



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 10, 2026 – 03:13 PM UTC

PDB ID : 2PGW / pdb_00002pgw
Title : Crystal structure of a putative muconate cycloisomerase from *Sinorhizobium meliloti* 1021
Authors : Kumaran, D.; Burley, S.K.; Swaminathan, S.; New York SGX Research Center for Structural Genomics (NYSGXRC)
Deposited on : 2007-04-10
Resolution : 1.95 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 : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

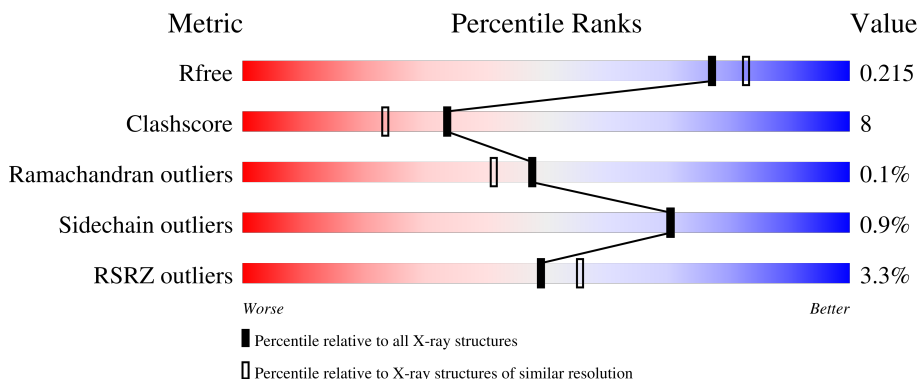
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

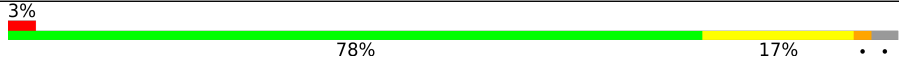

The reported resolution of this entry is 1.95 Å.

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}	180053	3494 (1.96-1.96)
Clashscore	190562	3612 (1.96-1.96)
Ramachandran outliers	187476	3587 (1.96-1.96)
Sidechain outliers	187428	3587 (1.96-1.96)
RSRZ outliers	180081	3495 (1.96-1.96)

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	384	 80% 16% ..
1	B	384	 78% 17% ..
1	C	384	 78% 18% ..
1	D	384	 73% 22% ..
1	E	384	 77% 19% ..

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	384	<p>3% 80% 16% ..</p>
1	G	384	<p>4% 81% 15% ..</p>
1	H	384	<p>2% 79% 16% ..</p>

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	GOL	A	2100	-	X	-	-
2	GOL	B	2200	-	X	-	-
2	GOL	C	2300	-	X	-	-
2	GOL	D	2400	-	X	-	-
2	GOL	E	2500	-	X	-	-
2	GOL	F	2600	-	X	-	-

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 24653 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 Muconate cycloisomerase.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	N	O	S	Se			
1	A	371	2859	1816	504	524	6	9	0	0	0
1	B	372	2865	1819	505	526	6	9	0	0	0
1	C	375	2889	1832	511	531	6	9	0	0	0
1	D	372	2865	1819	505	526	6	9	0	0	0
1	E	372	2865	1819	505	526	6	9	0	0	0
1	F	372	2865	1819	505	526	6	9	0	0	0
1	G	372	2865	1819	505	526	6	9	0	0	0
1	H	372	2865	1819	505	526	6	9	0	0	0

There are 160 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MSE	-	cloning artifact	UNP Q92YR6
A	2	SER	-	cloning artifact	UNP Q92YR6
A	3	LEU	-	cloning artifact	UNP Q92YR6
A	99	MSE	MET	modified residue	UNP Q92YR6
A	111	MSE	MET	modified residue	UNP Q92YR6
A	113	MSE	MET	modified residue	UNP Q92YR6
A	209	MSE	MET	modified residue	UNP Q92YR6
A	233	MSE	MET	modified residue	UNP Q92YR6
A	267	MSE	MET	modified residue	UNP Q92YR6
A	281	MSE	MET	modified residue	UNP Q92YR6
A	282	MSE	MET	modified residue	UNP Q92YR6
A	327	MSE	MET	modified residue	UNP Q92YR6
A	377	GLU	-	cloning artifact	UNP Q92YR6

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
A	378	GLY	-	cloning artifact	UNP Q92YR6
A	379	HIS	-	cloning artifact	UNP Q92YR6
A	380	HIS	-	cloning artifact	UNP Q92YR6
A	381	HIS	-	cloning artifact	UNP Q92YR6
A	382	HIS	-	cloning artifact	UNP Q92YR6
A	383	HIS	-	cloning artifact	UNP Q92YR6
A	384	HIS	-	cloning artifact	UNP Q92YR6
B	1	MSE	-	cloning artifact	UNP Q92YR6
B	2	SER	-	cloning artifact	UNP Q92YR6
B	3	LEU	-	cloning artifact	UNP Q92YR6
B	99	MSE	MET	modified residue	UNP Q92YR6
B	111	MSE	MET	modified residue	UNP Q92YR6
B	113	MSE	MET	modified residue	UNP Q92YR6
B	209	MSE	MET	modified residue	UNP Q92YR6
B	233	MSE	MET	modified residue	UNP Q92YR6
B	267	MSE	MET	modified residue	UNP Q92YR6
B	281	MSE	MET	modified residue	UNP Q92YR6
B	282	MSE	MET	modified residue	UNP Q92YR6
B	327	MSE	MET	modified residue	UNP Q92YR6
B	377	GLU	-	cloning artifact	UNP Q92YR6
B	378	GLY	-	cloning artifact	UNP Q92YR6
B	379	HIS	-	cloning artifact	UNP Q92YR6
B	380	HIS	-	cloning artifact	UNP Q92YR6
B	381	HIS	-	cloning artifact	UNP Q92YR6
B	382	HIS	-	cloning artifact	UNP Q92YR6
B	383	HIS	-	cloning artifact	UNP Q92YR6
B	384	HIS	-	cloning artifact	UNP Q92YR6
C	1	MSE	-	cloning artifact	UNP Q92YR6
C	2	SER	-	cloning artifact	UNP Q92YR6
C	3	LEU	-	cloning artifact	UNP Q92YR6
C	99	MSE	MET	modified residue	UNP Q92YR6
C	111	MSE	MET	modified residue	UNP Q92YR6
C	113	MSE	MET	modified residue	UNP Q92YR6
C	209	MSE	MET	modified residue	UNP Q92YR6
C	233	MSE	MET	modified residue	UNP Q92YR6
C	267	MSE	MET	modified residue	UNP Q92YR6
C	281	MSE	MET	modified residue	UNP Q92YR6
C	282	MSE	MET	modified residue	UNP Q92YR6
C	327	MSE	MET	modified residue	UNP Q92YR6
C	377	GLU	-	cloning artifact	UNP Q92YR6
C	378	GLY	-	cloning artifact	UNP Q92YR6
C	379	HIS	-	cloning artifact	UNP Q92YR6

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
C	380	HIS	-	cloning artifact	UNP Q92YR6
C	381	HIS	-	cloning artifact	UNP Q92YR6
C	382	HIS	-	cloning artifact	UNP Q92YR6
C	383	HIS	-	cloning artifact	UNP Q92YR6
C	384	HIS	-	cloning artifact	UNP Q92YR6
D	1	MSE	-	cloning artifact	UNP Q92YR6
D	2	SER	-	cloning artifact	UNP Q92YR6
D	3	LEU	-	cloning artifact	UNP Q92YR6
D	99	MSE	MET	modified residue	UNP Q92YR6
D	111	MSE	MET	modified residue	UNP Q92YR6
D	113	MSE	MET	modified residue	UNP Q92YR6
D	209	MSE	MET	modified residue	UNP Q92YR6
D	233	MSE	MET	modified residue	UNP Q92YR6
D	267	MSE	MET	modified residue	UNP Q92YR6
D	281	MSE	MET	modified residue	UNP Q92YR6
D	282	MSE	MET	modified residue	UNP Q92YR6
D	327	MSE	MET	modified residue	UNP Q92YR6
D	377	GLU	-	cloning artifact	UNP Q92YR6
D	378	GLY	-	cloning artifact	UNP Q92YR6
D	379	HIS	-	cloning artifact	UNP Q92YR6
D	380	HIS	-	cloning artifact	UNP Q92YR6
D	381	HIS	-	cloning artifact	UNP Q92YR6
D	382	HIS	-	cloning artifact	UNP Q92YR6
D	383	HIS	-	cloning artifact	UNP Q92YR6
D	384	HIS	-	cloning artifact	UNP Q92YR6
E	1	MSE	-	cloning artifact	UNP Q92YR6
E	2	SER	-	cloning artifact	UNP Q92YR6
E	3	LEU	-	cloning artifact	UNP Q92YR6
E	99	MSE	MET	modified residue	UNP Q92YR6
E	111	MSE	MET	modified residue	UNP Q92YR6
E	113	MSE	MET	modified residue	UNP Q92YR6
E	209	MSE	MET	modified residue	UNP Q92YR6
E	233	MSE	MET	modified residue	UNP Q92YR6
E	267	MSE	MET	modified residue	UNP Q92YR6
E	281	MSE	MET	modified residue	UNP Q92YR6
E	282	MSE	MET	modified residue	UNP Q92YR6
E	327	MSE	MET	modified residue	UNP Q92YR6
E	377	GLU	-	cloning artifact	UNP Q92YR6
E	378	GLY	-	cloning artifact	UNP Q92YR6
E	379	HIS	-	cloning artifact	UNP Q92YR6
E	380	HIS	-	cloning artifact	UNP Q92YR6
E	381	HIS	-	cloning artifact	UNP Q92YR6

Continued on next page...

Continued from previous page...

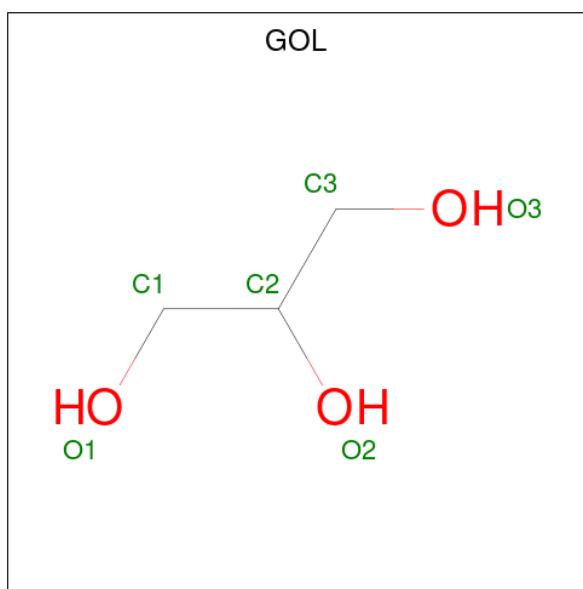
Chain	Residue	Modelled	Actual	Comment	Reference
E	382	HIS	-	cloning artifact	UNP Q92YR6
E	383	HIS	-	cloning artifact	UNP Q92YR6
E	384	HIS	-	cloning artifact	UNP Q92YR6
F	1	MSE	-	cloning artifact	UNP Q92YR6
F	2	SER	-	cloning artifact	UNP Q92YR6
F	3	LEU	-	cloning artifact	UNP Q92YR6
F	99	MSE	MET	modified residue	UNP Q92YR6
F	111	MSE	MET	modified residue	UNP Q92YR6
F	113	MSE	MET	modified residue	UNP Q92YR6
F	209	MSE	MET	modified residue	UNP Q92YR6
F	233	MSE	MET	modified residue	UNP Q92YR6
F	267	MSE	MET	modified residue	UNP Q92YR6
F	281	MSE	MET	modified residue	UNP Q92YR6
F	282	MSE	MET	modified residue	UNP Q92YR6
F	327	MSE	MET	modified residue	UNP Q92YR6
F	377	GLU	-	cloning artifact	UNP Q92YR6
F	378	GLY	-	cloning artifact	UNP Q92YR6
F	379	HIS	-	cloning artifact	UNP Q92YR6
F	380	HIS	-	cloning artifact	UNP Q92YR6
F	381	HIS	-	cloning artifact	UNP Q92YR6
F	382	HIS	-	cloning artifact	UNP Q92YR6
F	383	HIS	-	cloning artifact	UNP Q92YR6
F	384	HIS	-	cloning artifact	UNP Q92YR6
G	1	MSE	-	cloning artifact	UNP Q92YR6
G	2	SER	-	cloning artifact	UNP Q92YR6
G	3	LEU	-	cloning artifact	UNP Q92YR6
G	99	MSE	MET	modified residue	UNP Q92YR6
G	111	MSE	MET	modified residue	UNP Q92YR6
G	113	MSE	MET	modified residue	UNP Q92YR6
G	209	MSE	MET	modified residue	UNP Q92YR6
G	233	MSE	MET	modified residue	UNP Q92YR6
G	267	MSE	MET	modified residue	UNP Q92YR6
G	281	MSE	MET	modified residue	UNP Q92YR6
G	282	MSE	MET	modified residue	UNP Q92YR6
G	327	MSE	MET	modified residue	UNP Q92YR6
G	377	GLU	-	cloning artifact	UNP Q92YR6
G	378	GLY	-	cloning artifact	UNP Q92YR6
G	379	HIS	-	cloning artifact	UNP Q92YR6
G	380	HIS	-	cloning artifact	UNP Q92YR6
G	381	HIS	-	cloning artifact	UNP Q92YR6
G	382	HIS	-	cloning artifact	UNP Q92YR6
G	383	HIS	-	cloning artifact	UNP Q92YR6

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
G	384	HIS	-	cloning artifact	UNP Q92YR6
H	1	MSE	-	cloning artifact	UNP Q92YR6
H	2	SER	-	cloning artifact	UNP Q92YR6
H	3	LEU	-	cloning artifact	UNP Q92YR6
H	99	MSE	MET	modified residue	UNP Q92YR6
H	111	MSE	MET	modified residue	UNP Q92YR6
H	113	MSE	MET	modified residue	UNP Q92YR6
H	209	MSE	MET	modified residue	UNP Q92YR6
H	233	MSE	MET	modified residue	UNP Q92YR6
H	267	MSE	MET	modified residue	UNP Q92YR6
H	281	MSE	MET	modified residue	UNP Q92YR6
H	282	MSE	MET	modified residue	UNP Q92YR6
H	327	MSE	MET	modified residue	UNP Q92YR6
H	377	GLU	-	cloning artifact	UNP Q92YR6
H	378	GLY	-	cloning artifact	UNP Q92YR6
H	379	HIS	-	cloning artifact	UNP Q92YR6
H	380	HIS	-	cloning artifact	UNP Q92YR6
H	381	HIS	-	cloning artifact	UNP Q92YR6
H	382	HIS	-	cloning artifact	UNP Q92YR6
H	383	HIS	-	cloning artifact	UNP Q92YR6
H	384	HIS	-	cloning artifact	UNP Q92YR6

- Molecule 2 is GLYCEROL (CCD ID: GOL) (formula: C₃H₈O₃).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			6	3	3		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	B	1	Total 6	C 3	O 3	0	0
2	C	1	Total 6	C 3	O 3	0	0
2	D	1	Total 6	C 3	O 3	0	0
2	E	1	Total 6	C 3	O 3	0	0
2	F	1	Total 6	C 3	O 3	0	0

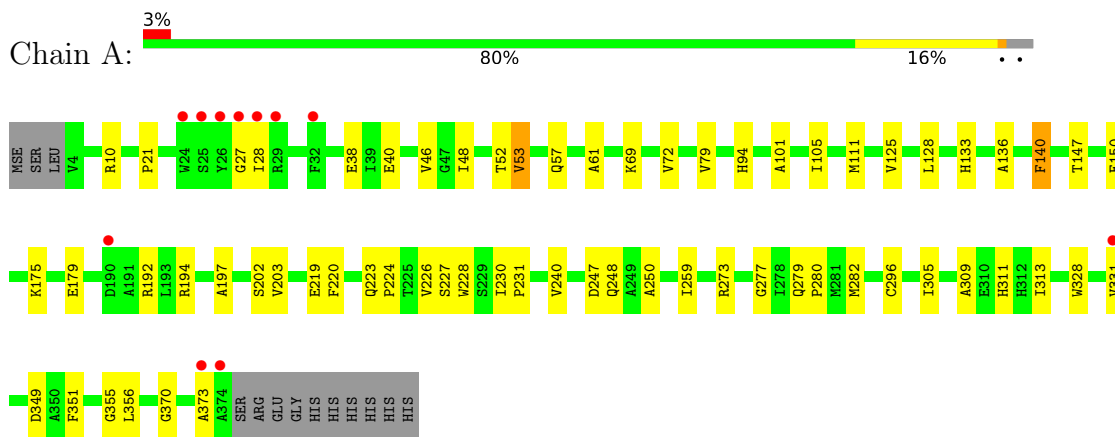
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	191	Total 191	O 191	0	0
3	B	211	Total 211	O 211	0	0
3	C	226	Total 226	O 226	0	0
3	D	219	Total 219	O 219	0	0
3	E	185	Total 185	O 185	0	0
3	F	210	Total 210	O 210	0	0
3	G	212	Total 212	O 212	0	0
3	H	225	Total 225	O 225	0	0

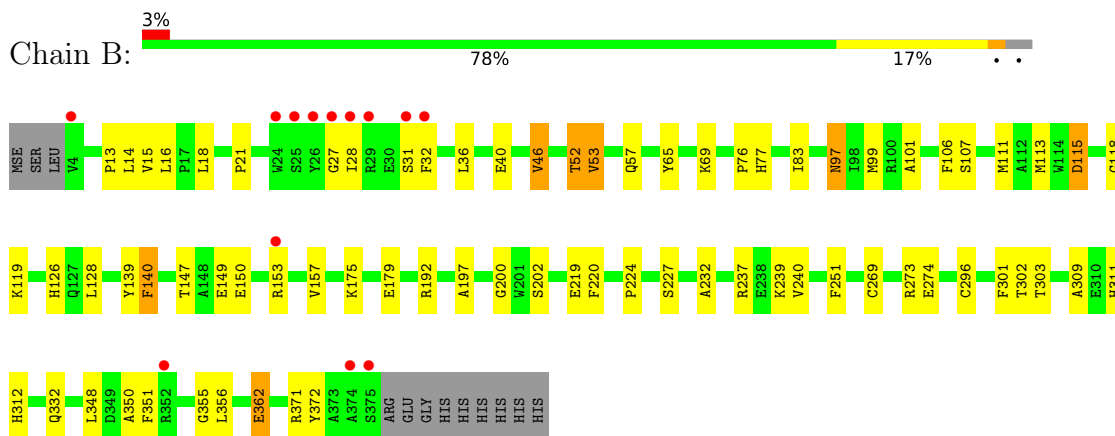
3 Residue-property plots [i](#)

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.

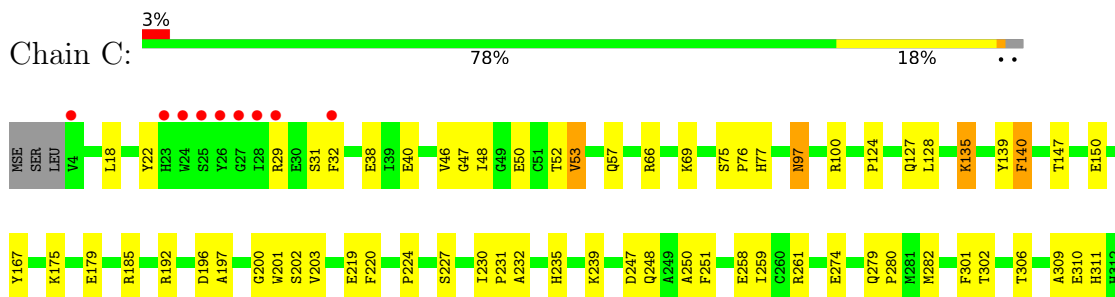
- Molecule 1: Muconate cycloisomerase

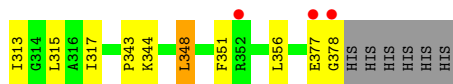


- Molecule 1: Muconate cycloisomerase

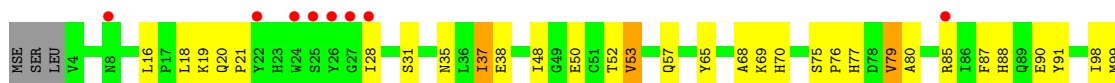
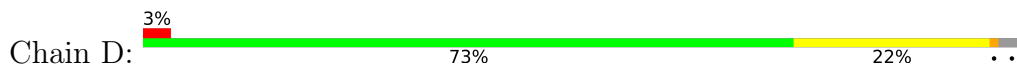


- Molecule 1: Muconate cycloisomerase

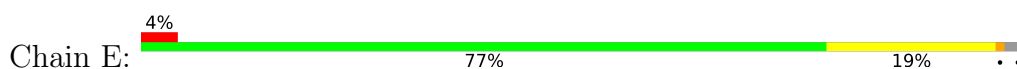




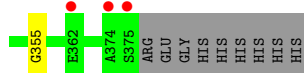
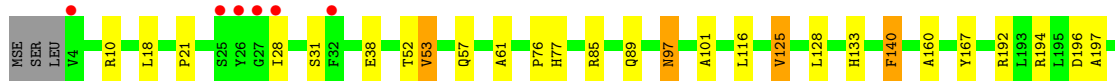
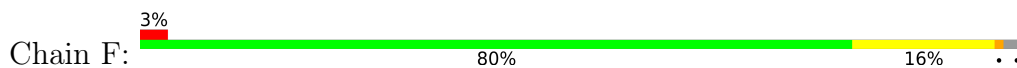
- Molecule 1: Muconate cycloisomerase



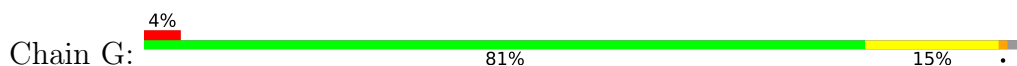
- Molecule 1: Muconate cycloisomerase

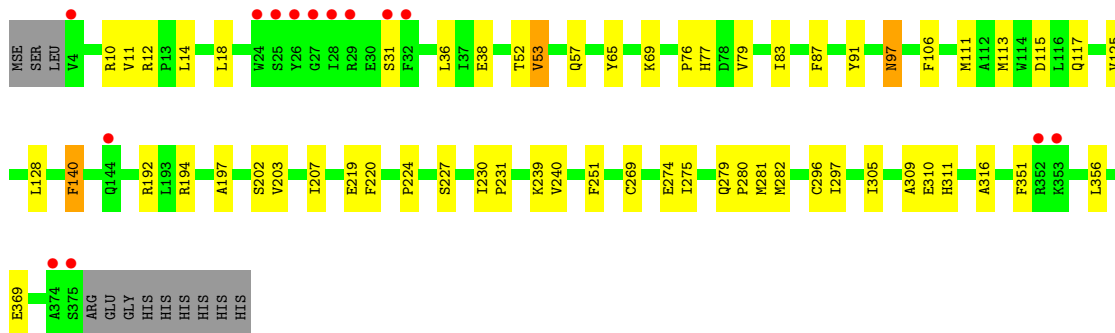


- Molecule 1: Muconate cycloisomerase

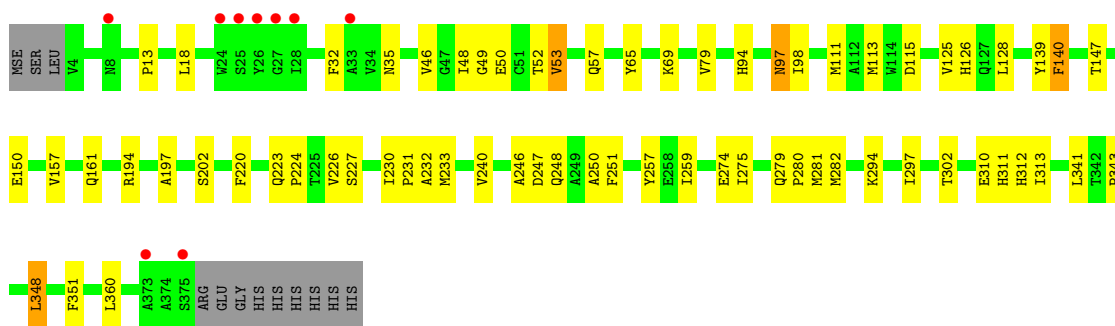
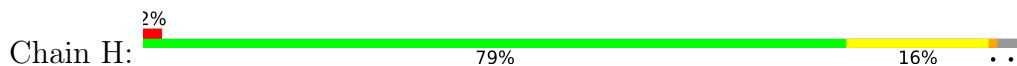


- Molecule 1: Muconate cycloisomerase





• Molecule 1: Muconate cycloisomerase



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	85.31Å 178.14Å 115.18Å 90.00° 106.20° 90.00°	Depositor
Resolution (Å)	48.89 – 1.95 48.89 – 1.95	Depositor EDS
% Data completeness (in resolution range)	95.5 (48.89-1.95) 95.5 (48.89-1.95)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.11	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.77 (at 1.87Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.196 , 0.215 0.196 , 0.215	Depositor DCC
R_{free} test set	11367 reflections (4.48%)	wwPDB-VP
Wilson B-factor (Å ²)	13.8	Xtrriage
Anisotropy	0.196	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 36.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	24653	wwPDB-VP
Average B, all atoms (Å ²)	17.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.37% 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: GOL

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.41	0/2913	0.90	11/3937 (0.3%)
1	B	0.43	0/2919	0.89	10/3945 (0.3%)
1	C	0.44	0/2943	0.92	9/3976 (0.2%)
1	D	0.42	0/2919	0.92	11/3945 (0.3%)
1	E	0.42	0/2919	0.89	9/3945 (0.2%)
1	F	0.43	0/2919	0.90	9/3945 (0.2%)
1	G	0.42	0/2919	0.91	9/3945 (0.2%)
1	H	0.42	0/2919	0.91	9/3945 (0.2%)
All	All	0.42	0/23370	0.91	77/31583 (0.2%)

There are no bond length outliers.

All (77) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	53	VAL	N-CA-C	9.16	123.41	113.43
1	F	53	VAL	N-CA-C	9.04	122.61	113.47
1	C	53	VAL	N-CA-C	8.95	123.19	113.43
1	D	53	VAL	N-CA-C	8.71	122.27	113.47
1	A	53	VAL	N-CA-C	8.62	122.82	113.43
1	H	227	SER	N-CA-C	7.79	120.67	111.71
1	H	53	VAL	N-CA-C	7.75	121.30	113.47
1	E	227	SER	N-CA-C	7.67	120.53	111.71
1	G	128	LEU	N-CA-C	-7.52	103.95	113.72
1	D	128	LEU	N-CA-C	-7.33	104.37	113.38
1	C	128	LEU	N-CA-C	-7.31	104.39	113.38
1	G	240	VAL	N-CA-C	7.29	117.99	110.05
1	E	128	LEU	N-CA-C	-7.10	104.64	113.38
1	H	128	LEU	N-CA-C	-7.03	104.74	113.38
1	B	53	VAL	N-CA-C	6.95	120.48	113.47
1	E	53	VAL	N-CA-C	6.92	120.97	113.43

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	227	SER	N-CA-C	6.87	119.61	111.71
1	A	128	LEU	N-CA-C	-6.82	104.99	113.38
1	F	128	LEU	N-CA-C	-6.73	105.11	113.38
1	E	52	THR	N-CA-C	-6.72	101.47	110.55
1	C	202	SER	N-CA-C	-6.64	102.25	110.41
1	D	125	VAL	N-CA-C	6.64	118.19	110.62
1	H	52	THR	N-CA-C	-6.63	101.61	110.55
1	H	202	SER	N-CA-C	-6.60	102.01	110.53
1	B	202	SER	N-CA-C	-6.57	102.33	110.41
1	B	52	THR	N-CA-C	-6.54	101.72	110.55
1	E	202	SER	N-CA-C	-6.50	102.14	110.53
1	G	202	SER	N-CA-C	-6.48	102.17	110.53
1	B	128	LEU	N-CA-C	-6.45	105.33	113.72
1	F	227	SER	N-CA-C	6.41	120.20	112.38
1	F	240	VAL	N-CA-C	6.34	116.96	110.05
1	H	115	ASP	N-CA-C	-6.33	104.38	111.28
1	F	52	THR	N-CA-C	-6.31	102.03	110.55
1	A	79	VAL	N-CA-C	6.28	116.95	110.36
1	C	200	GLY	N-CA-C	6.23	123.48	115.32
1	D	202	SER	N-CA-C	-6.17	102.56	110.53
1	H	125	VAL	N-CA-C	6.06	117.53	110.62
1	C	227	SER	N-CA-C	6.04	118.65	111.71
1	B	27	GLY	N-CA-C	6.03	118.87	111.45
1	F	277	GLY	N-CA-C	6.01	119.50	110.97
1	A	202	SER	N-CA-C	-5.99	103.04	110.41
1	D	317	ILE	N-CA-C	5.96	113.78	107.76
1	G	52	THR	N-CA-C	-5.92	102.56	110.55
1	H	240	VAL	N-CA-C	5.88	116.46	110.05
1	F	202	SER	N-CA-C	-5.86	102.97	110.53
1	D	227	SER	N-CA-C	5.86	118.45	111.71
1	A	52	THR	N-CA-C	-5.84	102.67	110.55
1	C	201	TRP	N-CA-C	5.84	118.99	109.59
1	C	52	THR	N-CA-C	-5.83	102.68	110.55
1	C	317	ILE	N-CA-C	5.82	113.64	107.76
1	F	125	VAL	N-CA-C	5.77	117.19	110.62
1	E	240	VAL	N-CA-C	5.71	118.14	109.12
1	C	203	VAL	N-CA-C	5.66	115.86	110.42
1	F	61	ALA	N-CA-C	-5.66	105.19	111.36
1	D	52	THR	N-CA-C	-5.66	102.92	110.55
1	D	200	GLY	N-CA-C	5.64	122.71	115.32
1	D	277	GLY	N-CA-C	5.56	118.86	110.97
1	D	79	VAL	N-CA-C	5.55	116.19	110.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	200	GLY	N-CA-C	5.46	122.47	115.32
1	B	240	VAL	N-CA-C	5.44	117.01	109.45
1	B	227	SER	N-CA-C	5.41	117.93	111.71
1	E	79	VAL	N-CA-C	5.31	115.93	110.36
1	G	125	VAL	N-CA-C	5.30	116.67	110.62
1	E	277	GLY	N-CA-C	5.30	118.50	110.97
1	G	79	VAL	N-CA-C	5.29	115.92	110.36
1	A	277	GLY	N-CA-C	5.28	118.47	110.97
1	A	227	SER	N-CA-C	5.28	118.82	112.38
1	D	203	VAL	N-CA-C	5.27	115.48	110.42
1	A	296	CYS	N-CA-C	-5.21	100.41	108.90
1	A	203	VAL	N-CA-C	5.19	115.40	110.42
1	E	115	ASP	N-CA-C	-5.17	105.65	111.28
1	H	46	VAL	N-CA-C	5.16	115.55	108.12
1	A	61	ALA	N-CA-C	-5.13	105.76	111.36
1	A	240	VAL	N-CA-C	5.11	116.61	109.55
1	B	46	VAL	N-CA-C	5.10	115.32	107.77
1	B	115	ASP	N-CA-C	-5.08	105.65	111.14
1	G	115	ASP	N-CA-C	-5.05	105.78	111.28

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	2859	0	2835	39	0
1	B	2865	0	2840	50	0
1	C	2889	0	2862	48	0
1	D	2865	0	2840	62	0
1	E	2865	0	2840	45	0
1	F	2865	0	2840	41	0
1	G	2865	0	2840	39	0
1	H	2865	0	2840	40	0
2	A	6	0	4	0	0
2	B	6	0	4	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	C	6	0	4	0	0
2	D	6	0	4	0	0
2	E	6	0	4	0	0
2	F	6	0	4	0	0
3	A	191	0	0	4	0
3	B	211	0	0	7	0
3	C	226	0	0	6	0
3	D	219	0	0	6	0
3	E	185	0	0	6	0
3	F	210	0	0	8	0
3	G	212	0	0	3	0
3	H	225	0	0	3	0
All	All	24653	0	22761	353	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 8.

All (353) 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:D:111:MSE:HE1	1:D:305:ILE:HG22	1.37	1.03
1:G:111:MSE:HE1	1:G:305:ILE:HG22	1.40	1.01
1:A:111:MSE:HE1	1:A:305:ILE:HG22	1.40	1.01
1:G:111:MSE:HE3	1:G:309:ALA:HB2	1.45	0.97
1:D:297:ILE:H	1:D:324:ASN:HD22	1.10	0.95
1:B:32:PHE:HB2	3:B:2310:HOH:O	1.67	0.94
1:A:111:MSE:HE3	1:A:309:ALA:HB2	1.52	0.91
1:G:282:MSE:HE2	3:G:536:HOH:O	1.71	0.90
1:A:223:GLN:HE21	1:A:247:ASP:H	1.24	0.80
1:D:111:MSE:HE3	1:D:309:ALA:HB2	1.66	0.76
1:A:21:PRO:HB3	1:A:28:ILE:HG21	1.66	0.75
1:D:226:VAL:HG23	3:D:2438:HOH:O	1.88	0.73
1:F:18:LEU:HG	1:F:31:SER:HA	1.71	0.72
1:D:297:ILE:H	1:D:324:ASN:ND2	1.89	0.69
1:A:223:GLN:NE2	1:A:247:ASP:H	1.91	0.69
1:F:21:PRO:HB3	1:F:28:ILE:HG21	1.76	0.68
1:D:133:HIS:HD2	3:D:2578:HOH:O	1.76	0.67
1:D:239:LYS:HG2	3:D:2463:HOH:O	1.94	0.66
1:A:192:ARG:HD2	1:A:219:GLU:OE1	1.94	0.66
1:A:147:THR:OG1	1:A:150:GLU:HG3	1.96	0.66
1:B:273:ARG:HD2	3:B:2232:HOH:O	1.95	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:53:VAL:HB	1:H:57:GLN:HA	1.77	0.65
1:A:133:HIS:HD2	3:A:2276:HOH:O	1.79	0.65
1:A:197:ALA:HB3	1:A:224:PRO:HA	1.78	0.65
1:B:97:ASN:N	1:B:97:ASN:HD22	1.94	0.65
1:E:239:LYS:HG2	3:E:2528:HOH:O	1.97	0.65
1:F:311:HIS:HE1	1:F:351:PHE:H	1.45	0.65
1:D:111:MSE:HE1	1:D:305:ILE:CG2	2.21	0.64
1:A:10:ARG:HG3	1:A:38:GLU:HB2	1.80	0.64
1:C:192:ARG:HD2	1:C:219:GLU:OE1	1.98	0.64
3:C:2495:HOH:O	1:F:133:HIS:HD2	1.81	0.63
1:B:239:LYS:HG2	3:B:2212:HOH:O	1.98	0.63
1:B:21:PRO:HB3	1:B:28:ILE:CG2	2.29	0.62
1:D:16:LEU:HD22	3:D:2506:HOH:O	1.98	0.62
1:A:282:MSE:CE	1:A:313:ILE:HG23	2.28	0.62
1:C:197:ALA:HB3	1:C:224:PRO:HA	1.80	0.62
1:B:362:GLU:H	1:B:362:GLU:CD	2.06	0.62
1:H:294:LYS:HE2	3:H:602:HOH:O	1.99	0.62
1:G:197:ALA:HB3	1:G:224:PRO:HA	1.81	0.62
1:F:192:ARG:HD2	1:F:219:GLU:OE1	2.00	0.62
1:B:53:VAL:HB	1:B:57:GLN:HA	1.82	0.61
1:G:311:HIS:HE1	1:G:351:PHE:H	1.48	0.61
1:A:69:LYS:O	1:A:72:VAL:HG12	2.01	0.61
1:B:18:LEU:HG	1:B:31:SER:HA	1.82	0.61
1:B:332:GLN:HB3	3:B:2298:HOH:O	2.00	0.61
1:G:97:ASN:N	1:G:97:ASN:HD22	2.00	0.60
1:H:311:HIS:HE1	1:H:351:PHE:H	1.46	0.60
1:E:53:VAL:HB	1:E:57:GLN:HA	1.82	0.60
1:E:197:ALA:HB3	1:E:224:PRO:HA	1.84	0.59
1:E:192:ARG:HD2	1:E:219:GLU:OE1	2.03	0.59
1:B:15:VAL:O	1:B:371:ARG:HD2	2.03	0.59
1:C:311:HIS:HE1	1:C:351:PHE:H	1.49	0.59
1:D:192:ARG:HD2	1:D:219:GLU:OE1	2.03	0.59
1:C:77:HIS:HE1	3:C:2339:HOH:O	1.84	0.59
1:G:12:ARG:HD2	1:G:369:GLU:OE2	2.02	0.59
1:B:149:GLU:HG3	3:B:2351:HOH:O	2.02	0.59
1:D:149:GLU:HG2	1:D:153:ARG:NH1	2.18	0.59
1:D:53:VAL:HB	1:D:57:GLN:HA	1.85	0.58
1:H:197:ALA:HB3	1:H:224:PRO:HA	1.86	0.58
1:D:197:ALA:HB3	1:D:224:PRO:HA	1.86	0.58
1:E:164:ARG:HD2	3:E:2620:HOH:O	2.04	0.58
1:B:18:LEU:HD21	1:B:32:PHE:CE2	2.38	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:275:ILE:CD1	1:F:284:ALA:HB2	2.34	0.58
1:H:232:ALA:HB3	3:H:592:HOH:O	2.04	0.57
1:G:53:VAL:HB	1:G:57:GLN:HA	1.85	0.57
1:E:126:HIS:HD2	1:E:312:HIS:ND1	2.02	0.57
1:F:282:MSE:CE	1:F:313:ILE:HG23	2.34	0.57
1:F:53:VAL:HB	1:F:57:GLN:HA	1.86	0.57
1:F:230:ILE:HB	1:F:231:PRO:HD3	1.87	0.57
1:D:309:ALA:HA	1:D:356:LEU:HD22	1.87	0.57
1:E:65:TYR:CE2	1:E:69:LYS:HD2	2.39	0.56
1:A:328:TRP:O	1:A:331:VAL:HG22	2.06	0.56
1:D:18:LEU:HG	1:D:31:SER:HA	1.88	0.56
1:D:68:ALA:HB2	1:D:109:ILE:HD11	1.88	0.55
1:F:10:ARG:HD2	1:F:38:GLU:OE1	2.06	0.55
1:H:140:PHE:CD1	1:H:140:PHE:C	2.84	0.55
1:H:223:GLN:HA	1:H:233:MSE:CE	2.36	0.55
1:B:140:PHE:C	1:B:140:PHE:CD2	2.83	0.55
1:F:197:ALA:HB3	1:F:224:PRO:HA	1.88	0.55
1:G:111:MSE:CE	1:G:305:ILE:HG22	2.26	0.55
1:H:343:PRO:HA	1:H:348:LEU:HD13	1.88	0.55
1:B:197:ALA:HB3	1:B:224:PRO:HA	1.89	0.54
1:G:311:HIS:CE1	1:G:351:PHE:H	2.25	0.54
1:F:279:GLN:HB3	1:F:280:PRO:HD3	1.88	0.54
1:G:140:PHE:C	1:G:140:PHE:CD2	2.86	0.54
1:C:22:TYR:HB3	1:C:29:ARG:HB3	1.89	0.54
1:G:76:PRO:HA	1:G:113:MSE:HE1	1.89	0.54
1:F:140:PHE:CD2	1:F:140:PHE:C	2.85	0.54
1:D:21:PRO:HB2	1:D:28:ILE:HG21	1.90	0.54
1:C:311:HIS:CE1	1:C:351:PHE:H	2.26	0.54
1:D:311:HIS:HE1	1:D:351:PHE:H	1.55	0.54
1:G:10:ARG:HD2	1:G:38:GLU:OE1	2.07	0.54
1:D:279:GLN:HB3	1:D:280:PRO:HD3	1.90	0.53
1:E:140:PHE:CD1	1:E:140:PHE:C	2.85	0.53
1:F:97:ASN:N	1:F:97:ASN:HD22	2.06	0.53
1:C:140:PHE:C	1:C:140:PHE:CD2	2.86	0.53
1:A:53:VAL:HB	1:A:57:GLN:HA	1.90	0.53
1:E:358:PHE:HE1	1:E:360:LEU:HD11	1.74	0.53
1:H:194:ARG:HD3	1:H:220:PHE:CZ	2.44	0.53
1:A:140:PHE:CD2	1:A:140:PHE:C	2.86	0.53
1:E:124:PRO:HG3	1:E:352:ARG:O	2.07	0.53
1:E:210:CYS:O	1:E:214:GLU:HG3	2.09	0.53
1:C:247:ASP:HB3	1:C:248:GLN:OE1	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:20:GLN:HB2	1:E:21:PRO:HD2	1.91	0.52
1:F:21:PRO:HB3	1:F:28:ILE:CG2	2.39	0.52
1:D:77:HIS:HE1	3:D:2442:HOH:O	1.92	0.52
1:F:311:HIS:CE1	1:F:351:PHE:H	2.24	0.52
1:C:40:GLU:HG3	1:C:46:VAL:HG22	1.92	0.52
1:G:77:HIS:HE1	3:G:419:HOH:O	1.92	0.52
1:H:147:THR:OG1	1:H:150:GLU:HG3	2.09	0.52
1:B:21:PRO:HB3	1:B:28:ILE:HG23	1.91	0.52
1:B:147:THR:OG1	1:B:150:GLU:HG3	2.10	0.52
1:B:311:HIS:HE1	1:B:351:PHE:H	1.57	0.52
1:H:97:ASN:HD22	1:H:97:ASN:N	2.08	0.52
1:H:311:HIS:CE1	1:H:351:PHE:H	2.27	0.52
1:H:139:TYR:HE2	1:H:348:LEU:HB2	1.74	0.51
1:G:65:TYR:CE2	1:G:69:LYS:HD2	2.45	0.51
1:B:21:PRO:HB3	1:B:28:ILE:HG21	1.91	0.51
1:C:232:ALA:HB3	3:C:2441:HOH:O	2.11	0.51
1:G:230:ILE:HB	1:G:231:PRO:HD3	1.93	0.51
1:H:65:TYR:CE2	1:H:69:LYS:HD2	2.46	0.51
1:H:282:MSE:CE	1:H:313:ILE:HG23	2.41	0.51
1:B:77:HIS:HE1	3:B:2289:HOH:O	1.94	0.50
1:D:21:PRO:HB2	1:D:28:ILE:CG2	2.41	0.50
1:E:175:LYS:O	1:E:179:GLU:HG3	2.11	0.50
1:C:97:ASN:N	1:C:97:ASN:HD22	2.09	0.50
1:B:237:ARG:O	1:G:239:LYS:HE3	2.12	0.50
1:F:275:ILE:HD13	1:F:284:ALA:HB2	1.92	0.50
1:A:311:HIS:HE1	1:A:351:PHE:H	1.60	0.50
1:D:88:HIS:ND1	1:E:26:TYR:HE2	2.09	0.49
1:F:267:MSE:HE3	1:F:296:CYS:HB2	1.94	0.49
1:G:251:PHE:HA	1:G:274:GLU:HB3	1.94	0.49
1:D:282:MSE:CE	1:D:313:ILE:HG23	2.42	0.49
1:C:53:VAL:HB	1:C:57:GLN:HA	1.93	0.49
1:D:65:TYR:CZ	1:D:69:LYS:HD3	2.47	0.49
1:D:211:ARG:NH2	1:D:212:LYS:HE3	2.27	0.49
1:E:15:VAL:HB	1:E:371:ARG:HB3	1.95	0.49
1:E:194:ARG:HD3	1:E:220:PHE:CZ	2.48	0.49
1:B:192:ARG:HD2	1:B:219:GLU:OE1	2.11	0.49
1:B:101:ALA:HB2	1:F:101:ALA:HB2	1.94	0.49
1:E:97:ASN:N	1:E:97:ASN:HD22	2.11	0.48
1:D:19:LYS:HA	1:D:332:GLN:OE1	2.12	0.48
1:E:74:HIS:HE1	3:E:2625:HOH:O	1.95	0.48
1:E:247:ASP:HB3	1:E:248:GLN:OE1	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:50:GLU:OE2	1:C:302:THR:HB	2.13	0.48
1:C:197:ALA:CB	1:C:224:PRO:HA	2.43	0.48
1:D:140:PHE:CD1	1:D:140:PHE:C	2.91	0.48
1:H:50:GLU:OE2	1:H:302:THR:HB	2.13	0.48
1:E:297:ILE:HG21	1:E:310:GLU:HB3	1.94	0.48
1:A:111:MSE:CE	1:A:305:ILE:HG22	2.26	0.48
1:F:332:GLN:HB3	3:F:2657:HOH:O	2.13	0.48
1:E:74:HIS:HB3	3:E:2616:HOH:O	2.13	0.48
1:F:261:ARG:HD2	3:F:2682:HOH:O	2.14	0.48
1:A:273:ARG:HD3	3:A:2149:HOH:O	2.14	0.48
1:B:251:PHE:HA	1:B:274:GLU:HB3	1.95	0.48
1:G:309:ALA:HA	1:G:356:LEU:HD22	1.95	0.48
1:E:140:PHE:C	1:E:140:PHE:HD1	2.22	0.48
1:C:18:LEU:HG	1:C:31:SER:HA	1.95	0.47
1:A:247:ASP:HB3	1:A:248:GLN:OE1	2.14	0.47
1:C:282:MSE:CE	1:C:313:ILE:HG23	2.43	0.47
1:C:124:PRO:HD2	1:C:127:GLN:HE21	1.80	0.47
1:E:10:ARG:HD2	1:E:38:GLU:OE1	2.14	0.47
1:H:251:PHE:HA	1:H:274:GLU:HB3	1.96	0.47
1:B:40:GLU:HG3	1:B:46:VAL:HG22	1.96	0.47
1:D:141:TYR:CD1	1:D:163:GLU:HG3	2.49	0.47
1:A:38:GLU:HG2	1:A:48:ILE:HG12	1.95	0.47
1:E:250:ALA:HB2	1:E:259:ILE:HD12	1.95	0.47
1:D:99:MSE:HE3	1:E:228:TRP:CE2	2.50	0.47
1:G:203:VAL:O	1:G:207:ILE:HG12	2.15	0.47
1:G:279:GLN:HB3	1:G:280:PRO:HD3	1.96	0.47
1:A:279:GLN:HB3	1:A:280:PRO:HD3	1.97	0.47
1:B:140:PHE:C	1:B:140:PHE:HD2	2.22	0.47
1:H:18:LEU:HD21	1:H:32:PHE:CG	2.50	0.47
1:C:235:HIS:HB2	1:D:263:ARG:HD2	1.97	0.47
1:C:258:GLU:OE2	1:C:261:ARG:HD3	2.15	0.47
1:C:77:HIS:HD2	3:C:2524:HOH:O	1.97	0.47
1:C:309:ALA:HA	1:C:356:LEU:HD22	1.96	0.47
1:E:18:LEU:HG	1:E:31:SER:HA	1.95	0.47
1:F:160:ALA:HB3	3:F:2782:HOH:O	2.14	0.47
1:H:233:MSE:HE1	1:H:246:ALA:HA	1.97	0.47
1:D:230:ILE:HB	1:D:231:PRO:HD3	1.96	0.46
1:C:139:TYR:HE2	1:C:348:LEU:HB2	1.80	0.46
1:C:279:GLN:HB3	1:C:280:PRO:HD3	1.97	0.46
1:E:269:CYS:HA	1:E:296:CYS:O	2.16	0.46
1:D:245:VAL:HG22	1:D:267:MSE:HB3	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:251:PHE:HA	1:F:274:GLU:HB3	1.98	0.46
1:H:126:HIS:HD2	1:H:312:HIS:ND1	2.14	0.46
1:B:153:ARG:O	1:B:157:VAL:HG23	2.15	0.46
1:D:98:ILE:HG22	1:E:100:ARG:HB3	1.97	0.46
1:D:275:ILE:HG13	1:D:275:ILE:O	2.16	0.46
1:D:70:HIS:HE1	1:D:90:GLU:OE2	1.98	0.46
1:D:147:THR:OG1	1:D:150:GLU:HG3	2.16	0.46
1:A:94:HIS:HE1	3:A:2256:HOH:O	1.99	0.46
1:E:282:MSE:CE	1:E:313:ILE:HG23	2.46	0.46
1:G:297:ILE:HG21	1:G:310:GLU:HB3	1.96	0.46
1:B:126:HIS:HD2	1:B:312:HIS:ND1	2.14	0.46
1:D:311:HIS:CE1	1:D:351:PHE:H	2.33	0.46
1:A:125:VAL:HG23	1:A:355:GLY:C	2.41	0.45
1:F:311:HIS:HE1	1:F:350:ALA:HA	1.82	0.45
3:F:2673:HOH:O	1:H:226:VAL:HG12	2.16	0.45
1:A:175:LYS:O	1:A:179:GLU:HG3	2.17	0.45
1:E:147:THR:OG1	1:E:150:GLU:HG3	2.16	0.45
1:G:76:PRO:HA	1:G:113:MSE:CE	2.46	0.45
1:B:309:ALA:HA	1:B:356:LEU:HD22	1.98	0.45
1:C:47:GLY:O	1:C:48:ILE:HD13	2.15	0.45
1:C:377:GLU:HG3	1:C:378:GLY:N	2.30	0.45
1:D:65:TYR:O	1:D:69:LYS:HG2	2.16	0.45
1:G:18:LEU:HG	1:G:31:SER:HA	1.99	0.45
1:D:20:GLN:HB2	1:D:21:PRO:HD2	1.99	0.45
1:D:38:GLU:HG2	1:D:48:ILE:HG12	1.98	0.45
1:F:125:VAL:HG23	1:F:355:GLY:C	2.42	0.45
1:G:269:CYS:HA	1:G:296:CYS:O	2.16	0.45
1:D:281:MSE:HG3	1:D:313:ILE:HD13	1.99	0.45
1:E:311:HIS:HE1	1:E:350:ALA:HA	1.81	0.45
1:G:192:ARG:HD2	1:G:219:GLU:OE1	2.17	0.45
1:C:100:ARG:HB3	1:H:98:ILE:HG22	1.98	0.45
1:C:306:THR:O	1:C:310:GLU:HG3	2.17	0.45
1:E:17:PRO:HD3	1:E:371:ARG:NE	2.32	0.45
1:E:341:LEU:O	1:E:343:PRO:HD3	2.17	0.45
1:F:247:ASP:HB3	1:F:248:GLN:OE1	2.16	0.45
1:A:136:ALA:HB2	1:A:349:ASP:HA	1.99	0.45
1:E:251:PHE:HA	1:E:274:GLU:HB3	1.99	0.44
1:F:133:HIS:HE1	3:F:2653:HOH:O	1.99	0.44
1:H:140:PHE:C	1:H:140:PHE:HD1	2.25	0.44
1:A:21:PRO:HB3	1:A:28:ILE:CG2	2.41	0.44
1:A:250:ALA:HB2	1:A:259:ILE:HD12	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:139:TYR:HE2	1:B:348:LEU:HB2	1.81	0.44
1:E:267:MSE:HE3	1:E:296:CYS:HB2	2.00	0.44
1:G:282:MSE:HE1	1:G:316:ALA:O	2.17	0.44
1:D:267:MSE:HE3	1:D:296:CYS:HB2	2.00	0.44
1:E:125:VAL:HG21	1:E:356:LEU:HD23	1.99	0.44
1:B:14:LEU:HD11	1:B:36:LEU:HD11	1.99	0.44
1:B:232:ALA:HB3	3:B:2360:HOH:O	2.17	0.44
1:F:273:ARG:HD3	3:F:2666:HOH:O	2.18	0.44
1:H:94:HIS:HE1	3:H:421:HOH:O	2.00	0.44
1:B:76:PRO:HA	1:B:113:MSE:CE	2.48	0.44
1:C:175:LYS:O	1:C:179:GLU:HG3	2.18	0.44
1:F:140:PHE:CE1	1:F:325:GLN:HG2	2.52	0.44
1:H:250:ALA:HB2	1:H:259:ILE:CD1	2.48	0.44
1:G:351:PHE:HB3	3:G:472:HOH:O	2.17	0.44
1:A:140:PHE:C	1:A:140:PHE:HD2	2.26	0.43
1:A:226:VAL:HG22	1:A:228:TRP:CD1	2.53	0.43
1:B:83:ILE:HG23	1:B:106:PHE:CD1	2.53	0.43
1:B:107:SER:O	1:B:111:MSE:HB2	2.18	0.43
1:A:309:ALA:HA	1:A:356:LEU:HD22	1.99	0.43
1:B:175:LYS:O	1:B:179:GLU:HG3	2.17	0.43
1:C:251:PHE:HA	1:C:274:GLU:HB3	2.01	0.43
1:D:174:GLU:HG3	1:D:209:MSE:SE	2.68	0.43
1:H:13:PRO:HA	1:H:35:ASN:HD22	1.83	0.43
1:A:72:VAL:CG1	3:A:2284:HOH:O	2.66	0.43
1:E:250:ALA:HB2	1:E:259:ILE:CD1	2.48	0.43
1:E:269:CYS:SG	1:E:298:HIS:HB2	2.58	0.43
1:F:194:ARG:HD3	1:F:220:PHE:CZ	2.53	0.43
1:B:269:CYS:HA	1:B:296:CYS:O	2.18	0.43
1:G:113:MSE:O	1:G:117:GLN:HG3	2.18	0.43
1:A:40:GLU:HG3	1:A:46:VAL:HG22	2.01	0.43
1:A:311:HIS:CE1	1:A:351:PHE:H	2.36	0.43
1:B:13:PRO:HB2	1:B:372:TYR:CD2	2.54	0.43
1:C:147:THR:OG1	1:C:150:GLU:HG3	2.19	0.43
1:G:194:ARG:HD3	1:G:220:PHE:CZ	2.54	0.43
1:B:97:ASN:N	1:B:97:ASN:ND2	2.65	0.43
1:C:185:ARG:HD3	3:C:2444:HOH:O	2.17	0.43
1:A:194:ARG:HD3	1:A:220:PHE:CZ	2.53	0.43
1:E:358:PHE:CE1	1:E:360:LEU:HD11	2.54	0.43
1:H:48:ILE:HG21	1:H:360:LEU:HD11	2.01	0.43
1:A:230:ILE:N	1:A:231:PRO:CD	2.82	0.43
2:B:2200:GOL:H11	1:C:219:GLU:HG3	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:101:ALA:HB2	1:E:101:ALA:HB2	2.01	0.43
1:F:77:HIS:HE1	3:F:2640:HOH:O	2.02	0.42
1:G:14:LEU:HD11	1:G:36:LEU:HD11	2.01	0.42
1:G:220:PHE:CD1	1:G:220:PHE:C	2.98	0.42
1:B:311:HIS:CE1	1:B:351:PHE:H	2.36	0.42
1:C:32:PHE:CE1	1:C:301:PHE:HB3	2.55	0.42
1:C:139:TYR:CE2	1:C:348:LEU:HB2	2.53	0.42
1:H:297:ILE:HG21	1:H:310:GLU:HB3	2.01	0.42
1:B:32:PHE:CD2	1:B:301:PHE:HB3	2.53	0.42
1:B:65:TYR:CE2	1:B:69:LYS:HD3	2.54	0.42
1:D:269:CYS:HA	1:D:296:CYS:O	2.19	0.42
1:G:140:PHE:C	1:G:140:PHE:HD2	2.27	0.42
1:D:197:ALA:CB	1:D:224:PRO:HA	2.49	0.42
1:E:75:SER:HA	1:E:76:PRO:HD3	1.95	0.42
1:G:111:MSE:HE1	1:G:305:ILE:CG2	2.30	0.42
1:H:157:VAL:O	1:H:161:GLN:HG3	2.19	0.42
1:H:230:ILE:N	1:H:231:PRO:CD	2.82	0.42
1:D:250:ALA:HB2	1:D:259:ILE:CD1	2.49	0.42
1:H:247:ASP:HB3	1:H:248:GLN:OE1	2.19	0.42
1:B:16:LEU:O	1:B:31:SER:HB2	2.19	0.42
1:C:38:GLU:HG2	1:C:48:ILE:HD12	2.02	0.42
1:D:35:ASN:ND2	1:D:53:VAL:HG12	2.35	0.42
1:G:11:VAL:HA	1:G:36:LEU:O	2.20	0.42
1:H:49:GLY:HA3	1:H:111:MSE:HG3	2.02	0.42
1:A:27:GLY:C	1:A:28:ILE:HD12	2.45	0.42
1:C:135:LYS:NZ	1:C:135:LYS:H	2.18	0.42
1:C:343:PRO:HA	1:C:348:LEU:HD13	2.01	0.42
1:C:75:SER:HA	1:C:76:PRO:HD3	1.92	0.42
1:C:167:TYR:CZ	1:C:196:ASP:HB2	2.55	0.41
1:C:311:HIS:CE1	1:C:315:LEU:HD11	2.55	0.41
1:D:220:PHE:C	1:D:220:PHE:CD1	2.98	0.41
1:F:250:ALA:HB2	1:F:259:ILE:CD1	2.50	0.41
1:H:279:GLN:HB3	1:H:280:PRO:HD3	2.02	0.41
1:B:52:THR:HG21	1:B:273:ARG:HD3	2.02	0.41
1:B:118:GLY:HA3	1:B:355:GLY:HA2	2.02	0.41
1:D:75:SER:HA	1:D:76:PRO:HD3	1.91	0.41
1:A:101:ALA:O	1:A:105:ILE:HD12	2.20	0.41
1:D:230:ILE:HG12	3:D:2478:HOH:O	2.20	0.41
1:E:273:ARG:HD3	3:E:2568:HOH:O	2.20	0.41
1:G:275:ILE:HG21	1:G:281:MSE:HG2	2.02	0.41
1:B:220:PHE:CD1	1:B:220:PHE:C	2.98	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:79:VAL:HG23	1:H:113:MSE:HG3	2.03	0.41
1:C:344:LYS:HD2	3:C:2366:HOH:O	2.21	0.41
1:D:290:ALA:HB1	1:H:257:TYR:HB2	2.02	0.41
1:F:140:PHE:C	1:F:140:PHE:HD2	2.26	0.41
1:F:167:TYR:CZ	1:F:196:ASP:HB2	2.55	0.41
1:F:210:CYS:SG	1:F:221:ILE:HD12	2.60	0.41
1:F:314:GLY:O	1:F:320:LEU:HD22	2.20	0.41
1:B:76:PRO:HA	1:B:113:MSE:HE1	2.03	0.41
1:B:302:THR:HB	1:B:303:THR:H	1.72	0.41
1:C:258:GLU:HA	1:C:261:ARG:HG2	2.03	0.41
1:D:85:ARG:HH11	1:E:26:TYR:HE1	1.68	0.41
1:F:85:ARG:NH1	1:F:89:GLN:OE1	2.54	0.41
1:C:18:LEU:HD21	1:C:32:PHE:CD2	2.56	0.41
1:C:66:ARG:HA	1:C:69:LYS:NZ	2.36	0.41
1:D:149:GLU:HG2	1:D:153:ARG:HH11	1.85	0.41
1:G:87:PHE:O	1:G:91:TYR:HB2	2.20	0.41
1:H:220:PHE:CD1	1:H:220:PHE:C	2.98	0.41
1:A:370:GLY:O	1:A:373:ALA:HB3	2.21	0.41
1:B:311:HIS:HE1	1:B:350:ALA:HA	1.86	0.41
1:D:50:GLU:OE2	1:D:302:THR:HB	2.21	0.41
1:D:247:ASP:HB3	1:D:248:GLN:OE1	2.21	0.41
1:F:311:HIS:CE1	1:F:350:ALA:HA	2.56	0.41
1:H:275:ILE:HG21	1:H:281:MSE:HG2	2.02	0.41
1:A:197:ALA:CB	1:A:224:PRO:HA	2.49	0.41
1:C:220:PHE:CD1	1:C:220:PHE:C	2.99	0.41
1:D:167:TYR:CZ	1:D:196:ASP:HB2	2.56	0.41
1:H:341:LEU:O	1:H:343:PRO:HD3	2.21	0.41
1:D:37:ILE:HG12	1:D:109:ILE:HD13	2.03	0.40
1:C:140:PHE:C	1:C:140:PHE:HD2	2.29	0.40
1:D:311:HIS:CE1	1:D:350:ALA:HA	2.57	0.40
1:E:351:PHE:HB3	3:E:2629:HOH:O	2.20	0.40
1:F:76:PRO:HB3	1:F:116:LEU:HD23	2.03	0.40
1:F:211:ARG:HD3	3:F:2699:HOH:O	2.21	0.40
1:B:99:MSE:HE3	1:F:228:TRP:CE2	2.56	0.40
1:B:115:ASP:OD1	1:B:119:LYS:HE3	2.21	0.40
1:C:250:ALA:HB2	1:C:259:ILE:CD1	2.51	0.40
1:G:83:ILE:HG23	1:G:106:PHE:CD1	2.57	0.40
1:G:230:ILE:N	1:G:231:PRO:CD	2.85	0.40
1:H:65:TYR:CZ	1:H:69:LYS:HD2	2.57	0.40
1:C:230:ILE:HB	1:C:231:PRO:HD3	2.03	0.40
1:D:79:VAL:HG13	1:D:80:ALA:N	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:87:PHE:O	1:D:91:TYR:HB2	2.21	0.40
1:H:197:ALA:CB	1:H:224:PRO:HA	2.50	0.40
1:D:85:ARG:HH11	1:D:85:ARG:HG3	1.87	0.40
1:E:230:ILE:N	1:E:231:PRO:CD	2.85	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	369/384 (96%)	356 (96%)	13 (4%)	0	100	100
1	B	370/384 (96%)	355 (96%)	15 (4%)	0	100	100
1	C	373/384 (97%)	362 (97%)	11 (3%)	0	100	100
1	D	370/384 (96%)	355 (96%)	15 (4%)	0	100	100
1	E	370/384 (96%)	354 (96%)	14 (4%)	2 (0%)	24	16
1	F	370/384 (96%)	360 (97%)	10 (3%)	0	100	100
1	G	370/384 (96%)	357 (96%)	13 (4%)	0	100	100
1	H	370/384 (96%)	358 (97%)	12 (3%)	0	100	100
All	All	2962/3072 (96%)	2857 (96%)	103 (4%)	2 (0%)	48	41

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	6	ILE
1	E	5	LYS

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	291/293 (99%)	290 (100%)	1 (0%)	86	87
1	B	292/293 (100%)	289 (99%)	3 (1%)	68	67
1	C	294/293 (100%)	289 (98%)	5 (2%)	53	49
1	D	292/293 (100%)	289 (99%)	3 (1%)	68	67
1	E	292/293 (100%)	289 (99%)	3 (1%)	68	67
1	F	292/293 (100%)	290 (99%)	2 (1%)	76	76
1	G	292/293 (100%)	290 (99%)	2 (1%)	76	76
1	H	292/293 (100%)	289 (99%)	3 (1%)	68	67
All	All	2337/2344 (100%)	2315 (99%)	22 (1%)	70	70

All (22) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	140	PHE
1	B	97	ASN
1	B	140	PHE
1	B	362	GLU
1	C	97	ASN
1	C	135	LYS
1	C	140	PHE
1	C	239	LYS
1	C	348	LEU
1	D	37	ILE
1	D	140	PHE
1	D	226	VAL
1	E	5	LYS
1	E	97	ASN
1	E	140	PHE
1	F	97	ASN
1	F	140	PHE
1	G	97	ASN
1	G	140	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	97	ASN
1	H	140	PHE
1	H	348	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (65) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	8	ASN
1	A	77	HIS
1	A	94	HIS
1	A	103	ASN
1	A	126	HIS
1	A	133	HIS
1	A	161	GLN
1	A	223	GLN
1	A	311	HIS
1	B	23	HIS
1	B	77	HIS
1	B	88	HIS
1	B	97	ASN
1	B	126	HIS
1	B	159	HIS
1	B	262	GLN
1	B	298	HIS
1	B	311	HIS
1	C	77	HIS
1	C	88	HIS
1	C	94	HIS
1	C	97	ASN
1	C	126	HIS
1	C	127	GLN
1	C	198	ASN
1	C	311	HIS
1	C	359	GLN
1	D	70	HIS
1	D	77	HIS
1	D	94	HIS
1	D	126	HIS
1	D	133	HIS
1	D	144	GLN
1	D	159	HIS
1	D	311	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	324	ASN
1	D	345	ASN
1	E	74	HIS
1	E	88	HIS
1	E	97	ASN
1	E	126	HIS
1	E	161	GLN
1	E	311	HIS
1	E	359	GLN
1	F	77	HIS
1	F	97	ASN
1	F	133	HIS
1	F	262	GLN
1	F	311	HIS
1	G	77	HIS
1	G	94	HIS
1	G	97	ASN
1	G	117	GLN
1	G	126	HIS
1	G	133	HIS
1	G	161	GLN
1	G	262	GLN
1	G	311	HIS
1	H	35	ASN
1	H	74	HIS
1	H	94	HIS
1	H	97	ASN
1	H	126	HIS
1	H	161	GLN
1	H	311	HIS

5.3.3 RNA ⓘ

There are no RNA molecules 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 [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

6 ligands are 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
2	GOL	E	2500	-	5,5,5	4.76	5 (100%)	5,5,5	6.02	3 (60%)
2	GOL	C	2300	-	5,5,5	4.64	5 (100%)	5,5,5	6.05	3 (60%)
2	GOL	A	2100	-	5,5,5	4.60	5 (100%)	5,5,5	6.09	3 (60%)
2	GOL	F	2600	-	5,5,5	4.64	5 (100%)	5,5,5	6.07	3 (60%)
2	GOL	B	2200	-	5,5,5	4.69	5 (100%)	5,5,5	6.07	3 (60%)
2	GOL	D	2400	-	5,5,5	4.63	5 (100%)	5,5,5	6.11	3 (60%)

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	GOL	E	2500	-	-	3/4/4/4	-
2	GOL	C	2300	-	-	3/4/4/4	-
2	GOL	A	2100	-	-	3/4/4/4	-
2	GOL	F	2600	-	-	3/4/4/4	-
2	GOL	B	2200	-	-	3/4/4/4	-
2	GOL	D	2400	-	-	3/4/4/4	-

All (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2200	GOL	C3-C2	-8.65	1.18	1.51

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	2500	GOL	C3-C2	-8.61	1.18	1.51
2	F	2600	GOL	C3-C2	-8.40	1.19	1.51
2	D	2400	GOL	C3-C2	-8.33	1.20	1.51
2	C	2300	GOL	C3-C2	-8.32	1.20	1.51
2	A	2100	GOL	C3-C2	-8.26	1.20	1.51
2	D	2400	GOL	O2-C2	-3.56	1.33	1.43
2	E	2500	GOL	O2-C2	-3.42	1.33	1.43
2	E	2500	GOL	C1-C2	-3.39	1.38	1.51
2	F	2600	GOL	O2-C2	-3.35	1.33	1.43
2	A	2100	GOL	C1-C2	-3.32	1.39	1.51
2	C	2300	GOL	C1-C2	-3.24	1.39	1.51
2	D	2400	GOL	O1-C1	3.23	1.56	1.42
2	B	2200	GOL	O2-C2	-3.13	1.34	1.43
2	C	2300	GOL	O2-C2	-3.12	1.34	1.43
2	F	2600	GOL	O1-C1	3.12	1.55	1.42
2	B	2200	GOL	O1-C1	3.04	1.55	1.42
2	A	2100	GOL	O2-C2	-3.03	1.34	1.43
2	C	2300	GOL	O1-C1	3.03	1.55	1.42
2	C	2300	GOL	O3-C3	3.02	1.55	1.42
2	B	2200	GOL	C1-C2	-3.01	1.40	1.51
2	F	2600	GOL	C1-C2	-3.00	1.40	1.51
2	A	2100	GOL	O3-C3	2.96	1.54	1.42
2	E	2500	GOL	O1-C1	2.95	1.54	1.42
2	A	2100	GOL	O1-C1	2.95	1.54	1.42
2	D	2400	GOL	C1-C2	-2.74	1.41	1.51
2	D	2400	GOL	O3-C3	2.71	1.53	1.42
2	F	2600	GOL	O3-C3	2.68	1.53	1.42
2	E	2500	GOL	O3-C3	2.67	1.53	1.42
2	B	2200	GOL	O3-C3	2.67	1.53	1.42

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	2400	GOL	O3-C3-C2	10.90	159.46	110.38
2	B	2200	GOL	O3-C3-C2	10.83	159.13	110.38
2	A	2100	GOL	O3-C3-C2	10.82	159.07	110.38
2	C	2300	GOL	O3-C3-C2	10.80	159.00	110.38
2	F	2600	GOL	O3-C3-C2	10.79	158.97	110.38
2	E	2500	GOL	O3-C3-C2	10.50	157.66	110.38
2	E	2500	GOL	O2-C2-C3	7.78	141.40	109.18
2	A	2100	GOL	O2-C2-C3	7.72	141.13	109.18
2	F	2600	GOL	O2-C2-C3	7.63	140.79	109.18

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2200	GOL	O2-C2-C3	7.60	140.65	109.18
2	C	2300	GOL	O2-C2-C3	7.60	140.65	109.18
2	D	2400	GOL	O2-C2-C3	7.55	140.44	109.18
2	D	2400	GOL	O1-C1-C2	3.09	124.31	110.38
2	E	2500	GOL	O1-C1-C2	2.98	123.80	110.38
2	F	2600	GOL	O1-C1-C2	2.88	123.35	110.38
2	C	2300	GOL	O1-C1-C2	2.75	122.77	110.38
2	B	2200	GOL	O1-C1-C2	2.75	122.75	110.38
2	A	2100	GOL	O1-C1-C2	2.74	122.73	110.38

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	2100	GOL	C1-C2-C3-O3
2	B	2200	GOL	C1-C2-C3-O3
2	C	2300	GOL	C1-C2-C3-O3
2	D	2400	GOL	C1-C2-C3-O3
2	E	2500	GOL	C1-C2-C3-O3
2	F	2600	GOL	C1-C2-C3-O3
2	A	2100	GOL	O1-C1-C2-C3
2	B	2200	GOL	O1-C1-C2-C3
2	C	2300	GOL	O1-C1-C2-C3
2	D	2400	GOL	O1-C1-C2-C3
2	E	2500	GOL	O1-C1-C2-C3
2	F	2600	GOL	O1-C1-C2-C3
2	C	2300	GOL	O1-C1-C2-O2
2	D	2400	GOL	O1-C1-C2-O2
2	A	2100	GOL	O1-C1-C2-O2
2	B	2200	GOL	O1-C1-C2-O2
2	E	2500	GOL	O1-C1-C2-O2
2	F	2600	GOL	O1-C1-C2-O2

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	2200	GOL	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	362/384 (94%)	0.32	11 (3%) 52 59	6, 18, 30, 42	0
1	B	363/384 (94%)	0.22	13 (3%) 46 53	7, 16, 30, 41	0
1	C	366/384 (95%)	0.04	12 (3%) 49 55	6, 14, 31, 47	0
1	D	363/384 (94%)	0.11	10 (2%) 55 62	6, 17, 29, 40	0
1	E	363/384 (94%)	0.40	17 (4%) 36 42	7, 18, 34, 43	0
1	F	363/384 (94%)	0.11	10 (2%) 55 62	5, 15, 29, 42	0
1	G	363/384 (94%)	0.30	14 (3%) 43 50	7, 18, 30, 43	0
1	H	363/384 (94%)	0.02	9 (2%) 58 65	6, 14, 28, 40	0
All	All	2906/3072 (94%)	0.19	96 (3%) 49 55	5, 16, 30, 47	0

All (96) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	4	VAL	7.2
1	B	32	PHE	6.4
1	A	374	ALA	6.0
1	E	5	LYS	5.6
1	C	377	GLU	5.2
1	B	26	TYR	4.9
1	G	26	TYR	4.9
1	E	28	ILE	4.8
1	C	378	GLY	4.7
1	C	27	GLY	4.6
1	C	26	TYR	4.3
1	C	32	PHE	4.2
1	C	24	TRP	4.2
1	A	373	ALA	4.1
1	G	375	SER	4.1
1	A	26	TYR	4.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	28	ILE	4.0
1	H	27	GLY	4.0
1	H	25	SER	3.8
1	F	27	GLY	3.7
1	F	375	SER	3.6
1	G	27	GLY	3.6
1	H	28	ILE	3.6
1	A	24	TRP	3.6
1	H	375	SER	3.6
1	D	375	SER	3.5
1	C	28	ILE	3.5
1	B	375	SER	3.4
1	D	26	TYR	3.4
1	G	28	ILE	3.4
1	C	25	SER	3.4
1	A	32	PHE	3.4
1	H	26	TYR	3.3
1	F	26	TYR	3.3
1	D	27	GLY	3.2
1	B	28	ILE	3.2
1	G	4	VAL	3.1
1	F	25	SER	3.1
1	G	25	SER	3.1
1	A	25	SER	2.9
1	G	24	TRP	2.9
1	E	375	SER	2.9
1	G	374	ALA	2.9
1	E	24	TRP	2.9
1	E	27	GLY	2.9
1	A	29	ARG	2.8
1	F	28	ILE	2.8
1	B	25	SER	2.8
1	E	25	SER	2.8
1	A	27	GLY	2.8
1	B	24	TRP	2.8
1	E	32	PHE	2.7
1	F	374	ALA	2.7
1	B	352	ARG	2.7
1	B	31	SER	2.6
1	E	352	ARG	2.6
1	H	8	ASN	2.6
1	H	24	TRP	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	27	GLY	2.5
1	E	360	LEU	2.5
1	G	352	ARG	2.5
1	G	144	GLN	2.5
1	E	26	TYR	2.5
1	C	352	ARG	2.4
1	A	28	ILE	2.4
1	F	32	PHE	2.4
1	G	32	PHE	2.4
1	D	24	TRP	2.4
1	A	190	ASP	2.3
1	D	85	ARG	2.3
1	A	331	VAL	2.3
1	B	374	ALA	2.3
1	E	29	ARG	2.2
1	E	48	ILE	2.2
1	G	353	LYS	2.2
1	G	29	ARG	2.2
1	D	25	SER	2.2
1	G	31	SER	2.2
1	E	22	TYR	2.2
1	B	4	VAL	2.2
1	H	373	ALA	2.2
1	B	153	ARG	2.1
1	D	352	ARG	2.1
1	C	4	VAL	2.1
1	D	8	ASN	2.1
1	E	363	ASP	2.1
1	B	29	ARG	2.1
1	D	22	TYR	2.0
1	C	23	HIS	2.0
1	C	29	ARG	2.0
1	H	33	ALA	2.0
1	E	362	GLU	2.0
1	F	362	GLU	2.0
1	E	8	ASN	2.0
1	F	4	VAL	2.0
1	F	352	ARG	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 [i](#)

There are no oligosaccharides 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(\AA^2)	Q<0.9
2	GOL	E	2500	6/6	0.84	0.14	19,21,22,23	0
2	GOL	F	2600	6/6	0.85	0.14	19,22,23,23	0
2	GOL	C	2300	6/6	0.86	0.14	21,21,22,23	0
2	GOL	B	2200	6/6	0.87	0.10	19,21,23,24	0
2	GOL	D	2400	6/6	0.88	0.11	19,22,22,22	0
2	GOL	A	2100	6/6	0.91	0.10	20,21,22,22	0

6.5 Other polymers [i](#)

There are no such residues in this entry.