Full wwPDB X-ray Structure Validation Report (i)

Mar 5, 2026 – 02:01 PM UTC

PDB ID	:	6VJB / pdb_00006vjb
Title	:	Crystal structure of a catalytically inactive CXC Chemokine-degrading protease SpyCEP from Streptococcus pyogenes
Authors	:	Malito, E.; Rouse, S.
Deposited on	:	2020-01-15
Resolution	:	2.24 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 (i) 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 (i)) were used in the production of this report:

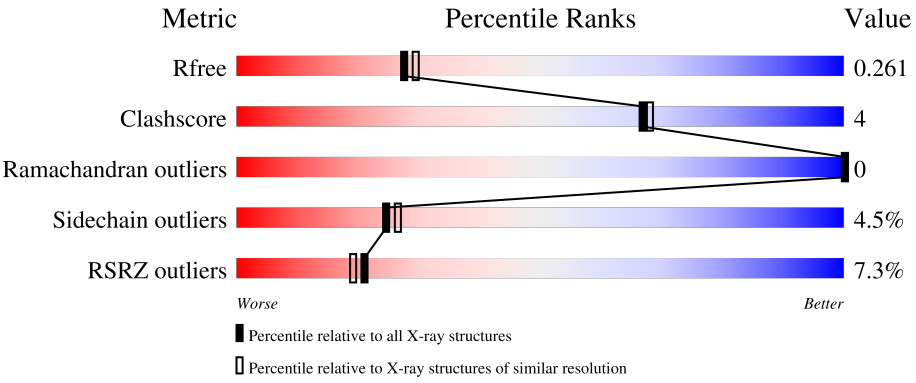
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.24 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	3416 (2.26-2.22)
Clashscore	190562	3556 (2.26-2.22)
Ramachandran outliers	187476	3500 (2.26-2.22)
Sidechain outliers	187428	3501 (2.26-2.22)
RSRZ outliers	180081	3415 (2.26-2.22)

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 <=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	1589	6% 74% 9% • 15%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 11195 atoms, of which 24 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.

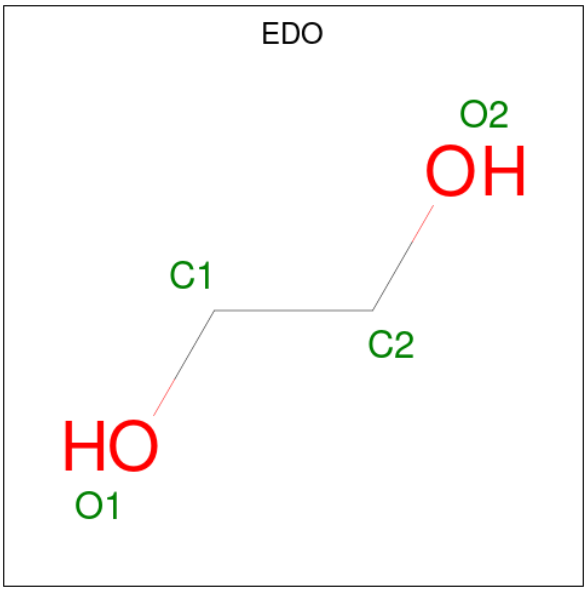
- Molecule 1 is a protein called Putative cell envelope proteinase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1346	Total	C	N	O	S	0	0	0
			10461	6591	1782	2063	25			

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	33	MET	-	initiating methionine	UNP Q9A180
A	151	ALA	ASP	engineered mutation	UNP Q9A180
A	617	ALA	SER	engineered mutation	UNP Q9A180
A	1615	GLU	-	expression tag	UNP Q9A180
A	1616	HIS	-	expression tag	UNP Q9A180
A	1617	HIS	-	expression tag	UNP Q9A180
A	1618	HIS	-	expression tag	UNP Q9A180
A	1619	HIS	-	expression tag	UNP Q9A180
A	1620	HIS	-	expression tag	UNP Q9A180
A	1621	HIS	-	expression tag	UNP Q9A180

- Molecule 2 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total C H O 10 2 6 2	0	0
2	A	1	Total C H O 10 2 6 2	0	0
2	A	1	Total C H O 10 2 6 2	0	0
2	A	1	Total C H O 10 2 6 2	0	0

- Molecule 3 is CALCIUM ION (CCD ID: CA) (formula: Ca).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	3	Total Ca 3 3	0	0

- Molecule 4 is water.

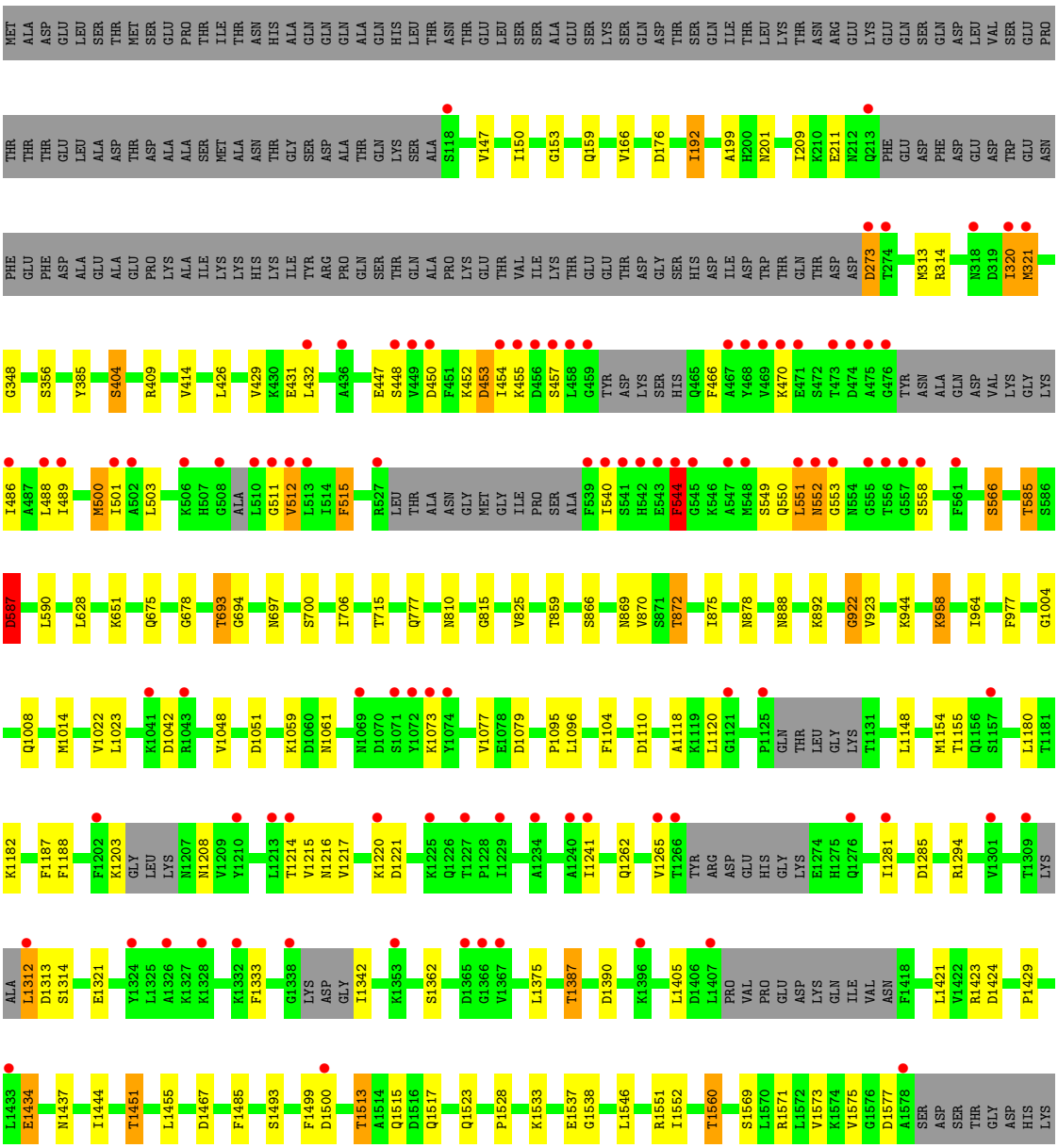
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	691	Total O 691 691	0	0

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: Putative cell envelope proteinase

Chain A:



VAL
MET
SER
LYS
ASN
ASN
SER
GLN
ALA
LEU
THR
ALA
SER
ALA
THR
PRO
THR
LYS
SER
THR
THR
SER
ALA
THR
ALA
LYS
ALA
LEU
GLU
HIS
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4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	140.50Å 121.75Å 106.64Å 90.00° 111.78° 90.00°	Depositor
Resolution (Å)	44.51 – 2.24 44.51 – 2.24	Depositor EDS
% Data completeness (in resolution range)	96.5 (44.51-2.24) 96.5 (44.51-2.24)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$< I/\sigma(I) >$ [1]	3.41 (at 2.25Å)	Xtriage
Refinement program	BUSTER 2.11.7	Depositor
R, R_{free}	0.190 , 0.244 0.202 , 0.261	Depositor DCC
R_{free} test set	3911 reflections (4.91%)	wwPDB-VP
Wilson B-factor (Å^2)	35.2	Xtriage
Anisotropy	0.234	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.31 , 64.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	11195	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.51% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CA, EDO

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	0.81	1/10660 (0.0%)	1.25	34/14420 (0.2%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	404	SER	C-N	8.28	1.50	1.34

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1499	PHE	CA-C-N	7.53	131.26	120.79
1	A	1499	PHE	C-N-CA	7.53	131.26	120.79
1	A	587	ASP	CA-CB-CG	7.03	119.62	112.60
1	A	176	ASP	CA-CB-CG	6.76	119.36	112.60
1	A	1120	LEU	N-CA-C	-6.34	100.45	109.96
1	A	544	PHE	CA-CB-CG	6.33	120.13	113.80
1	A	1079	ASP	CA-CB-CG	6.20	118.80	112.60
1	A	515	PHE	CA-CB-CG	6.19	119.99	113.80
1	A	409	ARG	CA-C-N	6.11	126.61	119.83
1	A	409	ARG	C-N-CA	6.11	126.61	119.83
1	A	273	ASP	CA-C-N	5.80	128.33	120.38
1	A	273	ASP	C-N-CA	5.80	128.33	120.38
1	A	552	ASN	N-CA-C	-5.76	105.08	111.36
1	A	1120	LEU	CA-C-N	-5.37	117.07	123.08
1	A	1120	LEU	C-N-CA	-5.37	117.07	123.08
1	A	414	VAL	N-CA-C	5.36	115.57	107.75
1	A	159	GLN	CA-C-N	5.36	129.78	120.68
1	A	159	GLN	C-N-CA	5.36	129.78	120.68
1	A	1110	ASP	CA-CB-CG	5.34	117.94	112.60
1	A	923	VAL	N-CA-CB	5.30	117.96	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	888	ASN	CA-CB-CG	5.25	117.85	112.60
1	A	878	ASN	CA-CB-CG	5.24	117.84	112.60
1	A	1051	ASP	CA-CB-CG	5.23	117.83	112.60
1	A	1424	ASP	CA-CB-CG	5.19	117.79	112.60
1	A	1467	ASP	CA-CB-CG	5.19	117.79	112.60
1	A	922	GLY	N-CA-C	5.16	118.65	110.96
1	A	1577	ASP	CA-CB-CG	5.12	117.72	112.60
1	A	500	MET	CA-C-N	5.10	126.98	120.56
1	A	500	MET	C-N-CA	5.10	126.98	120.56
1	A	1437	ASN	CA-CB-CG	5.10	117.70	112.60
1	A	550	GLN	N-CA-C	-5.07	105.84	112.23
1	A	869	ASN	CA-C-N	5.04	127.54	121.84
1	A	869	ASN	C-N-CA	5.04	127.54	121.84
1	A	1285	ASP	CA-CB-CG	5.01	117.61	112.60

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	10461	0	10283	77	0
2	A	16	24	24	1	0
3	A	3	0	0	0	0
4	A	691	0	0	3	0
All	All	11171	24	10307	77	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 4.

All (77) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:549:SER:HA	1:A:552:ASN:HB2	1.68	0.76
1:A:1312:LEU:HD12	1:A:1312:LEU:N	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:320:ILE:HD12	1:A:320:ILE:N	2.06	0.70
1:A:585:THR:CG2	1:A:587:ASP:OD1	2.40	0.70
1:A:321:MET:HE1	4:A:2262:HOH:O	1.94	0.67
1:A:1493:SER:OG	1:A:1560:THR:HG23	1.94	0.67
1:A:320:ILE:HD12	1:A:320:ILE:H	1.60	0.66
1:A:1023:LEU:HD13	1:A:1118:ALA:HB2	1.77	0.66
1:A:501:ILE:HG23	1:A:512:VAL:HG21	1.81	0.62
1:A:825:VAL:H	1:A:1008:GLN:HE22	1.48	0.62
1:A:1538:GLY:H	1:A:1560:THR:HG22	1.64	0.61
1:A:1148:LEU:HD23	1:A:1180:LEU:HG	1.84	0.60
1:A:875:ILE:HG12	1:A:1077:VAL:HG12	1.84	0.59
1:A:320:ILE:H	1:A:320:ILE:CD1	2.16	0.58
1:A:585:THR:HG23	1:A:587:ASP:OD1	2.04	0.58
1:A:1546:LEU:HD11	1:A:1552:ILE:HG12	1.85	0.58
1:A:675:GLN:OE1	1:A:678:GLY:HA2	2.05	0.56
1:A:385:TYR:HD2	1:A:958:LYS:HD3	1.72	0.55
1:A:348:GLY:HA2	1:A:404:SER:O	2.07	0.54
1:A:470:LYS:HG3	1:A:553:GLY:HA2	1.91	0.53
1:A:429:VAL:HG12	1:A:429:VAL:O	2.09	0.53
1:A:1523:GLN:HE21	1:A:1528:PRO:HB3	1.75	0.52
1:A:1434:GLU:HB3	1:A:1444:ILE:HB	1.92	0.52
1:A:1500:ASP:HB2	1:A:1571:ARG:HA	1.91	0.51
1:A:1405:LEU:HD23	1:A:1485:PHE:HB2	1.93	0.51
1:A:1423:ARG:HB2	1:A:1451:THR:HG22	1.93	0.51
1:A:489:ILE:HD12	1:A:500:MET:HE2	1.93	0.50
1:A:320:ILE:N	1:A:320:ILE:CD1	2.73	0.50
1:A:1188:PHE:CD2	1:A:1314:SER:HB3	2.46	0.50
1:A:1421:LEU:HD11	1:A:1429:PRO:HB3	1.93	0.49
1:A:1537:GLU:HA	1:A:1560:THR:CG2	2.41	0.49
1:A:693:THR:HG22	1:A:715:THR:HB	1.94	0.49
1:A:1154:MET:HE1	1:A:1182:LYS:HG2	1.93	0.49
1:A:1042:ASP:HB2	1:A:1048:VAL:HG23	1.94	0.49
1:A:1312:LEU:N	1:A:1312:LEU:CD1	2.73	0.49
1:A:1421:LEU:HB2	1:A:1455:LEU:HD11	1.96	0.48
1:A:777:GLN:HG2	4:A:1860:HOH:O	2.14	0.48
1:A:977:PHE:CD2	1:A:1014:MET:HE1	2.49	0.48
1:A:201:ASN:HA	1:A:314:ARG:HB3	1.96	0.48
1:A:1215:VAL:HG22	1:A:1265:VAL:HG22	1.97	0.47
1:A:706:ILE:HD11	1:A:815:GLY:HA3	1.96	0.47
1:A:457:SER:HB2	1:A:466:PHE:HE2	1.80	0.46
1:A:452:LYS:HE2	1:A:455:LYS:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:199:ALA:HB1	1:A:209:ILE:HG21	1.98	0.46
1:A:1321:GLU:HB2	1:A:1375:LEU:HB3	1.97	0.46
1:A:147:VAL:HB	1:A:628:LEU:HD11	1.98	0.46
1:A:651:LYS:HE2	4:A:2244:HOH:O	2.15	0.46
1:A:153:GLY:HA3	1:A:211:GLU:HB2	1.97	0.46
1:A:1387:THR:HG22	1:A:1390:ASP:H	1.81	0.46
1:A:1073:LYS:HD2	1:A:1333:PHE:CE1	2.52	0.45
1:A:544:PHE:CZ	1:A:549:SER:HB2	2.51	0.45
1:A:1214:THR:HG22	1:A:1216:ASN:HD21	1.80	0.45
1:A:429:VAL:HG12	1:A:432:LEU:HB2	1.99	0.45
1:A:447:GLU:OE2	1:A:453:ASP:HB2	2.17	0.44
1:A:1217:VAL:HA	1:A:1262:GLN:O	2.17	0.44
1:A:515:PHE:HB3	1:A:544:PHE:CE2	2.53	0.44
1:A:1187:PHE:HB3	1:A:1281:ILE:HD13	1.98	0.43
1:A:432:LEU:HD21	1:A:551:LEU:HD12	2.00	0.43
1:A:1214:THR:HG22	1:A:1216:ASN:ND2	2.33	0.43
1:A:1513:THR:HG23	1:A:1515:GLN:H	1.84	0.43
1:A:693:THR:HG23	1:A:694:GLY:O	2.18	0.43
1:A:486:ILE:HG12	1:A:511:GLY:HA3	2.00	0.42
1:A:488:LEU:HD11	1:A:549:SER:OG	2.19	0.42
1:A:1004:GLY:H	2:A:1702:EDO:H22	1.85	0.42
1:A:470:LYS:HA	1:A:488:LEU:HB3	2.01	0.41
1:A:872:THR:HG21	1:A:1342:ILE:HD12	2.03	0.41
1:A:1095:PRO:HD2	1:A:1104:PHE:CE1	2.55	0.41
1:A:426:LEU:HD12	1:A:566:SER:HB3	2.03	0.41
1:A:859:THR:HA	1:A:922:GLY:HA2	2.03	0.41
1:A:1073:LYS:HD2	1:A:1333:PHE:HE1	1.86	0.41
1:A:1214:THR:CG2	1:A:1216:ASN:HD21	2.34	0.41
1:A:429:VAL:HG22	1:A:558:SER:O	2.20	0.41
1:A:1551:ARG:HH21	1:A:1573:VAL:HG11	1.85	0.41
1:A:192:ILE:CD1	1:A:199:ALA:HB3	2.51	0.41
1:A:150:ILE:HG12	1:A:313:MET:HB2	2.03	0.40
1:A:590:LEU:HD23	1:A:700:SER:HB2	2.03	0.40
1:A:1513:THR:HG22	1:A:1517:GLN:H	1.86	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	1322/1589 (83%)	1288 (97%)	34 (3%)	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	1146/1354 (85%)	1095 (96%)	51 (4%)	24 26

All (51) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	166	VAL
1	A	192	ILE
1	A	273	ASP
1	A	320	ILE
1	A	321	MET
1	A	356	SER
1	A	431	GLU
1	A	448	SER
1	A	450	ASP
1	A	453	ASP
1	A	454	ILE
1	A	503	LEU
1	A	512	VAL

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Mol	Chain	Res	Type
1	A	540	ILE
1	A	544	PHE
1	A	551	LEU
1	A	566	SER
1	A	585	THR
1	A	587	ASP
1	A	693	THR
1	A	697	ASN
1	A	810	ASN
1	A	866	SER
1	A	870	VAL
1	A	872	THR
1	A	892	LYS
1	A	944	LYS
1	A	958	LYS
1	A	964	ILE
1	A	1022	VAL
1	A	1059	LYS
1	A	1061	ASN
1	A	1096	LEU
1	A	1155	THR
1	A	1203	LYS
1	A	1208	ASN
1	A	1220	LYS
1	A	1221	ASP
1	A	1241	ILE
1	A	1294	ARG
1	A	1312	LEU
1	A	1313	ASP
1	A	1362	SER
1	A	1387	THR
1	A	1434	GLU
1	A	1451	THR
1	A	1513	THR
1	A	1533	LYS
1	A	1560	THR
1	A	1569	SER
1	A	1575	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (31) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	181	GLN
1	A	212	ASN
1	A	279	HIS
1	A	418	ASN
1	A	424	GLN
1	A	465	GLN
1	A	507	HIS
1	A	554	ASN
1	A	574	ASN
1	A	577	ASN
1	A	652	ASN
1	A	755	GLN
1	A	913	ASN
1	A	945	ASN
1	A	1008	GLN
1	A	1165	GLN
1	A	1184	ASN
1	A	1208	ASN
1	A	1216	ASN
1	A	1284	ASN
1	A	1303	HIS
1	A	1354	ASN
1	A	1382	ASN
1	A	1432	ASN
1	A	1460	ASN
1	A	1482	GLN
1	A	1498	HIS
1	A	1515	GLN
1	A	1523	GLN
1	A	1555	ASN
1	A	1563	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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 7 ligands modelled in this entry, 3 are monoatomic - leaving 4 for Mogul analysis.

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	EDO	A	1703	-	3,3,3	0.54	0	2,2,2	0.30	0
2	EDO	A	1702	-	3,3,3	0.58	0	2,2,2	0.28	0
2	EDO	A	1704	-	3,3,3	0.14	0	2,2,2	0.24	0
2	EDO	A	1701	-	3,3,3	0.52	0	2,2,2	0.33	0

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	EDO	A	1703	-	-	0/1/1/1	-
2	EDO	A	1702	-	-	1/1/1/1	-
2	EDO	A	1704	-	-	1/1/1/1	-
2	EDO	A	1701	-	-	0/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1704	EDO	O1-C1-C2-O2
2	A	1702	EDO	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	A	1702	EDO	1	0

5.7 Other polymers

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

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, 95^{th} 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	1346/1589 (84%)	0.34	98 (7%)	21	19	24, 48, 91, 121	0

All (98) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	508	GLY	5.2
1	A	469	VAL	5.2
1	A	459	GLY	5.1
1	A	510	LEU	5.0
1	A	544	PHE	5.0
1	A	547	ALA	4.8
1	A	548	MET	4.6
1	A	501	ILE	4.5
1	A	473	THR	4.5
1	A	1210	TYR	4.4
1	A	454	ILE	4.4
1	A	1338	GLY	4.3
1	A	1213	LEU	4.2
1	A	1309	THR	4.2
1	A	555	GLY	4.1
1	A	449	VAL	3.9
1	A	1301	VAL	3.9
1	A	1125	PRO	3.8
1	A	458	LEU	3.7
1	A	551	LEU	3.7
1	A	1074	TYR	3.6
1	A	1332	LYS	3.5
1	A	468	TYR	3.5
1	A	542	HIS	3.5
1	A	1072	TYR	3.4
1	A	558	SER	3.4
1	A	476	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	539	PHE	3.3
1	A	320	ILE	3.3
1	A	556	THR	3.3
1	A	1407	LEU	3.2
1	A	1240	ALA	3.2
1	A	475	ALA	3.2
1	A	467	ALA	3.2
1	A	502	ALA	3.1
1	A	456	ASP	3.1
1	A	557	GLY	3.1
1	A	486	ILE	3.0
1	A	1069	ASN	3.0
1	A	321	MET	2.9
1	A	457	SER	2.9
1	A	1366	GLY	2.9
1	A	450	ASP	2.9
1	A	1241	ILE	2.9
1	A	1202	PHE	2.8
1	A	489	ILE	2.8
1	A	540	ILE	2.8
1	A	273	ASP	2.8
1	A	455	LYS	2.8
1	A	1578	ALA	2.8
1	A	1312	LEU	2.7
1	A	474	ASP	2.7
1	A	553	GLY	2.6
1	A	545	GLY	2.6
1	A	1214	THR	2.6
1	A	1367	VAL	2.6
1	A	1229	ILE	2.6
1	A	432	LEU	2.6
1	A	1365	ASP	2.6
1	A	511	GLY	2.6
1	A	512	VAL	2.6
1	A	1220	LYS	2.6
1	A	1276	GLN	2.5
1	A	1265	VAL	2.5
1	A	1266	THR	2.4
1	A	1157	SER	2.4
1	A	471	GLU	2.4
1	A	527	ARG	2.4
1	A	1043	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	541	SER	2.4
1	A	561	PHE	2.4
1	A	513	LEU	2.4
1	A	1500	ASP	2.3
1	A	1041	LYS	2.3
1	A	1326	ALA	2.3
1	A	1396	LYS	2.3
1	A	213	GLN	2.3
1	A	436	ALA	2.3
1	A	1234	ALA	2.3
1	A	448	SER	2.3
1	A	552	ASN	2.2
1	A	1121	GLY	2.2
1	A	506	LYS	2.2
1	A	1225	LYS	2.2
1	A	118	SER	2.2
1	A	274	THR	2.2
1	A	1433	LEU	2.2
1	A	1328	LYS	2.1
1	A	470	LYS	2.1
1	A	1071	SER	2.1
1	A	543	GLU	2.1
1	A	1324	TYR	2.1
1	A	488	LEU	2.1
1	A	1281	ILE	2.1
1	A	1353	LYS	2.0
1	A	1227	THR	2.0
1	A	318	ASN	2.0
1	A	1073	LYS	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 oligosaccharides in this entry.

6.4 Ligands

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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	EDO	A	1703	4/4	0.83	0.12	69,73,76,76	0
2	EDO	A	1702	4/4	0.85	0.13	40,41,41,41	0
2	EDO	A	1704	4/4	0.85	0.25	15,17,18,18	0
2	EDO	A	1701	4/4	0.92	0.08	52,53,55,55	0
3	CA	A	1705	1/1	0.98	0.03	48,48,48,48	0
3	CA	A	1706	1/1	0.98	0.03	35,35,35,35	0
3	CA	A	1707	1/1	0.98	0.07	59,59,59,59	0

6.5 Other polymers

There are no such residues in this entry.