



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 15, 2026 – 02:51 AM UTC

PDB ID : 6UJI / pdb_00006uji
Title : Low resolution crystal structure (5.5 Å) of the anthrax toxin protective antigen heptamer prepore D425A mutant
Authors : Lovell, S.; Mehzabeen, N.; Battaile, K.P.; Bann, J.G.
Deposited on : 2019-10-03
Resolution : 5.50 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
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

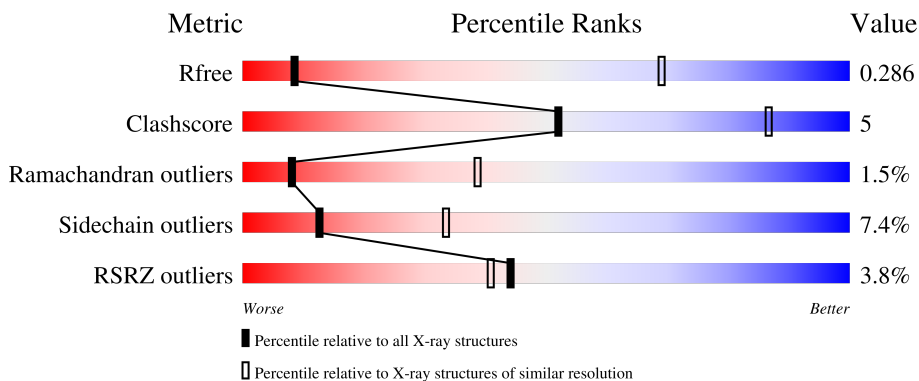
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 5.50 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	1088 (7.00-4.00)
Clashscore	190562	1147 (7.00-4.00)
Ramachandran outliers	187476	1012 (7.02-3.98)
Sidechain outliers	187428	1023 (7.04-3.96)
RSRZ outliers	180081	1081 (7.00-4.00)

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: 2%; 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: 16%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 17%; height: 10px; background-color: grey; margin-right: 5px;"></div> </div> <p style="margin-left: 20px;">2% 65% 16% • 17%</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: 70%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 20%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 9%; height: 10px; background-color: grey; margin-right: 5px;"></div> </div> <p style="margin-left: 20px;">4% 70% 20% • 9%</p>
1	C	568	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 56%; 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: 32%; height: 10px; background-color: grey; margin-right: 5px;"></div> </div> <p style="margin-left: 20px;">2% 56% 11% • 32%</p>
1	D	568	<div style="display: flex; align-items: center;"> <div style="width: 7%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 75%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 18%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey; margin-right: 5px;"></div> </div> <p style="margin-left: 20px;">7% 75% 18% • 5%</p>
1	E	568	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 69%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 20%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 9%; height: 10px; background-color: grey; margin-right: 5px;"></div> </div> <p style="margin-left: 20px;">2% 69% 20% • 9%</p>

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Mol	Chain	Length	Quality of chain
1	F	568	<p>2% 66% 14% 18%</p>
1	G	568	<p>3% 71% 19% 8%</p>
1	H	568	<p>5% 67% 17% 13%</p>
1	I	568	<p>3% 71% 20% 7%</p>
1	J	568	<p>2% 65% 17% 17%</p>
1	K	568	<p>4% 67% 17% 14%</p>
1	L	568	<p>2% 56% 14% 29%</p>
1	M	568	<p>2% 64% 18% 17%</p>
1	N	568	<p>4% 63% 19% 15%</p>

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 53490 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 Protective antigen PA-63.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	471	Total 3712	C 2316	N 650	O 740	S 6	0	0	0
1	B	519	Total 4114	C 2578	N 710	O 820	S 6	0	0	0
1	C	388	Total 3083	C 1929	N 539	O 609	S 6	0	0	0
1	D	539	Total 4265	C 2672	N 735	O 852	S 6	0	0	0
1	E	516	Total 4089	C 2564	N 704	O 815	S 6	0	0	0
1	F	467	Total 3688	C 2316	N 641	O 725	S 6	0	0	0
1	G	520	Total 4125	C 2583	N 710	O 826	S 6	0	0	0
1	H	493	Total 3894	C 2434	N 678	O 776	S 6	0	0	0
1	I	529	Total 4189	C 2622	N 724	O 837	S 6	0	0	0
1	J	470	Total 3718	C 2322	N 649	O 741	S 6	0	0	0
1	K	488	Total 3867	C 2419	N 673	O 769	S 6	0	0	0
1	L	404	Total 3189	C 1992	N 555	O 637	S 5	0	0	0
1	M	473	Total 3749	C 2345	N 656	O 742	S 6	0	0	0
1	N	480	Total 3808	C 2375	N 663	O 764	S 6	0	0	0

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	425	ALA	ASP	engineered mutation	UNP P13423

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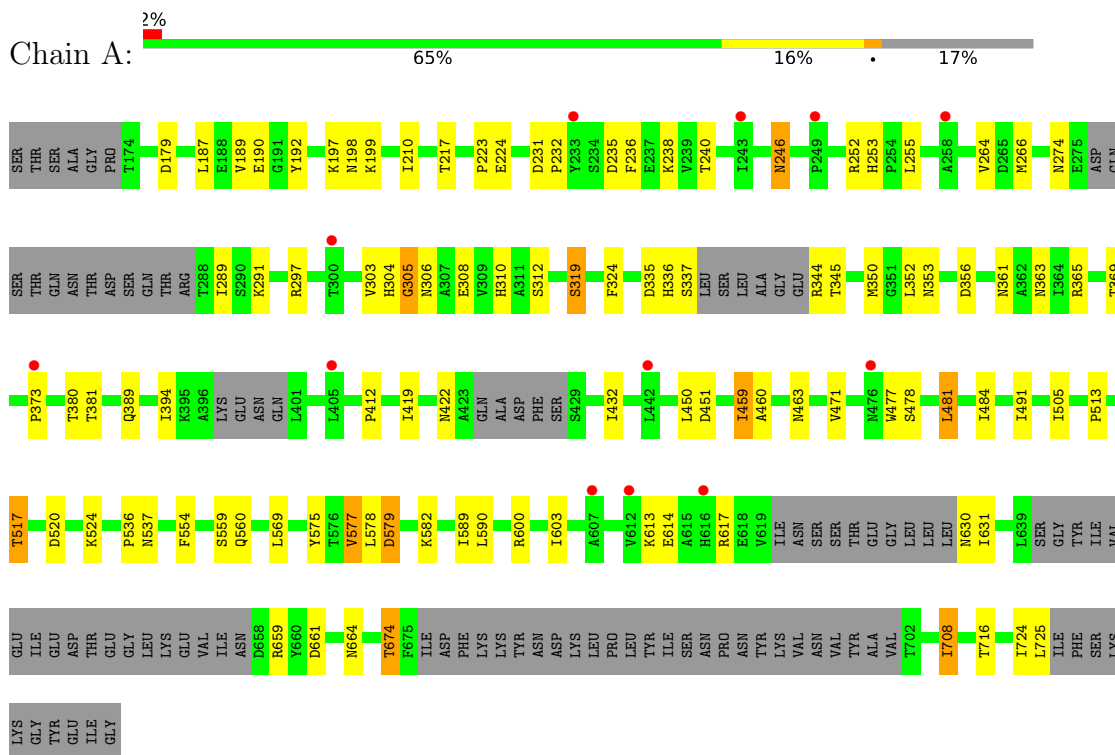
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Chain	Residue	Modelled	Actual	Comment	Reference
B	425	ALA	ASP	engineered mutation	UNP P13423
C	425	ALA	ASP	engineered mutation	UNP P13423
D	425	ALA	ASP	engineered mutation	UNP P13423
E	425	ALA	ASP	engineered mutation	UNP P13423
F	425	ALA	ASP	engineered mutation	UNP P13423
G	425	ALA	ASP	engineered mutation	UNP P13423
H	425	ALA	ASP	engineered mutation	UNP P13423
I	425	ALA	ASP	engineered mutation	UNP P13423
J	425	ALA	ASP	engineered mutation	UNP P13423
K	425	ALA	ASP	engineered mutation	UNP P13423
L	425	ALA	ASP	engineered mutation	UNP P13423
M	425	ALA	ASP	engineered mutation	UNP P13423
N	425	ALA	ASP	engineered mutation	UNP P13423

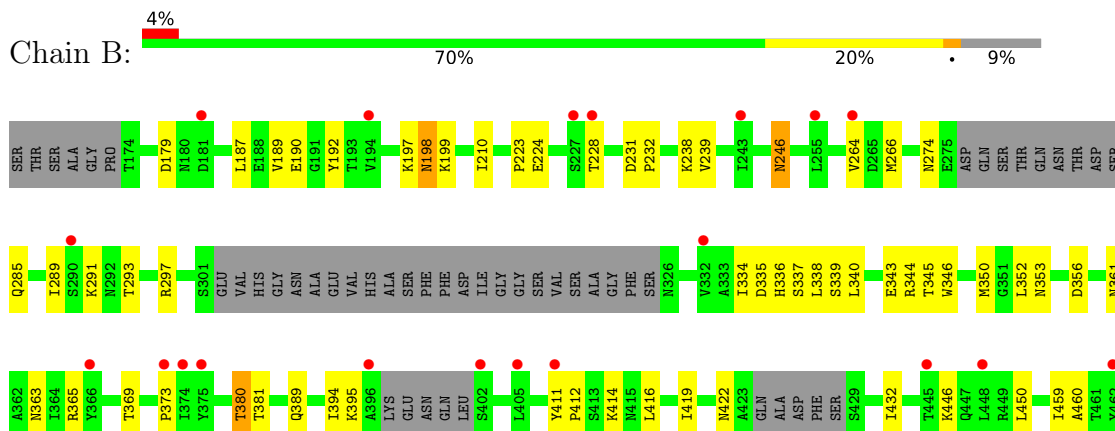
3 Residue-property plots i

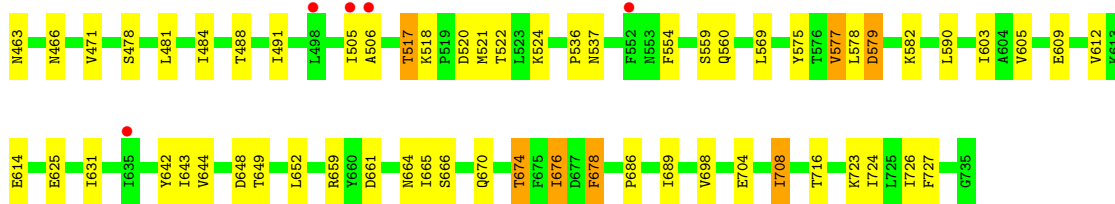
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Protective antigen PA-63

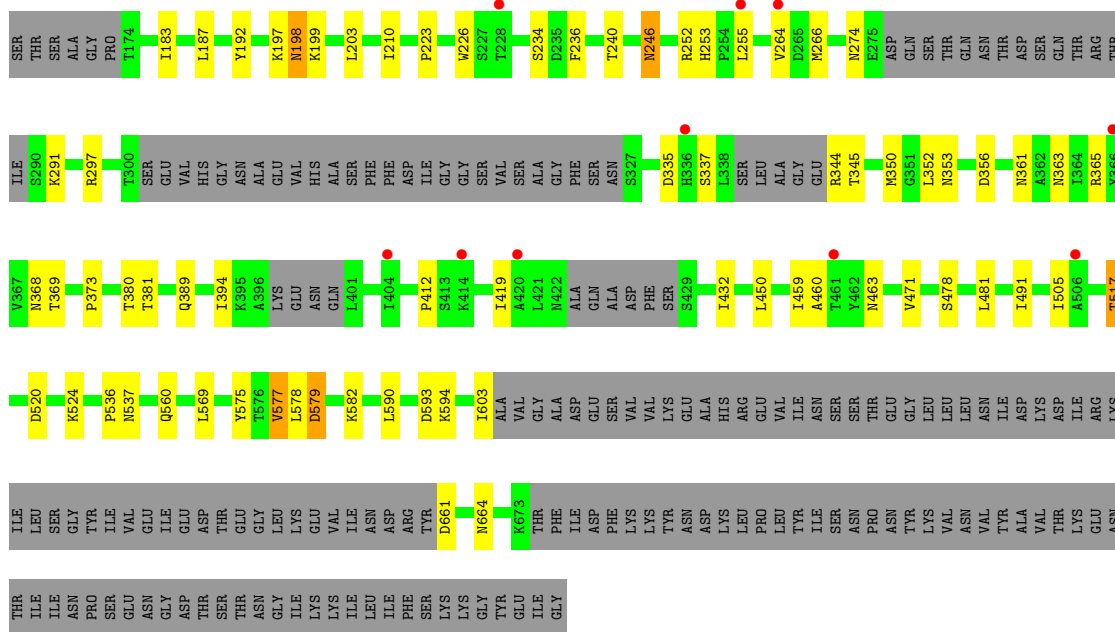


• Molecule 1: Protective antigen PA-63

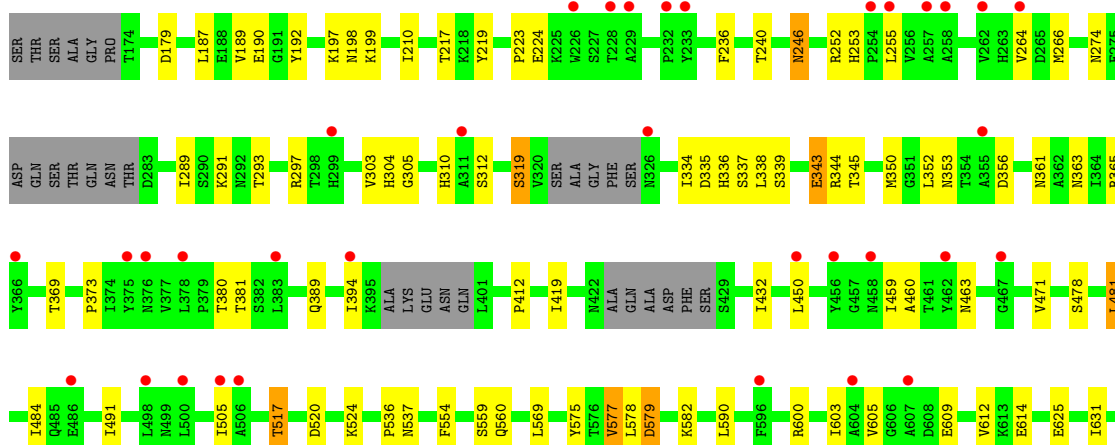
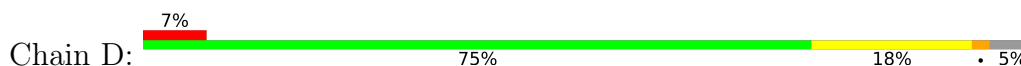


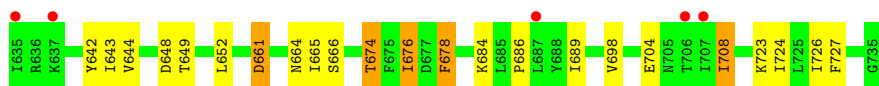


• Molecule 1: Protective antigen PA-63

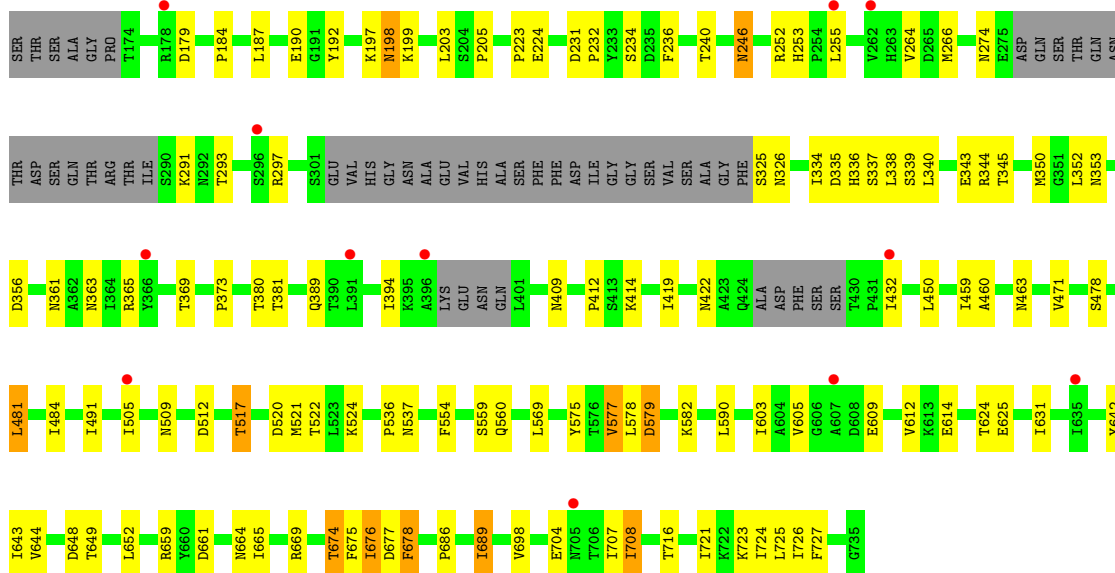


• Molecule 1: Protective antigen PA-63

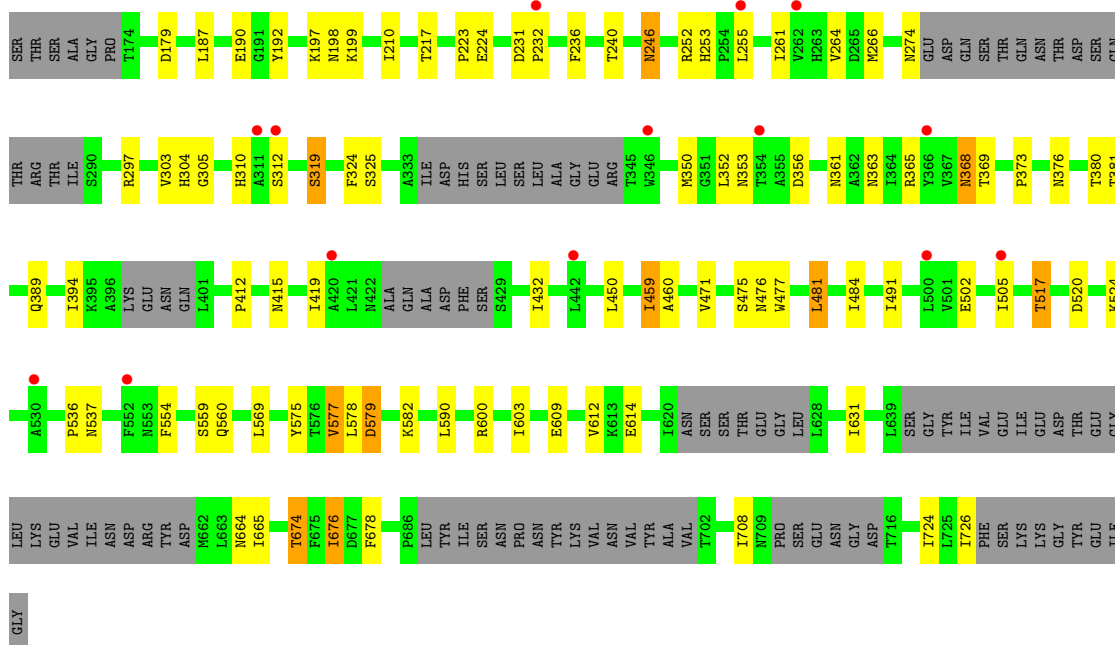




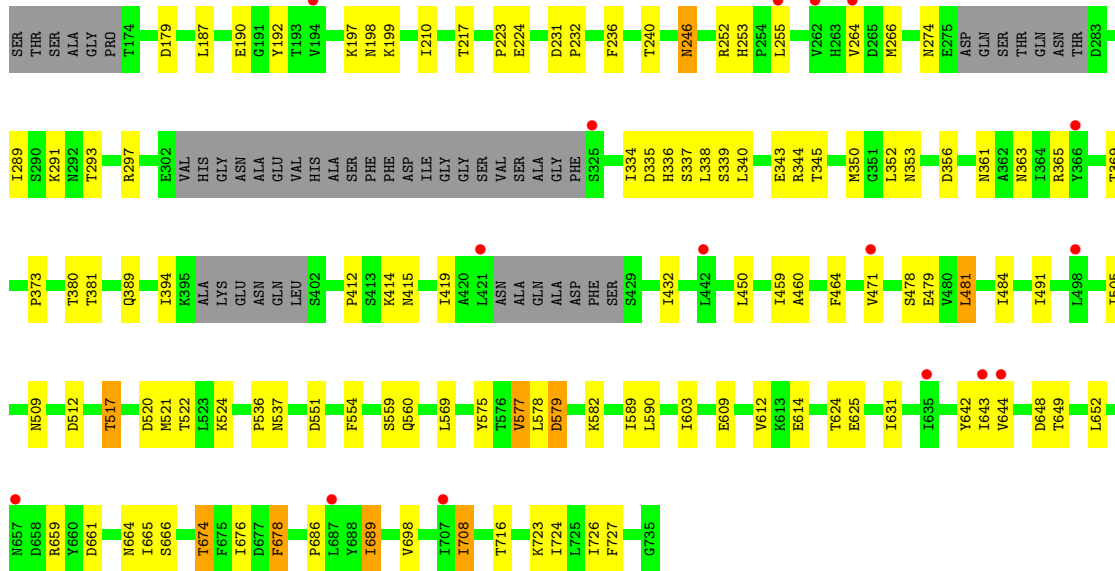
• Molecule 1: Protective antigen PA-63



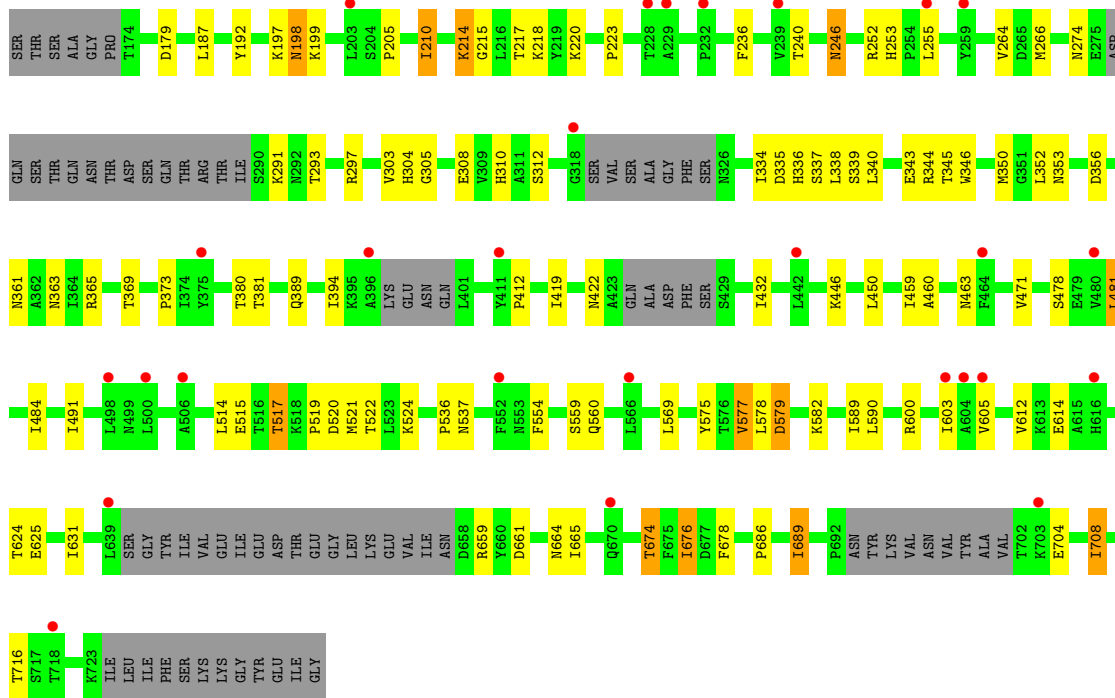
• Molecule 1: Protective antigen PA-63



• Molecule 1: Protective antigen PA-63

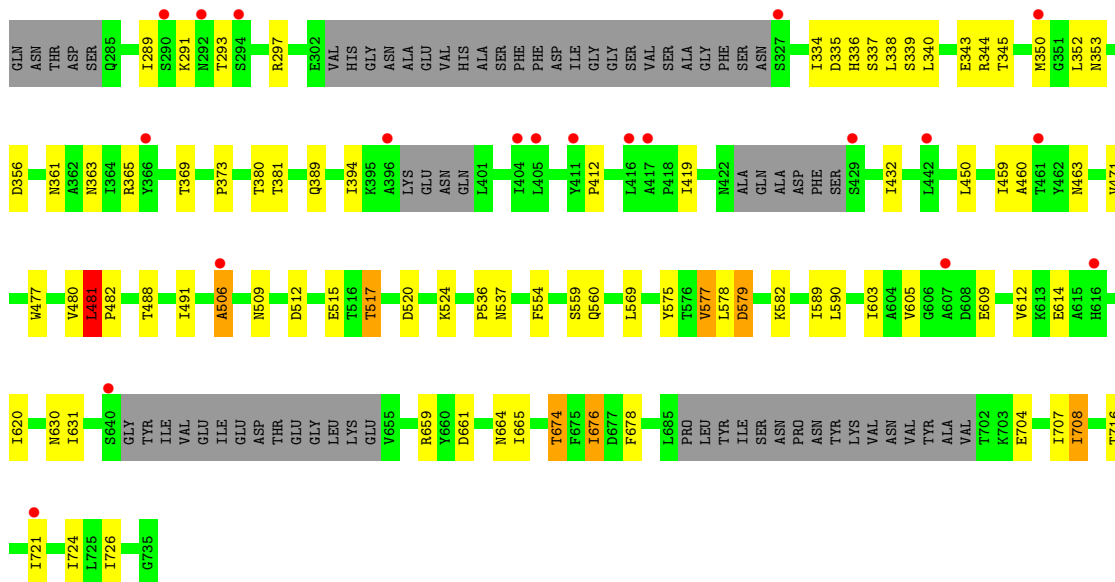


• Molecule 1: Protective antigen PA-63

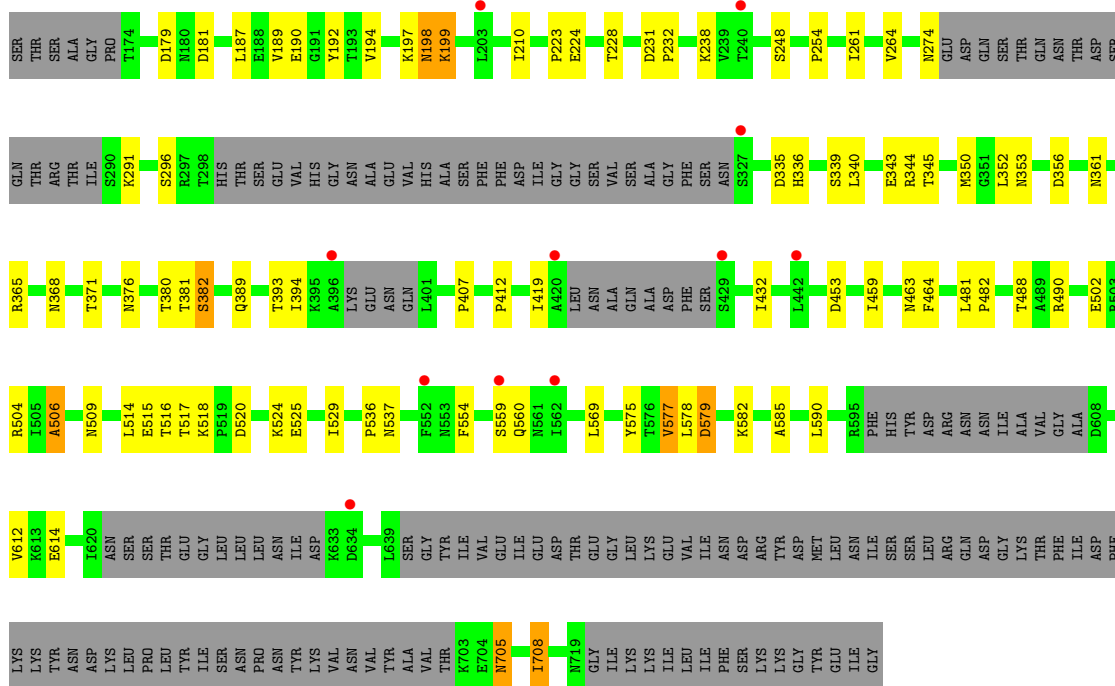


• Molecule 1: Protective antigen PA-63

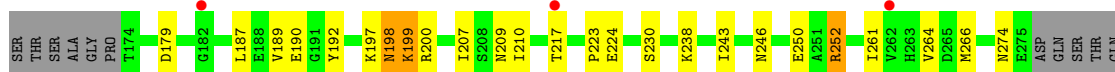


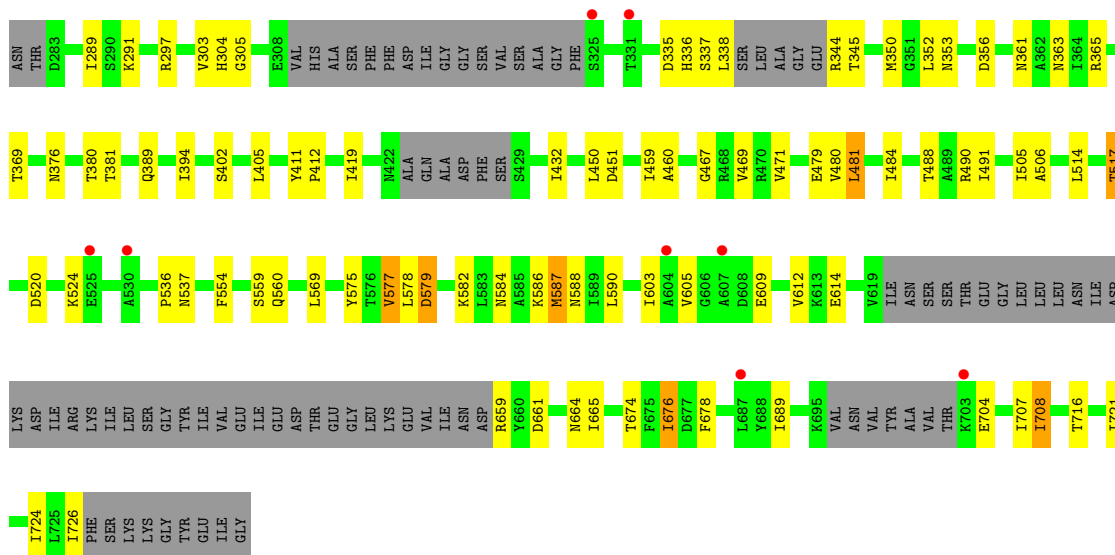


● Molecule 1: Protective antigen PA-63

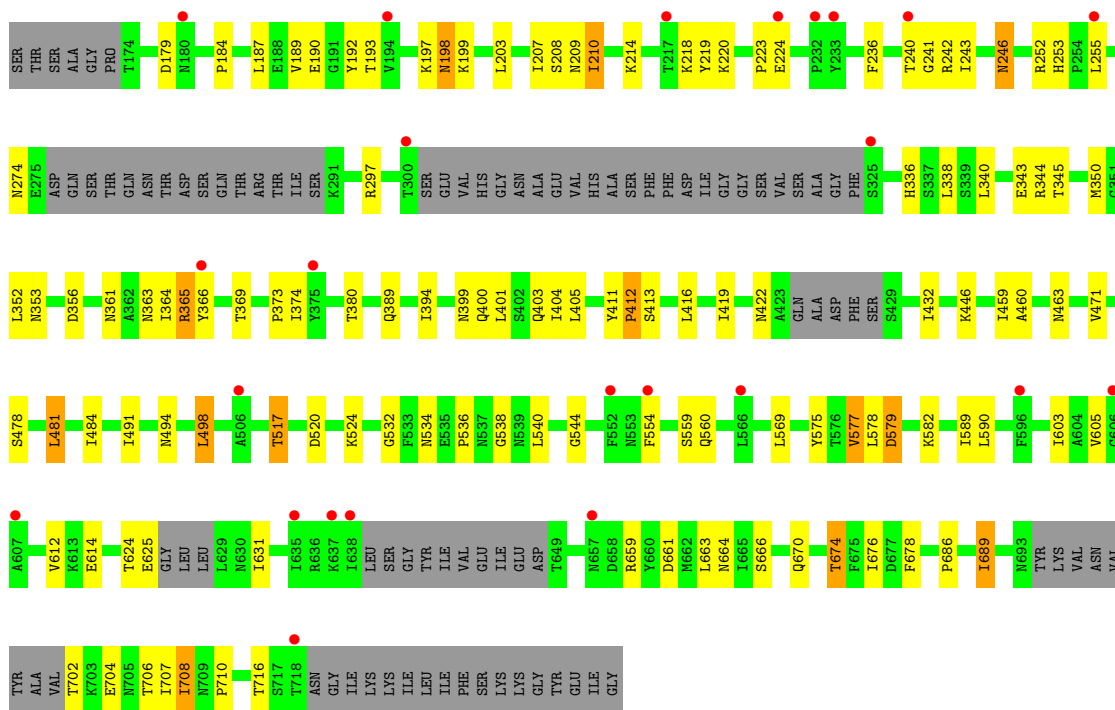


● Molecule 1: Protective antigen PA-63





• Molecule 1: Protective antigen PA-63



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	166.18Å 144.25Å 304.82Å 90.00° 102.41° 90.00°	Depositor
Resolution (Å)	44.83 – 5.50 44.83 – 5.50	Depositor EDS
% Data completeness (in resolution range)	99.3 (44.83-5.50) 99.1 (44.83-5.50)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.34 (at 5.39Å)	Xtrriage
Refinement program	BUSTER	Depositor
R, R_{free}	0.251 , 0.278 0.266 , 0.286	Depositor DCC
R_{free} test set	2250 reflections (4.87%)	wwPDB-VP
Wilson B-factor (Å ²)	183.8	Xtrriage
Anisotropy	0.481	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 272.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.84	EDS
Total number of atoms	53490	wwPDB-VP
Average B, all atoms (Å ²)	257.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.29% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.71	0/3771	1.22	8/5109 (0.2%)
1	B	0.70	0/4181	1.20	11/5667 (0.2%)
1	C	0.69	0/3134	1.20	9/4250 (0.2%)
1	D	0.67	0/4336	1.20	10/5877 (0.2%)
1	E	0.68	0/4156	1.20	11/5633 (0.2%)
1	F	0.70	0/3746	1.21	7/5072 (0.1%)
1	G	0.68	0/4192	1.18	9/5681 (0.2%)
1	H	0.68	0/3958	1.21	9/5364 (0.2%)
1	I	0.68	0/4257	1.21	12/5770 (0.2%)
1	J	0.72	0/3776	1.25	11/5112 (0.2%)
1	K	0.72	0/3926	1.22	10/5314 (0.2%)
1	L	0.77	0/3237	1.24	12/4388 (0.3%)
1	M	0.74	0/3811	1.23	8/5166 (0.2%)
1	N	0.74	0/3868	1.22	10/5243 (0.2%)
All	All	0.70	0/54349	1.21	137/73646 (0.2%)

There are no bond length outliers.

All (137) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	M	179	ASP	CA-CB-CG	6.87	119.47	112.60
1	L	179	ASP	CA-CB-CG	6.69	119.29	112.60
1	I	179	ASP	CA-CB-CG	6.55	119.15	112.60
1	L	705	ASN	CA-CB-CG	6.51	119.11	112.60
1	E	179	ASP	CA-CB-CG	6.45	119.05	112.60
1	D	179	ASP	CA-CB-CG	6.44	119.04	112.60
1	G	179	ASP	CA-CB-CG	6.44	119.04	112.60
1	J	198	ASN	N-CA-C	-6.41	103.92	111.03
1	G	198	ASN	N-CA-C	-6.38	103.94	111.03
1	B	198	ASN	N-CA-C	-6.38	103.94	111.03
1	H	198	ASN	N-CA-C	-6.38	103.95	111.03
1	C	198	ASN	N-CA-C	-6.33	104.00	111.03
1	E	198	ASN	N-CA-C	-6.28	103.14	111.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	198	ASN	N-CA-C	-6.27	104.07	111.03
1	A	198	ASN	N-CA-C	-6.23	104.12	111.03
1	I	463	ASN	CA-C-N	6.19	128.90	120.54
1	I	463	ASN	C-N-CA	6.19	128.90	120.54
1	D	463	ASN	CA-C-N	6.19	128.90	120.54
1	D	463	ASN	C-N-CA	6.19	128.90	120.54
1	I	198	ASN	N-CA-C	-6.19	104.16	111.03
1	D	198	ASN	N-CA-C	-6.19	104.16	111.03
1	N	198	ASN	N-CA-C	-6.18	104.17	111.03
1	A	179	ASP	CA-CB-CG	6.18	118.78	112.60
1	B	179	ASP	CA-CB-CG	6.17	118.77	112.60
1	L	453	ASP	CA-CB-CG	6.15	118.75	112.60
1	M	198	ASN	N-CA-C	-6.15	104.21	111.03
1	F	179	ASP	CA-CB-CG	6.11	118.71	112.60
1	A	463	ASN	CA-C-N	6.10	128.78	120.54
1	A	463	ASN	C-N-CA	6.10	128.78	120.54
1	C	463	ASN	CA-C-N	6.09	128.76	120.54
1	C	463	ASN	C-N-CA	6.09	128.76	120.54
1	K	198	ASN	N-CA-C	-6.09	104.27	111.03
1	L	198	ASN	N-CA-C	-6.08	104.29	111.03
1	J	463	ASN	CA-C-N	6.07	128.74	120.54
1	J	463	ASN	C-N-CA	6.07	128.74	120.54
1	N	179	ASP	CA-CB-CG	6.07	118.67	112.60
1	E	649	THR	CA-C-N	6.06	128.41	120.28
1	E	649	THR	C-N-CA	6.06	128.41	120.28
1	H	463	ASN	CA-C-N	6.02	128.67	120.54
1	H	463	ASN	C-N-CA	6.02	128.67	120.54
1	K	463	ASN	CA-C-N	6.01	128.65	120.54
1	K	463	ASN	C-N-CA	6.01	128.65	120.54
1	D	649	THR	CA-C-N	6.01	128.33	120.28
1	D	649	THR	C-N-CA	6.01	128.33	120.28
1	H	179	ASP	CA-CB-CG	6.00	118.60	112.60
1	J	179	ASP	CA-CB-CG	5.94	118.54	112.60
1	I	649	THR	CA-C-N	5.91	128.20	120.28
1	I	649	THR	C-N-CA	5.91	128.20	120.28
1	E	463	ASN	CA-C-N	5.88	128.97	120.79
1	E	463	ASN	C-N-CA	5.88	128.97	120.79
1	L	577	VAL	CA-C-N	5.82	128.35	120.38
1	L	577	VAL	C-N-CA	5.82	128.35	120.38
1	K	577	VAL	CA-C-N	5.81	128.34	120.38
1	K	577	VAL	C-N-CA	5.81	128.34	120.38
1	K	179	ASP	CA-CB-CG	5.80	118.40	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	577	VAL	CA-C-N	5.79	128.31	120.38
1	C	577	VAL	C-N-CA	5.79	128.31	120.38
1	H	577	VAL	CA-C-N	5.76	128.27	120.38
1	H	577	VAL	C-N-CA	5.76	128.27	120.38
1	M	577	VAL	CA-C-N	5.75	128.26	120.38
1	M	577	VAL	C-N-CA	5.75	128.26	120.38
1	F	577	VAL	CA-C-N	5.75	128.25	120.38
1	F	577	VAL	C-N-CA	5.75	128.25	120.38
1	J	577	VAL	CA-C-N	5.75	128.25	120.38
1	J	577	VAL	C-N-CA	5.75	128.25	120.38
1	N	577	VAL	CA-C-N	5.73	128.23	120.38
1	N	577	VAL	C-N-CA	5.73	128.23	120.38
1	L	463	ASN	CA-C-N	5.71	127.87	120.44
1	L	463	ASN	C-N-CA	5.71	127.87	120.44
1	E	577	VAL	CA-C-N	5.71	128.21	120.38
1	E	577	VAL	C-N-CA	5.71	128.21	120.38
1	D	577	VAL	CA-C-N	5.70	128.19	120.38
1	D	577	VAL	C-N-CA	5.70	128.19	120.38
1	G	577	VAL	CA-C-N	5.67	128.14	120.38
1	G	577	VAL	C-N-CA	5.67	128.14	120.38
1	A	577	VAL	CA-C-N	5.66	128.13	120.38
1	A	577	VAL	C-N-CA	5.66	128.13	120.38
1	I	577	VAL	CA-C-N	5.66	128.13	120.38
1	I	577	VAL	C-N-CA	5.66	128.13	120.38
1	B	577	VAL	CA-C-N	5.62	128.08	120.38
1	B	577	VAL	C-N-CA	5.62	128.08	120.38
1	L	516	THR	N-CA-C	-5.45	106.68	113.38
1	K	199	LYS	CA-C-N	5.44	128.57	120.90
1	K	199	LYS	C-N-CA	5.44	128.57	120.90
1	B	649	THR	CA-C-N	5.42	127.55	120.28
1	B	649	THR	C-N-CA	5.42	127.55	120.28
1	M	199	LYS	CA-C-N	5.42	128.54	120.90
1	M	199	LYS	C-N-CA	5.42	128.54	120.90
1	B	463	ASN	CA-C-N	5.39	127.44	120.44
1	B	463	ASN	C-N-CA	5.39	127.44	120.44
1	N	199	LYS	CA-C-N	5.37	128.47	120.90
1	N	199	LYS	C-N-CA	5.37	128.47	120.90
1	N	463	ASN	CA-C-N	5.37	127.41	120.44
1	N	463	ASN	C-N-CA	5.37	127.41	120.44
1	D	199	LYS	CA-C-N	5.34	128.43	120.90
1	D	199	LYS	C-N-CA	5.34	128.43	120.90
1	M	586	LYS	CA-C-N	5.32	131.70	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	M	586	LYS	C-N-CA	5.32	131.70	121.54
1	J	199	LYS	CA-C-N	5.29	128.35	120.90
1	J	199	LYS	C-N-CA	5.29	128.35	120.90
1	L	199	LYS	CA-C-N	5.28	128.34	120.90
1	L	199	LYS	C-N-CA	5.28	128.34	120.90
1	G	649	THR	CA-C-N	5.27	127.78	120.29
1	G	649	THR	C-N-CA	5.27	127.78	120.29
1	L	181	ASP	CA-CB-CG	5.27	117.87	112.60
1	H	199	LYS	CA-C-N	5.26	128.32	120.90
1	H	199	LYS	C-N-CA	5.26	128.32	120.90
1	J	235	ASP	CA-C-N	5.23	127.23	120.44
1	J	235	ASP	C-N-CA	5.23	127.23	120.44
1	G	199	LYS	CA-C-N	5.22	128.26	120.90
1	G	199	LYS	C-N-CA	5.22	128.26	120.90
1	F	199	LYS	CA-C-N	5.21	128.24	120.90
1	F	199	LYS	C-N-CA	5.21	128.24	120.90
1	I	199	LYS	CA-C-N	5.20	128.23	120.90
1	I	199	LYS	C-N-CA	5.20	128.23	120.90
1	N	412	PRO	CA-C-N	5.19	131.46	121.54
1	N	412	PRO	C-N-CA	5.19	131.46	121.54
1	E	199	LYS	CA-C-N	5.18	128.47	121.05
1	E	199	LYS	C-N-CA	5.18	128.47	121.05
1	I	661	ASP	CA-CB-CG	5.17	117.77	112.60
1	G	246	ASN	CA-CB-CG	5.17	117.77	112.60
1	C	199	LYS	CA-C-N	5.16	128.18	120.90
1	C	199	LYS	C-N-CA	5.16	128.18	120.90
1	E	246	ASN	CA-CB-CG	5.16	117.76	112.60
1	K	477	TRP	CA-C-N	5.16	127.45	120.38
1	K	477	TRP	C-N-CA	5.16	127.45	120.38
1	J	246	ASN	CA-CB-CG	5.15	117.75	112.60
1	A	199	LYS	CA-C-N	5.13	128.14	120.90
1	A	199	LYS	C-N-CA	5.13	128.14	120.90
1	C	594	LYS	CA-C-N	5.12	127.46	120.54
1	C	594	LYS	C-N-CA	5.12	127.46	120.54
1	B	246	ASN	CA-CB-CG	5.12	117.72	112.60
1	B	199	LYS	CA-C-N	5.12	128.11	120.90
1	B	199	LYS	C-N-CA	5.12	128.11	120.90
1	I	246	ASN	CA-CB-CG	5.09	117.69	112.60
1	H	246	ASN	CA-CB-CG	5.08	117.68	112.60
1	F	368	ASN	CA-CB-CG	5.04	117.64	112.60

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	3712	0	3666	41	0
1	B	4114	0	4098	51	0
1	C	3083	0	3058	22	0
1	D	4265	0	4229	42	0
1	E	4089	0	4071	49	0
1	F	3688	0	3679	31	0
1	G	4125	0	4102	45	0
1	H	3894	0	3852	40	0
1	I	4189	0	4164	49	0
1	J	3718	0	3673	33	0
1	K	3867	0	3860	41	0
1	L	3189	0	3177	34	0
1	M	3749	0	3697	42	0
1	N	3808	0	3769	48	0
All	All	53490	0	53095	541	0

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

All (541) 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:G:642:TYR:HB2	1:G:665:ILE:HD11	1.57	0.87
1:I:642:TYR:HB2	1:I:665:ILE:HD11	1.58	0.83
1:B:642:TYR:HB2	1:B:665:ILE:HD11	1.60	0.81
1:N:297:ARG:HD3	1:N:369:THR:HG21	1.68	0.75
1:K:481:LEU:H	1:K:482:PRO:HD2	1.56	0.71
1:E:642:TYR:HB2	1:E:665:ILE:HD11	1.74	0.68
1:D:642:TYR:HB2	1:D:665:ILE:HD11	1.78	0.65
1:L:187:LEU:HB3	1:L:192:TYR:HB3	1.79	0.65
1:I:337:SER:HA	1:I:661:ASP:HB2	1.81	0.62
1:E:648:ASP:HB2	1:E:652:LEU:H	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:648:ASP:HB2	1:B:652:LEU:H	1.64	0.61
1:E:325:SER:HB2	1:F:415:ASN:ND2	2.15	0.61
1:D:648:ASP:HB2	1:D:652:LEU:H	1.66	0.61
1:I:648:ASP:HB2	1:I:652:LEU:H	1.64	0.60
1:M:451:ASP:HB3	1:N:416:LEU:HD23	1.83	0.60
1:L:382:SER:HB3	1:L:393:THR:HG22	1.84	0.60
1:L:224:GLU:HB2	1:L:517:THR:HG21	1.83	0.59
1:N:575:TYR:HA	1:N:578:LEU:HD13	1.82	0.59
1:L:189:VAL:HG11	1:M:198:ASN:HB3	1.83	0.59
1:N:624:THR:HG21	1:N:689:ILE:HD11	1.85	0.59
1:G:648:ASP:HB2	1:G:652:LEU:H	1.67	0.58
1:K:189:VAL:HG11	1:L:198:ASN:HB3	1.85	0.58
1:C:183:ILE:HG23	1:C:203:LEU:HD21	1.86	0.58
1:G:337:SER:HA	1:G:661:ASP:HB2	1.86	0.58
1:E:337:SER:HA	1:E:661:ASP:HB2	1.86	0.57
1:L:231:ASP:HB2	1:L:232:PRO:HD2	1.86	0.57
1:A:337:SER:HA	1:A:661:ASP:HB2	1.87	0.57
1:B:337:SER:HA	1:B:661:ASP:HB2	1.86	0.57
1:B:350:MET:HE2	1:B:352:LEU:HD11	1.87	0.57
1:I:642:TYR:HE2	1:I:666:SER:HB3	1.70	0.57
1:N:353:ASN:H	1:N:356:ASP:HB2	1.70	0.57
1:D:336:HIS:HB3	1:D:708:ILE:HG22	1.86	0.56
1:I:350:MET:HE2	1:I:352:LEU:HD11	1.87	0.56
1:G:353:ASN:H	1:G:356:ASP:HB2	1.70	0.56
1:A:353:ASN:H	1:A:356:ASP:HB2	1.70	0.56
1:D:353:ASN:H	1:D:356:ASP:HB2	1.70	0.56
1:E:350:MET:HE2	1:E:352:LEU:HD11	1.87	0.56
1:J:353:ASN:H	1:J:356:ASP:HB2	1.70	0.56
1:K:353:ASN:H	1:K:356:ASP:HB2	1.70	0.56
1:M:350:MET:HE2	1:M:352:LEU:HD11	1.88	0.56
1:A:350:MET:HE2	1:A:352:LEU:HD11	1.87	0.56
1:F:353:ASN:H	1:F:356:ASP:HB2	1.70	0.56
1:H:350:MET:HE2	1:H:352:LEU:HD11	1.87	0.56
1:M:223:PRO:HD2	1:M:517:THR:HG22	1.88	0.56
1:C:350:MET:HE2	1:C:352:LEU:HD11	1.87	0.56
1:H:337:SER:HA	1:H:661:ASP:HB2	1.86	0.56
1:K:337:SER:HA	1:K:661:ASP:HB2	1.86	0.56
1:D:350:MET:HE2	1:D:352:LEU:HD11	1.87	0.56
1:L:353:ASN:H	1:L:356:ASP:HB2	1.70	0.56
1:C:353:ASN:H	1:C:356:ASP:HB2	1.71	0.56
1:B:665:ILE:HD12	1:B:676:ILE:HG23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:642:TYR:HE2	1:B:666:SER:HB3	1.71	0.55
1:E:353:ASN:H	1:E:356:ASP:HB2	1.71	0.55
1:G:642:TYR:HE2	1:G:666:SER:HB3	1.70	0.55
1:H:253:HIS:CD2	1:H:255:LEU:H	2.24	0.55
1:H:353:ASN:H	1:H:356:ASP:HB2	1.70	0.55
1:L:350:MET:HE2	1:L:352:LEU:HD11	1.88	0.55
1:M:353:ASN:H	1:M:356:ASP:HB2	1.70	0.55
1:L:490:ARG:HE	1:L:504:ARG:HH21	1.55	0.55
1:M:337:SER:HA	1:M:661:ASP:HB2	1.88	0.55
1:A:724:ILE:HG22	1:A:725:LEU:H	1.72	0.55
1:J:350:MET:HE2	1:J:352:LEU:HD11	1.87	0.55
1:N:350:MET:HE2	1:N:352:LEU:HD11	1.88	0.55
1:A:575:TYR:HA	1:A:578:LEU:HD13	1.89	0.55
1:N:246:ASN:HB2	1:N:373:PRO:HG3	1.89	0.55
1:D:575:TYR:HA	1:D:578:LEU:HD13	1.89	0.55
1:B:575:TYR:HA	1:B:578:LEU:HD13	1.89	0.55
1:D:291:LYS:HE2	1:D:339:SER:HB2	1.89	0.55
1:E:575:TYR:HA	1:E:578:LEU:HD13	1.89	0.55
1:G:350:MET:HE2	1:G:352:LEU:HD11	1.88	0.55
1:L:575:TYR:HA	1:L:578:LEU:HD13	1.89	0.55
1:M:665:ILE:HD12	1:M:676:ILE:HG23	1.89	0.55
1:E:644:VAL:HG11	1:E:678:PHE:HB3	1.89	0.55
1:I:353:ASN:H	1:I:356:ASP:HB2	1.70	0.55
1:I:665:ILE:HD12	1:I:676:ILE:HG23	1.89	0.55
1:L:509:ASN:HD22	1:L:585:ALA:HB3	1.72	0.54
1:B:223:PRO:HD2	1:B:517:THR:HG22	1.90	0.54
1:B:353:ASN:H	1:B:356:ASP:HB2	1.70	0.54
1:H:575:TYR:HA	1:H:578:LEU:HD13	1.89	0.54
1:K:350:MET:HE2	1:K:352:LEU:HD11	1.88	0.54
1:F:575:TYR:HA	1:F:578:LEU:HD13	1.90	0.54
1:G:575:TYR:HA	1:G:578:LEU:HD13	1.89	0.54
1:C:337:SER:HA	1:C:661:ASP:HB2	1.89	0.54
1:K:575:TYR:HA	1:K:578:LEU:HD13	1.89	0.54
1:N:187:LEU:HB3	1:N:192:TYR:HB3	1.90	0.54
1:N:524:LYS:HD2	1:N:579:ASP:HB3	1.88	0.54
1:C:575:TYR:HA	1:C:578:LEU:HD13	1.89	0.53
1:M:575:TYR:HA	1:M:578:LEU:HD13	1.89	0.53
1:F:350:MET:HE2	1:F:352:LEU:HD11	1.89	0.53
1:M:479:GLU:HG3	1:N:471:VAL:HG23	1.89	0.53
1:D:189:VAL:HG11	1:E:198:ASN:HB3	1.90	0.53
1:D:642:TYR:HE2	1:D:666:SER:HB3	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:246:ASN:HB2	1:I:373:PRO:HG3	1.91	0.53
1:K:291:LYS:HB3	1:K:335:ASP:HB3	1.91	0.53
1:E:246:ASN:HB2	1:E:373:PRO:HG3	1.91	0.53
1:J:575:TYR:HA	1:J:578:LEU:HD13	1.90	0.53
1:K:340:LEU:HB2	1:K:343:GLU:HB3	1.91	0.53
1:A:291:LYS:HB3	1:A:335:ASP:HB3	1.91	0.52
1:D:625:GLU:HG2	1:D:686:PRO:HB3	1.91	0.52
1:G:340:LEU:HB2	1:G:343:GLU:HB3	1.91	0.52
1:I:189:VAL:HG11	1:J:198:ASN:HB3	1.91	0.52
1:L:488:THR:HG22	1:L:506:ALA:HA	1.90	0.52
1:E:187:LEU:HB3	1:E:192:TYR:HB3	1.92	0.52
1:G:291:LYS:HB3	1:G:335:ASP:HB3	1.91	0.52
1:H:625:GLU:HG2	1:H:686:PRO:HB3	1.90	0.52
1:N:625:GLU:HG2	1:N:686:PRO:HB3	1.90	0.52
1:I:625:GLU:HG2	1:I:686:PRO:HB3	1.91	0.52
1:B:340:LEU:HB2	1:B:343:GLU:HB3	1.91	0.52
1:L:291:LYS:HB3	1:L:335:ASP:HB3	1.90	0.52
1:E:291:LYS:HB3	1:E:335:ASP:HB3	1.91	0.52
1:B:520:ASP:HB3	1:B:582:LYS:HE2	1.92	0.52
1:I:340:LEU:HB2	1:I:343:GLU:HB3	1.91	0.52
1:N:336:HIS:HE1	1:N:663:LEU:HB2	1.74	0.52
1:G:644:VAL:HG11	1:G:678:PHE:HB3	1.91	0.52
1:H:340:LEU:HB2	1:H:343:GLU:HB3	1.91	0.52
1:I:291:LYS:HB3	1:I:335:ASP:HB3	1.92	0.52
1:I:520:ASP:HB3	1:I:582:LYS:HE2	1.92	0.52
1:F:520:ASP:HB3	1:F:582:LYS:HE2	1.92	0.52
1:K:481:LEU:H	1:K:482:PRO:CD	2.22	0.52
1:C:291:LYS:HB3	1:C:335:ASP:HB3	1.92	0.51
1:E:631:ILE:HD12	1:E:674:THR:HB	1.92	0.51
1:F:246:ASN:HB2	1:F:373:PRO:HG3	1.92	0.51
1:B:481:LEU:HA	1:B:484:ILE:HD12	1.92	0.51
1:D:291:LYS:HB3	1:D:335:ASP:HB3	1.93	0.51
1:G:253:HIS:HE1	1:G:255:LEU:HD12	1.75	0.51
1:G:631:ILE:HD12	1:G:674:THR:HB	1.92	0.51
1:J:246:ASN:HB2	1:J:373:PRO:HG3	1.92	0.51
1:M:491:ILE:HD12	1:M:505:ILE:HD13	1.91	0.51
1:A:451:ASP:HB3	1:B:416:LEU:HD23	1.92	0.51
1:G:246:ASN:HB2	1:G:373:PRO:HG3	1.92	0.51
1:B:631:ILE:HD12	1:B:674:THR:HB	1.92	0.51
1:C:520:ASP:HB3	1:C:582:LYS:HE2	1.93	0.51
1:A:520:ASP:HB3	1:A:582:LYS:HE2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:246:ASN:HB2	1:B:373:PRO:HG3	1.91	0.51
1:D:319:SER:HA	1:E:414:LYS:HG3	1.93	0.51
1:M:520:ASP:HB3	1:M:582:LYS:HE2	1.92	0.51
1:E:509:ASN:HD22	1:E:512:ASP:H	1.57	0.51
1:I:644:VAL:HG11	1:I:678:PHE:HB3	1.92	0.51
1:K:631:ILE:HD12	1:K:674:THR:HB	1.93	0.51
1:N:631:ILE:HD12	1:N:674:THR:HB	1.93	0.51
1:A:631:ILE:HD12	1:A:674:THR:HB	1.93	0.51
1:L:238:LYS:HD3	1:L:254:PRO:HA	1.92	0.51
1:L:340:LEU:HB2	1:L:343:GLU:HB3	1.92	0.51
1:A:246:ASN:HB2	1:A:373:PRO:HG3	1.92	0.51
1:H:246:ASN:HB2	1:H:373:PRO:HG3	1.92	0.51
1:K:520:ASP:HB3	1:K:582:LYS:HE2	1.93	0.50
1:B:291:LYS:HB3	1:B:335:ASP:HB3	1.92	0.50
1:C:226:TRP:CZ2	1:C:234:SER:HB3	2.47	0.50
1:H:291:LYS:HB3	1:H:335:ASP:HB3	1.91	0.50
1:I:631:ILE:HD12	1:I:674:THR:HB	1.92	0.50
1:N:520:ASP:HB3	1:N:582:LYS:HE2	1.93	0.50
1:B:625:GLU:HG2	1:B:686:PRO:HB3	1.92	0.50
1:K:488:THR:HG22	1:K:506:ALA:HA	1.94	0.50
1:B:488:THR:HG22	1:B:506:ALA:HA	1.93	0.50
1:C:246:ASN:HB2	1:C:373:PRO:HG3	1.93	0.50
1:F:319:SER:HA	1:G:414:LYS:HG3	1.92	0.50
1:G:223:PRO:HD2	1:G:517:THR:HG22	1.94	0.50
1:H:631:ILE:HD12	1:H:674:THR:HB	1.94	0.50
1:L:520:ASP:HB3	1:L:582:LYS:HE2	1.93	0.50
1:N:340:LEU:HB2	1:N:343:GLU:HB3	1.91	0.50
1:G:520:ASP:HB3	1:G:582:LYS:HE2	1.92	0.50
1:K:665:ILE:HD12	1:K:676:ILE:HG23	1.93	0.50
1:D:223:PRO:HD2	1:D:517:THR:HG22	1.94	0.50
1:D:246:ASN:HB2	1:D:373:PRO:HG3	1.93	0.50
1:G:509:ASN:HD22	1:G:512:ASP:H	1.58	0.50
1:L:506:ALA:HB1	1:L:518:LYS:HE3	1.92	0.50
1:D:631:ILE:HD12	1:D:674:THR:HB	1.93	0.50
1:J:520:ASP:HB3	1:J:582:LYS:HE2	1.94	0.50
1:K:246:ASN:HB2	1:K:373:PRO:HG3	1.92	0.50
1:K:509:ASN:HD22	1:K:512:ASP:H	1.60	0.50
1:E:625:GLU:HG2	1:E:686:PRO:HB3	1.93	0.49
1:G:625:GLU:HG2	1:G:686:PRO:HB3	1.93	0.49
1:D:520:ASP:HB3	1:D:582:LYS:HE2	1.93	0.49
1:E:520:ASP:HB3	1:E:582:LYS:HE2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:481:LEU:HA	1:F:484:ILE:HD12	1.95	0.49
1:H:665:ILE:HD12	1:H:676:ILE:HG23	1.94	0.49
1:J:291:LYS:HB3	1:J:335:ASP:HB3	1.94	0.49
1:E:253:HIS:HE1	1:E:255:LEU:HD12	1.76	0.49
1:I:223:PRO:HD2	1:I:517:THR:HG22	1.94	0.49
1:N:253:HIS:HE1	1:N:255:LEU:HD12	1.78	0.49
1:B:187:LEU:HB3	1:B:192:TYR:HB3	1.95	0.49
1:F:631:ILE:HD12	1:F:674:THR:HB	1.93	0.49
1:I:253:HIS:HE1	1:I:255:LEU:HD12	1.77	0.49
1:F:223:PRO:HD2	1:F:517:THR:HG22	1.95	0.49
1:H:520:ASP:HB3	1:H:582:LYS:HE2	1.94	0.49
1:K:223:PRO:HD2	1:K:517:THR:HG22	1.94	0.49
1:D:253:HIS:HE1	1:D:255:LEU:HD12	1.77	0.49
1:G:187:LEU:HB3	1:G:192:TYR:HB3	1.95	0.49
1:G:291:LYS:HE2	1:G:339:SER:HB2	1.95	0.49
1:N:403:GLN:HB2	1:N:411:TYR:HE1	1.77	0.49
1:A:235:ASP:HA	1:A:238:LYS:HE3	1.94	0.49
1:D:644:VAL:HG11	1:D:678:PHE:HB3	1.95	0.49
1:G:665:ILE:HD12	1:G:676:ILE:HG23	1.95	0.49
1:K:236:PHE:O	1:K:240:THR:HG22	2.13	0.48
1:M:460:ALA:HA	1:M:471:VAL:HA	1.95	0.48
1:N:366:TYR:HB2	1:N:411:TYR:HB3	1.94	0.48
1:B:644:VAL:HG11	1:B:678:PHE:HB3	1.94	0.48
1:J:253:HIS:HE1	1:J:255:LEU:HD12	1.78	0.48
1:M:187:LEU:HB3	1:M:192:TYR:HB3	1.95	0.48
1:C:253:HIS:HE1	1:C:255:LEU:HD12	1.78	0.48
1:E:223:PRO:HD2	1:E:517:THR:HG22	1.95	0.48
1:F:236:PHE:O	1:F:240:THR:HG22	2.13	0.48
1:I:291:LYS:HE2	1:I:339:SER:HB2	1.95	0.48
1:I:575:TYR:HA	1:I:578:LEU:HD13	1.95	0.48
1:J:631:ILE:HD12	1:J:674:THR:HB	1.95	0.48
1:J:665:ILE:HD12	1:J:676:ILE:HG23	1.95	0.48
1:A:253:HIS:HE1	1:A:255:LEU:HD12	1.78	0.48
1:B:189:VAL:HG11	1:C:198:ASN:HB3	1.96	0.48
1:M:659:ARG:HG2	1:M:716:THR:HB	1.95	0.48
1:A:236:PHE:O	1:A:240:THR:HG22	2.14	0.48
1:N:223:PRO:HD2	1:N:517:THR:HG22	1.95	0.48
1:K:291:LYS:HE2	1:K:339:SER:HB2	1.96	0.48
1:K:659:ARG:HG2	1:K:716:THR:HB	1.95	0.48
1:E:338:LEU:HD21	1:E:659:ARG:HH12	1.79	0.48
1:G:236:PHE:O	1:G:240:THR:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:261:ILE:HD13	1:L:502:GLU:HB3	1.96	0.48
1:E:659:ARG:HG2	1:E:716:THR:HB	1.96	0.47
1:G:659:ARG:HG2	1:G:716:THR:HB	1.96	0.47
1:D:338:LEU:HD23	1:D:343:GLU:HG3	1.95	0.47
1:E:291:LYS:HE2	1:E:339:SER:HB2	1.96	0.47
1:F:253:HIS:HE1	1:F:255:LEU:HD12	1.79	0.47
1:M:261:ILE:HB	1:M:369:THR:HG23	1.96	0.47
1:I:236:PHE:O	1:I:240:THR:HG22	2.14	0.47
1:M:297:ARG:HD3	1:M:369:THR:HG21	1.96	0.47
1:B:291:LYS:HE2	1:B:339:SER:HB2	1.96	0.47
1:E:365:ARG:HG2	1:E:412:PRO:HG2	1.97	0.47
1:J:482:PRO:HB2	1:K:246:ASN:HD21	1.80	0.47
1:K:231:ASP:HB2	1:K:232:PRO:HD2	1.96	0.47
1:L:291:LYS:HE2	1:L:339:SER:HB2	1.97	0.47
1:L:365:ARG:HG2	1:L:412:PRO:HG2	1.97	0.47
1:M:291:LYS:HB3	1:M:335:ASP:HB3	1.95	0.47
1:M:365:ARG:HG2	1:M:412:PRO:HG2	1.97	0.47
1:A:305:GLY:HA2	1:B:670:GLN:HG3	1.97	0.47
1:B:659:ARG:HG2	1:B:716:THR:HB	1.96	0.47
1:A:223:PRO:HD2	1:A:517:THR:HG22	1.96	0.47
1:C:365:ARG:HG2	1:C:412:PRO:HG2	1.97	0.47
1:M:569:LEU:HB3	1:M:577:VAL:HG11	1.97	0.47
1:N:184:PRO:HG2	1:N:187:LEU:HG	1.97	0.47
1:C:236:PHE:O	1:C:240:THR:HG22	2.15	0.47
1:D:337:SER:HA	1:D:661:ASP:HB2	1.96	0.47
1:M:481:LEU:HA	1:M:484:ILE:HD12	1.96	0.47
1:N:297:ARG:CD	1:N:369:THR:HG21	2.42	0.47
1:D:236:PHE:O	1:D:240:THR:HG22	2.15	0.46
1:K:266:MET:HE3	1:K:450:LEU:HD11	1.97	0.46
1:I:659:ARG:HG2	1:I:716:THR:HB	1.97	0.46
1:J:187:LEU:HB3	1:J:192:TYR:HB3	1.98	0.46
1:D:643:ILE:HD12	1:D:723:LYS:HB3	1.98	0.46
1:E:236:PHE:O	1:E:240:THR:HG22	2.15	0.46
1:I:224:GLU:HB2	1:I:517:THR:HG21	1.97	0.46
1:N:240:THR:HG23	1:N:242:ARG:H	1.81	0.46
1:J:365:ARG:HG2	1:J:412:PRO:HG2	1.97	0.46
1:N:446:LYS:HB2	1:N:708:ILE:HD13	1.97	0.46
1:A:365:ARG:HG2	1:A:412:PRO:HG2	1.98	0.46
1:G:643:ILE:HD12	1:G:723:LYS:HB3	1.98	0.46
1:J:189:VAL:HG22	1:J:223:PRO:HG3	1.98	0.46
1:K:365:ARG:HG2	1:K:412:PRO:HG2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:223:PRO:HD2	1:C:517:THR:HG22	1.98	0.46
1:G:569:LEU:HB3	1:G:577:VAL:HG11	1.97	0.46
1:A:224:GLU:HB2	1:A:517:THR:HG21	1.98	0.46
1:B:264:VAL:HG21	1:B:381:THR:HG21	1.98	0.46
1:D:569:LEU:HB3	1:D:577:VAL:HG11	1.97	0.46
1:E:266:MET:HE3	1:E:450:LEU:HD11	1.98	0.46
1:H:303:VAL:HA	1:H:600:ARG:HH21	1.79	0.46
1:I:365:ARG:HG2	1:I:412:PRO:HG2	1.98	0.46
1:J:491:ILE:HD12	1:J:505:ILE:HD13	1.97	0.46
1:B:609:GLU:HG2	1:B:724:ILE:HG12	1.98	0.46
1:D:665:ILE:HD12	1:D:676:ILE:HG23	1.98	0.46
1:F:266:MET:HE3	1:F:450:LEU:HD11	1.98	0.46
1:F:569:LEU:HB3	1:F:577:VAL:HG11	1.98	0.46
1:H:481:LEU:HA	1:H:484:ILE:HD12	1.98	0.46
1:I:569:LEU:HB3	1:I:577:VAL:HG11	1.98	0.46
1:M:336:HIS:HB3	1:M:708:ILE:HG22	1.98	0.46
1:N:338:LEU:HD21	1:N:659:ARG:HH12	1.80	0.46
1:B:338:LEU:HD21	1:B:659:ARG:HH12	1.81	0.46
1:H:218:LYS:HE2	1:H:220:LYS:HE3	1.97	0.46
1:H:291:LYS:HE2	1:H:339:SER:HB2	1.97	0.46
1:I:303:VAL:HA	1:I:600:ARG:HH21	1.81	0.46
1:J:266:MET:HE3	1:J:450:LEU:HD11	1.97	0.46
1:L:336:HIS:HB3	1:L:708:ILE:HG22	1.98	0.46
1:A:266:MET:HE3	1:A:450:LEU:HD11	1.97	0.46
1:B:365:ARG:HG2	1:B:412:PRO:HG2	1.98	0.46
1:D:365:ARG:HG2	1:D:412:PRO:HG2	1.97	0.46
1:F:264:VAL:HG21	1:F:381:THR:HG21	1.98	0.46
1:H:255:LEU:HD21	1:H:519:PRO:HD2	1.96	0.46
1:H:659:ARG:HG2	1:H:716:THR:HB	1.96	0.46
1:L:368:ASN:HD22	1:L:407:PRO:HA	1.81	0.46
1:A:659:ARG:HG2	1:A:716:THR:HB	1.98	0.45
1:H:236:PHE:O	1:H:240:THR:HG22	2.15	0.45
1:J:569:LEU:HB3	1:J:577:VAL:HG11	1.98	0.45
1:M:207:ILE:HG22	1:M:209:ASN:H	1.82	0.45
1:B:569:LEU:HB3	1:B:577:VAL:HG11	1.98	0.45
1:D:187:LEU:HB3	1:D:192:TYR:HB3	1.97	0.45
1:G:264:VAL:HG21	1:G:381:THR:HG21	1.98	0.45
1:G:365:ARG:HG2	1:G:412:PRO:HG2	1.98	0.45
1:K:338:LEU:HD21	1:K:659:ARG:HH12	1.81	0.45
1:K:569:LEU:HB3	1:K:577:VAL:HG11	1.98	0.45
1:M:605:VAL:HB	1:M:704:GLU:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:187:LEU:HB3	1:A:192:TYR:HB3	1.98	0.45
1:H:192:TYR:HA	1:H:205:PRO:HA	1.97	0.45
1:I:624:THR:HG21	1:I:689:ILE:HD11	1.97	0.45
1:I:698:VAL:HB	1:I:727:PHE:HB3	1.97	0.45
1:M:189:VAL:HG11	1:N:198:ASN:HB3	1.98	0.45
1:N:218:LYS:HE2	1:N:220:LYS:HE2	1.98	0.45
1:C:266:MET:HE3	1:C:450:LEU:HD11	1.98	0.45
1:D:698:VAL:HB	1:D:727:PHE:HB3	1.98	0.45
1:J:236:PHE:O	1:J:240:THR:HG22	2.15	0.45
1:K:187:LEU:HB3	1:K:192:TYR:HB3	1.99	0.45
1:L:189:VAL:HG21	1:M:200:ARG:HE	1.80	0.45
1:G:336:HIS:HB3	1:G:708:ILE:HG22	1.99	0.45
1:L:482:PRO:HB2	1:M:246:ASN:HD21	1.82	0.45
1:N:224:GLU:HB2	1:N:517:THR:HG21	1.99	0.45
1:E:340:LEU:HB2	1:E:343:GLU:HB3	1.97	0.45
1:F:365:ARG:HG2	1:F:412:PRO:HG2	1.97	0.45
1:I:486:GLU:HG3	1:J:246:ASN:HD22	1.81	0.45
1:K:609:GLU:HG2	1:K:724:ILE:HG12	1.98	0.45
1:L:525:GLU:O	1:L:529:ILE:HG12	2.16	0.45
1:E:224:GLU:HB2	1:E:517:THR:HG21	1.99	0.45
1:F:224:GLU:HB2	1:F:517:THR:HG21	1.99	0.45
1:G:338:LEU:HD21	1:G:659:ARG:HH12	1.81	0.45
1:G:609:GLU:HG2	1:G:724:ILE:HG12	1.98	0.45
1:K:189:VAL:HG13	1:L:199:LYS:HG2	1.98	0.45
1:L:569:LEU:HB3	1:L:577:VAL:HG11	1.99	0.45
1:E:643:ILE:HD12	1:E:723:LYS:HB3	1.98	0.45
1:E:698:VAL:HB	1:E:727:PHE:HB3	1.98	0.45
1:H:569:LEU:HB3	1:H:577:VAL:HG11	1.98	0.45
1:K:336:HIS:HB3	1:K:708:ILE:HG22	1.99	0.45
1:C:569:LEU:HB3	1:C:577:VAL:HG11	1.98	0.45
1:F:609:GLU:HG2	1:F:724:ILE:HG12	1.98	0.45
1:I:338:LEU:HD21	1:I:659:ARG:HH12	1.81	0.45
1:M:266:MET:HE3	1:M:450:LEU:HD11	1.98	0.45
1:M:405:LEU:HD13	1:M:411:TYR:HB2	1.98	0.45
1:N:524:LYS:HG3	1:N:540:LEU:HD13	1.99	0.45
1:B:643:ILE:HD12	1:B:723:LYS:HB3	1.99	0.45
1:E:336:HIS:HB3	1:E:708:ILE:HG22	1.99	0.45
1:G:224:GLU:HB2	1:G:517:THR:HG21	1.99	0.45
1:G:481:LEU:HA	1:G:484:ILE:HD12	1.98	0.45
1:A:264:VAL:HG21	1:A:381:THR:HG21	1.99	0.44
1:A:459:ILE:HG12	1:A:477:TRP:CD1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:264:VAL:HG21	1:H:381:THR:HG21	1.99	0.44
1:H:310:HIS:CD2	1:H:312:SER:HB2	2.53	0.44
1:I:336:HIS:HB3	1:I:708:ILE:HG22	1.99	0.44
1:B:336:HIS:HB3	1:B:708:ILE:HG22	1.98	0.44
1:M:224:GLU:HB2	1:M:517:THR:HG21	1.99	0.44
1:B:524:LYS:HB2	1:B:579:ASP:HA	1.99	0.44
1:C:187:LEU:HB3	1:C:192:TYR:HB3	1.99	0.44
1:D:264:VAL:HG21	1:D:381:THR:HG21	2.00	0.44
1:F:187:LEU:HB3	1:F:192:TYR:HB3	1.99	0.44
1:H:338:LEU:HD21	1:H:659:ARG:HH12	1.83	0.44
1:I:266:MET:HE3	1:I:450:LEU:HD11	1.98	0.44
1:A:336:HIS:HB3	1:A:708:ILE:HG22	2.00	0.44
1:B:266:MET:HE3	1:B:450:LEU:HD11	1.99	0.44
1:E:554:PHE:HB2	1:E:559:SER:HB2	2.00	0.44
1:I:643:ILE:HD12	1:I:723:LYS:HB3	1.99	0.44
1:N:236:PHE:O	1:N:240:THR:HG22	2.17	0.44
1:N:569:LEU:HB3	1:N:577:VAL:HG11	1.98	0.44
1:E:184:PRO:HG2	1:E:187:LEU:HG	1.99	0.44
1:E:569:LEU:HB3	1:E:577:VAL:HG11	1.99	0.44
1:G:266:MET:HE3	1:G:450:LEU:HD11	2.00	0.44
1:I:231:ASP:HB2	1:I:232:PRO:HD2	2.00	0.44
1:I:460:ALA:HA	1:I:471:VAL:HA	2.00	0.44
1:J:264:VAL:HG21	1:J:381:THR:HG21	1.99	0.44
1:K:253:HIS:HE1	1:K:255:LEU:HD12	1.83	0.44
1:A:554:PHE:HB2	1:A:559:SER:HB2	2.00	0.44
1:D:481:LEU:HA	1:D:484:ILE:HD12	2.00	0.44
1:G:698:VAL:HB	1:G:727:PHE:HB3	1.99	0.44
1:L:248:SER:HB2	1:L:371:THR:HG22	2.00	0.44
1:A:481:LEU:HA	1:A:484:ILE:HD12	1.99	0.44
1:C:264:VAL:HG21	1:C:381:THR:HG21	1.98	0.44
1:H:266:MET:HE3	1:H:450:LEU:HD11	1.98	0.44
1:I:609:GLU:HG2	1:I:724:ILE:HG12	1.98	0.44
1:D:609:GLU:HG2	1:D:724:ILE:HG12	2.00	0.44
1:E:609:GLU:HG2	1:E:724:ILE:HG12	1.99	0.44
1:H:198:ASN:HB3	1:N:189:VAL:HG11	1.99	0.44
1:L:524:LYS:HB2	1:L:579:ASP:HA	2.00	0.44
1:M:490:ARG:HH21	1:M:588:ASN:HD21	1.66	0.44
1:N:666:SER:HB2	1:N:674:THR:HG22	2.00	0.44
1:K:224:GLU:HB2	1:K:517:THR:HG21	1.99	0.44
1:L:189:VAL:HG13	1:M:199:LYS:HG2	2.00	0.44
1:N:460:ALA:HA	1:N:471:VAL:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:569:LEU:HB3	1:A:577:VAL:HG11	1.98	0.43
1:I:187:LEU:HB3	1:I:192:TYR:HB3	2.00	0.43
1:I:193:THR:HA	1:I:219:TYR:HD2	1.82	0.43
1:I:481:LEU:HA	1:I:484:ILE:HD12	1.99	0.43
1:K:554:PHE:HB2	1:K:559:SER:HB2	2.00	0.43
1:A:613:LYS:HG2	1:A:725:LEU:HB3	2.00	0.43
1:E:264:VAL:HG21	1:E:381:THR:HG21	1.99	0.43
1:K:297:ARG:HD3	1:K:369:THR:HG21	2.01	0.43
1:D:266:MET:HE3	1:D:450:LEU:HD11	1.98	0.43
1:H:297:ARG:HD3	1:H:369:THR:HG21	2.01	0.43
1:I:264:VAL:HG21	1:I:381:THR:HG21	1.99	0.43
1:J:460:ALA:HA	1:J:471:VAL:HA	2.00	0.43
1:M:338:LEU:HD21	1:M:659:ARG:HH12	1.83	0.43
1:N:401:LEU:HD13	1:N:411:TYR:CE1	2.53	0.43
1:N:605:VAL:HB	1:N:704:GLU:HB3	2.00	0.43
1:A:189:VAL:HG11	1:B:198:ASN:HB3	2.00	0.43
1:B:460:ALA:HA	1:B:471:VAL:HA	2.01	0.43
1:B:554:PHE:HB2	1:B:559:SER:HB2	2.01	0.43
1:B:698:VAL:HB	1:B:727:PHE:HB3	1.99	0.43
1:F:554:PHE:HB2	1:F:559:SER:HB2	2.00	0.43
1:K:264:VAL:HG21	1:K:381:THR:HG21	1.99	0.43
1:E:481:LEU:HA	1:E:484:ILE:HD12	1.99	0.43
1:E:605:VAL:HB	1:E:704:GLU:HB3	2.01	0.43
1:E:665:ILE:HD12	1:E:676:ILE:HG23	2.00	0.43
1:N:481:LEU:HA	1:N:484:ILE:HD12	1.99	0.43
1:A:613:LYS:HE2	1:A:725:LEU:HB2	2.00	0.43
1:G:297:ARG:HD3	1:G:369:THR:HG21	2.01	0.43
1:H:336:HIS:HB3	1:H:708:ILE:HG22	2.00	0.43
1:H:524:LYS:HB2	1:H:579:ASP:HA	2.00	0.43
1:J:223:PRO:HD2	1:J:517:THR:HG22	2.00	0.43
1:J:303:VAL:HA	1:J:600:ARG:HH21	1.83	0.43
1:M:264:VAL:HG21	1:M:381:THR:HG21	1.99	0.43
1:M:609:GLU:HG2	1:M:724:ILE:HG12	1.99	0.43
1:N:338:LEU:HG	1:N:661:ASP:CG	2.44	0.43
1:D:554:PHE:HB2	1:D:559:SER:HB2	2.00	0.43
1:I:691:ASN:C	1:I:693:ASN:H	2.25	0.43
1:L:223:PRO:HD2	1:L:517:THR:HG22	2.00	0.43
1:M:460:ALA:HB2	1:M:471:VAL:HG22	2.01	0.43
1:M:488:THR:HG22	1:M:506:ALA:HA	2.00	0.43
1:B:297:ARG:HD3	1:B:369:THR:HG21	2.01	0.43
1:C:460:ALA:HA	1:C:471:VAL:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:524:LYS:HB2	1:C:579:ASP:HA	2.01	0.43
1:J:297:ARG:HD3	1:J:369:THR:HG21	2.00	0.43
1:J:310:HIS:CD2	1:J:312:SER:HB2	2.54	0.43
1:B:224:GLU:HB2	1:B:517:THR:HG21	2.00	0.43
1:D:217:THR:HB	1:D:219:TYR:CZ	2.54	0.43
1:H:554:PHE:HB2	1:H:559:SER:HB2	2.00	0.43
1:B:231:ASP:HB2	1:B:232:PRO:HD2	1.99	0.43
1:J:605:VAL:HB	1:J:704:GLU:HB3	2.01	0.43
1:L:554:PHE:HB2	1:L:559:SER:HB2	2.01	0.43
1:D:460:ALA:HA	1:D:471:VAL:HA	2.00	0.42
1:E:624:THR:HG21	1:E:689:ILE:HD11	2.01	0.42
1:H:605:VAL:HB	1:H:704:GLU:HB3	2.01	0.42
1:H:624:THR:HG21	1:H:689:ILE:HD11	2.01	0.42
1:J:524:LYS:HB2	1:J:579:ASP:HA	2.01	0.42
1:M:707:ILE:HG12	1:M:721:ILE:HG12	2.01	0.42
1:C:491:ILE:HD12	1:C:505:ILE:HD13	2.01	0.42
1:E:187:LEU:HD22	1:E:205:PRO:HB3	2.00	0.42
1:G:524:LYS:HB2	1:G:579:ASP:HA	2.00	0.42
1:I:491:ILE:HG12	1:I:589:ILE:HB	2.01	0.42
1:K:524:LYS:HB2	1:K:579:ASP:HA	2.01	0.42
1:E:524:LYS:HB2	1:E:579:ASP:HA	2.00	0.42
1:G:554:PHE:HB2	1:G:559:SER:HB2	2.00	0.42
1:J:554:PHE:HB2	1:J:559:SER:HB2	2.00	0.42
1:A:231:ASP:HB2	1:A:232:PRO:HD2	2.02	0.42
1:D:524:LYS:HB2	1:D:579:ASP:HA	2.00	0.42
1:F:325:SER:HB2	1:G:415:ASN:HD22	1.84	0.42
1:H:491:ILE:HG12	1:H:589:ILE:HB	2.02	0.42
1:I:554:PHE:HB2	1:I:559:SER:HB2	2.00	0.42
1:N:207:ILE:HB	1:N:210:ILE:HG12	2.01	0.42
1:F:297:ARG:HD3	1:F:369:THR:HG21	2.00	0.42
1:F:665:ILE:HD12	1:F:676:ILE:HG23	2.02	0.42
1:H:460:ALA:HA	1:H:471:VAL:HA	2.01	0.42
1:A:524:LYS:HB2	1:A:579:ASP:HA	2.00	0.42
1:C:297:ARG:HD3	1:C:369:THR:HG21	2.01	0.42
1:D:224:GLU:HB2	1:D:517:THR:HG21	2.00	0.42
1:F:303:VAL:HA	1:F:600:ARG:HH21	1.84	0.42
1:I:524:LYS:HB2	1:I:579:ASP:HA	2.01	0.42
1:J:488:THR:HG22	1:J:506:ALA:HA	2.02	0.42
1:N:193:THR:HA	1:N:219:TYR:HD2	1.84	0.42
1:A:303:VAL:HA	1:A:600:ARG:HH21	1.85	0.42
1:I:297:ARG:HD3	1:I:369:THR:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:491:ILE:HG12	1:K:589:ILE:HB	2.02	0.42
1:D:303:VAL:HA	1:D:600:ARG:HH21	1.85	0.42
1:D:310:HIS:CD2	1:D:312:SER:HB2	2.55	0.42
1:E:491:ILE:HD12	1:E:505:ILE:HD13	2.02	0.42
1:F:460:ALA:HA	1:F:471:VAL:HA	2.00	0.42
1:G:460:ALA:HA	1:G:471:VAL:HA	2.00	0.42
1:H:293:THR:HG22	1:H:334:ILE:HA	2.02	0.42
1:L:264:VAL:HG21	1:L:381:THR:HG21	2.00	0.42
1:D:605:VAL:HB	1:D:704:GLU:HB3	2.02	0.42
1:J:338:LEU:HD23	1:J:343:GLU:HG3	2.02	0.42
1:J:481:LEU:HA	1:J:484:ILE:HD12	2.01	0.42
1:K:605:VAL:HB	1:K:704:GLU:HB3	2.01	0.42
1:N:491:ILE:HG12	1:N:589:ILE:HB	2.02	0.42
1:A:477:TRP:HB3	1:A:481:LEU:HD12	2.02	0.41
1:F:310:HIS:CD2	1:F:312:SER:HB2	2.55	0.41
1:M:524:LYS:HB2	1:M:579:ASP:HA	2.00	0.41
1:N:554:PHE:HB2	1:N:559:SER:HB2	2.01	0.41
1:A:319:SER:HA	1:B:414:LYS:HG3	2.01	0.41
1:E:675:PHE:CZ	1:E:677:ASP:HB2	2.55	0.41
1:E:707:ILE:HG12	1:E:721:ILE:HG12	2.02	0.41
1:G:231:ASP:HB2	1:G:232:PRO:HD2	2.02	0.41
1:M:238:LYS:HB2	1:M:252:ARG:O	2.20	0.41
1:N:374:ILE:HD12	1:N:405:LEU:HD23	2.01	0.41
1:A:460:ALA:HA	1:A:471:VAL:HA	2.00	0.41
1:E:460:ALA:HA	1:E:471:VAL:HA	2.01	0.41
1:G:491:ILE:HG12	1:G:589:ILE:HB	2.02	0.41
1:A:305:GLY:HA2	1:B:670:GLN:HE21	1.86	0.41
1:B:491:ILE:HD12	1:B:505:ILE:HD13	2.02	0.41
1:F:524:LYS:HB2	1:F:579:ASP:HA	2.01	0.41
1:I:521:MET:HE3	1:I:522:THR:H	1.86	0.41
1:A:297:ARG:HD3	1:A:369:THR:HG21	2.02	0.41
1:G:293:THR:HG22	1:G:334:ILE:HA	2.03	0.41
1:H:365:ARG:HG2	1:H:412:PRO:HG2	2.02	0.41
1:H:521:MET:HE3	1:H:522:THR:H	1.86	0.41
1:A:491:ILE:HD12	1:A:505:ILE:HD13	2.03	0.41
1:B:605:VAL:HB	1:B:704:GLU:HB3	2.03	0.41
1:D:491:ILE:HD12	1:D:505:ILE:HD13	2.03	0.41
1:M:554:PHE:HB2	1:M:559:SER:HB2	2.01	0.41
1:N:365:ARG:HG2	1:N:412:PRO:HG2	2.02	0.41
1:N:400:GLN:HG3	1:N:401:LEU:N	2.35	0.41
1:F:491:ILE:HD12	1:F:505:ILE:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:491:ILE:HD12	1:I:505:ILE:HD13	2.02	0.41
1:N:494:ASN:HB2	1:N:498:LEU:HA	2.01	0.41
1:G:521:MET:HE3	1:G:522:THR:H	1.86	0.41
1:K:707:ILE:HG12	1:K:721:ILE:HG12	2.02	0.41
1:L:515:GLU:HA	1:L:518:LYS:HD3	2.03	0.41
1:N:241:GLY:C	1:N:243:ILE:H	2.28	0.41
1:B:228:THR:HG23	1:B:518:LYS:HG2	2.02	0.41
1:B:521:MET:HE3	1:B:522:THR:H	1.86	0.41
1:D:297:ARG:HD3	1:D:369:THR:HG21	2.02	0.41
1:E:521:MET:HE3	1:E:522:THR:H	1.86	0.41
1:F:459:ILE:HG12	1:F:477:TRP:CD1	2.55	0.41
1:G:624:THR:HG21	1:G:689:ILE:HD11	2.02	0.41
1:M:243:ILE:HG21	1:M:252:ARG:HD2	2.03	0.41
1:A:491:ILE:HG12	1:A:589:ILE:HB	2.03	0.41
1:B:293:THR:HG22	1:B:334:ILE:HA	2.03	0.41
1:H:210:ILE:O	1:H:214:LYS:HB2	2.21	0.41
1:H:223:PRO:HD2	1:H:517:THR:HG22	2.03	0.41
1:I:261:ILE:HD13	1:I:502:GLU:HB3	2.03	0.41
1:A:513:PRO:HG2	1:B:239:VAL:O	2.22	0.40
1:E:297:ARG:HD3	1:E:369:THR:HG21	2.02	0.40
1:M:303:VAL:HG23	1:N:670:GLN:HG2	2.03	0.40
1:B:411:TYR:HB3	1:B:412:PRO:HD3	2.04	0.40
1:D:293:THR:HG22	1:D:334:ILE:HA	2.03	0.40
1:E:231:ASP:HB2	1:E:232:PRO:HD2	2.03	0.40
1:F:231:ASP:HB2	1:F:232:PRO:HD2	2.03	0.40
1:F:261:ILE:HD13	1:F:502:GLU:HB3	2.04	0.40
1:G:491:ILE:HD12	1:G:505:ILE:HD13	2.03	0.40
1:I:305:GLY:HA2	1:J:670:GLN:HG3	2.02	0.40
1:J:226:TRP:CZ2	1:J:234:SER:HB2	2.56	0.40
1:E:293:THR:HG22	1:E:334:ILE:HA	2.03	0.40
1:H:346:TRP:CZ2	1:H:446:LYS:HE3	2.57	0.40
1:K:460:ALA:HA	1:K:471:VAL:HA	2.02	0.40
1:N:710:PRO:HG3	1:N:716:THR:HG22	2.02	0.40
1:A:310:HIS:CD2	1:A:312:SER:HB2	2.56	0.40
1:B:346:TRP:CZ2	1:B:446:LYS:HE3	2.57	0.40
1:B:380:THR:HG23	1:B:395:LYS:HB2	2.04	0.40
1:I:707:ILE:HG12	1:I:721:ILE:HG12	2.04	0.40
1:K:293:THR:HG22	1:K:334:ILE:HA	2.04	0.40
1:K:620:ILE:HD11	1:K:630:ASN:HB2	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	455/568 (80%)	407 (90%)	39 (9%)	9 (2%)	6	30
1	B	509/568 (90%)	454 (89%)	49 (10%)	6 (1%)	10	43
1	C	374/568 (66%)	335 (90%)	35 (9%)	4 (1%)	11	45
1	D	529/568 (93%)	473 (89%)	49 (9%)	7 (1%)	9	41
1	E	506/568 (89%)	457 (90%)	43 (8%)	6 (1%)	10	43
1	F	449/568 (79%)	402 (90%)	41 (9%)	6 (1%)	9	41
1	G	510/568 (90%)	460 (90%)	45 (9%)	5 (1%)	12	48
1	H	479/568 (84%)	424 (88%)	46 (10%)	9 (2%)	6	31
1	I	519/568 (91%)	460 (89%)	52 (10%)	7 (1%)	9	41
1	J	452/568 (80%)	401 (89%)	39 (9%)	12 (3%)	4	25
1	K	474/568 (84%)	424 (90%)	44 (9%)	6 (1%)	9	41
1	L	388/568 (68%)	347 (89%)	36 (9%)	5 (1%)	9	41
1	M	459/568 (81%)	403 (88%)	48 (10%)	8 (2%)	7	35
1	N	466/568 (82%)	415 (89%)	40 (9%)	11 (2%)	4	26
All	All	6569/7952 (83%)	5862 (89%)	606 (9%)	101 (2%)	8	39

All (101) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	M	587	MET
1	N	413	SER
1	B	422	ASN
1	I	304	HIS
1	J	715	ASP
1	K	481	LEU
1	L	506	ALA
1	A	197	LYS
1	A	304	HIS

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Mol	Chain	Res	Type
1	A	389	GLN
1	A	422	ASN
1	B	197	LYS
1	B	389	GLN
1	C	197	LYS
1	C	389	GLN
1	D	197	LYS
1	D	389	GLN
1	E	389	GLN
1	F	197	LYS
1	F	304	HIS
1	F	389	GLN
1	G	197	LYS
1	G	389	GLN
1	H	197	LYS
1	H	214	LYS
1	H	215	GLY
1	H	304	HIS
1	H	389	GLN
1	H	422	ASN
1	I	197	LYS
1	I	389	GLN
1	I	422	ASN
1	J	197	LYS
1	J	230	SER
1	J	304	HIS
1	J	389	GLN
1	J	422	ASN
1	J	711	SER
1	K	197	LYS
1	K	389	GLN
1	K	506	ALA
1	L	197	LYS
1	L	389	GLN
1	M	197	LYS
1	M	389	GLN
1	N	197	LYS
1	N	208	SER
1	N	389	GLN
1	N	422	ASN
1	N	544	GLY
1	A	345	THR

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Mol	Chain	Res	Type
1	B	345	THR
1	C	345	THR
1	D	304	HIS
1	D	319	SER
1	D	345	THR
1	E	345	THR
1	E	422	ASN
1	G	345	THR
1	H	345	THR
1	I	345	THR
1	J	345	THR
1	K	345	THR
1	L	345	THR
1	M	304	HIS
1	M	345	THR
1	N	345	THR
1	N	498	LEU
1	N	536	PRO
1	N	538	GLY
1	A	319	SER
1	A	536	PRO
1	B	238	LYS
1	B	536	PRO
1	C	536	PRO
1	D	536	PRO
1	E	326	ASN
1	E	536	PRO
1	F	319	SER
1	F	536	PRO
1	G	464	PHE
1	G	536	PRO
1	H	536	PRO
1	I	536	PRO
1	J	210	ILE
1	J	319	SER
1	J	536	PRO
1	K	536	PRO
1	L	536	PRO
1	M	536	PRO
1	A	305	GLY
1	A	306	ASN
1	E	197	LYS

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Mol	Chain	Res	Type
1	F	305	GLY
1	H	305	GLY
1	I	305	GLY
1	D	305	GLY
1	J	305	GLY
1	M	305	GLY
1	M	467	GLY
1	N	532	GLY

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	418/504 (83%)	387 (93%)	31 (7%)	13	33
1	B	465/504 (92%)	435 (94%)	30 (6%)	15	37
1	C	349/504 (69%)	326 (93%)	23 (7%)	15	37
1	D	482/504 (96%)	448 (93%)	34 (7%)	13	35
1	E	462/504 (92%)	429 (93%)	33 (7%)	13	35
1	F	416/504 (82%)	383 (92%)	33 (8%)	11	32
1	G	468/504 (93%)	436 (93%)	32 (7%)	14	36
1	H	439/504 (87%)	407 (93%)	32 (7%)	13	34
1	I	473/504 (94%)	440 (93%)	33 (7%)	14	36
1	J	419/504 (83%)	388 (93%)	31 (7%)	13	33
1	K	438/504 (87%)	406 (93%)	32 (7%)	13	34
1	L	362/504 (72%)	336 (93%)	26 (7%)	13	35
1	M	419/504 (83%)	380 (91%)	39 (9%)	8	26
1	N	432/504 (86%)	393 (91%)	39 (9%)	9	27
All	All	6042/7056 (86%)	5594 (93%)	448 (7%)	13	33

All (448) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	190	GLU
1	A	210	ILE
1	A	217	THR
1	A	246	ASN
1	A	252	ARG
1	A	274	ASN
1	A	289	ILE
1	A	308	GLU
1	A	324	PHE
1	A	344	ARG
1	A	361	ASN
1	A	363	ASN
1	A	380	THR
1	A	394	ILE
1	A	419	ILE
1	A	432	ILE
1	A	459	ILE
1	A	478	SER
1	A	481	LEU
1	A	517	THR
1	A	537	ASN
1	A	560	GLN
1	A	579	ASP
1	A	590	LEU
1	A	603	ILE
1	A	614	GLU
1	A	617	ARG
1	A	630	ASN
1	A	664	ASN
1	A	674	THR
1	A	708	ILE
1	B	190	GLU
1	B	210	ILE
1	B	274	ASN
1	B	285	GLN
1	B	289	ILE
1	B	344	ARG
1	B	361	ASN
1	B	363	ASN
1	B	380	THR
1	B	394	ILE
1	B	419	ILE
1	B	432	ILE

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Mol	Chain	Res	Type
1	B	459	ILE
1	B	466	ASN
1	B	478	SER
1	B	517	THR
1	B	537	ASN
1	B	560	GLN
1	B	579	ASP
1	B	590	LEU
1	B	603	ILE
1	B	612	VAL
1	B	614	GLU
1	B	664	ASN
1	B	674	THR
1	B	676	ILE
1	B	678	PHE
1	B	689	ILE
1	B	708	ILE
1	B	726	ILE
1	C	210	ILE
1	C	246	ASN
1	C	252	ARG
1	C	274	ASN
1	C	344	ARG
1	C	361	ASN
1	C	363	ASN
1	C	368	ASN
1	C	380	THR
1	C	394	ILE
1	C	419	ILE
1	C	432	ILE
1	C	459	ILE
1	C	478	SER
1	C	481	LEU
1	C	517	THR
1	C	537	ASN
1	C	560	GLN
1	C	579	ASP
1	C	590	LEU
1	C	593	ASP
1	C	603	ILE
1	C	664	ASN
1	D	190	GLU

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Mol	Chain	Res	Type
1	D	210	ILE
1	D	246	ASN
1	D	252	ARG
1	D	274	ASN
1	D	289	ILE
1	D	343	GLU
1	D	344	ARG
1	D	361	ASN
1	D	363	ASN
1	D	380	THR
1	D	394	ILE
1	D	419	ILE
1	D	432	ILE
1	D	459	ILE
1	D	478	SER
1	D	481	LEU
1	D	517	THR
1	D	537	ASN
1	D	560	GLN
1	D	579	ASP
1	D	590	LEU
1	D	603	ILE
1	D	612	VAL
1	D	614	GLU
1	D	661	ASP
1	D	664	ASN
1	D	674	THR
1	D	676	ILE
1	D	678	PHE
1	D	684	LYS
1	D	689	ILE
1	D	708	ILE
1	D	726	ILE
1	E	190	GLU
1	E	203	LEU
1	E	234	SER
1	E	252	ARG
1	E	274	ASN
1	E	344	ARG
1	E	361	ASN
1	E	363	ASN
1	E	380	THR

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Mol	Chain	Res	Type
1	E	394	ILE
1	E	409	ASN
1	E	419	ILE
1	E	432	ILE
1	E	459	ILE
1	E	478	SER
1	E	481	LEU
1	E	517	THR
1	E	537	ASN
1	E	560	GLN
1	E	579	ASP
1	E	590	LEU
1	E	603	ILE
1	E	612	VAL
1	E	614	GLU
1	E	664	ASN
1	E	669	ARG
1	E	674	THR
1	E	676	ILE
1	E	678	PHE
1	E	689	ILE
1	E	708	ILE
1	E	725	LEU
1	E	726	ILE
1	F	190	GLU
1	F	210	ILE
1	F	217	THR
1	F	246	ASN
1	F	252	ARG
1	F	274	ASN
1	F	324	PHE
1	F	361	ASN
1	F	363	ASN
1	F	368	ASN
1	F	376	ASN
1	F	380	THR
1	F	394	ILE
1	F	419	ILE
1	F	432	ILE
1	F	459	ILE
1	F	475	SER
1	F	476	ASN

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Mol	Chain	Res	Type
1	F	481	LEU
1	F	517	THR
1	F	537	ASN
1	F	560	GLN
1	F	579	ASP
1	F	590	LEU
1	F	603	ILE
1	F	612	VAL
1	F	614	GLU
1	F	664	ASN
1	F	674	THR
1	F	676	ILE
1	F	678	PHE
1	F	708	ILE
1	F	726	ILE
1	G	190	GLU
1	G	210	ILE
1	G	217	THR
1	G	252	ARG
1	G	274	ASN
1	G	289	ILE
1	G	344	ARG
1	G	361	ASN
1	G	363	ASN
1	G	380	THR
1	G	394	ILE
1	G	419	ILE
1	G	432	ILE
1	G	459	ILE
1	G	478	SER
1	G	479	GLU
1	G	481	LEU
1	G	517	THR
1	G	537	ASN
1	G	551	ASP
1	G	560	GLN
1	G	579	ASP
1	G	590	LEU
1	G	603	ILE
1	G	612	VAL
1	G	614	GLU
1	G	664	ASN

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Mol	Chain	Res	Type
1	G	674	THR
1	G	678	PHE
1	G	689	ILE
1	G	708	ILE
1	G	726	ILE
1	H	187	LEU
1	H	210	ILE
1	H	217	THR
1	H	252	ARG
1	H	274	ASN
1	H	308	GLU
1	H	344	ARG
1	H	361	ASN
1	H	363	ASN
1	H	380	THR
1	H	394	ILE
1	H	419	ILE
1	H	432	ILE
1	H	459	ILE
1	H	478	SER
1	H	481	LEU
1	H	514	LEU
1	H	515	GLU
1	H	517	THR
1	H	537	ASN
1	H	560	GLN
1	H	579	ASP
1	H	590	LEU
1	H	603	ILE
1	H	612	VAL
1	H	614	GLU
1	H	664	ASN
1	H	674	THR
1	H	676	ILE
1	H	678	PHE
1	H	689	ILE
1	H	708	ILE
1	I	190	GLU
1	I	210	ILE
1	I	217	THR
1	I	234	SER
1	I	252	ARG

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Mol	Chain	Res	Type
1	I	274	ASN
1	I	289	ILE
1	I	344	ARG
1	I	361	ASN
1	I	363	ASN
1	I	380	THR
1	I	394	ILE
1	I	419	ILE
1	I	432	ILE
1	I	459	ILE
1	I	478	SER
1	I	481	LEU
1	I	490	ARG
1	I	517	THR
1	I	537	ASN
1	I	560	GLN
1	I	579	ASP
1	I	590	LEU
1	I	603	ILE
1	I	612	VAL
1	I	614	GLU
1	I	664	ASN
1	I	674	THR
1	I	676	ILE
1	I	678	PHE
1	I	689	ILE
1	I	708	ILE
1	I	726	ILE
1	J	185	ASP
1	J	190	GLU
1	J	210	ILE
1	J	217	THR
1	J	230	SER
1	J	252	ARG
1	J	274	ASN
1	J	289	ILE
1	J	344	ARG
1	J	361	ASN
1	J	363	ASN
1	J	380	THR
1	J	394	ILE
1	J	419	ILE

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Mol	Chain	Res	Type
1	J	432	ILE
1	J	459	ILE
1	J	478	SER
1	J	480	VAL
1	J	511	SER
1	J	537	ASN
1	J	560	GLN
1	J	579	ASP
1	J	590	LEU
1	J	603	ILE
1	J	612	VAL
1	J	614	GLU
1	J	664	ASN
1	J	674	THR
1	J	676	ILE
1	J	678	PHE
1	J	708	ILE
1	K	190	GLU
1	K	210	ILE
1	K	217	THR
1	K	230	SER
1	K	252	ARG
1	K	274	ASN
1	K	289	ILE
1	K	344	ARG
1	K	361	ASN
1	K	363	ASN
1	K	380	THR
1	K	394	ILE
1	K	419	ILE
1	K	432	ILE
1	K	459	ILE
1	K	480	VAL
1	K	481	LEU
1	K	515	GLU
1	K	517	THR
1	K	537	ASN
1	K	560	GLN
1	K	579	ASP
1	K	590	LEU
1	K	603	ILE
1	K	612	VAL

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Mol	Chain	Res	Type
1	K	614	GLU
1	K	664	ASN
1	K	674	THR
1	K	676	ILE
1	K	678	PHE
1	K	708	ILE
1	K	726	ILE
1	L	190	GLU
1	L	194	VAL
1	L	210	ILE
1	L	228	THR
1	L	274	ASN
1	L	296	SER
1	L	344	ARG
1	L	361	ASN
1	L	376	ASN
1	L	380	THR
1	L	382	SER
1	L	394	ILE
1	L	419	ILE
1	L	432	ILE
1	L	459	ILE
1	L	464	PHE
1	L	481	LEU
1	L	514	LEU
1	L	537	ASN
1	L	560	GLN
1	L	579	ASP
1	L	590	LEU
1	L	612	VAL
1	L	614	GLU
1	L	705	ASN
1	L	708	ILE
1	M	190	GLU
1	M	210	ILE
1	M	217	THR
1	M	230	SER
1	M	250	GLU
1	M	252	ARG
1	M	274	ASN
1	M	289	ILE
1	M	344	ARG

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Mol	Chain	Res	Type
1	M	361	ASN
1	M	363	ASN
1	M	376	ASN
1	M	380	THR
1	M	394	ILE
1	M	402	SER
1	M	419	ILE
1	M	432	ILE
1	M	459	ILE
1	M	469	VAL
1	M	480	VAL
1	M	481	LEU
1	M	514	LEU
1	M	517	THR
1	M	537	ASN
1	M	560	GLN
1	M	579	ASP
1	M	584	ASN
1	M	587	MET
1	M	590	LEU
1	M	603	ILE
1	M	612	VAL
1	M	614	GLU
1	M	664	ASN
1	M	674	THR
1	M	676	ILE
1	M	678	PHE
1	M	689	ILE
1	M	708	ILE
1	M	726	ILE
1	N	190	GLU
1	N	203	LEU
1	N	209	ASN
1	N	210	ILE
1	N	214	LYS
1	N	246	ASN
1	N	252	ARG
1	N	274	ASN
1	N	344	ARG
1	N	361	ASN
1	N	363	ASN
1	N	364	ILE

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Mol	Chain	Res	Type
1	N	365	ARG
1	N	380	THR
1	N	394	ILE
1	N	399	ASN
1	N	404	ILE
1	N	419	ILE
1	N	432	ILE
1	N	459	ILE
1	N	478	SER
1	N	481	LEU
1	N	517	THR
1	N	534	ASN
1	N	560	GLN
1	N	579	ASP
1	N	590	LEU
1	N	603	ILE
1	N	612	VAL
1	N	614	GLU
1	N	664	ASN
1	N	674	THR
1	N	676	ILE
1	N	678	PHE
1	N	689	ILE
1	N	702	THR
1	N	706	THR
1	N	707	ILE
1	N	708	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (209) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	180	ASN
1	A	198	ASN
1	A	209	ASN
1	A	246	ASN
1	A	363	ASN
1	A	376	ASN
1	A	408	ASN
1	A	458	ASN
1	A	463	ASN
1	A	543	GLN
1	A	553	ASN

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Mol	Chain	Res	Type
1	A	560	GLN
1	A	564	ASN
1	A	597	HIS
1	A	664	ASN
1	B	198	ASN
1	B	209	ASN
1	B	363	ASN
1	B	408	ASN
1	B	415	ASN
1	B	458	ASN
1	B	543	GLN
1	B	553	ASN
1	B	564	ASN
1	B	588	ASN
1	B	621	ASN
1	B	630	ASN
1	B	691	ASN
1	B	693	ASN
1	C	180	ASN
1	C	198	ASN
1	C	209	ASN
1	C	246	ASN
1	C	363	ASN
1	C	458	ASN
1	C	463	ASN
1	C	485	GLN
1	C	543	GLN
1	C	564	ASN
1	D	180	ASN
1	D	198	ASN
1	D	209	ASN
1	D	246	ASN
1	D	363	ASN
1	D	368	ASN
1	D	376	ASN
1	D	408	ASN
1	D	415	ASN
1	D	458	ASN
1	D	463	ASN
1	D	483	GLN
1	D	485	GLN
1	D	543	GLN

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Mol	Chain	Res	Type
1	D	553	ASN
1	D	556	GLN
1	D	564	ASN
1	D	621	ASN
1	D	630	ASN
1	D	691	ASN
1	D	693	ASN
1	D	709	ASN
1	E	180	ASN
1	E	363	ASN
1	E	376	ASN
1	E	408	ASN
1	E	458	ASN
1	E	463	ASN
1	E	485	GLN
1	E	509	ASN
1	E	543	GLN
1	E	553	ASN
1	E	564	ASN
1	E	621	ASN
1	E	630	ASN
1	E	657	ASN
1	E	709	ASN
1	F	198	ASN
1	F	209	ASN
1	F	246	ASN
1	F	363	ASN
1	F	415	ASN
1	F	458	ASN
1	F	463	ASN
1	F	485	GLN
1	F	543	GLN
1	F	553	ASN
1	F	560	GLN
1	F	564	ASN
1	F	630	ASN
1	F	709	ASN
1	G	180	ASN
1	G	198	ASN
1	G	209	ASN
1	G	363	ASN
1	G	376	ASN

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Mol	Chain	Res	Type
1	G	408	ASN
1	G	415	ASN
1	G	458	ASN
1	G	463	ASN
1	G	485	GLN
1	G	509	ASN
1	G	543	GLN
1	G	553	ASN
1	G	560	GLN
1	G	564	ASN
1	G	621	ASN
1	G	630	ASN
1	H	180	ASN
1	H	198	ASN
1	H	209	ASN
1	H	263	HIS
1	H	408	ASN
1	H	454	GLN
1	H	458	ASN
1	H	463	ASN
1	H	485	GLN
1	H	543	GLN
1	H	553	ASN
1	H	564	ASN
1	H	621	ASN
1	H	630	ASN
1	H	709	ASN
1	I	180	ASN
1	I	198	ASN
1	I	274	ASN
1	I	363	ASN
1	I	376	ASN
1	I	458	ASN
1	I	463	ASN
1	I	483	GLN
1	I	543	GLN
1	I	560	GLN
1	I	564	ASN
1	I	621	ASN
1	I	630	ASN
1	I	709	ASN
1	J	180	ASN

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Mol	Chain	Res	Type
1	J	198	ASN
1	J	246	ASN
1	J	363	ASN
1	J	408	ASN
1	J	415	ASN
1	J	458	ASN
1	J	463	ASN
1	J	476	ASN
1	J	543	GLN
1	J	553	ASN
1	J	560	GLN
1	J	564	ASN
1	J	630	ASN
1	J	709	ASN
1	K	180	ASN
1	K	198	ASN
1	K	246	ASN
1	K	363	ASN
1	K	463	ASN
1	K	509	ASN
1	K	543	GLN
1	K	553	ASN
1	K	560	GLN
1	K	564	ASN
1	K	621	ASN
1	K	630	ASN
1	L	198	ASN
1	L	263	HIS
1	L	292	ASN
1	L	368	ASN
1	L	408	ASN
1	L	458	ASN
1	L	463	ASN
1	L	509	ASN
1	L	543	GLN
1	L	553	ASN
1	L	564	ASN
1	L	709	ASN
1	M	180	ASN
1	M	198	ASN
1	M	246	ASN
1	M	263	HIS

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Mol	Chain	Res	Type
1	M	363	ASN
1	M	400	GLN
1	M	458	ASN
1	M	463	ASN
1	M	499	ASN
1	M	543	GLN
1	M	553	ASN
1	M	560	GLN
1	M	564	ASN
1	M	584	ASN
1	M	709	ASN
1	N	180	ASN
1	N	198	ASN
1	N	246	ASN
1	N	376	ASN
1	N	399	ASN
1	N	400	GLN
1	N	454	GLN
1	N	458	ASN
1	N	483	GLN
1	N	485	GLN
1	N	534	ASN
1	N	543	GLN
1	N	553	ASN
1	N	560	GLN
1	N	564	ASN
1	N	630	ASN
1	N	670	GLN
1	N	691	ASN
1	N	705	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](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [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	471/568 (82%)	0.22	12 (2%) 58 49	257, 257, 257, 257	0
1	B	519/568 (91%)	0.38	25 (4%) 35 35	257, 257, 257, 257	0
1	C	388/568 (68%)	0.13	10 (2%) 57 48	257, 257, 257, 257	0
1	D	539/568 (94%)	0.43	39 (7%) 21 26	257, 257, 257, 257	0
1	E	516/568 (90%)	0.27	12 (2%) 61 52	257, 257, 257, 257	0
1	F	467/568 (82%)	0.34	14 (2%) 52 45	257, 257, 257, 257	0
1	G	520/568 (91%)	0.24	16 (3%) 51 44	257, 257, 257, 257	0
1	H	493/568 (86%)	0.46	27 (5%) 30 32	257, 257, 257, 257	0
1	I	529/568 (93%)	0.24	18 (3%) 48 43	257, 257, 257, 257	0
1	J	470/568 (82%)	0.21	14 (2%) 52 45	257, 257, 257, 257	0
1	K	488/568 (85%)	0.32	25 (5%) 33 34	257, 257, 257, 257	0
1	L	404/568 (71%)	0.11	11 (2%) 56 47	257, 257, 257, 257	0
1	M	473/568 (83%)	0.22	11 (2%) 61 52	257, 257, 257, 257	0
1	N	480/568 (84%)	0.31	24 (5%) 34 34	257, 257, 257, 257	0
All	All	6757/7952 (84%)	0.28	258 (3%) 44 41	257, 257, 257, 257	0

All (258) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	604	ALA	7.3
1	N	607	ALA	6.8
1	D	229	ALA	4.9
1	B	255	LEU	4.9
1	F	346	TRP	4.7
1	K	721	ILE	4.6
1	G	255	LEU	4.6
1	F	255	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
1	N	638	ILE	4.3
1	D	355	ALA	4.2
1	B	374	ILE	4.2
1	H	255	LEU	4.0
1	F	500	LEU	4.0
1	M	604	ALA	4.0
1	F	366	TYR	3.9
1	H	718	THR	3.8
1	B	264	VAL	3.7
1	N	606	GLY	3.7
1	D	498	LEU	3.7
1	M	703	LYS	3.7
1	B	366	TYR	3.7
1	E	635	ILE	3.6
1	I	264	VAL	3.6
1	D	394	ILE	3.6
1	E	396	ALA	3.6
1	F	311	ALA	3.6
1	B	505	ILE	3.6
1	G	471	VAL	3.5
1	D	383	LEU	3.5
1	D	264	VAL	3.5
1	D	232	PRO	3.5
1	D	604	ALA	3.5
1	C	336	HIS	3.5
1	N	637	LYS	3.5
1	G	366	TYR	3.5
1	D	258	ALA	3.4
1	J	334	ILE	3.4
1	I	358	ALA	3.4
1	H	500	LEU	3.4
1	L	562	ILE	3.4
1	I	607	ALA	3.4
1	L	203	LEU	3.4
1	H	670	GLN	3.4
1	K	442	LEU	3.3
1	H	396	ALA	3.3
1	I	224	GLU	3.3
1	M	325	SER	3.3
1	B	243	ILE	3.3
1	B	506	ALA	3.3
1	J	375	TYR	3.3

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Mol	Chain	Res	Type	RSRZ
1	G	264	VAL	3.3
1	L	442	LEU	3.2
1	E	505	ILE	3.2
1	C	264	VAL	3.2
1	J	707	ILE	3.2
1	I	232	PRO	3.2
1	B	375	TYR	3.2
1	D	233	TYR	3.2
1	N	300	THR	3.1
1	G	657	ASN	3.1
1	B	405	LEU	3.1
1	K	396	ALA	3.1
1	H	228	THR	3.1
1	G	643	ILE	3.1
1	H	639	LEU	3.1
1	E	255	LEU	3.0
1	H	442	LEU	3.0
1	N	325	SER	3.0
1	M	687	LEU	3.0
1	B	373	PRO	2.9
1	N	635	ILE	2.9
1	M	182	GLY	2.9
1	A	243	ILE	2.9
1	G	498	LEU	2.9
1	H	506	ALA	2.9
1	C	506	ALA	2.9
1	N	224	GLU	2.9
1	D	366	TYR	2.9
1	I	434	MET	2.9
1	L	420	ALA	2.9
1	B	332	VAL	2.9
1	K	616	HIS	2.9
1	N	217	THR	2.9
1	N	255	LEU	2.9
1	N	506	ALA	2.8
1	F	312	SER	2.8
1	D	378	LEU	2.8
1	D	226	TRP	2.8
1	F	530	ALA	2.8
1	K	183	ILE	2.8
1	L	240	THR	2.8
1	M	607	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
1	N	232	PRO	2.8
1	E	178	ARG	2.8
1	A	233	TYR	2.8
1	E	262	VAL	2.8
1	D	635	ILE	2.7
1	A	607	ALA	2.7
1	K	461	THR	2.7
1	K	239	VAL	2.7
1	E	432	ILE	2.7
1	J	228	THR	2.7
1	K	405	LEU	2.7
1	M	530	ALA	2.7
1	I	604	ALA	2.7
1	D	228	THR	2.7
1	K	417	ALA	2.6
1	J	721	ILE	2.6
1	G	194	VAL	2.6
1	K	416	LEU	2.6
1	H	552	PHE	2.6
1	F	505	ILE	2.6
1	K	429	SER	2.6
1	K	506	ALA	2.6
1	B	498	LEU	2.6
1	N	566	LEU	2.6
1	A	405	LEU	2.6
1	B	290	SER	2.6
1	I	299	HIS	2.6
1	H	498	LEU	2.6
1	I	402	SER	2.6
1	A	476	ASN	2.6
1	F	262	VAL	2.6
1	I	255	LEU	2.6
1	D	326	ASN	2.5
1	E	296	SER	2.5
1	F	232	PRO	2.5
1	I	439	PHE	2.5
1	H	203	LEU	2.5
1	J	386	GLY	2.5
1	L	559	SER	2.5
1	B	462	TYR	2.5
1	J	233	TYR	2.5
1	A	442	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	D	505	ILE	2.5
1	J	299	HIS	2.5
1	N	180	ASN	2.5
1	K	327	SER	2.5
1	N	596	PHE	2.5
1	D	467	GLY	2.5
1	B	396	ALA	2.5
1	M	262	VAL	2.5
1	G	687	LEU	2.4
1	D	707	ILE	2.4
1	N	718	THR	2.4
1	F	442	LEU	2.4
1	C	228	THR	2.4
1	A	373	PRO	2.4
1	J	338	LEU	2.4
1	K	404	ILE	2.4
1	D	254	PRO	2.4
1	E	607	ALA	2.4
1	D	596	PHE	2.4
1	H	232	PRO	2.4
1	D	607	ALA	2.4
1	J	404	ILE	2.4
1	D	450	LEU	2.4
1	C	461	THR	2.4
1	F	552	PHE	2.4
1	I	506	ALA	2.4
1	D	637	LYS	2.4
1	I	396	ALA	2.3
1	D	706	THR	2.3
1	A	612	VAL	2.3
1	H	411	TYR	2.3
1	N	233	TYR	2.3
1	A	300	THR	2.3
1	D	299	HIS	2.3
1	L	396	ALA	2.3
1	K	217	THR	2.3
1	M	217	THR	2.3
1	N	240	THR	2.3
1	A	616	HIS	2.3
1	B	448	LEU	2.3
1	E	366	TYR	2.3
1	G	707	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
1	D	375	TYR	2.2
1	H	464	PHE	2.2
1	N	375	TYR	2.2
1	A	249	PRO	2.2
1	I	325	SER	2.2
1	D	311	ALA	2.2
1	G	262	VAL	2.2
1	H	566	LEU	2.2
1	J	303	VAL	2.2
1	G	635	ILE	2.2
1	H	603	ILE	2.2
1	B	445	THR	2.2
1	C	414	LYS	2.2
1	D	257	ALA	2.2
1	K	294	SER	2.2
1	C	255	LEU	2.2
1	N	657	ASN	2.2
1	M	525	GLU	2.2
1	G	442	LEU	2.2
1	N	366	TYR	2.2
1	F	354	THR	2.2
1	K	290	SER	2.2
1	L	327	SER	2.2
1	L	429	SER	2.2
1	I	492	ILE	2.2
1	N	554	PHE	2.2
1	E	391	LEU	2.2
1	N	194	VAL	2.2
1	J	383	LEU	2.2
1	D	376	ASN	2.2
1	H	703	LYS	2.2
1	J	679	LYS	2.2
1	M	331	THR	2.2
1	C	366	TYR	2.2
1	K	194	VAL	2.2
1	H	229	ALA	2.1
1	K	411	TYR	2.1
1	K	350	MET	2.1
1	I	225	LYS	2.1
1	H	259	TYR	2.1
1	A	258	ALA	2.1
1	D	486	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	J	229	ALA	2.1
1	D	262	VAL	2.1
1	H	375	TYR	2.1
1	K	366	TYR	2.1
1	H	318	GLY	2.1
1	K	607	ALA	2.1
1	C	404	ILE	2.1
1	L	552	PHE	2.1
1	B	635	ILE	2.1
1	H	605	VAL	2.1
1	I	233	TYR	2.1
1	B	552	PHE	2.1
1	K	640	SER	2.1
1	H	480	VAL	2.1
1	D	456	TYR	2.1
1	G	421	LEU	2.1
1	H	616	HIS	2.1
1	C	420	ALA	2.1
1	D	506	ALA	2.1
1	G	644	VAL	2.1
1	D	687	LEU	2.0
1	L	634	ASP	2.0
1	D	500	LEU	2.0
1	I	703	LYS	2.0
1	B	411	TYR	2.0
1	D	462	TYR	2.0
1	K	259	TYR	2.0
1	N	552	PHE	2.0
1	F	420	ALA	2.0
1	D	458	ASN	2.0
1	H	239	VAL	2.0
1	K	292	ASN	2.0
1	B	227	SER	2.0
1	B	402	SER	2.0
1	B	181	ASP	2.0
1	B	194	VAL	2.0
1	B	228	THR	2.0
1	E	705	ASN	2.0
1	D	255	LEU	2.0
1	G	325	SER	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 [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.