WORLDWIDE PDB
PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report ⓘ

Nov 2, 2023 – 03:31 AM EDT

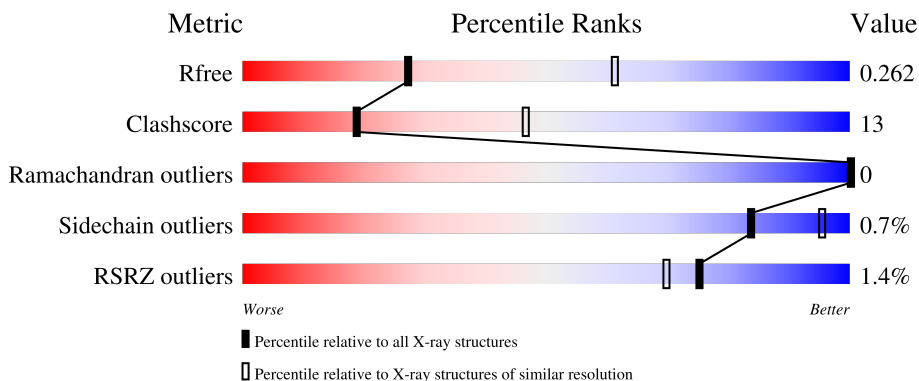|		
PDB ID	:	3MLP
Title	:	Early B-cell Factor 1 (Ebf1) bound to DNA
Authors	:	Treiber, N.; Treiber, T.; Zocher, G.; Grosschedl, R.
Deposited on	:	2010-04-17
Resolution	:	2.80 Å(reported)

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 2.80 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	Percentile Ranks	Value
Rfree		0.262
Clashscore		13
Ramachandran outliers		0
Sidechain outliers		0.7%
RSRZ outliers		1.4%

Worse — *Better*

▮ Percentile relative to all X-ray structures
▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)

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	402	% 63% 21% 16%
1	B	402	2% 59% 24% 17%
1	E	402	% 56% 19% 25%
1	F	402	56% 18% 26%
2	C	22	36% 50% 14%

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Mol	Chain	Length	Quality of chain
2	D	22	32% ‧ 50% ‧ 18%
2	G	22	68% ‧ 27% ‧ 5%
2	H	22	32% ‧ 59% ‧ 9%

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
4	CIT	F	6	-	X	-	-

2   Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 11961 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 Transcription factor COE1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	337	Total 2626	C 1653	N 475	O 482	S 16	0	0	0
1	B	332	Total 2591	C 1637	N 462	O 477	S 15	0	0	0
1	E	303	Total 2399	C 1511	N 435	O 438	S 15	0	0	0
1	F	298	Total 2334	C 1475	N 415	O 429	S 15	0	0	0

There are 76 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	GLY	deletion	UNP Q07802
A	?	-	THR	deletion	UNP Q07802
A	?	-	PRO	deletion	UNP Q07802
A	?	-	SER	deletion	UNP Q07802
A	?	-	TYR	deletion	UNP Q07802
A	?	-	LEU	deletion	UNP Q07802
A	?	-	GLU	deletion	UNP Q07802
A	252	ALA	HIS	engineered mutation	UNP Q07802
A	415	ALA	-	expression tag	UNP Q07802
A	416	ALA	-	expression tag	UNP Q07802
A	417	VAL	-	expression tag	UNP Q07802
A	418	LEU	-	expression tag	UNP Q07802
A	419	GLU	-	expression tag	UNP Q07802
A	420	HIS	-	expression tag	UNP Q07802
A	421	HIS	-	expression tag	UNP Q07802
A	422	HIS	-	expression tag	UNP Q07802
A	423	HIS	-	expression tag	UNP Q07802
A	424	HIS	-	expression tag	UNP Q07802
A	425	HIS	-	expression tag	UNP Q07802
B	?	-	GLY	deletion	UNP Q07802
B	?	-	THR	deletion	UNP Q07802

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Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	PRO	deletion	UNP Q07802
B	?	-	SER	deletion	UNP Q07802
B	?	-	TYR	deletion	UNP Q07802
B	?	-	LEU	deletion	UNP Q07802
B	?	-	GLU	deletion	UNP Q07802
B	252	ALA	HIS	engineered mutation	UNP Q07802
B	415	ALA	-	expression tag	UNP Q07802
B	416	ALA	-	expression tag	UNP Q07802
B	417	VAL	-	expression tag	UNP Q07802
B	418	LEU	-	expression tag	UNP Q07802
B	419	GLU	-	expression tag	UNP Q07802
B	420	HIS	-	expression tag	UNP Q07802
B	421	HIS	-	expression tag	UNP Q07802
B	422	HIS	-	expression tag	UNP Q07802
B	423	HIS	-	expression tag	UNP Q07802
B	424	HIS	-	expression tag	UNP Q07802
B	425	HIS	-	expression tag	UNP Q07802
E	?	-	GLY	deletion	UNP Q07802
E	?	-	THR	deletion	UNP Q07802
E	?	-	PRO	deletion	UNP Q07802
E	?	-	SER	deletion	UNP Q07802
E	?	-	TYR	deletion	UNP Q07802
E	?	-	LEU	deletion	UNP Q07802
E	?	-	GLU	deletion	UNP Q07802
E	252	ALA	HIS	engineered mutation	UNP Q07802
E	415	ALA	-	expression tag	UNP Q07802
E	416	ALA	-	expression tag	UNP Q07802
E	417	VAL	-	expression tag	UNP Q07802
E	418	LEU	-	expression tag	UNP Q07802
E	419	GLU	-	expression tag	UNP Q07802
E	420	HIS	-	expression tag	UNP Q07802
E	421	HIS	-	expression tag	UNP Q07802
E	422	HIS	-	expression tag	UNP Q07802
E	423	HIS	-	expression tag	UNP Q07802
E	424	HIS	-	expression tag	UNP Q07802
E	425	HIS	-	expression tag	UNP Q07802
F	?	-	GLY	deletion	UNP Q07802
F	?	-	THR	deletion	UNP Q07802
F	?	-	PRO	deletion	UNP Q07802
F	?	-	SER	deletion	UNP Q07802
F	?	-	TYR	deletion	UNP Q07802
F	?	-	LEU	deletion	UNP Q07802

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Chain	Residue	Modelled	Actual	Comment	Reference
F	?	-	GLU	deletion	UNP Q07802
F	252	ALA	HIS	engineered mutation	UNP Q07802
F	415	ALA	-	expression tag	UNP Q07802
F	416	ALA	-	expression tag	UNP Q07802
F	417	VAL	-	expression tag	UNP Q07802
F	418	LEU	-	expression tag	UNP Q07802
F	419	GLU	-	expression tag	UNP Q07802
F	420	HIS	-	expression tag	UNP Q07802
F	421	HIS	-	expression tag	UNP Q07802
F	422	HIS	-	expression tag	UNP Q07802
F	423	HIS	-	expression tag	UNP Q07802
F	424	HIS	-	expression tag	UNP Q07802
F	425	HIS	-	expression tag	UNP Q07802

- Molecule 2 is a DNA chain called DNA (5'-D(*CP*TP*TP*TP*AP*TP*TP*CP*CP*CP* AP*TP*GP*GP*GP*AP*AP*TP*AP*AP*AP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	22	Total 448	C 216	N 81	O 130	P 21	0	0	0
2	D	22	Total 448	C 216	N 81	O 130	P 21	0	0	0
2	G	22	Total 448	C 216	N 81	O 130	P 21	0	0	0
2	H	22	Total 448	C 216	N 81	O 130	P 21	0	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total 1	Zn 1	0	0
3	B	1	Total 1	Zn 1	0	0
3	E	1	Total 1	Zn 1	0	0
3	F	1	Total 1	Zn 1	0	0

- Molecule 4 is CITRIC ACID (three-letter code: CIT) (formula: $C_6H_8O_7$).

CIT
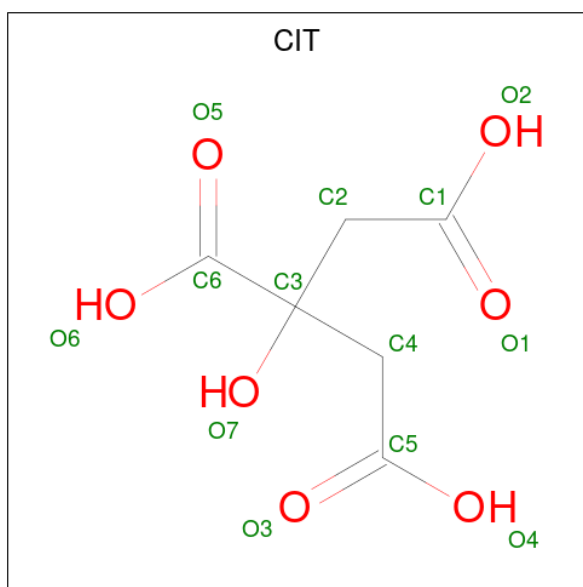
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total 13	C 6	O 7	0	0
4	A	1	Total 13	C 6	O 7	0	0
4	B	1	Total 13	C 6	O 7	0	0
4	E	1	Total 13	C 6	O 7	0	0
4	F	1	Total 13	C 6	O 7	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	36	Total 36	O 36	0	0
5	B	24	Total 24	O 24	0	0
5	C	3	Total 3	O 3	0	0
5	D	4	Total 4	O 4	0	0
5	E	34	Total 34	O 34	0	0
5	F	35	Total 35	O 35	0	0
5	G	8	Total 8	O 8	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	H	6	Total 6	O 6	0	0

3 Residue-property plots ⓘ

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: Transcription factor COE1
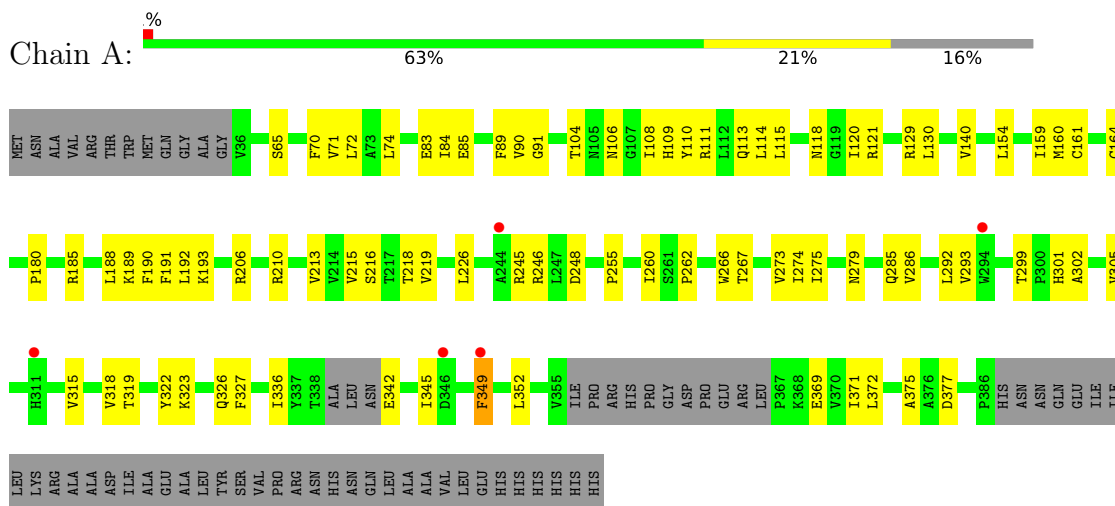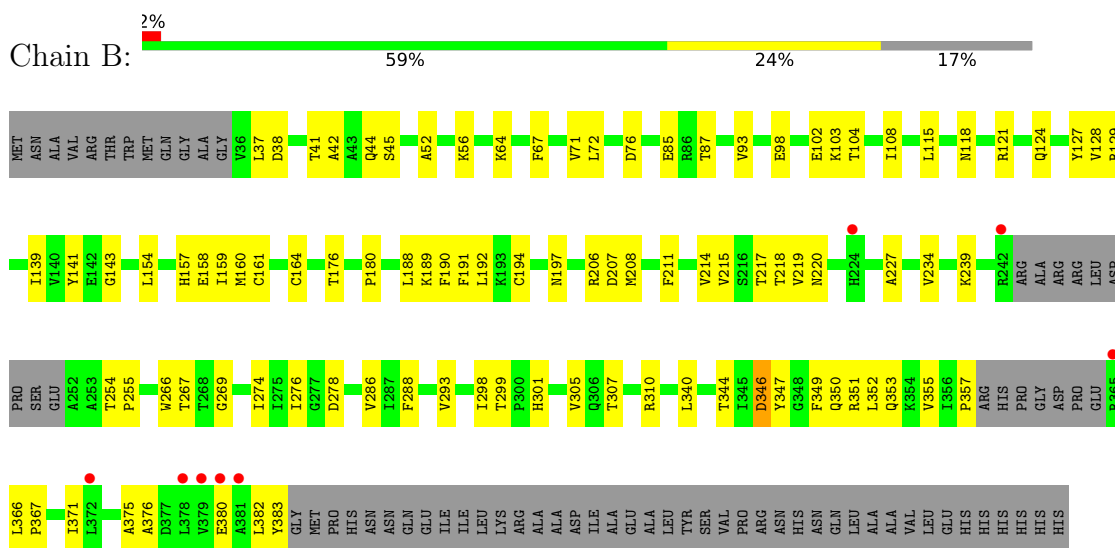
Chain A:

• Molecule 1: Transcription factor COE1

Chain B:

• Molecule 1: Transcription factor COE1

Chain E:

● Molecule 1: Transcription factor COE1

Chain F:

● Molecule 2: DNA (5'-D(*CP*TP*TP*TP*AP*TP*TP*CP*CP*CP*AP*TP*GP*GP*GP*AP*AP*TP*AP*AP*AP*G)-3')

Chain C:

● Molecule 2: DNA (5'-D(*CP*TP*TP*TP*AP*TP*TP*CP*CP*CP*AP*TP*GP*GP*GP*AP*AP*TP*AP*AP*AP*G)-3')

Chain D:

● Molecule 2: DNA (5'-D(*CP*TP*TP*TP*AP*TP*TP*CP*CP*CP*AP*TP*GP*GP*GP*AP*AP*TP*AP*AP*AP*G)-3')

Chain G:

C1 T2 T3 T6 T7 C8 T12 G15 T18 A21 G22
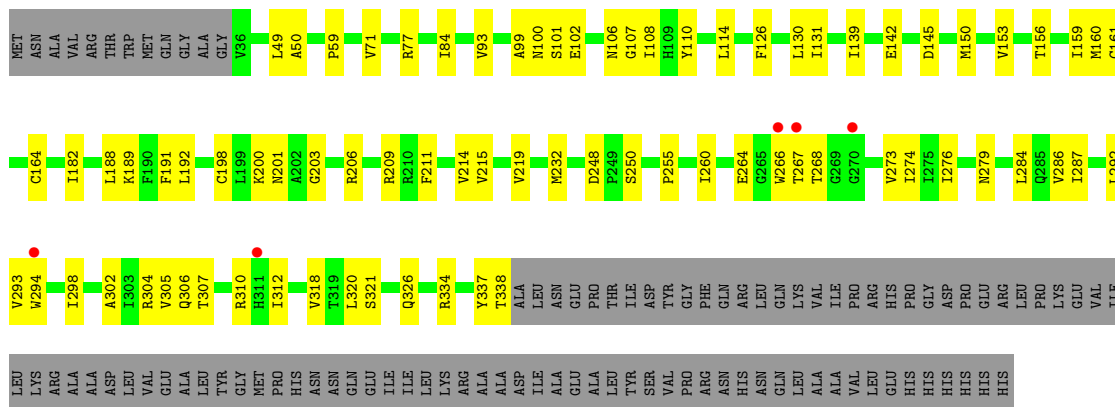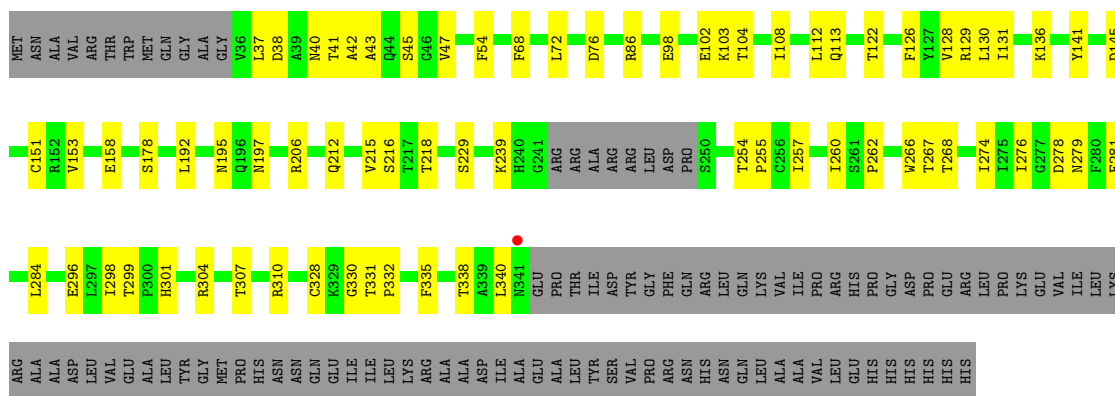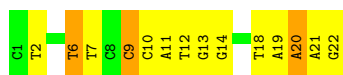
• Molecule 2: DNA (5'-D(*CP*TP*TP*TP*AP*TP*TP*CP*CP*CP*AP*TP*GP*GP*GP*AP
*AP*TP*AP*AP*AP*G)-3')

Chain H:

32%　　　　　　　　　　　　　59%　　　　　　　　　　　　9%

C1 T2 T3 T6 T7 C8 C9 C10 A11 T12 G13 G14 G15 A16 A17 T18 A19 G22

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	70.49Å 78.69Å 103.57Å 88.99° 90.00° 77.81°	Depositor
Resolution (Å)	38.75 – 2.80 38.75 – 2.80	Depositor EDS
% Data completeness (in resolution range)	100.0 (38.75-2.80) 96.8 (38.75-2.80)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	2.01 (at 2.81Å)	Xtriage
Refinement program	REFMAC 5.5.0109	Depositor
R, R_{free}	0.204 , 0.264 0.204 , 0.262	Depositor DCC
R_{free} test set	2592 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	47.2	Xtriage
Anisotropy	0.386	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 34.6	EDS
L-test for twinning[2]	$< |L| > = 0.46, < L^2 > = 0.28$	Xtriage
Estimated twinning fraction	0.036 for -h,-k,l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	11961	wwPDB-VP
Average B, all atoms (Å^2)	50.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.77% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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: CIT, ZN

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	0.49	0/2681	0.64	0/3626
1	B	0.48	0/2646	0.65	0/3583
1	E	0.53	0/2451	0.66	0/3314
1	F	0.52	0/2384	0.67	0/3226
2	C	0.97	0/502	1.77	13/773 (1.7%)
2	D	1.17	1/502 (0.2%)	1.84	16/773 (2.1%)
2	G	0.97	0/502	1.71	9/773 (1.2%)
2	H	1.01	1/502 (0.2%)	1.69	13/773 (1.7%)
All	All	0.62	2/12170 (0.0%)	0.96	51/16841 (0.3%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	6	DT	C3'-O3'	-6.87	1.35	1.44
2	H	12	DT	C3'-O3'	-6.05	1.36	1.44

The worst 5 of 51 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	D	18	DT	O4'-C4'-C3'	-9.72	100.17	106.00
2	D	6	DT	N3-C4-O4	9.02	125.31	119.90
2	H	7	DT	N3-C4-O4	8.95	125.27	119.90
2	G	6	DT	O4'-C4'-C3'	-8.89	100.66	106.00
2	D	6	DT	C5-C4-O4	-8.87	118.69	124.90

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	2626	0	2563	75	0
1	B	2591	0	2527	78	0
1	E	2399	0	2378	72	0
1	F	2334	0	2296	57	0
2	C	448	0	251	8	0
2	D	448	0	251	7	0
2	G	448	0	251	2	0
2	H	448	0	251	8	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
4	A	26	0	10	5	0
4	B	13	0	5	3	0
4	E	13	0	5	0	0
4	F	13	0	5	1	0
5	A	36	0	0	1	0
5	B	24	0	0	1	0
5	C	3	0	0	0	0
5	D	4	0	0	1	0
5	E	34	0	0	0	0
5	F	35	0	0	0	0
5	G	8	0	0	0	0
5	H	6	0	0	1	0
All	All	11961	0	10793	295	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 13.

The worst 5 of 295 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:B:64:LYS:NZ	1:B:197:ASN:OD1	1.87	1.08
1:E:287:ILE:CD1	1:E:292:LEU:HD23	1.94	0.97
1:A:260:ILE:HG22	1:A:260:ILE:O	1.64	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:287:ILE:HD12	1:E:292:LEU:HD23	1.58	0.85
1:A:299:THR:HG23	1:A:301:HIS:H	1.43	0.83

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	331/402 (82%)	306 (92%)	25 (8%)	0	100	100
1	B	326/402 (81%)	305 (94%)	21 (6%)	0	100	100
1	E	301/402 (75%)	284 (94%)	17 (6%)	0	100	100
1	F	294/402 (73%)	278 (95%)	16 (5%)	0	100	100
All	All	1252/1608 (78%)	1173 (94%)	79 (6%)	0	100	100

There are no Ramachandran outliers to report.

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	282/348 (81%)	280 (99%)	2 (1%)	84	95
1	B	279/348 (80%)	278 (100%)	1 (0%)	91	97
1	E	265/348 (76%)	262 (99%)	3 (1%)	73	92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	F	256/348 (74%)	254 (99%)	2 (1%)	81	94
All	All	1082/1392 (78%)	1074 (99%)	8 (1%)	84	95

5 of 8 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	F	340	LEU
1	F	206	ARG
1	E	264	GLU
1	E	145	ASP
1	E	326	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	195	ASN

5.3.3　RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5　Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6　Ligand geometry ⓘ

Of 9 ligands modelled in this entry, 4 are monoatomic - leaving 5 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	$\#\|Z\| > 2$
4	CIT	B	4	-	12,12,12	1.22	0	17,17,17	1.80	4 (23%)
4	CIT	A	1	-	12,12,12	1.21	0	17,17,17	1.88	3 (17%)
4	CIT	A	3	-	12,12,12	1.00	0	17,17,17	1.75	5 (29%)
4	CIT	F	6	-	12,12,12	1.41	2 (16%)	17,17,17	2.22	8 (47%)
4	CIT	E	2	-	12,12,12	1.16	0	17,17,17	1.75	4 (23%)

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
4	CIT	B	4	-	-	7/16/16/16	-
4	CIT	A	1	-	-	7/16/16/16	-
4	CIT	A	3	-	-	8/16/16/16	-
4	CIT	F	6	-	-	9/16/16/16	-
4	CIT	E	2	-	-	4/16/16/16	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	F	6	CIT	C4-C3	2.22	1.56	1.53
4	F	6	CIT	C2-C3	2.04	1.56	1.53

The worst 5 of 24 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	B	4	CIT	O6-C6-C3	5.02	121.77	113.05
4	A	1	CIT	O6-C6-C3	4.82	121.41	113.05
4	F	6	CIT	O6-C6-C3	4.36	120.62	113.05
4	E	2	CIT	O6-C6-C3	4.24	120.41	113.05
4	A	3	CIT	O6-C6-C3	4.13	120.22	113.05

There are no chirality outliers.

5 of 35 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	3	CIT	C2-C3-C6-O5
4	A	3	CIT	C2-C3-C6-O6
4	A	3	CIT	O7-C3-C6-O5
4	A	3	CIT	O7-C3-C6-O6
4	B	4	CIT	O7-C3-C6-O5

There are no ring outliers.

4 monomers are involved in 9 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	4	CIT	3	0
4	A	1	CIT	2	0
4	A	3	CIT	3	0
4	F	6	CIT	1	0

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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(Å²)	Q<0.9
1	A	337/402 (83%)	-0.34	5 (1%)	73	68	22, 49, 117, 155	0
1	B	332/402 (82%)	-0.32	8 (2%)	59	49	29, 48, 111, 158	0
1	E	303/402 (75%)	-0.40	5 (1%)	70	63	23, 44, 94, 140	0
1	F	298/402 (74%)	-0.49	1 (0%)	94	93	22, 44, 83, 127	0
2	C	22/22 (100%)	-0.84	0	100	100	26, 34, 59, 71	0
2	D	22/22 (100%)	-0.85	0	100	100	24, 38, 60, 88	0
2	G	22/22 (100%)	-0.89	0	100	100	24, 30, 58, 67	0
2	H	22/22 (100%)	-0.81	0	100	100	22, 33, 53, 76	0
All	All	1358/1696 (80%)	-0.41	19 (1%)	75	70	22, 46, 106, 158	0

The worst 5 of 19 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	379	VAL	3.6
1	B	378	LEU	3.5
1	E	311	HIS	3.2
1	E	266	TRP	3.2
1	B	365	ARG	2.7

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	CIT	F	6	13/13	0.81	0.20	52,59,62,63	0
4	CIT	B	4	13/13	0.88	0.19	61,68,71,71	0
4	CIT	A	3	13/13	0.91	0.13	56,63,66,68	0
4	CIT	A	1	13/13	0.93	0.13	42,46,50,51	0
4	CIT	E	2	13/13	0.94	0.11	53,56,60,60	0
3	ZN	B	501	1/1	0.99	0.10	38,38,38,38	0
3	ZN	F	501	1/1	1.00	0.09	32,32,32,32	0
3	ZN	A	501	1/1	1.00	0.06	43,43,43,43	0
3	ZN	E	501	1/1	1.00	0.10	38,38,38,38	0

6.5 Other polymers ⓘ

There are no such residues in this entry.