Full wwPDB X-ray Structure Validation Report (i)

Oct 29, 2023 – 12:19 PM EDT

PDB ID	:	8GLL
Title	:	R149E variant of Citrate Synthase (CitA) in Mycobacterium tuberculosis
Authors	:	Pathirage, R.; Ronning, D.; Petit, C.
Deposited on	:	2023-03-22
Resolution	:	2.65 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 (1)) were used in the production of this report:

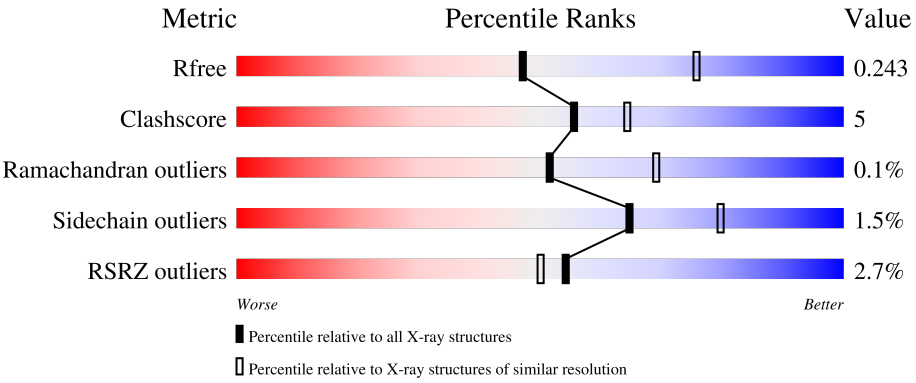
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.65 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}	130704	1332 (2.68-2.64)
Clashscore	141614	1374 (2.68-2.64)
Ramachandran outliers	138981	1349 (2.68-2.64)
Sidechain outliers	138945	1349 (2.68-2.64)
RSRZ outliers	127900	1318 (2.68-2.64)

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	379	2% 85% 12%
1	B	379	4% 85% 11%
1	C	379	85% 12%
1	D	379	2% 82% 14%
1	E	379	2% 85% 10%

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Mol	Chain	Length	Quality of chain
1	F	379	3% 84% 12%
1	G	379	6% 85% 11%
1	H	379	% 84% 13%

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
2	EDO	A	410	-	-	-	X
2	EDO	C	401	-	-	-	X
2	EDO	C	411	-	-	-	X
2	EDO	E	411	-	-	-	X
2	EDO	G	401	-	-	-	X
3	PEG	C	404	-	-	X	X

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 23209 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 citrate synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	371	Total	C	N	O	S	0	0	0
			2810	1769	506	521	14			
1	B	365	Total	C	N	O	S	0	0	0
			2764	1741	499	511	13			
1	C	370	Total	C	N	O	S	0	0	0
			2800	1763	505	519	13			
1	D	365	Total	C	N	O	S	0	0	0
			2764	1741	499	511	13			
1	E	362	Total	C	N	O	S	0	0	0
			2739	1723	496	507	13			
1	F	363	Total	C	N	O	S	0	0	0
			2749	1731	497	508	13			
1	G	366	Total	C	N	O	S	0	0	0
			2769	1744	500	512	13			
1	H	367	Total	C	N	O	S	0	0	0
			2781	1752	502	514	13			

There are 56 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	149	GLU	ARG	engineered mutation	UNP A0A045JB88
A	374	HIS	-	expression tag	UNP A0A045JB88
A	375	HIS	-	expression tag	UNP A0A045JB88
A	376	HIS	-	expression tag	UNP A0A045JB88
A	377	HIS	-	expression tag	UNP A0A045JB88
A	378	HIS	-	expression tag	UNP A0A045JB88
A	379	HIS	-	expression tag	UNP A0A045JB88
B	149	GLU	ARG	engineered mutation	UNP A0A045JB88
B	374	HIS	-	expression tag	UNP A0A045JB88
B	375	HIS	-	expression tag	UNP A0A045JB88
B	376	HIS	-	expression tag	UNP A0A045JB88
B	377	HIS	-	expression tag	UNP A0A045JB88
B	378	HIS	-	expression tag	UNP A0A045JB88

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Chain	Residue	Modelled	Actual	Comment	Reference
B	379	HIS	-	expression tag	UNP A0A045JB88
C	149	GLU	ARG	engineered mutation	UNP A0A045JB88
C	374	HIS	-	expression tag	UNP A0A045JB88
C	375	HIS	-	expression tag	UNP A0A045JB88
C	376	HIS	-	expression tag	UNP A0A045JB88
C	377	HIS	-	expression tag	UNP A0A045JB88
C	378	HIS	-	expression tag	UNP A0A045JB88
C	379	HIS	-	expression tag	UNP A0A045JB88
D	149	GLU	ARG	engineered mutation	UNP A0A045JB88
D	374	HIS	-	expression tag	UNP A0A045JB88
D	375	HIS	-	expression tag	UNP A0A045JB88
D	376	HIS	-	expression tag	UNP A0A045JB88
D	377	HIS	-	expression tag	UNP A0A045JB88
D	378	HIS	-	expression tag	UNP A0A045JB88
D	379	HIS	-	expression tag	UNP A0A045JB88
E	149	GLU	ARG	engineered mutation	UNP A0A045JB88
E	374	HIS	-	expression tag	UNP A0A045JB88
E	375	HIS	-	expression tag	UNP A0A045JB88
E	376	HIS	-	expression tag	UNP A0A045JB88
E	377	HIS	-	expression tag	UNP A0A045JB88
E	378	HIS	-	expression tag	UNP A0A045JB88
E	379	HIS	-	expression tag	UNP A0A045JB88
F	149	GLU	ARG	engineered mutation	UNP A0A045JB88
F	374	HIS	-	expression tag	UNP A0A045JB88
F	375	HIS	-	expression tag	UNP A0A045JB88
F	376	HIS	-	expression tag	UNP A0A045JB88
F	377	HIS	-	expression tag	UNP A0A045JB88
F	378	HIS	-	expression tag	UNP A0A045JB88
F	379	HIS	-	expression tag	UNP A0A045JB88
G	149	GLU	ARG	engineered mutation	UNP A0A045JB88
G	374	HIS	-	expression tag	UNP A0A045JB88
G	375	HIS	-	expression tag	UNP A0A045JB88
G	376	HIS	-	expression tag	UNP A0A045JB88
G	377	HIS	-	expression tag	UNP A0A045JB88
G	378	HIS	-	expression tag	UNP A0A045JB88
G	379	HIS	-	expression tag	UNP A0A045JB88
H	149	GLU	ARG	engineered mutation	UNP A0A045JB88
H	374	HIS	-	expression tag	UNP A0A045JB88
H	375	HIS	-	expression tag	UNP A0A045JB88
H	376	HIS	-	expression tag	UNP A0A045JB88
H	377	HIS	-	expression tag	UNP A0A045JB88
H	378	HIS	-	expression tag	UNP A0A045JB88

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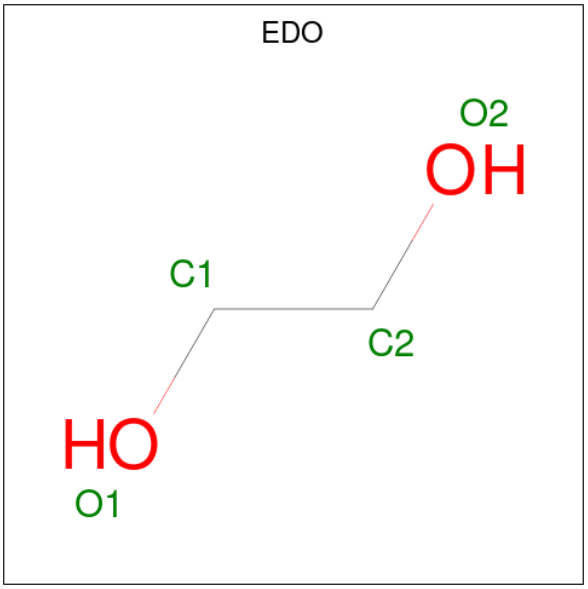
Chain	Residue	Modelled	Actual	Comment	Reference
H	379	HIS	-	expression tag	UNP A0A045JB88

- Molecule 2 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	A	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	B	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		
2	B	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	C	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	D	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	E	1	Total	C	O	0	0
			4	2	2		
2	F	1	Total	C	O	0	0
			4	2	2		
2	F	1	Total	C	O	0	0
			4	2	2		
2	F	1	Total	C	O	0	0
			4	2	2		
2	F	1	Total	C	O	0	0
			4	2	2		
2	G	1	Total	C	O	0	0
			4	2	2		
2	G	1	Total	C	O	0	0
			4	2	2		
2	G	1	Total	C	O	0	0
			4	2	2		
2	G	1	Total	C	O	0	0
			4	2	2		
2	G	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		
2	H	1	Total	C	O	0	0
			4	2	2		

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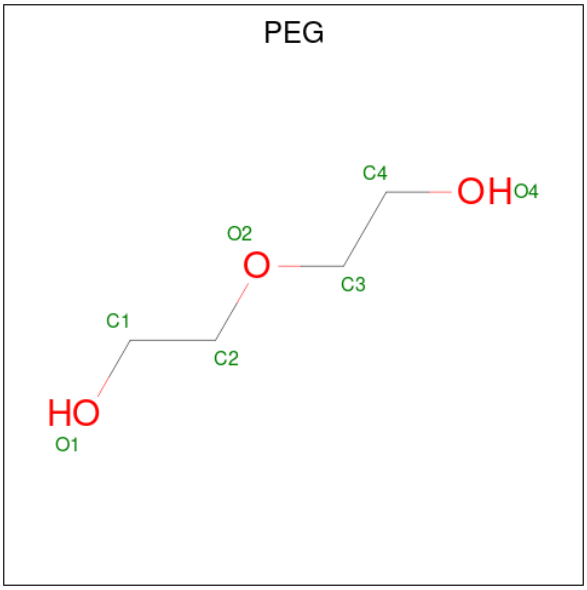
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	H	1	Total C O 4 2 2	0	0

- Molecule 3 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: $C_4H_{10}O_3$).



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

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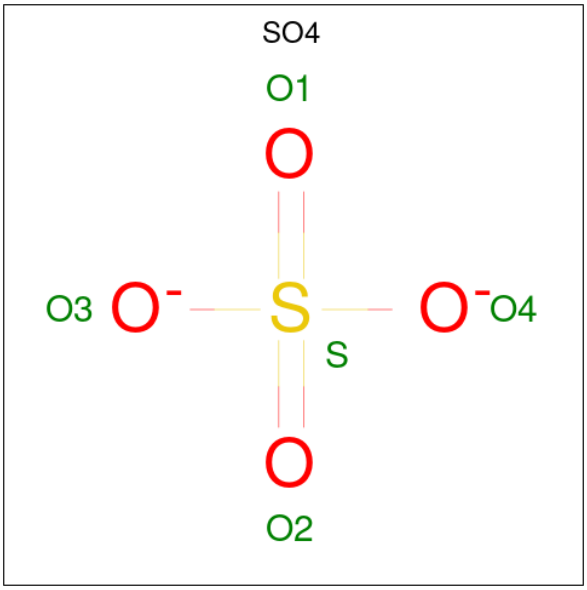
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	H	1	Total C O 7 4 3	0	0

- Molecule 4 is SULFATE ION (three-letter code: SO4) (formula: O_4S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	A	1	Total O S 5 4 1	0	0
4	B	1	Total O S 5 4 1	0	0
4	C	1	Total O S 5 4 1	0	0
4	C	1	Total O S 5 4 1	0	0
4	C	1	Total O S 5 4 1	0	0
4	E	1	Total O S 5 4 1	0	0
4	E	1	Total O S 5 4 1	0	0
4	E	1	Total O S 5 4 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	F	1	Total O S 5 4 1	0	0
4	F	1	Total O S 5 4 1	0	0
4	G	1	Total O S 5 4 1	0	0
4	H	1	Total O S 5 4 1	0	0
4	H	1	Total O S 5 4 1	0	0

- Molecule 5 is water.

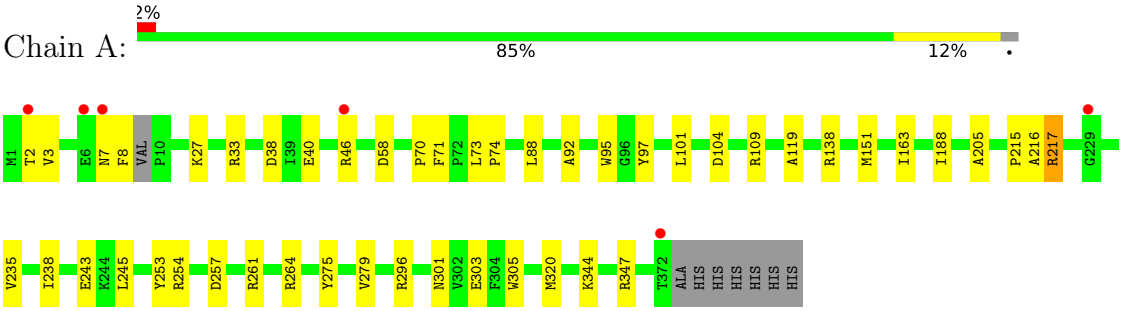
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	86	Total O 86 86	0	0
5	B	59	Total O 59 59	0	0
5	C	106	Total O 106 106	0	0
5	D	93	Total O 93 93	0	0
5	E	54	Total O 54 54	0	0
5	F	47	Total O 47 47	0	0
5	G	46	Total O 46 46	0	0
5	H	90	Total O 90 90	0	0

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.

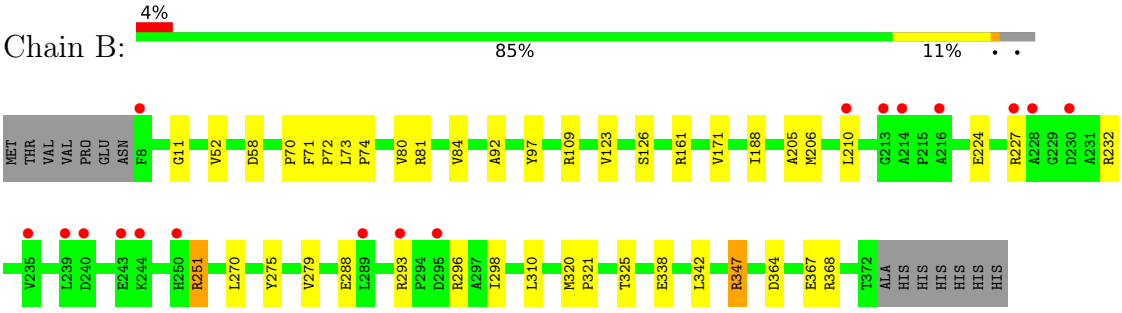
- Molecule 1: citrate synthase

Chain A:



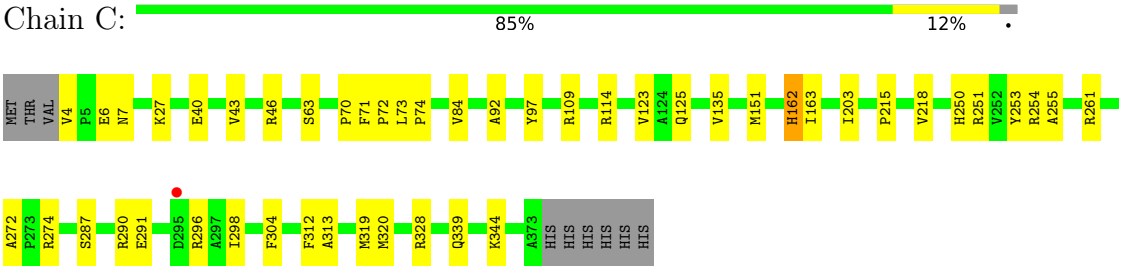
- Molecule 1: citrate synthase

Chain B:



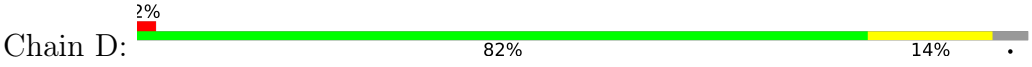
- Molecule 1: citrate synthase

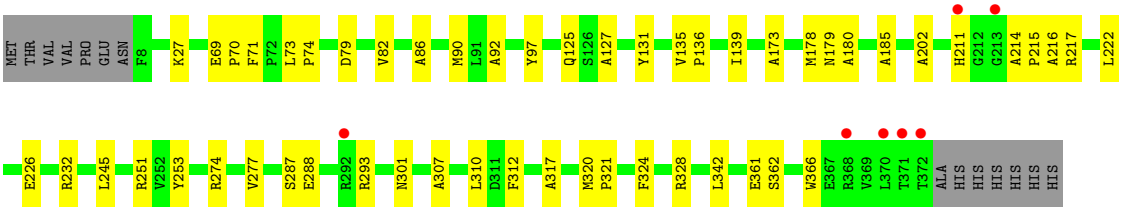
Chain C:



- Molecule 1: citrate synthase

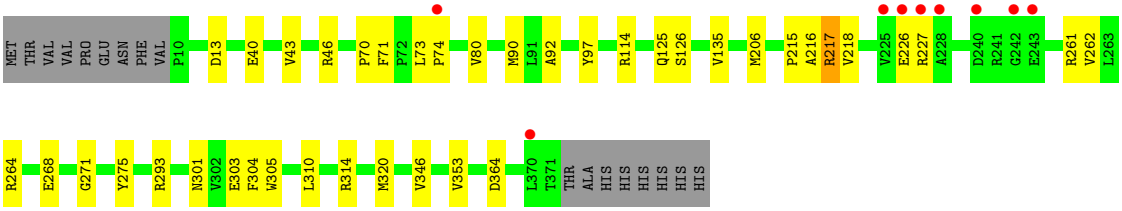
Chain D:





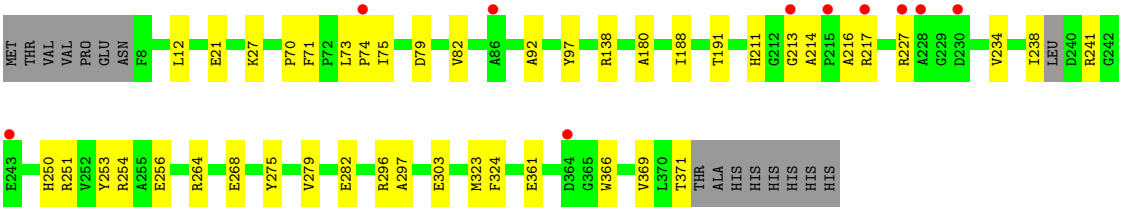
• Molecule 1: citrate synthase

Chain E:



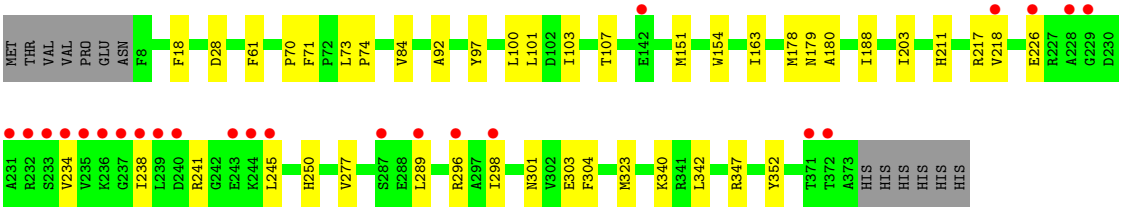
• Molecule 1: citrate synthase

Chain F:



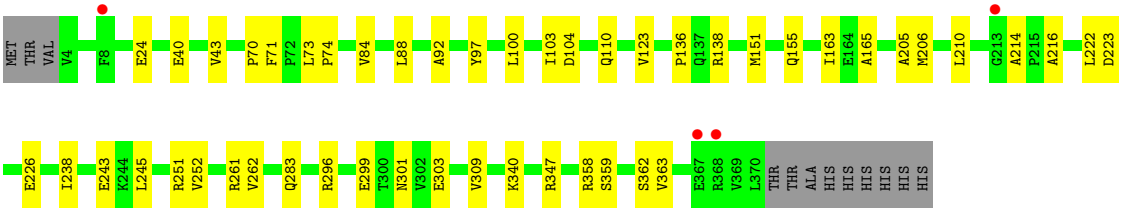
• Molecule 1: citrate synthase

Chain G:



• Molecule 1: citrate synthase

Chain H:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	99.93Å 129.68Å 270.15Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	47.53 – 2.65 47.53 – 2.65	Depositor EDS
% Data completeness (in resolution range)	97.4 (47.53-2.65) 92.9 (47.53-2.65)	Depositor EDS
R_{merge}	0.25	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.42 (at 2.65Å)	Xtriage
Refinement program	PHENIX 1.19.2_4158:000	Depositor
R, R_{free}	0.190 , 0.244 0.189 , 0.243	Depositor DCC
R_{free} test set	2000 reflections (2.00%)	wwPDB-VP
Wilson B-factor (Å^2)	42.2	Xtriage
Anisotropy	0.452	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 40.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	23209	wwPDB-VP
Average B, all atoms (Å^2)	46.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.88% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: SO4, PEG, EDO

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	0.24	0/2873	0.49	0/3912
1	B	0.24	0/2827	0.49	0/3851
1	C	0.25	0/2864	0.49	0/3903
1	D	0.24	0/2827	0.48	0/3851
1	E	0.24	0/2801	0.49	0/3814
1	F	0.24	0/2811	0.49	0/3827
1	G	0.24	0/2832	0.49	0/3858
1	H	0.24	0/2845	0.48	0/3876
All	All	0.24	0/22680	0.49	0/30892

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2810	0	2782	32	0
1	B	2764	0	2735	30	0
1	C	2800	0	2768	31	0
1	D	2764	0	2735	35	0
1	E	2739	0	2711	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	2749	0	2716	32	0
1	G	2769	0	2740	26	0
1	H	2781	0	2749	36	0
2	A	40	0	60	6	0
2	B	20	0	30	6	0
2	C	56	0	84	6	0
2	D	64	0	96	6	0
2	E	44	0	66	6	0
2	F	16	0	24	0	0
2	G	20	0	30	3	0
2	H	40	0	60	6	0
3	A	7	0	10	0	0
3	B	7	0	10	2	0
3	C	14	0	20	4	0
3	D	35	0	50	6	0
3	E	7	0	10	1	0
3	H	7	0	10	1	0
4	A	15	0	0	0	0
4	B	5	0	0	0	0
4	C	15	0	0	0	0
4	E	15	0	0	0	0
4	F	10	0	0	0	0
4	G	5	0	0	0	0
4	H	10	0	0	0	0
5	A	86	0	0	2	0
5	B	59	0	0	0	0
5	C	106	0	0	1	0
5	D	93	0	0	1	0
5	E	54	0	0	2	0
5	F	47	0	0	3	0
5	G	46	0	0	0	0
5	H	90	0	0	3	0
All	All	23209	0	22496	229	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 (229) 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:F:323:MET:HE2	1:F:323:MET:HA	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:206:MET:HG2	1:B:325:THR:HG22	1.66	0.76
1:E:125:GLN:HG2	2:E:412:EDO:H12	1.69	0.75
1:F:256:GLU:OE2	1:F:264:ARG:NH2	2.22	0.72
1:H:100:LEU:HD22	1:H:340:LYS:HD2	1.69	0.72
1:B:232:ARG:NH2	1:B:288:GLU:OE2	2.23	0.72
1:G:226:GLU:HG2	1:G:277:VAL:HG21	1.73	0.71
1:H:40:GLU:OE2	1:H:261:ARG:NH1	2.24	0.70
1:E:90:MET:HE3	1:F:75:ILE:HD12	1.73	0.69
1:C:125:GLN:HG2	2:C:405:EDO:H12	1.74	0.69
1:A:188:ILE:HG12	1:B:205:ALA:HB2	1.74	0.69
1:G:101:LEU:HD11	1:H:210:LEU:HG	1.73	0.69
1:E:301:ASN:HA	3:E:401:PEG:H32	1.75	0.68
1:H:216:ALA:H	1:H:303:GLU:HB3	1.60	0.67
1:F:70:PRO:HB2	1:G:70:PRO:HB2	1.77	0.65
1:A:101:LEU:HD11	1:B:210:LEU:HB2	1.78	0.65
1:H:238:ILE:HG23	1:H:243:GLU:HG3	1.79	0.65
1:D:328:ARG:HH12	3:D:402:PEG:H42	1.62	0.64
1:A:301:ASN:HA	2:A:401:EDO:H11	1.81	0.63
1:F:79:ASP:HB3	1:F:82:VAL:HG22	1.80	0.62
1:G:154:TRP:HE1	2:G:403:EDO:H12	1.63	0.62
1:A:257:ASP:HB2	2:A:401:EDO:H22	1.81	0.61
1:G:238:ILE:HD13	1:G:241:ARG:HH21	1.66	0.59
1:D:274:ARG:HD3	2:D:403:EDO:H11	1.83	0.59
1:E:114:ARG:HH22	2:E:406:EDO:H22	1.66	0.59
1:B:310:LEU:HD13	1:B:320:MET:HG2	1.83	0.59
1:H:358:ARG:HH11	1:H:363:VAL:HG12	1.68	0.59
2:A:408:EDO:H22	1:D:69:GLU:HB2	1.85	0.58
1:C:43:VAL:HG12	2:C:409:EDO:H22	1.86	0.58
1:D:125:GLN:HG2	3:D:405:PEG:H22	1.85	0.58
1:F:264:ARG:NH1	1:F:282:GLU:OE2	2.37	0.57
1:A:70:PRO:HB2	1:D:70:PRO:HB2	1.86	0.56
1:F:217:ARG:NH1	5:F:603:HOH:O	2.39	0.56
1:G:18:PHE:HB3	2:G:404:EDO:H12	1.87	0.56
1:H:100:LEU:HD23	1:H:103:ILE:HD11	1.86	0.56
1:D:179:ASN:HB3	3:D:402:PEG:H21	1.87	0.56
1:A:347:ARG:NH2	2:B:401:EDO:O2	2.37	0.55
1:D:226:GLU:HG2	1:D:277:VAL:HG11	1.88	0.55
1:D:312:PHE:HB2	2:D:403:EDO:H21	1.88	0.55
1:H:110:GLN:NE2	5:H:503:HOH:O	2.39	0.55
1:A:27:LYS:NZ	5:A:502:HOH:O	2.32	0.55
1:E:271:GLY:HA2	2:E:411:EDO:H11	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:46:ARG:HB2	1:F:371:THR:HG23	1.88	0.55
1:H:296:ARG:HA	1:H:296:ARG:NE	2.21	0.55
1:E:217:ARG:HA	1:E:217:ARG:NE	2.21	0.54
1:D:342:LEU:HD13	2:D:404:EDO:H21	1.89	0.54
1:H:296:ARG:NH2	5:H:506:HOH:O	2.41	0.54
1:A:254:ARG:HB3	2:A:411:EDO:H11	1.90	0.54
1:G:151:MET:HG3	1:G:163:ILE:HG12	1.89	0.54
1:E:43:VAL:HG11	1:E:262:VAL:HG13	1.90	0.54
1:E:70:PRO:HB2	1:H:70:PRO:HB2	1.90	0.54
1:F:138:ARG:NH1	5:F:602:HOH:O	2.37	0.54
1:G:342:LEU:HD22	2:G:404:EDO:H11	1.90	0.54
1:G:100:LEU:HD22	1:G:340:LYS:HD2	1.91	0.54
1:F:238:ILE:HD12	1:F:238:ILE:H	1.73	0.53
1:D:73:LEU:HD12	1:D:74:PRO:HD2	1.89	0.53
1:C:274:ARG:H	3:C:404:PEG:H31	1.72	0.53
1:B:73:LEU:HD12	1:B:74:PRO:HD2	1.90	0.53
1:C:92:ALA:HA	1:C:97:TYR:HB2	1.89	0.53
1:D:92:ALA:HA	1:D:97:TYR:HB2	1.90	0.53
1:G:289:LEU:HB3	1:G:298:ILE:HD13	1.91	0.53
1:B:84:VAL:HG11	1:B:123:VAL:HG23	1.90	0.53
1:A:88:LEU:HD11	1:A:119:ALA:HB2	1.91	0.52
1:H:155:GLN:HG2	3:H:405:PEG:H31	1.91	0.52
1:E:135:VAL:H	2:E:412:EDO:H22	1.75	0.52
1:F:251:ARG:HD2	1:F:297:ALA:HB3	1.92	0.52
1:C:261:ARG:NH2	5:C:504:HOH:O	2.40	0.52
1:G:92:ALA:HA	1:G:97:TYR:HB2	1.91	0.51
1:B:81:ARG:HB2	2:B:403:EDO:H22	1.93	0.51
1:E:310:LEU:HD13	1:E:320:MET:HG2	1.93	0.51
1:F:27:LYS:HA	1:F:253:TYR:CD2	2.46	0.50
1:B:92:ALA:HA	1:B:97:TYR:HB2	1.93	0.50
1:B:367:GLU:HG2	1:B:368:ARG:HG2	1.92	0.50
1:D:301:ASN:ND2	5:D:513:HOH:O	2.44	0.50
1:E:218:VAL:HG11	1:E:304:PHE:HD1	1.76	0.50
1:F:180:ALA:HB3	1:F:211:HIS:HD2	1.75	0.50
1:C:114:ARG:HG3	2:C:401:EDO:H22	1.93	0.50
1:H:165:ALA:HB1	1:H:309:VAL:HG13	1.93	0.50
1:C:84:VAL:HG12	1:C:203:ILE:HD13	1.93	0.49
1:D:180:ALA:HB3	1:D:211:HIS:HD2	1.77	0.49
1:D:136:PRO:HD2	1:D:139:ILE:HD12	1.94	0.49
1:E:268:GLU:HB2	1:E:275:TYR:CZ	2.47	0.49
1:F:275:TYR:O	1:F:279:VAL:HG23	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:73:LEU:HD12	1:A:74:PRO:HD2	1.94	0.49
1:F:73:LEU:HD12	1:F:74:PRO:HD2	1.94	0.49
1:F:238:ILE:HG13	1:F:241:ARG:NH2	2.28	0.49
1:A:217:ARG:CZ	1:A:217:ARG:HA	2.43	0.49
1:D:131:TYR:HB2	2:D:416:EDO:H12	1.95	0.49
1:B:80:VAL:HG13	1:B:126:SER:HB3	1.93	0.48
1:C:251:ARG:HD2	1:C:254:ARG:O	2.12	0.48
1:F:296:ARG:NH2	5:F:605:HOH:O	2.46	0.48
1:F:303:GLU:OE1	1:F:303:GLU:N	2.44	0.48
1:G:234:VAL:O	1:G:238:ILE:HG12	2.13	0.48
1:A:215:PRO:HG2	1:A:320:MET:HB3	1.96	0.48
1:H:73:LEU:HD12	1:H:74:PRO:HD2	1.95	0.48
1:F:92:ALA:HA	1:F:97:TYR:HB2	1.94	0.48
1:D:79:ASP:HB3	1:D:82:VAL:HB	1.95	0.48
1:F:366:TRP:O	1:F:369:VAL:HG12	2.14	0.48
1:G:73:LEU:HD12	1:G:74:PRO:HD2	1.96	0.48
1:C:250:HIS:HE1	1:C:296:ARG:HE	1.61	0.48
1:C:290:ARG:NH1	1:C:298:ILE:O	2.47	0.48
1:F:251:ARG:HH21	1:F:254:ARG:HA	1.78	0.48
1:E:73:LEU:HD12	1:E:74:PRO:HD2	1.96	0.47
1:G:218:VAL:HG11	1:G:304:PHE:HD1	1.78	0.47
1:D:185:ALA:HB2	1:D:202:ALA:HB2	1.95	0.47
1:C:272:ALA:HB1	3:C:404:PEG:H32	1.96	0.47
1:A:205:ALA:HB2	1:B:188:ILE:HG12	1.95	0.47
1:A:275:TYR:O	1:A:279:VAL:HG23	2.15	0.47
1:A:238:ILE:HG23	1:A:243:GLU:HB2	1.96	0.47
1:A:347:ARG:HH21	2:B:401:EDO:HO2	1.62	0.47
1:D:222:LEU:O	1:D:226:GLU:HG3	2.14	0.47
1:D:232:ARG:NH1	1:D:288:GLU:OE1	2.45	0.47
1:E:227:ARG:NH2	5:E:509:HOH:O	2.47	0.47
1:B:293:ARG:HH21	1:B:298:ILE:HD11	1.79	0.47
1:C:84:VAL:HG21	1:C:123:VAL:HG23	1.96	0.47
1:H:104:ASP:HB3	2:H:411:EDO:H22	1.97	0.47
1:C:73:LEU:HD12	1:C:74:PRO:HD2	1.97	0.47
1:D:127:ALA:HA	3:D:408:PEG:H11	1.96	0.47
1:C:312:PHE:HB2	3:C:404:PEG:H42	1.98	0.46
1:D:251:ARG:HH21	3:D:413:PEG:H11	1.80	0.46
1:E:80:VAL:HG13	1:E:126:SER:HB3	1.96	0.46
2:C:415:EDO:H21	1:D:178:MET:H	1.80	0.46
2:E:406:EDO:H11	1:H:136:PRO:HA	1.95	0.46
1:H:251:ARG:HE	2:H:408:EDO:H21	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:40:GLU:OE1	1:C:261:ARG:NH1	2.48	0.46
1:H:359:SER:O	1:H:362:SER:OG	2.32	0.46
1:E:92:ALA:HA	1:E:97:TYR:HB2	1.97	0.46
1:B:70:PRO:HB2	1:C:70:PRO:HB2	1.97	0.46
1:C:215:PRO:HG2	1:C:320:MET:HB3	1.98	0.46
1:G:352:TYR:CG	1:H:24:GLU:HB2	2.51	0.46
1:H:301:ASN:HA	2:H:410:EDO:H21	1.98	0.46
1:C:218:VAL:HG11	1:C:304:PHE:HD1	1.81	0.46
1:E:264:ARG:HG3	1:E:305:TRP:CZ2	2.51	0.46
1:E:215:PRO:HA	1:E:303:GLU:HB3	1.97	0.46
1:A:344:LYS:HD3	1:B:11:GLY:HA3	1.98	0.45
1:H:151:MET:HG3	1:H:163:ILE:HG12	1.98	0.45
1:B:161:ARG:NH1	1:B:270:LEU:O	2.50	0.45
1:B:338:GLU:HG2	3:B:402:PEG:H21	1.98	0.45
1:H:43:VAL:HG11	1:H:262:VAL:HG13	1.99	0.45
1:F:213:GLY:HA3	1:F:324:PHE:CE2	2.52	0.45
1:D:321:PRO:HG2	2:D:411:EDO:H21	1.98	0.45
1:F:250:HIS:HB2	1:F:296:ARG:NH2	2.32	0.45
1:D:274:ARG:HB2	2:D:403:EDO:H22	1.99	0.44
1:F:268:GLU:HB2	1:F:275:TYR:CZ	2.52	0.44
1:G:180:ALA:HB3	1:G:211:HIS:CD2	2.52	0.44
1:A:92:ALA:HA	1:A:97:TYR:HB2	1.98	0.44
1:B:321:PRO:HB2	2:B:403:EDO:H21	1.99	0.44
1:D:86:ALA:O	1:D:90:MET:HG3	2.18	0.44
1:E:216:ALA:H	1:E:303:GLU:HB3	1.82	0.44
1:A:151:MET:HG3	1:A:163:ILE:HG12	2.00	0.44
1:E:217:ARG:HA	1:E:217:ARG:CZ	2.47	0.44
1:F:238:ILE:HG13	1:F:241:ARG:HH22	1.82	0.44
1:H:299:GLU:HB2	2:H:410:EDO:H12	2.00	0.44
1:C:287:SER:O	1:C:291:GLU:HB2	2.17	0.44
1:B:347:ARG:O	1:B:347:ARG:HG3	2.17	0.43
1:D:216:ALA:HB1	1:D:317:ALA:HB1	2.00	0.43
1:G:103:ILE:HB	1:G:107:THR:HB	1.99	0.43
1:B:275:TYR:O	1:B:279:VAL:HG23	2.18	0.43
1:C:6:GLU:N	1:C:6:GLU:OE1	2.51	0.43
1:D:135:VAL:H	3:D:405:PEG:H11	1.81	0.43
1:D:215:PRO:HB2	1:D:307:ALA:HB2	2.00	0.43
1:A:40:GLU:OE1	1:A:261:ARG:NH1	2.51	0.43
1:B:251:ARG:HH11	2:B:404:EDO:H21	1.82	0.43
1:A:235:VAL:HG13	1:A:245:LEU:HD11	1.99	0.43
1:A:296:ARG:NH1	5:A:514:HOH:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:43:VAL:HG21	1:E:262:VAL:HG11	2.00	0.43
1:H:252:VAL:HB	2:H:410:EDO:H22	2.01	0.43
1:C:151:MET:HG3	1:C:163:ILE:HG12	2.00	0.43
1:C:344:LYS:HA	1:C:344:LYS:HD2	1.87	0.43
1:F:214:ALA:O	1:F:216:ALA:N	2.50	0.43
1:B:224:GLU:OE2	1:B:227:ARG:NH2	2.46	0.43
1:B:342:LEU:HD13	3:B:402:PEG:H22	2.00	0.43
1:H:222:LEU:O	1:H:226:GLU:HG3	2.19	0.43
1:G:178:MET:O	1:H:347:ARG:HD3	2.19	0.43
1:H:84:VAL:HG21	1:H:123:VAL:HG22	2.00	0.43
1:F:361:GLU:HG3	1:F:366:TRP:NE1	2.33	0.42
1:B:72:PRO:HD2	1:C:72:PRO:HD2	2.00	0.42
1:D:27:LYS:HA	1:D:253:TYR:CD2	2.55	0.42
1:D:310:LEU:HD13	1:D:320:MET:HG2	2.01	0.42
1:A:33:ARG:HG2	1:A:38:ASP:HA	2.01	0.42
1:E:70:PRO:HD2	2:E:410:EDO:H22	2.01	0.42
1:E:346:VAL:HG13	1:F:12:LEU:HD12	2.00	0.42
1:A:217:ARG:HA	1:A:217:ARG:NE	2.34	0.42
1:F:188:ILE:O	1:F:191:THR:OG1	2.34	0.42
1:G:245:LEU:HD12	1:G:245:LEU:HA	1.76	0.42
1:B:321:PRO:O	1:B:325:THR:HG23	2.20	0.42
1:C:135:VAL:H	2:C:405:EDO:H22	1.84	0.42
1:F:234:VAL:O	1:F:238:ILE:HD12	2.19	0.42
1:H:283:GLN:HE21	1:H:283:GLN:HB2	1.67	0.42
1:B:293:ARG:NH2	1:B:296:ARG:HH11	2.17	0.42
1:D:245:LEU:HD23	1:D:245:LEU:HA	1.91	0.42
1:E:314:ARG:NH2	5:E:512:HOH:O	2.52	0.42
1:G:61:PHE:CD2	1:H:363:VAL:HG21	2.55	0.42
1:A:138:ARG:HG2	2:A:409:EDO:H22	2.01	0.42
1:A:264:ARG:HG3	1:A:305:TRP:CZ2	2.55	0.42
1:G:179:ASN:HA	1:H:347:ARG:HD3	2.02	0.42
1:C:63:SER:O	1:C:109:ARG:NH2	2.47	0.42
1:C:339:GLN:O	2:C:402:EDO:O2	2.38	0.41
1:H:283:GLN:NE2	2:H:406:EDO:O1	2.50	0.41
1:C:328:ARG:HA	1:C:328:ARG:HD3	1.76	0.41
1:H:92:ALA:HA	1:H:97:TYR:HB2	2.01	0.41
1:A:27:LYS:HA	1:A:253:TYR:CD2	2.55	0.41
1:B:58:ASP:OD2	1:B:109:ARG:NH2	2.52	0.41
1:E:353:VAL:HG23	1:F:21:GLU:HG2	2.03	0.41
1:G:347:ARG:NH2	5:H:515:HOH:O	2.53	0.41
1:B:227:ARG:HB3	1:F:227:ARG:HE	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:361:GLU:HA	1:D:366:TRP:CD1	2.56	0.41
1:B:52:VAL:HG21	1:B:171:VAL:HG22	2.03	0.41
1:H:214:ALA:O	1:H:303:GLU:HG2	2.21	0.41
1:A:104:ASP:OD2	1:A:104:ASP:N	2.46	0.41
1:A:216:ALA:H	1:A:303:GLU:HB3	1.86	0.41
1:G:188:ILE:HG12	1:H:205:ALA:HB2	2.02	0.41
1:D:173:ALA:HB1	1:D:324:PHE:CE1	2.56	0.41
1:G:301:ASN:HB3	1:G:303:GLU:OE1	2.21	0.41
1:A:95:TRP:HE1	2:A:402:EDO:H12	1.86	0.41
1:A:303:GLU:N	1:A:303:GLU:OE2	2.54	0.41
1:D:362:SER:O	1:D:362:SER:OG	2.37	0.41
1:C:162:HIS:CD2	1:C:313:ALA:HA	2.56	0.40
1:C:274:ARG:HB2	3:C:404:PEG:C4	2.51	0.40
1:G:250:HIS:HB3	1:G:296:ARG:NH2	2.36	0.40
1:A:58:ASP:OD2	1:A:109:ARG:NH2	2.54	0.40
1:G:84:VAL:HG13	1:G:203:ILE:HD13	2.01	0.40
1:H:243:GLU:H	1:H:243:GLU:HG2	1.72	0.40
1:C:27:LYS:HA	1:C:253:TYR:CD2	2.57	0.40
1:C:46:ARG:HE	1:C:46:ARG:HB2	1.70	0.40
1:D:214:ALA:O	1:D:217:ARG:NE	2.37	0.40
1:H:88:LEU:HD23	1:H:88:LEU:HA	1.97	0.40
1:E:40:GLU:OE1	1:E:261:ARG:NH1	2.54	0.40
1:B:251:ARG:HD3	2:B:404:EDO:H21	2.04	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	367/379 (97%)	359 (98%)	7 (2%)	1 (0%)	41 56
1	B	363/379 (96%)	349 (96%)	14 (4%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	C	368/379 (97%)	354 (96%)	12 (3%)	2 (0%)	29 43
1	D	363/379 (96%)	353 (97%)	10 (3%)	0	100 100
1	E	360/379 (95%)	350 (97%)	10 (3%)	0	100 100
1	F	359/379 (95%)	350 (98%)	9 (2%)	0	100 100
1	G	364/379 (96%)	354 (97%)	10 (3%)	0	100 100
1	H	365/379 (96%)	354 (97%)	11 (3%)	0	100 100
All	All	2909/3032 (96%)	2823 (97%)	83 (3%)	3 (0%)	51 69

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	7	ASN
1	C	255	ALA
1	A	2	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	284/291 (98%)	278 (98%)	6 (2%)	53 72
1	B	278/291 (96%)	274 (99%)	4 (1%)	67 81
1	C	282/291 (97%)	278 (99%)	4 (1%)	67 81
1	D	278/291 (96%)	275 (99%)	3 (1%)	73 85
1	E	275/291 (94%)	268 (98%)	7 (2%)	47 66
1	F	276/291 (95%)	275 (100%)	1 (0%)	91 95
1	G	278/291 (96%)	274 (99%)	4 (1%)	67 81
1	H	280/291 (96%)	275 (98%)	5 (2%)	59 75
All	All	2231/2328 (96%)	2197 (98%)	34 (2%)	65 80

All (34) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	VAL
1	A	7	ASN
1	A	8	PHE
1	A	46	ARG
1	A	71	PHE
1	A	217	ARG
1	B	71	PHE
1	B	251	ARG
1	B	347	ARG
1	B	364	ASP
1	C	4	VAL
1	C	71	PHE
1	C	162	HIS
1	C	319	MET
1	D	71	PHE
1	D	287	SER
1	D	293	ARG
1	E	13	ASP
1	E	71	PHE
1	E	206	MET
1	E	217	ARG
1	E	226	GLU
1	E	293	ARG
1	E	364	ASP
1	F	71	PHE
1	G	28	ASP
1	G	71	PHE
1	G	217	ARG
1	G	323	MET
1	H	71	PHE
1	H	138	ARG
1	H	206	MET
1	H	223	ASP
1	H	245	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	283	GLN
1	D	301	ASN
1	E	45	GLN
1	G	137	GLN
1	H	283	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

101 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	EDO	C	401	-	3,3,3	0.46	0	2,2,2	0.31	0
2	EDO	C	409	-	3,3,3	0.46	0	2,2,2	0.32	0
2	EDO	H	409	-	3,3,3	0.45	0	2,2,2	0.34	0
4	SO4	C	419	-	4,4,4	0.14	0	6,6,6	0.04	0
4	SO4	F	406	-	4,4,4	0.14	0	6,6,6	0.05	0
4	SO4	G	406	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	H	406	-	3,3,3	0.47	0	2,2,2	0.29	0
2	EDO	D	406	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	E	412	-	3,3,3	0.45	0	2,2,2	0.31	0
2	EDO	D	418	-	3,3,3	0.45	0	2,2,2	0.32	0
2	EDO	E	411	-	3,3,3	0.46	0	2,2,2	0.31	0
2	EDO	C	408	-	3,3,3	0.46	0	2,2,2	0.36	0
4	SO4	H	413	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	C	405	-	3,3,3	0.45	0	2,2,2	0.28	0
2	EDO	D	410	-	3,3,3	0.46	0	2,2,2	0.29	0
3	PEG	D	408	-	6,6,6	0.48	0	5,5,5	0.25	0
2	EDO	D	409	-	3,3,3	0.47	0	2,2,2	0.31	0
2	EDO	E	408	-	3,3,3	0.46	0	2,2,2	0.27	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	EDO	D	415	-	3,3,3	0.46	0	2,2,2	0.32	0
2	EDO	C	412	-	3,3,3	0.47	0	2,2,2	0.32	0
2	EDO	F	404	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	H	410	-	3,3,3	0.46	0	2,2,2	0.26	0
3	PEG	D	402	-	6,6,6	0.48	0	5,5,5	0.32	0
3	PEG	D	413	-	6,6,6	0.48	0	5,5,5	0.22	0
2	EDO	C	415	-	3,3,3	0.45	0	2,2,2	0.34	0
4	SO4	A	413	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	E	409	-	3,3,3	0.47	0	2,2,2	0.26	0
2	EDO	A	409	-	3,3,3	0.47	0	2,2,2	0.32	0
3	PEG	H	405	-	6,6,6	0.48	0	5,5,5	0.23	0
4	SO4	E	415	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	D	404	-	3,3,3	0.49	0	2,2,2	0.19	0
2	EDO	C	403	-	3,3,3	0.45	0	2,2,2	0.34	0
2	EDO	H	401	-	3,3,3	0.46	0	2,2,2	0.33	0
4	SO4	C	418	-	4,4,4	0.15	0	6,6,6	0.05	0
2	EDO	F	403	-	3,3,3	0.46	0	2,2,2	0.35	0
2	EDO	G	402	-	3,3,3	0.45	0	2,2,2	0.35	0
2	EDO	E	406	-	3,3,3	0.47	0	2,2,2	0.28	0
2	EDO	D	417	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	B	404	-	3,3,3	0.46	0	2,2,2	0.32	0
2	EDO	E	405	-	3,3,3	0.47	0	2,2,2	0.28	0
2	EDO	B	406	-	3,3,3	0.47	0	2,2,2	0.26	0
2	EDO	E	402	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	G	401	-	3,3,3	0.45	0	2,2,2	0.32	0
2	EDO	H	402	-	3,3,3	0.46	0	2,2,2	0.30	0
2	EDO	A	405	-	3,3,3	0.46	0	2,2,2	0.32	0
2	EDO	A	402	-	3,3,3	0.46	0	2,2,2	0.27	0
3	PEG	D	407	-	6,6,6	0.49	0	5,5,5	0.27	0
2	EDO	E	403	-	3,3,3	0.46	0	2,2,2	0.29	0
4	SO4	E	413	-	4,4,4	0.13	0	6,6,6	0.05	0
2	EDO	G	405	-	3,3,3	0.46	0	2,2,2	0.29	0
2	EDO	F	401	-	3,3,3	0.46	0	2,2,2	0.24	0
2	EDO	G	404	-	3,3,3	0.46	0	2,2,2	0.32	0
2	EDO	C	413	-	3,3,3	0.46	0	2,2,2	0.34	0
2	EDO	C	411	-	3,3,3	0.47	0	2,2,2	0.27	0
4	SO4	A	414	-	4,4,4	0.14	0	6,6,6	0.05	0
4	SO4	B	407	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	C	406	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	D	420	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	H	404	-	3,3,3	0.47	0	2,2,2	0.30	0
3	PEG	C	404	-	6,6,6	0.49	0	5,5,5	0.29	0
3	PEG	B	402	-	6,6,6	0.49	0	5,5,5	0.22	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	EDO	H	403	-	3,3,3	0.46	0	2,2,2	0.35	0
2	EDO	E	410	-	3,3,3	0.47	0	2,2,2	0.32	0
2	EDO	C	414	-	3,3,3	0.46	0	2,2,2	0.32	0
2	EDO	C	410	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	B	403	-	3,3,3	0.46	0	2,2,2	0.29	0
3	PEG	E	401	-	6,6,6	0.49	0	5,5,5	0.24	0
2	EDO	A	410	-	3,3,3	0.47	0	2,2,2	0.26	0
2	EDO	C	416	-	3,3,3	0.46	0	2,2,2	0.34	0
2	EDO	D	403	-	3,3,3	0.43	0	2,2,2	0.35	0
2	EDO	B	405	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	H	408	-	3,3,3	0.47	0	2,2,2	0.30	0
2	EDO	D	401	-	3,3,3	0.47	0	2,2,2	0.27	0
4	SO4	F	405	-	4,4,4	0.13	0	6,6,6	0.08	0
2	EDO	A	404	-	3,3,3	0.45	0	2,2,2	0.33	0
4	SO4	C	417	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	G	403	-	3,3,3	0.45	0	2,2,2	0.32	0
2	EDO	H	407	-	3,3,3	0.47	0	2,2,2	0.30	0
3	PEG	C	407	-	6,6,6	0.48	0	5,5,5	0.24	0
2	EDO	B	401	-	3,3,3	0.47	0	2,2,2	0.31	0
2	EDO	C	402	-	3,3,3	0.45	0	2,2,2	0.34	0
2	EDO	D	412	-	3,3,3	0.46	0	2,2,2	0.34	0
2	EDO	D	421	-	3,3,3	0.46	0	2,2,2	0.29	0
2	EDO	D	411	-	3,3,3	0.46	0	2,2,2	0.34	0
4	SO4	H	412	-	4,4,4	0.14	0	6,6,6	0.05	0
2	EDO	H	411	-	3,3,3	0.46	0	2,2,2	0.33	0
3	PEG	D	405	-	6,6,6	0.49	0	5,5,5	0.22	0
2	EDO	A	411	-	3,3,3	0.45	0	2,2,2	0.37	0
2	EDO	D	419	-	3,3,3	0.45	0	2,2,2	0.33	0
2	EDO	E	407	-	3,3,3	0.46	0	2,2,2	0.28	0
2	EDO	A	401	-	3,3,3	0.49	0	2,2,2	0.13	0
2	EDO	E	404	-	3,3,3	0.48	0	2,2,2	0.27	0
4	SO4	E	414	-	4,4,4	0.15	0	6,6,6	0.05	0
2	EDO	D	414	-	3,3,3	0.46	0	2,2,2	0.31	0
3	PEG	A	406	-	6,6,6	0.49	0	5,5,5	0.25	0
2	EDO	A	407	-	3,3,3	0.45	0	2,2,2	0.34	0
4	SO4	A	412	-	4,4,4	0.15	0	6,6,6	0.04	0
2	EDO	D	416	-	3,3,3	0.47	0	2,2,2	0.28	0
2	EDO	F	402	-	3,3,3	0.46	0	2,2,2	0.33	0
2	EDO	A	403	-	3,3,3	0.47	0	2,2,2	0.28	0
2	EDO	A	408	-	3,3,3	0.48	0	2,2,2	0.23	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
2	EDO	C	401	-	-	0/1/1/1	-
2	EDO	C	409	-	-	0/1/1/1	-
2	EDO	H	409	-	-	0/1/1/1	-
2	EDO	H	406	-	-	0/1/1/1	-
2	EDO	D	406	-	-	0/1/1/1	-
2	EDO	E	412	-	-	0/1/1/1	-
2	EDO	D	418	-	-	0/1/1/1	-
2	EDO	E	411	-	-	0/1/1/1	-
2	EDO	C	408	-	-	0/1/1/1	-
2	EDO	C	405	-	-	0/1/1/1	-
2	EDO	D	410	-	-	0/1/1/1	-
3	PEG	D	408	-	-	1/4/4/4	-
2	EDO	D	409	-	-	0/1/1/1	-
2	EDO	E	408	-	-	0/1/1/1	-
2	EDO	D	415	-	-	0/1/1/1	-
2	EDO	C	412	-	-	0/1/1/1	-
2	EDO	F	404	-	-	0/1/1/1	-
2	EDO	H	410	-	-	1/1/1/1	-
3	PEG	D	402	-	-	2/4/4/4	-
3	PEG	D	413	-	-	1/4/4/4	-
2	EDO	C	415	-	-	0/1/1/1	-
2	EDO	E	409	-	-	0/1/1/1	-
2	EDO	A	409	-	-	0/1/1/1	-
3	PEG	H	405	-	-	0/4/4/4	-
2	EDO	D	404	-	-	0/1/1/1	-
2	EDO	C	403	-	-	0/1/1/1	-
2	EDO	H	401	-	-	0/1/1/1	-
2	EDO	F	403	-	-	0/1/1/1	-
2	EDO	G	402	-	-	0/1/1/1	-
2	EDO	E	406	-	-	0/1/1/1	-
2	EDO	D	417	-	-	0/1/1/1	-
2	EDO	B	404	-	-	0/1/1/1	-
2	EDO	E	405	-	-	0/1/1/1	-
2	EDO	B	406	-	-	0/1/1/1	-
2	EDO	E	402	-	-	0/1/1/1	-
2	EDO	G	401	-	-	0/1/1/1	-
2	EDO	H	402	-	-	0/1/1/1	-
2	EDO	A	405	-	-	0/1/1/1	-
2	EDO	A	402	-	-	0/1/1/1	-
3	PEG	D	407	-	-	2/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	EDO	E	403	-	-	0/1/1/1	-
2	EDO	G	405	-	-	0/1/1/1	-
2	EDO	F	401	-	-	0/1/1/1	-
2	EDO	G	404	-	-	0/1/1/1	-
2	EDO	C	413	-	-	0/1/1/1	-
2	EDO	C	411	-	-	0/1/1/1	-
2	EDO	C	406	-	-	0/1/1/1	-
2	EDO	D	420	-	-	0/1/1/1	-
2	EDO	H	404	-	-	0/1/1/1	-
3	PEG	C	404	-	-	1/4/4/4	-
3	PEG	B	402	-	-	2/4/4/4	-
2	EDO	H	403	-	-	0/1/1/1	-
2	EDO	E	410	-	-	0/1/1/1	-
2	EDO	C	414	-	-	0/1/1/1	-
2	EDO	C	410	-	-	0/1/1/1	-
2	EDO	B	403	-	-	0/1/1/1	-
3	PEG	E	401	-	-	3/4/4/4	-
2	EDO	A	410	-	-	0/1/1/1	-
2	EDO	C	416	-	-	0/1/1/1	-
2	EDO	D	403	-	-	0/1/1/1	-
2	EDO	B	405	-	-	0/1/1/1	-
2	EDO	H	408	-	-	0/1/1/1	-
2	EDO	D	401	-	-	0/1/1/1	-
2	EDO	A	404	-	-	0/1/1/1	-
2	EDO	G	403	-	-	1/1/1/1	-
2	EDO	H	407	-	-	0/1/1/1	-
3	PEG	C	407	-	-	2/4/4/4	-
2	EDO	B	401	-	-	0/1/1/1	-
2	EDO	C	402	-	-	0/1/1/1	-
2	EDO	D	412	-	-	0/1/1/1	-
2	EDO	D	421	-	-	0/1/1/1	-
2	EDO	D	411	-	-	0/1/1/1	-
2	EDO	H	411	-	-	0/1/1/1	-
3	PEG	D	405	-	-	1/4/4/4	-
2	EDO	A	411	-	-	0/1/1/1	-
2	EDO	D	419	-	-	0/1/1/1	-
2	EDO	E	407	-	-	0/1/1/1	-
2	EDO	A	401	-	-	0/1/1/1	-
2	EDO	E	404	-	-	0/1/1/1	-
2	EDO	D	414	-	-	0/1/1/1	-
3	PEG	A	406	-	-	4/4/4/4	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	EDO	A	407	-	-	0/1/1/1	-
2	EDO	D	416	-	-	0/1/1/1	-
2	EDO	F	402	-	-	0/1/1/1	-
2	EDO	A	403	-	-	0/1/1/1	-
2	EDO	A	408	-	-	1/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	E	401	PEG	O2-C3-C4-O4
3	A	406	PEG	O1-C1-C2-O2
3	B	402	PEG	O2-C3-C4-O4
3	D	408	PEG	O1-C1-C2-O2
3	D	402	PEG	C1-C2-O2-C3
3	C	404	PEG	C4-C3-O2-C2
3	D	413	PEG	C1-C2-O2-C3
3	E	401	PEG	C4-C3-O2-C2
3	C	407	PEG	C4-C3-O2-C2
3	D	402	PEG	O2-C3-C4-O4
2	A	408	EDO	O1-C1-C2-O2
2	H	410	EDO	O1-C1-C2-O2
3	B	402	PEG	C1-C2-O2-C3
3	D	405	PEG	C4-C3-O2-C2
3	D	407	PEG	C1-C2-O2-C3
3	A	406	PEG	C1-C2-O2-C3
3	A	406	PEG	C4-C3-O2-C2
3	D	407	PEG	O1-C1-C2-O2
3	E	401	PEG	O1-C1-C2-O2
3	C	407	PEG	O2-C3-C4-O4
2	G	403	EDO	O1-C1-C2-O2
3	A	406	PEG	O2-C3-C4-O4

There are no ring outliers.

35 monomers are involved in 53 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	401	EDO	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	409	EDO	1	0
2	H	406	EDO	1	0
2	E	412	EDO	2	0
2	E	411	EDO	1	0
2	C	405	EDO	2	0
3	D	408	PEG	1	0
2	H	410	EDO	3	0
3	D	402	PEG	2	0
3	D	413	PEG	1	0
2	C	415	EDO	1	0
2	A	409	EDO	1	0
3	H	405	PEG	1	0
2	D	404	EDO	1	0
2	E	406	EDO	2	0
2	B	404	EDO	2	0
2	A	402	EDO	1	0
2	G	404	EDO	2	0
3	C	404	PEG	4	0
3	B	402	PEG	2	0
2	E	410	EDO	1	0
2	B	403	EDO	2	0
3	E	401	PEG	1	0
2	D	403	EDO	3	0
2	H	408	EDO	1	0
2	G	403	EDO	1	0
2	B	401	EDO	2	0
2	C	402	EDO	1	0
2	D	411	EDO	1	0
2	H	411	EDO	1	0
3	D	405	PEG	2	0
2	A	411	EDO	1	0
2	A	401	EDO	2	0
2	D	416	EDO	1	0
2	A	408	EDO	1	0

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	371/379 (97%)	-0.09	6 (1%)	72	69	28, 40, 67, 116	0
1	B	365/379 (96%)	0.16	17 (4%)	31	28	28, 44, 80, 94	0
1	C	370/379 (97%)	-0.34	1 (0%)	94	95	24, 36, 58, 99	0
1	D	365/379 (96%)	-0.27	7 (1%)	66	63	23, 36, 63, 87	0
1	E	362/379 (95%)	0.01	9 (2%)	57	53	31, 47, 74, 115	0
1	F	363/379 (95%)	0.16	10 (2%)	53	49	35, 49, 84, 110	0
1	G	366/379 (96%)	0.22	24 (6%)	18	15	34, 49, 76, 92	0
1	H	367/379 (96%)	-0.21	4 (1%)	80	79	28, 40, 66, 90	0
All	All	2929/3032 (96%)	-0.05	78 (2%)	54	50	23, 43, 74, 116	0

All (78) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	227	ARG	4.8
1	G	239	LEU	4.5
1	E	242	GLY	4.5
1	G	238	ILE	4.4
1	B	213	GLY	4.4
1	E	225	VAL	4.3
1	E	227	ARG	4.1
1	D	372	THR	4.0
1	E	370	LEU	3.9
1	G	236	LYS	3.8
1	D	370	LEU	3.8
1	B	214	ALA	3.8
1	F	213	GLY	3.7
1	D	211	HIS	3.7
1	G	244	LYS	3.6
1	B	230	ASP	3.6

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Mol	Chain	Res	Type	RSRZ
1	B	239	LEU	3.4
1	A	372	THR	3.4
1	B	216	ALA	3.3
1	E	228	ALA	3.3
1	G	218	VAL	3.2
1	G	228	ALA	3.1
1	G	298	ILE	3.1
1	F	243	GLU	3.1
1	B	243	GLU	3.0
1	A	2	THR	3.0
1	G	240	ASP	3.0
1	F	217	ARG	2.9
1	B	8	PHE	2.9
1	G	243	GLU	2.9
1	G	235	VAL	2.9
1	E	243	GLU	2.8
1	B	235	VAL	2.8
1	F	74	PRO	2.8
1	E	74	PRO	2.7
1	A	7	ASN	2.7
1	B	250	HIS	2.7
1	G	234	VAL	2.7
1	B	295	ASP	2.7
1	G	245	LEU	2.6
1	H	367	GLU	2.6
1	D	368	ARG	2.6
1	F	215	PRO	2.6
1	F	86	ALA	2.6
1	D	213	GLY	2.6
1	G	231	ALA	2.6
1	A	6	GLU	2.5
1	E	226	GLU	2.5
1	C	295	ASP	2.5
1	G	229	GLY	2.4
1	G	237	GLY	2.4
1	D	371	THR	2.4
1	G	289	LEU	2.4
1	B	244	LYS	2.4
1	G	226	GLU	2.4
1	G	372	THR	2.4
1	B	227	ARG	2.3
1	H	368	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
1	F	230	ASP	2.2
1	B	210	LEU	2.2
1	A	46	ARG	2.2
1	B	228	ALA	2.2
1	G	232	ARG	2.2
1	G	371	THR	2.1
1	A	229	GLY	2.1
1	B	240	ASP	2.1
1	D	292	ARG	2.1
1	G	142	GLU	2.1
1	G	233	SER	2.1
1	H	8	PHE	2.1
1	E	240	ASP	2.1
1	B	289	LEU	2.1
1	H	213	GLY	2.0
1	B	293	ARG	2.0
1	F	364	ASP	2.0
1	G	287	SER	2.0
1	F	228	ALA	2.0
1	G	296	ARG	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 monosaccharides 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
2	EDO	F	401	4/4	0.67	0.40	52,58,63,64	0
2	EDO	C	401	4/4	0.69	0.41	51,54,57,69	0
2	EDO	E	411	4/4	0.72	0.62	62,67,68,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	PEG	C	407	7/7	0.72	0.33	50,55,63,64	0
2	EDO	G	403	4/4	0.74	0.39	55,59,64,76	0
2	EDO	A	404	4/4	0.75	0.34	55,62,70,76	0
2	EDO	G	401	4/4	0.76	0.42	55,60,61,62	0
2	EDO	A	405	4/4	0.76	0.24	60,62,63,67	0
2	EDO	E	406	4/4	0.76	0.35	49,50,52,61	0
2	EDO	C	411	4/4	0.77	0.51	55,55,58,65	0
2	EDO	H	406	4/4	0.77	0.39	52,54,55,71	0
2	EDO	D	421	4/4	0.77	0.22	52,56,64,72	0
2	EDO	D	416	4/4	0.78	0.31	41,42,59,61	0
2	EDO	G	405	4/4	0.78	0.21	58,59,64,68	0
3	PEG	D	405	7/7	0.78	0.38	33,49,57,59	0
2	EDO	A	410	4/4	0.79	0.50	43,45,55,72	0
3	PEG	C	404	7/7	0.79	0.53	39,47,58,68	0
2	EDO	A	407	4/4	0.80	0.17	70,72,75,80	0
2	EDO	E	409	4/4	0.81	0.30	48,55,56,60	0
3	PEG	D	413	7/7	0.81	0.28	50,52,59,62	0
2	EDO	H	402	4/4	0.82	0.39	51,54,56,57	0
2	EDO	E	405	4/4	0.82	0.66	52,53,57,61	0
2	EDO	C	414	4/4	0.83	0.28	49,54,54,57	0
2	EDO	E	402	4/4	0.83	0.26	59,59,63,64	0
2	EDO	D	404	4/4	0.83	0.32	39,40,51,57	0
2	EDO	B	406	4/4	0.83	0.20	46,55,56,57	0
2	EDO	F	403	4/4	0.84	0.22	62,67,68,71	0
2	EDO	A	408	4/4	0.84	0.55	52,55,57,59	0
2	EDO	C	412	4/4	0.84	0.19	48,48,56,62	0
3	PEG	D	408	7/7	0.84	0.40	48,55,62,65	0
2	EDO	H	408	4/4	0.84	0.31	40,49,50,53	0
2	EDO	A	401	4/4	0.85	0.33	35,39,40,42	0
2	EDO	A	411	4/4	0.85	0.21	51,55,56,58	0
2	EDO	D	409	4/4	0.85	0.35	51,52,53,53	0
2	EDO	H	407	4/4	0.85	0.31	54,56,63,66	0
2	EDO	E	403	4/4	0.85	0.29	57,60,68,73	0
2	EDO	E	410	4/4	0.86	0.44	52,52,54,58	0
2	EDO	D	401	4/4	0.86	0.39	43,48,52,58	0
2	EDO	A	403	4/4	0.86	0.36	43,56,57,71	0
3	PEG	B	402	7/7	0.86	0.36	51,56,60,62	0
2	EDO	A	409	4/4	0.86	0.56	55,59,59,60	0
2	EDO	C	403	4/4	0.86	0.39	52,53,55,57	0
2	EDO	D	417	4/4	0.86	0.61	51,52,54,56	0
2	EDO	E	407	4/4	0.86	0.24	47,51,53,54	0
2	EDO	D	418	4/4	0.86	0.42	36,46,50,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	EDO	D	406	4/4	0.87	0.29	40,45,45,50	0
2	EDO	D	411	4/4	0.87	0.33	47,52,53,57	0
2	EDO	D	415	4/4	0.87	0.48	49,53,56,58	0
2	EDO	E	408	4/4	0.87	0.36	43,47,49,50	0
2	EDO	E	404	4/4	0.87	0.39	52,53,56,60	0
2	EDO	G	402	4/4	0.87	0.18	57,60,60,60	0
2	EDO	B	403	4/4	0.88	0.33	42,46,51,57	0
2	EDO	H	409	4/4	0.88	0.41	58,59,60,68	0
3	PEG	A	406	7/7	0.88	0.22	47,56,62,63	0
3	PEG	E	401	7/7	0.88	0.56	44,51,64,65	0
4	SO4	F	406	5/5	0.88	0.25	87,92,106,118	0
3	PEG	D	407	7/7	0.89	0.32	50,51,60,68	0
2	EDO	D	410	4/4	0.89	0.62	47,51,52,52	0
2	EDO	C	416	4/4	0.89	0.12	54,55,56,58	0
2	EDO	H	411	4/4	0.89	0.26	56,59,59,61	0
2	EDO	D	414	4/4	0.89	0.20	53,53,62,73	0
2	EDO	H	410	4/4	0.90	0.43	47,49,56,58	0
2	EDO	C	406	4/4	0.90	0.21	49,50,52,54	0
2	EDO	H	403	4/4	0.90	0.19	45,51,56,58	0
3	PEG	H	405	7/7	0.90	0.16	46,50,53,58	0
4	SO4	C	418	5/5	0.90	0.17	75,81,99,104	0
4	SO4	C	419	5/5	0.90	0.20	96,100,115,132	0
2	EDO	E	412	4/4	0.90	0.52	40,44,51,60	0
2	EDO	A	402	4/4	0.91	0.45	39,41,47,47	0
2	EDO	F	404	4/4	0.91	0.10	54,59,66,68	0
4	SO4	E	415	5/5	0.91	0.18	82,85,100,107	0
2	EDO	B	405	4/4	0.91	0.13	52,55,67,70	0
4	SO4	H	413	5/5	0.91	0.37	67,76,103,106	0
2	EDO	H	401	4/4	0.92	0.40	57,58,59,64	0
2	EDO	D	420	4/4	0.92	0.14	46,47,50,52	0
2	EDO	C	405	4/4	0.92	0.37	37,45,47,51	0
2	EDO	D	403	4/4	0.92	0.44	37,38,42,44	0
2	EDO	C	413	4/4	0.92	0.10	52,54,55,62	0
2	EDO	D	419	4/4	0.92	0.16	43,45,47,53	0
2	EDO	F	402	4/4	0.93	0.29	51,59,62,66	0
2	EDO	G	404	4/4	0.93	0.35	54,58,62,69	0
4	SO4	B	407	5/5	0.93	0.22	74,77,83,84	0
2	EDO	C	402	4/4	0.93	0.50	39,40,52,57	0
2	EDO	B	404	4/4	0.93	0.10	55,57,58,66	0
4	SO4	E	414	5/5	0.93	0.16	69,75,85,95	0
2	EDO	C	409	4/4	0.93	0.55	46,47,49,63	0
2	EDO	C	410	4/4	0.93	0.39	54,55,60,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	SO4	G	406	5/5	0.93	0.19	63,72,86,89	0
2	EDO	H	404	4/4	0.93	0.19	49,51,57,57	0
2	EDO	D	412	4/4	0.94	0.51	39,45,54,56	0
3	PEG	D	402	7/7	0.94	0.16	36,40,51,54	0
4	SO4	A	413	5/5	0.95	0.20	58,74,78,79	0
4	SO4	A	414	5/5	0.95	0.14	73,81,101,104	0
4	SO4	F	405	5/5	0.95	0.16	51,66,87,87	0
2	EDO	C	408	4/4	0.95	0.38	52,55,56,64	0
2	EDO	C	415	4/4	0.95	0.16	32,43,47,58	0
4	SO4	H	412	5/5	0.95	0.14	44,64,73,75	0
2	EDO	B	401	4/4	0.95	0.25	34,35,43,52	0
4	SO4	E	413	5/5	0.97	0.20	50,59,67,67	0
4	SO4	C	417	5/5	0.97	0.23	51,53,75,79	0
4	SO4	A	412	5/5	0.98	0.14	50,54,58,61	0

6.5 Other polymers (i)

There are no such residues in this entry.