



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 24, 2023 – 02:27 PM EDT

PDB ID : 5UAX
Title : Structure of apo human PYCR-1 crystallized in space group C2
Authors : Tanner, J.J.
Deposited on : 2016-12-20
Resolution : 1.85 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

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.35.1
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

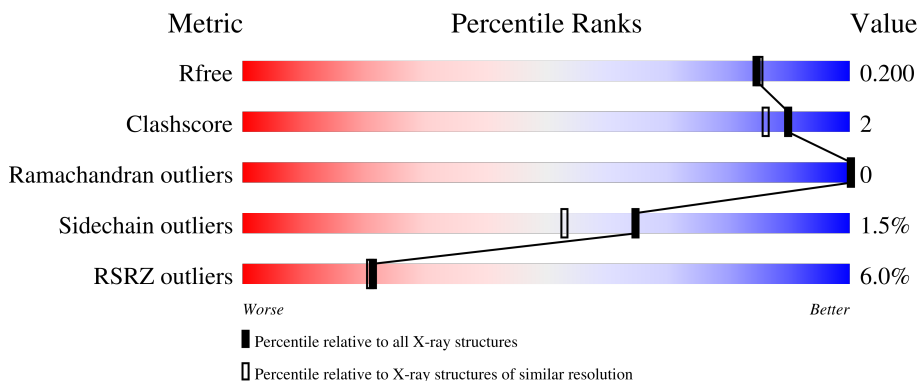
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.85 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}	130704	2469 (1.86-1.86)
Clashscore	141614	2625 (1.86-1.86)
Ramachandran outliers	138981	2592 (1.86-1.86)
Sidechain outliers	138945	2592 (1.86-1.86)
RSRZ outliers	127900	2436 (1.86-1.86)

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 $\leq 5\%$. 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	322	 3% 81% 14%
1	B	322	 81% 15%
1	C	322	 79% 6% 15%
1	D	322	 2% 81% 16%
1	E	322	 19% 74% 5% 21%

2 Entry composition i

There are 3 unique types of molecules in this entry. The entry contains 10002 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 Pyrroline-5-carboxylate reductase 1, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	278	1992	1256	349	375	12	0	3	0
1	B	273	1946	1228	340	366	12	0	2	0
1	C	274	1932	1220	335	365	12	0	2	0
1	D	270	1912	1206	336	359	11	0	1	0
1	E	255	1713	1078	304	322	9	0	0	0

There are 110 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-21	MET	-	initiating methionine	UNP P32322
A	-20	HIS	-	expression tag	UNP P32322
A	-19	HIS	-	expression tag	UNP P32322
A	-18	HIS	-	expression tag	UNP P32322
A	-17	HIS	-	expression tag	UNP P32322
A	-16	HIS	-	expression tag	UNP P32322
A	-15	HIS	-	expression tag	UNP P32322
A	-14	SER	-	expression tag	UNP P32322
A	-13	SER	-	expression tag	UNP P32322
A	-12	GLY	-	expression tag	UNP P32322
A	-11	VAL	-	expression tag	UNP P32322
A	-10	ASP	-	expression tag	UNP P32322
A	-9	LEU	-	expression tag	UNP P32322
A	-8	GLY	-	expression tag	UNP P32322
A	-7	THR	-	expression tag	UNP P32322
A	-6	GLU	-	expression tag	UNP P32322
A	-5	ASN	-	expression tag	UNP P32322
A	-4	LEU	-	expression tag	UNP P32322
A	-3	TYR	-	expression tag	UNP P32322

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	PHE	-	expression tag	UNP P32322
A	-1	GLN	-	expression tag	UNP P32322
A	0	SER	-	expression tag	UNP P32322
B	-21	MET	-	initiating methionine	UNP P32322
B	-20	HIS	-	expression tag	UNP P32322
B	-19	HIS	-	expression tag	UNP P32322
B	-18	HIS	-	expression tag	UNP P32322
B	-17	HIS	-	expression tag	UNP P32322
B	-16	HIS	-	expression tag	UNP P32322
B	-15	HIS	-	expression tag	UNP P32322
B	-14	SER	-	expression tag	UNP P32322
B	-13	SER	-	expression tag	UNP P32322
B	-12	GLY	-	expression tag	UNP P32322
B	-11	VAL	-	expression tag	UNP P32322
B	-10	ASP	-	expression tag	UNP P32322
B	-9	LEU	-	expression tag	UNP P32322
B	-8	GLY	-	expression tag	UNP P32322
B	-7	THR	-	expression tag	UNP P32322
B	-6	GLU	-	expression tag	UNP P32322
B	-5	ASN	-	expression tag	UNP P32322
B	-4	LEU	-	expression tag	UNP P32322
B	-3	TYR	-	expression tag	UNP P32322
B	-2	PHE	-	expression tag	UNP P32322
B	-1	GLN	-	expression tag	UNP P32322
B	0	SER	-	expression tag	UNP P32322
C	-21	MET	-	initiating methionine	UNP P32322
C	-20	HIS	-	expression tag	UNP P32322
C	-19	HIS	-	expression tag	UNP P32322
C	-18	HIS	-	expression tag	UNP P32322
C	-17	HIS	-	expression tag	UNP P32322
C	-16	HIS	-	expression tag	UNP P32322
C	-15	HIS	-	expression tag	UNP P32322
C	-14	SER	-	expression tag	UNP P32322
C	-13	SER	-	expression tag	UNP P32322
C	-12	GLY	-	expression tag	UNP P32322
C	-11	VAL	-	expression tag	UNP P32322
C	-10	ASP	-	expression tag	UNP P32322
C	-9	LEU	-	expression tag	UNP P32322
C	-8	GLY	-	expression tag	UNP P32322
C	-7	THR	-	expression tag	UNP P32322
C	-6	GLU	-	expression tag	UNP P32322
C	-5	ASN	-	expression tag	UNP P32322

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-4	LEU	-	expression tag	UNP P32322
C	-3	TYR	-	expression tag	UNP P32322
C	-2	PHE	-	expression tag	UNP P32322
C	-1	GLN	-	expression tag	UNP P32322
C	0	SER	-	expression tag	UNP P32322
D	-21	MET	-	initiating methionine	UNP P32322
D	-20	HIS	-	expression tag	UNP P32322
D	-19	HIS	-	expression tag	UNP P32322
D	-18	HIS	-	expression tag	UNP P32322
D	-17	HIS	-	expression tag	UNP P32322
D	-16	HIS	-	expression tag	UNP P32322
D	-15	HIS	-	expression tag	UNP P32322
D	-14	SER	-	expression tag	UNP P32322
D	-13	SER	-	expression tag	UNP P32322
D	-12	GLY	-	expression tag	UNP P32322
D	-11	VAL	-	expression tag	UNP P32322
D	-10	ASP	-	expression tag	UNP P32322
D	-9	LEU	-	expression tag	UNP P32322
D	-8	GLY	-	expression tag	UNP P32322
D	-7	THR	-	expression tag	UNP P32322
D	-6	GLU	-	expression tag	UNP P32322
D	-5	ASN	-	expression tag	UNP P32322
D	-4	LEU	-	expression tag	UNP P32322
D	-3	TYR	-	expression tag	UNP P32322
D	-2	PHE	-	expression tag	UNP P32322
D	-1	GLN	-	expression tag	UNP P32322
D	0	SER	-	expression tag	UNP P32322
E	-21	MET	-	initiating methionine	UNP P32322
E	-20	HIS	-	expression tag	UNP P32322
E	-19	HIS	-	expression tag	UNP P32322
E	-18	HIS	-	expression tag	UNP P32322
E	-17	HIS	-	expression tag	UNP P32322
E	-16	HIS	-	expression tag	UNP P32322
E	-15	HIS	-	expression tag	UNP P32322
E	-14	SER	-	expression tag	UNP P32322
E	-13	SER	-	expression tag	UNP P32322
E	-12	GLY	-	expression tag	UNP P32322
E	-11	VAL	-	expression tag	UNP P32322
E	-10	ASP	-	expression tag	UNP P32322
E	-9	LEU	-	expression tag	UNP P32322
E	-8	GLY	-	expression tag	UNP P32322
E	-7	THR	-	expression tag	UNP P32322

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Chain	Residue	Modelled	Actual	Comment	Reference
E	-6	GLU	-	expression tag	UNP P32322
E	-5	ASN	-	expression tag	UNP P32322
E	-4	LEU	-	expression tag	UNP P32322
E	-3	TYR	-	expression tag	UNP P32322
E	-2	PHE	-	expression tag	UNP P32322
E	-1	GLN	-	expression tag	UNP P32322
E	0	SER	-	expression tag	UNP P32322

- Molecule 2 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Cl 1 1	0	0
2	B	1	Total Cl 1 1	0	0
2	C	1	Total Cl 1 1	0	0
2	D	1	Total Cl 1 1	0	0
2	E	1	Total Cl 1 1	0	0

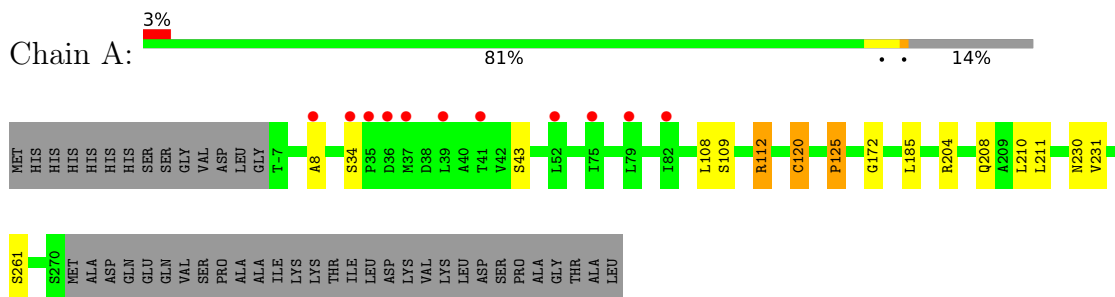
- Molecule 3 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	109	Total O 109 109	0	0
3	B	118	Total O 118 118	0	0
3	C	93	Total O 93 93	0	0
3	D	116	Total O 116 116	0	0
3	E	66	Total O 66 66	0	0

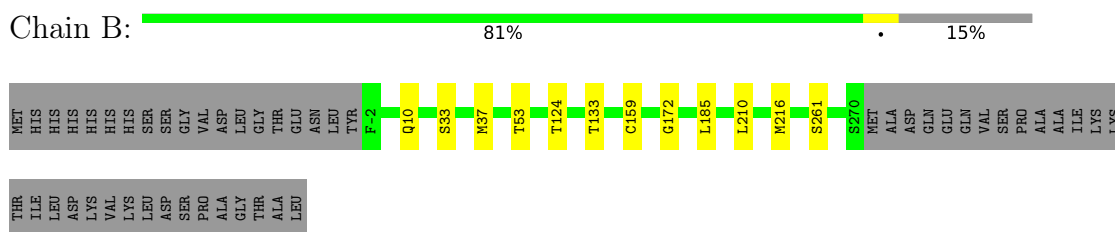
3 Residue-property plots [i](#)

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.

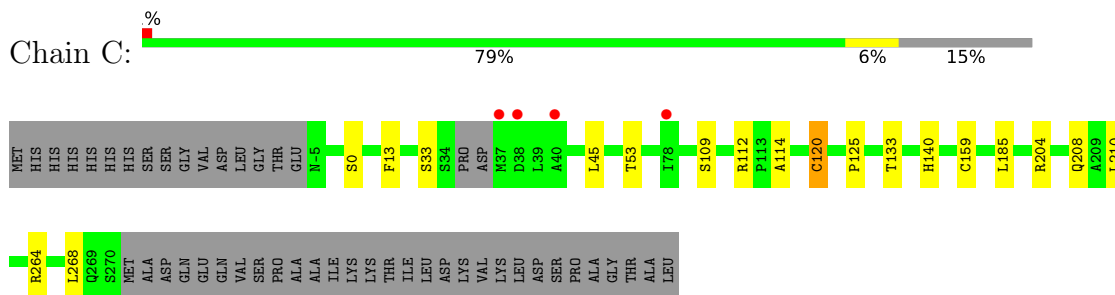
- Molecule 1: Pyrroline-5-carboxylate reductase 1, mitochondrial



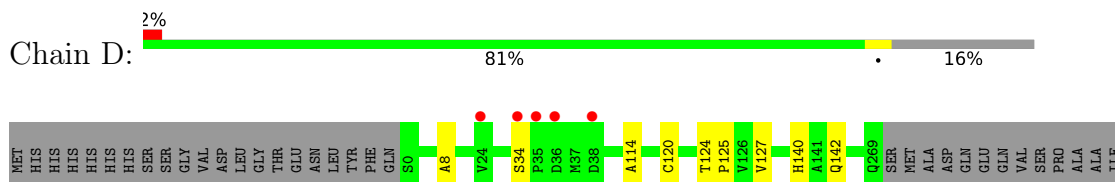
- Molecule 1: Pyrroline-5-carboxylate reductase 1, mitochondrial



- Molecule 1: Pyrroline-5-carboxylate reductase 1, mitochondrial




- Molecule 1: Pyrroline-5-carboxylate reductase 1, mitochondrial



LYS
LYS
THR
ILE
LEU
ASP
LYS
VAL
LYS
ASP
SER
PRO
ALA
GLY
THR
THR
ALA
LEU

- Molecule 1: Pyrroline-5-carboxylate reductase 1, mitochondrial

Chain E: 

MET
HIS
HIS
HIS
HIS
HIS
HIS
SER
SER
GLY
VAL
ASP
LEU
GLY
THR
GLU
ASN
LEU
TYR
PHE
GLN
SER
M1
S2
V3
G4
F5
I6
G7
A8
L11
A12
F13
A14
F19
T20
A21
A22
L25
A26
A27
H28
K29
I30
M31
A32
S33
S34
PRO
ASP
MET
ASP
LEU
ALA
THR
VAL
SER

ALA
LEU
ARG
LYS
MET
GLY
W50
K51
L52
T53
P54
H55
H62
S63
D64
V65
L66
F67
L68
A69
F72
H73
I74
I75
F76
F77
I78
L79
G83
A84
D85
I86
H90
I91
V92
V93
S94
V99
S102
L108
S109
A110
F111
R112
P113
A114
P115
R119
C120
R129

T133
T139
H140
A141
V143
E144
D145
L148
M149
C159
C177
Y180
M216
S270
MET
ALA
ASP
GLN
GLU
GLN
VAL
SER
PRO
ALA
ALA
ILE
LYS
LYS
THR
ILE
LEU
LEU
ASP
VAL
LYS
LEU
LEU
ASP
SER
PRO
ALA
GLY
THR
ALA
LEU

4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	183.85Å 120.69Å 88.14Å 90.00° 109.25° 90.00°	Depositor
Resolution (Å)	60.34 – 1.85 60.35 – 1.85	Depositor EDS
% Data completeness (in resolution range)	99.3 (60.34-1.85) 99.3 (60.35-1.85)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.71 (at 1.86Å)	Xtrriage
Refinement program	PHENIX (1.10.1_2155)	Depositor
R, R_{free}	0.172 , 0.200 0.173 , 0.200	Depositor DCC
R_{free} test set	7616 reflections (4.96%)	wwPDB-VP
Wilson B-factor (Å ²)	24.2	Xtrriage
Anisotropy	0.522	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 62.2	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	10002	wwPDB-VP
Average B, all atoms (Å ²)	35.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.76% 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: 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	0.69	0/2033	0.73	1/2768 (0.0%)
1	B	0.68	0/1983	0.74	0/2700
1	C	0.63	1/1968 (0.1%)	0.73	0/2682
1	D	0.71	1/1945 (0.1%)	0.75	0/2647
1	E	0.55	0/1737	0.66	0/2373
All	All	0.66	2/9666 (0.0%)	0.72	1/13170 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	120	CYS	CB-SG	-6.16	1.71	1.82
1	D	127	VAL	CB-CG1	5.59	1.64	1.52

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	120	CYS	CA-CB-SG	5.03	123.06	114.00

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	1992	0	1973	11	0
1	B	1946	0	1935	7	0
1	C	1932	0	1888	9	0
1	D	1912	0	1899	3	0
1	E	1713	0	1612	7	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
3	A	109	0	0	0	0
3	B	118	0	0	0	0
3	C	93	0	0	0	0
3	D	116	0	0	0	0
3	E	66	0	0	0	0
All	All	10002	0	9307	34	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 2.

All (34) 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:231:VAL:HG12	1:B:124[B]:THR:HG21	1.87	0.57
1:A:204[A]:ARG:NH1	1:A:208:GLN:HB2	2.21	0.56
1:E:33:SER:HA	1:E:53:THR:O	2.10	0.51
1:A:204[A]:ARG:HH12	1:A:208:GLN:HB2	1.75	0.51
1:A:8:ALA:HB3	1:A:34:SER:HB2	1.92	0.51
1:C:185:LEU:HD21	1:C:210:LEU:HG	1.94	0.49
1:B:33:SER:HA	1:B:53:THR:O	2.13	0.48
1:D:114:ALA:HA	1:D:140:HIS:CD2	2.49	0.48
1:D:8:ALA:HB3	1:D:34:SER:HB2	1.97	0.47
1:A:185:LEU:HD21	1:A:210:LEU:HG	1.97	0.47
1:A:230:ASN:O	1:B:10[B]:GLN:HG3	2.15	0.47
1:C:33:SER:HA	1:C:53:THR:O	2.18	0.44
1:D:124:THR:N	1:D:125:PRO:CD	2.81	0.44
1:E:22:ALA:HA	1:E:129:ARG:CZ	2.48	0.44
1:A:108:LEU:HD23	1:A:108:LEU:HA	1.84	0.44
1:E:114:ALA:N	1:E:115:PRO:HD3	2.32	0.43
1:C:204:ARG:HH12	1:C:208:GLN:HB2	1.83	0.43
1:E:133:THR:O	1:E:159:CYS:HA	2.19	0.43
1:C:109:SER:HA	1:C:112:ARG:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:114:ALA:HA	1:E:140:HIS:CG	2.54	0.42
1:B:172:GLY:HA2	1:B:261:SER:OG	2.19	0.41
1:C:133:THR:O	1:C:159:CYS:HA	2.20	0.41
1:C:264:ARG:O	1:C:268:LEU:HG	2.19	0.41
1:E:99:VAL:O	1:E:119:ARG:HD2	2.20	0.41
1:C:13:PHE:HA	1:C:45:LEU:HD21	2.03	0.41
1:E:177:GLY:HA2	1:E:180:TYR:CD2	2.56	0.41
1:B:185:LEU:HD21	1:B:210:LEU:HG	2.02	0.41
1:A:230:ASN:HB3	1:B:10[A]:GLN:NE2	2.36	0.41
1:C:114:ALA:HA	1:C:140:HIS:CD2	2.56	0.41
1:A:109:SER:HA	1:A:112:ARG:O	2.19	0.41
1:A:172:GLY:HA2	1:A:261:SER:OG	2.21	0.41
1:B:133:THR:O	1:B:159:CYS:HA	2.21	0.40

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	279/322 (87%)	271 (97%)	8 (3%)	0	100	100
1	B	273/322 (85%)	269 (98%)	4 (2%)	0	100	100
1	C	272/322 (84%)	263 (97%)	9 (3%)	0	100	100
1	D	269/322 (84%)	264 (98%)	5 (2%)	0	100	100
1	E	251/322 (78%)	243 (97%)	8 (3%)	0	100	100
All	All	1344/1610 (84%)	1310 (98%)	34 (2%)	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	200/254 (79%)	195 (98%)	5 (2%)	47	31
1	B	196/254 (77%)	194 (99%)	2 (1%)	76	69
1	C	190/254 (75%)	188 (99%)	2 (1%)	73	65
1	D	190/254 (75%)	188 (99%)	2 (1%)	73	65
1	E	152/254 (60%)	149 (98%)	3 (2%)	55	40
All	All	928/1270 (73%)	914 (98%)	14 (2%)	65	53

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	43	SER
1	A	112	ARG
1	A	120	CYS
1	A	125	PRO
1	A	211	LEU
1	B	37	MET
1	B	216	MET
1	C	0	SER
1	C	120	CYS
1	D	120	CYS
1	D	142	GLN
1	E	94	SER
1	E	120	CYS
1	E	216	MET

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

Mol	Chain	Res	Type
1	A	222	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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 5 ligands modelled in this entry, 5 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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	278/322 (86%)	0.18	11 (3%) 38 36	15, 31, 58, 76	0
1	B	273/322 (84%)	-0.13	0 100 100	13, 29, 55, 85	0
1	C	274/322 (85%)	0.09	4 (1%) 73 74	16, 33, 61, 85	0
1	D	270/322 (83%)	-0.06	5 (1%) 66 66	15, 30, 56, 87	0
1	E	255/322 (79%)	0.91	61 (23%) 0 0	17, 45, 80, 88	0
All	All	1350/1610 (83%)	0.19	81 (6%) 21 21	13, 32, 69, 88	0

All (81) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	143	VAL	6.2
1	E	54	PRO	5.1
1	E	111	PHE	5.1
1	E	75	ILE	4.9
1	E	84	ALA	4.9
1	E	72	PRO	4.6
1	E	26	ALA	4.5
1	E	53	THR	4.4
1	E	91	ILE	4.4
1	E	79	LEU	4.4
1	E	11	LEU	4.3
1	A	35	PRO	4.2
1	E	13	PHE	4.0
1	E	113	PRO	3.9
1	E	33	SER	3.9
1	E	83	GLY	3.8
1	E	110	ALA	3.7
1	E	50	VAL	3.7
1	E	25	LEU	3.6
1	E	3	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
1	E	27	ALA	3.5
1	E	69	ALA	3.4
1	E	52	LEU	3.3
1	E	8	ALA	3.3
1	D	38	ASP	3.3
1	E	76	PRO	3.2
1	E	144	GLU	3.2
1	E	30	ILE	3.2
1	E	19	PHE	3.2
1	E	109	SER	3.2
1	A	75	ILE	3.2
1	E	68	LEU	3.0
1	C	37	MET	3.0
1	C	38	ASP	3.0
1	E	108	LEU	3.0
1	E	28	HIS	3.0
1	D	36	ASP	3.0
1	D	24	VAL	3.0
1	A	8	ALA	3.0
1	E	55	HIS	3.0
1	E	140	HIS	3.0
1	E	7	GLY	2.9
1	E	86	ILE	2.9
1	E	73	HIS	2.9
1	E	148	LEU	2.8
1	A	79	LEU	2.8
1	E	14	ALA	2.8
1	E	5	PHE	2.8
1	A	37	MET	2.8
1	A	36	ASP	2.7
1	E	64	ASP	2.7
1	A	52	LEU	2.7
1	E	115	PRO	2.7
1	A	34	SER	2.7
1	D	35	PRO	2.6
1	A	41	THR	2.5
1	C	78	ILE	2.5
1	E	114	ALA	2.5
1	E	20	THR	2.5
1	E	21	ALA	2.5
1	E	90	HIS	2.5
1	E	67	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
1	E	62	HIS	2.4
1	E	112	ARG	2.4
1	E	1	MET	2.3
1	E	77	PHE	2.3
1	E	31	MET	2.3
1	E	92	VAL	2.2
1	E	145	ASP	2.2
1	E	141	ALA	2.2
1	E	139	THR	2.1
1	E	2	SER	2.1
1	E	102	SER	2.1
1	E	65	VAL	2.1
1	E	99	VAL	2.1
1	A	39	LEU	2.1
1	E	149	MET	2.1
1	A	82	ILE	2.1
1	E	51	LYS	2.1
1	C	40	ALA	2.0
1	D	34	SER	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 monosaccharides 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. 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
2	CL	E	401	1/1	0.96	0.10	36,36,36,36	0
2	CL	D	401	1/1	0.97	0.12	29,29,29,29	0
2	CL	B	401	1/1	0.98	0.10	34,34,34,34	0
2	CL	C	401	1/1	0.98	0.13	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	CL	A	401	1/1	0.99	0.12	25,25,25,25	0

6.5 Other polymers [i](#)

There are no such residues in this entry.