Full wwPDB X-ray Structure Validation Report (i)

Oct 24, 2026 – 01:10 PM EDT

PDB ID	:	14CM / pdb_000014cm
Title	:	Structure of liver pyruvate kinase in complex with allosteric site fragment S3
Authors	:	Lulla, A.; Rodriguez Rivero, A.; Grotli, M.; Hyvonen, M.
Deposited on	:	2026-04-28
Resolution	:	1.99 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 (i) 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 (i)) were used in the production of this report:

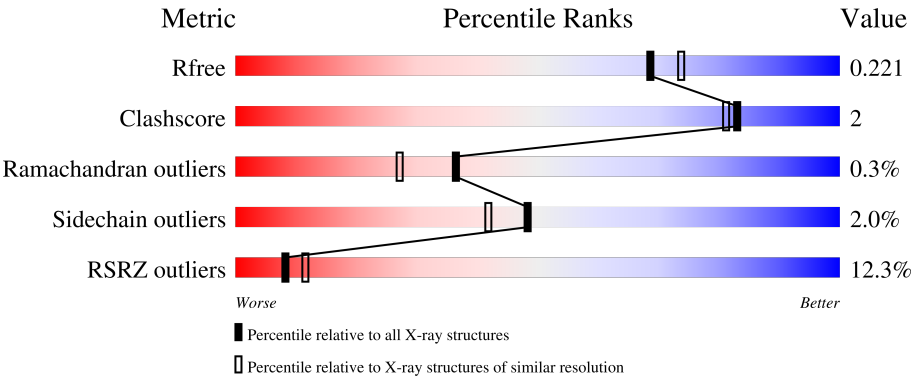
MolProbity	:	4-5-2 with Phenix2.2
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.2
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 1.99 Å.

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



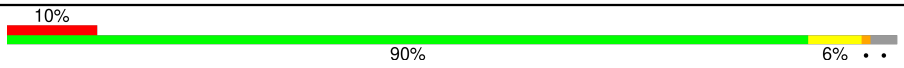
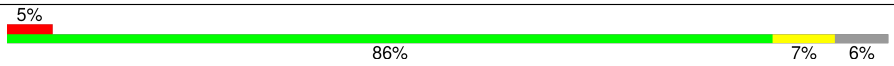
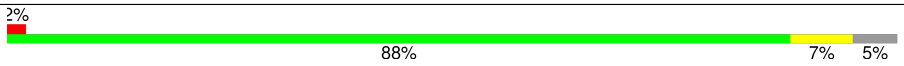
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1506 (1.98-1.98)
Clashscore	190562	1534 (1.98-1.98)
Ramachandran outliers	187476	1518 (1.98-1.98)
Sidechain outliers	187428	1518 (1.98-1.98)
RSRZ outliers	180081	1506 (1.98-1.98)

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 <=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	15% 85% 8% 6%
1	B	447	36% 89% 7%
1	C	447	6% 89% 5% 5%
1	D	447	2% 88% 6% 5%
1	E	447	17% 86% 6% 6%

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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	G	602	-	X	-	-
3	OXL	H	602	-	X	-	-

2 Entry composition (i)

There are 7 unique types of molecules in this entry. The entry contains 28463 atoms, of which 120 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	11	0
			3238	2033	583	602	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	6	0
			3257	2049	584	605	19			
1	D	425	Total	C	N	O	S	0	8	0
			3261	2048	590	604	19			
1	E	420	Total	C	N	O	S	0	11	0
			3253	2046	585	603	19			
1	F	432	Total	C	N	O	S	0	8	0
			3327	2094	597	616	20			
1	G	421	Total	C	N	O	S	0	5	0
			3225	2027	581	598	19			
1	H	425	Total	C	N	O	S	0	9	0
			3277	2057	597	604	19			

There are 48 discrepancies between the modelled and reference sequences:

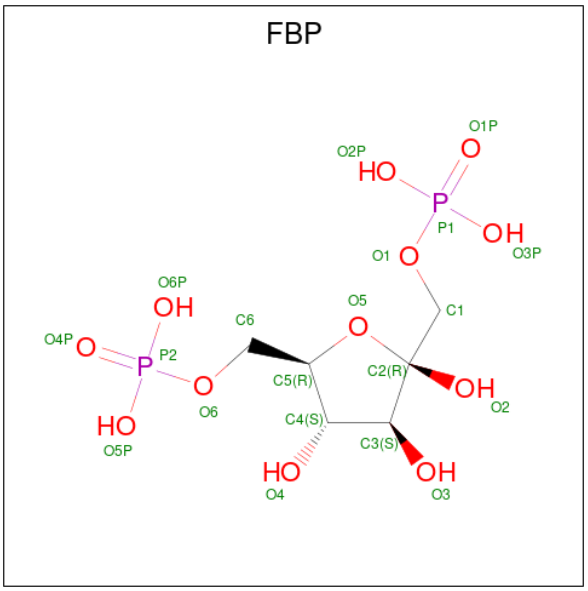
Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP P30613
A	0	SER	-	expression tag	UNP P30613
A	12	ASP	SER	conflict	UNP P30613
A	130	GLY	-	linker	UNP P30613
A	131	SER	-	linker	UNP P30613
A	132	GLY	-	linker	UNP P30613
B	-1	GLY	-	expression tag	UNP P30613
B	0	SER	-	expression 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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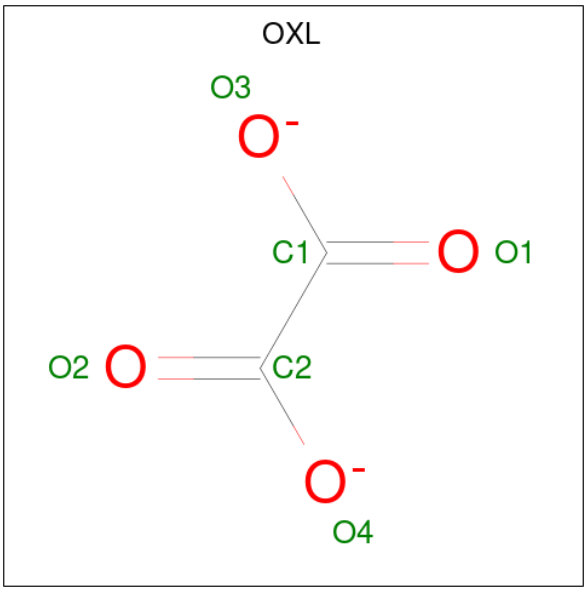
Chain	Residue	Modelled	Actual	Comment	Reference
C	0	SER	-	expression tag	UNP P30613
C	12	ASP	SER	conflict	UNP P30613
C	130	GLY	-	linker	UNP P30613
C	131	SER	-	linker	UNP P30613
C	132	GLY	-	linker	UNP P30613
D	-1	GLY	-	expression tag	UNP P30613
D	0	SER	-	expression tag	UNP P30613
D	12	ASP	SER	conflict	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: $C_6H_{14}O_{12}P_2$).



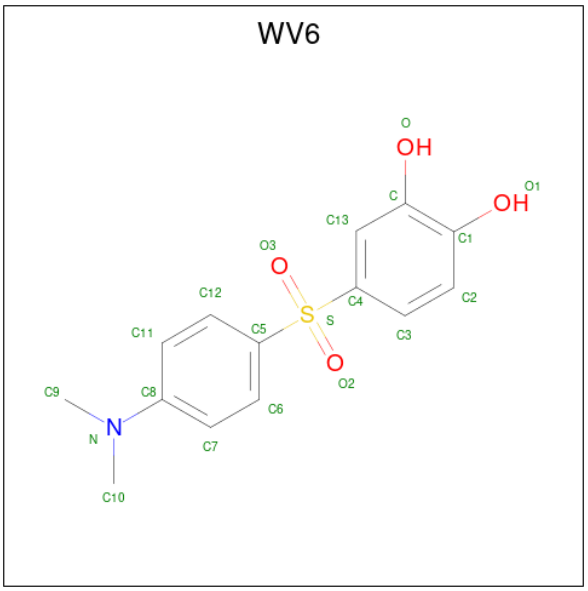
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	O	P	0	0
			20	6	12	2		
2	B	1	Total	C	O	P	0	0
			20	6	12	2		
2	C	1	Total	C	O	P	0	0
			20	6	12	2		
2	D	1	Total	C	O	P	0	0
			20	6	12	2		
2	E	1	Total	C	O	P	0	0
			20	6	12	2		
2	F	1	Total	C	O	P	0	0
			20	6	12	2		
2	G	1	Total	C	O	P	0	0
			20	6	12	2		
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 6 2 4	0	0
3	B	1	Total C O 6 2 4	0	0
3	C	1	Total C O 6 2 4	0	0
3	D	1	Total C O 6 2 4	0	0
3	E	1	Total C O 6 2 4	0	0
3	F	1	Total C O 6 2 4	0	0
3	G	1	Total C O 6 2 4	0	0
3	H	1	Total C O 6 2 4	0	0

- Molecule 4 is 4-[4-(dimethylamino)benzene-1-sulfonyl]benzene-1,2-diol (CCD ID: WV6) (formula: $C_{14}H_{15}NO_4S$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
4	A	1	Total	C	H	N	O	S	30	1
			70	28	30	2	8	2		
4	B	1	Total	C	H	N	O	S	30	1
			70	28	30	2	8	2		
4	E	1	Total	C	H	N	O	S	30	1
			70	28	30	2	8	2		
4	F	1	Total	C	H	N	O	S	30	1
			70	28	30	2	8	2		

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

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

- 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	151	Total O 151 151	0	0
7	B	122	Total O 122 122	0	0
7	C	262	Total O 262 262	0	0
7	D	294	Total O 294 294	0	0
7	E	137	Total O 137 137	0	0
7	F	204	Total O 204 204	0	0
7	G	261	Total O 261 261	0	0
7	H	340	Total O 340 340	0	0

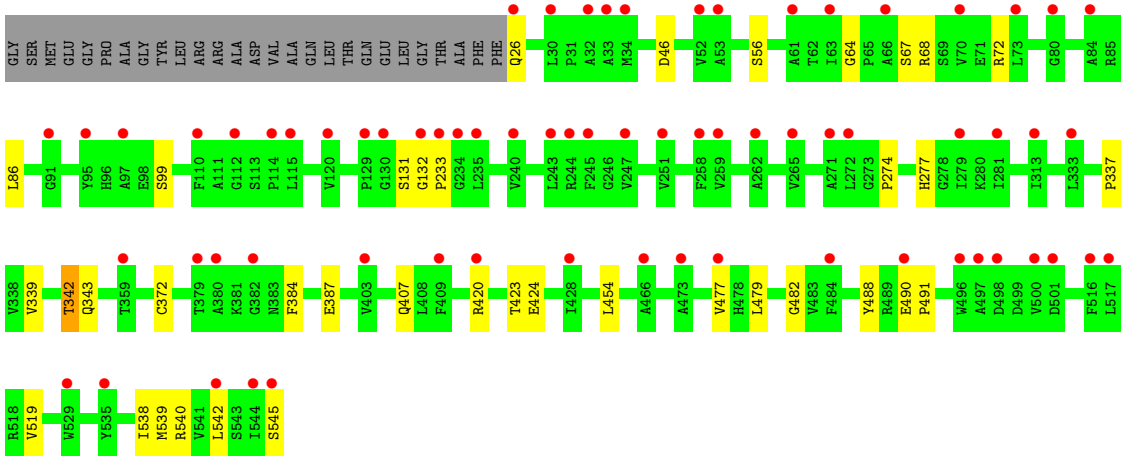
3 Residue-property plots (i)

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

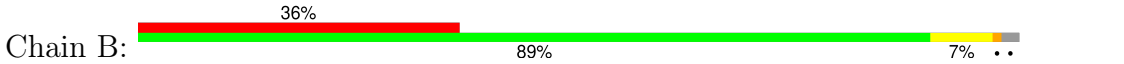
Chain A:

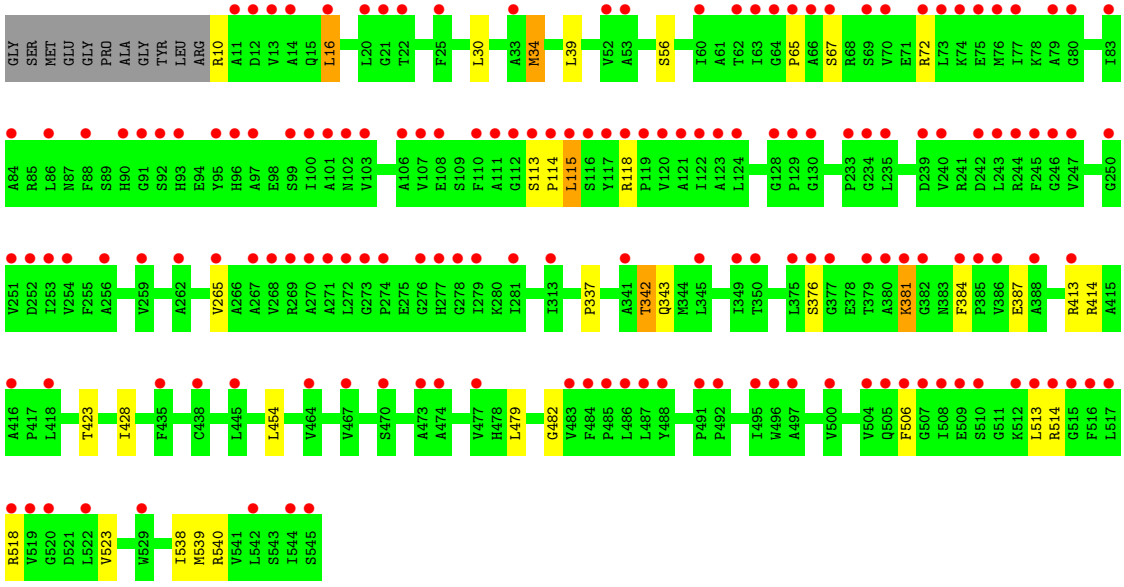




• Molecule 1: Isoform L-type of Pyruvate kinase PKLR

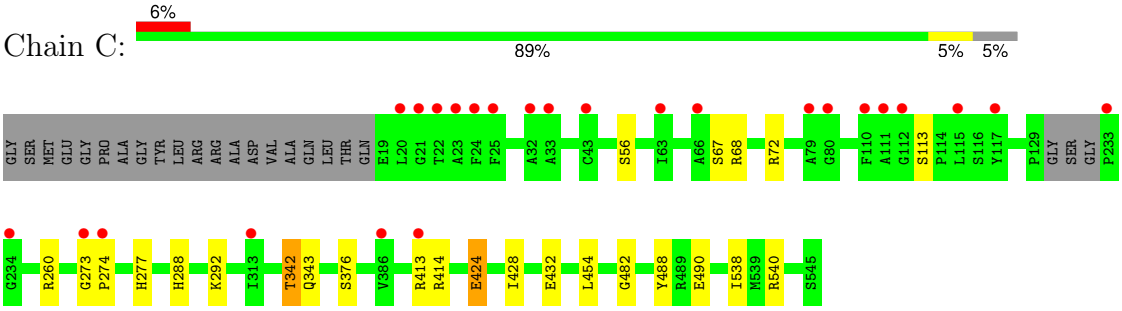
Chain B:





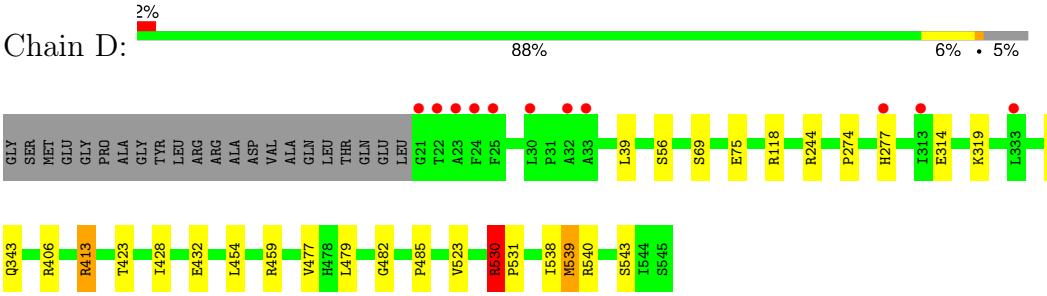
• Molecule 1: Isoform L-type of Pyruvate kinase PKLR

Chain C:



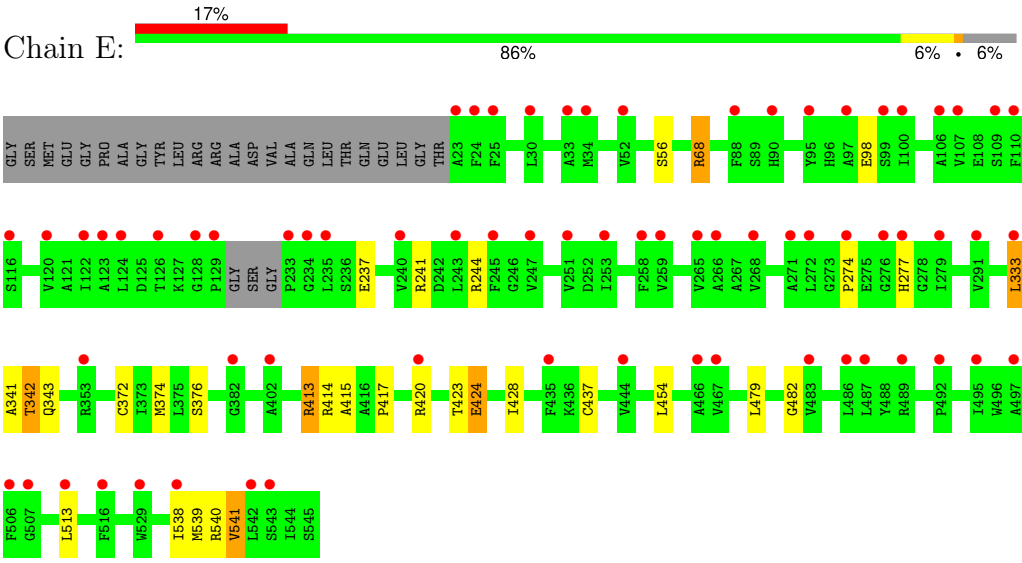
• Molecule 1: Isoform L-type of Pyruvate kinase PKLR

Chain D:



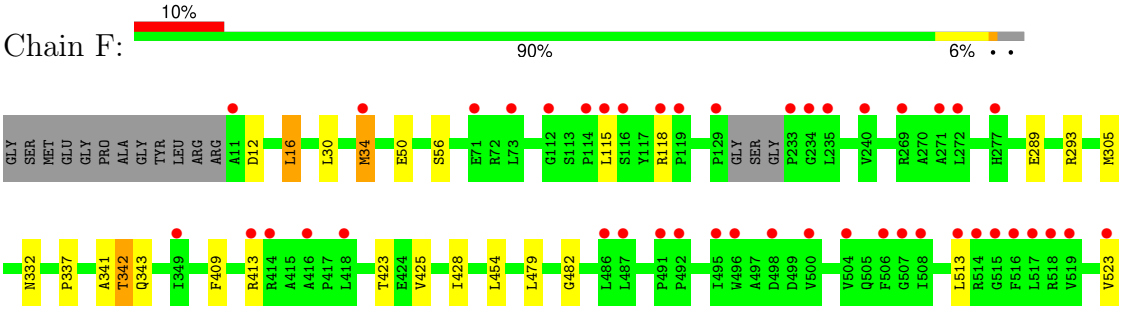
• Molecule 1: Isoform L-type of Pyruvate kinase PKLR

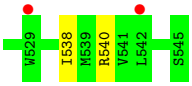
Chain E:



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

Chain F:

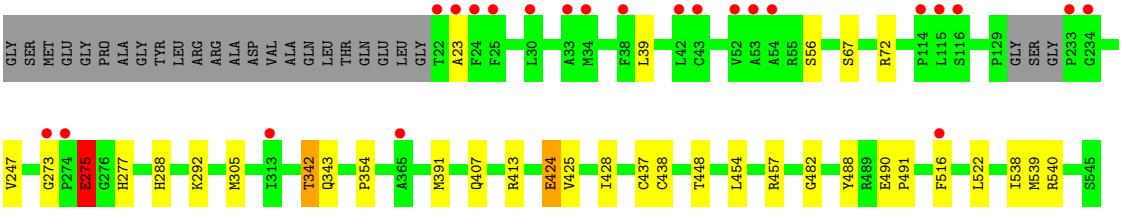




• Molecule 1: Isoform L-type of Pyruvate kinase PKLR

Chain G:

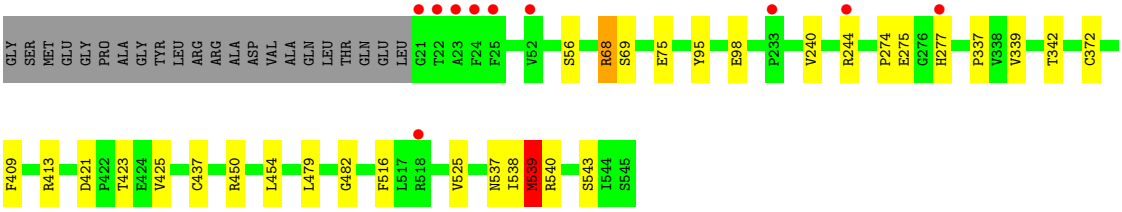




• Molecule 1: Isoform L-type of Pyruvate kinase PKLR

Chain H:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	208.50Å 113.30Å 188.78Å 90.00° 91.56° 90.00°	Depositor
Resolution (Å)	188.71 – 1.99 188.71 – 1.99	Depositor EDS
% Data completeness (in resolution range)	66.7 (188.71-1.99) 66.7 (188.71-1.99)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.63 (at 1.98Å)	Xtriage
Refinement program	BUSTER 2.10.4	Depositor
R, R_{free}	0.204 , 0.232 0.193 , 0.221	Depositor DCC
R_{free} test set	9908 reflections (3.28%)	wwPDB-VP
Wilson B-factor (Å^2)	42.3	Xtriage
Anisotropy	0.015	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 53.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.51$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.000 for -h,-k,l	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	28463	wwPDB-VP
Average B, all atoms (Å^2)	52.0	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 49.00 % 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 7.9363e-05. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, FBP, WV6, OXL, K

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	0.68	0/3324	1.01	1/4494 (0.0%)
1	B	0.71	2/3429 (0.1%)	1.01	0/4636
1	C	0.79	1/3329 (0.0%)	1.02	0/4500
1	D	0.81	2/3341 (0.1%)	1.04	3/4517 (0.1%)
1	E	0.67	1/3341 (0.0%)	1.00	1/4516 (0.0%)
1	F	0.74	1/3405 (0.0%)	1.03	4/4603 (0.1%)
1	G	0.84	3/3294 (0.1%)	1.04	2/4452 (0.0%)
1	H	0.83	1/3357 (0.0%)	1.04	1/4537 (0.0%)
All	All	0.76	11/26820 (0.0%)	1.02	12/36255 (0.0%)

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	H	539	MET	SD-CE	-7.50	1.60	1.79
1	G	23	ALA	CA-C	6.96	1.62	1.52
1	C	376	SER	CA-C	6.79	1.55	1.52
1	G	491	PRO	CA-C	6.68	1.55	1.51
1	D	459	ARG	CA-CB	5.75	1.56	1.52
1	D	539	MET	CA-C	5.54	1.59	1.52
1	E	376	SER	CA-C	5.47	1.55	1.52
1	G	305	MET	SD-CE	-5.45	1.66	1.79
1	F	305	MET	SD-CE	-5.20	1.66	1.79
1	B	376[A]	SER	CA-C	5.10	1.55	1.52
1	B	376[B]	SER	CA-C	5.10	1.55	1.52

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	541	VAL	N-CA-CB	5.95	118.17	111.21
1	G	275	GLU	CB-CG-CD	5.62	122.16	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	516	PHE	CA-CB-CG	5.60	119.40	113.80
1	F	341	ALA	CA-C-N	5.60	132.23	121.54
1	F	341	ALA	C-N-CA	5.60	132.23	121.54
1	F	332	ASN	CA-CB-CG	5.28	117.88	112.60
1	D	341	ALA	CA-C-N	5.25	131.57	121.54
1	D	341	ALA	C-N-CA	5.25	131.57	121.54
1	H	516	PHE	CA-CB-CG	5.20	119.00	113.80
1	A	46	ASP	CA-CB-CG	5.20	117.80	112.60
1	F	50	GLU	N-CA-C	5.13	116.29	109.93
1	D	530	ARG	CB-CG-CD	-5.09	99.60	111.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3238	0	3313	19	0
1	B	3350	0	3417	17	0
1	C	3257	0	3316	16	0
1	D	3261	0	3321	17	0
1	E	3253	0	3317	20	0
1	F	3327	0	3399	15	0
1	G	3225	0	3278	22	0
1	H	3277	0	3342	20	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
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	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	40	30	0	1	0
4	B	40	30	0	2	0
4	E	40	30	0	2	0
4	F	40	30	0	1	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	151	0	0	1	0
7	B	122	0	0	0	0
7	C	262	0	0	1	0
7	D	294	0	0	3	0
7	E	137	0	0	0	0
7	F	204	0	0	1	0
7	G	261	0	0	0	0
7	H	340	0	0	1	0
All	All	28343	120	26783	128	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 2.

All (128) 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:A:538:ILE:HG12	1:B:540:ARG:HG2	1.73	0.71
1:A:420[B]:ARG:HG3	1:B:16:LEU:HD11	1.72	0.70
1:E:420[B]:ARG:HG3	1:F:16:LEU:HD11	1.73	0.70
1:G:540:ARG:HG2	1:H:538:ILE:HG12	1.72	0.69
4:F:603[A]:WV6:O2	7:F:701:HOH:O	2.10	0.69
1:D:530:ARG:HD2	1:D:531:PRO:O	1.93	0.69
1:B:413:ARG:HG2	1:B:428:ILE:HD11	1.75	0.68
1:A:540:ARG:HG2	1:B:538:ILE:HG12	1.75	0.68
1:A:491:PRO:O	7:A:701:HOH:O	2.12	0.67
1:H:68:ARG:HH22	1:H:98:GLU:HB2	1.58	0.67
1:H:68:ARG:NH2	1:H:95:TYR:O	2.29	0.66
1:E:540:ARG:HG2	1:F:538:ILE:HG12	1.77	0.66
1:E:538:ILE:HG12	1:F:540:ARG:HG2	1.78	0.66
1:C:424[A]:GLU:HG3	1:C:454:LEU:HD13	1.79	0.64
4:E:603[B]:WV6:O3	1:G:407:GLN:HB3	1.98	0.64
1:H:56:SER:HB2	1:H:482:GLY:HA2	1.81	0.63
1:A:67:SER:HA	1:A:72:ARG:HG2	1.81	0.63
1:G:56:SER:HB2	1:G:482:GLY:HA2	1.82	0.62
1:G:424[A]:GLU:HG3	1:G:454:LEU:HD13	1.82	0.61
1:C:540:ARG:HG2	1:D:538:ILE:HG12	1.82	0.61
1:F:413:ARG:HG3	1:F:428:ILE:HD11	1.83	0.60
1:B:56:SER:HB2	1:B:482:GLY:HA2	1.84	0.59
1:C:56:SER:HB2	1:C:482:GLY:HA2	1.85	0.59
1:D:75:GLU:HG3	7:D:968:HOH:O	2.04	0.58
1:E:413:ARG:HH11	1:E:413:ARG:HB3	1.69	0.58
1:D:56:SER:HB2	1:D:482:GLY:HA2	1.87	0.57
1:H:75:GLU:HG3	7:H:1009:HOH:O	2.04	0.57
1:C:413:ARG:HG2	1:C:428:ILE:HD11	1.86	0.57
1:F:115:LEU:HD21	1:F:513:LEU:HB3	1.87	0.57
1:B:65:PRO:HG2	1:B:381:LYS:HE3	1.88	0.55
1:F:56:SER:HB2	1:F:482:GLY:HA2	1.88	0.55
1:A:519:VAL:HG13	1:A:545:SER:HB3	1.87	0.55
1:H:409:PHE:O	1:H:413:ARG:HG2	2.07	0.55
1:G:539:MET:HE3	1:H:539:MET:HG2	1.89	0.54
1:E:56:SER:HB2	1:E:482:GLY:HA2	1.89	0.53
1:F:30:LEU:O	1:F:34:MET:HG2	2.09	0.53
1:B:39:LEU:HD13	4:B:603[B]:WV6:O1	2.09	0.53
1:F:409:PHE:CE2	1:F:413:ARG:NH1	2.69	0.52
1:B:342:THR:HG22	1:B:343:GLN:HG3	1.91	0.52
1:A:407:GLN:HB3	4:A:603[A]:WV6:O3	2.10	0.52
1:B:30:LEU:O	1:B:34:MET:HG2	2.10	0.52
1:E:413:ARG:HG2	1:E:428:ILE:HD11	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:540:ARG:HD3	7:C:774:HOH:O	2.10	0.51
1:H:56:SER:HB2	1:H:482:GLY:CA	2.41	0.51
1:E:342:THR:HG22	1:E:343:GLN:HG3	1.92	0.51
1:E:333:LEU:HD21	1:E:415:ALA:HB1	1.93	0.50
1:D:342:THR:HG22	1:D:343:GLN:HG3	1.93	0.50
1:C:56:SER:HB2	1:C:482:GLY:CA	2.42	0.49
1:D:319:LYS:NZ	7:D:703:HOH:O	2.45	0.49
1:G:342:THR:HG22	1:G:343:GLN:HG3	1.95	0.49
1:C:413:ARG:CG	1:C:428:ILE:HD11	2.42	0.49
1:A:56:SER:HB2	1:A:482:GLY:HA2	1.94	0.49
1:G:273:GLY:O	1:G:277:HIS:CE1	2.66	0.48
1:C:342:THR:HG22	1:C:343:GLN:HG3	1.96	0.48
1:G:56:SER:HB2	1:G:482:GLY:CA	2.43	0.48
1:G:538:ILE:HG12	1:H:540[A]:ARG:HG2	1.95	0.48
1:A:488:TYR:CZ	1:A:490[B]:GLU:HB2	2.48	0.48
1:G:437:CYS:HB2	1:G:522:LEU:HD12	1.96	0.48
1:F:423:THR:HG22	1:F:454:LEU:HD12	1.96	0.48
1:C:432[B]:GLU:OE2	1:D:432[B]:GLU:OE1	2.32	0.47
1:D:274:PRO:HA	1:D:277[A]:HIS:CE1	2.49	0.47
1:H:68:ARG:NH2	1:H:98:GLU:HB2	2.27	0.47
1:C:273:GLY:O	1:C:277:HIS:CE1	2.68	0.47
1:D:56:SER:HB2	1:D:482:GLY:CA	2.44	0.47
1:A:64:GLY:O	1:A:68:ARG:HG3	2.14	0.47
1:B:56:SER:HB2	1:B:482:GLY:CA	2.45	0.47
1:C:274:PRO:HD3	1:G:448:THR:HG22	1.97	0.47
1:G:413:ARG:HG2	1:G:428:ILE:HD11	1.97	0.46
1:F:56:SER:HB2	1:F:482:GLY:CA	2.45	0.46
1:E:237:GLU:O	1:E:241:ARG:HD3	2.15	0.46
1:A:342:THR:HG22	1:A:343:GLN:HG3	1.97	0.46
1:E:341:ALA:HB1	1:E:374:MET:HE2	1.98	0.46
1:H:274:PRO:HA	1:H:277[A]:HIS:CE1	2.51	0.46
1:C:67:SER:HA	1:C:72:ARG:HG2	1.98	0.46
1:G:247:VAL:CG1	1:G:275:GLU:HG2	2.46	0.46
1:B:423:THR:HG22	1:B:454:LEU:HD12	1.98	0.45
1:G:488:TYR:CZ	1:G:490:GLU:HB2	2.52	0.45
1:D:423:THR:HG22	1:D:454:LEU:HD12	1.97	0.45
1:E:424:GLU:HG2	1:E:454:LEU:HD13	1.98	0.45
1:D:413:ARG:HG2	1:D:428:ILE:HD11	1.97	0.45
1:H:421:ASP:OD2	1:H:450:ARG:NH2	2.50	0.45
1:B:114:PRO:HB3	1:B:506:PHE:CE1	2.51	0.45
1:G:437:CYS:HB3	1:H:425:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:423:THR:HG22	1:A:454:LEU:HD12	2.00	0.44
1:B:115:LEU:HD12	1:B:513:LEU:HB2	2.00	0.44
1:E:274:PRO:HA	1:E:277[A]:HIS:CE1	2.51	0.44
1:E:337:PRO:HB3	1:E:479:LEU:O	2.16	0.44
1:H:240:VAL:O	1:H:244[B]:ARG:HG3	2.18	0.44
1:G:354:PRO:HG3	1:G:391:MET:HG2	1.99	0.44
1:A:274:PRO:HA	1:A:277:HIS:CE1	2.52	0.44
1:A:68:ARG:HD2	1:A:99:SER:OG	2.18	0.44
1:H:537:ASN:OD1	1:H:538:ILE:HG13	2.18	0.43
1:C:538:ILE:HG12	1:D:540:ARG:HG3	2.00	0.43
1:D:337:PRO:HB3	1:D:479:LEU:O	2.18	0.43
1:A:384:PHE:HB3	1:A:387:GLU:HB2	2.00	0.43
1:B:384:PHE:HB3	1:B:387:GLU:HB2	2.00	0.43
1:G:425:VAL:HG21	1:H:437:CYS:HB3	2.01	0.43
1:H:423:THR:HG22	1:H:454:LEU:HD12	2.01	0.43
1:E:339:VAL:HG22	1:E:372:CYS:HB2	2.01	0.42
1:E:423:THR:HG22	1:E:454:LEU:HD12	2.00	0.42
1:B:337:PRO:HB3	1:B:479:LEU:O	2.19	0.42
4:E:603[A]:WV6:O1	1:G:39:LEU:HD13	2.19	0.42
1:E:333:LEU:HD23	1:G:39:LEU:HD21	2.02	0.42
1:G:67:SER:HA	1:G:72:ARG:HG2	2.01	0.42
1:H:525:VAL:HB	1:H:540[B]:ARG:HG2	2.01	0.42
1:A:337:PRO:HB3	1:A:479:LEU:O	2.20	0.42
1:C:288:HIS:CE1	1:C:292:LYS:HG3	2.55	0.42
1:A:339:VAL:HG22	1:A:372:CYS:HB2	2.02	0.41
1:B:115:LEU:HG	1:B:513:LEU:HB3	2.02	0.41
1:F:289:GLU:OE2	1:F:293:ARG:NH2	2.53	0.41
1:C:414:ARG:NH2	1:D:406:ARG:HH11	2.18	0.41
4:B:603[A]:WV6:O	1:D:39:LEU:HB2	2.20	0.41
1:E:56:SER:HB2	1:E:482:GLY:CA	2.49	0.41
1:C:488:TYR:CZ	1:C:490:GLU:HB2	2.54	0.41
1:D:314:GLU:HB3	7:D:838:HOH:O	2.19	0.41
1:F:337:PRO:HB3	1:F:479:LEU:O	2.21	0.41
1:A:132:GLY:N	1:A:233:PRO:HD3	2.36	0.41
1:D:477:VAL:CG2	1:D:485:PRO:HB3	2.51	0.41
1:E:417:PRO:HB3	1:F:12:ASP:HA	2.02	0.41
1:G:454:LEU:O	1:G:457:ARG:HG2	2.21	0.41
1:F:342:THR:HG22	1:F:343:GLN:HG3	2.02	0.41
1:H:339:VAL:HG22	1:H:372:CYS:HB2	2.03	0.41
1:E:437:CYS:HB3	1:F:425:VAL:HG21	2.03	0.40
1:H:337:PRO:HB3	1:H:479:LEU:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:SER:HB2	1:A:482:GLY:CA	2.51	0.40
1:B:67:SER:HA	1:B:72:ARG:HG2	2.03	0.40
1:E:68:ARG:NH2	1:E:98:GLU:HB3	2.36	0.40
1:G:288:HIS:CE1	1:G:292:LYS:HG3	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	429/447 (96%)	424 (99%)	3 (1%)	2 (0%)	24	14
1	B	442/447 (99%)	436 (99%)	5 (1%)	1 (0%)	43	35
1	C	426/447 (95%)	421 (99%)	4 (1%)	1 (0%)	43	35
1	D	431/447 (96%)	427 (99%)	3 (1%)	1 (0%)	43	35
1	E	427/447 (96%)	422 (99%)	4 (1%)	1 (0%)	43	35
1	F	436/447 (98%)	431 (99%)	4 (1%)	1 (0%)	43	35
1	G	422/447 (94%)	416 (99%)	5 (1%)	1 (0%)	43	35
1	H	432/447 (97%)	428 (99%)	3 (1%)	1 (0%)	43	35
All	All	3445/3576 (96%)	3405 (99%)	31 (1%)	9 (0%)	36	27

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	131	SER
1	B	342	THR
1	C	342	THR
1	D	342	THR
1	E	342	THR
1	F	342	THR

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Mol	Chain	Res	Type
1	G	342	THR
1	H	342	THR
1	A	342	THR

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	344/352 (98%)	337 (98%)	7 (2%)	48	42
1	B	353/352 (100%)	339 (96%)	14 (4%)	28	17
1	C	343/352 (97%)	338 (98%)	5 (2%)	57	52
1	D	344/352 (98%)	335 (97%)	9 (3%)	40	32
1	E	345/352 (98%)	335 (97%)	10 (3%)	37	28
1	F	351/352 (100%)	347 (99%)	4 (1%)	65	61
1	G	339/352 (96%)	335 (99%)	4 (1%)	63	58
1	H	345/352 (98%)	340 (99%)	5 (1%)	59	54
All	All	2764/2816 (98%)	2706 (98%)	58 (2%)	48	40

All (58) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	26	GLN
1	A	86	LEU
1	A	424	GLU
1	A	477	VAL
1	A	539[A]	MET
1	A	539[B]	MET
1	A	542	LEU
1	B	10	ARG
1	B	16	LEU
1	B	34	MET
1	B	113	SER
1	B	115	LEU

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Mol	Chain	Res	Type
1	B	118	ARG
1	B	265	VAL
1	B	381	LYS
1	B	414	ARG
1	B	514	ARG
1	B	518	ARG
1	B	523	VAL
1	B	539[A]	MET
1	B	539[B]	MET
1	C	68	ARG
1	C	113	SER
1	C	260	ARG
1	C	424[A]	GLU
1	C	424[B]	GLU
1	D	69	SER
1	D	118	ARG
1	D	244[A]	ARG
1	D	244[B]	ARG
1	D	413	ARG
1	D	523	VAL
1	D	530	ARG
1	D	539	MET
1	D	543	SER
1	E	68	ARG
1	E	244	ARG
1	E	333	LEU
1	E	413	ARG
1	E	414	ARG
1	E	424	GLU
1	E	502	ARG
1	E	513	LEU
1	E	539	MET
1	E	541	VAL
1	F	16	LEU
1	F	34	MET
1	F	118	ARG
1	F	523	VAL
1	G	275	GLU
1	G	424[A]	GLU
1	G	424[B]	GLU
1	G	438	CYS
1	H	68	ARG

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Mol	Chain	Res	Type
1	H	69	SER
1	H	275	GLU
1	H	539	MET
1	H	543	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	27	GLN
1	C	27	GLN
1	C	277	HIS
1	D	27	GLN
1	E	27	GLN
1	F	27	GLN
1	G	277	HIS
1	H	27	GLN
1	H	90	HIS

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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

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	$\#\|Z\| > 2$
3	OXL	A	602	5	5,5,5	1.98	2 (40%)	6,6,6	2.03	3 (50%)
3	OXL	B	602	5	5,5,5	2.54	2 (40%)	6,6,6	1.45	1 (16%)
4	WV6	B	603[B]	-	21,21,21	0.59	1 (4%)	30,31,31	0.45	0
2	FBP	F	601	-	18,20,20	0.50	0	21,32,32	0.64	0
4	WV6	B	603[A]	-	21,21,21	0.51	0	30,31,31	0.41	0
2	FBP	E	601	-	18,20,20	0.40	0	21,32,32	0.59	0
2	FBP	G	601	-	18,20,20	0.45	0	21,32,32	0.62	0
2	FBP	D	601	-	18,20,20	0.53	0	21,32,32	0.99	1 (4%)
3	OXL	C	602	5	5,5,5	1.88	2 (40%)	6,6,6	2.35	3 (50%)
4	WV6	A	603[A]	-	21,21,21	0.50	0	30,31,31	0.48	0
4	WV6	A	603[B]	-	21,21,21	0.51	0	30,31,31	0.48	0
2	FBP	C	601	-	18,20,20	0.59	0	21,32,32	0.50	0
3	OXL	D	602	5	5,5,5	2.11	2 (40%)	6,6,6	2.74	4 (66%)
3	OXL	F	602	5	5,5,5	1.93	2 (40%)	6,6,6	2.40	3 (50%)
3	OXL	G	602	5	5,5,5	2.42	3 (60%)	6,6,6	1.10	1 (16%)
3	OXL	E	602	5	5,5,5	2.08	2 (40%)	6,6,6	2.06	2 (33%)
4	WV6	E	603[B]	-	21,21,21	0.46	0	30,31,31	0.41	0
4	WV6	E	603[A]	-	21,21,21	0.53	0	30,31,31	0.42	0
4	WV6	F	603[B]	-	21,21,21	0.57	0	30,31,31	0.47	0
4	WV6	F	603[A]	-	21,21,21	0.54	0	30,31,31	0.42	0
2	FBP	H	601	-	18,20,20	0.92	2 (11%)	21,32,32	0.81	1 (4%)
2	FBP	A	601	-	18,20,20	0.51	0	21,32,32	0.58	0
2	FBP	B	601	-	18,20,20	0.45	0	21,32,32	0.68	0
3	OXL	H	602	5	5,5,5	1.93	2 (40%)	6,6,6	1.32	1 (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
3	OXL	A	602	5	-	4/4/4/4	-
3	OXL	B	602	5	-	4/4/4/4	-
4	WV6	B	603[B]	-	-	0/16/16/16	0/2/2/2
2	FBP	F	601	-	-	2/13/32/32	0/1/1/1
4	WV6	B	603[A]	-	-	2/16/16/16	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	FBP	E	601	-	-	2/13/32/32	0/1/1/1
2	FBP	G	601	-	-	2/13/32/32	0/1/1/1
2	FBP	D	601	-	-	2/13/32/32	0/1/1/1
3	OXL	C	602	5	-	4/4/4/4	-
4	WV6	A	603[A]	-	-	1/16/16/16	0/2/2/2
4	WV6	A	603[B]	-	-	1/16/16/16	0/2/2/2
2	FBP	C	601	-	-	2/13/32/32	0/1/1/1
3	OXL	D	602	5	-	4/4/4/4	-
3	OXL	F	602	5	-	0/4/4/4	-
3	OXL	G	602	5	-	4/4/4/4	-
3	OXL	E	602	5	-	4/4/4/4	-
4	WV6	E	603[B]	-	-	2/16/16/16	0/2/2/2
4	WV6	E	603[A]	-	-	2/16/16/16	0/2/2/2
4	WV6	F	603[B]	-	-	0/16/16/16	0/2/2/2
4	WV6	F	603[A]	-	-	0/16/16/16	0/2/2/2
2	FBP	H	601	-	-	2/13/32/32	0/1/1/1
2	FBP	A	601	-	-	2/13/32/32	0/1/1/1
2	FBP	B	601	-	-	2/13/32/32	0/1/1/1
3	OXL	H	602	5	-	4/4/4/4	-

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	602	OXL	O2-C2	4.67	1.34	1.22
3	G	602	OXL	O2-C2	4.22	1.33	1.22
3	A	602	OXL	O2-C2	3.76	1.31	1.22
3	C	602	OXL	O2-C2	3.41	1.31	1.22
3	E	602	OXL	O2-C2	3.32	1.30	1.22
3	F	602	OXL	O2-C2	3.27	1.30	1.22
3	D	602	OXL	O2-C2	3.24	1.30	1.22
3	D	602	OXL	O4-C2	-3.14	1.22	1.30
3	E	602	OXL	O4-C2	-3.04	1.22	1.30
3	B	602	OXL	O4-C2	-3.03	1.22	1.30
3	H	602	OXL	O2-C2	3.02	1.30	1.22
3	H	602	OXL	O4-C2	-2.94	1.22	1.30
3	F	602	OXL	O4-C2	-2.42	1.24	1.30
3	G	602	OXL	C2-C1	-2.38	1.50	1.54
3	G	602	OXL	O4-C2	-2.37	1.24	1.30
3	C	602	OXL	O4-C2	-2.24	1.24	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	602	OXL	O4-C2	-2.19	1.24	1.30
4	B	603[B]	WV6	C8-N	2.12	1.42	1.37
2	H	601	FBP	P1-O1	-2.11	1.53	1.60
2	H	601	FBP	P2-O6P	-2.08	1.47	1.54

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	602	OXL	O4-C2-C1	4.45	121.47	112.83
3	F	602	OXL	O4-C2-C1	4.34	121.25	112.83
3	D	602	OXL	O3-C1-C2	4.18	120.94	112.83
3	D	602	OXL	O4-C2-C1	4.02	120.62	112.83
3	A	602	OXL	O4-C2-C1	3.83	120.26	112.83
3	E	602	OXL	O4-C2-C1	3.58	119.77	112.83
2	D	601	FBP	O6-P2-O4P	3.18	115.04	106.44
3	F	602	OXL	O3-C1-C2	2.91	118.47	112.83
3	H	602	OXL	O4-C2-C1	2.82	118.30	112.83
3	E	602	OXL	O3-C1-C2	2.80	118.25	112.83
3	C	602	OXL	O2-C2-C1	-2.75	114.90	120.63
3	D	602	OXL	O1-C1-C2	-2.70	115.01	120.63
3	B	602	OXL	O3-C1-C2	2.68	118.02	112.83
2	H	601	FBP	O6-P2-O4P	2.66	113.62	106.44
3	F	602	OXL	O2-C2-C1	-2.53	115.35	120.63
3	A	602	OXL	O2-C2-C1	-2.31	115.83	120.63
3	C	602	OXL	O3-C1-C2	2.31	117.30	112.83
3	G	602	OXL	O4-C2-C1	2.15	117.00	112.83
3	A	602	OXL	O3-C1-C2	2.10	116.91	112.83
3	D	602	OXL	O2-C2-C1	-2.02	116.41	120.63

There are no chirality outliers.

All (52) 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	H	601	FBP	C4-C5-C6-O6
2	F	601	FBP	C4-C5-C6-O6
2	G	601	FBP	C4-C5-C6-O6
2	A	601	FBP	O5-C5-C6-O6

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Mol	Chain	Res	Type	Atoms
2	B	601	FBP	O5-C5-C6-O6
2	D	601	FBP	O5-C5-C6-O6
2	E	601	FBP	O5-C5-C6-O6
2	G	601	FBP	O5-C5-C6-O6
2	H	601	FBP	O5-C5-C6-O6
2	C	601	FBP	O5-C5-C6-O6
2	F	601	FBP	O5-C5-C6-O6
4	E	603[B]	WV6	C11-C8-N-C10
4	B	603[A]	WV6	C7-C8-N-C9
3	H	602	OXL	O3-C1-C2-O4
4	E	603[B]	WV6	C7-C8-N-C10
4	B	603[A]	WV6	C11-C8-N-C9
3	A	602	OXL	O3-C1-C2-O4
3	B	602	OXL	O3-C1-C2-O4
3	C	602	OXL	O3-C1-C2-O4
3	C	602	OXL	O1-C1-C2-O2
3	E	602	OXL	O3-C1-C2-O4
3	G	602	OXL	O3-C1-C2-O4
3	A	602	OXL	O1-C1-C2-O2
3	B	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	D	602	OXL	O3-C1-C2-O4
3	H	602	OXL	O1-C1-C2-O2
3	H	602	OXL	O3-C1-C2-O2
4	E	603[A]	WV6	C7-C8-N-C9
4	E	603[A]	WV6	C11-C8-N-C9
4	A	603[B]	WV6	C7-C8-N-C9
3	A	602	OXL	O1-C1-C2-O4
3	B	602	OXL	O3-C1-C2-O2
3	C	602	OXL	O1-C1-C2-O4
3	C	602	OXL	O3-C1-C2-O2
3	E	602	OXL	O3-C1-C2-O2
3	A	602	OXL	O3-C1-C2-O2
3	B	602	OXL	O1-C1-C2-O4
3	E	602	OXL	O1-C1-C2-O4
3	G	602	OXL	O1-C1-C2-O4
3	D	602	OXL	O3-C1-C2-O2
3	G	602	OXL	O3-C1-C2-O2
3	D	602	OXL	O1-C1-C2-O4
3	H	602	OXL	O1-C1-C2-O4

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Mol	Chain	Res	Type	Atoms
4	A	603[A]	WV6	C7-C8-N-C9

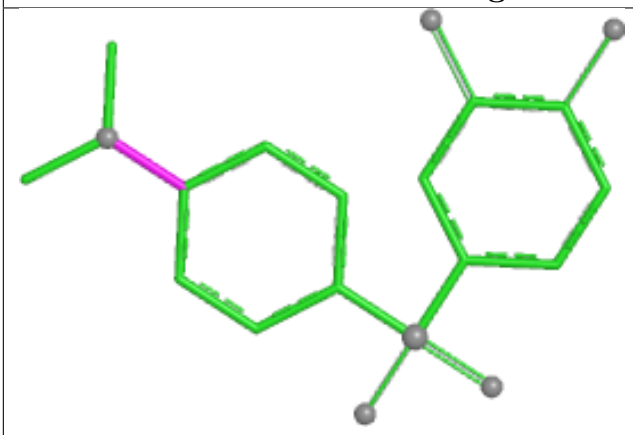
There are no ring outliers.

6 monomers are involved in 6 short contacts:

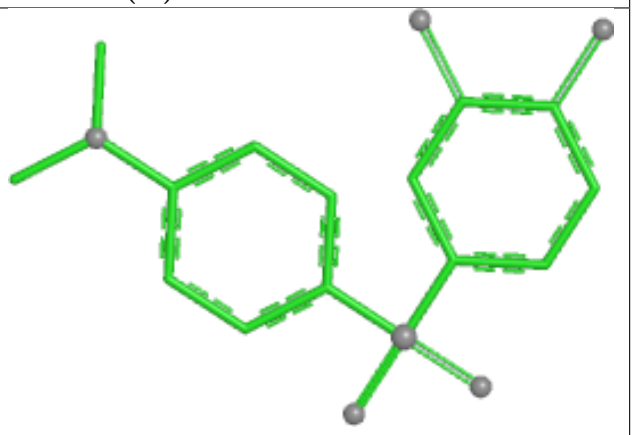
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	603[B]	WV6	1	0
4	B	603[A]	WV6	1	0
4	A	603[A]	WV6	1	0
4	E	603[B]	WV6	1	0
4	E	603[A]	WV6	1	0
4	F	603[A]	WV6	1	0

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 then 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.

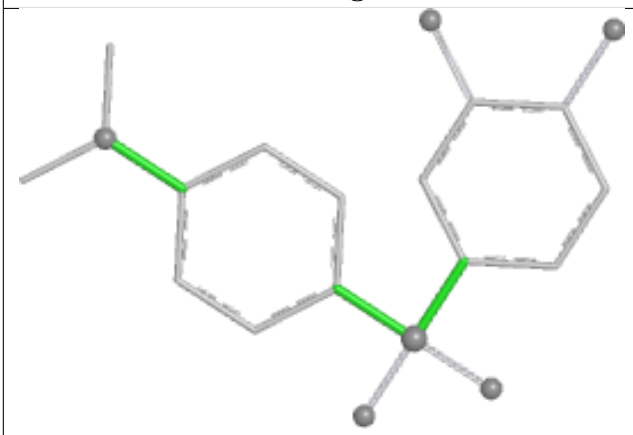
Ligand WV6 B 603 (B)



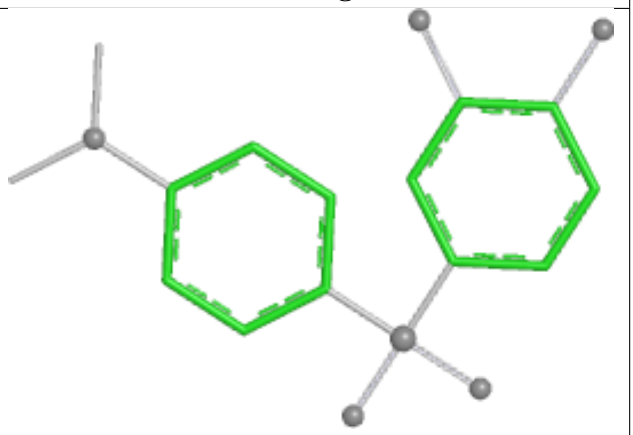
Bond lengths



Bond angles

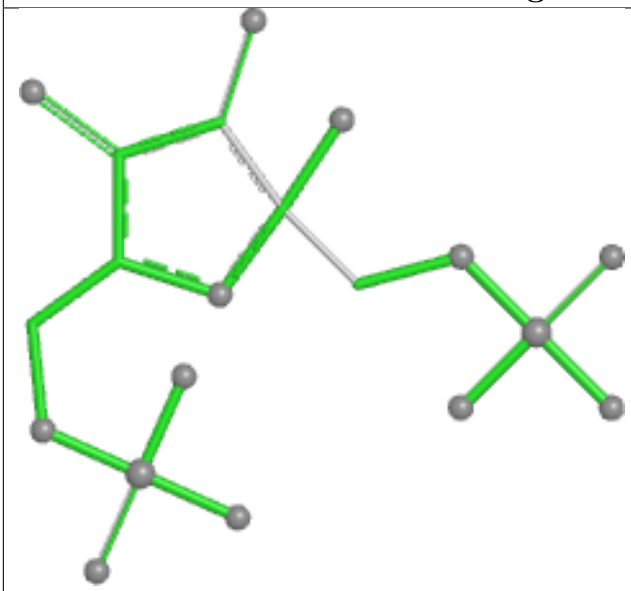


Torsions

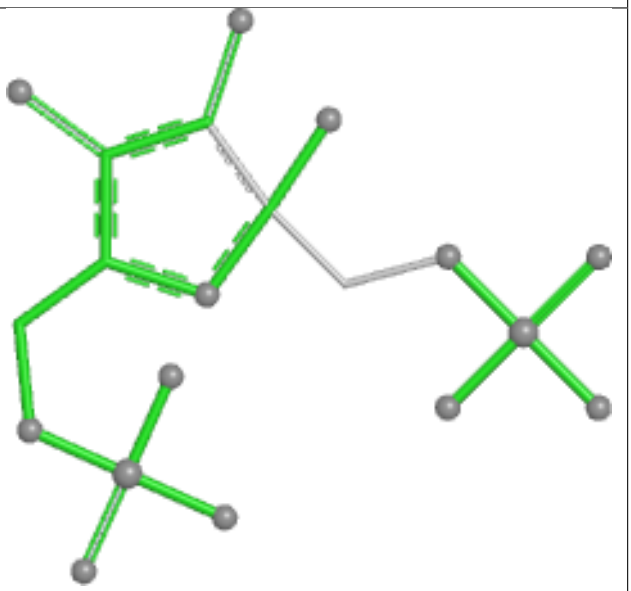


Rings

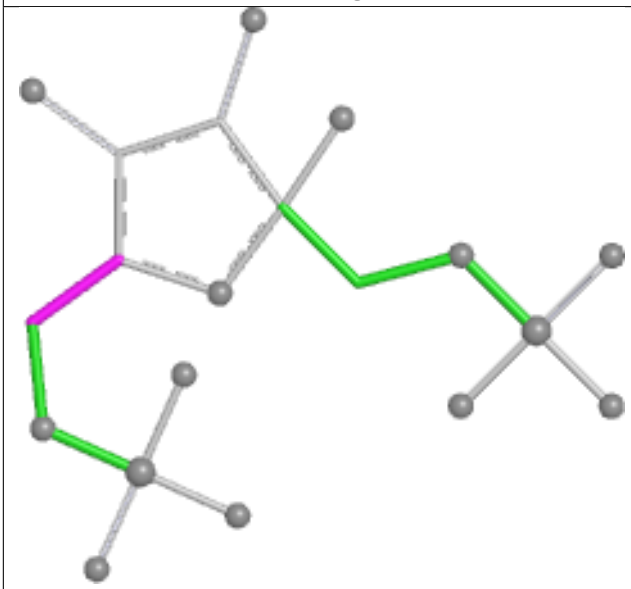
Ligand FBP F 601



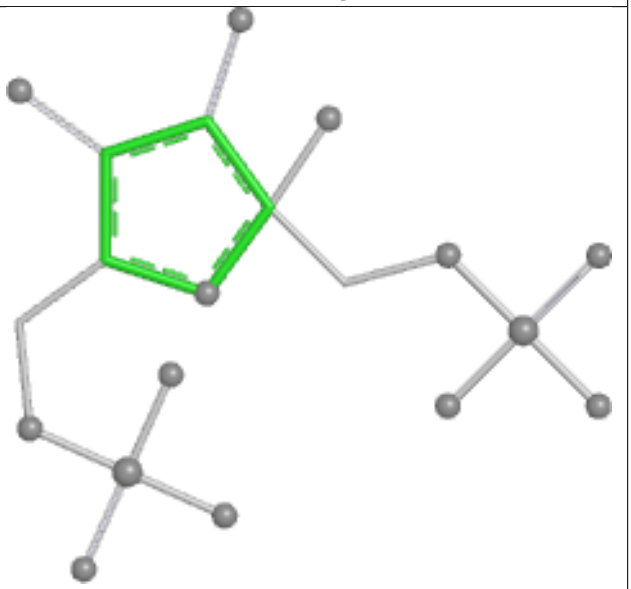
Bond lengths



Bond angles

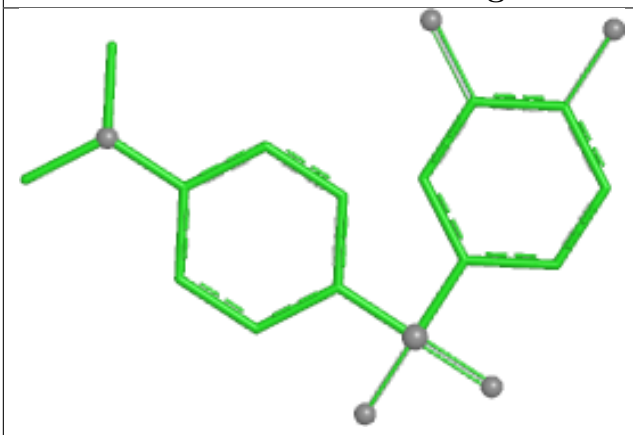


Torsions

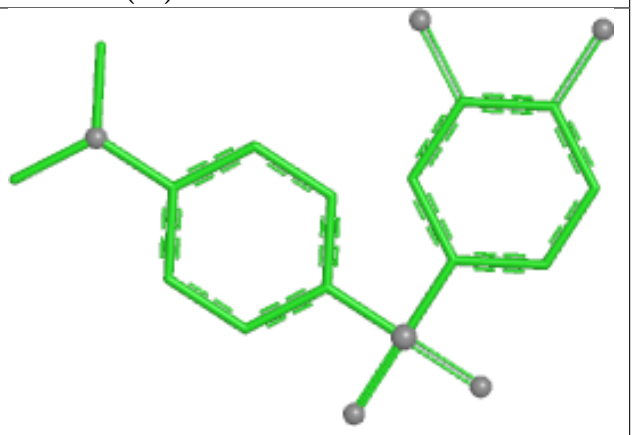


Rings

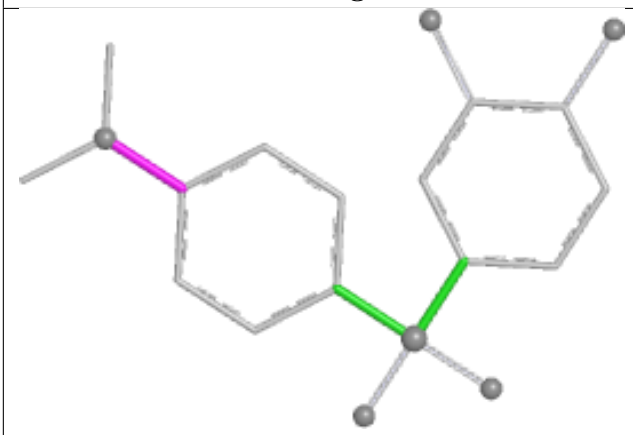
Ligand WV6 B 603 (A)



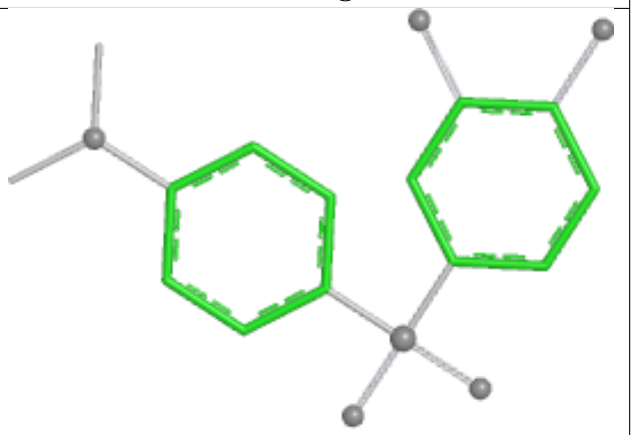
Bond lengths



Bond angles

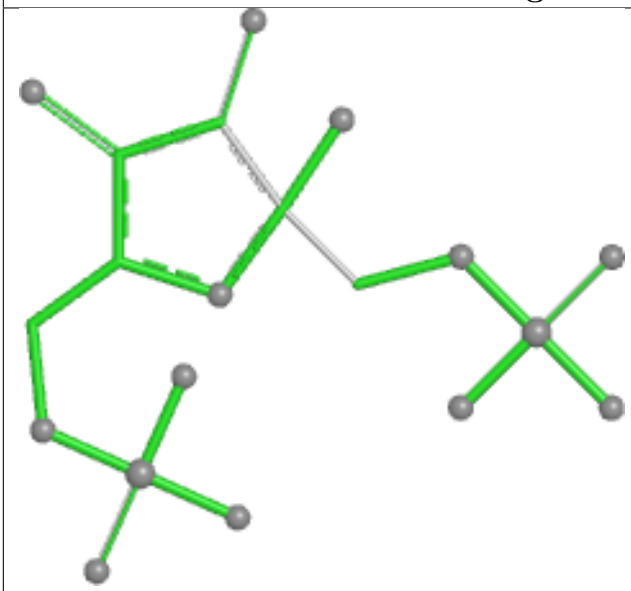


Torsions

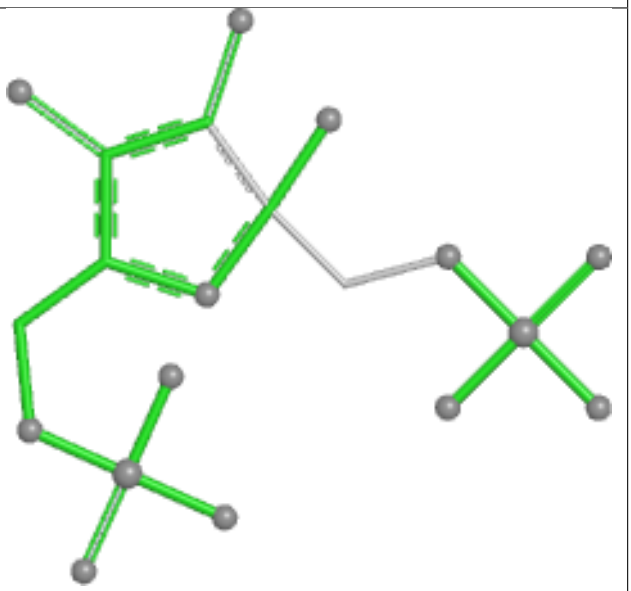


Rings

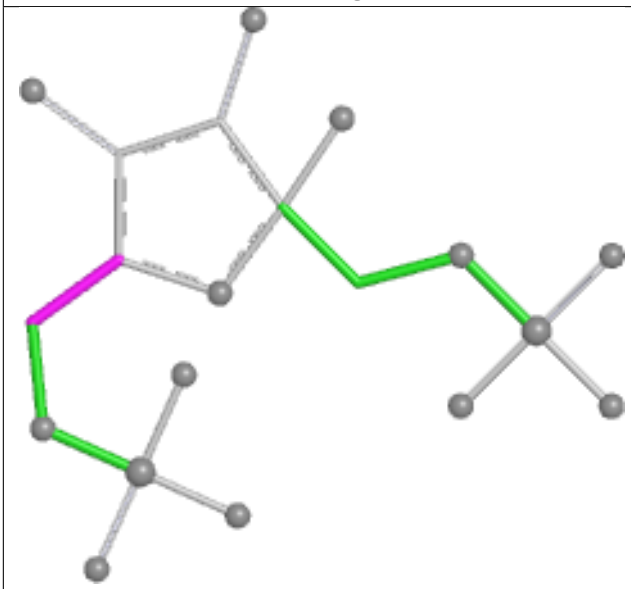
Ligand FBP E 601



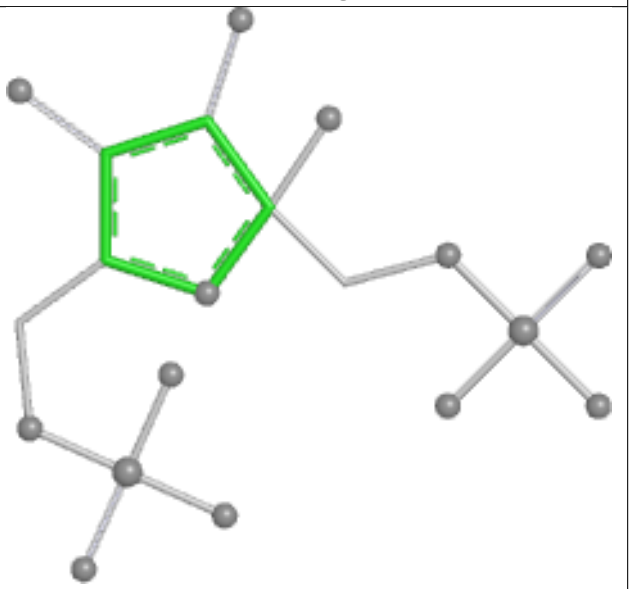
Bond lengths



Bond angles

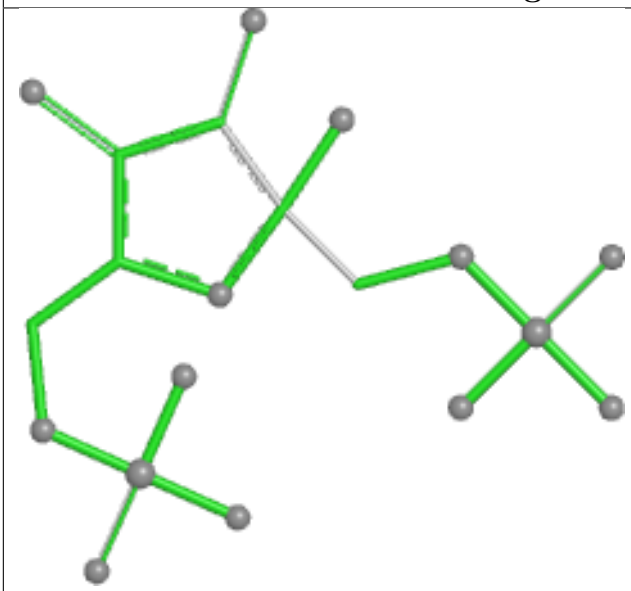


Torsions

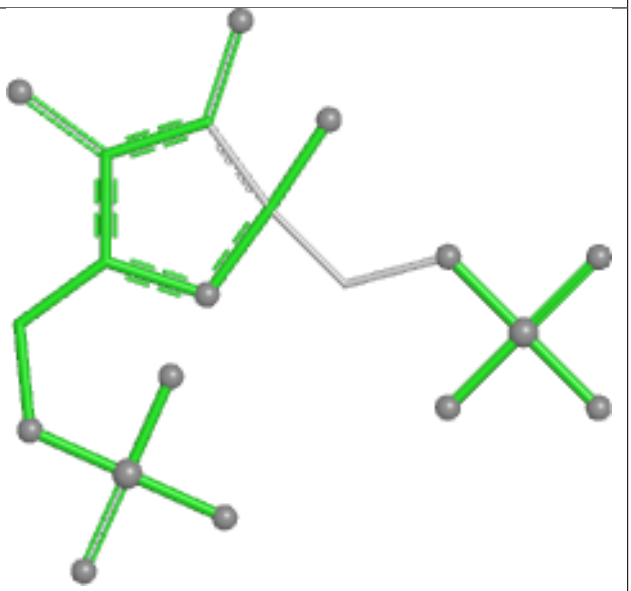


Rings

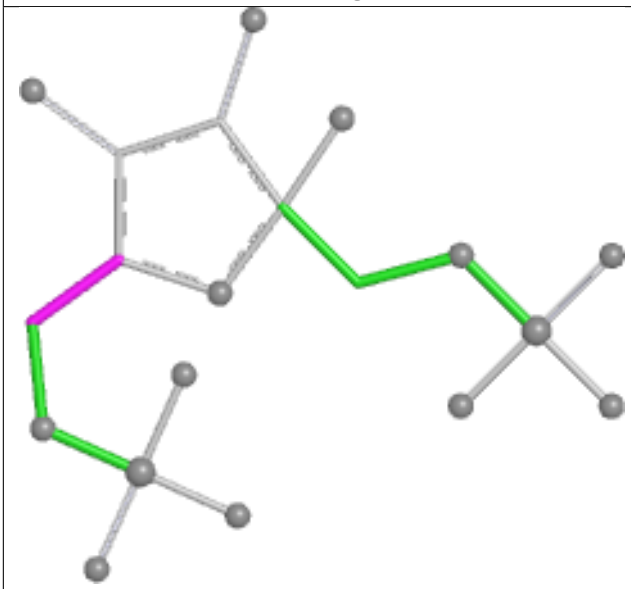
Ligand FBP G 601



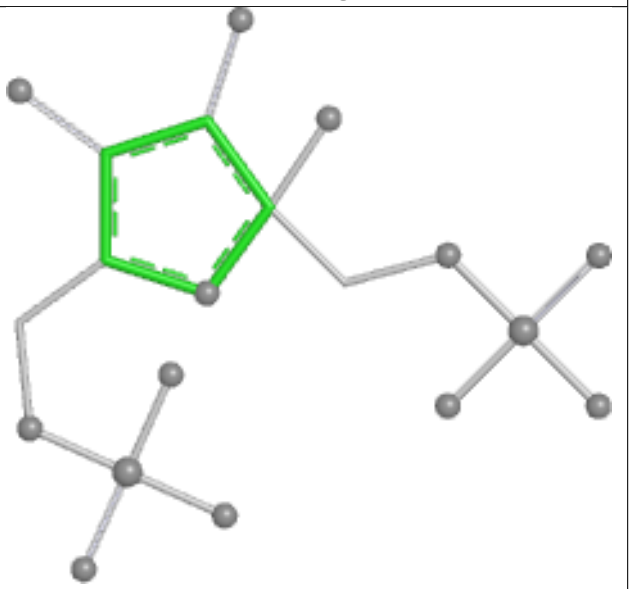
Bond lengths



Bond angles

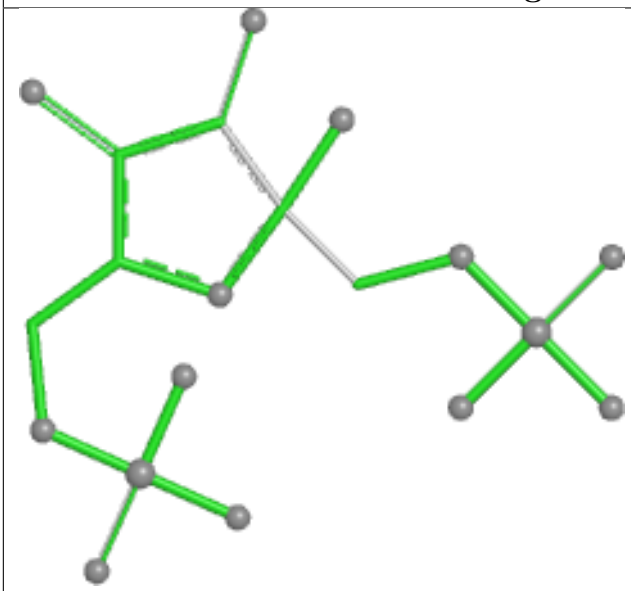


Torsions

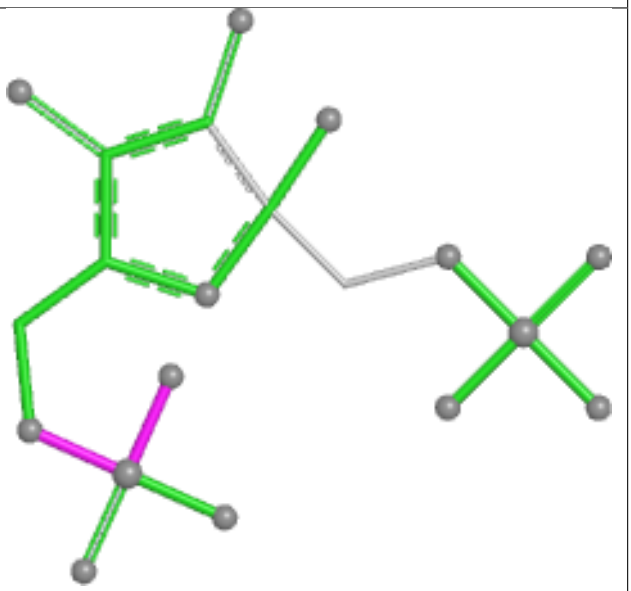


Rings

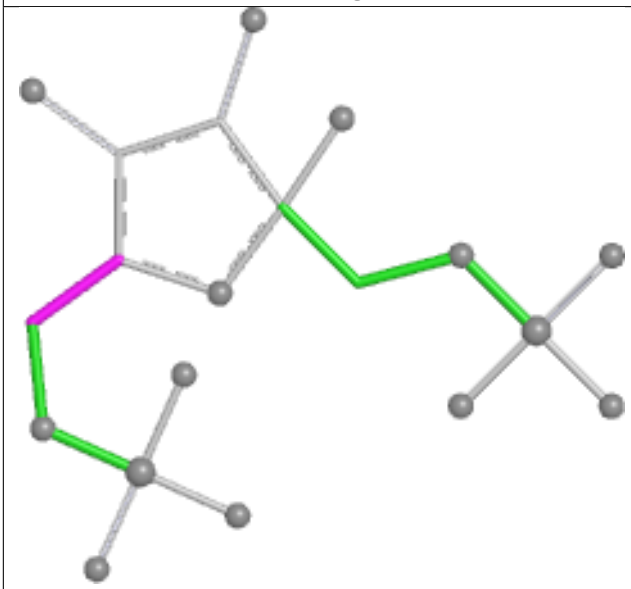
Ligand FBP D 601



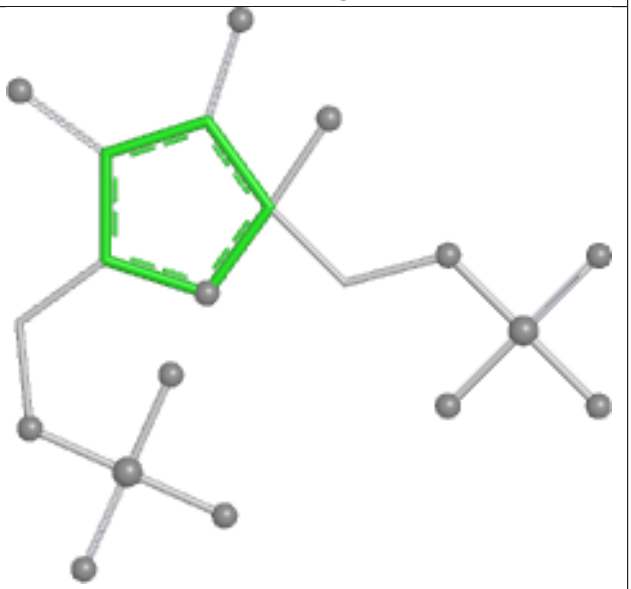
Bond lengths



Bond angles

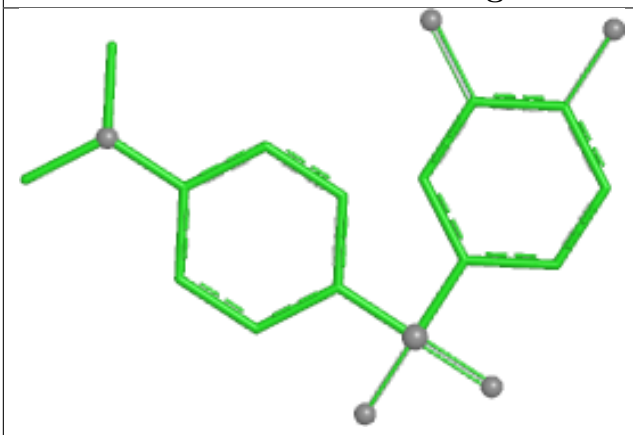


Torsions

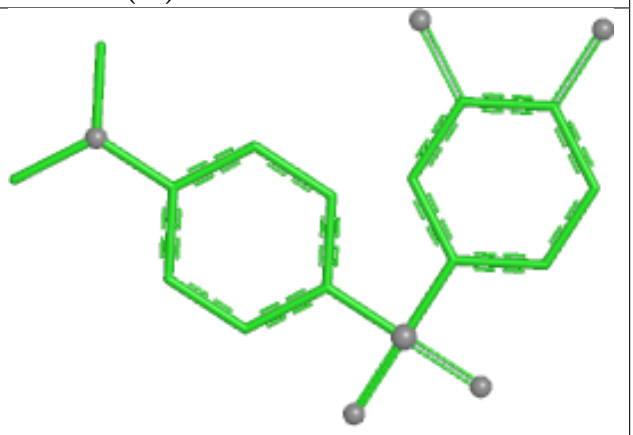


Rings

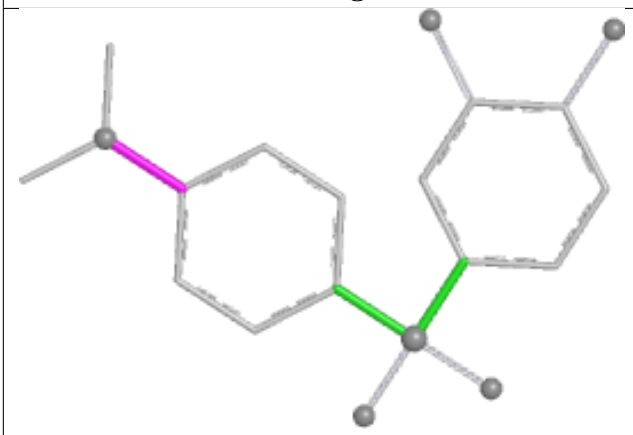
Ligand WV6 A 603 (A)



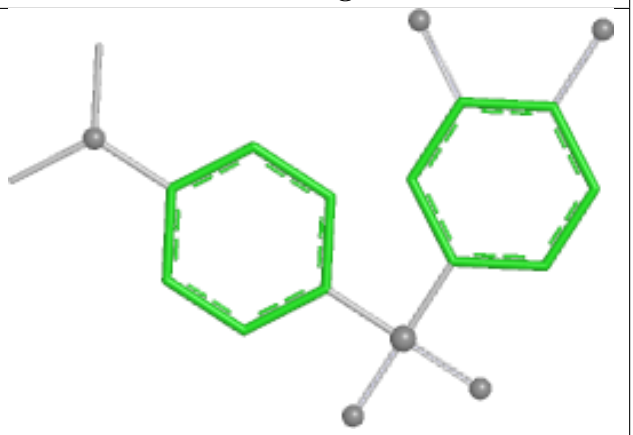
Bond lengths



Bond angles

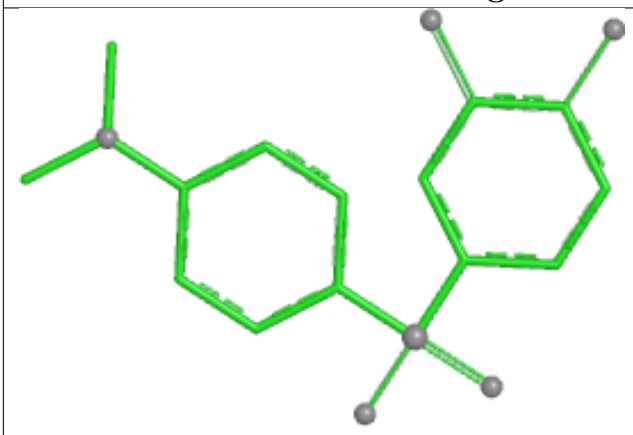


Torsions

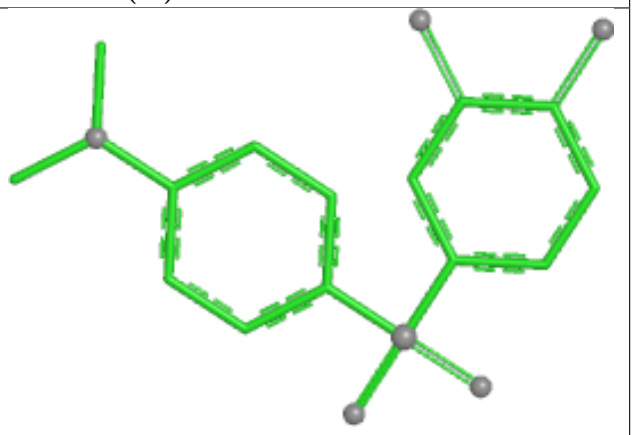


Rings

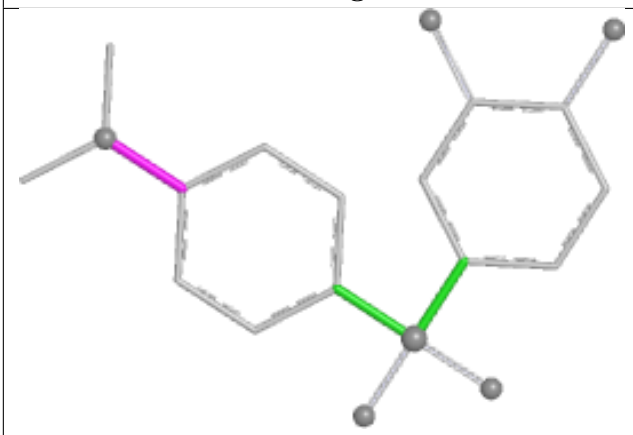
Ligand WV6 A 603 (B)



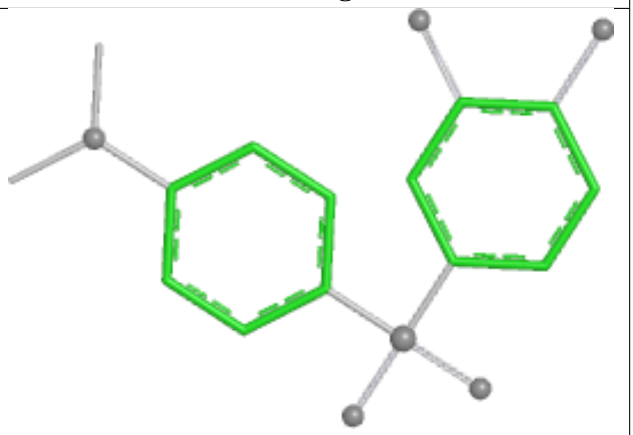
Bond lengths



Bond angles

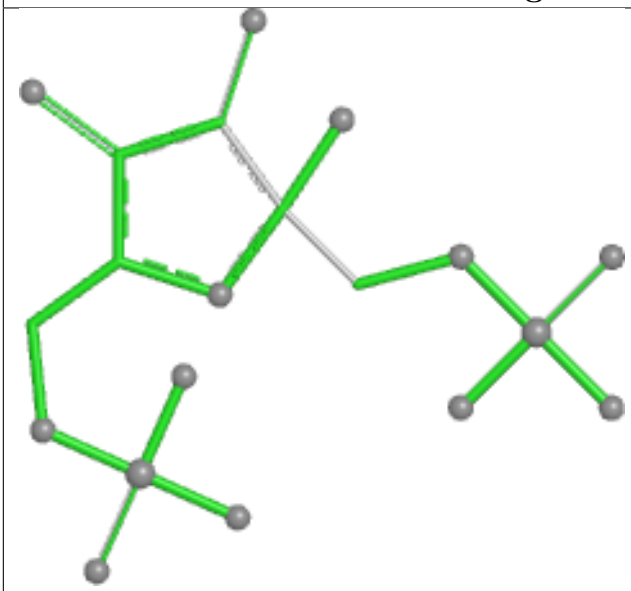


Torsions

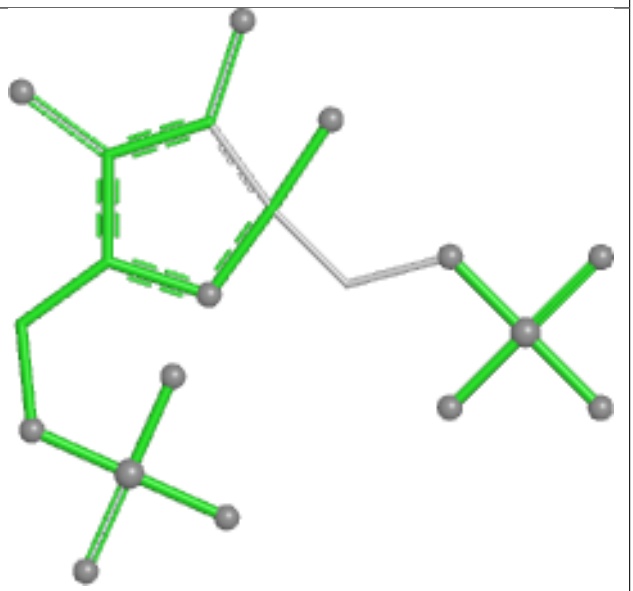


Rings

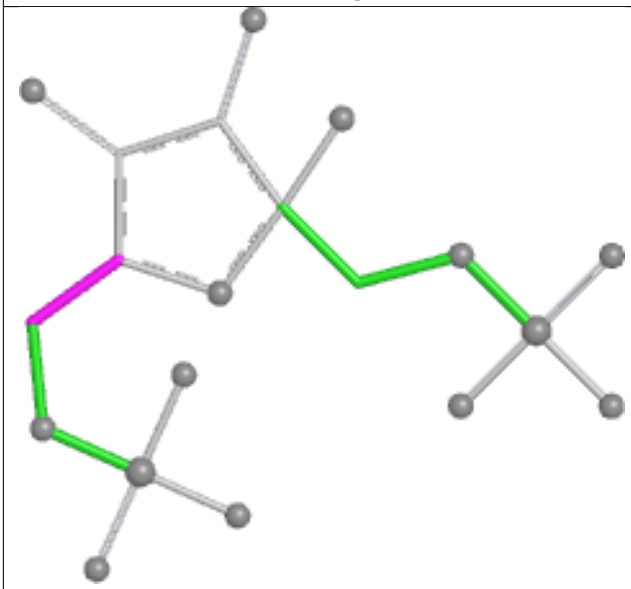
Ligand FBP C 601



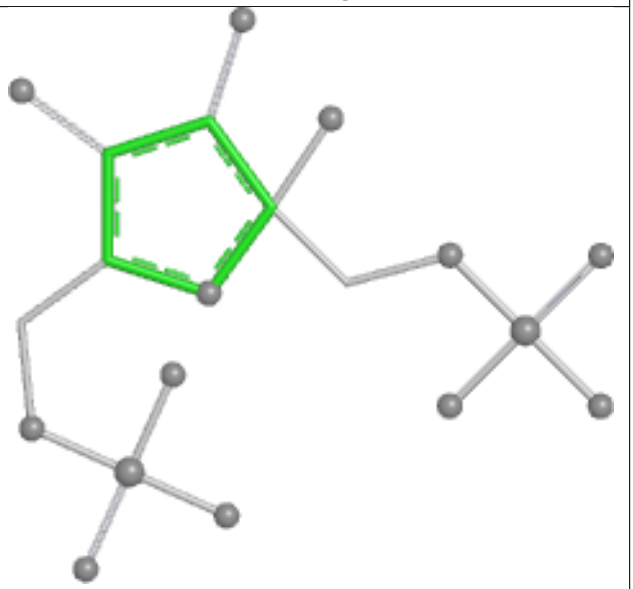
Bond lengths



Bond angles

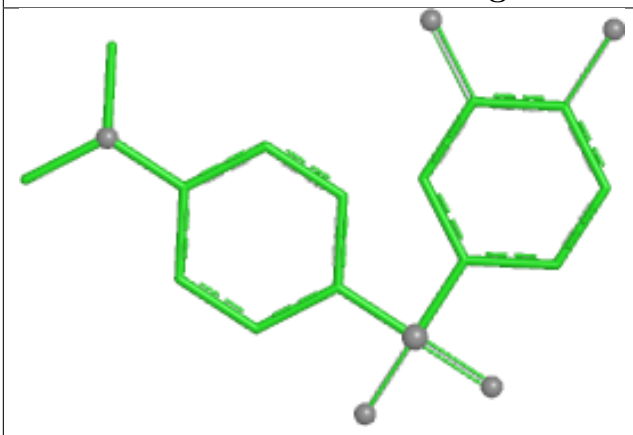


Torsions

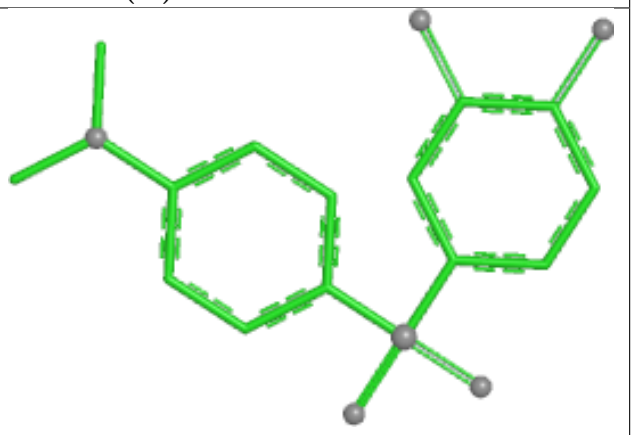


Rings

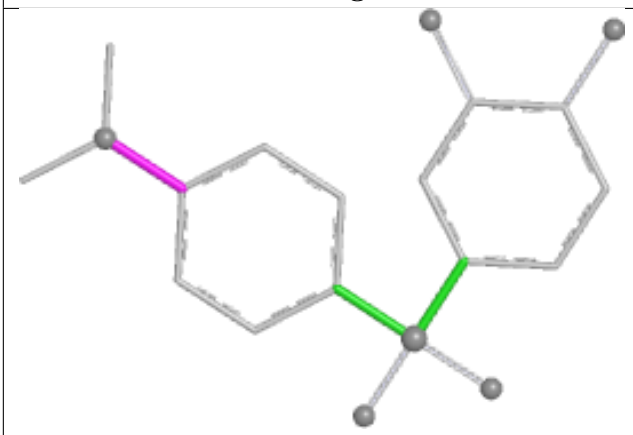
Ligand WV6 E 603 (B)



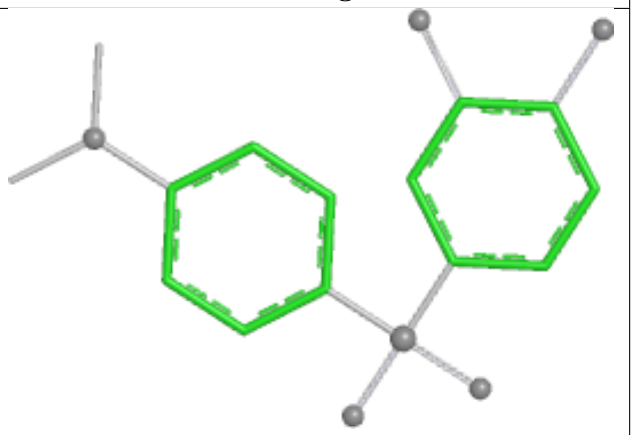
Bond lengths



Bond angles

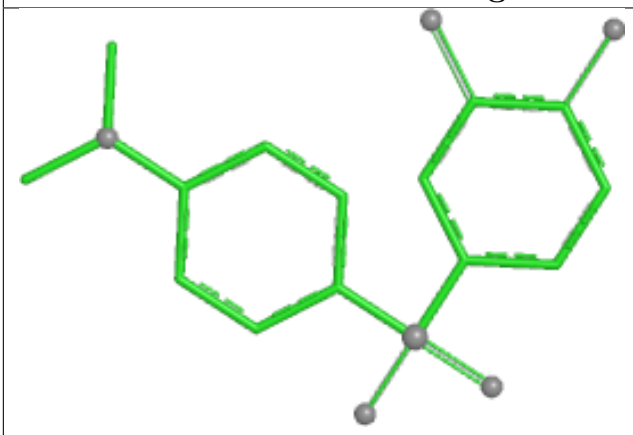


Torsions

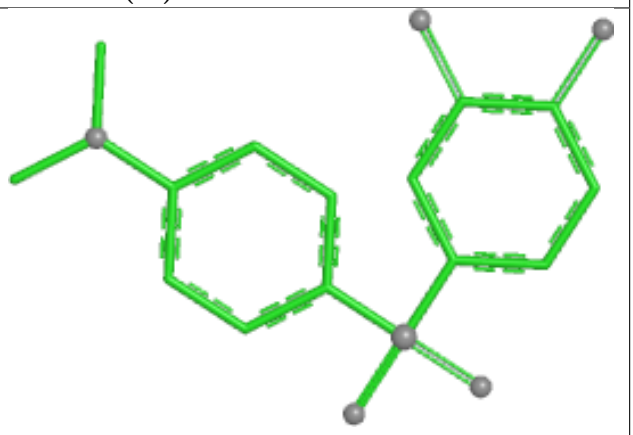


Rings

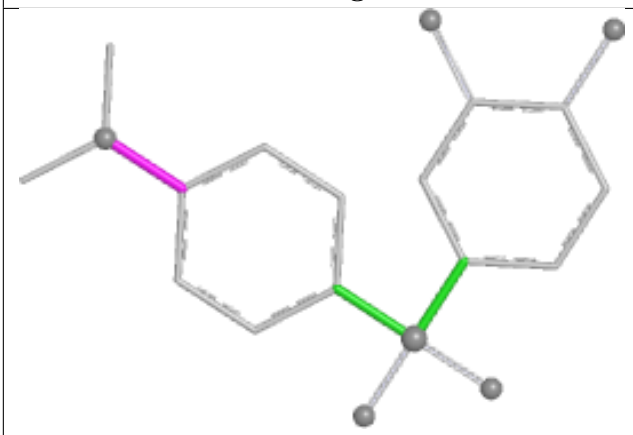
Ligand WV6 E 603 (A)



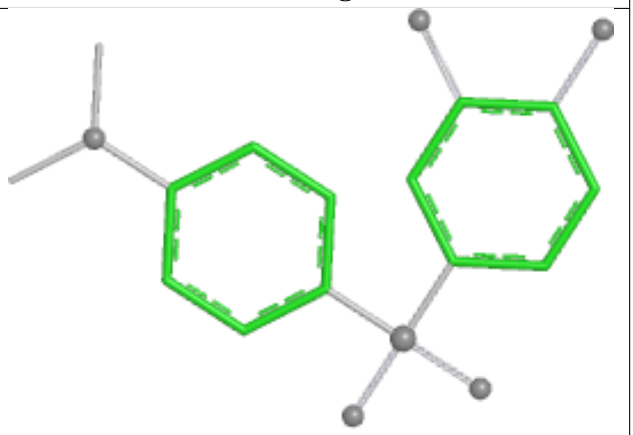
Bond lengths



Bond angles

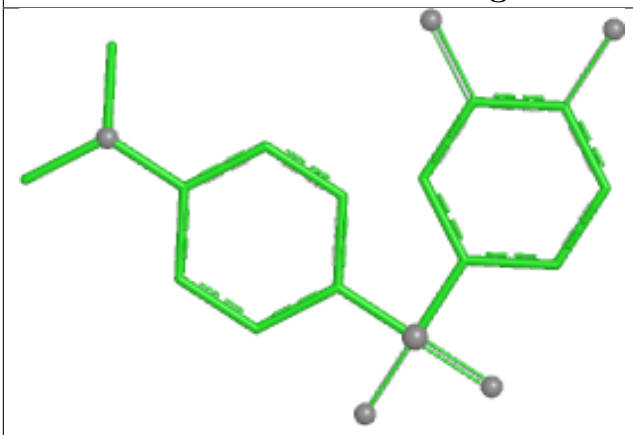


Torsions

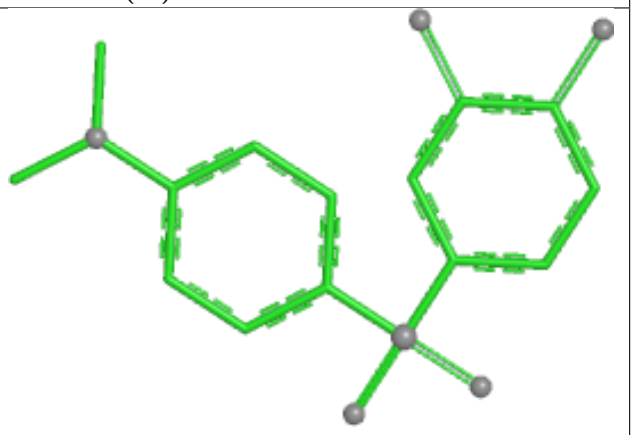


Rings

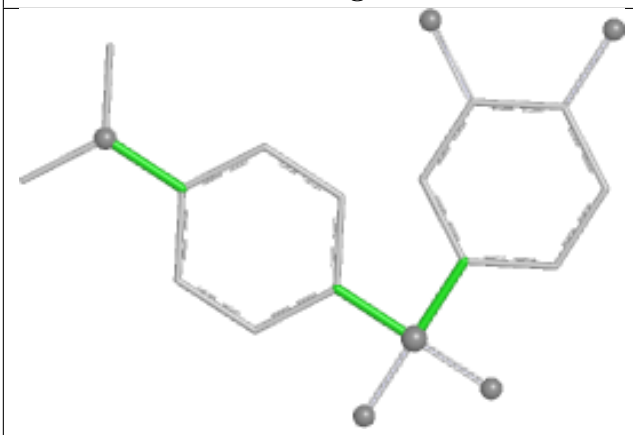
Ligand WV6 F 603 (B)



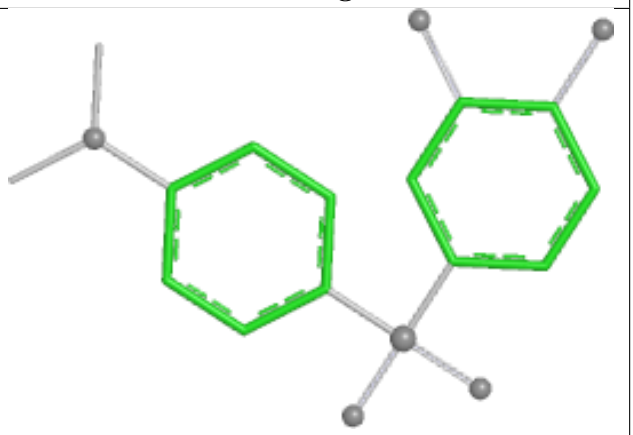
Bond lengths



Bond angles

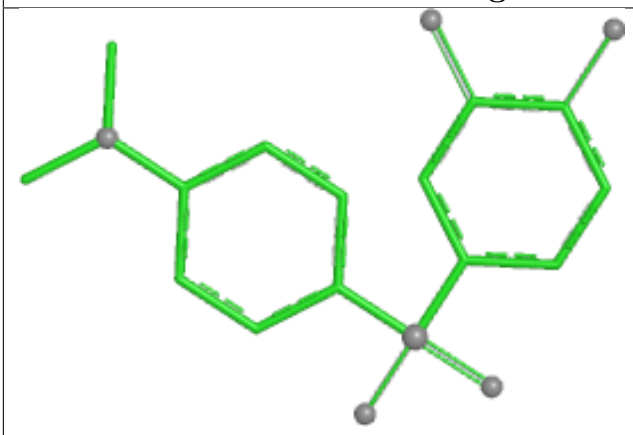


Torsions

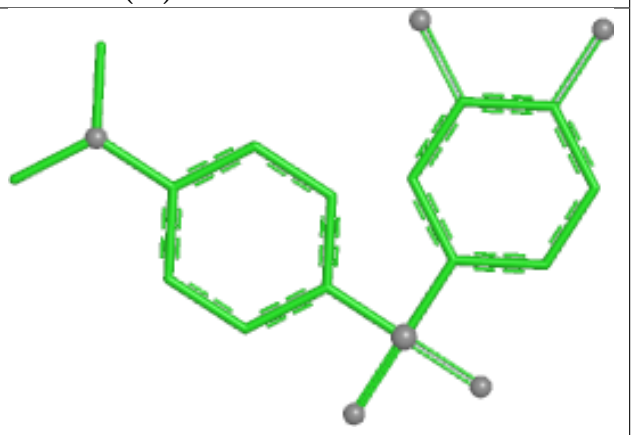


Rings

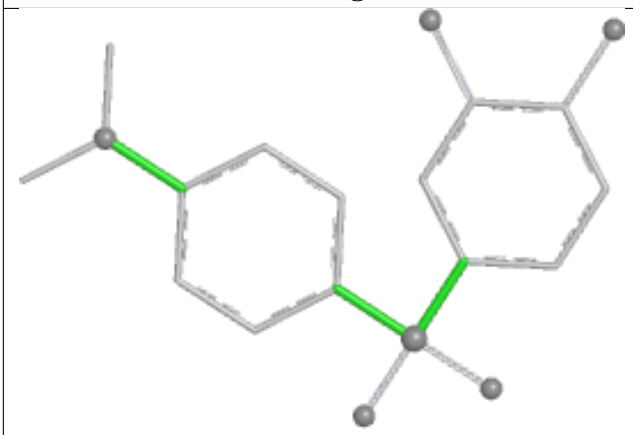
Ligand WV6 F 603 (A)



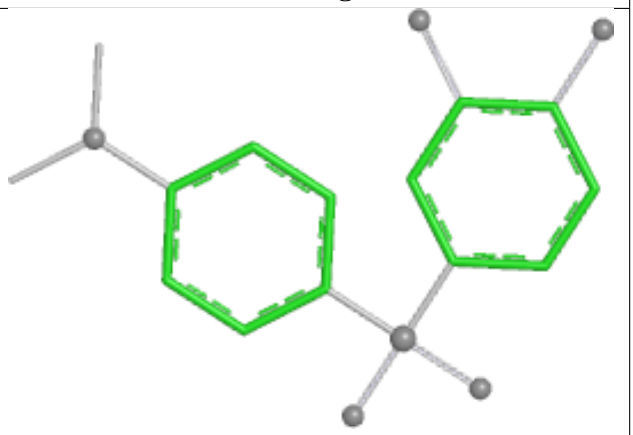
Bond lengths



Bond angles

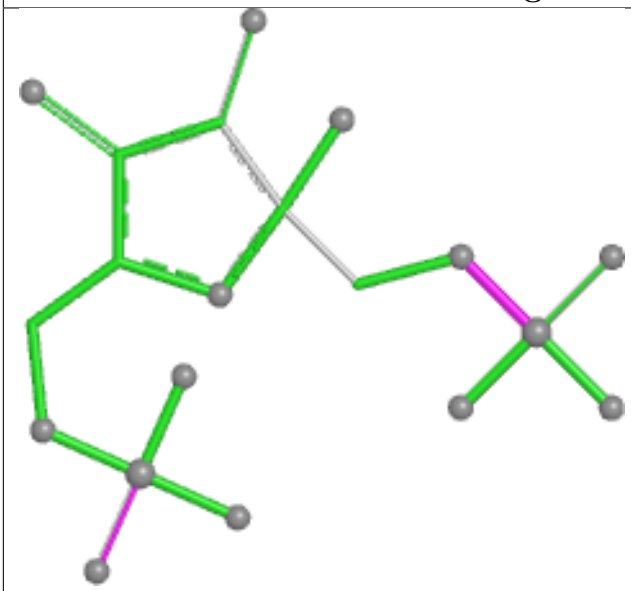


Torsions

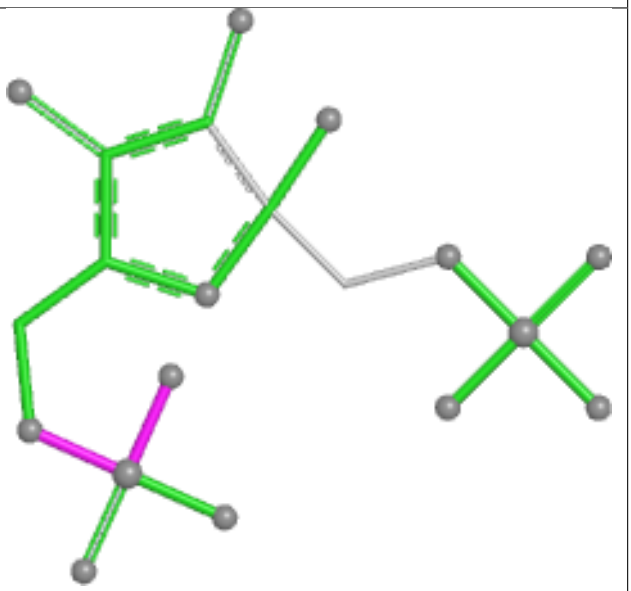


Rings

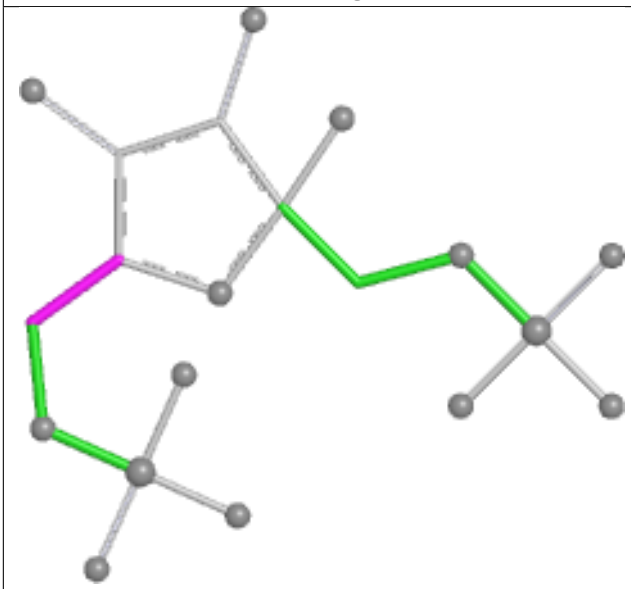
Ligand FBP H 601



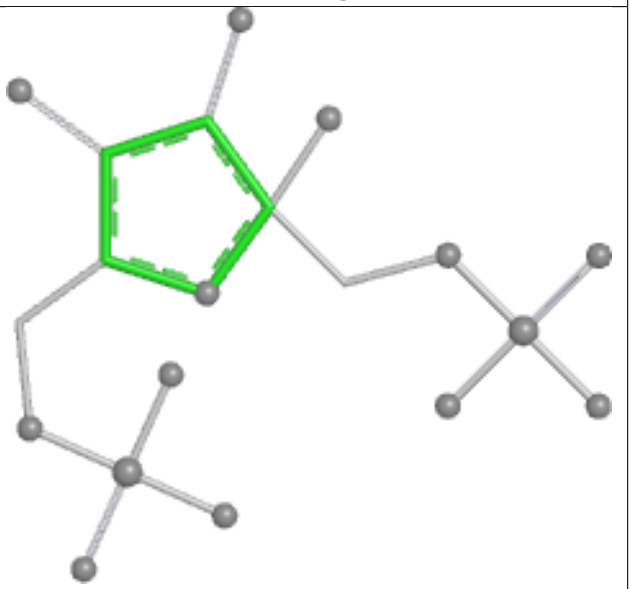
Bond lengths



Bond angles

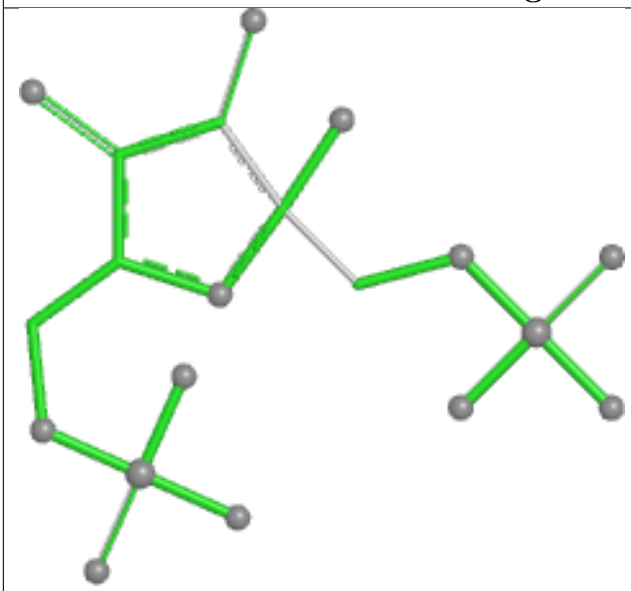


Torsions

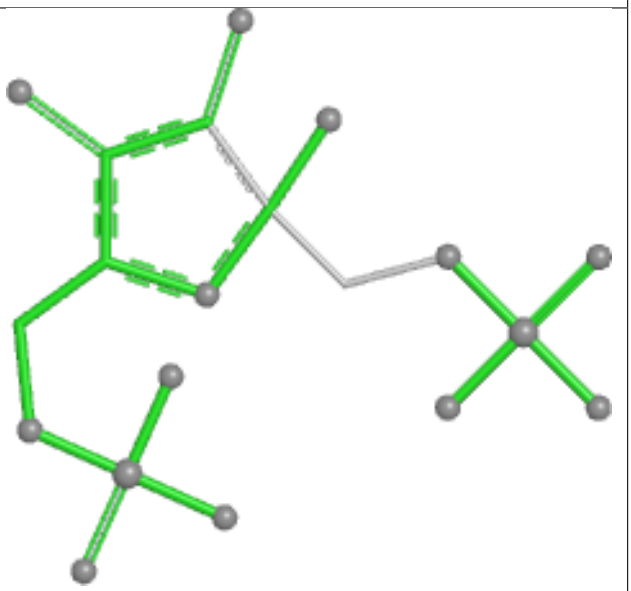


Rings

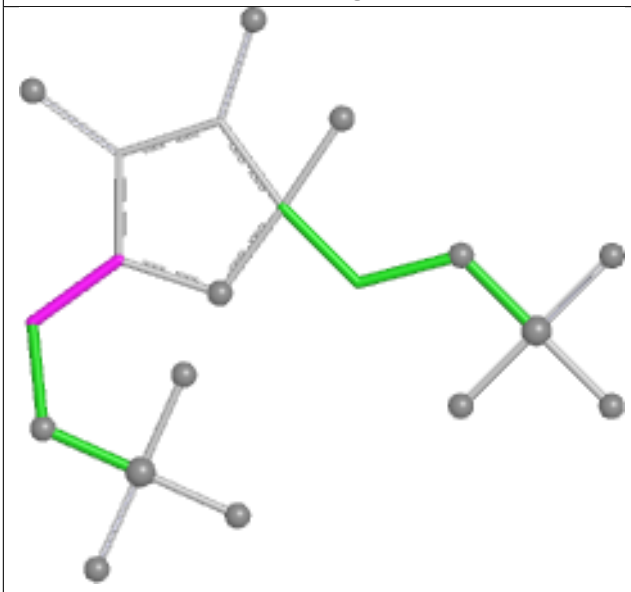
Ligand FBP A 601



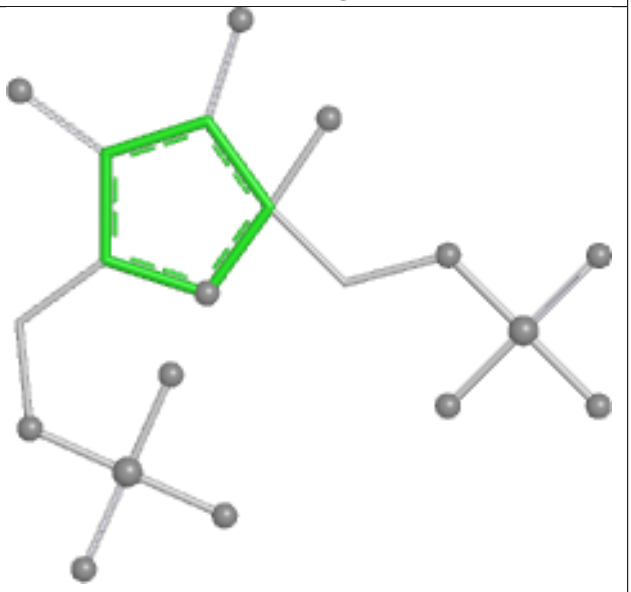
Bond lengths



Bond angles

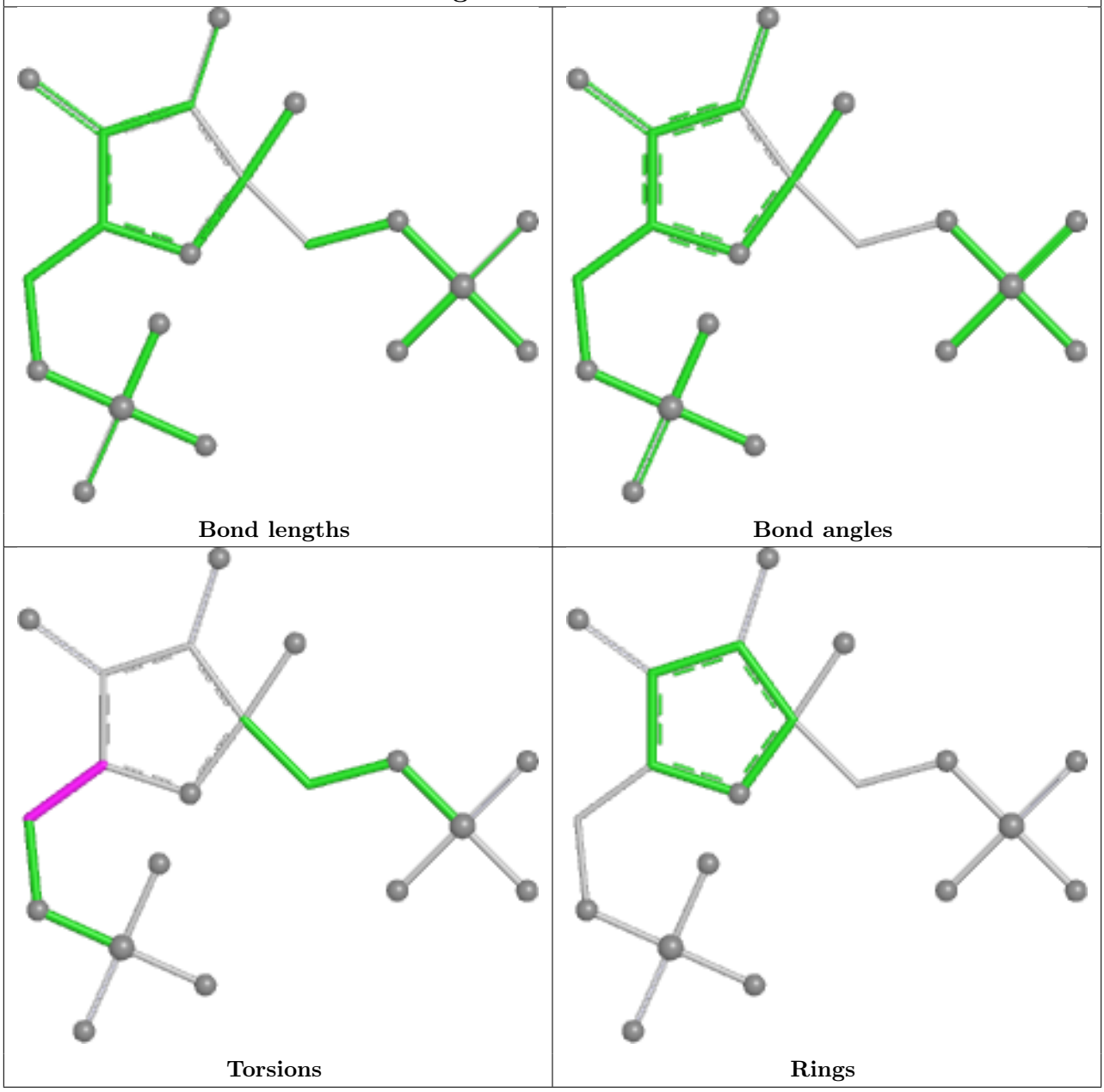


Torsions



Rings

Ligand FBP B 601



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, 95^{th} 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%)	1.18	69 (16%) 4 5	32, 59, 88, 109	11 (2%)
1	B	436/447 (97%)	1.73	160 (36%) 1 1	28, 61, 98, 114	8 (1%)
1	C	424/447 (94%)	0.53	25 (5%) 28 37	22, 45, 70, 122	6 (1%)
1	D	425/447 (95%)	0.17	11 (2%) 57 67	18, 38, 63, 116	8 (1%)
1	E	420/447 (93%)	1.21	75 (17%) 3 4	32, 60, 90, 104	11 (2%)
1	F	432/447 (96%)	0.77	46 (10%) 11 15	27, 49, 78, 96	8 (1%)
1	G	421/447 (94%)	0.35	23 (5%) 30 39	25, 41, 63, 96	6 (1%)
1	H	425/447 (95%)	-0.00	10 (2%) 59 69	17, 35, 59, 110	9 (2%)
All	All	3403/3576 (95%)	0.74	419 (12%) 8 11	17, 49, 86, 122	67 (1%)

All (419) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	513	LEU	7.7
1	E	277[A]	HIS	6.8
1	B	115	LEU	6.4
1	F	233	PRO	5.9
1	C	20	LEU	5.8
1	G	273	GLY	5.7
1	E	233	PRO	5.5
1	F	115	LEU	5.2
1	E	129	PRO	4.9
1	B	486	LEU	4.8
1	D	25	PHE	4.8
1	G	25	PHE	4.8
1	A	240	VAL	4.8
1	B	110	PHE	4.8
1	B	251	VAL	4.8
1	E	25	PHE	4.7

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Mol	Chain	Res	Type	RSRZ
1	D	24	PHE	4.6
1	B	103	VAL	4.6
1	B	107	VAL	4.6
1	B	529	TRP	4.6
1	C	25	PHE	4.6
1	B	517	LEU	4.6
1	B	508	ILE	4.5
1	G	23	ALA	4.5
1	B	519	VAL	4.5
1	B	77	ILE	4.4
1	B	272	LEU	4.4
1	B	544	ILE	4.4
1	B	380	ALA	4.4
1	B	243	LEU	4.3
1	B	235	LEU	4.3
1	B	506	PHE	4.3
1	C	273	GLY	4.2
1	B	384	PHE	4.1
1	G	233	PRO	4.1
1	H	25	PHE	4.1
1	H	21	GLY	4.1
1	B	70	VAL	4.0
1	B	106	ALA	4.0
1	B	67	SER	4.0
1	A	380	ALA	4.0
1	B	100	ILE	4.0
1	B	120	VAL	4.0
1	F	269[A]	ARG	3.9
1	B	83	ILE	3.9
1	A	235	LEU	3.9
1	B	487	LEU	3.9
1	A	233	PRO	3.9
1	B	254	VAL	3.9
1	E	24	PHE	3.9
1	A	52	VAL	3.9
1	B	504	VAL	3.9
1	B	269[A]	ARG	3.8
1	B	86	LEU	3.8
1	B	113	SER	3.8
1	C	234	GLY	3.7
1	B	492	PRO	3.7
1	C	233	PRO	3.7

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Mol	Chain	Res	Type	RSRZ
1	G	274	PRO	3.7
1	E	33	ALA	3.7
1	A	529	TRP	3.7
1	A	484	PHE	3.7
1	B	507	GLY	3.7
1	B	350	THR	3.7
1	B	73	LEU	3.7
1	E	240	VAL	3.7
1	C	274	PRO	3.7
1	C	117	TYR	3.6
1	A	477	VAL	3.6
1	E	115	LEU	3.6
1	E	234	GLY	3.6
1	G	24	PHE	3.6
1	B	545	SER	3.6
1	A	30	LEU	3.6
1	B	124	LEU	3.6
1	B	279	ILE	3.6
1	A	516	PHE	3.6
1	E	516	PHE	3.6
1	F	518	ARG	3.6
1	E	235	LEU	3.6
1	B	240	VAL	3.5
1	B	386	VAL	3.5
1	B	102	ASN	3.5
1	A	243	LEU	3.5
1	B	66	ALA	3.5
1	C	23	ALA	3.5
1	F	513	LEU	3.5
1	B	13	VAL	3.4
1	A	545	SER	3.4
1	C	22	THR	3.4
1	B	76[A]	MET	3.4
1	F	234	GLY	3.4
1	A	497	ALA	3.4
1	B	64	GLY	3.4
1	C	24	PHE	3.4
1	E	114	PRO	3.4
1	B	117	TYR	3.3
1	A	63	ILE	3.3
1	B	510	SER	3.3
1	B	270	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
1	D	23	ALA	3.3
1	B	516	PHE	3.3
1	G	22	THR	3.3
1	B	253	ILE	3.3
1	E	111	ALA	3.3
1	E	120	VAL	3.3
1	E	271	ALA	3.3
1	E	402	ALA	3.3
1	E	382	GLY	3.3
1	B	79	ALA	3.2
1	D	21	GLY	3.2
1	B	95	TYR	3.2
1	B	495	ILE	3.2
1	A	251	VAL	3.2
1	E	543[A]	SER	3.2
1	B	488	TYR	3.2
1	E	251	VAL	3.2
1	F	235	LEU	3.2
1	B	497	ALA	3.1
1	E	279	ILE	3.1
1	A	272	LEU	3.1
1	B	116	SER	3.1
1	B	268	VAL	3.1
1	B	515	GLY	3.1
1	B	381	LYS	3.1
1	E	123	ALA	3.1
1	F	272	LEU	3.1
1	A	501	ASP	3.1
1	A	234	GLY	3.1
1	A	115	LEU	3.1
1	F	486	LEU	3.1
1	B	500	VAL	3.1
1	E	110	PHE	3.1
1	B	90	HIS	3.1
1	B	121	ALA	3.1
1	B	273	GLY	3.1
1	B	63	ILE	3.0
1	A	265	VAL	3.0
1	B	477	VAL	3.0
1	H	24	PHE	3.0
1	E	497	ALA	3.0
1	E	504	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	B	65	PRO	3.0
1	E	23	ALA	3.0
1	B	122	ILE	3.0
1	B	247	VAL	3.0
1	B	118	ARG	3.0
1	B	349	ILE	3.0
1	G	313	ILE	3.0
1	B	467	VAL	2.9
1	C	21	GLY	2.9
1	D	22	THR	2.9
1	E	492	PRO	2.9
1	A	73	LEU	2.9
1	D	30	LEU	2.9
1	E	52	VAL	2.9
1	B	278	GLY	2.9
1	B	274	PRO	2.9
1	C	66	ALA	2.9
1	F	413	ARG	2.9
1	B	281	ILE	2.9
1	B	522	LEU	2.9
1	E	487	LEU	2.9
1	F	240	VAL	2.9
1	F	114	PRO	2.9
1	C	43	CYS	2.9
1	E	529	TRP	2.9
1	B	16	LEU	2.9
1	F	495	ILE	2.9
1	G	42	LEU	2.9
1	B	21	GLY	2.9
1	F	514	ARG	2.8
1	B	123	ALA	2.8
1	G	38	PHE	2.8
1	B	496	TRP	2.8
1	B	542[A]	LEU	2.8
1	B	259	VAL	2.8
1	B	265	VAL	2.8
1	G	52	VAL	2.8
1	B	74	LYS	2.8
1	B	11	ALA	2.8
1	B	388	ALA	2.8
1	F	11	ALA	2.8
1	E	258	PHE	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	112	GLY	2.8
1	G	234	GLY	2.8
1	F	542[A]	LEU	2.8
1	H	233	PRO	2.8
1	E	259	VAL	2.8
1	G	33	ALA	2.8
1	B	245	PHE	2.8
1	D	277[A]	HIS	2.8
1	B	62	THR	2.8
1	B	114	PRO	2.8
1	E	34	MET	2.8
1	F	529	TRP	2.8
1	B	52	VAL	2.8
1	B	483	VAL	2.8
1	E	268	VAL	2.8
1	A	33	ALA	2.7
1	E	507	GLY	2.7
1	C	63	ILE	2.7
1	D	313	ILE	2.7
1	B	119	PRO	2.7
1	B	99	SER	2.7
1	A	26	GLN	2.7
1	A	70	VAL	2.7
1	B	72	ARG	2.7
1	A	490[A]	GLU	2.7
1	G	365	ALA	2.7
1	B	250	GLY	2.7
1	E	420[A]	ARG	2.7
1	B	246	GLY	2.7
1	B	88	PHE	2.7
1	F	506	PHE	2.7
1	A	379	THR	2.7
1	B	92	SER	2.7
1	B	445	LEU	2.7
1	G	115	LEU	2.7
1	F	508	ILE	2.7
1	C	111	ALA	2.6
1	B	242	ASP	2.6
1	B	518	ARG	2.6
1	B	484	PHE	2.6
1	E	30	LEU	2.6
1	E	124	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
1	E	542	LEU	2.6
1	A	428	ILE	2.6
1	B	313	ILE	2.6
1	E	253	ILE	2.6
1	F	112	GLY	2.6
1	A	473	ALA	2.6
1	E	106	ALA	2.6
1	F	516	PHE	2.6
1	B	485	PRO	2.6
1	B	375	LEU	2.6
1	E	272	LEU	2.6
1	H	518	ARG	2.6
1	B	128	GLY	2.6
1	B	276	GLY	2.6
1	B	474	ALA	2.6
1	E	247	VAL	2.6
1	E	265	VAL	2.6
1	H	22	THR	2.6
1	B	96	HIS	2.6
1	A	496	TRP	2.6
1	A	544	ILE	2.6
1	E	495	ILE	2.6
1	A	61	ALA	2.6
1	E	97	ALA	2.6
1	E	266	ALA	2.6
1	F	416	ALA	2.6
1	F	116	SER	2.6
1	B	435	PHE	2.5
1	B	345	LEU	2.5
1	A	120	VAL	2.5
1	A	259	VAL	2.5
1	B	277	HIS	2.5
1	A	110	PHE	2.5
1	C	112	GLY	2.5
1	A	32	ALA	2.5
1	B	101	ALA	2.5
1	A	359	THR	2.5
1	B	512	LYS	2.5
1	A	420[A]	ARG	2.5
1	H	277[A]	HIS	2.5
1	B	60	ILE	2.5
1	G	116	SER	2.5

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Mol	Chain	Res	Type	RSRZ
1	B	75[A]	GLU	2.5
1	A	53	ALA	2.5
1	B	33	ALA	2.5
1	F	500	VAL	2.5
1	B	129	PRO	2.5
1	B	385	PRO	2.5
1	B	377	GLY	2.4
1	A	333[A]	LEU	2.4
1	F	487	LEU	2.4
1	E	100	ILE	2.4
1	B	267	ALA	2.4
1	F	498	ASP	2.4
1	F	519	VAL	2.4
1	A	517	LEU	2.4
1	E	506	PHE	2.4
1	E	538	ILE	2.4
1	B	262	ALA	2.4
1	F	271	ALA	2.4
1	H	23	ALA	2.4
1	C	413	ARG	2.4
1	A	129	PRO	2.4
1	F	129	PRO	2.4
1	A	132	GLY	2.4
1	A	382	GLY	2.4
1	B	382	GLY	2.4
1	G	43	CYS	2.4
1	C	115	LEU	2.4
1	B	22	THR	2.4
1	B	84	ALA	2.4
1	B	473	ALA	2.4
1	B	509	GLU	2.4
1	A	114	PRO	2.4
1	B	505	GLN	2.4
1	A	247	VAL	2.4
1	E	243	LEU	2.3
1	F	118	ARG	2.3
1	H	244[A]	ARG	2.3
1	A	66	ALA	2.3
1	A	262	ALA	2.3
1	B	271	ALA	2.3
1	B	416	ALA	2.3
1	E	122	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
1	G	53	ALA	2.3
1	B	93	HIS	2.3
1	B	491	PRO	2.3
1	F	491	PRO	2.3
1	F	492	PRO	2.3
1	A	112	GLY	2.3
1	B	520	GLY	2.3
1	B	464	VAL	2.3
1	E	99	SER	2.3
1	E	291	VAL	2.3
1	B	413	ARG	2.3
1	G	30	LEU	2.3
1	E	126	THR	2.3
1	A	258	PHE	2.3
1	B	97	ALA	2.3
1	C	79	ALA	2.3
1	G	114	PRO	2.3
1	B	91	GLY	2.3
1	E	109	SER	2.3
1	A	403	VAL	2.3
1	F	418	LEU	2.3
1	C	110	PHE	2.3
1	E	245	PHE	2.3
1	B	14	ALA	2.3
1	B	233	PRO	2.3
1	G	54	ALA	2.3
1	A	313	ILE	2.3
1	A	498	ASP	2.3
1	F	277	HIS	2.3
1	E	333	LEU	2.3
1	E	486	LEU	2.3
1	B	514	ARG	2.2
1	E	353	ARG	2.2
1	A	97	ALA	2.2
1	A	271	ALA	2.2
1	A	466	ALA	2.2
1	E	466	ALA	2.2
1	E	467	VAL	2.2
1	F	504	VAL	2.2
1	F	34	MET	2.2
1	B	20	LEU	2.2
1	D	32	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	489	ARG	2.2
1	A	130	GLY	2.2
1	B	111	ALA	2.2
1	B	256	ALA	2.2
1	E	88	PHE	2.2
1	G	516	PHE	2.2
1	A	281	ILE	2.2
1	F	349	ILE	2.2
1	A	500	VAL	2.2
1	E	483	VAL	2.2
1	B	438	CYS	2.2
1	A	80	GLY	2.2
1	E	276	GLY	2.2
1	F	507	GLY	2.2
1	B	53	ALA	2.2
1	D	33	ALA	2.2
1	A	535	TYR	2.1
1	E	95	TYR	2.1
1	F	496	TRP	2.1
1	B	470	SER	2.1
1	E	116	SER	2.1
1	C	80	GLY	2.1
1	E	513	LEU	2.1
1	F	73	LEU	2.1
1	A	409	PHE	2.1
1	B	12	ASP	2.1
1	B	418	LEU	2.1
1	A	245	PHE	2.1
1	A	95	TYR	2.1
1	C	313	ILE	2.1
1	A	244	ARG	2.1
1	B	376[A]	SER	2.1
1	B	108	GLU	2.1
1	F	71	GLU	2.1
1	A	91	GLY	2.1
1	B	80	GLY	2.1
1	B	234	GLY	2.1
1	E	128	GLY	2.1
1	F	515	GLY	2.1
1	E	90	HIS	2.1
1	E	274	PRO	2.1
1	A	542	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	F	517	LEU	2.1
1	B	341	ALA	2.1
1	B	252	ASP	2.1
1	F	414	ARG	2.1
1	A	279	ILE	2.0
1	E	435	PHE	2.0
1	B	69	SER	2.0
1	G	34	MET	2.0
1	E	112	GLY	2.0
1	C	386	VAL	2.0
1	F	119	PRO	2.0
1	F	523	VAL	2.0
1	D	333	LEU	2.0
1	A	84	ALA	2.0
1	B	239	ASP	2.0
1	B	244	ARG	2.0
1	C	32	ALA	2.0
1	C	33	ALA	2.0
1	A	34	MET	2.0
1	B	25	PHE	2.0
1	B	130	GLY	2.0
1	B	379	THR	2.0
1	E	107	VAL	2.0
1	E	444	VAL	2.0
1	H	52	VAL	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, 95^{th} 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.

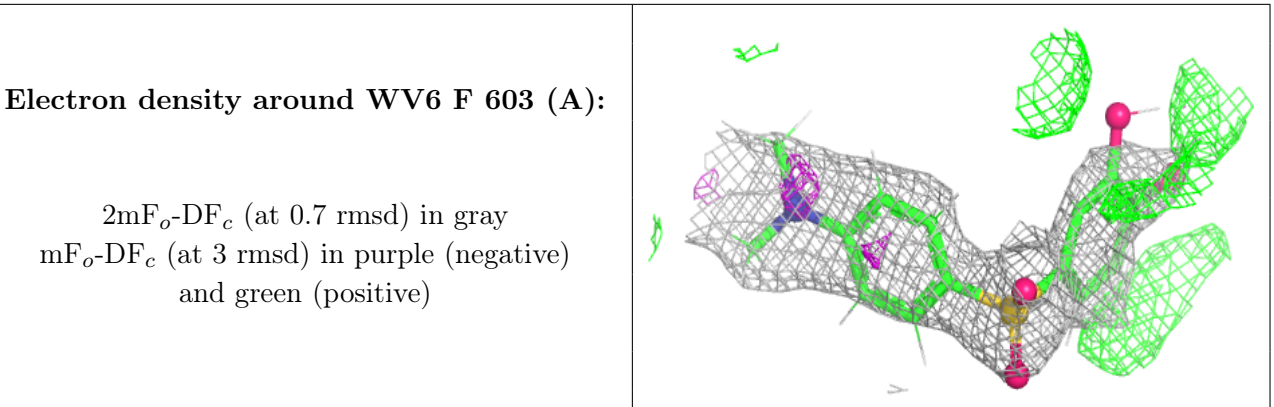
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	WV6	F	603[A]	20/20	0.81	0.23	44,45,47,47	35
4	WV6	F	603[B]	20/20	0.81	0.23	48,50,50,50	35
6	K	E	605	1/1	0.81	0.33	104,104,104,104	0
4	WV6	A	603[B]	20/20	0.83	0.27	49,51,52,52	35
4	WV6	A	603[A]	20/20	0.83	0.27	60,62,63,63	35
3	OXL	E	602	6/6	0.85	0.13	78,78,78,79	0
4	WV6	E	603[B]	20/20	0.86	0.24	53,56,57,57	35
4	WV6	E	603[A]	20/20	0.86	0.24	57,57,58,58	35
4	WV6	B	603[B]	20/20	0.88	0.21	49,52,53,53	35
6	K	B	605	1/1	0.88	0.13	79,79,79,79	0
4	WV6	B	603[A]	20/20	0.88	0.21	48,50,50,50	35
5	MG	E	604	1/1	0.91	0.10	65,65,65,65	0
6	K	A	605	1/1	0.91	0.17	104,104,104,104	0
3	OXL	A	602	6/6	0.91	0.10	64,64,65,66	0
5	MG	A	604	1/1	0.91	0.11	68,68,68,68	0
2	FBP	B	601	20/20	0.92	0.10	59,60,64,65	0
3	OXL	B	602	6/6	0.93	0.08	51,52,52,53	0
5	MG	B	604	1/1	0.93	0.09	73,73,73,73	0
2	FBP	E	601	20/20	0.93	0.09	57,58,59,60	0
2	FBP	F	601	20/20	0.94	0.09	49,55,60,60	0
3	OXL	G	602	6/6	0.94	0.08	45,46,47,47	0
6	K	C	604	1/1	0.95	0.18	67,67,67,67	0
3	OXL	C	602	6/6	0.95	0.07	55,56,56,57	0
6	K	F	605	1/1	0.95	0.07	92,92,92,92	0
6	K	G	604	1/1	0.95	0.21	71,71,71,71	0
3	OXL	F	602	6/6	0.96	0.06	50,51,53,53	0
3	OXL	D	602	6/6	0.96	0.06	40,42,42,43	0
3	OXL	H	602	6/6	0.96	0.07	40,40,41,41	0
2	FBP	A	601	20/20	0.96	0.07	52,54,55,55	0
5	MG	D	603	1/1	0.98	0.04	39,39,39,39	0
6	K	D	604	1/1	0.98	0.09	55,55,55,55	0
2	FBP	C	601	20/20	0.98	0.05	32,33,36,36	0
2	FBP	D	601	20/20	0.98	0.04	29,31,34,34	0
2	FBP	G	601	20/20	0.98	0.05	30,32,35,36	0
5	MG	F	604	1/1	0.99	0.02	42,42,42,42	0
5	MG	G	603	1/1	0.99	0.03	37,37,37,37	0
5	MG	H	603	1/1	0.99	0.06	40,40,40,40	0
2	FBP	H	601	20/20	0.99	0.04	25,27,31,31	0
5	MG	C	603	1/1	0.99	0.02	49,49,49,49	0
6	K	H	604	1/1	0.99	0.16	55,55,55,55	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.

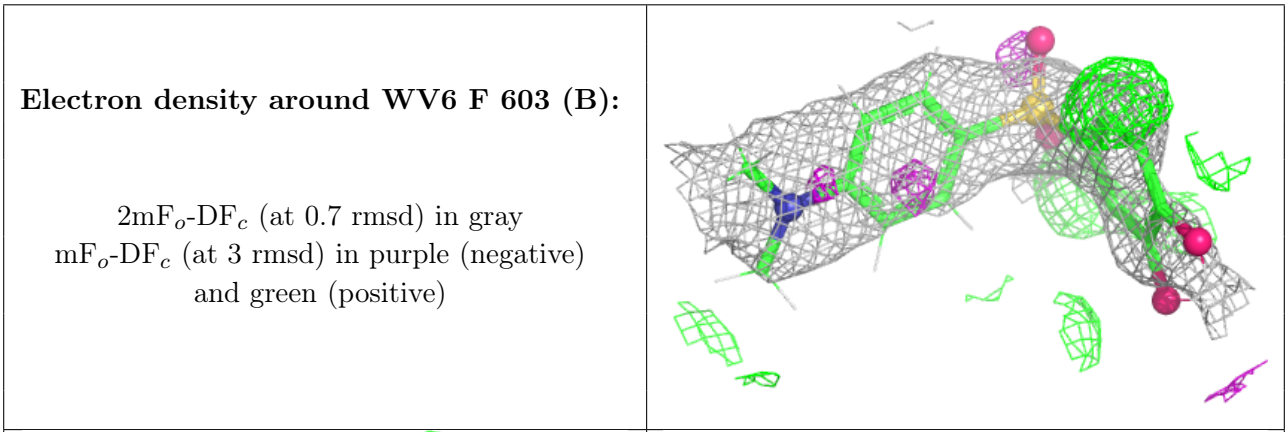
Electron density around WV6 F 603 (A):

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



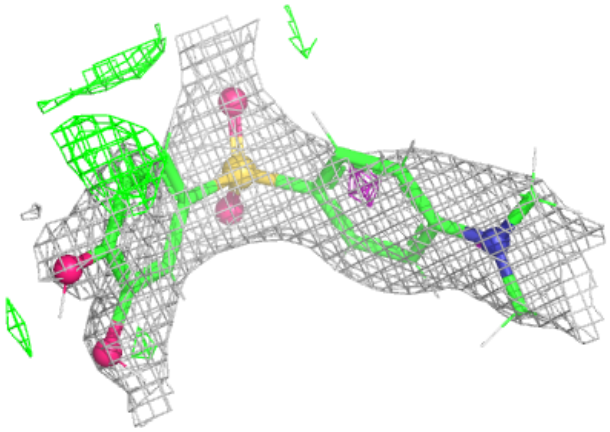
Electron density around WV6 F 603 (B):

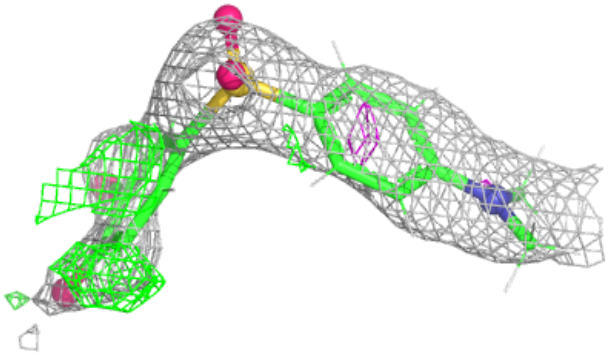
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

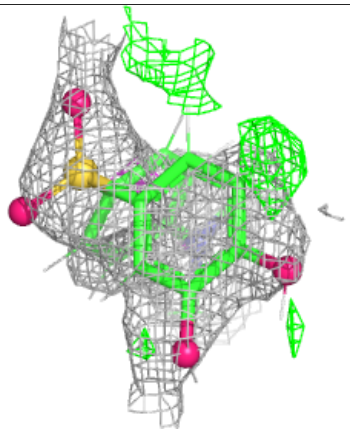


Electron density around WV6 A 603 (B):

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

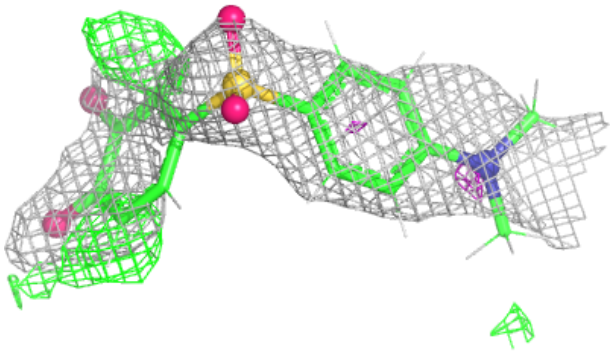


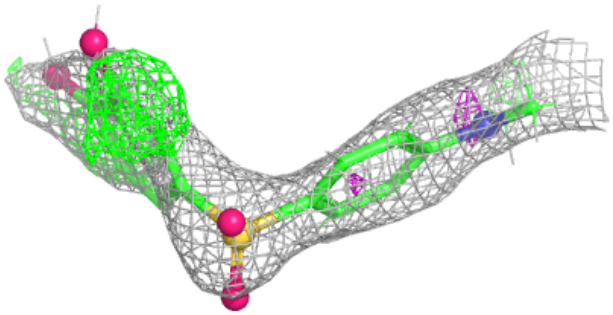




Electron density around WV6 A 603 (A):

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

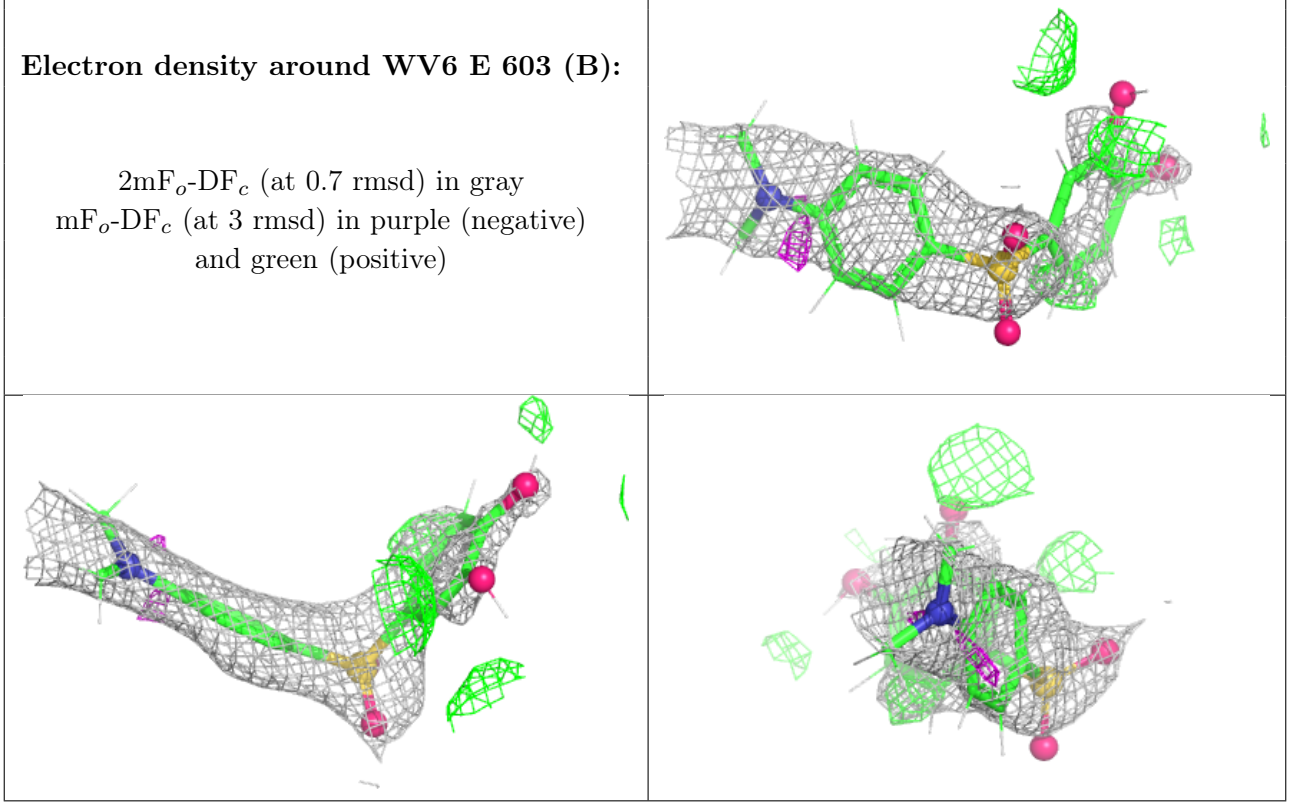






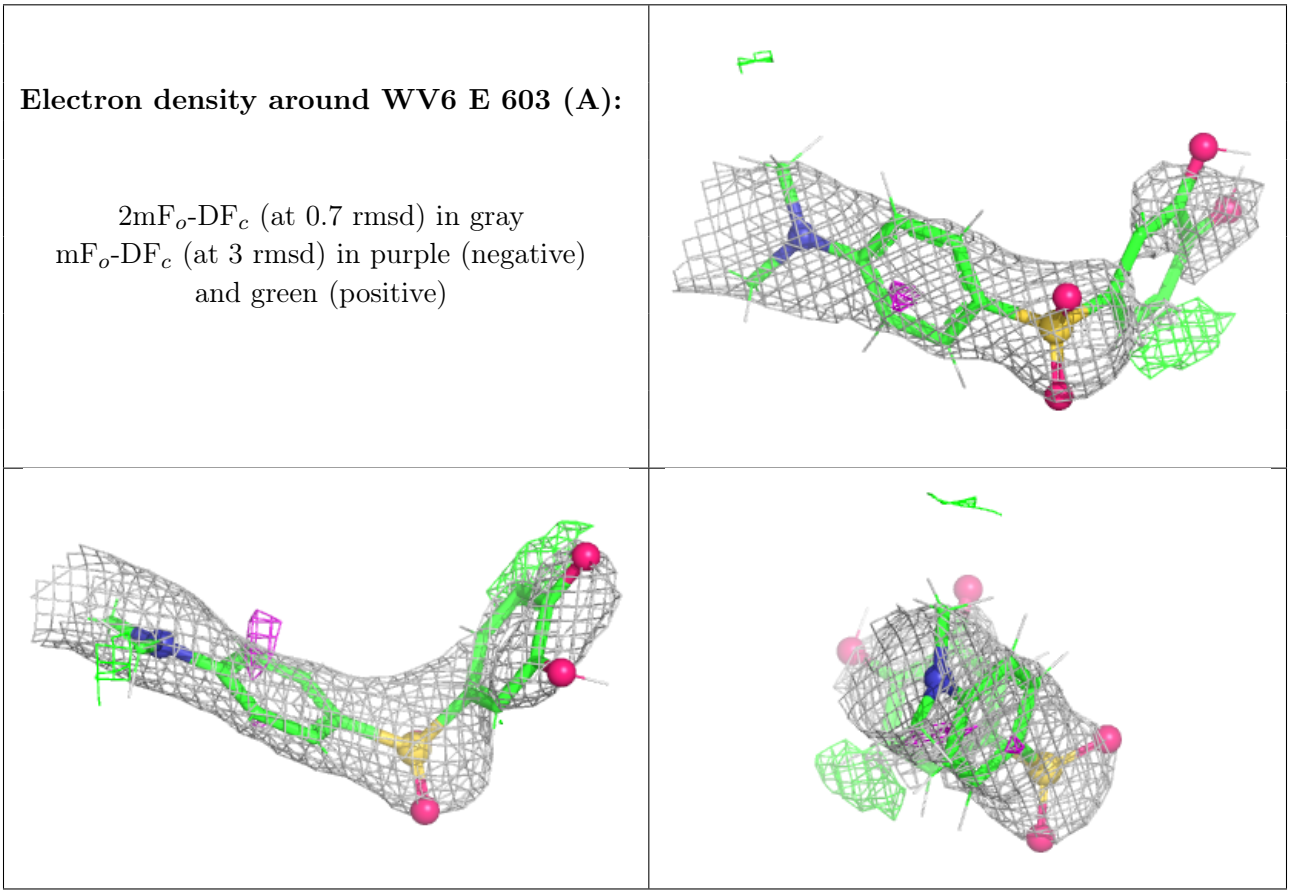
Electron density around WV6 E 603 (B):

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



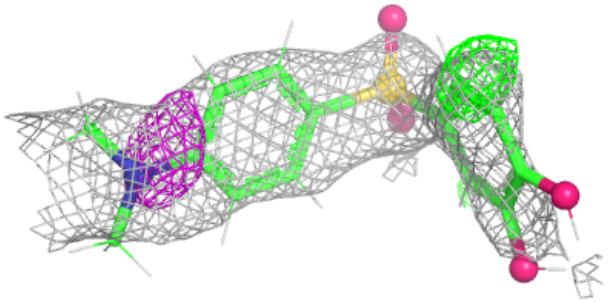
Electron density around WV6 E 603 (A):

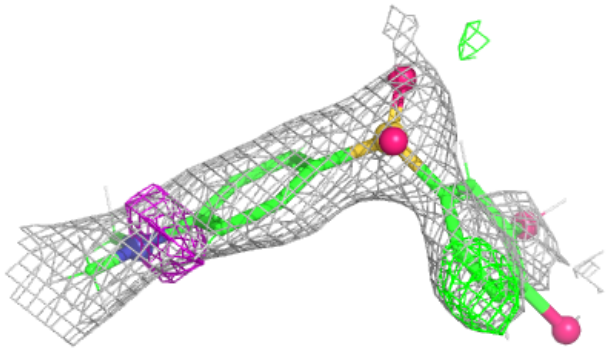
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

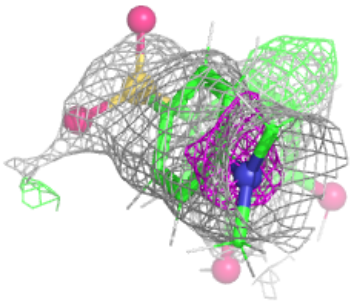


Electron density around WV6 B 603 (B):

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

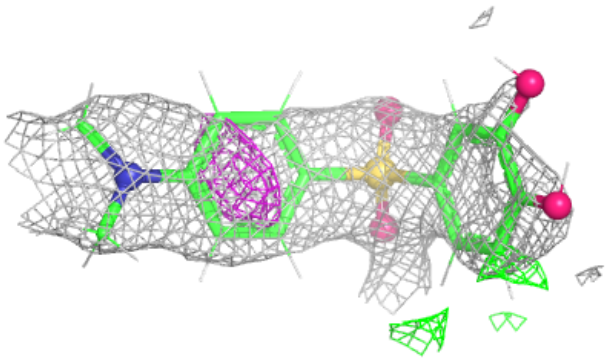


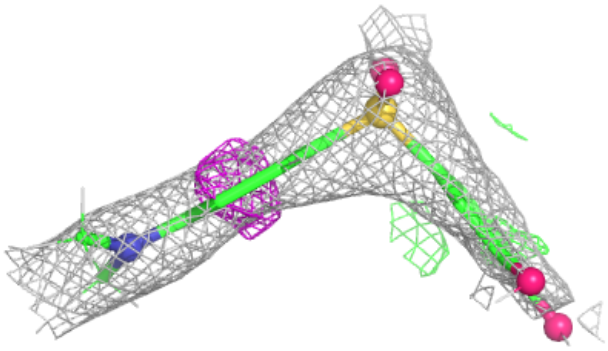


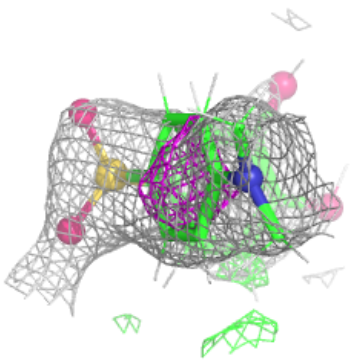


Electron density around WV6 B 603 (A):

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

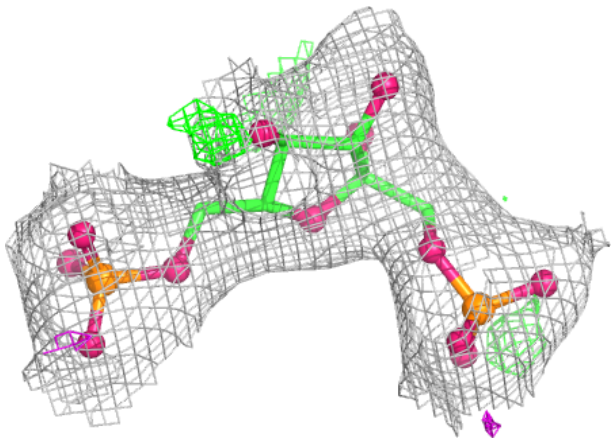


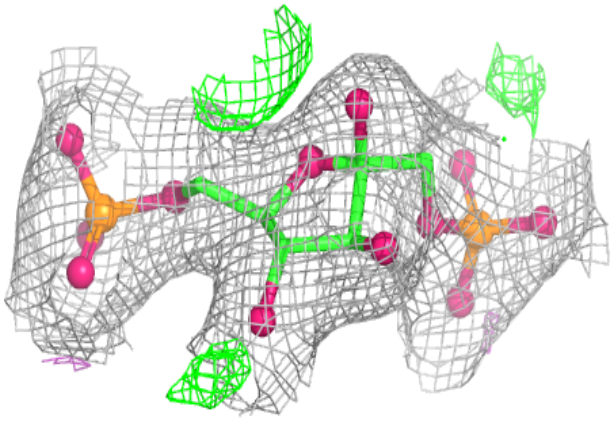


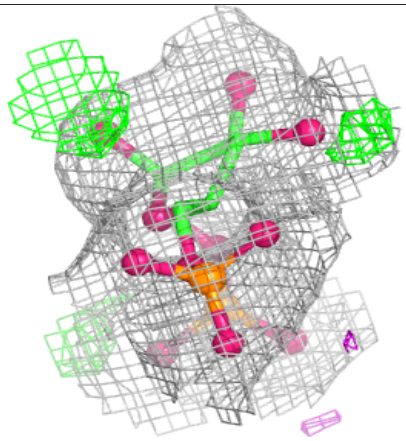


Electron density around FBP B 601:

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

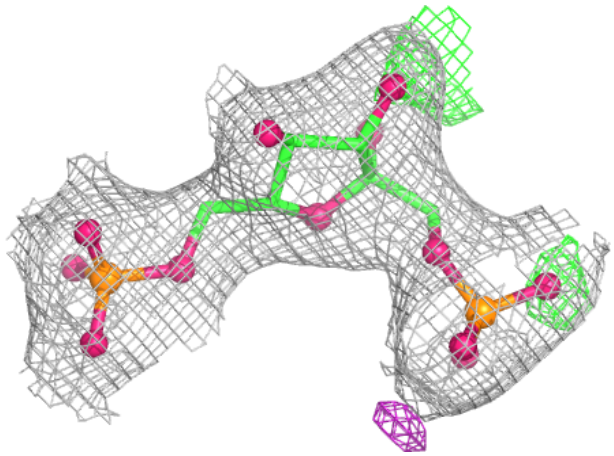


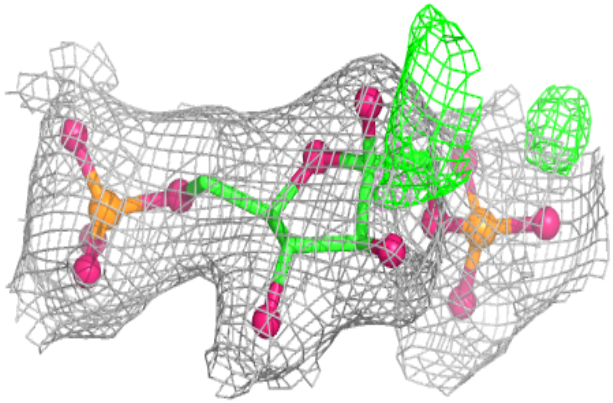


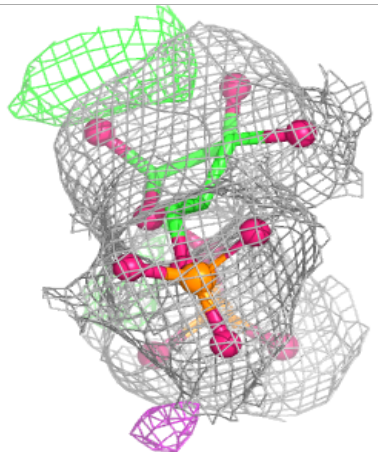


Electron density around FBP E 601:

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

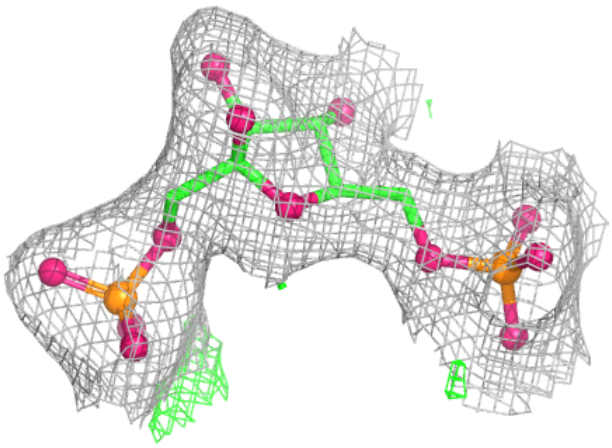


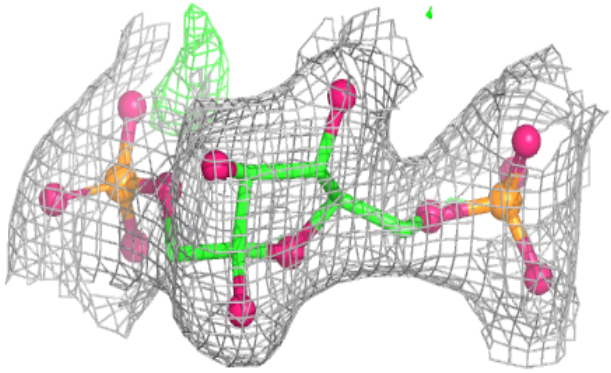


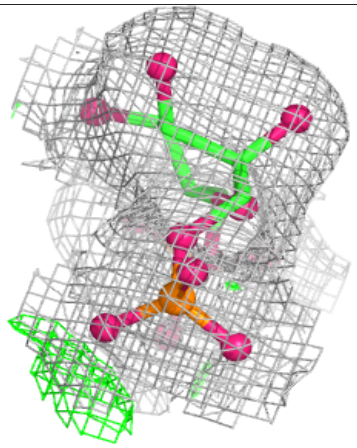


Electron density around FBP F 601:

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

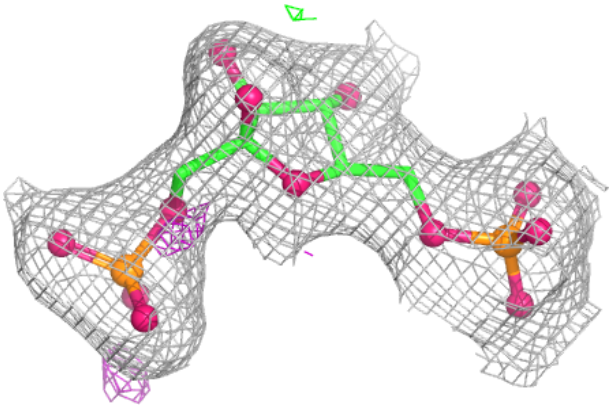


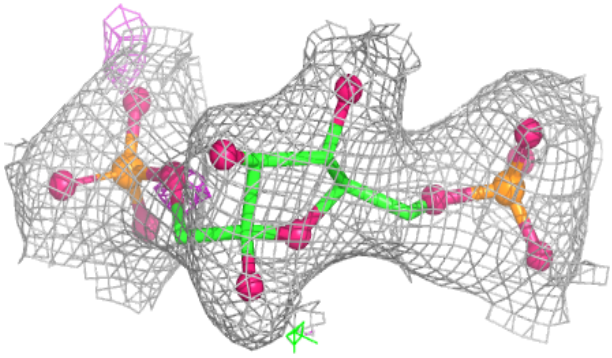


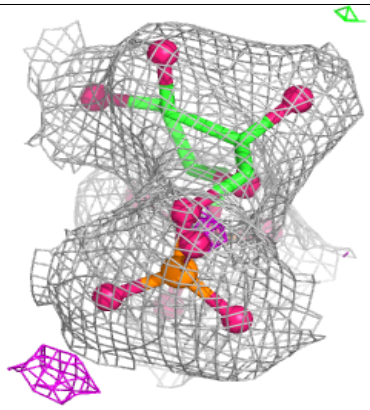


Electron density around FBP A 601:

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

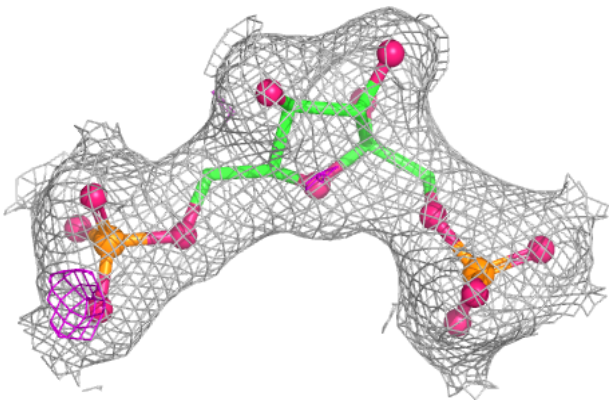


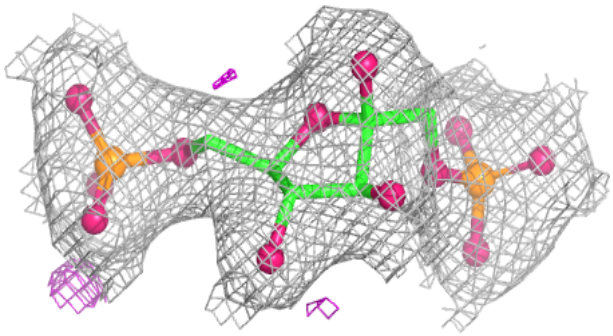


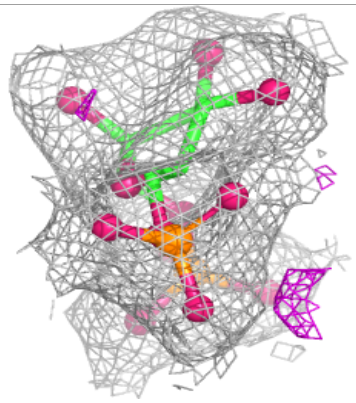


Electron density around FBP C 601:

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

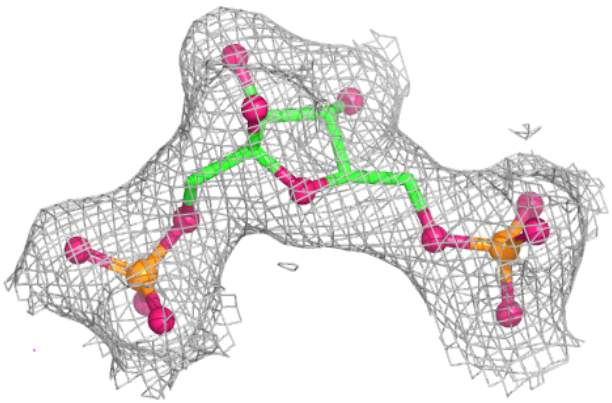


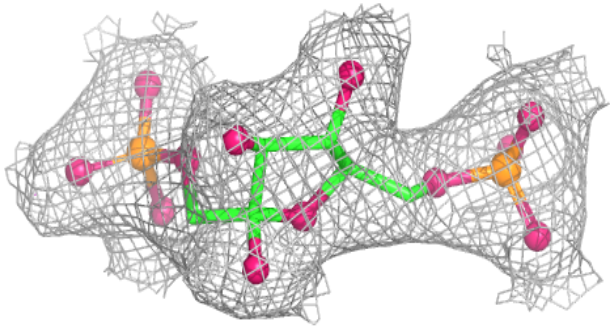


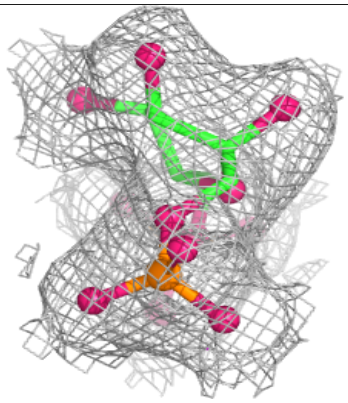


Electron density around FBP D 601:

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

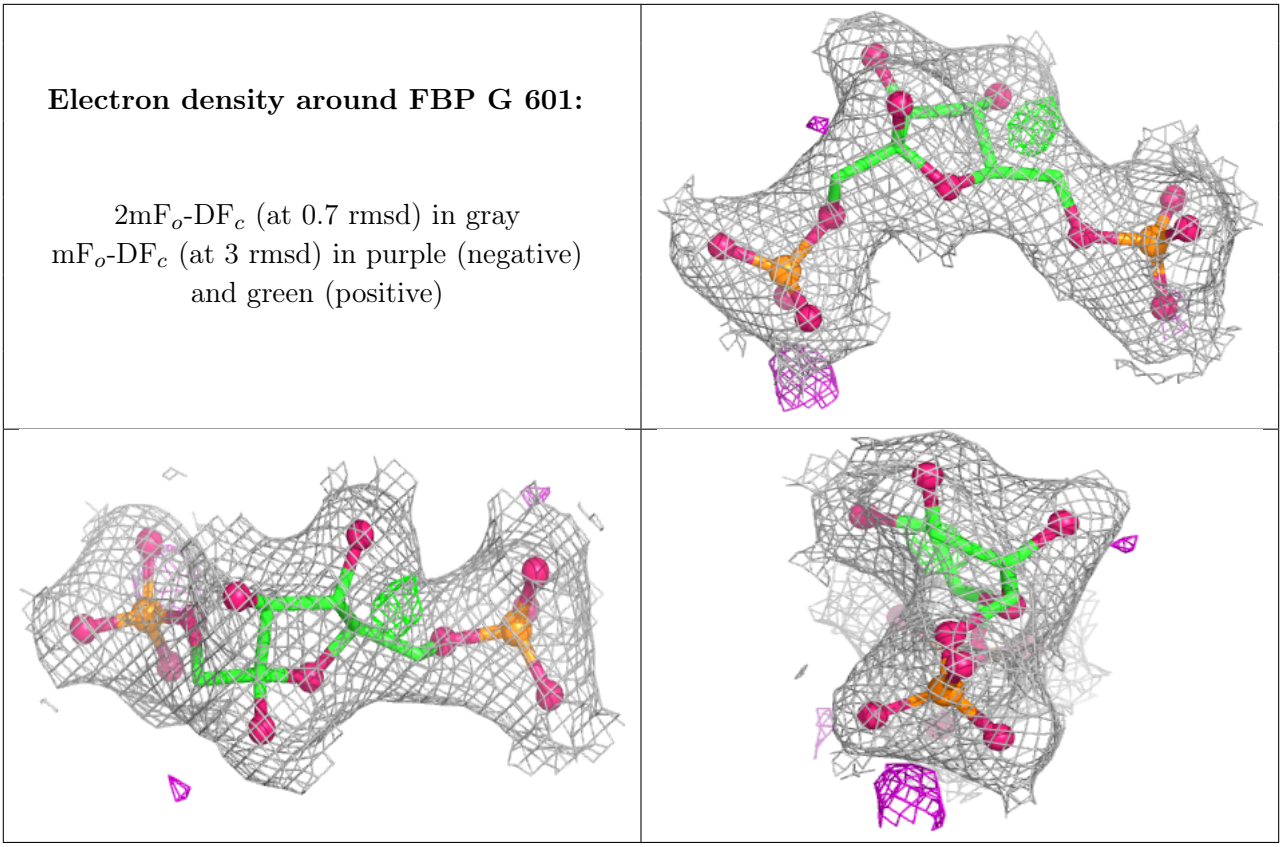






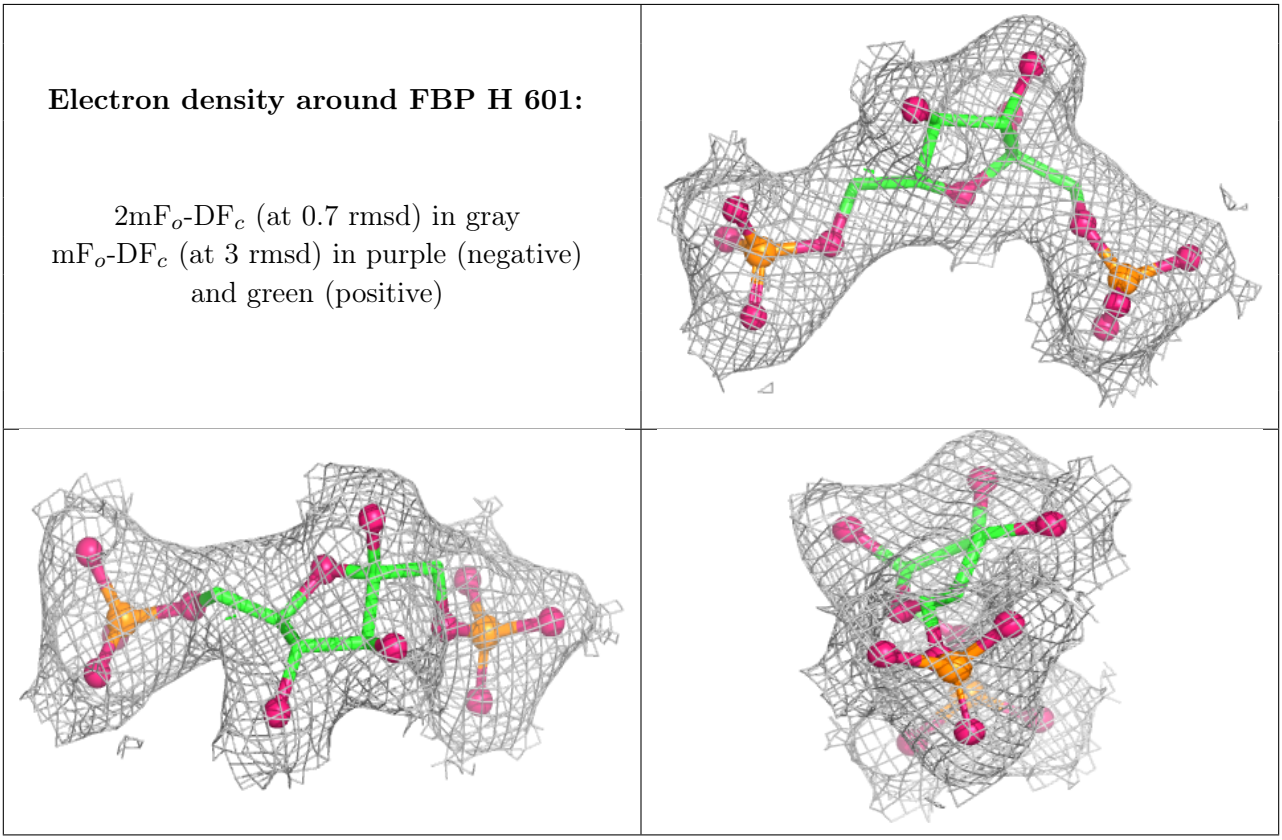
Electron density around FBP G 601:

$2mF_o$-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 H 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.