



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 15, 2024 – 09:33 AM EST

PDB ID : 6EAI
Title : CRYSTAL STRUCTURE OF HUMAN RESPIRATORY SYNCYTIAL VIRUS FUSION GLYCOPROTEIN INHIBITOR ESCAPE VARIANT S398L STABILIZED IN THE PREFUSION STATE
Authors : Battles, M.B.; McLellan, J.S.
Deposited on : 2018-08-03
Resolution : 2.80 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 1.21
EDS : 3.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4 : 9.0.004 (Gargrove)
Density-Fitness : 1.0.11
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.40

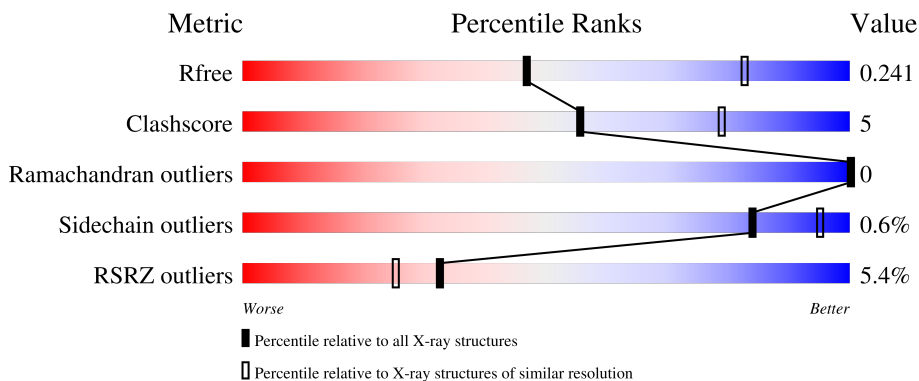
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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}	164625	3657 (2.80-2.80)
Clashscore	180529	4123 (2.80-2.80)
Ramachandran outliers	177936	4071 (2.80-2.80)
Sidechain outliers	177891	4073 (2.80-2.80)
RSRZ outliers	164620	3659 (2.80-2.80)

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	568	<div style="display: flex; align-items: center;"> <div style="width: 4%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 65%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 10%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 24%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">4% 65% 10% 24%</p>
1	B	568	<div style="display: flex; align-items: center;"> <div style="width: 4%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 66%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 9%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 24%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">4% 66% 9% 24%</p>
1	C	568	<div style="display: flex; align-items: center;"> <div style="width: 4%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 66%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 11%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 23%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center;">4% 66% 11% 23%</p>

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 10249 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 Fusion glycoprotein F0.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	429	3331	2115	545	650	21	0	0	0
1	B	429	3331	2115	545	650	21	0	0	0
1	C	435	3374	2140	553	660	21	0	0	0

There are 183 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	66	GLU	LYS	conflict	UNP W8RJF9
A	155	CYS	SER	engineered mutation	UNP W8RJF9
A	190	PHE	SER	engineered mutation	UNP W8RJF9
A	207	LEU	VAL	engineered mutation	UNP W8RJF9
A	290	CYS	SER	engineered mutation	UNP W8RJF9
A	398	LEU	SER	engineered mutation	UNP W8RJF9
A	514	SER	-	expression tag	UNP W8RJF9
A	515	ALA	-	expression tag	UNP W8RJF9
A	516	ILE	-	expression tag	UNP W8RJF9
A	517	GLY	-	expression tag	UNP W8RJF9
A	518	GLY	-	expression tag	UNP W8RJF9
A	519	TYR	-	expression tag	UNP W8RJF9
A	520	ILE	-	expression tag	UNP W8RJF9
A	521	PRO	-	expression tag	UNP W8RJF9
A	522	GLU	-	expression tag	UNP W8RJF9
A	523	ALA	-	expression tag	UNP W8RJF9
A	524	PRO	-	expression tag	UNP W8RJF9
A	525	ARG	-	expression tag	UNP W8RJF9
A	526	ASP	-	expression tag	UNP W8RJF9
A	527	GLY	-	expression tag	UNP W8RJF9
A	528	GLN	-	expression tag	UNP W8RJF9
A	529	ALA	-	expression tag	UNP W8RJF9
A	530	TYR	-	expression tag	UNP W8RJF9

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Chain	Residue	Modelled	Actual	Comment	Reference
A	531	VAL	-	expression tag	UNP W8RJF9
A	532	ARG	-	expression tag	UNP W8RJF9
A	533	LYS	-	expression tag	UNP W8RJF9
A	534	ASP	-	expression tag	UNP W8RJF9
A	535	GLY	-	expression tag	UNP W8RJF9
A	536	GLU	-	expression tag	UNP W8RJF9
A	537	TRP	-	expression tag	UNP W8RJF9
A	538	VAL	-	expression tag	UNP W8RJF9
A	539	LEU	-	expression tag	UNP W8RJF9
A	540	LEU	-	expression tag	UNP W8RJF9
A	541	SER	-	expression tag	UNP W8RJF9
A	542	THR	-	expression tag	UNP W8RJF9
A	543	PHE	-	expression tag	UNP W8RJF9
A	544	LEU	-	expression tag	UNP W8RJF9
A	545	GLY	-	expression tag	UNP W8RJF9
A	546	GLY	-	expression tag	UNP W8RJF9
A	547	LEU	-	expression tag	UNP W8RJF9
A	548	VAL	-	expression tag	UNP W8RJF9
A	549	PRO	-	expression tag	UNP W8RJF9
A	550	ARG	-	expression tag	UNP W8RJF9
A	551	GLY	-	expression tag	UNP W8RJF9
A	552	SER	-	expression tag	UNP W8RJF9
A	553	HIS	-	expression tag	UNP W8RJF9
A	554	HIS	-	expression tag	UNP W8RJF9
A	555	HIS	-	expression tag	UNP W8RJF9
A	556	HIS	-	expression tag	UNP W8RJF9
A	557	HIS	-	expression tag	UNP W8RJF9
A	558	HIS	-	expression tag	UNP W8RJF9
A	559	SER	-	expression tag	UNP W8RJF9
A	560	ALA	-	expression tag	UNP W8RJF9
A	561	TRP	-	expression tag	UNP W8RJF9
A	562	SER	-	expression tag	UNP W8RJF9
A	563	HIS	-	expression tag	UNP W8RJF9
A	564	PRO	-	expression tag	UNP W8RJF9
A	565	GLN	-	expression tag	UNP W8RJF9
A	566	PHE	-	expression tag	UNP W8RJF9
A	567	GLU	-	expression tag	UNP W8RJF9
A	568	LYS	-	expression tag	UNP W8RJF9
B	66	GLU	LYS	conflict	UNP W8RJF9
B	155	CYS	SER	engineered mutation	UNP W8RJF9
B	190	PHE	SER	engineered mutation	UNP W8RJF9
B	207	LEU	VAL	engineered mutation	UNP W8RJF9

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Chain	Residue	Modelled	Actual	Comment	Reference
B	290	CYS	SER	engineered mutation	UNP W8RJF9
B	398	LEU	SER	engineered mutation	UNP W8RJF9
B	514	SER	-	expression tag	UNP W8RJF9
B	515	ALA	-	expression tag	UNP W8RJF9
B	516	ILE	-	expression tag	UNP W8RJF9
B	517	GLY	-	expression tag	UNP W8RJF9
B	518	GLY	-	expression tag	UNP W8RJF9
B	519	TYR	-	expression tag	UNP W8RJF9
B	520	ILE	-	expression tag	UNP W8RJF9
B	521	PRO	-	expression tag	UNP W8RJF9
B	522	GLU	-	expression tag	UNP W8RJF9
B	523	ALA	-	expression tag	UNP W8RJF9
B	524	PRO	-	expression tag	UNP W8RJF9
B	525	ARG	-	expression tag	UNP W8RJF9
B	526	ASP	-	expression tag	UNP W8RJF9
B	527	GLY	-	expression tag	UNP W8RJF9
B	528	GLN	-	expression tag	UNP W8RJF9
B	529	ALA	-	expression tag	UNP W8RJF9
B	530	TYR	-	expression tag	UNP W8RJF9
B	531	VAL	-	expression tag	UNP W8RJF9
B	532	ARG	-	expression tag	UNP W8RJF9
B	533	LYS	-	expression tag	UNP W8RJF9
B	534	ASP	-	expression tag	UNP W8RJF9
B	535	GLY	-	expression tag	UNP W8RJF9
B	536	GLU	-	expression tag	UNP W8RJF9
B	537	TRP	-	expression tag	UNP W8RJF9
B	538	VAL	-	expression tag	UNP W8RJF9
B	539	LEU	-	expression tag	UNP W8RJF9
B	540	LEU	-	expression tag	UNP W8RJF9
B	541	SER	-	expression tag	UNP W8RJF9
B	542	THR	-	expression tag	UNP W8RJF9
B	543	PHE	-	expression tag	UNP W8RJF9
B	544	LEU	-	expression tag	UNP W8RJF9
B	545	GLY	-	expression tag	UNP W8RJF9
B	546	GLY	-	expression tag	UNP W8RJF9
B	547	LEU	-	expression tag	UNP W8RJF9
B	548	VAL	-	expression tag	UNP W8RJF9
B	549	PRO	-	expression tag	UNP W8RJF9
B	550	ARG	-	expression tag	UNP W8RJF9
B	551	GLY	-	expression tag	UNP W8RJF9
B	552	SER	-	expression tag	UNP W8RJF9
B	553	HIS	-	expression tag	UNP W8RJF9

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Chain	Residue	Modelled	Actual	Comment	Reference
B	554	HIS	-	expression tag	UNP W8RJF9
B	555	HIS	-	expression tag	UNP W8RJF9
B	556	HIS	-	expression tag	UNP W8RJF9
B	557	HIS	-	expression tag	UNP W8RJF9
B	558	HIS	-	expression tag	UNP W8RJF9
B	559	SER	-	expression tag	UNP W8RJF9
B	560	ALA	-	expression tag	UNP W8RJF9
B	561	TRP	-	expression tag	UNP W8RJF9
B	562	SER	-	expression tag	UNP W8RJF9
B	563	HIS	-	expression tag	UNP W8RJF9
B	564	PRO	-	expression tag	UNP W8RJF9
B	565	GLN	-	expression tag	UNP W8RJF9
B	566	PHE	-	expression tag	UNP W8RJF9
B	567	GLU	-	expression tag	UNP W8RJF9
B	568	LYS	-	expression tag	UNP W8RJF9
C	66	GLU	LYS	conflict	UNP W8RJF9
C	155	CYS	SER	engineered mutation	UNP W8RJF9
C	190	PHE	SER	engineered mutation	UNP W8RJF9
C	207	LEU	VAL	engineered mutation	UNP W8RJF9
C	290	CYS	SER	engineered mutation	UNP W8RJF9
C	398	LEU	SER	engineered mutation	UNP W8RJF9
C	514	SER	-	expression tag	UNP W8RJF9
C	515	ALA	-	expression tag	UNP W8RJF9
C	516	ILE	-	expression tag	UNP W8RJF9
C	517	GLY	-	expression tag	UNP W8RJF9
C	518	GLY	-	expression tag	UNP W8RJF9
C	519	TYR	-	expression tag	UNP W8RJF9
C	520	ILE	-	expression tag	UNP W8RJF9
C	521	PRO	-	expression tag	UNP W8RJF9
C	522	GLU	-	expression tag	UNP W8RJF9
C	523	ALA	-	expression tag	UNP W8RJF9
C	524	PRO	-	expression tag	UNP W8RJF9
C	525	ARG	-	expression tag	UNP W8RJF9
C	526	ASP	-	expression tag	UNP W8RJF9
C	527	GLY	-	expression tag	UNP W8RJF9
C	528	GLN	-	expression tag	UNP W8RJF9
C	529	ALA	-	expression tag	UNP W8RJF9
C	530	TYR	-	expression tag	UNP W8RJF9
C	531	VAL	-	expression tag	UNP W8RJF9
C	532	ARG	-	expression tag	UNP W8RJF9
C	533	LYS	-	expression tag	UNP W8RJF9
C	534	ASP	-	expression tag	UNP W8RJF9

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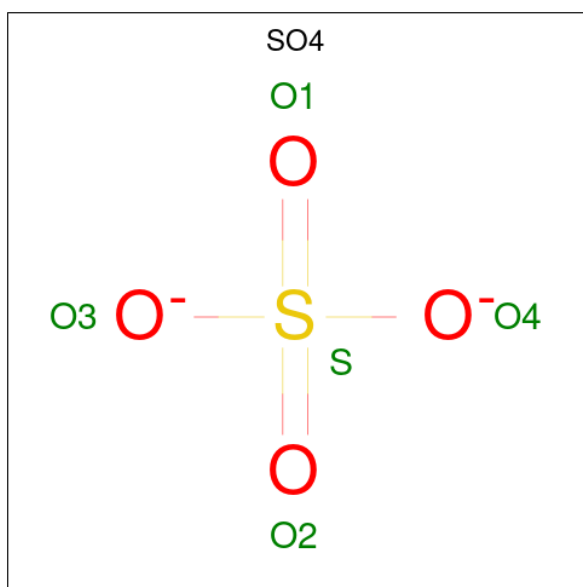
Chain	Residue	Modelled	Actual	Comment	Reference
C	535	GLY	-	expression tag	UNP W8RJF9
C	536	GLU	-	expression tag	UNP W8RJF9
C	537	TRP	-	expression tag	UNP W8RJF9
C	538	VAL	-	expression tag	UNP W8RJF9
C	539	LEU	-	expression tag	UNP W8RJF9
C	540	LEU	-	expression tag	UNP W8RJF9
C	541	SER	-	expression tag	UNP W8RJF9
C	542	THR	-	expression tag	UNP W8RJF9
C	543	PHE	-	expression tag	UNP W8RJF9
C	544	LEU	-	expression tag	UNP W8RJF9
C	545	GLY	-	expression tag	UNP W8RJF9
C	546	GLY	-	expression tag	UNP W8RJF9
C	547	LEU	-	expression tag	UNP W8RJF9
C	548	VAL	-	expression tag	UNP W8RJF9
C	549	PRO	-	expression tag	UNP W8RJF9
C	550	ARG	-	expression tag	UNP W8RJF9
C	551	GLY	-	expression tag	UNP W8RJF9
C	552	SER	-	expression tag	UNP W8RJF9
C	553	HIS	-	expression tag	UNP W8RJF9
C	554	HIS	-	expression tag	UNP W8RJF9
C	555	HIS	-	expression tag	UNP W8RJF9
C	556	HIS	-	expression tag	UNP W8RJF9
C	557	HIS	-	expression tag	UNP W8RJF9
C	558	HIS	-	expression tag	UNP W8RJF9
C	559	SER	-	expression tag	UNP W8RJF9
C	560	ALA	-	expression tag	UNP W8RJF9
C	561	TRP	-	expression tag	UNP W8RJF9
C	562	SER	-	expression tag	UNP W8RJF9
C	563	HIS	-	expression tag	UNP W8RJF9
C	564	PRO	-	expression tag	UNP W8RJF9
C	565	GLN	-	expression tag	UNP W8RJF9
C	566	PHE	-	expression tag	UNP W8RJF9
C	567	GLU	-	expression tag	UNP W8RJF9
C	568	LYS	-	expression tag	UNP W8RJF9

- Molecule 2 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: C₈H₁₅NO₆).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	A	1	Total 14	C 8	N 1	O 5	0	0
2	B	1	Total 14	C 8	N 1	O 5	0	0
2	C	1	Total 14	C 8	N 1	O 5	0	0

- Molecule 3 is SULFATE ION (three-letter code: SO₄) (formula: O₄S).



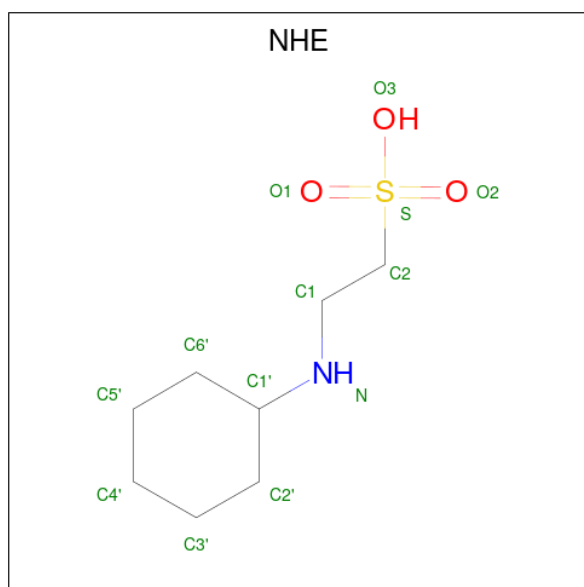
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	O	S		
3	A	1	Total 5	O 4	S 1	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	O	S	0	0	
			5	4	1			
3	A	1	Total	O	S	0	0	
			5	4	1			
3	B	1	Total	O	S	0	0	
			5	4	1			
3	B	1	Total	O	S	0	0	
			5	4	1			
3	B	1	Total	O	S	0	0	
			5	4	1			
3	B	1	Total	O	S	0	0	
			5	4	1			
3	C	1	Total	O	S	0	0	
			5	4	1			
3	C	1	Total	O	S	0	0	
			5	4	1			
3	C	1	Total	O	S	0	0	
			5	4	1			

- Molecule 4 is 2-[N-CYCLOHEXYLAMINO]ETHANE SULFONIC ACID (three-letter code: NHE) (formula: C₈H₁₇NO₃S).



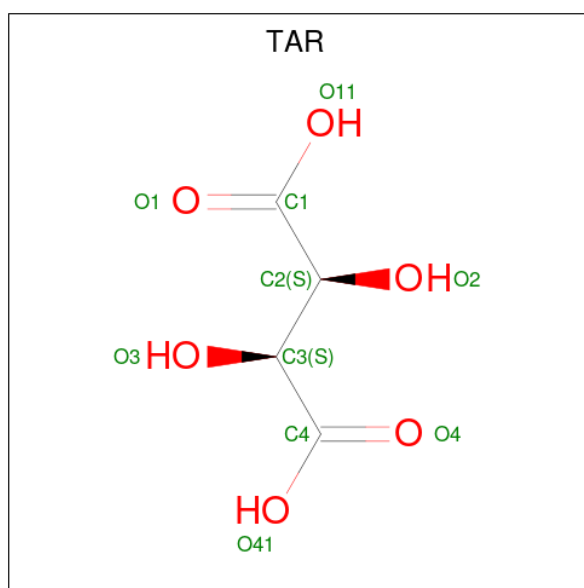
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	S	0	0
			13	8	1	3	1		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	S	0	0
			13	8	1	3	1		
4	B	1	Total	C	N	O	S	0	0
			13	8	1	3	1		
4	B	1	Total	C	N	O	S	0	0
			13	8	1	3	1		
4	C	1	Total	C	N	O	S	0	0
			13	8	1	3	1		
4	C	1	Total	C	N	O	S	0	0
			13	8	1	3	1		

- Molecule 5 is D(-)-TARTARIC ACID (three-letter code: TAR) (formula: C₄H₆O₆).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	B	1	Total	C O	0	0
			10	4 6		
5	C	1	Total	C O	0	0
			10	4 6		

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	5	Total	O	0	0
			5	5		
6	B	9	Total	O	0	0
			9	9		

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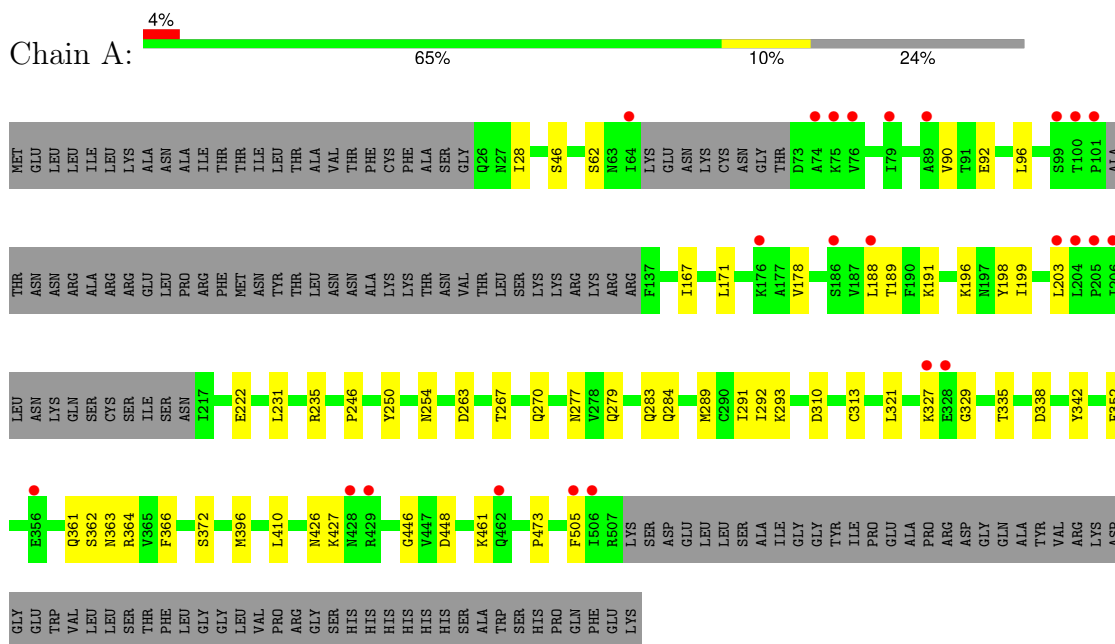
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	C	4	Total	O	0	0
			4	4		

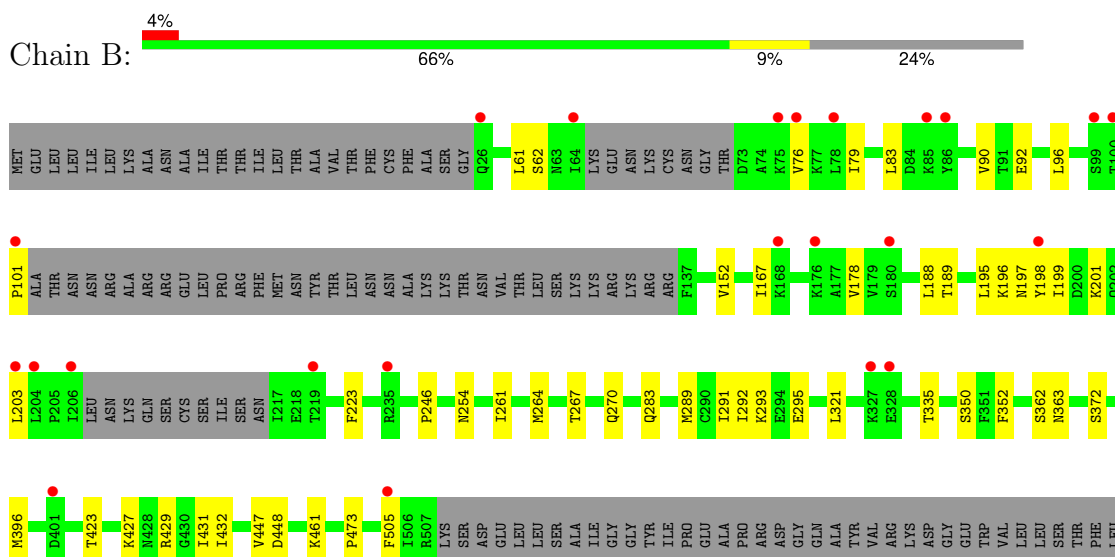
3 Residue-property plots

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: Fusion glycoprotein F0



- Molecule 1: Fusion glycoprotein F0



GLY
GLY
LEU
VAL
PRO
ARG
GLY
SER
HIS
HIS
HIS
HIS
HIS
SER
ALA
ALA
TRP
SER
HIS
PRO
GLN
PHE
GLU
GLU
LYS

● Molecule 1: Fusion glycoprotein F0



MET
GLU
LEU
LEU
LEU
ILE
LEU
LEU
LYS
ALA
ALA
ASN
ALA
THR
THR
THR
ILE
LEU
LEU
ALA
VAL
THR
PHE
CYS
PHE
ALA
ALA
SER
GLY
Q26
S46
R49
I64
LYS
GLU
ASN
LYS
CYS
ASN
GLY
THR
D73
A74
K75
V76
K77
L78
I79
E92
L96
S99
T100
P101
ALA
THR
ASN
ASN
ARG

ALA
ARG
ARG
GLU
LEU
PRO
ARG
PHE
MET
ASN
TYR
THR
LEU
ASN
ASN
ALA
ALA
LYS
LYS
THR
ASN
VAL
THR
LEU
LEU
SER
LYS
LYS
ARG
LYS
ARG
ARG
F137
S146
A149
K156
I167
L171
A177
V178
M183
G184
L188
T189
F190
K191
L203
L204
P205
I206
LEU
ASN
LYS

GLN
SER
CYS
S213
I214
S215
N216
I217
T219
L231
E232
R235
S238
A241
P246
Y250
N254
I261
M264
T267
Q270
Q283
K293
E294
C313
L321
C322
K327
E328
G329
T335
Y342
V349
F352
S362
N363
D368

S372
M396
D401
V414
Y417
I432
F435
V447
M460
P473
F505
K508
S509
ASP
GLU
LEU
LEU
SER
SER
ALA
ILE
GLY
GLY
TYR
ILE
PRO
GLU
ALA
PRO
ARG
ASP
GLY
GLN
ALA
TYR
VAL
ARG
LYS
ASP
GLY
TRP
VAL
LEU
LEU
SER
THR
PHE
LEU

GLY
GLY
LEU
VAL
PRO
ARG
GLY
SER
HIS
HIS
HIS
HIS
HIS
SER
ALA
ALA
TRP
SER
HIS
PRO
GLN
PHE
GLU
GLU
LYS

4 Data and refinement statistics i

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α , β , γ	167.32Å 167.32Å 174.43Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	43.61 – 2.80 43.61 – 2.80	Depositor EDS
% Data completeness (in resolution range)	99.1 (43.61-2.80) 99.0 (43.61-2.80)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.85 (at 2.81Å)	Xtriage
Refinement program	PHENIX 1.13_2998	Depositor
R, R_{free}	0.210 , 0.239 0.212 , 0.241	Depositor DCC
R_{free} test set	3102 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å ²)	72.6	Xtriage
Anisotropy	0.061	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 49.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.017 for -h,l,k 0.011 for -l,-k,-h	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	10249	wwPDB-VP
Average B, all atoms (Å ²)	80.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.11% 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: NAG, SO4, NHE, TAR

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	0.27	0/3380	0.46	0/4581
1	B	0.26	0/3380	0.46	0/4581
1	C	0.26	0/3423	0.46	0/4638
All	All	0.26	0/10183	0.46	0/13800

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3331	0	3374	40	0
1	B	3331	0	3374	28	1
1	C	3374	0	3419	35	0
2	A	14	0	13	0	0
2	B	14	0	13	0	0
2	C	14	0	13	0	0
3	A	15	0	0	1	0
3	B	20	0	0	0	0
3	C	20	0	0	0	0
4	A	26	0	34	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	26	0	34	0	0
4	C	26	0	34	1	0
5	B	10	0	4	0	1
5	C	10	0	4	1	0
6	A	5	0	0	0	0
6	B	9	0	0	1	0
6	C	4	0	0	0	0
All	All	10249	0	10316	94	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 5.

All (94) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:246:PRO:HB3	1:B:283:GLN:HA	1.64	0.79
1:C:246:PRO:HB3	1:C:283:GLN:HA	1.66	0.76
1:A:246:PRO:HB3	1:A:283:GLN:HA	1.69	0.73
1:A:92:GLU:OE1	1:B:254:ASN:ND2	2.24	0.67
1:B:432:ILE:HD11	1:B:447:VAL:HG22	1.80	0.64
1:C:146:SER:HB2	1:C:149:ALA:HB2	1.80	0.63
1:C:432:ILE:HD11	1:C:447:VAL:HG22	1.79	0.63
1:A:361:GLN:HE22	1:C:99:SER:HA	1.64	0.62
1:B:261:ILE:HA	1:B:264:MET:HE3	1.82	0.62
1:B:321:LEU:HD11	1:B:473:PRO:HB3	1.82	0.62
1:A:283:GLN:OE1	1:C:241:ALA:HB2	2.01	0.60
1:A:327:LYS:HE3	1:A:329:GLY:H	1.67	0.60
1:A:427:LYS:HB3	1:A:448:ASP:OD2	2.02	0.60
1:A:426:ASN:OD1	1:A:427:LYS:HG2	2.04	0.58
1:A:250:TYR:OH	1:C:235:ARG:NE	2.38	0.57
1:A:426:ASN:ND2	1:A:446:GLY:O	2.37	0.57
1:A:62:SER:HB2	1:A:196:LYS:HA	1.87	0.56
1:B:350:SER:OG	6:B:703:HOH:O	2.18	0.56
1:B:267:THR:HG23	1:B:270:GLN:H	1.70	0.56
1:C:321:LEU:HD11	1:C:473:PRO:HB3	1.88	0.56
1:A:167:ILE:HG23	1:A:189:THR:HG21	1.89	0.55
1:C:327:LYS:HE3	1:C:329:GLY:H	1.72	0.55
5:C:608:TAR:O1	5:C:608:TAR:O3	2.24	0.54
1:A:178:VAL:HG22	1:A:188:LEU:HD13	1.89	0.54
1:A:267:THR:HG23	1:A:270:GLN:H	1.73	0.54
1:A:291:ILE:HD11	1:A:293:LYS:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:167:ILE:HG23	1:B:189:THR:HG21	1.90	0.54
1:B:291:ILE:HD11	1:B:293:LYS:HD2	1.90	0.53
1:A:198:TYR:OH	1:A:222:GLU:HG3	2.10	0.52
1:A:277:ASN:ND2	3:A:604:SO4:O2	2.41	0.51
1:C:401:ASP:OD1	1:C:401:ASP:N	2.40	0.51
1:A:279:GLN:NE2	1:C:238:SER:O	2.38	0.50
1:A:361:GLN:NE2	1:C:99:SER:HA	2.25	0.50
1:C:167:ILE:HG23	1:C:189:THR:HG21	1.93	0.50
1:C:293:LYS:HG2	1:C:294:GLU:HG3	1.92	0.50
1:C:216:ASN:HB3	1:C:218:GLU:OE2	2.12	0.50
1:A:321:LEU:HD11	1:A:473:PRO:HB3	1.92	0.50
1:A:279:GLN:HG2	1:C:96:LEU:HD13	1.93	0.50
1:C:261:ILE:HA	1:C:264:MET:HE3	1.94	0.50
1:B:335:THR:HB	1:B:396:MET:HG2	1.93	0.50
1:B:178:VAL:HG22	1:B:188:LEU:HD13	1.94	0.49
1:B:427:LYS:HB2	1:B:448:ASP:OD2	2.11	0.49
1:B:92:GLU:OE1	1:C:254:ASN:ND2	2.30	0.49
1:C:335:THR:HB	1:C:396:MET:HG2	1.94	0.49
1:A:284:GLN:HE22	1:A:366:PHE:HB3	1.77	0.49
1:C:73:ASP:OD1	1:C:74:ALA:N	2.44	0.49
1:B:62:SER:HB2	1:B:196:LYS:HA	1.94	0.49
1:C:171:LEU:HD13	1:C:191:LYS:HB2	1.95	0.48
1:C:362:SER:OG	1:C:363:ASN:N	2.46	0.48
1:A:338:ASP:HB2	1:A:342:TYR:OH	2.14	0.48
1:B:61:LEU:O	1:B:295:GLU:HB3	2.14	0.47
1:B:96:LEU:HD22	1:B:289:MET:HG2	1.96	0.47
1:A:254:ASN:OD1	1:C:92:GLU:HG2	2.15	0.47
1:A:231:LEU:HB3	1:A:235:ARG:HH12	1.80	0.47
1:B:90:VAL:HG13	1:B:292:ILE:HD11	1.96	0.47
1:A:90:VAL:HG13	1:A:292:ILE:HD11	1.97	0.46
1:C:352:PHE:CE1	1:C:372:SER:HB3	2.50	0.45
1:C:267:THR:HG23	1:C:270:GLN:H	1.81	0.45
1:A:310:ASP:OD1	1:A:364:ARG:NH1	2.40	0.45
1:A:352:PHE:CE1	1:A:372:SER:HB3	2.52	0.45
1:A:461:LYS:HA	1:A:461:LYS:HD2	1.74	0.45
1:C:46:SER:HB3	1:C:313:CYS:SG	2.56	0.45
1:B:461:LYS:HA	1:B:461:LYS:HD2	1.81	0.45
1:B:352:PHE:CE1	1:B:372:SER:HB3	2.51	0.45
1:C:178:VAL:HG22	1:C:188:LEU:HD13	1.99	0.44
1:B:198:TYR:HE2	1:B:223:PHE:HD1	1.63	0.44
1:C:322:CYS:HB2	1:C:417:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:171:LEU:HD13	1:A:191:LYS:HB2	1.99	0.44
1:C:232:GLU:HG3	1:C:250:TYR:CZ	2.53	0.44
1:B:101:PRO:HB2	1:B:152:VAL:HG22	1.99	0.44
1:C:49:ARG:NH2	1:C:368:ASP:OD1	2.51	0.44
4:A:605:NHE:HC12	4:A:605:NHE:H2'1	1.81	0.43
1:B:264:MET:HE3	1:B:264:MET:HB2	1.92	0.43
1:A:461:LYS:O	1:C:156:LYS:NZ	2.48	0.43
1:B:362:SER:OG	1:B:363:ASN:N	2.52	0.42
1:A:335:THR:HB	1:A:396:MET:HG2	2.00	0.42
1:A:505:PHE:HE1	1:B:505:PHE:HB3	1.84	0.42
1:C:231:LEU:O	1:C:235:ARG:HG3	2.18	0.42
1:B:197:ASN:OD1	1:B:201:LYS:HE2	2.20	0.42
1:A:222:GLU:HB3	1:C:78:LEU:HD21	2.01	0.42
1:C:79:ILE:HG13	1:C:214:ILE:HD13	2.01	0.42
1:A:96:LEU:HD22	1:A:289:MET:HG2	2.01	0.41
1:A:231:LEU:HB3	1:A:235:ARG:NH1	2.34	0.41
1:B:199:ILE:O	1:B:203:LEU:HB2	2.20	0.41
1:A:362:SER:OG	1:A:363:ASN:N	2.48	0.41
1:C:414:VAL:HG21	1:C:435:PHE:CE2	2.56	0.41
1:B:79:ILE:O	1:B:83:LEU:N	2.51	0.41
1:A:188:LEU:HD21	1:A:263:ASP:HB2	2.02	0.41
1:A:199:ILE:O	1:A:203:LEU:HB2	2.21	0.41
1:A:28:ILE:HG22	1:A:410:LEU:HD11	2.03	0.40
1:B:423:THR:HG21	1:B:431:ILE:HD13	2.03	0.40
4:C:607:NHE:H2'2	4:C:607:NHE:HC11	1.82	0.40
1:C:342:TYR:HD2	1:C:349:VAL:HG11	1.86	0.40
1:A:46:SER:HB3	1:A:313:CYS:SG	2.62	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:429:ARG:NH2	5:B:608:TAR:O2[3_455]	1.30	0.90

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	421/568 (74%)	406 (96%)	15 (4%)	0	100	100
1	B	421/568 (74%)	408 (97%)	13 (3%)	0	100	100
1	C	427/568 (75%)	413 (97%)	14 (3%)	0	100	100
All	All	1269/1704 (74%)	1227 (97%)	42 (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	391/510 (77%)	391 (100%)	0	100	100
1	B	391/510 (77%)	389 (100%)	2 (0%)	86	95
1	C	397/510 (78%)	392 (99%)	5 (1%)	65	88
All	All	1179/1530 (77%)	1172 (99%)	7 (1%)	84	95

All (7) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	76	VAL
1	B	195	LEU
1	C	96	LEU
1	C	183	ASN
1	C	190	PHE
1	C	460	ASN
1	C	508	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

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](#)

22 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
3	SO4	B	604	-	4,4,4	0.24	0	6,6,6	0.07	0
3	SO4	B	605	-	4,4,4	0.22	0	6,6,6	0.09	0
2	NAG	A	601	1	14,14,15	0.19	0	17,19,21	0.46	0
5	TAR	C	608	-	9,9,9	1.02	0	12,12,12	1.30	2 (16%)
3	SO4	C	602	-	4,4,4	0.24	0	6,6,6	0.07	0
3	SO4	A	603	-	4,4,4	0.24	0	6,6,6	0.09	0
3	SO4	A	602	-	4,4,4	0.24	0	6,6,6	0.09	0
4	NHE	B	607	-	13,13,13	1.33	2 (15%)	16,17,17	1.71	4 (25%)
3	SO4	C	604	-	4,4,4	0.24	0	6,6,6	0.08	0
3	SO4	C	605	-	4,4,4	0.23	0	6,6,6	0.07	0
3	SO4	B	603	-	4,4,4	0.23	0	6,6,6	0.07	0
3	SO4	C	603	-	4,4,4	0.24	0	6,6,6	0.10	0
4	NHE	C	607	-	13,13,13	1.44	3 (23%)	16,17,17	1.69	5 (31%)
4	NHE	A	606	-	13,13,13	1.41	3 (23%)	16,17,17	1.62	4 (25%)
4	NHE	B	606	-	13,13,13	1.35	2 (15%)	16,17,17	1.64	4 (25%)
2	NAG	C	601	1	14,14,15	0.18	0	17,19,21	0.47	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	NAG	B	601	1	14,14,15	0.18	0	17,19,21	0.43	0
3	SO4	B	602	-	4,4,4	0.24	0	6,6,6	0.07	0
4	NHE	C	606	-	13,13,13	1.43	3 (23%)	16,17,17	1.69	5 (31%)
4	NHE	A	605	-	13,13,13	1.45	3 (23%)	16,17,17	1.70	4 (25%)
5	TAR	B	608	-	9,9,9	1.03	0	12,12,12	1.28	2 (16%)
3	SO4	A	604	-	4,4,4	0.22	0	6,6,6	0.08	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
5	TAR	C	608	-	-	10/12/12/12	-
4	NHE	C	606	-	-	5/7/15/15	0/1/1/1
4	NHE	C	607	-	-	0/7/15/15	0/1/1/1
4	NHE	B	607	-	-	0/7/15/15	0/1/1/1
5	TAR	B	608	-	-	8/12/12/12	-
4	NHE	A	606	-	-	0/7/15/15	0/1/1/1
4	NHE	B	606	-	-	1/7/15/15	0/1/1/1
2	NAG	C	601	1	-	2/6/23/26	0/1/1/1
4	NHE	A	605	-	-	1/7/15/15	0/1/1/1
2	NAG	B	601	1	-	2/6/23/26	0/1/1/1
2	NAG	A	601	1	-	1/6/23/26	0/1/1/1

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	605	NHE	C2-S	2.94	1.81	1.77
4	B	606	NHE	C2-S	2.82	1.81	1.77
4	C	607	NHE	C2-S	2.81	1.81	1.77
4	B	607	NHE	C2-S	2.70	1.81	1.77
4	C	606	NHE	C2-S	2.67	1.81	1.77
4	A	606	NHE	C2-S	2.62	1.81	1.77
4	C	607	NHE	O1-S	2.56	1.52	1.45
4	A	605	NHE	O1-S	2.54	1.52	1.45
4	A	606	NHE	O1-S	2.53	1.52	1.45
4	C	606	NHE	O1-S	2.51	1.52	1.45
4	B	606	NHE	O2-S	2.20	1.51	1.45
4	A	605	NHE	O2-S	2.20	1.51	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	606	NHE	O2-S	2.18	1.51	1.45
4	C	606	NHE	O2-S	2.16	1.51	1.45
4	B	607	NHE	O2-S	2.16	1.51	1.45
4	C	607	NHE	O2-S	2.16	1.51	1.45

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	605	NHE	O3-S-O2	-4.05	101.28	111.40
4	C	606	NHE	O3-S-O2	-3.99	101.41	111.40
4	C	607	NHE	O3-S-O2	-3.97	101.46	111.40
4	B	607	NHE	O2-S-O1	-3.95	100.99	113.82
4	B	606	NHE	O2-S-O1	-3.83	101.36	113.82
4	A	606	NHE	O3-S-O2	-3.78	101.93	111.40
4	B	607	NHE	O2-S-C2	3.41	111.89	106.73
4	A	605	NHE	O2-S-C2	3.27	111.67	106.73
4	B	607	NHE	O1-S-C2	3.18	111.53	106.73
4	B	606	NHE	O2-S-C2	3.11	111.43	106.73
4	B	606	NHE	O1-S-C2	3.01	111.27	106.73
4	C	607	NHE	O2-S-C2	2.93	111.15	106.73
4	C	606	NHE	O2-S-C2	2.74	110.88	106.73
4	A	606	NHE	O1-S-C2	2.74	110.87	106.73
4	C	607	NHE	O3-S-C2	2.72	111.32	106.00
4	A	606	NHE	O2-S-C2	2.70	110.81	106.73
4	A	605	NHE	O3-S-C2	2.55	110.99	106.00
4	C	606	NHE	O3-S-C2	2.53	110.96	106.00
4	A	606	NHE	O3-S-C2	2.51	110.91	106.00
4	C	607	NHE	O1-S-C2	2.51	110.52	106.73
5	C	608	TAR	O41-C4-C3	2.50	120.27	113.31
4	C	606	NHE	O1-S-C2	2.49	110.49	106.73
5	B	608	TAR	O11-C1-C2	2.47	120.19	113.31
4	C	607	NHE	C1-N-C1'	-2.44	109.49	114.18
5	C	608	TAR	O11-C1-C2	2.38	119.93	113.31
4	C	606	NHE	C1-N-C1'	-2.34	109.68	114.18
5	B	608	TAR	O41-C4-C3	2.32	119.75	113.31
4	A	605	NHE	O1-S-C2	2.30	110.21	106.73
4	B	606	NHE	O3-S-C2	2.14	110.20	106.00
4	B	607	NHE	O3-S-C2	2.02	109.95	106.00

There are no chirality outliers.

All (30) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	B	606	NHE	N-C1-C2-S
4	C	606	NHE	N-C1-C2-S
4	C	606	NHE	C1-C2-S-O3
5	C	608	TAR	C1-C2-C3-C4
5	C	608	TAR	O2-C2-C3-O3
5	C	608	TAR	O3-C3-C4-O4
5	C	608	TAR	O3-C3-C4-O41
5	B	608	TAR	O3-C3-C4-O4
5	B	608	TAR	O3-C3-C4-O41
5	B	608	TAR	C2-C3-C4-O4
5	B	608	TAR	C2-C3-C4-O41
5	C	608	TAR	C1-C2-C3-O3
5	C	608	TAR	O2-C2-C3-C4
2	C	601	NAG	C8-C7-N2-C2
2	C	601	NAG	O7-C7-N2-C2
2	B	601	NAG	C4-C5-C6-O6
5	B	608	TAR	O1-C1-C2-C3
2	B	601	NAG	O5-C5-C6-O6
5	B	608	TAR	O11-C1-C2-C3
2	A	601	NAG	O5-C5-C6-O6
4	C	606	NHE	C2-C1-N-C1'
5	C	608	TAR	O1-C1-C2-C3
4	C	606	NHE	C1-C2-S-O1
4	C	606	NHE	C1-C2-S-O2
5	C	608	TAR	O11-C1-C2-C3
5	B	608	TAR	O1-C1-C2-O2
5	C	608	TAR	C2-C3-C4-O41
5	B	608	TAR	O11-C1-C2-O2
5	C	608	TAR	C2-C3-C4-O4
4	A	605	NHE	N-C1-C2-S

There are no ring outliers.

5 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	C	608	TAR	1	0
4	C	607	NHE	1	0
4	A	605	NHE	1	0
5	B	608	TAR	0	1
3	A	604	SO4	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	429/568 (75%)	0.20	24 (5%) 31 24	44, 72, 132, 166	0
1	B	429/568 (75%)	0.13	23 (5%) 32 25	38, 69, 128, 172	0
1	C	435/568 (76%)	0.27	23 (5%) 33 26	41, 74, 146, 203	0
All	All	1293/1704 (75%)	0.20	70 (5%) 32 25	38, 72, 141, 203	0

All (70) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	100	THR	6.2
1	C	100	THR	6.1
1	A	100	THR	5.0
1	A	206	ILE	4.5
1	C	213	SER	4.5
1	A	505	PHE	4.4
1	C	206	ILE	4.3
1	B	505	PHE	4.2
1	A	101	PRO	4.0
1	B	64	ILE	4.0
1	C	101	PRO	3.7
1	C	76	VAL	3.7
1	B	76	VAL	3.4
1	B	75	LYS	3.4
1	C	505	PHE	3.4
1	A	64	ILE	3.1
1	C	183	ASN	3.1
1	C	219	THR	3.1
1	A	176	LYS	3.0
1	C	203	LEU	3.0
1	C	64	ILE	3.0
1	A	79	ILE	3.0
1	C	26	GLN	2.9

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Mol	Chain	Res	Type	RSRZ
1	C	184	GLY	2.9
1	B	328	GLU	2.9
1	A	205	PRO	2.8
1	B	401	ASP	2.8
1	A	429	ARG	2.8
1	A	204	LEU	2.8
1	C	214	ILE	2.8
1	A	203	LEU	2.8
1	B	204	LEU	2.7
1	B	206	ILE	2.7
1	C	79	ILE	2.7
1	B	327	LYS	2.7
1	B	101	PRO	2.7
1	A	75	LYS	2.7
1	A	506	ILE	2.6
1	B	26	GLN	2.5
1	A	76	VAL	2.5
1	C	327	LYS	2.5
1	B	219	THR	2.5
1	B	235	ARG	2.4
1	A	327	LYS	2.4
1	C	204	LEU	2.4
1	B	99	SER	2.4
1	A	328	GLU	2.3
1	C	328	GLU	2.3
1	A	74	ALA	2.3
1	A	462	GLN	2.3
1	B	78	LEU	2.3
1	A	356	GLU	2.2
1	C	215	SER	2.2
1	B	85	LYS	2.2
1	C	217	ILE	2.2
1	A	428	ASN	2.2
1	A	188	LEU	2.2
1	C	205	PRO	2.2
1	C	177	ALA	2.2
1	B	180	SER	2.1
1	C	238	SER	2.1
1	A	89	ALA	2.1
1	C	508	LYS	2.1
1	B	203	LEU	2.1
1	B	86	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	176	LYS	2.1
1	B	168	LYS	2.0
1	A	99	SER	2.0
1	A	186	SER	2.0
1	B	198	TYR	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	NAG	A	601	14/15	0.44	0.18	113,137,154,161	0
2	NAG	B	601	14/15	0.54	0.15	116,129,138,139	0
2	NAG	C	601	14/15	0.59	0.16	91,129,138,140	0
3	SO4	B	605	5/5	0.76	0.08	146,146,154,158	0
3	SO4	A	604	5/5	0.79	0.10	122,127,131,147	0
3	SO4	B	604	5/5	0.81	0.11	144,146,148,152	0
5	TAR	C	608	10/10	0.81	0.12	93,105,113,115	0
3	SO4	C	605	5/5	0.86	0.10	142,144,155,155	0
3	SO4	A	603	5/5	0.86	0.08	123,125,129,131	0
5	TAR	B	608	10/10	0.87	0.11	100,106,121,122	0
3	SO4	C	604	5/5	0.89	0.08	140,145,148,148	0
3	SO4	C	603	5/5	0.89	0.14	90,96,101,107	0
3	SO4	A	602	5/5	0.91	0.14	74,88,92,93	0
3	SO4	B	603	5/5	0.92	0.14	91,92,107,115	0
4	NHE	A	605	13/13	0.92	0.13	76,86,92,107	0
4	NHE	B	606	13/13	0.93	0.12	78,86,99,103	0
4	NHE	C	606	13/13	0.93	0.13	75,85,96,98	0
4	NHE	A	606	13/13	0.95	0.09	54,65,75,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
4	NHE	C	607	13/13	0.96	0.09	60,70,76,82	0
4	NHE	B	607	13/13	0.96	0.09	60,65,83,84	0
3	SO4	C	602	5/5	0.96	0.10	58,69,72,77	0
3	SO4	B	602	5/5	0.98	0.06	64,68,81,88	0

6.5 Other polymers [i](#)

There are no such residues in this entry.