



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 7, 2017 – 09:54 AM EST

PDB ID : 4II4
Title : The Phenylacetyl-CoA monooxygenase - mutant PaaA E49Q K68Q - PaaC wild type subcomplex with benzoyl-CoA
Authors : Cygler, M.; Grishin, A.M.; Montreal-Kingston Bacterial Structural Genomics Initiative (BSGI)
Deposited on : unknown
Resolution : 2.80 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 : 1.7.2 (RC1), CSD as538be (2017)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20030345
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) : rb-20030345

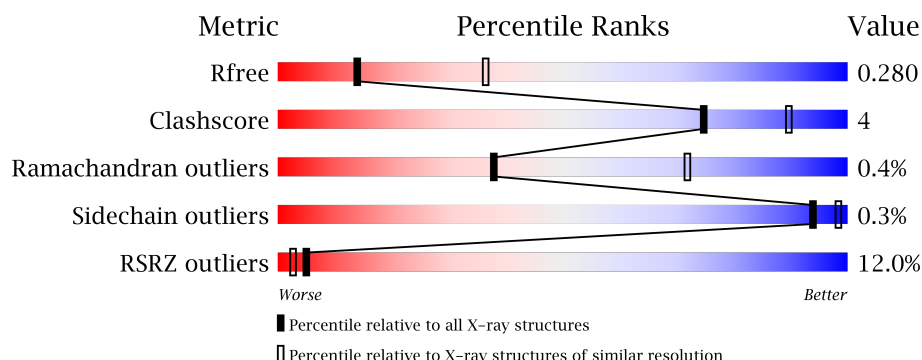
1 Overall quality at a glance

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	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	100719	2583 (2.80-2.80)
Clashscore	112137	3033 (2.80-2.80)
Ramachandran outliers	110173	2983 (2.80-2.80)
Sidechain outliers	110143	2985 (2.80-2.80)
RSRZ outliers	101464	2610 (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 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	311	<div> <div>6%</div> <div>93%</div> <div>5%</div> </div>
2	B	259	<div> <div>19%</div> <div>81%</div> <div>10%</div> <div>8%</div> </div>
2	C	259	<div> <div>11%</div> <div>84%</div> <div>12%</div> </div>

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 6266 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 1,2-phenylacetyl-CoA epoxidase, subunit A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	304	Total	C	N	O	S	0	0	0
			2403	1511	429	447	16			

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	MET	-	EXPRESSION TAG	UNP P76077
A	0	ARG	-	EXPRESSION TAG	UNP P76077
A	1	SER	-	EXPRESSION TAG	UNP P76077
A	49	GLN	GLU	ENGINEERED MUTATION	UNP P76077
A	68	GLN	LYS	ENGINEERED MUTATION	UNP P76077

- Molecule 2 is a protein called 1,2-phenylacetyl-CoA epoxidase, subunit C.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	239	Total	C	N	O	S	0	0	0
			1841	1160	328	347	6			
2	C	248	Total	C	N	O	S	0	0	0
			1951	1229	345	371	6			

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-10	MET	-	EXPRESSION TAG	UNP P76079
B	-9	GLY	-	EXPRESSION TAG	UNP P76079
B	-8	SER	-	EXPRESSION TAG	UNP P76079
B	-7	SER	-	EXPRESSION TAG	UNP P76079
B	-6	HIS	-	EXPRESSION TAG	UNP P76079
B	-5	HIS	-	EXPRESSION TAG	UNP P76079
B	-4	HIS	-	EXPRESSION TAG	UNP P76079
B	-3	HIS	-	EXPRESSION TAG	UNP P76079
B	-2	HIS	-	EXPRESSION TAG	UNP P76079

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-1	HIS	-	EXPRESSION TAG	UNP P76079
B	0	GLY	-	EXPRESSION TAG	UNP P76079
B	1	SER	-	EXPRESSION TAG	UNP P76079
C	-10	MET	-	EXPRESSION TAG	UNP P76079
C	-9	GLY	-	EXPRESSION TAG	UNP P76079
C	-8	SER	-	EXPRESSION TAG	UNP P76079
C	-7	SER	-	EXPRESSION TAG	UNP P76079
C	-6	HIS	-	EXPRESSION TAG	UNP P76079
C	-5	HIS	-	EXPRESSION TAG	UNP P76079
C	-4	HIS	-	EXPRESSION TAG	UNP P76079
C	-3	HIS	-	EXPRESSION TAG	UNP P76079
C	-2	HIS	-	EXPRESSION TAG	UNP P76079
C	-1	HIS	-	EXPRESSION TAG	UNP P76079
C	0	GLY	-	EXPRESSION TAG	UNP P76079
C	1	SER	-	EXPRESSION TAG	UNP P76079

- # BYC

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	9	Total O 9 9	0	0



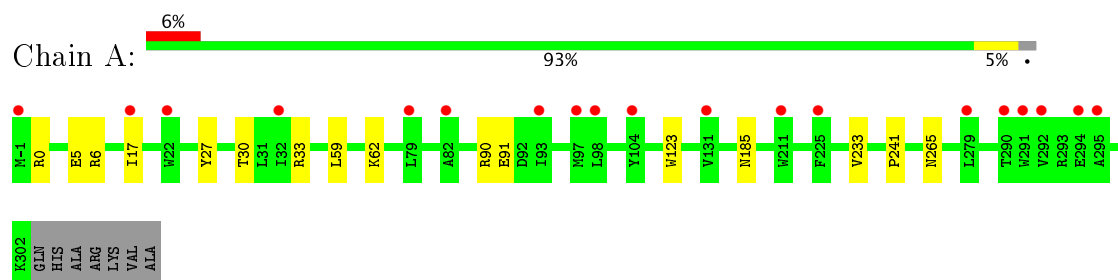
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	B	4	Total 4	O 4	0	0
4	C	12	Total 12	O 12	0	0

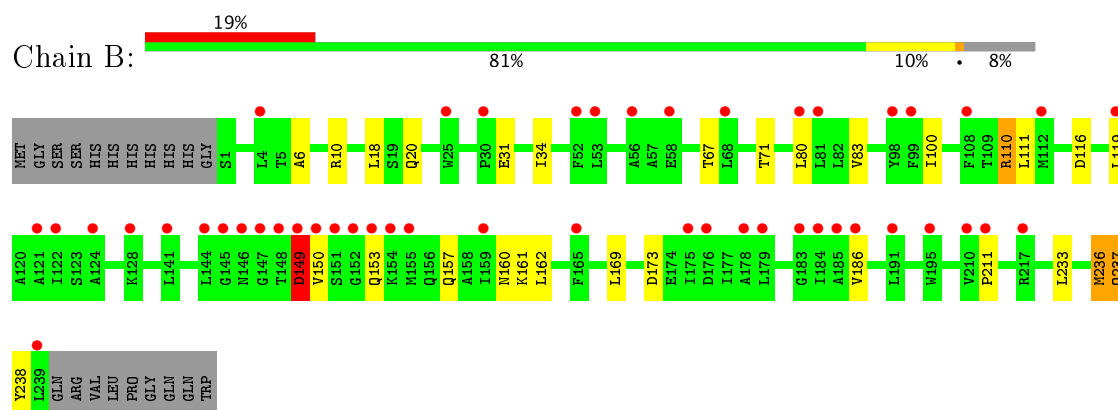
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA and DNA 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.

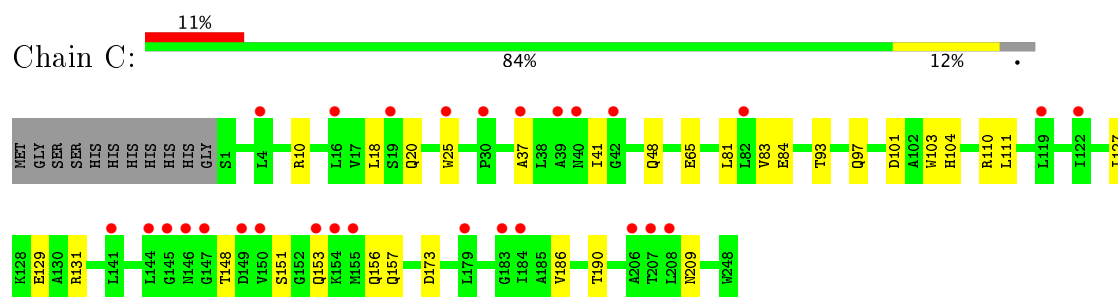
- Molecule 1: 1,2-phenylacetyl-CoA epoxidase, subunit A



- Molecule 2: 1,2-phenylacetyl-CoA epoxidase, subunit C



- Molecule 2: 1,2-phenylacetyl-CoA epoxidase, subunit C



4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α , β , γ	77.59 Å 77.59 Å 304.69 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	26.64 – 2.80 48.27 – 2.80	Depositor EDS
% Data completeness (in resolution range)	99.4 (26.64-2.80) 91.3 (48.27-2.80)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.83 (at 2.81 Å)	Xtriage
Refinement program	REFMAC, PHENIX 1.8_1069	Depositor
R, R_{free}	0.218 , 0.276 0.233 , 0.280	Depositor DCC
R_{free} test set	1225 reflections (5.89%)	DCC
Wilson B-factor (Å ²)	75.4	Xtriage
Anisotropy	0.102	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 50.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	6266	wwPDB-VP
Average B, all atoms (Å ²)	119.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.10% 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: BYC

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	0.38	0/2460	0.59	0/3336
2	B	0.39	0/1877	0.64	1/2547 (0.0%)
2	C	0.37	0/1990	0.61	0/2697
All	All	0.38	0/6327	0.61	1/8580 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	149	ASP	CB-CG-OD1	5.69	123.42	118.30

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	2403	0	2285	10	0
2	B	1841	0	1760	20	0
2	C	1951	0	1890	16	0
3	A	46	0	25	1	0
4	A	9	0	0	1	0
4	B	4	0	0	0	0
4	C	12	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	6266	0	5960	45	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 4.

All (45) 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)
2:B:149:ASP:OD1	2:B:150:VAL:N	2.11	0.84
2:C:156:GLN:HE22	2:C:209:ASN:H	1.24	0.84
2:C:10:ARG:NH2	2:C:173:ASP:OD2	2.23	0.72
2:B:80:LEU:HD22	2:B:169:LEU:HD12	1.76	0.68
2:C:148:THR:HG23	2:C:151:SER:H	1.61	0.66
2:C:111:LEU:HD13	2:C:186:VAL:HG23	1.79	0.64
2:C:127:ILE:O	2:C:131:ARG:HG3	1.99	0.62
2:B:10:ARG:NH1	2:B:173:ASP:OD2	2.27	0.61
1:A:30:THR:HG23	1:A:33:ARG:HE	1.64	0.60
1:A:91:GLU:H	1:A:91:GLU:CD	2.04	0.59
1:A:0:ARG:NH2	1:A:5:GLU:OE1	2.27	0.59
2:B:6:ALA:O	2:B:10:ARG:HG3	2.04	0.58
2:B:161:LYS:HG3	2:B:162:LEU:HG	1.87	0.55
2:B:80:LEU:O	2:B:83:VAL:HG22	2.06	0.55
2:C:81:LEU:O	2:C:84:GLU:HG2	2.07	0.55
2:C:48:GLN:NE2	2:C:129:GLU:OE1	2.38	0.54
2:B:20:GLN:HG3	2:B:236:MET:SD	2.49	0.53
2:B:233:LEU:O	2:B:237:GLN:HG3	2.09	0.53
2:C:25:TRP:HE1	2:C:93:THR:HG1	1.57	0.52
1:A:185:ASN:HA	1:A:241:PRO:HG3	1.92	0.51
1:A:17:ILE:HD12	1:A:27:TYR:OH	2.10	0.51
2:B:116:ASP:HB3	2:B:119:LEU:HB2	1.92	0.50
1:A:123:TRP:HH2	1:A:233:VAL:HG22	1.77	0.48
2:B:18:LEU:HD21	2:B:100:ILE:HG21	1.96	0.47
1:A:6:ARG:NH1	4:A:502:HOH:O	2.48	0.47
2:B:67:THR:O	2:B:71:THR:OG1	2.18	0.46
1:A:62:LYS:HE2	2:C:20:GLN:OE1	2.15	0.46
2:B:236:MET:O	2:B:237:GLN:C	2.53	0.46
3:A:401:BYC:O3A	3:A:401:BYC:H2D	2.16	0.45
2:B:160:ASN:OD1	2:B:211:PRO:HG3	2.17	0.44
2:C:18:LEU:HB2	2:C:83:VAL:HB	1.98	0.44
1:A:59:LEU:HD12	2:C:65:GLU:HB2	1.99	0.44
2:B:18:LEU:CD2	2:B:100:ILE:HG21	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:236:MET:O	2:B:238:TYR:N	2.52	0.43
2:B:111:LEU:HD13	2:B:186:VAL:HG23	2.01	0.43
2:B:236:MET:HE3	2:B:236:MET:HB3	1.92	0.42
1:A:90:ARG:HE	1:A:90:ARG:HB2	1.57	0.42
2:B:153:GLN:O	2:B:157:GLN:N	2.39	0.42
2:C:110:ARG:HH22	2:C:190:THR:CB	2.33	0.41
2:C:37:ALA:O	2:C:41:ILE:HG13	2.20	0.41
2:B:31:GLU:HB2	2:B:34:ILE:HD12	2.02	0.41
2:C:153:GLN:O	2:C:157:GLN:HG2	2.20	0.41
2:B:110:ARG:HA	2:B:110:ARG:HD3	1.83	0.41
2:C:97:GLN:HG3	2:C:101:ASP:OD2	2.21	0.40
2:C:103:TRP:HE3	2:C:104:HIS:HD2	1.69	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	302/311 (97%)	300 (99%)	2 (1%)	0	100	100
2	B	237/259 (92%)	229 (97%)	5 (2%)	3 (1%)	14	41
2	C	246/259 (95%)	241 (98%)	5 (2%)	0	100	100
All	All	785/829 (95%)	770 (98%)	12 (2%)	3 (0%)	38	72

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	149	ASP
2	B	237	GLN
2	B	236	MET

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	242/259 (93%)	241 (100%)	1 (0%)	93	98
2	B	178/208 (86%)	177 (99%)	1 (1%)	89	97
2	C	196/208 (94%)	196 (100%)	0	100	100
All	All	616/675 (91%)	614 (100%)	2 (0%)	94	98

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	265	ASN
2	B	110	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	133	GLN
2	C	104	HIS
2	C	156	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 ⓘ

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	BYC	A	401	-	39,47,59	2.45	10 (25%)	43,70,87	2.03	5 (11%)

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	BYC	A	401	-	-	0/38/59/71	0/3/3/4

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	401	BYC	O4D-C1D	-6.11	1.32	1.41
3	A	401	BYC	C2D-C1D	-6.03	1.44	1.53
3	A	401	BYC	O2D-C2D	-2.93	1.36	1.43
3	A	401	BYC	CEP-CBP	-2.84	1.47	1.53
3	A	401	BYC	O3D-C3D	-2.37	1.35	1.44
3	A	401	BYC	O5P-C5P	2.77	1.36	1.19
3	A	401	BYC	C7P-N8P	3.35	1.53	1.46
3	A	401	BYC	O9P-C9P	5.46	1.34	1.23
3	A	401	BYC	O4D-C4D	5.61	1.57	1.45
3	A	401	BYC	C7P-C6P	5.85	1.59	1.53

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	401	BYC	N3A-C2A-N1A	-7.88	121.99	128.86
3	A	401	BYC	C4D-O4D-C1D	-5.82	103.58	109.77
3	A	401	BYC	O5P-C5P-C6P	-3.30	109.45	125.72
3	A	401	BYC	O4D-C4D-C5D	2.12	116.57	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
3	A	401	BYC	O9P-C9P-N8P	5.49	133.63	123.07

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	401	BYC	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	304/311 (97%)	0.56	19 (6%)	21 13	56, 110, 168, 209	0
2	B	239/259 (92%)	0.97	48 (20%)	1 1	86, 135, 179, 198	0
2	C	248/259 (95%)	0.71	28 (11%)	6 3	58, 109, 158, 189	0
All	All	791/829 (95%)	0.73	95 (12%)	5 3	56, 118, 173, 209	0

All (95) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	-1	MET	7.1
2	C	206	ALA	6.6
2	B	144	LEU	6.5
2	B	184	ILE	6.4
1	A	295	ALA	5.9
2	C	146	ASN	5.7
2	B	179	LEU	5.3
2	B	175	ILE	5.2
2	B	186	VAL	5.2
2	B	124	ALA	4.3
2	B	58	GLU	4.3
2	B	185	ALA	4.2
2	B	128	LYS	4.2
2	C	147	GLY	4.2
2	C	141	LEU	4.0
2	B	176	ASP	4.0
2	B	98	TYR	3.8
2	B	112	MET	3.8
2	B	151	SER	3.6
2	B	150	VAL	3.6
1	A	279	LEU	3.6
2	C	145	GLY	3.5
1	A	22	TRP	3.5

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Mol	Chain	Res	Type	RSRZ
2	B	25	TRP	3.5
2	B	145	GLY	3.2
1	A	17	ILE	3.2
2	B	53	LEU	3.2
2	C	184	ILE	3.2
1	A	211	TRP	3.1
2	C	179	LEU	3.1
2	B	108	PHE	3.1
2	B	119	LEU	3.1
2	B	183	GLY	3.0
2	C	207	THR	3.0
2	B	68	LEU	3.0
2	B	148	THR	3.0
2	B	211	PRO	3.0
2	B	153	GLN	2.9
2	C	4	LEU	2.9
2	B	121	ALA	2.9
2	B	147	GLY	2.9
2	B	146	ASN	2.8
2	B	159	ILE	2.7
2	B	56	ALA	2.7
2	B	217	ARG	2.7
2	B	239	LEU	2.7
2	B	52	PHE	2.7
2	B	154	LYS	2.7
2	B	152	GLY	2.6
2	B	149	ASP	2.6
1	A	131	VAL	2.6
1	A	292	VAL	2.6
1	A	104	TYR	2.6
2	C	40	ASN	2.6
2	B	99	PHE	2.6
1	A	79	LEU	2.5
2	B	191	LEU	2.5
1	A	291	TRP	2.5
2	C	39	ALA	2.4
2	B	195	TRP	2.4
2	B	210	VAL	2.4
2	B	155	MET	2.4
2	C	25	TRP	2.4
2	C	16	LEU	2.4
2	B	4	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
2	C	149	ASP	2.4
2	B	80	LEU	2.3
2	C	82	LEU	2.3
1	A	97	MET	2.3
1	A	82	ALA	2.3
2	C	19	SER	2.3
2	C	37	ALA	2.3
2	B	122	ILE	2.3
2	C	183	GLY	2.3
2	B	178	ALA	2.2
2	C	150	VAL	2.2
2	C	144	LEU	2.2
1	A	294	GLU	2.2
2	B	165	PHE	2.2
2	B	141	LEU	2.2
2	B	30	PRO	2.1
2	C	119	LEU	2.1
2	C	208	LEU	2.1
2	C	154	LYS	2.1
2	C	122	ILE	2.1
2	C	153	GLN	2.1
1	A	98	LEU	2.1
2	B	81	LEU	2.1
2	C	30	PRO	2.1
2	C	42	GLY	2.1
2	C	155	MET	2.1
1	A	290	THR	2.0
1	A	32	ILE	2.0
1	A	225	PHE	2.0
1	A	93	ILE	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 [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(\AA^2)	Q<0.9
3	BYC	A	401	46/56	0.95	0.16	-0.81	110,140,159,167	0

6.5 Other polymers [i](#)

There are no such residues in this entry.