Full wwPDB X-ray Structure Validation Report

Apr 19, 2026 – 05:02 AM UTC

PDB ID	:	6V75 / pdb_00006v75
Title	:	Crystal Structure of Human PKM2 in Complex with L-aspartate
Authors	:	Nandi, S.; Dey, M.
Deposited on	:	2019-12-07
Resolution	:	2.85 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:

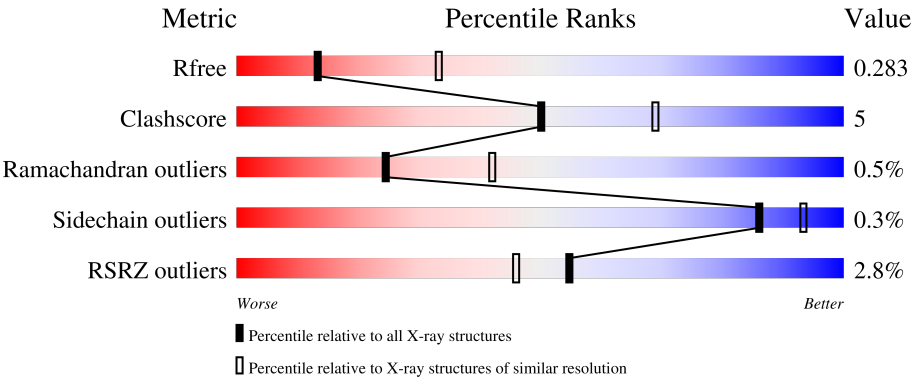
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 2.85 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	1407 (2.88-2.84)
Clashscore	190562	1446 (2.88-2.84)
Ramachandran outliers	187476	1406 (2.88-2.84)
Sidechain outliers	187428	1407 (2.88-2.84)
RSRZ outliers	180081	1408 (2.88-2.84)

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	550	2% 82% 11% 7%
1	B	550	4% 79% 14% 7%
1	C	550	2% 84% 9% • 6%
1	D	550	2% 70% 8% 22%

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
7	OXL	C	609	-	X	-	-

2 Entry composition (i)

There are 10 unique types of molecules in this entry. The entry contains 13674 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 Pyruvate kinase PKM.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	C	517	Total	C	N	O	S	0	0	0
			3550	2223	632	671	24			
1	A	509	Total	C	N	O	S	0	0	0
			3450	2152	608	667	23			
1	B	512	Total	C	N	O	S	0	0	0
			3491	2166	632	671	22			
1	D	430	Total	C	N	O	S	0	0	0
			2917	1809	525	563	20			

There are 76 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-18	MET	-	initiating methionine	UNP P14618
C	-17	GLY	-	expression tag	UNP P14618
C	-16	SER	-	expression tag	UNP P14618
C	-15	SER	-	expression tag	UNP P14618
C	-14	HIS	-	expression tag	UNP P14618
C	-13	HIS	-	expression tag	UNP P14618
C	-12	HIS	-	expression tag	UNP P14618
C	-11	HIS	-	expression tag	UNP P14618
C	-10	HIS	-	expression tag	UNP P14618
C	-9	HIS	-	expression tag	UNP P14618
C	-8	SER	-	expression tag	UNP P14618
C	-7	SER	-	expression tag	UNP P14618
C	-6	GLY	-	expression tag	UNP P14618
C	-5	LEU	-	expression tag	UNP P14618
C	-4	VAL	-	expression tag	UNP P14618
C	-3	PRO	-	expression tag	UNP P14618
C	-2	ARG	-	expression tag	UNP P14618
C	-1	GLY	-	expression tag	UNP P14618
C	0	SER	-	expression tag	UNP P14618
A	-18	MET	-	initiating methionine	UNP P14618
A	-17	GLY	-	expression tag	UNP P14618

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-16	SER	-	expression tag	UNP P14618
A	-15	SER	-	expression tag	UNP P14618
A	-14	HIS	-	expression tag	UNP P14618
A	-13	HIS	-	expression tag	UNP P14618
A	-12	HIS	-	expression tag	UNP P14618
A	-11	HIS	-	expression tag	UNP P14618
A	-10	HIS	-	expression tag	UNP P14618
A	-9	HIS	-	expression tag	UNP P14618
A	-8	SER	-	expression tag	UNP P14618
A	-7	SER	-	expression tag	UNP P14618
A	-6	GLY	-	expression tag	UNP P14618
A	-5	LEU	-	expression tag	UNP P14618
A	-4	VAL	-	expression tag	UNP P14618
A	-3	PRO	-	expression tag	UNP P14618
A	-2	ARG	-	expression tag	UNP P14618
A	-1	GLY	-	expression tag	UNP P14618
A	0	SER	-	expression tag	UNP P14618
B	-18	MET	-	initiating methionine	UNP P14618
B	-17	GLY	-	expression tag	UNP P14618
B	-16	SER	-	expression tag	UNP P14618
B	-15	SER	-	expression tag	UNP P14618
B	-14	HIS	-	expression tag	UNP P14618
B	-13	HIS	-	expression tag	UNP P14618
B	-12	HIS	-	expression tag	UNP P14618
B	-11	HIS	-	expression tag	UNP P14618
B	-10	HIS	-	expression tag	UNP P14618
B	-9	HIS	-	expression tag	UNP P14618
B	-8	SER	-	expression tag	UNP P14618
B	-7	SER	-	expression tag	UNP P14618
B	-6	GLY	-	expression tag	UNP P14618
B	-5	LEU	-	expression tag	UNP P14618
B	-4	VAL	-	expression tag	UNP P14618
B	-3	PRO	-	expression tag	UNP P14618
B	-2	ARG	-	expression tag	UNP P14618
B	-1	GLY	-	expression tag	UNP P14618
B	0	SER	-	expression tag	UNP P14618
D	-18	MET	-	initiating methionine	UNP P14618
D	-17	GLY	-	expression tag	UNP P14618
D	-16	SER	-	expression tag	UNP P14618
D	-15	SER	-	expression tag	UNP P14618
D	-14	HIS	-	expression tag	UNP P14618
D	-13	HIS	-	expression tag	UNP P14618

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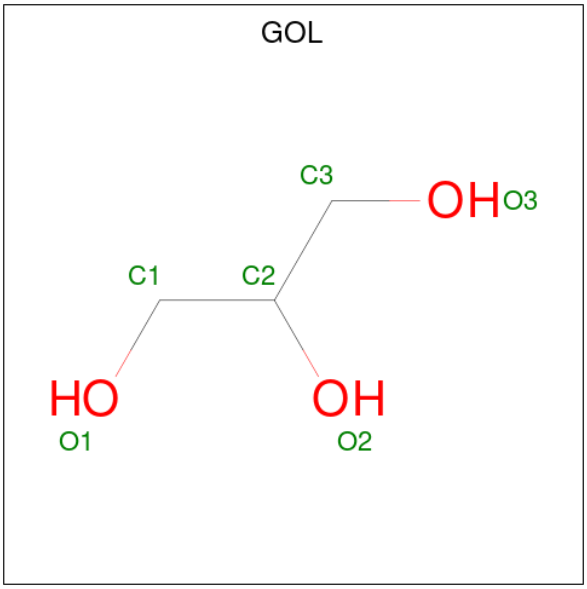
Chain	Residue	Modelled	Actual	Comment	Reference
D	-12	HIS	-	expression tag	UNP P14618
D	-11	HIS	-	expression tag	UNP P14618
D	-10	HIS	-	expression tag	UNP P14618
D	-9	HIS	-	expression tag	UNP P14618
D	-8	SER	-	expression tag	UNP P14618
D	-7	SER	-	expression tag	UNP P14618
D	-6	GLY	-	expression tag	UNP P14618
D	-5	LEU	-	expression tag	UNP P14618
D	-4	VAL	-	expression tag	UNP P14618
D	-3	PRO	-	expression tag	UNP P14618
D	-2	ARG	-	expression tag	UNP P14618
D	-1	GLY	-	expression tag	UNP P14618
D	0	SER	-	expression tag	UNP P14618

- Molecule 2 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	2	Total K 2 2	0	0
2	A	1	Total K 1 1	0	0
2	B	1	Total K 1 1	0	0
2	D	2	Total K 2 2	0	0

- Molecule 3 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).

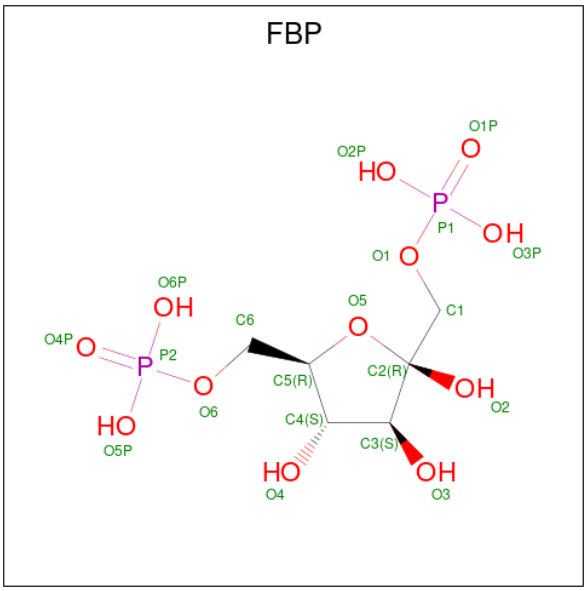


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	C	1	Total	C	O	0	0
			6	3	3		
3	C	1	Total	C	O	0	0
			6	3	3		
3	C	1	Total	C	O	0	0
			6	3	3		
3	A	1	Total	C	O	0	0
			6	3	3		
3	A	1	Total	C	O	0	0
			6	3	3		
3	B	1	Total	C	O	0	0
			6	3	3		
3	B	1	Total	C	O	0	0
			6	3	3		
3	B	1	Total	C	O	0	0
			6	3	3		
3	B	1	Total	C	O	0	0
			6	3	3		
3	B	1	Total	C	O	0	0
			6	3	3		
3	D	1	Total	C	O	0	0
			6	3	3		
3	D	1	Total	C	O	0	0
			6	3	3		

- Molecule 4 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	C	1	Total	Cl	0	0
			1	1		

- Molecule 5 is 1,6-di-O-phosphono-beta-D-fructofuranose (CCD ID: FBP) (formula: $C_6H_{14}O_{12}P_2$).

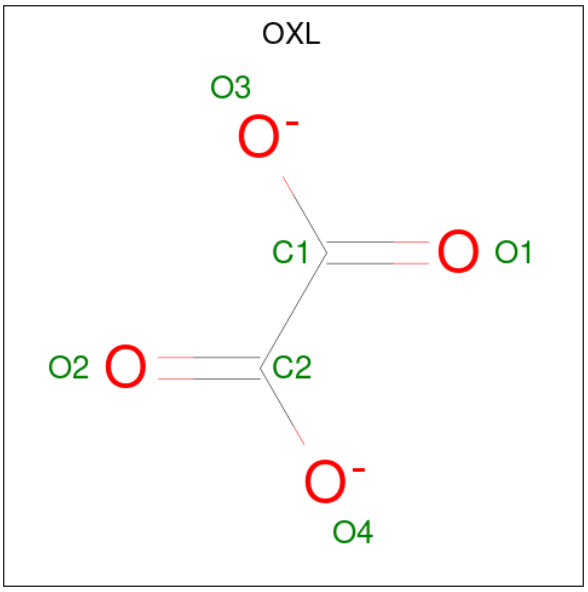


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	C	1	Total C O P 20 6 12 2	0	0
5	A	1	Total C O P 20 6 12 2	0	0
5	B	1	Total C O P 20 6 12 2	0	0
5	D	1	Total C O P 20 6 12 2	0	0

- Molecule 6 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

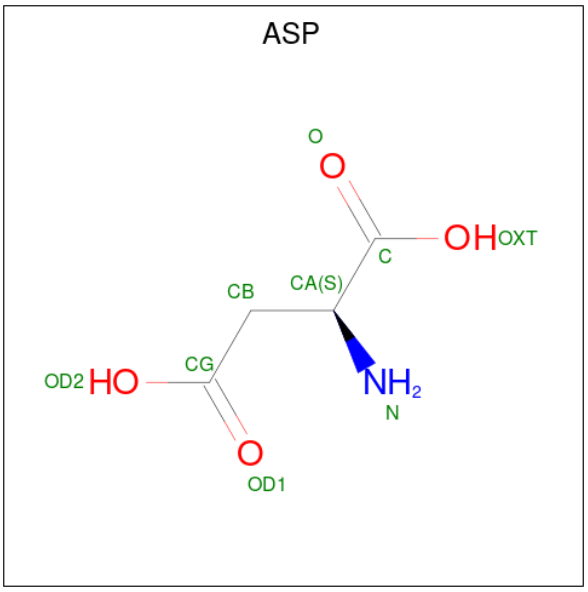
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	C	1	Total Mg 1 1	0	0
6	A	1	Total Mg 1 1	0	0
6	B	1	Total Mg 1 1	0	0
6	D	1	Total Mg 1 1	0	0

- Molecule 7 is OXALATE ION (CCD ID: OXL) (formula: C_2O_4).



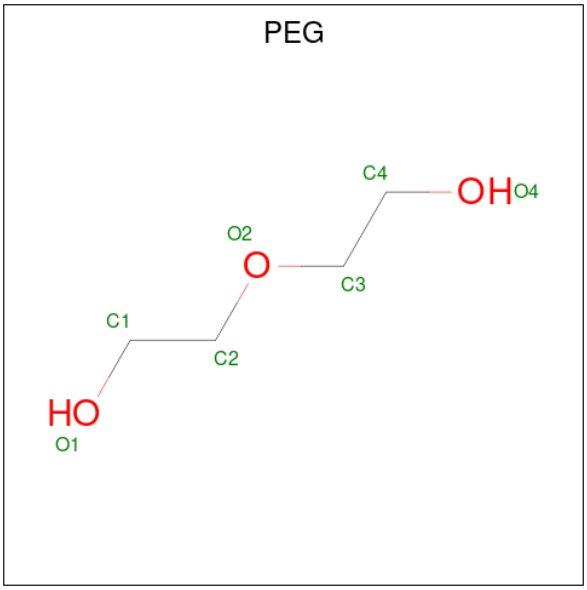
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
7	C	1	Total	C	O	0	0
			6	2	4		

- Molecule 8 is ASPARTIC ACID (CCD ID: ASP) (formula: $C_4H_7NO_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
8	C	1	Total	C	N	O	0	0
			9	4	1	4		
8	B	1	Total	C	N	O	0	0
			9	4	1	4		

- Molecule 9 is DI(HYDROXYETHYL)ETHER (CCD ID: PEG) (formula: $C_4H_{10}O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
9	A	1	Total C O 7 4 3	0	0
9	A	1	Total C O 7 4 3	0	0
9	B	1	Total C O 7 4 3	0	0

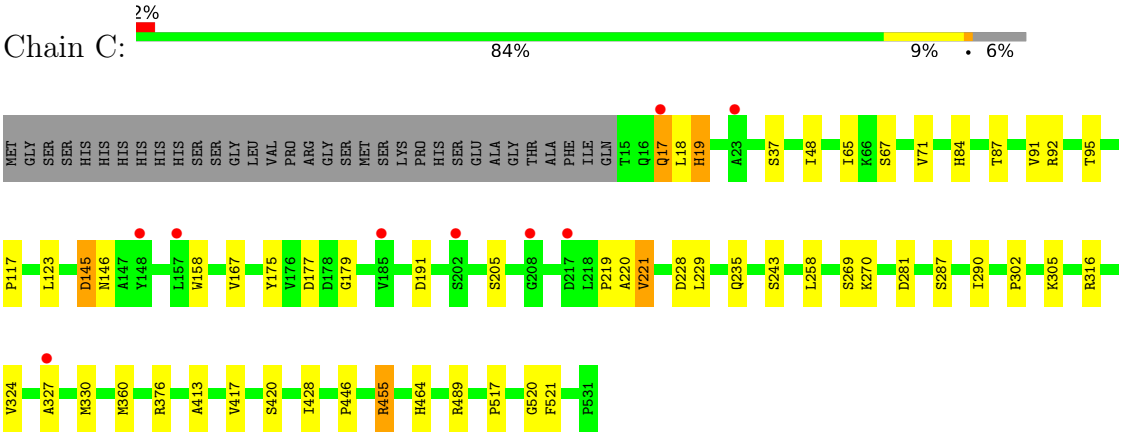
- Molecule 10 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
10	C	15	Total O 15 15	0	0
10	A	24	Total O 24 24	0	0
10	B	7	Total O 7 7	0	0
10	D	12	Total O 12 12	0	0

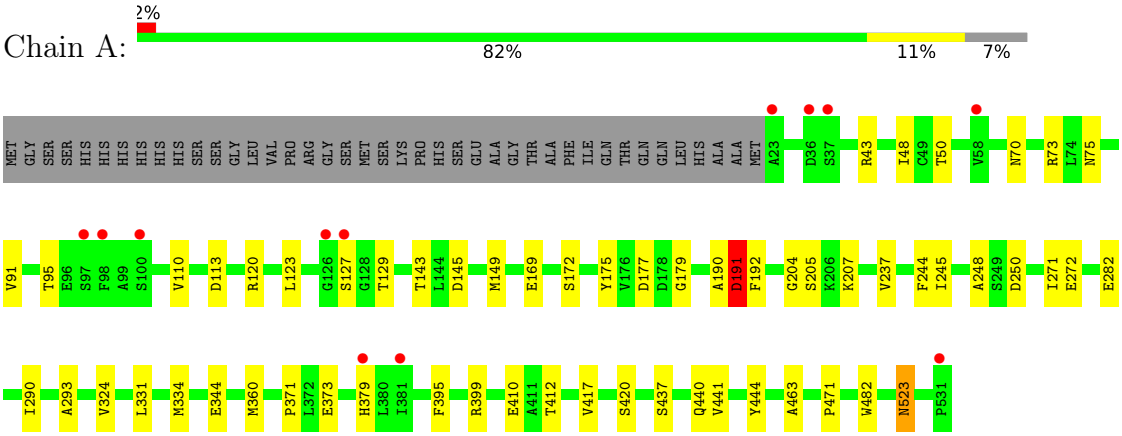
3 Residue-property plots (i)

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.

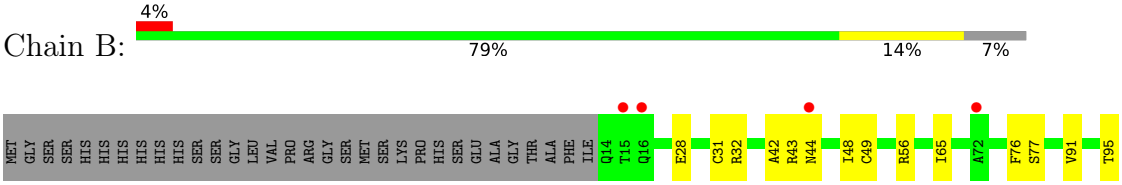
• Molecule 1: Pyruvate kinase PKM

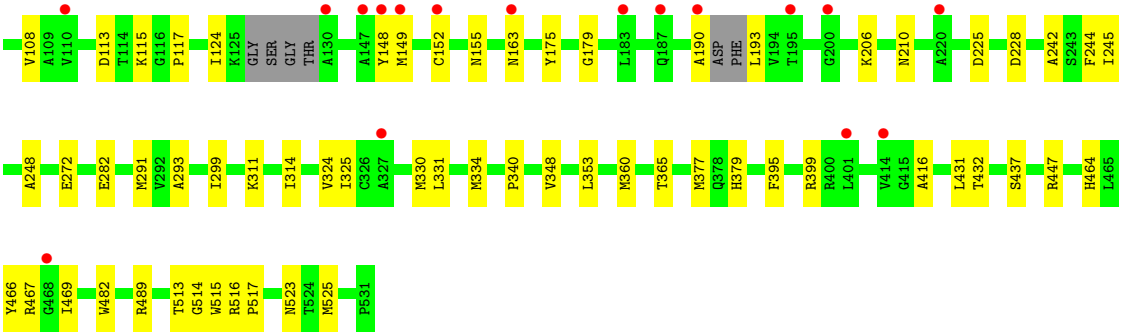


• Molecule 1: Pyruvate kinase PKM



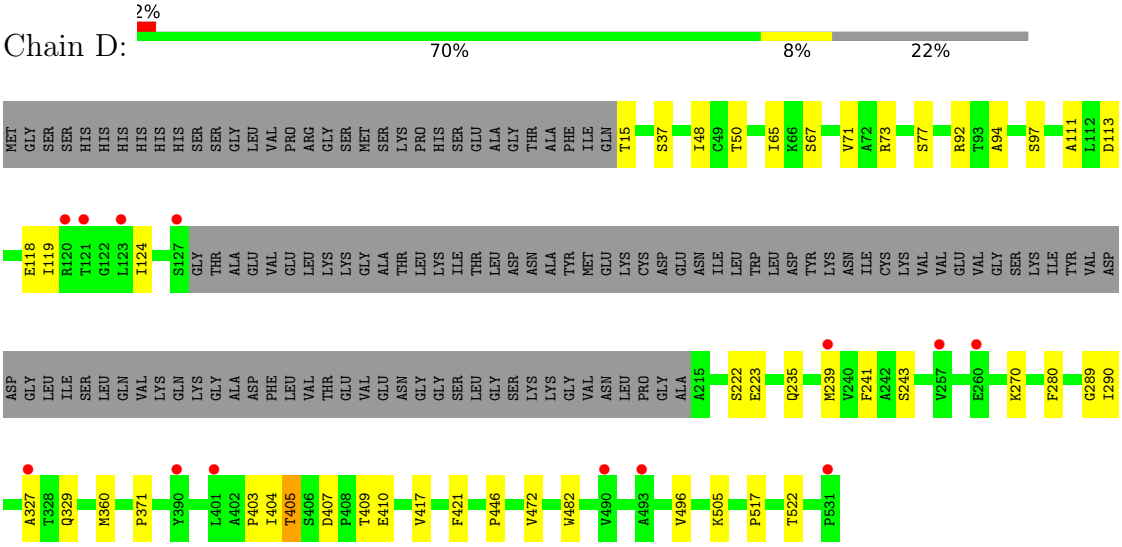
• Molecule 1: Pyruvate kinase PKM





• Molecule 1: Pyruvate kinase PKM

Chain D:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	82.52Å 157.96Å 93.03Å 90.00° 101.08° 90.00°	Depositor
Resolution (Å)	55.52 – 2.85 55.52 – 2.85	Depositor EDS
% Data completeness (in resolution range)	99.3 (55.52-2.85) 99.4 (55.52-2.85)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.06	Depositor
$< I/\sigma(I) >$ [1]	1.97 (at 2.86Å)	Xtriage
Refinement program	PHENIX 1.17.1_3660	Depositor
R, R_{free}	0.246 , 0.284 0.247 , 0.283	Depositor DCC
R_{free} test set	2637 reflections (4.83%)	wwPDB-VP
Wilson B-factor (Å^2)	69.0	Xtriage
Anisotropy	0.076	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 84.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	13674	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.60% of the height of the origin peak. No significant pseudotranslation is detected.*

[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 (i)

5.1 Standard geometry (i)

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

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	0.17	0/3509	0.47	6/4785 (0.1%)
1	B	0.24	0/3548	0.42	4/4832 (0.1%)
1	C	0.21	0/3611	0.43	7/4923 (0.1%)
1	D	0.11	0/2967	0.41	5/4047 (0.1%)
All	All	0.19	0/13635	0.43	22/18587 (0.1%)

There are no bond length outliers.

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	244	PHE	N-CA-C	12.10	125.06	110.91
1	C	327	ALA	N-CA-C	8.86	129.68	110.80
1	B	155	ASN	CB-CA-C	8.51	127.34	110.42
1	D	505	LYS	N-CA-C	-8.44	97.38	109.96
1	A	523	ASN	CB-CA-C	8.37	127.08	110.42
1	D	505	LYS	CB-CA-C	8.33	122.16	110.16
1	A	177	ASP	N-CA-C	8.17	120.46	110.91
1	A	191	ASP	N-CA-C	-8.02	93.72	110.80
1	C	146	ASN	CB-CA-C	6.45	120.64	109.15
1	C	145	ASP	CB-CA-C	-6.22	99.26	113.33
1	C	18	LEU	N-CA-C	6.20	120.57	113.19
1	D	329	GLN	N-CA-C	6.05	123.69	110.80
1	C	177	ASP	N-CA-C	6.00	117.93	110.91
1	D	405	THR	CB-CA-C	5.80	116.94	109.80
1	C	146	ASN	N-CA-C	-5.74	106.92	114.04
1	B	244	PHE	N-CA-C	5.65	117.52	110.91
1	B	206	LYS	N-CA-C	5.39	117.22	110.91
1	B	523	ASN	CB-CA-C	5.32	121.00	110.42
1	C	191	ASP	N-CA-C	-5.24	106.95	113.55
1	A	149	MET	N-CA-C	5.16	117.32	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	119	ILE	N-CA-C	5.03	119.80	109.34
1	A	129	THR	N-CA-C	5.02	117.65	111.82

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	3450	0	2990	31	0
1	B	3491	0	3021	46	0
1	C	3550	0	3161	34	0
1	D	2917	0	2524	24	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	2	0	0	0	0
2	D	2	0	0	0	0
3	A	12	0	16	0	0
3	B	30	0	40	4	0
3	C	18	0	24	0	0
3	D	12	0	16	1	0
4	C	1	0	0	0	0
5	A	20	0	10	0	0
5	B	20	0	10	3	0
5	C	20	0	10	4	0
5	D	20	0	10	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
7	C	6	0	0	0	0
8	B	9	0	3	3	0
8	C	9	0	3	1	0
9	A	14	0	20	2	0
9	B	7	0	10	0	0
10	A	24	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	B	7	0	0	1	0
10	C	15	0	0	0	0
10	D	12	0	0	0	0
All	All	13674	0	11868	134	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 5.

All (134) 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:489:ARG:NH2	5:C:607:FBP:O2P	1.70	1.24
1:C:19:HIS:ND1	1:C:19:HIS:O	2.11	0.83
1:B:469:ILE:O	8:B:610:ASP:HB2	1.81	0.80
1:B:95:THR:HG21	1:B:108:VAL:HG21	1.62	0.80
1:A:127:SER:OG	10:A:701:HOH:O	2.04	0.75
1:A:123:LEU:HA	1:A:205:SER:HB3	1.70	0.74
1:A:412:THR:HG21	1:A:523:ASN:O	1.87	0.74
1:C:175:TYR:HB3	1:C:179:GLY:HA2	1.69	0.73
1:A:412:THR:CG2	1:A:523:ASN:O	2.41	0.69
1:D:407:ASP:HB3	1:D:410:GLU:HB2	1.75	0.69
1:C:417:VAL:HG13	1:C:446:PRO:HB3	1.76	0.67
1:B:190:ALA:C	1:B:193:LEU:N	2.53	0.67
1:A:43:ARG:NH2	1:A:70:ASN:OD1	2.28	0.67
1:C:145:ASP:O	1:C:158:TRP:CD1	2.49	0.66
1:D:472:VAL:HG11	1:D:496:VAL:HG11	1.77	0.66
1:C:290:ILE:HB	1:C:324:VAL:HG12	1.77	0.66
1:A:143:THR:HG22	1:A:145:ASP:H	1.60	0.65
1:B:464:HIS:HD1	8:B:610:ASP:N	1.96	0.63
1:D:50:THR:OG1	1:D:73:ARG:NH1	2.31	0.63
1:B:311:LYS:NZ	3:B:603:GOL:O3	2.32	0.62
1:A:48:ILE:HB	1:A:360:MET:HG3	1.82	0.62
1:C:517:PRO:HA	5:C:607:FBP:H11	1.80	0.61
1:B:489:ARG:NH2	5:B:607:FBP:O1P	2.33	0.61
1:A:271:ILE:HD11	1:A:290:ILE:HD12	1.83	0.60
1:C:92:ARG:NH2	1:C:235:GLN:O	2.34	0.60
1:D:48:ILE:HB	1:D:360:MET:HG3	1.84	0.60
1:A:272:GLU:HG2	1:A:293:ALA:HB3	1.84	0.60
1:C:464:HIS:HD1	8:C:610:ASP:N	2.01	0.59
1:D:92:ARG:NH1	1:D:235:GLN:O	2.34	0.58
1:D:94:ALA:O	1:D:97:SER:OG	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:605:PEG:H11	1:B:56:ARG:HH11	1.69	0.58
1:C:520:GLY:N	5:C:607:FBP:O4P	2.35	0.57
1:B:466:TYR:O	8:B:610:ASP:OD1	2.24	0.56
1:D:417:VAL:HG13	1:D:446:PRO:HB3	1.88	0.56
1:C:67:SER:OG	1:C:376:ARG:NH1	2.39	0.56
1:A:417:VAL:HA	1:A:420:SER:HB3	1.89	0.55
1:A:482:TRP:HB3	9:A:605:PEG:H21	1.90	0.54
1:A:463:ALA:HB3	1:A:471:PRO:HG3	1.89	0.54
1:B:225:ASP:HA	1:B:228:ASP:HB2	1.90	0.54
1:B:437:SER:OG	5:B:607:FBP:O4P	2.21	0.54
1:B:48:ILE:HB	1:B:360:MET:HG3	1.89	0.53
1:D:48:ILE:HG23	1:D:71:VAL:HG13	1.91	0.53
1:B:482:TRP:CD1	1:B:517:PRO:HG3	2.44	0.53
1:B:42:ALA:HB1	3:B:602:GOL:H2	1.91	0.52
1:B:466:TYR:HB2	1:B:469:ILE:HD12	1.91	0.52
1:C:521:PHE:HB2	5:C:607:FBP:O4	2.09	0.52
1:B:330:MET:HE2	1:B:348:VAL:HG12	1.92	0.52
1:D:65:ILE:C	1:D:67:SER:H	2.18	0.51
1:B:49:CYS:HB3	1:B:365:THR:HG21	1.91	0.51
1:D:404:ILE:O	1:D:405:THR:C	2.53	0.51
1:C:281:ASP:OD1	1:C:316:ARG:NH1	2.44	0.51
1:A:91:VAL:O	1:A:95:THR:HG23	2.11	0.51
1:B:77:SER:HA	1:B:115:LYS:HD3	1.94	0.50
1:B:210:ASN:HD22	1:B:299:ILE:HG21	1.77	0.50
1:A:331:LEU:HD23	1:A:344:GLU:HB3	1.92	0.50
1:B:272:GLU:HG2	1:B:293:ALA:HB3	1.93	0.50
1:A:248:ALA:HB2	1:A:282:GLU:HG2	1.94	0.50
1:B:28:GLU:HG3	1:B:32:ARG:HD2	1.94	0.49
1:B:432:THR:HA	5:B:607:FBP:H61	1.93	0.49
1:D:113:ASP:HA	1:D:241:PHE:HB2	1.93	0.49
1:B:248:ALA:HB2	1:B:282:GLU:HG2	1.94	0.49
1:D:111:ALA:HB2	1:D:239:MET:HE3	1.93	0.49
1:C:91:VAL:O	1:C:95:THR:HG23	2.12	0.49
1:D:77:SER:OG	1:D:118:GLU:OE2	2.30	0.49
1:C:48:ILE:HG12	1:C:71:VAL:HB	1.94	0.48
1:B:515:TRP:CE3	1:B:516:ARG:HB3	2.48	0.48
1:A:204:GLY:HA3	1:A:207:LYS:HE2	1.95	0.48
1:A:169:GLU:O	1:A:172:SER:OG	2.28	0.48
1:D:222:SER:OG	1:D:223:GLU:N	2.46	0.48
1:D:409:THR:HG23	1:D:522:THR:HB	1.95	0.48
1:A:245:ILE:HG23	1:A:250:ASP:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:19:HIS:ND1	1:C:19:HIS:C	2.72	0.47
1:C:145:ASP:O	1:C:158:TRP:NE1	2.46	0.47
1:B:331:LEU:HB3	1:B:334:MET:HG3	1.96	0.47
1:B:447:ARG:NH1	10:B:701:HOH:O	2.47	0.47
1:D:15:THR:O	1:D:37:SER:OG	2.31	0.47
1:C:420:SER:HB2	1:C:428:ILE:HD11	1.96	0.47
1:A:395:PHE:HE1	1:A:444:TYR:HB3	1.80	0.47
1:A:175:TYR:HB3	1:A:179:GLY:HA2	1.95	0.47
1:B:340:PRO:HG3	1:B:377:MET:HG2	1.97	0.46
1:B:43:ARG:HB2	3:B:602:GOL:H31	1.97	0.46
1:A:43:ARG:HD3	1:A:379:HIS:ND1	2.30	0.46
1:B:91:VAL:O	1:B:95:THR:HG23	2.15	0.46
1:D:15:THR:O	1:D:15:THR:OG1	2.27	0.46
1:C:243:SER:HA	1:C:270:LYS:HB2	1.97	0.45
1:C:290:ILE:O	1:C:324:VAL:HA	2.16	0.45
1:A:75:ASN:HA	1:A:113:ASP:HB3	1.97	0.45
1:D:241:PHE:HB3	1:D:270:LYS:HD3	1.98	0.45
1:C:219:PRO:C	1:C:221:VAL:H	2.23	0.45
1:C:117:PRO:HD3	1:C:220:ALA:HA	1.99	0.45
1:A:395:PHE:CZ	1:A:399:ARG:HD3	2.52	0.45
1:B:431:LEU:HD21	1:B:489:ARG:HB2	1.98	0.45
1:B:117:PRO:O	3:B:604:GOL:O1	2.24	0.44
1:C:330:MET:HE3	1:C:360:MET:H	1.82	0.44
1:B:190:ALA:H	1:B:193:LEU:N	2.16	0.44
1:D:280:PHE:HE1	1:D:290:ILE:HG21	1.82	0.44
1:C:65:ILE:HD11	1:C:95:THR:HG22	2.00	0.44
1:B:65:ILE:HD11	1:B:95:THR:HG22	1.98	0.44
1:B:175:TYR:HB3	1:B:179:GLY:HA2	1.98	0.44
1:B:43:ARG:HD3	1:B:379:HIS:ND1	2.32	0.44
1:D:482:TRP:CD2	1:D:517:PRO:HG3	2.53	0.43
1:B:124:ILE:HA	1:B:152:CYS:H	1.83	0.43
1:C:228:ASP:N	1:C:228:ASP:OD1	2.50	0.43
1:C:316:ARG:HG2	1:B:31:CYS:HB3	2.00	0.43
1:A:331:LEU:HB3	1:A:334:MET:HG3	2.00	0.43
1:C:302:PRO:HG2	1:C:305:LYS:HE3	1.99	0.43
1:C:413:ALA:O	1:C:417:VAL:HG23	2.19	0.43
1:C:123:LEU:HA	1:C:205:SER:OG	2.20	0.42
1:A:373:GLU:OE1	1:A:373:GLU:N	2.46	0.42
1:D:289:GLY:O	1:D:290:ILE:HD13	2.19	0.42
1:D:421:PHE:HB3	3:D:604:GOL:H2	2.02	0.42
1:C:84:HIS:HA	1:C:87:THR:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:314:ILE:HA	1:B:324:VAL:HG21	2.02	0.42
1:B:44:ASN:O	1:B:467:ARG:HG3	2.18	0.42
1:A:110:VAL:HG12	1:A:237:VAL:HG23	2.01	0.42
1:B:395:PHE:CZ	1:B:399:ARG:HD3	2.55	0.42
1:B:148:TYR:O	1:B:149:MET:C	2.62	0.41
1:B:242:ALA:HB1	1:B:245:ILE:HD11	2.02	0.41
1:A:437:SER:O	1:A:441:VAL:HG23	2.19	0.41
1:B:353:LEU:HD23	1:B:353:LEU:HA	1.87	0.41
1:D:327:ALA:HB1	1:D:360:MET:HE2	2.01	0.41
1:B:76:PHE:HB2	1:B:113:ASP:O	2.19	0.41
1:C:455:ARG:H	1:C:455:ARG:HG3	1.60	0.41
1:C:269:SER:OG	1:C:287:SER:OG	2.32	0.41
1:A:50:THR:OG1	1:A:73:ARG:NH1	2.40	0.41
1:B:291:MET:HG3	1:B:325:ILE:HB	2.03	0.41
1:A:190:ALA:O	1:A:191:ASP:CB	2.68	0.41
1:C:17:GLN:N	1:C:37:SER:OG	2.54	0.41
1:B:513:THR:OG1	1:B:514:GLY:N	2.54	0.41
1:A:290:ILE:O	1:A:324:VAL:HA	2.21	0.41
1:C:229:LEU:HD22	1:C:258:LEU:HD21	2.03	0.40
1:D:243:SER:HA	1:D:270:LYS:HE2	2.03	0.40
1:A:410:GLU:HG2	1:A:440:GLN:OE1	2.21	0.40
1:B:416:ALA:HA	1:B:525:MET:HE2	2.03	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	507/550 (92%)	471 (93%)	33 (6%)	3 (1%)	21	38
1	B	506/550 (92%)	472 (93%)	33 (6%)	1 (0%)	43	62
1	C	515/550 (94%)	478 (93%)	34 (7%)	3 (1%)	21	38

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	D	426/550 (78%)	389 (91%)	34 (8%)	3 (1%)	18 35
All	All	1954/2200 (89%)	1810 (93%)	134 (7%)	10 (0%)	24 42

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	191	ASP
1	A	192	PHE
1	D	124	ILE
1	C	167	VAL
1	A	371	PRO
1	D	371	PRO
1	C	17	GLN
1	B	163	ASN
1	D	403	PRO
1	C	221	VAL

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	283/452 (63%)	282 (100%)	1 (0%)	84 92
1	B	282/452 (62%)	282 (100%)	0	100 100
1	C	300/452 (66%)	298 (99%)	2 (1%)	76 87
1	D	238/452 (53%)	238 (100%)	0	100 100
All	All	1103/1808 (61%)	1100 (100%)	3 (0%)	86 93

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	19	HIS
1	C	455	ARG
1	A	120	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	199	ASN
1	C	329	GLN
1	C	350	ASN
1	C	456	ASN
1	A	391	HIS
1	A	456	ASN
1	B	210	ASN
1	B	318	ASN
1	D	378	GLN
1	D	440	GLN

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 33 ligands modelled in this entry, 11 are monoatomic - leaving 22 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	$\#\|Z\| > 2$
9	PEG	A	606	-	6,6,6	0.50	0	5,5,5	0.46	0
3	GOL	D	603	-	5,5,5	0.90	0	5,5,5	1.07	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	GOL	D	604	-	5,5,5	0.96	0	5,5,5	1.05	0
3	GOL	B	605	-	5,5,5	0.96	0	5,5,5	1.06	0
5	FBP	D	605	-	18,20,20	0.92	1 (5%)	21,32,32	0.74	0
3	GOL	B	606	-	5,5,5	0.95	0	5,5,5	1.05	0
3	GOL	A	603	-	5,5,5	0.96	0	5,5,5	1.00	0
3	GOL	B	603	-	5,5,5	0.95	0	5,5,5	1.03	0
8	ASP	C	610	-	7,8,8	1.14	1 (14%)	6,10,10	1.41	1 (16%)
3	GOL	B	602	-	5,5,5	0.90	0	5,5,5	1.09	0
5	FBP	A	604	-	18,20,20	0.93	1 (5%)	21,32,32	0.64	0
3	GOL	A	602	-	5,5,5	0.95	0	5,5,5	1.06	0
8	ASP	B	610	-	7,8,8	1.10	0	6,10,10	0.86	0
3	GOL	C	605	-	5,5,5	0.94	0	5,5,5	1.09	0
7	OXL	C	609	6	5,5,5	2.54	1 (20%)	6,6,6	1.95	2 (33%)
9	PEG	A	605	-	6,6,6	0.51	0	5,5,5	0.46	0
5	FBP	B	607	-	18,20,20	0.92	1 (5%)	21,32,32	0.86	0
9	PEG	B	608	-	6,6,6	0.50	0	5,5,5	0.39	0
5	FBP	C	607	-	18,20,20	1.94	6 (33%)	21,32,32	1.59	5 (23%)
3	GOL	B	604	-	5,5,5	0.93	0	5,5,5	1.12	0
3	GOL	C	603	-	5,5,5	0.95	0	5,5,5	1.09	0
3	GOL	C	604	-	5,5,5	0.97	0	5,5,5	1.08	0

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
9	PEG	A	606	-	-	0/4/4/4	-
3	GOL	D	603	-	-	2/4/4/4	-
3	GOL	D	604	-	-	2/4/4/4	-
3	GOL	B	605	-	-	0/4/4/4	-
5	FBP	D	605	-	-	7/13/32/32	0/1/1/1
3	GOL	B	606	-	-	0/4/4/4	-
3	GOL	A	603	-	-	2/4/4/4	-
3	GOL	B	603	-	-	2/4/4/4	-
8	ASP	C	610	-	-	5/8/8/8	-
3	GOL	B	602	-	-	2/4/4/4	-
5	FBP	A	604	-	-	3/13/32/32	0/1/1/1
3	GOL	A	602	-	-	0/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
8	ASP	B	610	-	-	4/8/8/8	-
3	GOL	C	605	-	-	4/4/4/4	-
7	OXL	C	609	6	-	4/4/4/4	-
9	PEG	A	605	-	-	1/4/4/4	-
5	FBP	B	607	-	-	11/13/32/32	0/1/1/1
9	PEG	B	608	-	-	2/4/4/4	-
5	FBP	C	607	-	-	5/13/32/32	0/1/1/1
3	GOL	B	604	-	-	1/4/4/4	-
3	GOL	C	603	-	-	0/4/4/4	-
3	GOL	C	604	-	-	0/4/4/4	-

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	C	609	OXL	C2-C1	-4.75	1.46	1.54
5	C	607	FBP	P2-O6P	-3.48	1.41	1.54
5	C	607	FBP	P2-O5P	-3.21	1.42	1.54
5	C	607	FBP	P1-O3P	-2.87	1.44	1.54
5	B	607	FBP	O2-C2	2.73	1.45	1.40
5	A	604	FBP	O2-C2	2.69	1.45	1.40
5	D	605	FBP	O2-C2	2.68	1.45	1.40
5	C	607	FBP	O5-C2	-2.63	1.39	1.43
5	C	607	FBP	P1-O2P	-2.36	1.46	1.54
8	C	610	ASP	OXT-C	-2.26	1.23	1.30
5	C	607	FBP	P2-O6	-2.13	1.53	1.60

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	C	609	OXL	O3-C1-C2	3.19	119.02	112.83
7	C	609	OXL	O4-C2-C1	3.17	118.97	112.83
5	C	607	FBP	O6P-P2-O6	-3.05	98.70	106.67
8	C	610	ASP	OXT-C-O	-2.58	118.22	124.08
5	C	607	FBP	O2P-P1-O1P	2.55	120.78	110.83
5	C	607	FBP	O3-C3-C4	-2.22	105.40	113.25
5	C	607	FBP	O2-C2-O5	-2.12	105.26	109.33
5	C	607	FBP	O4-C4-C3	-2.02	106.09	112.16

There are no chirality outliers.

All (57) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	605	GOL	O1-C1-C2-O2
3	C	605	GOL	O1-C1-C2-C3
3	C	605	GOL	C1-C2-C3-O3
3	A	603	GOL	C1-C2-C3-O3
3	B	602	GOL	O1-C1-C2-C3
3	B	603	GOL	O1-C1-C2-C3
3	D	603	GOL	O1-C1-C2-O2
3	D	603	GOL	O1-C1-C2-C3
3	D	604	GOL	O1-C1-C2-C3
5	C	607	FBP	O1-C1-C2-O2
5	C	607	FBP	O1-C1-C2-C3
5	C	607	FBP	O1-C1-C2-O5
5	A	604	FBP	O1-C1-C2-O2
5	A	604	FBP	O1-C1-C2-C3
5	A	604	FBP	O1-C1-C2-O5
5	B	607	FBP	C1-O1-P1-O1P
5	B	607	FBP	C1-O1-P1-O2P
5	B	607	FBP	C1-O1-P1-O3P
5	B	607	FBP	O1-C1-C2-O2
5	B	607	FBP	O1-C1-C2-C3
5	B	607	FBP	O1-C1-C2-O5
5	B	607	FBP	C6-O6-P2-O4P
5	B	607	FBP	C6-O6-P2-O5P
5	B	607	FBP	C6-O6-P2-O6P
5	D	605	FBP	O1-C1-C2-O2
5	D	605	FBP	O1-C1-C2-C3
5	D	605	FBP	O1-C1-C2-O5
5	D	605	FBP	C6-O6-P2-O5P
5	D	605	FBP	C6-O6-P2-O6P
8	C	610	ASP	O-C-CA-N
8	C	610	ASP	N-CA-CB-CG
5	C	607	FBP	C4-C5-C6-O6
5	B	607	FBP	C4-C5-C6-O6
8	C	610	ASP	OXT-C-CA-N
3	C	605	GOL	O2-C2-C3-O3
5	B	607	FBP	O5-C5-C6-O6
8	B	610	ASP	OXT-C-CA-N
9	B	608	PEG	O2-C3-C4-O4
3	B	602	GOL	O1-C1-C2-O2
5	C	607	FBP	O5-C5-C6-O6
3	D	604	GOL	O1-C1-C2-O2
5	D	605	FBP	C6-O6-P2-O4P
3	A	603	GOL	O2-C2-C3-O3

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Mol	Chain	Res	Type	Atoms
8	B	610	ASP	O-C-CA-N
3	B	603	GOL	O1-C1-C2-O2
7	C	609	OXL	O3-C1-C2-O4
9	A	605	PEG	C4-C3-O2-C2
8	B	610	ASP	N-CA-CB-CG
7	C	609	OXL	O1-C1-C2-O2
8	C	610	ASP	O-C-CA-CB
8	C	610	ASP	OXT-C-CA-CB
7	C	609	OXL	O1-C1-C2-O4
7	C	609	OXL	O3-C1-C2-O2
3	B	604	GOL	O1-C1-C2-O2
5	D	605	FBP	C4-C5-C6-O6
8	B	610	ASP	CA-CB-CG-OD1
9	B	608	PEG	C4-C3-O2-C2

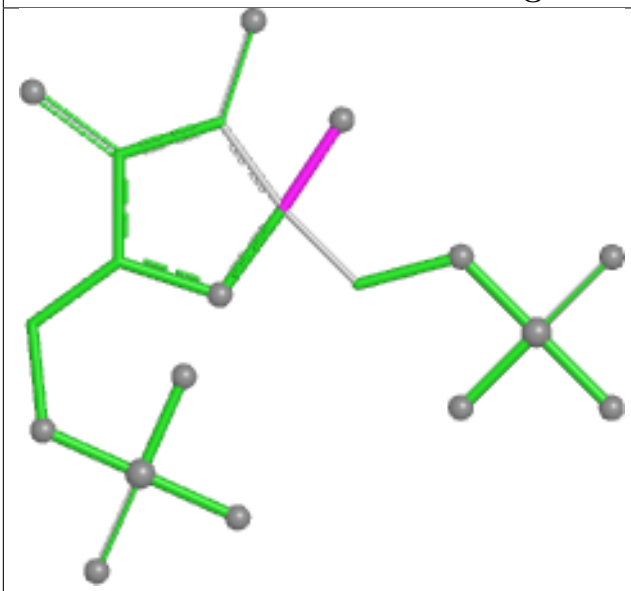
There are no ring outliers.

9 monomers are involved in 18 short contacts:

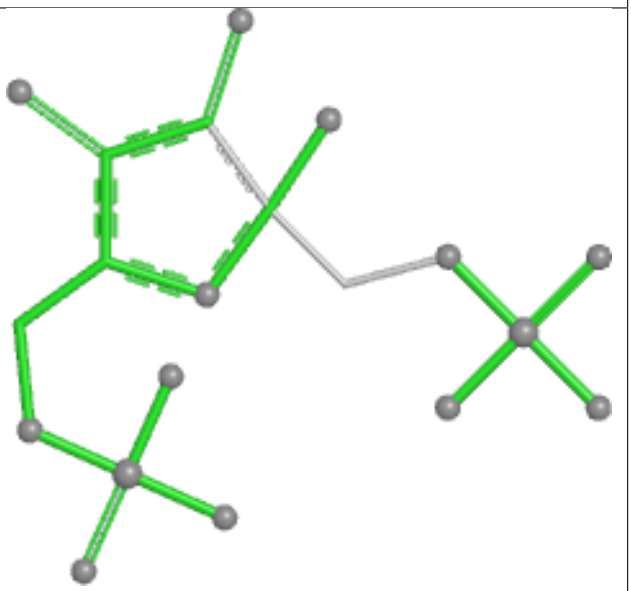
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	604	GOL	1	0
3	B	603	GOL	1	0
8	C	610	ASP	1	0
3	B	602	GOL	2	0
8	B	610	ASP	3	0
9	A	605	PEG	2	0
5	B	607	FBP	3	0
5	C	607	FBP	4	0
3	B	604	GOL	1	0

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.

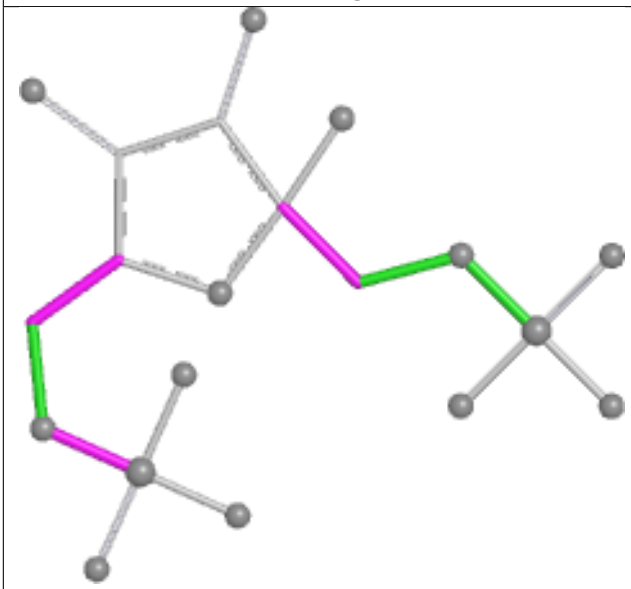
Ligand FBP D 605



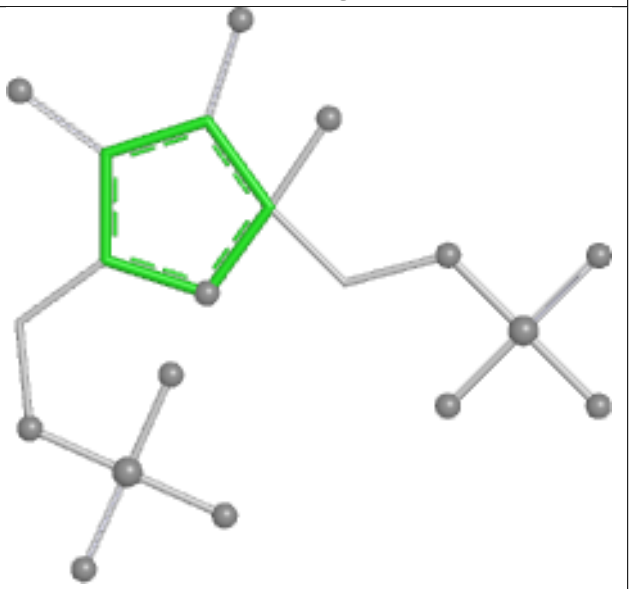
Bond lengths



Bond angles

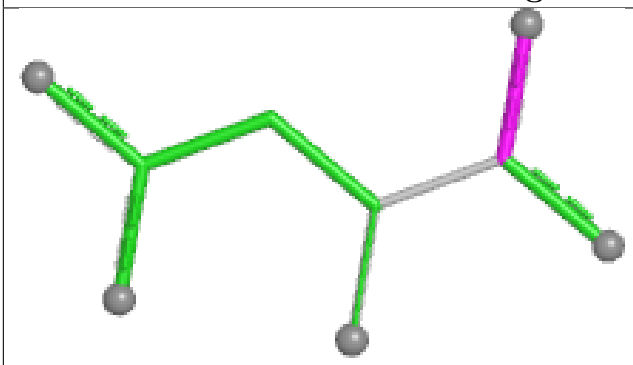


Torsions

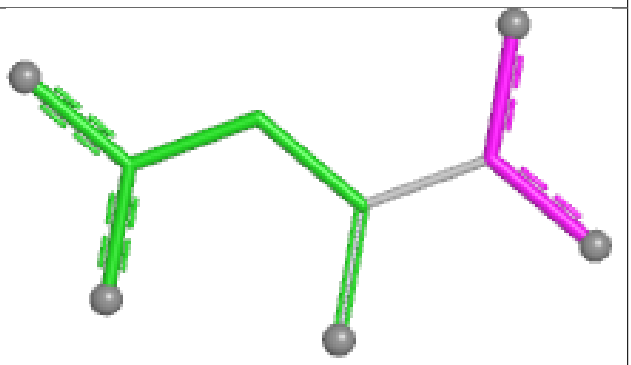


Rings

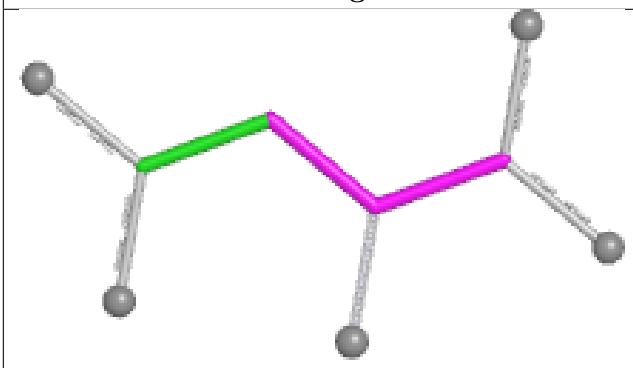
Ligand ASP C 610



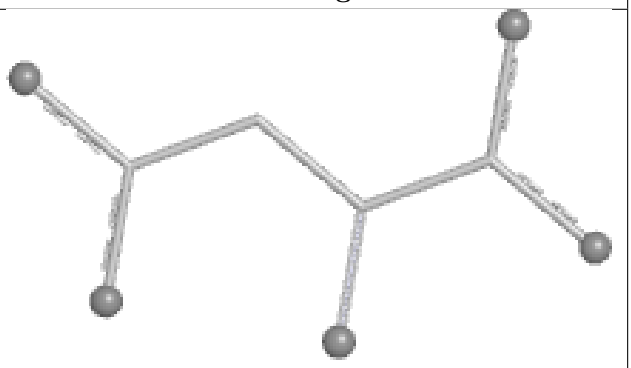
Bond lengths



Bond angles

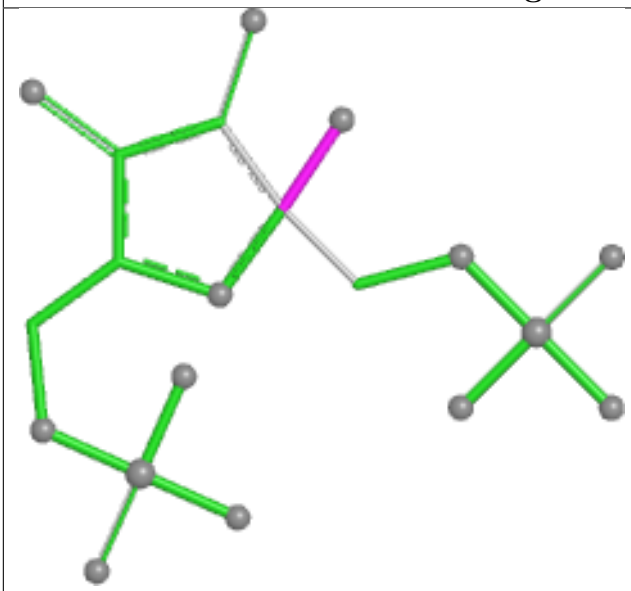


Torsions

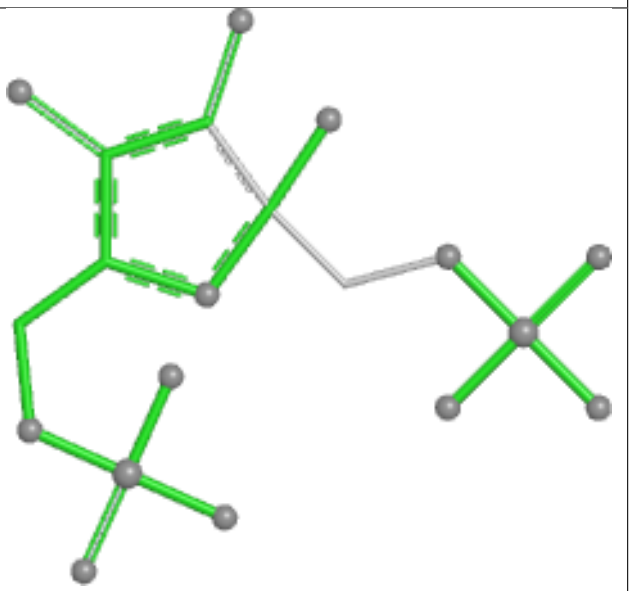


Rings

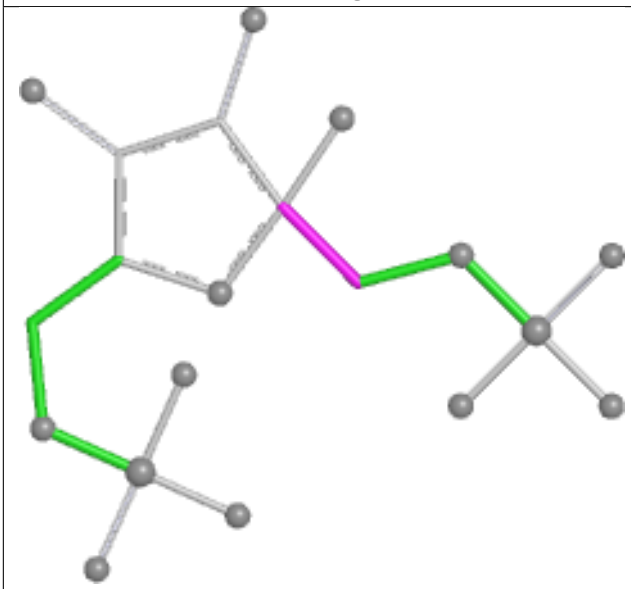
Ligand FBP A 604



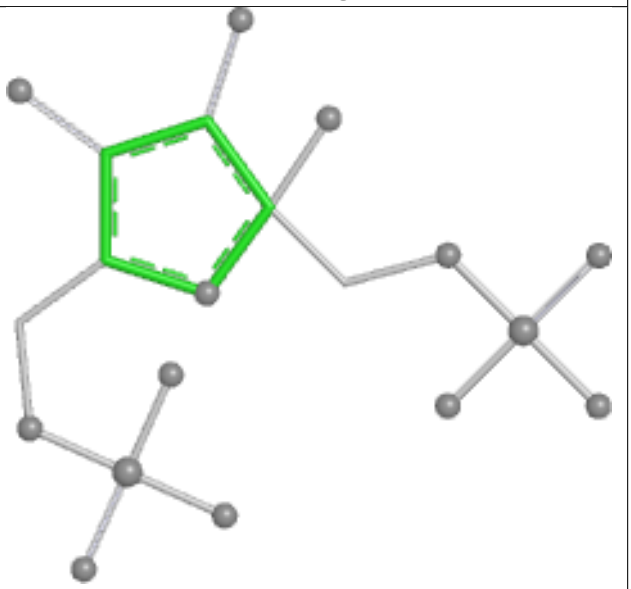
Bond lengths



Bond angles

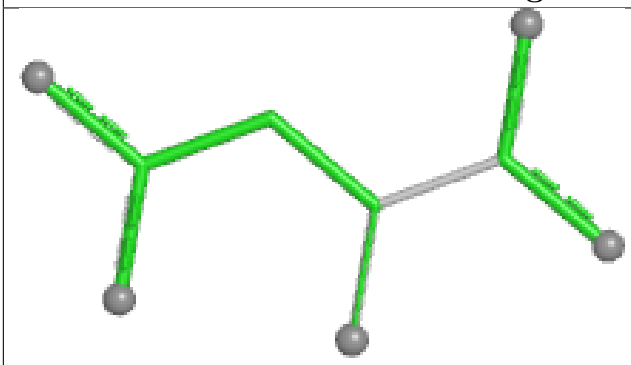


Torsions

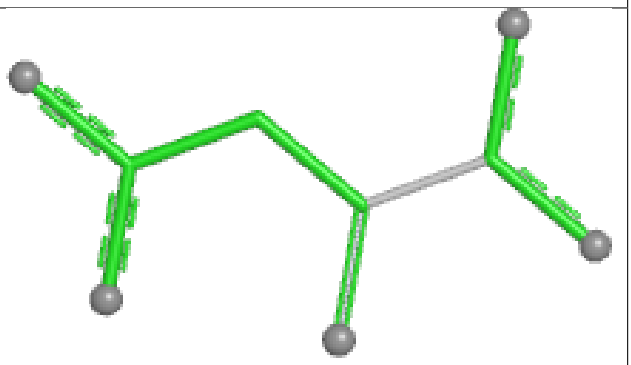


Rings

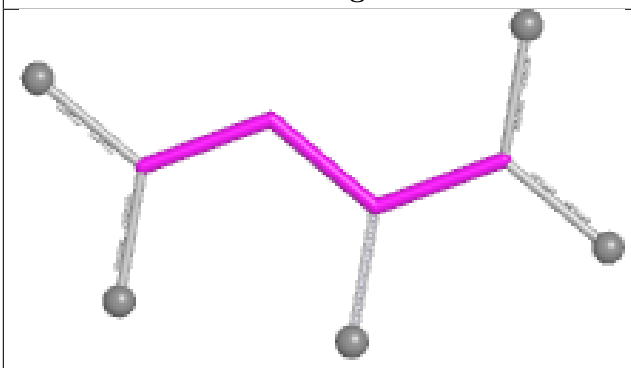
Ligand ASP B 610



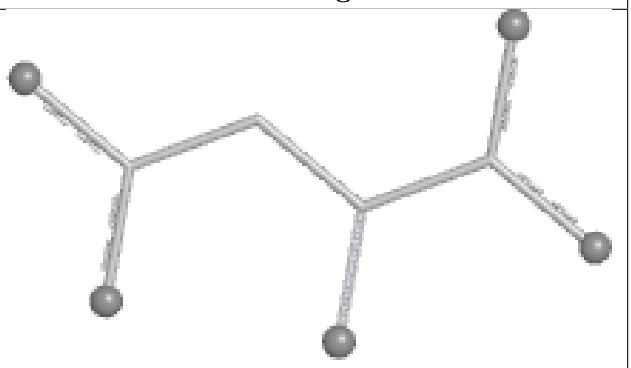
Bond lengths



Bond angles

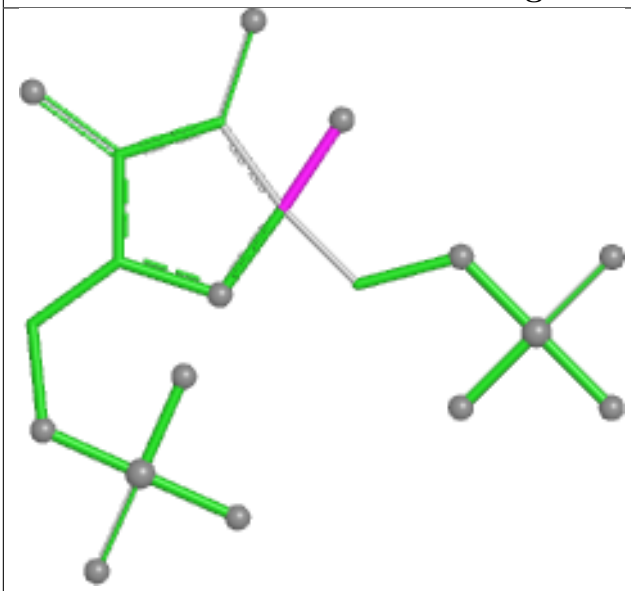


Torsions

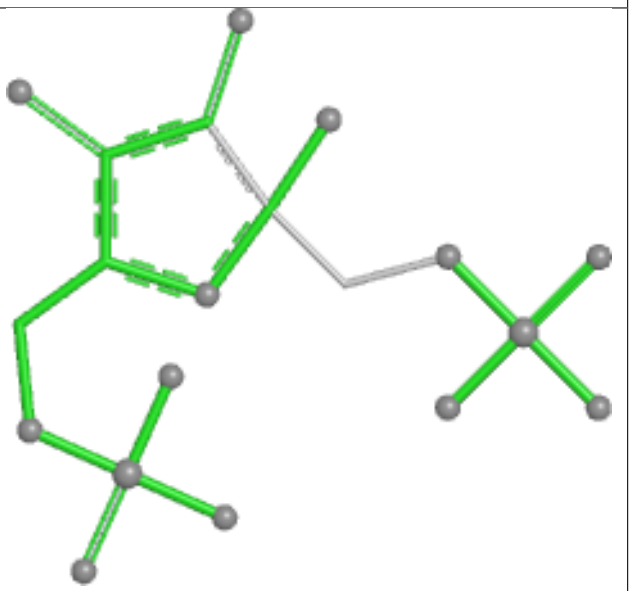


Rings

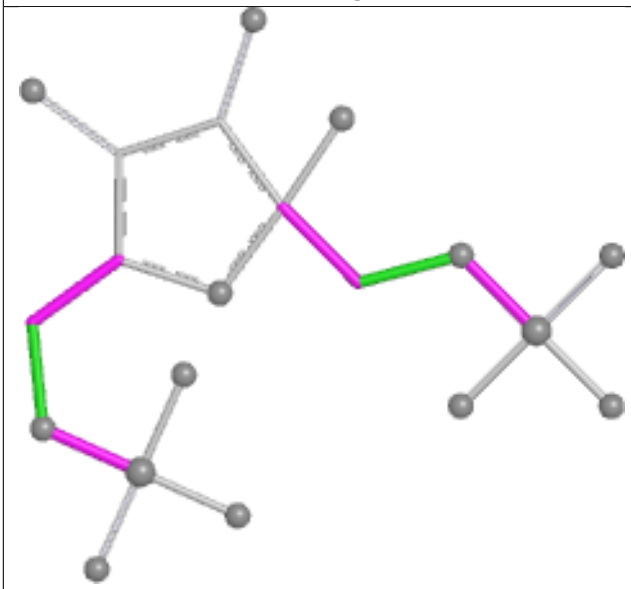
Ligand FBP B 607



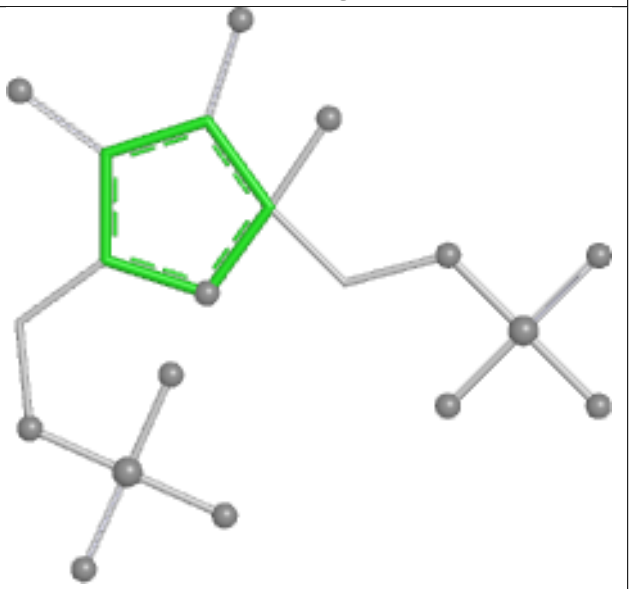
Bond lengths



Bond angles

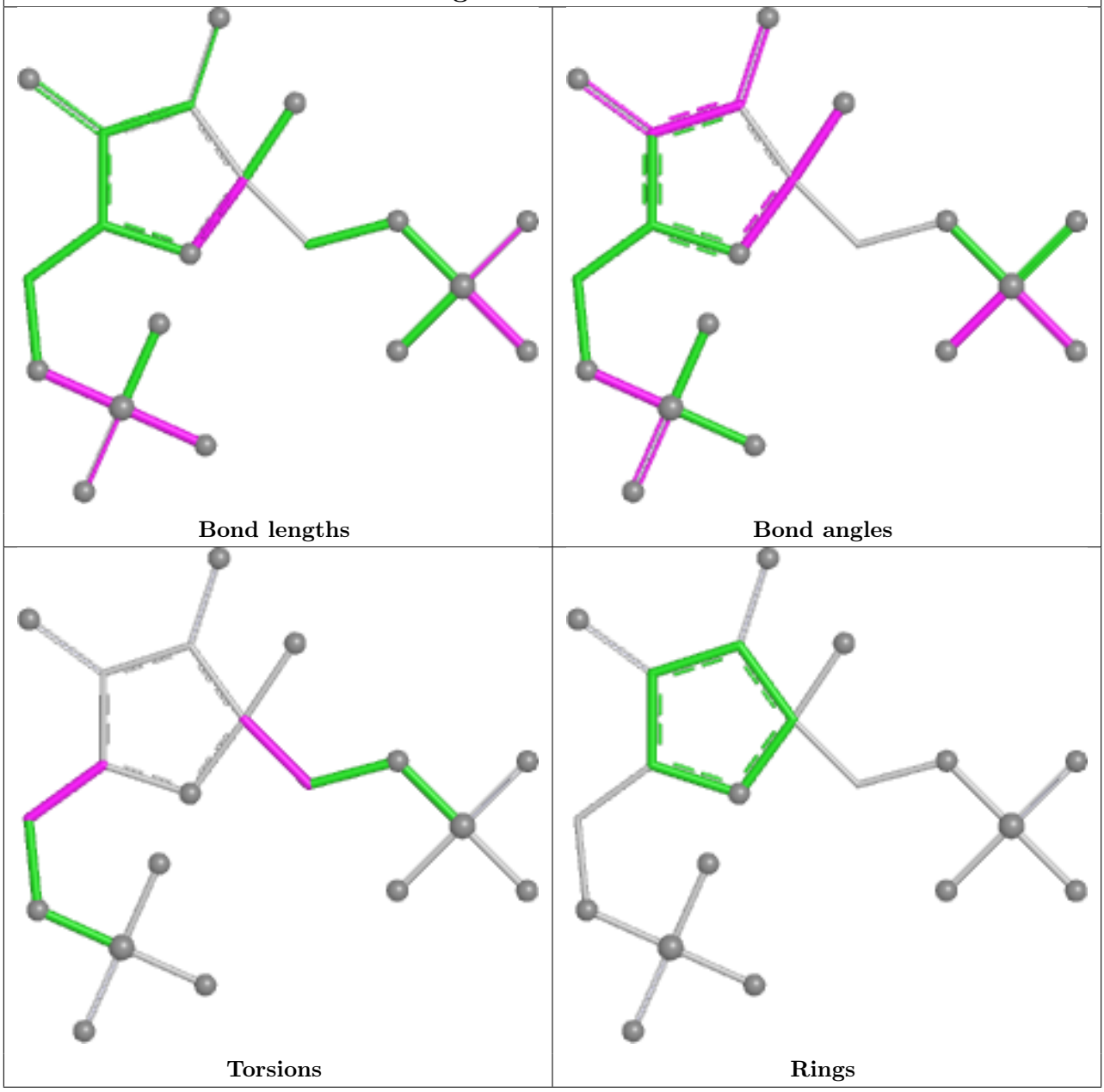


Torsions



Rings

Ligand FBP C 607



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	509/550 (92%)	0.47	12 (2%) 59 51	49, 67, 98, 114	0
1	B	512/550 (93%)	0.58	21 (4%) 41 32	30, 66, 110, 129	0
1	C	517/550 (94%)	0.35	9 (1%) 69 63	43, 59, 98, 115	0
1	D	430/550 (78%)	0.49	13 (3%) 52 44	47, 64, 94, 131	0
All	All	1968/2200 (89%)	0.47	55 (2%) 55 46	30, 64, 101, 131	0

All (55) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	72	ALA	4.2
1	B	44	ASN	3.8
1	B	327	ALA	3.4
1	A	531	PRO	3.3
1	B	163	ASN	3.1
1	A	23	ALA	2.9
1	B	110	VAL	2.8
1	C	17	GLN	2.8
1	D	239	MET	2.8
1	B	152	CYS	2.8
1	C	23	ALA	2.8
1	D	493	ALA	2.7
1	B	15	THR	2.7
1	B	187	GLN	2.7
1	C	217	ASP	2.6
1	A	98	PHE	2.6
1	C	202	SER	2.6
1	D	257	VAL	2.6
1	D	327	ALA	2.6
1	B	401	LEU	2.6
1	C	327	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	147	ALA	2.6
1	A	37	SER	2.5
1	B	190	ALA	2.5
1	B	200	GLY	2.4
1	D	490	VAL	2.4
1	D	531	PRO	2.4
1	B	183	LEU	2.4
1	B	148	TYR	2.3
1	A	381	ILE	2.3
1	C	157	LEU	2.3
1	B	16	GLN	2.3
1	D	127	SER	2.3
1	B	414	VAL	2.3
1	A	36	ASP	2.2
1	D	390	TYR	2.2
1	B	195	THR	2.2
1	B	130	ALA	2.2
1	A	379	HIS	2.2
1	D	121	THR	2.1
1	A	127	SER	2.1
1	D	260	GLU	2.1
1	D	123	LEU	2.1
1	A	97	SER	2.1
1	A	100	SER	2.1
1	A	126	GLY	2.1
1	C	185	VAL	2.1
1	D	401	LEU	2.1
1	B	468	GLY	2.0
1	B	149	MET	2.0
1	A	58	VAL	2.0
1	D	120	ARG	2.0
1	C	208	GLY	2.0
1	B	220	ALA	2.0
1	C	148	TYR	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
3	GOL	B	606	6/6	0.74	0.16	69,72,77,78	0
6	MG	D	606	1/1	0.77	0.27	58,58,58,58	0
9	PEG	B	608	7/7	0.77	0.18	70,74,79,86	0
3	GOL	A	602	6/6	0.78	0.18	77,81,85,87	0
8	ASP	B	610	9/9	0.80	0.14	55,62,65,67	0
3	GOL	C	603	6/6	0.80	0.13	71,81,83,85	0
2	K	D	602	1/1	0.82	0.12	114,114,114,114	0
7	OXL	C	609	6/6	0.82	0.12	55,61,64,64	0
6	MG	A	607	1/1	0.83	0.27	60,60,60,60	0
3	GOL	B	605	6/6	0.84	0.17	74,77,85,88	0
9	PEG	A	606	7/7	0.84	0.12	61,65,74,89	0
6	MG	B	609	1/1	0.84	0.14	59,59,59,59	0
9	PEG	A	605	7/7	0.85	0.16	60,72,74,87	0
3	GOL	B	603	6/6	0.85	0.23	62,64,72,77	0
3	GOL	C	605	6/6	0.85	0.13	61,68,74,76	0
3	GOL	C	604	6/6	0.86	0.18	50,59,60,76	0
5	FBP	B	607	20/20	0.87	0.12	65,83,96,104	0
5	FBP	C	607	20/20	0.88	0.11	49,67,72,72	0
3	GOL	A	603	6/6	0.88	0.12	70,74,80,83	0
3	GOL	D	604	6/6	0.89	0.13	62,68,70,71	0
8	ASP	C	610	9/9	0.89	0.12	56,57,69,72	0
3	GOL	B	604	6/6	0.89	0.13	71,74,78,79	0
3	GOL	D	603	6/6	0.90	0.14	53,58,63,66	0
5	FBP	A	604	20/20	0.90	0.10	59,66,75,81	0
2	K	A	601	1/1	0.90	0.07	63,63,63,63	0
2	K	C	601	1/1	0.91	0.09	65,65,65,65	0
5	FBP	D	605	20/20	0.92	0.10	51,64,71,71	0
3	GOL	B	602	6/6	0.93	0.08	55,57,61,66	0
2	K	D	601	1/1	0.93	0.06	68,68,68,68	0
2	K	C	602	1/1	0.95	0.07	82,82,82,82	0
6	MG	C	608	1/1	0.97	0.14	57,57,57,57	0
2	K	B	601	1/1	0.97	0.08	69,69,69,69	0

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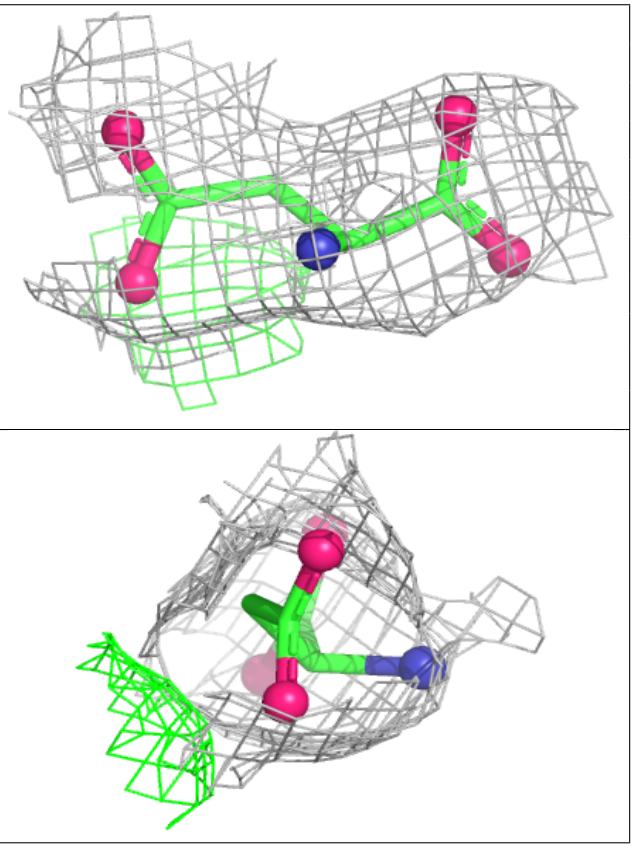
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	CL	C	606	1/1	0.99	0.03	47,47,47,47	0

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.

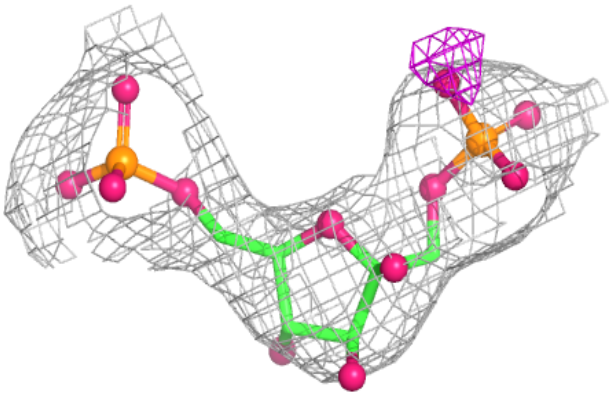
Electron density around ASP B 610:

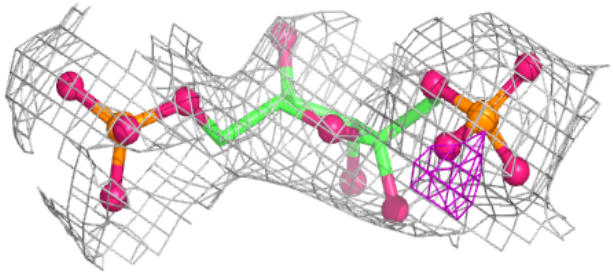
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

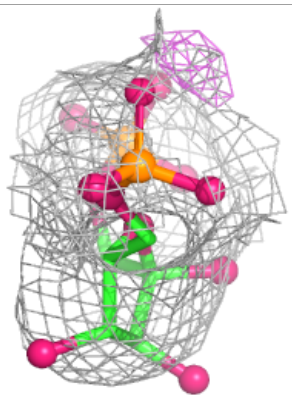


Electron density around FBP B 607:

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

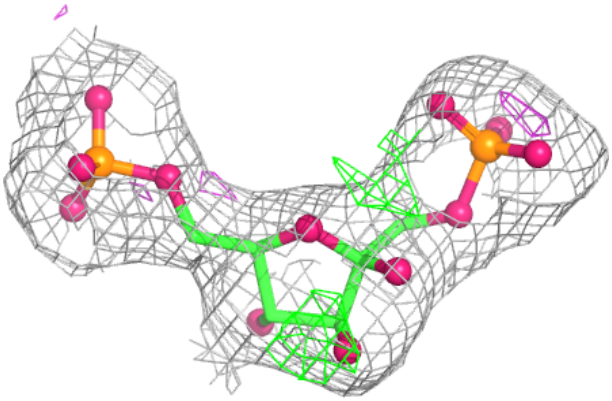


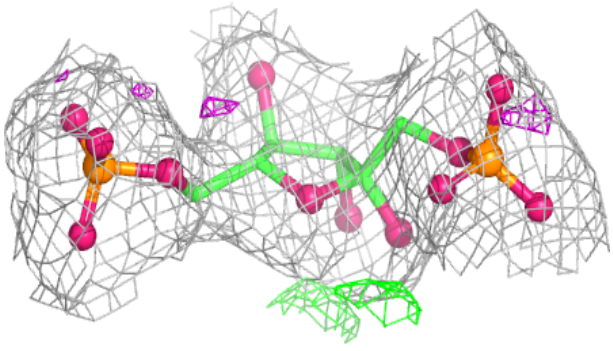


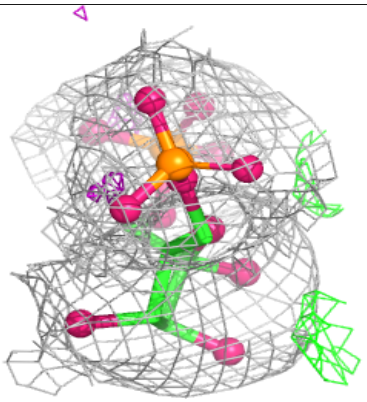


Electron density around FBP C 607:

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

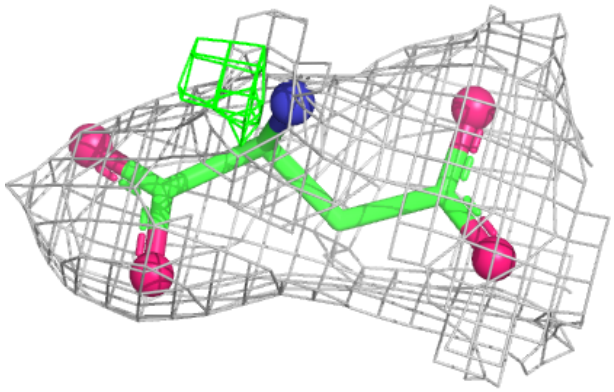


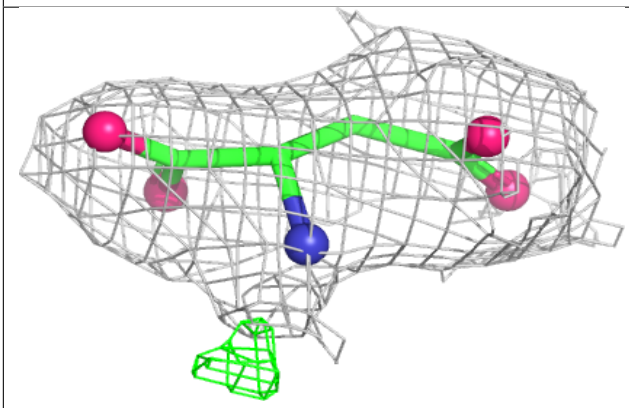


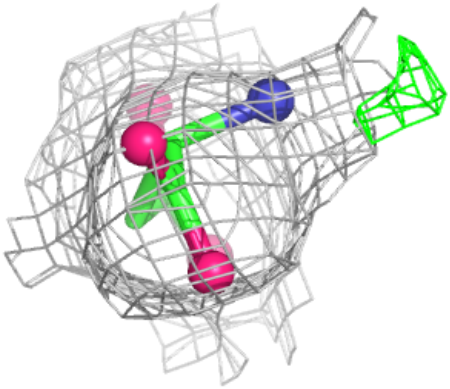


Electron density around ASP C 610:

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

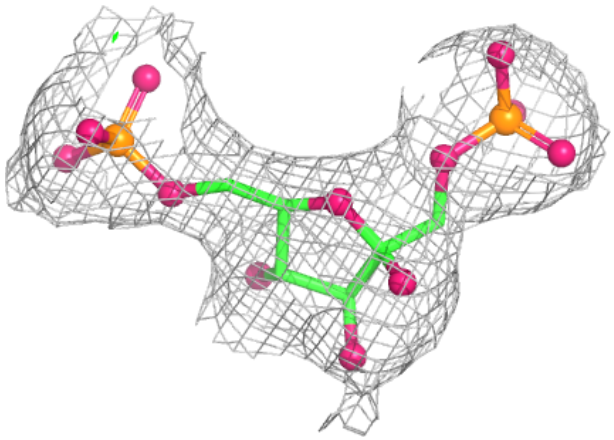


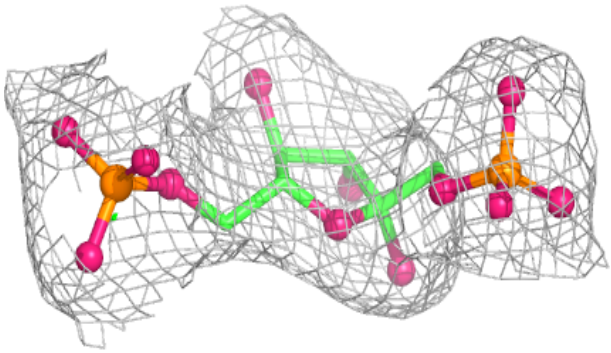


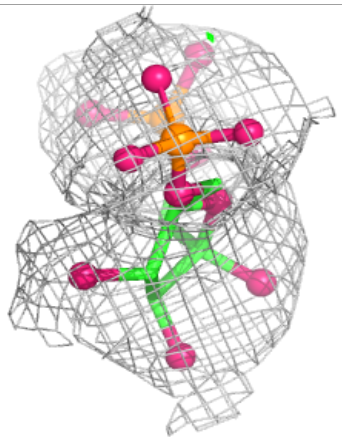


Electron density around FBP A 604:

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

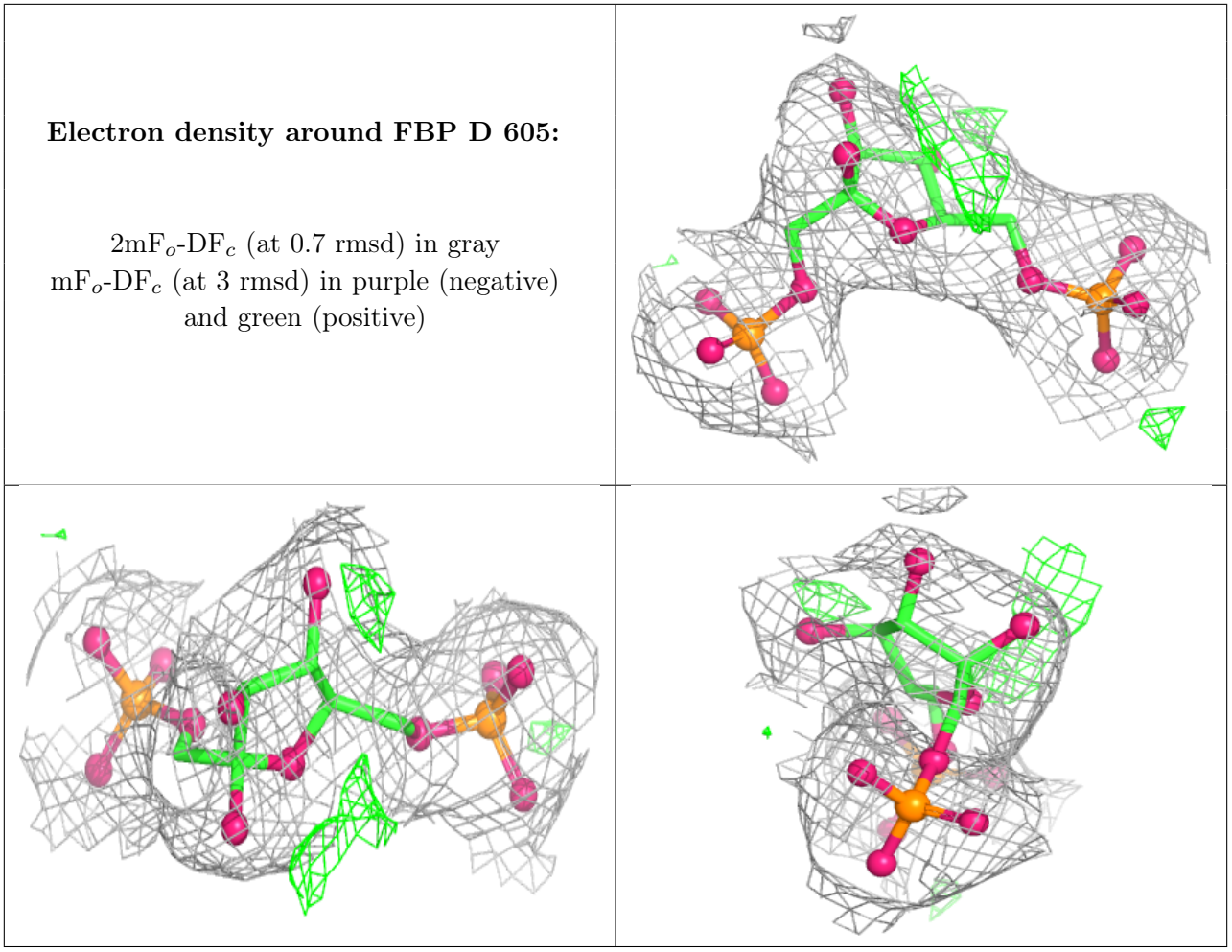






Electron density around FBP D 605:

$2mF_o$-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

There are no such residues in this entry.