



Full wwPDB EM Validation Report ⓘ

Nov 15, 2023 – 02:57 pm GMT

PDB ID : 8OTZ
EMDB ID : EMD-17187
Title : 48-nm repeat of the native axonemal doublet microtubule from bovine sperm
Authors : Leung, M.R.; Zeng, J.; Zhang, R.; Zeev-Ben-Mordehai, T.
Deposited on : 2023-04-21
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.dev70
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36





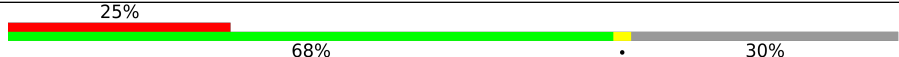
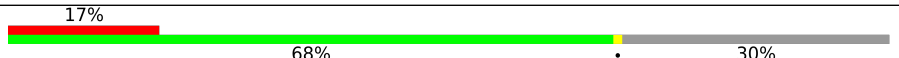
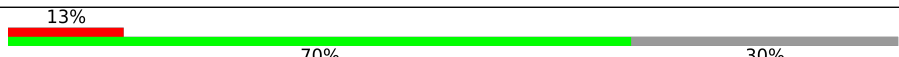
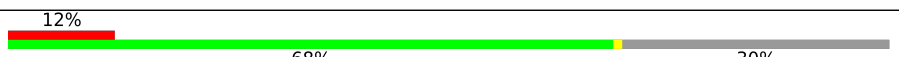
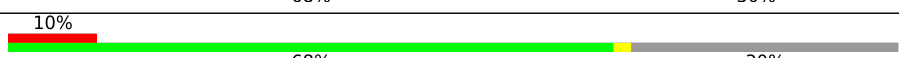


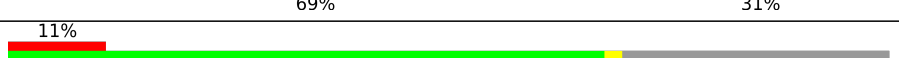
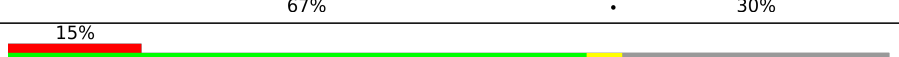
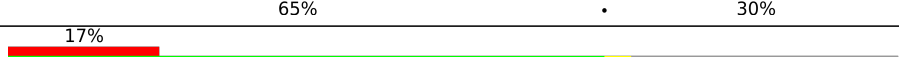
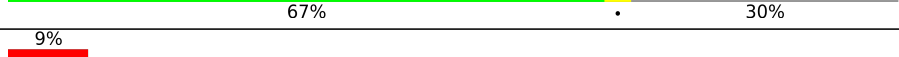
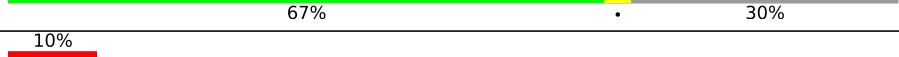

1 Overall quality at a glance

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

The reported resolution of this entry is 3.60 Å.

There are no overall percentile quality scores available for this entry.

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	0	232	 17% 83%
1	V	232	 5% 77% 21%
2	0A	224	 11% 69% 30%
2	0C	224	 17% 66% 30%
2	0E	224	 25% 68% 30%
2	0G	224	 17% 68% 30%
2	0W	224	 13% 70% 30%
2	0Y	224	 12% 68% 30%
2	0a	224	 10% 68% 30%
2	0c	224	 17% 67% 30%
2	0e	224	 5% 69% 31%
2	0g	224	 11% 67% 30%
2	0i	224	 15% 65% 30%
2	0k	224	 17% 67% 30%
2	CT	224	 9% 67% 30%
2	CU	224	 10% 67% 31%
2	CV	224	 24% 67% 30%

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Mol	Chain	Length	Quality of chain
2	CX	224	7% 68% 30%
2	CY	224	16% 68% 30%
2	CZ	224	10% 68% 30%
2	Ca	224	10% 68% 30%
2	Cb	224	8% 67% 30%
2	Cc	224	9% 69% 30%
2	Cd	224	15% 67% 30%
2	Ce	224	26% 68% 31%
2	Cf	224	21% 68% 31%
2	Cg	224	15% 69% 30%
2	Ch	224	13% 69% 30%
2	Ci	224	12% 67% 30%
2	Cj	224	17% 68% 31%
2	Ck	224	23% 68% 30%
3	1	273	61% 78% 21%
3	2	273	74% 93% 5%
3	x	273	61% 93% 5%
4	3	275	19% 65% 35%
4	y	275	21% 64% 35%
4	z	275	19% 64% 35%
5	A	176	22% 78%
5	B	176	51% 48%
5	C	176	6% 51% 48%
6	A0	274	6% 46% 53%
6	BN	274	28% 71%

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Mol	Chain	Length	Quality of chain
7	A1	254	29% 92% 6%
7	A2	254	19% 81%
7	A3	254	27% 96%
7	A4	254	12% 44% 56%
7	A5	254	17% 61% 39%
7	A6	254	19% 81%
7	A7	254	11% 87% 11%
7	A8	254	9% 63% 33%
7	A9	254	8% 44% 56%
7	Au	254	26% 72%
7	Av	254	9% 57% 42%
7	Aw	254	9% 50% 49%
7	Ay	254	9% 70% 28%
7	Az	254	16% 83%
8	AA	450	96%
8	AC	450	97%
8	AE	450	98%
8	AG	450	97%
8	AI	450	97%
8	AK	450	96%
8	AM	450	96%
8	BA	450	95% 5%
8	BC	450	96%
8	BE	450	94%
8	BG	450	5% 97%

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Mol	Chain	Length	Quality of chain
8	BI	450	94% . 5%
8	BK	450	96% ..
8	BM	450	94% ..
8	CA	450	97% .
8	CC	450	97% .
8	CE	450	96% ..
8	CG	450	96% ..
8	CI	450	96% ..
8	CK	450	97% ..
8	CM	450	97% ..
8	DA	450	83% . 16%
8	DC	450	94% . 5%
8	DE	450	94% . 5%
8	DG	450	95% ..
8	DI	450	93% . 5%
8	DK	450	94% . 5%
8	DM	450	94% . 5%
8	EC	450	95% ..
8	EE	450	97% .
8	EG	450	97% .
8	EI	450	96% ..
8	EK	450	96% ..
8	EM	450	94% . 5%
8	FC	450	95% 5%
8	FE	450	94% . 6%

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Mol	Chain	Length	Quality of chain
8	FG	450	5% 95% ..
8	FI	450	6% 93% .. 6%
8	FK	450	5% 94% .. 5%
8	FM	450	5% 94% .. 5%
8	GC	450	8% 98% .
8	GE	450	6% 95% ..
8	GG	450	7% 95% ..
8	GI	450	6% 96% ..
8	GK	450	. 95% ..
8	GM	450	7% 96% ..
8	HC	450	6% 95% .. 5%
8	HE	450	. 94% .. 5%
8	HG	450	6% 95% .
8	HI	450	7% 95% .
8	HK	450	. 95% ..
8	HM	450	6% 96% .
8	HO	450	7% 85% .. 14%
8	IC	450	. 95% ..
8	IE	450	. 94% ..
8	IG	450	. 96% ..
8	II	450	5% 95% ..
8	IK	450	. 94% ..
8	IM	450	. 97% .
8	IO	450	. 94% .. 5%
8	JC	450	6% 95% ..

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Mol	Chain	Length	Quality of chain
8	JE	450	95%
8	JG	450	95%
8	JI	450	94%
8	JK	450	97%
8	JM	450	95%
8	KC	450	96%
8	KE	450	95%
8	KG	450	95%
8	KI	450	95%
8	KK	450	94%
8	KM	450	96%
8	KO	450	91%
8	LC	450	96%
8	LE	450	98%
8	LG	450	97%
8	LI	450	99%
8	LK	450	97%
8	LM	450	96%
8	MC	450	98%
8	ME	450	94%
8	MG	450	96%
8	MI	450	95%
8	MK	450	97%
8	MM	450	96%
8	NA	450	94%

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Mol	Chain	Length	Quality of chain
8	NC	450	13% 94% 5%
8	NE	450	9% 95% .
8	NG	450	11% 95% .
8	NI	450	12% 94% . 5%
8	NK	450	16% 93% . 5%
8	OA	450	8% 95% 5%
8	OC	450	8% 95% 5%
8	OE	450	6% 96% .
8	OG	450	8% 95% . .
8	OI	450	10% 95% . .
8	OK	450	7% 94% . .
8	PA	450	9% 94% . .
8	PC	450	10% 96% .
8	PE	450	10% 95% . .
8	PG	450	13% 96% .
8	PI	450	8% 94% . 5%
8	PK	450	7% 94% . 5%
8	PM	450	9% 94% . .
8	QA	450	18% 94% . 5%
8	QC	450	17% 94% . 5%
8	QE	450	14% 95% . .
8	QG	450	16% 95% . .
8	QI	450	9% 93% . 5%
8	QK	450	16% 94% . .
8	QM	450	13% 94% . .

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Mol	Chain	Length	Quality of chain
8	RA	450	18% 94% 5%
8	RC	450	12% 94% ..
8	RE	450	10% 94% 5%
8	RG	450	15% 95% ..
8	RI	450	11% 94% ..
8	RK	450	15% 95% ..
8	RM	450	18% 94% 5%
8	SA	450	18% 94% 5%
8	SC	450	9% 95% .
8	SE	450	. 94% ..
8	SG	450	9% 94% ..
8	SI	450	8% 94% 5%
8	SK	450	11% 95% ..
8	SM	450	10% 95% .
8	TC	450	6% 94% 5%
8	TE	450	5% 95% ..
8	TG	450	7% 95% 5%
8	TI	450	6% 94% ..
8	TK	450	7% 95% ..
8	TM	450	8% 95% ..
8	UC	450	12% 95% ..
8	UE	450	11% 95% ..
8	UG	450	10% 95% ..
8	UI	450	12% 95% ..
8	UK	450	9% 95% ..

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Mol	Chain	Length	Quality of chain
8	UM	450	10% 95% 5%
8	VC	450	9% 96%
8	VE	450	10% 95%
8	VG	450	10% 97%
8	VI	450	11% 95% 5%
8	VK	450	9% 96%
8	VM	450	10% 95%
8	WC	450	13% 96%
8	WE	450	8% 94%
8	WG	450	10% 96%
8	WI	450	7% 94% 5%
8	WK	450	7% 96%
8	WM	450	7% 95%
9	AB	445	97%
9	AD	445	97%
9	AF	445	97%
9	AH	445	97%
9	AJ	445	97%
9	AL	445	96%
9	BB	445	94%
9	BD	445	95%
9	BF	445	5% 96%
9	BH	445	95%
9	BJ	445	96%
9	BL	445	94%

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Mol	Chain	Length	Quality of chain
9	CB	445	10% 95%
9	CD	445	9% 94%
9	CF	445	8% 95%
9	CH	445	10% 95%
9	CJ	445	6% 95%
9	CL	445	8% 95%
9	DB	445	18% 94%
9	DD	445	12% 94%
9	DF	445	7% 95%
9	DH	445	10% 95%
9	DJ	445	6% 94%
9	DL	445	8% 95%
9	DN	445	16% 86% 13%
9	EB	445	21% 95%
9	ED	445	12% 95%
9	EF	445	7% 95%
9	EH	445	11% 95%
9	EJ	445	9% 94%
9	EL	445	9% 94%
9	EN	445	15% 95%
9	FB	445	14% 94%
9	FD	445	7% 94%
9	FF	445	96%
9	FH	445	95%
9	FJ	445	94%

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Mol	Chain	Length	Quality of chain
9	FL	445	6% 95%
9	FN	445	9% 95%
9	GB	445	12% 96%
9	GD	445	8% 95%
9	GF	445	6% 95%
9	GH	445	6% 95%
9	GJ	445	5% 95%
9	GL	445	6% 95%
9	GN	445	9% 95%
9	HB	445	16% 95%
9	HD	445	. 95%
9	HF	445	5% 95%
9	HH	445	7% 96%
9	HJ	445	. 94%
9	HL	445	5% 95%
9	HN	445	7% 96%
9	IB	445	11% 81% 17%
9	ID	445	. 95%
9	IF	445	. 95%
9	IH	445	. 96%
9	IJ	445	. 95%
9	IL	445	6% 95%
9	IN	445	. 94%
9	JB	445	. 95%
9	JD	445	. 95%

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Mol	Chain	Length	Quality of chain
9	JF	445	96%
9	JH	445	95%
9	JJ	445	95%
9	JL	445	95%
9	JN	445	95%
9	KB	445	90%
9	KD	445	96%
9	KF	445	95%
9	KH	445	96%
9	KJ	445	95%
9	KL	445	96%
9	KN	445	96%
9	LB	445	98%
9	LD	445	95%
9	LF	445	98%
9	LH	445	96%
9	LJ	445	98%
9	LL	445	96%
9	LN	445	98%
9	MB	445	95%
9	MD	445	96%
9	MF	445	96%
9	MH	445	96%
9	MJ	445	95%
9	ML	445	95%

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Mol	Chain	Length	Quality of chain
9	MN	445	96%
9	NO	445	95%
9	NB	445	94%
9	ND	445	95%
9	NF	445	94%
9	NH	445	95%
9	NJ	445	95%
9	NL	445	95%
9	OO	445	87%
9	OB	445	96%
9	OD	445	95%
9	OF	445	95%
9	OH	445	95%
9	OJ	445	94%
9	OL	445	94%
9	PB	445	94%
9	PD	445	96%
9	PF	445	95%
9	PH	445	96%
9	PJ	445	95%
9	PL	445	94%
9	QB	445	95%
9	QD	445	95%
9	QF	445	95%
9	QH	445	95%

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Mol	Chain	Length	Quality of chain
9	QJ	445	11% 95%
9	QL	445	11% 95%
9	RB	445	10% 95%
9	RD	445	12% 94%
9	RF	445	13% 94%
9	RH	445	13% 95%
9	RJ	445	10% 94%
9	RL	445	12% 93%
9	SB	445	9% 95%
9	SD	445	9% 94%
9	SF	445	7% 95%
9	SH	445	6% 95%
9	SJ	445	7% 94%
9	SL	445	9% 95%
9	TB	445	11% 93%
9	TD	445	7% 95%
9	TF	445	5% 95%
9	TH	445	5% 95%
9	TJ	445	0% 96%
9	TL	445	6% 94%
9	UB	445	13% 93%
9	UD	445	12% 94%
9	UF	445	9% 95%
9	UH	445	11% 95%
9	UJ	445	8% 95%

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Mol	Chain	Length	Quality of chain
9	UL	445	12% 95%
9	UN	445	15% 95%
9	VB	445	12% 95%
9	VD	445	10% 95%
9	VF	445	6% 95%
9	VH	445	9% 95%
9	VJ	445	10% 94%
9	VL	445	9% 94%
9	VN	445	11% 95%
9	WB	445	13% 95%
9	WD	445	6% 95%
9	WF	445	6% 95%
9	WH	445	7% 94%
9	WJ	445	6% 95%
9	WL	445	7% 95%
9	WN	445	8% 95%
10	AP	196	60% 40%
10	AQ	196	59% 40%
10	AR	196	48% 52%
10	AS	196	60% 40%
11	AT	514	57% 42%
11	AU	514	42% 58%
12	AV	377	97%
12	AW	377	5% 98%
13	Aa	733	6% 79% 20%

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Mol	Chain	Length	Quality of chain	
13	Ab	733	5%	80% 18%
13	Ac	733		81% 18%
13	Ad	733	5%	69% 30%
14	Al	320	13%	87%
14	Am	320	13%	87%
14	An	320	13%	87%
14	Ao	320	21%	79%
14	B7	320	27%	73%
14	BY	320	32%	67%
14	BZ	320	32%	67%
14	Ba	320	60%	40%
14	Bb	320	5%	59% 40%
14	Bc	320	5%	59% 41%
14	Bd	320	33%	67%
14	Be	320	33%	67%
14	CN	320	26%	74%
14	CO	320	27%	73%
15	Ap	201	64%	35%
15	Aq	201	44%	56%
15	Ar	201	74%	24%
16	At	303	8%	33% 67%
16	Ax	303	13%	39% 61%
17	B0	304	14%	85%
17	B1	304	12%	88%
17	B2	304	13%	87%

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Mol	Chain	Length	Quality of chain
17	B3	304	9% 91%
17	B4	304	13% 87%
17	B8	304	13% 87%
17	B9	304	12% 88%
17	CQ	304	15% 85%
17	CR	304	13% 87%
17	CS	304	12% 88%
18	B5	259	12% 93% 6%
18	B6	259	14% 96%
18	By	259	7% 61% 38%
18	Bz	259	12% 93% 6%
19	BO	500	45% 55%
19	BP	500	8% 83% 16%
19	BQ	500	5% 73% 27%
19	BR	500	6% 85% 15%
20	BS	428	35% 65%
20	BT	428	5% 56% 44%
21	BU	377	9% 90%
21	BV	377	98%
21	Bi	377	11% 89%
21	Bj	377	64% 34%
21	Bk	377	46% 54%
22	BW	196	5% 95%
22	BX	196	25% 74%
23	Bf	136	45% 54%



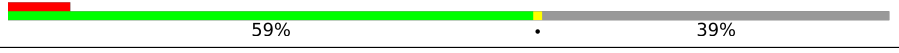




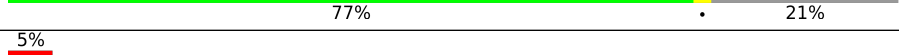
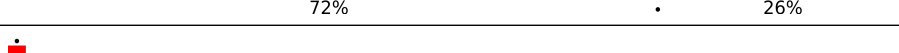

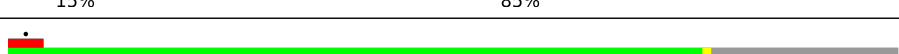


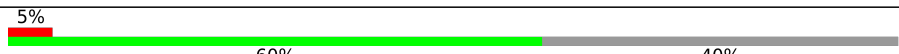





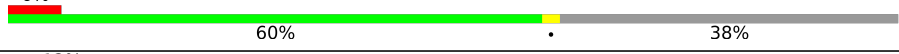





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Mol	Chain	Length	Quality of chain	
23	Bg	136	84%	15%
24	Bh	120	80%	20%
25	Bl	477	27%	73%
25	Bm	477	27%	73%
25	Bn	477	29%	71%
25	Bo	477	30%	70%
25	Bp	477	34%	66%
26	Bq	338	29%	70%
26	Bu	338	7% 43%	57%
27	Br	495	33%	67%
27	Bs	495	71%	28%
28	C0	490	21%	79%
28	C2	490	83%	17%
28	C3	490	83%	17%
28	C4	490	69%	30%
28	C5	490	45%	54%
28	C6	490	8%	92%
28	C7	490	87%	13%
28	C8	490	86%	13%
28	C9	490	77%	22%
28	DO	490	26%	74%
28	F2	490	84%	15%
28	F3	490	84%	15%
28	F4	490	78%	21%
28	F5	490	22%	78%




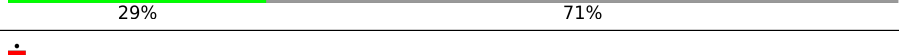
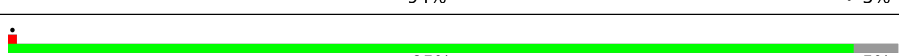

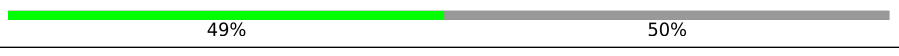
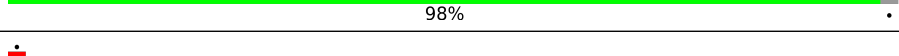
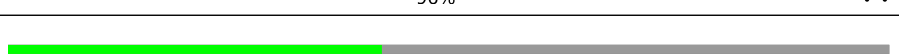


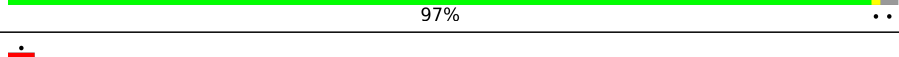
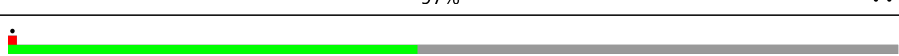










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Mol	Chain	Length	Quality of chain
28	F6	490	
29	C1	489	
29	Cz	489	
29	D0	489	
29	D1	489	
29	D2	489	
29	D3	489	
29	D4	489	
29	D5	489	
29	D6	489	
29	D7	489	
29	D8	489	
29	D9	489	
29	DP	489	
29	DQ	489	
29	DR	489	
29	DS	489	
29	DT	489	
29	DU	489	
29	DV	489	
29	DW	489	
29	DX	489	
29	EA	489	
29	EO	489	
29	EP	489	

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Mol	Chain	Length	Quality of chain
29	EQ	489	 35% 64%
29	ER	489	 9% 91%
30	CW	484	 34% 66%
31	Cl	440	 29% 71%
32	Cm	418	 94% 5%
32	Cn	418	 95% 5%
32	Co	418	 81% 17%
32	Cp	418	 49% 50%
33	Cq	430	 98%
33	Cr	430	 96%
33	Cs	430	 42% 57%
33	Ct	430	 89% 10%
33	Cu	430	 87% 13%
33	Cv	430	 97%
33	Cw	430	 97%
33	Cx	430	 46% 54%
33	Cy	430	 10% 90%
34	D	138	 45% 55%
35	DY	216	 17% 82%
35	DZ	216	 23% 76%
35	Da	216	 8% 62% 38%
35	Ee	216	 21% 79%
36	Db	192	 27% 73%
36	Dc	192	26% 73%
36	Dd	192	24% 76%



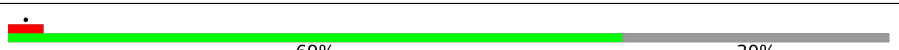
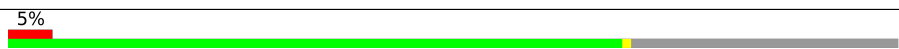
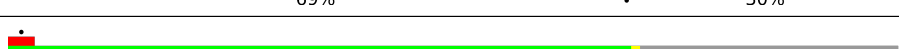
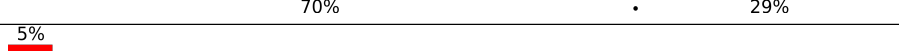








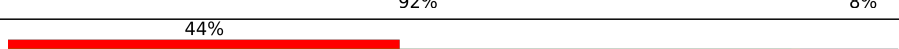
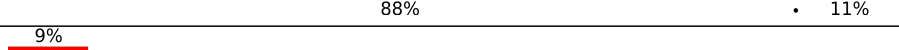


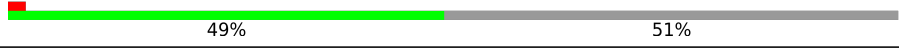





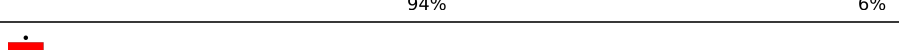
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Mol	Chain	Length	Quality of chain
37	De	272	5% 24% 76%
38	Df	180	11% 73% 26%
38	Dg	180	17% 68% 32%
38	Dh	180	13% 59% 39%
39	Di	133	7% 59% 41%
39	Dj	133	5% 74% 26%
39	Dk	133	7% 74% 26%
39	Dl	133	8% 74% 26%
40	Dm	131	• 66% 34%
41	Dn	450	5% 12% 88%
42	E	877	• 16% 83%
42	F	877	• 51% 48%
43	E1	208	5% 94% 5%
43	E2	208	6% 94% 5%
43	E3	208	9% 94% 5%
43	E4	208	5% 69% 30%
44	ES	447	• 95% 5%
44	ET	447	62% 38%
44	EU	447	73% 26%
44	EV	447	• 94% 5%
44	EW	447	• 70% 29%
44	EX	447	• 96% ..
44	EY	447	• 69% 30%
44	EZ	447	• 98% ..
45	G	584	5% 47% 52%

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Mol	Chain	Length	Quality of chain
46	H	547	
46	o	547	
47	I	640	
47	X	640	
47	Y	640	
48	J	235	
48	K	235	
48	L	235	
48	M	235	
49	K1	135	
50	L1	147	
50	L2	147	
51	N	154	
51	O	154	
52	P	137	
53	Q	169	
54	R	284	
54	S	284	
54	T	284	
54	U	284	
55	W	309	
56	XG	193	
56	XH	193	
56	XI	193	
56	XJ	193	

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Mol	Chain	Length	Quality of chain
56	XK	193	5% 93% 6%
56	XL	193	5% 94% 6%
56	XM	193	8% 92% 7%
57	YG	257	50% 82% 18%
57	YH	257	6% 85% 15%
57	YI	257	5% 85% 15%
57	YJ	257	5% 84% 15%
57	YK	257	8% 85% 15%
57	YL	257	8% 82% 15%
58	Z	164	48% 71% 29%
58	p	164	24% 33% 67%
58	q	164	47% 59% 41%
59	a	549	6% 33% 66%
59	b	549	14% 58% 40%
59	c	549	12% 53% 46%
59	d	549	8% 36% 63%
60	e	623	5% 97% ..
60	f	623	5% 98% .
60	g	623	5% 97% .
61	h	101	. 89% 10%
62	i	321	. 79% 21%
62	j	321	. 83% 17%
63	k	196	15% 80% 20%
63	l	196	23% 70% 30%
63	m	196	12% 81% 19%

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Mol	Chain	Length	Quality of chain
63	n	196	
64	ke	197	
65	r	170	
65	s	170	
65	t	170	
66	u	438	
66	v	438	
66	w	438	

2 Entry composition [i](#)

There are 69 unique types of molecules in this entry. The entry contains 1456841 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 Cilia- and flagella-associated protein 95.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	40	330	205	63	61	1	0	0
1	V	183	1487	932	258	288	9	0	0

- Molecule 2 is a protein called Sperm acrosome associated 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	0A	156	1252	782	224	236	10	0	0
2	0C	156	1252	782	224	236	10	0	0
2	0E	157	1260	787	225	237	11	0	0
2	0G	156	1252	782	224	236	10	0	0
2	0W	156	1252	782	224	236	10	0	0
2	0Y	156	1252	782	224	236	10	0	0
2	0a	156	1252	782	224	236	10	0	0
2	0c	156	1252	782	224	236	10	0	0
2	0e	155	1244	777	223	235	9	0	0
2	0g	156	1252	782	224	236	10	0	0
2	0i	156	1252	782	224	236	10	0	0
2	0k	156	1252	782	224	236	10	0	0
2	CT	157	1260	787	225	237	11	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	CU	155	Total	C	N	O	S	0	0
			1244	777	223	235	9		
2	CV	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	CX	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	CY	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	CZ	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Ca	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Cb	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Cc	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Cd	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Ce	155	Total	C	N	O	S	0	0
			1244	777	223	235	9		
2	Cf	155	Total	C	N	O	S	0	0
			1244	777	223	235	9		
2	Cg	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Ch	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Ci	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		
2	Cj	155	Total	C	N	O	S	0	0
			1244	777	223	235	9		
2	Ck	156	Total	C	N	O	S	0	0
			1252	782	224	236	10		

- Molecule 3 is a protein called Testis specific serine kinase 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	1	216	Total	C	N	O	S	0	0
			1700	1076	317	301	6		
3	2	258	Total	C	N	O	S	0	0
			2027	1292	370	357	8		
3	x	258	Total	C	N	O	S	0	0
			2027	1292	370	357	8		

- Molecule 4 is a protein called EF-hand domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	3	178	Total	C	N	O	S	0	0
			1469	941	252	265	11		
4	y	178	Total	C	N	O	S	0	0
			1469	941	252	265	11		
4	z	178	Total	C	N	O	S	0	0
			1469	941	252	265	11		

- Molecule 5 is a protein called ATP6V1F neighbor.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	A	39	Total	C	N	O	S	0	0
			338	216	64	56	2		
5	B	91	Total	C	N	O	S	0	0
			751	486	129	132	4		
5	C	91	Total	C	N	O	S	0	0
			751	486	129	132	4		

- Molecule 6 is a protein called Outer dense fiber of sperm tails 3 like 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	A0	130	Total	C	N	O	S	0	0
			1017	656	177	175	9		
6	BN	79	Total	C	N	O	S	0	0
			614	386	121	103	4		

- Molecule 7 is a protein called Outer dense fiber of sperm tails 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A1	239	Total	C	N	O	S	0	0
			1828	1173	321	324	10		
7	A2	49	Total	C	N	O	S	0	0
			385	252	72	60	1		
7	A3	244	Total	C	N	O		0	0
			1200	712	244	244			
7	A4	111	Total	C	N	O		0	0
			546	324	111	111			
7	A5	155	Total	C	N	O		0	0
			762	452	155	155			
7	A6	49	Total	C	N	O	S	0	0
			369	235	63	67	4		
7	A7	226	Total	C	N	O	S	0	0
			1726	1110	305	303	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
7	A8	169	Total	C	N	O	S	0	0
			1281	815	222	237	7		
7	A9	112	Total	C	N	O	S	0	0
			879	573	156	147	3		
7	Au	71	Total	C	N	O	S	0	0
			540	344	93	99	4		
7	Av	148	Total	C	N	O	S	0	0
			1126	717	195	207	7		
7	Aw	129	Total	C	N	O	S	0	0
			1009	652	182	172	3		
7	Ay	183	Total	C	N	O	S	0	0
			1412	909	250	248	5		
7	Az	42	Total	C	N	O	S	0	0
			313	201	53	56	3		

- Molecule 8 is a protein called Tubulin alpha-3 chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AA	438	Total	C	N	O	S	0	0
			3413	2161	581	650	21		
8	AC	440	Total	C	N	O	S	0	0
			3428	2171	583	652	22		
8	AE	440	Total	C	N	O	S	0	0
			3428	2171	583	652	22		
8	AG	440	Total	C	N	O	S	0	0
			3428	2171	583	652	22		
8	AI	440	Total	C	N	O	S	0	0
			3428	2171	583	652	22		
8	AK	440	Total	C	N	O	S	0	0
			3428	2171	583	652	22		
8	AM	439	Total	C	N	O	S	0	0
			3421	2166	582	651	22		
8	BA	429	Total	C	N	O	S	0	0
			3355	2128	571	635	21		
8	BC	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	BE	430	Total	C	N	O	S	0	0
			3363	2133	572	636	22		
8	BG	439	Total	C	N	O	S	0	0
			3421	2166	582	651	22		
8	BI	429	Total	C	N	O	S	0	0
			3357	2130	571	634	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	BK	437	Total	C	N	O	S	0	0
			3407	2159	580	646	22		
8	BM	430	Total	C	N	O	S	0	0
			3363	2133	572	636	22		
8	CA	437	Total	C	N	O	S	0	0
			3407	2158	580	648	21		
8	CC	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	CE	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	CG	436	Total	C	N	O	S	0	0
			3400	2154	579	645	22		
8	CI	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	CK	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	CM	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	DA	380	Total	C	N	O	S	0	0
			2965	1881	509	556	19		
8	DC	428	Total	C	N	O	S	0	0
			3349	2126	570	631	22		
8	DE	428	Total	C	N	O	S	0	0
			3349	2126	570	631	22		
8	DG	431	Total	C	N	O	S	0	0
			3370	2138	573	637	22		
8	DI	428	Total	C	N	O	S	0	0
			3348	2124	570	632	22		
8	DK	427	Total	C	N	O	S	0	0
			3342	2121	569	630	22		
8	DM	427	Total	C	N	O	S	0	0
			3342	2121	569	630	22		
8	EC	434	Total	C	N	O	S	0	0
			3392	2150	577	643	22		
8	EE	439	Total	C	N	O	S	0	0
			3421	2166	582	651	22		
8	EG	437	Total	C	N	O	S	0	0
			3407	2159	580	646	22		
8	EI	436	Total	C	N	O	S	0	0
			3400	2154	579	645	22		
8	EK	437	Total	C	N	O	S	0	0
			3413	2162	580	649	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	EM	428	Total	C	N	O	S	0	0
			3349	2126	570	631	22		
8	FC	429	Total	C	N	O	S	0	0
			3357	2130	571	634	22		
8	FE	424	Total	C	N	O	S	0	0
			3323	2110	566	625	22		
8	FG	430	Total	C	N	O	S	0	0
			3363	2133	572	636	22		
8	FI	425	Total	C	N	O	S	0	0
			3325	2109	567	627	22		
8	FK	428	Total	C	N	O	S	0	0
			3350	2125	570	633	22		
8	FM	429	Total	C	N	O	S	0	0
			3356	2128	571	635	22		
8	GC	439	Total	C	N	O	S	0	0
			3421	2166	582	651	22		
8	GE	431	Total	C	N	O	S	0	0
			3370	2138	573	637	22		
8	GG	433	Total	C	N	O	S	0	0
			3384	2145	575	642	22		
8	GI	436	Total	C	N	O	S	0	0
			3398	2154	578	644	22		
8	GK	430	Total	C	N	O	S	0	0
			3364	2132	572	638	22		
8	GM	439	Total	C	N	O	S	0	0
			3421	2166	582	651	22		
8	HC	429	Total	C	N	O	S	0	0
			3357	2130	571	634	22		
8	HE	429	Total	C	N	O	S	0	0
			3357	2130	571	634	22		
8	HG	431	Total	C	N	O	S	0	0
			3370	2138	573	637	22		
8	HI	430	Total	C	N	O	S	0	0
			3362	2134	572	634	22		
8	HK	431	Total	C	N	O	S	0	0
			3370	2138	573	637	22		
8	HM	434	Total	C	N	O	S	0	0
			3393	2150	577	644	22		
8	HO	387	Total	C	N	O	S	0	0
			3035	1925	518	571	21		
8	IC	433	Total	C	N	O	S	0	0
			3384	2145	575	642	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	IE	430	Total	C	N	O	S	0	0
			3363	2133	572	636	22		
8	IG	439	Total	C	N	O	S	0	0
			3421	2166	582	651	22		
8	II	431	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	IK	436	Total	C	N	O	S	0	0
			3400	2154	579	645	22		
8	IM	437	Total	C	N	O	S	0	0
			3407	2159	580	646	22		
8	IO	428	Total	C	N	O	S	0	0
			3348	2124	570	632	22		
8	JC	433	Total	C	N	O	S	0	0
			3382	2144	575	641	22		
8	JE	430	Total	C	N	O	S	0	0
			3363	2133	572	636	22		
8	JG	428	Total	C	N	O	S	0	0
			3349	2126	570	631	22		
8	JI	429	Total	C	N	O	S	0	0
			3357	2130	571	634	22		
8	JK	438	Total	C	N	O	S	0	0
			3415	2163	581	649	22		
8	JM	430	Total	C	N	O	S	0	0
			3363	2133	572	636	22		
8	KC	434	Total	C	N	O	S	0	0
			3389	2146	576	645	22		
8	KE	431	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	KG	430	Total	C	N	O	S	0	0
			3361	2132	572	635	22		
8	KI	428	Total	C	N	O	S	0	0
			3349	2126	570	631	22		
8	KK	431	Total	C	N	O	S	0	0
			3371	2137	573	639	22		
8	KM	434	Total	C	N	O	S	0	0
			3383	2143	576	642	22		
8	KO	411	Total	C	N	O	S	0	0
			3229	2048	548	611	22		
8	LC	440	Total	C	N	O	S	0	0
			3428	2171	583	652	22		
8	LE	445	Total	C	N	O	S	0	0
			3465	2192	588	663	22		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	LG	440	Total 3428	C 2171	N 583	O 652	S 22	0	0
8	LI	445	Total 3465	C 2192	N 588	O 663	S 22	0	0
8	LK	440	Total 3428	C 2171	N 583	O 652	S 22	0	0
8	LM	436	Total 3404	C 2157	N 578	O 647	S 22	0	0
8	MC	439	Total 3421	C 2166	N 582	O 651	S 22	0	0
8	ME	429	Total 3357	C 2130	N 571	O 634	S 22	0	0
8	MG	432	Total 3377	C 2140	N 574	O 641	S 22	0	0
8	MI	431	Total 3369	C 2136	N 573	O 638	S 22	0	0
8	MK	440	Total 3428	C 2171	N 583	O 652	S 22	0	0
8	MM	437	Total 3407	C 2158	N 580	O 648	S 21	0	0
8	NA	426	Total 3333	C 2117	N 568	O 627	S 21	0	0
8	NC	427	Total 3343	C 2123	N 569	O 629	S 22	0	0
8	NE	430	Total 3363	C 2133	N 572	O 636	S 22	0	0
8	NG	430	Total 3363	C 2133	N 572	O 636	S 22	0	0
8	NI	429	Total 3357	C 2130	N 571	O 634	S 22	0	0
8	NK	429	Total 3357	C 2130	N 571	O 634	S 22	0	0
8	OA	428	Total 3349	C 2125	N 570	O 633	S 21	0	0
8	OC	429	Total 3357	C 2130	N 571	O 634	S 22	0	0
8	OE	432	Total 3378	C 2142	N 574	O 640	S 22	0	0
8	OG	432	Total 3375	C 2139	N 574	O 640	S 22	0	0
8	OI	432	Total 3378	C 2142	N 574	O 640	S 22	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	OK	430	3365	2134	572	637	22	0	0
8	PA	430	3363	2132	572	638	21	0	0
8	PC	434	3385	2144	576	643	22	0	0
8	PE	431	3371	2137	573	639	22	0	0
8	PG	433	3384	2145	575	642	22	0	0
8	PI	427	3341	2121	569	630	21	0	0
8	PK	429	3355	2129	571	633	22	0	0
8	PM	431	3369	2136	573	638	22	0	0
8	QA	428	3347	2124	570	632	21	0	0
8	QC	428	3349	2126	570	631	22	0	0
8	QE	430	3363	2133	572	636	22	0	0
8	QG	431	3371	2137	573	639	22	0	0
8	QI	428	3349	2126	570	631	22	0	0
8	QK	430	3363	2133	572	636	22	0	0
8	QM	431	3369	2136	573	638	22	0	0
8	RA	429	3355	2128	571	635	21	0	0
8	RC	432	3378	2142	574	640	22	0	0
8	RE	429	3357	2130	571	634	22	0	0
8	RG	432	3376	2141	574	639	22	0	0
8	RI	432	3376	2141	574	639	22	0	0
8	RK	433	3384	2145	575	642	22	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	RM	428	3348	2124	570	632	22	0	0
8	SA	428	3349	2125	570	633	21	0	0
8	SC	430	3363	2133	572	636	22	0	0
8	SE	431	3372	2138	573	639	22	0	0
8	SG	431	3370	2138	573	637	22	0	0
8	SI	426	3341	2121	567	631	22	0	0
8	SK	432	3378	2142	574	640	22	0	0
8	SM	430	3363	2133	572	636	22	0	0
8	TC	429	3357	2130	571	634	22	0	0
8	TE	432	3378	2142	574	640	22	0	0
8	TG	429	3355	2129	571	633	22	0	0
8	TI	430	3363	2133	572	636	22	0	0
8	TK	431	3371	2137	573	639	22	0	0
8	TM	430	3363	2133	572	636	22	0	0
8	UC	431	3371	2137	573	639	22	0	0
8	UE	431	3371	2137	573	639	22	0	0
8	UG	432	3375	2139	574	640	22	0	0
8	UI	431	3371	2137	573	639	22	0	0
8	UK	430	3363	2133	572	636	22	0	0
8	UM	429	3357	2130	571	634	22	0	0
8	VC	436	3400	2154	579	645	22	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	VE	430	Total 3365	C 2134	N 573	O 636	S 22	0	0
8	VG	439	Total 3421	C 2166	N 582	O 651	S 22	0	0
8	VI	428	Total 3350	C 2125	N 570	O 633	S 22	0	0
8	VK	437	Total 3407	C 2159	N 580	O 646	S 22	0	0
8	VM	432	Total 3377	C 2140	N 574	O 641	S 22	0	0
8	WC	437	Total 3407	C 2159	N 580	O 646	S 22	0	0
8	WE	430	Total 3361	C 2132	N 572	O 635	S 22	0	0
8	WG	436	Total 3400	C 2154	N 579	O 645	S 22	0	0
8	WI	429	Total 3357	C 2130	N 571	O 634	S 22	0	0
8	WK	437	Total 3407	C 2159	N 580	O 646	S 22	0	0
8	WM	430	Total 3363	C 2133	N 572	O 636	S 22	0	0

- Molecule 9 is a protein called Tubulin beta-4B chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	AB	436	Total 3424	C 2150	N 584	O 664	S 26	0	0
9	AD	436	Total 3424	C 2150	N 584	O 664	S 26	0	0
9	AF	436	Total 3424	C 2150	N 584	O 664	S 26	0	0
9	AH	436	Total 3424	C 2150	N 584	O 664	S 26	0	0
9	AJ	436	Total 3424	C 2150	N 584	O 664	S 26	0	0
9	AL	431	Total 3383	C 2124	N 579	O 655	S 25	0	0
9	BB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	BD	426	Total 3348	C 2105	N 574	O 643	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	BF	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	BH	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	BJ	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	BL	425	Total	C	N	O	S	0	0
			3340	2100	573	642	25		
9	CB	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	CD	425	Total	C	N	O	S	0	0
			3339	2100	572	641	26		
9	CF	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	CH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	CJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	CL	425	Total	C	N	O	S	0	0
			3340	2100	573	642	25		
9	DB	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	DD	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	DF	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	DH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	DJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	DL	425	Total	C	N	O	S	0	0
			3340	2100	573	642	25		
9	DN	387	Total	C	N	O	S	0	0
			3035	1911	519	582	23		
9	EB	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	ED	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	EF	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	EH	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	EJ	426	3348	2105	574	643	26	0	0
9	EL	425	3340	2100	573	642	25	0	0
9	EN	426	3348	2105	574	643	26	0	0
9	FB	426	3348	2105	574	643	26	0	0
9	FD	427	3356	2109	575	646	26	0	0
9	FF	426	3348	2105	574	643	26	0	0
9	FH	428	3361	2112	576	647	26	0	0
9	FJ	426	3348	2105	574	643	26	0	0
9	FL	425	3340	2100	573	642	25	0	0
9	FN	428	3361	2112	576	647	26	0	0
9	GB	428	3361	2112	576	647	26	0	0
9	GD	427	3356	2109	575	646	26	0	0
9	GF	428	3361	2112	576	647	26	0	0
9	GH	428	3361	2112	576	647	26	0	0
9	GJ	428	3361	2112	576	647	26	0	0
9	GL	425	3340	2100	573	642	25	0	0
9	GN	427	3356	2109	575	646	26	0	0
9	HB	426	3348	2105	574	643	26	0	0
9	HD	427	3356	2109	575	646	26	0	0
9	HF	426	3348	2105	574	643	26	0	0
9	HH	427	3356	2109	575	646	26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	HJ	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	HL	425	Total	C	N	O	S	0	0
			3340	2100	573	642	25		
9	HN	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	IB	368	Total	C	N	O	S	0	0
			2892	1817	499	553	23		
9	ID	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	IF	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	IH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	IJ	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	IL	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	IN	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	JB	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	JD	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	JF	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	JH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	JJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	JL	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	JN	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	KB	403	Total	C	N	O	S	0	0
			3165	1989	539	613	24		
9	KD	429	Total	C	N	O	S	0	0
			3368	2116	577	649	26		
9	KF	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	KH	429	Total	C	N	O	S	0	0
			3368	2116	577	649	26		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	KJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	KL	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	KN	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	LB	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	LD	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	LF	436	Total 3424	C 2150	N 584	O 664	S 26	0	0
9	LH	428	Total 3361	C 2112	N 576	O 647	S 26	0	0
9	LJ	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	LL	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	LN	437	Total 3433	C 2155	N 585	O 667	S 26	0	0
9	MB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	MD	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	MF	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	MH	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	MJ	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	ML	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	MN	429	Total 3368	C 2116	N 577	O 649	S 26	0	0
9	N0	425	Total 3339	C 2100	N 572	O 641	S 26	0	0
9	NB	426	Total 3348	C 2105	N 574	O 643	S 26	0	0
9	ND	427	Total 3356	C 2109	N 575	O 646	S 26	0	0
9	NF	426	Total 3348	C 2105	N 574	O 643	S 26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	NH	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	NJ	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	NL	425	Total	C	N	O	S	0	0
			3339	2100	572	641	26		
9	O0	391	Total	C	N	O	S	0	0
			3078	1937	526	592	23		
9	OB	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	OD	424	Total	C	N	O	S	0	0
			3327	2091	571	639	26		
9	OF	425	Total	C	N	O	S	0	0
			3339	2100	572	641	26		
9	OH	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	OJ	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	OL	424	Total	C	N	O	S	0	0
			3327	2091	571	639	26		
9	PB	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	PD	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	PF	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	PH	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	PJ	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	PL	425	Total	C	N	O	S	0	0
			3340	2100	573	642	25		
9	QB	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	QD	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	QF	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	QH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	QJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	QL	426	3348	2105	574	643	26	0	0
9	RB	428	3361	2112	576	647	26	0	0
9	RD	427	3356	2109	575	646	26	0	0
9	RF	427	3356	2109	575	646	26	0	0
9	RH	428	3361	2112	576	647	26	0	0
9	RJ	428	3361	2112	576	647	26	0	0
9	RL	426	3348	2105	574	643	26	0	0
9	SB	428	3361	2112	576	647	26	0	0
9	SD	427	3356	2109	575	646	26	0	0
9	SF	428	3361	2112	576	647	26	0	0
9	SH	428	3361	2112	576	647	26	0	0
9	SJ	428	3361	2112	576	647	26	0	0
9	SL	426	3348	2105	574	643	26	0	0
9	TB	427	3356	2109	575	646	26	0	0
9	TD	427	3356	2109	575	646	26	0	0
9	TF	428	3361	2112	576	647	26	0	0
9	TH	428	3361	2112	576	647	26	0	0
9	TJ	428	3361	2112	576	647	26	0	0
9	TL	426	3348	2105	574	643	26	0	0
9	UB	426	3348	2105	574	643	26	0	0
9	UD	427	3356	2109	575	646	26	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
9	UF	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	UH	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	UJ	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	UL	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	UN	427	Total	C	N	O	S	0	0
			3356	2109	575	646	26		
9	VB	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	VD	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	VF	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	VH	428	Total	C	N	O	S	0	0
			3361	2112	576	647	26		
9	VJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	VL	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	VN	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WB	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WD	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WF	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WH	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WJ	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WL	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		
9	WN	426	Total	C	N	O	S	0	0
			3348	2105	574	643	26		

- Molecule 10 is a protein called Protein Flattop.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AP	117	Total	C	N	O	S	0	0
			920	586	168	164	2		
10	AQ	117	Total	C	N	O	S	0	0
			920	586	168	164	2		
10	AR	95	Total	C	N	O	S	0	0
			735	470	137	126	2		
10	AS	117	Total	C	N	O	S	0	0
			920	586	168	164	2		

- Molecule 11 is a protein called Cilia- and flagella-associated protein 53.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AT	297	Total	C	N	O	S	0	0
			2521	1541	478	489	13		
11	AU	217	Total	C	N	O	S	0	0
			1855	1127	350	364	14		

- Molecule 12 is a protein called Nucleoside diphosphate kinase 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AV	366	Total	C	N	O	S	0	0
			2901	1853	491	536	21		
12	AW	372	Total	C	N	O	S	0	0
			2947	1880	499	546	22		

- Molecule 13 is a protein called EF-hand domain-containing family member C2.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Aa	585	Total	C	N	O	S	0	0
			4829	3100	812	892	25		
13	Ab	598	Total	C	N	O	S	0	0
			4935	3171	827	912	25		
13	Ac	600	Total	C	N	O	S	0	0
			4948	3179	831	913	25		
13	Ad	512	Total	C	N	O	S	0	0
			4235	2727	705	782	21		

- Molecule 14 is a protein called Family with sequence similarity 166 member A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	Al	43	Total	C	N	O	S	0	0
			338	217	58	62	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	Am	43	Total 338	C 217	N 58	O 62	S 1	0	0
14	An	43	Total 338	C 217	N 58	O 62	S 1	0	0
14	Ao	67	Total 573	C 379	N 96	O 95	S 3	0	0
14	B7	86	Total 686	C 443	N 117	O 122	S 4	0	0
14	BY	106	Total 866	C 553	N 155	O 152	S 6	0	0
14	BZ	106	Total 866	C 553	N 155	O 152	S 6	0	0
14	Ba	191	Total 1587	C 1026	N 281	O 271	S 9	0	0
14	Bb	191	Total 1587	C 1026	N 281	O 271	S 9	0	0
14	Bc	190	Total 1575	C 1017	N 280	O 269	S 9	0	0
14	Bd	106	Total 866	C 553	N 155	O 152	S 6	0	0
14	Be	106	Total 866	C 553	N 155	O 152	S 6	0	0
14	CN	84	Total 670	C 431	N 115	O 120	S 4	0	0
14	CO	87	Total 697	C 449	N 121	O 123	S 4	0	0

- Molecule 15 is a protein called Protein FAM166C.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	Ap	130	Total 1101	C 710	N 202	O 187	S 2	0	0
15	Aq	88	Total 766	C 493	N 146	O 126	S 1	0	0
15	Ar	152	Total 1257	C 809	N 228	O 218	S 2	0	0

- Molecule 16 is a protein called Outer dense fiber of sperm tails 3B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	At	100	Total 772	C 495	N 138	O 135	S 4	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	Ax	119	914	590	179	142	3	0	0

- Molecule 17 is a protein called Spermatid-specific manchette-related protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	B0	45	367	240	59	68		0	0
17	B1	37	300	198	46	56		0	0
17	B2	41	307	190	56	55	6	0	0
17	B3	26	200	124	35	37	4	0	0
17	B4	39	305	188	57	54	6	0	0
17	B8	41	320	196	62	56	6	0	0
17	B9	38	307	202	47	58		0	0
17	CQ	45	367	240	59	68		0	0
17	CR	39	316	208	49	59		0	0
17	CS	38	307	202	47	58		0	0

- Molecule 18 is a protein called Enkurin.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	B5	244	2008	1283	348	369	8	0	0
18	B6	248	2040	1306	352	374	8	0	0
18	By	160	1316	833	228	250	5	0	0
18	Bz	244	2008	1283	348	369	8	0	0

- Molecule 19 is a protein called Coiled-coil domain-containing protein 105.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	BO	227	Total	C	N	O	S	1	0
			1817	1123	346	332	16		
19	BP	418	Total	C	N	O	S	1	0
			3394	2101	651	616	26		
19	BQ	367	Total	C	N	O	S	1	0
			2989	1843	580	545	21		
19	BR	427	Total	C	N	O	S	1	0
			3465	2147	665	627	26		

- Molecule 20 is a protein called Protein phosphatase 1 regulatory subunit 32.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	BS	151	Total	C	N	O	S	0	0
			1192	756	212	223	1		
20	BT	240	Total	C	N	O	S	0	0
			1886	1193	327	362	4		

- Molecule 21 is a protein called RIB43A-like with coiled-coils protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	BU	36	Total	C	N	O	S	0	0
			307	192	64	50	1		
21	BV	371	Total	C	N	O	S	0	0
			3087	1881	602	589	15		
21	Bi	43	Total	C	N	O	S	0	0
			352	214	68	67	3		
21	Bj	247	Total	C	N	O	S	0	0
			2029	1233	393	393	10		
21	Bk	174	Total	C	N	O	S	0	0
			1444	876	285	276	7		

- Molecule 22 is a protein called Cilia- and flagella-associated protein 107.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	BW	189	Total	C	N	O	S	0	0
			1586	1022	284	279	1		
22	BX	50	Total	C	N	O		0	0
			424	272	73	79			

- Molecule 23 is a protein called Piercer of microtubule wall 1 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	Bf	62	Total	C	N	O	S	0	0
			508	324	87	93	4		
23	Bg	115	Total	C	N	O	S	0	0
			950	602	168	175	5		

- Molecule 24 is a protein called Piercer of microtubule wall 2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Bh	96	Total	C	N	O	S	0	0
			775	496	130	142	7		

- Molecule 25 is a protein called Stabilizer of axonemal microtubules 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	Bl	127	Total	C	N	O	0	0
			635	381	127	127		
25	Bm	128	Total	C	N	O	0	0
			640	384	128	128		
25	Bn	138	Total	C	N	O	0	0
			690	414	138	138		
25	Bo	143	Total	C	N	O	0	0
			715	429	143	143		
25	Bp	163	Total	C	N	O	0	0
			815	489	163	163		

- Molecule 26 is a protein called Stabilizer of axonemal microtubules 3.

Mol	Chain	Residues	Atoms				AltConf	Trace	
26	Bq	100	Total	C	N	O	0	0	
			782	505	139	138			
26	Bu	147	Total	C	N	O	S	0	0
			1177	755	219	202	1		

- Molecule 27 is a protein called Meiosis-specific nuclear structural protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Br	165	Total	C	N	O	S	0	0
			1380	842	259	272	7		
27	Bs	355	Total	C	N	O	S	0	0
			3042	1886	556	583	17		

- Molecule 28 is a protein called Tektin-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	C0	105	Total	C	N	O	S	0	0
			851	527	155	166	3		
28	C2	407	Total	C	N	O	S	0	0
			3314	2044	605	649	16		
28	C3	407	Total	C	N	O	S	0	0
			3314	2044	605	649	16		
28	C4	342	Total	C	N	O	S	0	0
			2779	1715	505	545	14		
28	C5	226	Total	C	N	O	S	0	0
			1843	1145	331	354	13		
28	C6	41	Total	C	N	O	S	0	0
			352	218	65	68	1		
28	C7	425	Total	C	N	O	S	0	0
			3454	2128	630	678	18		
28	C8	424	Total	C	N	O	S	0	0
			3446	2124	629	675	18		
28	C9	381	Total	C	N	O	S	0	0
			3089	1897	568	609	15		
28	DO	127	Total	C	N	O	S	0	0
			1041	632	197	209	3		
28	F2	418	Total	C	N	O	S	0	0
			3411	2107	621	667	16		
28	F3	417	Total	C	N	O	S	0	0
			3400	2102	616	666	16		
28	F4	387	Total	C	N	O	S	0	0
			3141	1931	577	618	15		
28	F5	108	Total	C	N	O	S	0	0
			873	540	159	171	3		
28	F6	127	Total	C	N	O	S	0	0
			1047	643	194	208	2		

- Molecule 29 is a protein called Tektin-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	C1	330	Total	C	N	O	S	0	0
			2710	1677	498	513	22		
29	Cz	297	Total	C	N	O	S	0	0
			2435	1509	445	461	20		
29	D0	69	Total	C	N	O	S	0	0
			569	351	107	106	5		
29	D1	358	Total	C	N	O	S	0	0
			2933	1802	545	560	26		
29	D2	387	Total	C	N	O	S	0	0
			3169	1945	592	603	29		

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Mol	Chain	Residues	Atoms					AltConf	Trace
29	D3	386	Total	C	N	O	S	0	0
			3160	1939	590	602	29		
29	D4	385	Total	C	N	O	S	0	0
			3152	1936	587	601	28		
29	D5	362	Total	C	N	O	S	0	0
			2961	1818	552	564	27		
29	D6	148	Total	C	N	O	S	0	0
			1209	733	227	239	10		
29	D7	73	Total	C	N	O	S	0	0
			603	374	111	113	5		
29	D8	387	Total	C	N	O	S	0	0
			3169	1945	592	603	29		
29	D9	160	Total	C	N	O	S	0	0
			1305	789	247	258	11		
29	DP	204	Total	C	N	O	S	0	0
			1668	1010	317	327	14		
29	DQ	293	Total	C	N	O	S	0	0
			2411	1481	450	459	21		
29	DR	261	Total	C	N	O	S	0	0
			2151	1327	399	407	18		
29	DS	257	Total	C	N	O	S	0	0
			2118	1308	392	401	17		
29	DT	165	Total	C	N	O	S	0	0
			1373	874	240	249	10		
29	DU	300	Total	C	N	O	S	0	0
			2497	1547	463	466	21		
29	DV	301	Total	C	N	O	S	0	0
			2502	1550	464	467	21		
29	DW	301	Total	C	N	O	S	0	0
			2502	1550	464	467	21		
29	DX	229	Total	C	N	O	S	0	0
			1897	1171	354	357	15		
29	EA	399	Total	C	N	O	S	0	0
			3259	2006	604	618	31		
29	EO	398	Total	C	N	O	S	0	0
			3251	2000	603	617	31		
29	EP	360	Total	C	N	O	S	0	0
			2940	1805	544	563	28		
29	EQ	178	Total	C	N	O	S	0	0
			1458	909	265	270	14		
29	ER	44	Total	C	N	O	S	0	0
			358	217	68	68	5		

There are 26 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C1	245	ASP	GLU	variant	UNP Q2YDI7
Cz	245	ASP	GLU	variant	UNP Q2YDI7
D0	245	ASP	GLU	variant	UNP Q2YDI7
D1	245	ASP	GLU	variant	UNP Q2YDI7
D2	245	ASP	GLU	variant	UNP Q2YDI7
D3	245	ASP	GLU	variant	UNP Q2YDI7
D4	245	ASP	GLU	variant	UNP Q2YDI7
D5	245	ASP	GLU	variant	UNP Q2YDI7
D6	245	ASP	GLU	variant	UNP Q2YDI7
D7	245	ASP	GLU	variant	UNP Q2YDI7
D8	245	ASP	GLU	variant	UNP Q2YDI7
D9	245	ASP	GLU	variant	UNP Q2YDI7
DP	245	ASP	GLU	variant	UNP Q2YDI7
DQ	245	ASP	GLU	variant	UNP Q2YDI7
DR	245	ASP	GLU	variant	UNP Q2YDI7
DS	245	ASP	GLU	variant	UNP Q2YDI7
DT	245	ASP	GLU	variant	UNP Q2YDI7
DU	245	ASP	GLU	variant	UNP Q2YDI7
DV	245	ASP	GLU	variant	UNP Q2YDI7
DW	245	ASP	GLU	variant	UNP Q2YDI7
DX	245	ASP	GLU	variant	UNP Q2YDI7
EA	245	ASP	GLU	variant	UNP Q2YDI7
EO	245	ASP	GLU	variant	UNP Q2YDI7
EP	245	ASP	GLU	variant	UNP Q2YDI7
EQ	245	ASP	GLU	variant	UNP Q2YDI7
ER	245	ASP	GLU	variant	UNP Q2YDI7

- Molecule 30 is a protein called Sperm-associated antigen 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	CW	163	1319	827	236	249	7	0	0

- Molecule 31 is a protein called Spermatogenesis-associated protein 48.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	Cl	127	977	615	168	190	4	0	0

- Molecule 32 is a protein called Tektin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Cm	396	Total	C	N	O	S	0	0
			3264	2032	594	629	9		
32	Cn	399	Total	C	N	O	S	0	0
			3286	2047	598	632	9		
32	Co	345	Total	C	N	O	S	0	0
			2845	1776	512	549	8		
32	Cp	208	Total	C	N	O	S	0	0
			1690	1058	306	319	7		

- Molecule 33 is a protein called Tektin-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Cq	421	Total	C	N	O	S	0	0
			3427	2114	632	667	14		
33	Cr	415	Total	C	N	O	S	0	0
			3386	2087	626	659	14		
33	Cs	183	Total	C	N	O	S	0	0
			1496	915	282	293	6		
33	Ct	387	Total	C	N	O	S	0	0
			3147	1943	575	614	15		
33	Cu	376	Total	C	N	O	S	0	0
			3055	1887	556	598	14		
33	Cv	422	Total	C	N	O	S	0	0
			3436	2120	634	668	14		
33	Cw	422	Total	C	N	O	S	0	0
			3436	2120	634	668	14		
33	Cx	199	Total	C	N	O	S	0	0
			1611	987	302	316	6		
33	Cy	44	Total	C	N	O	S	0	0
			365	224	71	68	2		

- Molecule 34 is a protein called Uncharacterized protein C1orf100 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	D	62	Total	C	N	O	S	0	0
			537	344	94	98	1		

- Molecule 35 is a protein called TEPP protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	DY	38	Total	C	N	O	S	0	0
			308	187	53	63	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
35	DZ	51	Total	C	N	O	S	0	0
			416	250	82	79	5		
35	Da	134	Total	C	N	O	S	0	0
			1095	704	194	193	4		
35	Ee	45	Total	C	N	O	S	0	0
			386	248	71	66	1		

- Molecule 36 is a protein called Uncharacterized protein MGC137036.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Db	52	Total	C	N	O	S	0	0
			450	290	81	78	1		
36	Dc	51	Total	C	N	O	S	0	0
			442	284	80	77	1		
36	Dd	47	Total	C	N	O	S	0	0
			406	262	72	71	1		

- Molecule 37 is a protein called Testis expressed 33.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	De	66	Total	C	N	O	S	0	0
			545	343	97	101	4		

- Molecule 38 is a protein called Testis-expressed sequence 37 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Df	133	Total	C	N	O	S	0	0
			1060	685	176	196	3		
38	Dg	123	Total	C	N	O	S	0	0
			981	629	167	181	4		
38	Dh	109	Total	C	N	O	S	0	0
			873	561	143	166	3		

- Molecule 39 is a protein called Testis-expressed protein 43.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Di	78	Total	C	N	O	S	0	0
			632	405	120	102	5		
39	Dj	99	Total	C	N	O	S	0	0
			806	513	154	133	6		
39	Dk	99	Total	C	N	O	S	0	0
			806	513	154	133	6		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	Dl	99	806	513	154	133	6	0	0

- Molecule 40 is a protein called Testis expressed 49.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
40	Dm	87	725	458	136	127	4	0	0

- Molecule 41 is a protein called Theg spermatid protein like.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	Dn	56	468	289	97	81	1	0	0

- Molecule 42 is a protein called EF-hand domain-containing family member B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
42	E	148	1181	742	206	230	3	0	0
42	F	455	3679	2344	655	667	13	0	0

- Molecule 43 is a protein called Tektin bundle interacting protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	E1	197	1648	1052	300	292	4	1	0
43	E2	197	1648	1052	300	292	4	1	0
43	E3	197	1641	1047	299	291	4	0	0
43	E4	145	1221	782	222	214	3	1	0

- Molecule 44 is a protein called Tektin-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	ES	425	3483	2143	653	672	15	0	0
44	ET	278	2273	1404	416	445	8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
44	EU	329	Total	C	N	O	S	0	0
			2692	1660	501	517	14		
44	EV	425	Total	C	N	O	S	0	0
			3483	2143	653	672	15		
44	EW	319	Total	C	N	O	S	0	0
			2601	1601	482	504	14		
44	EX	436	Total	C	N	O	S	0	0
			3560	2192	665	687	16		
44	EY	311	Total	C	N	O	S	0	0
			2552	1578	476	486	12		
44	EZ	443	Total	C	N	O	S	0	0
			3615	2228	673	698	16		

- Molecule 45 is a protein called Chromosome 7 open reading frame 31.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	G	282	Total	C	N	O	S	0	0
			2317	1475	409	427	6		

- Molecule 46 is a protein called Cilia- and flagella- associated protein 210.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	H	102	Total	C	N	O	S	0	0
			848	533	146	166	3		
46	o	397	Total	C	N	O	S	0	0
			3401	2106	640	644	11		

- Molecule 47 is a protein called EF-hand domain-containing protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	I	447	Total	C	N	O	S	0	0
			3689	2376	623	676	14		
47	X	448	Total	C	N	O	S	0	0
			3692	2385	621	672	14		
47	Y	454	Total	C	N	O	S	0	0
			3743	2416	631	682	14		

- Molecule 48 is a protein called Uncharacterized protein C10orf82 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	J	116	Total	C	N	O	S	0	0
			951	599	178	165	9		

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Mol	Chain	Residues	Atoms					AltConf	Trace
48	K	116	Total	C	N	O	S	0	0
			951	599	178	165	9		
48	L	108	Total	C	N	O	S	0	0
			891	562	167	155	7		
48	M	89	Total	C	N	O	S	0	0
			728	459	135	127	7		

- Molecule 49 is a protein called Cilia- and flagella-associated protein 144.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	K1	116	Total	C	N	O	S	0	0
			992	627	186	177	2		

- Molecule 50 is a protein called Chromosome 20 C5orf49 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	L1	134	Total	C	N	O	S	0	0
			1090	685	208	195	2		
50	L2	90	Total	C	N	O	S	0	0
			743	467	137	137	2		

- Molecule 51 is a protein called Chromosome 19 C17orf98 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	N	142	Total	C	N	O	S	0	0
			1173	737	232	199	5		
51	O	137	Total	C	N	O	S	0	0
			1134	715	222	194	3		

- Molecule 52 is a protein called Chromosome 13 C20orf85 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	P	105	Total	C	N	O	S	0	0
			870	564	151	153	2		

- Molecule 53 is a protein called Cilia- and flagella-associated protein 68.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	Q	107	Total	C	N	O	S	0	0
			919	584	160	170	5		

- Molecule 54 is a protein called Cilia and flagella associated protein 77.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
54	R	140	1162	731	225	200	6	0	0
54	S	140	1162	731	225	200	6	0	0
54	T	140	1165	734	226	199	6	0	0
54	U	97	818	518	155	141	4	0	0

- Molecule 55 is a protein called UPF0602 protein C4orf47 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
55	W	124	990	626	176	185	3	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
W	199	PRO	THR	variant	UNP Q2T9M0

- Molecule 56 is a protein called Cilia- and flagella-associated protein 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
56	XG	182	1512	969	266	270	7	0	0
56	XH	182	1512	969	266	270	7	0	0
56	XI	182	1512	969	266	270	7	0	0
56	XJ	182	1512	969	266	270	7	0	0
56	XK	182	1512	969	266	270	7	0	0
56	XL	181	1503	963	264	269	7	0	0
56	XM	180	1494	958	262	267	7	0	0

- Molecule 57 is a protein called Parkin coregulated gene protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
57	YG	210	1706	1108	288	301	9	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
57	YH	218	Total	C	N	O	S	0	0
			1759	1138	297	315	9		
57	YI	218	Total	C	N	O	S	0	0
			1759	1138	297	315	9		
57	YJ	218	Total	C	N	O	S	0	0
			1759	1138	297	315	9		
57	YK	218	Total	C	N	O	S	0	0
			1759	1138	297	315	9		
57	YL	218	Total	C	N	O	S	0	0
			1759	1138	297	315	9		

- Molecule 58 is a protein called CFAP97 domain containing 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Z	117	Total	C	N	O	S	0	0
			1014	632	205	175	2		
58	p	54	Total	C	N	O	S	0	0
			459	294	88	76	1		
58	q	96	Total	C	N	O	S	0	0
			829	510	169	148	2		

- Molecule 59 is a protein called Cilia- and flagella-associated protein 45.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	a	185	Total	C	N	O	S	0	0
			1559	959	297	294	9		
59	b	327	Total	C	N	O	S	0	0
			2814	1700	563	539	12		
59	c	297	Total	C	N	O	S	0	0
			2525	1544	478	487	16		
59	d	203	Total	C	N	O	S	0	0
			1728	1048	349	326	5		

- Molecule 60 is a protein called Cilia- and flagella-associated protein 52.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	e	610	Total	C	N	O	S	0	0
			4722	2990	823	877	32		
60	f	609	Total	C	N	O	S	0	0
			4713	2985	822	874	32		
60	g	609	Total	C	N	O	S	0	0
			4713	2985	822	874	32		

- Molecule 61 is a protein called Cilia- and flagella-associated protein 141.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
61	h	91	785	495	151	133	6	0	0

- Molecule 62 is a protein called Cilia- and flagella-associated protein 161.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
62	i	255	2055	1302	369	373	11	0	0
62	j	268	2158	1367	386	394	11	0	0

- Molecule 63 is a protein called Dual specificity phosphatase 21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
63	k	157	1245	797	207	230	11	0	0
63	l	137	1098	706	185	199	8	0	0
63	m	159	1263	807	211	234	11	0	0
63	n	114	908	587	147	167	7	0	0

- Molecule 64 is a protein called Uncharacterized protein C4orf45 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
64	ke	97	796	516	138	141	1	0	0

- Molecule 65 is a protein called Cilia- and flagella-associated protein 276.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
65	r	77	615	386	113	116	0	0
65	s	78	624	391	115	118	0	0
65	t	78	624	391	115	118	0	0

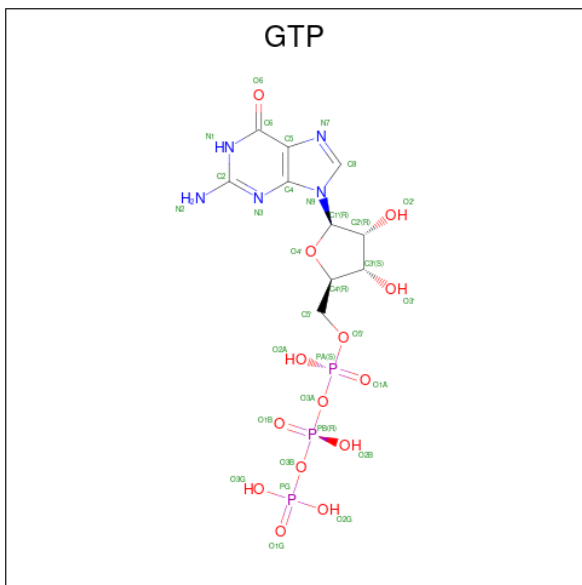
- Molecule 66 is a protein called EF-hand calcium-binding domain-containing protein 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	u	128	Total	C	N	O	S	0	0
			1081	697	188	192	4		
66	v	113	Total	C	N	O	S	0	0
			957	620	164	170	3		
66	w	128	Total	C	N	O	S	0	0
			1081	697	188	192	4		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
u	290	ALA	GLU	variant	UNP Q2T9P0
u	303	SER	THR	variant	UNP Q2T9P0
v	290	ALA	GLU	variant	UNP Q2T9P0
v	303	SER	THR	variant	UNP Q2T9P0
w	290	ALA	GLU	variant	UNP Q2T9P0
w	303	SER	THR	variant	UNP Q2T9P0

- Molecule 67 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
67	AA	1	Total	C	N	O	P	0
			32	10	5	14	3	
67	AC	1	Total	C	N	O	P	0
			32	10	5	14	3	
67	AD	1	Total	C	N	O	P	0
			32	10	5	14	3	

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
67	AG	1	Total 32	C 10	N 5	O 14	P 3	0
67	AH	1	Total 32	C 10	N 5	O 14	P 3	0
67	AK	1	Total 32	C 10	N 5	O 14	P 3	0
67	AM	1	Total 32	C 10	N 5	O 14	P 3	0
67	BA	1	Total 32	C 10	N 5	O 14	P 3	0
67	BC	1	Total 32	C 10	N 5	O 14	P 3	0
67	BE	1	Total 32	C 10	N 5	O 14	P 3	0
67	BG	1	Total 32	C 10	N 5	O 14	P 3	0
67	BI	1	Total 32	C 10	N 5	O 14	P 3	0
67	BK	1	Total 32	C 10	N 5	O 14	P 3	0
67	BM	1	Total 32	C 10	N 5	O 14	P 3	0
67	CA	1	Total 32	C 10	N 5	O 14	P 3	0
67	CB	1	Total 32	C 10	N 5	O 14	P 3	0
67	CD	1	Total 32	C 10	N 5	O 14	P 3	0
67	CG	1	Total 32	C 10	N 5	O 14	P 3	0
67	CH	1	Total 32	C 10	N 5	O 14	P 3	0
67	CJ	1	Total 32	C 10	N 5	O 14	P 3	0
67	CL	1	Total 32	C 10	N 5	O 14	P 3	0
67	DA	1	Total 32	C 10	N 5	O 14	P 3	0
67	DC	1	Total 32	C 10	N 5	O 14	P 3	0
67	DE	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	
67	DF	1	Total 32	C 10	N 5	O 14	P 3	0
67	DI	1	Total 32	C 10	N 5	O 14	P 3	0
67	DK	1	Total 32	C 10	N 5	O 14	P 3	0
67	DM	1	Total 32	C 10	N 5	O 14	P 3	0
67	EC	1	Total 32	C 10	N 5	O 14	P 3	0
67	EE	1	Total 32	C 10	N 5	O 14	P 3	0
67	EG	1	Total 32	C 10	N 5	O 14	P 3	0
67	EI	1	Total 32	C 10	N 5	O 14	P 3	0
67	EK	1	Total 32	C 10	N 5	O 14	P 3	0
67	EM	1	Total 32	C 10	N 5	O 14	P 3	0
67	FC	1	Total 32	C 10	N 5	O 14	P 3	0
67	FE	1	Total 32	C 10	N 5	O 14	P 3	0
67	FG	1	Total 32	C 10	N 5	O 14	P 3	0
67	FI	1	Total 32	C 10	N 5	O 14	P 3	0
67	FK	1	Total 32	C 10	N 5	O 14	P 3	0
67	FM	1	Total 32	C 10	N 5	O 14	P 3	0
67	GC	1	Total 32	C 10	N 5	O 14	P 3	0
67	GE	1	Total 32	C 10	N 5	O 14	P 3	0
67	GG	1	Total 32	C 10	N 5	O 14	P 3	0
67	GI	1	Total 32	C 10	N 5	O 14	P 3	0
67	GJ	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	
67	GM	1	Total 32	C 10	N 5	O 14	P 3	0
67	HC	1	Total 32	C 10	N 5	O 14	P 3	0
67	HE	1	Total 32	C 10	N 5	O 14	P 3	0
67	HG	1	Total 32	C 10	N 5	O 14	P 3	0
67	HI	1	Total 32	C 10	N 5	O 14	P 3	0
67	HK	1	Total 32	C 10	N 5	O 14	P 3	0
67	HL	1	Total 32	C 10	N 5	O 14	P 3	0
67	HN	1	Total 32	C 10	N 5	O 14	P 3	0
67	IC	1	Total 32	C 10	N 5	O 14	P 3	0
67	IE	1	Total 32	C 10	N 5	O 14	P 3	0
67	IG	1	Total 32	C 10	N 5	O 14	P 3	0
67	II	1	Total 32	C 10	N 5	O 14	P 3	0
67	IK	1	Total 32	C 10	N 5	O 14	P 3	0
67	IM	1	Total 32	C 10	N 5	O 14	P 3	0
67	IN	1	Total 32	C 10	N 5	O 14	P 3	0
67	JC	1	Total 32	C 10	N 5	O 14	P 3	0
67	JE	1	Total 32	C 10	N 5	O 14	P 3	0
67	JG	1	Total 32	C 10	N 5	O 14	P 3	0
67	JI	1	Total 32	C 10	N 5	O 14	P 3	0
67	JK	1	Total 32	C 10	N 5	O 14	P 3	0
67	JM	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	
67	KC	1	Total 32	C 10	N 5	O 14	P 3	0
67	KE	1	Total 32	C 10	N 5	O 14	P 3	0
67	KG	1	Total 32	C 10	N 5	O 14	P 3	0
67	KI	1	Total 32	C 10	N 5	O 14	P 3	0
67	KK	1	Total 32	C 10	N 5	O 14	P 3	0
67	KM	1	Total 32	C 10	N 5	O 14	P 3	0
67	KO	1	Total 32	C 10	N 5	O 14	P 3	0
67	LC	1	Total 32	C 10	N 5	O 14	P 3	0
67	LE	1	Total 32	C 10	N 5	O 14	P 3	0
67	LG	1	Total 32	C 10	N 5	O 14	P 3	0
67	LI	1	Total 32	C 10	N 5	O 14	P 3	0
67	LK	1	Total 32	C 10	N 5	O 14	P 3	0
67	LM	1	Total 32	C 10	N 5	O 14	P 3	0
67	MC	1	Total 32	C 10	N 5	O 14	P 3	0
67	ME	1	Total 32	C 10	N 5	O 14	P 3	0
67	MG	1	Total 32	C 10	N 5	O 14	P 3	0
67	MI	1	Total 32	C 10	N 5	O 14	P 3	0
67	MK	1	Total 32	C 10	N 5	O 14	P 3	0
67	MM	1	Total 32	C 10	N 5	O 14	P 3	0
67	NA	1	Total 32	C 10	N 5	O 14	P 3	0
67	NB	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	
67	NE	1	Total 32	C 10	N 5	O 14	P 3	0
67	NF	1	Total 32	C 10	N 5	O 14	P 3	0
67	NI	1	Total 32	C 10	N 5	O 14	P 3	0
67	NK	1	Total 32	C 10	N 5	O 14	P 3	0
67	O0	1	Total 32	C 10	N 5	O 14	P 3	0
67	OC	1	Total 32	C 10	N 5	O 14	P 3	0
67	OE	1	Total 32	C 10	N 5	O 14	P 3	0
67	OF	1	Total 32	C 10	N 5	O 14	P 3	0
67	OH	1	Total 32	C 10	N 5	O 14	P 3	0
67	OK	1	Total 32	C 10	N 5	O 14	P 3	0
67	PA	1	Total 32	C 10	N 5	O 14	P 3	0
67	PC	1	Total 32	C 10	N 5	O 14	P 3	0
67	PD	1	Total 32	C 10	N 5	O 14	P 3	0
67	PG	1	Total 32	C 10	N 5	O 14	P 3	0
67	PI	1	Total 32	C 10	N 5	O 14	P 3	0
67	PK	1	Total 32	C 10	N 5	O 14	P 3	0
67	PM	1	Total 32	C 10	N 5	O 14	P 3	0
67	QA	1	Total 32	C 10	N 5	O 14	P 3	0
67	QC	1	Total 32	C 10	N 5	O 14	P 3	0
67	QE	1	Total 32	C 10	N 5	O 14	P 3	0
67	QG	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
67	QI	1	32	10	5	14	3	0
67	QK	1	32	10	5	14	3	0
67	QM	1	32	10	5	14	3	0
67	RA	1	32	10	5	14	3	0
67	RB	1	32	10	5	14	3	0
67	RE	1	32	10	5	14	3	0
67	RG	1	32	10	5	14	3	0
67	RI	1	32	10	5	14	3	0
67	RK	1	32	10	5	14	3	0
67	RM	1	32	10	5	14	3	0
67	SA	1	32	10	5	14	3	0
67	SC	1	32	10	5	14	3	0
67	SE	1	32	10	5	14	3	0
67	SF	1	32	10	5	14	3	0
67	SI	1	32	10	5	14	3	0
67	SK	1	32	10	5	14	3	0
67	SM	1	32	10	5	14	3	0
67	TC	1	32	10	5	14	3	0
67	TE	1	32	10	5	14	3	0
67	TG	1	32	10	5	14	3	0
67	TI	1	32	10	5	14	3	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
67	TK	1	Total 32	C 10	N 5	O 14	P 3	0
67	TM	1	Total 32	C 10	N 5	O 14	P 3	0
67	UC	1	Total 32	C 10	N 5	O 14	P 3	0
67	UE	1	Total 32	C 10	N 5	O 14	P 3	0
67	UG	1	Total 32	C 10	N 5	O 14	P 3	0
67	UI	1	Total 32	C 10	N 5	O 14	P 3	0
67	UK	1	Total 32	C 10	N 5	O 14	P 3	0
67	UM	1	Total 32	C 10	N 5	O 14	P 3	0
67	VC	1	Total 32	C 10	N 5	O 14	P 3	0
67	VE	1	Total 32	C 10	N 5	O 14	P 3	0
67	VG	1	Total 32	C 10	N 5	O 14	P 3	0
67	VI	1	Total 32	C 10	N 5	O 14	P 3	0
67	VK	1	Total 32	C 10	N 5	O 14	P 3	0
67	VL	1	Total 32	C 10	N 5	O 14	P 3	0
67	WC	1	Total 32	C 10	N 5	O 14	P 3	0
67	WE	1	Total 32	C 10	N 5	O 14	P 3	0
67	WG	1	Total 32	C 10	N 5	O 14	P 3	0
67	WI	1	Total 32	C 10	N 5	O 14	P 3	0
67	WK	1	Total 32	C 10	N 5	O 14	P 3	0
67	WM	1	Total 32	C 10	N 5	O 14	P 3	0

- Molecule 68 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
68	AA	1	Total Mg 1 1	0
68	AC	1	Total Mg 1 1	0
68	AE	1	Total Mg 1 1	0
68	AG	1	Total Mg 1 1	0
68	AI	1	Total Mg 1 1	0
68	AK	1	Total Mg 1 1	0
68	AM	1	Total Mg 1 1	0
68	BA	1	Total Mg 1 1	0
68	BC	1	Total Mg 1 1	0
68	BE	1	Total Mg 1 1	0
68	BG	1	Total Mg 1 1	0
68	BI	1	Total Mg 1 1	0
68	BK	1	Total Mg 1 1	0
68	BM	1	Total Mg 1 1	0
68	CA	1	Total Mg 1 1	0
68	CC	1	Total Mg 1 1	0
68	CE	1	Total Mg 1 1	0
68	CG	1	Total Mg 1 1	0
68	CI	1	Total Mg 1 1	0
68	CK	1	Total Mg 1 1	0
68	CM	1	Total Mg 1 1	0
68	DA	1	Total Mg 1 1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	DC	1	1	1	0
68	DE	1	1	1	0
68	DG	1	1	1	0
68	DI	1	1	1	0
68	DK	1	1	1	0
68	DM	1	1	1	0
68	EC	1	1	1	0
68	EE	1	1	1	0
68	EG	1	1	1	0
68	EI	1	1	1	0
68	EJ	1	1	1	0
68	EM	1	1	1	0
68	FC	1	1	1	0
68	FE	1	1	1	0
68	FG	1	1	1	0
68	FI	1	1	1	0
68	FK	1	1	1	0
68	FM	1	1	1	0
68	GC	1	1	1	0
68	GE	1	1	1	0
68	GG	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	GI	1	1	1	0
68	GK	1	1	1	0
68	GM	1	1	1	0
68	HC	1	1	1	0
68	HE	1	1	1	0
68	HG	1	1	1	0
68	HI	1	1	1	0
68	HK	1	1	1	0
68	HM	1	1	1	0
68	HO	1	1	1	0
68	IC	1	1	1	0
68	IE	1	1	1	0
68	IG	1	1	1	0
68	II	1	1	1	0
68	IK	1	1	1	0
68	IM	1	1	1	0
68	IO	1	1	1	0
68	JC	1	1	1	0
68	JE	1	1	1	0
68	JG	1	1	1	0
68	JI	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	JK	1	1	1	0
68	JM	1	1	1	0
68	KC	1	1	1	0
68	KE	1	1	1	0
68	KG	1	1	1	0
68	KI	1	1	1	0
68	KK	1	1	1	0
68	KM	1	1	1	0
68	KN	1	1	1	0
68	LC	1	1	1	0
68	LE	1	1	1	0
68	LG	1	1	1	0
68	LI	1	1	1	0
68	LK	1	1	1	0
68	LL	1	1	1	0
68	MC	1	1	1	0
68	ME	1	1	1	0
68	MG	1	1	1	0
68	MI	1	1	1	0
68	MK	1	1	1	0
68	MM	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	NA	1	1	1	0
68	NC	1	1	1	0
68	NE	1	1	1	0
68	NG	1	1	1	0
68	NI	1	1	1	0
68	NK	1	1	1	0
68	OA	1	1	1	0
68	OC	1	1	1	0
68	OE	1	1	1	0
68	OG	1	1	1	0
68	OI	1	1	1	0
68	OK	1	1	1	0
68	PA	1	1	1	0
68	PC	1	1	1	0
68	PE	1	1	1	0
68	PG	1	1	1	0
68	PH	1	1	1	0
68	PK	1	1	1	0
68	PM	1	1	1	0
68	QA	1	1	1	0
68	QC	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	QE	1	1	1	0
68	QG	1	1	1	0
68	QI	1	1	1	0
68	QK	1	1	1	0
68	QM	1	1	1	0
68	RA	1	1	1	0
68	RC	1	1	1	0
68	RE	1	1	1	0
68	RG	1	1	1	0
68	RI	1	1	1	0
68	RK	1	1	1	0
68	RM	1	1	1	0
68	SA	1	1	1	0
68	SC	1	1	1	0
68	SE	1	1	1	0
68	SG	1	1	1	0
68	SI	1	1	1	0
68	SK	1	1	1	0
68	SM	1	1	1	0
68	TC	1	1	1	0
68	TE	1	1	1	0

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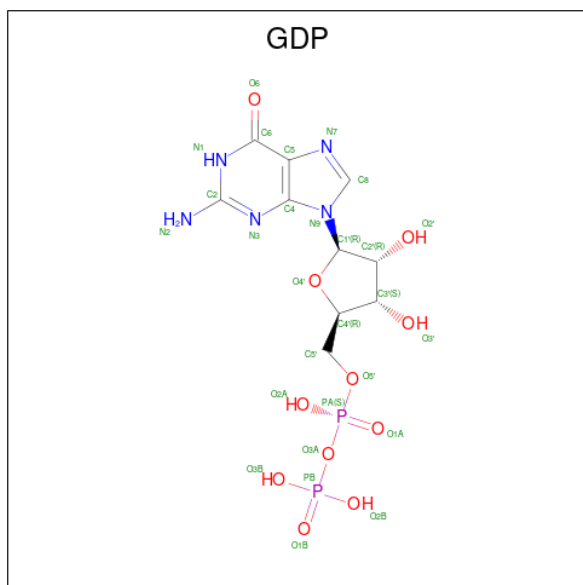
Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	TG	1	1	1	0
68	TH	1	1	1	0
68	TK	1	1	1	0
68	TM	1	1	1	0
68	UC	1	1	1	0
68	UE	1	1	1	0
68	UG	1	1	1	0
68	UI	1	1	1	0
68	UK	1	1	1	0
68	UM	1	1	1	0
68	VC	1	1	1	0
68	VE	1	1	1	0
68	VG	1	1	1	0
68	VI	1	1	1	0
68	VK	1	1	1	0
68	VM	1	1	1	0
68	WC	1	1	1	0
68	WE	1	1	1	0
68	WG	1	1	1	0
68	WI	1	1	1	0
68	WK	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
68	WM	1	1	1	0

- Molecule 69 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
69	AB	1	28	10	5	11	2	0
69	AD	1	28	10	5	11	2	0
69	AF	1	28	10	5	11	2	0
69	AH	1	28	10	5	11	2	0
69	AJ	1	28	10	5	11	2	0
69	AL	1	28	10	5	11	2	0
69	BB	1	28	10	5	11	2	0
69	BD	1	28	10	5	11	2	0
69	BF	1	28	10	5	11	2	0
69	BH	1	28	10	5	11	2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
69	BJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	BL	1	Total 28	C 10	N 5	O 11	P 2	0
69	CB	1	Total 28	C 10	N 5	O 11	P 2	0
69	CD	1	Total 28	C 10	N 5	O 11	P 2	0
69	CF	1	Total 28	C 10	N 5	O 11	P 2	0
69	CH	1	Total 28	C 10	N 5	O 11	P 2	0
69	CJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	CL	1	Total 28	C 10	N 5	O 11	P 2	0
69	DB	1	Total 28	C 10	N 5	O 11	P 2	0
69	DD	1	Total 28	C 10	N 5	O 11	P 2	0
69	DF	1	Total 28	C 10	N 5	O 11	P 2	0
69	DH	1	Total 28	C 10	N 5	O 11	P 2	0
69	DJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	DL	1	Total 28	C 10	N 5	O 11	P 2	0
69	DN	1	Total 28	C 10	N 5	O 11	P 2	0
69	EB	1	Total 28	C 10	N 5	O 11	P 2	0
69	ED	1	Total 28	C 10	N 5	O 11	P 2	0
69	EF	1	Total 28	C 10	N 5	O 11	P 2	0
69	EH	1	Total 28	C 10	N 5	O 11	P 2	0
69	EJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	EL	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	
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69	FB	1	Total 28	C 10	N 5	O 11	P 2	0
69	FD	1	Total 28	C 10	N 5	O 11	P 2	0
69	FF	1	Total 28	C 10	N 5	O 11	P 2	0
69	FH	1	Total 28	C 10	N 5	O 11	P 2	0
69	FJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	FL	1	Total 28	C 10	N 5	O 11	P 2	0
69	FN	1	Total 28	C 10	N 5	O 11	P 2	0
69	GB	1	Total 28	C 10	N 5	O 11	P 2	0
69	GD	1	Total 28	C 10	N 5	O 11	P 2	0
69	GF	1	Total 28	C 10	N 5	O 11	P 2	0
69	GH	1	Total 28	C 10	N 5	O 11	P 2	0
69	GJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	GL	1	Total 28	C 10	N 5	O 11	P 2	0
69	GN	1	Total 28	C 10	N 5	O 11	P 2	0
69	HB	1	Total 28	C 10	N 5	O 11	P 2	0
69	HD	1	Total 28	C 10	N 5	O 11	P 2	0
69	HF	1	Total 28	C 10	N 5	O 11	P 2	0
69	HH	1	Total 28	C 10	N 5	O 11	P 2	0
69	HJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	HL	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	
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69	IB	1	28	10	5	11	2	0
69	ID	1	28	10	5	11	2	0
69	IF	1	28	10	5	11	2	0
69	IH	1	28	10	5	11	2	0
69	IJ	1	28	10	5	11	2	0
69	IL	1	28	10	5	11	2	0
69	IN	1	28	10	5	11	2	0
69	JB	1	28	10	5	11	2	0
69	JD	1	28	10	5	11	2	0
69	JF	1	28	10	5	11	2	0
69	JH	1	28	10	5	11	2	0
69	JJ	1	28	10	5	11	2	0
69	JL	1	28	10	5	11	2	0
69	JN	1	28	10	5	11	2	0
69	KB	1	28	10	5	11	2	0
69	KD	1	28	10	5	11	2	0
69	KF	1	28	10	5	11	2	0
69	KH	1	28	10	5	11	2	0
69	KJ	1	28	10	5	11	2	0
69	KL	1	28	10	5	11	2	0

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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
69	KN	1	Total 28	C 10	N 5	O 11	P 2	0
69	LB	1	Total 28	C 10	N 5	O 11	P 2	0
69	LD	1	Total 28	C 10	N 5	O 11	P 2	0
69	LF	1	Total 28	C 10	N 5	O 11	P 2	0
69	LH	1	Total 28	C 10	N 5	O 11	P 2	0
69	LJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	LL	1	Total 28	C 10	N 5	O 11	P 2	0
69	LN	1	Total 28	C 10	N 5	O 11	P 2	0
69	MB	1	Total 28	C 10	N 5	O 11	P 2	0
69	MD	1	Total 28	C 10	N 5	O 11	P 2	0
69	MF	1	Total 28	C 10	N 5	O 11	P 2	0
69	MH	1	Total 28	C 10	N 5	O 11	P 2	0
69	MJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	ML	1	Total 28	C 10	N 5	O 11	P 2	0
69	MN	1	Total 28	C 10	N 5	O 11	P 2	0
69	N0	1	Total 28	C 10	N 5	O 11	P 2	0
69	NB	1	Total 28	C 10	N 5	O 11	P 2	0
69	ND	1	Total 28	C 10	N 5	O 11	P 2	0
69	NF	1	Total 28	C 10	N 5	O 11	P 2	0
69	NH	1	Total 28	C 10	N 5	O 11	P 2	0
69	NJ	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	
69	NL	1	28	10	5	11	2	0
69	O0	1	28	10	5	11	2	0
69	OB	1	28	10	5	11	2	0
69	OD	1	28	10	5	11	2	0
69	OF	1	28	10	5	11	2	0
69	OH	1	28	10	5	11	2	0
69	OJ	1	28	10	5	11	2	0
69	OL	1	28	10	5	11	2	0
69	PB	1	28	10	5	11	2	0
69	PD	1	28	10	5	11	2	0
69	PF	1	28	10	5	11	2	0
69	PH	1	28	10	5	11	2	0
69	PJ	1	28	10	5	11	2	0
69	PL	1	28	10	5	11	2	0
69	QB	1	28	10	5	11	2	0
69	QD	1	28	10	5	11	2	0
69	QF	1	28	10	5	11	2	0
69	QH	1	28	10	5	11	2	0
69	QJ	1	28	10	5	11	2	0
69	QL	1	28	10	5	11	2	0
69	RB	1	28	10	5	11	2	0

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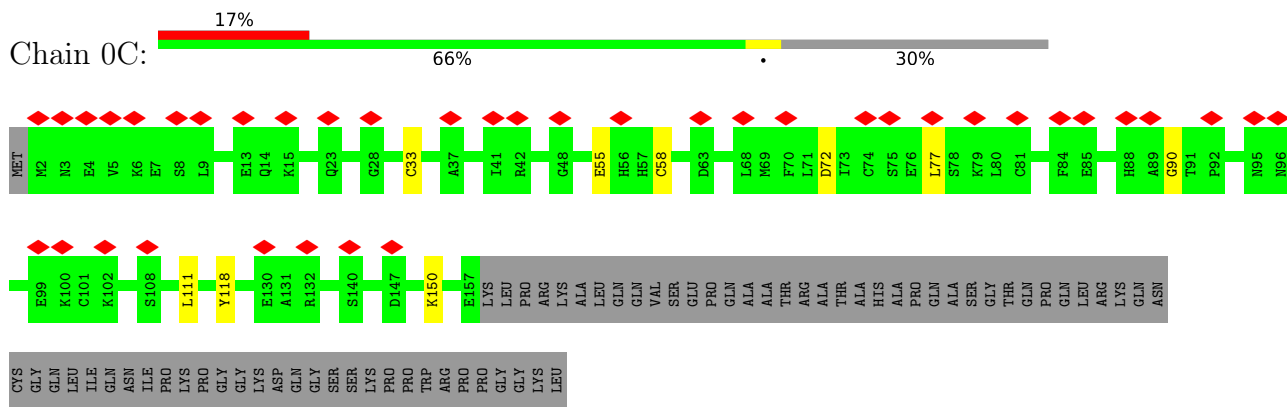
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Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
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69	RF	1	Total 28	C 10	N 5	O 11	P 2	0
69	RH	1	Total 28	C 10	N 5	O 11	P 2	0
69	RJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	RL	1	Total 28	C 10	N 5	O 11	P 2	0
69	SB	1	Total 28	C 10	N 5	O 11	P 2	0
69	SD	1	Total 28	C 10	N 5	O 11	P 2	0
69	SF	1	Total 28	C 10	N 5	O 11	P 2	0
69	SH	1	Total 28	C 10	N 5	O 11	P 2	0
69	SJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	SL	1	Total 28	C 10	N 5	O 11	P 2	0
69	TB	1	Total 28	C 10	N 5	O 11	P 2	0
69	TD	1	Total 28	C 10	N 5	O 11	P 2	0
69	TF	1	Total 28	C 10	N 5	O 11	P 2	0
69	TH	1	Total 28	C 10	N 5	O 11	P 2	0
69	TJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	TL	1	Total 28	C 10	N 5	O 11	P 2	0
69	UB	1	Total 28	C 10	N 5	O 11	P 2	0
69	UD	1	Total 28	C 10	N 5	O 11	P 2	0
69	UF	1	Total 28	C 10	N 5	O 11	P 2	0
69	UH	1	Total 28	C 10	N 5	O 11	P 2	0

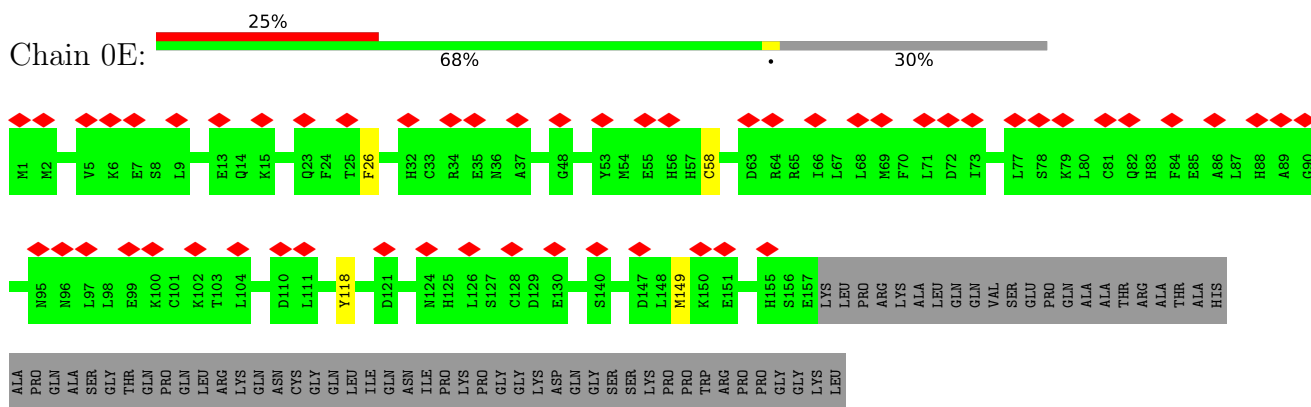
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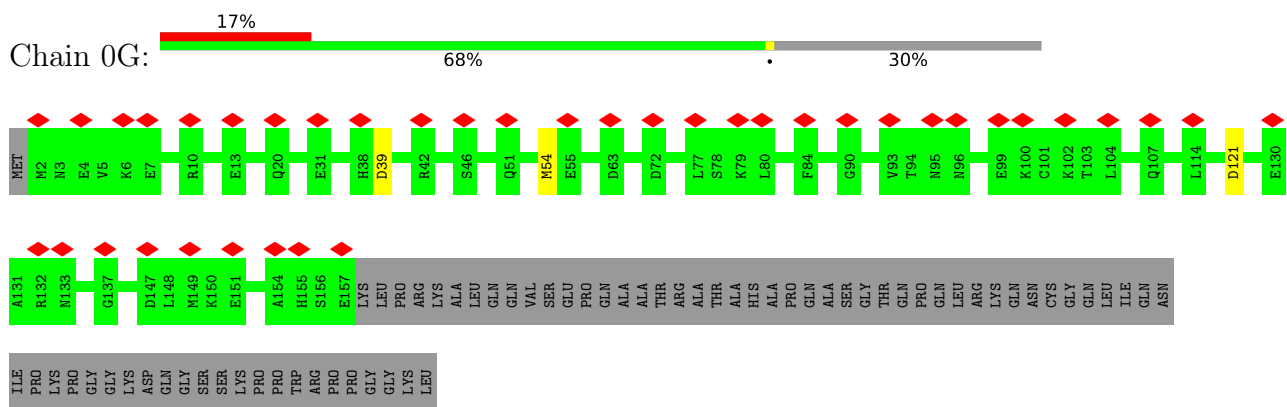
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
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69	UL	1	Total 28	C 10	N 5	O 11	P 2	0
69	UN	1	Total 28	C 10	N 5	O 11	P 2	0
69	VB	1	Total 28	C 10	N 5	O 11	P 2	0
69	VD	1	Total 28	C 10	N 5	O 11	P 2	0
69	VF	1	Total 28	C 10	N 5	O 11	P 2	0
69	VH	1	Total 28	C 10	N 5	O 11	P 2	0
69	VJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	VL	1	Total 28	C 10	N 5	O 11	P 2	0
69	VN	1	Total 28	C 10	N 5	O 11	P 2	0
69	WB	1	Total 28	C 10	N 5	O 11	P 2	0
69	WD	1	Total 28	C 10	N 5	O 11	P 2	0
69	WF	1	Total 28	C 10	N 5	O 11	P 2	0
69	WH	1	Total 28	C 10	N 5	O 11	P 2	0
69	WJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	WL	1	Total 28	C 10	N 5	O 11	P 2	0
69	WN	1	Total 28	C 10	N 5	O 11	P 2	0



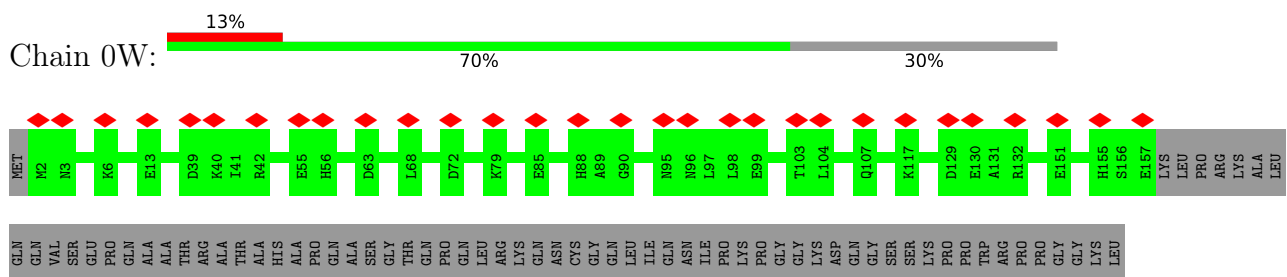
• Molecule 2: Sperm acrosome associated 9



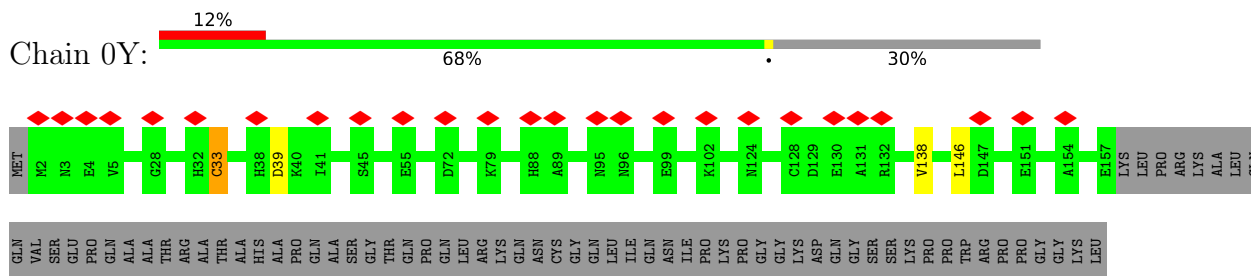
• Molecule 2: Sperm acrosome associated 9



• Molecule 2: Sperm acrosome associated 9



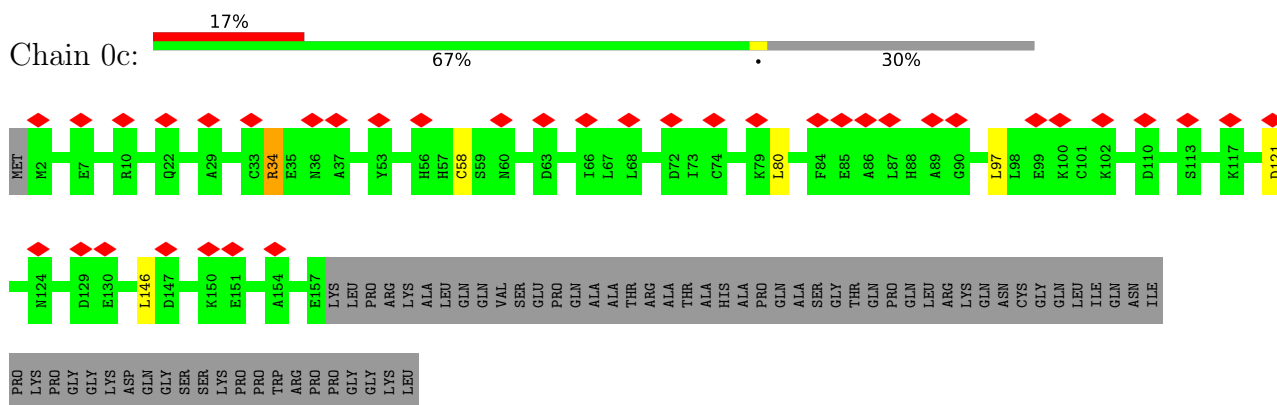
• Molecule 2: Sperm acrosome associated 9



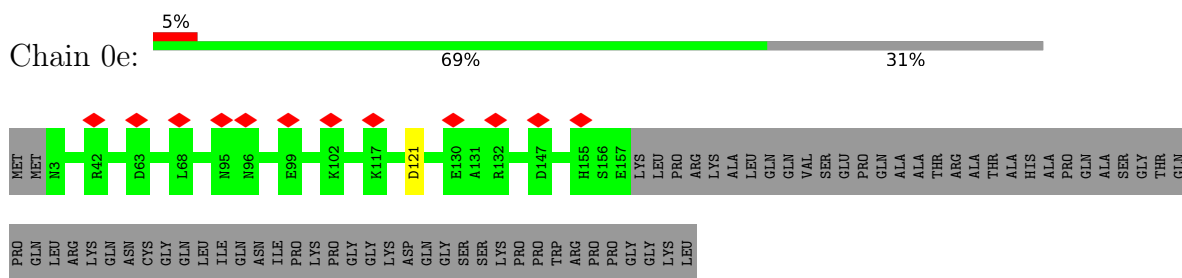
• Molecule 2: Sperm acrosome associated 9



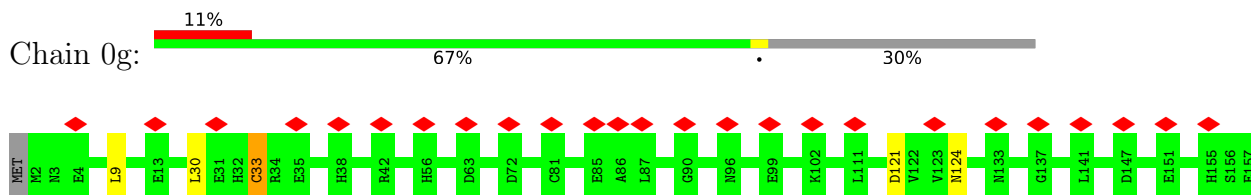
• Molecule 2: Sperm acrosome associated 9



• Molecule 2: Sperm acrosome associated 9



• Molecule 2: Sperm acrosome associated 9



SER GLU PRO GLN ALA ALA THR ARG ALA ALA HIS PRO GLN SER GLY THR THR ALA ALA HIS PRO GLN SER SER SER SER PRO PRO TRP ARG PRO PRO GLY LYS LEU

Molecule 2: Sperm acrosome associated 9



MET M2 N3 E4 V5 K6 E7 R10 E13 Q14 K15 Y16 K17 I18 Q21 C33 R34 E35 N36 I41 R42 S45 Y53 M54 E55 H56 M60 D63 R64 R65 I66 L67 L68 L71 D72 I73 C74 S75 E76 L77 S78 K79 L80 C81 Q82 H83 F84 E85 A89

G90 T91 N95 N96 L97 L98 E99 K100 C101 K102 T103 L104 D110 H120 H121 H124 H125 L126 S127 C128 R132 L141 I142 L146 D147 K150 A154 E157 LEU PRO ARG LYS ALA ALA LEU GLN VAL SER SER SER LEU ALA HIS

ALA PRO GLN ALA SER GLY THR PRO GLN LEU ARG LYS GLN ASN CYS GLY GLN ILE LEU ASN PRO LYS PRO GLY LYS ASP GLN SER LYS LYS PRO TRP ARG PRO PRO GLY LYS LEU

Molecule 2: Sperm acrosome associated 9



MET M2 N3 E4 V5 L9 K17 H32 D39 Y53 H66 F70 L71 D72 K79 L80 C81 K100 D110 D121 L126 E130 M154 E157 LEU PRO ARG LYS ALA ALA LEU GLN VAL SER SER SER LEU ALA HIS

HIS ALA PRO GLN ALA SER GLY THR PRO GLN LEU ARG LYS GLN ASN CYS GLY GLN ILE LEU ASN PRO LYS PRO GLY LYS ASP GLN SER LYS LYS PRO TRP ARG PRO PRO GLY LYS LEU

Molecule 2: Sperm acrosome associated 9



MET M2 N3 E4 V5 L9 R10 E13 E33 D39 K40 I41 Y53 H56 H57 C58 M60 D63 I66 L67 L68 D72 L77 L80 C81 Q82 H83 L87 H88 P92 Y93 N96 L97 K100 L104 D110 D121 E130 M133

L146 D147 K150 A154 E157 LEU LEU ARG LYS ALA ALA LEU GLN VAL SER SER PRO PRO LYS ALA ALA LEU LEU LEU ILE GLN ASN ASN LYS LYS PRO PRO GLY LYS

ASP GLN GLY SER LYS PRO TRP ARG PRO GLN PRO GLY GLY LEU

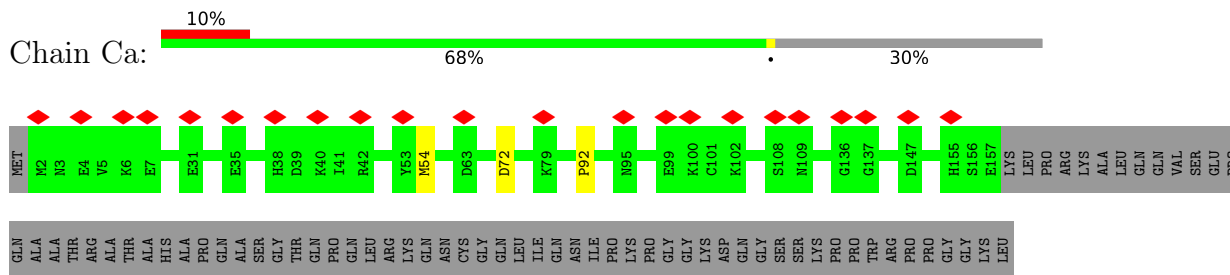
Molecule 2: Sperm acrosome associated 9



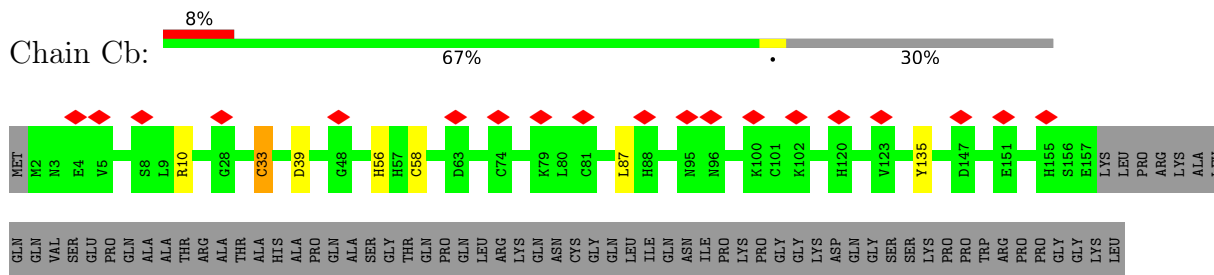
MET M2 N3 E4 E7 E13 E31 R34 K40 V50 Q51 D63 D72 K79 L87 L98 K102 H120 D121 E130 A131 R132 D147 L148 M149 K150 E151 H156 S156 E157 LYS LEU PRO ARG LYS ALA ALA LEU GLN VAL SER SER PRO GLN

ALA THR ARG ALA THR ALA HIS ALA PRO GLN ALA SER GLY THR GLN GLN GLN ARG LYS GLN ASN CYS GLY GLN ILE GLN ASN ILE PRO PRO GLY LYS ASP GLN GLY ASP SER LYS PRO TRP ARG PRO PRO GLY LYS LEU

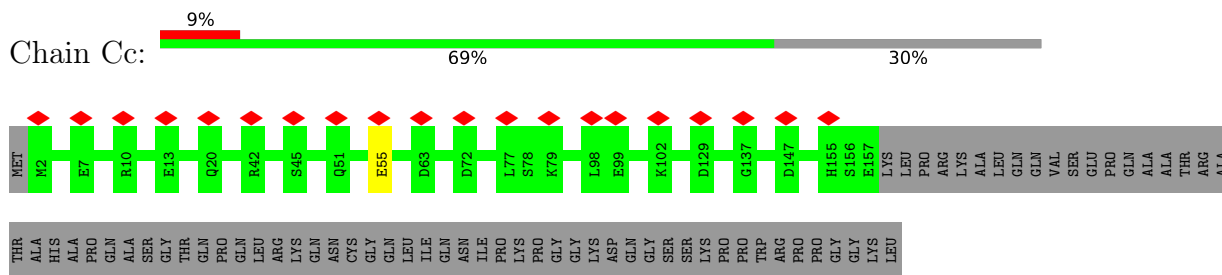
• Molecule 2: Sperm acrosome associated 9



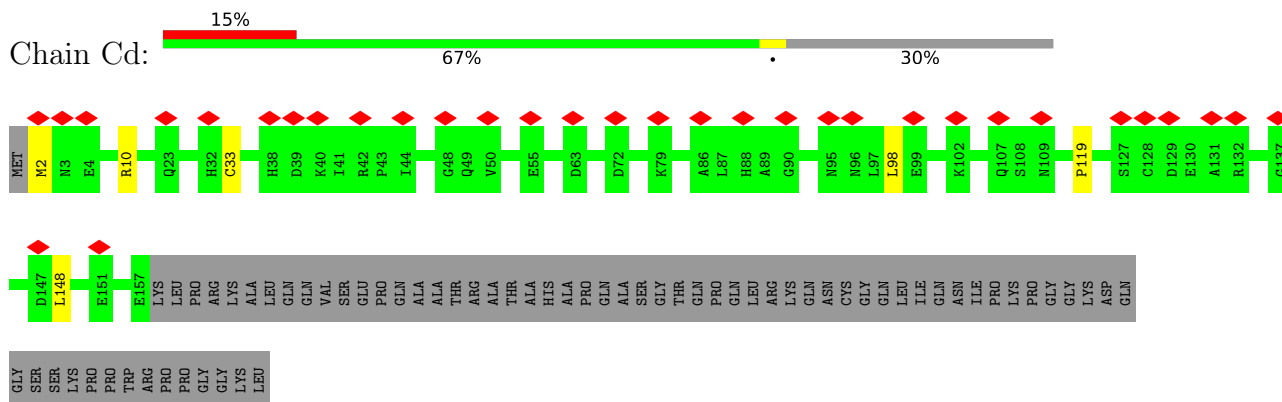
• Molecule 2: Sperm acrosome associated 9



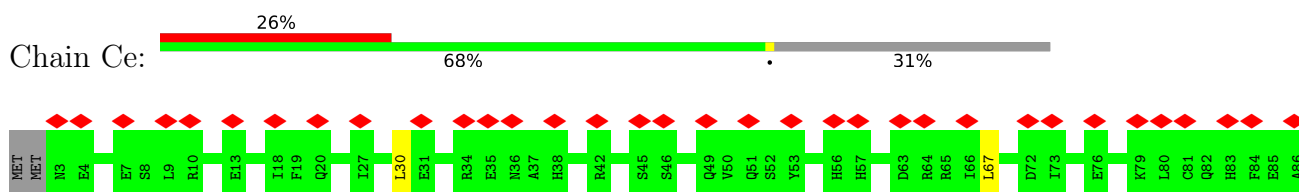
• Molecule 2: Sperm acrosome associated 9

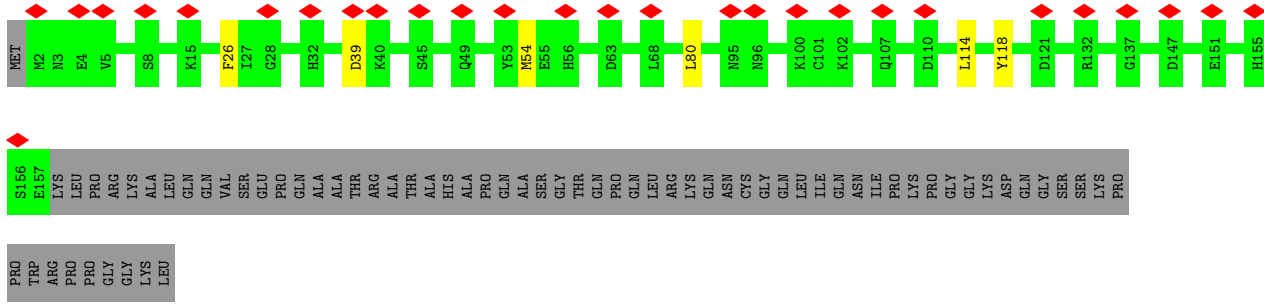


• Molecule 2: Sperm acrosome associated 9

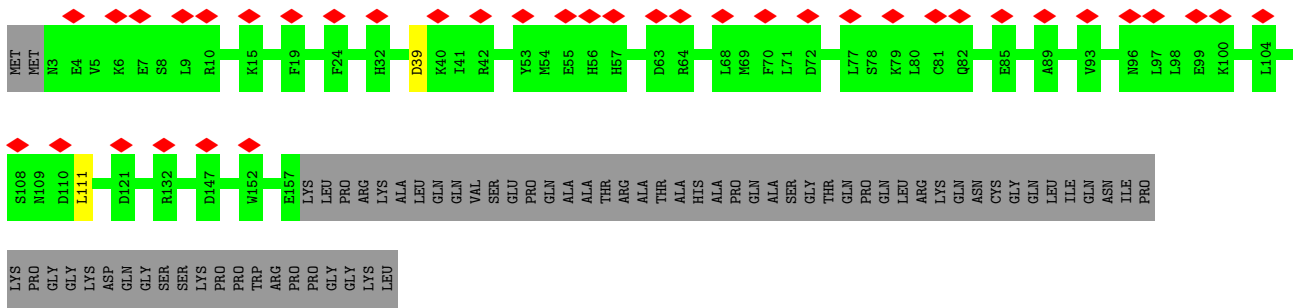


• Molecule 2: Sperm acrosome associated 9

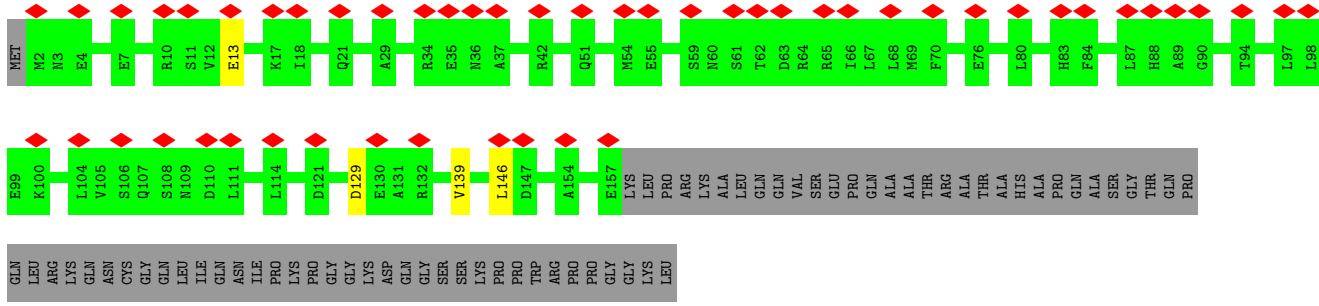




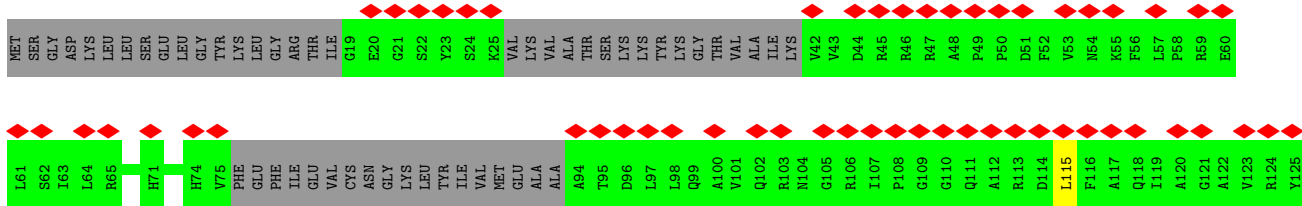
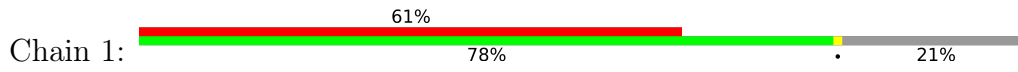
• Molecule 2: Sperm acrosome associated 9



• Molecule 2: Sperm acrosome associated 9

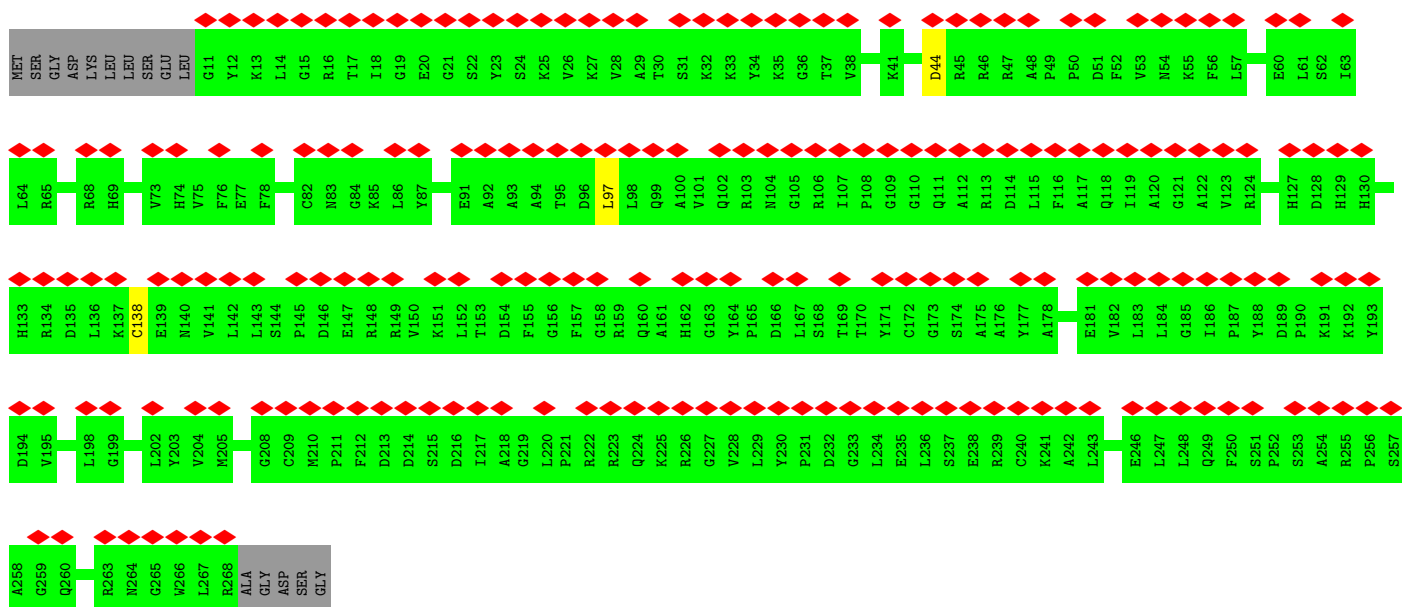
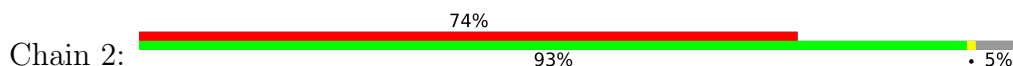


• Molecule 3: Testis specific serine kinase 6

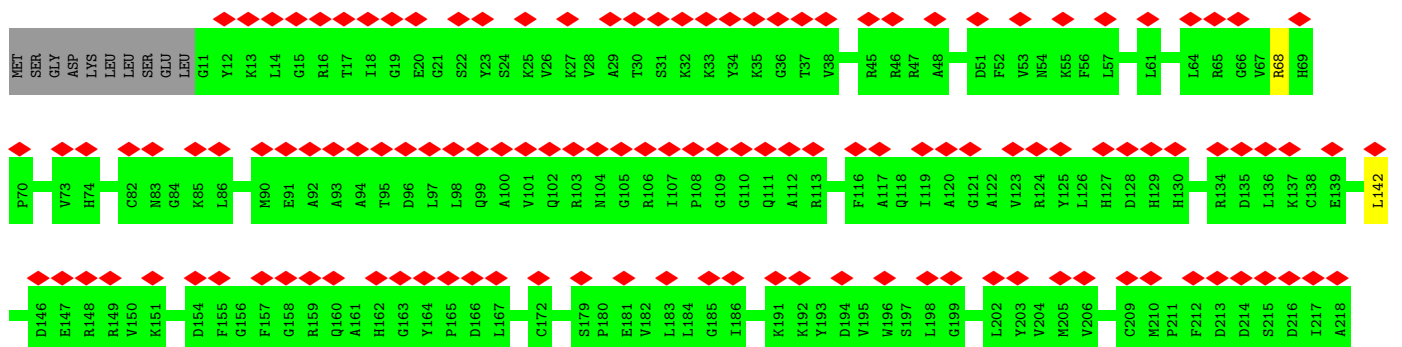
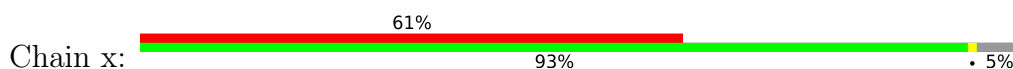


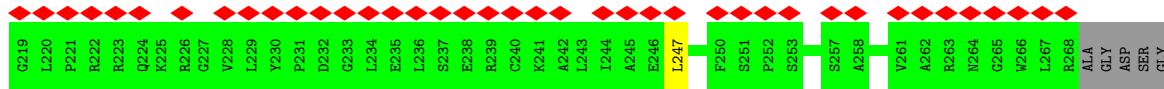


• Molecule 3: Testis specific serine kinase 6

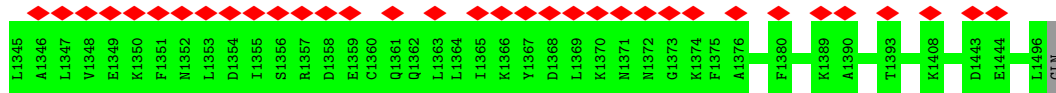
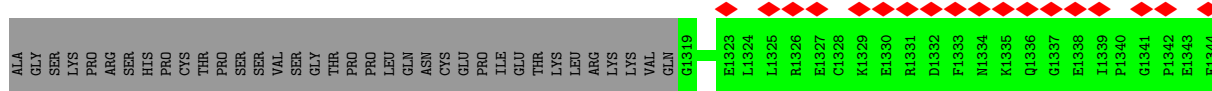


• Molecule 3: Testis specific serine kinase 6

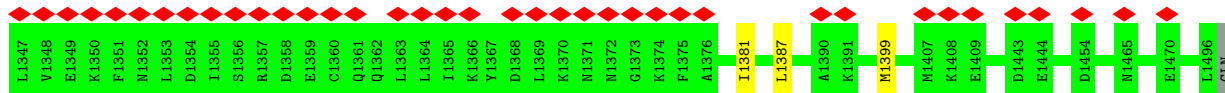
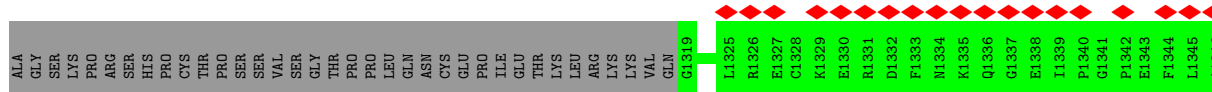




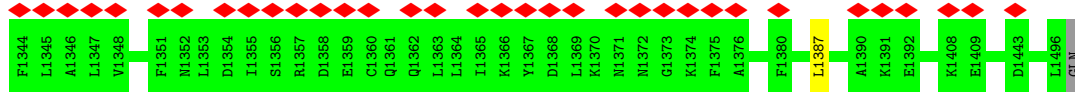
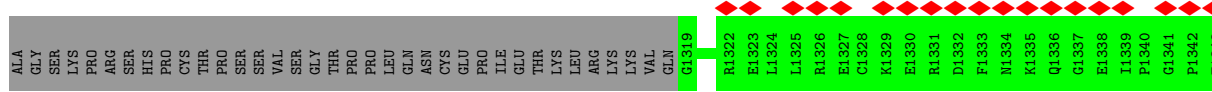
• Molecule 4: EF-hand domain-containing protein



• Molecule 4: EF-hand domain-containing protein

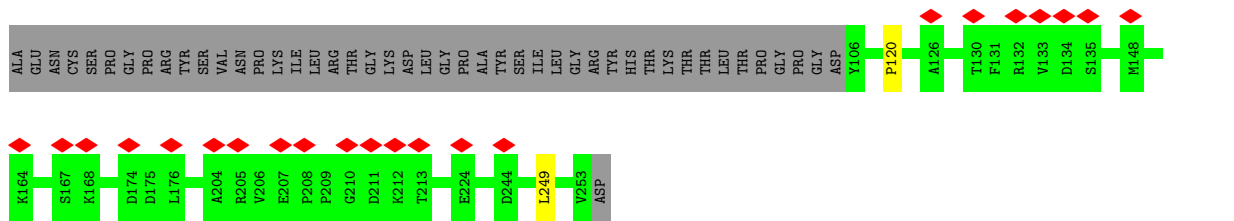


• Molecule 4: EF-hand domain-containing protein

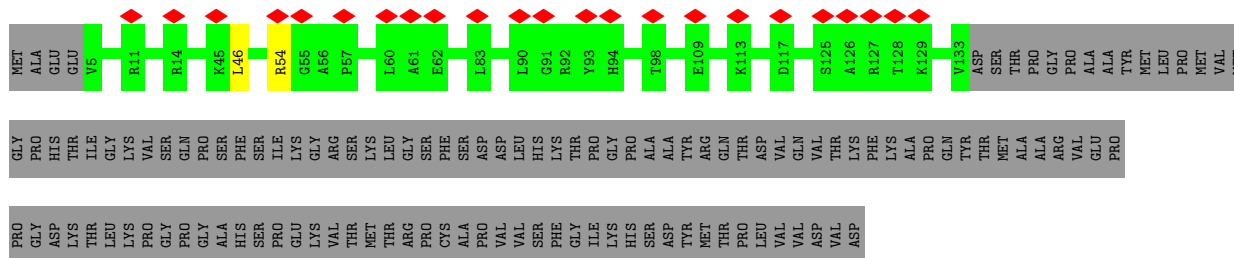


• Molecule 5: ATP6V1F neighbor

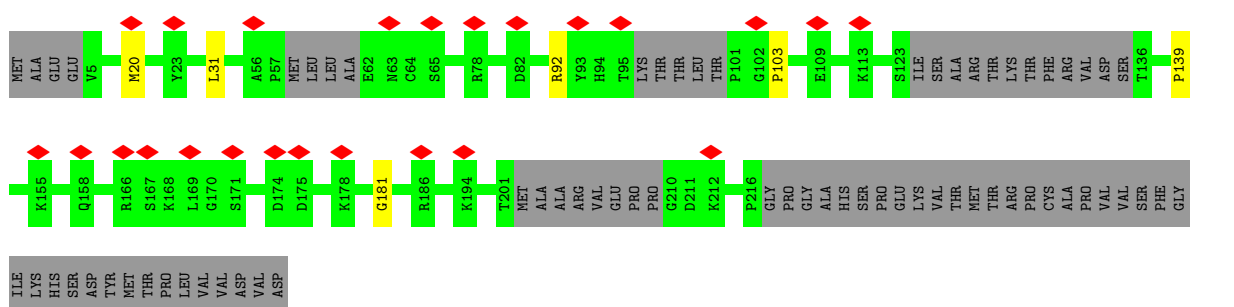




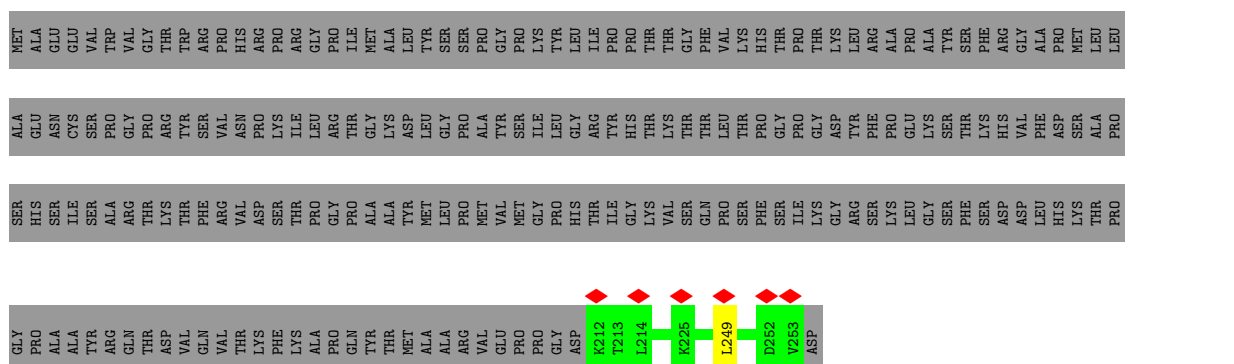
• Molecule 7: Outer dense fiber of sperm tails 3



• Molecule 7: Outer dense fiber of sperm tails 3

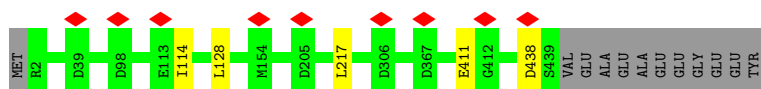


• Molecule 7: Outer dense fiber of sperm tails 3



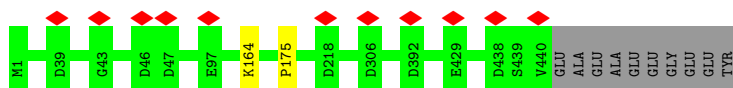
• Molecule 8: Tubulin alpha-3 chain

Chain AA:  96%



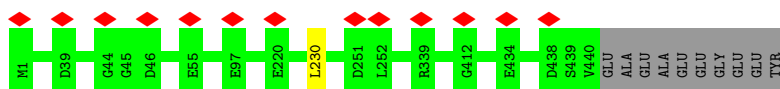
- Molecule 8: Tubulin alpha-3 chain

Chain AC:  97%



- Molecule 8: Tubulin alpha-3 chain

Chain AE:  98%



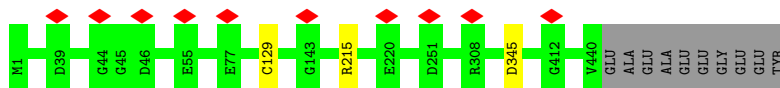
- Molecule 8: Tubulin alpha-3 chain

Chain AG:  97%



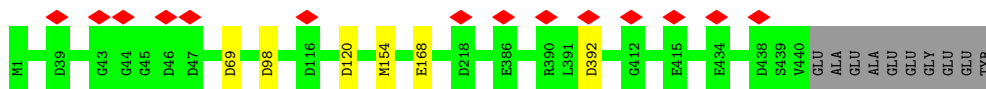
- Molecule 8: Tubulin alpha-3 chain

Chain AI:  97%



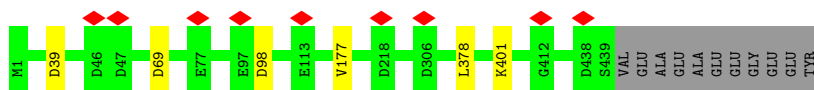
- Molecule 8: Tubulin alpha-3 chain

Chain AK:  96%

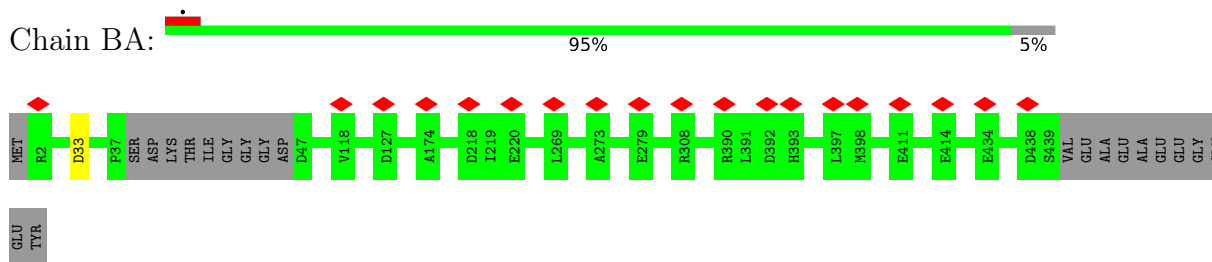


- Molecule 8: Tubulin alpha-3 chain

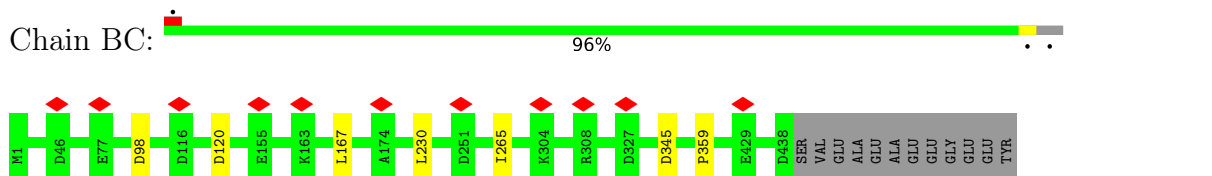
Chain AM:  96%



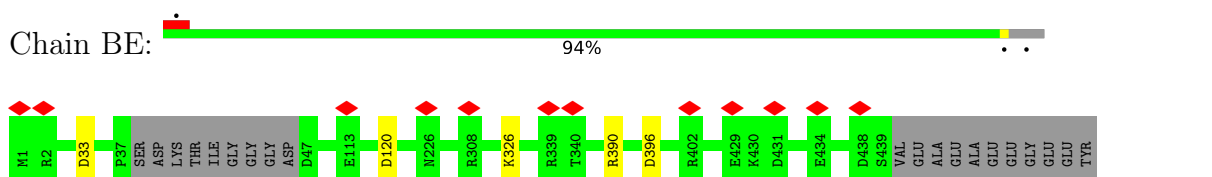
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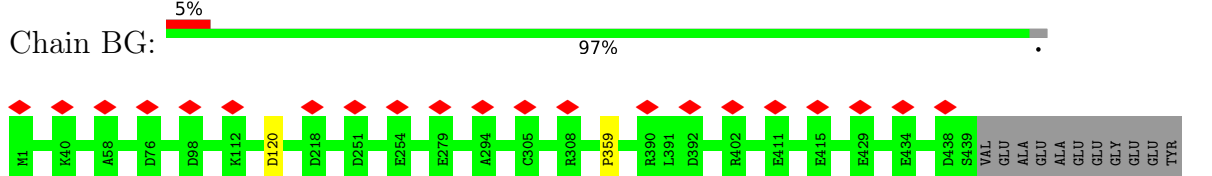
• Molecule 8: Tubulin alpha-3 chain



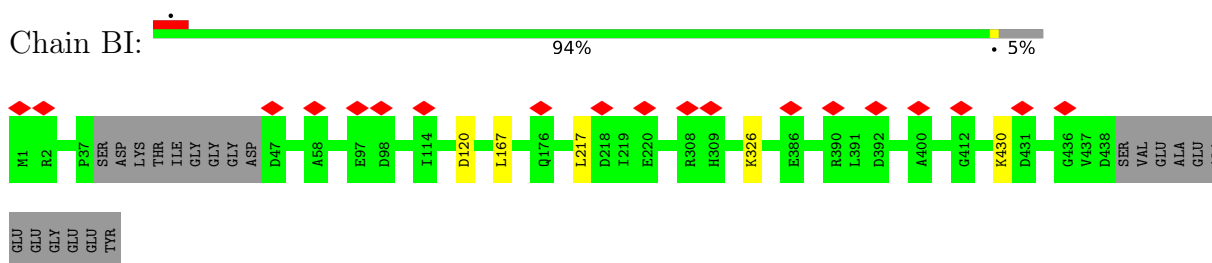
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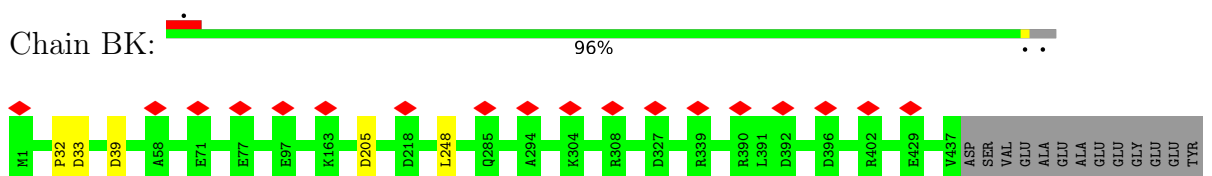
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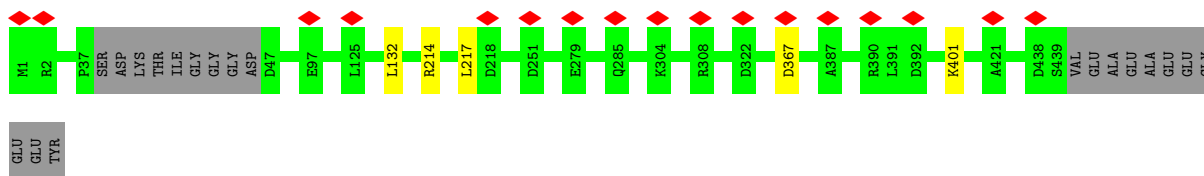
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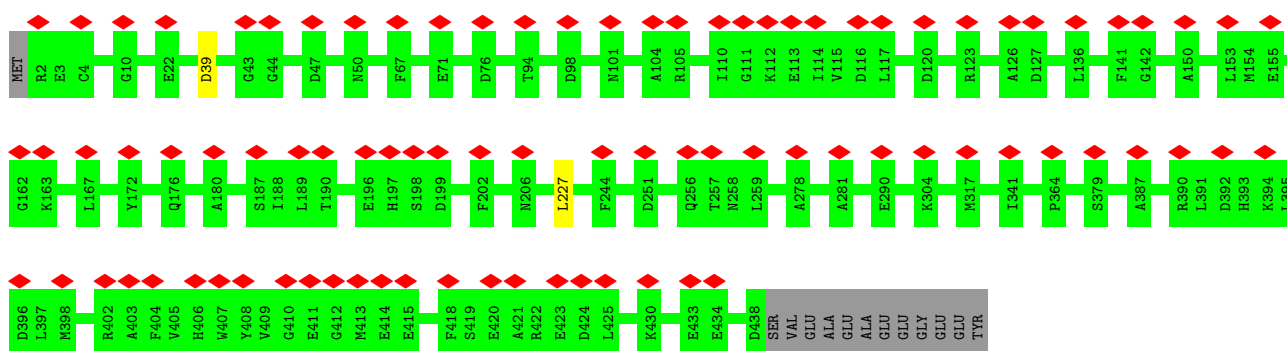
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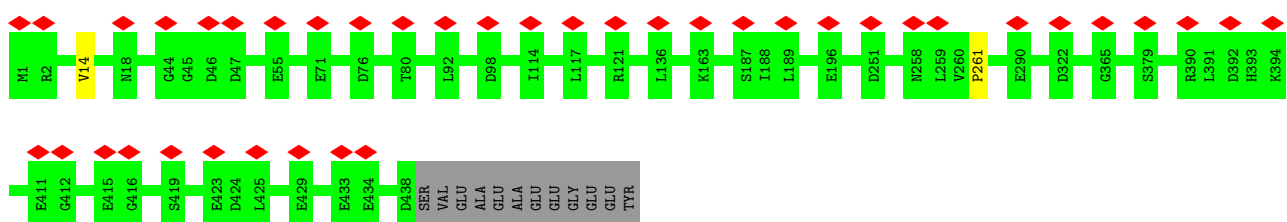
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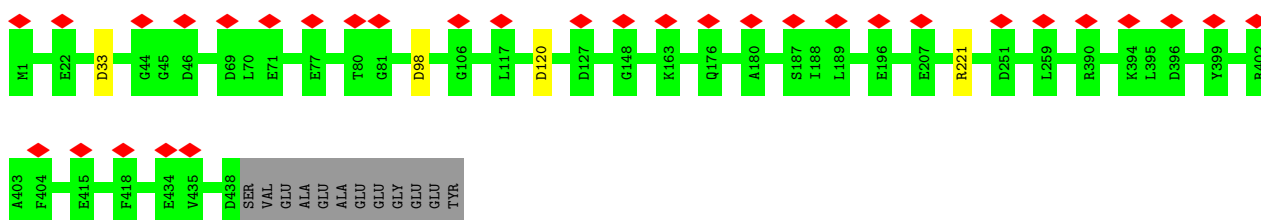
• Molecule 8: Tubulin alpha-3 chain



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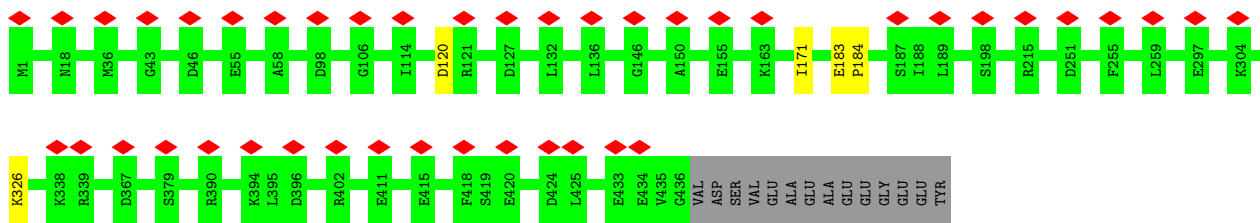


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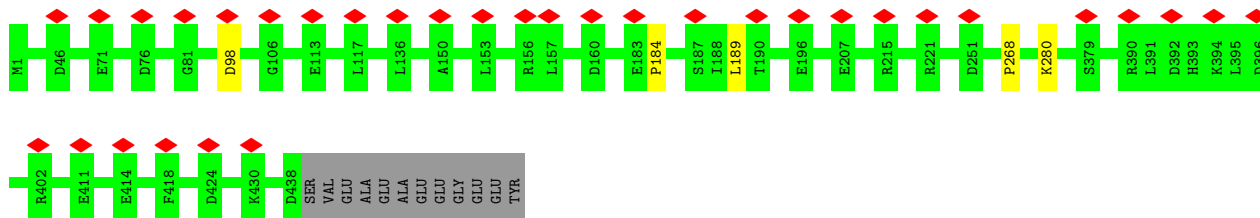


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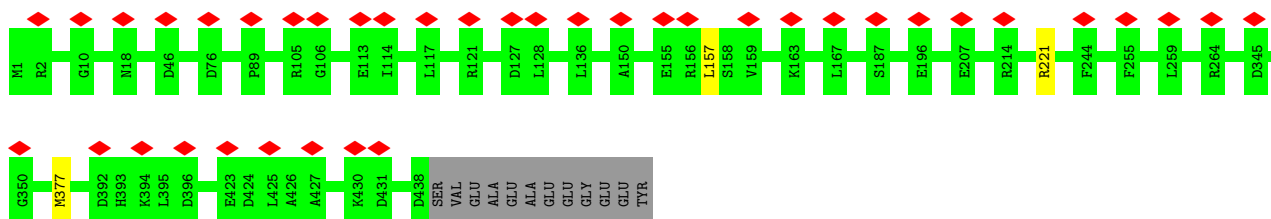




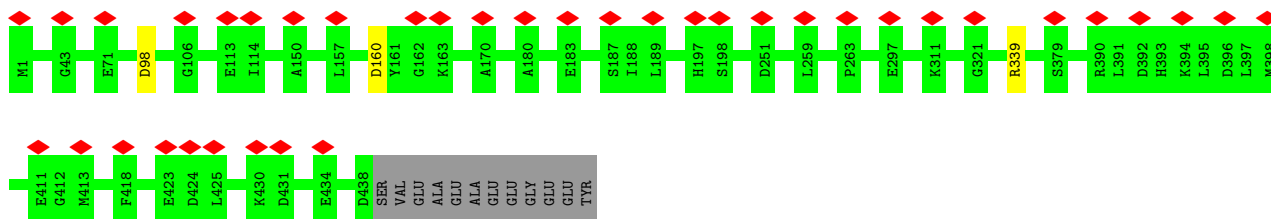
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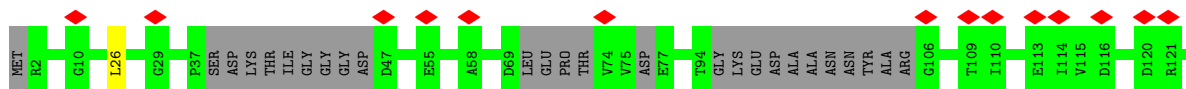
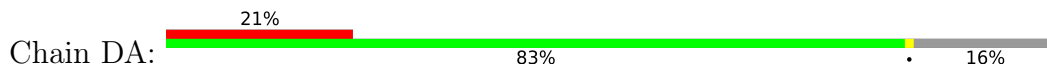
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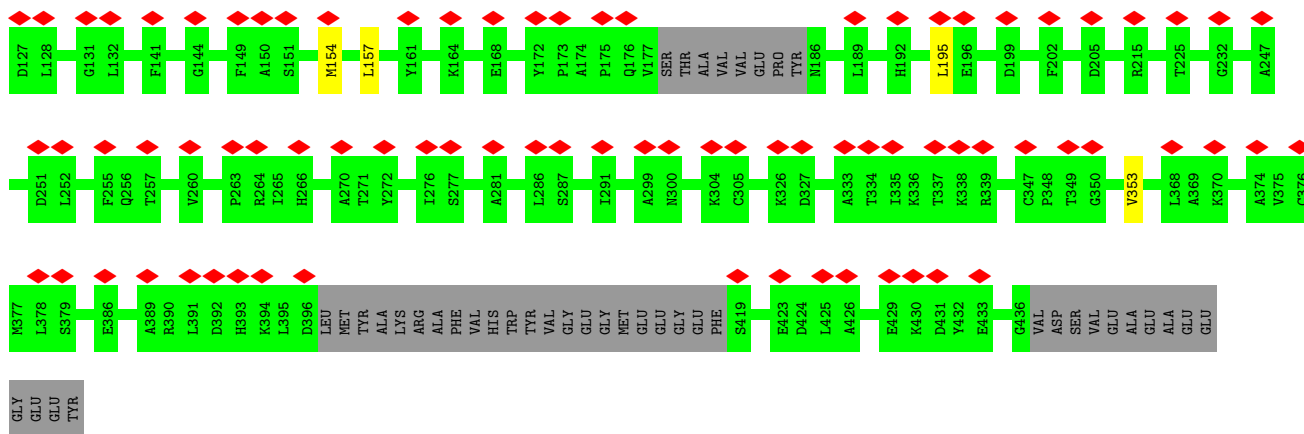


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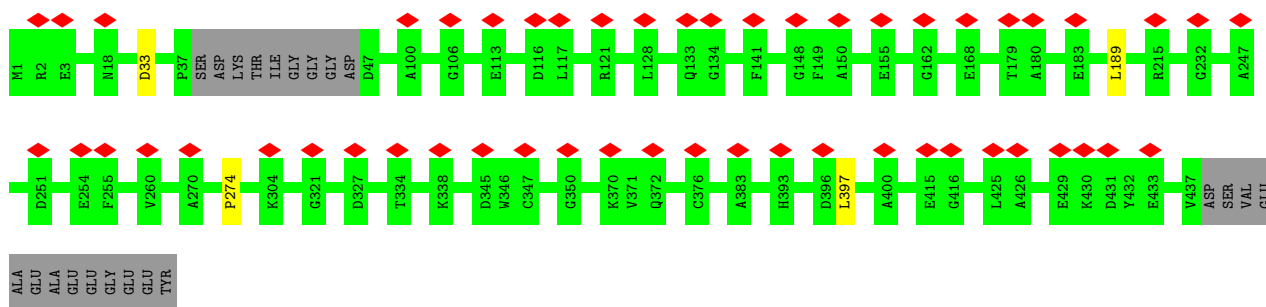


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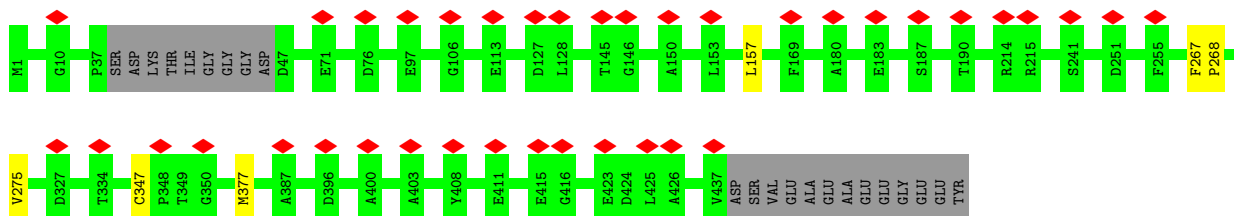




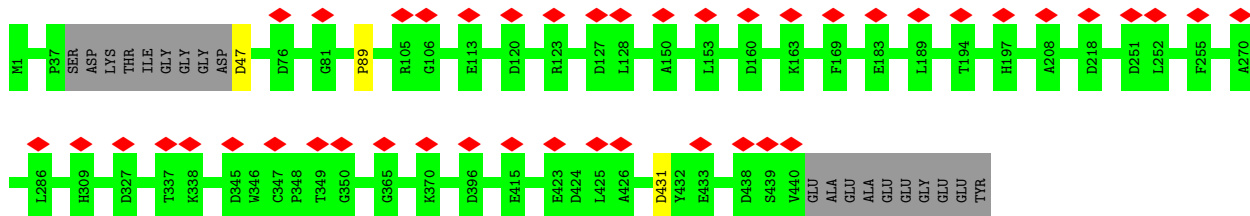
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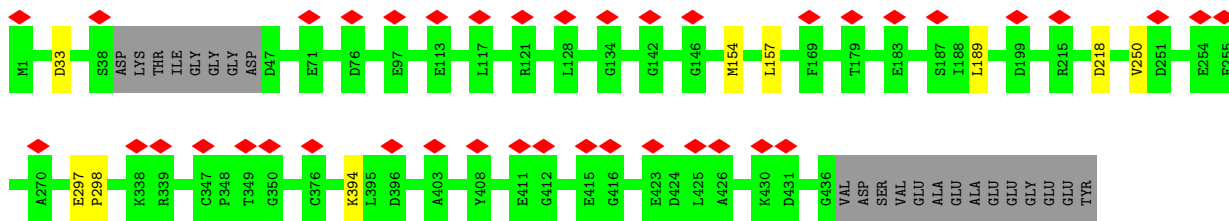
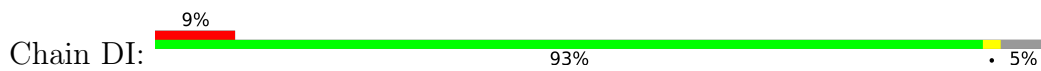
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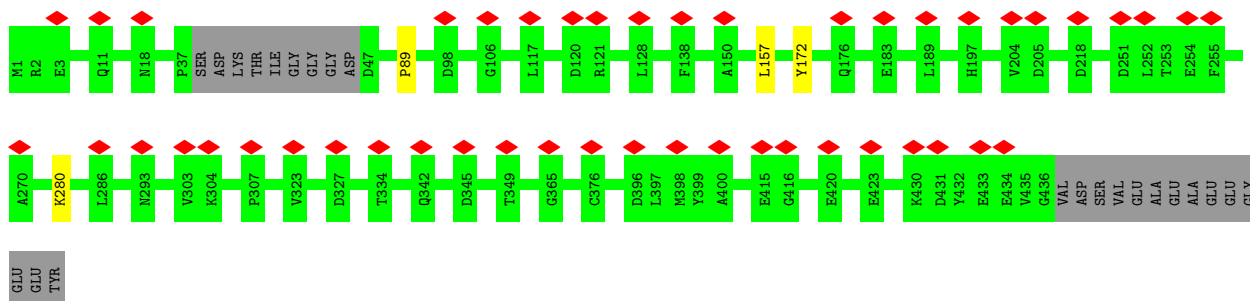
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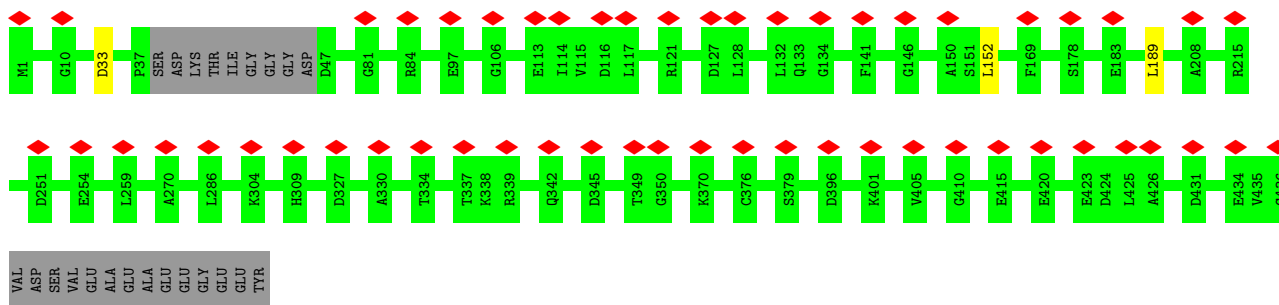
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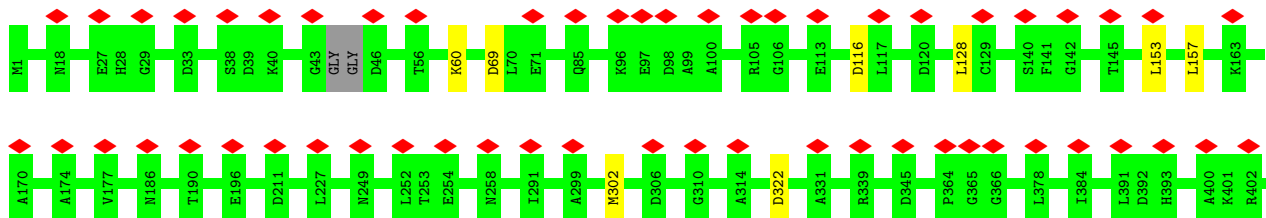
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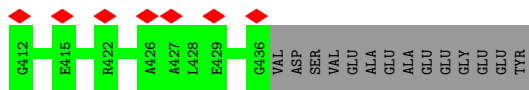


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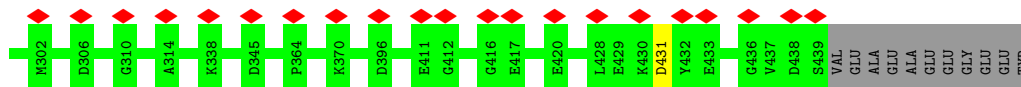
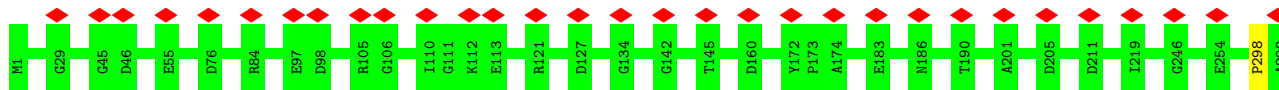


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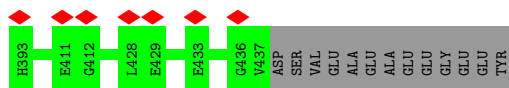
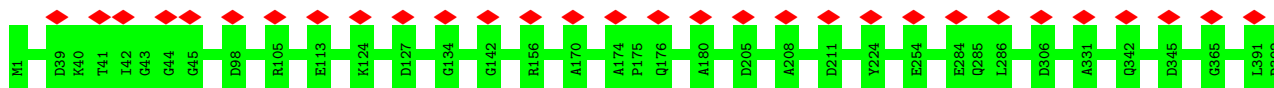




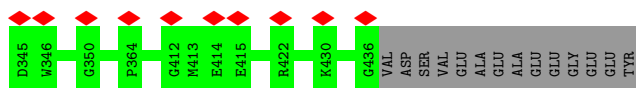
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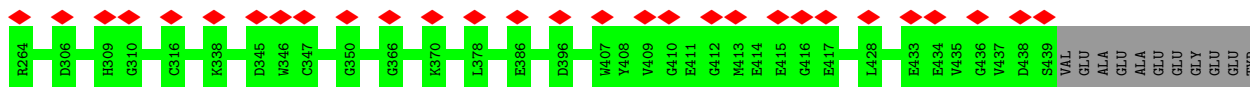
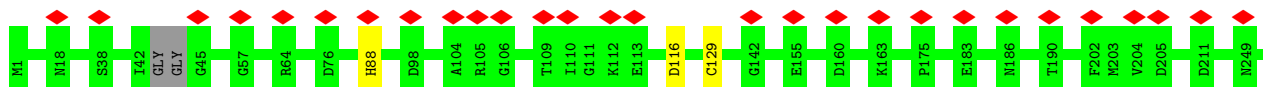
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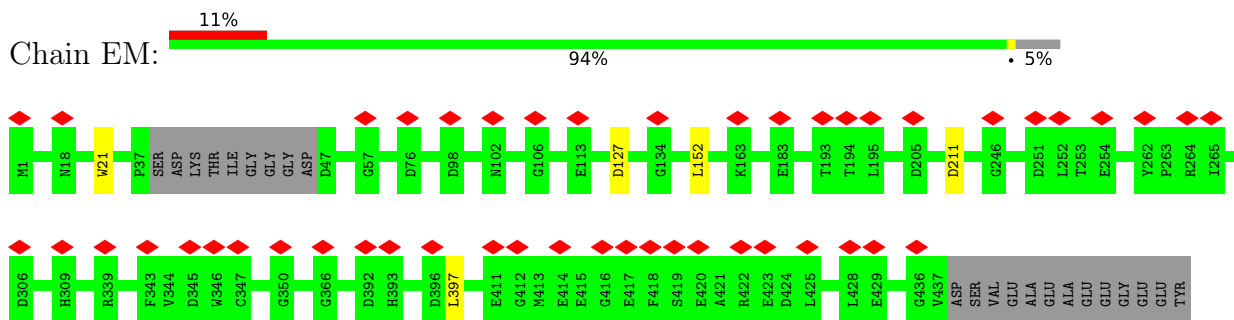
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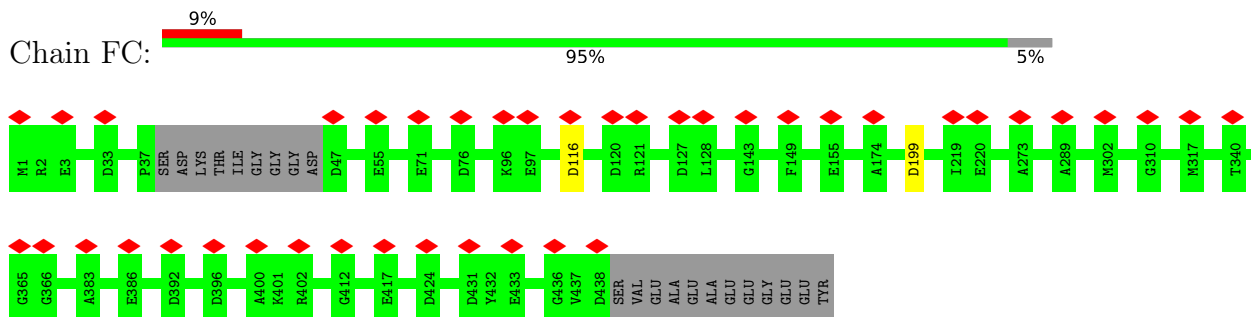
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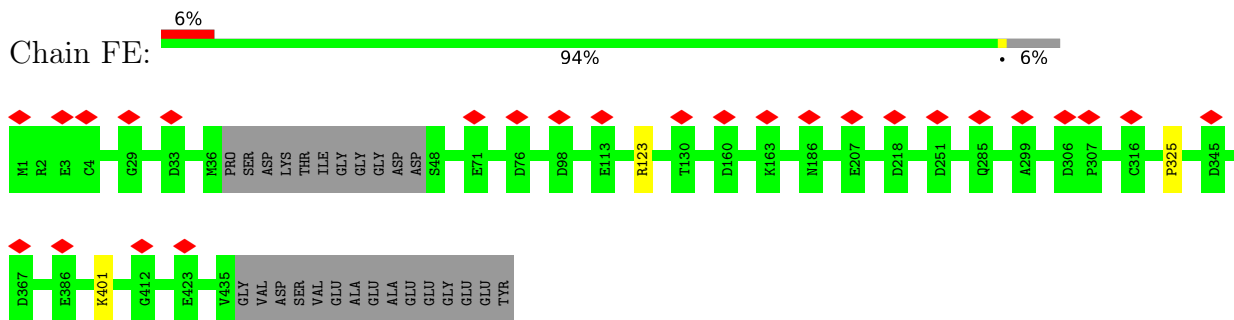
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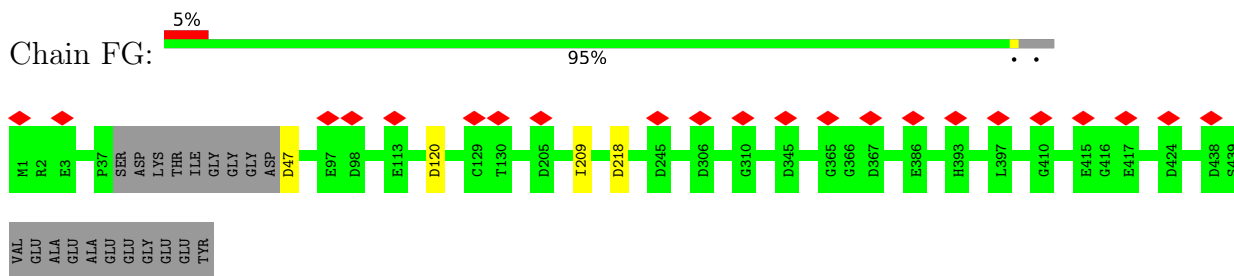
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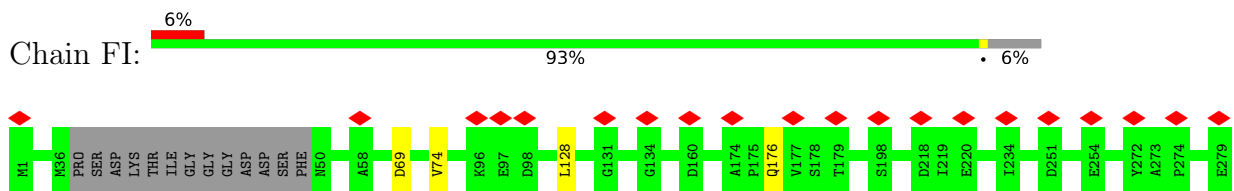
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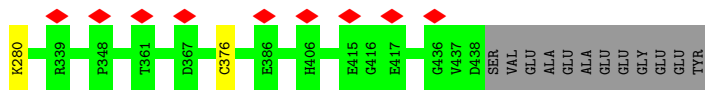


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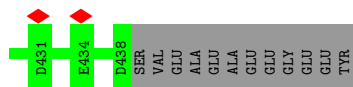
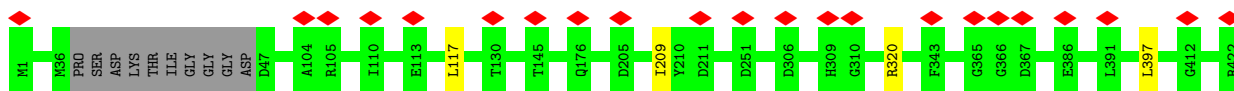


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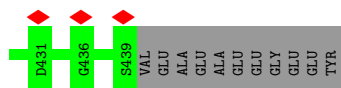
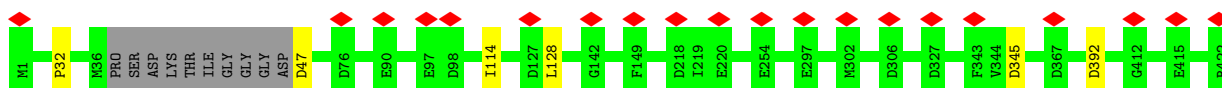




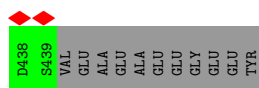
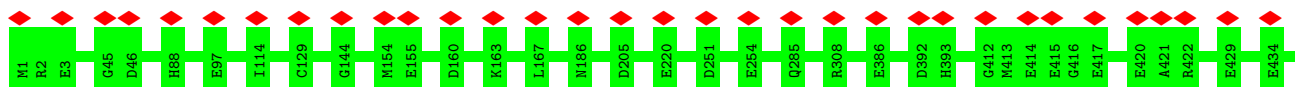
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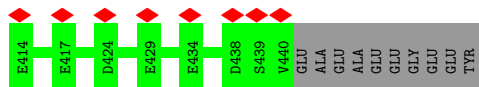
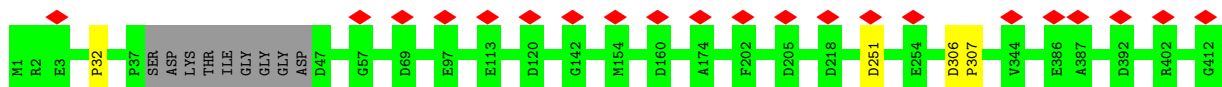
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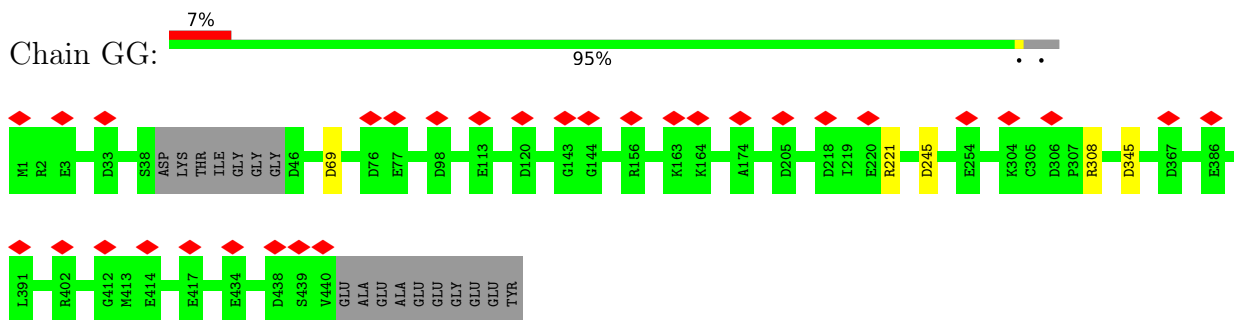
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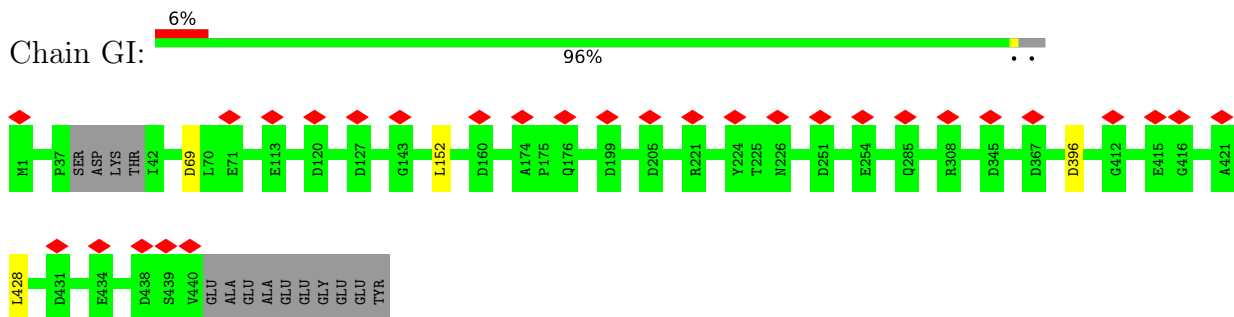
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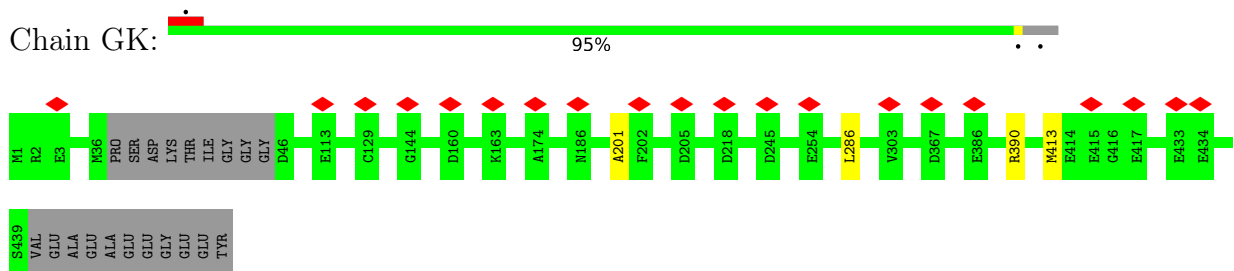
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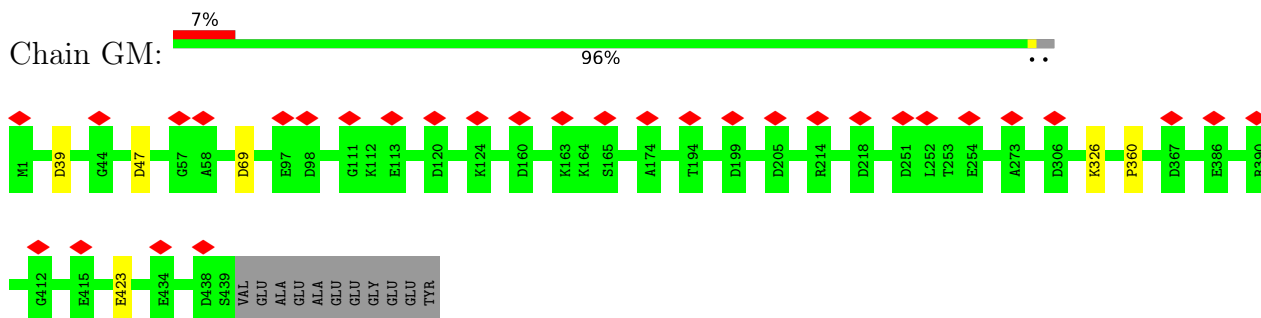
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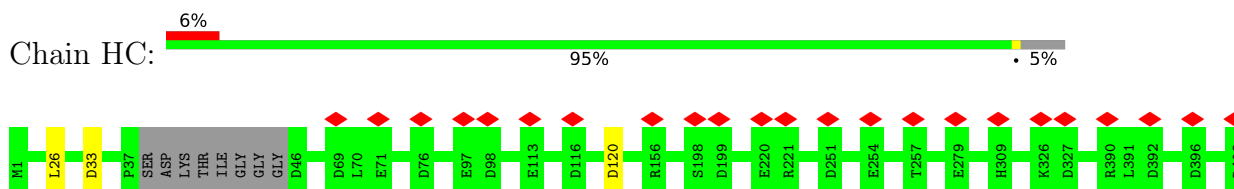
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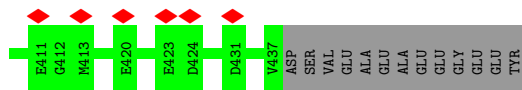


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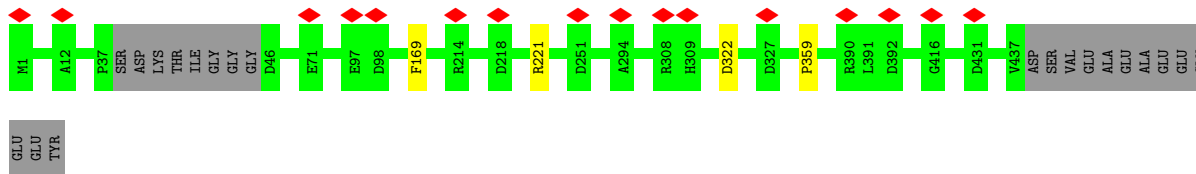


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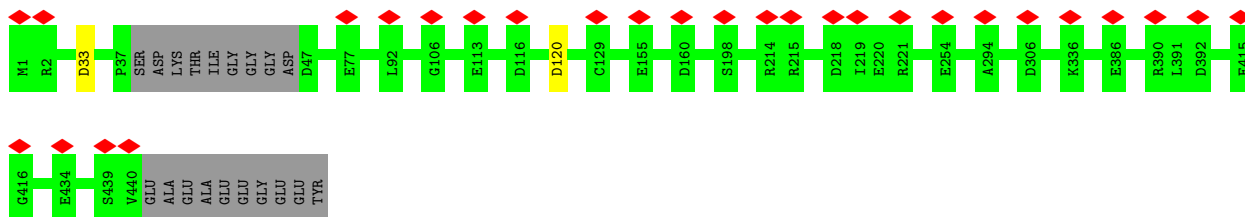




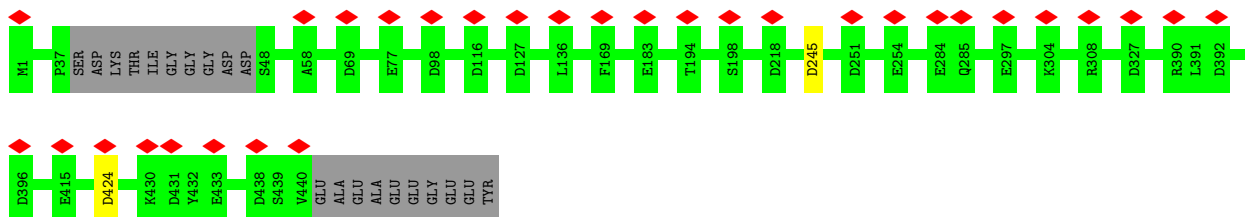
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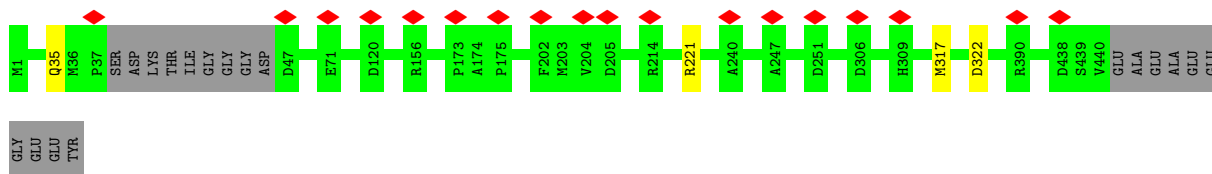
• Molecule 8: Tubulin alpha-3 chain



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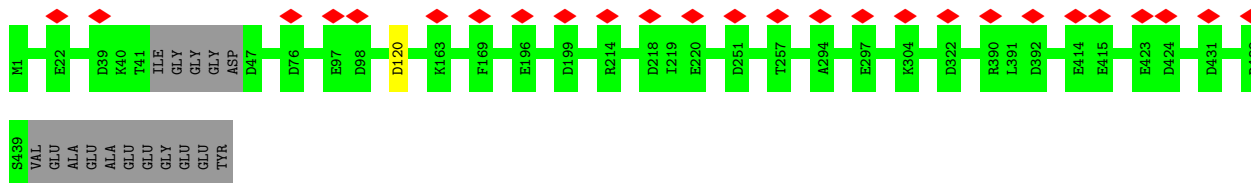


• Molecule 8: Tubulin alpha-3 chain

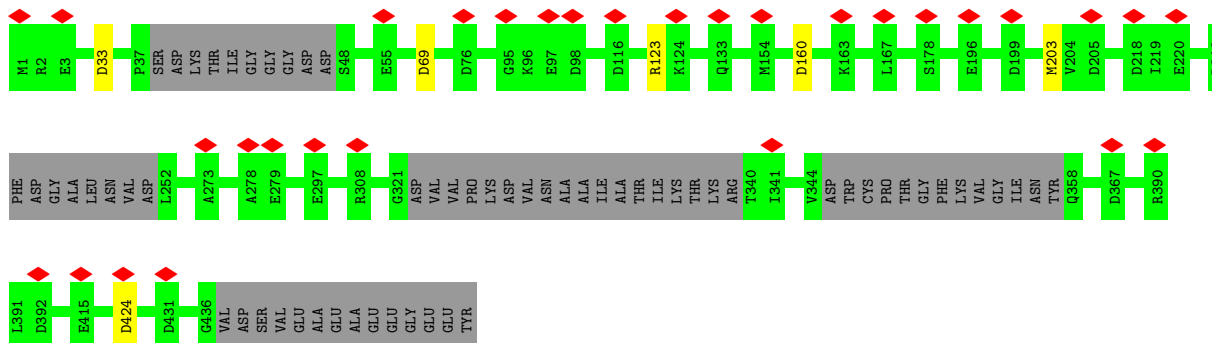
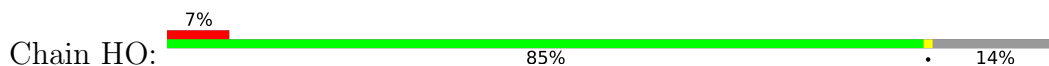


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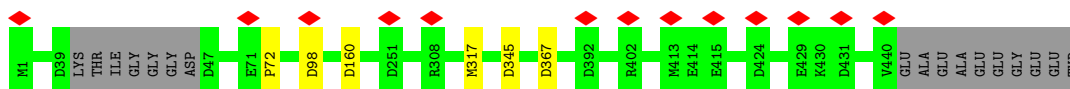




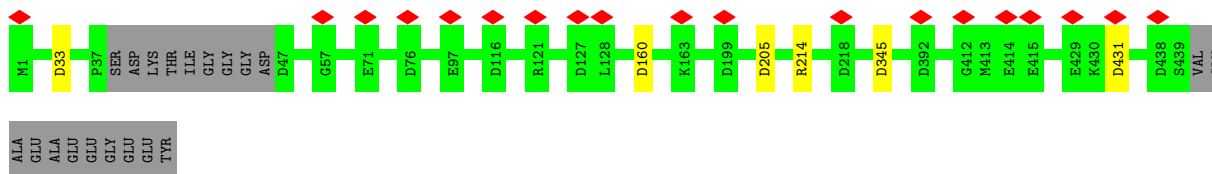
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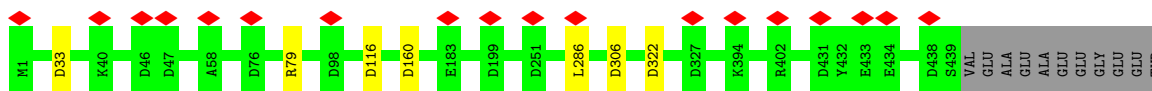
• Molecule 8: Tubulin alpha-3 chain



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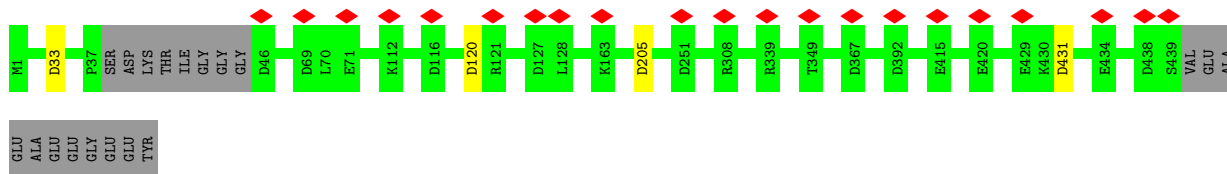


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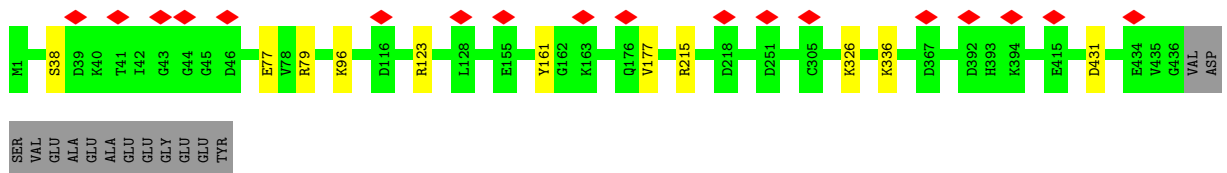


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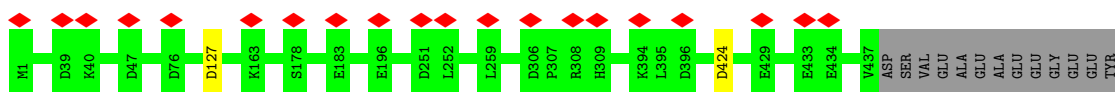




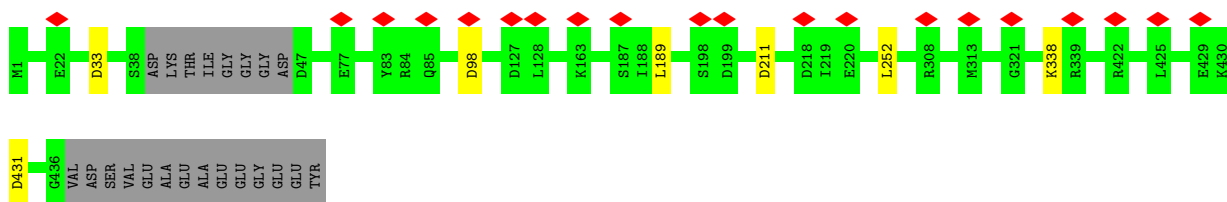
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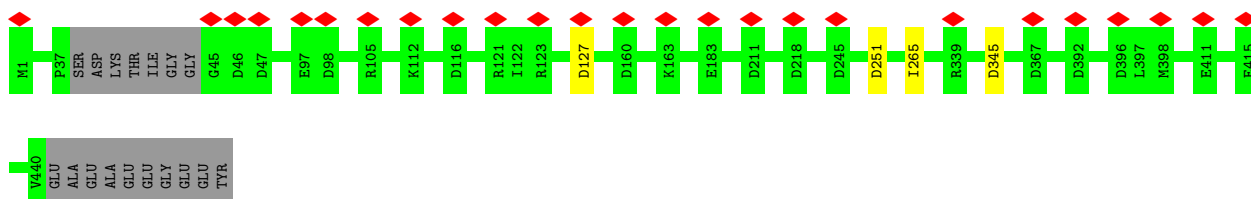
• Molecule 8: Tubulin alpha-3 chain



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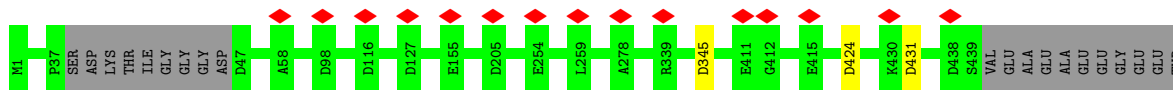


• Molecule 8: Tubulin alpha-3 chain

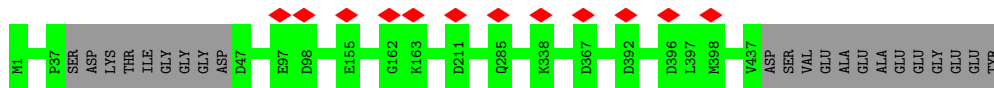


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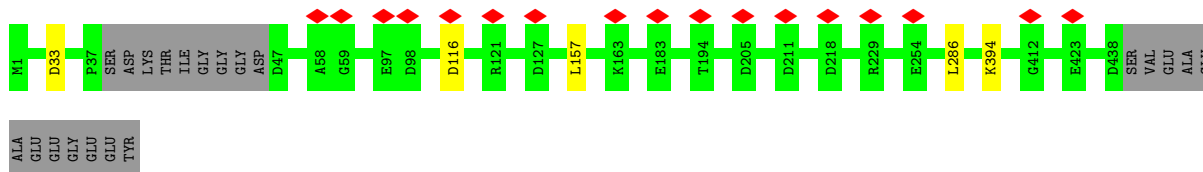




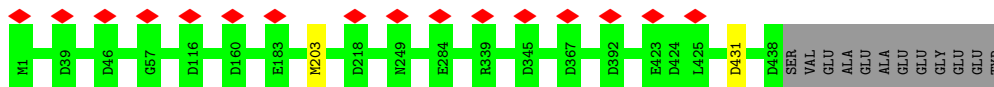
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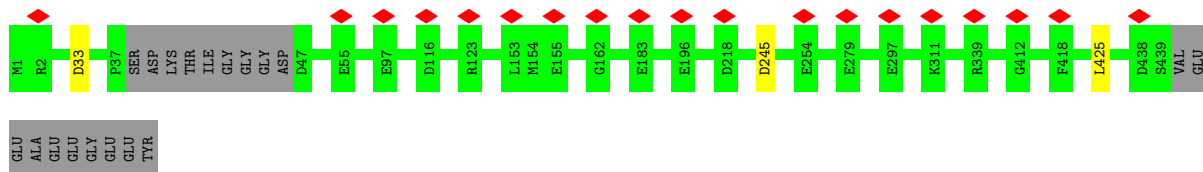
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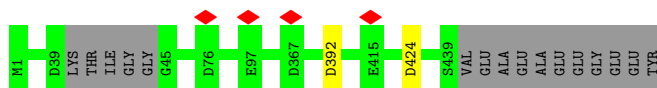
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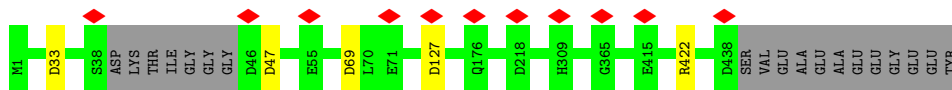


• Molecule 8: Tubulin alpha-3 chain

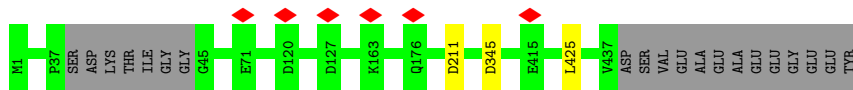


• Molecule 8: Tubulin alpha-3 chain

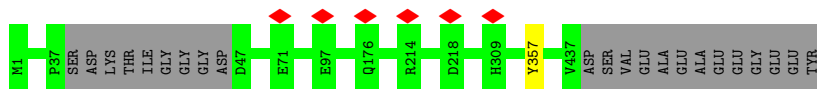




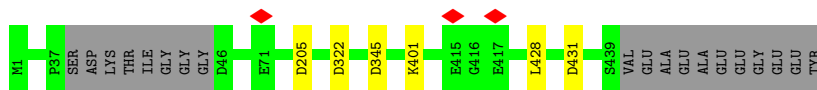
• Molecule 8: Tubulin alpha-3 chain



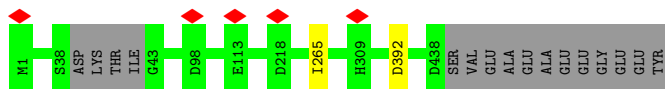
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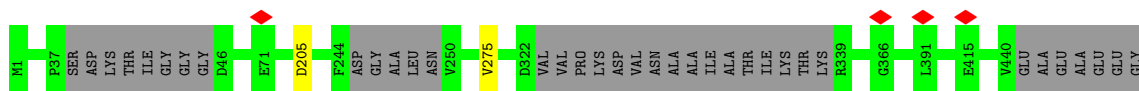
• Molecule 8: Tubulin alpha-3 chain



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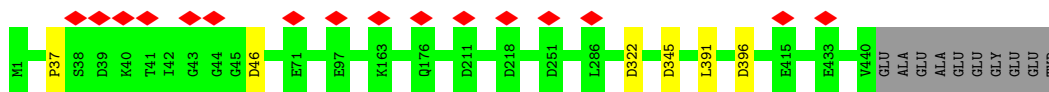


• Molecule 8: Tubulin alpha-3 chain

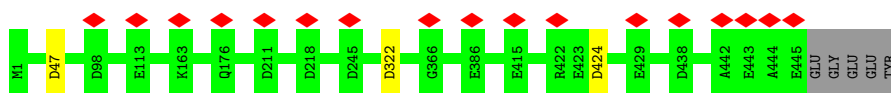


• Molecule 8: Tubulin alpha-3 chain

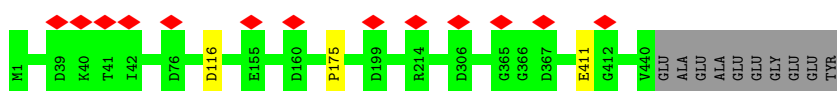




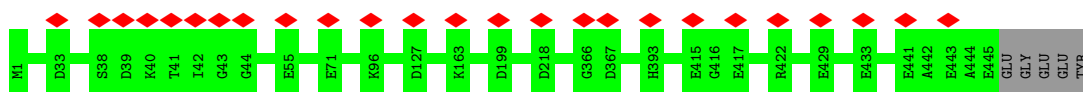
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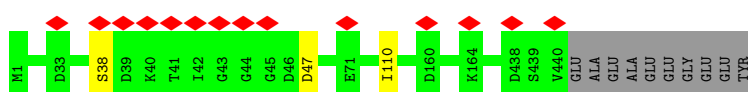
• Molecule 8: Tubulin alpha-3 chain



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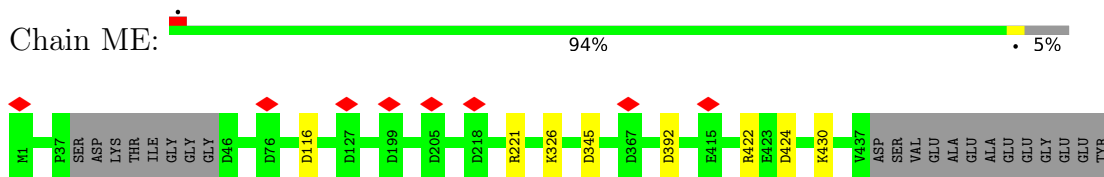
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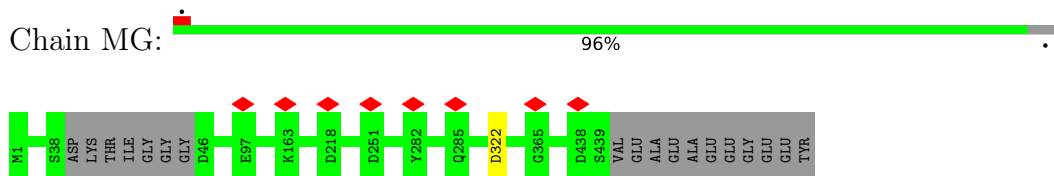
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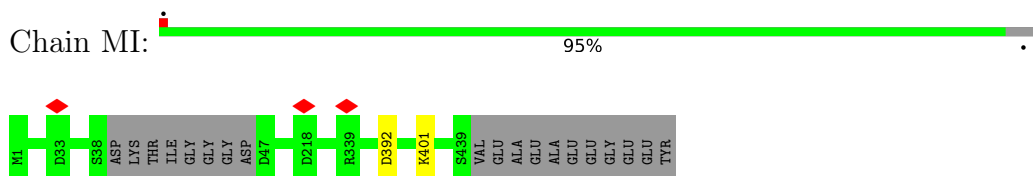
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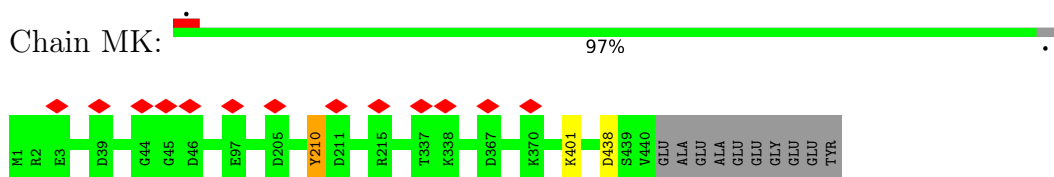
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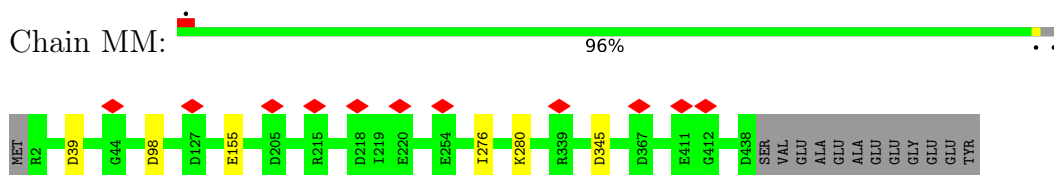
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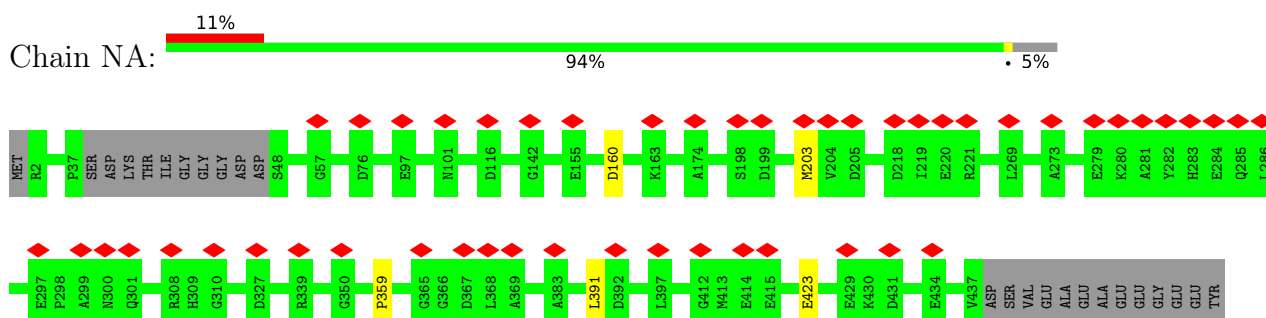
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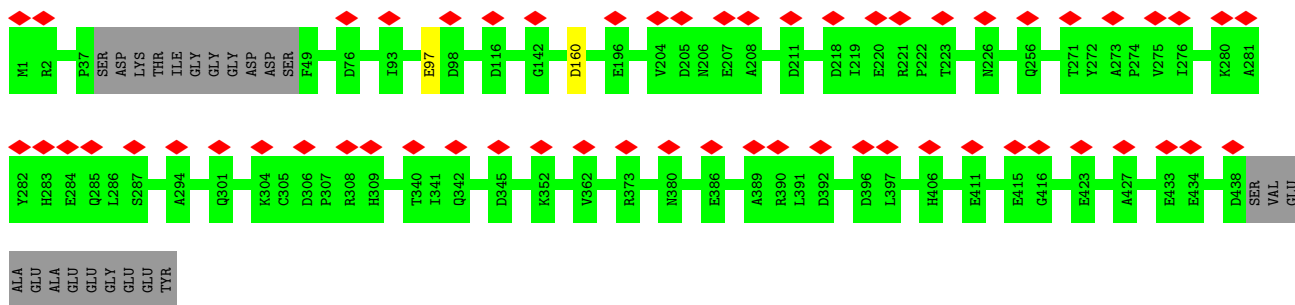


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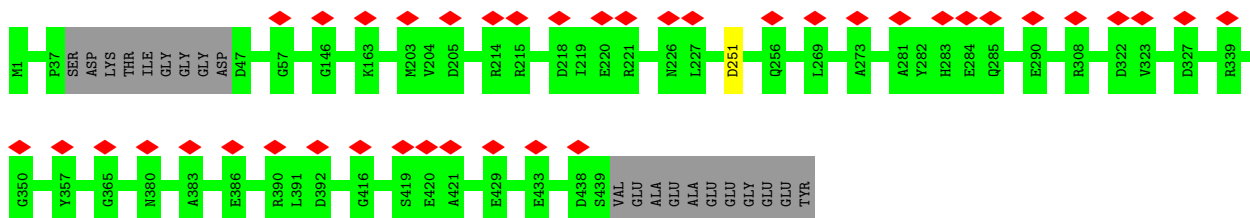


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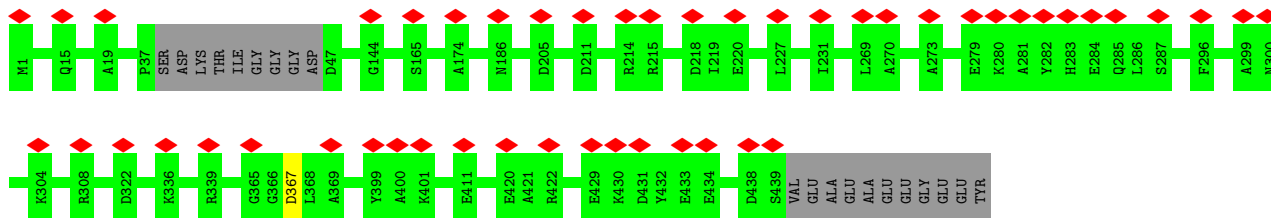




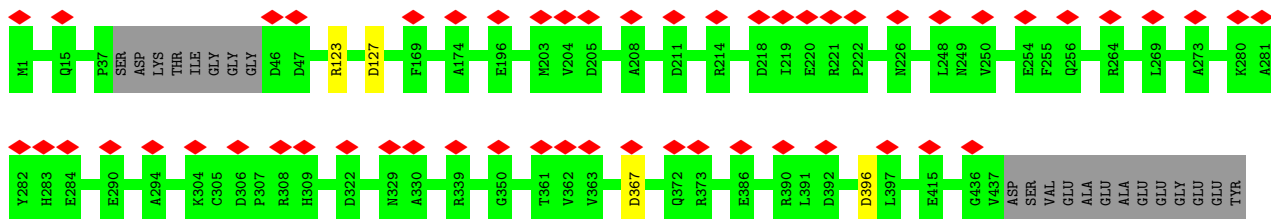
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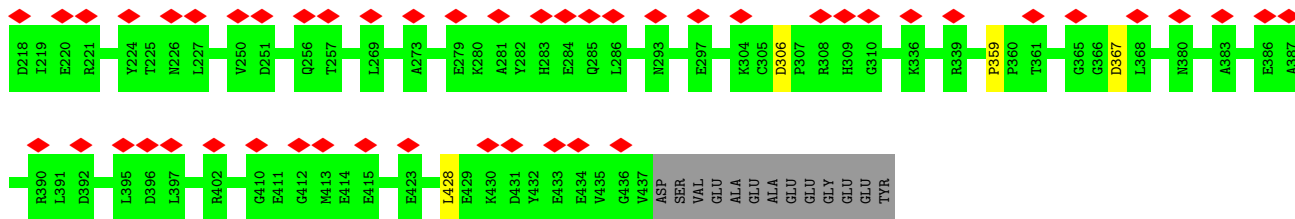


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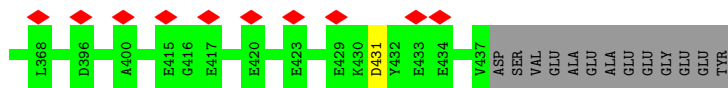


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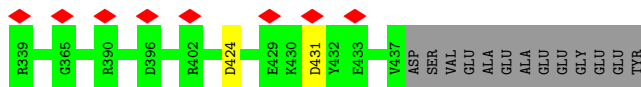
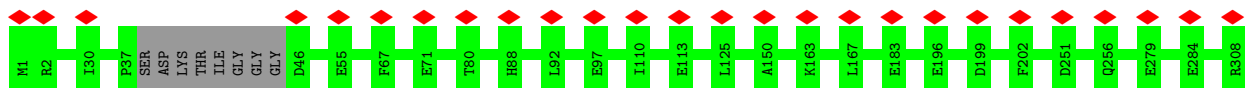




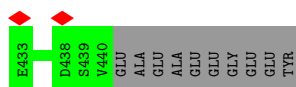
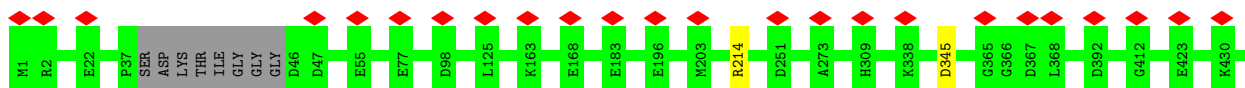
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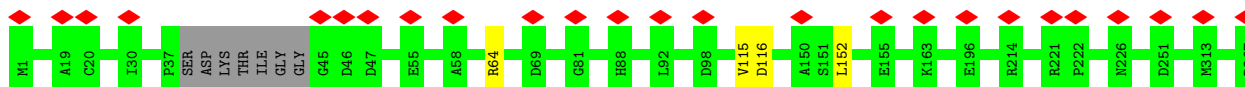
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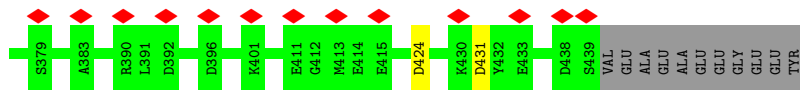


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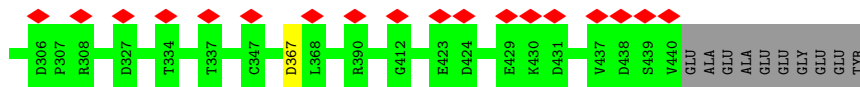
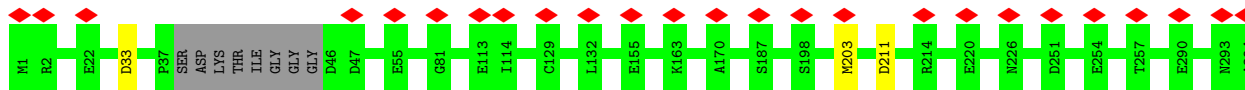


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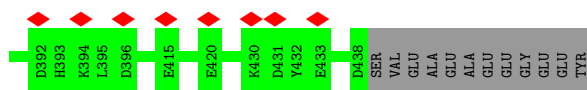
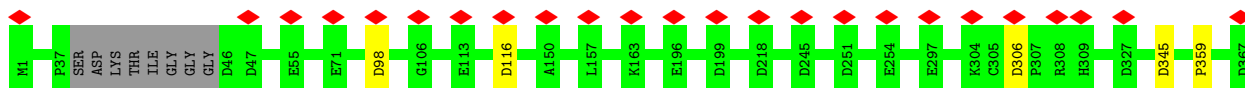




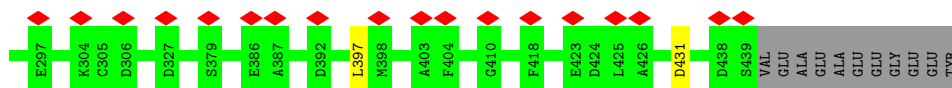
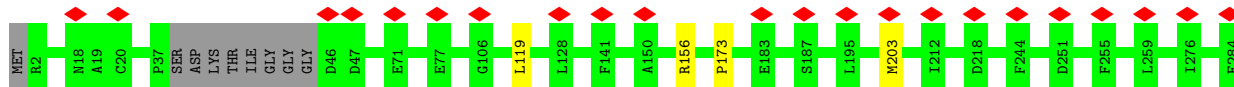
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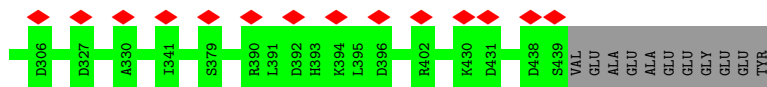
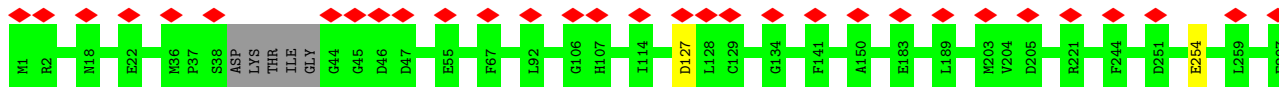
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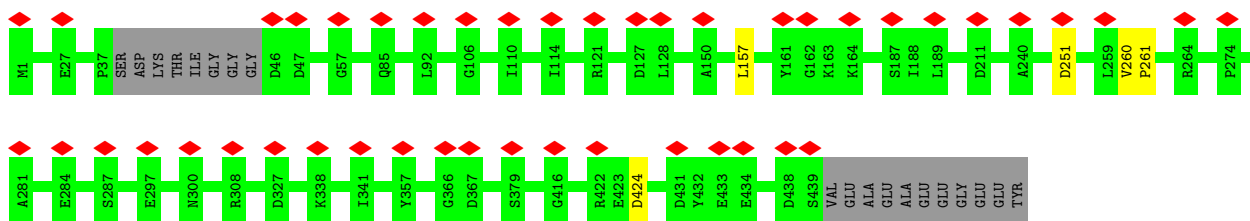
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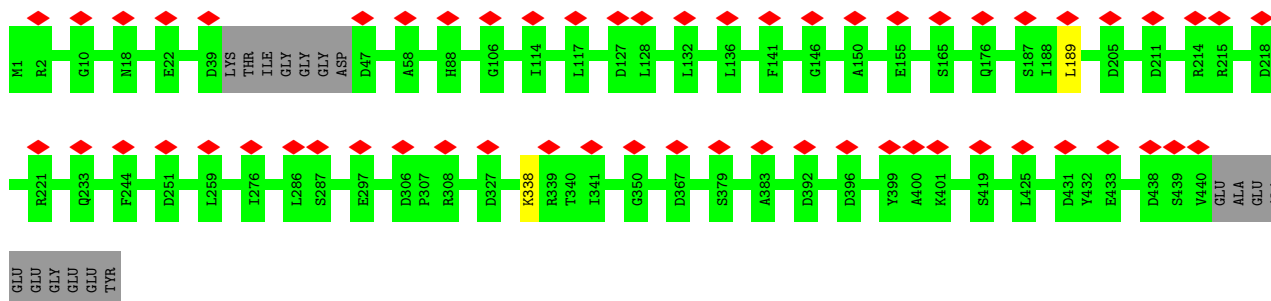
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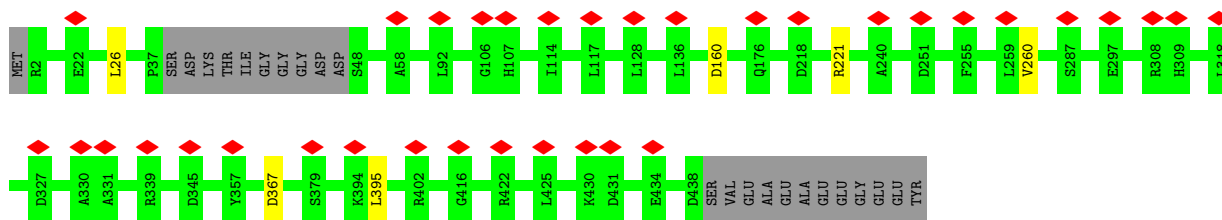
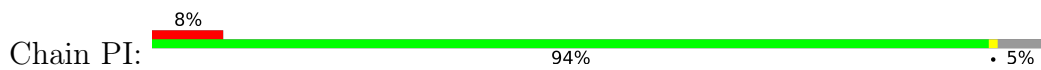
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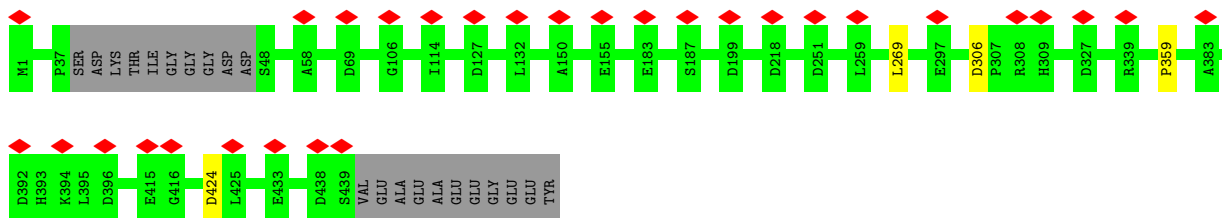
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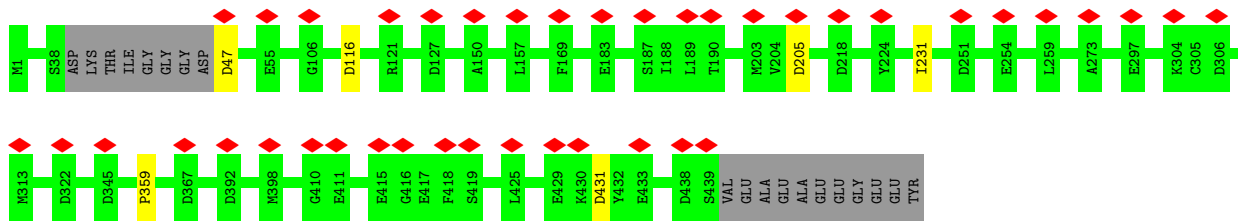


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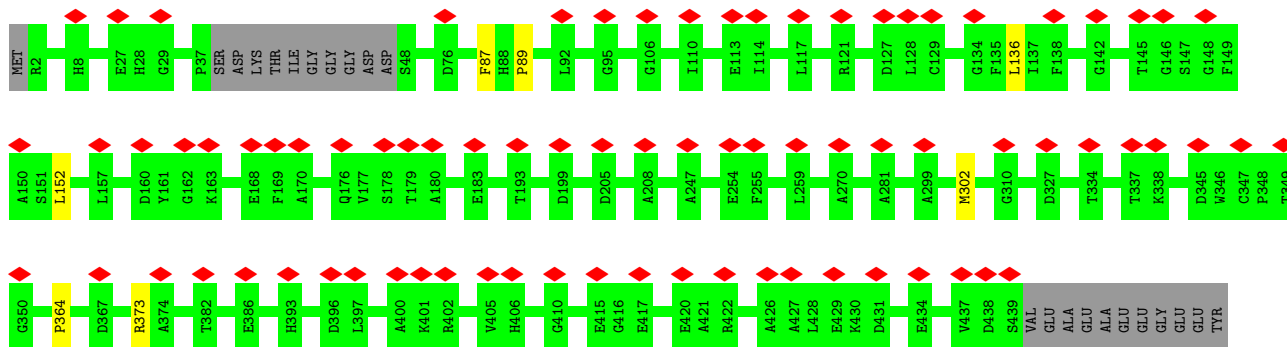


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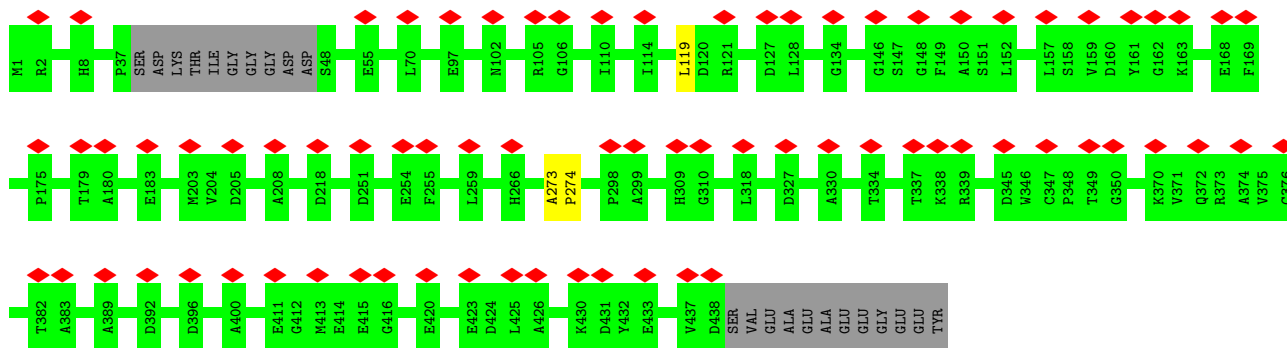




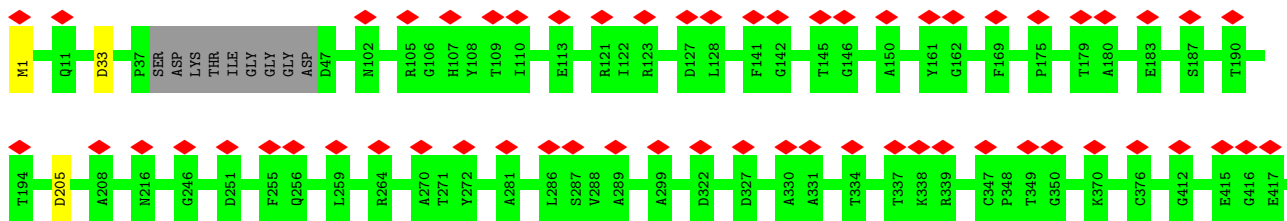
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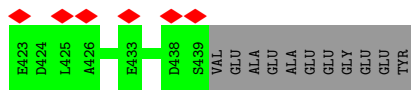


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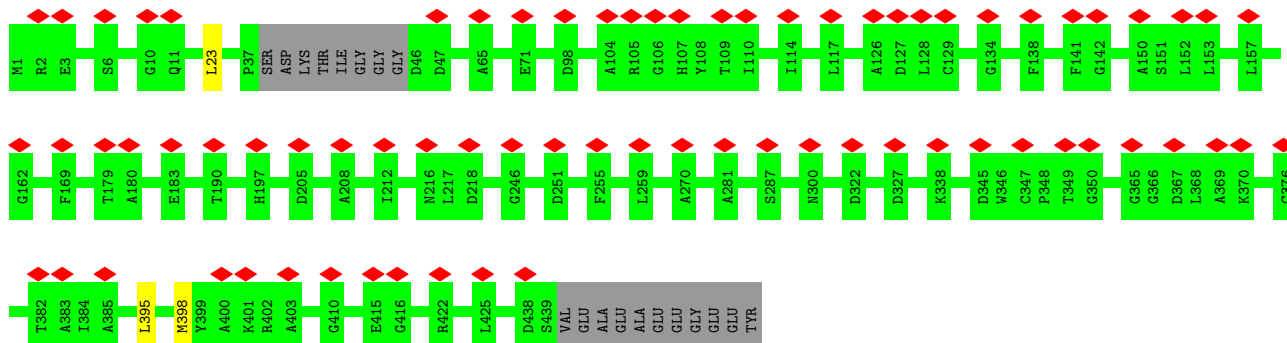


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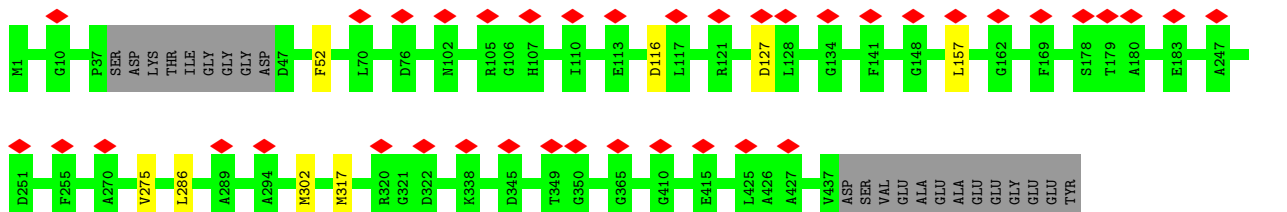
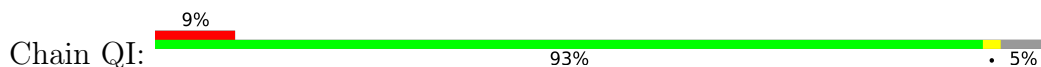




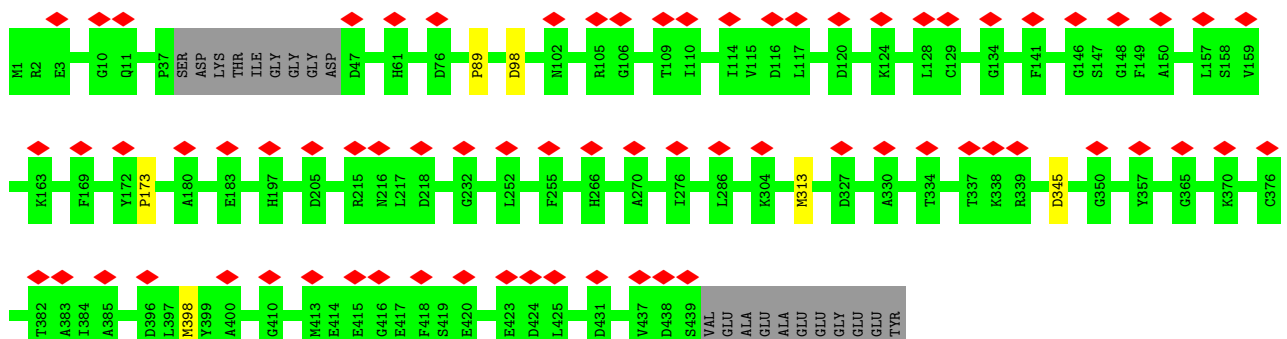
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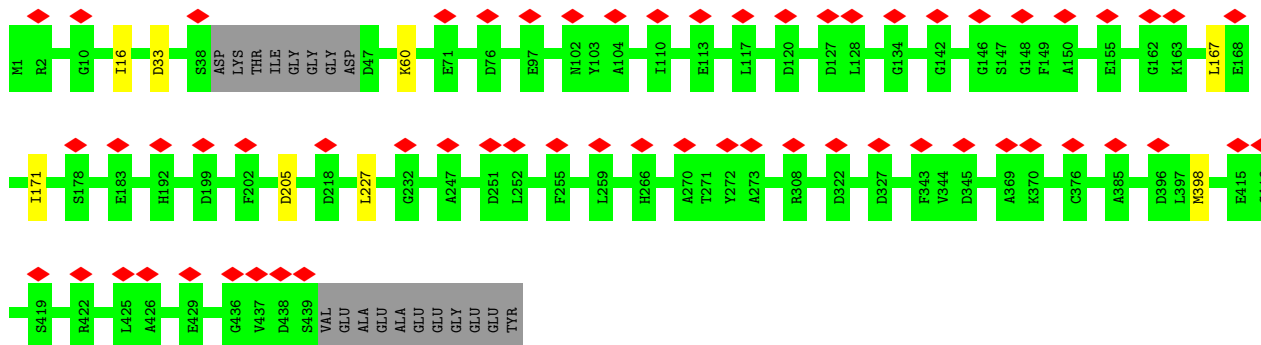


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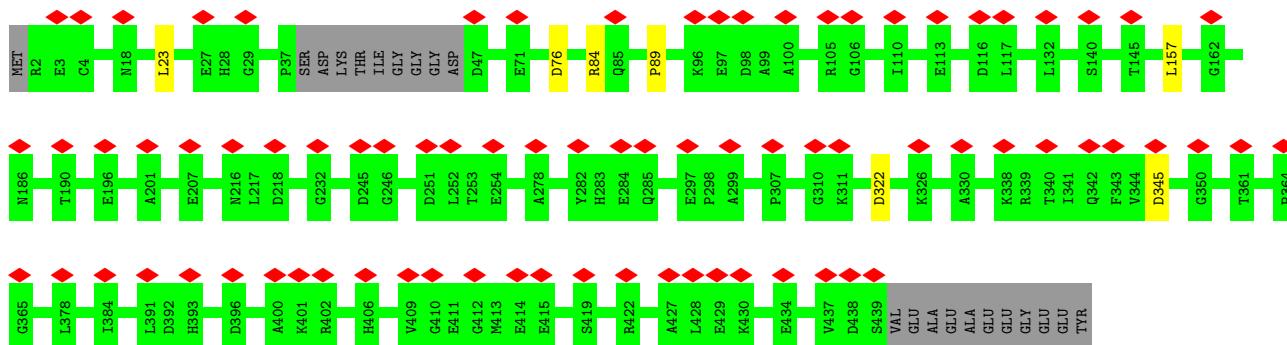


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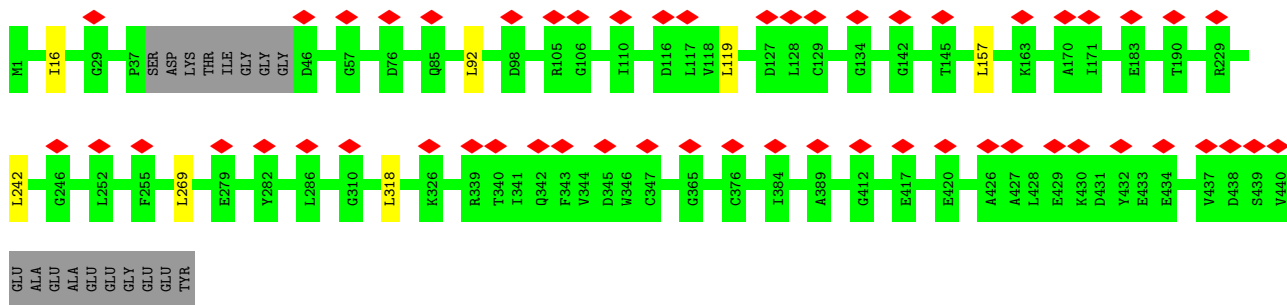




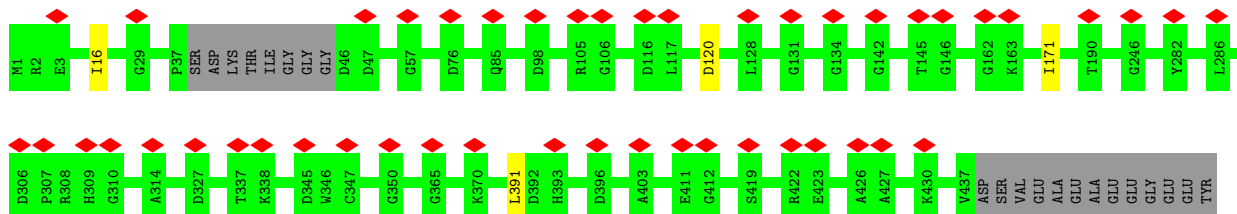
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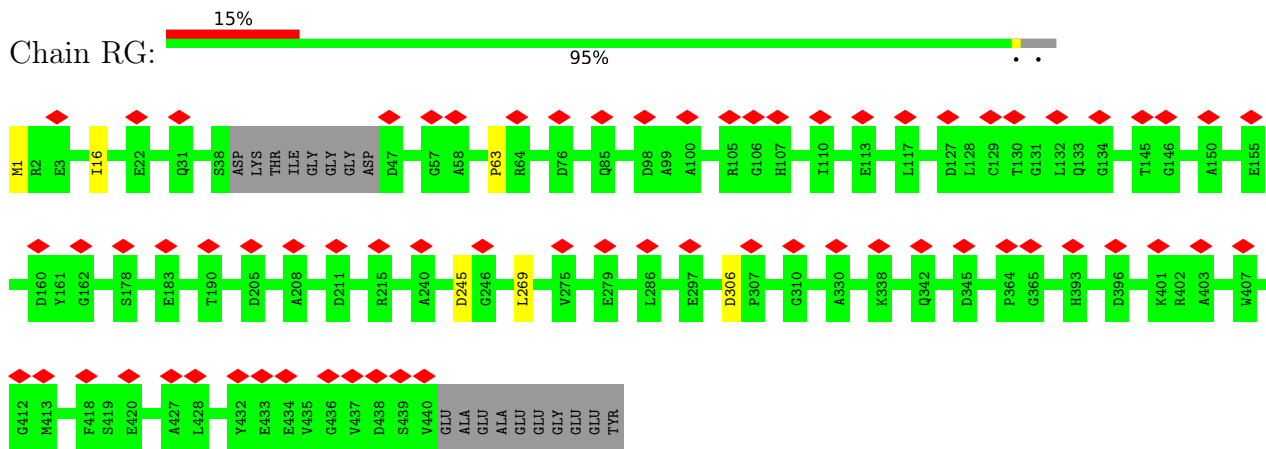
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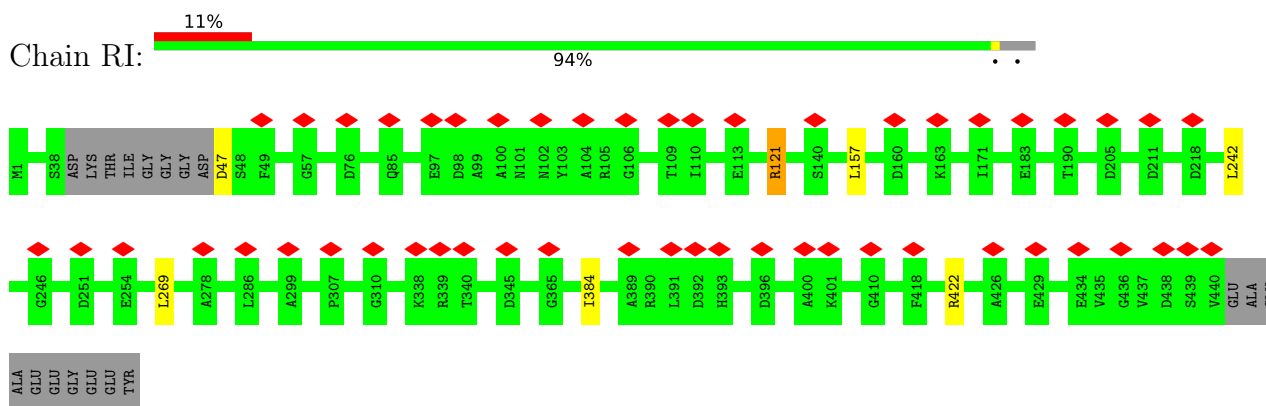
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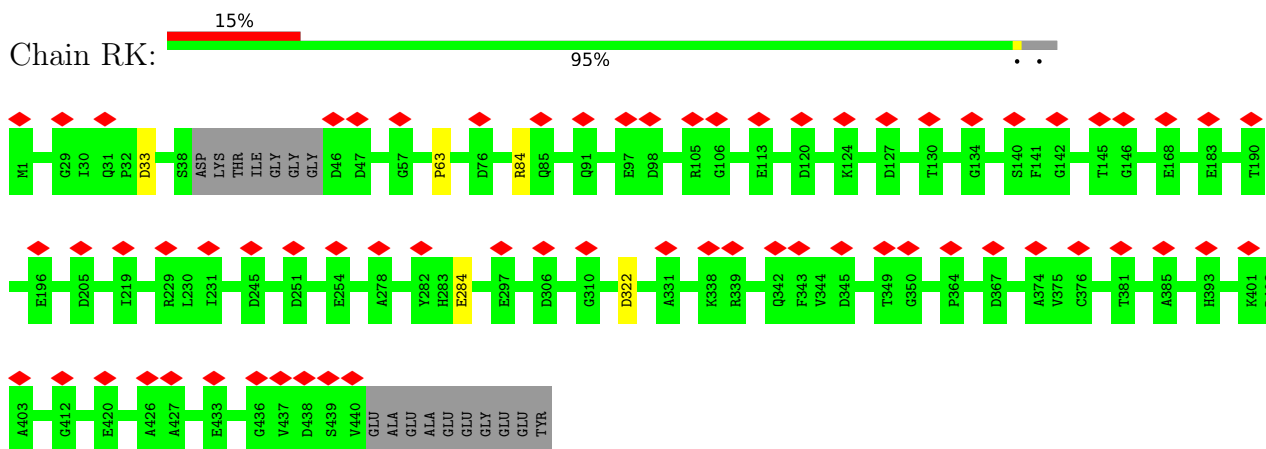
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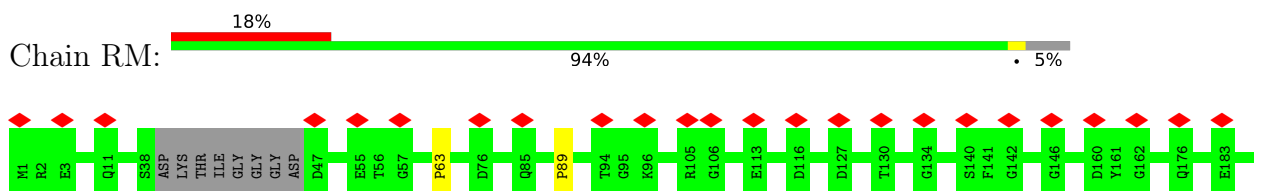
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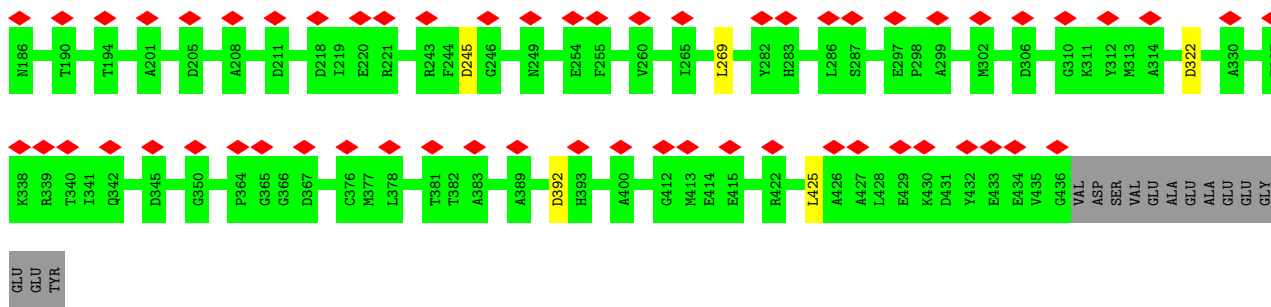


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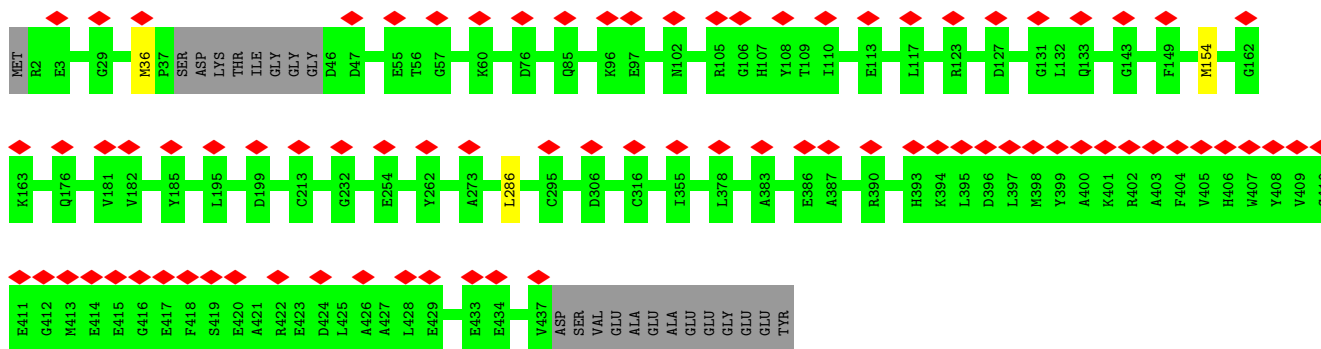


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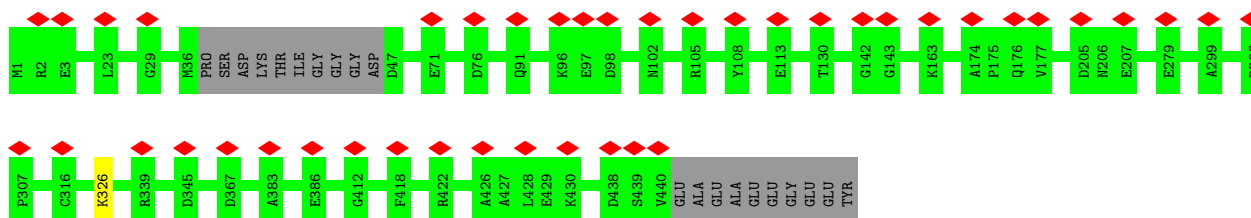




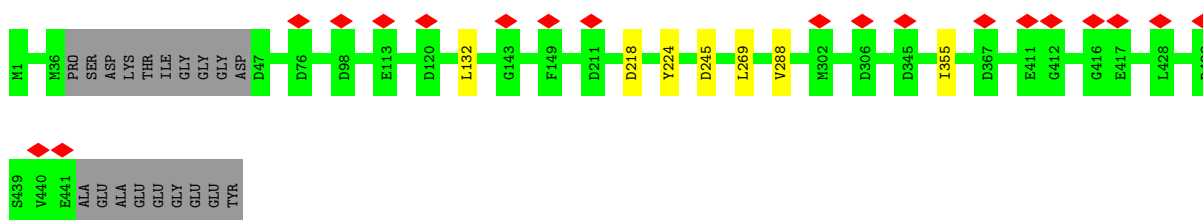
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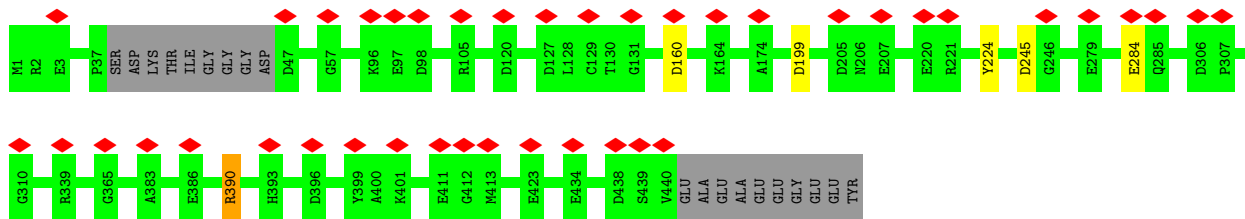


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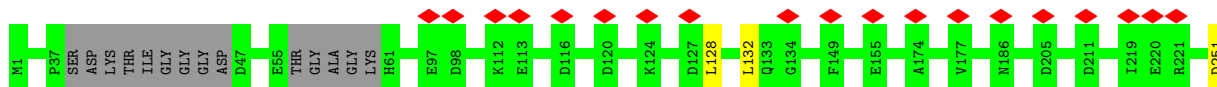
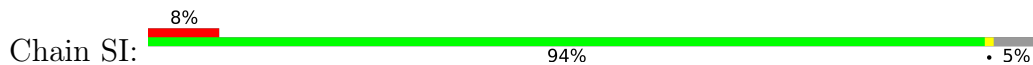


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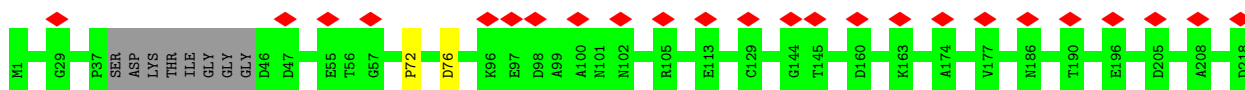




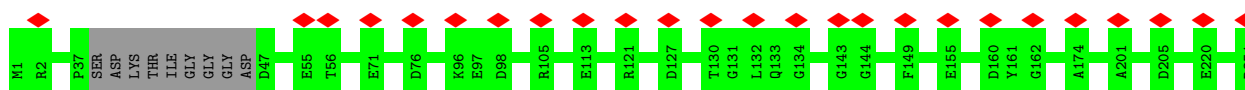
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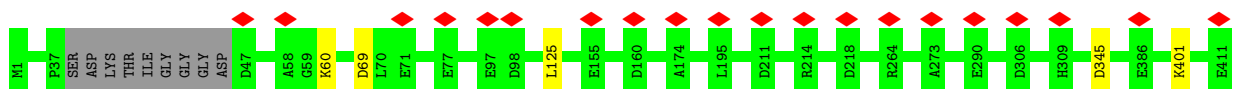
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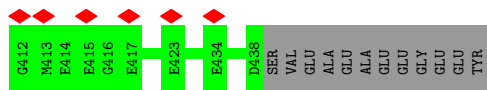


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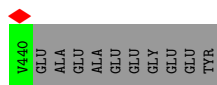
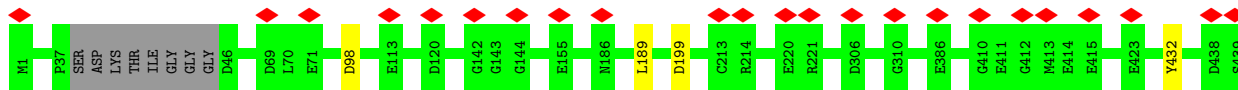


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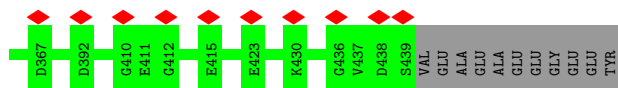
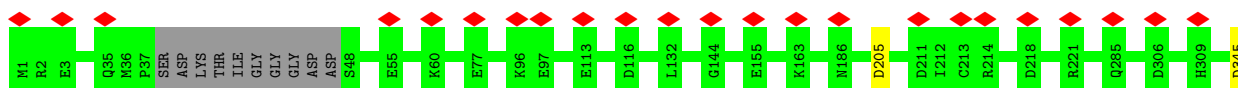




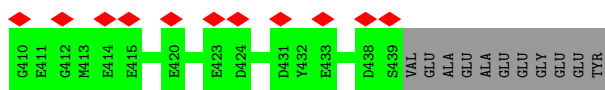
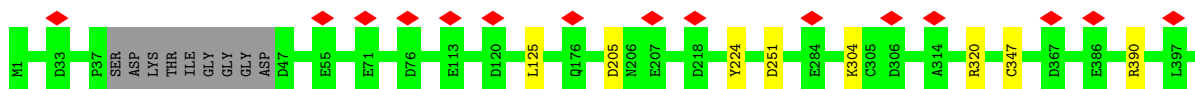
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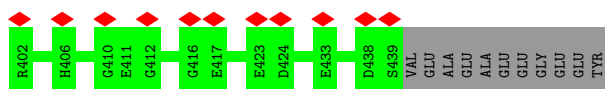
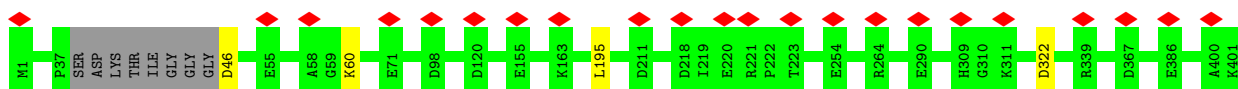
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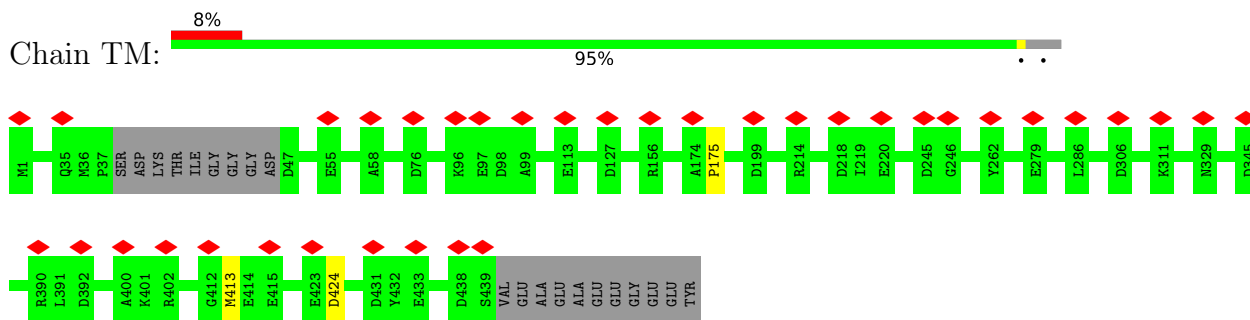
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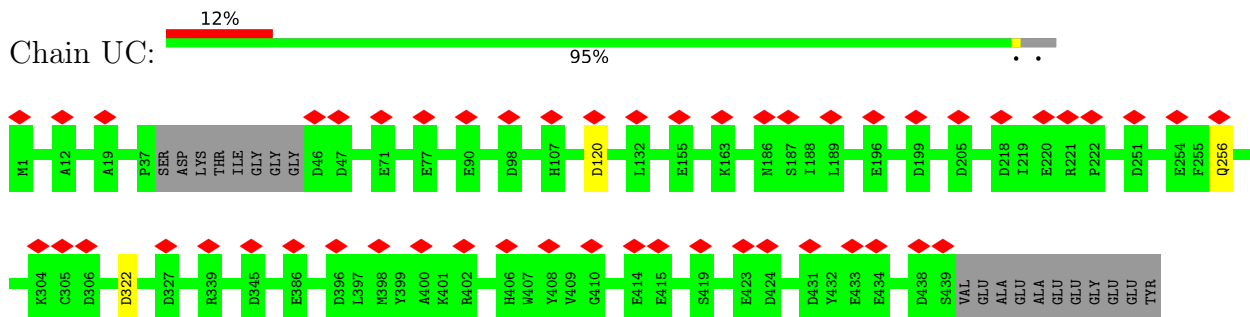
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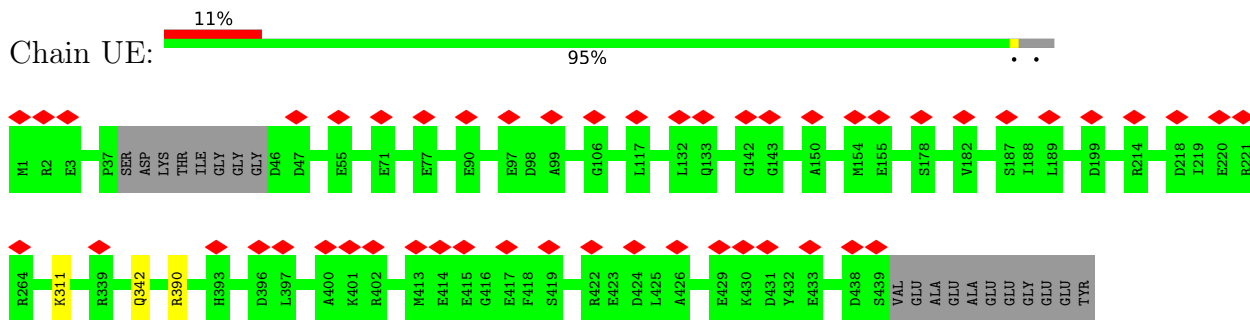
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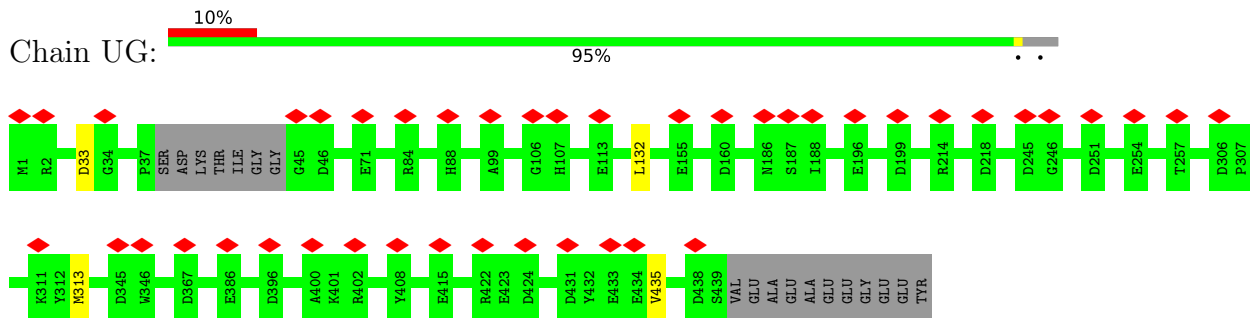
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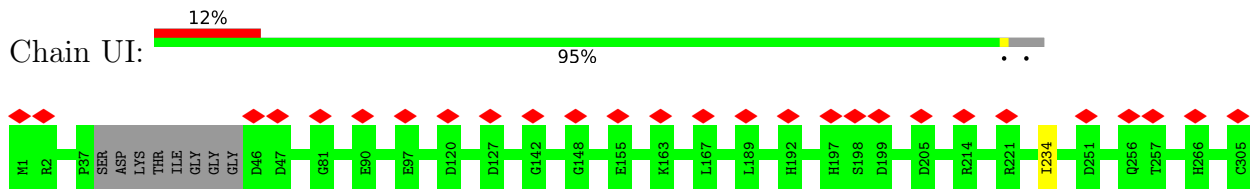
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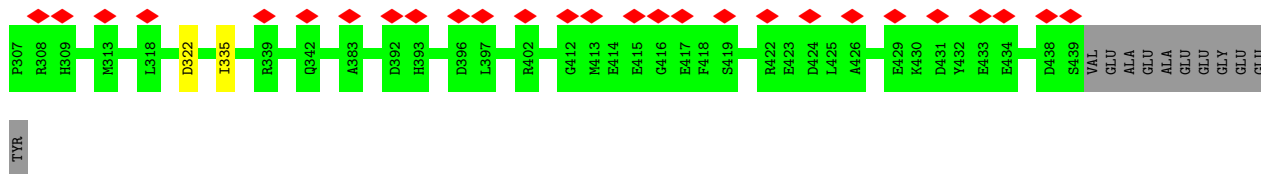


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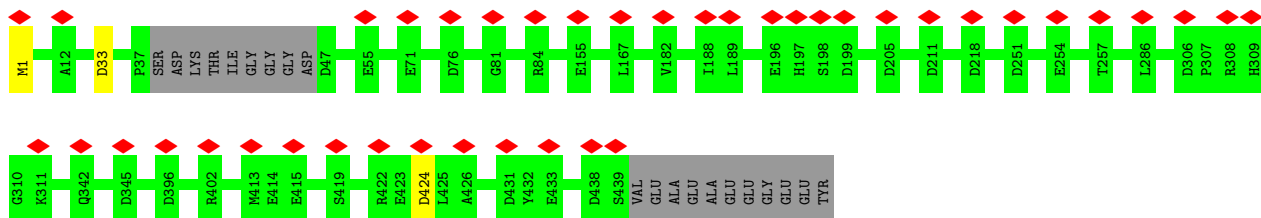


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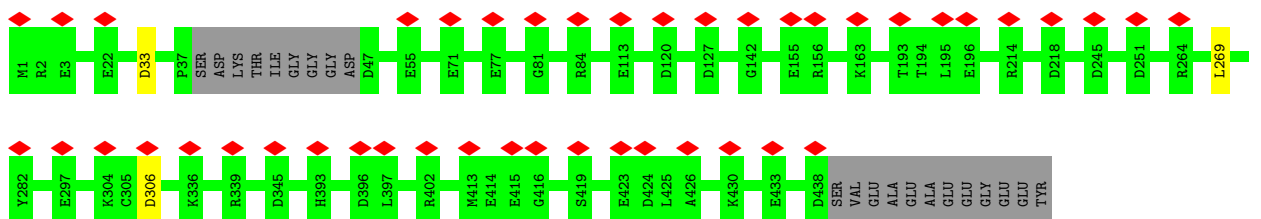




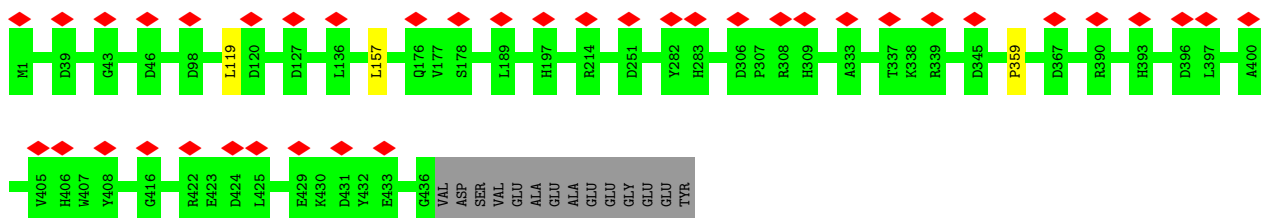
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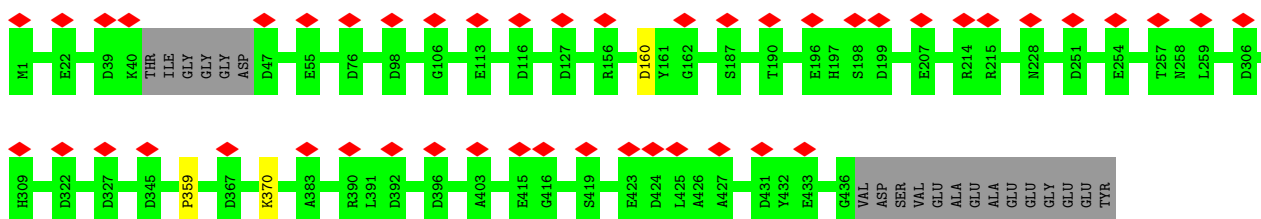
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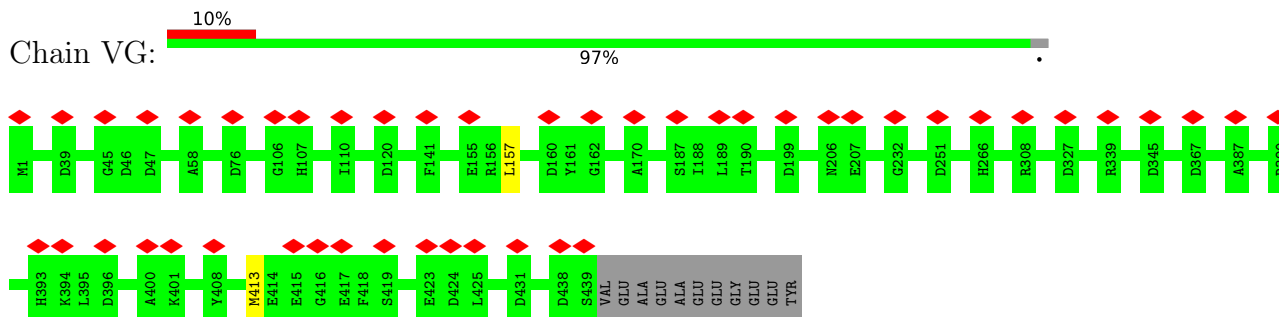
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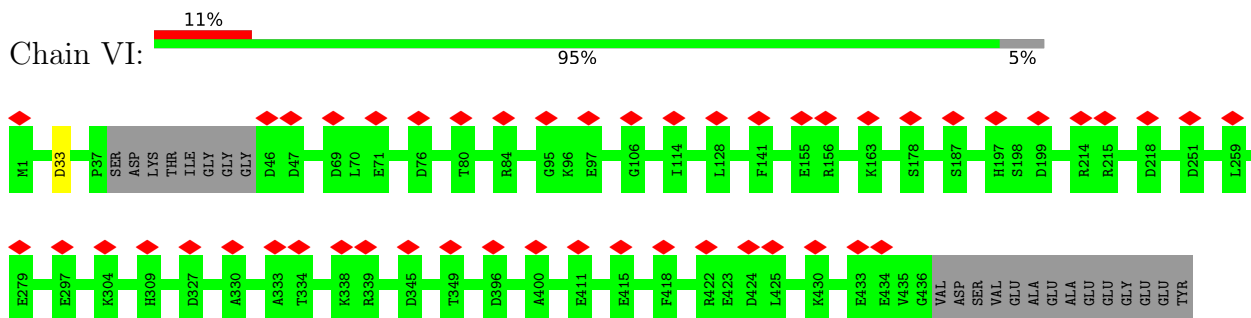
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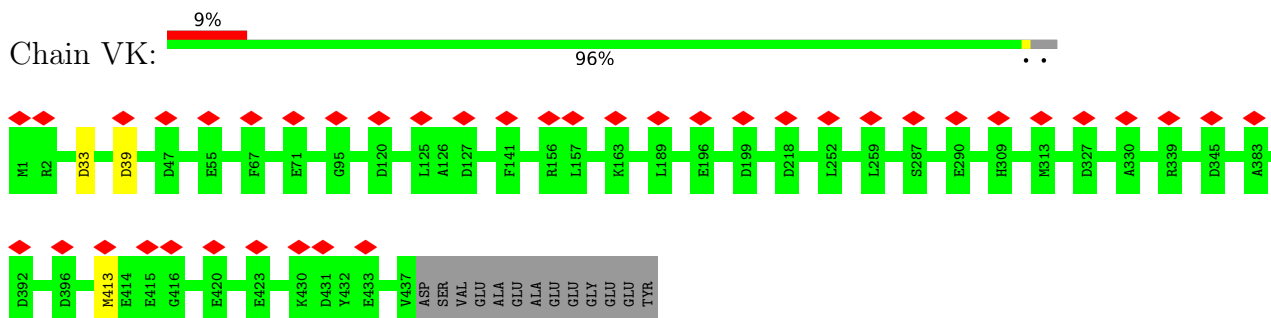
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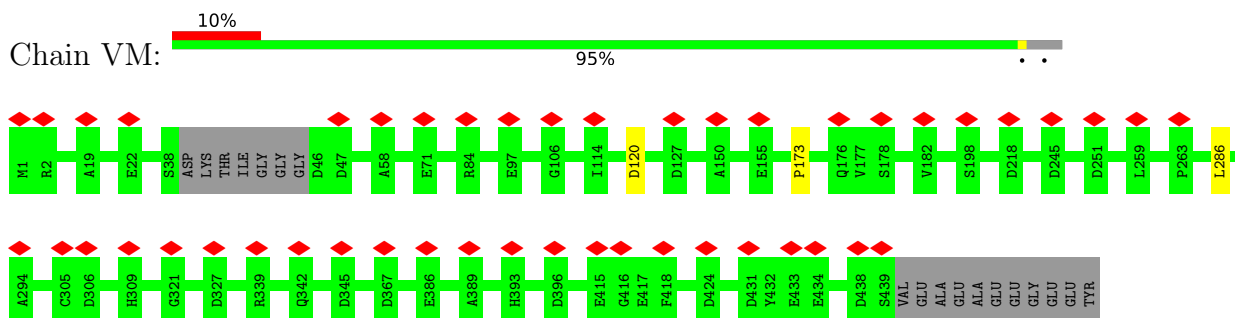
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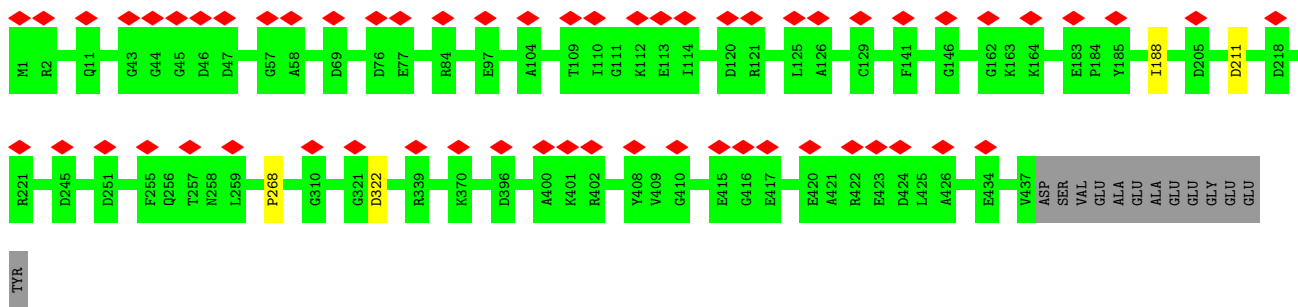


• Molecule 8: Tubulin alpha-3 chain

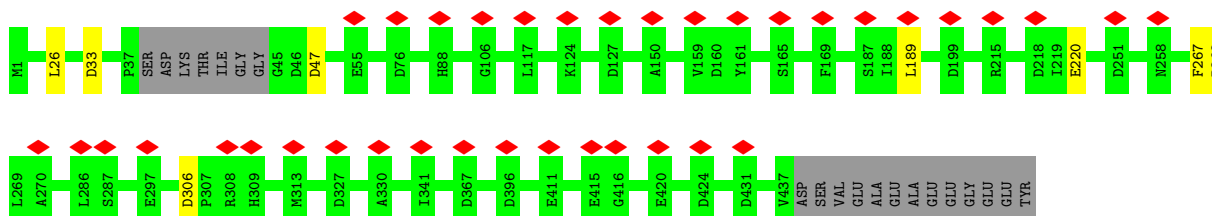


• Molecule 8: Tubulin alpha-3 chain

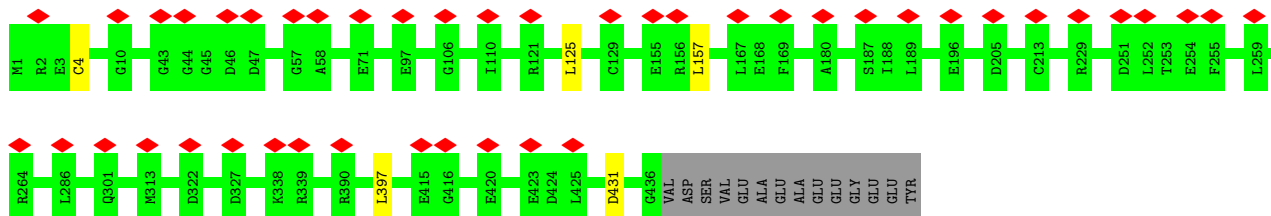




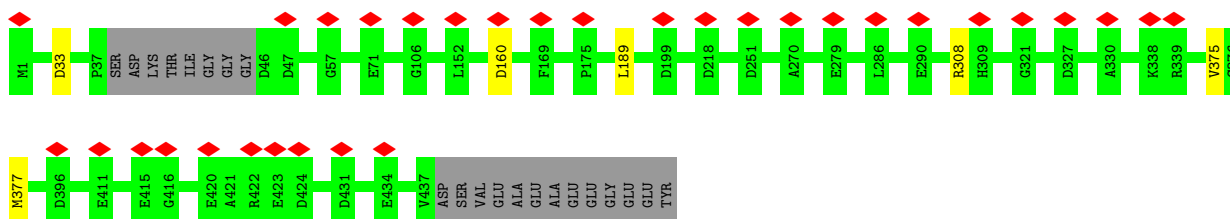
• Molecule 8: Tubulin alpha-3 chain



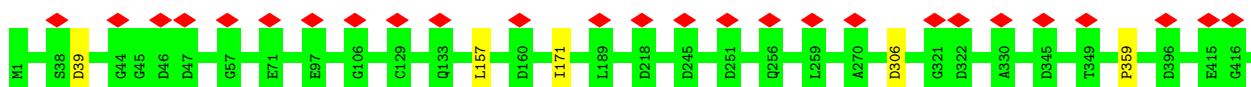
• Molecule 8: Tubulin alpha-3 chain

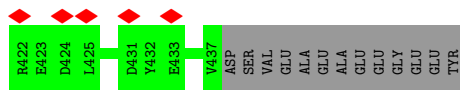


• Molecule 8: Tubulin alpha-3 chain

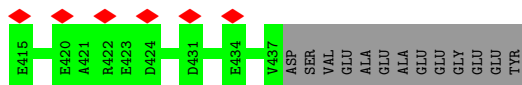
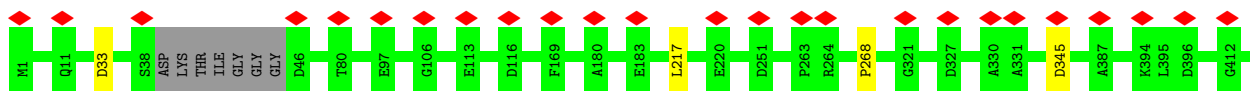


• Molecule 8: Tubulin alpha-3 chain





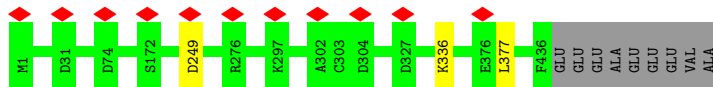
- Molecule 8: Tubulin alpha-3 chain



- Molecule 9: Tubulin beta-4B chain



- Molecule 9: Tubulin beta-4B chain



- Molecule 9: Tubulin beta-4B chain

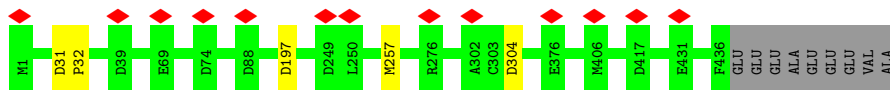


- Molecule 9: Tubulin beta-4B chain



- Molecule 9: Tubulin beta-4B chain

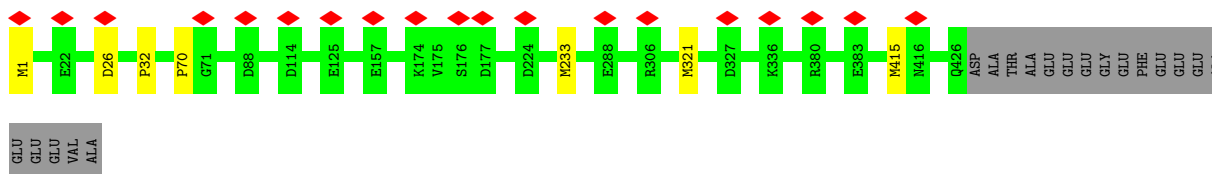




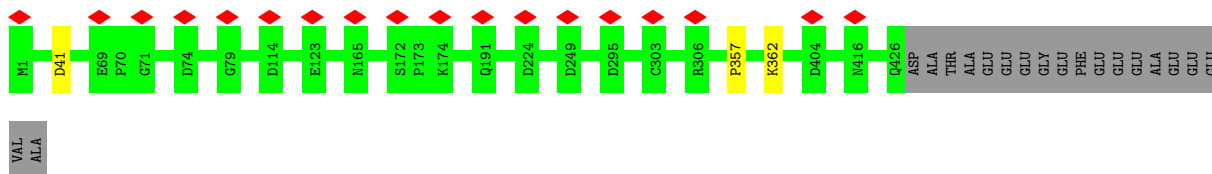
• Molecule 9: Tubulin beta-4B chain



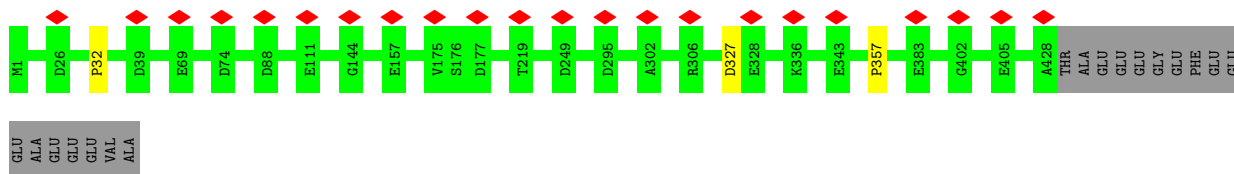
• Molecule 9: Tubulin beta-4B chain



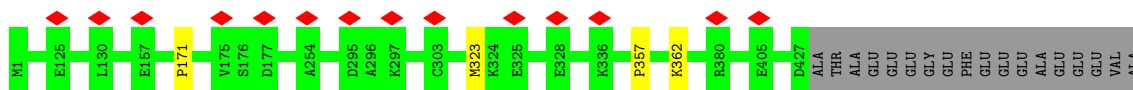
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

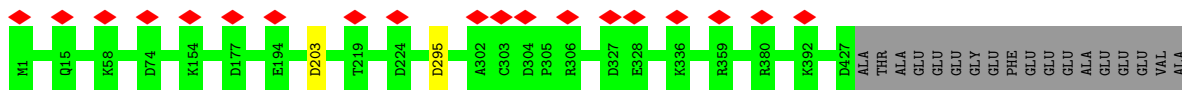


• Molecule 9: Tubulin beta-4B chain



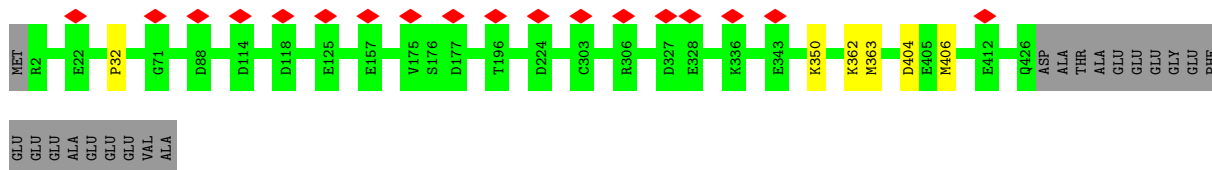
• Molecule 9: Tubulin beta-4B chain

Chain BJ:  96%



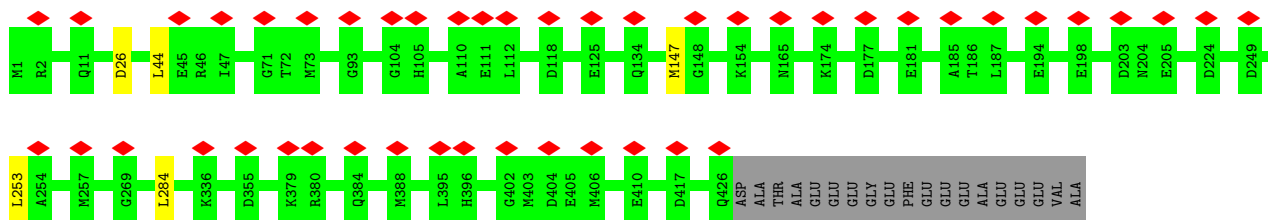
• Molecule 9: Tubulin beta-4B chain

Chain BL:  94%



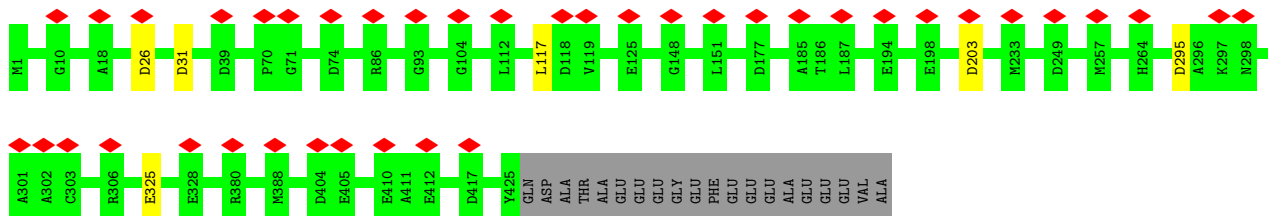
• Molecule 9: Tubulin beta-4B chain

Chain CB:  95%



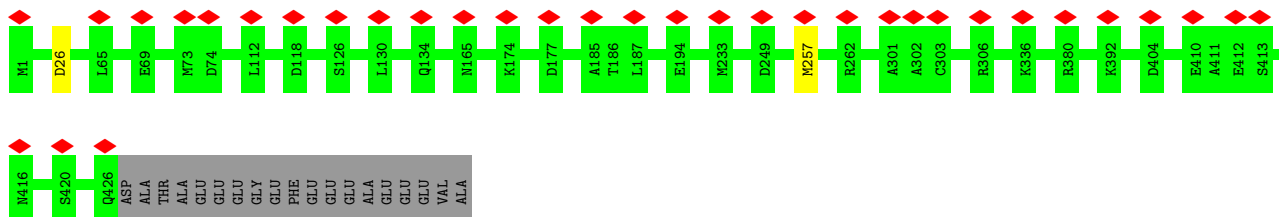
• Molecule 9: Tubulin beta-4B chain

Chain CD:  94%

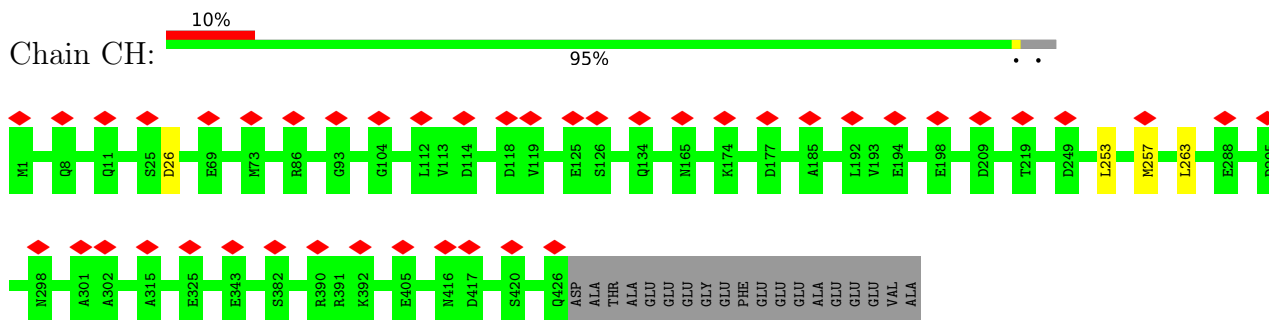


• Molecule 9: Tubulin beta-4B chain

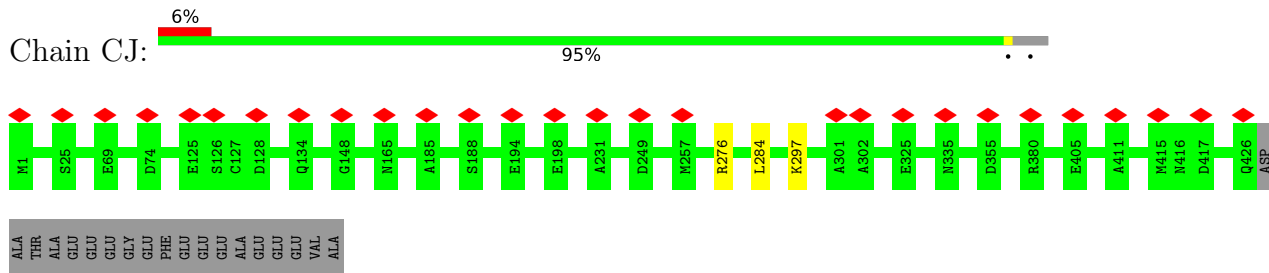
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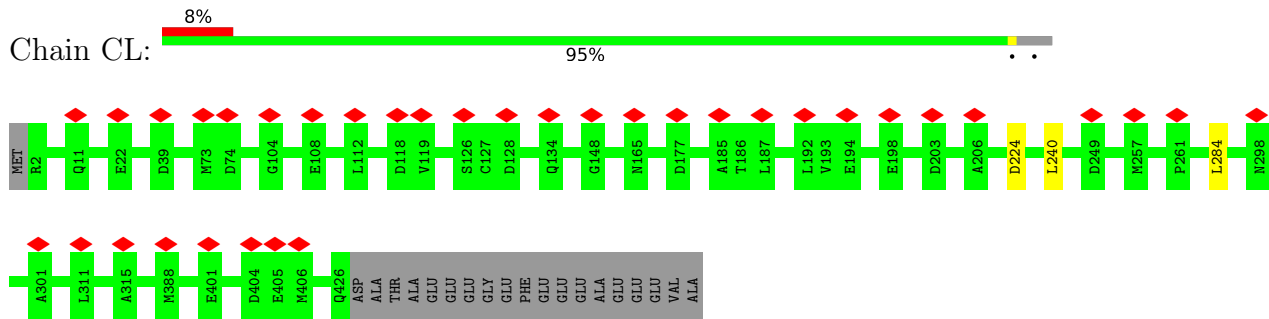
• Molecule 9: Tubulin beta-4B chain



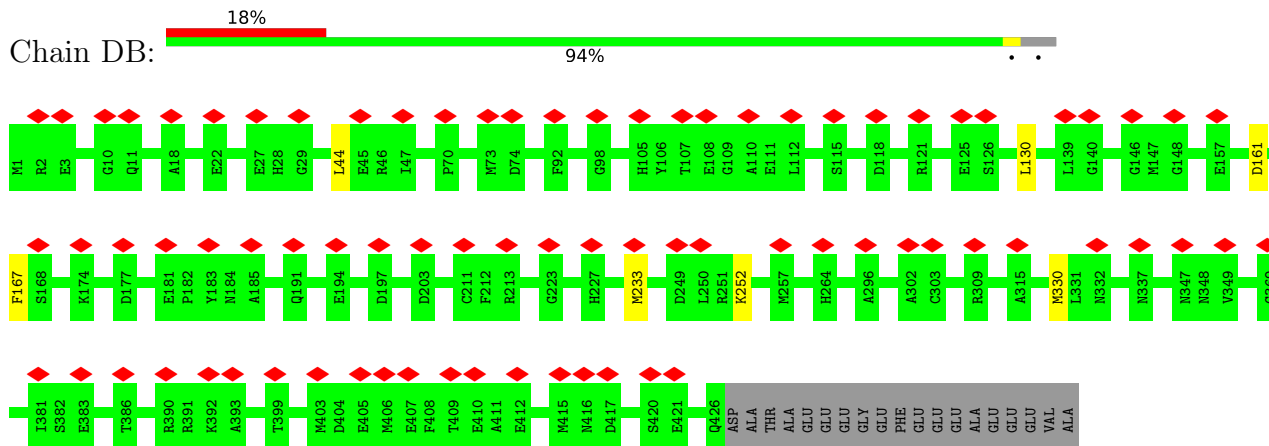
● Molecule 9: Tubulin beta-4B chain



● Molecule 9: Tubulin beta-4B chain

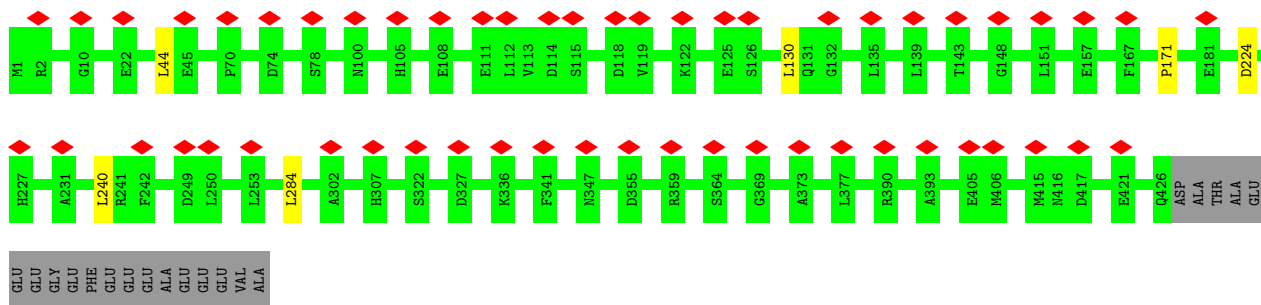


● Molecule 9: Tubulin beta-4B chain

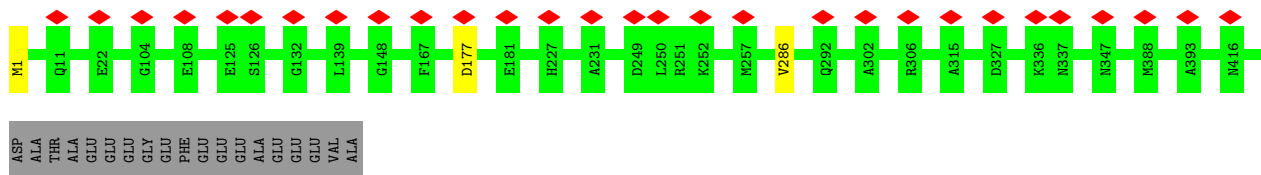


● Molecule 9: Tubulin beta-4B chain

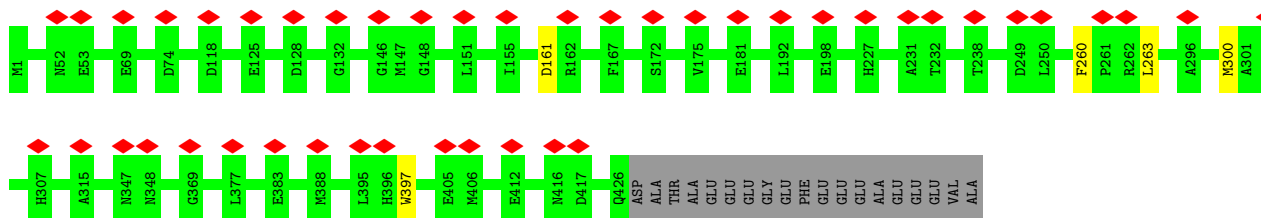




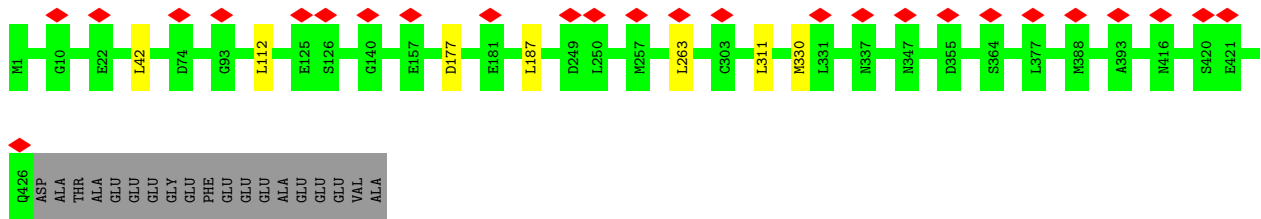
● Molecule 9: Tubulin beta-4B chain



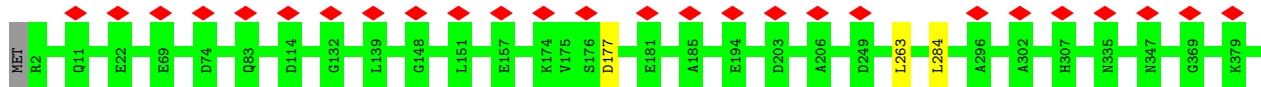
● Molecule 9: Tubulin beta-4B chain

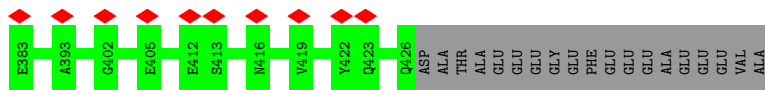


● Molecule 9: Tubulin beta-4B chain

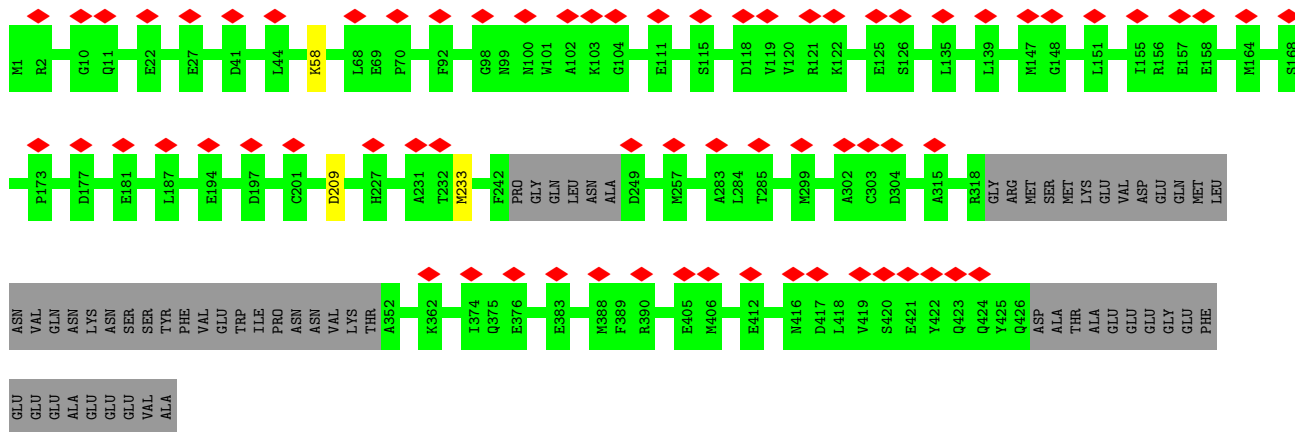
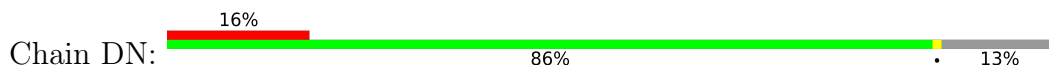


● Molecule 9: Tubulin beta-4B chain

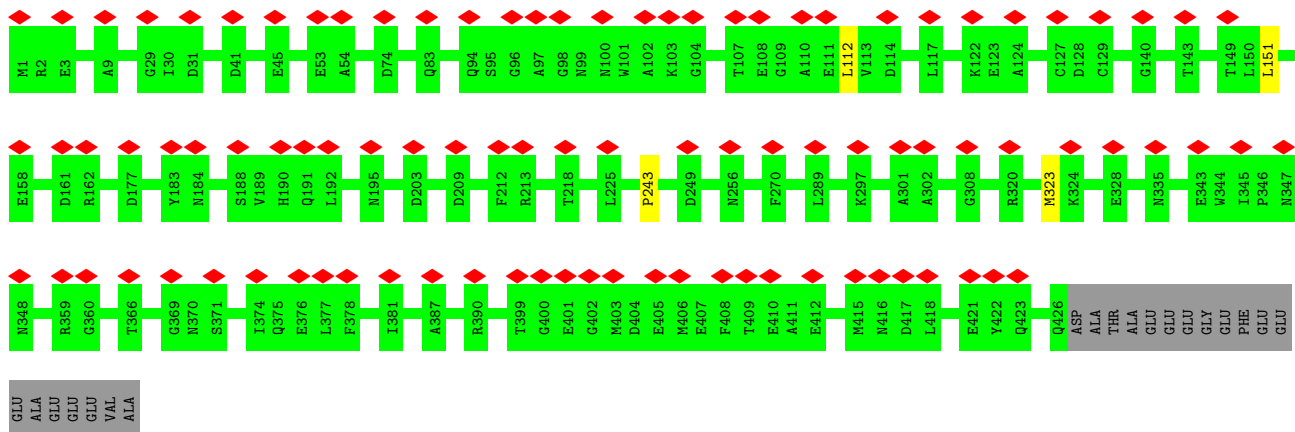




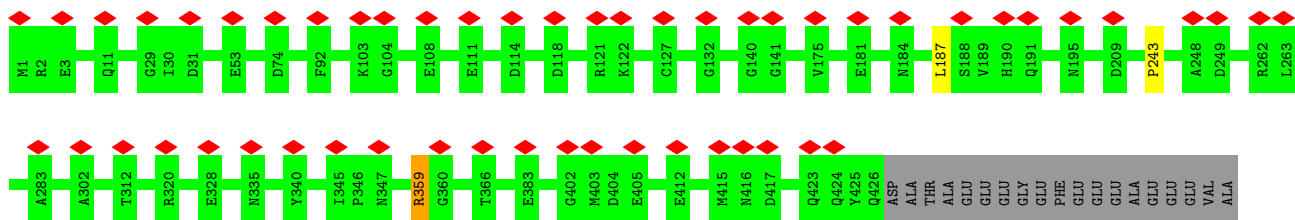
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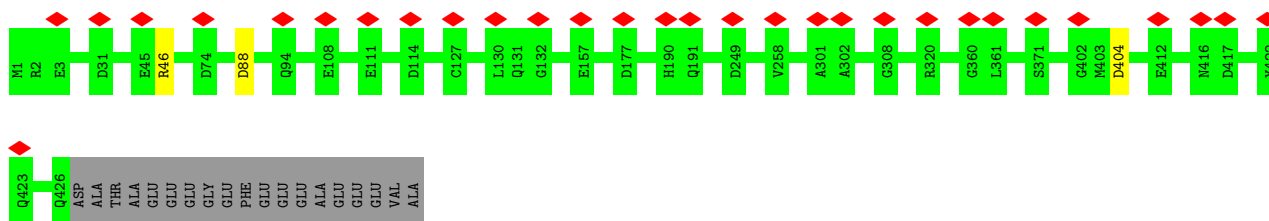
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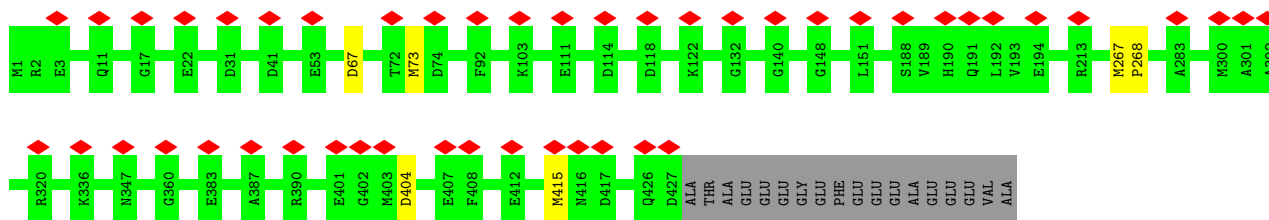
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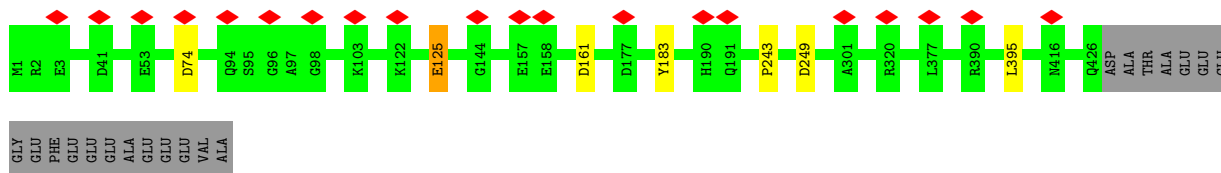
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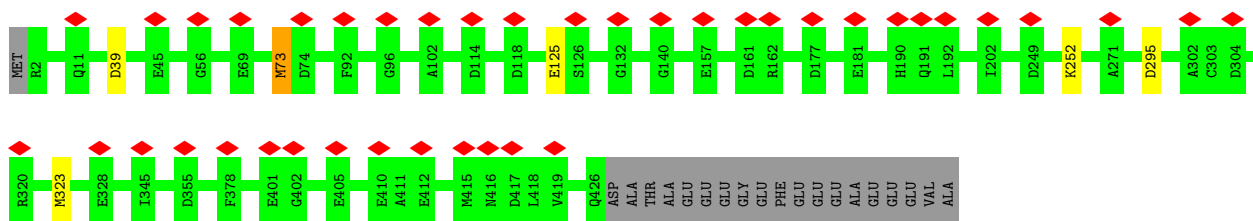
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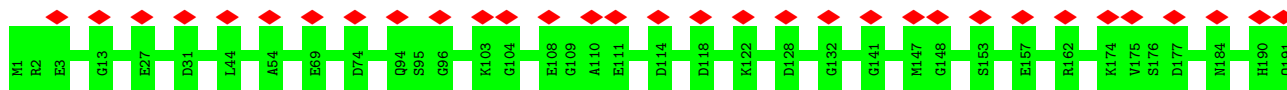
• Molecule 9: Tubulin beta-4B chain

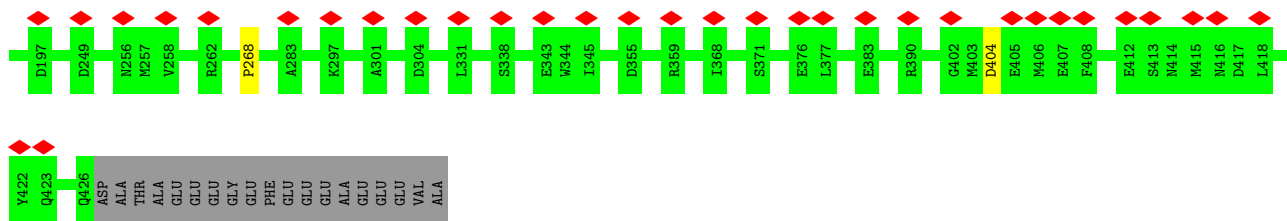


• Molecule 9: Tubulin beta-4B chain

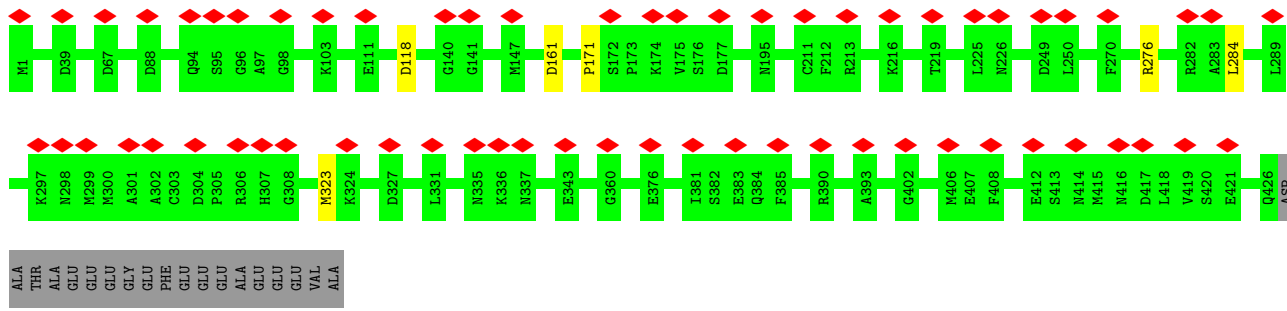


• Molecule 9: Tubulin beta-4B chain

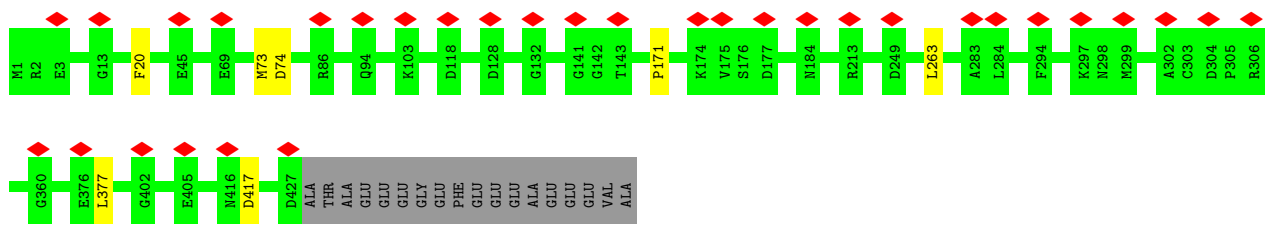




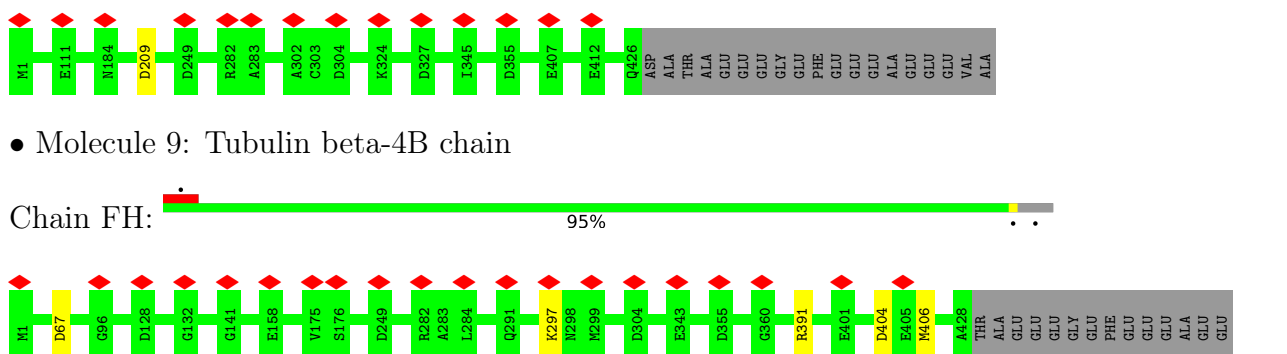
• Molecule 9: Tubulin beta-4B chain



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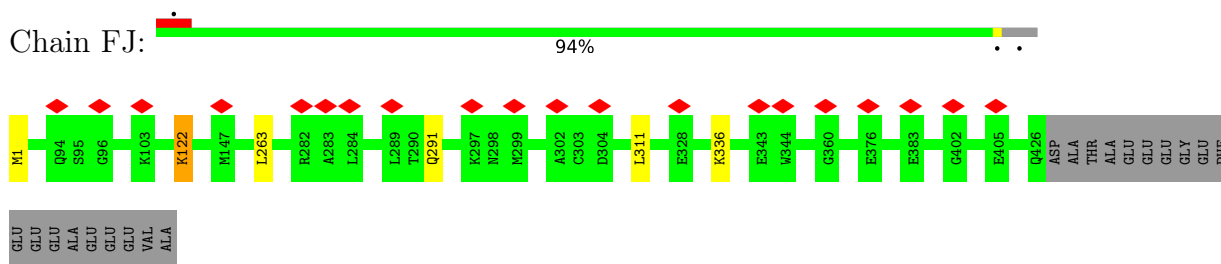


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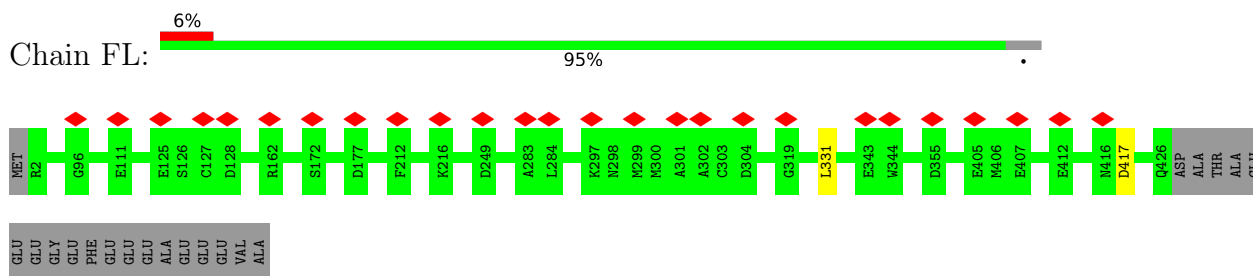


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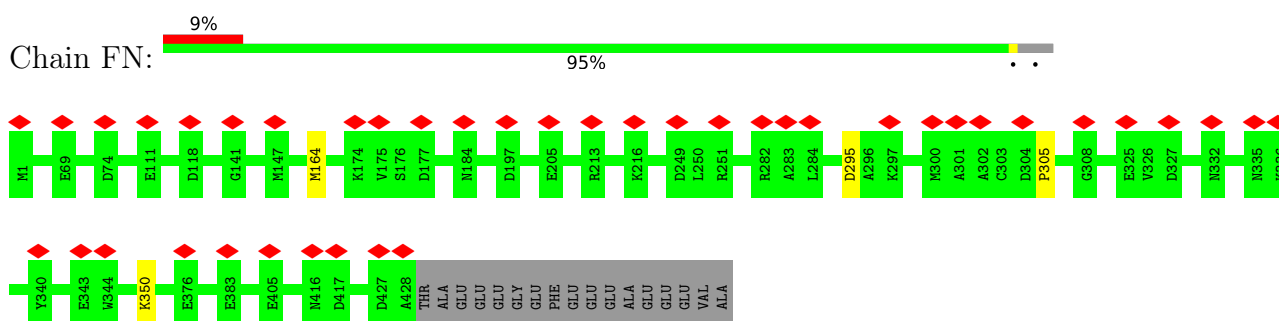




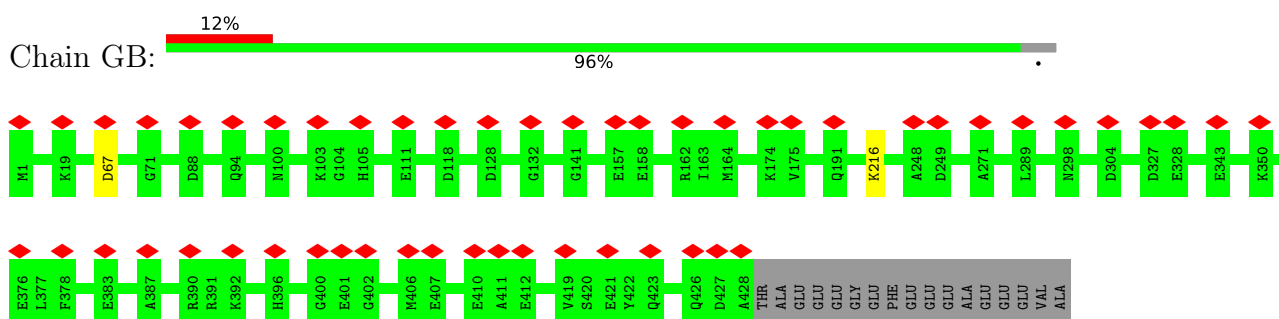
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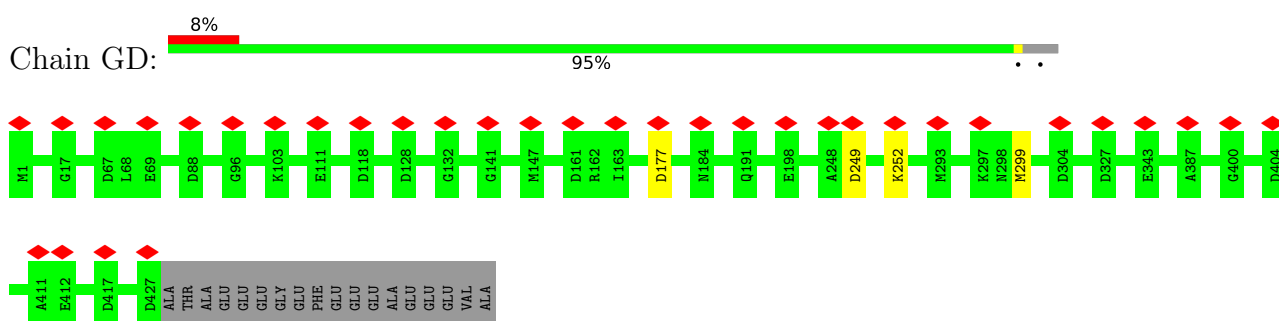
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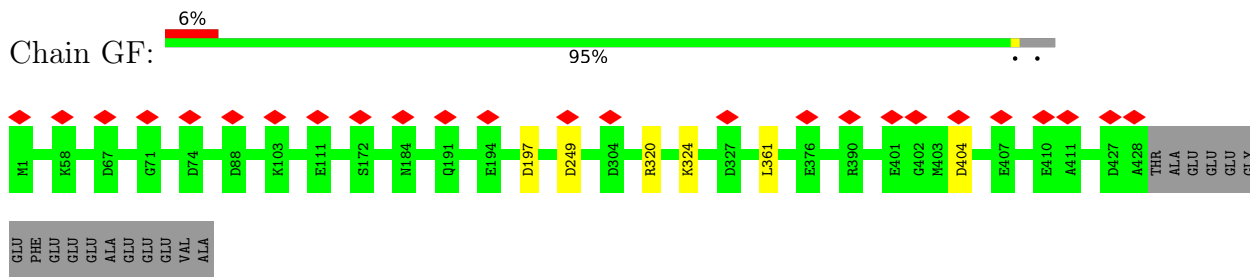
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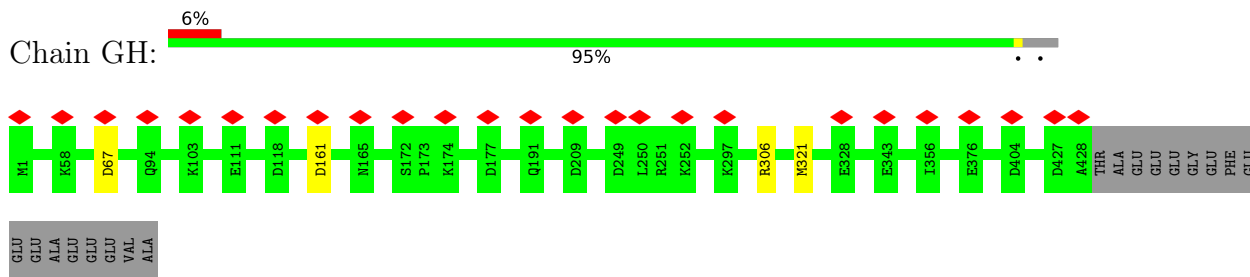
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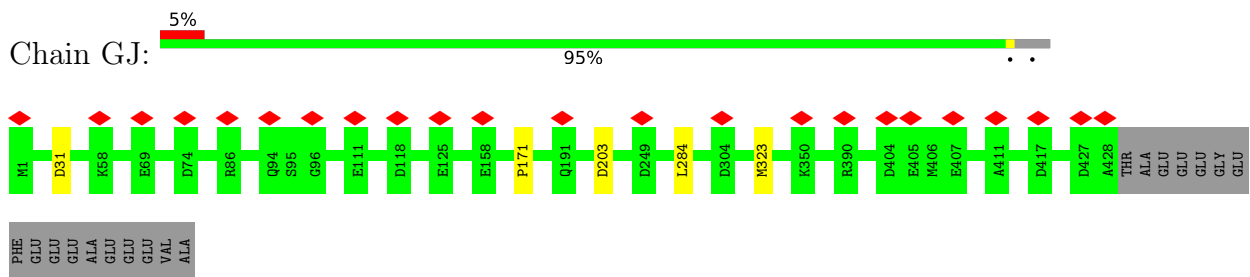
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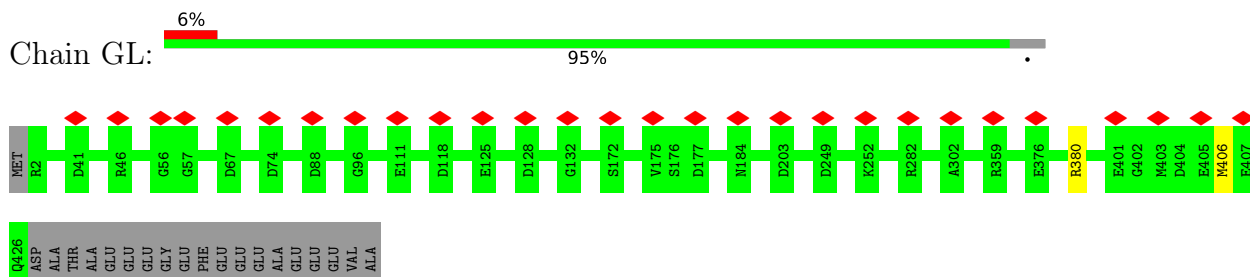
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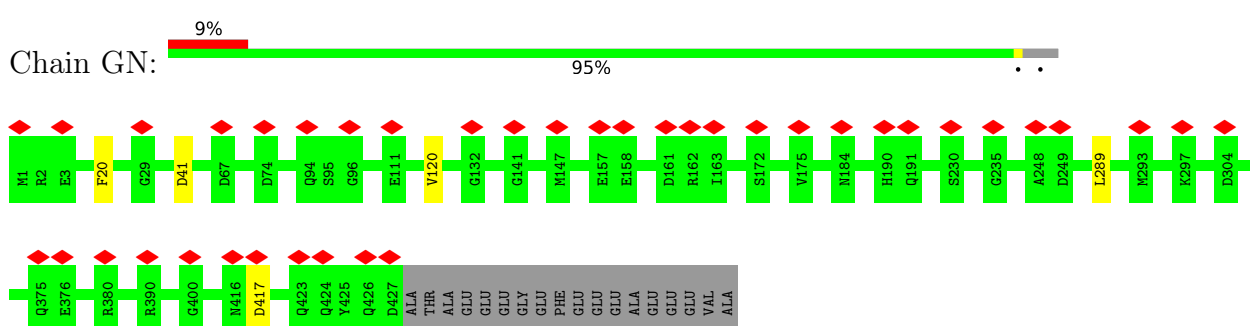
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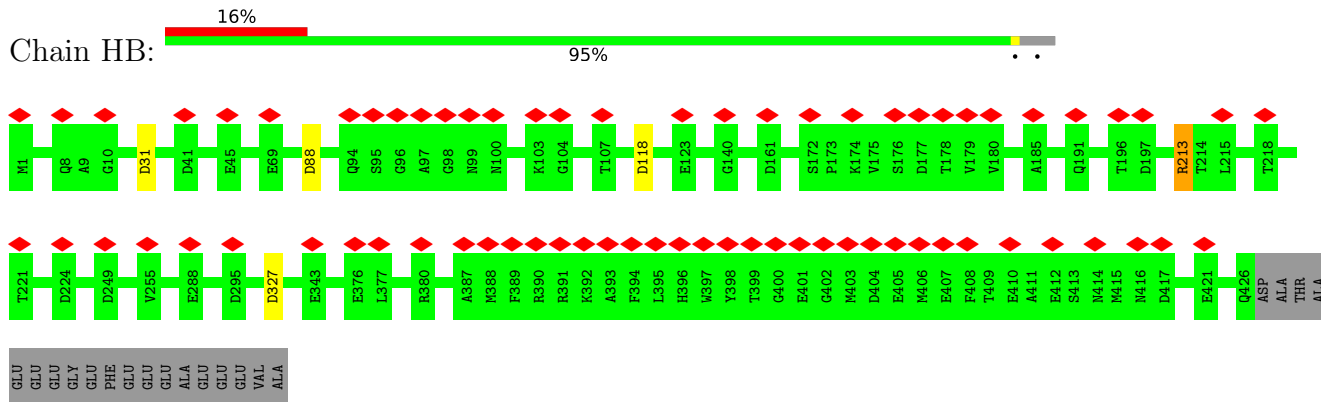
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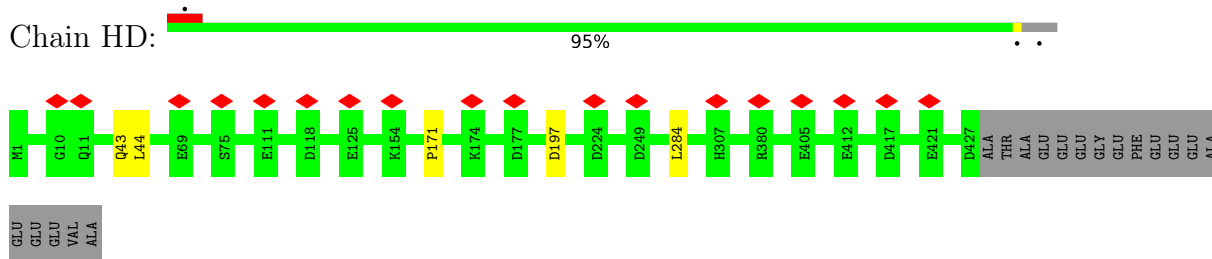
• Molecule 9: Tubulin beta-4B chain



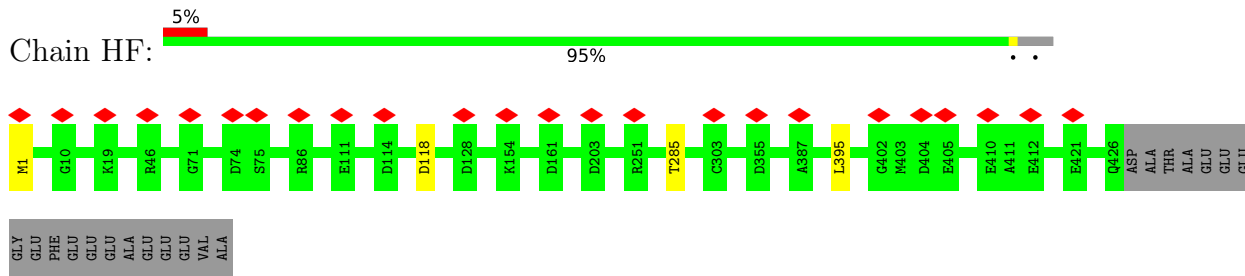
● Molecule 9: Tubulin beta-4B chain



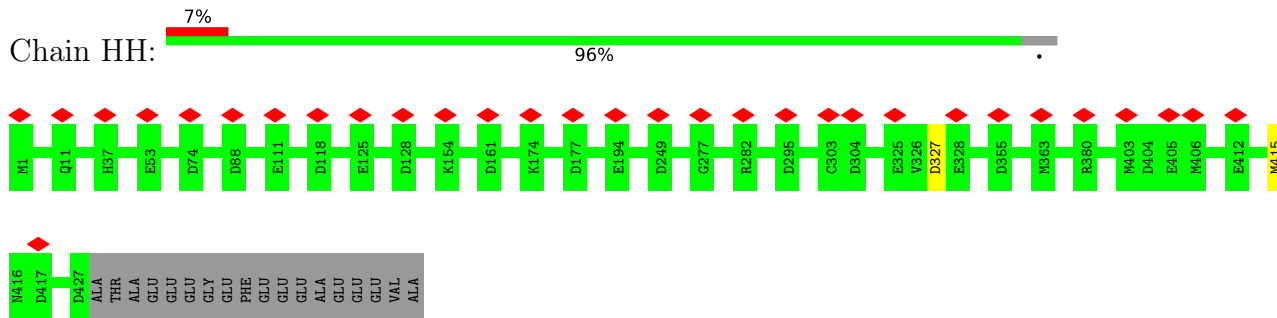
● Molecule 9: Tubulin beta-4B chain



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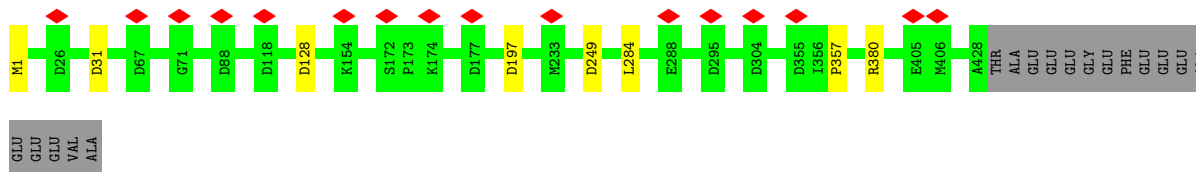


● Molecule 9: Tubulin beta-4B chain

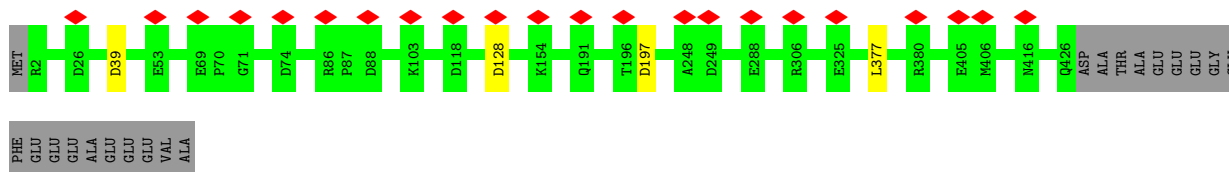


● Molecule 9: Tubulin beta-4B chain

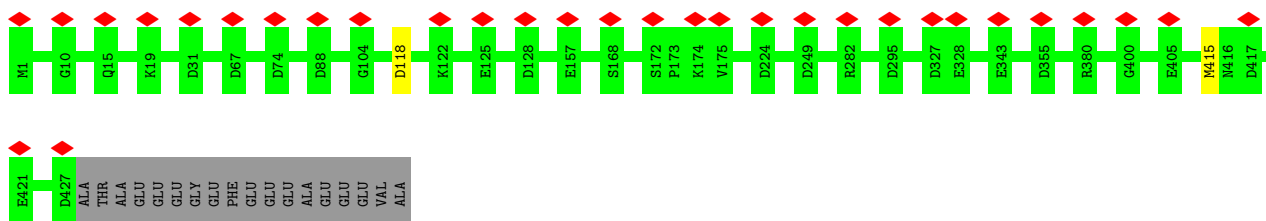




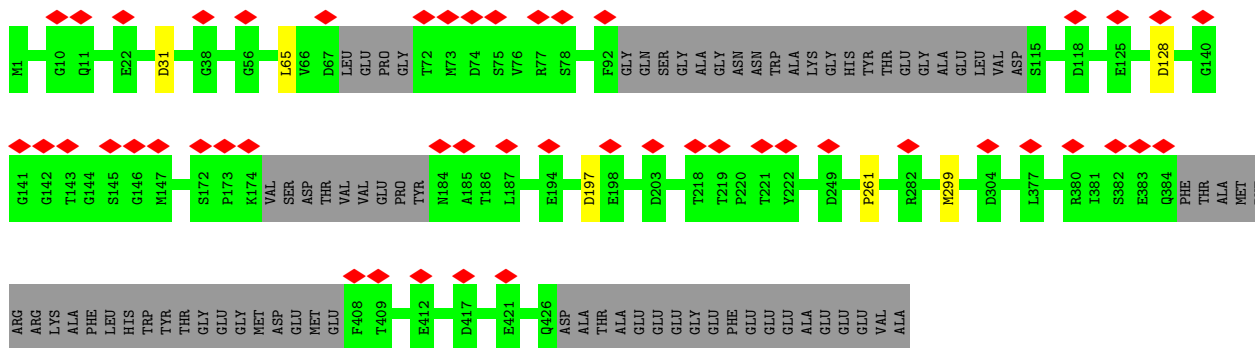
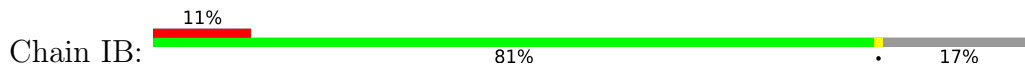
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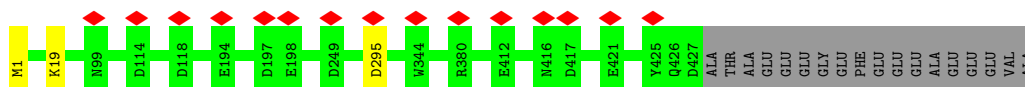
• Molecule 9: Tubulin beta-4B chain



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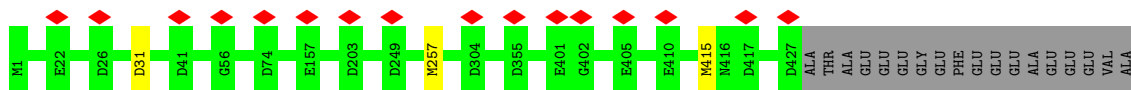


• Molecule 9: Tubulin beta-4B chain



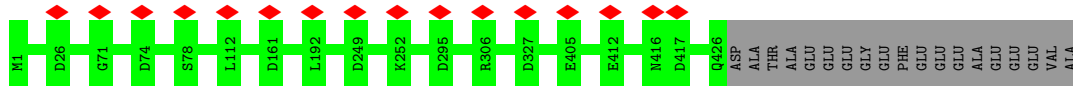
• Molecule 9: Tubulin beta-4B chain

Chain IF:  95%



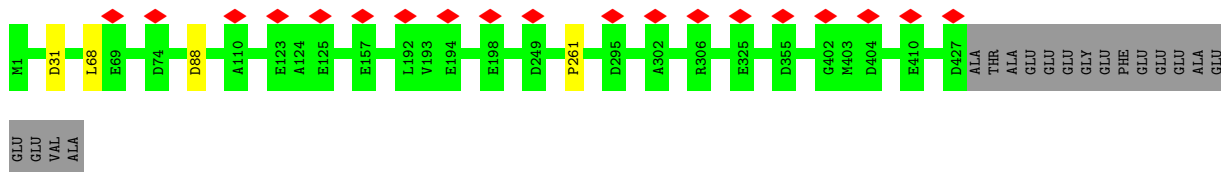
• Molecule 9: Tubulin beta-4B chain

Chain IH:  96%



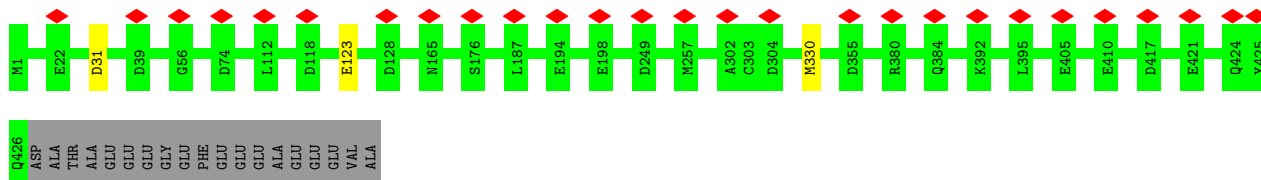
• Molecule 9: Tubulin beta-4B chain

Chain IJ:  95%



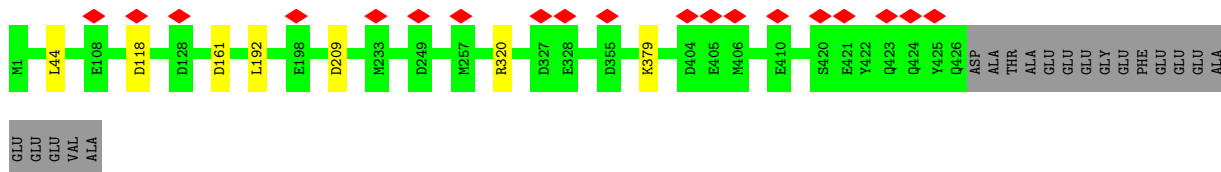
• Molecule 9: Tubulin beta-4B chain

Chain IL:  6% 95%



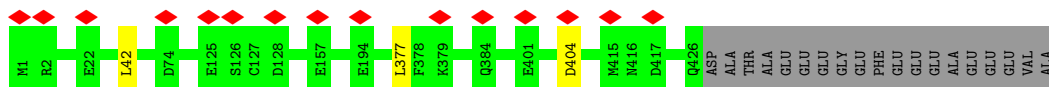
• Molecule 9: Tubulin beta-4B chain

Chain IN:  94%

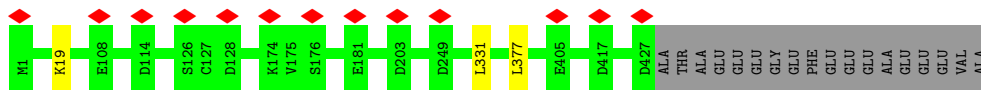


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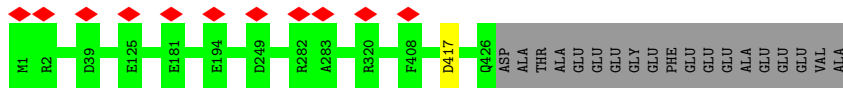
Chain JB:  95%



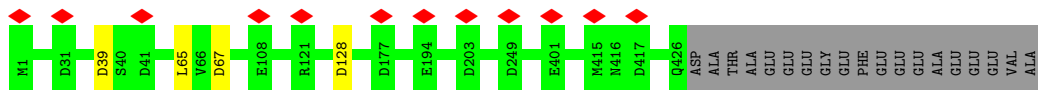
• Molecule 9: Tubulin beta-4B chain



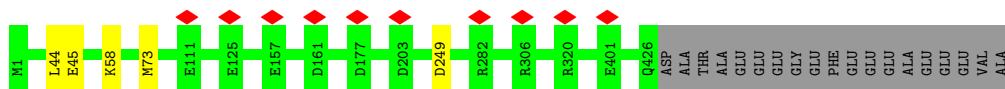
• Molecule 9: Tubulin beta-4B chain



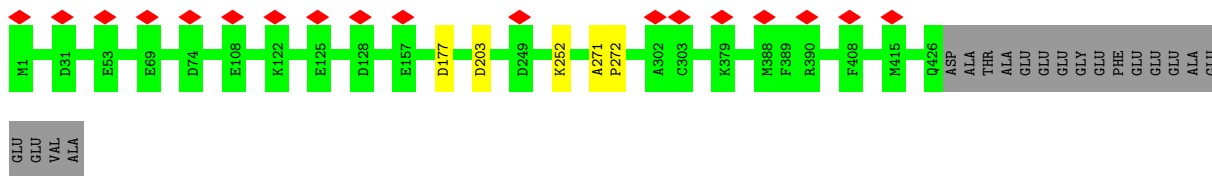
• Molecule 9: Tubulin beta-4B chain



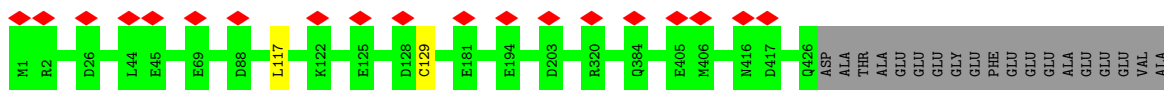
• Molecule 9: Tubulin beta-4B chain



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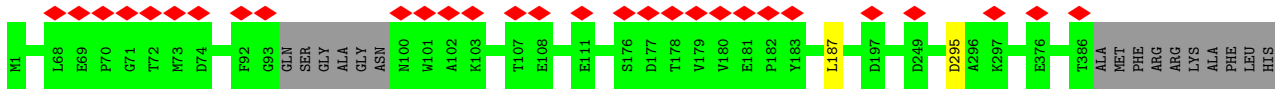


• Molecule 9: Tubulin beta-4B chain



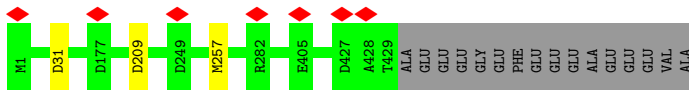
• Molecule 9: Tubulin beta-4B chain





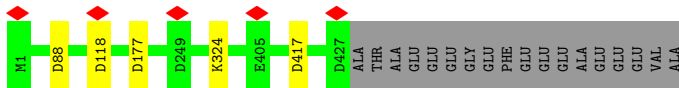
- Molecule 9: Tubulin beta-4B chain

Chain KD: 96%



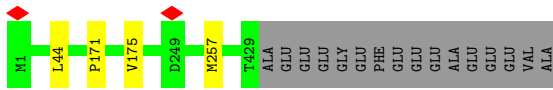
- Molecule 9: Tubulin beta-4B chain

Chain KF: 95%



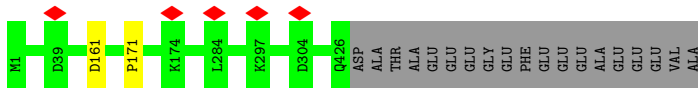
- Molecule 9: Tubulin beta-4B chain

Chain KH: 96%



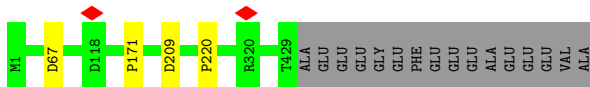
- Molecule 9: Tubulin beta-4B chain

Chain KJ: 95%



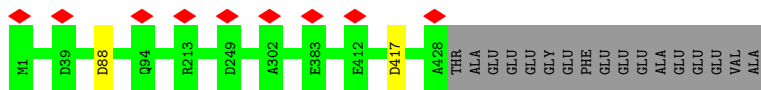
- Molecule 9: Tubulin beta-4B chain

Chain KL: 96%

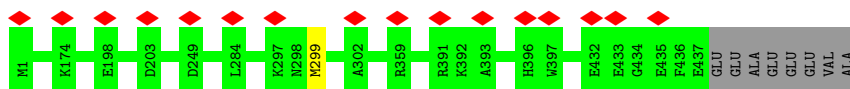


- Molecule 9: Tubulin beta-4B chain

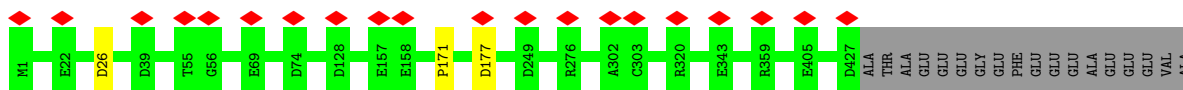
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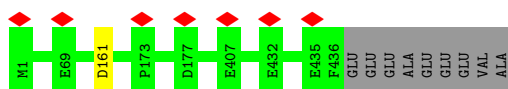
• Molecule 9: Tubulin beta-4B chain



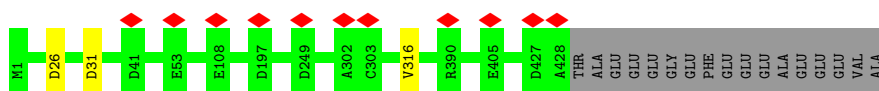
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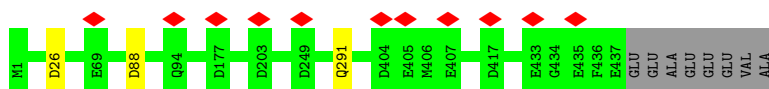
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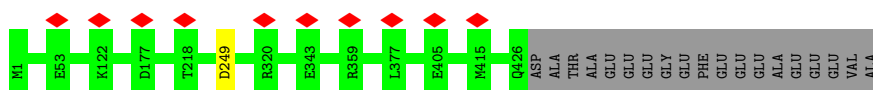
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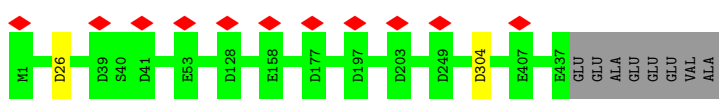
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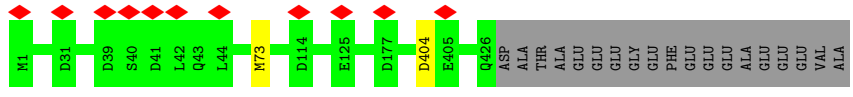
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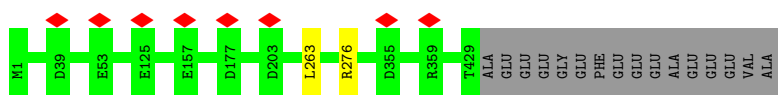
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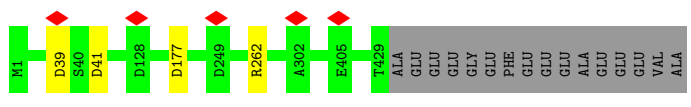
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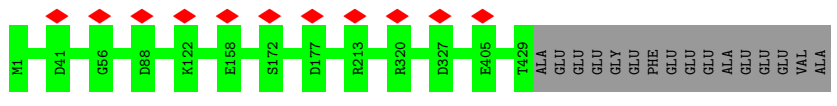
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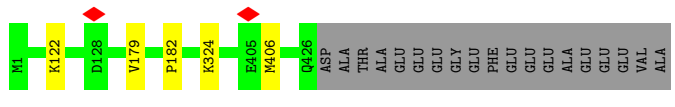
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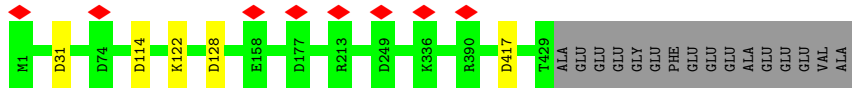
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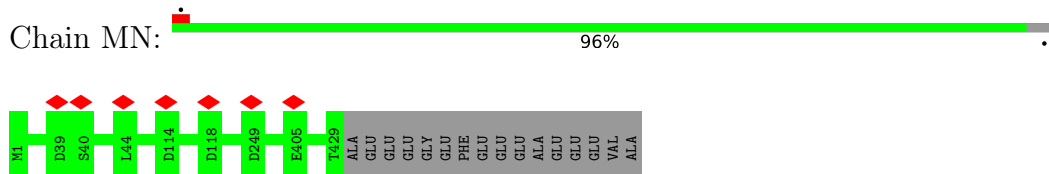
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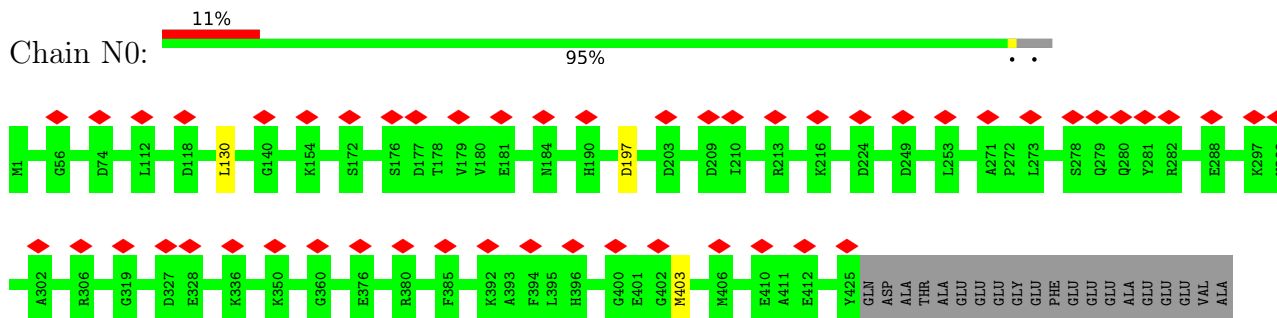
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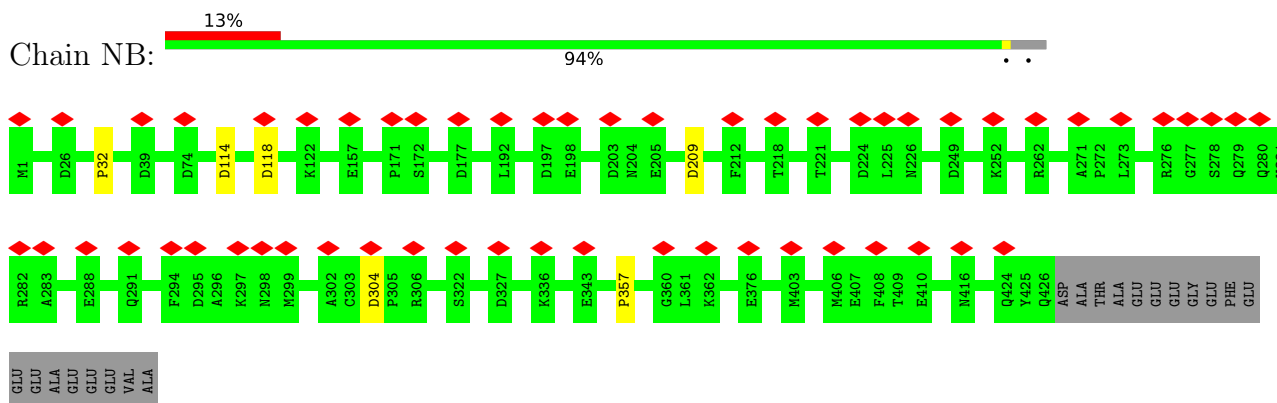
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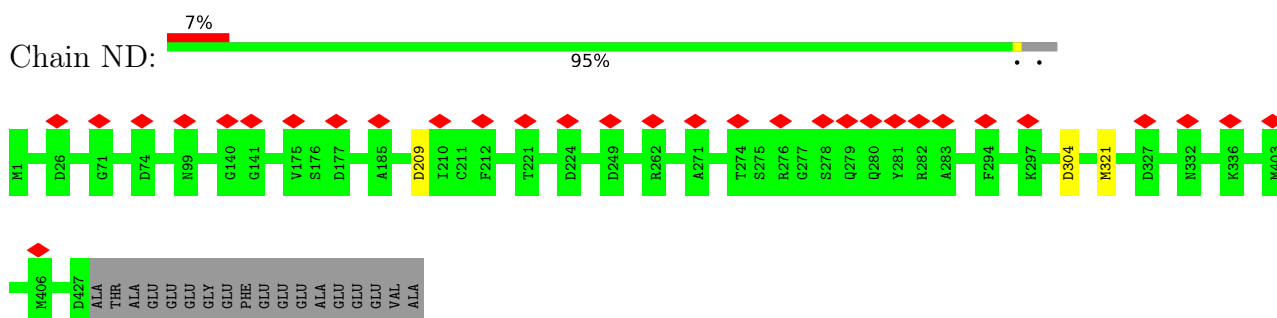
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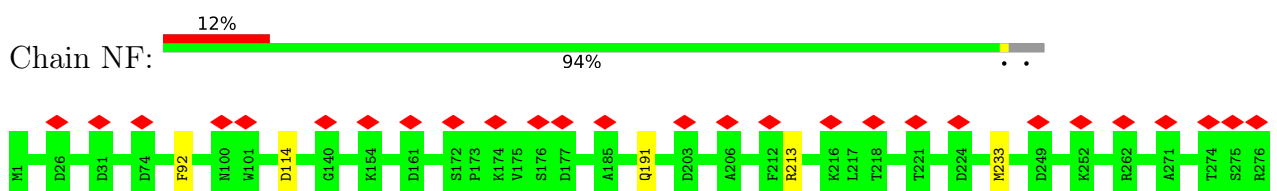
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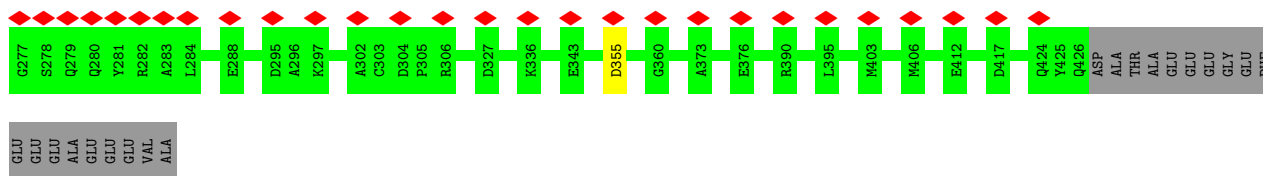


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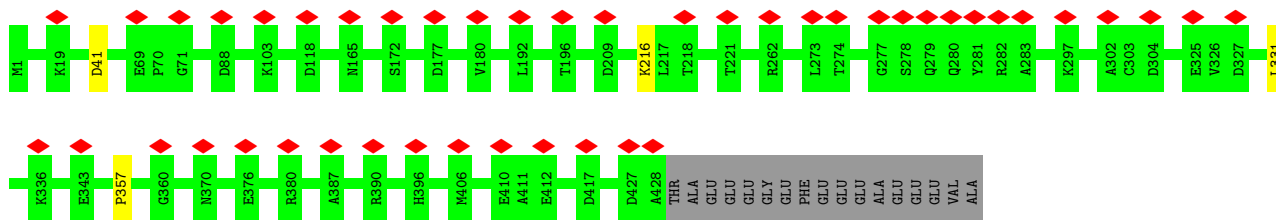


• Molecule 9: Tubulin beta-4B chain

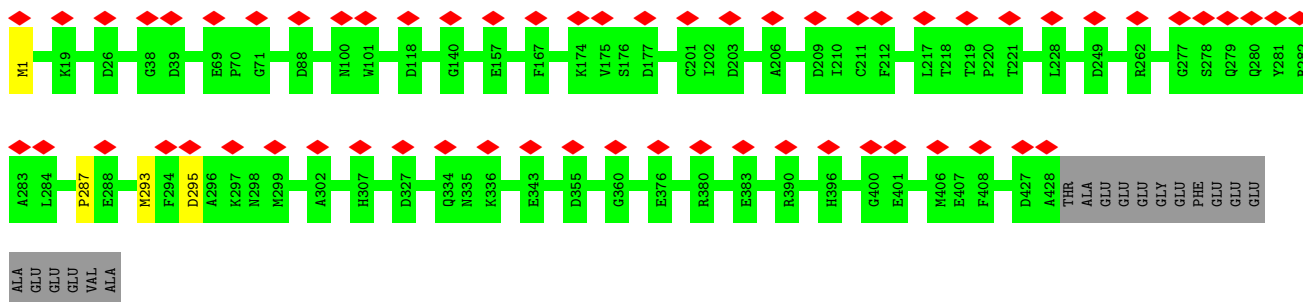




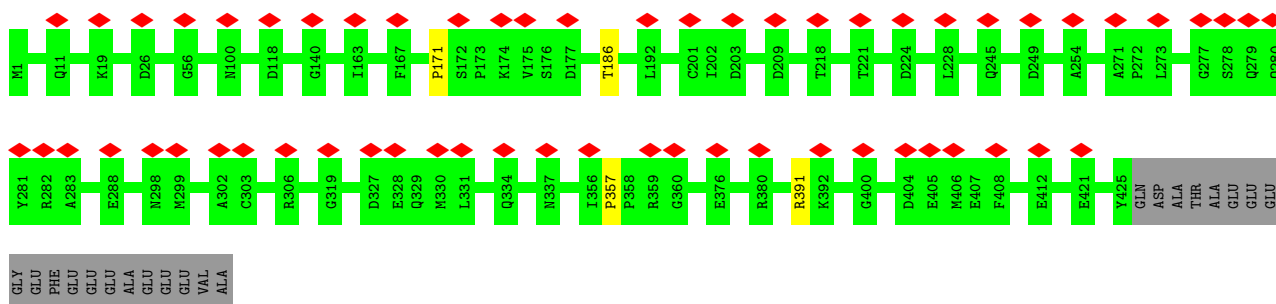
● Molecule 9: Tubulin beta-4B chain



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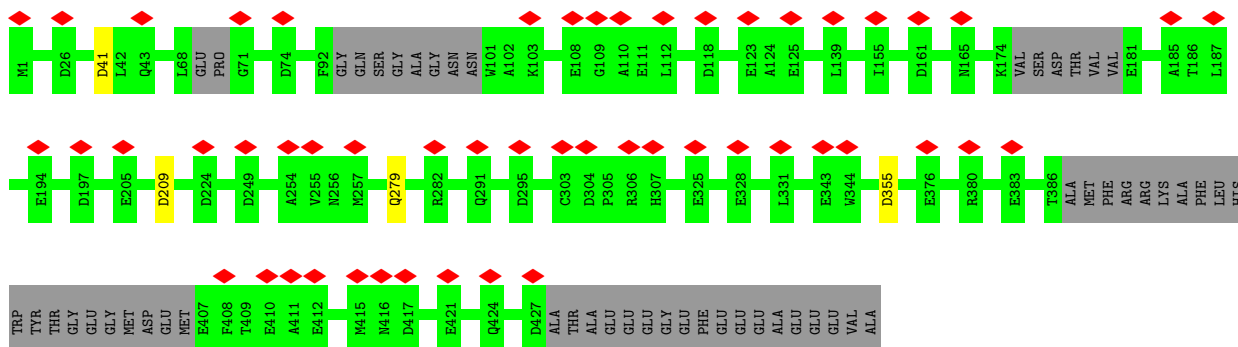


● Molecule 9: Tubulin beta-4B chain

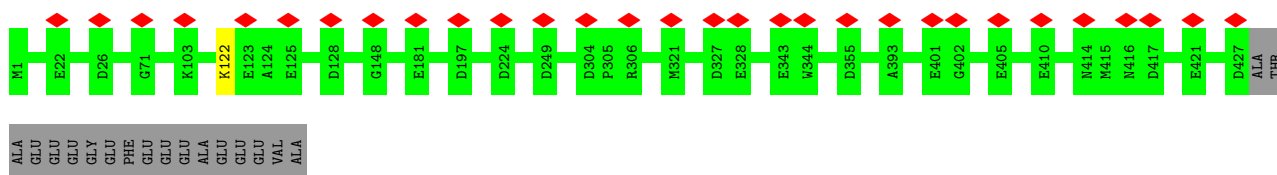


● Molecule 9: Tubulin beta-4B chain

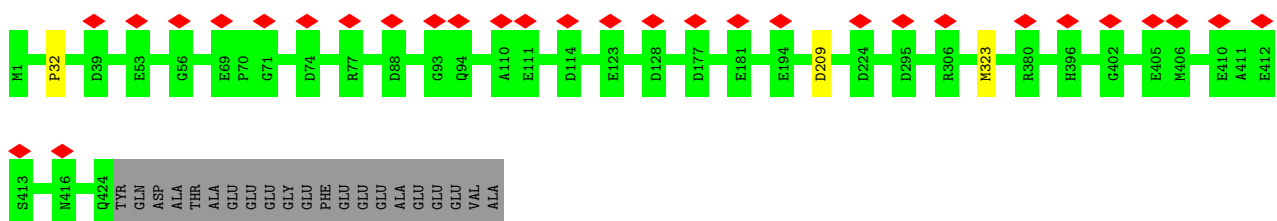




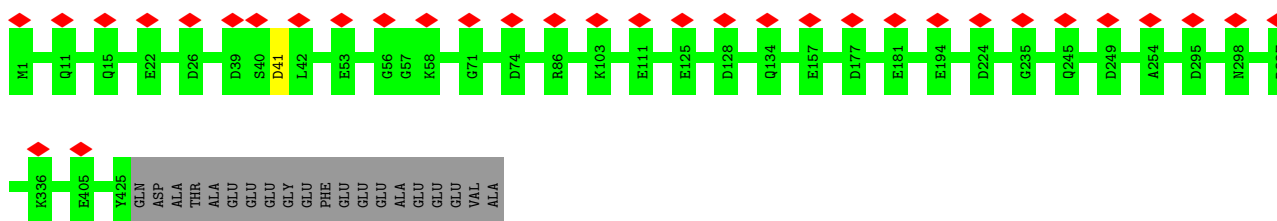
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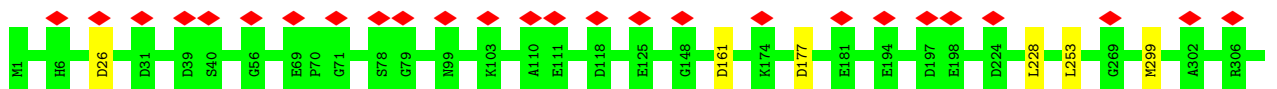
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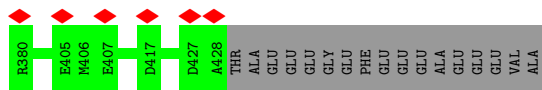


• Molecule 9: Tubulin beta-4B chain



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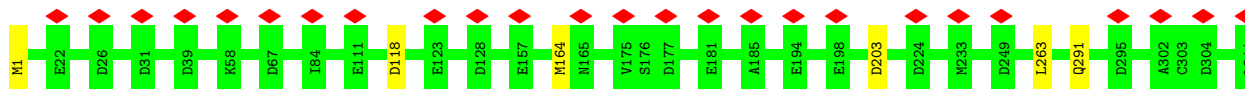




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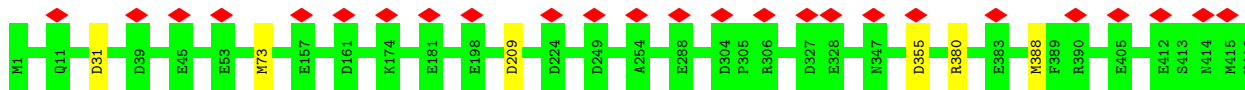
Chain OJ:



• Molecule 9: Tubulin beta-4B chain



Chain OL:



• Molecule 9: Tubulin beta-4B chain



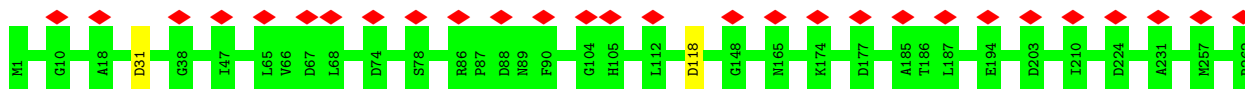
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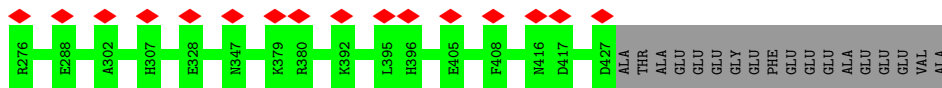
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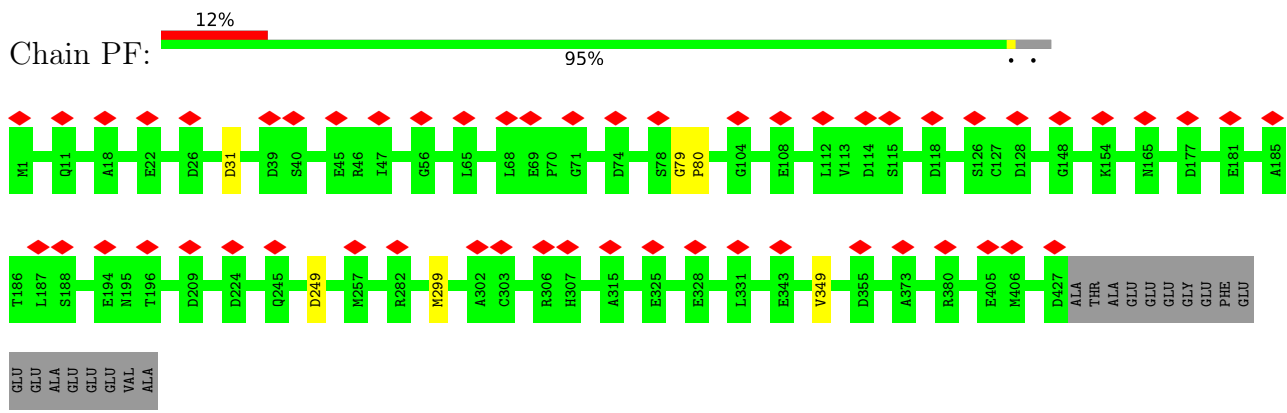


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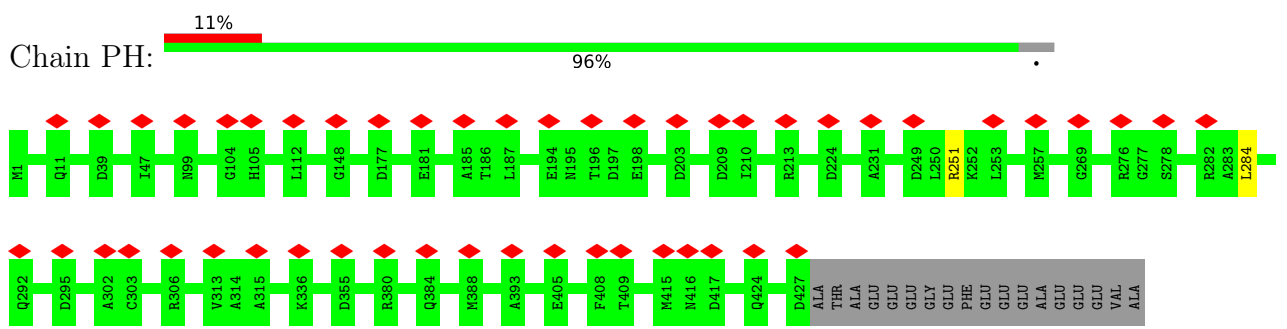


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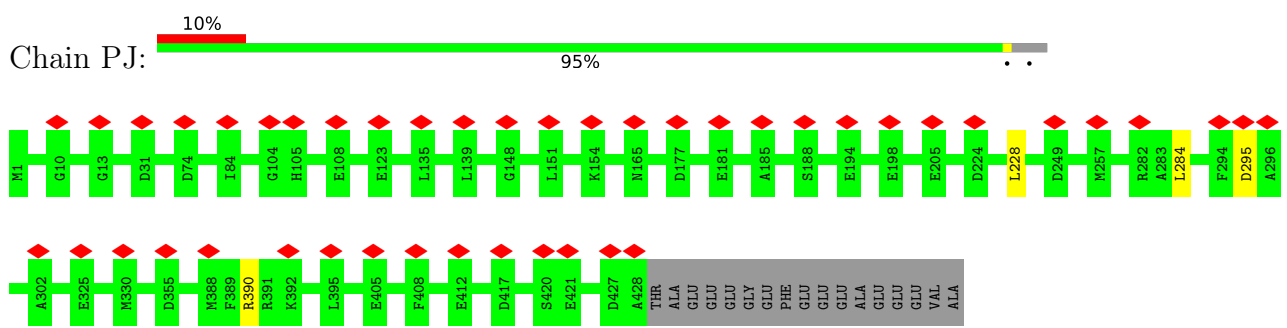




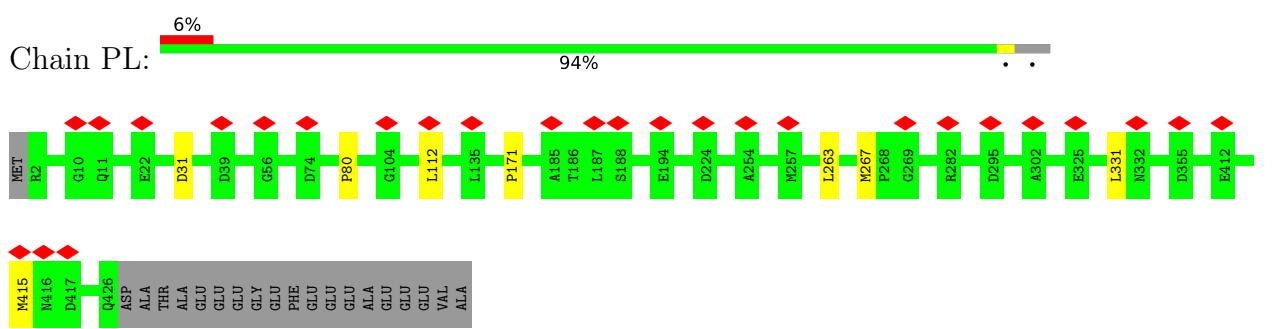
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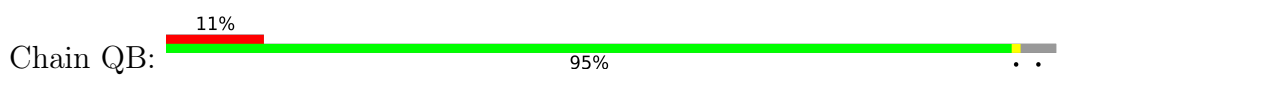
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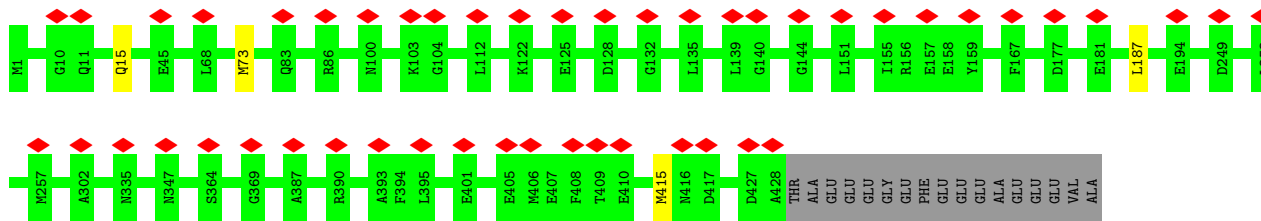


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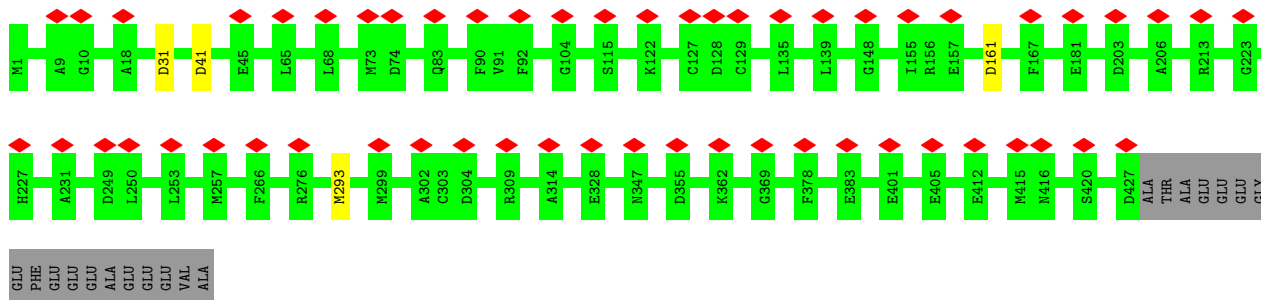


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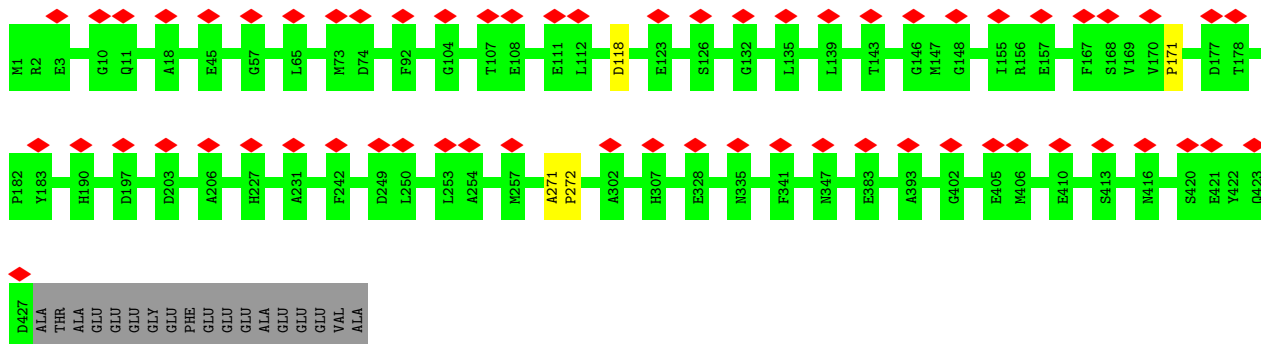




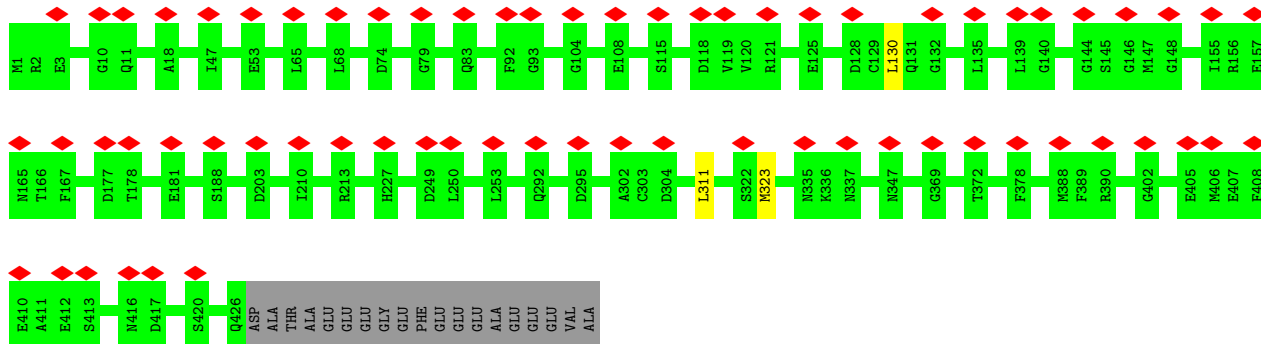
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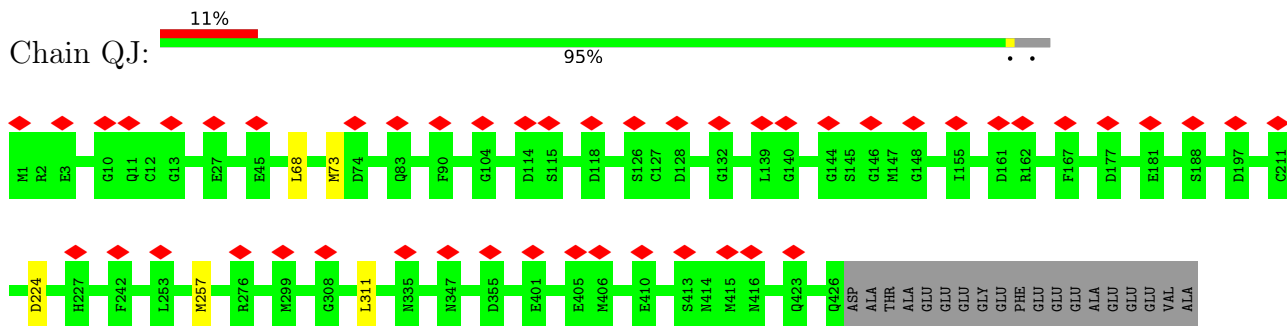
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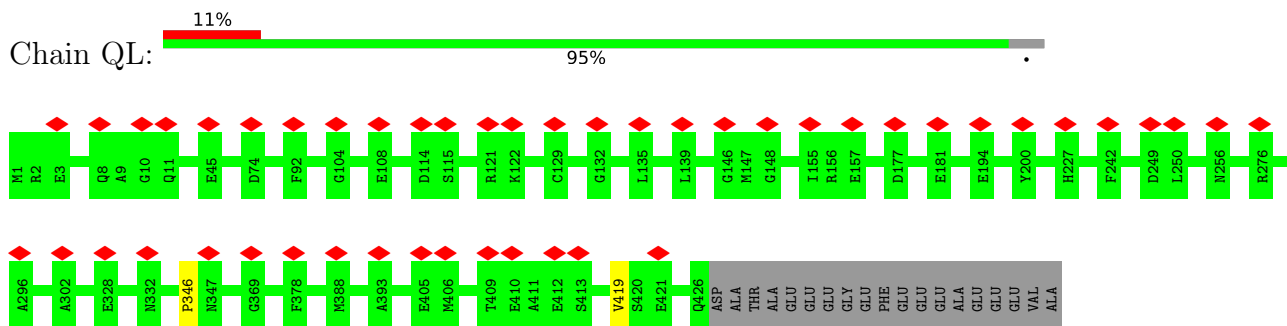
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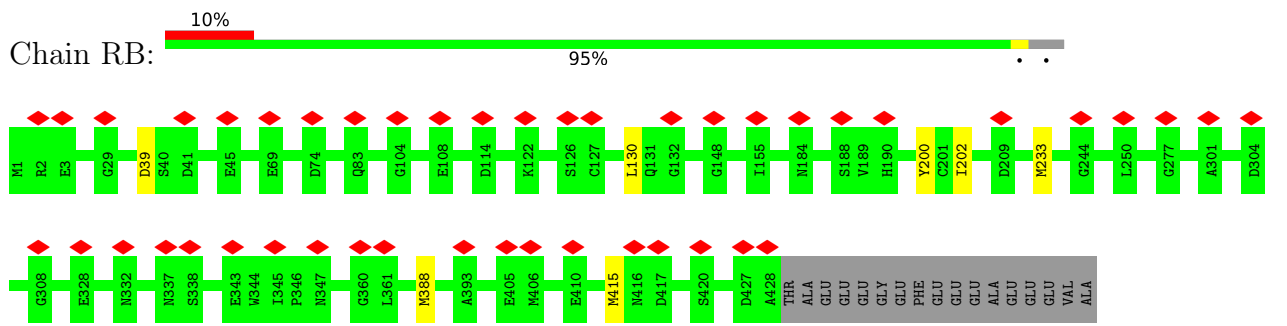
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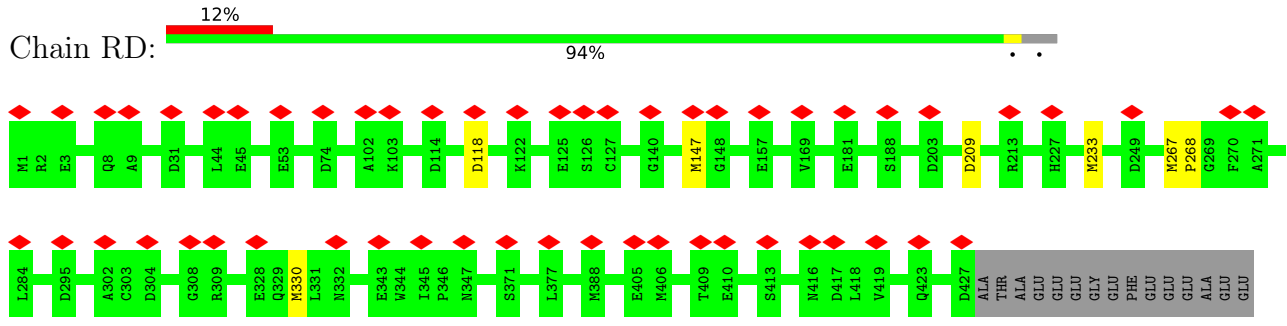
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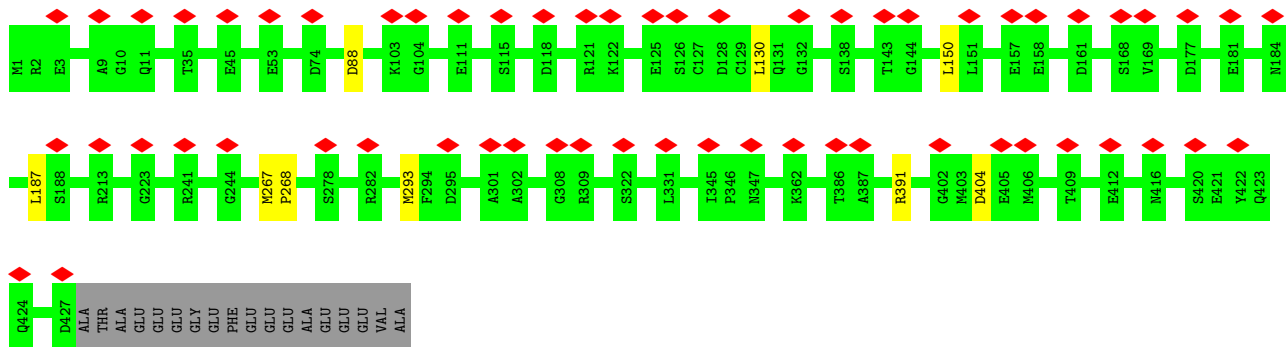
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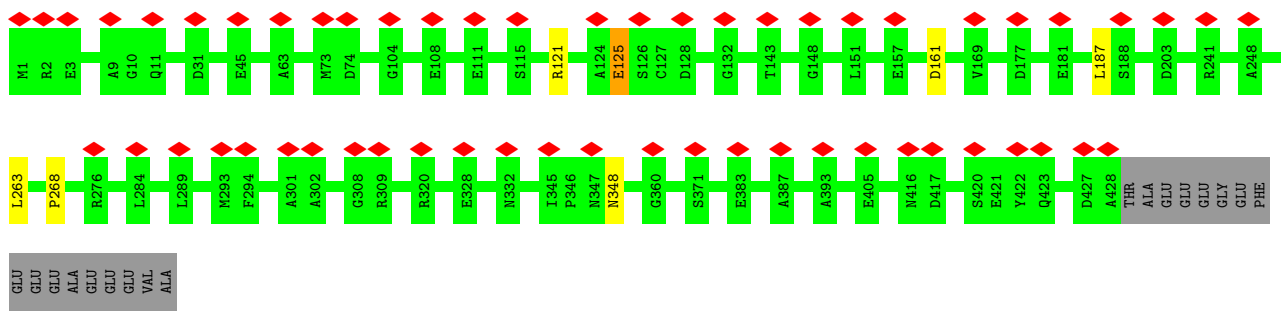
GLU
VAL
ALA

• Molecule 9: Tubulin beta-4B chain

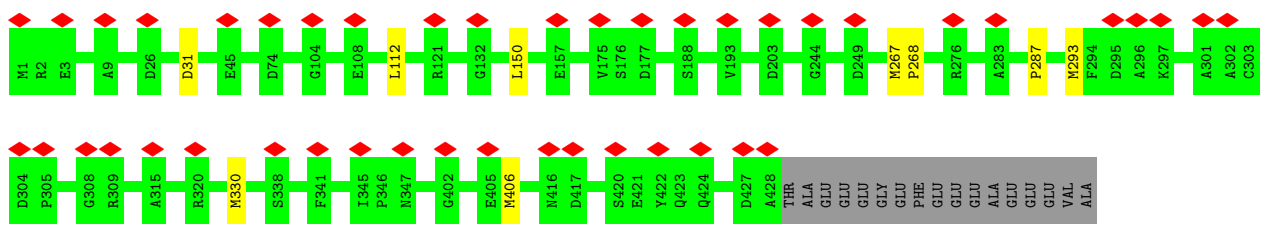




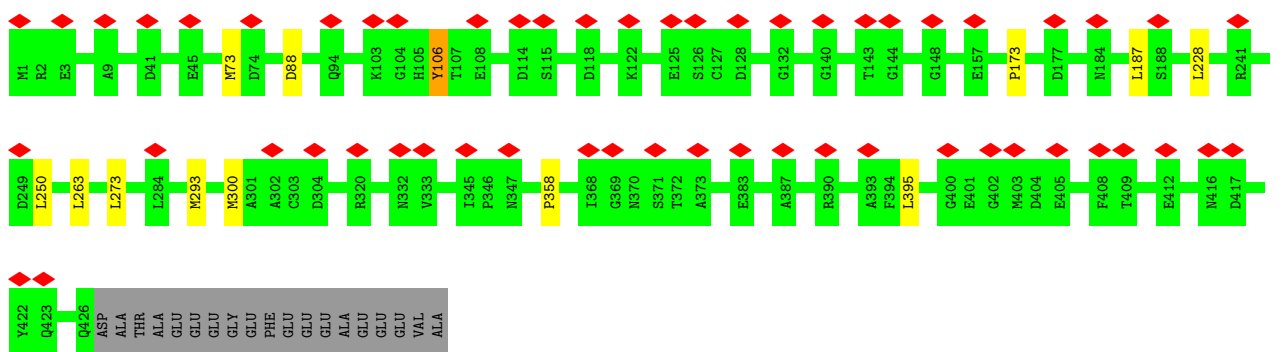
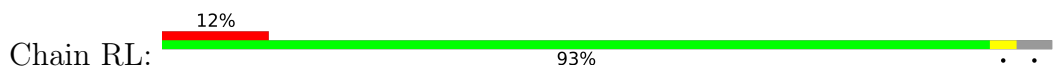
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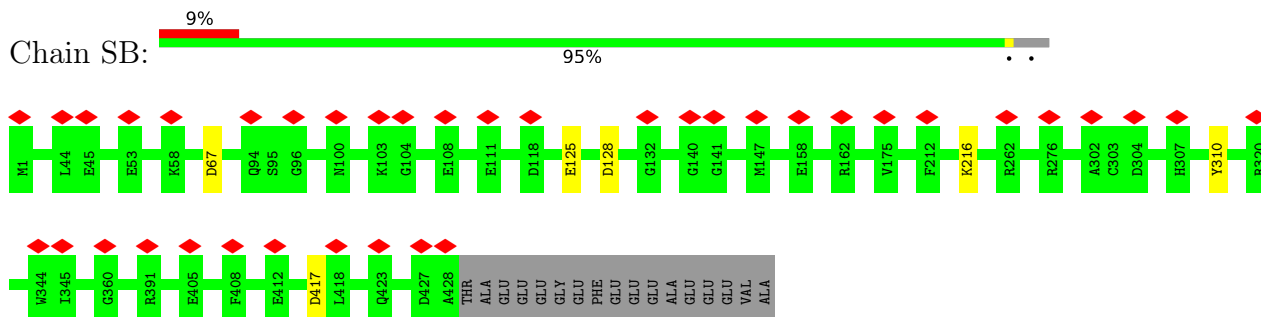
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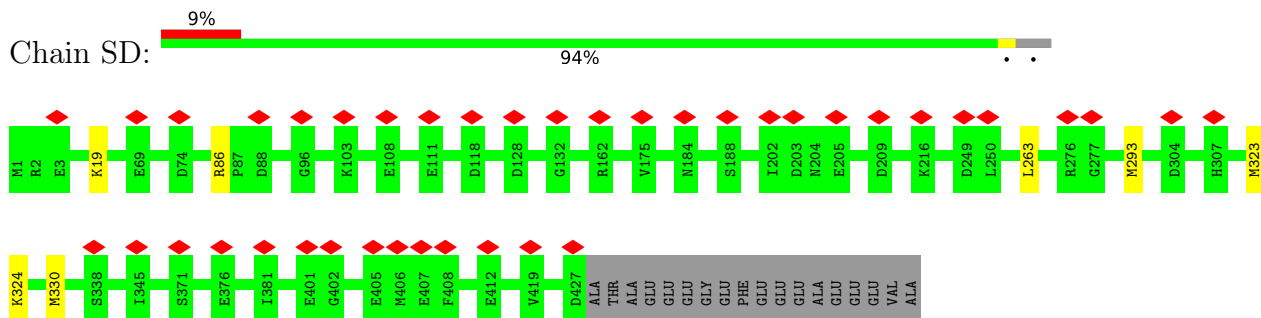
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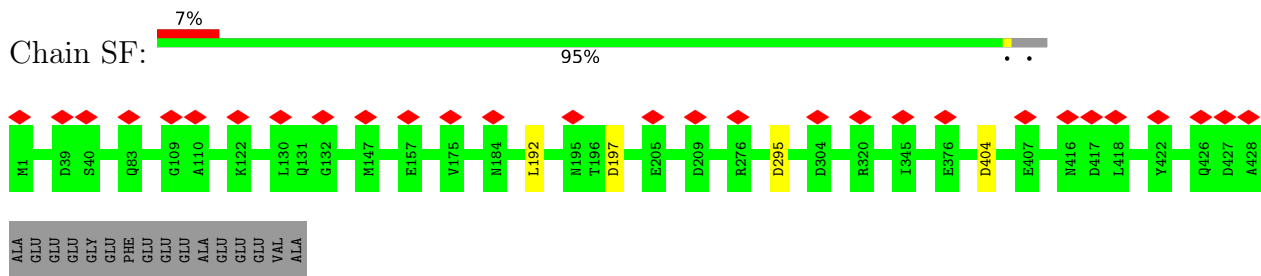
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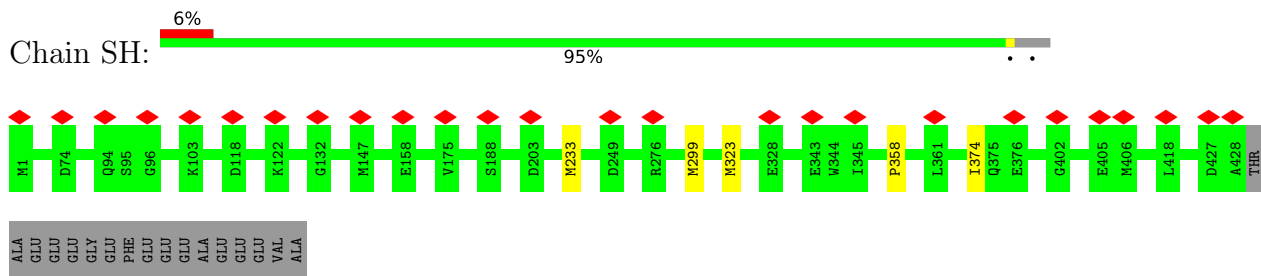
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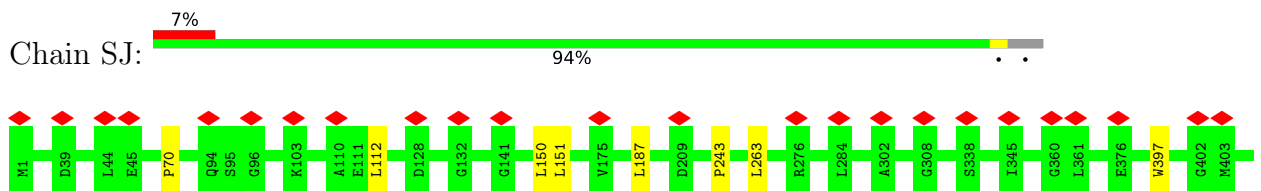
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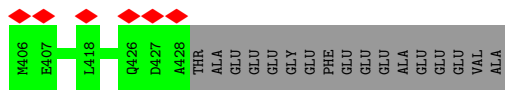


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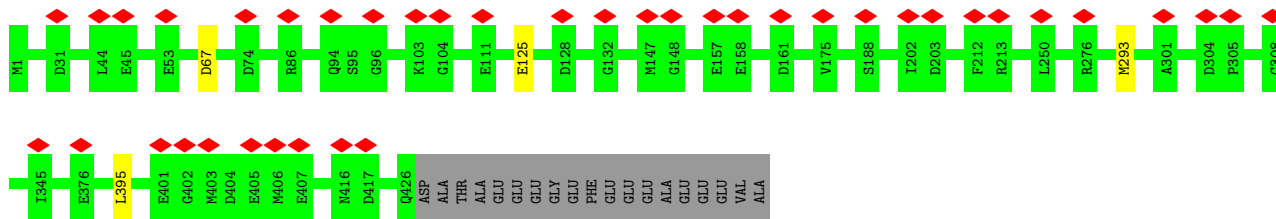


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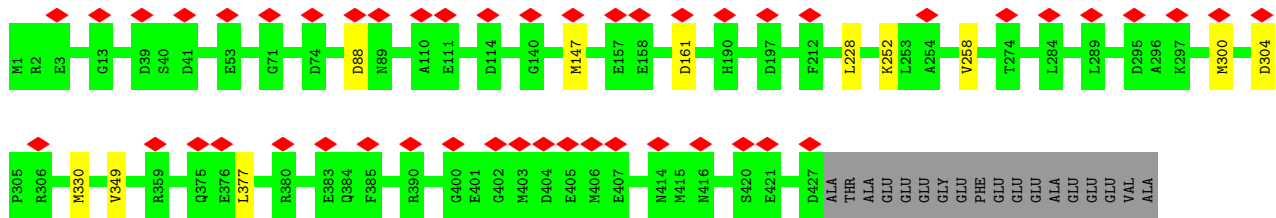




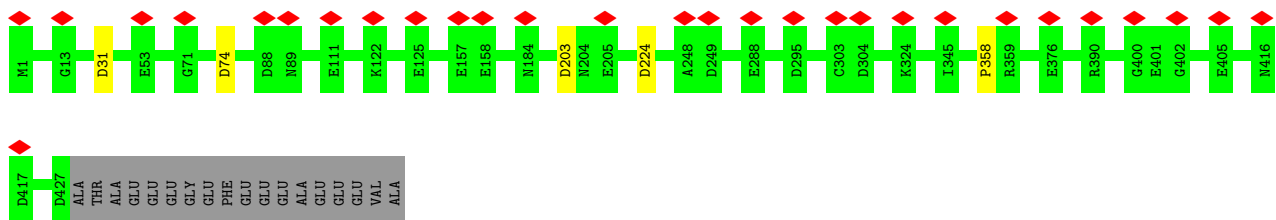
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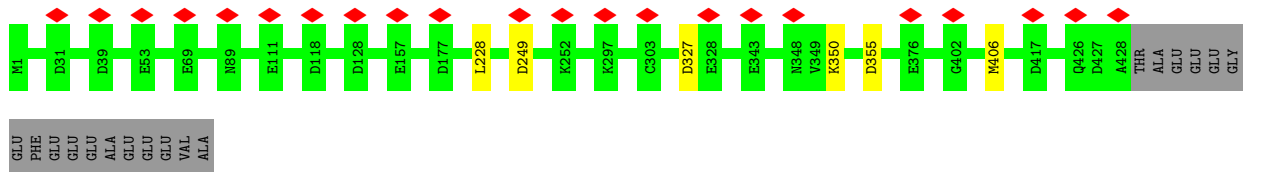
• Molecule 9: Tubulin beta-4B chain



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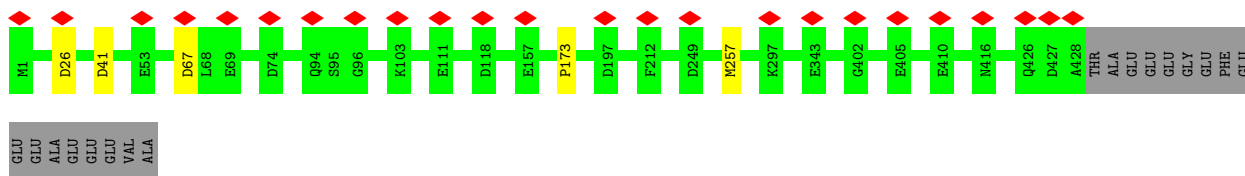


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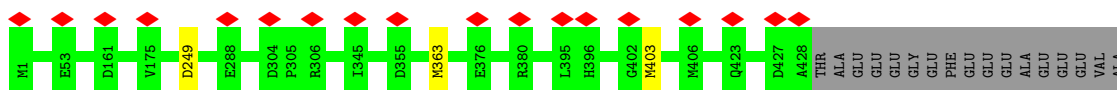


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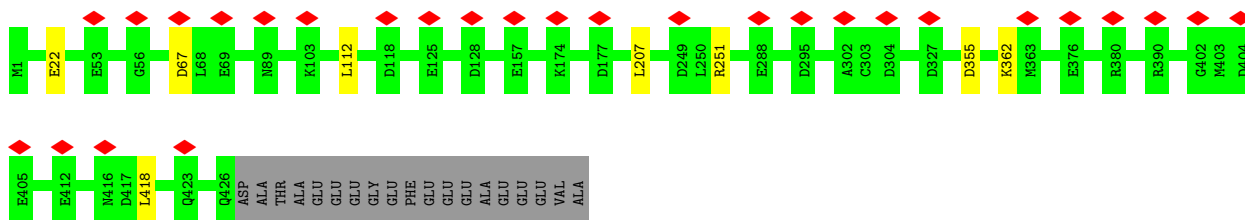




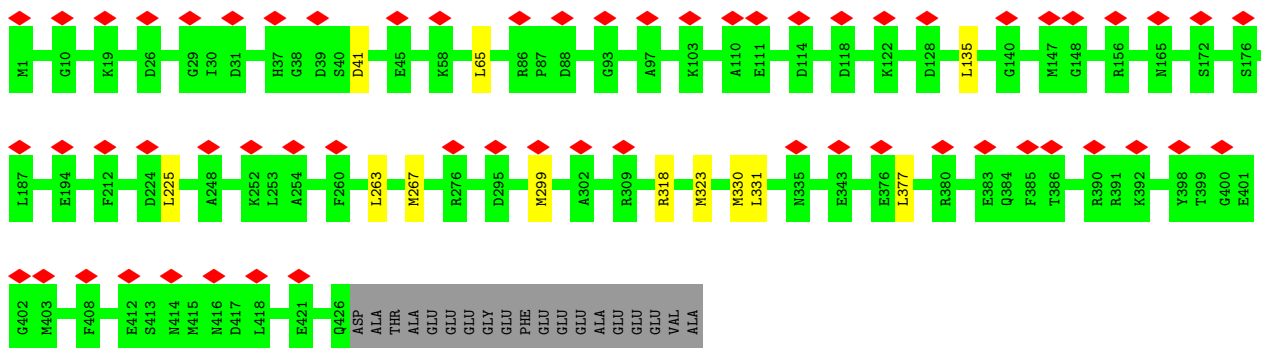
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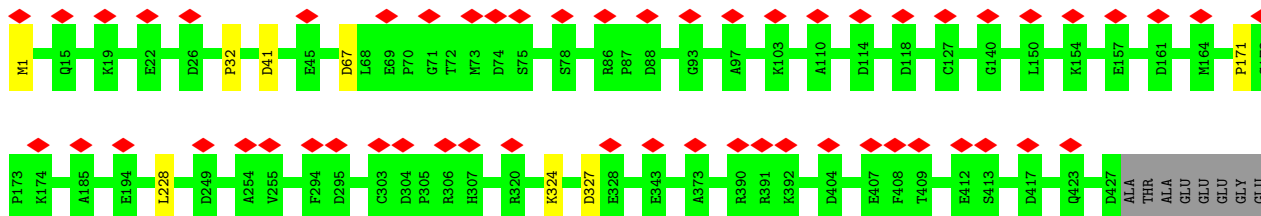
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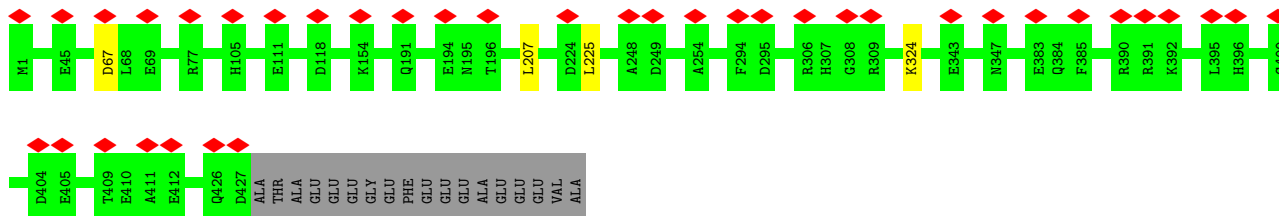


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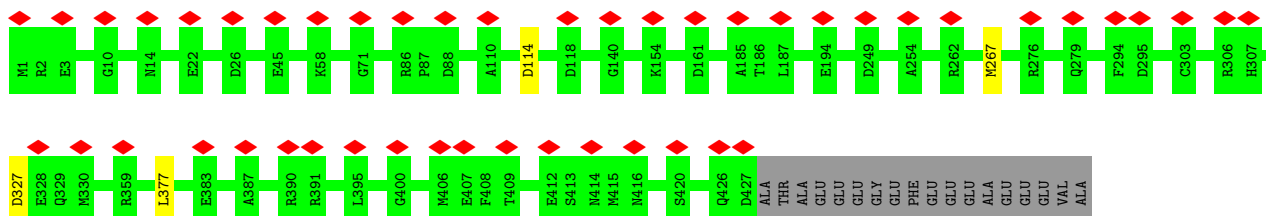


PHE
GLU
GLU
GLU
ALA
GLU
GLU
VAL
ALA

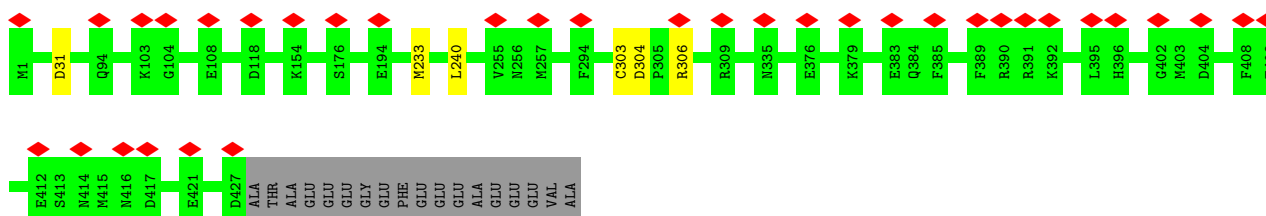
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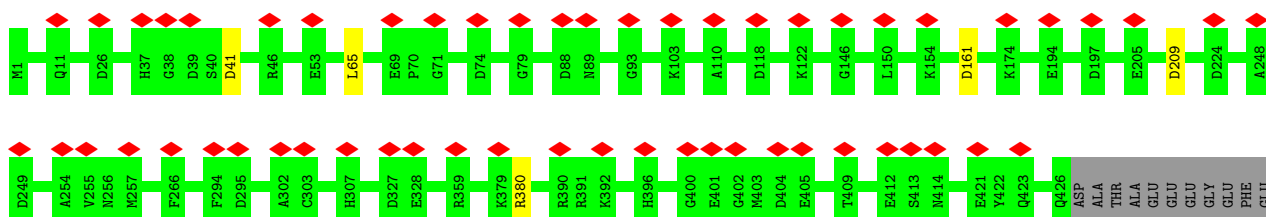
• Molecule 9: Tubulin beta-4B chain



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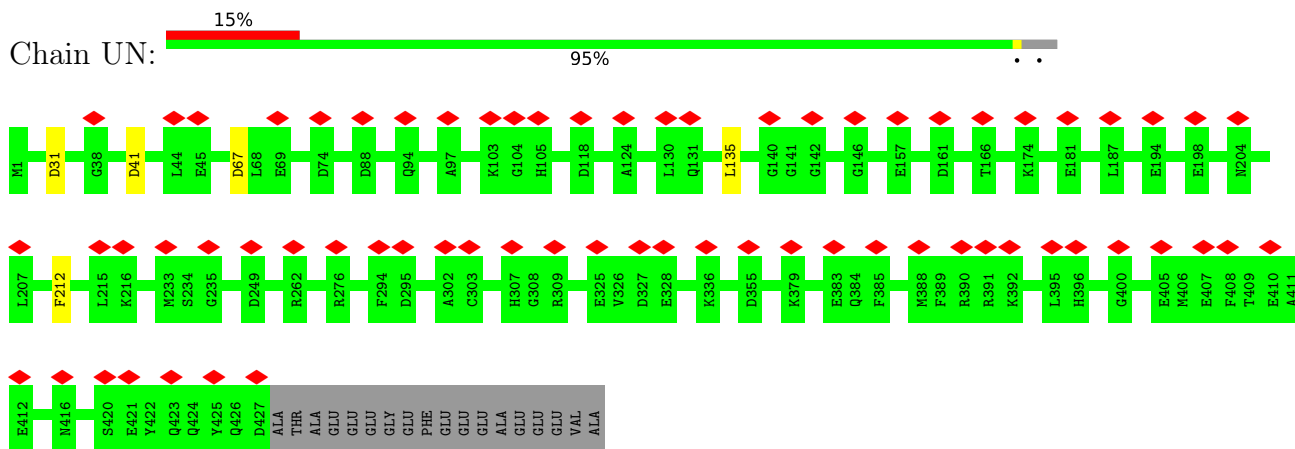


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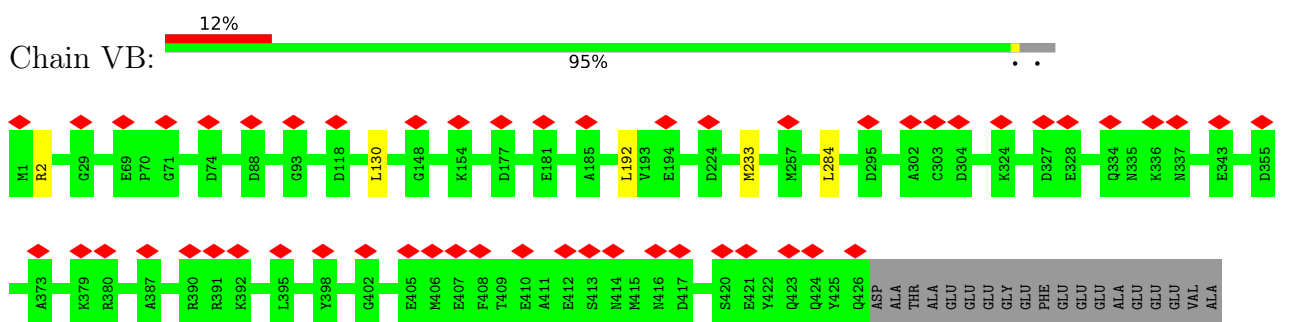


GLU
GLU
ALA
GLU
GLU
VAL
ALA

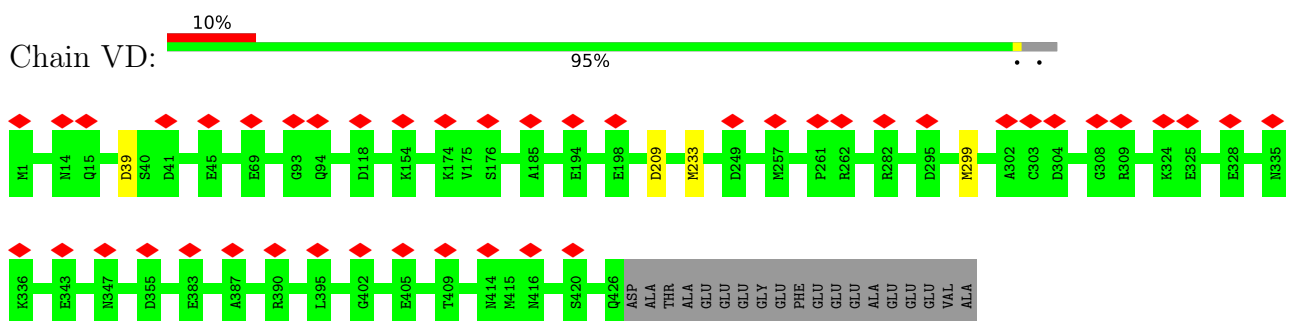
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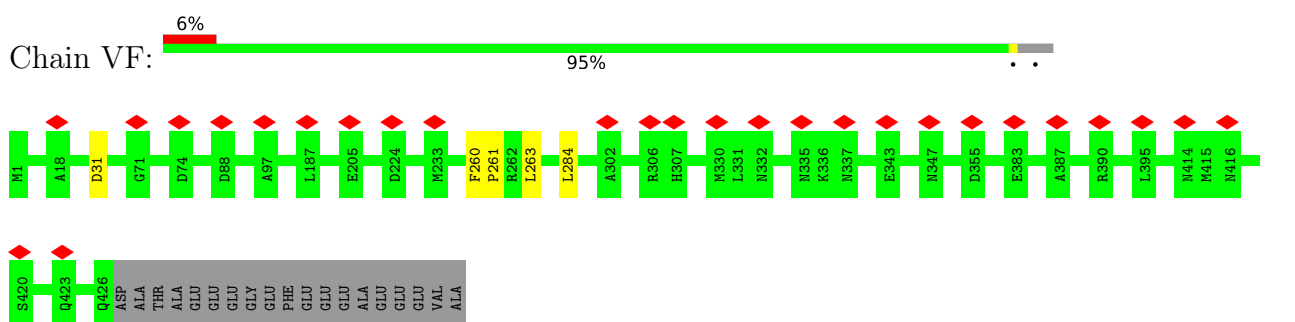
• Molecule 9: Tubulin beta-4B chain



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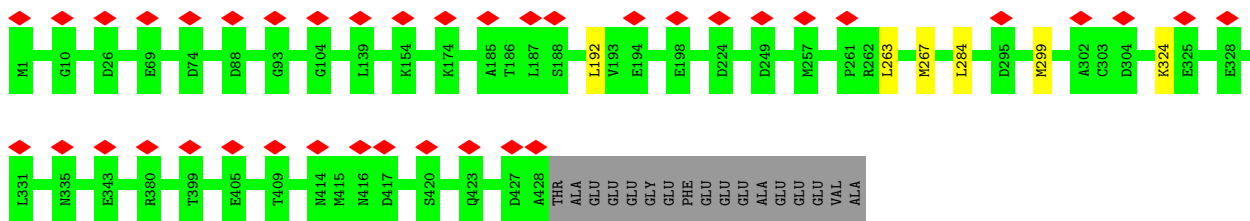


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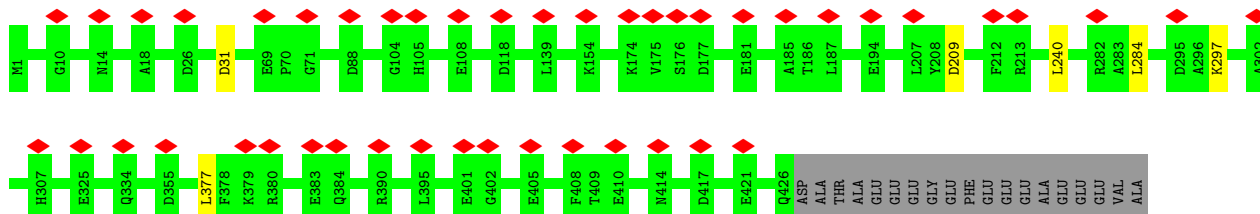


• Molecule 9: Tubulin beta-4B chain

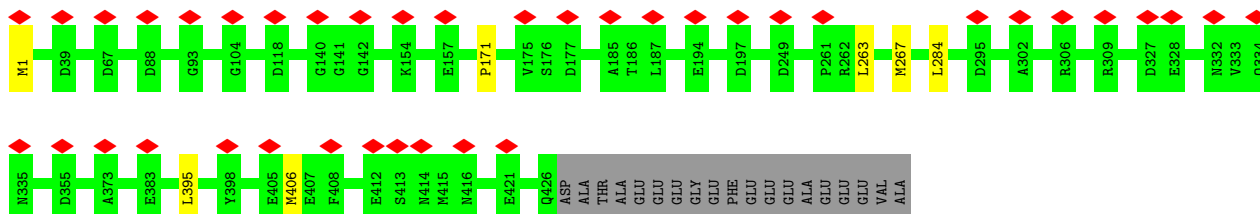




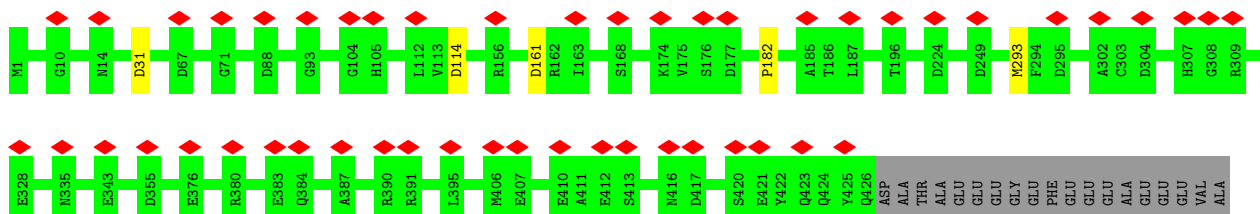
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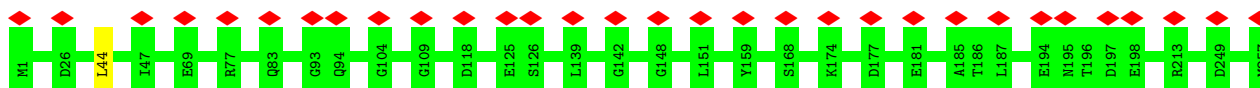
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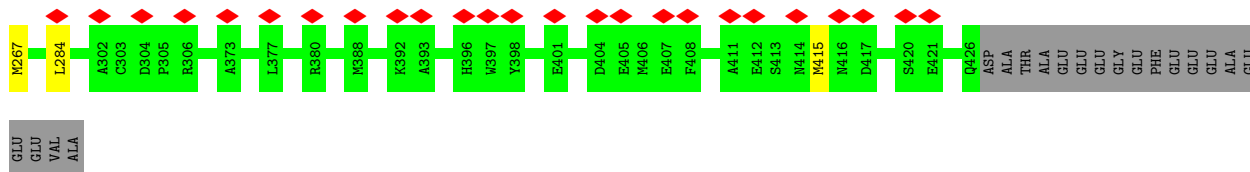


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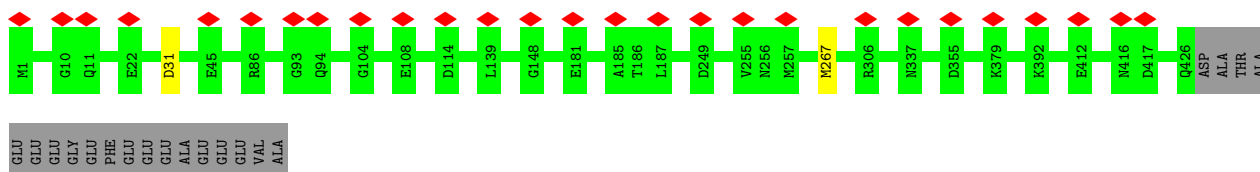


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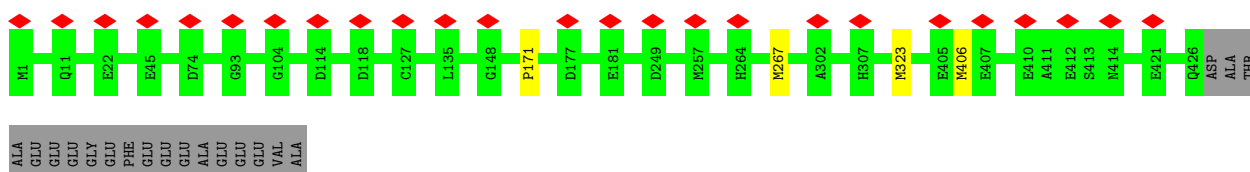




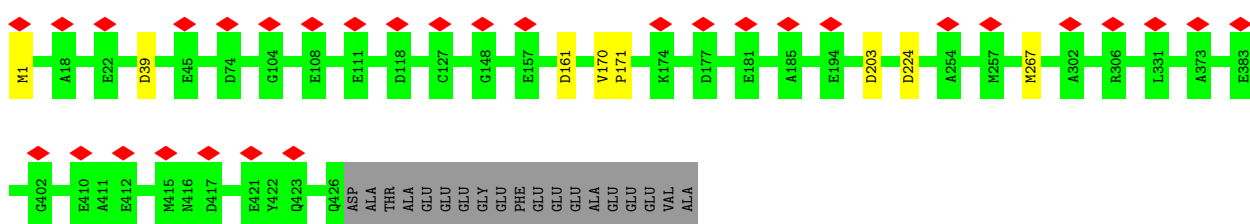
● Molecule 9: Tubulin beta-4B chain



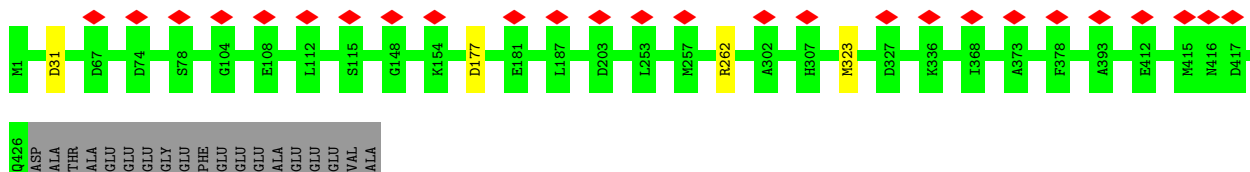
● Molecule 9: Tubulin beta-4B chain



● Molecule 9: Tubulin beta-4B chain

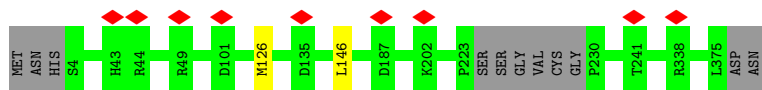


● Molecule 9: Tubulin beta-4B chain

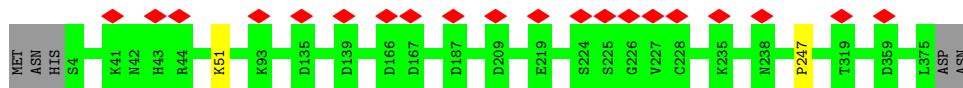


● Molecule 9: Tubulin beta-4B chain

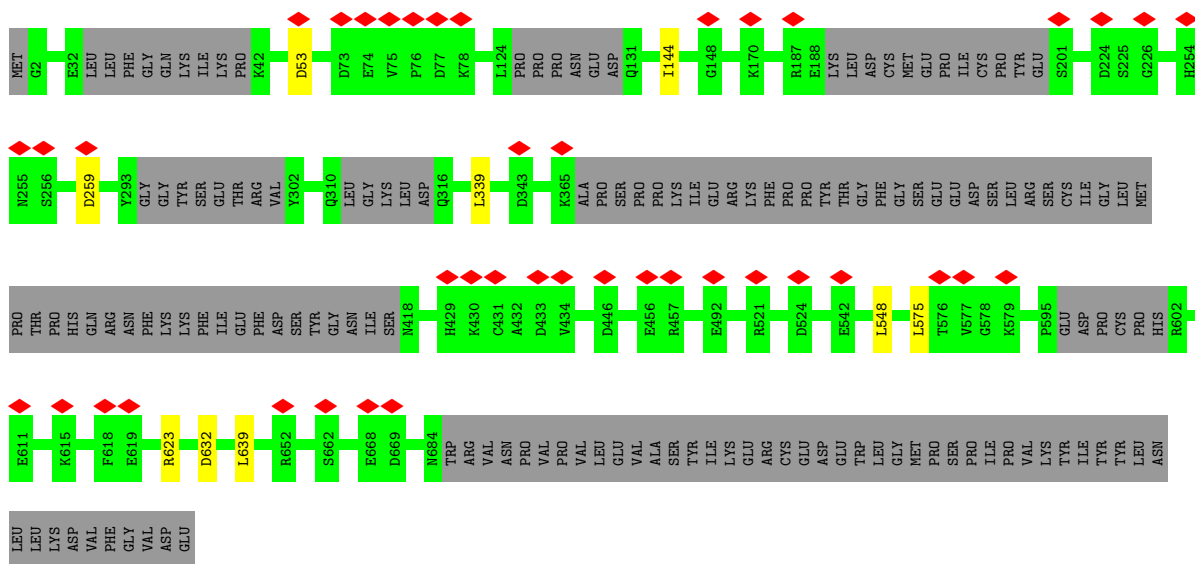
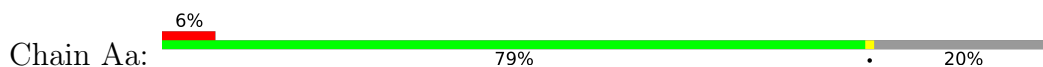




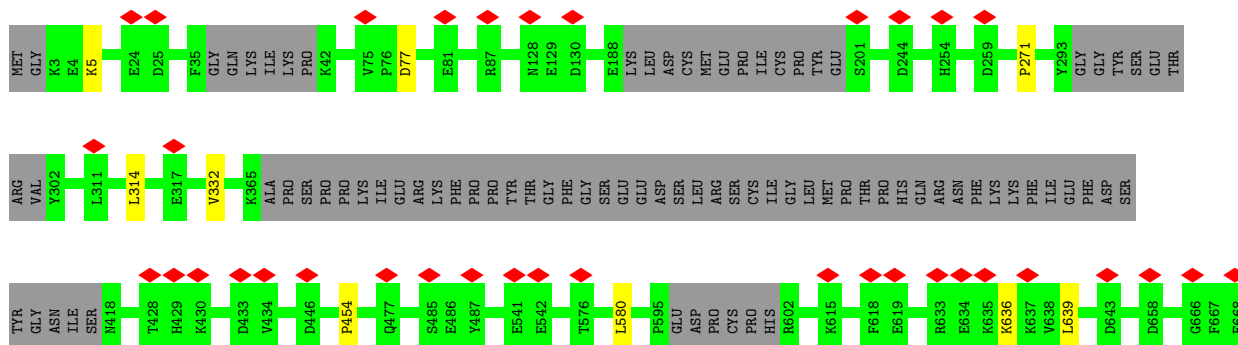
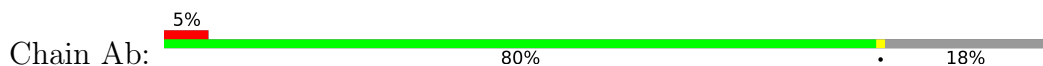
• Molecule 12: Nucleoside diphosphate kinase 7

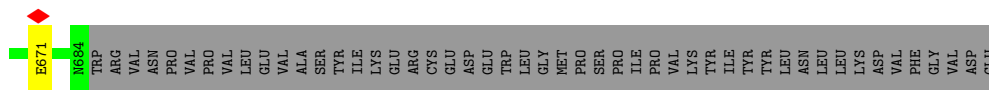


• Molecule 13: EF-hand domain-containing family member C2

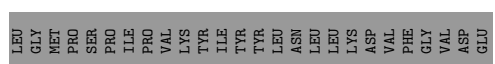
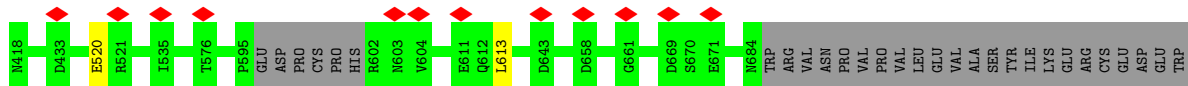
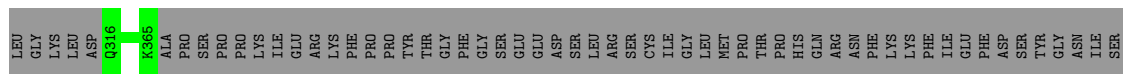
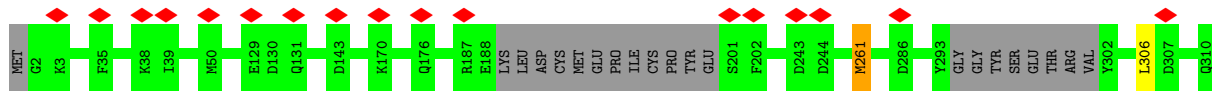
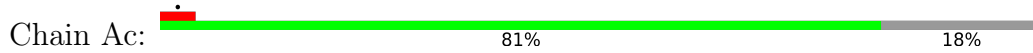


• Molecule 13: EF-hand domain-containing family member C2

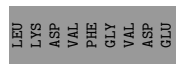
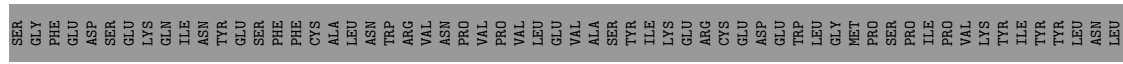
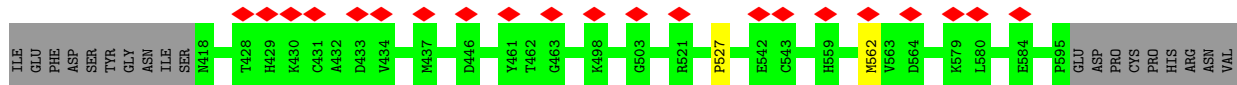
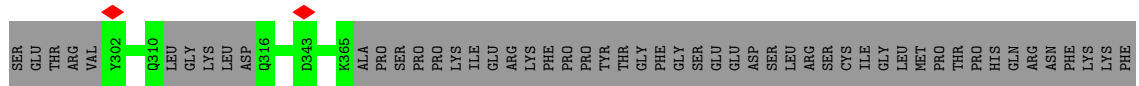
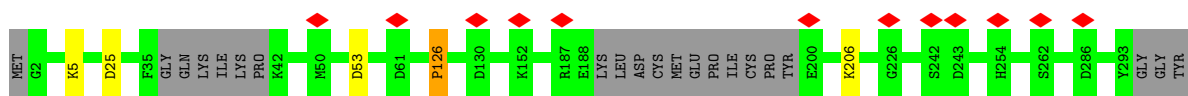




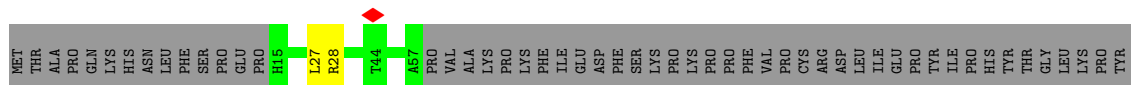
• Molecule 13: EF-hand domain-containing family member C2

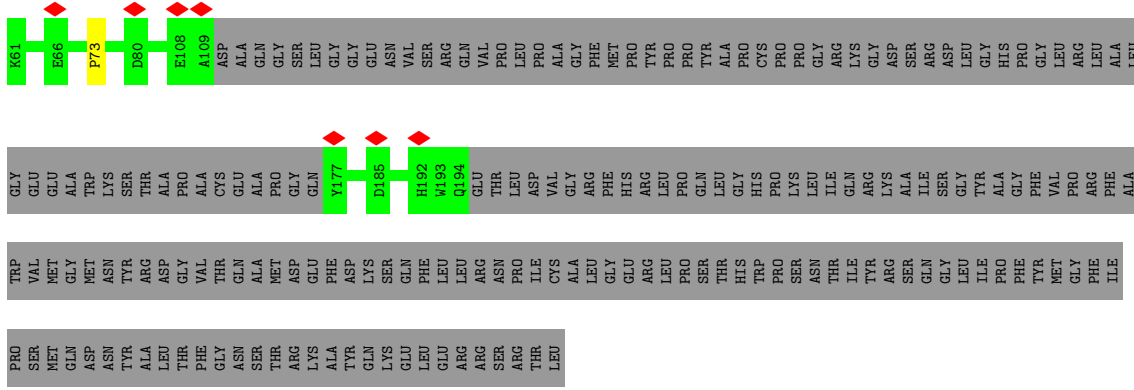


• Molecule 13: EF-hand domain-containing family member C2



• Molecule 14: Family with sequence similarity 166 member A

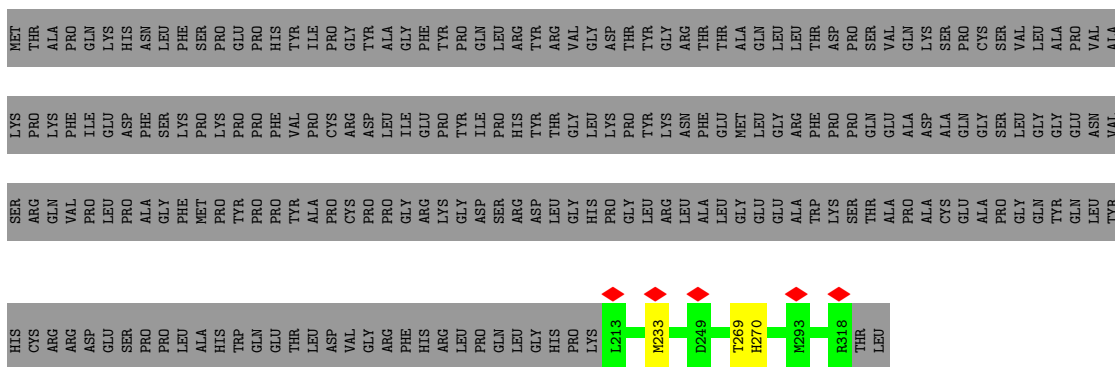




- Molecule 14: Family with sequence similarity 166 member A

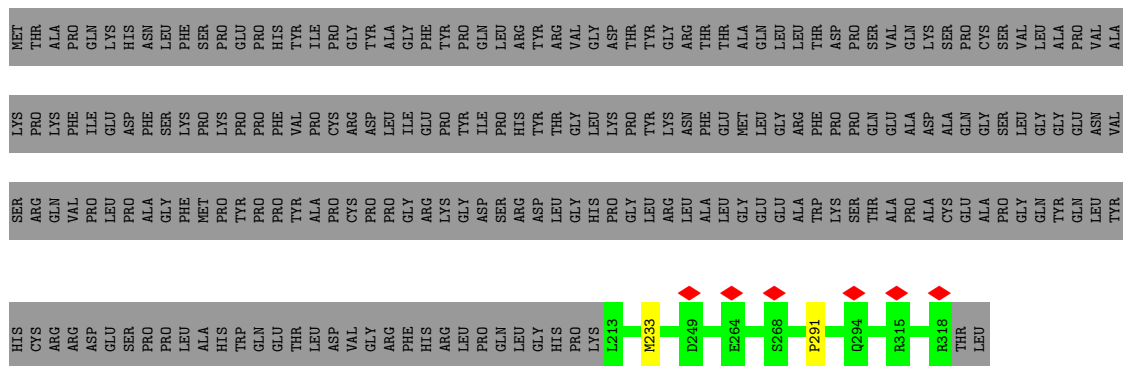


- Molecule 14: Family with sequence similarity 166 member A

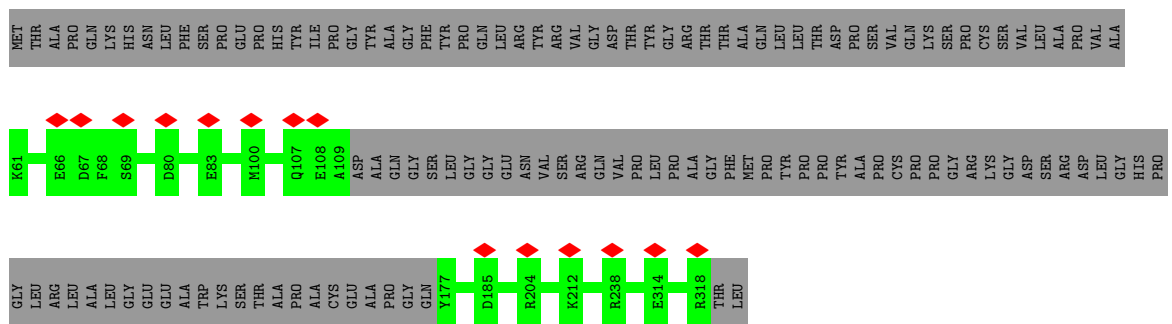


- Molecule 14: Family with sequence similarity 166 member A

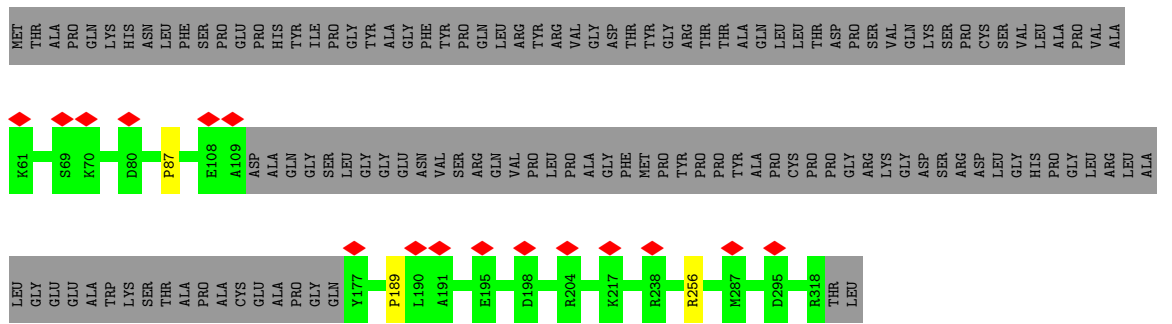




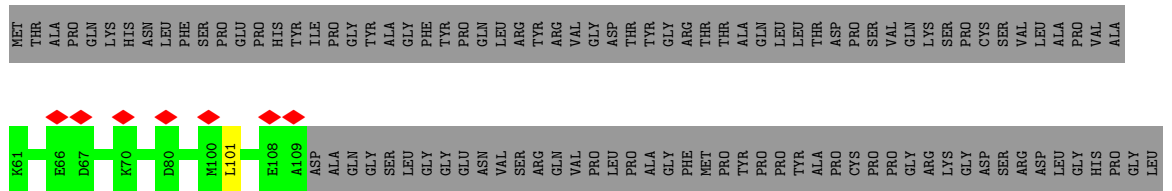
• Molecule 14: Family with sequence similarity 166 member A



• Molecule 14: Family with sequence similarity 166 member A



• Molecule 14: Family with sequence similarity 166 member A



ASN
SER
THR
THR
ARG
LYS
ALA
TYR
GLN
LYS
GLU
LEU
LEU
GLU
ARG
ARG
SER
ARG
THR
LEU

- Molecule 14: Family with sequence similarity 166 member A

Chain CO:  27% 73%

MET
THR
ALA
PRO
GLN
LEU
LYS
HIS
ASN
PHE
LEU
SER
PRO
GLU
PRO
GLU
PRO
HIS
D33
D33
A40
A40
A57
A57
PRO
VAL
ALA
LYS
SER
PRO
GLN
PHE
ILE
LEU
GLU
ASP
PHE
GLY
SER
LYS
LYS
PRO
PRO
PHE
VAL
PRO
CYS
ARG
ASP
LEU
ILE
GLU
GLY
TYR
ILE
PRO
HIS
TYR
THR
LEU
LEU
PRO
TYR
ARG
LEU
LEU
LEU
ARG

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

LEU
ALA
LEU
GLY
GLU
GLU
ALA
TRP
LYS
SER
THR
SER
ALA
PRO
ALA
CYS
GLU
ALA
PRO
TRP
SER
ASN
GLN
TYR
GLN
LEU
TYR
HIS
CYS
ARG
GLN
VAL
ILE
SER
GLY
ILE
LEU
PHE
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TYR
MET
GLY
ALA
HIS
PHE
ILE
PRO
SER
MET
GLN
ASP
VAL
GLY
ARG
PHE
HIS
LEU
HIS
GLY
LEU
GLN
GLN
L213
L213
R236
R236
D239
D239

L255
L255
R256
R256
PRO
PRO
CYS
ALA
LEU
GLY
SER
LEU
ARG
PRO
SER
HIS
TRP
SER
ASN
ILE
TYR
ARG
SER
GLN
GLY
ILE
VAL
PHE
TYR
MET
GLY
ALA
HIS
PHE
ILE
PRO
SER
MET
GLN
ASP
ASN
TYR
ALA
LEU
THR
PHE
GLY
LEU
ASN
THR
SER
LYS
ALA
TYR
GLN
LEU
LEU
LEU

GLU
ARG
SER
SER
THR
LEU

- Molecule 15: Protein FAM166C

Chain Ap:  64% 35%

MET
ALA
SER
ARG
SER
ALA
GLY
THR
LEU
LEU
LEU
GLU
PHE
ASN
ALA
ALA
TYR
VAL
PRO
PRO
GLY
L22
L22
K47
K47
Q50
Q50
R53
R53
R54
R54
R55
R55
ALA
LEU
GLY
ARG
SER
SER
THR
ALA
PHE
SER
GLY
ARG
GLY
HIS
PHE
PRO
THR
THR
ILE
PHE
SER
LEU
LEU
ASN
PRO
THR
GLN
VAL
LEU
ARG
ASN
ASN

ALA
LEU
THR
ARG
ASP
ARG
TRP
LEU
HIS
THR
PRO
GLU
PHE
SER
Y98
Y98
D153
D153
Q177
Q177
R192
R192
R193
R193
ASP
CYS
TYR
PHE
GLU
PHE
ARG
ALA


- Molecule 15: Protein FAM166C

Chain Aq:  44% 56%

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

SER
THR
PHE
ARG
GLY
GLY
HIS
PHE
PRO
THR
THR
PHE
SER
SER
LEU
LEU
ASN
PRO
THR
GLN
VAL
LEU
ARG
ASN
ASN
ALA
THR
LEU
ASP
TRP
LEU
HIS
THR
SER
SER
TYR
THR
PHE
ASN
GLY
ASP
SER
SER
S106
S106
K143
K143
L173
L173
R193
R193
ASP
CYS
TYR
PHE
GLU
PHE
ARG
ALA

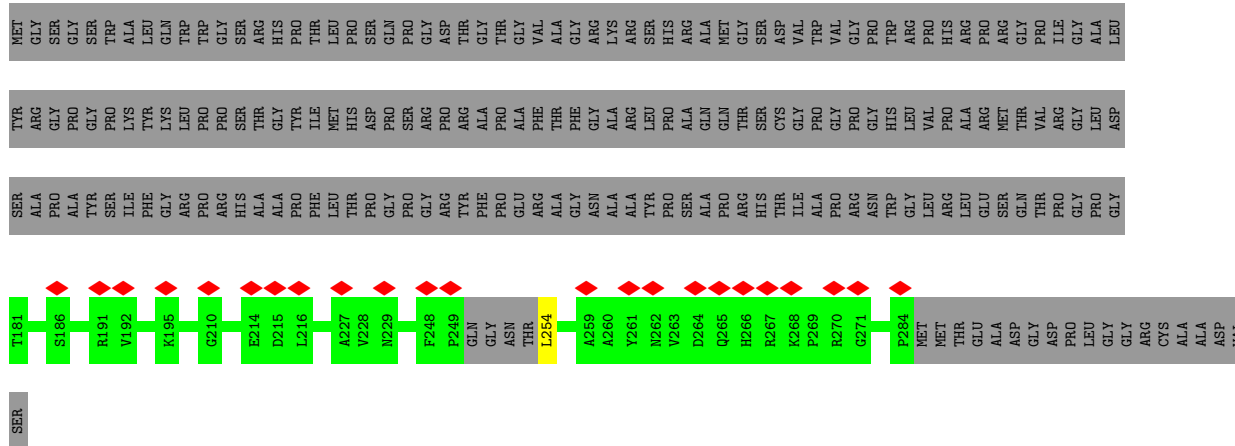
- Molecule 15: Protein FAM166C

Chain Ar:  74% 24%

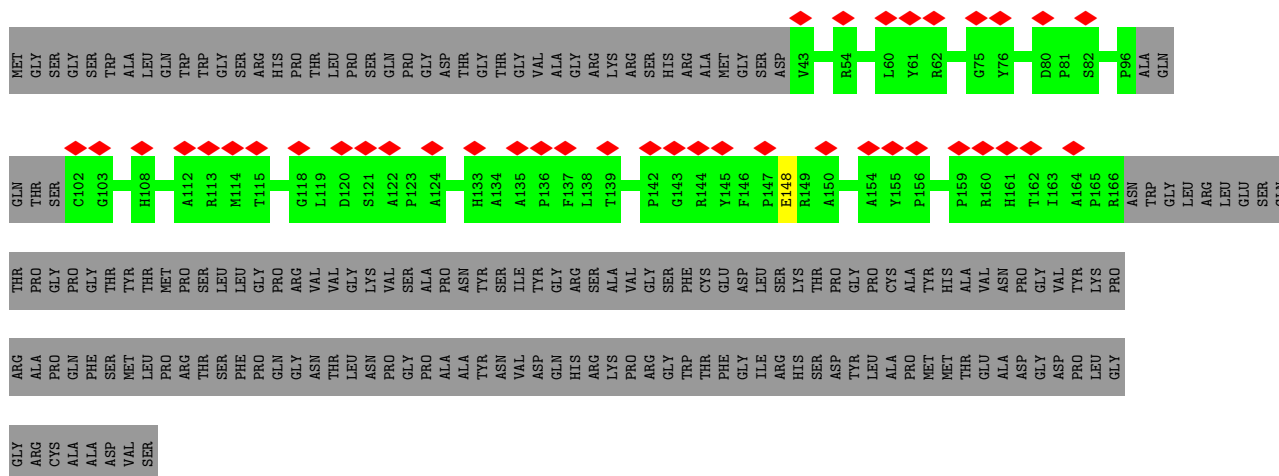
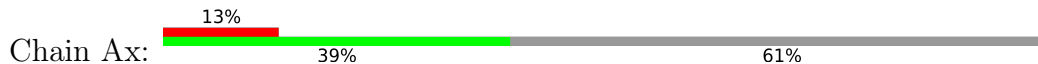
MET
ALA
ES
ES
L10
L10
T11
T11
E12
E12
L57
L57
GLY
ARG
SER
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ALA
PHE
SER
ARG
GLY
GLY
HIS
PHE
PRO
THR
ILE
PHE
LEU
ASN
PRO
THR
GLN
VAL
LEU
LEU
ASN
ARG
ALA
LEU
THR
ARG
ASP
TRP
LEU
HIS
THR
PRO
S97
S97
D104
D104
P159
P159
Q177
Q177
R192
R192
R193
R193
ASP
CYS

TYR
PHE
GLU
PHE
ARG
ALA

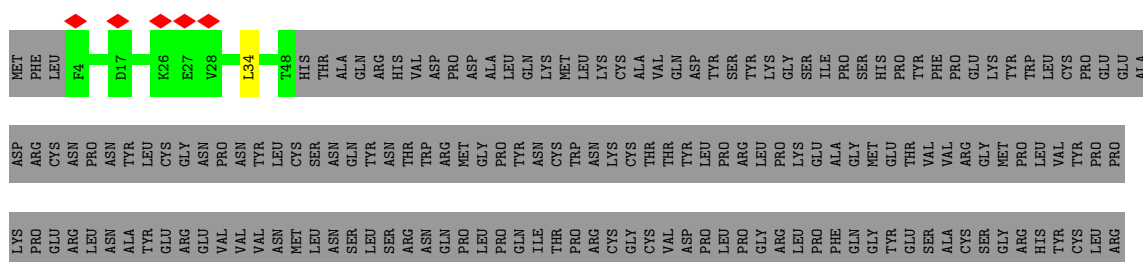
• Molecule 16: Outer dense fiber of sperm tails 3B



• Molecule 16: Outer dense fiber of sperm tails 3B

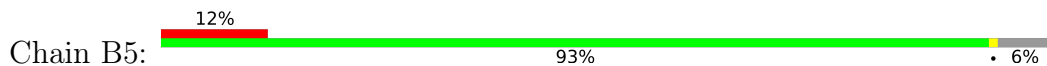


• Molecule 17: Spermatid-specific manchette-related protein 1



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

• Molecule 18: Enkurin



MET	VAL	ALA	MET	ASP	PRO	THR	THR	GLY	PRO	S10	M15	S19	D20	D20	W21	W21	K22	P25	P60	K71	E72	K73	I74	K78	M84	E85	R86	R94	H97	P98	I102	E105	K122	D130	D138	D176	M177	E181	R184	L191	S192	D193	E194	E208	D222	E236	F253	TYR	ILE	ALA	ASN	ASN	LYS	LYS
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----

• Molecule 18: Enkurin



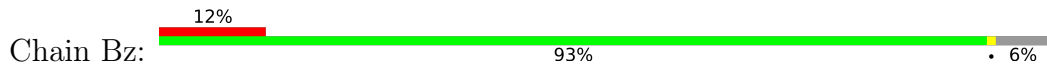
MET	VAL	ALA	MET	ASP	PRO	THR	THR	GLY	PRO	P9	S10	D20	W21	K22	E23	F24	P25	D40	D41	E58	V59	P60	K68	K71	E72	K73	I74	K78	K79	E82	E85	H86	R94	T95	D96	Q103	S104	K125	D153	E166	E173	D176	M177	Q180	E181	M182	L183	S192	D193	E194	K256	ASN	LYS	LYS
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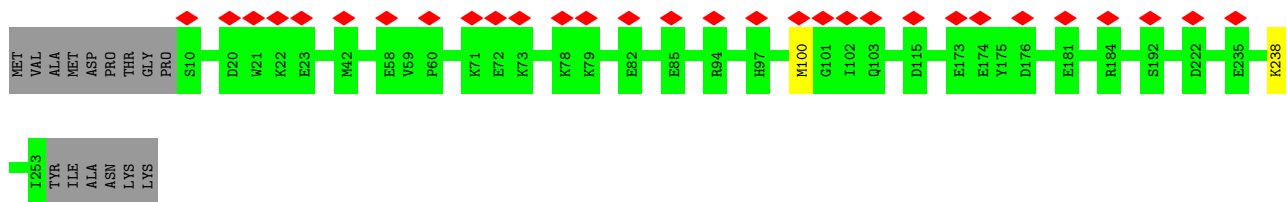
• Molecule 18: Enkurin



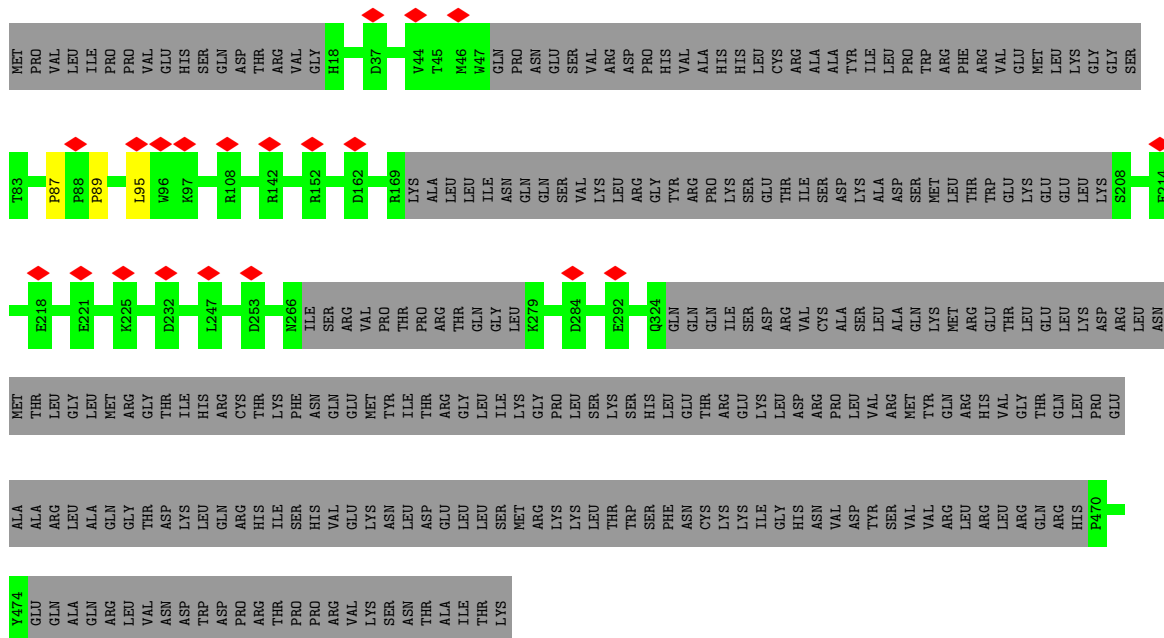
MET	VAL	ALA	MET	ASP	PRO	THR	THR	GLY	PRO	PRO	SER	SER	GLY	ILE	TYR	ASN	ASN	LEU	PRO	PRO	ILE	PRO	PRO	LYS	LYS	LYS	ASP	TRP	TRP	GLY	GLY	TRP	TRP	GLY	ASN	ASN	PRO	ARG	GLN	GLN	PRO	PRO	PRO	TYR	ARG	VAL	PRO	SER	ILE	ILE	PHE	ARG	THR	LYS	LYS	ALA	ALA	THR	VAL	VAL	LYS	ASP	ASP	ASP	GLN	LYS	PHE	LYS	THR	THR	ALA	ALA	MET	LYS	THR	THR	MET	LYS	ALA	ALA	LEU	GLU	VAL	VAL	PRO	SER	PRO	LEU	LEU	ARG	THR	D96	M100	G101	I102	I103	K106	D115	A121	D138	D153	E173	D176	M177	Q180	E181	R184	K188	S192	L200	E208	K249	I255	ALA	ASN	LYS	LYS
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----

• Molecule 18: Enkurin

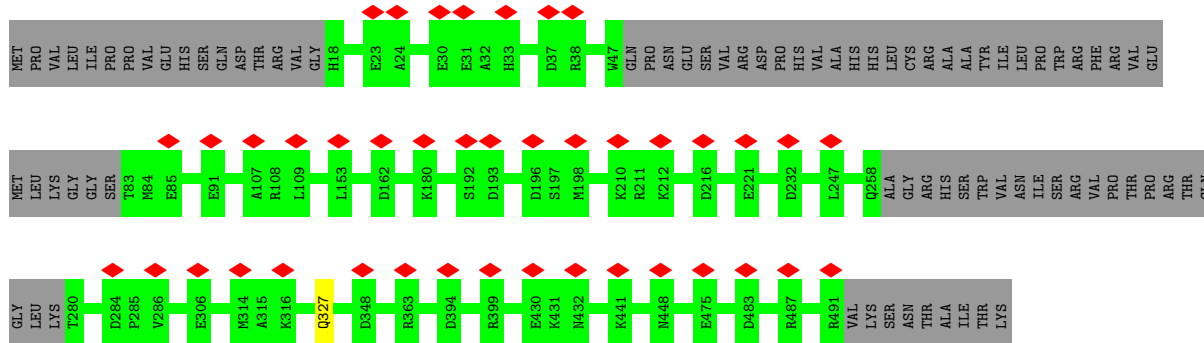
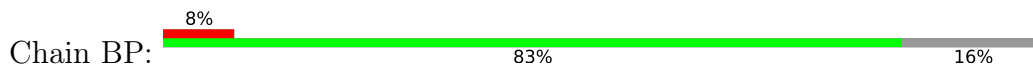




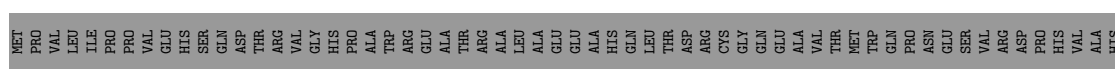
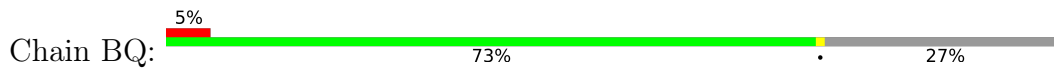
• Molecule 19: Coiled-coil domain-containing protein 105

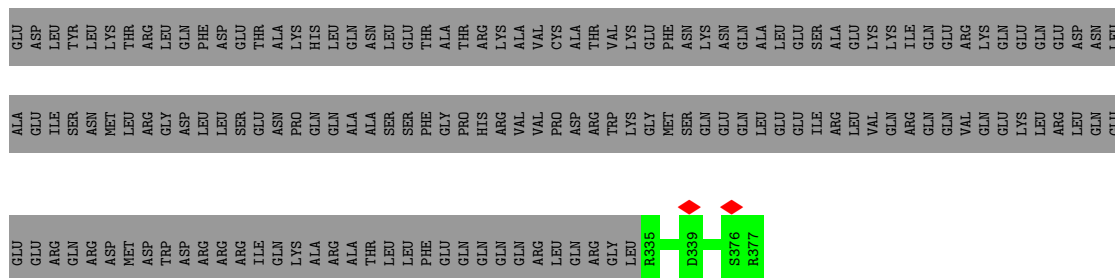


• Molecule 19: Coiled-coil domain-containing protein 105

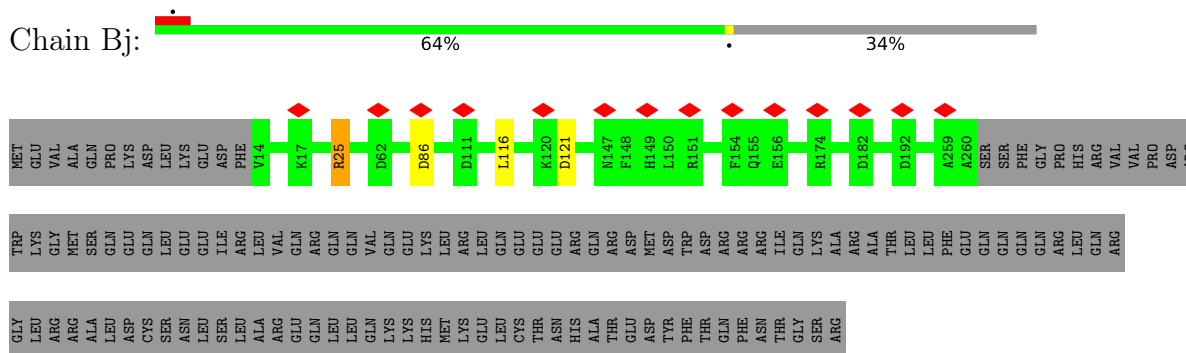


• Molecule 19: Coiled-coil domain-containing protein 105

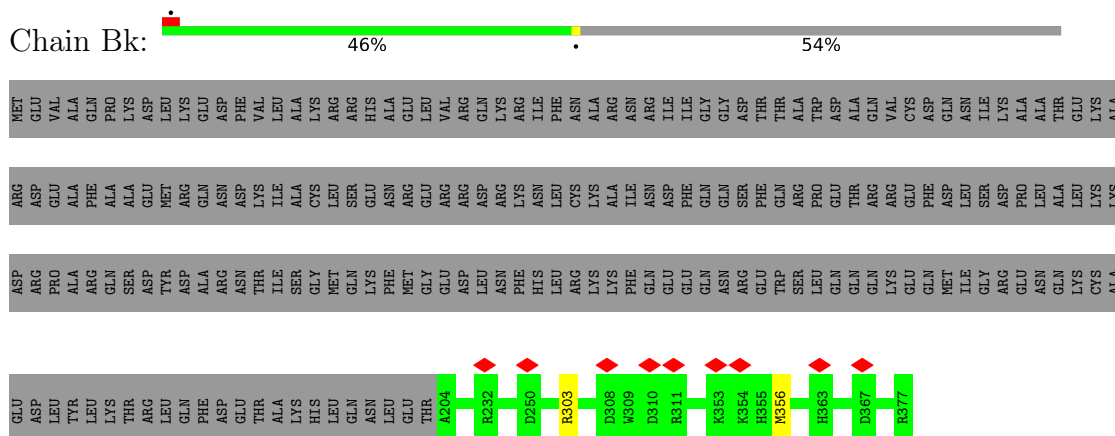




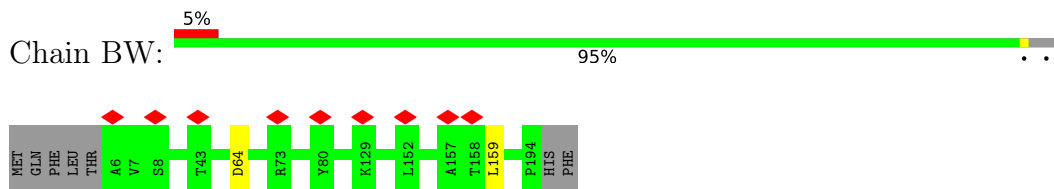
• Molecule 21: RIB43A-like with coiled-coils protein 2



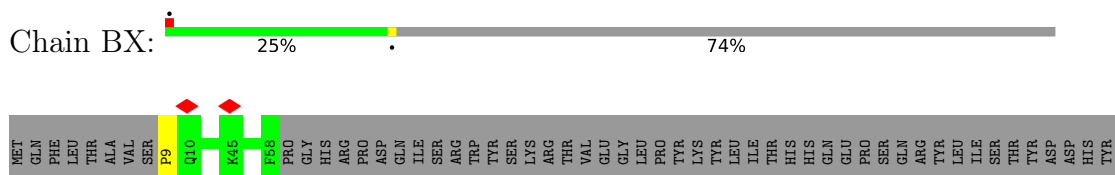
• Molecule 21: RIB43A-like with coiled-coils protein 2

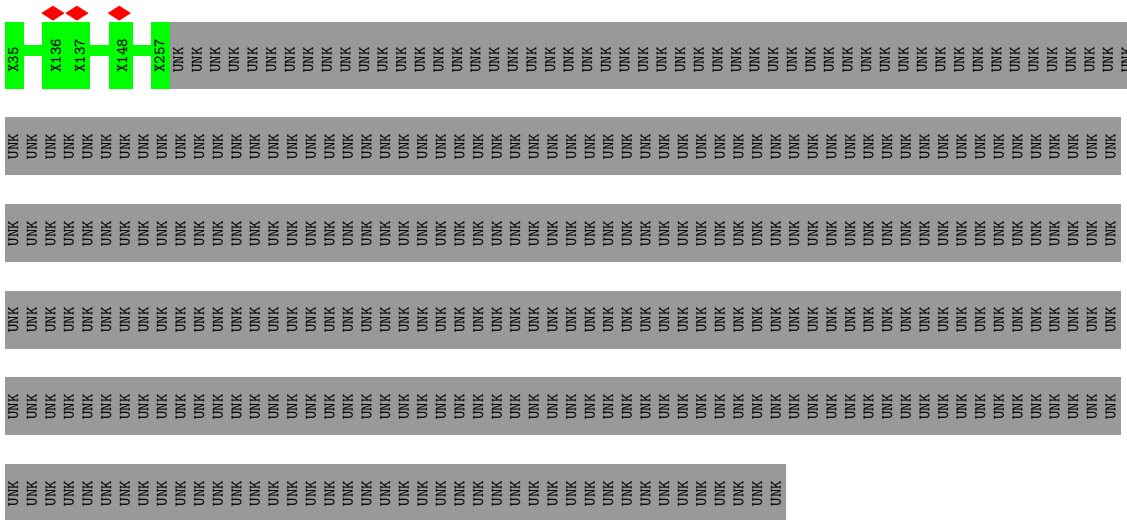


• Molecule 22: Cilia- and flagella-associated protein 107

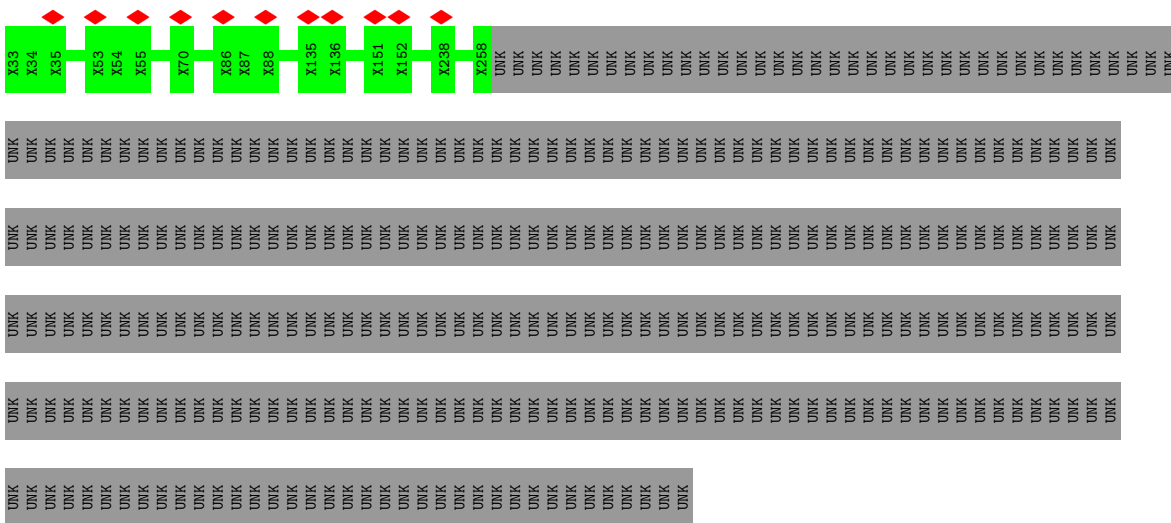


• Molecule 22: Cilia- and flagella-associated protein 107

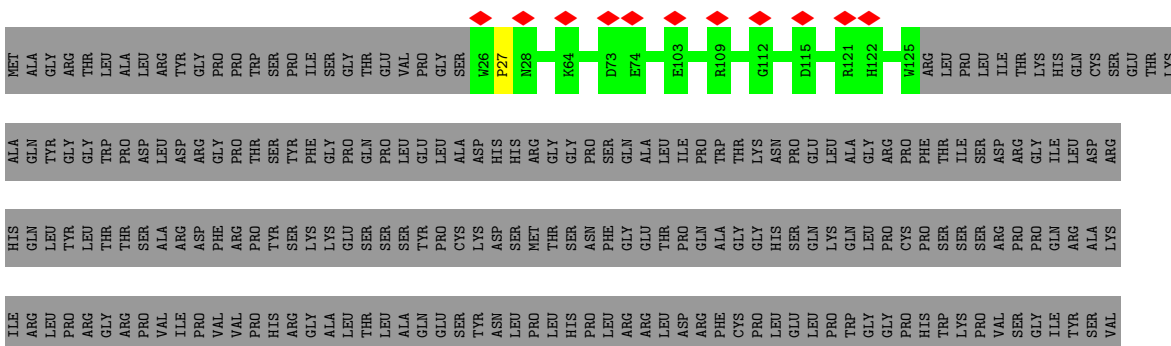




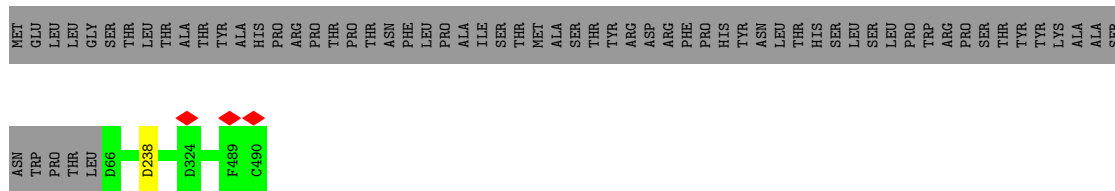
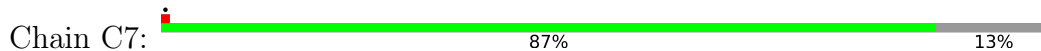
• Molecule 25: Stabilizer of axonemal microtubules 1



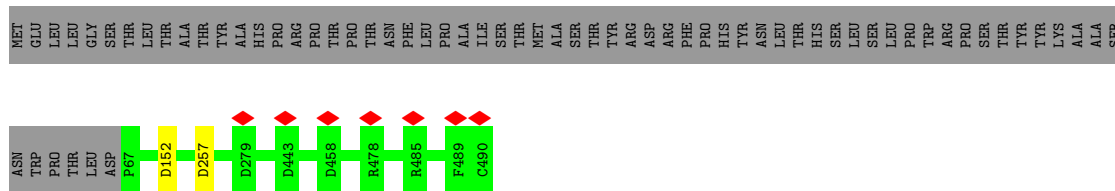
• Molecule 26: Stabilizer of axonemal microtubules 3



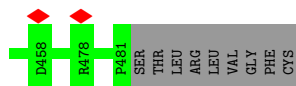
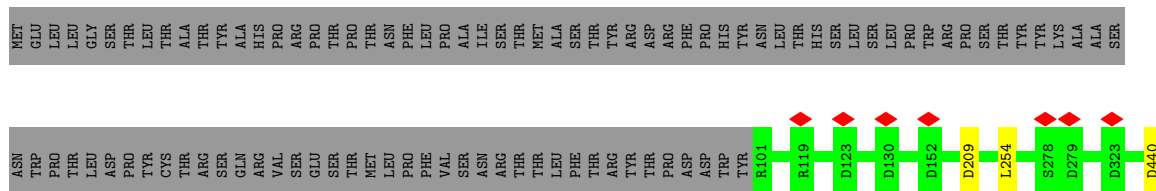
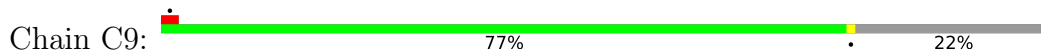
• Molecule 28: Tektin-3



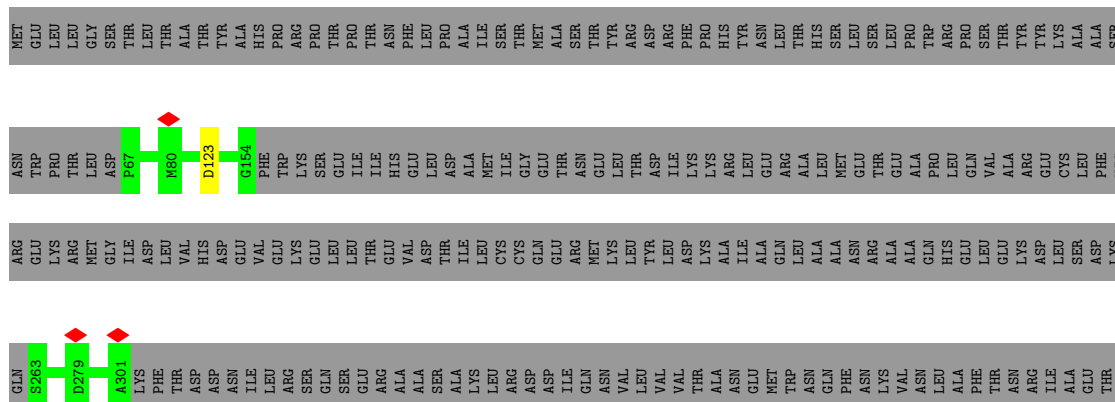
• Molecule 28: Tektin-3

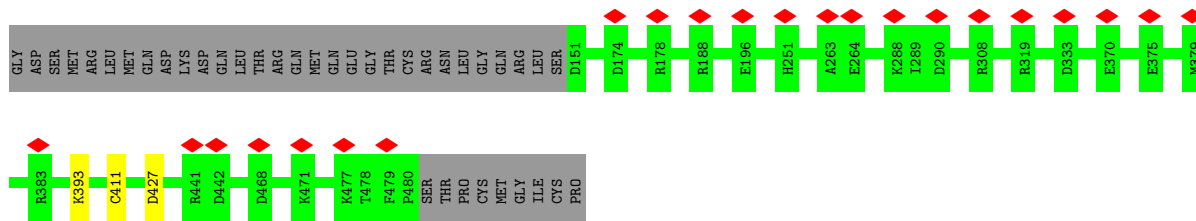


• Molecule 28: Tektin-3

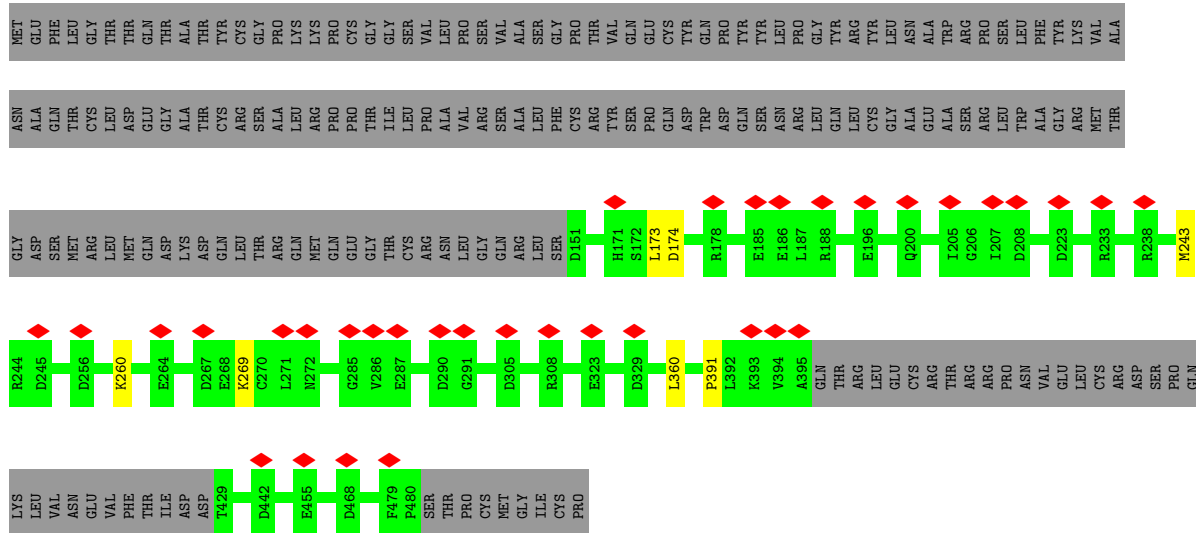


• Molecule 28: Tektin-3

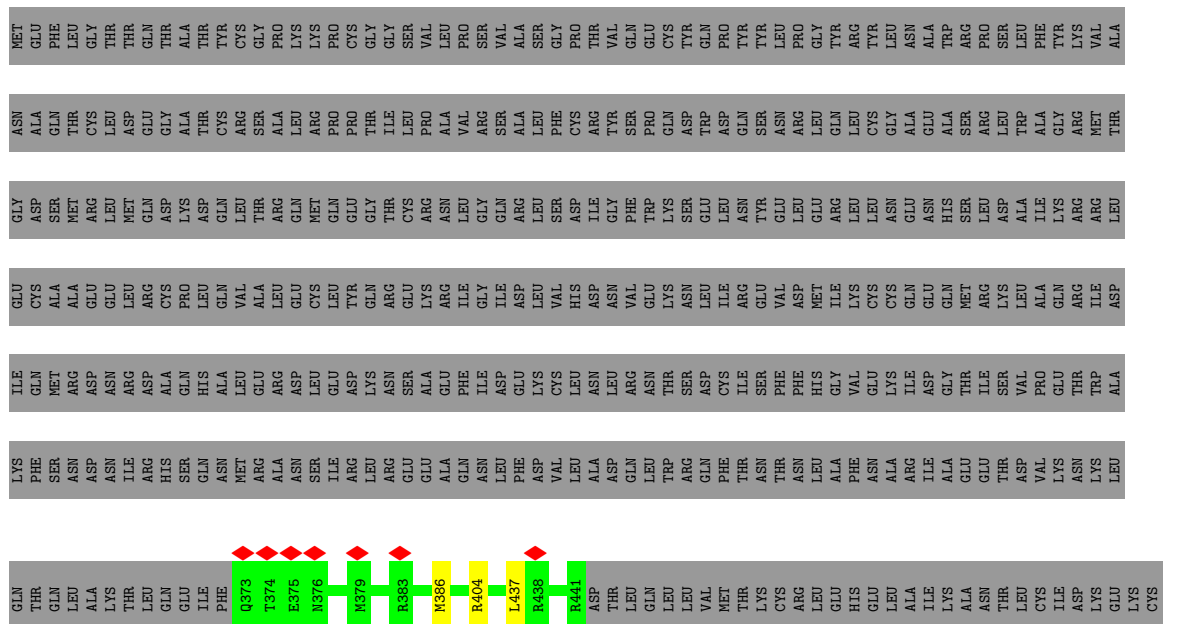




• Molecule 29: Tektin-5

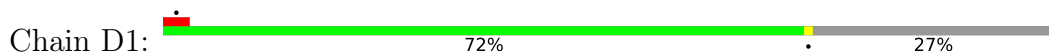


• Molecule 29: Tektin-5



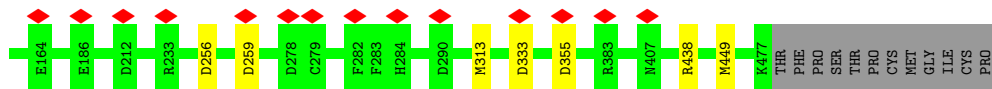
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• Molecule 29: Tektin-5

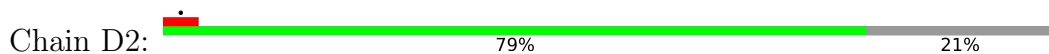


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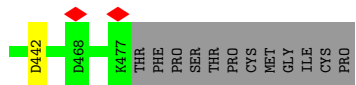


• Molecule 29: Tektin-5

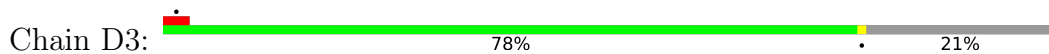


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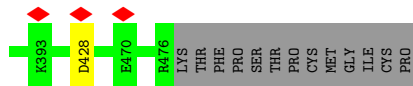


• Molecule 29: Tektin-5

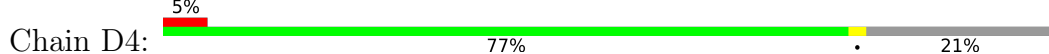


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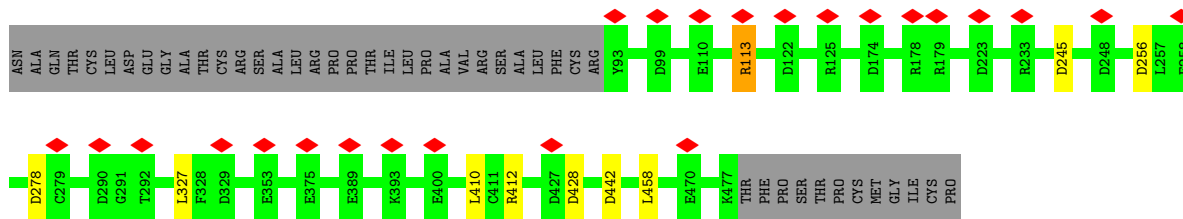
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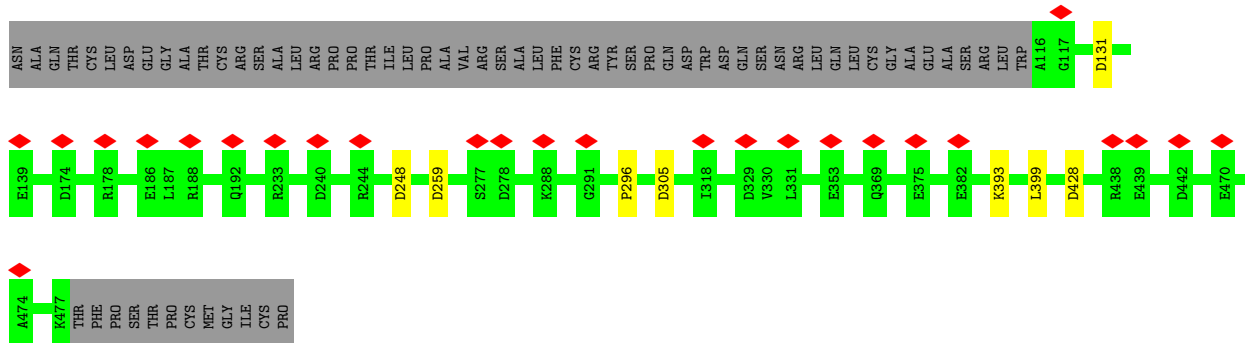
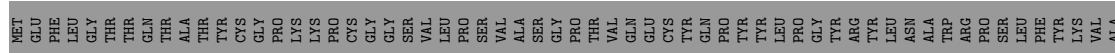
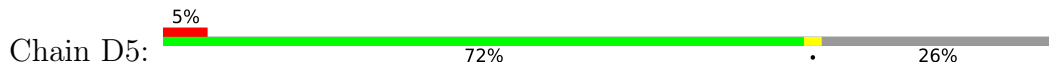
• Molecule 29: Tektin-5



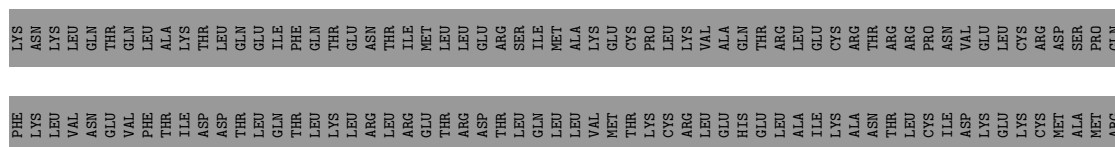
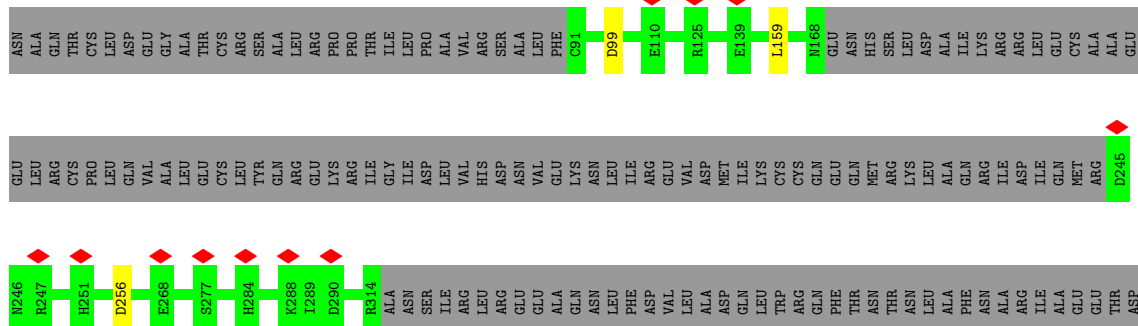
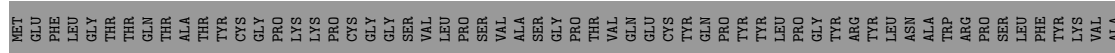
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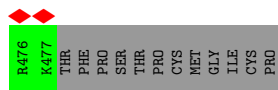
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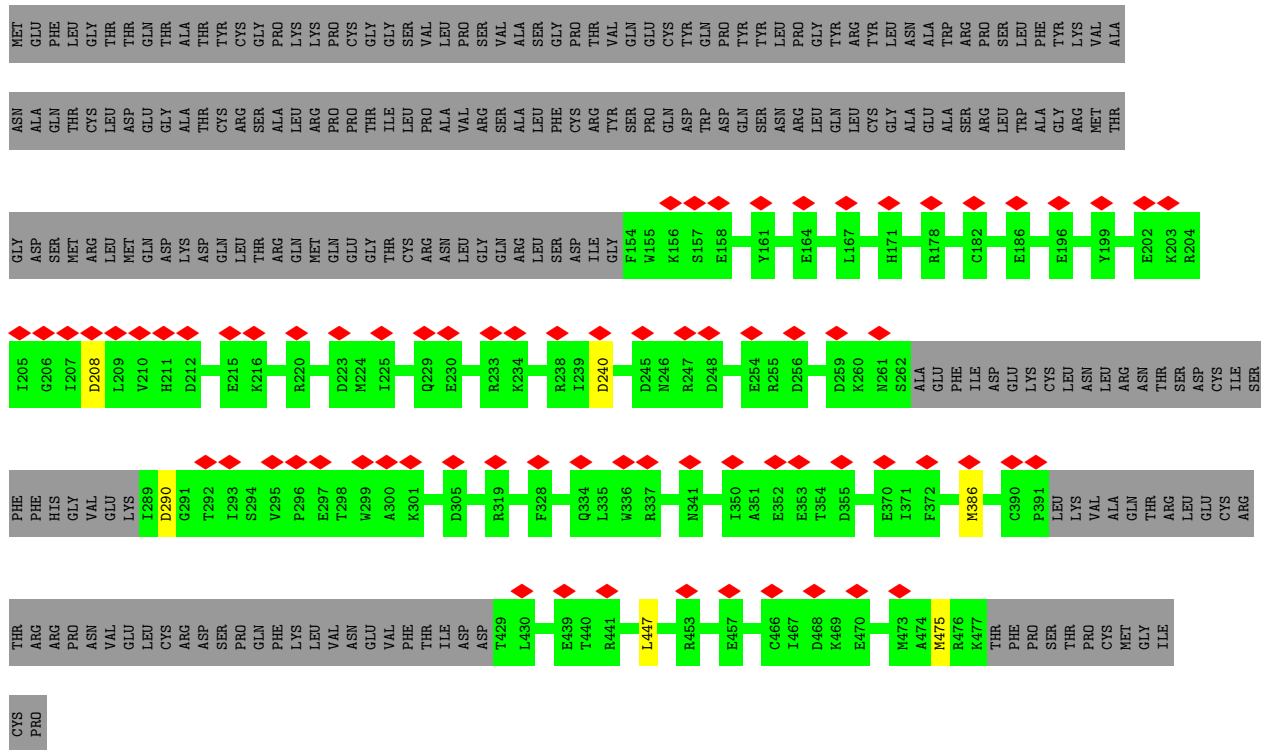
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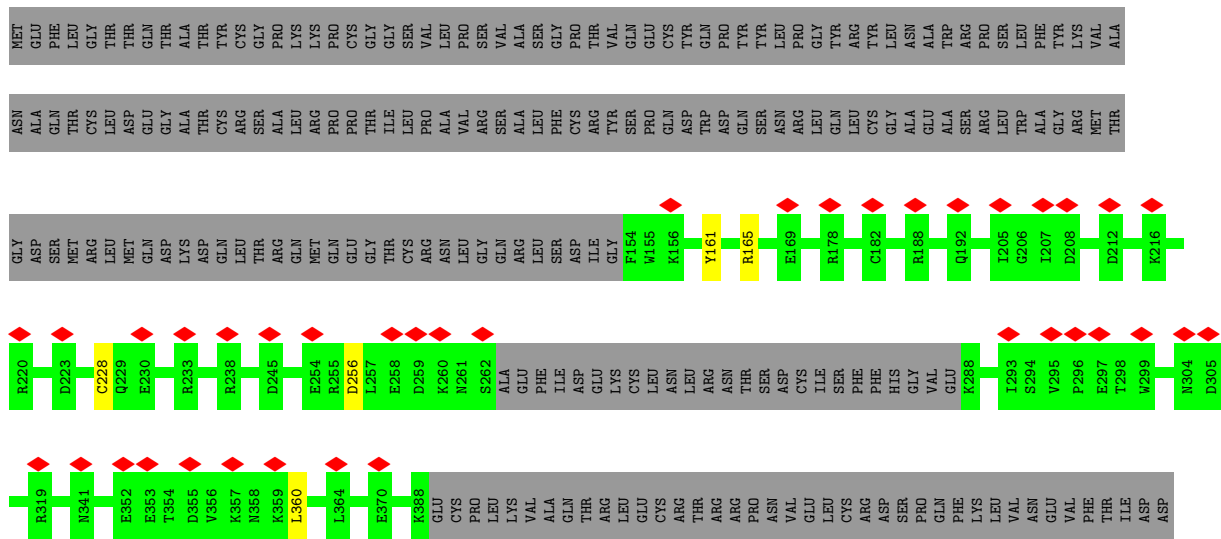
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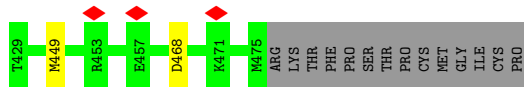


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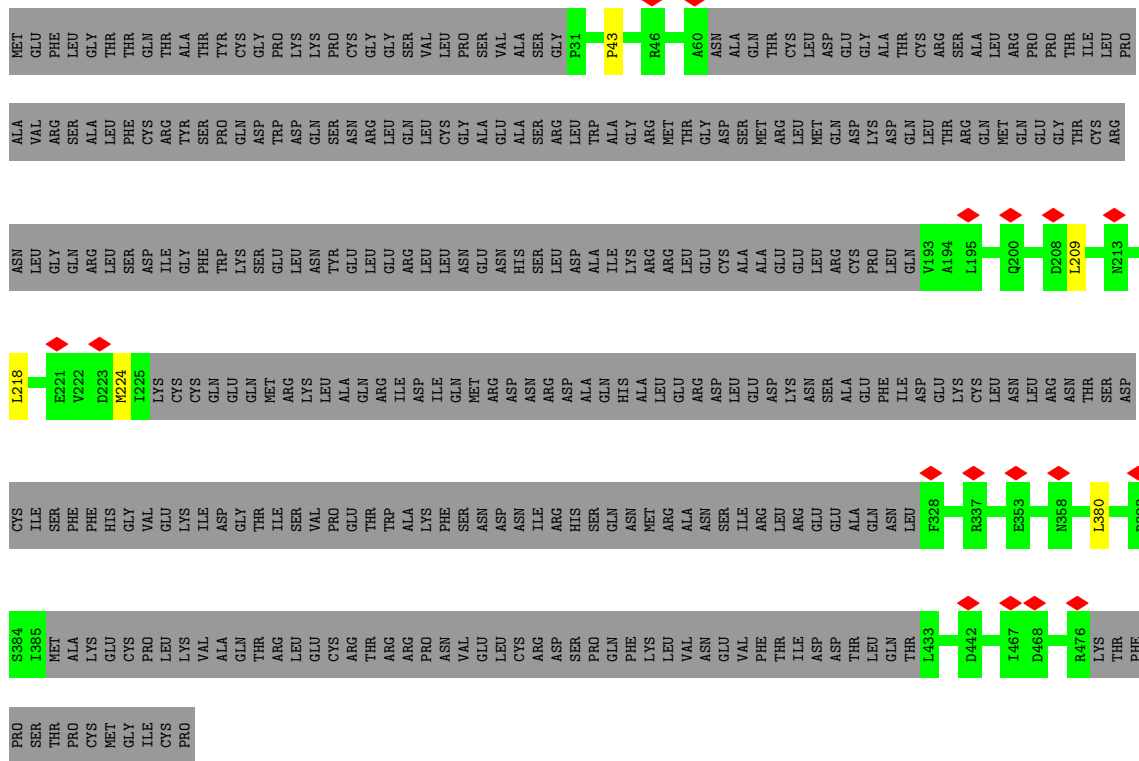


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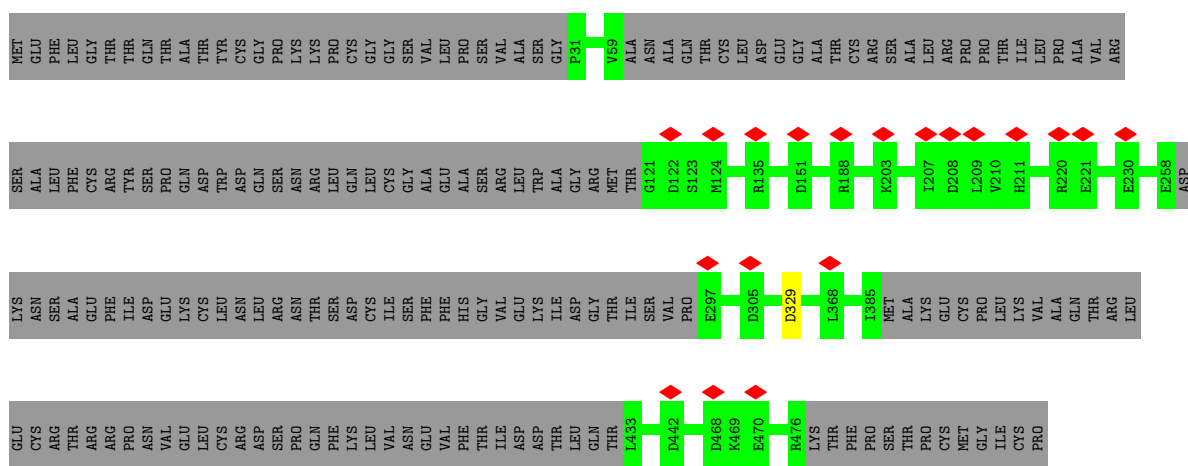




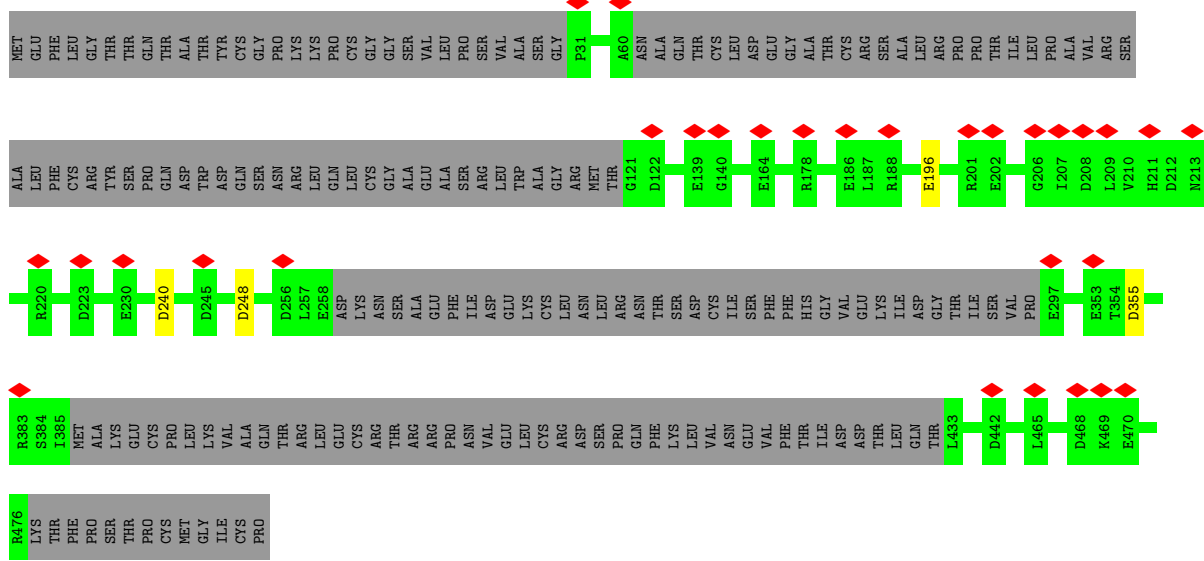
• Molecule 29: Tektin-5



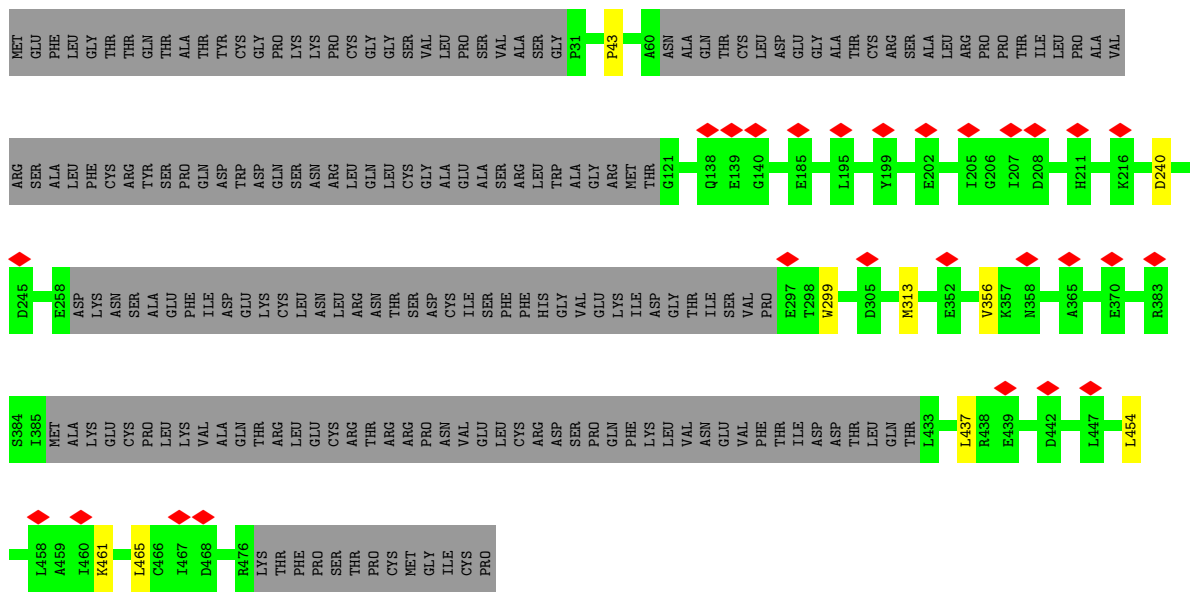
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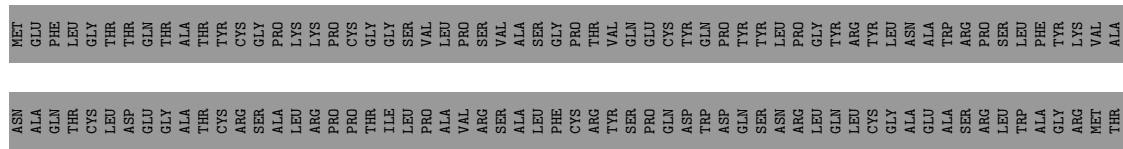
• Molecule 29: Tektin-5

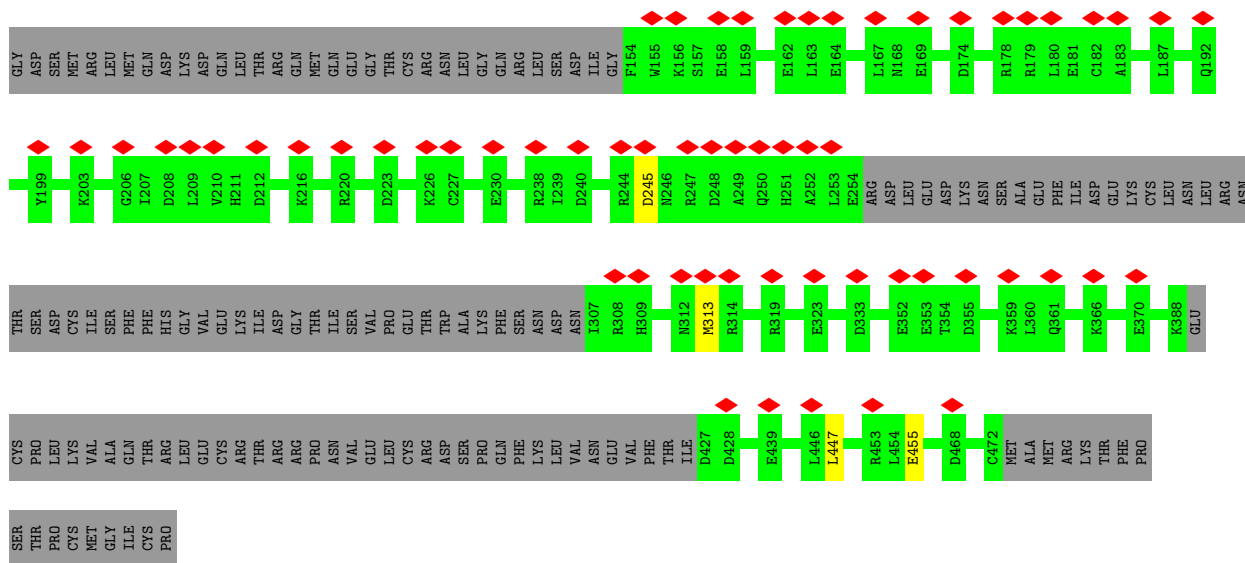


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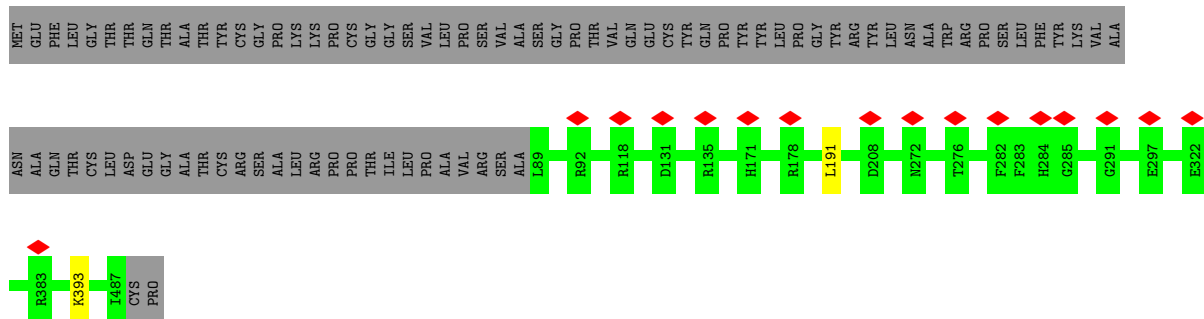
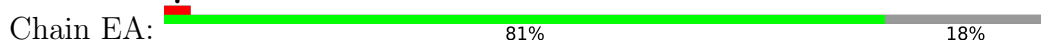


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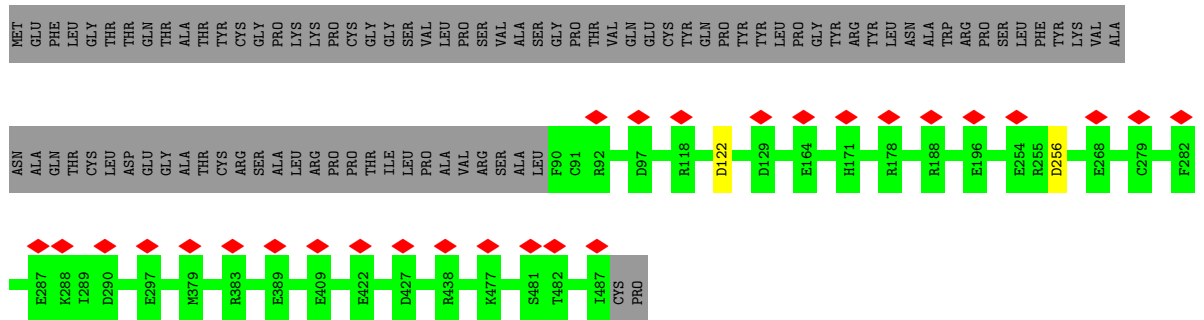
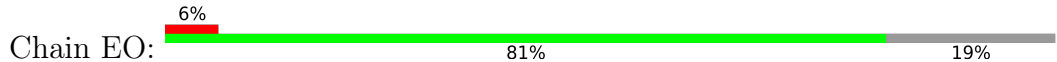




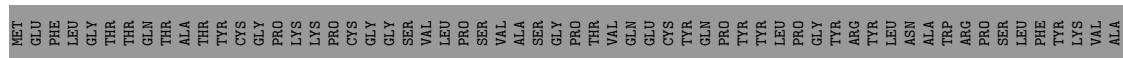
• Molecule 29: Tektin-5

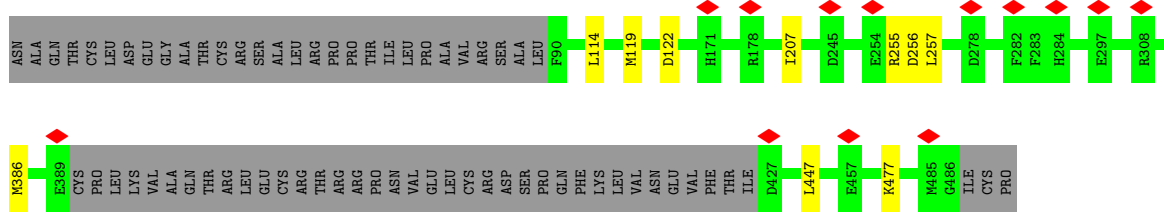


• Molecule 29: Tektin-5



• Molecule 29: Tektin-5

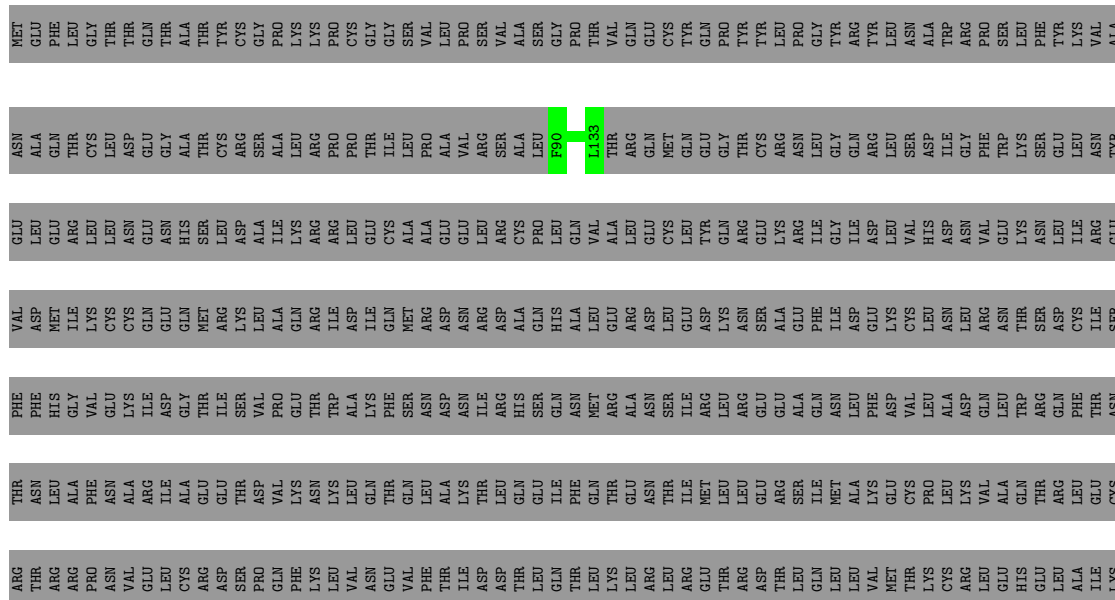




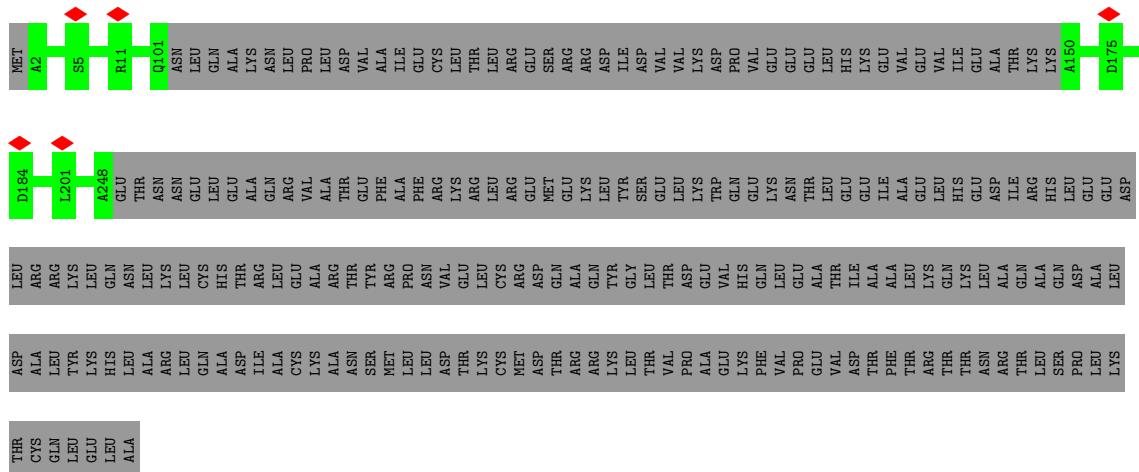
• Molecule 29: Tektin-5



• Molecule 29: Tektin-5



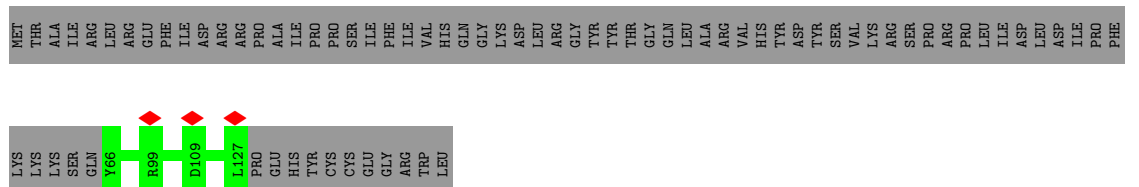
• Molecule 33: Tektin-2



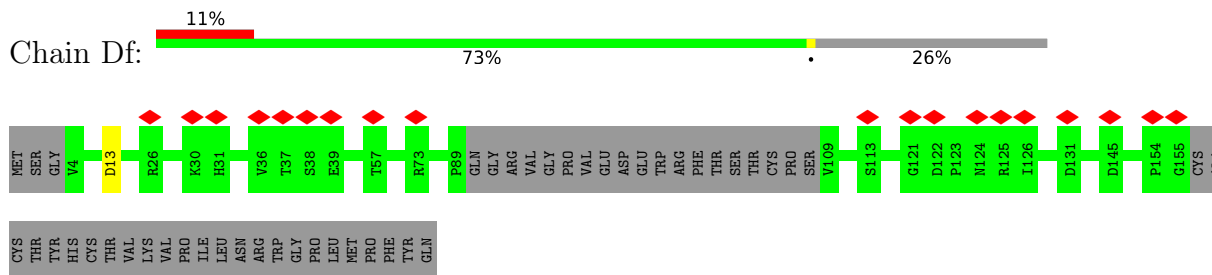
• Molecule 33: Tektin-2



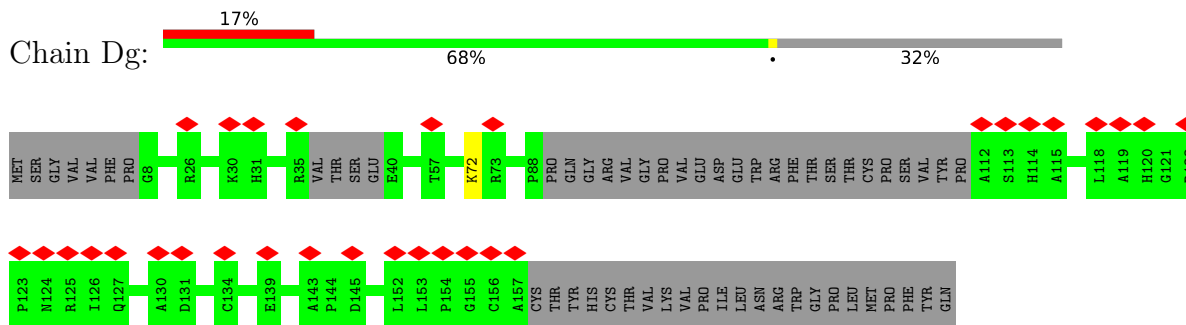
• Molecule 34: Uncharacterized protein C1orf100 homolog



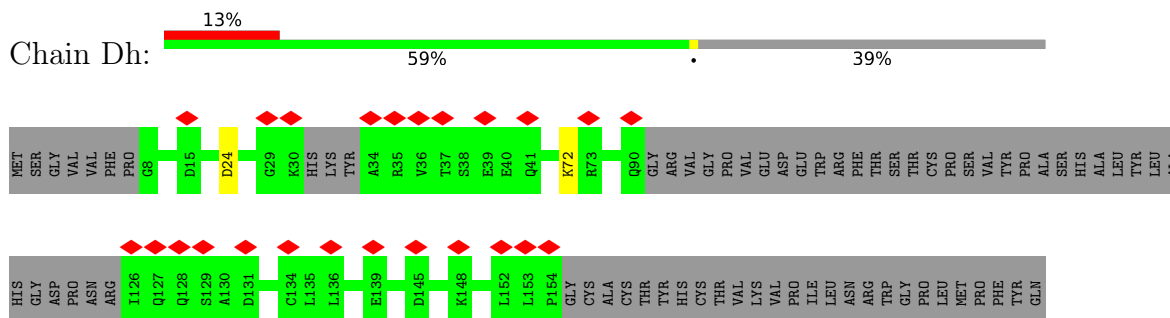
• Molecule 38: Testis-expressed sequence 37 protein



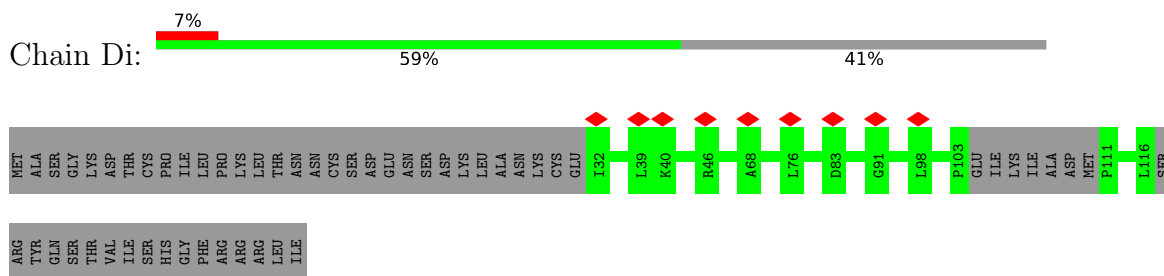
• Molecule 38: Testis-expressed sequence 37 protein



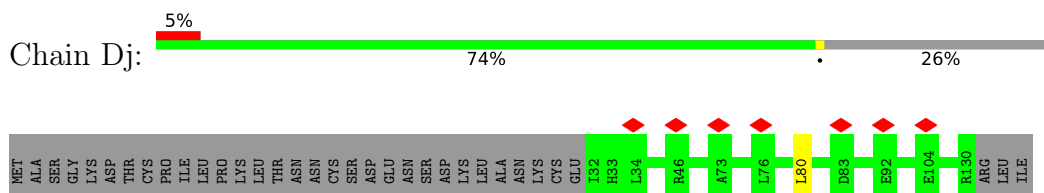
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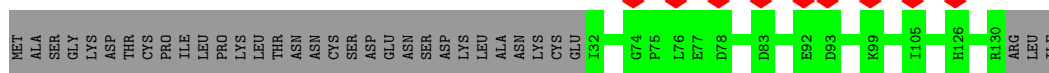
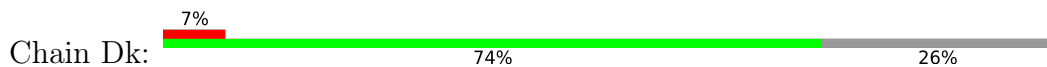
• Molecule 39: Testis-expressed protein 43



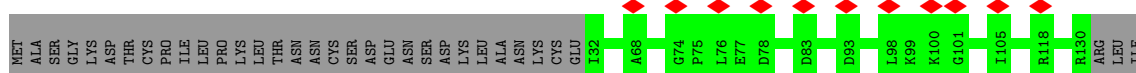
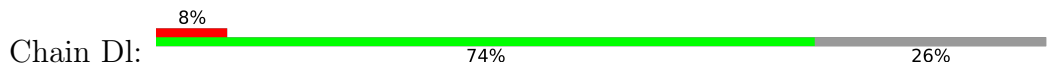
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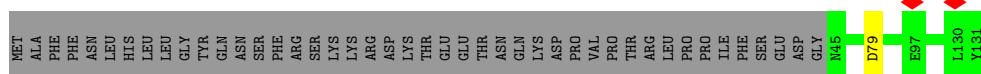
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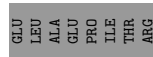
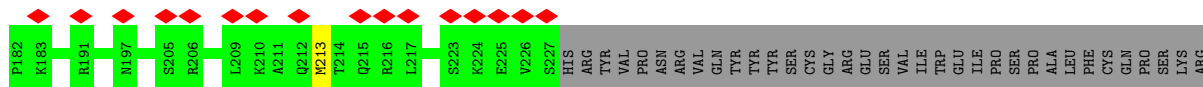
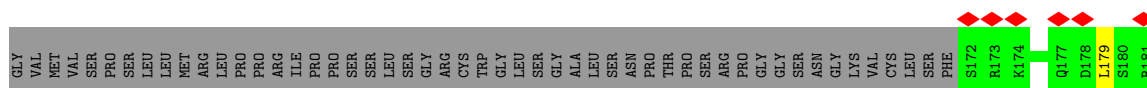
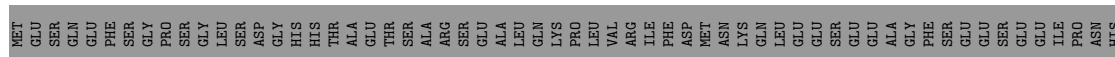
• Molecule 39: Testis-expressed protein 43



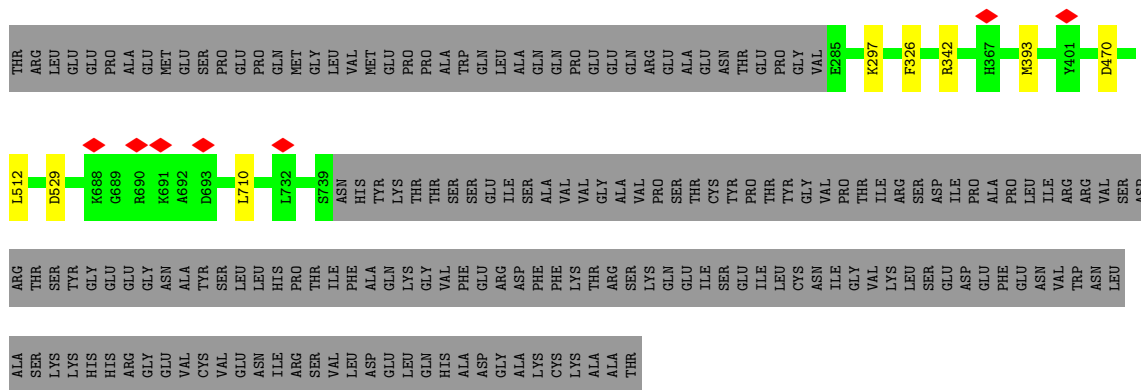
• Molecule 40: Testis expressed 49



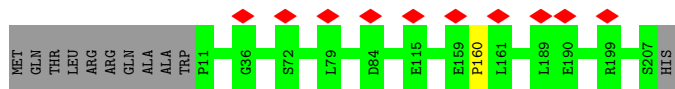
• Molecule 41: Theg spermatid protein like



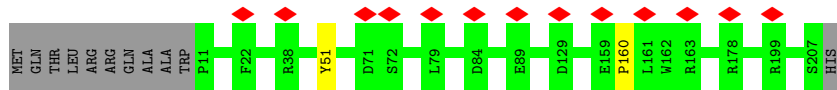
• Molecule 42: EF-hand domain-containing family member B



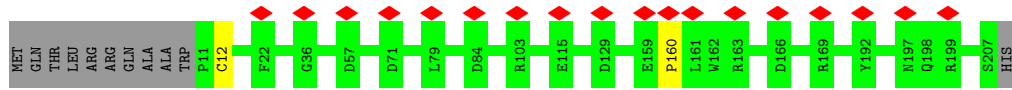
• Molecule 43: Tektin bundle interacting protein 1



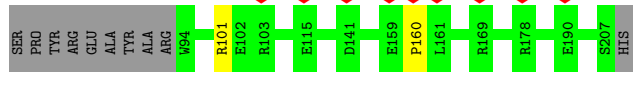
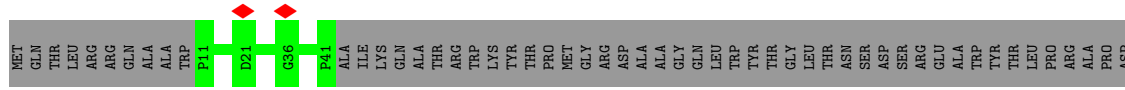
• Molecule 43: Tektin bundle interacting protein 1



• Molecule 43: Tektin bundle interacting protein 1

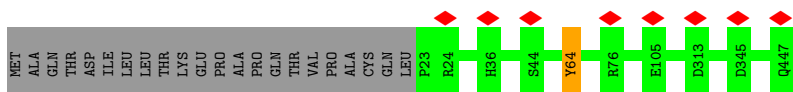


• Molecule 43: Tektin bundle interacting protein 1

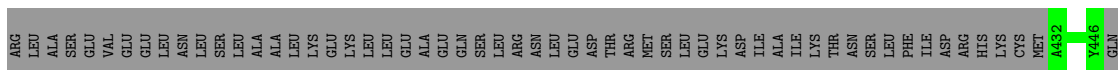
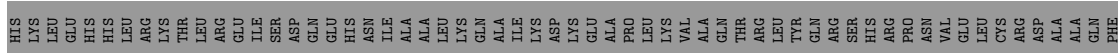
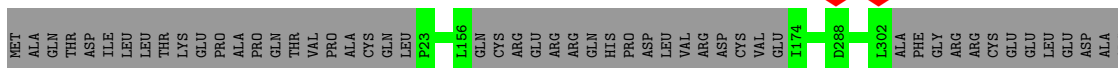


• Molecule 44: Tektin-4

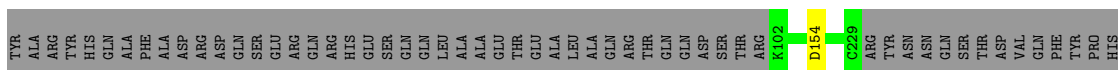
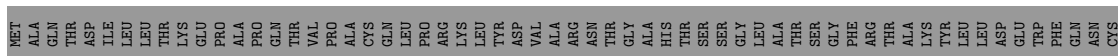




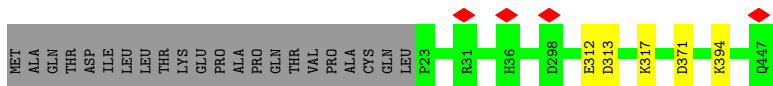
• Molecule 44: Tektin-4



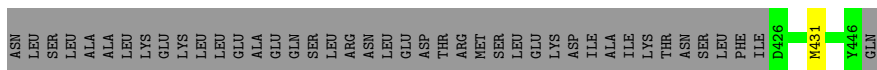
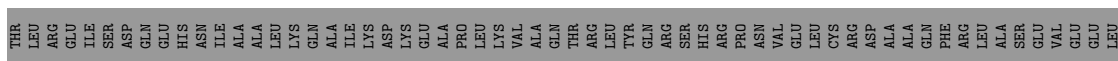
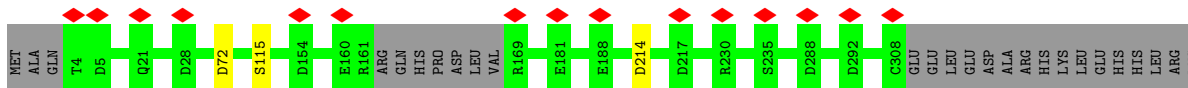
• Molecule 44: Tektin-4



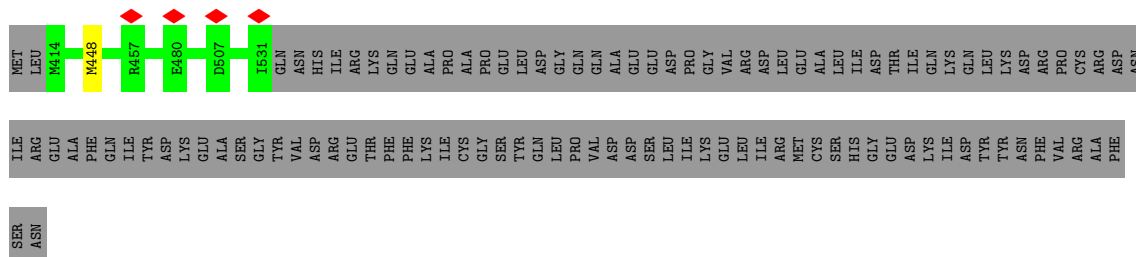
• Molecule 44: Tektin-4



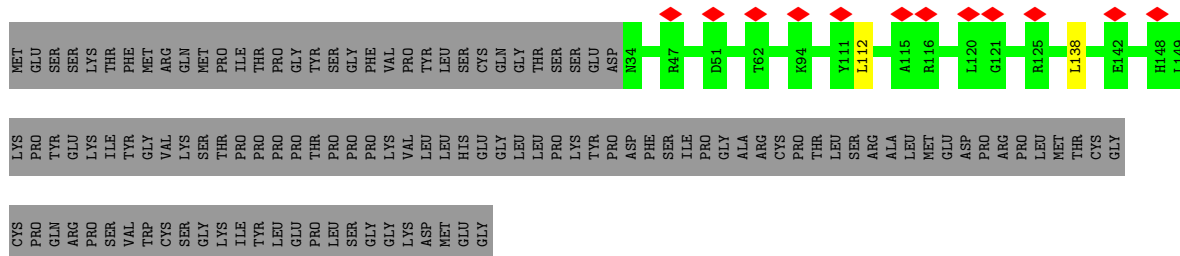
• Molecule 44: Tektin-4



• Molecule 44: Tektin-4



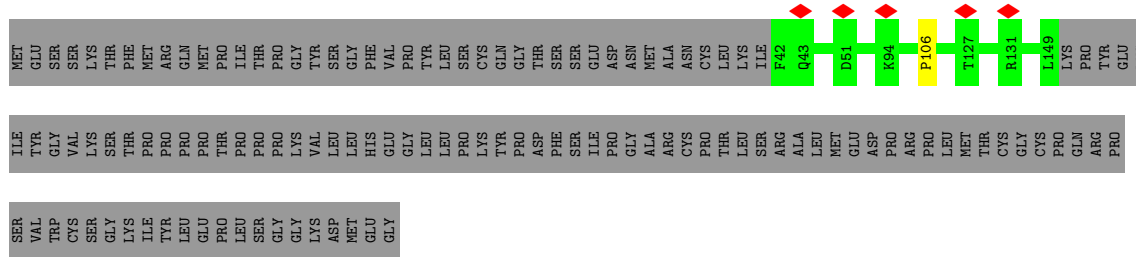
• Molecule 48: Uncharacterized protein C10orf82 homolog



• Molecule 48: Uncharacterized protein C10orf82 homolog

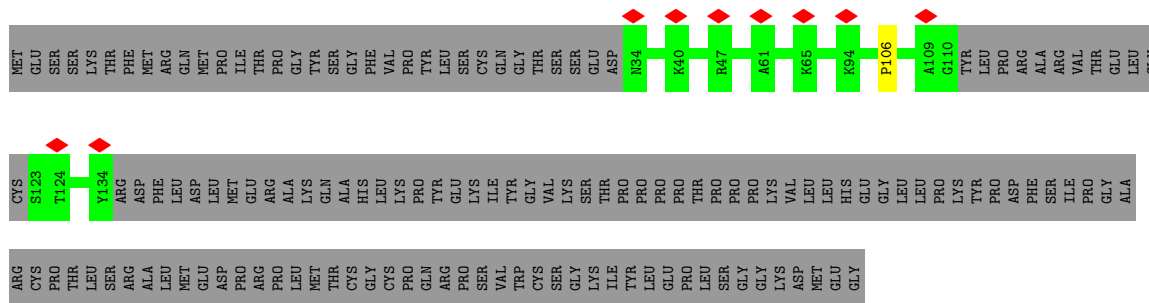


• Molecule 48: Uncharacterized protein C10orf82 homolog

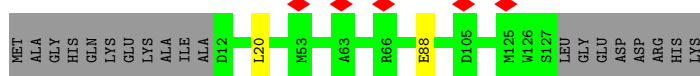
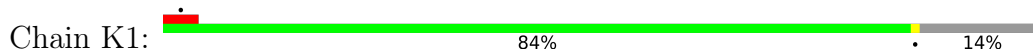


• Molecule 48: Uncharacterized protein C10orf82 homolog

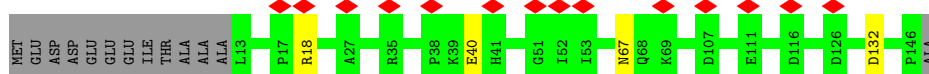
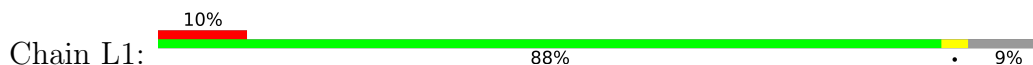




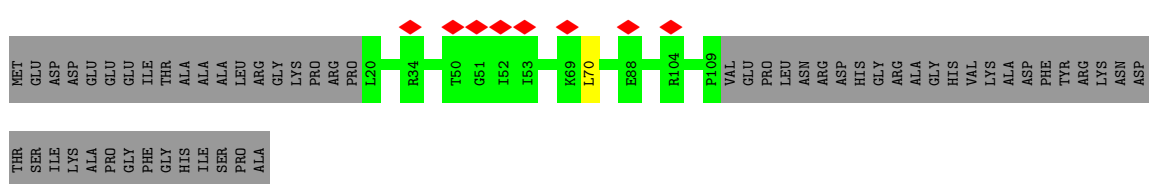
• Molecule 49: Cilia- and flagella-associated protein 144



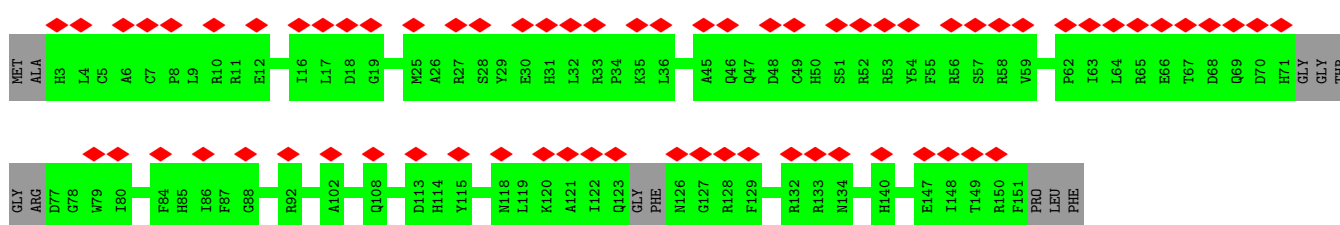
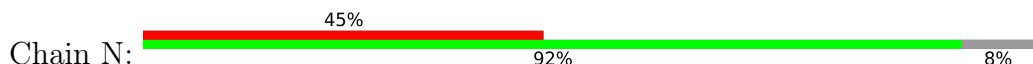
• Molecule 50: Chromosome 20 C5orf49 homolog



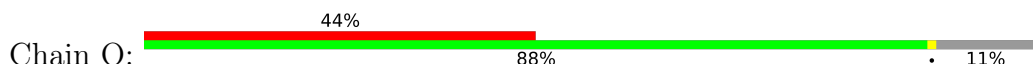
• Molecule 50: Chromosome 20 C5orf49 homolog

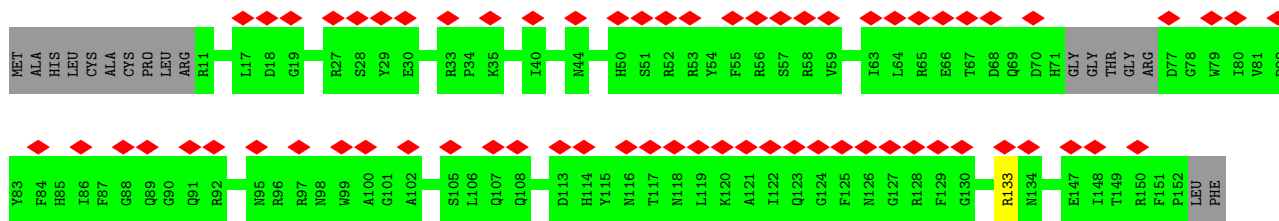


• Molecule 51: Chromosome 19 C17orf98 homolog

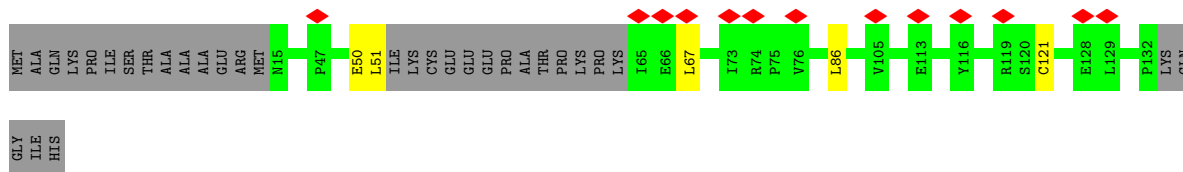
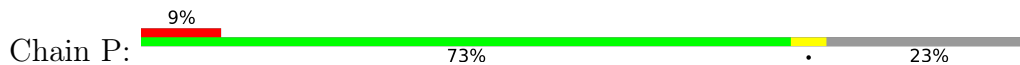


• Molecule 51: Chromosome 19 C17orf98 homolog

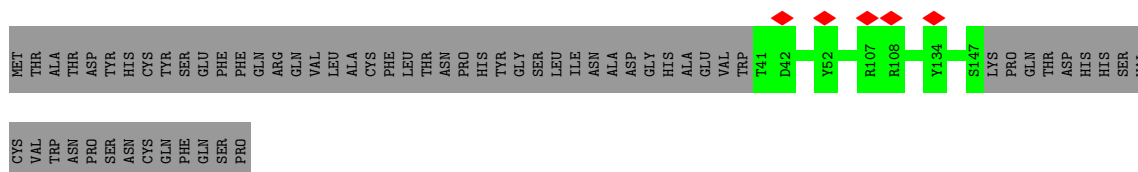




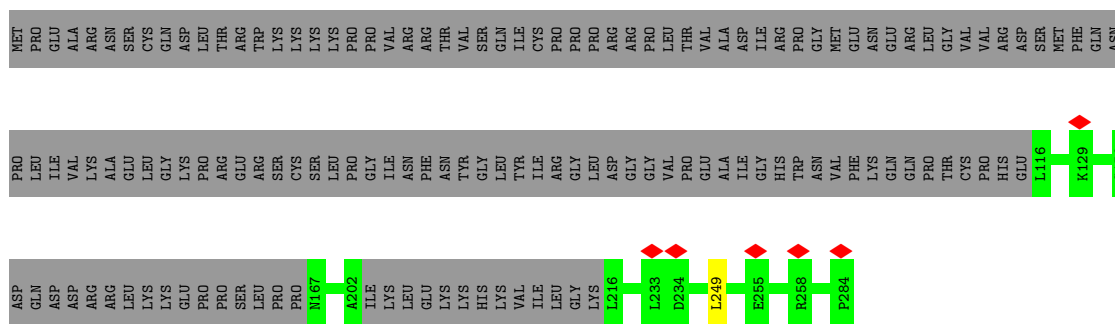
• Molecule 52: Chromosome 13 C20orf85 homolog



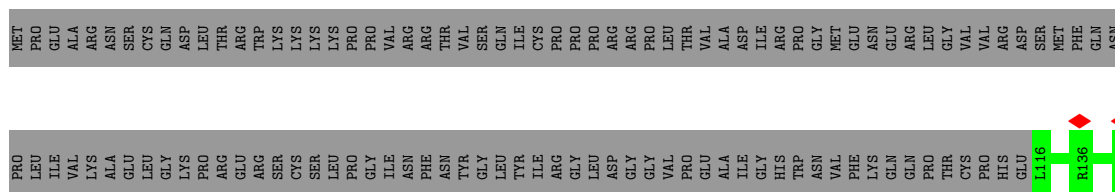
• Molecule 53: Cilia- and flagella-associated protein 68

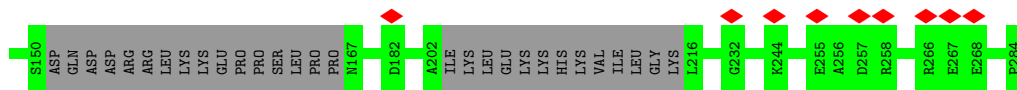


• Molecule 54: Cilia and flagella associated protein 77

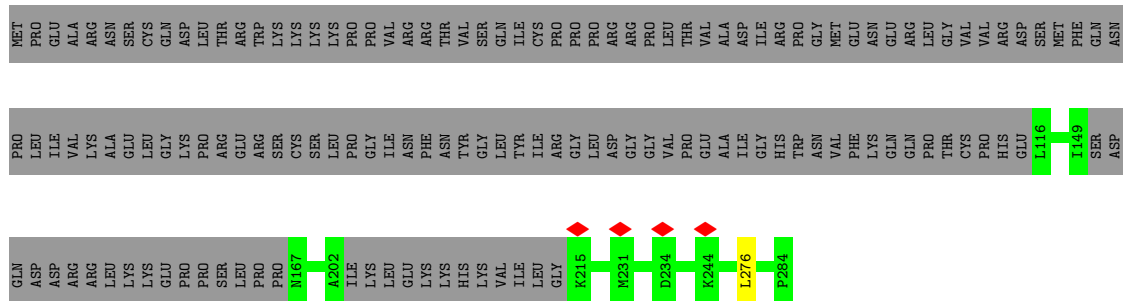


• Molecule 54: Cilia and flagella associated protein 77

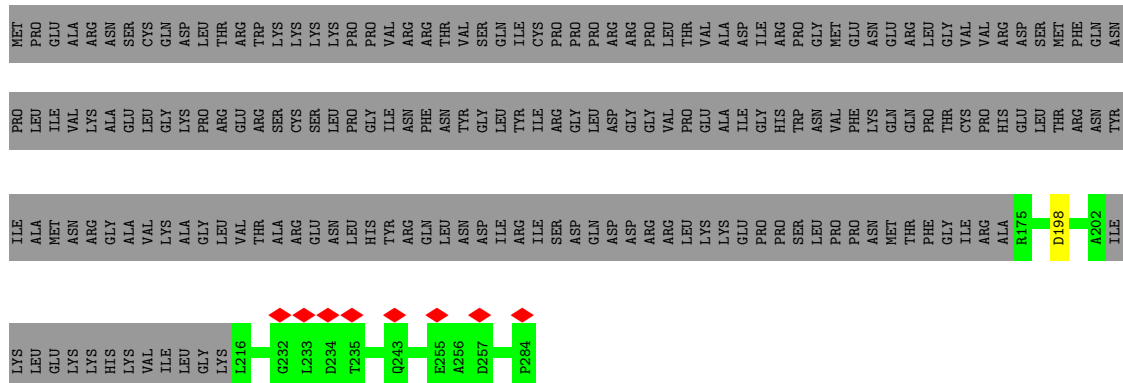




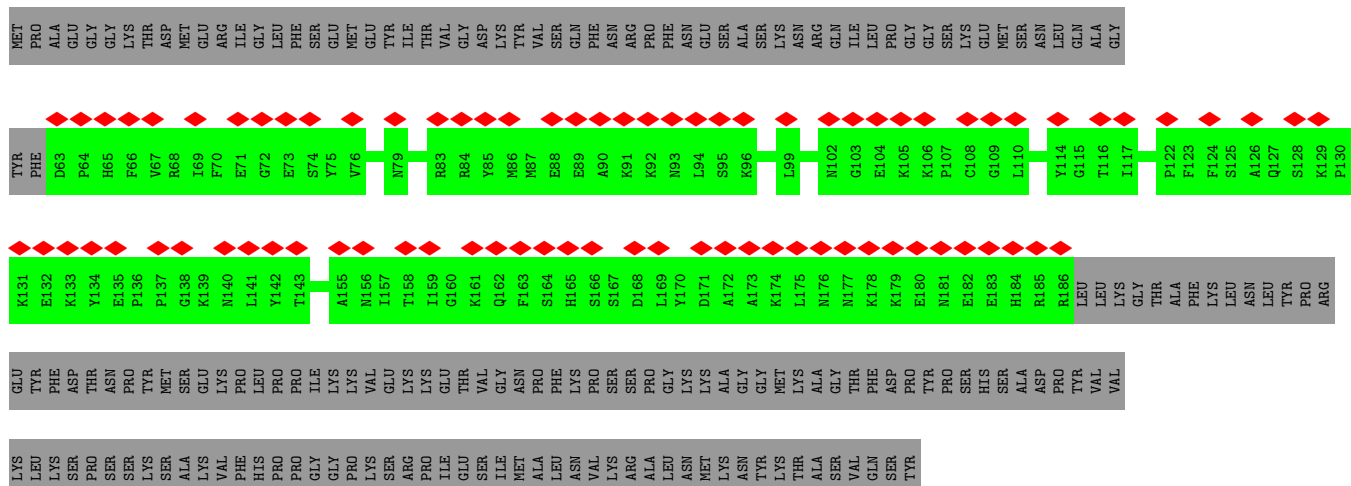
• Molecule 54: Cilia and flagella associated protein 77



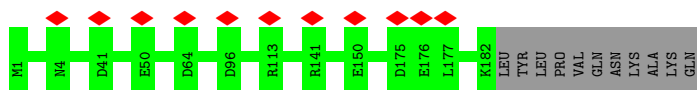
• Molecule 54: Cilia and flagella associated protein 77



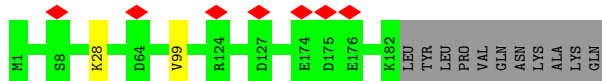
• Molecule 55: UPF0602 protein C4orf47 homolog



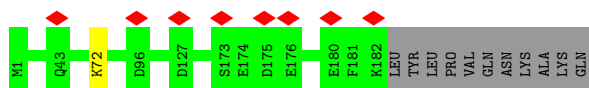
- Molecule 56: Cilia- and flagella-associated protein 20



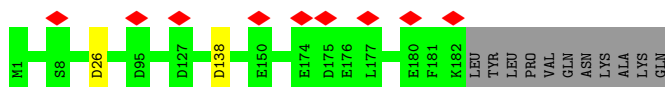
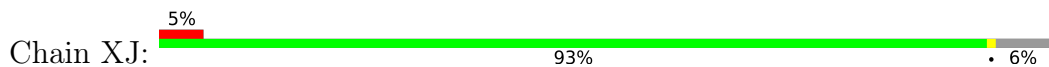
- Molecule 56: Cilia- and flagella-associated protein 20



- Molecule 56: Cilia- and flagella-associated protein 20



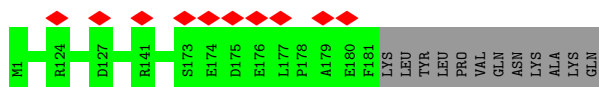
- Molecule 56: Cilia- and flagella-associated protein 20



- Molecule 56: Cilia- and flagella-associated protein 20

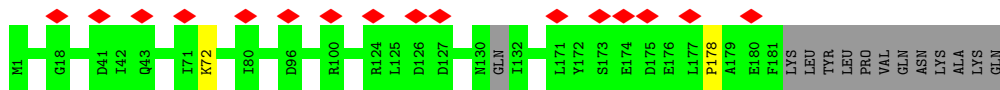


- Molecule 56: Cilia- and flagella-associated protein 20

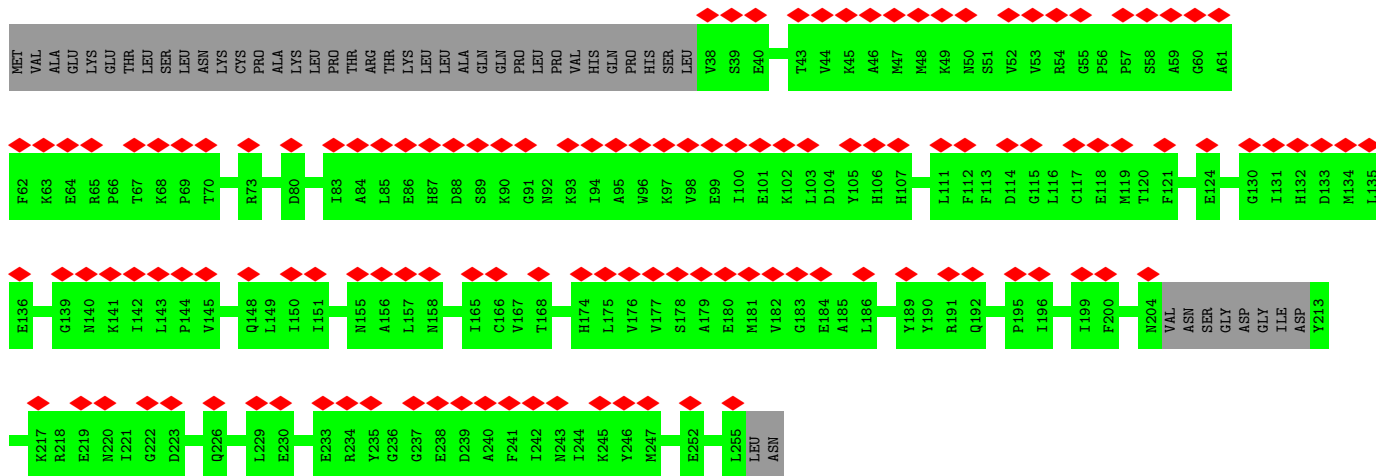
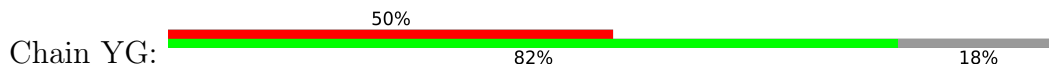


- Molecule 56: Cilia- and flagella-associated protein 20

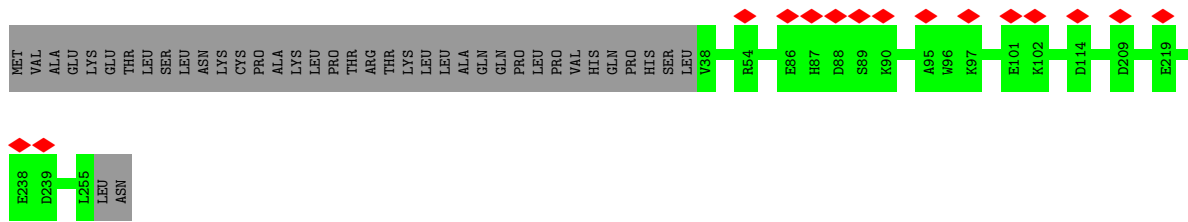
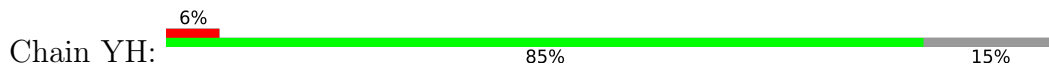




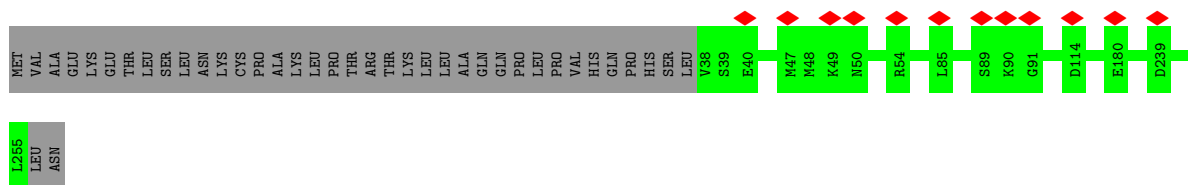
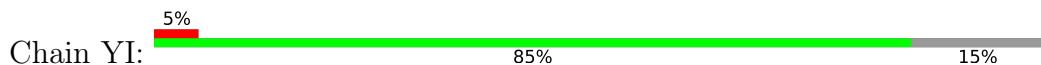
• Molecule 57: Parkin coregulated gene protein



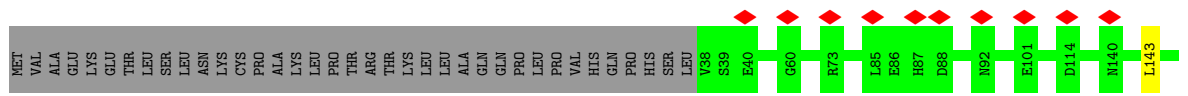
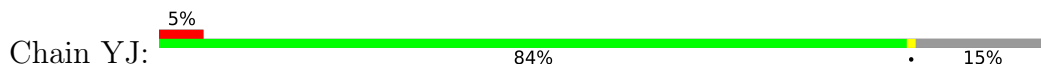
• Molecule 57: Parkin coregulated gene protein

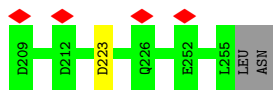


• Molecule 57: Parkin coregulated gene protein

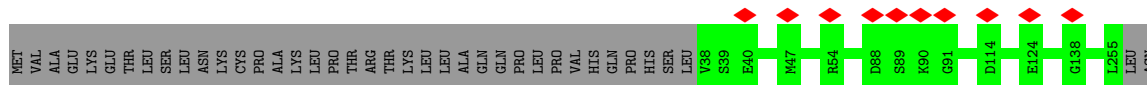
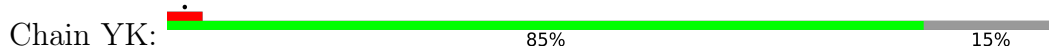


• Molecule 57: Parkin coregulated gene protein

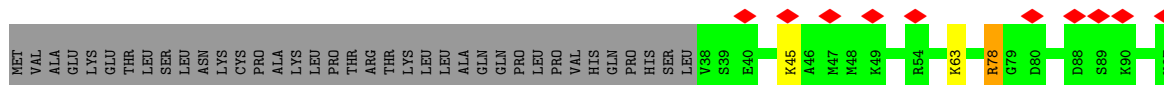
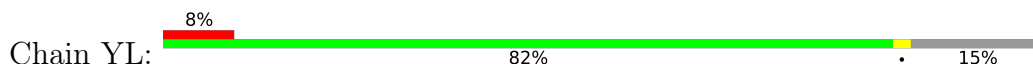




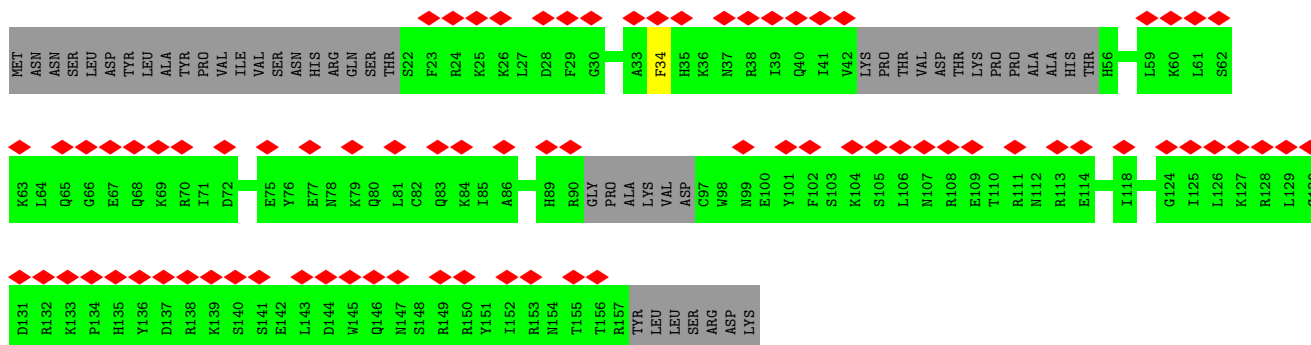
• Molecule 57: Parkin coregulated gene protein



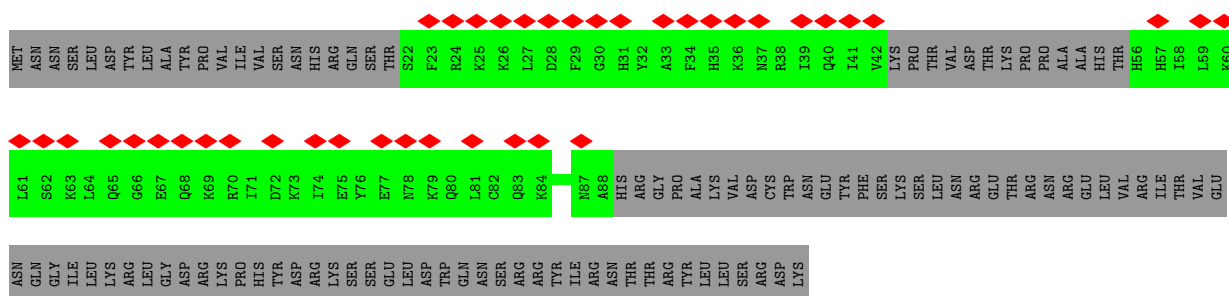
• Molecule 57: Parkin coregulated gene protein

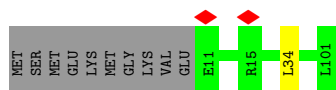
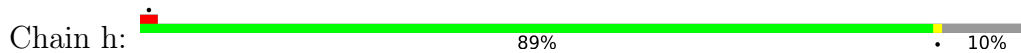


• Molecule 58: CFAP97 domain containing 1

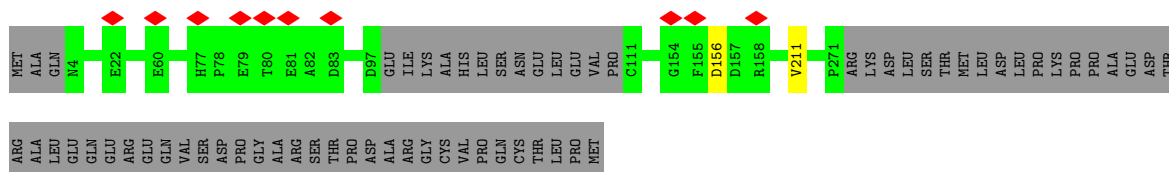
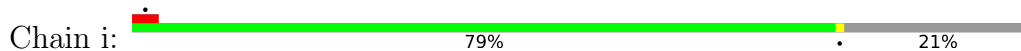


• Molecule 58: CFAP97 domain containing 1

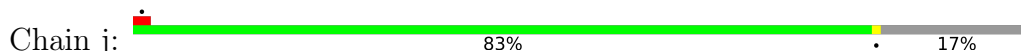




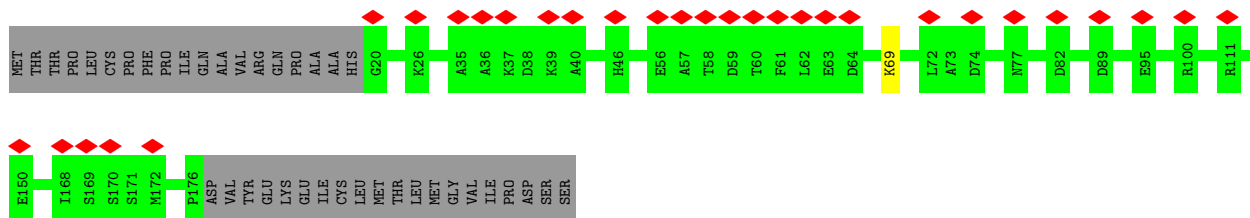
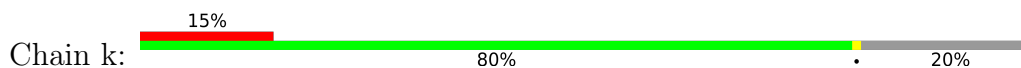
• Molecule 62: Cilia- and flagella-associated protein 161



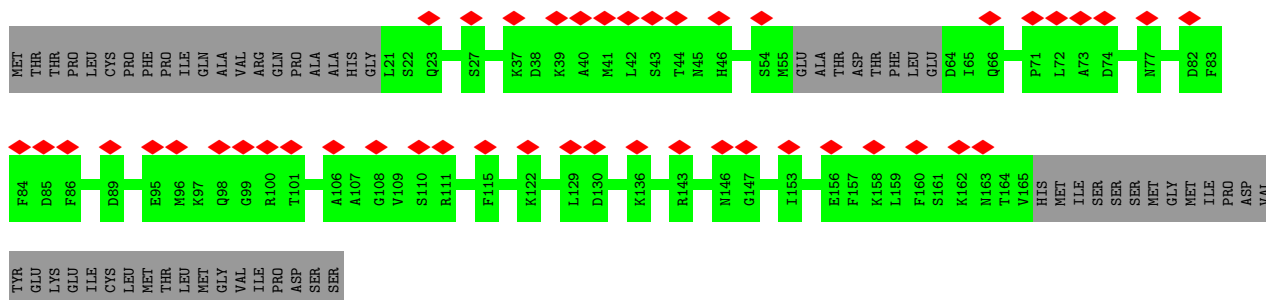
• Molecule 62: Cilia- and flagella-associated protein 161



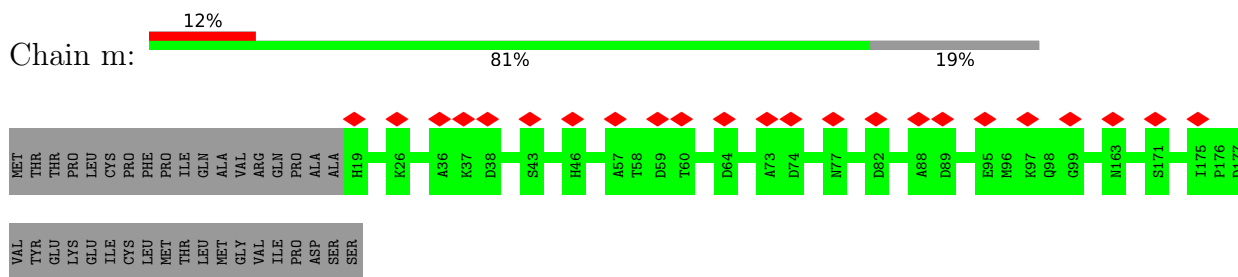
• Molecule 63: Dual specificity phosphatase 21



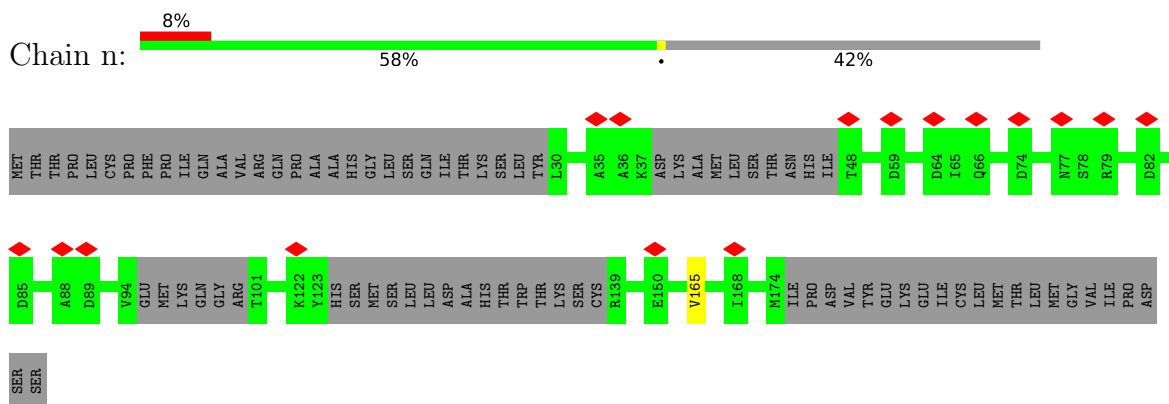
• Molecule 63: Dual specificity phosphatase 21



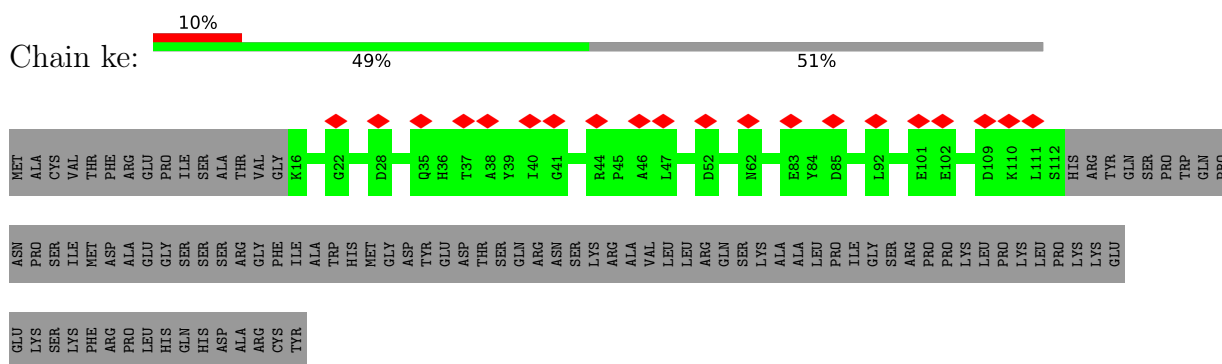
• Molecule 63: Dual specificity phosphatase 21



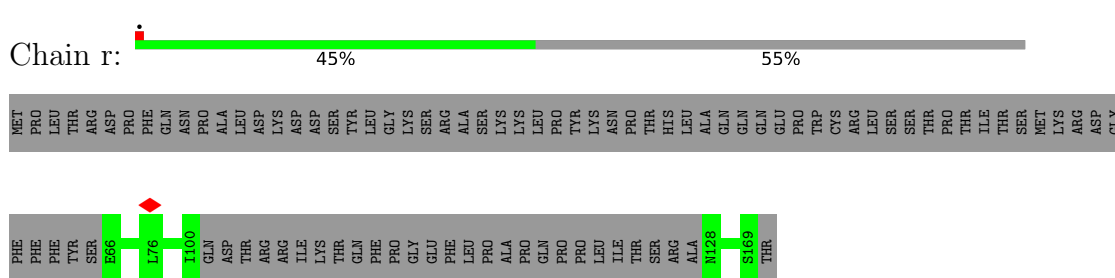
• Molecule 63: Dual specificity phosphatase 21



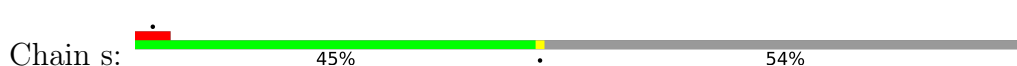
• Molecule 64: Uncharacterized protein C4orf45 homolog



• Molecule 65: Cilia- and flagella-associated protein 276



• Molecule 65: Cilia- and flagella-associated protein 276



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	34083	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	2.294	Depositor
Minimum map value	0.000	Depositor
Average map value	0.014	Depositor
Map value standard deviation	0.078	Depositor
Recommended contour level	0.2	Depositor
Map size (Å)	699.552, 699.552, 699.552	wwPDB
Map dimensions	672, 672, 672	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.041, 1.041, 1.041	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, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	0	0.29	0/337	0.56	0/452
1	V	0.42	0/1525	0.74	4/2064 (0.2%)
2	0A	0.41	0/1276	0.71	2/1721 (0.1%)
2	0C	0.36	0/1276	0.78	6/1721 (0.3%)
2	0E	0.40	0/1284	0.71	2/1731 (0.1%)
2	0G	0.34	0/1276	0.62	3/1721 (0.2%)
2	0W	0.32	0/1276	0.57	0/1721
2	0Y	0.36	0/1276	0.72	4/1721 (0.2%)
2	0a	0.43	1/1276 (0.1%)	0.76	2/1721 (0.1%)
2	0c	0.47	0/1276	0.89	6/1721 (0.3%)
2	0e	0.32	0/1268	0.57	1/1711 (0.1%)
2	0g	0.37	0/1276	0.83	5/1721 (0.3%)
2	0i	0.52	2/1276 (0.2%)	1.01	13/1721 (0.8%)
2	0k	0.39	1/1276 (0.1%)	0.84	6/1721 (0.3%)
2	CT	0.44	0/1284	0.84	6/1731 (0.3%)
2	CU	0.39	1/1268 (0.1%)	0.77	4/1711 (0.2%)
2	CV	0.41	0/1276	0.84	8/1721 (0.5%)
2	CX	0.39	0/1276	0.83	4/1721 (0.2%)
2	CY	0.38	0/1276	0.74	3/1721 (0.2%)
2	CZ	0.35	0/1276	0.68	3/1721 (0.2%)
2	Ca	0.40	0/1276	0.77	3/1721 (0.2%)
2	Cb	0.44	1/1276 (0.1%)	0.79	4/1721 (0.2%)
2	Cc	0.36	0/1276	0.68	1/1721 (0.1%)
2	Cd	0.54	1/1276 (0.1%)	0.92	8/1721 (0.5%)
2	Ce	0.29	0/1268	0.63	3/1711 (0.2%)
2	Cf	0.32	0/1268	0.67	3/1711 (0.2%)
2	Cg	0.32	0/1276	0.68	2/1721 (0.1%)
2	Ch	0.38	0/1276	0.68	3/1721 (0.2%)
2	Ci	0.39	0/1276	0.72	5/1721 (0.3%)
2	Cj	0.37	0/1268	0.74	3/1711 (0.2%)
2	Ck	0.40	0/1276	0.77	5/1721 (0.3%)
3	1	0.37	1/1740 (0.1%)	0.80	5/2356 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
3	2	0.31	0/2074	0.67	3/2806 (0.1%)
3	x	0.33	0/2074	0.69	3/2806 (0.1%)
4	3	0.35	0/1498	0.62	0/2007
4	y	0.34	0/1498	0.66	4/2007 (0.2%)
4	z	0.31	0/1498	0.66	1/2007 (0.0%)
5	A	0.48	1/346 (0.3%)	0.76	0/460
5	B	0.40	0/773	0.78	2/1046 (0.2%)
5	C	0.33	0/773	0.71	2/1046 (0.2%)
6	A0	0.40	0/1054	0.88	4/1436 (0.3%)
6	BN	0.36	0/638	0.87	2/871 (0.2%)
7	A1	0.68	3/1891 (0.2%)	0.94	8/2580 (0.3%)
7	A2	0.36	0/402	0.81	1/549 (0.2%)
7	A3	0.27	0/1199	0.55	0/1665
7	A4	0.30	0/542	0.60	0/747
7	A5	0.29	0/761	0.58	0/1056
7	A6	0.33	0/380	0.72	0/518
7	A7	0.45	0/1786	0.85	4/2434 (0.2%)
7	A8	0.46	2/1322 (0.2%)	0.85	4/1799 (0.2%)
7	A9	0.38	0/914	0.69	0/1249
7	Au	0.36	0/555	0.92	6/757 (0.8%)
7	Av	0.39	0/1161	0.79	2/1578 (0.1%)
7	Aw	0.32	0/1047	0.66	1/1429 (0.1%)
7	Ay	0.61	2/1462 (0.1%)	0.92	7/1986 (0.4%)
7	Az	0.41	0/322	0.80	1/439 (0.2%)
8	AA	0.36	1/3490 (0.0%)	0.65	5/4740 (0.1%)
8	AC	0.33	0/3505	0.63	2/4760 (0.0%)
8	AE	0.34	0/3505	0.60	1/4760 (0.0%)
8	AG	0.35	0/3505	0.62	1/4760 (0.0%)
8	AI	0.34	1/3505 (0.0%)	0.63	2/4760 (0.0%)
8	AK	0.36	1/3505 (0.0%)	0.63	5/4760 (0.1%)
8	AM	0.38	0/3498	0.66	7/4750 (0.1%)
8	BA	0.34	0/3431	0.64	1/4660 (0.0%)
8	BC	0.37	0/3492	0.68	7/4742 (0.1%)
8	BE	0.34	0/3439	0.65	4/4670 (0.1%)
8	BG	0.37	1/3498 (0.0%)	0.66	4/4750 (0.1%)
8	BI	0.38	0/3433	0.69	5/4662 (0.1%)
8	BK	0.45	2/3484 (0.1%)	0.71	7/4731 (0.1%)
8	BM	0.36	0/3439	0.67	5/4670 (0.1%)
8	CA	0.32	0/3484	0.63	2/4732 (0.0%)
8	CC	0.34	1/3492 (0.0%)	0.61	1/4742 (0.0%)
8	CE	0.31	0/3492	0.63	5/4742 (0.1%)
8	CG	0.65	5/3477 (0.1%)	0.81	9/4721 (0.2%)
8	CI	0.46	3/3492 (0.1%)	0.75	7/4742 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
8	CK	0.32	0/3492	0.61	2/4742 (0.0%)
8	CM	0.32	0/3492	0.64	3/4742 (0.1%)
8	DA	0.35	0/3025	0.68	5/4100 (0.1%)
8	DC	0.35	0/3425	0.66	4/4651 (0.1%)
8	DE	0.53	3/3425 (0.1%)	0.84	9/4651 (0.2%)
8	DG	0.34	0/3446	0.67	4/4680 (0.1%)
8	DI	0.64	3/3424 (0.1%)	0.90	13/4649 (0.3%)
8	DK	0.36	0/3418	0.66	4/4641 (0.1%)
8	DM	0.33	0/3418	0.67	3/4641 (0.1%)
8	EC	0.38	0/3468	0.72	9/4708 (0.2%)
8	EE	0.33	0/3498	0.63	2/4750 (0.0%)
8	EG	0.33	0/3484	0.64	0/4731
8	EI	0.36	1/3477 (0.0%)	0.64	2/4721 (0.0%)
8	EK	0.34	1/3489 (0.0%)	0.64	2/4737 (0.0%)
8	EM	0.36	1/3425 (0.0%)	0.64	4/4651 (0.1%)
8	FC	0.35	0/3433	0.64	2/4662 (0.0%)
8	FE	0.38	1/3398 (0.0%)	0.64	1/4613 (0.0%)
8	FG	0.36	0/3439	0.66	4/4670 (0.1%)
8	FI	0.37	1/3399 (0.0%)	0.70	5/4615 (0.1%)
8	FK	0.34	0/3425	0.62	3/4650 (0.1%)
8	FM	0.35	0/3431	0.70	6/4658 (0.1%)
8	GC	0.37	0/3498	0.65	0/4750
8	GE	0.38	2/3446 (0.1%)	0.69	7/4680 (0.1%)
8	GG	0.38	0/3460	0.68	5/4699 (0.1%)
8	GI	0.36	0/3474	0.66	4/4717 (0.1%)
8	GK	0.33	0/3439	0.60	2/4669 (0.0%)
8	GM	0.37	1/3498 (0.0%)	0.65	6/4750 (0.1%)
8	HC	0.33	0/3433	0.64	3/4662 (0.1%)
8	HE	0.36	1/3433 (0.0%)	0.65	4/4662 (0.1%)
8	HG	0.36	0/3446	0.63	2/4680 (0.0%)
8	HI	0.32	0/3438	0.62	2/4669 (0.0%)
8	HK	0.38	0/3446	0.67	4/4680 (0.1%)
8	HM	0.33	0/3469	0.60	1/4710 (0.0%)
8	HO	0.36	0/3101	0.69	5/4203 (0.1%)
8	IC	0.34	0/3460	0.67	5/4699 (0.1%)
8	IE	0.33	0/3439	0.66	5/4670 (0.1%)
8	IG	0.34	0/3498	0.65	6/4750 (0.1%)
8	II	0.35	0/3447	0.67	4/4681 (0.1%)
8	IK	0.44	4/3477 (0.1%)	0.70	8/4721 (0.2%)
8	IM	0.35	0/3484	0.65	4/4731 (0.1%)
8	IO	0.37	1/3424 (0.0%)	0.68	6/4649 (0.1%)
8	JC	0.32	0/3458	0.61	4/4696 (0.1%)
8	JE	0.33	0/3439	0.63	3/4670 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
8	JG	0.33	0/3425	0.58	0/4651
8	JI	0.33	1/3433 (0.0%)	0.63	4/4662 (0.1%)
8	JK	0.33	0/3492	0.60	2/4742 (0.0%)
8	JM	0.32	0/3439	0.61	4/4670 (0.1%)
8	KC	0.32	0/3465	0.60	2/4705 (0.0%)
8	KE	0.33	0/3447	0.62	4/4681 (0.1%)
8	KG	0.33	0/3437	0.62	4/4667 (0.1%)
8	KI	0.33	0/3425	0.57	0/4651
8	KK	0.34	0/3447	0.64	6/4681 (0.1%)
8	KM	0.32	0/3459	0.59	2/4696 (0.0%)
8	KO	0.32	0/3302	0.60	2/4480 (0.0%)
8	LC	0.33	0/3505	0.65	6/4760 (0.1%)
8	LE	0.33	0/3542	0.62	3/4810 (0.1%)
8	LG	0.35	0/3505	0.62	3/4760 (0.1%)
8	LI	0.32	0/3542	0.57	0/4810
8	LK	0.33	0/3505	0.61	3/4760 (0.1%)
8	LM	0.31	0/3480	0.57	2/4726 (0.0%)
8	MC	0.32	0/3498	0.59	0/4750
8	ME	0.34	0/3433	0.65	7/4662 (0.2%)
8	MG	0.32	0/3453	0.63	1/4689 (0.0%)
8	MI	0.34	0/3445	0.63	2/4678 (0.0%)
8	MK	0.39	1/3505 (0.0%)	0.63	3/4760 (0.1%)
8	MM	0.37	1/3484 (0.0%)	0.64	5/4732 (0.1%)
8	NA	0.37	1/3409 (0.0%)	0.67	4/4630 (0.1%)
8	NC	0.34	0/3419	0.63	1/4643 (0.0%)
8	NE	0.34	0/3439	0.62	1/4670 (0.0%)
8	NG	0.31	0/3439	0.61	1/4670 (0.0%)
8	NI	0.34	0/3433	0.66	5/4662 (0.1%)
8	NK	0.37	0/3433	0.70	9/4662 (0.2%)
8	OA	0.33	0/3425	0.62	2/4652 (0.0%)
8	OC	0.34	0/3433	0.63	2/4662 (0.0%)
8	OE	0.34	0/3454	0.64	2/4691 (0.0%)
8	OG	0.37	0/3451	0.69	5/4686 (0.1%)
8	OI	0.33	0/3454	0.69	5/4691 (0.1%)
8	OK	0.34	0/3441	0.65	5/4673 (0.1%)
8	PA	0.36	0/3439	0.68	5/4671 (0.1%)
8	PC	0.35	0/3461	0.69	2/4699 (0.0%)
8	PE	0.62	2/3447 (0.1%)	0.88	9/4681 (0.2%)
8	PG	0.33	0/3460	0.65	2/4699 (0.0%)
8	PI	0.35	0/3417	0.67	7/4641 (0.2%)
8	PK	0.33	0/3431	0.64	4/4659 (0.1%)
8	PM	0.36	0/3445	0.72	6/4678 (0.1%)
8	QA	0.52	2/3423 (0.1%)	0.78	9/4649 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
8	QC	0.63	5/3425 (0.1%)	0.79	7/4651 (0.2%)
8	QE	0.36	0/3439	0.67	3/4670 (0.1%)
8	QG	0.35	0/3447	0.69	4/4681 (0.1%)
8	QI	0.40	1/3425 (0.0%)	0.72	8/4651 (0.2%)
8	QK	0.43	2/3439 (0.1%)	0.76	9/4670 (0.2%)
8	QM	0.35	0/3445	0.70	8/4678 (0.2%)
8	RA	0.34	0/3431	0.72	7/4660 (0.2%)
8	RC	0.35	0/3454	0.65	7/4691 (0.1%)
8	RE	0.38	0/3433	0.69	4/4662 (0.1%)
8	RG	0.35	0/3452	0.69	6/4688 (0.1%)
8	RI	0.40	0/3452	0.74	7/4688 (0.1%)
8	RK	0.55	2/3460 (0.1%)	0.78	6/4699 (0.1%)
8	RM	0.56	2/3424 (0.1%)	0.83	9/4649 (0.2%)
8	SA	0.33	0/3425	0.67	3/4652 (0.1%)
8	SC	0.39	0/3438	0.69	1/4668 (0.0%)
8	SE	0.41	2/3447 (0.1%)	0.70	5/4680 (0.1%)
8	SG	0.40	1/3446 (0.0%)	0.67	4/4680 (0.1%)
8	SI	0.42	0/3416	0.73	5/4639 (0.1%)
8	SK	0.37	1/3454 (0.0%)	0.64	1/4691 (0.0%)
8	SM	0.35	0/3439	0.67	2/4670 (0.0%)
8	TC	0.35	0/3433	0.68	5/4662 (0.1%)
8	TE	0.40	1/3454 (0.0%)	0.70	4/4691 (0.1%)
8	TG	0.36	0/3431	0.66	2/4659 (0.0%)
8	TI	0.41	2/3439 (0.1%)	0.70	6/4670 (0.1%)
8	TK	0.37	0/3447	0.69	4/4681 (0.1%)
8	TM	0.35	0/3439	0.68	3/4670 (0.1%)
8	UC	0.36	0/3447	0.68	3/4681 (0.1%)
8	UE	0.35	1/3447 (0.0%)	0.63	1/4681 (0.0%)
8	UG	0.40	1/3451 (0.0%)	0.65	3/4686 (0.1%)
8	UI	0.36	0/3447	0.64	3/4681 (0.1%)
8	UK	0.32	0/3439	0.63	3/4670 (0.1%)
8	UM	0.33	0/3433	0.64	3/4662 (0.1%)
8	VC	0.36	0/3477	0.69	3/4721 (0.1%)
8	VE	0.32	0/3441	0.64	3/4671 (0.1%)
8	VG	0.35	0/3498	0.64	3/4750 (0.1%)
8	VI	0.32	0/3426	0.61	1/4652 (0.0%)
8	VK	0.36	0/3484	0.65	3/4731 (0.1%)
8	VM	0.34	0/3453	0.64	3/4689 (0.1%)
8	WC	0.64	2/3484 (0.1%)	0.87	8/4731 (0.2%)
8	WE	0.55	5/3437 (0.1%)	0.85	12/4667 (0.3%)
8	WG	0.34	0/3477	0.65	5/4721 (0.1%)
8	WI	0.34	1/3433 (0.0%)	0.70	7/4662 (0.2%)
8	WK	0.35	0/3484	0.66	5/4731 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
8	WM	0.36	0/3439	0.68	4/4670 (0.1%)
9	AB	0.35	0/3500	0.61	3/4742 (0.1%)
9	AD	0.33	0/3500	0.63	3/4742 (0.1%)
9	AF	0.35	1/3500 (0.0%)	0.63	4/4742 (0.1%)
9	AH	0.33	0/3500	0.64	4/4742 (0.1%)
9	AJ	0.33	0/3500	0.63	5/4742 (0.1%)
9	AL	0.33	0/3458	0.63	4/4687 (0.1%)
9	BB	0.37	0/3423	0.73	7/4638 (0.2%)
9	BD	0.34	0/3423	0.64	4/4638 (0.1%)
9	BF	0.40	2/3436 (0.1%)	0.70	6/4656 (0.1%)
9	BH	0.38	1/3431 (0.0%)	0.68	5/4649 (0.1%)
9	BJ	0.35	0/3431	0.65	3/4649 (0.1%)
9	BL	0.37	0/3415	0.69	6/4628 (0.1%)
9	CB	0.34	0/3423	0.67	5/4638 (0.1%)
9	CD	0.36	1/3414 (0.0%)	0.71	6/4626 (0.1%)
9	CF	0.33	0/3423	0.66	3/4638 (0.1%)
9	CH	0.34	0/3423	0.65	5/4638 (0.1%)
9	CJ	0.33	0/3423	0.66	3/4638 (0.1%)
9	CL	0.31	0/3415	0.64	3/4628 (0.1%)
9	DB	0.33	1/3423 (0.0%)	0.67	6/4638 (0.1%)
9	DD	0.35	1/3423 (0.0%)	0.71	8/4638 (0.2%)
9	DF	0.34	0/3423	0.66	3/4638 (0.1%)
9	DH	0.36	1/3423 (0.0%)	0.67	3/4638 (0.1%)
9	DJ	0.36	0/3423	0.74	8/4638 (0.2%)
9	DL	0.32	0/3415	0.64	3/4628 (0.1%)
9	DN	0.38	1/3102 (0.0%)	0.67	3/4201 (0.1%)
9	EB	0.37	2/3423 (0.1%)	0.71	5/4638 (0.1%)
9	ED	0.35	0/3423	0.67	4/4638 (0.1%)
9	EF	0.33	0/3423	0.67	3/4638 (0.1%)
9	EH	0.68	3/3431 (0.1%)	0.82	10/4649 (0.2%)
9	EJ	0.41	3/3423 (0.1%)	0.70	6/4638 (0.1%)
9	EL	0.34	1/3415 (0.0%)	0.64	4/4628 (0.1%)
9	EN	0.33	0/3423	0.65	2/4638 (0.0%)
9	FB	0.40	2/3423 (0.1%)	0.72	6/4638 (0.1%)
9	FD	0.33	0/3431	0.66	7/4649 (0.2%)
9	FF	0.37	0/3423	0.61	1/4638 (0.0%)
9	FH	0.37	0/3436	0.68	4/4656 (0.1%)
9	FJ	0.38	0/3423	0.70	6/4638 (0.1%)
9	FL	0.32	0/3415	0.62	2/4628 (0.0%)
9	FN	0.33	0/3436	0.66	4/4656 (0.1%)
9	GB	0.31	0/3436	0.62	2/4656 (0.0%)
9	GD	0.34	0/3431	0.65	3/4649 (0.1%)
9	GF	0.33	0/3436	0.67	4/4656 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
9	GH	0.33	0/3436	0.61	3/4656 (0.1%)
9	GJ	0.33	0/3436	0.65	4/4656 (0.1%)
9	GL	0.37	0/3415	0.67	2/4628 (0.0%)
9	GN	0.34	0/3431	0.66	6/4649 (0.1%)
9	HB	0.32	0/3423	0.66	5/4638 (0.1%)
9	HD	0.37	1/3431 (0.0%)	0.68	5/4649 (0.1%)
9	HF	0.36	0/3423	0.67	4/4638 (0.1%)
9	HH	0.33	0/3431	0.61	2/4649 (0.0%)
9	HJ	0.36	0/3436	0.70	8/4656 (0.2%)
9	HL	0.32	0/3415	0.65	4/4628 (0.1%)
9	HN	0.34	0/3431	0.64	2/4649 (0.0%)
9	IB	0.41	0/2949	0.79	9/3989 (0.2%)
9	ID	0.32	0/3431	0.63	5/4649 (0.1%)
9	IF	0.34	0/3431	0.65	3/4649 (0.1%)
9	IH	0.34	0/3423	0.62	0/4638
9	IJ	0.35	0/3431	0.67	4/4649 (0.1%)
9	IL	0.36	1/3423 (0.0%)	0.65	2/4638 (0.0%)
9	IN	0.34	0/3423	0.69	6/4638 (0.1%)
9	JB	0.34	0/3423	0.64	3/4638 (0.1%)
9	JD	0.33	0/3431	0.61	3/4649 (0.1%)
9	JF	0.33	0/3423	0.60	1/4638 (0.0%)
9	JH	0.33	0/3423	0.64	4/4638 (0.1%)
9	JJ	0.34	0/3423	0.62	5/4638 (0.1%)
9	JL	0.36	1/3423 (0.0%)	0.67	4/4638 (0.1%)
9	JN	0.31	0/3423	0.58	2/4638 (0.0%)
9	KB	0.33	0/3232	0.62	2/4380 (0.0%)
9	KD	0.32	0/3443	0.62	3/4666 (0.1%)
9	KF	0.33	0/3431	0.64	5/4649 (0.1%)
9	KH	0.37	1/3443 (0.0%)	0.62	3/4666 (0.1%)
9	KJ	0.33	0/3423	0.61	2/4638 (0.0%)
9	KL	0.51	1/3443 (0.0%)	0.86	6/4666 (0.1%)
9	KN	0.33	0/3436	0.62	2/4656 (0.0%)
9	LB	0.31	0/3509	0.60	1/4754 (0.0%)
9	LD	0.35	0/3431	0.61	3/4649 (0.1%)
9	LF	0.34	0/3500	0.60	1/4742 (0.0%)
9	LH	0.31	0/3436	0.61	4/4656 (0.1%)
9	LJ	0.33	0/3509	0.61	3/4754 (0.1%)
9	LL	0.31	0/3423	0.56	1/4638 (0.0%)
9	LN	0.30	0/3509	0.57	2/4754 (0.0%)
9	MB	0.32	0/3423	0.61	2/4638 (0.0%)
9	MD	0.34	0/3443	0.58	1/4666 (0.0%)
9	MF	0.32	0/3443	0.64	3/4666 (0.1%)
9	MH	0.31	0/3443	0.57	0/4666

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
9	MJ	0.34	1/3423 (0.0%)	0.66	5/4638 (0.1%)
9	ML	0.34	1/3443 (0.0%)	0.63	4/4666 (0.1%)
9	MN	0.32	0/3443	0.58	0/4666
9	NO	0.32	0/3414	0.64	3/4626 (0.1%)
9	NB	0.39	2/3423 (0.1%)	0.72	9/4638 (0.2%)
9	ND	0.33	0/3431	0.69	4/4649 (0.1%)
9	NF	0.34	1/3423 (0.0%)	0.66	4/4638 (0.1%)
9	NH	0.42	2/3436 (0.1%)	0.72	7/4656 (0.2%)
9	NJ	0.34	0/3436	0.66	4/4656 (0.1%)
9	NL	0.35	0/3414	0.67	4/4626 (0.1%)
9	OO	0.36	0/3142	0.70	4/4253 (0.1%)
9	OB	0.34	0/3431	0.64	1/4649 (0.0%)
9	OD	0.35	0/3401	0.65	3/4608 (0.1%)
9	OF	0.36	0/3414	0.63	1/4626 (0.0%)
9	OH	0.33	0/3436	0.70	7/4656 (0.2%)
9	OJ	0.36	0/3431	0.70	9/4649 (0.2%)
9	OL	0.37	0/3401	0.71	8/4608 (0.2%)
9	PB	0.33	0/3431	0.69	8/4649 (0.2%)
9	PD	0.36	0/3431	0.69	2/4649 (0.0%)
9	PF	0.69	5/3431 (0.1%)	0.88	10/4649 (0.2%)
9	PH	0.33	0/3431	0.64	1/4649 (0.0%)
9	PJ	0.32	0/3436	0.64	2/4656 (0.0%)
9	PL	0.37	0/3415	0.75	10/4628 (0.2%)
9	QB	0.33	0/3436	0.66	4/4656 (0.1%)
9	QD	0.34	0/3431	0.71	7/4649 (0.2%)
9	QF	0.63	4/3431 (0.1%)	0.98	11/4649 (0.2%)
9	QH	0.33	1/3423 (0.0%)	0.66	3/4638 (0.1%)
9	QJ	0.34	0/3423	0.72	5/4638 (0.1%)
9	QL	0.37	1/3423 (0.0%)	0.71	3/4638 (0.1%)
9	RB	0.38	0/3436	0.74	8/4656 (0.2%)
9	RD	0.57	3/3431 (0.1%)	0.85	12/4649 (0.3%)
9	RF	0.55	3/3431 (0.1%)	0.87	13/4649 (0.3%)
9	RH	0.71	5/3436 (0.1%)	0.80	11/4656 (0.2%)
9	RJ	0.67	4/3436 (0.1%)	0.84	13/4656 (0.3%)
9	RL	0.57	4/3423 (0.1%)	0.88	18/4638 (0.4%)
9	SB	0.51	3/3436 (0.1%)	0.73	4/4656 (0.1%)
9	SD	0.35	0/3431	0.71	6/4649 (0.1%)
9	SF	0.36	0/3436	0.74	6/4656 (0.1%)
9	SH	0.45	3/3436 (0.1%)	0.74	6/4656 (0.1%)
9	SJ	0.38	3/3436 (0.1%)	0.73	8/4656 (0.2%)
9	SL	0.34	2/3423 (0.1%)	0.67	4/4638 (0.1%)
9	TB	0.40	0/3431	0.76	12/4649 (0.3%)
9	TD	0.36	0/3431	0.69	5/4649 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
9	TF	0.36	0/3436	0.69	6/4656 (0.1%)
9	TH	0.38	0/3436	0.70	6/4656 (0.1%)
9	TJ	0.37	0/3436	0.68	3/4656 (0.1%)
9	TL	0.37	0/3423	0.74	8/4638 (0.2%)
9	UB	0.37	0/3423	0.77	13/4638 (0.3%)
9	UD	0.39	0/3431	0.77	9/4649 (0.2%)
9	UF	0.34	0/3431	0.66	4/4649 (0.1%)
9	UH	0.34	0/3431	0.68	6/4649 (0.1%)
9	UJ	0.43	1/3431 (0.0%)	0.73	5/4649 (0.1%)
9	UL	0.34	0/3423	0.68	4/4638 (0.1%)
9	UN	0.34	0/3431	0.71	6/4649 (0.1%)
9	VB	0.35	0/3423	0.68	4/4638 (0.1%)
9	VD	0.35	0/3423	0.70	4/4638 (0.1%)
9	VF	0.66	4/3423 (0.1%)	0.87	10/4638 (0.2%)
9	VH	0.37	0/3436	0.71	6/4656 (0.1%)
9	VJ	0.37	0/3423	0.72	8/4638 (0.2%)
9	VL	0.36	0/3423	0.68	8/4638 (0.2%)
9	VN	0.37	0/3423	0.71	5/4638 (0.1%)
9	WB	0.33	0/3423	0.67	4/4638 (0.1%)
9	WD	0.33	0/3423	0.64	2/4638 (0.0%)
9	WF	0.37	2/3423 (0.1%)	0.67	5/4638 (0.1%)
9	WH	0.36	0/3423	0.70	9/4638 (0.2%)
9	WJ	0.34	0/3423	0.68	5/4638 (0.1%)
9	WL	0.37	1/3423 (0.0%)	0.69	6/4638 (0.1%)
9	WN	0.36	0/3423	0.70	5/4638 (0.1%)
10	AP	0.31	0/949	0.58	0/1291
10	AQ	0.35	0/949	0.63	1/1291 (0.1%)
10	AR	0.32	0/756	0.63	0/1027
10	AS	0.30	0/949	0.60	0/1291
11	AT	0.42	0/2539	0.71	3/3368 (0.1%)
11	AU	0.43	0/1868	0.71	1/2471 (0.0%)
12	AV	0.35	0/2964	0.65	2/4002 (0.0%)
12	AW	0.37	0/3011	0.66	3/4065 (0.1%)
13	Aa	0.38	0/4935	0.70	9/6639 (0.1%)
13	Ab	0.41	2/5047 (0.0%)	0.72	12/6797 (0.2%)
13	Ac	0.34	0/5061	0.66	3/6815 (0.0%)
13	Ad	0.37	0/4337	0.71	9/5847 (0.2%)
14	Al	0.41	0/348	0.77	1/475 (0.2%)
14	Am	0.32	0/348	0.75	1/475 (0.2%)
14	An	0.41	0/348	0.66	1/475 (0.2%)
14	Ao	0.39	0/598	0.72	1/812 (0.1%)
14	B7	0.32	0/704	0.65	0/952
14	BY	0.33	0/889	0.75	3/1198 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
14	BZ	0.33	0/889	0.73	2/1198 (0.2%)
14	Ba	0.34	0/1641	0.66	0/2220
14	Bb	0.34	0/1641	0.70	2/2220 (0.1%)
14	Bc	0.36	0/1628	0.65	1/2202 (0.0%)
14	Bd	0.29	0/889	0.57	0/1198
14	Be	0.31	0/889	0.59	0/1198
14	CN	0.54	2/688 (0.3%)	0.69	0/930
14	CO	0.35	0/715	0.76	1/966 (0.1%)
15	Ap	0.33	0/1140	0.64	0/1547
15	Aq	0.33	0/794	0.60	0/1079
15	Ar	0.32	0/1300	0.66	2/1767 (0.1%)
16	At	0.38	0/800	0.73	1/1092 (0.1%)
16	Ax	0.38	0/956	0.74	1/1309 (0.1%)
17	B0	0.36	0/380	0.73	1/519 (0.2%)
17	B1	0.37	0/312	0.65	1/428 (0.2%)
17	B2	0.33	0/317	0.75	1/430 (0.2%)
17	B3	0.29	0/205	0.56	0/274
17	B4	0.30	0/313	0.64	0/422
17	B8	0.30	0/328	0.66	0/441
17	B9	0.31	0/319	0.52	0/438
17	CQ	0.32	0/380	0.60	0/519
17	CR	0.30	0/328	0.49	0/450
17	CS	0.37	0/319	0.64	0/438
18	B5	0.34	0/2053	0.68	3/2757 (0.1%)
18	B6	0.32	0/2087	0.56	0/2804
18	By	0.36	0/1338	0.68	2/1792 (0.1%)
18	Bz	0.40	1/2053 (0.0%)	0.67	1/2757 (0.0%)
19	BO	0.51	3/1848 (0.2%)	0.83	5/2489 (0.2%)
19	BP	0.37	0/3450	0.69	1/4641 (0.0%)
19	BQ	0.35	0/3030	0.71	3/4067 (0.1%)
19	BR	0.38	0/3524	0.72	2/4742 (0.0%)
20	BS	0.31	0/1229	0.72	3/1679 (0.2%)
20	BT	0.38	0/1941	0.75	2/2637 (0.1%)
21	BU	0.31	0/310	0.71	1/411 (0.2%)
21	BV	0.33	0/3125	0.57	1/4176 (0.0%)
21	Bi	0.26	0/356	0.48	0/475
21	Bj	0.42	1/2051 (0.0%)	0.66	4/2740 (0.1%)
21	Bk	0.40	0/1459	0.65	2/1949 (0.1%)
22	BW	0.34	0/1648	0.69	2/2254 (0.1%)
22	BX	0.39	0/436	0.81	1/589 (0.2%)
23	Bf	0.36	0/522	0.68	2/707 (0.3%)
23	Bg	0.37	0/981	0.72	1/1334 (0.1%)
24	Bh	0.32	0/802	0.62	0/1094

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
26	Bq	0.37	0/816	0.70	2/1125 (0.2%)
26	Bu	0.29	0/1219	0.62	1/1664 (0.1%)
27	Br	0.45	0/1386	0.71	1/1839 (0.1%)
27	Bs	0.44	1/3070 (0.0%)	0.72	5/4068 (0.1%)
28	C0	0.31	0/857	0.63	1/1154 (0.1%)
28	C2	0.33	0/3358	0.60	2/4529 (0.0%)
28	C3	0.34	0/3358	0.56	0/4529
28	C4	0.35	0/2819	0.61	2/3802 (0.1%)
28	C5	0.44	2/1860 (0.1%)	0.66	5/2502 (0.2%)
28	C6	0.30	0/361	0.58	0/490
28	C7	0.33	0/3501	0.59	1/4723 (0.0%)
28	C8	0.34	0/3493	0.60	2/4711 (0.0%)
28	C9	0.38	0/3125	0.59	4/4209 (0.1%)
28	DO	0.32	0/1061	0.64	1/1436 (0.1%)
28	F2	0.32	0/3462	0.58	3/4675 (0.1%)
28	F3	0.36	0/3452	0.65	7/4661 (0.2%)
28	F4	0.39	2/3178 (0.1%)	0.64	7/4281 (0.2%)
28	F5	0.30	0/879	0.52	0/1183
28	F6	0.37	0/1072	0.69	4/1456 (0.3%)
29	C1	0.43	2/2741 (0.1%)	0.67	2/3684 (0.1%)
29	Cz	0.51	1/2461 (0.0%)	0.82	10/3304 (0.3%)
29	D0	0.38	0/573	0.81	3/770 (0.4%)
29	D1	0.37	0/2962	0.71	7/3975 (0.2%)
29	D2	0.35	0/3204	0.63	2/4302 (0.0%)
29	D3	0.38	0/3195	0.69	5/4291 (0.1%)
29	D4	0.38	0/3187	0.75	9/4280 (0.2%)
29	D5	0.43	1/2990 (0.0%)	0.80	10/4011 (0.2%)
29	D6	0.39	0/1227	0.72	3/1646 (0.2%)
29	D7	0.35	0/608	0.73	0/818
29	D8	0.36	0/3204	0.65	6/4302 (0.1%)
29	D9	0.39	0/1324	0.75	4/1776 (0.2%)
29	DP	0.39	0/1688	0.70	2/2261 (0.1%)
29	DQ	0.37	0/2431	0.70	2/3258 (0.1%)
29	DR	0.37	0/2170	0.71	6/2910 (0.2%)
29	DS	0.37	0/2136	0.71	7/2864 (0.2%)
29	DT	0.41	1/1391 (0.1%)	0.81	6/1872 (0.3%)
29	DU	0.36	0/2526	0.65	1/3388 (0.0%)
29	DV	0.38	0/2531	0.72	4/3395 (0.1%)
29	DW	0.42	1/2531 (0.0%)	0.79	8/3395 (0.2%)
29	DX	0.38	0/1911	0.72	4/2561 (0.2%)
29	EA	0.37	0/3298	0.65	2/4431 (0.0%)
29	EO	0.35	0/3290	0.64	2/4420 (0.0%)
29	EP	0.47	1/2973 (0.0%)	0.78	10/3989 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
29	EQ	0.42	0/1470	0.80	5/1976 (0.3%)
29	ER	0.30	0/364	0.57	0/487
30	CW	0.33	0/1354	0.62	0/1838
31	Cl	0.35	0/1003	0.72	2/1368 (0.1%)
32	Cm	0.38	0/3304	0.70	4/4451 (0.1%)
32	Cn	0.38	0/3326	0.60	2/4480 (0.0%)
32	Co	0.47	3/2878 (0.1%)	0.64	5/3873 (0.1%)
32	Cp	0.43	0/1708	0.68	2/2298 (0.1%)
33	Cq	0.36	0/3471	0.57	0/4682
33	Cr	0.38	0/3429	0.62	3/4623 (0.1%)
33	Cs	0.38	0/1517	0.63	1/2044 (0.0%)
33	Ct	0.37	1/3183 (0.0%)	0.62	3/4289 (0.1%)
33	Cu	0.35	0/3091	0.66	3/4165 (0.1%)
33	Cv	0.40	2/3480 (0.1%)	0.63	2/4693 (0.0%)
33	Cw	0.38	0/3480	0.68	5/4693 (0.1%)
33	Cx	0.38	0/1632	0.64	0/2200
33	Cy	0.40	0/369	0.74	1/497 (0.2%)
34	D	0.47	0/554	0.76	0/753
35	DY	0.35	0/313	0.67	1/420 (0.2%)
35	DZ	0.30	0/422	0.71	1/565 (0.2%)
35	Da	0.33	0/1129	0.60	1/1531 (0.1%)
35	Ee	0.29	0/400	0.58	0/543
36	Db	0.30	0/465	0.71	0/632
36	Dc	0.33	0/457	0.82	2/621 (0.3%)
36	Dd	0.31	0/420	0.61	0/572
37	De	0.42	0/558	0.71	1/749 (0.1%)
38	Df	0.32	0/1099	0.62	1/1500 (0.1%)
38	Dg	0.34	0/1014	0.62	1/1376 (0.1%)
38	Dh	0.42	0/901	0.77	3/1224 (0.2%)
39	Di	0.34	0/651	0.65	0/875
39	Dj	0.29	0/829	0.62	1/1115 (0.1%)
39	Dk	0.30	0/829	0.62	0/1115
39	Dl	0.29	0/829	0.63	0/1115
40	Dm	0.37	0/747	0.61	1/1012 (0.1%)
41	Dn	0.30	0/476	0.80	2/637 (0.3%)
42	E	0.89	3/1203 (0.2%)	1.22	14/1625 (0.9%)
42	F	0.37	0/3776	0.76	7/5106 (0.1%)
43	E1	0.32	0/1714	0.68	1/2351 (0.0%)
43	E2	0.30	0/1714	0.66	1/2351 (0.0%)
43	E3	0.35	0/1707	0.67	2/2340 (0.1%)
43	E4	0.37	0/1271	0.69	1/1744 (0.1%)
44	ES	0.38	0/3537	0.60	1/4765 (0.0%)
44	ET	0.34	0/2311	0.55	0/3120

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
44	EU	0.37	0/2725	0.65	5/3664 (0.1%)
44	EV	0.43	3/3537 (0.1%)	0.64	4/4765 (0.1%)
44	EW	0.38	0/2644	0.68	4/3569 (0.1%)
44	EX	0.38	0/3617	0.65	6/4879 (0.1%)
44	EY	0.38	0/2586	0.63	1/3481 (0.0%)
44	EZ	0.36	0/3672	0.64	4/4954 (0.1%)
45	G	0.39	0/2380	0.76	7/3223 (0.2%)
46	H	0.46	0/860	0.66	1/1149 (0.1%)
46	o	0.42	0/3439	0.81	13/4555 (0.3%)
47	I	0.31	0/3783	0.60	2/5118 (0.0%)
47	X	0.38	2/3788 (0.1%)	0.69	7/5125 (0.1%)
47	Y	0.58	3/3840 (0.1%)	0.73	8/5196 (0.2%)
48	J	0.35	0/974	0.70	1/1315 (0.1%)
48	K	0.31	0/974	0.67	2/1315 (0.2%)
48	L	0.88	2/914 (0.2%)	1.10	2/1235 (0.2%)
48	M	0.34	0/746	0.71	1/1007 (0.1%)
49	K1	0.39	0/1019	0.76	1/1379 (0.1%)
50	L1	0.45	1/1121 (0.1%)	0.77	0/1514
50	L2	0.32	0/763	0.74	1/1031 (0.1%)
51	N	0.32	0/1207	0.67	0/1631
51	O	0.33	0/1169	0.69	0/1581
52	P	0.41	0/897	0.89	5/1219 (0.4%)
53	Q	0.34	0/955	0.63	0/1300
54	R	0.30	0/1190	0.73	1/1603 (0.1%)
54	S	0.32	0/1190	0.66	0/1603
54	T	0.35	0/1193	0.75	1/1606 (0.1%)
54	U	0.31	0/843	0.73	1/1138 (0.1%)
55	W	0.35	0/1017	0.60	0/1365
56	XG	0.32	0/1544	0.65	0/2082
56	XH	0.32	0/1544	0.67	2/2082 (0.1%)
56	XI	0.33	0/1544	0.67	0/2082
56	XJ	0.30	0/1544	0.65	2/2082 (0.1%)
56	XK	0.36	0/1544	0.70	2/2082 (0.1%)
56	XL	0.29	0/1535	0.63	0/2071
56	XM	0.37	0/1525	0.88	4/2056 (0.2%)
57	YG	0.33	0/1748	0.65	0/2360
57	YH	0.34	0/1802	0.61	0/2435
57	YI	0.33	0/1802	0.60	0/2435
57	YJ	0.33	0/1802	0.64	3/2435 (0.1%)
57	YK	0.34	0/1802	0.65	0/2435
57	YL	0.46	1/1802 (0.1%)	0.78	7/2435 (0.3%)
58	Z	0.29	0/1031	0.61	1/1372 (0.1%)
58	p	0.36	0/466	0.60	0/616

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
58	q	0.27	0/841	0.65	0/1121
59	a	0.51	2/1570 (0.1%)	0.86	5/2088 (0.2%)
59	b	0.41	1/2828 (0.0%)	0.82	8/3738 (0.2%)
59	c	0.39	0/2540	0.77	4/3369 (0.1%)
59	d	0.46	1/1738 (0.1%)	0.75	3/2298 (0.1%)
60	e	0.34	0/4821	0.71	6/6527 (0.1%)
60	f	0.33	0/4812	0.66	0/6515
60	g	0.35	1/4812 (0.0%)	0.67	1/6515 (0.0%)
61	h	0.31	0/801	0.62	1/1073 (0.1%)
62	i	0.35	0/2105	0.65	2/2851 (0.1%)
62	j	0.34	0/2211	0.67	3/2997 (0.1%)
63	k	0.31	0/1275	0.60	1/1727 (0.1%)
63	l	0.32	0/1124	0.62	0/1522
63	m	0.29	0/1294	0.57	0/1753
63	n	0.35	0/928	0.67	1/1255 (0.1%)
64	ke	0.31	0/820	0.59	0/1109
65	r	0.32	0/630	0.67	0/849
65	s	0.35	0/639	0.62	1/861 (0.1%)
65	t	0.32	0/639	0.57	1/861 (0.1%)
66	u	0.31	0/1107	0.55	1/1491 (0.1%)
66	v	0.31	0/982	0.58	0/1327
66	w	0.30	0/1107	0.57	0/1491
All	All	0.38	216/1475221 (0.0%)	0.68	2018/1997530 (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	V	0	1
2	0C	0	3
2	0E	0	2
2	0Y	0	1
2	0a	0	1
2	0c	0	1
2	0g	0	2
2	0i	0	3
2	CT	0	2
2	CY	0	1
2	Cb	0	3
2	Ci	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
6	A0	0	2
7	A5	0	1
7	A7	0	3
7	A8	0	4
7	A9	0	1
7	Aw	0	1
7	Ay	0	2
8	AG	0	1
8	AI	0	1
8	BE	0	1
8	BM	0	1
8	CK	0	1
8	EI	0	1
8	EK	0	1
8	FE	0	1
8	FK	0	1
8	GG	0	1
8	GK	0	2
8	HO	0	1
8	IC	0	1
8	IE	0	1
8	IG	0	1
8	IK	0	2
8	KE	0	1
8	KI	0	1
8	LC	0	1
8	LK	0	1
8	ME	0	1
8	MK	0	1
8	NC	0	1
8	NI	0	1
8	NK	0	1
8	OE	0	1
8	OG	0	1
8	PA	0	1
8	PC	0	1
8	PI	0	1
8	QA	0	1
8	RA	0	1
8	RI	0	2
8	RK	0	1
8	SG	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
8	SK	0	1
8	TI	0	2
8	UE	0	1
8	WI	0	1
9	DH	0	1
9	ED	0	1
9	EJ	0	1
9	EL	0	2
9	FB	0	2
9	FH	0	1
9	FJ	0	1
9	GD	0	1
9	GF	0	2
9	GH	0	1
9	GJ	0	1
9	GL	0	1
9	HB	0	1
9	HD	0	1
9	HJ	0	1
9	IN	0	1
9	MD	0	1
9	MF	0	1
9	NF	0	1
9	NL	0	1
9	O0	0	1
9	OL	0	1
9	PH	0	1
9	PJ	0	2
9	RF	0	1
9	RH	0	3
9	RL	0	1
9	SD	0	1
9	TL	0	1
9	UJ	0	1
9	UL	0	1
9	VB	0	1
9	WJ	0	1
11	AT	0	1
13	Aa	0	1
13	Ab	0	1
13	Ac	0	2
13	Ad	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
14	Al	0	1
14	BY	0	1
14	Bb	0	1
15	Ap	0	1
15	Ar	0	1
18	Bz	0	1
19	BR	0	1
21	Bj	0	1
28	F2	0	1
28	F6	0	1
29	D4	0	2
29	DP	0	1
29	EP	0	1
32	Co	0	1
33	Ct	0	1
42	E	0	1
42	F	0	2
43	E2	0	1
43	E4	0	1
44	ES	0	1
44	EX	0	2
45	G	0	2
46	H	0	1
46	o	0	1
47	I	0	2
47	Y	0	1
48	J	0	1
49	K1	0	1
50	L1	0	3
51	O	0	1
56	XI	0	1
57	YL	0	1
59	a	0	2
59	b	0	3
59	d	0	2
60	f	0	1
65	s	0	1
All	All	0	172

All (216) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	PF	80	PRO	CG-CD	-31.31	0.47	1.50
8	WC	268	PRO	CG-CD	-29.44	0.53	1.50
9	EH	268	PRO	CG-CD	-28.52	0.56	1.50
9	RJ	268	PRO	CG-CD	-27.72	0.59	1.50
8	PE	261	PRO	CG-CD	-26.91	0.61	1.50
9	RH	268	PRO	CG-CD	-26.77	0.62	1.50
9	VF	261	PRO	CB-CG	26.45	2.82	1.50
47	Y	365	PRO	CG-CD	-25.51	0.66	1.50
8	RM	63	PRO	CG-CD	-24.12	0.71	1.50
48	L	106	PRO	CG-CD	-24.12	0.71	1.50
9	QF	272	PRO	CG-CD	-23.78	0.72	1.50
8	DE	268	PRO	CG-CD	-23.33	0.73	1.50
9	KL	220	PRO	CG-CD	-23.01	0.74	1.50
8	DI	298	PRO	CG-CD	-22.11	0.77	1.50
8	RK	63	PRO	CG-CD	-21.80	0.78	1.50
8	CG	184	PRO	CG-CD	-21.64	0.79	1.50
8	QC	274	PRO	CG-CD	-21.47	0.79	1.50
7	A1	101	PRO	CG-CD	-21.09	0.81	1.50
42	E	734	PRO	CG-CD	-20.81	0.81	1.50
8	DI	298	PRO	CB-CG	20.49	2.52	1.50
8	QA	364	PRO	CG-CD	-20.41	0.83	1.50
9	RF	268	PRO	CG-CD	-20.25	0.83	1.50
8	WE	268	PRO	CG-CD	-19.15	0.87	1.50
8	QC	274	PRO	CB-CG	17.66	2.38	1.50
8	CG	184	PRO	CB-CG	17.40	2.37	1.50
9	RD	268	PRO	CG-CD	-17.09	0.94	1.50
8	CI	268	PRO	CG-CD	-16.84	0.95	1.50
9	VF	261	PRO	CG-CD	-16.74	0.95	1.50
42	E	734	PRO	CB-CG	16.57	2.32	1.50
29	Cz	391	PRO	CG-CD	-15.49	0.99	1.50
7	Ay	139	PRO	CG-CD	-15.48	0.99	1.50
9	RL	173	PRO	CG-CD	-15.10	1.00	1.50
8	BK	32	PRO	CG-CD	-14.90	1.01	1.50
9	RL	358	PRO	CG-CD	-14.48	1.02	1.50
8	PE	261	PRO	CB-CG	14.48	2.22	1.50
9	RD	268	PRO	CB-CG	14.14	2.20	1.50
9	QF	272	PRO	CB-CG	13.80	2.19	1.50
9	RJ	268	PRO	CB-CG	13.63	2.18	1.50
9	SB	125	GLU	CB-CG	-12.67	1.28	1.52
9	RH	268	PRO	CB-CG	12.49	2.12	1.50
8	CG	183	GLU	C-N	12.47	1.57	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	EH	268	PRO	CB-CG	12.38	2.11	1.50
9	EH	268	PRO	N-CD	12.28	1.65	1.47
9	NH	357	PRO	CG-CD	-12.10	1.10	1.50
8	QK	89	PRO	CG-CD	-11.97	1.11	1.50
2	Cd	119	PRO	CG-CD	-11.92	1.11	1.50
9	SH	358	PRO	CG-CD	-11.77	1.11	1.50
9	UJ	303	CYS	CB-SG	-11.69	1.62	1.82
13	Ab	454	PRO	CG-CD	-11.62	1.12	1.50
9	RD	268	PRO	N-CD	11.51	1.64	1.47
8	WE	268	PRO	CB-CG	11.45	2.07	1.50
9	RH	268	PRO	N-CD	11.25	1.63	1.47
9	RF	268	PRO	CB-CG	11.12	2.05	1.50
47	Y	365	PRO	N-CD	10.58	1.62	1.47
8	BG	359	PRO	CG-CD	-10.39	1.16	1.50
9	QF	171	PRO	CG-CD	-10.15	1.17	1.50
9	RH	125	GLU	CG-CD	-10.10	1.36	1.51
29	EP	477	LYS	CD-CE	-9.80	1.26	1.51
8	TI	224	TYR	CD2-CE2	-9.46	1.25	1.39
7	Ay	139	PRO	N-CD	9.33	1.60	1.47
9	RH	125	GLU	CB-CG	-9.24	1.34	1.52
9	PF	80	PRO	CB-CG	9.22	1.96	1.50
47	Y	365	PRO	CB-CG	9.19	1.96	1.50
9	BF	357	PRO	CG-CD	-9.19	1.20	1.50
8	CG	184	PRO	CA-CB	-9.17	1.35	1.53
8	MK	210	TYR	CD1-CE1	-9.10	1.25	1.39
19	BO	89	PRO	CG-CD	-9.05	1.20	1.50
9	FB	171	PRO	CG-CD	-8.81	1.21	1.50
9	SB	125	GLU	CG-CD	-8.71	1.38	1.51
8	GE	307	PRO	CG-CD	-8.57	1.22	1.50
9	RJ	268	PRO	N-CD	8.54	1.59	1.47
8	QC	274	PRO	N-CD	8.52	1.59	1.47
9	RL	358	PRO	N-CD	8.51	1.59	1.47
8	UG	435	VAL	CB-CG1	-8.38	1.35	1.52
47	X	287	PRO	CG-CD	-8.27	1.23	1.50
8	QI	52	PHE	CB-CG	-8.15	1.37	1.51
9	SH	358	PRO	N-CD	8.14	1.59	1.47
9	RL	173	PRO	N-CD	8.11	1.59	1.47
2	0i	92	PRO	CG-CD	-8.07	1.24	1.50
19	BO	89	PRO	N-CD	8.05	1.59	1.47
7	A1	6	TRP	CB-CG	-8.04	1.35	1.50
3	1	145	PRO	CG-CD	-7.99	1.24	1.50
9	NB	357	PRO	CG-CD	-7.86	1.24	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	WE	268	PRO	N-CD	7.83	1.58	1.47
59	d	394	GLU	CB-CG	-7.53	1.37	1.52
8	SE	288	VAL	CB-CG1	-7.50	1.37	1.52
7	A1	101	PRO	N-CD	7.46	1.58	1.47
9	KH	175	VAL	CB-CG1	-7.42	1.37	1.52
8	CG	184	PRO	N-CD	7.39	1.58	1.47
8	DE	268	PRO	CB-CG	7.38	1.86	1.50
9	EJ	125	GLU	CB-CG	-7.35	1.38	1.52
29	D5	296	PRO	CG-CD	-7.33	1.26	1.50
9	QF	171	PRO	N-CD	7.31	1.58	1.47
9	FB	171	PRO	N-CD	7.28	1.58	1.47
8	QC	274	PRO	CA-CB	-7.24	1.39	1.53
9	SB	310	TYR	CD1-CE1	-7.21	1.28	1.39
9	PF	80	PRO	N-CD	7.10	1.57	1.47
8	QA	364	PRO	N-CD	7.09	1.57	1.47
8	CC	14	VAL	CB-CG1	-6.99	1.38	1.52
44	EV	312	GLU	CB-CG	-6.98	1.38	1.52
9	RF	268	PRO	N-CD	6.96	1.57	1.47
9	JL	271	ALA	C-N	6.91	1.47	1.34
8	IO	338	LYS	CD-CE	-6.86	1.34	1.51
8	WE	220	GLU	CG-CD	-6.85	1.41	1.51
8	RK	63	PRO	N-CD	6.82	1.57	1.47
8	RM	63	PRO	N-CD	6.80	1.57	1.47
8	QC	273	ALA	C-N	6.70	1.47	1.34
8	WC	268	PRO	CB-CG	6.69	1.83	1.50
32	Co	24	TYR	CD1-CE1	-6.64	1.29	1.39
8	TE	432	TYR	CD1-CE1	-6.59	1.29	1.39
59	b	238	VAL	CB-CG2	-6.57	1.39	1.52
9	BF	357	PRO	N-CD	6.49	1.56	1.47
8	IK	77	GLU	CG-CD	-6.44	1.42	1.51
9	WF	323	MET	CG-SD	-6.39	1.64	1.81
19	BO	87	PRO	CG-CD	-6.33	1.29	1.50
9	DN	58	LYS	CE-NZ	-6.30	1.33	1.49
2	0i	92	PRO	N-CD	6.29	1.56	1.47
9	VF	261	PRO	CA-CB	-6.29	1.41	1.53
9	VF	261	PRO	N-CA	-6.28	1.36	1.47
33	Ct	81	CYS	CB-SG	-6.26	1.71	1.82
9	ML	122	LYS	CD-CE	-6.24	1.35	1.51
9	IL	123	GLU	CG-CD	-6.24	1.42	1.51
8	BK	32	PRO	N-CD	6.17	1.56	1.47
14	CN	16	TYR	CD2-CE2	-6.17	1.30	1.39
27	Bs	213	LYS	CD-CE	-6.13	1.35	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	C1	393	LYS	CB-CG	-6.13	1.35	1.52
50	L1	40	GLU	CD-OE2	-6.12	1.19	1.25
8	SK	316	CYS	CB-SG	-6.12	1.71	1.82
42	E	734	PRO	N-CD	6.08	1.56	1.47
47	X	287	PRO	N-CD	6.07	1.56	1.47
8	TI	224	TYR	CE2-CZ	-6.07	1.30	1.38
28	C5	467	TYR	CG-CD1	-5.97	1.31	1.39
9	BH	357	PRO	CG-CD	-5.94	1.31	1.50
9	NH	357	PRO	N-CD	5.94	1.56	1.47
8	IK	77	GLU	CB-CG	-5.94	1.40	1.52
9	EL	125	GLU	CD-OE1	-5.92	1.19	1.25
8	IK	161	TYR	CD1-CE1	-5.92	1.30	1.39
9	MJ	179	VAL	CB-CG1	-5.92	1.40	1.52
9	RJ	287	PRO	CG-CD	-5.91	1.31	1.50
8	GE	32	PRO	CG-CD	-5.87	1.31	1.50
29	C1	393	LYS	CD-CE	-5.86	1.36	1.51
33	Cv	355	LYS	CB-CG	-5.80	1.36	1.52
18	Bz	238	LYS	CE-NZ	-5.80	1.34	1.49
59	a	225	ARG	CG-CD	-5.79	1.37	1.51
8	GM	326	LYS	CE-NZ	-5.75	1.34	1.49
28	F4	371	GLU	CG-CD	-5.74	1.43	1.51
59	a	225	ARG	CB-CG	-5.72	1.37	1.52
9	PF	79	GLY	C-N	5.71	1.45	1.34
8	NA	423	GLU	CD-OE1	-5.67	1.19	1.25
21	Bj	25	ARG	CG-CD	-5.64	1.37	1.51
8	EK	129	CYS	CB-SG	-5.63	1.72	1.81
9	PF	349	VAL	CB-CG2	-5.63	1.41	1.52
8	UE	311	LYS	CE-NZ	-5.62	1.34	1.49
8	EM	21	TRP	CB-CG	-5.59	1.40	1.50
9	EB	243	PRO	CG-CD	-5.57	1.32	1.50
9	WL	326	VAL	CB-CG1	-5.57	1.41	1.52
9	DD	171	PRO	CG-CD	-5.56	1.32	1.50
2	Cb	135	TYR	CD1-CE1	-5.55	1.31	1.39
28	F4	148	GLU	CB-CG	-5.53	1.41	1.52
2	CU	33	CYS	CB-SG	-5.52	1.72	1.81
29	DW	299	TRP	CB-CG	-5.50	1.40	1.50
9	WF	171	PRO	CG-CD	-5.49	1.32	1.50
9	QL	419	VAL	CB-CG1	-5.48	1.41	1.52
8	WE	268	PRO	CA-CB	-5.47	1.42	1.53
9	NB	357	PRO	N-CA	-5.46	1.38	1.47
8	AA	411	GLU	CG-CD	-5.45	1.43	1.51
5	A	33	TYR	CD2-CE2	-5.39	1.31	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	Co	384	TYR	CD2-CE2	-5.38	1.31	1.39
8	JI	394	LYS	CD-CE	-5.36	1.37	1.51
9	SJ	397	TRP	CE3-CZ3	-5.36	1.29	1.38
8	FI	74	VAL	CB-CG1	-5.35	1.41	1.52
13	Ab	454	PRO	N-CD	5.34	1.55	1.47
8	CI	280	LYS	CE-NZ	-5.34	1.35	1.49
9	EJ	183	TYR	CD1-CE1	-5.33	1.31	1.39
9	DB	252	LYS	CE-NZ	-5.32	1.35	1.49
44	EV	312	GLU	CG-CD	-5.31	1.44	1.51
8	AI	129	CYS	CB-SG	-5.30	1.73	1.81
9	DH	397	TRP	CB-CG	-5.28	1.40	1.50
8	WI	375	VAL	CB-CG1	-5.27	1.41	1.52
60	g	477	GLU	CB-CG	5.27	1.62	1.52
8	EI	210	TYR	CD2-CE2	-5.26	1.31	1.39
14	CN	24	TYR	CD1-CE1	-5.24	1.31	1.39
8	CI	268	PRO	N-CD	5.23	1.55	1.47
9	SJ	70	PRO	CG-CD	-5.22	1.33	1.50
8	FE	325	PRO	CG-CD	-5.22	1.33	1.50
8	SG	224	TYR	CD2-CE2	-5.21	1.31	1.39
8	DE	268	PRO	N-CD	5.20	1.55	1.47
8	QK	89	PRO	N-CD	5.19	1.55	1.47
32	Co	24	TYR	CD2-CE2	-5.18	1.31	1.39
9	SJ	397	TRP	CB-CG	-5.17	1.41	1.50
9	QH	323	MET	CG-SD	-5.17	1.67	1.81
57	YL	78	ARG	CZ-NH1	-5.16	1.26	1.33
9	AF	328	GLU	CB-CG	-5.16	1.42	1.52
8	HE	169	PHE	CA-CB	-5.15	1.42	1.53
7	A8	107	PHE	C-N	5.15	1.44	1.34
29	DT	43	PRO	CG-CD	-5.15	1.33	1.50
9	EJ	395	LEU	CG-CD1	-5.13	1.32	1.51
2	0a	53	TYR	CD1-CE1	-5.12	1.31	1.39
48	L	106	PRO	N-CD	5.12	1.55	1.47
8	IK	123	ARG	CB-CG	5.12	1.66	1.52
9	SH	374	ILE	CB-CG2	-5.11	1.37	1.52
44	EV	317	LYS	CE-NZ	-5.08	1.36	1.49
9	NF	92	PHE	CD1-CE1	-5.08	1.29	1.39
9	EB	323	MET	CG-SD	-5.07	1.68	1.81
7	A8	185	TYR	CD1-CE1	-5.07	1.31	1.39
8	MM	155	GLU	CG-CD	-5.07	1.44	1.51
2	0k	90	GLY	C-N	5.05	1.45	1.34
8	AK	168	GLU	CD-OE2	-5.03	1.20	1.25
8	DI	394	LYS	CD-CE	-5.03	1.38	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	C5	467	TYR	CE1-CZ	-5.02	1.32	1.38
9	CD	325	GLU	CB-CG	-5.02	1.42	1.52
8	SE	224	TYR	CB-CG	-5.02	1.44	1.51
33	Cv	341	GLU	CB-CG	-5.01	1.42	1.52
9	HD	171	PRO	CG-CD	-5.00	1.34	1.50
9	SL	125	GLU	CB-CG	-5.00	1.42	1.52
9	SL	125	GLU	CG-CD	-5.00	1.44	1.51

All (2018) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	KL	220	PRO	N-CD-CG	-34.16	51.96	103.20
9	PF	80	PRO	N-CD-CG	-32.94	53.79	103.20
9	QF	272	PRO	N-CD-CG	-32.79	54.01	103.20
8	WC	268	PRO	N-CD-CG	-32.30	54.76	103.20
8	DE	268	PRO	N-CD-CG	-28.57	60.35	103.20
48	L	106	PRO	N-CD-CG	-26.54	63.39	103.20
8	CG	184	PRO	N-CD-CG	-26.46	63.51	103.20
8	RM	63	PRO	N-CD-CG	-24.99	65.72	103.20
9	QF	272	PRO	CA-CB-CG	-24.60	57.26	104.00
9	VF	261	PRO	CB-CG-CD	-23.35	15.43	106.50
8	RK	63	PRO	N-CD-CG	-23.14	68.48	103.20
47	Y	365	PRO	N-CD-CG	-23.00	68.70	103.20
7	A1	101	PRO	N-CD-CG	-22.41	69.58	103.20
8	QA	364	PRO	N-CD-CG	-21.74	70.58	103.20
8	CI	268	PRO	N-CD-CG	-21.42	71.07	103.20
9	KL	220	PRO	CA-CB-CG	-20.85	64.38	104.00
9	RF	268	PRO	N-CD-CG	-20.26	72.80	103.20
8	DI	298	PRO	CA-CB-CG	-20.14	65.72	104.00
8	PE	261	PRO	N-CD-CG	-20.11	73.03	103.20
42	E	734	PRO	N-CD-CG	-20.00	73.20	103.20
8	WE	268	PRO	N-CD-CG	-19.95	73.27	103.20
9	RH	268	PRO	N-CD-CG	-19.58	73.83	103.20
9	RD	268	PRO	N-CD-CG	-19.41	74.09	103.20
20	BT	54	LYS	CD-CE-NZ	-19.21	67.52	111.70
29	Cz	391	PRO	N-CD-CG	-19.00	74.70	103.20
8	DI	298	PRO	CB-CG-CD	-18.90	32.80	106.50
8	DI	298	PRO	N-CD-CG	-18.46	75.51	103.20
8	CG	184	PRO	CB-CG-CD	-18.36	34.88	106.50
8	DE	268	PRO	CA-CB-CG	-18.21	69.39	104.00
7	Ay	139	PRO	N-CD-CG	-18.20	75.90	103.20
8	PE	261	PRO	CB-CG-CD	-18.14	35.74	106.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	XM	72	LYS	CD-CE-NZ	-18.12	70.03	111.70
9	RF	268	PRO	N-CA-CB	-18.01	81.69	103.30
8	WM	268	PRO	CA-N-CD	-18.00	86.30	111.50
9	VF	261	PRO	CA-CB-CG	-18.00	69.81	104.00
8	QC	274	PRO	CB-CG-CD	-17.86	36.86	106.50
9	CD	117	LEU	CB-CG-CD1	-17.80	80.74	111.00
42	E	734	PRO	CA-CB-CG	-17.50	70.74	104.00
8	DG	89	PRO	CA-N-CD	-17.08	87.59	111.50
3	1	145	PRO	CA-N-CD	-16.95	87.77	111.50
8	QC	274	PRO	N-CD-CG	-16.83	77.95	103.20
9	RJ	268	PRO	CB-CG-CD	-16.73	41.23	106.50
8	PE	261	PRO	CA-CB-CG	-16.70	72.26	104.00
32	Cm	126	ASP	CB-CG-OD1	-16.57	103.38	118.30
2	Cd	119	PRO	N-CD-CG	-16.27	78.80	103.20
8	WE	268	PRO	N-CA-CB	-15.94	84.17	103.30
9	RL	173	PRO	N-CD-CG	-15.87	79.39	103.20
8	BK	32	PRO	N-CD-CG	-15.64	79.73	103.20
42	E	734	PRO	CB-CG-CD	-15.60	45.66	106.50
48	L	106	PRO	CA-CB-CG	-15.38	74.77	104.00
8	DI	298	PRO	N-CA-CB	-15.34	84.89	103.30
9	RL	358	PRO	N-CD-CG	-14.96	80.76	103.20
46	o	523	LEU	CB-CG-CD2	-14.92	85.64	111.00
9	EH	268	PRO	N-CD-CG	-14.73	81.11	103.20
32	Cm	126	ASP	CB-CG-OD2	14.58	131.42	118.30
8	DI	298	PRO	CA-N-CD	-14.43	91.29	111.50
9	RD	268	PRO	CB-CG-CD	-14.33	50.63	106.50
8	WE	268	PRO	CA-CB-CG	-14.24	76.95	104.00
9	NH	357	PRO	N-CD-CG	-14.11	82.04	103.20
19	BO	89	PRO	CA-N-CD	-14.00	91.90	111.50
9	EH	268	PRO	CB-CG-CD	-13.97	52.03	106.50
9	RD	268	PRO	CA-N-CD	-13.84	92.12	111.50
8	BG	359	PRO	N-CD-CG	-13.79	82.51	103.20
9	RF	268	PRO	CA-CB-CG	-13.78	77.82	104.00
8	PE	261	PRO	N-CA-CB	-13.77	86.78	103.30
6	BN	201	PRO	CA-N-CD	-13.61	92.45	111.50
13	Ab	454	PRO	N-CD-CG	-13.50	82.95	103.20
9	RF	268	PRO	CB-CG-CD	-13.29	54.66	106.50
9	NB	357	PRO	CA-N-CD	-13.19	93.03	111.50
8	WC	268	PRO	CA-CB-CG	-13.15	79.01	104.00
8	CI	268	PRO	CA-CB-CG	-13.15	79.01	104.00
9	SH	358	PRO	N-CD-CG	-13.15	83.48	103.20
47	X	287	PRO	CA-N-CD	-13.12	93.13	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	PE	261	PRO	CA-N-CD	-13.12	93.14	111.50
8	QK	89	PRO	N-CD-CG	-13.03	83.66	103.20
18	Bz	238	LYS	CD-CE-NZ	-12.86	82.13	111.70
42	E	734	PRO	N-CA-CB	-12.72	88.04	103.30
9	RD	268	PRO	N-CA-CB	-12.70	88.06	103.30
9	RJ	268	PRO	CA-N-CD	-12.66	93.78	111.50
60	e	390	LYS	CD-CE-NZ	-12.65	82.59	111.70
9	DD	171	PRO	CA-N-CD	-12.62	93.83	111.50
9	PF	80	PRO	CA-CB-CG	-12.61	80.04	104.00
8	CI	280	LYS	CD-CE-NZ	-12.58	82.76	111.70
2	0i	92	PRO	CA-N-CD	-12.56	93.92	111.50
9	FB	171	PRO	CA-N-CD	-12.52	93.98	111.50
9	QF	171	PRO	CA-N-CD	-12.48	94.03	111.50
9	EB	243	PRO	CA-N-CD	-12.41	94.13	111.50
9	RL	106	TYR	CB-CG-CD2	-12.40	113.56	121.00
8	SC	326	LYS	CD-CE-NZ	-12.29	83.43	111.70
9	EH	268	PRO	CA-N-CD	-12.27	94.32	111.50
9	RJ	287	PRO	CA-N-CD	-12.24	94.37	111.50
8	QK	89	PRO	CA-N-CD	-12.21	94.41	111.50
9	DJ	177	ASP	CB-CG-OD1	12.19	129.27	118.30
8	BM	217	LEU	CB-CG-CD1	-12.15	90.34	111.00
57	YL	122	PRO	CA-N-CD	-12.09	94.58	111.50
9	OB	122	LYS	CD-CE-NZ	-12.09	83.90	111.70
9	BF	357	PRO	CA-N-CD	-12.08	94.59	111.50
13	Ab	271	PRO	CA-N-CD	-12.07	94.60	111.50
9	QF	118	ASP	CB-CG-OD1	-12.07	107.44	118.30
9	EB	323	MET	CG-SD-CE	-12.05	80.92	100.20
8	RM	63	PRO	CA-CB-CG	-12.03	81.14	104.00
8	WE	268	PRO	CB-CG-CD	-12.03	59.59	106.50
9	ED	243	PRO	CA-N-CD	-12.00	94.70	111.50
9	PL	331	LEU	CB-CG-CD1	-11.99	90.62	111.00
2	CY	146	LEU	CB-CG-CD1	-11.90	90.76	111.00
9	HD	171	PRO	CA-N-CD	-11.90	94.84	111.50
8	RK	63	PRO	CA-CB-CG	-11.85	81.48	104.00
8	QK	173	PRO	CA-N-CD	-11.80	94.98	111.50
9	VF	261	PRO	CA-N-CD	-11.79	95.00	111.50
8	CG	184	PRO	N-CA-CB	-11.74	89.22	103.30
9	UJ	240	LEU	CB-CG-CD2	-11.74	91.05	111.00
8	QA	364	PRO	CA-CB-CG	-11.71	81.75	104.00
9	EH	268	PRO	N-CA-CB	-11.70	89.26	103.30
2	CU	33	CYS	CA-CB-SG	11.69	135.05	114.00
56	XM	178	PRO	CA-N-CD	-11.67	95.17	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	SH	358	PRO	CA-N-CD	-11.57	95.31	111.50
8	SM	298	PRO	CA-N-CD	-11.55	95.33	111.50
44	EY	346	LYS	CD-CE-NZ	-11.54	85.15	111.70
9	RJ	268	PRO	N-CD-CG	-11.52	85.92	103.20
29	DT	43	PRO	CA-N-CD	-11.51	95.39	111.50
8	GE	307	PRO	N-CD-CG	-11.43	86.05	103.20
6	A0	167	LEU	CA-CB-CG	11.36	141.43	115.30
59	a	104	PRO	CA-N-CD	-11.32	95.66	111.50
8	BI	326	LYS	CD-CE-NZ	-11.31	85.68	111.70
9	RH	268	PRO	CA-N-CD	-11.31	95.67	111.50
38	Dg	72	LYS	CD-CE-NZ	-11.28	85.77	111.70
9	RH	268	PRO	CA-CB-CG	-11.16	82.80	104.00
13	Ab	454	PRO	CA-CB-CG	-11.10	82.91	104.00
9	BH	357	PRO	CA-N-CD	-11.08	95.99	111.50
8	QC	274	PRO	CA-N-CD	-11.03	96.05	111.50
9	VH	299	MET	CG-SD-CE	-11.03	82.56	100.20
9	QF	171	PRO	N-CD-CG	-10.99	86.72	103.20
9	IB	261	PRO	CA-N-CD	-10.98	96.12	111.50
8	CG	184	PRO	CA-CB-CG	-10.98	83.14	104.00
9	VF	261	PRO	N-CD-CG	-10.97	86.74	103.20
8	DE	268	PRO	N-CA-CB	-10.97	90.14	103.30
9	WF	171	PRO	CA-N-CD	-10.93	96.20	111.50
9	SF	197	ASP	CB-CG-OD2	10.88	128.09	118.30
29	D5	296	PRO	CA-N-CD	-10.84	96.33	111.50
9	PL	80	PRO	CA-N-CD	-10.83	96.34	111.50
9	JL	252	LYS	CD-CE-NZ	-10.80	86.86	111.70
8	AI	345	ASP	CB-CG-OD2	10.71	127.94	118.30
9	FJ	122	LYS	CD-CE-NZ	-10.68	87.14	111.70
9	BF	32	PRO	CA-N-CD	-10.67	96.56	111.50
26	Bq	27	PRO	CA-N-CD	-10.65	96.59	111.50
29	DW	43	PRO	CA-N-CD	-10.65	96.59	111.50
9	RL	358	PRO	CA-N-CD	-10.63	96.62	111.50
59	c	104	PRO	CA-N-CD	-10.57	96.70	111.50
9	RL	173	PRO	CA-N-CD	-10.56	96.72	111.50
9	NB	32	PRO	CA-N-CD	-10.55	96.72	111.50
9	UD	171	PRO	C-N-CA	10.53	148.02	121.70
8	AM	177	VAL	CG1-CB-CG2	-10.52	94.07	110.90
47	Y	365	PRO	CA-CB-CG	-10.51	84.03	104.00
8	PC	127	ASP	CB-CG-OD2	10.50	127.75	118.30
8	PG	338	LYS	CD-CE-NZ	-10.42	87.73	111.70
46	o	298	ASP	CB-CG-OD1	10.42	127.68	118.30
9	GN	289	LEU	CB-CG-CD1	-10.40	93.31	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	PE	260	VAL	C-N-CD	10.39	150.23	128.40
9	TL	355	ASP	CB-CG-OD2	10.39	127.65	118.30
8	RM	322	ASP	CB-CG-OD2	10.38	127.65	118.30
31	Cl	298	ASP	CB-CG-OD2	10.35	127.62	118.30
2	0i	92	PRO	N-CD-CG	-10.33	87.70	103.20
9	OL	209	ASP	CB-CG-OD1	10.33	127.60	118.30
2	Cd	119	PRO	CA-CB-CG	-10.32	84.39	104.00
12	AW	247	PRO	CA-N-CD	-10.29	97.10	111.50
8	BK	32	PRO	CA-N-CD	-10.27	97.12	111.50
7	A1	101	PRO	CA-CB-CG	-10.27	84.49	104.00
8	OE	345	ASP	CB-CG-OD1	10.24	127.51	118.30
9	BF	357	PRO	N-CD-CG	-10.21	87.89	103.20
9	NL	357	PRO	CA-N-CD	-10.20	97.22	111.50
47	X	287	PRO	N-CD-CG	-10.16	87.96	103.20
8	AC	175	PRO	CA-N-CD	-10.16	97.28	111.50
9	BD	357	PRO	CA-N-CD	-10.16	97.28	111.50
33	Cr	233	MET	CG-SD-CE	-10.14	83.97	100.20
9	EJ	243	PRO	CA-N-CD	-10.08	97.38	111.50
9	VN	182	PRO	CA-N-CD	-10.06	97.41	111.50
9	EH	415	MET	CA-CB-CG	10.06	130.40	113.30
8	WE	26	LEU	CB-CG-CD1	-10.05	93.91	111.00
7	A1	74	PRO	CA-N-CD	-10.04	97.44	111.50
8	QC	119	LEU	CB-CG-CD2	-10.04	93.93	111.00
42	E	734	PRO	CA-N-CD	-10.03	97.45	111.50
9	RH	268	PRO	CB-CG-CD	-10.03	67.40	106.50
9	VF	261	PRO	N-CA-CB	-10.00	91.30	103.30
9	CD	26	ASP	CB-CG-OD1	9.97	127.27	118.30
8	QC	274	PRO	N-CA-CB	-9.97	91.34	103.30
29	Cz	391	PRO	CA-CB-CG	-9.96	85.07	104.00
19	BR	35	LEU	CB-CG-CD2	9.94	127.89	111.00
8	FI	280	LYS	CD-CE-NZ	9.94	134.55	111.70
45	G	221	PRO	CA-N-CD	-9.91	97.62	111.50
8	HE	322	ASP	CB-CG-OD2	9.91	127.22	118.30
9	BL	32	PRO	CA-N-CD	-9.87	97.69	111.50
57	YL	45	LYS	CD-CE-NZ	-9.82	89.11	111.70
9	BB	32	PRO	CA-N-CD	-9.78	97.81	111.50
9	IB	197	ASP	CB-CG-OD1	9.78	127.10	118.30
9	KL	220	PRO	N-CA-CB	-9.75	91.60	103.30
60	e	406	PRO	CA-N-CD	-9.74	97.86	111.50
9	VJ	31	ASP	CB-CG-OD1	9.73	127.05	118.30
19	BO	89	PRO	N-CD-CG	-9.70	88.65	103.20
44	EV	394	LYS	CD-CE-NZ	-9.70	89.39	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	QF	272	PRO	CA-N-CD	-9.69	97.94	111.50
9	DD	224	ASP	CB-CG-OD2	9.68	127.01	118.30
6	A0	49	ARG	CG-CD-NE	9.68	132.13	111.80
9	RJ	268	PRO	N-CA-CB	-9.67	91.70	103.30
42	F	529	ASP	CB-CG-OD2	9.65	126.98	118.30
8	PI	160	ASP	CB-CG-OD1	9.62	126.96	118.30
9	UD	32	PRO	CA-N-CD	-9.62	98.04	111.50
8	EC	60	LYS	CD-CE-NZ	-9.61	89.60	111.70
9	UH	327	ASP	CB-CG-OD1	9.58	126.92	118.30
9	TH	26	ASP	CB-CG-OD1	9.57	126.91	118.30
9	O0	41	ASP	CB-CG-OD1	9.55	126.90	118.30
9	CF	26	ASP	CB-CG-OD2	9.54	126.89	118.30
9	RJ	268	PRO	CA-CB-CG	-9.54	85.87	104.00
9	NB	357	PRO	N-CD-CG	-9.53	88.91	103.20
7	Ay	139	PRO	CA-CB-CG	-9.52	85.92	104.00
8	PA	397	LEU	CA-CB-CG	9.50	137.14	115.30
8	RM	425	LEU	CB-CG-CD2	9.48	127.12	111.00
8	GE	32	PRO	CA-N-CD	-9.47	98.24	111.50
9	QL	346	PRO	CA-N-CD	-9.46	98.26	111.50
33	Cu	127	ASP	CB-CG-OD1	9.46	126.81	118.30
8	LK	47	ASP	CB-CG-OD1	9.46	126.81	118.30
9	PL	171	PRO	CA-N-CD	-9.45	98.27	111.50
9	JL	177	ASP	CB-CG-OD1	9.45	126.80	118.30
9	IB	31	ASP	CB-CG-OD1	9.44	126.80	118.30
8	EC	116	ASP	CB-CG-OD1	-9.44	109.80	118.30
29	DV	240	ASP	CB-CG-OD2	9.43	126.78	118.30
8	NI	127	ASP	CB-CG-OD2	9.39	126.75	118.30
9	OD	32	PRO	CA-N-CD	-9.37	98.38	111.50
8	IM	424	ASP	CB-CG-OD2	9.36	126.72	118.30
9	IF	31	ASP	CB-CG-OD1	9.35	126.72	118.30
32	Co	283	ASP	CB-CG-OD2	9.33	126.70	118.30
9	CH	26	ASP	CB-CG-OD2	9.33	126.70	118.30
14	BY	270	HIS	C-N-CA	9.33	145.02	121.70
9	QF	118	ASP	CB-CG-OD2	9.31	126.68	118.30
8	WC	268	PRO	N-CA-CB	-9.30	92.14	103.30
42	E	733	ARG	C-N-CD	9.28	147.90	128.40
44	EZ	182	LEU	CB-CG-CD2	-9.28	95.22	111.00
9	WH	224	ASP	CB-CG-OD1	9.28	126.65	118.30
9	FJ	1	MET	CG-SD-CE	-9.28	85.36	100.20
38	Dh	24	ASP	CB-CG-OD2	9.27	126.64	118.30
9	RD	267	MET	C-N-CD	9.26	147.85	128.40
8	RA	76	ASP	CB-CG-OD1	9.26	126.64	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	KG	345	ASP	CB-CG-OD1	9.25	126.63	118.30
9	SJ	70	PRO	N-CD-CG	-9.25	89.32	103.20
8	OI	211	ASP	CB-CG-OD1	9.23	126.61	118.30
9	UN	41	ASP	CB-CG-OD2	9.22	126.60	118.30
38	Dh	72	LYS	CD-CE-NZ	-9.20	90.55	111.70
9	HJ	197	ASP	CB-CG-OD1	9.19	126.57	118.30
8	QC	274	PRO	CA-CB-CG	-9.19	86.55	104.00
9	NH	41	ASP	CB-CG-OD1	9.18	126.56	118.30
8	GI	396	ASP	CB-CG-OD1	9.18	126.56	118.30
8	WC	188	ILE	CG1-CB-CG2	-9.17	91.22	111.40
8	PM	205	ASP	CB-CG-OD2	9.17	126.55	118.30
28	C7	238	ASP	CB-CG-OD1	9.17	126.55	118.30
29	D3	428	ASP	CB-CG-OD2	9.17	126.55	118.30
9	UH	114	ASP	CB-CG-OD2	9.16	126.55	118.30
2	0g	121	ASP	CB-CG-OD1	9.14	126.52	118.30
8	OG	431	ASP	CB-CG-OD1	9.12	126.51	118.30
9	BB	26	ASP	CB-CG-OD1	9.12	126.51	118.30
9	CH	263	LEU	CB-CG-CD2	-9.11	95.52	111.00
9	LH	26	ASP	CB-CG-OD2	9.10	126.49	118.30
8	WG	431	ASP	CB-CG-OD2	9.10	126.49	118.30
8	UC	120	ASP	CB-CG-OD1	9.07	126.46	118.30
9	VF	260	PHE	C-N-CD	9.06	147.42	128.40
2	CV	142	ILE	CG1-CB-CG2	-9.03	91.53	111.40
9	IN	379	LYS	CD-CE-NZ	-9.00	91.00	111.70
9	UF	324	LYS	CD-CE-NZ	-9.00	91.00	111.70
18	B5	138	ASP	CB-CG-OD1	8.98	126.39	118.30
9	ID	1	MET	CG-SD-CE	-8.98	85.83	100.20
9	OL	31	ASP	CB-CG-OD1	8.98	126.39	118.30
9	ND	209	ASP	CB-CG-OD1	8.96	126.37	118.30
9	LJ	88	ASP	CB-CG-OD1	8.96	126.36	118.30
9	SF	295	ASP	CB-CG-OD2	8.96	126.36	118.30
8	WI	160	ASP	CB-CG-OD2	8.94	126.35	118.30
29	D1	355	ASP	CB-CG-OD1	8.94	126.35	118.30
9	TB	88	ASP	CB-CG-OD1	8.94	126.34	118.30
8	IC	317	MET	CG-SD-CE	-8.94	85.90	100.20
9	PF	31	ASP	CB-CG-OD1	8.93	126.33	118.30
9	VJ	209	ASP	CB-CG-OD1	8.93	126.33	118.30
8	KO	205	ASP	CB-CG-OD1	8.92	126.33	118.30
13	Ad	53	ASP	CB-CG-OD2	8.91	126.32	118.30
8	WI	160	ASP	CB-CG-OD1	-8.91	110.28	118.30
8	PA	173	PRO	CA-N-CD	-8.90	99.04	111.50
7	A7	211	ASP	CB-CG-OD1	8.89	126.31	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	By	138	ASP	CB-CG-OD1	8.89	126.31	118.30
8	BK	32	PRO	CA-CB-CG	-8.89	87.11	104.00
29	DX	313	MET	CA-CB-CG	8.89	128.41	113.30
7	Au	228	MET	CA-CB-CG	8.88	128.40	113.30
8	PK	424	ASP	CB-CG-OD1	8.88	126.29	118.30
9	ML	128	ASP	CB-CG-OD1	8.88	126.29	118.30
8	NI	396	ASP	CB-CG-OD2	8.87	126.29	118.30
8	OG	424	ASP	CB-CG-OD2	8.87	126.28	118.30
29	EO	122	ASP	CB-CG-OD1	8.86	126.27	118.30
8	QK	345	ASP	CB-CG-OD1	8.85	126.27	118.30
9	UD	41	ASP	CB-CG-OD2	8.85	126.26	118.30
19	BQ	309	ASP	CB-CG-OD1	8.85	126.26	118.30
8	TE	199	ASP	CB-CG-OD2	8.84	126.26	118.30
29	Cz	360	LEU	CB-CG-CD1	-8.84	95.97	111.00
9	IJ	31	ASP	CB-CG-OD2	8.84	126.25	118.30
9	AL	103	LYS	CD-CE-NZ	-8.83	91.39	111.70
46	o	285	ASP	CB-CG-OD2	8.80	126.22	118.30
33	Cw	90	ASP	CB-CG-OD1	8.79	126.21	118.30
8	IG	116	ASP	CB-CG-OD1	8.79	126.21	118.30
9	AJ	197	ASP	CB-CG-OD1	8.78	126.20	118.30
9	LJ	26	ASP	CB-CG-OD2	8.77	126.19	118.30
8	QI	127	ASP	CB-CG-OD1	8.74	126.17	118.30
9	RL	173	PRO	CA-CB-CG	-8.74	87.39	104.00
9	KL	209	ASP	CB-CG-OD1	8.74	126.16	118.30
33	Cv	352	LEU	CB-CG-CD2	-8.72	96.18	111.00
9	CL	240	LEU	CB-CG-CD2	-8.71	96.19	111.00
8	RI	384	ILE	CB-CA-C	8.71	129.02	111.60
8	IE	431	ASP	CB-CG-OD2	8.69	126.12	118.30
8	MG	322	ASP	CB-CG-OD2	8.67	126.10	118.30
9	LD	171	PRO	C-N-CA	8.66	143.36	121.70
8	RA	89	PRO	CA-N-CD	-8.66	99.38	111.50
9	NH	357	PRO	CA-N-CD	-8.64	99.41	111.50
9	WB	267	MET	CA-CB-CG	8.63	127.98	113.30
2	Cd	33	CYS	CA-CB-SG	8.62	129.52	114.00
9	SH	299	MET	CG-SD-CE	-8.62	86.40	100.20
13	Aa	144	ILE	CG1-CB-CG2	-8.62	92.44	111.40
8	WE	47	ASP	CB-CG-OD2	8.61	126.05	118.30
9	GD	249	ASP	CB-CG-OD2	8.60	126.04	118.30
8	IC	367	ASP	CB-CG-OD1	8.60	126.04	118.30
8	FE	401	LYS	CD-CE-NZ	-8.59	91.94	111.70
9	HJ	1	MET	CG-SD-CE	-8.58	86.47	100.20
8	LC	396	ASP	CB-CG-OD2	-8.57	110.59	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	EX	98	ASP	CB-CG-OD1	8.57	126.01	118.30
8	IE	345	ASP	CB-CG-OD2	8.56	126.00	118.30
54	R	249	LEU	CA-CB-CG	8.54	134.95	115.30
8	BE	326	LYS	CD-CE-NZ	-8.53	92.09	111.70
9	MF	177	ASP	CB-CG-OD1	8.52	125.97	118.30
36	Dc	168	LEU	CB-CG-CD1	8.51	125.47	111.00
9	FH	404	ASP	CB-CG-OD2	8.50	125.95	118.30
8	HG	33	ASP	CB-CG-OD1	8.50	125.95	118.30
9	WL	118	ASP	CB-CG-OD1	8.49	125.94	118.30
2	Ce	30	LEU	CA-CB-CG	8.49	134.82	115.30
8	BK	39	ASP	CB-CG-OD2	8.48	125.93	118.30
9	QF	271	ALA	C-N-CD	8.48	146.20	128.40
9	BH	323	MET	CB-CG-SD	-8.46	87.02	112.40
8	JE	345	ASP	CB-CG-OD2	8.46	125.92	118.30
9	TD	74	ASP	CB-CG-OD1	8.46	125.92	118.30
28	C4	260	ASP	CB-CG-OD2	8.46	125.91	118.30
8	EK	116	ASP	CB-CG-OD1	8.45	125.91	118.30
29	D8	442	ASP	CB-CG-OD2	8.44	125.90	118.30
9	FB	161	ASP	CB-CG-OD1	8.44	125.90	118.30
47	I	19	ASP	CB-CG-OD2	8.44	125.89	118.30
8	AI	345	ASP	CB-CG-OD1	-8.43	110.71	118.30
9	KJ	171	PRO	CA-N-CD	-8.43	99.70	111.50
9	RB	202	ILE	CG1-CB-CG2	-8.43	92.86	111.40
8	WI	33	ASP	CB-CG-OD1	8.42	125.88	118.30
9	FN	350	LYS	CD-CE-NZ	-8.41	92.36	111.70
9	O0	355	ASP	CB-CG-OD1	8.41	125.87	118.30
33	Cu	175	ASP	CB-CG-OD2	8.40	125.86	118.30
9	SH	323	MET	CG-SD-CE	-8.40	86.75	100.20
9	FB	171	PRO	N-CD-CG	-8.40	90.60	103.20
8	BC	265	ILE	CG1-CB-CG2	-8.40	92.93	111.40
59	c	298	ASP	CB-CG-OD1	8.40	125.86	118.30
44	EZ	426	ASP	CB-CG-OD1	8.38	125.84	118.30
9	QD	41	ASP	CB-CG-OD1	-8.38	110.76	118.30
8	UG	33	ASP	CB-CG-OD2	8.38	125.84	118.30
29	D5	296	PRO	N-CD-CG	-8.37	90.65	103.20
46	o	526	ASP	CB-CG-OD1	8.36	125.83	118.30
29	D5	428	ASP	CB-CG-OD1	8.36	125.83	118.30
28	F6	141	ASP	CB-CG-OD2	8.36	125.83	118.30
9	SJ	243	PRO	CA-N-CD	-8.36	99.79	111.50
9	PD	31	ASP	CB-CG-OD1	8.36	125.83	118.30
8	LC	345	ASP	CB-CG-OD2	8.36	125.82	118.30
8	NE	251	ASP	CB-CG-OD1	8.36	125.82	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	AK	154	MET	CG-SD-CE	-8.35	86.84	100.20
9	PF	80	PRO	CB-CG-CD	-8.34	73.98	106.50
9	KL	171	PRO	C-N-CA	8.33	142.53	121.70
33	Cy	308	LEU	CB-CG-CD2	-8.33	96.84	111.00
9	VH	192	LEU	CA-CB-CG	8.32	134.44	115.30
8	II	120	ASP	CB-CG-OD1	8.32	125.79	118.30
9	QB	187	LEU	CB-CG-CD2	-8.31	96.86	111.00
8	HO	160	ASP	CB-CG-OD2	8.31	125.78	118.30
9	MB	404	ASP	CB-CG-OD2	8.31	125.78	118.30
7	A7	82	ASP	CB-CG-OD1	8.30	125.77	118.30
9	PF	80	PRO	N-CA-CB	-8.30	93.34	103.30
44	EU	154	ASP	CB-CG-OD2	8.29	125.76	118.30
9	WL	39	ASP	CB-CG-OD1	8.29	125.76	118.30
8	HO	33	ASP	CB-CG-OD1	8.28	125.76	118.30
9	VH	267	MET	CG-SD-CE	-8.28	86.95	100.20
8	KK	205	ASP	CB-CG-OD2	8.28	125.75	118.30
9	BJ	203	ASP	CB-CG-OD2	8.27	125.75	118.30
8	RM	392	ASP	CB-CG-OD2	8.27	125.74	118.30
2	0g	30	LEU	CA-CB-CG	8.27	134.31	115.30
8	TC	345	ASP	CB-CG-OD1	8.27	125.74	118.30
9	JN	117	LEU	CB-CG-CD1	-8.26	96.96	111.00
9	QJ	224	ASP	CB-CG-OD1	8.26	125.73	118.30
9	O0	209	ASP	CB-CG-OD1	8.26	125.73	118.30
8	WK	157	LEU	CA-CB-CG	8.25	134.28	115.30
9	KF	177	ASP	CB-CG-OD1	8.23	125.70	118.30
9	HF	118	ASP	CB-CG-OD2	8.23	125.70	118.30
47	X	128	ASP	CB-CG-OD1	-8.23	110.90	118.30
29	D5	305	ASP	CB-CG-OD2	-8.21	110.91	118.30
8	BC	98	ASP	CB-CG-OD1	8.21	125.69	118.30
29	DX	245	ASP	CB-CG-OD2	-8.21	110.92	118.30
9	RF	268	PRO	CA-N-CD	-8.20	100.02	111.50
47	Y	365	PRO	CA-N-CD	-8.20	100.03	111.50
35	DZ	53	ASP	CB-CG-OD1	8.19	125.67	118.30
9	EH	267	MET	C-N-CD	8.19	145.60	128.40
9	TD	358	PRO	CA-N-CD	-8.19	100.03	111.50
9	SD	323	MET	CG-SD-CE	-8.19	87.10	100.20
9	WN	70	PRO	CA-N-CD	-8.19	100.04	111.50
29	EP	447	LEU	CB-CG-CD2	-8.18	97.10	111.00
8	IC	160	ASP	CB-CG-OD1	8.18	125.66	118.30
8	DI	33	ASP	CB-CG-OD2	8.17	125.66	118.30
9	ML	114	ASP	CB-CG-OD2	8.17	125.66	118.30
9	UL	161	ASP	CB-CG-OD2	8.16	125.65	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	WJ	31	ASP	CB-CG-OD1	8.16	125.65	118.30
2	0i	69	MET	CA-CB-CG	8.14	127.15	113.30
8	IE	160	ASP	CB-CG-OD2	8.14	125.63	118.30
9	VF	263	LEU	CA-CB-CG	8.14	134.03	115.30
29	DT	218	LEU	CA-CB-CG	8.14	134.02	115.30
9	EF	404	ASP	CB-CG-OD2	8.13	125.62	118.30
9	HL	197	ASP	CB-CG-OD2	8.14	125.62	118.30
8	VI	33	ASP	CB-CG-OD2	8.13	125.62	118.30
8	WK	39	ASP	CB-CG-OD1	8.13	125.62	118.30
33	Cu	127	ASP	CB-CG-OD2	-8.13	110.98	118.30
9	EH	268	PRO	CA-CB-CG	-8.12	88.56	104.00
7	Ay	139	PRO	CA-N-CD	-8.12	100.14	111.50
9	BD	41	ASP	CB-CG-OD1	8.10	125.59	118.30
9	GJ	203	ASP	CB-CG-OD1	8.10	125.59	118.30
9	VH	284	LEU	CA-CB-CG	8.10	133.92	115.30
8	II	205	ASP	CB-CG-OD2	8.09	125.58	118.30
8	CE	33	ASP	CB-CG-OD2	8.08	125.58	118.30
9	WL	161	ASP	CB-CG-OD1	8.08	125.57	118.30
29	D4	442	ASP	CB-CG-OD2	8.08	125.57	118.30
8	RM	89	PRO	CA-N-CD	-8.08	100.19	111.50
2	0G	121	ASP	CB-CG-OD1	8.07	125.56	118.30
29	DW	454	LEU	CB-CG-CD2	-8.06	97.30	111.00
8	NG	367	ASP	CB-CG-OD1	8.04	125.54	118.30
8	TM	175	PRO	CA-N-CD	-8.04	100.24	111.50
8	IM	127	ASP	CB-CG-OD1	8.04	125.54	118.30
8	RG	306	ASP	CB-CG-OD1	8.02	125.52	118.30
2	0e	121	ASP	CB-CG-OD1	8.02	125.52	118.30
8	GI	152	LEU	CB-CG-CD2	-8.02	97.37	111.00
9	CD	31	ASP	CB-CG-OD2	8.01	125.51	118.30
9	RB	415	MET	CG-SD-CE	7.99	112.98	100.20
9	UB	65	LEU	CB-CG-CD2	7.99	124.58	111.00
9	CF	26	ASP	CB-CG-OD1	-7.99	111.11	118.30
2	0i	126	LEU	CB-CG-CD2	7.98	124.56	111.00
8	VG	157	LEU	CA-CB-CG	7.97	133.63	115.30
2	CV	71	LEU	CB-CG-CD2	-7.97	97.46	111.00
28	C5	401	ASP	CB-CG-OD1	7.96	125.47	118.30
8	QC	273	ALA	C-N-CD	7.96	145.12	128.40
29	DS	449	MET	CG-SD-CE	-7.96	87.47	100.20
29	DW	461	LYS	CD-CE-NZ	-7.96	93.40	111.70
9	IB	65	LEU	CB-CG-CD2	7.96	124.53	111.00
13	Aa	259	ASP	CB-CG-OD1	7.95	125.46	118.30
9	RD	209	ASP	CB-CG-OD1	7.95	125.46	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	EL	39	ASP	CB-CG-OD2	7.95	125.46	118.30
9	VJ	240	LEU	CB-CG-CD1	-7.94	97.51	111.00
14	Ao	73	PRO	CA-N-CD	-7.93	100.39	111.50
29	EP	122	ASP	CB-CG-OD2	7.93	125.44	118.30
9	WL	377	LEU	CB-CG-CD1	-7.93	97.53	111.00
9	OJ	355	ASP	CB-CG-OD1	7.92	125.43	118.30
8	IE	33	ASP	CB-CG-OD2	7.92	125.43	118.30
11	AT	137	LEU	CB-CG-CD1	7.92	124.46	111.00
8	IK	326	LYS	CD-CE-NZ	-7.92	93.49	111.70
9	QF	272	PRO	N-CA-CB	-7.92	93.80	103.30
12	AV	126	MET	CG-SD-CE	-7.91	87.54	100.20
9	WD	31	ASP	CB-CG-OD2	7.91	125.42	118.30
9	BH	357	PRO	N-CD-CG	-7.91	91.34	103.20
8	OI	367	ASP	CB-CG-OD2	7.90	125.41	118.30
9	IJ	261	PRO	CA-N-CD	-7.90	100.44	111.50
9	SF	197	ASP	CB-CG-OD1	-7.90	111.19	118.30
18	B5	130	ASP	CB-CG-OD1	7.88	125.40	118.30
8	BK	205	ASP	CB-CG-OD2	7.87	125.38	118.30
8	EC	157	LEU	CB-CG-CD2	7.87	124.38	111.00
8	MK	210	TYR	CB-CG-CD1	-7.87	116.28	121.00
9	UL	209	ASP	CB-CG-OD1	7.86	125.37	118.30
7	Ay	103	PRO	CA-N-CD	-7.86	100.50	111.50
8	TI	125	LEU	CA-CB-CG	7.86	133.37	115.30
8	DI	297	GLU	C-N-CD	7.84	144.87	128.40
8	BA	33	ASP	CB-CG-OD1	7.83	125.35	118.30
2	CX	39	ASP	CB-CG-OD1	7.83	125.34	118.30
13	Ab	77	ASP	CB-CG-OD1	7.83	125.34	118.30
8	WI	377	MET	CG-SD-CE	7.83	112.72	100.20
9	PD	118	ASP	CB-CG-OD1	7.82	125.33	118.30
2	Ok	39	ASP	CB-CG-OD1	7.81	125.33	118.30
8	KG	425	LEU	CB-CG-CD1	7.81	124.27	111.00
9	RD	268	PRO	CA-CB-CG	-7.81	89.17	104.00
8	VM	120	ASP	CB-CG-OD1	7.81	125.33	118.30
8	LK	110	ILE	CG1-CB-CG2	-7.80	94.23	111.40
29	D5	248	ASP	CB-CG-OD1	7.80	125.32	118.30
9	TL	67	ASP	CB-CG-OD1	7.79	125.31	118.30
9	EB	151	LEU	CA-CB-CG	7.79	133.21	115.30
29	D2	442	ASP	CB-CG-OD1	7.78	125.30	118.30
28	F3	176	ASP	CB-CG-OD1	7.78	125.30	118.30
8	WI	189	LEU	CB-CG-CD2	7.78	124.22	111.00
8	JM	425	LEU	CA-CB-CG	7.76	133.16	115.30
8	AM	401	LYS	CD-CE-NZ	-7.76	93.85	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	Df	13	ASP	CB-CG-OD1	7.76	125.28	118.30
9	CD	203	ASP	CB-CG-OD1	7.75	125.27	118.30
29	DQ	473	MET	CA-CB-CG	7.75	126.47	113.30
9	EL	252	LYS	CD-CE-NZ	-7.74	93.89	111.70
42	E	731	LEU	CB-CG-CD1	-7.74	97.84	111.00
9	NH	357	PRO	CA-CB-CG	-7.74	89.29	104.00
8	TC	401	LYS	CD-CE-NZ	-7.74	93.90	111.70
9	IF	415	MET	CG-SD-CE	7.74	112.58	100.20
2	0C	72	ASP	CB-CG-OD1	7.73	125.26	118.30
9	UD	327	ASP	CB-CG-OD1	7.73	125.26	118.30
9	QH	323	MET	CG-SD-CE	-7.72	87.84	100.20
13	Ad	25	ASP	CB-CG-OD1	7.72	125.25	118.30
9	UB	323	MET	CG-SD-CE	7.71	112.54	100.20
8	WK	306	ASP	CB-CG-OD2	7.71	125.23	118.30
29	DS	256	ASP	CB-CG-OD1	7.70	125.23	118.30
8	SE	218	ASP	CB-CG-OD2	7.69	125.22	118.30
9	TB	304	ASP	CB-CG-OD1	7.69	125.22	118.30
8	CM	98	ASP	CB-CG-OD1	7.68	125.21	118.30
2	0i	111	LEU	CB-CG-CD2	7.68	124.06	111.00
8	BG	120	ASP	CB-CG-OD1	7.67	125.21	118.30
8	NA	359	PRO	CA-N-CD	-7.67	100.76	111.50
29	D4	278	ASP	CB-CG-OD1	7.67	125.20	118.30
9	MF	39	ASP	CB-CG-OD2	7.67	125.20	118.30
8	KE	47	ASP	CB-CG-OD1	7.66	125.20	118.30
8	IG	160	ASP	CB-CG-OD2	7.66	125.19	118.30
9	EJ	249	ASP	CB-CG-OD1	7.65	125.19	118.30
8	IK	215	ARG	CA-CB-CG	7.64	130.21	113.40
9	AD	249	ASP	CB-CG-OD1	7.64	125.18	118.30
8	QK	89	PRO	CA-CB-CG	-7.64	89.49	104.00
9	RL	358	PRO	CA-CB-CG	-7.63	89.51	104.00
8	WK	359	PRO	CA-N-CD	-7.63	100.82	111.50
29	D2	259	ASP	CB-CG-OD1	7.63	125.16	118.30
8	PC	127	ASP	CB-CG-OD1	-7.63	111.44	118.30
8	PK	359	PRO	CA-N-CD	-7.62	100.83	111.50
59	b	285	LEU	CB-CG-CD1	-7.62	98.04	111.00
29	DR	290	ASP	CB-CG-OD2	7.61	125.15	118.30
9	PL	31	ASP	CB-CG-OD2	7.60	125.14	118.30
9	OL	355	ASP	CB-CG-OD1	7.59	125.14	118.30
28	F3	279	ASP	CB-CG-OD1	7.59	125.13	118.30
8	DM	33	ASP	CB-CG-OD2	7.59	125.13	118.30
54	U	198	ASP	CB-CG-OD2	7.58	125.12	118.30
8	JM	245	ASP	CB-CG-OD2	7.58	125.12	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	WF	323	MET	CG-SD-CE	-7.58	88.08	100.20
8	LE	47	ASP	CB-CG-OD1	7.57	125.11	118.30
8	FG	209	ILE	CG1-CB-CG2	-7.57	94.76	111.40
9	DB	233	MET	CB-CG-SD	7.56	135.09	112.40
9	EJ	395	LEU	CB-CG-CD2	7.56	123.85	111.00
46	H	572	TYR	CB-CG-CD2	-7.56	116.47	121.00
8	OK	345	ASP	CB-CG-OD2	7.55	125.09	118.30
8	KK	401	LYS	CD-CE-NZ	-7.55	94.34	111.70
8	PA	119	LEU	CB-CG-CD1	-7.55	98.17	111.00
29	DP	267	ASP	CB-CG-OD1	7.54	125.09	118.30
9	AH	327	ASP	CB-CG-OD1	7.54	125.09	118.30
13	Aa	575	LEU	CA-CB-CG	7.54	132.65	115.30
29	D1	449	MET	CG-SD-CE	-7.54	88.13	100.20
8	GE	307	PRO	CA-N-CD	-7.54	100.94	111.50
8	FM	345	ASP	CB-CG-OD2	7.54	125.09	118.30
2	CT	87	LEU	CB-CG-CD2	-7.53	98.19	111.00
9	UB	331	LEU	CB-CG-CD1	-7.53	98.20	111.00
9	FD	417	ASP	CB-CG-OD1	7.52	125.07	118.30
9	DJ	112	LEU	CA-CB-CG	7.52	132.60	115.30
8	JK	431	ASP	CB-CG-OD2	7.52	125.06	118.30
2	Cj	111	LEU	CA-CB-CG	7.51	132.58	115.30
8	AA	438	ASP	CB-CG-OD2	7.50	125.05	118.30
9	WJ	177	ASP	CB-CG-OD1	7.50	125.05	118.30
8	GM	360	PRO	CA-N-CD	-7.50	101.00	111.50
9	JH	39	ASP	CB-CG-OD2	7.50	125.05	118.30
32	Cn	9	PRO	CA-N-CD	-7.48	101.02	111.50
29	EA	393	LYS	CD-CE-NZ	-7.48	94.51	111.70
13	Ad	206	LYS	CD-CE-NZ	-7.47	94.51	111.70
9	GF	197	ASP	CB-CG-OD1	7.47	125.03	118.30
8	LG	116	ASP	CB-CG-OD1	7.46	125.02	118.30
9	NB	32	PRO	N-CD-CG	-7.45	92.03	103.20
7	A1	175	ASP	CB-CG-OD1	7.44	125.00	118.30
22	BX	9	PRO	CA-N-CD	-7.44	101.08	111.50
8	MM	276	ILE	CG1-CB-CG2	-7.44	95.04	111.40
13	Ad	126	PRO	CA-N-CD	-7.43	101.10	111.50
9	KF	88	ASP	CB-CG-OD2	7.42	124.98	118.30
8	IK	215	ARG	CB-CA-C	-7.42	95.57	110.40
9	ID	1	MET	CB-CG-SD	7.41	134.64	112.40
8	QI	286	LEU	CA-CB-CG	7.40	132.31	115.30
9	DD	224	ASP	CB-CG-OD1	-7.39	111.65	118.30
9	HJ	249	ASP	CB-CG-OD1	7.39	124.95	118.30
8	IO	211	ASP	CB-CG-OD1	7.39	124.95	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	BQ	216	ASP	CB-CG-OD1	7.38	124.94	118.30
9	VD	209	ASP	CB-CG-OD1	7.38	124.94	118.30
8	BG	359	PRO	CA-N-CD	-7.36	101.19	111.50
9	NJ	287	PRO	CA-N-CD	-7.36	101.20	111.50
9	SH	233	MET	CG-SD-CE	7.35	111.97	100.20
8	LG	175	PRO	CA-N-CD	-7.35	101.21	111.50
8	EC	153	LEU	CA-CB-CG	7.34	132.19	115.30
8	WE	33	ASP	CB-CG-OD2	7.34	124.91	118.30
8	JC	265	ILE	CG1-CB-CG2	-7.34	95.26	111.40
9	RL	73	MET	CG-SD-CE	-7.33	88.47	100.20
8	HK	322	ASP	CB-CG-OD2	7.33	124.89	118.30
9	KL	67	ASP	CB-CG-OD1	7.33	124.89	118.30
8	WC	322	ASP	CB-CG-OD1	7.32	124.89	118.30
9	HB	88	ASP	CB-CG-OD1	7.32	124.89	118.30
8	WE	268	PRO	CA-N-CD	-7.31	101.26	111.50
9	OJ	404	ASP	CB-CG-OD1	7.31	124.88	118.30
28	C5	323	ASP	CB-CG-OD1	7.31	124.88	118.30
9	SJ	70	PRO	CA-CB-CG	-7.30	90.13	104.00
9	WH	39	ASP	CB-CG-OD1	7.30	124.87	118.30
27	Bs	364	LEU	CA-CB-CG	7.29	132.07	115.30
8	EC	322	ASP	CB-CG-OD2	7.29	124.86	118.30
8	BM	132	LEU	CB-CG-CD2	-7.29	98.61	111.00
2	Cb	33	CYS	CA-CB-SG	7.29	127.12	114.00
8	EM	127	ASP	CB-CG-OD1	7.29	124.86	118.30
63	k	69	LYS	CD-CE-NZ	-7.29	94.94	111.70
29	DS	161	TYR	CA-CB-CG	7.28	127.24	113.40
2	CX	79	LYS	CD-CE-NZ	7.28	128.44	111.70
9	MF	41	ASP	CB-CG-OD1	7.28	124.85	118.30
9	JH	67	ASP	CB-CG-OD1	7.27	124.84	118.30
9	DF	1	MET	CG-SD-CE	-7.27	88.57	100.20
8	NK	98	ASP	CB-CG-OD1	7.27	124.84	118.30
29	EQ	191	LEU	CA-CB-CG	7.26	131.99	115.30
29	Cz	269	LYS	CD-CE-NZ	-7.25	95.03	111.70
8	BG	359	PRO	CA-CB-CG	-7.25	90.23	104.00
14	Am	45	ASP	CB-CG-OD1	7.24	124.82	118.30
42	E	847	LYS	CD-CE-NZ	-7.24	95.05	111.70
44	EX	70	ASP	CB-CG-OD2	7.24	124.81	118.30
9	HD	197	ASP	CB-CG-OD1	7.24	124.81	118.30
2	0i	129	ASP	CB-CG-OD1	7.23	124.81	118.30
9	TL	207	LEU	CA-CB-CG	7.23	131.94	115.30
9	SL	395	LEU	CA-CB-CG	7.23	131.93	115.30
29	D6	256	ASP	CB-CG-OD1	7.22	124.79	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	NC	160	ASP	CB-CG-OD2	7.21	124.79	118.30
9	GB	67	ASP	CB-CG-OD1	7.21	124.79	118.30
59	c	245	ASP	CB-CG-OD1	7.21	124.79	118.30
9	WH	170	VAL	CG1-CB-CG2	-7.20	99.38	110.90
9	DJ	177	ASP	CB-CG-OD2	-7.20	111.82	118.30
8	EE	431	ASP	CB-CG-OD2	7.20	124.78	118.30
7	Az	249	LEU	CB-CG-CD1	-7.20	98.77	111.00
9	DF	177	ASP	CB-CG-OD2	7.19	124.77	118.30
42	E	731	LEU	CB-CG-CD2	-7.19	98.78	111.00
9	PB	267	MET	CA-CB-CG	7.19	125.52	113.30
46	o	298	ASP	CB-CG-OD2	-7.18	111.84	118.30
8	QM	227	LEU	CB-CG-CD2	-7.18	98.80	111.00
35	Da	97	ILE	CG1-CB-CG2	-7.17	95.62	111.40
9	SH	358	PRO	CA-CB-CG	-7.17	90.37	104.00
9	AD	336	LYS	CD-CE-NZ	-7.17	95.21	111.70
9	BL	362	LYS	CD-CE-NZ	7.17	128.19	111.70
29	DT	43	PRO	N-CD-CG	-7.17	92.45	103.20
9	RF	88	ASP	CB-CG-OD2	7.16	124.75	118.30
8	HE	322	ASP	CB-CG-OD1	-7.16	111.86	118.30
9	KN	417	ASP	CB-CG-OD2	7.16	124.74	118.30
29	EA	191	LEU	CB-CG-CD1	-7.15	98.84	111.00
9	NB	118	ASP	CB-CG-OD1	7.15	124.74	118.30
8	UC	322	ASP	CB-CG-OD1	7.15	124.73	118.30
29	Cz	174	ASP	CB-CG-OD1	7.14	124.73	118.30
28	C0	382	ILE	CG1-CB-CG2	-7.14	95.69	111.40
5	C	106	ASP	CB-CG-OD1	7.13	124.72	118.30
7	Au	206	VAL	CG1-CB-CG2	-7.13	99.49	110.90
8	RK	322	ASP	CB-CG-OD2	7.12	124.71	118.30
9	GF	249	ASP	CB-CG-OD2	7.12	124.71	118.30
9	GN	289	LEU	CA-CB-CG	7.12	131.67	115.30
9	WD	267	MET	CA-CB-CG	7.11	125.39	113.30
2	CU	126	LEU	CA-CB-CG	7.11	131.66	115.30
8	VM	173	PRO	CA-N-CD	-7.11	101.54	111.50
8	CE	98	ASP	CB-CG-OD1	7.11	124.70	118.30
9	OD	209	ASP	CB-CG-OD2	7.11	124.70	118.30
9	EL	73	MET	CG-SD-CE	-7.10	88.84	100.20
9	VF	284	LEU	CA-CB-CG	7.10	131.63	115.30
9	DD	171	PRO	N-CD-CG	-7.09	92.56	103.20
8	ME	326	LYS	CD-CE-NZ	-7.09	95.38	111.70
9	NL	186	THR	CA-CB-CG2	-7.09	102.47	112.40
8	MK	438	ASP	CB-CG-OD1	7.09	124.68	118.30
8	ME	345	ASP	CB-CG-OD1	7.08	124.67	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	BB	70	PRO	CA-N-CD	-7.07	101.60	111.50
9	JB	42	LEU	CA-CB-CG	7.07	131.57	115.30
9	QJ	73	MET	CG-SD-CE	-7.07	88.89	100.20
8	TE	189	LEU	CA-CB-CG	7.07	131.55	115.30
2	0c	97	LEU	CA-CB-CG	7.06	131.53	115.30
2	0C	58	CYS	CA-CB-SG	7.06	126.70	114.00
44	EX	396	LEU	CB-CG-CD1	-7.05	99.01	111.00
3	2	97	LEU	CB-CG-CD1	-7.05	99.01	111.00
2	Cf	39	ASP	CB-CG-OD1	7.05	124.64	118.30
8	KC	392	ASP	CB-CG-OD1	-7.04	111.96	118.30
29	D5	305	ASP	CB-CG-OD1	7.04	124.64	118.30
9	NF	355	ASP	CB-CG-OD2	7.04	124.64	118.30
8	GG	69	ASP	CB-CG-OD2	7.02	124.62	118.30
29	D4	428	ASP	CB-CG-OD2	7.01	124.61	118.30
8	UI	322	ASP	CB-CG-OD2	7.00	124.60	118.30
45	G	220	TRP	C-N-CD	-7.00	105.19	120.60
9	IJ	88	ASP	CB-CG-OD2	-7.00	112.00	118.30
8	MM	39	ASP	CB-CG-OD2	6.99	124.59	118.30
9	TJ	249	ASP	CB-CG-OD1	6.99	124.59	118.30
8	FI	376	CYS	CA-CB-SG	6.99	126.58	114.00
8	WM	345	ASP	CB-CG-OD1	6.99	124.59	118.30
38	Dh	24	ASP	CB-CG-OD1	-6.98	112.02	118.30
9	LD	177	ASP	CB-CG-OD1	6.98	124.58	118.30
9	GF	404	ASP	CB-CG-OD1	6.98	124.58	118.30
8	TK	195	LEU	CB-CG-CD1	-6.98	99.14	111.00
9	KD	257	MET	CG-SD-CE	-6.97	89.05	100.20
8	QE	1	MET	CB-CG-SD	-6.97	91.48	112.40
9	AL	295	ASP	CB-CG-OD2	6.97	124.57	118.30
9	DL	177	ASP	CB-CG-OD1	6.97	124.57	118.30
8	JK	203	MET	CG-SD-CE	6.97	111.35	100.20
8	GE	32	PRO	N-CD-CG	-6.96	92.75	103.20
8	HC	33	ASP	CB-CG-OD1	6.96	124.57	118.30
9	QD	41	ASP	CB-CG-OD2	6.96	124.57	118.30
27	Bs	245	ILE	CB-CA-C	6.96	125.52	111.60
9	DJ	187	LEU	CB-CG-CD1	6.96	122.83	111.00
19	BO	89	PRO	CA-CB-CG	-6.96	90.79	104.00
8	VC	157	LEU	CA-CB-CG	6.95	131.29	115.30
18	B5	191	LEU	CA-CB-CG	6.95	131.28	115.30
9	SB	417	ASP	CB-CG-OD2	6.94	124.55	118.30
3	x	142	LEU	CB-CG-CD2	-6.94	99.20	111.00
2	CU	92	PRO	CA-N-CD	-6.93	101.80	111.50
8	UG	132	LEU	CA-CB-CG	6.93	131.25	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	LC	46	ASP	CB-CG-OD2	6.93	124.53	118.30
29	EQ	447	LEU	CB-CG-CD2	-6.92	99.24	111.00
8	KK	345	ASP	CB-CG-OD2	6.92	124.53	118.30
9	OJ	118	ASP	CB-CG-OD2	6.91	124.52	118.30
9	NB	114	ASP	CB-CG-OD1	6.91	124.52	118.30
8	PE	424	ASP	CB-CG-OD1	6.91	124.52	118.30
9	HB	31	ASP	CB-CG-OD2	6.91	124.52	118.30
9	TD	224	ASP	CB-CG-OD1	6.90	124.51	118.30
2	Cj	39	ASP	CB-CG-OD1	6.90	124.51	118.30
29	EP	256	ASP	CB-CG-OD1	6.89	124.50	118.30
29	DW	313	MET	CA-CB-CG	-6.89	101.58	113.30
9	IB	261	PRO	N-CD-CG	-6.89	92.87	103.20
8	KK	431	ASP	CB-CG-OD1	6.88	124.50	118.30
32	Co	384	TYR	CB-CG-CD1	6.88	125.13	121.00
8	EC	69	ASP	CB-CG-OD2	6.88	124.50	118.30
9	FJ	263	LEU	CA-CB-CG	6.88	131.13	115.30
8	IK	336	LYS	CD-CE-NZ	-6.88	95.87	111.70
28	F4	148	GLU	N-CA-CB	-6.88	98.21	110.60
9	UH	267	MET	CG-SD-CE	6.88	111.21	100.20
9	JH	128	ASP	CB-CG-OD1	6.88	124.49	118.30
14	BY	233	MET	CG-SD-CE	6.87	111.20	100.20
2	Ch	30	LEU	CA-CB-CG	6.87	131.11	115.30
57	YJ	143	LEU	CA-CB-CG	6.87	131.11	115.30
29	D5	131	ASP	CB-CG-OD2	6.87	124.48	118.30
8	QI	116	ASP	CB-CG-OD1	6.87	124.48	118.30
28	C2	377	MET	CG-SD-CE	-6.87	89.21	100.20
9	CJ	284	LEU	CA-CB-CG	6.87	131.10	115.30
8	QE	205	ASP	CB-CG-OD2	6.87	124.48	118.30
21	Bj	25	ARG	CG-CD-NE	-6.87	97.38	111.80
9	HD	171	PRO	N-CD-CG	-6.86	92.91	103.20
9	PF	80	PRO	CA-N-CD	-6.86	101.89	111.50
29	D4	256	ASP	CB-CG-OD2	6.86	124.47	118.30
9	OL	209	ASP	CB-CG-OD2	-6.86	112.13	118.30
8	HO	69	ASP	CB-CG-OD1	6.85	124.47	118.30
44	EW	214	ASP	CB-CG-OD2	6.85	124.46	118.30
9	EN	268	PRO	CA-N-CD	-6.85	101.91	111.50
2	CV	41	ILE	CG1-CB-CG2	-6.84	96.36	111.40
28	F4	141	ASP	CB-CG-OD2	6.84	124.45	118.30
8	FG	47	ASP	CB-CG-OD2	6.84	124.45	118.30
8	GM	69	ASP	CB-CG-OD2	6.83	124.45	118.30
8	QK	398	MET	CG-SD-CE	-6.83	89.26	100.20
14	BZ	291	PRO	CA-N-CD	-6.83	101.93	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	HH	327	ASP	CB-CG-OD1	6.83	124.45	118.30
29	D1	333	ASP	CB-CG-OD1	6.83	124.45	118.30
8	OC	431	ASP	CB-CG-OD2	6.83	124.44	118.30
9	RF	293	MET	CG-SD-CE	6.83	111.12	100.20
9	CB	26	ASP	CB-CG-OD1	6.83	124.44	118.30
9	WF	171	PRO	N-CD-CG	-6.83	92.96	103.20
62	j	253	ASP	CB-CG-OD1	6.83	124.44	118.30
7	A1	101	PRO	N-CA-CB	-6.82	95.09	102.60
19	BR	35	LEU	CB-CG-CD1	-6.82	99.41	111.00
47	Y	269	MET	CG-SD-CE	6.81	111.09	100.20
9	WH	203	ASP	CB-CG-OD2	-6.81	112.17	118.30
9	TD	31	ASP	CB-CG-OD1	6.80	124.42	118.30
44	EV	313	ASP	CB-CG-OD1	6.80	124.42	118.30
8	CI	189	LEU	CB-CG-CD1	6.80	122.56	111.00
8	QK	98	ASP	CB-CG-OD1	6.80	124.42	118.30
9	EB	243	PRO	N-CD-CG	-6.79	93.01	103.20
44	EU	317	LYS	CD-CE-NZ	-6.79	96.08	111.70
9	PB	31	ASP	CB-CG-OD1	6.79	124.41	118.30
9	QD	293	MET	CA-CB-CG	6.78	124.83	113.30
9	QF	171	PRO	CA-CB-CG	-6.78	91.11	104.00
9	WJ	323	MET	CG-SD-CE	-6.78	89.35	100.20
8	OK	116	ASP	CB-CG-OD2	6.78	124.40	118.30
29	EP	207	ILE	CG1-CB-CG2	-6.77	96.50	111.40
44	EX	313	ASP	CB-CG-OD2	6.77	124.39	118.30
28	F2	356	ASP	CB-CG-OD2	6.76	124.39	118.30
57	YL	181	MET	CA-CB-CG	6.76	124.79	113.30
29	DR	475	MET	CA-CB-CG	6.76	124.79	113.30
9	ED	243	PRO	N-CD-CG	-6.75	93.08	103.20
9	NF	233	MET	CG-SD-CE	-6.75	89.41	100.20
8	GE	251	ASP	CB-CG-OD1	6.75	124.37	118.30
9	EN	404	ASP	CB-CG-OD1	6.74	124.37	118.30
9	DN	209	ASP	CB-CG-OD2	6.74	124.36	118.30
9	UH	327	ASP	CB-CG-OD2	-6.73	112.24	118.30
9	SL	67	ASP	CB-CG-OD1	6.72	124.35	118.30
8	RI	47	ASP	CB-CG-OD1	6.72	124.35	118.30
9	BH	171	PRO	C-N-CA	6.72	138.50	121.70
9	TL	362	LYS	CD-CE-NZ	-6.71	96.26	111.70
8	LE	424	ASP	CB-CG-OD2	6.71	124.34	118.30
9	TF	406	MET	CA-CB-CG	6.71	124.70	113.30
60	e	461	LYS	CD-CE-NZ	-6.70	96.29	111.70
11	AT	208	ASP	CB-CG-OD2	6.70	124.33	118.30
8	TE	199	ASP	CB-CG-OD1	-6.70	112.28	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	CD	295	ASP	CB-CG-OD2	6.69	124.32	118.30
8	WC	211	ASP	CB-CG-OD2	6.69	124.32	118.30
8	DG	47	ASP	CB-CG-OD2	6.69	124.32	118.30
44	EV	371	ASP	CB-CG-OD1	6.69	124.32	118.30
9	FB	118	ASP	CB-CG-OD1	6.69	124.32	118.30
8	TK	322	ASP	CB-CG-OD2	6.69	124.32	118.30
9	AF	161	ASP	CB-CG-OD1	6.68	124.32	118.30
44	EX	18	PRO	CA-N-CD	-6.68	102.14	111.50
9	UD	67	ASP	CB-CG-OD1	6.68	124.31	118.30
8	RA	345	ASP	CB-CG-OD1	6.68	124.31	118.30
2	Ca	54	MET	CG-SD-CE	-6.67	89.53	100.20
8	QG	398	MET	CG-SD-CE	-6.66	89.54	100.20
46	o	422	ARG	CB-CG-CD	6.66	128.92	111.60
9	EL	295	ASP	CB-CG-OD2	6.66	124.29	118.30
8	WE	189	LEU	CB-CG-CD1	6.66	122.32	111.00
9	JD	19	LYS	CD-CE-NZ	-6.65	96.40	111.70
9	VL	267	MET	CA-CB-CG	6.65	124.61	113.30
19	BO	87	PRO	CA-N-CD	-6.65	102.19	111.50
8	OA	160	ASP	CB-CG-OD2	6.65	124.28	118.30
8	PA	203	MET	CG-SD-CE	-6.64	89.57	100.20
9	TH	67	ASP	CB-CG-OD1	6.64	124.28	118.30
9	FH	406	MET	CA-CB-CG	6.63	124.57	113.30
8	WC	268	PRO	CA-N-CD	-6.63	102.22	111.50
8	FI	128	LEU	CA-CB-CG	6.62	130.54	115.30
8	DA	154	MET	CA-CB-CG	6.62	124.56	113.30
29	EO	256	ASP	CB-CG-OD2	6.62	124.26	118.30
9	CB	44	LEU	CA-CB-CG	6.62	130.52	115.30
29	D4	410	LEU	CA-CB-CG	6.62	130.52	115.30
8	RG	63	PRO	CA-N-CD	-6.62	102.23	111.50
9	EJ	395	LEU	CB-CG-CD1	-6.62	99.75	111.00
8	WI	189	LEU	CB-CG-CD1	-6.61	99.76	111.00
56	XK	69	LEU	CB-CG-CD1	-6.61	99.76	111.00
9	UN	31	ASP	CB-CG-OD2	6.60	124.24	118.30
28	F3	165	ASP	CB-CG-OD1	-6.60	112.36	118.30
8	JC	127	ASP	CB-CG-OD1	6.60	124.24	118.30
57	YJ	223	ASP	CB-CG-OD2	-6.60	112.36	118.30
2	CT	71	LEU	CA-CB-CG	-6.59	100.15	115.30
9	RL	293	MET	CG-SD-CE	-6.58	89.67	100.20
8	GG	245	ASP	CB-CG-OD1	6.58	124.22	118.30
8	KG	211	ASP	CB-CG-OD1	6.58	124.22	118.30
8	PM	359	PRO	CA-N-CD	-6.58	102.29	111.50
8	SA	154	MET	CG-SD-CE	6.58	110.72	100.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	Aa	53	ASP	CB-CG-OD2	6.57	124.22	118.30
9	FD	263	LEU	CA-CB-CG	6.57	130.41	115.30
62	j	30	LEU	CB-CG-CD1	-6.57	99.83	111.00
42	E	736	ASP	CB-CG-OD1	6.57	124.21	118.30
8	WI	375	VAL	CG1-CB-CG2	-6.56	100.41	110.90
62	i	156	ASP	CB-CG-OD1	6.56	124.20	118.30
9	BB	321	MET	CG-SD-CE	-6.55	89.71	100.20
9	GJ	31	ASP	CB-CG-OD2	6.55	124.20	118.30
9	VN	114	ASP	CB-CG-OD2	6.55	124.20	118.30
6	BN	271	ASP	CB-CG-OD1	6.55	124.20	118.30
9	JH	65	LEU	CA-CB-CG	6.55	130.37	115.30
28	C9	440	ASP	CB-CG-OD1	6.55	124.19	118.30
9	DH	161	ASP	CB-CG-OD1	6.55	124.19	118.30
8	BM	132	LEU	CA-CB-CG	6.55	130.36	115.30
28	C9	254	LEU	CB-CG-CD1	-6.55	99.87	111.00
9	VD	39	ASP	CB-CG-OD1	6.55	124.19	118.30
9	MJ	122	LYS	CA-CB-CG	6.54	127.80	113.40
9	TL	355	ASP	CB-CG-OD1	-6.54	112.41	118.30
2	0A	12	VAL	CA-CB-CG2	-6.54	101.09	110.90
9	FN	295	ASP	CB-CG-OD1	6.54	124.18	118.30
13	Ad	53	ASP	CB-CG-OD1	-6.53	112.42	118.30
8	DI	394	LYS	CB-CG-CD	-6.53	94.62	111.60
47	X	128	ASP	CB-CG-OD2	6.53	124.18	118.30
8	HG	120	ASP	CB-CG-OD1	6.53	124.17	118.30
2	0a	80	LEU	CB-CG-CD1	-6.52	99.91	111.00
2	0k	68	LEU	CA-CB-CG	6.52	130.30	115.30
8	EE	298	PRO	CA-N-CD	-6.52	102.37	111.50
9	LL	249	ASP	CB-CG-OD2	6.52	124.17	118.30
9	RH	268	PRO	N-CA-CB	-6.52	95.43	102.60
2	Ce	67	LEU	CA-CB-CG	6.51	130.28	115.30
4	y	1381	ILE	CG1-CB-CG2	-6.51	97.08	111.40
18	By	200	LEU	CA-CB-CG	6.51	130.26	115.30
1	V	191	ASP	CB-CG-OD1	6.51	124.16	118.30
8	UM	33	ASP	CB-CG-OD1	6.50	124.15	118.30
4	y	1399	MET	CA-CB-CG	6.49	124.33	113.30
9	CJ	276	ARG	NE-CZ-NH2	-6.48	117.06	120.30
8	FM	47	ASP	CB-CG-OD1	6.48	124.13	118.30
8	SI	322	ASP	CB-CG-OD2	6.48	124.13	118.30
22	BW	64	ASP	CB-CG-OD1	6.48	124.13	118.30
8	QM	33	ASP	CB-CG-OD1	6.48	124.13	118.30
8	SG	245	ASP	CB-CG-OD1	6.48	124.13	118.30
9	DF	286	VAL	CG1-CB-CG2	-6.47	100.54	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	XJ	26	ASP	CB-CG-OD1	6.47	124.13	118.30
8	OG	152	LEU	CB-CG-CD2	6.47	122.00	111.00
57	YL	181	MET	CB-CG-SD	6.47	131.82	112.40
9	SJ	150	LEU	CA-CB-CG	6.47	130.18	115.30
2	Cd	119	PRO	N-CA-CB	-6.47	95.49	102.60
9	LN	26	ASP	CB-CG-OD1	6.46	124.12	118.30
8	QE	33	ASP	CB-CG-OD2	6.46	124.12	118.30
13	Ab	454	PRO	N-CA-CB	-6.46	95.50	102.60
8	MM	280	LYS	CA-CB-CG	6.45	127.59	113.40
9	RF	404	ASP	CB-CG-OD1	6.45	124.10	118.30
41	Dn	179	LEU	CA-CB-CG	6.45	130.12	115.30
8	FI	176	GLN	CB-CA-C	6.45	123.29	110.40
9	QJ	257	MET	CG-SD-CE	6.45	110.51	100.20
8	HO	424	ASP	CB-CG-OD2	6.44	124.10	118.30
33	Ct	84	ASP	CB-CG-OD1	6.44	124.10	118.30
59	a	104	PRO	N-CD-CG	-6.44	93.54	103.20
9	RJ	267	MET	CB-CG-SD	6.44	131.72	112.40
8	QI	302	MET	CA-CB-CG	6.44	124.24	113.30
8	VC	119	LEU	CB-CG-CD1	-6.44	100.06	111.00
31	Cl	298	ASP	CB-CG-OD1	-6.43	112.51	118.30
8	RI	157	LEU	CA-CB-CG	6.43	130.09	115.30
9	TL	22	GLU	CA-CB-CG	6.43	127.55	113.40
29	D5	259	ASP	CB-CG-OD2	6.43	124.08	118.30
8	KO	275	VAL	CG1-CB-CG2	-6.43	100.62	110.90
8	TI	205	ASP	CB-CG-OD1	6.43	124.08	118.30
9	AF	328	GLU	CA-CB-CG	-6.43	99.26	113.40
29	D9	99	ASP	CB-CG-OD1	6.42	124.08	118.30
8	QA	152	LEU	CB-CG-CD2	6.42	121.91	111.00
9	PL	112	LEU	CA-CB-CG	6.41	130.04	115.30
9	KH	171	PRO	C-N-CA	6.40	137.71	121.70
9	PL	263	LEU	CA-CB-CG	6.40	130.03	115.30
9	BL	404	ASP	CB-CG-OD2	6.40	124.06	118.30
9	WJ	177	ASP	CB-CG-OD2	-6.40	112.54	118.30
3	x	68	ARG	CG-CD-NE	-6.39	98.37	111.80
2	0C	90	GLY	C-N-CA	6.39	137.68	121.70
8	JI	116	ASP	CB-CG-OD1	6.39	124.05	118.30
8	QA	136	LEU	CA-CB-CG	6.39	130.00	115.30
8	JE	431	ASP	CB-CG-OD2	6.39	124.05	118.30
8	BE	396	ASP	CB-CG-OD1	6.39	124.05	118.30
8	VC	359	PRO	CA-N-CD	-6.39	102.56	111.50
9	BB	1	MET	CA-CB-CG	6.38	124.15	113.30
21	Bj	121	ASP	CB-CG-OD1	6.38	124.05	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	FN	305	PRO	CA-N-CD	-6.38	102.56	111.50
8	OG	115	VAL	CA-CB-CG1	-6.38	101.33	110.90
9	RB	415	MET	CA-CB-CG	6.38	124.15	113.30
8	LC	322	ASP	CB-CG-OD2	6.38	124.04	118.30
9	MJ	182	PRO	CA-N-CD	-6.38	102.57	111.50
8	TC	125	LEU	CA-CB-CG	6.37	129.95	115.30
9	PB	299	MET	CG-SD-CE	-6.37	90.01	100.20
45	G	338	LEU	CA-CB-CG	6.36	129.93	115.30
2	Cj	111	LEU	CB-CG-CD1	-6.36	100.19	111.00
42	F	470	ASP	CB-CG-OD1	6.36	124.02	118.30
8	GM	326	LYS	CG-CD-CE	-6.36	92.83	111.90
9	WB	284	LEU	CA-CB-CG	6.36	129.92	115.30
29	D1	259	ASP	CB-CG-OD1	6.35	124.02	118.30
8	II	431	ASP	CB-CG-OD1	6.35	124.02	118.30
14	BY	270	HIS	CB-CA-C	6.35	123.10	110.40
2	Ci	80	LEU	CA-CB-CG	6.35	129.91	115.30
9	UB	263	LEU	CA-CB-CG	6.34	129.89	115.30
28	F4	309	LEU	CB-CG-CD1	-6.34	100.22	111.00
2	Cf	111	LEU	CA-CB-CG	6.33	129.87	115.30
8	IO	33	ASP	CB-CG-OD2	6.33	124.00	118.30
62	j	97	ASP	CB-CG-OD1	6.33	124.00	118.30
9	UJ	233	MET	CG-SD-CE	-6.33	90.07	100.20
8	CI	98	ASP	CB-CG-OD1	6.33	123.99	118.30
8	BC	120	ASP	CB-CG-OD1	6.32	123.99	118.30
9	TB	349	VAL	CG1-CB-CG2	-6.32	100.79	110.90
19	BQ	443	LEU	CB-CG-CD1	-6.31	100.27	111.00
9	QJ	68	LEU	CA-CB-CG	6.31	129.82	115.30
9	ML	417	ASP	CB-CG-OD1	6.31	123.98	118.30
47	Y	365	PRO	N-CA-CB	-6.31	95.66	102.60
8	VK	39	ASP	CB-CG-OD2	6.31	123.98	118.30
8	JE	424	ASP	CB-CG-OD1	6.30	123.97	118.30
8	RE	171	ILE	C-N-CA	6.30	137.45	121.70
9	PL	267	MET	CA-CB-CG	6.30	124.01	113.30
8	RA	23	LEU	CB-CG-CD2	6.29	121.70	111.00
2	0Y	146	LEU	CA-CB-CG	6.29	129.77	115.30
8	VE	160	ASP	CB-CG-OD2	6.29	123.97	118.30
9	IB	299	MET	CG-SD-CE	-6.29	90.13	100.20
8	OK	306	ASP	CB-CG-OD1	6.29	123.96	118.30
9	JJ	73	MET	CG-SD-CE	6.29	110.26	100.20
8	SK	76	ASP	CB-CG-OD1	6.29	123.96	118.30
7	Av	120	PRO	N-CD-CG	-6.29	93.77	103.20
9	NB	304	ASP	CB-CG-OD2	6.29	123.96	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	Cw	114	ILE	CG1-CB-CG2	-6.29	97.57	111.40
8	PE	157	LEU	CA-CB-CG	6.29	129.76	115.30
8	SM	269	LEU	CB-CG-CD1	6.29	121.69	111.00
8	CE	120	ASP	CB-CG-OD1	6.28	123.96	118.30
9	HH	415	MET	CG-SD-CE	6.28	110.25	100.20
9	UB	135	LEU	CB-CG-CD2	6.28	121.67	111.00
8	RC	157	LEU	CA-CB-CG	6.28	129.74	115.30
29	D9	286	VAL	CG1-CB-CG2	-6.27	100.86	110.90
8	CG	184	PRO	CA-N-CD	-6.26	102.73	111.50
2	CZ	148	LEU	CA-CB-CG	6.26	129.69	115.30
9	UB	41	ASP	CB-CG-OD2	6.25	123.93	118.30
2	CV	80	LEU	CA-CB-CG	6.25	129.68	115.30
8	DA	353	VAL	CG1-CB-CG2	6.25	120.90	110.90
52	P	121	CYS	CA-CB-SG	6.25	125.25	114.00
8	AM	69	ASP	CB-CG-OD1	6.24	123.92	118.30
9	UB	377	LEU	CA-CB-CG	6.24	129.66	115.30
9	LD	26	ASP	CB-CG-OD2	6.24	123.92	118.30
9	ED	359	ARG	NE-CZ-NH1	6.24	123.42	120.30
8	IE	205	ASP	CB-CG-OD1	6.24	123.91	118.30
42	F	393	MET	CG-SD-CE	-6.24	90.22	100.20
11	AU	381	LEU	CB-CG-CD2	-6.23	100.41	111.00
59	b	442	ASP	CB-CG-OD1	6.23	123.91	118.30
9	KJ	161	ASP	CB-CG-OD2	6.23	123.91	118.30
8	MM	345	ASP	CB-CG-OD2	6.23	123.91	118.30
13	Ab	580	LEU	CA-CB-CG	6.22	129.61	115.30
9	BL	363	MET	CG-SD-CE	-6.21	90.26	100.20
2	CT	30	LEU	CA-CB-CG	6.21	129.59	115.30
29	EQ	366	LYS	CD-CE-NZ	-6.21	97.41	111.70
9	HL	39	ASP	CB-CG-OD2	6.21	123.89	118.30
28	F4	356	ASP	CB-CG-OD1	6.21	123.89	118.30
59	d	387	LEU	CA-CB-CG	6.21	129.57	115.30
9	JB	377	LEU	CA-CB-CG	6.20	129.56	115.30
9	GH	321	MET	CG-SD-CE	-6.20	90.28	100.20
48	K	136	ASP	CB-CG-OD1	6.20	123.88	118.30
8	CM	160	ASP	CB-CG-OD2	6.20	123.88	118.30
9	HJ	284	LEU	CA-CB-CG	6.19	129.54	115.30
9	GD	299	MET	CG-SD-CE	6.19	110.10	100.20
13	Aa	639	LEU	CA-CB-CG	6.18	129.52	115.30
8	UM	269	LEU	CA-CB-CG	6.18	129.52	115.30
8	HE	221	ARG	CA-CB-CG	6.18	127.00	113.40
9	GD	177	ASP	CB-CG-OD2	6.18	123.86	118.30
8	QM	167	LEU	CA-CB-CG	6.18	129.51	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	Ar	159	PRO	CA-N-CD	-6.18	102.85	111.50
9	HB	118	ASP	CB-CG-OD1	6.18	123.86	118.30
2	CX	126	LEU	CA-CB-CG	6.18	129.51	115.30
9	JJ	249	ASP	CB-CG-OD1	6.18	123.86	118.30
9	VH	263	LEU	CA-CB-CG	6.18	129.51	115.30
43	E1	160	PRO	N-CA-CB	6.17	110.71	103.30
8	OA	431	ASP	CB-CG-OD2	6.17	123.86	118.30
9	UH	267	MET	CA-CB-CG	6.17	123.79	113.30
8	DC	274	PRO	CA-N-CD	-6.17	102.86	111.50
59	b	227	ASP	CB-CG-OD1	6.17	123.86	118.30
8	MM	98	ASP	CB-CG-OD2	6.17	123.85	118.30
8	DI	250	VAL	CG1-CB-CG2	-6.17	101.03	110.90
9	HJ	31	ASP	CB-CG-OD1	6.17	123.85	118.30
29	D1	256	ASP	CB-CG-OD1	6.17	123.85	118.30
2	CV	141	LEU	CA-CB-CG	6.16	129.47	115.30
9	QD	161	ASP	CB-CG-OD1	6.16	123.85	118.30
9	IJ	68	LEU	CA-CB-CG	6.16	129.47	115.30
9	RH	125	GLU	CG-CD-OE2	-6.16	105.98	118.30
8	RC	16	ILE	CG1-CB-CG2	-6.16	97.85	111.40
2	0i	146	LEU	CA-CB-CG	6.16	129.46	115.30
47	Y	448	MET	CG-SD-CE	6.16	110.05	100.20
9	BB	233	MET	CG-SD-CE	6.16	110.05	100.20
9	BJ	295	ASP	CB-CG-OD1	6.16	123.84	118.30
8	FG	120	ASP	CB-CG-OD1	6.15	123.83	118.30
1	V	169	LEU	CA-CB-CG	6.15	129.45	115.30
29	DQ	267	ASP	CB-CG-OD2	6.15	123.83	118.30
17	B2	197	LEU	CA-CB-CG	-6.15	101.16	115.30
9	FL	417	ASP	CB-CG-OD1	6.15	123.83	118.30
13	Aa	339	LEU	CB-CG-CD1	-6.15	100.55	111.00
29	DP	131	ASP	CB-CG-OD2	6.14	123.83	118.30
8	GM	47	ASP	CB-CG-OD1	6.14	123.83	118.30
9	PF	249	ASP	CB-CG-OD1	6.14	123.83	118.30
28	C2	429	ASP	CB-CG-OD2	6.14	123.83	118.30
9	OD	323	MET	CG-SD-CE	-6.14	90.37	100.20
63	n	165	VAL	CA-CB-CG1	6.14	120.11	110.90
9	RF	267	MET	C-N-CD	6.14	141.29	128.40
8	VG	157	LEU	CB-CG-CD2	6.14	121.44	111.00
8	SI	251	ASP	CB-CG-OD2	6.14	123.83	118.30
28	C5	429	ASP	CB-CG-OD1	6.14	123.82	118.30
29	DR	386	MET	CG-SD-CE	-6.14	90.38	100.20
9	OH	228	LEU	CA-CB-CG	6.14	129.41	115.30
8	RA	322	ASP	CB-CG-OD1	6.14	123.82	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	SL	293	MET	CB-CG-SD	6.14	130.81	112.40
29	DV	248	ASP	CB-CG-OD1	6.13	123.82	118.30
28	F4	141	ASP	CB-CG-OD1	-6.13	112.78	118.30
9	PF	79	GLY	C-N-CD	6.13	141.27	128.40
9	RL	263	LEU	CA-CB-CG	6.13	129.39	115.30
56	XJ	138	ASP	CB-CG-OD2	6.12	123.81	118.30
57	YJ	223	ASP	CB-CG-OD1	6.12	123.81	118.30
2	0E	149	MET	CG-SD-CE	-6.12	90.41	100.20
9	HN	415	MET	CG-SD-CE	6.12	109.99	100.20
8	RA	23	LEU	CA-CB-CG	6.12	129.37	115.30
48	M	106	PRO	N-CA-CB	-6.12	95.87	102.60
9	MJ	324	LYS	N-CA-CB	6.12	121.61	110.60
8	QI	317	MET	CA-CB-CG	6.12	123.70	113.30
32	Cn	277	LYS	CD-CE-NZ	6.11	125.76	111.70
7	A8	186	ARG	CB-CG-CD	6.10	127.47	111.60
29	C1	427	ASP	CB-CG-OD2	6.10	123.79	118.30
9	OL	73	MET	CG-SD-CE	-6.10	90.44	100.20
9	RH	187	LEU	CB-CG-CD2	6.09	121.36	111.00
4	z	1387	LEU	CA-CB-CG	6.09	129.31	115.30
9	RB	388	MET	CG-SD-CE	6.09	109.94	100.20
9	TL	112	LEU	CB-CG-CD2	-6.09	100.65	111.00
8	RG	1	MET	CG-SD-CE	6.09	109.94	100.20
8	LM	401	LYS	CD-CE-NZ	-6.08	97.71	111.70
8	WE	267	PHE	C-N-CD	6.08	141.17	128.40
9	BF	327	ASP	CB-CG-OD1	6.08	123.77	118.30
9	UB	331	LEU	CB-CG-CD2	6.08	121.33	111.00
9	HL	128	ASP	CB-CG-OD1	6.08	123.77	118.30
8	DI	157	LEU	CA-CB-CG	6.08	129.28	115.30
9	DB	161	ASP	CB-CG-OD2	6.07	123.77	118.30
9	OH	253	LEU	CA-CB-CG	6.07	129.25	115.30
8	UK	33	ASP	CB-CG-OD1	6.07	123.76	118.30
7	A8	176	LEU	CA-CB-CG	6.07	129.25	115.30
9	PB	192	LEU	CA-CB-CG	6.07	129.25	115.30
13	Ad	527	PRO	CA-N-CD	-6.06	103.02	111.50
29	D9	159	LEU	CB-CG-CD1	-6.06	100.70	111.00
9	UH	377	LEU	CA-CB-CG	6.06	129.24	115.30
2	0c	80	LEU	CB-CG-CD1	-6.06	100.70	111.00
9	FH	67	ASP	CB-CG-OD1	6.05	123.74	118.30
8	JM	425	LEU	CB-CG-CD2	-6.05	100.72	111.00
8	PI	260	VAL	CG1-CB-CG2	-6.05	101.23	110.90
33	Ct	409	ASP	CB-CG-OD1	6.04	123.74	118.30
59	b	423	LEU	CA-CB-CG	6.04	129.20	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	GJ	171	PRO	C-N-CA	6.04	136.81	121.70
8	HE	359	PRO	CA-N-CD	-6.04	103.04	111.50
8	QA	364	PRO	CA-N-CD	-6.04	103.04	111.50
8	RI	121	ARG	CG-CD-NE	6.04	124.48	111.80
8	PK	269	LEU	CB-CG-CD2	-6.03	100.74	111.00
8	QA	302	MET	CA-CB-CG	6.03	123.56	113.30
9	GJ	284	LEU	CA-CB-CG	6.03	129.16	115.30
9	SF	295	ASP	CB-CG-OD1	-6.03	112.88	118.30
2	Ca	92	PRO	CA-N-CD	-6.03	103.06	111.50
28	F3	279	ASP	CB-CG-OD2	-6.03	112.88	118.30
8	NK	367	ASP	CB-CG-OD1	6.03	123.72	118.30
8	AA	217	LEU	CA-CB-CG	6.02	129.15	115.30
8	NI	127	ASP	CB-CG-OD1	-6.02	112.88	118.30
8	FM	392	ASP	CB-CG-OD1	6.01	123.71	118.30
8	AM	177	VAL	CA-CB-CG2	-6.01	101.88	110.90
9	FF	209	ASP	CB-CG-OD2	6.01	123.71	118.30
8	PG	189	LEU	CA-CB-CG	6.01	129.12	115.30
9	RB	200	TYR	CG-CD2-CE2	6.01	126.11	121.30
13	Aa	632	ASP	CB-CG-OD1	6.00	123.70	118.30
14	An	42	LEU	CA-CB-CG	6.00	129.10	115.30
8	IC	98	ASP	CB-CG-OD1	6.00	123.70	118.30
42	E	728	LEU	CA-CB-CG	6.00	129.09	115.30
9	JB	404	ASP	CB-CG-OD2	5.99	123.69	118.30
8	RE	16	ILE	CG1-CB-CG2	-5.99	98.21	111.40
8	RM	269	LEU	CA-CB-CG	5.99	129.08	115.30
65	s	94	LEU	CA-CB-CG	5.99	129.08	115.30
15	Ar	10	LEU	CB-CG-CD2	-5.99	100.82	111.00
9	VF	31	ASP	CB-CG-OD2	5.99	123.69	118.30
13	Ac	613	LEU	CB-CG-CD1	5.99	121.18	111.00
8	UG	313	MET	CG-SD-CE	-5.98	90.63	100.20
8	BC	359	PRO	CA-N-CD	-5.98	103.13	111.50
8	FM	114	ILE	CG1-CB-CG2	-5.98	98.25	111.40
9	VB	233	MET	CG-SD-CE	-5.98	90.64	100.20
8	NK	359	PRO	CA-N-CD	-5.97	103.14	111.50
9	IN	209	ASP	CB-CG-OD2	5.97	123.67	118.30
2	0c	58	CYS	CA-CB-SG	5.97	124.74	114.00
9	AB	249	ASP	CB-CG-OD1	5.97	123.67	118.30
9	KF	118	ASP	CB-CG-OD1	5.97	123.67	118.30
65	t	72	LEU	CA-CB-CG	5.97	129.02	115.30
13	Aa	53	ASP	CB-CG-OD1	-5.96	112.93	118.30
8	MI	401	LYS	CD-CE-NZ	-5.96	97.99	111.70
44	EZ	292	ASP	CB-CG-OD1	5.96	123.66	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	UC	256	GLN	CA-CB-CG	5.96	126.51	113.40
44	EW	72	ASP	CB-CG-OD1	5.96	123.66	118.30
9	FB	284	LEU	CB-CG-CD1	-5.96	100.88	111.00
9	UN	67	ASP	CB-CG-OD1	5.96	123.66	118.30
8	JM	33	ASP	CB-CG-OD2	5.95	123.66	118.30
9	WH	224	ASP	CB-CG-OD2	-5.95	112.94	118.30
33	Cv	201	LEU	CB-CG-CD2	-5.95	100.89	111.00
28	F6	141	ASP	CB-CG-OD1	-5.95	112.95	118.30
8	IK	431	ASP	CB-CG-OD1	5.95	123.65	118.30
9	AJ	31	ASP	CB-CG-OD2	5.95	123.65	118.30
2	0i	69	MET	N-CA-CB	5.94	121.30	110.60
9	LH	31	ASP	CB-CG-OD1	5.94	123.65	118.30
8	DE	267	PHE	C-N-CD	5.94	140.88	128.40
8	BC	345	ASP	CB-CG-OD1	5.94	123.65	118.30
13	Ac	306	LEU	CB-CG-CD2	5.94	121.09	111.00
33	Ct	175	ASP	CB-CG-OD2	5.94	123.64	118.30
9	FH	297	LYS	CD-CE-NZ	-5.93	98.05	111.70
8	KC	424	ASP	CB-CG-OD2	5.93	123.64	118.30
9	WN	233	MET	CG-SD-CE	5.93	109.69	100.20
4	y	1387	LEU	CA-CB-CG	5.93	128.93	115.30
2	CT	10	ARG	CA-CB-CG	-5.92	100.37	113.40
9	DJ	311	LEU	CA-CB-CG	5.92	128.93	115.30
43	E3	160	PRO	N-CA-CB	5.92	110.41	103.30
9	JD	331	LEU	CA-CB-CG	5.92	128.93	115.30
8	QM	16	ILE	CG1-CB-CG2	-5.92	98.37	111.40
8	RM	63	PRO	N-CA-CB	-5.92	96.08	102.60
9	KB	187	LEU	CB-CG-CD2	-5.92	100.94	111.00
56	XH	28	LYS	CD-CE-NZ	-5.92	98.08	111.70
2	Ck	129	ASP	CB-CG-OD2	5.92	123.62	118.30
8	HC	120	ASP	CB-CG-OD2	5.92	123.62	118.30
8	MI	392	ASP	CB-CG-OD2	-5.92	112.97	118.30
46	o	519	MET	CG-SD-CE	5.92	109.67	100.20
13	Ab	271	PRO	N-CD-CG	-5.92	94.33	103.20
59	d	529	PRO	CA-N-CD	-5.91	103.22	111.50
8	BI	120	ASP	CB-CG-OD1	5.91	123.62	118.30
43	E2	160	PRO	N-CA-CB	5.91	110.39	103.30
45	G	539	LYS	CA-CB-CG	5.91	126.40	113.40
8	OK	98	ASP	CB-CG-OD1	5.91	123.62	118.30
9	WB	415	MET	CA-CB-CG	5.91	123.34	113.30
62	i	211	VAL	CG1-CB-CG2	-5.91	101.44	110.90
21	BV	40	ASP	CB-CG-OD1	5.91	123.62	118.30
8	RI	242	LEU	CA-CB-CG	5.91	128.89	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	C4	90	LEU	CB-CG-CD2	-5.91	100.96	111.00
9	IB	197	ASP	CB-CG-OD2	-5.91	112.98	118.30
9	KH	257	MET	CG-SD-CE	-5.90	90.76	100.20
9	KF	324	LYS	CD-CE-NZ	-5.90	98.13	111.70
9	RL	300	MET	CB-CG-SD	5.90	130.09	112.40
8	VE	370	LYS	CD-CE-NZ	5.89	125.25	111.70
8	NK	428	LEU	CA-CB-CG	5.89	128.85	115.30
9	BF	32	PRO	N-CD-CG	-5.89	94.37	103.20
59	a	229	MET	CB-CG-SD	-5.89	94.74	112.40
19	BP	327	GLN	CA-CB-CG	5.88	126.35	113.40
8	IG	322	ASP	CB-CG-OD1	5.88	123.59	118.30
10	AQ	96	ILE	CG1-CB-CG2	-5.88	98.46	111.40
9	NJ	295	ASP	CB-CG-OD1	5.88	123.59	118.30
9	JN	129	CYS	CA-CB-SG	5.88	124.58	114.00
9	UD	327	ASP	CB-CG-OD2	-5.88	113.01	118.30
29	DR	447	LEU	CA-CB-CG	-5.87	101.80	115.30
9	GN	120	VAL	CG1-CB-CG2	-5.87	101.50	110.90
60	e	526	ASP	CB-CG-OD1	5.87	123.58	118.30
2	0c	121	ASP	CB-CG-OD1	5.87	123.58	118.30
9	ID	295	ASP	CB-CG-OD1	5.87	123.58	118.30
8	IM	127	ASP	CB-CG-OD2	-5.87	113.02	118.30
8	IG	286	LEU	CA-CB-CG	5.87	128.79	115.30
9	NF	114	ASP	CB-CG-OD2	5.87	123.58	118.30
9	WH	171	PRO	CA-N-CD	-5.87	103.29	111.50
29	D4	458	LEU	CB-CG-CD1	-5.87	101.03	111.00
9	HF	395	LEU	CA-CB-CG	5.86	128.78	115.30
9	JF	417	ASP	CB-CG-OD1	5.86	123.57	118.30
9	JJ	44	LEU	CA-CB-CG	5.86	128.78	115.30
17	B1	47	LEU	CB-CG-CD1	-5.86	101.04	111.00
44	ES	64	TYR	CB-CG-CD2	-5.86	117.48	121.00
9	O0	355	ASP	CB-CG-OD2	-5.86	113.03	118.30
9	SD	293	MET	CG-SD-CE	5.86	109.57	100.20
28	C8	152	ASP	CB-CG-OD1	5.86	123.57	118.30
8	GE	307	PRO	CA-CB-CG	-5.86	92.87	104.00
8	AK	98	ASP	CB-CG-OD1	5.85	123.57	118.30
9	IB	31	ASP	CB-CG-OD2	-5.85	113.03	118.30
9	RH	161	ASP	CB-CG-OD2	5.85	123.57	118.30
9	UB	225	LEU	CB-CG-CD1	-5.85	101.05	111.00
8	PK	306	ASP	CB-CG-OD2	5.85	123.56	118.30
8	RI	269	LEU	CA-CB-CG	5.85	128.75	115.30
8	UE	342	GLN	CA-CB-CG	5.85	126.26	113.40
8	UK	424	ASP	CB-CG-OD1	5.85	123.56	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	Aa	548	LEU	CA-CB-CG	5.84	128.74	115.30
8	BM	401	LYS	CD-CE-NZ	-5.84	98.26	111.70
8	OI	33	ASP	CB-CG-OD1	5.84	123.56	118.30
8	RC	92	LEU	CB-CG-CD1	-5.84	101.07	111.00
12	AW	51	LYS	CD-CE-NZ	-5.84	98.27	111.70
9	TD	203	ASP	CB-CG-OD1	5.84	123.56	118.30
8	KM	265	ILE	CG1-CB-CG2	-5.84	98.55	111.40
2	0k	67	LEU	CA-CB-CG	5.84	128.72	115.30
8	QG	395	LEU	CA-CB-CG	5.84	128.72	115.30
9	RJ	293	MET	CG-SD-CE	5.83	109.53	100.20
9	AH	249	ASP	CB-CG-OD1	5.83	123.55	118.30
8	SI	255	PHE	CB-CG-CD1	5.83	124.88	120.80
9	OH	161	ASP	CB-CG-OD2	5.83	123.54	118.30
6	A0	49	ARG	CA-CB-CG	5.82	126.21	113.40
44	EZ	191	LYS	CD-CE-NZ	5.82	125.09	111.70
7	Av	249	LEU	CA-CB-CG	5.82	128.69	115.30
8	MK	401	LYS	CD-CE-NZ	-5.82	98.31	111.70
9	OH	299	MET	CB-CG-SD	5.82	129.86	112.40
8	KK	322	ASP	CB-CG-OD2	5.82	123.53	118.30
59	a	229	MET	CA-CB-CG	-5.82	103.41	113.30
8	ME	116	ASP	CB-CG-OD1	5.82	123.53	118.30
17	B0	34	LEU	CA-CB-CG	5.81	128.67	115.30
8	DE	275	VAL	CG1-CB-CG2	-5.81	101.60	110.90
9	EJ	74	ASP	CB-CG-OD1	5.81	123.53	118.30
9	OJ	355	ASP	CB-CG-OD2	-5.81	113.07	118.30
9	DL	263	LEU	CA-CB-CG	5.81	128.66	115.30
9	DB	44	LEU	CA-CB-CG	5.81	128.66	115.30
8	II	33	ASP	CB-CG-OD2	5.81	123.53	118.30
9	IN	118	ASP	CB-CG-OD1	5.81	123.53	118.30
8	TE	98	ASP	CB-CG-OD2	5.81	123.53	118.30
29	DS	165	ARG	CG-CD-NE	-5.80	99.61	111.80
8	CG	326	LYS	CD-CE-NZ	-5.80	98.35	111.70
52	P	50	GLU	CA-CB-CG	5.80	126.16	113.40
21	Bj	116	LEU	CA-CB-CG	5.80	128.64	115.30
43	E4	160	PRO	N-CA-CB	5.80	110.26	103.30
23	Bg	73	MET	CG-SD-CE	-5.80	90.93	100.20
29	D6	159	LEU	CB-CG-CD2	-5.80	101.14	111.00
9	EB	112	LEU	CB-CG-CD2	5.80	120.86	111.00
8	HK	35	GLN	C-N-CA	5.79	136.19	121.70
26	Bq	27	PRO	N-CD-CG	-5.79	94.51	103.20
8	WK	171	ILE	C-N-CA	5.79	136.18	121.70
2	0C	77	LEU	CB-CG-CD2	5.79	120.84	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	BZ	233	MET	CB-CG-SD	-5.79	95.03	112.40
8	JI	286	LEU	CA-CB-CG	5.79	128.62	115.30
8	CI	268	PRO	N-CA-CB	-5.79	96.23	102.60
9	FJ	311	LEU	CA-CB-CG	5.79	128.61	115.30
9	SB	128	ASP	CB-CG-OD2	5.79	123.51	118.30
9	TB	258	VAL	CG1-CB-CG2	-5.79	101.64	110.90
9	WF	267	MET	CA-CB-CG	5.79	123.14	113.30
9	DL	284	LEU	CA-CB-CG	5.78	128.60	115.30
9	TB	300	MET	CG-SD-CE	5.78	109.45	100.20
3	1	115	LEU	CA-CB-CG	5.78	128.59	115.30
9	GN	417	ASP	CB-CG-OD1	5.78	123.50	118.30
8	SE	245	ASP	CB-CG-OD1	5.78	123.50	118.30
29	D5	399	LEU	CA-CB-CG	5.78	128.59	115.30
29	DW	240	ASP	CB-CG-OD1	5.78	123.50	118.30
9	UD	324	LYS	CD-CE-NZ	-5.78	98.41	111.70
7	A1	74	PRO	N-CD-CG	-5.78	94.53	103.20
8	CA	227	LEU	CA-CB-CG	5.78	128.58	115.30
9	CF	257	MET	CG-SD-CE	-5.78	90.96	100.20
9	QF	272	PRO	CB-CG-CD	-5.78	83.98	106.50
9	RJ	150	LEU	CA-CB-CG	5.78	128.59	115.30
5	B	148	LEU	CA-CB-CG	5.77	128.58	115.30
14	Bb	87	PRO	CA-N-CD	-5.77	103.42	111.50
9	GF	361	LEU	CB-CG-CD2	-5.77	101.19	111.00
9	IN	44	LEU	CA-CB-CG	5.77	128.58	115.30
2	CU	97	LEU	CA-CB-CG	5.77	128.57	115.30
9	IL	31	ASP	CB-CG-OD2	5.77	123.49	118.30
7	A2	20	MET	CA-CB-CG	5.77	123.11	113.30
8	DE	268	PRO	CA-N-CD	-5.77	103.42	111.50
9	KH	44	LEU	CA-CB-CG	5.77	128.56	115.30
8	SA	286	LEU	CB-CG-CD1	-5.77	101.19	111.00
9	VB	130	LEU	CA-CB-CG	5.77	128.57	115.30
29	EP	477	LYS	CB-CG-CD	-5.76	96.61	111.60
9	PL	80	PRO	N-CD-CG	-5.76	94.56	103.20
8	TI	304	LYS	CA-CB-CG	5.76	126.08	113.40
8	TK	46	ASP	CB-CG-OD2	5.76	123.49	118.30
8	NK	123	ARG	CG-CD-NE	-5.76	99.71	111.80
36	Dc	168	LEU	CB-CG-CD2	-5.76	101.21	111.00
8	PI	160	ASP	CB-CG-OD2	-5.75	113.12	118.30
7	Ay	20	MET	CA-CB-CG	5.75	123.08	113.30
9	FD	73	MET	CG-SD-CE	-5.75	90.99	100.20
8	QA	87	PHE	C-N-CA	5.75	136.08	121.70
9	GL	406	MET	CG-SD-CE	5.75	109.40	100.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	HI	424	ASP	CB-CG-OD1	5.75	123.48	118.30
9	UB	267	MET	CG-SD-CE	-5.75	91.00	100.20
8	EK	116	ASP	CB-CG-OD2	-5.74	113.13	118.30
8	OE	345	ASP	CB-CG-OD2	-5.74	113.13	118.30
2	CY	58	CYS	CA-CB-SG	5.74	124.33	114.00
8	BM	367	ASP	CB-CG-OD2	5.74	123.46	118.30
8	LK	47	ASP	CB-CG-OD2	-5.74	113.14	118.30
8	TC	69	ASP	CB-CG-OD1	5.74	123.46	118.30
29	D6	99	ASP	CB-CG-OD1	5.73	123.46	118.30
9	GB	216	LYS	CA-CB-CG	5.73	126.02	113.40
9	EJ	161	ASP	CB-CG-OD1	5.73	123.46	118.30
8	TI	347	CYS	CA-CB-SG	5.73	124.32	114.00
9	DD	284	LEU	CA-CB-CG	5.73	128.48	115.30
8	VK	413	MET	CG-SD-CE	-5.73	91.03	100.20
9	RD	118	ASP	CB-CG-OD1	5.73	123.45	118.30
42	F	297	LYS	CA-CB-CG	5.73	126.00	113.40
8	IM	424	ASP	CB-CG-OD1	-5.73	113.15	118.30
9	NH	331	LEU	CA-CB-CG	5.73	128.47	115.30
8	NI	367	ASP	CB-CG-OD1	5.73	123.45	118.30
9	DH	263	LEU	CA-CB-CG	5.72	128.47	115.30
28	F4	148	GLU	CB-CA-C	5.72	121.85	110.40
9	ND	304	ASP	CB-CG-OD1	5.72	123.45	118.30
9	FD	74	ASP	CB-CG-OD1	5.72	123.45	118.30
45	G	297	ASP	CB-CG-OD1	5.72	123.45	118.30
8	GK	413	MET	CG-SD-CE	-5.72	91.05	100.20
7	Au	249	LEU	CA-CB-CG	5.72	128.45	115.30
28	F3	255	GLU	CG-CD-OE1	5.72	129.73	118.30
8	AM	98	ASP	CB-CG-OD1	5.71	123.44	118.30
14	Bb	189	PRO	CA-N-CD	-5.71	103.50	111.50
41	Dn	213	MET	CG-SD-CE	5.71	109.34	100.20
9	QB	15	GLN	CA-CB-CG	5.71	125.97	113.40
9	TB	330	MET	CA-CB-CG	-5.71	103.59	113.30
9	VJ	377	LEU	CA-CB-CG	5.71	128.44	115.30
20	BS	357	LEU	CA-CB-CG	5.71	128.44	115.30
9	FD	171	PRO	C-N-CA	5.71	135.98	121.70
9	BF	357	PRO	CA-CB-CG	-5.71	93.15	104.00
33	Cw	376	ASP	CB-CG-OD1	5.71	123.44	118.30
8	NA	160	ASP	CB-CG-OD1	5.71	123.44	118.30
8	DK	280	LYS	CD-CE-NZ	-5.71	98.58	111.70
8	UM	306	ASP	CB-CG-OD1	5.71	123.44	118.30
39	Dj	80	LEU	CB-CG-CD1	-5.70	101.30	111.00
9	HF	285	THR	OG1-CB-CG2	-5.70	96.88	110.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	RH	187	LEU	CA-CB-CG	5.70	128.41	115.30
8	RK	33	ASP	CB-CG-OD1	5.70	123.43	118.30
9	CH	253	LEU	CA-CB-CG	5.70	128.41	115.30
9	DD	240	LEU	CA-CB-CG	5.70	128.41	115.30
3	1	144	SER	C-N-CD	5.70	140.36	128.40
8	AA	128	LEU	CA-CB-CG	5.70	128.40	115.30
16	Ax	148	GLU	CA-CB-CG	5.70	125.93	113.40
9	PJ	284	LEU	CA-CB-CG	5.70	128.40	115.30
8	FM	128	LEU	CA-CB-CG	5.69	128.40	115.30
2	CV	126	LEU	CA-CB-CG	5.69	128.39	115.30
49	K1	20	LEU	CB-CG-CD1	5.69	120.67	111.00
29	D5	393	LYS	CG-CD-CE	-5.68	94.85	111.90
9	QB	415	MET	CB-CG-SD	5.68	129.45	112.40
32	Cp	130	ASP	CB-CG-OD2	5.68	123.41	118.30
9	DJ	263	LEU	CB-CG-CD1	-5.68	101.34	111.00
9	UD	228	LEU	CA-CB-CG	5.68	128.37	115.30
9	UL	41	ASP	CB-CG-OD1	5.68	123.41	118.30
32	Co	283	ASP	CB-CG-OD1	-5.68	113.19	118.30
8	RM	245	ASP	CB-CG-OD2	5.68	123.41	118.30
9	LN	304	ASP	CB-CG-OD2	5.68	123.41	118.30
9	UF	67	ASP	CB-CG-OD1	5.68	123.41	118.30
7	A8	172	PHE	CB-CG-CD1	5.68	124.77	120.80
3	1	145	PRO	N-CA-CB	-5.67	96.36	102.60
9	VJ	31	ASP	CB-CG-OD2	-5.67	113.20	118.30
8	DK	172	TYR	CA-CB-CG	5.67	124.17	113.40
2	Cd	148	LEU	CB-CG-CD2	-5.67	101.36	111.00
2	CZ	87	LEU	CB-CG-CD1	-5.67	101.37	111.00
13	Ad	5	LYS	CD-CE-NZ	-5.67	98.67	111.70
8	CI	184	PRO	CA-N-CD	-5.66	103.57	111.50
9	WH	161	ASP	CB-CG-OD1	5.66	123.40	118.30
28	F3	371	GLU	OE1-CD-OE2	-5.66	116.51	123.30
8	JI	33	ASP	CB-CG-OD1	5.66	123.39	118.30
9	PF	31	ASP	CB-CG-OD2	-5.66	113.21	118.30
2	CT	10	ARG	CG-CD-NE	-5.66	99.92	111.80
9	MB	73	MET	CG-SD-CE	-5.66	91.15	100.20
46	o	365	LEU	CA-CB-CG	5.66	128.31	115.30
12	AV	146	LEU	CA-CB-CG	5.65	128.30	115.30
9	JJ	58	LYS	CD-CE-NZ	-5.65	98.69	111.70
29	D8	177	LYS	CD-CE-NZ	-5.65	98.71	111.70
8	KE	69	ASP	CB-CG-OD2	5.65	123.38	118.30
8	IO	189	LEU	CA-CB-CG	5.64	128.28	115.30
9	PL	415	MET	CA-CB-CG	-5.64	103.71	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	DD	130	LEU	CA-CB-CG	5.64	128.28	115.30
46	o	402	GLU	CA-CB-CG	5.64	125.81	113.40
2	Ca	72	ASP	CB-CG-OD1	5.64	123.38	118.30
8	WG	397	LEU	CA-CB-CG	5.64	128.27	115.30
47	Y	313	LEU	CB-CG-CD2	-5.64	101.41	111.00
32	Co	130	ASP	CB-CG-OD2	5.64	123.37	118.30
45	G	539	LYS	CD-CE-NZ	5.64	124.67	111.70
9	BL	350	LYS	CD-CE-NZ	-5.64	98.74	111.70
2	Ck	13	GLU	CA-CB-CG	5.64	125.80	113.40
8	HM	120	ASP	CB-CG-OD1	5.64	123.37	118.30
52	P	51	LEU	CB-CG-CD2	5.64	120.58	111.00
9	CH	26	ASP	CB-CG-OD1	-5.63	113.23	118.30
8	OC	424	ASP	CB-CG-OD2	5.63	123.37	118.30
8	OK	359	PRO	CA-N-CD	-5.63	103.61	111.50
2	0g	33	CYS	CA-CB-SG	5.63	124.14	114.00
9	OJ	1	MET	CB-CG-SD	-5.63	95.50	112.40
28	C9	209	ASP	CB-CG-OD1	5.63	123.37	118.30
8	FC	116	ASP	CB-CG-OD2	-5.63	113.23	118.30
7	A1	11	ARG	CB-CG-CD	5.63	126.24	111.60
9	OL	355	ASP	CB-CG-OD2	-5.63	113.23	118.30
29	DV	355	ASP	CB-CG-OD1	5.63	123.37	118.30
14	Al	27	LEU	CA-CB-CG	5.63	128.24	115.30
9	RD	147	MET	CB-CG-SD	5.63	129.28	112.40
8	CC	261	PRO	N-CD-CG	-5.62	94.77	103.20
9	RL	273	LEU	CB-CG-CD2	-5.62	101.44	111.00
9	TB	330	MET	CB-CG-SD	5.62	129.27	112.40
9	TL	418	LEU	CA-CB-CG	5.62	128.24	115.30
9	BB	415	MET	CG-SD-CE	5.62	109.20	100.20
2	0a	97	LEU	CB-CG-CD2	-5.62	101.45	111.00
8	WG	157	LEU	CA-CB-CG	5.62	128.22	115.30
8	DG	431	ASP	CB-CG-OD2	5.62	123.35	118.30
8	PM	431	ASP	CB-CG-OD1	5.62	123.35	118.30
29	D3	245	ASP	CB-CG-OD1	5.61	123.35	118.30
8	KE	127	ASP	CB-CG-OD1	5.61	123.35	118.30
9	WL	377	LEU	CA-CB-CG	5.61	128.21	115.30
8	RC	242	LEU	CA-CB-CG	5.61	128.20	115.30
56	XH	99	VAL	CG1-CB-CG2	-5.61	101.92	110.90
7	Au	223	PRO	CA-N-CD	-5.61	103.65	111.50
29	DR	208	ASP	CB-CG-OD2	5.61	123.35	118.30
9	KF	417	ASP	CB-CG-OD1	5.61	123.35	118.30
9	OH	299	MET	CG-SD-CE	5.61	109.17	100.20
29	DT	380	LEU	CA-CB-CG	5.61	128.19	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	Cz	173	LEU	CA-CB-CG	5.60	128.18	115.30
9	CB	284	LEU	CA-CB-CG	5.60	128.18	115.30
2	0c	146	LEU	CB-CG-CD1	-5.60	101.48	111.00
8	IG	33	ASP	CB-CG-OD2	5.60	123.34	118.30
9	AH	324	LYS	CB-CG-CD	5.60	126.15	111.60
37	De	256	LEU	CB-CG-CD1	5.60	120.51	111.00
8	SI	128	LEU	CA-CB-CG	5.59	128.17	115.30
9	DH	300	MET	CG-SD-CE	-5.59	91.25	100.20
9	VD	233	MET	CG-SD-CE	-5.59	91.25	100.20
28	C5	467	TYR	CB-CG-CD1	-5.59	117.64	121.00
44	EW	431	MET	CG-SD-CE	5.59	109.15	100.20
9	RF	130	LEU	CA-CB-CG	5.59	128.16	115.30
8	ME	424	ASP	CB-CG-OD1	5.59	123.33	118.30
9	OJ	291	GLN	CA-CB-CG	-5.59	101.10	113.40
9	DB	167	PHE	CB-CG-CD2	-5.59	116.89	120.80
9	EH	404	ASP	CB-CG-OD1	5.59	123.33	118.30
9	PB	331	LEU	CA-CB-CG	5.58	128.15	115.30
8	AE	230	LEU	CA-CB-CG	5.58	128.14	115.30
8	CG	120	ASP	CB-CG-OD1	5.58	123.32	118.30
8	DK	89	PRO	N-CD-CG	-5.58	94.83	103.20
8	VM	286	LEU	CA-CB-CG	5.58	128.13	115.30
9	JJ	45	GLU	CG-CD-OE2	5.58	129.46	118.30
9	TF	249	ASP	CB-CG-OD1	5.58	123.32	118.30
8	WM	33	ASP	CB-CG-OD2	5.58	123.32	118.30
8	AA	438	ASP	CB-CG-OD1	-5.57	113.28	118.30
8	QG	398	MET	CB-CA-C	5.57	121.54	110.40
9	UB	318	ARG	CG-CD-NE	5.57	123.50	111.80
56	XM	72	LYS	CB-CG-CD	-5.57	97.12	111.60
9	HB	213	ARG	CA-CB-CG	5.57	125.65	113.40
9	IL	330	MET	CB-CG-SD	5.57	129.10	112.40
59	d	520	LEU	CA-CB-CG	5.57	128.10	115.30
2	Ce	126	LEU	CA-CB-CG	5.57	128.10	115.30
9	OH	26	ASP	CB-CG-OD2	5.57	123.31	118.30
8	PM	116	ASP	CB-CG-OD2	5.57	123.31	118.30
8	VK	33	ASP	CB-CG-OD2	5.57	123.31	118.30
9	VL	284	LEU	CA-CB-CG	5.57	128.10	115.30
7	Aw	46	LEU	CA-CB-CG	5.56	128.10	115.30
27	Br	93	LEU	CA-CB-CG	5.56	128.09	115.30
2	Cc	55	GLU	C-N-CA	-5.56	107.80	121.70
13	Ab	314	LEU	CA-CB-CG	5.56	128.09	115.30
9	WH	267	MET	CG-SD-CE	-5.56	91.30	100.20
59	b	284	MET	CA-CB-CG	5.56	122.75	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	SG	160	ASP	CB-CG-OD1	5.56	123.30	118.30
9	LH	316	VAL	CG1-CB-CG2	-5.55	102.02	110.90
9	RB	39	ASP	CB-CG-OD1	5.55	123.30	118.30
8	AK	120	ASP	CB-CG-OD2	5.55	123.30	118.30
2	Ch	30	LEU	CB-CG-CD2	5.55	120.44	111.00
8	LC	391	LEU	CA-CB-CG	5.55	128.07	115.30
61	h	34	LEU	CA-CB-CG	5.55	128.07	115.30
8	GG	345	ASP	CB-CG-OD2	5.55	123.29	118.30
59	b	309	MET	CB-CG-SD	5.54	129.03	112.40
29	D3	379	MET	CA-CB-CG	5.54	122.72	113.30
8	TI	251	ASP	CB-CG-OD1	5.54	123.29	118.30
9	PB	1	MET	CG-SD-CE	5.54	109.06	100.20
2	0C	150	LYS	CA-CB-CG	5.54	125.58	113.40
29	D1	313	MET	CG-SD-CE	-5.54	91.34	100.20
8	EI	227	LEU	CB-CG-CD1	-5.54	101.59	111.00
50	L2	70	LEU	CA-CB-CG	5.53	128.03	115.30
9	LB	299	MET	CB-CG-SD	5.53	129.00	112.40
8	NI	396	ASP	CB-CG-OD1	-5.53	113.32	118.30
2	0A	150	LYS	CA-CB-CG	5.53	125.55	113.40
20	BS	305	VAL	CG1-CB-CG2	-5.52	102.06	110.90
8	DI	154	MET	CG-SD-CE	-5.52	91.37	100.20
8	FK	117	LEU	CA-CB-CG	5.52	128.00	115.30
9	PB	228	LEU	CA-CB-CG	5.52	127.99	115.30
8	SE	132	LEU	CA-CB-CG	5.52	128.00	115.30
9	SJ	187	LEU	CA-CB-CG	5.52	128.00	115.30
8	RA	157	LEU	CA-CB-CG	5.52	127.99	115.30
8	CM	339	ARG	CA-CB-CG	5.51	125.53	113.40
7	Ay	139	PRO	CB-CG-CD	5.51	127.99	106.50
8	DA	195	LEU	CB-CG-CD1	5.51	120.37	111.00
9	JD	377	LEU	CA-CB-CG	5.51	127.98	115.30
2	0Y	39	ASP	CB-CG-OD1	5.51	123.26	118.30
9	WB	44	LEU	CA-CB-CG	5.51	127.97	115.30
14	Bc	101	LEU	CA-CB-CG	5.50	127.96	115.30
21	Bk	303	ARG	CG-CD-NE	-5.50	100.24	111.80
9	TB	147	MET	CB-CG-SD	5.50	128.90	112.40
8	IO	431	ASP	CB-CG-OD2	5.50	123.25	118.30
9	TF	355	ASP	CB-CG-OD1	5.50	123.25	118.30
9	WN	179	VAL	CG1-CB-CG2	5.50	119.70	110.90
60	e	547	LEU	CA-CB-CG	5.50	127.94	115.30
40	Dm	79	ASP	CB-CG-OD2	5.50	123.25	118.30
8	EM	397	LEU	CA-CB-CG	5.50	127.94	115.30
9	CD	26	ASP	CB-CG-OD2	-5.49	113.36	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	F6	46	LEU	CA-CB-CG	5.49	127.93	115.30
14	CO	255	LEU	CB-CG-CD2	5.49	120.33	111.00
52	P	86	LEU	CA-CB-CG	5.49	127.92	115.30
9	FD	20	PHE	CB-CG-CD1	5.48	124.64	120.80
8	QA	364	PRO	CB-CG-CD	5.48	127.87	106.50
9	TH	26	ASP	CB-CG-OD2	-5.48	113.37	118.30
9	BD	362	LYS	CA-CB-CG	5.47	125.44	113.40
2	Cg	54	MET	CB-CG-SD	5.47	128.83	112.40
47	X	287	PRO	CA-CB-CG	-5.47	93.60	104.00
2	CY	146	LEU	CB-CG-CD2	-5.47	101.70	111.00
52	P	67	LEU	CA-CB-CG	5.47	127.88	115.30
9	RJ	31	ASP	CB-CG-OD2	5.47	123.22	118.30
2	Ci	54	MET	CG-SD-CE	-5.47	91.45	100.20
9	VL	171	PRO	C-N-CA	5.47	135.37	121.70
9	OF	41	ASP	CB-CG-OD2	5.46	123.22	118.30
59	b	232	VAL	CG1-CB-CG2	-5.46	102.16	110.90
47	I	19	ASP	CB-CG-OD1	-5.46	113.39	118.30
9	VH	324	LYS	CD-CE-NZ	-5.46	99.15	111.70
29	Cz	391	PRO	CA-N-CD	-5.46	103.86	111.50
29	D0	386	MET	CG-SD-CE	5.46	108.93	100.20
29	EP	114	LEU	CA-CB-CG	5.46	127.85	115.30
8	PI	395	LEU	CB-CG-CD1	5.46	120.27	111.00
29	D3	238	ARG	CG-CD-NE	5.46	123.25	111.80
1	V	184	LYS	CD-CE-NZ	-5.46	99.15	111.70
9	AL	299	MET	CG-SD-CE	-5.45	91.48	100.20
8	RE	391	LEU	CB-CG-CD2	-5.45	101.73	111.00
9	HF	1	MET	CG-SD-CE	-5.45	91.48	100.20
9	NL	171	PRO	C-N-CA	5.45	135.32	121.70
8	RC	269	LEU	CA-CB-CG	5.45	127.83	115.30
2	Cb	58	CYS	CA-CB-SG	5.45	123.80	114.00
2	Cg	104	LEU	CA-CB-CG	5.45	127.82	115.30
9	DB	130	LEU	CA-CB-CG	5.44	127.82	115.30
8	RE	120	ASP	CB-CG-OD2	5.44	123.20	118.30
9	EH	67	ASP	CB-CG-OD2	5.44	123.20	118.30
9	NB	357	PRO	CA-CB-CG	-5.44	93.66	104.00
8	RK	84	ARG	CB-CG-CD	-5.44	97.45	111.60
9	UB	299	MET	CG-SD-CE	5.44	108.91	100.20
8	QG	23	LEU	CA-CB-CG	5.44	127.81	115.30
57	YL	255	LEU	CA-CB-CG	5.44	127.81	115.30
9	AD	377	LEU	CA-CB-CG	5.44	127.81	115.30
9	CL	284	LEU	CA-CB-CG	5.44	127.81	115.30
29	Cz	260	LYS	CD-CE-NZ	-5.44	99.19	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	TJ	403	MET	CA-CB-CG	5.43	122.54	113.30
32	Co	395	LYS	CG-CD-CE	-5.43	95.60	111.90
8	QK	313	MET	CA-CB-CG	5.43	122.53	113.30
9	RF	187	LEU	CA-CB-CG	5.43	127.79	115.30
9	DJ	330	MET	CA-CB-CG	5.43	122.53	113.30
8	GK	286	LEU	CB-CG-CD1	5.43	120.23	111.00
9	RJ	330	MET	CA-CB-CG	-5.43	104.07	113.30
9	VJ	209	ASP	CB-CG-OD2	-5.43	113.41	118.30
60	e	98	LEU	CB-CG-CD1	-5.43	101.77	111.00
9	AF	249	ASP	CB-CG-OD1	5.43	123.19	118.30
8	PI	367	ASP	CB-CG-OD1	5.43	123.18	118.30
9	RH	263	LEU	CA-CB-CG	5.43	127.78	115.30
9	MJ	406	MET	CA-CB-CG	5.42	122.52	113.30
9	NJ	293	MET	CA-CB-CG	5.42	122.52	113.30
23	Bf	95	GLN	CB-CA-C	5.42	121.24	110.40
47	X	166	LYS	CD-CE-NZ	-5.42	99.23	111.70
8	BI	167	LEU	CB-CG-CD1	-5.42	101.79	111.00
9	PH	284	LEU	CA-CB-CG	5.42	127.76	115.30
9	QL	419	VAL	CG1-CB-CG2	-5.42	102.23	110.90
8	RG	16	ILE	CG1-CB-CG2	-5.42	99.48	111.40
9	VJ	297	LYS	CD-CE-NZ	-5.42	99.24	111.70
2	0g	9	LEU	CA-CB-CG	5.42	127.76	115.30
9	RB	233	MET	CA-CB-CG	5.42	122.51	113.30
8	SG	199	ASP	CB-CG-OD2	5.42	123.17	118.30
8	DA	157	LEU	CB-CG-CD1	-5.42	101.80	111.00
8	EM	152	LEU	CA-CB-CG	5.41	127.75	115.30
8	GM	39	ASP	CB-CG-OD2	5.41	123.17	118.30
8	KM	392	ASP	CB-CG-OD1	5.41	123.17	118.30
60	g	38	ASP	CB-CG-OD2	5.41	123.17	118.30
8	PI	26	LEU	CA-CB-CG	5.41	127.74	115.30
8	PM	47	ASP	CB-CG-OD2	5.41	123.17	118.30
8	TM	424	ASP	CB-CG-OD1	5.41	123.17	118.30
9	NH	41	ASP	CB-CG-OD2	-5.41	113.44	118.30
9	ID	1	MET	CA-CB-CG	5.40	122.49	113.30
9	N0	197	ASP	CB-CG-OD1	5.40	123.16	118.30
8	BE	120	ASP	CB-CG-OD1	5.40	123.16	118.30
2	Cd	98	LEU	CB-CG-CD2	-5.40	101.82	111.00
8	BK	248	LEU	CA-CB-CG	5.40	127.72	115.30
8	DC	397	LEU	CA-CB-CG	5.40	127.72	115.30
5	C	168	LEU	CB-CG-CD1	-5.40	101.82	111.00
2	0E	26	PHE	CB-CG-CD1	5.40	124.58	120.80
9	AJ	32	PRO	CA-N-CD	-5.39	103.95	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	Au	228	MET	CB-CG-SD	5.39	128.58	112.40
8	FK	209	ILE	CG1-CB-CG2	-5.39	99.53	111.40
9	HJ	1	MET	CB-CG-SD	-5.39	96.22	112.40
9	SF	404	ASP	CB-CG-OD1	5.39	123.16	118.30
9	HD	44	LEU	CB-CG-CD2	-5.39	101.83	111.00
9	VL	267	MET	CG-SD-CE	-5.39	91.57	100.20
32	Cm	130	ASP	CB-CG-OD1	5.39	123.15	118.30
48	J	138	LEU	CB-CG-CD2	5.39	120.16	111.00
9	ML	31	ASP	CB-CG-OD1	5.38	123.15	118.30
8	WG	125	LEU	CA-CB-CG	5.38	127.68	115.30
33	Cw	10	PRO	CA-N-CD	-5.38	103.97	111.50
8	HO	203	MET	CG-SD-CE	-5.38	91.59	100.20
9	UN	41	ASP	CB-CG-OD1	-5.38	113.46	118.30
9	VN	161	ASP	CB-CG-OD2	5.38	123.14	118.30
2	Cb	87	LEU	CB-CG-CD2	5.38	120.15	111.00
9	RJ	112	LEU	CA-CB-CG	5.38	127.67	115.30
29	DX	455	GLU	CA-CB-CG	5.38	125.23	113.40
9	QB	73	MET	CG-SD-CE	-5.38	91.59	100.20
9	RD	330	MET	CB-CG-SD	-5.38	96.26	112.40
9	N0	130	LEU	CA-CB-CG	5.38	127.66	115.30
9	TB	377	LEU	CA-CB-CG	5.38	127.66	115.30
56	XM	178	PRO	N-CD-CG	-5.38	95.14	103.20
9	CJ	297	LYS	CB-CG-CD	5.37	125.57	111.60
8	QM	171	ILE	C-N-CA	5.37	135.13	121.70
9	WN	257	MET	CB-CG-SD	5.37	128.51	112.40
29	DS	468	ASP	CB-CG-OD1	5.37	123.13	118.30
9	EF	88	ASP	CB-CG-OD2	5.37	123.13	118.30
29	EP	257	LEU	CA-CB-CG	5.37	127.64	115.30
9	TF	327	ASP	CB-CG-OD2	-5.37	113.47	118.30
9	UF	207	LEU	CA-CB-CG	5.37	127.64	115.30
2	0i	141	LEU	CB-CG-CD1	-5.37	101.88	111.00
8	BI	430	LYS	CA-CB-CG	5.37	125.21	113.40
3	2	138	CYS	CA-CB-SG	5.36	123.65	114.00
8	BE	33	ASP	CB-CG-OD1	5.36	123.13	118.30
9	HN	118	ASP	CB-CG-OD2	5.36	123.13	118.30
8	CK	377	MET	CG-SD-CE	5.36	108.78	100.20
9	N0	403	MET	CG-SD-CE	5.36	108.78	100.20
4	y	1399	MET	CB-CG-SD	-5.36	96.32	112.40
8	AA	114	ILE	CG1-CB-CG2	-5.36	99.61	111.40
8	ME	430	LYS	CD-CE-NZ	-5.36	99.38	111.70
9	JL	203	ASP	CB-CG-OD1	-5.36	113.48	118.30
8	PM	231	ILE	CG1-CB-CG2	-5.36	99.61	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	DU	329	ASP	CB-CG-OD1	5.36	123.12	118.30
9	LF	161	ASP	CB-CG-OD1	5.36	123.12	118.30
8	PA	431	ASP	CB-CG-OD1	5.36	123.12	118.30
9	VL	1	MET	CA-CB-CG	5.36	122.41	113.30
57	YL	125	PHE	CB-CG-CD1	5.36	124.55	120.80
21	Bj	86	ASP	CB-CG-OD1	5.35	123.12	118.30
9	QD	31	ASP	CB-CG-OD1	-5.35	113.48	118.30
9	FJ	336	LYS	CA-CB-CG	5.35	125.17	113.40
9	UN	135	LEU	CA-CB-CG	5.35	127.61	115.30
9	WJ	323	MET	CA-CB-CG	-5.35	104.20	113.30
8	AK	69	ASP	CB-CG-OD1	5.35	123.11	118.30
9	VF	261	PRO	CB-CA-C	5.35	125.37	112.00
2	Ck	146	LEU	CA-CB-CG	5.35	127.60	115.30
8	DK	157	LEU	CA-CB-CG	5.35	127.60	115.30
8	IO	98	ASP	CB-CG-OD1	5.35	123.11	118.30
9	VB	192	LEU	CA-CB-CG	5.35	127.60	115.30
59	a	230	MET	CA-CB-CG	5.35	122.39	113.30
9	BD	357	PRO	N-CD-CG	-5.35	95.18	103.20
9	HJ	357	PRO	CA-N-CD	-5.35	104.02	111.50
9	IF	257	MET	CG-SD-CE	5.35	108.75	100.20
8	AK	392	ASP	CB-CG-OD1	5.34	123.11	118.30
28	C5	467	TYR	CB-CG-CD2	5.34	124.21	121.00
33	Cs	13	ARG	NE-CZ-NH1	5.34	122.97	120.30
2	0k	58	CYS	CA-CB-SG	5.34	123.62	114.00
9	ID	19	LYS	CD-CE-NZ	-5.34	99.41	111.70
3	1	126	LEU	CA-CB-CG	5.34	127.59	115.30
8	IK	177	VAL	CG1-CB-CG2	-5.34	102.36	110.90
9	SD	324	LYS	CD-CE-NZ	-5.34	99.42	111.70
8	FI	69	ASP	CB-CG-OD2	5.34	123.10	118.30
9	FB	171	PRO	CA-CB-CG	-5.33	93.86	104.00
9	NH	216	LYS	CA-CB-CG	5.33	125.13	113.40
9	QL	346	PRO	N-CD-CG	-5.33	95.20	103.20
8	EM	211	ASP	CB-CG-OD2	5.33	123.10	118.30
8	QM	398	MET	CG-SD-CE	-5.33	91.68	100.20
9	UJ	304	ASP	CB-CG-OD2	5.33	123.09	118.30
9	VB	284	LEU	CA-CB-CG	5.33	127.55	115.30
2	Ck	139	VAL	CG1-CB-CG2	-5.33	102.38	110.90
20	BT	154	LEU	CA-CB-CG	5.33	127.55	115.30
29	DW	437	LEU	CA-CB-CG	5.33	127.55	115.30
9	FN	164	MET	CB-CG-SD	5.33	128.38	112.40
9	QD	31	ASP	CB-CG-OD2	5.33	123.09	118.30
13	Ab	671	GLU	CA-CB-CG	5.32	125.11	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	LM	120	ASP	CB-CG-OD1	5.32	123.09	118.30
21	BU	1	MET	CG-SD-CE	5.32	108.71	100.20
2	CZ	121	ASP	CB-CG-OD1	5.32	123.09	118.30
2	Ci	26	PHE	CB-CG-CD1	5.32	124.53	120.80
8	HK	317	MET	CG-SD-CE	-5.32	91.69	100.20
9	QD	293	MET	CG-SD-CE	-5.32	91.69	100.20
47	Y	365	PRO	CB-CG-CD	-5.32	85.75	106.50
9	KN	88	ASP	CB-CG-OD2	5.32	123.09	118.30
9	ND	209	ASP	CB-CG-OD2	-5.32	113.51	118.30
9	RD	233	MET	CA-CB-CG	5.32	122.34	113.30
9	BH	362	LYS	CB-CG-CD	-5.32	97.78	111.60
8	RG	245	ASP	CB-CG-OD2	5.31	123.08	118.30
9	TH	257	MET	CG-SD-CE	-5.31	91.70	100.20
8	EC	157	LEU	CA-CB-CG	5.31	127.52	115.30
8	EC	302	MET	CA-CB-CG	5.31	122.33	113.30
32	Cp	258	ASP	CB-CG-OD1	5.31	123.08	118.30
16	At	254	LEU	CA-CB-CG	5.31	127.51	115.30
8	PE	251	ASP	CB-CG-OD1	5.31	123.08	118.30
11	AT	331	LYS	CA-CB-CG	5.31	125.08	113.40
44	EU	407	ASP	CB-CG-OD2	5.31	123.08	118.30
8	GI	428	LEU	CB-CG-CD2	-5.31	101.98	111.00
66	u	396	LEU	CB-CG-CD2	5.31	120.02	111.00
13	Ab	639	LEU	CA-CB-CG	5.30	127.50	115.30
9	QJ	311	LEU	CA-CB-CG	5.30	127.50	115.30
9	CB	147	MET	CG-SD-CE	-5.30	91.72	100.20
8	IO	252	LEU	CA-CB-CG	5.30	127.49	115.30
9	KD	31	ASP	CB-CG-OD1	5.30	123.07	118.30
2	Cf	111	LEU	CB-CG-CD1	5.30	120.01	111.00
9	CB	253	LEU	CA-CB-CG	5.30	127.48	115.30
29	D0	404	ARG	CG-CD-NE	-5.30	100.68	111.80
8	GE	306	ASP	CB-CG-OD2	5.30	123.07	118.30
9	LH	26	ASP	CB-CG-OD1	-5.30	113.53	118.30
9	OH	177	ASP	CB-CG-OD2	5.30	123.07	118.30
13	Ab	5	LYS	CD-CE-NZ	-5.29	99.53	111.70
7	Au	249	LEU	CB-CG-CD2	5.29	120.00	111.00
2	CT	148	LEU	CA-CB-CG	5.29	127.47	115.30
42	E	731	LEU	CA-CB-CG	5.29	127.47	115.30
44	EU	324	LYS	CA-CB-CG	5.29	125.05	113.40
44	EV	371	ASP	CB-CG-OD2	-5.29	113.53	118.30
29	D0	437	LEU	CA-CB-CG	5.29	127.47	115.30
9	TF	228	LEU	CB-CG-CD2	-5.29	102.00	111.00
29	D4	113	ARG	CB-CG-CD	-5.29	97.84	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	NA	391	LEU	CA-CB-CG	5.29	127.47	115.30
8	BI	217	LEU	CA-CB-CG	5.29	127.47	115.30
9	OL	388	MET	CA-CB-CG	5.29	122.29	113.30
8	RG	269	LEU	CA-CB-CG	5.29	127.46	115.30
8	GM	423	GLU	CA-CB-CG	5.29	125.03	113.40
9	DD	44	LEU	CA-CB-CG	5.28	127.45	115.30
8	DE	377	MET	CG-SD-CE	-5.28	91.75	100.20
8	LG	411	GLU	CB-CA-C	5.28	120.96	110.40
29	Cz	243	MET	CA-CB-CG	5.28	122.27	113.30
8	ME	392	ASP	CB-CG-OD2	-5.28	113.55	118.30
9	SJ	151	LEU	CA-CB-CG	5.28	127.44	115.30
46	o	413	ILE	CG1-CB-CG2	-5.28	99.79	111.40
8	QI	275	VAL	CG1-CB-CG2	-5.28	102.46	110.90
9	TB	252	LYS	CB-CG-CD	5.28	125.32	111.60
29	D4	245	ASP	CB-CG-OD2	5.27	123.05	118.30
2	0i	129	ASP	CB-CG-OD2	-5.27	113.56	118.30
8	GI	69	ASP	CB-CG-OD2	5.27	123.05	118.30
9	RL	187	LEU	CA-CB-CG	5.27	127.43	115.30
8	WG	4	CYS	CA-CB-SG	5.27	123.49	114.00
2	CV	146	LEU	CB-CG-CD2	-5.27	102.04	111.00
9	HB	327	ASP	CB-CG-OD2	-5.27	113.56	118.30
8	TC	60	LYS	CD-CE-NZ	-5.27	99.58	111.70
9	TF	350	LYS	CD-CE-NZ	5.27	123.82	111.70
46	o	422	ARG	CG-CD-NE	5.27	122.86	111.80
8	IK	123	ARG	CG-CD-NE	-5.27	100.74	111.80
8	QM	205	ASP	CB-CG-OD2	5.27	123.04	118.30
9	UN	212	PHE	CB-CG-CD1	5.26	124.48	120.80
8	GG	221	ARG	CA-CB-CG	5.26	124.98	113.40
9	HJ	128	ASP	CB-CG-OD2	5.26	123.04	118.30
32	Cm	37	LEU	CA-CB-CG	5.26	127.40	115.30
29	DS	228	CYS	CA-CB-SG	5.26	123.47	114.00
47	X	317	ASP	CB-CG-OD2	5.26	123.04	118.30
9	NJ	1	MET	CA-CB-CG	5.26	122.24	113.30
2	0G	54	MET	CA-CB-CG	5.26	122.24	113.30
2	Ch	54	MET	CG-SD-CE	-5.26	91.79	100.20
9	WF	406	MET	CB-CG-SD	5.26	128.17	112.40
44	EW	115	SER	N-CA-CB	5.25	118.38	110.50
8	LC	396	ASP	CB-CG-OD1	5.25	123.03	118.30
9	OL	73	MET	CB-CG-SD	5.25	128.15	112.40
9	VN	31	ASP	CB-CG-OD2	-5.25	113.57	118.30
8	CA	39	ASP	CB-CG-OD1	5.25	123.03	118.30
8	QA	89	PRO	N-CD-CG	-5.25	95.33	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	F2	176	ASP	CB-CG-OD1	5.25	123.02	118.30
27	Bs	307	LEU	CA-CB-CG	5.25	127.36	115.30
9	FL	331	LEU	CA-CB-CG	5.24	127.36	115.30
44	EX	214	ASP	CB-CG-OD2	5.24	123.02	118.30
8	NK	306	ASP	CB-CG-OD1	5.24	123.02	118.30
9	SJ	112	LEU	CA-CB-CG	5.24	127.35	115.30
8	WE	306	ASP	CB-CG-OD2	5.24	123.02	118.30
29	C1	411	CYS	CA-CB-SG	-5.24	104.57	114.00
9	ND	321	MET	CA-CB-CG	5.24	122.21	113.30
8	TG	205	ASP	CB-CG-OD1	5.24	123.02	118.30
9	TB	228	LEU	CA-CB-CG	5.24	127.34	115.30
8	DI	189	LEU	CA-CB-CG	5.24	127.34	115.30
8	AM	39	ASP	CB-CG-OD1	5.23	123.01	118.30
5	B	98	LEU	CA-CB-CG	5.23	127.34	115.30
8	UI	335	ILE	CG1-CB-CG2	-5.23	99.89	111.40
21	Bk	356	MET	CG-SD-CE	5.23	108.57	100.20
9	PJ	228	LEU	CA-CB-CG	5.23	127.33	115.30
2	Ci	114	LEU	CB-CG-CD1	-5.23	102.11	111.00
9	NL	357	PRO	N-CD-CG	-5.23	95.36	103.20
9	RD	147	MET	CG-SD-CE	5.23	108.57	100.20
9	RJ	406	MET	CA-CB-CG	5.23	122.19	113.30
9	MD	263	LEU	CB-CG-CD2	-5.23	102.11	111.00
9	GH	67	ASP	CB-CG-OD1	5.23	123.00	118.30
9	CH	257	MET	CB-CG-SD	-5.23	96.72	112.40
29	D3	428	ASP	CB-CG-OD1	-5.22	113.60	118.30
9	RF	268	PRO	CB-CA-C	5.22	125.06	112.00
9	UB	330	MET	CG-SD-CE	-5.22	91.84	100.20
13	Ad	562	MET	CA-CB-CG	5.22	122.17	113.30
28	F4	411	LEU	CA-CB-CG	5.22	127.30	115.30
8	KG	345	ASP	CB-CG-OD2	-5.22	113.60	118.30
9	SB	216	LYS	CD-CE-NZ	5.22	123.70	111.70
2	Ck	13	GLU	N-CA-CB	5.22	119.99	110.60
9	GN	41	ASP	CB-CG-OD1	5.22	123.00	118.30
43	E3	12	CYS	CA-CB-SG	5.21	123.39	114.00
9	UF	225	LEU	CA-CB-CG	5.21	127.29	115.30
8	AG	345	ASP	CB-CG-OD2	5.21	122.99	118.30
29	DT	209	LEU	CA-CB-CG	5.21	127.29	115.30
29	D8	268	GLU	CA-CB-CG	5.21	124.86	113.40
29	DS	360	LEU	CB-CG-CD2	-5.21	102.14	111.00
9	VN	293	MET	CA-CB-CG	5.21	122.16	113.30
29	EQ	441	ARG	NE-CZ-NH1	5.21	122.90	120.30
9	PB	330	MET	CB-CG-SD	5.21	128.02	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	XK	77	VAL	CG1-CB-CG2	5.21	119.23	110.90
9	BL	406	MET	CA-CB-CG	5.20	122.15	113.30
9	FJ	291	GLN	CA-CB-CG	5.20	124.85	113.40
9	OJ	164	MET	CB-CG-SD	5.20	128.01	112.40
8	PI	395	LEU	CB-CG-CD2	-5.20	102.15	111.00
9	UD	1	MET	CG-SD-CE	5.20	108.53	100.20
2	Ci	39	ASP	CB-CG-OD1	5.20	122.98	118.30
3	2	44	ASP	CB-CG-OD1	5.20	122.98	118.30
8	AC	164	LYS	CD-CE-NZ	5.20	123.66	111.70
8	QM	60	LYS	CD-CE-NZ	-5.20	99.74	111.70
2	0Y	33	CYS	CA-CB-SG	5.20	123.35	114.00
8	DA	26	LEU	CA-CB-CG	5.20	127.25	115.30
1	V	79	ARG	CG-CD-NE	-5.19	100.89	111.80
29	EP	119	MET	CB-CG-SD	-5.19	96.82	112.40
28	F2	94	TYR	C-N-CA	5.19	134.68	121.70
8	IG	306	ASP	CB-CG-OD1	5.19	122.97	118.30
8	RK	63	PRO	CA-N-CD	-5.19	104.23	111.50
3	x	247	LEU	CA-CB-CG	5.19	127.24	115.30
7	A7	211	ASP	CB-CG-OD2	-5.19	113.63	118.30
29	EP	386	MET	CA-CB-CG	5.19	122.12	113.30
9	VD	299	MET	CG-SD-CE	-5.19	91.90	100.20
9	WL	118	ASP	CB-CG-OD2	-5.19	113.63	118.30
6	A0	167	LEU	CB-CG-CD1	-5.19	102.19	111.00
8	FG	218	ASP	CB-CG-OD2	5.19	122.97	118.30
28	C8	257	ASP	CB-CG-OD1	5.18	122.97	118.30
9	DN	233	MET	CA-CB-CG	5.18	122.11	113.30
9	UL	65	LEU	CA-CB-CG	5.18	127.23	115.30
8	DM	189	LEU	CB-CG-CD1	5.18	119.81	111.00
8	HI	245	ASP	CB-CG-OD2	5.18	122.96	118.30
9	SD	263	LEU	CA-CB-CG	5.18	127.22	115.30
8	DC	33	ASP	CB-CG-OD2	5.18	122.96	118.30
9	AJ	304	ASP	CB-CG-OD1	5.18	122.96	118.30
8	AM	378	LEU	CB-CG-CD2	5.18	119.80	111.00
9	NF	191	GLN	CA-CB-CG	5.18	124.79	113.40
8	NK	154	MET	CG-SD-CE	5.18	108.48	100.20
9	VL	395	LEU	CA-CB-CG	5.18	127.20	115.30
8	CE	221	ARG	CG-CD-NE	5.17	122.66	111.80
8	QK	398	MET	CA-CB-CG	5.17	122.10	113.30
8	SE	269	LEU	CA-CB-CG	5.17	127.20	115.30
7	A1	31	LEU	CA-CB-CG	5.17	127.20	115.30
9	SD	19	LYS	CD-CE-NZ	-5.17	99.80	111.70
12	AW	247	PRO	N-CD-CG	-5.17	95.44	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	SJ	263	LEU	CA-CB-CG	5.17	127.19	115.30
29	DX	447	LEU	CB-CG-CD2	-5.17	102.22	111.00
29	EQ	393	LYS	CD-CE-NZ	-5.17	99.82	111.70
8	KE	33	ASP	CB-CG-OD1	5.17	122.95	118.30
8	FM	32	PRO	N-CD-CG	-5.17	95.45	103.20
57	YL	63	LYS	CD-CE-NZ	-5.17	99.82	111.70
9	ED	187	LEU	CB-CG-CD2	5.16	119.78	111.00
8	FC	199	ASP	CB-CG-OD1	5.16	122.95	118.30
8	SG	390	ARG	NE-CZ-NH1	5.16	122.88	120.30
8	ME	422	ARG	CD-NE-CZ	-5.16	116.37	123.60
8	VE	359	PRO	CA-N-CD	-5.16	104.28	111.50
2	0c	34	ARG	CG-CD-NE	5.16	122.63	111.80
9	CL	224	ASP	CB-CG-OD1	5.16	122.94	118.30
9	IN	192	LEU	CA-CB-CG	5.16	127.17	115.30
9	OJ	203	ASP	CB-CG-OD2	5.16	122.94	118.30
9	WN	69	GLU	C-N-CD	-5.16	109.25	120.60
9	AB	41	ASP	CB-CG-OD1	5.16	122.94	118.30
8	BK	33	ASP	CB-CG-OD1	5.16	122.94	118.30
29	EP	447	LEU	CA-CB-CG	-5.16	103.44	115.30
9	AJ	257	MET	CG-SD-CE	-5.15	91.96	100.20
29	D9	124	MET	CG-SD-CE	5.15	108.44	100.20
8	OG	116	ASP	CB-CG-OD1	5.15	122.94	118.30
9	HD	284	LEU	CA-CB-CG	5.15	127.14	115.30
8	SI	132	LEU	CB-CG-CD2	5.15	119.75	111.00
9	TB	161	ASP	CB-CG-OD1	5.15	122.93	118.30
29	DW	356	VAL	CG1-CB-CG2	-5.15	102.67	110.90
42	E	726	LYS	CA-CB-CG	5.15	124.72	113.40
28	F3	255	GLU	CG-CD-OE2	-5.15	108.01	118.30
8	NA	203	MET	CB-CG-SD	5.15	127.84	112.40
8	SE	355	ILE	CG1-CB-CG2	-5.14	100.08	111.40
9	VL	263	LEU	CA-CB-CG	5.14	127.13	115.30
35	DY	52	MET	CG-SD-CE	-5.14	91.97	100.20
9	GL	406	MET	CB-CG-SD	5.14	127.83	112.40
8	TK	60	LYS	CD-CE-NZ	-5.14	99.87	111.70
2	0k	126	LEU	CB-CG-CD1	-5.14	102.26	111.00
8	LE	322	ASP	CB-CG-OD2	5.14	122.93	118.30
9	MJ	324	LYS	CA-CB-CG	5.14	124.71	113.40
9	RB	130	LEU	CA-CB-CG	5.14	127.12	115.30
46	o	467	ASP	CB-CG-OD1	-5.14	113.67	118.30
8	DC	189	LEU	CB-CG-CD2	5.14	119.73	111.00
9	FD	377	LEU	CA-CB-CG	5.14	127.11	115.30
45	G	29	LEU	CA-CB-CG	5.13	127.11	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	Z	34	PHE	CB-CG-CD1	5.13	124.39	120.80
9	JL	272	PRO	CA-N-CD	-5.13	104.32	111.50
9	AL	257	MET	CA-CB-CG	5.13	122.02	113.30
7	A7	16	ARG	NE-CZ-NH1	5.13	122.86	120.30
8	DE	347	CYS	CA-CB-SG	5.13	123.23	114.00
9	IB	128	ASP	CB-CG-OD1	5.13	122.91	118.30
20	BS	330	ARG	CA-CB-CG	5.12	124.67	113.40
8	TM	413	MET	CA-CB-CG	5.12	122.01	113.30
2	0k	141	LEU	CA-CB-CG	5.12	127.09	115.30
9	IN	161	ASP	CB-CG-OD2	5.12	122.91	118.30
8	RC	119	LEU	CB-CG-CD1	-5.12	102.29	111.00
9	EH	73	MET	CG-SD-CE	-5.12	92.01	100.20
8	NK	119	LEU	CB-CG-CD1	-5.12	102.30	111.00
9	KB	295	ASP	CB-CG-OD2	5.12	122.91	118.30
8	KK	428	LEU	CA-CB-CG	5.12	127.07	115.30
44	EU	317	LYS	CA-CB-CG	5.12	124.66	113.40
8	OI	367	ASP	CB-CG-OD1	-5.12	113.69	118.30
33	Cw	90	ASP	CB-CG-OD2	-5.12	113.70	118.30
29	D8	240	ASP	CB-CG-OD1	5.12	122.91	118.30
9	QH	130	LEU	CA-CB-CG	5.12	127.06	115.30
8	SA	36	MET	CB-CG-SD	5.11	127.74	112.40
9	SF	192	LEU	CA-CB-CG	5.11	127.06	115.30
9	VL	406	MET	CG-SD-CE	5.11	108.38	100.20
9	PL	171	PRO	N-CD-CG	-5.11	95.53	103.20
8	BC	167	LEU	CA-CB-CG	5.11	127.05	115.30
8	DI	218	ASP	CB-CG-OD1	5.11	122.90	118.30
9	RL	228	LEU	CB-CG-CD1	-5.11	102.31	111.00
9	QH	311	LEU	CA-CB-CG	5.11	127.05	115.30
8	DM	152	LEU	CA-CB-CG	5.11	127.05	115.30
29	DW	465	LEU	CA-CB-CG	5.11	127.05	115.30
9	GH	161	ASP	CB-CG-OD1	5.11	122.90	118.30
8	HK	221	ARG	CA-CB-CG	5.11	124.63	113.40
8	CG	171	ILE	C-N-CA	5.10	134.46	121.70
29	DR	240	ASP	CB-CG-OD1	5.10	122.89	118.30
8	HC	26	LEU	CA-CB-CG	5.10	127.03	115.30
7	A8	184	ALA	C-N-CA	-5.10	108.96	121.70
8	CK	157	LEU	CA-CB-CG	5.10	127.02	115.30
29	D8	442	ASP	CB-CG-OD1	-5.10	113.71	118.30
9	GN	20	PHE	CB-CG-CD1	5.09	124.37	120.80
48	K	138	LEU	CB-CG-CD2	5.09	119.66	111.00
2	0G	39	ASP	CB-CG-OD1	5.09	122.88	118.30
2	Cd	10	ARG	CG-CD-NE	-5.09	101.11	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	NK	217	LEU	CB-CG-CD1	-5.09	102.34	111.00
9	AH	328	GLU	CG-CD-OE2	-5.09	108.12	118.30
22	BW	159	LEU	CA-CB-CG	5.09	127.00	115.30
8	DE	157	LEU	CA-CB-CG	5.09	127.01	115.30
9	SL	293	MET	CA-CB-CG	5.09	121.95	113.30
9	UJ	31	ASP	CB-CG-OD1	5.09	122.88	118.30
33	Cr	366	LEU	CB-CG-CD1	-5.08	102.36	111.00
46	o	519	MET	CB-CG-SD	5.08	127.65	112.40
28	C9	209	ASP	CB-CG-OD2	-5.08	113.72	118.30
29	D4	327	LEU	CA-CB-CG	5.08	126.99	115.30
29	DV	196	GLU	OE1-CD-OE2	-5.08	117.20	123.30
9	KD	209	ASP	CB-CG-OD1	5.08	122.88	118.30
9	DJ	42	LEU	CA-CB-CG	5.08	126.99	115.30
59	b	423	LEU	CB-CG-CD2	5.08	119.64	111.00
2	0i	92	PRO	CA-CB-CG	-5.08	94.35	104.00
2	0i	111	LEU	CA-CB-CG	5.08	126.98	115.30
23	Bf	95	GLN	CA-CB-CG	5.08	124.57	113.40
33	Cr	364	ASP	CB-CG-OD1	5.08	122.87	118.30
9	HL	377	LEU	CA-CB-CG	5.08	126.98	115.30
7	Ay	31	LEU	CA-CB-CG	5.08	126.97	115.30
29	Cz	391	PRO	N-CA-CB	-5.08	97.02	102.60
9	DB	330	MET	CG-SD-CE	-5.08	92.08	100.20
9	TJ	363	MET	CA-CB-CG	5.08	121.93	113.30
27	Bs	453	LEU	CB-CG-CD1	-5.07	102.38	111.00
28	DO	123	ASP	CB-CG-OD1	5.07	122.86	118.30
9	RL	250	LEU	CA-CB-CG	5.07	126.97	115.30
19	BO	95	LEU	CB-CG-CD2	-5.07	102.38	111.00
9	TH	173	PRO	CA-N-CD	-5.07	104.40	111.50
8	IK	96	LYS	CD-CE-NZ	-5.07	100.04	111.70
26	Bu	155	TYR	C-N-CA	5.07	134.37	121.70
9	AF	404	ASP	CB-CG-OD1	5.07	122.86	118.30
8	BC	230	LEU	CA-CB-CG	5.07	126.95	115.30
9	TH	41	ASP	CB-CG-OD1	5.06	122.86	118.30
8	JC	251	ASP	CB-CG-OD2	5.06	122.85	118.30
8	JI	157	LEU	CA-CB-CG	5.06	126.94	115.30
29	D1	438	ARG	NE-CZ-NH1	5.06	122.83	120.30
9	DN	233	MET	CG-SD-CE	-5.06	92.11	100.20
8	FK	397	LEU	CB-CG-CD2	5.06	119.60	111.00
9	RL	358	PRO	N-CA-CB	-5.06	97.03	102.60
9	RF	150	LEU	CA-CB-CG	5.06	126.93	115.30
8	WC	268	PRO	CB-CG-CD	-5.06	86.78	106.50
8	WE	33	ASP	CB-CG-OD1	-5.06	113.75	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CV	146	LEU	CB-CG-CD1	5.05	119.59	111.00
8	CE	33	ASP	CB-CG-OD1	-5.05	113.75	118.30
8	EI	117	LEU	CA-CB-CG	5.05	126.92	115.30
9	SD	330	MET	CB-CG-SD	5.05	127.56	112.40
9	VJ	284	LEU	CA-CB-CG	5.05	126.92	115.30
2	Cb	39	ASP	CB-CG-OD1	5.05	122.84	118.30
2	Cd	2	MET	CB-CG-SD	5.05	127.55	112.40
42	F	529	ASP	CB-CG-OD1	-5.05	113.76	118.30
9	WH	1	MET	CA-CB-CG	5.05	121.89	113.30
8	GG	69	ASP	CB-CG-OD1	-5.05	113.76	118.30
8	CG	184	PRO	CB-CA-C	5.05	124.62	112.00
9	BJ	203	ASP	CB-CG-OD1	-5.04	113.76	118.30
13	Ab	332	VAL	CG1-CB-CG2	-5.04	102.83	110.90
2	0C	111	LEU	CA-CB-CG	5.04	126.90	115.30
27	Bs	133	MET	CB-CG-SD	-5.04	97.27	112.40
8	IC	345	ASP	CB-CG-OD2	5.04	122.84	118.30
9	OJ	263	LEU	CB-CG-CD1	-5.04	102.43	111.00
9	RH	125	GLU	CG-CD-OE1	5.04	128.38	118.30
9	RL	88	ASP	CB-CG-OD2	5.04	122.84	118.30
8	RC	318	LEU	CB-CG-CD1	-5.04	102.44	111.00
54	T	276	LEU	CA-CB-CG	5.04	126.89	115.30
9	UJ	303	CYS	C-N-CA	-5.04	109.11	121.70
2	CX	72	ASP	CB-CG-OD1	5.04	122.83	118.30
59	c	183	MET	CG-SD-CE	5.04	108.26	100.20
9	NB	209	ASP	CB-CG-OD2	5.03	122.83	118.30
42	F	710	LEU	CA-CB-CG	5.03	126.87	115.30
2	0Y	138	VAL	CG1-CB-CG2	-5.03	102.85	110.90
42	F	512	LEU	CA-CB-CG	5.03	126.87	115.30
8	UI	234	ILE	CG1-CB-CG2	-5.03	100.34	111.40
8	TI	224	TYR	OH-CZ-CE2	-5.03	106.53	120.10
9	EF	46	ARG	NE-CZ-NH1	5.03	122.81	120.30
28	F6	287	VAL	CA-CB-CG2	-5.02	103.36	110.90
9	SB	67	ASP	CB-CG-OD1	5.02	122.82	118.30
2	0i	92	PRO	N-CA-C	5.02	125.15	112.10
8	VG	413	MET	CG-SD-CE	5.02	108.23	100.20
2	0g	121	ASP	CB-CG-OD2	-5.02	113.78	118.30
13	Ad	562	MET	CB-CG-SD	5.02	127.45	112.40
8	UK	1	MET	CA-CB-CG	5.02	121.83	113.30
9	AB	45	GLU	CG-CD-OE2	5.01	128.33	118.30
8	OI	203	MET	CG-SD-CE	5.01	108.22	100.20
8	QI	157	LEU	CA-CB-CG	5.01	126.83	115.30
13	Ac	261	MET	CG-SD-CE	-5.01	92.18	100.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	D8	333	ASP	CB-CG-OD2	5.01	122.81	118.30
8	DG	89	PRO	N-CD-CG	-5.01	95.68	103.20
8	JC	345	ASP	CB-CG-OD1	5.01	122.81	118.30
8	TG	345	ASP	CB-CG-OD2	5.01	122.81	118.30
8	EC	128	LEU	CA-CB-CG	5.01	126.82	115.30
9	RL	395	LEU	CA-CB-CG	5.01	126.82	115.30
8	WM	217	LEU	CB-CG-CD2	-5.01	102.48	111.00
8	RI	121	ARG	NE-CZ-NH2	-5.01	117.80	120.30
9	PF	299	MET	CG-SD-CE	-5.01	92.19	100.20
42	E	734	PRO	N-CA-C	5.00	125.11	112.10
8	QI	302	MET	CG-SD-CE	-5.00	92.19	100.20
29	DT	224	MET	CA-CB-CG	5.00	121.80	113.30
9	LJ	291	GLN	CB-CA-C	5.00	120.40	110.40

There are no chirality outliers.

All (172) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	0C	118	TYR	Peptide
2	0C	33	CYS	Peptide
2	0C	55	GLU	Peptide
2	0E	118	TYR	Peptide
2	0E	58	CYS	Peptide
2	0Y	33	CYS	Peptide
2	0a	33	CYS	Peptide
2	0c	34	ARG	Sidechain
2	0g	124	ASN	Peptide
2	0g	33	CYS	Peptide
2	0i	10	ARG	Sidechain
2	0i	118	TYR	Peptide
2	0i	33	CYS	Peptide
6	A0	221	MET	Peptide
6	A0	49	ARG	Sidechain
7	A5	54	ARG	Peptide
7	A7	11	ARG	Peptide
7	A7	12	PRO	Peptide
7	A7	78	ARG	Sidechain
7	A8	185	TYR	Peptide
7	A8	188	THR	Peptide
7	A8	219	GLY	Peptide
7	A8	221	HIS	Peptide
7	A9	47	ARG	Sidechain

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Mol	Chain	Res	Type	Group
8	AG	214	ARG	Sidechain
8	AI	215	ARG	Sidechain
11	AT	250	ARG	Sidechain
13	Aa	623	ARG	Sidechain
13	Ab	636	LYS	Peptide
13	Ac	261	MET	Peptide
13	Ac	520	GLU	Sidechain
13	Ad	126	PRO	Peptide
14	Al	28	ARG	Sidechain
15	Ap	177	GLN	Peptide
15	Ar	177	GLN	Peptide
7	Aw	54	ARG	Sidechain
7	Ay	181	GLY	Peptide
7	Ay	92	ARG	Sidechain
8	BE	390	ARG	Sidechain
8	BM	214	ARG	Sidechain
19	BR	88	PRO	Peptide
14	BY	269	THR	Peptide
14	Bb	256	ARG	Sidechain
21	Bj	25	ARG	Sidechain
18	Bz	100	MET	Peptide
8	CK	221	ARG	Sidechain
2	CT	33	CYS	Peptide
2	CT	56	HIS	Peptide
2	CY	10	ARG	Sidechain
2	Cb	10	ARG	Sidechain
2	Cb	33	CYS	Peptide
2	Cb	56	HIS	Peptide
2	Ci	118	TYR	Peptide
32	Co	97	ARG	Sidechain
33	Ct	124	ARG	Peptide
29	D4	113	ARG	Sidechain
29	D4	412	ARG	Sidechain
9	DH	260	PHE	Peptide
29	DP	113	ARG	Sidechain
42	E	731	LEU	Peptide
43	E2	51	TYR	Peptide
43	E4	101	ARG	Sidechain
9	ED	359	ARG	Sidechain
8	EI	123	ARG	Sidechain
9	EJ	125	GLU	Sidechain
8	EK	88	HIS	Peptide

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Mol	Chain	Res	Type	Group
9	EL	323	MET	Peptide
9	EL	73	MET	Peptide
29	EP	255	ARG	Sidechain
44	ES	64	TYR	Sidechain
44	EX	184	ARG	Sidechain
44	EX	430	CYS	Peptide
42	F	326	PHE	Peptide
42	F	342	ARG	Sidechain
28	F2	373	PHE	Sidechain
28	F6	121	ARG	Sidechain
9	FB	276	ARG	Sidechain
9	FB	323	MET	Peptide
8	FE	123	ARG	Sidechain
9	FH	391	ARG	Sidechain
9	FJ	122	LYS	Peptide
8	FK	320	ARG	Sidechain
45	G	197	THR	Peptide
45	G	525	ARG	Sidechain
9	GD	252	LYS	Peptide
9	GF	320	ARG	Sidechain
9	GF	324	LYS	Peptide
8	GG	308	ARG	Sidechain
9	GH	306	ARG	Sidechain
9	GJ	323	MET	Peptide
8	GK	201	ALA	Peptide
8	GK	390	ARG	Sidechain
9	GL	380	ARG	Sidechain
46	H	572	TYR	Sidechain
9	HB	213	ARG	Sidechain
9	HD	43	GLN	Peptide
9	HJ	380	ARG	Sidechain
8	HO	123	ARG	Sidechain
47	I	153	ARG	Sidechain
47	I	502	ARG	Sidechain
8	IC	72	PRO	Peptide
8	IE	214	ARG	Sidechain
8	IG	79	ARG	Sidechain
8	IK	38	SER	Peptide
8	IK	79	ARG	Sidechain
9	IN	320	ARG	Sidechain
48	J	112	LEU	Peptide
49	K1	88	GLU	Peptide

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Mol	Chain	Res	Type	Group
8	KE	422	ARG	Sidechain
8	KI	357	TYR	Sidechain
50	L1	132	ASP	Peptide
50	L1	18	ARG	Peptide
50	L1	67	ASN	Peptide
8	LC	37	PRO	Peptide
8	LK	38	SER	Peptide
9	MD	276	ARG	Sidechain
8	ME	221	ARG	Sidechain
9	MF	262	ARG	Sidechain
8	MK	210	TYR	Sidechain
8	NC	97	GLU	Peptide
9	NF	213	ARG	Sidechain
8	NI	123	ARG	Sidechain
8	NK	123	ARG	Sidechain
9	NL	391	ARG	Sidechain
51	O	133	ARG	Sidechain
9	O0	279	GLN	Peptide
8	OE	214	ARG	Sidechain
8	OG	64	ARG	Sidechain
9	OL	380	ARG	Sidechain
8	PA	156	ARG	Sidechain
8	PC	254	GLU	Peptide
9	PH	251	ARG	Sidechain
8	PI	221	ARG	Sidechain
9	PJ	295	ASP	Peptide
9	PJ	390	ARG	Sidechain
8	QA	373	ARG	Sidechain
8	RA	84	ARG	Sidechain
9	RF	391	ARG	Peptide
9	RH	121	ARG	Sidechain
9	RH	125	GLU	Sidechain
9	RH	348	ASN	Peptide
8	RI	121	ARG	Sidechain
8	RI	422	ARG	Sidechain
8	RK	284	GLU	Peptide
9	RL	106	TYR	Sidechain
9	SD	86	ARG	Sidechain
8	SG	284	GLU	Peptide
8	SG	390	ARG	Sidechain
8	SK	72	PRO	Peptide
8	TI	320	ARG	Sidechain

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Mol	Chain	Res	Type	Group
8	TI	390	ARG	Sidechain
9	TL	251	ARG	Sidechain
8	UE	390	ARG	Sidechain
9	UJ	306	ARG	Sidechain
9	UL	380	ARG	Sidechain
1	V	58	TYR	Peptide
9	VB	2	ARG	Sidechain
8	WI	308	ARG	Sidechain
9	WJ	262	ARG	Sidechain
56	XI	72	LYS	Peptide
47	Y	276	ARG	Sidechain
57	YL	78	ARG	Sidechain
59	a	225	ARG	Sidechain
59	a	246	ARG	Sidechain
59	b	234	ARG	Sidechain
59	b	240	ARG	Sidechain
59	b	439	ARG	Sidechain
59	d	419	ARG	Sidechain
59	d	446	ARG	Sidechain
60	f	36	HIS	Peptide
46	o	422	ARG	Sidechain
65	s	75	ARG	Sidechain

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](#)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein residues with a non-rotameric sidechain to report in this entry.

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](#)

Of 451 ligands modelled in this entry, 149 are monoatomic - leaving 302 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	IL	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	UC	501	68	26,34,34	1.12	2 (7%)	32,54,54	1.62	7 (21%)
67	GTP	JM	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.50	7 (21%)
67	GTP	JI	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.74	7 (21%)
67	GTP	II	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.62	7 (21%)
69	GDP	AF	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	OF	502	68,9	26,34,34	1.12	2 (7%)	32,54,54	1.56	8 (25%)
69	GDP	BJ	501	9	24,30,30	0.96	1 (4%)	30,47,47	1.24	4 (13%)
69	GDP	OB	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.23	5 (16%)
67	GTP	KM	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.54	8 (25%)
69	GDP	IJ	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.27	3 (10%)
69	GDP	MH	501	9	24,30,30	0.86	0	30,47,47	1.45	4 (13%)
67	GTP	AG	501	68,8	26,34,34	1.15	1 (3%)	32,54,54	1.73	9 (28%)
69	GDP	TD	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	5 (16%)
69	GDP	EJ	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	GB	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.35	4 (13%)
69	GDP	EL	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.38	4 (13%)
67	GTP	JK	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.68	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	HD	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	AL	501	9	24,30,30	0.92	1 (4%)	30,47,47	1.28	4 (13%)
69	GDP	IN	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	CJ	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	RL	501	-	24,30,30	0.90	1 (4%)	30,47,47	1.43	6 (20%)
67	GTP	BA	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.68	7 (21%)
67	GTP	WK	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.68	7 (21%)
67	GTP	DM	501	68	26,34,34	1.21	2 (7%)	32,54,54	1.67	7 (21%)
67	GTP	IN	502	68,9	26,34,34	1.13	2 (7%)	32,54,54	1.74	8 (25%)
67	GTP	PC	501	-	26,34,34	1.22	2 (7%)	32,54,54	1.76	7 (21%)
67	GTP	LM	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.60	7 (21%)
67	GTP	AH	502	68,8,9	26,34,34	1.16	1 (3%)	32,54,54	1.70	10 (31%)
69	GDP	O0	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	OL	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.33	4 (13%)
67	GTP	GI	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.58	7 (21%)
67	GTP	NF	502	68,9	26,34,34	1.14	2 (7%)	32,54,54	1.52	7 (21%)
67	GTP	RE	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.72	7 (21%)
67	GTP	SM	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.64	7 (21%)
69	GDP	VB	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.30	4 (13%)
69	GDP	N0	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.39	4 (13%)
67	GTP	GJ	502	68,9	26,34,34	1.14	2 (7%)	32,54,54	1.78	7 (21%)
69	GDP	GJ	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.29	5 (16%)
69	GDP	JL	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.34	4 (13%)
69	GDP	RD	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.41	5 (16%)
69	GDP	EN	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.39	4 (13%)
67	GTP	RB	502	9	26,34,34	1.16	2 (7%)	32,54,54	1.69	7 (21%)
67	GTP	VE	501	-	26,34,34	1.13	1 (3%)	32,54,54	1.63	9 (28%)
69	GDP	GH	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	KL	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	VF	501	-	24,30,30	0.90	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	DI	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.68	6 (18%)
67	GTP	DA	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.76	7 (21%)
67	GTP	SC	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.76	7 (21%)
69	GDP	VN	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.56	6 (20%)
69	GDP	RF	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.35	5 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	PD	501	9	24,30,30	0.95	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	FI	501	68	26,34,34	1.12	2 (7%)	32,54,54	1.54	7 (21%)
69	GDP	FF	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.24	4 (13%)
69	GDP	HF	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
67	GTP	WM	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.65	7 (21%)
69	GDP	QJ	501	9	24,30,30	0.96	1 (4%)	30,47,47	1.46	5 (16%)
69	GDP	RH	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.37	4 (13%)
69	GDP	RJ	501	-	24,30,30	1.00	1 (4%)	30,47,47	1.37	2 (6%)
69	GDP	LF	501	9	24,30,30	0.87	0	30,47,47	1.43	4 (13%)
67	GTP	FE	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.73	7 (21%)
67	GTP	IM	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.61	7 (21%)
69	GDP	MJ	501	9	24,30,30	0.92	1 (4%)	30,47,47	1.34	4 (13%)
67	GTP	UG	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.71	7 (21%)
69	GDP	CB	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	DD	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.34	5 (16%)
69	GDP	KD	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	4 (13%)
69	GDP	WD	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.28	4 (13%)
67	GTP	OE	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.72	7 (21%)
67	GTP	TG	501	68	26,34,34	1.26	2 (7%)	32,54,54	1.73	7 (21%)
69	GDP	AD	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	JF	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	UL	501	9	24,30,30	0.96	1 (4%)	30,47,47	1.14	4 (13%)
69	GDP	MF	501	9	24,30,30	0.78	0	30,47,47	1.70	6 (20%)
67	GTP	CA	501	-	26,34,34	1.18	1 (3%)	32,54,54	1.63	8 (25%)
67	GTP	FG	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.68	7 (21%)
69	GDP	BB	501	9	24,30,30	0.96	1 (4%)	30,47,47	1.23	4 (13%)
69	GDP	VH	501	-	24,30,30	0.98	1 (4%)	30,47,47	1.26	4 (13%)
67	GTP	QM	501	68	26,34,34	1.19	2 (7%)	32,54,54	1.81	7 (21%)
67	GTP	RK	501	-	26,34,34	1.19	1 (3%)	32,54,54	1.44	7 (21%)
67	GTP	DK	501	68,8	26,34,34	1.15	2 (7%)	32,54,54	1.66	7 (21%)
69	GDP	BD	501	9	24,30,30	1.05	1 (4%)	30,47,47	1.44	5 (16%)
69	GDP	LL	501	9	24,30,30	0.90	1 (4%)	30,47,47	1.35	5 (16%)
67	GTP	OC	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.61	7 (21%)
67	GTP	MK	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.58	7 (21%)
67	GTP	WE	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.58	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	GN	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.32	4 (13%)
67	GTP	ME	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.63	7 (21%)
69	GDP	MB	501	9	24,30,30	0.87	0	30,47,47	1.45	6 (20%)
69	GDP	VL	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.20	4 (13%)
69	GDP	DN	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.52	4 (13%)
67	GTP	MM	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.58	7 (21%)
69	GDP	FN	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.27	4 (13%)
69	GDP	VD	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.22	5 (16%)
67	GTP	CH	502	68,9	26,34,34	1.10	2 (7%)	32,54,54	1.61	7 (21%)
67	GTP	PG	501	68,8	26,34,34	1.18	2 (7%)	32,54,54	1.56	7 (21%)
69	GDP	FD	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.32	5 (16%)
69	GDP	JJ	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	3 (10%)
69	GDP	WJ	501	-	24,30,30	1.06	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	SD	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
69	GDP	DJ	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.30	3 (10%)
67	GTP	AK	501	68,8,9	26,34,34	1.18	1 (3%)	32,54,54	1.59	9 (28%)
67	GTP	CJ	502	68,9	26,34,34	1.14	2 (7%)	32,54,54	1.58	8 (25%)
67	GTP	EK	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.68	7 (21%)
67	GTP	HC	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.79	8 (25%)
69	GDP	KN	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.27	5 (16%)
69	GDP	LN	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.23	4 (13%)
69	GDP	GD	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.30	4 (13%)
67	GTP	LE	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.72	7 (21%)
69	GDP	CF	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	TB	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.37	4 (13%)
69	GDP	EH	501	9	24,30,30	0.92	1 (4%)	30,47,47	1.46	4 (13%)
67	GTP	OK	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.45	4 (12%)
67	GTP	HL	502	68,9	26,34,34	1.13	2 (7%)	32,54,54	1.60	7 (21%)
67	GTP	BK	501	68	26,34,34	1.12	2 (7%)	32,54,54	1.63	7 (21%)
67	GTP	TC	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.57	8 (25%)
69	GDP	BF	501	9	24,30,30	0.98	1 (4%)	30,47,47	1.13	4 (13%)
69	GDP	SB	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.45	6 (20%)
67	GTP	EI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.59	7 (21%)
67	GTP	KE	501	68	26,34,34	1.12	2 (7%)	32,54,54	1.52	6 (18%)
69	GDP	UF	501	9	24,30,30	0.95	1 (4%)	30,47,47	1.34	5 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	WL	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.30	4 (13%)
67	GTP	LC	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.66	7 (21%)
69	GDP	PH	501	9	24,30,30	0.95	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	PA	501	68	26,34,34	1.18	2 (7%)	32,54,54	1.67	7 (21%)
69	GDP	PF	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.35	6 (20%)
67	GTP	CB	502	68,9	26,34,34	1.14	2 (7%)	32,54,54	1.63	7 (21%)
67	GTP	QC	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.69	7 (21%)
67	GTP	RI	501	68,8	26,34,34	1.20	1 (3%)	32,54,54	1.77	9 (28%)
69	GDP	CH	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	5 (16%)
69	GDP	MN	501	9	24,30,30	0.89	1 (4%)	30,47,47	1.41	5 (16%)
69	GDP	WH	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
69	GDP	UB	501	9	24,30,30	0.92	1 (4%)	30,47,47	1.18	4 (13%)
69	GDP	UJ	501	9	24,30,30	0.91	1 (4%)	30,47,47	1.33	5 (16%)
69	GDP	DB	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.34	3 (10%)
69	GDP	LJ	501	9	24,30,30	0.86	0	30,47,47	1.42	4 (13%)
67	GTP	SK	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.60	8 (25%)
69	GDP	JB	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.35	4 (13%)
69	GDP	JH	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.34	4 (13%)
69	GDP	KJ	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	NL	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	OD	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.34	4 (13%)
69	GDP	VJ	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.32	4 (13%)
67	GTP	DC	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.56	6 (18%)
67	GTP	BM	501	68	26,34,34	1.12	2 (7%)	32,54,54	1.62	7 (21%)
67	GTP	CL	502	68,9	26,34,34	1.16	2 (7%)	32,54,54	1.60	7 (21%)
67	GTP	VC	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.77	6 (18%)
69	GDP	IH	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.28	4 (13%)
69	GDP	SJ	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	NJ	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.35	4 (13%)
67	GTP	KC	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.75	7 (21%)
67	GTP	BG	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.67	7 (21%)
69	GDP	UD	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.32	5 (16%)
67	GTP	GE	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.66	7 (21%)
67	GTP	IE	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.61	7 (21%)
69	GDP	NH	501	9	24,30,30	0.87	0	30,47,47	1.47	6 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
67	GTP	NA	502	68	26,34,34	1.16	2 (7%)	32,54,54	1.68	8 (25%)
69	GDP	UN	501	9	24,30,30	0.91	1 (4%)	30,47,47	1.26	4 (13%)
67	GTP	BC	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.74	7 (21%)
67	GTP	FC	501	-	26,34,34	1.17	2 (7%)	32,54,54	1.55	6 (18%)
67	GTP	RA	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.56	6 (18%)
69	GDP	JD	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.37	4 (13%)
67	GTP	IG	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.66	7 (21%)
67	GTP	RG	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.54	7 (21%)
69	GDP	OH	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.33	5 (16%)
69	GDP	OF	501	9	24,30,30	0.86	1 (4%)	30,47,47	1.64	6 (20%)
67	GTP	SA	501	68	26,34,34	1.23	2 (7%)	32,54,54	1.78	8 (25%)
69	GDP	HL	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.34	4 (13%)
67	GTP	KO	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.58	7 (21%)
69	GDP	WN	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.26	4 (13%)
69	GDP	GF	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	UM	501	68	26,34,34	1.14	1 (3%)	32,54,54	1.72	7 (21%)
67	GTP	CD	502	68,9	26,34,34	1.15	2 (7%)	32,54,54	1.65	8 (25%)
69	GDP	SH	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	WB	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.32	4 (13%)
67	GTP	IC	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.71	7 (21%)
69	GDP	LH	501	9	24,30,30	0.80	0	30,47,47	1.84	7 (23%)
67	GTP	AM	501	68,8	26,34,34	1.15	2 (7%)	32,54,54	1.65	8 (25%)
67	GTP	EC	501	68	26,34,34	1.13	2 (7%)	32,54,54	1.76	7 (21%)
69	GDP	HN	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.38	4 (13%)
69	GDP	UH	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.29	4 (13%)
67	GTP	VK	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.47	8 (25%)
67	GTP	TK	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.54	7 (21%)
69	GDP	AB	501	9	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	QI	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.63	7 (21%)
67	GTP	WC	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.67	7 (21%)
69	GDP	FH	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.37	4 (13%)
69	GDP	BH	501	9	24,30,30	0.97	1 (4%)	30,47,47	1.19	4 (13%)
69	GDP	GL	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.35	4 (13%)
67	GTP	QE	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.69	6 (18%)
67	GTP	CG	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.77	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	WF	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.24	4 (13%)
67	GTP	OH	502	68,9	26,34,34	1.13	2 (7%)	32,54,54	1.64	7 (21%)
67	GTP	TM	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.56	7 (21%)
69	GDP	EF	501	9	24,30,30	0.95	1 (4%)	30,47,47	1.33	4 (13%)
69	GDP	IF	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	PL	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.23	4 (13%)
67	GTP	JC	501	68,8	26,34,34	1.14	2 (7%)	32,54,54	1.71	8 (25%)
69	GDP	SL	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	IB	501	9	24,30,30	1.04	1 (4%)	30,47,47	1.50	5 (16%)
67	GTP	FM	501	68,8	26,34,34	1.12	2 (7%)	32,54,54	1.73	7 (21%)
69	GDP	KB	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.30	3 (10%)
67	GTP	KI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.56	7 (21%)
67	GTP	TI	501	68	26,34,34	1.25	2 (7%)	32,54,54	1.61	7 (21%)
69	GDP	PJ	501	9	24,30,30	0.98	1 (4%)	30,47,47	1.35	7 (23%)
69	GDP	QL	501	9	24,30,30	0.99	1 (4%)	30,47,47	1.40	5 (16%)
67	GTP	MC	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.68	7 (21%)
69	GDP	ND	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.25	3 (10%)
67	GTP	LI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.57	7 (21%)
67	GTP	PI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.77	7 (21%)
69	GDP	DF	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.34	5 (16%)
69	GDP	HB	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.28	4 (13%)
69	GDP	ID	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.27	4 (13%)
69	GDP	MD	501	9	24,30,30	0.86	0	30,47,47	1.83	6 (20%)
69	GDP	TL	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	JN	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.39	5 (16%)
69	GDP	SF	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.27	5 (16%)
69	GDP	FJ	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.22	4 (13%)
67	GTP	QG	501	-	26,34,34	1.23	2 (7%)	32,54,54	1.69	8 (25%)
69	GDP	KH	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.32	4 (13%)
67	GTP	QK	501	68	26,34,34	1.23	2 (7%)	32,54,54	1.58	8 (25%)
67	GTP	AA	501	68,8	26,34,34	1.17	2 (7%)	32,54,54	1.73	8 (25%)
67	GTP	IK	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.71	7 (21%)
67	GTP	JG	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.53	7 (21%)
67	GTP	GG	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.52	7 (21%)
67	GTP	PD	502	68,9	26,34,34	1.17	1 (3%)	32,54,54	1.46	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
67	GTP	VL	502	68,9	26,34,34	1.14	2 (7%)	32,54,54	1.64	8 (25%)
69	GDP	QD	501	9	24,30,30	0.97	1 (4%)	30,47,47	1.30	5 (16%)
69	GDP	NB	501	9	24,30,30	0.83	0	30,47,47	1.85	7 (23%)
69	GDP	HJ	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.36	4 (13%)
69	GDP	CD	501	-	24,30,30	0.94	1 (4%)	30,47,47	1.29	4 (13%)
67	GTP	GC	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.74	7 (21%)
69	GDP	ED	501	9	24,30,30	0.95	1 (4%)	30,47,47	1.35	4 (13%)
67	GTP	UK	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.71	7 (21%)
67	GTP	MI	501	68,8	26,34,34	1.29	2 (7%)	32,54,54	2.06	10 (31%)
69	GDP	DL	501	-	24,30,30	0.95	1 (4%)	30,47,47	1.31	5 (16%)
67	GTP	WG	501	-	26,34,34	1.22	2 (7%)	32,54,54	1.60	8 (25%)
69	GDP	PB	501	9	24,30,30	0.83	0	30,47,47	1.55	7 (23%)
69	GDP	HH	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.30	4 (13%)
67	GTP	HE	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.71	7 (21%)
67	GTP	QA	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.56	8 (25%)
67	GTP	PK	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.48	7 (21%)
67	GTP	UI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.76	7 (21%)
69	GDP	AJ	501	9	24,30,30	0.95	1 (4%)	30,47,47	1.37	4 (13%)
67	GTP	SF	502	68,9	26,34,34	1.14	2 (7%)	32,54,54	1.73	9 (28%)
69	GDP	KF	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.27	5 (16%)
69	GDP	BL	501	9	24,30,30	0.97	1 (4%)	30,47,47	1.19	5 (16%)
67	GTP	NB	502	68,9	26,34,34	1.13	2 (7%)	32,54,54	1.57	7 (21%)
67	GTP	EE	501	-	26,34,34	1.18	2 (7%)	32,54,54	1.53	6 (18%)
67	GTP	HN	502	68,9	26,34,34	1.13	2 (7%)	32,54,54	1.58	8 (25%)
67	GTP	KK	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.58	7 (21%)
67	GTP	KG	501	68,8	26,34,34	1.18	2 (7%)	32,54,54	1.56	8 (25%)
69	GDP	CL	501	-	24,30,30	0.97	1 (4%)	30,47,47	1.37	4 (13%)
67	GTP	GM	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.75	8 (25%)
67	GTP	EG	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.60	6 (18%)
67	GTP	HG	502	68	26,34,34	1.15	2 (7%)	32,54,54	1.69	7 (21%)
67	GTP	HK	501	68	26,34,34	1.18	2 (7%)	32,54,54	1.63	7 (21%)
67	GTP	MG	501	68,8	26,34,34	1.13	1 (3%)	32,54,54	1.64	6 (18%)
67	GTP	O0	502	68,9	26,34,34	1.15	2 (7%)	32,54,54	1.59	7 (21%)
69	GDP	AH	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.35	4 (13%)
69	GDP	FL	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.41	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
69	GDP	LD	501	9	24,30,30	0.90	1 (4%)	30,47,47	1.40	5 (16%)
69	GDP	DH	501	-	24,30,30	0.90	1 (4%)	30,47,47	1.46	5 (16%)
69	GDP	NF	501	9	24,30,30	0.90	0	30,47,47	1.37	4 (13%)
69	GDP	OJ	501	-	24,30,30	0.96	1 (4%)	30,47,47	1.26	4 (13%)
67	GTP	TE	501	68	26,34,34	1.18	2 (7%)	32,54,54	1.61	7 (21%)
67	GTP	AD	502	68,8,9	26,34,34	1.14	1 (3%)	32,54,54	1.57	9 (28%)
67	GTP	RM	501	-	26,34,34	1.15	2 (7%)	32,54,54	1.73	7 (21%)
67	GTP	BE	501	68	26,34,34	1.11	2 (7%)	32,54,54	1.62	6 (18%)
67	GTP	NI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.67	7 (21%)
67	GTP	VG	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.62	7 (21%)
69	GDP	TF	501	-	24,30,30	0.90	1 (4%)	30,47,47	1.31	4 (13%)
69	GDP	QF	501	9	24,30,30	0.97	1 (4%)	30,47,47	1.36	5 (16%)
67	GTP	EM	501	-	26,34,34	1.14	2 (7%)	32,54,54	1.64	7 (21%)
67	GTP	SE	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.80	7 (21%)
69	GDP	RB	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.38	4 (13%)
67	GTP	FK	501	68	26,34,34	1.17	2 (7%)	32,54,54	1.71	7 (21%)
67	GTP	DF	502	68,9	26,34,34	1.17	2 (7%)	32,54,54	1.70	7 (21%)
69	GDP	QB	501	9	24,30,30	0.96	1 (4%)	30,47,47	1.37	5 (16%)
67	GTP	VI	502	68	26,34,34	1.14	2 (7%)	32,54,54	1.72	6 (18%)
67	GTP	LK	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.58	7 (21%)
69	GDP	EB	501	9	24,30,30	0.94	1 (4%)	30,47,47	1.32	4 (13%)
69	GDP	QH	501	9	24,30,30	0.96	1 (4%)	30,47,47	1.31	4 (13%)
67	GTP	NK	501	68	26,34,34	1.12	2 (7%)	32,54,54	1.52	8 (25%)
69	GDP	TH	501	-	24,30,30	0.91	1 (4%)	30,47,47	1.21	4 (13%)
67	GTP	DE	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.62	7 (21%)
67	GTP	HI	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.68	7 (21%)
69	GDP	FB	501	-	24,30,30	0.92	1 (4%)	30,47,47	1.38	4 (13%)
69	GDP	ML	501	9	24,30,30	0.90	1 (4%)	30,47,47	2.16	7 (23%)
67	GTP	AC	501	68,8,9	26,34,34	1.16	1 (3%)	32,54,54	1.55	10 (31%)
67	GTP	BI	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.68	7 (21%)
67	GTP	UE	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.68	7 (21%)
67	GTP	LG	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.61	7 (21%)
67	GTP	PM	501	68	26,34,34	1.16	2 (7%)	32,54,54	1.74	6 (18%)
69	GDP	LB	501	9	24,30,30	0.88	0	30,47,47	1.41	5 (16%)
67	GTP	WI	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.55	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
67	GTP	NE	501	68	26,34,34	1.14	2 (7%)	32,54,54	1.68	7 (21%)
67	GTP	JE	501	68	26,34,34	1.15	2 (7%)	32,54,54	1.66	7 (21%)
67	GTP	SI	501	-	26,34,34	1.28	2 (7%)	32,54,54	1.82	8 (25%)
69	GDP	TJ	501	-	24,30,30	0.93	1 (4%)	30,47,47	1.60	5 (16%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	IL	501	-	-	2/12/32/32	0/3/3/3
67	GTP	UC	501	68	-	6/18/38/38	0/3/3/3
67	GTP	JM	501	68	-	4/18/38/38	0/3/3/3
67	GTP	JI	501	68	-	3/18/38/38	0/3/3/3
67	GTP	II	501	68	-	5/18/38/38	0/3/3/3
69	GDP	AF	501	9	-	1/12/32/32	0/3/3/3
67	GTP	OF	502	68,9	-	9/18/38/38	0/3/3/3
69	GDP	BJ	501	9	-	6/12/32/32	0/3/3/3
69	GDP	OB	501	-	-	4/12/32/32	0/3/3/3
67	GTP	KM	501	68	-	5/18/38/38	0/3/3/3
69	GDP	IJ	501	-	-	2/12/32/32	0/3/3/3
69	GDP	MH	501	9	-	6/12/32/32	0/3/3/3
67	GTP	AG	501	68,8	-	4/18/38/38	0/3/3/3
69	GDP	TD	501	-	-	4/12/32/32	0/3/3/3
69	GDP	EJ	501	9	-	4/12/32/32	0/3/3/3
69	GDP	GB	501	-	-	3/12/32/32	0/3/3/3
69	GDP	EL	501	9	-	4/12/32/32	0/3/3/3
67	GTP	JK	501	-	-	3/18/38/38	0/3/3/3
69	GDP	HD	501	-	-	3/12/32/32	0/3/3/3
69	GDP	AL	501	9	-	1/12/32/32	0/3/3/3
69	GDP	IN	501	-	-	3/12/32/32	0/3/3/3
69	GDP	CJ	501	-	-	4/12/32/32	0/3/3/3
69	GDP	RL	501	-	-	2/12/32/32	0/3/3/3
67	GTP	BA	501	68	-	3/18/38/38	0/3/3/3
67	GTP	WK	501	68	-	6/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
67	GTP	DM	501	68	-	4/18/38/38	0/3/3/3
67	GTP	IN	502	68,9	-	2/18/38/38	0/3/3/3
67	GTP	PC	501	-	-	5/18/38/38	0/3/3/3
67	GTP	LM	501	68	-	6/18/38/38	0/3/3/3
67	GTP	AH	502	68,8,9	-	1/18/38/38	0/3/3/3
69	GDP	O0	501	-	-	5/12/32/32	0/3/3/3
69	GDP	OL	501	-	-	4/12/32/32	0/3/3/3
67	GTP	GI	501	68	-	5/18/38/38	0/3/3/3
67	GTP	NF	502	68,9	-	6/18/38/38	0/3/3/3
67	GTP	RE	501	-	-	4/18/38/38	0/3/3/3
67	GTP	SM	501	68	-	7/18/38/38	0/3/3/3
69	GDP	VB	501	-	-	2/12/32/32	0/3/3/3
69	GDP	N0	501	9	-	2/12/32/32	0/3/3/3
67	GTP	GJ	502	68,9	-	8/18/38/38	0/3/3/3
69	GDP	GJ	501	-	-	4/12/32/32	0/3/3/3
69	GDP	JL	501	-	-	4/12/32/32	0/3/3/3
69	GDP	RD	501	-	-	3/12/32/32	0/3/3/3
69	GDP	EN	501	9	-	4/12/32/32	0/3/3/3
67	GTP	RB	502	9	-	3/18/38/38	0/3/3/3
67	GTP	VE	501	-	-	4/18/38/38	0/3/3/3
69	GDP	GH	501	-	-	3/12/32/32	0/3/3/3
69	GDP	KL	501	-	-	2/12/32/32	0/3/3/3
69	GDP	VF	501	-	-	5/12/32/32	0/3/3/3
67	GTP	DI	501	68	-	4/18/38/38	0/3/3/3
67	GTP	DA	501	68	-	2/18/38/38	0/3/3/3
67	GTP	SC	501	68	-	6/18/38/38	0/3/3/3
69	GDP	VN	501	-	-	2/12/32/32	0/3/3/3
69	GDP	RF	501	-	-	2/12/32/32	0/3/3/3
69	GDP	PD	501	9	-	2/12/32/32	0/3/3/3
67	GTP	FI	501	68	-	4/18/38/38	0/3/3/3
69	GDP	FF	501	-	-	4/12/32/32	0/3/3/3
69	GDP	HF	501	-	-	4/12/32/32	0/3/3/3
67	GTP	WM	501	68	-	3/18/38/38	0/3/3/3
69	GDP	QJ	501	9	-	0/12/32/32	0/3/3/3
69	GDP	RH	501	-	-	1/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	RJ	501	-	-	2/12/32/32	0/3/3/3
69	GDP	LF	501	9	-	3/12/32/32	0/3/3/3
67	GTP	FE	501	68	-	5/18/38/38	0/3/3/3
67	GTP	IM	501	68	-	3/18/38/38	0/3/3/3
69	GDP	MJ	501	9	-	5/12/32/32	0/3/3/3
67	GTP	UG	501	68	-	3/18/38/38	0/3/3/3
69	GDP	CB	501	-	-	2/12/32/32	0/3/3/3
69	GDP	DD	501	-	-	4/12/32/32	0/3/3/3
69	GDP	KD	501	-	-	3/12/32/32	0/3/3/3
69	GDP	WD	501	-	-	4/12/32/32	0/3/3/3
67	GTP	OE	501	68	-	3/18/38/38	0/3/3/3
67	GTP	TG	501	68	-	5/18/38/38	0/3/3/3
69	GDP	AD	501	9	-	1/12/32/32	0/3/3/3
69	GDP	JF	501	-	-	4/12/32/32	0/3/3/3
69	GDP	UL	501	9	-	3/12/32/32	0/3/3/3
69	GDP	MF	501	9	-	4/12/32/32	0/3/3/3
67	GTP	CA	501	-	-	2/18/38/38	0/3/3/3
67	GTP	FG	501	68	-	1/18/38/38	0/3/3/3
69	GDP	BB	501	9	-	5/12/32/32	0/3/3/3
69	GDP	VH	501	-	-	2/12/32/32	0/3/3/3
67	GTP	QM	501	68	-	3/18/38/38	0/3/3/3
67	GTP	RK	501	-	-	3/18/38/38	0/3/3/3
67	GTP	DK	501	68,8	-	3/18/38/38	0/3/3/3
69	GDP	BD	501	9	-	0/12/32/32	0/3/3/3
69	GDP	LL	501	9	-	2/12/32/32	0/3/3/3
67	GTP	OC	501	68	-	7/18/38/38	0/3/3/3
67	GTP	MK	501	68	-	5/18/38/38	0/3/3/3
67	GTP	WE	501	68	-	4/18/38/38	0/3/3/3
69	GDP	GN	501	-	-	4/12/32/32	0/3/3/3
67	GTP	ME	501	68	-	3/18/38/38	0/3/3/3
69	GDP	MB	501	9	-	6/12/32/32	0/3/3/3
69	GDP	VL	501	-	-	3/12/32/32	0/3/3/3
69	GDP	DN	501	-	-	0/12/32/32	0/3/3/3
67	GTP	MM	501	68	-	7/18/38/38	0/3/3/3
69	GDP	FN	501	-	-	2/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	VD	501	-	-	0/12/32/32	0/3/3/3
67	GTP	CH	502	68,9	-	3/18/38/38	0/3/3/3
67	GTP	PG	501	68,8	-	2/18/38/38	0/3/3/3
69	GDP	FD	501	-	-	3/12/32/32	0/3/3/3
69	GDP	JJ	501	-	-	4/12/32/32	0/3/3/3
69	GDP	WJ	501	-	-	3/12/32/32	0/3/3/3
69	GDP	SD	501	-	-	5/12/32/32	0/3/3/3
69	GDP	DJ	501	-	-	3/12/32/32	0/3/3/3
67	GTP	AK	501	68,8,9	-	4/18/38/38	0/3/3/3
67	GTP	CJ	502	68,9	-	5/18/38/38	0/3/3/3
67	GTP	EK	501	68	-	4/18/38/38	0/3/3/3
67	GTP	HC	501	68	-	5/18/38/38	0/3/3/3
69	GDP	KN	501	-	-	7/12/32/32	0/3/3/3
69	GDP	LN	501	-	-	3/12/32/32	0/3/3/3
69	GDP	GD	501	-	-	2/12/32/32	0/3/3/3
67	GTP	LE	501	68	-	7/18/38/38	0/3/3/3
69	GDP	CF	501	-	-	3/12/32/32	0/3/3/3
69	GDP	TB	501	-	-	4/12/32/32	0/3/3/3
69	GDP	EH	501	9	-	3/12/32/32	0/3/3/3
67	GTP	OK	501	68	-	6/18/38/38	0/3/3/3
67	GTP	HL	502	68,9	-	2/18/38/38	0/3/3/3
67	GTP	BK	501	68	-	4/18/38/38	0/3/3/3
67	GTP	TC	501	68	-	5/18/38/38	0/3/3/3
69	GDP	BF	501	9	-	4/12/32/32	0/3/3/3
69	GDP	SB	501	-	-	5/12/32/32	0/3/3/3
67	GTP	EI	501	68	-	8/18/38/38	0/3/3/3
67	GTP	KE	501	68	-	4/18/38/38	0/3/3/3
69	GDP	UF	501	9	-	2/12/32/32	0/3/3/3
69	GDP	WL	501	-	-	6/12/32/32	0/3/3/3
67	GTP	LC	501	68	-	0/18/38/38	0/3/3/3
69	GDP	PH	501	9	-	3/12/32/32	0/3/3/3
67	GTP	PA	501	68	-	3/18/38/38	0/3/3/3
69	GDP	PF	501	9	-	2/12/32/32	0/3/3/3
67	GTP	CB	502	68,9	-	3/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
67	GTP	QC	501	68	-	5/18/38/38	0/3/3/3
67	GTP	RI	501	68,8	-	6/18/38/38	0/3/3/3
69	GDP	CH	501	-	-	7/12/32/32	0/3/3/3
69	GDP	MN	501	9	-	3/12/32/32	0/3/3/3
69	GDP	WH	501	-	-	5/12/32/32	0/3/3/3
69	GDP	UB	501	9	-	2/12/32/32	0/3/3/3
69	GDP	UJ	501	9	-	1/12/32/32	0/3/3/3
69	GDP	DB	501	-	-	4/12/32/32	0/3/3/3
69	GDP	LJ	501	9	-	3/12/32/32	0/3/3/3
67	GTP	SK	501	68	-	5/18/38/38	0/3/3/3
69	GDP	JB	501	-	-	5/12/32/32	0/3/3/3
69	GDP	JH	501	-	-	6/12/32/32	0/3/3/3
69	GDP	KJ	501	-	-	3/12/32/32	0/3/3/3
69	GDP	NL	501	-	-	2/12/32/32	0/3/3/3
69	GDP	OD	501	-	-	3/12/32/32	0/3/3/3
69	GDP	VJ	501	-	-	2/12/32/32	0/3/3/3
67	GTP	DC	501	-	-	7/18/38/38	0/3/3/3
67	GTP	BM	501	68	-	7/18/38/38	0/3/3/3
67	GTP	CL	502	68,9	-	1/18/38/38	0/3/3/3
67	GTP	VC	501	68	-	3/18/38/38	0/3/3/3
69	GDP	IH	501	-	-	4/12/32/32	0/3/3/3
69	GDP	SJ	501	-	-	2/12/32/32	0/3/3/3
69	GDP	NJ	501	9	-	3/12/32/32	0/3/3/3
67	GTP	KC	501	68	-	7/18/38/38	0/3/3/3
67	GTP	BG	501	68	-	6/18/38/38	0/3/3/3
69	GDP	UD	501	9	-	5/12/32/32	0/3/3/3
67	GTP	GE	501	68	-	4/18/38/38	0/3/3/3
67	GTP	IE	501	68	-	3/18/38/38	0/3/3/3
69	GDP	NH	501	9	-	2/12/32/32	0/3/3/3
67	GTP	NA	502	68	-	6/18/38/38	0/3/3/3
69	GDP	UN	501	9	-	2/12/32/32	0/3/3/3
67	GTP	BC	501	-	-	7/18/38/38	0/3/3/3
67	GTP	FC	501	-	-	3/18/38/38	0/3/3/3
67	GTP	RA	501	68	-	8/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	JD	501	-	-	4/12/32/32	0/3/3/3
67	GTP	IG	501	68	-	4/18/38/38	0/3/3/3
67	GTP	RG	501	68	-	2/18/38/38	0/3/3/3
69	GDP	OH	501	-	-	2/12/32/32	0/3/3/3
69	GDP	OF	501	9	-	3/12/32/32	0/3/3/3
67	GTP	SA	501	68	-	5/18/38/38	0/3/3/3
69	GDP	HL	501	-	-	3/12/32/32	0/3/3/3
67	GTP	KO	501	68	-	6/18/38/38	0/3/3/3
69	GDP	WN	501	-	-	2/12/32/32	0/3/3/3
69	GDP	GF	501	-	-	3/12/32/32	0/3/3/3
67	GTP	UM	501	68	-	5/18/38/38	0/3/3/3
67	GTP	CD	502	68,9	-	3/18/38/38	0/3/3/3
69	GDP	SH	501	-	-	0/12/32/32	0/3/3/3
69	GDP	WB	501	-	-	1/12/32/32	0/3/3/3
67	GTP	IC	501	68	-	5/18/38/38	0/3/3/3
69	GDP	LH	501	9	-	3/12/32/32	0/3/3/3
67	GTP	AM	501	68,8	-	2/18/38/38	0/3/3/3
67	GTP	EC	501	68	-	8/18/38/38	0/3/3/3
69	GDP	HN	501	-	-	3/12/32/32	0/3/3/3
69	GDP	UH	501	-	-	0/12/32/32	0/3/3/3
67	GTP	VK	501	68	-	8/18/38/38	0/3/3/3
67	GTP	TK	501	68	-	3/18/38/38	0/3/3/3
69	GDP	AB	501	9	-	1/12/32/32	0/3/3/3
67	GTP	QI	501	-	-	1/18/38/38	0/3/3/3
67	GTP	WC	501	68	-	3/18/38/38	0/3/3/3
69	GDP	FH	501	-	-	3/12/32/32	0/3/3/3
69	GDP	BH	501	9	-	4/12/32/32	0/3/3/3
69	GDP	GL	501	-	-	2/12/32/32	0/3/3/3
67	GTP	QE	501	68	-	3/18/38/38	0/3/3/3
67	GTP	CG	501	68	-	5/18/38/38	0/3/3/3
69	GDP	WF	501	-	-	3/12/32/32	0/3/3/3
67	GTP	OH	502	68,9	-	5/18/38/38	0/3/3/3
67	GTP	TM	501	68	-	4/18/38/38	0/3/3/3
69	GDP	EF	501	9	-	4/12/32/32	0/3/3/3
69	GDP	IF	501	-	-	1/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	PL	501	9	-	3/12/32/32	0/3/3/3
67	GTP	JC	501	68,8	-	2/18/38/38	0/3/3/3
69	GDP	SL	501	-	-	2/12/32/32	0/3/3/3
69	GDP	IB	501	9	-	3/12/32/32	0/3/3/3
67	GTP	FM	501	68,8	-	4/18/38/38	0/3/3/3
69	GDP	KB	501	-	-	7/12/32/32	0/3/3/3
67	GTP	KI	501	68	-	9/18/38/38	0/3/3/3
67	GTP	TI	501	68	-	5/18/38/38	0/3/3/3
69	GDP	PJ	501	9	-	1/12/32/32	0/3/3/3
69	GDP	QL	501	9	-	0/12/32/32	0/3/3/3
67	GTP	MC	501	68	-	6/18/38/38	0/3/3/3
69	GDP	ND	501	9	-	3/12/32/32	0/3/3/3
67	GTP	LI	501	68	-	8/18/38/38	0/3/3/3
67	GTP	PI	501	68	-	4/18/38/38	0/3/3/3
69	GDP	DF	501	-	-	4/12/32/32	0/3/3/3
69	GDP	HB	501	-	-	3/12/32/32	0/3/3/3
69	GDP	ID	501	-	-	3/12/32/32	0/3/3/3
69	GDP	MD	501	9	-	6/12/32/32	0/3/3/3
69	GDP	TL	501	-	-	3/12/32/32	0/3/3/3
69	GDP	JN	501	-	-	3/12/32/32	0/3/3/3
69	GDP	SF	501	-	-	3/12/32/32	0/3/3/3
69	GDP	FJ	501	-	-	2/12/32/32	0/3/3/3
67	GTP	QG	501	-	-	2/18/38/38	0/3/3/3
69	GDP	KH	501	-	-	4/12/32/32	0/3/3/3
67	GTP	QK	501	68	-	2/18/38/38	0/3/3/3
67	GTP	AA	501	68,8	-	8/18/38/38	0/3/3/3
67	GTP	IK	501	68	-	7/18/38/38	0/3/3/3
67	GTP	JG	501	68	-	2/18/38/38	0/3/3/3
67	GTP	GG	501	68	-	5/18/38/38	0/3/3/3
67	GTP	PD	502	68,9	-	6/18/38/38	0/3/3/3
67	GTP	VL	502	68,9	-	5/18/38/38	0/3/3/3
69	GDP	QD	501	9	-	0/12/32/32	0/3/3/3
69	GDP	NB	501	9	-	2/12/32/32	0/3/3/3
69	GDP	HJ	501	-	-	5/12/32/32	0/3/3/3
69	GDP	CD	501	-	-	5/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
67	GTP	GC	501	68	-	5/18/38/38	0/3/3/3
69	GDP	ED	501	9	-	4/12/32/32	0/3/3/3
67	GTP	UK	501	68	-	3/18/38/38	0/3/3/3
67	GTP	MI	501	68,8	-	5/18/38/38	0/3/3/3
69	GDP	DL	501	-	-	2/12/32/32	0/3/3/3
67	GTP	WG	501	-	-	6/18/38/38	0/3/3/3
69	GDP	PB	501	9	-	2/12/32/32	0/3/3/3
69	GDP	HH	501	-	-	3/12/32/32	0/3/3/3
67	GTP	HE	501	68	-	6/18/38/38	0/3/3/3
67	GTP	QA	501	68	-	4/18/38/38	0/3/3/3
67	GTP	PK	501	68	-	3/18/38/38	0/3/3/3
67	GTP	UI	501	68	-	5/18/38/38	0/3/3/3
69	GDP	AJ	501	9	-	2/12/32/32	0/3/3/3
67	GTP	SF	502	68,9	-	6/18/38/38	0/3/3/3
69	GDP	KF	501	-	-	4/12/32/32	0/3/3/3
69	GDP	BL	501	9	-	4/12/32/32	0/3/3/3
67	GTP	NB	502	68,9	-	7/18/38/38	0/3/3/3
67	GTP	EE	501	-	-	7/18/38/38	0/3/3/3
67	GTP	HN	502	68,9	-	4/18/38/38	0/3/3/3
67	GTP	KK	501	68	-	6/18/38/38	0/3/3/3
67	GTP	KG	501	68,8	-	5/18/38/38	0/3/3/3
69	GDP	CL	501	-	-	2/12/32/32	0/3/3/3
67	GTP	GM	501	68	-	4/18/38/38	0/3/3/3
67	GTP	EG	501	68	-	11/18/38/38	0/3/3/3
67	GTP	HG	502	68	-	2/18/38/38	0/3/3/3
67	GTP	HK	501	68	-	6/18/38/38	0/3/3/3
67	GTP	MG	501	68,8	-	4/18/38/38	0/3/3/3
67	GTP	O0	502	68,9	-	5/18/38/38	0/3/3/3
69	GDP	AH	501	9	-	1/12/32/32	0/3/3/3
69	GDP	FL	501	-	-	3/12/32/32	0/3/3/3
69	GDP	LD	501	9	-	4/12/32/32	0/3/3/3
69	GDP	DH	501	-	-	4/12/32/32	0/3/3/3
69	GDP	NF	501	9	-	2/12/32/32	0/3/3/3
69	GDP	OJ	501	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
67	GTP	TE	501	68	-	3/18/38/38	0/3/3/3
67	GTP	AD	502	68,8,9	-	4/18/38/38	0/3/3/3
67	GTP	RM	501	-	-	4/18/38/38	0/3/3/3
67	GTP	BE	501	68	-	4/18/38/38	0/3/3/3
67	GTP	NI	501	68	-	6/18/38/38	0/3/3/3
67	GTP	VG	501	68	-	6/18/38/38	0/3/3/3
69	GDP	TF	501	-	-	5/12/32/32	0/3/3/3
69	GDP	QF	501	9	-	2/12/32/32	0/3/3/3
67	GTP	EM	501	-	-	3/18/38/38	0/3/3/3
67	GTP	SE	501	68	-	3/18/38/38	0/3/3/3
69	GDP	RB	501	-	-	1/12/32/32	0/3/3/3
67	GTP	FK	501	68	-	2/18/38/38	0/3/3/3
67	GTP	DF	502	68,9	-	6/18/38/38	0/3/3/3
69	GDP	QB	501	9	-	5/12/32/32	0/3/3/3
67	GTP	VI	502	68	-	5/18/38/38	0/3/3/3
67	GTP	LK	501	68	-	6/18/38/38	0/3/3/3
69	GDP	EB	501	9	-	3/12/32/32	0/3/3/3
69	GDP	QH	501	9	-	1/12/32/32	0/3/3/3
67	GTP	NK	501	68	-	6/18/38/38	0/3/3/3
69	GDP	TH	501	-	-	2/12/32/32	0/3/3/3
67	GTP	DE	501	68	-	1/18/38/38	0/3/3/3
67	GTP	HI	501	68	-	6/18/38/38	0/3/3/3
69	GDP	FB	501	-	-	2/12/32/32	0/3/3/3
69	GDP	ML	501	9	-	6/12/32/32	0/3/3/3
67	GTP	AC	501	68,8,9	-	4/18/38/38	0/3/3/3
67	GTP	BI	501	68	-	8/18/38/38	0/3/3/3
67	GTP	UE	501	68	-	5/18/38/38	0/3/3/3
67	GTP	LG	501	68	-	9/18/38/38	0/3/3/3
67	GTP	PM	501	68	-	1/18/38/38	0/3/3/3
69	GDP	LB	501	9	-	3/12/32/32	0/3/3/3
67	GTP	WI	501	68	-	3/18/38/38	0/3/3/3
67	GTP	NE	501	68	-	2/18/38/38	0/3/3/3
67	GTP	JE	501	68	-	2/18/38/38	0/3/3/3
67	GTP	SI	501	-	-	4/18/38/38	0/3/3/3
69	GDP	TJ	501	-	-	3/12/32/32	0/3/3/3

All (427) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	TG	501	GTP	C5-C6	-4.63	1.38	1.47
67	QK	501	GTP	C5-C6	-4.57	1.38	1.47
67	PC	501	GTP	C5-C6	-4.50	1.38	1.47
67	CA	501	GTP	C5-C6	-4.47	1.38	1.47
67	TI	501	GTP	C5-C6	-4.47	1.38	1.47
67	DM	501	GTP	C5-C6	-4.46	1.38	1.47
67	SA	501	GTP	C5-C6	-4.44	1.38	1.47
67	QG	501	GTP	C5-C6	-4.42	1.38	1.47
67	SI	501	GTP	C5-C6	-4.41	1.38	1.47
67	FC	501	GTP	C5-C6	-4.39	1.38	1.47
67	WG	501	GTP	C5-C6	-4.35	1.38	1.47
67	RK	501	GTP	C5-C6	-4.30	1.38	1.47
67	QM	501	GTP	C5-C6	-4.29	1.38	1.47
67	PD	502	GTP	C5-C6	-4.27	1.38	1.47
67	EG	501	GTP	C5-C6	-4.26	1.38	1.47
67	PG	501	GTP	C5-C6	-4.26	1.38	1.47
67	DF	502	GTP	C5-C6	-4.25	1.38	1.47
67	TE	501	GTP	C5-C6	-4.24	1.38	1.47
67	DC	501	GTP	C5-C6	-4.23	1.38	1.47
67	MI	501	GTP	C5-C6	-4.22	1.38	1.47
67	HK	501	GTP	C5-C6	-4.22	1.38	1.47
67	AA	501	GTP	C5-C6	-4.21	1.38	1.47
67	CL	502	GTP	C5-C6	-4.21	1.38	1.47
67	QC	501	GTP	C5-C6	-4.20	1.38	1.47
67	KG	501	GTP	C5-C6	-4.20	1.38	1.47
67	HE	501	GTP	C5-C6	-4.19	1.38	1.47
67	FG	501	GTP	C5-C6	-4.19	1.38	1.47
67	VK	501	GTP	C5-C6	-4.19	1.38	1.47
67	WK	501	GTP	C5-C6	-4.17	1.38	1.47
67	PA	501	GTP	C5-C6	-4.17	1.38	1.47
67	DI	501	GTP	C5-C6	-4.17	1.39	1.47
67	FE	501	GTP	C5-C6	-4.17	1.39	1.47
67	AH	502	GTP	C5-C6	-4.16	1.39	1.47
67	PK	501	GTP	C5-C6	-4.16	1.39	1.47
67	LK	501	GTP	C5-C6	-4.15	1.39	1.47
67	RA	501	GTP	C5-C6	-4.15	1.39	1.47
67	NA	502	GTP	C5-C6	-4.14	1.39	1.47
67	AK	501	GTP	C5-C6	-4.14	1.39	1.47
67	KO	501	GTP	C5-C6	-4.14	1.39	1.47
67	WM	501	GTP	C5-C6	-4.14	1.39	1.47
67	FK	501	GTP	C5-C6	-4.14	1.39	1.47
67	CD	502	GTP	C5-C6	-4.14	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	RB	502	GTP	C5-C6	-4.13	1.39	1.47
67	JM	501	GTP	C5-C6	-4.13	1.39	1.47
67	UG	501	GTP	C5-C6	-4.13	1.39	1.47
67	UE	501	GTP	C5-C6	-4.13	1.39	1.47
67	KC	501	GTP	C5-C6	-4.12	1.39	1.47
67	CB	502	GTP	C5-C6	-4.12	1.39	1.47
67	TC	501	GTP	C5-C6	-4.12	1.39	1.47
67	ME	501	GTP	C5-C6	-4.12	1.39	1.47
67	MK	501	GTP	C5-C6	-4.12	1.39	1.47
67	SC	501	GTP	C5-C6	-4.12	1.39	1.47
67	MM	501	GTP	C5-C6	-4.11	1.39	1.47
67	JE	501	GTP	C5-C6	-4.11	1.39	1.47
67	QA	501	GTP	C5-C6	-4.11	1.39	1.47
67	IE	501	GTP	C5-C6	-4.11	1.39	1.47
67	MC	501	GTP	C5-C6	-4.10	1.39	1.47
67	RM	501	GTP	C5-C6	-4.10	1.39	1.47
67	SM	501	GTP	C5-C6	-4.10	1.39	1.47
67	QI	501	GTP	C5-C6	-4.10	1.39	1.47
67	VG	501	GTP	C5-C6	-4.10	1.39	1.47
67	JK	501	GTP	C5-C6	-4.10	1.39	1.47
67	LE	501	GTP	C5-C6	-4.10	1.39	1.47
67	JI	501	GTP	C5-C6	-4.09	1.39	1.47
67	EE	501	GTP	C5-C6	-4.09	1.39	1.47
67	HG	502	GTP	C5-C6	-4.09	1.39	1.47
67	WI	501	GTP	C5-C6	-4.09	1.39	1.47
67	LG	501	GTP	C5-C6	-4.09	1.39	1.47
67	HC	501	GTP	C5-C6	-4.08	1.39	1.47
67	DE	501	GTP	C5-C6	-4.08	1.39	1.47
67	KK	501	GTP	C5-C6	-4.08	1.39	1.47
67	SK	501	GTP	C5-C6	-4.08	1.39	1.47
67	BA	501	GTP	C5-C6	-4.08	1.39	1.47
67	CJ	502	GTP	C5-C6	-4.08	1.39	1.47
67	CG	501	GTP	C5-C6	-4.08	1.39	1.47
67	AC	501	GTP	C5-C6	-4.08	1.39	1.47
67	NI	501	GTP	C5-C6	-4.08	1.39	1.47
67	TK	501	GTP	C5-C6	-4.08	1.39	1.47
67	GG	501	GTP	C5-C6	-4.08	1.39	1.47
67	KI	501	GTP	C5-C6	-4.08	1.39	1.47
67	BI	501	GTP	C5-C6	-4.07	1.39	1.47
67	O0	502	GTP	C5-C6	-4.07	1.39	1.47
67	LC	501	GTP	C5-C6	-4.07	1.39	1.47
67	II	501	GTP	C5-C6	-4.07	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	GC	501	GTP	C5-C6	-4.07	1.39	1.47
67	GI	501	GTP	C5-C6	-4.07	1.39	1.47
67	GJ	502	GTP	C5-C6	-4.06	1.39	1.47
67	IC	501	GTP	C5-C6	-4.06	1.39	1.47
67	NF	502	GTP	C5-C6	-4.06	1.39	1.47
67	PI	501	GTP	C5-C6	-4.06	1.39	1.47
67	KM	501	GTP	C5-C6	-4.06	1.39	1.47
67	NE	501	GTP	C5-C6	-4.05	1.39	1.47
67	AM	501	GTP	C5-C6	-4.05	1.39	1.47
67	IK	501	GTP	C5-C6	-4.05	1.39	1.47
67	WE	501	GTP	C5-C6	-4.05	1.39	1.47
67	LI	501	GTP	C5-C6	-4.05	1.39	1.47
67	GM	501	GTP	C5-C6	-4.05	1.39	1.47
67	TM	501	GTP	C5-C6	-4.05	1.39	1.47
67	WC	501	GTP	C5-C6	-4.04	1.39	1.47
67	IM	501	GTP	C5-C6	-4.04	1.39	1.47
67	UM	501	GTP	C5-C6	-4.04	1.39	1.47
67	IG	501	GTP	C5-C6	-4.04	1.39	1.47
67	OH	502	GTP	C5-C6	-4.03	1.39	1.47
67	BC	501	GTP	C5-C6	-4.03	1.39	1.47
67	JG	501	GTP	C5-C6	-4.03	1.39	1.47
67	VL	502	GTP	C5-C6	-4.03	1.39	1.47
67	UK	501	GTP	C5-C6	-4.03	1.39	1.47
67	HI	501	GTP	C5-C6	-4.03	1.39	1.47
67	DK	501	GTP	C5-C6	-4.03	1.39	1.47
67	EM	501	GTP	C5-C6	-4.03	1.39	1.47
67	IN	502	GTP	C5-C6	-4.02	1.39	1.47
67	LM	501	GTP	C5-C6	-4.02	1.39	1.47
67	RG	501	GTP	C5-C6	-4.02	1.39	1.47
67	EI	501	GTP	C5-C6	-4.01	1.39	1.47
67	NB	502	GTP	C5-C6	-4.01	1.39	1.47
67	HN	502	GTP	C5-C6	-4.01	1.39	1.47
67	VC	501	GTP	C5-C6	-4.00	1.39	1.47
67	BM	501	GTP	C5-C6	-4.00	1.39	1.47
67	UI	501	GTP	C5-C6	-4.00	1.39	1.47
67	BG	501	GTP	C5-C6	-4.00	1.39	1.47
67	RE	501	GTP	C5-C6	-4.00	1.39	1.47
67	HL	502	GTP	C5-C6	-3.99	1.39	1.47
67	VI	502	GTP	C5-C6	-3.99	1.39	1.47
67	OF	502	GTP	C5-C6	-3.99	1.39	1.47
67	BK	501	GTP	C5-C6	-3.99	1.39	1.47
67	JC	501	GTP	C5-C6	-3.98	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	OC	501	GTP	C5-C6	-3.98	1.39	1.47
67	GE	501	GTP	C5-C6	-3.98	1.39	1.47
67	FM	501	GTP	C5-C6	-3.98	1.39	1.47
67	AG	501	GTP	C5-C6	-3.97	1.39	1.47
67	OK	501	GTP	C5-C6	-3.97	1.39	1.47
67	OE	501	GTP	C5-C6	-3.97	1.39	1.47
67	VE	501	GTP	C5-C6	-3.96	1.39	1.47
67	PM	501	GTP	C5-C6	-3.95	1.39	1.47
67	NK	501	GTP	C5-C6	-3.95	1.39	1.47
67	RI	501	GTP	C5-C6	-3.95	1.39	1.47
67	EK	501	GTP	C5-C6	-3.94	1.39	1.47
67	AD	502	GTP	C5-C6	-3.94	1.39	1.47
67	QE	501	GTP	C5-C6	-3.93	1.39	1.47
67	DA	501	GTP	C5-C6	-3.92	1.39	1.47
67	CH	502	GTP	C5-C6	-3.91	1.39	1.47
67	EC	501	GTP	C5-C6	-3.91	1.39	1.47
67	BE	501	GTP	C5-C6	-3.90	1.39	1.47
67	SE	501	GTP	C5-C6	-3.88	1.39	1.47
67	MG	501	GTP	C5-C6	-3.88	1.39	1.47
67	UC	501	GTP	C5-C6	-3.87	1.39	1.47
67	SF	502	GTP	C5-C6	-3.86	1.39	1.47
67	FI	501	GTP	C5-C6	-3.85	1.39	1.47
67	KE	501	GTP	C5-C6	-3.84	1.39	1.47
69	QL	501	GDP	C6-N1	-3.04	1.33	1.37
69	QB	501	GDP	C6-N1	-2.85	1.33	1.37
69	QD	501	GDP	C6-N1	-2.82	1.33	1.37
69	VH	501	GDP	C6-N1	-2.79	1.33	1.37
69	PJ	501	GDP	C6-N1	-2.71	1.33	1.37
69	IB	501	GDP	C6-N1	-2.67	1.33	1.37
69	RJ	501	GDP	C6-N1	-2.64	1.33	1.37
69	QH	501	GDP	C6-N1	-2.64	1.33	1.37
69	CL	501	GDP	C6-N1	-2.60	1.34	1.37
69	WJ	501	GDP	C6-N1	-2.59	1.34	1.37
69	DL	501	GDP	C6-N1	-2.58	1.34	1.37
69	CH	501	GDP	C6-N1	-2.56	1.34	1.37
69	CF	501	GDP	C6-N1	-2.56	1.34	1.37
69	WB	501	GDP	C6-N1	-2.55	1.34	1.37
69	QF	501	GDP	C6-N1	-2.54	1.34	1.37
67	SF	502	GTP	C2-N3	2.54	1.39	1.33
69	QJ	501	GDP	C6-N1	-2.54	1.34	1.37
69	CJ	501	GDP	C6-N1	-2.53	1.34	1.37
69	KB	501	GDP	C6-N1	-2.53	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	PH	501	GDP	C6-N1	-2.53	1.34	1.37
69	ED	501	GDP	C6-N1	-2.49	1.34	1.37
69	DB	501	GDP	C6-N1	-2.49	1.34	1.37
69	FN	501	GDP	C6-N1	-2.48	1.34	1.37
69	WD	501	GDP	C6-N1	-2.47	1.34	1.37
69	WL	501	GDP	C6-N1	-2.46	1.34	1.37
69	VL	501	GDP	C6-N1	-2.46	1.34	1.37
69	GJ	501	GDP	C6-N1	-2.46	1.34	1.37
69	WF	501	GDP	C6-N1	-2.46	1.34	1.37
69	PD	501	GDP	C6-N1	-2.45	1.34	1.37
69	CD	501	GDP	C6-N1	-2.45	1.34	1.37
69	DF	501	GDP	C6-N1	-2.45	1.34	1.37
69	EL	501	GDP	C6-N1	-2.45	1.34	1.37
69	DD	501	GDP	C6-N1	-2.44	1.34	1.37
69	WN	501	GDP	C6-N1	-2.43	1.34	1.37
69	UF	501	GDP	C6-N1	-2.43	1.34	1.37
69	BL	501	GDP	C6-N1	-2.42	1.34	1.37
69	BJ	501	GDP	C6-N1	-2.42	1.34	1.37
69	OJ	501	GDP	C6-N1	-2.42	1.34	1.37
69	HL	501	GDP	C6-N1	-2.42	1.34	1.37
69	FB	501	GDP	C6-N1	-2.41	1.34	1.37
69	RH	501	GDP	C6-N1	-2.41	1.34	1.37
69	AF	501	GDP	C6-N1	-2.41	1.34	1.37
69	FL	501	GDP	C6-N1	-2.41	1.34	1.37
69	IJ	501	GDP	C6-N1	-2.41	1.34	1.37
69	BD	501	GDP	C6-N1	-2.41	1.34	1.37
69	FD	501	GDP	C6-N1	-2.41	1.34	1.37
69	O0	501	GDP	C6-N1	-2.40	1.34	1.37
69	UD	501	GDP	C6-N1	-2.40	1.34	1.37
67	EE	501	GTP	C2-N3	2.40	1.39	1.33
69	FF	501	GDP	C6-N1	-2.40	1.34	1.37
69	EB	501	GDP	C6-N1	-2.40	1.34	1.37
69	BF	501	GDP	C6-N1	-2.39	1.34	1.37
69	HJ	501	GDP	C6-N1	-2.39	1.34	1.37
69	KJ	501	GDP	C6-N1	-2.39	1.34	1.37
69	HB	501	GDP	C6-N1	-2.39	1.34	1.37
69	AH	501	GDP	C6-N1	-2.39	1.34	1.37
69	HF	501	GDP	C6-N1	-2.39	1.34	1.37
69	AJ	501	GDP	C6-N1	-2.39	1.34	1.37
67	DI	501	GTP	C2-N3	2.38	1.38	1.33
69	VB	501	GDP	C6-N1	-2.38	1.34	1.37
69	EJ	501	GDP	C6-N1	-2.38	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	PL	501	GDP	C6-N1	-2.38	1.34	1.37
69	UH	501	GDP	C6-N1	-2.38	1.34	1.37
69	FH	501	GDP	C6-N1	-2.38	1.34	1.37
69	FJ	501	GDP	C6-N1	-2.38	1.34	1.37
69	HD	501	GDP	C6-N1	-2.38	1.34	1.37
69	SH	501	GDP	C6-N1	-2.38	1.34	1.37
69	WH	501	GDP	C6-N1	-2.37	1.34	1.37
69	IN	501	GDP	C6-N1	-2.37	1.34	1.37
69	SL	501	GDP	C6-N1	-2.37	1.34	1.37
69	BB	501	GDP	C6-N1	-2.37	1.34	1.37
69	SD	501	GDP	C6-N1	-2.37	1.34	1.37
69	VJ	501	GDP	C6-N1	-2.37	1.34	1.37
69	GN	501	GDP	C6-N1	-2.36	1.34	1.37
69	OL	501	GDP	C6-N1	-2.36	1.34	1.37
69	TL	501	GDP	C6-N1	-2.36	1.34	1.37
69	UL	501	GDP	C6-N1	-2.36	1.34	1.37
69	GB	501	GDP	C6-N1	-2.36	1.34	1.37
69	KF	501	GDP	C6-N1	-2.36	1.34	1.37
69	JB	501	GDP	C6-N1	-2.35	1.34	1.37
69	UB	501	GDP	C6-N1	-2.35	1.34	1.37
69	GF	501	GDP	C6-N1	-2.35	1.34	1.37
69	GL	501	GDP	C6-N1	-2.35	1.34	1.37
69	VD	501	GDP	C6-N1	-2.35	1.34	1.37
69	UJ	501	GDP	C6-N1	-2.35	1.34	1.37
69	EN	501	GDP	C6-N1	-2.35	1.34	1.37
67	TG	501	GTP	C2-N3	2.35	1.38	1.33
69	JH	501	GDP	C6-N1	-2.35	1.34	1.37
69	AL	501	GDP	C6-N1	-2.34	1.34	1.37
69	JL	501	GDP	C6-N1	-2.34	1.34	1.37
69	ML	501	GDP	C2-N2	2.34	1.39	1.34
69	AB	501	GDP	C6-N1	-2.34	1.34	1.37
69	IL	501	GDP	C6-N1	-2.34	1.34	1.37
69	RB	501	GDP	C6-N1	-2.34	1.34	1.37
69	SB	501	GDP	C6-N1	-2.34	1.34	1.37
67	EG	501	GTP	C2-N3	2.34	1.38	1.33
69	ID	501	GDP	C6-N1	-2.34	1.34	1.37
69	DN	501	GDP	C6-N1	-2.34	1.34	1.37
69	EH	501	GDP	C6-N1	-2.34	1.34	1.37
69	AD	501	GDP	C6-N1	-2.33	1.34	1.37
69	UN	501	GDP	C6-N1	-2.33	1.34	1.37
69	JF	501	GDP	C6-N1	-2.33	1.34	1.37
69	KN	501	GDP	C6-N1	-2.33	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	SJ	501	GDP	C6-N1	-2.33	1.34	1.37
69	KL	501	GDP	C6-N1	-2.33	1.34	1.37
69	DJ	501	GDP	C6-N1	-2.33	1.34	1.37
69	IF	501	GDP	C6-N1	-2.33	1.34	1.37
69	BH	501	GDP	C6-N1	-2.33	1.34	1.37
69	LN	501	GDP	C6-N1	-2.33	1.34	1.37
69	GH	501	GDP	C6-N1	-2.32	1.34	1.37
69	IH	501	GDP	C6-N1	-2.32	1.34	1.37
69	KD	501	GDP	C6-N1	-2.32	1.34	1.37
69	DH	501	GDP	C6-N1	-2.32	1.34	1.37
69	HN	501	GDP	C6-N1	-2.32	1.34	1.37
67	DA	501	GTP	C2-N3	2.31	1.38	1.33
69	GD	501	GDP	C6-N1	-2.31	1.34	1.37
69	VN	501	GDP	C6-N1	-2.31	1.34	1.37
69	OD	501	GDP	C6-N1	-2.31	1.34	1.37
69	NJ	501	GDP	C6-N1	-2.31	1.34	1.37
69	OB	501	GDP	C6-N1	-2.30	1.34	1.37
69	OH	501	GDP	C6-N1	-2.30	1.34	1.37
69	NL	501	GDP	C6-N1	-2.30	1.34	1.37
69	EF	501	GDP	C6-N1	-2.30	1.34	1.37
69	RD	501	GDP	C6-N1	-2.30	1.34	1.37
69	JD	501	GDP	C6-N1	-2.30	1.34	1.37
69	RL	501	GDP	C6-N1	-2.30	1.34	1.37
69	TJ	501	GDP	C6-N1	-2.29	1.34	1.37
67	EC	501	GTP	C2-N3	2.29	1.38	1.33
67	IE	501	GTP	C2-N3	2.29	1.38	1.33
69	VF	501	GDP	C6-N1	-2.28	1.34	1.37
69	HH	501	GDP	C6-N1	-2.28	1.34	1.37
69	TH	501	GDP	C6-N1	-2.28	1.34	1.37
67	WM	501	GTP	C2-N3	2.28	1.38	1.33
69	JN	501	GDP	C6-N1	-2.28	1.34	1.37
69	SF	501	GDP	C6-N1	-2.28	1.34	1.37
69	ND	501	GDP	C6-N1	-2.27	1.34	1.37
67	EK	501	GTP	C2-N3	2.27	1.38	1.33
67	BA	501	GTP	C2-N3	2.27	1.38	1.33
69	RF	501	GDP	C6-N1	-2.27	1.34	1.37
67	GE	501	GTP	C2-N3	2.27	1.38	1.33
67	NI	501	GTP	C2-N3	2.26	1.38	1.33
67	OF	502	GTP	C2-N3	2.26	1.38	1.33
69	JJ	501	GDP	C6-N1	-2.26	1.34	1.37
67	NE	501	GTP	C2-N3	2.26	1.38	1.33
67	BG	501	GTP	C2-N3	2.25	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	NA	502	GTP	C2-N3	2.25	1.38	1.33
67	CD	502	GTP	C2-N3	2.25	1.38	1.33
67	BM	501	GTP	C2-N3	2.25	1.38	1.33
67	LG	501	GTP	C2-N3	2.25	1.38	1.33
67	II	501	GTP	C2-N3	2.25	1.38	1.33
67	HG	502	GTP	C2-N3	2.24	1.38	1.33
67	WK	501	GTP	C2-N3	2.24	1.38	1.33
69	KH	501	GDP	C6-N1	-2.24	1.34	1.37
67	RA	501	GTP	C2-N3	2.24	1.38	1.33
67	NF	502	GTP	C2-N3	2.24	1.38	1.33
67	DK	501	GTP	C2-N3	2.24	1.38	1.33
67	CG	501	GTP	C2-N3	2.23	1.38	1.33
67	NK	501	GTP	C2-N3	2.23	1.38	1.33
67	TM	501	GTP	C2-N3	2.23	1.38	1.33
67	UE	501	GTP	C2-N3	2.23	1.38	1.33
69	TD	501	GDP	C6-N1	-2.23	1.34	1.37
67	BC	501	GTP	C2-N3	2.23	1.38	1.33
67	HL	502	GTP	C2-N3	2.21	1.38	1.33
67	LI	501	GTP	C2-N3	2.21	1.38	1.33
67	PI	501	GTP	C2-N3	2.21	1.38	1.33
67	SM	501	GTP	C2-N3	2.21	1.38	1.33
67	GC	501	GTP	C2-N3	2.21	1.38	1.33
67	HC	501	GTP	C2-N3	2.21	1.38	1.33
67	VK	501	GTP	C2-N3	2.20	1.38	1.33
67	MM	501	GTP	C2-N3	2.20	1.38	1.33
67	NB	502	GTP	C2-N3	2.20	1.38	1.33
67	SE	501	GTP	C2-N3	2.20	1.38	1.33
67	KK	501	GTP	C2-N3	2.20	1.38	1.33
67	SC	501	GTP	C2-N3	2.20	1.38	1.33
67	PC	501	GTP	C2-N3	2.20	1.38	1.33
67	IG	501	GTP	C2-N3	2.20	1.38	1.33
67	RG	501	GTP	C2-N3	2.19	1.38	1.33
67	UC	501	GTP	C2-N3	2.19	1.38	1.33
67	FK	501	GTP	C2-N3	2.19	1.38	1.33
67	O0	502	GTP	C2-N3	2.19	1.38	1.33
67	ME	501	GTP	C2-N3	2.19	1.38	1.33
69	N0	501	GDP	C6-N1	-2.19	1.34	1.37
67	LE	501	GTP	C2-N3	2.19	1.38	1.33
67	UK	501	GTP	C2-N3	2.19	1.38	1.33
69	TF	501	GDP	C6-N1	-2.19	1.34	1.37
67	QK	501	GTP	C2-N3	2.18	1.38	1.33
67	GJ	502	GTP	C2-N3	2.18	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	CL	502	GTP	C2-N3	2.18	1.38	1.33
67	IC	501	GTP	C2-N3	2.18	1.38	1.33
67	BI	501	GTP	C2-N3	2.18	1.38	1.33
67	EM	501	GTP	C2-N3	2.18	1.38	1.33
67	CB	502	GTP	C2-N3	2.18	1.38	1.33
67	WE	501	GTP	C2-N3	2.18	1.38	1.33
67	DM	501	GTP	C2-N3	2.18	1.38	1.33
67	GM	501	GTP	C2-N3	2.18	1.38	1.33
67	OK	501	GTP	C2-N3	2.18	1.38	1.33
67	VI	502	GTP	C2-N3	2.18	1.38	1.33
69	TB	501	GDP	C6-N1	-2.17	1.34	1.37
67	QA	501	GTP	C2-N3	2.17	1.38	1.33
67	HN	502	GTP	C2-N3	2.17	1.38	1.33
67	GI	501	GTP	C2-N3	2.17	1.38	1.33
67	RE	501	GTP	C2-N3	2.17	1.38	1.33
67	JE	501	GTP	C2-N3	2.17	1.38	1.33
67	QG	501	GTP	C2-N3	2.17	1.38	1.33
67	FI	501	GTP	C2-N3	2.17	1.38	1.33
67	OC	501	GTP	C2-N3	2.17	1.38	1.33
69	PF	501	GDP	C6-N1	-2.17	1.34	1.37
67	DF	502	GTP	C2-N3	2.17	1.38	1.33
67	IM	501	GTP	C2-N3	2.16	1.38	1.33
67	SK	501	GTP	C2-N3	2.16	1.38	1.33
67	KC	501	GTP	C2-N3	2.16	1.38	1.33
67	GG	501	GTP	C2-N3	2.16	1.38	1.33
67	PK	501	GTP	C2-N3	2.16	1.38	1.33
67	UG	501	GTP	C2-N3	2.16	1.38	1.33
67	WG	501	GTP	C2-N3	2.16	1.38	1.33
67	DC	501	GTP	C2-N3	2.16	1.38	1.33
67	OH	502	GTP	C2-N3	2.16	1.38	1.33
67	EI	501	GTP	C2-N3	2.15	1.38	1.33
67	BE	501	GTP	C2-N3	2.15	1.38	1.33
67	LM	501	GTP	C2-N3	2.15	1.38	1.33
67	VG	501	GTP	C2-N3	2.15	1.38	1.33
67	KE	501	GTP	C2-N3	2.15	1.38	1.33
67	LK	501	GTP	C2-N3	2.15	1.38	1.33
67	LC	501	GTP	C2-N3	2.15	1.38	1.33
67	UI	501	GTP	C2-N3	2.15	1.38	1.33
67	KI	501	GTP	C2-N3	2.15	1.38	1.33
67	JM	501	GTP	C2-N3	2.14	1.38	1.33
67	PG	501	GTP	C2-N3	2.14	1.38	1.33
67	SA	501	GTP	C2-N3	2.14	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	OE	501	GTP	C2-N3	2.14	1.38	1.33
67	IN	502	GTP	C2-N3	2.13	1.38	1.33
67	FM	501	GTP	C2-N3	2.13	1.38	1.33
67	QC	501	GTP	C2-N3	2.13	1.38	1.33
67	WC	501	GTP	C2-N3	2.13	1.38	1.33
67	TI	501	GTP	C2-N3	2.13	1.38	1.33
67	MI	501	GTP	C5-C4	-2.13	1.37	1.43
67	HE	501	GTP	C2-N3	2.13	1.38	1.33
67	FE	501	GTP	C2-N3	2.13	1.38	1.33
67	HK	501	GTP	C2-N3	2.13	1.38	1.33
67	MK	501	GTP	C2-N3	2.13	1.38	1.33
67	QM	501	GTP	C2-N3	2.12	1.38	1.33
67	CJ	502	GTP	C2-N3	2.12	1.38	1.33
67	JG	501	GTP	C2-N3	2.12	1.38	1.33
67	TE	501	GTP	C2-N3	2.12	1.38	1.33
67	JK	501	GTP	C2-N3	2.12	1.38	1.33
67	QI	501	GTP	C2-N3	2.12	1.38	1.33
67	WI	501	GTP	C2-N3	2.11	1.38	1.33
67	KO	501	GTP	C2-N3	2.11	1.38	1.33
67	CH	502	GTP	C2-N3	2.11	1.38	1.33
67	HI	501	GTP	C2-N3	2.11	1.38	1.33
67	JI	501	GTP	C2-N3	2.11	1.38	1.33
67	QE	501	GTP	C2-N3	2.11	1.38	1.33
67	BK	501	GTP	C2-N3	2.10	1.38	1.33
67	AA	501	GTP	C2-N3	2.10	1.38	1.33
67	RB	502	GTP	C2-N3	2.10	1.38	1.33
67	IK	501	GTP	C2-N3	2.09	1.38	1.33
67	TK	501	GTP	C2-N3	2.09	1.38	1.33
69	CB	501	GDP	C6-N1	-2.09	1.34	1.37
69	MJ	501	GDP	C6-N1	-2.09	1.34	1.37
67	PA	501	GTP	C2-N3	2.08	1.38	1.33
67	TC	501	GTP	C2-N3	2.08	1.38	1.33
67	KM	501	GTP	C2-N3	2.08	1.38	1.33
67	DE	501	GTP	C2-N3	2.07	1.38	1.33
67	RM	501	GTP	C2-N3	2.07	1.38	1.33
67	MC	501	GTP	C2-N3	2.07	1.38	1.33
69	LL	501	GDP	C6-N1	-2.06	1.34	1.37
69	LD	501	GDP	C6-N1	-2.06	1.34	1.37
69	OF	501	GDP	C4-N3	-2.06	1.32	1.37
67	FC	501	GTP	C2-N3	2.06	1.38	1.33
67	SI	501	GTP	C2'-C1'	-2.05	1.50	1.53
67	KG	501	GTP	C2-N3	2.05	1.38	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	VL	502	GTP	C2-N3	2.04	1.38	1.33
67	VC	501	GTP	C2-N3	2.04	1.38	1.33
67	PM	501	GTP	C2-N3	2.04	1.38	1.33
67	JC	501	GTP	C2-N3	2.03	1.38	1.33
67	AM	501	GTP	C2-N3	2.03	1.38	1.33
67	FG	501	GTP	C2-N3	2.01	1.38	1.33
69	MN	501	GDP	C6-N1	-2.01	1.34	1.37

All (1743) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	ML	501	GDP	N2-C2-N1	6.49	130.53	116.71
69	TJ	501	GDP	PA-O3A-PB	-5.47	114.05	132.83
69	DN	501	GDP	PA-O3A-PB	-5.24	114.84	132.83
69	ML	501	GDP	N2-C2-N3	-5.01	109.98	119.74
67	MI	501	GTP	N2-C2-N1	4.92	127.20	116.71
69	NB	501	GDP	N2-C2-N1	4.92	127.19	116.71
67	FE	501	GTP	PA-O3A-PB	-4.87	116.11	132.83
67	HC	501	GTP	PB-O3B-PG	-4.87	116.11	132.83
69	MD	501	GDP	N2-C2-N1	4.82	126.98	116.71
67	PI	501	GTP	PA-O3A-PB	-4.81	116.31	132.83
67	PI	501	GTP	PB-O3B-PG	-4.76	116.49	132.83
69	ML	501	GDP	PA-O3A-PB	-4.74	116.55	132.83
69	EH	501	GDP	PA-O3A-PB	-4.72	116.64	132.83
67	VC	501	GTP	PA-O3A-PB	-4.72	116.64	132.83
69	LH	501	GDP	N2-C2-N1	4.71	126.74	116.71
67	GJ	502	GTP	PB-O3B-PG	-4.70	116.69	132.83
67	UM	501	GTP	PA-O3A-PB	-4.70	116.69	132.83
67	FG	501	GTP	PA-O3A-PB	-4.70	116.69	132.83
67	UI	501	GTP	PA-O3A-PB	-4.66	116.84	132.83
67	SE	501	GTP	PB-O3B-PG	-4.66	116.85	132.83
67	RI	501	GTP	PB-O3B-PG	-4.64	116.89	132.83
67	SI	501	GTP	PB-O3B-PG	-4.63	116.93	132.83
69	NB	501	GDP	N2-C2-N3	-4.63	110.72	119.74
67	SA	501	GTP	PA-O3A-PB	-4.63	116.95	132.83
67	AG	501	GTP	PB-O3B-PG	-4.62	116.97	132.83
67	RB	502	GTP	PA-O3A-PB	-4.62	116.98	132.83
67	GC	501	GTP	PA-O3A-PB	-4.61	117.01	132.83
67	SC	501	GTP	PA-O3A-PB	-4.61	117.01	132.83
67	HE	501	GTP	PB-O3B-PG	-4.59	117.09	132.83
67	CA	501	GTP	PB-O3B-PG	-4.58	117.13	132.83
67	BC	501	GTP	PB-O3B-PG	-4.57	117.13	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	MN	501	GDP	PA-O3A-PB	-4.57	117.15	132.83
69	MD	501	GDP	N2-C2-N3	-4.56	110.86	119.74
67	QM	501	GTP	PA-O3A-PB	-4.56	117.19	132.83
69	DH	501	GDP	PA-O3A-PB	-4.56	117.19	132.83
67	UK	501	GTP	PB-O3B-PG	-4.56	117.19	132.83
67	RM	501	GTP	PB-O3B-PG	-4.55	117.21	132.83
67	IN	502	GTP	O3G-PG-O3B	4.55	119.88	104.64
67	IC	501	GTP	PA-O3A-PB	-4.54	117.23	132.83
67	HL	502	GTP	PA-O3A-PB	-4.54	117.24	132.83
67	KC	501	GTP	PB-O3B-PG	-4.53	117.30	132.83
67	VC	501	GTP	PB-O3B-PG	-4.52	117.32	132.83
67	SE	501	GTP	PA-O3A-PB	-4.52	117.32	132.83
67	FM	501	GTP	PA-O3A-PB	-4.52	117.33	132.83
67	FC	501	GTP	PA-O3A-PB	-4.51	117.35	132.83
67	DA	501	GTP	C3'-C2'-C1'	4.51	107.77	100.98
67	RE	501	GTP	PA-O3A-PB	-4.51	117.36	132.83
67	OE	501	GTP	PB-O3B-PG	-4.50	117.38	132.83
67	SC	501	GTP	PB-O3B-PG	-4.49	117.40	132.83
69	IF	501	GDP	PA-O3A-PB	-4.48	117.47	132.83
69	IB	501	GDP	C3'-C2'-C1'	4.47	107.71	100.98
67	UI	501	GTP	PB-O3B-PG	-4.47	117.49	132.83
69	GB	501	GDP	PA-O3A-PB	-4.47	117.49	132.83
67	KC	501	GTP	PA-O3A-PB	-4.46	117.51	132.83
67	AM	501	GTP	PA-O3A-PB	-4.45	117.56	132.83
69	RD	501	GDP	PA-O3A-PB	-4.44	117.58	132.83
69	JL	501	GDP	PA-O3A-PB	-4.44	117.60	132.83
67	UG	501	GTP	PA-O3A-PB	-4.42	117.64	132.83
67	AA	501	GTP	PB-O3B-PG	-4.42	117.65	132.83
69	QJ	501	GDP	PA-O3A-PB	-4.42	117.66	132.83
67	IG	501	GTP	PB-O3B-PG	-4.41	117.68	132.83
69	JD	501	GDP	PA-O3A-PB	-4.41	117.69	132.83
67	BG	501	GTP	PB-O3B-PG	-4.41	117.70	132.83
69	MB	501	GDP	PA-O3A-PB	-4.40	117.72	132.83
67	CG	501	GTP	PB-O3B-PG	-4.40	117.72	132.83
69	JN	501	GDP	PA-O3A-PB	-4.39	117.76	132.83
67	MI	501	GTP	PA-O3A-PB	-4.39	117.77	132.83
67	JK	501	GTP	PA-O3A-PB	-4.38	117.78	132.83
69	AJ	501	GDP	PA-O3A-PB	-4.38	117.79	132.83
69	MH	501	GDP	PA-O3A-PB	-4.38	117.79	132.83
67	GM	501	GTP	PB-O3B-PG	-4.38	117.80	132.83
69	AD	501	GDP	PA-O3A-PB	-4.37	117.83	132.83
67	SI	501	GTP	PA-O3A-PB	-4.37	117.84	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	LE	501	GTP	PB-O3B-PG	-4.37	117.84	132.83
67	OE	501	GTP	PA-O3A-PB	-4.36	117.87	132.83
67	GJ	502	GTP	PA-O3A-PB	-4.35	117.89	132.83
67	MG	501	GTP	PA-O3A-PB	-4.35	117.89	132.83
67	JC	501	GTP	PA-O3A-PB	-4.35	117.91	132.83
69	OD	501	GDP	PA-O3A-PB	-4.35	117.91	132.83
67	PM	501	GTP	PB-O3B-PG	-4.33	117.97	132.83
69	MD	501	GDP	PA-O3A-PB	-4.33	117.98	132.83
69	BD	501	GDP	PA-O3A-PB	-4.32	118.01	132.83
67	JI	501	GTP	PB-O3B-PG	-4.32	118.01	132.83
67	RM	501	GTP	PA-O3A-PB	-4.32	118.01	132.83
69	HJ	501	GDP	PA-O3A-PB	-4.31	118.04	132.83
69	EN	501	GDP	PA-O3A-PB	-4.31	118.05	132.83
69	GL	501	GDP	PA-O3A-PB	-4.30	118.06	132.83
69	DJ	501	GDP	PA-O3A-PB	-4.30	118.09	132.83
67	HG	502	GTP	PB-O3B-PG	-4.29	118.09	132.83
67	UE	501	GTP	PA-O3A-PB	-4.29	118.11	132.83
67	VI	502	GTP	PB-O3B-PG	-4.29	118.11	132.83
67	PA	501	GTP	PB-O3B-PG	-4.29	118.12	132.83
67	BI	501	GTP	PA-O3A-PB	-4.28	118.13	132.83
69	DB	501	GDP	PA-O3A-PB	-4.28	118.14	132.83
67	WC	501	GTP	PA-O3A-PB	-4.28	118.14	132.83
69	DD	501	GDP	PA-O3A-PB	-4.27	118.16	132.83
67	JI	501	GTP	PA-O3A-PB	-4.27	118.17	132.83
67	VE	501	GTP	PA-O3A-PB	-4.26	118.21	132.83
69	JF	501	GDP	PA-O3A-PB	-4.25	118.23	132.83
67	DI	501	GTP	PA-O3A-PB	-4.25	118.25	132.83
67	GM	501	GTP	PA-O3A-PB	-4.25	118.25	132.83
67	CG	501	GTP	PA-O3A-PB	-4.25	118.25	132.83
67	EC	501	GTP	PA-O3A-PB	-4.25	118.25	132.83
67	VL	502	GTP	O3G-PG-O3B	4.25	118.88	104.64
69	HN	501	GDP	PA-O3A-PB	-4.25	118.26	132.83
67	FK	501	GTP	PB-O3B-PG	-4.24	118.28	132.83
67	HG	502	GTP	PA-O3A-PB	-4.23	118.30	132.83
69	GN	501	GDP	PA-O3A-PB	-4.23	118.30	132.83
67	GC	501	GTP	PB-O3B-PG	-4.23	118.31	132.83
69	CL	501	GDP	PA-O3A-PB	-4.23	118.31	132.83
69	FL	501	GDP	PA-O3A-PB	-4.23	118.31	132.83
67	IK	501	GTP	PB-O3B-PG	-4.22	118.33	132.83
67	O0	502	GTP	PB-O3B-PG	-4.22	118.36	132.83
69	LF	501	GDP	PA-O3A-PB	-4.21	118.39	132.83
69	VN	501	GDP	O2B-PB-O3A	4.21	118.74	104.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	NF	501	GDP	PA-O3A-PB	-4.20	118.40	132.83
69	JJ	501	GDP	PA-O3A-PB	-4.20	118.41	132.83
67	JC	501	GTP	PB-O3B-PG	-4.20	118.42	132.83
69	LH	501	GDP	N2-C2-N3	-4.19	111.58	119.74
69	LJ	501	GDP	PA-O3A-PB	-4.19	118.46	132.83
67	BA	501	GTP	PB-O3B-PG	-4.18	118.47	132.83
69	KH	501	GDP	PA-O3A-PB	-4.18	118.48	132.83
67	NE	501	GTP	PA-O3A-PB	-4.17	118.53	132.83
67	II	501	GTP	PA-O3A-PB	-4.16	118.54	132.83
69	MF	501	GDP	N2-C2-N1	4.15	125.55	116.71
69	CB	501	GDP	PA-O3A-PB	-4.15	118.59	132.83
67	RI	501	GTP	PA-O3A-PB	-4.14	118.61	132.83
69	RB	501	GDP	PA-O3A-PB	-4.14	118.61	132.83
69	FB	501	GDP	PA-O3A-PB	-4.14	118.61	132.83
69	JH	501	GDP	PA-O3A-PB	-4.14	118.63	132.83
69	KL	501	GDP	PA-O3A-PB	-4.13	118.64	132.83
69	OH	501	GDP	PA-O3A-PB	-4.13	118.65	132.83
67	PC	501	GTP	PA-O3A-PB	-4.13	118.66	132.83
69	MF	501	GDP	PA-O3A-PB	-4.13	118.66	132.83
67	UG	501	GTP	PB-O3B-PG	-4.12	118.69	132.83
69	CJ	501	GDP	PA-O3A-PB	-4.12	118.69	132.83
69	HF	501	GDP	PA-O3A-PB	-4.12	118.70	132.83
67	SI	501	GTP	C8-N7-C5	4.12	110.83	102.99
67	EK	501	GTP	PA-O3A-PB	-4.11	118.72	132.83
69	VF	501	GDP	PA-O3A-PB	-4.11	118.72	132.83
69	QL	501	GDP	PA-O3A-PB	-4.11	118.73	132.83
69	EL	501	GDP	PA-O3A-PB	-4.11	118.74	132.83
67	QE	501	GTP	C8-N7-C5	4.11	110.81	102.99
67	FM	501	GTP	PB-O3B-PG	-4.10	118.74	132.83
67	EC	501	GTP	PB-O3B-PG	-4.10	118.76	132.83
69	OL	501	GDP	PA-O3A-PB	-4.10	118.77	132.83
69	SB	501	GDP	PA-O3A-PB	-4.09	118.78	132.83
67	TG	501	GTP	C5-C6-N1	4.09	121.18	113.95
67	UM	501	GTP	PB-O3B-PG	-4.09	118.80	132.83
69	JB	501	GDP	PA-O3A-PB	-4.09	118.80	132.83
67	QC	501	GTP	PA-O3A-PB	-4.09	118.80	132.83
67	LK	501	GTP	PB-O3B-PG	-4.08	118.81	132.83
67	LC	501	GTP	PA-O3A-PB	-4.07	118.84	132.83
69	EJ	501	GDP	PA-O3A-PB	-4.07	118.85	132.83
67	QA	501	GTP	PA-O3A-PB	-4.07	118.85	132.83
67	MI	501	GTP	PB-O3B-PG	-4.07	118.86	132.83
67	HI	501	GTP	PA-O3A-PB	-4.07	118.86	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	WN	501	GDP	PA-O3A-PB	-4.06	118.88	132.83
67	GE	501	GTP	PB-O3B-PG	-4.06	118.91	132.83
67	CD	502	GTP	PA-O3A-PB	-4.05	118.92	132.83
67	QM	501	GTP	PB-O3B-PG	-4.05	118.94	132.83
67	SA	501	GTP	PB-O3B-PG	-4.04	118.96	132.83
67	PM	501	GTP	PA-O3A-PB	-4.03	118.99	132.83
69	GD	501	GDP	PA-O3A-PB	-4.03	118.99	132.83
69	AF	501	GDP	PA-O3A-PB	-4.03	119.00	132.83
67	UK	501	GTP	PA-O3A-PB	-4.03	119.01	132.83
67	UE	501	GTP	PB-O3B-PG	-4.03	119.01	132.83
67	VI	502	GTP	PA-O3A-PB	-4.02	119.03	132.83
67	DK	501	GTP	PB-O3B-PG	-4.01	119.05	132.83
69	GF	501	GDP	PA-O3A-PB	-4.01	119.05	132.83
69	AH	501	GDP	PA-O3A-PB	-4.01	119.06	132.83
69	AL	501	GDP	PA-O3A-PB	-4.00	119.09	132.83
69	GH	501	GDP	PA-O3A-PB	-4.00	119.10	132.83
69	N0	501	GDP	PA-O3A-PB	-4.00	119.11	132.83
67	EM	501	GTP	PA-O3A-PB	-4.00	119.11	132.83
69	RF	501	GDP	PA-O3A-PB	-3.99	119.13	132.83
69	EB	501	GDP	PA-O3A-PB	-3.99	119.14	132.83
67	IM	501	GTP	PB-O3B-PG	-3.98	119.18	132.83
67	EG	501	GTP	PB-O3B-PG	-3.98	119.18	132.83
67	MK	501	GTP	PB-O3B-PG	-3.97	119.21	132.83
67	IC	501	GTP	PB-O3B-PG	-3.96	119.22	132.83
67	DF	502	GTP	PA-O3A-PB	-3.96	119.24	132.83
67	HE	501	GTP	PA-O3A-PB	-3.96	119.24	132.83
69	WL	501	GDP	PA-O3A-PB	-3.95	119.27	132.83
67	UC	501	GTP	PB-O3B-PG	-3.94	119.30	132.83
67	IE	501	GTP	PB-O3B-PG	-3.94	119.31	132.83
69	OJ	501	GDP	PA-O3A-PB	-3.93	119.34	132.83
69	UF	501	GDP	PA-O3A-PB	-3.92	119.36	132.83
69	RH	501	GDP	PA-O3A-PB	-3.92	119.37	132.83
69	OF	501	GDP	PA-O3A-PB	-3.92	119.39	132.83
69	QF	501	GDP	PA-O3A-PB	-3.91	119.40	132.83
67	NE	501	GTP	PB-O3B-PG	-3.91	119.40	132.83
67	MG	501	GTP	PB-O3B-PG	-3.91	119.43	132.83
69	FH	501	GDP	PA-O3A-PB	-3.90	119.44	132.83
69	RJ	501	GDP	PA-O3A-PB	-3.90	119.44	132.83
69	IL	501	GDP	PA-O3A-PB	-3.89	119.47	132.83
69	UJ	501	GDP	PA-O3A-PB	-3.89	119.48	132.83
69	WH	501	GDP	PA-O3A-PB	-3.89	119.48	132.83
69	LH	501	GDP	PA-O3A-PB	-3.89	119.48	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	BK	501	GTP	PB-O3B-PG	-3.89	119.49	132.83
67	NI	501	GTP	PA-O3A-PB	-3.88	119.50	132.83
67	FE	501	GTP	PB-O3B-PG	-3.88	119.50	132.83
69	SJ	501	GDP	PA-O3A-PB	-3.88	119.53	132.83
69	UH	501	GDP	PA-O3A-PB	-3.87	119.55	132.83
67	LC	501	GTP	PB-O3B-PG	-3.87	119.56	132.83
67	OH	502	GTP	PA-O3A-PB	-3.86	119.57	132.83
67	GE	501	GTP	PA-O3A-PB	-3.86	119.57	132.83
67	RA	501	GTP	PB-O3B-PG	-3.86	119.57	132.83
69	NB	501	GDP	PA-O3A-PB	-3.86	119.58	132.83
67	DE	501	GTP	PA-O3A-PB	-3.86	119.59	132.83
67	DM	501	GTP	PA-O3A-PB	-3.86	119.59	132.83
69	DF	501	GDP	PA-O3A-PB	-3.85	119.60	132.83
69	ED	501	GDP	PA-O3A-PB	-3.85	119.61	132.83
67	CB	502	GTP	PA-O3A-PB	-3.85	119.61	132.83
67	FC	501	GTP	PB-O3B-PG	-3.85	119.61	132.83
69	VJ	501	GDP	PA-O3A-PB	-3.84	119.64	132.83
67	VG	501	GTP	PA-O3A-PB	-3.84	119.66	132.83
69	VB	501	GDP	PA-O3A-PB	-3.83	119.68	132.83
67	SM	501	GTP	PB-O3B-PG	-3.83	119.69	132.83
69	AB	501	GDP	PA-O3A-PB	-3.83	119.69	132.83
67	NI	501	GTP	PB-O3B-PG	-3.83	119.70	132.83
69	WJ	501	GDP	PA-O3A-PB	-3.83	119.70	132.83
67	EG	501	GTP	PA-O3A-PB	-3.82	119.71	132.83
69	QH	501	GDP	PA-O3A-PB	-3.82	119.72	132.83
67	NA	502	GTP	PA-O3A-PB	-3.82	119.73	132.83
67	SF	502	GTP	PB-O3B-PG	-3.82	119.73	132.83
69	MJ	501	GDP	PA-O3A-PB	-3.82	119.73	132.83
67	NA	502	GTP	PB-O3B-PG	-3.81	119.74	132.83
67	QE	501	GTP	PA-O3A-PB	-3.81	119.74	132.83
67	QI	501	GTP	PB-O3B-PG	-3.81	119.75	132.83
67	PC	501	GTP	PB-O3B-PG	-3.81	119.75	132.83
67	RE	501	GTP	PB-O3B-PG	-3.81	119.77	132.83
69	TL	501	GDP	PA-O3A-PB	-3.81	119.77	132.83
67	FK	501	GTP	PA-O3A-PB	-3.80	119.78	132.83
67	AA	501	GTP	PA-O3A-PB	-3.80	119.78	132.83
67	WM	501	GTP	PB-O3B-PG	-3.80	119.79	132.83
67	BE	501	GTP	PA-O3A-PB	-3.79	119.81	132.83
67	KO	501	GTP	PB-O3B-PG	-3.79	119.81	132.83
69	KD	501	GDP	PA-O3A-PB	-3.78	119.84	132.83
69	FD	501	GDP	PA-O3A-PB	-3.78	119.85	132.83
67	BG	501	GTP	PA-O3A-PB	-3.78	119.85	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	SF	502	GTP	C5-C6-N1	3.78	120.62	113.95
69	NJ	501	GDP	PA-O3A-PB	-3.77	119.88	132.83
69	LL	501	GDP	PA-O3A-PB	-3.77	119.88	132.83
69	HH	501	GDP	PA-O3A-PB	-3.77	119.89	132.83
69	TD	501	GDP	PA-O3A-PB	-3.77	119.90	132.83
69	EF	501	GDP	PA-O3A-PB	-3.77	119.91	132.83
67	QI	501	GTP	PA-O3A-PB	-3.76	119.92	132.83
67	EM	501	GTP	PB-O3B-PG	-3.75	119.94	132.83
67	FG	501	GTP	C3'-C2'-C1'	3.75	106.62	100.98
67	HK	501	GTP	PA-O3A-PB	-3.75	119.97	132.83
69	IJ	501	GDP	PA-O3A-PB	-3.74	119.98	132.83
67	ME	501	GTP	PA-O3A-PB	-3.74	119.98	132.83
69	IN	501	GDP	PA-O3A-PB	-3.74	120.00	132.83
67	DI	501	GTP	PB-O3B-PG	-3.74	120.00	132.83
67	BC	501	GTP	PA-O3A-PB	-3.73	120.01	132.83
67	CL	502	GTP	PA-O3A-PB	-3.73	120.01	132.83
69	WD	501	GDP	PA-O3A-PB	-3.72	120.05	132.83
69	WB	501	GDP	PA-O3A-PB	-3.72	120.06	132.83
69	GJ	501	GDP	PA-O3A-PB	-3.72	120.08	132.83
67	KM	501	GTP	PA-O3A-PB	-3.72	120.08	132.83
67	MC	501	GTP	PA-O3A-PB	-3.71	120.08	132.83
69	TB	501	GDP	PA-O3A-PB	-3.71	120.10	132.83
67	OC	501	GTP	PB-O3B-PG	-3.70	120.12	132.83
67	AH	502	GTP	O3G-PG-O3B	3.70	117.05	104.64
69	RL	501	GDP	PA-O3A-PB	-3.70	120.12	132.83
69	O0	501	GDP	PA-O3A-PB	-3.70	120.12	132.83
67	OC	501	GTP	PA-O3A-PB	-3.69	120.18	132.83
69	HL	501	GDP	PA-O3A-PB	-3.69	120.18	132.83
67	IK	501	GTP	PA-O3A-PB	-3.68	120.18	132.83
67	CL	502	GTP	PB-O3B-PG	-3.68	120.19	132.83
67	QE	501	GTP	PB-O3B-PG	-3.68	120.19	132.83
67	BM	501	GTP	PA-O3A-PB	-3.68	120.19	132.83
69	NL	501	GDP	PA-O3A-PB	-3.68	120.20	132.83
67	LE	501	GTP	PA-O3A-PB	-3.68	120.20	132.83
67	JK	501	GTP	PB-O3B-PG	-3.68	120.21	132.83
69	OF	501	GDP	N2-C2-N3	-3.67	112.59	119.74
67	BM	501	GTP	PB-O3B-PG	-3.67	120.23	132.83
67	OK	501	GTP	C5-C6-N1	3.67	120.43	113.95
67	LG	501	GTP	PB-O3B-PG	-3.67	120.24	132.83
69	SH	501	GDP	PA-O3A-PB	-3.67	120.24	132.83
67	ME	501	GTP	PB-O3B-PG	-3.67	120.24	132.83
67	LM	501	GTP	PA-O3A-PB	-3.65	120.30	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	HI	501	GTP	PB-O3B-PG	-3.65	120.30	132.83
67	HK	501	GTP	PB-O3B-PG	-3.65	120.30	132.83
69	ID	501	GDP	PA-O3A-PB	-3.65	120.31	132.83
67	CA	501	GTP	PA-O3A-PB	-3.65	120.32	132.83
67	TI	501	GTP	PA-O3A-PB	-3.64	120.32	132.83
69	ND	501	GDP	PA-O3A-PB	-3.64	120.32	132.83
67	WK	501	GTP	C3'-C2'-C1'	3.64	106.46	100.98
67	QM	501	GTP	C3'-C2'-C1'	3.64	106.46	100.98
67	WK	501	GTP	C5-C6-N1	3.63	120.37	113.95
67	IN	502	GTP	PA-O3A-PB	-3.63	120.36	132.83
67	HC	501	GTP	PA-O3A-PB	-3.63	120.36	132.83
69	LB	501	GDP	PA-O3A-PB	-3.63	120.37	132.83
67	WM	501	GTP	PA-O3A-PB	-3.62	120.40	132.83
67	QG	501	GTP	PA-O3A-PB	-3.62	120.40	132.83
67	GI	501	GTP	PA-O3A-PB	-3.61	120.42	132.83
69	LD	501	GDP	PA-O3A-PB	-3.61	120.42	132.83
67	EK	501	GTP	PB-O3B-PG	-3.61	120.45	132.83
67	BK	501	GTP	PA-O3A-PB	-3.60	120.46	132.83
67	DC	501	GTP	PB-O3B-PG	-3.60	120.48	132.83
69	TF	501	GDP	PA-O3A-PB	-3.60	120.48	132.83
69	SD	501	GDP	PA-O3A-PB	-3.59	120.50	132.83
69	CF	501	GDP	PA-O3A-PB	-3.59	120.50	132.83
67	TG	501	GTP	PA-O3A-PB	-3.59	120.51	132.83
67	BE	501	GTP	PB-O3B-PG	-3.59	120.52	132.83
67	QC	501	GTP	PB-O3B-PG	-3.58	120.54	132.83
69	PH	501	GDP	PA-O3A-PB	-3.58	120.55	132.83
69	QB	501	GDP	PA-O3A-PB	-3.58	120.55	132.83
67	MC	501	GTP	PB-O3B-PG	-3.58	120.56	132.83
67	DF	502	GTP	PB-O3B-PG	-3.57	120.56	132.83
67	DM	501	GTP	PB-O3B-PG	-3.57	120.58	132.83
69	IB	501	GDP	PA-O3A-PB	-3.56	120.59	132.83
69	HD	501	GDP	PA-O3A-PB	-3.56	120.60	132.83
69	KJ	501	GDP	PA-O3A-PB	-3.56	120.60	132.83
67	WI	501	GTP	PA-O3A-PB	-3.56	120.63	132.83
67	EI	501	GTP	PB-O3B-PG	-3.55	120.63	132.83
67	UC	501	GTP	PA-O3A-PB	-3.55	120.65	132.83
67	WG	501	GTP	PB-O3B-PG	-3.55	120.65	132.83
67	TC	501	GTP	PA-O3A-PB	-3.55	120.65	132.83
67	QK	501	GTP	C5-C6-N1	3.55	120.21	113.95
67	LI	501	GTP	PB-O3B-PG	-3.55	120.66	132.83
67	PC	501	GTP	C3'-C2'-C1'	3.54	106.31	100.98
67	LM	501	GTP	PB-O3B-PG	-3.54	120.68	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	DE	501	GTP	PB-O3B-PG	-3.54	120.69	132.83
67	WK	501	GTP	PB-O3B-PG	-3.54	120.69	132.83
67	BA	501	GTP	PA-O3A-PB	-3.54	120.69	132.83
67	RG	501	GTP	PA-O3A-PB	-3.54	120.69	132.83
67	JE	501	GTP	PB-O3B-PG	-3.53	120.71	132.83
69	LN	501	GDP	PA-O3A-PB	-3.53	120.71	132.83
69	KB	501	GDP	PA-O3A-PB	-3.53	120.71	132.83
67	AH	502	GTP	PA-O3A-PB	-3.53	120.73	132.83
67	KK	501	GTP	PB-O3B-PG	-3.53	120.73	132.83
67	IG	501	GTP	PA-O3A-PB	-3.52	120.76	132.83
67	SM	501	GTP	C3'-C2'-C1'	3.52	106.27	100.98
67	TE	501	GTP	PB-O3B-PG	-3.51	120.77	132.83
67	JM	501	GTP	PB-O3B-PG	-3.51	120.78	132.83
67	EE	501	GTP	PB-O3B-PG	-3.51	120.79	132.83
69	NH	501	GDP	PA-O3A-PB	-3.51	120.79	132.83
67	TK	501	GTP	PB-O3B-PG	-3.50	120.83	132.83
69	BD	501	GDP	C2'-C3'-C4'	3.50	109.43	102.64
67	MI	501	GTP	C5-C6-N1	3.49	120.12	113.95
67	JG	501	GTP	PB-O3B-PG	-3.49	120.85	132.83
67	TG	501	GTP	PB-O3B-PG	-3.49	120.86	132.83
67	CH	502	GTP	O3G-PG-O3B	3.48	116.31	104.64
67	BI	501	GTP	PB-O3B-PG	-3.48	120.89	132.83
69	QD	501	GDP	PA-O3A-PB	-3.48	120.89	132.83
67	AG	501	GTP	PA-O3A-PB	-3.48	120.89	132.83
69	HB	501	GDP	PA-O3A-PB	-3.47	120.93	132.83
67	II	501	GTP	PB-O3B-PG	-3.47	120.94	132.83
67	LG	501	GTP	PA-O3A-PB	-3.46	120.95	132.83
67	TG	501	GTP	C2-N1-C6	-3.46	118.73	125.10
67	BC	501	GTP	C5-C6-N1	3.46	120.06	113.95
69	MF	501	GDP	N2-C2-N3	-3.46	113.01	119.74
67	WC	501	GTP	PB-O3B-PG	-3.46	120.97	132.83
67	BI	501	GTP	C5-C6-N1	3.45	120.05	113.95
67	HN	502	GTP	PB-O3B-PG	-3.45	120.99	132.83
69	OB	501	GDP	PA-O3A-PB	-3.45	120.99	132.83
67	KG	501	GTP	PB-O3B-PG	-3.45	121.00	132.83
67	SK	501	GTP	PA-O3A-PB	-3.44	121.02	132.83
69	SL	501	GDP	PA-O3A-PB	-3.44	121.03	132.83
67	TE	501	GTP	C5-C6-N1	3.43	120.02	113.95
69	UD	501	GDP	PA-O3A-PB	-3.43	121.05	132.83
67	KI	501	GTP	PB-O3B-PG	-3.43	121.05	132.83
67	VK	501	GTP	C5-C6-N1	3.42	119.98	113.95
67	RB	502	GTP	PB-O3B-PG	-3.41	121.11	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	VG	501	GTP	PB-O3B-PG	-3.41	121.11	132.83
67	TG	501	GTP	O6-C6-C5	-3.41	117.71	124.37
67	PA	501	GTP	PA-O3A-PB	-3.40	121.14	132.83
67	TM	501	GTP	PB-O3B-PG	-3.40	121.15	132.83
67	NB	502	GTP	PA-O3A-PB	-3.40	121.15	132.83
67	EC	501	GTP	C8-N7-C5	3.40	109.47	102.99
69	QJ	501	GDP	C3'-C2'-C1'	3.40	106.10	100.98
67	DA	501	GTP	C8-N7-C5	3.40	109.46	102.99
67	KK	501	GTP	PA-O3A-PB	-3.40	121.17	132.83
67	PK	501	GTP	PB-O3B-PG	-3.39	121.19	132.83
67	JE	501	GTP	PA-O3A-PB	-3.39	121.20	132.83
69	ED	501	GDP	C3'-C2'-C1'	3.37	106.06	100.98
69	VN	501	GDP	O2B-PB-O1B	-3.37	97.47	110.68
69	DL	501	GDP	PA-O3A-PB	-3.37	121.26	132.83
67	OH	502	GTP	O3G-PG-O3B	3.37	115.93	104.64
67	DA	501	GTP	PA-O3A-PB	-3.37	121.27	132.83
67	UG	501	GTP	C5-C6-N1	3.36	119.89	113.95
69	PD	501	GDP	PA-O3A-PB	-3.36	121.31	132.83
67	QK	501	GTP	PA-O3A-PB	-3.36	121.31	132.83
67	QC	501	GTP	C3'-C2'-C1'	3.36	106.03	100.98
67	TI	501	GTP	C2-N1-C6	-3.35	118.92	125.10
67	VE	501	GTP	PB-O3B-PG	-3.35	121.32	132.83
67	CB	502	GTP	C5-C6-N1	3.35	119.87	113.95
67	PA	501	GTP	C5-C6-N1	3.35	119.87	113.95
69	FL	501	GDP	C3'-C2'-C1'	3.35	106.02	100.98
67	TM	501	GTP	PA-O3A-PB	-3.35	121.33	132.83
67	FG	501	GTP	C5-C6-N1	3.35	119.86	113.95
67	GE	501	GTP	C5-C6-N1	3.35	119.86	113.95
67	CH	502	GTP	PA-O3A-PB	-3.35	121.34	132.83
69	TB	501	GDP	C3'-C2'-C1'	3.34	106.01	100.98
67	VI	502	GTP	C5-C6-N1	3.34	119.85	113.95
67	OH	502	GTP	C5-C6-N1	3.34	119.85	113.95
67	WI	501	GTP	C5-C6-N1	3.34	119.84	113.95
67	RA	501	GTP	PA-O3A-PB	-3.34	121.38	132.83
67	FI	501	GTP	PA-O3A-PB	-3.34	121.38	132.83
67	WC	501	GTP	C5-C6-N1	3.33	119.83	113.95
69	EH	501	GDP	C3'-C2'-C1'	3.33	105.99	100.98
67	DC	501	GTP	C5-C6-N1	3.33	119.83	113.95
67	PC	501	GTP	C5-C6-N1	3.33	119.83	113.95
67	SC	501	GTP	C3'-C2'-C1'	3.33	105.99	100.98
67	DA	501	GTP	PB-O3B-PG	-3.33	121.41	132.83
67	DI	501	GTP	C5-C6-N1	3.33	119.83	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	CJ	502	GTP	C3'-C2'-C1'	3.33	105.99	100.98
67	WE	501	GTP	PB-O3B-PG	-3.33	121.42	132.83
67	EC	501	GTP	C5-C6-N1	3.32	119.82	113.95
67	NB	502	GTP	C5-C6-N1	3.32	119.81	113.95
67	VI	502	GTP	C3'-C2'-C1'	3.32	105.98	100.98
69	WF	501	GDP	PA-O3A-PB	-3.31	121.45	132.83
67	CB	502	GTP	O3G-PG-O3B	3.31	115.74	104.64
69	EL	501	GDP	C3'-C2'-C1'	3.31	105.96	100.98
67	BE	501	GTP	C5-C6-N1	3.31	119.79	113.95
67	KG	501	GTP	C5-C6-N1	3.31	119.79	113.95
67	HK	501	GTP	C5-C6-N1	3.30	119.78	113.95
67	HC	501	GTP	C5-C6-N1	3.30	119.78	113.95
67	SE	501	GTP	C5-C6-N1	3.30	119.78	113.95
67	GM	501	GTP	C5-C6-N1	3.29	119.77	113.95
67	BK	501	GTP	C5-C6-N1	3.29	119.77	113.95
67	GI	501	GTP	C5-C6-N1	3.29	119.77	113.95
67	SK	501	GTP	C3'-C2'-C1'	3.29	105.94	100.98
69	O0	501	GDP	C3'-C2'-C1'	3.29	105.94	100.98
67	TI	501	GTP	PB-O3B-PG	-3.29	121.53	132.83
67	WK	501	GTP	PA-O3A-PB	-3.29	121.53	132.83
67	WE	501	GTP	C5-C6-N1	3.29	119.76	113.95
67	NB	502	GTP	PB-O3B-PG	-3.29	121.53	132.83
67	IC	501	GTP	C5-C6-N1	3.29	119.76	113.95
67	BI	501	GTP	C3'-C2'-C1'	3.29	105.92	100.98
67	PI	501	GTP	C5-C6-N1	3.29	119.75	113.95
67	LE	501	GTP	C3'-C2'-C1'	3.28	105.92	100.98
67	GC	501	GTP	C5-C6-N1	3.28	119.74	113.95
67	QM	501	GTP	C5-C6-N1	3.28	119.74	113.95
69	ML	501	GDP	O6-C6-C5	-3.28	117.97	124.37
67	DF	502	GTP	C3'-C2'-C1'	3.27	105.91	100.98
67	EK	501	GTP	C8-N7-C5	3.27	109.22	102.99
67	VL	502	GTP	C5-C6-N1	3.27	119.73	113.95
67	EE	501	GTP	C5-C6-N1	3.27	119.73	113.95
67	EM	501	GTP	C5-C6-N1	3.27	119.73	113.95
67	NK	501	GTP	C5-C6-N1	3.27	119.72	113.95
69	SD	501	GDP	C3'-C2'-C1'	3.27	105.90	100.98
67	NF	502	GTP	C5-C6-N1	3.27	119.72	113.95
67	AA	501	GTP	C5-C6-N1	3.27	119.72	113.95
67	CD	502	GTP	C5-C6-N1	3.27	119.72	113.95
67	EE	501	GTP	C8-N7-C5	3.27	109.21	102.99
67	WM	501	GTP	C3'-C2'-C1'	3.27	105.89	100.98
67	FI	501	GTP	C5-C6-N1	3.27	119.72	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	IK	501	GTP	C3'-C2'-C1'	3.26	105.89	100.98
67	CG	501	GTP	C5-C6-N1	3.26	119.71	113.95
67	IG	501	GTP	C5-C6-N1	3.26	119.71	113.95
69	RH	501	GDP	C3'-C2'-C1'	3.26	105.88	100.98
69	IH	501	GDP	PA-O3A-PB	-3.26	121.65	132.83
67	AH	502	GTP	C5-C6-N1	3.26	119.70	113.95
69	SF	501	GDP	PA-O3A-PB	-3.26	121.65	132.83
67	AK	501	GTP	C5-C6-N1	3.26	119.70	113.95
67	RA	501	GTP	C5-C6-N1	3.25	119.70	113.95
67	GJ	502	GTP	C5-C6-N1	3.25	119.69	113.95
67	WG	501	GTP	C2-N1-C6	-3.25	119.11	125.10
67	BM	501	GTP	C5-C6-N1	3.25	119.69	113.95
67	HE	501	GTP	C5-C6-N1	3.25	119.69	113.95
67	KE	501	GTP	C5-C6-N1	3.25	119.69	113.95
67	OC	501	GTP	C5-C6-N1	3.25	119.69	113.95
67	SK	501	GTP	C5-C6-N1	3.25	119.68	113.95
67	NA	502	GTP	C3'-C2'-C1'	3.24	105.86	100.98
67	LC	501	GTP	C5-C6-N1	3.24	119.68	113.95
67	EE	501	GTP	C2-N1-C6	-3.24	119.12	125.10
67	KI	501	GTP	C5-C6-N1	3.24	119.68	113.95
67	RK	501	GTP	C8-N7-C5	3.24	109.17	102.99
67	GJ	502	GTP	C3'-C2'-C1'	3.24	105.86	100.98
67	JE	501	GTP	C3'-C2'-C1'	3.24	105.86	100.98
67	BA	501	GTP	C5-C6-N1	3.24	119.67	113.95
67	TE	501	GTP	PA-O3A-PB	-3.24	121.70	132.83
67	IN	502	GTP	C5-C6-N1	3.24	119.67	113.95
67	JE	501	GTP	C5-C6-N1	3.24	119.67	113.95
67	AD	502	GTP	C5-C6-N1	3.24	119.67	113.95
67	CG	501	GTP	C3'-C2'-C1'	3.24	105.85	100.98
67	UE	501	GTP	C5-C6-N1	3.24	119.67	113.95
69	KF	501	GDP	PA-O3A-PB	-3.24	121.72	132.83
67	IE	501	GTP	PA-O3A-PB	-3.24	121.72	132.83
69	BB	501	GDP	PA-O3A-PB	-3.23	121.73	132.83
67	HN	502	GTP	C5-C6-N1	3.23	119.66	113.95
67	BG	501	GTP	C5-C6-N1	3.23	119.66	113.95
67	LI	501	GTP	PA-O3A-PB	-3.23	121.74	132.83
67	CJ	502	GTP	C5-C6-N1	3.23	119.66	113.95
69	NH	501	GDP	N2-C2-N1	3.23	123.59	116.71
67	BC	501	GTP	C3'-C2'-C1'	3.23	105.84	100.98
67	MC	501	GTP	C3'-C2'-C1'	3.23	105.84	100.98
67	NI	501	GTP	C3'-C2'-C1'	3.23	105.84	100.98
67	DM	501	GTP	C5-C6-N1	3.23	119.65	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	EC	501	GTP	C2-N1-C6	-3.23	119.16	125.10
67	PG	501	GTP	C5-C6-N1	3.23	119.65	113.95
67	SM	501	GTP	C5-C6-N1	3.23	119.65	113.95
67	FK	501	GTP	C5-C6-N1	3.22	119.64	113.95
67	VC	501	GTP	C5-C6-N1	3.22	119.64	113.95
67	WG	501	GTP	C8-N7-C5	3.22	109.13	102.99
67	GG	501	GTP	PA-O3A-PB	-3.22	121.77	132.83
67	OF	502	GTP	C5-C6-N1	3.22	119.64	113.95
67	CH	502	GTP	C3'-C2'-C1'	3.22	105.82	100.98
67	QA	501	GTP	C5-C6-N1	3.22	119.63	113.95
67	SM	501	GTP	PA-O3A-PB	-3.21	121.80	132.83
67	TC	501	GTP	C5-C6-N1	3.21	119.62	113.95
67	GG	501	GTP	C5-C6-N1	3.21	119.62	113.95
67	RB	502	GTP	C5-C6-N1	3.21	119.62	113.95
67	RE	501	GTP	C5-C6-N1	3.21	119.62	113.95
67	UC	501	GTP	C5-C6-N1	3.21	119.62	113.95
67	VG	501	GTP	C5-C6-N1	3.21	119.62	113.95
67	LK	501	GTP	C5-C6-N1	3.21	119.62	113.95
67	MI	501	GTP	O6-C6-C5	-3.21	118.11	124.37
67	BA	501	GTP	C3'-C2'-C1'	3.21	105.81	100.98
67	HI	501	GTP	C5-C6-N1	3.21	119.61	113.95
67	HL	502	GTP	C5-C6-N1	3.21	119.61	113.95
67	II	501	GTP	C5-C6-N1	3.21	119.61	113.95
67	MC	501	GTP	C5-C6-N1	3.21	119.61	113.95
69	QL	501	GDP	C5-C6-N1	3.21	119.61	113.95
67	SK	501	GTP	PB-O3B-PG	-3.21	121.83	132.83
67	JM	501	GTP	C5-C6-N1	3.20	119.61	113.95
67	GI	501	GTP	PB-O3B-PG	-3.20	121.83	132.83
67	O0	502	GTP	C5-C6-N1	3.20	119.60	113.95
67	UK	501	GTP	C5-C6-N1	3.20	119.60	113.95
67	SE	501	GTP	C2-N1-C6	-3.20	119.21	125.10
67	JI	501	GTP	C3'-C2'-C1'	3.20	105.79	100.98
67	PD	502	GTP	C2-N1-C6	-3.20	119.21	125.10
67	IM	501	GTP	C5-C6-N1	3.20	119.60	113.95
67	QG	501	GTP	C8-N7-C5	3.20	109.08	102.99
67	QG	501	GTP	C5-C6-N1	3.20	119.59	113.95
67	SI	501	GTP	C2-N1-C6	-3.19	119.22	125.10
67	JI	501	GTP	C5-C6-N1	3.19	119.59	113.95
67	DI	501	GTP	C3'-C2'-C1'	3.19	105.79	100.98
69	KB	501	GDP	C3'-C2'-C1'	3.19	105.79	100.98
67	JG	501	GTP	C5-C6-N1	3.19	119.59	113.95
67	KC	501	GTP	C5-C6-N1	3.19	119.59	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	AD	502	GTP	PA-O3A-PB	-3.19	121.87	132.83
67	WM	501	GTP	C5-C6-N1	3.19	119.59	113.95
69	CH	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
69	QF	501	GDP	C3'-C2'-C1'	3.19	105.78	100.98
67	JC	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	LG	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	HI	501	GTP	C3'-C2'-C1'	3.19	105.78	100.98
67	AC	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	AG	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	OE	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	SC	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	RG	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	UI	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	LE	501	GTP	C5-C6-N1	3.19	119.58	113.95
67	EK	501	GTP	C5-C6-N1	3.18	119.58	113.95
67	AM	501	GTP	C5-C6-N1	3.18	119.57	113.95
67	DE	501	GTP	C5-C6-N1	3.18	119.57	113.95
67	EC	501	GTP	C3'-C2'-C1'	3.18	105.77	100.98
67	QI	501	GTP	C5-C6-N1	3.18	119.57	113.95
69	PB	501	GDP	N2-C2-N1	3.18	123.48	116.71
67	KO	501	GTP	C5-C6-N1	3.18	119.56	113.95
67	AK	501	GTP	PA-O3A-PB	-3.18	121.92	132.83
67	JK	501	GTP	C5-C6-N1	3.18	119.56	113.95
67	QC	501	GTP	C5-C6-N1	3.18	119.56	113.95
67	CH	502	GTP	C5-C6-N1	3.18	119.56	113.95
67	MM	501	GTP	C3'-C2'-C1'	3.18	105.76	100.98
67	HG	502	GTP	C5-C6-N1	3.17	119.56	113.95
67	UM	501	GTP	C5-C6-N1	3.17	119.56	113.95
67	LI	501	GTP	C5-C6-N1	3.17	119.56	113.95
67	ME	501	GTP	C5-C6-N1	3.17	119.56	113.95
67	NE	501	GTP	C5-C6-N1	3.17	119.55	113.95
67	OF	502	GTP	C3'-C2'-C1'	3.17	105.75	100.98
67	VC	501	GTP	C8-N7-C5	3.17	109.03	102.99
67	KK	501	GTP	C5-C6-N1	3.17	119.55	113.95
67	PK	501	GTP	C5-C6-N1	3.17	119.55	113.95
67	CA	501	GTP	C3'-C2'-C1'	3.17	105.75	100.98
67	KO	501	GTP	PA-O3A-PB	-3.17	121.96	132.83
67	MM	501	GTP	PB-O3B-PG	-3.17	121.96	132.83
67	FM	501	GTP	C5-C6-N1	3.17	119.54	113.95
69	HL	501	GDP	C3'-C2'-C1'	3.16	105.74	100.98
69	FN	501	GDP	PA-O3A-PB	-3.16	121.97	132.83
69	SJ	501	GDP	C3'-C2'-C1'	3.16	105.74	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	SL	501	GDP	C3'-C2'-C1'	3.16	105.74	100.98
67	IE	501	GTP	C5-C6-N1	3.16	119.53	113.95
67	LM	501	GTP	C5-C6-N1	3.16	119.53	113.95
67	DK	501	GTP	C5-C6-N1	3.16	119.53	113.95
67	IM	501	GTP	PA-O3A-PB	-3.16	121.98	132.83
67	TK	501	GTP	C5-C6-N1	3.16	119.53	113.95
69	FB	501	GDP	C3'-C2'-C1'	3.16	105.73	100.98
67	FE	501	GTP	C5-C6-N1	3.16	119.53	113.95
67	MM	501	GTP	C5-C6-N1	3.16	119.53	113.95
67	MI	501	GTP	C2-N1-C6	-3.16	119.28	125.10
67	MK	501	GTP	C5-C6-N1	3.16	119.52	113.95
67	IK	501	GTP	C5-C6-N1	3.15	119.52	113.95
67	TM	501	GTP	C5-C6-N1	3.15	119.52	113.95
67	KM	501	GTP	C5-C6-N1	3.15	119.51	113.95
69	TH	501	GDP	PA-O3A-PB	-3.15	122.02	132.83
67	NA	502	GTP	C5-C6-N1	3.15	119.51	113.95
67	NI	501	GTP	C5-C6-N1	3.15	119.51	113.95
67	SE	501	GTP	C8-N7-C5	3.15	108.98	102.99
67	DC	501	GTP	PA-O3A-PB	-3.14	122.03	132.83
67	OK	501	GTP	C8-N7-C5	3.14	108.98	102.99
69	EN	501	GDP	C3'-C2'-C1'	3.14	105.71	100.98
69	FH	501	GDP	C3'-C2'-C1'	3.14	105.71	100.98
67	DF	502	GTP	C5-C6-N1	3.14	119.50	113.95
69	RJ	501	GDP	C3'-C2'-C1'	3.14	105.71	100.98
67	KE	501	GTP	PA-O3A-PB	-3.14	122.05	132.83
69	IN	501	GDP	C3'-C2'-C1'	3.14	105.71	100.98
67	VG	501	GTP	C8-N7-C5	3.14	108.97	102.99
67	WE	501	GTP	PA-O3A-PB	-3.14	122.06	132.83
67	RI	501	GTP	C8-N7-C5	3.14	108.96	102.99
67	BK	501	GTP	C3'-C2'-C1'	3.14	105.70	100.98
67	AM	501	GTP	PB-O3B-PG	-3.13	122.07	132.83
67	EI	501	GTP	C5-C6-N1	3.13	119.48	113.95
67	RE	501	GTP	C8-N7-C5	3.13	108.95	102.99
67	NF	502	GTP	PA-O3A-PB	-3.12	122.11	132.83
67	RM	501	GTP	C5-C6-N1	3.12	119.47	113.95
67	RI	501	GTP	N2-C2-N1	3.12	123.36	116.71
67	DA	501	GTP	C5-C6-N1	3.12	119.46	113.95
67	PM	501	GTP	C5-C6-N1	3.12	119.45	113.95
67	MM	501	GTP	PA-O3A-PB	-3.12	122.14	132.83
67	KI	501	GTP	PA-O3A-PB	-3.12	122.14	132.83
67	PG	501	GTP	PB-O3B-PG	-3.11	122.14	132.83
67	AK	501	GTP	O3G-PG-O3B	3.11	115.08	104.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	RM	501	GTP	C3'-C2'-C1'	3.11	105.67	100.98
69	UN	501	GDP	C3'-C2'-C1'	3.11	105.66	100.98
69	BJ	501	GDP	PA-O3A-PB	-3.11	122.17	132.83
67	RK	501	GTP	PA-O3A-PB	-3.10	122.17	132.83
67	IN	502	GTP	C8-N7-C5	3.10	108.90	102.99
67	MI	501	GTP	C8-N7-C5	3.10	108.90	102.99
67	LK	501	GTP	C3'-C2'-C1'	3.10	105.65	100.98
67	HC	501	GTP	C3'-C2'-C1'	3.10	105.64	100.98
67	OH	502	GTP	C3'-C2'-C1'	3.10	105.64	100.98
67	RG	501	GTP	C8-N7-C5	3.10	108.89	102.99
67	BE	501	GTP	C8-N7-C5	3.10	108.89	102.99
67	IC	501	GTP	C3'-C2'-C1'	3.10	105.64	100.98
67	JC	501	GTP	C8-N7-C5	3.10	108.89	102.99
67	EI	501	GTP	C3'-C2'-C1'	3.09	105.64	100.98
67	JG	501	GTP	C8-N7-C5	3.09	108.88	102.99
67	SA	501	GTP	C5-C6-N1	3.09	119.41	113.95
67	EG	501	GTP	C5-C6-N1	3.09	119.41	113.95
67	VE	501	GTP	C8-N7-C5	3.09	108.88	102.99
67	CJ	502	GTP	PB-O3B-PG	-3.09	122.23	132.83
67	NF	502	GTP	C8-N7-C5	3.09	108.87	102.99
67	UI	501	GTP	C8-N7-C5	3.08	108.86	102.99
67	DE	501	GTP	C3'-C2'-C1'	3.08	105.62	100.98
67	KE	501	GTP	C8-N7-C5	3.08	108.86	102.99
67	VL	502	GTP	C8-N7-C5	3.08	108.86	102.99
67	VE	501	GTP	C5-C6-N1	3.08	119.39	113.95
67	NK	501	GTP	C8-N7-C5	3.08	108.85	102.99
67	JK	501	GTP	C3'-C2'-C1'	3.07	105.61	100.98
67	BG	501	GTP	C8-N7-C5	3.07	108.84	102.99
67	BM	501	GTP	C3'-C2'-C1'	3.07	105.60	100.98
67	CJ	502	GTP	PA-O3A-PB	-3.07	122.29	132.83
67	JM	501	GTP	C8-N7-C5	3.07	108.84	102.99
67	PA	501	GTP	C8-N7-C5	3.07	108.84	102.99
67	IM	501	GTP	C8-N7-C5	3.07	108.83	102.99
69	AH	501	GDP	C3'-C2'-C1'	3.07	105.60	100.98
67	UM	501	GTP	C8-N7-C5	3.07	108.83	102.99
67	FI	501	GTP	C8-N7-C5	3.07	108.83	102.99
69	CD	501	GDP	PA-O3A-PB	-3.07	122.31	132.83
67	IN	502	GTP	C3'-C2'-C1'	3.07	105.59	100.98
67	OH	502	GTP	C8-N7-C5	3.07	108.83	102.99
67	OK	501	GTP	C2-N1-C6	-3.07	119.45	125.10
69	VH	501	GDP	PA-O3A-PB	-3.06	122.31	132.83
67	PG	501	GTP	PA-O3A-PB	-3.06	122.31	132.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	CL	502	GTP	C5-C6-N1	3.06	119.36	113.95
69	SH	501	GDP	C3'-C2'-C1'	3.06	105.59	100.98
67	HC	501	GTP	O3G-PG-O3B	3.06	114.89	104.64
67	DK	501	GTP	C8-N7-C5	3.06	108.81	102.99
67	GE	501	GTP	C8-N7-C5	3.06	108.81	102.99
67	GG	501	GTP	PB-O3B-PG	-3.06	122.34	132.83
67	FE	501	GTP	C8-N7-C5	3.06	108.81	102.99
69	NL	501	GDP	C3'-C2'-C1'	3.06	105.58	100.98
67	CB	502	GTP	C3'-C2'-C1'	3.05	105.58	100.98
67	KK	501	GTP	C8-N7-C5	3.05	108.81	102.99
67	PM	501	GTP	C8-N7-C5	3.05	108.81	102.99
67	VI	502	GTP	C8-N7-C5	3.05	108.81	102.99
67	AD	502	GTP	C8-N7-C5	3.05	108.80	102.99
67	NB	502	GTP	C8-N7-C5	3.05	108.80	102.99
67	IG	501	GTP	C8-N7-C5	3.05	108.80	102.99
67	FM	501	GTP	C8-N7-C5	3.05	108.80	102.99
69	LH	501	GDP	O6-C6-C5	-3.05	118.42	124.37
67	OE	501	GTP	C8-N7-C5	3.05	108.80	102.99
67	KE	501	GTP	PB-O3B-PG	-3.05	122.36	132.83
67	CD	502	GTP	C8-N7-C5	3.05	108.80	102.99
67	UC	501	GTP	C8-N7-C5	3.05	108.80	102.99
69	WJ	501	GDP	C2'-C3'-C4'	3.05	108.56	102.64
67	MG	501	GTP	C8-N7-C5	3.05	108.80	102.99
67	GC	501	GTP	C8-N7-C5	3.04	108.79	102.99
67	RB	502	GTP	C8-N7-C5	3.04	108.79	102.99
67	DM	501	GTP	C8-N7-C5	3.04	108.79	102.99
67	II	501	GTP	C3'-C2'-C1'	3.04	105.56	100.98
67	EI	501	GTP	C8-N7-C5	3.04	108.79	102.99
67	LK	501	GTP	C8-N7-C5	3.04	108.78	102.99
67	DM	501	GTP	C2-N1-C6	-3.04	119.50	125.10
67	KI	501	GTP	C8-N7-C5	3.04	108.78	102.99
67	EI	501	GTP	PA-O3A-PB	-3.04	122.39	132.83
67	BM	501	GTP	C8-N7-C5	3.04	108.78	102.99
67	HI	501	GTP	C8-N7-C5	3.04	108.78	102.99
67	GJ	502	GTP	C8-N7-C5	3.04	108.78	102.99
67	HL	502	GTP	C8-N7-C5	3.04	108.78	102.99
67	AC	501	GTP	C8-N7-C5	3.04	108.77	102.99
67	GM	501	GTP	C8-N7-C5	3.04	108.77	102.99
67	HG	502	GTP	C8-N7-C5	3.04	108.77	102.99
67	II	501	GTP	C8-N7-C5	3.04	108.77	102.99
67	FK	501	GTP	C3'-C2'-C1'	3.03	105.55	100.98
67	FE	501	GTP	C3'-C2'-C1'	3.03	105.55	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	GG	501	GTP	C8-N7-C5	3.03	108.77	102.99
67	EM	501	GTP	C8-N7-C5	3.03	108.77	102.99
67	WC	501	GTP	C3'-C2'-C1'	3.03	105.54	100.98
67	TC	501	GTP	PB-O3B-PG	-3.03	122.43	132.83
67	AK	501	GTP	C8-N7-C5	3.03	108.75	102.99
69	PJ	501	GDP	C5-C6-N1	3.03	119.29	113.95
69	KJ	501	GDP	C3'-C2'-C1'	3.02	105.53	100.98
67	UG	501	GTP	C8-N7-C5	3.02	108.75	102.99
67	DK	501	GTP	C2-N1-C6	-3.02	119.53	125.10
67	NK	501	GTP	PA-O3A-PB	-3.02	122.45	132.83
67	PC	501	GTP	C2-N1-C6	-3.02	119.53	125.10
67	KM	501	GTP	C8-N7-C5	3.02	108.75	102.99
67	OC	501	GTP	C8-N7-C5	3.02	108.75	102.99
67	QA	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	LG	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	TK	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	VC	501	GTP	C2-N1-C6	-3.02	119.54	125.10
67	ME	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	TM	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	SA	501	GTP	O6-C6-C5	-3.02	118.47	124.37
69	KN	501	GDP	PA-O3A-PB	-3.02	122.47	132.83
67	GI	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	HC	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	KG	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	O0	502	GTP	C8-N7-C5	3.02	108.74	102.99
67	WE	501	GTP	C8-N7-C5	3.02	108.74	102.99
67	IM	501	GTP	C3'-C2'-C1'	3.02	105.52	100.98
67	LM	501	GTP	C8-N7-C5	3.02	108.73	102.99
67	NE	501	GTP	C3'-C2'-C1'	3.02	105.52	100.98
67	OE	501	GTP	C3'-C2'-C1'	3.02	105.52	100.98
67	WC	501	GTP	C8-N7-C5	3.02	108.73	102.99
67	VK	501	GTP	PA-O3A-PB	-3.02	122.48	132.83
67	AH	502	GTP	C8-N7-C5	3.01	108.73	102.99
67	UK	501	GTP	C8-N7-C5	3.01	108.73	102.99
67	JE	501	GTP	C8-N7-C5	3.01	108.73	102.99
67	RM	501	GTP	C8-N7-C5	3.01	108.73	102.99
67	KO	501	GTP	C3'-C2'-C1'	3.01	105.51	100.98
67	AM	501	GTP	C8-N7-C5	3.01	108.73	102.99
67	CD	502	GTP	O3G-PG-O3B	3.01	114.73	104.64
67	LC	501	GTP	C8-N7-C5	3.01	108.72	102.99
69	FF	501	GDP	PA-O3A-PB	-3.01	122.50	132.83
67	HN	502	GTP	C8-N7-C5	3.01	108.72	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	SC	501	GTP	C8-N7-C5	3.01	108.72	102.99
67	QE	501	GTP	C5-C6-N1	3.01	119.26	113.95
67	GI	501	GTP	C2-N1-C6	-3.01	119.56	125.10
67	QG	501	GTP	C2-N1-C6	-3.01	119.56	125.10
67	BI	501	GTP	C8-N7-C5	3.01	108.72	102.99
67	FI	501	GTP	PB-O3B-PG	-3.00	122.52	132.83
67	KC	501	GTP	C8-N7-C5	3.00	108.71	102.99
67	MK	501	GTP	C8-N7-C5	3.00	108.71	102.99
67	PI	501	GTP	C3'-C2'-C1'	3.00	105.50	100.98
67	UK	501	GTP	C3'-C2'-C1'	3.00	105.50	100.98
67	FK	501	GTP	C8-N7-C5	3.00	108.71	102.99
69	LD	501	GDP	O6-C6-C5	-3.00	118.51	124.37
67	IE	501	GTP	C8-N7-C5	3.00	108.70	102.99
69	WB	501	GDP	C3'-C2'-C1'	3.00	105.49	100.98
67	AG	501	GTP	C8-N7-C5	3.00	108.70	102.99
67	DC	501	GTP	C8-N7-C5	3.00	108.70	102.99
67	PM	501	GTP	C3'-C2'-C1'	3.00	105.49	100.98
67	KC	501	GTP	C3'-C2'-C1'	3.00	105.49	100.98
67	BK	501	GTP	C8-N7-C5	3.00	108.70	102.99
67	MC	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	KE	501	GTP	C2-N1-C6	-2.99	119.58	125.10
67	JI	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	SK	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	MM	501	GTP	C8-N7-C5	2.99	108.69	102.99
69	BH	501	GDP	PA-O3A-PB	-2.99	122.56	132.83
69	UN	501	GDP	PA-O3A-PB	-2.99	122.56	132.83
67	NE	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	IK	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	HK	501	GTP	C3'-C2'-C1'	2.99	105.48	100.98
69	UJ	501	GDP	C3'-C2'-C1'	2.99	105.48	100.98
67	RI	501	GTP	C2-N1-C6	-2.99	119.59	125.10
67	NI	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	WI	501	GTP	C8-N7-C5	2.99	108.69	102.99
67	BA	501	GTP	C8-N7-C5	2.99	108.68	102.99
67	UE	501	GTP	C8-N7-C5	2.99	108.68	102.99
67	GM	501	GTP	C3'-C2'-C1'	2.99	105.48	100.98
67	QI	501	GTP	C3'-C2'-C1'	2.99	105.48	100.98
67	LI	501	GTP	C8-N7-C5	2.99	108.68	102.99
69	TL	501	GDP	C3'-C2'-C1'	2.99	105.48	100.98
67	IC	501	GTP	C8-N7-C5	2.99	108.68	102.99
67	KM	501	GTP	PB-O3B-PG	-2.99	122.58	132.83
69	ML	501	GDP	C5-C6-N1	2.98	119.22	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	AB	501	GDP	C3'-C2'-C1'	2.98	105.47	100.98
67	KK	501	GTP	C3'-C2'-C1'	2.98	105.47	100.98
67	UE	501	GTP	C3'-C2'-C1'	2.98	105.47	100.98
67	MI	501	GTP	N2-C2-N3	-2.98	113.94	119.74
67	JK	501	GTP	C8-N7-C5	2.98	108.67	102.99
67	TE	501	GTP	C2-N1-C6	-2.98	119.61	125.10
67	WK	501	GTP	C2-N1-C6	-2.98	119.62	125.10
67	QG	501	GTP	O6-C6-C5	-2.98	118.56	124.37
67	NB	502	GTP	C3'-C2'-C1'	2.98	105.46	100.98
67	SM	501	GTP	C8-N7-C5	2.98	108.66	102.99
67	EK	501	GTP	C2-N1-C6	-2.97	119.62	125.10
67	QK	501	GTP	C2-N1-C6	-2.97	119.62	125.10
69	VL	501	GDP	PA-O3A-PB	-2.97	122.62	132.83
67	CL	502	GTP	C3'-C2'-C1'	2.97	105.45	100.98
67	TK	501	GTP	PA-O3A-PB	-2.97	122.63	132.83
67	CD	502	GTP	C3'-C2'-C1'	2.97	105.45	100.98
69	FJ	501	GDP	PA-O3A-PB	-2.97	122.64	132.83
67	LE	501	GTP	C8-N7-C5	2.97	108.65	102.99
69	EB	501	GDP	C3'-C2'-C1'	2.97	105.45	100.98
67	KO	501	GTP	C8-N7-C5	2.97	108.64	102.99
67	TC	501	GTP	C8-N7-C5	2.97	108.64	102.99
67	TI	501	GTP	C5-C6-N1	2.97	119.19	113.95
69	HN	501	GDP	C3'-C2'-C1'	2.97	105.44	100.98
67	CJ	502	GTP	C8-N7-C5	2.96	108.64	102.99
67	HG	502	GTP	C3'-C2'-C1'	2.96	105.44	100.98
67	HK	501	GTP	C8-N7-C5	2.96	108.63	102.99
67	RA	501	GTP	C8-N7-C5	2.96	108.63	102.99
67	FG	501	GTP	C2-N1-C6	-2.96	119.65	125.10
67	BA	501	GTP	C2-N1-C6	-2.96	119.66	125.10
67	DI	501	GTP	C8-N7-C5	2.95	108.62	102.99
67	EK	501	GTP	C3'-C2'-C1'	2.95	105.42	100.98
69	AD	501	GDP	C3'-C2'-C1'	2.95	105.42	100.98
69	DN	501	GDP	C3'-C2'-C1'	2.95	105.42	100.98
67	AD	502	GTP	PB-O3B-PG	-2.95	122.70	132.83
67	CB	502	GTP	C2-N1-C6	-2.95	119.67	125.10
67	WI	501	GTP	C3'-C2'-C1'	2.95	105.42	100.98
67	QI	501	GTP	C8-N7-C5	2.95	108.60	102.99
67	HE	501	GTP	C8-N7-C5	2.95	108.60	102.99
69	CL	501	GDP	C3'-C2'-C1'	2.95	105.41	100.98
67	SF	502	GTP	PA-O3A-PB	-2.95	122.72	132.83
67	DA	501	GTP	C2-N1-C6	-2.95	119.67	125.10
67	DC	501	GTP	C2-N1-C6	-2.95	119.67	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	AC	501	GTP	PB-O3B-PG	-2.94	122.72	132.83
67	LI	501	GTP	C3'-C2'-C1'	2.94	105.41	100.98
67	QC	501	GTP	C8-N7-C5	2.94	108.59	102.99
67	WG	501	GTP	C5-C6-N1	2.94	119.15	113.95
67	RE	501	GTP	C2-N1-C6	-2.94	119.68	125.10
67	AA	501	GTP	C3'-C2'-C1'	2.94	105.41	100.98
67	BC	501	GTP	C8-N7-C5	2.94	108.59	102.99
67	BC	501	GTP	C2-N1-C6	-2.94	119.69	125.10
67	HN	502	GTP	C3'-C2'-C1'	2.94	105.40	100.98
67	WM	501	GTP	C8-N7-C5	2.93	108.58	102.99
67	HN	502	GTP	PA-O3A-PB	-2.93	122.76	132.83
67	QE	501	GTP	C2-N1-C6	-2.93	119.69	125.10
67	OK	501	GTP	PB-O3B-PG	-2.93	122.76	132.83
67	FI	501	GTP	C2-N1-C6	-2.93	119.70	125.10
67	NB	502	GTP	C2-N1-C6	-2.93	119.70	125.10
67	QK	501	GTP	O6-C6-C5	-2.93	118.64	124.37
67	PC	501	GTP	O6-C6-C5	-2.93	118.65	124.37
69	EJ	501	GDP	C3'-C2'-C1'	2.93	105.39	100.98
69	IH	501	GDP	C3'-C2'-C1'	2.93	105.39	100.98
69	GB	501	GDP	C3'-C2'-C1'	2.93	105.39	100.98
67	WK	501	GTP	C8-N7-C5	2.93	108.56	102.99
67	BI	501	GTP	C2-N1-C6	-2.93	119.71	125.10
67	RG	501	GTP	C3'-C2'-C1'	2.92	105.38	100.98
67	IN	502	GTP	PB-O3B-PG	-2.92	122.80	132.83
67	VL	502	GTP	C2-N1-C6	-2.92	119.72	125.10
69	HD	501	GDP	C3'-C2'-C1'	2.92	105.38	100.98
67	OF	502	GTP	C2-N1-C6	-2.92	119.72	125.10
69	DF	501	GDP	C3'-C2'-C1'	2.92	105.37	100.98
67	VK	501	GTP	C8-N7-C5	2.92	108.55	102.99
67	BM	501	GTP	C2-N1-C6	-2.92	119.72	125.10
67	KG	501	GTP	PA-O3A-PB	-2.92	122.81	132.83
67	NK	501	GTP	C2-N1-C6	-2.92	119.73	125.10
67	SF	502	GTP	C8-N7-C5	2.92	108.54	102.99
67	DM	501	GTP	O6-C6-C5	-2.91	118.68	124.37
67	BG	501	GTP	C2-N1-C6	-2.91	119.73	125.10
67	VC	501	GTP	C3'-C2'-C1'	2.91	105.36	100.98
69	EF	501	GDP	C3'-C2'-C1'	2.91	105.36	100.98
67	CG	501	GTP	C8-N7-C5	2.91	108.53	102.99
67	QM	501	GTP	C2-N1-C6	-2.91	119.74	125.10
67	IE	501	GTP	C2-N1-C6	-2.91	119.74	125.10
67	CA	501	GTP	C5-C6-N1	2.91	119.09	113.95
67	VI	502	GTP	C2-N1-C6	-2.91	119.74	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	FK	501	GTP	C2-N1-C6	-2.91	119.75	125.10
67	GE	501	GTP	C2-N1-C6	-2.91	119.75	125.10
67	EM	501	GTP	C2-N1-C6	-2.90	119.75	125.10
67	HL	502	GTP	C3'-C2'-C1'	2.90	105.35	100.98
69	AJ	501	GDP	C3'-C2'-C1'	2.90	105.35	100.98
67	CD	502	GTP	C2-N1-C6	-2.90	119.75	125.10
67	WC	501	GTP	C2-N1-C6	-2.90	119.75	125.10
67	UM	501	GTP	C2-N1-C6	-2.90	119.76	125.10
67	EG	501	GTP	C8-N7-C5	2.90	108.51	102.99
67	TC	501	GTP	C2-N1-C6	-2.90	119.76	125.10
67	OF	502	GTP	C8-N7-C5	2.90	108.51	102.99
67	TE	501	GTP	C8-N7-C5	2.90	108.51	102.99
67	UC	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
69	OF	501	GDP	C8-N7-C5	2.89	108.50	102.99
67	WI	501	GTP	C2-N1-C6	-2.89	119.77	125.10
69	CF	501	GDP	C3'-C2'-C1'	2.89	105.33	100.98
69	BJ	501	GDP	C3'-C2'-C1'	2.89	105.33	100.98
67	TE	501	GTP	O6-C6-C5	-2.89	118.73	124.37
67	CB	502	GTP	C8-N7-C5	2.89	108.49	102.99
67	BG	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
69	BL	501	GDP	PA-O3A-PB	-2.89	122.92	132.83
67	UI	501	GTP	C3'-C2'-C1'	2.89	105.33	100.98
67	UG	501	GTP	C2-N1-C6	-2.89	119.78	125.10
67	AA	501	GTP	C8-N7-C5	2.89	108.49	102.99
67	PK	501	GTP	C2-N1-C6	-2.89	119.78	125.10
67	QK	501	GTP	C8-N7-C5	2.89	108.49	102.99
67	QK	501	GTP	PB-O3B-PG	-2.89	122.92	132.83
67	DI	501	GTP	C2-N1-C6	-2.88	119.79	125.10
67	PD	502	GTP	C5-C6-N1	2.88	119.04	113.95
67	DF	502	GTP	C2-N1-C6	-2.88	119.79	125.10
69	CD	501	GDP	C3'-C2'-C1'	2.88	105.32	100.98
67	JE	501	GTP	C2-N1-C6	-2.88	119.79	125.10
67	UE	501	GTP	C2-N1-C6	-2.88	119.79	125.10
67	GM	501	GTP	C2-N1-C6	-2.88	119.80	125.10
67	QG	501	GTP	PB-O3B-PG	-2.88	122.95	132.83
67	PI	501	GTP	C8-N7-C5	2.88	108.47	102.99
67	PI	501	GTP	C2-N1-C6	-2.87	119.80	125.10
67	SF	502	GTP	C2-N1-C6	-2.87	119.81	125.10
67	II	501	GTP	C2-N1-C6	-2.87	119.82	125.10
67	GE	501	GTP	C3'-C2'-C1'	2.87	105.30	100.98
67	NF	502	GTP	C2-N1-C6	-2.87	119.82	125.10
69	TJ	501	GDP	C3'-C2'-C1'	2.87	105.30	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	HC	501	GTP	C2-N1-C6	-2.87	119.82	125.10
67	PM	501	GTP	C2-N1-C6	-2.87	119.82	125.10
67	SF	502	GTP	C3'-C2'-C1'	2.87	105.29	100.98
67	GJ	502	GTP	C2-N1-C6	-2.86	119.82	125.10
67	MC	501	GTP	C2-N1-C6	-2.86	119.82	125.10
67	HG	502	GTP	C2-N1-C6	-2.86	119.82	125.10
67	VL	502	GTP	C3'-C2'-C1'	2.86	105.29	100.98
67	VK	501	GTP	C2-N1-C6	-2.86	119.83	125.10
67	CH	502	GTP	C8-N7-C5	2.86	108.44	102.99
67	PA	501	GTP	C2-N1-C6	-2.86	119.83	125.10
69	QB	501	GDP	C5-C6-N1	2.86	119.00	113.95
67	RA	501	GTP	C2-N1-C6	-2.86	119.83	125.10
69	FN	501	GDP	C3'-C2'-C1'	2.86	105.28	100.98
67	HK	501	GTP	C2-N1-C6	-2.86	119.83	125.10
67	HL	502	GTP	C2-N1-C6	-2.86	119.83	125.10
67	NI	501	GTP	C2-N1-C6	-2.86	119.83	125.10
67	SM	501	GTP	C2-N1-C6	-2.86	119.83	125.10
67	VL	502	GTP	PA-O3A-PB	-2.86	123.02	132.83
67	CD	502	GTP	PB-O3B-PG	-2.86	123.02	132.83
67	PD	502	GTP	C3'-C2'-C1'	2.86	105.28	100.98
69	VH	501	GDP	C3'-C2'-C1'	2.86	105.28	100.98
69	PF	501	GDP	PA-O3A-PB	-2.86	123.02	132.83
67	RG	501	GTP	PB-O3B-PG	-2.86	123.03	132.83
67	GG	501	GTP	C3'-C2'-C1'	2.86	105.28	100.98
69	NB	501	GDP	O6-C6-C5	-2.85	118.80	124.37
67	SF	502	GTP	O6-C6-C5	-2.85	118.80	124.37
69	OF	501	GDP	N2-C2-N1	2.85	122.79	116.71
67	AH	502	GTP	PB-O3B-PG	-2.85	123.03	132.83
67	BE	501	GTP	C2-N1-C6	-2.85	119.84	125.10
67	AK	501	GTP	O6-C6-C5	-2.85	118.80	124.37
67	LM	501	GTP	C3'-C2'-C1'	2.85	105.27	100.98
67	PG	501	GTP	C2-N1-C6	-2.85	119.84	125.10
69	GH	501	GDP	C3'-C2'-C1'	2.85	105.27	100.98
69	PB	501	GDP	PA-O3A-PB	-2.85	123.04	132.83
67	CJ	502	GTP	C2-N1-C6	-2.85	119.85	125.10
67	OH	502	GTP	C2-N1-C6	-2.85	119.85	125.10
67	AC	501	GTP	O3G-PG-O3B	2.85	114.18	104.64
69	GF	501	GDP	C3'-C2'-C1'	2.85	105.26	100.98
67	CG	501	GTP	C2-N1-C6	-2.85	119.86	125.10
67	IG	501	GTP	C2-N1-C6	-2.85	119.86	125.10
67	CH	502	GTP	PB-O3B-PG	-2.84	123.06	132.83
67	HN	502	GTP	C2-N1-C6	-2.84	119.86	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	IE	501	GTP	C3'-C2'-C1'	2.84	105.26	100.98
67	GC	501	GTP	C3'-C2'-C1'	2.84	105.26	100.98
67	FE	501	GTP	C2-N1-C6	-2.84	119.87	125.10
67	IC	501	GTP	C2-N1-C6	-2.84	119.87	125.10
67	WE	501	GTP	C2-N1-C6	-2.84	119.87	125.10
67	BK	501	GTP	C2-N1-C6	-2.84	119.87	125.10
67	CH	502	GTP	C2-N1-C6	-2.84	119.87	125.10
67	IG	501	GTP	C3'-C2'-C1'	2.84	105.25	100.98
69	UL	501	GDP	PA-O3A-PB	-2.84	123.09	132.83
67	HE	501	GTP	C2-N1-C6	-2.84	119.88	125.10
67	IM	501	GTP	C2-N1-C6	-2.84	119.88	125.10
67	SE	501	GTP	C3'-C2'-C1'	2.83	105.25	100.98
69	PL	501	GDP	PA-O3A-PB	-2.83	123.11	132.83
67	O0	502	GTP	O2G-PG-O3B	2.83	114.13	104.64
67	KC	501	GTP	C2-N1-C6	-2.83	119.88	125.10
67	LE	501	GTP	C2-N1-C6	-2.83	119.89	125.10
67	GC	501	GTP	C2-N1-C6	-2.83	119.89	125.10
67	EG	501	GTP	C3'-C2'-C1'	2.83	105.24	100.98
69	UD	501	GDP	C3'-C2'-C1'	2.83	105.23	100.98
67	PK	501	GTP	C8-N7-C5	2.83	108.38	102.99
67	AA	501	GTP	C2-N1-C6	-2.82	119.90	125.10
67	WM	501	GTP	C2-N1-C6	-2.82	119.90	125.10
67	QI	501	GTP	C2-N1-C6	-2.82	119.90	125.10
67	RM	501	GTP	C2-N1-C6	-2.82	119.90	125.10
67	CL	502	GTP	C2-N1-C6	-2.82	119.90	125.10
67	VG	501	GTP	C2-N1-C6	-2.82	119.90	125.10
67	O0	502	GTP	C2-N1-C6	-2.82	119.91	125.10
69	DL	501	GDP	C3'-C2'-C1'	2.82	105.22	100.98
67	JG	501	GTP	PA-O3A-PB	-2.82	123.16	132.83
67	TM	501	GTP	C2-N1-C6	-2.82	119.91	125.10
67	MG	501	GTP	C3'-C2'-C1'	2.82	105.22	100.98
67	NA	502	GTP	C2-N1-C6	-2.82	119.91	125.10
67	OC	501	GTP	C2-N1-C6	-2.82	119.91	125.10
67	SA	501	GTP	C2-N1-C6	-2.82	119.91	125.10
67	LG	501	GTP	C2-N1-C6	-2.82	119.91	125.10
67	DE	501	GTP	C8-N7-C5	2.81	108.35	102.99
67	SI	501	GTP	C5-C6-N1	2.81	118.92	113.95
67	GG	501	GTP	C2-N1-C6	-2.81	119.92	125.10
67	RK	501	GTP	C5-C6-N1	2.81	118.92	113.95
69	HF	501	GDP	C3'-C2'-C1'	2.81	105.21	100.98
67	QA	501	GTP	C2-N1-C6	-2.81	119.92	125.10
69	NJ	501	GDP	C3'-C2'-C1'	2.81	105.21	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	UF	501	GDP	C3'-C2'-C1'	2.81	105.21	100.98
67	ME	501	GTP	C3'-C2'-C1'	2.81	105.21	100.98
67	LI	501	GTP	C2-N1-C6	-2.81	119.93	125.10
69	SB	501	GDP	C2'-C3'-C4'	2.81	108.10	102.64
69	DH	501	GDP	C3'-C2'-C1'	2.80	105.20	100.98
67	QC	501	GTP	C2-N1-C6	-2.80	119.94	125.10
67	OE	501	GTP	C2-N1-C6	-2.80	119.94	125.10
67	EI	501	GTP	C2-N1-C6	-2.80	119.94	125.10
67	SC	501	GTP	C2-N1-C6	-2.80	119.94	125.10
67	RE	501	GTP	C3'-C2'-C1'	2.80	105.19	100.98
67	IN	502	GTP	C2-N1-C6	-2.80	119.94	125.10
67	NA	502	GTP	C8-N7-C5	2.80	108.32	102.99
67	UC	501	GTP	C2-N1-C6	-2.80	119.95	125.10
67	KI	501	GTP	C2-N1-C6	-2.80	119.95	125.10
67	ME	501	GTP	C2-N1-C6	-2.80	119.95	125.10
67	SK	501	GTP	C2-N1-C6	-2.79	119.95	125.10
67	DE	501	GTP	C2-N1-C6	-2.79	119.95	125.10
67	LC	501	GTP	C2-N1-C6	-2.79	119.95	125.10
67	HI	501	GTP	C2-N1-C6	-2.79	119.96	125.10
67	LM	501	GTP	C2-N1-C6	-2.79	119.96	125.10
69	JB	501	GDP	C3'-C2'-C1'	2.78	105.17	100.98
67	NE	501	GTP	C2-N1-C6	-2.78	119.97	125.10
67	TI	501	GTP	C3'-C2'-C1'	2.78	105.17	100.98
67	RG	501	GTP	C2-N1-C6	-2.78	119.97	125.10
67	JG	501	GTP	C2-N1-C6	-2.78	119.98	125.10
67	FM	501	GTP	C2-N1-C6	-2.78	119.98	125.10
67	MK	501	GTP	C2-N1-C6	-2.78	119.98	125.10
69	GN	501	GDP	C3'-C2'-C1'	2.78	105.16	100.98
67	MM	501	GTP	C2-N1-C6	-2.78	119.98	125.10
67	JK	501	GTP	C2-N1-C6	-2.78	119.98	125.10
67	RB	502	GTP	C2-N1-C6	-2.77	119.99	125.10
69	CJ	501	GDP	C3'-C2'-C1'	2.77	105.15	100.98
67	MK	501	GTP	C3'-C2'-C1'	2.77	105.15	100.98
67	IK	501	GTP	C2-N1-C6	-2.77	120.00	125.10
67	LG	501	GTP	C3'-C2'-C1'	2.77	105.14	100.98
67	PG	501	GTP	C8-N7-C5	2.77	108.26	102.99
67	JM	501	GTP	C2-N1-C6	-2.77	120.00	125.10
67	QG	501	GTP	C3'-C2'-C1'	2.76	105.14	100.98
67	LK	501	GTP	C2-N1-C6	-2.76	120.01	125.10
67	KG	501	GTP	C2-N1-C6	-2.76	120.01	125.10
67	JC	501	GTP	C2-N1-C6	-2.76	120.01	125.10
67	UK	501	GTP	C2-N1-C6	-2.76	120.01	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	WI	501	GTP	PB-O3B-PG	-2.76	123.36	132.83
69	KN	501	GDP	C3'-C2'-C1'	2.76	105.13	100.98
69	TF	501	GDP	C3'-C2'-C1'	2.76	105.13	100.98
67	TK	501	GTP	C2-N1-C6	-2.76	120.02	125.10
67	DF	502	GTP	C8-N7-C5	2.75	108.24	102.99
67	JI	501	GTP	C2-N1-C6	-2.75	120.03	125.10
67	FM	501	GTP	C3'-C2'-C1'	2.75	105.12	100.98
67	KK	501	GTP	C2-N1-C6	-2.75	120.03	125.10
67	CL	502	GTP	C8-N7-C5	2.75	108.23	102.99
67	AM	501	GTP	C2-N1-C6	-2.75	120.03	125.10
69	PH	501	GDP	C3'-C2'-C1'	2.75	105.12	100.98
67	KM	501	GTP	C2-N1-C6	-2.75	120.04	125.10
67	TG	501	GTP	C8-N7-C5	2.75	108.22	102.99
67	NK	501	GTP	C3'-C2'-C1'	2.75	105.11	100.98
67	FC	501	GTP	C3'-C2'-C1'	2.74	105.11	100.98
69	QD	501	GDP	C5-C6-N1	2.74	118.80	113.95
67	LC	501	GTP	C3'-C2'-C1'	2.74	105.10	100.98
69	GL	501	GDP	C3'-C2'-C1'	2.74	105.10	100.98
67	KO	501	GTP	C2-N1-C6	-2.73	120.06	125.10
69	AF	501	GDP	C3'-C2'-C1'	2.73	105.09	100.98
69	VD	501	GDP	PA-O3A-PB	-2.73	123.46	132.83
67	PC	501	GTP	C8-N7-C5	2.73	108.19	102.99
67	AA	501	GTP	O6-C6-C5	-2.73	119.04	124.37
67	UI	501	GTP	C2-N1-C6	-2.73	120.08	125.10
67	JM	501	GTP	PA-O3A-PB	-2.73	123.47	132.83
67	TM	501	GTP	C3'-C2'-C1'	2.73	105.08	100.98
69	UB	501	GDP	PA-O3A-PB	-2.73	123.47	132.83
67	AH	502	GTP	O6-C6-C5	-2.72	119.05	124.37
67	OC	501	GTP	C3'-C2'-C1'	2.72	105.08	100.98
67	AG	501	GTP	N2-C2-N1	2.72	122.51	116.71
69	LD	501	GDP	C5-C6-N1	2.72	118.75	113.95
69	WH	501	GDP	C3'-C2'-C1'	2.72	105.07	100.98
67	AM	501	GTP	C3'-C2'-C1'	2.71	105.06	100.98
67	VE	501	GTP	C2-N1-C6	-2.71	120.10	125.10
67	FG	501	GTP	C8-N7-C5	2.71	108.16	102.99
67	AH	502	GTP	C2-N1-C6	-2.71	120.11	125.10
67	TI	501	GTP	O6-C6-C5	-2.71	119.08	124.37
67	NF	502	GTP	C3'-C2'-C1'	2.71	105.05	100.98
67	BE	501	GTP	C3'-C2'-C1'	2.71	105.05	100.98
67	QM	501	GTP	C8-N7-C5	2.71	108.14	102.99
67	AK	501	GTP	C2-N1-C6	-2.71	120.12	125.10
67	JC	501	GTP	C3'-C2'-C1'	2.70	105.05	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	AD	502	GTP	C2-N1-C6	-2.70	120.12	125.10
69	N0	501	GDP	C5-C6-N1	2.70	118.72	113.95
69	PB	501	GDP	C5-C6-N1	2.70	118.72	113.95
67	AK	501	GTP	N2-C2-N1	2.70	122.46	116.71
69	PB	501	GDP	N2-C2-N3	-2.70	114.48	119.74
69	MD	501	GDP	C8-N7-C5	2.70	108.13	102.99
67	PK	501	GTP	PA-O3A-PB	-2.70	123.57	132.83
67	EG	501	GTP	C2-N1-C6	-2.70	120.13	125.10
69	UB	501	GDP	C3'-C2'-C1'	2.69	105.03	100.98
69	IL	501	GDP	C3'-C2'-C1'	2.69	105.03	100.98
67	PG	501	GTP	O6-C6-C5	-2.69	119.12	124.37
67	UM	501	GTP	C3'-C2'-C1'	2.69	105.02	100.98
67	MK	501	GTP	PA-O3A-PB	-2.68	123.62	132.83
67	QE	501	GTP	C3'-C2'-C1'	2.68	105.02	100.98
67	WG	501	GTP	C3'-C2'-C1'	2.68	105.02	100.98
67	AD	502	GTP	N2-C2-N1	2.68	122.42	116.71
69	BF	501	GDP	PA-O3A-PB	-2.68	123.64	132.83
69	QH	501	GDP	C3'-C2'-C1'	2.67	105.00	100.98
69	FJ	501	GDP	C3'-C2'-C1'	2.67	105.00	100.98
69	JD	501	GDP	C3'-C2'-C1'	2.67	105.00	100.98
67	PD	502	GTP	PA-O3A-PB	-2.67	123.67	132.83
67	WG	501	GTP	PA-O3A-PB	-2.67	123.67	132.83
67	AG	501	GTP	C2-N1-C6	-2.67	120.19	125.10
67	KG	501	GTP	O6-C6-C5	-2.66	119.17	124.37
67	KI	501	GTP	C3'-C2'-C1'	2.66	104.98	100.98
67	UG	501	GTP	C3'-C2'-C1'	2.66	104.98	100.98
69	MF	501	GDP	C8-N7-C5	2.66	108.06	102.99
67	MI	501	GTP	C3'-C2'-C1'	2.66	104.98	100.98
67	AC	501	GTP	PA-O3A-PB	-2.65	123.72	132.83
67	OF	502	GTP	O3G-PG-O3B	2.65	113.52	104.64
67	DK	501	GTP	C3'-C2'-C1'	2.65	104.97	100.98
69	JH	501	GDP	C3'-C2'-C1'	2.65	104.97	100.98
67	QM	501	GTP	O6-C6-C5	-2.65	119.20	124.37
69	ML	501	GDP	C8-N7-C5	2.64	108.03	102.99
67	CA	501	GTP	C8-N7-C5	2.64	108.02	102.99
67	TG	501	GTP	C3'-C2'-C1'	2.64	104.95	100.98
67	TK	501	GTP	C3'-C2'-C1'	2.63	104.94	100.98
67	CJ	502	GTP	O3G-PG-O3B	2.63	113.44	104.64
67	SA	501	GTP	C8-N7-C5	2.62	107.99	102.99
67	PD	502	GTP	PB-O3B-PG	-2.62	123.83	132.83
67	AC	501	GTP	C2-N1-C6	-2.62	120.27	125.10
69	DB	501	GDP	C5-C6-N1	2.62	118.58	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	FI	501	GTP	C3'-C2'-C1'	2.62	104.92	100.98
69	TJ	501	GDP	O3B-PB-O3A	2.62	113.41	104.64
69	RB	501	GDP	C5-C6-N1	2.61	118.56	113.95
69	DH	501	GDP	O6-C6-C5	-2.61	119.27	124.37
67	QA	501	GTP	C3'-C2'-C1'	2.61	104.91	100.98
67	TC	501	GTP	O6-C6-C5	-2.61	119.28	124.37
69	CB	501	GDP	C5-C6-N1	2.61	118.55	113.95
69	BF	501	GDP	C2'-C3'-C4'	2.60	107.69	102.64
67	NK	501	GTP	PB-O3B-PG	-2.60	123.91	132.83
69	FF	501	GDP	C8-N7-C5	2.60	107.94	102.99
69	LJ	501	GDP	O6-C6-C5	-2.59	119.31	124.37
69	RL	501	GDP	C3'-C2'-C1'	2.59	104.88	100.98
67	VL	502	GTP	PB-O3B-PG	-2.59	123.93	132.83
69	WF	501	GDP	C3'-C2'-C1'	2.59	104.88	100.98
67	LK	501	GTP	PA-O3A-PB	-2.59	123.94	132.83
69	PJ	501	GDP	PA-O3A-PB	-2.59	123.94	132.83
67	EM	501	GTP	C3'-C2'-C1'	2.59	104.88	100.98
69	MF	501	GDP	O6-C6-C5	-2.59	119.32	124.37
69	NH	501	GDP	C5-C6-N1	2.58	118.51	113.95
67	EE	501	GTP	C3'-C2'-C1'	2.58	104.86	100.98
69	NB	501	GDP	C8-N7-C5	2.58	107.90	102.99
67	TI	501	GTP	C8-N7-C5	2.57	107.89	102.99
69	LH	501	GDP	C5-C6-N1	2.57	118.49	113.95
67	JG	501	GTP	C3'-C2'-C1'	2.57	104.85	100.98
67	OH	502	GTP	PB-O3B-PG	-2.57	124.01	132.83
69	VB	501	GDP	C3'-C2'-C1'	2.56	104.84	100.98
69	PB	501	GDP	C8-N7-C5	2.56	107.87	102.99
69	N0	501	GDP	C8-N7-C5	2.56	107.87	102.99
69	MB	501	GDP	C5-C6-N1	2.56	118.47	113.95
69	MH	501	GDP	O6-C6-C5	-2.56	119.38	124.37
69	UH	501	GDP	C3'-C2'-C1'	2.55	104.82	100.98
69	SB	501	GDP	C5-C6-N1	2.55	118.46	113.95
67	AH	502	GTP	N2-C2-N1	2.55	122.15	116.71
67	RB	502	GTP	C3'-C2'-C1'	2.55	104.82	100.98
69	RF	501	GDP	C3'-C2'-C1'	2.55	104.82	100.98
67	VG	501	GTP	C3'-C2'-C1'	2.55	104.81	100.98
69	NH	501	GDP	C8-N7-C5	2.54	107.84	102.99
69	RB	501	GDP	O6-C6-C5	-2.54	119.41	124.37
69	JN	501	GDP	C3'-C2'-C1'	2.54	104.80	100.98
69	LH	501	GDP	C8-N7-C5	2.53	107.82	102.99
67	MI	501	GTP	N1-C2-N3	-2.53	118.59	123.32
69	KD	501	GDP	C3'-C2'-C1'	2.53	104.78	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	VN	501	GDP	C3'-C2'-C1'	2.52	104.78	100.98
69	KB	501	GDP	C8-N7-C5	2.52	107.79	102.99
67	O0	502	GTP	C3'-C2'-C1'	2.52	104.77	100.98
69	CH	501	GDP	PA-O3A-PB	-2.52	124.19	132.83
67	TE	501	GTP	C3'-C2'-C1'	2.51	104.76	100.98
67	PK	501	GTP	C3'-C2'-C1'	2.51	104.76	100.98
67	FC	501	GTP	C8-N7-C5	2.51	107.77	102.99
67	PD	502	GTP	C8-N7-C5	2.51	107.77	102.99
69	TH	501	GDP	C3'-C2'-C1'	2.51	104.75	100.98
67	RI	501	GTP	C3'-C2'-C1'	2.51	104.75	100.98
69	VH	501	GDP	C5-C6-N1	2.50	118.36	113.95
69	NJ	501	GDP	C5-C6-N1	2.49	118.35	113.95
67	HN	502	GTP	O3G-PG-O3B	2.49	112.98	104.64
69	LB	501	GDP	N2-C2-N1	2.49	122.01	116.71
67	WE	501	GTP	C3'-C2'-C1'	2.49	104.72	100.98
69	AL	501	GDP	C3'-C2'-C1'	2.48	104.72	100.98
69	BB	501	GDP	C3'-C2'-C1'	2.48	104.72	100.98
69	OF	501	GDP	C3'-C2'-C1'	2.48	104.71	100.98
67	PG	501	GTP	C3'-C2'-C1'	2.48	104.71	100.98
69	GJ	501	GDP	C3'-C2'-C1'	2.47	104.70	100.98
67	TC	501	GTP	C3'-C2'-C1'	2.47	104.70	100.98
69	SB	501	GDP	O6-C6-C5	-2.47	119.54	124.37
69	RD	501	GDP	O6-C6-C5	-2.47	119.55	124.37
69	PD	501	GDP	C3'-C2'-C1'	2.47	104.70	100.98
69	PF	501	GDP	C5-C6-N1	2.47	118.31	113.95
67	QK	501	GTP	C3'-C2'-C1'	2.47	104.70	100.98
69	LF	501	GDP	C5-C6-N1	2.47	118.31	113.95
67	DF	502	GTP	O6-C6-C5	-2.47	119.55	124.37
69	DD	501	GDP	C5-C6-N1	2.46	118.30	113.95
69	LJ	501	GDP	C5-C6-N1	2.46	118.30	113.95
67	RK	501	GTP	PB-O3B-PG	-2.46	124.38	132.83
69	DH	501	GDP	C5-C6-N1	2.46	118.30	113.95
69	LF	501	GDP	O6-C6-C5	-2.46	119.57	124.37
69	OD	501	GDP	C3'-C2'-C1'	2.46	104.68	100.98
69	LB	501	GDP	C5-C6-N1	2.46	118.29	113.95
67	AC	501	GTP	O6-C6-C5	-2.46	119.57	124.37
69	QB	501	GDP	C3'-C2'-C1'	2.45	104.67	100.98
69	VJ	501	GDP	O3B-PB-O3A	2.45	112.86	104.64
69	QD	501	GDP	C3'-C2'-C1'	2.45	104.67	100.98
67	MG	501	GTP	C5-C6-N1	2.45	118.28	113.95
67	AG	501	GTP	O6-C6-C5	-2.45	119.59	124.37
69	OL	501	GDP	C3'-C2'-C1'	2.45	104.66	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	RI	501	GTP	C5-C6-N1	2.44	118.27	113.95
69	OF	501	GDP	C2-N1-C6	-2.44	120.60	125.10
67	FK	501	GTP	O6-C6-C5	-2.44	119.61	124.37
69	HH	501	GDP	C3'-C2'-C1'	2.44	104.65	100.98
69	MJ	501	GDP	C5-C6-N1	2.44	118.25	113.95
69	PJ	501	GDP	O6-C6-C5	-2.43	119.62	124.37
69	ND	501	GDP	C8-N7-C5	2.43	107.62	102.99
69	HB	501	GDP	C3'-C2'-C1'	2.43	104.64	100.98
69	PB	501	GDP	O6-C6-C5	-2.43	119.63	124.37
69	RL	501	GDP	O6-C6-C5	-2.42	119.64	124.37
69	PF	501	GDP	C3'-C2'-C1'	2.42	104.63	100.98
67	GI	501	GTP	C3'-C2'-C1'	2.42	104.62	100.98
67	AG	501	GTP	C3'-C2'-C1'	2.42	104.62	100.98
69	JF	501	GDP	C3'-C2'-C1'	2.42	104.62	100.98
67	AC	501	GTP	C3'-C2'-C1'	2.42	104.61	100.98
67	AH	502	GTP	C3'-C2'-C1'	2.42	104.61	100.98
67	AC	501	GTP	N2-C2-N1	2.41	121.85	116.71
69	FD	501	GDP	C3'-C2'-C1'	2.41	104.61	100.98
69	BB	501	GDP	C8-N7-C5	2.41	107.58	102.99
69	MH	501	GDP	C5-C6-N1	2.41	118.20	113.95
67	EM	501	GTP	O6-C6-C5	-2.41	119.67	124.37
69	BH	501	GDP	C8-N7-C5	2.41	107.57	102.99
67	QA	501	GTP	PB-O3B-PG	-2.40	124.58	132.83
69	NB	501	GDP	C5-C6-N1	2.40	118.19	113.95
69	VD	501	GDP	C8-N7-C5	2.40	107.56	102.99
69	WD	501	GDP	C3'-C2'-C1'	2.40	104.59	100.98
69	TL	501	GDP	C8-N7-C5	2.40	107.56	102.99
69	GF	501	GDP	C8-N7-C5	2.40	107.56	102.99
69	KL	501	GDP	C8-N7-C5	2.40	107.56	102.99
67	AD	502	GTP	C3'-C2'-C1'	2.40	104.59	100.98
67	HE	501	GTP	O6-C6-C5	-2.39	119.70	124.37
69	KF	501	GDP	C3'-C2'-C1'	2.39	104.58	100.98
67	AM	501	GTP	O6-C6-C5	-2.39	119.70	124.37
69	MB	501	GDP	C8-N7-C5	2.39	107.55	102.99
67	KM	501	GTP	C3'-C2'-C1'	2.39	104.58	100.98
69	TD	501	GDP	C8-N7-C5	2.39	107.54	102.99
69	IJ	501	GDP	C8-N7-C5	2.39	107.54	102.99
69	OJ	501	GDP	C8-N7-C5	2.39	107.54	102.99
69	BL	501	GDP	C8-N7-C5	2.38	107.53	102.99
69	UL	501	GDP	C8-N7-C5	2.38	107.53	102.99
69	NF	501	GDP	C5-C6-N1	2.38	118.16	113.95
67	RB	502	GTP	O6-C6-C5	-2.38	119.72	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	HF	501	GDP	C8-N7-C5	2.38	107.53	102.99
69	GD	501	GDP	C8-N7-C5	2.38	107.53	102.99
69	UH	501	GDP	C8-N7-C5	2.38	107.53	102.99
69	MJ	501	GDP	C8-N7-C5	2.38	107.53	102.99
69	DL	501	GDP	C5-C6-N1	2.38	118.16	113.95
69	VF	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	KL	501	GDP	C3'-C2'-C1'	2.38	104.56	100.98
69	VB	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	LL	501	GDP	C5-C6-N1	2.38	118.15	113.95
69	AD	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	OH	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	GN	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	BJ	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	PL	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	JD	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	GH	501	GDP	C8-N7-C5	2.38	107.52	102.99
69	HJ	501	GDP	C8-N7-C5	2.37	107.51	102.99
69	IL	501	GDP	C8-N7-C5	2.37	107.51	102.99
67	FC	501	GTP	C5-C6-N1	2.37	118.14	113.95
69	DJ	501	GDP	C5-C6-N1	2.37	118.14	113.95
69	LN	501	GDP	C8-N7-C5	2.37	107.50	102.99
69	TH	501	GDP	C8-N7-C5	2.37	107.50	102.99
69	NJ	501	GDP	C8-N7-C5	2.37	107.50	102.99
69	HB	501	GDP	C8-N7-C5	2.37	107.50	102.99
69	OB	501	GDP	C8-N7-C5	2.37	107.50	102.99
69	QH	501	GDP	C5-C6-N1	2.37	118.13	113.95
67	JM	501	GTP	C3'-C2'-C1'	2.37	104.54	100.98
69	HJ	501	GDP	C3'-C2'-C1'	2.37	104.54	100.98
69	ND	501	GDP	C5-C6-N1	2.37	118.13	113.95
67	AD	502	GTP	O6-C6-C5	-2.37	119.75	124.37
69	ID	501	GDP	C3'-C2'-C1'	2.37	104.54	100.98
69	LD	501	GDP	C2'-C3'-C4'	2.36	107.24	102.64
69	AB	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	MN	501	GDP	C5-C6-N1	2.36	118.13	113.95
69	FB	501	GDP	C5-C6-N1	2.36	118.12	113.95
67	PA	501	GTP	C3'-C2'-C1'	2.36	104.54	100.98
69	VN	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	AH	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	KH	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	FD	501	GDP	C5-C6-N1	2.36	118.12	113.95
69	TJ	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	HD	501	GDP	C8-N7-C5	2.36	107.49	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	VN	501	GDP	C5-C6-N1	2.36	118.12	113.95
69	CH	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	HH	501	GDP	C8-N7-C5	2.36	107.49	102.99
69	WL	501	GDP	C8-N7-C5	2.36	107.49	102.99
67	OF	502	GTP	O2G-PG-O3B	2.36	112.55	104.64
69	CJ	501	GDP	C8-N7-C5	2.36	107.48	102.99
69	IF	501	GDP	C8-N7-C5	2.36	107.48	102.99
69	PF	501	GDP	C8-N7-C5	2.36	107.48	102.99
69	IN	501	GDP	C8-N7-C5	2.36	107.48	102.99
69	PD	501	GDP	C8-N7-C5	2.36	107.48	102.99
69	WD	501	GDP	C8-N7-C5	2.36	107.48	102.99
69	GL	501	GDP	C8-N7-C5	2.36	107.48	102.99
67	NF	502	GTP	O3G-PG-O3B	2.35	112.53	104.64
69	VB	501	GDP	C5-C6-N1	2.35	118.11	113.95
69	GB	501	GDP	C8-N7-C5	2.35	107.47	102.99
67	SM	501	GTP	O6-C6-C5	-2.35	119.78	124.37
69	AF	501	GDP	C8-N7-C5	2.35	107.47	102.99
69	KN	501	GDP	C8-N7-C5	2.35	107.47	102.99
69	LL	501	GDP	C8-N7-C5	2.35	107.47	102.99
69	EH	501	GDP	C8-N7-C5	2.35	107.47	102.99
69	DB	501	GDP	C8-N7-C5	2.35	107.47	102.99
69	LB	501	GDP	C8-N7-C5	2.35	107.47	102.99
69	VJ	501	GDP	C8-N7-C5	2.35	107.47	102.99
67	VE	501	GTP	C3'-C2'-C1'	2.35	104.51	100.98
67	HK	501	GTP	O6-C6-C5	-2.35	119.79	124.37
69	RL	501	GDP	C5-C6-N1	2.35	118.10	113.95
67	SA	501	GTP	C3'-C2'-C1'	2.35	104.51	100.98
69	BF	501	GDP	C8-N7-C5	2.35	107.46	102.99
69	HL	501	GDP	C8-N7-C5	2.35	107.46	102.99
69	JF	501	GDP	C8-N7-C5	2.35	107.46	102.99
69	AL	501	GDP	C8-N7-C5	2.35	107.46	102.99
69	OO	501	GDP	C8-N7-C5	2.35	107.46	102.99
69	HN	501	GDP	C8-N7-C5	2.34	107.46	102.99
69	GD	501	GDP	C5-C6-N1	2.34	118.09	113.95
69	CB	501	GDP	C8-N7-C5	2.34	107.45	102.99
69	IH	501	GDP	C8-N7-C5	2.34	107.45	102.99
69	IB	501	GDP	C5-C6-N1	2.34	118.08	113.95
69	EB	501	GDP	C8-N7-C5	2.34	107.45	102.99
69	UD	501	GDP	C5-C6-N1	2.34	118.08	113.95
69	BH	501	GDP	C2'-C3'-C4'	2.34	107.19	102.64
69	AJ	501	GDP	C8-N7-C5	2.34	107.44	102.99
69	UN	501	GDP	C8-N7-C5	2.34	107.44	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	OL	501	GDP	C8-N7-C5	2.34	107.44	102.99
69	FJ	501	GDP	C8-N7-C5	2.34	107.44	102.99
69	ID	501	GDP	C8-N7-C5	2.34	107.44	102.99
69	EF	501	GDP	C8-N7-C5	2.34	107.44	102.99
69	VH	501	GDP	C8-N7-C5	2.34	107.44	102.99
69	WL	501	GDP	C5-C6-N1	2.34	118.08	113.95
69	NH	501	GDP	O6-C6-C5	-2.33	119.81	124.37
69	JB	501	GDP	C8-N7-C5	2.33	107.44	102.99
69	KJ	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	FH	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	OD	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	UJ	501	GDP	C8-N7-C5	2.33	107.43	102.99
67	DC	501	GTP	O6-C6-C5	-2.33	119.82	124.37
67	RK	501	GTP	C2-N1-C6	-2.33	120.81	125.10
69	UJ	501	GDP	C5-C6-N1	2.33	118.07	113.95
69	NF	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	SH	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	SL	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	RD	501	GDP	C5-C6-N1	2.33	118.06	113.95
69	NL	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	VL	501	GDP	C8-N7-C5	2.33	107.43	102.99
69	QF	501	GDP	C8-N7-C5	2.33	107.42	102.99
69	QF	501	GDP	C5-C6-N1	2.33	118.06	113.95
69	PJ	501	GDP	C2-N1-C6	-2.33	120.81	125.10
69	CH	501	GDP	C5-C6-N1	2.33	118.06	113.95
69	GJ	501	GDP	C8-N7-C5	2.32	107.42	102.99
67	SI	501	GTP	O6-C6-C5	-2.32	119.83	124.37
69	SJ	501	GDP	C5-C6-N1	2.32	118.05	113.95
67	OF	502	GTP	PA-O3A-PB	-2.32	124.86	132.83
69	WB	501	GDP	C5-C6-N1	2.32	118.05	113.95
69	FN	501	GDP	C8-N7-C5	2.32	107.41	102.99
69	BL	501	GDP	C5-C6-N1	2.32	118.05	113.95
69	RL	501	GDP	O5'-PA-O1A	-2.32	100.02	109.07
69	JJ	501	GDP	C5-C6-N1	2.32	118.04	113.95
69	KD	501	GDP	C8-N7-C5	2.32	107.40	102.99
69	MN	501	GDP	C8-N7-C5	2.32	107.40	102.99
69	JN	501	GDP	C8-N7-C5	2.31	107.40	102.99
69	FD	501	GDP	C8-N7-C5	2.31	107.40	102.99
69	KF	501	GDP	C8-N7-C5	2.31	107.40	102.99
69	ED	501	GDP	C8-N7-C5	2.31	107.40	102.99
69	OL	501	GDP	C5-C6-N1	2.31	118.03	113.95
69	BD	501	GDP	C8-N7-C5	2.31	107.39	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	PJ	501	GDP	O3B-PB-O3A	2.31	112.38	104.64
69	CD	501	GDP	C8-N7-C5	2.31	107.39	102.99
69	UH	501	GDP	C5-C6-N1	2.31	118.03	113.95
69	RH	501	GDP	C8-N7-C5	2.30	107.38	102.99
69	FF	501	GDP	C5-C6-N1	2.30	118.02	113.95
69	JF	501	GDP	C5-C6-N1	2.30	118.02	113.95
69	VL	501	GDP	C5-C6-N1	2.30	118.02	113.95
69	GJ	501	GDP	C5-C6-N1	2.30	118.02	113.95
69	JL	501	GDP	C3'-C2'-C1'	2.30	104.44	100.98
69	QB	501	GDP	O6-C6-C5	-2.30	119.88	124.37
69	HB	501	GDP	C5-C6-N1	2.30	118.02	113.95
69	HN	501	GDP	C5-C6-N1	2.30	118.02	113.95
67	EC	501	GTP	O6-C6-C5	-2.30	119.88	124.37
69	KH	501	GDP	C5-C6-N1	2.30	118.01	113.95
67	SF	502	GTP	O2G-PG-O3B	2.30	112.35	104.64
69	EJ	501	GDP	C8-N7-C5	2.30	107.37	102.99
69	EL	501	GDP	C8-N7-C5	2.30	107.37	102.99
69	JD	501	GDP	C5-C6-N1	2.30	118.01	113.95
69	JL	501	GDP	C8-N7-C5	2.30	107.37	102.99
69	CF	501	GDP	C5-C6-N1	2.30	118.01	113.95
69	PL	501	GDP	C5-C6-N1	2.30	118.01	113.95
69	EN	501	GDP	C8-N7-C5	2.30	107.36	102.99
69	MH	501	GDP	C8-N7-C5	2.30	107.36	102.99
69	TF	501	GDP	C5-C6-N1	2.29	118.00	113.95
69	LJ	501	GDP	C8-N7-C5	2.29	107.36	102.99
69	WH	501	GDP	C8-N7-C5	2.29	107.36	102.99
69	TB	501	GDP	C8-N7-C5	2.29	107.36	102.99
69	HH	501	GDP	C5-C6-N1	2.29	118.00	113.95
69	LF	501	GDP	C8-N7-C5	2.29	107.36	102.99
69	FB	501	GDP	C8-N7-C5	2.29	107.36	102.99
69	BH	501	GDP	C5-C6-N1	2.29	118.00	113.95
69	RH	501	GDP	C5-C6-N1	2.29	118.00	113.95
69	IB	501	GDP	C8-N7-C5	2.29	107.35	102.99
69	CJ	501	GDP	C5-C6-N1	2.29	118.00	113.95
69	EB	501	GDP	C5-C6-N1	2.29	118.00	113.95
69	EJ	501	GDP	C5-C6-N1	2.29	117.99	113.95
69	HJ	501	GDP	C5-C6-N1	2.29	117.99	113.95
69	QL	501	GDP	C3'-C2'-C1'	2.29	104.42	100.98
69	JN	501	GDP	C5-C6-N1	2.29	117.99	113.95
67	GM	501	GTP	O6-C6-C5	-2.29	119.91	124.37
67	VK	501	GTP	PB-O3B-PG	-2.29	124.98	132.83
69	FL	501	GDP	C8-N7-C5	2.29	107.35	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	OH	501	GDP	C3'-C2'-C1'	2.29	104.42	100.98
69	KF	501	GDP	C5-C6-N1	2.28	117.99	113.95
69	RD	501	GDP	C3'-C2'-C1'	2.28	104.42	100.98
69	IN	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	VF	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	CL	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	DF	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	SL	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	RF	501	GDP	C8-N7-C5	2.28	107.33	102.99
69	PD	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	DN	501	GDP	C5-C6-N1	2.28	117.98	113.95
69	WB	501	GDP	C8-N7-C5	2.28	107.33	102.99
69	KL	501	GDP	C5-C6-N1	2.28	117.97	113.95
69	UD	501	GDP	C8-N7-C5	2.28	107.33	102.99
69	GN	501	GDP	C5-C6-N1	2.28	117.97	113.95
69	KN	501	GDP	C5-C6-N1	2.28	117.97	113.95
69	WH	501	GDP	C5-C6-N1	2.28	117.97	113.95
67	CB	502	GTP	PB-O3B-PG	-2.28	125.02	132.83
69	DL	501	GDP	C8-N7-C5	2.28	107.33	102.99
69	O0	501	GDP	C5-C6-N1	2.28	117.97	113.95
69	PH	501	GDP	C5-C6-N1	2.28	117.97	113.95
69	WD	501	GDP	C5-C6-N1	2.28	117.97	113.95
69	BB	501	GDP	C5-C6-N1	2.27	117.97	113.95
69	FF	501	GDP	C3'-C2'-C1'	2.27	104.40	100.98
69	NL	501	GDP	C5-C6-N1	2.27	117.97	113.95
69	EL	501	GDP	C5-C6-N1	2.27	117.96	113.95
67	FE	501	GTP	O6-C6-C5	-2.27	119.94	124.37
69	FJ	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	KJ	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	BJ	501	GDP	C5-C6-N1	2.27	117.96	113.95
67	FI	501	GTP	O6-C6-C5	-2.27	119.94	124.37
69	QJ	501	GDP	C8-N7-C5	2.27	107.31	102.99
69	PB	501	GDP	O3B-PB-O3A	2.27	112.25	104.64
69	EH	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	IF	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	GL	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	IH	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	GF	501	GDP	C5-C6-N1	2.27	117.96	113.95
69	JH	501	GDP	C8-N7-C5	2.27	107.31	102.99
69	IL	501	GDP	C5-C6-N1	2.27	117.95	113.95
69	UL	501	GDP	C5-C6-N1	2.27	117.95	113.95
67	FG	501	GTP	O6-C6-C5	-2.26	119.95	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	SD	501	GDP	C8-N7-C5	2.26	107.30	102.99
69	AJ	501	GDP	C5-C6-N1	2.26	117.95	113.95
69	ED	501	GDP	C5-C6-N1	2.26	117.95	113.95
69	BD	501	GDP	C5'-C4'-C3'	-2.26	106.71	115.18
69	KH	501	GDP	C3'-C2'-C1'	2.26	104.38	100.98
67	AM	501	GTP	N2-C2-N1	2.26	121.53	116.71
69	IJ	501	GDP	C5-C6-N1	2.26	117.94	113.95
69	WF	501	GDP	C5-C6-N1	2.26	117.94	113.95
69	ID	501	GDP	C5-C6-N1	2.26	117.94	113.95
69	UF	501	GDP	C5-C6-N1	2.26	117.94	113.95
69	VD	501	GDP	C5-C6-N1	2.26	117.94	113.95
69	HD	501	GDP	C5-C6-N1	2.26	117.94	113.95
67	QC	501	GTP	O6-C6-C5	-2.26	119.96	124.37
69	OH	501	GDP	C5-C6-N1	2.26	117.94	113.95
67	NF	502	GTP	O6-C6-C5	-2.26	119.97	124.37
69	AB	501	GDP	C5-C6-N1	2.26	117.94	113.95
67	UE	501	GTP	O6-C6-C5	-2.26	119.97	124.37
69	KD	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	OD	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	RF	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	GH	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	TD	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	JJ	501	GDP	C8-N7-C5	2.25	107.28	102.99
69	AD	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	SF	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	FN	501	GDP	C5-C6-N1	2.25	117.93	113.95
69	EF	501	GDP	C5-C6-N1	2.25	117.92	113.95
69	LN	501	GDP	C5-C6-N1	2.25	117.92	113.95
67	RI	501	GTP	N2-C2-N3	-2.25	115.36	119.74
69	HL	501	GDP	C5-C6-N1	2.25	117.92	113.95
67	BA	501	GTP	O6-C6-C5	-2.25	119.98	124.37
67	EE	501	GTP	O6-C6-C5	-2.25	119.98	124.37
69	HF	501	GDP	C5-C6-N1	2.25	117.92	113.95
69	TL	501	GDP	C5-C6-N1	2.25	117.92	113.95
69	UN	501	GDP	C5-C6-N1	2.24	117.92	113.95
69	AH	501	GDP	C5-C6-N1	2.24	117.91	113.95
67	SC	501	GTP	O6-C6-C5	-2.24	119.99	124.37
69	JB	501	GDP	C5-C6-N1	2.24	117.91	113.95
69	DF	501	GDP	C8-N7-C5	2.24	107.26	102.99
69	OJ	501	GDP	C5-C6-N1	2.24	117.91	113.95
67	TM	501	GTP	O6-C6-C5	-2.24	120.00	124.37
69	VF	501	GDP	C3'-C2'-C1'	2.24	104.35	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	NA	502	GTP	O6-C6-C5	-2.24	120.00	124.37
69	PH	501	GDP	C8-N7-C5	2.24	107.25	102.99
69	TF	501	GDP	C8-N7-C5	2.24	107.25	102.99
69	VJ	501	GDP	C5-C6-N1	2.24	117.90	113.95
67	MG	501	GTP	N1-C2-N3	-2.24	119.14	123.32
67	SK	501	GTP	O6-C6-C5	-2.24	120.00	124.37
69	SH	501	GDP	C5-C6-N1	2.24	117.90	113.95
69	UB	501	GDP	C8-N7-C5	2.24	107.25	102.99
69	PL	501	GDP	C3'-C2'-C1'	2.23	104.34	100.98
69	OB	501	GDP	C5-C6-N1	2.23	117.89	113.95
69	FH	501	GDP	C5-C6-N1	2.23	117.89	113.95
69	MF	501	GDP	C5-C6-N1	2.23	117.89	113.95
67	VE	501	GTP	N2-C2-N1	2.23	121.46	116.71
67	SF	502	GTP	N1-C2-N3	-2.23	119.15	123.32
69	NF	501	GDP	C3'-C2'-C1'	2.23	104.33	100.98
69	UF	501	GDP	C8-N7-C5	2.23	107.23	102.99
69	WF	501	GDP	C8-N7-C5	2.23	107.23	102.99
67	KC	501	GTP	O6-C6-C5	-2.22	120.03	124.37
69	AL	501	GDP	C5-C6-N1	2.22	117.88	113.95
67	LM	501	GTP	O6-C6-C5	-2.22	120.03	124.37
69	QD	501	GDP	C8-N7-C5	2.22	107.22	102.99
69	DJ	501	GDP	O6-C6-C5	-2.22	120.03	124.37
67	LG	501	GTP	O6-C6-C5	-2.22	120.03	124.37
67	MK	501	GTP	O6-C6-C5	-2.22	120.04	124.37
69	QJ	501	GDP	C5-C6-N1	2.22	117.87	113.95
67	AK	501	GTP	N1-C2-N3	-2.22	119.18	123.32
69	RL	501	GDP	C8-N7-C5	2.22	107.21	102.99
69	CB	501	GDP	C3'-C2'-C1'	2.22	104.31	100.98
67	DK	501	GTP	O3G-PG-O3B	2.22	112.07	104.64
67	GE	501	GTP	O6-C6-C5	-2.22	120.05	124.37
67	UG	501	GTP	O6-C6-C5	-2.22	120.05	124.37
67	WI	501	GTP	O6-C6-C5	-2.21	120.05	124.37
69	BL	501	GDP	C3'-C2'-C1'	2.21	104.31	100.98
69	FL	501	GDP	C5-C6-N1	2.21	117.86	113.95
69	UF	501	GDP	C2'-C3'-C4'	2.21	106.94	102.64
69	QH	501	GDP	C8-N7-C5	2.21	107.21	102.99
69	QL	501	GDP	O6-C6-C5	-2.21	120.05	124.37
69	NH	501	GDP	N2-C2-N3	-2.21	115.43	119.74
69	AF	501	GDP	C5-C6-N1	2.21	117.86	113.95
67	GJ	502	GTP	O6-C6-C5	-2.21	120.05	124.37
69	SD	501	GDP	C5-C6-N1	2.21	117.86	113.95
69	BF	501	GDP	C5-C6-N1	2.21	117.85	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	LN	501	GDP	C3'-C2'-C1'	2.21	104.30	100.98
69	CF	501	GDP	C8-N7-C5	2.21	107.20	102.99
69	WN	501	GDP	C5-C6-N1	2.21	117.85	113.95
67	NE	501	GTP	O6-C6-C5	-2.21	120.06	124.37
69	VL	501	GDP	C3'-C2'-C1'	2.21	104.30	100.98
67	KE	501	GTP	O6-C6-C5	-2.21	120.06	124.37
69	WJ	501	GDP	C5-C6-N1	2.21	117.85	113.95
69	IF	501	GDP	C2'-C3'-C4'	2.20	106.92	102.64
69	DN	501	GDP	C8-N7-C5	2.20	107.19	102.99
67	RM	501	GTP	O6-C6-C5	-2.20	120.07	124.37
67	AG	501	GTP	N1-C2-N3	-2.20	119.21	123.32
67	LK	501	GTP	O6-C6-C5	-2.20	120.08	124.37
69	BD	501	GDP	C5-C6-N1	2.20	117.84	113.95
69	GB	501	GDP	C5-C6-N1	2.20	117.84	113.95
67	JE	501	GTP	O6-C6-C5	-2.20	120.08	124.37
67	PD	502	GTP	O6-C6-C5	-2.20	120.08	124.37
67	KK	501	GTP	O6-C6-C5	-2.19	120.08	124.37
67	VK	501	GTP	O6-C6-C5	-2.19	120.08	124.37
67	FC	501	GTP	N1-C2-N3	-2.19	119.22	123.32
69	CH	501	GDP	O3B-PB-O3A	2.19	111.99	104.64
69	JL	501	GDP	C5-C6-N1	2.19	117.82	113.95
67	JC	501	GTP	O6-C6-C5	-2.19	120.09	124.37
67	LC	501	GTP	O6-C6-C5	-2.19	120.09	124.37
69	MB	501	GDP	O6-C6-C5	-2.19	120.09	124.37
67	AD	502	GTP	N1-C2-N3	-2.19	119.23	123.32
69	RD	501	GDP	C8-N7-C5	2.19	107.16	102.99
67	BM	501	GTP	O6-C6-C5	-2.19	120.10	124.37
67	CA	501	GTP	N1-C2-N3	-2.19	119.23	123.32
67	HE	501	GTP	C3'-C2'-C1'	2.19	104.27	100.98
67	TK	501	GTP	O6-C6-C5	-2.19	120.10	124.37
69	EN	501	GDP	C5-C6-N1	2.19	117.81	113.95
67	MC	501	GTP	O6-C6-C5	-2.19	120.10	124.37
67	RK	501	GTP	O6-C6-C5	-2.19	120.10	124.37
67	WG	501	GTP	O6-C6-C5	-2.19	120.10	124.37
67	EK	501	GTP	O6-C6-C5	-2.19	120.10	124.37
69	WN	501	GDP	C2'-C3'-C4'	2.19	106.89	102.64
69	LL	501	GDP	O6-C6-C5	-2.18	120.11	124.37
69	CL	501	GDP	C8-N7-C5	2.18	107.15	102.99
69	UB	501	GDP	C5-C6-N1	2.18	117.81	113.95
69	SJ	501	GDP	C8-N7-C5	2.18	107.15	102.99
67	NB	502	GTP	O6-C6-C5	-2.18	120.11	124.37
67	LE	501	GTP	O6-C6-C5	-2.18	120.11	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	MN	501	GDP	C3'-C2'-C1'	2.18	104.26	100.98
67	WM	501	GTP	O6-C6-C5	-2.18	120.12	124.37
67	GG	501	GTP	O6-C6-C5	-2.18	120.12	124.37
67	NI	501	GTP	O6-C6-C5	-2.18	120.12	124.37
67	RG	501	GTP	O6-C6-C5	-2.18	120.12	124.37
69	WL	501	GDP	C3'-C2'-C1'	2.18	104.26	100.98
67	MM	501	GTP	O6-C6-C5	-2.18	120.12	124.37
67	AH	502	GTP	N1-C2-N3	-2.18	119.25	123.32
69	OJ	501	GDP	C2'-C3'-C4'	2.18	106.87	102.64
67	RE	501	GTP	O6-C6-C5	-2.18	120.12	124.37
69	TB	501	GDP	C5-C6-N1	2.17	117.79	113.95
67	ME	501	GTP	O6-C6-C5	-2.17	120.13	124.37
67	WK	501	GTP	O6-C6-C5	-2.17	120.13	124.37
67	KG	501	GTP	N2-C2-N1	2.17	121.33	116.71
69	DD	501	GDP	C8-N7-C5	2.17	107.12	102.99
67	HN	502	GTP	O6-C6-C5	-2.17	120.14	124.37
69	MB	501	GDP	N2-C2-N1	2.17	121.33	116.71
69	TH	501	GDP	C5-C6-N1	2.17	117.78	113.95
67	PA	501	GTP	O6-C6-C5	-2.17	120.14	124.37
69	N0	501	GDP	C2-N1-C6	-2.17	121.11	125.10
69	UD	501	GDP	C2'-C3'-C4'	2.17	106.85	102.64
67	JK	501	GTP	O6-C6-C5	-2.16	120.14	124.37
67	AA	501	GTP	N2-C2-N1	2.16	121.32	116.71
69	TJ	501	GDP	C5-C6-N1	2.16	117.76	113.95
67	DE	501	GTP	O6-C6-C5	-2.16	120.16	124.37
67	JM	501	GTP	O6-C6-C5	-2.16	120.16	124.37
69	RB	501	GDP	C8-N7-C5	2.16	107.10	102.99
67	GI	501	GTP	O6-C6-C5	-2.16	120.16	124.37
67	QA	501	GTP	O6-C6-C5	-2.16	120.16	124.37
69	KN	501	GDP	O3B-PB-O3A	2.16	111.87	104.64
67	LI	501	GTP	O6-C6-C5	-2.16	120.16	124.37
69	WN	501	GDP	C8-N7-C5	2.15	107.09	102.99
67	KO	501	GTP	O6-C6-C5	-2.15	120.17	124.37
69	CD	501	GDP	C5-C6-N1	2.15	117.75	113.95
67	SI	501	GTP	O4'-C1'-C2'	2.15	110.07	106.93
67	BI	501	GTP	O6-C6-C5	-2.15	120.17	124.37
67	NK	501	GTP	O6-C6-C5	-2.15	120.17	124.37
67	AK	501	GTP	PB-O3B-PG	-2.15	125.45	132.83
67	IE	501	GTP	O6-C6-C5	-2.15	120.17	124.37
69	JH	501	GDP	C5-C6-N1	2.15	117.74	113.95
69	UL	501	GDP	C2'-C3'-C4'	2.15	106.81	102.64
67	FM	501	GTP	O6-C6-C5	-2.14	120.19	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	QA	501	GTP	O3G-PG-O3B	2.14	111.82	104.64
67	SE	501	GTP	O6-C6-C5	-2.14	120.19	124.37
69	RF	501	GDP	O6-C6-C5	-2.14	120.19	124.37
69	QB	501	GDP	C8-N7-C5	2.14	107.07	102.99
69	WJ	501	GDP	C8-N7-C5	2.14	107.07	102.99
67	QI	501	GTP	O6-C6-C5	-2.14	120.19	124.37
67	FG	501	GTP	PB-O3B-PG	-2.14	125.49	132.83
69	MD	501	GDP	O6-C6-C5	-2.14	120.20	124.37
67	JI	501	GTP	O6-C6-C5	-2.14	120.20	124.37
69	BL	501	GDP	C2'-C3'-C4'	2.14	106.79	102.64
69	ML	501	GDP	N1-C2-N3	-2.14	119.33	123.32
67	RK	501	GTP	O3G-PG-O3B	2.14	111.80	104.64
69	VD	501	GDP	C3'-C2'-C1'	2.13	104.19	100.98
67	HL	502	GTP	O3G-PG-O3B	2.13	111.78	104.64
69	DH	501	GDP	C8-N7-C5	2.13	107.05	102.99
67	EI	501	GTP	O6-C6-C5	-2.12	120.22	124.37
67	IK	501	GTP	O6-C6-C5	-2.12	120.22	124.37
67	VK	501	GTP	C3'-C2'-C1'	2.12	104.17	100.98
69	QF	501	GDP	C2'-C3'-C4'	2.12	106.77	102.64
67	CL	502	GTP	O6-C6-C5	-2.12	120.23	124.37
69	OH	501	GDP	C2'-C3'-C4'	2.12	106.76	102.64
67	HC	501	GTP	O6-C6-C5	-2.12	120.23	124.37
69	MJ	501	GDP	O6-C6-C5	-2.12	120.23	124.37
67	VK	501	GTP	O3G-PG-O3B	2.12	111.74	104.64
69	DF	501	GDP	O6-C6-C5	-2.12	120.24	124.37
67	KM	501	GTP	O6-C6-C5	-2.12	120.24	124.37
67	IG	501	GTP	O6-C6-C5	-2.12	120.24	124.37
67	BC	501	GTP	O6-C6-C5	-2.11	120.24	124.37
69	DL	501	GDP	O3B-PB-O3A	2.11	111.73	104.64
67	WG	501	GTP	C2'-C3'-C4'	2.11	106.75	102.64
67	JG	501	GTP	O6-C6-C5	-2.11	120.25	124.37
69	DD	501	GDP	C3'-C2'-C1'	2.11	104.16	100.98
67	VE	501	GTP	O3G-PG-O3B	2.11	111.71	104.64
67	VG	501	GTP	O6-C6-C5	-2.11	120.25	124.37
67	BG	501	GTP	O6-C6-C5	-2.11	120.26	124.37
67	IC	501	GTP	O6-C6-C5	-2.10	120.27	124.37
69	LB	501	GDP	O6-C6-C5	-2.10	120.27	124.37
69	LL	501	GDP	C3'-C2'-C1'	2.10	104.13	100.98
69	PJ	501	GDP	C8-N7-C5	2.10	106.98	102.99
69	MD	501	GDP	C5-C6-N1	2.09	117.65	113.95
69	PJ	501	GDP	C2'-C3'-C4'	2.09	106.71	102.64
67	IM	501	GTP	O6-C6-C5	-2.09	120.29	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	NK	501	GTP	O3G-PG-O3B	2.09	111.65	104.64
67	QG	501	GTP	O3G-PG-O3B	2.09	111.65	104.64
67	GM	501	GTP	O2G-PG-O3B	2.09	111.64	104.64
69	IB	501	GDP	O2'-C2'-C3'	-2.09	105.07	111.82
69	LD	501	GDP	C8-N7-C5	2.09	106.96	102.99
69	PF	501	GDP	O6-C6-C5	-2.09	120.30	124.37
67	O0	502	GTP	O6-C6-C5	-2.08	120.30	124.37
67	HG	502	GTP	O6-C6-C5	-2.08	120.30	124.37
69	OB	501	GDP	C2'-C3'-C4'	2.08	106.69	102.64
67	SI	501	GTP	C2'-C3'-C4'	2.08	106.69	102.64
69	SB	501	GDP	C8-N7-C5	2.08	106.95	102.99
67	JC	501	GTP	N2-C2-N1	2.08	121.14	116.71
69	UJ	501	GDP	O2B-PB-O3A	2.08	111.61	104.64
67	HL	502	GTP	O6-C6-C5	-2.08	120.31	124.37
69	QD	501	GDP	C2'-C3'-C4'	2.08	106.68	102.64
69	VD	501	GDP	O2B-PB-O3A	2.08	111.60	104.64
69	GD	501	GDP	C3'-C2'-C1'	2.07	104.10	100.98
67	RI	501	GTP	O6-C6-C5	-2.07	120.32	124.37
67	GC	501	GTP	O6-C6-C5	-2.07	120.32	124.37
67	CA	501	GTP	C2-N1-C6	-2.07	121.28	125.10
67	DK	501	GTP	O6-C6-C5	-2.07	120.33	124.37
67	UC	501	GTP	O6-C6-C5	-2.07	120.33	124.37
69	GJ	501	GDP	C2'-C3'-C4'	2.07	106.67	102.64
69	LH	501	GDP	O6-C6-N1	2.07	123.09	120.65
69	TD	501	GDP	C2'-C3'-C4'	2.07	106.67	102.64
67	UI	501	GTP	O6-C6-C5	-2.07	120.33	124.37
67	II	501	GTP	O6-C6-C5	-2.07	120.33	124.37
69	KF	501	GDP	O3B-PB-O3A	2.07	111.57	104.64
67	AC	501	GTP	N1-C2-N3	-2.07	119.46	123.32
69	FD	501	GDP	C2'-C3'-C4'	2.07	106.66	102.64
67	DM	501	GTP	C3'-C2'-C1'	2.06	104.09	100.98
69	OB	501	GDP	C3'-C2'-C1'	2.06	104.09	100.98
67	CJ	502	GTP	O6-C6-C5	-2.06	120.34	124.37
69	SF	501	GDP	C3'-C2'-C1'	2.06	104.08	100.98
67	KI	501	GTP	O6-C6-C5	-2.06	120.35	124.37
69	TD	501	GDP	C3'-C2'-C1'	2.06	104.08	100.98
67	VE	501	GTP	O6-C6-C5	-2.06	120.35	124.37
67	OF	502	GTP	O6-C6-C5	-2.06	120.36	124.37
67	OE	501	GTP	O6-C6-C5	-2.06	120.36	124.37
69	QJ	501	GDP	O2B-PB-O3A	2.05	111.51	104.64
67	DA	501	GTP	O4'-C4'-C3'	2.05	109.17	105.11
67	KG	501	GTP	N1-C2-N3	-2.05	119.50	123.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
67	SA	501	GTP	C2'-C3'-C4'	2.04	106.61	102.64
67	WE	501	GTP	O6-C6-C5	-2.04	120.38	124.37
69	DD	501	GDP	O6-C6-C5	-2.04	120.38	124.37
69	PF	501	GDP	O3B-PB-O3A	2.04	111.48	104.64
69	SF	501	GDP	C2'-C3'-C4'	2.04	106.61	102.64
67	WC	501	GTP	O6-C6-C5	-2.04	120.39	124.37
69	NB	501	GDP	C2-N1-C6	-2.04	121.34	125.10
67	QK	501	GTP	O3G-PG-O3B	2.04	111.47	104.64
67	IN	502	GTP	O6-C6-C5	-2.04	120.39	124.37
67	UM	501	GTP	O6-C6-C5	-2.04	120.39	124.37
67	OC	501	GTP	O6-C6-C5	-2.03	120.40	124.37
69	VN	501	GDP	PA-O3A-PB	-2.03	125.85	132.83
69	QL	501	GDP	C8-N7-C5	2.03	106.86	102.99
67	RA	501	GTP	C3'-C2'-C1'	2.03	104.03	100.98
69	MN	501	GDP	O6-C6-C5	-2.03	120.41	124.37
67	PI	501	GTP	O6-C6-C5	-2.03	120.41	124.37
67	NA	502	GTP	O2G-PG-O3B	2.03	111.43	104.64
69	SF	501	GDP	C8-N7-C5	2.02	106.85	102.99
67	CG	501	GTP	O6-C6-C5	-2.02	120.42	124.37
67	PK	501	GTP	O6-C6-C5	-2.02	120.42	124.37
67	HI	501	GTP	O6-C6-C5	-2.02	120.42	124.37
67	VL	502	GTP	O6-C6-C5	-2.02	120.42	124.37
67	CA	501	GTP	O6-C6-C5	-2.02	120.43	124.37
67	BK	501	GTP	O6-C6-C5	-2.02	120.43	124.37
69	SB	501	GDP	C3'-C2'-C1'	2.02	104.01	100.98
67	UK	501	GTP	O6-C6-C5	-2.01	120.45	124.37
67	CD	502	GTP	O6-C6-C5	-2.01	120.45	124.37
69	JN	501	GDP	C2'-C3'-C4'	2.01	106.54	102.64
67	SK	501	GTP	O3G-PG-O3B	2.01	111.36	104.64
67	KM	501	GTP	O3G-PG-O3B	2.01	111.36	104.64
67	TC	501	GTP	N2-C2-N1	2.00	120.98	116.71
69	MB	501	GDP	C3'-C2'-C1'	2.00	103.99	100.98

There are no chirality outliers.

All (1140) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
67	AA	501	GTP	C5'-O5'-PA-O1A
67	AA	501	GTP	C5'-O5'-PA-O2A
67	AC	501	GTP	C5'-O5'-PA-O1A
67	AC	501	GTP	C5'-O5'-PA-O2A
67	AG	501	GTP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
67	AG	501	GTP	C5'-O5'-PA-O2A
67	AK	501	GTP	C5'-O5'-PA-O1A
67	BA	501	GTP	C5'-O5'-PA-O3A
67	BA	501	GTP	C5'-O5'-PA-O2A
67	BC	501	GTP	C5'-O5'-PA-O1A
67	BE	501	GTP	C5'-O5'-PA-O3A
67	BE	501	GTP	C5'-O5'-PA-O2A
67	BG	501	GTP	C5'-O5'-PA-O1A
67	BG	501	GTP	C5'-O5'-PA-O2A
67	BG	501	GTP	O4'-C4'-C5'-O5'
67	BG	501	GTP	C3'-C4'-C5'-O5'
67	BI	501	GTP	PB-O3B-PG-O2G
67	BI	501	GTP	PB-O3B-PG-O3G
67	BI	501	GTP	C5'-O5'-PA-O3A
67	BI	501	GTP	C5'-O5'-PA-O1A
67	BK	501	GTP	C5'-O5'-PA-O3A
67	BK	501	GTP	C5'-O5'-PA-O1A
67	BK	501	GTP	C5'-O5'-PA-O2A
67	BM	501	GTP	C5'-O5'-PA-O1A
67	BM	501	GTP	C5'-O5'-PA-O2A
67	CB	502	GTP	C5'-O5'-PA-O3A
67	CD	502	GTP	C5'-O5'-PA-O3A
67	CG	501	GTP	C5'-O5'-PA-O3A
67	CG	501	GTP	C5'-O5'-PA-O2A
67	CG	501	GTP	C3'-C4'-C5'-O5'
67	CH	502	GTP	C5'-O5'-PA-O3A
67	CH	502	GTP	C5'-O5'-PA-O2A
67	CJ	502	GTP	C5'-O5'-PA-O1A
67	CJ	502	GTP	C5'-O5'-PA-O2A
67	DC	501	GTP	C5'-O5'-PA-O1A
67	DC	501	GTP	C5'-O5'-PA-O2A
67	DF	502	GTP	C5'-O5'-PA-O3A
67	DF	502	GTP	C5'-O5'-PA-O2A
67	DF	502	GTP	O4'-C4'-C5'-O5'
67	DF	502	GTP	C3'-C4'-C5'-O5'
67	DI	501	GTP	C5'-O5'-PA-O1A
67	DI	501	GTP	C5'-O5'-PA-O2A
67	DM	501	GTP	C5'-O5'-PA-O1A
67	EC	501	GTP	C5'-O5'-PA-O1A
67	EC	501	GTP	C5'-O5'-PA-O2A
67	EG	501	GTP	C5'-O5'-PA-O1A
67	EG	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
67	EG	501	GTP	C3'-C4'-C5'-O5'
67	EI	501	GTP	PB-O3B-PG-O3G
67	EI	501	GTP	C5'-O5'-PA-O3A
67	EK	501	GTP	PB-O3B-PG-O3G
67	EK	501	GTP	O4'-C4'-C5'-O5'
67	EM	501	GTP	C5'-O5'-PA-O1A
67	EM	501	GTP	C5'-O5'-PA-O2A
67	FE	501	GTP	C5'-O5'-PA-O2A
67	FG	501	GTP	C4'-C5'-O5'-PA
67	FI	501	GTP	C5'-O5'-PA-O1A
67	FM	501	GTP	O4'-C4'-C5'-O5'
67	FM	501	GTP	C3'-C4'-C5'-O5'
67	GC	501	GTP	C3'-C4'-C5'-O5'
67	GE	501	GTP	C5'-O5'-PA-O1A
67	GG	501	GTP	O4'-C4'-C5'-O5'
67	GG	501	GTP	C3'-C4'-C5'-O5'
67	GI	501	GTP	C5'-O5'-PA-O3A
67	GJ	502	GTP	C5'-O5'-PA-O1A
67	HC	501	GTP	C5'-O5'-PA-O1A
67	HC	501	GTP	C5'-O5'-PA-O2A
67	HC	501	GTP	C3'-C4'-C5'-O5'
67	HE	501	GTP	C5'-O5'-PA-O1A
67	HE	501	GTP	C5'-O5'-PA-O2A
67	HI	501	GTP	C5'-O5'-PA-O1A
67	HI	501	GTP	C5'-O5'-PA-O2A
67	HI	501	GTP	C3'-C4'-C5'-O5'
67	HK	501	GTP	C5'-O5'-PA-O2A
67	HL	502	GTP	PB-O3B-PG-O2G
67	HN	502	GTP	C5'-O5'-PA-O1A
67	HN	502	GTP	C5'-O5'-PA-O2A
67	IC	501	GTP	C5'-O5'-PA-O1A
67	IC	501	GTP	C5'-O5'-PA-O2A
67	IC	501	GTP	O4'-C4'-C5'-O5'
67	IC	501	GTP	C3'-C4'-C5'-O5'
67	IE	501	GTP	O4'-C4'-C5'-O5'
67	IE	501	GTP	C3'-C4'-C5'-O5'
67	IG	501	GTP	O4'-C4'-C5'-O5'
67	II	501	GTP	PB-O3B-PG-O2G
67	II	501	GTP	C5'-O5'-PA-O1A
67	II	501	GTP	C5'-O5'-PA-O2A
67	IK	501	GTP	C5'-O5'-PA-O1A
67	IK	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
67	IM	501	GTP	C5'-O5'-PA-O3A
67	JG	501	GTP	O4'-C4'-C5'-O5'
67	JG	501	GTP	C3'-C4'-C5'-O5'
67	JI	501	GTP	C5'-O5'-PA-O3A
67	JK	501	GTP	C5'-O5'-PA-O3A
67	KC	501	GTP	O4'-C4'-C5'-O5'
67	KC	501	GTP	C3'-C4'-C5'-O5'
67	KI	501	GTP	PB-O3B-PG-O3G
67	KI	501	GTP	C5'-O5'-PA-O1A
67	KI	501	GTP	C5'-O5'-PA-O2A
67	KK	501	GTP	C5'-O5'-PA-O1A
67	KK	501	GTP	C5'-O5'-PA-O2A
67	KM	501	GTP	PB-O3A-PA-O5'
67	KM	501	GTP	O4'-C4'-C5'-O5'
67	KM	501	GTP	C3'-C4'-C5'-O5'
67	KO	501	GTP	C5'-O5'-PA-O1A
67	KO	501	GTP	C5'-O5'-PA-O2A
67	LE	501	GTP	C5'-O5'-PA-O1A
67	LE	501	GTP	C5'-O5'-PA-O2A
67	LG	501	GTP	C5'-O5'-PA-O1A
67	LG	501	GTP	C5'-O5'-PA-O2A
67	LI	501	GTP	C5'-O5'-PA-O1A
67	LK	501	GTP	C5'-O5'-PA-O1A
67	LK	501	GTP	C5'-O5'-PA-O2A
67	LM	501	GTP	C5'-O5'-PA-O1A
67	LM	501	GTP	C5'-O5'-PA-O2A
67	MC	501	GTP	C5'-O5'-PA-O3A
67	MC	501	GTP	C5'-O5'-PA-O2A
67	MC	501	GTP	C3'-C4'-C5'-O5'
67	ME	501	GTP	C5'-O5'-PA-O3A
67	MG	501	GTP	C5'-O5'-PA-O1A
67	MG	501	GTP	C5'-O5'-PA-O2A
67	MI	501	GTP	O4'-C4'-C5'-O5'
67	MI	501	GTP	C3'-C4'-C5'-O5'
67	MK	501	GTP	C5'-O5'-PA-O1A
67	MK	501	GTP	C5'-O5'-PA-O2A
67	MM	501	GTP	PB-O3B-PG-O3G
67	MM	501	GTP	C5'-O5'-PA-O1A
67	MM	501	GTP	C5'-O5'-PA-O2A
67	NA	502	GTP	C5'-O5'-PA-O1A
67	NA	502	GTP	C5'-O5'-PA-O2A
67	NB	502	GTP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
67	NB	502	GTP	C5'-O5'-PA-O2A
67	NB	502	GTP	O4'-C4'-C5'-O5'
67	NB	502	GTP	C3'-C4'-C5'-O5'
67	NF	502	GTP	PB-O3B-PG-O3G
67	NF	502	GTP	C5'-O5'-PA-O1A
67	NF	502	GTP	O4'-C4'-C5'-O5'
67	NF	502	GTP	C3'-C4'-C5'-O5'
67	NI	501	GTP	C5'-O5'-PA-O1A
67	NK	501	GTP	C5'-O5'-PA-O1A
67	OC	501	GTP	C5'-O5'-PA-O1A
67	OC	501	GTP	C5'-O5'-PA-O2A
67	OC	501	GTP	O4'-C4'-C5'-O5'
67	OC	501	GTP	C3'-C4'-C5'-O5'
67	OF	502	GTP	PB-O3B-PG-O3G
67	OF	502	GTP	C5'-O5'-PA-O1A
67	OH	502	GTP	PB-O3B-PG-O3G
67	OK	501	GTP	C5'-O5'-PA-O1A
67	PA	501	GTP	C5'-O5'-PA-O3A
67	PC	501	GTP	C5'-O5'-PA-O1A
67	PC	501	GTP	C5'-O5'-PA-O2A
67	PC	501	GTP	O4'-C4'-C5'-O5'
67	PC	501	GTP	C3'-C4'-C5'-O5'
67	PD	502	GTP	C5'-O5'-PA-O1A
67	PD	502	GTP	C5'-O5'-PA-O2A
67	PD	502	GTP	O4'-C4'-C5'-O5'
67	PD	502	GTP	C3'-C4'-C5'-O5'
67	PG	501	GTP	C5'-O5'-PA-O3A
67	PG	501	GTP	C5'-O5'-PA-O1A
67	PI	501	GTP	C5'-O5'-PA-O3A
67	PK	501	GTP	C5'-O5'-PA-O3A
67	PK	501	GTP	C5'-O5'-PA-O2A
67	QA	501	GTP	C5'-O5'-PA-O3A
67	QC	501	GTP	C5'-O5'-PA-O1A
67	QC	501	GTP	C5'-O5'-PA-O2A
67	QC	501	GTP	C3'-C4'-C5'-O5'
67	QG	501	GTP	C5'-O5'-PA-O3A
67	QK	501	GTP	C5'-O5'-PA-O3A
67	RA	501	GTP	C5'-O5'-PA-O1A
67	RA	501	GTP	C5'-O5'-PA-O2A
67	RB	502	GTP	O4'-C4'-C5'-O5'
67	RB	502	GTP	C3'-C4'-C5'-O5'
67	RE	501	GTP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
67	RG	501	GTP	C5'-O5'-PA-O3A
67	RI	501	GTP	C5'-O5'-PA-O1A
67	RI	501	GTP	C3'-C4'-C5'-O5'
67	RK	501	GTP	O4'-C4'-C5'-O5'
67	RK	501	GTP	C3'-C4'-C5'-O5'
67	RM	501	GTP	C5'-O5'-PA-O1A
67	RM	501	GTP	C5'-O5'-PA-O2A
67	SA	501	GTP	C5'-O5'-PA-O3A
67	SA	501	GTP	C5'-O5'-PA-O1A
67	SA	501	GTP	C5'-O5'-PA-O2A
67	SE	501	GTP	C5'-O5'-PA-O3A
67	SE	501	GTP	C5'-O5'-PA-O2A
67	SF	502	GTP	PB-O3B-PG-O2G
67	SF	502	GTP	PB-O3B-PG-O3G
67	SF	502	GTP	O4'-C4'-C5'-O5'
67	SF	502	GTP	C3'-C4'-C5'-O5'
67	SI	501	GTP	C5'-O5'-PA-O1A
67	SI	501	GTP	C5'-O5'-PA-O2A
67	SM	501	GTP	O4'-C4'-C5'-O5'
67	SM	501	GTP	C3'-C4'-C5'-O5'
67	TC	501	GTP	C5'-O5'-PA-O1A
67	TC	501	GTP	O4'-C4'-C5'-O5'
67	TC	501	GTP	C3'-C4'-C5'-O5'
67	TE	501	GTP	O4'-C4'-C5'-O5'
67	TE	501	GTP	C3'-C4'-C5'-O5'
67	TG	501	GTP	C5'-O5'-PA-O1A
67	TG	501	GTP	O4'-C4'-C5'-O5'
67	TG	501	GTP	C3'-C4'-C5'-O5'
67	TI	501	GTP	C5'-O5'-PA-O1A
67	TI	501	GTP	O4'-C4'-C5'-O5'
67	TI	501	GTP	C3'-C4'-C5'-O5'
67	TK	501	GTP	O4'-C4'-C5'-O5'
67	TK	501	GTP	C3'-C4'-C5'-O5'
67	TM	501	GTP	C5'-O5'-PA-O1A
67	TM	501	GTP	C3'-C4'-C5'-O5'
67	UC	501	GTP	C5'-O5'-PA-O2A
67	UC	501	GTP	O4'-C4'-C5'-O5'
67	UC	501	GTP	C3'-C4'-C5'-O5'
67	UE	501	GTP	O4'-C4'-C5'-O5'
67	UE	501	GTP	C3'-C4'-C5'-O5'
67	UG	501	GTP	O4'-C4'-C5'-O5'
67	UI	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
67	UK	501	GTP	O4'-C4'-C5'-O5'
67	UK	501	GTP	C3'-C4'-C5'-O5'
67	UM	501	GTP	O4'-C4'-C5'-O5'
67	UM	501	GTP	C3'-C4'-C5'-O5'
67	VC	501	GTP	C5'-O5'-PA-O2A
67	VE	501	GTP	C3'-C4'-C5'-O5'
67	VG	501	GTP	C5'-O5'-PA-O1A
67	VG	501	GTP	C5'-O5'-PA-O2A
67	VI	502	GTP	C5'-O5'-PA-O1A
67	VK	501	GTP	PB-O3B-PG-O3G
67	VK	501	GTP	PB-O3A-PA-O5'
67	VK	501	GTP	C5'-O5'-PA-O3A
67	VK	501	GTP	C5'-O5'-PA-O1A
67	VL	502	GTP	C5'-O5'-PA-O1A
67	VL	502	GTP	C5'-O5'-PA-O2A
67	WE	501	GTP	C5'-O5'-PA-O1A
67	WE	501	GTP	C5'-O5'-PA-O2A
67	WG	501	GTP	C5'-O5'-PA-O3A
67	WG	501	GTP	C3'-C4'-C5'-O5'
67	WI	501	GTP	C5'-O5'-PA-O3A
67	WK	501	GTP	C5'-O5'-PA-O1A
67	WK	501	GTP	C5'-O5'-PA-O2A
67	WK	501	GTP	C3'-C4'-C5'-O5'
67	WM	501	GTP	C5'-O5'-PA-O3A
67	WM	501	GTP	C5'-O5'-PA-O1A
67	WM	501	GTP	C5'-O5'-PA-O2A
69	AB	501	GDP	C5'-O5'-PA-O1A
69	AD	501	GDP	C5'-O5'-PA-O1A
69	AF	501	GDP	C5'-O5'-PA-O1A
69	AH	501	GDP	C5'-O5'-PA-O1A
69	AJ	501	GDP	C5'-O5'-PA-O1A
69	AL	501	GDP	C5'-O5'-PA-O1A
69	BB	501	GDP	C5'-O5'-PA-O1A
69	BF	501	GDP	C5'-O5'-PA-O1A
69	BH	501	GDP	C5'-O5'-PA-O1A
69	BJ	501	GDP	PA-O3A-PB-O3B
69	BJ	501	GDP	C5'-O5'-PA-O3A
69	BJ	501	GDP	C5'-O5'-PA-O1A
69	BL	501	GDP	C5'-O5'-PA-O1A
69	CB	501	GDP	C5'-O5'-PA-O1A
69	CD	501	GDP	PA-O3A-PB-O2B
69	CD	501	GDP	PA-O3A-PB-O3B

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Mol	Chain	Res	Type	Atoms
69	CF	501	GDP	PA-O3A-PB-O3B
69	CH	501	GDP	C5'-O5'-PA-O1A
69	CJ	501	GDP	PA-O3A-PB-O3B
69	CL	501	GDP	PA-O3A-PB-O3B
69	DB	501	GDP	C5'-O5'-PA-O3A
69	DB	501	GDP	C5'-O5'-PA-O1A
69	DB	501	GDP	O4'-C4'-C5'-O5'
69	DB	501	GDP	C3'-C4'-C5'-O5'
69	DD	501	GDP	PA-O3A-PB-O3B
69	DD	501	GDP	C5'-O5'-PA-O3A
69	DD	501	GDP	C5'-O5'-PA-O1A
69	DH	501	GDP	C5'-O5'-PA-O3A
69	DH	501	GDP	O4'-C4'-C5'-O5'
69	DH	501	GDP	C3'-C4'-C5'-O5'
69	DL	501	GDP	PA-O3A-PB-O2B
69	EB	501	GDP	C5'-O5'-PA-O3A
69	ED	501	GDP	PA-O3A-PB-O3B
69	ED	501	GDP	C5'-O5'-PA-O3A
69	ED	501	GDP	C5'-O5'-PA-O1A
69	EF	501	GDP	PA-O3A-PB-O3B
69	EF	501	GDP	C5'-O5'-PA-O1A
69	EH	501	GDP	C5'-O5'-PA-O3A
69	EH	501	GDP	C5'-O5'-PA-O1A
69	EJ	501	GDP	PA-O3A-PB-O3B
69	EJ	501	GDP	C5'-O5'-PA-O3A
69	EJ	501	GDP	C5'-O5'-PA-O1A
69	EL	501	GDP	PA-O3A-PB-O3B
69	EL	501	GDP	C5'-O5'-PA-O3A
69	EL	501	GDP	C5'-O5'-PA-O1A
69	EN	501	GDP	PA-O3A-PB-O3B
69	EN	501	GDP	C5'-O5'-PA-O3A
69	FB	501	GDP	PA-O3A-PB-O2B
69	FD	501	GDP	C5'-O5'-PA-O1A
69	FD	501	GDP	C5'-O5'-PA-O2A
69	FF	501	GDP	PA-O3A-PB-O3B
69	FF	501	GDP	C5'-O5'-PA-O3A
69	FH	501	GDP	C5'-O5'-PA-O1A
69	FH	501	GDP	C5'-O5'-PA-O2A
69	FJ	501	GDP	C5'-O5'-PA-O3A
69	FL	501	GDP	C5'-O5'-PA-O2A
69	FN	501	GDP	C5'-O5'-PA-O3A
69	FN	501	GDP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
69	GB	501	GDP	O4'-C4'-C5'-O5'
69	GB	501	GDP	C3'-C4'-C5'-O5'
69	GD	501	GDP	O4'-C4'-C5'-O5'
69	GD	501	GDP	C3'-C4'-C5'-O5'
69	GF	501	GDP	C5'-O5'-PA-O1A
69	GH	501	GDP	C5'-O5'-PA-O1A
69	GH	501	GDP	C3'-C4'-C5'-O5'
69	GJ	501	GDP	C5'-O5'-PA-O3A
69	GJ	501	GDP	O4'-C4'-C5'-O5'
69	GL	501	GDP	C3'-C4'-C5'-O5'
69	GN	501	GDP	C5'-O5'-PA-O1A
69	GN	501	GDP	O4'-C4'-C5'-O5'
69	GN	501	GDP	C3'-C4'-C5'-O5'
69	HB	501	GDP	C5'-O5'-PA-O1A
69	HB	501	GDP	C5'-O5'-PA-O2A
69	HD	501	GDP	C5'-O5'-PA-O1A
69	HD	501	GDP	C5'-O5'-PA-O2A
69	HF	501	GDP	C5'-O5'-PA-O1A
69	HF	501	GDP	C5'-O5'-PA-O2A
69	HH	501	GDP	C5'-O5'-PA-O1A
69	HH	501	GDP	C5'-O5'-PA-O2A
69	HJ	501	GDP	C5'-O5'-PA-O1A
69	HJ	501	GDP	C5'-O5'-PA-O2A
69	HJ	501	GDP	C3'-C4'-C5'-O5'
69	HL	501	GDP	C5'-O5'-PA-O2A
69	HN	501	GDP	C5'-O5'-PA-O1A
69	HN	501	GDP	C5'-O5'-PA-O2A
69	IB	501	GDP	C5'-O5'-PA-O3A
69	IB	501	GDP	C5'-O5'-PA-O1A
69	ID	501	GDP	C5'-O5'-PA-O3A
69	ID	501	GDP	C5'-O5'-PA-O2A
69	IH	501	GDP	C5'-O5'-PA-O1A
69	IH	501	GDP	C5'-O5'-PA-O2A
69	IJ	501	GDP	C5'-O5'-PA-O3A
69	IJ	501	GDP	C5'-O5'-PA-O1A
69	IN	501	GDP	C5'-O5'-PA-O1A
69	IN	501	GDP	C5'-O5'-PA-O2A
69	JB	501	GDP	PA-O3A-PB-O3B
69	JD	501	GDP	C5'-O5'-PA-O3A
69	JD	501	GDP	O4'-C4'-C5'-O5'
69	JF	501	GDP	PA-O3A-PB-O2B
69	JF	501	GDP	PA-O3A-PB-O3B

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Mol	Chain	Res	Type	Atoms
69	JH	501	GDP	PA-O3A-PB-O2B
69	JH	501	GDP	PA-O3A-PB-O3B
69	JH	501	GDP	C5'-O5'-PA-O1A
69	JJ	501	GDP	PA-O3A-PB-O2B
69	JJ	501	GDP	PA-O3A-PB-O3B
69	KB	501	GDP	PA-O3A-PB-O3B
69	KB	501	GDP	C5'-O5'-PA-O2A
69	KB	501	GDP	O4'-C4'-C5'-O5'
69	KD	501	GDP	C5'-O5'-PA-O2A
69	KH	501	GDP	C5'-O5'-PA-O3A
69	KH	501	GDP	C5'-O5'-PA-O1A
69	KH	501	GDP	O4'-C4'-C5'-O5'
69	KH	501	GDP	C3'-C4'-C5'-O5'
69	KJ	501	GDP	C5'-O5'-PA-O1A
69	KJ	501	GDP	C5'-O5'-PA-O2A
69	KL	501	GDP	PA-O3A-PB-O3B
69	KN	501	GDP	C5'-O5'-PA-O3A
69	KN	501	GDP	C5'-O5'-PA-O2A
69	KN	501	GDP	C3'-C4'-C5'-O5'
69	LB	501	GDP	C5'-O5'-PA-O1A
69	LB	501	GDP	C5'-O5'-PA-O2A
69	LD	501	GDP	C5'-O5'-PA-O3A
69	LF	501	GDP	C5'-O5'-PA-O1A
69	LF	501	GDP	C5'-O5'-PA-O2A
69	LH	501	GDP	C5'-O5'-PA-O1A
69	LH	501	GDP	C5'-O5'-PA-O2A
69	LJ	501	GDP	C5'-O5'-PA-O2A
69	LL	501	GDP	C5'-O5'-PA-O3A
69	LN	501	GDP	C5'-O5'-PA-O3A
69	MB	501	GDP	C5'-O5'-PA-O3A
69	MB	501	GDP	C5'-O5'-PA-O1A
69	MB	501	GDP	O4'-C4'-C5'-O5'
69	MB	501	GDP	C3'-C4'-C5'-O5'
69	MD	501	GDP	PA-O3A-PB-O3B
69	MD	501	GDP	C5'-O5'-PA-O3A
69	MD	501	GDP	C5'-O5'-PA-O1A
69	MD	501	GDP	C3'-C4'-C5'-O5'
69	MF	501	GDP	C5'-O5'-PA-O1A
69	MH	501	GDP	PA-O3A-PB-O3B
69	MH	501	GDP	C5'-O5'-PA-O3A
69	MH	501	GDP	C5'-O5'-PA-O1A
69	MJ	501	GDP	PA-O3A-PB-O3B

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Mol	Chain	Res	Type	Atoms
69	MJ	501	GDP	C5'-O5'-PA-O3A
69	MJ	501	GDP	C5'-O5'-PA-O1A
69	ML	501	GDP	PA-O3A-PB-O3B
69	ML	501	GDP	C5'-O5'-PA-O3A
69	ML	501	GDP	C5'-O5'-PA-O1A
69	ML	501	GDP	C3'-C4'-C5'-O5'
69	MN	501	GDP	C5'-O5'-PA-O1A
69	N0	501	GDP	C5'-O5'-PA-O3A
69	NB	501	GDP	C5'-O5'-PA-O3A
69	ND	501	GDP	C5'-O5'-PA-O3A
69	NF	501	GDP	C5'-O5'-PA-O3A
69	NH	501	GDP	C5'-O5'-PA-O3A
69	NH	501	GDP	C5'-O5'-PA-O1A
69	NJ	501	GDP	C5'-O5'-PA-O1A
69	NJ	501	GDP	C5'-O5'-PA-O2A
69	NL	501	GDP	C5'-O5'-PA-O3A
69	O0	501	GDP	PA-O3A-PB-O3B
69	O0	501	GDP	C3'-C4'-C5'-O5'
69	OB	501	GDP	C5'-O5'-PA-O2A
69	OF	501	GDP	C5'-O5'-PA-O3A
69	OF	501	GDP	C5'-O5'-PA-O2A
69	OH	501	GDP	PA-O3A-PB-O3B
69	OJ	501	GDP	C3'-C4'-C5'-O5'
69	OL	501	GDP	C5'-O5'-PA-O1A
69	PB	501	GDP	PA-O3A-PB-O3B
69	PD	501	GDP	C5'-O5'-PA-O1A
69	PF	501	GDP	C5'-O5'-PA-O1A
69	PH	501	GDP	PA-O3A-PB-O3B
69	PL	501	GDP	PA-O3A-PB-O3B
69	QB	501	GDP	PA-O3A-PB-O3B
69	QF	501	GDP	C5'-O5'-PA-O1A
69	RB	501	GDP	C5'-O5'-PA-O1A
69	RD	501	GDP	PA-O3A-PB-O2B
69	RD	501	GDP	PA-O3A-PB-O3B
69	RD	501	GDP	C5'-O5'-PA-O1A
69	RF	501	GDP	C5'-O5'-PA-O1A
69	RJ	501	GDP	C5'-O5'-PA-O1A
69	RL	501	GDP	C5'-O5'-PA-O1A
69	SB	501	GDP	C5'-O5'-PA-O3A
69	SB	501	GDP	C5'-O5'-PA-O2A
69	SB	501	GDP	C3'-C4'-C5'-O5'
69	SD	501	GDP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
69	SD	501	GDP	C5'-O5'-PA-O2A
69	SF	501	GDP	C5'-O5'-PA-O3A
69	SF	501	GDP	C5'-O5'-PA-O1A
69	SJ	501	GDP	C5'-O5'-PA-O3A
69	SL	501	GDP	C5'-O5'-PA-O3A
69	SL	501	GDP	C5'-O5'-PA-O1A
69	TB	501	GDP	C5'-O5'-PA-O3A
69	TD	501	GDP	C5'-O5'-PA-O2A
69	TF	501	GDP	C5'-O5'-PA-O3A
69	TF	501	GDP	C5'-O5'-PA-O2A
69	TH	501	GDP	C5'-O5'-PA-O3A
69	TH	501	GDP	C5'-O5'-PA-O1A
69	TJ	501	GDP	C5'-O5'-PA-O3A
69	TL	501	GDP	C5'-O5'-PA-O1A
69	UB	501	GDP	PA-O3A-PB-O3B
69	UD	501	GDP	C5'-O5'-PA-O3A
69	UD	501	GDP	C5'-O5'-PA-O1A
69	UF	501	GDP	C5'-O5'-PA-O1A
69	UL	501	GDP	C5'-O5'-PA-O1A
69	UN	501	GDP	C5'-O5'-PA-O1A
69	VB	501	GDP	O4'-C4'-C5'-O5'
69	VB	501	GDP	C3'-C4'-C5'-O5'
69	VF	501	GDP	PA-O3A-PB-O3B
69	VF	501	GDP	C3'-C4'-C5'-O5'
69	VH	501	GDP	O4'-C4'-C5'-O5'
69	VH	501	GDP	C3'-C4'-C5'-O5'
69	VJ	501	GDP	PA-O3A-PB-O3B
69	VN	501	GDP	C5'-O5'-PA-O3A
69	WD	501	GDP	PA-O3A-PB-O3B
69	WF	501	GDP	PA-O3A-PB-O3B
69	WH	501	GDP	PA-O3A-PB-O3B
69	WJ	501	GDP	C3'-C4'-C5'-O5'
69	WL	501	GDP	PA-O3A-PB-O3B
69	WL	501	GDP	O4'-C4'-C5'-O5'
69	WL	501	GDP	C3'-C4'-C5'-O5'
67	DC	501	GTP	C3'-C4'-C5'-O5'
67	DM	501	GTP	O4'-C4'-C5'-O5'
67	DM	501	GTP	C3'-C4'-C5'-O5'
67	EC	501	GTP	C3'-C4'-C5'-O5'
67	EK	501	GTP	C3'-C4'-C5'-O5'
67	GJ	502	GTP	C3'-C4'-C5'-O5'
67	HC	501	GTP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
67	HE	501	GTP	C3'-C4'-C5'-O5'
67	IG	501	GTP	C3'-C4'-C5'-O5'
67	JE	501	GTP	O4'-C4'-C5'-O5'
67	LE	501	GTP	C3'-C4'-C5'-O5'
67	LI	501	GTP	O4'-C4'-C5'-O5'
67	LI	501	GTP	C3'-C4'-C5'-O5'
67	MC	501	GTP	O4'-C4'-C5'-O5'
67	NK	501	GTP	C3'-C4'-C5'-O5'
67	QC	501	GTP	O4'-C4'-C5'-O5'
67	QM	501	GTP	O4'-C4'-C5'-O5'
67	TM	501	GTP	O4'-C4'-C5'-O5'
67	UG	501	GTP	C3'-C4'-C5'-O5'
67	UI	501	GTP	C3'-C4'-C5'-O5'
67	WK	501	GTP	O4'-C4'-C5'-O5'
69	BH	501	GDP	C3'-C4'-C5'-O5'
69	CH	501	GDP	O4'-C4'-C5'-O5'
69	CH	501	GDP	C3'-C4'-C5'-O5'
69	GH	501	GDP	O4'-C4'-C5'-O5'
69	GJ	501	GDP	C3'-C4'-C5'-O5'
69	GL	501	GDP	O4'-C4'-C5'-O5'
69	JD	501	GDP	C3'-C4'-C5'-O5'
69	JF	501	GDP	C3'-C4'-C5'-O5'
69	JH	501	GDP	C3'-C4'-C5'-O5'
69	KB	501	GDP	C3'-C4'-C5'-O5'
69	KN	501	GDP	O4'-C4'-C5'-O5'
69	MD	501	GDP	O4'-C4'-C5'-O5'
69	ML	501	GDP	O4'-C4'-C5'-O5'
69	O0	501	GDP	O4'-C4'-C5'-O5'
69	OJ	501	GDP	O4'-C4'-C5'-O5'
69	OL	501	GDP	C3'-C4'-C5'-O5'
69	SB	501	GDP	O4'-C4'-C5'-O5'
69	VF	501	GDP	O4'-C4'-C5'-O5'
69	VL	501	GDP	C3'-C4'-C5'-O5'
69	WJ	501	GDP	O4'-C4'-C5'-O5'
67	EI	501	GTP	C4'-C5'-O5'-PA
67	CG	501	GTP	O4'-C4'-C5'-O5'
67	DC	501	GTP	O4'-C4'-C5'-O5'
67	NK	501	GTP	O4'-C4'-C5'-O5'
67	QE	501	GTP	C3'-C4'-C5'-O5'
67	QM	501	GTP	C3'-C4'-C5'-O5'
67	VE	501	GTP	O4'-C4'-C5'-O5'
69	JB	501	GDP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
69	JB	501	GDP	C3'-C4'-C5'-O5'
69	JF	501	GDP	O4'-C4'-C5'-O5'
69	JH	501	GDP	O4'-C4'-C5'-O5'
69	JN	501	GDP	C3'-C4'-C5'-O5'
69	MH	501	GDP	C3'-C4'-C5'-O5'
69	OL	501	GDP	O4'-C4'-C5'-O5'
69	VL	501	GDP	O4'-C4'-C5'-O5'
67	JM	501	GTP	O4'-C4'-C5'-O5'
67	JM	501	GTP	C3'-C4'-C5'-O5'
69	BH	501	GDP	O4'-C4'-C5'-O5'
69	JN	501	GDP	O4'-C4'-C5'-O5'
67	BK	501	GTP	C4'-C5'-O5'-PA
67	GC	501	GTP	O4'-C4'-C5'-O5'
67	GI	501	GTP	C3'-C4'-C5'-O5'
67	HK	501	GTP	C3'-C4'-C5'-O5'
67	IK	501	GTP	C3'-C4'-C5'-O5'
67	JE	501	GTP	C3'-C4'-C5'-O5'
67	KE	501	GTP	O4'-C4'-C5'-O5'
67	KE	501	GTP	C3'-C4'-C5'-O5'
67	SK	501	GTP	C3'-C4'-C5'-O5'
67	WG	501	GTP	O4'-C4'-C5'-O5'
69	BL	501	GDP	C3'-C4'-C5'-O5'
69	CJ	501	GDP	C3'-C4'-C5'-O5'
69	IL	501	GDP	C3'-C4'-C5'-O5'
69	QB	501	GDP	C3'-C4'-C5'-O5'
67	BI	501	GTP	C3'-C4'-C5'-O5'
67	EC	501	GTP	O4'-C4'-C5'-O5'
67	GJ	502	GTP	O4'-C4'-C5'-O5'
67	HE	501	GTP	O4'-C4'-C5'-O5'
67	HG	502	GTP	O4'-C4'-C5'-O5'
67	HI	501	GTP	O4'-C4'-C5'-O5'
67	HK	501	GTP	O4'-C4'-C5'-O5'
67	LE	501	GTP	O4'-C4'-C5'-O5'
67	NA	502	GTP	C3'-C4'-C5'-O5'
67	RI	501	GTP	O4'-C4'-C5'-O5'
67	SK	501	GTP	O4'-C4'-C5'-O5'
69	BF	501	GDP	C3'-C4'-C5'-O5'
69	HJ	501	GDP	O4'-C4'-C5'-O5'
69	IL	501	GDP	O4'-C4'-C5'-O5'
69	MH	501	GDP	O4'-C4'-C5'-O5'
69	OD	501	GDP	C3'-C4'-C5'-O5'
67	AA	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
67	BA	501	GTP	C4'-C5'-O5'-PA
67	BE	501	GTP	C4'-C5'-O5'-PA
67	DC	501	GTP	C4'-C5'-O5'-PA
67	IK	501	GTP	C4'-C5'-O5'-PA
67	ME	501	GTP	C4'-C5'-O5'-PA
67	PD	502	GTP	C4'-C5'-O5'-PA
67	AA	501	GTP	C3'-C4'-C5'-O5'
67	GI	501	GTP	O4'-C4'-C5'-O5'
67	HG	502	GTP	C3'-C4'-C5'-O5'
67	VG	501	GTP	C3'-C4'-C5'-O5'
69	CJ	501	GDP	O4'-C4'-C5'-O5'
69	EB	501	GDP	PA-O3A-PB-O1B
69	ED	501	GDP	PA-O3A-PB-O1B
69	EF	501	GDP	PA-O3A-PB-O1B
69	FF	501	GDP	PA-O3A-PB-O1B
69	IF	501	GDP	PA-O3A-PB-O1B
69	MB	501	GDP	PA-O3A-PB-O1B
67	HE	501	GTP	C4'-C5'-O5'-PA
67	FC	501	GTP	PA-O3A-PB-O1B
67	FM	501	GTP	PB-O3A-PA-O1A
67	GC	501	GTP	PA-O3A-PB-O1B
67	OH	502	GTP	PA-O3A-PB-O1B
69	KF	501	GDP	PB-O3A-PA-O1A
67	LG	501	GTP	C3'-C4'-C5'-O5'
67	QE	501	GTP	O4'-C4'-C5'-O5'
67	RE	501	GTP	C3'-C4'-C5'-O5'
67	SC	501	GTP	O4'-C4'-C5'-O5'
69	BL	501	GDP	O4'-C4'-C5'-O5'
69	MN	501	GDP	C3'-C4'-C5'-O5'
69	TB	501	GDP	C3'-C4'-C5'-O5'
69	WH	501	GDP	C3'-C4'-C5'-O5'
67	AC	501	GTP	C4'-C5'-O5'-PA
67	CA	501	GTP	C4'-C5'-O5'-PA
67	CG	501	GTP	C4'-C5'-O5'-PA
67	HI	501	GTP	C4'-C5'-O5'-PA
67	HN	502	GTP	C4'-C5'-O5'-PA
67	JI	501	GTP	C4'-C5'-O5'-PA
67	JK	501	GTP	C4'-C5'-O5'-PA
67	LE	501	GTP	C4'-C5'-O5'-PA
67	MK	501	GTP	C4'-C5'-O5'-PA
67	NA	502	GTP	C4'-C5'-O5'-PA
67	QI	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
67	UE	501	GTP	C4'-C5'-O5'-PA
67	DK	501	GTP	O4'-C4'-C5'-O5'
67	AD	502	GTP	C4'-C5'-O5'-PA
67	AG	501	GTP	C4'-C5'-O5'-PA
67	BC	501	GTP	C4'-C5'-O5'-PA
67	BI	501	GTP	C4'-C5'-O5'-PA
67	EG	501	GTP	C4'-C5'-O5'-PA
67	FI	501	GTP	C4'-C5'-O5'-PA
67	GE	501	GTP	C4'-C5'-O5'-PA
67	GJ	502	GTP	C4'-C5'-O5'-PA
67	IM	501	GTP	C4'-C5'-O5'-PA
67	LI	501	GTP	C4'-C5'-O5'-PA
67	OO	502	GTP	C4'-C5'-O5'-PA
67	OC	501	GTP	C4'-C5'-O5'-PA
67	PA	501	GTP	C4'-C5'-O5'-PA
67	QE	501	GTP	C4'-C5'-O5'-PA
67	QM	501	GTP	C4'-C5'-O5'-PA
67	RM	501	GTP	C4'-C5'-O5'-PA
67	TC	501	GTP	C4'-C5'-O5'-PA
67	TE	501	GTP	C4'-C5'-O5'-PA
67	UM	501	GTP	C4'-C5'-O5'-PA
67	KE	501	GTP	PB-O3A-PA-O5'
67	KG	501	GTP	PB-O3A-PA-O5'
67	QA	501	GTP	PB-O3A-PA-O5'
67	RA	501	GTP	PB-O3A-PA-O5'
67	O0	502	GTP	PA-O3A-PB-O3B
67	JC	501	GTP	O4'-C4'-C5'-O5'
67	VG	501	GTP	O4'-C4'-C5'-O5'
69	DF	501	GDP	PA-O3A-PB-O1B
69	DJ	501	GDP	PA-O3A-PB-O1B
69	EH	501	GDP	PA-O3A-PB-O1B
69	EN	501	GDP	PA-O3A-PB-O1B
69	VF	501	GDP	PA-O3A-PB-O1B
67	AM	501	GTP	C4'-C5'-O5'-PA
67	BG	501	GTP	C4'-C5'-O5'-PA
67	BM	501	GTP	C4'-C5'-O5'-PA
67	CB	502	GTP	C4'-C5'-O5'-PA
67	DE	501	GTP	C4'-C5'-O5'-PA
67	EC	501	GTP	C4'-C5'-O5'-PA
67	GM	501	GTP	C4'-C5'-O5'-PA
67	LG	501	GTP	C4'-C5'-O5'-PA
67	LK	501	GTP	C4'-C5'-O5'-PA

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Mol	Chain	Res	Type	Atoms
67	NI	501	GTP	C4'-C5'-O5'-PA
67	RA	501	GTP	C4'-C5'-O5'-PA
67	RE	501	GTP	C4'-C5'-O5'-PA
67	SF	502	GTP	C4'-C5'-O5'-PA
67	SI	501	GTP	C4'-C5'-O5'-PA
67	VG	501	GTP	C4'-C5'-O5'-PA
67	WG	501	GTP	C4'-C5'-O5'-PA
67	WK	501	GTP	C4'-C5'-O5'-PA
67	KI	501	GTP	PB-O3B-PG-O2G
67	VK	501	GTP	PB-O3B-PG-O2G
69	BB	501	GDP	PA-O3A-PB-O2B
69	BH	501	GDP	PA-O3A-PB-O2B
69	CH	501	GDP	PA-O3A-PB-O3B
69	JL	501	GDP	PA-O3A-PB-O2B
69	JL	501	GDP	PA-O3A-PB-O3B
69	MB	501	GDP	PA-O3A-PB-O3B
69	UB	501	GDP	PA-O3A-PB-O2B
69	UD	501	GDP	PA-O3A-PB-O3B
69	WH	501	GDP	PA-O3A-PB-O2B
69	WL	501	GDP	PA-O3A-PB-O2B
67	AK	501	GTP	C5'-O5'-PA-O3A
67	BC	501	GTP	C5'-O5'-PA-O3A
67	BG	501	GTP	C5'-O5'-PA-O3A
67	EG	501	GTP	C5'-O5'-PA-O3A
67	FE	501	GTP	C5'-O5'-PA-O3A
67	GE	501	GTP	C5'-O5'-PA-O3A
67	GG	501	GTP	C5'-O5'-PA-O3A
67	GJ	502	GTP	C5'-O5'-PA-O3A
67	HK	501	GTP	C5'-O5'-PA-O3A
67	IG	501	GTP	C5'-O5'-PA-O3A
67	KI	501	GTP	C5'-O5'-PA-O3A
67	LE	501	GTP	C5'-O5'-PA-O3A
67	LG	501	GTP	C5'-O5'-PA-O3A
67	LI	501	GTP	C5'-O5'-PA-O3A
67	LK	501	GTP	C5'-O5'-PA-O3A
67	MM	501	GTP	C5'-O5'-PA-O3A
67	NI	501	GTP	C5'-O5'-PA-O3A
67	OC	501	GTP	C5'-O5'-PA-O3A
67	OF	502	GTP	C5'-O5'-PA-O3A
67	PC	501	GTP	C5'-O5'-PA-O3A
67	QC	501	GTP	C5'-O5'-PA-O3A
67	RA	501	GTP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
67	RI	501	GTP	C5'-O5'-PA-O3A
67	RM	501	GTP	C5'-O5'-PA-O3A
67	SC	501	GTP	C5'-O5'-PA-O3A
67	SK	501	GTP	C5'-O5'-PA-O3A
67	SM	501	GTP	C5'-O5'-PA-O3A
67	TG	501	GTP	C5'-O5'-PA-O3A
67	TI	501	GTP	C5'-O5'-PA-O3A
67	UC	501	GTP	C5'-O5'-PA-O3A
67	UI	501	GTP	C5'-O5'-PA-O3A
67	UM	501	GTP	C5'-O5'-PA-O3A
67	VC	501	GTP	C5'-O5'-PA-O3A
67	VI	502	GTP	C5'-O5'-PA-O3A
69	BB	501	GDP	C5'-O5'-PA-O3A
69	FH	501	GDP	C5'-O5'-PA-O3A
69	FL	501	GDP	C5'-O5'-PA-O3A
69	HF	501	GDP	C5'-O5'-PA-O3A
69	IN	501	GDP	C5'-O5'-PA-O3A
69	KB	501	GDP	C5'-O5'-PA-O3A
69	KD	501	GDP	C5'-O5'-PA-O3A
69	LJ	501	GDP	C5'-O5'-PA-O3A
69	TD	501	GDP	C5'-O5'-PA-O3A
67	BI	501	GTP	O4'-C4'-C5'-O5'
67	CA	501	GTP	C3'-C4'-C5'-O5'
67	EE	501	GTP	C3'-C4'-C5'-O5'
67	MM	501	GTP	C3'-C4'-C5'-O5'
69	BB	501	GDP	C3'-C4'-C5'-O5'
69	CD	501	GDP	C3'-C4'-C5'-O5'
69	LD	501	GDP	C3'-C4'-C5'-O5'
67	AD	502	GTP	PB-O3A-PA-O2A
67	EE	501	GTP	PG-O3B-PB-O1B
67	GM	501	GTP	PG-O3B-PB-O1B
67	GM	501	GTP	PA-O3A-PB-O2B
67	HK	501	GTP	PB-O3A-PA-O1A
67	IN	502	GTP	PA-O3A-PB-O1B
67	KG	501	GTP	PA-O3A-PB-O1B
67	LG	501	GTP	PA-O3A-PB-O2B
67	NE	501	GTP	PA-O3A-PB-O2B
67	RA	501	GTP	PA-O3A-PB-O2B
67	SM	501	GTP	PA-O3A-PB-O2B
67	WG	501	GTP	PA-O3A-PB-O1B
69	KN	501	GDP	PB-O3A-PA-O2A
69	VL	501	GDP	PB-O3A-PA-O1A

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Mol	Chain	Res	Type	Atoms
67	AK	501	GTP	C4'-C5'-O5'-PA
67	CL	502	GTP	C4'-C5'-O5'-PA
67	DA	501	GTP	C4'-C5'-O5'-PA
67	DF	502	GTP	C4'-C5'-O5'-PA
67	GC	501	GTP	C4'-C5'-O5'-PA
67	GG	501	GTP	C4'-C5'-O5'-PA
67	II	501	GTP	C4'-C5'-O5'-PA
67	KC	501	GTP	C4'-C5'-O5'-PA
67	KI	501	GTP	C4'-C5'-O5'-PA
67	KK	501	GTP	C4'-C5'-O5'-PA
67	KM	501	GTP	C4'-C5'-O5'-PA
67	LM	501	GTP	C4'-C5'-O5'-PA
67	MI	501	GTP	C4'-C5'-O5'-PA
67	MM	501	GTP	C4'-C5'-O5'-PA
67	NB	502	GTP	C4'-C5'-O5'-PA
67	NE	501	GTP	C4'-C5'-O5'-PA
67	OF	502	GTP	C4'-C5'-O5'-PA
67	RB	502	GTP	C4'-C5'-O5'-PA
67	RI	501	GTP	C4'-C5'-O5'-PA
67	SM	501	GTP	C4'-C5'-O5'-PA
67	UC	501	GTP	C4'-C5'-O5'-PA
67	UI	501	GTP	C4'-C5'-O5'-PA
67	UK	501	GTP	C4'-C5'-O5'-PA
67	VE	501	GTP	C4'-C5'-O5'-PA
67	VI	502	GTP	C4'-C5'-O5'-PA
67	VL	502	GTP	C4'-C5'-O5'-PA
67	WE	501	GTP	C4'-C5'-O5'-PA
69	LD	501	GDP	C4'-C5'-O5'-PA
67	AD	502	GTP	C5'-O5'-PA-O2A
67	AK	501	GTP	C5'-O5'-PA-O2A
67	BC	501	GTP	C5'-O5'-PA-O2A
67	CB	502	GTP	C5'-O5'-PA-O2A
67	CD	502	GTP	C5'-O5'-PA-O2A
67	EG	501	GTP	C5'-O5'-PA-O2A
67	EI	501	GTP	C5'-O5'-PA-O2A
67	FE	501	GTP	C5'-O5'-PA-O1A
67	GE	501	GTP	C5'-O5'-PA-O2A
67	GI	501	GTP	C5'-O5'-PA-O2A
67	GJ	502	GTP	C5'-O5'-PA-O2A
67	HK	501	GTP	C5'-O5'-PA-O1A
67	IM	501	GTP	C5'-O5'-PA-O2A
67	JI	501	GTP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
67	JK	501	GTP	C5'-O5'-PA-O2A
67	LI	501	GTP	C5'-O5'-PA-O2A
67	MC	501	GTP	C5'-O5'-PA-O1A
67	ME	501	GTP	C5'-O5'-PA-O2A
67	NI	501	GTP	C5'-O5'-PA-O2A
67	OF	502	GTP	C5'-O5'-PA-O2A
67	PA	501	GTP	C5'-O5'-PA-O2A
67	PI	501	GTP	C5'-O5'-PA-O1A
67	PI	501	GTP	C5'-O5'-PA-O2A
67	PK	501	GTP	C5'-O5'-PA-O1A
67	QA	501	GTP	C5'-O5'-PA-O1A
67	QG	501	GTP	C5'-O5'-PA-O1A
67	QK	501	GTP	C5'-O5'-PA-O1A
67	RE	501	GTP	C5'-O5'-PA-O2A
67	RG	501	GTP	C5'-O5'-PA-O1A
67	RI	501	GTP	C5'-O5'-PA-O2A
67	SC	501	GTP	C5'-O5'-PA-O1A
67	SK	501	GTP	C5'-O5'-PA-O1A
67	SK	501	GTP	C5'-O5'-PA-O2A
67	SM	501	GTP	C5'-O5'-PA-O1A
67	UC	501	GTP	C5'-O5'-PA-O1A
67	UI	501	GTP	C5'-O5'-PA-O1A
67	VC	501	GTP	C5'-O5'-PA-O1A
67	VI	502	GTP	C5'-O5'-PA-O2A
67	WG	501	GTP	C5'-O5'-PA-O1A
67	WI	501	GTP	C5'-O5'-PA-O2A
69	DH	501	GDP	C5'-O5'-PA-O1A
69	EB	501	GDP	C5'-O5'-PA-O1A
69	EN	501	GDP	C5'-O5'-PA-O1A
69	FF	501	GDP	C5'-O5'-PA-O1A
69	FJ	501	GDP	C5'-O5'-PA-O1A
69	FL	501	GDP	C5'-O5'-PA-O1A
69	GJ	501	GDP	C5'-O5'-PA-O2A
69	HL	501	GDP	C5'-O5'-PA-O1A
69	ID	501	GDP	C5'-O5'-PA-O1A
69	JD	501	GDP	C5'-O5'-PA-O2A
69	KB	501	GDP	C5'-O5'-PA-O1A
69	KD	501	GDP	C5'-O5'-PA-O1A
69	KN	501	GDP	C5'-O5'-PA-O1A
69	LD	501	GDP	C5'-O5'-PA-O1A
69	LJ	501	GDP	C5'-O5'-PA-O1A
69	LL	501	GDP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
69	LN	501	GDP	C5'-O5'-PA-O1A
69	N0	501	GDP	C5'-O5'-PA-O1A
69	NB	501	GDP	C5'-O5'-PA-O1A
69	ND	501	GDP	C5'-O5'-PA-O1A
69	ND	501	GDP	C5'-O5'-PA-O2A
69	NF	501	GDP	C5'-O5'-PA-O1A
69	NL	501	GDP	C5'-O5'-PA-O1A
69	OB	501	GDP	C5'-O5'-PA-O1A
69	OF	501	GDP	C5'-O5'-PA-O1A
69	SB	501	GDP	C5'-O5'-PA-O1A
69	SD	501	GDP	C5'-O5'-PA-O1A
69	SJ	501	GDP	C5'-O5'-PA-O1A
69	TB	501	GDP	C5'-O5'-PA-O1A
69	TD	501	GDP	C5'-O5'-PA-O1A
69	TF	501	GDP	C5'-O5'-PA-O1A
69	TJ	501	GDP	C5'-O5'-PA-O1A
67	BM	501	GTP	C3'-C4'-C5'-O5'
67	JC	501	GTP	C3'-C4'-C5'-O5'
67	OK	501	GTP	C3'-C4'-C5'-O5'
67	VK	501	GTP	C3'-C4'-C5'-O5'
69	KF	501	GDP	C3'-C4'-C5'-O5'
69	MF	501	GDP	C3'-C4'-C5'-O5'
69	MJ	501	GDP	C3'-C4'-C5'-O5'
69	SD	501	GDP	C3'-C4'-C5'-O5'
67	CH	502	GTP	C4'-C5'-O5'-PA
67	CJ	502	GTP	C4'-C5'-O5'-PA
67	KG	501	GTP	C4'-C5'-O5'-PA
67	KO	501	GTP	C4'-C5'-O5'-PA
67	OK	501	GTP	C4'-C5'-O5'-PA
67	SE	501	GTP	C4'-C5'-O5'-PA
67	EE	501	GTP	PA-O3A-PB-O3B
67	LG	501	GTP	O4'-C4'-C5'-O5'
67	WC	501	GTP	O4'-C4'-C5'-O5'
69	BF	501	GDP	O4'-C4'-C5'-O5'
69	OD	501	GDP	O4'-C4'-C5'-O5'
69	PD	501	GDP	C3'-C4'-C5'-O5'
69	TF	501	GDP	C3'-C4'-C5'-O5'
67	EG	501	GTP	PB-O3B-PG-O1G
69	CJ	501	GDP	PA-O3A-PB-O1B
69	CL	501	GDP	PA-O3A-PB-O1B
69	DD	501	GDP	PA-O3A-PB-O1B
69	JN	501	GDP	PA-O3A-PB-O1B

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Mol	Chain	Res	Type	Atoms
69	MD	501	GDP	PA-O3A-PB-O1B
69	VJ	501	GDP	PA-O3A-PB-O1B
69	WN	501	GDP	PA-O3A-PB-O1B
67	IE	501	GTP	C4'-C5'-O5'-PA
67	KE	501	GTP	C4'-C5'-O5'-PA
67	NK	501	GTP	C4'-C5'-O5'-PA
67	RK	501	GTP	C4'-C5'-O5'-PA
67	TG	501	GTP	C4'-C5'-O5'-PA
69	TL	501	GDP	C4'-C5'-O5'-PA
67	IK	501	GTP	O4'-C4'-C5'-O5'
67	KI	501	GTP	C3'-C4'-C5'-O5'
69	LN	501	GDP	C3'-C4'-C5'-O5'
69	TB	501	GDP	O4'-C4'-C5'-O5'
69	UD	501	GDP	C3'-C4'-C5'-O5'
69	WH	501	GDP	O4'-C4'-C5'-O5'
67	AM	501	GTP	PA-O3A-PB-O2B
67	BM	501	GTP	PB-O3A-PA-O1A
67	DC	501	GTP	PA-O3A-PB-O2B
67	DF	502	GTP	PA-O3A-PB-O2B
67	EC	501	GTP	PA-O3A-PB-O2B
67	EG	501	GTP	PA-O3A-PB-O2B
67	EI	501	GTP	PA-O3A-PB-O2B
67	GJ	502	GTP	PA-O3A-PB-O2B
67	IK	501	GTP	PA-O3A-PB-O2B
67	KI	501	GTP	PA-O3A-PB-O2B
67	LE	501	GTP	PA-O3A-PB-O2B
67	MK	501	GTP	PA-O3A-PB-O2B
67	NI	501	GTP	PA-O3A-PB-O2B
67	OE	501	GTP	PA-O3A-PB-O2B
67	OF	502	GTP	PA-O3A-PB-O2B
67	OH	502	GTP	PA-O3A-PB-O2B
67	PI	501	GTP	PG-O3B-PB-O1B
67	SC	501	GTP	PA-O3A-PB-O1B
67	SC	501	GTP	PA-O3A-PB-O2B
67	VI	502	GTP	PA-O3A-PB-O2B
67	FC	501	GTP	C4'-C5'-O5'-PA
67	OH	502	GTP	C4'-C5'-O5'-PA
67	TI	501	GTP	C4'-C5'-O5'-PA
67	TM	501	GTP	C4'-C5'-O5'-PA
67	UG	501	GTP	C4'-C5'-O5'-PA
69	IH	501	GDP	C4'-C5'-O5'-PA
67	BC	501	GTP	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
67	FE	501	GTP	C3'-C4'-C5'-O5'
67	LM	501	GTP	C3'-C4'-C5'-O5'
67	RA	501	GTP	C3'-C4'-C5'-O5'
69	DJ	501	GDP	C3'-C4'-C5'-O5'
69	SF	501	GDP	C3'-C4'-C5'-O5'
67	CD	502	GTP	C4'-C5'-O5'-PA
67	DI	501	GTP	C4'-C5'-O5'-PA
67	MC	501	GTP	C4'-C5'-O5'-PA
67	OE	501	GTP	C4'-C5'-O5'-PA
67	VK	501	GTP	C4'-C5'-O5'-PA
67	WC	501	GTP	C3'-C4'-C5'-O5'
69	EJ	501	GDP	PA-O3A-PB-O1B
69	JB	501	GDP	PA-O3A-PB-O1B
69	KF	501	GDP	PA-O3A-PB-O1B
69	KL	501	GDP	PA-O3A-PB-O1B
69	OH	501	GDP	PA-O3A-PB-O1B
67	AH	502	GTP	C4'-C5'-O5'-PA
67	JM	501	GTP	C4'-C5'-O5'-PA
69	UL	501	GDP	C4'-C5'-O5'-PA
69	IB	501	GDP	C3'-C4'-C5'-O5'
69	MN	501	GDP	O4'-C4'-C5'-O5'
67	BC	501	GTP	PA-O3A-PB-O2B
67	LI	501	GTP	PA-O3A-PB-O2B
67	NI	501	GTP	PA-O3A-PB-O1B
67	O0	502	GTP	PG-O3B-PB-O1B
67	OF	502	GTP	PG-O3B-PB-O1B
67	VE	501	GTP	PB-O3A-PA-O1A
67	VL	502	GTP	PG-O3B-PB-O1B
67	BM	501	GTP	O4'-C4'-C5'-O5'
67	EE	501	GTP	O4'-C4'-C5'-O5'
67	OK	501	GTP	O4'-C4'-C5'-O5'
69	BB	501	GDP	O4'-C4'-C5'-O5'
69	CD	501	GDP	O4'-C4'-C5'-O5'
69	SD	501	GDP	O4'-C4'-C5'-O5'
69	WD	501	GDP	C3'-C4'-C5'-O5'
67	LG	501	GTP	PB-O3A-PA-O5'
67	GI	501	GTP	C4'-C5'-O5'-PA
67	DK	501	GTP	C3'-C4'-C5'-O5'
67	SC	501	GTP	C3'-C4'-C5'-O5'
67	VK	501	GTP	O4'-C4'-C5'-O5'
69	DJ	501	GDP	O4'-C4'-C5'-O5'
69	MF	501	GDP	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
69	RL	501	GDP	C3'-C4'-C5'-O5'
69	TD	501	GDP	C3'-C4'-C5'-O5'
69	WN	501	GDP	C3'-C4'-C5'-O5'
67	BI	501	GTP	PB-O3B-PG-O1G
69	CD	501	GDP	PA-O3A-PB-O1B
69	CF	501	GDP	PA-O3A-PB-O1B
69	DL	501	GDP	PA-O3A-PB-O1B
69	EL	501	GDP	PA-O3A-PB-O1B
69	FB	501	GDP	PA-O3A-PB-O1B
69	JH	501	GDP	PA-O3A-PB-O1B
69	MJ	501	GDP	PA-O3A-PB-O1B
69	ML	501	GDP	PA-O3A-PB-O1B
69	OO	501	GDP	PA-O3A-PB-O1B
69	PL	501	GDP	PA-O3A-PB-O1B
69	QB	501	GDP	PA-O3A-PB-O1B
69	WF	501	GDP	PA-O3A-PB-O1B
69	WH	501	GDP	PA-O3A-PB-O1B
69	WL	501	GDP	PA-O3A-PB-O1B
67	AA	501	GTP	O4'-C4'-C5'-O5'
67	NA	502	GTP	O4'-C4'-C5'-O5'
69	QB	501	GDP	O4'-C4'-C5'-O5'
67	AD	502	GTP	PB-O3B-PG-O2G
67	EG	501	GTP	PB-O3B-PG-O2G
67	EG	501	GTP	PB-O3B-PG-O3G
67	EI	501	GTP	PB-O3B-PG-O2G
67	EK	501	GTP	PB-O3B-PG-O2G
67	MM	501	GTP	PB-O3B-PG-O2G
67	NF	502	GTP	PB-O3B-PG-O2G
67	OF	502	GTP	PB-O3B-PG-O2G
67	OH	502	GTP	PB-O3B-PG-O2G
69	BF	501	GDP	PA-O3A-PB-O2B
69	BJ	501	GDP	PA-O3A-PB-O2B
69	BL	501	GDP	PA-O3A-PB-O2B
69	CF	501	GDP	PA-O3A-PB-O2B
69	CH	501	GDP	PA-O3A-PB-O2B
69	DF	501	GDP	PA-O3A-PB-O2B
69	DF	501	GDP	PA-O3A-PB-O3B
69	MH	501	GDP	PA-O3A-PB-O2B
69	PB	501	GDP	PA-O3A-PB-O2B
69	PL	501	GDP	PA-O3A-PB-O2B
69	UD	501	GDP	PA-O3A-PB-O2B
69	WD	501	GDP	PA-O3A-PB-O2B

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Mol	Chain	Res	Type	Atoms
67	AA	501	GTP	C5'-O5'-PA-O3A
67	AC	501	GTP	C5'-O5'-PA-O3A
67	AG	501	GTP	C5'-O5'-PA-O3A
67	BM	501	GTP	C5'-O5'-PA-O3A
67	CJ	502	GTP	C5'-O5'-PA-O3A
67	DC	501	GTP	C5'-O5'-PA-O3A
67	DI	501	GTP	C5'-O5'-PA-O3A
67	DM	501	GTP	C5'-O5'-PA-O3A
67	EC	501	GTP	C5'-O5'-PA-O3A
67	EM	501	GTP	C5'-O5'-PA-O3A
67	HC	501	GTP	C5'-O5'-PA-O3A
67	HE	501	GTP	C5'-O5'-PA-O3A
67	HI	501	GTP	C5'-O5'-PA-O3A
67	HN	502	GTP	C5'-O5'-PA-O3A
67	IC	501	GTP	C5'-O5'-PA-O3A
67	II	501	GTP	C5'-O5'-PA-O3A
67	IK	501	GTP	C5'-O5'-PA-O3A
67	KC	501	GTP	C5'-O5'-PA-O3A
67	KK	501	GTP	C5'-O5'-PA-O3A
67	KO	501	GTP	C5'-O5'-PA-O3A
67	LM	501	GTP	C5'-O5'-PA-O3A
67	MG	501	GTP	C5'-O5'-PA-O3A
67	MK	501	GTP	C5'-O5'-PA-O3A
67	NA	502	GTP	C5'-O5'-PA-O3A
67	NB	502	GTP	C5'-O5'-PA-O3A
67	NF	502	GTP	C5'-O5'-PA-O3A
67	NK	501	GTP	C5'-O5'-PA-O3A
67	O0	502	GTP	C5'-O5'-PA-O3A
67	OK	501	GTP	C5'-O5'-PA-O3A
67	PD	502	GTP	C5'-O5'-PA-O3A
67	SI	501	GTP	C5'-O5'-PA-O3A
67	TC	501	GTP	C5'-O5'-PA-O3A
67	UE	501	GTP	C5'-O5'-PA-O3A
67	VG	501	GTP	C5'-O5'-PA-O3A
67	VL	502	GTP	C5'-O5'-PA-O3A
67	WE	501	GTP	C5'-O5'-PA-O3A
67	WK	501	GTP	C5'-O5'-PA-O3A
69	AJ	501	GDP	C5'-O5'-PA-O3A
69	CB	501	GDP	C5'-O5'-PA-O3A
69	CH	501	GDP	C5'-O5'-PA-O3A
69	EF	501	GDP	C5'-O5'-PA-O3A
69	FD	501	GDP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
69	GF	501	GDP	C5'-O5'-PA-O3A
69	GN	501	GDP	C5'-O5'-PA-O3A
69	HB	501	GDP	C5'-O5'-PA-O3A
69	HD	501	GDP	C5'-O5'-PA-O3A
69	HH	501	GDP	C5'-O5'-PA-O3A
69	HJ	501	GDP	C5'-O5'-PA-O3A
69	HL	501	GDP	C5'-O5'-PA-O3A
69	HN	501	GDP	C5'-O5'-PA-O3A
69	IH	501	GDP	C5'-O5'-PA-O3A
69	KJ	501	GDP	C5'-O5'-PA-O3A
69	LB	501	GDP	C5'-O5'-PA-O3A
69	LF	501	GDP	C5'-O5'-PA-O3A
69	LH	501	GDP	C5'-O5'-PA-O3A
69	MF	501	GDP	C5'-O5'-PA-O3A
69	NJ	501	GDP	C5'-O5'-PA-O3A
69	OB	501	GDP	C5'-O5'-PA-O3A
69	OL	501	GDP	C5'-O5'-PA-O3A
69	PF	501	GDP	C5'-O5'-PA-O3A
69	QF	501	GDP	C5'-O5'-PA-O3A
69	RF	501	GDP	C5'-O5'-PA-O3A
69	RJ	501	GDP	C5'-O5'-PA-O3A
69	TL	501	GDP	C5'-O5'-PA-O3A
69	UF	501	GDP	C5'-O5'-PA-O3A
69	UL	501	GDP	C5'-O5'-PA-O3A
69	UN	501	GDP	C5'-O5'-PA-O3A
69	WJ	501	GDP	C5'-O5'-PA-O3A
69	WL	501	GDP	C5'-O5'-PA-O3A
67	TK	501	GTP	C4'-C5'-O5'-PA
69	TJ	501	GDP	C4'-C5'-O5'-PA
67	DA	501	GTP	O4'-C4'-C5'-O5'
67	EI	501	GTP	C3'-C4'-C5'-O5'
67	FE	501	GTP	O4'-C4'-C5'-O5'
67	FK	501	GTP	C3'-C4'-C5'-O5'
67	KI	501	GTP	O4'-C4'-C5'-O5'
67	MG	501	GTP	C3'-C4'-C5'-O5'
69	BJ	501	GDP	C3'-C4'-C5'-O5'
69	DF	501	GDP	O4'-C4'-C5'-O5'
69	GF	501	GDP	C3'-C4'-C5'-O5'
69	JL	501	GDP	C3'-C4'-C5'-O5'
67	AA	501	GTP	PA-O3A-PB-O1B
67	AA	501	GTP	PA-O3A-PB-O2B
67	BC	501	GTP	PA-O3A-PB-O1B

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Mol	Chain	Res	Type	Atoms
67	CJ	502	GTP	PB-O3A-PA-O2A
67	DK	501	GTP	PA-O3A-PB-O1B
67	EC	501	GTP	PA-O3A-PB-O1B
67	EE	501	GTP	PA-O3A-PB-O1B
67	EG	501	GTP	PA-O3A-PB-O1B
67	EI	501	GTP	PA-O3A-PB-O1B
67	FC	501	GTP	PA-O3A-PB-O2B
67	FI	501	GTP	PG-O3B-PB-O1B
67	FI	501	GTP	PG-O3B-PB-O2B
67	FM	501	GTP	PB-O3A-PA-O2A
67	GC	501	GTP	PA-O3A-PB-O2B
67	GJ	502	GTP	PA-O3A-PB-O1B
67	IN	502	GTP	PA-O3A-PB-O2B
67	KC	501	GTP	PA-O3A-PB-O1B
67	KC	501	GTP	PA-O3A-PB-O2B
67	KG	501	GTP	PG-O3B-PB-O2B
67	KK	501	GTP	PA-O3A-PB-O1B
67	KK	501	GTP	PA-O3A-PB-O2B
67	KO	501	GTP	PB-O3A-PA-O1A
67	KO	501	GTP	PB-O3A-PA-O2A
67	LG	501	GTP	PA-O3A-PB-O1B
67	LI	501	GTP	PA-O3A-PB-O1B
67	LK	501	GTP	PB-O3A-PA-O1A
67	LK	501	GTP	PB-O3A-PA-O2A
67	MI	501	GTP	PA-O3A-PB-O1B
67	MI	501	GTP	PA-O3A-PB-O2B
67	NB	502	GTP	PA-O3A-PB-O2B
67	NK	501	GTP	PG-O3B-PB-O2B
67	O0	502	GTP	PG-O3B-PB-O2B
67	OC	501	GTP	PA-O3A-PB-O2B
67	OE	501	GTP	PA-O3A-PB-O1B
67	OF	502	GTP	PA-O3A-PB-O1B
67	SA	501	GTP	PB-O3A-PA-O1A
67	SA	501	GTP	PB-O3A-PA-O2A
67	SM	501	GTP	PA-O3A-PB-O1B
67	WC	501	GTP	PB-O3A-PA-O2A
69	CH	501	GDP	PB-O3A-PA-O2A
69	KN	501	GDP	PB-O3A-PA-O1A
67	BE	501	GTP	C5'-O5'-PA-O1A
67	EE	501	GTP	C5'-O5'-PA-O1A
67	FK	501	GTP	C5'-O5'-PA-O1A
67	GG	501	GTP	C5'-O5'-PA-O1A

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Mol	Chain	Res	Type	Atoms
67	GM	501	GTP	C5'-O5'-PA-O2A
67	HL	502	GTP	C5'-O5'-PA-O1A
67	IG	501	GTP	C5'-O5'-PA-O2A
67	JM	501	GTP	C5'-O5'-PA-O1A
67	KC	501	GTP	C5'-O5'-PA-O1A
67	KG	501	GTP	C5'-O5'-PA-O1A
67	KM	501	GTP	C5'-O5'-PA-O1A
67	PM	501	GTP	C5'-O5'-PA-O1A
67	SF	502	GTP	C5'-O5'-PA-O1A
67	UE	501	GTP	C5'-O5'-PA-O1A
67	UM	501	GTP	C5'-O5'-PA-O1A
69	GB	501	GDP	C5'-O5'-PA-O1A
69	JB	501	GDP	C5'-O5'-PA-O1A
69	JJ	501	GDP	C5'-O5'-PA-O1A
69	JL	501	GDP	C5'-O5'-PA-O1A
69	O0	501	GDP	C5'-O5'-PA-O1A
69	OD	501	GDP	C5'-O5'-PA-O1A
69	OJ	501	GDP	C5'-O5'-PA-O1A
69	PH	501	GDP	C5'-O5'-PA-O1A
69	PJ	501	GDP	C5'-O5'-PA-O1A
69	QB	501	GDP	C5'-O5'-PA-O1A
69	QH	501	GDP	C5'-O5'-PA-O1A
69	RH	501	GDP	C5'-O5'-PA-O1A
69	UJ	501	GDP	C5'-O5'-PA-O1A
69	VF	501	GDP	C5'-O5'-PA-O1A
69	VN	501	GDP	C5'-O5'-PA-O2A
69	WB	501	GDP	C5'-O5'-PA-O1A
69	WD	501	GDP	C5'-O5'-PA-O1A
69	WF	501	GDP	C5'-O5'-PA-O1A
67	LM	501	GTP	O4'-C4'-C5'-O5'
67	RA	501	GTP	O4'-C4'-C5'-O5'
69	TF	501	GDP	O4'-C4'-C5'-O5'
69	BJ	501	GDP	PA-O3A-PB-O1B
69	KB	501	GDP	PA-O3A-PB-O1B
69	PH	501	GDP	PA-O3A-PB-O1B
67	OK	501	GTP	PA-O3A-PB-O3B
67	EE	501	GTP	C4'-C5'-O5'-PA
67	QA	501	GTP	C4'-C5'-O5'-PA
67	WI	501	GTP	C4'-C5'-O5'-PA
69	HF	501	GDP	C4'-C5'-O5'-PA
69	OB	501	GDP	C4'-C5'-O5'-PA
69	JJ	501	GDP	C3'-C4'-C5'-O5'

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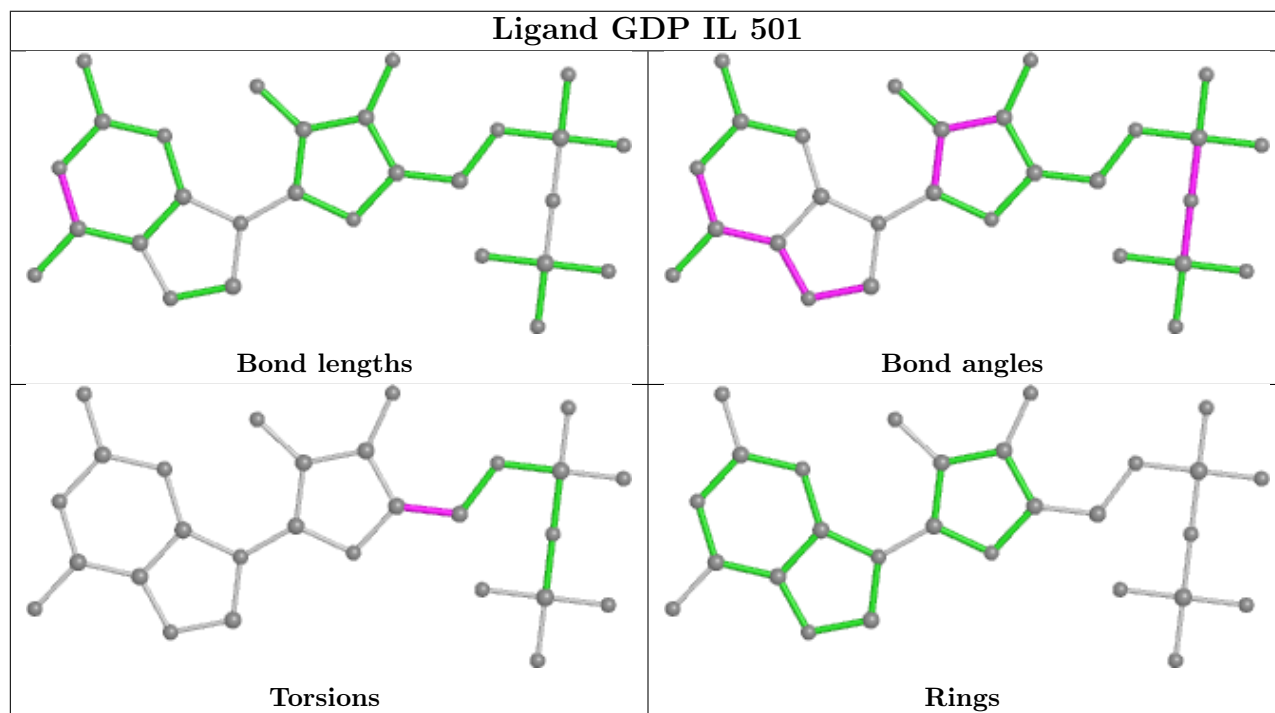
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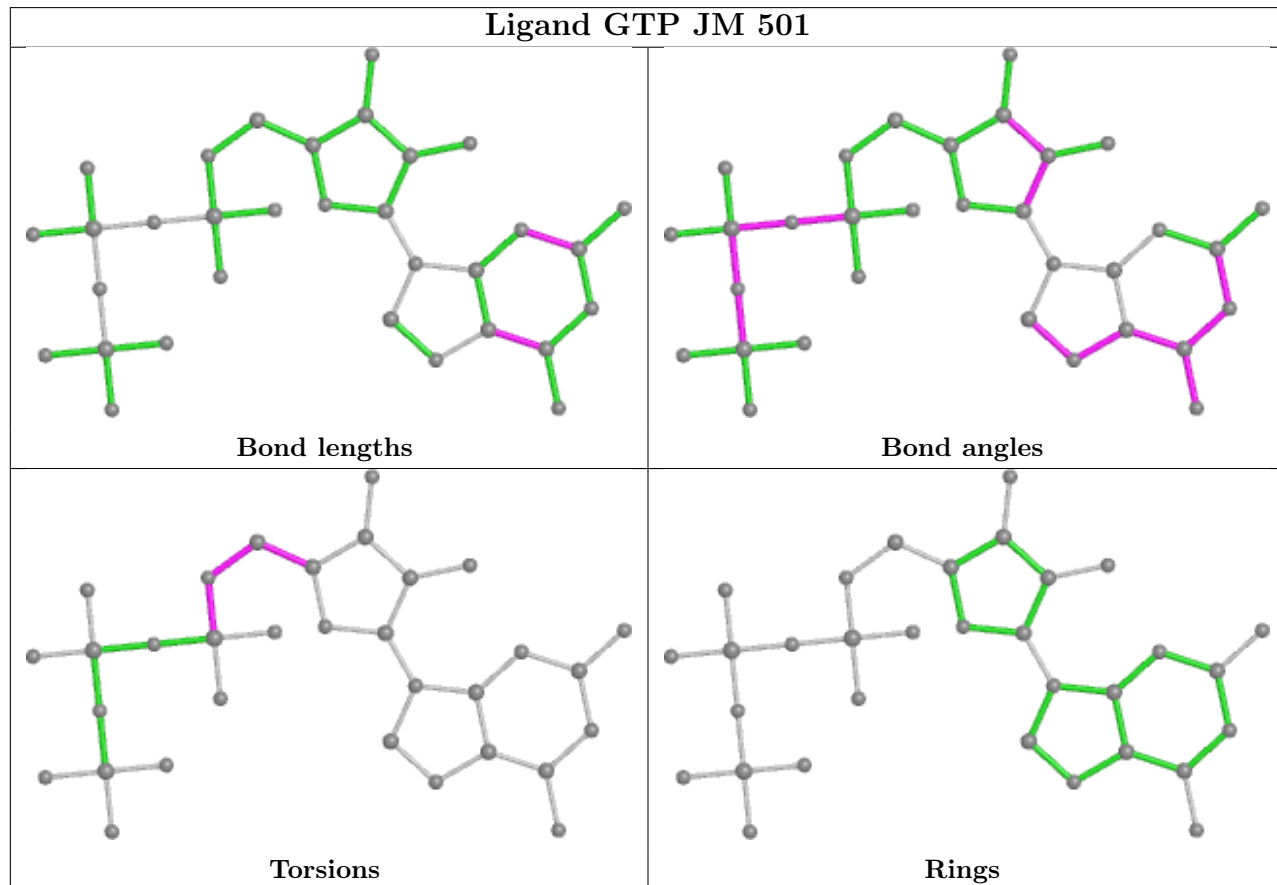
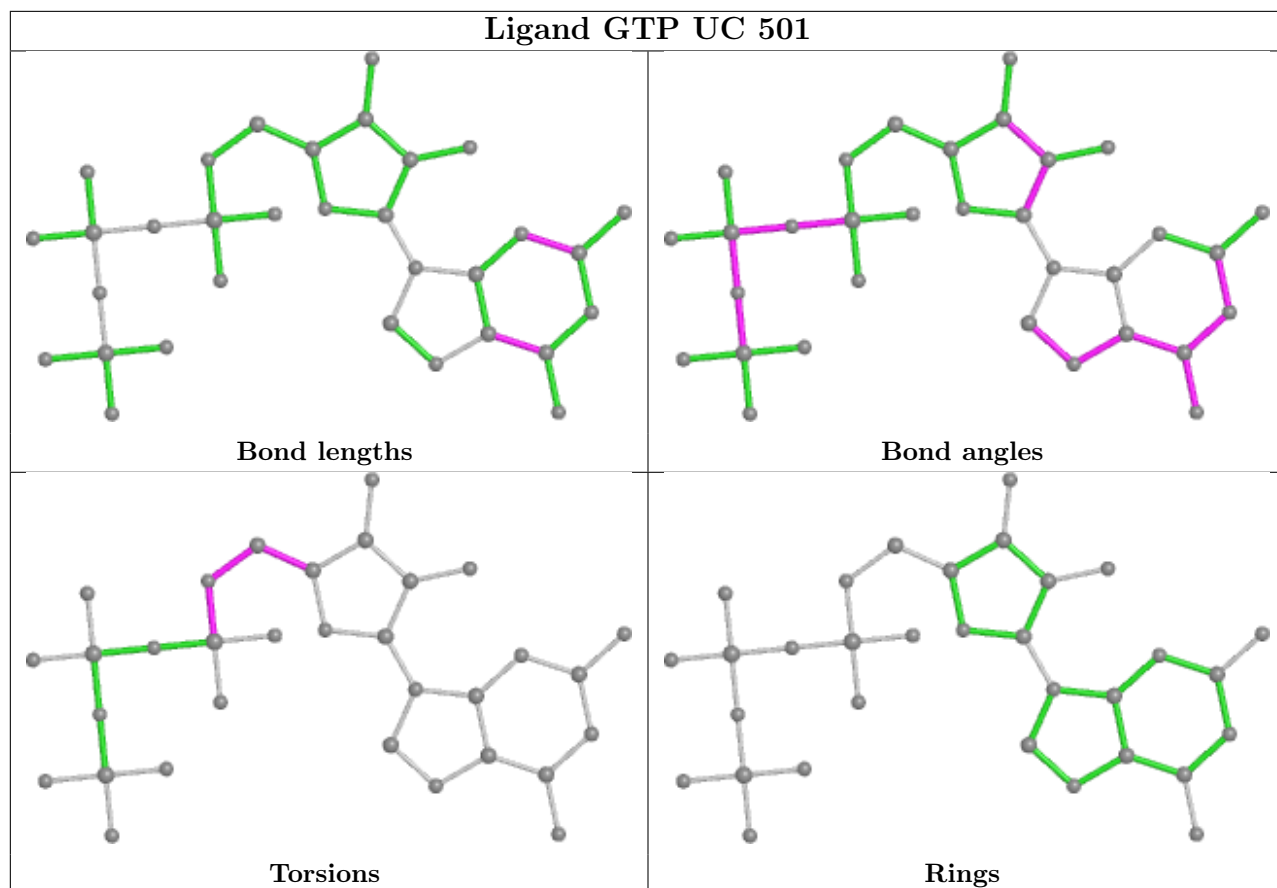
Mol	Chain	Res	Type	Atoms
69	KF	501	GDP	O4'-C4'-C5'-O5'

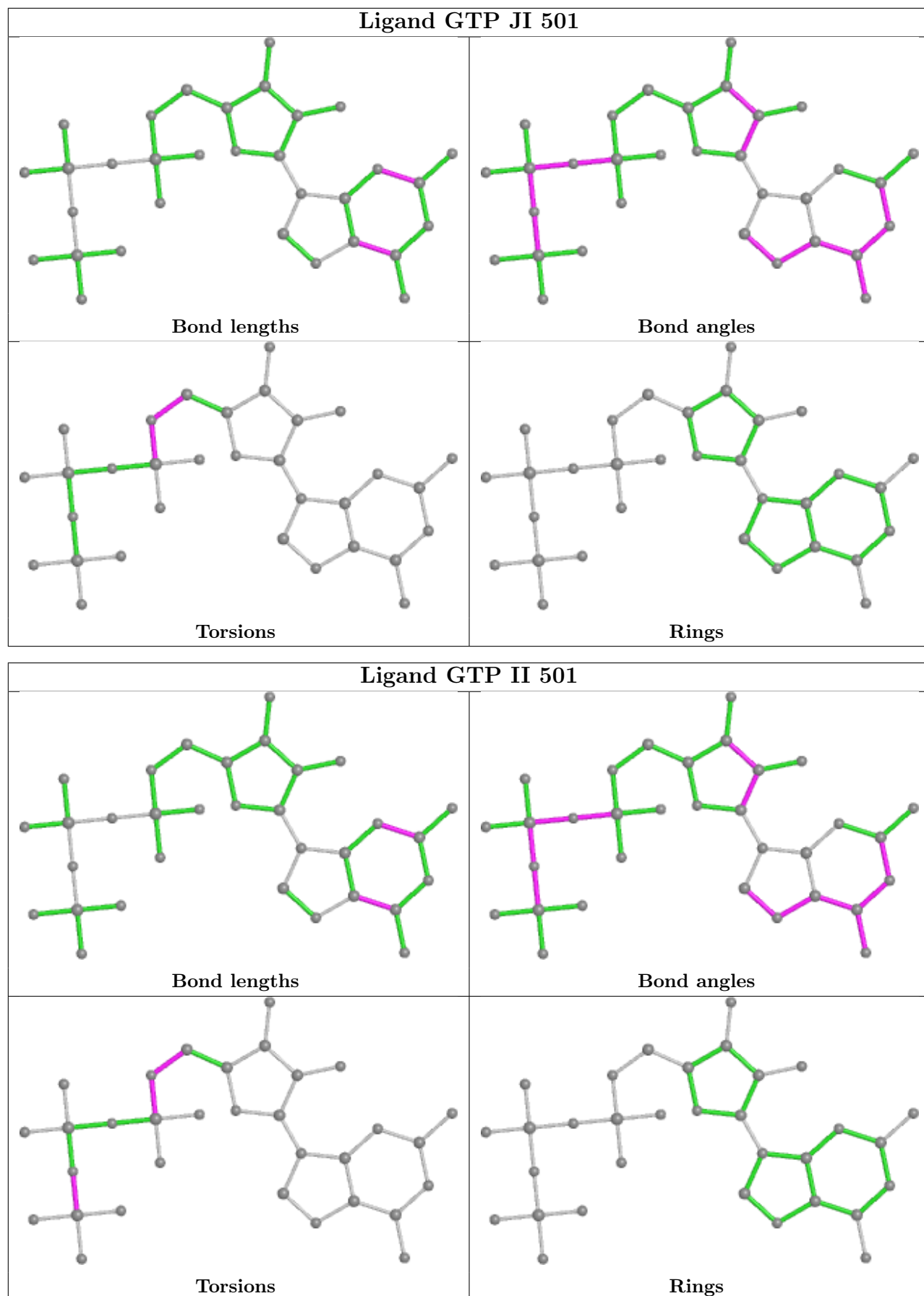
There are no ring outliers.

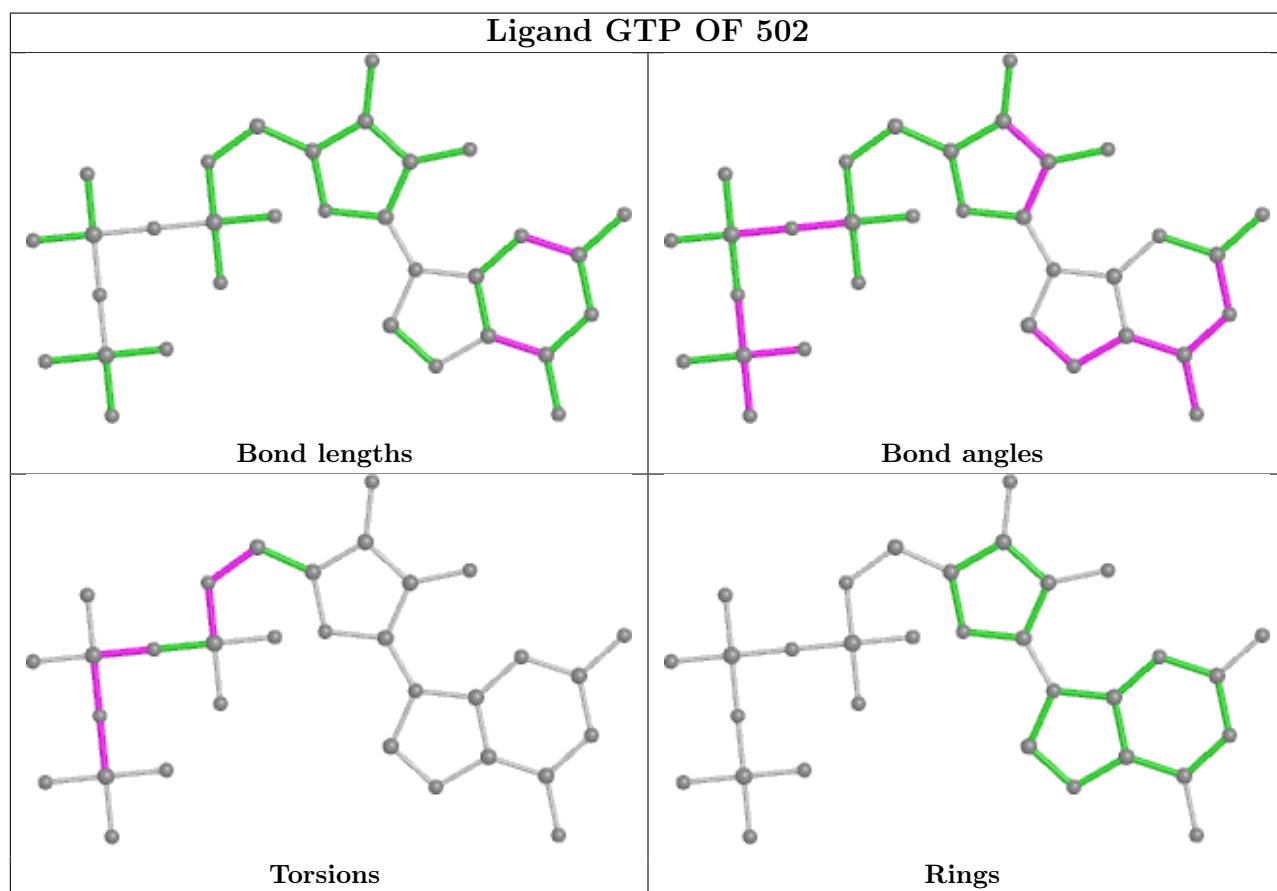
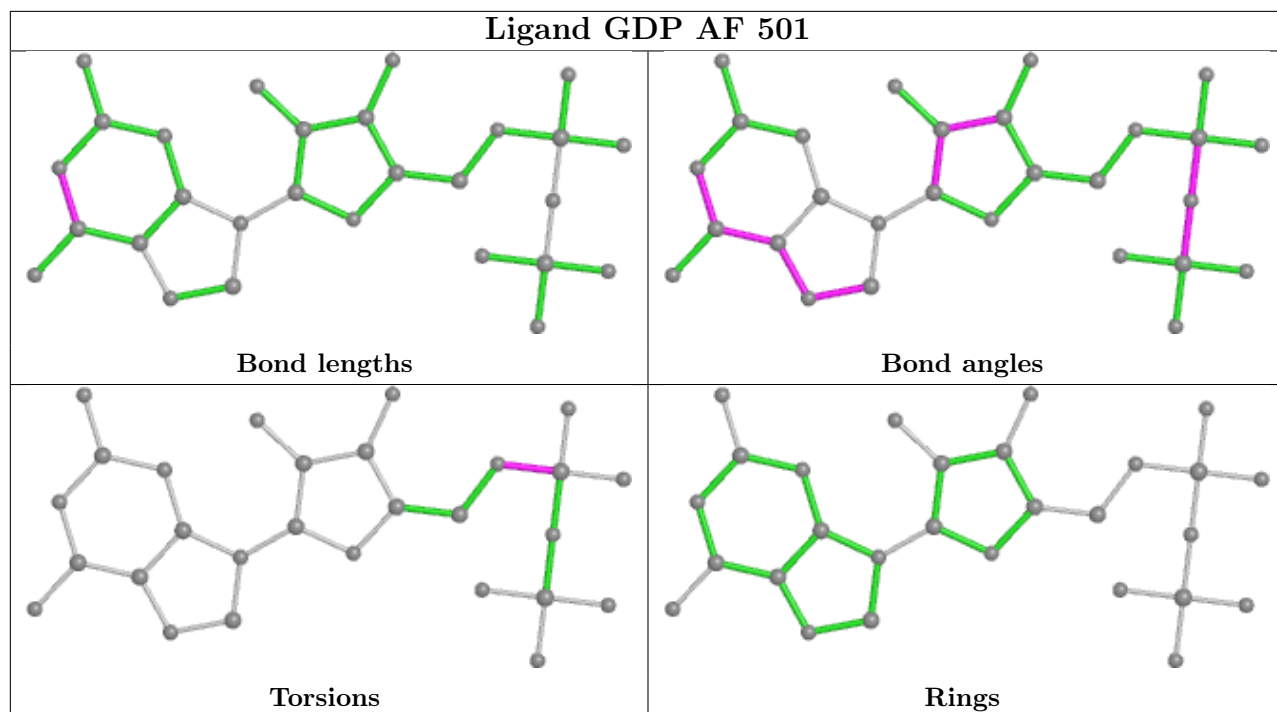
No monomer is involved in short contacts.

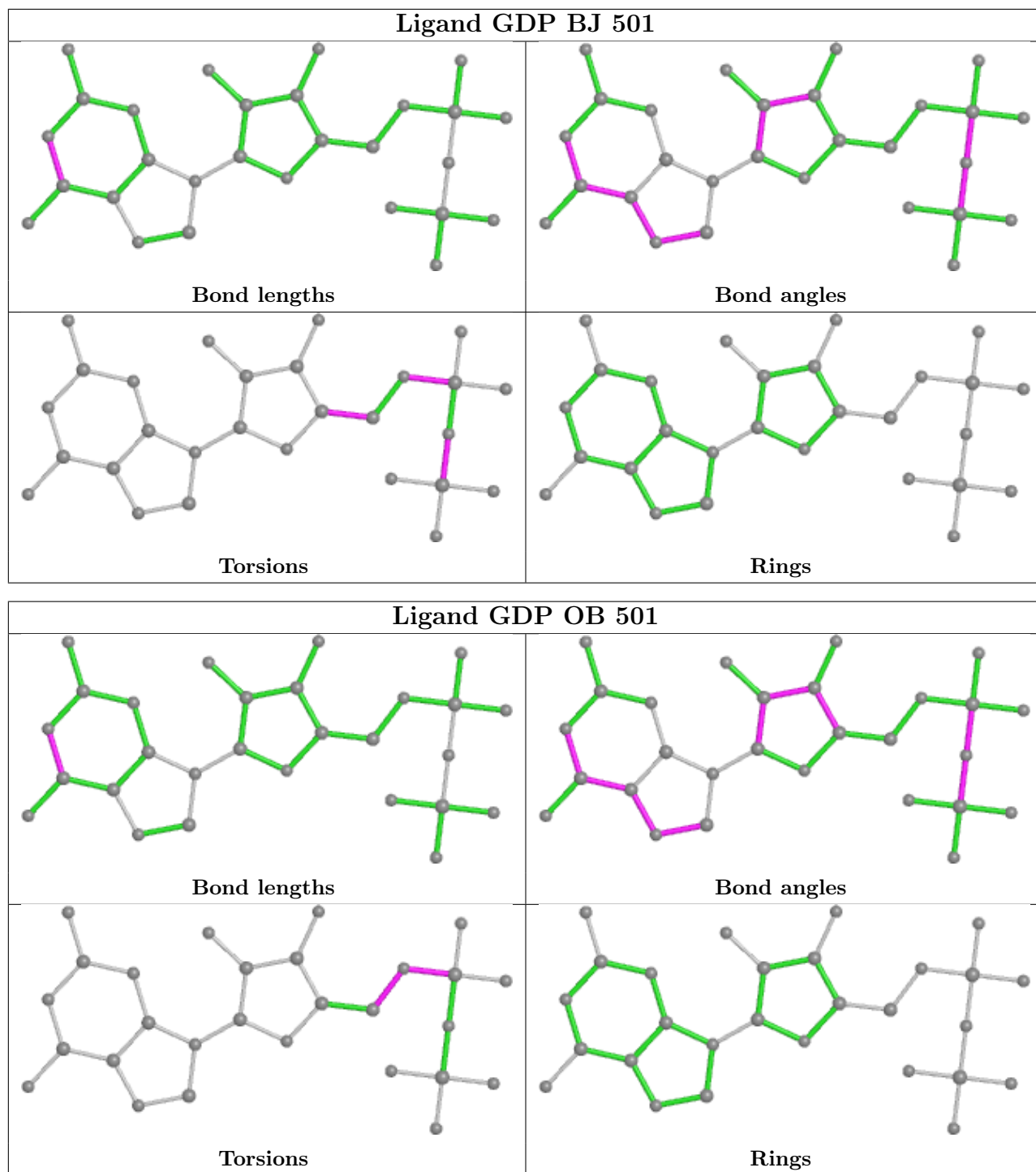
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

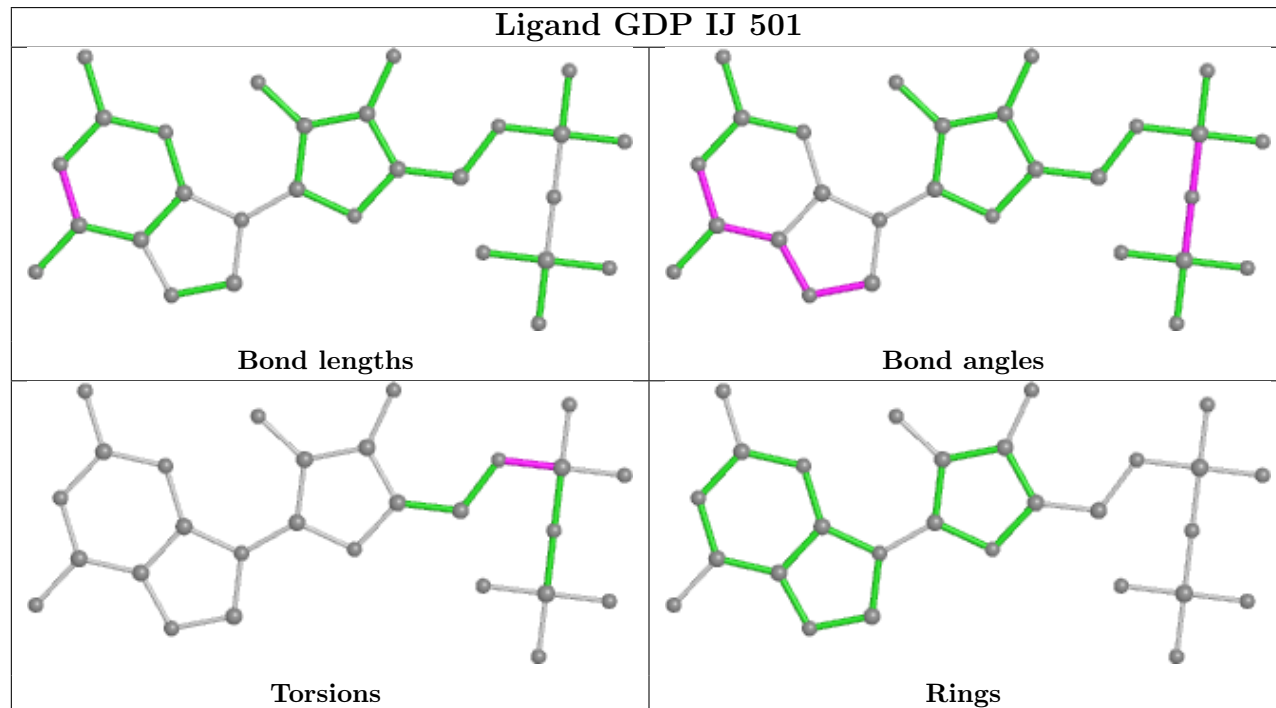
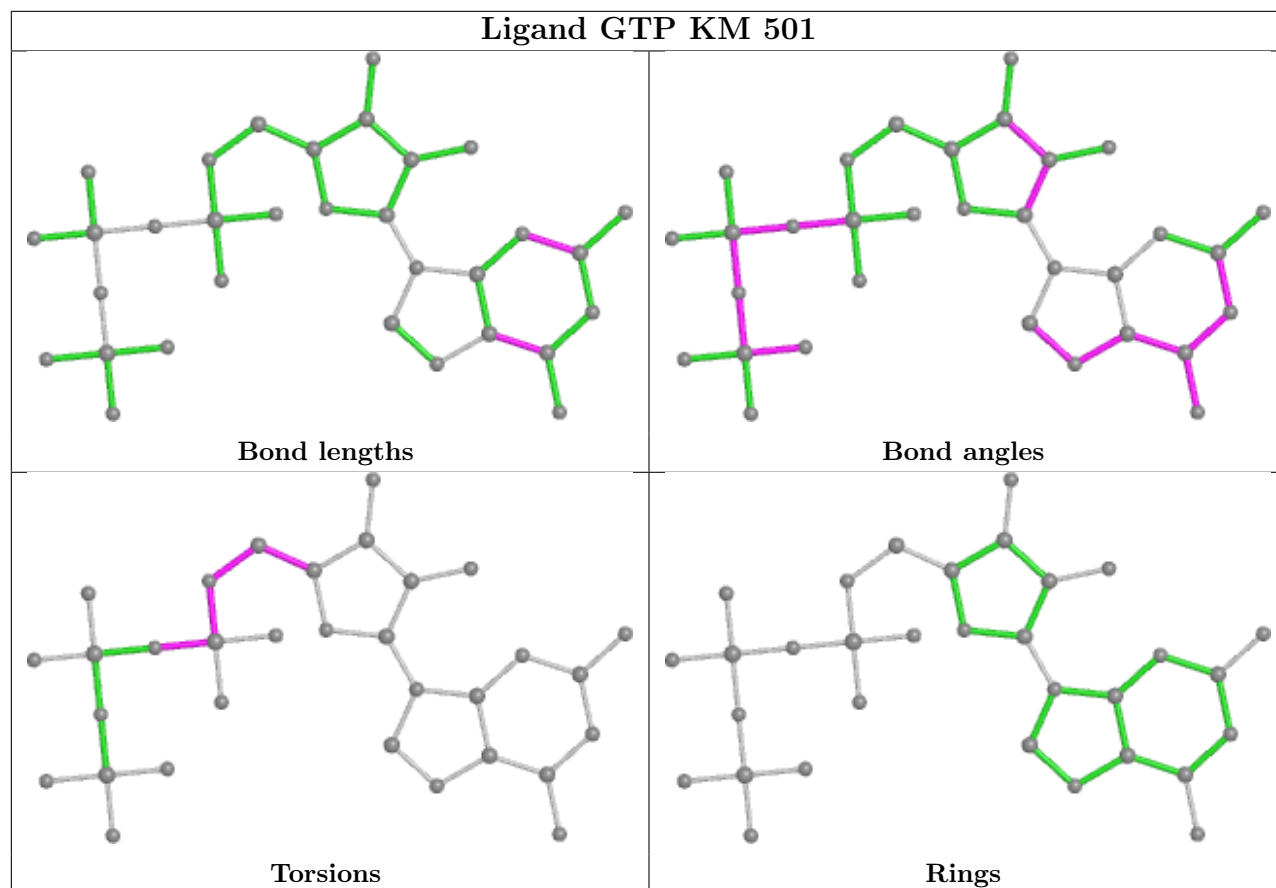


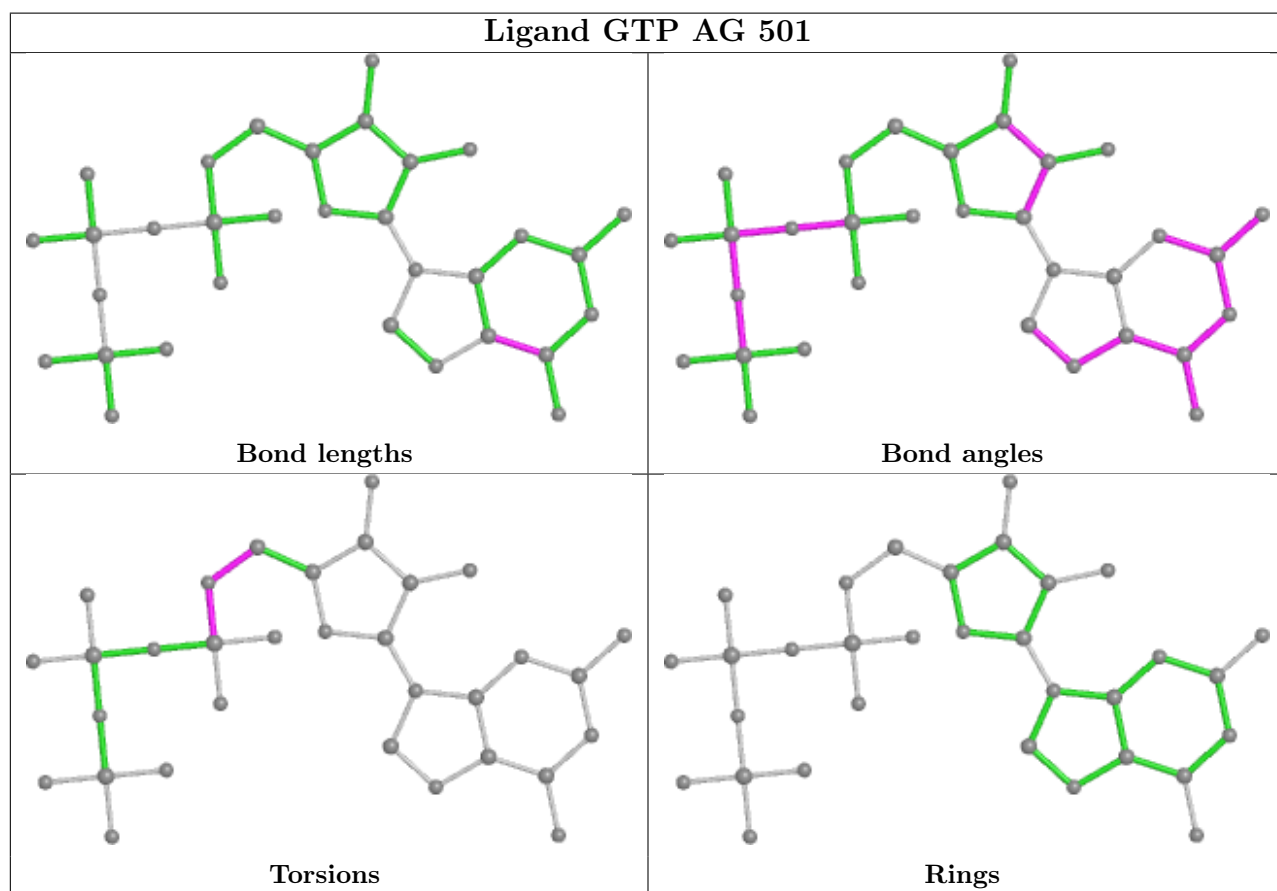
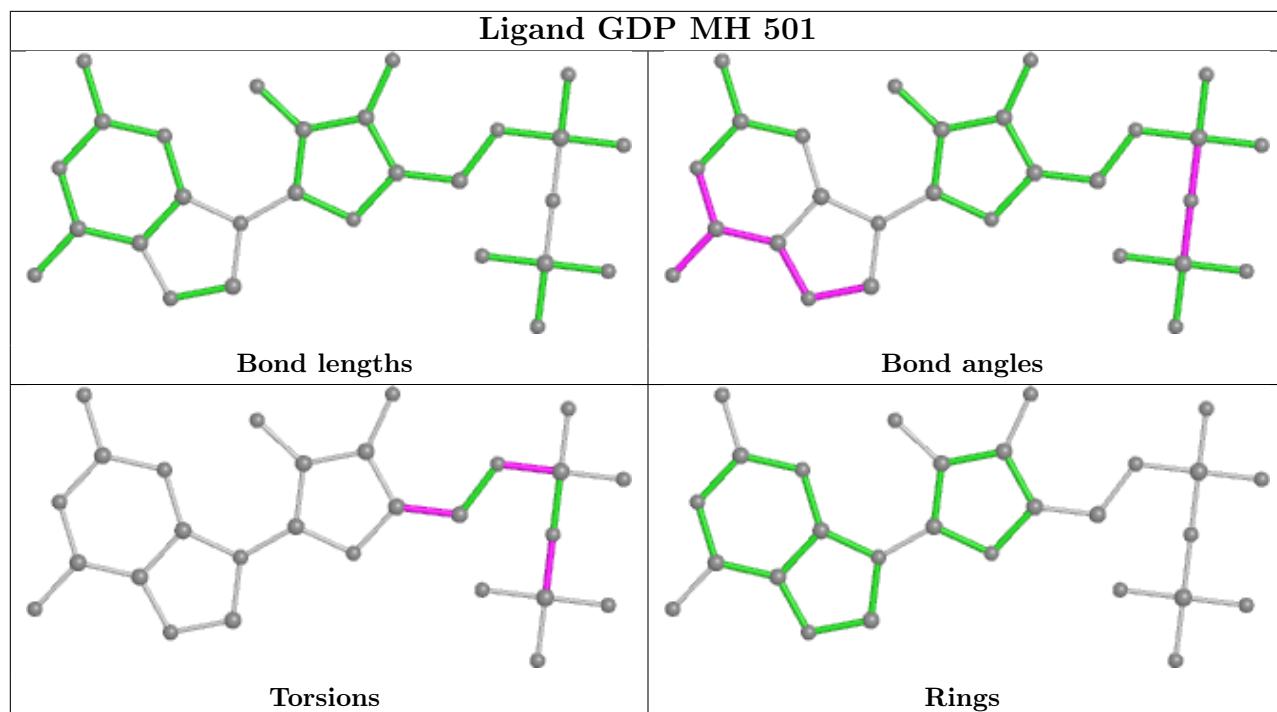


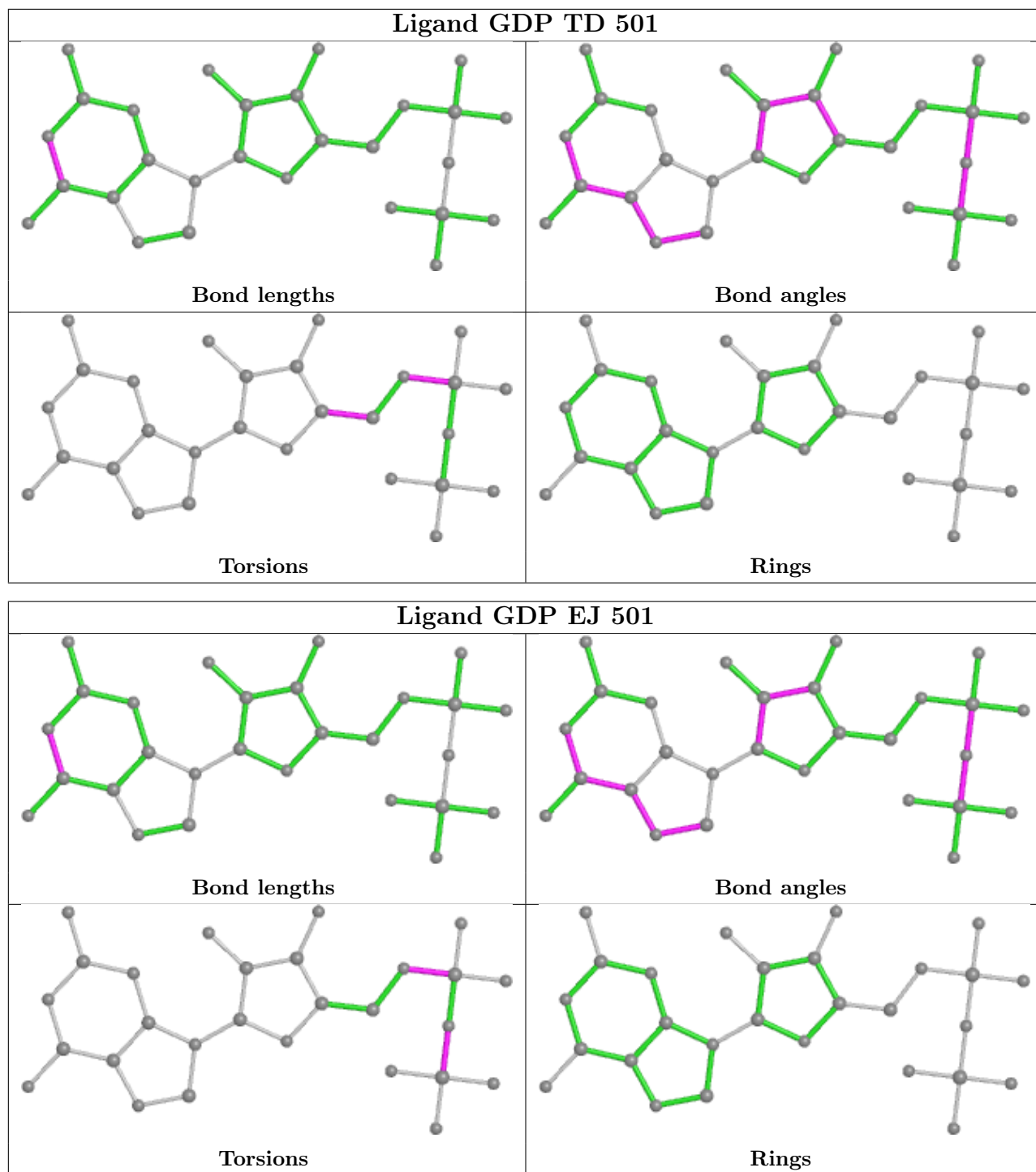


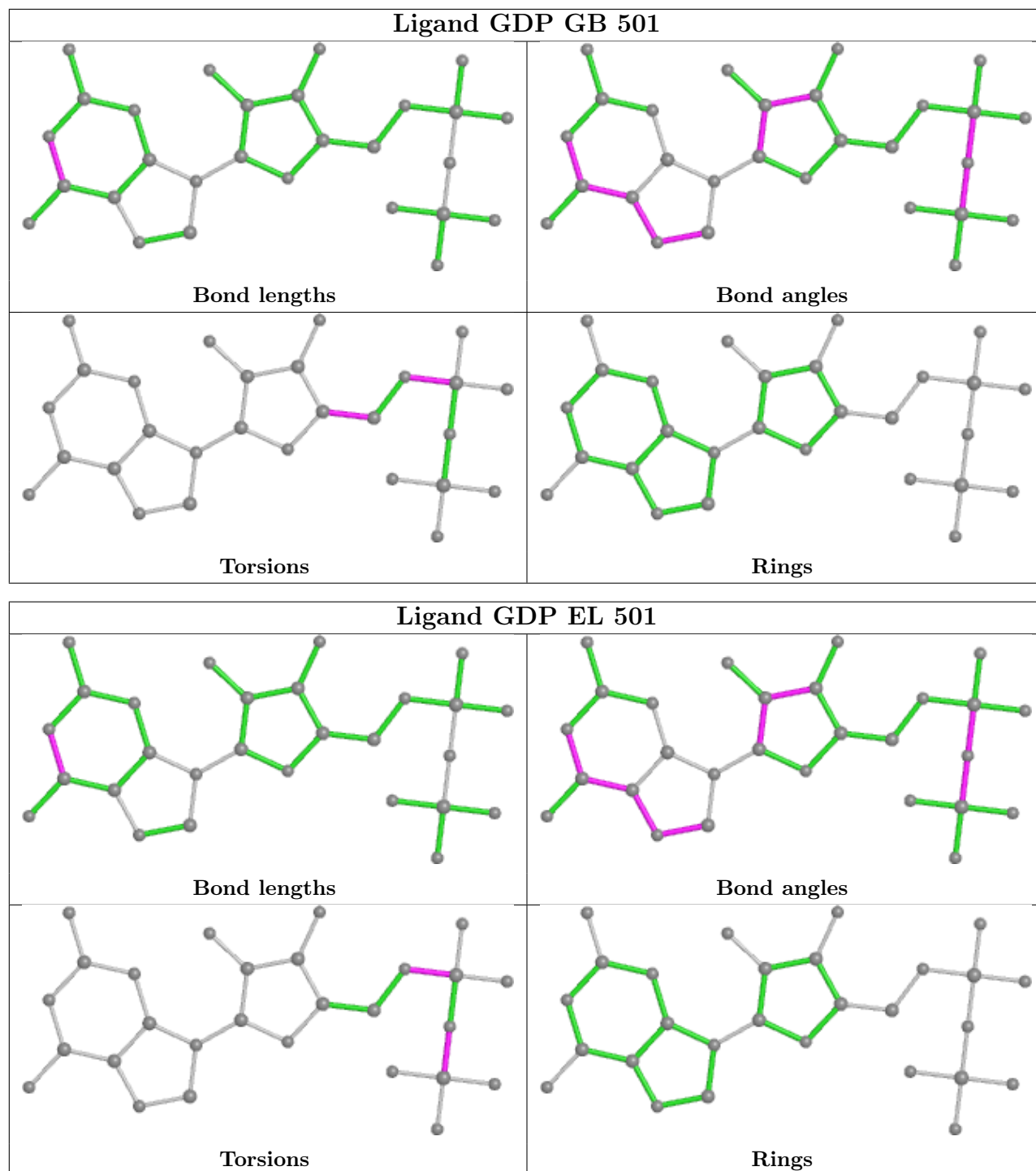


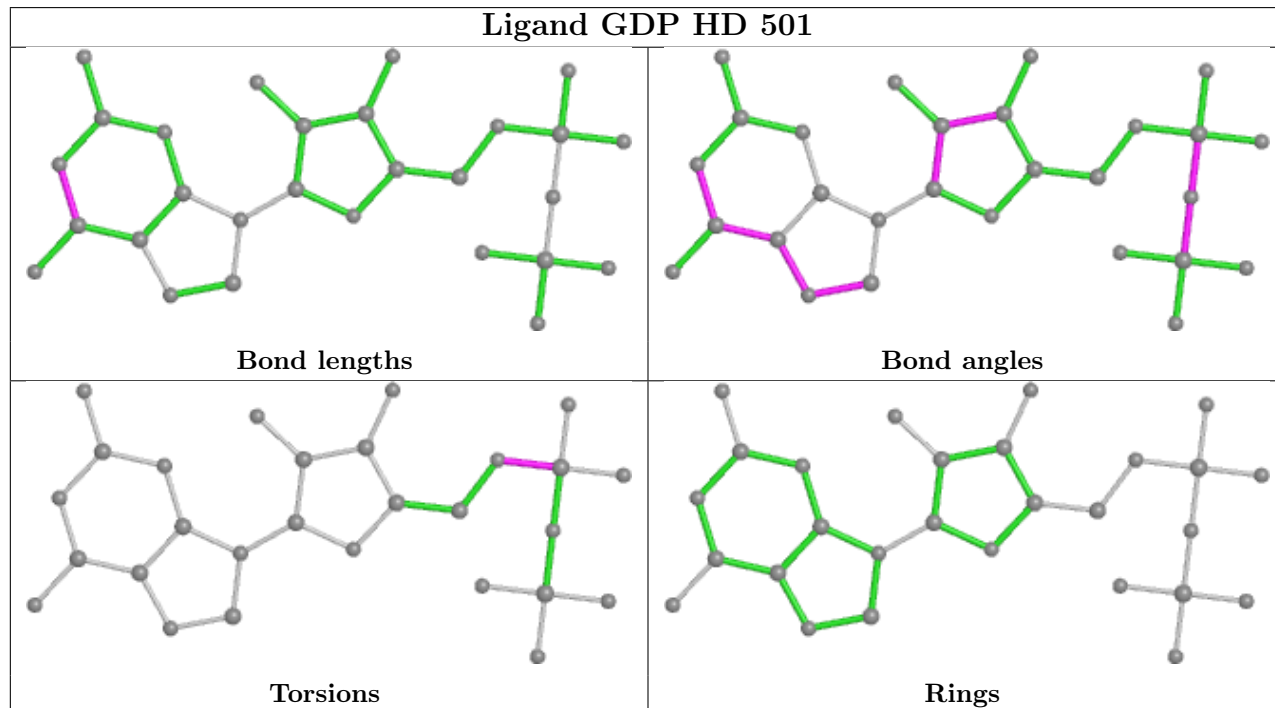
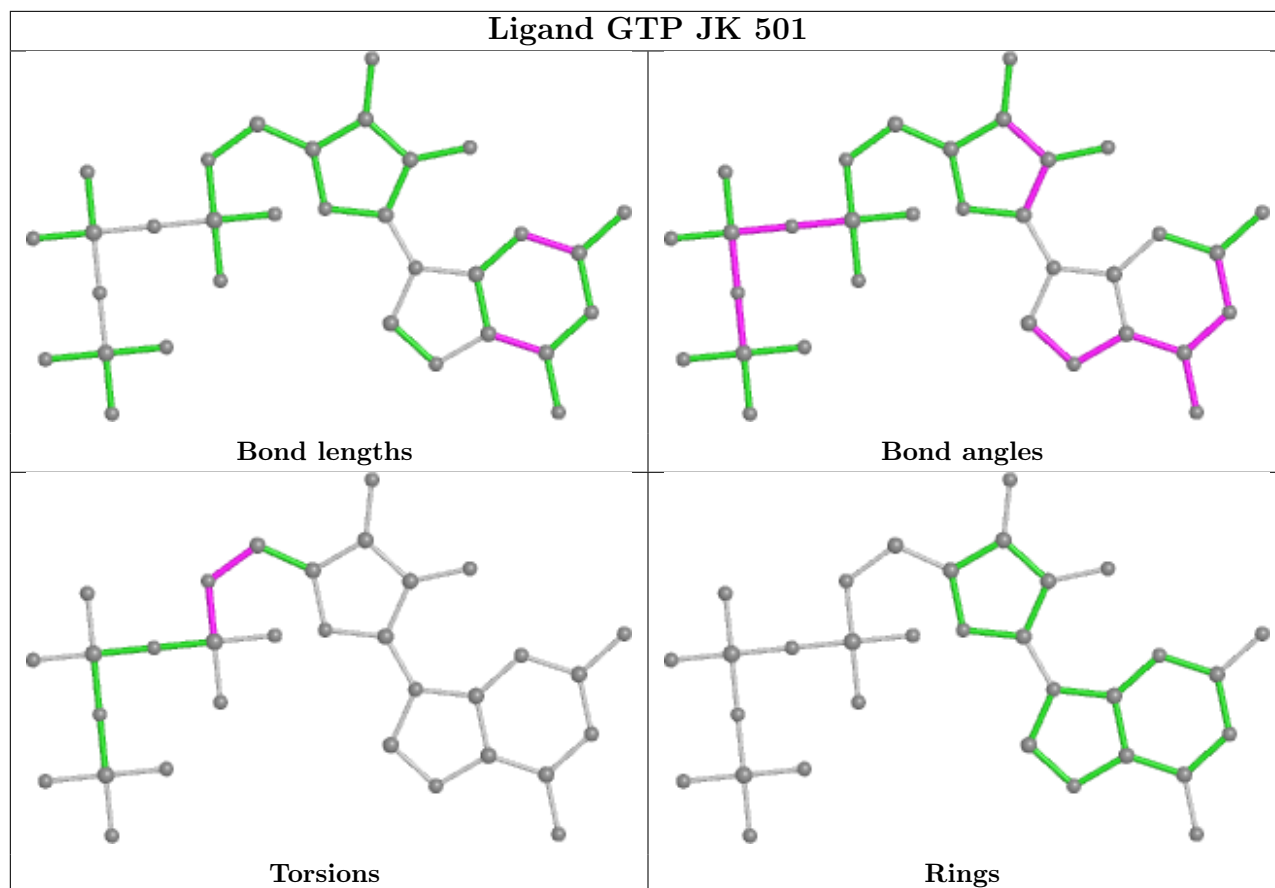


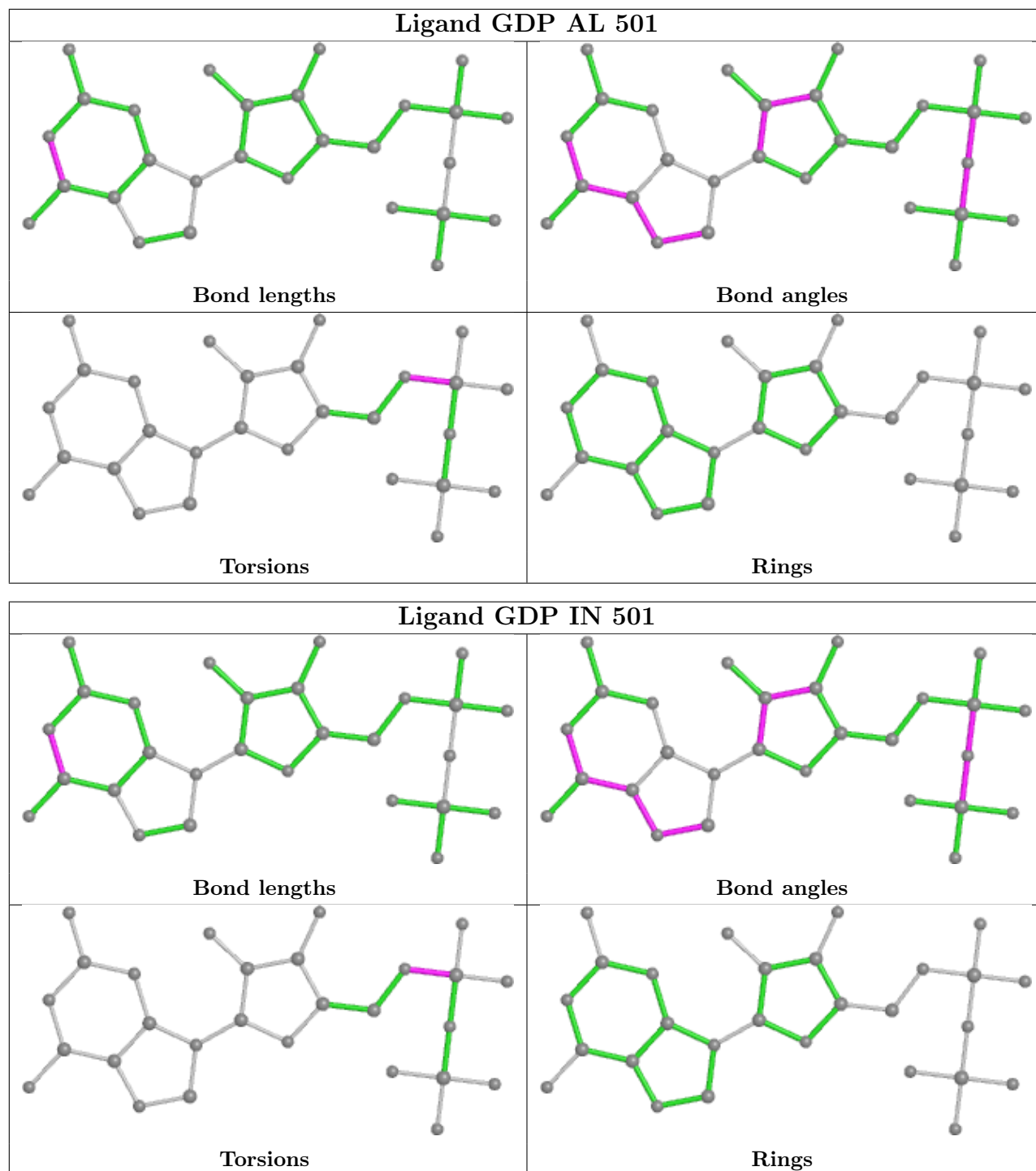


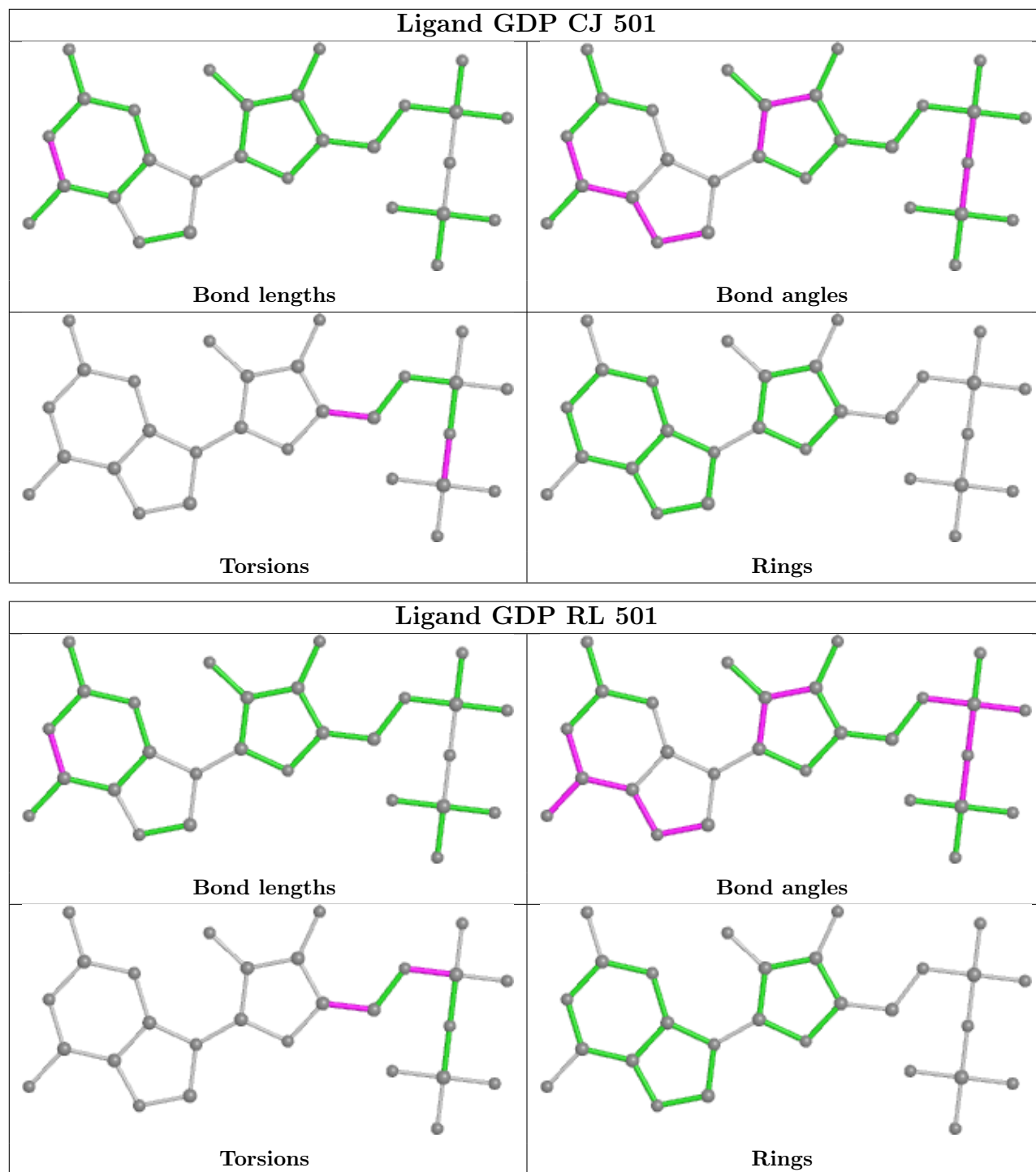


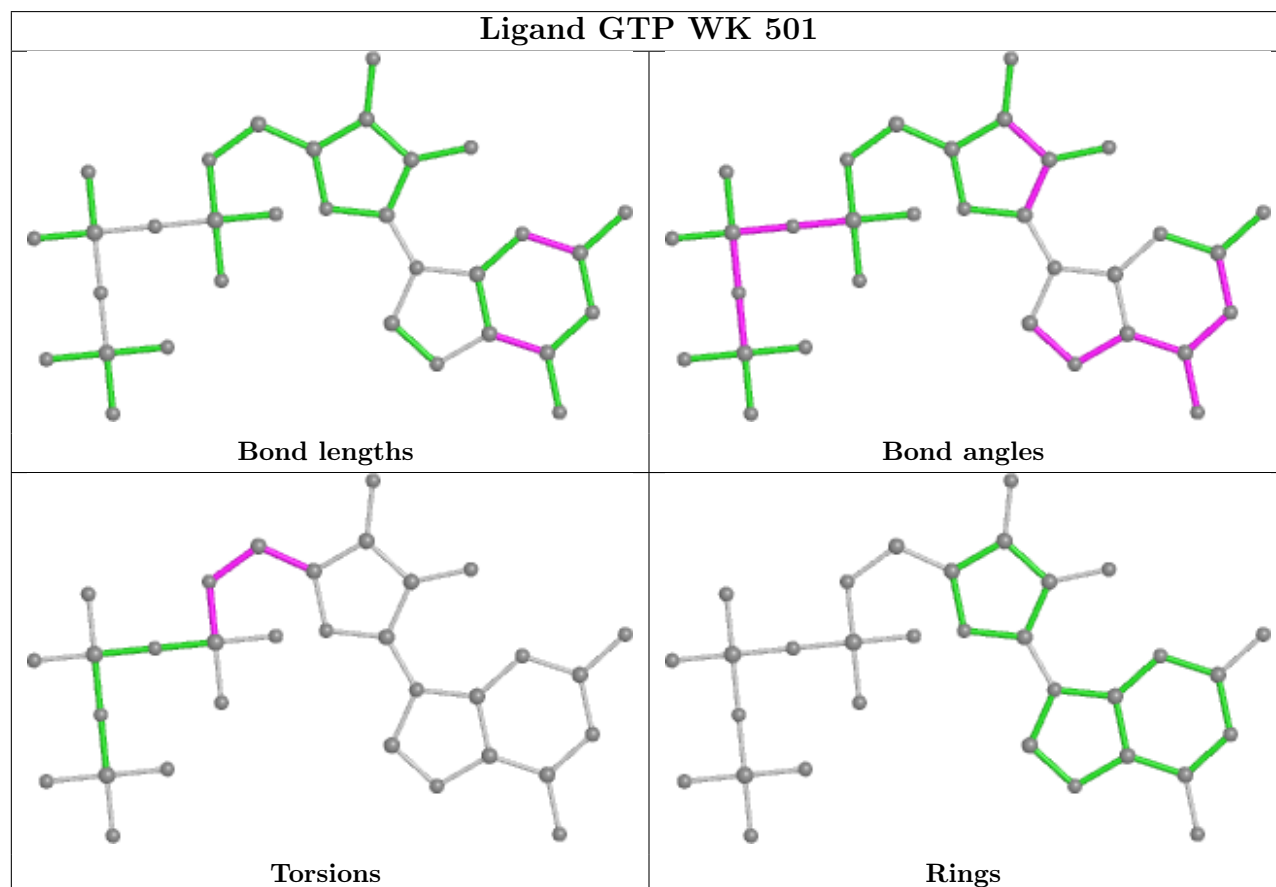
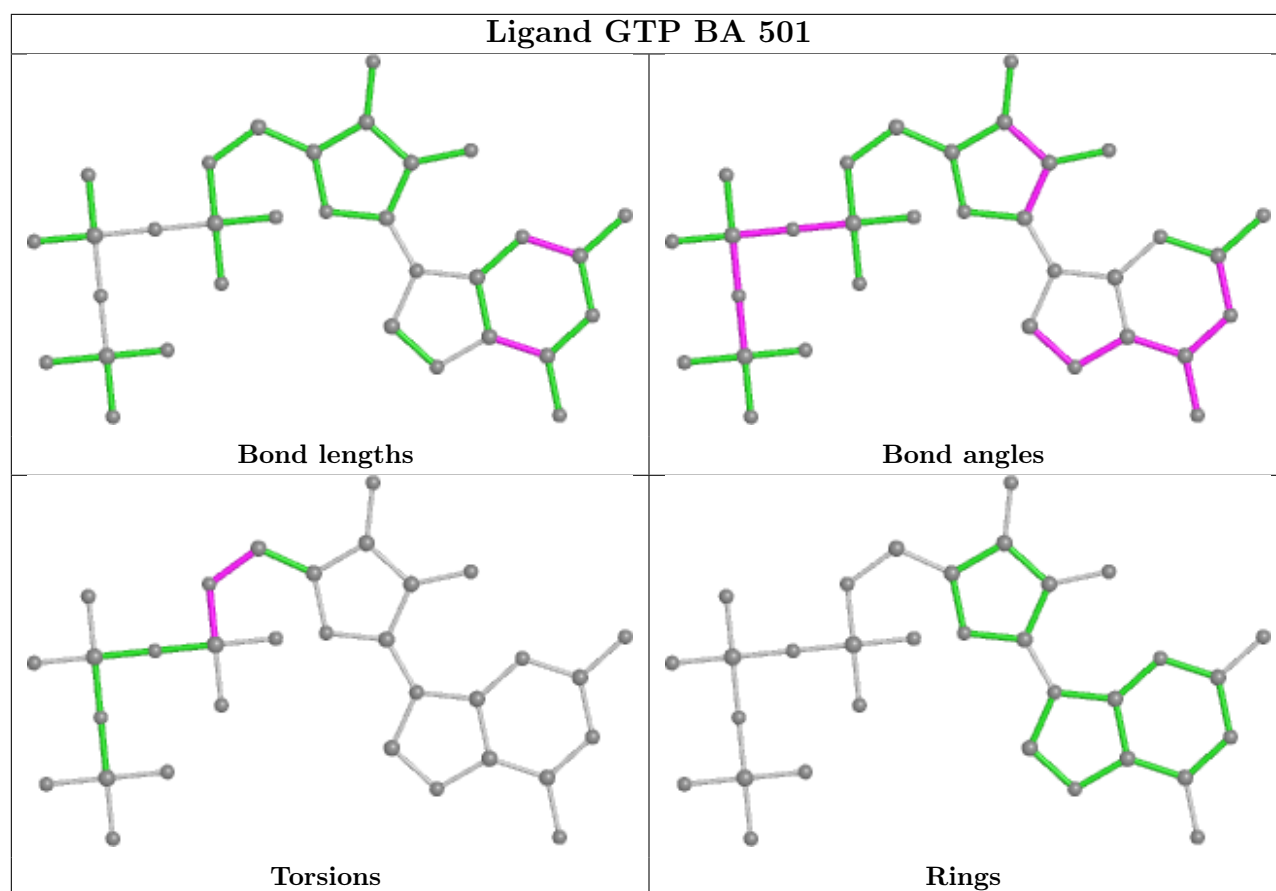


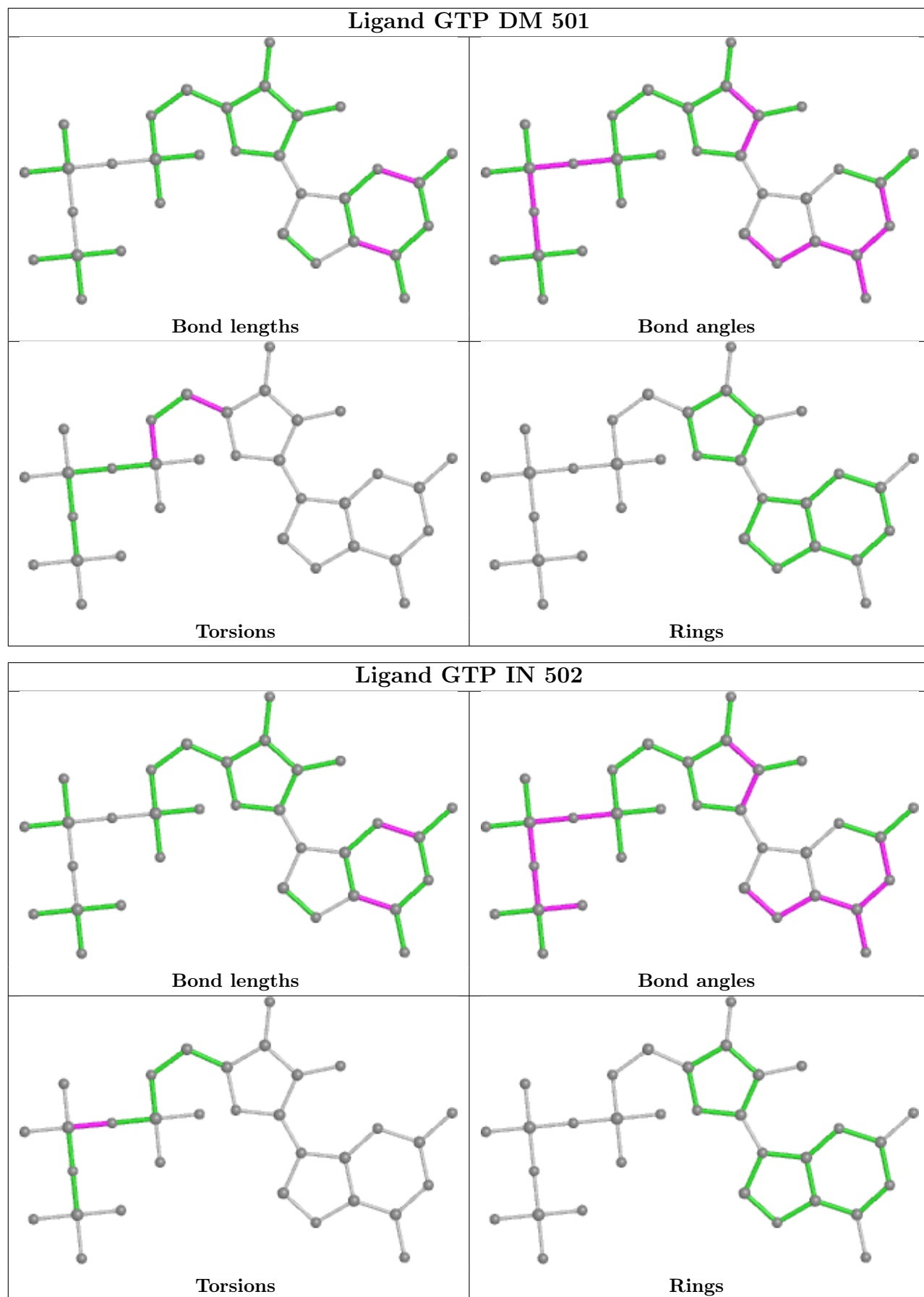


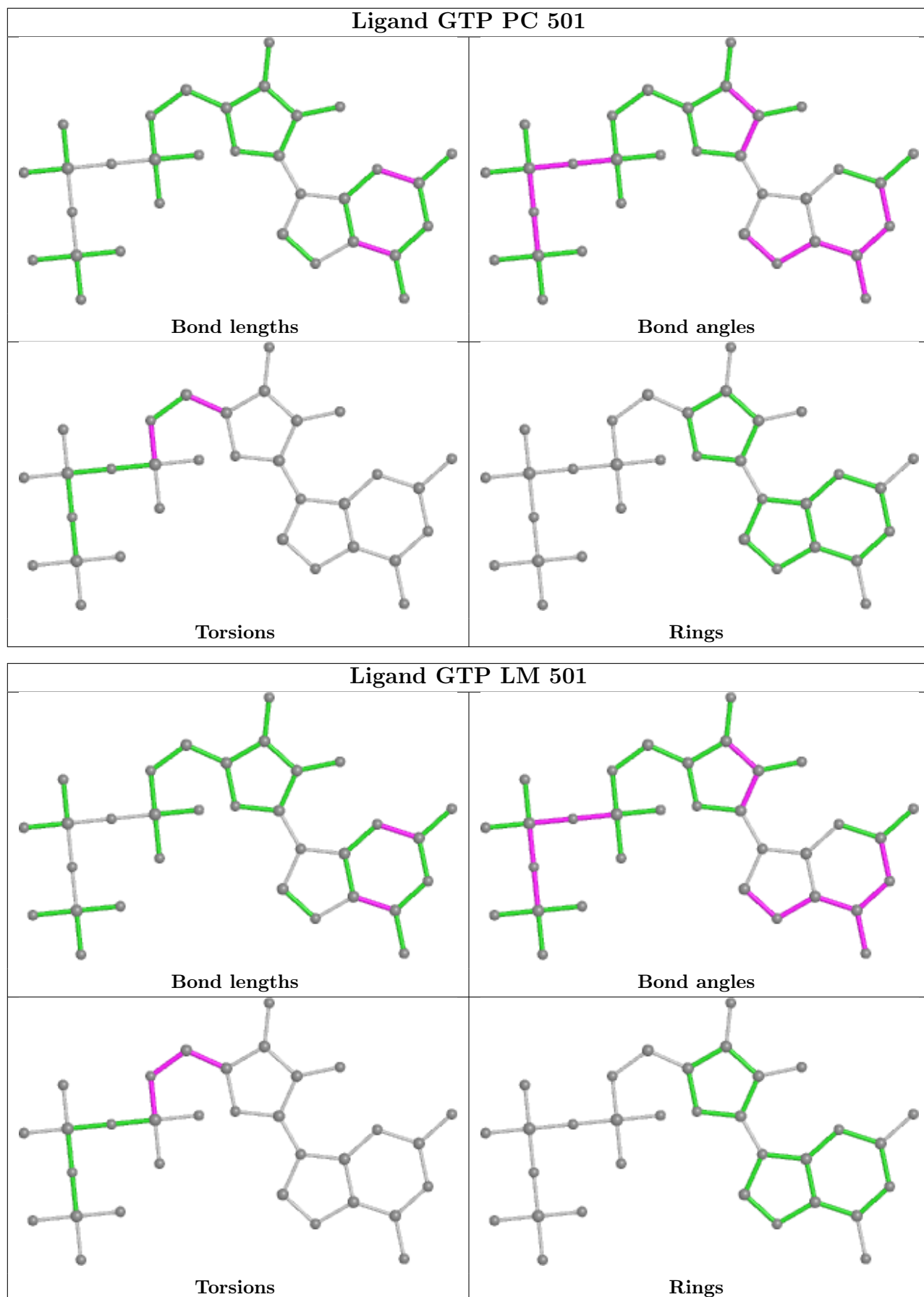


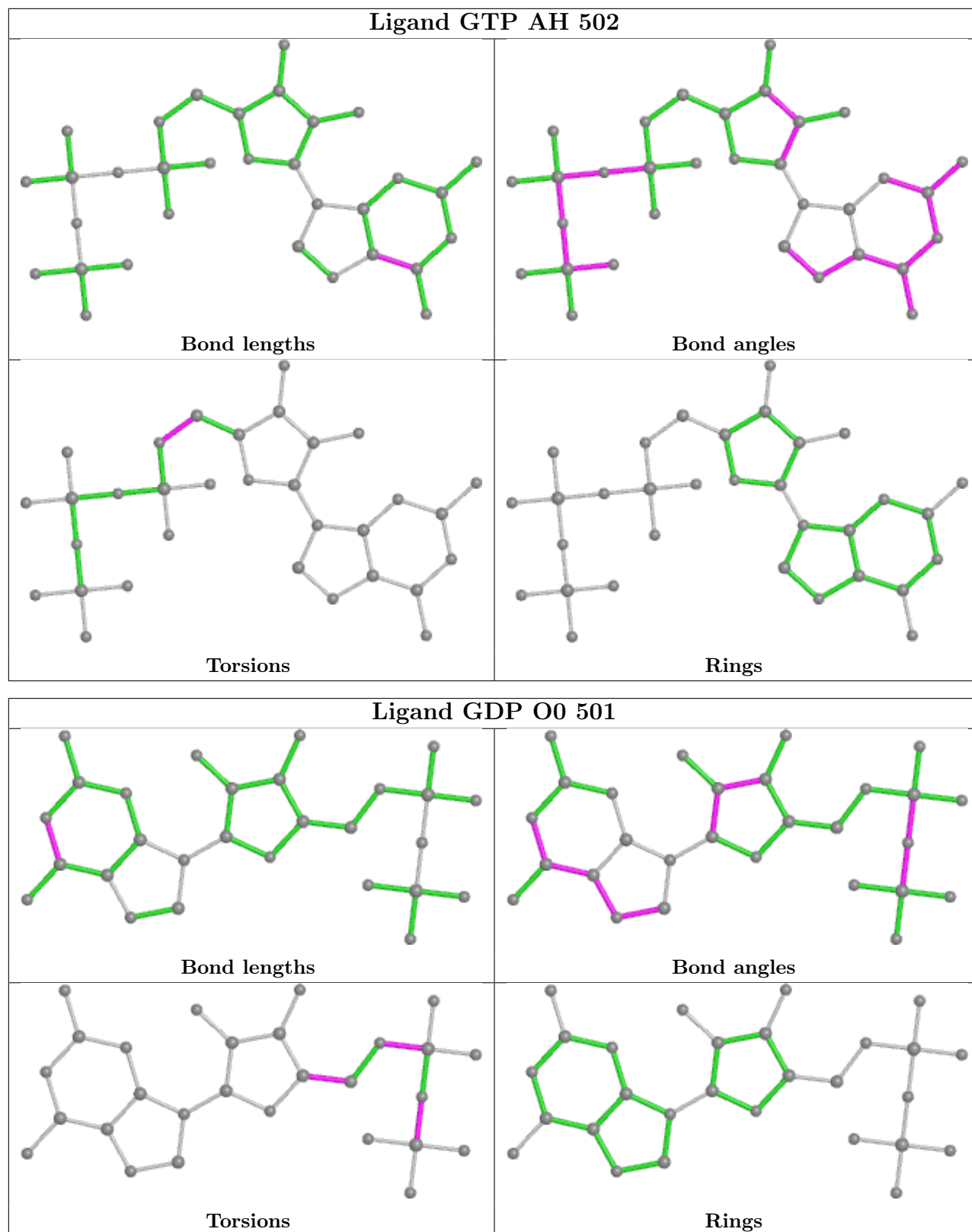


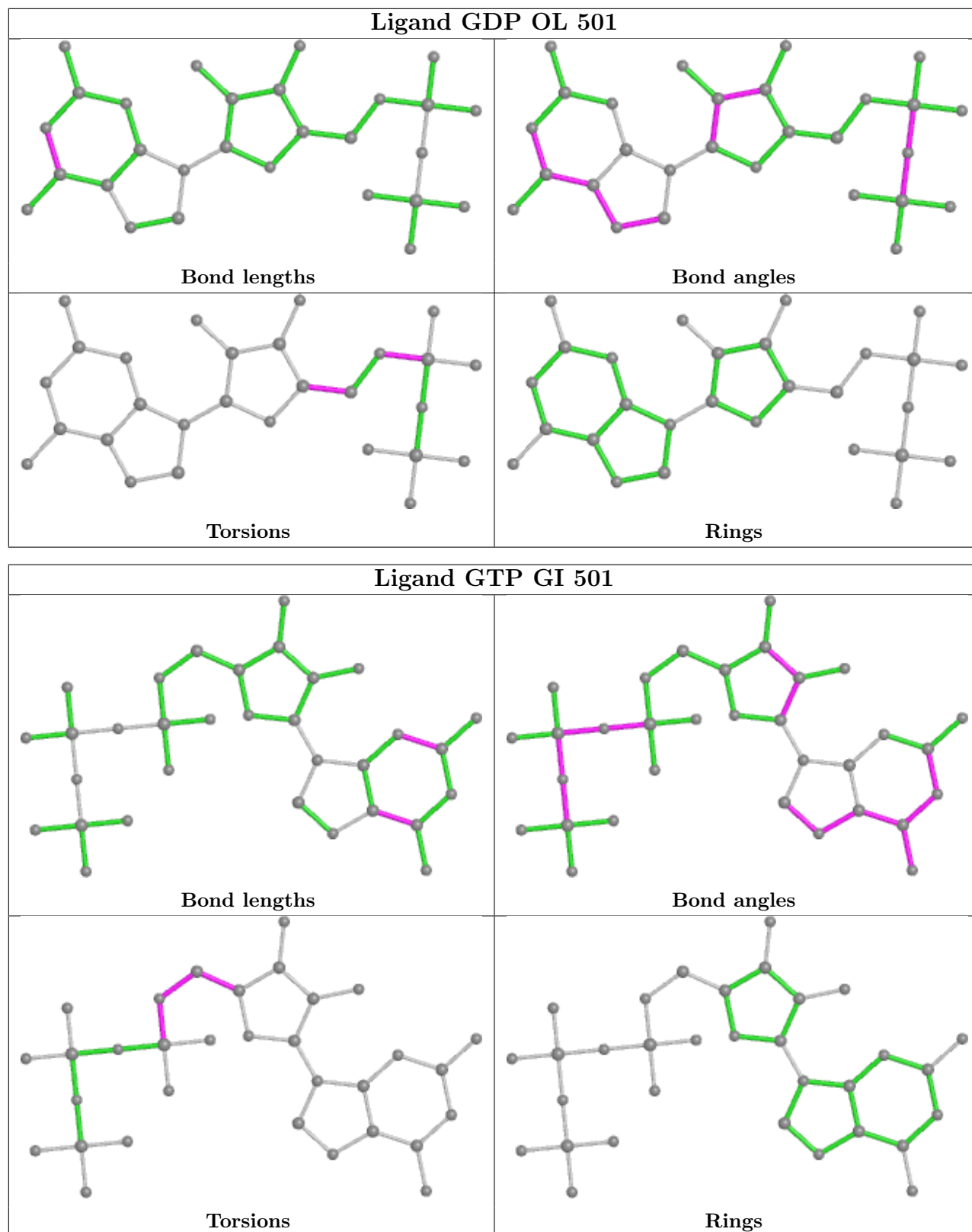


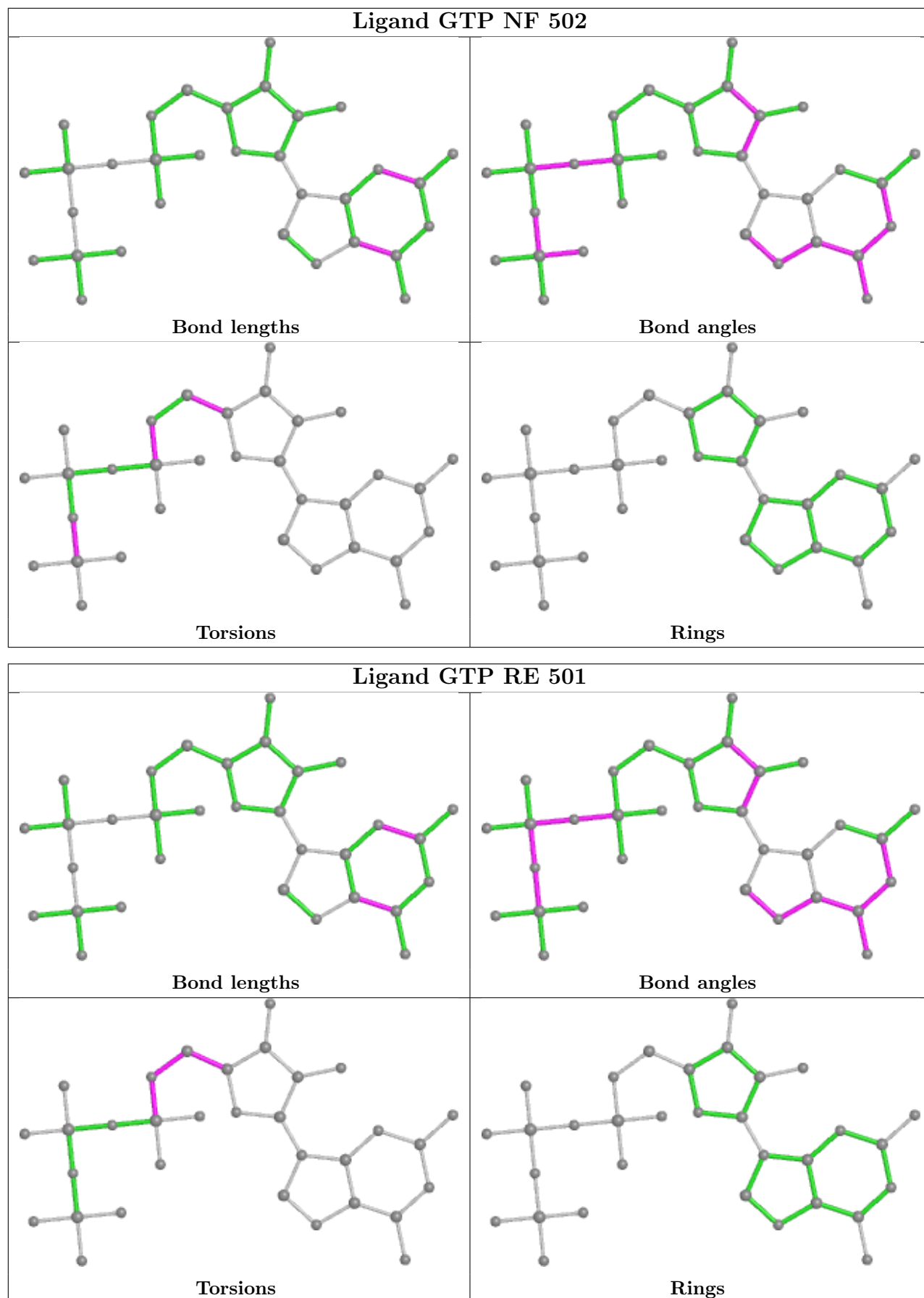


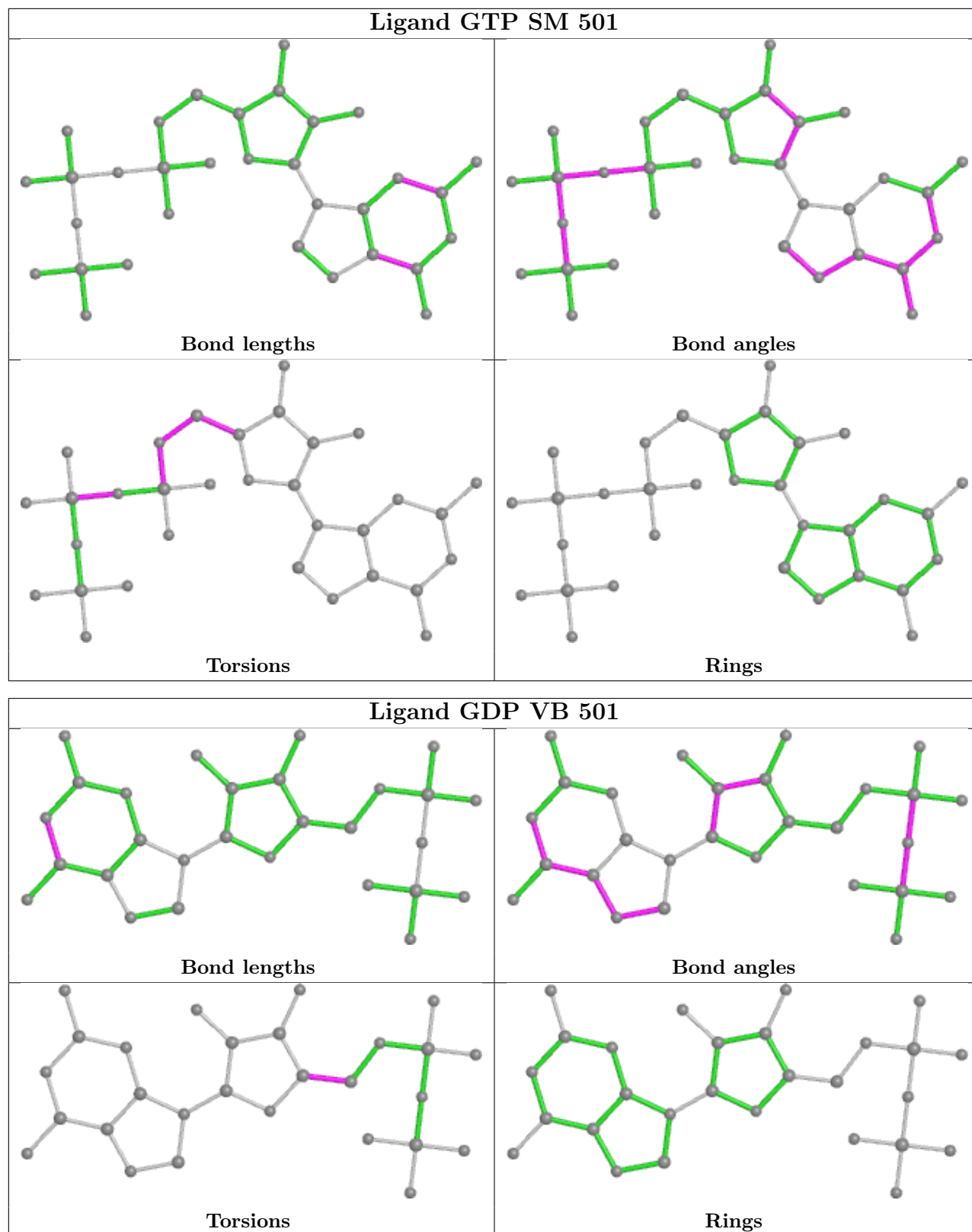


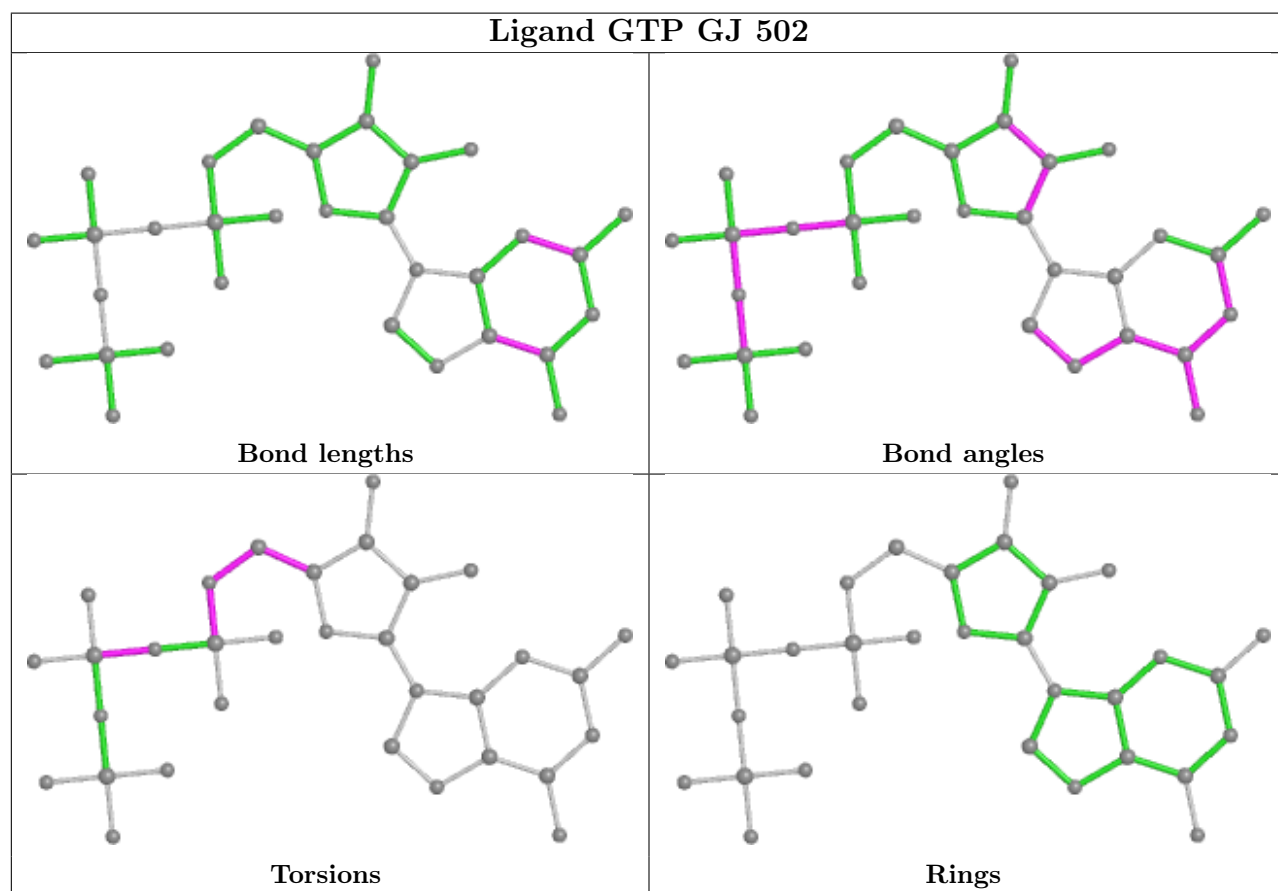
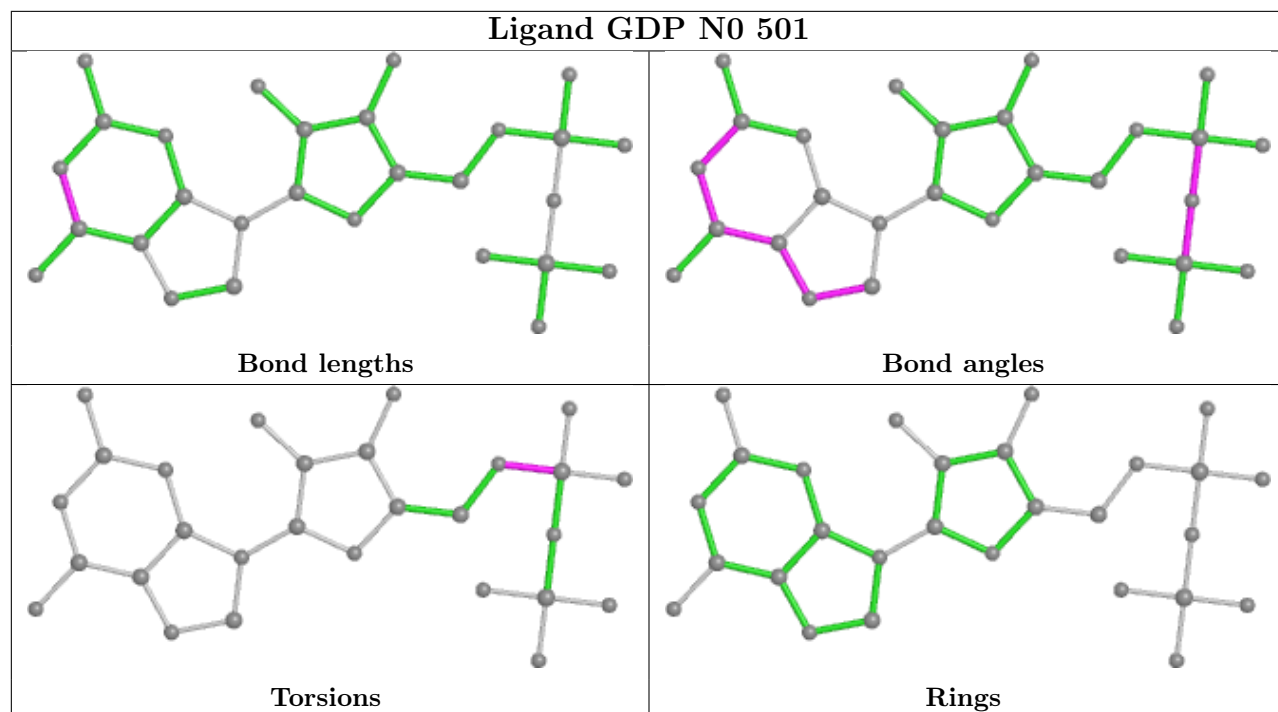


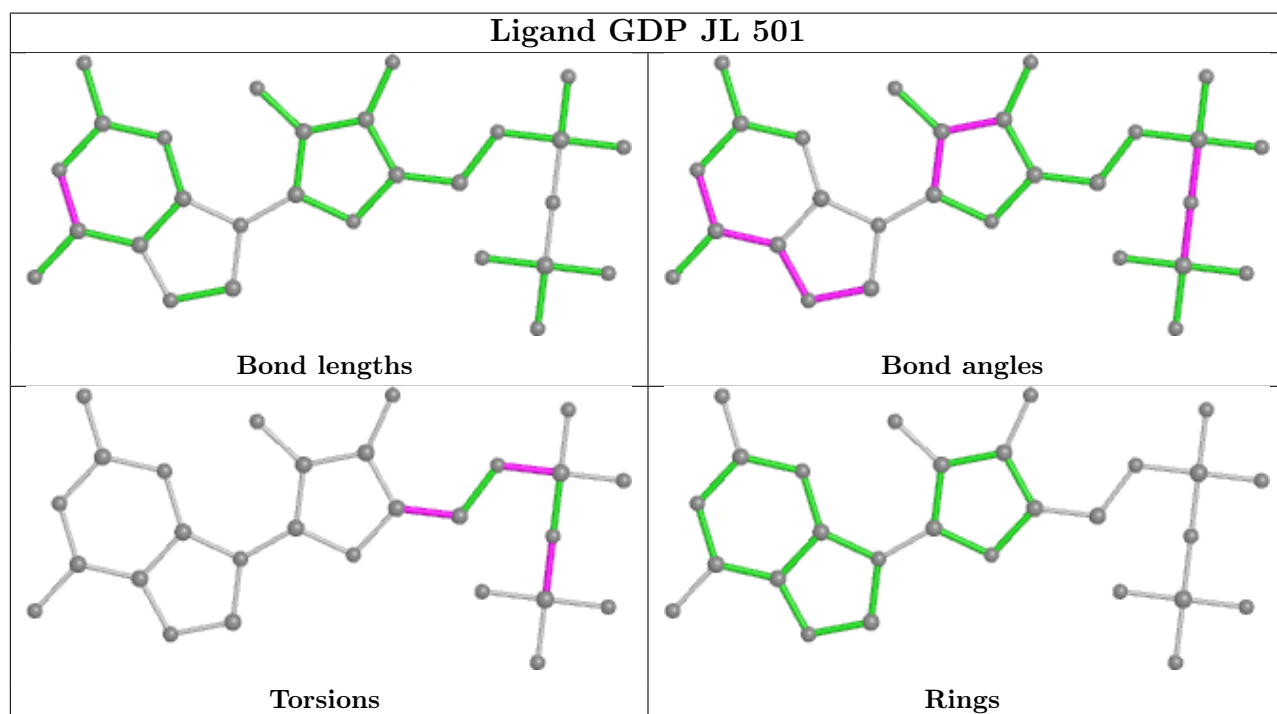
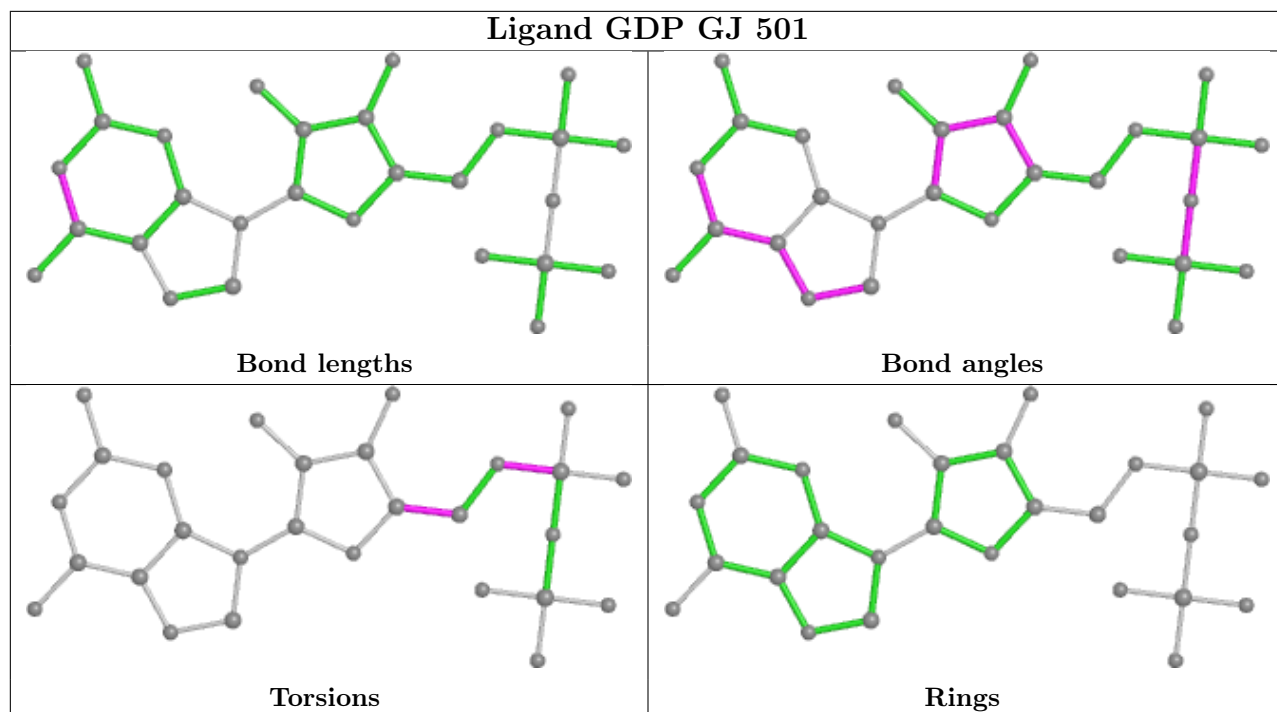


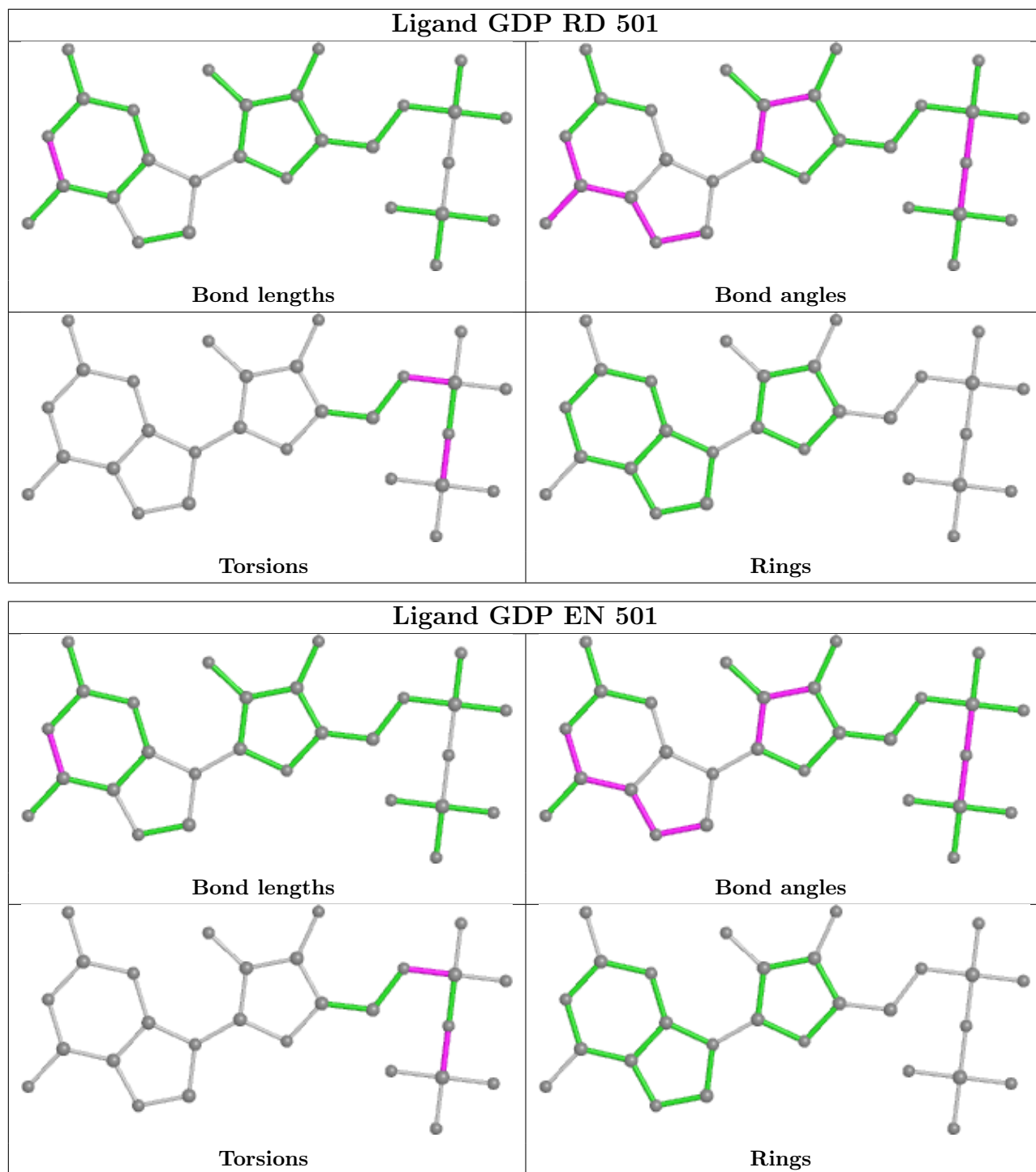


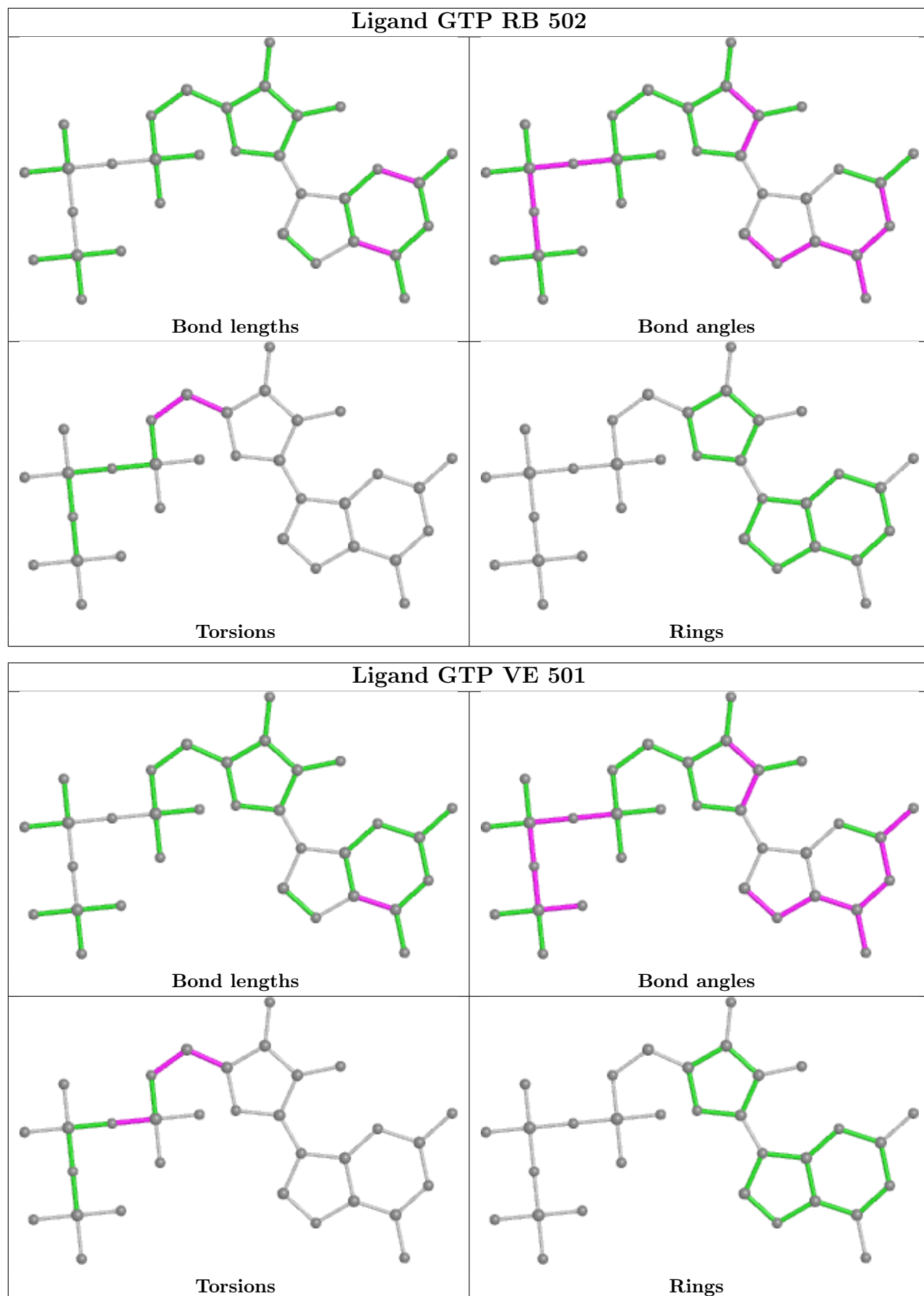


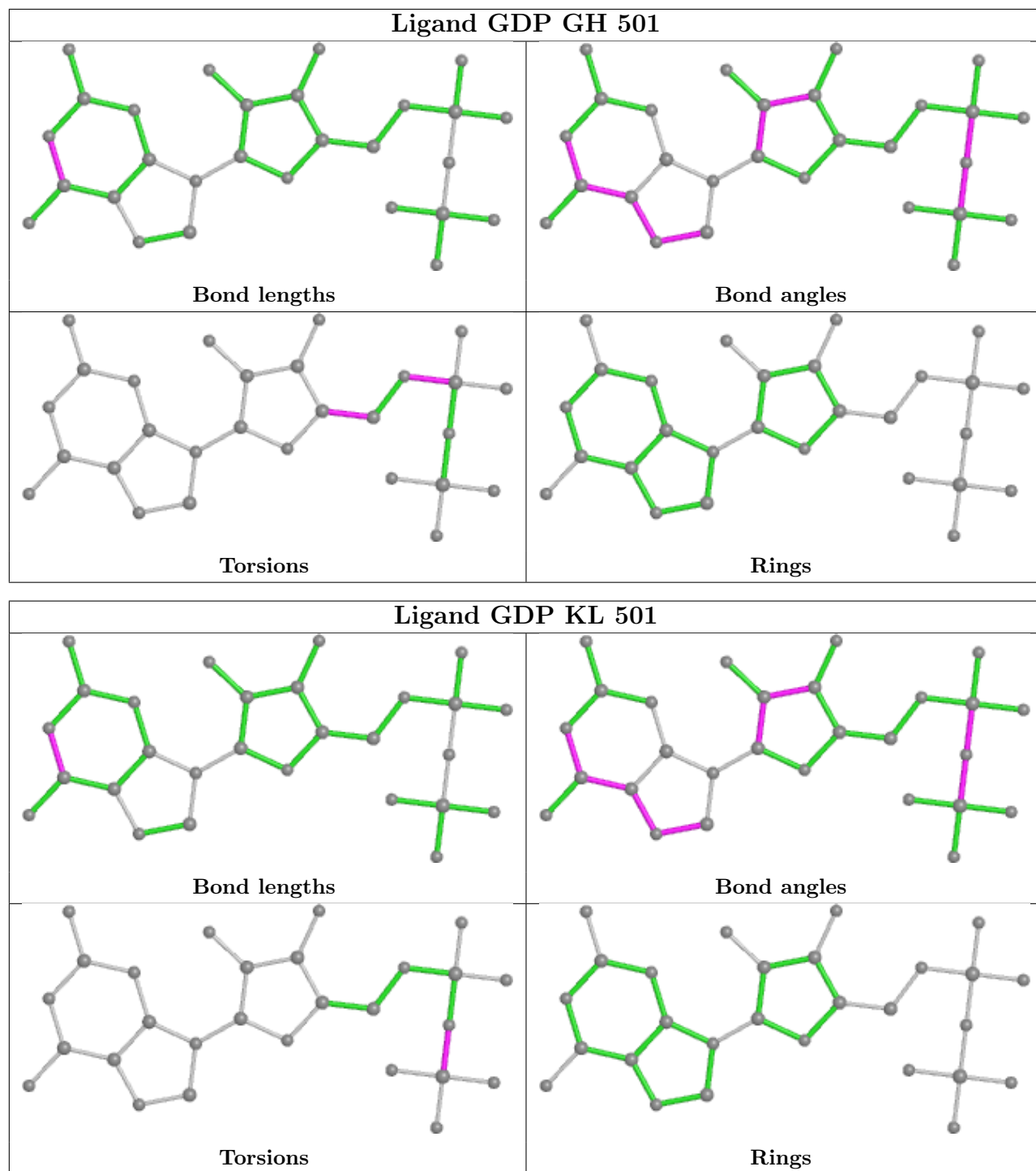


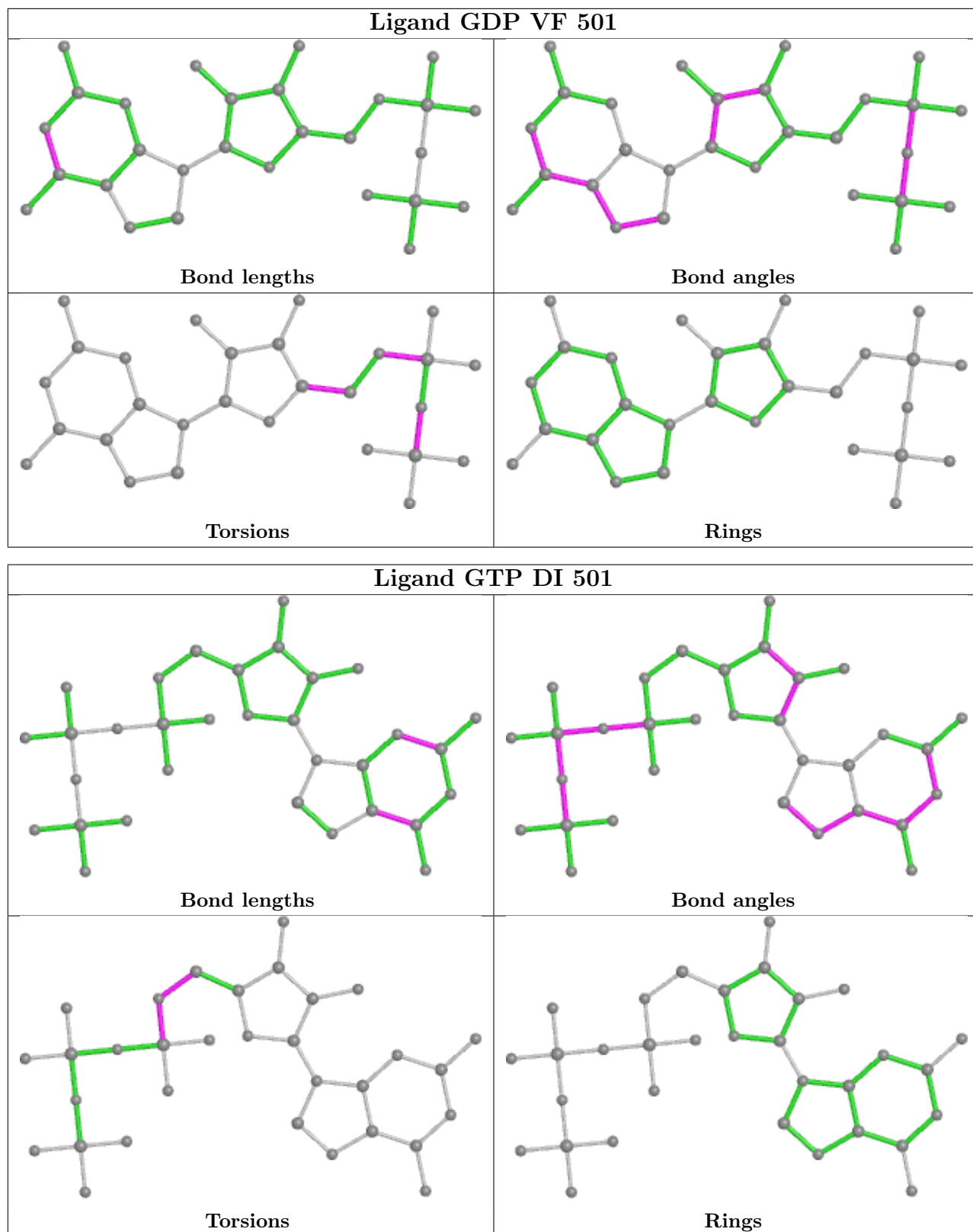


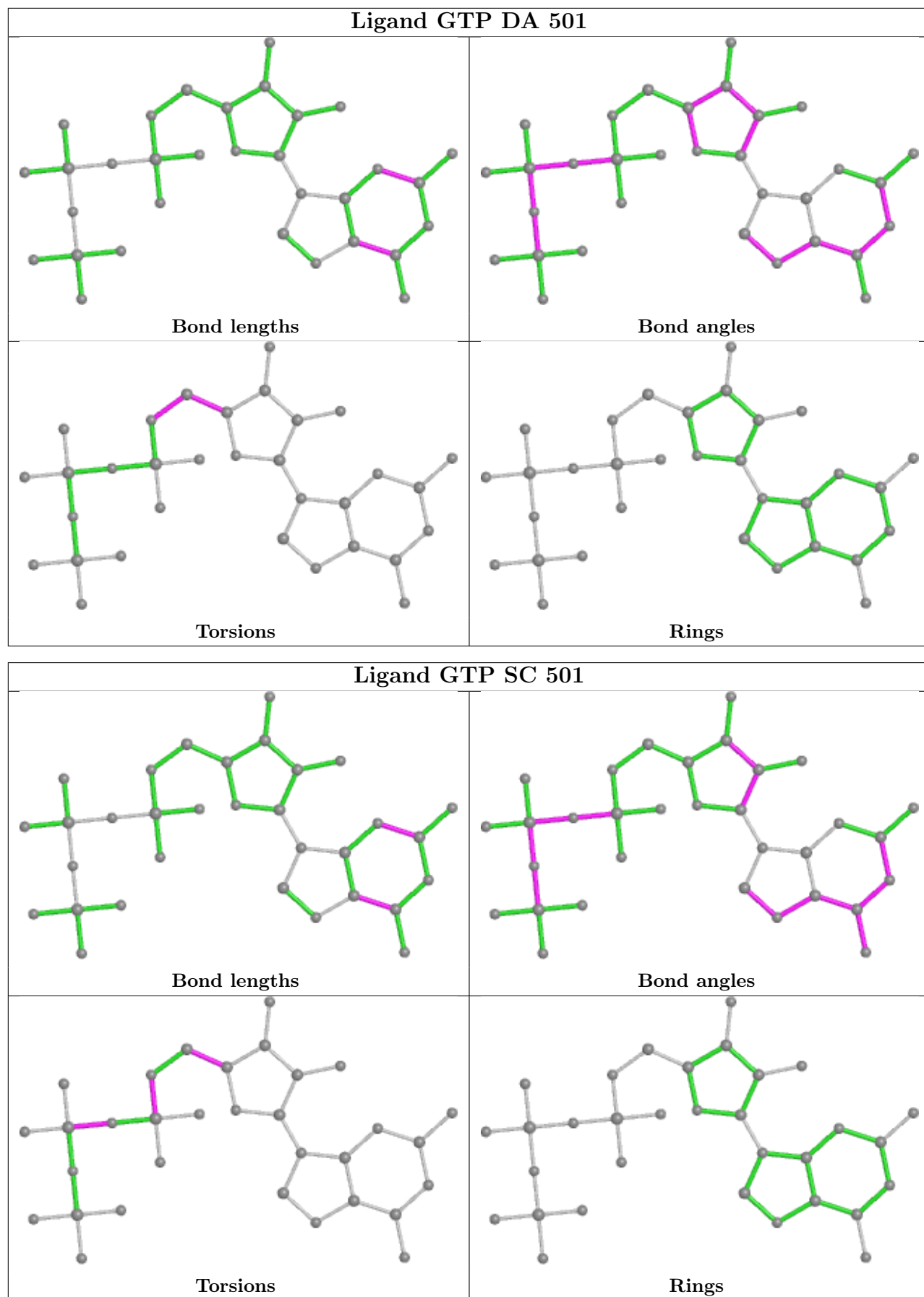


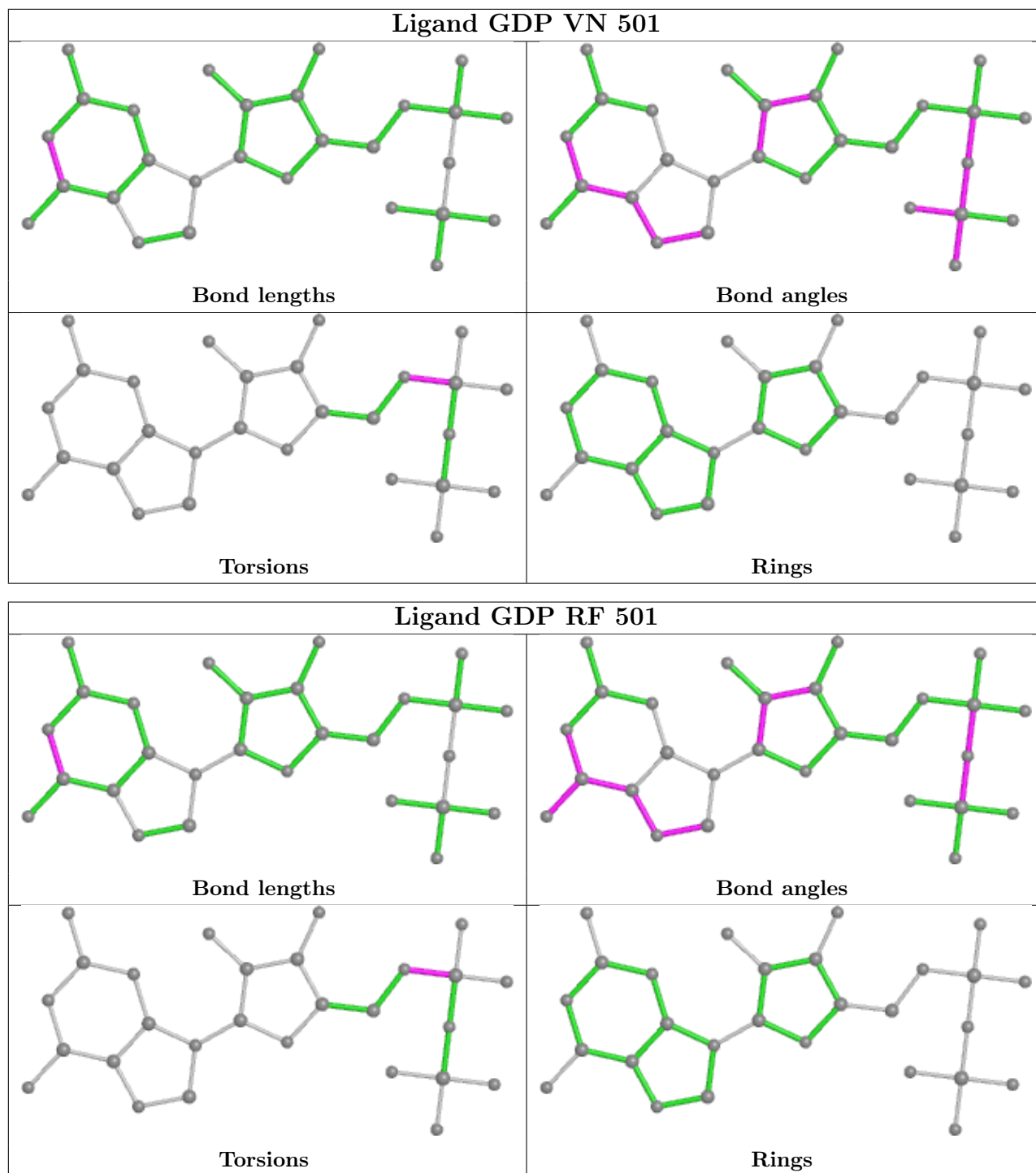


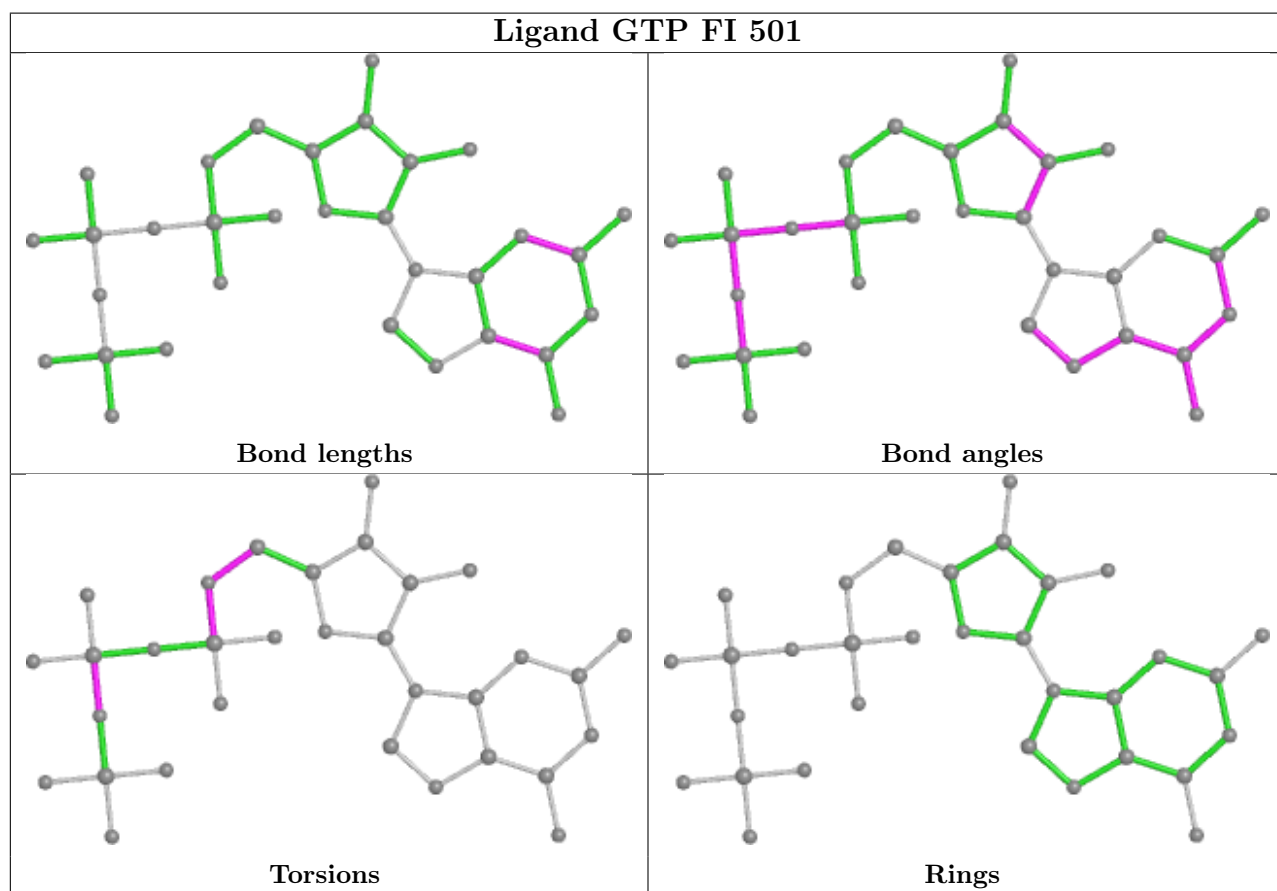
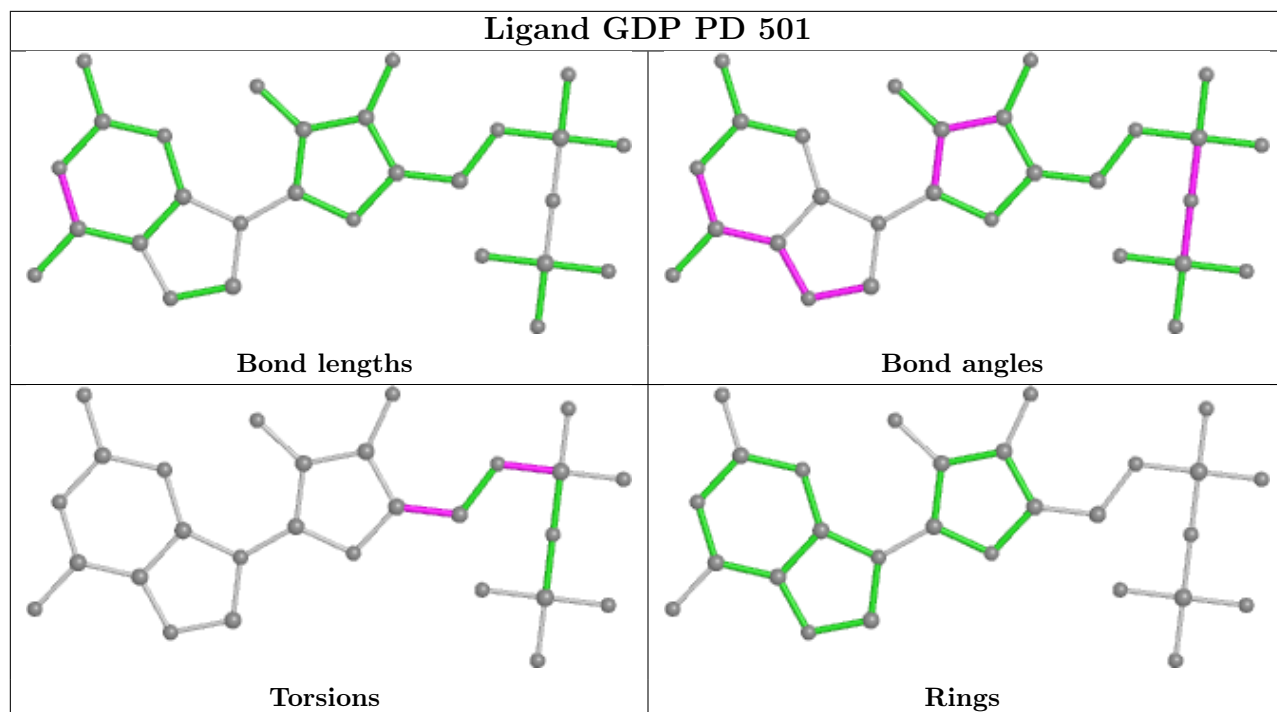


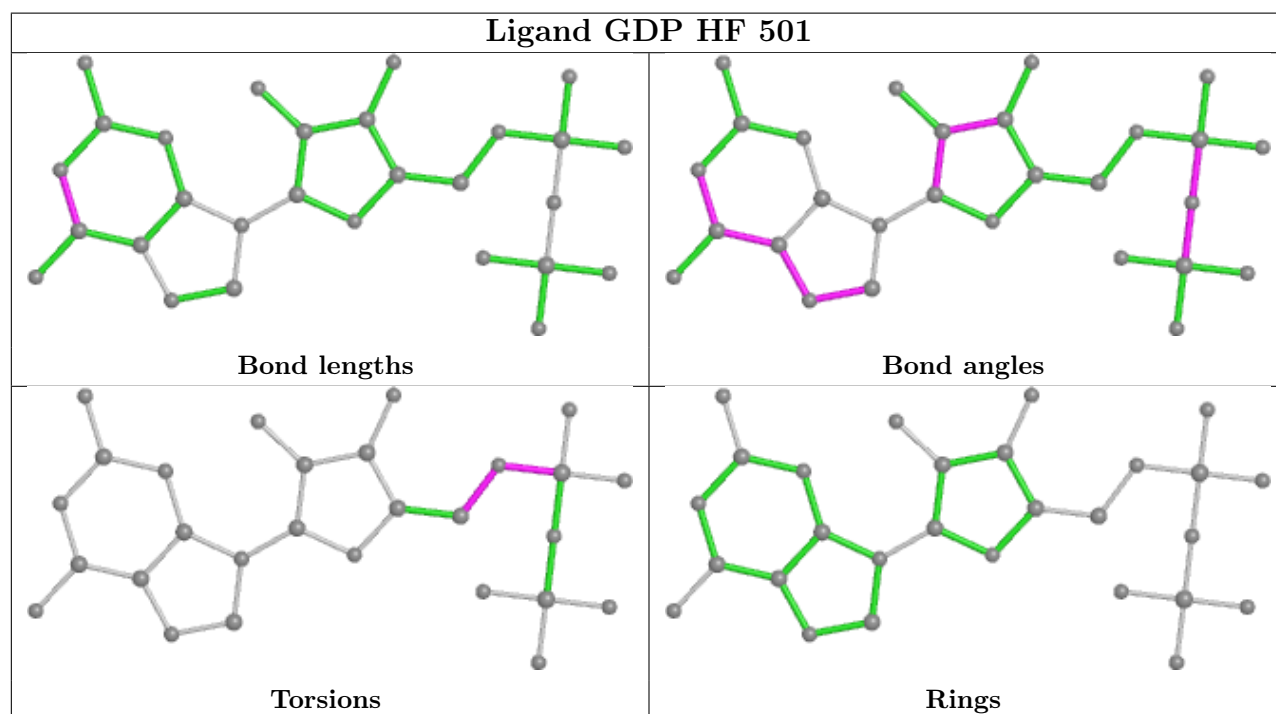
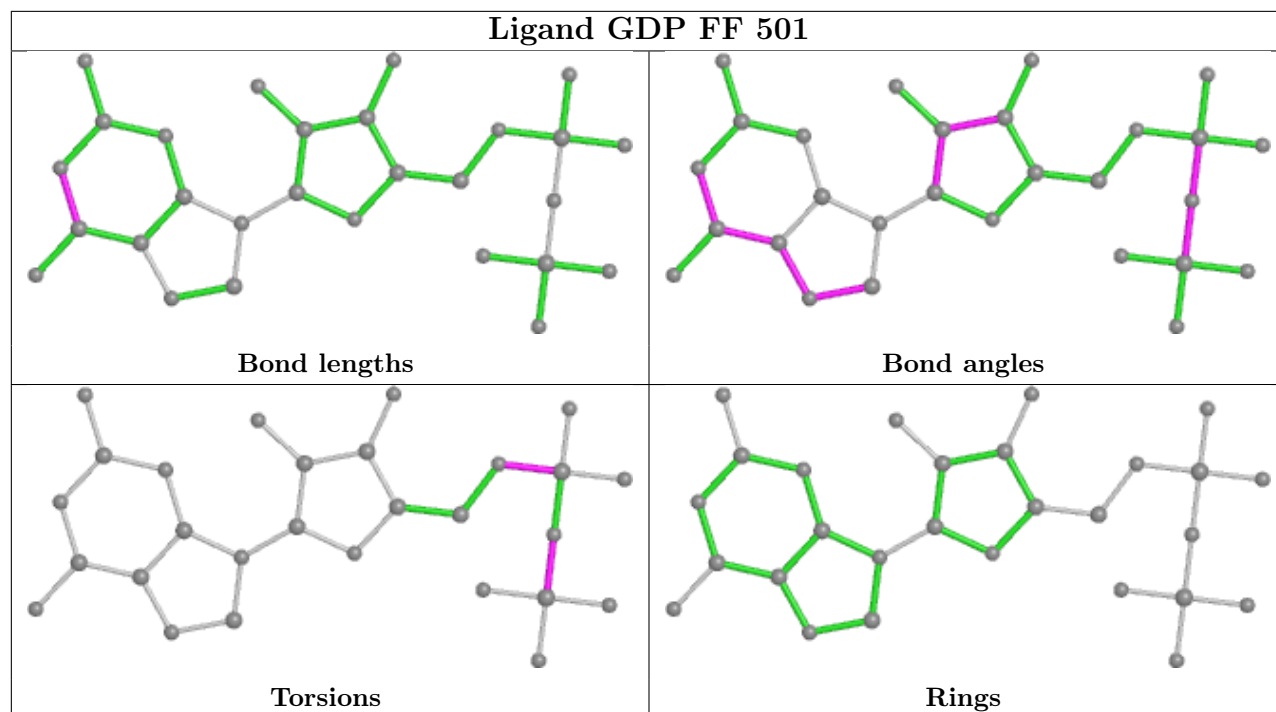


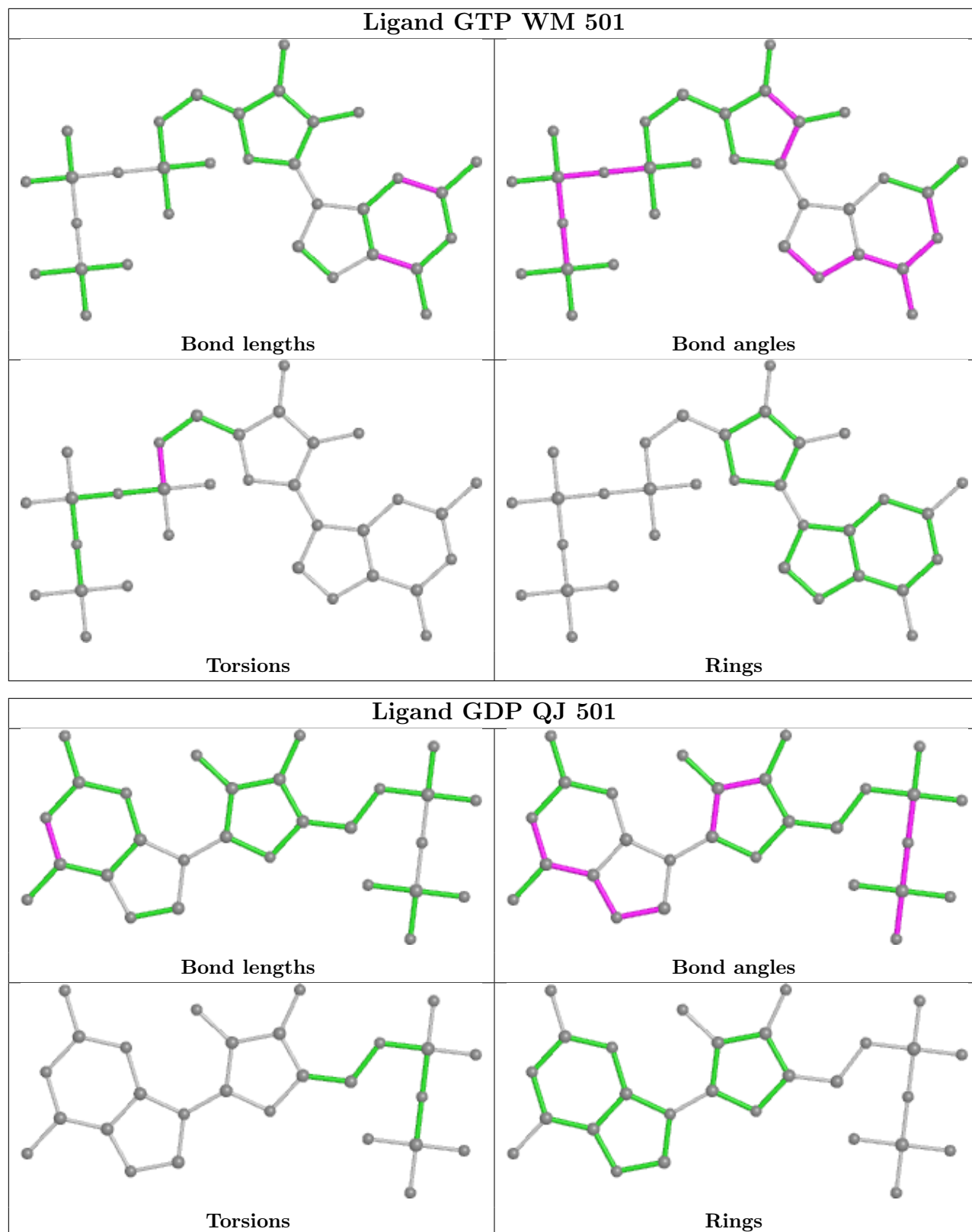


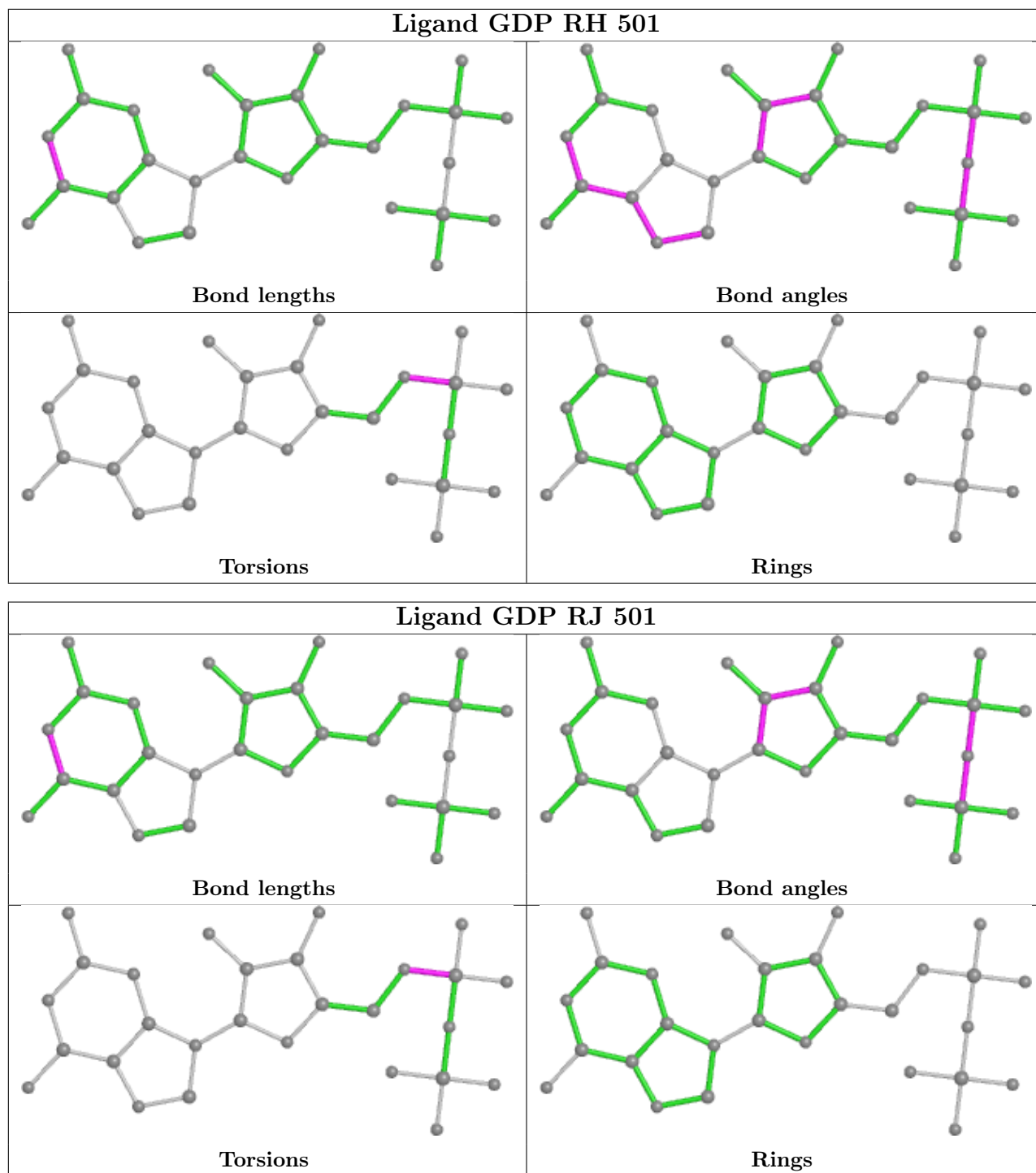


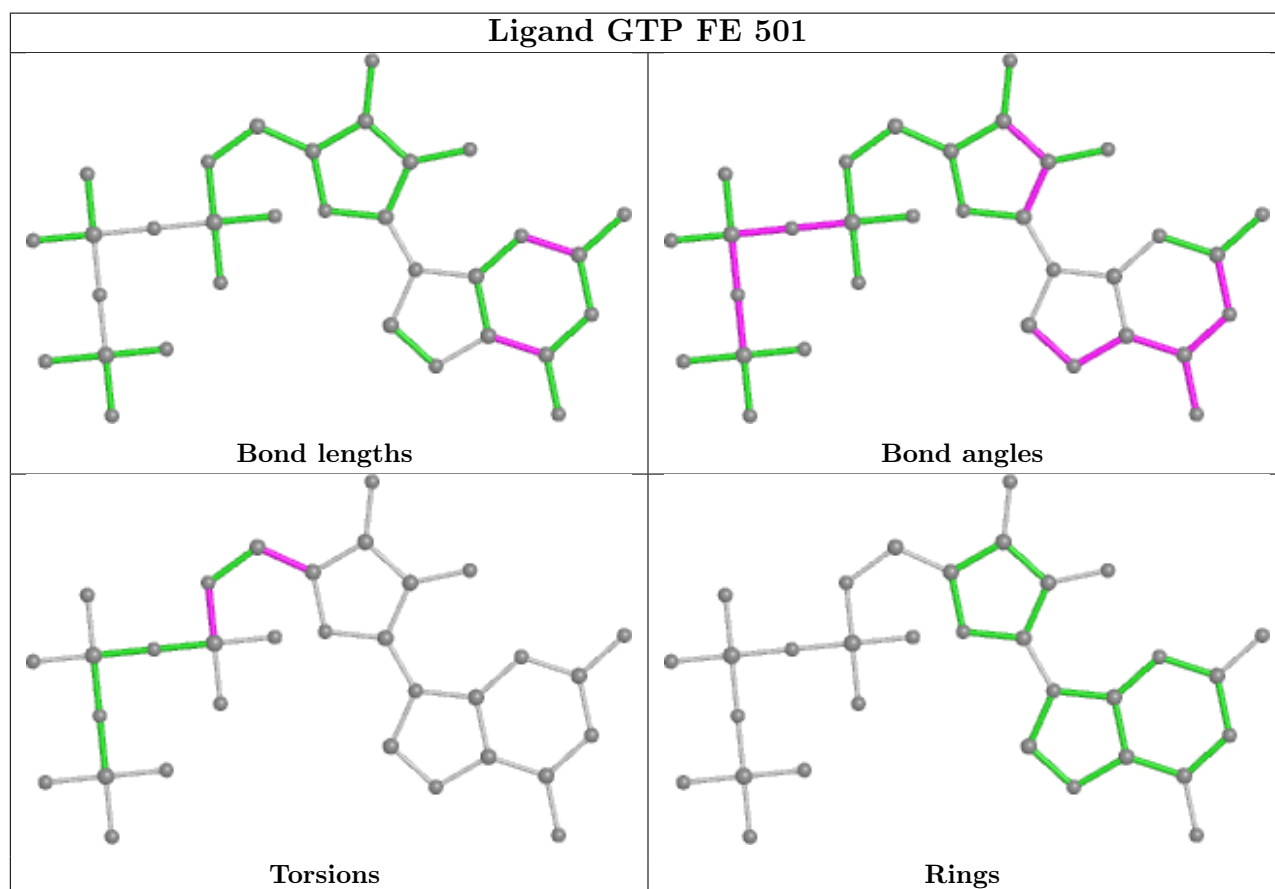
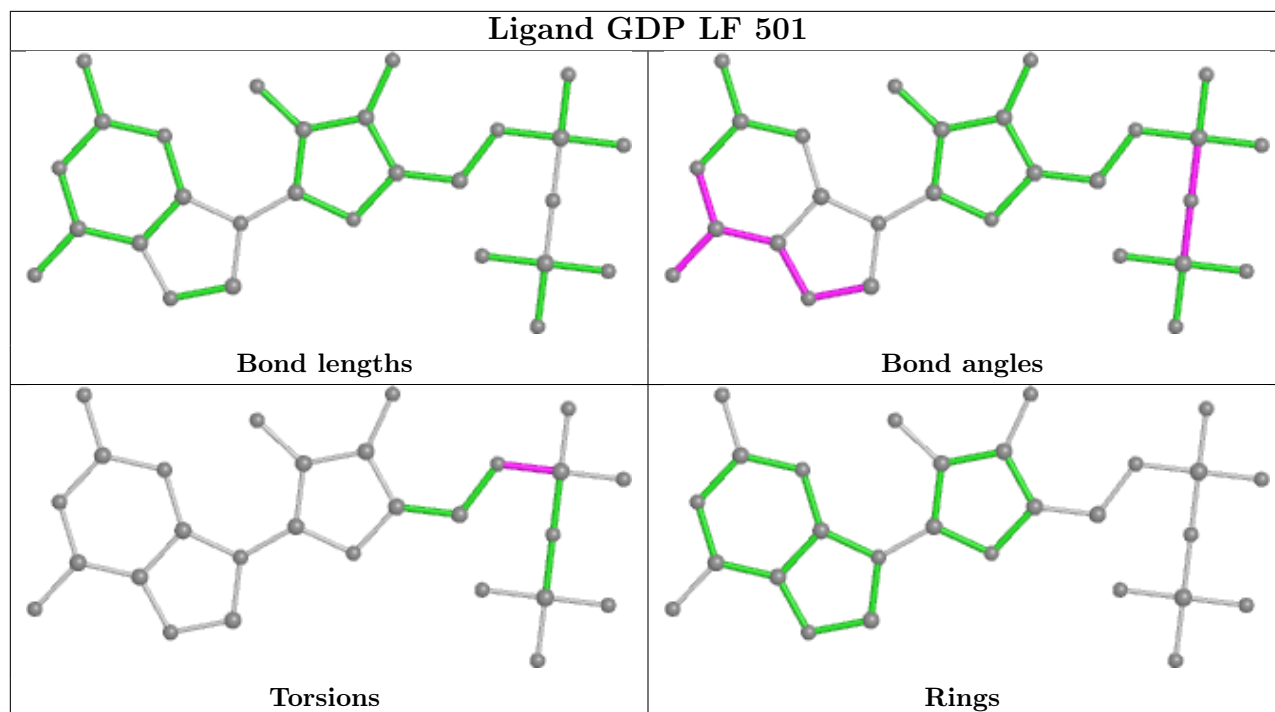


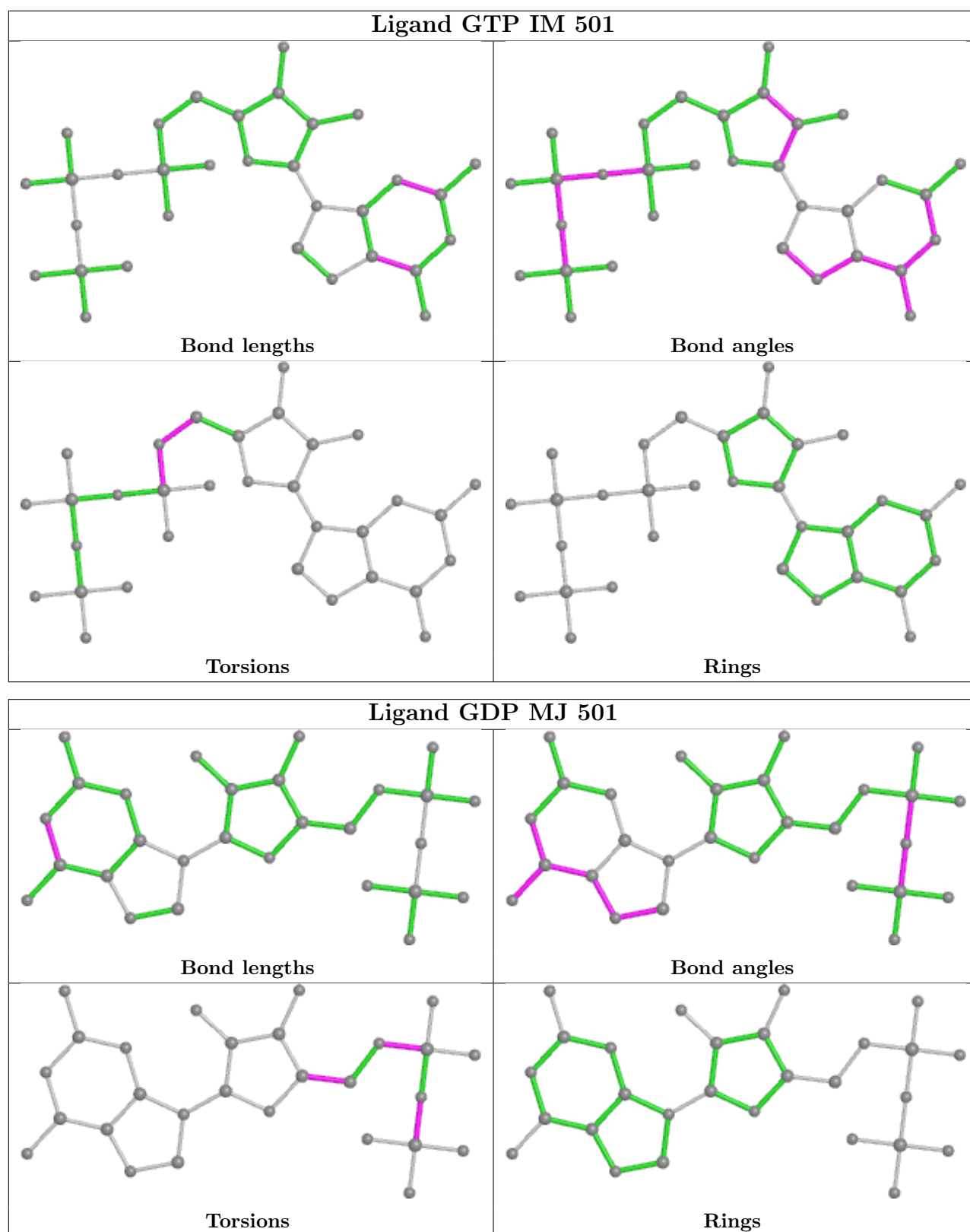


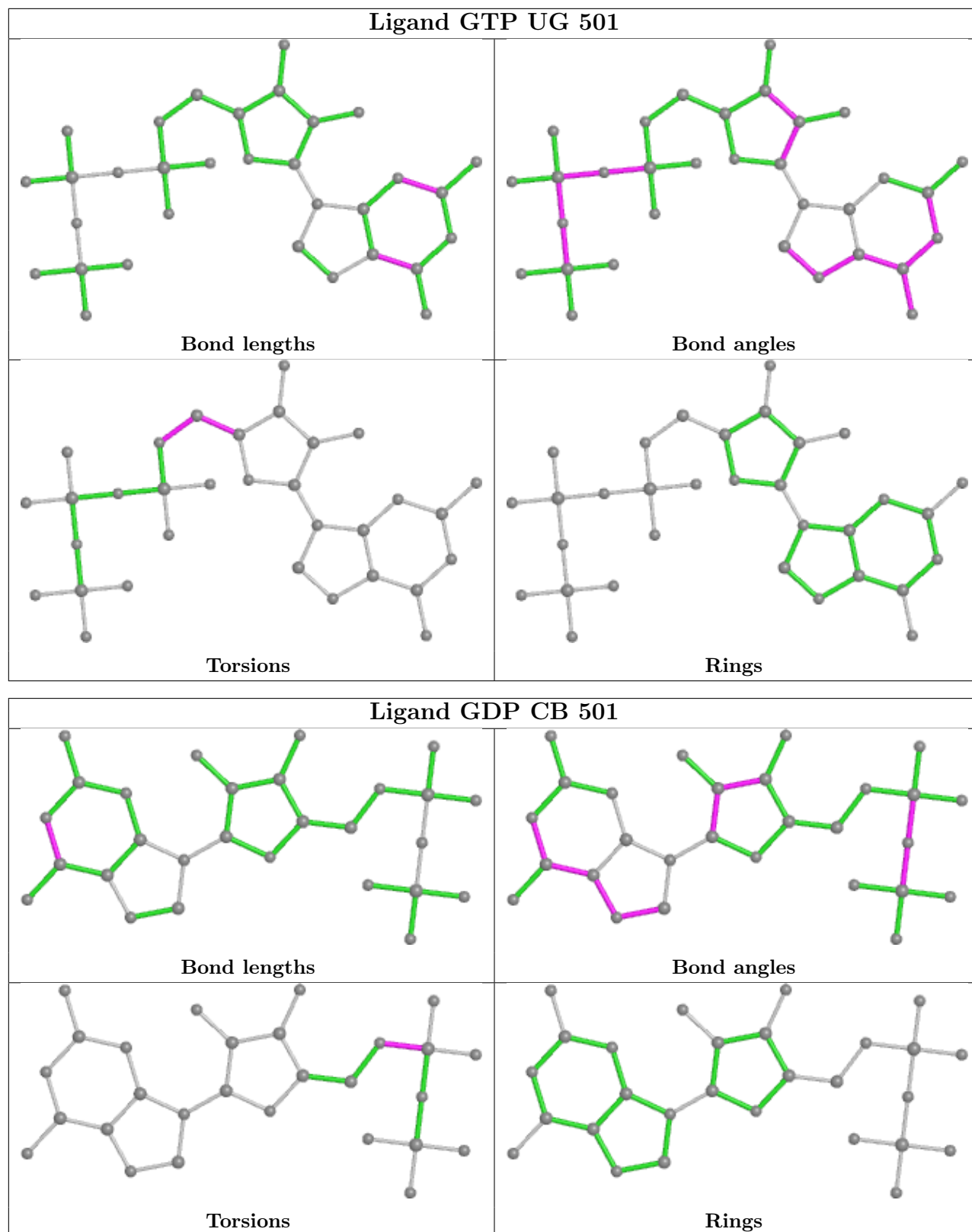


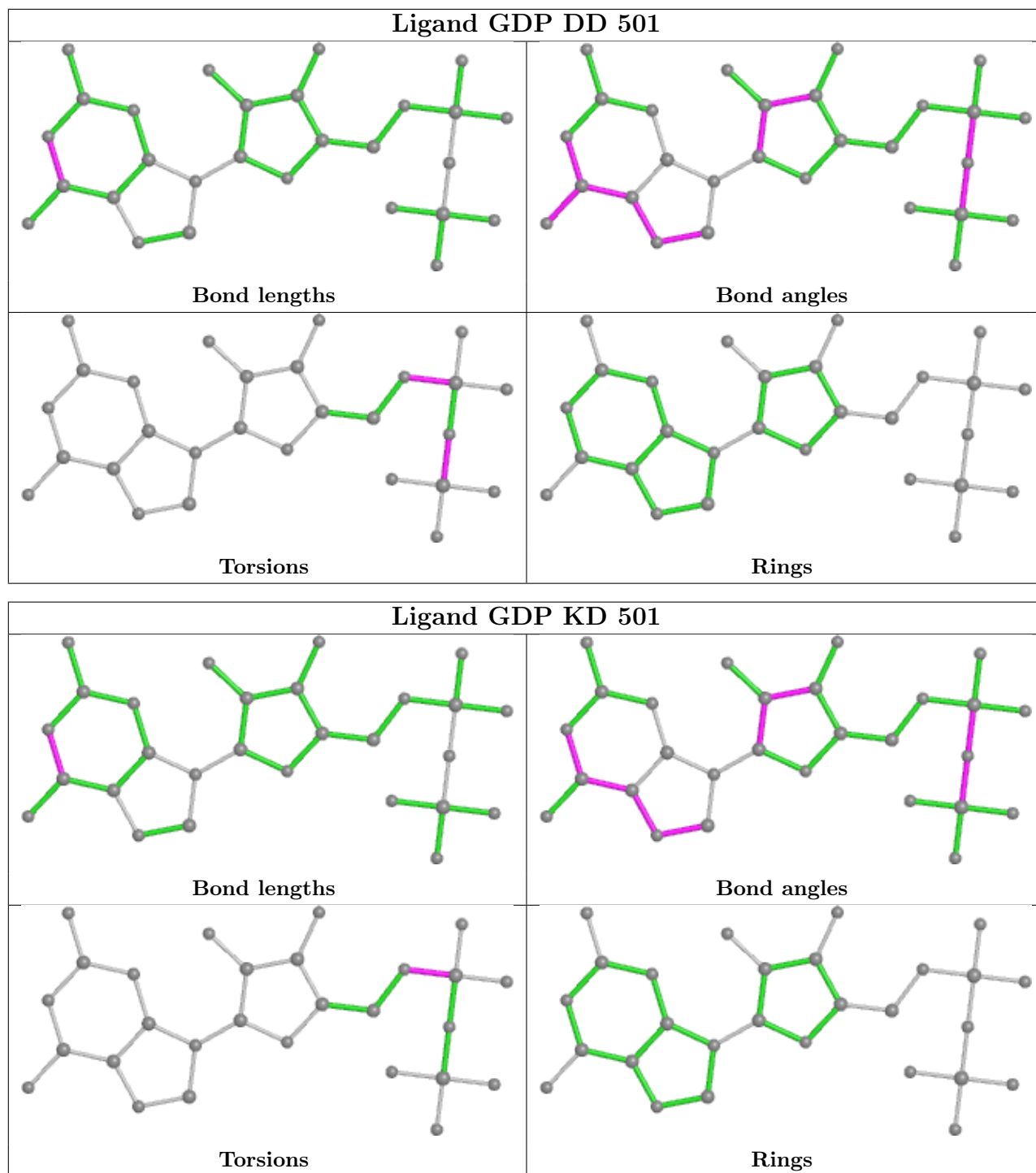


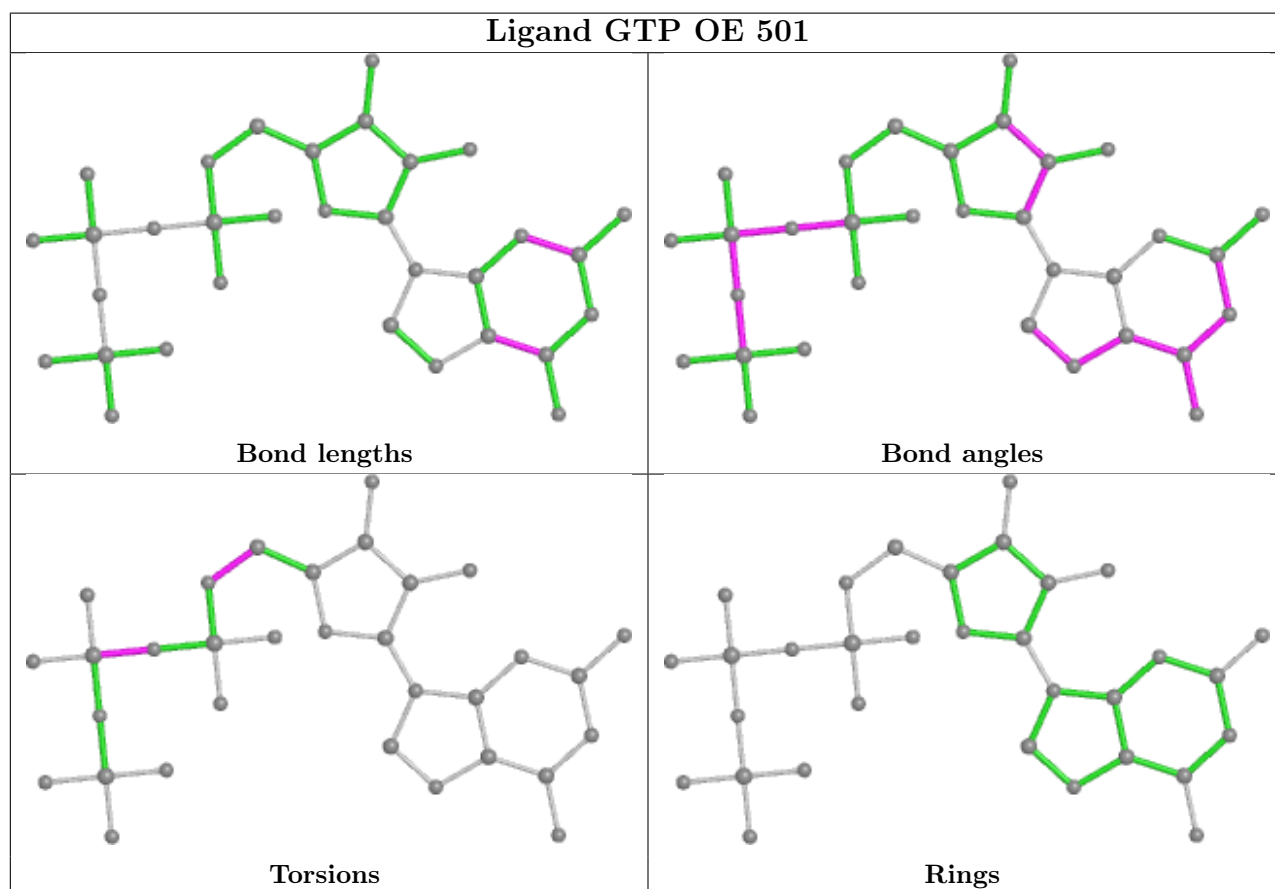
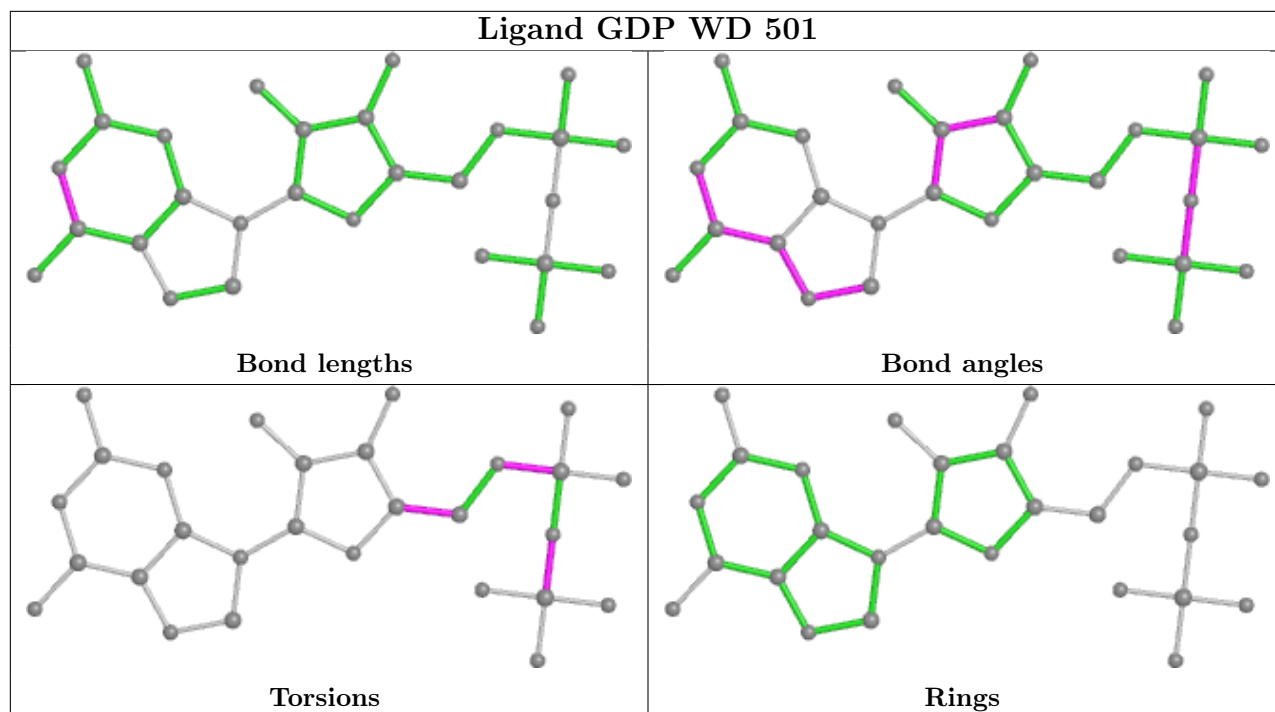


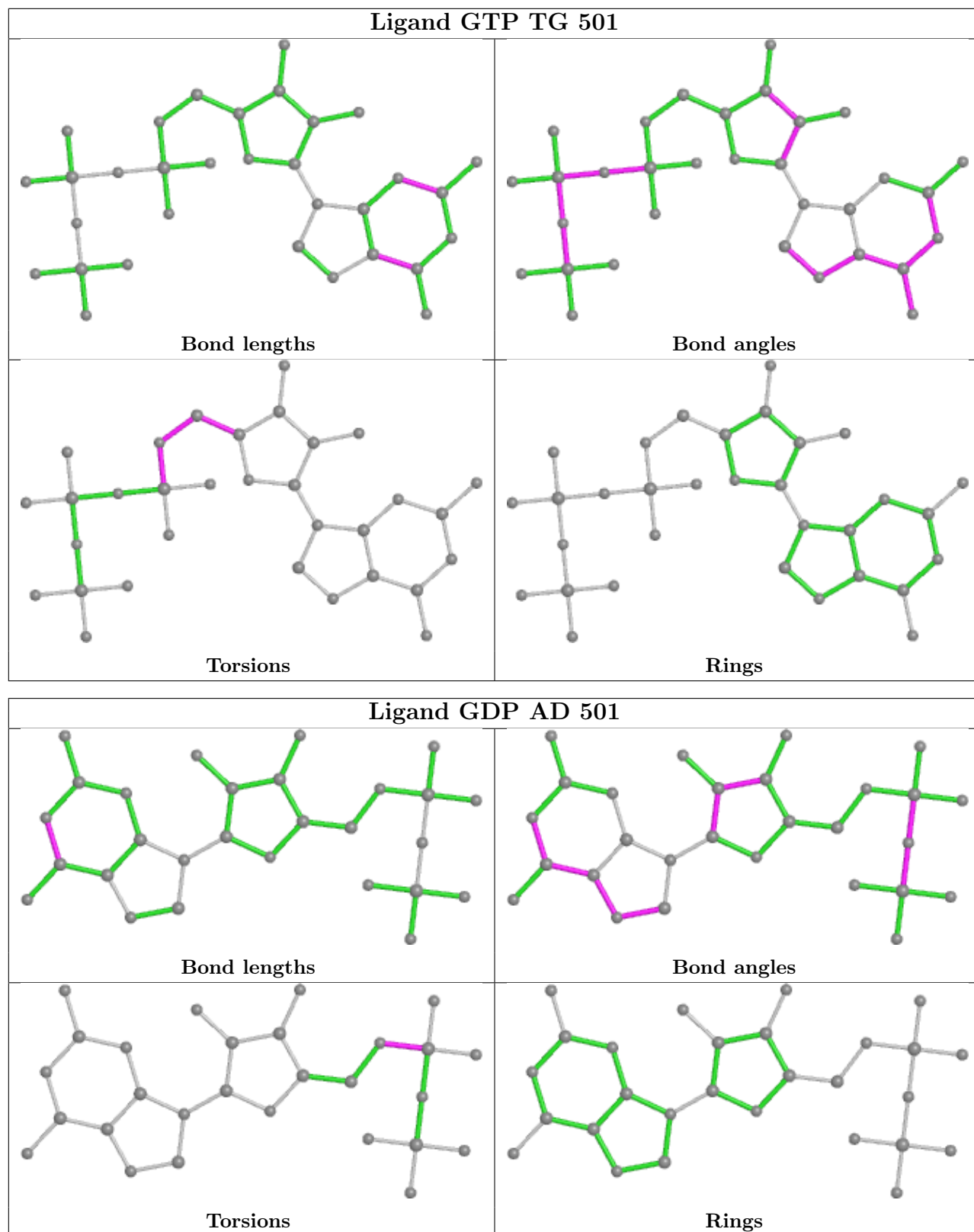


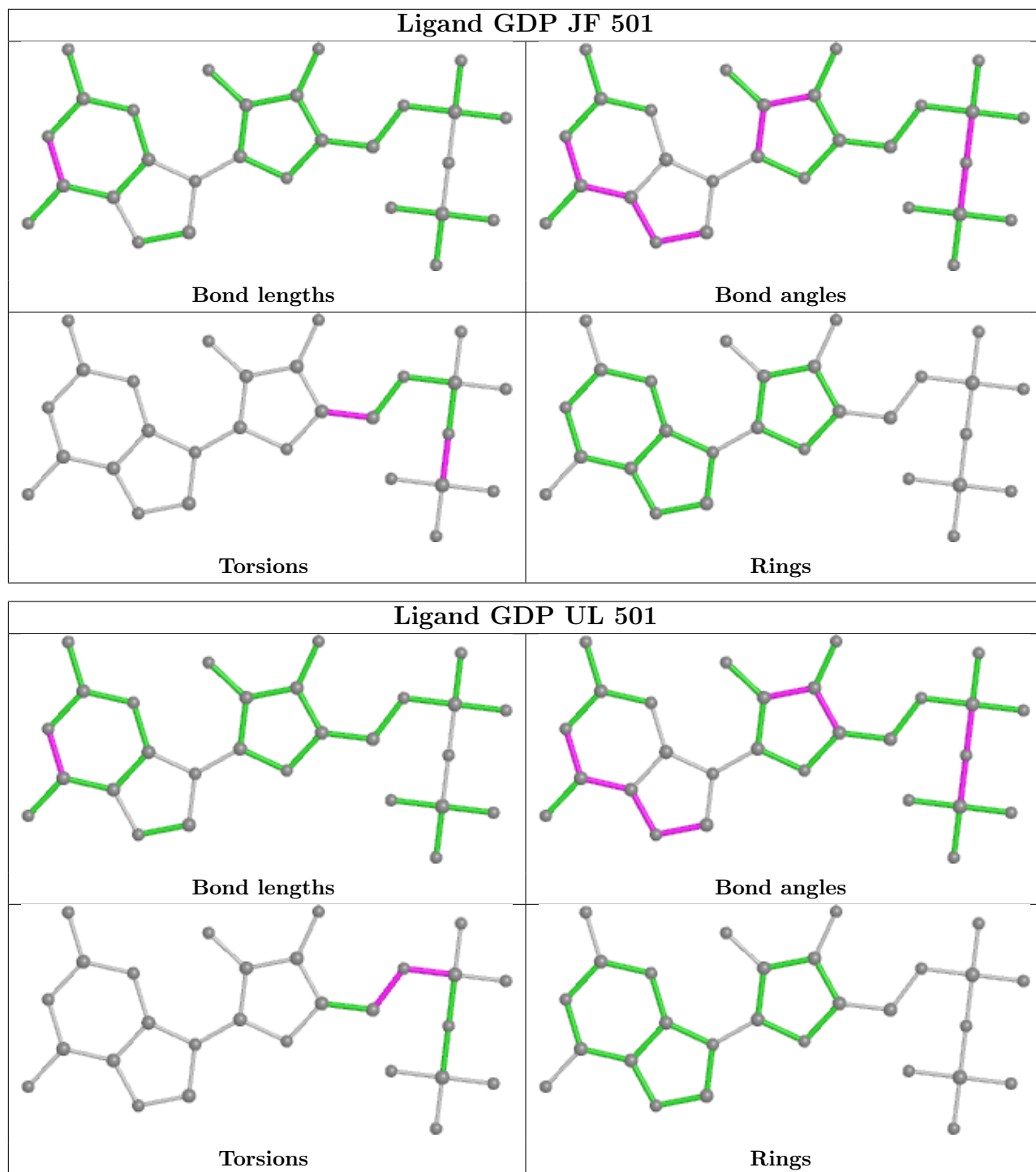


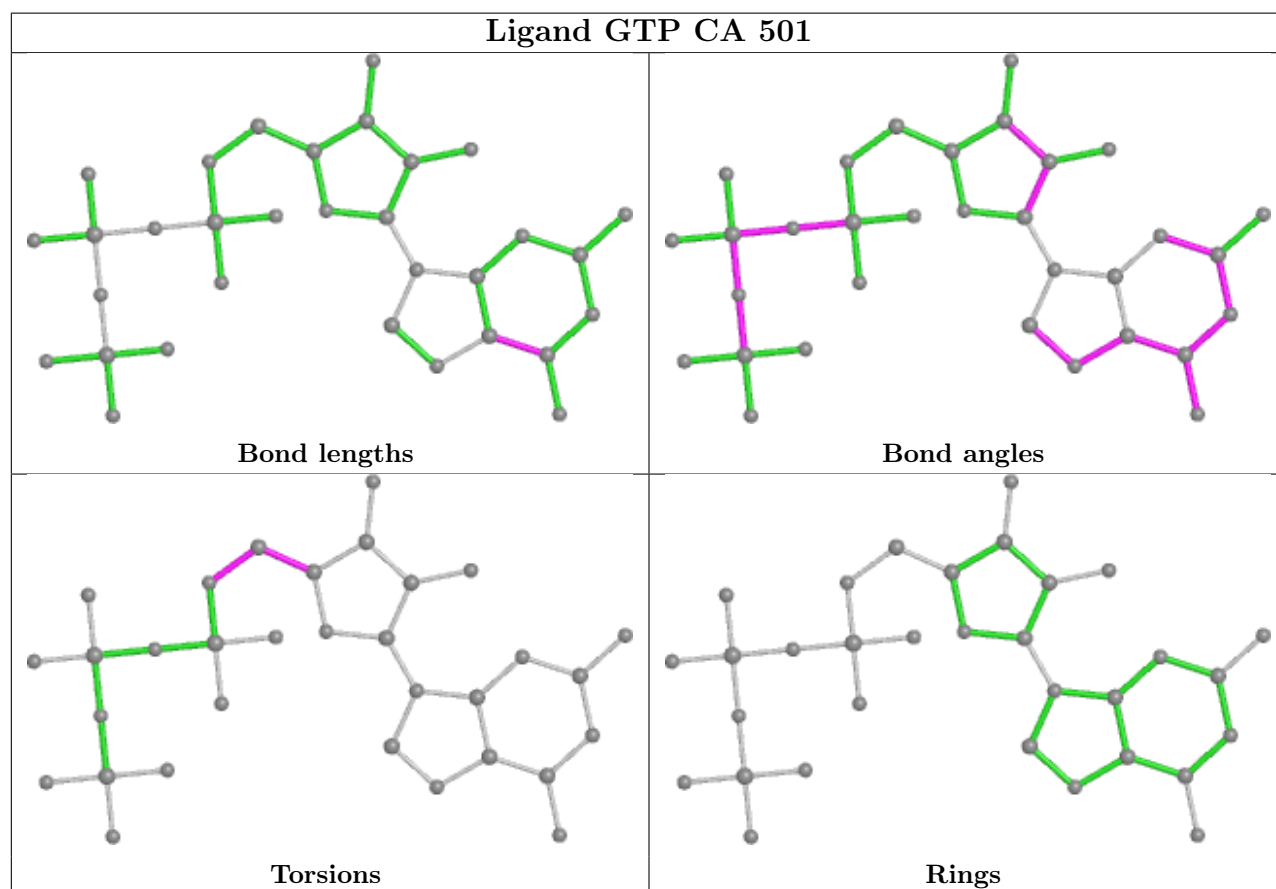
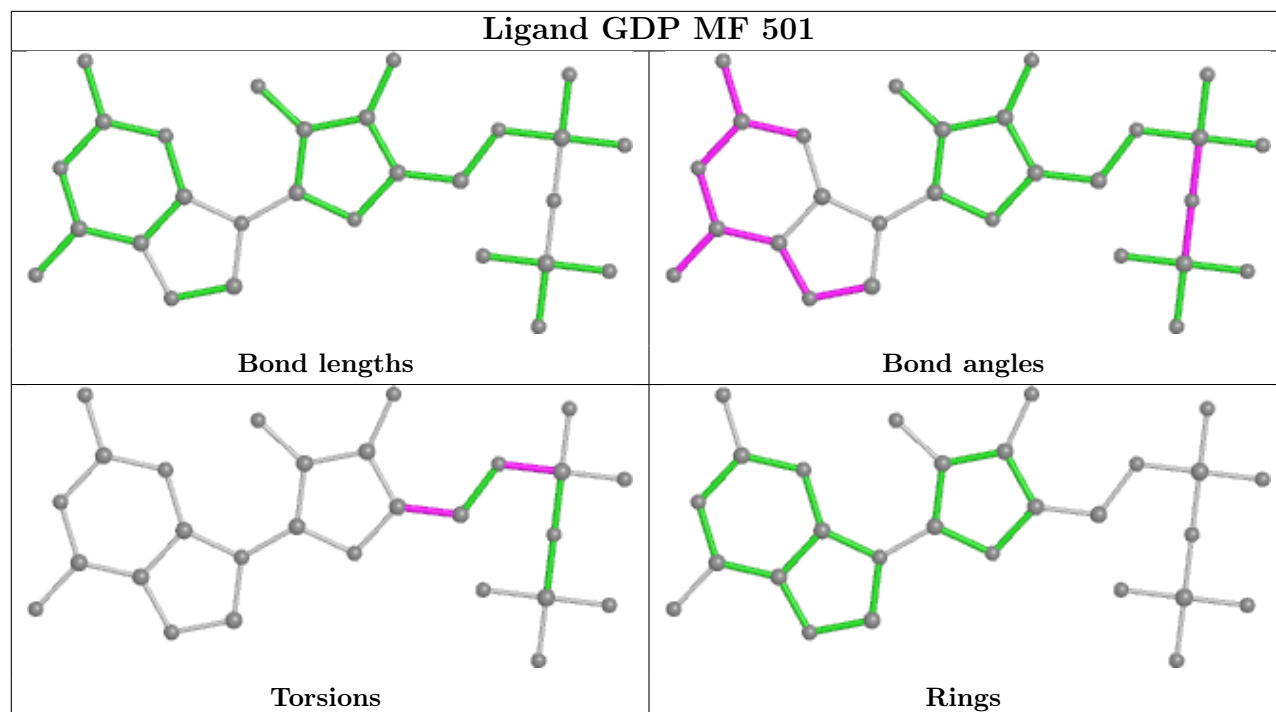


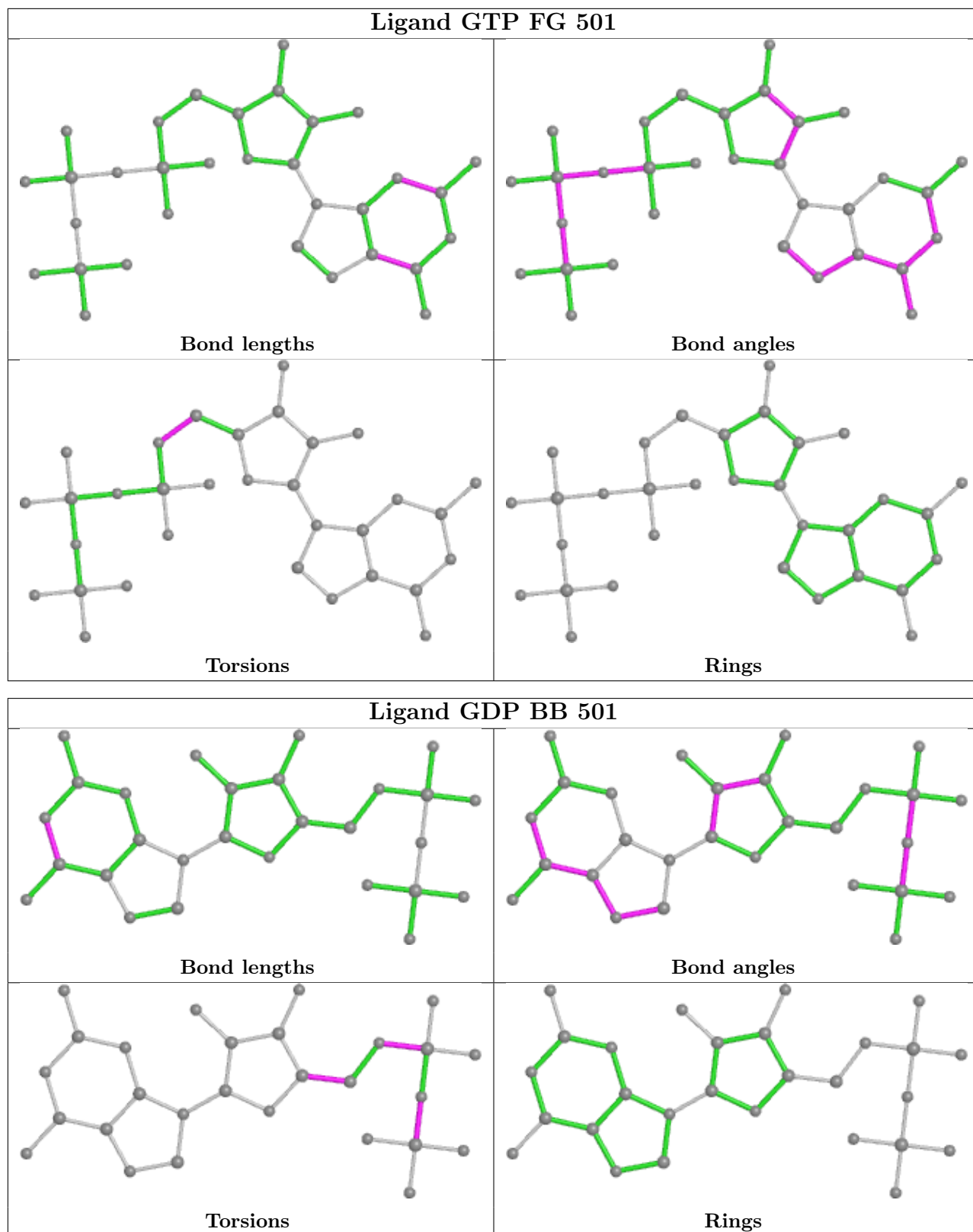


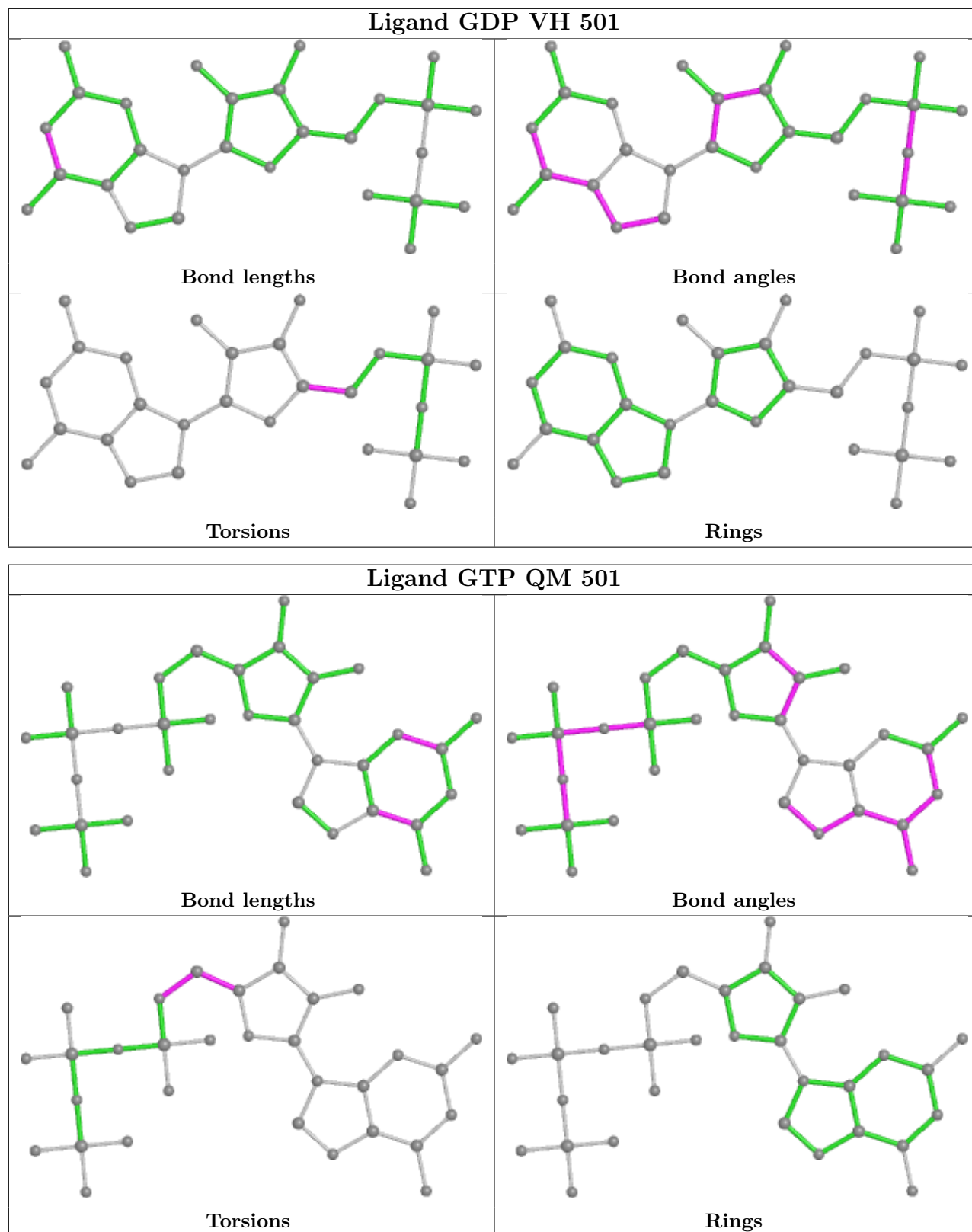


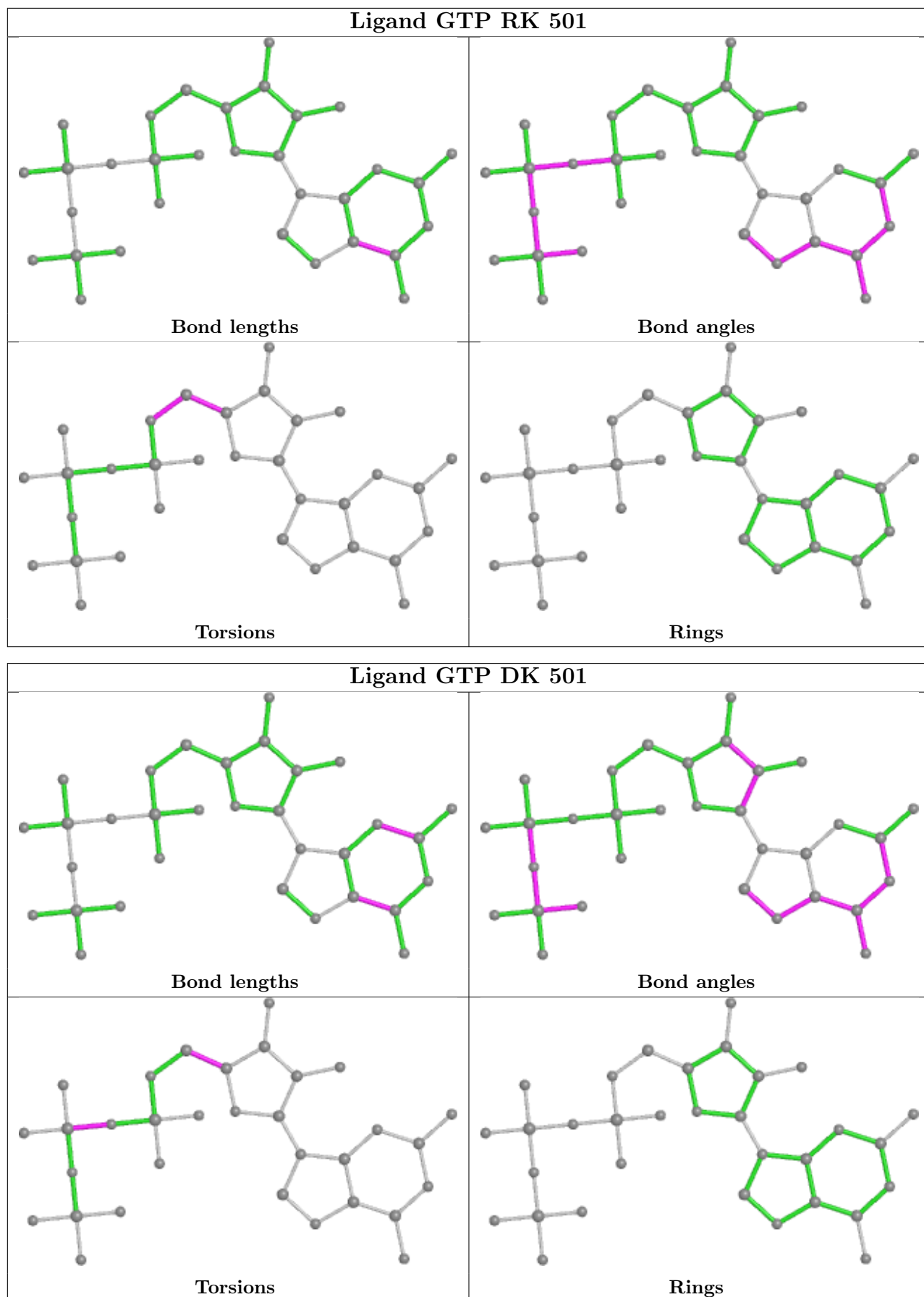


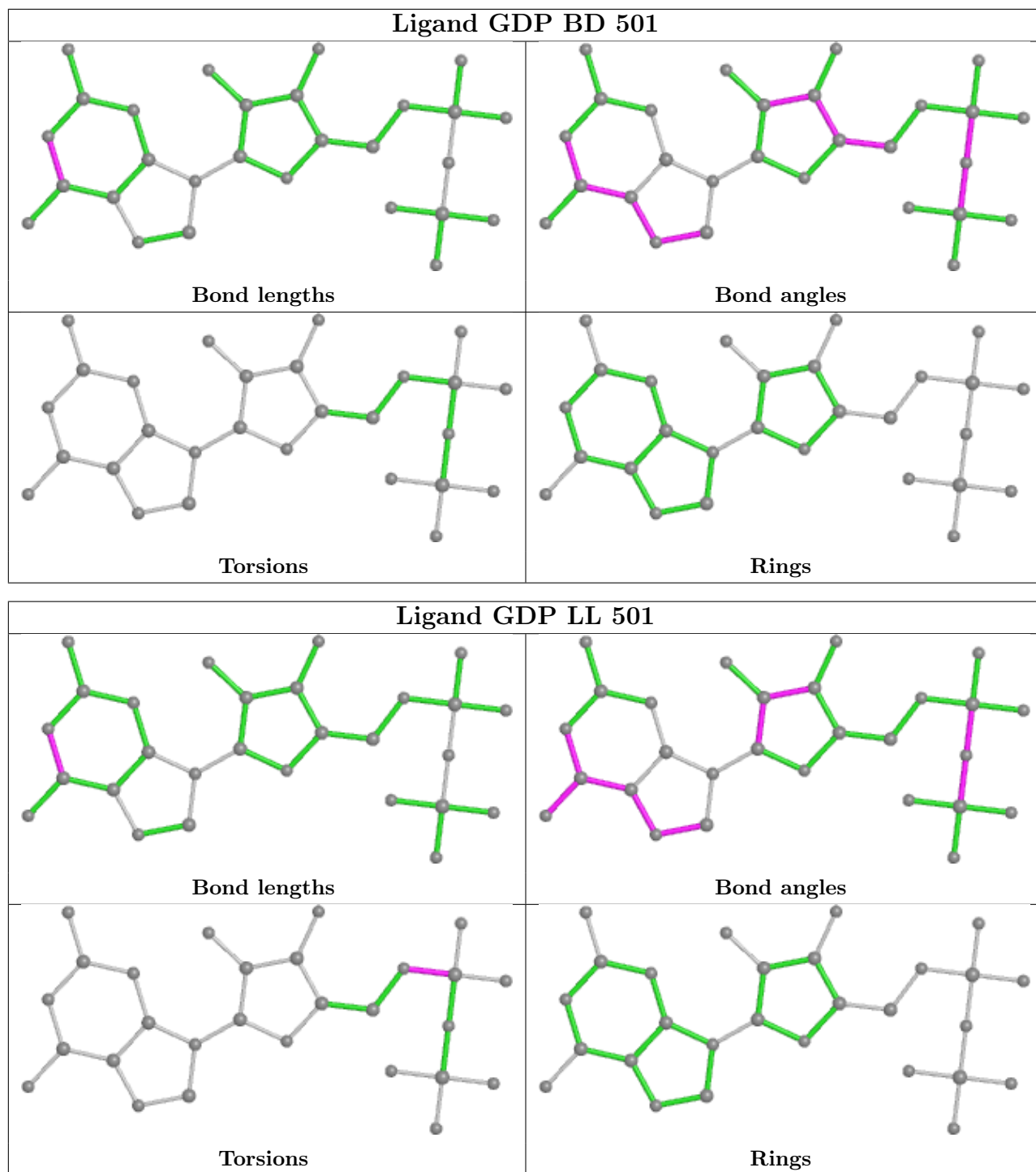


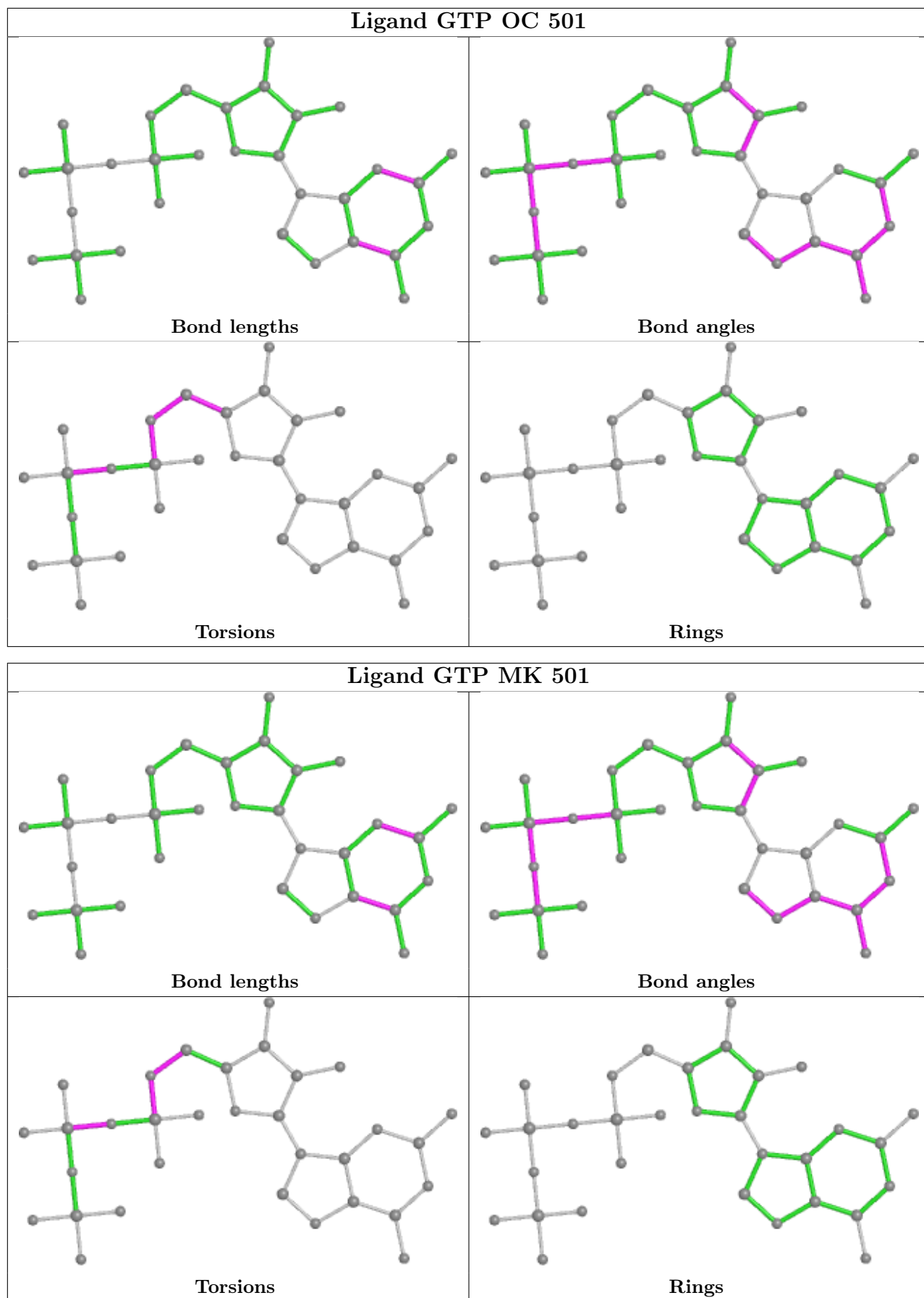


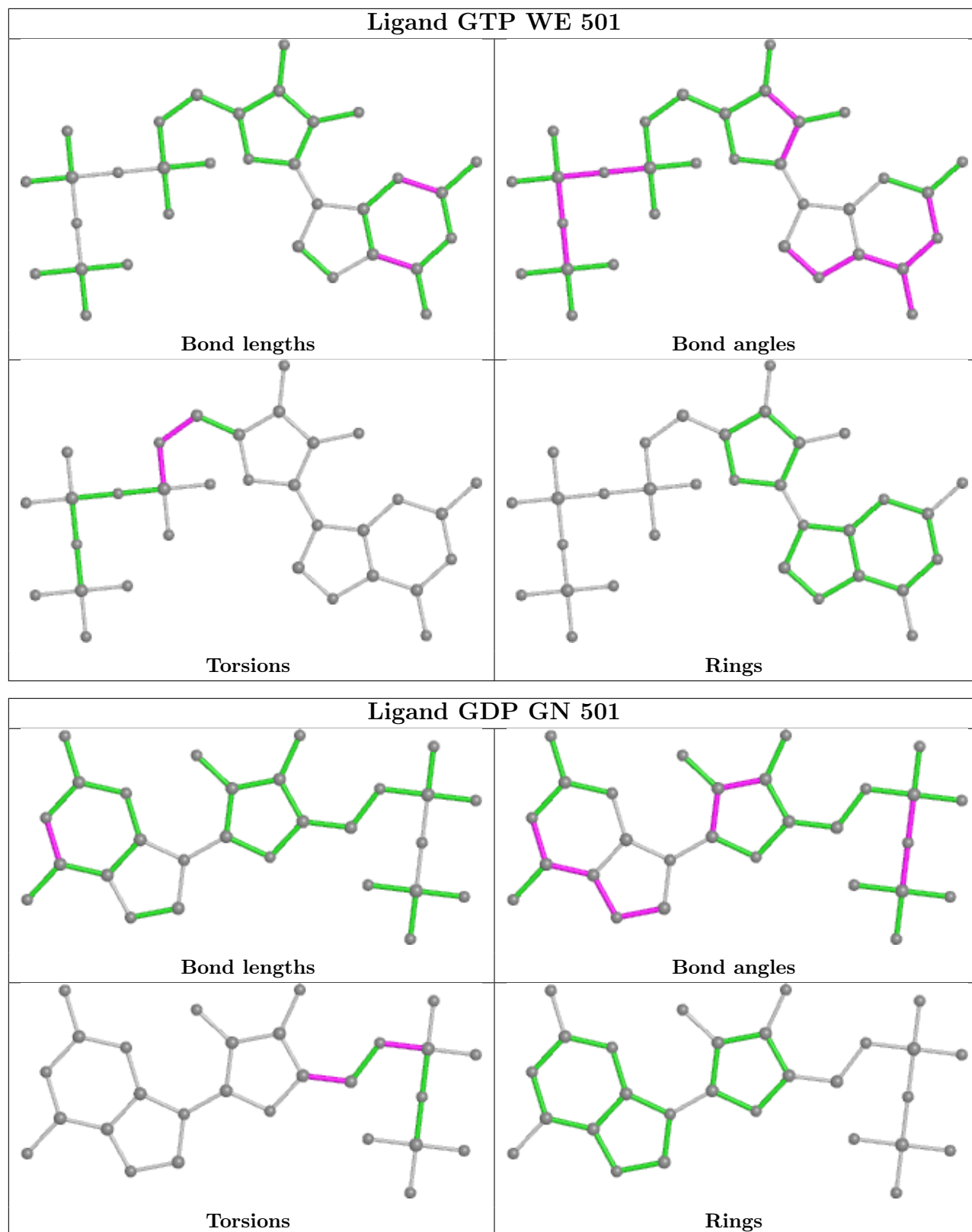


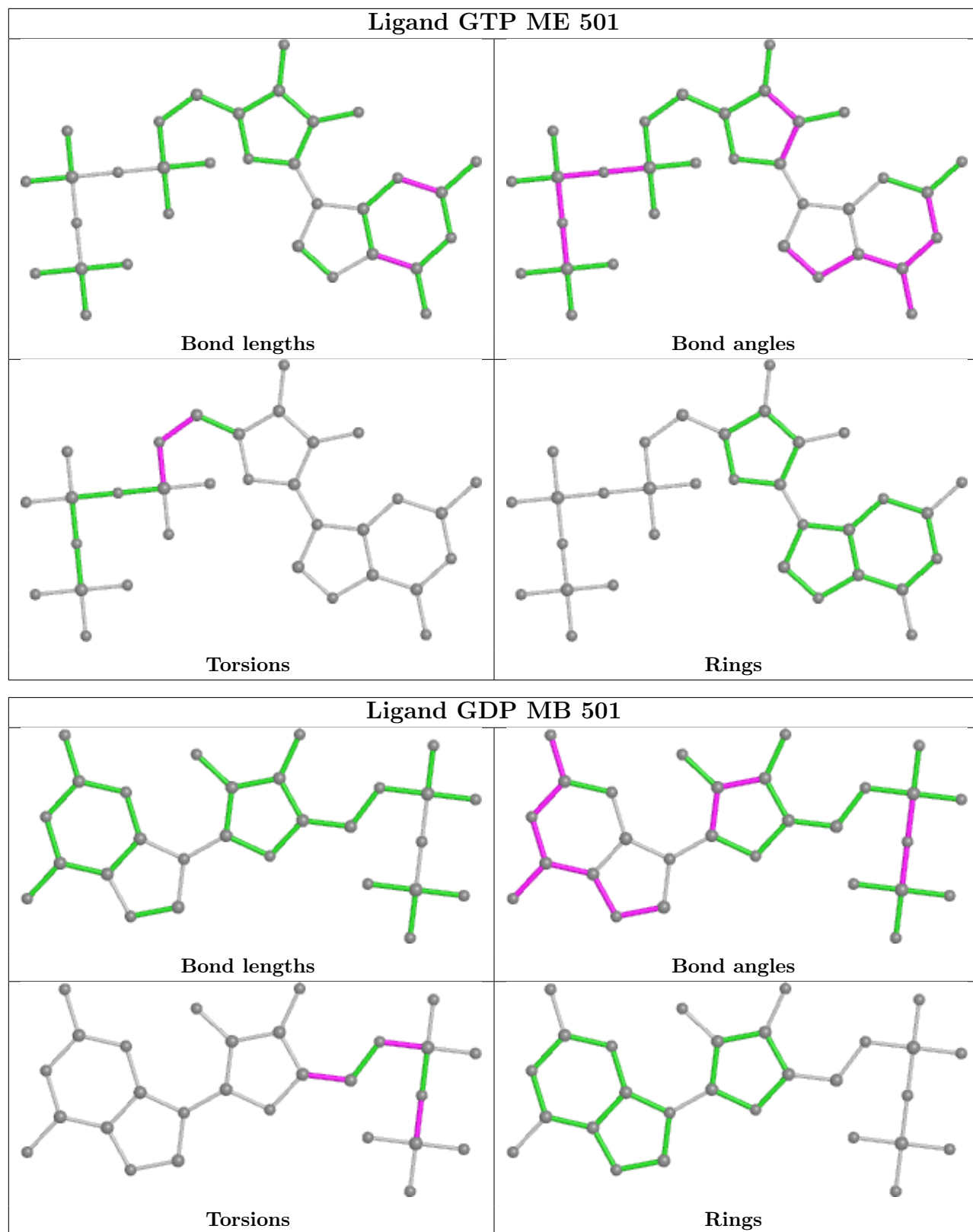


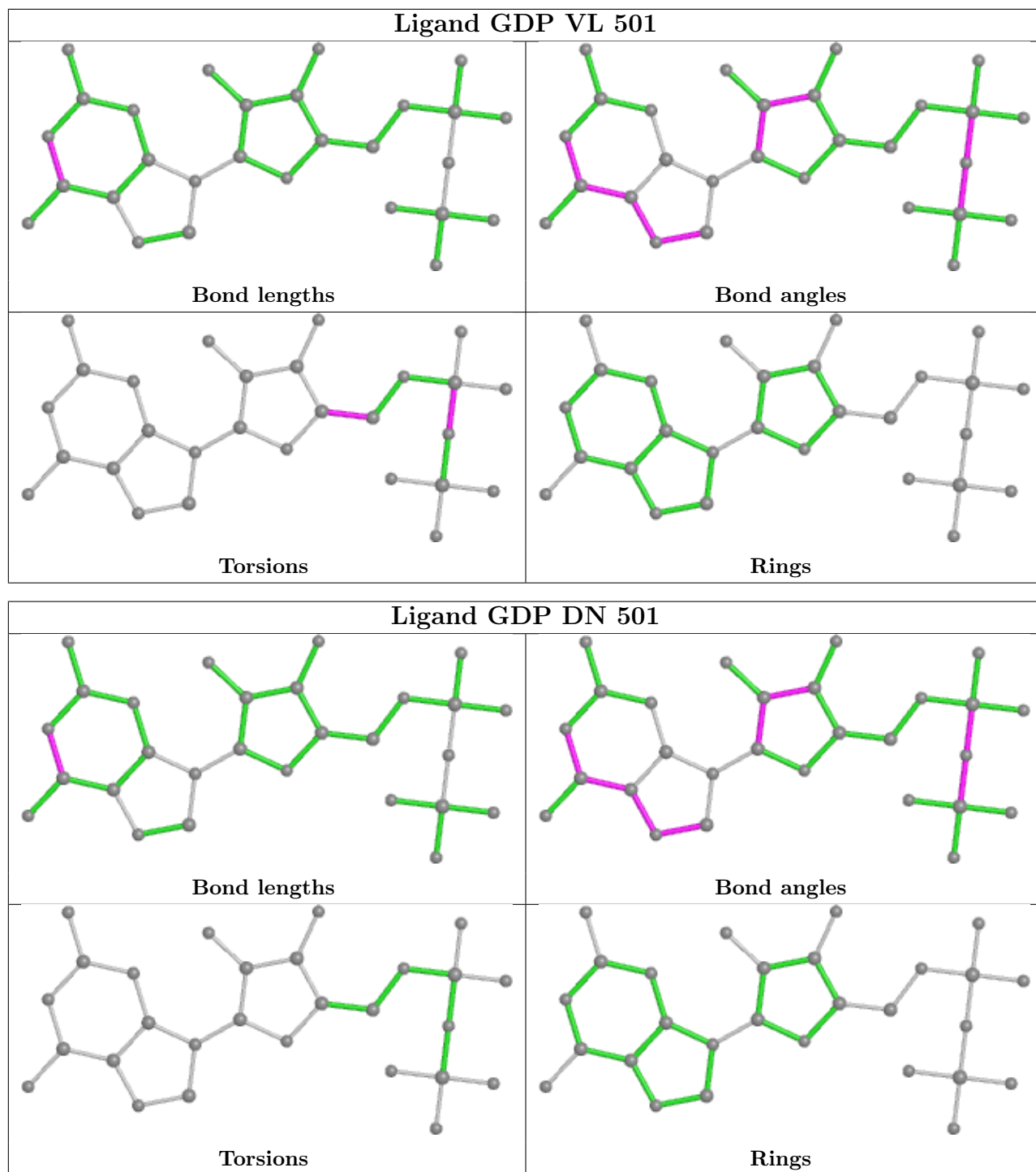


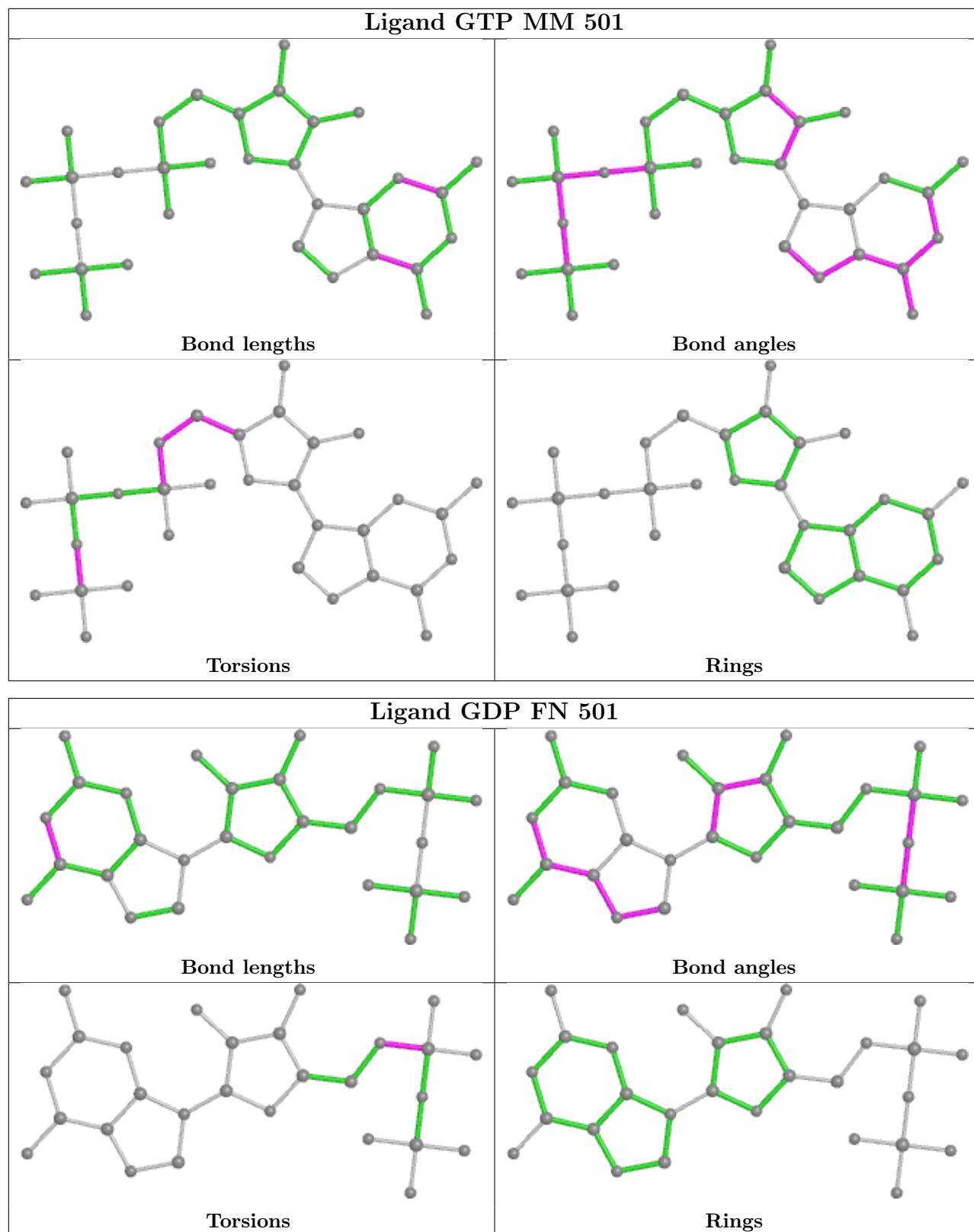


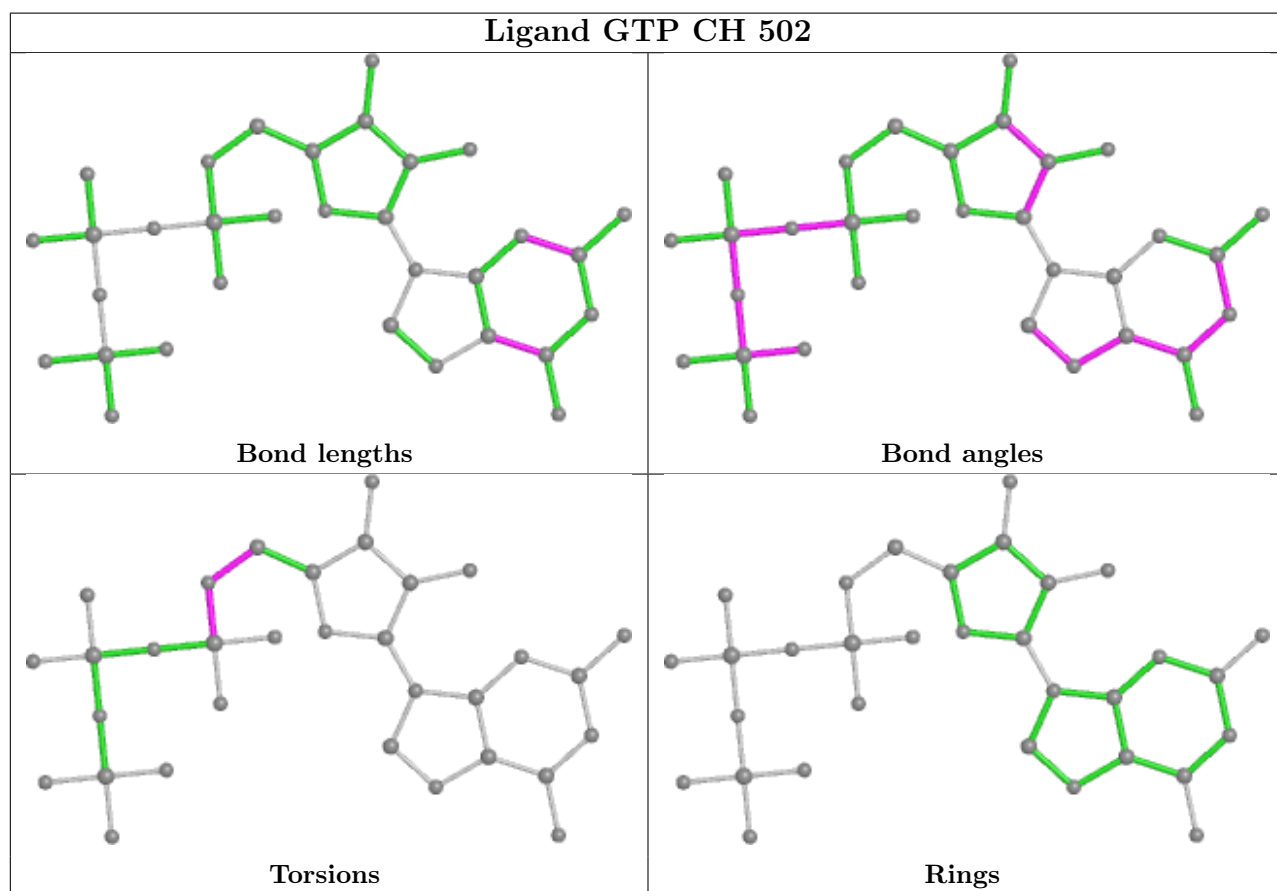
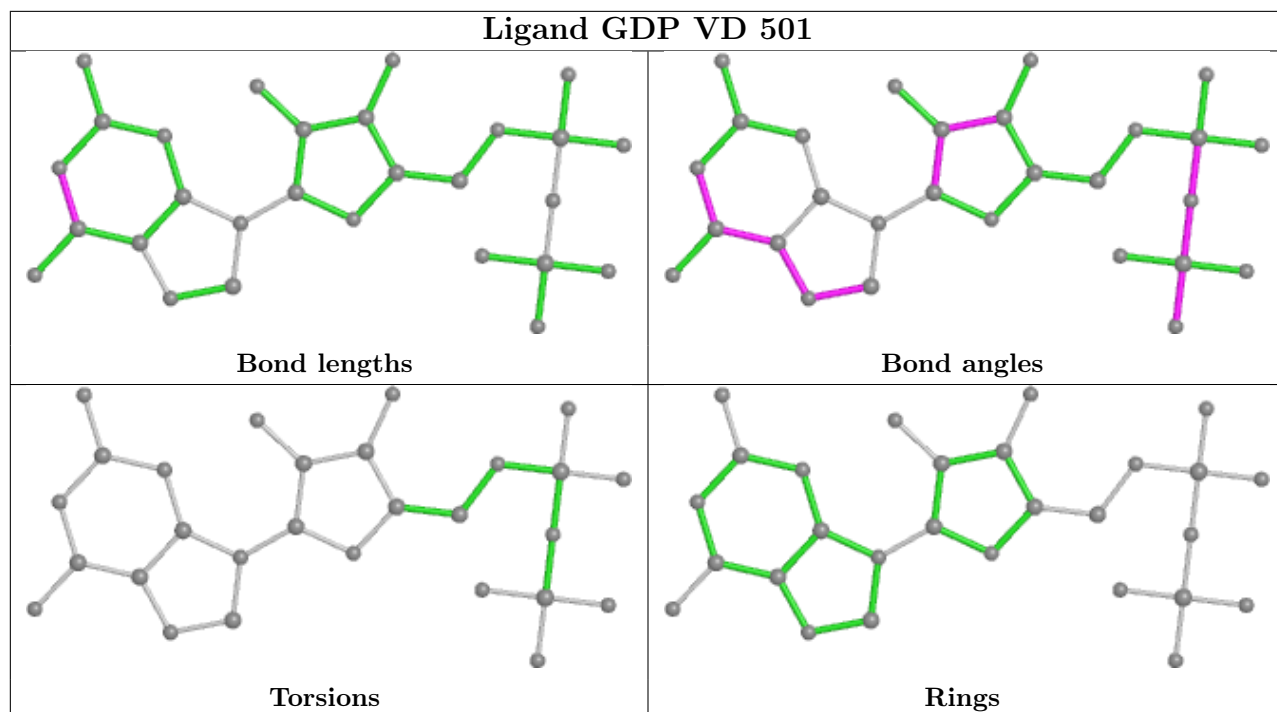


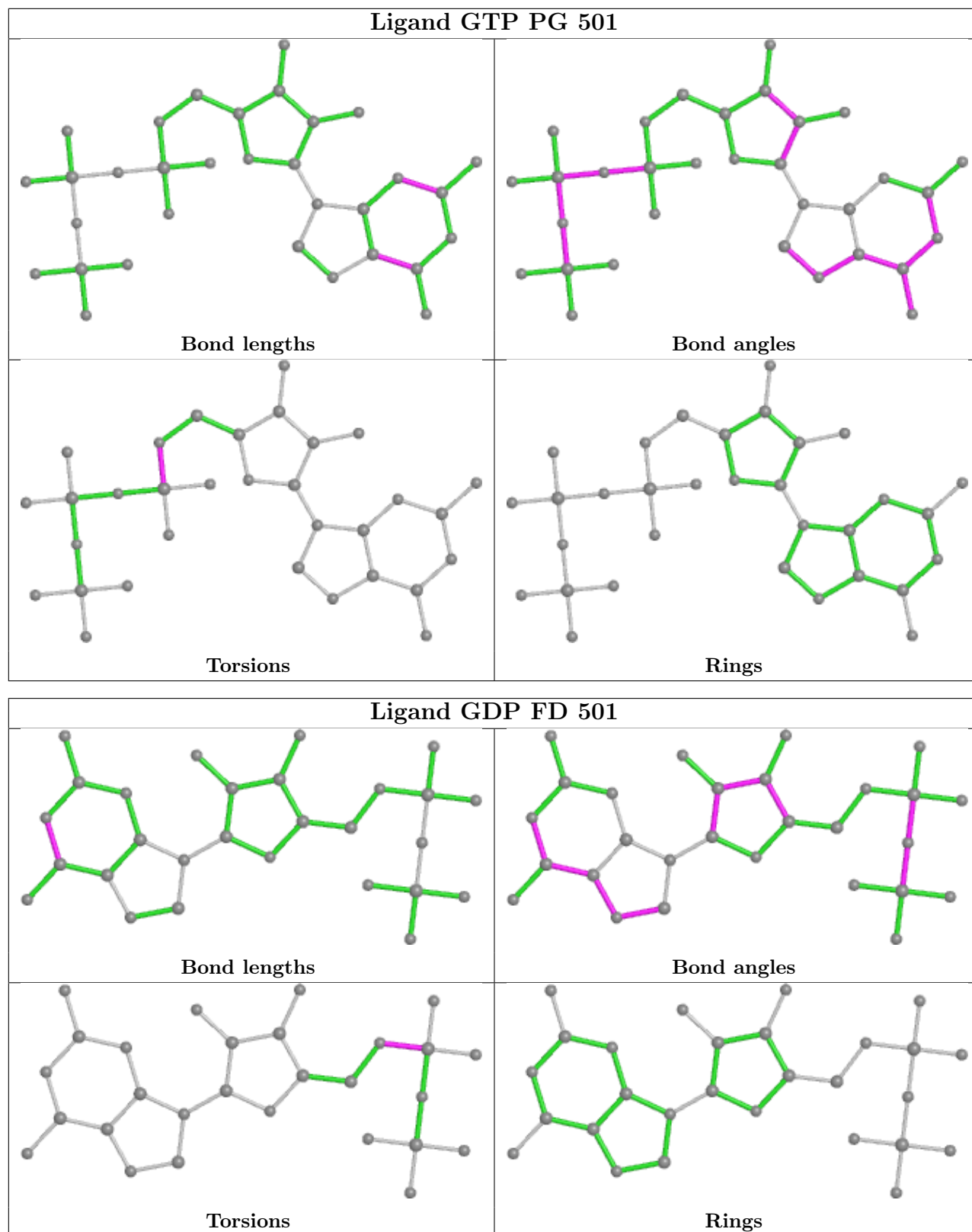


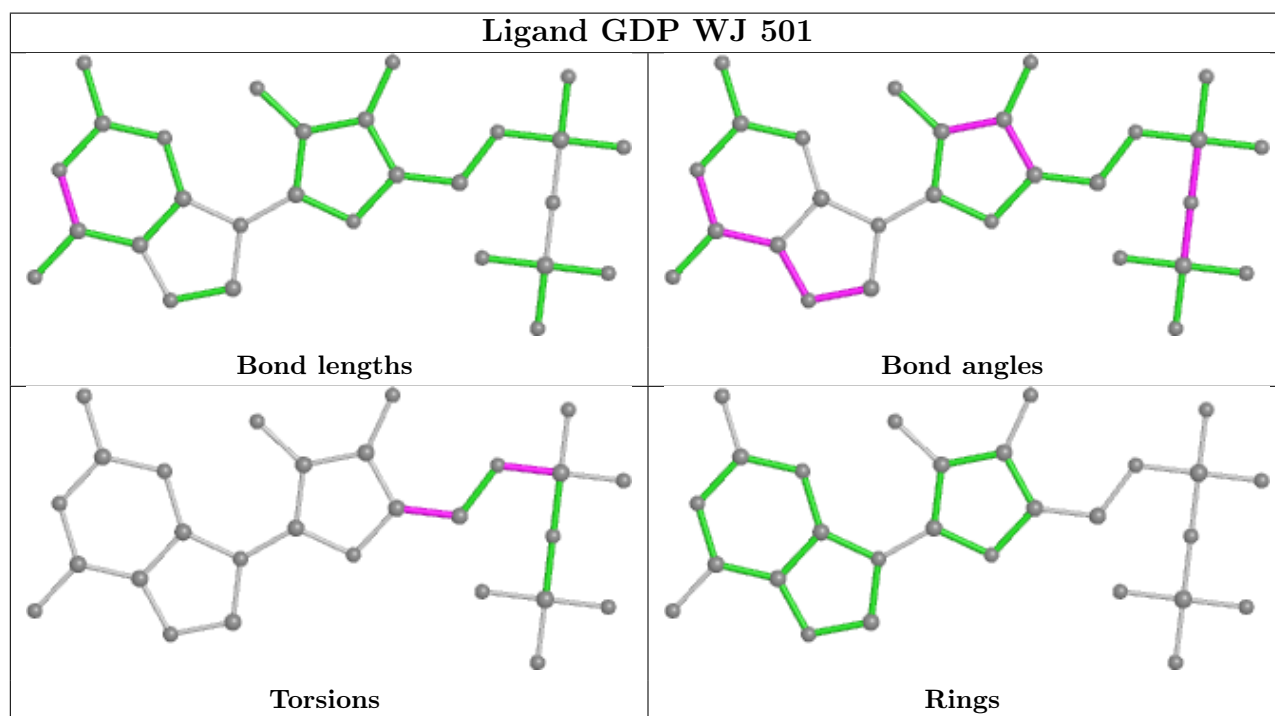
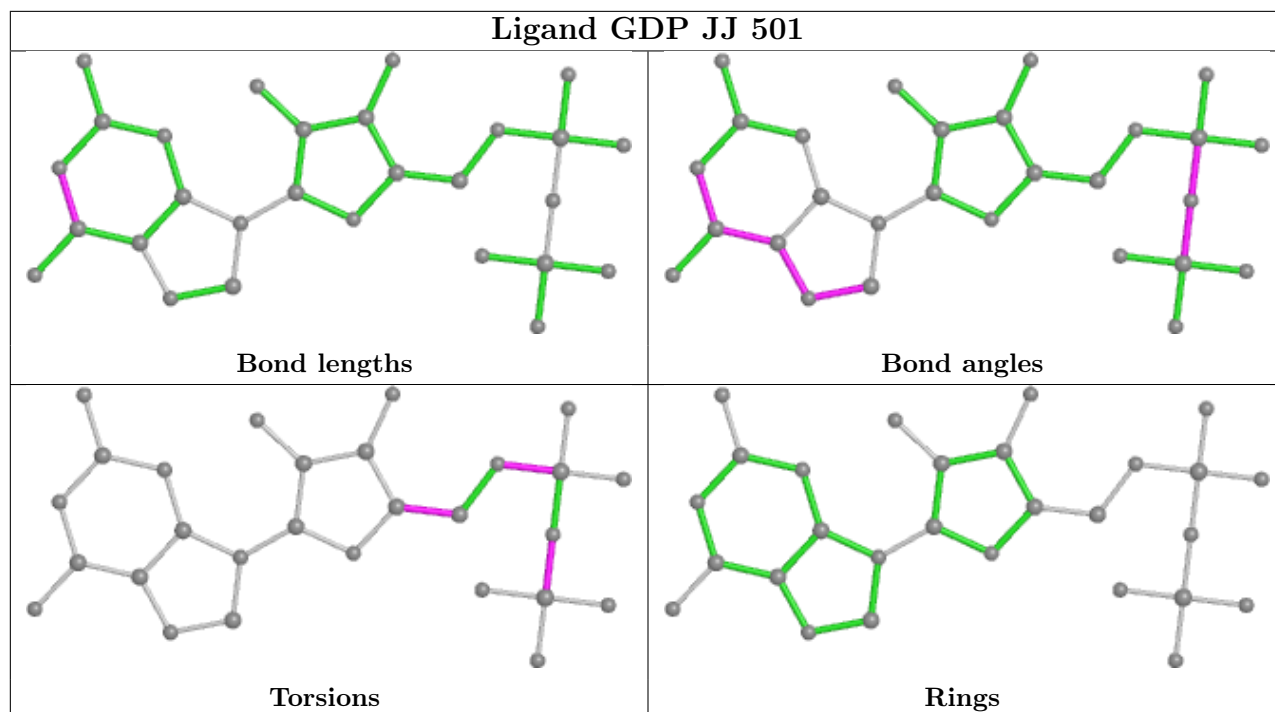


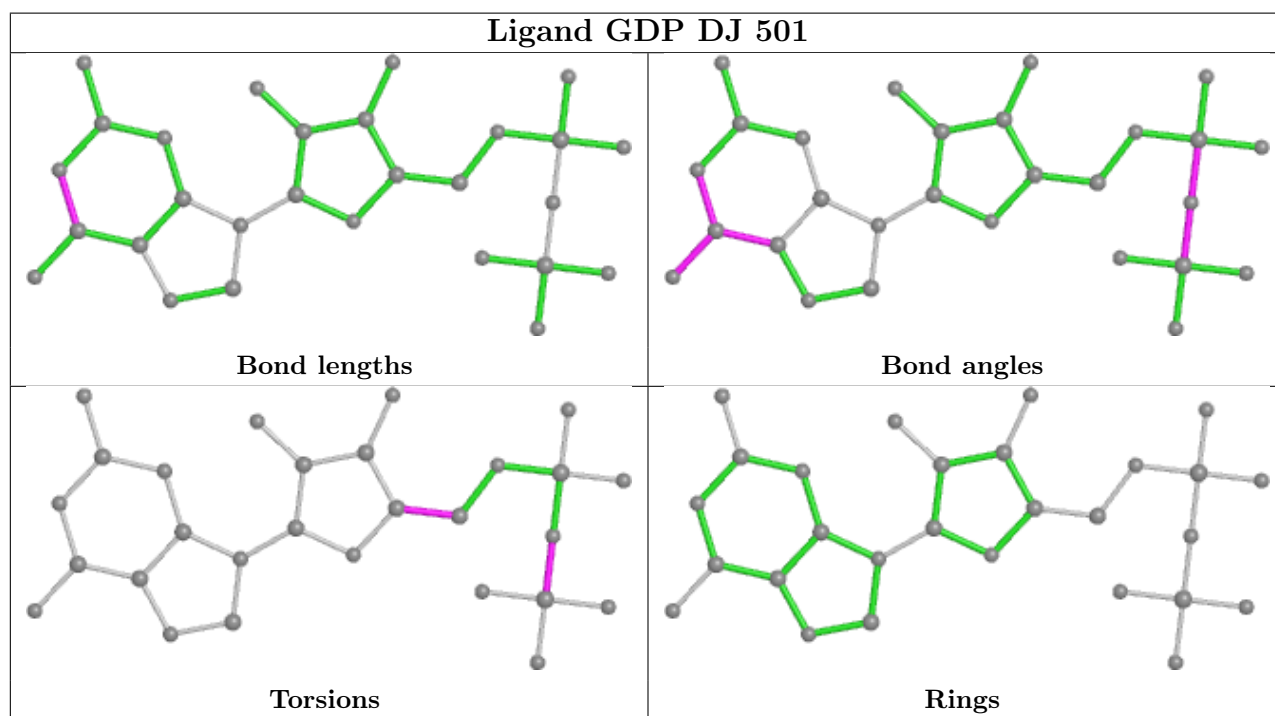
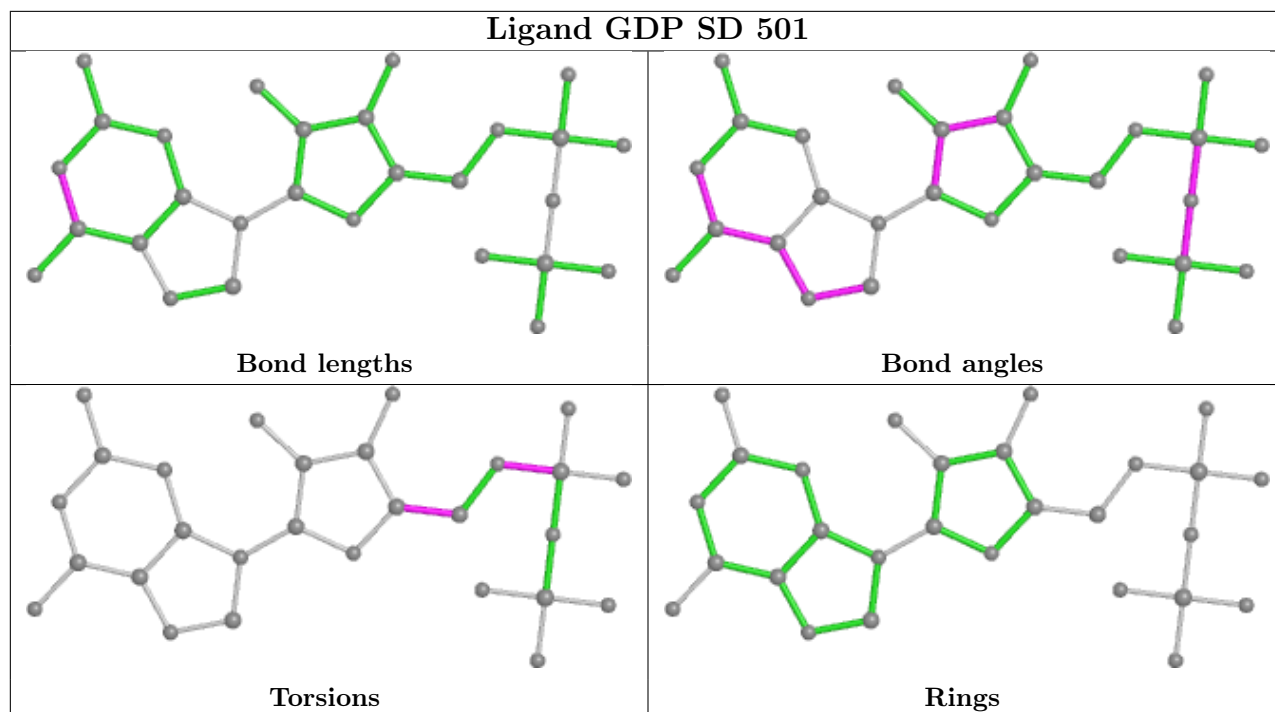


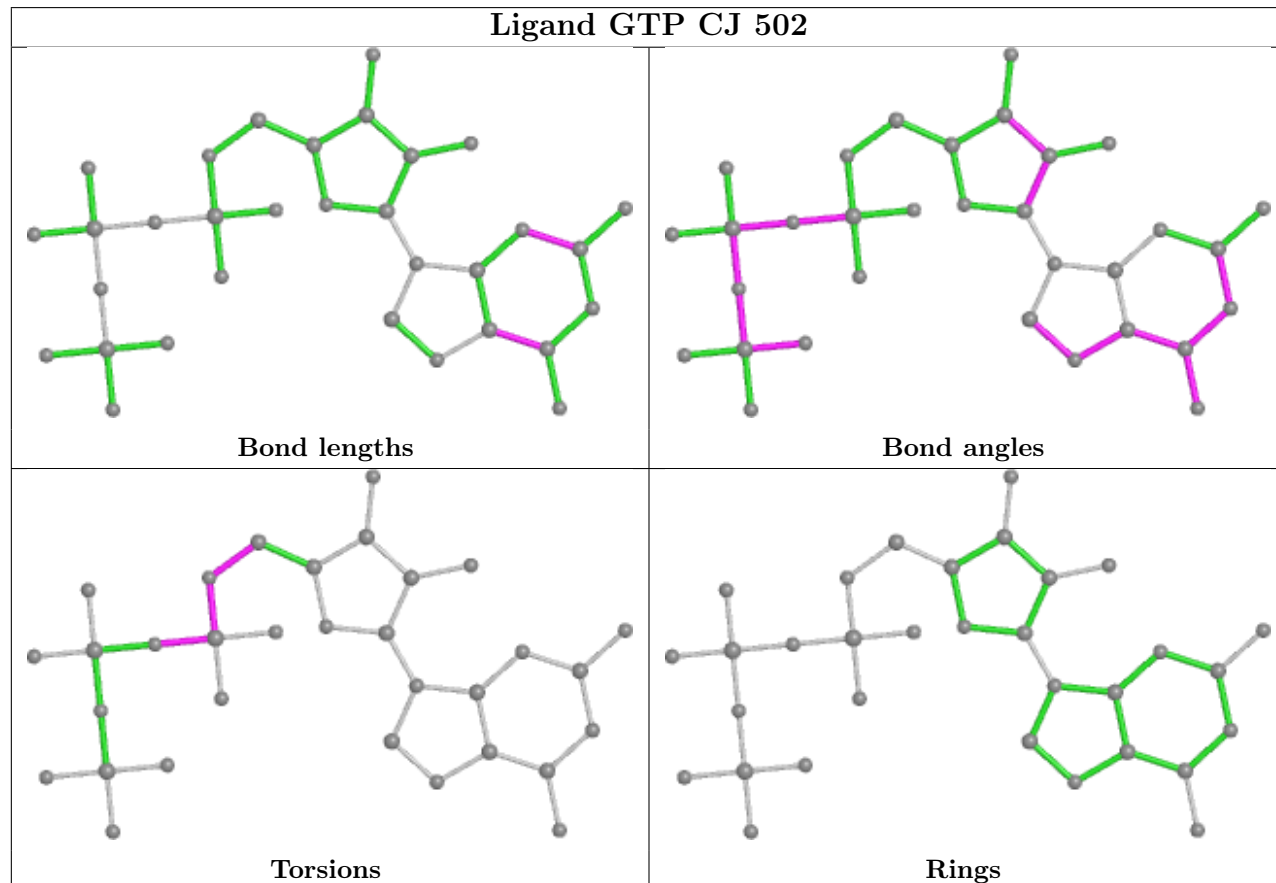
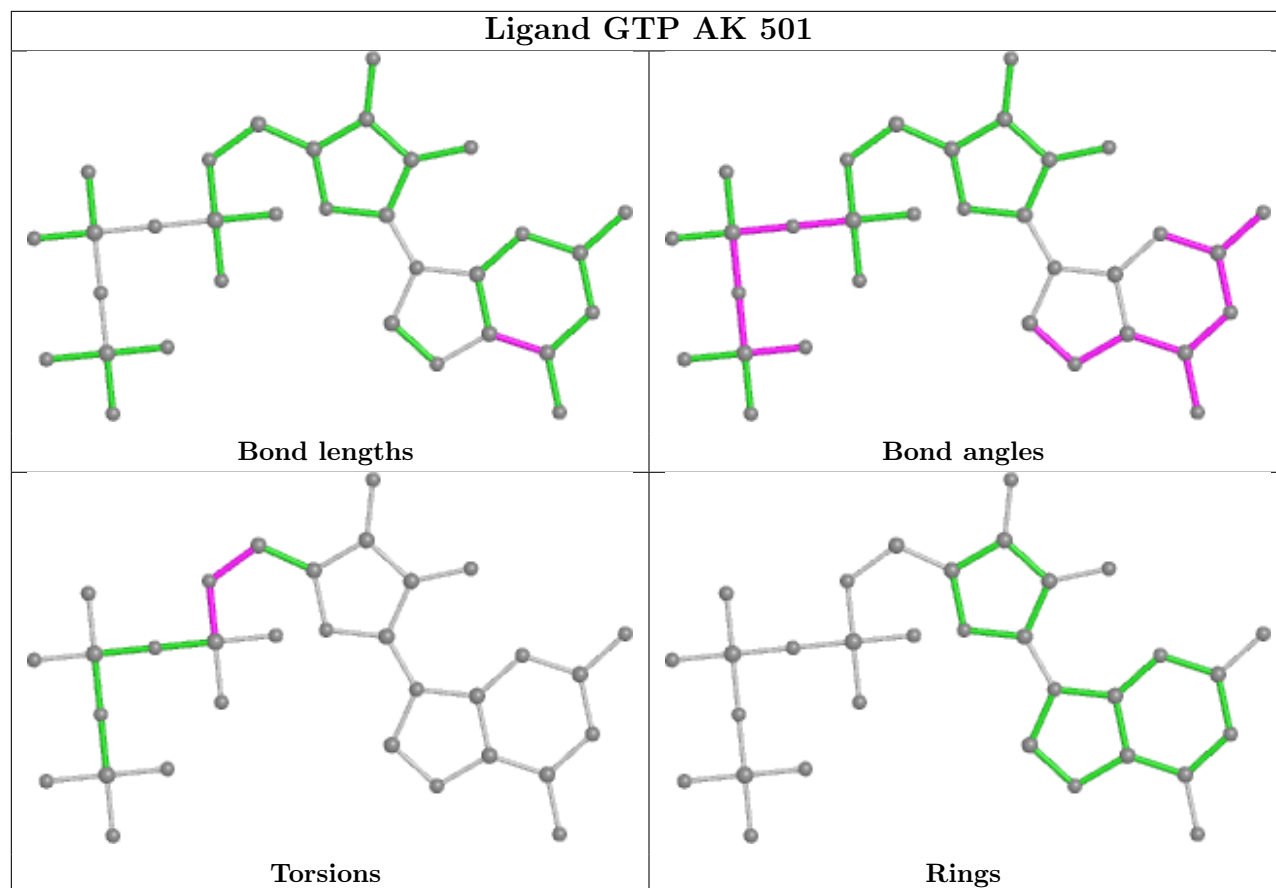


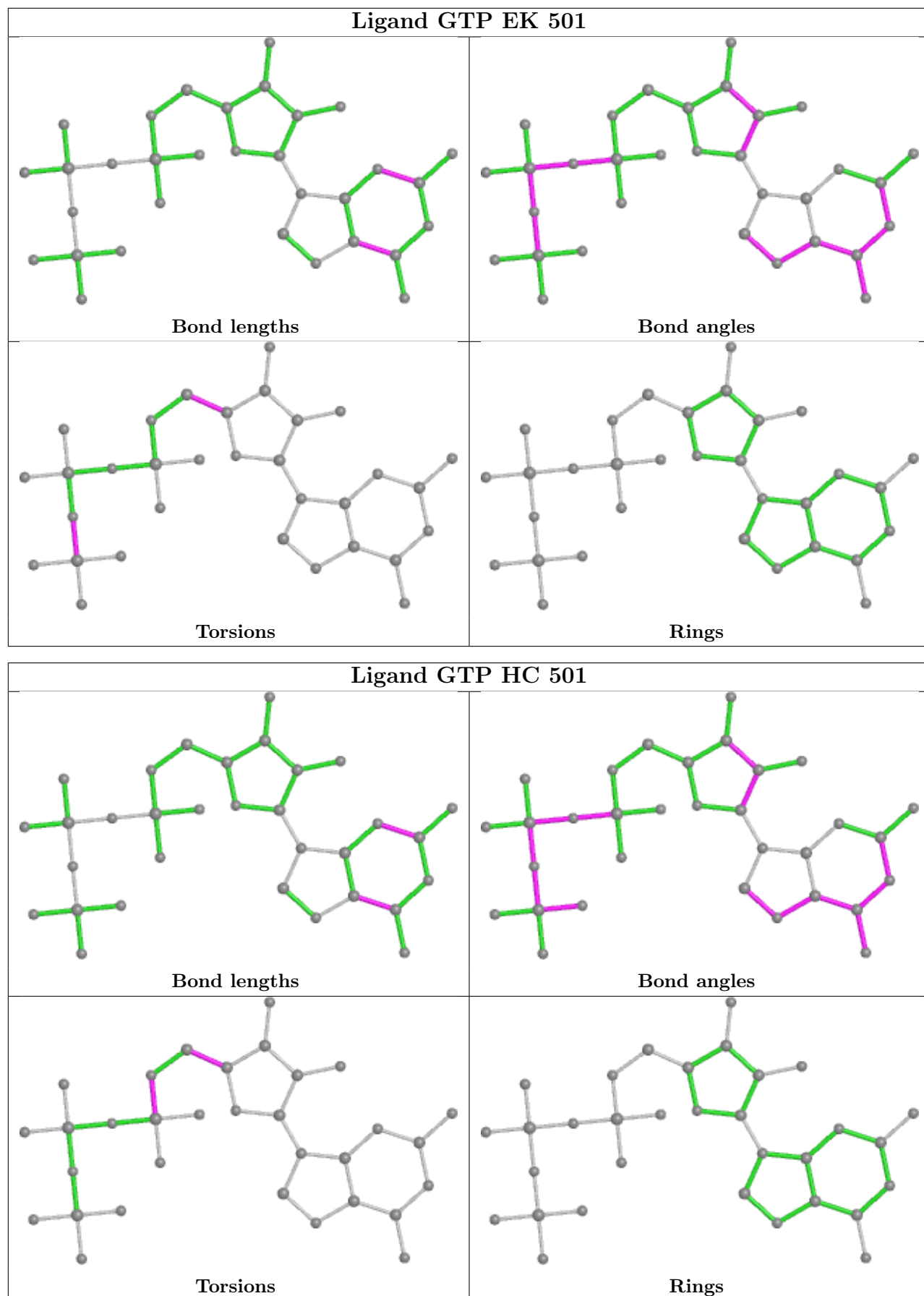


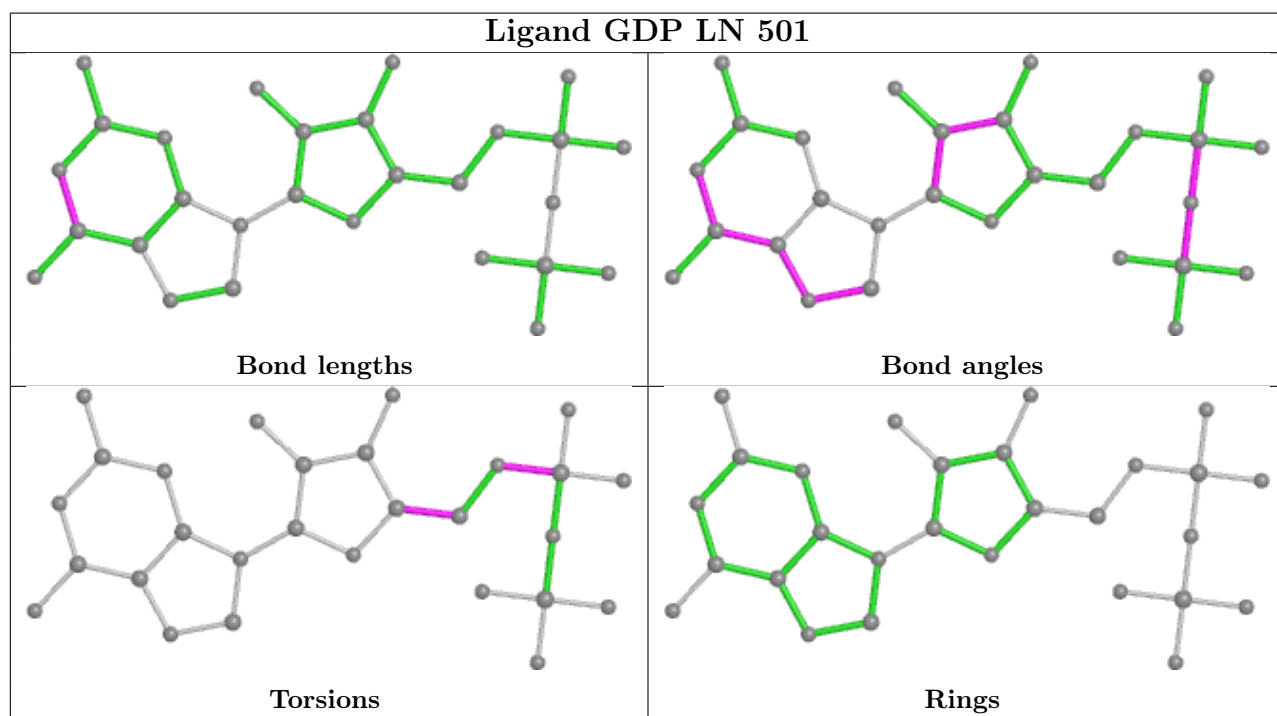
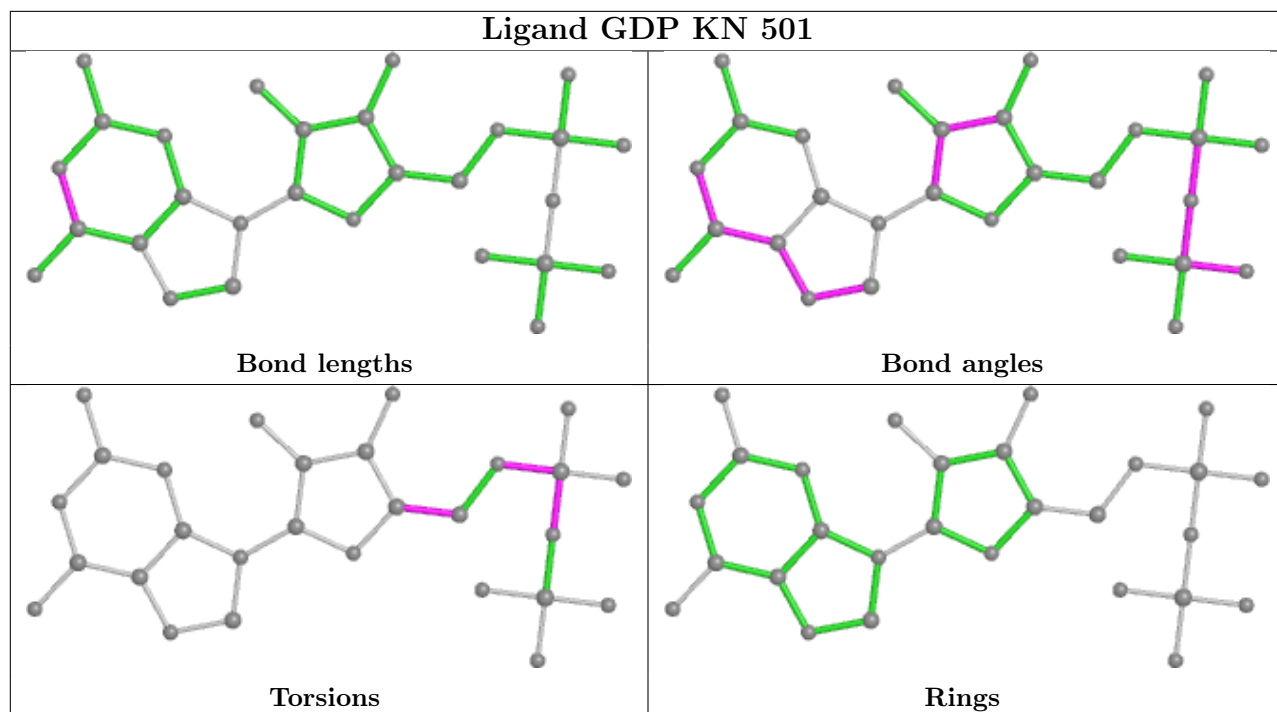


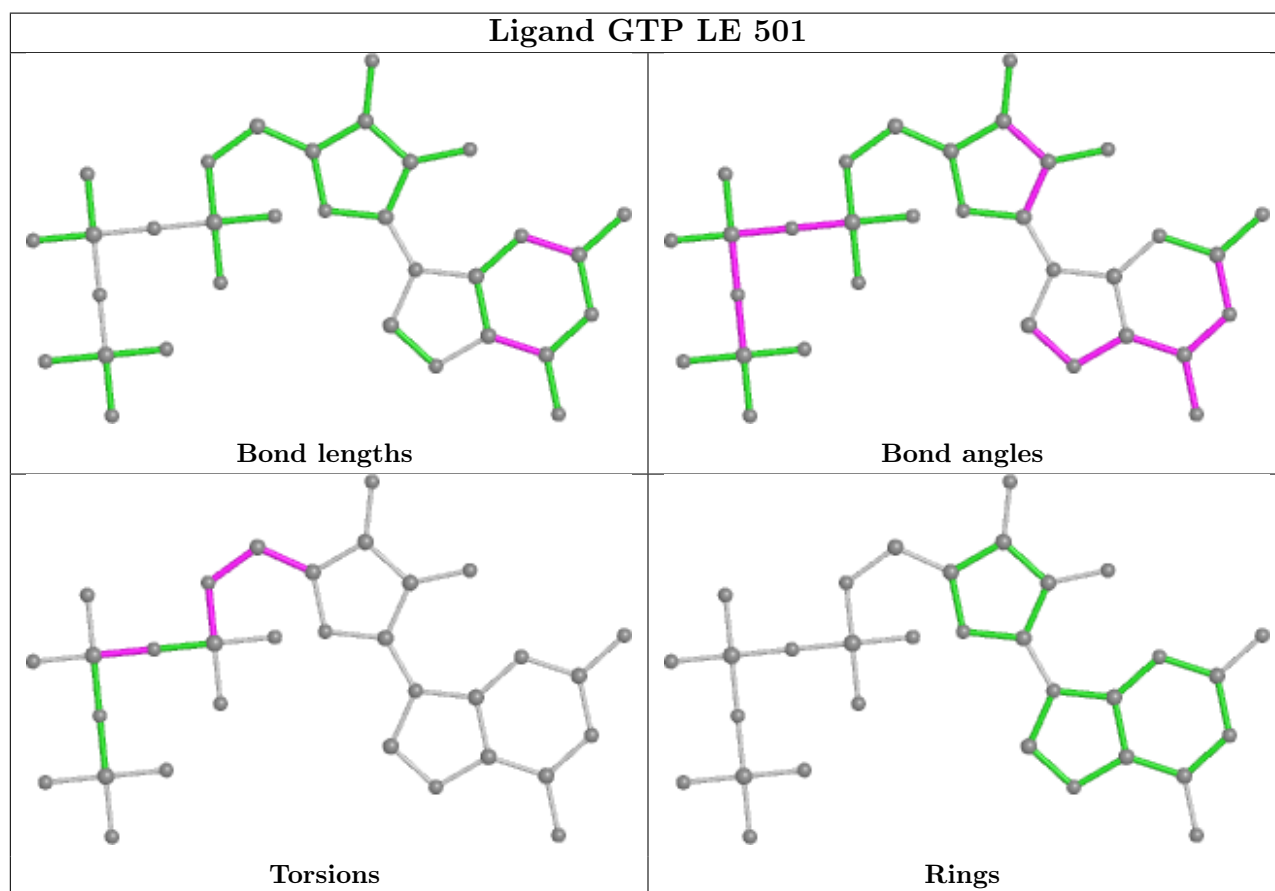
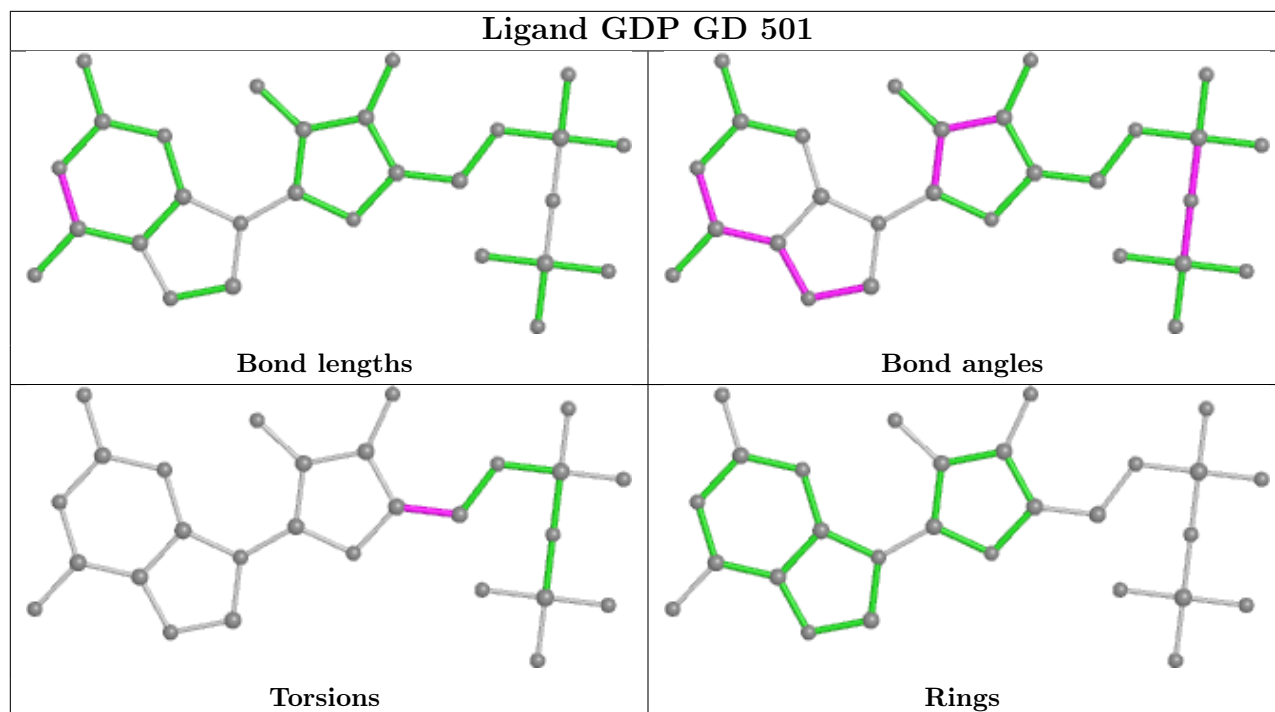


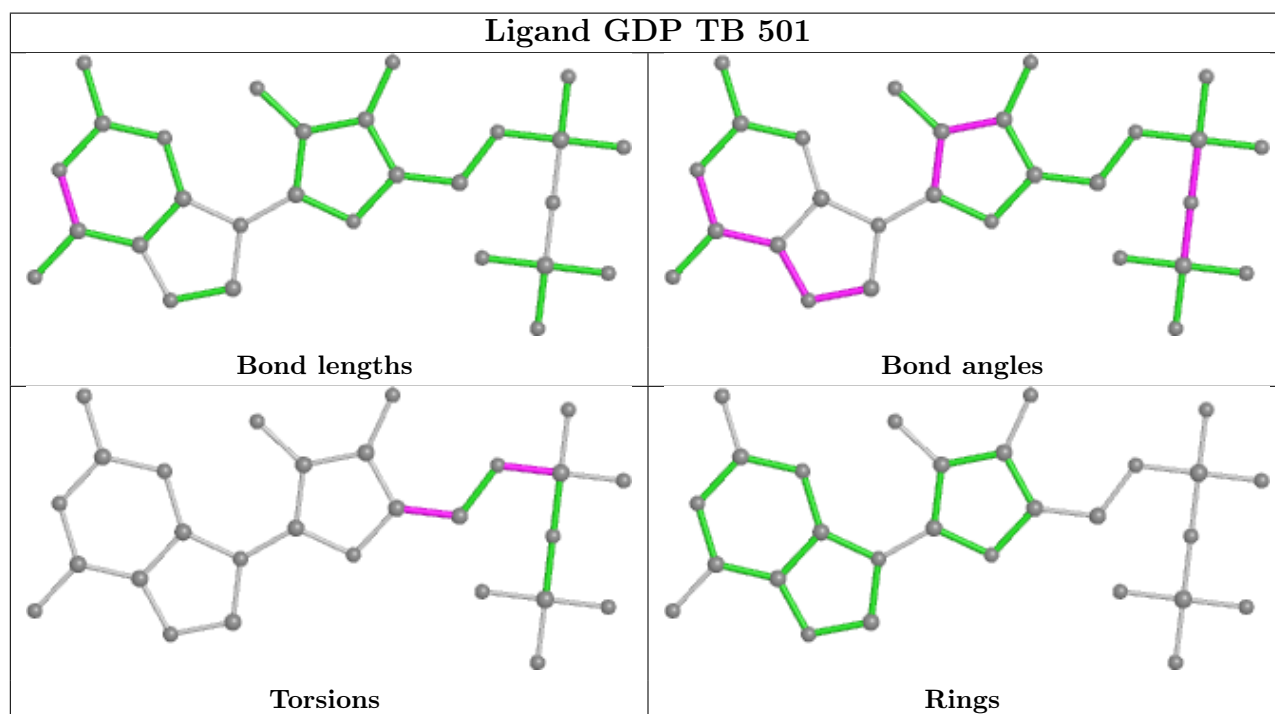
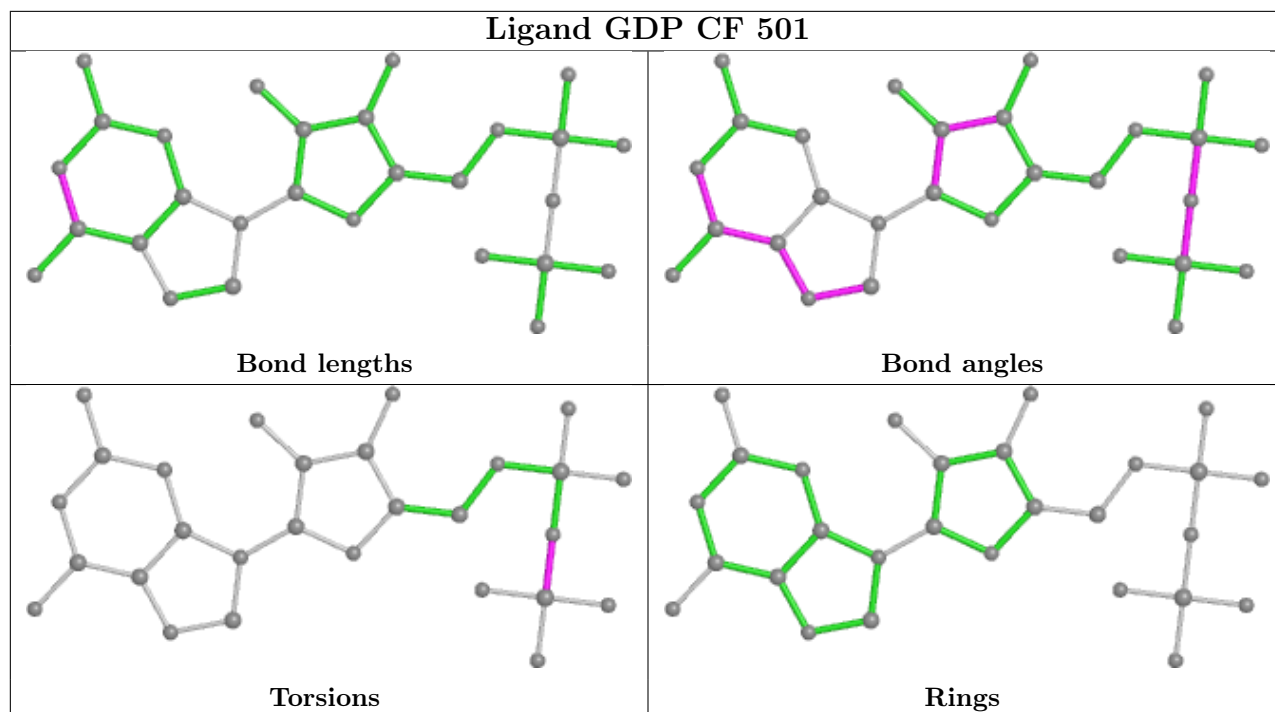


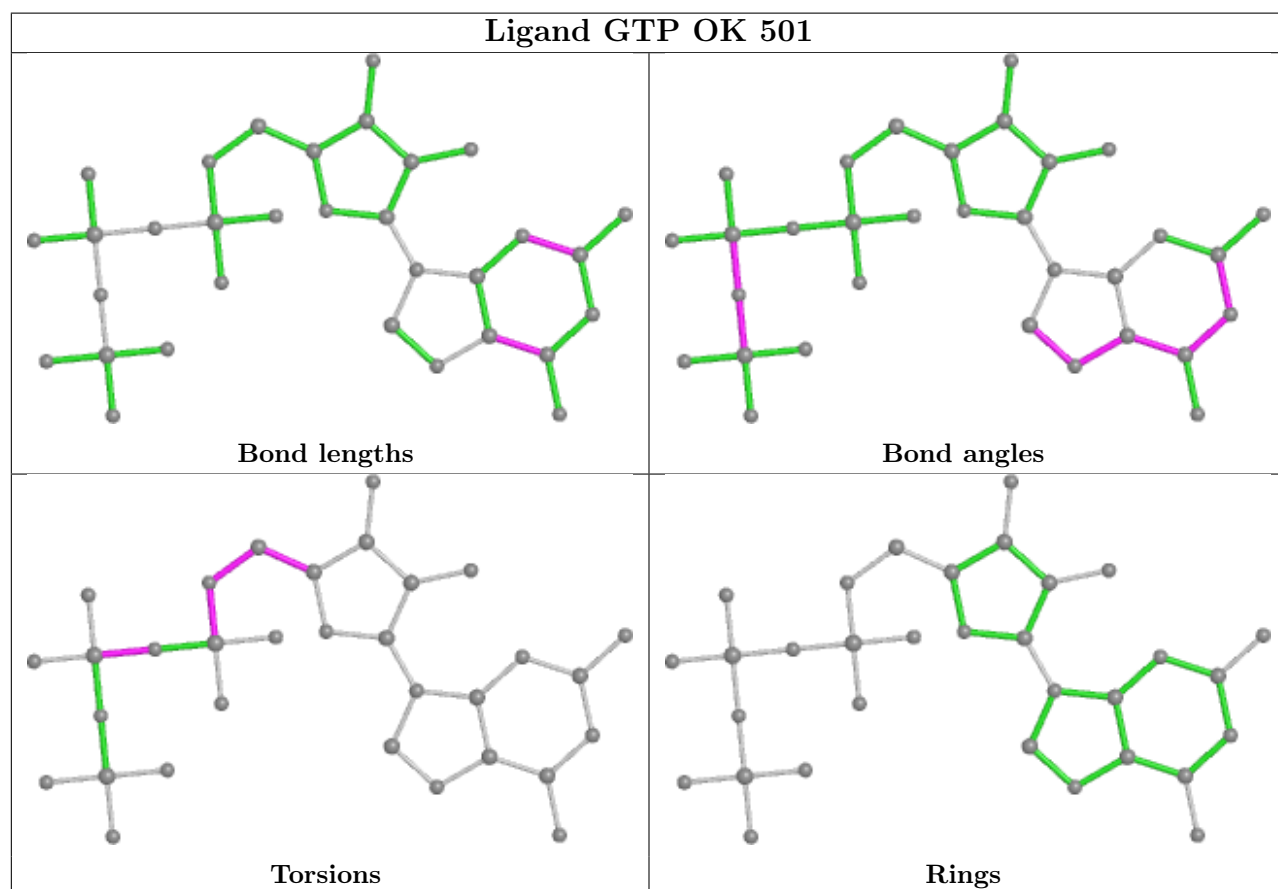
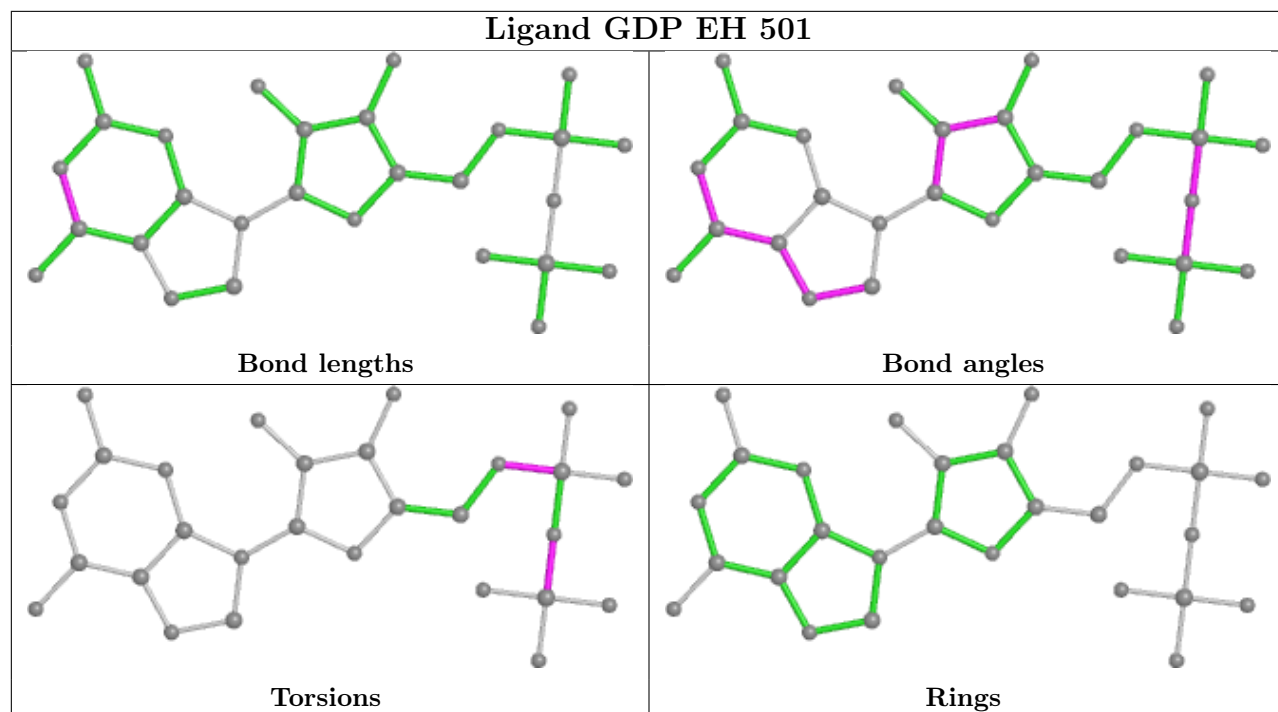


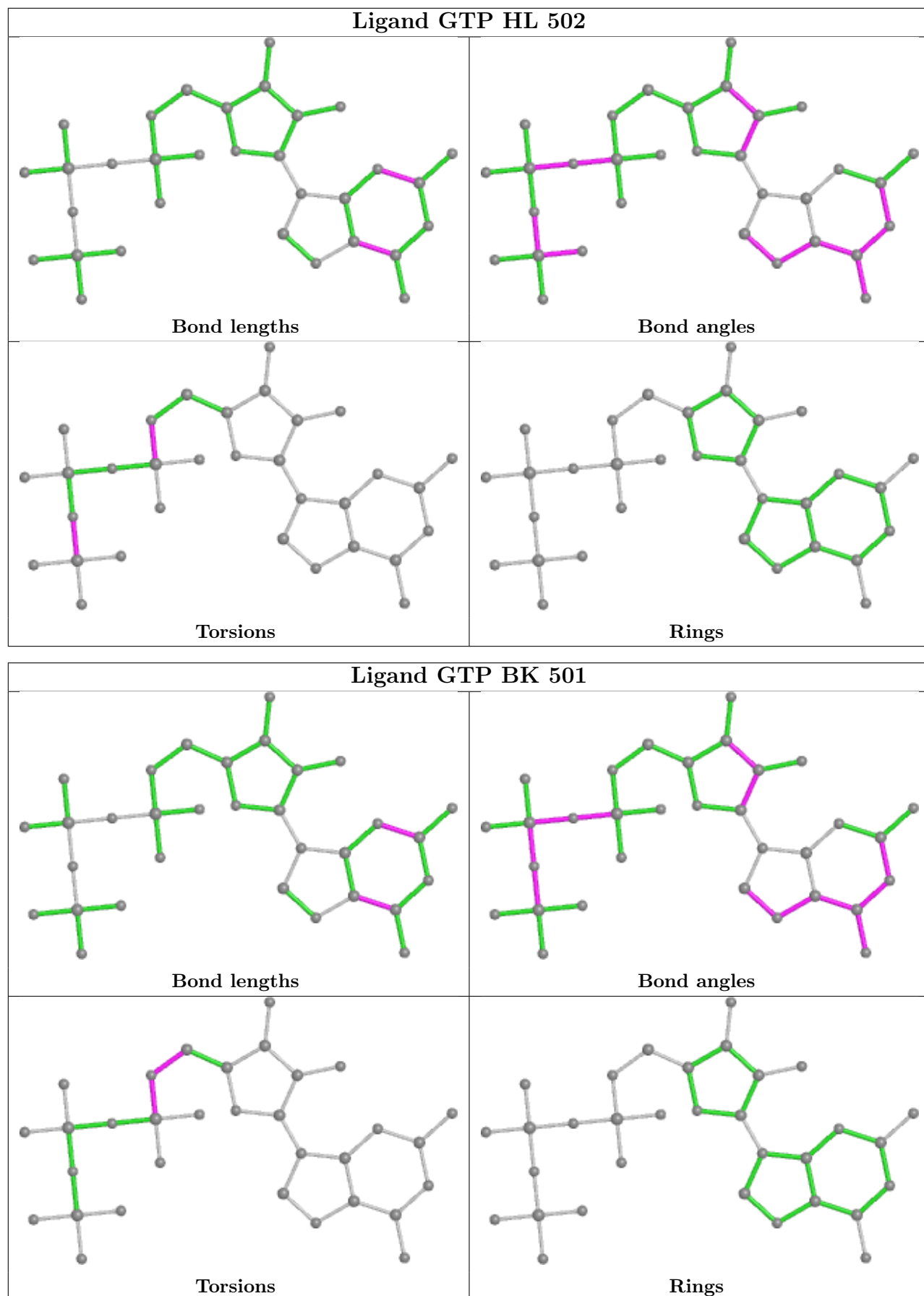


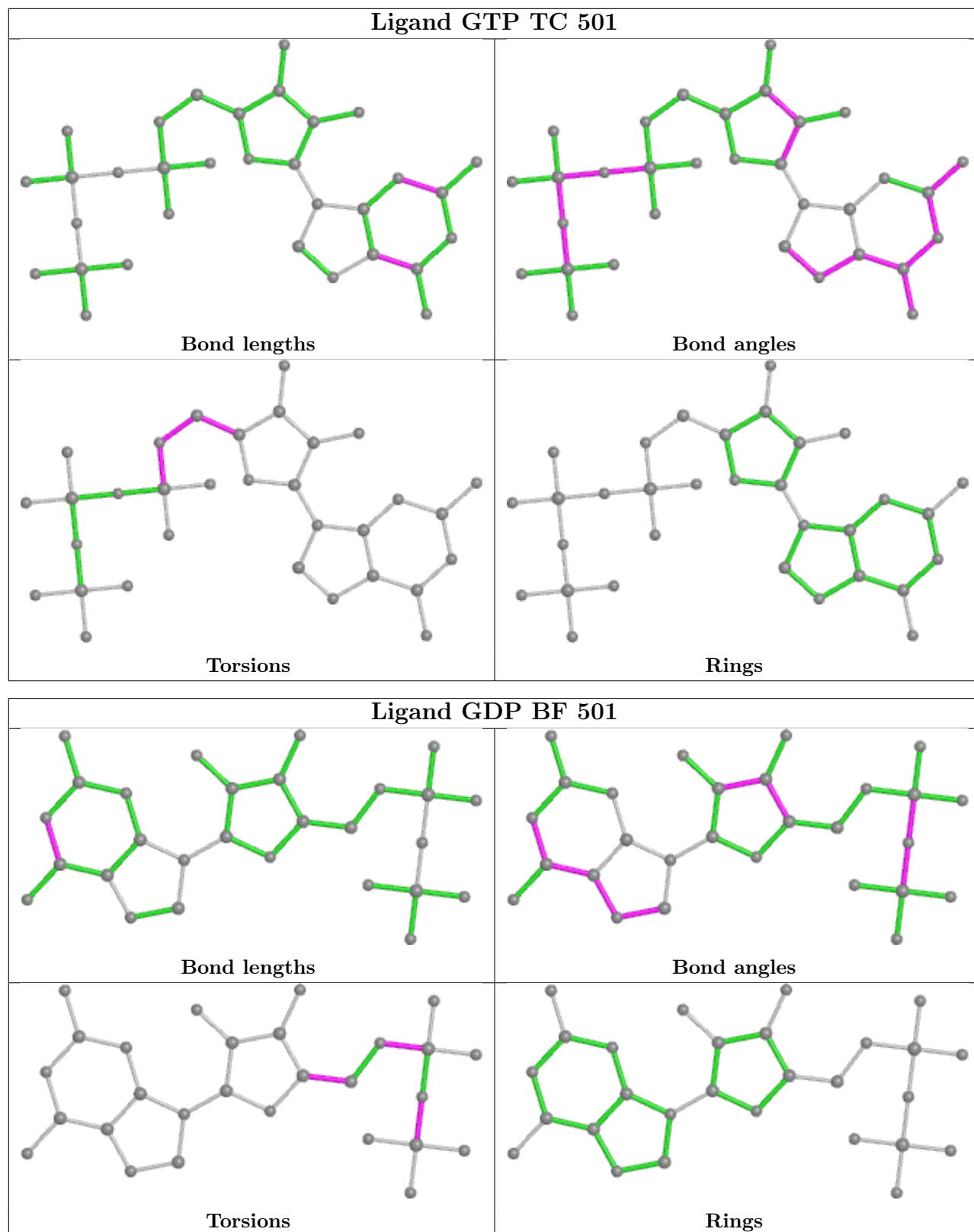


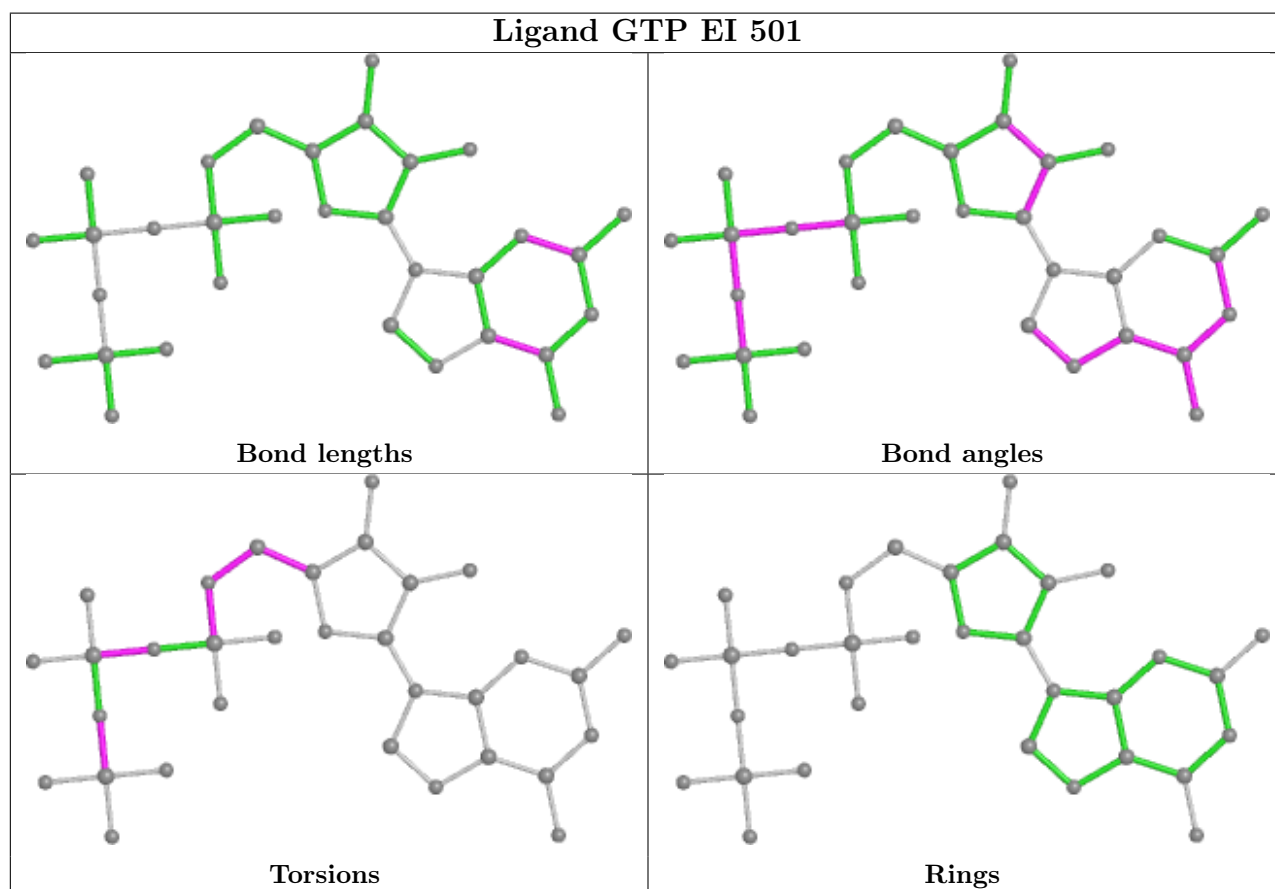
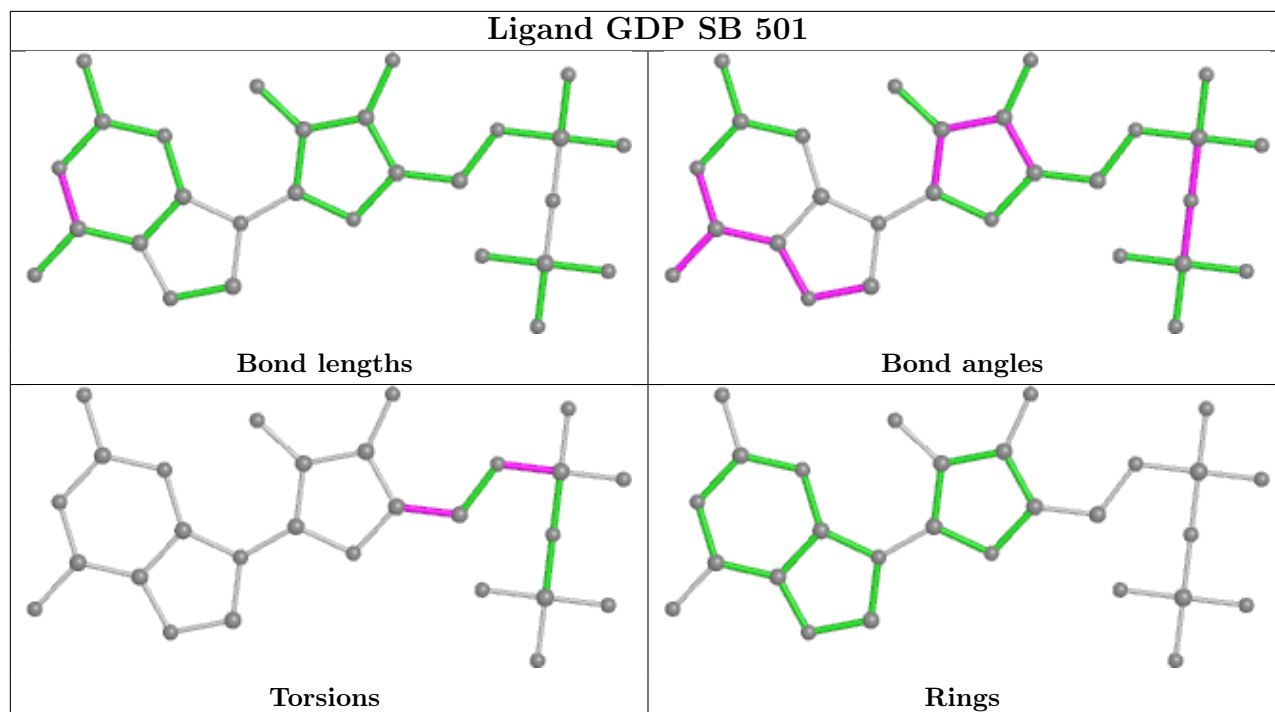


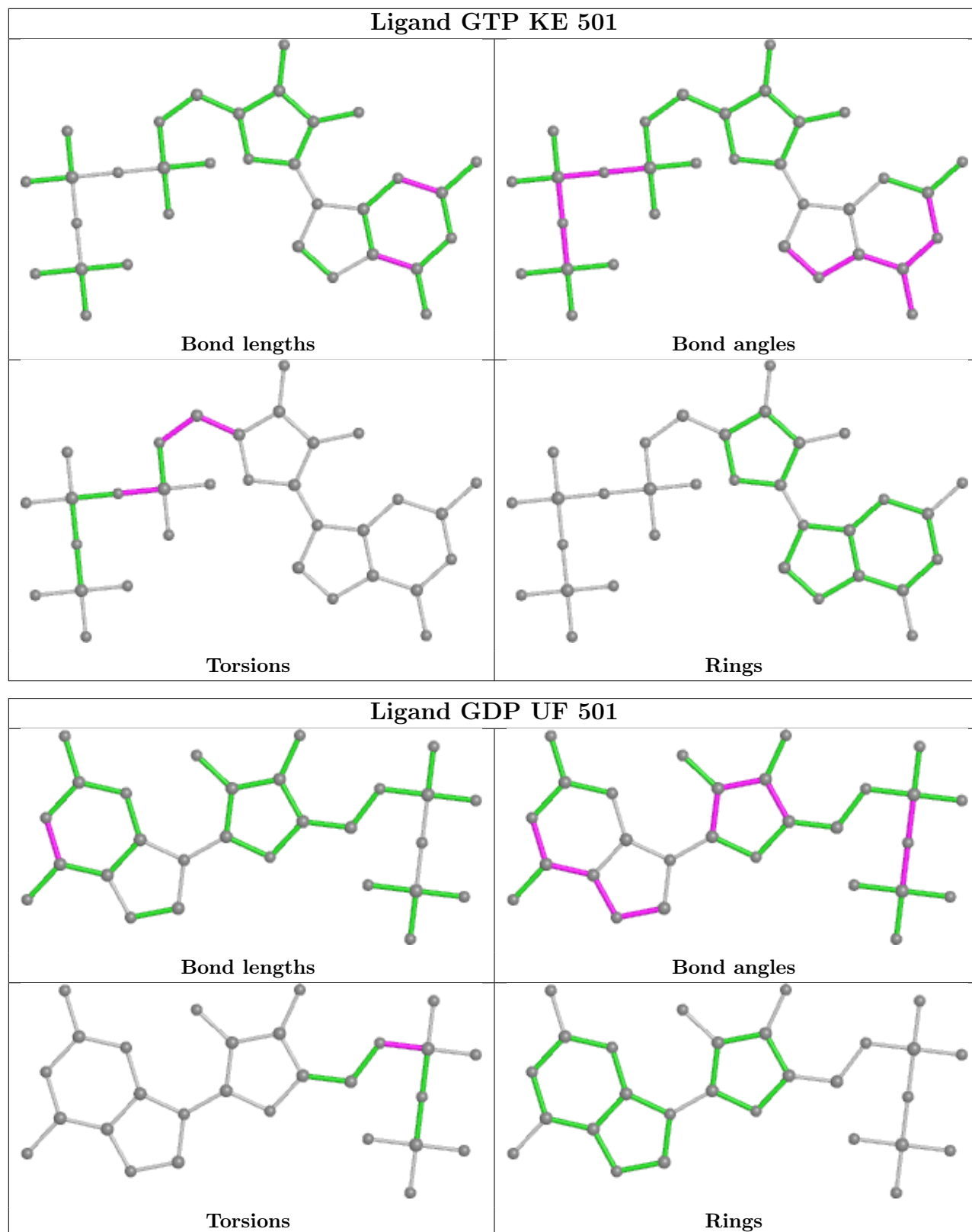


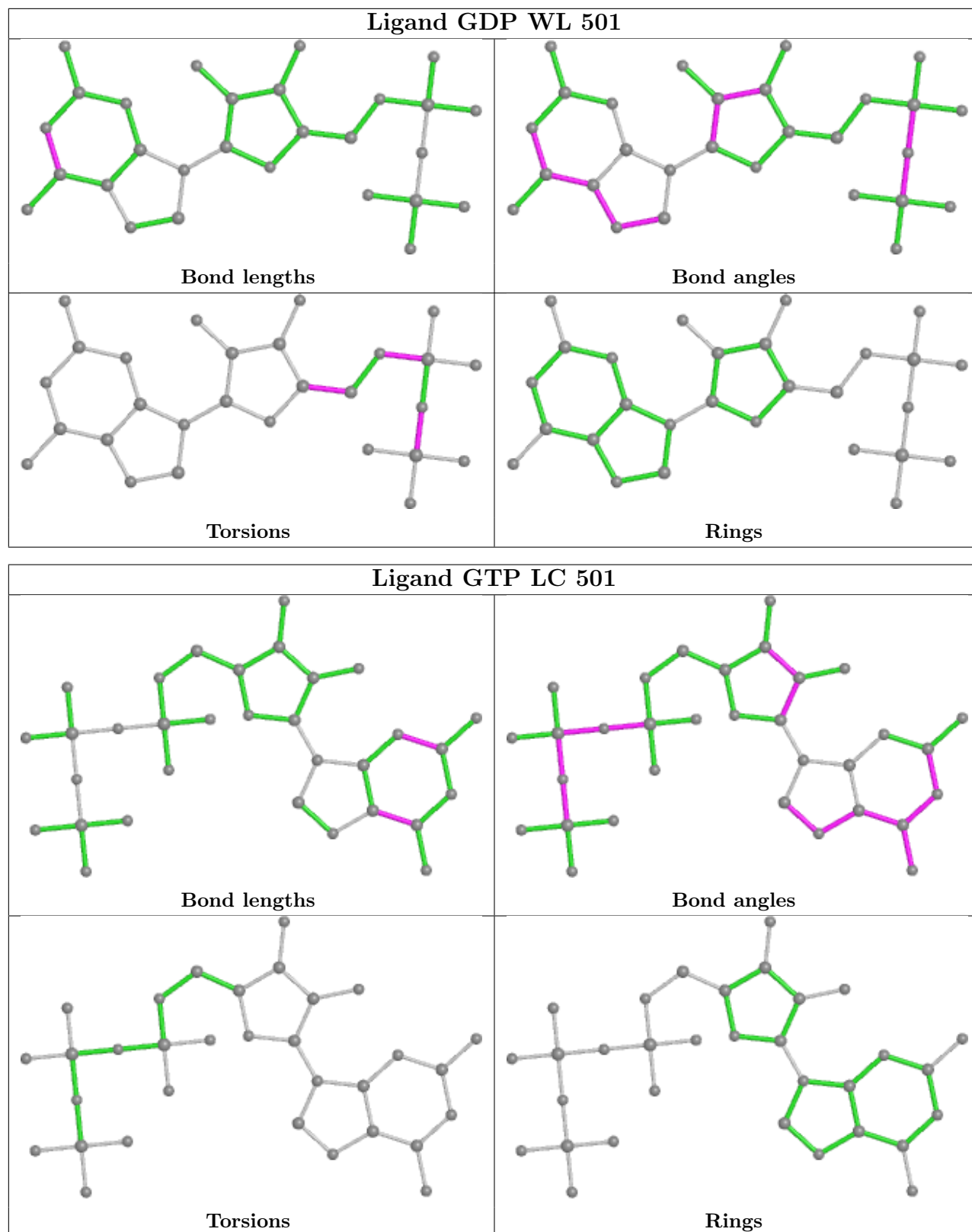


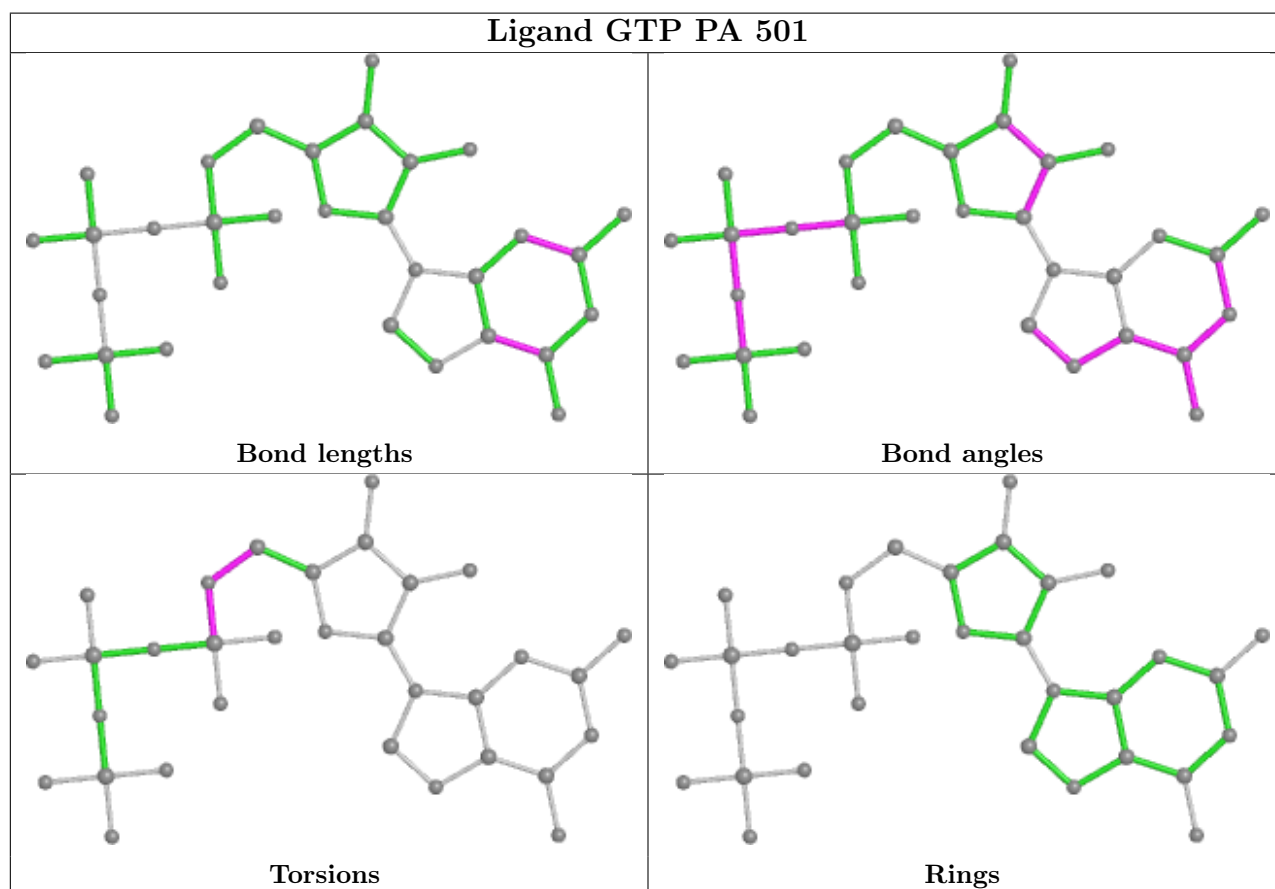
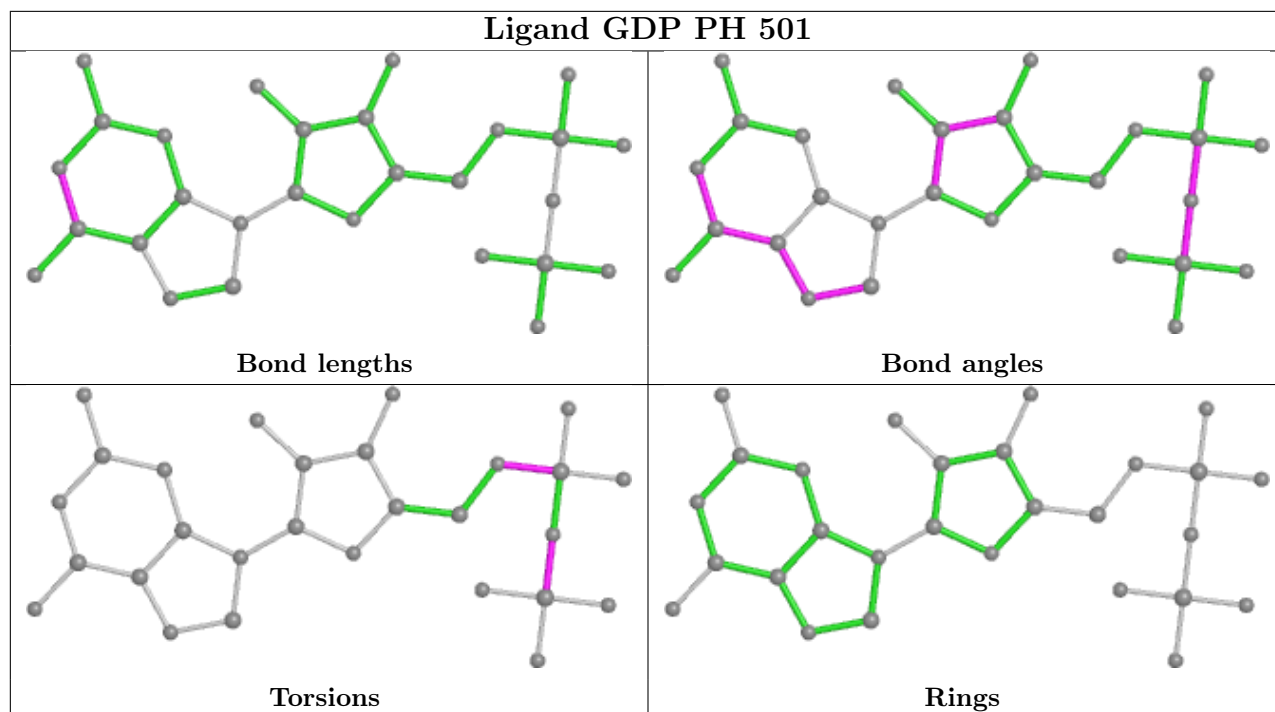


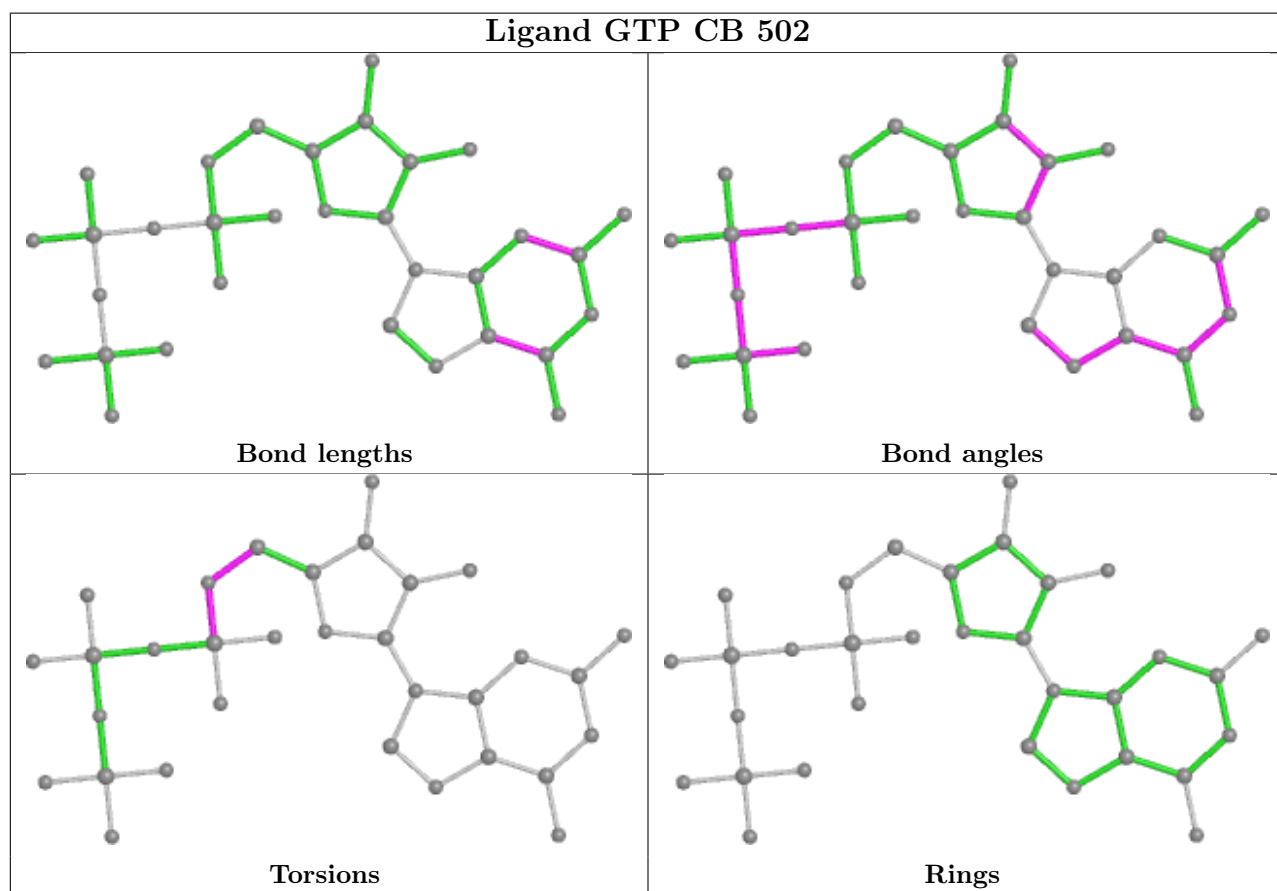
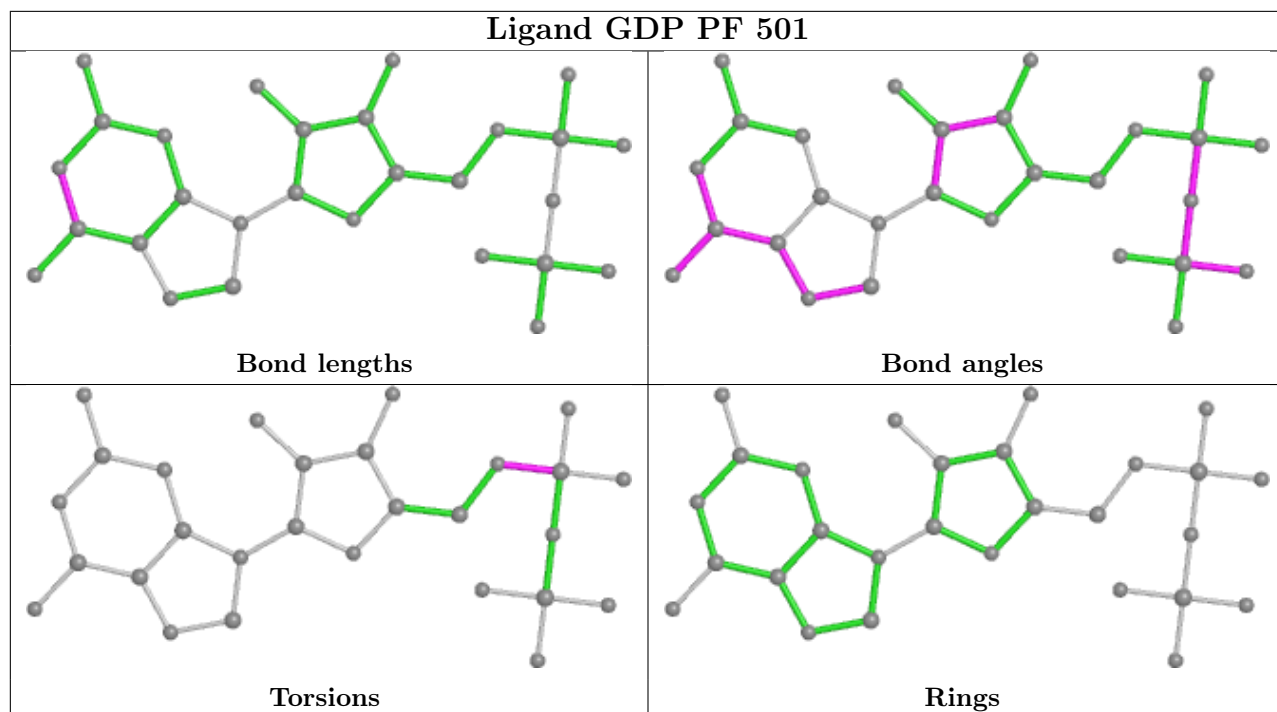


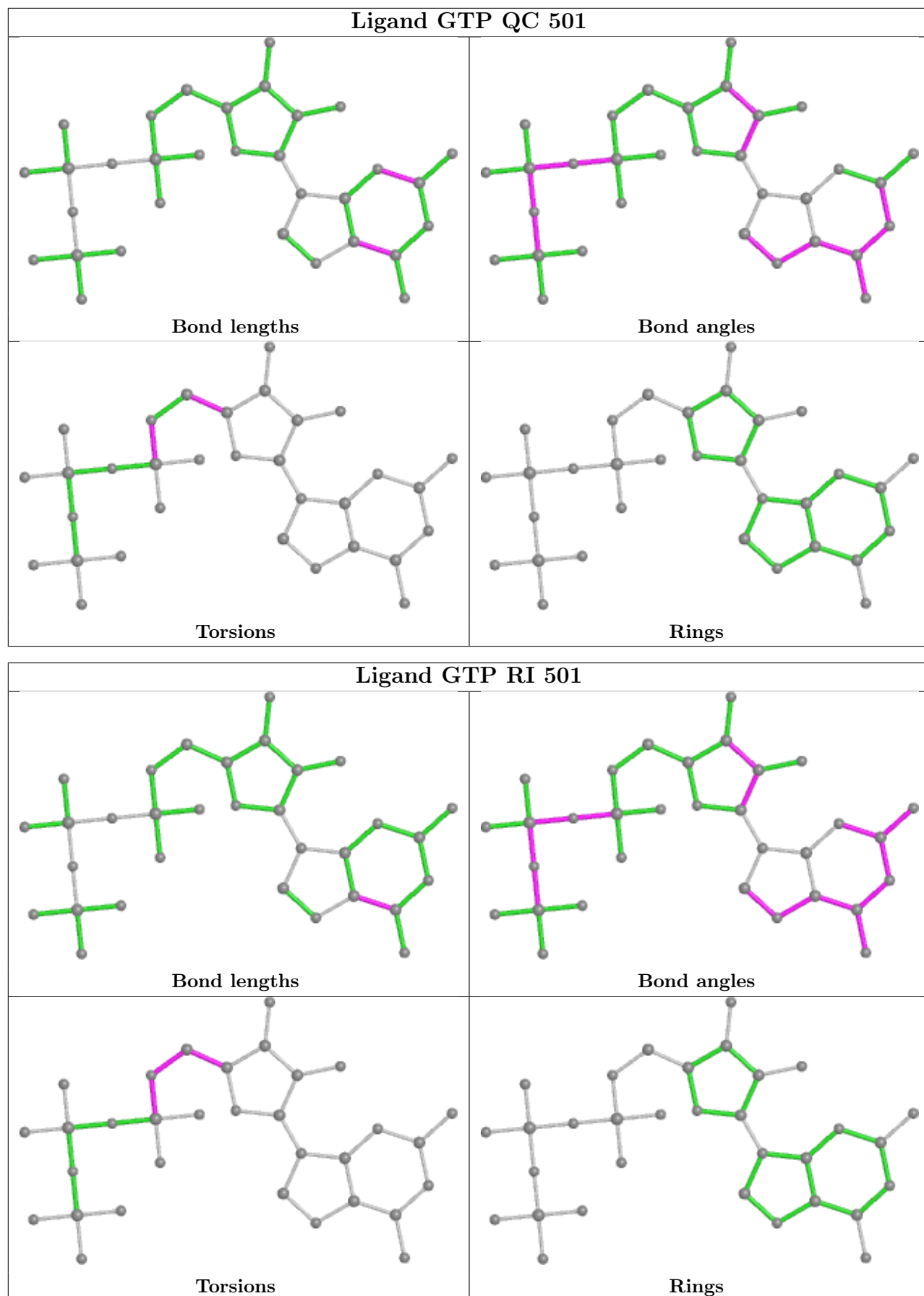


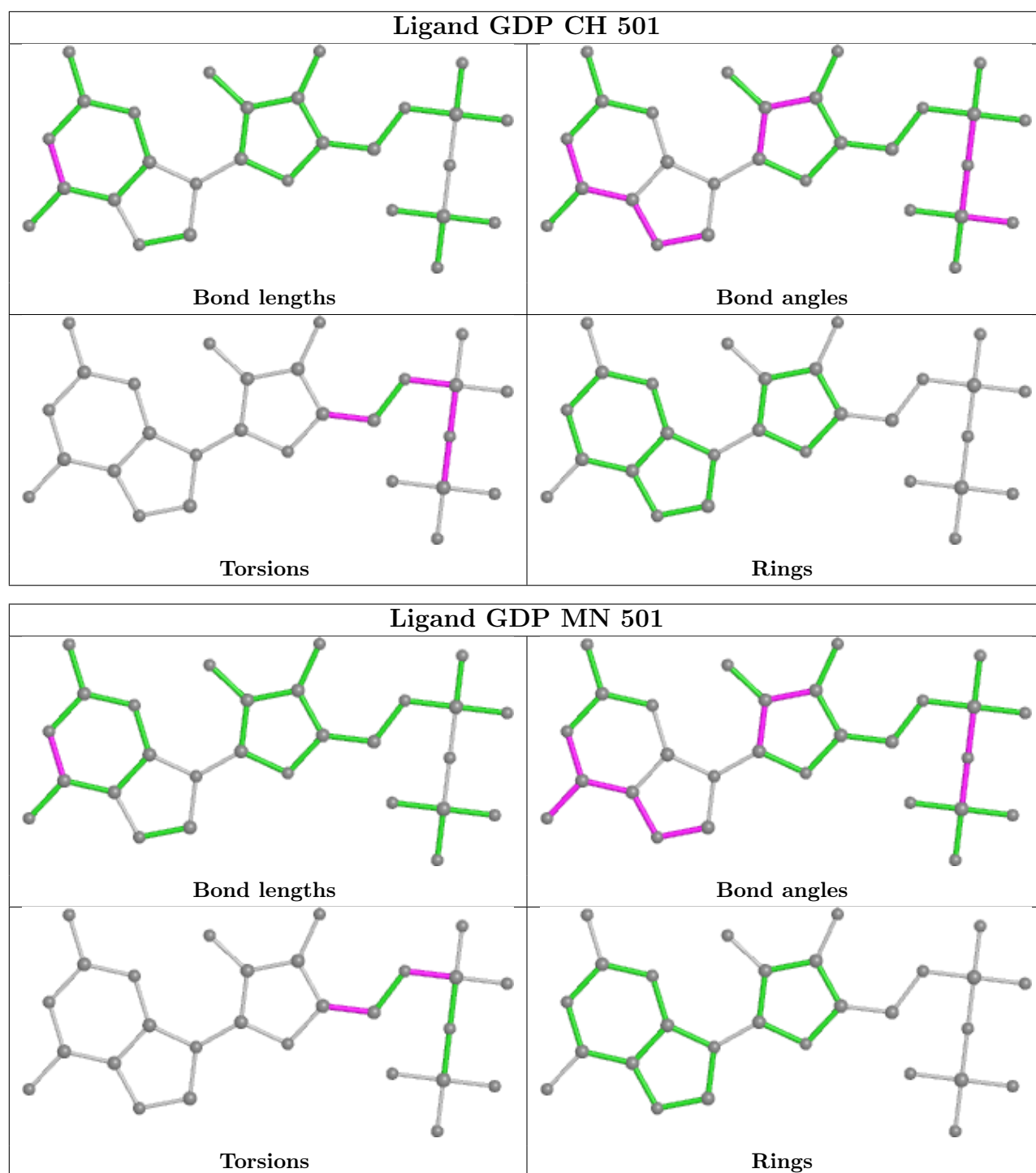


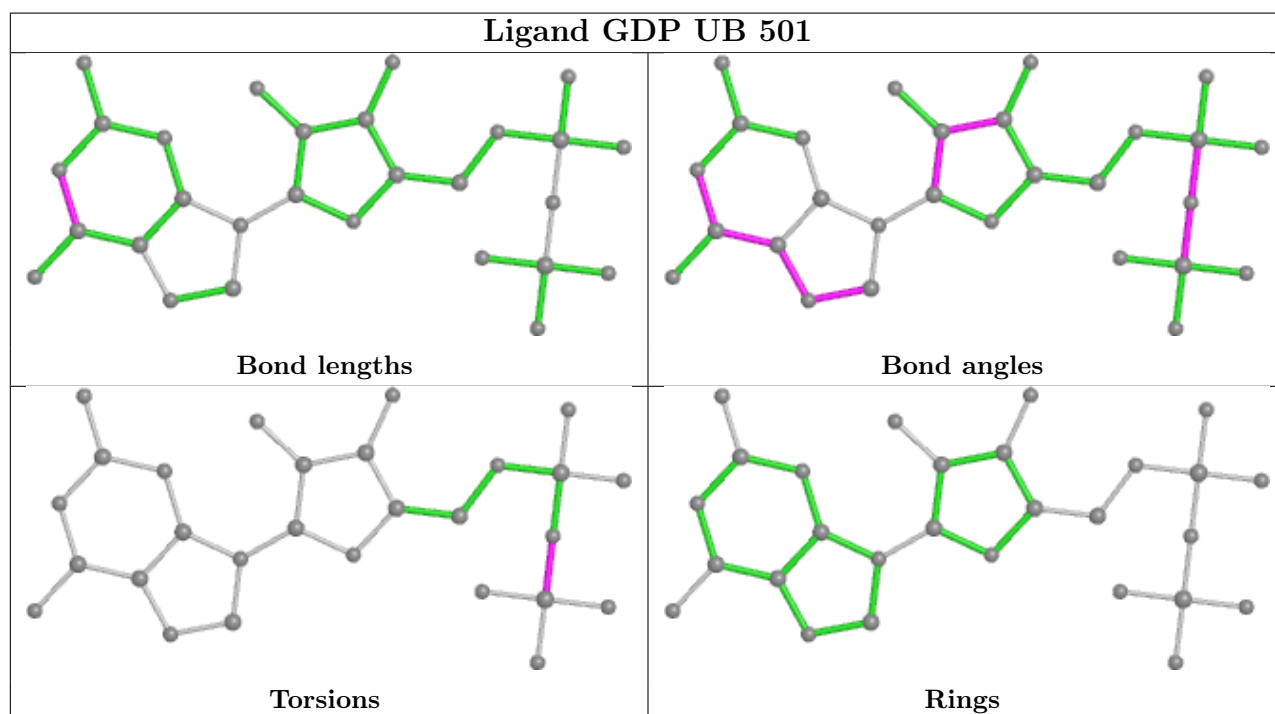
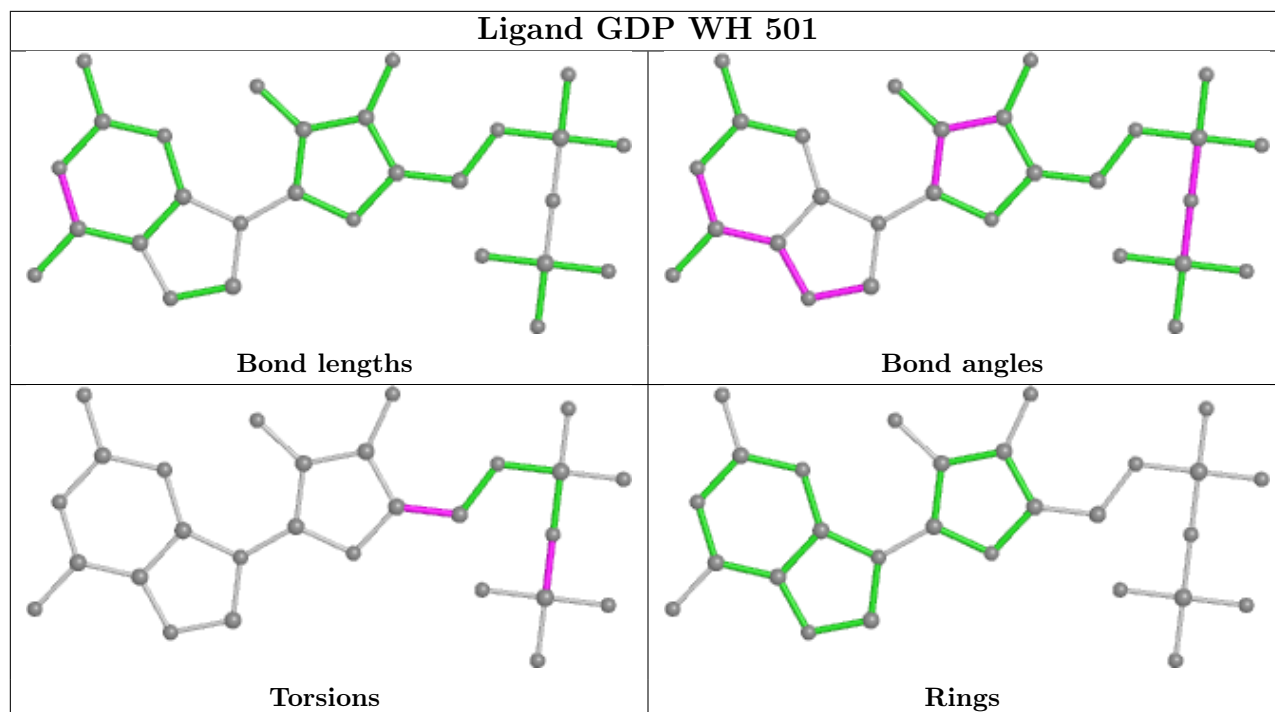


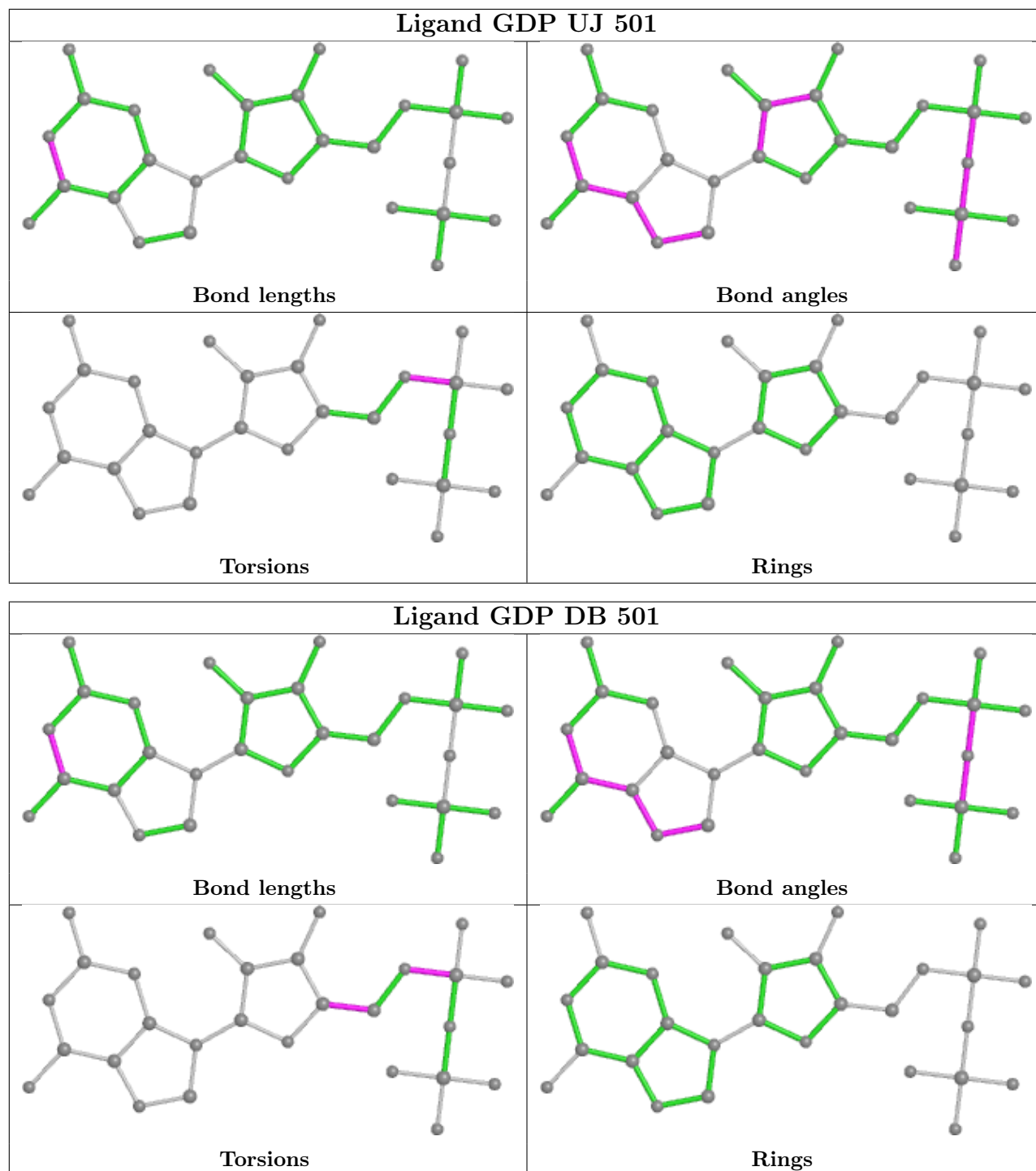


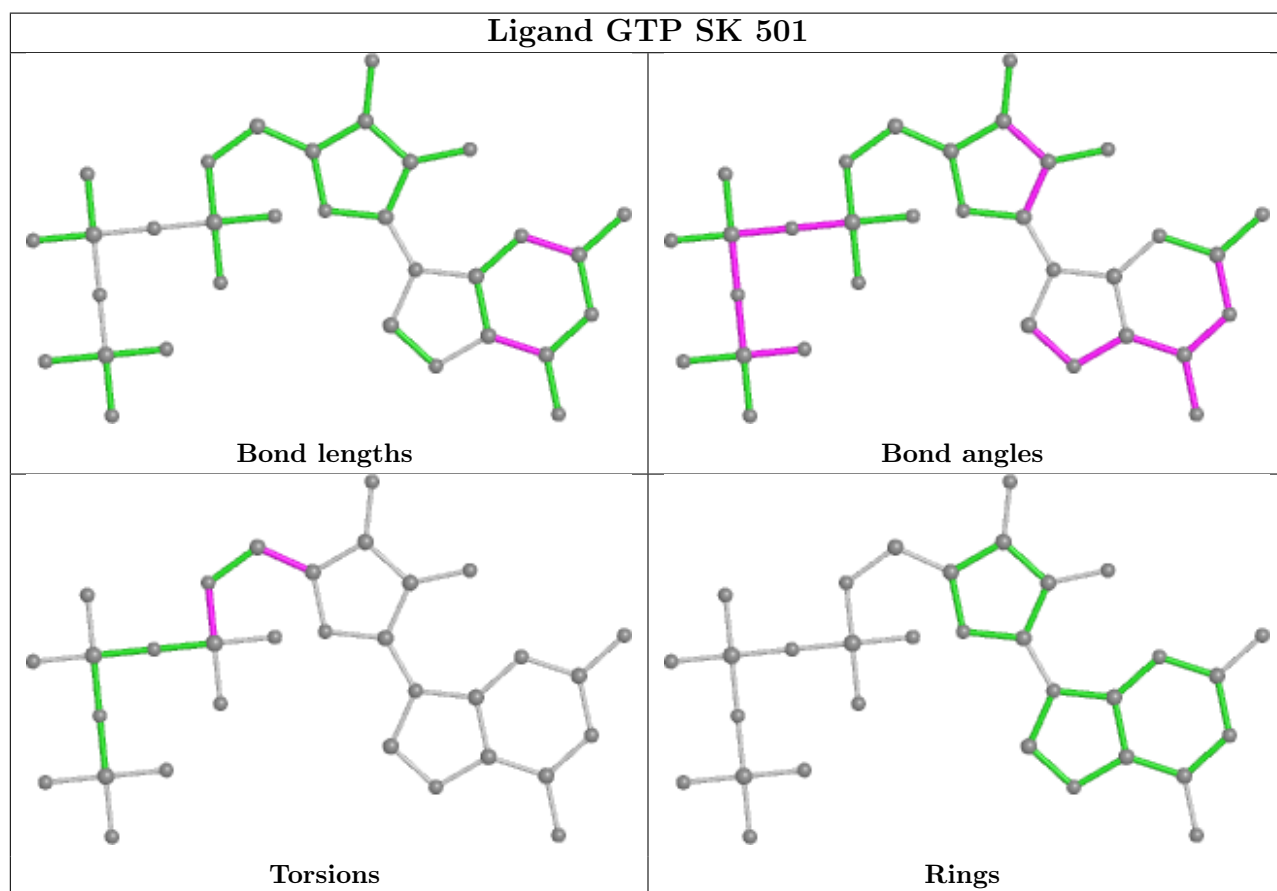
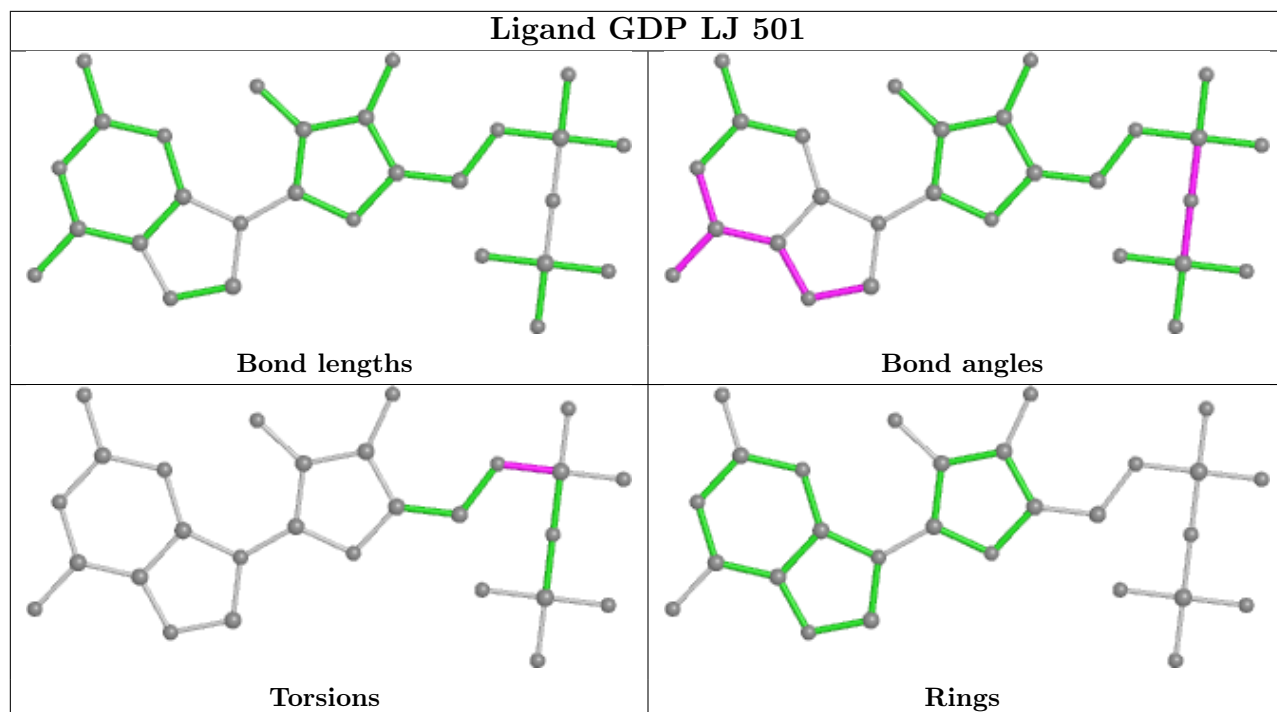


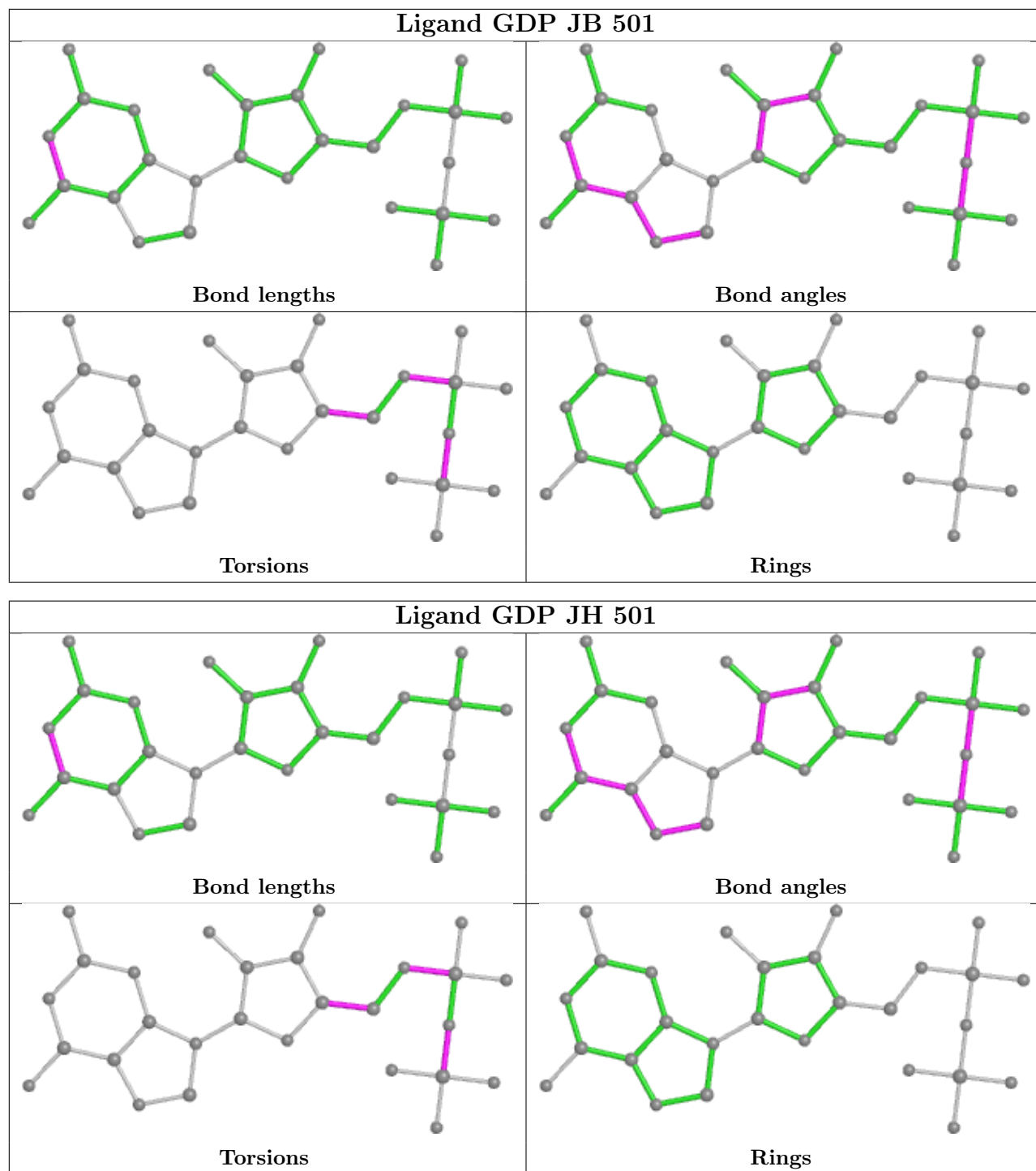


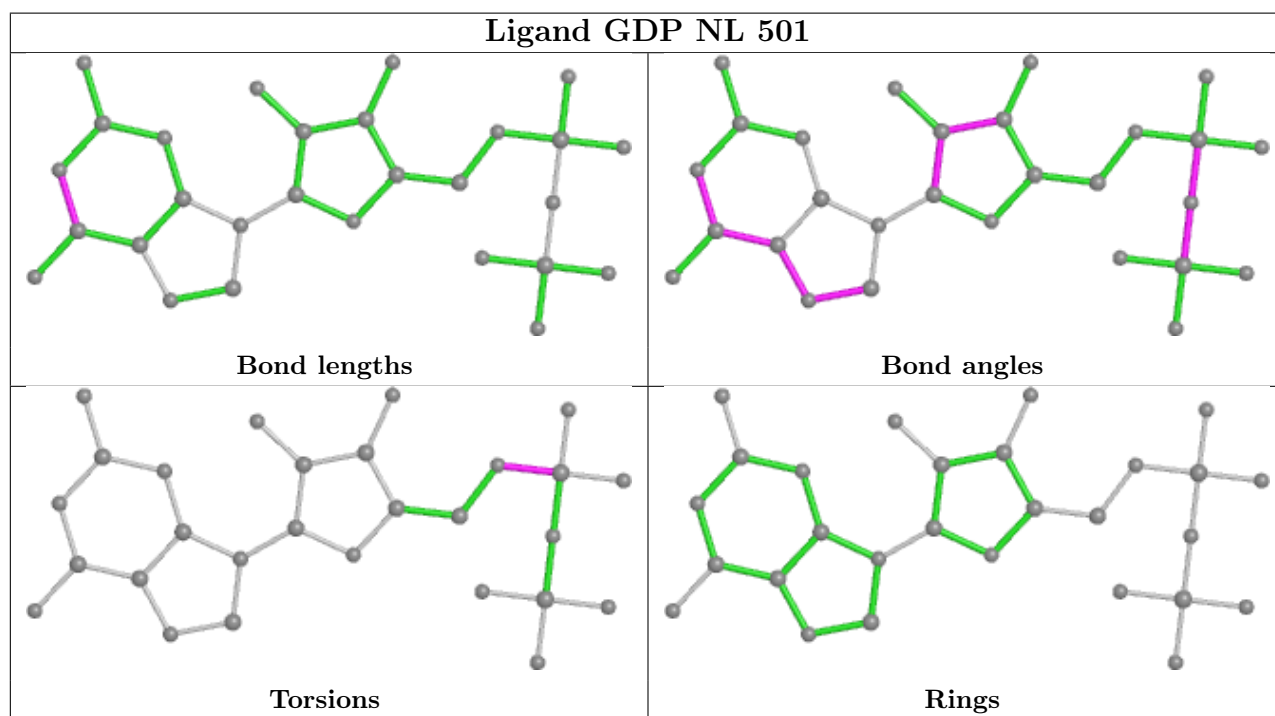
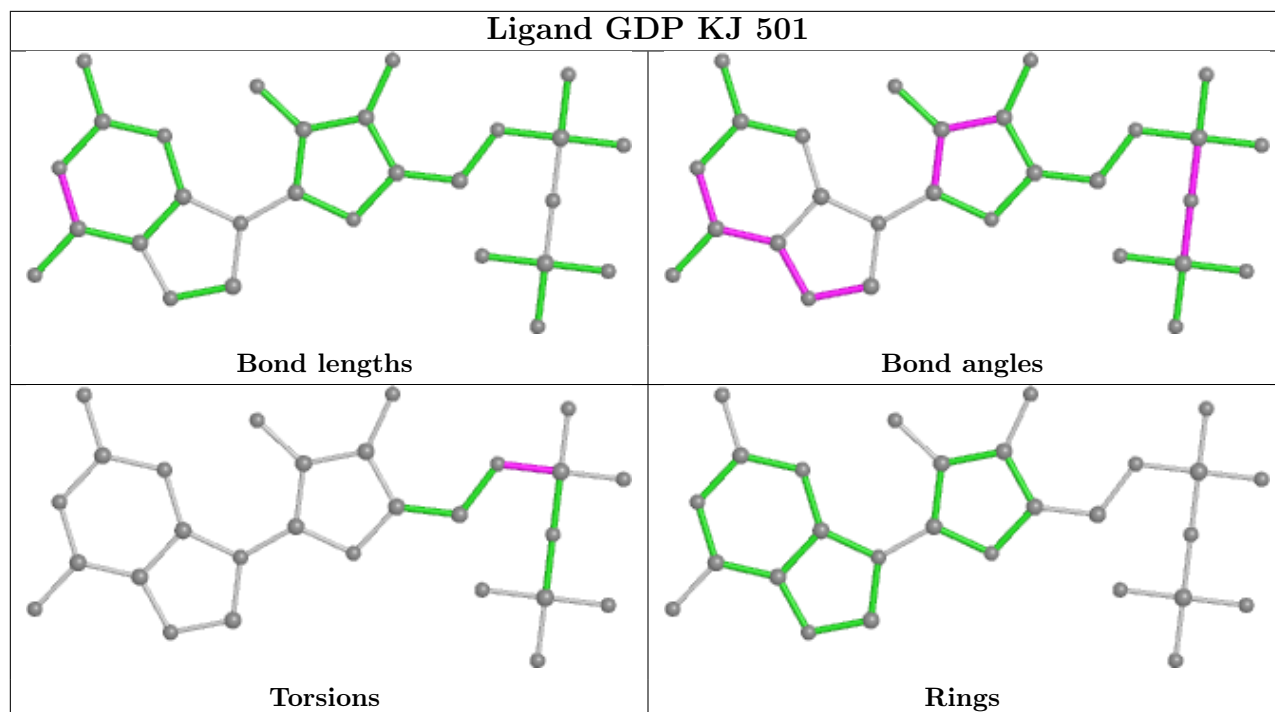


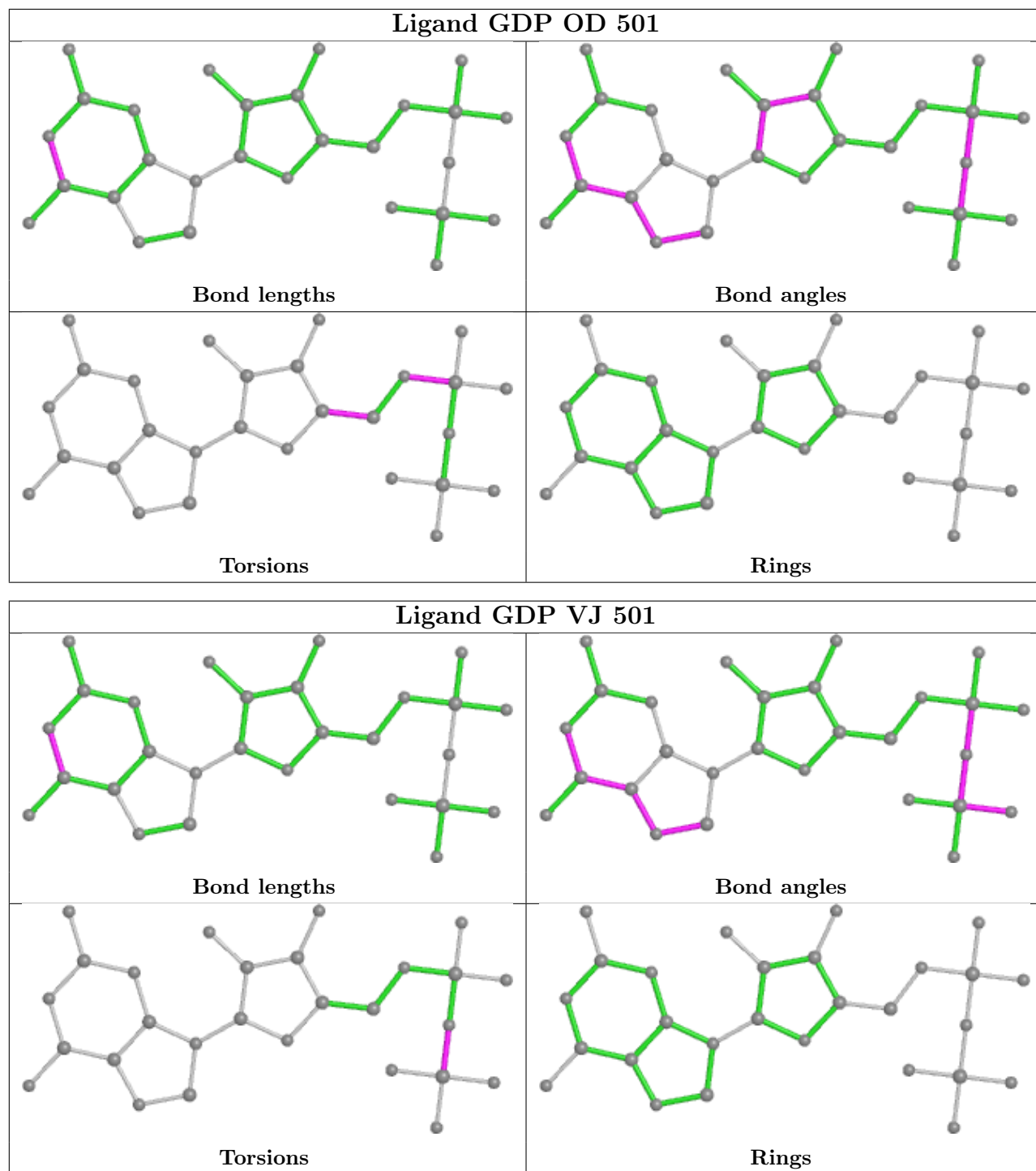


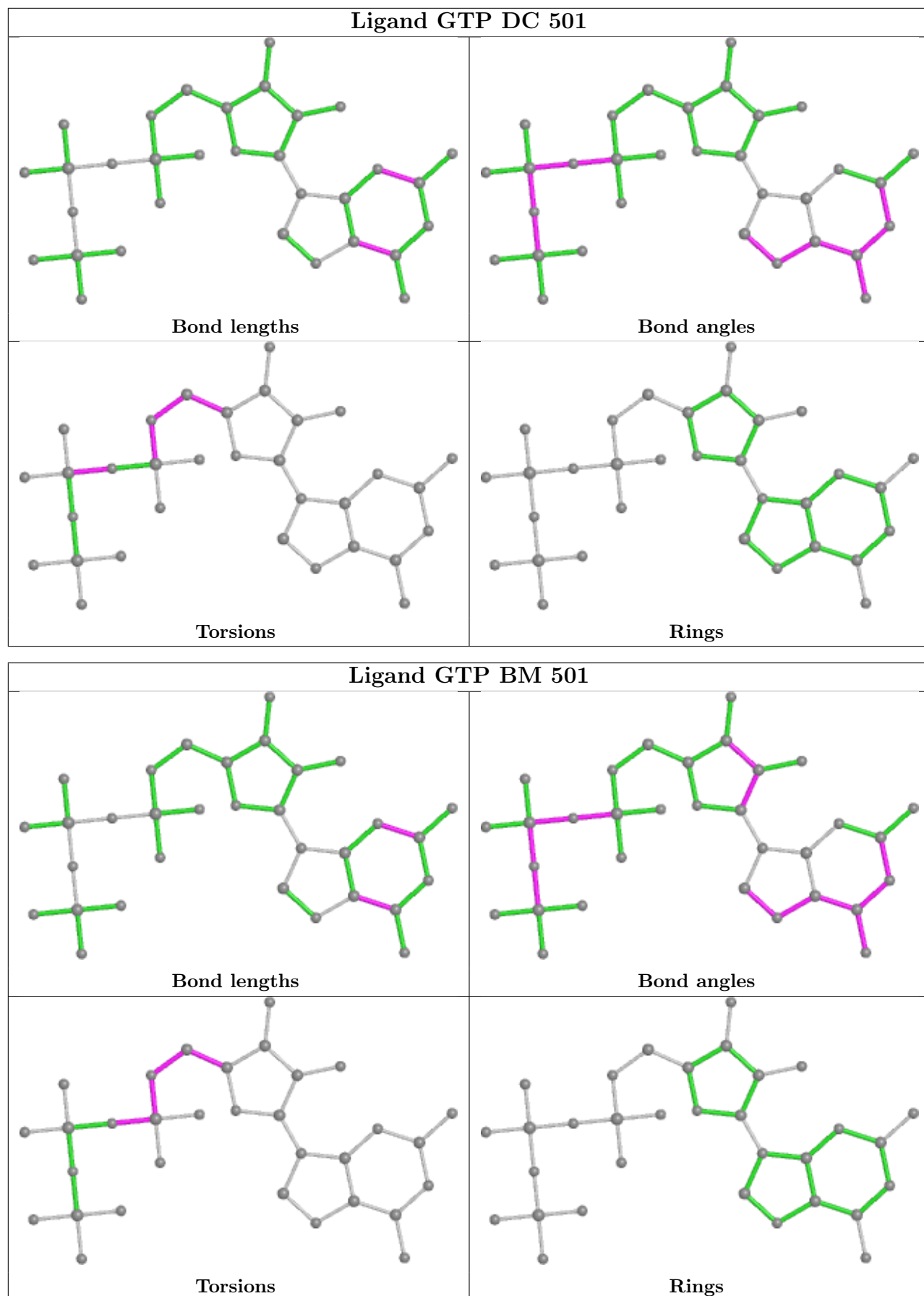


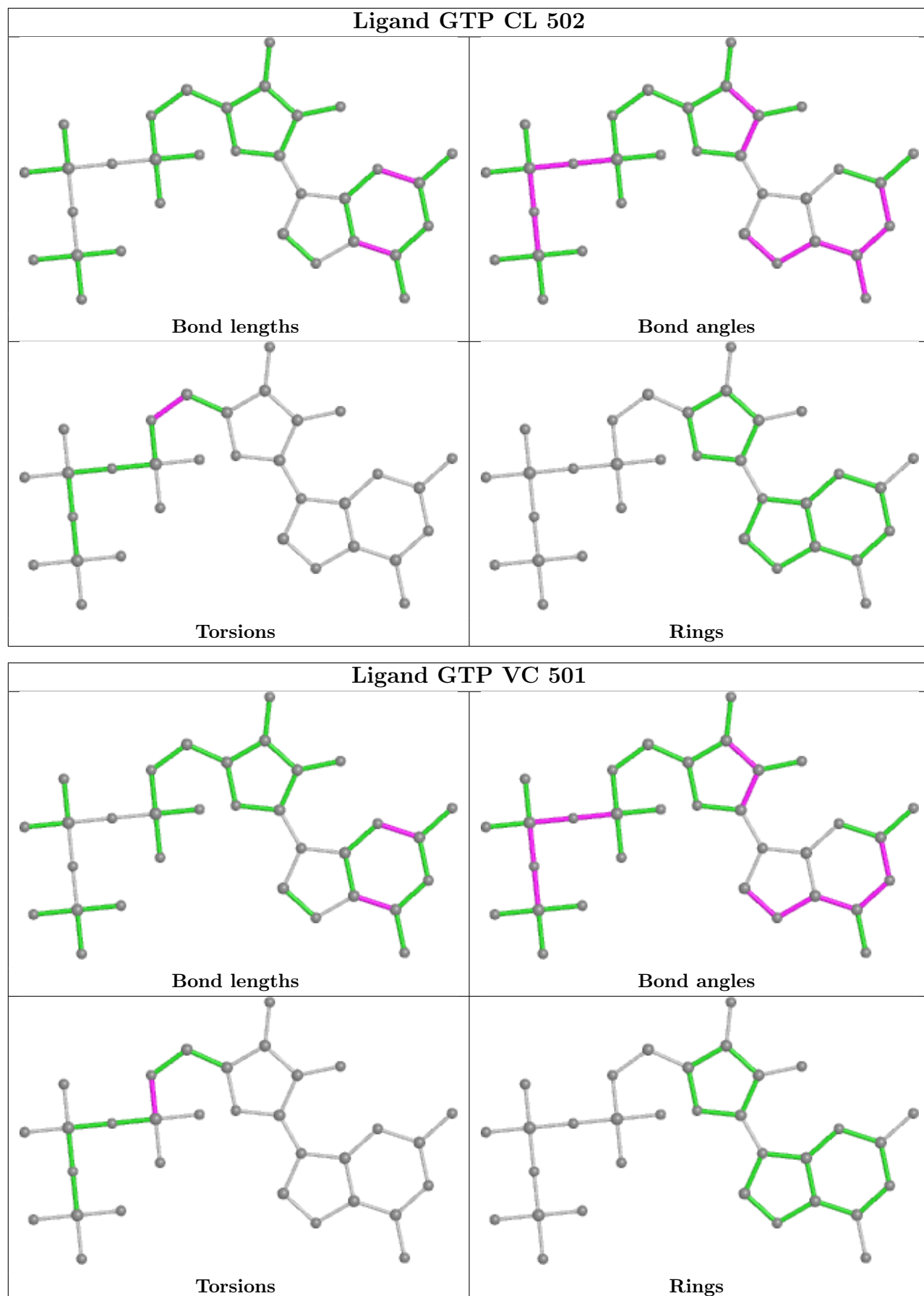


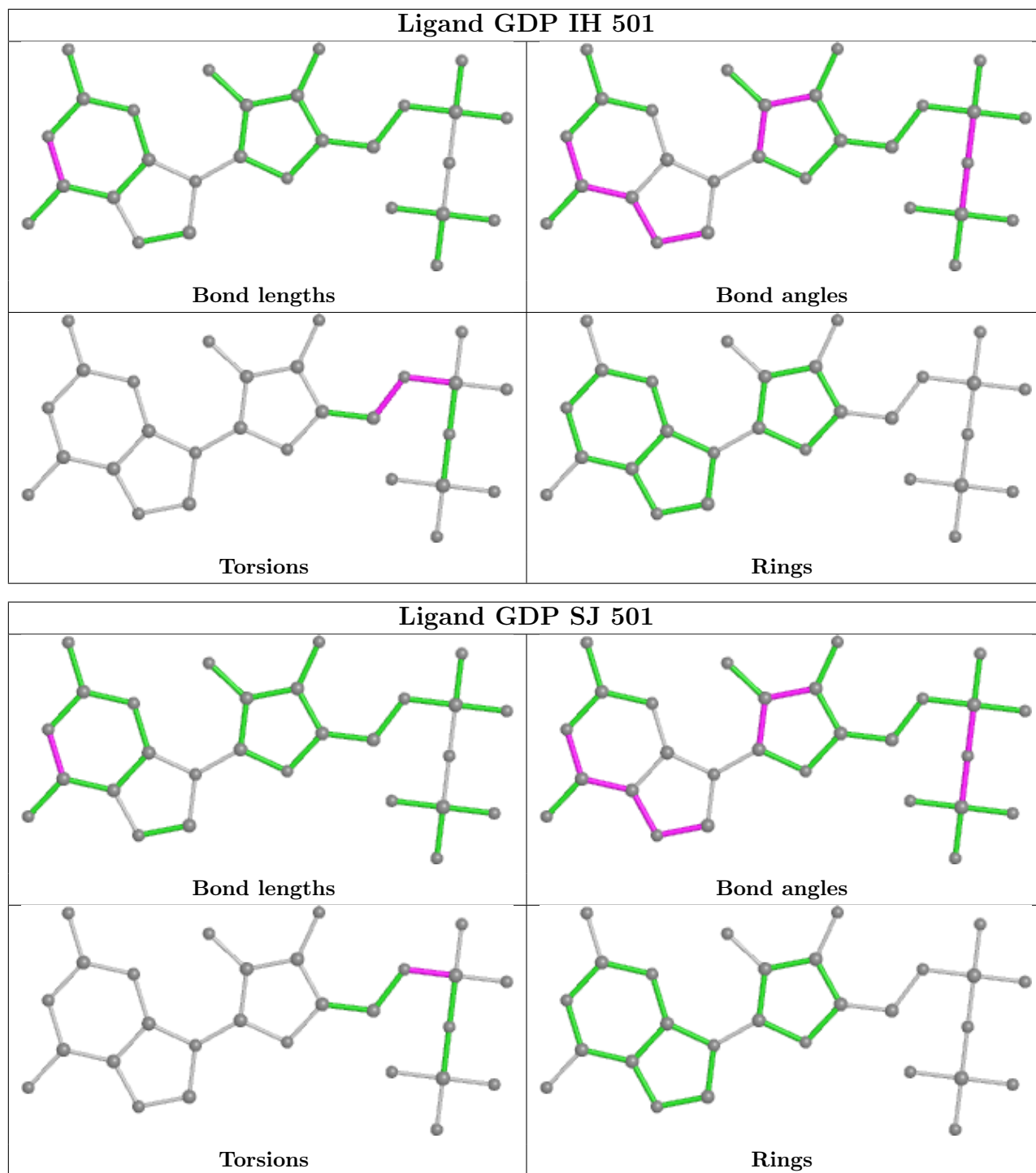


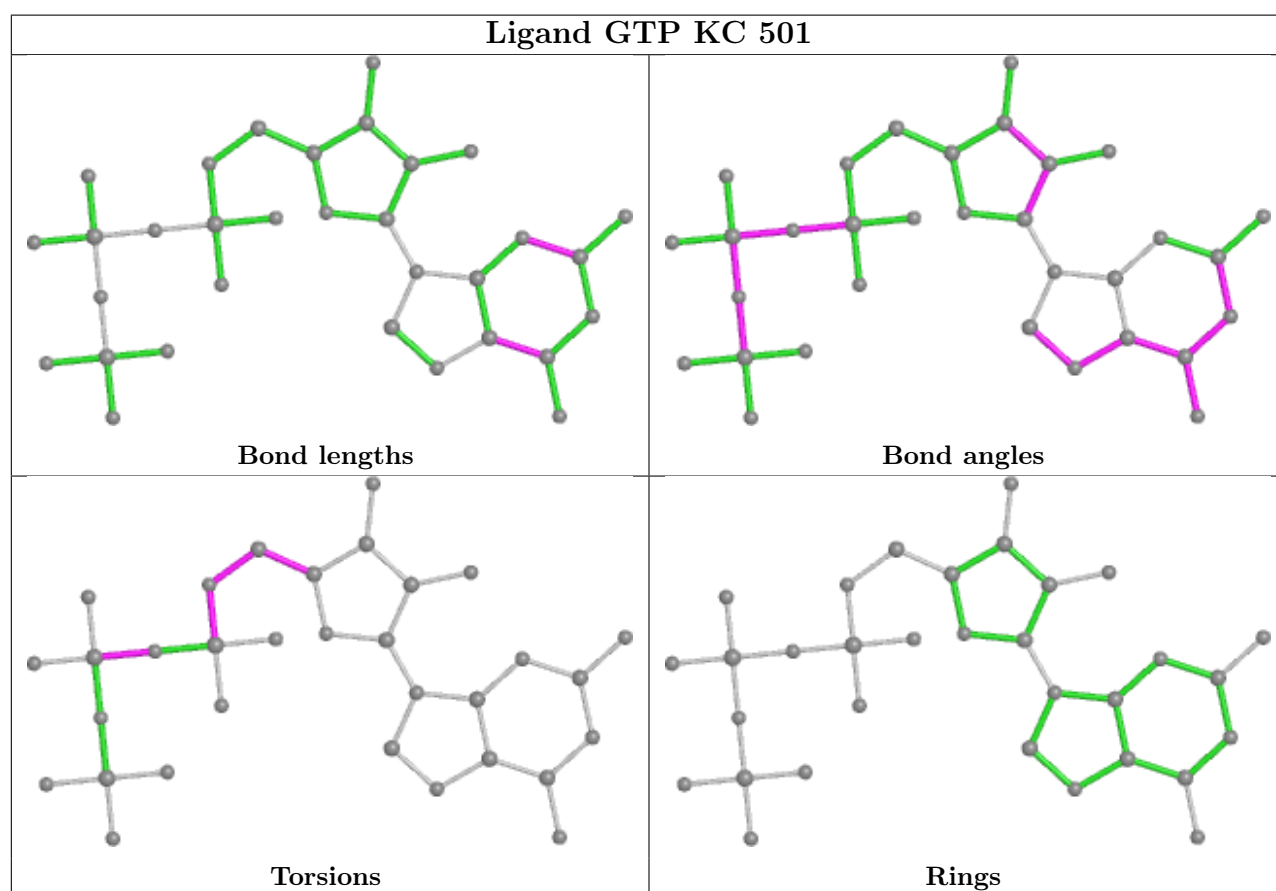
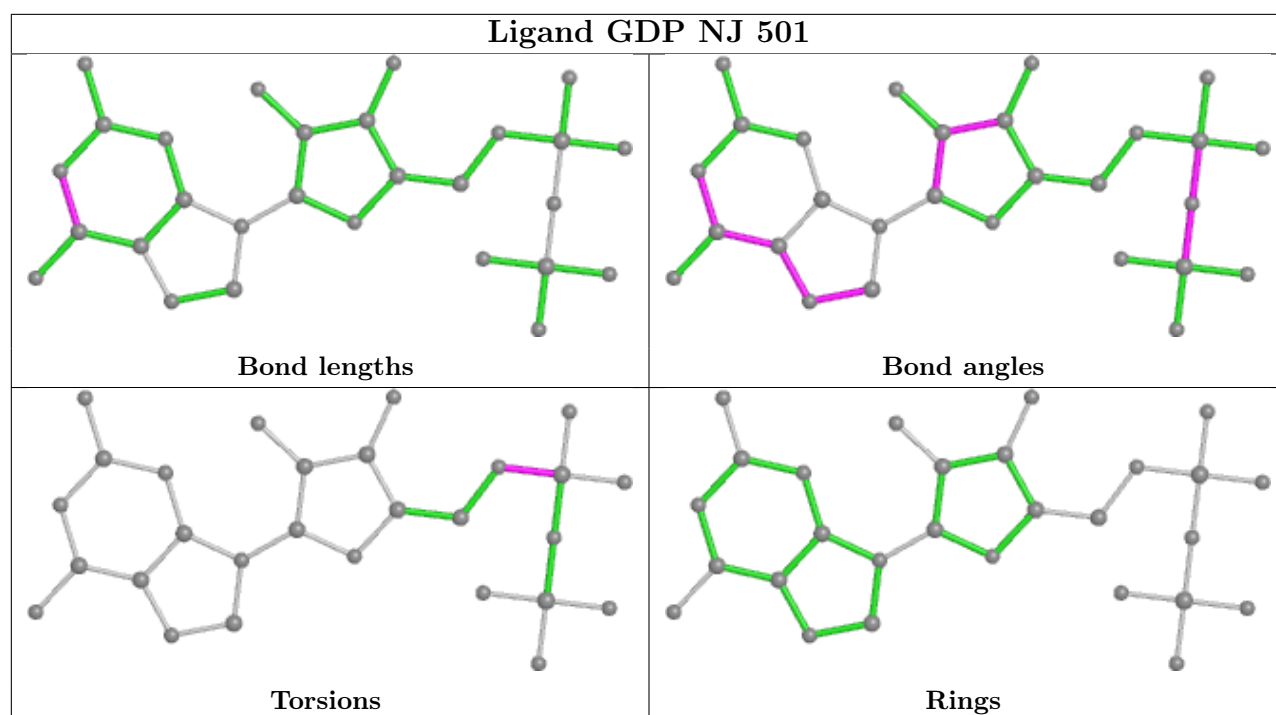


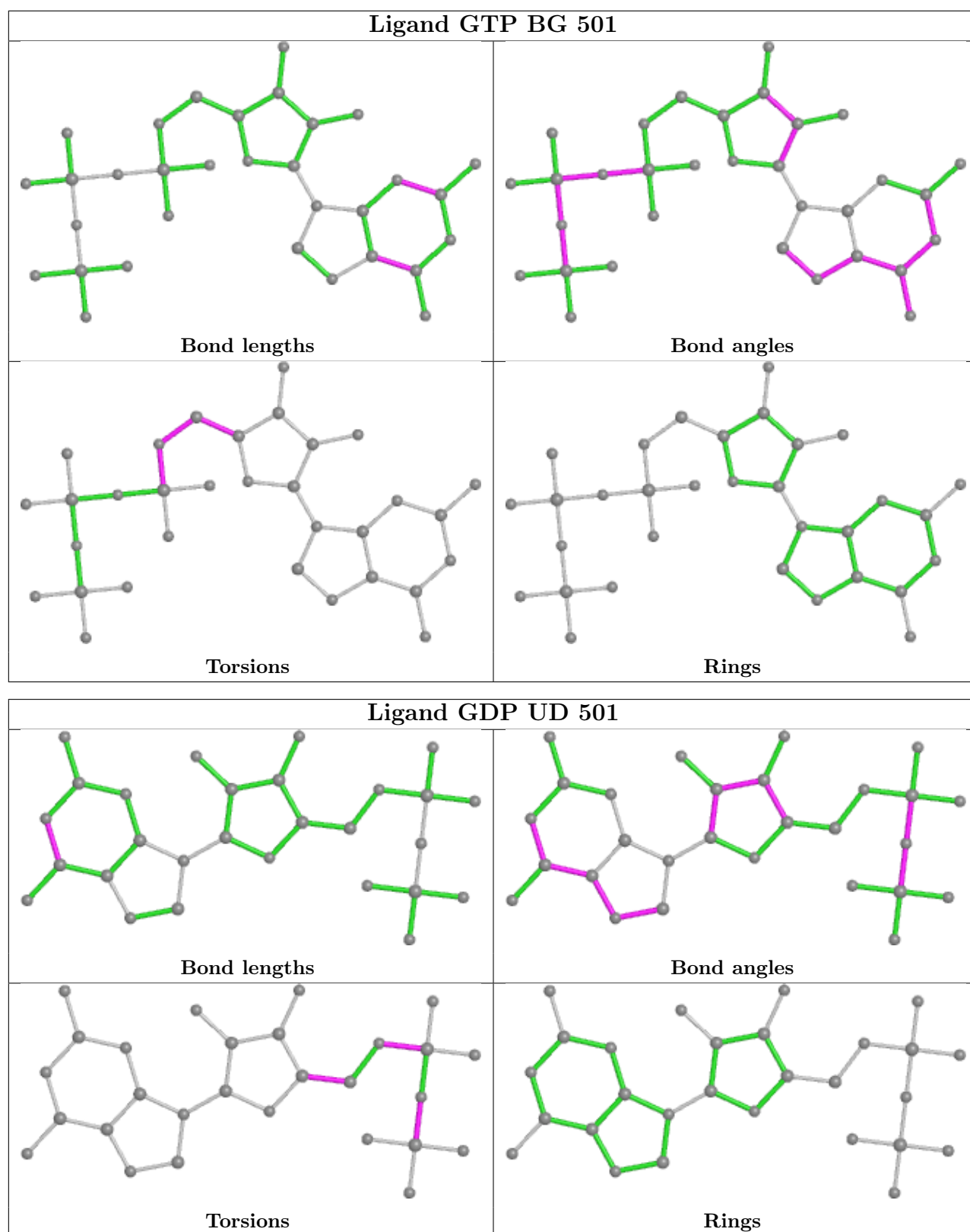


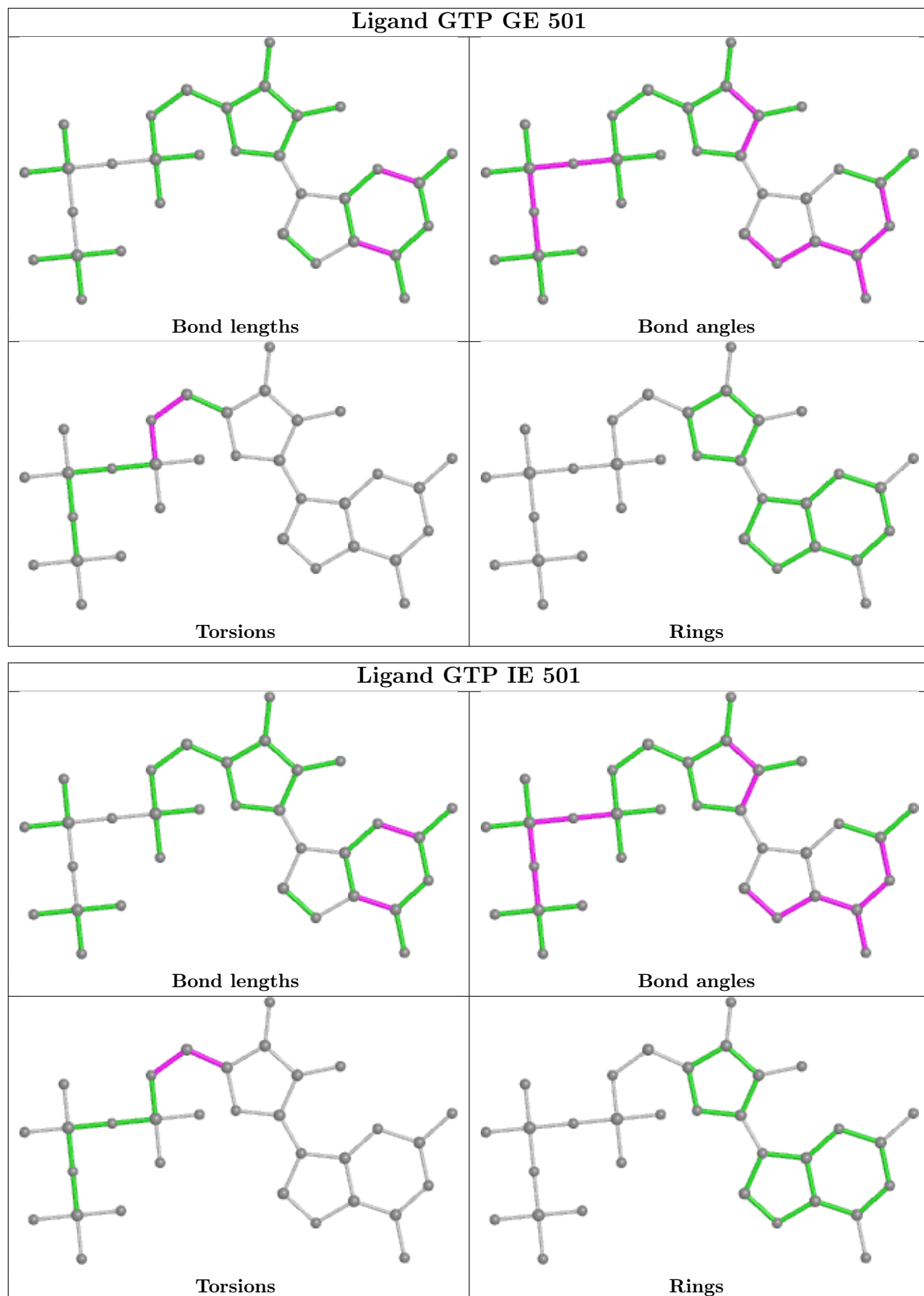


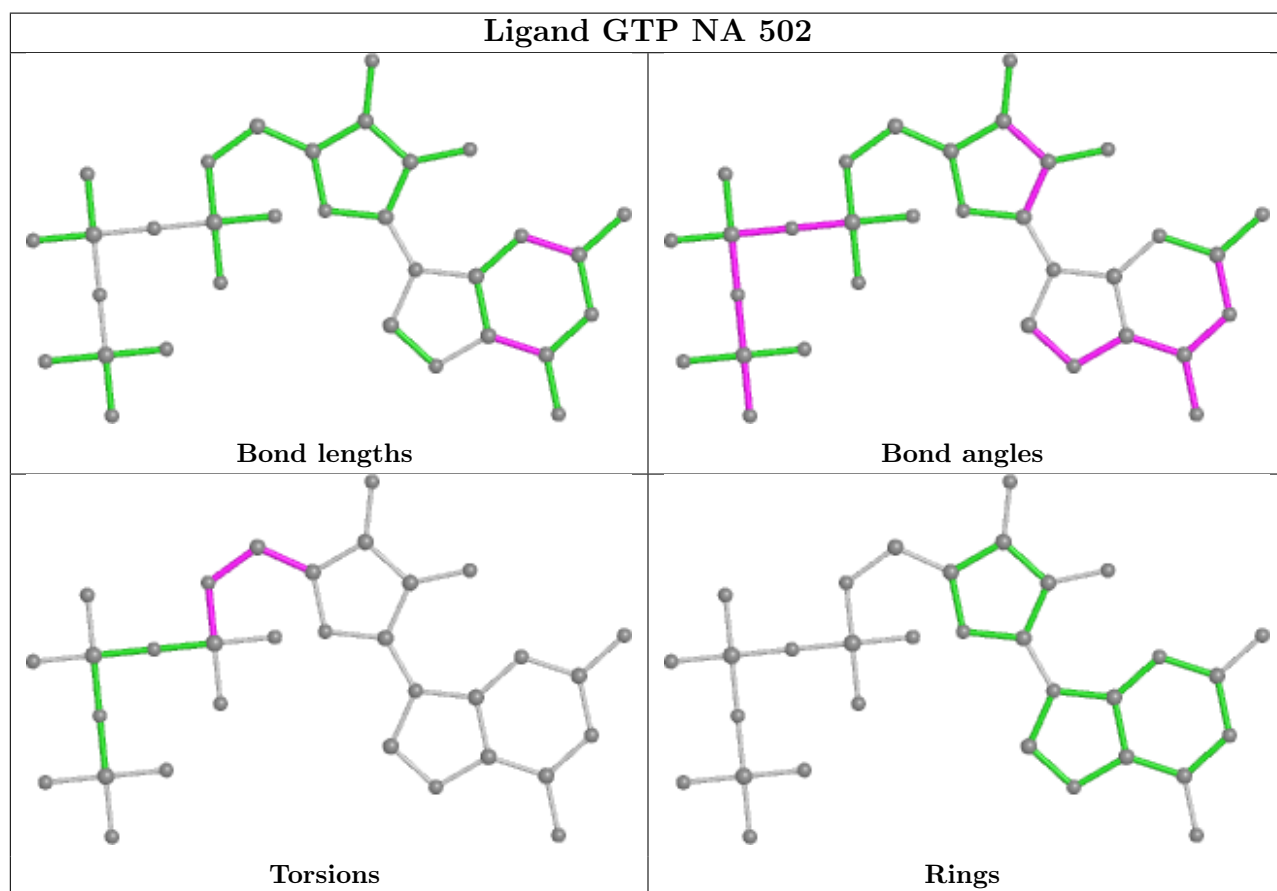
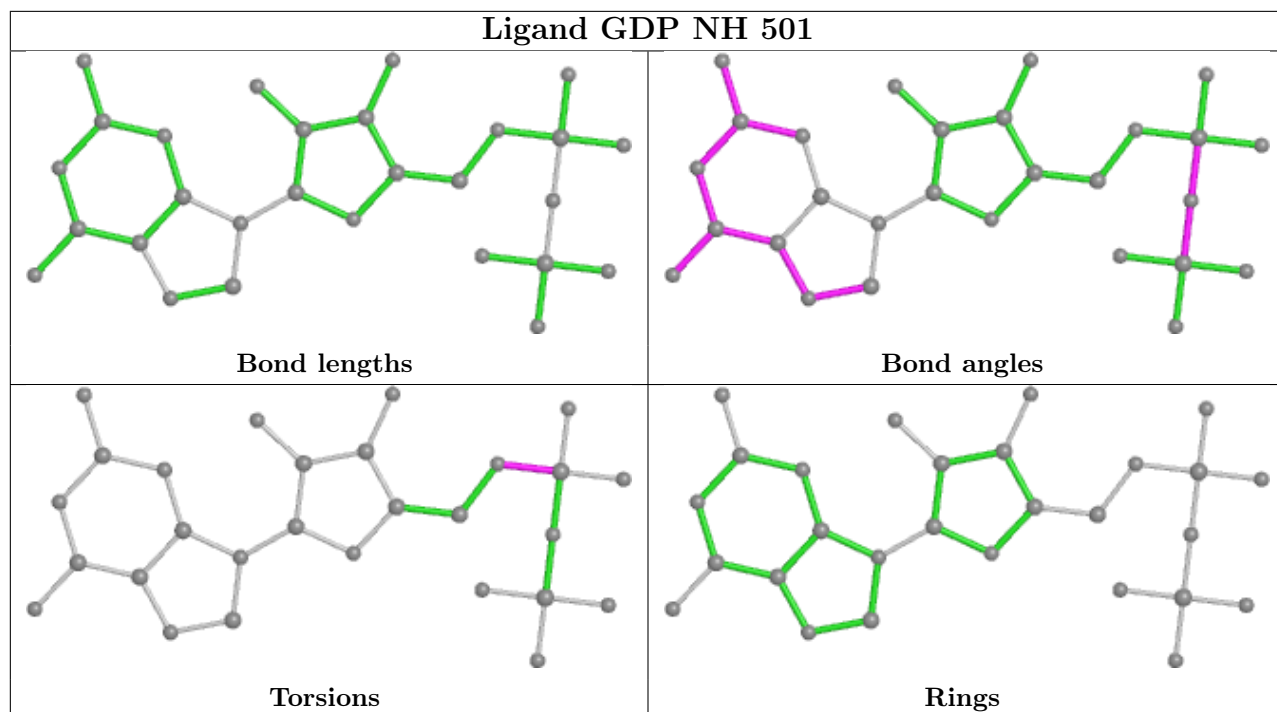


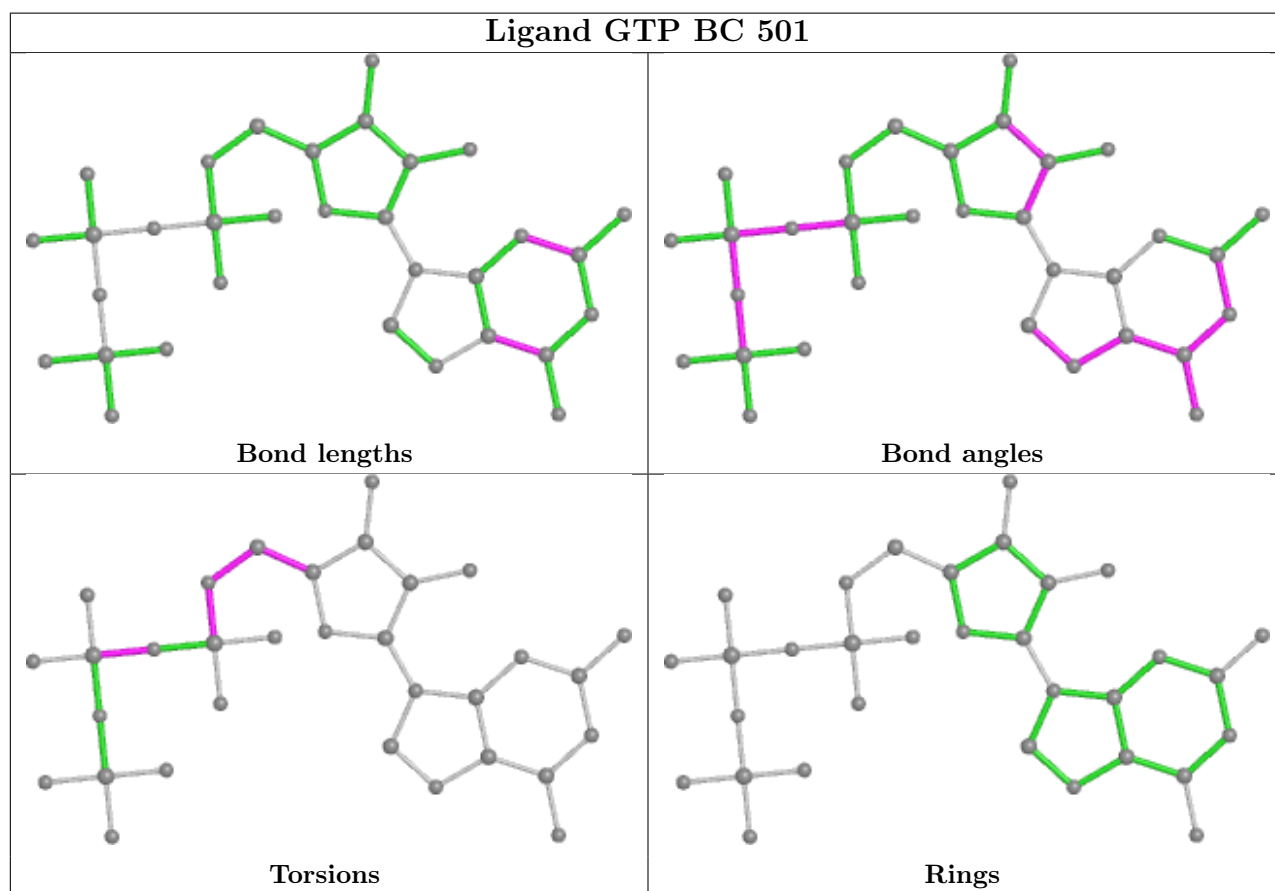
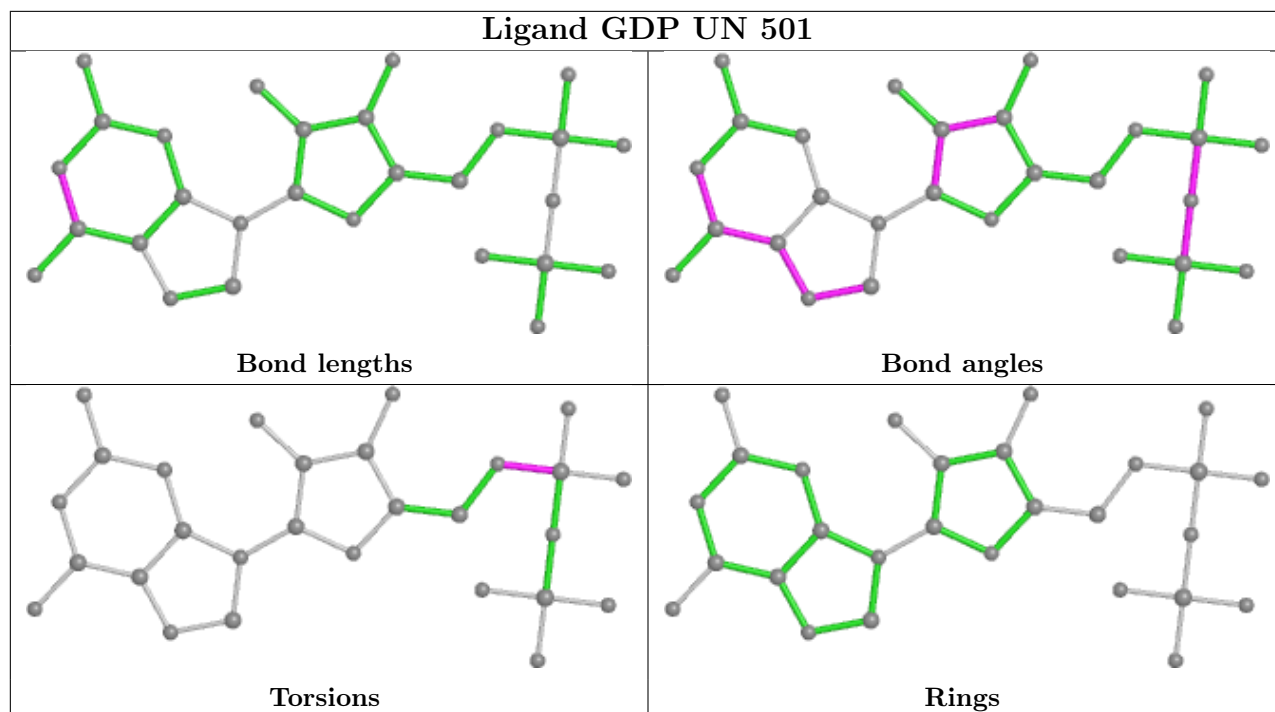


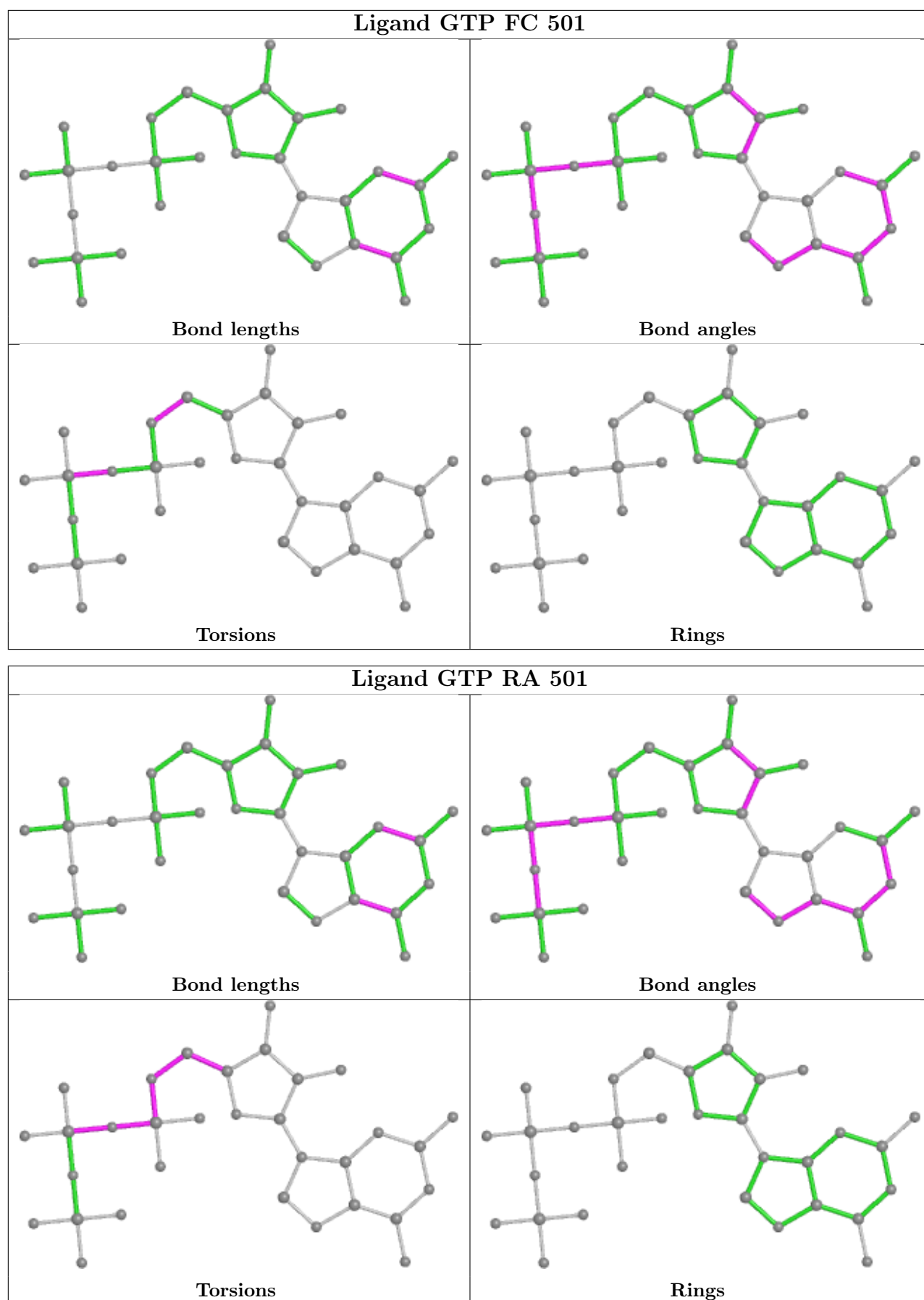


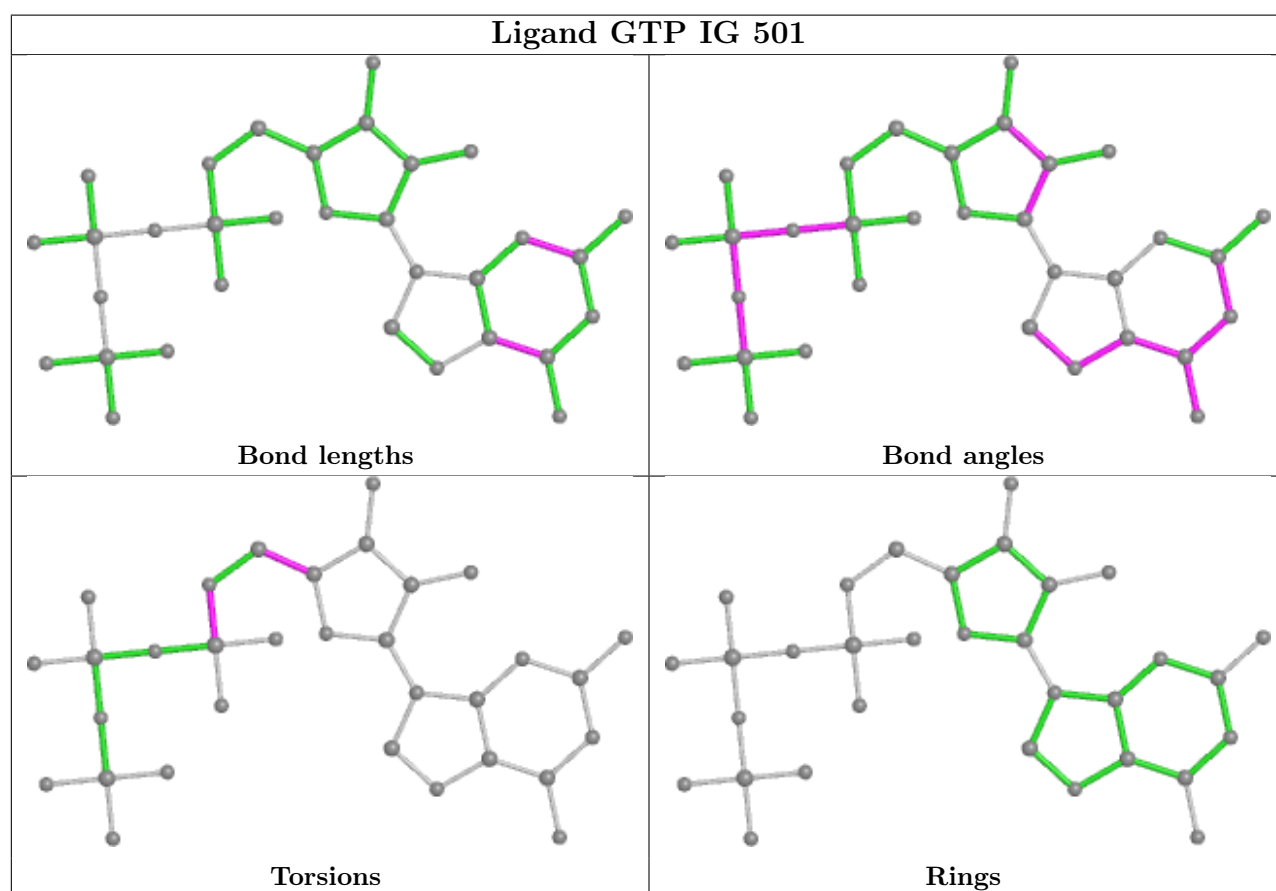
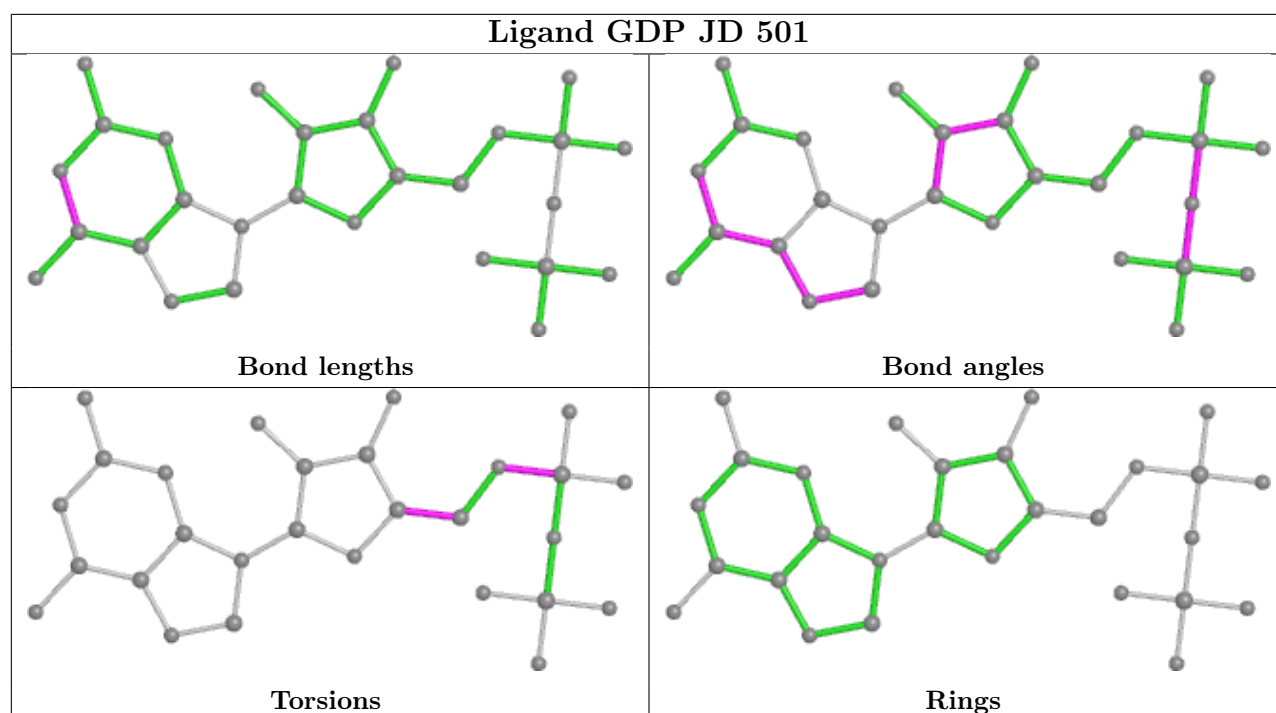


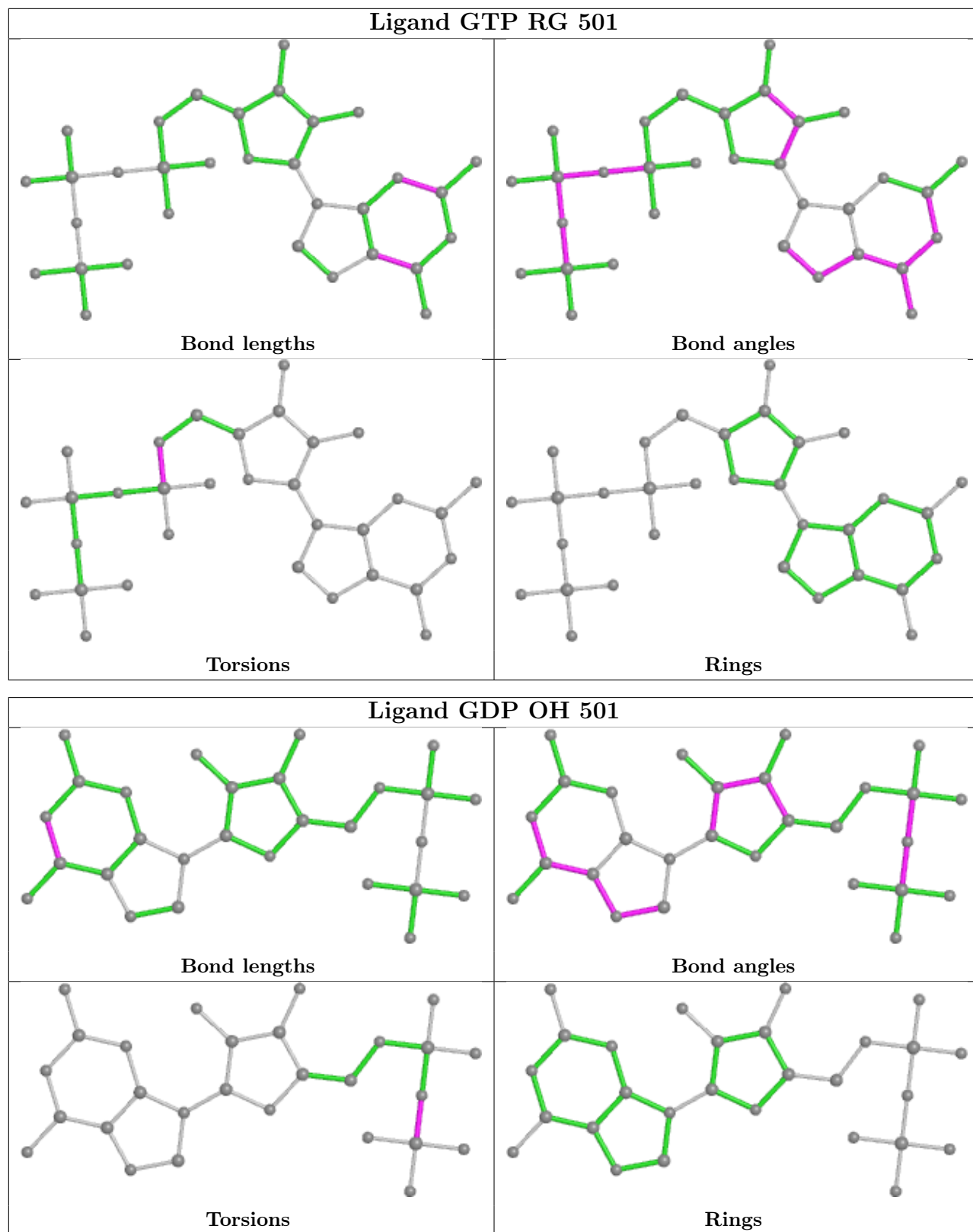


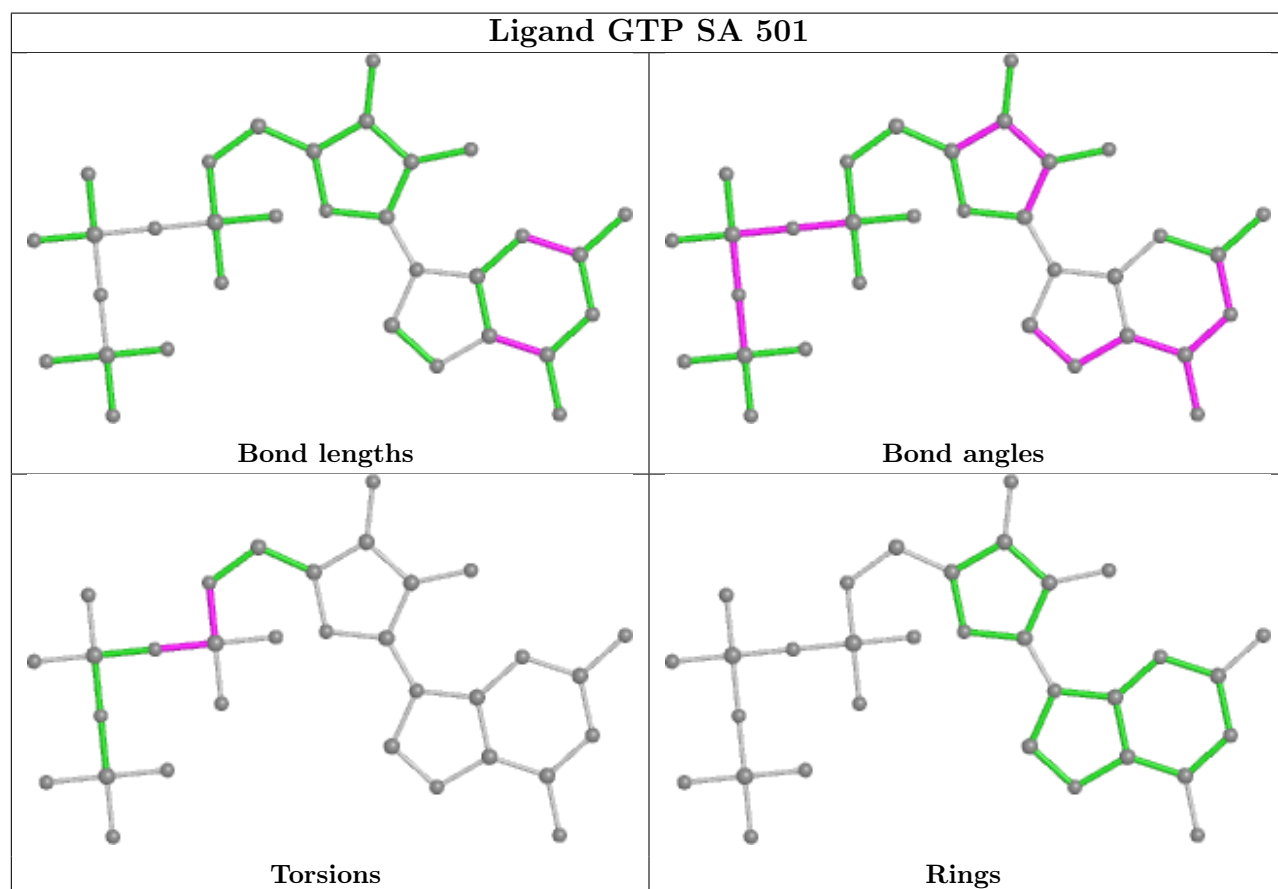
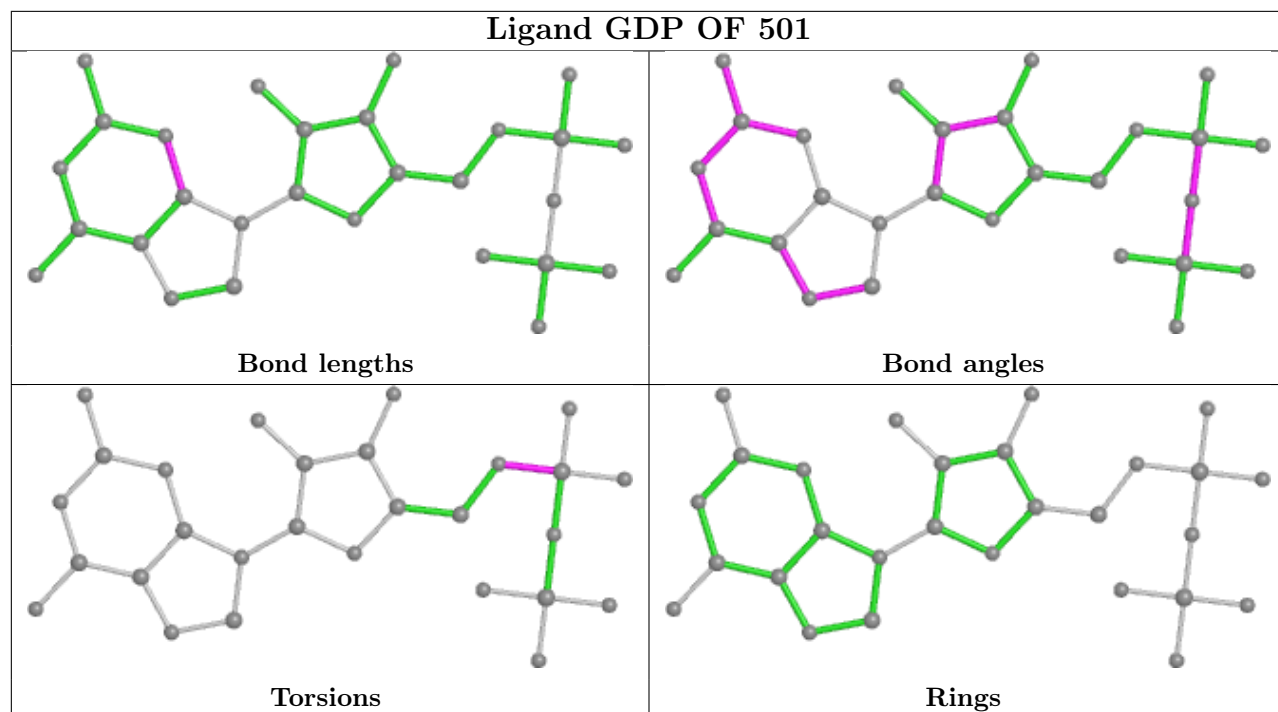


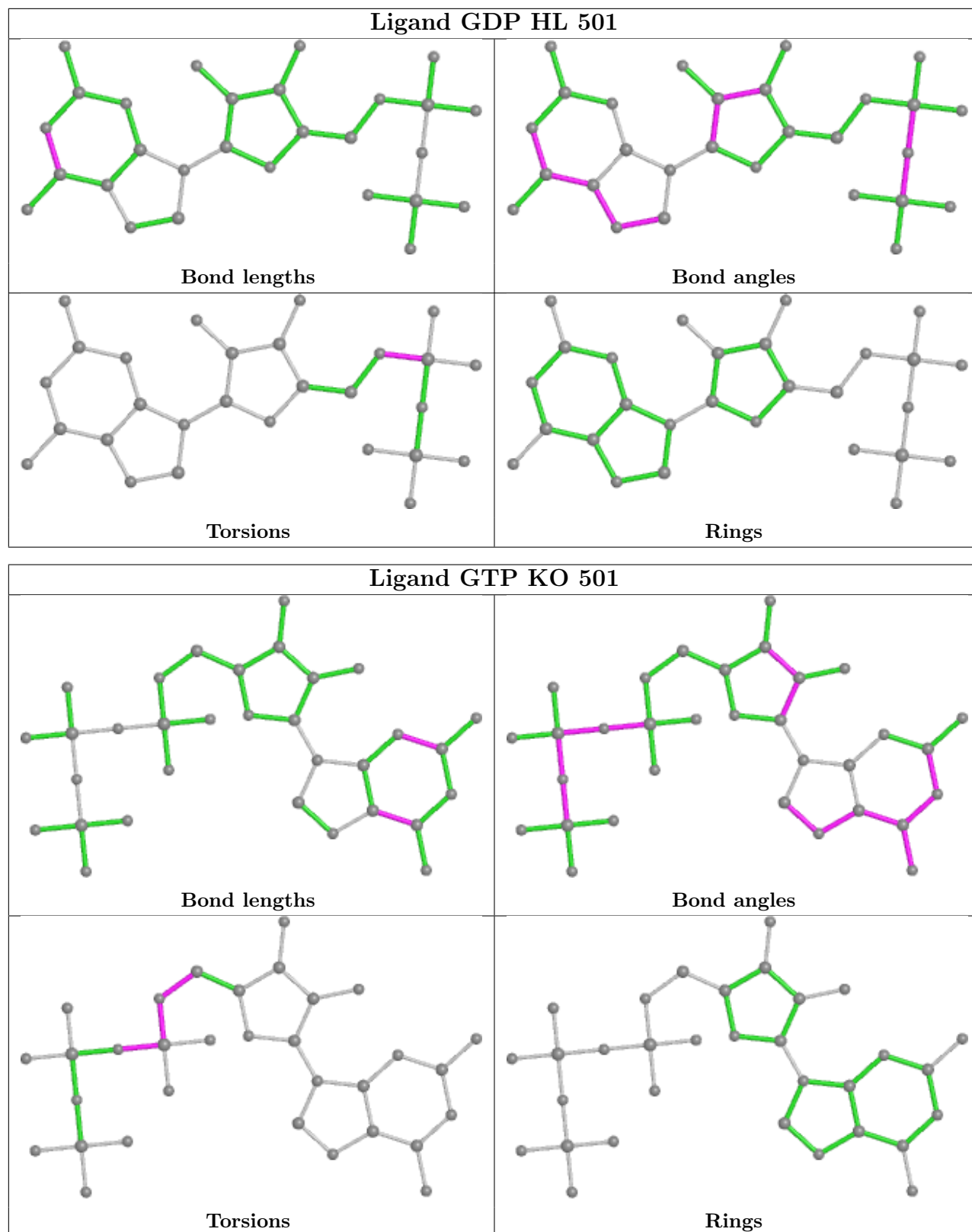


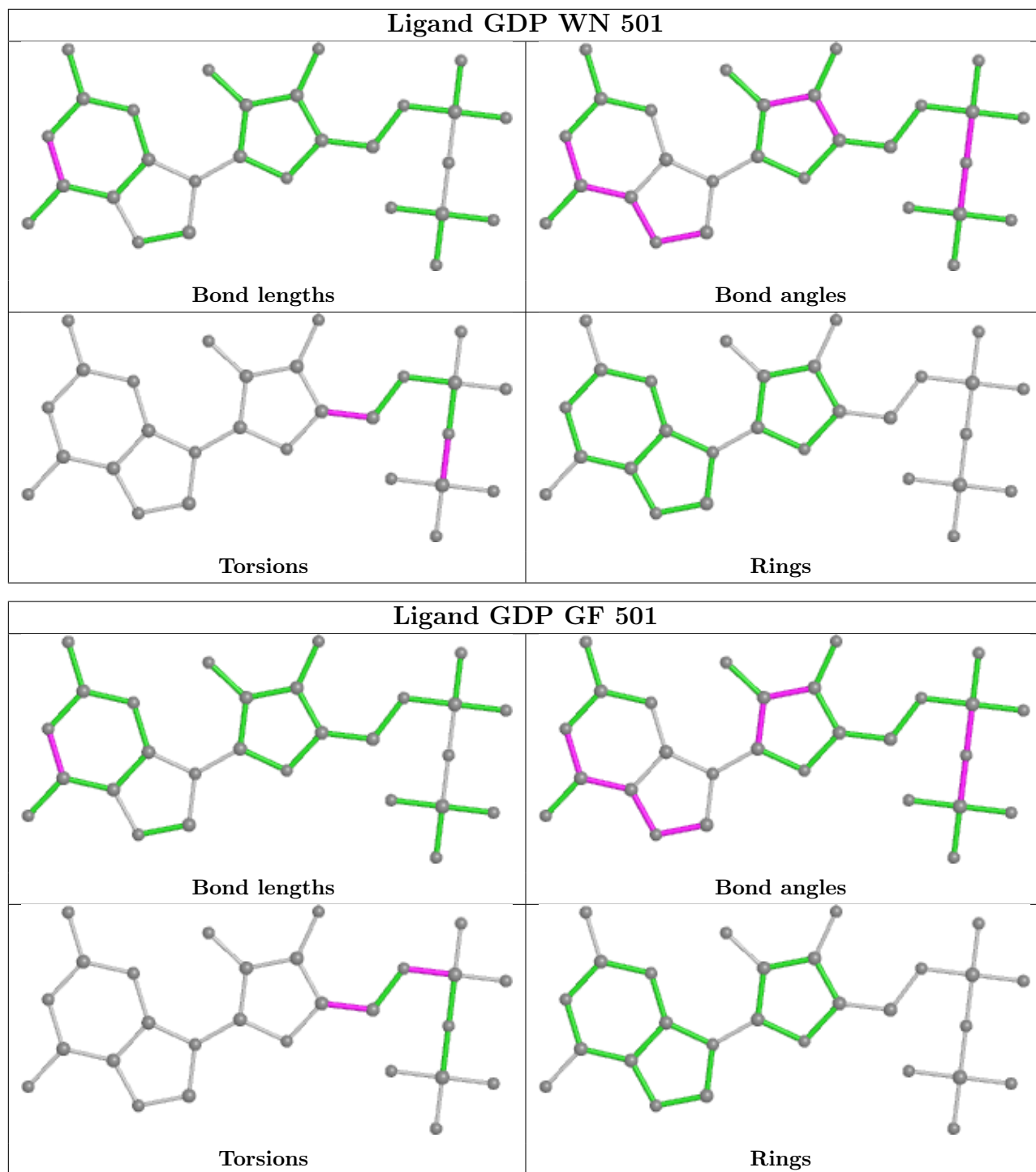


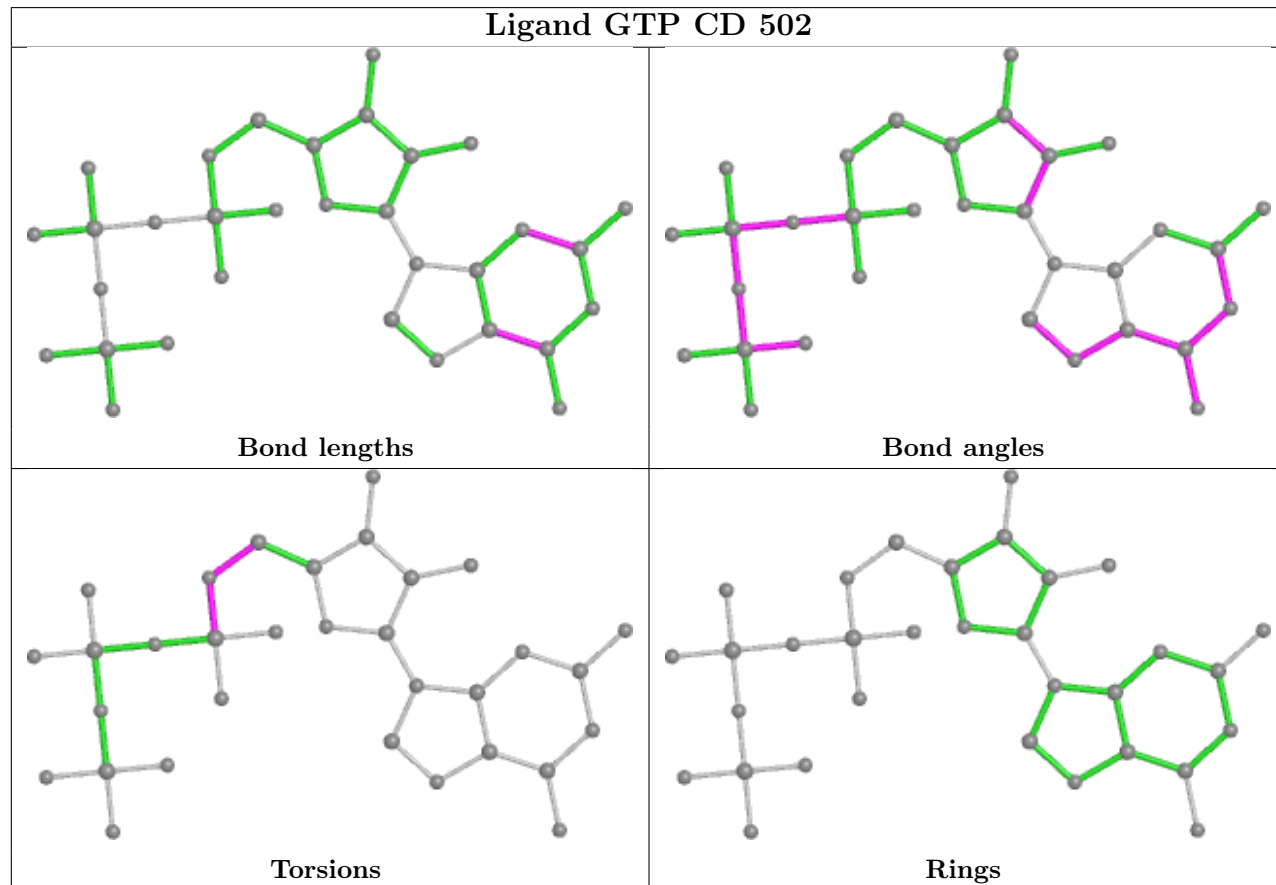
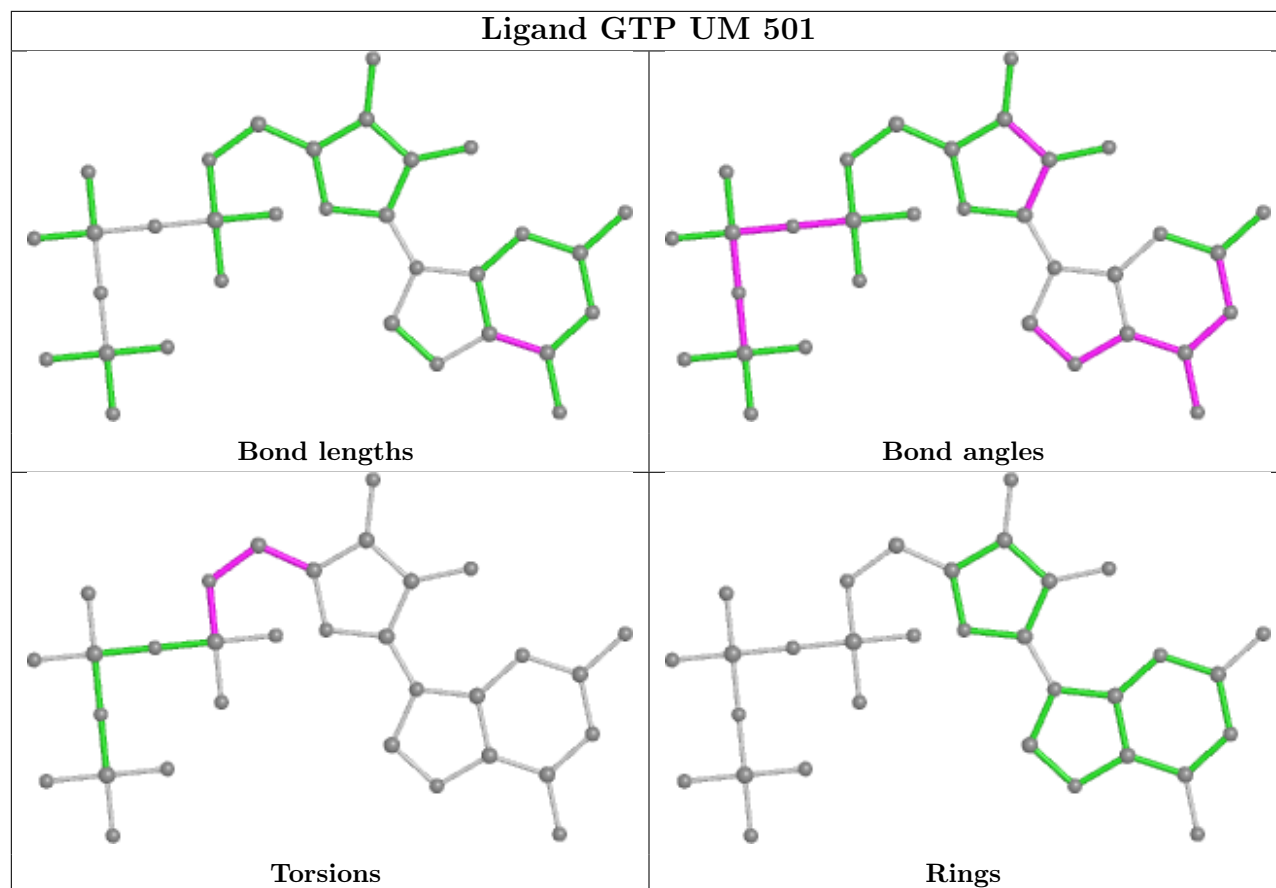


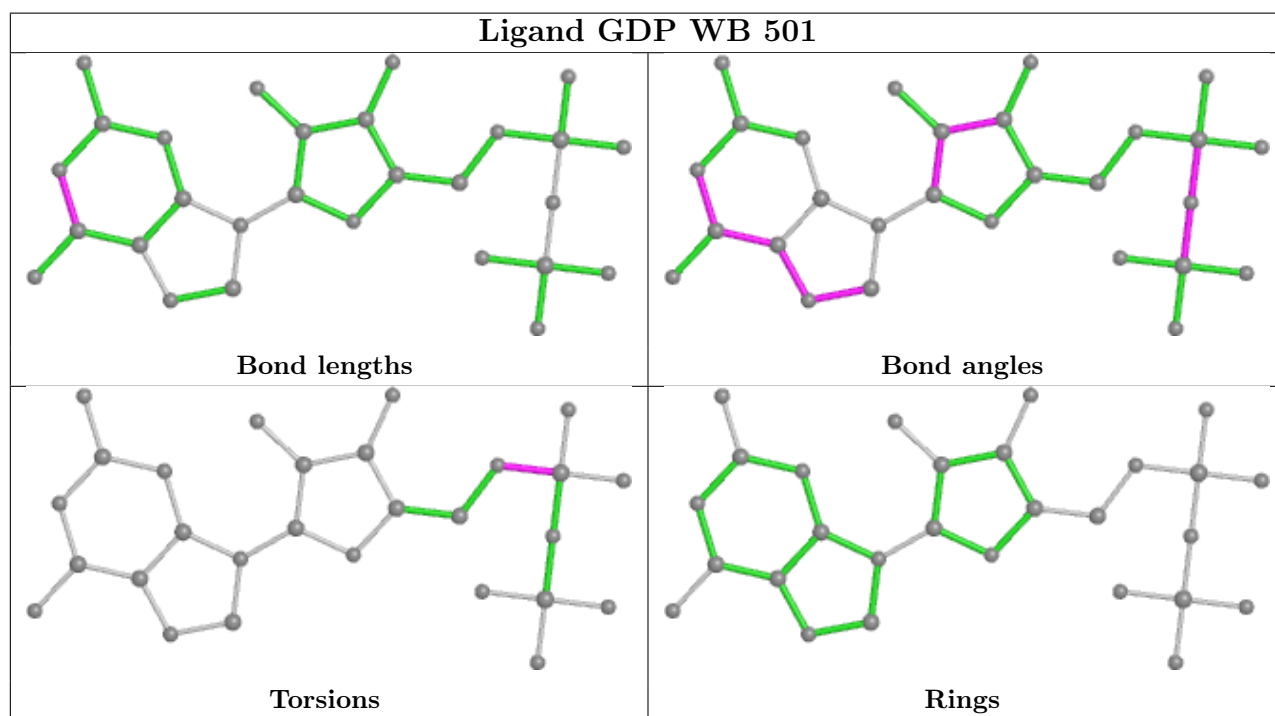
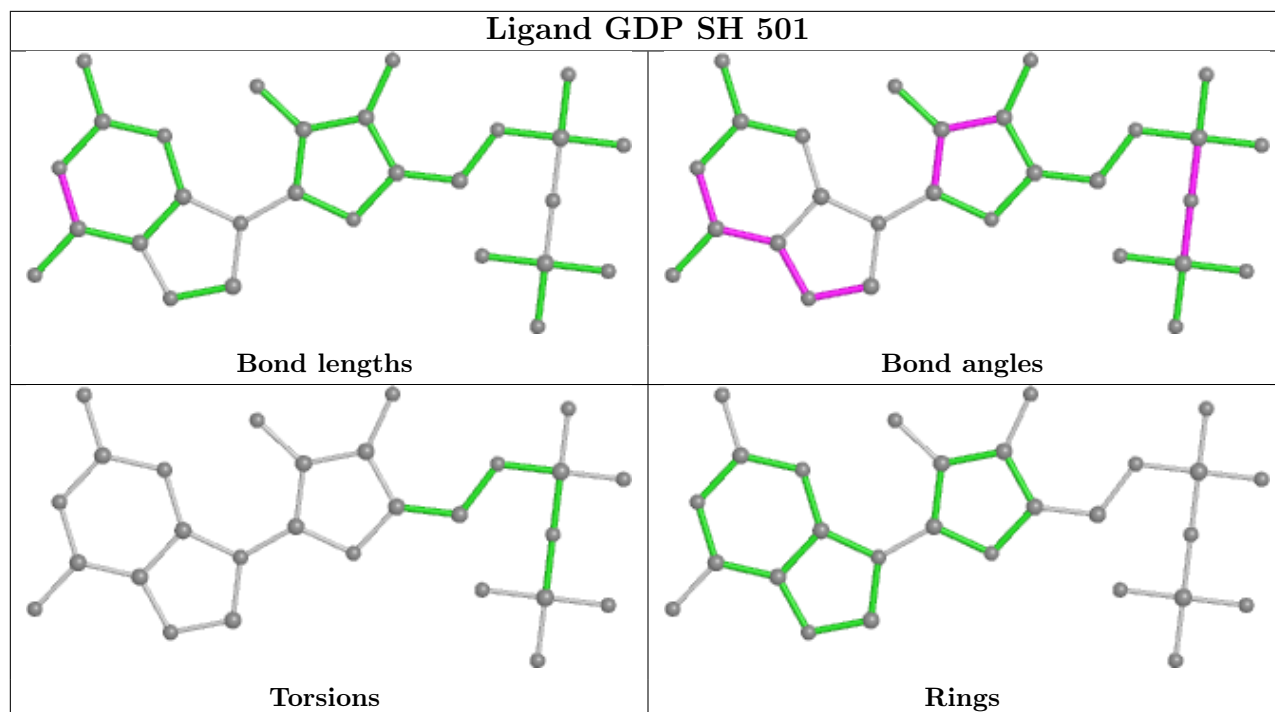


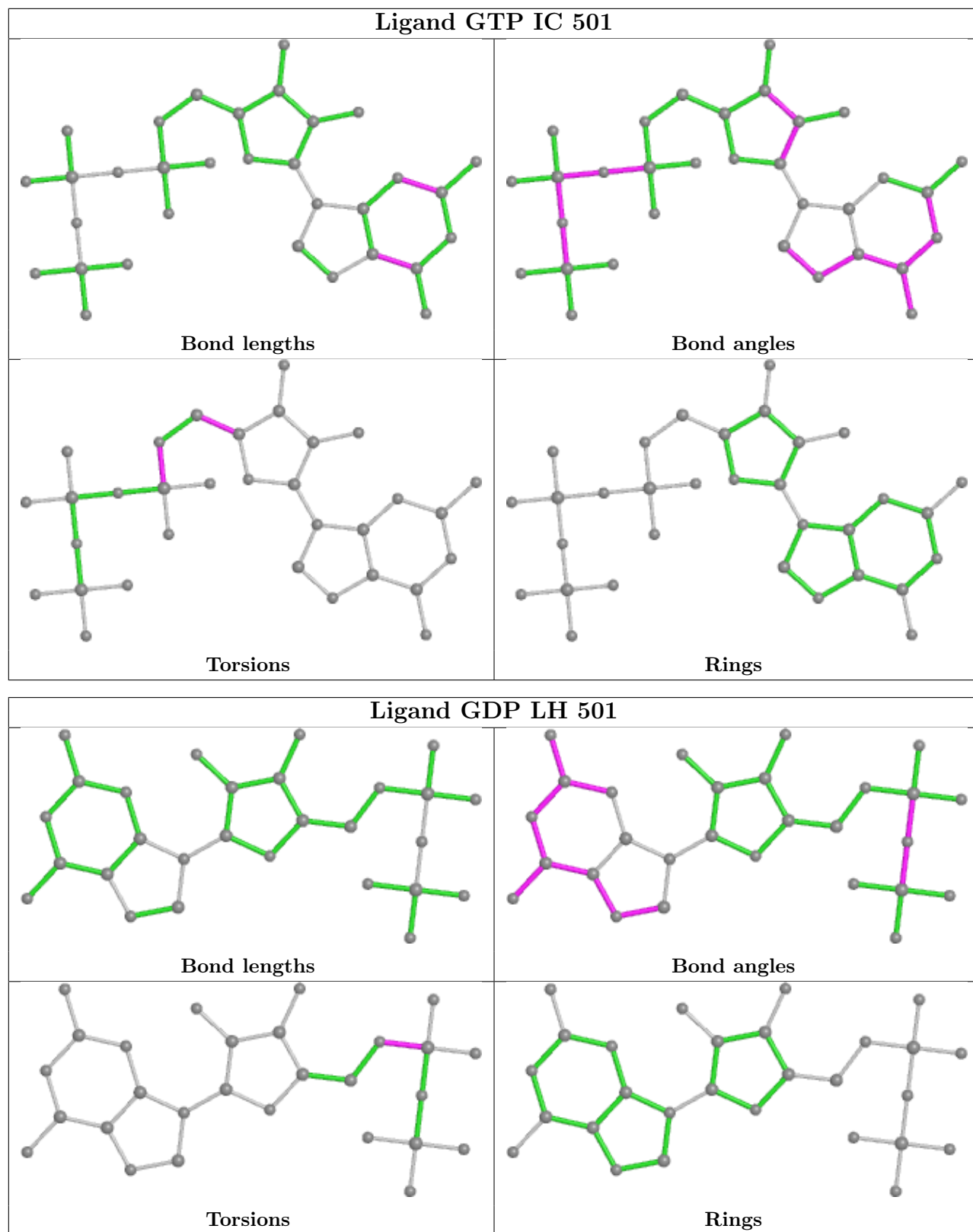


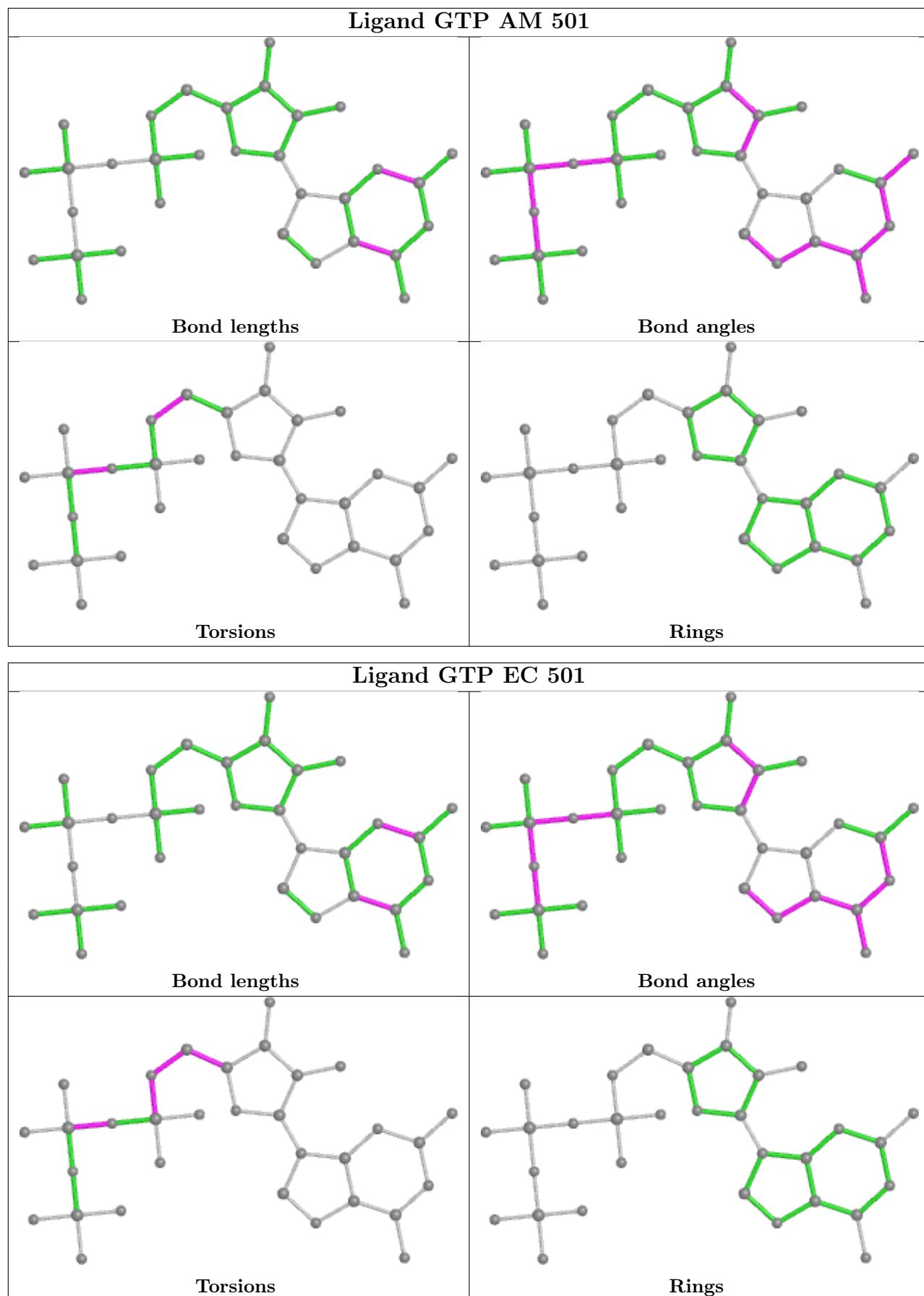


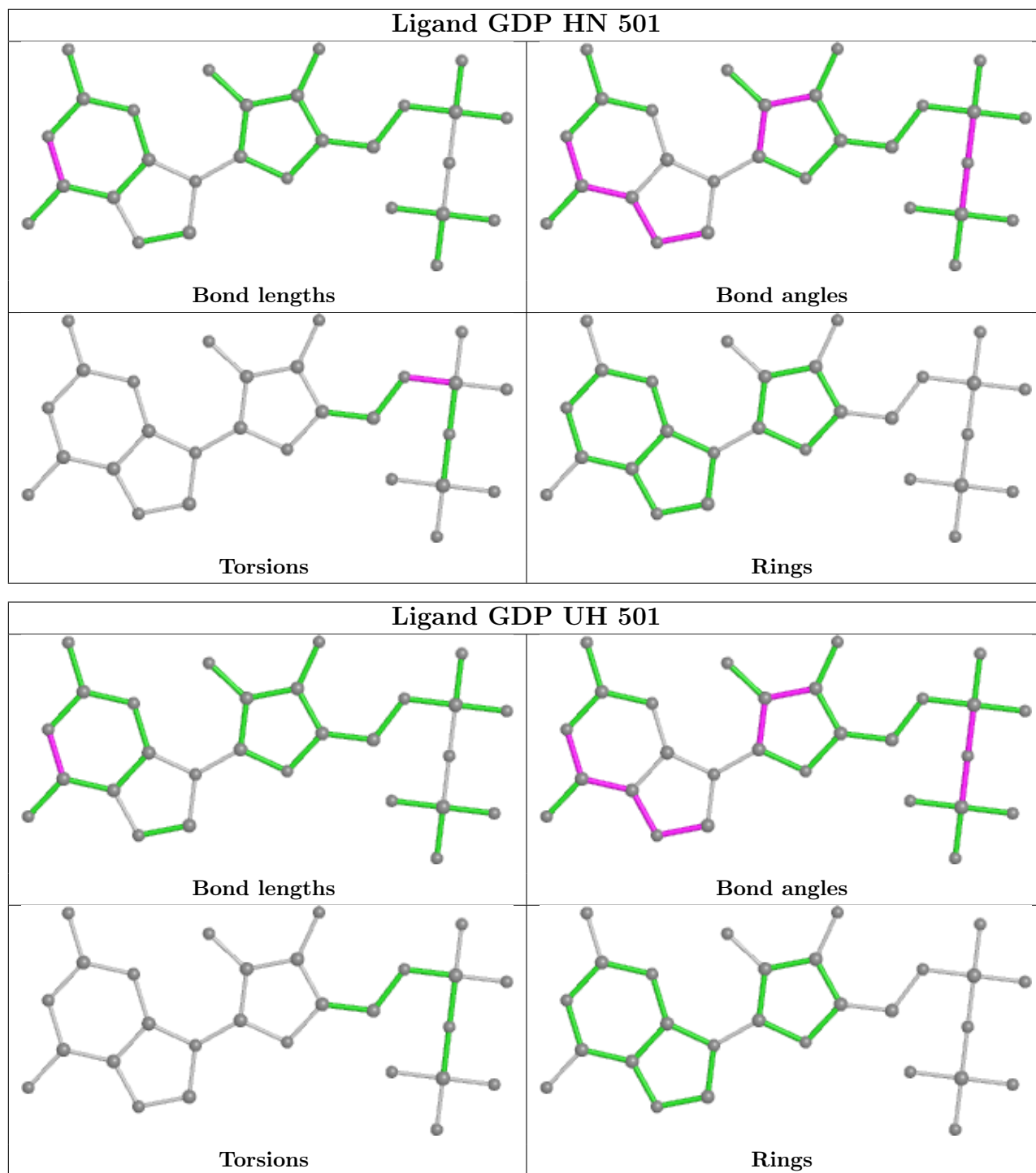


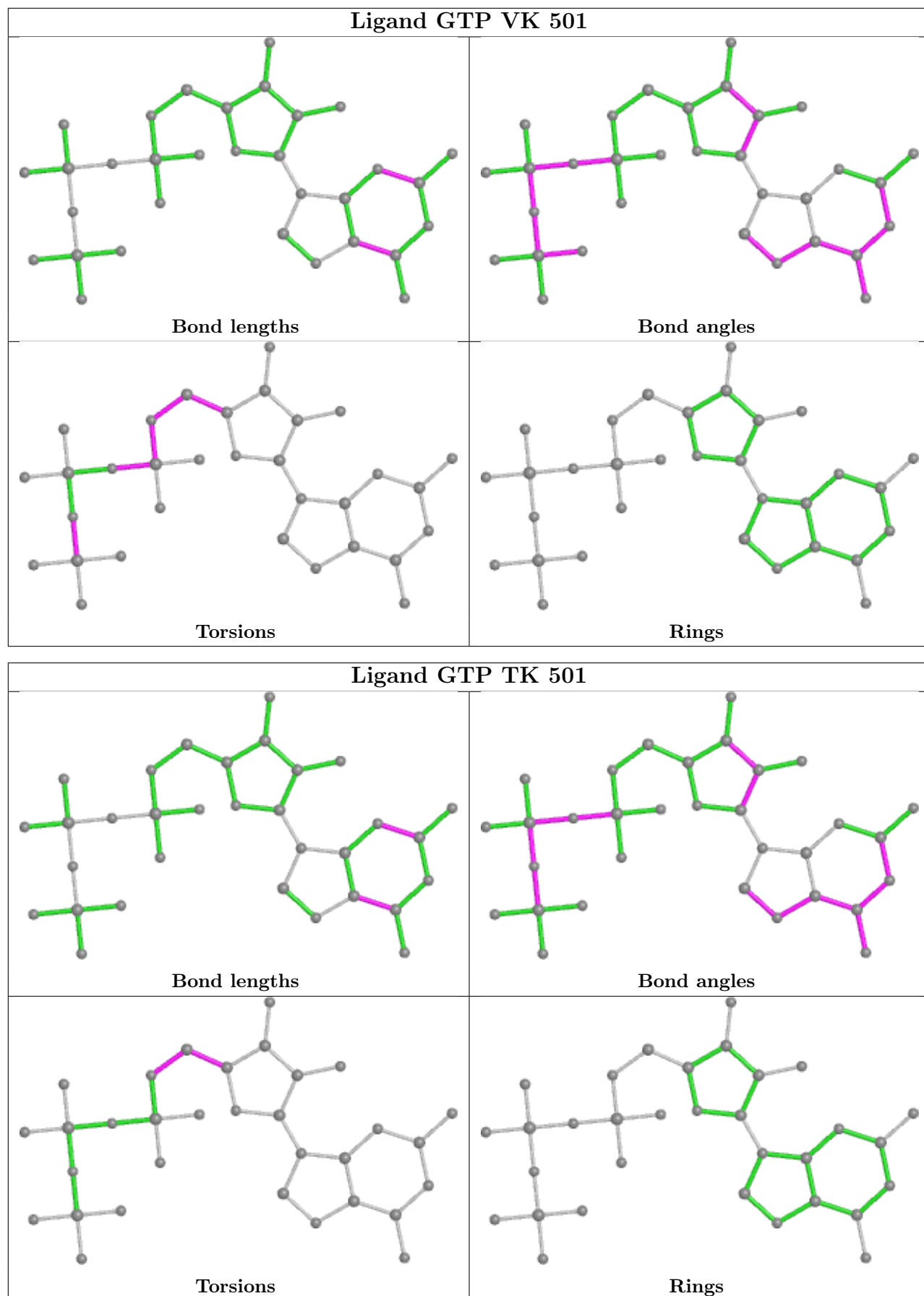


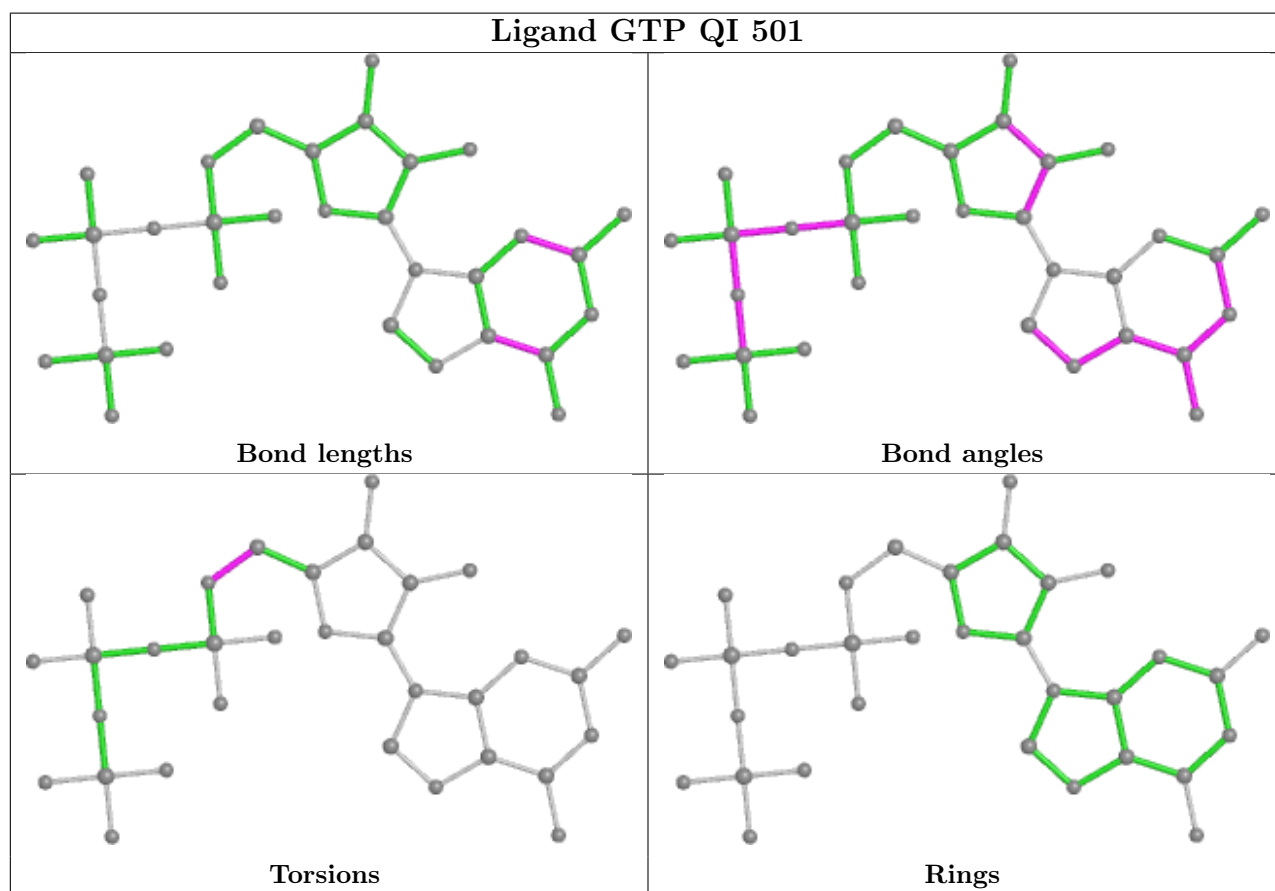
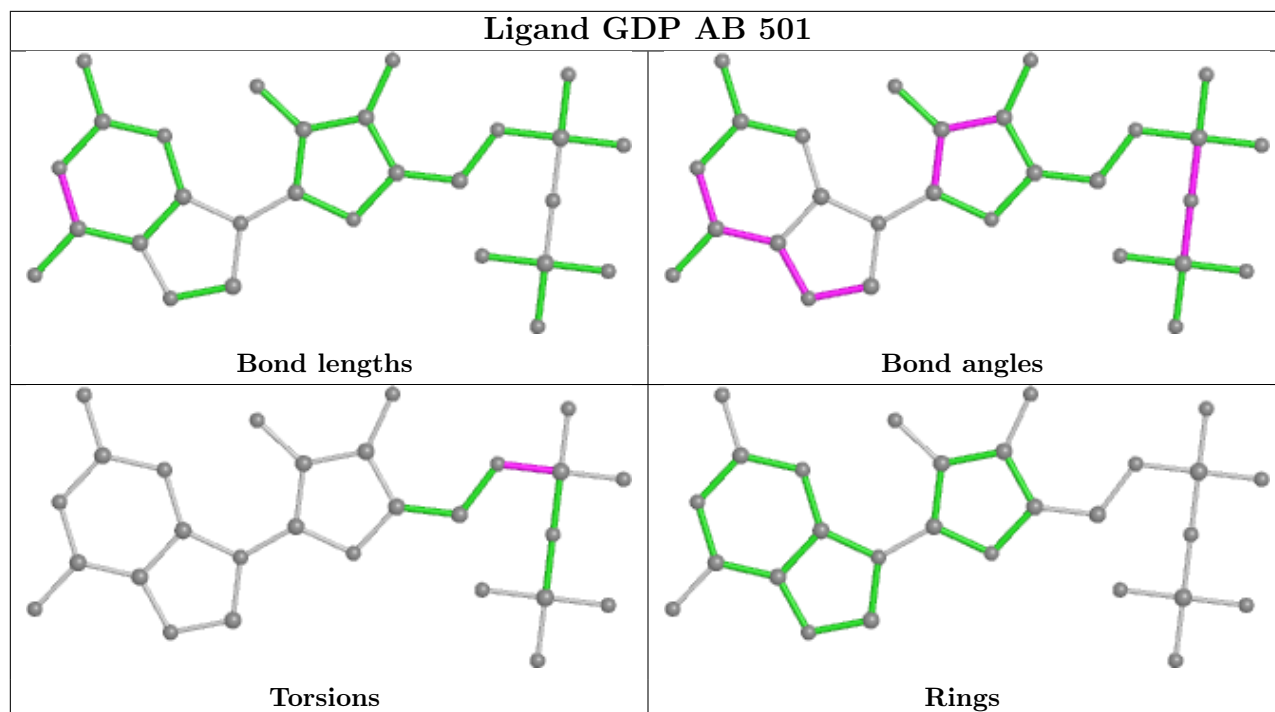


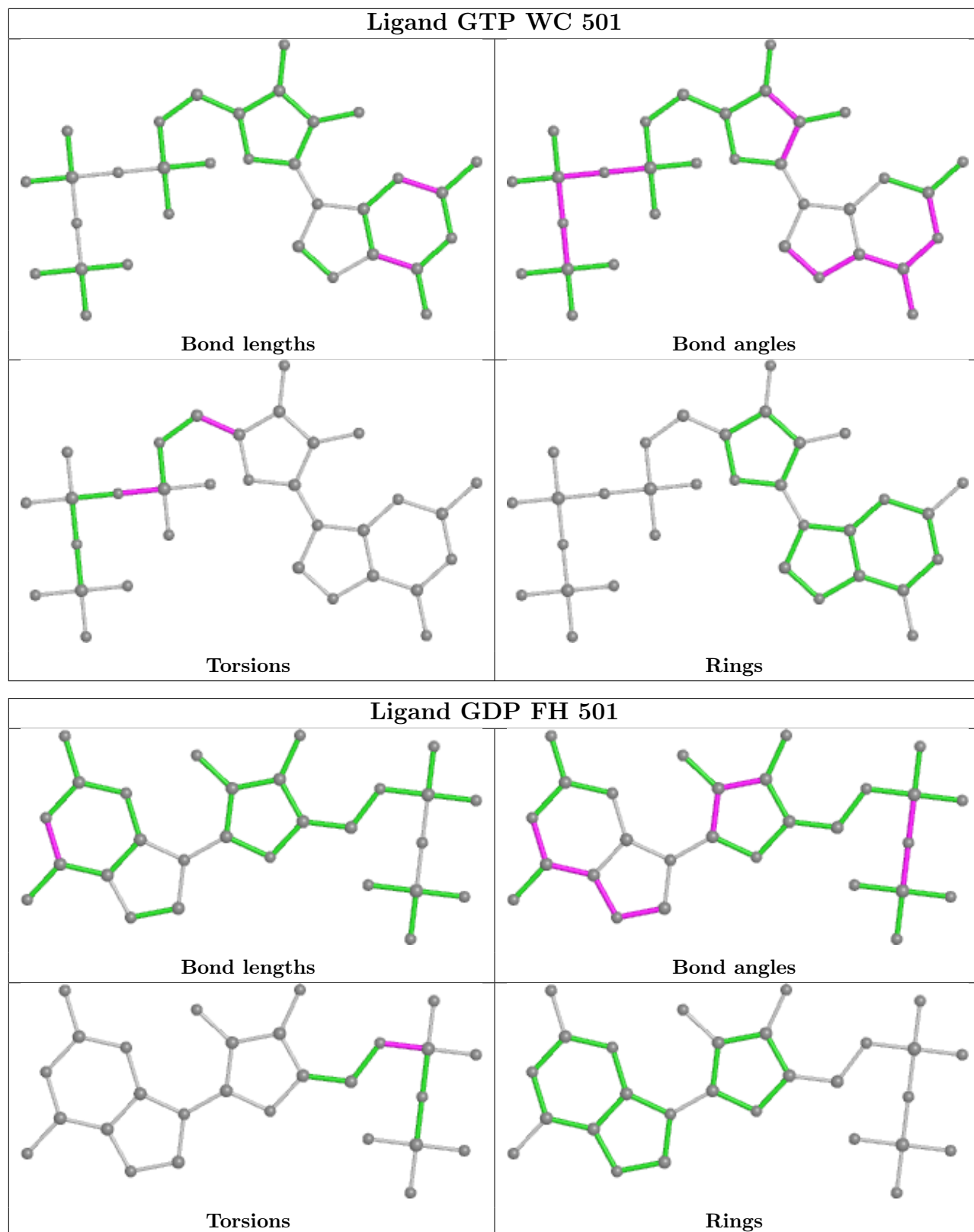


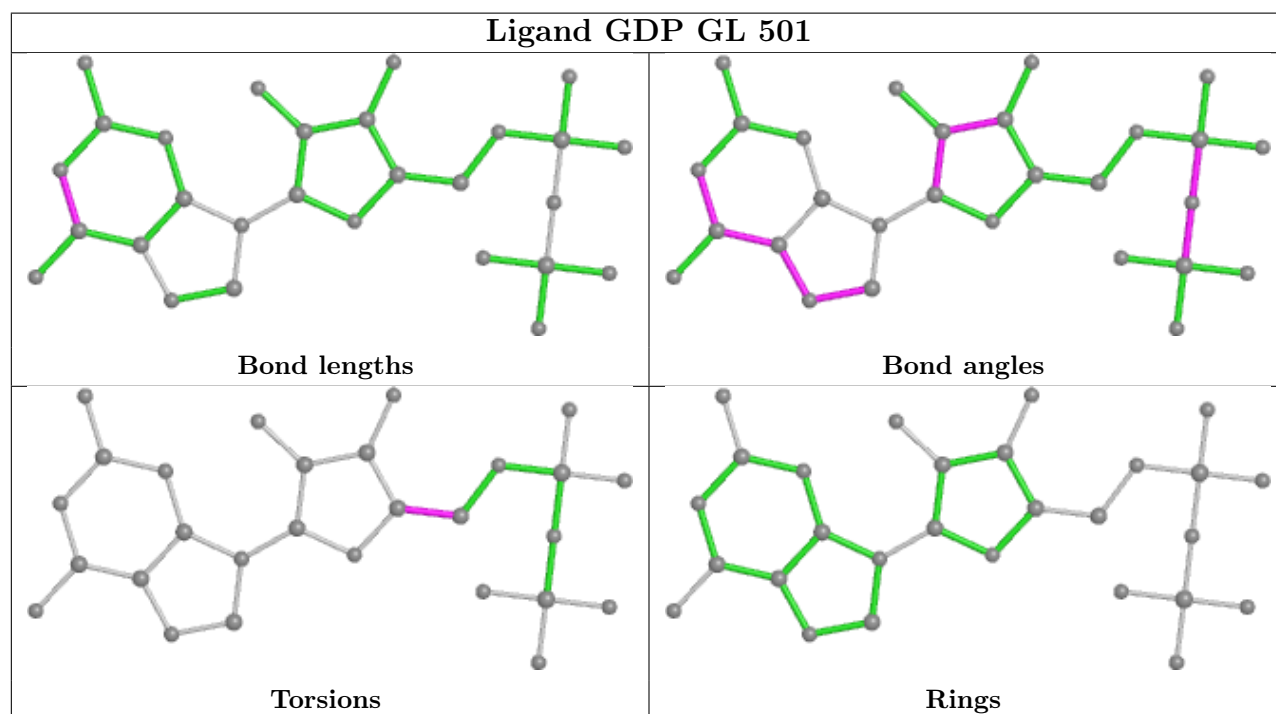
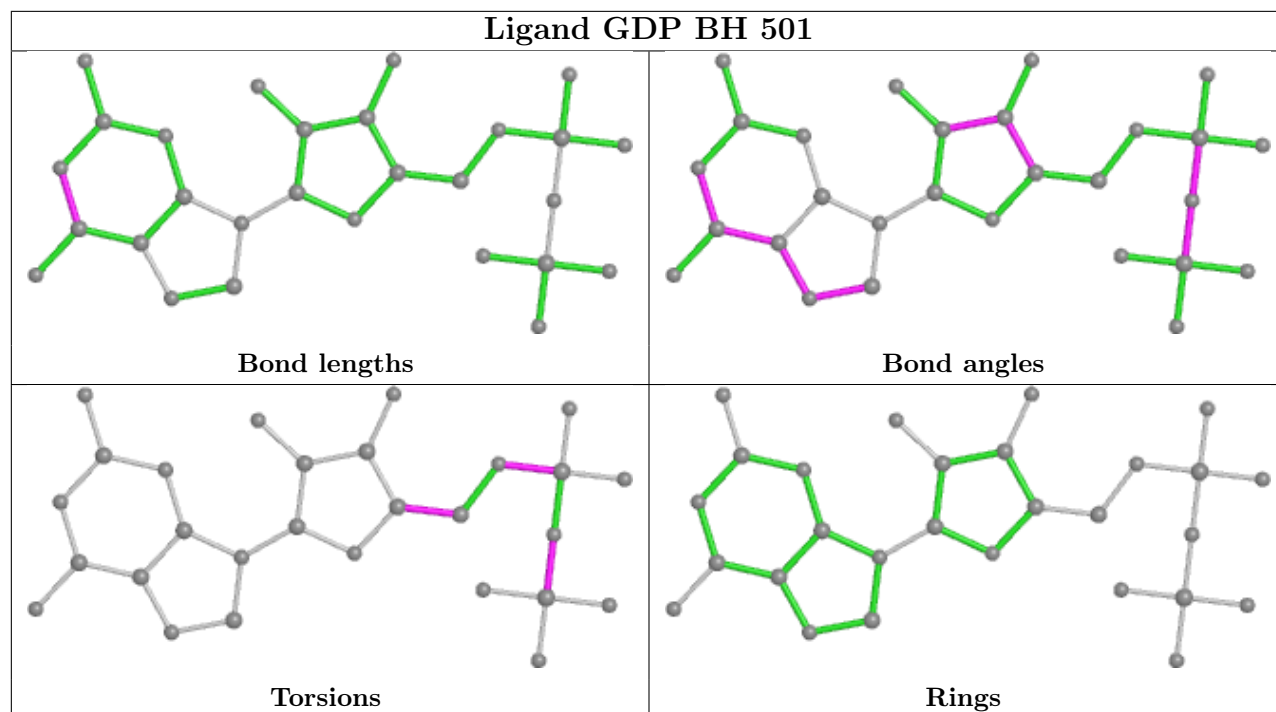


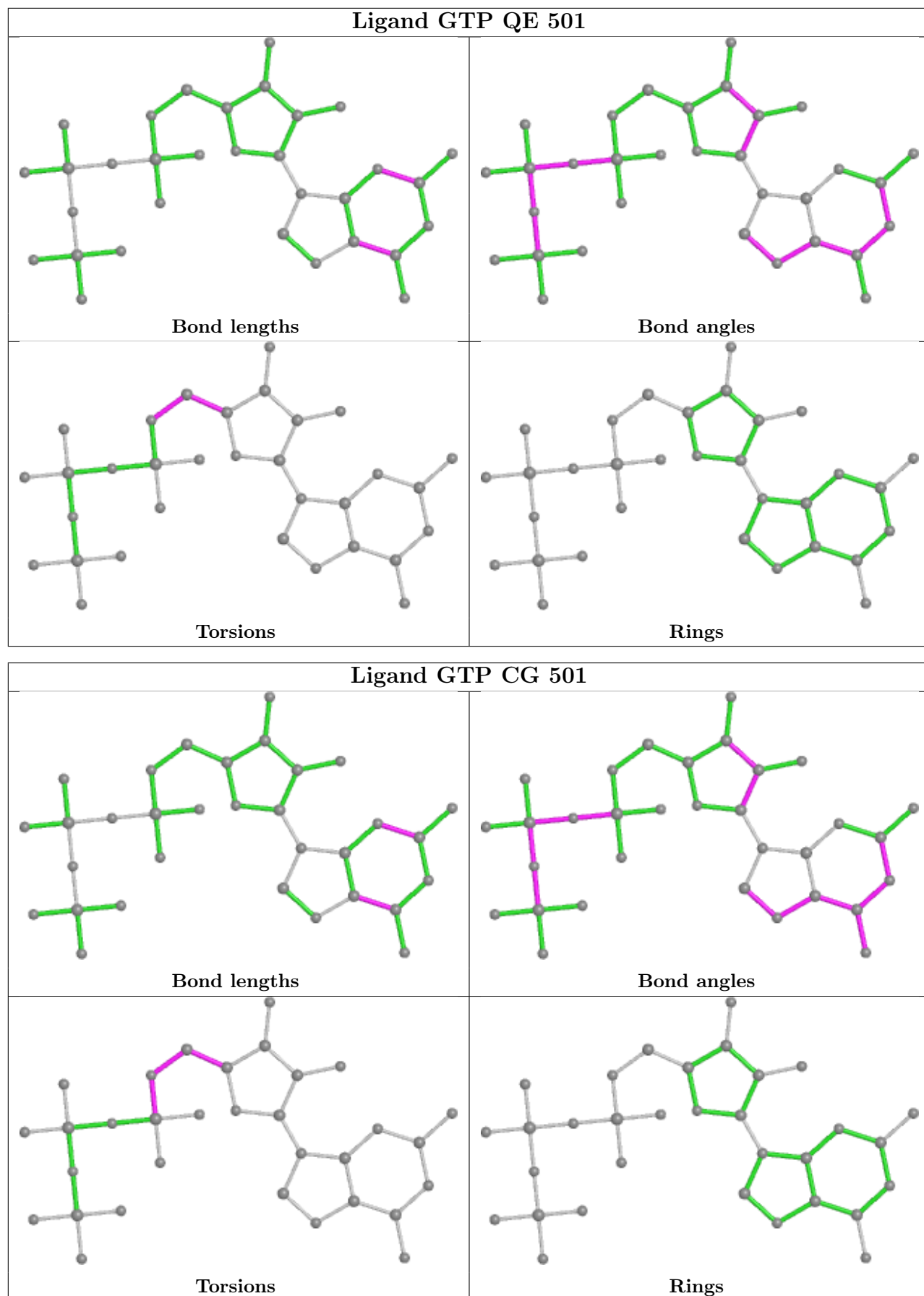


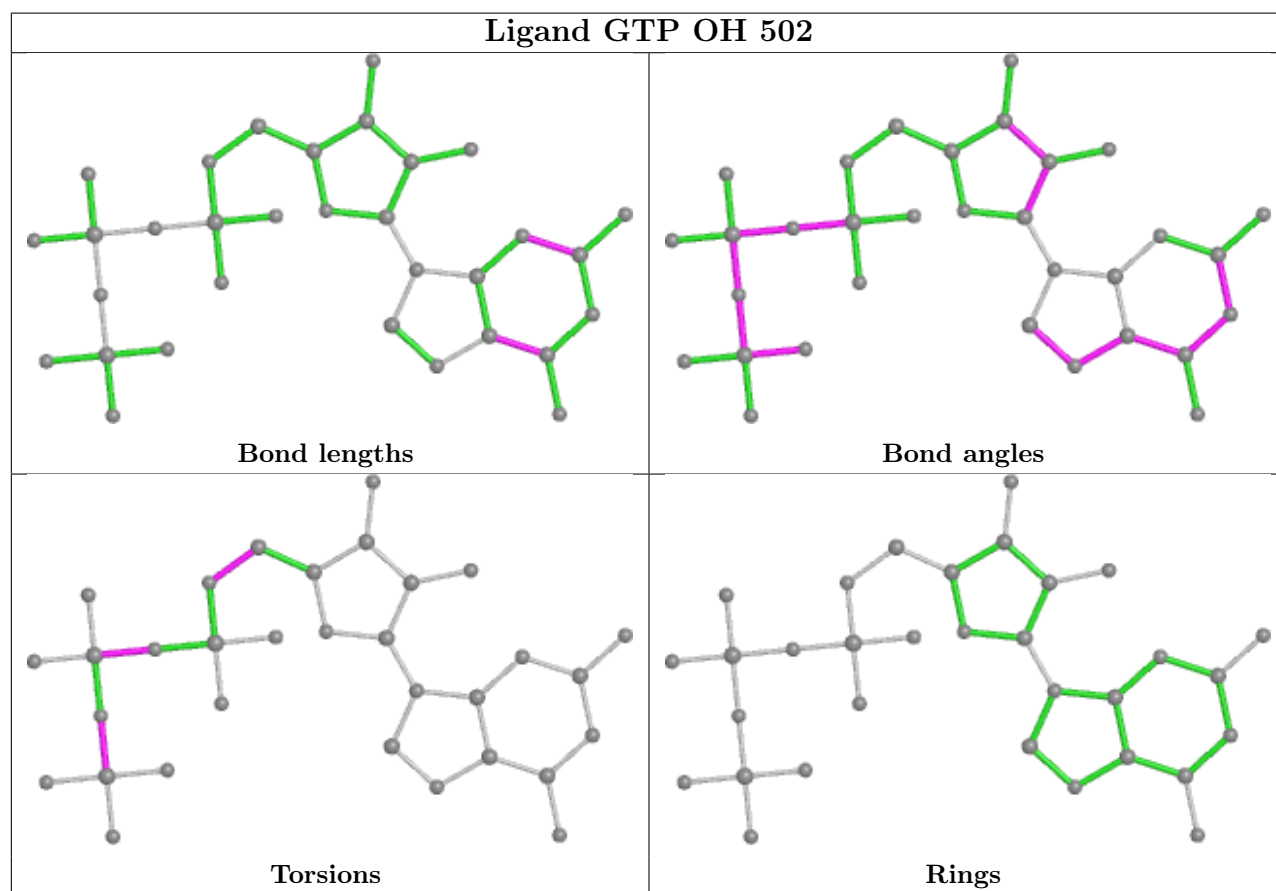
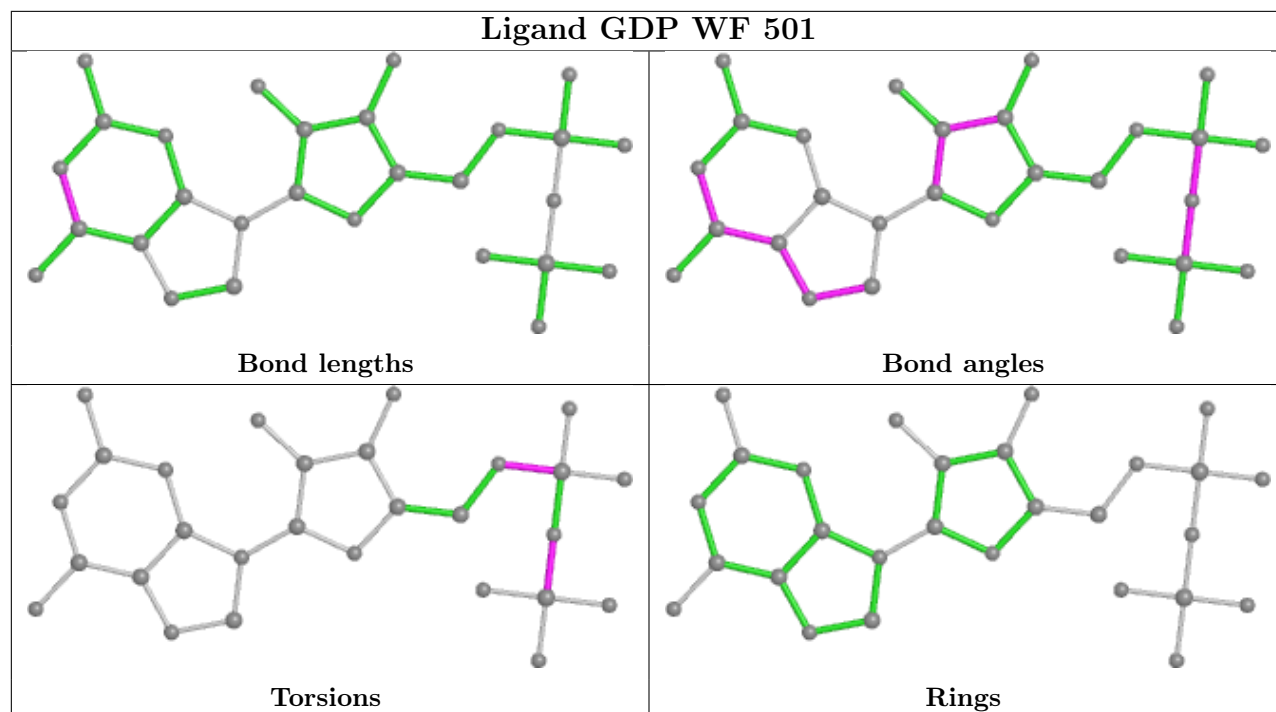


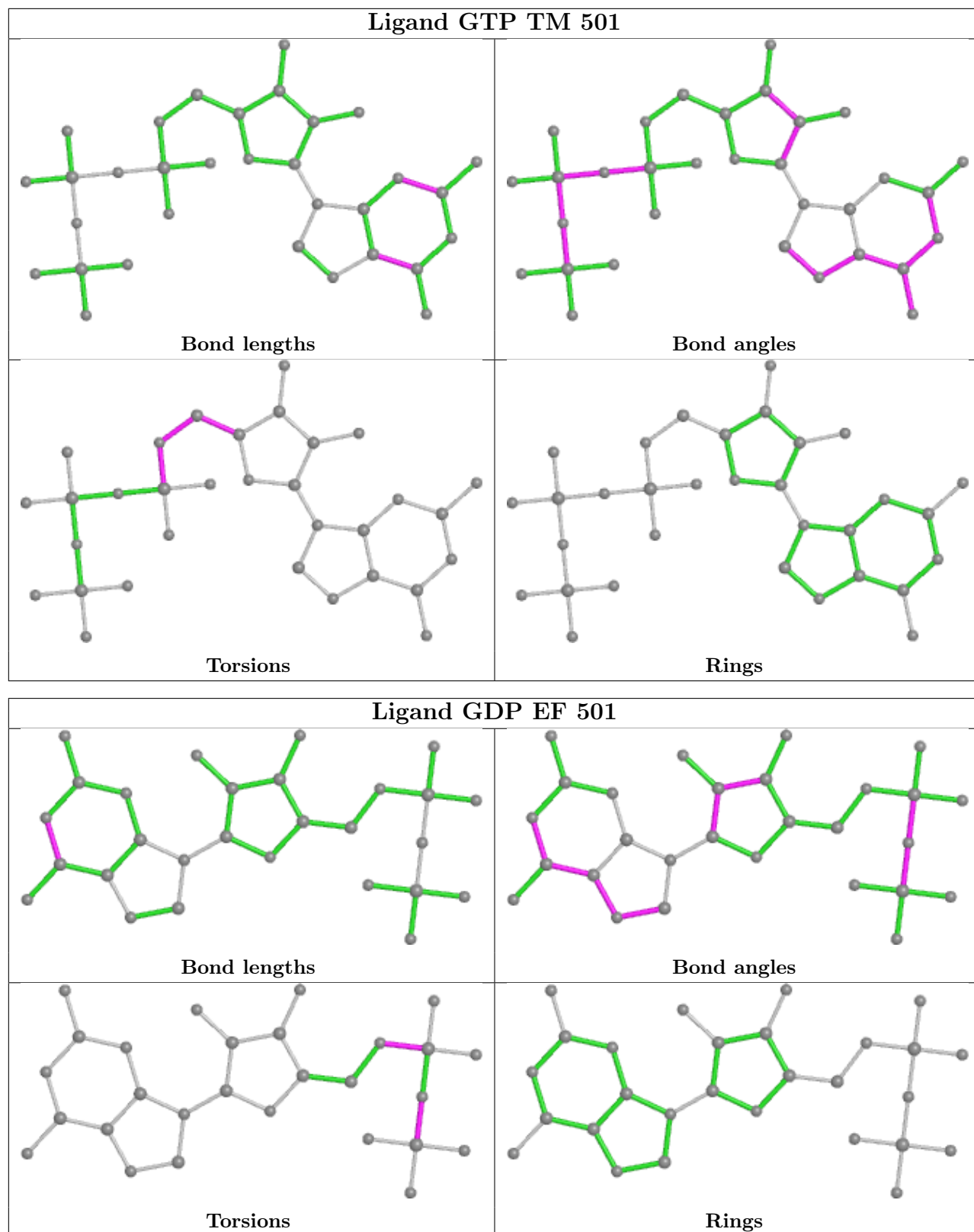


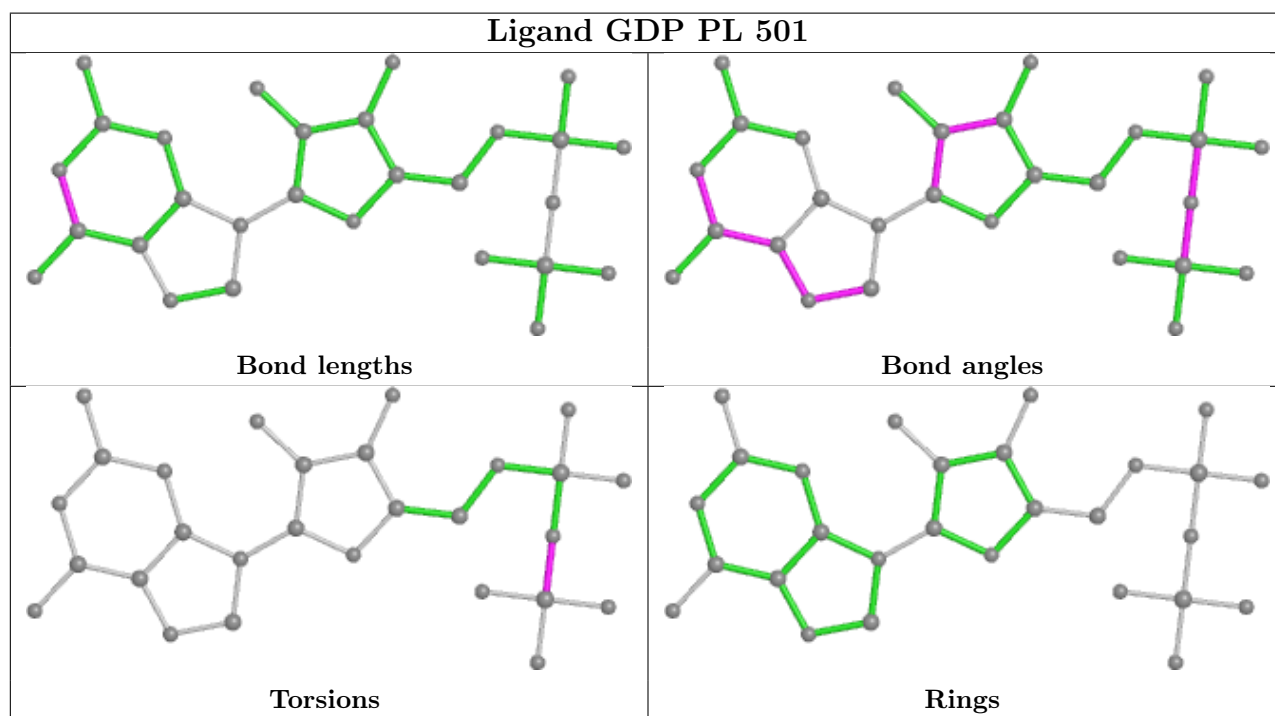
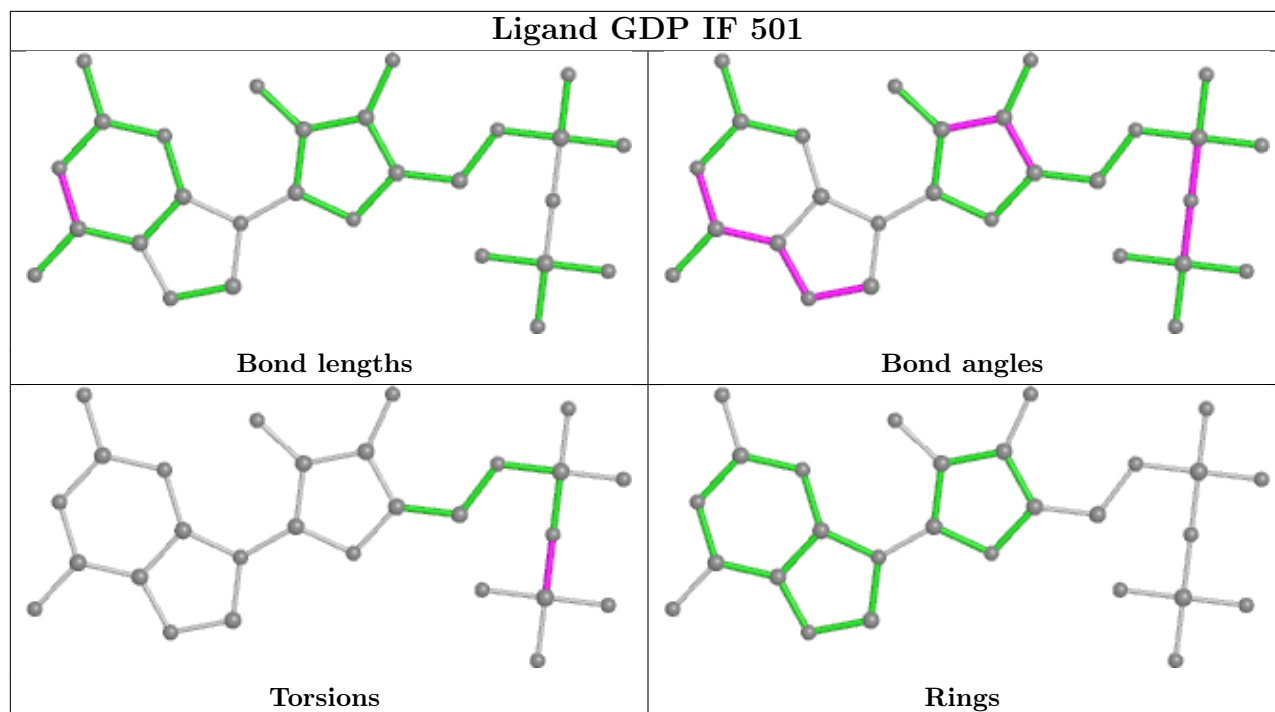


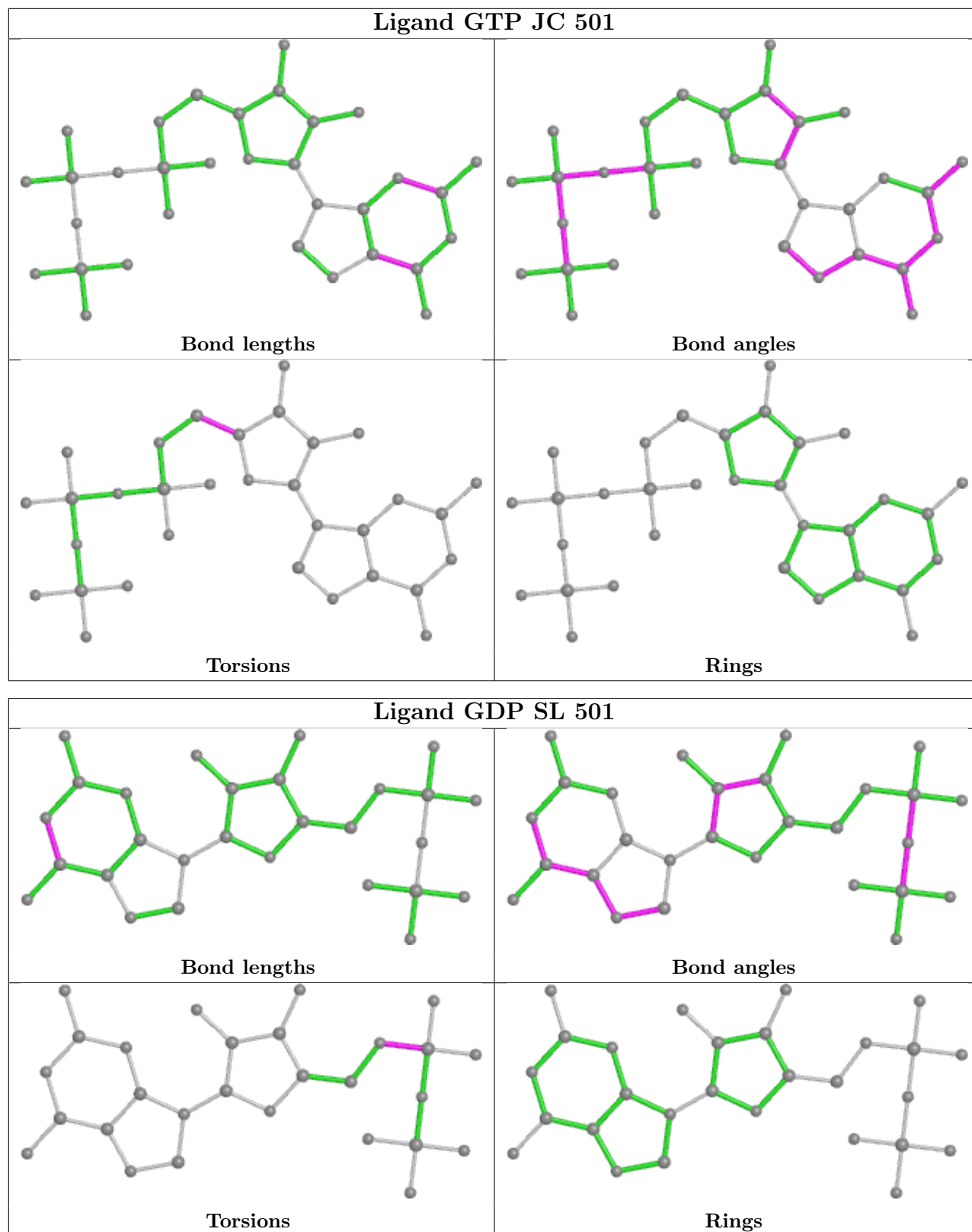


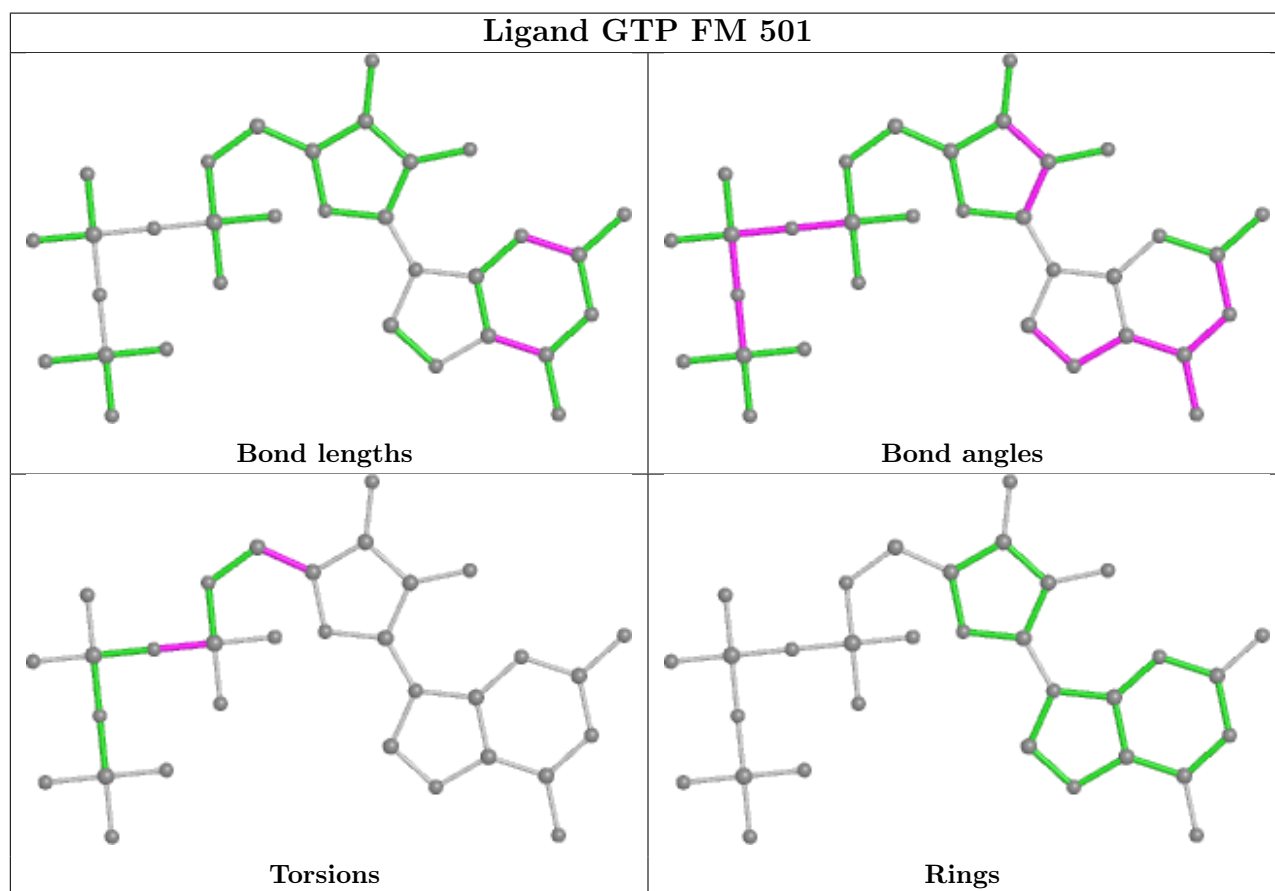
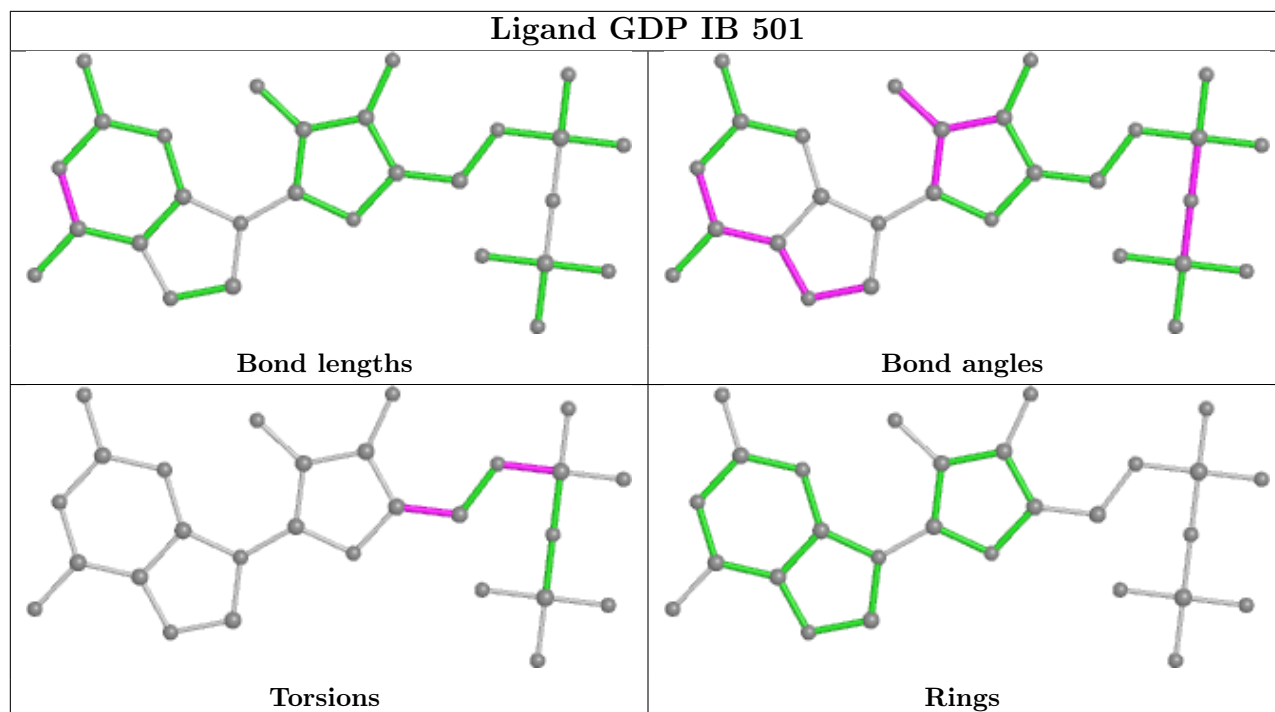


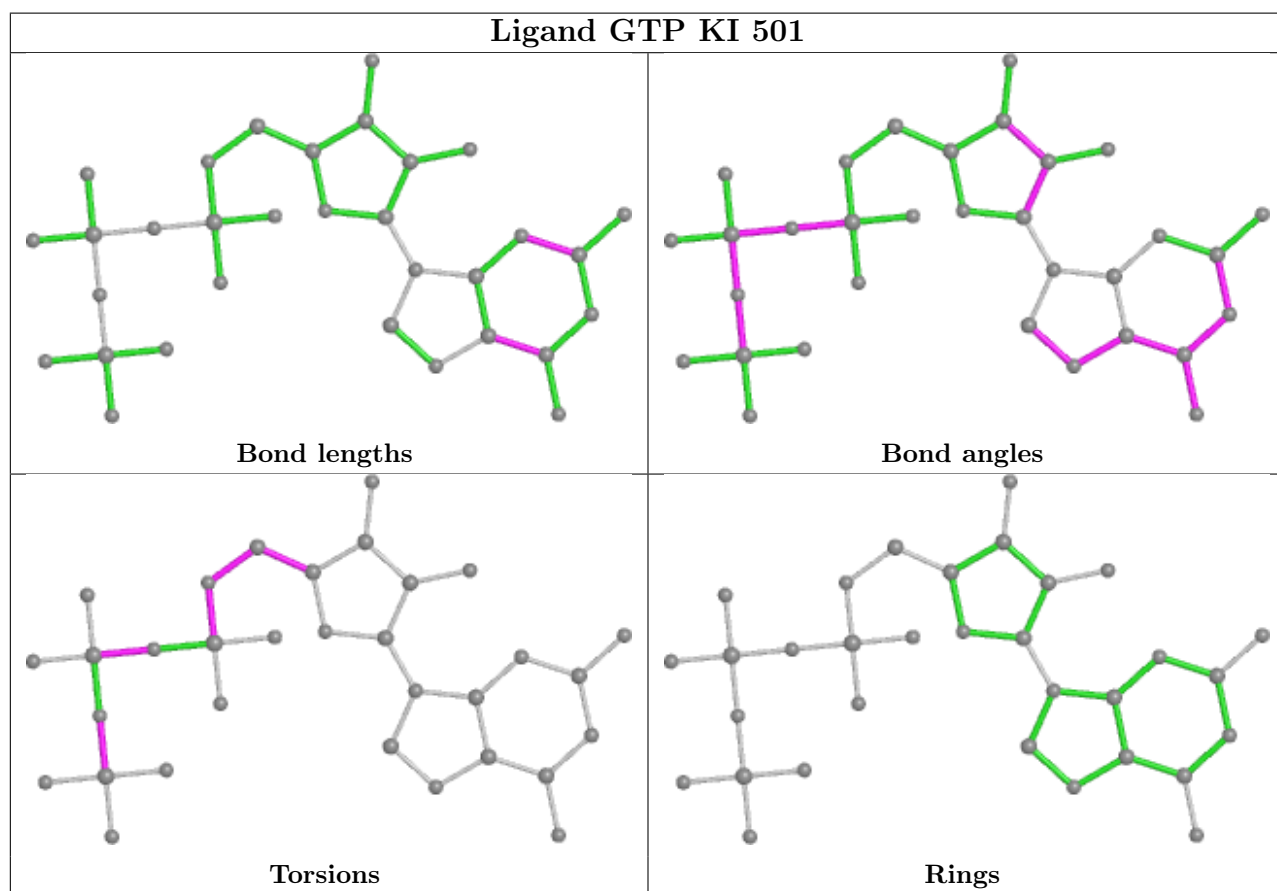
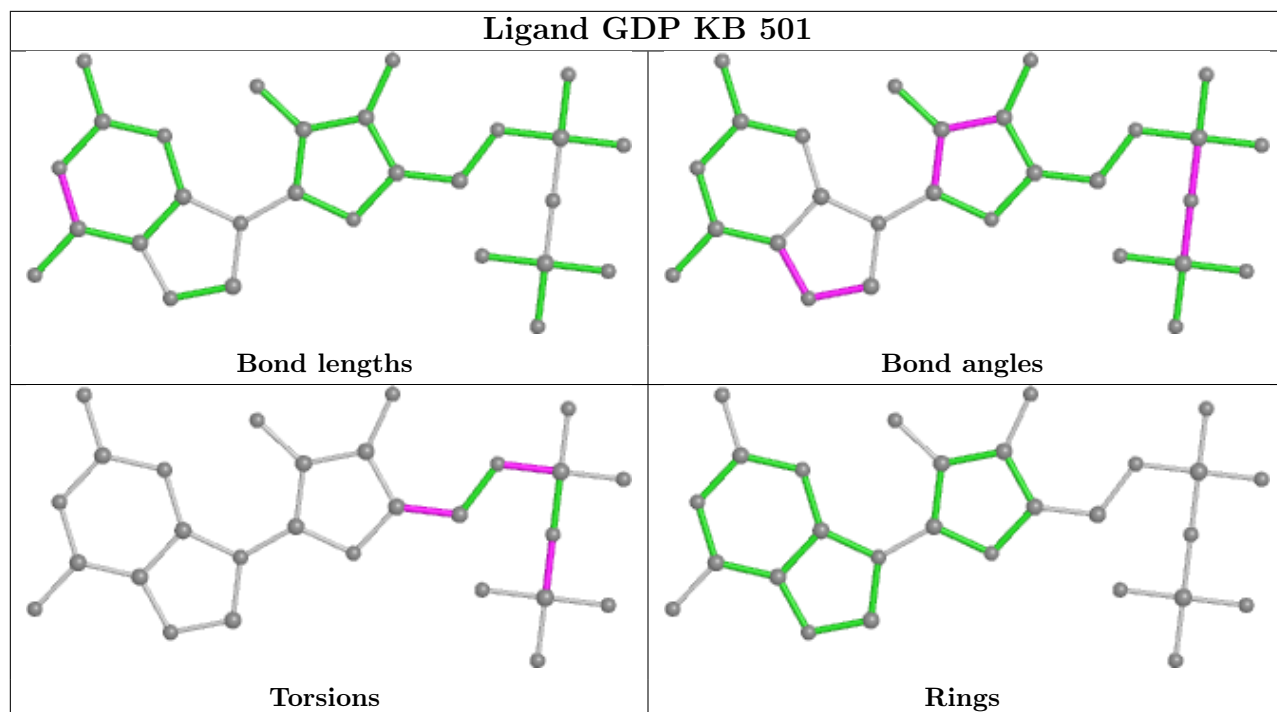


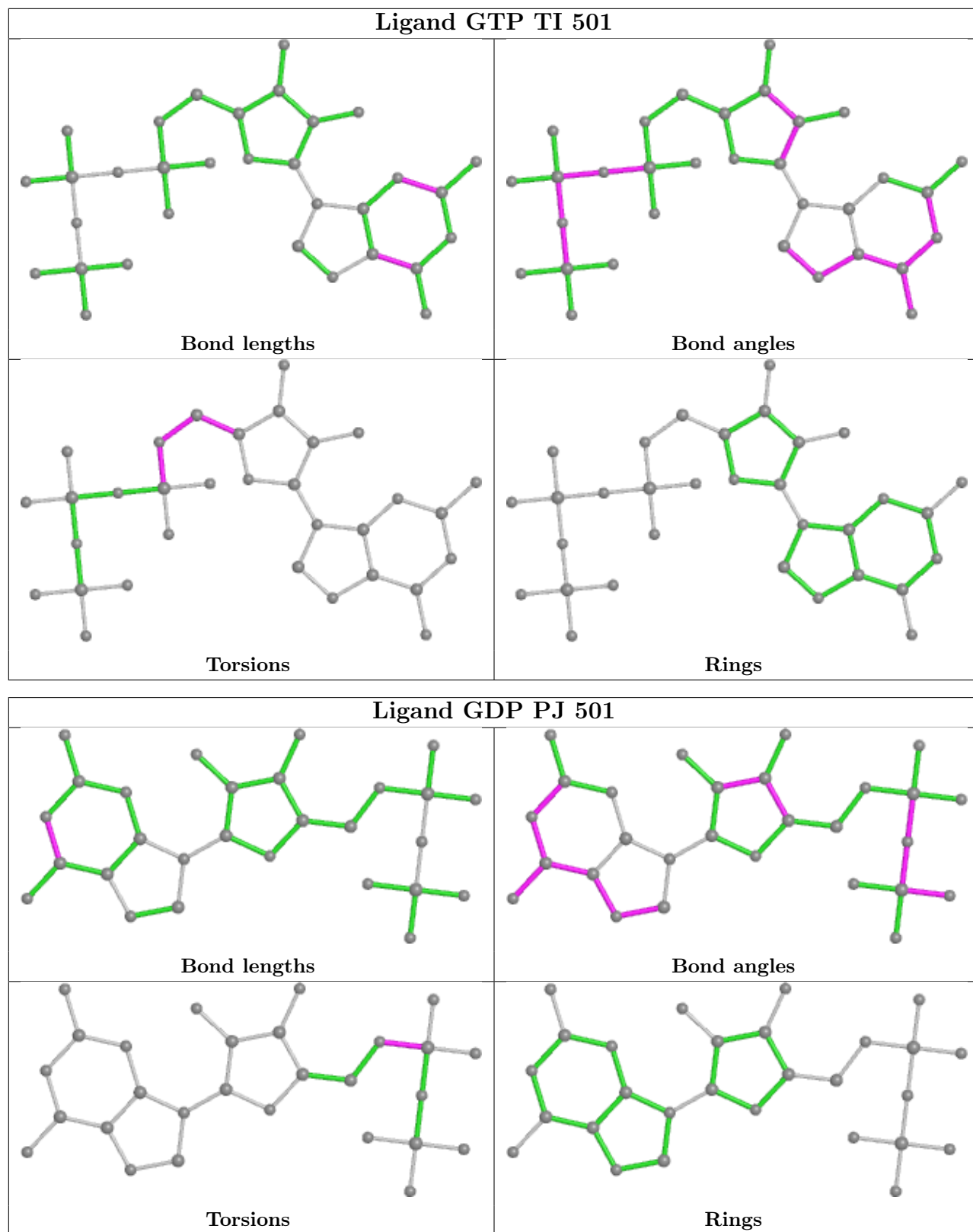


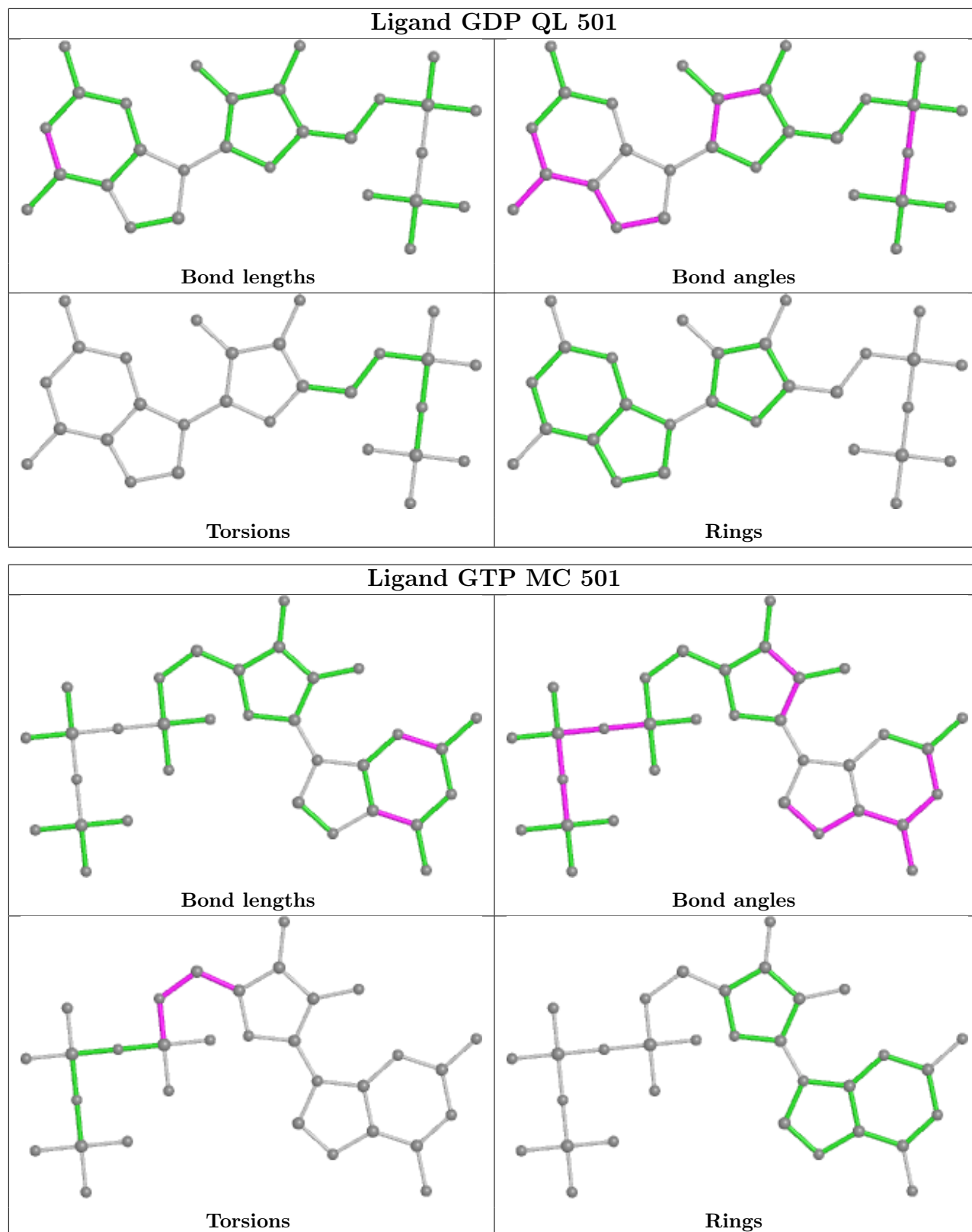


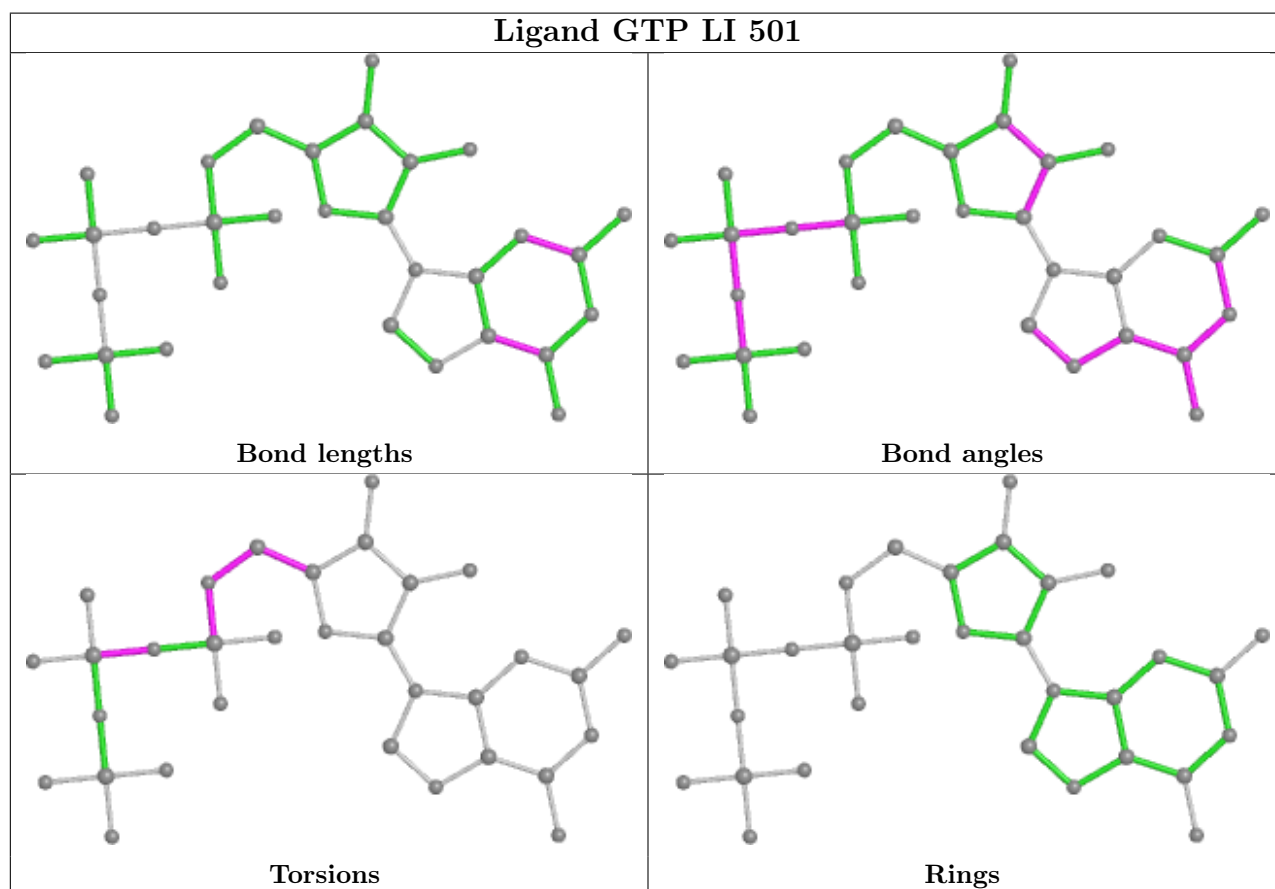
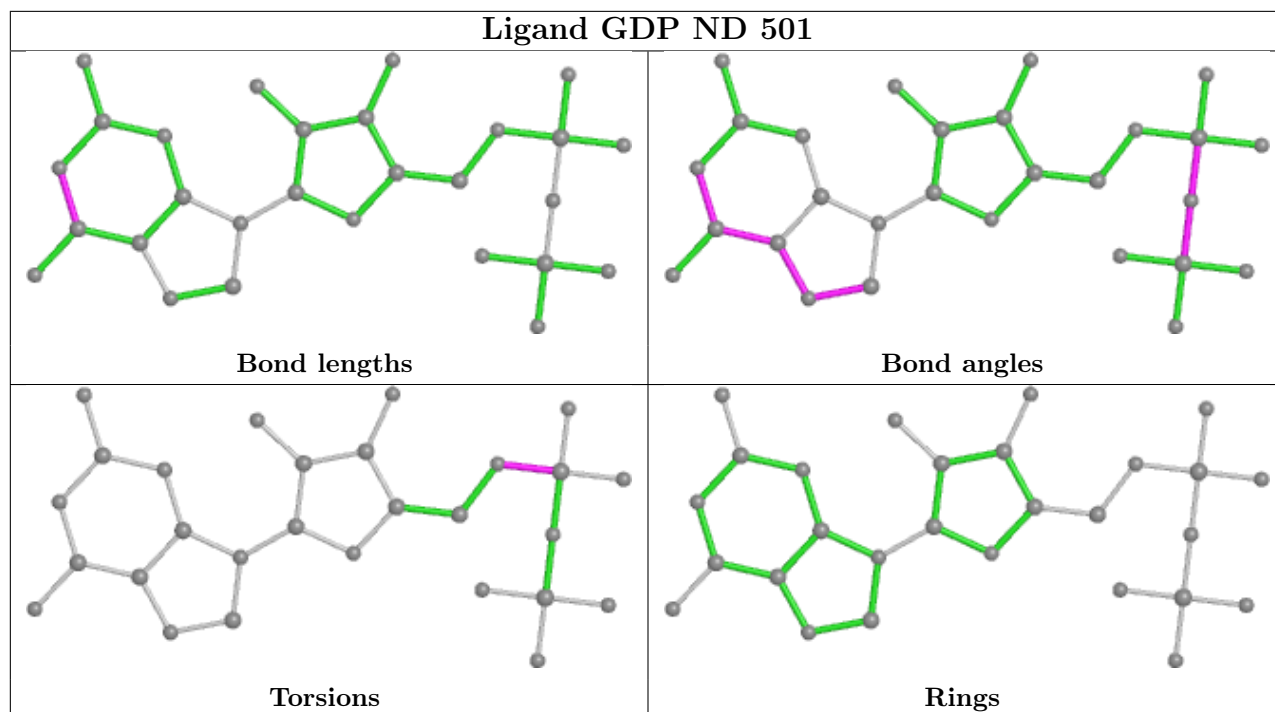


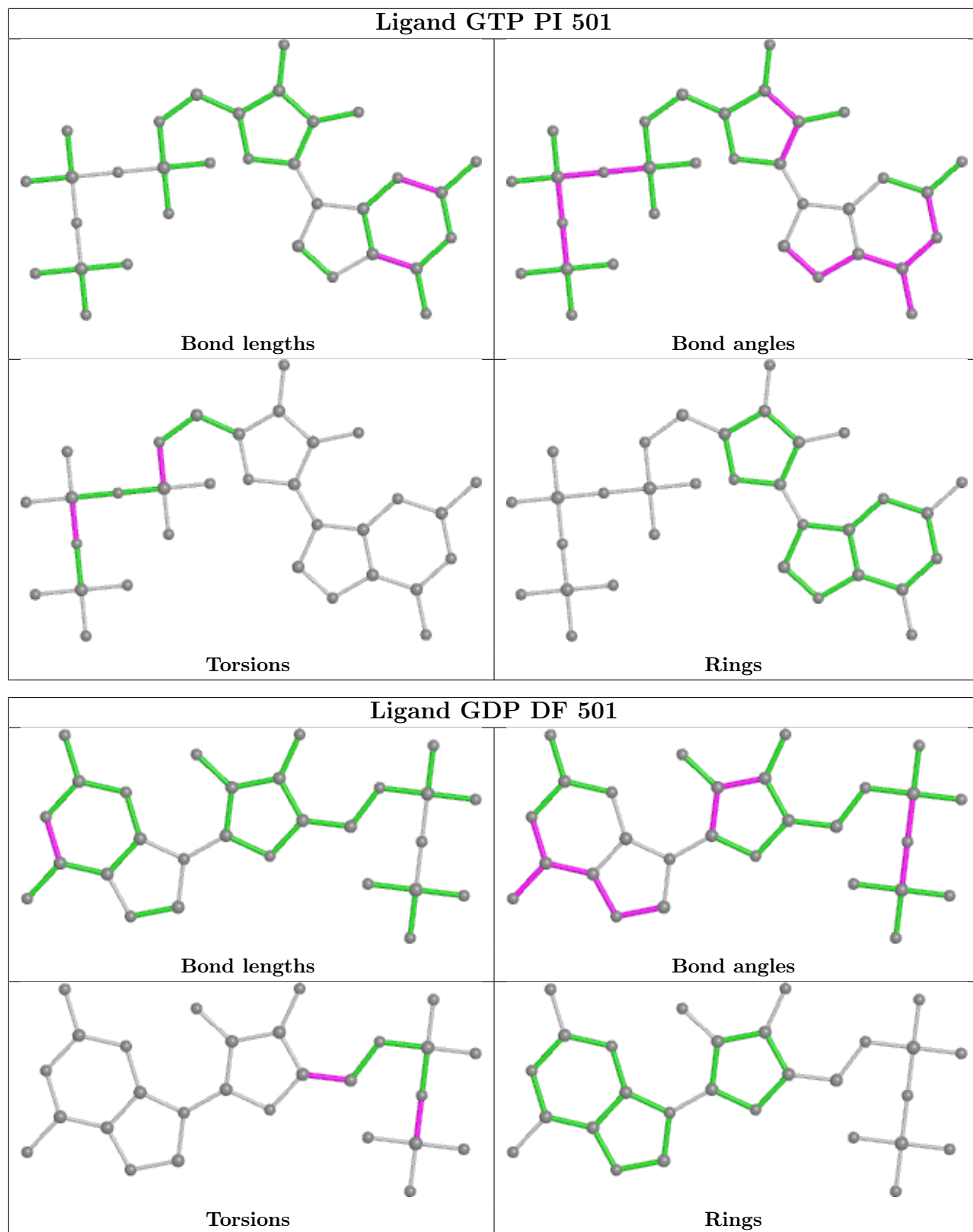


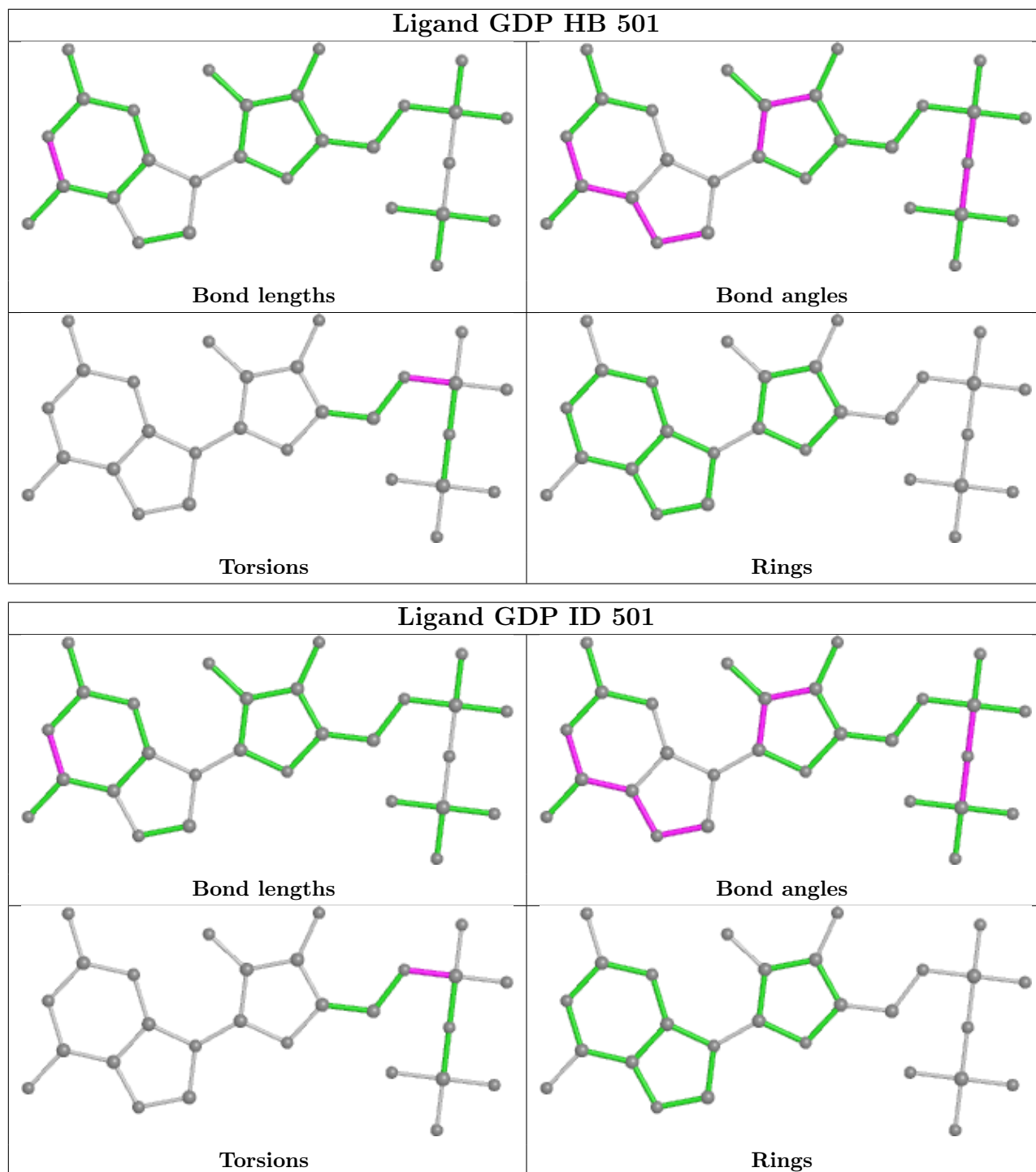


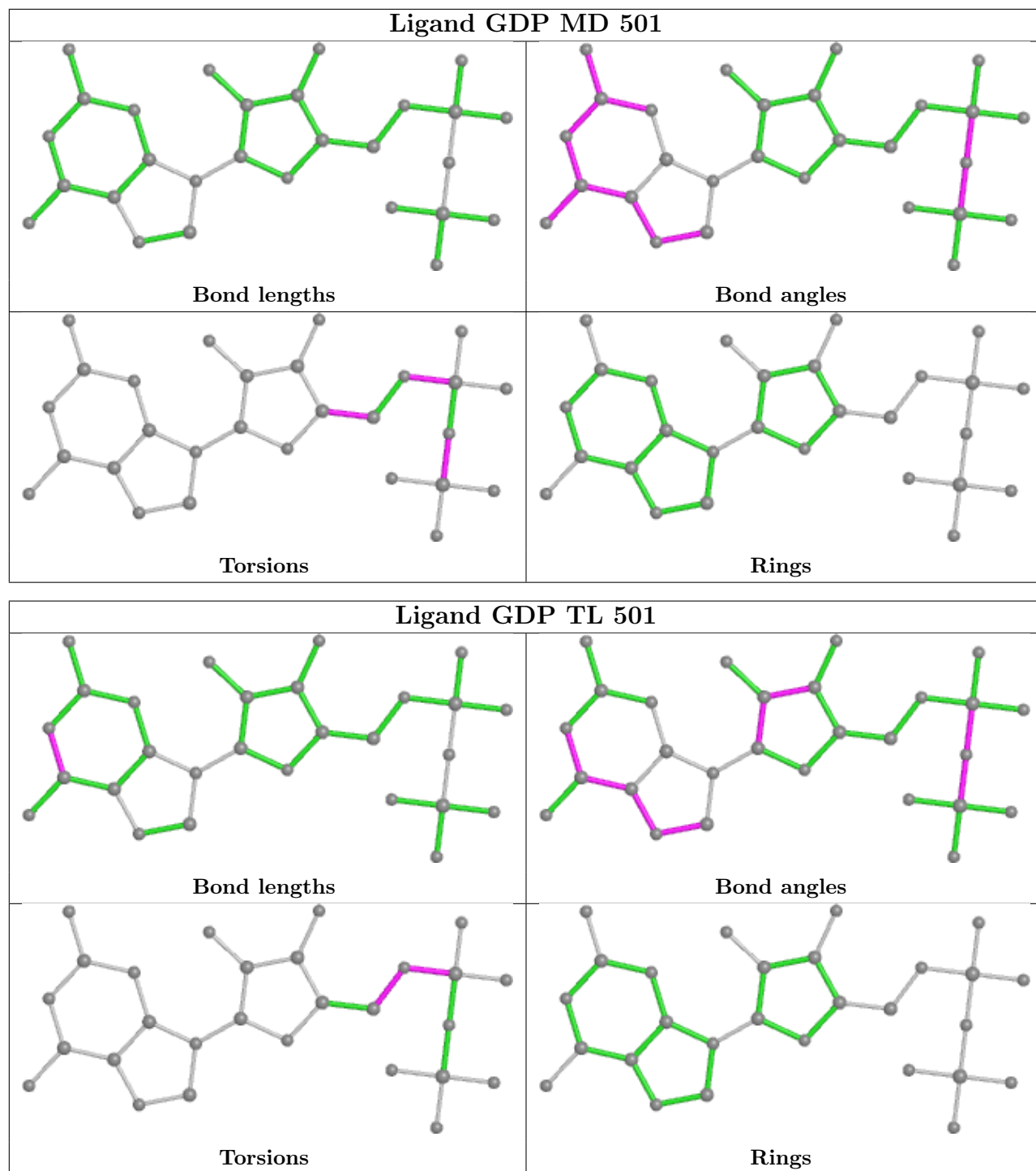


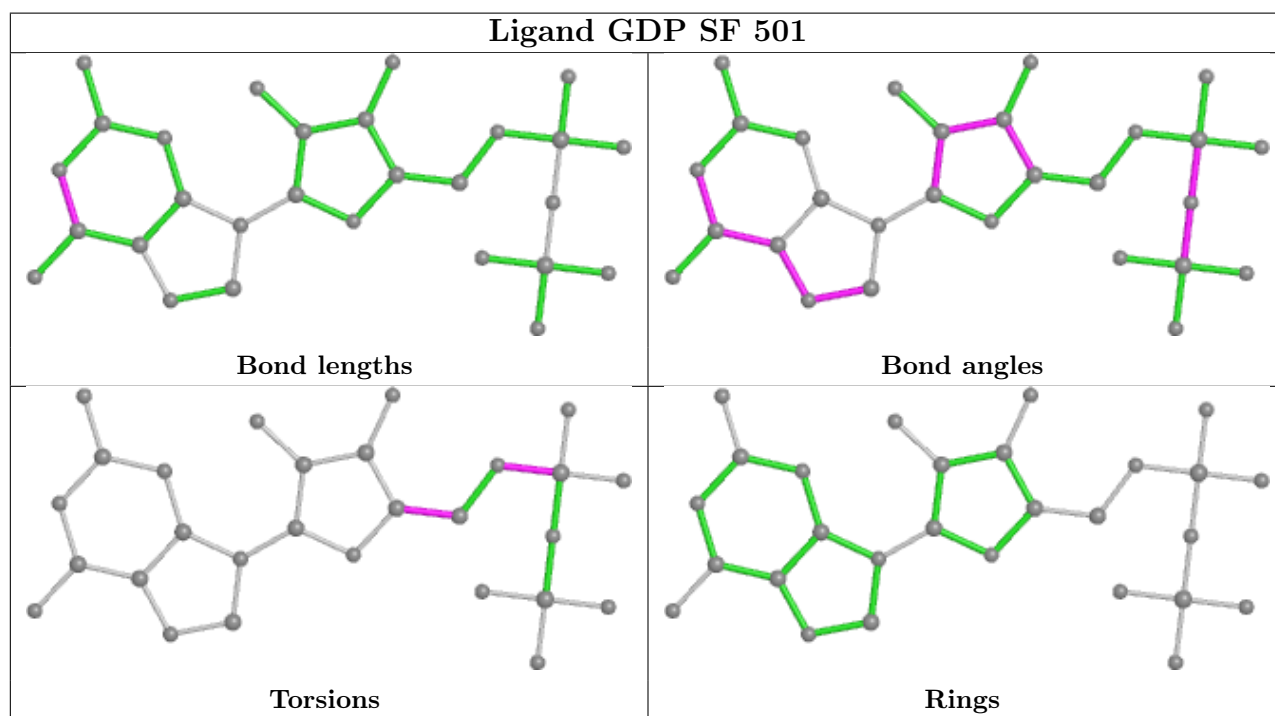
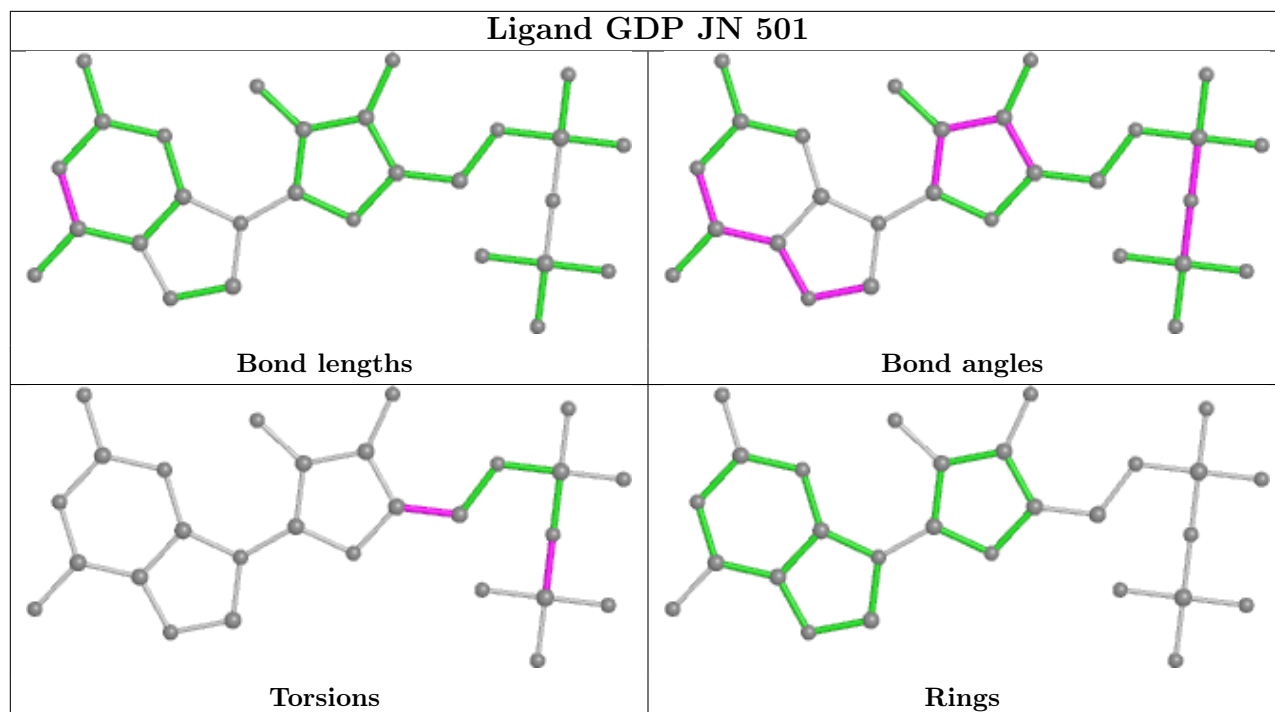


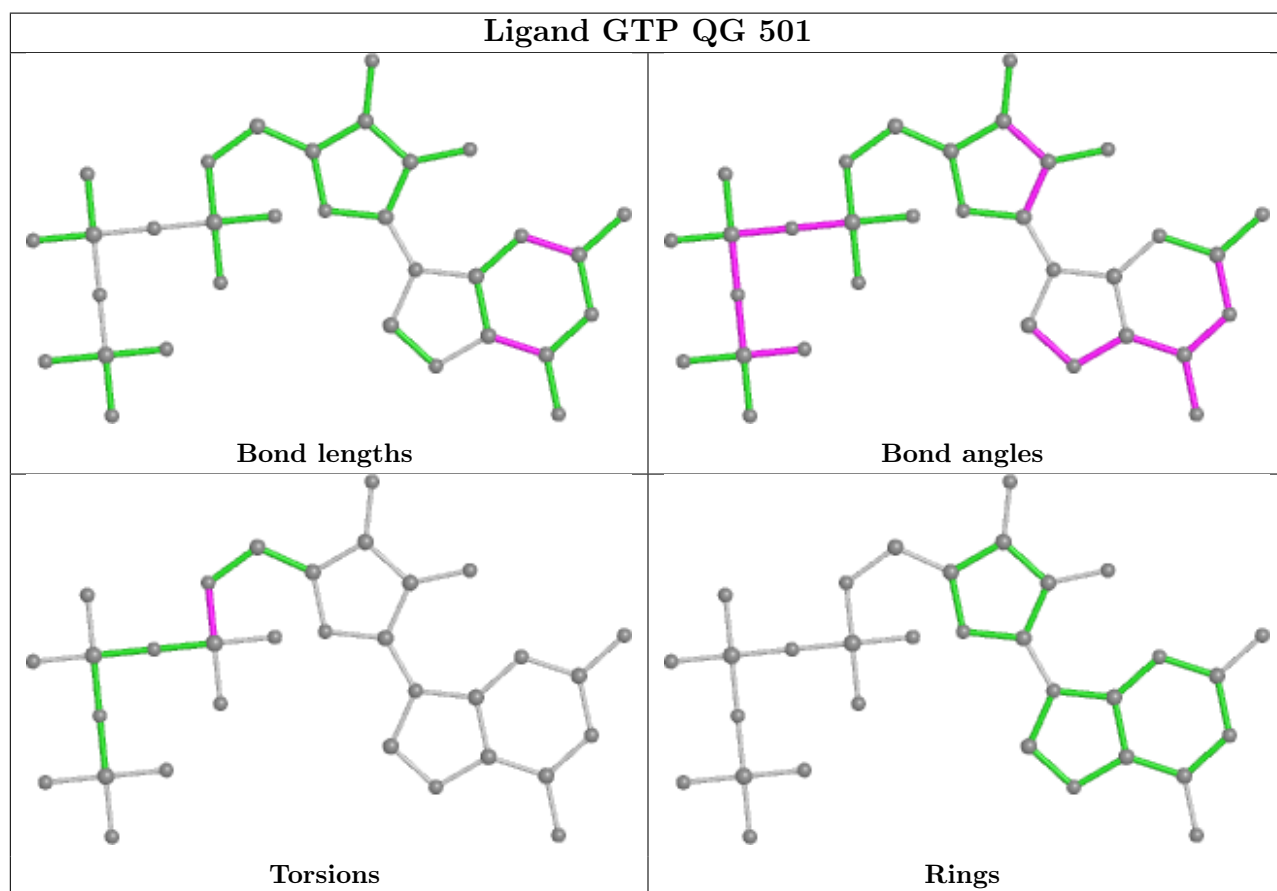
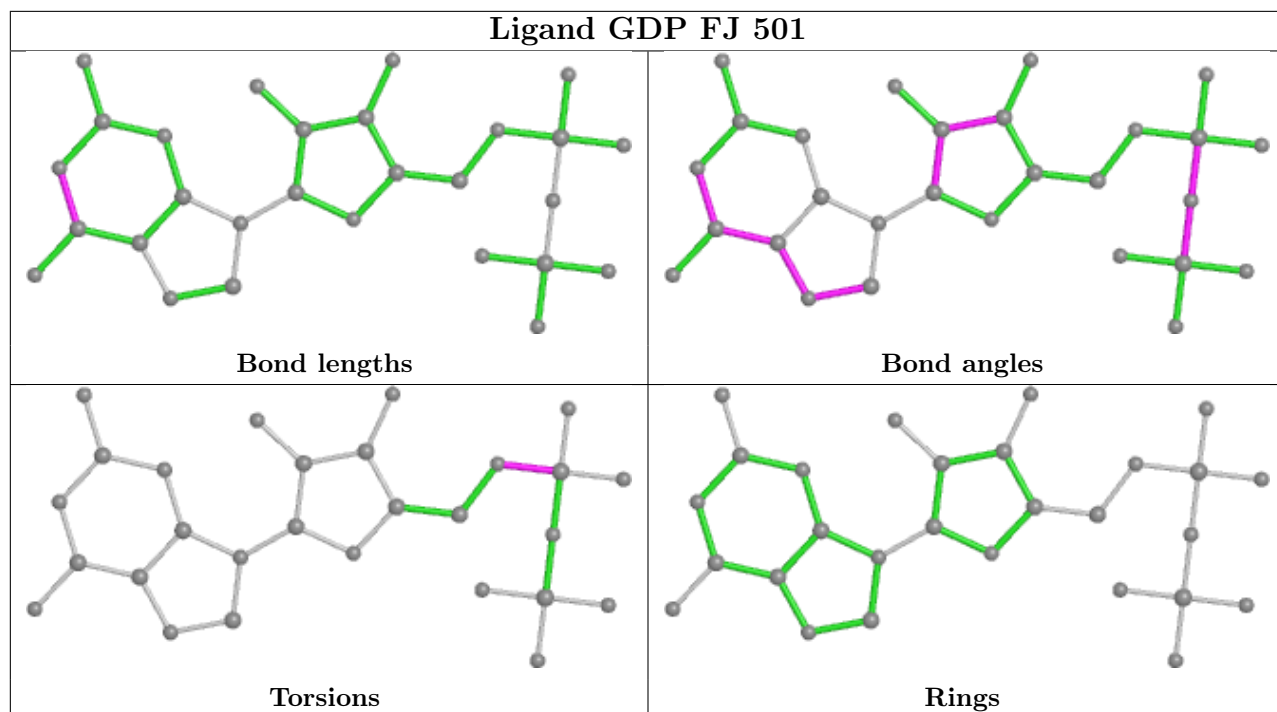


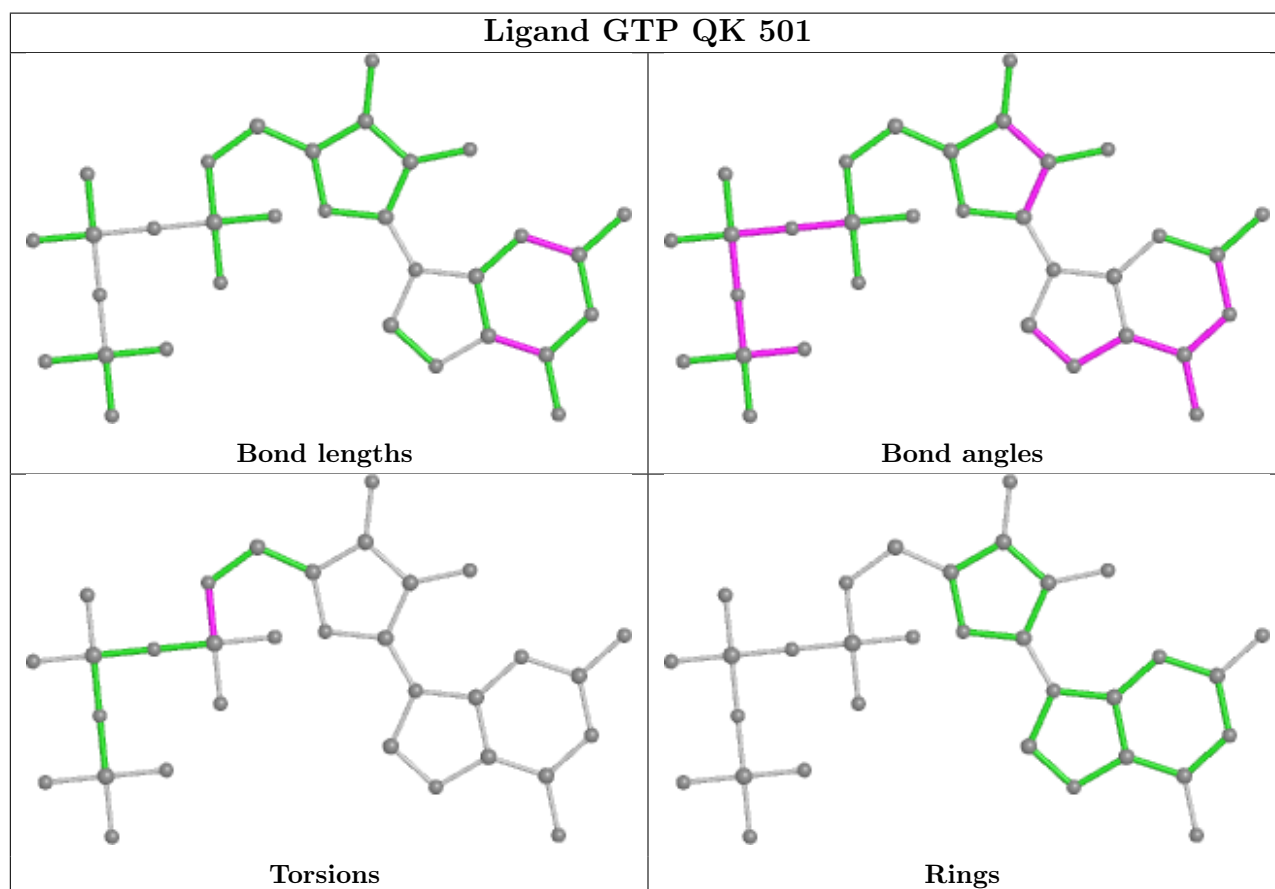
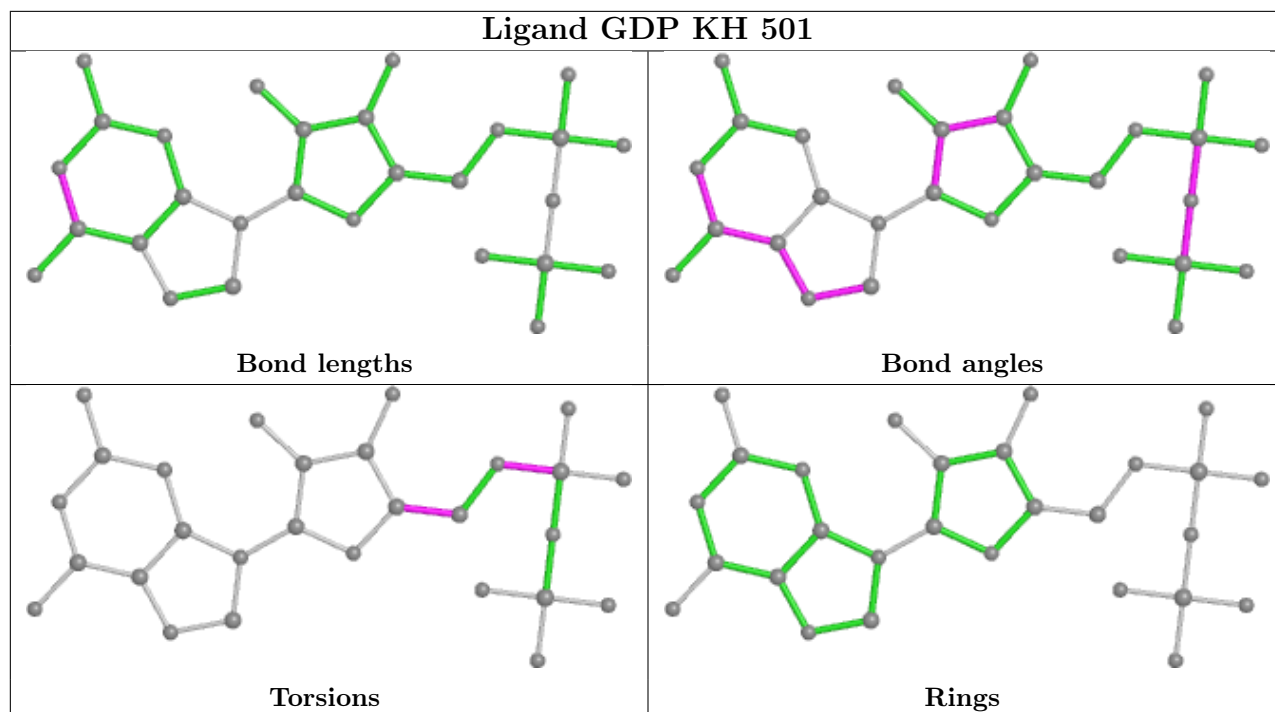


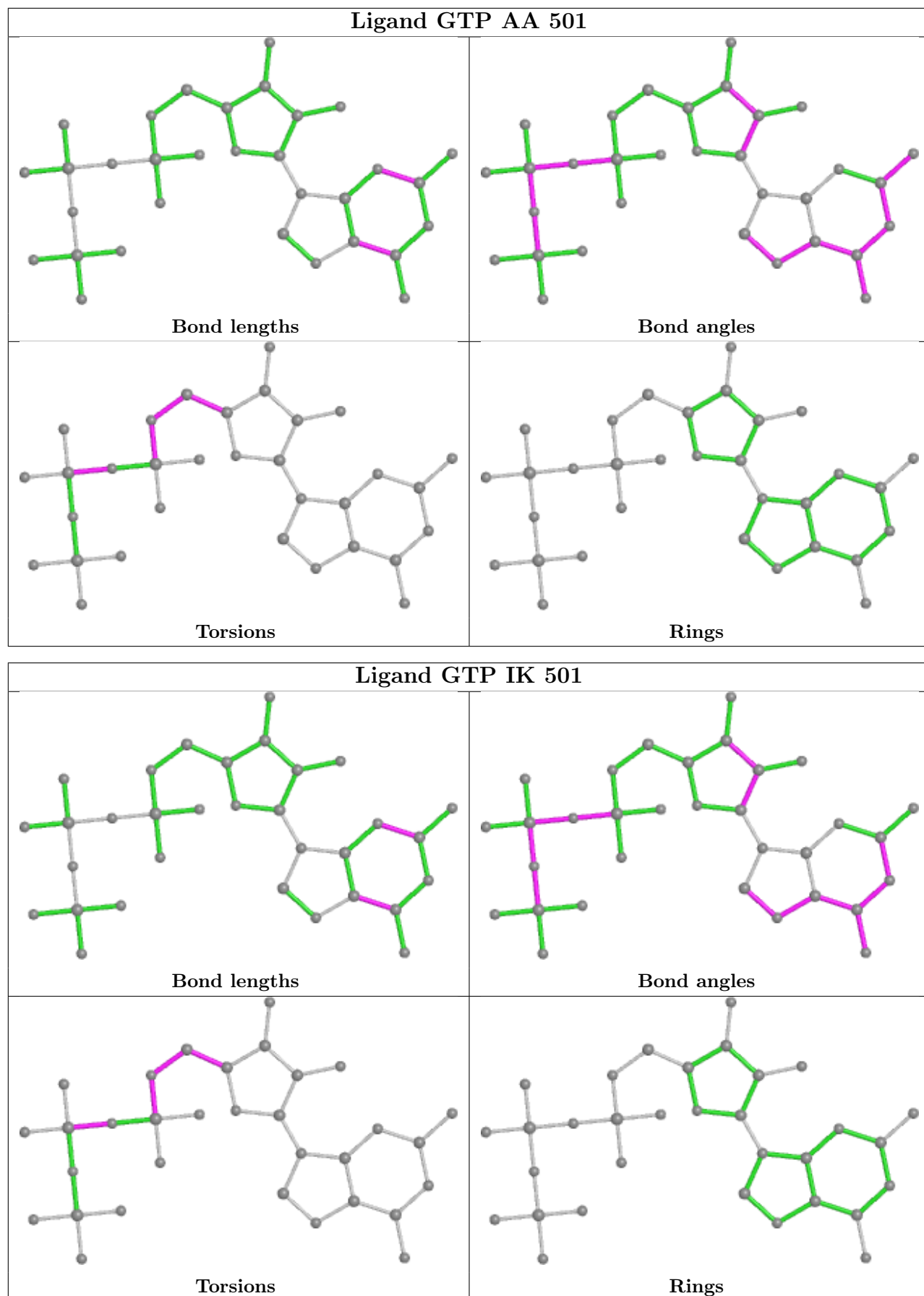


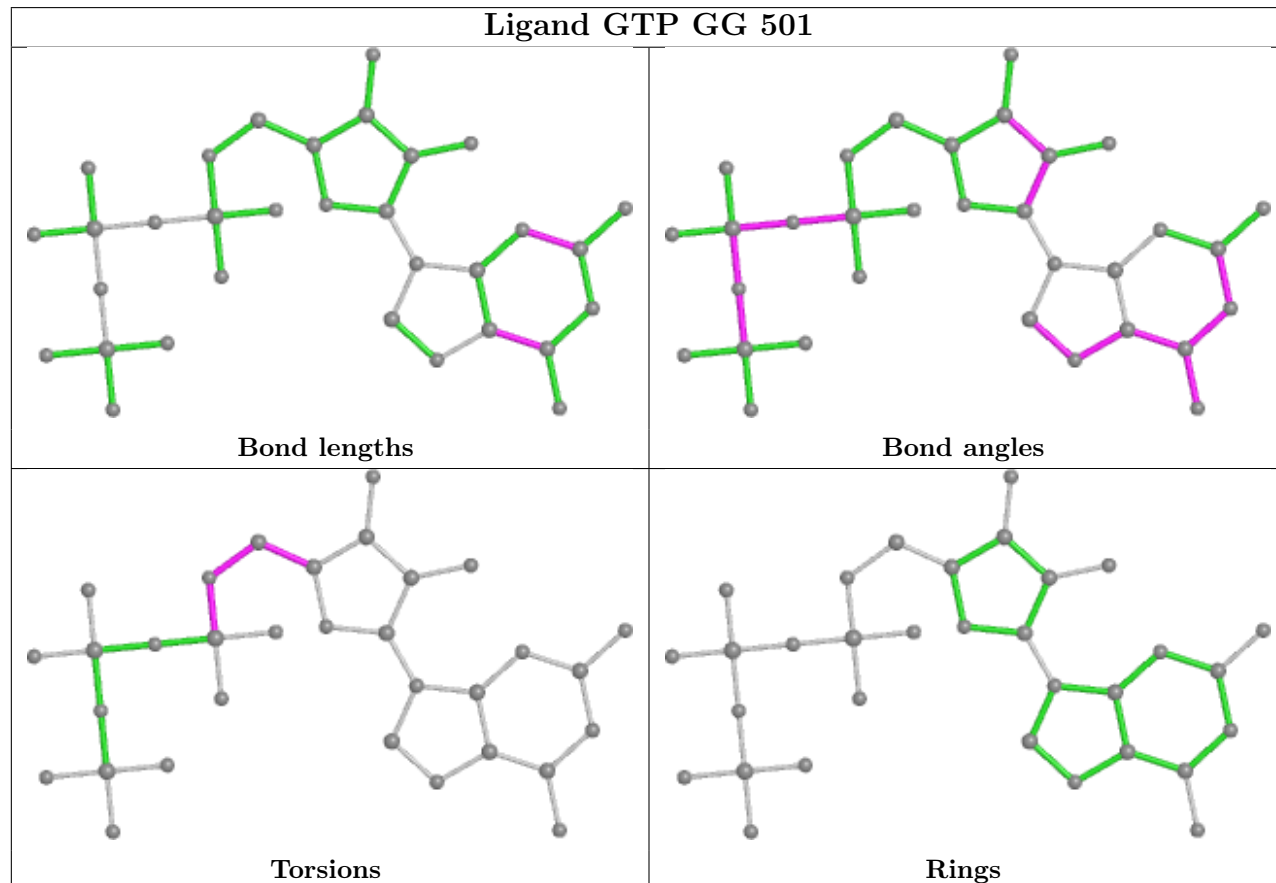
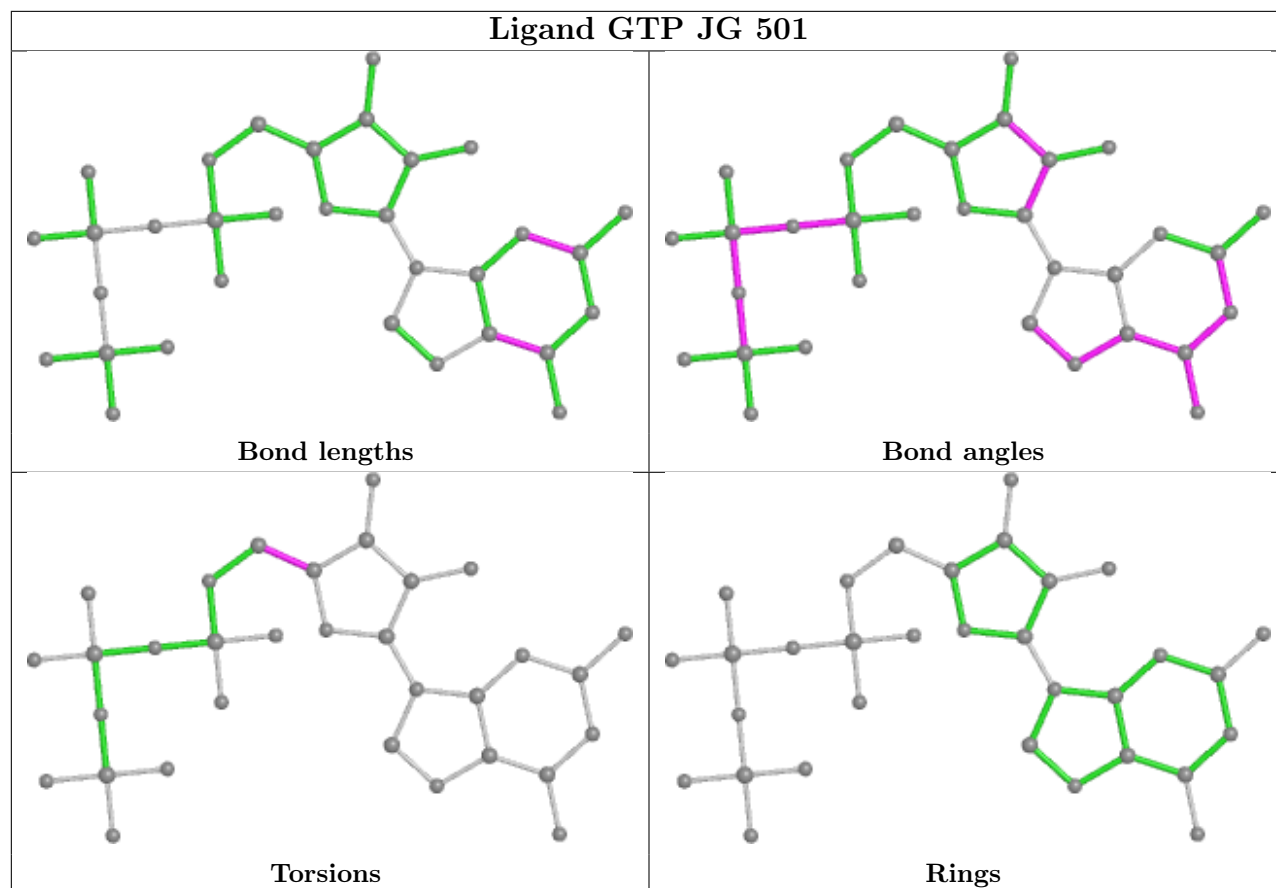


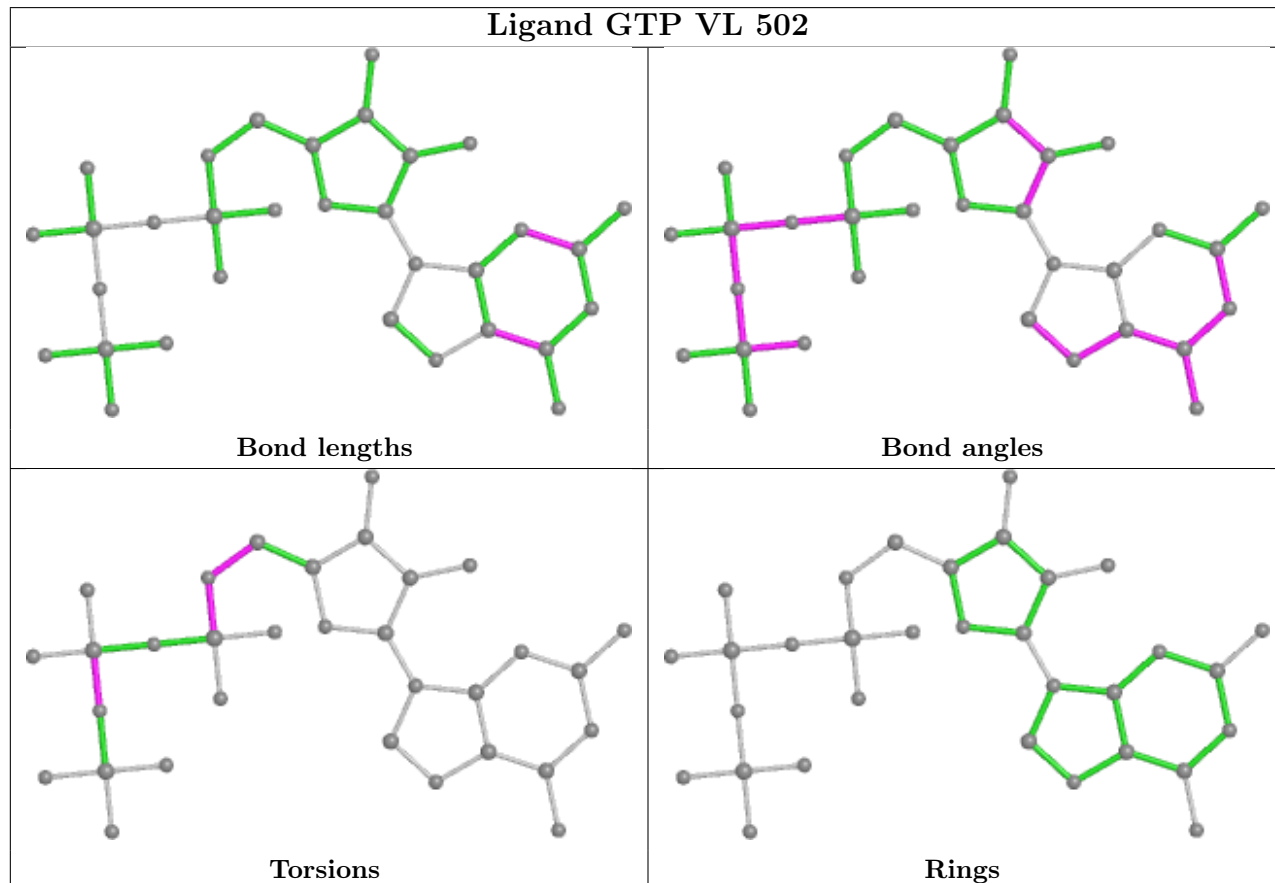
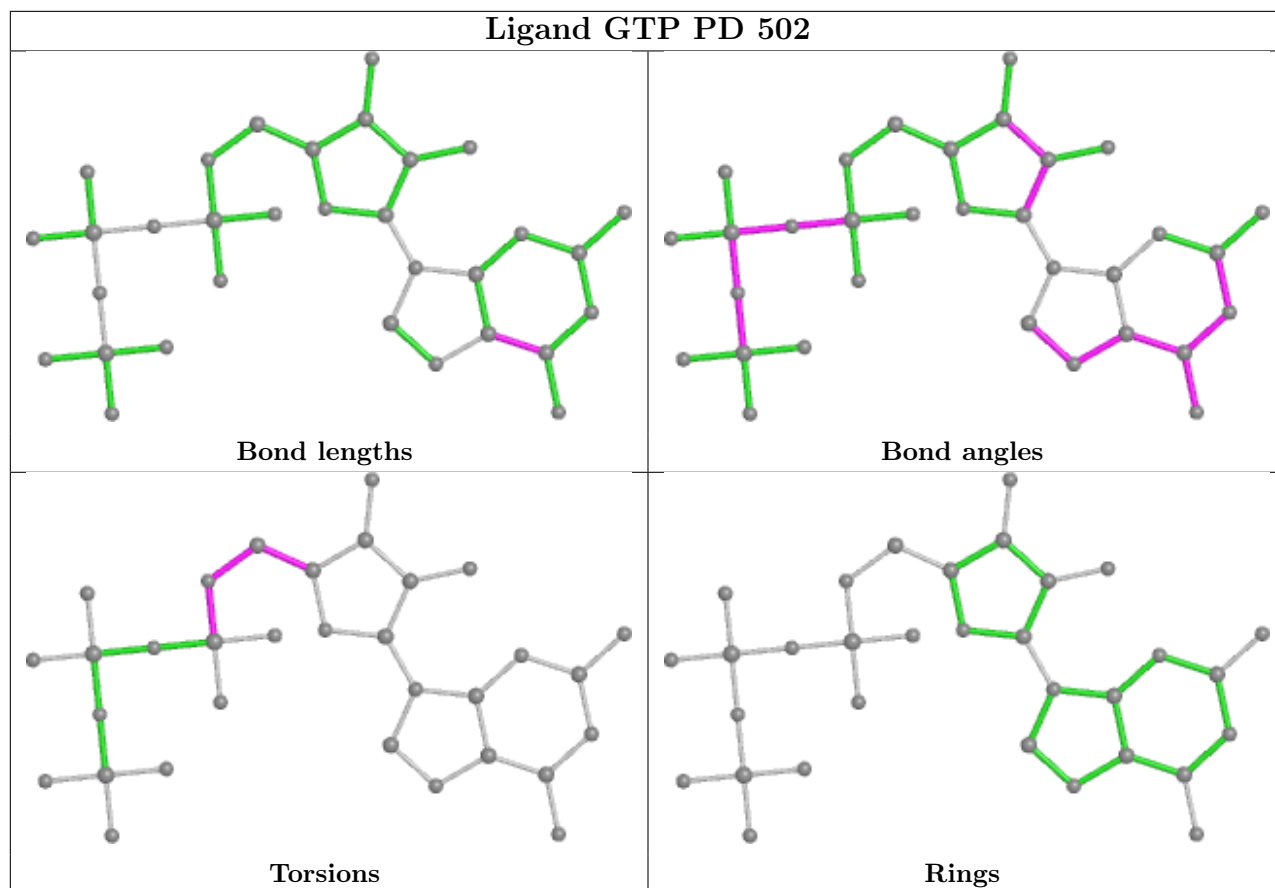


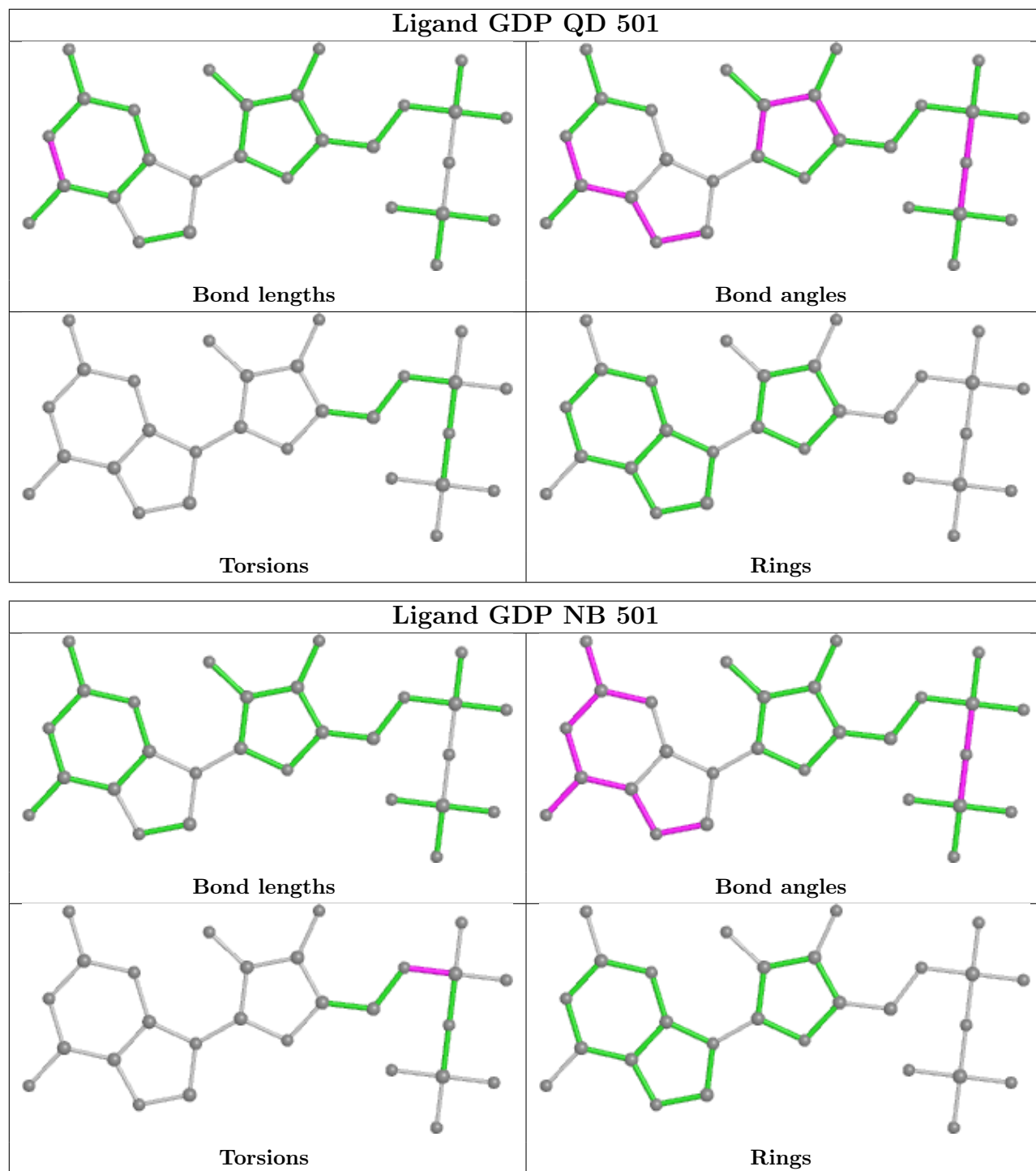


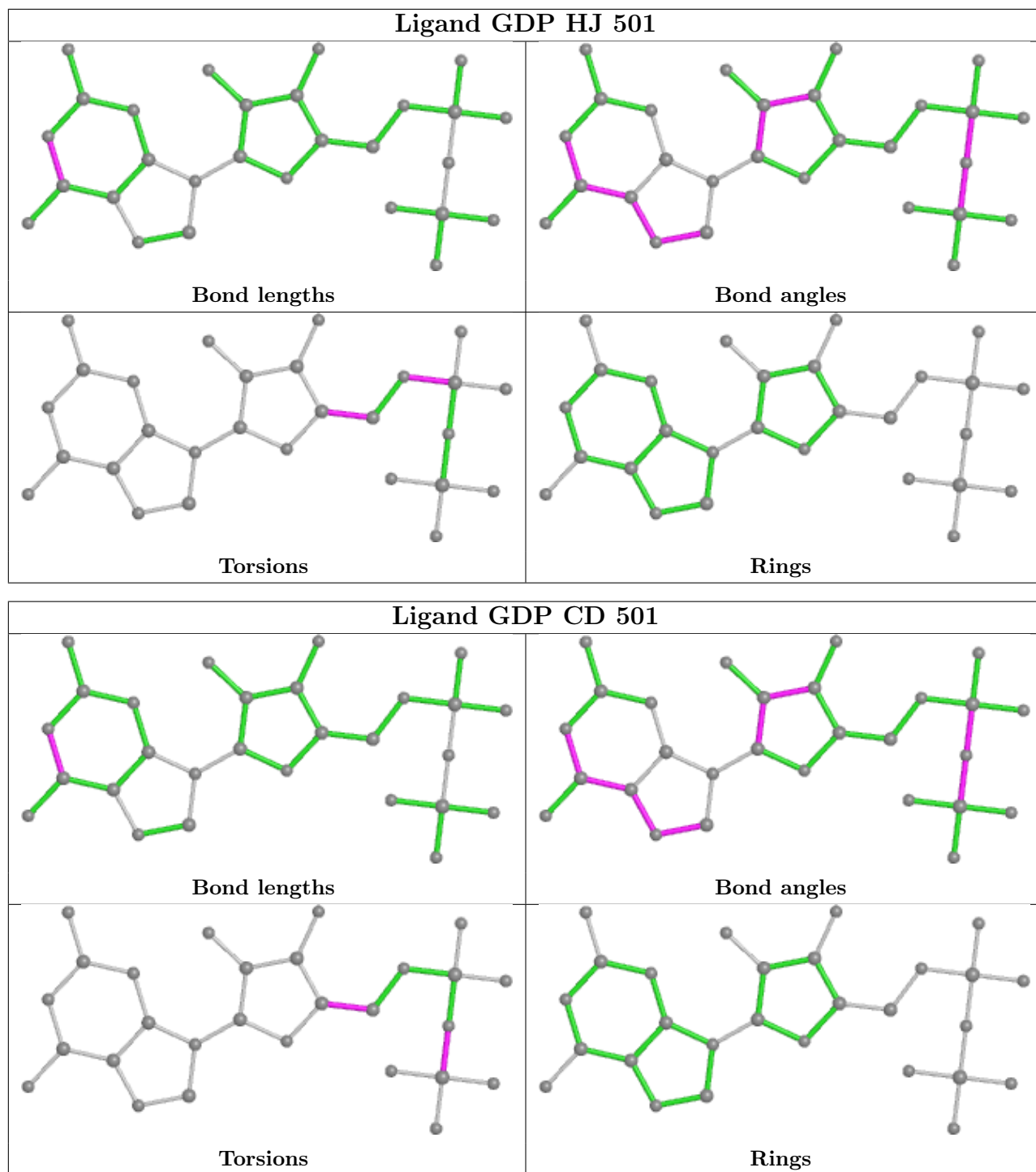


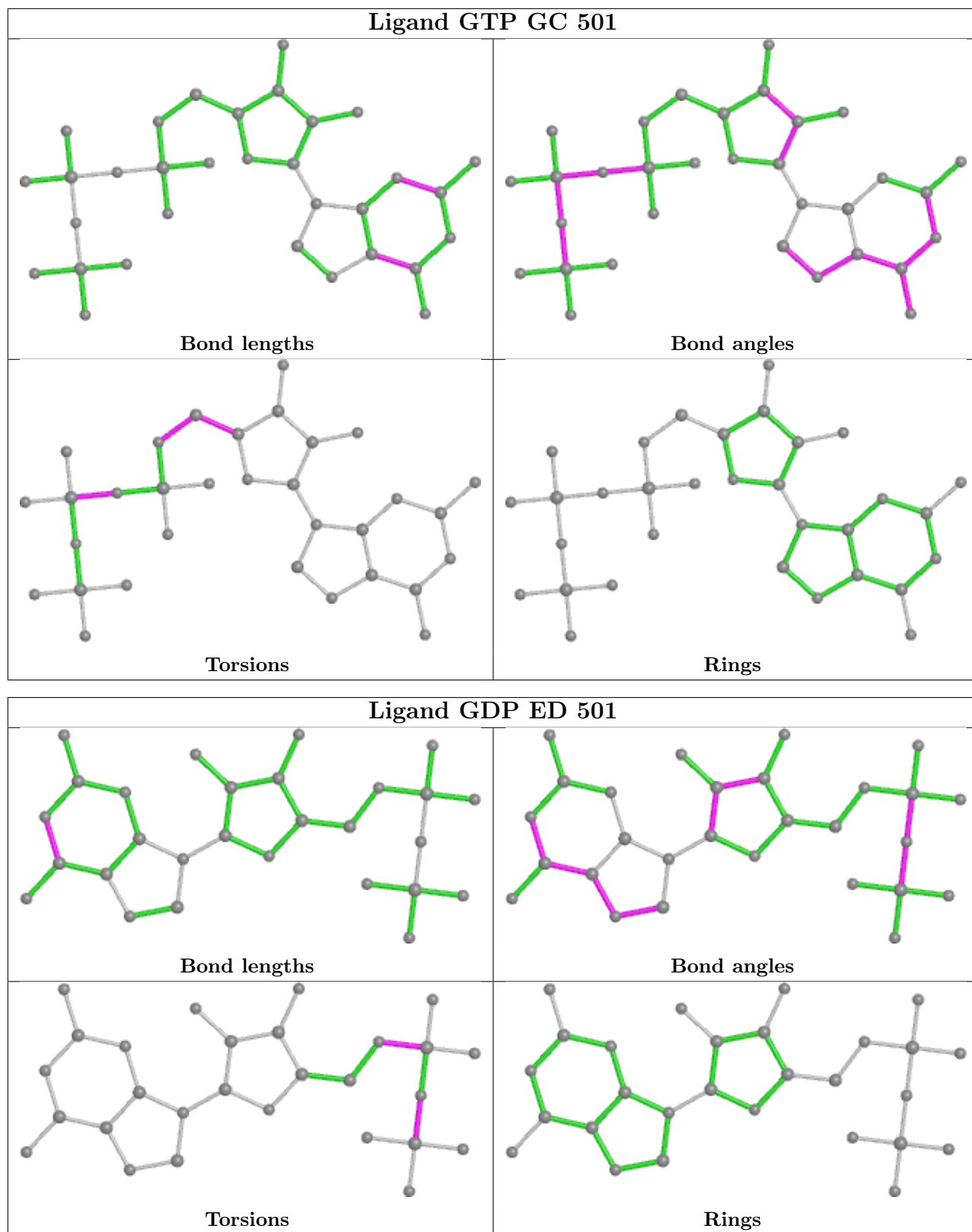


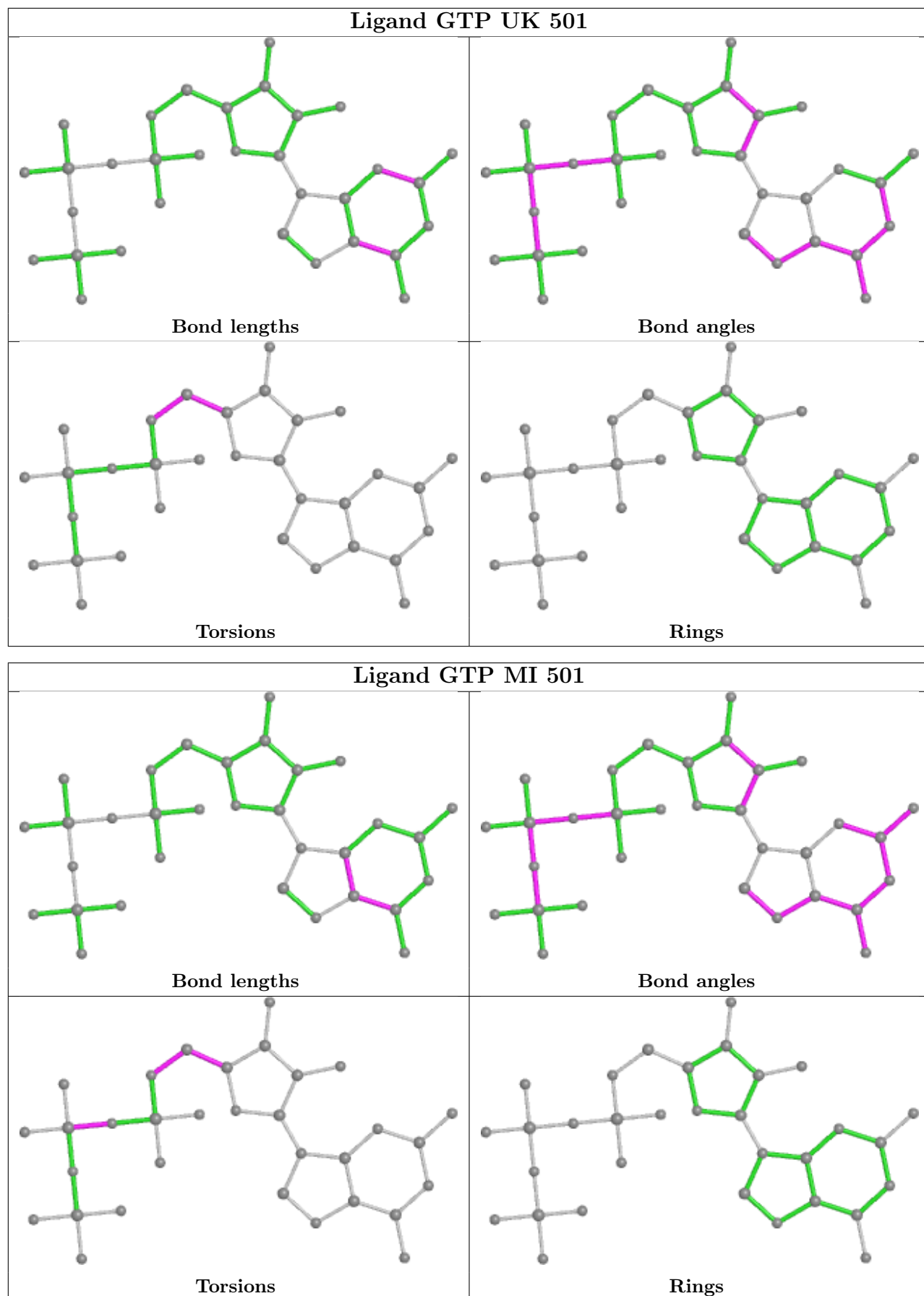


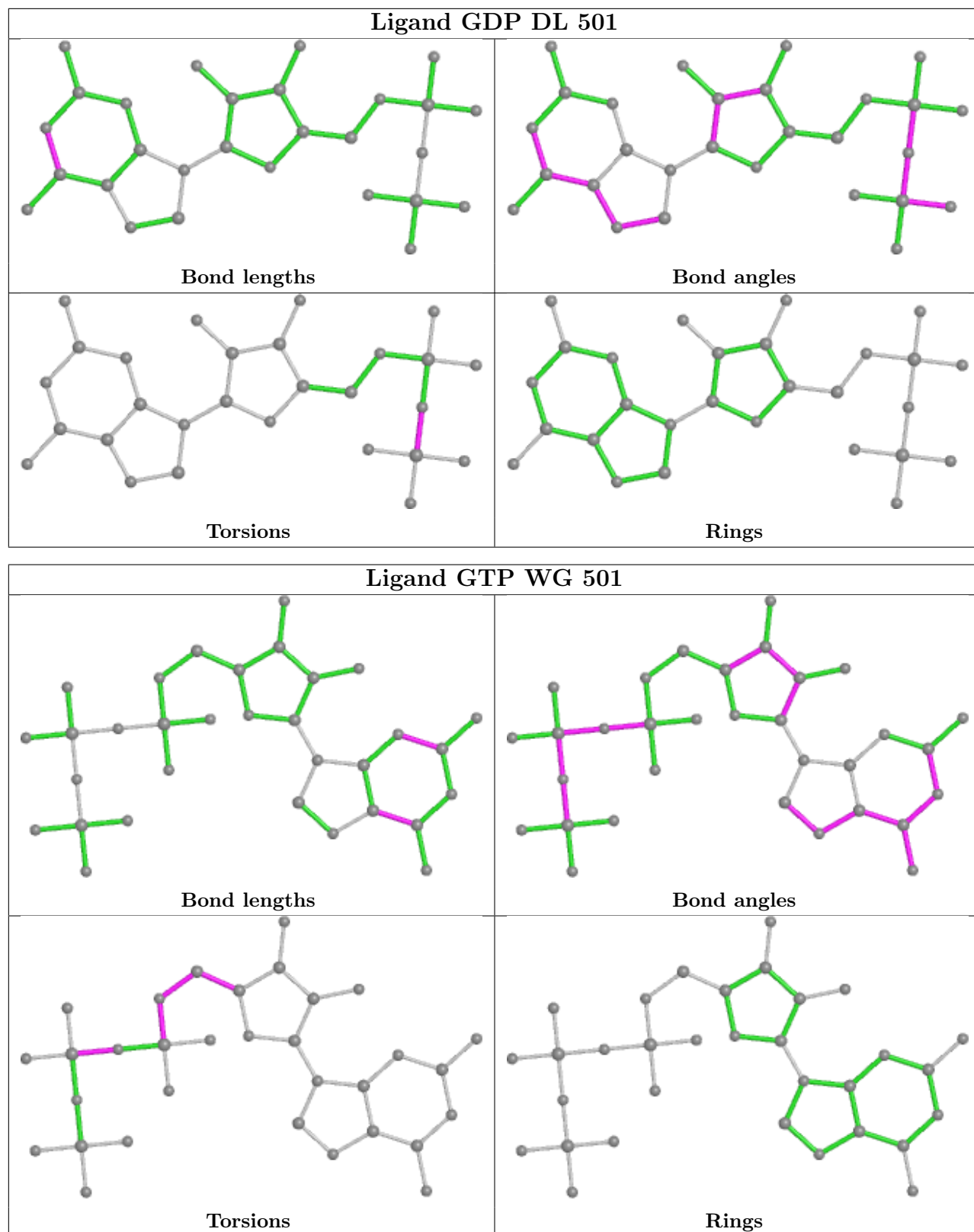


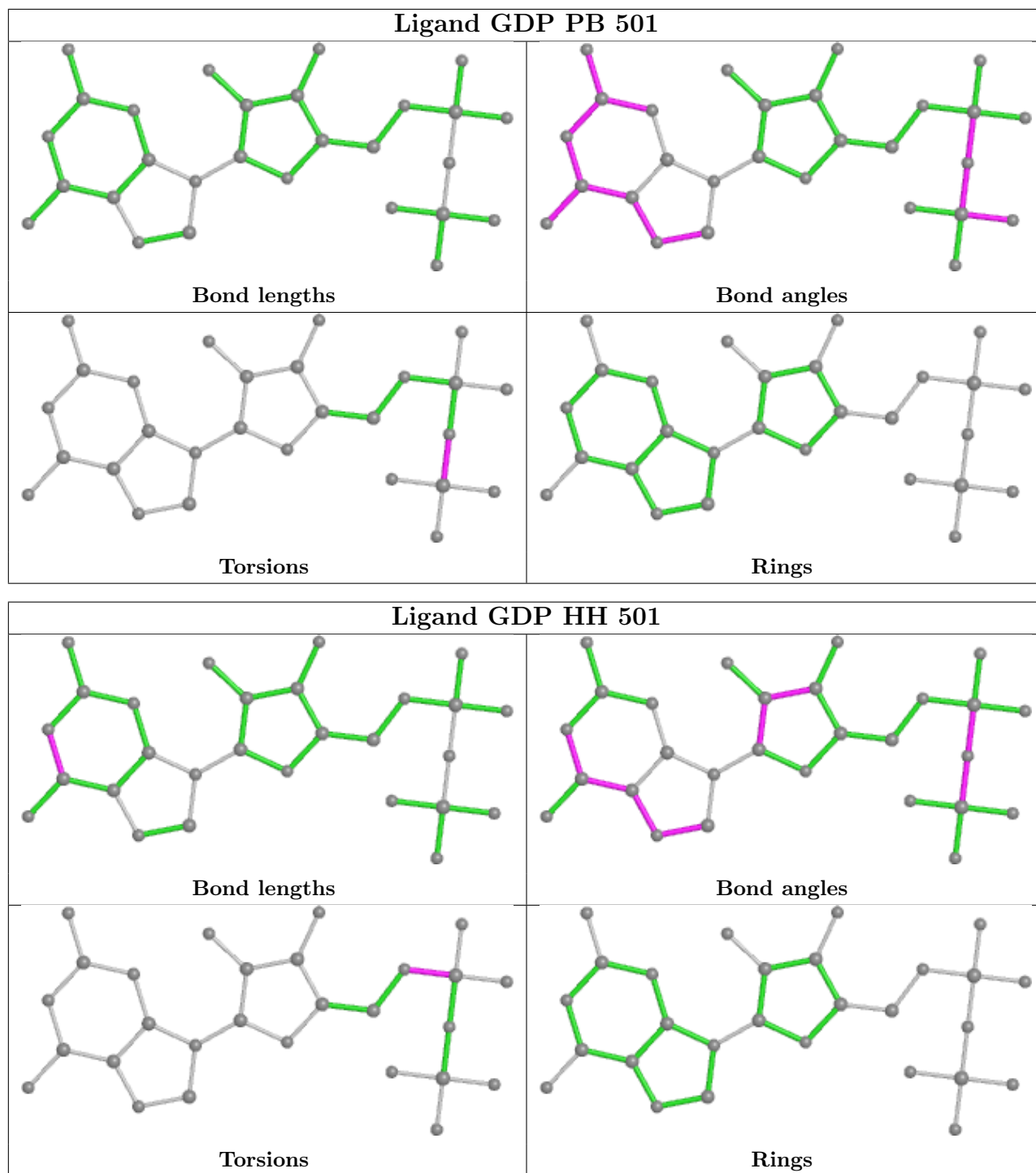


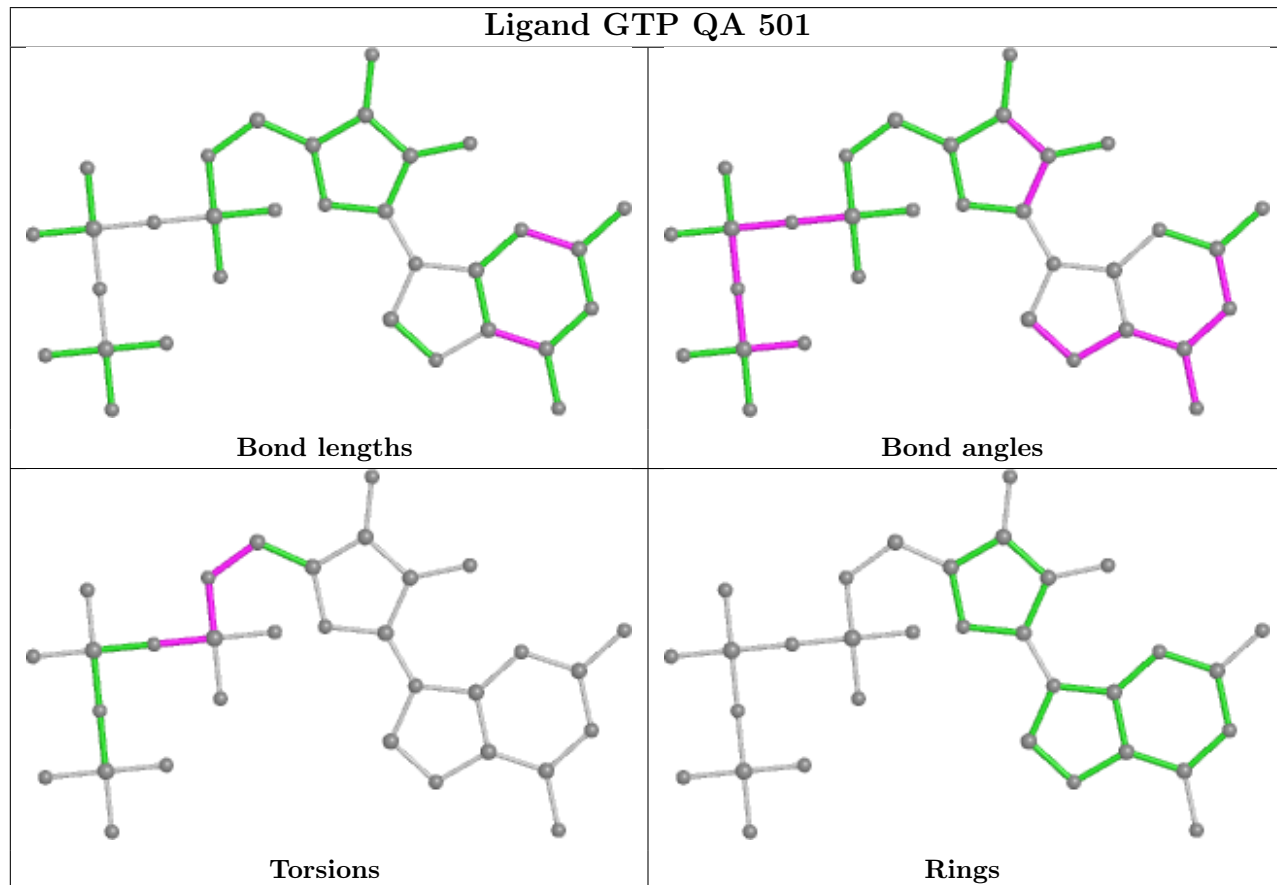
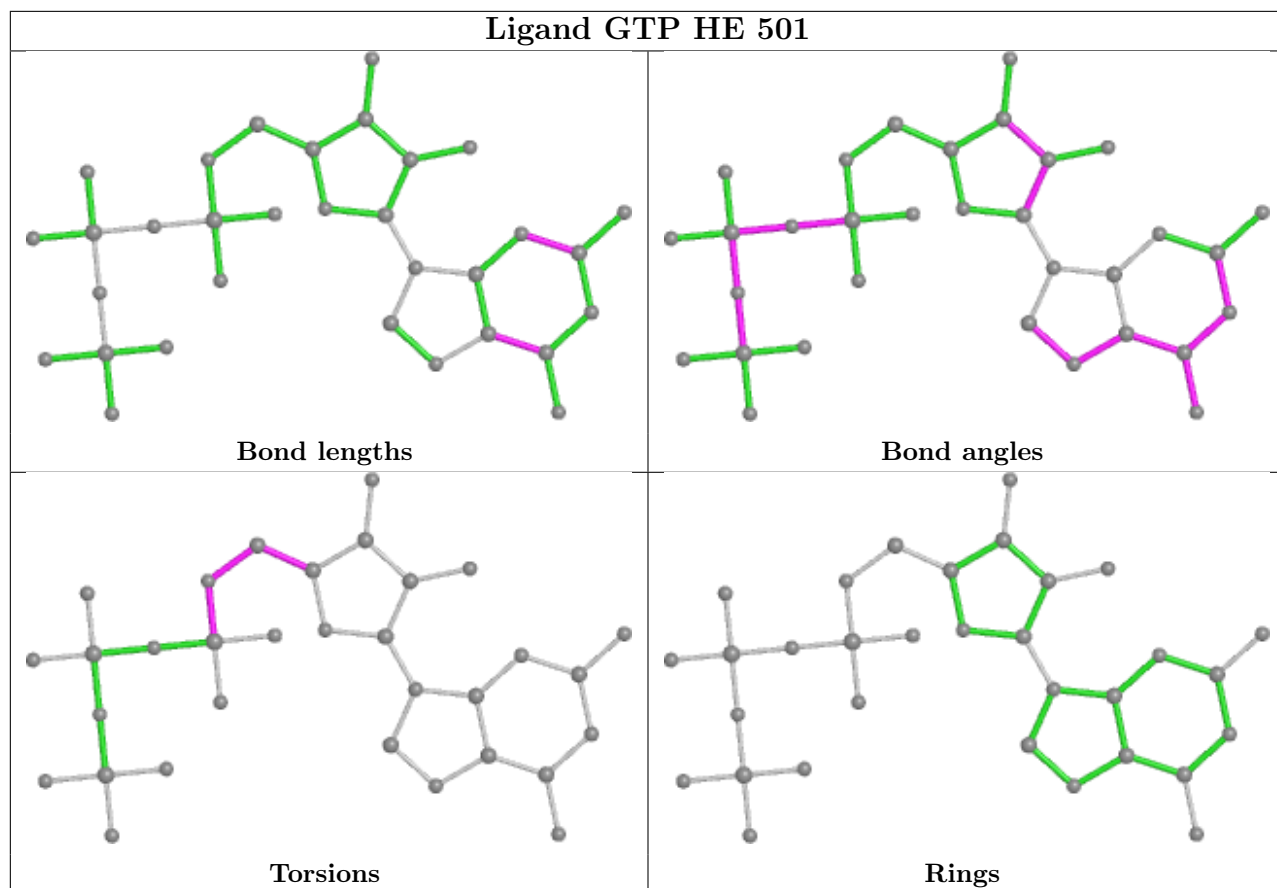


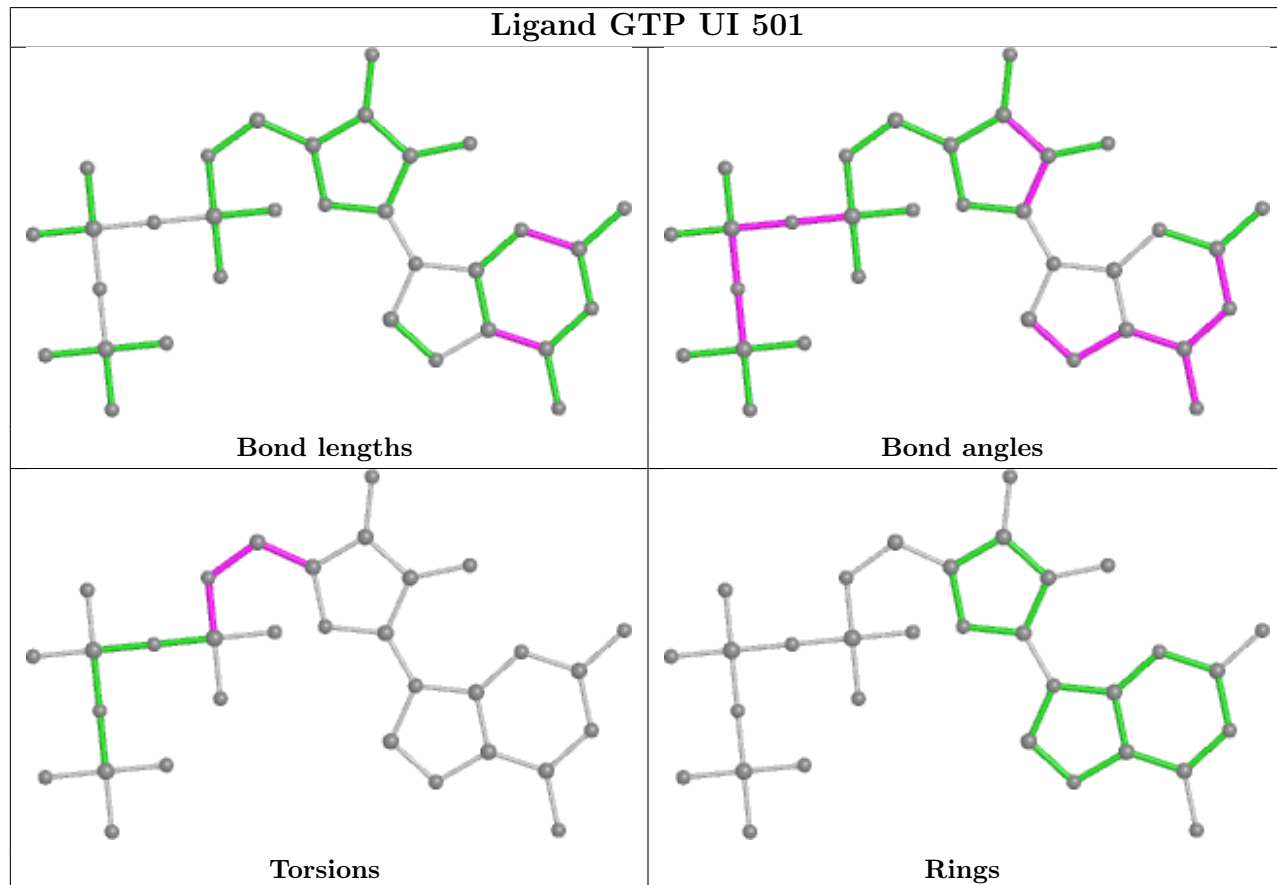
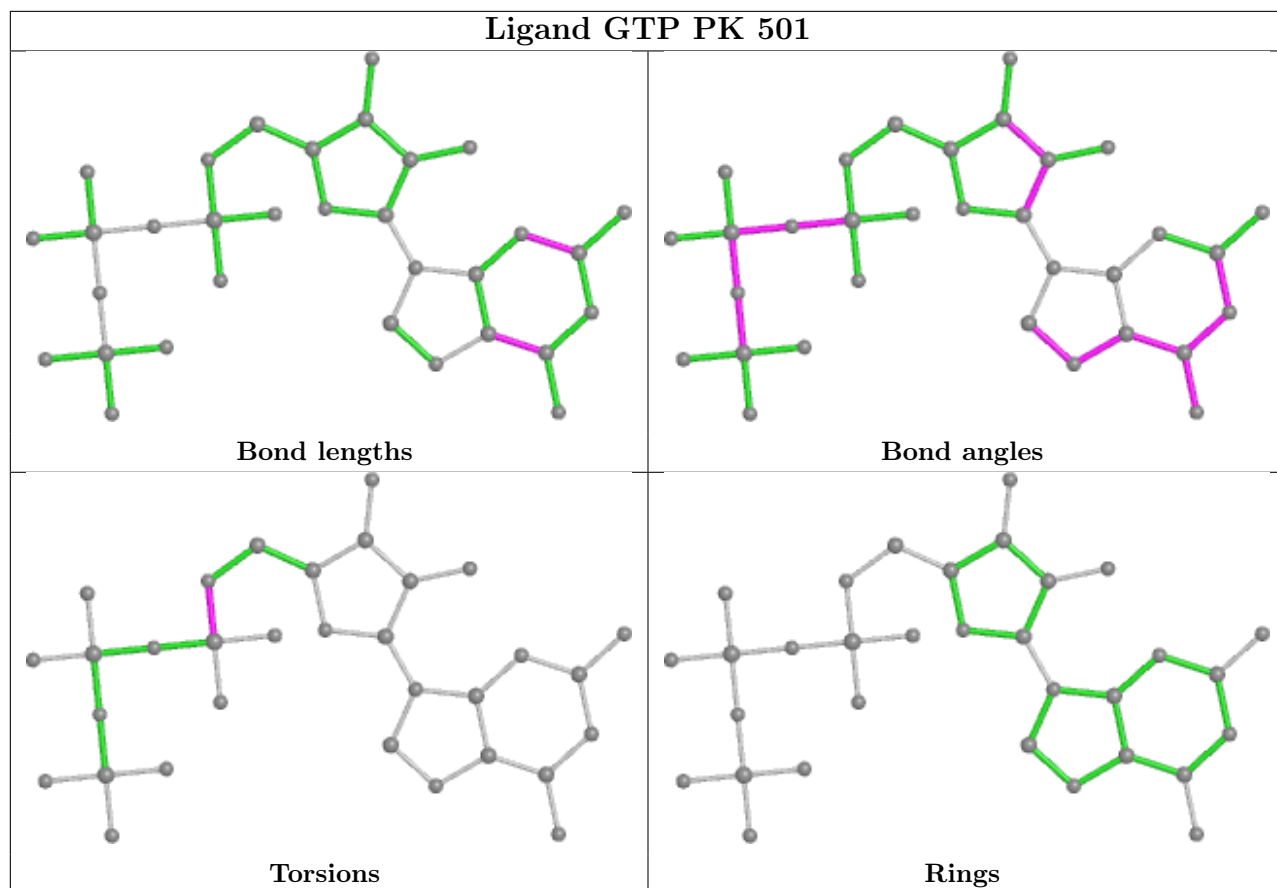


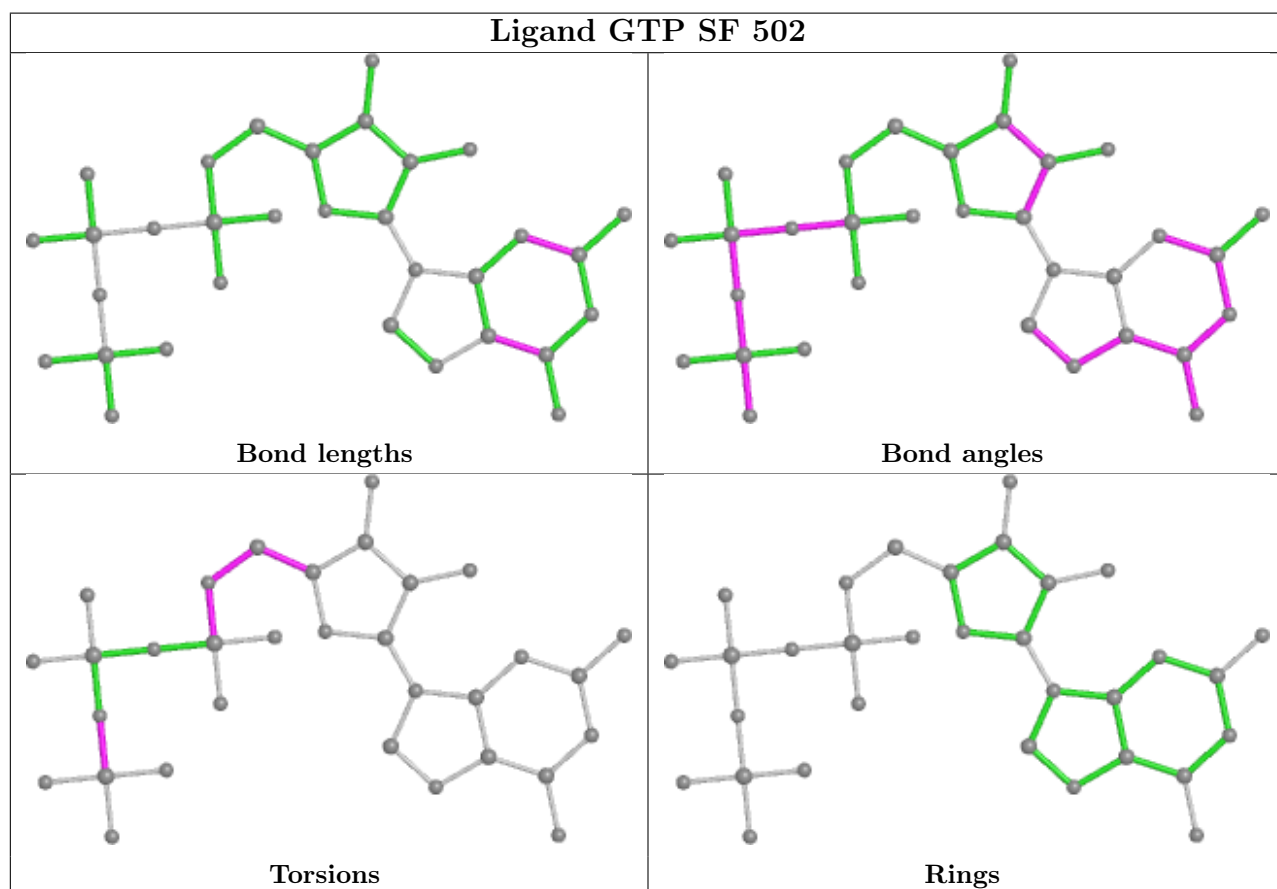
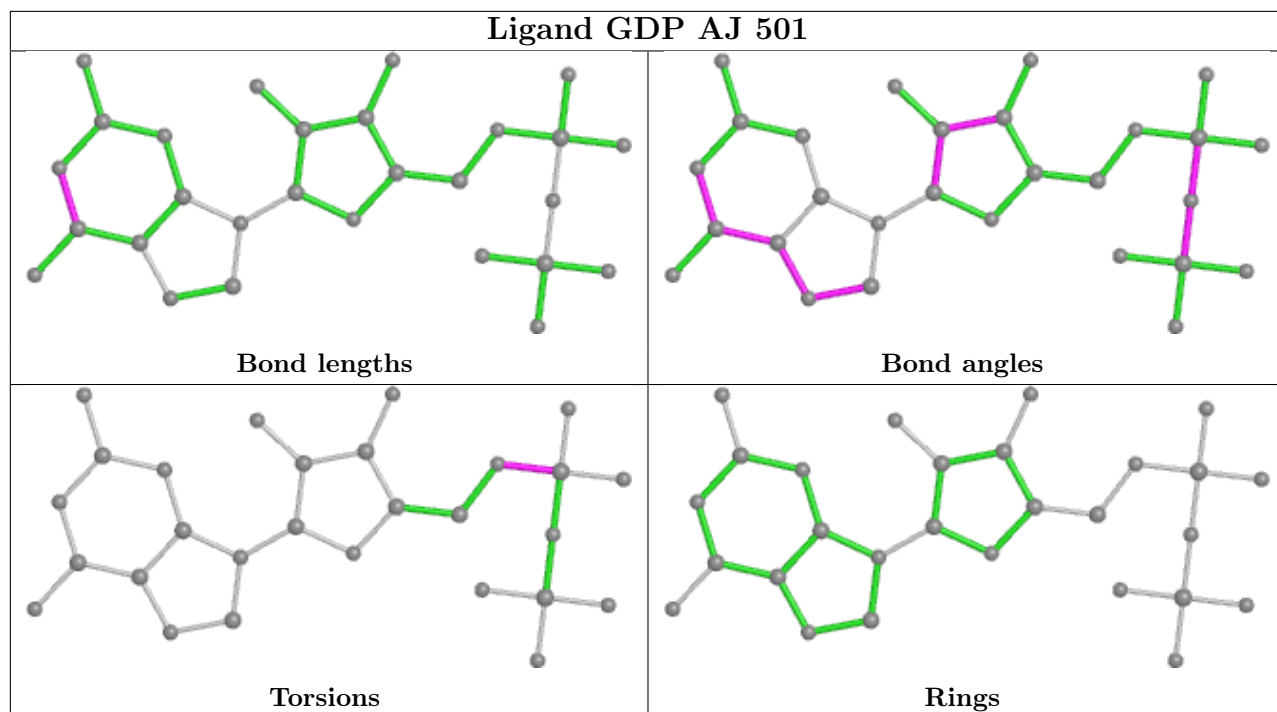


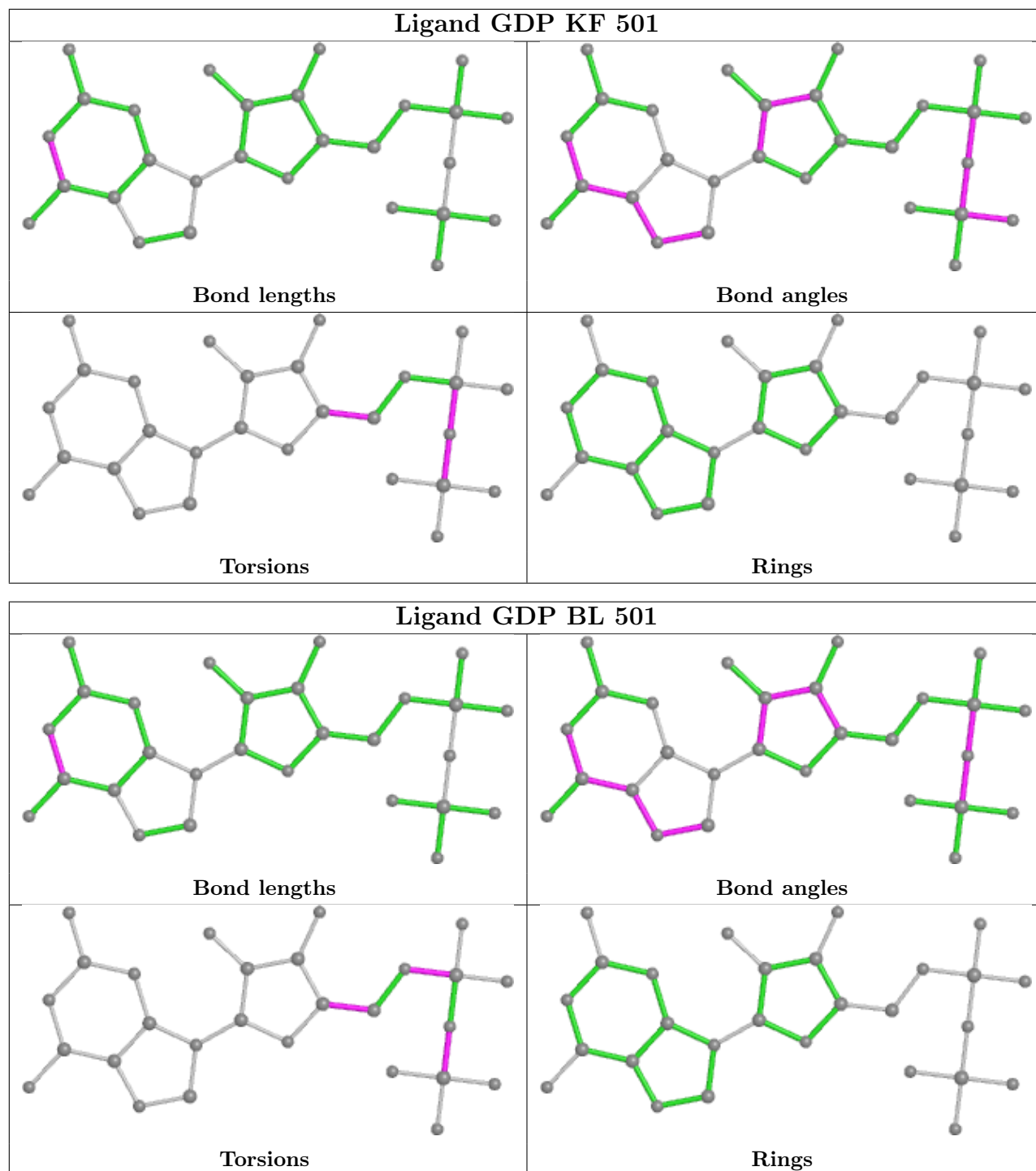


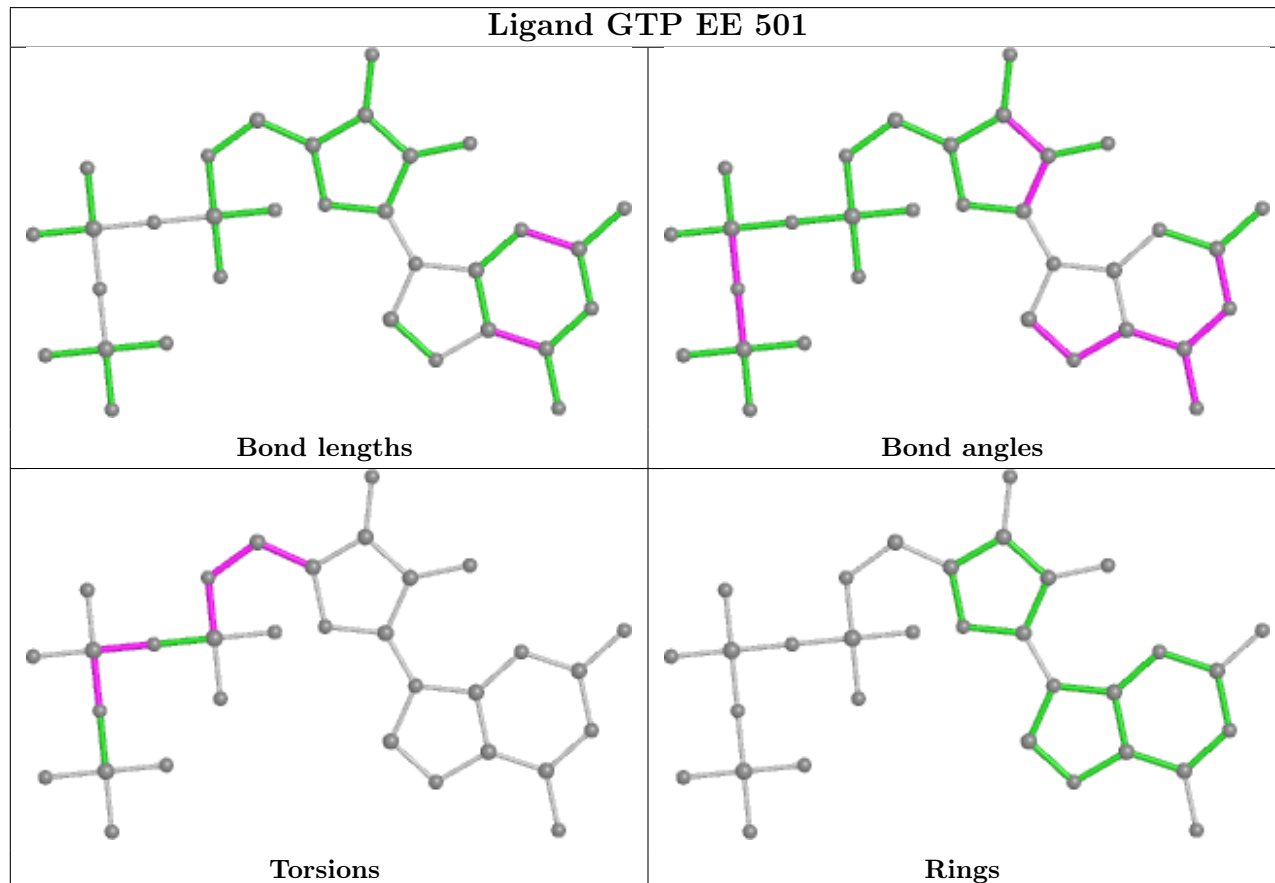
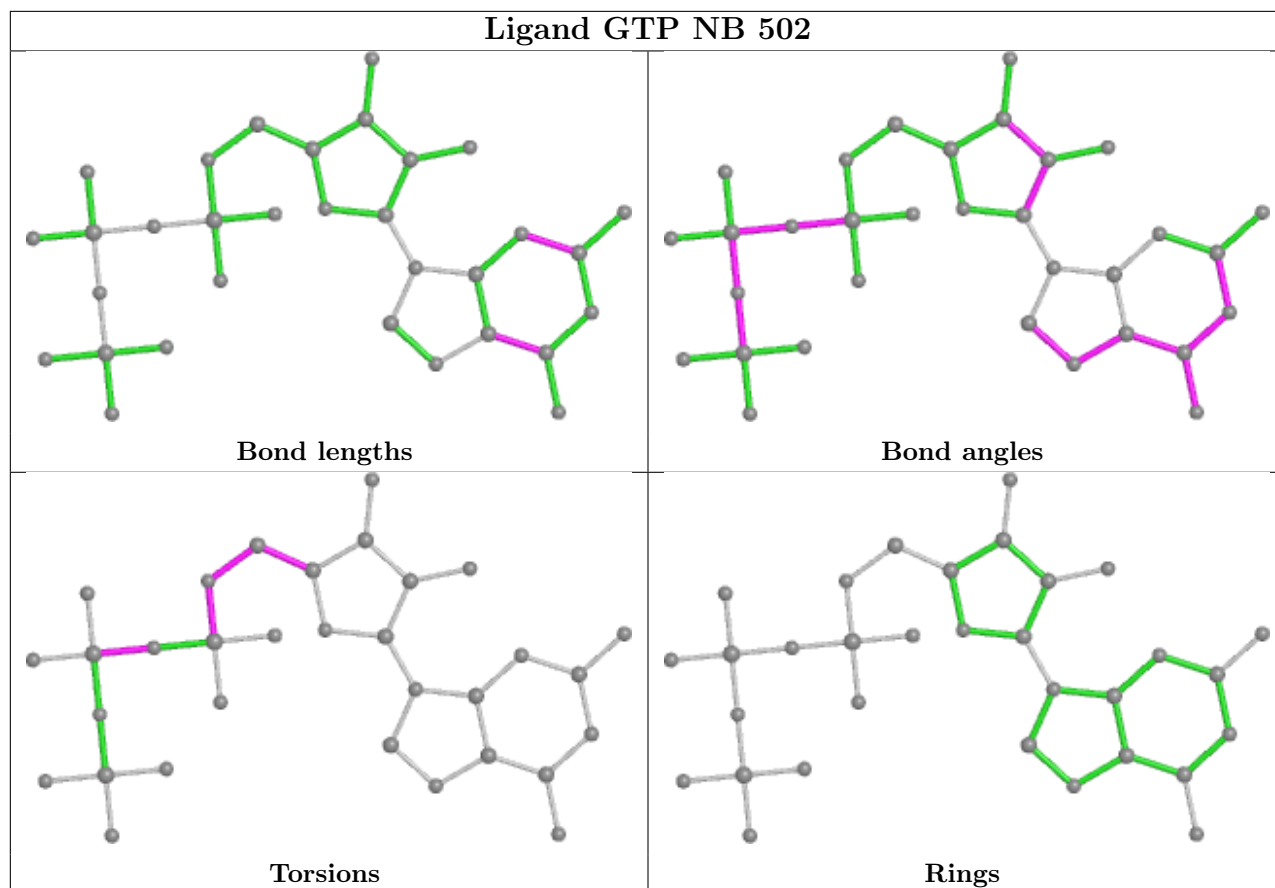


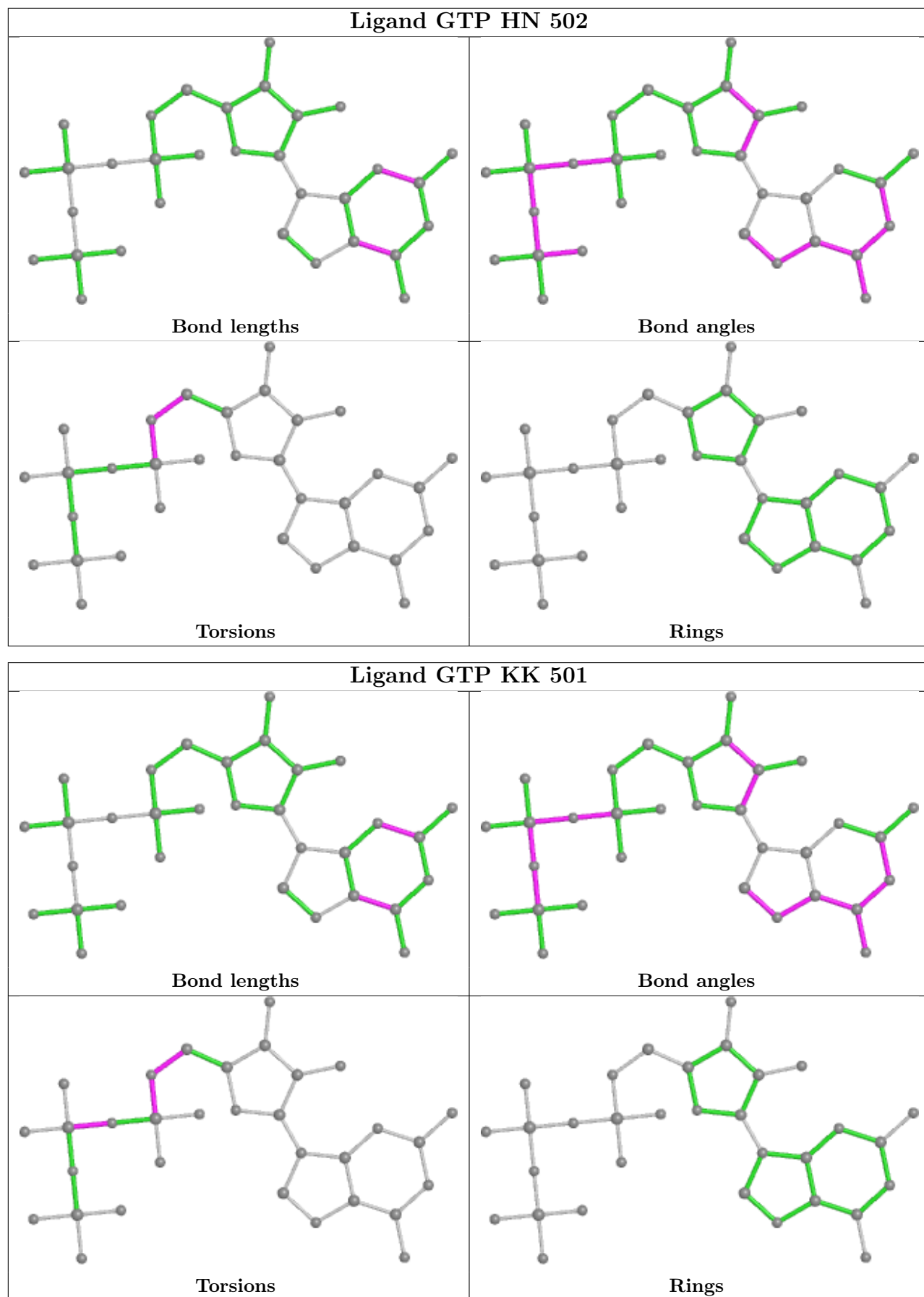


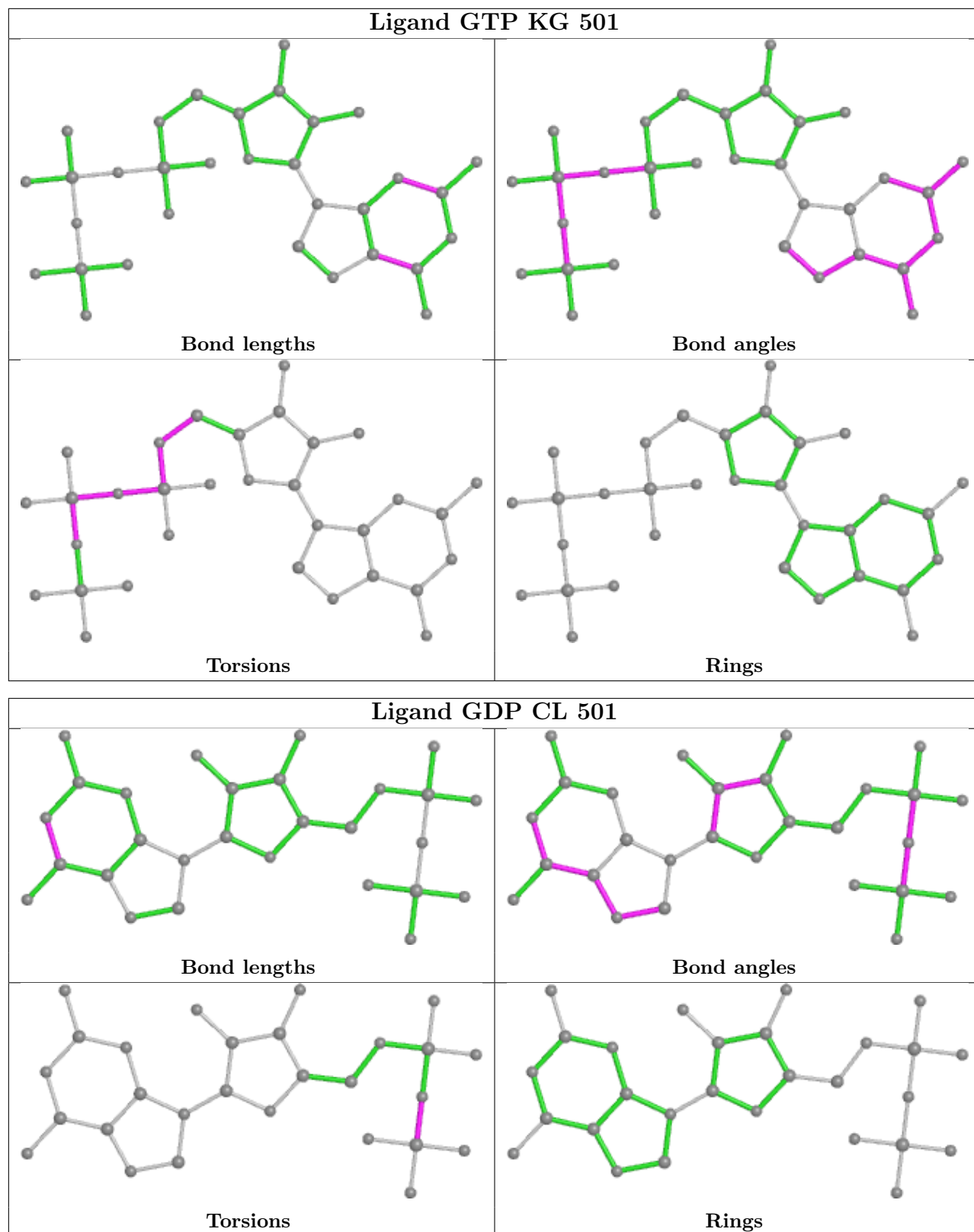


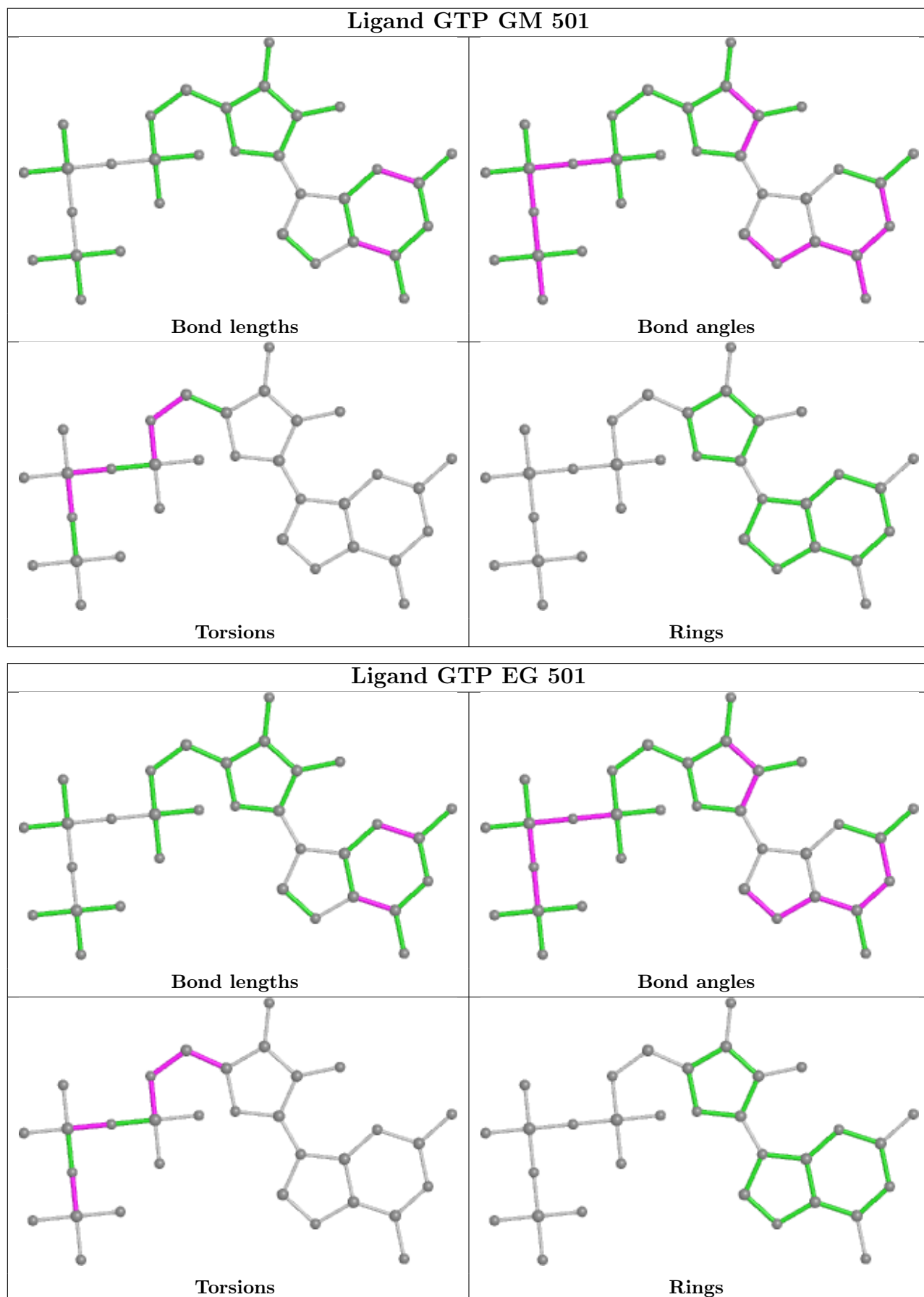


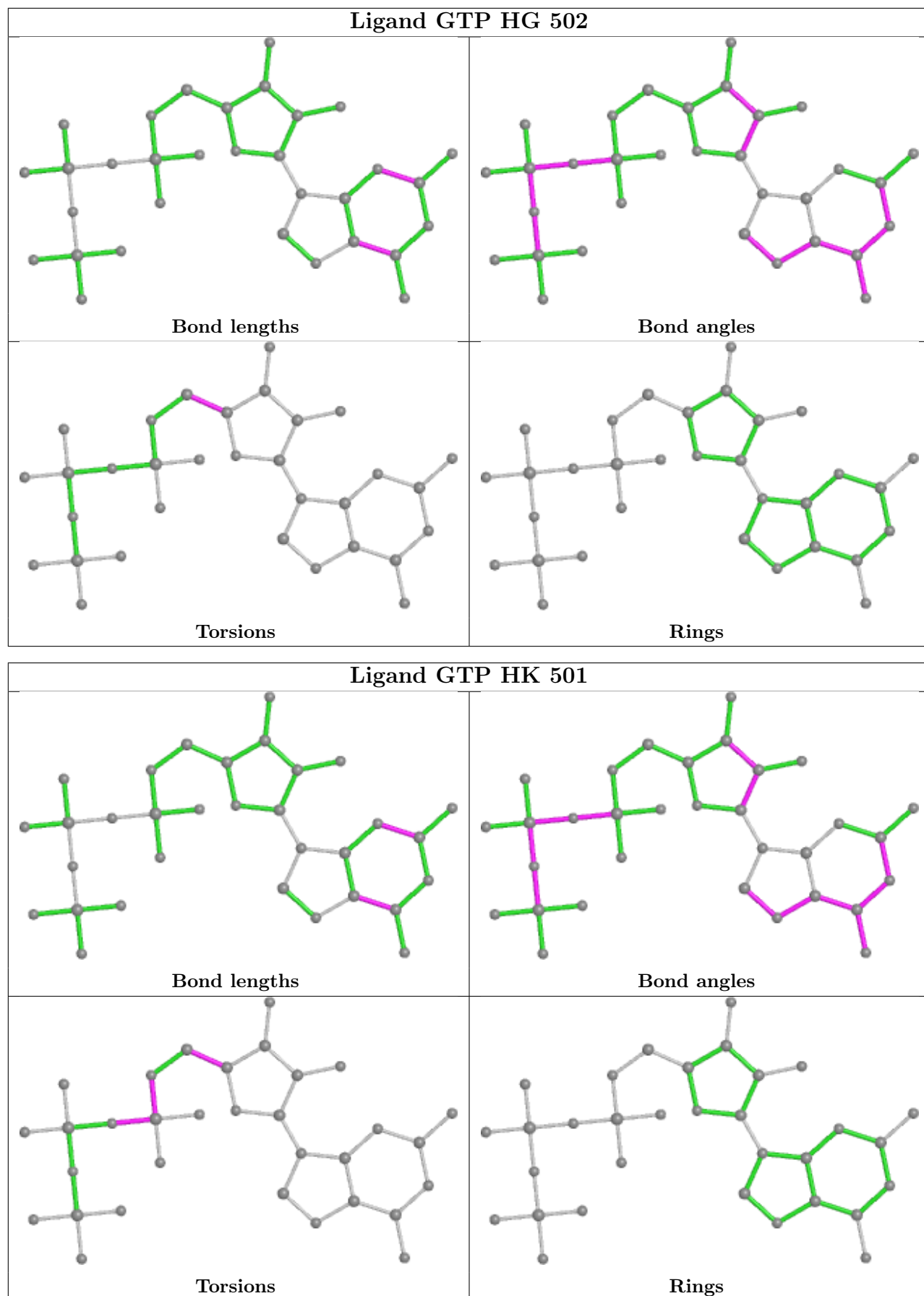


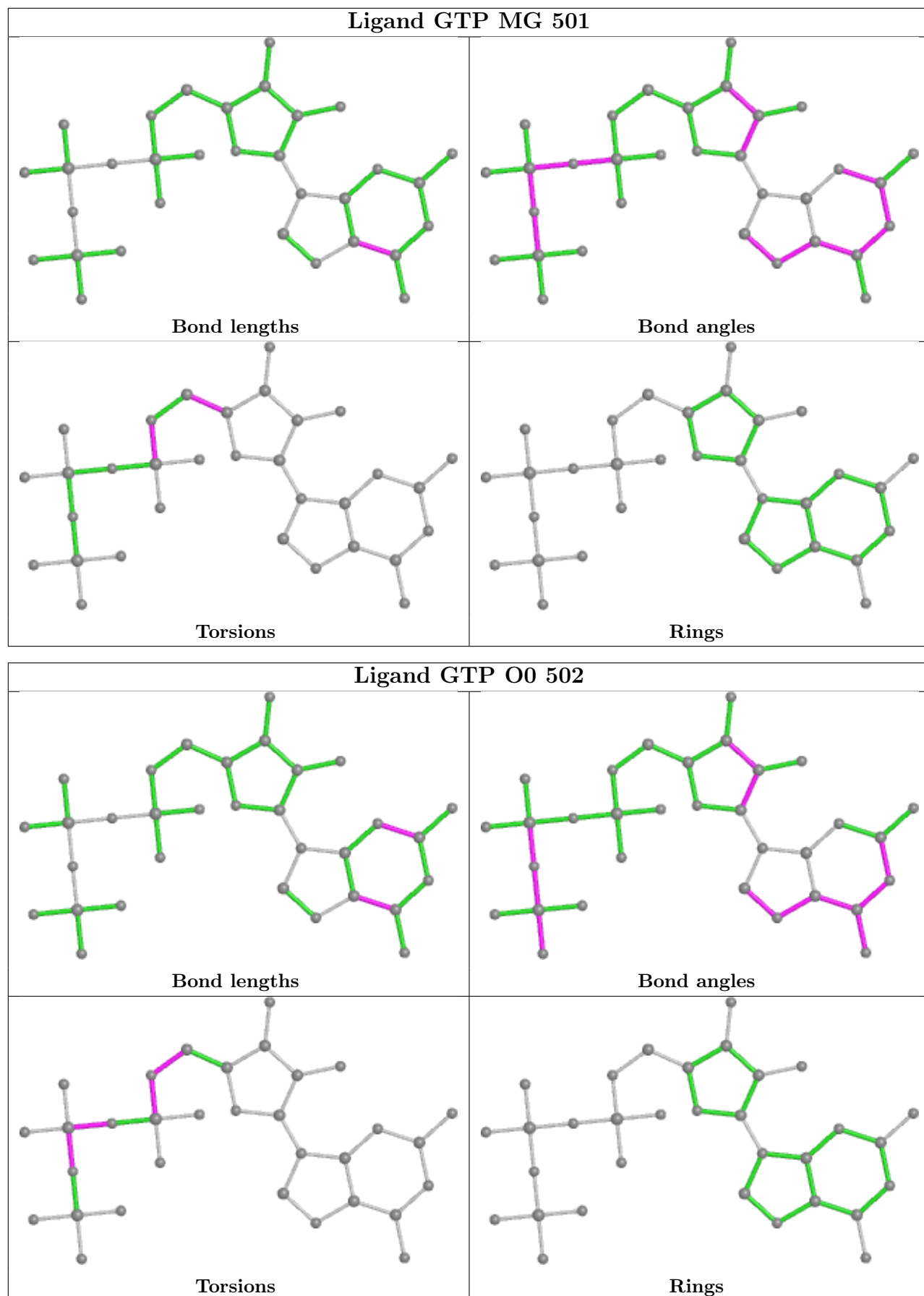


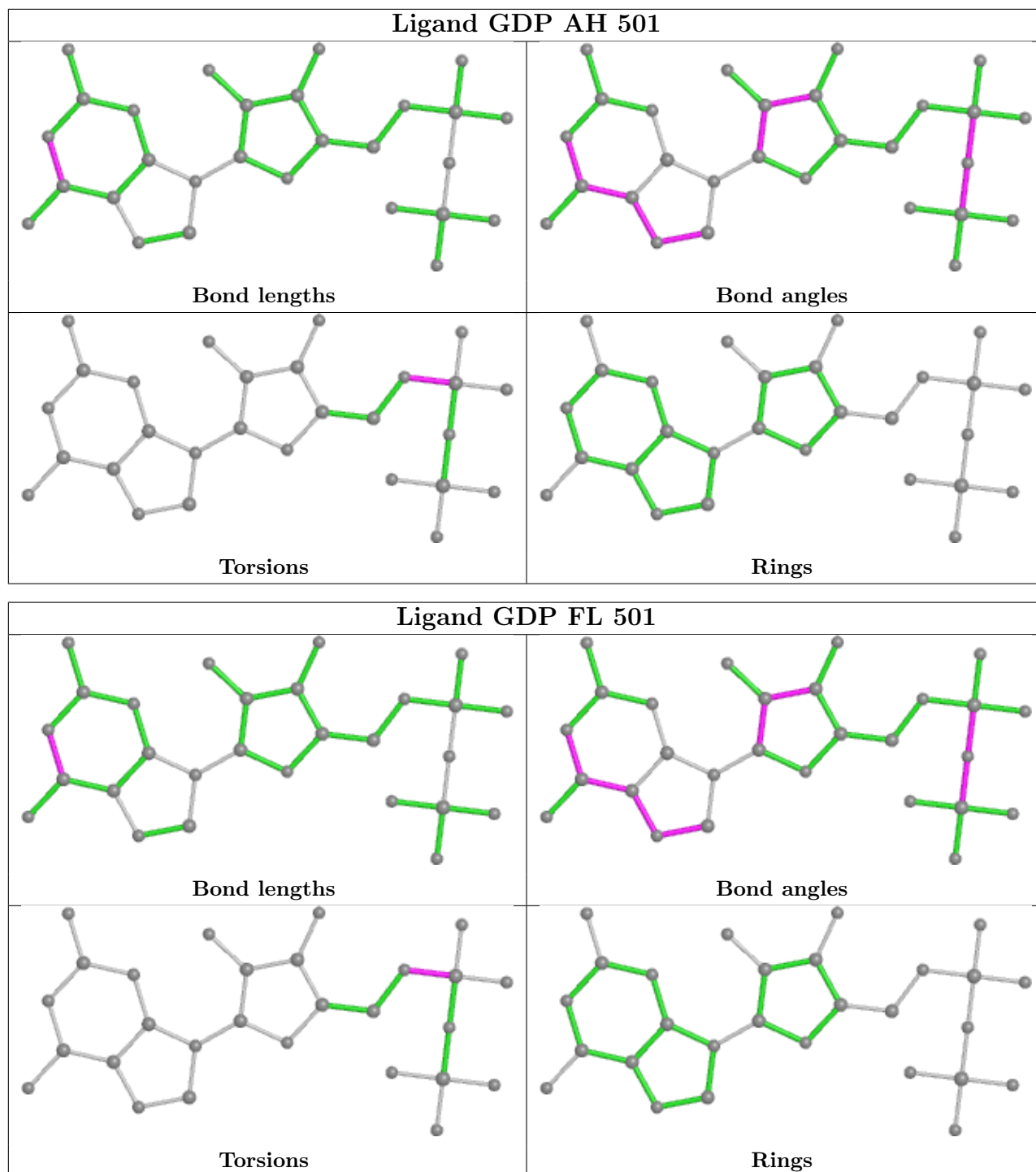


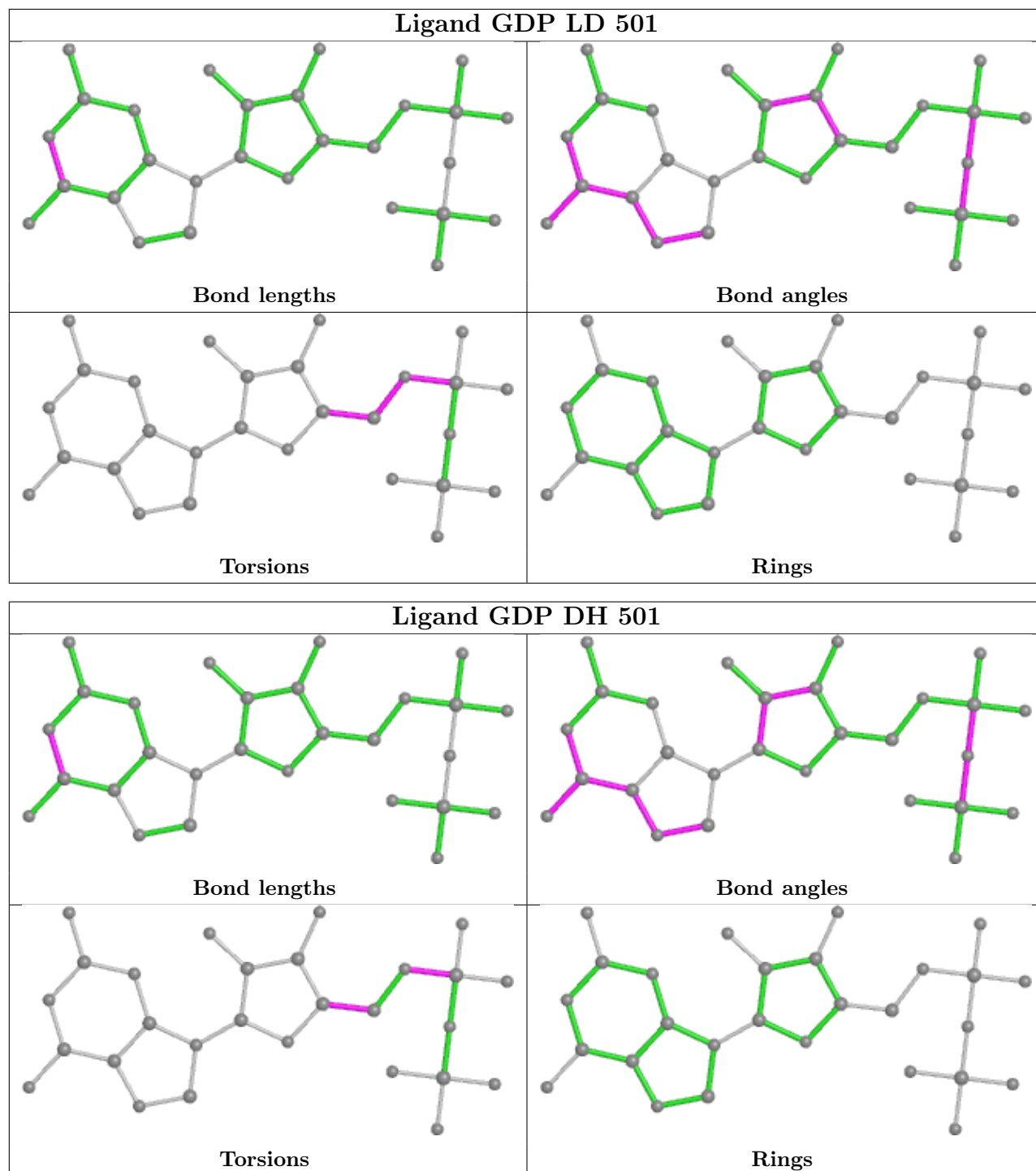


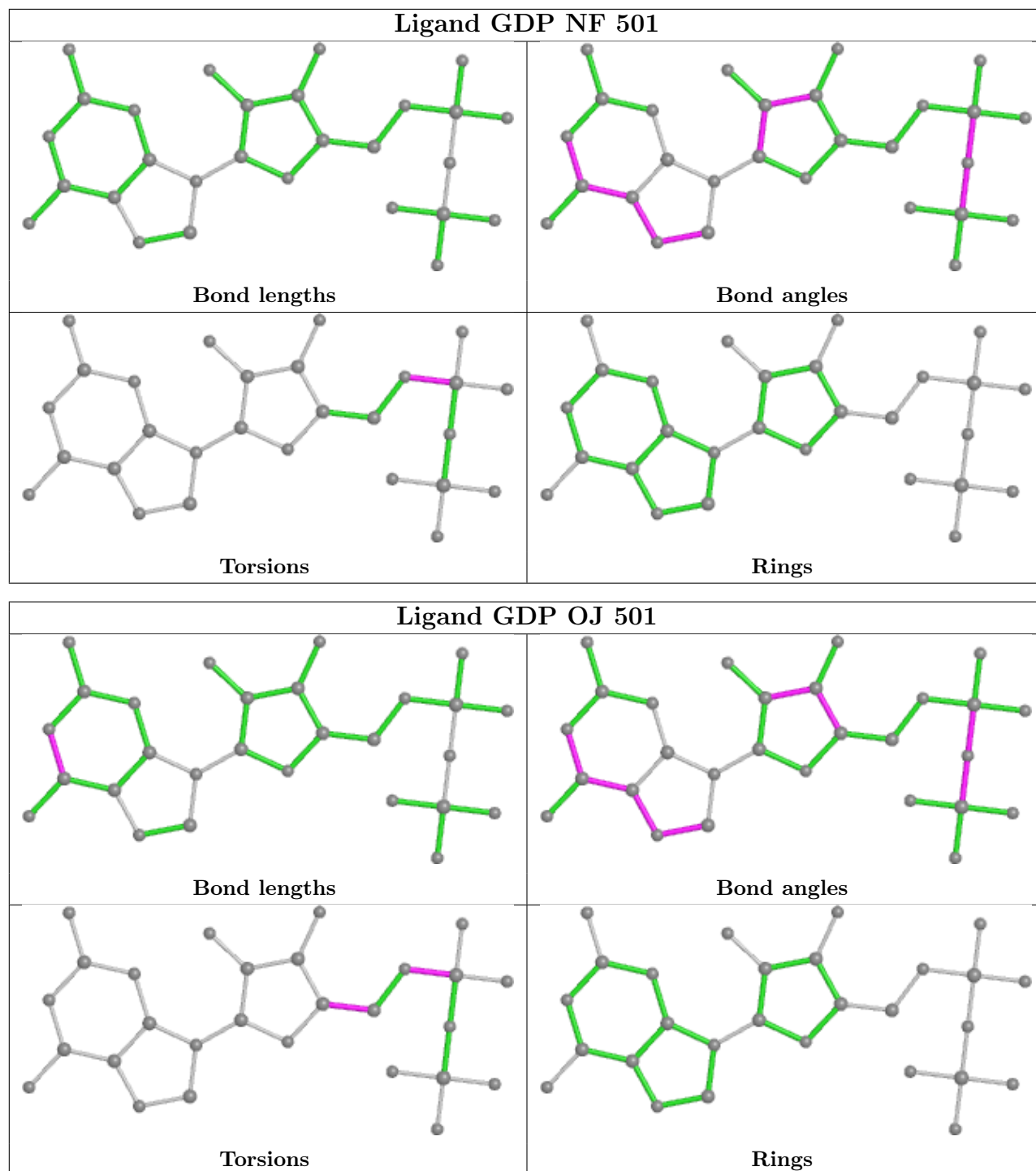


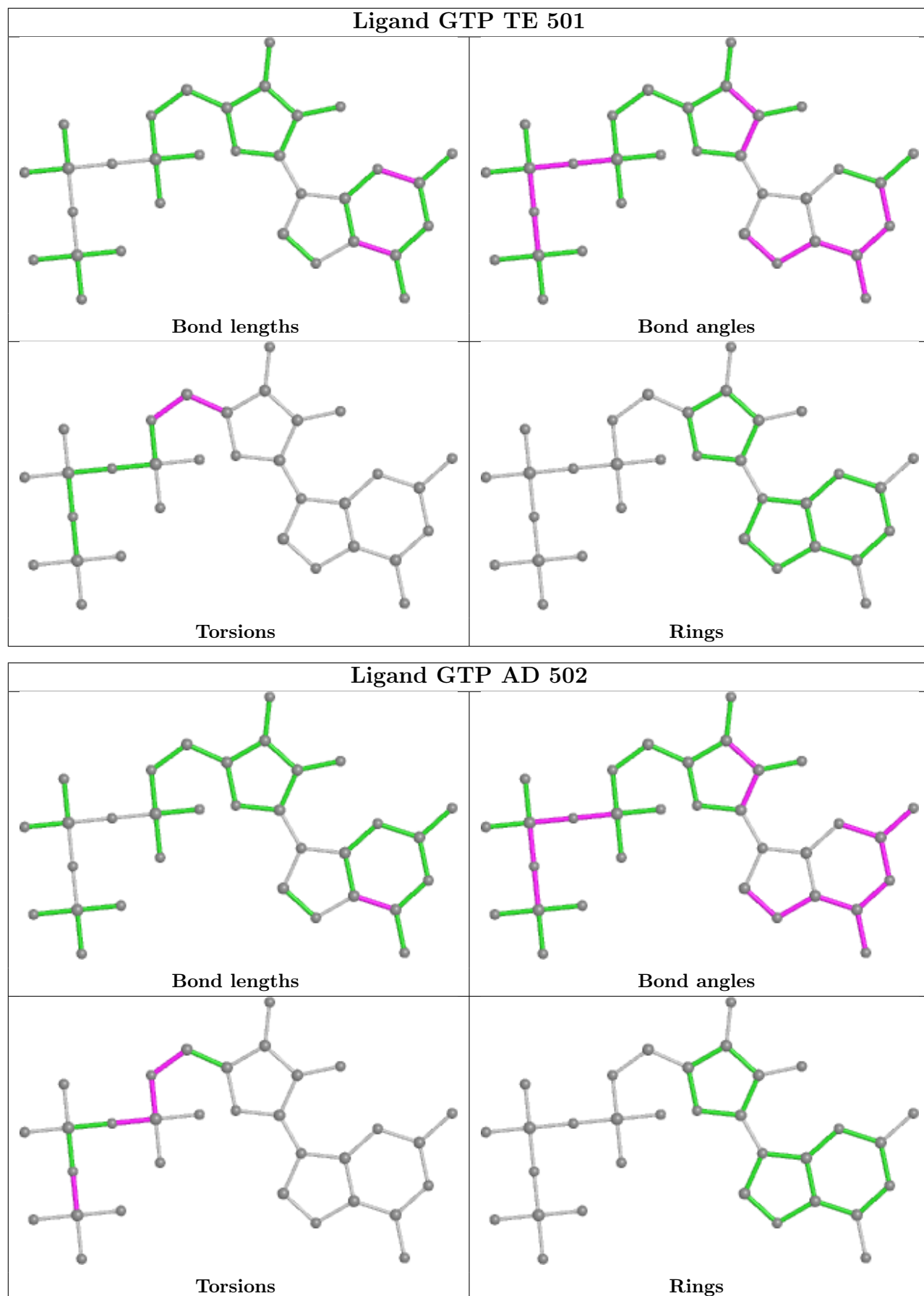


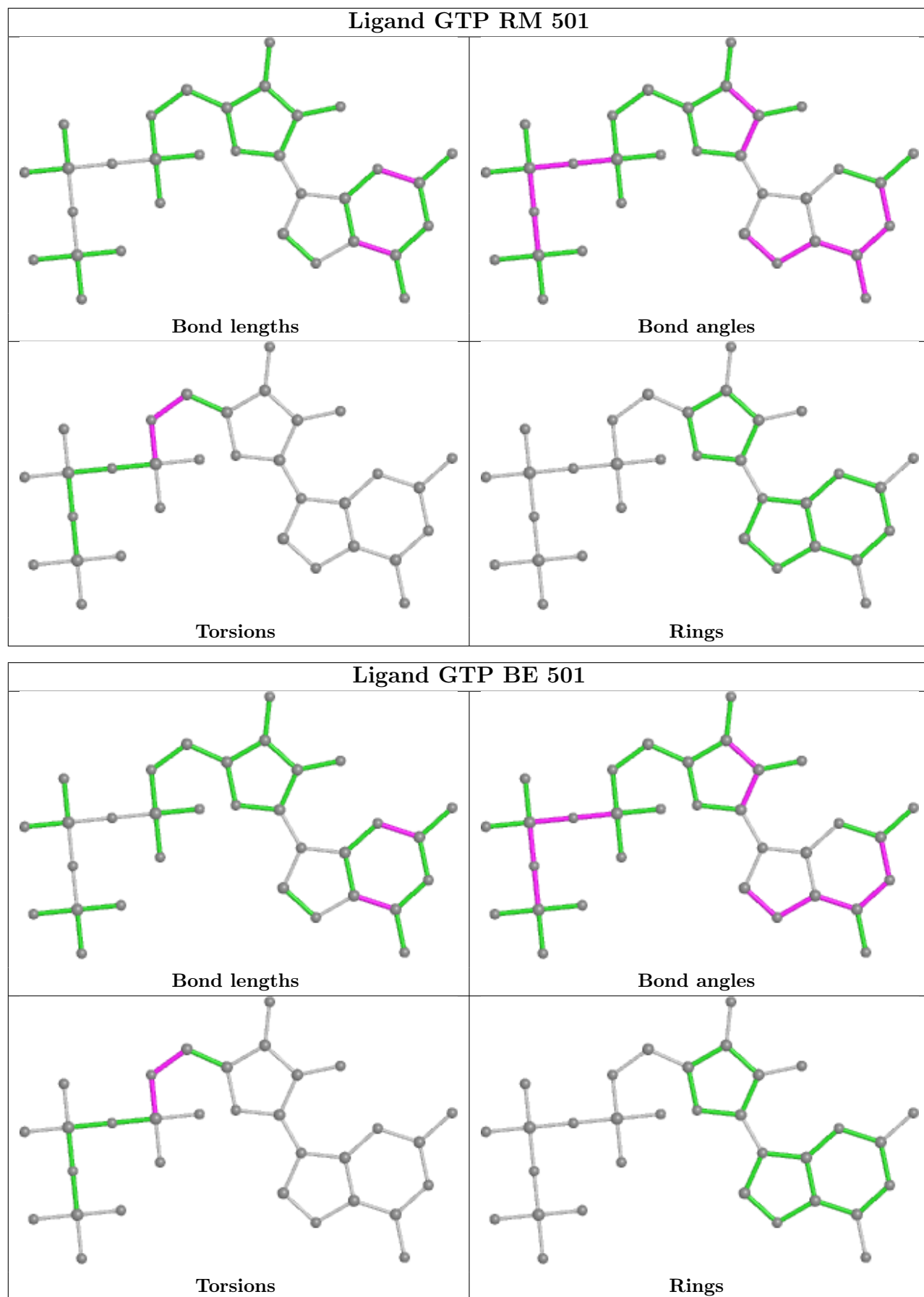


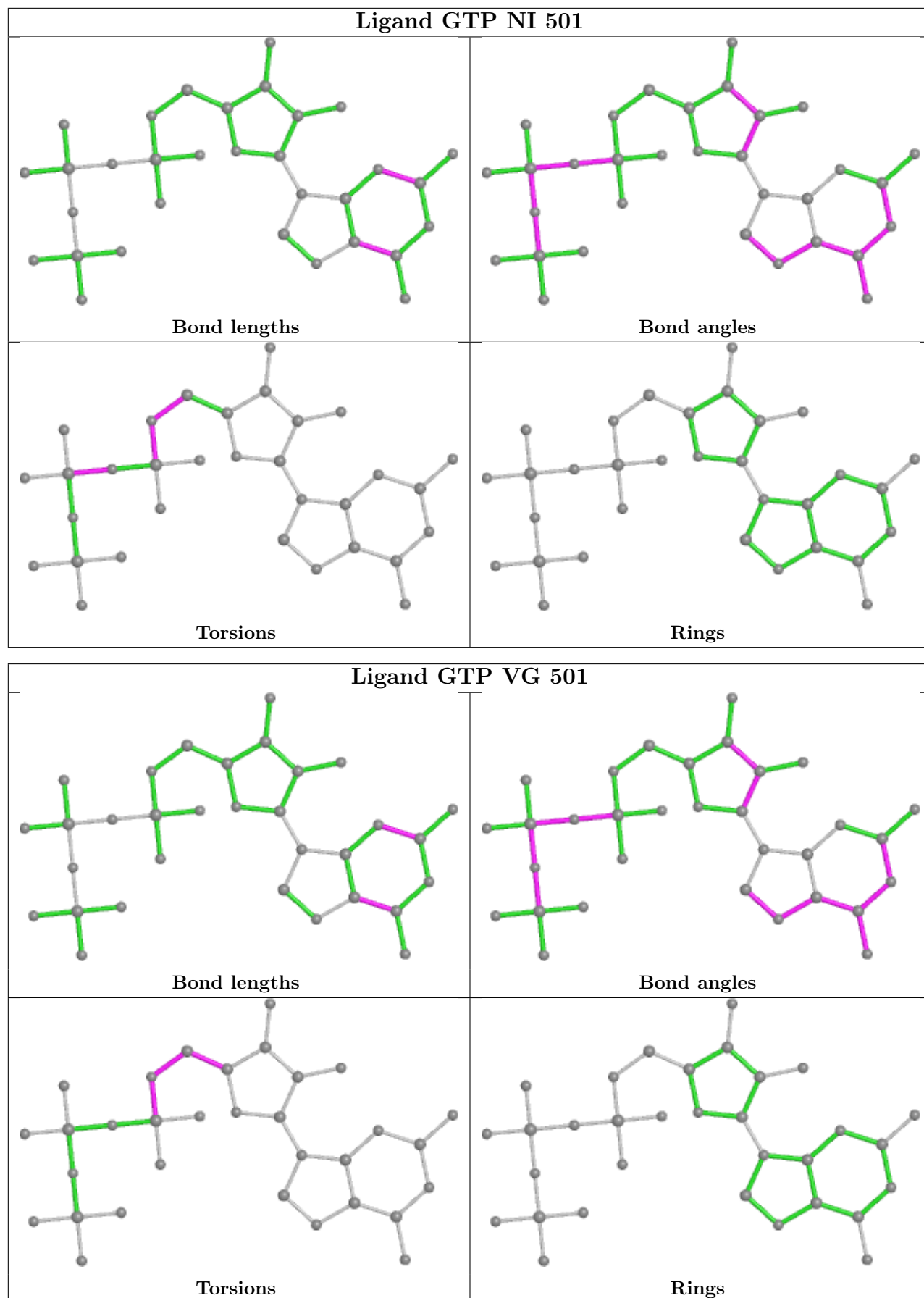


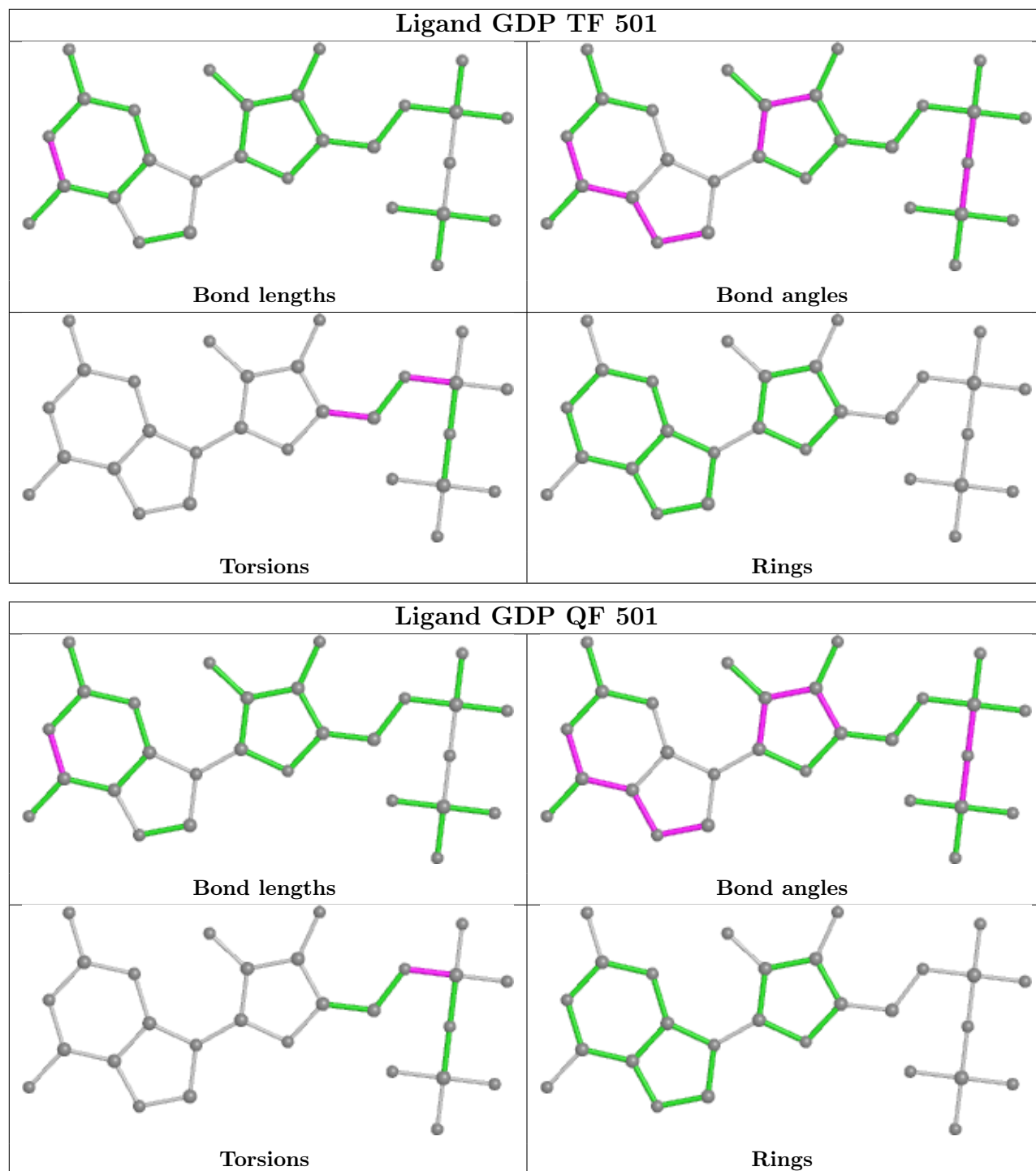


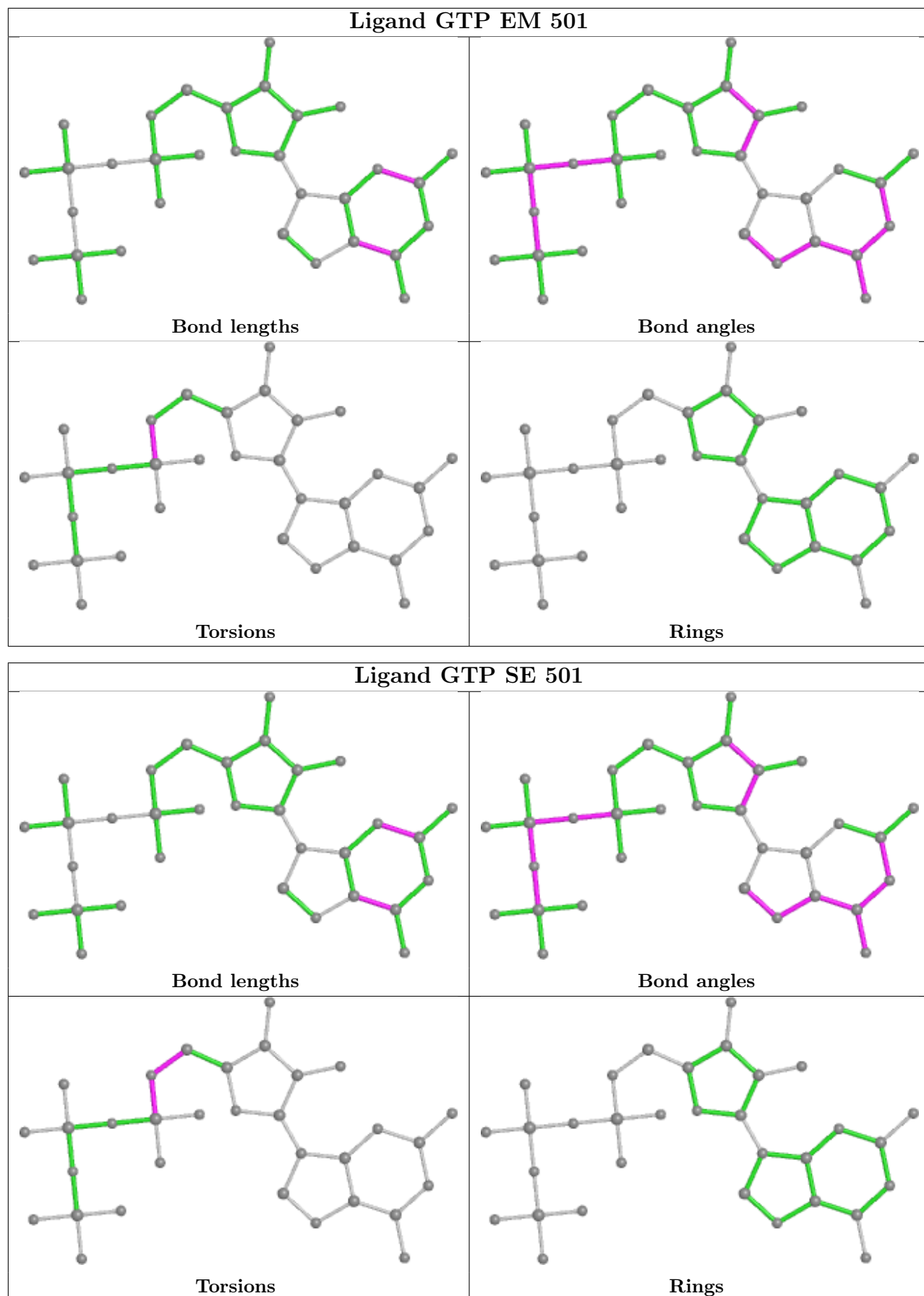


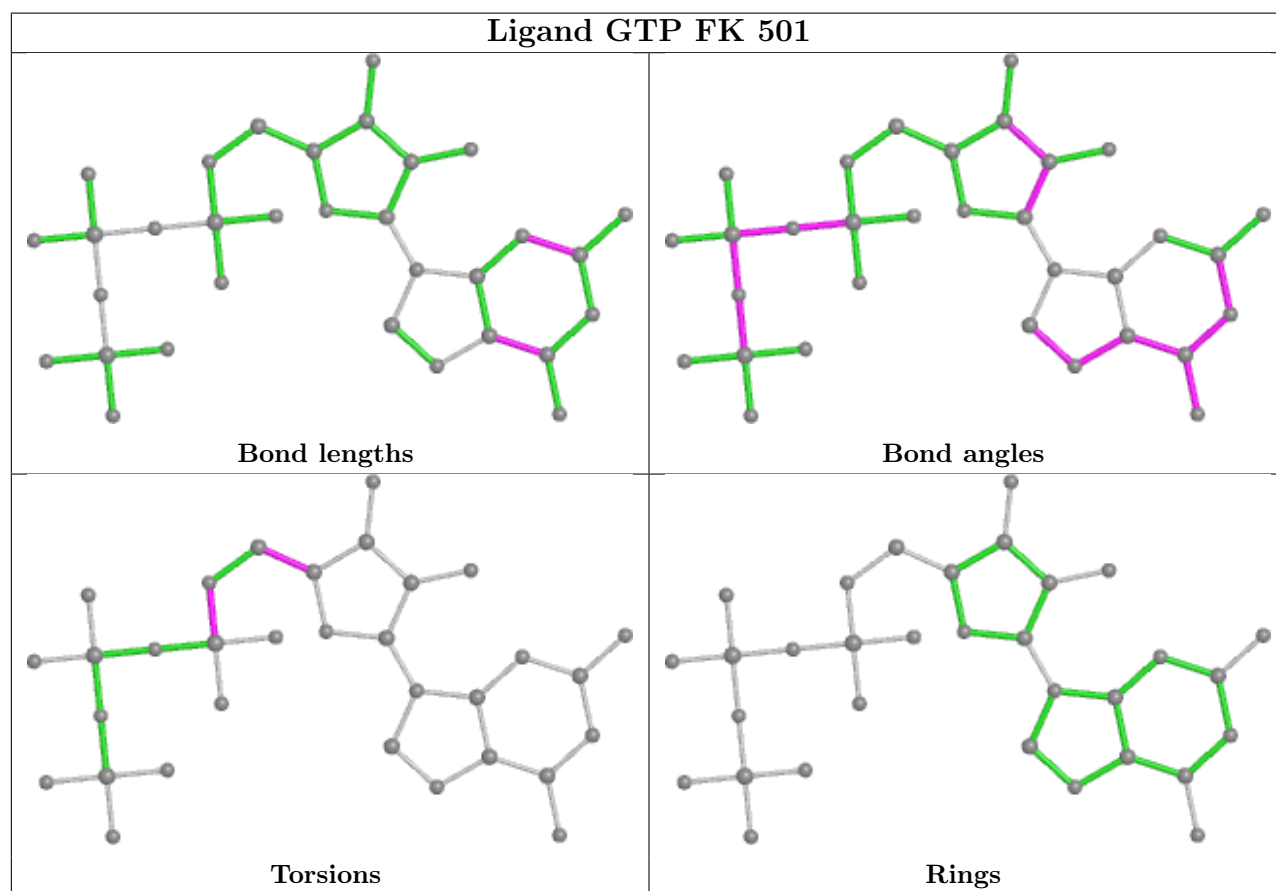
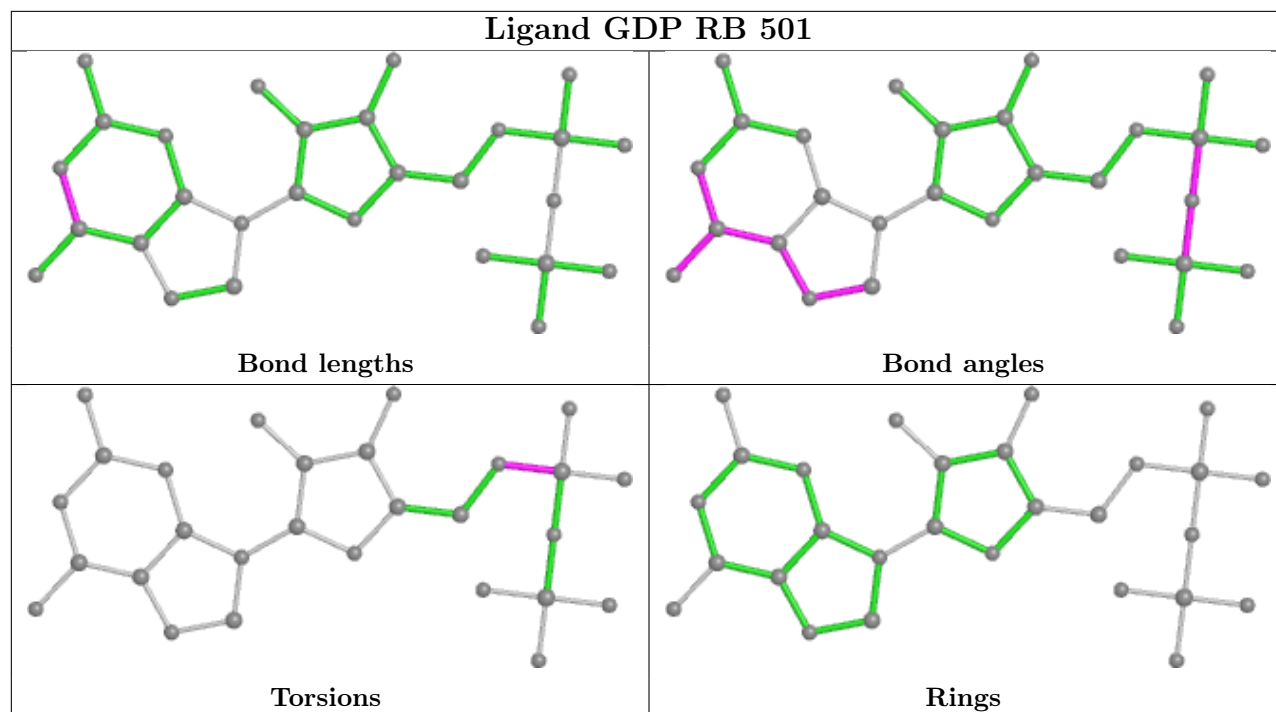


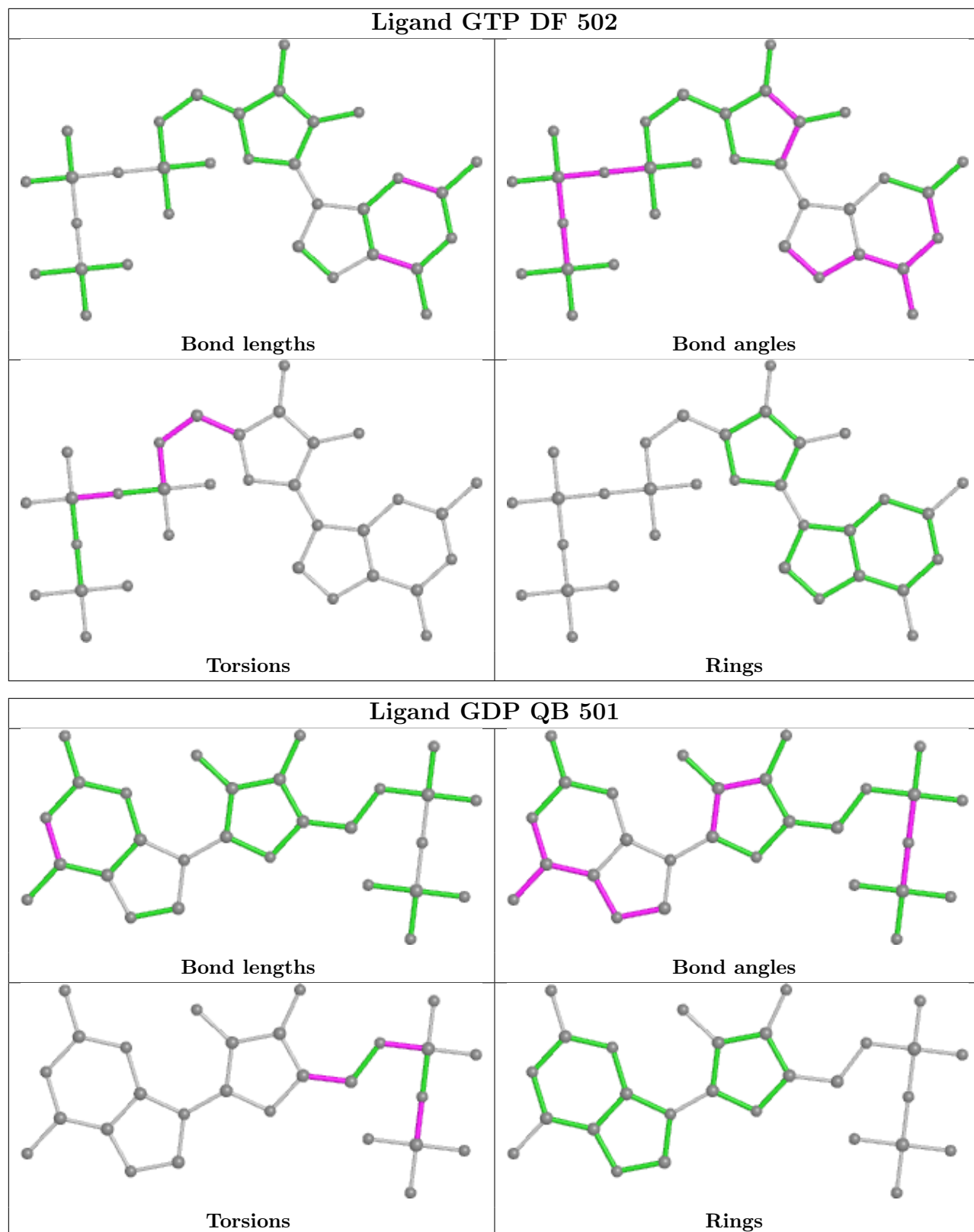


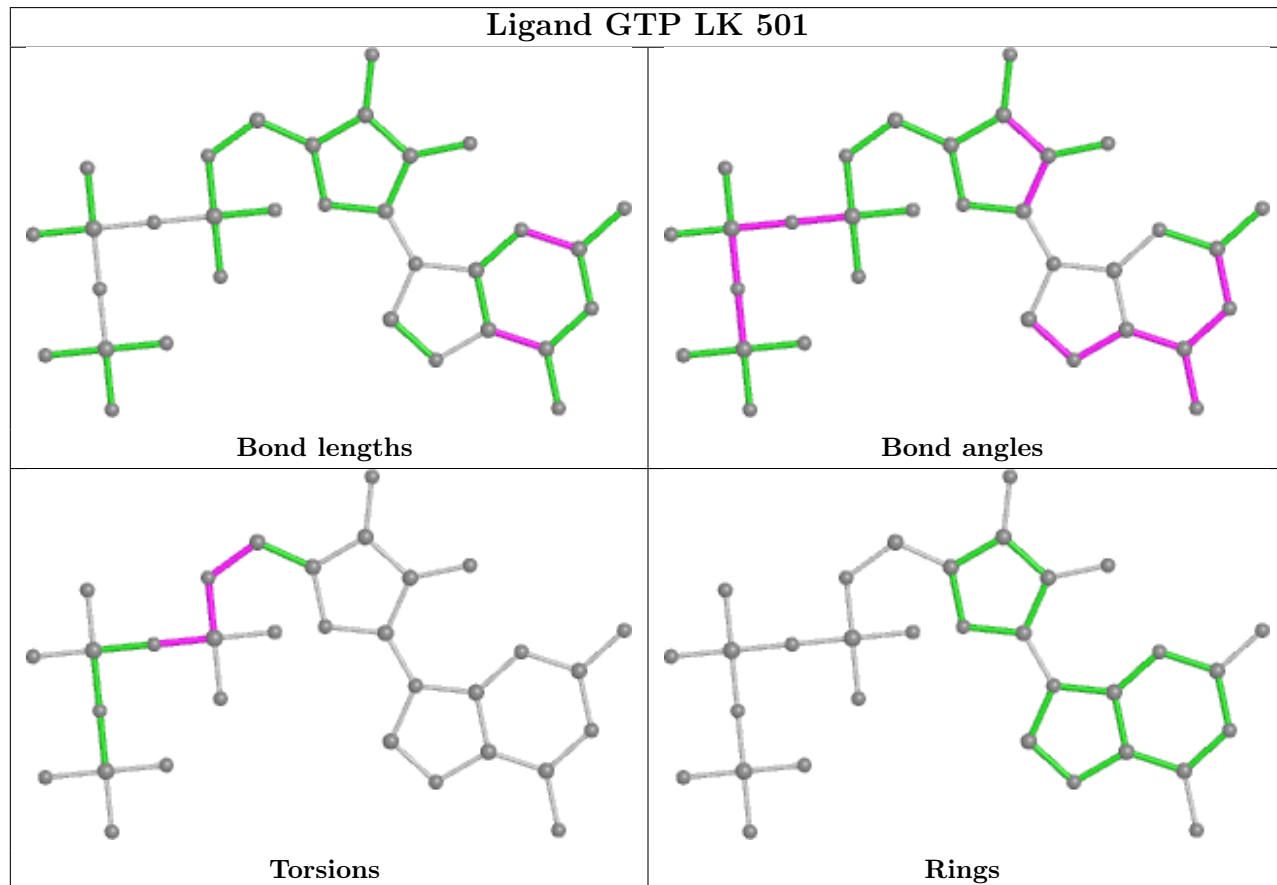
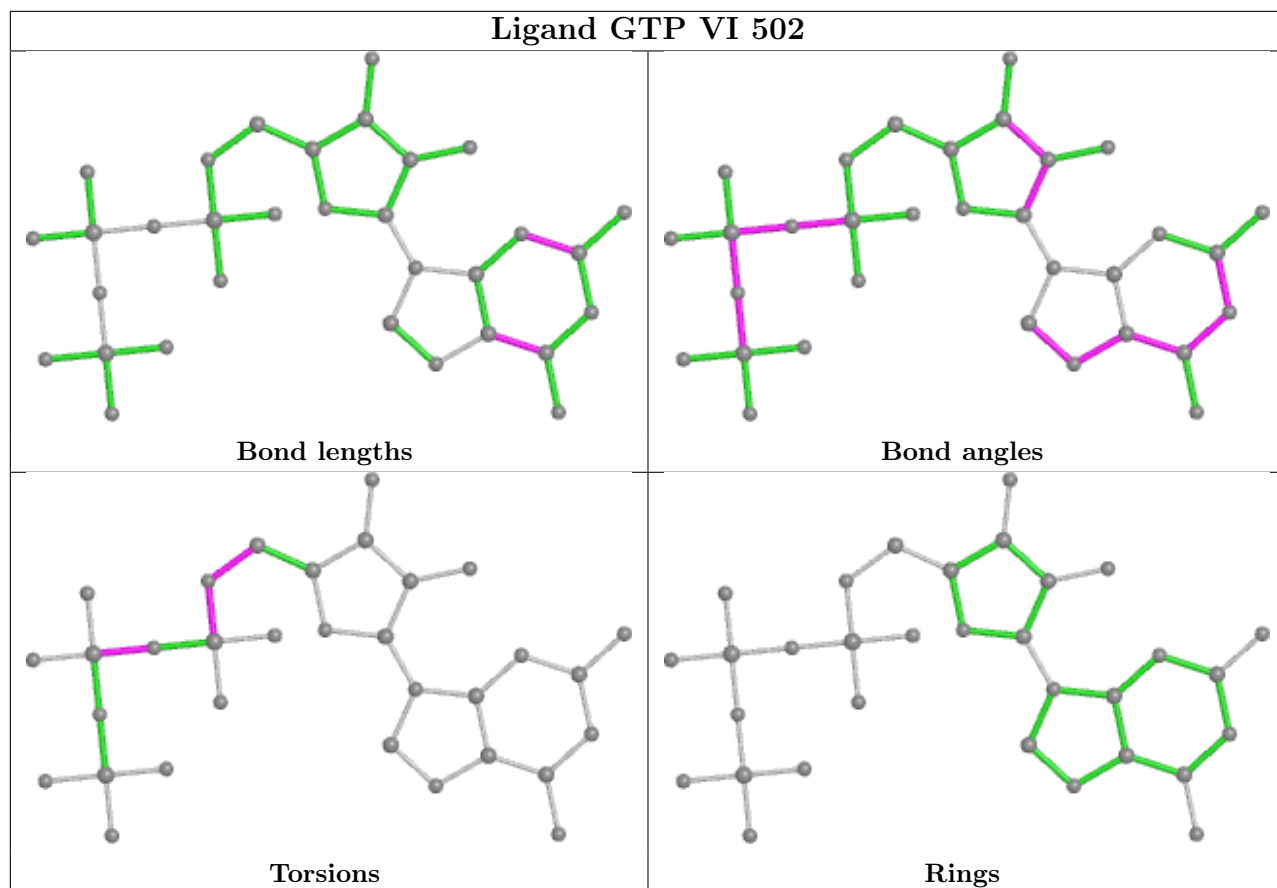


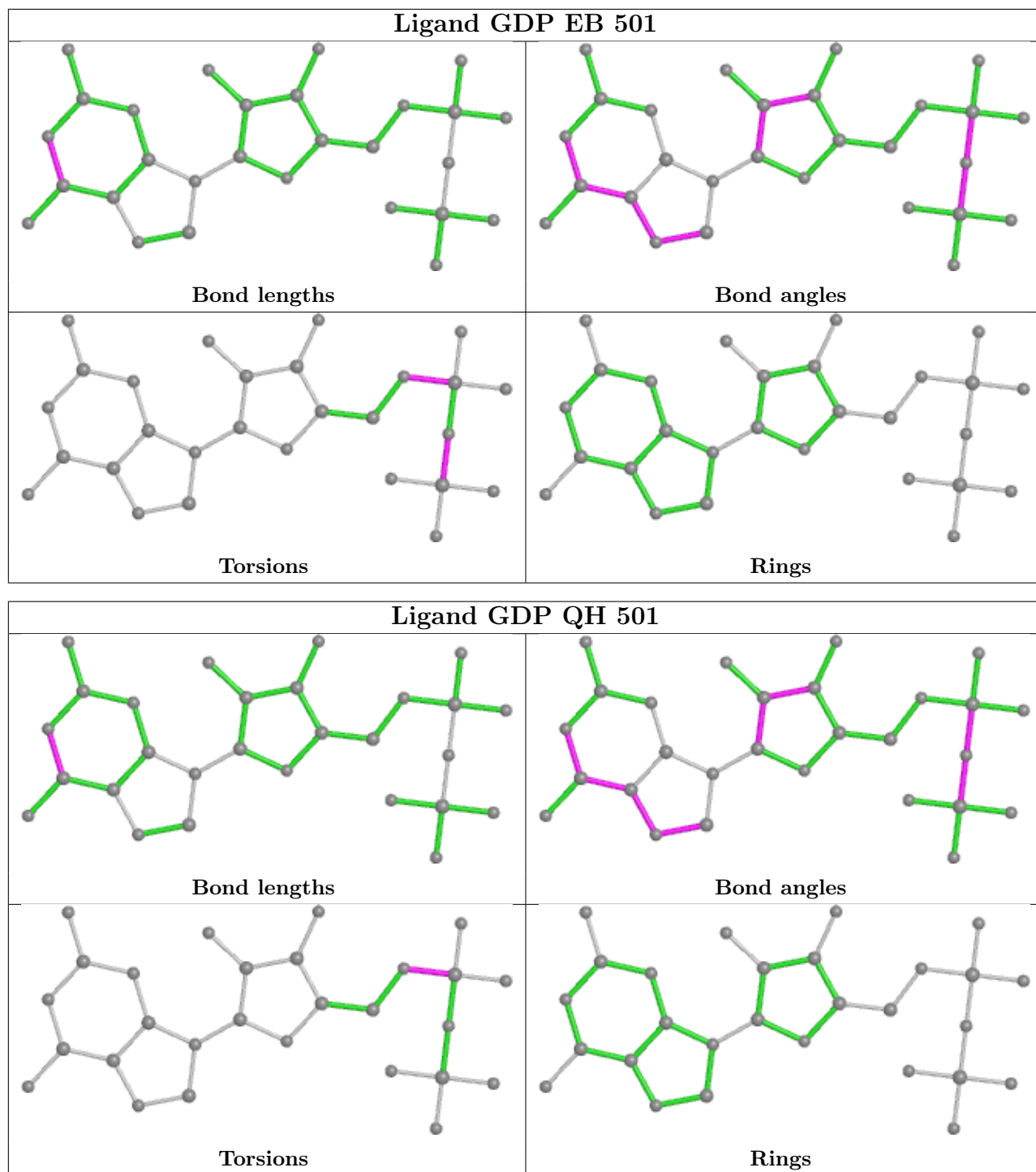


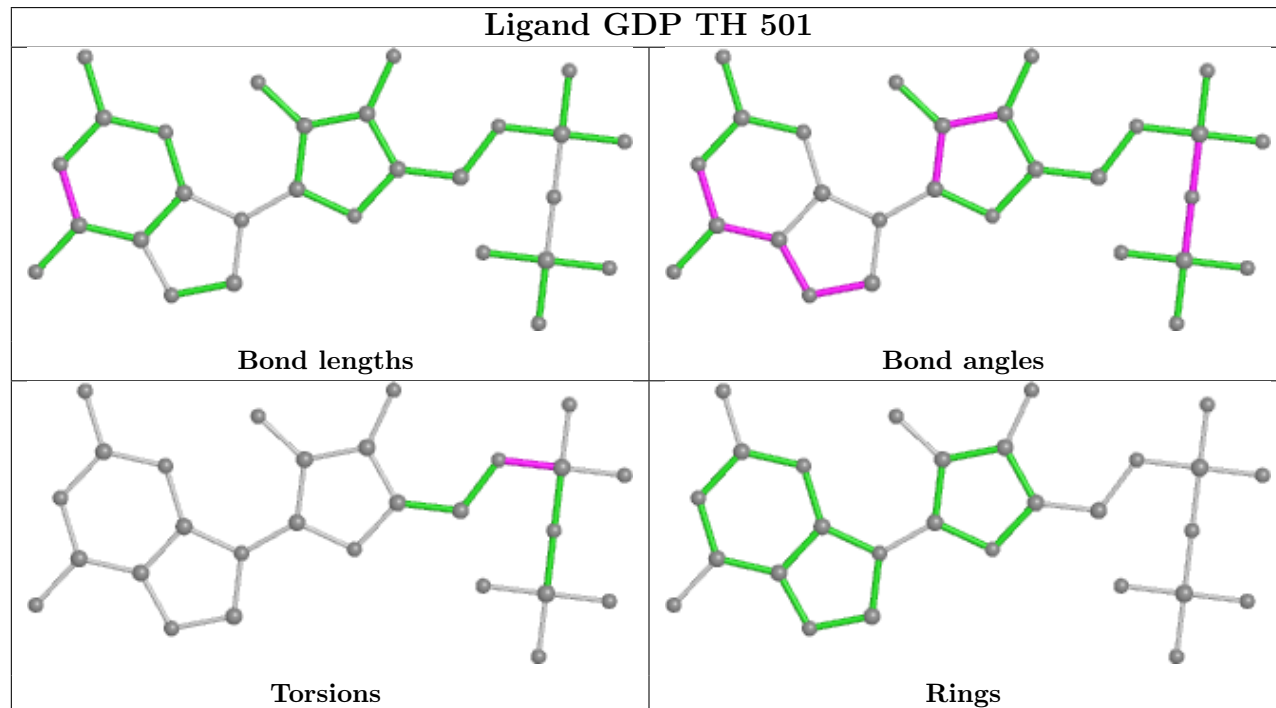
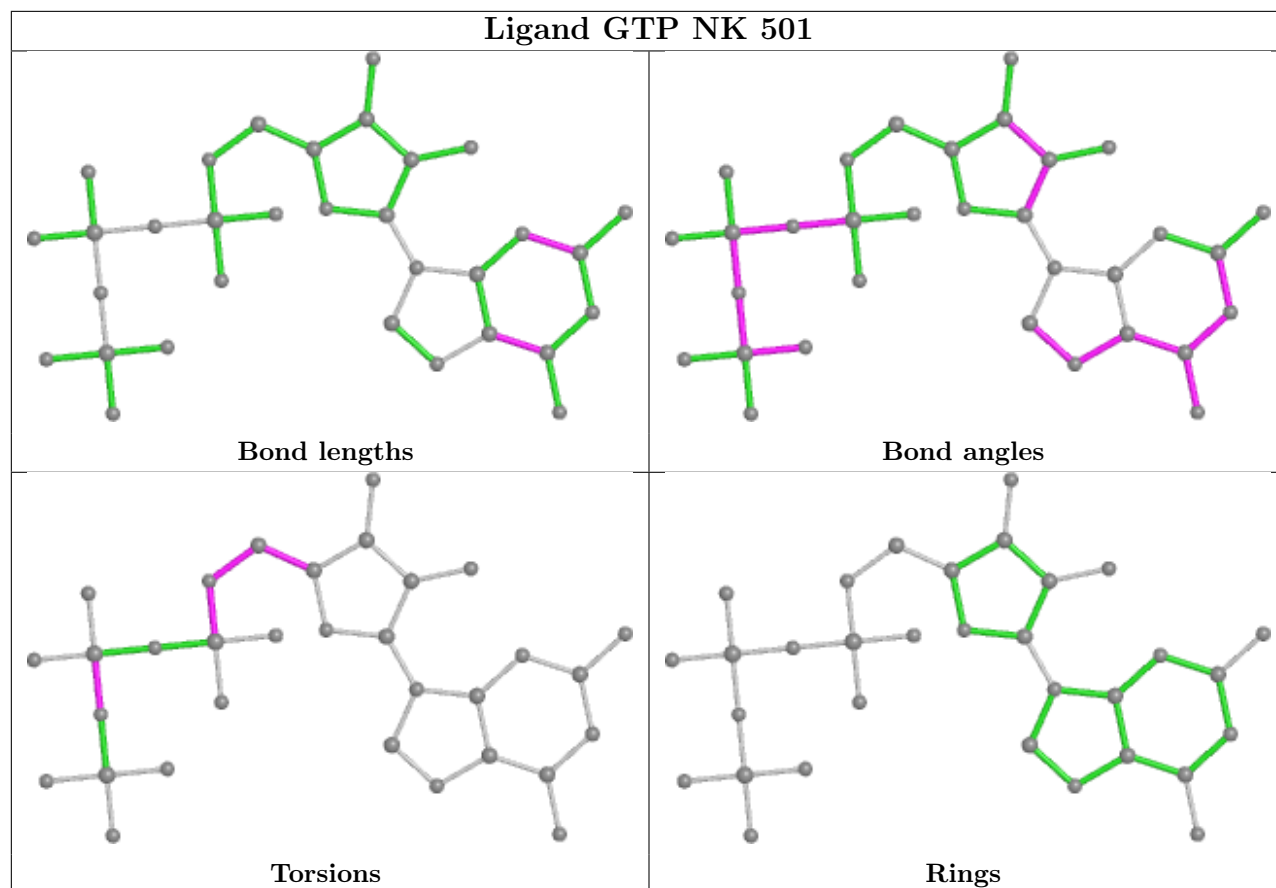


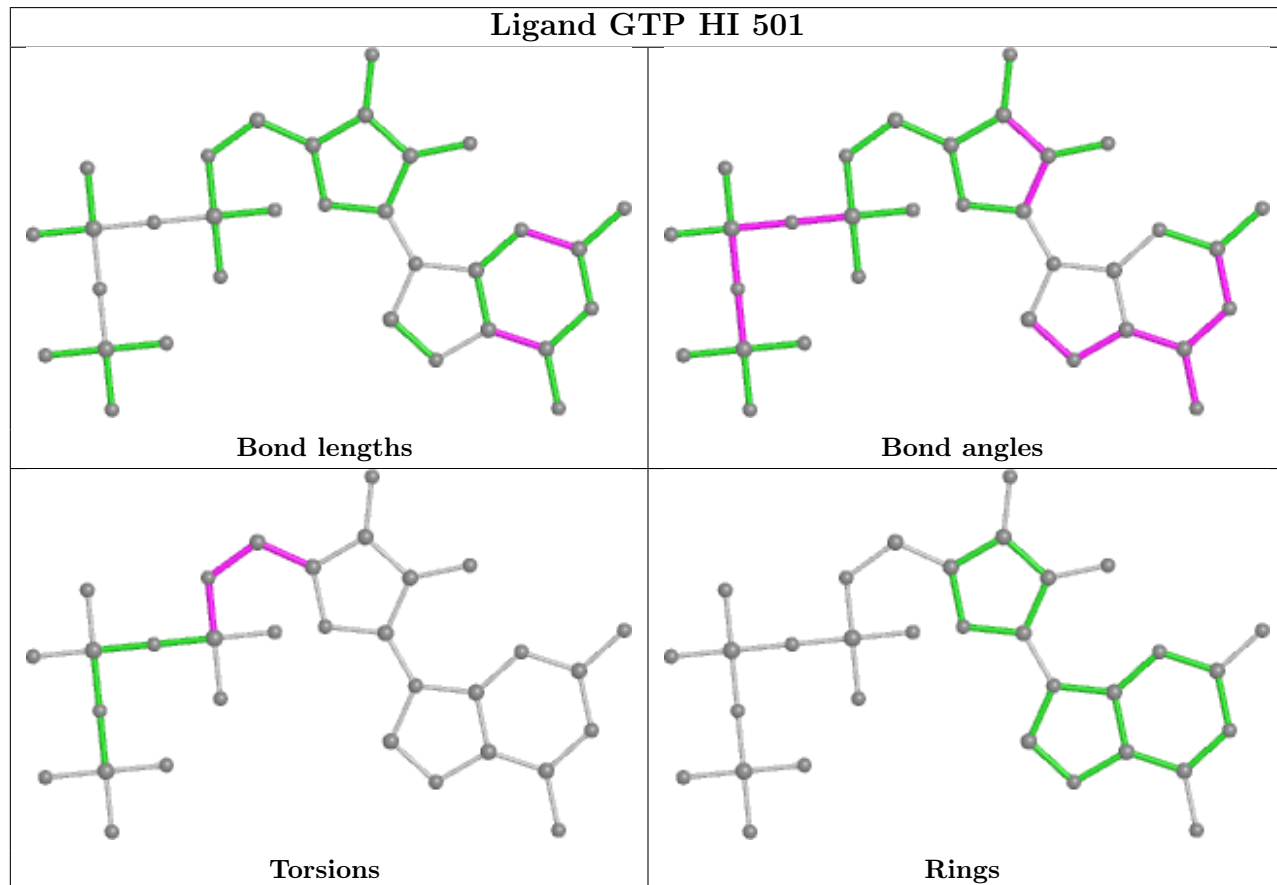
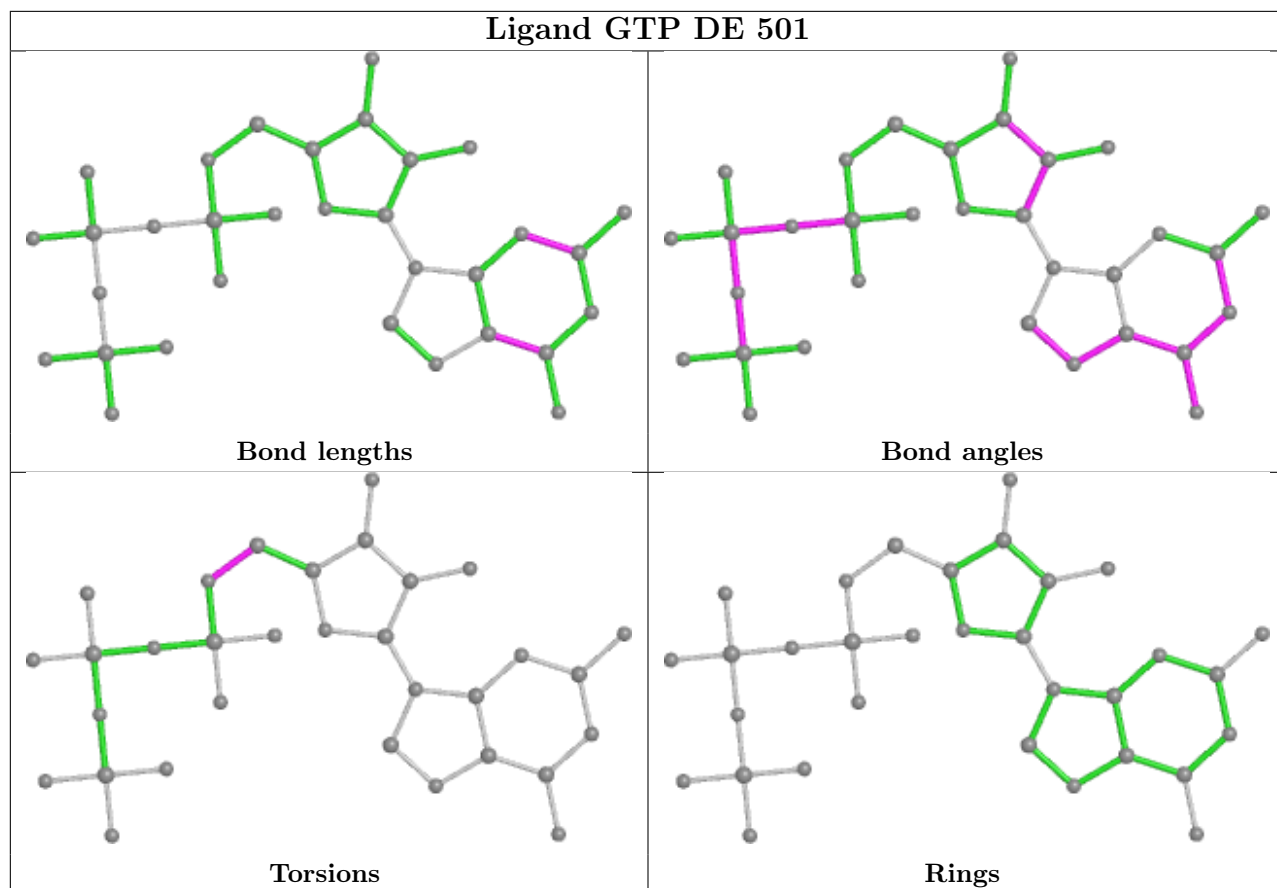


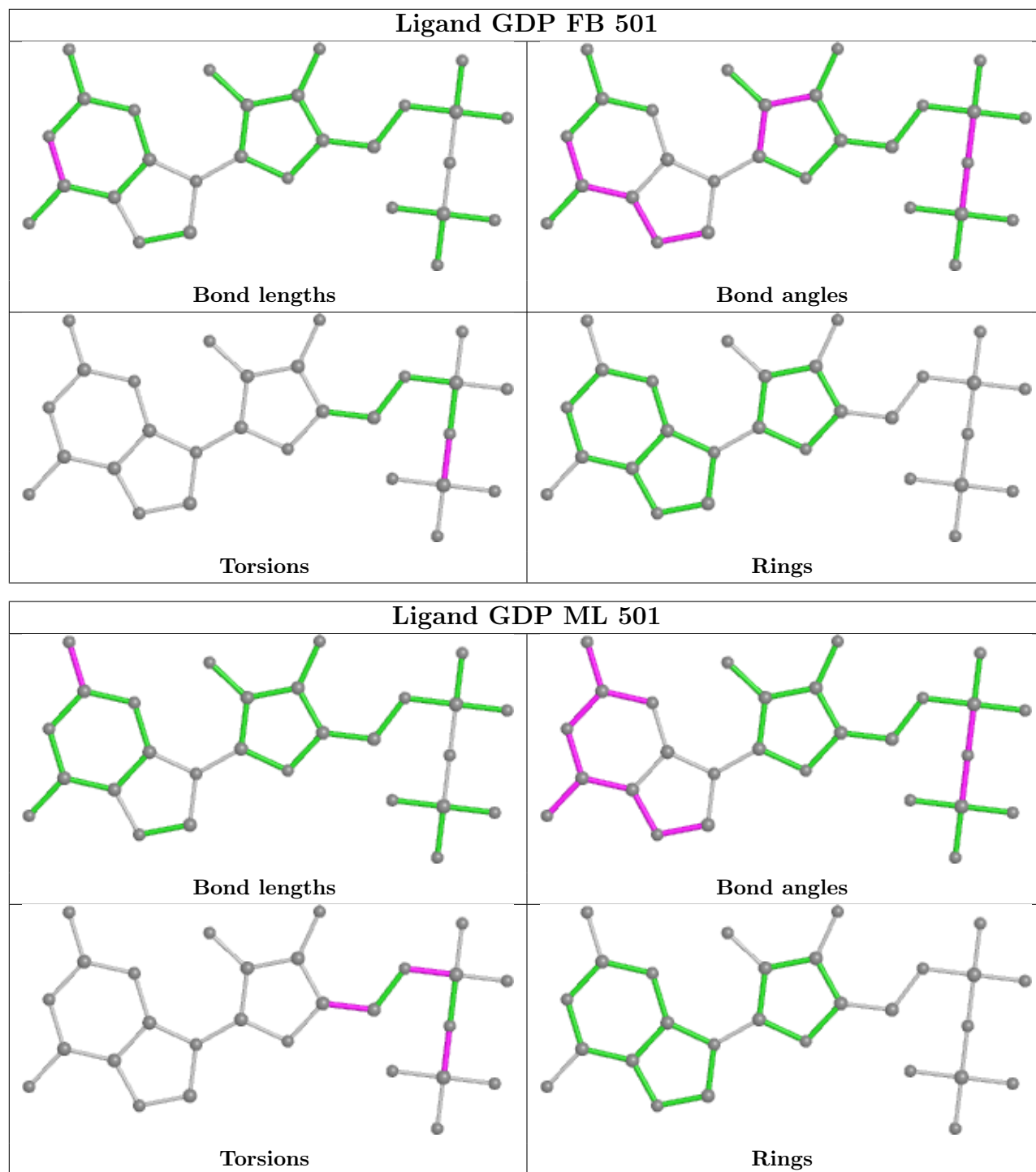


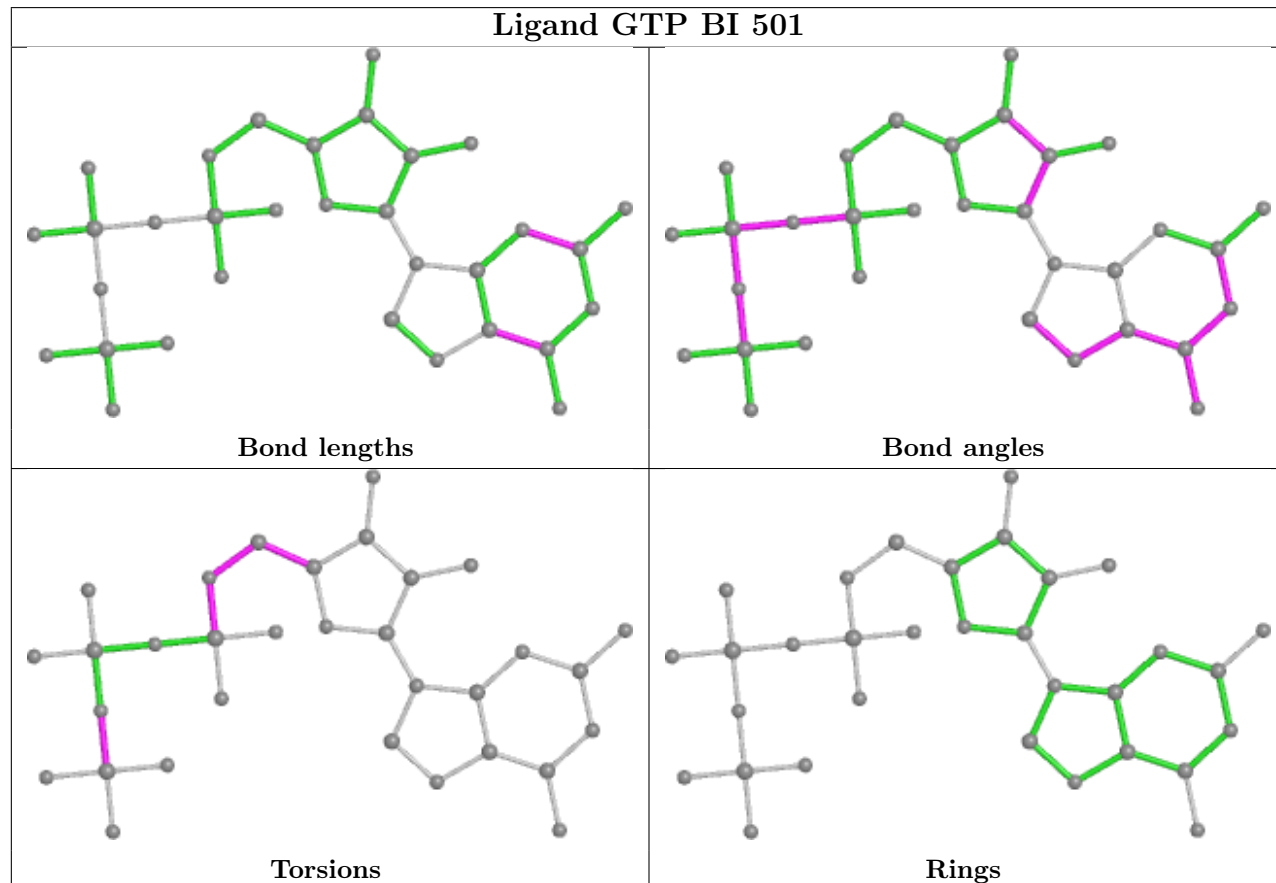
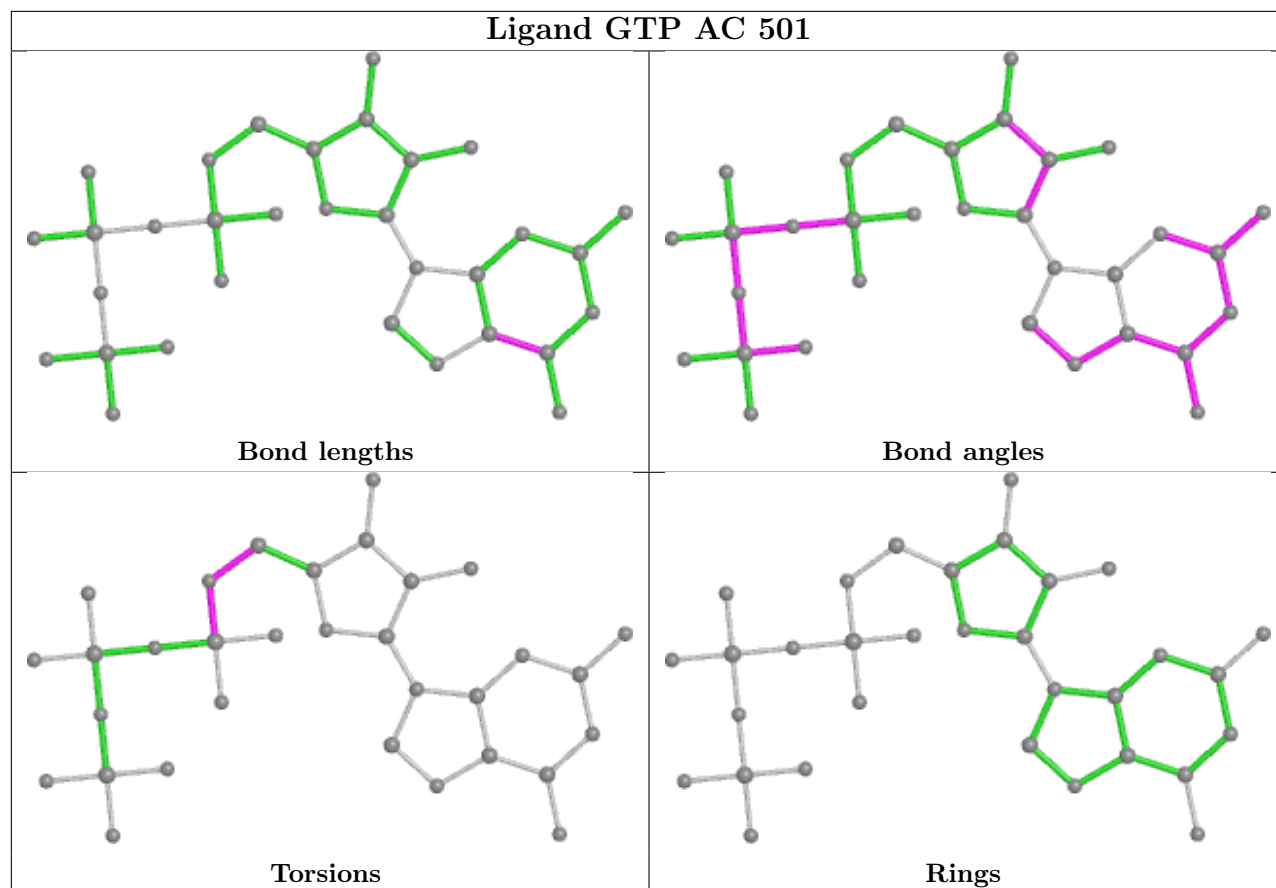


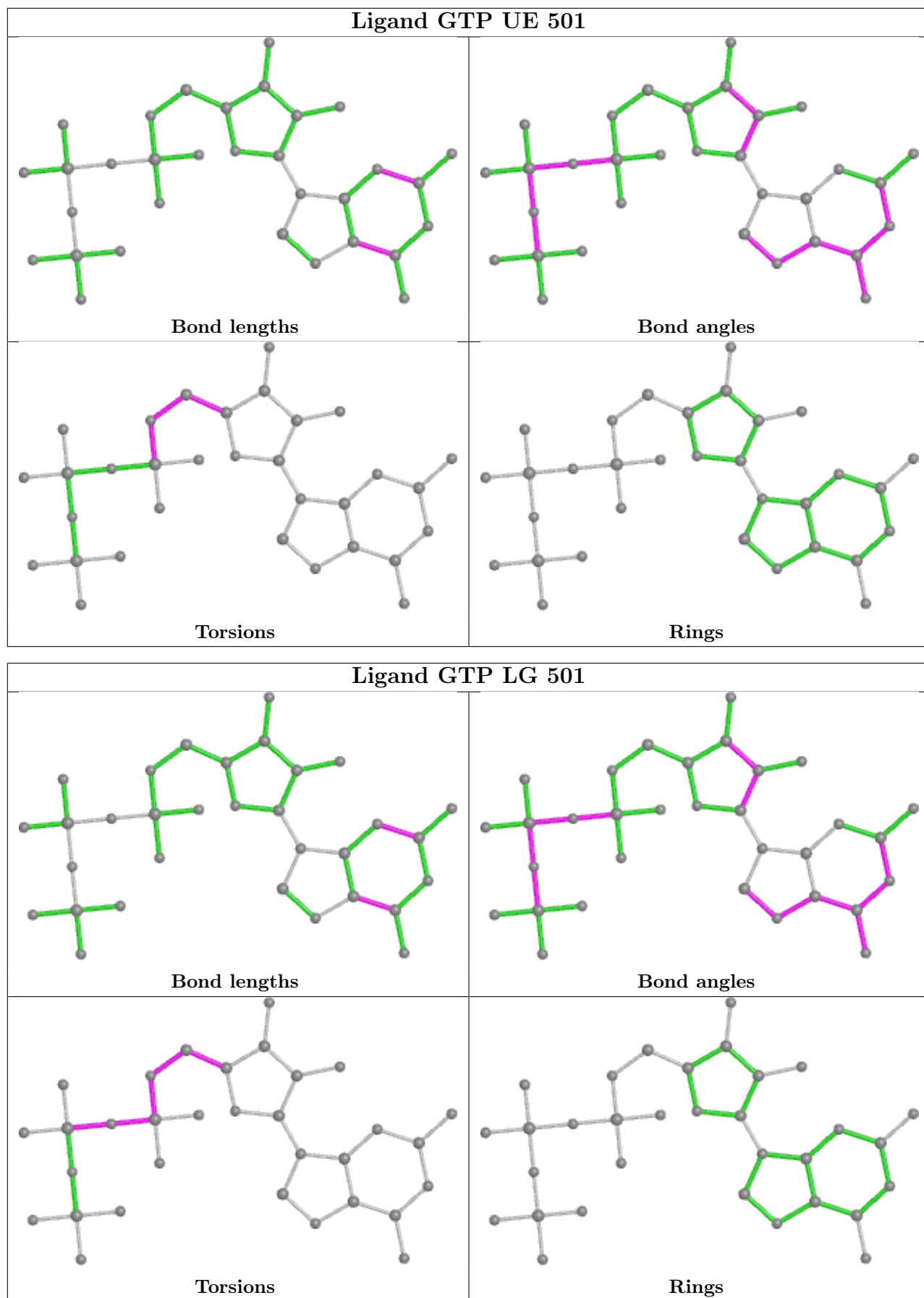


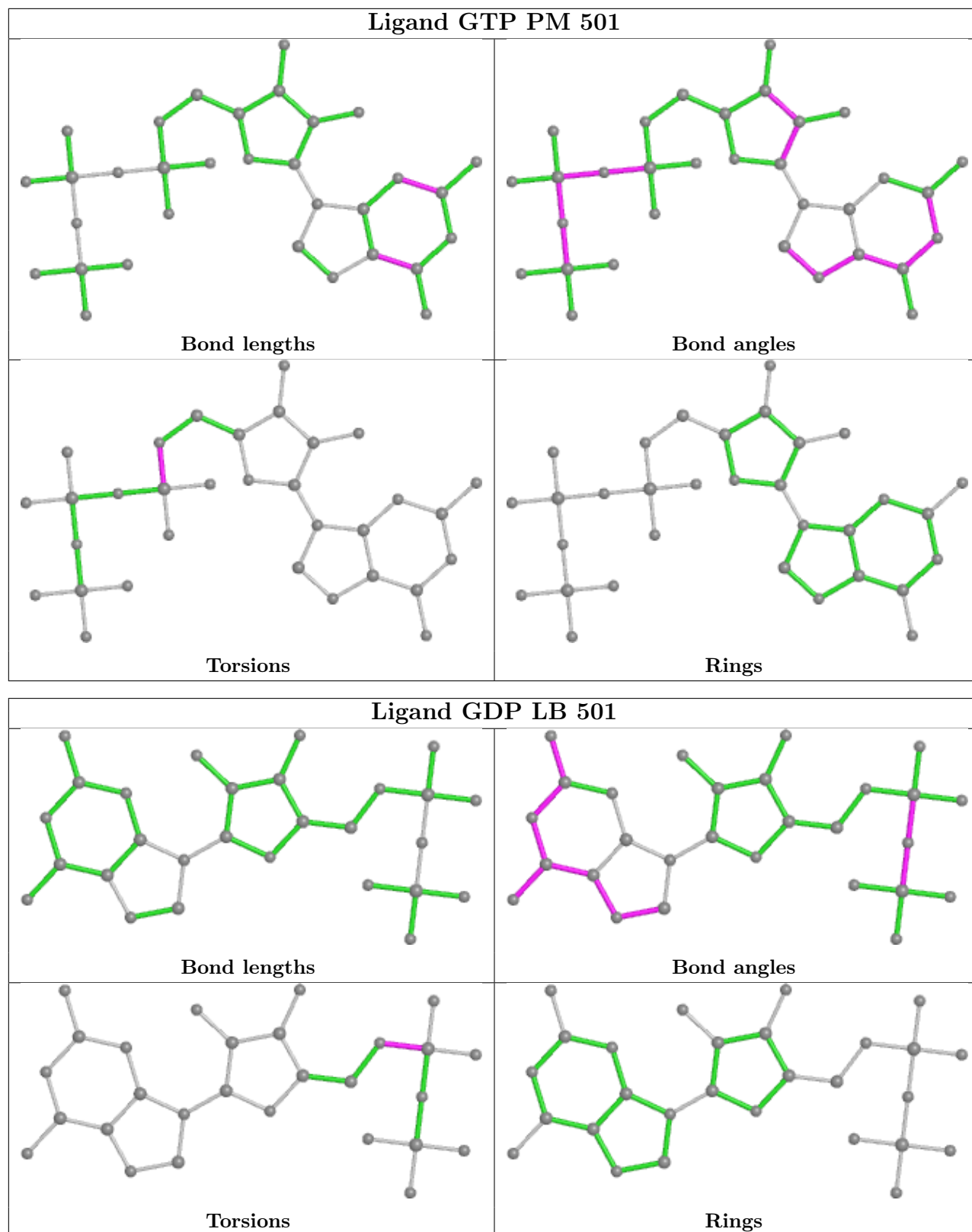


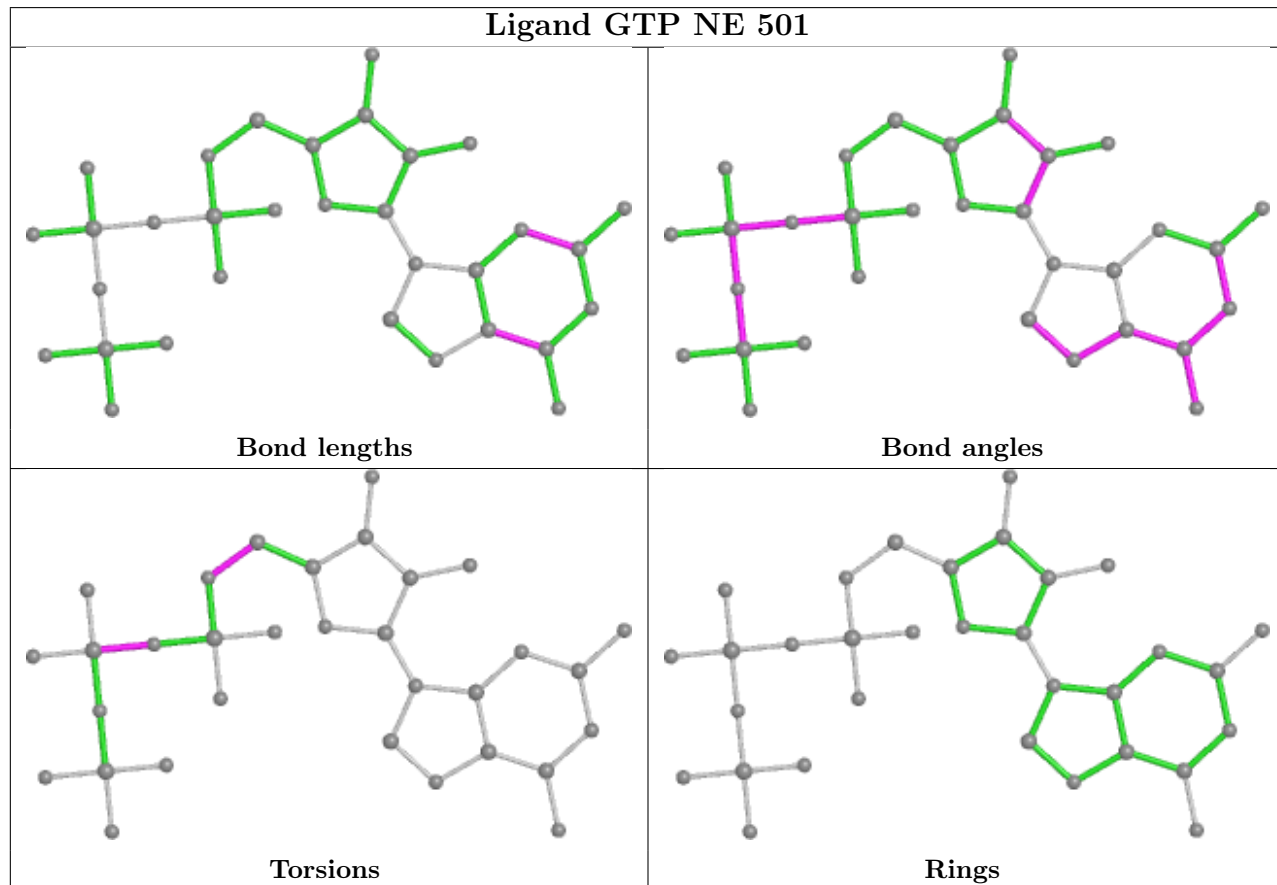
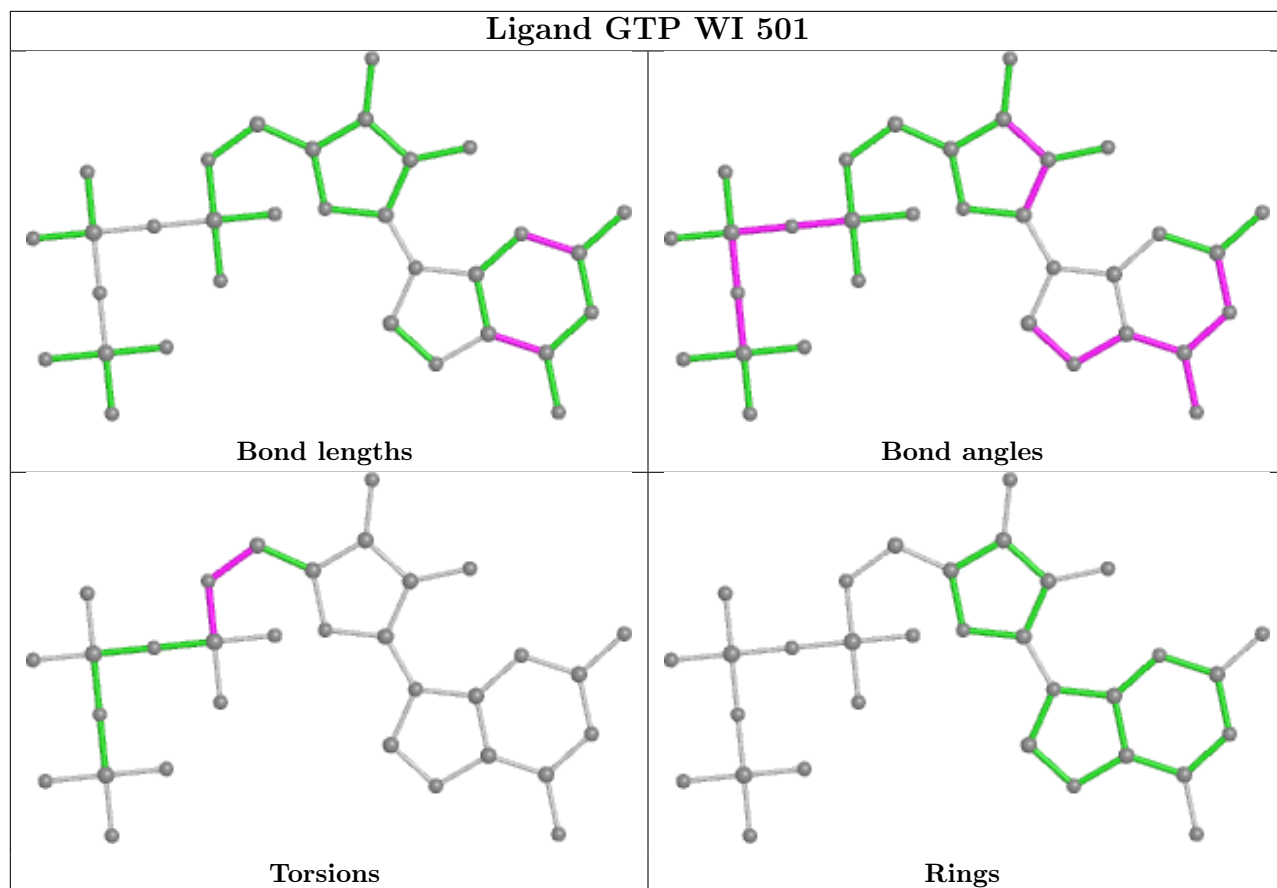


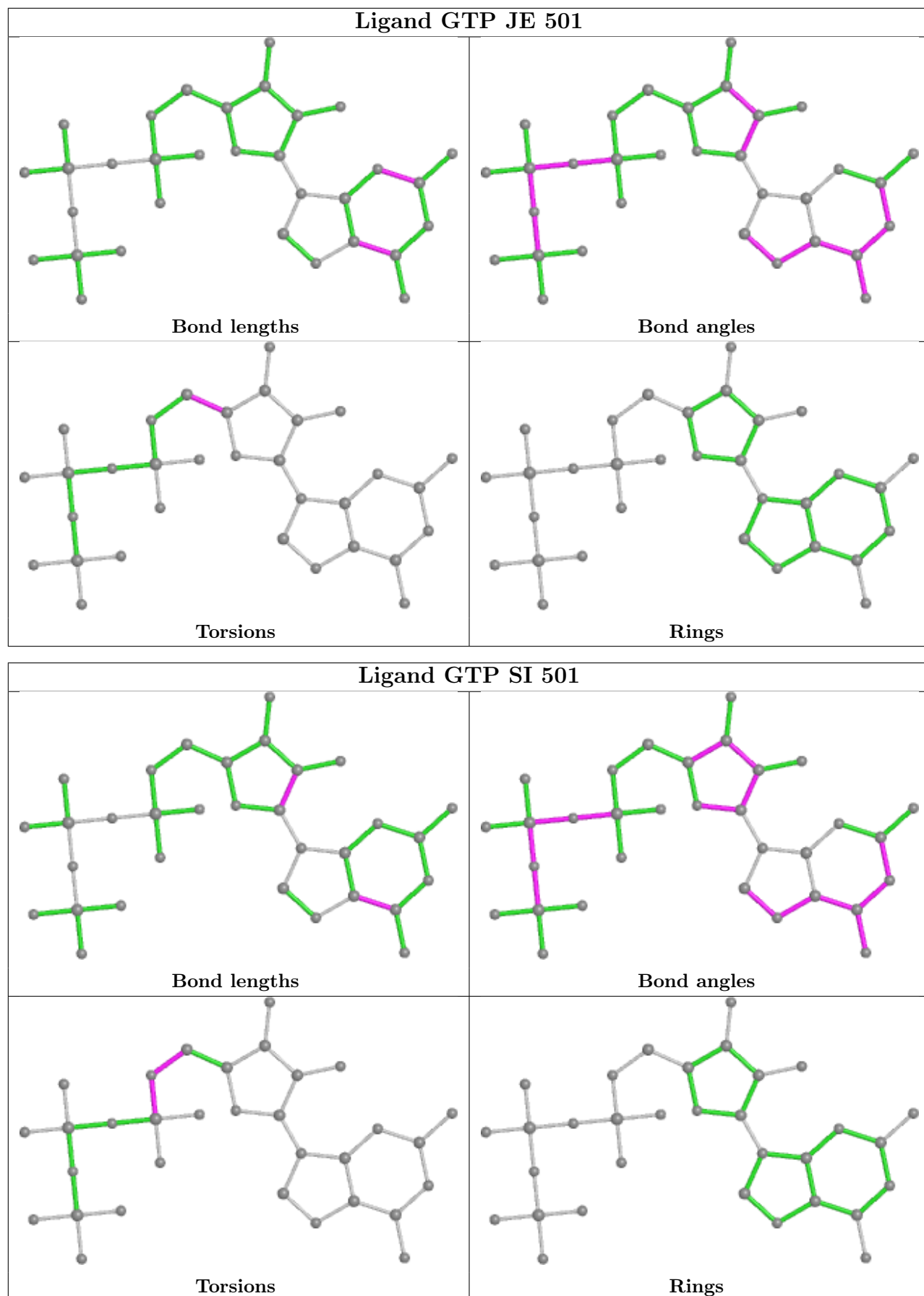


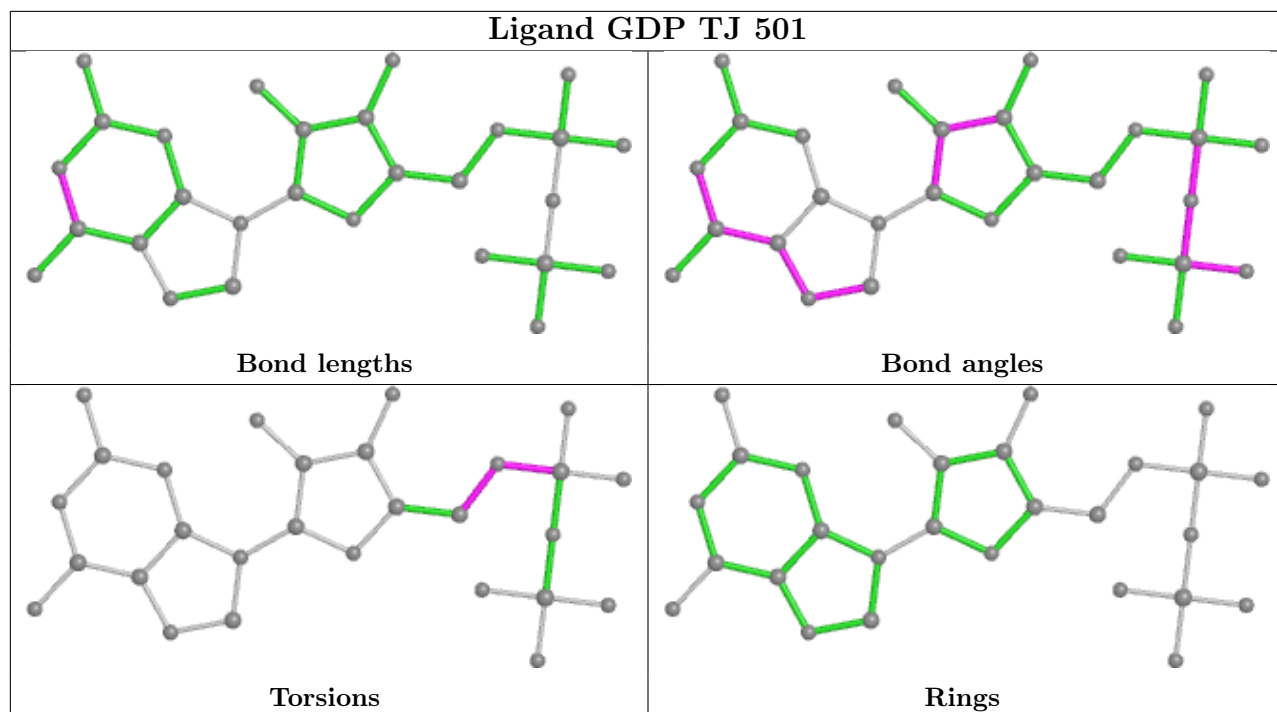












5.7 Other polymers [i](#)

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
25	B1	6
25	Bn	6
25	Bp	6
25	Bo	6
25	Bm	6

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B1	83:UNK	C	103:UNK	N	55.09
1	B1	151:UNK	C	171:UNK	N	54.90
1	Bn	151:UNK	C	171:UNK	N	54.16
1	Bp	116:UNK	C	135:UNK	N	50.17
1	Bp	218:UNK	C	236:UNK	N	49.54
1	Bo	218:UNK	C	236:UNK	N	49.16
1	Bm	151:UNK	C	169:UNK	N	48.86

Continued on next page...

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Bo	117:UNK	C	136:UNK	N	47.32
1	Bm	49:UNK	C	67:UNK	N	45.44
1	Bm	219:UNK	C	235:UNK	N	43.88
1	Bm	86:UNK	C	100:UNK	N	41.26
1	Bn	52:UNK	C	69:UNK	N	40.34
1	Bn	89:UNK	C	104:UNK	N	39.66
1	Bn	221:UNK	C	235:UNK	N	37.88
1	Bo	185:UNK	C	200:UNK	N	37.33
1	Bl	53:UNK	C	68:UNK	N	37.09
1	Bn	191:UNK	C	206:UNK	N	35.50
1	Bl	191:UNK	C	206:UNK	N	35.03
1	Bm	191:UNK	C	206:UNK	N	34.57
1	Bl	119:UNK	C	132:UNK	N	33.11
1	Bm	118:UNK	C	131:UNK	N	31.66
1	Bo	56:UNK	C	70:UNK	N	31.62
1	Bl	224:UNK	C	235:UNK	N	31.23
1	Bo	157:UNK	C	168:UNK	N	30.94
1	Bn	123:UNK	C	134:UNK	N	30.11
1	Bp	56:UNK	C	69:UNK	N	29.18
1	Bo	92:UNK	C	101:UNK	N	24.98
1	Bp	93:UNK	C	101:UNK	N	23.78
1	Bp	190:UNK	C	197:UNK	N	15.87
1	Bp	163:UNK	C	167:UNK	N	15.48

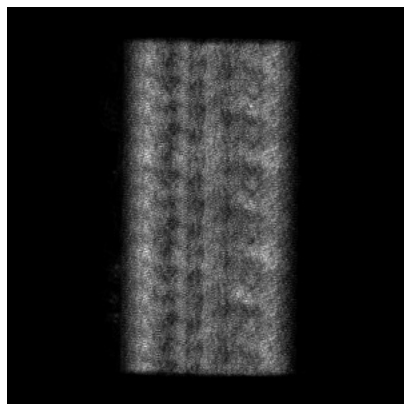
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-17187. These allow visual inspection of the internal detail of the map and identification of artifacts.

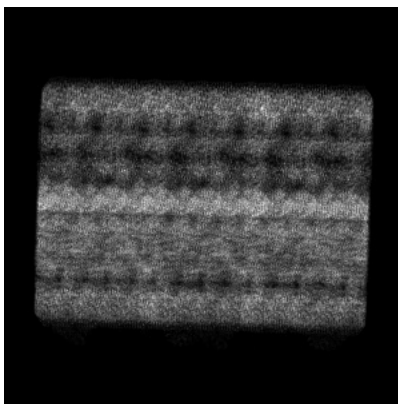
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

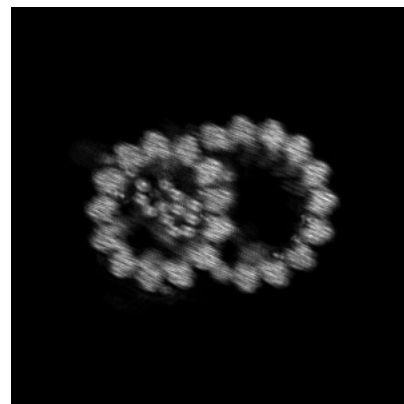
6.1.1 Primary map



X

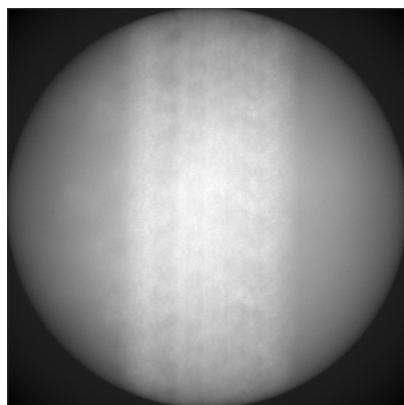


Y

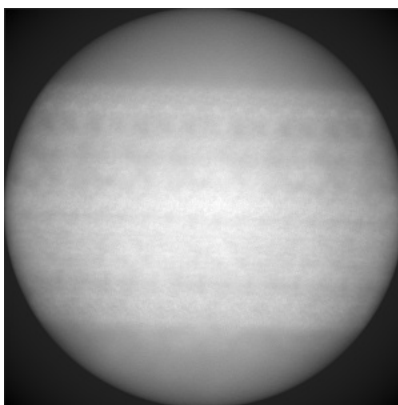


Z

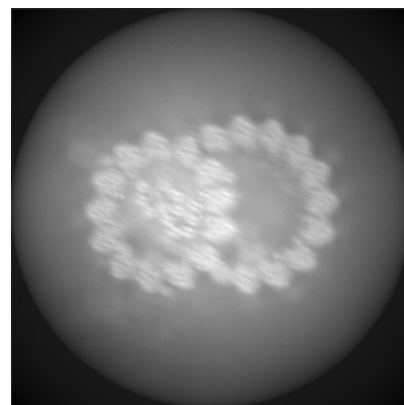
6.1.2 Raw map



X



Y

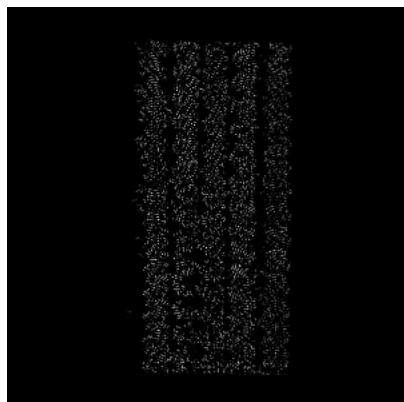


Z

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

6.2 Central slices [i](#)

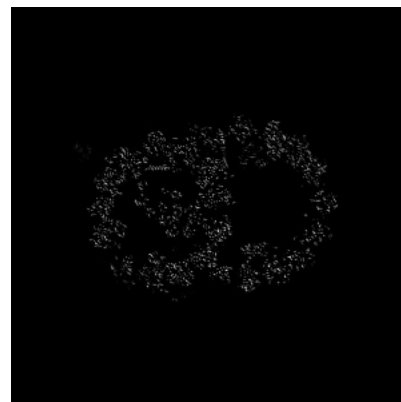
6.2.1 Primary map



X Index: 336

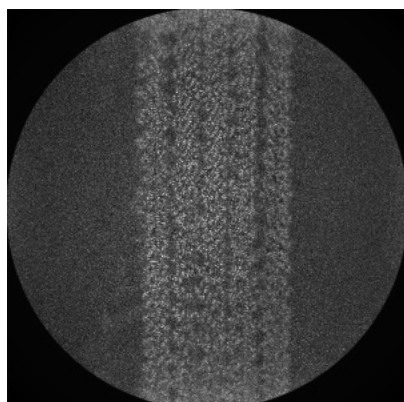


Y Index: 336

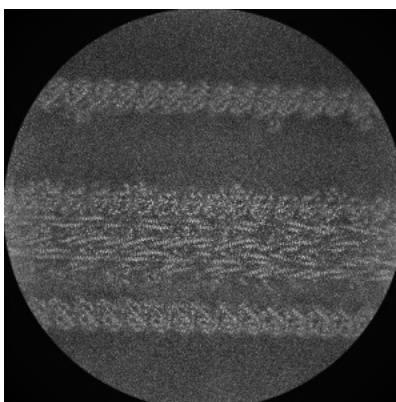


Z Index: 336

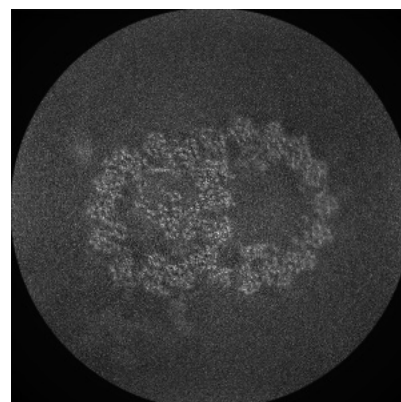
6.2.2 Raw map



X Index: 336



Y Index: 336

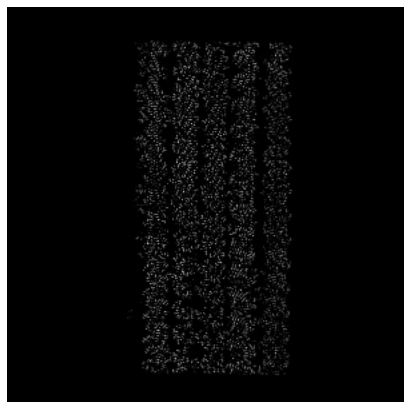


Z Index: 336

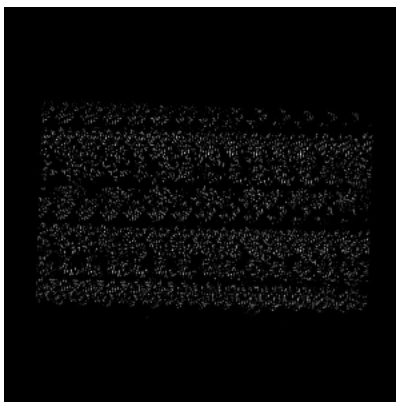
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

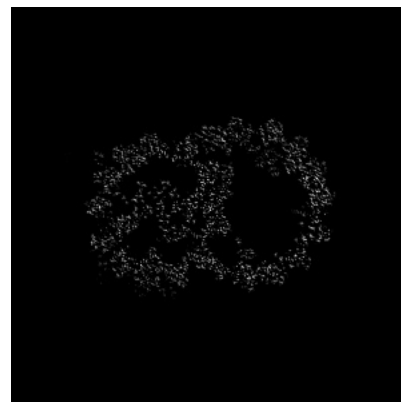
6.3.1 Primary map



X Index: 337

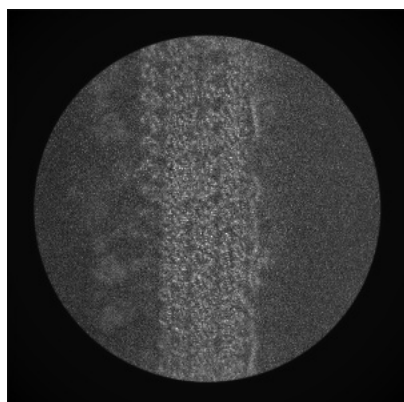


Y Index: 233

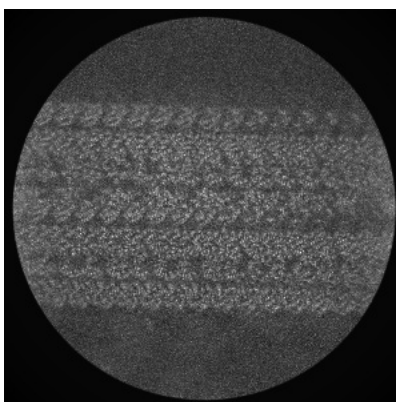


Z Index: 425

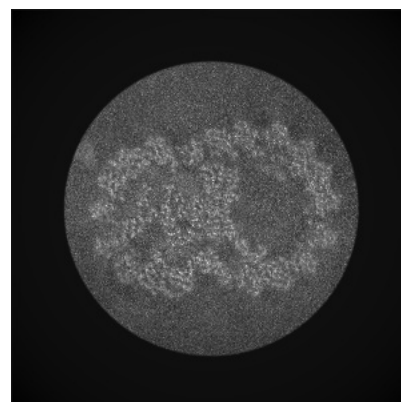
6.3.2 Raw map



X Index: 165



Y Index: 233

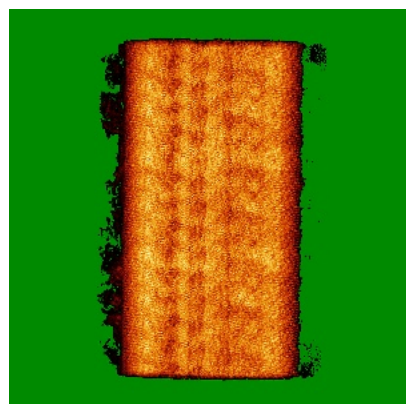


Z Index: 106

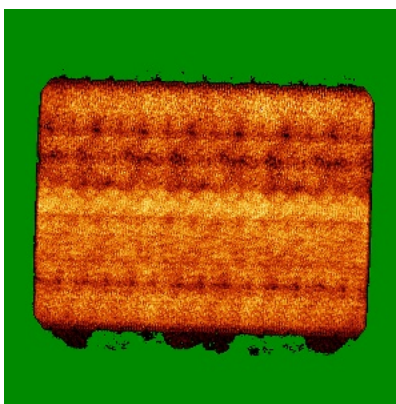
The images above show the largest variance slices of the map in three orthogonal directions.

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

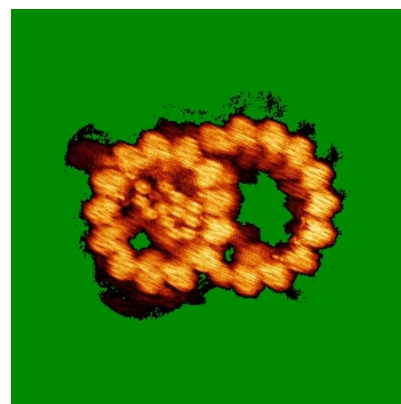
6.4.1 Primary map



X

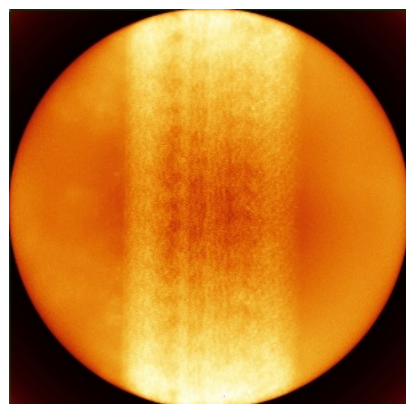


Y

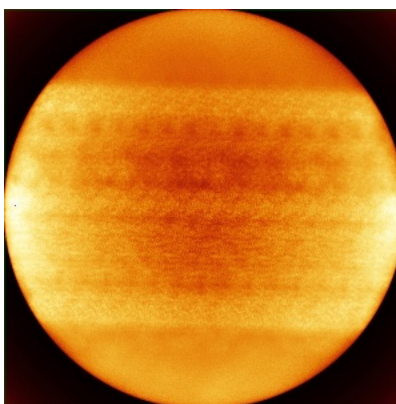


Z

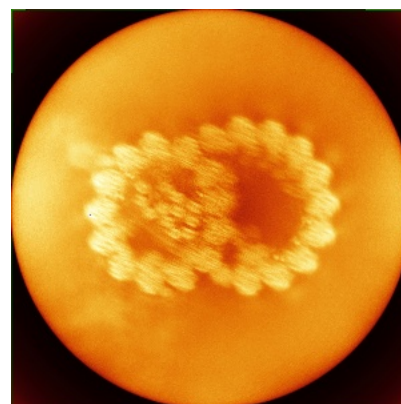
6.4.2 Raw map



X



Y

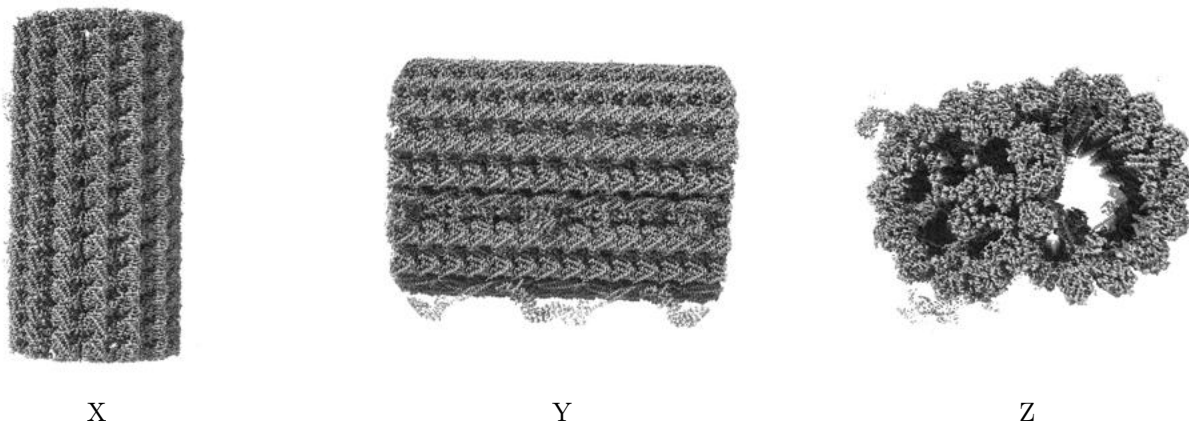


Z

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

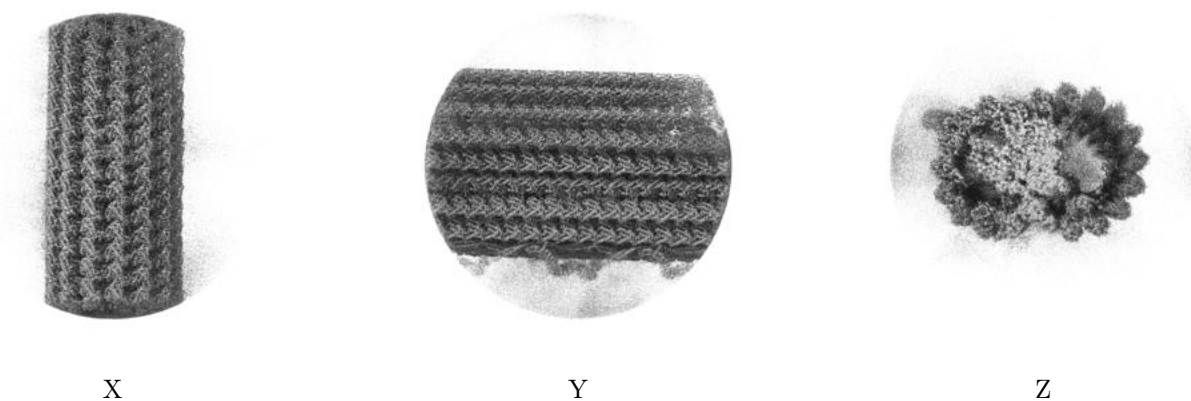
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.2. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

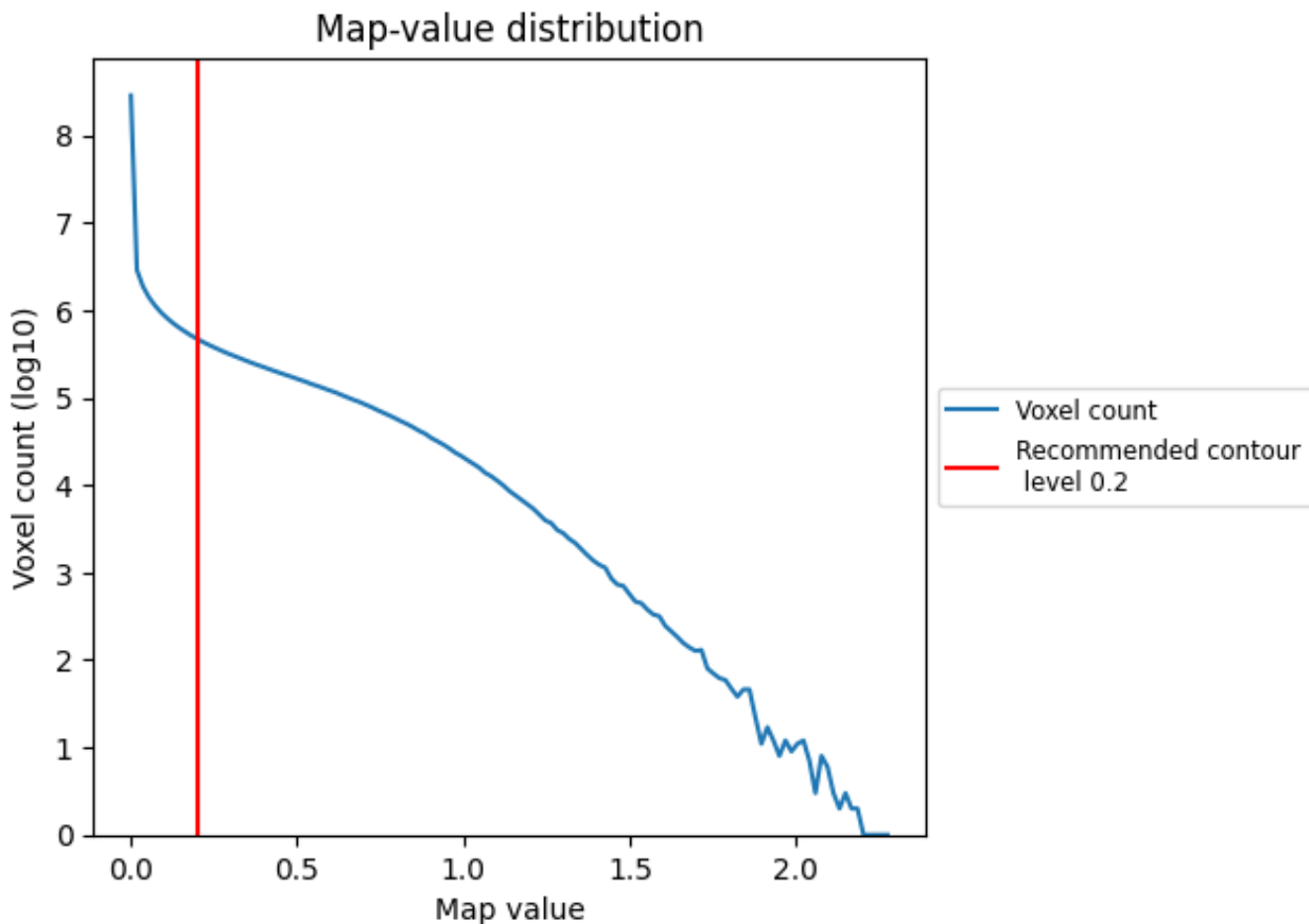
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

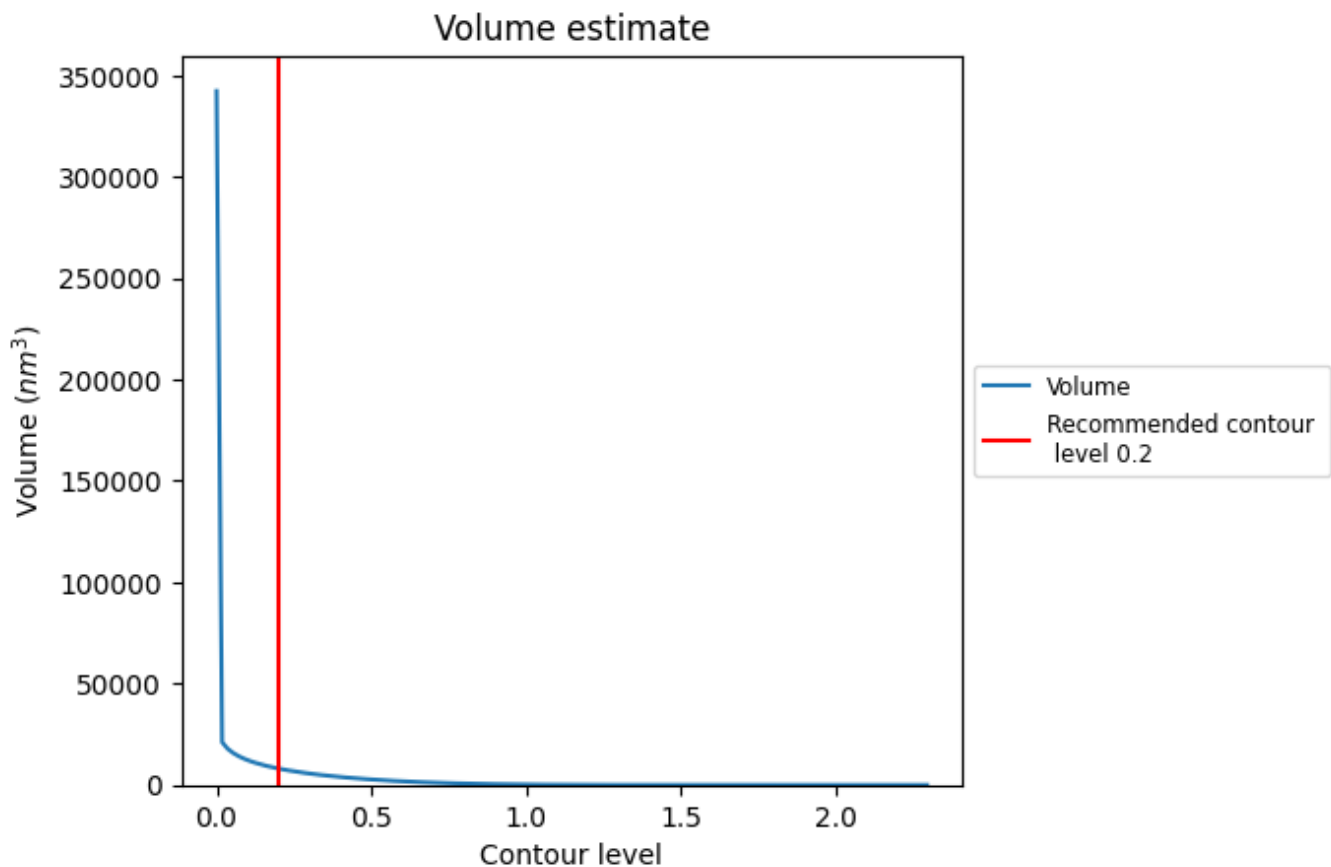
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

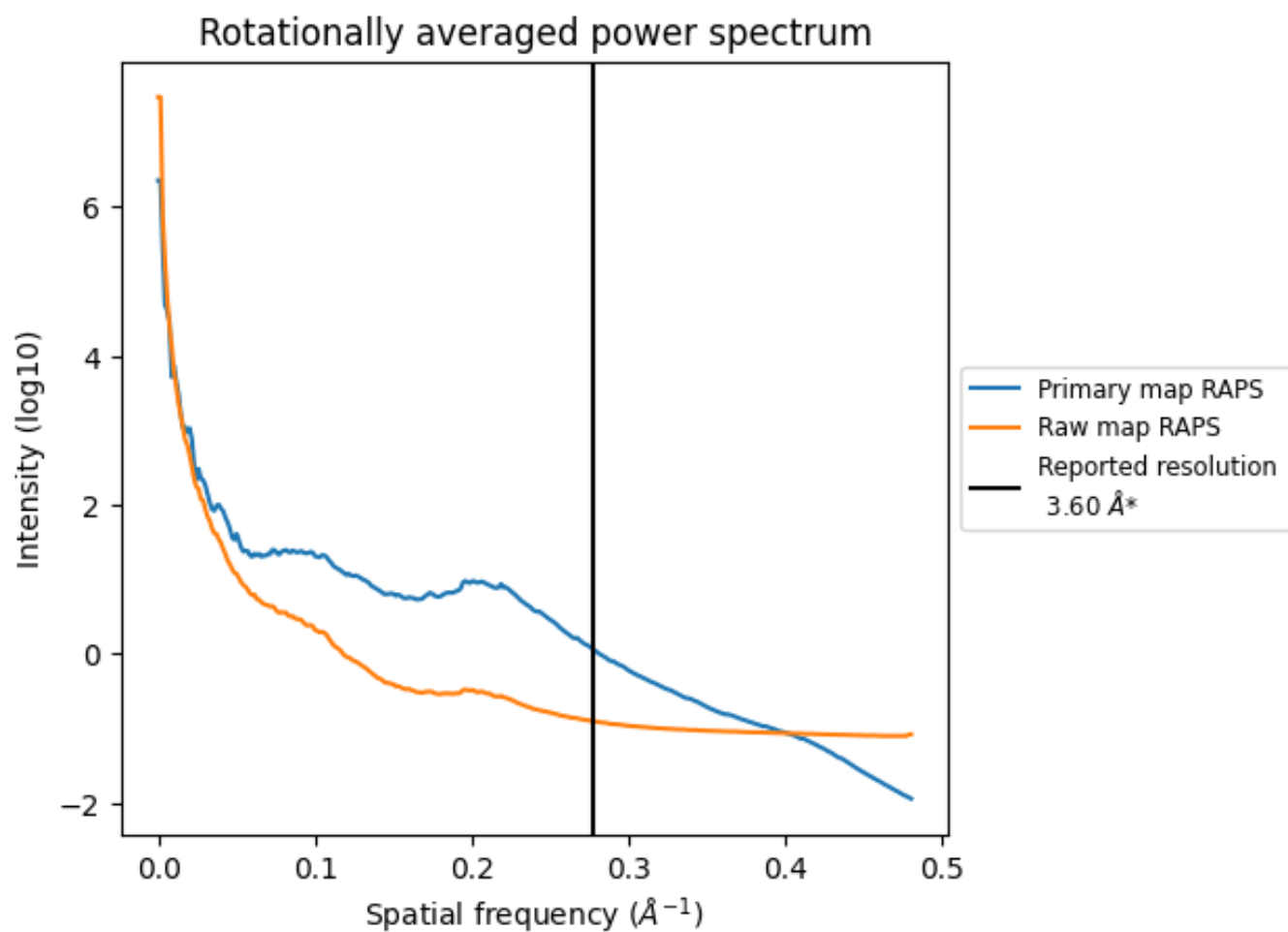
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 8092 nm^3 ; this corresponds to an approximate mass of 7310 kDa.

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

7.3 Rotationally averaged power spectrum i

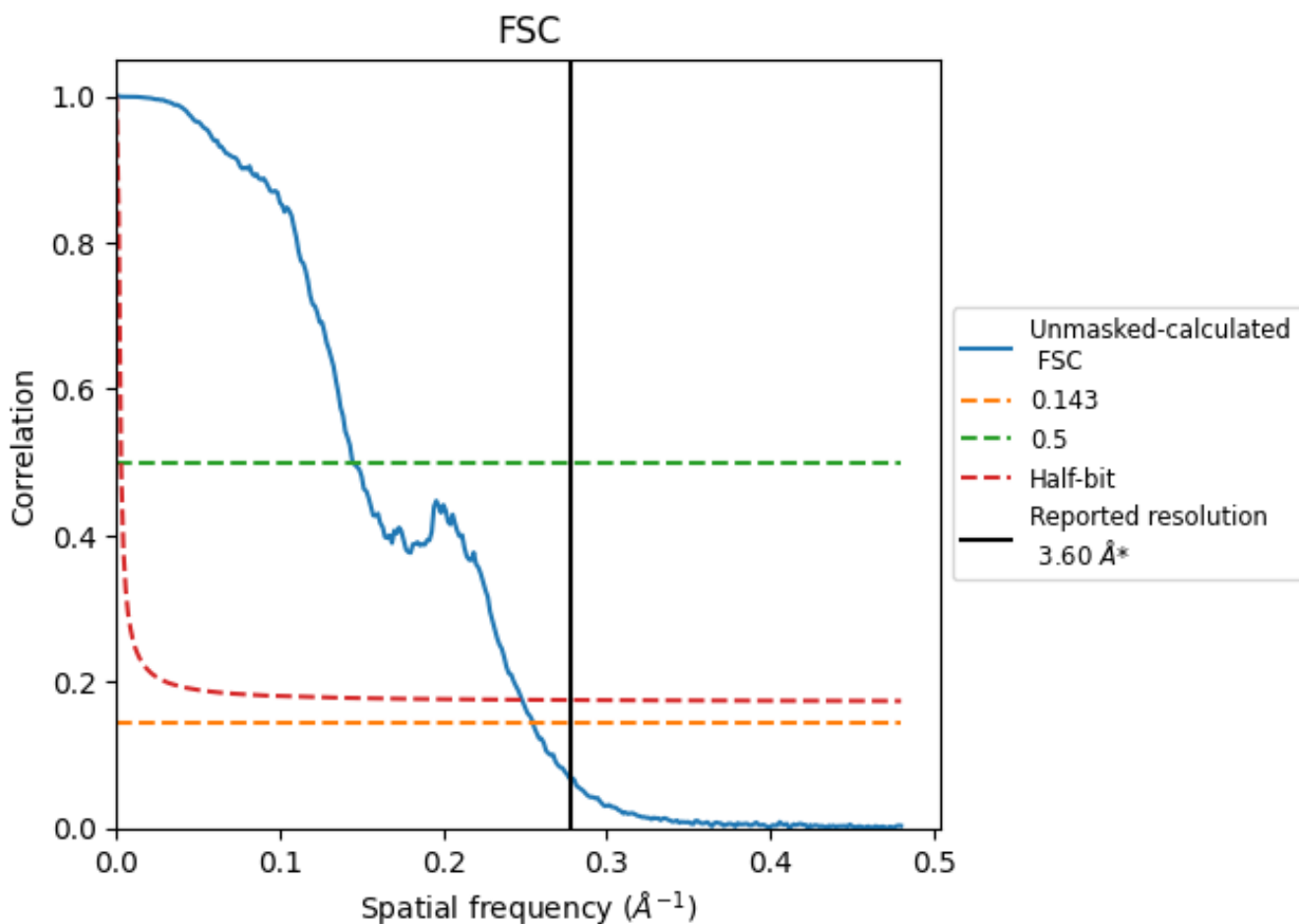


*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8.2 Resolution estimates [i](#)

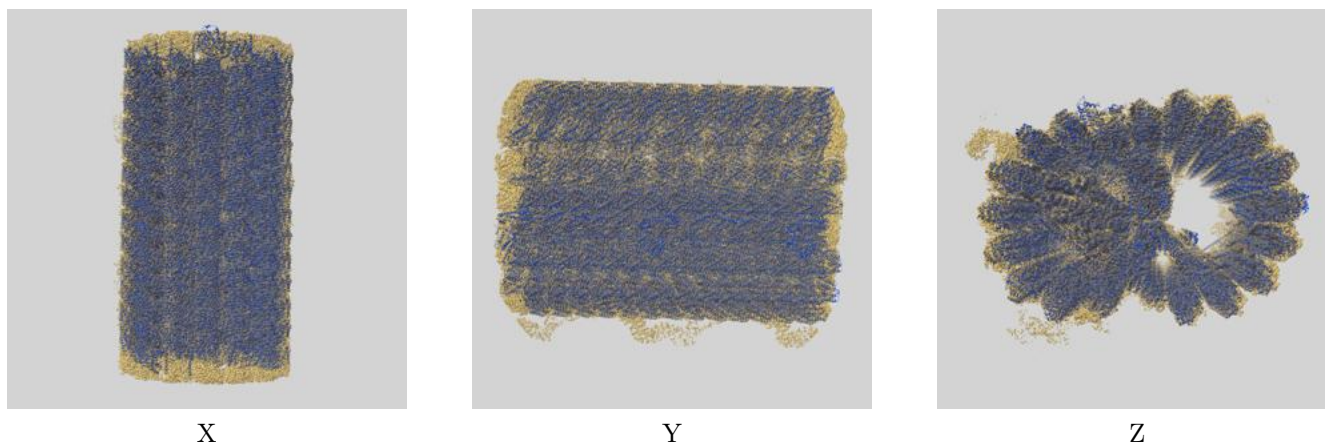
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.92	6.91	4.03

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

9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-17187 and PDB model 8OTZ. Per-residue inclusion information can be found in section 3 on page 83.

9.1 Map-model overlay [i](#)

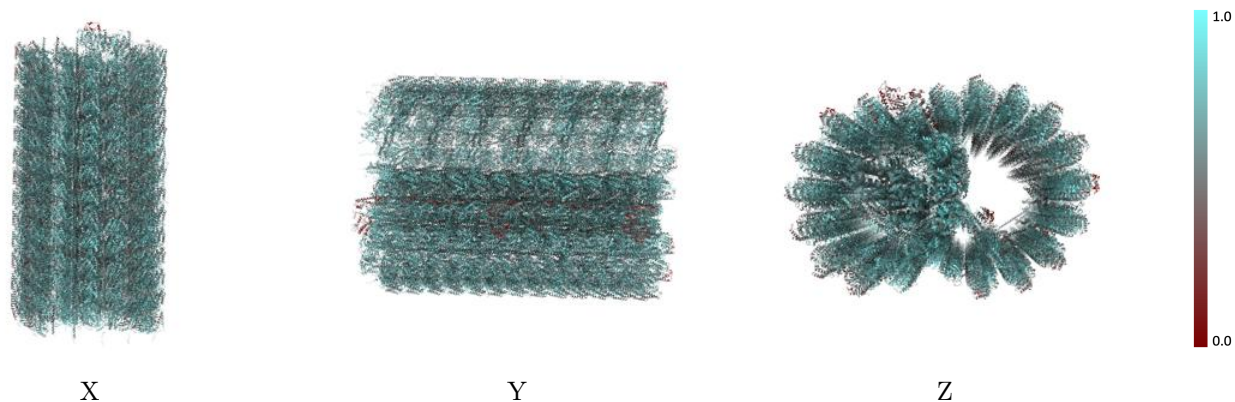


The images above show the 3D surface view of the map at the recommended contour level 0.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

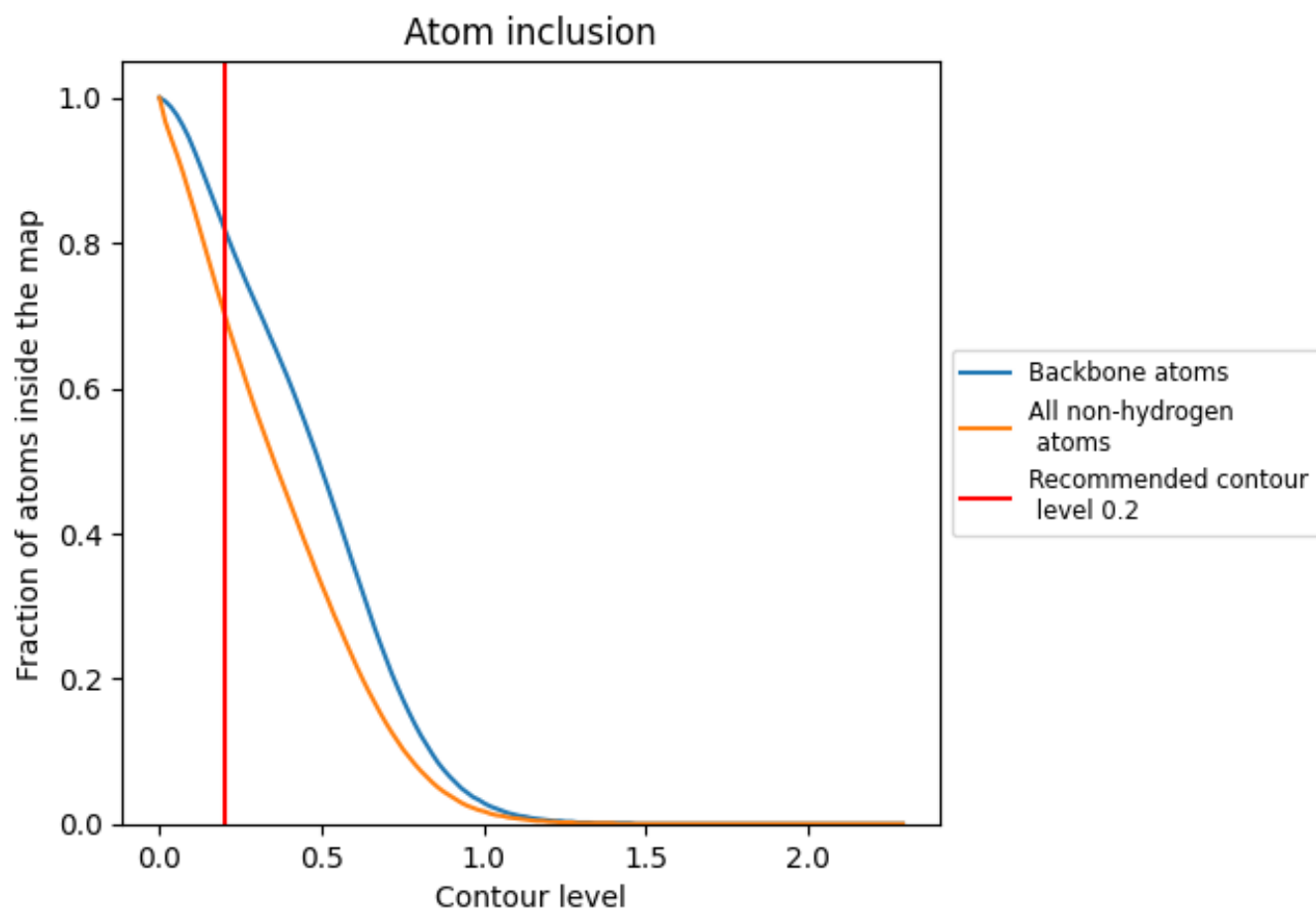
This section was not generated.

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 (0.2).

9.4 Atom inclusion [i](#)



At the recommended contour level, 82% of all backbone atoms, 70% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion
All	0.7030
0	0.8150
0A	0.6410
0C	0.5730
0E	0.4740
0G	0.5510
0W	0.5900
0Y	0.6150
0a	0.5950
0c	0.5520
0e	0.6530
0g	0.6110
0i	0.6080
0k	0.5270
1	0.2550
2	0.2450
3	0.5620
A	0.6710
A0	0.6540
A1	0.5170
A2	0.6230
A3	0.6280
A4	0.6190
A5	0.6080
A6	0.7220
A7	0.6710
A8	0.6070
A9	0.6390
AA	0.7750
AB	0.7690
AC	0.7790
AD	0.7890
AE	0.7930
AF	0.7730
AG	0.7640



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Chain	Atom inclusion
AH	0.7610
AI	0.8080
AJ	0.7810
AK	0.7690
AL	0.7640
AM	0.7810
AP	0.7660
AQ	0.7610
AR	0.7270
AS	0.7560
AT	0.6560
AU	0.6920
AV	0.7510
AW	0.7550
Aa	0.7150
Ab	0.7380
Ac	0.7480
Ad	0.7240
Al	0.7860
Am	0.8170
An	0.8170
Ao	0.7250
Ap	0.7400
Aq	0.7850
Ar	0.7880
At	0.5650
Au	0.6890
Av	0.6330
Aw	0.6530
Ax	0.5070
Ay	0.6510
Az	0.5810
B	0.7070
B0	0.6560
B1	0.6420
B2	0.7800
B3	0.7510
B4	0.7260
B5	0.6420
B6	0.6260
B7	0.7760
B8	0.7080











































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Chain	Atom inclusion
B9	0.7000
BA	0.7230
BB	0.7460
BC	0.7560
BD	0.7490
BE	0.7650
BF	0.7400
BG	0.7450
BH	0.7460
BI	0.7620
BJ	0.7490
BK	0.7490
BL	0.7550
BM	0.7470
BN	0.6720
BO	0.6700
BP	0.6750
BQ	0.6720
BR	0.6810
BS	0.6720
BT	0.6820
BU	0.6750
BV	0.7380
BW	0.7500
BX	0.7060
BY	0.7450
BZ	0.7580
Ba	0.7000
Bb	0.7180
Bc	0.7210
Bd	0.7700
Be	0.7600
Bf	0.6900
Bg	0.7580
Bh	0.7470
Bi	0.7350
Bj	0.6590
Bk	0.6440
Bl	0.7830
Bm	0.8160
Bn	0.8380
Bo	0.8620

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Chain	Atom inclusion
Bp	 0.7890
Bq	 0.6600
Br	 0.7150
Bs	 0.7020
Bu	 0.6510
By	 0.6280
Bz	 0.6400
C	 0.7270
C0	 0.7520
C1	 0.6770
C2	 0.7370
C3	 0.7540
C4	 0.7450
C5	 0.7580
C6	 0.7880
C7	 0.7590
C8	 0.7640
C9	 0.7480
CA	 0.6110
CB	 0.6670
CC	 0.6920
CD	 0.6730
CE	 0.7130
CF	 0.7010
CG	 0.6810
CH	 0.6850
CI	 0.6950
CJ	 0.7190
CK	 0.6910
CL	 0.6900
CM	 0.6790
CN	 0.7340
CO	 0.7390
CQ	 0.6680
CR	 0.6080
CS	 0.6830
CT	 0.6620
CU	 0.6240
CV	 0.5200
CW	 0.7280
CX	 0.6590
CY	 0.5480

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Chain	Atom inclusion
CZ	0.6160
Ca	0.6620
Cb	0.6670
Cc	0.6410
Cd	0.6030
Ce	0.4970
Cf	0.5210
Cg	0.5820
Ch	0.6270
Ci	0.6080
Cj	0.5470
Ck	0.5080
Cl	0.6730
Cm	0.7570
Cn	0.7590
Co	0.7660
Cp	0.7590
Cq	0.7710
Cr	0.7660
Cs	0.7570
Ct	0.7680
Cu	0.7190
Cv	0.7270
Cw	0.7100
Cx	0.7240
Cy	0.7200
Cz	0.6210
D	0.7330
D0	0.7110
D1	0.7090
D2	0.6980
D3	0.6940
D4	0.6710
D5	0.6790
D6	0.6810
D7	0.7110
D8	0.6960
D9	0.6900
DA	0.5710
DB	0.6320
DC	0.6680
DD	0.6770

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Chain	Atom inclusion
DE	0.6890
DF	0.7190
DG	0.6820
DH	0.6870
DI	0.6910
DJ	0.7390
DK	0.6770
DL	0.6980
DM	0.6770
DN	0.6280
DO	0.7950
DP	0.6630
DQ	0.6530
DR	0.5250
DS	0.5940
DT	0.6630
DU	0.6750
DV	0.6400
DW	0.6630
DX	0.5350
DY	0.7130
DZ	0.7440
Da	0.6720
Db	0.7250
Dc	0.7290
Dd	0.6540
De	0.6340
Df	0.6430
Dg	0.5960
Dh	0.5990
Di	0.6690
Dj	0.7030
Dk	0.6820
Dl	0.6730
Dm	0.7730
Dn	0.5110
E	0.7600
E1	0.7560
E2	0.7660
E3	0.7590
E4	0.7370
EA	0.6900

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Chain	Atom inclusion
EB	0.5950
EC	0.6500
ED	0.6650
EE	0.6780
EF	0.7100
EG	0.6860
EH	0.6790
EI	0.6950
EJ	0.7300
EK	0.6750
EL	0.6920
EM	0.6900
EN	0.6350
EO	0.6900
EP	0.7010
EQ	0.7040
ER	0.7300
ES	0.7790
ET	0.7740
EU	0.7650
EV	0.7630
EW	0.6960
EX	0.6990
EY	0.7040
EZ	0.7010
Ee	0.7840
F	0.7710
F2	0.7680
F3	0.7610
F4	0.7540
F5	0.7570
F6	0.7560
FB	0.6520
FC	0.6890
FD	0.6890
FE	0.7100
FF	0.7490
FG	0.7280
FH	0.7270
FI	0.7180
FJ	0.7390
FK	0.7190











































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Chain	Atom inclusion
FL	0.7190
FM	0.7360
FN	0.6780
G	0.6850
GB	0.6690
GC	0.6960
GD	0.7100
GE	0.7130
GF	0.7450
GG	0.7100
GH	0.7200
GI	0.7120
GJ	0.7380
GK	0.7330
GL	0.7210
GM	0.7130
GN	0.6880
H	0.6550
HB	0.6190
HC	0.6920
HD	0.7150
HE	0.7180
HF	0.7170
HG	0.7050
HH	0.6960
HI	0.7090
HJ	0.7240
HK	0.7210
HL	0.7120
HM	0.7170
HN	0.6930
HO	0.6710
I	0.7400
IB	0.6610
IC	0.7430
ID	0.7430
IE	0.7410
IF	0.7360
IG	0.7460
IH	0.7440
II	0.7380
IJ	0.7380

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Chain	Atom inclusion
IK	 0.7570
IL	 0.7350
IM	 0.7330
IN	 0.7340
IO	 0.7320
J	 0.6790
JB	 0.7390
JC	 0.7390
JD	 0.7410
JE	 0.7400
JF	 0.7670
JG	 0.7470
JH	 0.7520
JI	 0.7470
JJ	 0.7740
JK	 0.7370
JL	 0.7400
JM	 0.7410
JN	 0.7390
K	 0.6970
K1	 0.7000
KB	 0.7380
KC	 0.8080
KD	 0.8100
KE	 0.7950
KF	 0.8010
KG	 0.8150
KH	 0.8090
KI	 0.8000
KJ	 0.7850
KK	 0.8290
KL	 0.7990
KM	 0.7990
KN	 0.7890
KO	 0.8160
L	 0.7310
L1	 0.6560
L2	 0.6800
LB	 0.7310
LC	 0.7550
LD	 0.7400
LE	 0.7310

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Chain	Atom inclusion
LF	0.7800
LG	0.7620
LH	0.7580
LI	0.7430
LJ	0.7660
LK	0.7670
LL	0.7590
LM	0.7370
LN	0.7580
M	0.6740
MB	0.7950
MC	0.7930
MD	0.7900
ME	0.7980
MF	0.8260
MG	0.7990
MH	0.7920
MI	0.7960
MJ	0.8110
MK	0.7830
ML	0.7960
MM	0.7960
MN	0.8070
N	0.4530
N0	0.6630
NA	0.6730
NB	0.6480
NC	0.6490
ND	0.7150
NE	0.6870
NF	0.6530
NG	0.6570
NH	0.6840
NI	0.6750
NJ	0.6530
NK	0.6470
NL	0.6520
O	0.4470
O0	0.6450
OA	0.7000
OB	0.6920
OC	0.6910

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Chain	Atom inclusion
OD	0.7100
OE	0.7250
OF	0.6950
OG	0.6810
OH	0.6910
OI	0.6990
OJ	0.6820
OK	0.7000
OL	0.6970
P	0.6710
PA	0.7010
PB	0.7180
PC	0.6960
PD	0.6990
PE	0.7070
PF	0.6820
PG	0.6590
PH	0.6820
PI	0.7190
PJ	0.7010
PK	0.7020
PL	0.7310
PM	0.7020
Q	0.7560
QA	0.6460
QB	0.6900
QC	0.6470
QD	0.6710
QE	0.6900
QF	0.6500
QG	0.6520
QH	0.6680
QI	0.7160
QJ	0.6810
QK	0.6530
QL	0.6920
QM	0.6650
R	0.7240
RA	0.6370
RB	0.6880
RC	0.6770
RD	0.6670











































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Chain	Atom inclusion
RE	0.7180
RF	0.6790
RG	0.6390
RH	0.6760
RI	0.6980
RJ	0.6920
RK	0.6550
RL	0.6850
RM	0.6420
S	0.7110
SA	0.6160
SB	0.6940
SC	0.7040
SD	0.7080
SE	0.7540
SF	0.7220
SG	0.7020
SH	0.7100
SI	0.7180
SJ	0.7390
SK	0.7090
SL	0.7200
SM	0.7030
T	0.7220
TB	0.6780
TC	0.7190
TD	0.7120
TE	0.7420
TF	0.7450
TG	0.7060
TH	0.7230
TI	0.7320
TJ	0.7470
TK	0.7080
TL	0.7120
TM	0.6910
U	0.7090
UB	0.6240
UC	0.6590
UD	0.6510
UE	0.6690
UF	0.6890






































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Chain	Atom inclusion
UG	 0.6700
UH	 0.6550
UI	 0.6520
UJ	 0.6960
UK	 0.6610
UL	 0.6440
UM	 0.6480
UN	 0.6020
V	 0.7140
VB	 0.6540
VC	 0.6740
VD	 0.6960
VE	 0.6660
VF	 0.7120
VG	 0.6670
VH	 0.6970
VI	 0.6760
VJ	 0.7090
VK	 0.6990
VL	 0.6910
VM	 0.6730
VN	 0.6520
W	 0.3360
WB	 0.6400
WC	 0.6500
WD	 0.7070
WE	 0.6740
WF	 0.7200
WG	 0.6600
WH	 0.7030
WI	 0.6880
WJ	 0.7260
WK	 0.6950
WL	 0.6930
WM	 0.6920
WN	 0.6880
X	 0.7360
XG	 0.7160
XH	 0.7320
XI	 0.7550
XJ	 0.7260
XK	 0.7470

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Chain	Atom inclusion
XL	 0.7190
XM	 0.6850
Y	 0.7480
YG	 0.3440
YH	 0.7100
YI	 0.7030
YJ	 0.7020
YK	 0.7330
YL	 0.6830
Z	 0.2870
a	 0.5960
b	 0.5480
c	 0.5580
d	 0.5790
e	 0.7240
f	 0.7250
g	 0.7280
h	 0.7560
i	 0.7960
j	 0.7780
k	 0.6100
ke	 0.6190
l	 0.4820
m	 0.6620
n	 0.6470
o	 0.6230
p	 0.3170
q	 0.2590
r	 0.7380
s	 0.7270
t	 0.7270
u	 0.3280
v	 0.3030
w	 0.2890
x	 0.3250
y	 0.5650
z	 0.5620