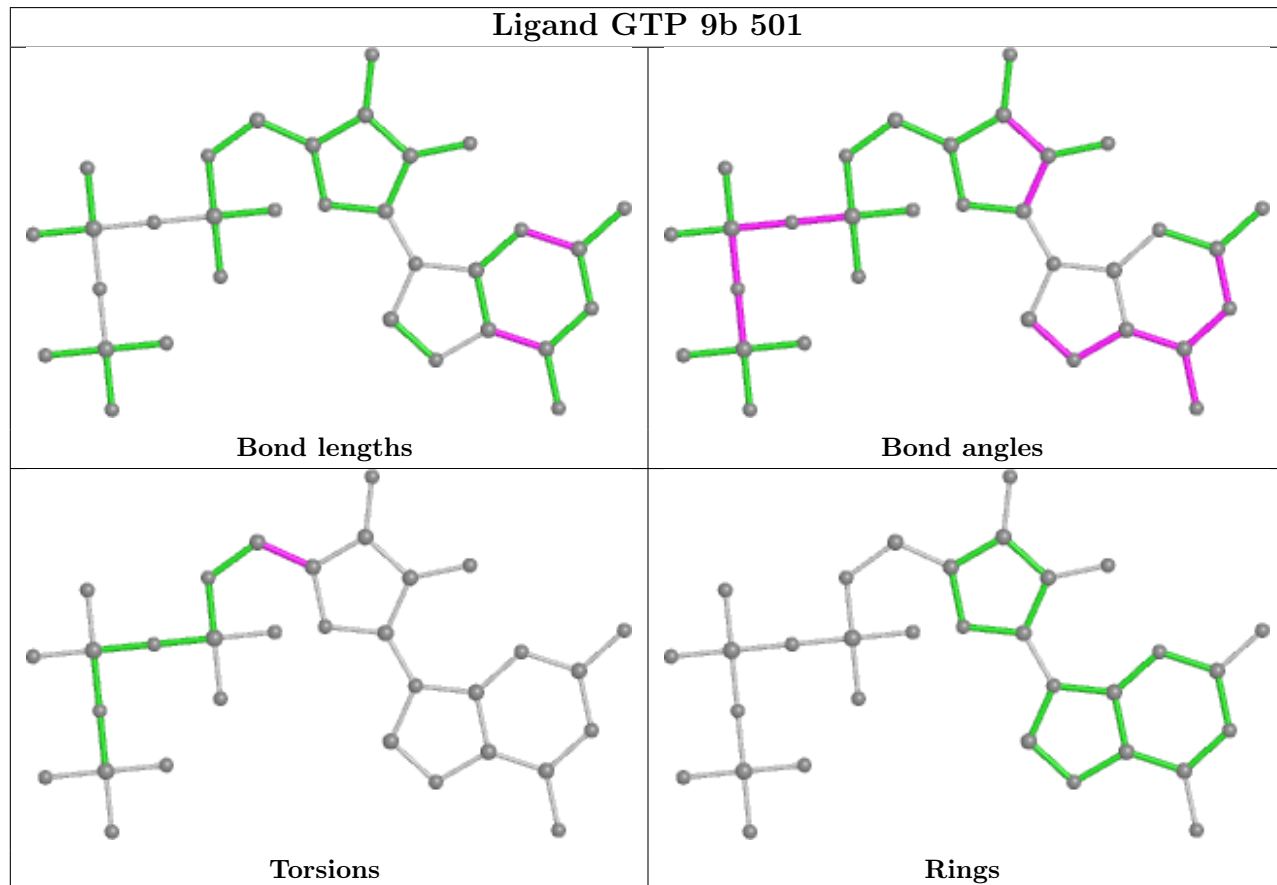
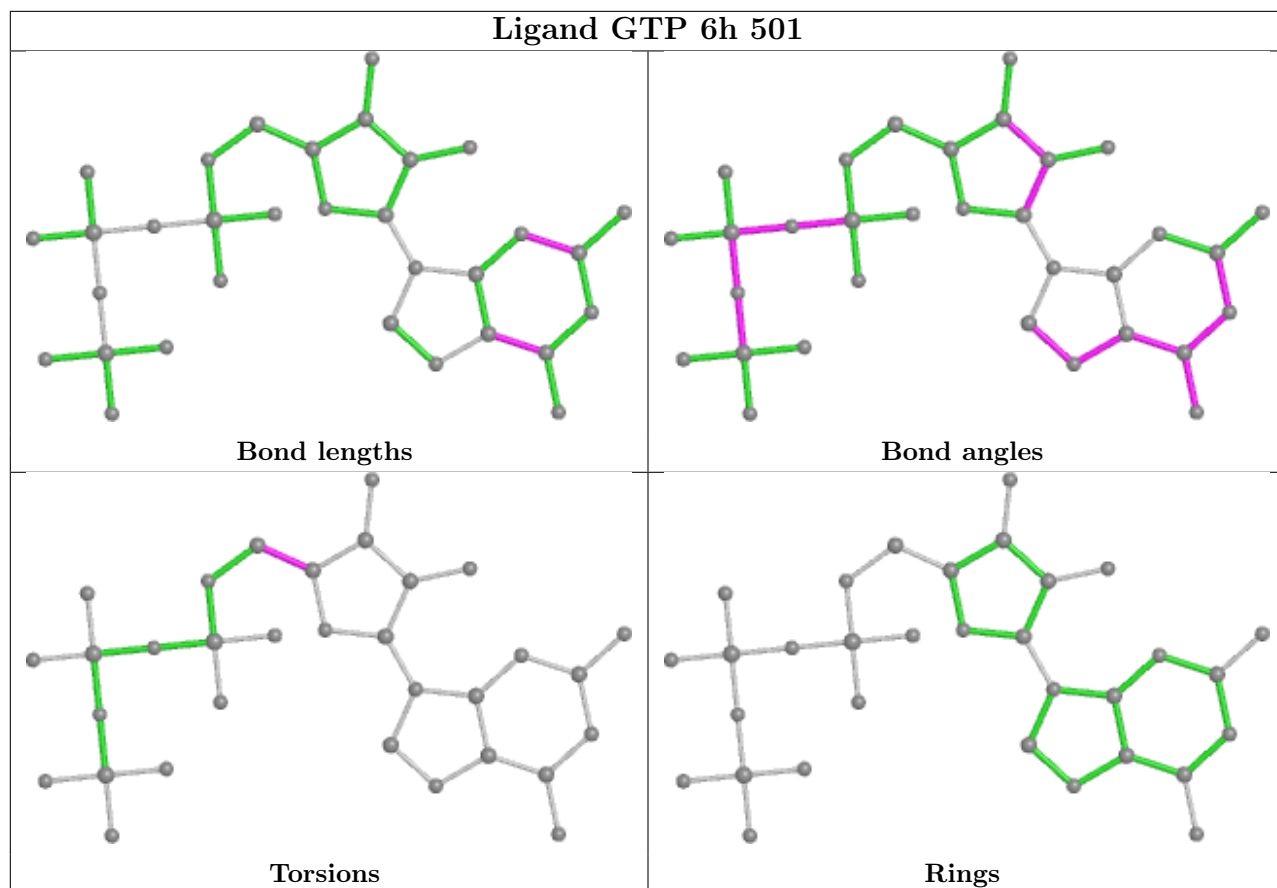


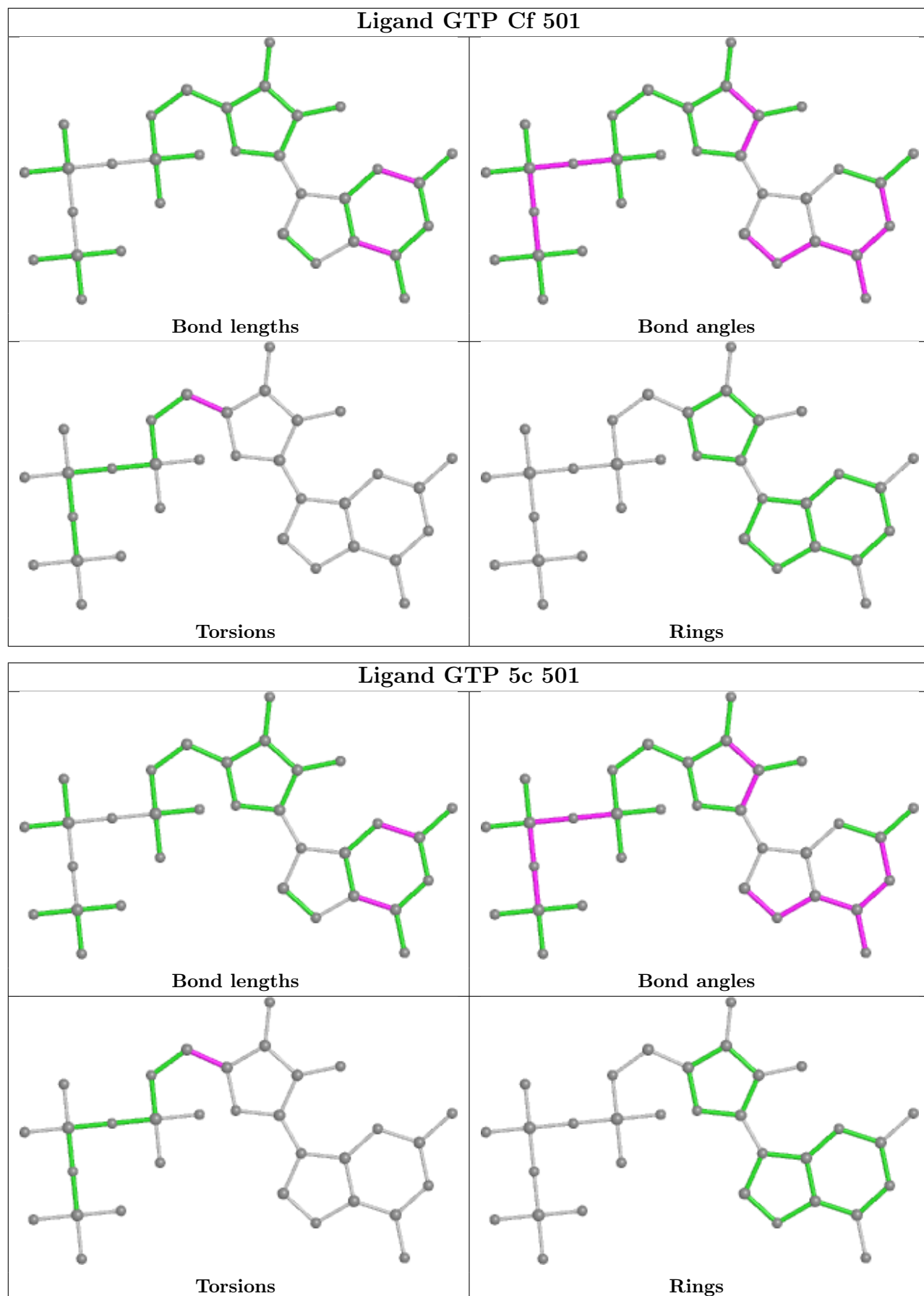


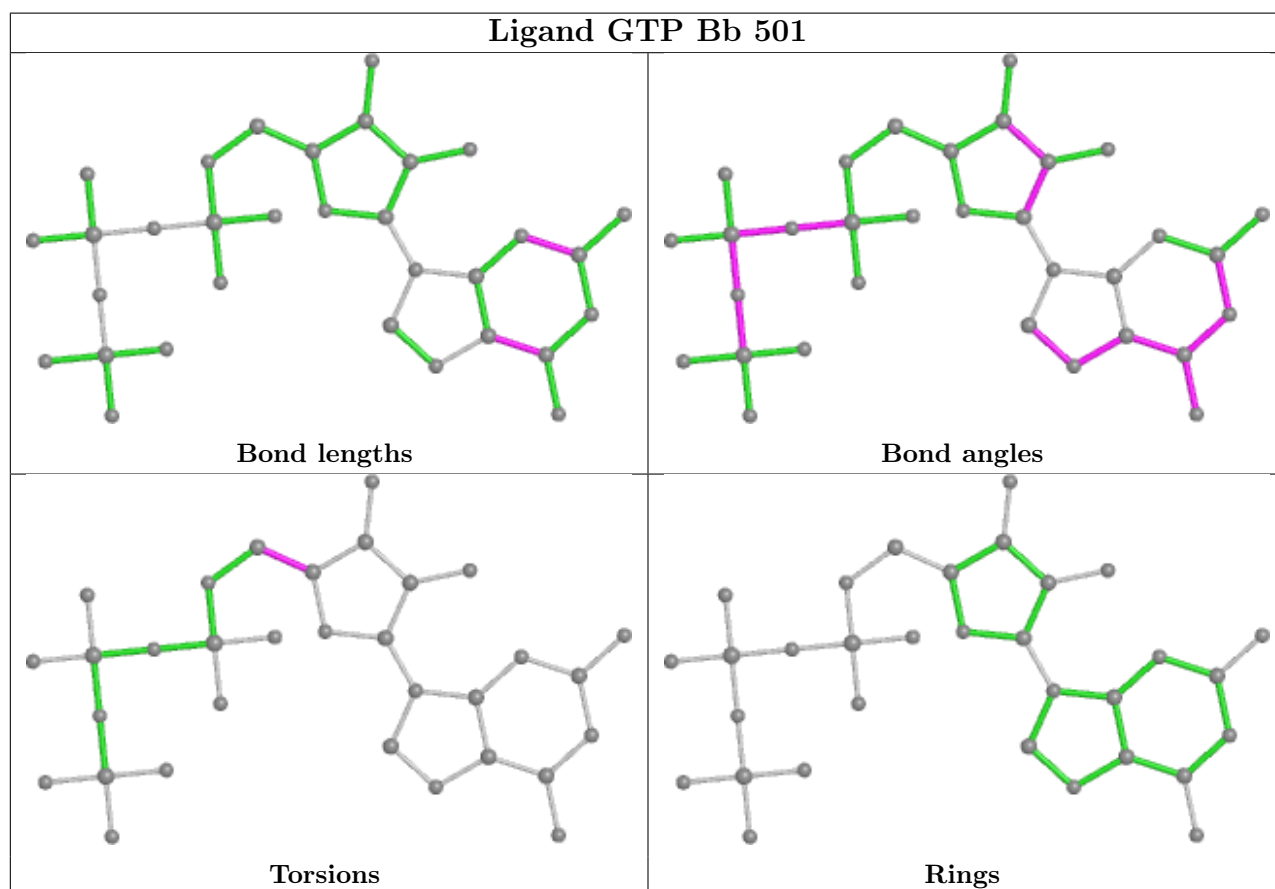
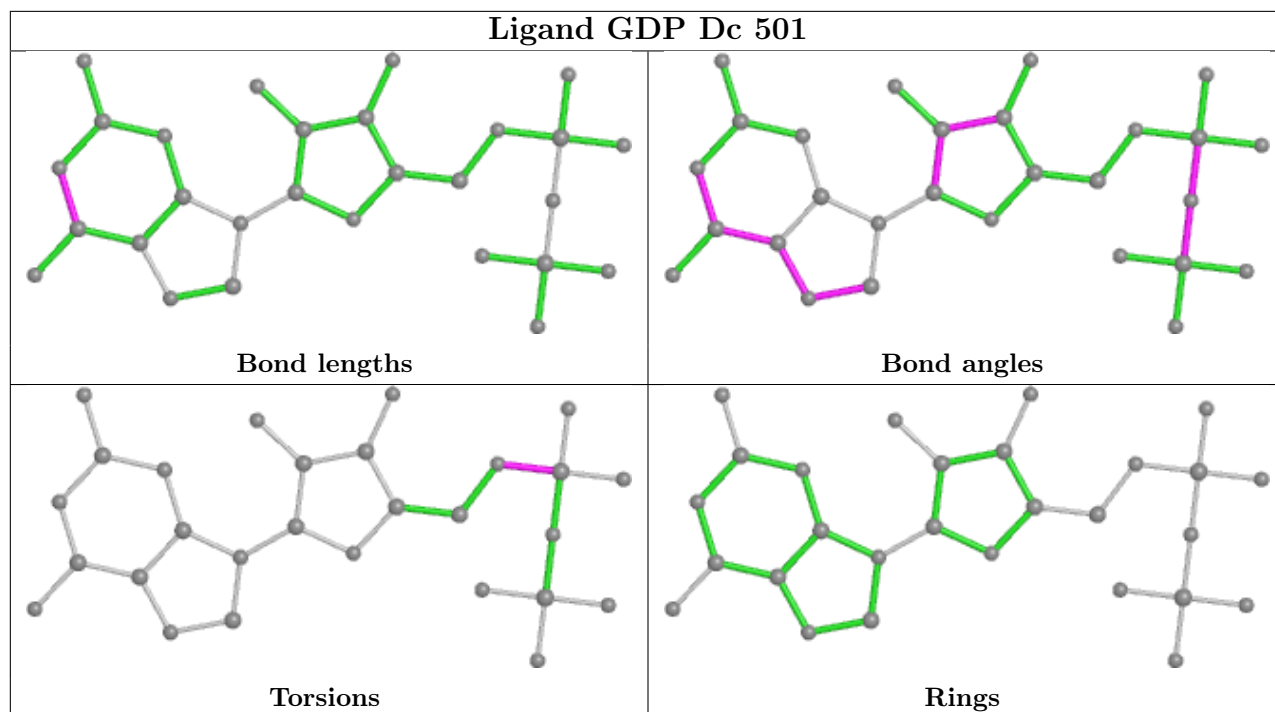


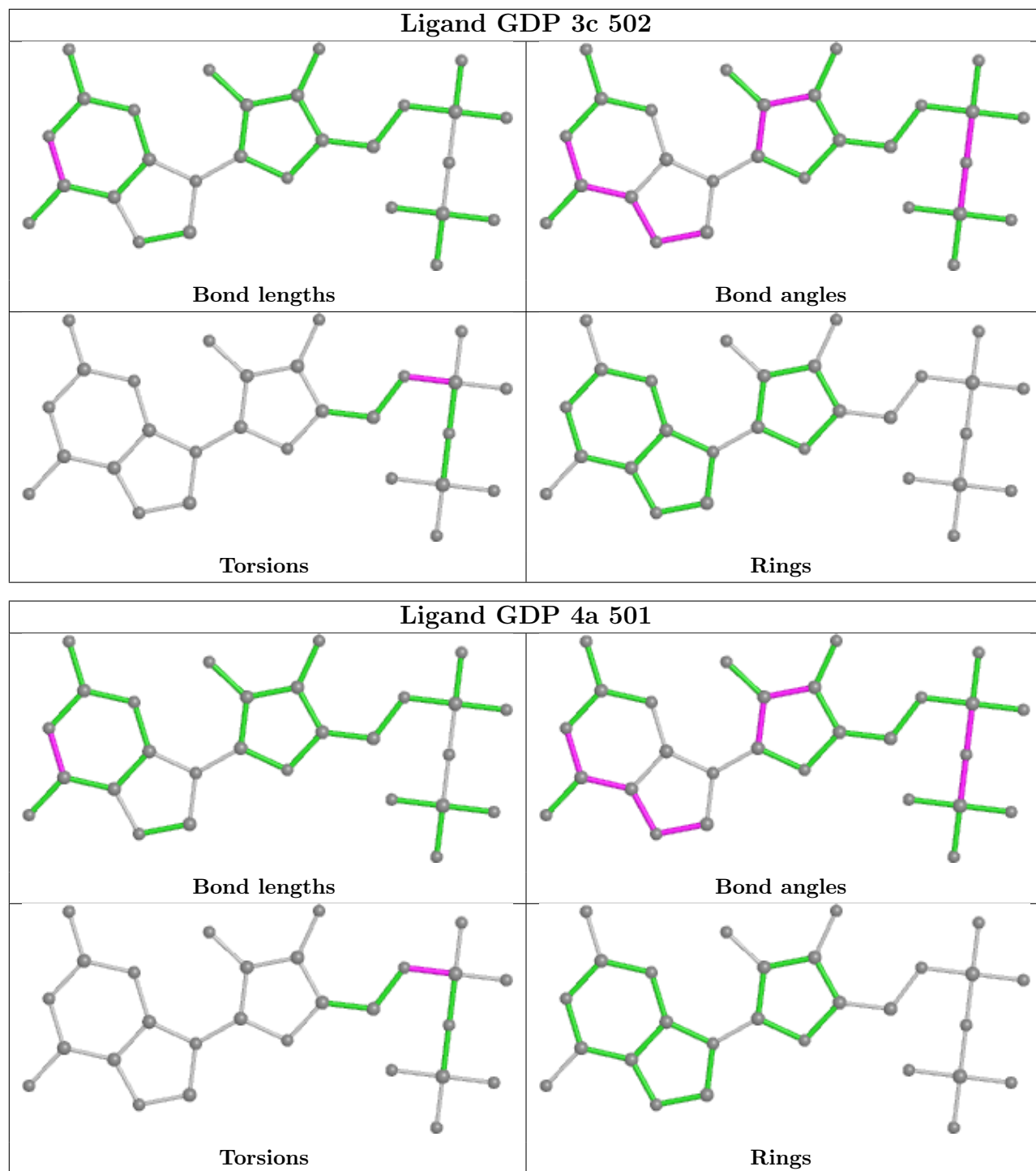


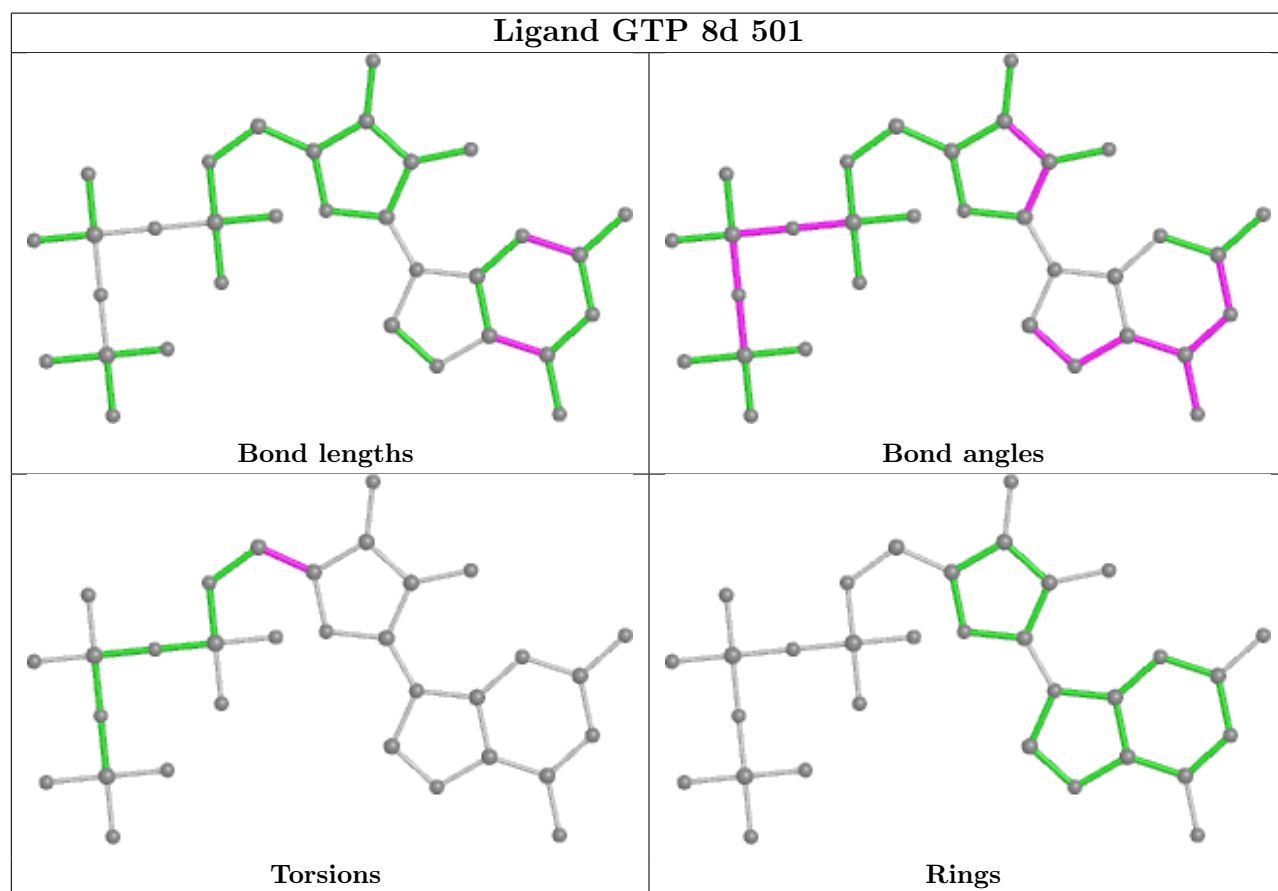
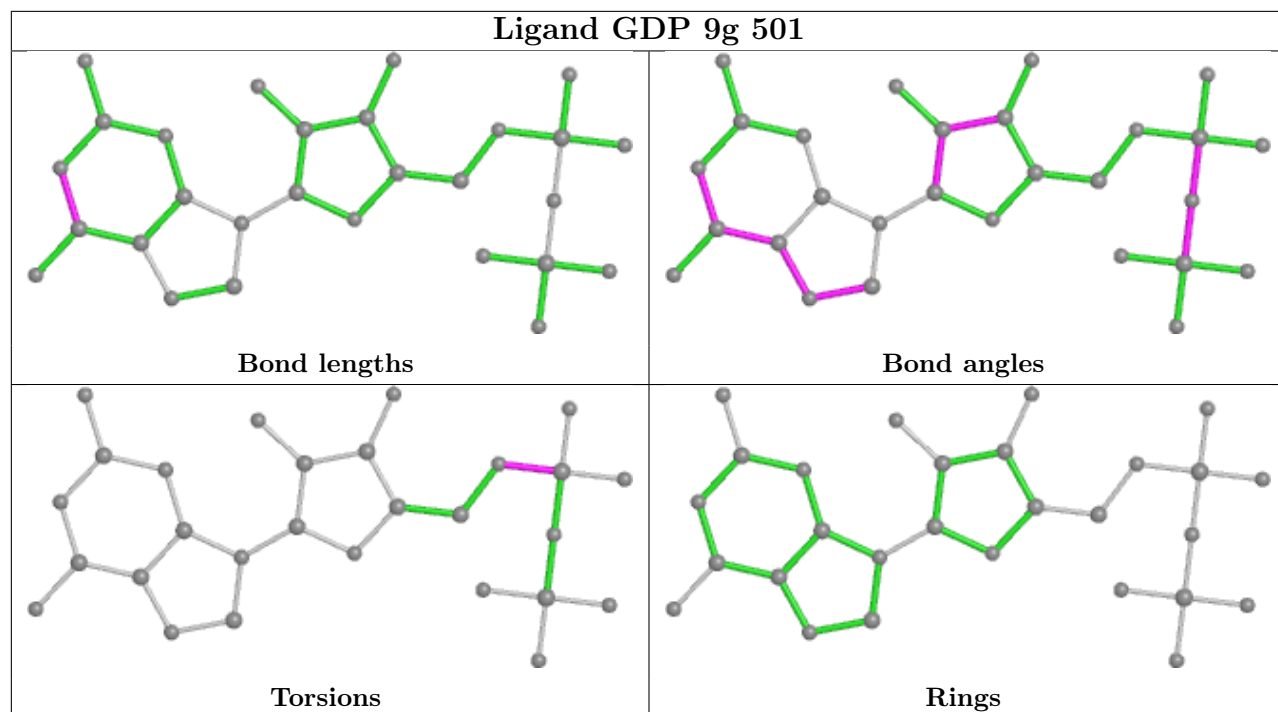


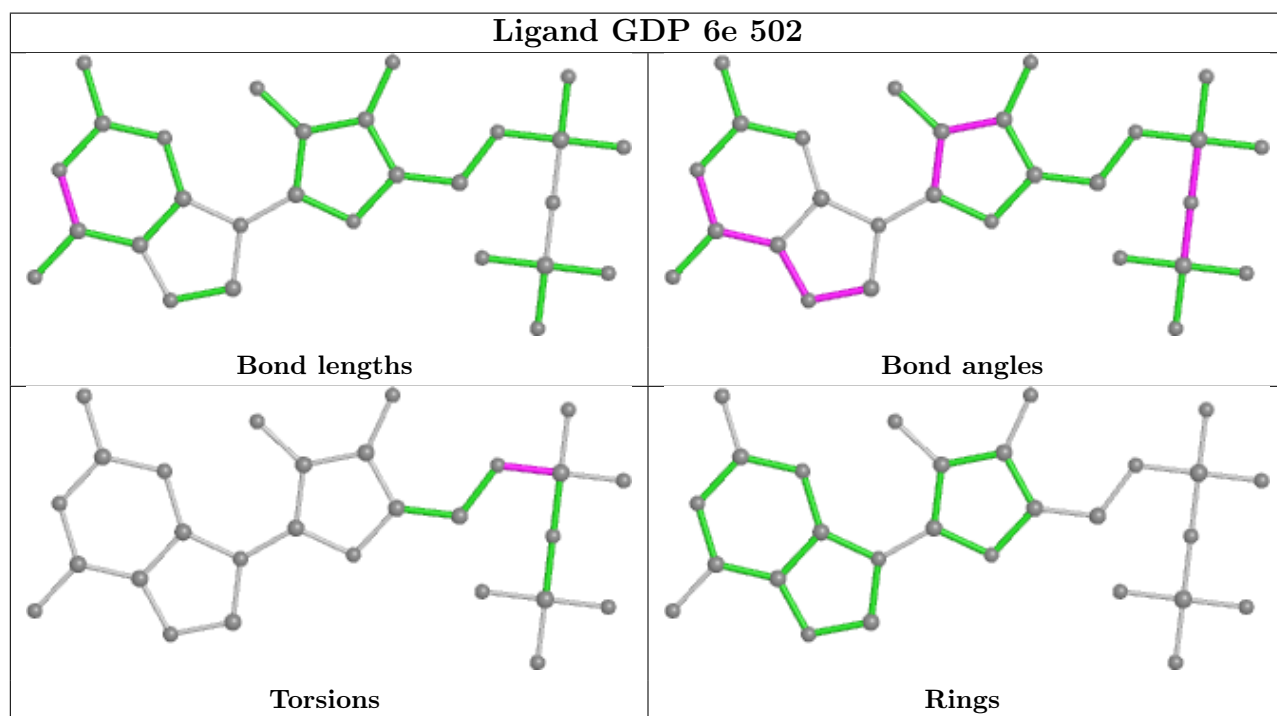
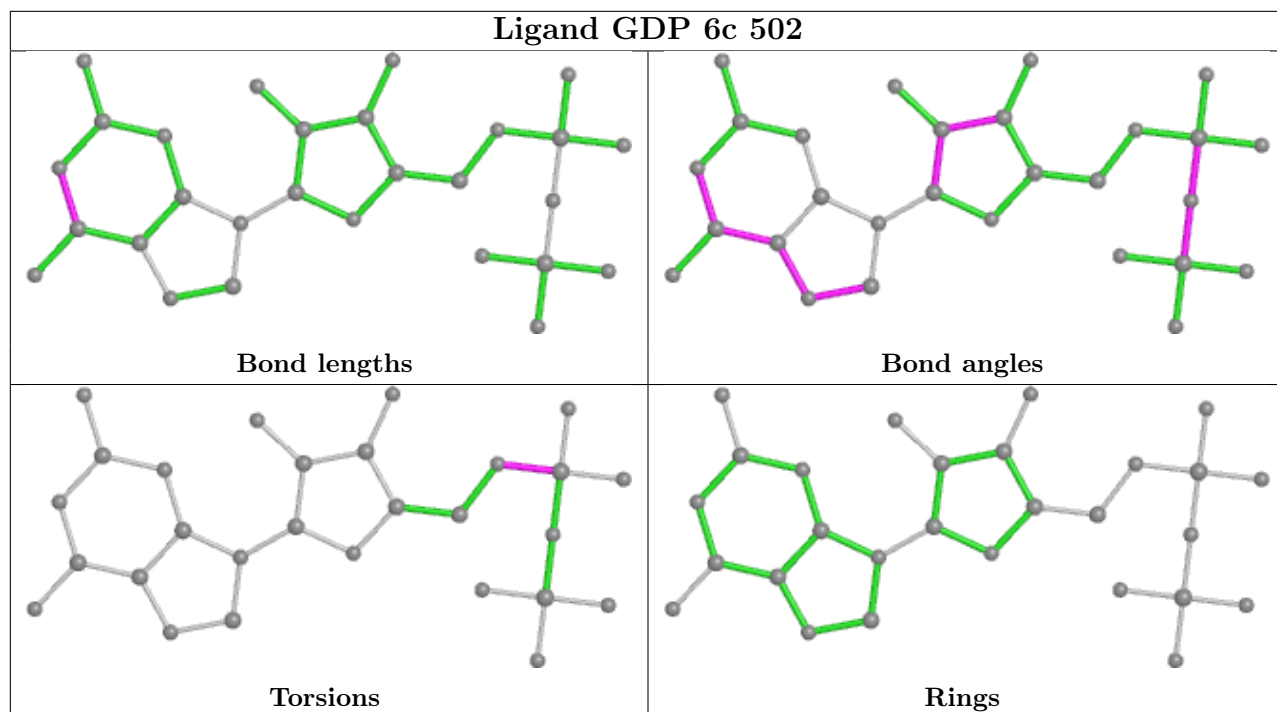


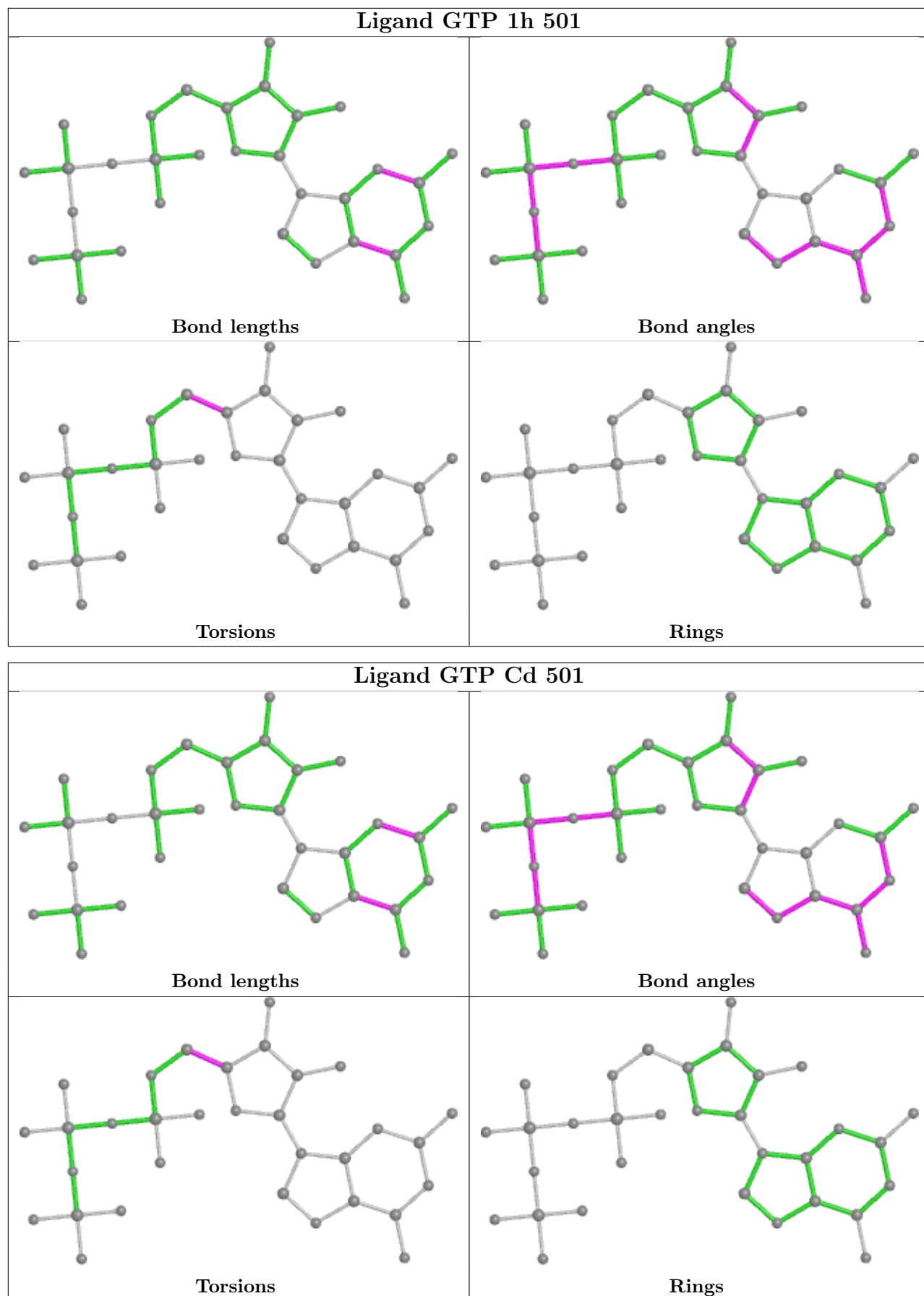


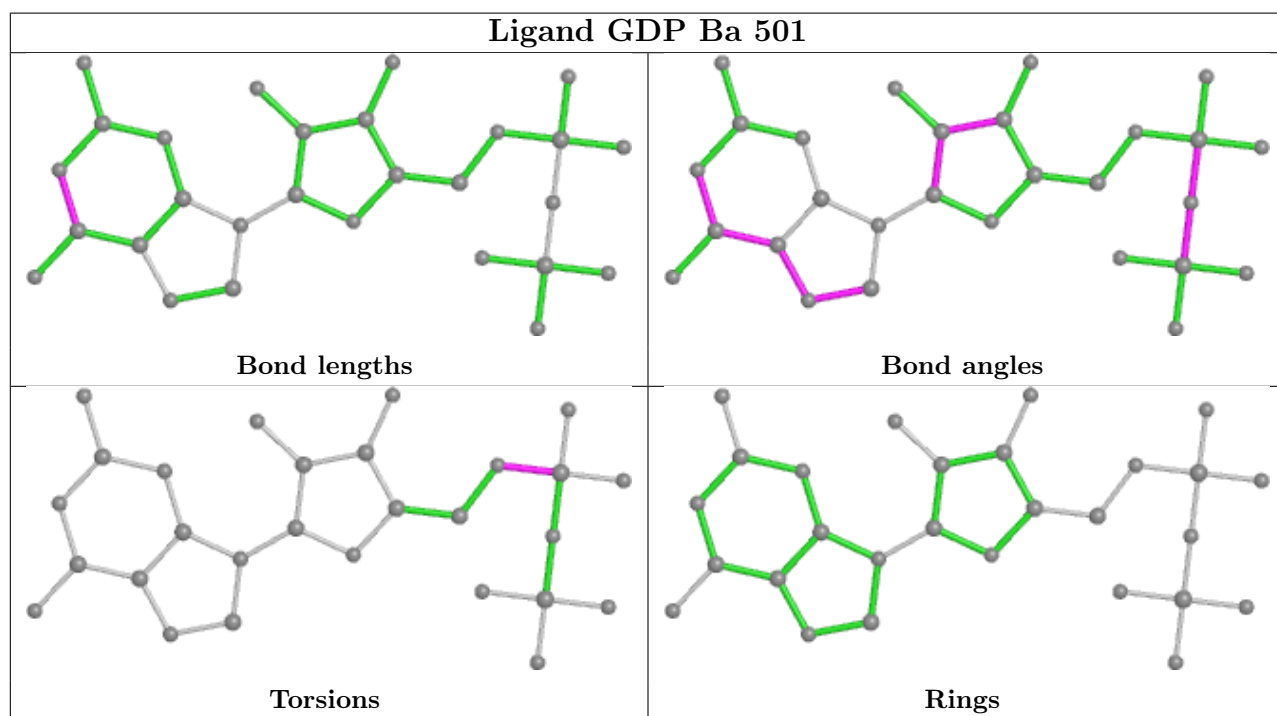
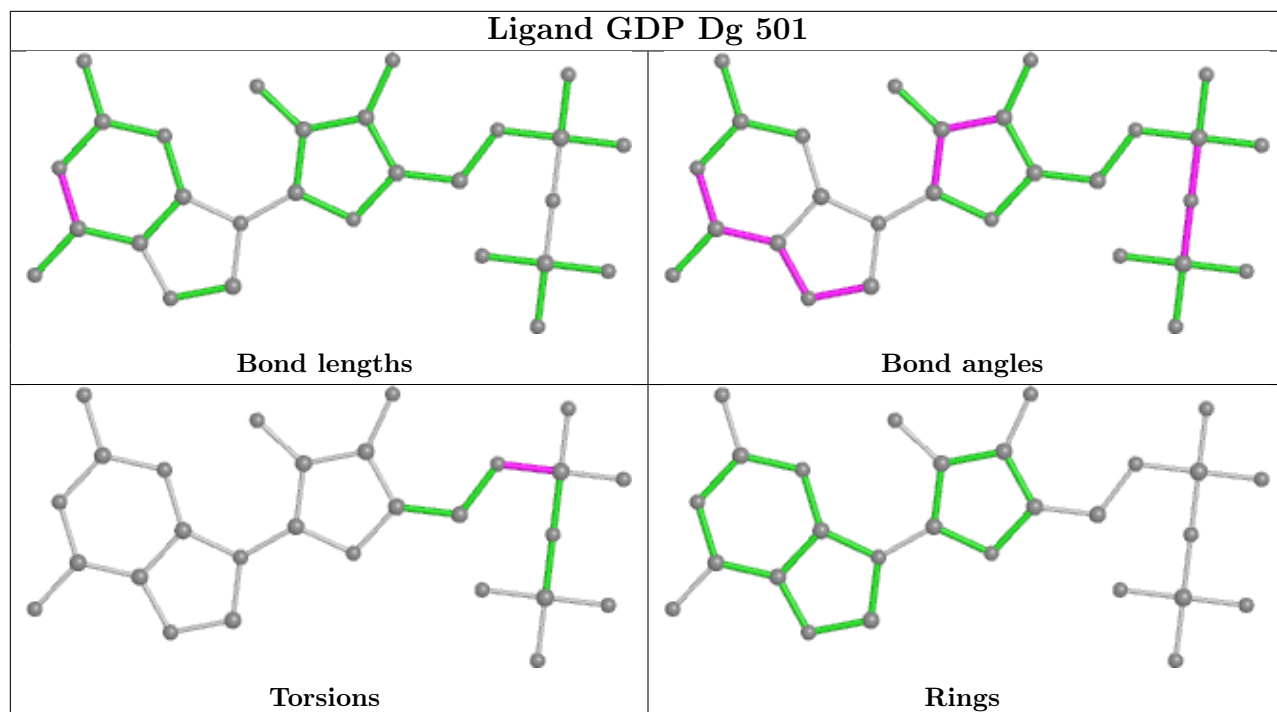


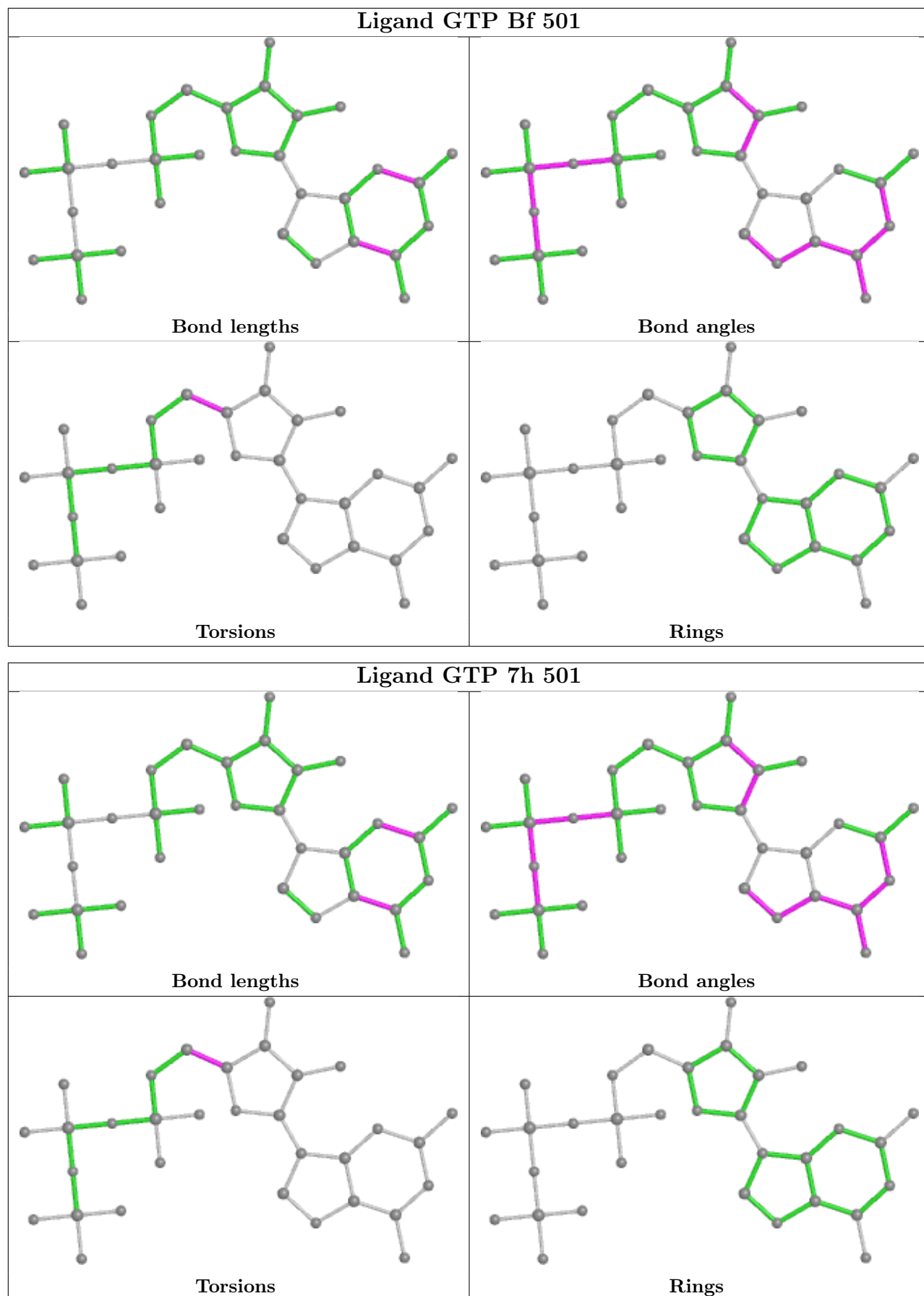


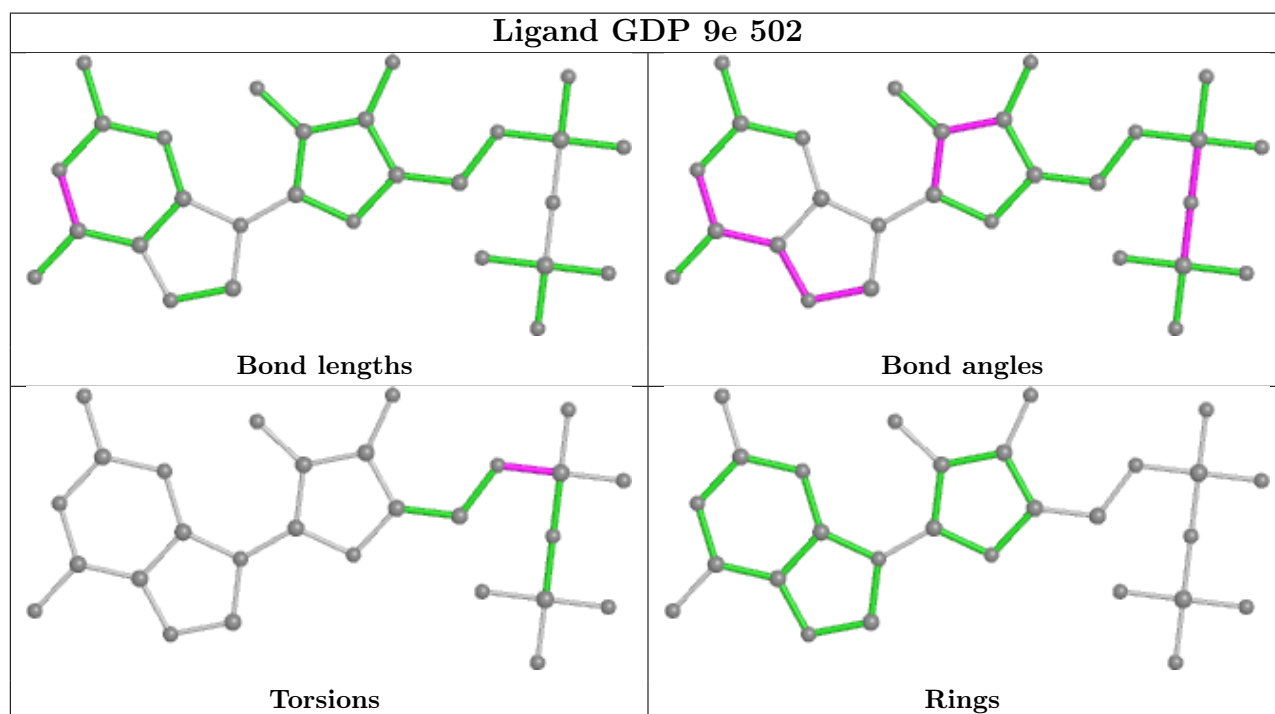
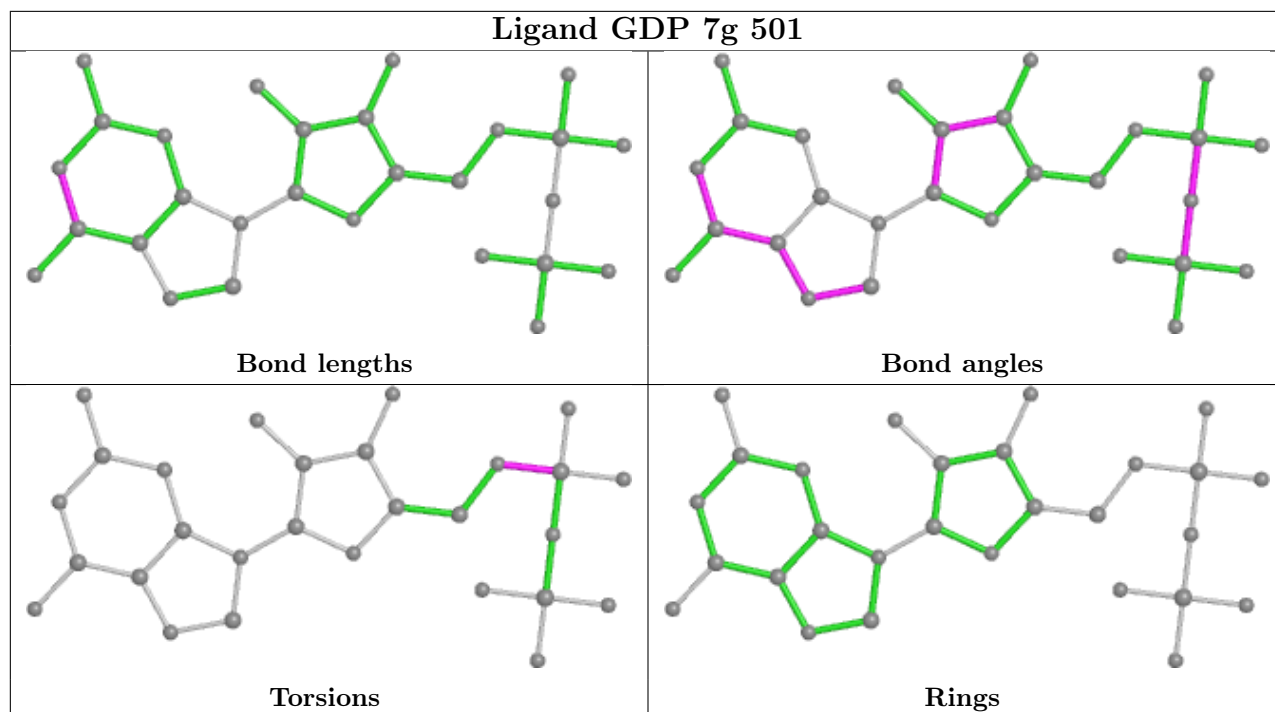


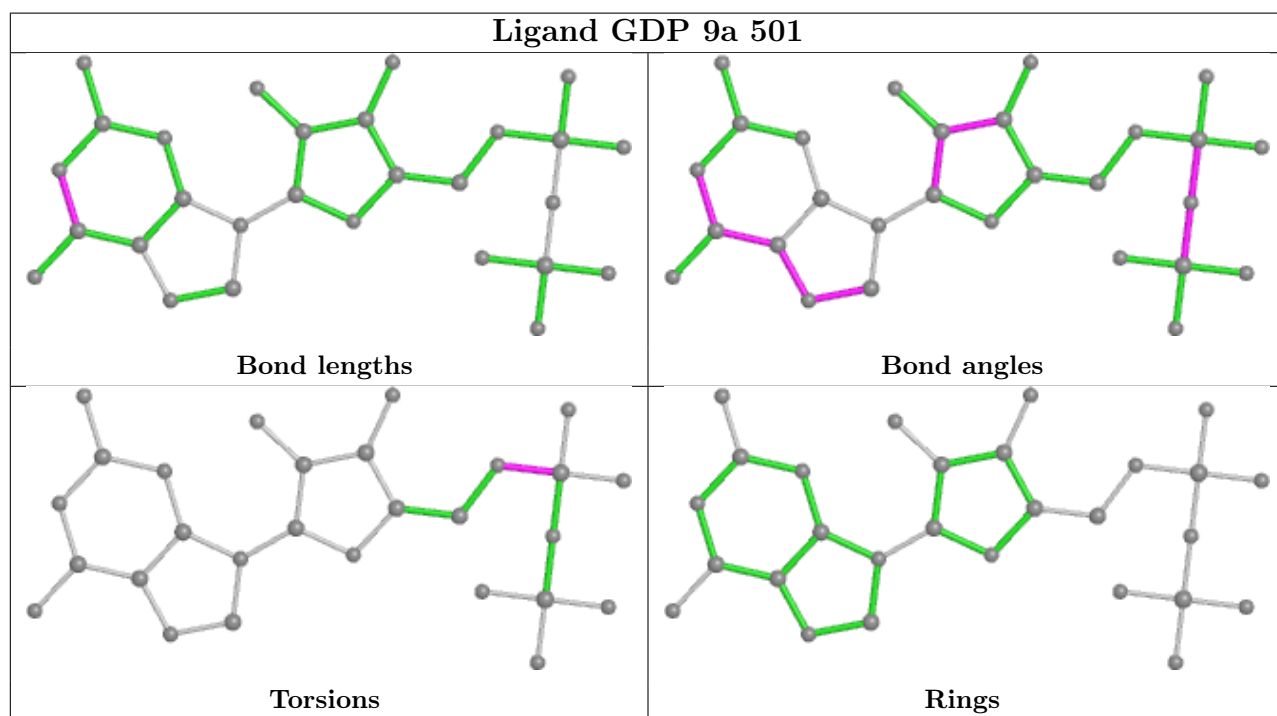
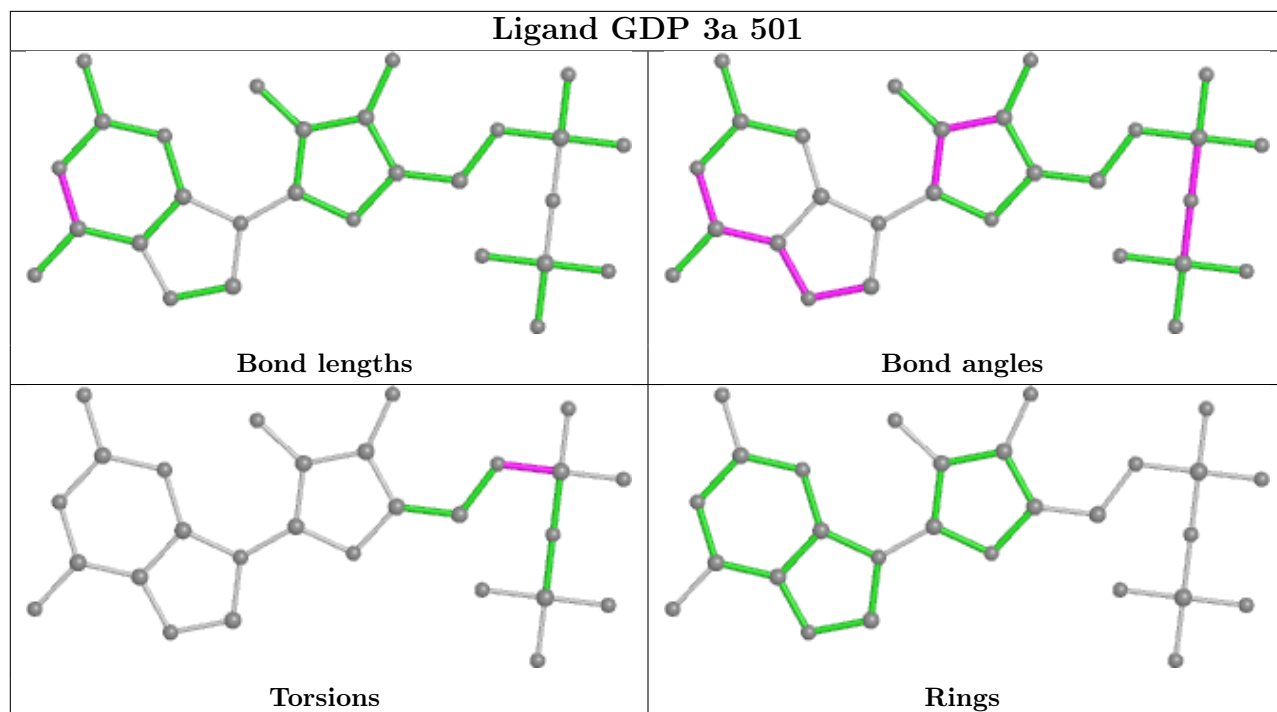


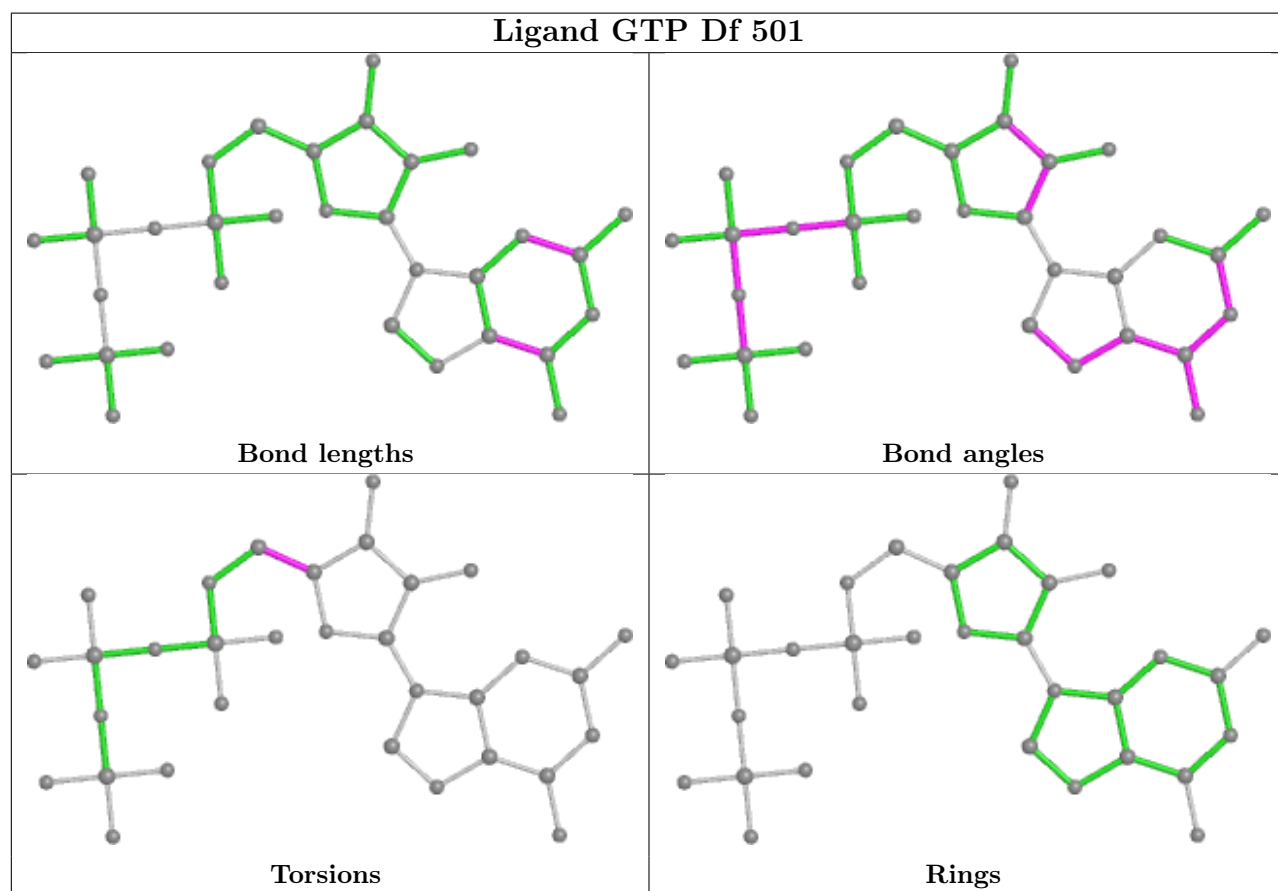
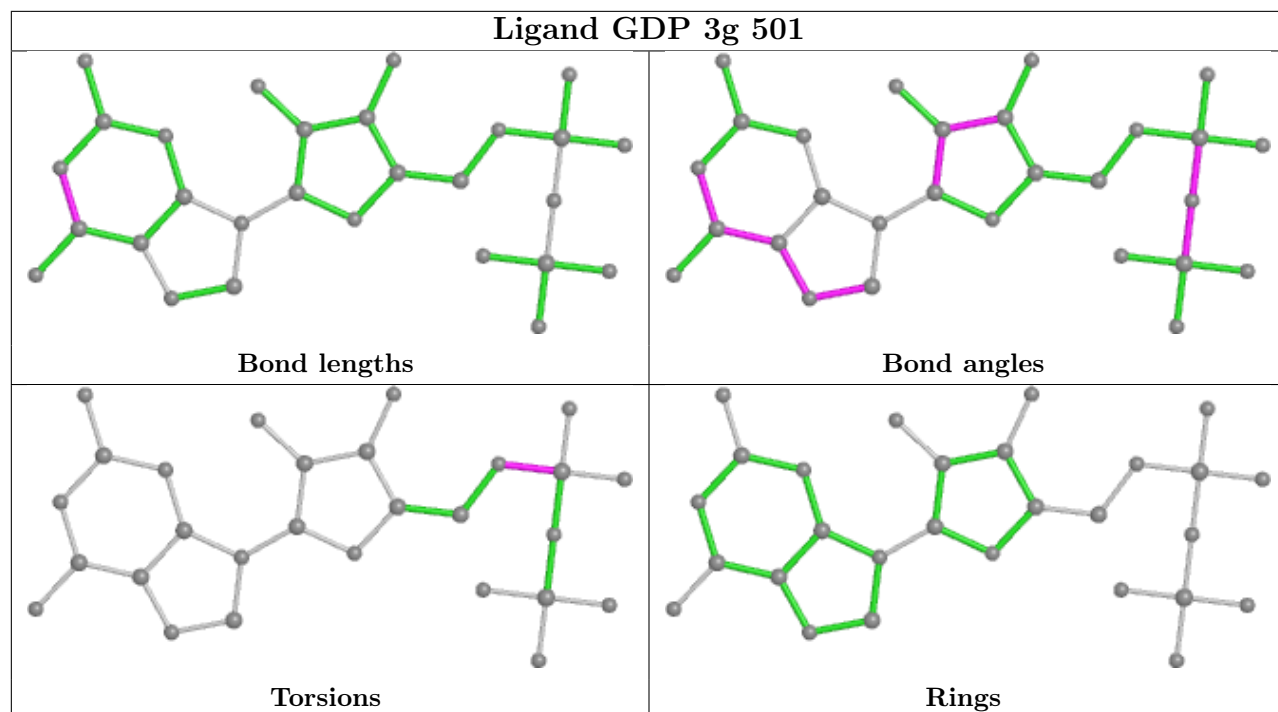


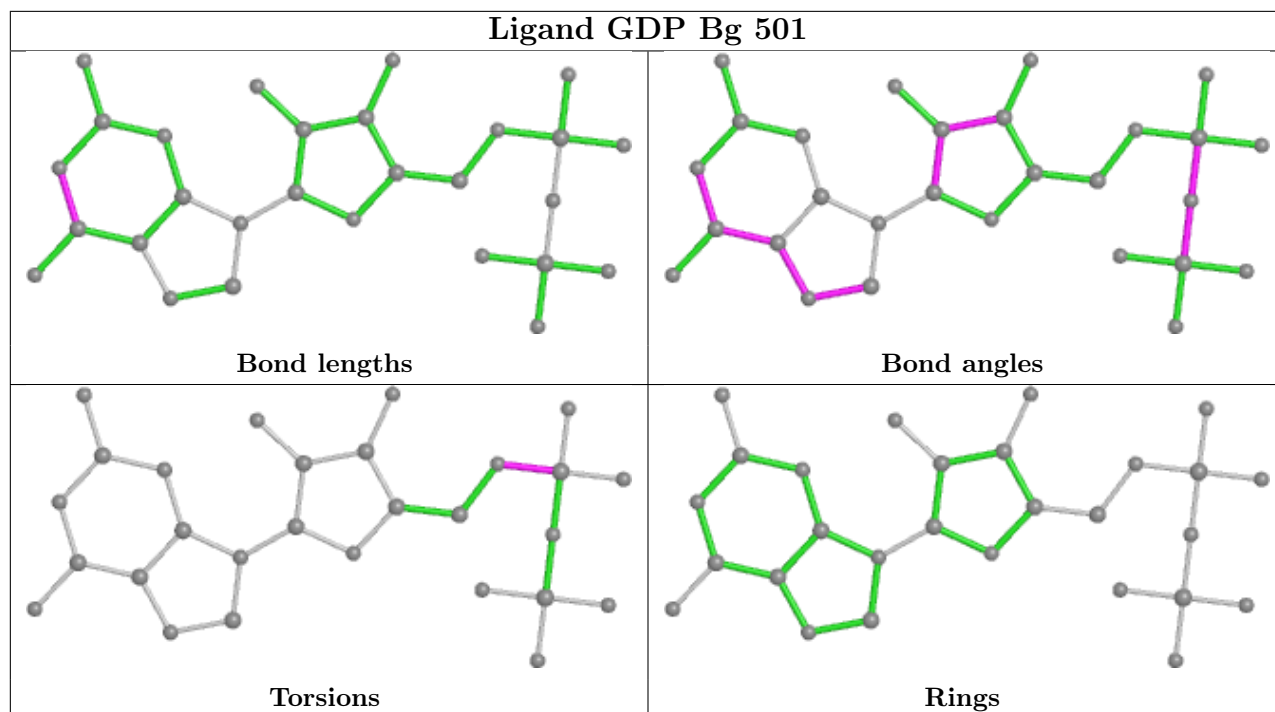












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [\(i\)](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
37	4F	5
37	4E	3
46	5Z	2
45	5W	1
45	5X	1
45	5Y	1
43	5I	1
43	5J	1
43	5L	1
43	5K	1
37	4G	1
41	5A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5W	111:UNK	C	154:UNK	N	23.64
1	5X	111:UNK	C	154:UNK	N	23.64
1	5Y	111:UNK	C	154:UNK	N	23.64
1	5Z	14:UNK	C	15:UNK	N	3.57
1	5Z	44:UNK	C	45:UNK	N	3.20
1	5I	44:THR	C	45:ASN	N	1.77
1	5J	44:THR	C	45:ASN	N	1.77
1	5L	44:THR	C	45:ASN	N	1.77
1	5K	44:THR	C	45:ASN	N	1.76
1	4F	1322:ARG	C	1323:ILE	N	1.71
1	4F	1333:VAL	C	1334:GLU	N	1.71
1	4E	577:LEU	C	578:ASP	N	1.69
1	4F	1082:LEU	C	1083:ILE	N	1.69
1	4E	589:PRO	C	590:LYS	N	1.66
1	4G	1082:LEU	C	1083:ILE	N	1.66
1	4F	1083:ILE	C	1084:ARG	N	1.65
1	4F	1323:ILE	C	1324:THR	N	1.64
1	4E	586:PHE	C	587:ALA	N	1.61
1	5A	141:ASN	C	142:ARG	N	1.20

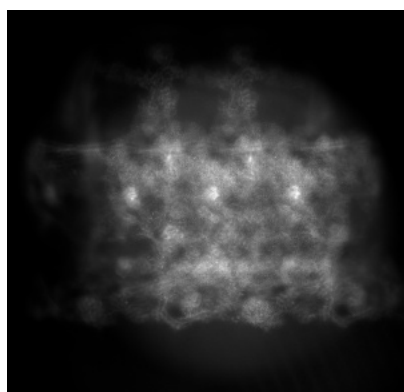
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-24207. These allow visual inspection of the internal detail of the map and identification of artifacts.

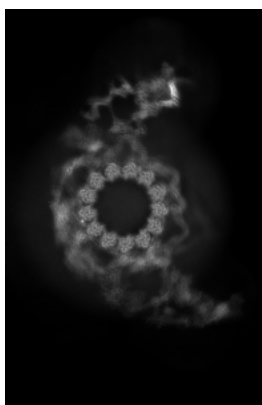
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

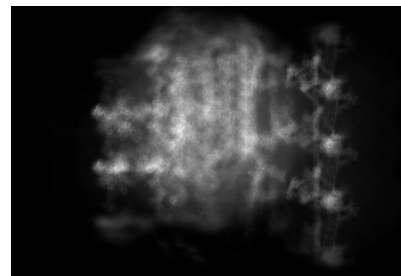
6.1.1 Primary map



X



Y

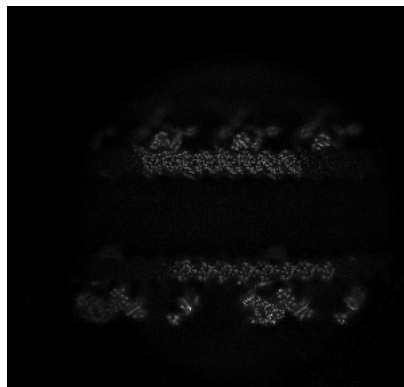


Z

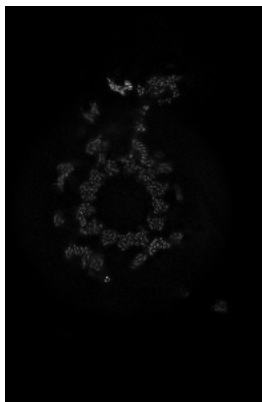
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

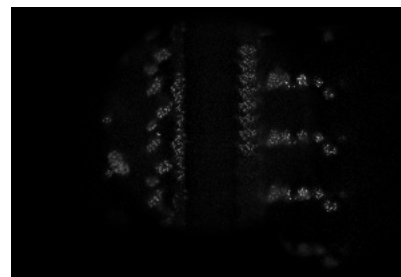
6.2.1 Primary map



X Index: 439



Y Index: 299

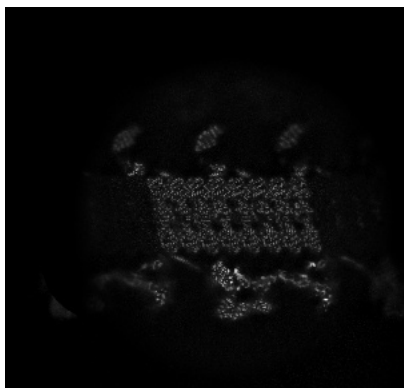


Z Index: 287

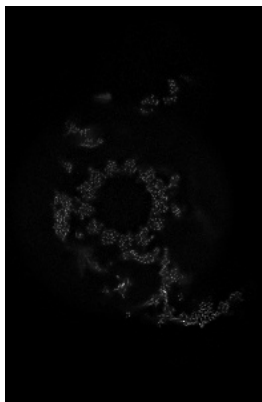
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

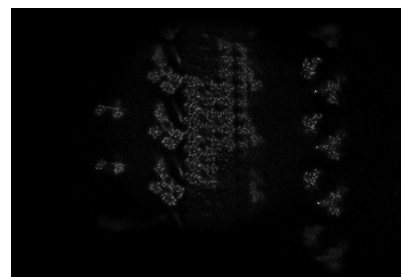
6.3.1 Primary map



X Index: 373



Y Index: 362



Z Index: 325

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

6.4 Orthogonal surface views [i](#)

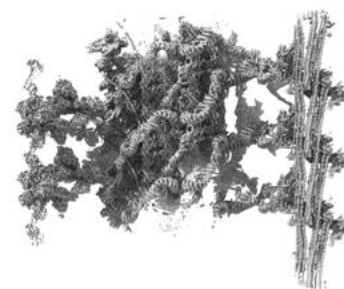
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

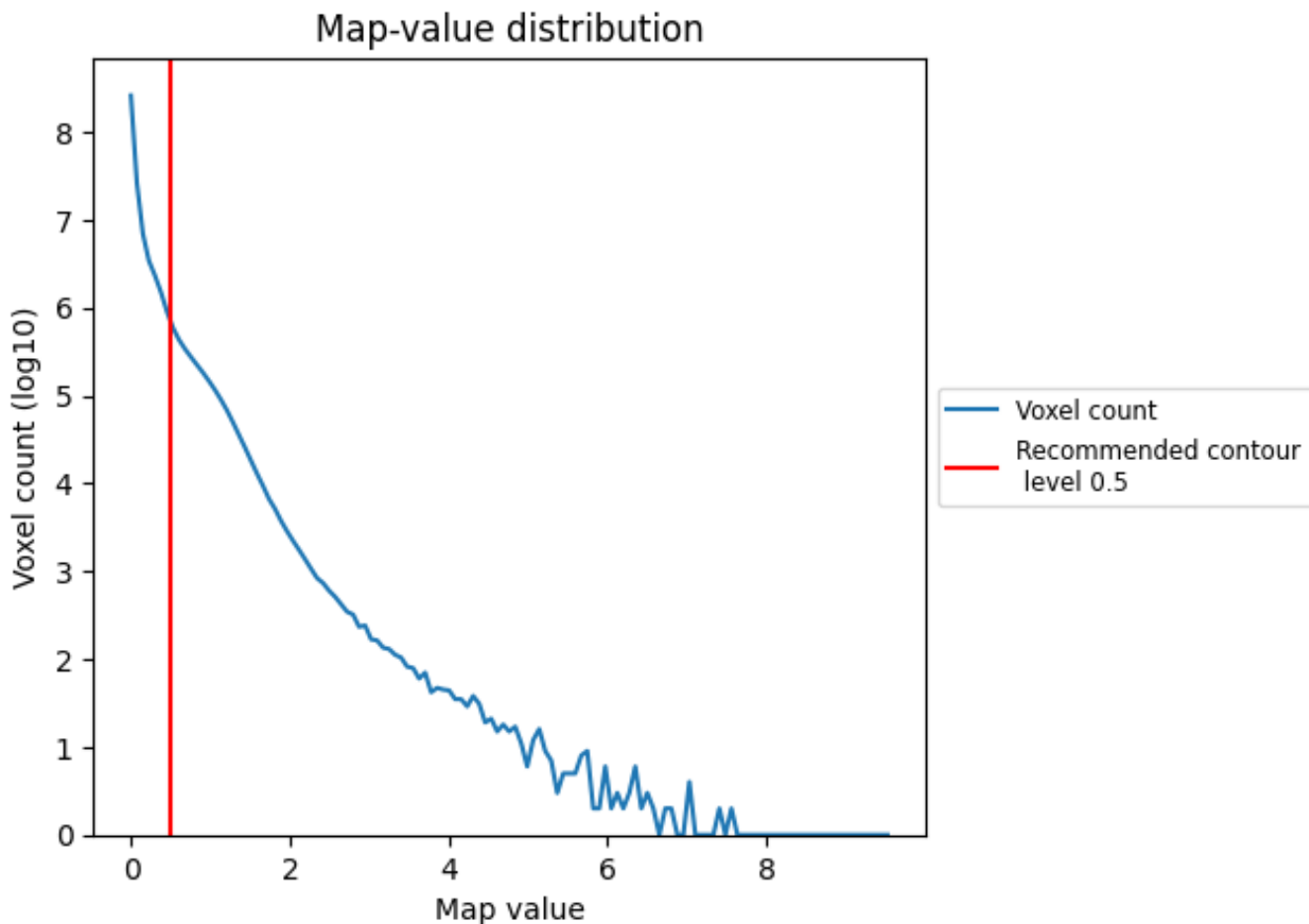
6.5 Mask visualisation

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

7 Map analysis [i](#)

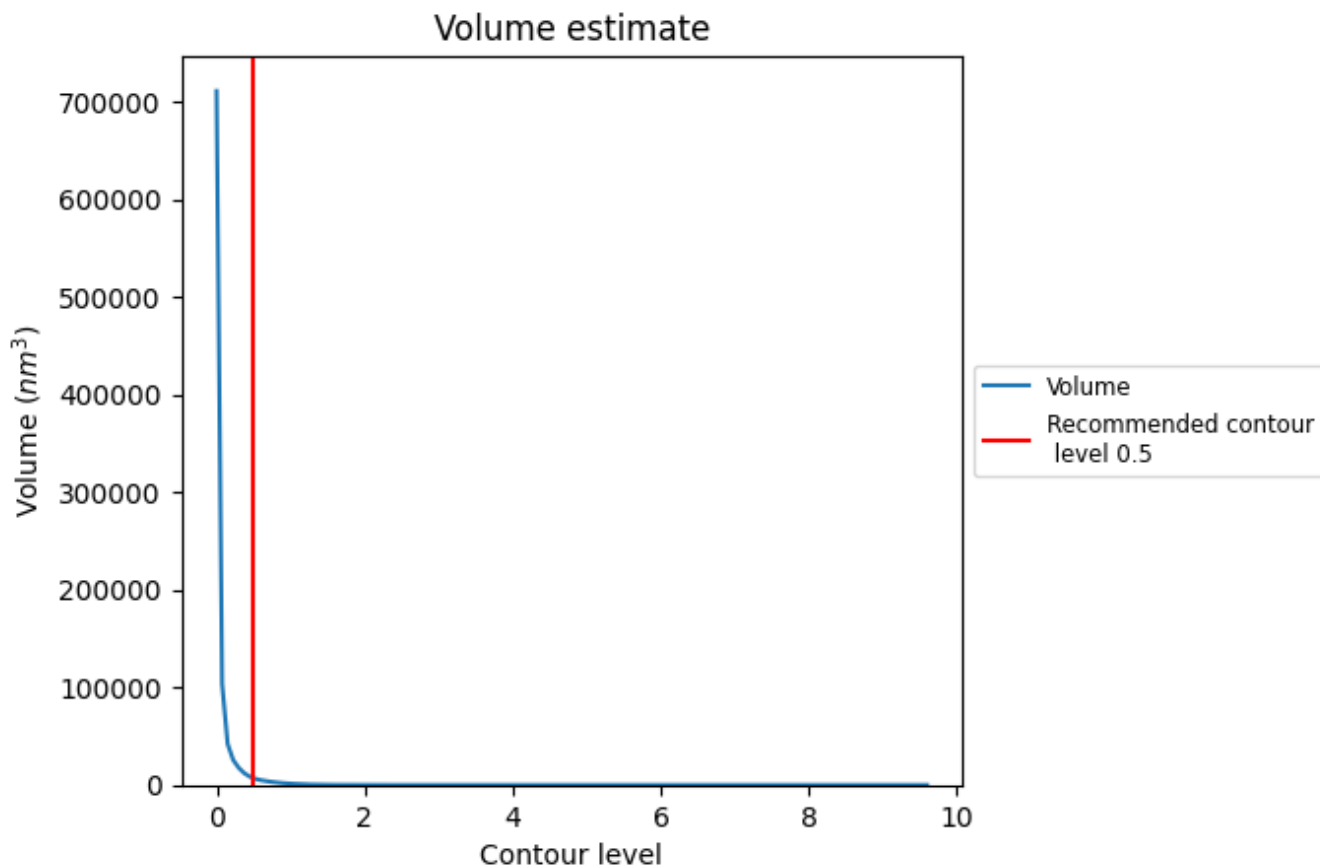
This section contains the results of statistical analysis of the map.

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 7012 nm³; this corresponds to an approximate mass of 6334 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

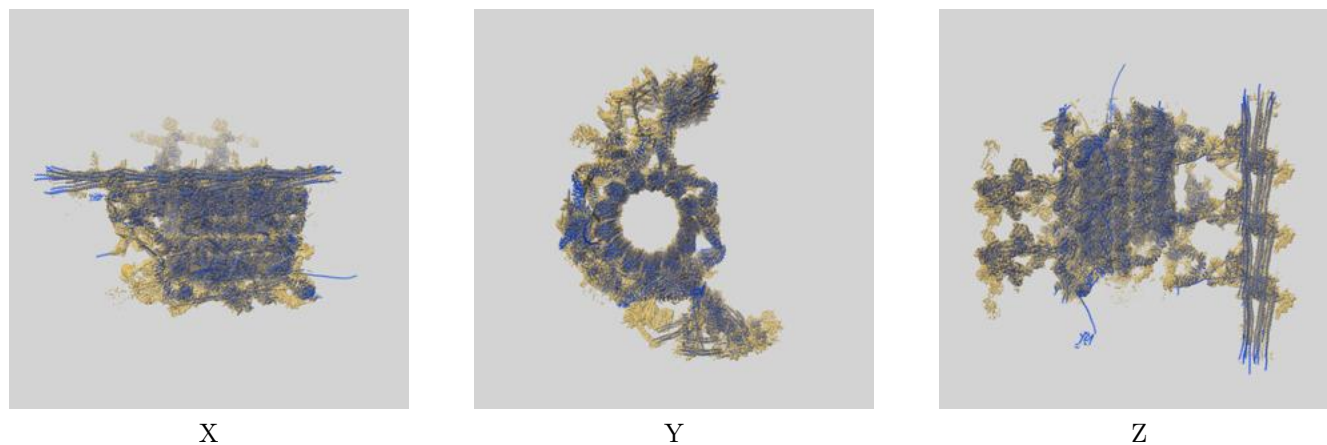
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

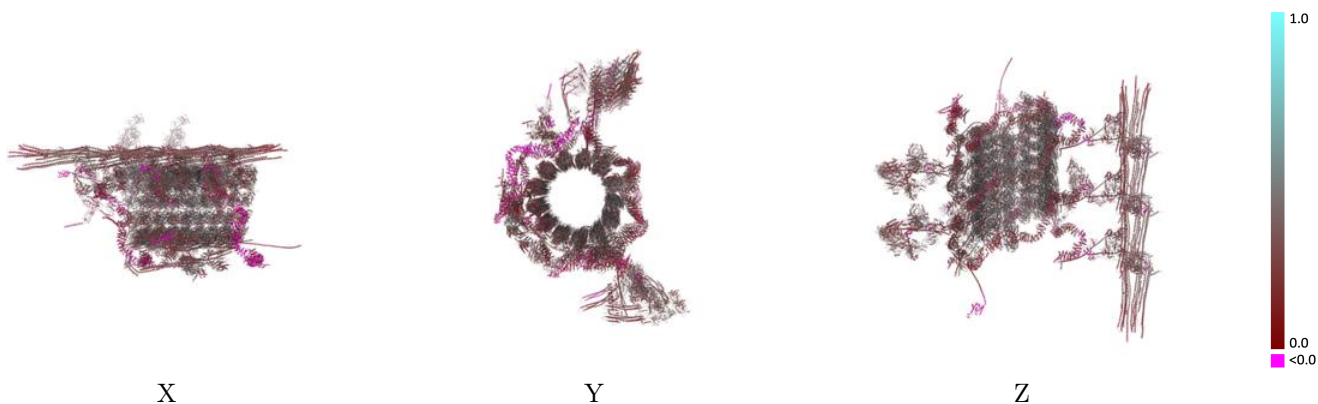
This section contains information regarding the fit between EMDB map EMD-24207 and PDB model 7N6G. Per-residue inclusion information can be found in section 3 on page 38.

9.1 Map-model overlay [i](#)



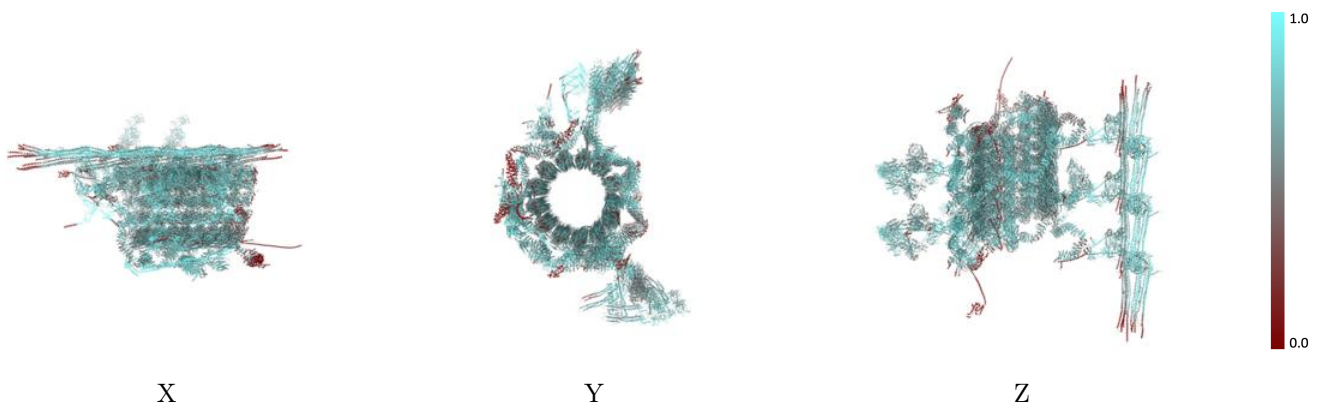
The images above show the 3D surface view of the map at the recommended contour level 0.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



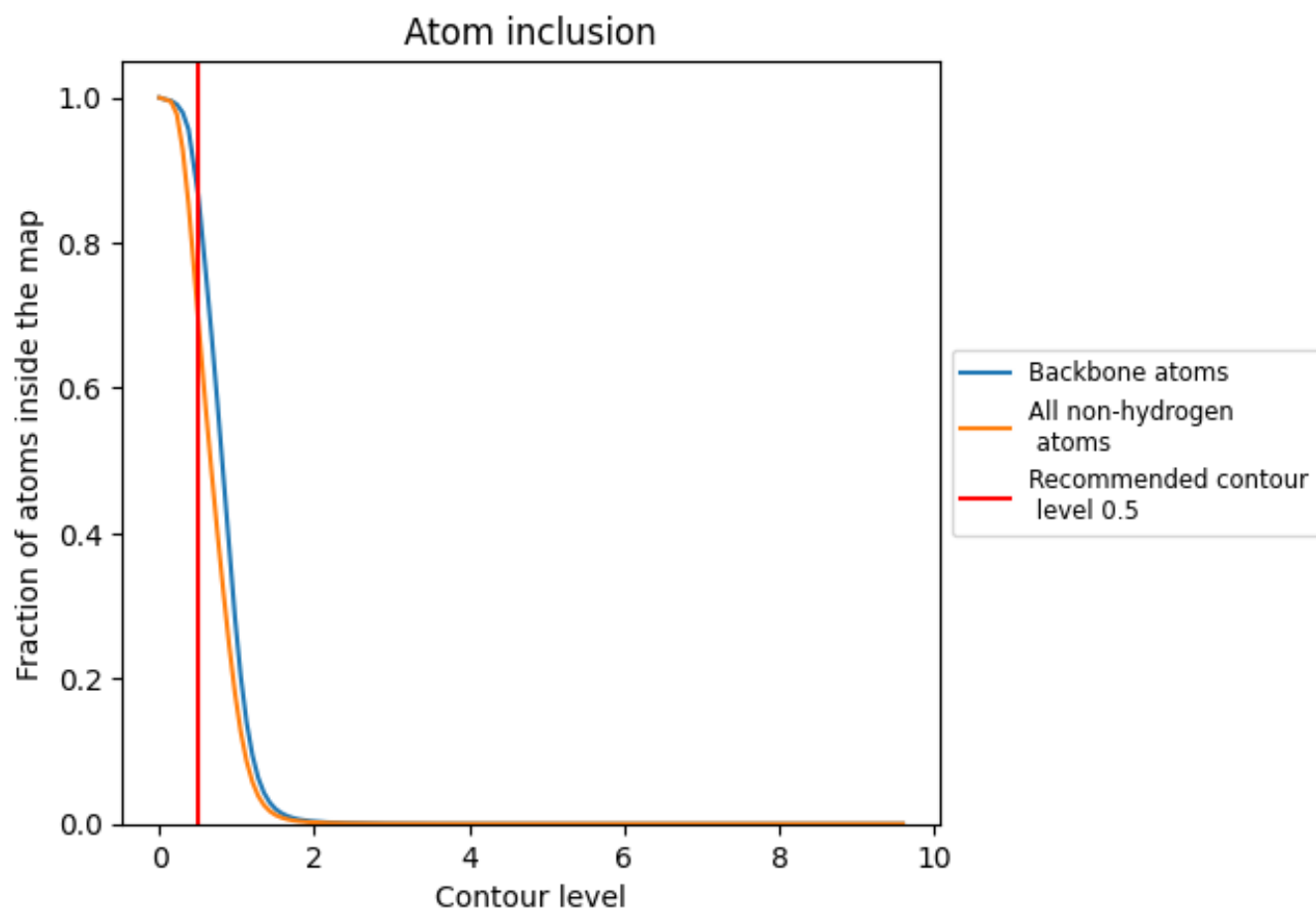
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.5).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 87% of all backbone atoms, 70% 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 (0.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6963	 0.3180
0A	 0.7504	 0.2650
0B	 0.4550	 0.2100
0C	 0.6701	 0.2090
0D	 0.5904	 0.2200
0E	 0.6449	 0.2060
0F	 0.7682	 0.1910
0G	 0.6015	 0.1330
0H	 0.7427	 0.1760
0I	 0.6345	 0.1160
0J	 0.6824	 0.1290
0K	 0.7384	 0.1500
0L	 0.8379	 0.2400
0M	 0.7780	 0.2260
0N	 0.8273	 0.2890
0O	 0.8104	 0.2820
0P	 0.3488	 0.0250
0Q	 0.4877	 0.0040
0R	 0.7988	 0.2820
0S	 0.7648	 0.2540
0T	 0.7846	 0.2600
0U	 0.8388	 0.2950
0V	 0.7748	 0.2540
0W	 0.7461	 0.2130
0X	 0.7527	 0.2590
0Y	 0.5600	 0.2060
0Z	 0.5207	 0.1890
1A	 0.7212	 0.2450
1B	 0.1147	 0.0410
1C	 0.2579	 0.0910
1D	 0.8495	 0.2490
1E	 0.4591	 0.1400
1F	 0.8270	 0.2670
1G	 0.5339	 0.1640
1H	 0.7506	 0.2730























































































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Chain	Atom inclusion	Q-score
1I	0.5267	0.2020
1J	0.7932	0.3180
1K	0.8361	0.3780
1L	0.6765	0.3020
1M	0.7230	0.2800
1N	0.7709	0.2690
1O	0.8369	0.3480
1P	0.7477	0.2890
1Q	0.8610	0.3240
1R	0.7807	0.3770
1S	0.7220	0.3510
1T	0.9538	0.2390
1a	0.5812	0.3640
1b	0.6927	0.3740
1c	0.7180	0.4100
1d	0.7272	0.4010
1e	0.7368	0.3940
1f	0.7378	0.3980
1g	0.7530	0.4240
1h	0.7000	0.4050
2F	0.6803	0.3690
2G	0.5977	0.3540
2H	0.7459	0.4360
2I	0.8296	0.4640
2J	0.4780	0.3790
2K	0.5120	0.4210
2L	0.2926	0.3280
2M	0.4444	0.3760
2N	0.7192	0.4500
2O	0.7277	0.3910
2P	0.8358	0.4620
2Q	0.8727	0.4280
2R	0.8073	0.4500
2S	0.2165	0.3650
2T	0.0945	0.2800
2U	0.2200	0.3280
2V	0.2560	0.3120
2W	0.8802	0.4280
2X	0.8156	0.4210
2Y	0.8123	0.3760
2Z	0.4892	0.3490
2a	0.5659	0.3220





















































































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Chain	Atom inclusion	Q-score
2b	 0.7121	 0.3890
2c	 0.7383	 0.4000
2d	 0.7278	 0.4040
2e	 0.7037	 0.3520
2f	 0.7402	 0.4020
2g	 0.7581	 0.4150
2h	 0.6870	 0.4000
3A	 0.8111	 0.3150
3B	 0.4167	 0.2640
3C	 0.7294	 0.3540
3E	 0.5679	 0.3030
3F	 0.4462	 0.2260
3G	 0.7003	 0.2620
3H	 0.7531	 0.3050
3I	 0.6457	 0.2630
3J	 0.7748	 0.3570
3K	 0.5321	 0.2870
3L	 0.7375	 0.2520
3M	 0.3959	 0.2500
3N	 0.5049	 0.2670
3O	 0.4693	 0.2650
3P	 0.4886	 0.2650
3Q	 0.6330	 0.2930
3R	 0.6272	 0.2790
3S	 0.5106	 0.2690
3T	 0.3672	 0.2580
3U	 0.6342	 0.2820
3V	 0.6331	 0.2710
3W	 0.7745	 0.3370
3X	 0.7784	 0.3250
3Y	 0.7831	 0.3240
3Z	 0.6597	 0.2850
3a	 0.5671	 0.3380
3b	 0.6937	 0.3860
3c	 0.7583	 0.4050
3d	 0.7054	 0.3890
3e	 0.7139	 0.3830
3f	 0.7160	 0.3950
3g	 0.7560	 0.4240
3h	 0.6468	 0.3860
4A	 0.7605	 0.3150
4B	 0.6351	 0.2930





















































































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Chain	Atom inclusion	Q-score
4C	 0.7522	 0.3040
4D	 0.7410	 0.2810
4E	 0.7296	 0.2730
4F	 0.7546	 0.3670
4G	 0.7590	 0.3660
4H	 0.7571	 0.3710
4I	 0.4339	 0.0160
4J	 0.6901	 0.2770
4K	 0.6715	 0.2600
4L	 0.3636	 -0.0330
4M	 0.3554	 -0.0260
4N	 0.3595	 -0.0290
4O	 0.7108	 0.2630
4P	 0.6930	 0.2780
4Q	 0.8394	 0.3110
4R	 0.5311	 0.1910
4S	 0.6981	 0.2050
4T	 0.7238	 0.3110
4U	 0.7229	 0.2980
4V	 0.7172	 0.3050
4W	 0.8509	 0.3030
4X	 0.9966	 0.3010
4Y	 0.9899	 0.2330
4Z	 0.9950	 0.2190
4a	 0.6044	 0.3270
4b	 0.7133	 0.3790
4c	 0.7461	 0.4040
4d	 0.7233	 0.3970
4e	 0.7259	 0.3990
4f	 0.7335	 0.3820
4g	 0.7518	 0.4110
4h	 0.6353	 0.3530
5A	 0.8632	 0.1960
5B	 1.0000	 0.2960
5C	 0.9865	 0.1560
5D	 0.9949	 0.1740
5E	 0.8181	 0.3270
5F	 0.7171	 0.2200
5G	 0.7334	 0.2050
5H	 0.7772	 0.2400
5I	 0.8206	 0.3050
5J	 0.7324	 0.2860





















































































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Chain	Atom inclusion	Q-score
5K	 0.7842	 0.2660
5L	 0.3863	 -0.0190
5M	 0.8913	 0.2500
5N	 0.6781	 0.1350
5O	 0.5379	 0.1390
5P	 0.7088	 0.2840
5Q	 0.8307	 0.2110
5R	 0.8456	 0.2190
5S	 0.7595	 0.3020
5T	 0.7409	 0.2960
5U	 0.7427	 0.2920
5V	 0.7658	 0.2950
5W	 0.9606	 0.2070
5X	 0.7898	 0.3030
5Y	 0.9942	 0.2860
5Z	 0.9179	 0.3220
5a	 0.5223	 0.2690
5b	 0.6955	 0.3700
5c	 0.7248	 0.3810
5d	 0.7115	 0.3840
5e	 0.7055	 0.3660
5f	 0.7293	 0.3770
5g	 0.7285	 0.3600
5h	 0.6290	 0.3390
6A	 0.5907	 0.1920
6B	 0.7191	 0.2660
6D	 0.8091	 0.3340
6E	 0.7322	 0.3210
6F	 0.7261	 0.3150
6G	 0.5105	 0.2830
6H	 0.5145	 0.2820
6I	 0.5358	 0.3380
6J	 0.5366	 0.3450
6K	 0.5899	 0.3200
6L	 0.5877	 0.3230
6M	 0.6978	 0.3180
6N	 0.6944	 0.3250
6O	 0.6126	 0.1910
6P	 0.6554	 0.1850
6Q	 0.7770	 0.2210
6a	 0.5325	 0.2520
6b	 0.6937	 0.3470









































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Chain	Atom inclusion	Q-score
6c	 0.7047	 0.3350
6d	 0.7172	 0.3820
6e	 0.7357	 0.3800
6f	 0.7352	 0.3740
6g	 0.7710	 0.3940
6h	 0.6550	 0.3590
7a	 0.5520	 0.2620
7b	 0.6888	 0.3570
7c	 0.6932	 0.3500
7d	 0.6894	 0.3600
7e	 0.7098	 0.3520
7f	 0.7498	 0.3800
7g	 0.7697	 0.4040
7h	 0.6849	 0.3800
8a	 0.4877	 0.2030
8b	 0.6949	 0.3660
8c	 0.7036	 0.3770
8d	 0.6834	 0.3650
8e	 0.6910	 0.3670
8f	 0.7245	 0.3570
8g	 0.7404	 0.3760
8h	 0.6411	 0.3520
9a	 0.5966	 0.3180
9b	 0.7239	 0.3890
9c	 0.7386	 0.3950
9d	 0.7120	 0.3780
9e	 0.7113	 0.3630
9f	 0.7429	 0.3920
9g	 0.7336	 0.3810
9h	 0.6701	 0.3700
Aa	 0.6200	 0.3240
Ab	 0.7202	 0.3880
Ac	 0.7563	 0.4150
Ad	 0.7175	 0.3880
Ae	 0.7497	 0.4060
Af	 0.7556	 0.4000
Ag	 0.7560	 0.4130
Ah	 0.6716	 0.3740
Ba	 0.6748	 0.4000
Bb	 0.7550	 0.4110
Bc	 0.7455	 0.3610
Bd	 0.7535	 0.4020

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Chain	Atom inclusion	Q-score
Be	 0.7620	 0.4010
Bf	 0.7698	 0.4060
Bg	 0.7533	 0.3840
Bh	 0.7006	 0.3960
Ca	 0.6865	 0.4150
Cb	 0.7434	 0.4180
Cc	 0.7710	 0.4190
Cd	 0.7559	 0.4180
Ce	 0.7650	 0.4000
Cf	 0.7656	 0.4210
Cg	 0.7587	 0.4260
Ch	 0.6858	 0.4070
Da	 0.7307	 0.4170
Db	 0.7828	 0.4210
Dc	 0.8146	 0.4470
Dd	 0.7792	 0.4220
De	 0.7816	 0.4110
Df	 0.7749	 0.4200
Dg	 0.7877	 0.4240
Dh	 0.6837	 0.3920