



wwPDB X-ray Structure Validation Summary Report ⓘ

Mar 4, 2024 – 10:53 PM EST

PDB ID : 2DRD
Title : Crystal structure of a multidrug transporter reveal a functionally rotating mechanism
Authors : Murakami, S.; Nakashima, R.; Yamashita, E.; Matsumoto, T.
Deposited on : 2006-06-08
Resolution : 3.10 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
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

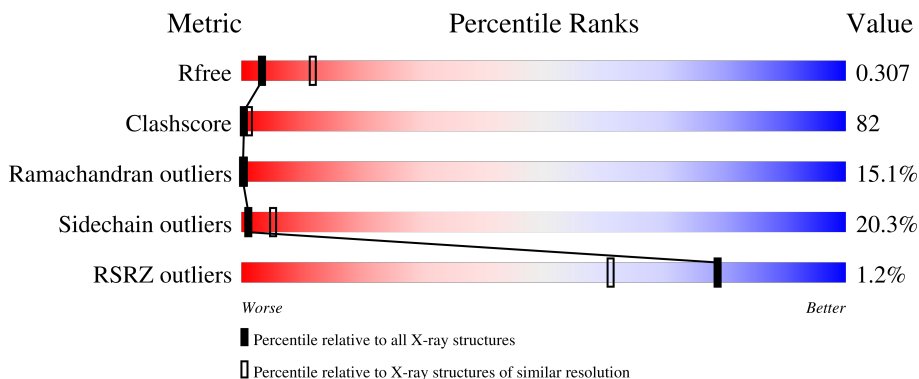
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 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	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)

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	1053	 19% 49% 24% 5% •
1	B	1053	 17% 53% 23% • •
1	C	1053	 19% 50% 23% 6% •

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 23355 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.

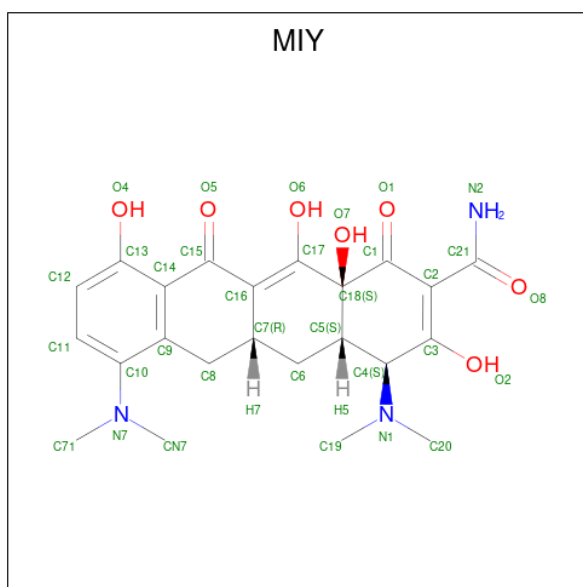
- Molecule 1 is a protein called ACRB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	1022	7774	5003	1283	1444	44	0	0	0
1	B	1022	7774	5003	1283	1444	44	0	0	0
1	C	1022	7774	5003	1283	1444	44	0	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1050	HIS	-	expression tag	UNP P31224
A	1051	HIS	-	expression tag	UNP P31224
A	1052	HIS	-	expression tag	UNP P31224
A	1053	HIS	-	expression tag	UNP P31224
B	1050	HIS	-	expression tag	UNP P31224
B	1051	HIS	-	expression tag	UNP P31224
B	1052	HIS	-	expression tag	UNP P31224
B	1053	HIS	-	expression tag	UNP P31224
C	1050	HIS	-	expression tag	UNP P31224
C	1051	HIS	-	expression tag	UNP P31224
C	1052	HIS	-	expression tag	UNP P31224
C	1053	HIS	-	expression tag	UNP P31224

- Molecule 2 is (4S,4AS,5AR,12AS)-4,7-BIS(DIMETHYLAMINO)-3,10,12,12A-TETRAHYDROXY-1,11-DIOXO-1,4,4A,5,5A,6,11,12A-OCTAHYDROTETRACENE-2-CARBOXAMIDE (three-letter code: MIY) (formula: C₂₃H₂₇N₃O₇).

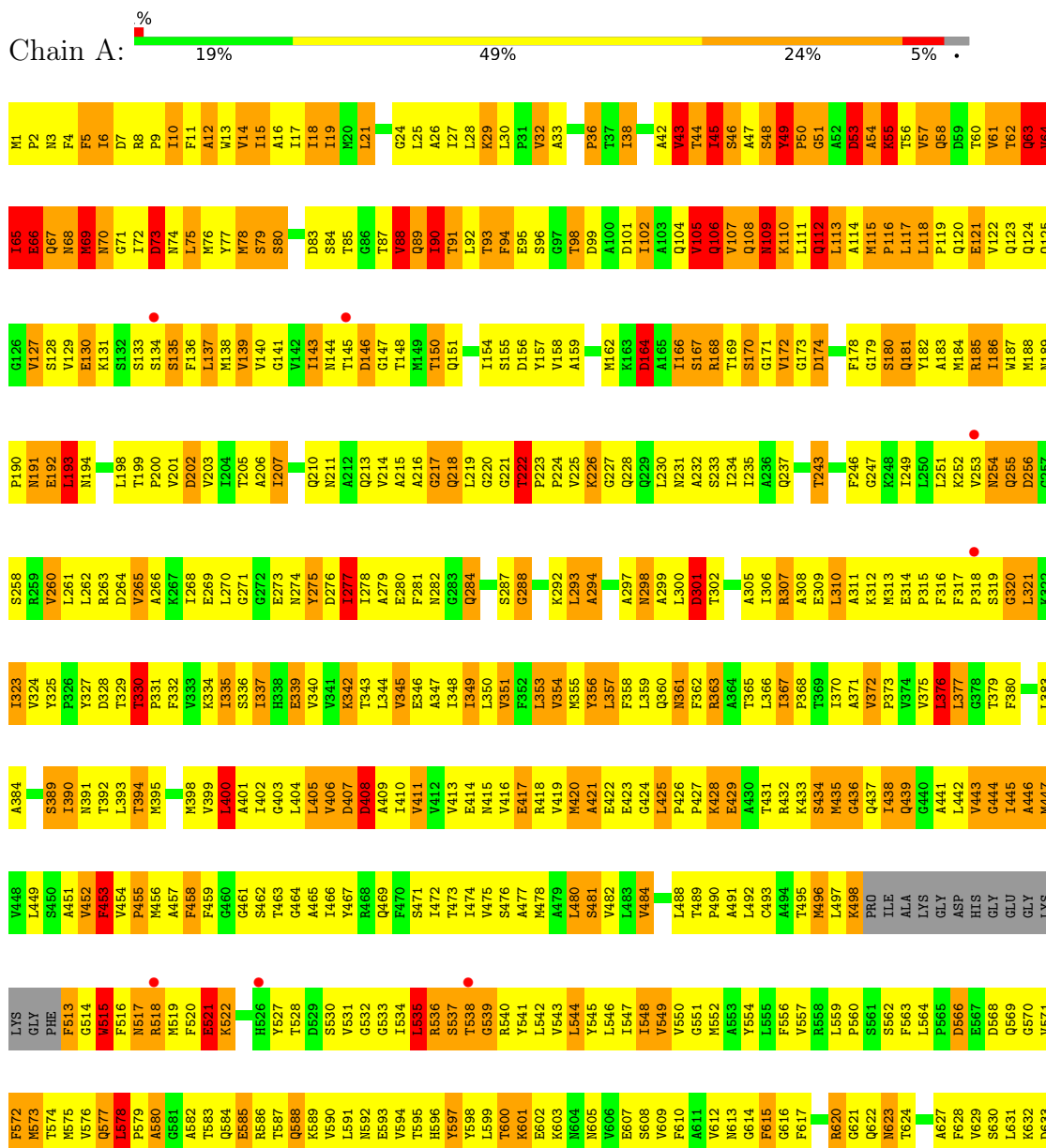


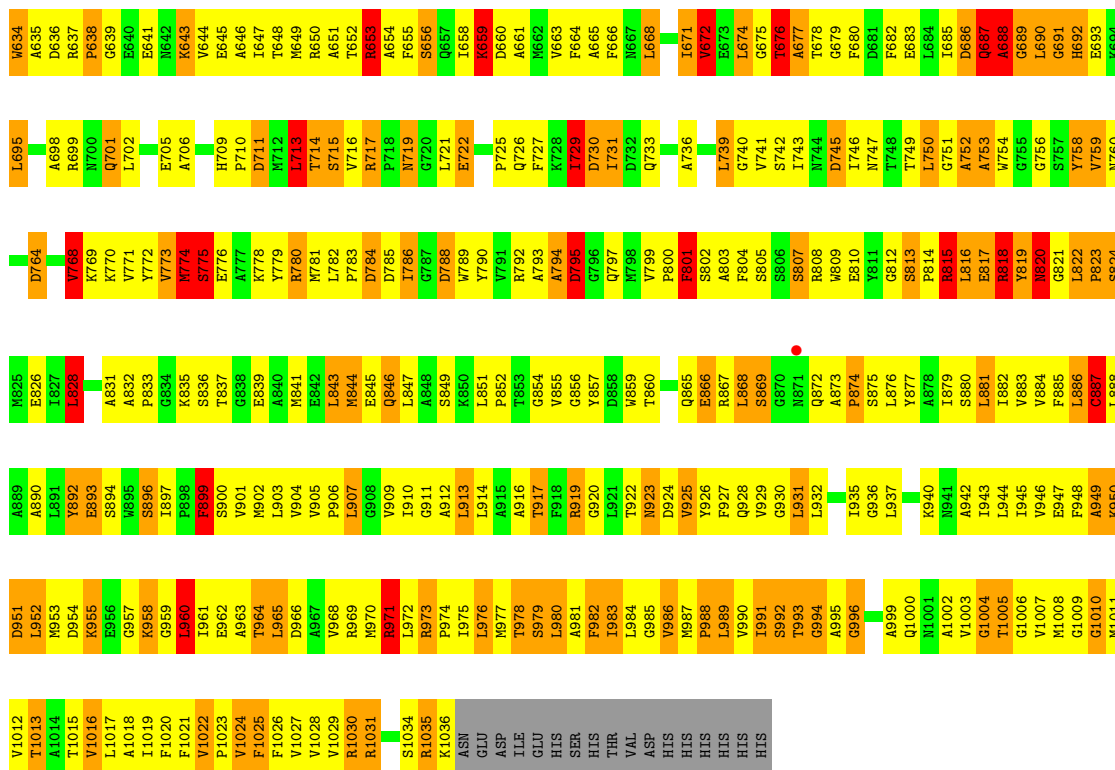
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	A	1	33	23	3	7	0	0

3 Residue-property plots

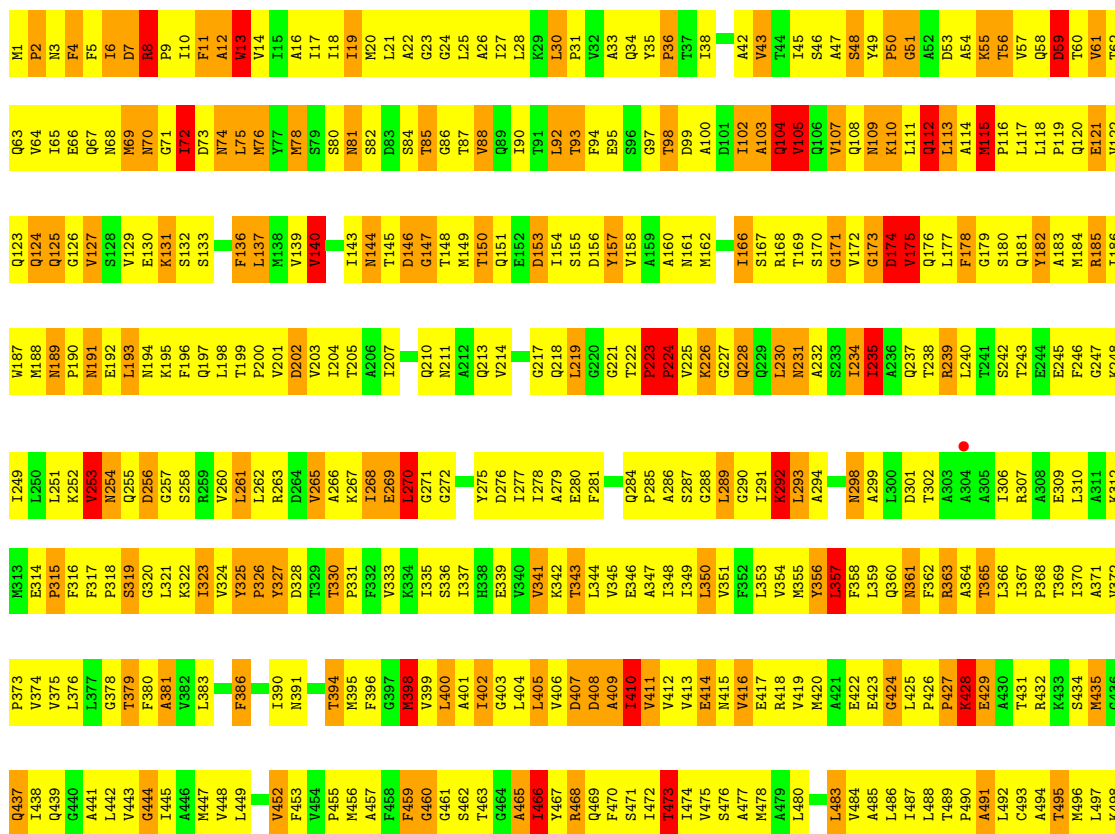
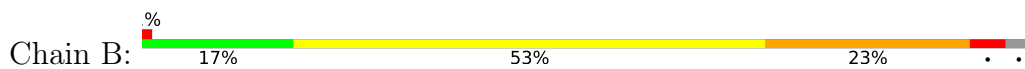
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: ACRB





● Molecule 1: ACRB



T1005	M841	1879	R818	G751	D686	G625	P660	I1E	K488	L376	K312
G1006	A942	S860	Y819	A752	Q687	I626	S861	ALA	L489	L377	M313
V1007	I943	G883	M820	A753	A688	A627	S862	LYS	L442	G378	E314
M1008	L844	V883	G889	M754	G688	F628	F563	GLY	L443	T379	P315
G1009	I945	F885	P823	G755	L690	V629	L564	ASP	V443	F380	F316
G1010	V946	F885	S824	G755	G691	S630	L564	HIS	V444	F381	F317
M1011	E947	L886	M825	Y758	H692	L631	P665	GLY	G444	V382	P318
V1012	F948	C887	E826	V759	E693	R632	D567	GLU	I445	S319	S319
T1013	A949	L888	I827	N760	K694	D633	D568	GLY	M447	L383	G320
A1014	A899	A889	G828	N761	L695	M634	D569	LYS	V448	A385	L321
T1015	K950	A890	G829	F762	T696	A635	D570	LYS	L449	K322	K322
V1016	L952	L891	Q830	I763	Q697	D636	V571	GLY	S450	I323	K323
M1017	M953	Y892	A831	T764	D637	R637	F572	PHE	A451	M324	M324
A1018	D954	E893	A832	R765	R689	P638	M573	F513	V452	Y325	Y325
I1019	K958	S894	R833	G766	G639	G639	T574	G514	F453	M391	Y326
F1020	G959	M895	G834	R767	E640	E640	M575	M515	V454	T392	Y327
F1021	G959	S896	K835	V768	E641	E641	N576	F516	F455	L393	Y327
V1022	L960	L897	S836	R769	L702	E642	V577	N517	M456	T394	D328
P1023	I961	R898	T837	K770	L703	N642	O584	F517	M456	M395	T329
V1024	E962	P898	T837	K770	A704	K643	L578	M518	A457	F396	T330
F1025	A963	F899	G838	V771	E705	V644	P579	M519	F458	G397	T331
F1026	T964	S900	E839	V772	A706	E645	F520	F520	M398	M398	F332
V1027	L965	V901	M840	V773	A707	A582	E521	E521	G460	G460	K333
V1028	D966	V904	M841	M774	K708	I583	M583	M522	G461	L400	K334
R1030	A967	V905	E842	S775	H709	T648	O584	S523	G462	A401	I335
R1031	V968	P906	L843	E776	P710	M649	E585	T524	T463	I402	S336
R1032	R969	L907	M844	A777	D711	R650	R586	H525	G484	G483	I337
F1033	M970	G908	E845	K778	M712	T587	T587	H526	A465	L404	H338
S1034	R971	G908	Q846	V779	L713	R653	Q588	Y527	L466	L405	L344
R1035	L972	V909	L847	M774	L714	A654	K589	T528	Y467	V406	V345
R1036	R973	I910	A848	S775	S715	F655	V590	D529	R488	D407	V345
ASN	P974	G911	S849	K770	V716	S656	L591	S530	Q469	M408	E346
GLU	I975	A912	K850	V771	R717	Q657	N592	V531	F470	A409	E347
THR	L976	L913	P851	D764	P718	L658	E593	G532	S471	I410	I348
VAL	M977	L914	P852	D785	N719	K659	V594	G533	V411	V411	I349
ASP	S979	A916	T853	G787	L721	D660	L534	G533	L474	V412	L350
HIS	L980	T917	G854	V788	S716	A661	Y598	R536	V475	V413	V351
SER	A981	F918	G856	V789	E722	M662	L599	S537	S476	E414	F352
HIS	F982	G920	T857	Y790	Q726	F664	T600	T538	M477	M415	L353
HIS	I983	L921	D858	V791	F727	A665	R601	G539	M478	E417	M355
ASP	L984	L922	T860	A793	K728	F666	E602	L480	L480	R418	Y356
HIS	G985	N923	G861	F804	I729	N667	K603	S481	V482	Y419	L357
HIS	V986	D924	M862	S905	D730	L668	V606	P490	M420	M420	F358
HIS	M987	V925	S863	R808	D732	P669	E607	P490	V483	L483	L359
HIS	L988	V926	Y864	W809	Q733	A670	S608	V484	V484	E422	Q860
HIS	V990	F927	Q865	W809	E734	V672	G608	A485	A485	E423	M361
HIS	I991	Q928	E866	G812	K735	E673	V612	L486	G424	G424	F362
HIS	S992	V929	R867	G813	A736	L674	N613	I487	L425	L425	R363
HIS	T993	G930	L868	S814	Q737	G675	G614	L488	P426	P426	A364
HIS	G994	L931	S869	L876	Q737	T676	F615	T489	K428	K428	L366
HIS	S997	L932	G870	R808	S742	A677	G616	P490	A428	A428	L366
HIS	A999	T933	M871	W809	I743	F678	F617	A491	A491	E429	I367
Q1000	Q1000	T934	Q872	G812	N744	G679	A553	L492	L492	A430	P368
M1001	M1001	G936	A873	G812	G679	F680	G619	C493	C493	T431	T369
G1004	G1004	L937	P874	S813	I746	F680	G620	A494	A494	R432	I370
		S938	P814	S813	I746	F682	G621	T495	T495	K433	A371
		A939	L876	R815	T748	E883	Q622	M486	M486	S434	V372
		K940	L876	L816	T749	E883	Q622	L498	L498	M435	V373
			A878	E817	L750	I685	T624	K498	K498	G436	V374
								PRD	PRD	Q437	V375

4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	225.80Å 134.47Å 162.12Å 90.00° 98.17° 90.00°	Depositor
Resolution (Å)	10.00 – 3.10 10.00 – 3.10	Depositor EDS
% Data completeness (in resolution range)	97.5 (10.00-3.10) 97.4 (10.00-3.10)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.33 (at 3.10Å)	Xtrriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.255 , 0.310 0.248 , 0.307	Depositor DCC
R_{free} test set	4181 reflections (5.08%)	wwPDB-VP
Wilson B-factor (Å ²)	78.1	Xtrriage
Anisotropy	0.293	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 97.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	23355	wwPDB-VP
Average B, all atoms (Å ²)	83.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.89% 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: MIY

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	1.56	90/7920 (1.1%)	1.40	68/10756 (0.6%)
1	B	1.30	22/7920 (0.3%)	1.26	50/10756 (0.5%)
1	C	1.54	90/7920 (1.1%)	1.44	86/10756 (0.8%)
All	All	1.47	202/23760 (0.9%)	1.37	204/32268 (0.6%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	1
1	C	0	4
All	All	0	7

The worst 5 of 202 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	819	TYR	CG-CD1	13.88	1.57	1.39
1	A	45	ILE	CA-CB	-12.79	1.25	1.54
1	A	818	ARG	CG-CD	12.35	1.82	1.51
1	C	167	SER	N-CA	11.14	1.68	1.46
1	A	819	TYR	CE2-CZ	10.84	1.52	1.38

The worst 5 of 204 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	164	ASP	CB-CG-OD1	-15.00	104.80	118.30
1	C	126	GLY	N-CA-C	-11.22	85.04	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	686	ASP	CB-CG-OD2	10.96	128.16	118.30
1	A	717	ARG	NE-CZ-NH2	-10.44	115.08	120.30
1	C	686	ASP	CB-CG-OD1	-9.84	109.44	118.30

There are no chirality outliers.

5 of 7 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	860	THR	Peptide
1	A	949	ALA	Peptide
1	B	706	ALA	Peptide
1	C	157	TYR	Sidechain
1	C	160	ALA	Mainchain

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	7774	0	7931	1270	0
1	B	7774	0	7931	1386	0
1	C	7774	0	7931	1315	0
2	A	33	0	25	2	0
All	All	23355	0	23818	3853	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 82.

The worst 5 of 3853 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:C:166:ILE:CA	1:C:166:ILE:CB	1.74	1.60
1:C:45:ILE:CA	1:C:45:ILE:CB	1.75	1.60
1:A:90:ILE:CG1	1:A:90:ILE:CD1	1.80	1.58
1:A:814:PRO:CB	1:A:814:PRO:CG	1.74	1.56
1:A:818:ARG:CG	1:A:818:ARG:CD	1.82	1.55

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	1018/1053 (97%)	627 (62%)	225 (22%)	166 (16%)	0	0
1	B	1018/1053 (97%)	616 (60%)	246 (24%)	156 (15%)	0	0
1	C	1018/1053 (97%)	642 (63%)	236 (23%)	140 (14%)	0	1
All	All	3054/3159 (97%)	1885 (62%)	707 (23%)	462 (15%)	0	0

5 of 462 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	63	GLN
1	A	64	VAL
1	A	65	ILE
1	A	73	ASP
1	A	74	ASN

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	833/859 (97%)	661 (79%)	172 (21%)	1	5
1	B	833/859 (97%)	665 (80%)	168 (20%)	1	5
1	C	833/859 (97%)	665 (80%)	168 (20%)	1	5
All	All	2499/2577 (97%)	1991 (80%)	508 (20%)	1	5

5 of 508 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	336	SER
1	C	624	THR
1	B	692	HIS
1	C	588	GLN
1	C	783	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 94 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	642	ASN
1	C	123	GLN
1	B	744	ASN
1	B	872	GLN
1	C	189	ASN

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](#)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	MIY	A	2001	-	35,36,36	1.27	3 (8%)	41,58,58	2.61	17 (41%)

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	MIY	A	2001	-	-	5/12/70/70	0/4/4/4

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	2001	MIY	C4-N1	4.03	1.56	1.47
2	A	2001	MIY	C18-C17	3.08	1.54	1.52
2	A	2001	MIY	C4-C3	2.33	1.56	1.51

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	2001	MIY	C1-C18-C17	8.44	119.78	109.88
2	A	2001	MIY	O6-C17-C16	-5.94	115.77	123.90
2	A	2001	MIY	O7-C18-C17	-4.52	102.92	110.14
2	A	2001	MIY	C18-C17-C16	4.14	127.27	123.06
2	A	2001	MIY	CN7-N7-C10	-3.93	102.99	115.17

There are no chirality outliers.

All (5) torsion outliers are listed below:

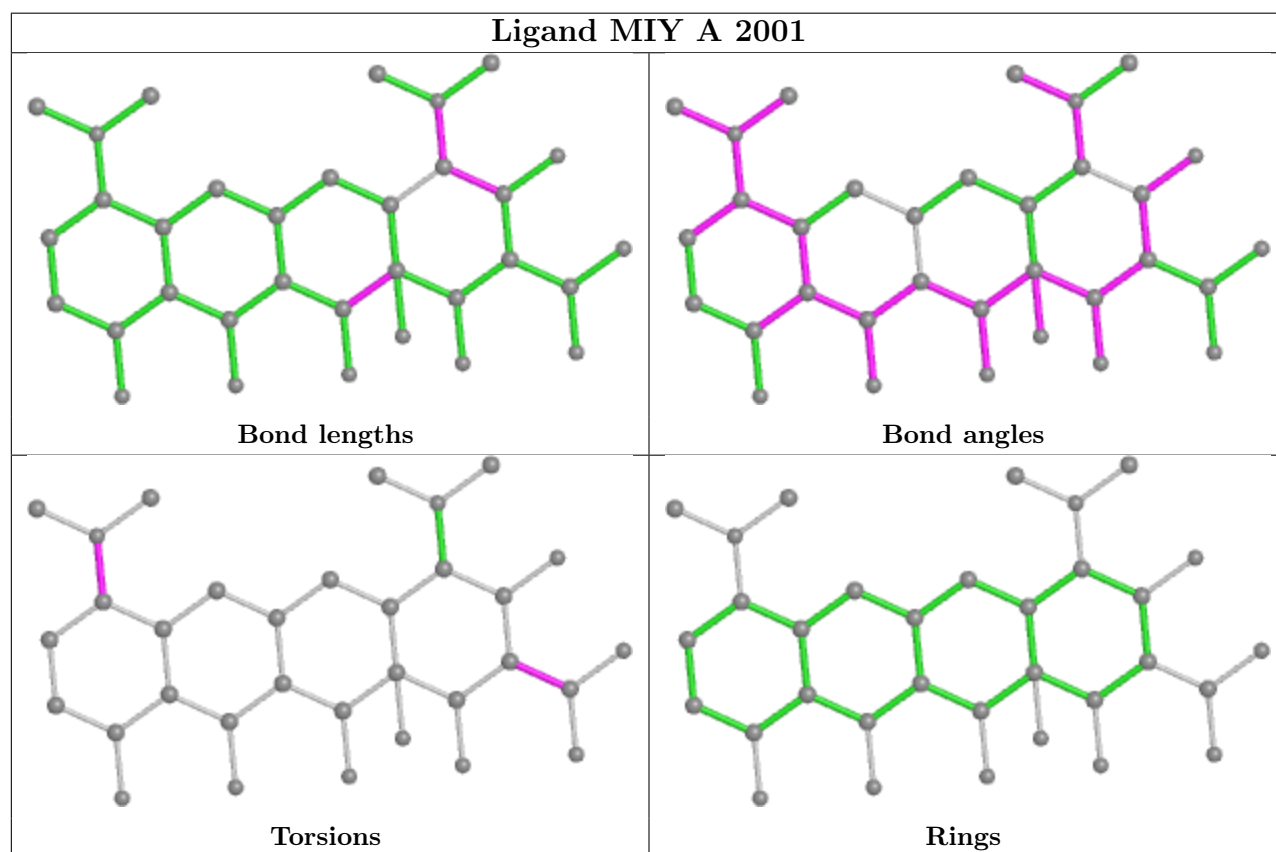
Mol	Chain	Res	Type	Atoms
2	A	2001	MIY	C1-C2-C21-O8
2	A	2001	MIY	C1-C2-C21-N2
2	A	2001	MIY	C3-C2-C21-N2
2	A	2001	MIY	C3-C2-C21-O8
2	A	2001	MIY	C9-C10-N7-CN7

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	2001	MIY	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	1022/1053 (97%)	-0.46	8 (0%) 86 72	3, 87, 108, 120	0
1	B	1022/1053 (97%)	-0.32	12 (1%) 79 61	42, 93, 108, 120	0
1	C	1022/1053 (97%)	-0.47	18 (1%) 68 47	5, 84, 109, 120	0
All	All	3066/3159 (97%)	-0.42	38 (1%) 79 61	3, 88, 108, 120	0

The worst 5 of 38 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	1034	SER	4.9
1	C	870	GLY	4.7
1	C	514	GLY	3.7
1	C	538	THR	3.5
1	C	656	SER	3.5

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](#)

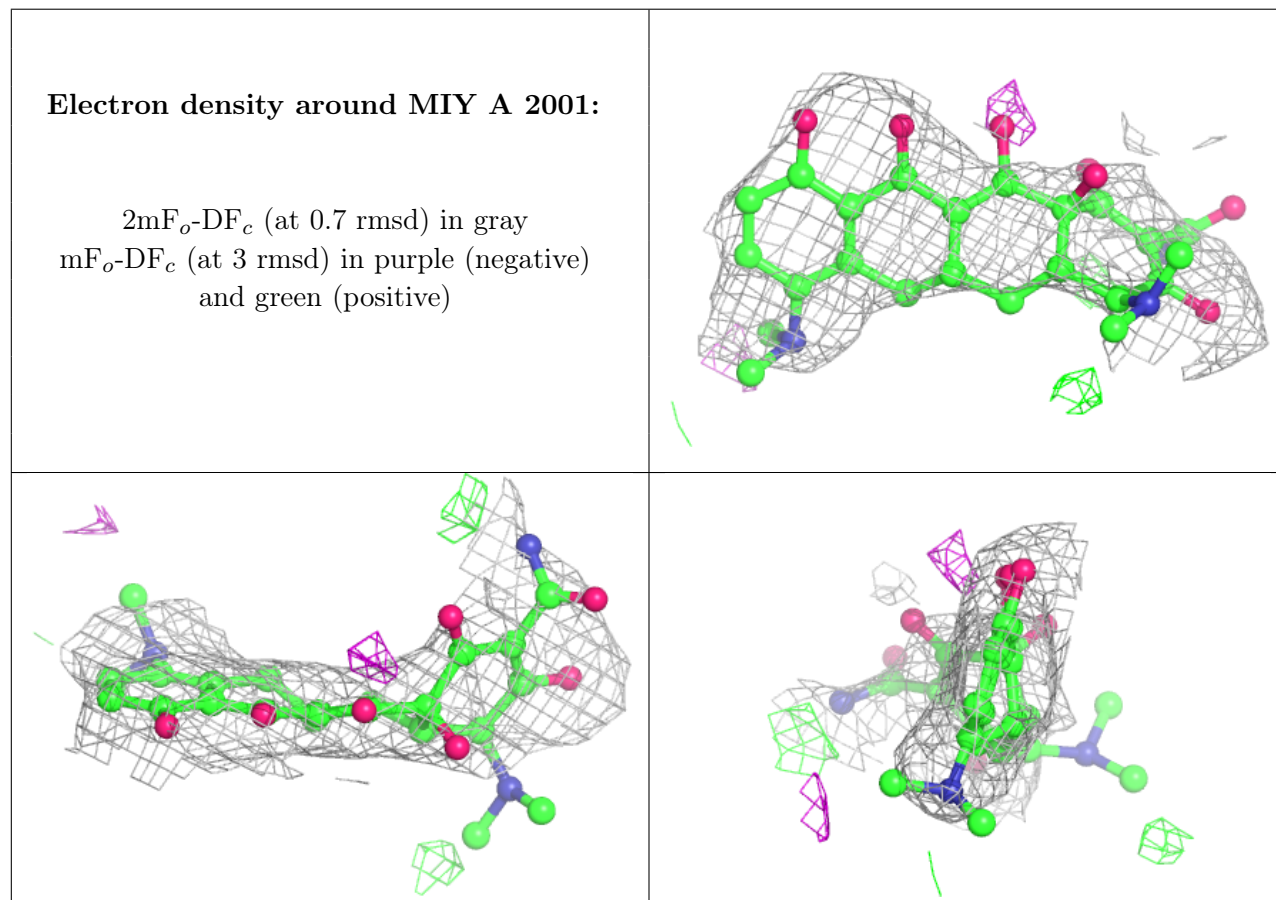
There are no monosaccharides in this entry.

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(\AA^2)	Q<0.9
2	MIY	A	2001	33/33	0.82	0.32	112,122,129,131	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



6.5 Other polymers [i](#)

There are no such residues in this entry.