



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 19, 2016 – 08:57 PM GMT

PDB ID : 4Z3W
Title : Active site complex BamBC of Benzoyl Coenzyme A reductase in complex with 1,5 Dienoyl-CoA
Authors : Weinert, T.; Kung, J.; Weidenweber, S.; Huwiler, S.; Boll, M.; Ermler, U.
Deposited on : 2015-04-01
Resolution : 2.21 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.7.1 (RC1), CSD as537be (2016)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026982
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20026982

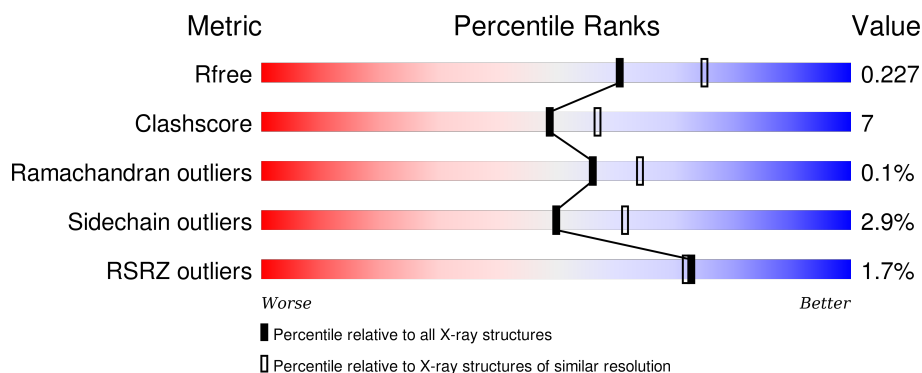
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.21 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}	91344	3774 (2.20-2.20)
Clashscore	102246	4477 (2.20-2.20)
Ramachandran outliers	100387	4404 (2.20-2.20)
Sidechain outliers	100360	4405 (2.20-2.20)
RSRZ outliers	91569	3781 (2.20-2.20)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	653	
1	B	653	
1	C	653	
1	D	653	
2	E	179	

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Mol	Chain	Length	Quality of chain
2	F	179	
2	G	179	
2	H	179	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	SF4	F	1002	-	-	-	X
3	SF4	G	1001	-	-	-	X
3	SF4	G	1002	-	-	-	X
3	SF4	H	1001	-	-	-	X
7	UNL	C	705	-	-	-	X

2 Entry composition

There are 9 unique types of molecules in this entry. The entry contains 27094 atoms, of which 168 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.

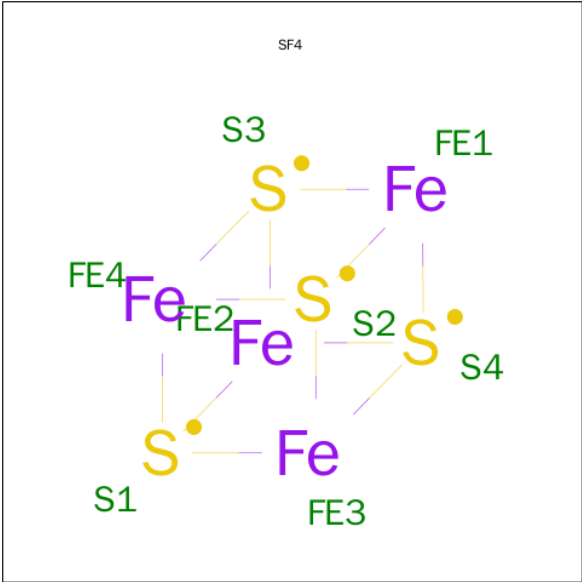
- Molecule 1 is a protein called Benzoyl-CoA reductase, putative.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	652	Total	C	N	O	S	0	0	0
			5185	3311	875	965	34			
1	B	652	Total	C	N	O	S	0	1	0
			5181	3309	877	961	34			
1	C	653	Total	C	N	O	S	0	1	0
			5195	3317	876	968	34			
1	D	652	Total	C	N	O	S	0	1	0
			5193	3316	878	965	34			

- Molecule 2 is a protein called Iron-sulfur cluster-binding oxidoreductase, putative benzoyl-CoA reductase electron transfer protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	E	163	Total	C	N	O	S	0	1	0
			1241	772	215	240	14			
2	F	170	Total	C	N	O	S	0	1	0
			1325	820	227	264	14			
2	G	169	Total	C	N	O	S	0	2	0
			1322	819	229	260	14			
2	H	161	Total	C	N	O	S	0	0	0
			1221	758	213	236	14			

- Molecule 3 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



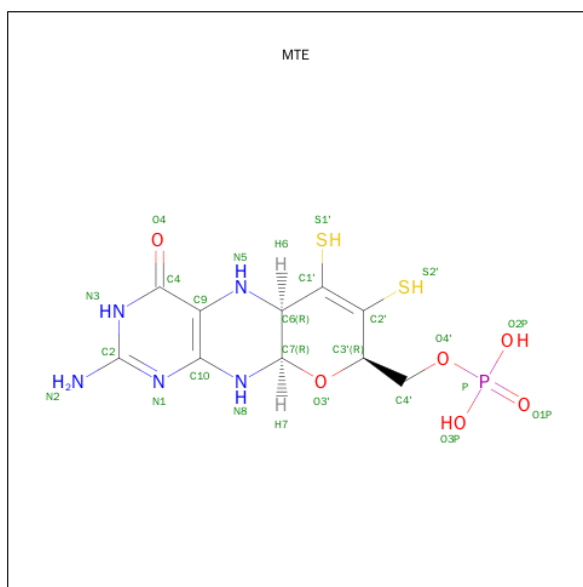
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total	Fe	S	0	0
			8	4	4		
3	B	1	Total	Fe	S	0	0
			8	4	4		
3	C	1	Total	Fe	S	0	0
			8	4	4		
3	D	1	Total	Fe	S	0	0
			8	4	4		
3	E	1	Total	Fe	S	0	0
			8	4	4		
3	E	1	Total	Fe	S	0	0
			8	4	4		
3	E	1	Total	Fe	S	0	0
			8	4	4		
3	F	1	Total	Fe	S	0	0
			8	4	4		
3	F	1	Total	Fe	S	0	0
			8	4	4		
3	F	1	Total	Fe	S	0	0
			8	4	4		
3	G	1	Total	Fe	S	0	0
			8	4	4		
3	G	1	Total	Fe	S	0	0
			8	4	4		
3	G	1	Total	Fe	S	0	0
			8	4	4		
3	H	1	Total	Fe	S	0	0
			8	4	4		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	H	1	Total	Fe	S	0	0
			8	4	4		
3	H	1	Total	Fe	S	0	0
			8	4	4		

- Molecule 4 is PHOSPHONIC ACIDMONO-(2-AMINO-5,6-DIMERCAPTO-4-OXO-3,7,8A, 9,10,10A-HEXAHYDRO-4H-8-OXA-1,3,9,10-TETRAAZA-ANTHRACEN-7-YLMETHYL) ESTER (three-letter code: MTE) (formula: $C_{10}H_{14}N_5O_6PS_2$).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
4	A	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	A	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	B	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	B	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	C	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	C	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	D	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		
4	D	1	Total	C	N	O	P	S	0	0
			24	10	5	6	1	2		

- Molecule 5 is TUNGSTEN ION (three-letter code: W) (formula: W).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total W 1 1	0	0
5	A	1	Total W 1 1	0	0
5	D	1	Total W 1 1	0	0
5	C	1	Total W 1 1	0	0

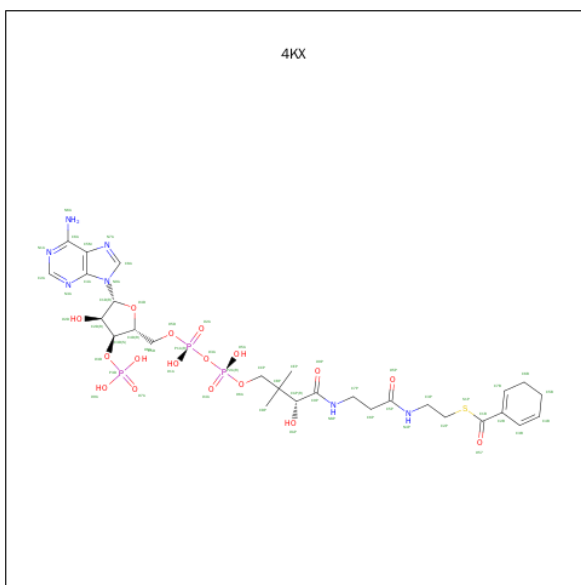
- Molecule 6 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

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

- Molecule 7 is UNKNOWN LIGAND (three-letter code: UNL) (formula:).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	B	1	Total X 1 1	0	0
7	A	1	Total X 1 1	0	0
7	D	1	Total X 1 1	0	0
7	C	1	Total X 1 1	0	0

- Molecule 8 is 1,5 Dienoyl-CoA (three-letter code: 4KX) (formula: C₂₈H₄₂N₇O₁₇P₃S).



Mol	Chain	Residues	Atoms							ZeroOcc	AltConf
8	A	1	Total	C	H	N	O	P	S	0	0
			98	28	42	7	17	3	1		
8	B	1	Total	C	H	N	O	P	S	0	0
			98	28	42	7	17	3	1		
8	C	1	Total	C	H	N	O	P	S	0	0
			98	28	42	7	17	3	1		
8	D	1	Total	C	H	N	O	P	S	0	0
			98	28	42	7	17	3	1		

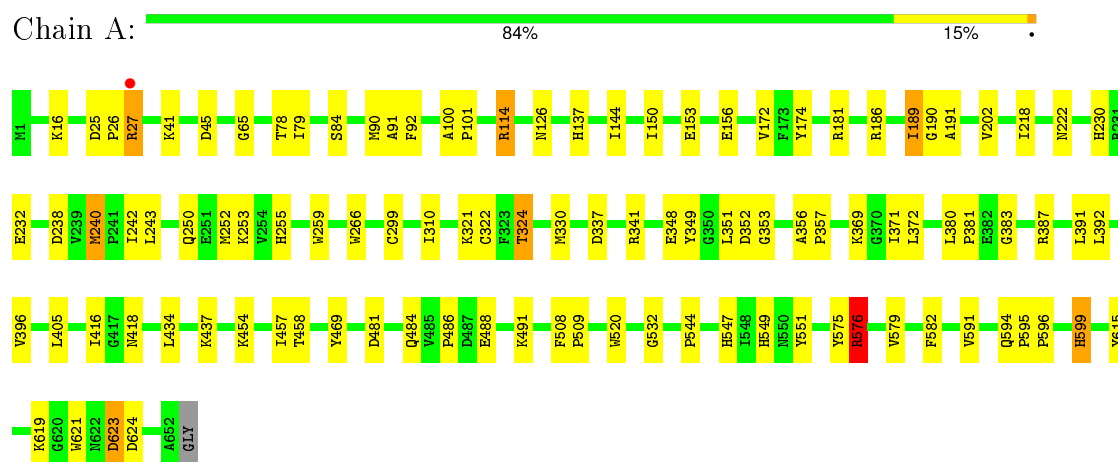
- Molecule 9 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
9	A	134	Total	O	0	0
			134	134		
9	B	40	Total	O	0	0
			40	40		
9	C	96	Total	O	0	0
			96	96		
9	D	96	Total	O	0	0
			96	96		
9	E	46	Total	O	0	0
			46	46		
9	F	39	Total	O	0	0
			39	39		
9	G	29	Total	O	0	0
			29	29		
9	H	27	Total	O	0	0
			27	27		

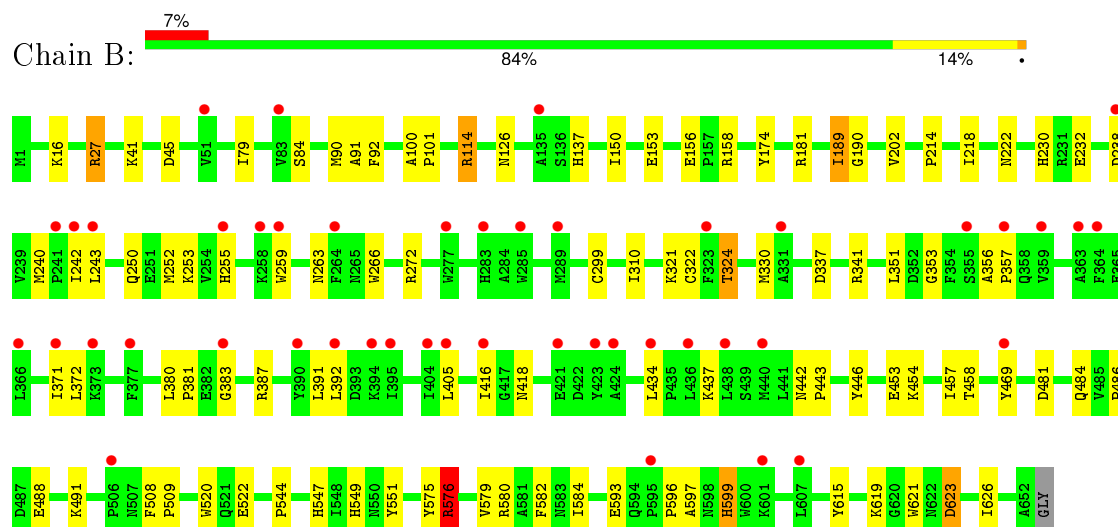
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

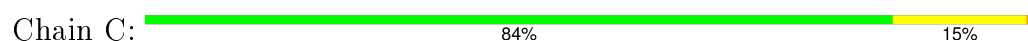
- Molecule 1: Benzoyl-CoA reductase, putative

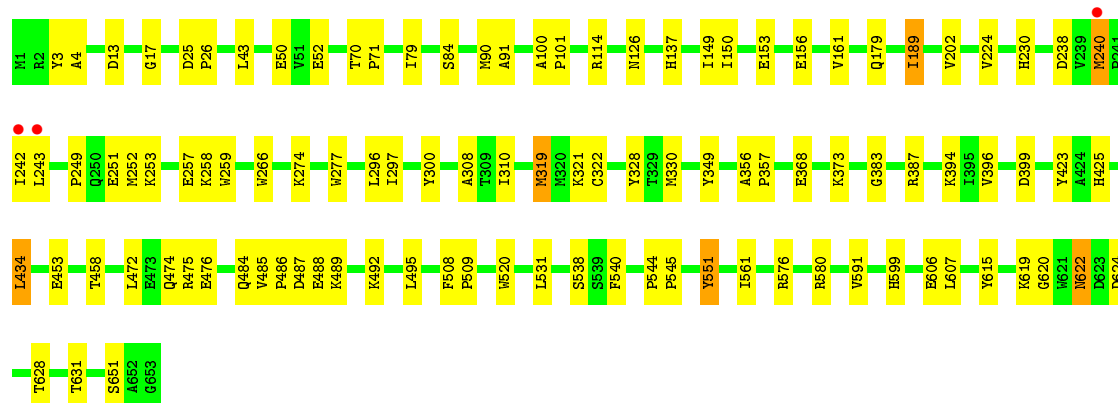


- Molecule 1: Benzoyl-CoA reductase, putative

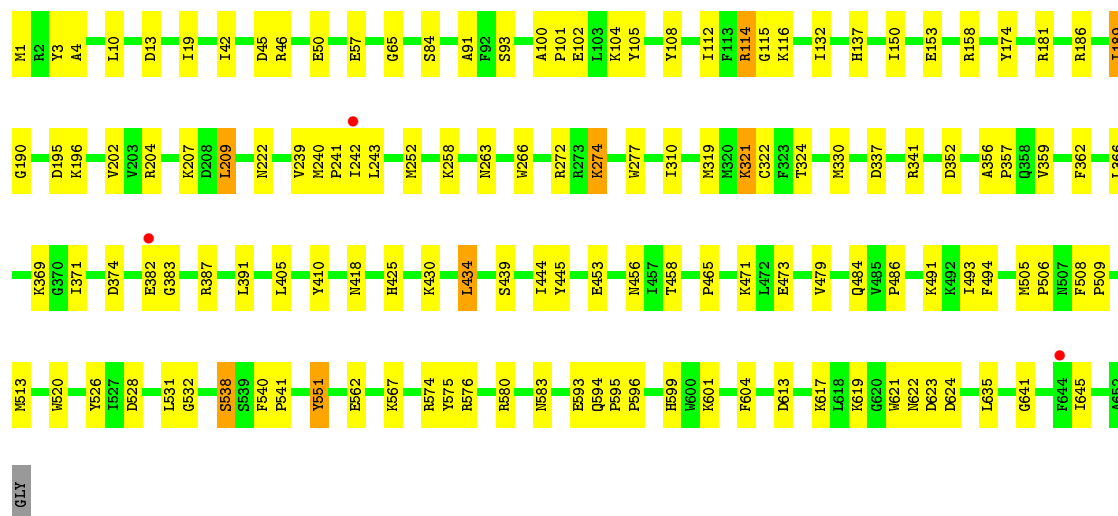
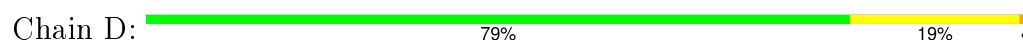


- Molecule 1: Benzoyl-CoA reductase, putative

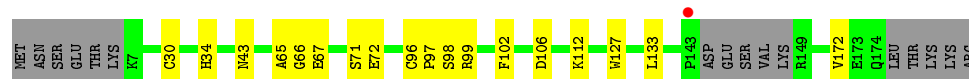
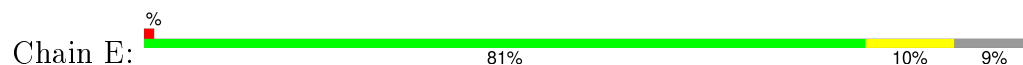




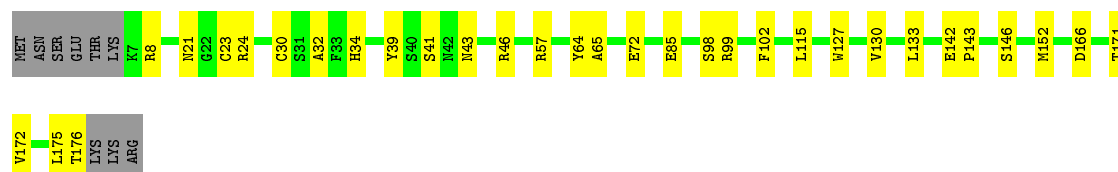
- Molecule 1: Benzoyl-CoA reductase, putative



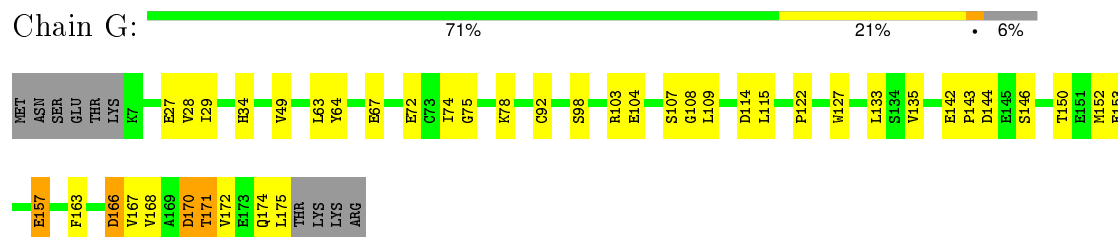
- Molecule 2: Iron-sulfur cluster-binding oxidoreductase, putative benzoyl-CoA reductase electron transfer protein



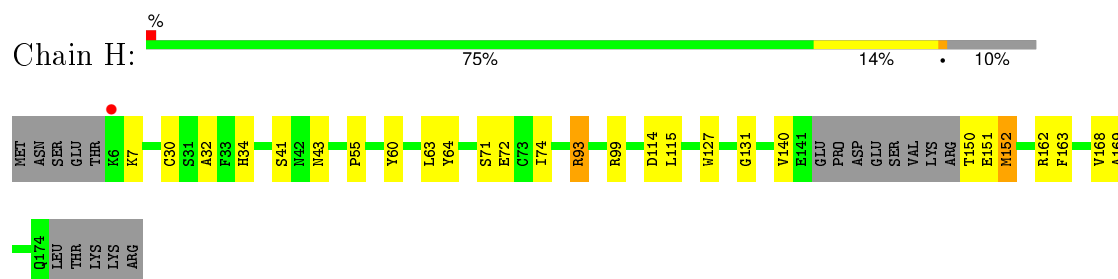
- Molecule 2: Iron-sulfur cluster-binding oxidoreductase, putative benzoyl-CoA reductase electron transfer protein



- Molecule 2: Iron-sulfur cluster-binding oxidoreductase, putative benzoyl-CoA reductase electron transfer protein



- Molecule 2: Iron-sulfur cluster-binding oxidoreductase, putative benzoyl-CoA reductase electron transfer protein



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	125.34Å 116.30Å 144.16Å 90.00° 110.48° 90.00°	Depositor
Resolution (Å)	82.63 – 2.21 88.13 – 2.21	Depositor EDS
% Data completeness (in resolution range)	92.6 (82.63-2.21) 92.6 (88.13-2.21)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.05 (at 2.20Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.9_1692)	Depositor
R, R_{free}	0.178 , 0.222 0.189 , 0.227	Depositor DCC
R_{free} test set	2340 reflections (1.32%)	DCC
Wilson B-factor (Å ²)	37.3	Xtriage
Anisotropy	0.231	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 42.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 180008 reflections	Xtriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	27094	wwPDB-VP
Average B, all atoms (Å ²)	58.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 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, SF4, W, UNL, 4KX, MTE

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	0.36	0/5311	0.52	3/7179 (0.0%)
1	B	0.30	0/5310	0.53	3/7179 (0.0%)
1	C	0.35	0/5324	0.50	0/7196
1	D	0.36	0/5322	0.53	0/7193
2	E	0.38	0/1266	0.54	0/1715
2	F	0.41	0/1351	0.55	0/1829
2	G	0.37	0/1351	0.52	0/1828
2	H	0.36	0/1242	0.56	0/1681
All	All	0.35	0/26477	0.53	6/35800 (0.0%)

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	576	ARG	NE-CZ-NH2	14.50	127.55	120.30
1	B	576	ARG	NE-CZ-NH1	-14.30	113.15	120.30
1	A	576	ARG	NE-CZ-NH1	10.84	125.72	120.30
1	A	576	ARG	NE-CZ-NH2	-10.82	114.89	120.30
1	B	576	ARG	CD-NE-CZ	7.31	133.84	123.60
1	A	576	ARG	CD-NE-CZ	5.51	131.32	123.60

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	5185	0	5119	72	0
1	B	5181	0	5113	70	0
1	C	5195	0	5128	67	0
1	D	5193	0	5132	88	0
2	E	1241	0	1180	11	0
2	F	1325	0	1276	24	0
2	G	1322	0	1278	38	0
2	H	1221	0	1158	25	0
3	A	8	0	0	0	0
3	B	8	0	0	1	0
3	C	8	0	0	0	0
3	D	8	0	0	1	0
3	E	24	0	0	1	0
3	F	24	0	0	1	0
3	G	24	0	0	1	0
3	H	24	0	0	1	0
4	A	48	0	20	2	0
4	B	48	0	20	2	0
4	C	48	0	20	2	0
4	D	48	0	20	4	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
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	A	1	0	0	0	0
7	B	1	0	0	0	0
7	C	1	0	0	0	0
7	D	1	0	0	0	0
8	A	56	42	38	1	0
8	B	56	42	38	1	0
8	C	56	42	38	2	0
8	D	56	42	38	2	0
9	A	134	0	0	1	0
9	B	40	0	0	4	0
9	C	96	0	0	1	0
9	D	96	0	0	5	0
9	E	46	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	F	39	0	0	3	0
9	G	29	0	0	1	0
9	H	27	0	0	2	0
All	All	26926	168	25616	375	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 7.

All (375) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:114:ARG:HG3	1:A:114:ARG:HH11	1.21	1.04
1:B:114:ARG:HG3	1:B:114:ARG:HH11	1.21	1.00
1:B:434:LEU:HD11	1:B:458:THR:HG23	1.54	0.89
1:A:434:LEU:HD11	1:A:458:THR:HG23	1.53	0.88
2:F:43:ASN:HB3	2:F:46:ARG:HG3	1.56	0.86
1:D:137:HIS:NE2	1:D:153:GLU:OE2	2.12	0.83
1:D:158[B]:ARG:NH1	9:D:801:HOH:O	2.11	0.82
2:G:72:GLU:HG2	2:G:98:SER:HB3	1.63	0.81
1:D:622:ASN:HB3	1:D:624:ASP:H	1.45	0.80
1:C:242:ILE:HG13	1:C:243:LEU:HG	1.65	0.79
2:H:150:THR:HG23	2:H:151:GLU:H	1.48	0.78
1:C:259:TRP:HE1	8:C:707:4KX:CDP	1.96	0.78
2:E:71:SER:HB2	2:F:146:SER:HB3	1.65	0.78
1:B:434:LEU:HD12	1:B:457:ILE:HG22	1.66	0.77
1:B:137:HIS:NE2	1:B:153:GLU:OE2	2.18	0.77
1:A:137:HIS:NE2	1:A:153:GLU:OE2	2.17	0.76
1:D:84:SER:HB2	1:D:91:ALA:HB2	1.67	0.76
1:D:240:MET:HE3	1:D:243:LEU:HD12	1.69	0.75
1:D:321:LYS:HE2	4:D:703:MTE:O2P	1.87	0.75
1:A:434:LEU:HD12	1:A:457:ILE:HG22	1.67	0.75
1:D:356:ALA:HB3	1:D:357:PRO:HD3	1.67	0.74
1:B:114:ARG:HG3	1:B:114:ARG:NH1	1.93	0.74
1:D:252:MET:CE	1:D:310:ILE:HD11	2.16	0.74
2:F:72:GLU:HG2	2:F:98:SER:HB3	1.68	0.74
1:A:84:SER:HB2	1:A:91:ALA:HB2	1.70	0.73
1:C:628:THR:OG1	1:C:631:THR:HG23	1.89	0.72
2:G:146:SER:HB3	2:H:71:SER:HB2	1.72	0.72
1:A:150:ILE:HG21	1:A:202:VAL:HG21	1.72	0.71
1:C:259:TRP:HE1	8:C:707:4KX:HDPB	1.54	0.71
1:C:252:MET:HE1	1:C:310:ILE:HD11	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:150:ILE:HG21	1:B:202:VAL:HG21	1.71	0.71
1:A:114:ARG:HG3	1:A:114:ARG:NH1	1.93	0.71
1:D:321:LYS:NZ	4:D:704:MTE:O4	2.22	0.70
1:B:84:SER:HB2	1:B:91:ALA:HB2	1.72	0.69
1:A:434:LEU:HD11	1:A:458:THR:CG2	2.22	0.69
1:B:434:LEU:HD12	1:B:457:ILE:CG2	2.22	0.69
1:B:434:LEU:HD11	1:B:458:THR:CG2	2.21	0.69
2:G:163:PHE:CE2	2:H:152:MET:HB2	2.27	0.69
1:A:434:LEU:HD12	1:A:457:ILE:CG2	2.23	0.68
1:D:493:ILE:HD13	1:D:513:MET:HB3	1.75	0.68
1:D:383:GLY:O	1:D:387:ARG:HG3	1.94	0.68
2:H:162:ARG:HD2	2:H:163:PHE:CE2	2.29	0.68
1:D:150:ILE:HG21	1:D:202:VAL:HG21	1.76	0.67
1:C:238:ASP:OD2	1:C:474:GLN:NE2	2.27	0.67
2:H:64:TYR:O	2:H:93:ARG:HD2	1.94	0.67
1:D:263:ASN:HD22	1:D:272:ARG:NH2	1.93	0.66
1:C:240:MET:HE1	1:C:243:LEU:HD12	1.77	0.66
1:C:434:LEU:CD1	1:C:458:THR:HG23	2.26	0.66
1:D:391:LEU:HD11	1:D:405:LEU:HD12	1.77	0.66
2:E:172:VAL:HG21	2:F:172:VAL:HG21	1.76	0.66
1:C:150:ILE:HG21	1:C:202:VAL:HG21	1.77	0.66
2:F:30:CYS:O	2:F:34:HIS:HD2	1.79	0.66
1:B:434:LEU:CD1	1:B:458:THR:HG23	2.25	0.65
1:D:240:MET:CE	1:D:243:LEU:HD12	2.25	0.65
1:C:487:ASP:OD1	1:C:489:LYS:HG3	1.96	0.65
1:B:383:GLY:O	1:B:387:ARG:HG3	1.96	0.65
1:D:181:ARG:HD2	1:D:181:ARG:O	1.96	0.65
2:G:166:ASP:OD1	2:G:167:VAL:HG23	1.95	0.65
1:B:453:GLU:OE2	1:B:576:ARG:NH1	2.30	0.65
2:E:66:GLY:O	2:E:112:LYS:HE2	1.97	0.65
1:C:252:MET:CE	1:C:310:ILE:HD11	2.27	0.64
1:D:263:ASN:HD22	1:D:272:ARG:HH21	1.45	0.64
1:A:434:LEU:CD1	1:A:458:THR:HG23	2.26	0.64
1:B:488:GLU:HG2	1:B:491:LYS:HD2	1.80	0.63
1:A:488:GLU:HG2	1:A:491:LYS:HD2	1.80	0.63
1:B:158[B]:ARG:NH2	9:B:802:HOH:O	2.25	0.62
1:C:84:SER:HB2	1:C:91:ALA:HB2	1.81	0.62
1:B:242:ILE:HG13	1:B:243:LEU:HG	1.81	0.62
1:D:445:TYR:CZ	8:D:707:4KX:H6PA	2.34	0.62
1:A:322:CYS:HB2	4:A:702:MTE:S2'	2.38	0.62
1:A:114:ARG:CG	1:A:114:ARG:HH11	2.04	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:189:ILE:HD13	1:C:189:ILE:H	1.64	0.62
1:C:252:MET:HE3	1:C:308:ALA:HB3	1.81	0.61
1:C:252:MET:CE	1:C:308:ALA:HB3	2.30	0.61
1:A:383:GLY:O	1:A:387:ARG:HG3	1.99	0.61
1:C:472:LEU:O	1:C:476:GLU:HG3	1.99	0.61
2:G:75:GLY:O	2:H:93:ARG:NH1	2.34	0.61
2:H:150:THR:HG23	2:H:151:GLU:N	2.14	0.60
1:A:242:ILE:HG13	1:A:243:LEU:HG	1.81	0.60
1:A:322:CYS:CB	4:A:702:MTE:S2'	2.88	0.60
1:D:222:ASN:HD21	2:H:127:TRP:HE1	1.48	0.60
1:B:114:ARG:CG	1:B:114:ARG:HH11	2.06	0.60
1:D:321:LYS:NZ	9:D:803:HOH:O	2.33	0.60
1:C:531:LEU:HD12	1:C:551:TYR:CE1	2.36	0.60
2:G:170:ASP:OD1	2:G:171:THR:OG1	2.14	0.60
1:C:253:LYS:HG2	1:C:296:LEU:CD1	2.32	0.60
2:E:72:GLU:HG2	2:E:98:SER:HB3	1.84	0.60
2:G:150:THR:OG1	2:G:153:GLU:HG2	2.02	0.60
1:B:337:ASP:O	1:B:341:ARG:HG3	2.02	0.59
1:C:100:ALA:HB3	1:C:101:PRO:HD3	1.84	0.59
1:A:615:TYR:CZ	1:A:619:LYS:HE3	2.38	0.59
1:D:272:ARG:HE	1:D:274:LYS:CD	2.16	0.59
1:B:615:TYR:CZ	1:B:619:LYS:HE3	2.36	0.59
4:C:703:MTE:H4'1	9:C:837:HOH:O	2.03	0.58
1:A:259:TRP:HE1	8:A:707:4KX:HDPB	1.69	0.58
2:F:65:ALA:HB2	2:F:102:PHE:CD1	2.38	0.58
1:A:27:ARG:HG3	1:A:27:ARG:NH1	2.18	0.58
1:D:322:CYS:HB2	4:D:703:MTE:S2'	2.43	0.58
1:B:27:ARG:HG3	1:B:27:ARG:NH1	2.17	0.58
1:B:27:ARG:HH11	1:B:27:ARG:CG	2.17	0.57
1:B:27:ARG:HH11	1:B:27:ARG:HG3	1.68	0.57
1:A:27:ARG:HG3	1:A:27:ARG:HH11	1.69	0.57
1:A:27:ARG:CG	1:A:27:ARG:HH11	2.16	0.57
1:D:114:ARG:HD3	9:D:835:HOH:O	2.04	0.56
2:F:23:CYS:O	2:F:24:ARG:HB2	2.05	0.56
1:D:382:GLU:CD	1:D:382:GLU:H	2.07	0.56
2:G:163:PHE:CD2	2:H:152:MET:HB2	2.41	0.56
1:B:522:GLU:OE1	1:B:576:ARG:HD2	2.06	0.56
1:A:623:ASP:N	1:A:623:ASP:OD1	2.38	0.56
1:A:252:MET:CE	1:A:310:ILE:HD11	2.36	0.56
1:A:337:ASP:O	1:A:341:ARG:HG3	2.06	0.55
1:D:528:ASP:OD2	1:D:538:SER:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:488:GLU:O	1:C:492:LYS:HD2	2.06	0.55
1:D:242:ILE:HG13	1:D:243:LEU:HG	1.88	0.55
2:G:172:VAL:HG11	2:H:169:ALA:HA	1.89	0.55
1:D:116:LYS:HE2	1:D:195:ASP:OD2	2.06	0.55
1:D:479:VAL:HB	1:D:491:LYS:HG2	1.89	0.55
2:F:46:ARG:HD3	9:F:1123:HOH:O	2.05	0.55
2:G:174:GLN:C	2:G:175:LEU:HD12	2.27	0.55
1:A:369:LYS:CG	1:A:371:ILE:HG13	2.37	0.55
1:C:258:LYS:HB2	1:C:277:TRP:CD1	2.41	0.55
1:B:189:ILE:HD12	1:B:190:GLY:H	1.73	0.54
1:C:356:ALA:HB3	1:C:357:PRO:HD3	1.89	0.54
1:D:112:ILE:N	1:D:112:ILE:HD12	2.22	0.54
1:B:252:MET:CE	1:B:310:ILE:HD11	2.38	0.54
2:G:107:SER:HA	2:H:151:GLU:HB3	1.89	0.54
1:B:41:LYS:NZ	1:B:45:ASP:OD2	2.39	0.54
1:D:266:TRP:CE3	1:D:330:MET:HA	2.43	0.54
2:H:131:GLY:HA2	9:H:1114:HOH:O	2.07	0.53
1:D:189:ILE:HG12	1:D:190:GLY:N	2.21	0.53
1:A:189:ILE:HD12	1:A:190:GLY:H	1.72	0.53
1:D:508:PHE:HA	1:D:509:PRO:C	2.27	0.53
1:A:369:LYS:HG2	1:A:371:ILE:HG13	1.90	0.53
1:C:434:LEU:HD11	1:C:458:THR:HG23	1.90	0.53
1:D:19:ILE:HD11	1:D:132:ILE:HG13	1.91	0.53
1:B:181:ARG:NH1	1:B:299:CYS:SG	2.81	0.53
2:G:115:LEU:HA	3:G:1002:SF4:S2	2.48	0.53
2:H:30:CYS:O	2:H:34:HIS:HD2	1.92	0.53
1:B:380:LEU:HD21	1:B:387:ARG:HH21	1.73	0.53
1:B:181:ARG:O	1:B:181:ARG:HG3	2.07	0.53
2:G:63:LEU:HD21	2:G:92:CYS:O	2.08	0.53
1:A:126:ASN:ND2	1:A:156:GLU:OE2	2.42	0.53
1:D:479:VAL:O	1:D:491:LYS:NZ	2.43	0.52
2:G:172:VAL:HG13	2:H:168:VAL:HG12	1.91	0.52
1:C:487:ASP:HB3	1:C:489:LYS:HD3	1.92	0.52
1:A:100:ALA:HB3	1:A:101:PRO:HD3	1.91	0.52
1:B:380:LEU:HG	1:B:381:PRO:O	2.10	0.52
1:D:471:LYS:HB3	1:D:473:GLU:OE1	2.09	0.52
1:D:181:ARG:NH2	3:D:702:SF4:S4	2.83	0.52
1:D:13:ASP:OD2	1:D:114:ARG:NH2	2.42	0.52
2:G:174:GLN:O	2:G:175:LEU:HD12	2.10	0.52
1:A:369:LYS:O	1:A:369:LYS:HG3	2.09	0.52
1:C:249:PRO:HG3	1:C:540:PHE:CZ	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:322:CYS:CB	4:D:703:MTE:S2'	2.98	0.51
1:D:410:TYR:CE2	1:D:430:LYS:HE3	2.45	0.51
1:B:100:ALA:HB3	1:B:101:PRO:HD3	1.93	0.51
1:A:380:LEU:HD21	1:A:387:ARG:HH21	1.76	0.51
2:G:67[B]:GLU:CD	2:G:67[B]:GLU:H	2.13	0.51
1:A:92:PHE:O	1:A:454:LYS:HE2	2.11	0.51
1:A:484:GLN:HG2	1:A:544:PRO:HD2	1.92	0.51
1:A:380:LEU:HG	1:A:381:PRO:O	2.11	0.51
1:C:383:GLY:O	1:C:387:ARG:HG3	2.10	0.51
1:C:253:LYS:HG2	1:C:296:LEU:HD11	1.92	0.51
2:F:115:LEU:HA	3:F:1002:SF4:S2	2.51	0.51
1:B:126:ASN:ND2	1:B:156:GLU:OE2	2.42	0.51
2:G:144:ASP:OD1	2:G:146:SER:HB2	2.10	0.50
1:B:371:ILE:HG23	1:B:418:ASN:HB2	1.93	0.50
1:D:252:MET:HE2	1:D:310:ILE:HD11	1.92	0.50
1:D:10:LEU:HG	1:D:108:TYR:CD1	2.45	0.50
1:A:181:ARG:NH1	1:A:299:CYS:SG	2.84	0.50
1:B:266:TRP:CE3	1:B:330:MET:HA	2.47	0.50
2:G:74:ILE:HD12	2:H:114:ASP:HA	1.93	0.50
1:A:181:ARG:O	1:A:181:ARG:HG3	2.12	0.49
1:B:484:GLN:HG2	1:B:544:PRO:HD2	1.94	0.49
1:B:623:ASP:OD1	1:B:623:ASP:N	2.41	0.49
1:D:445:TYR:CE2	8:D:707:4KX:H6PA	2.47	0.49
1:C:251:GLU:HG2	1:C:257:GLU:OE2	2.12	0.49
1:C:253:LYS:HG2	1:C:296:LEU:HD13	1.94	0.49
1:D:272:ARG:NE	1:D:274:LYS:HE2	2.27	0.49
2:F:21:ASN:HD22	2:F:130:VAL:HG11	1.77	0.49
1:A:371:ILE:HG23	1:A:418:ASN:HB2	1.94	0.49
1:B:322:CYS:HB2	4:B:702:MTE:S2'	2.52	0.49
1:B:619:LYS:HB3	1:B:621:TRP:CE2	2.48	0.49
1:B:250:GLN:OE1	1:B:253:LYS:HE3	2.13	0.49
1:A:79:ILE:N	1:A:79:ILE:HD12	2.27	0.49
1:A:222:ASN:HD21	2:E:127:TRP:HE1	1.61	0.48
1:A:41:LYS:NZ	1:A:45:ASP:OD2	2.43	0.48
1:B:356:ALA:HB3	1:B:357:PRO:HD3	1.94	0.48
1:D:272:ARG:HE	1:D:274:LYS:HD3	1.78	0.48
1:B:391:LEU:HD11	1:B:405:LEU:HD12	1.95	0.48
2:H:150:THR:CG2	2:H:151:GLU:H	2.24	0.48
1:D:391:LEU:HD11	1:D:405:LEU:CD1	2.43	0.48
1:B:181:ARG:NH1	3:B:701:SF4:S2	2.86	0.48
1:D:619:LYS:HB3	1:D:621:TRP:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:576:ARG:HD3	1:A:576:ARG:O	2.13	0.48
1:A:619:LYS:HB3	1:A:621:TRP:CE2	2.49	0.48
1:A:266:TRP:CE3	1:A:330:MET:HA	2.48	0.48
2:E:30:CYS:O	2:E:34:HIS:HD2	1.97	0.48
1:B:486:PRO:HD3	1:B:520:TRP:CE2	2.49	0.48
1:B:92:PHE:O	1:B:454:LYS:HE2	2.14	0.48
1:C:266:TRP:CE3	1:C:330:MET:HA	2.49	0.48
2:E:71:SER:CB	2:F:146:SER:HB3	2.41	0.48
1:C:253:LYS:HE2	1:C:296:LEU:HD13	1.96	0.48
1:C:322:CYS:HB3	4:C:703:MTE:S1'	2.53	0.48
1:C:508:PHE:HA	1:C:509:PRO:C	2.34	0.48
1:D:506:PRO:HG3	1:D:604:PHE:CE1	2.49	0.48
1:D:102:GLU:OE1	1:D:204:ARG:HD2	2.13	0.47
1:A:356:ALA:HB3	1:A:357:PRO:HD3	1.96	0.47
1:C:149:ILE:O	1:C:153:GLU:HB2	2.15	0.47
1:C:394:LYS:HE3	1:C:399:ASP:O	2.14	0.47
1:C:349:TYR:CD2	1:C:396:VAL:HG21	2.49	0.47
2:H:32:ALA:HA	2:H:41:SER:O	2.15	0.47
1:C:189:ILE:HD13	1:C:189:ILE:N	2.29	0.47
1:D:104:LYS:HB3	1:D:209:LEU:HD13	1.97	0.47
1:A:547:HIS:CE1	1:A:549:HIS:HB2	2.49	0.47
1:D:453:GLU:OE1	1:D:583:ASN:ND2	2.46	0.47
2:G:146:SER:OG	2:H:72:GLU:HG3	2.14	0.47
2:G:103[A]:ARG:HD2	2:G:108:GLY:O	2.15	0.47
1:B:508:PHE:HA	1:B:509:PRO:C	2.35	0.47
1:C:622:ASN:HB3	1:C:624:ASP:H	1.80	0.47
1:A:250:GLN:OE1	1:A:253:LYS:HE3	2.15	0.47
2:G:104:GLU:HG3	2:G:109:LEU:HB2	1.96	0.47
1:D:486:PRO:HD3	1:D:520:TRP:CE2	2.49	0.47
2:G:146:SER:CB	2:H:71:SER:HB2	2.42	0.46
1:C:606:GLU:CD	1:C:606:GLU:H	2.19	0.46
1:A:486:PRO:HD3	1:A:520:TRP:CE2	2.49	0.46
1:D:366:LEU:HD22	1:D:371:ILE:HG21	1.97	0.46
1:C:52:GLU:OE1	1:C:52:GLU:HA	2.15	0.46
1:B:580:ARG:NH2	1:B:593:GLU:OE1	2.35	0.46
1:D:580:ARG:HH22	1:D:593:GLU:CD	2.19	0.46
1:C:224:VAL:HG13	1:C:545:PRO:HB2	1.96	0.46
1:B:446:TYR:OH	9:B:801:HOH:O	2.18	0.46
1:D:181:ARG:HB2	1:D:319:MET:HB3	1.97	0.46
1:B:547:HIS:CE1	1:B:549:HIS:HB2	2.51	0.46
1:A:189:ILE:HD12	1:A:189:ILE:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:78:LYS:HD3	9:H:1106:HOH:O	2.15	0.46
1:A:508:PHE:HA	1:A:509:PRO:C	2.36	0.46
2:H:55:PRO:HA	2:H:60:TYR:OH	2.15	0.46
1:D:42:ILE:HG23	1:D:46:ARG:HD3	1.98	0.46
1:C:137:HIS:NE2	1:C:153:GLU:OE2	2.43	0.46
1:D:45:ASP:O	1:D:46:ARG:HG3	2.16	0.45
2:G:27:GLU:HG2	2:G:49:VAL:O	2.16	0.45
1:B:597:ALA:N	9:B:805:HOH:O	2.49	0.45
1:C:453:GLU:OE2	1:C:580:ARG:HD3	2.16	0.45
1:B:351:LEU:HD12	1:B:392:LEU:HD11	1.98	0.45
1:B:324:THR:CG2	1:B:353:GLY:HA3	2.46	0.45
1:A:238:ASP:HB2	1:A:469:TYR:HE1	1.82	0.45
1:B:437:LYS:NZ	1:B:599:HIS:HD2	2.14	0.45
1:B:238:ASP:HB2	1:B:469:TYR:HE1	1.82	0.45
2:G:152:MET:HE2	2:H:163:PHE:CB	2.46	0.45
1:C:484:GLN:HG2	1:C:544:PRO:HD2	1.98	0.45
1:B:189:ILE:N	1:B:189:ILE:HD12	2.32	0.45
2:F:72:GLU:CG	2:F:98:SER:HB3	2.41	0.45
1:B:259:TRP:HE1	8:B:707:4KX:HDPB	1.81	0.45
1:A:437:LYS:NZ	1:A:599:HIS:HD2	2.14	0.45
1:A:372:LEU:HD21	1:A:416:ILE:HD13	1.99	0.45
1:D:150:ILE:HG21	1:D:202:VAL:CG2	2.45	0.45
1:A:351:LEU:HD12	1:A:392:LEU:HD11	1.98	0.45
1:A:391:LEU:HD11	1:A:405:LEU:HD12	1.98	0.45
1:C:368:GLU:HA	1:C:368:GLU:OE1	2.15	0.45
2:G:170:ASP:OD1	2:G:171:THR:N	2.50	0.45
2:F:21:ASN:OD1	2:F:23:CYS:HB3	2.17	0.45
1:B:218:ILE:HG12	2:F:39:TYR:CE1	2.52	0.45
1:B:27:ARG:CG	1:B:27:ARG:NH1	2.78	0.44
2:E:65:ALA:HB2	2:E:102:PHE:CD1	2.52	0.44
1:A:172:VAL:O	1:A:191:ALA:HB2	2.17	0.44
1:C:70:THR:HB	1:C:71:PRO:CD	2.46	0.44
2:G:114:ASP:HA	2:H:74:ILE:HD12	1.99	0.44
2:F:166:ASP:N	2:F:166:ASP:OD1	2.45	0.44
1:A:240:MET:HE3	1:A:240:MET:HB3	1.95	0.44
1:A:576:ARG:C	1:A:576:ARG:HD3	2.38	0.44
1:C:126:ASN:ND2	1:C:156:GLU:OE2	2.49	0.44
1:C:274:LYS:HA	1:C:274:LYS:HD2	1.61	0.44
1:B:90:MET:HB2	1:B:582:PHE:CD2	2.52	0.44
2:G:168:VAL:O	2:G:172:VAL:HG23	2.17	0.44
1:A:624:ASP:OD2	9:A:801:HOH:O	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:93:SER:HB3	1:D:189:ILE:HD12	1.99	0.44
1:D:186:ARG:HD2	1:D:352:ASP:OD2	2.18	0.44
1:D:526:TYR:O	1:D:575:TYR:OH	2.26	0.44
2:F:43:ASN:HB3	2:F:46:ARG:CG	2.38	0.44
1:D:484:GLN:OE1	1:D:484:GLN:N	2.50	0.44
1:C:13:ASP:O	1:C:17:GLY:N	2.50	0.44
2:H:7:LYS:HA	2:H:140:VAL:O	2.18	0.44
1:D:641:GLY:O	1:D:645:ILE:HG13	2.17	0.44
2:G:152:MET:HE2	2:H:163:PHE:HB3	1.99	0.44
2:G:153:GLU:O	2:G:157:GLU:HB2	2.17	0.43
1:C:161:VAL:O	1:C:179:GLN:HG2	2.18	0.43
1:A:481:ASP:OD1	1:A:481:ASP:N	2.50	0.43
1:D:531:LEU:HD23	1:D:551:TYR:CE1	2.53	0.43
1:D:3:TYR:O	1:D:4:ALA:HB3	2.18	0.43
1:A:596:PRO:HG2	1:A:599:HIS:CD2	2.52	0.43
1:A:218:ILE:HA	1:A:218:ILE:HD12	1.85	0.43
1:B:322:CYS:CB	4:B:702:MTE:S2'	3.07	0.43
2:G:122:PRO:HG2	2:G:135:VAL:HG21	2.01	0.43
2:G:171:THR:HA	2:G:174:GLN:HB3	2.00	0.43
1:C:606:GLU:HG2	1:C:607:LEU:N	2.34	0.43
1:A:186:ARG:HD2	1:A:352:ASP:OD2	2.19	0.43
1:A:349:TYR:CD2	1:A:396:VAL:HG21	2.54	0.43
1:C:328:TYR:CE1	1:C:357:PRO:HG3	2.54	0.43
2:E:133:LEU:HD11	3:E:1001:SF4:S4	2.59	0.43
1:C:297:ILE:HD11	1:C:319:MET:HG2	2.00	0.43
1:D:186:ARG:NH2	9:D:802:HOH:O	2.50	0.43
1:C:615:TYR:OH	1:C:619:LYS:NZ	2.52	0.43
1:D:105:TYR:O	1:D:207:LYS:HB2	2.18	0.43
1:D:465:PRO:HG2	1:D:494:PHE:CE1	2.54	0.42
1:D:382:GLU:HG2	1:D:383:GLY:N	2.33	0.42
2:F:64:TYR:OH	2:F:133:LEU:HD13	2.19	0.42
1:B:79:ILE:N	1:B:79:ILE:HD12	2.33	0.42
2:G:142:GLU:CD	2:G:142:GLU:H	2.21	0.42
1:A:78:THR:OG1	1:A:100:ALA:HB2	2.18	0.42
1:D:258:LYS:HB2	1:D:277:TRP:CD1	2.53	0.42
1:B:575:TYR:O	1:B:579:VAL:HG23	2.19	0.42
1:A:324:THR:CG2	1:A:353:GLY:HA3	2.49	0.42
1:D:540:PHE:HB3	1:D:541:PRO:HD3	2.01	0.42
1:D:574:ARG:NE	1:D:635:LEU:O	2.46	0.42
1:A:90:MET:HB2	1:A:582:PHE:CD2	2.55	0.42
1:D:240:MET:HA	1:D:241:PRO:HD3	1.94	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:434:LEU:HD13	1:D:458:THR:HG23	2.01	0.42
1:B:372:LEU:HD21	1:B:416:ILE:HD13	2.01	0.42
1:B:263:ASN:HD22	1:B:272:ARG:HH21	1.67	0.42
1:C:486:PRO:HD3	1:C:520:TRP:CE2	2.55	0.42
1:B:214:PRO:HD2	9:B:840:HOH:O	2.20	0.42
1:D:425:HIS:O	1:D:596:PRO:HB3	2.20	0.42
1:D:337:ASP:O	1:D:341:ARG:HG3	2.19	0.42
1:D:508:PHE:CG	1:D:509:PRO:HA	2.55	0.42
1:B:596:PRO:HG2	1:B:599:HIS:CD2	2.55	0.42
1:C:606:GLU:HG2	1:C:607:LEU:H	1.84	0.41
1:B:218:ILE:HD12	1:B:218:ILE:HA	1.86	0.41
1:A:575:TYR:O	1:A:579:VAL:HG23	2.20	0.41
2:G:64:TYR:OH	2:G:133:LEU:HD13	2.20	0.41
1:B:481:ASP:N	1:B:481:ASP:OD1	2.51	0.41
1:D:562:GLU:HG2	1:D:567:LYS:NZ	2.35	0.41
2:G:29:ILE:HD13	2:G:127:TRP:CZ2	2.55	0.41
1:D:115:GLY:O	1:D:196:LYS:HG2	2.20	0.41
1:B:222:ASN:HD21	2:F:127:TRP:HE1	1.68	0.41
2:F:176:THR:O	9:F:1101:HOH:O	2.21	0.41
2:F:34:HIS:HE1	9:F:1104:HOH:O	2.03	0.41
1:D:100:ALA:HB3	1:D:101:PRO:HD3	2.02	0.41
1:A:144:ILE:HB	1:A:348:GLU:OE2	2.20	0.41
1:D:444:ILE:HD12	1:D:505:MET:CE	2.50	0.41
1:C:3:TYR:O	1:C:4:ALA:HB3	2.20	0.41
1:C:189:ILE:H	1:C:189:ILE:CD1	2.31	0.41
1:A:189:ILE:HD12	1:A:190:GLY:N	2.36	0.41
2:G:34:HIS:HE1	9:G:1103:HOH:O	2.02	0.41
1:B:442:ASN:HA	1:B:443:PRO:HD2	1.88	0.41
1:D:359:VAL:O	1:D:362:PHE:HB3	2.20	0.41
2:F:171:THR:O	2:F:175:LEU:HD12	2.20	0.41
1:D:613:ASP:O	1:D:617:LYS:HG2	2.21	0.41
1:C:538:SER:O	1:C:544:PRO:HG3	2.21	0.41
1:C:475:ARG:HB3	1:C:495:LEU:HD23	2.03	0.41
1:B:584:ILE:HD12	1:B:626:ILE:HG12	2.02	0.41
2:F:32:ALA:HA	2:F:41:SER:O	2.21	0.41
1:C:79:ILE:HD12	1:C:79:ILE:N	2.36	0.41
1:D:567:LYS:HB2	1:D:567:LYS:HE3	1.75	0.40
1:A:65:GLY:HA3	1:A:532:GLY:HA3	2.03	0.40
1:C:43:LEU:HD12	1:C:90:MET:CE	2.51	0.40
1:A:594:GLN:HA	1:A:595:PRO:HD3	1.92	0.40
2:F:57:ARG:NH1	2:F:85:GLU:O	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:142:GLU:HA	2:G:143:PRO:HD3	1.93	0.40
2:F:142:GLU:HA	2:F:143:PRO:HD3	1.94	0.40
1:C:25:ASP:HA	1:C:26:PRO:HD2	1.89	0.40
1:D:601:LYS:HB3	1:D:601:LYS:HE2	1.83	0.40
1:D:456:ASN:HA	9:D:802:HOH:O	2.20	0.40
1:D:594:GLN:HA	1:D:595:PRO:HD3	1.91	0.40
1:C:423:TYR:O	1:C:425:HIS:HD2	2.04	0.40
1:D:65:GLY:HA3	1:D:532:GLY:HA3	2.02	0.40
1:C:620:GLY:O	1:C:631:THR:HG21	2.21	0.40
1:D:181:ARG:CD	1:D:181:ARG:O	2.66	0.40
1:B:189:ILE:HD12	1:B:190:GLY:N	2.36	0.40
1:C:485:VAL:HA	1:C:486:PRO:HD3	1.92	0.40
1:A:25:ASP:HA	1:A:26:PRO:HD2	1.95	0.40
2:E:96:CYS:SG	2:E:97:PRO:HD2	2.60	0.40
2:H:115:LEU:HA	3:H:1002:SF4:S1	2.62	0.40
1:C:300:TYR:OH	2:G:28:VAL:HG22	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	650/653 (100%)	626 (96%)	24 (4%)	0	100	100
1	B	651/653 (100%)	626 (96%)	25 (4%)	0	100	100
1	C	652/653 (100%)	632 (97%)	19 (3%)	1 (0%)	52	59
1	D	651/653 (100%)	625 (96%)	26 (4%)	0	100	100
2	E	160/179 (89%)	158 (99%)	1 (1%)	1 (1%)	30	29
2	F	169/179 (94%)	166 (98%)	3 (2%)	0	100	100
2	G	169/179 (94%)	163 (96%)	6 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	H	157/179 (88%)	151 (96%)	5 (3%)	1 (1%)	30	29
All	All	3259/3328 (98%)	3147 (97%)	109 (3%)	3 (0%)	56	64

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	622	ASN
2	H	43	ASN
2	E	43	ASN

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	548/548 (100%)	532 (97%)	16 (3%)	50	62
1	B	546/548 (100%)	531 (97%)	15 (3%)	52	64
1	C	549/548 (100%)	534 (97%)	15 (3%)	52	64
1	D	549/548 (100%)	528 (96%)	21 (4%)	40	49
2	E	135/159 (85%)	133 (98%)	2 (2%)	72	84
2	F	150/159 (94%)	147 (98%)	3 (2%)	63	76
2	G	149/159 (94%)	145 (97%)	4 (3%)	52	64
2	H	132/159 (83%)	128 (97%)	4 (3%)	48	60
All	All	2758/2828 (98%)	2678 (97%)	80 (3%)	50	62

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

Mol	Chain	Res	Type
1	A	16	LYS
1	A	27	ARG
1	A	114	ARG
1	A	174	TYR
1	A	189	ILE

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Mol	Chain	Res	Type
1	A	230	HIS
1	A	232	GLU
1	A	240	MET
1	A	255	HIS
1	A	321	LYS
1	A	324	THR
1	A	551	TYR
1	A	576	ARG
1	A	591	VAL
1	A	599	HIS
1	A	623	ASP
1	B	16	LYS
1	B	27	ARG
1	B	114	ARG
1	B	174	TYR
1	B	189	ILE
1	B	230	HIS
1	B	232	GLU
1	B	240	MET
1	B	255	HIS
1	B	321	LYS
1	B	324	THR
1	B	551	TYR
1	B	576	ARG
1	B	599	HIS
1	B	623	ASP
1	C	50	GLU
1	C	114	ARG
1	C	189	ILE
1	C	230	HIS
1	C	240	MET
1	C	319	MET
1	C	321	LYS
1	C	373	LYS
1	C	434	LEU
1	C	551	TYR
1	C	561	ILE
1	C	576	ARG
1	C	591	VAL
1	C	599	HIS
1	C	651	SER
1	D	1	MET

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Mol	Chain	Res	Type
1	D	50	GLU
1	D	57	GLU
1	D	114	ARG
1	D	174	TYR
1	D	189	ILE
1	D	209	LEU
1	D	239	VAL
1	D	274	LYS
1	D	321	LYS
1	D	324	THR
1	D	369	LYS
1	D	374	ASP
1	D	418	ASN
1	D	434	LEU
1	D	439	SER
1	D	538	SER
1	D	551	TYR
1	D	576	ARG
1	D	599	HIS
1	D	623	ASP
2	E	99	ARG
2	E	106	ASP
2	F	8	ARG
2	F	99	ARG
2	F	152	MET
2	G	157	GLU
2	G	166	ASP
2	G	170	ASP
2	G	171	THR
2	H	63	LEU
2	H	93	ARG
2	H	99	ARG
2	H	152	MET

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	222	ASN
1	A	255	HIS
1	A	263	ASN
1	A	433	GLN
1	A	599	HIS

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Mol	Chain	Res	Type
1	B	222	ASN
1	B	255	HIS
1	B	263	ASN
1	B	599	HIS
1	C	222	ASN
1	C	263	ASN
1	C	418	ASN
1	C	594	GLN
1	C	602	ASN
1	D	222	ASN
1	D	263	ASN
2	E	34	HIS
2	F	34	HIS
2	G	34	HIS
2	H	34	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 40 ligands modelled in this entry, 4 are unknown and 8 are monoatomic - leaving 28 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	SF4	A	701	1	0,12,12	0.00	-	0,24,24	0.00	-
4	MTE	A	702	5,6	21,26,26	2.62	11 (52%)	18,40,40	2.15	4 (22%)
4	MTE	A	703	5,6	21,26,26	2.67	11 (52%)	18,40,40	2.16	4 (22%)
8	4KX	A	707	-	48,59,59	0.41	0	58,87,87	0.72	2 (3%)
3	SF4	B	701	1	0,12,12	0.00	-	0,24,24	0.00	-
4	MTE	B	702	5,6	21,26,26	2.87	12 (57%)	18,40,40	1.92	4 (22%)
4	MTE	B	703	5,6	21,26,26	2.74	10 (47%)	18,40,40	2.21	3 (16%)
8	4KX	B	707	-	48,59,59	0.41	0	58,87,87	0.79	3 (5%)
3	SF4	C	701	1	0,12,12	0.00	-	0,24,24	0.00	-
4	MTE	C	702	5,6	21,26,26	2.79	11 (52%)	18,40,40	1.89	3 (16%)
4	MTE	C	703	5,6	21,26,26	2.73	10 (47%)	18,40,40	2.09	3 (16%)
8	4KX	C	707	-	48,59,59	0.43	0	58,87,87	0.93	3 (5%)
3	SF4	D	702	1	0,12,12	0.00	-	0,24,24	0.00	-
4	MTE	D	703	5,6	21,26,26	2.68	11 (52%)	18,40,40	2.69	5 (27%)
4	MTE	D	704	5,6	21,26,26	2.66	10 (47%)	18,40,40	1.94	2 (11%)
8	4KX	D	707	-	48,59,59	0.45	0	58,87,87	0.95	1 (1%)
3	SF4	E	1001	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	E	1002	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	E	1003	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	F	1001	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	F	1002	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	F	1003	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	G	1001	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	G	1002	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	G	1003	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	H	1001	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	H	1002	2	0,12,12	0.00	-	0,24,24	0.00	-
3	SF4	H	1003	2	0,12,12	0.00	-	0,24,24	0.00	-

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	SF4	A	701	1	-	0/0/48/48	0/6/5/5
4	MTE	A	702	5,6	-	0/6/34/34	0/3/3/3
4	MTE	A	703	5,6	-	0/6/34/34	0/3/3/3
8	4KX	A	707	-	-	0/48/79/79	0/4/4/4
3	SF4	B	701	1	-	0/0/48/48	0/6/5/5

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	MTE	B	702	5,6	-	0/6/34/34	0/3/3/3
4	MTE	B	703	5,6	-	0/6/34/34	0/3/3/3
8	4KX	B	707	-	-	0/48/79/79	0/4/4/4
3	SF4	C	701	1	-	0/0/48/48	0/6/5/5
4	MTE	C	702	5,6	-	0/6/34/34	0/3/3/3
4	MTE	C	703	5,6	-	0/6/34/34	0/3/3/3
8	4KX	C	707	-	-	0/48/79/79	0/4/4/4
3	SF4	D	702	1	-	0/0/48/48	0/6/5/5
4	MTE	D	703	5,6	-	0/6/34/34	0/3/3/3
4	MTE	D	704	5,6	-	0/6/34/34	0/3/3/3
8	4KX	D	707	-	-	0/48/79/79	0/4/4/4
3	SF4	E	1001	2	-	0/0/48/48	0/6/5/5
3	SF4	E	1002	2	-	0/0/48/48	0/6/5/5
3	SF4	E	1003	2	-	0/0/48/48	0/6/5/5
3	SF4	F	1001	2	-	0/0/48/48	0/6/5/5
3	SF4	F	1002	2	-	0/0/48/48	0/6/5/5
3	SF4	F	1003	2	-	0/0/48/48	0/6/5/5
3	SF4	G	1001	2	-	0/0/48/48	0/6/5/5
3	SF4	G	1002	2	-	0/0/48/48	0/6/5/5
3	SF4	G	1003	2	-	0/0/48/48	0/6/5/5
3	SF4	H	1001	2	-	0/0/48/48	0/6/5/5
3	SF4	H	1002	2	-	0/0/48/48	0/6/5/5
3	SF4	H	1003	2	-	0/0/48/48	0/6/5/5

All (86) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	703	MTE	C9-C10	-6.57	1.29	1.41
4	C	702	MTE	C9-C10	-6.40	1.29	1.41
4	C	703	MTE	C9-C10	-6.08	1.30	1.41
4	B	702	MTE	C9-C10	-6.03	1.30	1.41
4	D	704	MTE	C9-C10	-5.85	1.30	1.41
4	A	703	MTE	C9-C10	-5.76	1.30	1.41
4	D	703	MTE	C9-C10	-5.47	1.31	1.41
4	C	703	MTE	C7-C6	-5.39	1.49	1.53
4	B	703	MTE	C7-C6	-5.16	1.49	1.53
4	A	702	MTE	C9-C10	-4.94	1.32	1.41
4	B	702	MTE	C7-C6	-4.62	1.50	1.53
4	C	702	MTE	C7-C6	-4.42	1.50	1.53
4	D	703	MTE	C7-C6	-4.36	1.50	1.53
4	A	703	MTE	C7-C6	-4.14	1.50	1.53
4	D	704	MTE	C7-C6	-4.04	1.50	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	703	MTE	O3'-C7	-3.99	1.38	1.43
4	B	702	MTE	O3'-C7	-3.81	1.38	1.43
4	A	702	MTE	C7-C6	-3.69	1.50	1.53
4	A	702	MTE	O3'-C7	-3.67	1.38	1.43
4	C	702	MTE	O3'-C7	-3.55	1.38	1.43
4	C	702	MTE	O3'-C3'	-3.50	1.38	1.43
4	D	703	MTE	O3'-C3'	-3.11	1.39	1.43
4	D	704	MTE	O3'-C7	-2.81	1.39	1.43
4	B	703	MTE	O3'-C3'	-2.71	1.39	1.43
4	C	703	MTE	O3'-C3'	-2.51	1.40	1.43
4	B	703	MTE	O3'-C7	-2.51	1.40	1.43
4	B	702	MTE	O3'-C3'	-2.48	1.40	1.43
4	A	702	MTE	O3'-C3'	-2.48	1.40	1.43
4	D	704	MTE	O3'-C3'	-2.47	1.40	1.43
4	A	703	MTE	O3'-C7	-2.40	1.40	1.43
4	A	703	MTE	O3'-C3'	-2.24	1.40	1.43
4	C	703	MTE	O3'-C7	-2.22	1.40	1.43
4	B	702	MTE	C2'-C1'	2.08	1.49	1.35
4	A	703	MTE	C9-N5	2.09	1.42	1.38
4	C	702	MTE	C2-N3	2.16	1.39	1.35
4	C	702	MTE	C10-N8	2.17	1.42	1.35
4	D	704	MTE	C2-N3	2.20	1.39	1.35
4	B	702	MTE	C2-N3	2.25	1.39	1.35
4	B	702	MTE	C9-N5	2.27	1.43	1.38
4	D	703	MTE	C2-N3	2.35	1.39	1.35
4	A	702	MTE	C10-N1	2.37	1.38	1.34
4	B	703	MTE	C10-N8	2.37	1.42	1.35
4	C	702	MTE	C9-N5	2.42	1.43	1.38
4	A	703	MTE	C2-N3	2.44	1.40	1.35
4	A	702	MTE	C2-N3	2.54	1.40	1.35
4	C	703	MTE	C2-N3	2.56	1.40	1.35
4	A	702	MTE	C10-N8	2.60	1.43	1.35
4	C	703	MTE	C10-N8	2.63	1.43	1.35
4	A	702	MTE	C9-N5	2.65	1.43	1.38
4	B	702	MTE	C10-N1	2.66	1.39	1.34
4	B	703	MTE	C10-N1	2.68	1.39	1.34
4	D	703	MTE	C9-N5	2.69	1.44	1.38
4	B	703	MTE	C2-N3	2.70	1.40	1.35
4	D	704	MTE	C4-N3	2.76	1.38	1.33
4	A	703	MTE	C10-N8	2.76	1.44	1.35
4	B	702	MTE	C10-N8	2.77	1.44	1.35
4	C	702	MTE	C10-N1	2.77	1.39	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	703	MTE	C10-N1	2.77	1.39	1.34
4	D	703	MTE	C10-N8	2.78	1.44	1.35
4	D	704	MTE	C10-N8	2.89	1.44	1.35
4	D	704	MTE	C10-N1	2.93	1.39	1.34
4	C	703	MTE	C10-N1	2.96	1.39	1.34
4	B	702	MTE	C4-N3	3.06	1.38	1.33
4	A	703	MTE	C4-N3	3.15	1.38	1.33
4	D	703	MTE	C4-N3	3.24	1.38	1.33
4	C	703	MTE	C4-N3	3.24	1.38	1.33
4	A	703	MTE	C10-N1	3.24	1.40	1.34
4	B	703	MTE	C4-N3	3.27	1.38	1.33
4	A	702	MTE	C4-N3	3.48	1.39	1.33
4	C	702	MTE	C4-N3	3.50	1.39	1.33
4	D	703	MTE	C4-C9	3.71	1.46	1.41
4	B	703	MTE	C4-C9	3.74	1.46	1.41
4	A	702	MTE	C2-N2	3.96	1.42	1.34
4	D	703	MTE	C2-N2	4.31	1.43	1.34
4	C	702	MTE	C4-C9	4.32	1.47	1.41
4	B	703	MTE	C2-N2	4.40	1.43	1.34
4	C	702	MTE	C2-N2	4.42	1.43	1.34
4	C	703	MTE	C4-C9	4.42	1.47	1.41
4	D	704	MTE	C2-N2	4.45	1.43	1.34
4	C	703	MTE	C2-N2	4.46	1.43	1.34
4	A	703	MTE	C2-N2	4.46	1.43	1.34
4	B	702	MTE	C2-N2	4.47	1.43	1.34
4	A	703	MTE	C4-C9	4.81	1.48	1.41
4	A	702	MTE	C4-C9	4.85	1.48	1.41
4	D	704	MTE	C4-C9	4.99	1.48	1.41
4	B	702	MTE	C4-C9	5.14	1.48	1.41

All (37) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	D	703	MTE	O3'-C7-C6	-7.69	103.70	108.96
4	A	703	MTE	O3'-C7-C6	-2.75	107.08	108.96
4	A	702	MTE	O3'-C7-C6	-2.25	107.43	108.96
4	B	703	MTE	O3'-C7-C6	-2.17	107.48	108.96
8	B	707	4KX	C5B-C6B-C7B	-2.13	114.46	119.32
4	B	702	MTE	N3-C2-N1	-2.06	122.14	125.51
8	A	707	4KX	C5B-C4B-C3B	2.02	125.83	122.62
8	C	707	4KX	C5B-C4B-C3B	2.07	125.91	122.62
4	D	703	MTE	C10-C9-N5	2.08	121.50	118.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	C	703	MTE	N8-C10-N1	2.08	119.94	116.62
4	D	704	MTE	C2-N1-C10	2.25	119.68	114.63
4	A	702	MTE	C2-N1-C10	2.27	119.73	114.63
4	C	702	MTE	C9-C10-N8	2.28	120.36	118.19
8	A	707	4KX	C2P-S1P-C1B	2.35	102.64	99.61
4	D	703	MTE	C2-N1-C10	2.43	120.08	114.63
8	B	707	4KX	C2P-S1P-C1B	2.45	102.75	99.61
4	C	702	MTE	C2-N1-C10	2.50	120.25	114.63
4	A	703	MTE	C2-N1-C10	2.51	120.27	114.63
4	B	703	MTE	C2-N1-C10	2.55	120.36	114.63
4	C	703	MTE	C2-N1-C10	2.62	120.52	114.63
8	C	707	4KX	P3D-O3D-C3D	2.64	128.32	121.56
4	A	703	MTE	N8-C10-N1	2.69	120.91	116.62
8	B	707	4KX	P3D-O3D-C3D	2.75	128.59	121.56
4	B	702	MTE	C2-N1-C10	2.84	121.02	114.63
4	B	702	MTE	C9-C10-N8	3.06	121.10	118.19
4	D	703	MTE	C9-C10-N8	3.53	121.54	118.19
8	C	707	4KX	C2P-S1P-C1B	4.50	105.39	99.61
8	D	707	4KX	C2P-S1P-C1B	4.81	105.79	99.61
4	A	702	MTE	C9-C10-N8	5.20	123.13	118.19
4	B	702	MTE	C4-C9-C10	5.67	119.60	114.61
4	A	702	MTE	C4-C9-C10	5.75	119.68	114.61
4	C	702	MTE	C4-C9-C10	5.99	119.88	114.61
4	D	703	MTE	C4-C9-C10	6.04	119.93	114.61
4	D	704	MTE	C4-C9-C10	6.61	120.43	114.61
4	A	703	MTE	C4-C9-C10	7.09	120.85	114.61
4	C	703	MTE	C4-C9-C10	7.11	120.87	114.61
4	B	703	MTE	C4-C9-C10	7.33	121.06	114.61

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

15 monomers are involved in 22 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	702	MTE	2	0
8	A	707	4KX	1	0
3	B	701	SF4	1	0
4	B	702	MTE	2	0
8	B	707	4KX	1	0
4	C	703	MTE	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
8	C	707	4KX	2	0
3	D	702	SF4	1	0
4	D	703	MTE	3	0
4	D	704	MTE	1	0
8	D	707	4KX	2	0
3	E	1001	SF4	1	0
3	F	1002	SF4	1	0
3	G	1002	SF4	1	0
3	H	1002	SF4	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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	652/653 (99%)	-0.19	1 (0%) 95 95	28, 47, 79, 111	0
1	B	652/653 (99%)	0.45	46 (7%) 19 18	37, 83, 121, 146	0
1	C	653/653 (100%)	-0.26	3 (0%) 91 91	30, 49, 83, 119	0
1	D	652/653 (99%)	-0.26	3 (0%) 91 91	32, 54, 82, 105	0
2	E	163/179 (91%)	-0.27	1 (0%) 90 90	30, 45, 70, 117	0
2	F	170/179 (94%)	-0.29	0 100 100	30, 42, 71, 100	0
2	G	169/179 (94%)	-0.22	0 100 100	30, 48, 99, 133	0
2	H	161/179 (89%)	-0.32	1 (0%) 90 90	34, 50, 100, 129	0
All	All	3272/3328 (98%)	-0.11	55 (1%) 73 72	28, 53, 101, 146	0

All (55) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	394	LYS	6.0
1	B	377	PHE	5.0
1	B	366	LEU	4.9
1	B	259	TRP	4.7
1	B	285	TRP	4.5
1	B	264	PHE	4.4
1	B	405	LEU	4.3
1	B	363	ALA	4.0
1	B	243	LEU	3.9
1	B	423	TYR	3.8
2	E	143	PRO	3.8
1	B	416	ILE	3.7
1	B	355	SER	3.6
1	B	421	GLU	3.6
1	C	240	MET	3.4
1	B	255	HIS	3.4

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Mol	Chain	Res	Type	RSRZ
1	B	323	PHE	3.3
1	B	392	LEU	3.3
1	B	241	PRO	3.2
1	B	258	LYS	3.2
1	B	357	PRO	3.1
1	B	373	LYS	3.1
1	B	242	ILE	3.1
1	C	242	ILE	3.1
1	B	359	VAL	3.1
1	C	243	LEU	3.1
1	B	383	GLY	3.1
1	B	277	TRP	2.9
1	B	469	TYR	2.9
1	B	371	ILE	2.8
1	B	434	LEU	2.8
1	B	404	ILE	2.7
1	D	644	PHE	2.7
1	B	364	PHE	2.6
1	B	283	HIS	2.6
1	B	395	ILE	2.5
2	H	6	LYS	2.5
1	B	135	ALA	2.5
1	B	238	ASP	2.4
1	B	289	MET	2.4
1	B	436	LEU	2.4
1	B	607	LEU	2.4
1	A	27	ARG	2.3
1	B	390	TYR	2.3
1	B	595	PRO	2.3
1	B	331	ALA	2.3
1	B	440	MET	2.2
1	B	83	VAL	2.2
1	B	601	LYS	2.2
1	B	438	LEU	2.1
1	B	506	PRO	2.1
1	B	51	VAL	2.1
1	B	424	ALA	2.0
1	D	242	ILE	2.0
1	D	382	GLU	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 carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
7	UNL	C	705	1/-	0.97	0.43	15.07	46,46,46,46	0
3	SF4	F	1002	8/8	0.99	0.14	2.31	25,29,30,30	0
3	SF4	H	1001	8/8	0.99	0.14	2.14	24,34,36,37	0
3	SF4	G	1002	8/8	0.99	0.15	2.12	27,39,43,43	0
3	SF4	G	1001	8/8	0.99	0.15	2.01	34,37,38,41	0
3	SF4	E	1002	8/8	0.99	0.15	1.99	35,38,41,44	0
3	SF4	H	1002	8/8	0.99	0.14	1.57	41,43,53,54	0
3	SF4	F	1001	8/8	0.99	0.13	1.08	26,32,33,34	0
3	SF4	E	1001	8/8	0.99	0.14	0.94	32,32,34,38	0
3	SF4	G	1003	8/8	0.99	0.14	0.70	37,40,42,48	0
3	SF4	H	1003	8/8	0.99	0.14	0.53	40,42,44,51	0
6	MG	C	704	1/1	0.97	0.14	0.48	37,37,37,37	0
3	SF4	E	1003	8/8	0.99	0.14	0.32	27,33,35,36	0
8	4KX	C	707	56/56	0.89	0.17	0.30	61,94,124,129	0
4	MTE	A	702	24/24	0.97	0.13	0.28	14,26,32,39	0
3	SF4	F	1003	8/8	0.99	0.13	0.11	26,32,34,39	0
6	MG	D	706	1/1	0.97	0.11	0.11	32,32,32,32	0
8	4KX	A	707	56/56	0.93	0.14	0.09	31,50,87,109	98
8	4KX	D	707	56/56	0.95	0.13	0.02	36,48,67,81	0
4	MTE	B	702	24/24	0.93	0.13	-0.01	42,58,66,190	0
4	MTE	C	702	24/24	0.98	0.12	-0.03	28,31,35,39	0
4	MTE	D	703	24/24	0.97	0.11	-0.25	19,31,35,39	0
8	4KX	B	707	56/56	0.85	0.18	-0.36	69,105,135,149	98
3	SF4	C	701	8/8	0.99	0.11	-0.39	32,38,40,48	0
4	MTE	A	703	24/24	0.97	0.11	-0.50	18,25,34,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
4	MTE	D	704	24/24	0.98	0.10	-0.64	23,33,38,47	0
4	MTE	C	703	24/24	0.96	0.11	-0.73	33,39,42,43	0
4	MTE	B	703	24/24	0.95	0.11	-0.98	46,50,64,67	0
3	SF4	B	701	8/8	0.99	0.09	-0.99	45,50,55,62	0
3	SF4	D	702	8/8	0.98	0.10	-1.04	26,32,36,45	0
6	MG	A	705	1/1	0.97	0.10	-1.62	30,30,30,30	0
3	SF4	A	701	8/8	0.98	0.10	-2.90	23,27,32,38	0
7	UNL	D	701	1/-	0.91	0.36	-	36,36,36,36	0
5	W	C	706	1/1	0.99	0.17	-	43,43,43,43	0
6	MG	B	705	1/1	0.86	0.06	-	47,47,47,47	0
5	W	B	704	1/1	0.87	0.15	-	73,73,73,73	0
5	W	D	705	1/1	0.99	0.17	-	36,36,36,36	0
7	UNL	A	706	1/-	0.94	0.32	-	31,31,31,31	0
5	W	A	704	1/1	0.99	0.18	-	33,33,33,33	0
7	UNL	B	706	1/-	0.97	0.29	-	21,21,21,21	0

6.5 Other polymers [i](#)

There are no such residues in this entry.