



wwPDB X-ray Structure Validation Summary Report ⓘ

Feb 15, 2017 – 04:33 am GMT

PDB ID : 3L7M
Title : Structure of the Wall Teichoic Acid Polymerase TagF, H548A
Authors : Lovering, A.L.; Strynadka, N.C.J.
Deposited on : 2009-12-28
Resolution : 2.85 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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 : 1.7.2 (RC1), CSD as538be (2017)
Xtriage (Phenix) : 1.9-1692
EDS : trunk28620
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
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) : recalc28949

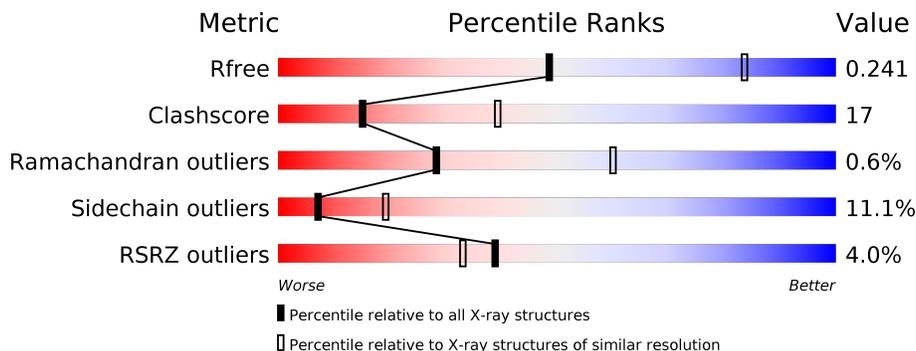
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.85 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	100719	2469 (2.90-2.82)
Clashscore	112137	2749 (2.90-2.82)
Ramachandran outliers	110173	2687 (2.90-2.82)
Sidechain outliers	110143	2690 (2.90-2.82)
RSRZ outliers	101464	2487 (2.90-2.82)

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	729	 2% 35% 18% 44%
1	B	729	 2% 37% 16% 44%
1	C	729	 3% 36% 18% 44%
1	D	729	 3% 35% 19% 43%

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 crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	CL	B	735	-	-	X	-
3	CL	B	736	-	-	X	-
4	EDT	A	738	-	-	X	X
4	EDT	D	735	-	-	X	X

2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 13942 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 Teichoic acid biosynthesis protein F.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	407	3434	2206	572	645	11	0	0	0
1	B	411	3464	2226	577	650	11	0	0	0
1	C	411	3464	2226	577	650	11	0	0	0
1	D	412	3474	2232	580	651	11	0	0	0

There are 36 discrepancies between the modelled and reference sequences:

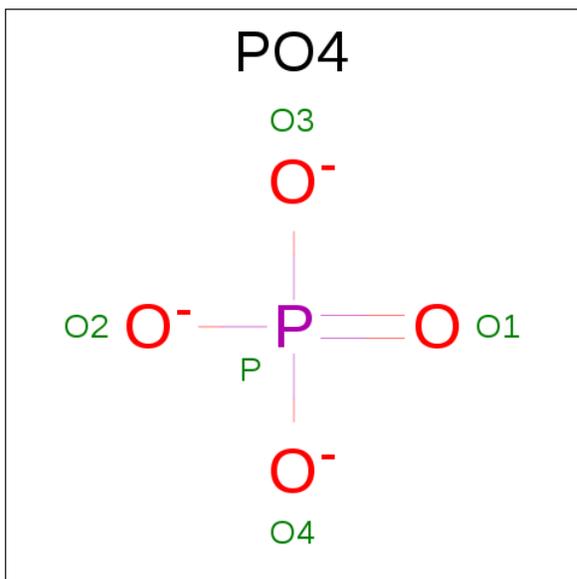
Chain	Residue	Modelled	Actual	Comment	Reference
A	584	ALA	HIS	ENGINEERED	UNP Q5HLM5
A	722	LEU	-	EXPRESSION TAG	UNP Q5HLM5
A	723	GLU	-	EXPRESSION TAG	UNP Q5HLM5
A	724	HIS	-	EXPRESSION TAG	UNP Q5HLM5
A	725	HIS	-	EXPRESSION TAG	UNP Q5HLM5
A	726	HIS	-	EXPRESSION TAG	UNP Q5HLM5
A	727	HIS	-	EXPRESSION TAG	UNP Q5HLM5
A	728	HIS	-	EXPRESSION TAG	UNP Q5HLM5
A	729	HIS	-	EXPRESSION TAG	UNP Q5HLM5
B	584	ALA	HIS	ENGINEERED	UNP Q5HLM5
B	722	LEU	-	EXPRESSION TAG	UNP Q5HLM5
B	723	GLU	-	EXPRESSION TAG	UNP Q5HLM5
B	724	HIS	-	EXPRESSION TAG	UNP Q5HLM5
B	725	HIS	-	EXPRESSION TAG	UNP Q5HLM5
B	726	HIS	-	EXPRESSION TAG	UNP Q5HLM5
B	727	HIS	-	EXPRESSION TAG	UNP Q5HLM5
B	728	HIS	-	EXPRESSION TAG	UNP Q5HLM5
B	729	HIS	-	EXPRESSION TAG	UNP Q5HLM5
C	584	ALA	HIS	ENGINEERED	UNP Q5HLM5
C	722	LEU	-	EXPRESSION TAG	UNP Q5HLM5
C	723	GLU	-	EXPRESSION TAG	UNP Q5HLM5

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Chain	Residue	Modelled	Actual	Comment	Reference
C	724	HIS	-	EXPRESSION TAG	UNP Q5HLM5
C	725	HIS	-	EXPRESSION TAG	UNP Q5HLM5
C	726	HIS	-	EXPRESSION TAG	UNP Q5HLM5
C	727	HIS	-	EXPRESSION TAG	UNP Q5HLM5
C	728	HIS	-	EXPRESSION TAG	UNP Q5HLM5
C	729	HIS	-	EXPRESSION TAG	UNP Q5HLM5
D	584	ALA	HIS	ENGINEERED	UNP Q5HLM5
D	722	LEU	-	EXPRESSION TAG	UNP Q5HLM5
D	723	GLU	-	EXPRESSION TAG	UNP Q5HLM5
D	724	HIS	-	EXPRESSION TAG	UNP Q5HLM5
D	725	HIS	-	EXPRESSION TAG	UNP Q5HLM5
D	726	HIS	-	EXPRESSION TAG	UNP Q5HLM5
D	727	HIS	-	EXPRESSION TAG	UNP Q5HLM5
D	728	HIS	-	EXPRESSION TAG	UNP Q5HLM5
D	729	HIS	-	EXPRESSION TAG	UNP Q5HLM5

- Molecule 2 is PHOSPHATE ION (three-letter code: PO4) (formula: O₄P).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	O	P	0	0
			5	4	1		
2	A	1	Total	O	P	0	0
			5	4	1		
2	B	1	Total	O	P	0	0
			5	4	1		
2	B	1	Total	O	P	0	0
			5	4	1		

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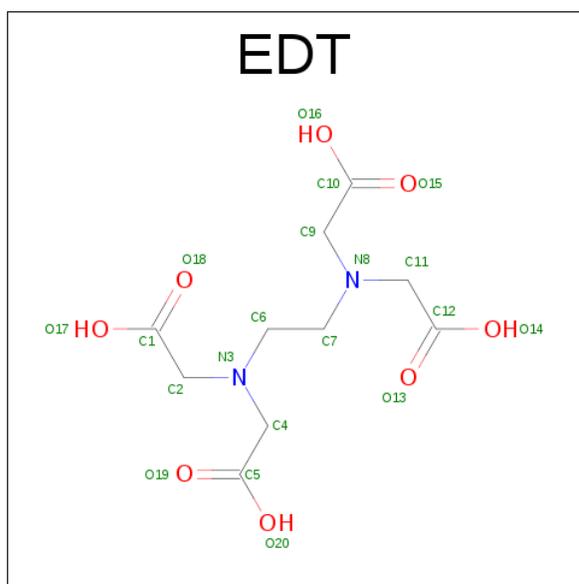
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	C	1	Total	O	P	0	0
			5	4	1		
2	C	1	Total	O	P	0	0
			5	4	1		
2	D	1	Total	O	P	0	0
			5	4	1		
2	D	1	Total	O	P	0	0
			5	4	1		

- Molecule 3 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	B	6	Total	Cl	0	0
			6	6		
3	A	6	Total	Cl	0	0
			6	6		
3	D	4	Total	Cl	0	0
			4	4		
3	C	2	Total	Cl	0	0
			2	2		

- Molecule 4 is {[-(BIS-CARBOXYMETHYL-AMINO)-ETHYL]-CARBOXYMETHYL-AMINO}-ACETIC ACID (three-letter code: EDT) (formula: C₁₀H₁₆N₂O₈).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			20	10	2	8		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
4	D	1	20	10	2	8	0	0

- Molecule 5 is water.

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

4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α , β , γ	223.51Å 223.51Å 101.76Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.94 – 2.85 19.94 – 2.85	Depositor EDS
% Data completeness (in resolution range)	90.0 (19.94-2.85) 89.9 (19.94-2.85)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	0.06	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.70 (at 2.83Å)	Xtrriage
Refinement program	PHENIX (phenix.refine)	Depositor
R, R_{free}	0.191 , 0.251 0.184 , 0.241	Depositor DCC
R_{free} test set	2712 reflections (5.00%)	DCC
Wilson B-factor (Å ²)	86.4	Xtrriage
Anisotropy	0.162	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 44.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	13942	wwPDB-VP
Average B, all atoms (Å ²)	97.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.66% 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, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: PO4, EDT, CL

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	0.41	0/3521	0.59	0/4757
1	B	0.43	0/3553	0.60	1/4801 (0.0%)
1	C	0.40	0/3553	0.58	0/4801
1	D	0.39	0/3564	0.59	0/4816
All	All	0.41	0/14191	0.59	1/19175 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C	0	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	B	619	LEU	CA-CB-CG	5.64	128.28	115.30

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	364	ASN	Peptide

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	3434	0	3342	121	0
1	B	3464	0	3373	103	0
1	C	3464	0	3373	118	0
1	D	3474	0	3380	123	0
2	A	10	0	0	1	0
2	B	10	0	0	1	0
2	C	10	0	0	0	0
2	D	10	0	0	1	0
3	A	6	0	0	2	0
3	B	6	0	0	5	0
3	C	2	0	0	1	0
3	D	4	0	0	2	0
4	A	20	0	16	10	0
4	D	20	0	16	7	0
5	A	1	0	0	0	0
5	B	4	0	0	2	0
5	C	1	0	0	0	0
5	D	2	0	0	0	0
All	All	13942	0	13500	462	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 17.

The worst 5 of 462 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:470:ARG:HG2	1:C:470:ARG:HH11	1.10	1.10
1:A:333:ARG:HH11	1:A:333:ARG:HG2	1.20	1.04
1:B:470:ARG:HG2	1:B:470:ARG:HH11	1.19	1.00
1:D:470:ARG:HH11	1:D:470:ARG:HG2	1.21	1.00
1:B:333:ARG:HH11	1:B:333:ARG:HG2	1.21	0.99

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	403/729 (55%)	369 (92%)	33 (8%)	1 (0%)	51	80
1	B	409/729 (56%)	366 (90%)	40 (10%)	3 (1%)	25	56
1	C	409/729 (56%)	363 (89%)	41 (10%)	5 (1%)	15	42
1	D	410/729 (56%)	372 (91%)	37 (9%)	1 (0%)	51	80
All	All	1631/2916 (56%)	1470 (90%)	151 (9%)	10 (1%)	28	60

5 of 10 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	550	ASP
1	C	535	PRO
1	D	649	LYS
1	A	689	GLU
1	B	443	TRP

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	376/674 (56%)	332 (88%)	44 (12%)	6	16
1	B	378/674 (56%)	331 (88%)	47 (12%)	5	14
1	C	378/674 (56%)	341 (90%)	37 (10%)	9	25
1	D	379/674 (56%)	339 (89%)	40 (11%)	8	21
All	All	1511/2696 (56%)	1343 (89%)	168 (11%)	7	19

5 of 168 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	604	SER
1	C	333	ARG
1	D	625	SER
1	B	623	TYR
1	B	676	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 14 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	703	ASN
1	B	708	GLN
1	D	349	ASN
1	B	686	GLN
1	C	686	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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 28 ligands modelled in this entry, 18 are monoatomic - leaving 10 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
2	PO4	A	730	-	4,4,4	0.71	0	6,6,6	0.57	0
2	PO4	A	731	-	4,4,4	0.73	0	6,6,6	0.42	0
4	EDT	A	738	-	7,19,19	0.37	0	12,24,24	1.17	2 (16%)
2	PO4	B	730	-	4,4,4	0.75	0	6,6,6	0.37	0
2	PO4	B	731	-	4,4,4	0.78	0	6,6,6	0.52	0
2	PO4	C	730	-	4,4,4	0.72	0	6,6,6	0.45	0
2	PO4	C	731	-	4,4,4	0.73	0	6,6,6	0.42	0
2	PO4	D	730	-	4,4,4	0.82	0	6,6,6	0.30	0
2	PO4	D	731	-	4,4,4	0.59	0	6,6,6	0.67	0
4	EDT	D	735	-	7,19,19	0.42	0	12,24,24	1.76	2 (16%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PO4	A	730	-	-	0/0/0/0	0/0/0/0
2	PO4	A	731	-	-	0/0/0/0	0/0/0/0
4	EDT	A	738	-	-	0/13/21/21	0/0/0/0
2	PO4	B	730	-	-	0/0/0/0	0/0/0/0
2	PO4	B	731	-	-	0/0/0/0	0/0/0/0
2	PO4	C	730	-	-	0/0/0/0	0/0/0/0
2	PO4	C	731	-	-	0/0/0/0	0/0/0/0
2	PO4	D	730	-	-	0/0/0/0	0/0/0/0
2	PO4	D	731	-	-	0/0/0/0	0/0/0/0
4	EDT	D	735	-	-	0/13/21/21	0/0/0/0

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	738	EDT	C5-C4-N3	-2.57	109.83	113.48
4	A	738	EDT	C1-C2-N3	-2.50	109.92	113.48
4	D	735	EDT	C4-N3-C6	2.61	116.84	111.29
4	D	735	EDT	C2-N3-C4	4.67	118.75	110.73

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	731	PO4	1	0
4	A	738	EDT	10	0
2	B	731	PO4	1	0
2	D	731	PO4	1	0
4	D	735	EDT	7	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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	407/729 (55%)	-0.19	11 (2%) 55 50	57, 87, 151, 221	0
1	B	411/729 (56%)	-0.20	16 (3%) 40 34	58, 84, 147, 265	0
1	C	411/729 (56%)	-0.05	19 (4%) 33 28	59, 96, 163, 264	0
1	D	412/729 (56%)	-0.11	19 (4%) 33 28	63, 89, 163, 306	0
All	All	1641/2916 (56%)	-0.14	65 (3%) 39 33	57, 89, 160, 306	0

The worst 5 of 65 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	724	HIS	8.0
1	C	558	TYR	7.2
1	D	652	ARG	5.9
1	B	555	LYS	5.6
1	C	556	GLY	5.3

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
4	EDT	A	738	20/20	0.78	0.29	2.96	134,134,134,134	0
4	EDT	D	735	20/20	0.78	0.29	2.42	132,132,132,132	0
3	CL	B	737	1/1	0.87	0.21	1.50	99,99,99,99	0
2	PO4	C	731	5/5	0.90	0.26	1.22	152,152,152,152	0
3	CL	A	734	1/1	0.95	0.16	0.79	102,102,102,102	0
3	CL	A	737	1/1	0.78	0.22	0.71	115,115,115,115	0
3	CL	C	733	1/1	0.83	0.27	0.11	108,108,108,108	0
2	PO4	B	731	5/5	0.95	0.16	-0.08	123,123,123,123	0
2	PO4	D	731	5/5	0.93	0.15	-0.24	133,133,133,133	0
2	PO4	A	731	5/5	0.96	0.12	-0.58	124,124,124,124	0
2	PO4	D	730	5/5	0.98	0.12	-1.31	125,125,125,125	0
2	PO4	B	730	5/5	0.97	0.10	-1.56	112,112,112,112	0
2	PO4	A	730	5/5	0.98	0.09	-2.38	102,102,102,102	0
2	PO4	C	730	5/5	0.96	0.10	-2.69	125,125,125,125	0
3	CL	B	732	1/1	0.99	0.06	-2.78	69,69,69,69	0
3	CL	D	734	1/1	0.92	0.42	-	113,113,113,113	0
3	CL	A	736	1/1	0.61	0.44	-	111,111,111,111	0
3	CL	B	734	1/1	0.69	0.50	-	141,141,141,141	0
3	CL	D	736	1/1	0.89	0.17	-	87,87,87,87	0
3	CL	C	732	1/1	0.88	0.20	-	119,119,119,119	0
3	CL	B	735	1/1	0.89	0.19	-	107,107,107,107	0
3	CL	A	735	1/1	0.70	0.66	-	104,104,104,104	0
3	CL	D	732	1/1	0.86	0.11	-	107,107,107,107	0
3	CL	D	733	1/1	0.69	0.34	-	124,124,124,124	0
3	CL	A	732	1/1	0.87	0.56	-	126,126,126,126	0
3	CL	B	736	1/1	0.94	0.50	-	140,140,140,140	0
3	CL	A	733	1/1	0.98	0.39	-	93,93,93,93	0
3	CL	B	733	1/1	0.80	0.47	-	109,109,109,109	0

6.5 Other polymers

There are no such residues in this entry.