



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 8, 2026 – 11:31 AM EDT

PDB ID : 14CL / pdb_000014cl
Title : Structure of liver pyruvate kinase in complex with TEPP-46
Authors : Lulla, A.; Rodriguez Rivero, A.; Grotli, M.; Hyvonen, M.
Deposited on : 2026-04-28
Resolution : 2.13 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp>

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:

MolProbity : 4-5-2 with Phenix2.2
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.2
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.015 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.51

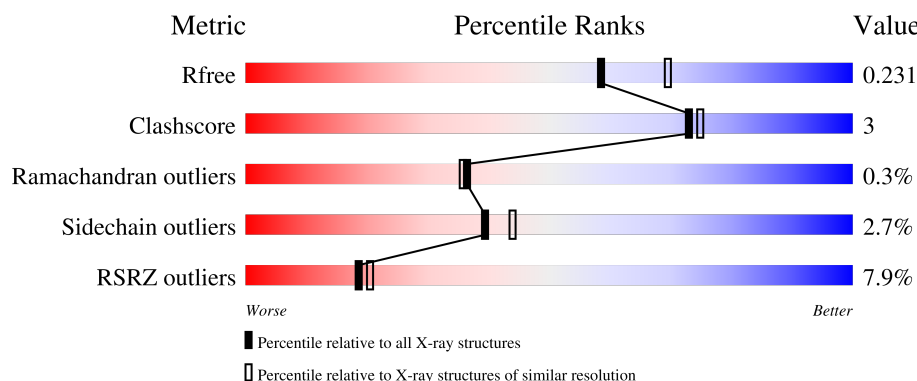
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.13 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	8290 (2.14-2.10)
Clashscore	190562	8817 (2.14-2.10)
Ramachandran outliers	187476	8738 (2.14-2.10)
Sidechain outliers	187428	8739 (2.14-2.10)
RSRZ outliers	180081	8294 (2.14-2.10)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	447	10% 83% 10% 6%
1	B	447	19% 89% 8% .
1	C	447	6% 84% 10% 5%
1	D	447	4% 87% 7% 5%
1	E	447	8% 84% 10% 5%

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Mol	Chain	Length	Quality of chain
1	F	447	
1	G	447	
1	H	447	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	OXL	A	602	-	X	-	-
3	OXL	B	602	-	X	-	-
3	OXL	C	602	-	X	-	-
3	OXL	D	602	-	X	-	-
3	OXL	E	602	-	X	-	-
3	OXL	F	602	-	X	-	-
3	OXL	G	602	-	X	-	-
3	OXL	H	602	-	X	-	-

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 27961 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Isoform L-type of Pyruvate kinase PKLR.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	420	Total	C	N	O	S	0	13	0
			3249	2040	583	606	20			
1	B	436	Total	C	N	O	S	3	8	0
			3350	2104	604	622	20			
1	C	424	Total	C	N	O	S	0	8	0
			3265	2056	584	606	19			
1	D	425	Total	C	N	O	S	0	8	0
			3261	2048	590	604	19			
1	E	423	Total	C	N	O	S	0	13	0
			3278	2061	588	609	20			
1	F	435	Total	C	N	O	S	0	8	0
			3341	2101	600	620	20			
1	G	427	Total	C	N	O	S	0	9	0
			3290	2070	588	613	19			
1	H	425	Total	C	N	O	S	0	9	0
			3269	2053	593	604	19			

There are 48 discrepancies between the modelled and reference sequences:

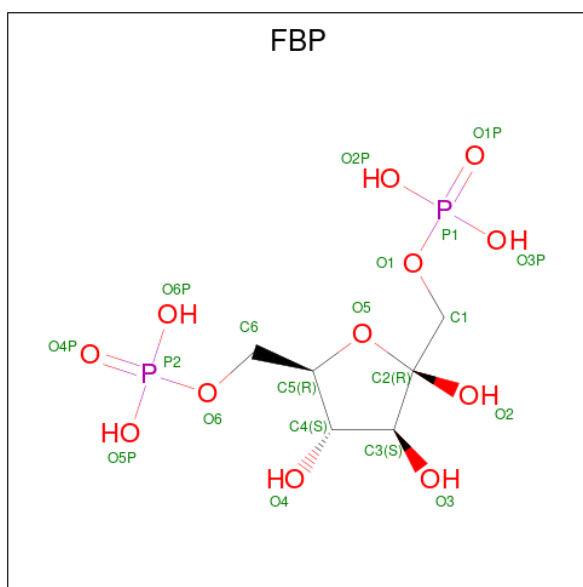
Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP P30613
A	0	SER	-	expression tag	UNP P30613
A	12	ASP	SER	conflict	UNP P30613
A	130	GLY	-	linker	UNP P30613
A	131	SER	-	linker	UNP P30613
A	132	GLY	-	linker	UNP P30613
B	-1	GLY	-	expression tag	UNP P30613
B	0	SER	-	expression tag	UNP P30613
B	12	ASP	SER	conflict	UNP P30613
B	130	GLY	-	linker	UNP P30613
B	131	SER	-	linker	UNP P30613
B	132	GLY	-	linker	UNP P30613
C	-1	GLY	-	expression tag	UNP P30613

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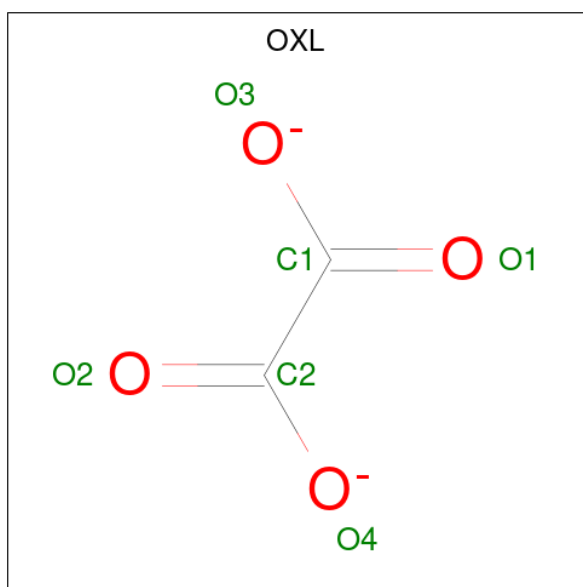
Chain	Residue	Modelled	Actual	Comment	Reference
C	0	SER	-	expression tag	UNP P30613
C	12	ASP	SER	conflict	UNP P30613
C	130	GLY	-	linker	UNP P30613
C	131	SER	-	linker	UNP P30613
C	132	GLY	-	linker	UNP P30613
D	-1	GLY	-	expression tag	UNP P30613
D	0	SER	-	expression tag	UNP P30613
D	12	ASP	SER	conflict	UNP P30613
D	130	GLY	-	linker	UNP P30613
D	131	SER	-	linker	UNP P30613
D	132	GLY	-	linker	UNP P30613
E	-1	GLY	-	expression tag	UNP P30613
E	0	SER	-	expression tag	UNP P30613
E	12	ASP	SER	conflict	UNP P30613
E	130	GLY	-	linker	UNP P30613
E	131	SER	-	linker	UNP P30613
E	132	GLY	-	linker	UNP P30613
F	-1	GLY	-	expression tag	UNP P30613
F	0	SER	-	expression tag	UNP P30613
F	12	ASP	SER	conflict	UNP P30613
F	130	GLY	-	linker	UNP P30613
F	131	SER	-	linker	UNP P30613
F	132	GLY	-	linker	UNP P30613
G	-1	GLY	-	expression tag	UNP P30613
G	0	SER	-	expression tag	UNP P30613
G	12	ASP	SER	conflict	UNP P30613
G	130	GLY	-	linker	UNP P30613
G	131	SER	-	linker	UNP P30613
G	132	GLY	-	linker	UNP P30613
H	-1	GLY	-	expression tag	UNP P30613
H	0	SER	-	expression tag	UNP P30613
H	12	ASP	SER	conflict	UNP P30613
H	130	GLY	-	linker	UNP P30613
H	131	SER	-	linker	UNP P30613
H	132	GLY	-	linker	UNP P30613

- Molecule 2 is 1,6-di-O-phosphono-beta-D-fructofuranose (CCD ID: FBP) (formula: $C_6H_{14}O_{12}P_2$).



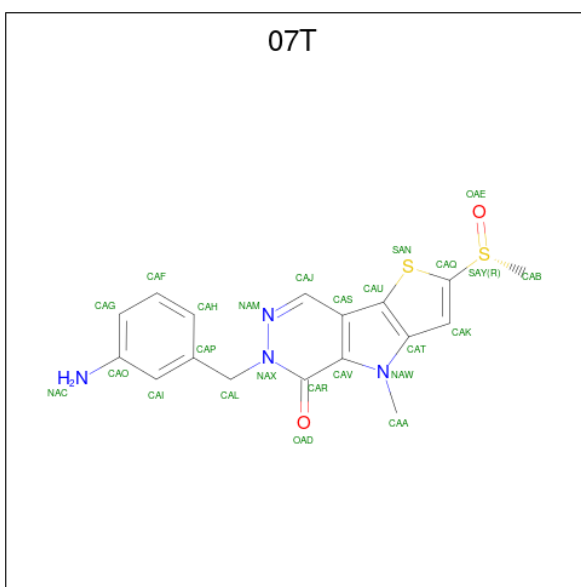
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	O	P	0	0
			20	6	12	2		
2	B	1	Total	C	O	P	0	0
			20	6	12	2		
2	C	1	Total	C	O	P	0	0
			20	6	12	2		
2	D	1	Total	C	O	P	0	0
			20	6	12	2		
2	E	1	Total	C	O	P	0	0
			20	6	12	2		
2	F	1	Total	C	O	P	0	0
			20	6	12	2		
2	G	1	Total	C	O	P	0	0
			20	6	12	2		
2	H	1	Total	C	O	P	0	0
			20	6	12	2		

- Molecule 3 is OXALATE ION (CCD ID: OXL) (formula: C_2O_4).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	C	O	0	0
			6	2	4		
3	B	1	Total	C	O	0	0
			6	2	4		
3	C	1	Total	C	O	0	0
			6	2	4		
3	D	1	Total	C	O	0	0
			6	2	4		
3	E	1	Total	C	O	0	0
			6	2	4		
3	F	1	Total	C	O	0	0
			6	2	4		
3	G	1	Total	C	O	0	0
			6	2	4		
3	H	1	Total	C	O	0	0
			6	2	4		

- Molecule 4 is 6-(3-aminobenzyl)-4-methyl-2-methylsulfinyl-4,6-dihydro-5H-thieno[2',3':4,5]pyrrolo[2,3-d]pyridazin-5-one (CCD ID: 07T) (formula: C₁₇H₁₆N₄O₂S₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total 50	C 34	N 8	O 4	S 4	0	1
4	B	1	Total 50	C 34	N 8	O 4	S 4	0	1
4	E	1	Total 50	C 34	N 8	O 4	S 4	0	1
4	F	1	Total 50	C 34	N 8	O 4	S 4	0	1

- Molecule 5 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total Mg 1 1	0	0
5	B	1	Total Mg 1 1	0	0
5	C	1	Total Mg 1 1	0	0
5	D	1	Total Mg 1 1	0	0
5	E	1	Total Mg 1 1	0	0
5	F	1	Total Mg 1 1	0	0
5	G	1	Total Mg 1 1	0	0
5	H	1	Total Mg 1 1	0	0

- Molecule 6 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total K 1 1	0	0
6	B	1	Total K 1 1	0	0
6	C	1	Total K 1 1	0	0
6	D	1	Total K 1 1	0	0
6	E	1	Total K 1 1	0	0
6	F	1	Total K 1 1	0	0
6	G	1	Total K 1 1	0	0
6	H	1	Total K 1 1	0	0

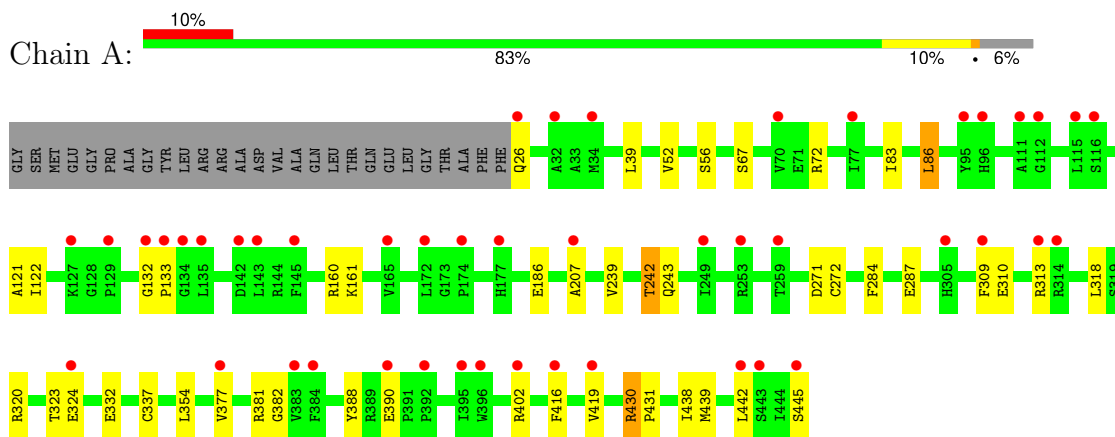
- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	110	Total O 110 110	0	0
7	B	111	Total O 111 111	0	0
7	C	173	Total O 173 173	0	0
7	D	201	Total O 201 201	0	0
7	E	121	Total O 121 121	0	0
7	F	149	Total O 149 149	0	0
7	G	169	Total O 169 169	0	0
7	H	200	Total O 200 200	0	0

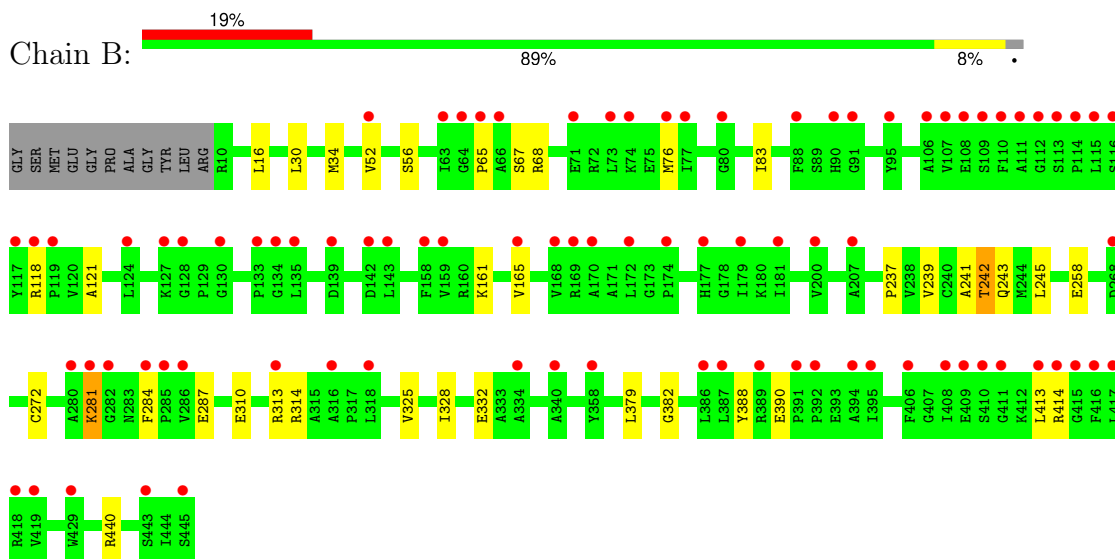
3 Residue-property plots [i](#)

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

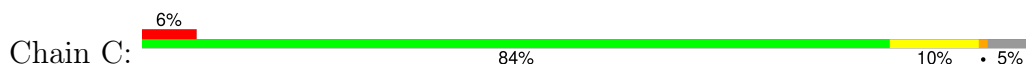
- Molecule 1: Isoform L-type of Pyruvate kinase PKLR

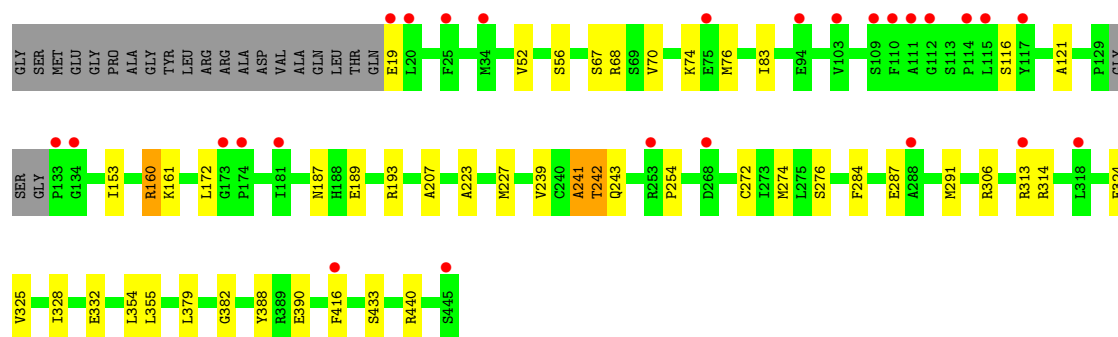


- Molecule 1: Isoform L-type of Pyruvate kinase PKLR

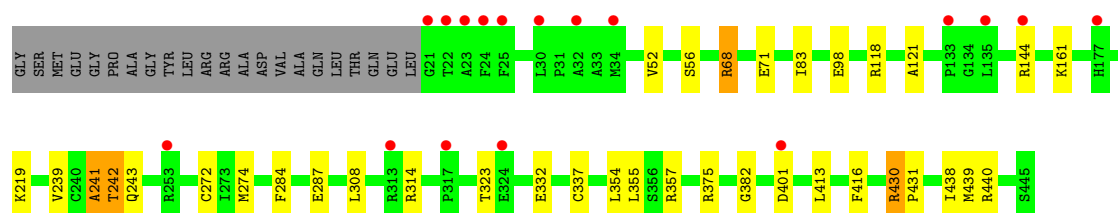
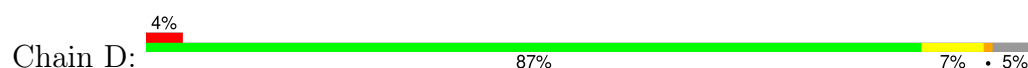


- Molecule 1: Isoform L-type of Pyruvate kinase PKLR

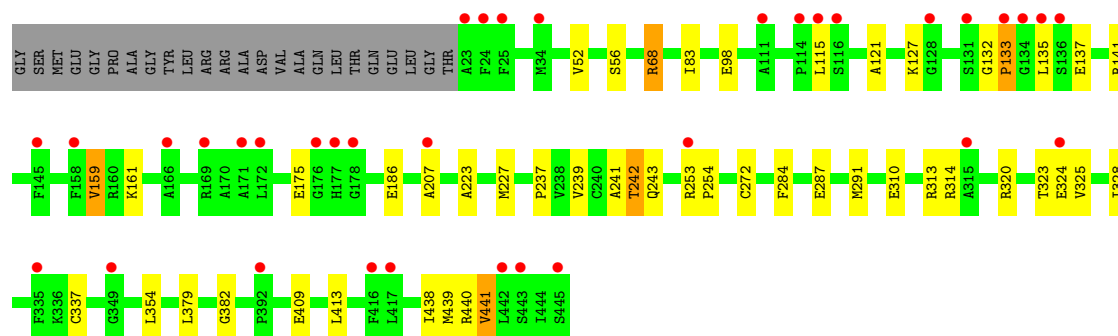
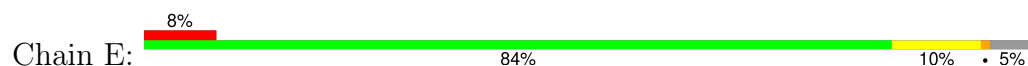




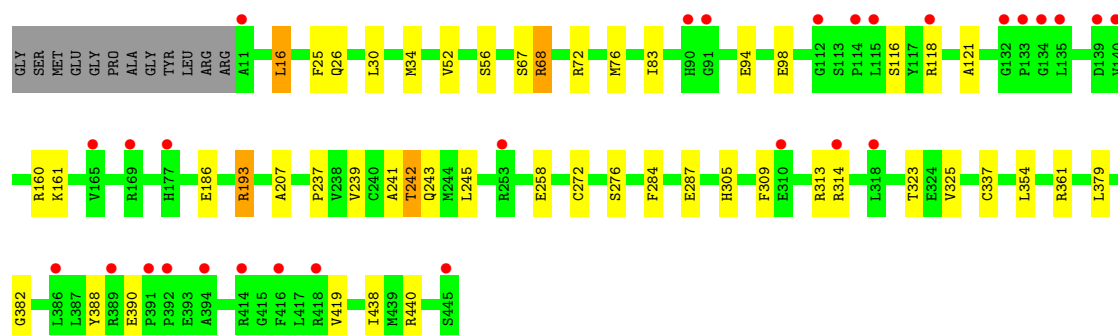
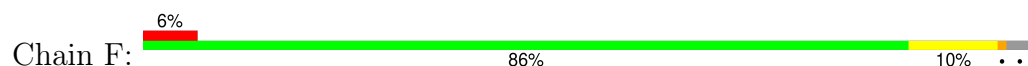
• Molecule 1: Isoform L-type of Pyruvate kinase PKLR



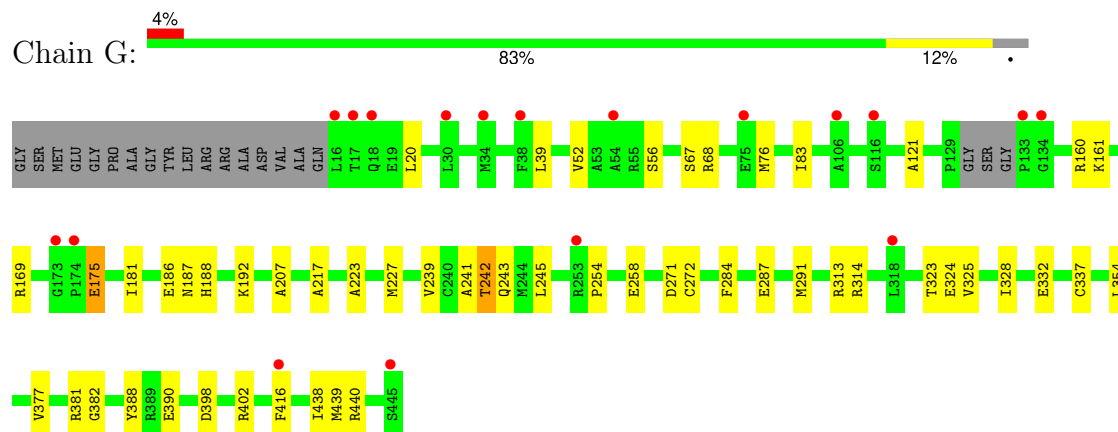
• Molecule 1: Isoform L-type of Pyruvate kinase PKLR



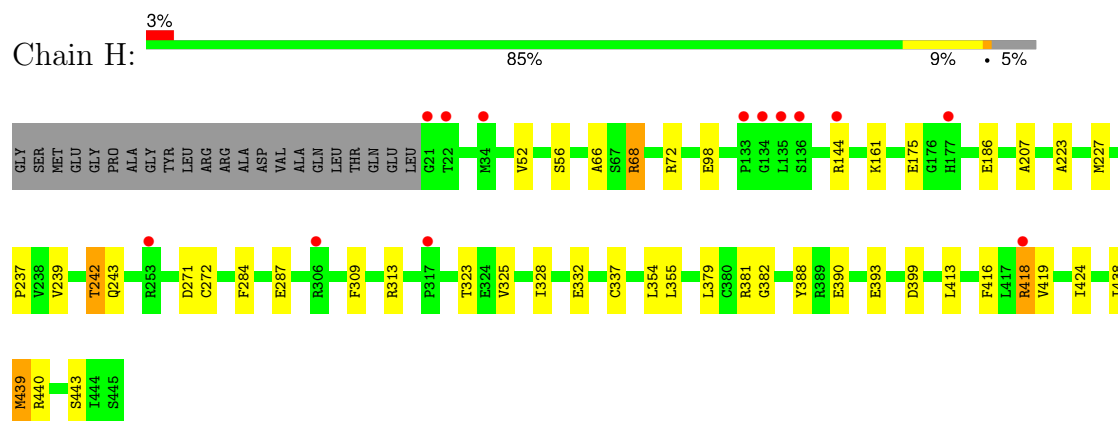
• Molecule 1: Isoform L-type of Pyruvate kinase PKLR



• Molecule 1: Isoform L-type of Pyruvate kinase PKLR



• Molecule 1: Isoform L-type of Pyruvate kinase PKLR



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	207.27Å 112.59Å 187.70Å 90.00° 91.73° 90.00°	Depositor
Resolution (Å)	103.59 – 2.13 103.59 – 2.13	Depositor EDS
% Data completeness (in resolution range)	69.0 (103.59-2.13) 69.0 (103.59-2.13)	Depositor EDS
R_{merge}	0.22	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.57 (at 2.12Å)	Xtriage
Refinement program	BUSTER 2.10.4	Depositor
R, R_{free}	0.215 , 0.248 0.203 , 0.231	Depositor DCC
R_{free} test set	8268 reflections (4.87%)	wwPDB-VP
Wilson B-factor (Å ²)	38.6	Xtriage
Anisotropy	0.001	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 32.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.000 for -h,-k,l	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	27961	wwPDB-VP
Average B, all atoms (Å ²)	45.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 44.21 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.5773e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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: K, 07T, OXL, FBP, 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	A	0.66	0/3341	1.01	1/4517 (0.0%)
1	B	0.67	0/3429	1.00	2/4636 (0.0%)
1	C	0.74	1/3343 (0.0%)	1.02	5/4519 (0.1%)
1	D	0.73	0/3341	1.02	5/4517 (0.1%)
1	E	0.66	0/3373	1.01	4/4560 (0.1%)
1	F	0.72	1/3420 (0.0%)	1.02	3/4625 (0.1%)
1	G	0.74	0/3371	1.02	4/4557 (0.1%)
1	H	0.75	0/3352	1.03	3/4531 (0.1%)
All	All	0.71	2/26970 (0.0%)	1.02	27/36462 (0.1%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	276	SER	CA-C	7.71	1.56	1.52
1	F	276	SER	CA-C	5.00	1.54	1.52

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	159	VAL	N-CA-CB	7.51	118.72	110.53
1	G	416	PHE	CA-CB-CG	6.66	120.45	113.80
1	G	175	GLU	CB-CG-CD	6.32	123.34	112.60
1	H	416	PHE	CA-CB-CG	5.97	119.77	113.80
1	C	416	PHE	CA-CB-CG	5.94	119.74	113.80
1	D	355	LEU	CA-C-N	5.84	128.38	120.38
1	D	355	LEU	C-N-CA	5.84	128.38	120.38
1	D	241	ALA	CA-C-N	5.73	132.49	121.54
1	D	241	ALA	C-N-CA	5.73	132.49	121.54
1	F	241	ALA	CA-C-N	5.58	132.20	121.54
1	F	241	ALA	C-N-CA	5.58	132.20	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	441	VAL	N-CA-CB	5.56	117.72	111.21
1	G	241	ALA	CA-C-N	5.39	131.84	121.54
1	G	241	ALA	C-N-CA	5.39	131.84	121.54
1	H	355	LEU	CA-C-N	5.35	127.70	120.38
1	H	355	LEU	C-N-CA	5.35	127.70	120.38
1	D	416	PHE	CA-CB-CG	5.31	119.11	113.80
1	C	241	ALA	CA-C-N	5.23	131.53	121.54
1	C	241	ALA	C-N-CA	5.23	131.53	121.54
1	C	355	LEU	CA-C-N	5.16	127.45	120.38
1	C	355	LEU	C-N-CA	5.16	127.45	120.38
1	A	416	PHE	CA-CB-CG	5.15	118.95	113.80
1	F	25	PHE	CA-CB-CG	-5.13	108.67	113.80
1	B	241	ALA	CA-C-N	5.11	131.29	121.54
1	B	241	ALA	C-N-CA	5.11	131.29	121.54
1	E	241	ALA	CA-C-N	5.03	131.14	121.54
1	E	241	ALA	C-N-CA	5.03	131.14	121.54

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3249	0	3323	25	0
1	B	3350	0	3417	20	1
1	C	3265	0	3331	24	0
1	D	3261	0	3321	21	0
1	E	3278	0	3342	23	0
1	F	3341	0	3410	25	0
1	G	3290	0	3356	31	0
1	H	3269	0	3334	26	0
2	A	20	0	10	0	0
2	B	20	0	10	0	0
2	C	20	0	10	0	0
2	D	20	0	10	0	0
2	E	20	0	10	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	F	20	0	10	0	0
2	G	20	0	10	0	0
2	H	20	0	10	0	0
3	A	6	0	0	0	0
3	B	6	0	0	0	0
3	C	6	0	0	1	0
3	D	6	0	0	0	0
3	E	6	0	0	0	0
3	F	6	0	0	0	0
3	G	6	0	0	0	0
3	H	6	0	0	0	0
4	A	50	0	32	1	0
4	B	50	0	32	1	0
4	E	50	0	32	1	0
4	F	50	0	32	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
5	G	1	0	0	0	0
5	H	1	0	0	0	0
6	A	1	0	0	0	0
6	B	1	0	0	0	0
6	C	1	0	0	0	0
6	D	1	0	0	0	0
6	E	1	0	0	0	0
6	F	1	0	0	0	0
6	G	1	0	0	0	0
6	H	1	0	0	0	0
7	A	110	0	0	0	0
7	B	111	0	0	0	0
7	C	173	0	0	0	0
7	D	201	0	0	2	0
7	E	121	0	0	0	0
7	F	149	0	0	1	0
7	G	169	0	0	0	0
7	H	200	0	0	0	0
All	All	27961	0	27042	170	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 3.

All (170) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:313:ARG:HG3	1:C:328:ILE:HD11	1.58	0.83
1:G:440:ARG:HG2	1:H:438:ILE:HG12	1.62	0.79
1:A:320[A]:ARG:HD3	1:B:16:LEU:HD11	1.64	0.79
1:A:438:ILE:HG12	1:B:440:ARG:HG2	1.63	0.79
1:G:56:SER:HB2	1:G:382:GLY:HA2	1.66	0.77
1:C:324[A]:GLU:HG3	1:C:354:LEU:HD13	1.72	0.71
1:C:56:SER:HB2	1:C:382:GLY:HA2	1.75	0.69
1:E:438:ILE:HG12	1:F:440:ARG:HG2	1.75	0.69
1:G:324[A]:GLU:HG3	1:G:354:LEU:HD13	1.75	0.68
1:D:56:SER:HB2	1:D:382:GLY:HA2	1.76	0.67
1:H:56:SER:HB2	1:H:382:GLY:HA2	1.76	0.66
1:E:440:ARG:HG2	1:F:438:ILE:HG12	1.77	0.65
1:F:309:PHE:CE2	1:F:313:ARG:NH1	2.65	0.65
1:A:309:PHE:CE2	1:A:313:ARG:NH1	2.65	0.64
1:E:56:SER:HB2	1:E:382:GLY:HA2	1.80	0.64
1:B:56:SER:HB2	1:B:382:GLY:HA2	1.80	0.63
1:A:56:SER:HB2	1:A:382:GLY:HA2	1.81	0.62
1:C:440:ARG:HG2	1:D:438:ILE:HG12	1.80	0.62
1:G:438:ILE:HG12	1:H:440[A]:ARG:HG2	1.83	0.61
1:G:313:ARG:HG3	1:G:328:ILE:HD11	1.82	0.61
1:G:313:ARG:NH2	1:H:313:ARG:NH1	2.47	0.61
1:A:313:ARG:NH2	1:B:313:ARG:NH2	2.51	0.59
1:G:56:SER:HB2	1:G:382:GLY:CA	2.34	0.58
1:F:56:SER:HB2	1:F:382:GLY:HA2	1.86	0.58
1:B:313:ARG:HG2	1:B:328:ILE:HD11	1.85	0.57
1:B:65:PRO:HG2	1:B:281:LYS:HE3	1.86	0.57
1:F:116:SER:O	1:F:118:ARG:HD2	2.03	0.57
1:E:313:ARG:HG2	1:E:328:ILE:HD11	1.87	0.56
1:G:242:THR:HG22	1:G:243:GLN:HG3	1.88	0.55
1:H:418:ARG:HH11	1:H:419:VAL:H	1.54	0.55
1:D:430:ARG:HD2	1:D:431:PRO:O	2.07	0.55
1:H:68:ARG:NH2	1:H:98:GLU:HB2	2.21	0.55
1:B:242:THR:HG22	1:B:243:GLN:HG3	1.87	0.54
1:G:169:ARG:HG2	1:G:181:ILE:CD1	2.38	0.54
1:A:309:PHE:HE2	1:A:313:ARG:HH12	1.53	0.54
1:G:398:ASP:O	1:G:402:ARG:HG2	2.08	0.54
1:H:313:ARG:HG2	1:H:328:ILE:HD11	1.89	0.53
1:C:56:SER:HB2	1:C:382:GLY:CA	2.38	0.53
1:F:67:SER:HA	1:F:72:ARG:HG2	1.91	0.53
1:D:56:SER:HB2	1:D:382:GLY:CA	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:239:VAL:HG22	1:F:272:CYS:HB2	1.91	0.52
1:H:56:SER:HB2	1:H:382:GLY:CA	2.40	0.52
1:A:242:THR:HG22	1:A:243:GLN:HG3	1.92	0.51
1:E:320:ARG:HD3	1:F:16:LEU:HD11	1.93	0.51
1:C:242:THR:HG22	1:C:243:GLN:HG3	1.93	0.51
1:A:67:SER:HA	1:A:72:ARG:HG2	1.92	0.51
4:B:603[B]:07T:H5	1:D:308:LEU:HD13	1.91	0.51
1:A:388:TYR:CZ	1:A:390[B]:GLU:HB2	2.46	0.51
1:G:439:MET:HE3	1:H:439:MET:HG2	1.93	0.51
1:A:419:VAL:HG13	1:A:445:SER:HB3	1.92	0.50
1:D:242:THR:HG22	1:D:243:GLN:HG3	1.93	0.50
1:G:332[A]:GLU:OE1	1:H:332[A]:GLU:OE1	2.29	0.50
1:F:83:ILE:HG12	1:F:121:ALA:HB3	1.93	0.50
1:F:68:ARG:NH2	1:F:98:GLU:HB3	2.27	0.50
1:C:332[B]:GLU:OE2	1:D:332[B]:GLU:OE1	2.30	0.49
1:G:388:TYR:CZ	1:G:390:GLU:HB2	2.47	0.49
1:F:242:THR:HG22	1:F:243:GLN:HG3	1.95	0.49
1:H:239:VAL:HG22	1:H:272:CYS:HB2	1.94	0.49
1:G:337:CYS:HB3	1:H:325:VAL:HG21	1.95	0.49
1:A:430:ARG:HD2	1:A:431:PRO:O	2.13	0.48
1:C:83:ILE:HG12	1:C:121:ALA:HB3	1.94	0.48
1:B:239:VAL:HG22	1:B:272:CYS:HB2	1.95	0.48
1:D:68:ARG:NH2	1:D:98:GLU:HB2	2.29	0.48
1:E:83:ILE:HG12	1:E:121:ALA:HB3	1.96	0.48
1:F:284:PHE:HB3	1:F:287:GLU:HB2	1.95	0.48
1:B:310:GLU:HG2	1:B:313:ARG:HH22	1.79	0.47
1:A:239:VAL:HG22	1:A:272:CYS:HB2	1.95	0.47
1:D:71[B]:GLU:CD	1:D:71[B]:GLU:H	2.22	0.47
1:G:83:ILE:HG12	1:G:121:ALA:HB3	1.96	0.47
1:B:56:SER:HB2	1:B:382:GLY:CA	2.45	0.47
1:E:239:VAL:HG22	1:E:272:CYS:HB2	1.96	0.47
1:E:284:PHE:HB3	1:E:287:GLU:HB2	1.96	0.47
1:B:83:ILE:HG12	1:B:121:ALA:HB3	1.97	0.47
1:F:390:GLU:HG2	7:F:775:HOH:O	2.14	0.47
1:H:186:GLU:HG2	1:H:207:ALA:HB3	1.96	0.47
1:C:306:ARG:HD3	1:D:314:ARG:HH21	1.79	0.47
1:H:242:THR:HG22	1:H:243:GLN:HG3	1.96	0.47
1:A:56:SER:HB2	1:A:382:GLY:CA	2.45	0.46
1:D:83:ILE:HG12	1:D:121:ALA:HB3	1.95	0.46
1:A:284:PHE:HB3	1:A:287:GLU:HB2	1.98	0.46
1:F:30:LEU:O	1:F:34:MET:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:67:SER:HB2	1:C:76[B]:MET:SD	2.56	0.46
1:E:242:THR:HG22	1:E:243:GLN:HG3	1.97	0.46
1:A:337:CYS:HB3	1:B:325:VAL:HG21	1.97	0.46
1:A:186:GLU:HG2	1:A:207:ALA:HB3	1.97	0.46
1:A:39:LEU:HB2	4:A:603[B]:07T:H14	1.97	0.46
1:D:239:VAL:HG22	1:D:272:CYS:HB2	1.98	0.46
1:G:254:PRO:HG3	1:G:291:MET:HG2	1.97	0.46
1:E:68:ARG:NH2	1:E:98:GLU:HB3	2.31	0.46
1:E:56:SER:HB2	1:E:382:GLY:CA	2.46	0.45
1:C:325:VAL:HG21	1:D:337:CYS:HB3	1.98	0.45
1:C:239:VAL:HG22	1:C:272:CYS:HB2	1.99	0.45
1:E:132:GLY:N	1:E:133:PRO:HD3	2.32	0.45
1:F:56:SER:HB2	1:F:382:GLY:CA	2.46	0.45
1:H:66:ALA:O	1:H:72:ARG:HD2	2.16	0.45
1:B:30:LEU:O	1:B:34:MET:HG2	2.17	0.45
1:C:223:ALA:O	1:C:227:MET:HG3	2.16	0.45
1:E:323:THR:HG22	1:E:354:LEU:HD12	1.99	0.45
1:F:160:ARG:O	1:F:193:ARG:HG3	2.17	0.45
1:D:219:LYS:NZ	7:D:704:HOH:O	2.50	0.44
1:D:440:ARG:HD2	7:D:851:HOH:O	2.16	0.44
1:A:83:ILE:HG12	1:A:121:ALA:HB3	2.00	0.44
1:G:67:SER:HB2	1:G:76[B]:MET:SD	2.57	0.44
1:A:310[B]:GLU:HG2	1:A:313:ARG:HH21	1.83	0.44
1:C:189:GLU:HG2	1:C:193:ARG:HD2	1.99	0.44
1:G:186:GLU:HG2	1:G:207:ALA:HB3	2.00	0.44
1:G:239:VAL:HG22	1:G:272:CYS:HB2	2.00	0.44
1:E:310[B]:GLU:OE1	1:E:313:ARG:NH1	2.51	0.44
1:H:237:PRO:HB3	1:H:379:LEU:O	2.18	0.44
1:B:284:PHE:HB3	1:B:287:GLU:HB2	2.00	0.43
1:C:284:PHE:HB3	1:C:287:GLU:HB2	2.00	0.43
1:G:188:HIS:CE1	1:G:192:LYS:HG3	2.53	0.43
1:A:271:ASP:HA	1:A:381:ARG:HB2	2.00	0.43
1:H:223:ALA:O	1:H:227:MET:HG3	2.19	0.43
1:A:332:GLU:OE2	1:B:332[A]:GLU:OE1	2.36	0.43
1:G:313:ARG:HH22	1:H:313:ARG:NH1	2.15	0.43
1:H:424:ILE:HG23	1:H:439:MET:HE3	2.00	0.43
1:H:388:TYR:CE2	1:H:390:GLU:HB2	2.54	0.43
1:D:241:ALA:HB1	1:D:274:MET:HE2	2.01	0.43
1:G:245:LEU:HD23	1:G:258:GLU:HB3	2.01	0.43
1:A:86:LEU:HD21	1:A:122:ILE:CG2	2.49	0.42
1:B:245:LEU:HD23	1:B:258:GLU:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:137:GLU:O	1:E:141:ARG:HD3	2.19	0.42
1:E:223:ALA:O	1:E:227:MET:HG3	2.19	0.42
1:H:309:PHE:CZ	1:H:313:ARG:HD3	2.54	0.42
1:C:332[A]:GLU:OE1	1:D:332[A]:GLU:OE1	2.38	0.42
1:D:323:THR:HG22	1:D:354:LEU:HD12	2.01	0.42
1:G:325:VAL:HG21	1:H:337:CYS:HB3	2.01	0.42
1:D:354:LEU:O	1:D:357:ARG:HG2	2.20	0.42
1:E:325:VAL:HG21	1:F:337:CYS:HB3	2.00	0.42
4:E:603[A]:07T:H14	1:G:39:LEU:HB2	2.00	0.42
1:G:223:ALA:O	1:G:227:MET:HG3	2.19	0.42
1:A:318:LEU:HB3	1:B:16:LEU:HD22	2.00	0.42
1:A:323:THR:HG22	1:A:354:LEU:HD12	2.01	0.42
1:E:115:LEU:HD21	1:E:409[B]:GLU:HB3	2.02	0.42
1:E:237:PRO:HB3	1:E:379:LEU:O	2.19	0.42
1:G:284:PHE:HB3	1:G:287:GLU:HB2	2.00	0.42
1:G:323:THR:HG22	1:G:354:LEU:HD12	2.02	0.42
1:C:254:PRO:HG3	1:C:291:MET:HG2	2.02	0.42
1:F:67:SER:HB2	1:F:76[B]:MET:SD	2.60	0.42
1:F:323:THR:HG22	1:F:354:LEU:HD12	2.02	0.42
1:E:337:CYS:HB3	1:F:325:VAL:HG21	2.01	0.42
1:C:207:ALA:HB1	3:C:602:OXL:C1	2.50	0.42
1:C:388:TYR:CE2	1:C:390:GLU:HB2	2.54	0.42
1:E:254:PRO:HG3	1:E:291:MET:HG2	2.02	0.41
1:F:305:HIS:CE1	1:F:361:ARG:HG2	2.55	0.41
1:G:169:ARG:HG2	1:G:181:ILE:HD12	2.01	0.41
1:H:271:ASP:HA	1:H:381:ARG:HB2	2.02	0.41
1:C:388:TYR:CZ	1:C:390:GLU:HB2	2.55	0.41
1:D:121:ALA:HA	1:D:375:ARG:HB3	2.02	0.41
1:F:245:LEU:HD23	1:F:258:GLU:HB3	2.02	0.41
1:H:323:THR:HG22	1:H:354:LEU:HD12	2.02	0.41
1:H:284:PHE:HB3	1:H:287:GLU:HB2	2.03	0.41
1:C:153:ILE:HG12	1:C:379:LEU:HD11	2.03	0.41
1:C:241:ALA:HB1	1:C:274:MET:HE2	2.02	0.41
1:D:284:PHE:HB3	1:D:287:GLU:HB2	2.03	0.41
1:F:237:PRO:HB3	1:F:379:LEU:O	2.21	0.41
1:B:67:SER:HB2	1:B:76[B]:MET:SD	2.60	0.41
1:B:237:PRO:HB3	1:B:379:LEU:O	2.21	0.41
1:E:253:ARG:HH21	1:G:217:ALA:HB2	1.86	0.41
1:H:393:GLU:HB2	1:H:399:ASP:HB2	2.02	0.41
1:B:388:TYR:CZ	1:B:390:GLU:HB2	2.56	0.40
1:C:70:VAL:HG12	1:C:74:LYS:HE3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:186:GLU:HG2	1:F:207:ALA:HB3	2.03	0.40
1:F:388:TYR:CZ	1:F:390:GLU:HB2	2.56	0.40
1:G:271:ASP:HA	1:G:381:ARG:HB2	2.02	0.40
1:E:186:GLU:HG2	1:E:207:ALA:HB3	2.03	0.40
1:A:132:GLY:N	1:A:133:PRO:HD3	2.36	0.40
1:C:160:ARG:HD3	1:C:187:ASN:HD21	1.86	0.40
1:G:160:ARG:HD3	1:G:187:ASN:HD21	1.87	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:413:LEU:O	1:B:413:LEU:O[2_555]	2.16	0.04

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	431/447 (96%)	425 (99%)	5 (1%)	1 (0%)	43	44
1	B	442/447 (99%)	436 (99%)	5 (1%)	1 (0%)	43	44
1	C	428/447 (96%)	420 (98%)	7 (2%)	1 (0%)	43	44
1	D	431/447 (96%)	427 (99%)	3 (1%)	1 (0%)	43	44
1	E	434/447 (97%)	426 (98%)	6 (1%)	2 (0%)	24	22
1	F	441/447 (99%)	437 (99%)	3 (1%)	1 (0%)	43	44
1	G	432/447 (97%)	424 (98%)	7 (2%)	1 (0%)	43	44
1	H	432/447 (97%)	428 (99%)	3 (1%)	1 (0%)	43	44
All	All	3471/3576 (97%)	3423 (99%)	39 (1%)	9 (0%)	36	36

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	242	THR
1	B	242	THR
1	C	242	THR
1	D	242	THR
1	E	242	THR
1	F	242	THR
1	G	242	THR
1	H	242	THR
1	E	133	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	346/352 (98%)	334 (96%)	12 (4%)	32	34
1	B	353/352 (100%)	345 (98%)	8 (2%)	44	50
1	C	345/352 (98%)	334 (97%)	11 (3%)	34	37
1	D	344/352 (98%)	334 (97%)	10 (3%)	37	41
1	E	348/352 (99%)	335 (96%)	13 (4%)	30	31
1	F	352/352 (100%)	343 (97%)	9 (3%)	40	45
1	G	349/352 (99%)	342 (98%)	7 (2%)	48	55
1	H	345/352 (98%)	335 (97%)	10 (3%)	37	41
All	All	2782/2816 (99%)	2702 (97%)	80 (3%)	39	41

All (80) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	26	GLN
1	A	52	VAL
1	A	86	LEU
1	A	160	ARG
1	A	161	LYS
1	A	324	GLU
1	A	377	VAL

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Mol	Chain	Res	Type
1	A	402	ARG
1	A	430	ARG
1	A	439[A]	MET
1	A	439[B]	MET
1	A	442	LEU
1	B	52	VAL
1	B	68	ARG
1	B	118	ARG
1	B	161	LYS
1	B	165	VAL
1	B	281	LYS
1	B	314	ARG
1	B	414	ARG
1	C	19	GLU
1	C	52	VAL
1	C	68	ARG
1	C	116[A]	SER
1	C	116[B]	SER
1	C	160	ARG
1	C	161	LYS
1	C	172[A]	LEU
1	C	172[B]	LEU
1	C	314	ARG
1	C	433	SER
1	D	52	VAL
1	D	68	ARG
1	D	118	ARG
1	D	144[A]	ARG
1	D	144[B]	ARG
1	D	161	LYS
1	D	401	ASP
1	D	413	LEU
1	D	430	ARG
1	D	439	MET
1	E	52	VAL
1	E	68	ARG
1	E	127	LYS
1	E	135	LEU
1	E	159	VAL
1	E	161	LYS
1	E	175	GLU
1	E	314	ARG

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Mol	Chain	Res	Type
1	E	324	GLU
1	E	413	LEU
1	E	439[A]	MET
1	E	439[B]	MET
1	E	441	VAL
1	F	16	LEU
1	F	26	GLN
1	F	52	VAL
1	F	68	ARG
1	F	94	GLU
1	F	161	LYS
1	F	193	ARG
1	F	314	ARG
1	F	419	VAL
1	G	20	LEU
1	G	52	VAL
1	G	68	ARG
1	G	161	LYS
1	G	175	GLU
1	G	314	ARG
1	G	377	VAL
1	H	52	VAL
1	H	68	ARG
1	H	144[A]	ARG
1	H	144[B]	ARG
1	H	161	LYS
1	H	175	GLU
1	H	413	LEU
1	H	418	ARG
1	H	439	MET
1	H	443	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	90	HIS
1	B	15	GLN
1	B	90	HIS
1	C	90	HIS
1	E	90	HIS
1	F	15	GLN
1	F	90	HIS

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Mol	Chain	Res	Type
1	G	90	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 40 ligands modelled in this entry, 16 are monoatomic - leaving 24 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	$\# Z > 2$
2	FBP	C	601	-	18,20,20	0.59	0	21,32,32	0.55	0
2	FBP	E	601	-	18,20,20	0.57	0	21,32,32	0.54	0
2	FBP	D	601	-	18,20,20	0.56	0	21,32,32	0.89	1 (4%)
3	OXL	F	602	5	5,5,5	2.26	3 (60%)	6,6,6	2.57	3 (50%)
4	07T	F	603[B]	-	26,28,28	1.39	4 (15%)	30,42,42	1.34	3 (10%)
4	07T	B	603[A]	-	26,28,28	1.22	4 (15%)	30,42,42	1.31	5 (16%)
4	07T	A	603[A]	-	26,28,28	1.41	5 (19%)	30,42,42	1.23	2 (6%)
3	OXL	G	602	5	5,5,5	2.47	2 (40%)	6,6,6	1.29	1 (16%)
3	OXL	H	602	5	5,5,5	1.97	2 (40%)	6,6,6	1.86	1 (16%)
3	OXL	A	602	5	5,5,5	1.89	2 (40%)	6,6,6	2.55	3 (50%)
2	FBP	H	601	-	18,20,20	0.59	0	21,32,32	0.79	1 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	FBP	A	601	-	18,20,20	0.44	0	21,32,32	0.59	0
3	OXL	C	602	5	5,5,5	2.23	3 (60%)	6,6,6	2.01	2 (33%)
4	07T	E	603[B]	-	26,28,28	1.34	2 (7%)	30,42,42	1.37	6 (20%)
3	OXL	D	602	5	5,5,5	2.09	2 (40%)	6,6,6	1.94	2 (33%)
4	07T	F	603[A]	-	26,28,28	1.28	3 (11%)	30,42,42	1.45	5 (16%)
2	FBP	F	601	-	18,20,20	0.33	0	21,32,32	0.59	0
3	OXL	B	602	5	5,5,5	2.25	2 (40%)	6,6,6	1.41	1 (16%)
3	OXL	E	602	5	5,5,5	2.03	2 (40%)	6,6,6	1.73	2 (33%)
2	FBP	B	601	-	18,20,20	0.54	0	21,32,32	0.94	1 (4%)
2	FBP	G	601	-	18,20,20	0.56	0	21,32,32	0.57	0
4	07T	B	603[B]	-	26,28,28	1.37	2 (7%)	30,42,42	1.29	4 (13%)
4	07T	A	603[B]	-	26,28,28	1.26	4 (15%)	30,42,42	1.20	5 (16%)
4	07T	E	603[A]	-	26,28,28	1.11	1 (3%)	30,42,42	1.33	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
2	FBP	C	601	-	-	2/13/32/32	0/1/1/1
2	FBP	E	601	-	-	3/13/32/32	0/1/1/1
2	FBP	D	601	-	-	2/13/32/32	0/1/1/1
3	OXL	F	602	5	-	0/4/4/4	-
4	07T	F	603[B]	-	-	0/4/8/8	0/4/4/4
4	07T	B	603[A]	-	-	0/4/8/8	0/4/4/4
4	07T	A	603[A]	-	-	0/4/8/8	0/4/4/4
3	OXL	G	602	5	-	4/4/4/4	-
3	OXL	H	602	5	-	4/4/4/4	-
3	OXL	A	602	5	-	4/4/4/4	-
2	FBP	H	601	-	-	2/13/32/32	0/1/1/1
2	FBP	A	601	-	-	2/13/32/32	0/1/1/1
3	OXL	C	602	5	-	4/4/4/4	-
4	07T	E	603[B]	-	-	0/4/8/8	0/4/4/4
3	OXL	D	602	5	-	4/4/4/4	-
4	07T	F	603[A]	-	-	0/4/8/8	0/4/4/4
2	FBP	F	601	-	-	2/13/32/32	0/1/1/1
3	OXL	B	602	5	-	4/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OXL	E	602	5	-	4/4/4/4	-
2	FBP	B	601	-	-	2/13/32/32	0/1/1/1
2	FBP	G	601	-	-	2/13/32/32	0/1/1/1
4	07T	B	603[B]	-	-	0/4/8/8	0/4/4/4
4	07T	A	603[B]	-	-	0/4/8/8	0/4/4/4
4	07T	E	603[A]	-	-	0/4/8/8	0/4/4/4

All (43) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	602	OXL	O2-C2	4.41	1.33	1.22
3	G	602	OXL	O2-C2	4.26	1.33	1.22
4	E	603[B]	07T	CAU-SAN	-4.25	1.65	1.74
4	B	603[B]	07T	CAL-NAX	4.11	1.52	1.46
4	F	603[B]	07T	CAL-NAX	3.84	1.52	1.46
3	C	602	OXL	O2-C2	3.64	1.31	1.22
3	A	602	OXL	O2-C2	3.50	1.31	1.22
3	D	602	OXL	O4-C2	-3.39	1.21	1.30
3	F	602	OXL	O2-C2	3.38	1.30	1.22
4	E	603[A]	07T	CAU-SAN	-3.31	1.67	1.74
3	E	602	OXL	O4-C2	-3.27	1.21	1.30
3	H	602	OXL	O4-C2	-3.17	1.21	1.30
3	D	602	OXL	O2-C2	3.12	1.30	1.22
4	F	603[A]	07T	CAL-NAX	3.05	1.51	1.46
4	A	603[B]	07T	CAL-NAX	3.05	1.51	1.46
3	F	602	OXL	C2-C1	3.03	1.59	1.54
3	E	602	OXL	O2-C2	3.02	1.30	1.22
4	A	603[A]	07T	CAU-SAN	-3.01	1.67	1.74
4	A	603[A]	07T	CAJ-NAM	3.01	1.33	1.29
3	G	602	OXL	O4-C2	-2.98	1.22	1.30
4	B	603[B]	07T	CAU-SAN	-2.97	1.67	1.74
4	A	603[A]	07T	CAL-NAX	2.88	1.50	1.46
4	B	603[A]	07T	CAU-SAN	-2.86	1.68	1.74
4	F	603[A]	07T	CAU-SAN	-2.85	1.68	1.74
4	B	603[A]	07T	CAJ-NAM	2.72	1.32	1.29
4	A	603[B]	07T	CAU-SAN	-2.55	1.68	1.74
4	F	603[A]	07T	CAJ-NAM	2.51	1.32	1.29
4	F	603[B]	07T	CAU-SAN	-2.49	1.68	1.74
3	H	602	OXL	O2-C2	2.48	1.28	1.22
3	C	602	OXL	C2-C1	2.42	1.58	1.54
4	B	603[A]	07T	CAL-NAX	2.40	1.50	1.46
4	A	603[B]	07T	CAJ-NAM	2.40	1.32	1.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	603[A]	07T	CAV-CAR	2.38	1.49	1.43
4	F	603[B]	07T	CAT-CAU	2.37	1.42	1.39
3	A	602	OXL	O4-C2	-2.33	1.24	1.30
3	B	602	OXL	O4-C2	-2.30	1.24	1.30
3	C	602	OXL	O4-C2	-2.28	1.24	1.30
4	B	603[A]	07T	CAT-CAU	2.26	1.42	1.39
4	F	603[B]	07T	CAJ-NAM	2.17	1.32	1.29
4	A	603[B]	07T	CAV-CAR	2.16	1.48	1.43
4	E	603[B]	07T	CAS-CAU	-2.15	1.38	1.44
4	A	603[A]	07T	CAS-CAU	-2.11	1.38	1.44
3	F	602	OXL	O4-C2	-2.07	1.24	1.30

All (53) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	F	602	OXL	O4-C2-C1	4.55	121.66	112.83
3	A	602	OXL	O4-C2-C1	4.44	121.44	112.83
3	C	602	OXL	O4-C2-C1	4.14	120.87	112.83
3	H	602	OXL	O4-C2-C1	3.82	120.24	112.83
4	F	603[B]	07T	CAL-NAX-CAR	3.54	122.53	119.22
2	B	601	FBP	O6-P2-O4P	3.51	115.92	106.44
3	F	602	OXL	O3-C1-C2	3.36	119.35	112.83
4	B	603[B]	07T	CAL-NAX-CAR	3.34	122.34	119.22
4	F	603[A]	07T	CAU-SAN-CAQ	-3.27	90.98	95.52
3	D	602	OXL	O4-C2-C1	3.22	119.08	112.83
3	E	602	OXL	O4-C2-C1	3.15	118.95	112.83
4	A	603[A]	07T	CAL-NAX-CAR	3.07	122.09	119.22
4	F	603[B]	07T	CAU-SAN-CAQ	-3.05	91.29	95.52
4	F	603[A]	07T	CAL-NAX-CAR	3.00	122.03	119.22
3	A	602	OXL	O2-C2-C1	-2.99	114.40	120.63
3	A	602	OXL	O3-C1-C2	2.97	118.58	112.83
3	D	602	OXL	O3-C1-C2	2.96	118.56	112.83
4	E	603[A]	07T	CAO-CAI-CAP	-2.93	118.16	121.01
4	B	603[A]	07T	CAV-NAW-CAT	-2.87	106.24	108.61
4	F	603[A]	07T	CAV-NAW-CAT	-2.87	106.24	108.61
4	E	603[B]	07T	CAL-NAX-CAR	2.86	121.89	119.22
4	F	603[B]	07T	CAV-NAW-CAT	-2.83	106.27	108.61
4	A	603[B]	07T	CAU-SAN-CAQ	-2.82	91.61	95.52
2	H	601	FBP	O6-P2-O4P	2.80	114.02	106.44
4	B	603[A]	07T	CAU-SAN-CAQ	-2.75	91.70	95.52
2	D	601	FBP	O6-P2-O4P	2.73	113.82	106.44
4	B	603[B]	07T	CAV-NAW-CAT	-2.71	106.37	108.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	603[B]	07T	CAU-SAN-CAQ	-2.68	91.80	95.52
4	E	603[A]	07T	CAV-NAW-CAT	-2.68	106.40	108.61
4	E	603[B]	07T	CAV-NAW-CAT	-2.60	106.47	108.61
4	E	603[A]	07T	CAU-SAN-CAQ	-2.58	91.94	95.52
4	E	603[B]	07T	CAU-SAN-CAQ	-2.57	91.95	95.52
3	B	602	OXL	O4-C2-C1	2.56	117.79	112.83
4	B	603[A]	07T	CAO-CAI-CAP	-2.52	118.56	121.01
4	E	603[B]	07T	CAO-CAI-CAP	-2.42	118.66	121.01
3	F	602	OXL	O2-C2-C1	-2.42	115.60	120.63
3	G	602	OXL	O3-C1-C2	2.41	117.51	112.83
3	E	602	OXL	O3-C1-C2	2.40	117.49	112.83
4	A	603[A]	07T	CAV-NAW-CAT	-2.40	106.63	108.61
4	F	603[A]	07T	CAO-CAI-CAP	-2.33	118.75	121.01
4	E	603[A]	07T	CAH-CAP-CAI	2.32	121.75	118.55
4	A	603[B]	07T	CAL-NAX-CAR	2.31	121.38	119.22
4	B	603[A]	07T	CAL-NAX-CAR	2.31	121.38	119.22
4	B	603[A]	07T	CAS-CAU-CAT	-2.22	106.42	108.21
4	A	603[B]	07T	CAS-CAU-CAT	-2.18	106.45	108.21
4	E	603[A]	07T	OAE-SAY-CAB	-2.16	101.59	106.44
4	B	603[B]	07T	CAS-CAU-CAT	-2.16	106.47	108.21
3	C	602	OXL	O2-C2-C1	-2.15	116.15	120.63
4	E	603[B]	07T	OAE-SAY-CAB	-2.11	101.71	106.44
4	A	603[B]	07T	CAV-NAW-CAT	-2.07	106.90	108.61
4	A	603[B]	07T	CAO-CAI-CAP	-2.06	119.01	121.01
4	F	603[A]	07T	OAE-SAY-CAB	-2.06	101.83	106.44
4	E	603[B]	07T	CAH-CAP-CAI	2.03	121.35	118.55

There are no chirality outliers.

All (45) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	FBP	C4-C5-C6-O6
2	B	601	FBP	C4-C5-C6-O6
2	C	601	FBP	C4-C5-C6-O6
2	D	601	FBP	C4-C5-C6-O6
2	E	601	FBP	C4-C5-C6-O6
2	F	601	FBP	C4-C5-C6-O6
2	G	601	FBP	C4-C5-C6-O6
2	H	601	FBP	C4-C5-C6-O6
2	A	601	FBP	O5-C5-C6-O6
2	B	601	FBP	O5-C5-C6-O6
2	C	601	FBP	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
2	D	601	FBP	O5-C5-C6-O6
2	E	601	FBP	O5-C5-C6-O6
2	F	601	FBP	O5-C5-C6-O6
2	G	601	FBP	O5-C5-C6-O6
2	H	601	FBP	O5-C5-C6-O6
3	E	602	OXL	O3-C1-C2-O4
3	H	602	OXL	O3-C1-C2-O4
3	A	602	OXL	O3-C1-C2-O4
3	B	602	OXL	O3-C1-C2-O4
3	D	602	OXL	O3-C1-C2-O4
3	G	602	OXL	O3-C1-C2-O4
3	A	602	OXL	O1-C1-C2-O2
3	D	602	OXL	O1-C1-C2-O2
3	E	602	OXL	O1-C1-C2-O2
3	G	602	OXL	O1-C1-C2-O2
3	H	602	OXL	O1-C1-C2-O2
3	B	602	OXL	O1-C1-C2-O2
3	C	602	OXL	O3-C1-C2-O4
3	C	602	OXL	O1-C1-C2-O2
3	A	602	OXL	O1-C1-C2-O4
3	E	602	OXL	O1-C1-C2-O4
3	B	602	OXL	O3-C1-C2-O2
3	D	602	OXL	O1-C1-C2-O4
3	D	602	OXL	O3-C1-C2-O2
3	E	602	OXL	O3-C1-C2-O2
3	G	602	OXL	O1-C1-C2-O4
3	G	602	OXL	O3-C1-C2-O2
3	H	602	OXL	O1-C1-C2-O4
3	H	602	OXL	O3-C1-C2-O2
3	A	602	OXL	O3-C1-C2-O2
3	B	602	OXL	O1-C1-C2-O4
3	C	602	OXL	O1-C1-C2-O4
2	E	601	FBP	C1-O1-P1-O1P
3	C	602	OXL	O3-C1-C2-O2

There are no ring outliers.

4 monomers are involved in 4 short contacts:

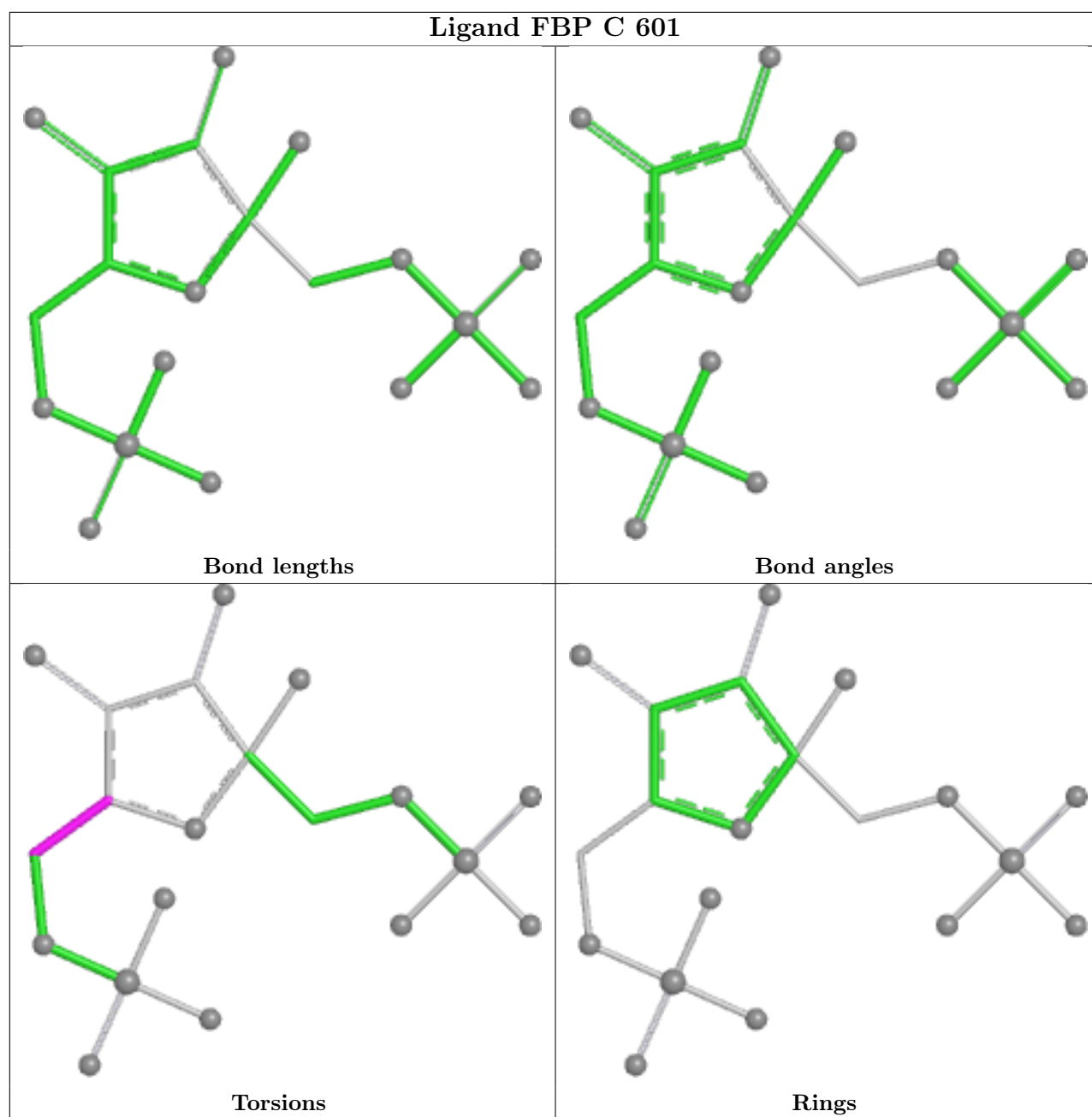
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	602	OXL	1	0
4	B	603[B]	07T	1	0
4	A	603[B]	07T	1	0

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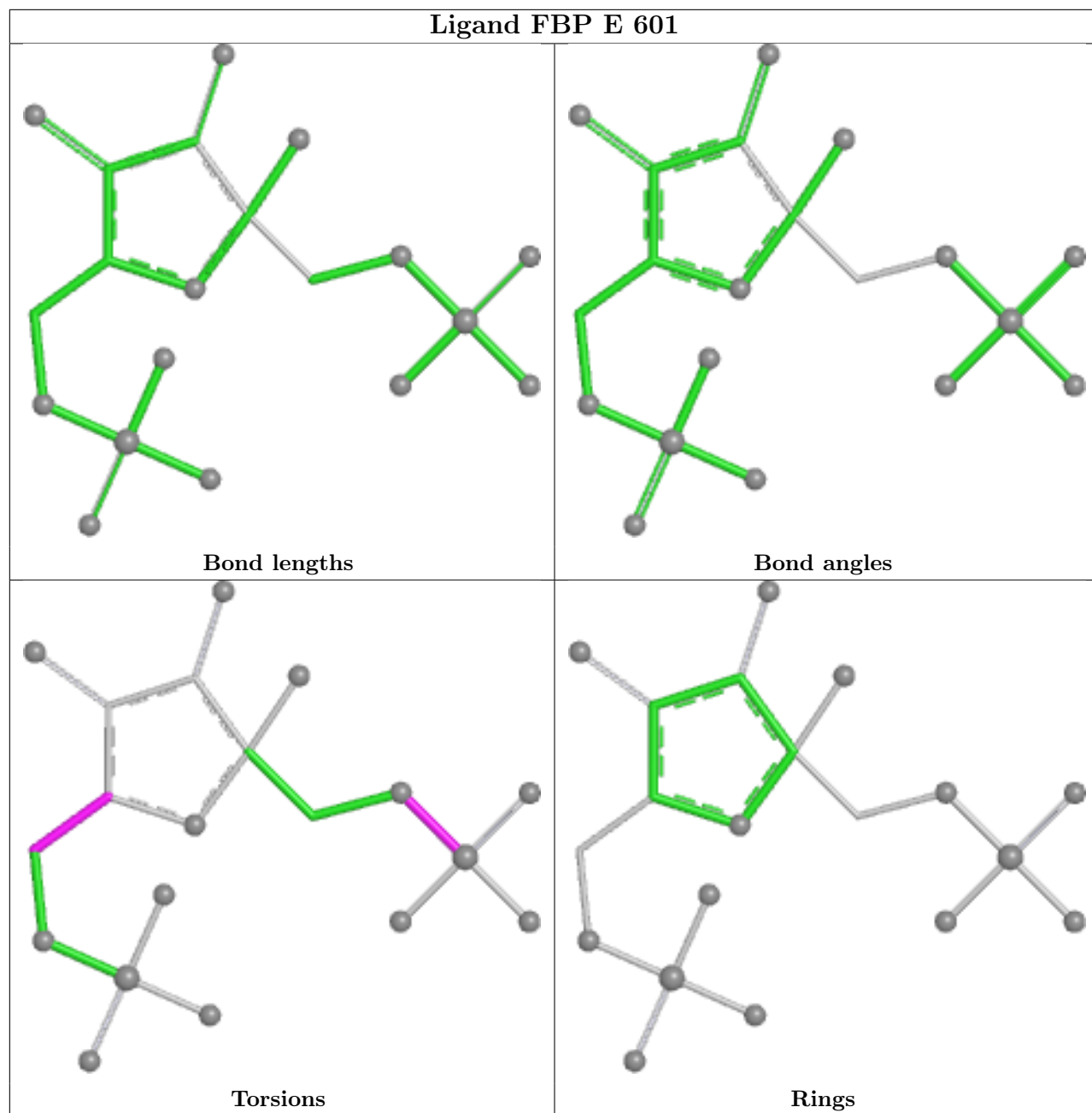
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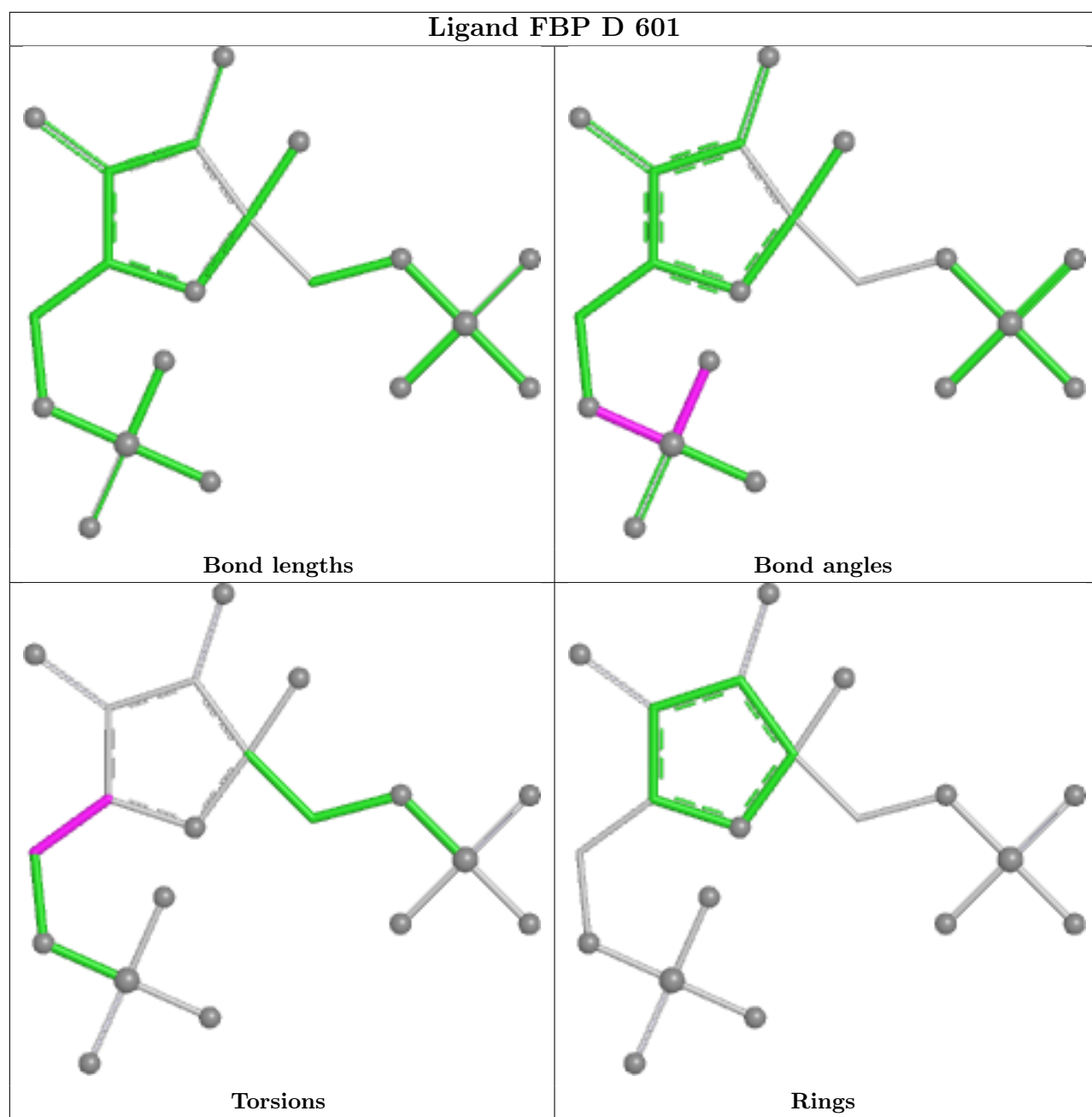
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	E	603[A]	07T	1	0

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

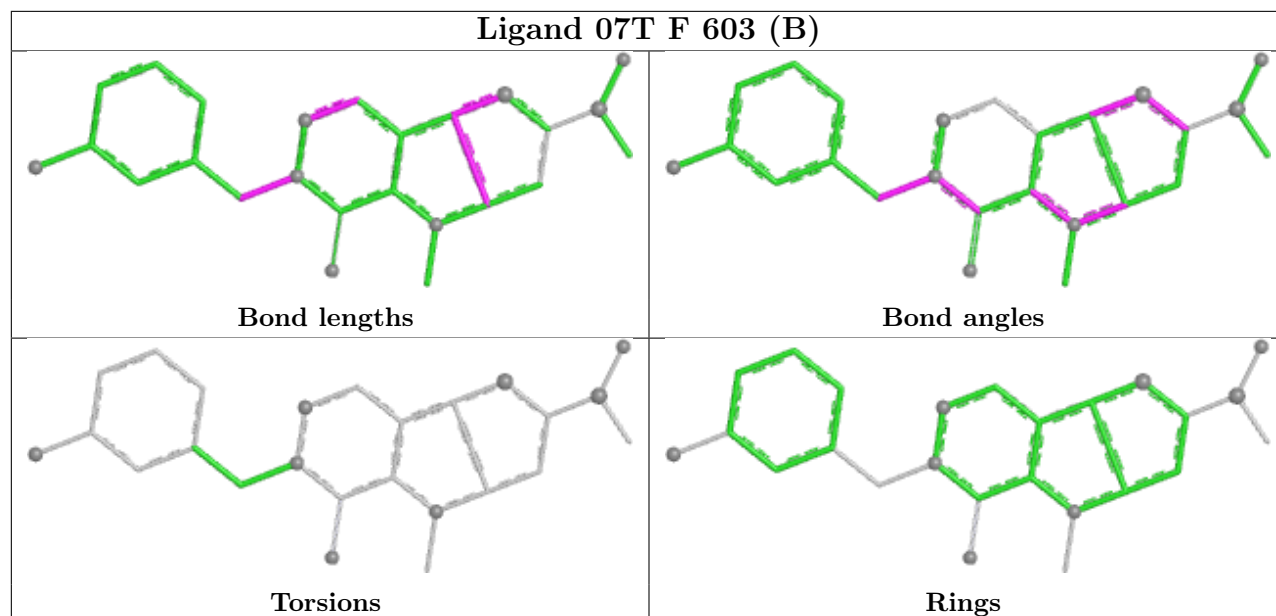


Ligand FBP E 601

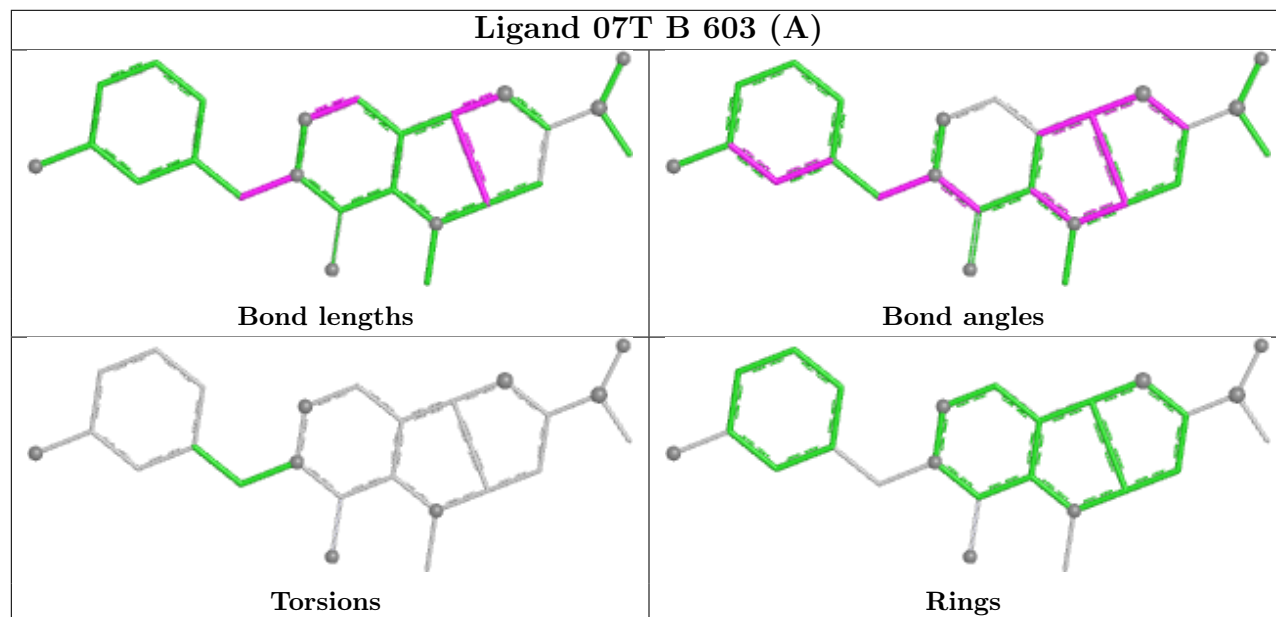


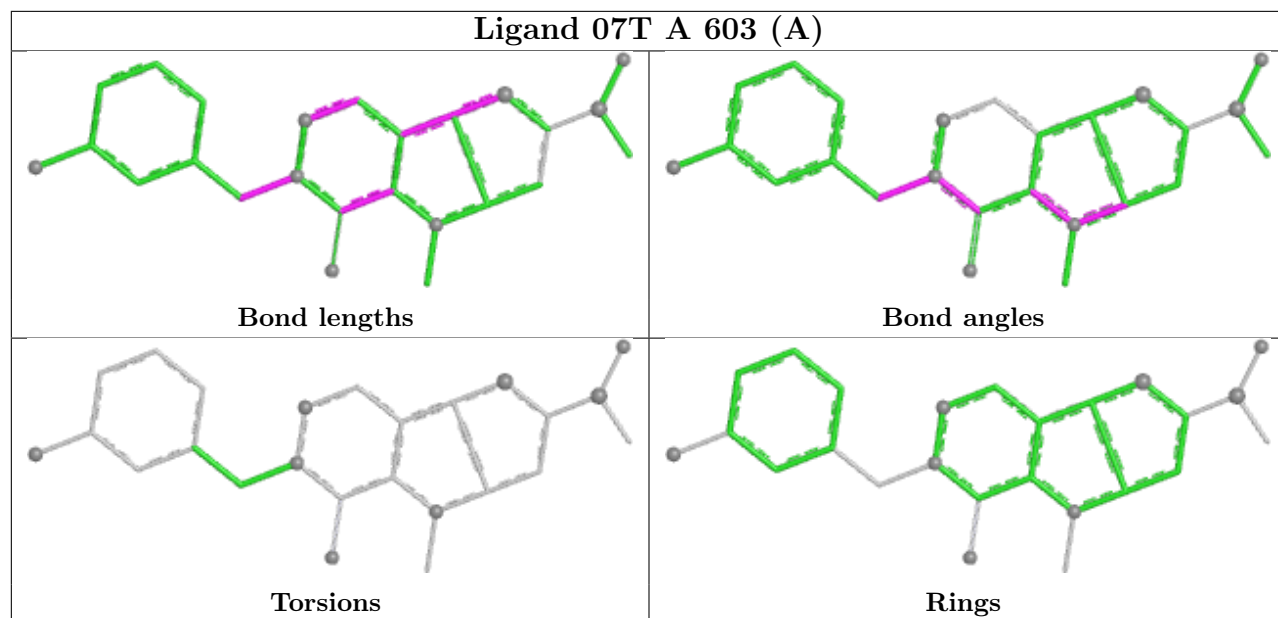


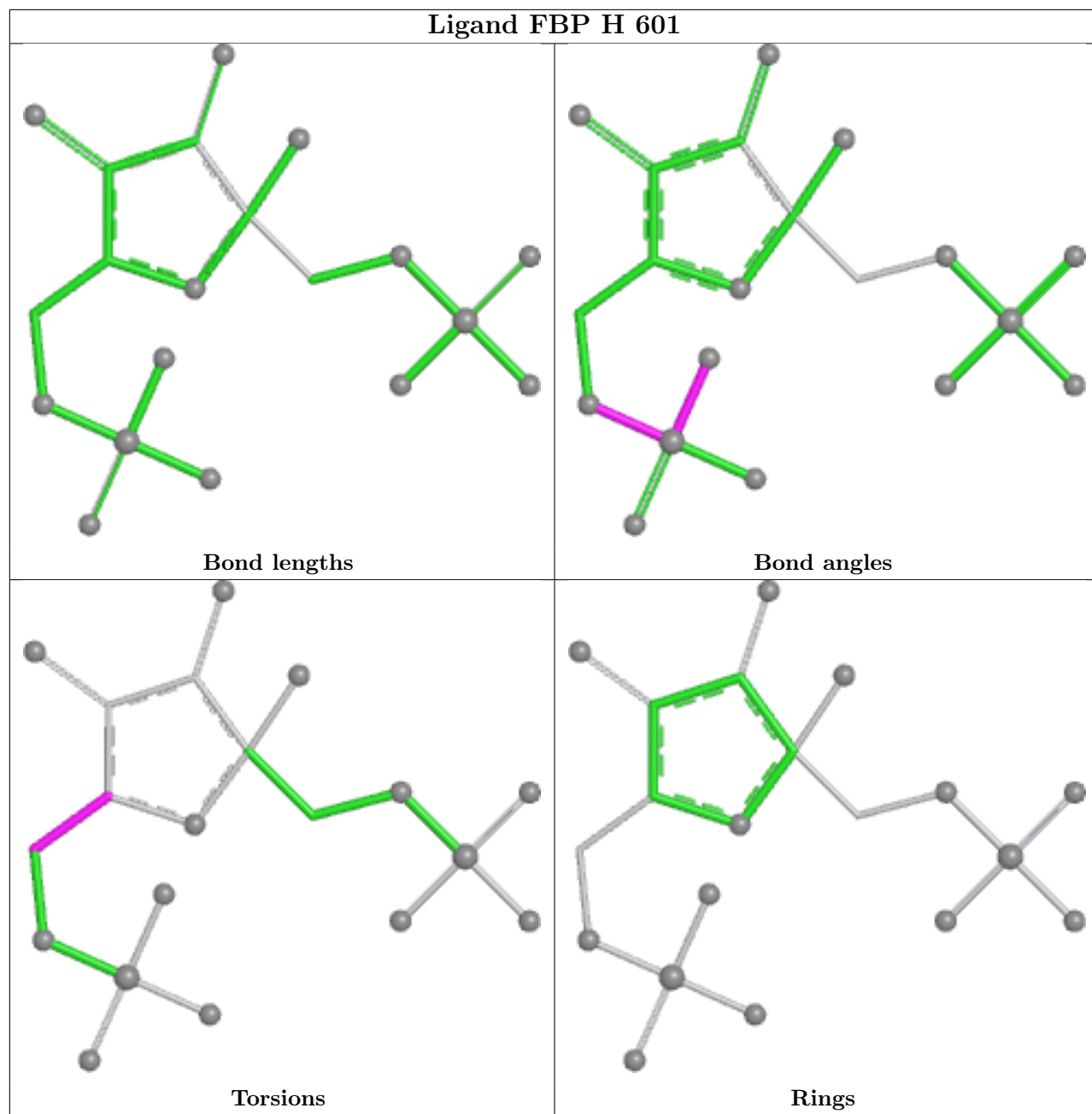
Ligand 07T F 603 (B)

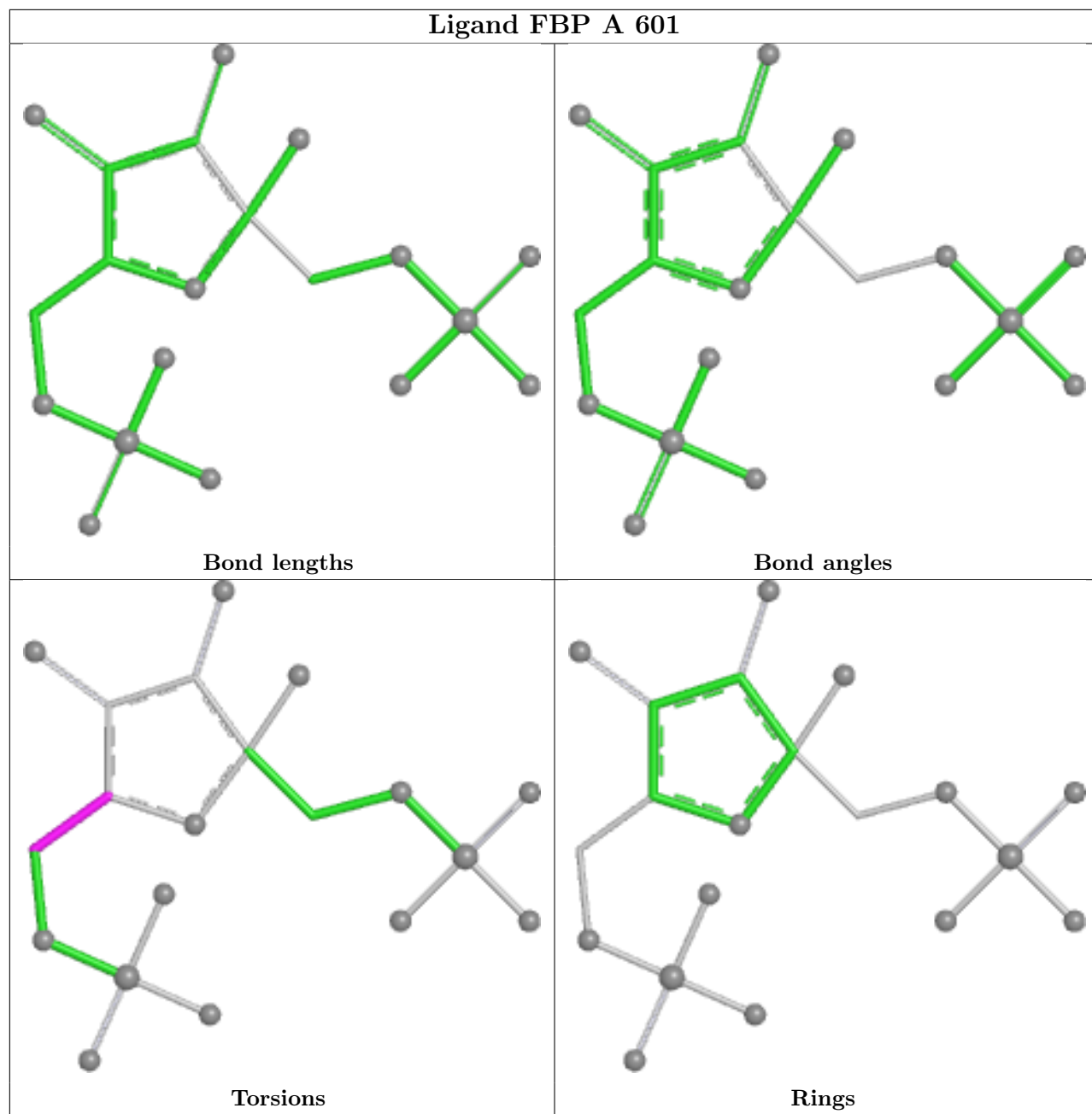


Ligand 07T B 603 (A)

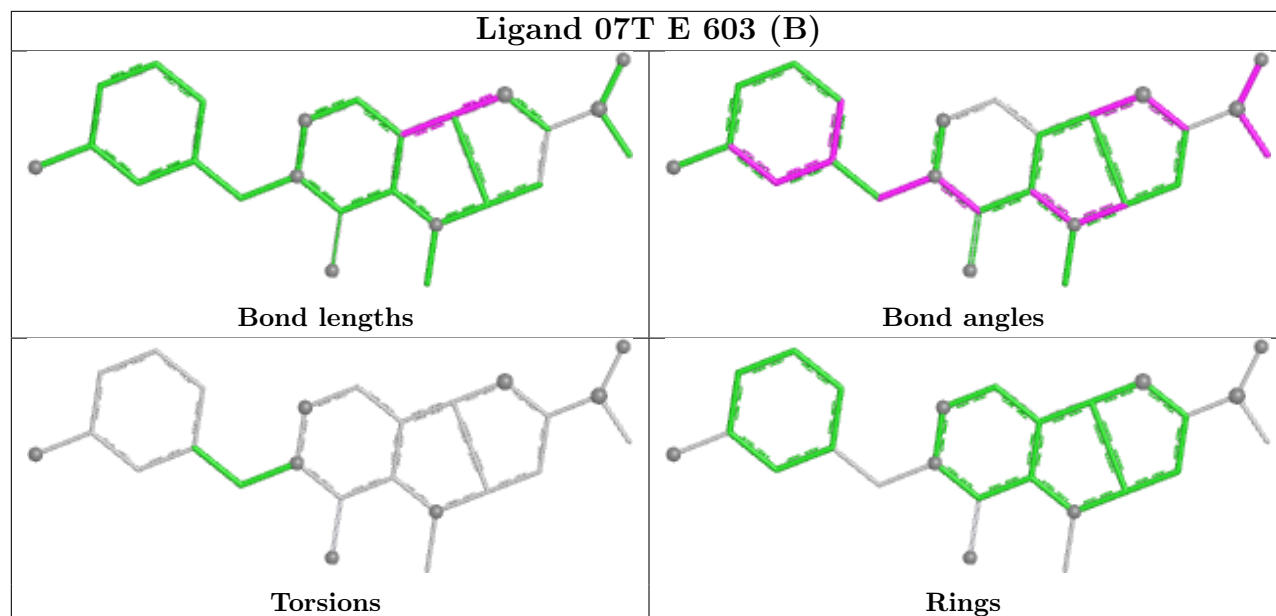




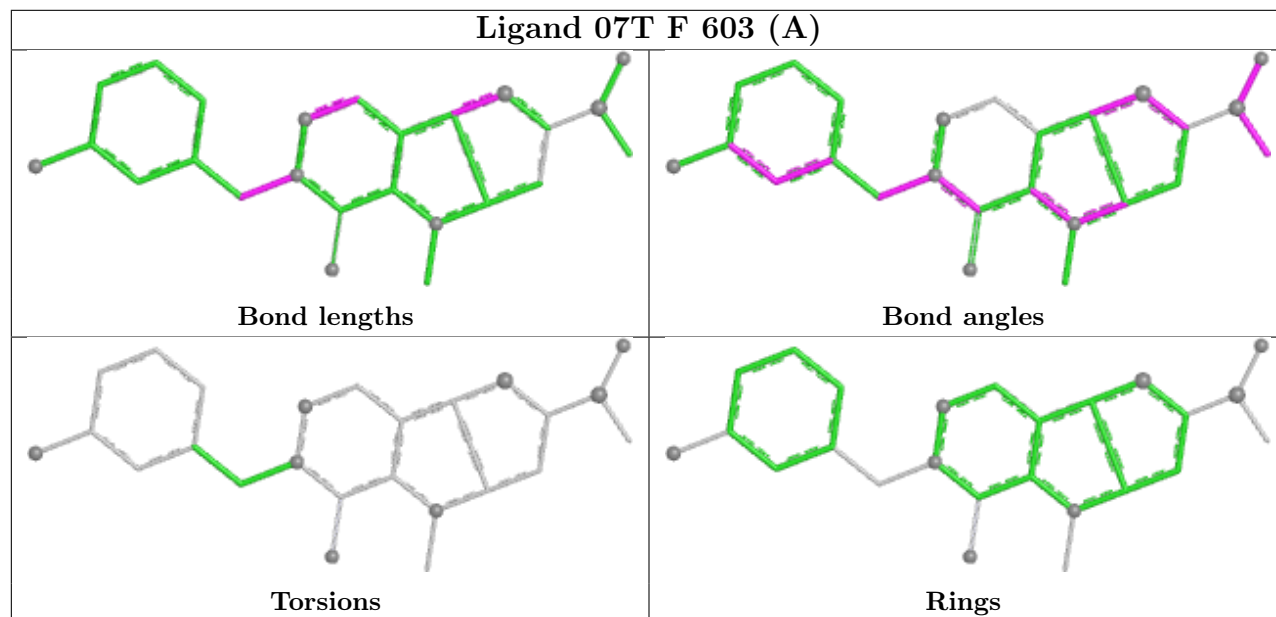


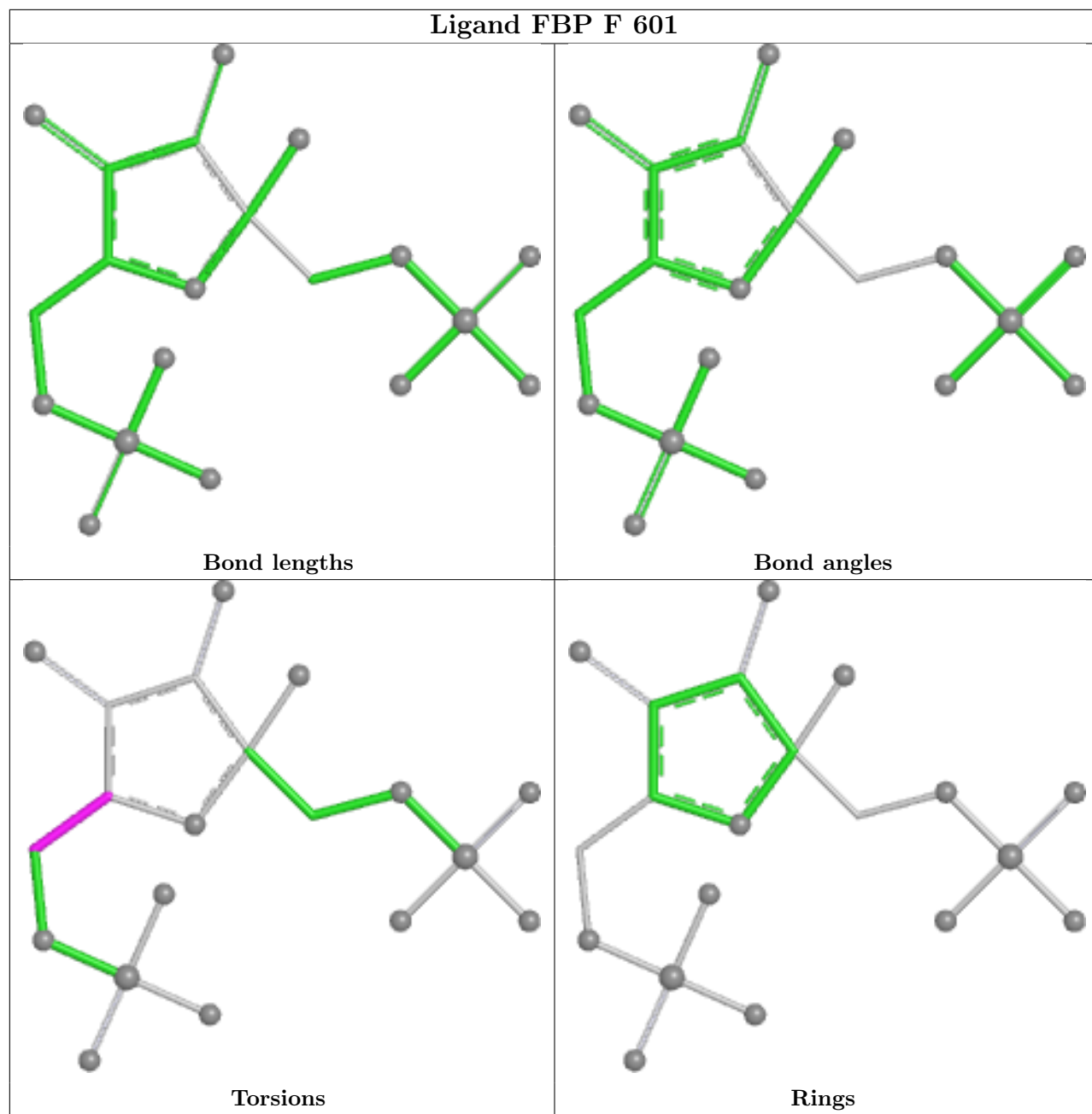


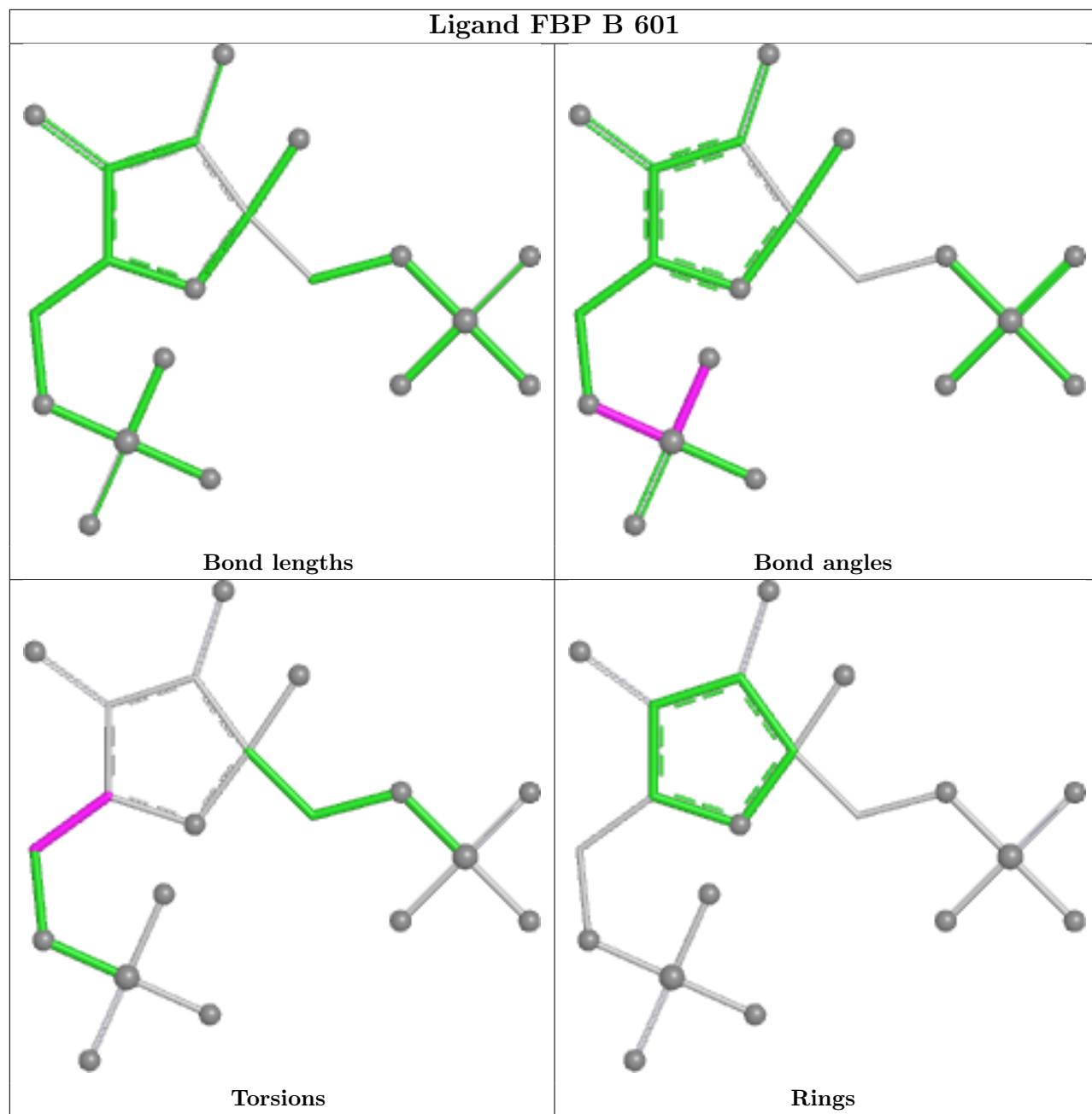
Ligand 07T E 603 (B)

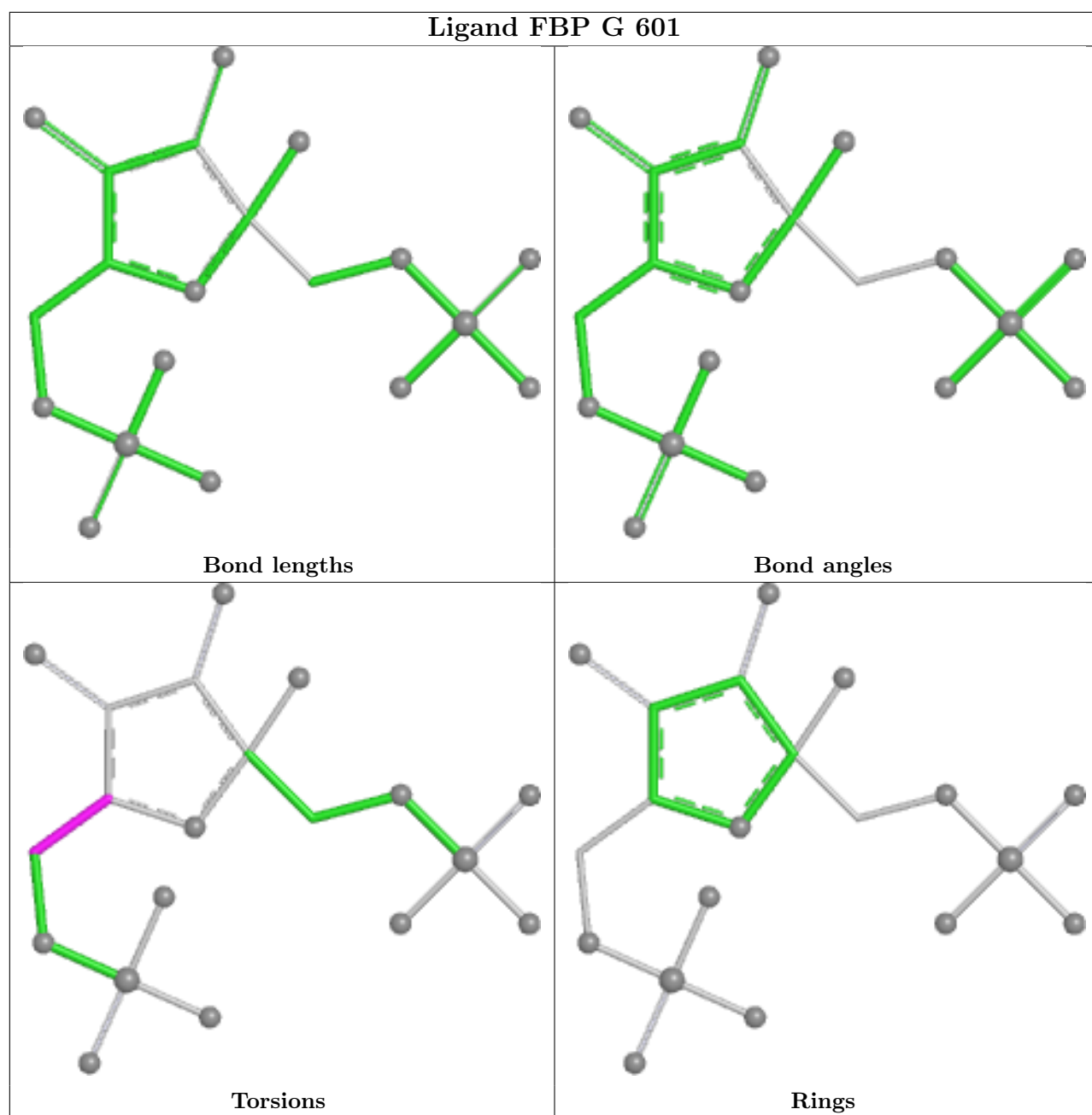


Ligand 07T F 603 (A)

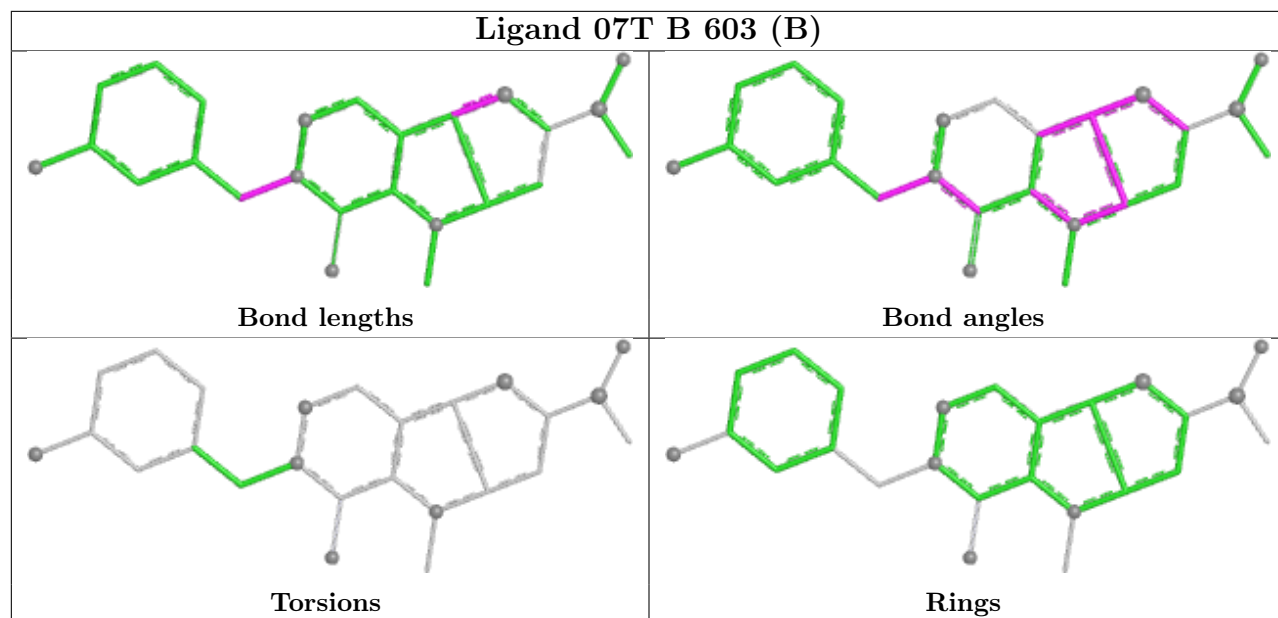




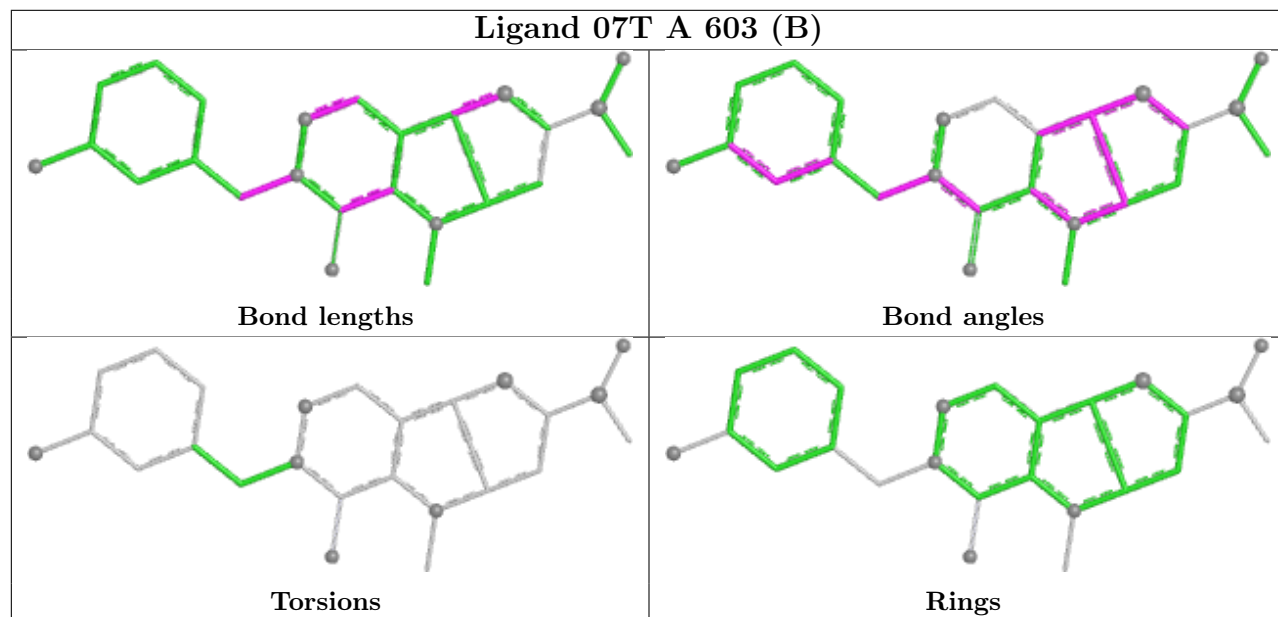


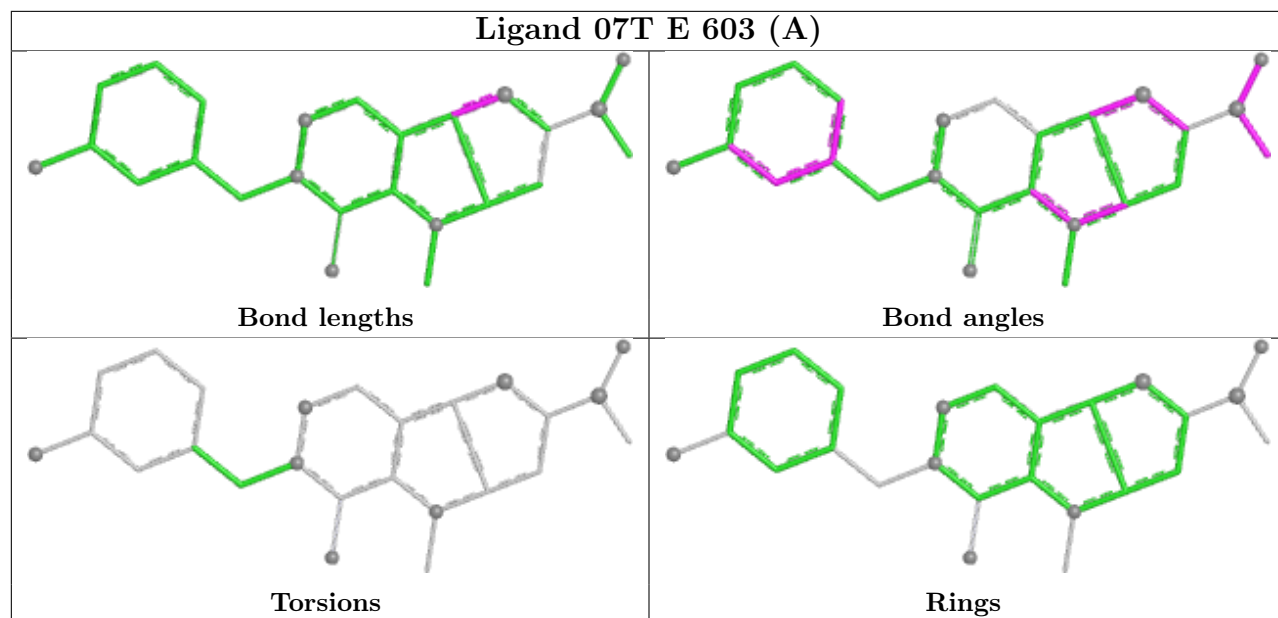


Ligand 07T B 603 (B)



Ligand 07T A 603 (B)





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
1	A	420/447 (93%)	0.99	46 (10%)	10 11	24, 49, 77, 97	13 (3%)
1	B	436/447 (97%)	1.20	87 (19%)	3 3	21, 49, 83, 93	8 (1%)
1	C	424/447 (94%)	0.56	26 (6%)	27 29	20, 40, 62, 82	8 (1%)
1	D	425/447 (95%)	0.35	17 (4%)	42 45	16, 35, 58, 86	8 (1%)
1	E	423/447 (94%)	0.89	35 (8%)	17 19	25, 47, 75, 93	13 (3%)
1	F	435/447 (97%)	0.70	29 (6%)	24 26	23, 42, 67, 80	8 (1%)
1	G	427/447 (95%)	0.45	18 (4%)	40 43	20, 37, 55, 87	10 (2%)
1	H	425/447 (95%)	0.23	13 (3%)	51 54	16, 34, 55, 71	9 (2%)
All	All	3415/3576 (95%)	0.67	271 (7%)	18 20	16, 42, 71, 97	77 (2%)

All (271) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	115	LEU	6.7
1	E	177[A]	HIS	6.1
1	H	21	GLY	6.0
1	B	413	LEU	5.8
1	D	21	GLY	5.4
1	A	445	SER	5.2
1	B	445	SER	5.1
1	B	114	PRO	4.9
1	G	16	LEU	4.7
1	A	34	MET	4.7
1	A	115	LEU	4.7
1	E	23	ALA	4.6
1	G	133	PRO	4.5
1	C	173	GLY	4.5
1	D	24	PHE	4.4
1	D	177[A]	HIS	4.4

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Mol	Chain	Res	Type	RSRZ
1	C	133	PRO	4.2
1	E	416	PHE	4.2
1	E	133	PRO	4.2
1	G	173	GLY	4.1
1	B	116	SER	4.0
1	E	169[A]	ARG	4.0
1	E	135	LEU	3.9
1	F	133	PRO	3.9
1	E	115	LEU	3.9
1	A	26	GLN	3.9
1	A	416	PHE	3.9
1	D	23	ALA	3.8
1	B	135	LEU	3.7
1	C	19	GLU	3.7
1	A	133	PRO	3.6
1	B	392	PRO	3.6
1	A	207	ALA	3.6
1	B	169[A]	ARG	3.5
1	C	34	MET	3.5
1	B	395	ILE	3.5
1	B	207	ALA	3.5
1	B	117	TYR	3.5
1	E	34	MET	3.5
1	H	418	ARG	3.5
1	B	77	ILE	3.5
1	C	268	ASP	3.5
1	C	111	ALA	3.4
1	B	391	PRO	3.4
1	E	145	PHE	3.4
1	A	134	GLY	3.4
1	C	253	ARG	3.4
1	A	390[A]	GLU	3.4
1	G	416	PHE	3.4
1	B	95	TYR	3.4
1	B	118	ARG	3.3
1	B	280	ALA	3.3
1	B	52	VAL	3.3
1	F	165	VAL	3.3
1	H	144[A]	ARG	3.3
1	D	22	THR	3.2
1	A	442	LEU	3.2
1	B	417	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
1	E	176	GLY	3.2
1	B	414	ARG	3.2
1	G	318	LEU	3.2
1	C	134	GLY	3.2
1	F	134	GLY	3.2
1	C	20	LEU	3.1
1	E	335	PHE	3.1
1	B	419	VAL	3.1
1	F	115	LEU	3.1
1	H	34	MET	3.1
1	B	143	LEU	3.1
1	F	318	LEU	3.1
1	B	408	ILE	3.1
1	B	318	LEU	3.0
1	E	442	LEU	3.0
1	B	133	PRO	3.0
1	B	165	VAL	3.0
1	E	158	PHE	3.0
1	B	107	VAL	2.9
1	B	415	GLY	2.9
1	B	139	ASP	2.9
1	F	391	PRO	2.9
1	F	418	ARG	2.9
1	F	416	PHE	2.9
1	A	111	ALA	2.9
1	B	63	ILE	2.9
1	A	174	PRO	2.9
1	E	324	GLU	2.9
1	B	316	ALA	2.9
1	E	171	ALA	2.9
1	A	135	LEU	2.9
1	C	313	ARG	2.9
1	F	11	ALA	2.9
1	H	177[A]	HIS	2.9
1	B	174	PRO	2.8
1	C	114	PRO	2.8
1	G	174	PRO	2.8
1	F	177	HIS	2.8
1	E	172	LEU	2.8
1	B	91	GLY	2.8
1	C	115	LEU	2.8
1	A	70	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	F	253	ARG	2.8
1	B	65	PRO	2.8
1	A	145	PHE	2.7
1	E	24	PHE	2.7
1	B	66	ALA	2.7
1	C	445	SER	2.7
1	A	132	GLY	2.7
1	B	80	GLY	2.7
1	B	134	GLY	2.7
1	C	288	ALA	2.7
1	B	386	LEU	2.7
1	D	34	MET	2.7
1	A	324	GLU	2.6
1	A	177	HIS	2.6
1	B	170	ALA	2.6
1	E	114	PRO	2.6
1	F	135	LEU	2.6
1	E	445	SER	2.6
1	A	95	TYR	2.6
1	F	414	ARG	2.6
1	F	140	VAL	2.6
1	A	396	TRP	2.6
1	G	17	THR	2.6
1	H	22	THR	2.6
1	G	18	GLN	2.6
1	E	392	PRO	2.6
1	F	389	ARG	2.6
1	A	143	LEU	2.6
1	A	172	LEU	2.6
1	B	172	LEU	2.6
1	D	30	LEU	2.6
1	H	136	SER	2.6
1	B	158	PHE	2.5
1	C	103	VAL	2.5
1	B	112	GLY	2.5
1	C	117	TYR	2.5
1	F	91	GLY	2.5
1	B	285	PRO	2.5
1	B	394	ALA	2.5
1	G	34	MET	2.5
1	B	106	ALA	2.5
1	B	409	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	75	GLU	2.5
1	B	387	LEU	2.5
1	A	305	HIS	2.5
1	B	177	HIS	2.5
1	B	281	LYS	2.5
1	E	443[A]	SER	2.5
1	A	392	PRO	2.5
1	D	317	PRO	2.5
1	H	133	PRO	2.5
1	B	389	ARG	2.5
1	F	169[A]	ARG	2.5
1	G	253	ARG	2.5
1	A	165	VAL	2.4
1	A	142	ASP	2.4
1	C	318	LEU	2.4
1	B	128	GLY	2.4
1	B	130	GLY	2.4
1	D	25	PHE	2.4
1	D	401	ASP	2.4
1	F	445	SER	2.4
1	G	445	SER	2.4
1	D	133	PRO	2.4
1	B	127	LYS	2.4
1	B	124	LEU	2.4
1	B	284	PHE	2.4
1	C	416	PHE	2.4
1	B	200	VAL	2.4
1	F	314	ARG	2.4
1	E	128	GLY	2.4
1	B	110	PHE	2.4
1	E	25	PHE	2.4
1	A	313	ARG	2.4
1	H	135	LEU	2.3
1	B	64	GLY	2.3
1	B	418	ARG	2.3
1	B	71	GLU	2.3
1	B	119	PRO	2.3
1	C	174	PRO	2.3
1	D	32	ALA	2.3
1	B	411	GLY	2.3
1	E	417	LEU	2.3
1	H	253	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	127	LYS	2.3
1	G	54	ALA	2.3
1	B	282	GLY	2.3
1	F	118	ARG	2.3
1	B	76[A]	MET	2.3
1	B	406	PHE	2.3
1	A	77	ILE	2.3
1	H	306	ARG	2.3
1	A	32	ALA	2.3
1	E	134	GLY	2.3
1	A	384	PHE	2.2
1	A	259	THR	2.2
1	A	419	VAL	2.2
1	B	168	VAL	2.2
1	F	114	PRO	2.2
1	A	253	ARG	2.2
1	E	253	ARG	2.2
1	B	268	ASP	2.2
1	A	96	HIS	2.2
1	F	90	HIS	2.2
1	B	443	SER	2.2
1	G	116[A]	SER	2.2
1	B	88	PHE	2.2
1	A	395	ILE	2.2
1	G	134	GLY	2.2
1	B	340	ALA	2.2
1	A	116	SER	2.2
1	C	109	SER	2.2
1	E	116	SER	2.2
1	E	136	SER	2.2
1	B	429	TRP	2.2
1	C	181	ILE	2.2
1	F	139	ASP	2.2
1	F	310	GLU	2.2
1	B	111	ALA	2.2
1	B	73	LEU	2.2
1	A	402	ARG	2.2
1	A	309	PHE	2.1
1	B	108	GLU	2.1
1	B	179	ILE	2.1
1	C	94	GLU	2.1
1	C	110	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	324	GLU	2.1
1	G	75	GLU	2.1
1	A	383	VAL	2.1
1	B	159	VAL	2.1
1	F	112	GLY	2.1
1	F	132	GLY	2.1
1	E	166	ALA	2.1
1	B	74	LYS	2.1
1	F	392	PRO	2.1
1	H	317	PRO	2.1
1	G	38	PHE	2.1
1	A	377	VAL	2.1
1	B	313	ARG	2.1
1	D	313	ARG	2.1
1	E	111	ALA	2.1
1	F	394	ALA	2.1
1	B	109	SER	2.1
1	B	113	SER	2.1
1	B	410	SER	2.1
1	D	135	LEU	2.1
1	B	358	TYR	2.1
1	B	181	ILE	2.1
1	C	112	GLY	2.1
1	D	144[A]	ARG	2.1
1	H	134	GLY	2.1
1	F	386	LEU	2.1
1	G	30	LEU	2.1
1	B	142	ASP	2.1
1	A	249	ILE	2.1
1	B	286	VAL	2.1
1	C	25	PHE	2.1
1	B	334	ALA	2.1
1	E	315	ALA	2.1
1	A	314	ARG	2.0
1	D	253	ARG	2.0
1	B	90	HIS	2.0
1	A	112	GLY	2.0
1	B	416	PHE	2.0
1	A	443[A]	SER	2.0
1	E	131	SER	2.0
1	E	207	ALA	2.0
1	G	106	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	129	PRO	2.0
1	E	178	GLY	2.0
1	E	349	GLY	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	OXL	B	602	6/6	0.80	0.13	53,54,55,55	0
3	OXL	E	602	6/6	0.85	0.13	61,62,62,62	0
3	OXL	C	602	6/6	0.86	0.11	52,52,53,54	0
5	MG	A	604	1/1	0.86	0.17	52,52,52,52	0
3	OXL	F	602	6/6	0.87	0.11	49,50,51,51	0
4	07T	E	603[B]	25/25	0.88	0.12	39,41,43,43	25
4	07T	E	603[A]	25/25	0.88	0.12	26,30,34,35	25
5	MG	B	604	1/1	0.89	0.11	60,60,60,60	0
6	K	B	605	1/1	0.90	0.09	76,76,76,76	0
3	OXL	A	602	6/6	0.91	0.10	54,55,57,57	0
4	07T	A	603[A]	25/25	0.91	0.10	20,27,32,32	25
4	07T	F	603[A]	25/25	0.91	0.12	38,41,43,44	25
4	07T	F	603[B]	25/25	0.91	0.12	26,30,35,36	25
4	07T	A	603[B]	25/25	0.91	0.10	48,50,53,54	25
4	07T	B	603[A]	25/25	0.91	0.10	18,25,31,32	25
4	07T	B	603[B]	25/25	0.91	0.10	50,53,54,55	25
6	K	E	605	1/1	0.91	0.18	87,87,87,87	0
3	OXL	G	602	6/6	0.93	0.08	42,43,44,45	0
3	OXL	H	602	6/6	0.93	0.09	44,44,45,45	0
2	FBP	B	601	20/20	0.94	0.09	44,45,49,49	0

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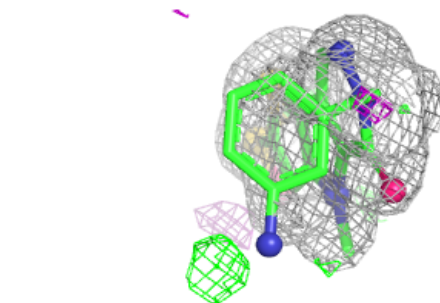
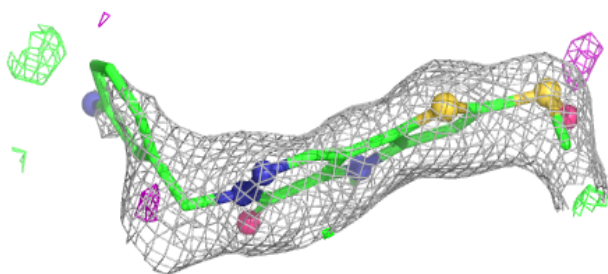
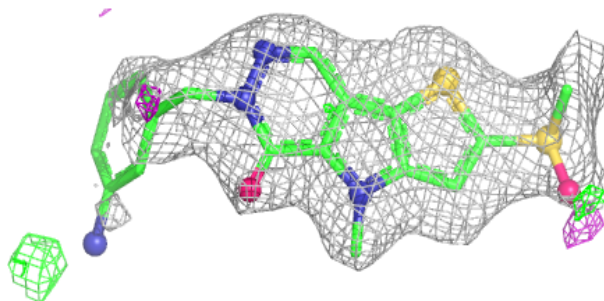
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	OXL	D	602	6/6	0.94	0.09	46,46,47,47	0
2	FBP	A	601	20/20	0.95	0.07	48,49,50,50	0
2	FBP	F	601	20/20	0.95	0.07	37,42,48,49	0
2	FBP	E	601	20/20	0.96	0.07	45,47,48,49	0
2	FBP	G	601	20/20	0.96	0.07	30,32,34,34	0
6	K	G	604	1/1	0.96	0.13	56,56,56,56	0
6	K	C	604	1/1	0.97	0.07	52,52,52,52	0
2	FBP	C	601	20/20	0.97	0.06	33,34,36,36	0
6	K	F	605	1/1	0.97	0.06	71,71,71,71	0
2	FBP	D	601	20/20	0.97	0.06	25,27,33,33	0
6	K	D	604	1/1	0.98	0.06	38,38,38,38	0
6	K	A	605	1/1	0.98	0.07	77,77,77,77	0
2	FBP	H	601	20/20	0.98	0.04	26,28,31,32	0
5	MG	C	603	1/1	0.98	0.04	44,44,44,44	0
6	K	H	604	1/1	0.98	0.07	41,41,41,41	0
5	MG	G	603	1/1	0.99	0.03	41,41,41,41	0
5	MG	H	603	1/1	0.99	0.04	41,41,41,41	0
5	MG	D	603	1/1	0.99	0.01	40,40,40,40	0
5	MG	E	604	1/1	0.99	0.02	45,45,45,45	0
5	MG	F	604	1/1	0.99	0.04	36,36,36,36	0

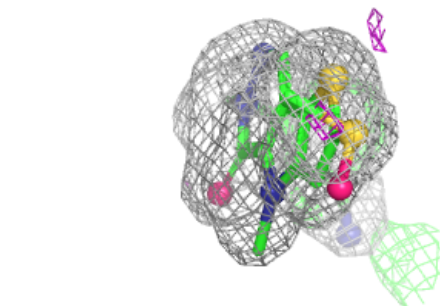
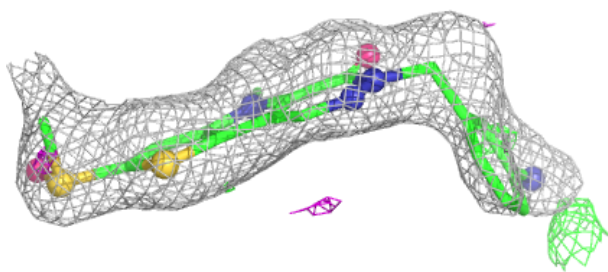
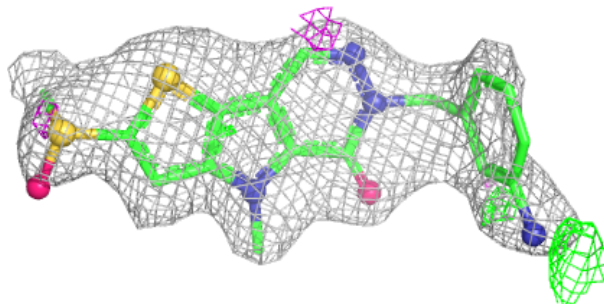
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around 07T E 603 (B):

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

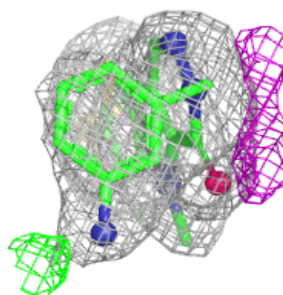
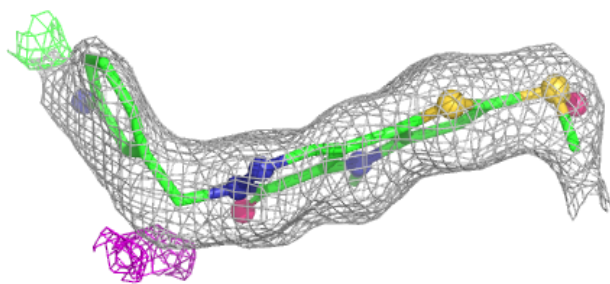
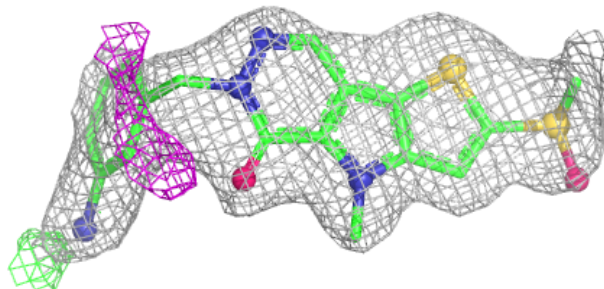
**Electron density around 07T E 603 (A):**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

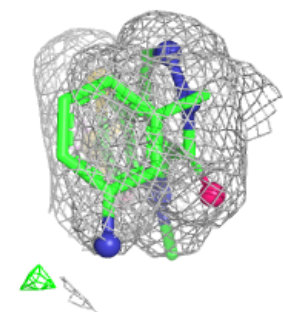
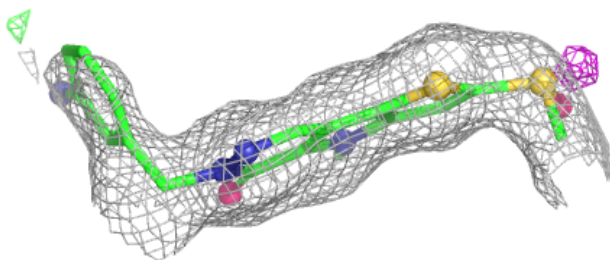
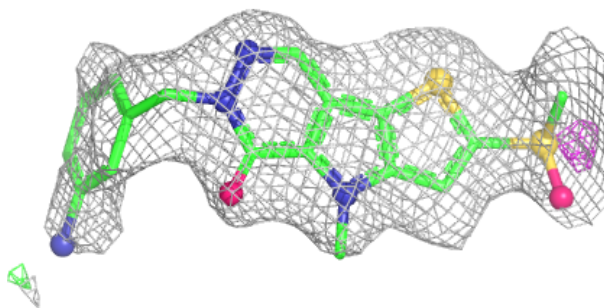


Electron density around 07T A 603 (A):

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

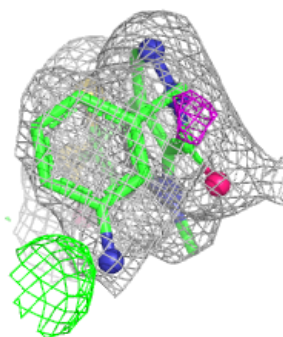
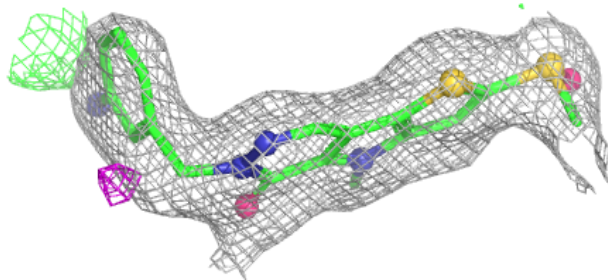
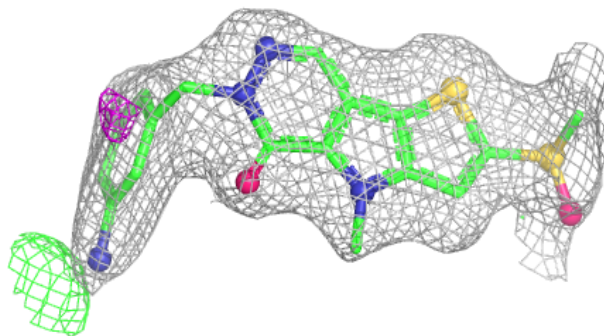
**Electron density around 07T F 603 (A):**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

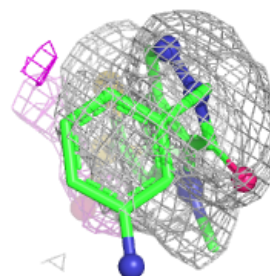
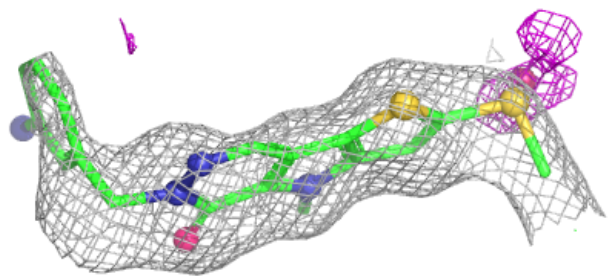
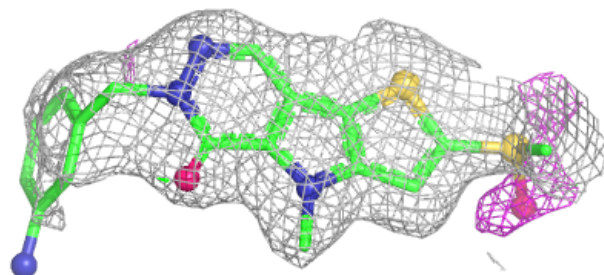


Electron density around 07T F 603 (B):

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

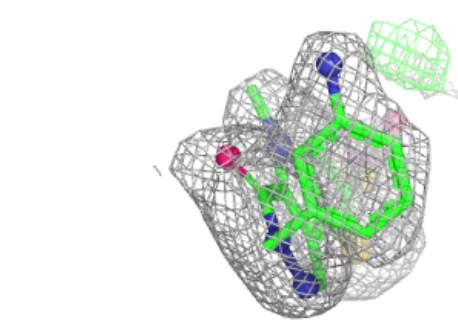
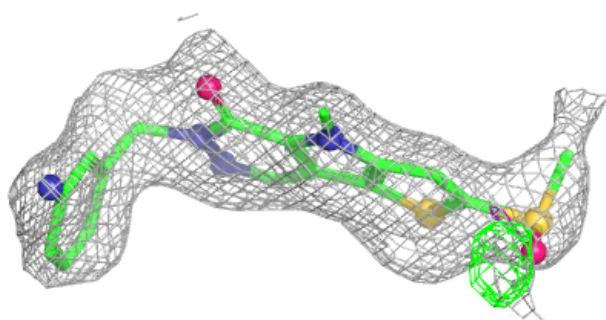
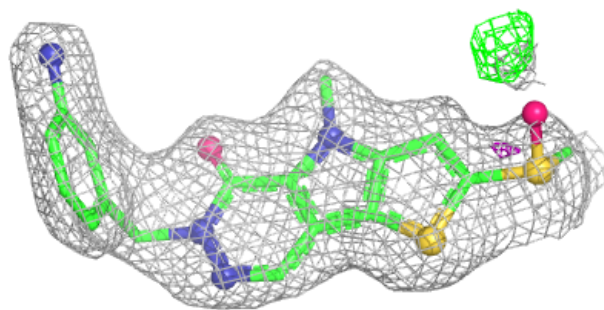
**Electron density around 07T A 603 (B):**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

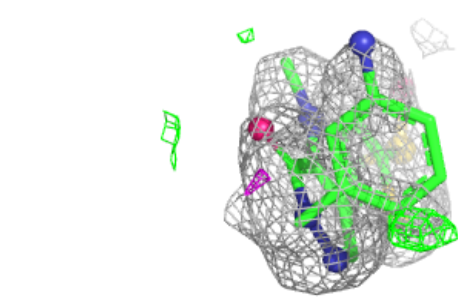
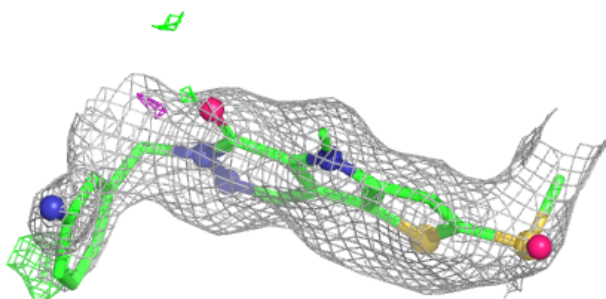
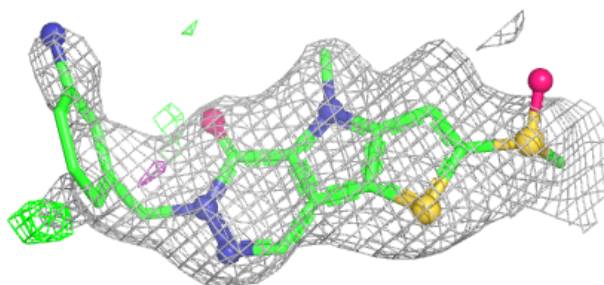


Electron density around 07T B 603 (A):

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

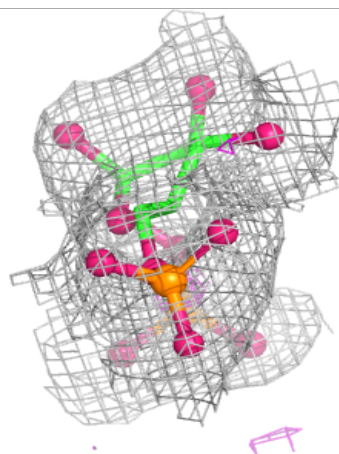
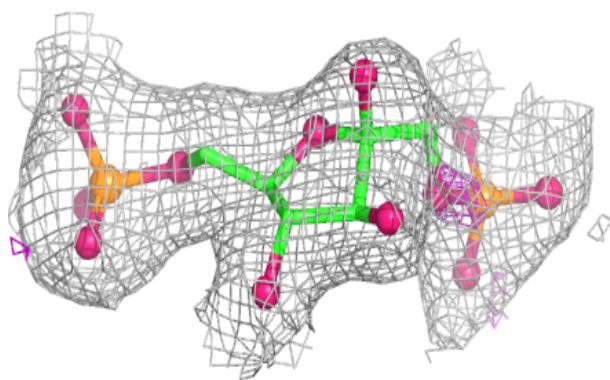
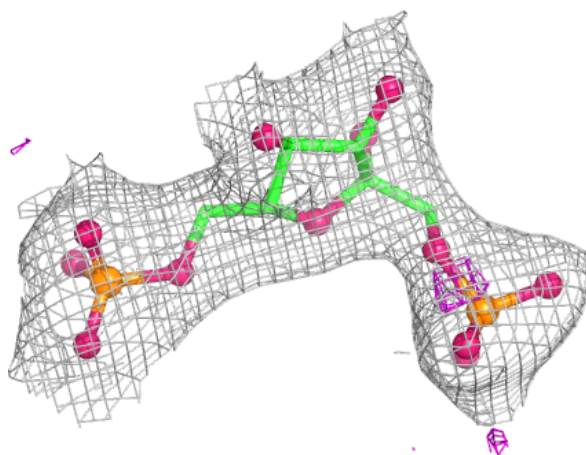
**Electron density around 07T B 603 (B):**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



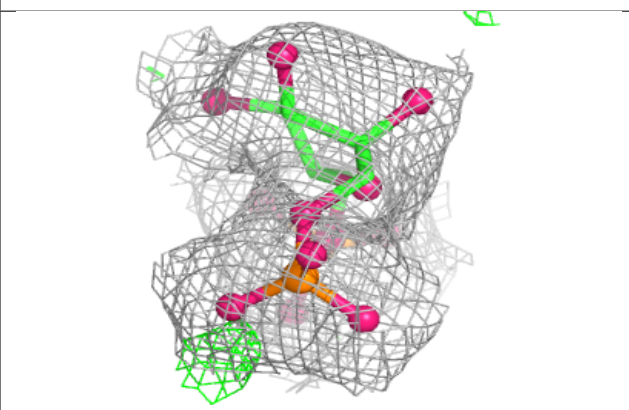
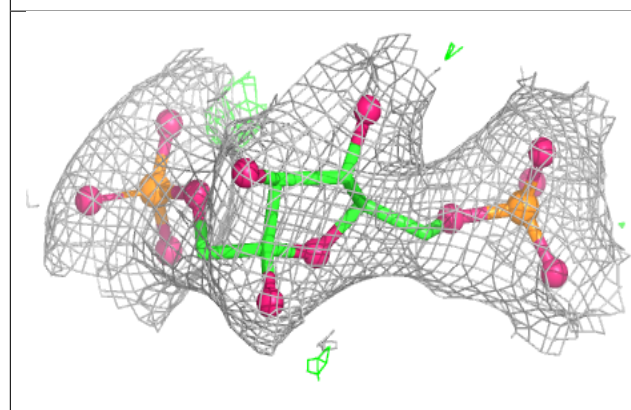
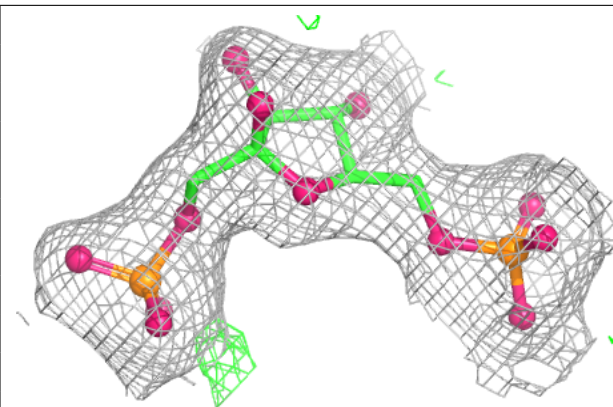
Electron density around FBP B 601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

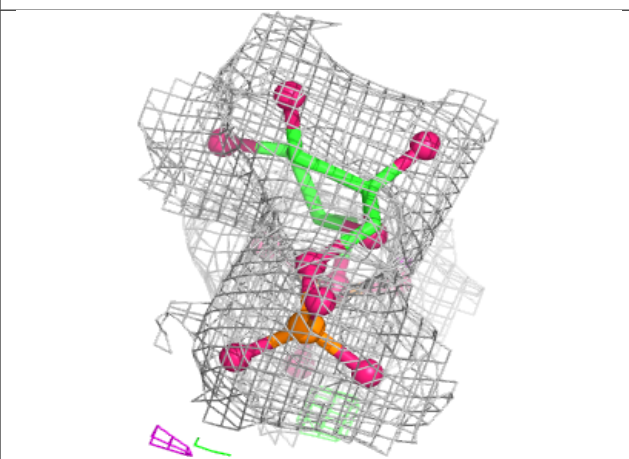
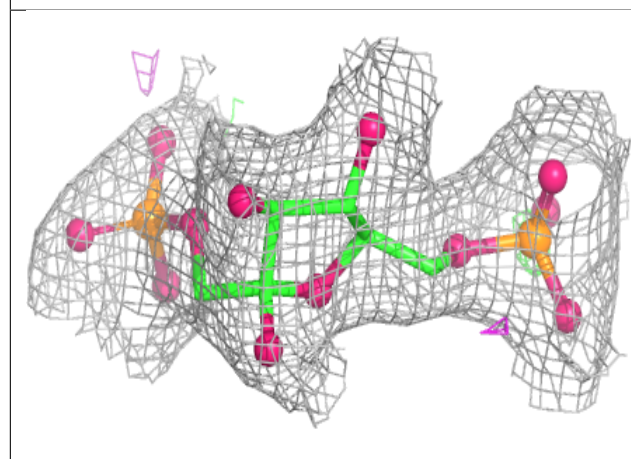
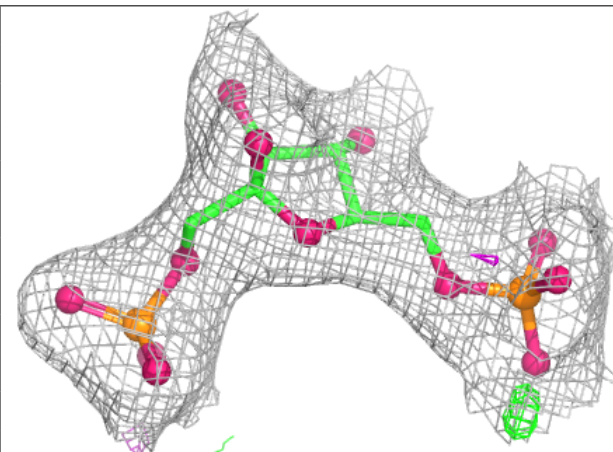


Electron density around FBP A 601:

$2mF_o - DF_c$ (at 0.7 rmsd) in gray
 $mF_o - DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)

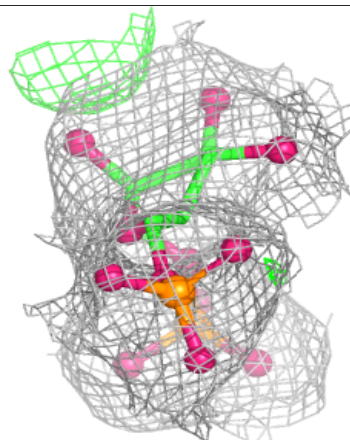
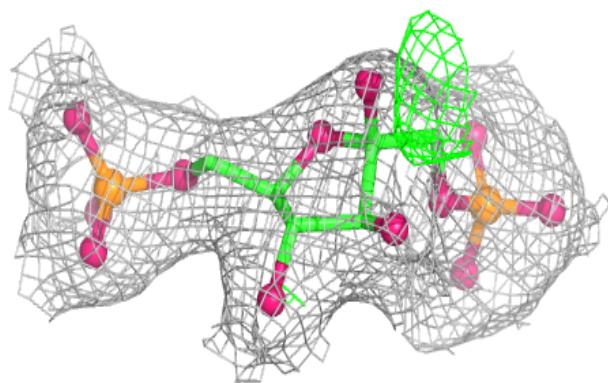
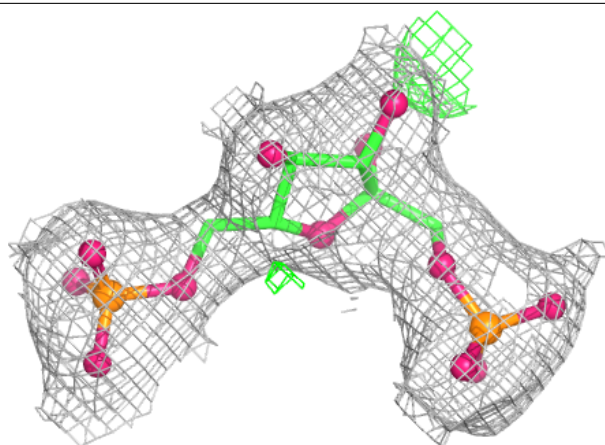
**Electron density around FBP F 601:**

$2mF_o - DF_c$ (at 0.7 rmsd) in gray
 $mF_o - DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)

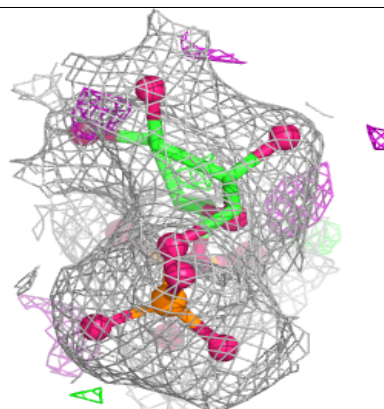
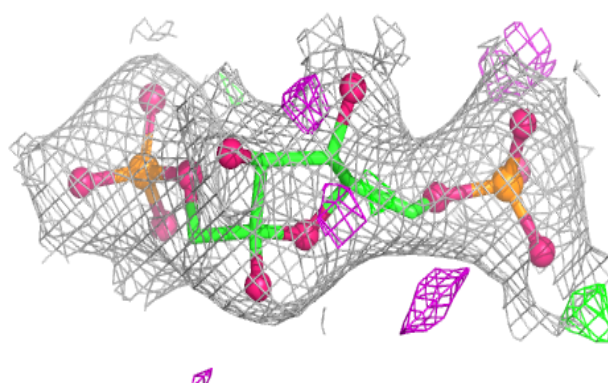
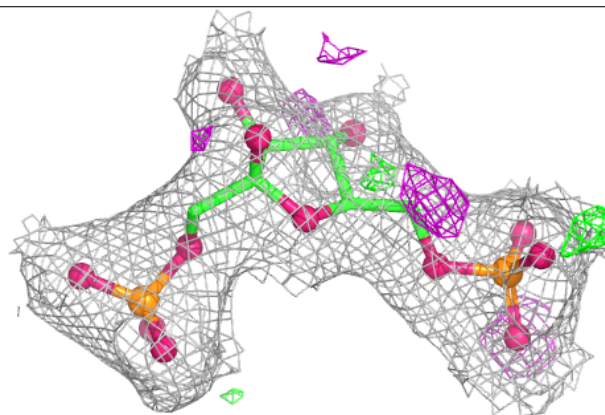


Electron density around FBP E 601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

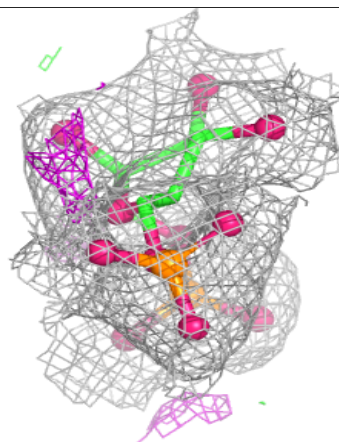
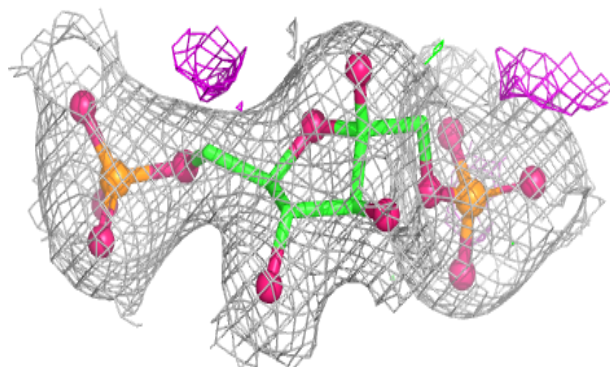
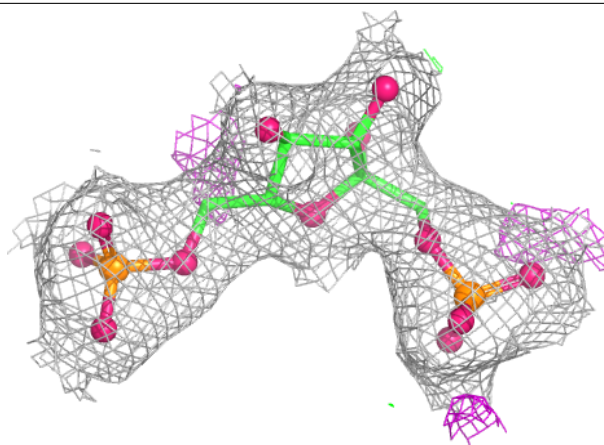
**Electron density around FBP G 601:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

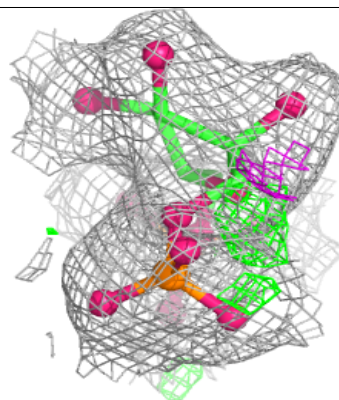
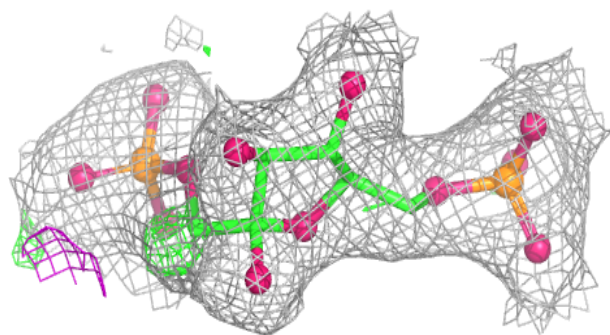
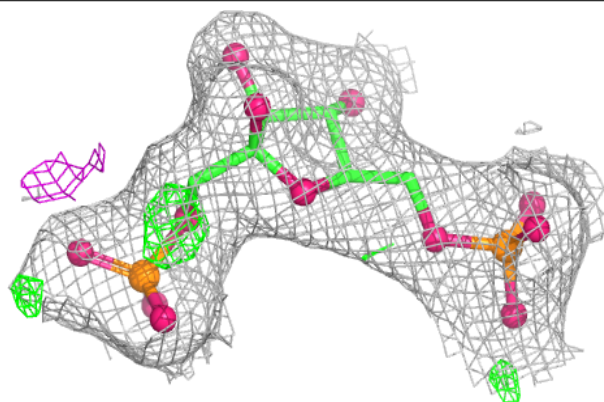


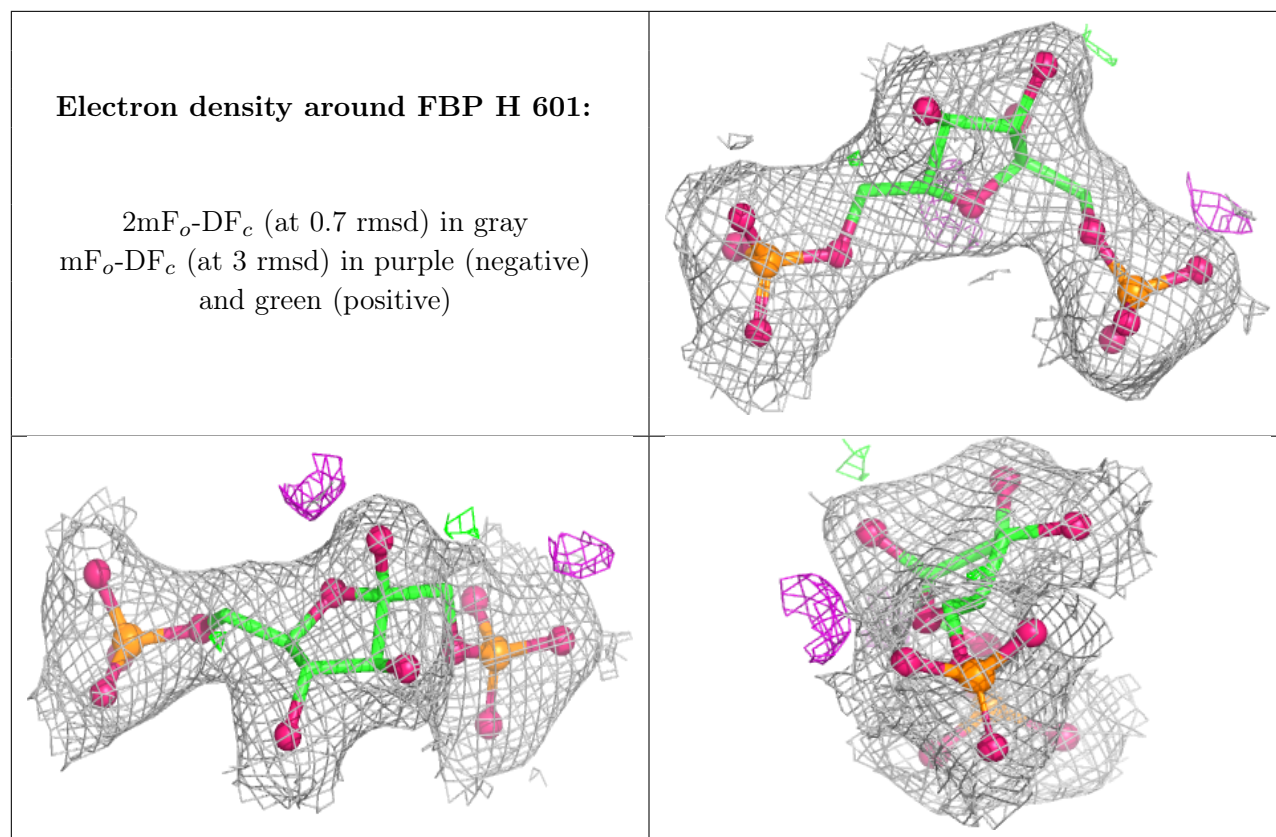
Electron density around FBP C 601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around FBP D 601:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.