Full wwPDB EM Validation Report ⓘ

Dec 17, 2022 – 08:22 am GMT

PDB ID	:	6Z05
EMDB ID	:	EMD-11003
Title	:	Campylobacter jejuni serine protease HtrA
Authors	:	Grinzato, A.; Kandiah, E.; Zanotti, G.
Deposited on	:	2020-05-07
Resolution	:	5.80 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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:

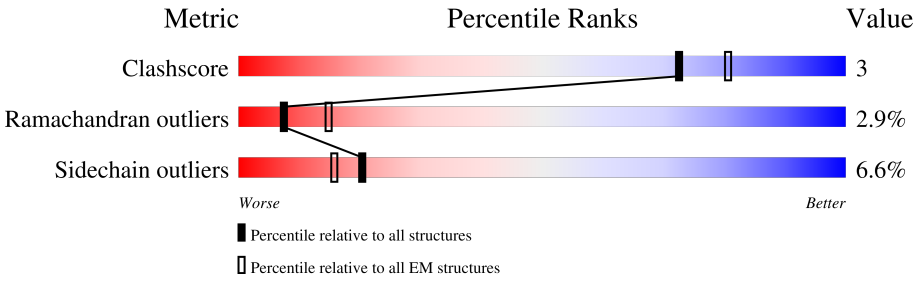
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 5.80 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.



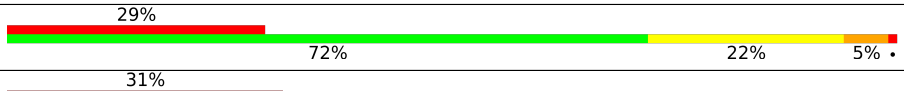
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	434	32% 68% 26% 5%
1	B	434	28% 68% 28%
1	C	434	31% 73% 22% 5%
1	D	434	28% 70% 23% 6%
1	E	434	28% 71% 22% 6%
1	F	434	31% 68% 26% 5%
1	G	434	27% 71% 24% 6%
1	H	434	30% 69% 24% 6%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	I	434	
1	J	434	
1	K	434	
1	L	434	

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 39875 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 DegQ family serine endoprotease.

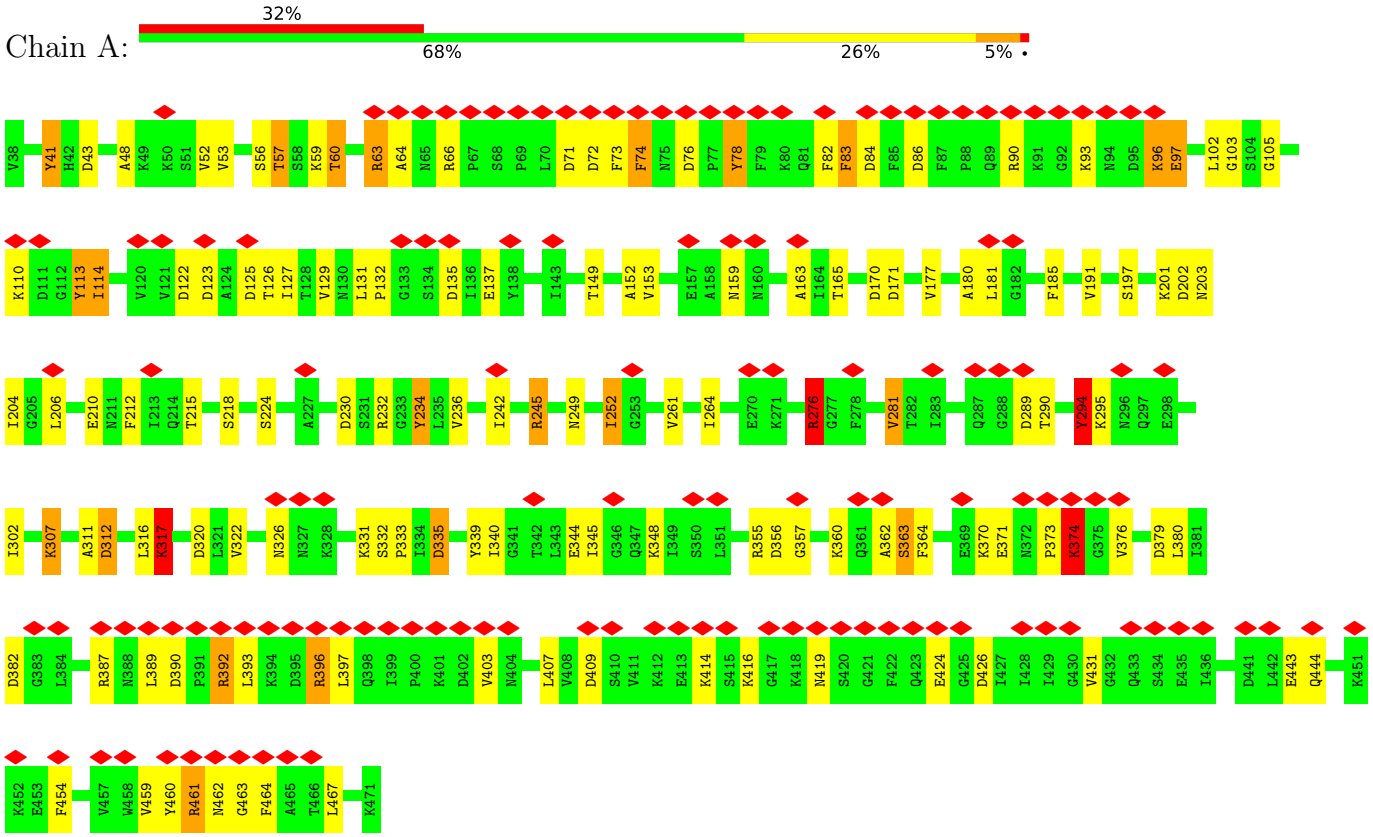
Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	B	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	C	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	D	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	E	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	F	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	G	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	H	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	I	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	J	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	K	434	Total	C	N	O	S	0	0
			3323	2096	570	655	2		
1	L	434	Total	C	N	O	S	0	0
			3322	2096	570	654	2		

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

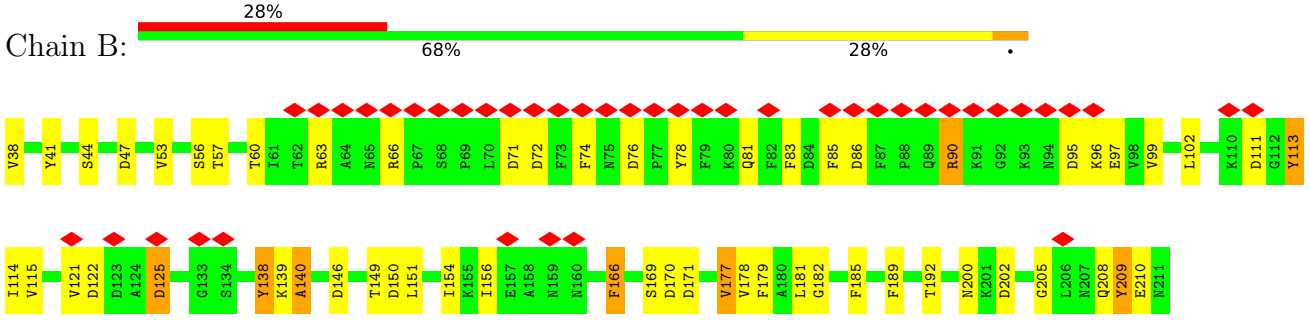
• Molecule 1: DegQ family serine endoprotease

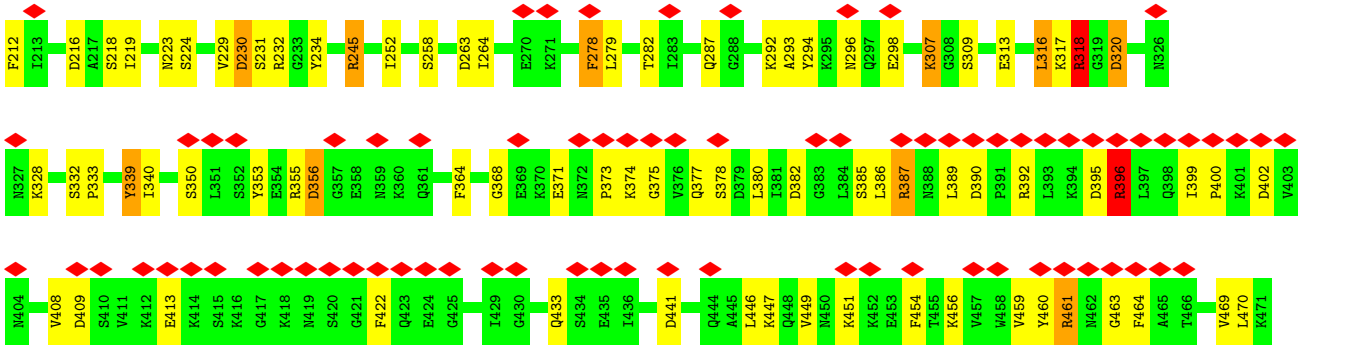
Chain A:



• Molecule 1: DegQ family serine endoprotease

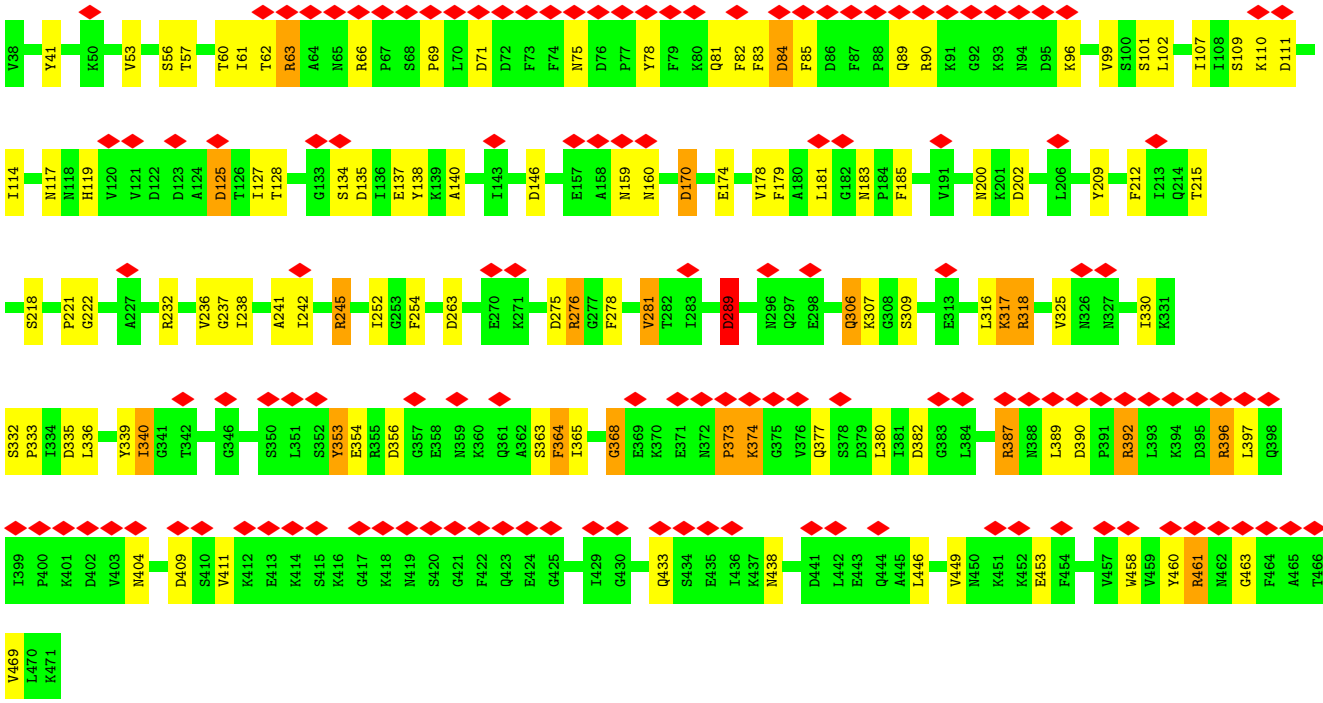
Chain B:





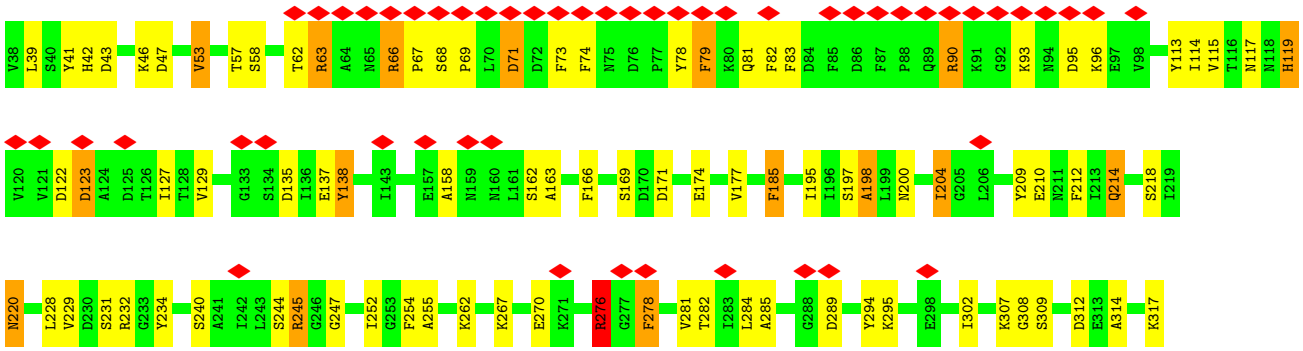
• Molecule 1: DegQ family serine endoprotease

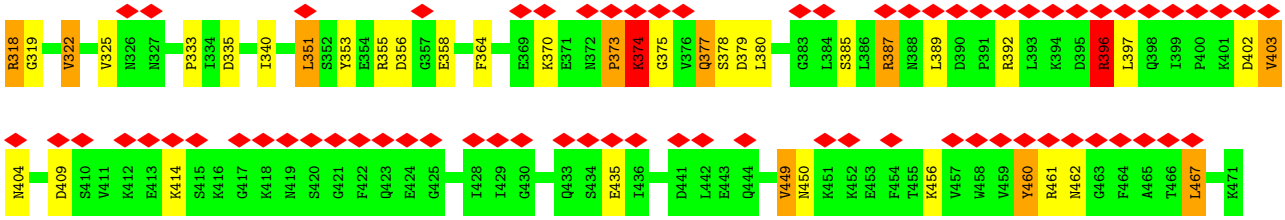
Chain C:



• Molecule 1: DegQ family serine endoprotease

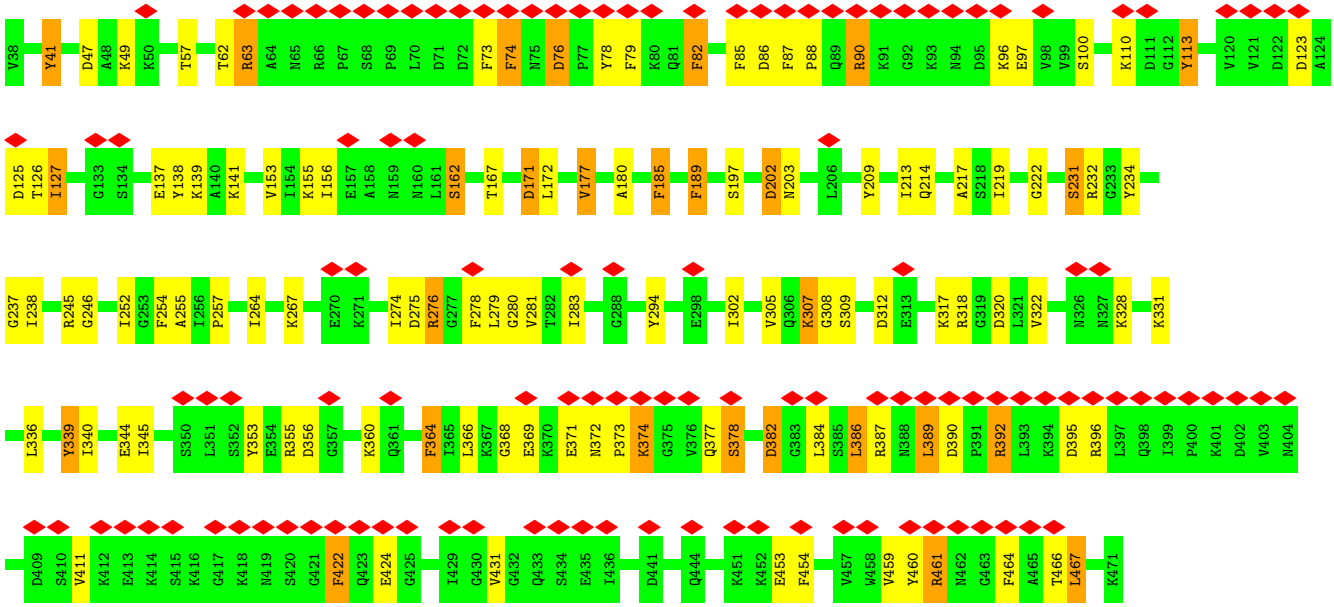
Chain D:





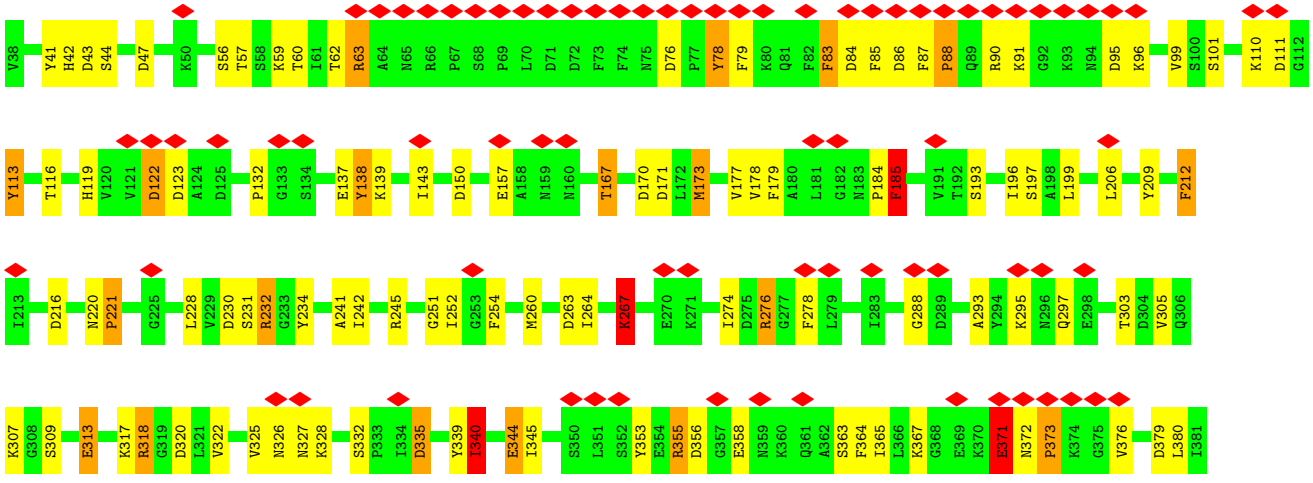
• Molecule 1: DegQ family serine endoprotease

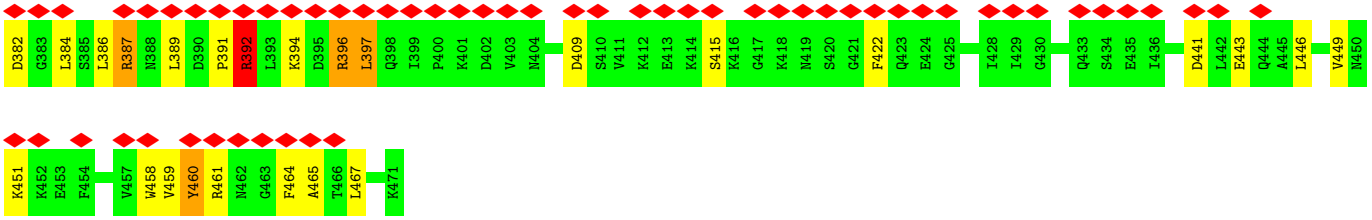
Chain E:



• Molecule 1: DegQ family serine endoprotease

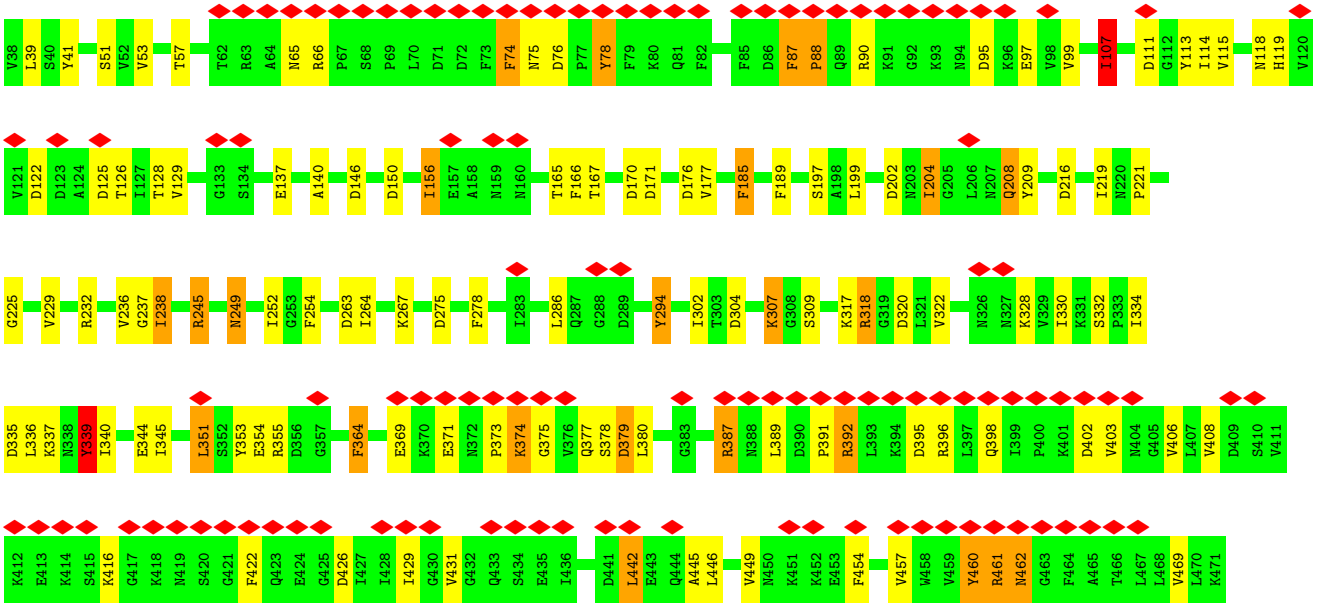
Chain F:





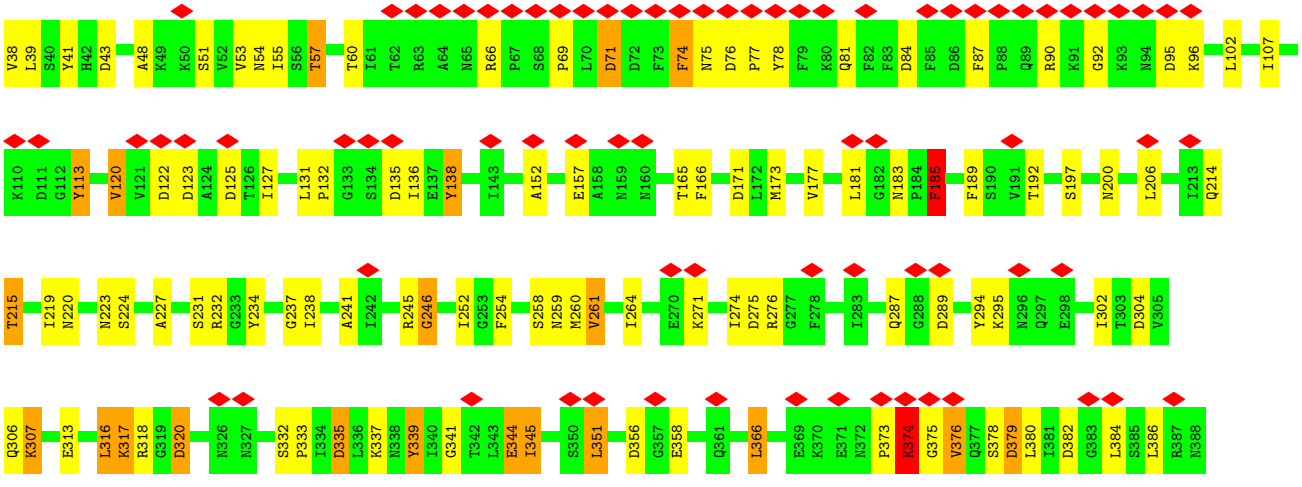
• Molecule 1: DegQ family serine endoprotease

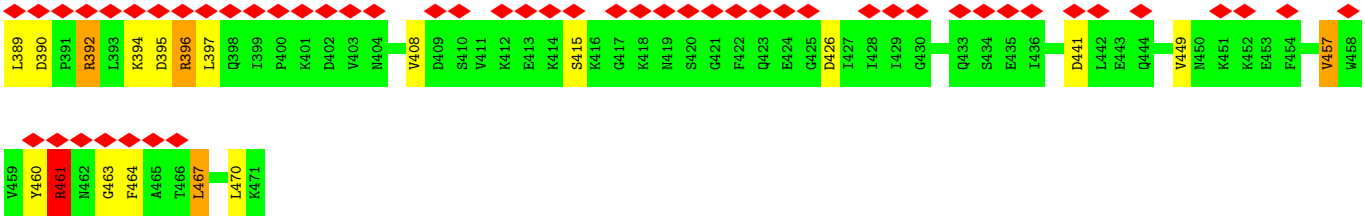
Chain G:



• Molecule 1: DegQ family serine endoprotease

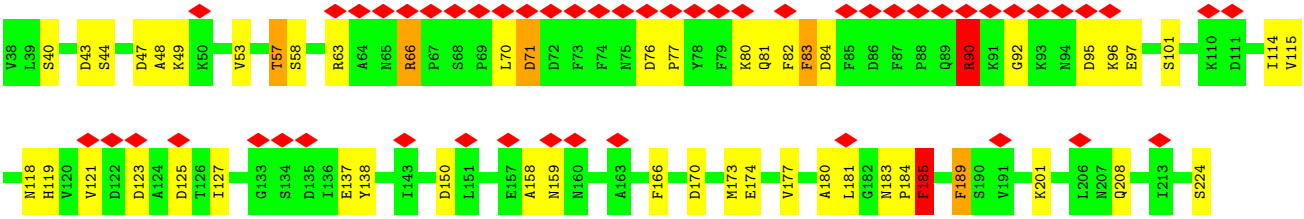
Chain H:





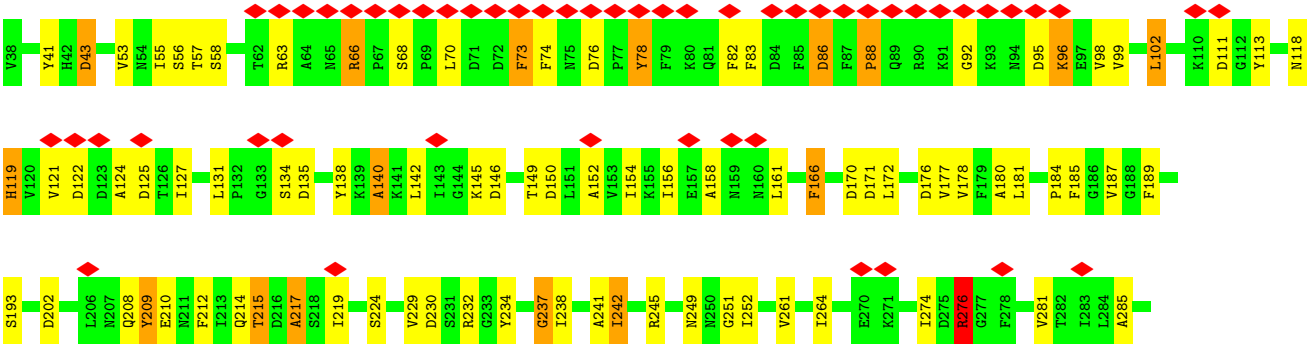
• Molecule 1: DegQ family serine endoprotease

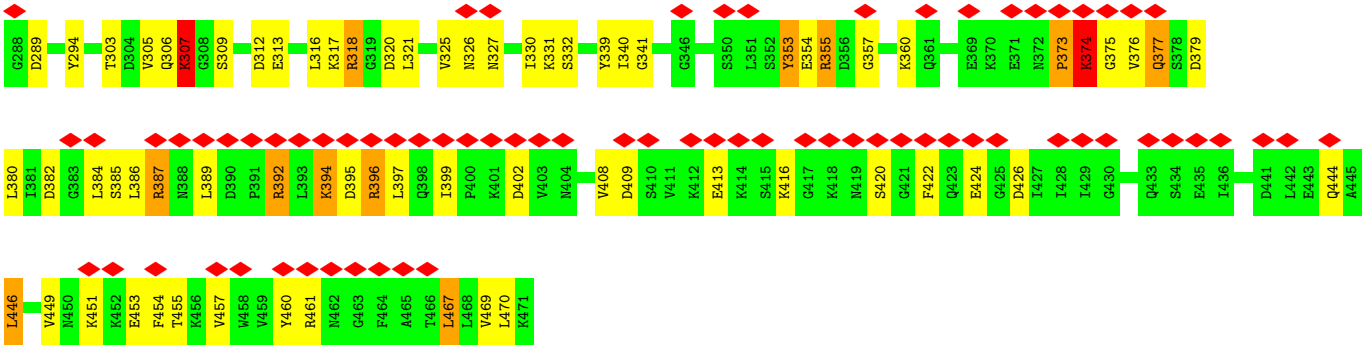
Chain I:



• Molecule 1: DegQ family serine endoprotease

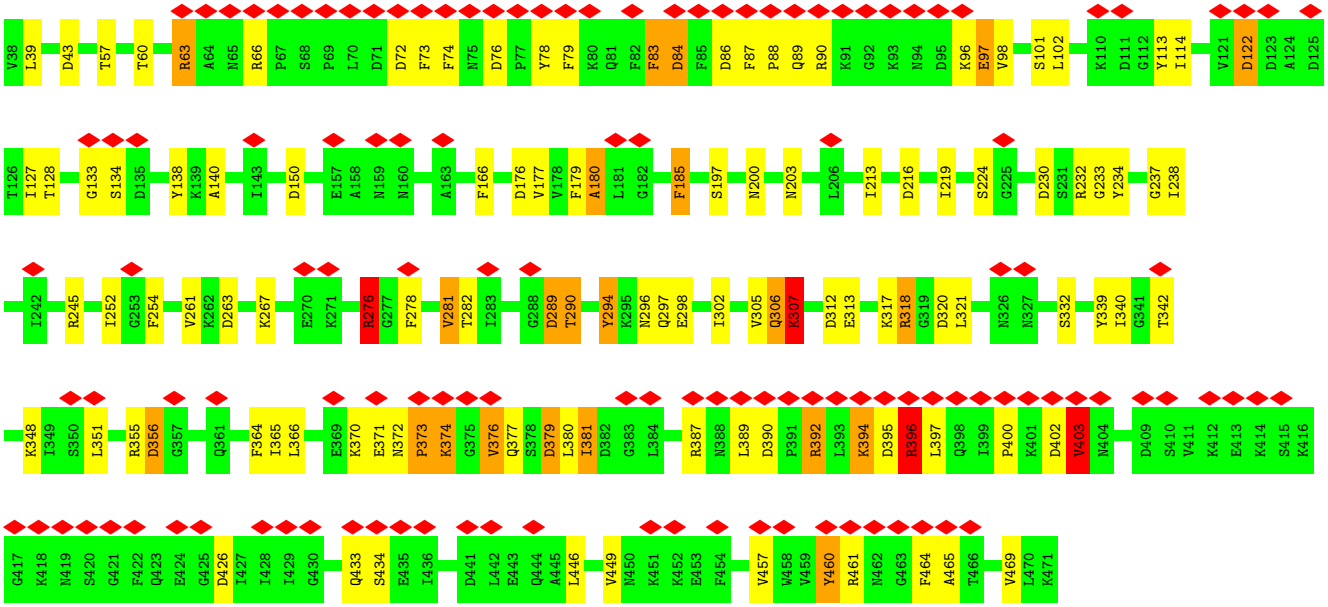
Chain J:





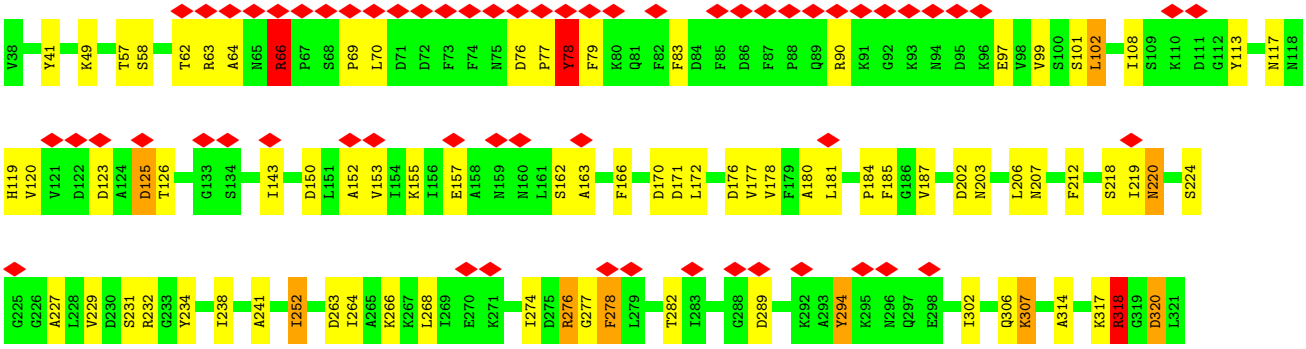
• Molecule 1: DegQ family serine endoprotease

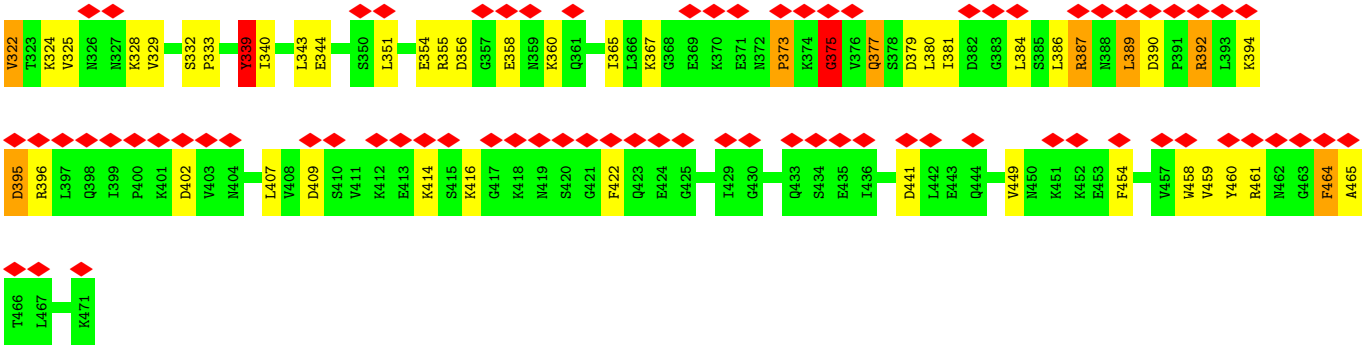
Chain K:



• Molecule 1: DegQ family serine endoprotease

Chain L:




V322 T323 K324 V325 N326 N327 K328 V329 S332 P333 Y339 I340 L343 E344 S350 L351 E354 R355 D356 G357 E358 N359 K360 Q361 I365 L366 K367 G368 E369 K370 E371 N372 P373 K374 G375 V376 Q377 S378 D379 L380 I381 D382 G383 L384 S385 L386 R387 N388 L389 D390 P391 R392 L393 K394
D395 R396 L397 Q398 I399 P400 K401 D402 V403 N404 L407 V408 D409 S410 V411 K412 E413 K414 S415 K416 G417 K418 N419 S420 G421 F422 Q423 E424 G425 I429 G430 Q433 S434 E435 I436 D441 L442 E443 Q444 V449 N450 K451 K452 E453 F454 V457 W458 V459 Y460 R461 N462 G463 F464 A465
T466 L467 K471

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, T	Depositor
Number of particles used	113843	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS GLACIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	44	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.067	Depositor
Minimum map value	-0.026	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.02	Depositor
Map size (Å)	328.30402, 328.30402, 328.30402	wwPDB
Map dimensions	272, 272, 272	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.207, 1.207, 1.207	Depositor

5 Model quality

5.1 Standard geometry

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	0.52	0/3367	2.01	96/4532 (2.1%)
1	B	0.52	0/3367	1.93	88/4532 (1.9%)
1	C	0.52	0/3367	2.02	86/4532 (1.9%)
1	D	0.51	0/3367	2.03	93/4532 (2.1%)
1	E	0.52	0/3367	2.03	92/4532 (2.0%)
1	F	0.52	0/3367	2.07	108/4532 (2.4%)
1	G	0.52	0/3367	2.06	105/4532 (2.3%)
1	H	0.52	0/3367	2.03	90/4532 (2.0%)
1	I	0.52	0/3367	2.00	87/4532 (1.9%)
1	J	0.51	0/3367	2.03	94/4532 (2.1%)
1	K	0.52	0/3367	1.95	83/4532 (1.8%)
1	L	0.52	0/3366	1.98	83/4532 (1.8%)
All	All	0.52	0/40403	2.01	1105/54384 (2.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	14
1	B	0	19
1	C	0	19
1	D	0	17
1	E	0	12
1	F	0	16
1	G	0	18
1	H	0	16
1	I	0	17
1	J	0	21
1	K	0	21
1	L	0	15
All	All	0	205

There are no bond length outliers.

All (1105) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	232	ARG	NE-CZ-NH2	24.38	132.49	120.30
1	C	66	ARG	NE-CZ-NH2	21.22	130.91	120.30
1	H	461	ARG	NE-CZ-NH2	-20.75	109.92	120.30
1	G	387	ARG	NE-CZ-NH1	19.22	129.91	120.30
1	F	461	ARG	NE-CZ-NH1	18.79	129.69	120.30
1	E	232	ARG	NE-CZ-NH2	18.45	129.52	120.30
1	E	461	ARG	NE-CZ-NH1	17.55	129.07	120.30
1	J	461	ARG	NE-CZ-NH1	16.83	128.72	120.30
1	A	63	ARG	NE-CZ-NH2	16.79	128.70	120.30
1	J	276	ARG	NE-CZ-NH1	16.26	128.43	120.30
1	H	339	TYR	CB-CG-CD2	-15.66	111.61	121.00
1	H	276	ARG	NE-CZ-NH2	15.38	127.99	120.30
1	C	66	ARG	NE-CZ-NH1	-15.16	112.72	120.30
1	J	209	TYR	CB-CG-CD1	-14.94	112.04	121.00
1	C	276	ARG	NE-CZ-NH1	14.69	127.64	120.30
1	H	461	ARG	NE-CZ-NH1	14.63	127.61	120.30
1	G	318	ARG	NE-CZ-NH2	14.57	127.58	120.30
1	L	66	ARG	NE-CZ-NH2	14.48	127.54	120.30
1	C	170	ASP	CB-CG-OD1	14.32	131.19	118.30
1	D	245	ARG	NE-CZ-NH2	14.23	127.42	120.30
1	D	392	ARG	NE-CZ-NH1	14.18	127.39	120.30
1	J	66	ARG	NE-CZ-NH2	14.14	127.37	120.30
1	I	185	PHE	CB-CG-CD2	-13.62	111.26	120.80
1	G	387	ARG	NE-CZ-NH2	-13.58	113.51	120.30
1	E	355	ARG	NE-CZ-NH1	13.57	127.08	120.30
1	D	461	ARG	NE-CZ-NH2	-13.34	113.63	120.30
1	L	318	ARG	NE-CZ-NH2	13.13	126.86	120.30
1	K	138	TYR	CB-CG-CD2	-13.01	113.19	121.00
1	C	212	PHE	CB-CG-CD1	-13.00	111.70	120.80
1	G	355	ARG	NE-CZ-NH1	12.80	126.70	120.30
1	I	392	ARG	NE-CZ-NH1	12.68	126.64	120.30
1	J	392	ARG	NE-CZ-NH1	12.58	126.59	120.30
1	A	245	ARG	NE-CZ-NH2	12.46	126.53	120.30
1	I	90	ARG	NE-CZ-NH2	12.35	126.48	120.30
1	I	138	TYR	CB-CG-CD1	-12.26	113.64	121.00
1	A	382	ASP	CB-CG-OD1	12.11	129.20	118.30
1	H	339	TYR	CB-CG-CD1	12.10	128.26	121.00
1	F	232	ARG	NE-CZ-NH1	-11.99	114.30	120.30
1	L	234	TYR	CB-CG-CD2	-11.79	113.93	121.00
1	J	232	ARG	NE-CZ-NH2	11.78	126.19	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	212	PHE	CB-CG-CD2	11.77	129.04	120.80
1	F	382	ASP	CB-CG-OD1	11.71	128.84	118.30
1	I	294	TYR	CB-CG-CD1	-11.67	114.00	121.00
1	G	166	PHE	CB-CG-CD2	11.59	128.91	120.80
1	A	90	ARG	NE-CZ-NH1	-11.54	114.53	120.30
1	L	396	ARG	NE-CZ-NH1	-11.52	114.54	120.30
1	F	392	ARG	NE-CZ-NH2	11.51	126.06	120.30
1	D	294	TYR	CB-CG-CD2	-11.49	114.10	121.00
1	J	355	ARG	NE-CZ-NH2	-11.49	114.55	120.30
1	C	387	ARG	NE-CZ-NH1	11.42	126.01	120.30
1	C	461	ARG	NE-CZ-NH1	11.40	126.00	120.30
1	B	353	TYR	CB-CG-CD1	-11.25	114.25	121.00
1	J	63	ARG	NE-CZ-NH1	11.23	125.91	120.30
1	E	294	TYR	CB-CG-CD2	-11.13	114.32	121.00
1	K	232	ARG	NE-CZ-NH1	11.12	125.86	120.30
1	A	76	ASP	CB-CG-OD1	11.11	128.30	118.30
1	D	392	ARG	NH1-CZ-NH2	-11.11	107.18	119.40
1	H	232	ARG	NE-CZ-NH2	11.09	125.84	120.30
1	A	63	ARG	NH1-CZ-NH2	-11.08	107.21	119.40
1	K	234	TYR	CB-CG-CD2	-11.03	114.38	121.00
1	F	138	TYR	CB-CG-CD1	-10.97	114.42	121.00
1	H	374	LYS	C-N-CA	10.94	145.27	122.30
1	B	138	TYR	CB-CG-CD2	-10.92	114.45	121.00
1	F	216	ASP	CB-CG-OD2	10.89	128.10	118.30
1	H	396	ARG	NE-CZ-NH2	10.86	125.73	120.30
1	F	150	ASP	CB-CG-OD1	-10.85	108.54	118.30
1	B	353	TYR	CG-CD1-CE1	-10.84	112.63	121.30
1	F	138	TYR	CG-CD1-CE1	-10.76	112.69	121.30
1	A	355	ARG	NE-CZ-NH2	10.62	125.61	120.30
1	I	232	ARG	NE-CZ-NH2	10.60	125.60	120.30
1	E	123	ASP	CB-CG-OD2	10.46	127.72	118.30
1	J	82	PHE	CB-CG-CD1	10.44	128.11	120.80
1	B	318	ARG	NE-CZ-NH2	10.43	125.51	120.30
1	K	395	ASP	CB-CG-OD2	10.32	127.59	118.30
1	J	318	ARG	NE-CZ-NH2	10.23	125.42	120.30
1	G	209	TYR	CB-CG-CD2	-10.21	114.88	121.00
1	A	90	ARG	NE-CZ-NH2	10.16	125.38	120.30
1	I	90	ARG	NE-CZ-NH1	-10.15	115.22	120.30
1	E	41	TYR	CB-CG-CD1	-10.14	114.92	121.00
1	I	63	ARG	NE-CZ-NH2	10.13	125.37	120.30
1	F	86	ASP	CB-CG-OD2	10.13	127.42	118.30
1	K	63	ARG	NE-CZ-NH1	-10.13	115.24	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	276	ARG	NE-CZ-NH1	10.06	125.33	120.30
1	D	276	ARG	NE-CZ-NH1	10.06	125.33	120.30
1	K	72	ASP	CB-CG-OD1	10.03	127.32	118.30
1	K	460	TYR	CB-CG-CD1	-9.96	115.02	121.00
1	C	461	ARG	NE-CZ-NH2	-9.93	115.34	120.30
1	J	461	ARG	NE-CZ-NH2	-9.90	115.35	120.30
1	E	90	ARG	NE-CZ-NH2	9.90	125.25	120.30
1	H	189	PHE	CB-CG-CD2	-9.87	113.89	120.80
1	B	409	ASP	CB-CG-OD2	9.85	127.17	118.30
1	F	76	ASP	CB-CG-OD1	9.82	127.13	118.30
1	F	355	ARG	NE-CZ-NH2	9.79	125.20	120.30
1	H	66	ARG	NE-CZ-NH2	9.73	125.17	120.30
1	I	232	ARG	NE-CZ-NH1	9.71	125.15	120.30
1	K	245	ARG	NE-CZ-NH2	9.71	125.15	120.30
1	G	254	PHE	CB-CG-CD2	-9.70	114.01	120.80
1	J	355	ARG	NE-CZ-NH1	9.68	125.14	120.30
1	G	78	TYR	CB-CG-CD1	-9.66	115.20	121.00
1	D	79	PHE	CB-CG-CD2	-9.62	114.07	120.80
1	D	392	ARG	NE-CZ-NH2	9.60	125.10	120.30
1	E	339	TYR	CB-CG-CD1	9.59	126.75	121.00
1	D	387	ARG	NE-CZ-NH1	9.56	125.08	120.30
1	I	232	ARG	NH1-CZ-NH2	-9.49	108.96	119.40
1	D	461	ARG	NE-CZ-NH1	9.48	125.04	120.30
1	F	90	ARG	NE-CZ-NH1	-9.46	115.57	120.30
1	G	66	ARG	CD-NE-CZ	9.45	136.82	123.60
1	L	278	PHE	CB-CG-CD1	-9.40	114.22	120.80
1	I	460	TYR	CB-CG-CD1	-9.40	115.36	121.00
1	E	294	TYR	CG-CD2-CE2	-9.39	113.79	121.30
1	H	460	TYR	CB-CG-CD2	9.36	126.61	121.00
1	H	245	ARG	NE-CZ-NH1	-9.35	115.62	120.30
1	F	335	ASP	CB-CG-OD2	-9.34	109.90	118.30
1	K	318	ARG	NE-CZ-NH2	9.31	124.95	120.30
1	A	339	TYR	CB-CG-CD2	-9.28	115.43	121.00
1	H	289	ASP	CB-CG-OD1	9.28	126.65	118.30
1	D	138	TYR	CB-CG-CD2	-9.25	115.45	121.00
1	D	113	TYR	CB-CG-CD2	-9.24	115.45	121.00
1	G	335	ASP	CB-CG-OD1	9.15	126.54	118.30
1	H	335	ASP	CB-CG-OD1	9.13	126.52	118.30
1	J	339	TYR	CB-CG-CD2	-9.09	115.55	121.00
1	E	74	PHE	CB-CG-CD2	-9.07	114.45	120.80
1	G	422	PHE	CB-CG-CD1	-9.04	114.47	120.80
1	L	396	ARG	NE-CZ-NH2	9.03	124.82	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	392	ARG	NH1-CZ-NH2	-9.02	109.48	119.40
1	E	185	PHE	CB-CG-CD1	-9.00	114.50	120.80
1	A	234	TYR	CB-CG-CD2	-8.97	115.62	121.00
1	G	304	ASP	CB-CG-OD2	8.91	126.32	118.30
1	L	123	ASP	CB-CG-OD2	8.88	126.29	118.30
1	L	344	GLU	OE1-CD-OE2	-8.87	112.65	123.30
1	C	339	TYR	CB-CG-CD2	-8.86	115.68	121.00
1	F	171	ASP	CB-CG-OD1	8.86	126.28	118.30
1	K	63	ARG	NE-CZ-NH2	8.84	124.72	120.30
1	E	392	ARG	NE-CZ-NH2	8.82	124.71	120.30
1	I	355	ARG	NE-CZ-NH1	8.81	124.71	120.30
1	D	234	TYR	CB-CG-CD2	-8.81	115.71	121.00
1	C	170	ASP	CB-CG-OD2	-8.80	110.38	118.30
1	E	189	PHE	CB-CG-CD2	-8.79	114.64	120.80
1	A	374	LYS	CA-C-N	8.78	133.75	116.20
1	F	83	PHE	CB-CG-CD2	-8.76	114.67	120.80
1	E	82	PHE	CB-CG-CD2	8.71	126.90	120.80
1	K	276	ARG	NE-CZ-NH1	8.70	124.65	120.30
1	F	138	TYR	CD1-CG-CD2	8.67	127.44	117.90
1	H	358	GLU	OE1-CD-OE2	-8.60	112.99	123.30
1	E	113	TYR	CB-CG-CD2	-8.59	115.85	121.00
1	A	232	ARG	NH1-CZ-NH2	-8.58	109.96	119.40
1	D	232	ARG	NE-CZ-NH2	8.55	124.57	120.30
1	H	43	ASP	CB-CG-OD2	-8.53	110.62	118.30
1	G	461	ARG	NE-CZ-NH1	8.48	124.54	120.30
1	G	90	ARG	NE-CZ-NH1	-8.48	116.06	120.30
1	B	318	ARG	NE-CZ-NH1	-8.47	116.06	120.30
1	I	234	TYR	CB-CG-CD1	8.47	126.08	121.00
1	F	318	ARG	NE-CZ-NH2	8.45	124.53	120.30
1	F	43	ASP	CB-CG-OD2	8.45	125.90	118.30
1	I	294	TYR	CB-CG-CD2	8.41	126.05	121.00
1	G	39	LEU	CB-CG-CD1	8.38	125.25	111.00
1	A	289	ASP	CB-CG-OD2	8.37	125.83	118.30
1	K	232	ARG	NH1-CZ-NH2	-8.36	110.21	119.40
1	F	41	TYR	CB-CG-CD1	-8.34	116.00	121.00
1	G	396	ARG	NE-CZ-NH1	8.34	124.47	120.30
1	E	355	ARG	NH1-CZ-NH2	-8.32	110.24	119.40
1	G	339	TYR	CB-CG-CD1	8.32	125.99	121.00
1	C	212	PHE	CB-CG-CD2	8.32	126.62	120.80
1	H	122	ASP	CB-CG-OD2	-8.28	110.85	118.30
1	K	281	VAL	CA-CB-CG1	8.27	123.31	110.90
1	J	209	TYR	CB-CG-CD2	8.27	125.96	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	276	ARG	NE-CZ-NH2	-8.25	116.17	120.30
1	L	232	ARG	NE-CZ-NH2	8.25	124.43	120.30
1	H	232	ARG	NE-CZ-NH1	-8.23	116.18	120.30
1	D	294	TYR	CB-CG-CD1	8.23	125.94	121.00
1	E	387	ARG	NE-CZ-NH2	8.20	124.40	120.30
1	L	178	VAL	CG1-CB-CG2	-8.19	97.79	110.90
1	L	441	ASP	CB-CG-OD1	8.18	125.66	118.30
1	C	63	ARG	NE-CZ-NH2	8.17	124.39	120.30
1	B	90	ARG	NE-CZ-NH1	8.16	124.38	120.30
1	G	461	ARG	NE-CZ-NH2	-8.16	116.22	120.30
1	J	76	ASP	CB-CG-OD1	8.16	125.64	118.30
1	D	137	GLU	OE1-CD-OE2	-8.14	113.53	123.30
1	J	189	PHE	CB-CG-CD2	-8.13	115.11	120.80
1	K	426	ASP	CB-CG-OD2	8.10	125.59	118.30
1	A	374	LYS	C-N-CA	8.09	139.29	122.30
1	I	83	PHE	CB-CG-CD1	-8.07	115.15	120.80
1	J	424	GLU	OE1-CD-OE2	-8.07	113.62	123.30
1	A	78	TYR	CB-CG-CD2	-8.06	116.16	121.00
1	D	185	PHE	CB-CG-CD2	-8.06	115.16	120.80
1	K	396	ARG	NE-CZ-NH1	8.06	124.33	120.30
1	I	71	ASP	CB-CG-OD1	8.03	125.53	118.30
1	B	71	ASP	CB-CG-OD1	8.02	125.52	118.30
1	D	278	PHE	CB-CG-CD2	-8.02	115.19	120.80
1	L	387	ARG	NE-CZ-NH2	8.01	124.31	120.30
1	K	339	TYR	CB-CG-CD2	-7.93	116.24	121.00
1	A	443	GLU	OE1-CD-OE2	-7.92	113.79	123.30
1	C	53	VAL	CG1-CB-CG2	-7.92	98.23	110.90
1	B	461	ARG	NE-CZ-NH1	7.92	124.26	120.30
1	F	179	PHE	CB-CG-CD1	-7.90	115.27	120.80
1	I	138	TYR	CB-CG-CD2	7.87	125.72	121.00
1	F	76	ASP	CB-CG-OD2	-7.87	111.22	118.30
1	I	374	LYS	C-N-CA	7.86	138.81	122.30
1	E	392	ARG	NE-CZ-NH1	7.83	124.22	120.30
1	D	47	ASP	CB-CG-OD2	7.83	125.35	118.30
1	L	460	TYR	CB-CG-CD1	-7.80	116.32	121.00
1	H	254	PHE	CB-CG-CD2	-7.79	115.34	120.80
1	K	461	ARG	CD-NE-CZ	7.79	134.51	123.60
1	D	245	ARG	NH1-CZ-NH2	-7.79	110.83	119.40
1	F	170	ASP	CB-CG-OD1	7.75	125.28	118.30
1	H	57	THR	CA-CB-CG2	7.75	123.25	112.40
1	J	78	TYR	CB-CG-CD1	-7.75	116.35	121.00
1	J	176	ASP	CB-CG-OD1	7.73	125.26	118.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	461	ARG	NE-CZ-NH1	7.73	124.17	120.30
1	I	387	ARG	NE-CZ-NH1	7.73	124.17	120.30
1	B	402	ASP	CB-CG-OD2	7.71	125.24	118.30
1	C	374	LYS	CA-C-N	7.71	131.61	116.20
1	A	113	TYR	CB-CG-CD2	-7.70	116.38	121.00
1	I	339	TYR	CB-CG-CD1	-7.69	116.39	121.00
1	L	66	ARG	NE-CZ-NH1	-7.69	116.46	120.30
1	L	454	PHE	CB-CG-CD1	-7.68	115.42	120.80
1	I	396	ARG	NE-CZ-NH1	-7.68	116.46	120.30
1	E	189	PHE	CB-CG-CD1	7.67	126.17	120.80
1	G	426	ASP	CB-CG-OD2	7.66	125.19	118.30
1	L	176	ASP	CB-CG-OD2	-7.66	111.41	118.30
1	I	390	ASP	CB-CG-OD1	7.65	125.19	118.30
1	A	276	ARG	CD-NE-CZ	7.64	134.29	123.60
1	F	392	ARG	NH1-CZ-NH2	-7.64	111.00	119.40
1	F	371	GLU	OE1-CD-OE2	-7.61	114.17	123.30
1	L	354	GLU	OE1-CD-OE2	-7.61	114.17	123.30
1	F	245	ARG	NE-CZ-NH1	-7.60	116.50	120.30
1	E	90	ARG	NE-CZ-NH1	-7.59	116.50	120.30
1	A	294	TYR	CB-CG-CD2	-7.59	116.45	121.00
1	C	236	VAL	CA-CB-CG2	7.59	122.28	110.90
1	E	392	ARG	NH1-CZ-NH2	-7.59	111.05	119.40
1	L	90	ARG	NE-CZ-NH1	7.58	124.09	120.30
1	A	63	ARG	NE-CZ-NH1	7.58	124.09	120.30
1	E	390	ASP	CB-CG-OD1	-7.58	111.48	118.30
1	G	87	PHE	CB-CG-CD2	-7.57	115.50	120.80
1	H	41	TYR	CB-CG-CD2	-7.56	116.47	121.00
1	F	344	GLU	OE1-CD-OE2	-7.54	114.25	123.30
1	G	74	PHE	CB-CG-CD1	7.51	126.06	120.80
1	L	460	TYR	CB-CG-CD2	7.51	125.50	121.00
1	F	335	ASP	CB-CG-OD1	7.50	125.05	118.30
1	B	339	TYR	CB-CG-CD2	-7.49	116.50	121.00
1	F	391	PRO	N-CA-CB	7.49	112.28	103.30
1	B	454	PHE	CB-CG-CD2	-7.47	115.57	120.80
1	I	158	ALA	CB-CA-C	7.44	121.26	110.10
1	F	150	ASP	CB-CG-OD2	7.44	125.00	118.30
1	D	234	TYR	CB-CG-CD1	7.44	125.46	121.00
1	A	407	LEU	CB-CG-CD2	7.43	123.63	111.00
1	B	216	ASP	CB-CG-OD1	7.42	124.98	118.30
1	A	390	ASP	CB-CG-OD1	7.41	124.97	118.30
1	G	429	ILE	CA-CB-CG1	7.41	125.07	111.00
1	F	95	ASP	CB-CG-OD2	7.40	124.96	118.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	120	VAL	CG1-CB-CG2	-7.40	99.06	110.90
1	L	387	ARG	NH1-CZ-NH2	-7.40	111.26	119.40
1	L	392	ARG	NE-CZ-NH1	7.38	123.99	120.30
1	A	382	ASP	CB-CG-OD2	-7.37	111.67	118.30
1	F	355	ARG	NH1-CZ-NH2	-7.36	111.30	119.40
1	F	467	LEU	CB-CG-CD2	7.36	123.51	111.00
1	B	356	ASP	CB-CG-OD1	-7.34	111.69	118.30
1	A	232	ARG	NE-CZ-NH1	-7.33	116.63	120.30
1	K	122	ASP	CB-CG-OD2	7.33	124.89	118.30
1	I	138	TYR	CD1-CE1-CZ	-7.32	113.22	119.80
1	D	460	TYR	CG-CD1-CE1	-7.31	115.45	121.30
1	G	78	TYR	CG-CD2-CE2	-7.30	115.46	121.30
1	J	460	TYR	CG-CD2-CE2	-7.29	115.47	121.30
1	F	464	PHE	CB-CG-CD2	7.27	125.89	120.80
1	I	325	VAL	CA-CB-CG2	7.27	121.81	110.90
1	H	258	SER	N-CA-CB	7.27	121.40	110.50
1	E	390	ASP	CB-CG-OD2	7.27	124.84	118.30
1	K	232	ARG	NE-CZ-NH2	7.26	123.93	120.30
1	E	318	ARG	NE-CZ-NH2	7.26	123.93	120.30
1	D	66	ARG	CD-NE-CZ	7.26	133.76	123.60
1	D	135	ASP	CB-CG-OD2	7.25	124.83	118.30
1	B	76	ASP	CB-CG-OD1	7.24	124.81	118.30
1	H	77	PRO	N-CA-CB	7.23	111.98	103.30
1	E	76	ASP	CB-CG-OD1	7.23	124.81	118.30
1	F	422	PHE	CB-CG-CD2	-7.22	115.75	120.80
1	J	66	ARG	NH1-CZ-NH2	-7.21	111.47	119.40
1	I	66	ARG	NE-CZ-NH1	7.21	123.90	120.30
1	B	95	ASP	CB-CG-OD2	7.19	124.77	118.30
1	F	171	ASP	CB-CG-OD2	-7.17	111.84	118.30
1	H	426	ASP	CB-CG-OD1	7.16	124.75	118.30
1	B	72	ASP	CB-CG-OD1	7.16	124.74	118.30
1	A	344	GLU	OE1-CD-OE2	-7.15	114.72	123.30
1	D	66	ARG	NE-CZ-NH2	7.15	123.87	120.30
1	I	123	ASP	CB-CG-OD2	7.14	124.72	118.30
1	L	390	ASP	CB-CG-OD1	7.13	124.72	118.30
1	I	402	ASP	CB-CG-OD2	7.13	124.72	118.30
1	G	166	PHE	CB-CG-CD1	-7.12	115.82	120.80
1	K	339	TYR	CB-CG-CD1	7.10	125.26	121.00
1	L	339	TYR	CB-CG-CD2	-7.09	116.75	121.00
1	G	278	PHE	CB-CG-CD2	-7.06	115.86	120.80
1	E	387	ARG	NE-CZ-NH1	-7.06	116.77	120.30
1	C	336	LEU	CB-CG-CD1	7.05	122.99	111.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	460	TYR	CB-CG-CD1	-7.05	116.77	121.00
1	E	294	TYR	CZ-CE2-CD2	7.04	126.14	119.80
1	K	402	ASP	CB-CG-OD2	7.04	124.64	118.30
1	J	409	ASP	CB-CG-OD2	7.04	124.64	118.30
1	C	396	ARG	NE-CZ-NH1	-7.03	116.79	120.30
1	C	364	PHE	CG-CD1-CE1	7.01	128.51	120.80
1	F	318	ARG	NE-CZ-NH1	-7.00	116.80	120.30
1	G	286	LEU	CB-CG-CD2	-7.00	99.10	111.00
1	D	78	TYR	CB-CG-CD2	-6.99	116.81	121.00
1	L	402	ASP	CB-CG-OD2	-6.98	112.02	118.30
1	E	209	TYR	CB-CG-CD2	-6.97	116.82	121.00
1	G	126	THR	CA-CB-CG2	6.97	122.17	112.40
1	L	387	ARG	NE-CZ-NH1	6.97	123.79	120.30
1	H	467	LEU	CB-CG-CD2	6.97	122.85	111.00
1	A	374	LYS	O-C-N	-6.96	111.38	123.20
1	J	86	ASP	CB-CG-OD2	6.95	124.55	118.30
1	D	232	ARG	NH1-CZ-NH2	-6.93	111.78	119.40
1	K	356	ASP	CB-CG-OD2	6.93	124.54	118.30
1	F	116	THR	CA-CB-CG2	6.92	122.09	112.40
1	F	461	ARG	NH1-CZ-NH2	-6.92	111.78	119.40
1	D	404	ASN	CB-CA-C	6.92	124.24	110.40
1	K	396	ARG	NH1-CZ-NH2	-6.91	111.80	119.40
1	F	384	LEU	CB-CG-CD2	6.91	122.75	111.00
1	E	153	VAL	CG1-CB-CG2	-6.90	99.86	110.90
1	I	422	PHE	CB-CG-CD2	-6.90	115.97	120.80
1	F	386	LEU	CB-CG-CD1	6.89	122.72	111.00
1	G	128	THR	CA-CB-CG2	6.89	122.05	112.40
1	H	245	ARG	NE-CZ-NH2	6.88	123.74	120.30
1	C	60	THR	CA-CB-CG2	6.88	122.03	112.40
1	K	290	THR	CA-CB-CG2	-6.87	102.78	112.40
1	F	459	VAL	CA-CB-CG2	6.85	121.18	110.90
1	L	375	GLY	O-C-N	-6.85	111.74	122.70
1	G	146	ASP	CB-CG-OD1	6.84	124.46	118.30
1	B	230	ASP	CB-CG-OD1	6.83	124.45	118.30
1	B	413	GLU	OE1-CD-OE2	-6.83	115.10	123.30
1	F	234	TYR	CB-CG-CD2	-6.83	116.90	121.00
1	I	77	PRO	N-CA-CB	6.83	111.50	103.30
1	C	392	ARG	NE-CZ-NH1	6.82	123.71	120.30
1	E	453	GLU	OE1-CD-OE2	-6.82	115.12	123.30
1	C	392	ARG	NE-CZ-NH2	-6.81	116.89	120.30
1	B	459	VAL	CG1-CB-CG2	-6.81	100.00	110.90
1	I	355	ARG	NE-CZ-NH2	-6.81	116.89	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	371	GLU	OE1-CD-OE2	-6.81	115.13	123.30
1	F	167	THR	CA-CB-CG2	6.81	121.93	112.40
1	J	138	TYR	CB-CG-CD1	-6.81	116.92	121.00
1	G	454	PHE	CB-CG-CD1	-6.80	116.04	120.80
1	G	379	ASP	CB-CG-OD2	-6.78	112.19	118.30
1	L	113	TYR	CB-CG-CD2	-6.78	116.94	121.00
1	I	47	ASP	CB-CG-OD1	6.77	124.39	118.30
1	D	254	PHE	CB-CG-CD2	-6.75	116.07	120.80
1	E	461	ARG	NH1-CZ-NH2	-6.75	111.98	119.40
1	K	254	PHE	CB-CG-CD2	-6.74	116.08	120.80
1	E	245	ARG	NE-CZ-NH2	6.73	123.67	120.30
1	I	400	PRO	N-CA-CB	6.73	111.38	103.30
1	A	424	GLU	OE1-CD-OE2	-6.72	115.23	123.30
1	A	96	LYS	CA-CB-CG	6.72	128.19	113.40
1	H	276	ARG	NH1-CZ-NH2	-6.72	112.01	119.40
1	A	317	LYS	CA-CB-CG	6.71	128.17	113.40
1	F	263	ASP	CB-CG-OD1	6.70	124.33	118.30
1	D	232	ARG	NE-CZ-NH1	6.70	123.65	120.30
1	L	99	VAL	CA-CB-CG1	6.69	120.93	110.90
1	D	71	ASP	CB-CG-OD1	6.68	124.31	118.30
1	B	78	TYR	CB-CG-CD2	-6.67	117.00	121.00
1	G	41	TYR	CB-CG-CD1	-6.67	117.00	121.00
1	H	376	VAL	CG1-CB-CG2	-6.66	100.25	110.90
1	C	460	TYR	CZ-CE2-CD2	-6.65	113.81	119.80
1	I	446	LEU	CB-CA-C	6.65	122.84	110.20
1	D	335	ASP	CB-CG-OD1	6.64	124.28	118.30
1	D	318	ARG	NE-CZ-NH1	6.63	123.61	120.30
1	B	122	ASP	CB-CG-OD2	-6.62	112.34	118.30
1	J	454	PHE	CB-CG-CD1	6.60	125.42	120.80
1	G	304	ASP	CB-CG-OD1	-6.60	112.36	118.30
1	I	119	HIS	CA-CB-CG	6.60	124.81	113.60
1	A	74	PHE	CB-CG-CD1	-6.59	116.18	120.80
1	A	454	PHE	CB-CG-CD1	-6.59	116.18	120.80
1	D	115	VAL	CG1-CB-CG2	-6.59	100.35	110.90
1	D	90	ARG	NE-CZ-NH1	-6.59	117.00	120.30
1	H	457	VAL	CG1-CB-CG2	-6.59	100.36	110.90
1	A	426	ASP	CB-CG-OD1	6.58	124.22	118.30
1	F	379	ASP	CB-CG-OD2	-6.58	112.38	118.30
1	H	53	VAL	CA-CB-CG1	6.58	120.77	110.90
1	B	115	VAL	CG1-CB-CG2	-6.57	100.39	110.90
1	I	170	ASP	CB-CG-OD1	6.57	124.21	118.30
1	I	371	GLU	OE1-CD-OE2	-6.57	115.42	123.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	261	VAL	CA-CB-CG2	6.57	120.75	110.90
1	L	355	ARG	NE-CZ-NH2	6.56	123.58	120.30
1	F	276	ARG	NE-CZ-NH2	-6.56	117.02	120.30
1	F	123	ASP	CB-CG-OD1	6.54	124.19	118.30
1	I	374	LYS	CA-C-N	6.54	129.28	116.20
1	J	212	PHE	CB-CG-CD1	-6.54	116.22	120.80
1	L	125	ASP	CB-CG-OD2	-6.54	112.41	118.30
1	H	376	VAL	CA-CB-CG2	6.53	120.70	110.90
1	L	241	ALA	N-CA-CB	-6.52	100.97	110.10
1	G	229	VAL	CA-CB-CG1	6.51	120.67	110.90
1	C	90	ARG	NE-CZ-NH1	6.50	123.55	120.30
1	F	387	ARG	NE-CZ-NH1	6.50	123.55	120.30
1	G	457	VAL	CA-CB-CG1	6.49	120.64	110.90
1	F	56	SER	C-N-CA	6.49	137.93	121.70
1	K	278	PHE	CB-CG-CD1	-6.49	116.26	120.80
1	L	458	TRP	CG-CD2-CE3	6.49	139.74	133.90
1	G	107	ILE	CA-CB-CG1	6.49	123.33	111.00
1	H	123	ASP	CB-CG-OD2	6.49	124.14	118.30
1	E	276	ARG	NE-CZ-NH2	6.48	123.54	120.30
1	H	392	ARG	CD-NE-CZ	6.47	132.66	123.60
1	L	320	ASP	CB-CG-OD1	6.47	124.13	118.30
1	J	320	ASP	CB-CG-OD1	6.47	124.13	118.30
1	K	306	GLN	C-N-CA	6.47	137.88	121.70
1	G	354	GLU	C-N-CA	6.47	137.87	121.70
1	F	387	ARG	CD-NE-CZ	6.47	132.66	123.60
1	F	409	ASP	CB-CG-OD2	6.47	124.12	118.30
1	I	339	TYR	CG-CD1-CE1	-6.46	116.13	121.30
1	L	278	PHE	CB-CG-CD2	6.46	125.32	120.80
1	E	63	ARG	NE-CZ-NH2	6.45	123.53	120.30
1	E	232	ARG	NH1-CZ-NH2	-6.44	112.31	119.40
1	I	245	ARG	NE-CZ-NH2	6.43	123.52	120.30
1	I	387	ARG	NH1-CZ-NH2	-6.43	112.33	119.40
1	A	170	ASP	CB-CG-OD2	-6.41	112.53	118.30
1	J	453	GLU	OE1-CD-OE2	6.41	130.99	123.30
1	K	234	TYR	CB-CG-CD1	6.40	124.84	121.00
1	H	227	ALA	N-CA-CB	-6.40	101.14	110.10
1	B	63	ARG	NE-CZ-NH2	6.39	123.50	120.30
1	J	230	ASP	CB-CG-OD1	6.39	124.05	118.30
1	J	74	PHE	CB-CG-CD2	-6.39	116.33	120.80
1	J	354	GLU	OE1-CD-OE2	-6.39	115.63	123.30
1	B	146	ASP	CB-CG-OD2	-6.38	112.56	118.30
1	G	318	ARG	NH1-CZ-NH2	-6.38	112.38	119.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	461	ARG	NE-CZ-NH2	-6.38	117.11	120.30
1	D	163	ALA	N-CA-CB	-6.38	101.17	110.10
1	F	394	LYS	O-C-N	-6.38	112.50	122.70
1	L	126	THR	O-C-N	-6.38	112.50	122.70
1	J	396	ARG	NE-CZ-NH1	-6.37	117.11	120.30
1	E	78	TYR	CB-CG-CD2	-6.37	117.18	121.00
1	I	387	ARG	NE-CZ-NH2	6.37	123.48	120.30
1	I	396	ARG	CD-NE-CZ	6.36	132.51	123.60
1	C	374	LYS	O-C-N	-6.36	112.39	123.20
1	L	180	ALA	CB-CA-C	6.36	119.64	110.10
1	C	373	PRO	O-C-N	-6.36	112.53	122.70
1	A	409	ASP	C-N-CA	6.34	137.56	121.70
1	B	44	SER	N-CA-CB	6.34	120.01	110.50
1	H	87	PHE	CB-CG-CD1	-6.33	116.37	120.80
1	K	289	ASP	CB-CG-OD2	-6.33	112.60	118.30
1	B	353	TYR	CD1-CE1-CZ	6.33	125.50	119.80
1	E	254	PHE	CB-CG-CD1	6.33	125.23	120.80
1	H	318	ARG	NE-CZ-NH2	6.32	123.46	120.30
1	C	289	ASP	CB-CG-OD1	6.32	123.99	118.30
1	L	41	TYR	CG-CD1-CE1	-6.32	116.25	121.30
1	G	457	VAL	CG1-CB-CG2	-6.31	100.80	110.90
1	L	176	ASP	CB-CG-OD1	6.31	123.98	118.30
1	D	39	LEU	CB-CG-CD1	6.31	121.72	111.00
1	E	464	PHE	O-C-N	-6.30	112.61	122.70
1	C	263	ASP	CB-CG-OD2	6.30	123.97	118.30
1	F	178	VAL	CA-CB-CG1	6.30	120.34	110.90
1	J	88	PRO	N-CD-CG	6.29	112.64	103.20
1	E	460	TYR	CB-CG-CD1	-6.29	117.23	121.00
1	F	99	VAL	CG1-CB-CG2	-6.28	100.85	110.90
1	H	379	ASP	CB-CG-OD1	-6.28	112.65	118.30
1	H	392	ARG	CB-CA-C	6.25	122.91	110.40
1	J	382	ASP	CB-CG-OD2	-6.25	112.67	118.30
1	I	339	TYR	CD1-CG-CD2	6.25	124.78	117.90
1	B	464	PHE	CB-CG-CD1	-6.25	116.43	120.80
1	H	138	TYR	CB-CG-CD1	-6.24	117.26	121.00
1	L	150	ASP	CB-CG-OD1	6.24	123.91	118.30
1	B	232	ARG	NE-CZ-NH2	6.23	123.42	120.30
1	D	289	ASP	CB-CG-OD2	-6.23	112.69	118.30
1	F	41	TYR	CB-CG-CD2	6.23	124.74	121.00
1	G	431	VAL	CA-CB-CG2	6.23	120.24	110.90
1	H	396	ARG	NH1-CZ-NH2	-6.22	112.56	119.40
1	C	84	ASP	CB-CG-OD1	-6.22	112.70	118.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	275	ASP	CB-CG-OD2	6.22	123.90	118.30
1	L	120	VAL	CA-CB-CG1	6.22	120.22	110.90
1	H	234	TYR	CB-CG-CD1	-6.21	117.28	121.00
1	G	377	GLN	N-CA-C	6.20	127.74	111.00
1	D	409	ASP	CB-CG-OD2	6.19	123.87	118.30
1	E	320	ASP	CB-CG-OD1	6.19	123.87	118.30
1	E	431	VAL	CG1-CB-CG2	-6.18	101.00	110.90
1	J	150	ASP	CB-CA-C	6.18	122.77	110.40
1	J	305	VAL	CA-CB-CG2	-6.18	101.63	110.90
1	F	110	LYS	O-C-N	-6.17	112.82	122.70
1	K	307	LYS	CA-CB-CG	6.17	126.98	113.40
1	H	84	ASP	CB-CG-OD2	-6.17	112.75	118.30
1	G	95	ASP	CB-CG-OD1	6.17	123.85	118.30
1	H	426	ASP	CB-CG-OD2	-6.16	112.76	118.30
1	C	71	ASP	CB-CG-OD1	6.16	123.84	118.30
1	G	371	GLU	OE1-CD-OE2	-6.15	115.92	123.30
1	C	409	ASP	CB-CG-OD2	6.15	123.83	118.30
1	E	467	LEU	CB-CG-CD2	6.15	121.45	111.00
1	I	180	ALA	N-CA-CB	-6.15	101.49	110.10
1	K	128	THR	CA-CB-CG2	6.15	121.00	112.40
1	D	322	VAL	CA-CB-CG1	6.14	120.12	110.90
1	I	121	VAL	O-C-N	-6.14	112.87	122.70
1	C	209	TYR	CG-CD1-CE1	6.14	126.21	121.30
1	L	113	TYR	CB-CG-CD1	6.14	124.68	121.00
1	A	392	ARG	NE-CZ-NH2	6.13	123.37	120.30
1	H	304	ASP	CB-CA-C	6.13	122.65	110.40
1	C	215	THR	OG1-CB-CG2	-6.12	95.92	110.00
1	I	254	PHE	CB-CG-CD1	-6.12	116.52	120.80
1	J	41	TYR	CB-CA-C	6.12	122.63	110.40
1	H	320	ASP	CB-CG-OD2	6.10	123.79	118.30
1	A	379	ASP	CB-CG-OD1	-6.09	112.82	118.30
1	B	209	TYR	CG-CD2-CE2	-6.09	116.43	121.30
1	D	229	VAL	CA-CB-CG1	6.09	120.03	110.90
1	F	254	PHE	CB-CG-CD1	6.09	125.06	120.80
1	B	382	ASP	CB-CG-OD1	6.08	123.78	118.30
1	L	318	ARG	NE-CZ-NH1	-6.08	117.26	120.30
1	A	170	ASP	CB-CG-OD1	6.08	123.77	118.30
1	K	355	ARG	NE-CZ-NH1	6.07	123.34	120.30
1	J	140	ALA	CB-CA-C	6.07	119.20	110.10
1	A	464	PHE	CB-CG-CD2	-6.07	116.55	120.80
1	A	86	ASP	CB-CG-OD2	6.07	123.76	118.30
1	L	78	TYR	CB-CG-CD2	-6.06	117.36	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	171	ASP	CB-CG-OD1	6.06	123.75	118.30
1	L	238	ILE	CA-CB-CG1	6.06	122.52	111.00
1	K	469	VAL	O-C-N	-6.06	113.01	122.70
1	D	378	SER	C-N-CA	6.05	136.84	121.70
1	A	180	ALA	CB-CA-C	6.05	119.18	110.10
1	K	465	ALA	CB-CA-C	6.05	119.18	110.10
1	I	374	LYS	O-C-N	-6.05	112.92	123.20
1	I	185	PHE	CG-CD2-CE2	-6.04	114.15	120.80
1	E	312	ASP	CB-CG-OD1	-6.04	112.86	118.30
1	I	281	VAL	CA-CB-CG1	6.04	119.96	110.90
1	F	458	TRP	CZ3-CH2-CZ2	-6.04	114.35	121.60
1	L	79	PHE	CB-CG-CD2	-6.03	116.58	120.80
1	E	339	TYR	CB-CG-CD2	-6.03	117.38	121.00
1	C	387	ARG	NE-CZ-NH2	-6.03	117.29	120.30
1	J	158	ALA	CB-CA-C	6.03	119.14	110.10
1	J	178	VAL	CA-CB-CG2	6.02	119.93	110.90
1	C	146	ASP	CB-CG-OD1	-6.02	112.88	118.30
1	J	73	PHE	CB-CG-CD1	-6.02	116.59	120.80
1	D	209	TYR	CB-CG-CD1	-6.01	117.39	121.00
1	B	86	ASP	CB-CG-OD1	-6.01	112.89	118.30
1	I	441	ASP	CB-CG-OD1	6.00	123.70	118.30
1	J	316	LEU	CB-CA-C	6.00	121.60	110.20
1	F	78	TYR	CB-CG-CD1	-6.00	117.40	121.00
1	C	71	ASP	CB-CG-OD2	-6.00	112.90	118.30
1	C	373	PRO	CA-C-N	6.00	130.39	117.20
1	J	210	GLU	N-CA-CB	-5.99	99.81	110.60
1	J	374	LYS	N-CA-C	5.99	127.18	111.00
1	E	411	VAL	CG1-CB-CG2	-5.99	101.32	110.90
1	G	167	THR	CA-CB-CG2	5.99	120.78	112.40
1	F	461	ARG	CD-NE-CZ	5.99	131.98	123.60
1	C	318	ARG	NE-CZ-NH1	5.98	123.29	120.30
1	B	150	ASP	CB-CG-OD1	5.98	123.68	118.30
1	L	276	ARG	NE-CZ-NH2	5.98	123.29	120.30
1	E	294	TYR	CB-CG-CD1	5.98	124.59	121.00
1	H	304	ASP	CB-CG-OD1	5.98	123.68	118.30
1	L	157	GLU	CB-CA-C	5.98	122.36	110.40
1	K	396	ARG	NE-CZ-NH2	5.98	123.29	120.30
1	F	90	ARG	NE-CZ-NH2	5.97	123.29	120.30
1	F	138	TYR	CB-CG-CD2	-5.97	117.42	121.00
1	B	263	ASP	CB-CG-OD1	5.97	123.67	118.30
1	C	99	VAL	C-N-CA	5.97	136.62	121.70
1	L	266	LYS	CB-CA-C	5.97	122.34	110.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	460	TYR	CZ-CE2-CD2	5.97	125.17	119.80
1	K	76	ASP	CB-CG-OD1	5.96	123.66	118.30
1	A	390	ASP	CB-CG-OD2	-5.95	112.95	118.30
1	J	215	THR	CA-CB-CG2	5.95	120.72	112.40
1	L	343	LEU	CB-CG-CD2	5.95	121.11	111.00
1	H	185	PHE	CB-CG-CD2	-5.94	116.64	120.80
1	E	85	PHE	CB-CG-CD1	-5.94	116.64	120.80
1	L	64	ALA	CB-CA-C	5.94	119.01	110.10
1	E	312	ASP	CB-CG-OD2	5.94	123.65	118.30
1	G	392	ARG	CD-NE-CZ	5.94	131.91	123.60
1	G	167	THR	OG1-CB-CG2	-5.94	96.34	110.00
1	F	446	LEU	CB-CA-C	5.94	121.48	110.20
1	H	318	ARG	NH1-CZ-NH2	-5.94	112.87	119.40
1	K	460	TYR	CD1-CG-CD2	5.93	124.43	117.90
1	C	353	TYR	CZ-CE2-CD2	-5.93	114.46	119.80
1	C	364	PHE	CD1-CG-CD2	-5.93	110.59	118.30
1	H	344	GLU	N-CA-CB	-5.93	99.93	110.60
1	D	270	GLU	OE1-CD-OE2	-5.92	116.19	123.30
1	D	158	ALA	N-CA-CB	-5.92	101.81	110.10
1	F	373	PRO	CA-N-CD	-5.92	103.21	111.50
1	G	76	ASP	CB-CG-OD1	5.92	123.62	118.30
1	B	279	LEU	CB-CG-CD2	5.91	121.05	111.00
1	F	232	ARG	NE-CZ-NH2	5.91	123.26	120.30
1	B	356	ASP	CB-CG-OD2	5.91	123.62	118.30
1	D	276	ARG	NH1-CZ-NH2	-5.91	112.90	119.40
1	J	99	VAL	CA-CB-CG1	5.91	119.76	110.90
1	L	373	PRO	N-CD-CG	5.91	112.06	103.20
1	I	80	LYS	CB-CG-CD	5.91	126.96	111.60
1	F	295	LYS	C-N-CA	5.91	136.46	121.70
1	C	377	GLN	N-CA-C	5.90	126.94	111.00
1	K	460	TYR	CG-CD2-CE2	-5.90	116.58	121.30
1	L	202	ASP	CB-CG-OD1	5.90	123.61	118.30
1	A	76	ASP	CB-CG-OD2	-5.90	112.99	118.30
1	C	254	PHE	CB-CG-CD1	-5.90	116.67	120.80
1	J	467	LEU	CA-CB-CG	5.89	128.86	115.30
1	L	41	TYR	CB-CG-CD1	-5.89	117.46	121.00
1	K	374	LYS	N-CA-C	5.89	126.90	111.00
1	I	339	TYR	CA-CB-CG	5.89	124.59	113.40
1	C	128	THR	CA-CB-CG2	5.89	120.64	112.40
1	G	140	ALA	CB-CA-C	5.88	118.93	110.10
1	D	41	TYR	CG-CD1-CE1	-5.88	116.60	121.30
1	D	129	VAL	CG1-CB-CG2	5.88	120.31	110.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	122	ASP	CB-CG-OD2	-5.88	113.01	118.30
1	G	392	ARG	NE-CZ-NH1	5.88	123.24	120.30
1	L	373	PRO	N-CA-C	5.88	127.38	112.10
1	B	245	ARG	NE-CZ-NH2	5.87	123.24	120.30
1	I	392	ARG	NE-CZ-NH2	5.87	123.24	120.30
1	H	366	LEU	CB-CG-CD2	5.87	120.97	111.00
1	I	184	PRO	N-CA-CB	5.87	110.34	103.30
1	E	47	ASP	CB-CG-OD1	5.87	123.58	118.30
1	D	255	ALA	N-CA-CB	-5.87	101.89	110.10
1	E	422	PHE	CB-CG-CD1	-5.87	116.69	120.80
1	G	74	PHE	CB-CG-CD2	-5.87	116.69	120.80
1	L	289	ASP	CB-CG-OD1	5.86	123.57	118.30
1	G	111	ASP	CB-CG-OD2	5.85	123.57	118.30
1	E	155	LYS	CB-CG-CD	5.85	126.82	111.60
1	G	408	VAL	CA-CB-CG1	5.85	119.67	110.90
1	F	397	LEU	CB-CG-CD2	5.85	120.94	111.00
1	B	375	GLY	N-CA-C	5.84	127.71	113.10
1	C	146	ASP	CB-CG-OD2	5.84	123.56	118.30
1	A	202	ASP	CB-CG-OD2	5.84	123.56	118.30
1	I	66	ARG	CB-CA-C	5.84	122.08	110.40
1	A	202	ASP	CB-CG-OD1	-5.84	113.05	118.30
1	F	465	ALA	CB-CA-C	5.84	118.86	110.10
1	E	82	PHE	CB-CG-CD1	-5.83	116.72	120.80
1	K	79	PHE	CB-CG-CD1	-5.83	116.72	120.80
1	C	181	LEU	CB-CG-CD1	5.83	120.91	111.00
1	C	374	LYS	N-CA-C	5.83	126.73	111.00
1	A	234	TYR	CG-CD2-CE2	-5.82	116.64	121.30
1	D	228	LEU	CB-CG-CD2	-5.82	101.10	111.00
1	K	73	PHE	CB-CG-CD1	-5.82	116.72	120.80
1	D	73	PHE	CB-CG-CD1	-5.82	116.72	120.80
1	A	373	PRO	N-CA-C	5.82	127.23	112.10
1	F	305	VAL	CA-CB-CG1	5.82	119.63	110.90
1	G	90	ARG	NE-CZ-NH2	5.82	123.21	120.30
1	K	113	TYR	CB-CG-CD2	-5.82	117.51	121.00
1	C	374	LYS	C-N-CA	5.82	134.52	122.30
1	G	202	ASP	CB-CG-OD2	-5.82	113.06	118.30
1	A	71	ASP	CB-CG-OD1	5.81	123.53	118.30
1	B	350	SER	CB-CA-C	5.81	121.14	110.10
1	J	176	ASP	CB-CG-OD2	-5.81	113.07	118.30
1	A	312	ASP	N-CA-CB	-5.81	100.14	110.60
1	C	53	VAL	CA-CB-CG2	5.81	119.61	110.90
1	F	157	GLU	OE1-CD-OE2	-5.81	116.33	123.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	78	TYR	CB-CG-CD2	5.81	124.48	121.00
1	L	459	VAL	CG1-CB-CG2	-5.80	101.62	110.90
1	F	313	GLU	CA-CB-CG	5.80	126.16	113.40
1	A	242	ILE	CA-CB-CG1	5.80	122.01	111.00
1	G	76	ASP	CB-CG-OD2	-5.79	113.09	118.30
1	K	290	THR	CA-CB-OG1	5.79	121.17	109.00
1	F	230	ASP	CB-CG-OD2	-5.79	113.09	118.30
1	B	282	THR	OG1-CB-CG2	-5.79	96.69	110.00
1	F	443	GLU	OE1-CD-OE2	-5.78	116.36	123.30
1	H	173	MET	CG-SD-CE	5.78	109.45	100.20
1	I	137	GLU	OE1-CD-OE2	-5.78	116.36	123.30
1	A	159	ASN	CB-CA-C	5.77	121.95	110.40
1	A	414	LYS	CB-CA-C	5.77	121.94	110.40
1	K	278	PHE	CB-CG-CD2	5.76	124.83	120.80
1	L	379	ASP	CB-CG-OD1	-5.76	113.11	118.30
1	F	293	ALA	N-CA-CB	-5.76	102.03	110.10
1	C	202	ASP	CB-CA-C	5.76	121.92	110.40
1	F	254	PHE	CB-CG-CD2	-5.76	116.77	120.80
1	H	394	LYS	O-C-N	-5.76	113.49	122.70
1	E	460	TYR	CB-CG-CD2	5.75	124.45	121.00
1	E	255	ALA	N-CA-CB	-5.75	102.05	110.10
1	H	185	PHE	CB-CG-CD1	5.75	124.83	120.80
1	J	98	VAL	CA-CB-CG2	5.75	119.53	110.90
1	B	200	ASN	CA-CB-CG	5.75	126.05	113.40
1	B	396	ARG	NE-CZ-NH2	5.75	123.17	120.30
1	E	123	ASP	OD1-CG-OD2	-5.75	112.38	123.30
1	B	138	TYR	CG-CD1-CE1	-5.75	116.70	121.30
1	K	90	ARG	NE-CZ-NH2	5.75	123.17	120.30
1	E	373	PRO	N-CA-C	5.74	127.03	112.10
1	F	137	GLU	CB-CA-C	5.74	121.88	110.40
1	A	236	VAL	CA-CB-CG2	5.74	119.51	110.90
1	E	177	VAL	CA-CB-CG2	5.74	119.50	110.90
1	G	294	TYR	CG-CD1-CE1	-5.74	116.71	121.30
1	F	63	ARG	CD-NE-CZ	5.74	131.63	123.60
1	J	379	ASP	CB-CG-OD2	5.74	123.46	118.30
1	J	394	LYS	C-N-CA	5.74	136.04	121.70
1	K	84	ASP	CB-CG-OD1	-5.74	113.14	118.30
1	G	339	TYR	CG-CD2-CE2	5.73	125.89	121.30
1	B	113	TYR	CB-CG-CD2	-5.72	117.57	121.00
1	E	78	TYR	CG-CD1-CE1	-5.72	116.72	121.30
1	E	377	GLN	N-CA-C	5.71	126.42	111.00
1	H	74	PHE	CB-CG-CD1	-5.70	116.81	120.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	470	LEU	CB-CG-CD1	5.70	120.69	111.00
1	I	115	VAL	CG1-CB-CG2	-5.70	101.78	110.90
1	J	82	PHE	CB-CG-CD2	-5.70	116.81	120.80
1	C	125	ASP	CB-CG-OD2	-5.70	113.17	118.30
1	G	78	TYR	CZ-CE2-CD2	5.70	124.93	119.80
1	A	362	ALA	CB-CA-C	5.69	118.64	110.10
1	A	215	THR	OG1-CB-CG2	-5.69	96.92	110.00
1	B	209	TYR	CZ-CE2-CD2	5.69	124.92	119.80
1	H	66	ARG	NH1-CZ-NH2	-5.68	113.15	119.40
1	A	370	LYS	CA-CB-CG	5.68	125.90	113.40
1	E	41	TYR	CD1-CG-CD2	5.68	124.15	117.90
1	A	431	VAL	CA-CB-CG2	5.67	119.41	110.90
1	B	298	GLU	OE1-CD-OE2	-5.67	116.49	123.30
1	K	98	VAL	CA-CB-CG1	5.67	119.41	110.90
1	C	137	GLU	CB-CA-C	5.67	121.74	110.40
1	J	172	LEU	CB-CG-CD2	5.67	120.64	111.00
1	L	63	ARG	NE-CZ-NH1	-5.67	117.47	120.30
1	H	138	TYR	CG-CD2-CE2	-5.66	116.77	121.30
1	C	183	ASN	OD1-CG-ND2	-5.66	108.88	121.90
1	D	135	ASP	CB-CG-OD1	-5.66	113.20	118.30
1	F	458	TRP	CG-CD2-CE3	5.66	138.99	133.90
1	I	416	LYS	N-CA-CB	-5.66	100.41	110.60
1	G	66	ARG	NE-CZ-NH2	5.66	123.13	120.30
1	H	464	PHE	CG-CD2-CE2	5.66	127.02	120.80
1	A	387	ARG	CD-NE-CZ	5.66	131.52	123.60
1	E	464	PHE	CG-CD2-CE2	-5.66	114.58	120.80
1	K	457	VAL	CG1-CB-CG2	-5.65	101.86	110.90
1	D	169	SER	CB-CA-C	5.65	120.83	110.10
1	A	396	ARG	NE-CZ-NH2	5.65	123.12	120.30
1	G	65	ASN	CB-CA-C	5.65	121.70	110.40
1	L	234	TYR	CG-CD2-CE2	-5.65	116.78	121.30
1	A	355	ARG	NH1-CZ-NH2	-5.65	113.19	119.40
1	G	398	GLN	CA-CB-CG	-5.65	100.98	113.40
1	B	111	ASP	CB-CG-OD2	5.64	123.38	118.30
1	A	403	VAL	CA-CB-CG2	5.64	119.36	110.90
1	E	395	ASP	CB-CG-OD1	5.64	123.37	118.30
1	H	171	ASP	CB-CG-OD2	-5.64	113.23	118.30
1	D	353	TYR	CD1-CE1-CZ	5.63	124.87	119.80
1	C	365	ILE	O-C-N	-5.63	113.69	122.70
1	F	113	TYR	CG-CD1-CE1	-5.63	116.79	121.30
1	F	113	TYR	CB-CG-CD2	-5.63	117.62	121.00
1	E	73	PHE	CG-CD2-CE2	5.62	126.98	120.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	189	PHE	CB-CG-CD1	5.62	124.74	120.80
1	I	362	ALA	CB-CA-C	5.62	118.53	110.10
1	L	163	ALA	CB-CA-C	5.62	118.53	110.10
1	L	170	ASP	CB-CG-OD1	5.62	123.36	118.30
1	L	152	ALA	N-CA-CB	-5.62	102.23	110.10
1	D	171	ASP	CB-CG-OD1	5.61	123.35	118.30
1	E	254	PHE	CB-CG-CD2	-5.61	116.87	120.80
1	B	316	LEU	CA-CB-CG	5.61	128.21	115.30
1	B	293	ALA	N-CA-CB	-5.60	102.26	110.10
1	K	60	THR	O-C-N	-5.59	113.75	122.70
1	A	84	ASP	CB-CG-OD2	-5.59	113.27	118.30
1	G	245	ARG	NE-CZ-NH2	5.58	123.09	120.30
1	G	263	ASP	CB-CG-OD1	5.58	123.33	118.30
1	G	115	VAL	CG1-CB-CG2	-5.58	101.97	110.90
1	J	318	ARG	NE-CZ-NH1	-5.58	117.51	120.30
1	J	402	ASP	CB-CG-OD1	5.58	123.32	118.30
1	E	87	PHE	CG-CD2-CE2	-5.58	114.67	120.80
1	J	413	GLU	OE1-CD-OE2	-5.58	116.61	123.30
1	L	407	LEU	CB-CG-CD2	5.58	120.48	111.00
1	H	378	SER	N-CA-C	5.57	126.05	111.00
1	A	210	GLU	OE1-CD-OE2	-5.57	116.61	123.30
1	K	230	ASP	CB-CA-C	5.57	121.54	110.40
1	F	276	ARG	C-N-CA	5.57	133.99	122.30
1	K	180	ALA	CB-CA-C	5.57	118.45	110.10
1	G	267	LYS	CA-CB-CG	5.57	125.64	113.40
1	C	178	VAL	O-C-N	5.56	131.60	122.70
1	D	63	ARG	NE-CZ-NH2	5.56	123.08	120.30
1	D	240	SER	N-CA-CB	-5.56	102.15	110.50
1	J	122	ASP	CB-CG-OD1	5.56	123.31	118.30
1	G	445	ALA	O-C-N	-5.56	113.80	122.70
1	B	78	TYR	CB-CG-CD1	5.56	124.34	121.00
1	J	426	ASP	CB-CG-OD2	5.56	123.30	118.30
1	B	264	ILE	CG1-CB-CG2	-5.55	99.18	111.40
1	B	125	ASP	CB-CG-OD2	5.55	123.30	118.30
1	E	62	THR	OG1-CB-CG2	-5.55	97.23	110.00
1	H	215	THR	CA-CB-CG2	5.55	120.17	112.40
1	D	169	SER	N-CA-CB	-5.55	102.17	110.50
1	D	198	ALA	N-CA-CB	-5.55	102.33	110.10
1	B	138	TYR	CB-CG-CD1	5.54	124.33	121.00
1	D	123	ASP	CB-CG-OD1	5.54	123.29	118.30
1	D	244	SER	O-C-N	-5.54	113.84	122.70
1	B	353	TYR	CD1-CG-CD2	5.54	123.99	117.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	38	VAL	CA-CB-CG1	5.54	119.20	110.90
1	C	109	SER	C-N-CA	5.53	135.54	121.70
1	D	449	VAL	O-C-N	-5.53	113.84	122.70
1	L	207	ASN	N-CA-CB	5.53	120.56	110.60
1	D	53	VAL	CA-CB-CG1	5.53	119.19	110.90
1	I	166	PHE	CB-CA-C	5.52	121.44	110.40
1	D	74	PHE	CB-CA-C	5.52	121.44	110.40
1	A	393	LEU	CB-CG-CD1	5.51	120.37	111.00
1	L	252	ILE	CA-CB-CG1	5.51	121.46	111.00
1	H	152	ALA	N-CA-CB	-5.50	102.39	110.10
1	F	123	ASP	CB-CG-OD2	-5.50	113.35	118.30
1	J	102	LEU	CB-CA-C	5.50	120.65	110.20
1	J	138	TYR	CB-CG-CD2	5.50	124.30	121.00
1	A	41	TYR	CB-CG-CD1	5.49	124.30	121.00
1	E	305	VAL	CG1-CB-CG2	-5.49	102.11	110.90
1	F	376	VAL	C-N-CA	5.49	135.42	121.70
1	H	259	ASN	CA-CB-CG	5.49	125.47	113.40
1	I	424	GLU	OE1-CD-OE2	-5.49	116.72	123.30
1	B	294	TYR	CB-CA-C	5.48	121.37	110.40
1	J	376	VAL	CA-CB-CG1	5.48	119.12	110.90
1	B	140	ALA	CB-CA-C	5.48	118.32	110.10
1	B	114	ILE	CA-CB-CG1	5.48	121.41	111.00
1	K	66	ARG	NE-CZ-NH2	5.48	123.04	120.30
1	L	62	THR	OG1-CB-CG2	-5.48	97.40	110.00
1	L	314	ALA	N-CA-CB	-5.48	102.43	110.10
1	G	278	PHE	CB-CG-CD1	5.47	124.63	120.80
1	A	374	LYS	N-CA-C	5.47	125.77	111.00
1	K	138	TYR	CB-CG-CD1	5.47	124.28	121.00
1	L	162	SER	N-CA-CB	-5.47	102.29	110.50
1	K	73	PHE	CD1-CG-CD2	5.47	125.41	118.30
1	B	460	TYR	CZ-CE2-CD2	5.47	124.72	119.80
1	I	461	ARG	NH1-CZ-NH2	-5.47	113.39	119.40
1	E	113	TYR	CB-CG-CD1	5.46	124.28	121.00
1	K	216	ASP	CB-CG-OD2	5.46	123.22	118.30
1	K	464	PHE	CD1-CE1-CZ	-5.46	113.55	120.10
1	G	150	ASP	CB-CG-OD2	-5.46	113.39	118.30
1	D	403	VAL	CA-CB-CG1	5.46	119.09	110.90
1	G	379	ASP	N-CA-CB	5.46	120.42	110.60
1	B	85	PHE	CG-CD2-CE2	-5.45	114.80	120.80
1	I	97	GLU	CB-CA-C	5.45	121.31	110.40
1	G	286	LEU	CB-CG-CD1	5.45	120.26	111.00
1	J	353	TYR	CB-CG-CD1	-5.45	117.73	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	174	GLU	O-C-N	-5.45	113.94	123.20
1	A	93	LYS	N-CA-CB	-5.45	100.80	110.60
1	I	76	ASP	CB-CG-OD1	5.45	123.20	118.30
1	D	229	VAL	CG1-CB-CG2	-5.44	102.19	110.90
1	G	176	ASP	CB-CG-OD1	5.44	123.20	118.30
1	D	387	ARG	NH1-CZ-NH2	-5.44	113.41	119.40
1	I	189	PHE	CG-CD2-CE2	-5.44	114.81	120.80
1	F	459	VAL	CG1-CB-CG2	-5.44	102.19	110.90
1	I	180	ALA	CB-CA-C	5.44	118.26	110.10
1	D	210	GLU	OE1-CD-OE2	-5.44	116.78	123.30
1	G	113	TYR	CB-CG-CD2	-5.43	117.74	121.00
1	A	335	ASP	CB-CG-OD1	5.43	123.18	118.30
1	B	245	ARG	C-N-CA	5.43	133.69	122.30
1	B	38	VAL	CG1-CB-CG2	-5.42	102.22	110.90
1	B	232	ARG	NE-CZ-NH1	-5.42	117.59	120.30
1	C	245	ARG	CD-NE-CZ	5.42	131.19	123.60
1	J	202	ASP	CB-CG-OD2	5.42	123.18	118.30
1	E	202	ASP	CB-CG-OD1	5.42	123.18	118.30
1	D	218	SER	O-C-N	5.42	131.37	122.70
1	G	238	ILE	CA-CB-CG1	5.42	121.30	111.00
1	K	294	TYR	CG-CD1-CE1	5.42	125.63	121.30
1	G	351	LEU	CB-CG-CD2	5.42	120.21	111.00
1	I	390	ASP	CB-CG-OD2	-5.42	113.43	118.30
1	I	159	ASN	N-CA-C	5.41	125.62	111.00
1	K	387	ARG	NE-CZ-NH1	5.41	123.01	120.30
1	C	78	TYR	CB-CG-CD1	-5.41	117.75	121.00
1	D	62	THR	CA-CB-CG2	5.41	119.98	112.40
1	D	456	LYS	CA-C-O	5.41	131.47	120.10
1	B	447	LYS	CA-CB-CG	5.41	125.30	113.40
1	D	212	PHE	CB-CG-CD2	5.41	124.59	120.80
1	B	78	TYR	CB-CA-C	5.41	121.21	110.40
1	J	171	ASP	CB-CG-OD1	5.41	123.16	118.30
1	J	387	ARG	CD-NE-CZ	5.41	131.17	123.60
1	J	454	PHE	CB-CG-CD2	-5.40	117.02	120.80
1	C	140	ALA	CB-CA-C	5.40	118.20	110.10
1	H	51	SER	N-CA-CB	-5.40	102.41	110.50
1	B	292	LYS	N-CA-CB	-5.39	100.89	110.60
1	B	313	GLU	OE1-CD-OE2	-5.39	116.83	123.30
1	H	260	MET	CG-SD-CE	-5.39	91.57	100.20
1	A	73	PHE	CB-CA-C	5.39	121.18	110.40
1	E	63	ARG	NH1-CZ-NH2	-5.39	113.47	119.40
1	K	318	ARG	NE-CZ-NH1	-5.39	117.60	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	151	LEU	CB-CG-CD1	5.39	120.17	111.00
1	G	236	VAL	CA-CB-CG2	5.39	118.98	110.90
1	G	254	PHE	CB-CG-CD1	5.39	124.57	120.80
1	A	113	TYR	CB-CG-CD1	5.39	124.23	121.00
1	G	95	ASP	CB-CG-OD2	-5.39	113.45	118.30
1	C	125	ASP	CB-CG-OD1	5.39	123.15	118.30
1	E	172	LEU	CB-CG-CD2	5.39	120.16	111.00
1	E	424	GLU	OE1-CD-OE2	-5.38	116.84	123.30
1	H	441	ASP	CB-CG-OD1	5.38	123.15	118.30
1	B	177	VAL	CG1-CB-CG2	-5.38	102.29	110.90
1	C	353	TYR	CG-CD1-CE1	-5.38	117.00	121.30
1	D	462	ASN	CA-C-N	5.38	126.96	116.20
1	H	375	GLY	CA-C-O	-5.38	110.91	120.60
1	B	171	ASP	CB-CG-OD1	5.38	123.14	118.30
1	D	82	PHE	CB-CG-CD1	-5.38	117.03	120.80
1	I	234	TYR	CB-CG-CD2	-5.38	117.77	121.00
1	I	276	ARG	C-N-CA	5.38	133.59	122.30
1	L	79	PHE	CB-CG-CD1	5.38	124.56	120.80
1	L	263	ASP	CB-CG-OD2	-5.38	113.46	118.30
1	H	113	TYR	CG-CD1-CE1	-5.37	117.00	121.30
1	J	422	PHE	CB-CG-CD2	-5.37	117.04	120.80
1	G	208	GLN	N-CA-CB	-5.37	100.94	110.60
1	F	132	PRO	CA-N-CD	-5.37	103.99	111.50
1	K	233	GLY	CA-C-O	-5.37	110.94	120.60
1	A	153	VAL	CA-CB-CG2	5.36	118.94	110.90
1	J	232	ARG	NH1-CZ-NH2	-5.36	113.50	119.40
1	F	379	ASP	CB-CG-OD1	5.36	123.12	118.30
1	K	379	ASP	N-CA-C	5.35	125.46	111.00
1	K	376	VAL	N-CA-C	5.35	125.45	111.00
1	G	122	ASP	CB-CG-OD1	-5.35	113.48	118.30
1	A	97	GLU	O-C-N	-5.35	114.14	122.70
1	B	74	PHE	CB-CA-C	5.35	121.09	110.40
1	C	62	THR	O-C-N	-5.34	114.15	122.70
1	D	95	ASP	CB-CG-OD2	-5.34	113.49	118.30
1	L	454	PHE	CB-CG-CD2	5.34	124.54	120.80
1	I	95	ASP	CB-CG-OD1	5.34	123.11	118.30
1	I	254	PHE	CG-CD2-CE2	-5.34	114.93	120.80
1	H	271	LYS	CA-C-N	5.33	126.87	116.20
1	J	382	ASP	CB-CG-OD1	5.33	123.10	118.30
1	F	44	SER	N-CA-CB	5.33	118.50	110.50
1	H	224	SER	CB-CA-C	5.33	120.23	110.10
1	C	377	GLN	CA-C-N	5.33	128.92	117.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	378	SER	O-C-N	-5.33	114.17	122.70
1	C	458	TRP	CE2-CD2-CG	5.33	111.56	107.30
1	C	458	TRP	NE1-CE2-CD2	-5.33	101.97	107.30
1	D	204	ILE	N-CA-C	-5.33	96.62	111.00
1	D	355	ARG	NE-CZ-NH2	5.33	122.96	120.30
1	F	47	ASP	N-CA-CB	5.32	120.18	110.60
1	K	74	PHE	CG-CD1-CE1	-5.32	114.94	120.80
1	H	316	LEU	CB-CG-CD1	5.32	120.05	111.00
1	J	321	LEU	CB-CG-CD2	5.32	120.05	111.00
1	A	461	ARG	CD-NE-CZ	5.32	131.05	123.60
1	C	110	LYS	C-N-CA	5.32	134.99	121.70
1	K	342	THR	CA-CB-CG2	5.32	119.84	112.40
1	J	166	PHE	CB-CG-CD1	-5.31	117.08	120.80
1	J	234	TYR	CB-CG-CD2	-5.31	117.81	121.00
1	F	363	SER	O-C-N	5.31	131.19	122.70
1	A	72	ASP	CB-CG-OD1	5.31	123.08	118.30
1	K	376	VAL	CA-CB-CG2	5.31	118.86	110.90
1	C	373	PRO	N-CA-C	5.30	125.89	112.10
1	J	392	ARG	CB-CA-C	5.30	121.01	110.40
1	D	325	VAL	CA-CB-CG2	5.30	118.85	110.90
1	F	293	ALA	CB-CA-C	5.30	118.05	110.10
1	G	137	GLU	CB-CA-C	5.30	121.00	110.40
1	I	402	ASP	CB-CG-OD1	-5.30	113.53	118.30
1	G	216	ASP	CB-CG-OD1	5.30	123.07	118.30
1	K	381	ILE	CG1-CB-CG2	-5.30	99.75	111.40
1	K	395	ASP	CB-CG-OD1	-5.30	113.53	118.30
1	G	369	GLU	OE1-CD-OE2	-5.29	116.95	123.30
1	K	426	ASP	CA-CB-CG	5.29	125.05	113.40
1	F	451	LYS	O-C-N	5.29	131.17	122.70
1	J	455	THR	OG1-CB-CG2	-5.29	97.82	110.00
1	E	63	ARG	NE-CZ-NH1	5.29	122.94	120.30
1	E	202	ASP	CB-CA-C	5.29	120.98	110.40
1	G	462	ASN	C-N-CA	5.29	133.41	122.30
1	K	261	VAL	CA-CB-CG2	5.29	118.83	110.90
1	F	228	LEU	CB-CG-CD1	5.29	119.99	111.00
1	L	172	LEU	CB-CG-CD2	5.29	119.99	111.00
1	A	345	ILE	CG1-CB-CG2	-5.28	99.79	111.40
1	B	234	TYR	CA-CB-CG	5.28	123.42	113.40
1	D	402	ASP	CB-CG-OD2	5.27	123.05	118.30
1	G	379	ASP	CB-CG-OD1	5.27	123.05	118.30
1	A	103	GLY	O-C-N	5.27	131.14	122.70
1	G	225	GLY	O-C-N	-5.27	114.24	123.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	392	ARG	NE-CZ-NH1	5.27	122.94	120.30
1	H	460	TYR	CG-CD1-CE1	5.27	125.52	121.30
1	K	176	ASP	CB-CG-OD2	-5.27	113.56	118.30
1	B	66	ARG	NE-CZ-NH2	5.27	122.93	120.30
1	C	202	ASP	N-CA-CB	-5.27	101.12	110.60
1	E	378	SER	N-CA-C	5.26	125.20	111.00
1	A	64	ALA	C-N-CA	5.26	134.84	121.70
1	H	287	GLN	OE1-CD-NE2	-5.26	109.81	121.90
1	C	276	ARG	NE-CZ-NH2	-5.26	117.67	120.30
1	K	234	TYR	CD1-CE1-CZ	5.26	124.53	119.80
1	E	344	GLU	OE1-CD-OE2	-5.25	117.00	123.30
1	D	43	ASP	CB-CG-OD1	5.25	123.03	118.30
1	G	41	TYR	CD1-CE1-CZ	5.25	124.53	119.80
1	H	69	PRO	N-CA-CB	5.25	109.60	103.30
1	B	356	ASP	N-CA-C	5.25	125.17	111.00
1	K	166	PHE	CB-CG-CD2	-5.25	117.13	120.80
1	L	306	GLN	C-N-CA	5.25	134.82	121.70
1	K	84	ASP	CB-CG-OD2	5.25	123.02	118.30
1	D	212	PHE	CG-CD1-CE1	5.24	126.57	120.80
1	F	373	PRO	C-N-CA	5.24	134.81	121.70
1	G	402	ASP	CB-CG-OD1	5.24	123.02	118.30
1	A	165	THR	O-C-N	-5.24	114.32	122.70
1	F	260	MET	CA-CB-CG	5.23	122.20	113.30
1	B	459	VAL	CA-CB-CG2	5.23	118.75	110.90
1	K	263	ASP	CB-CG-OD1	5.23	123.01	118.30
1	E	88	PRO	N-CA-CB	5.22	109.57	103.30
1	A	252	ILE	CA-CB-CG1	5.22	120.92	111.00
1	B	278	PHE	CG-CD2-CE2	5.22	126.55	120.80
1	F	371	GLU	N-CA-C	5.22	125.10	111.00
1	H	252	ILE	CA-CB-CG1	5.22	120.92	111.00
1	C	215	THR	CA-CB-OG1	5.22	119.96	109.00
1	E	125	ASP	CB-CG-OD1	5.22	123.00	118.30
1	G	392	ARG	NE-CZ-NH2	-5.22	117.69	120.30
1	K	114	ILE	CA-CB-CG1	5.22	120.91	111.00
1	I	66	ARG	NH1-CZ-NH2	-5.22	113.66	119.40
1	C	221	PRO	N-CA-CB	5.21	109.56	103.30
1	E	97	GLU	O-C-N	-5.21	114.36	122.70
1	A	152	ALA	N-CA-CB	-5.21	102.80	110.10
1	C	232	ARG	NE-CZ-NH2	5.21	122.91	120.30
1	L	360	LYS	O-C-N	5.21	131.04	122.70
1	F	212	PHE	CB-CG-CD2	5.21	124.45	120.80
1	J	152	ALA	CB-CA-C	5.21	117.91	110.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	J	210	GLU	OE1-CD-OE2	-5.21	117.05	123.30
1	K	89	GLN	C-N-CA	5.20	134.71	121.70
1	B	121	VAL	CA-CB-CG1	5.20	118.70	110.90
1	G	125	ASP	CB-CG-OD1	5.20	122.97	118.30
1	F	185	PHE	CB-CG-CD2	-5.19	117.17	120.80
1	K	43	ASP	CB-CG-OD1	5.19	122.97	118.30
1	L	171	ASP	O-C-N	-5.19	114.39	122.70
1	B	234	TYR	CB-CG-CD1	-5.19	117.89	121.00
1	D	355	ARG	C-N-CA	5.19	134.68	121.70
1	G	189	PHE	CG-CD1-CE1	-5.19	115.09	120.80
1	H	373	PRO	N-CA-C	5.19	125.60	112.10
1	B	192	THR	CA-CB-OG1	5.19	119.90	109.00
1	D	351	LEU	CB-CG-CD1	5.19	119.82	111.00
1	C	460	TYR	CG-CD2-CE2	5.19	125.45	121.30
1	G	364	PHE	CA-CB-CG	5.19	126.35	113.90
1	H	71	ASP	CB-CG-OD1	-5.19	113.63	118.30
1	J	307	LYS	CA-CB-CG	5.19	124.81	113.40
1	A	122	ASP	CB-CG-OD1	5.18	122.97	118.30
1	H	39	LEU	CB-CG-CD1	5.18	119.81	111.00
1	C	275	ASP	N-CA-CB	-5.18	101.28	110.60
1	G	171	ASP	CB-CG-OD2	-5.17	113.64	118.30
1	C	179	PHE	CB-CG-CD1	-5.17	117.18	120.80
1	D	374	LYS	N-CA-C	5.17	124.96	111.00
1	J	119	HIS	CA-CB-CG	5.17	122.39	113.60
1	B	378	SER	O-C-N	-5.17	114.43	122.70
1	A	204	ILE	C-N-CA	5.17	133.15	122.30
1	F	206	LEU	CB-CG-CD1	5.17	119.78	111.00
1	J	82	PHE	CG-CD2-CE2	5.17	126.48	120.80
1	G	264	ILE	CA-CB-CG2	5.16	121.22	110.90
1	C	174	GLU	CA-CB-CG	5.16	124.75	113.40
1	D	285	ALA	N-CA-CB	5.16	117.32	110.10
1	F	288	GLY	O-C-N	-5.16	114.45	122.70
1	G	339	TYR	CB-CG-CD2	-5.16	117.91	121.00
1	A	396	ARG	NE-CZ-NH1	-5.16	117.72	120.30
1	B	212	PHE	CB-CG-CD2	-5.16	117.19	120.80
1	H	374	LYS	CA-C-N	5.15	126.51	116.20
1	A	163	ALA	CB-CA-C	5.15	117.83	110.10
1	I	335	ASP	CA-CB-CG	5.15	124.73	113.40
1	B	355	ARG	NE-CZ-NH1	5.15	122.87	120.30
1	C	411	VAL	CA-CB-CG1	5.15	118.62	110.90
1	E	372	ASN	OD1-CG-ND2	-5.15	110.06	121.90
1	I	138	TYR	CG-CD2-CE2	-5.15	117.18	121.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L	78	TYR	CB-CG-CD1	5.15	124.09	121.00
1	B	63	ARG	CD-NE-CZ	5.14	130.80	123.60
1	E	322	VAL	CA-CB-CG1	5.14	118.62	110.90
1	F	441	ASP	CB-CG-OD1	5.14	122.93	118.30
1	G	378	SER	CB-CA-C	5.14	119.86	110.10
1	C	309	SER	N-CA-CB	-5.13	102.80	110.50
1	G	371	GLU	CA-CB-CG	5.13	124.70	113.40
1	H	171	ASP	CB-CG-OD1	5.13	122.92	118.30
1	C	134	SER	N-CA-CB	5.12	118.19	110.50
1	C	469	VAL	CA-CB-CG2	5.12	118.58	110.90
1	H	307	LYS	CA-CB-CG	5.12	124.67	113.40
1	K	185	PHE	CZ-CE2-CD2	-5.12	113.95	120.10
1	J	399	ILE	CA-CB-CG1	5.12	120.73	111.00
1	E	307	LYS	C-N-CA	5.12	133.05	122.30
1	D	435	GLU	OE1-CD-OE2	-5.12	117.16	123.30
1	F	196	ILE	CA-CB-CG2	5.12	121.13	110.90
1	E	382	ASP	CB-CG-OD1	5.12	122.91	118.30
1	I	318	ARG	NE-CZ-NH1	5.12	122.86	120.30
1	C	353	TYR	CB-CG-CD2	-5.11	117.93	121.00
1	D	197	SER	N-CA-CB	5.11	118.17	110.50
1	A	363	SER	N-CA-CB	-5.11	102.83	110.50
1	D	460	TYR	CB-CG-CD2	-5.11	117.93	121.00
1	E	386	LEU	CB-CG-CD1	5.11	119.69	111.00
1	G	355	ARG	NH1-CZ-NH2	-5.11	113.78	119.40
1	H	333	PRO	N-CA-CB	5.11	109.43	103.30
1	A	82	PHE	CB-CG-CD2	-5.11	117.22	120.80
1	G	165	THR	OG1-CB-CG2	-5.11	98.25	110.00
1	J	327	ASN	N-CA-CB	-5.10	101.41	110.60
1	I	278	PHE	CB-CG-CD2	-5.10	117.23	120.80
1	E	369	GLU	N-CA-CB	5.10	119.78	110.60
1	A	459	VAL	CG1-CB-CG2	-5.10	102.74	110.90
1	C	41	TYR	CB-CG-CD1	5.10	124.06	121.00
1	K	134	SER	N-CA-C	5.10	124.76	111.00
1	A	60	THR	CA-CB-CG2	5.10	119.53	112.40
1	D	69	PRO	N-CA-CB	5.09	109.41	103.30
1	D	373	PRO	N-CA-C	5.09	125.34	112.10
1	A	191	VAL	CA-CB-CG1	5.09	118.53	110.90
1	C	453	GLU	OE1-CD-OE2	5.09	129.41	123.30
1	D	314	ALA	CB-CA-C	5.09	117.73	110.10
1	G	395	ASP	CB-CG-OD1	5.09	122.88	118.30
1	C	382	ASP	CB-CG-OD1	5.08	122.87	118.30
1	L	126	THR	OG1-CB-CG2	-5.08	98.31	110.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	322	VAL	CA-CB-CG1	5.08	118.52	110.90
1	L	325	VAL	CA-CB-CG2	5.08	118.52	110.90
1	B	99	VAL	C-N-CA	5.08	134.39	121.70
1	A	102	LEU	CA-CB-CG	5.08	126.97	115.30
1	E	217	ALA	CB-CA-C	5.08	117.71	110.10
1	F	267	LYS	CB-CG-CD	5.08	124.79	111.60
1	A	114	ILE	CA-CB-CG1	5.07	120.64	111.00
1	E	234	TYR	CD1-CE1-CZ	-5.07	115.23	119.80
1	D	385	SER	CB-CA-C	5.07	119.74	110.10
1	E	387	ARG	CD-NE-CZ	5.07	130.70	123.60
1	I	439	LEU	CB-CG-CD1	-5.07	102.38	111.00
1	J	113	TYR	CB-CG-CD1	5.07	124.04	121.00
1	F	325	VAL	CA-CB-CG2	5.07	118.50	110.90
1	I	173	MET	CG-SD-CE	5.07	108.31	100.20
1	I	394	LYS	O-C-N	-5.07	114.59	122.70
1	A	171	ASP	CB-CG-OD1	5.06	122.86	118.30
1	K	373	PRO	C-N-CA	5.06	134.36	121.70
1	L	212	PHE	O-C-N	-5.06	114.60	122.70
1	J	285	ALA	N-CA-CB	-5.06	103.02	110.10
1	A	454	PHE	CB-CG-CD2	5.06	124.34	120.80
1	J	146	ASP	CB-CG-OD1	5.06	122.85	118.30
1	A	331	LYS	N-CA-CB	-5.05	101.50	110.60
1	E	364	PHE	CD1-CE1-CZ	-5.05	114.04	120.10
1	F	184	PRO	N-CD-CG	5.05	110.77	103.20
1	K	179	PHE	CB-CG-CD2	-5.05	117.27	120.80
1	K	392	ARG	NE-CZ-NH1	5.04	122.82	120.30
1	L	381	ILE	CA-CB-CG1	5.04	120.58	111.00
1	G	275	ASP	CB-CG-OD2	-5.04	113.76	118.30
1	E	257	PRO	N-CA-CB	5.04	109.35	103.30
1	G	111	ASP	OD1-CG-OD2	-5.04	113.73	123.30
1	B	146	ASP	CB-CG-OD1	5.04	122.83	118.30
1	B	390	ASP	N-CA-C	-5.04	97.41	111.00
1	G	442	LEU	CB-CA-C	5.04	119.77	110.20
1	L	108	ILE	CA-CB-CG1	5.03	120.56	111.00
1	J	170	ASP	CB-CA-C	5.03	120.46	110.40
1	G	122	ASP	CB-CG-OD2	5.03	122.83	118.30
1	K	394	LYS	N-CA-CB	-5.03	101.55	110.60
1	H	41	TYR	CG-CD1-CE1	-5.03	117.28	121.30
1	C	354	GLU	OE1-CD-OE2	-5.02	117.27	123.30
1	I	183	ASN	O-C-N	-5.02	111.55	121.10
1	J	73	PHE	CG-CD2-CE2	-5.02	115.28	120.80
1	L	206	LEU	CB-CG-CD2	5.02	119.54	111.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	460	TYR	CB-CA-C	5.02	120.44	110.40
1	B	166	PHE	CG-CD1-CE1	5.02	126.32	120.80
1	I	82	PHE	CB-CG-CD1	5.02	124.31	120.80
1	C	306	GLN	C-N-CA	5.02	134.24	121.70
1	D	396	ARG	C-N-CA	5.02	134.24	121.70
1	E	125	ASP	CB-CG-OD2	-5.02	113.78	118.30
1	J	43	ASP	CB-CG-OD1	5.02	122.82	118.30
1	J	420	SER	N-CA-CB	-5.02	102.97	110.50
1	J	53	VAL	CA-CB-CG2	5.01	118.42	110.90
1	H	107	ILE	CA-CB-CG1	5.01	120.52	111.00
1	J	185	PHE	CB-CG-CD1	5.01	124.30	120.80
1	L	379	ASP	OD1-CG-OD2	5.00	132.81	123.30
1	A	82	PHE	CB-CG-CD1	5.00	124.30	120.80
1	C	61	ILE	CG1-CB-CG2	-5.00	100.39	111.40
1	H	136	ILE	CA-CB-CG1	5.00	120.50	111.00

There are no chirality outliers.

All (205) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	113	TYR	Sidechain
1	A	129	VAL	Peptide
1	A	185	PHE	Sidechain
1	A	230	ASP	Sidechain
1	A	234	TYR	Sidechain
1	A	294	TYR	Sidechain
1	A	371	GLU	Peptide
1	A	389	LEU	Peptide
1	A	396	ARG	Peptide
1	A	41	TYR	Sidechain
1	A	419	ASN	Peptide
1	A	460	TYR	Sidechain
1	A	461	ARG	Sidechain
1	A	83	PHE	Peptide
1	B	113	TYR	Sidechain
1	B	139	LYS	Mainchain
1	B	166	PHE	Sidechain
1	B	170	ASP	Mainchain
1	B	189	PHE	Sidechain
1	B	202	ASP	Peptide
1	B	209	TYR	Sidechain
1	B	245	ARG	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	B	318	ARG	Sidechain
1	B	374	LYS	Peptide
1	B	387	ARG	Sidechain
1	B	389	LEU	Peptide
1	B	396	ARG	Sidechain
1	B	41	TYR	Peptide
1	B	441	ASP	Mainchain
1	B	461	ARG	Sidechain
1	B	469	VAL	Mainchain
1	B	53	VAL	Mainchain,Peptide
1	C	138	TYR	Sidechain
1	C	159	ASN	Peptide
1	C	222	GLY	Peptide
1	C	245	ARG	Sidechain
1	C	289	ASP	Mainchain
1	C	318	ARG	Sidechain
1	C	353	TYR	Sidechain
1	C	364	PHE	Sidechain
1	C	368	GLY	Mainchain
1	C	387	ARG	Sidechain
1	C	389	LEU	Peptide
1	C	390	ASP	Peptide
1	C	404	ASN	Peptide
1	C	438	ASN	Mainchain
1	C	461	ARG	Sidechain
1	C	56	SER	Peptide
1	C	63	ARG	Sidechain
1	C	82	PHE	Sidechain
1	C	89	GLN	Mainchain
1	D	119	HIS	Sidechain
1	D	138	TYR	Sidechain
1	D	162	SER	Peptide
1	D	220	ASN	Peptide
1	D	245	ARG	Sidechain
1	D	247	GLY	Peptide
1	D	276	ARG	Sidechain
1	D	278	PHE	Peptide
1	D	282	THR	Peptide
1	D	364	PHE	Sidechain
1	D	375	GLY	Peptide
1	D	389	LEU	Peptide
1	D	396	ARG	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	D	460	TYR	Sidechain
1	D	53	VAL	Peptide
1	D	63	ARG	Sidechain
1	D	90	ARG	Sidechain
1	E	100	SER	Peptide
1	E	113	TYR	Sidechain
1	E	138	TYR	Sidechain
1	E	162	SER	Peptide
1	E	171	ASP	Peptide
1	E	185	PHE	Sidechain
1	E	202	ASP	Peptide
1	E	222	GLY	Peptide
1	E	389	LEU	Peptide
1	E	41	TYR	Sidechain
1	E	461	ARG	Sidechain
1	E	63	ARG	Sidechain
1	F	138	TYR	Sidechain
1	F	139	LYS	Mainchain
1	F	185	PHE	Sidechain
1	F	209	TYR	Sidechain
1	F	212	PHE	Sidechain
1	F	221	PRO	Peptide
1	F	232	ARG	Sidechain
1	F	318	ARG	Sidechain
1	F	340	ILE	Mainchain
1	F	344	GLU	Peptide
1	F	353	TYR	Sidechain
1	F	355	ARG	Sidechain
1	F	389	LEU	Peptide
1	F	415	SER	Mainchain
1	F	78	TYR	Sidechain
1	F	79	PHE	Sidechain
1	G	170	ASP	Peptide
1	G	185	PHE	Sidechain
1	G	199	LEU	Peptide
1	G	204	ILE	Peptide
1	G	232	ARG	Sidechain
1	G	249	ASN	Sidechain
1	G	318	ARG	Sidechain
1	G	339	TYR	Sidechain
1	G	344	GLU	Peptide
1	G	345	ILE	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	G	353	TYR	Sidechain
1	G	387	ARG	Sidechain
1	G	389	LEU	Peptide
1	G	460	TYR	Sidechain
1	G	461	ARG	Sidechain
1	G	51	SER	Mainchain
1	G	53	VAL	Peptide
1	G	74	PHE	Peptide
1	H	113	TYR	Sidechain
1	H	120	VAL	Mainchain
1	H	138	TYR	Sidechain
1	H	185	PHE	Sidechain
1	H	192	THR	Mainchain
1	H	220	ASN	Peptide
1	H	306	GLN	Peptide
1	H	345	ILE	Peptide
1	H	376	VAL	Peptide
1	H	389	LEU	Peptide
1	H	390	ASP	Peptide
1	H	395	ASP	Peptide
1	H	396	ARG	Sidechain
1	H	415	SER	Mainchain
1	H	461	ARG	Sidechain
1	H	78	TYR	Sidechain
1	I	185	PHE	Sidechain
1	I	201	LYS	Peptide
1	I	240	SER	Mainchain
1	I	256	ILE	Mainchain
1	I	318	ARG	Sidechain
1	I	337	LYS	Mainchain
1	I	339	TYR	Sidechain
1	I	353	TYR	Sidechain
1	I	355	ARG	Sidechain
1	I	373	PRO	Peptide
1	I	387	ARG	Sidechain
1	I	389	LEU	Peptide
1	I	395	ASP	Mainchain
1	I	40	SER	Mainchain
1	I	418	LYS	Peptide
1	I	43	ASP	Mainchain
1	I	84	ASP	Mainchain
1	J	121	VAL	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	J	209	TYR	Sidechain
1	J	217	ALA	Mainchain
1	J	237	GLY	Mainchain
1	J	245	ARG	Sidechain
1	J	276	ARG	Sidechain
1	J	289	ASP	Peptide
1	J	306	GLN	Peptide
1	J	318	ARG	Sidechain,Peptide
1	J	326	ASN	Sidechain
1	J	353	TYR	Sidechain
1	J	355	ARG	Sidechain
1	J	373	PRO	Mainchain
1	J	375	GLY	Peptide
1	J	389	LEU	Peptide
1	J	392	ARG	Sidechain
1	J	446	LEU	Peptide
1	J	56	SER	Peptide
1	J	66	ARG	Sidechain
1	J	73	PHE	Sidechain
1	K	133	GLY	Peptide
1	K	185	PHE	Sidechain
1	K	276	ARG	Sidechain
1	K	289	ASP	Peptide
1	K	294	TYR	Sidechain
1	K	296	ASN	Peptide
1	K	298	GLU	Mainchain
1	K	312	ASP	Peptide
1	K	318	ARG	Sidechain
1	K	370	LYS	Peptide
1	K	371	GLU	Peptide
1	K	372	ASN	Mainchain
1	K	376	VAL	Peptide
1	K	389	LEU	Peptide
1	K	390	ASP	Peptide
1	K	396	ARG	Sidechain,Peptide
1	K	403	VAL	Peptide
1	K	460	TYR	Sidechain
1	K	63	ARG	Sidechain
1	K	83	PHE	Sidechain
1	L	220	ASN	Peptide
1	L	227	ALA	Peptide
1	L	277	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	L	278	PHE	Peptide
1	L	294	TYR	Sidechain
1	L	318	ARG	Sidechain
1	L	339	TYR	Sidechain
1	L	375	GLY	Peptide
1	L	389	LEU	Peptide
1	L	422	PHE	Sidechain,Mainchain
1	L	461	ARG	Sidechain
1	L	66	ARG	Sidechain
1	L	70	LEU	Mainchain
1	L	78	TYR	Sidechain

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	3323	0	3393	17	0
1	B	3323	0	3393	29	0
1	C	3323	0	3393	12	0
1	D	3323	0	3393	24	0
1	E	3323	0	3393	26	0
1	F	3323	0	3393	21	0
1	G	3323	0	3393	23	0
1	H	3323	0	3393	24	0
1	I	3323	0	3393	30	0
1	J	3323	0	3393	33	0
1	K	3323	0	3393	19	0
1	L	3322	0	3393	24	0
All	All	39875	0	40716	276	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 3.

All (276) 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:E:281:VAL:HG21	1:E:302:ILE:HD12	1.67	0.76
1:E:237:GLY:C	1:E:238:ILE:HD12	2.06	0.75
1:L:380:LEU:HB2	1:L:449:VAL:HG21	1.68	0.74
1:G:380:LEU:HB2	1:G:449:VAL:HG21	1.70	0.74
1:I:311:ALA:HB1	1:I:316:LEU:HD23	1.70	0.73
1:B:278:PHE:HA	1:B:340:ILE:HG21	1.76	0.67
1:I:380:LEU:HB2	1:I:449:VAL:HG21	1.76	0.67
1:J:294:TYR:CE2	1:J:416:LYS:HE3	2.31	0.65
1:I:294:TYR:CE2	1:I:416:LYS:HE3	2.31	0.64
1:E:139:LYS:HE3	1:E:141:LYS:HE3	1.78	0.64
1:I:302:ILE:HD11	1:I:316:LEU:HD21	1.78	0.64
1:L:365:ILE:HD12	1:L:367:LYS:HE3	1.79	0.64
1:G:302:ILE:HD11	1:G:322:VAL:HG23	1.81	0.62
1:L:384:LEU:HB3	1:L:386:LEU:HD13	1.82	0.61
1:G:446:LEU:O	1:G:449:VAL:HG22	2.00	0.61
1:J:457:VAL:HG22	1:J:470:LEU:HD13	1.83	0.60
1:D:267:LYS:HE2	1:D:267:LYS:HA	1.83	0.60
1:H:57:THR:HG23	1:H:127:ILE:HG22	1.82	0.60
1:D:281:VAL:HG21	1:D:302:ILE:HD12	1.84	0.60
1:E:340:ILE:HD12	1:E:366:LEU:HD11	1.84	0.59
1:K:282:THR:HG23	1:K:306:GLN:HE21	1.68	0.58
1:F:177:VAL:HG23	1:F:231:SER:HB3	1.86	0.58
1:B:318:ARG:HD2	1:B:377:GLN:HG3	1.86	0.57
1:C:278:PHE:CD1	1:C:340:ILE:HG21	2.39	0.57
1:L:264:ILE:HG23	1:L:274:ILE:HD11	1.85	0.57
1:H:384:LEU:HB3	1:H:386:LEU:HD13	1.85	0.57
1:K:380:LEU:HB2	1:K:449:VAL:HG21	1.87	0.57
1:L:302:ILE:HD11	1:L:322:VAL:CG2	2.34	0.57
1:L:218:SER:O	1:L:219:ILE:HD13	2.05	0.57
1:K:381:ILE:HB	1:K:446:LEU:HD13	1.87	0.56
1:D:198:ALA:HB3	1:D:214:GLN:HB3	1.88	0.56
1:I:317:LYS:HE3	1:I:376:VAL:CG1	2.35	0.56
1:H:131:LEU:HD12	1:H:132:PRO:HD2	1.86	0.56
1:J:385:SER:O	1:J:386:LEU:HD12	2.06	0.56
1:K:348:LYS:HE3	1:K:365:ILE:HG13	1.88	0.56
1:J:325:VAL:HG23	1:J:330:ILE:HD11	1.88	0.56
1:I:340:ILE:HD12	1:I:366:LEU:HD11	1.88	0.55
1:B:380:LEU:HB2	1:B:449:VAL:HG21	1.88	0.55
1:K:297:GLN:HB2	1:K:321:LEU:HD12	1.87	0.55
1:L:294:TYR:CZ	1:L:416:LYS:HE3	2.41	0.55
1:B:446:LEU:O	1:B:449:VAL:HG22	2.07	0.55
1:F:267:LYS:HE2	1:F:267:LYS:HA	1.88	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:267:LYS:HA	1:D:267:LYS:CE	2.38	0.54
1:L:294:TYR:CE2	1:L:416:LYS:HE3	2.43	0.54
1:L:264:ILE:HG23	1:L:274:ILE:CD1	2.37	0.54
1:E:238:ILE:HD12	1:E:238:ILE:N	2.23	0.54
1:L:181:LEU:HD11	1:L:229:VAL:HG22	1.89	0.54
1:J:249:ASN:ND2	1:J:251:GLY:H	2.06	0.54
1:I:278:PHE:HA	1:I:340:ILE:HG21	1.90	0.53
1:I:385:SER:O	1:I:386:LEU:HD12	2.08	0.53
1:I:446:LEU:O	1:I:449:VAL:HG22	2.08	0.53
1:D:177:VAL:HG23	1:D:231:SER:HB3	1.91	0.53
1:I:312:ASP:CG	1:I:317:LYS:HZ1	2.12	0.53
1:L:328:LYS:HB3	1:L:339:TYR:CE2	2.44	0.53
1:B:328:LYS:HB3	1:B:339:TYR:CE2	2.44	0.52
1:H:81:GLN:HB3	1:H:185:PHE:CG	2.44	0.52
1:K:237:GLY:C	1:K:238:ILE:HD12	2.29	0.52
1:F:380:LEU:HB2	1:F:449:VAL:HG21	1.91	0.52
1:J:384:LEU:HB3	1:J:386:LEU:HD13	1.91	0.52
1:A:131:LEU:HD12	1:A:132:PRO:HD2	1.90	0.52
1:J:241:ALA:C	1:J:242:ILE:HD12	2.30	0.52
1:G:302:ILE:HD11	1:G:322:VAL:CG2	2.40	0.51
1:B:307:LYS:HE3	1:B:377:GLN:CD	2.30	0.51
1:C:117:ASN:HD22	1:C:119:HIS:CE1	2.29	0.51
1:D:81:GLN:HB3	1:D:185:PHE:CD2	2.47	0.51
1:I:317:LYS:HE3	1:I:376:VAL:HG13	1.92	0.50
1:D:307:LYS:O	1:D:374:LYS:HA	2.11	0.50
1:I:177:VAL:HG23	1:I:231:SER:HB3	1.93	0.50
1:H:48:ALA:HB1	1:H:181:LEU:HD22	1.94	0.50
1:B:278:PHE:HB2	1:B:368:GLY:HA2	1.94	0.50
1:L:97:GLU:HG3	1:L:102:LEU:HD23	1.94	0.50
1:D:403:VAL:O	1:D:403:VAL:HG22	2.12	0.49
1:F:241:ALA:C	1:F:242:ILE:HD12	2.33	0.49
1:L:332:SER:HB2	1:L:333:PRO:HD2	1.94	0.49
1:D:370:LYS:HZ1	1:G:391:PRO:HD2	1.77	0.49
1:F:365:ILE:HD12	1:F:367:LYS:HE3	1.94	0.49
1:H:246:GLY:HA3	1:I:245:ARG:HG3	1.93	0.49
1:L:318:ARG:HD3	1:L:377:GLN:HB2	1.93	0.49
1:I:208:GLN:O	1:I:337:LYS:HE2	2.13	0.49
1:H:317:LYS:HE3	1:H:317:LYS:HA	1.93	0.49
1:C:107:ILE:HG12	1:C:114:ILE:HG22	1.95	0.49
1:C:81:GLN:HB3	1:C:185:PHE:CG	2.47	0.49
1:F:59:LYS:HE3	1:F:62:THR:HA	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:307:LYS:HB3	1:G:374:LYS:HA	1.94	0.49
1:L:153:VAL:HG23	1:L:268:LEU:HD12	1.93	0.49
1:B:433:GLN:HE21	1:B:456:LYS:HG3	1.78	0.49
1:I:81:GLN:HB3	1:I:185:PHE:CG	2.48	0.49
1:C:325:VAL:CG2	1:C:330:ILE:HD11	2.43	0.49
1:B:169:SER:HB3	1:B:258:SER:H	1.78	0.49
1:C:316:LEU:HD12	1:C:317:LYS:H	1.78	0.49
1:K:281:VAL:CG2	1:K:302:ILE:HG23	2.43	0.49
1:E:177:VAL:HG23	1:E:231:SER:HB3	1.95	0.48
1:H:380:LEU:HB2	1:H:449:VAL:HG21	1.95	0.48
1:J:149:THR:HG23	1:J:276:ARG:HH22	1.78	0.48
1:J:307:LYS:HE3	1:J:377:GLN:OE1	2.12	0.48
1:J:325:VAL:CG2	1:J:330:ILE:HD11	2.43	0.48
1:E:279:LEU:HD12	1:E:336:LEU:HD11	1.95	0.48
1:J:264:ILE:HG23	1:J:274:ILE:HD11	1.95	0.48
1:L:184:PRO:O	1:L:187:VAL:HG22	2.14	0.48
1:H:81:GLN:HE22	1:H:102:LEU:HD11	1.78	0.48
1:J:380:LEU:HB2	1:J:449:VAL:HG21	1.96	0.48
1:A:311:ALA:HB1	1:A:316:LEU:HD23	1.96	0.47
1:A:294:TYR:CZ	1:A:416:LYS:HE3	2.48	0.47
1:D:79:PHE:CZ	1:D:93:LYS:HB3	2.49	0.47
1:H:54:ASN:HB3	1:H:183:ASN:HD22	1.80	0.47
1:J:386:LEU:HD11	1:J:408:VAL:HG13	1.96	0.47
1:J:215:THR:HG23	1:J:217:ALA:HB3	1.97	0.47
1:J:249:ASN:HD21	1:J:251:GLY:HA2	1.79	0.47
1:E:275:ASP:HB3	1:E:345:ILE:HD12	1.96	0.47
1:F:113:TYR:CE1	1:F:143:ILE:HD11	2.50	0.47
1:G:237:GLY:C	1:G:238:ILE:HD12	2.35	0.47
1:I:345:ILE:HD12	1:I:345:ILE:H	1.80	0.47
1:L:307:LYS:HB3	1:L:375:GLY:H	1.78	0.47
1:B:177:VAL:HG23	1:B:231:SER:HB3	1.97	0.47
1:I:57:THR:CG2	1:I:101:SER:HB3	2.44	0.47
1:I:57:THR:HB	1:I:101:SER:HB3	1.95	0.47
1:A:281:VAL:CG2	1:A:302:ILE:HD12	2.45	0.47
1:G:129:VAL:HG22	1:G:156:ILE:HD13	1.96	0.47
1:D:302:ILE:HD11	1:D:322:VAL:HG23	1.97	0.46
1:D:380:LEU:HD13	1:D:449:VAL:HG23	1.96	0.46
1:J:57:THR:HA	1:J:127:ILE:HA	1.97	0.46
1:D:307:LYS:C	1:D:374:LYS:HA	2.36	0.46
1:K:380:LEU:CB	1:K:449:VAL:HG21	2.46	0.46
1:B:140:ALA:HB1	1:B:154:ILE:HG22	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:195:ILE:HD11	1:F:193:SER:H	1.79	0.46
1:D:284:LEU:HA	1:D:333:PRO:HG3	1.97	0.46
1:B:316:LEU:HD12	1:B:320:ASP:HB2	1.96	0.46
1:F:278:PHE:CD1	1:F:340:ILE:HG21	2.51	0.46
1:L:143:ILE:HD11	1:L:155:LYS:HB2	1.97	0.46
1:D:467:LEU:HD23	1:D:467:LEU:H	1.80	0.46
1:G:406:VAL:HG11	1:G:442:LEU:HD22	1.97	0.46
1:A:307:LYS:C	1:A:374:LYS:HA	2.36	0.46
1:H:302:ILE:HG13	1:H:316:LEU:HD21	1.98	0.46
1:K:200:ASN:H	1:K:213:ILE:HG12	1.81	0.46
1:A:63:ARG:HH21	1:A:66:ARG:NH2	2.14	0.46
1:E:307:LYS:C	1:E:374:LYS:HA	2.36	0.46
1:G:403:VAL:HG22	1:G:403:VAL:O	2.16	0.46
1:H:219:ILE:HG23	1:H:223:ASN:CB	2.46	0.45
1:H:344:GLU:O	1:H:366:LEU:HD22	2.16	0.45
1:B:81:GLN:HB3	1:B:185:PHE:CG	2.52	0.45
1:F:63:ARG:HG2	1:F:63:ARG:HH21	1.82	0.45
1:C:237:GLY:C	1:C:238:ILE:HD12	2.36	0.45
1:I:81:GLN:HB3	1:I:185:PHE:CD1	2.52	0.45
1:J:184:PRO:O	1:J:187:VAL:HG22	2.16	0.45
1:B:181:LEU:HD11	1:B:229:VAL:HG22	1.99	0.45
1:E:57:THR:HG23	1:E:127:ILE:HG22	1.99	0.45
1:E:237:GLY:CA	1:E:238:ILE:HD12	2.47	0.45
1:J:68:SER:HB3	1:J:70:LEU:HD13	1.97	0.45
1:D:318:ARG:HD3	1:D:377:GLN:HB2	1.98	0.45
1:F:185:PHE:CE1	1:F:221:PRO:HD2	2.51	0.45
1:B:182:GLY:CA	1:B:223:ASN:HD22	2.30	0.45
1:C:332:SER:HB2	1:C:333:PRO:HD2	1.98	0.45
1:G:208:GLN:O	1:G:337:LYS:HE2	2.17	0.45
1:E:454:PHE:C	1:E:454:PHE:CD2	2.90	0.45
1:H:345:ILE:HD12	1:H:345:ILE:N	2.32	0.45
1:I:118:ASN:HB3	1:I:150:ASP:HA	1.98	0.45
1:B:449:VAL:C	1:B:451:LYS:H	2.20	0.44
1:I:406:VAL:HG12	1:I:428:ILE:HB	1.98	0.44
1:K:267:LYS:HE2	1:K:267:LYS:HA	1.99	0.44
1:A:52:VAL:HA	1:A:105:GLY:O	2.18	0.44
1:F:372:ASN:HA	1:F:373:PRO:HD3	1.89	0.44
1:I:181:LEU:HD11	1:I:229:VAL:HG22	2.00	0.44
1:E:49:LYS:HB3	1:E:189:PHE:CE2	2.53	0.44
1:E:267:LYS:HB3	1:E:274:ILE:HG23	2.00	0.44
1:I:307:LYS:C	1:I:309:SER:H	2.20	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:281:VAL:HG22	1:A:302:ILE:HD12	2.00	0.44
1:B:138:TYR:HB2	1:B:156:ILE:HD11	1.99	0.44
1:E:264:ILE:HG23	1:E:274:ILE:HD11	1.99	0.44
1:G:107:ILE:HG12	1:G:114:ILE:HG22	1.99	0.44
1:G:219:ILE:H	1:G:249:ASN:HB2	1.83	0.44
1:G:351:LEU:HD22	1:G:364:PHE:CZ	2.53	0.44
1:H:206:LEU:HD11	1:H:241:ALA:HB3	2.00	0.44
1:A:59:LYS:HD2	1:A:123:ASP:O	2.17	0.44
1:E:213:ILE:HG22	1:E:214:GLN:N	2.33	0.43
1:E:126:THR:HG23	1:E:139:LYS:HD2	1.99	0.43
1:E:328:LYS:HD3	1:E:339:TYR:CG	2.53	0.43
1:E:384:LEU:HB3	1:E:386:LEU:HD13	2.00	0.43
1:G:185:PHE:CE1	1:G:221:PRO:HD2	2.54	0.43
1:A:302:ILE:HD11	1:A:322:VAL:HG23	2.00	0.43
1:F:396:ARG:HD3	1:F:460:TYR:CE2	2.54	0.43
1:B:332:SER:HB2	1:B:333:PRO:HD2	1.99	0.43
1:C:380:LEU:HB2	1:C:449:VAL:HG21	2.00	0.43
1:E:281:VAL:CG2	1:E:302:ILE:HD12	2.45	0.43
1:G:245:ARG:HG3	1:I:246:GLY:HA3	2.00	0.43
1:L:394:LYS:HA	1:L:395:ASP:HA	1.82	0.43
1:H:206:LEU:CD1	1:H:241:ALA:HB3	2.48	0.43
1:C:446:LEU:O	1:C:449:VAL:HG22	2.18	0.43
1:A:332:SER:HB2	1:A:333:PRO:HD2	2.01	0.43
1:B:386:LEU:HD11	1:B:408:VAL:HG13	2.00	0.43
1:E:278:PHE:HA	1:E:340:ILE:HG21	2.00	0.43
1:G:469:VAL:HG13	1:G:469:VAL:O	2.19	0.43
1:C:281:VAL:HA	1:C:306:GLN:H	1.83	0.43
1:G:307:LYS:CB	1:G:374:LYS:HA	2.49	0.43
1:L:117:ASN:HD22	1:L:119:HIS:CE1	2.37	0.43
1:G:330:ILE:HD13	1:G:336:LEU:HB2	2.01	0.42
1:I:314:ALA:HB3	1:I:364:PHE:CE1	2.54	0.42
1:B:371:GLU:CD	1:K:394:LYS:HE2	2.39	0.42
1:F:173:MET:HA	1:F:199:LEU:HD11	2.01	0.42
1:J:181:LEU:HD11	1:J:229:VAL:HG22	2.01	0.42
1:F:345:ILE:CD1	1:J:394:LYS:HE2	2.50	0.42
1:G:87:PHE:HA	1:G:88:PRO:HD3	1.92	0.42
1:J:446:LEU:O	1:J:449:VAL:HG22	2.19	0.42
1:K:400:PRO:HA	1:K:403:VAL:CG1	2.50	0.42
1:B:408:VAL:HG21	1:B:422:PHE:CZ	2.55	0.42
1:F:264:ILE:HG23	1:F:274:ILE:CD1	2.50	0.42
1:F:327:ASN:HD21	1:F:328:LYS:HE3	1.84	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:322:VAL:HG11	1:I:351:LEU:HD11	2.00	0.42
1:K:127:ILE:O	1:K:140:ALA:HB3	2.19	0.42
1:B:385:SER:O	1:B:386:LEU:HD12	2.18	0.42
1:E:422:PHE:CD1	1:E:459:VAL:HG11	2.54	0.42
1:L:464:PHE:CG	1:L:465:ALA:N	2.87	0.42
1:J:237:GLY:C	1:J:238:ILE:HD12	2.40	0.42
1:K:281:VAL:HA	1:K:306:GLN:H	1.85	0.42
1:H:386:LEU:HD11	1:H:408:VAL:HG13	2.02	0.42
1:F:335:ASP:HB3	1:F:339:TYR:CE2	2.55	0.42
1:G:294:TYR:CE2	1:G:416:LYS:HE3	2.54	0.42
1:B:219:ILE:HG23	1:B:223:ASN:CB	2.50	0.42
1:D:66:ARG:HG3	1:D:67:PRO:HD2	2.01	0.42
1:H:219:ILE:HG23	1:H:223:ASN:HB2	2.02	0.42
1:H:264:ILE:HG23	1:H:274:ILE:CD1	2.50	0.42
1:J:303:THR:HB	1:J:451:LYS:HG2	2.02	0.42
1:J:385:SER:C	1:J:386:LEU:HD12	2.40	0.42
1:H:237:GLY:C	1:H:238:ILE:HD12	2.39	0.41
1:I:44:SER:O	1:I:48:ALA:HB2	2.20	0.41
1:A:312:ASP:CG	1:A:317:LYS:HZ1	2.22	0.41
1:D:42:HIS:ND1	1:D:46:LYS:HE3	2.35	0.41
1:K:180:ALA:CB	1:K:219:ILE:HD11	2.51	0.41
1:A:149:THR:HG23	1:A:276:ARG:HH22	1.86	0.41
1:I:385:SER:C	1:I:386:LEU:HD12	2.40	0.41
1:J:276:ARG:NH1	1:J:341:GLY:O	2.53	0.41
1:A:206:LEU:HD12	1:A:212:PHE:CZ	2.56	0.41
1:A:218:SER:HA	1:A:249:ASN:ND2	2.35	0.41
1:E:283:ILE:HD12	1:E:302:ILE:HD13	2.02	0.41
1:K:305:VAL:C	1:K:307:LYS:H	2.23	0.41
1:L:76:ASP:N	1:L:77:PRO:CD	2.83	0.41
1:A:348:LYS:HE2	1:A:363:SER:OG	2.20	0.41
1:B:318:ARG:HD3	1:B:377:GLN:HB2	2.03	0.41
1:D:319:GLY:H	1:D:450:ASN:ND2	2.17	0.41
1:E:79:PHE:HB2	1:E:82:PHE:CD1	2.56	0.41
1:F:185:PHE:CD1	1:F:220:ASN:HB3	2.55	0.41
1:K:87:PHE:HA	1:K:88:PRO:HD3	1.87	0.41
1:F:392:ARG:HA	1:F:392:ARG:NH1	2.36	0.41
1:J:303:THR:CG2	1:J:451:LYS:HG2	2.51	0.41
1:B:318:ARG:CD	1:B:377:GLN:HG3	2.50	0.41
1:B:399:ILE:HA	1:B:400:PRO:HD3	1.87	0.41
1:B:179:PHE:CE1	1:B:231:SER:HA	2.56	0.41
1:B:205:GLY:HA2	1:B:210:GLU:CD	2.41	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:166:PHE:HB2	1:D:262:LYS:HE2	2.03	0.41
1:G:328:LYS:HB3	1:G:339:TYR:CE2	2.56	0.41
1:H:177:VAL:HG23	1:H:231:SER:HB3	2.03	0.41
1:I:393:LEU:HG	1:I:394:LYS:H	1.85	0.41
1:J:140:ALA:HB1	1:J:154:ILE:HG22	2.03	0.41
1:J:307:LYS:C	1:J:374:LYS:HA	2.41	0.41
1:K:97:GLU:HG2	1:K:102:LEU:H	1.86	0.41
1:D:308:GLY:HA2	1:D:312:ASP:HB3	2.02	0.41
1:F:87:PHE:HA	1:F:88:PRO:HD3	1.88	0.41
1:H:457:VAL:HG22	1:H:470:LEU:HD13	2.02	0.41
1:J:156:ILE:HG23	1:J:161:LEU:HD13	2.03	0.41
1:J:394:LYS:HE3	1:J:395:ASP:CG	2.41	0.41
1:L:324:LYS:HD2	1:L:329:VAL:HG22	2.02	0.41
1:D:117:ASN:HD22	1:D:119:HIS:CE1	2.39	0.40
1:D:185:PHE:CD1	1:D:220:ASN:HB3	2.56	0.40
1:E:180:ALA:HB1	1:E:219:ILE:CG1	2.52	0.40
1:G:307:LYS:HB3	1:G:375:GLY:H	1.86	0.40
1:J:142:LEU:HD21	1:J:145:LYS:HD3	2.02	0.40
1:B:182:GLY:HA3	1:B:223:ASN:HD22	1.86	0.40
1:I:49:LYS:HB3	1:I:189:PHE:CE2	2.56	0.40
1:J:394:LYS:HE3	1:J:395:ASP:OD1	2.22	0.40
1:L:185:PHE:CE1	1:L:220:ASN:HB3	2.56	0.40
1:A:48:ALA:HB1	1:A:181:LEU:HD22	2.04	0.40
1:H:335:ASP:HB3	1:H:339:TYR:CE2	2.56	0.40
1:J:180:ALA:HB1	1:J:219:ILE:HD11	2.04	0.40
1:K:96:LYS:HE3	1:K:102:LEU:HB3	2.03	0.40
1:C:241:ALA:C	1:C:242:ILE:HD12	2.42	0.40
1:E:389:LEU:HD23	1:E:389:LEU:H	1.87	0.40
1:H:351:LEU:HD23	1:H:351:LEU:C	2.42	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	432/434 (100%)	356 (82%)	63 (15%)	13 (3%)	4	28
1	B	432/434 (100%)	364 (84%)	56 (13%)	12 (3%)	5	30
1	C	432/434 (100%)	353 (82%)	64 (15%)	15 (4%)	3	25
1	D	432/434 (100%)	351 (81%)	70 (16%)	11 (2%)	5	32
1	E	432/434 (100%)	351 (81%)	65 (15%)	16 (4%)	3	24
1	F	432/434 (100%)	366 (85%)	55 (13%)	11 (2%)	5	32
1	G	432/434 (100%)	367 (85%)	58 (13%)	7 (2%)	9	43
1	H	432/434 (100%)	348 (81%)	67 (16%)	17 (4%)	3	23
1	I	432/434 (100%)	361 (84%)	59 (14%)	12 (3%)	5	30
1	J	432/434 (100%)	350 (81%)	65 (15%)	17 (4%)	3	23
1	K	432/434 (100%)	356 (82%)	64 (15%)	12 (3%)	5	30
1	L	432/434 (100%)	356 (82%)	68 (16%)	8 (2%)	8	38
All	All	5184/5208 (100%)	4279 (82%)	754 (14%)	151 (3%)	7	29

All (151) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	307	LYS
1	B	373	PRO
1	B	396	ARG
1	C	200	ASN
1	C	307	LYS
1	C	356	ASP
1	C	433	GLN
1	D	200	ASN
1	D	309	SER
1	D	356	ASP
1	D	379	ASP
1	E	356	ASP
1	F	57	THR
1	F	307	LYS
1	F	356	ASP
1	H	356	ASP
1	I	57	THR
1	I	125	ASP
1	I	309	SER
1	J	374	LYS
1	K	224	SER
1	K	307	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	K	374	LYS
1	L	78	TYR
1	L	307	LYS
1	A	127	ILE
1	A	307	LYS
1	A	326	ASN
1	A	462	ASN
1	B	125	ASP
1	C	368	GLY
1	D	58	SER
1	E	127	ILE
1	E	231	SER
1	E	280	GLY
1	E	308	GLY
1	E	378	SER
1	E	382	ASP
1	G	309	SER
1	G	462	ASN
1	H	200	ASN
1	H	379	ASP
1	I	90	ARG
1	I	307	LYS
1	I	308	GLY
1	I	356	ASP
1	I	380	LEU
1	I	396	ARG
1	J	58	SER
1	J	78	TYR
1	J	124	ALA
1	J	125	ASP
1	J	307	LYS
1	J	373	PRO
1	K	78	TYR
1	K	373	PRO
1	K	379	ASP
1	K	396	ARG
1	L	125	ASP
1	L	224	SER
1	L	231	SER
1	L	356	ASP
1	A	78	TYR
1	A	125	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	281	VAL
1	A	356	ASP
1	A	463	GLY
1	B	224	SER
1	B	296	ASN
1	B	463	GLY
1	C	125	ASP
1	C	463	GLY
1	D	71	ASP
1	D	396	ARG
1	E	86	ASP
1	E	171	ASP
1	E	309	SER
1	E	374	LYS
1	F	309	SER
1	F	326	ASN
1	F	371	GLU
1	G	75	ASN
1	G	78	TYR
1	G	307	LYS
1	G	379	ASP
1	H	71	ASP
1	H	95	ASP
1	H	125	ASP
1	H	157	GLU
1	H	246	GLY
1	H	374	LYS
1	J	309	SER
1	J	396	ARG
1	A	57	THR
1	A	357	GLY
1	A	380	LEU
1	B	97	GLU
1	B	309	SER
1	B	356	ASP
1	C	69	PRO
1	C	335	ASP
1	C	374	LYS
1	E	110	LYS
1	E	368	GLY
1	F	91	LYS
1	F	396	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	75	ASN
1	H	307	LYS
1	I	92	GLY
1	J	86	ASP
1	J	208	GLN
1	J	357	GLY
1	K	86	ASP
1	K	356	ASP
1	K	433	GLN
1	A	374	LYS
1	B	218	SER
1	C	75	ASN
1	C	160	ASN
1	C	396	ARG
1	E	396	ARG
1	F	42	HIS
1	H	294	TYR
1	I	71	ASP
1	K	377	GLN
1	B	208	GLN
1	D	374	LYS
1	H	337	LYS
1	I	463	GLY
1	J	95	ASP
1	J	96	LYS
1	J	134	SER
1	L	373	PRO
1	H	76	ASP
1	H	341	GLY
1	H	463	GLY
1	J	92	GLY
1	K	403	VAL
1	C	127	ILE
1	C	252	ILE
1	D	127	ILE
1	E	246	GLY
1	F	251	GLY
1	J	88	PRO
1	D	204	ILE
1	D	252	ILE
1	E	76	ASP
1	G	88	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	92	GLY
1	F	88	PRO
1	L	69	PRO

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 PDB entries followed by that with respect to all EM entries.

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	369/369 (100%)	332 (90%)	37 (10%)	7 26
1	B	369/369 (100%)	350 (95%)	19 (5%)	24 49
1	C	369/369 (100%)	349 (95%)	20 (5%)	22 47
1	D	369/369 (100%)	348 (94%)	21 (6%)	20 45
1	E	369/369 (100%)	350 (95%)	19 (5%)	24 49
1	F	369/369 (100%)	341 (92%)	28 (8%)	13 37
1	G	369/369 (100%)	350 (95%)	19 (5%)	24 49
1	H	369/369 (100%)	345 (94%)	24 (6%)	17 42
1	I	369/369 (100%)	349 (95%)	20 (5%)	22 47
1	J	369/369 (100%)	336 (91%)	33 (9%)	9 30
1	K	369/369 (100%)	344 (93%)	25 (7%)	16 40
1	L	369/369 (100%)	342 (93%)	27 (7%)	14 38
All	All	4428/4428 (100%)	4136 (93%)	292 (7%)	20 41

All (292) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	43	ASP
1	A	53	VAL
1	A	56	SER
1	A	57	THR
1	A	60	THR
1	A	74	PHE
1	A	83	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	96	LYS
1	A	97	GLU
1	A	110	LYS
1	A	114	ILE
1	A	126	THR
1	A	135	ASP
1	A	137	GLU
1	A	177	VAL
1	A	197	SER
1	A	201	LYS
1	A	203	ASN
1	A	224	SER
1	A	245	ARG
1	A	252	ILE
1	A	261	VAL
1	A	264	ILE
1	A	276	ARG
1	A	290	THR
1	A	295	LYS
1	A	317	LYS
1	A	320	ASP
1	A	335	ASP
1	A	340	ILE
1	A	360	LYS
1	A	364	PHE
1	A	376	VAL
1	A	392	ARG
1	A	397	LEU
1	A	444	GLN
1	A	467	LEU
1	B	47	ASP
1	B	56	SER
1	B	57	THR
1	B	60	THR
1	B	83	PHE
1	B	90	ARG
1	B	96	LYS
1	B	102	LEU
1	B	149	THR
1	B	178	VAL
1	B	230	ASP
1	B	252	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	287	GLN
1	B	317	LYS
1	B	320	ASP
1	B	364	PHE
1	B	387	ARG
1	B	392	ARG
1	B	395	ASP
1	C	57	THR
1	C	83	PHE
1	C	84	ASP
1	C	85	PHE
1	C	96	LYS
1	C	101	SER
1	C	102	LEU
1	C	111	ASP
1	C	135	ASP
1	C	170	ASP
1	C	218	SER
1	C	276	ARG
1	C	281	VAL
1	C	289	ASP
1	C	317	LYS
1	C	340	ILE
1	C	363	SER
1	C	373	PRO
1	C	392	ARG
1	C	397	LEU
1	D	57	THR
1	D	68	SER
1	D	83	PHE
1	D	96	LYS
1	D	114	ILE
1	D	122	ASP
1	D	123	ASP
1	D	174	GLU
1	D	214	GLN
1	D	276	ARG
1	D	295	LYS
1	D	317	LYS
1	D	340	ILE
1	D	351	LEU
1	D	358	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	373	PRO
1	D	377	GLN
1	D	387	ARG
1	D	397	LEU
1	D	414	LYS
1	D	467	LEU
1	E	74	PHE
1	E	90	ARG
1	E	96	LYS
1	E	137	GLU
1	E	156	ILE
1	E	162	SER
1	E	167	THR
1	E	197	SER
1	E	203	ASN
1	E	252	ILE
1	E	276	ARG
1	E	317	LYS
1	E	331	LYS
1	E	353	TYR
1	E	360	LYS
1	E	364	PHE
1	E	392	ARG
1	E	466	THR
1	E	467	LEU
1	F	60	THR
1	F	83	PHE
1	F	84	ASP
1	F	85	PHE
1	F	96	LYS
1	F	101	SER
1	F	111	ASP
1	F	119	HIS
1	F	122	ASP
1	F	167	THR
1	F	173	MET
1	F	197	SER
1	F	252	ILE
1	F	267	LYS
1	F	276	ARG
1	F	297	GLN
1	F	303	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	F	313	GLU
1	F	317	LYS
1	F	320	ASP
1	F	332	SER
1	F	340	ILE
1	F	358	GLU
1	F	364	PHE
1	F	371	GLU
1	F	387	ARG
1	F	392	ARG
1	F	397	LEU
1	G	57	THR
1	G	97	GLU
1	G	99	VAL
1	G	107	ILE
1	G	118	ASN
1	G	119	HIS
1	G	156	ILE
1	G	177	VAL
1	G	197	SER
1	G	204	ILE
1	G	252	ILE
1	G	317	LYS
1	G	320	ASP
1	G	332	SER
1	G	334	ILE
1	G	340	ILE
1	G	373	PRO
1	G	374	LYS
1	G	392	ARG
1	H	55	ILE
1	H	60	THR
1	H	74	PHE
1	H	90	ARG
1	H	96	LYS
1	H	135	ASP
1	H	165	THR
1	H	166	PHE
1	H	197	SER
1	H	214	GLN
1	H	215	THR
1	H	261	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	295	LYS
1	H	313	GLU
1	H	317	LYS
1	H	320	ASP
1	H	332	SER
1	H	351	LEU
1	H	374	LYS
1	H	382	ASP
1	H	392	ARG
1	H	397	LEU
1	H	461	ARG
1	H	467	LEU
1	I	53	VAL
1	I	58	SER
1	I	66	ARG
1	I	70	LEU
1	I	83	PHE
1	I	90	ARG
1	I	96	LYS
1	I	114	ILE
1	I	127	ILE
1	I	224	SER
1	I	242	ILE
1	I	313	GLU
1	I	317	LYS
1	I	320	ASP
1	I	335	ASP
1	I	351	LEU
1	I	358	GLU
1	I	377	GLN
1	I	392	ARG
1	I	444	GLN
1	J	43	ASP
1	J	55	ILE
1	J	83	PHE
1	J	96	LYS
1	J	102	LEU
1	J	111	ASP
1	J	118	ASN
1	J	119	HIS
1	J	131	LEU
1	J	135	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	J	166	PHE
1	J	177	VAL
1	J	193	SER
1	J	214	GLN
1	J	224	SER
1	J	242	ILE
1	J	252	ILE
1	J	261	VAL
1	J	276	ARG
1	J	281	VAL
1	J	312	ASP
1	J	313	GLU
1	J	317	LYS
1	J	331	LYS
1	J	332	SER
1	J	340	ILE
1	J	360	LYS
1	J	377	GLN
1	J	387	ARG
1	J	397	LEU
1	J	444	GLN
1	J	467	LEU
1	J	469	VAL
1	K	39	LEU
1	K	57	THR
1	K	83	PHE
1	K	84	ASP
1	K	97	GLU
1	K	101	SER
1	K	122	ASP
1	K	150	ASP
1	K	177	VAL
1	K	197	SER
1	K	203	ASN
1	K	252	ILE
1	K	276	ARG
1	K	290	THR
1	K	313	GLU
1	K	317	LYS
1	K	320	ASP
1	K	332	SER
1	K	340	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	K	351	LEU
1	K	364	PHE
1	K	366	LEU
1	K	392	ARG
1	K	397	LEU
1	K	434	SER
1	L	49	LYS
1	L	57	THR
1	L	58	SER
1	L	66	ARG
1	L	83	PHE
1	L	101	SER
1	L	102	LEU
1	L	166	PHE
1	L	177	VAL
1	L	203	ASN
1	L	252	ILE
1	L	276	ARG
1	L	282	THR
1	L	317	LYS
1	L	320	ASP
1	L	322	VAL
1	L	340	ILE
1	L	351	LEU
1	L	358	GLU
1	L	377	GLN
1	L	387	ARG
1	L	389	LEU
1	L	392	ARG
1	L	395	ASP
1	L	409	ASP
1	L	414	LYS
1	L	464	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	130	ASN
1	A	249	ASN
1	C	117	ASN
1	C	119	HIS
1	C	444	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	117	ASN
1	D	119	HIS
1	D	450	ASN
1	E	117	ASN
1	E	450	ASN
1	F	200	ASN
1	F	214	GLN
1	F	287	GLN
1	G	81	GLN
1	G	287	GLN
1	H	200	ASN
1	H	450	ASN
1	I	450	ASN
1	J	54	ASN
1	J	183	ASN
1	J	450	ASN
1	L	119	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Map visualisation

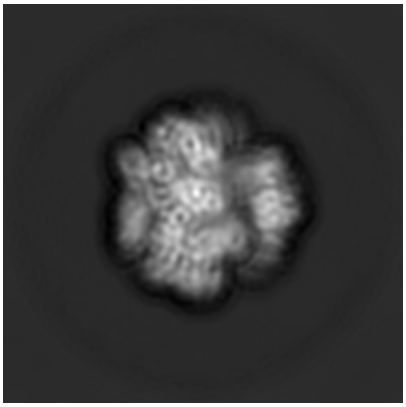
This section contains visualisations of the EMDB entry EMD-11003. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

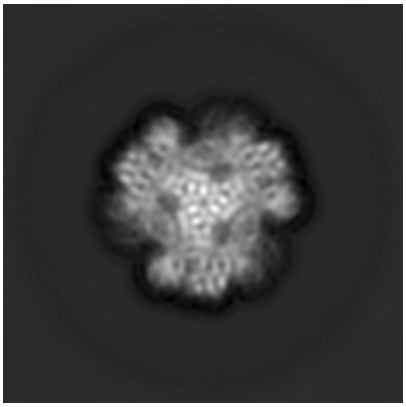
6.1 Orthogonal projections

6.1.1 Primary map

X



Y



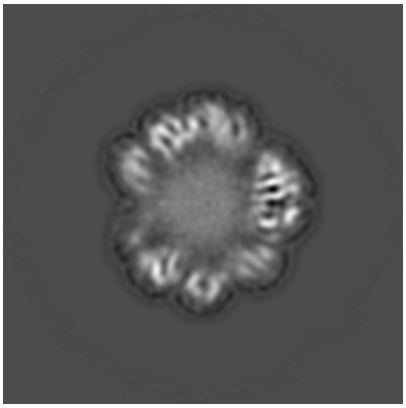
Z

The images above show the map projected in three orthogonal directions.

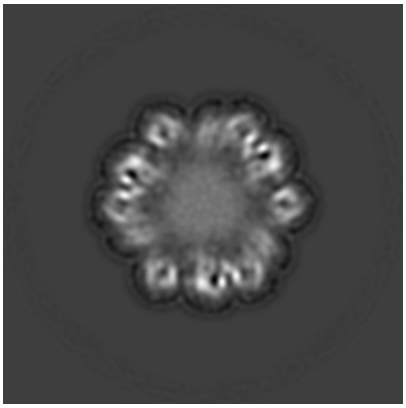
6.2 Central slices

6.2.1 Primary map

X Index: 136



Y Index: 136



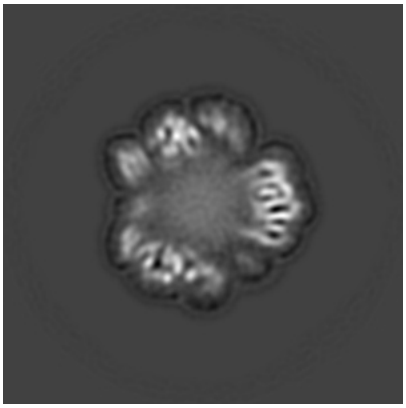
Z Index: 136

The images above show central slices of the map in three orthogonal directions.

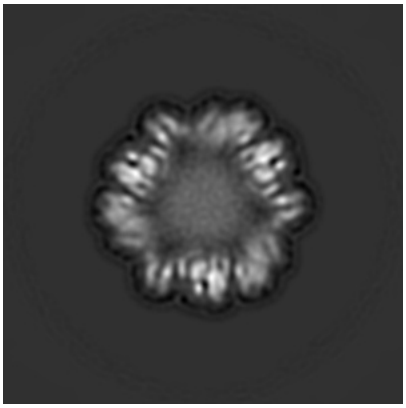
6.3 Largest variance slices (i)

6.3.1 Primary map

X Index: 132



Y Index: 146

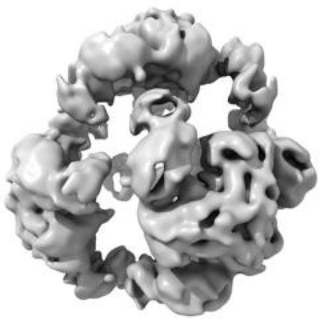


Z Index: 131

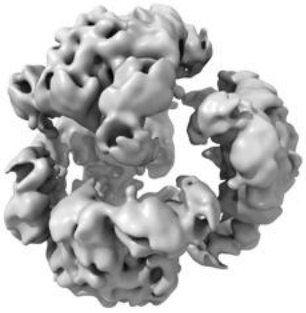
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

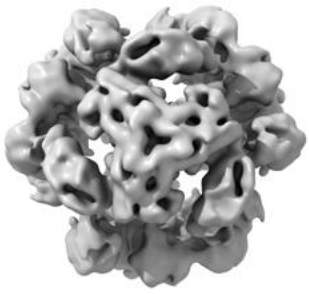
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.02. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

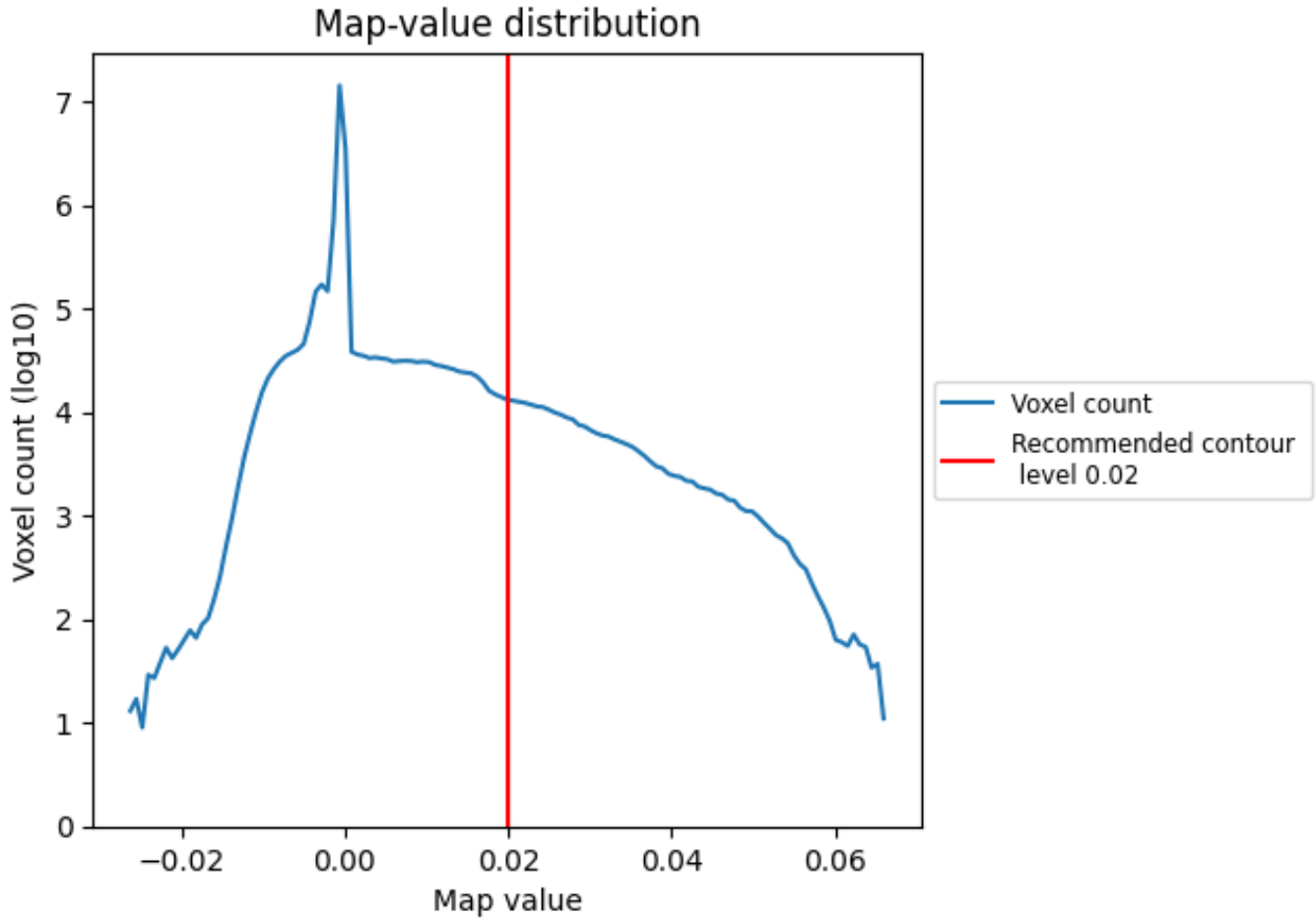
6.5 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

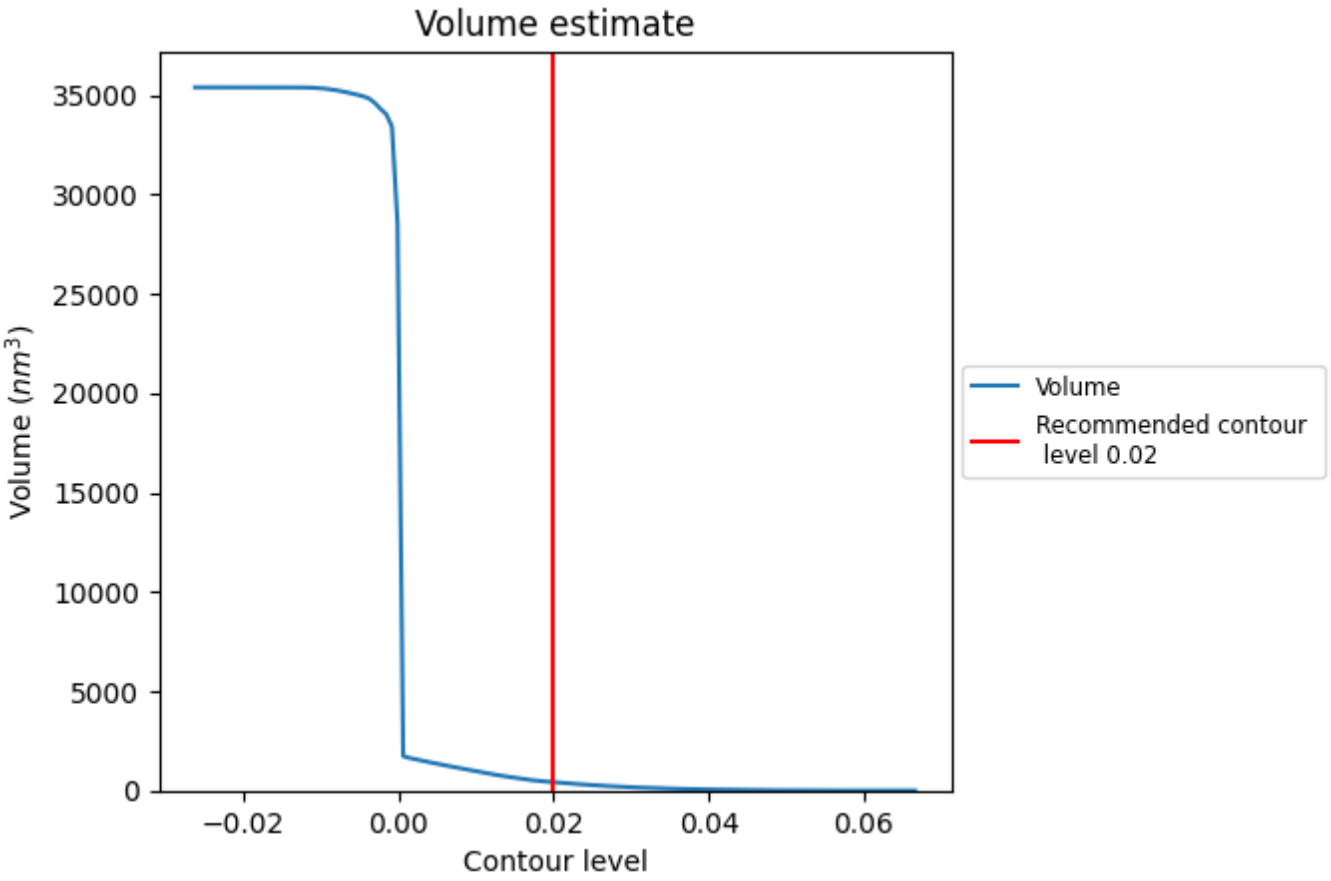
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

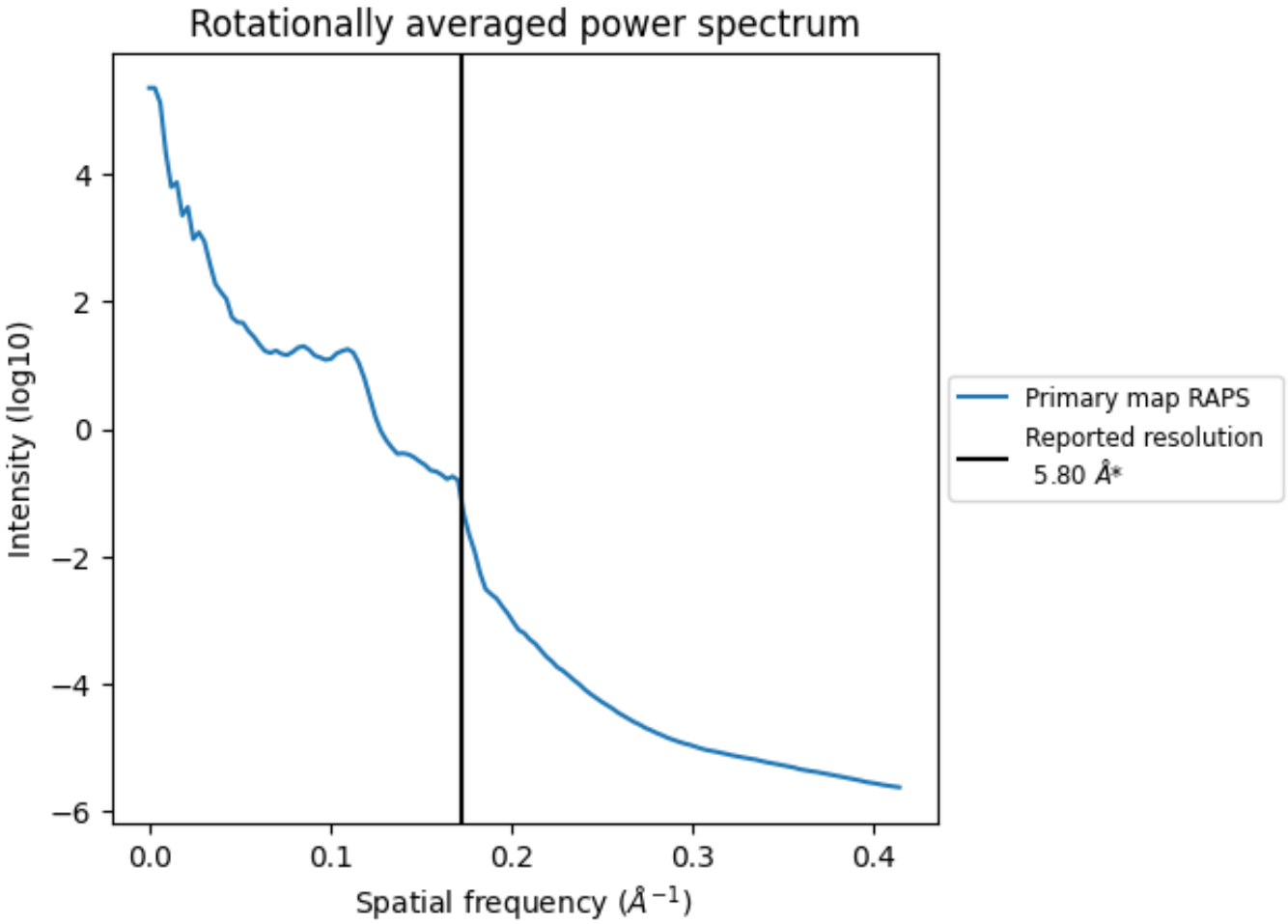
7.2 Volume estimate



The volume at the recommended contour level is 420 nm^3; this corresponds to an approximate mass of 380 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.172 Å^{-1}

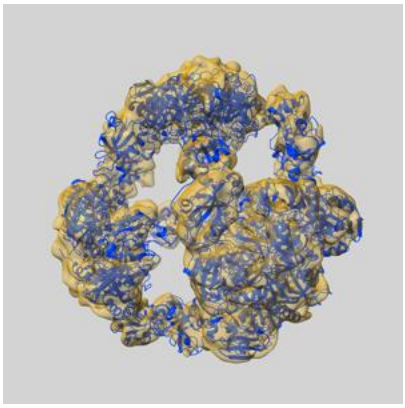
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

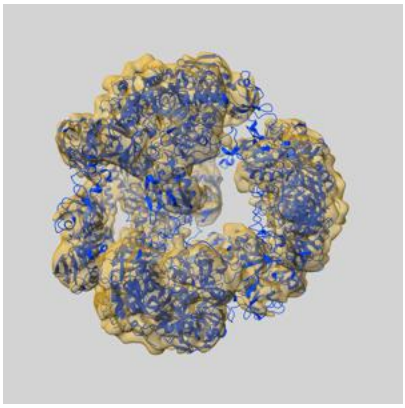
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-11003 and PDB model 6Z05. Per-residue inclusion information can be found in section 3 on page 5.

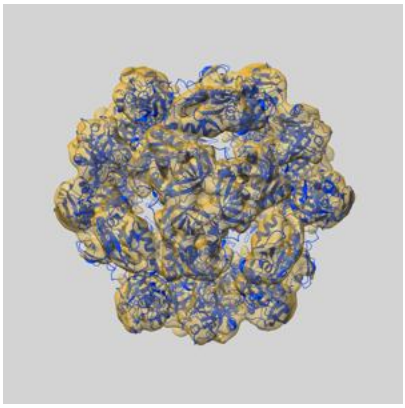
9.1 Map-model overlay



X



Y



Z

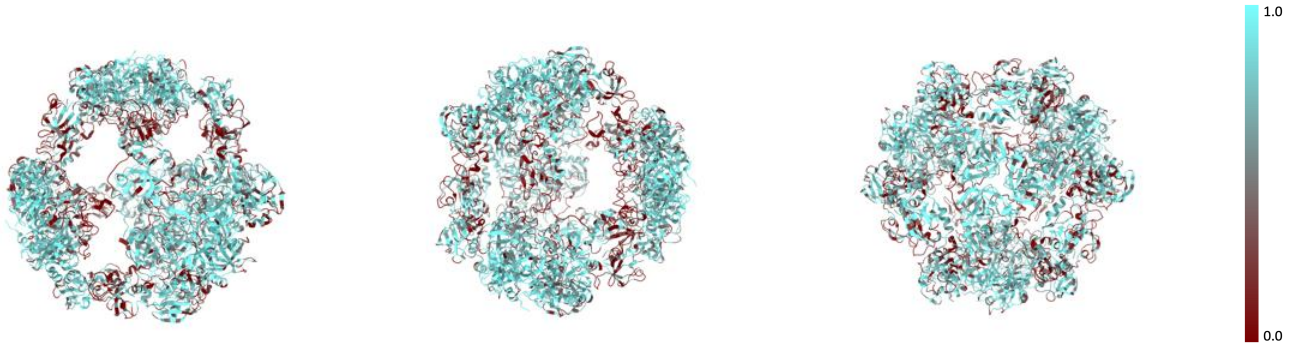
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)

X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

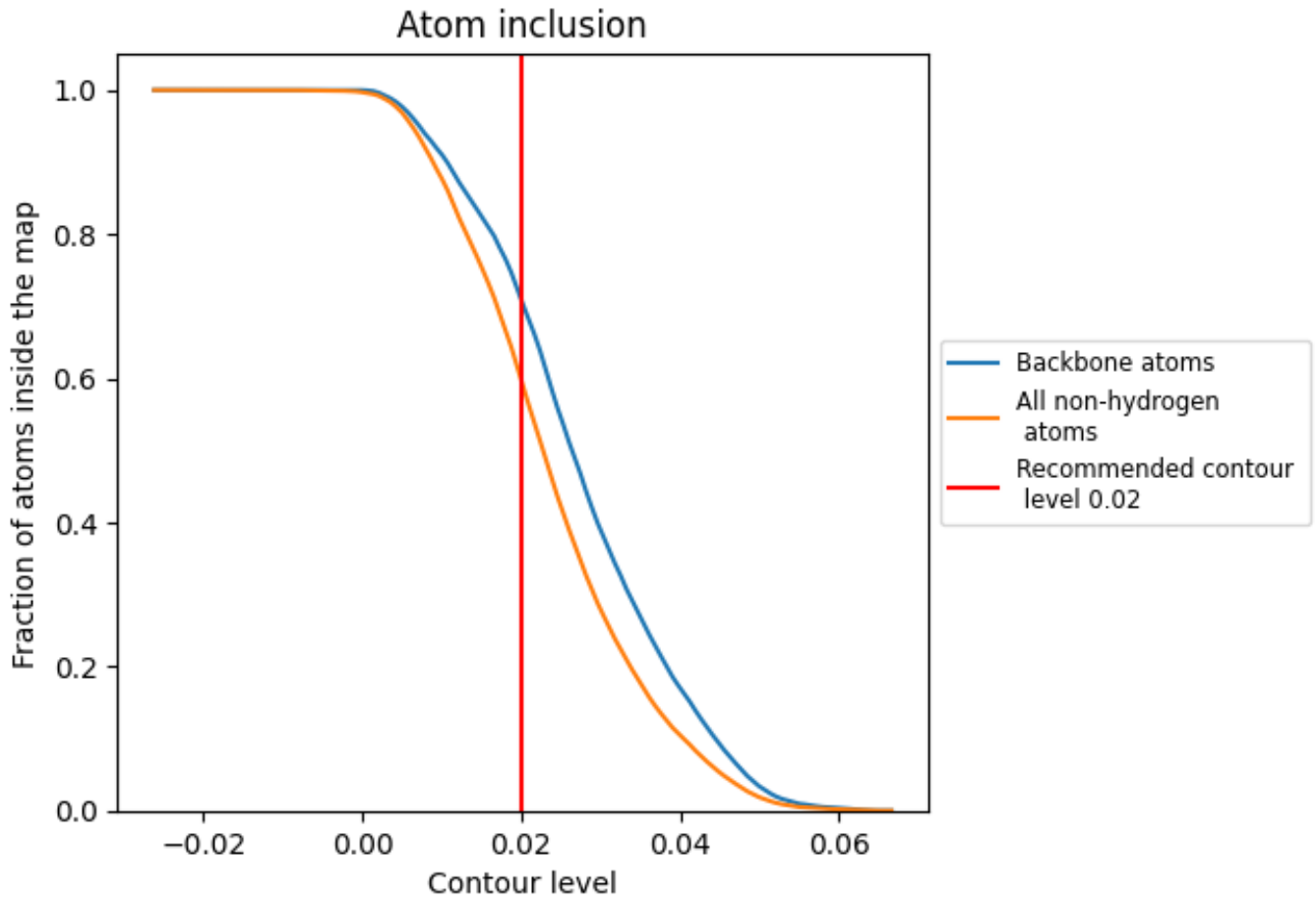
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.02).

9.4 Atom inclusion (i)



At the recommended contour level, 71% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5980	0.1100
A	0.5922	0.1090
B	0.6101	0.1130
C	0.5915	0.1100
D	0.6052	0.1090
E	0.6107	0.1120
F	0.5858	0.1030
G	0.6080	0.1110
H	0.5976	0.1090
I	0.5922	0.1120
J	0.5998	0.1100
K	0.5912	0.1080
L	0.5920	0.1080