



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 14, 2023 – 01:39 AM JST

PDB ID : 5YPT
Title : Crystal structure of Marchantia paleacea chalone synthase like 1 (CHSL1)
Authors : Lou, H.X.; Yu, H.
Deposited on : 2017-11-03
Resolution : 2.39 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 : 2.36
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) : 2.36

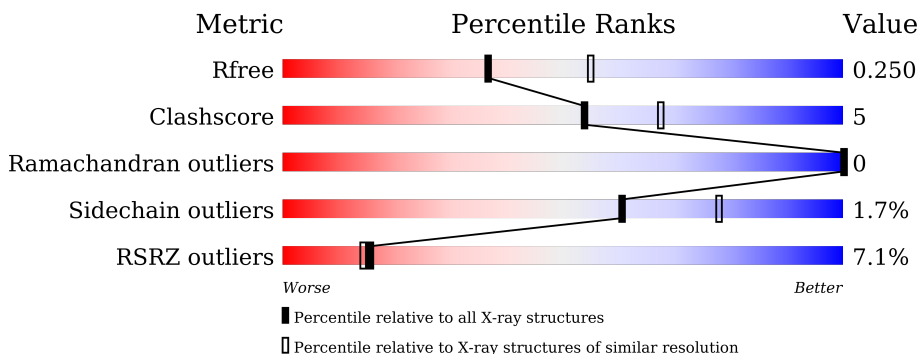
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.39 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	3907 (2.40-2.40)
Clashscore	141614	4398 (2.40-2.40)
Ramachandran outliers	138981	4318 (2.40-2.40)
Sidechain outliers	138945	4319 (2.40-2.40)
RSRZ outliers	127900	3811 (2.40-2.40)

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	429	
1	B	429	
1	C	429	
1	D	429	
1	E	429	
1	F	429	

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 18274 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 Stilbenecarboxylate synthase 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	384	Total 2959	C 1873	N 518	O 556	S 12	0	2	0
1	B	383	Total 2937	C 1858	N 515	O 552	S 12	0	0	0
1	C	384	Total 2949	C 1867	N 516	O 554	S 12	0	0	0
1	D	384	Total 2949	C 1867	N 516	O 554	S 12	0	0	0
1	E	384	Total 2949	C 1867	N 516	O 554	S 12	0	0	0
1	F	384	Total 2949	C 1867	N 516	O 554	S 12	0	0	0

There are 216 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-35	GLY	-	expression tag	UNP Q5I6Y2
A	-34	SER	-	expression tag	UNP Q5I6Y2
A	-33	GLY	-	expression tag	UNP Q5I6Y2
A	-32	MET	-	expression tag	UNP Q5I6Y2
A	-31	LYS	-	expression tag	UNP Q5I6Y2
A	-30	GLU	-	expression tag	UNP Q5I6Y2
A	-29	THR	-	expression tag	UNP Q5I6Y2
A	-28	ALA	-	expression tag	UNP Q5I6Y2
A	-27	ALA	-	expression tag	UNP Q5I6Y2
A	-26	ALA	-	expression tag	UNP Q5I6Y2
A	-25	LYS	-	expression tag	UNP Q5I6Y2
A	-24	PHE	-	expression tag	UNP Q5I6Y2
A	-23	GLU	-	expression tag	UNP Q5I6Y2
A	-22	ARG	-	expression tag	UNP Q5I6Y2
A	-21	GLN	-	expression tag	UNP Q5I6Y2
A	-20	HIS	-	expression tag	UNP Q5I6Y2
A	-19	MET	-	expression tag	UNP Q5I6Y2

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-18	ASP	-	expression tag	UNP Q5I6Y2
A	-17	SER	-	expression tag	UNP Q5I6Y2
A	-16	PRO	-	expression tag	UNP Q5I6Y2
A	-15	ASP	-	expression tag	UNP Q5I6Y2
A	-14	LEU	-	expression tag	UNP Q5I6Y2
A	-13	GLY	-	expression tag	UNP Q5I6Y2
A	-12	THR	-	expression tag	UNP Q5I6Y2
A	-11	ASP	-	expression tag	UNP Q5I6Y2
A	-10	ASP	-	expression tag	UNP Q5I6Y2
A	-9	ASP	-	expression tag	UNP Q5I6Y2
A	-8	ASP	-	expression tag	UNP Q5I6Y2
A	-7	LYS	-	expression tag	UNP Q5I6Y2
A	-6	ALA	-	expression tag	UNP Q5I6Y2
A	-5	MET	-	expression tag	UNP Q5I6Y2
A	-4	ALA	-	expression tag	UNP Q5I6Y2
A	-3	ASP	-	expression tag	UNP Q5I6Y2
A	-2	ILE	-	expression tag	UNP Q5I6Y2
A	-1	GLY	-	expression tag	UNP Q5I6Y2
A	0	SER	-	expression tag	UNP Q5I6Y2
B	-35	GLY	-	expression tag	UNP Q5I6Y2
B	-34	SER	-	expression tag	UNP Q5I6Y2
B	-33	GLY	-	expression tag	UNP Q5I6Y2
B	-32	MET	-	expression tag	UNP Q5I6Y2
B	-31	LYS	-	expression tag	UNP Q5I6Y2
B	-30	GLU	-	expression tag	UNP Q5I6Y2
B	-29	THR	-	expression tag	UNP Q5I6Y2
B	-28	ALA	-	expression tag	UNP Q5I6Y2
B	-27	ALA	-	expression tag	UNP Q5I6Y2
B	-26	ALA	-	expression tag	UNP Q5I6Y2
B	-25	LYS	-	expression tag	UNP Q5I6Y2
B	-24	PHE	-	expression tag	UNP Q5I6Y2
B	-23	GLU	-	expression tag	UNP Q5I6Y2
B	-22	ARG	-	expression tag	UNP Q5I6Y2
B	-21	GLN	-	expression tag	UNP Q5I6Y2
B	-20	HIS	-	expression tag	UNP Q5I6Y2
B	-19	MET	-	expression tag	UNP Q5I6Y2
B	-18	ASP	-	expression tag	UNP Q5I6Y2
B	-17	SER	-	expression tag	UNP Q5I6Y2
B	-16	PRO	-	expression tag	UNP Q5I6Y2
B	-15	ASP	-	expression tag	UNP Q5I6Y2
B	-14	LEU	-	expression tag	UNP Q5I6Y2
B	-13	GLY	-	expression tag	UNP Q5I6Y2

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-12	THR	-	expression tag	UNP Q5I6Y2
B	-11	ASP	-	expression tag	UNP Q5I6Y2
B	-10	ASP	-	expression tag	UNP Q5I6Y2
B	-9	ASP	-	expression tag	UNP Q5I6Y2
B	-8	ASP	-	expression tag	UNP Q5I6Y2
B	-7	LYS	-	expression tag	UNP Q5I6Y2
B	-6	ALA	-	expression tag	UNP Q5I6Y2
B	-5	MET	-	expression tag	UNP Q5I6Y2
B	-4	ALA	-	expression tag	UNP Q5I6Y2
B	-3	ASP	-	expression tag	UNP Q5I6Y2
B	-2	ILE	-	expression tag	UNP Q5I6Y2
B	-1	GLY	-	expression tag	UNP Q5I6Y2
B	0	SER	-	expression tag	UNP Q5I6Y2
C	-35	GLY	-	expression tag	UNP Q5I6Y2
C	-34	SER	-	expression tag	UNP Q5I6Y2
C	-33	GLY	-	expression tag	UNP Q5I6Y2
C	-32	MET	-	expression tag	UNP Q5I6Y2
C	-31	LYS	-	expression tag	UNP Q5I6Y2
C	-30	GLU	-	expression tag	UNP Q5I6Y2
C	-29	THR	-	expression tag	UNP Q5I6Y2
C	-28	ALA	-	expression tag	UNP Q5I6Y2
C	-27	ALA	-	expression tag	UNP Q5I6Y2
C	-26	ALA	-	expression tag	UNP Q5I6Y2
C	-25	LYS	-	expression tag	UNP Q5I6Y2
C	-24	PHE	-	expression tag	UNP Q5I6Y2
C	-23	GLU	-	expression tag	UNP Q5I6Y2
C	-22	ARG	-	expression tag	UNP Q5I6Y2
C	-21	GLN	-	expression tag	UNP Q5I6Y2
C	-20	HIS	-	expression tag	UNP Q5I6Y2
C	-19	MET	-	expression tag	UNP Q5I6Y2
C	-18	ASP	-	expression tag	UNP Q5I6Y2
C	-17	SER	-	expression tag	UNP Q5I6Y2
C	-16	PRO	-	expression tag	UNP Q5I6Y2
C	-15	ASP	-	expression tag	UNP Q5I6Y2
C	-14	LEU	-	expression tag	UNP Q5I6Y2
C	-13	GLY	-	expression tag	UNP Q5I6Y2
C	-12	THR	-	expression tag	UNP Q5I6Y2
C	-11	ASP	-	expression tag	UNP Q5I6Y2
C	-10	ASP	-	expression tag	UNP Q5I6Y2
C	-9	ASP	-	expression tag	UNP Q5I6Y2
C	-8	ASP	-	expression tag	UNP Q5I6Y2
C	-7	LYS	-	expression tag	UNP Q5I6Y2

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-6	ALA	-	expression tag	UNP Q5I6Y2
C	-5	MET	-	expression tag	UNP Q5I6Y2
C	-4	ALA	-	expression tag	UNP Q5I6Y2
C	-3	ASP	-	expression tag	UNP Q5I6Y2
C	-2	ILE	-	expression tag	UNP Q5I6Y2
C	-1	GLY	-	expression tag	UNP Q5I6Y2
C	0	SER	-	expression tag	UNP Q5I6Y2
D	-35	GLY	-	expression tag	UNP Q5I6Y2
D	-34	SER	-	expression tag	UNP Q5I6Y2
D	-33	GLY	-	expression tag	UNP Q5I6Y2
D	-32	MET	-	expression tag	UNP Q5I6Y2
D	-31	LYS	-	expression tag	UNP Q5I6Y2
D	-30	GLU	-	expression tag	UNP Q5I6Y2
D	-29	THR	-	expression tag	UNP Q5I6Y2
D	-28	ALA	-	expression tag	UNP Q5I6Y2
D	-27	ALA	-	expression tag	UNP Q5I6Y2
D	-26	ALA	-	expression tag	UNP Q5I6Y2
D	-25	LYS	-	expression tag	UNP Q5I6Y2
D	-24	PHE	-	expression tag	UNP Q5I6Y2
D	-23	GLU	-	expression tag	UNP Q5I6Y2
D	-22	ARG	-	expression tag	UNP Q5I6Y2
D	-21	GLN	-	expression tag	UNP Q5I6Y2
D	-20	HIS	-	expression tag	UNP Q5I6Y2
D	-19	MET	-	expression tag	UNP Q5I6Y2
D	-18	ASP	-	expression tag	UNP Q5I6Y2
D	-17	SER	-	expression tag	UNP Q5I6Y2
D	-16	PRO	-	expression tag	UNP Q5I6Y2
D	-15	ASP	-	expression tag	UNP Q5I6Y2
D	-14	LEU	-	expression tag	UNP Q5I6Y2
D	-13	GLY	-	expression tag	UNP Q5I6Y2
D	-12	THR	-	expression tag	UNP Q5I6Y2
D	-11	ASP	-	expression tag	UNP Q5I6Y2
D	-10	ASP	-	expression tag	UNP Q5I6Y2
D	-9	ASP	-	expression tag	UNP Q5I6Y2
D	-8	ASP	-	expression tag	UNP Q5I6Y2
D	-7	LYS	-	expression tag	UNP Q5I6Y2
D	-6	ALA	-	expression tag	UNP Q5I6Y2
D	-5	MET	-	expression tag	UNP Q5I6Y2
D	-4	ALA	-	expression tag	UNP Q5I6Y2
D	-3	ASP	-	expression tag	UNP Q5I6Y2
D	-2	ILE	-	expression tag	UNP Q5I6Y2
D	-1	GLY	-	expression tag	UNP Q5I6Y2

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Chain	Residue	Modelled	Actual	Comment	Reference
D	0	SER	-	expression tag	UNP Q5I6Y2
E	-35	GLY	-	expression tag	UNP Q5I6Y2
E	-34	SER	-	expression tag	UNP Q5I6Y2
E	-33	GLY	-	expression tag	UNP Q5I6Y2
E	-32	MET	-	expression tag	UNP Q5I6Y2
E	-31	LYS	-	expression tag	UNP Q5I6Y2
E	-30	GLU	-	expression tag	UNP Q5I6Y2
E	-29	THR	-	expression tag	UNP Q5I6Y2
E	-28	ALA	-	expression tag	UNP Q5I6Y2
E	-27	ALA	-	expression tag	UNP Q5I6Y2
E	-26	ALA	-	expression tag	UNP Q5I6Y2
E	-25	LYS	-	expression tag	UNP Q5I6Y2
E	-24	PHE	-	expression tag	UNP Q5I6Y2
E	-23	GLU	-	expression tag	UNP Q5I6Y2
E	-22	ARG	-	expression tag	UNP Q5I6Y2
E	-21	GLN	-	expression tag	UNP Q5I6Y2
E	-20	HIS	-	expression tag	UNP Q5I6Y2
E	-19	MET	-	expression tag	UNP Q5I6Y2
E	-18	ASP	-	expression tag	UNP Q5I6Y2
E	-17	SER	-	expression tag	UNP Q5I6Y2
E	-16	PRO	-	expression tag	UNP Q5I6Y2
E	-15	ASP	-	expression tag	UNP Q5I6Y2
E	-14	LEU	-	expression tag	UNP Q5I6Y2
E	-13	GLY	-	expression tag	UNP Q5I6Y2
E	-12	THR	-	expression tag	UNP Q5I6Y2
E	-11	ASP	-	expression tag	UNP Q5I6Y2
E	-10	ASP	-	expression tag	UNP Q5I6Y2
E	-9	ASP	-	expression tag	UNP Q5I6Y2
E	-8	ASP	-	expression tag	UNP Q5I6Y2
E	-7	LYS	-	expression tag	UNP Q5I6Y2
E	-6	ALA	-	expression tag	UNP Q5I6Y2
E	-5	MET	-	expression tag	UNP Q5I6Y2
E	-4	ALA	-	expression tag	UNP Q5I6Y2
E	-3	ASP	-	expression tag	UNP Q5I6Y2
E	-2	ILE	-	expression tag	UNP Q5I6Y2
E	-1	GLY	-	expression tag	UNP Q5I6Y2
E	0	SER	-	expression tag	UNP Q5I6Y2
F	-35	GLY	-	expression tag	UNP Q5I6Y2
F	-34	SER	-	expression tag	UNP Q5I6Y2
F	-33	GLY	-	expression tag	UNP Q5I6Y2
F	-32	MET	-	expression tag	UNP Q5I6Y2
F	-31	LYS	-	expression tag	UNP Q5I6Y2

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Chain	Residue	Modelled	Actual	Comment	Reference
F	-30	GLU	-	expression tag	UNP Q5I6Y2
F	-29	THR	-	expression tag	UNP Q5I6Y2
F	-28	ALA	-	expression tag	UNP Q5I6Y2
F	-27	ALA	-	expression tag	UNP Q5I6Y2
F	-26	ALA	-	expression tag	UNP Q5I6Y2
F	-25	LYS	-	expression tag	UNP Q5I6Y2
F	-24	PHE	-	expression tag	UNP Q5I6Y2
F	-23	GLU	-	expression tag	UNP Q5I6Y2
F	-22	ARG	-	expression tag	UNP Q5I6Y2
F	-21	GLN	-	expression tag	UNP Q5I6Y2
F	-20	HIS	-	expression tag	UNP Q5I6Y2
F	-19	MET	-	expression tag	UNP Q5I6Y2
F	-18	ASP	-	expression tag	UNP Q5I6Y2
F	-17	SER	-	expression tag	UNP Q5I6Y2
F	-16	PRO	-	expression tag	UNP Q5I6Y2
F	-15	ASP	-	expression tag	UNP Q5I6Y2
F	-14	LEU	-	expression tag	UNP Q5I6Y2
F	-13	GLY	-	expression tag	UNP Q5I6Y2
F	-12	THR	-	expression tag	UNP Q5I6Y2
F	-11	ASP	-	expression tag	UNP Q5I6Y2
F	-10	ASP	-	expression tag	UNP Q5I6Y2
F	-9	ASP	-	expression tag	UNP Q5I6Y2
F	-8	ASP	-	expression tag	UNP Q5I6Y2
F	-7	LYS	-	expression tag	UNP Q5I6Y2
F	-6	ALA	-	expression tag	UNP Q5I6Y2
F	-5	MET	-	expression tag	UNP Q5I6Y2
F	-4	ALA	-	expression tag	UNP Q5I6Y2
F	-3	ASP	-	expression tag	UNP Q5I6Y2
F	-2	ILE	-	expression tag	UNP Q5I6Y2
F	-1	GLY	-	expression tag	UNP Q5I6Y2
F	0	SER	-	expression tag	UNP Q5I6Y2

- Molecule 2 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	161	Total O 161 161	0	0
2	B	127	Total O 127 127	0	0
2	C	56	Total O 56 56	0	0
2	D	99	Total O 99 99	0	0

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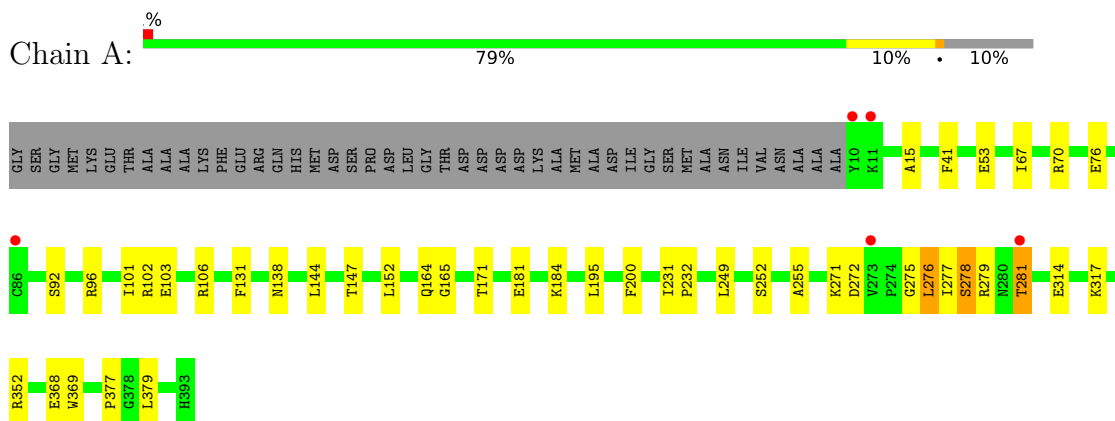
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	E	66	Total 66	O 66	0	0
2	F	73	Total 73	O 73	0	0

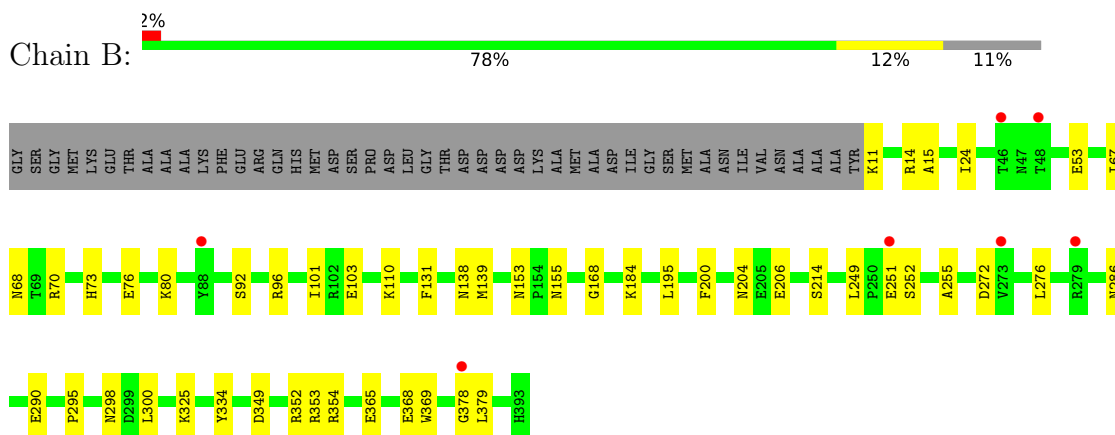
3 Residue-property plots [i](#)

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.

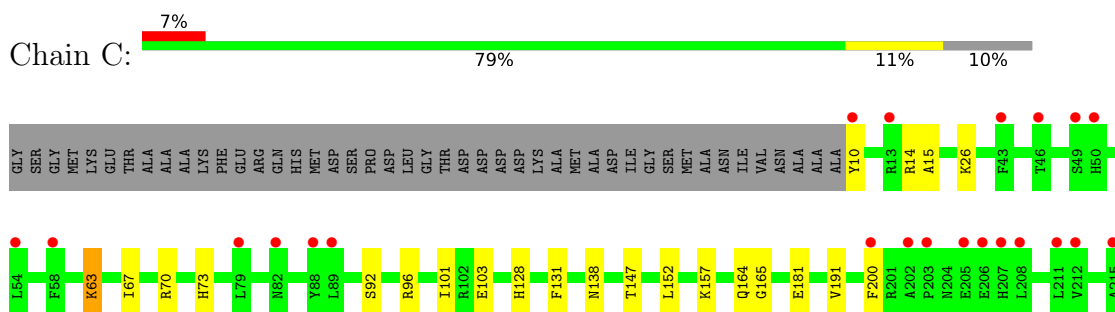
- Molecule 1: Stilbenecarboxylate synthase 1

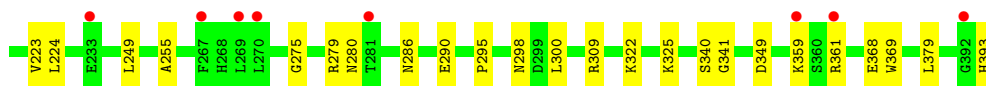


- Molecule 1: Stilbenecarboxylate synthase 1

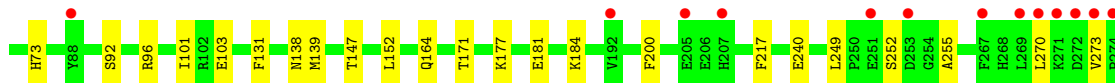
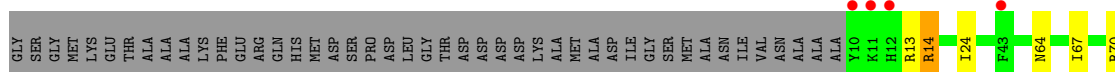
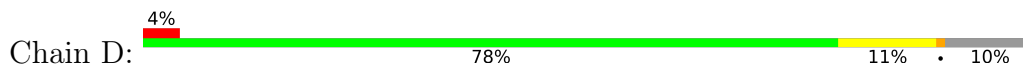


- Molecule 1: Stilbenecarboxylate synthase 1

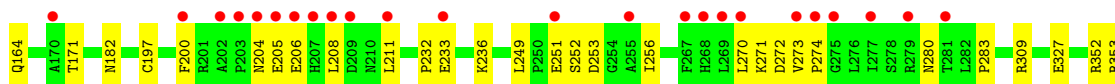
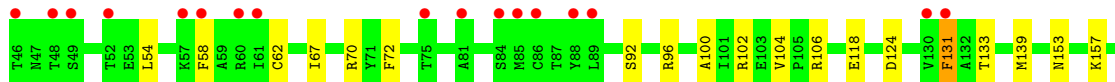
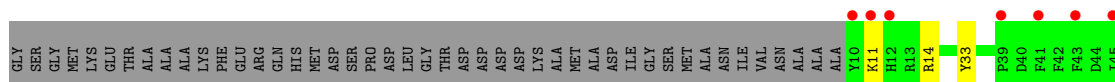
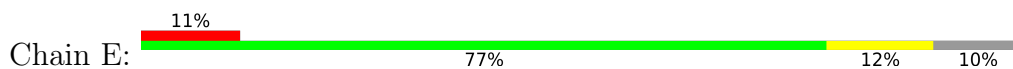




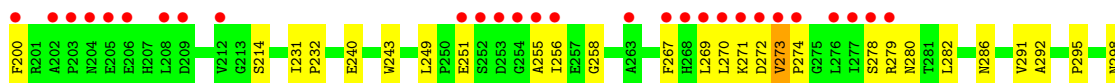
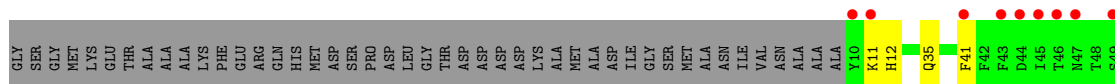
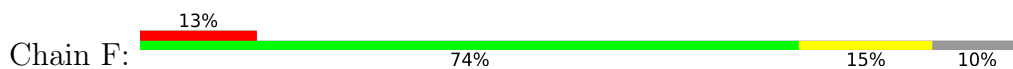
- Molecule 1: Stilbenecarboxylate synthase 1

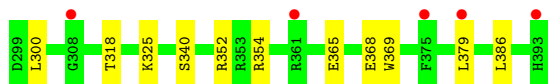


- Molecule 1: Stilbenecarboxylate synthase 1



- Molecule 1: Stilbenecarboxylate synthase 1





4 Data and refinement statistics i

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	128.18Å 74.58Å 262.15Å 90.00° 104.04° 90.00°	Depositor
Resolution (Å)	48.25 – 2.39 48.25 – 2.39	Depositor EDS
% Data completeness (in resolution range)	98.5 (48.25-2.39) 98.5 (48.25-2.39)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	0.10	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.12 (at 2.39Å)	Xtrriage
Refinement program	PHENIX 1.9_1692	Depositor
R, R_{free}	0.194 , 0.248 0.197 , 0.250	Depositor DCC
R_{free} test set	4702 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	33.9	Xtrriage
Anisotropy	0.721	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 48.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.014 for h,-k,-h-l	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	18274	wwPDB-VP
Average B, all atoms (Å ²)	41.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 8.03% 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](#)

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	0.54	0/3027	0.65	0/4113
1	B	0.49	0/2998	0.62	0/4072
1	C	0.43	0/3011	0.60	0/4090
1	D	0.45	0/3011	0.63	0/4090
1	E	0.46	0/3011	0.62	0/4090
1	F	0.44	0/3011	0.62	0/4090
All	All	0.47	0/18069	0.62	0/24545

There are no bond length outliers.

There are no bond angle outliers.

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	2959	0	2970	28	0
1	B	2937	0	2949	34	0
1	C	2949	0	2958	30	0
1	D	2949	0	2958	33	0
1	E	2949	0	2958	34	0
1	F	2949	0	2958	38	0
2	A	161	0	0	1	0
2	B	127	0	0	3	0
2	C	56	0	0	2	0
2	D	99	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	E	66	0	0	2	0
2	F	73	0	0	0	0
All	All	18274	0	17751	187	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 5.

All (187) 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:96:ARG:NH2	1:B:200:PHE:O	2.06	0.88
1:F:96:ARG:NH2	1:F:200:PHE:O	2.09	0.85
1:D:96:ARG:NH2	1:D:200:PHE:O	2.11	0.82
1:E:96:ARG:NH2	1:E:200:PHE:O	2.12	0.81
1:C:96:ARG:NH2	1:C:200:PHE:O	2.15	0.80
1:A:96:ARG:NH2	1:A:200:PHE:O	2.16	0.77
1:C:298:ASN:HB3	1:C:322:LYS:HE2	1.70	0.73
1:C:15:ALA:O	1:D:14:ARG:NH1	2.23	0.72
1:E:249:LEU:HD12	1:E:379:LEU:HD13	1.71	0.72
1:B:255:ALA:HB3	1:B:379:LEU:HD23	1.72	0.71
1:E:280:ASN:O	1:E:283:PRO:HD2	1.91	0.70
1:F:251:GLU:O	1:F:251:GLU:HG2	1.94	0.68
1:E:252:SER:HB2	1:E:379:LEU:HB2	1.77	0.67
1:F:90:GLU:HG3	1:F:91:PRO:HD2	1.76	0.66
1:D:255:ALA:HB3	1:D:379:LEU:HD23	1.78	0.66
1:C:92:SER:O	1:C:96:ARG:HG3	1.96	0.66
1:E:67:ILE:HG21	1:E:70:ARG:HD2	1.78	0.65
1:F:92:SER:O	1:F:96:ARG:HG3	1.96	0.65
1:E:54:LEU:HD11	1:E:211:LEU:HD11	1.78	0.64
1:A:102:ARG:NH2	1:A:106:ARG:HH22	1.96	0.64
1:E:182:ASN:ND2	1:F:178:ASP:OD1	2.31	0.63
1:B:252:SER:HB2	1:B:379:LEU:HB2	1.79	0.63
1:A:70:ARG:HD3	2:A:471:HOH:O	1.99	0.63
1:A:255:ALA:HB3	1:A:379:LEU:HD23	1.81	0.62
1:E:271:LYS:HG3	1:E:272:ASP:H	1.64	0.61
1:D:92:SER:O	1:D:96:ARG:HG3	2.00	0.60
1:A:255:ALA:HB2	1:A:271:LYS:HD2	1.82	0.60
1:C:249:LEU:HD12	1:C:379:LEU:HD12	1.84	0.60
1:A:314:GLU:OE2	1:A:317:LYS:NZ	2.31	0.60
1:B:204:ASN:OD1	1:B:206:GLU:HG3	2.02	0.59
1:D:252:SER:HB2	1:D:379:LEU:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:92:SER:O	1:E:96:ARG:HG3	2.02	0.59
1:B:92:SER:O	1:B:96:ARG:HG3	2.03	0.59
1:F:35:GLN:OE1	1:F:70:ARG:NH1	2.35	0.58
1:A:92:SER:O	1:A:96:ARG:HG3	2.04	0.58
1:F:255:ALA:HB3	1:F:379:LEU:HD23	1.87	0.57
1:F:278:SER:OG	1:F:318:THR:OG1	2.19	0.57
1:E:118:GLU:O	1:E:236:LYS:NZ	2.25	0.57
1:D:147:THR:HG23	1:D:152:LEU:HB2	1.88	0.56
1:C:164:GLN:NE2	2:C:401:HOH:O	2.23	0.56
1:E:272:ASP:HA	1:E:274:PRO:HD2	1.88	0.56
1:A:272:ASP:O	1:A:276:LEU:HB2	2.05	0.55
1:D:67:ILE:HG21	1:D:70:ARG:HD2	1.89	0.55
1:A:103:GLU:HB2	1:A:195:LEU:HD11	1.89	0.55
1:F:147:THR:HG23	1:F:152:LEU:HB2	1.89	0.55
1:D:64:ASN:O	1:D:309:ARG:NH1	2.38	0.54
1:A:277:ILE:O	1:A:281:THR:OG1	2.25	0.54
1:A:249:LEU:HD12	1:A:379:LEU:HD12	1.90	0.54
1:B:249:LEU:HD12	1:B:379:LEU:HD12	1.88	0.54
1:B:70:ARG:HD3	2:B:472:HOH:O	2.08	0.54
1:A:101:ILE:HG12	1:A:138:ASN:HB2	1.89	0.54
1:C:368:GLU:HG3	1:C:369:TRP:CD1	2.43	0.54
1:D:73:HIS:NE2	1:D:103:GLU:HG3	2.22	0.53
1:A:275:GLY:O	1:A:279:ARG:HB3	2.08	0.53
1:F:255:ALA:HB3	1:F:379:LEU:CD2	2.38	0.53
1:B:110:LYS:NZ	2:B:402:HOH:O	2.21	0.52
1:E:232:PRO:O	1:E:233:GLU:HB3	2.09	0.52
1:B:295:PRO:HG2	1:B:300:LEU:HD21	1.91	0.52
1:E:256:ILE:HB	1:E:377:PRO:HA	1.92	0.52
1:F:270:LEU:C	1:F:271:LYS:HD3	2.30	0.52
1:C:70:ARG:HD3	2:C:430:HOH:O	2.10	0.52
1:E:327:GLU:HB3	1:E:354:ARG:NH2	2.25	0.52
1:A:252:SER:HB2	1:A:379:LEU:HB2	1.92	0.51
1:E:102:ARG:HH12	1:E:106:ARG:NH1	2.08	0.51
1:D:327:GLU:HB3	1:D:354:ARG:NH2	2.25	0.51
1:D:255:ALA:HB3	1:D:379:LEU:CD2	2.41	0.51
1:A:252:SER:HB2	1:A:379:LEU:CB	2.41	0.50
1:B:352:ARG:HG2	1:B:353:ARG:N	2.26	0.50
1:F:271:LYS:HD3	1:F:271:LYS:N	2.25	0.50
1:D:277:ILE:O	1:D:281:THR:HG23	2.11	0.50
1:B:67:ILE:HG21	1:B:70:ARG:HD2	1.92	0.50
1:C:295:PRO:HG2	1:C:300:LEU:HD21	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:204:ASN:OD1	1:E:206:GLU:HG3	2.11	0.50
1:F:12:HIS:HE1	1:F:182:ASN:O	1.93	0.50
1:D:24:ILE:HG21	1:D:349:ASP:HB2	1.94	0.49
1:A:67:ILE:HG21	1:A:70:ARG:HD2	1.94	0.49
1:D:300:LEU:O	1:D:325:LYS:NZ	2.41	0.48
1:F:282:LEU:O	1:F:286:ASN:ND2	2.47	0.48
1:D:270:LEU:O	1:D:273:VAL:HG23	2.14	0.48
1:E:131:PHE:HE2	1:E:133:THR:HB	1.79	0.48
1:F:67:ILE:HG21	1:F:70:ARG:HD2	1.96	0.48
1:C:147:THR:HG23	1:C:152:LEU:HB2	1.95	0.47
1:F:41:PHE:HE1	1:F:76:GLU:HG3	1.79	0.47
1:B:153:ASN:OD1	1:B:155:ASN:HB2	2.15	0.47
1:C:249:LEU:HD22	1:C:280:ASN:HB3	1.96	0.47
1:A:181:GLU:O	1:B:14:ARG:NH1	2.44	0.47
1:C:181:GLU:O	1:D:14:ARG:NH1	2.48	0.47
1:D:13:ARG:HG3	1:D:184:LYS:HB2	1.97	0.47
1:E:256:ILE:HG12	1:E:270:LEU:HD13	1.97	0.47
1:E:273:VAL:N	1:E:274:PRO:HD2	2.30	0.47
1:D:382:GLU:OE1	2:D:401:HOH:O	2.20	0.46
1:E:157:LYS:HE3	2:E:405:HOH:O	2.14	0.46
1:E:251:GLU:O	1:E:251:GLU:HG3	2.15	0.46
1:B:251:GLU:OE1	1:B:276:LEU:HD21	2.15	0.46
1:F:298:ASN:HA	1:F:325:LYS:HD2	1.96	0.46
1:C:255:ALA:HB3	1:C:379:LEU:HD23	1.97	0.46
1:A:41:PHE:HE1	1:A:76:GLU:HG2	1.81	0.46
1:B:298:ASN:HA	1:B:325:LYS:HD2	1.98	0.46
1:C:67:ILE:HG21	1:C:70:ARG:HD2	1.96	0.46
1:E:58:PHE:CE2	1:E:62:CYS:SG	3.09	0.46
1:D:352:ARG:HG2	1:D:353:ARG:N	2.31	0.46
1:B:76:GLU:HG3	1:B:80:LYS:HE2	1.98	0.45
1:E:271:LYS:HG3	1:E:272:ASP:N	2.31	0.45
1:E:273:VAL:N	1:E:274:PRO:CD	2.78	0.45
1:F:88:TYR:O	1:F:89:LEU:HD23	2.17	0.45
1:C:101:ILE:HG12	1:C:138:ASN:HB2	1.98	0.45
1:B:73:HIS:NE2	1:B:103:GLU:HG3	2.30	0.45
1:B:252:SER:HB2	1:B:379:LEU:CB	2.45	0.45
1:F:70:ARG:NH2	1:F:214:SER:O	2.48	0.45
1:F:295:PRO:HG2	1:F:300:LEU:HD21	1.99	0.45
1:B:251:GLU:CD	1:B:251:GLU:O	2.55	0.45
1:B:354:ARG:NH1	1:B:365:GLU:OE2	2.47	0.45
1:C:298:ASN:HA	1:C:325:LYS:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:379:LEU:HD13	1:D:379:LEU:HA	1.81	0.45
1:F:256:ILE:HG23	1:F:269:LEU:HD22	1.99	0.45
1:D:217:PHE:HA	1:D:338:ASN:O	2.16	0.44
1:E:100:ALA:HB2	1:E:197:CYS:SG	2.57	0.44
1:B:70:ARG:NH2	1:B:214:SER:O	2.47	0.44
1:D:101:ILE:HG12	1:D:138:ASN:HB2	1.99	0.44
1:C:298:ASN:HB3	1:C:322:LYS:CE	2.44	0.44
1:E:124:ASP:O	1:E:153:ASN:ND2	2.42	0.44
1:D:252:SER:CB	1:D:379:LEU:HB2	2.47	0.44
1:F:255:ALA:HA	1:F:271:LYS:H	1.82	0.44
1:C:340:SER:OG	1:C:341:GLY:N	2.51	0.44
1:A:231:ILE:HA	1:A:232:PRO:HD3	1.86	0.44
1:E:33:TYR:CD2	1:E:72:PHE:HD2	2.36	0.44
1:F:368:GLU:HG3	1:F:369:TRP:CD1	2.52	0.44
1:A:15:ALA:HA	1:A:184:LYS:HD2	2.00	0.44
1:A:164:GLN:NE2	1:A:171:THR:HG21	2.33	0.43
1:D:177:LYS:NZ	1:D:181:GLU:OE1	2.47	0.43
1:B:101:ILE:HG12	1:B:138:ASN:HB2	2.00	0.43
1:F:199:THR:HG21	1:F:267:PHE:HE2	1.84	0.43
1:F:354:ARG:NE	1:F:365:GLU:OE2	2.41	0.43
1:C:191:VAL:HG22	1:C:223:VAL:HG22	2.00	0.43
1:B:272:ASP:O	1:B:276:LEU:HB2	2.19	0.43
1:F:243:TRP:HB2	1:F:291:VAL:HG21	2.01	0.42
1:A:147:THR:HG23	1:A:152:LEU:HB2	2.00	0.42
1:B:68:ASN:HB2	1:B:334:TYR:CE1	2.55	0.42
1:B:68:ASN:HB2	1:B:334:TYR:CZ	2.54	0.42
1:B:368:GLU:HG3	1:B:369:TRP:CD1	2.54	0.42
1:D:249:LEU:HB2	1:D:379:LEU:HB3	2.01	0.42
1:F:11:LYS:HG2	1:F:11:LYS:O	2.19	0.42
1:C:73:HIS:NE2	1:C:103:GLU:HG3	2.35	0.42
1:E:14:ARG:HG2	2:E:409:HOH:O	2.20	0.42
1:F:73:HIS:NE2	1:F:103:GLU:HG3	2.35	0.42
1:F:292:ALA:HB1	1:F:369:TRP:CG	2.55	0.42
1:D:368:GLU:HG3	1:D:369:TRP:CD1	2.55	0.42
1:E:104:VAL:HG12	1:E:131:PHE:HZ	1.84	0.42
1:E:352:ARG:HG2	1:E:353:ARG:N	2.35	0.42
1:B:24:ILE:HG21	1:B:349:ASP:HB2	2.01	0.42
1:C:128:HIS:CD2	1:C:157:LYS:HB2	2.55	0.42
1:D:359:LYS:HA	1:D:393:HIS:ND1	2.35	0.42
1:A:102:ARG:NH2	1:A:106:ARG:NH2	2.65	0.42
1:B:15:ALA:HA	1:B:184:LYS:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:14:ARG:NH1	1:D:181:GLU:O	2.52	0.41
1:D:255:ALA:HA	1:D:270:LEU:HG	2.02	0.41
1:F:273:VAL:HG13	1:F:274:PRO:HD3	2.02	0.41
1:F:100:ALA:HB2	1:F:197:CYS:SG	2.60	0.41
1:A:277:ILE:HG22	1:A:278:SER:N	2.35	0.41
1:B:168:GLY:HA3	2:B:482:HOH:O	2.21	0.41
1:C:165:GLY:HA2	1:D:139:MET:HE1	2.02	0.41
1:D:240:GLU:O	1:D:386:LEU:HA	2.20	0.41
1:A:377:PRO:HG2	1:B:139:MET:HE2	2.02	0.41
1:C:63:LYS:HE2	1:C:63:LYS:HB2	1.63	0.41
1:C:286:ASN:O	1:C:290:GLU:HG3	2.19	0.41
1:E:208:LEU:O	1:E:211:LEU:HB2	2.21	0.41
1:A:165:GLY:HA2	1:B:139:MET:HE1	2.02	0.41
1:B:103:GLU:HB2	1:B:195:LEU:HD11	2.03	0.41
1:F:119:TRP:CZ2	1:F:121:GLN:HB2	2.56	0.41
1:C:359:LYS:HG2	1:C:393:HIS:CE1	2.56	0.41
1:D:288:ALA:O	1:D:385:VAL:HG21	2.21	0.41
1:E:139:MET:HB2	1:F:258:GLY:HA3	2.02	0.41
1:E:164:GLN:NE2	1:E:171:THR:HG21	2.36	0.41
1:F:240:GLU:O	1:F:386:LEU:HA	2.21	0.41
1:F:249:LEU:HD22	1:F:280:ASN:HB3	2.03	0.41
1:F:278:SER:O	1:F:318:THR:HG21	2.21	0.41
1:C:26:LYS:NZ	1:C:349:ASP:OD2	2.38	0.41
1:C:275:GLY:HA3	1:C:279:ARG:HH21	1.86	0.41
1:C:379:LEU:HA	1:C:379:LEU:HD22	1.73	0.41
1:A:368:GLU:HG3	1:A:369:TRP:CD1	2.56	0.40
1:B:286:ASN:O	1:B:290:GLU:HG3	2.20	0.40
1:F:137:VAL:HA	1:F:162:TYR:CE1	2.56	0.40
1:A:144:LEU:HD13	1:B:378:GLY:HA3	2.03	0.40
1:D:164:GLN:NE2	1:D:171:THR:HG21	2.36	0.40
1:E:205:GLU:HA	1:E:208:LEU:HD21	2.02	0.40
1:C:224:LEU:N	1:C:224:LEU:HD12	2.37	0.40
1:F:231:ILE:HA	1:F:232:PRO:HD3	1.97	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	384/429 (90%)	378 (98%)	6 (2%)	0	100	100
1	B	381/429 (89%)	371 (97%)	10 (3%)	0	100	100
1	C	382/429 (89%)	374 (98%)	8 (2%)	0	100	100
1	D	382/429 (89%)	372 (97%)	10 (3%)	0	100	100
1	E	382/429 (89%)	369 (97%)	13 (3%)	0	100	100
1	F	382/429 (89%)	374 (98%)	8 (2%)	0	100	100
All	All	2293/2574 (89%)	2238 (98%)	55 (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	319/349 (91%)	313 (98%)	6 (2%)	57	75
1	B	316/349 (90%)	313 (99%)	3 (1%)	78	90
1	C	317/349 (91%)	312 (98%)	5 (2%)	62	79
1	D	317/349 (91%)	312 (98%)	5 (2%)	62	79
1	E	317/349 (91%)	313 (99%)	4 (1%)	69	84
1	F	317/349 (91%)	307 (97%)	10 (3%)	39	59
All	All	1903/2094 (91%)	1870 (98%)	33 (2%)	60	78

All (33) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	53	GLU
1	A	131	PHE
1	A	276	LEU
1	A	278	SER
1	A	281	THR
1	A	352	ARG
1	B	11	LYS
1	B	53	GLU
1	B	131	PHE
1	C	10	TYR
1	C	63	LYS
1	C	131	PHE
1	C	309	ARG
1	C	361	ARG
1	D	14	ARG
1	D	131	PHE
1	D	281	THR
1	D	317	LYS
1	D	352	ARG
1	E	11	LYS
1	E	131	PHE
1	E	253	ASP
1	E	309	ARG
1	F	52	THR
1	F	60	ARG
1	F	76	GLU
1	F	131	PHE
1	F	135	SER
1	F	272	ASP
1	F	273	VAL
1	F	279	ARG
1	F	340	SER
1	F	352	ARG

Sometimes 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 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](#)

There are no ligands in this entry.

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	384/429 (89%)	0.22	5 (1%) 77 75	18, 32, 58, 80	0
1	B	383/429 (89%)	0.15	7 (1%) 68 66	19, 34, 60, 79	0
1	C	384/429 (89%)	0.59	30 (7%) 13 11	24, 44, 68, 89	0
1	D	384/429 (89%)	0.42	19 (4%) 29 28	22, 37, 69, 88	0
1	E	384/429 (89%)	0.68	48 (12%) 3 3	25, 43, 73, 94	0
1	F	384/429 (89%)	0.81	54 (14%) 2 2	25, 44, 77, 93	0
All	All	2303/2574 (89%)	0.48	163 (7%) 16 14	18, 38, 70, 94	0

All (163) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	270	LEU	9.0
1	E	270	LEU	7.1
1	F	86	CYS	5.8
1	F	43	PHE	5.4
1	E	273	VAL	5.3
1	F	251	GLU	5.1
1	C	10	TYR	5.1
1	A	10	TYR	4.9
1	E	48	THR	4.7
1	F	50	HIS	4.6
1	C	206	GLU	4.6
1	F	271	LYS	4.6
1	E	203	PRO	4.6
1	D	207	HIS	4.5
1	F	277	ILE	4.4
1	C	270	LEU	4.2
1	F	11	LYS	4.2
1	E	279	ARG	4.2
1	C	46	THR	4.2

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Mol	Chain	Res	Type	RSRZ
1	E	45	ILE	4.1
1	F	274	PRO	4.1
1	F	254	GLY	4.1
1	E	57	LYS	4.0
1	C	54	LEU	4.0
1	E	206	GLU	4.0
1	E	255	ALA	3.9
1	E	207	HIS	3.8
1	E	11	LYS	3.8
1	A	273	VAL	3.8
1	F	49	SER	3.8
1	D	11	LYS	3.7
1	F	269	LEU	3.6
1	F	255	ALA	3.6
1	E	208	LEU	3.6
1	F	89	LEU	3.6
1	F	53	GLU	3.6
1	D	205	GLU	3.5
1	F	267	PHE	3.5
1	C	88	TYR	3.5
1	F	45	ILE	3.5
1	F	272	ASP	3.5
1	E	43	PHE	3.5
1	F	88	TYR	3.4
1	E	269	LEU	3.4
1	E	233	GLU	3.4
1	F	273	VAL	3.4
1	C	49	SER	3.4
1	F	205	GLU	3.4
1	E	41	PHE	3.3
1	C	203	PRO	3.3
1	F	203	PRO	3.3
1	E	10	TYR	3.3
1	C	233	GLU	3.2
1	C	212	VAL	3.2
1	F	47	ASN	3.2
1	D	269	LEU	3.2
1	F	268	HIS	3.1
1	F	279	ARG	3.1
1	F	278	SER	3.0
1	B	88	TYR	3.0
1	D	274	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
1	F	51	LYS	3.0
1	E	58	PHE	3.0
1	C	208	LEU	3.0
1	C	361	ARG	3.0
1	E	86	CYS	2.9
1	E	39	PRO	2.9
1	C	200	PHE	2.9
1	F	10	TYR	2.9
1	D	277	ILE	2.9
1	F	379	LEU	2.9
1	D	272	ASP	2.9
1	F	206	GLU	2.8
1	F	256	ILE	2.8
1	C	58	PHE	2.8
1	F	252	SER	2.8
1	D	88	TYR	2.8
1	F	204	ASN	2.8
1	F	212	VAL	2.7
1	C	79	LEU	2.7
1	F	52	THR	2.7
1	D	271	LYS	2.7
1	D	10	TYR	2.7
1	F	308	GLY	2.7
1	A	11	LYS	2.7
1	D	275	GLY	2.7
1	C	43	PHE	2.7
1	F	393	HIS	2.7
1	A	281	THR	2.6
1	D	273	VAL	2.6
1	E	275	GLY	2.6
1	F	44	ASP	2.6
1	E	81	ALA	2.6
1	E	211	LEU	2.6
1	E	267	PHE	2.6
1	E	205	GLU	2.6
1	E	204	ASN	2.6
1	F	46	THR	2.6
1	C	392	GLY	2.6
1	E	209	ASP	2.5
1	B	251	GLU	2.5
1	E	84	SER	2.5
1	F	208	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	B	46	THR	2.5
1	B	48	THR	2.5
1	F	276	LEU	2.5
1	F	58	PHE	2.5
1	C	215	ALA	2.5
1	E	277	ILE	2.5
1	E	49	SER	2.4
1	C	50	HIS	2.4
1	B	279	ARG	2.4
1	E	251	GLU	2.4
1	E	88	TYR	2.4
1	E	89	LEU	2.4
1	E	274	PRO	2.4
1	C	205	GLU	2.4
1	C	207	HIS	2.4
1	E	268	HIS	2.4
1	D	192	VAL	2.4
1	D	267	PHE	2.4
1	F	200	PHE	2.4
1	F	375	PHE	2.4
1	A	86	CYS	2.4
1	F	202	ALA	2.3
1	E	46	THR	2.3
1	E	52	THR	2.3
1	C	269	LEU	2.3
1	D	253	ASP	2.3
1	F	253	ASP	2.3
1	F	160	MET	2.3
1	C	267	PHE	2.3
1	D	251	GLU	2.3
1	E	61	ILE	2.3
1	C	281	THR	2.2
1	D	270	LEU	2.2
1	B	378	GLY	2.2
1	F	361	ARG	2.2
1	F	64	ASN	2.2
1	B	273	VAL	2.2
1	E	130	VAL	2.2
1	F	85	MET	2.2
1	E	60	ARG	2.2
1	E	281	THR	2.2
1	C	211	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	85	MET	2.2
1	D	12	HIS	2.1
1	F	41	PHE	2.1
1	C	202	ALA	2.1
1	E	200	PHE	2.1
1	C	13	ARG	2.1
1	D	43	PHE	2.1
1	E	131	PHE	2.1
1	E	202	ALA	2.1
1	F	54	LEU	2.1
1	C	89	LEU	2.0
1	E	12	HIS	2.0
1	C	359	LYS	2.0
1	E	75	THR	2.0
1	F	263	ALA	2.0
1	C	82	ASN	2.0
1	F	209	ASP	2.0
1	E	170	ALA	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](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.