



Full wwPDB X-ray Structure Validation Report

Mar 1, 2014 – 03:58 AM GMT

PDB ID : 3Q12
Title : Pantoate-beta-alanineligase from Yersinia pestis in complex with pantoate.
Authors : Osipiuk, J.; Maltseva, N.; Kwon, K.; Anderson, W.F.; Joachimiak, A.; Center
for Structural Genomics of Infectious Diseases (CSGID)
Deposited on : 2010-12-16
Resolution : 1.58 Å(reported)

This is a full wwPDB 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/ValidationPDFNotes.html>

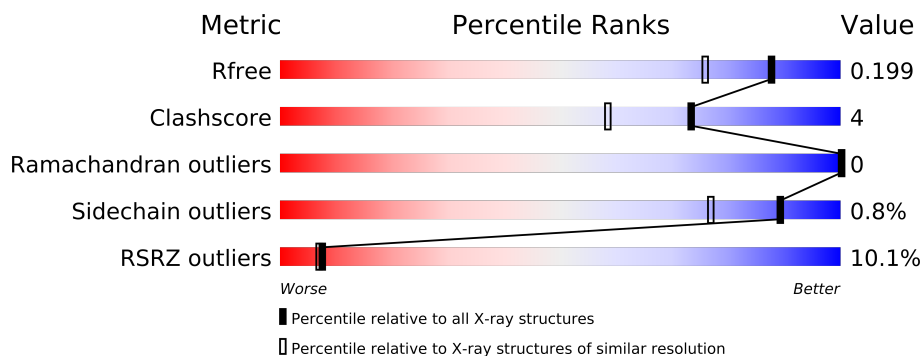
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 1.58 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}	66092	2778 (1.60-1.56)
Clashscore	79885	3207 (1.60-1.56)
Ramachandran outliers	78287	3107 (1.60-1.56)
Sidechain outliers	78261	3104 (1.60-1.56)
RSRZ outliers	66119	2778 (1.60-1.56)

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. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	287	
1	B	287	
1	C	287	
1	D	287	

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 10600 atoms, of which 0 are hydrogen and 0 are deuterium.

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.

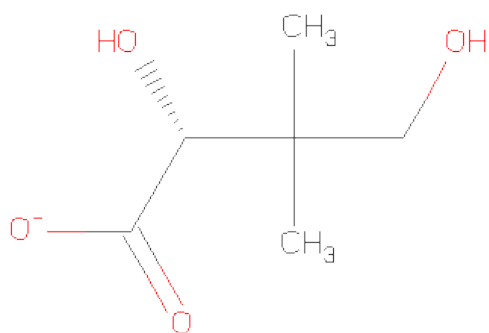
- Molecule 1 is a protein called Pantoate--beta-alanineligase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	285	Total	C	N	O	S	0	19	0
			2351	1501	405	435	10			
1	B	284	Total	C	N	O	S	0	25	0
			2374	1521	402	441	10			
1	C	285	Total	C	N	O	S	0	22	0
			2370	1512	412	436	10			
1	D	283	Total	C	N	O	S	0	15	0
			2305	1475	395	425	10			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	SER	-	EXPRESSION TAG	UNP Q8ZBK7
A	-1	ASN	-	EXPRESSION TAG	UNP Q8ZBK7
A	0	ALA	-	EXPRESSION TAG	UNP Q8ZBK7
B	-2	SER	-	EXPRESSION TAG	UNP Q8ZBK7
B	-1	ASN	-	EXPRESSION TAG	UNP Q8ZBK7
B	0	ALA	-	EXPRESSION TAG	UNP Q8ZBK7
C	-2	SER	-	EXPRESSION TAG	UNP Q8ZBK7
C	-1	ASN	-	EXPRESSION TAG	UNP Q8ZBK7
C	0	ALA	-	EXPRESSION TAG	UNP Q8ZBK7
D	-2	SER	-	EXPRESSION TAG	UNP Q8ZBK7
D	-1	ASN	-	EXPRESSION TAG	UNP Q8ZBK7
D	0	ALA	-	EXPRESSION TAG	UNP Q8ZBK7

- Molecule 2 is PANTOATE (three-letter code: PAF) (formula: C₆H₁₁O₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			10	6	4		
2	B	1	Total	C	O	0	0
			10	6	4		
2	C	1	Total	C	O	0	0
			10	6	4		
2	D	1	Total	C	O	0	0
			10	6	4		

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	Cl	0	0
			1	1		
3	C	1	Total	Cl	0	0
			1	1		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	376	Total	O	0	4
			378	378		
4	B	299	Total	O	0	1
			299	299		
4	C	303	Total	O	0	5
			305	305		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	D	176	Total 176	O 176	0	2

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.

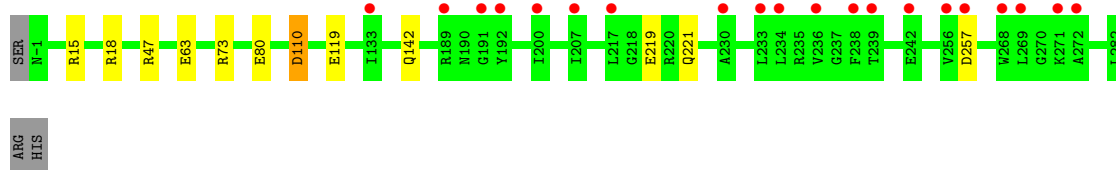
- Molecule 1: Pantoate--beta-alanineligase

Chain A: 



- Molecule 1: Pantoate--beta-alanineligase

Chain B: 



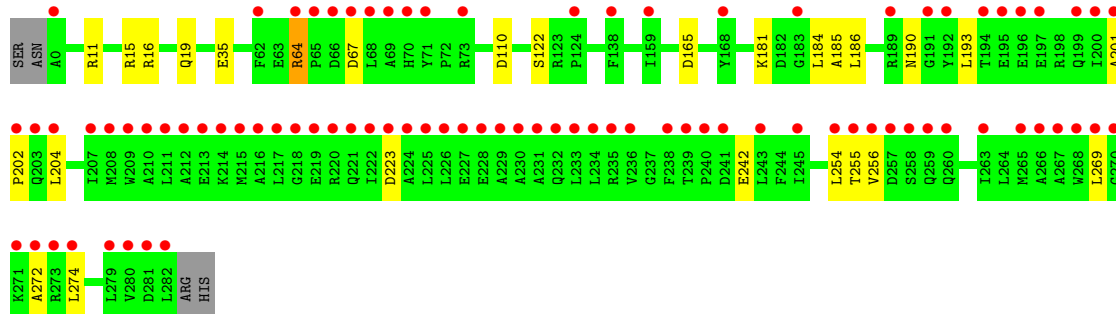
- Molecule 1: Pantoate--beta-alanineligase

Chain C: 



- Molecule 1: Pantoate--beta-alanineligase

Chain D: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	44.73Å 77.05Å 98.76Å 100.67° 95.33° 94.43°	Depositor
Resolution (Å)	36.69 – 1.58 36.69 – 1.58	Depositor EDS
% Data completeness (in resolution range)	87.2 (36.69-1.58) 87.2 (36.69-1.58)	Depositor EDS
R_{merge}	0.04	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.64 (at 1.58Å)	Xtriage
Refinement program	REFMAC 5.5.0109	Depositor
R, R_{free}	0.150 , 0.195 0.156 , 0.199	Depositor DCC
R_{free} test set	7730 reflections (5.29%)	DCC
Wilson B-factor (Å ²)	20.1	Xtriage
Anisotropy	0.700	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.36 , 42.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 153765 reflections	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	10600	wwPDB-VP
Average B, all atoms (Å ²)	28.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.87% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PAF, 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	0.94	0/2449	0.89	4/3315 (0.1%)
1	B	0.86	0/2490	0.88	6/3378 (0.2%)
1	C	0.83	0/2475	0.84	2/3350 (0.1%)
1	D	0.75	0/2390	0.77	1/3244 (0.0%)
All	All	0.85	0/9804	0.85	13/13287 (0.1%)

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	110[A]	ASP	CB-CG-OD2	-7.67	111.39	118.30
1	B	110[B]	ASP	CB-CG-OD2	-7.67	111.39	118.30
1	B	47	ARG	NE-CZ-NH2	-6.60	117.00	120.30
1	B	110[A]	ASP	CB-CG-OD1	6.42	124.08	118.30
1	B	110[B]	ASP	CB-CG-OD1	6.42	124.08	118.30
1	A	73	ARG	NE-CZ-NH2	-6.08	117.26	120.30
1	B	47	ARG	NE-CZ-NH1	5.56	123.08	120.30
1	C	66[A]	ASP	CB-CG-OD1	5.48	123.24	118.30
1	C	66[B]	ASP	CB-CG-OD1	5.48	123.24	118.30
1	D	165	ASP	CB-CG-OD2	-5.38	113.46	118.30
1	A	47	ARG	NE-CZ-NH1	5.17	122.89	120.30
1	A	64	ARG	NE-CZ-NH1	5.02	122.81	120.30
1	A	182	ASP	CB-CG-OD1	-5.02	113.78	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2351	0	0	6	0
1	B	2374	0	0	10	0
1	C	2370	0	0	7	0
1	D	2305	0	0	17	0
2	A	10	0	0	1	0
2	B	10	0	0	0	0
2	C	10	0	0	0	0
2	D	10	0	0	0	0
3	A	1	0	0	0	0
3	C	1	0	0	0	0
4	A	378	0	0	4	0
4	B	299	0	0	8	0
4	C	305	0	0	5	0
4	D	176	0	0	5	0
All	All	10600	0	0	40	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 4.

All (40) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:A:501:PAF:O1	4:A:867:HOH:O	1.89	0.90
1:C:76[B]:GLN:NE2	4:C:1059:HOH:O	2.10	0.84
1:A:151:LYS:NZ	4:A:870:HOH:O	2.12	0.81
1:A:113:ALA:CB	1:A:161[B]:LYS:CE	2.62	0.77
1:D:204:LEU:CD2	1:D:274[B]:LEU:CD1	2.62	0.77
1:A:161[B]:LYS:CE	4:B:417:HOH:O	2.36	0.73
1:B:221[A]:GLN:NE2	4:B:382:HOH:O	2.21	0.72
1:A:232:GLN:NE2	4:A:515:HOH:O	2.26	0.69
1:B:110[A]:ASP:OD2	4:B:333:HOH:O	2.10	0.67
1:D:16[B]:ARG:NH2	1:D:19:GLN:OE1	2.29	0.66
1:B:80[B]:GLU:OE1	4:B:843:HOH:O	2.16	0.61
1:D:184:LEU:CD1	1:D:190:ASN:ND2	2.64	0.60
1:B:18:ARG:NH2	4:B:606:HOH:O	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:76[A]:GLN:NE2	4:C:935:HOH:O	2.37	0.57
1:D:110[B]:ASP:OD2	4:D:538:HOH:O	2.17	0.57
1:C:113:ALA:CB	1:C:161[B]:LYS:CE	2.87	0.52
1:A:142:GLN:OE1	1:B:18:ARG:NH2	2.43	0.52
1:D:122:SER:N	4:D:999:HOH:O	2.43	0.50
1:C:214:LYS:NZ	4:C:341:HOH:O	2.44	0.50
1:D:64[A]:ARG:CZ	1:D:67:ASP:CB	2.89	0.50
1:D:15:ARG:NH1	4:D:635:HOH:O	2.45	0.48
1:C:64[A]:ARG:NH1	1:C:66[A]:ASP:OD2	2.47	0.48
1:B:142[B]:GLN:NE2	4:B:436:HOH:O	2.46	0.48
1:D:242[B]:GLU:CA	1:D:242[B]:GLU:OE2	2.62	0.47
1:D:64[A]:ARG:NE	1:D:67:ASP:CB	2.79	0.46
1:D:269:LEU:N	1:D:272:ALA:O	2.49	0.46
1:D:184:LEU:CD1	1:D:185:ALA:O	2.65	0.45
1:D:35[B]:GLU:CG	1:D:186:LEU:CD1	2.95	0.44
1:D:11:ARG:NH2	4:D:881:HOH:O	2.50	0.44
1:D:186:LEU:C	1:D:186:LEU:CD2	2.87	0.43
1:D:255:THR:CG2	1:D:256:VAL:N	2.82	0.43
1:B:73[A]:ARG:NH1	4:B:388:HOH:O	2.52	0.43
1:D:201:ALA:N	1:D:202:PRO:CD	2.84	0.41
1:B:15:ARG:NE	4:B:384:HOH:O	2.52	0.41
1:C:45[A]:LYS:NZ	4:C:1126:HOH:O	2.53	0.41
1:D:254:LEU:N	4:D:1091:HOH:O	2.52	0.41
1:C:19[B]:GLN:NE2	4:C:354:HOH:O	2.54	0.41
1:A:73:ARG:NE	4:A:632:HOH:O	2.53	0.41
1:B:63:GLU:N	1:B:63:GLU:OE1	2.55	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	301/287 (105%)	297 (99%)	4 (1%)	0	100	100
1	B	307/287 (107%)	302 (98%)	5 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	305/287 (106%)	300 (98%)	5 (2%)	0	100	100
1	D	296/287 (103%)	289 (98%)	7 (2%)	0	100	100
All	All	1209/1148 (105%)	1188 (98%)	21 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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	257/240 (107%)	255 (99%)	2 (1%)	89	77
1	B	262/240 (109%)	258 (98%)	4 (2%)	76	52
1	C	260/240 (108%)	258 (99%)	2 (1%)	89	77
1	D	251/240 (105%)	246 (98%)	5 (2%)	68	38
All	All	1030/960 (107%)	1017 (99%)	13 (1%)	89	59

All (13) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	242[A]	GLU
1	A	242[B]	GLU
1	B	119[A]	GLU
1	B	119[B]	GLU
1	B	219[A]	GLU
1	B	219[B]	GLU
1	C	66[A]	ASP
1	C	66[B]	ASP
1	D	64[A]	ARG
1	D	64[B]	ARG
1	D	181	LYS
1	D	193	LEU
1	D	223	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA ⓘ

There are no RNA chains 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 carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 6 ligands modelled in this entry, 2 are monoatomic - leaving 4 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	PAF	A	501	-	6,9,9	1.41	1 (16%)	10,13,13	4.46	9 (90%)
2	PAF	B	501	-	6,9,9	2.84	3 (50%)	10,13,13	4.07	9 (90%)
2	PAF	C	501	-	6,9,9	2.36	3 (50%)	10,13,13	4.49	8 (80%)
2	PAF	D	501	-	6,9,9	2.89	4 (66%)	10,13,13	5.17	8 (80%)

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	PAF	A	501	-	-	0/9/13/13	0/0/0/0
2	PAF	B	501	-	-	0/9/13/13	0/0/0/0
2	PAF	C	501	-	-	0/9/13/13	0/0/0/0
2	PAF	D	501	-	-	0/9/13/13	0/0/0/0

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	501	PAF	C3-C2	-5.29	1.50	1.55
2	D	501	PAF	C3-C2	-4.69	1.50	1.55
2	D	501	PAF	C6-C3	3.90	1.58	1.53
2	C	501	PAF	C3-C2	-3.81	1.51	1.55
2	B	501	PAF	C6-C3	3.68	1.58	1.53
2	C	501	PAF	C6-C3	2.74	1.56	1.53
2	D	501	PAF	C5-C3	-2.72	1.47	1.53
2	D	501	PAF	C4-C3	-2.20	1.49	1.53
2	B	501	PAF	C5-C3	-2.06	1.49	1.53
2	C	501	PAF	C4-C3	-2.06	1.49	1.53
2	A	501	PAF	C3-C2	-2.06	1.53	1.55

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	501	PAF	C5-C3-C4	8.26	120.84	109.08
2	D	501	PAF	C5-C3-C4	7.17	119.29	109.08
2	D	501	PAF	C3-C2-C1	-7.10	104.22	114.99
2	B	501	PAF	C5-C3-C2	6.61	120.28	108.82
2	D	501	PAF	C5-C3-C6	-6.59	95.70	108.84
2	C	501	PAF	C4-C3-C6	-6.45	95.98	108.84
2	D	501	PAF	C4-C3-C6	-6.24	96.39	108.84
2	A	501	PAF	C5-C3-C6	-6.11	96.66	108.84
2	A	501	PAF	C5-C3-C2	5.87	119.01	108.82
2	D	501	PAF	C5-C3-C2	5.75	118.80	108.82
2	C	501	PAF	C4-C3-C2	5.66	118.63	108.82
2	A	501	PAF	C4-C3-C2	5.56	118.47	108.82
2	B	501	PAF	C3-C2-C1	-5.10	107.25	114.99
2	A	501	PAF	C6-C3-C2	-4.86	97.79	109.89
2	D	501	PAF	C4-C3-C2	4.82	117.17	108.82
2	A	501	PAF	C5-C3-C4	4.71	115.79	109.08
2	A	501	PAF	C3-C2-C1	-4.42	108.28	114.99
2	B	501	PAF	C5-C3-C6	-4.41	100.04	108.84
2	B	501	PAF	C6-C3-C2	-4.35	99.07	109.89
2	C	501	PAF	C3-C2-C1	-4.19	108.63	114.99
2	B	501	PAF	C4-C3-C2	4.10	115.92	108.82
2	D	501	PAF	C6-C3-C2	-4.07	99.78	109.89
2	B	501	PAF	C5-C3-C4	3.99	114.76	109.08
2	C	501	PAF	C6-C3-C2	-3.86	100.30	109.89
2	B	501	PAF	C4-C3-C6	-3.81	101.25	108.84
2	A	501	PAF	C4-C3-C6	-3.60	101.66	108.84
2	C	501	PAF	C5-C3-C6	-3.58	101.70	108.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	501	PAF	O3-C2-C1	-2.88	106.43	113.05
2	A	501	PAF	O3-C2-C3	2.74	117.09	110.71
2	C	501	PAF	O3-C2-C3	2.48	116.48	110.71
2	C	501	PAF	C5-C3-C2	2.34	112.88	108.82
2	B	501	PAF	O3-C2-C1	-2.27	107.84	113.05
2	B	501	PAF	O3-C2-C3	2.16	115.74	110.71
2	D	501	PAF	O3-C2-C3	2.08	115.55	110.71

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

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(Å ²)	Q<0.9
1	A	285/287 (99%)	-0.13	5 (1%) 65 68	10, 18, 30, 38	0
1	B	284/287 (98%)	0.39	20 (7%) 16 16	11, 24, 42, 51	0
1	C	285/287 (99%)	-0.06	4 (1%) 72 75	13, 22, 33, 38	0
1	D	283/287 (98%)	1.71	87 (30%) 1 1	14, 33, 80, 96	0
All	All	1137/1148 (99%)	0.48	116 (10%) 7 7	10, 23, 55, 96	0

All (116) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	225	LEU	13.3
1	D	217	LEU	10.9
1	D	226	LEU	10.4
1	D	222	ILE	10.0
1	D	211	LEU	9.5
1	D	256	VAL	9.3
1	D	282	LEU	8.5
1	D	200	ILE	8.4
1	D	218	GLY	7.6
1	D	229	ALA	7.3
1	D	268[A]	TRP	7.2
1	D	224	ALA	7.1
1	D	231	ALA	7.1
1	D	238	PHE	7.1
1	D	194	THR	7.1
1	D	243	LEU	7.0
1	D	215	MET	7.0
1	D	269	LEU	6.9
1	D	233	LEU	6.9
1	D	216	ALA	6.8
1	D	234	LEU	6.7

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Mol	Chain	Res	Type	RSRZ
1	D	65	PRO	6.6
1	D	267	ALA	6.5
1	B	256	VAL	6.5
1	D	254	LEU	6.4
1	D	209	TRP	6.3
1	D	221	GLN	6.3
1	D	270	GLY	6.3
1	B	192[A]	TYR	6.2
1	D	232	GLN	6.1
1	B	271	LYS	5.9
1	D	280	VAL	5.8
1	D	220	ARG	5.8
1	D	236	VAL	5.8
1	D	239	THR	5.7
1	D	281	ASP	5.6
1	D	219	GLU	5.6
1	D	230	ALA	5.6
1	D	274[A]	LEU	5.6
1	B	268[A]	TRP	5.5
1	D	240	PRO	5.5
1	D	68	LEU	5.5
1	D	213	GLU	5.5
1	D	245	ILE	5.4
1	D	228	GLU	5.4
1	D	259	GLN	4.9
1	D	196[A]	GLU	4.8
1	D	212	ALA	4.7
1	D	189	ARG	4.7
1	D	223	ASP	4.4
1	D	235	ARG	4.3
1	D	257	ASP	4.2
1	D	210	ALA	4.1
1	D	255	THR	4.0
1	B	238	PHE	4.0
1	D	272	ALA	3.9
1	B	272	ALA	3.9
1	D	192	TYR	3.9
1	D	266	ALA	3.6
1	D	66	ASP	3.6
1	D	258	SER	3.6
1	D	183	GLY	3.5
1	D	69	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
1	D	227	GLU	3.4
1	B	239	THR	3.3
1	D	260	GLN	3.2
1	D	0	ALA	3.2
1	D	201	ALA	3.2
1	D	208	MET	3.2
1	B	234	LEU	3.2
1	D	199	GLN	3.2
1	B	207	ILE	3.2
1	D	263	ILE	3.2
1	B	189	ARG	3.1
1	D	271	LYS	3.1
1	D	67	ASP	3.1
1	D	71	TYR	3.1
1	D	214	LYS	3.1
1	D	191	GLY	3.0
1	D	207	ILE	3.0
1	B	257[A]	ASP	3.0
1	D	195	GLU	3.0
1	D	265	MET	2.9
1	D	124	PRO	2.9
1	B	191	GLY	2.9
1	A	195[A]	GLU	2.9
1	A	271	LYS	2.8
1	D	203	GLN	2.8
1	D	273	ARG	2.8
1	D	138	PHE	2.7
1	C	168	TYR	2.6
1	D	168	TYR	2.6
1	B	269	LEU	2.6
1	D	279	LEU	2.6
1	D	241	ASP	2.6
1	B	217	LEU	2.5
1	B	236	VAL	2.5
1	B	133	ILE	2.4
1	B	200	ILE	2.4
1	B	230	ALA	2.4
1	D	159[A]	ILE	2.4
1	D	204	LEU	2.4
1	D	64[A]	ARG	2.3
1	C	163	VAL	2.3
1	D	70	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	227[A]	GLU	2.2
1	B	233	LEU	2.2
1	D	202	PRO	2.2
1	D	73	ARG	2.2
1	D	62	PHE	2.2
1	C	0	ALA	2.1
1	B	242	GLU	2.1
1	D	197	GLU	2.1
1	A	192[A]	TYR	2.1
1	C	170	ILE	2.1
1	A	284[A]	HIS	2.0

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 carbohydrates 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. 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	RSR	LLDF	B-factors(Å ²)	Q<0.9
2	PAF	C	501	10/10	0.11	0.84	15,18,26,29	0
2	PAF	A	501	10/10	0.09	0.38	13,16,23,26	0
2	PAF	B	501	10/10	0.09	-0.88	13,16,27,32	0
2	PAF	D	501	10/10	0.07	-0.95	19,21,30,33	0
3	CL	C	285	1/1	0.07	-1.39	22,22,22,22	0
3	CL	A	285	1/1	0.07	-1.58	19,19,19,19	0

6.5 Other polymers ⓘ

There are no such residues in this entry.