Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 06:57 am GMT

PDB ID	:	6HE9
EMDB ID	:	EMD-0213
Title	:	PAN-proteasome in state 2
Authors	:	Majumder, P.; Rudack, T.; Beck, F.; Baumeister, W.
Deposited on	:	2018-08-20
Resolution	:	6.35 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:

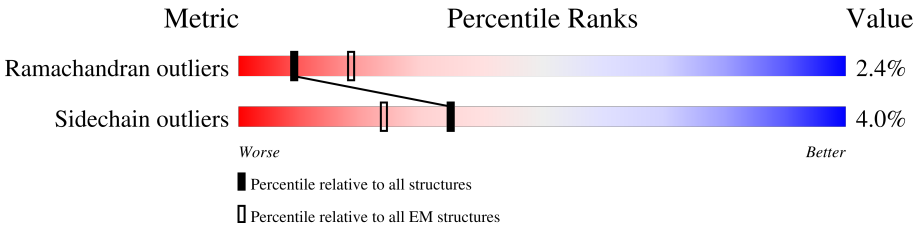
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 6.35 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)
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	242	6% 77% 21% •
1	B	242	7% 71% 26% •
1	C	242	7% 75% 21% •
1	D	242	8% 75% 19% 5%
1	E	242	9% 76% 20% • •
1	F	242	6% 76% 20% •
1	G	242	8% 75% 19% 5%
1	a	242	10% 75% 20% • •
1	b	242	12% 74% 22% • •

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Mol	Chain	Length	Quality of chain
1	c	242	10% 76% 18% 5%
1	d	242	10% 76% 17% 5%
1	e	242	8% 70% 24%
1	f	242	11% 74% 20%
1	g	242	9% 72% 23%
2	1	202	22% 74% 24%
2	2	202	19% 73% 22%
2	3	202	13% 76% 20%
2	4	202	18% 77% 18%
2	5	202	20% 72% 24%
2	6	202	13% 72% 25%
2	7	202	17% 77% 19%
2	h	202	21% 73% 19% 8%
2	i	202	21% 76% 20%
2	j	202	20% 80% 17%
2	k	202	22% 77% 18% 5%
2	l	202	20% 76% 21%
2	m	202	23% 78% 21%
2	n	202	21% 73% 22%
3	H	390	19% 70% 25% 5%
3	I	390	18% 76% 19%
3	J	390	19% 73% 24%
3	K	390	21% 77% 20%
3	L	390	22% 73% 23%
3	M	390	22% 78% 18%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 66909 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 Proteasome subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	a	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		
1	B	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	b	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		
1	C	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	c	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		
1	D	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	d	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		
1	E	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	e	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		
1	F	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	f	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		
1	G	242	Total	C	N	O	S	0	0
			1907	1211	321	368	7		
1	g	237	Total	C	N	O	S	0	0
			1866	1186	315	359	6		

- Molecule 2 is a protein called Proteasome subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	1	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		

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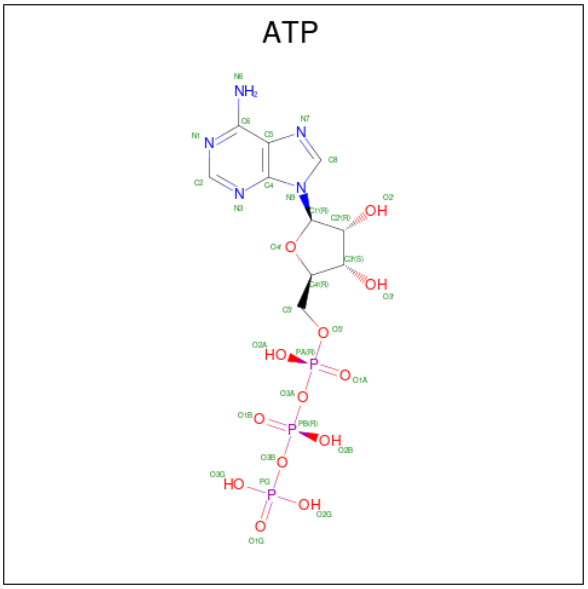
Mol	Chain	Residues	Atoms					AltConf	Trace
2	h	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	2	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	i	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	3	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	j	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	4	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	k	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	5	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	l	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	6	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	m	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	7	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		
2	n	202	Total	C	N	O	S	0	0
			1553	982	260	305	6		

- Molecule 3 is a protein called Proteasome-activating nucleotidase.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	H	390	Total	C	N	O	S	0	0
			3100	1974	535	583	8		
3	I	390	Total	C	N	O	S	0	0
			3100	1974	535	583	8		
3	K	390	Total	C	N	O	S	0	0
			3100	1974	535	583	8		
3	L	390	Total	C	N	O	S	0	0
			3100	1974	535	583	8		
3	M	390	Total	C	N	O	S	0	0
			3100	1974	535	583	8		
3	J	390	Total	C	N	O	S	0	0
			3100	1974	535	583	8		

- Molecule 4 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).

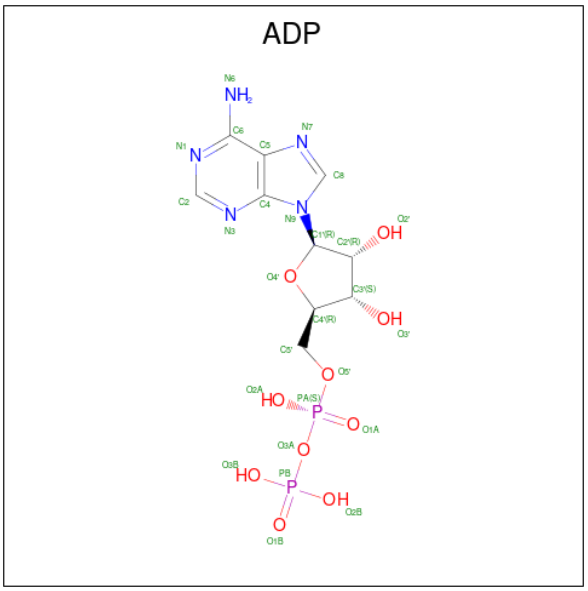


Mol	Chain	Residues	Atoms					AltConf
4	H	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	I	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	K	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	J	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 5 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
5	H	1	Total	Mg	0
			1	1	
5	I	1	Total	Mg	0
			1	1	
5	K	1	Total	Mg	0
			1	1	
5	L	1	Total	Mg	0
			1	1	
5	J	1	Total	Mg	0
			1	1	

- Molecule 6 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



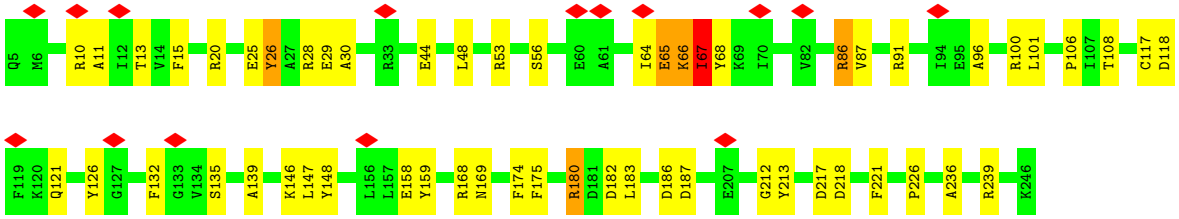
Mol	Chain	Residues	Atoms					AltConf
6	L	1	Total	C	N	O	P	0
			27	10	5	10	2	

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.

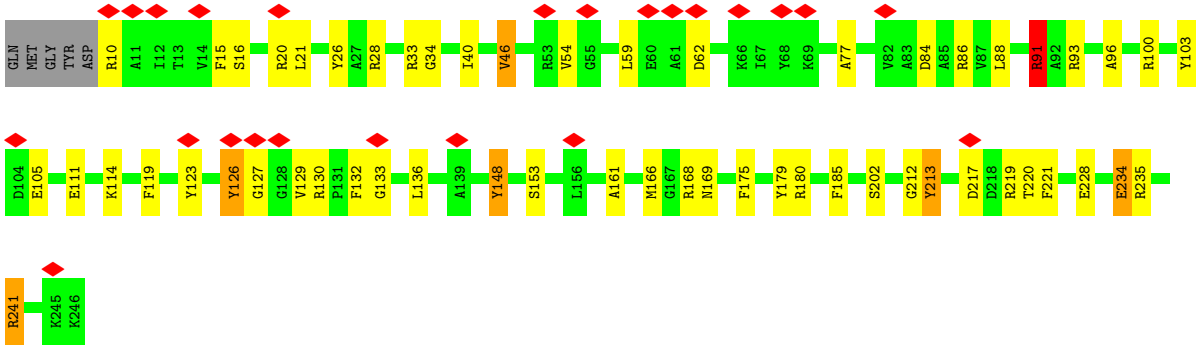
• Molecule 1: Proteasome subunit alpha

Chain A:



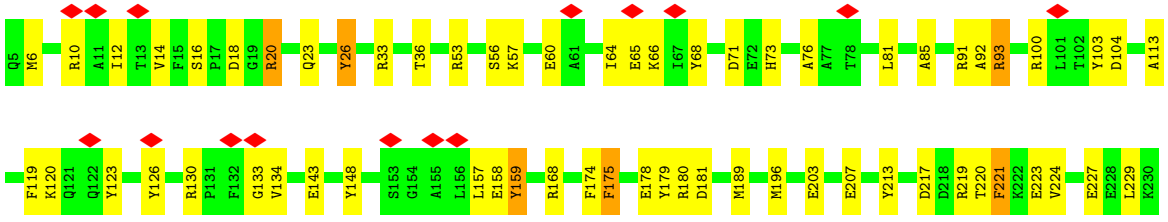
• Molecule 1: Proteasome subunit alpha

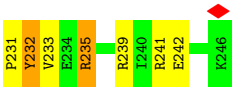
Chain a:



• Molecule 1: Proteasome subunit alpha

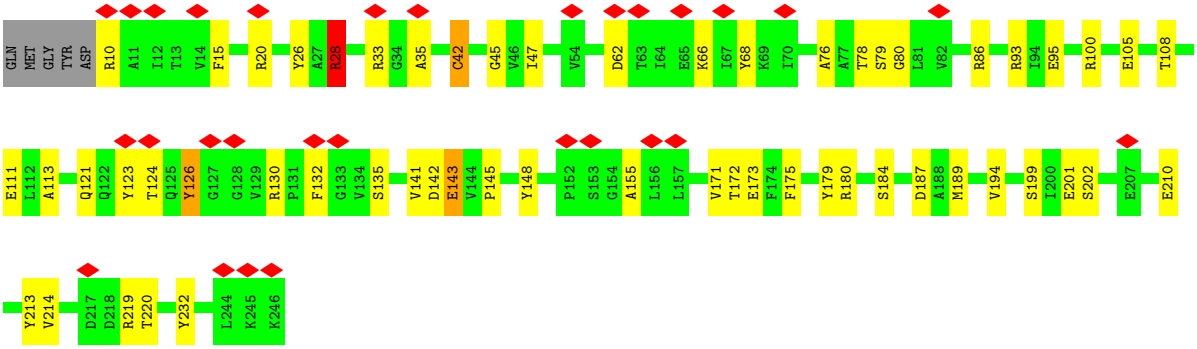
Chain B:





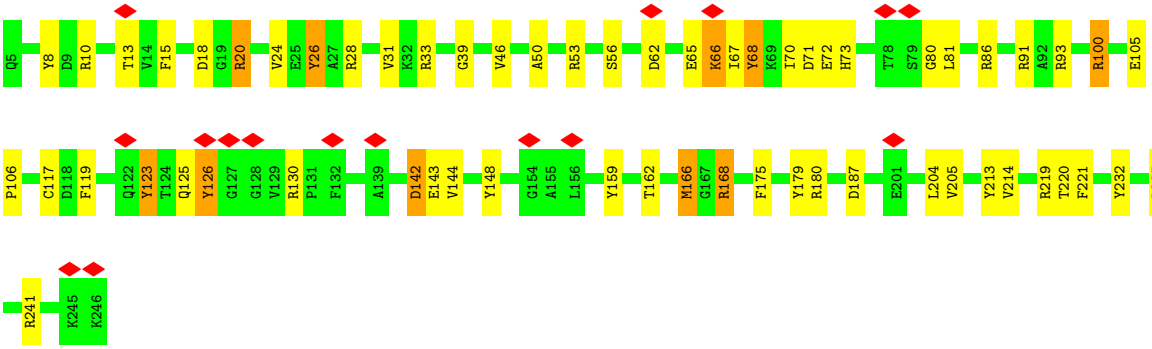
• Molecule 1: Proteasome subunit alpha

Chain b:



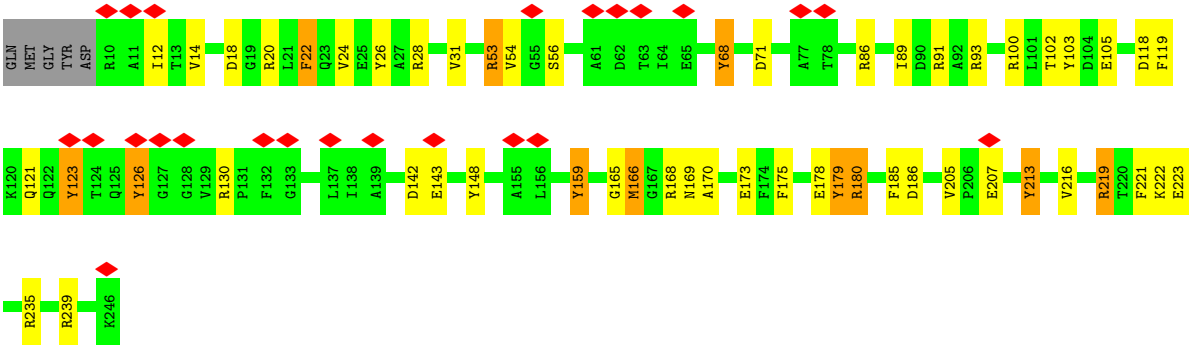
• Molecule 1: Proteasome subunit alpha

Chain C:



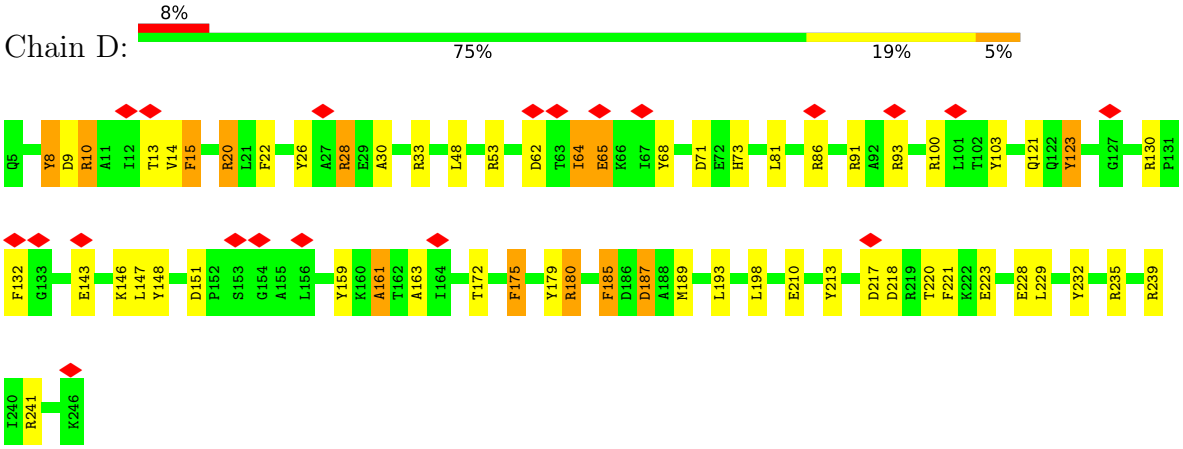
• Molecule 1: Proteasome subunit alpha

Chain c:



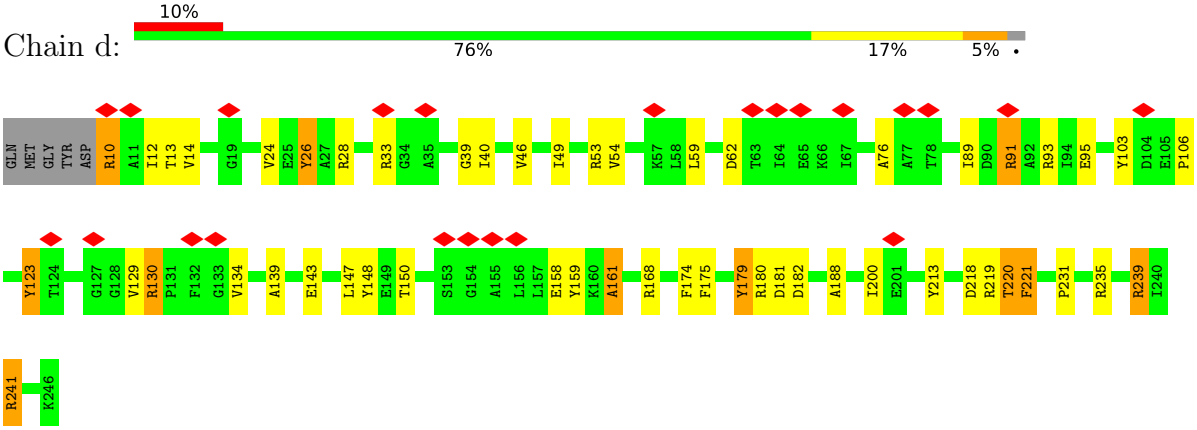
• Molecule 1: Proteasome subunit alpha

Chain D:



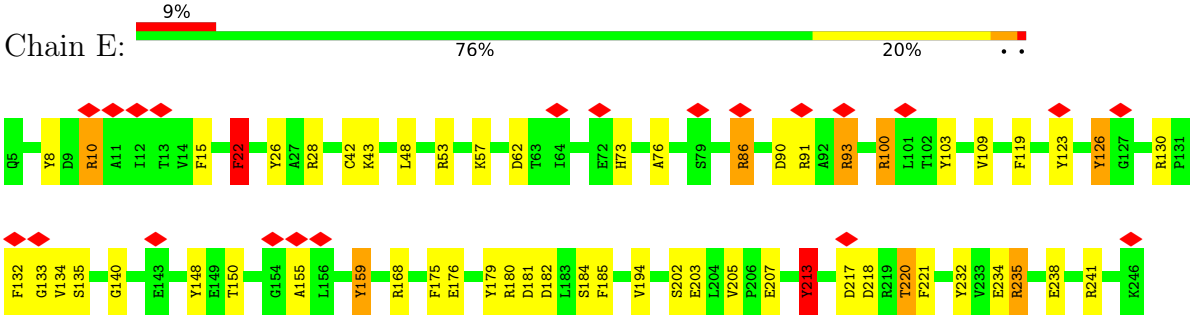
• Molecule 1: Proteasome subunit alpha

Chain d:



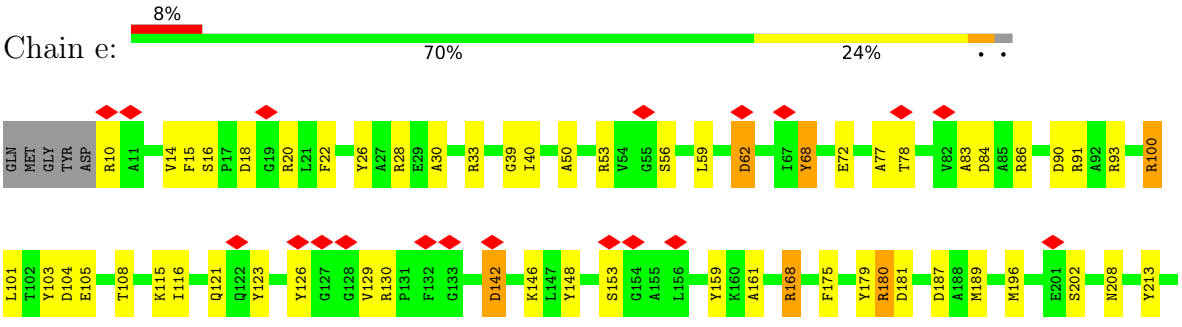
• Molecule 1: Proteasome subunit alpha

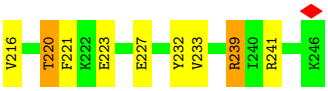
Chain E:



• Molecule 1: Proteasome subunit alpha

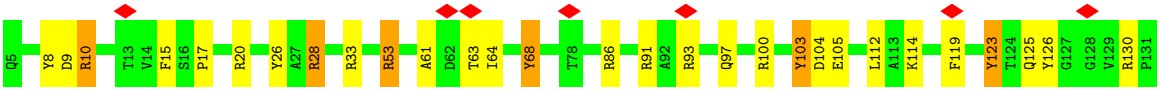
Chain e:

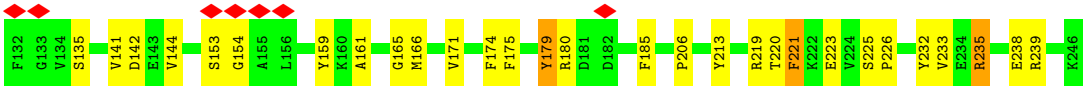




• Molecule 1: Proteasome subunit alpha

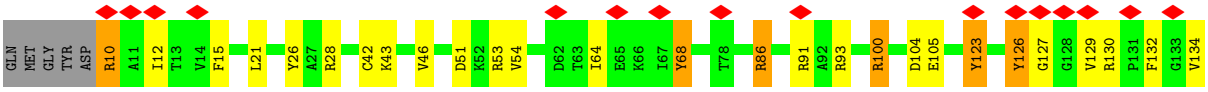
Chain F:

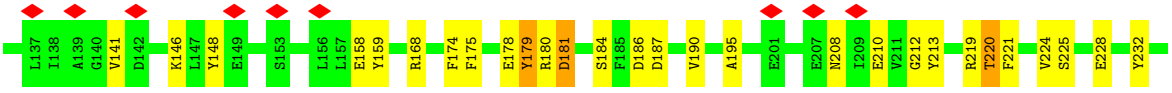


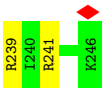


• Molecule 1: Proteasome subunit alpha

Chain f:

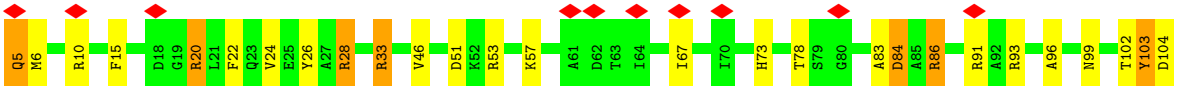


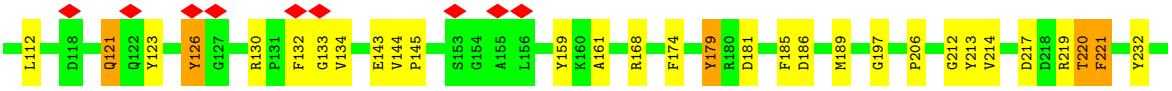


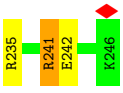


• Molecule 1: Proteasome subunit alpha

Chain G:

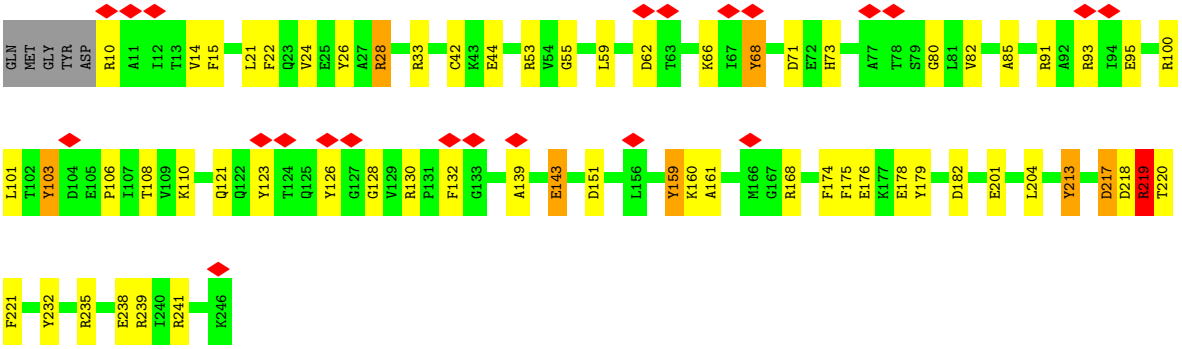




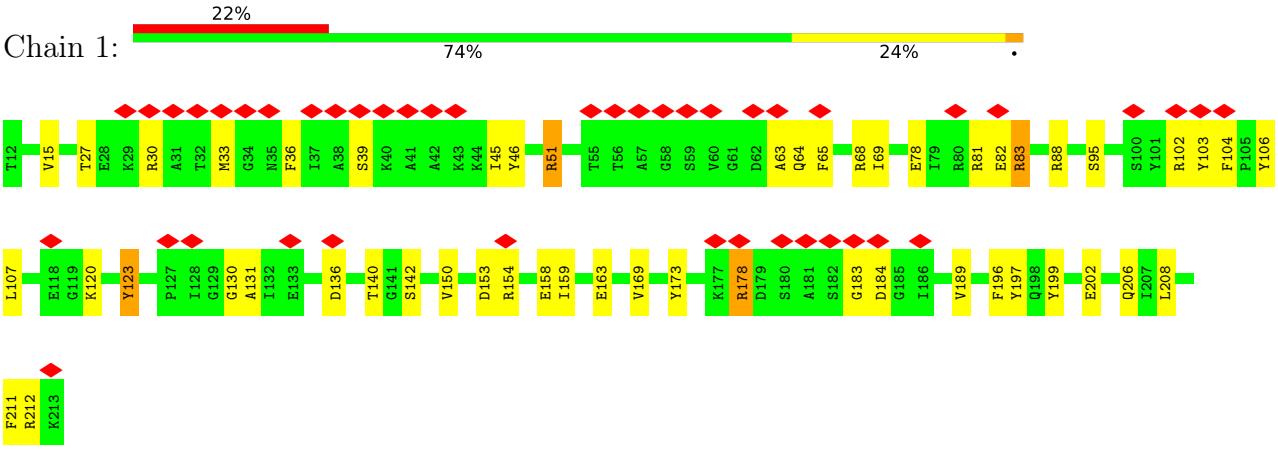


• Molecule 1: Proteasome subunit alpha

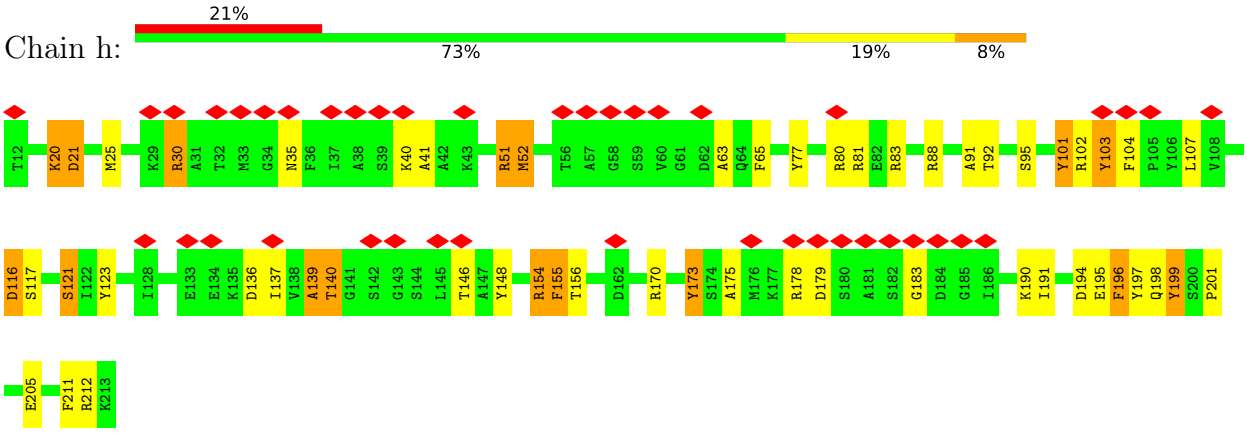
Chain g:



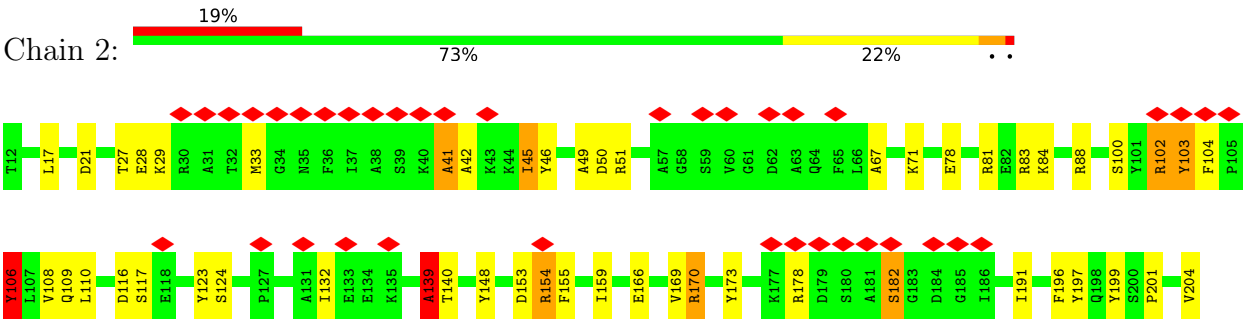
• Molecule 2: Proteasome subunit beta



• Molecule 2: Proteasome subunit beta

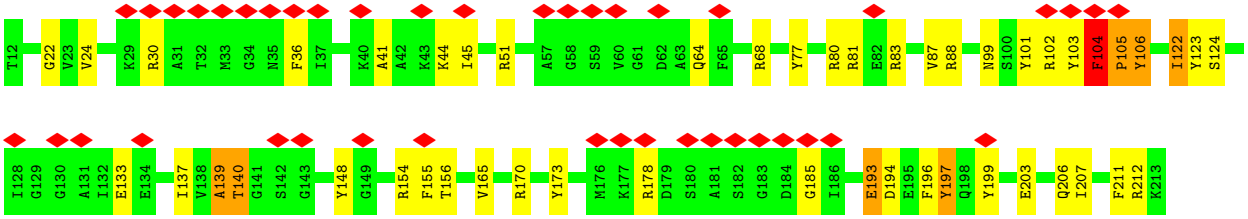


• Molecule 2: Proteasome subunit beta



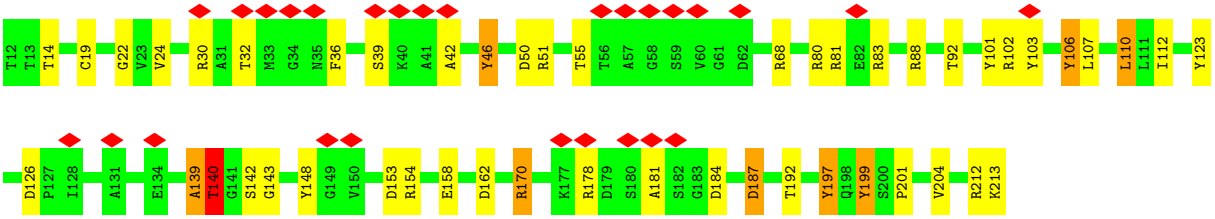
• Molecule 2: Proteasome subunit beta

Chain i:



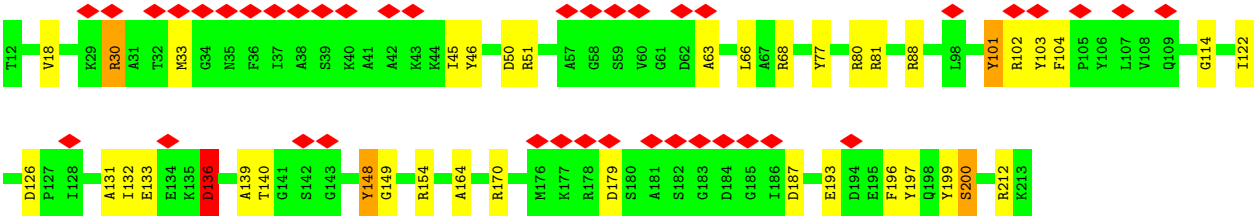
• Molecule 2: Proteasome subunit beta

Chain 3:



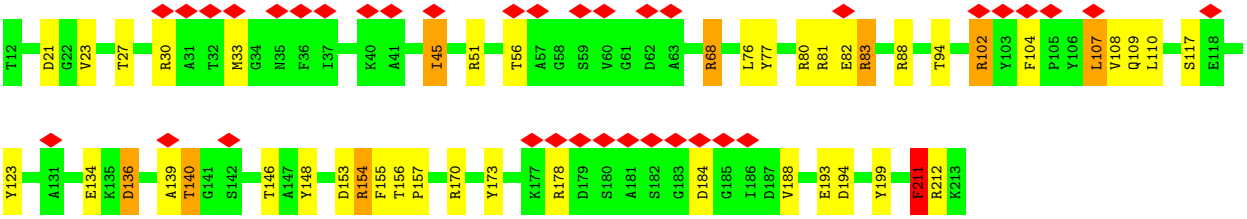
• Molecule 2: Proteasome subunit beta

Chain j:



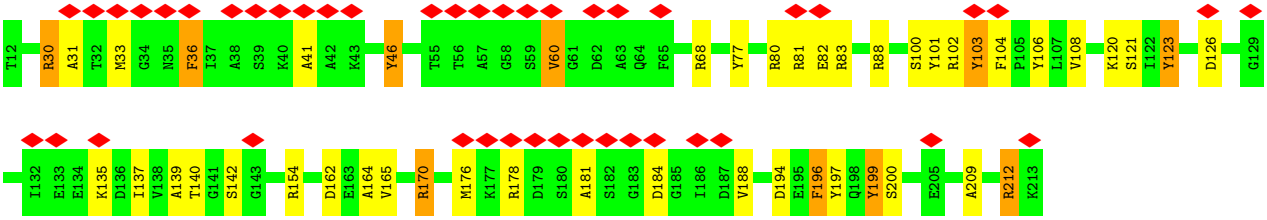
• Molecule 2: Proteasome subunit beta

Chain 4:



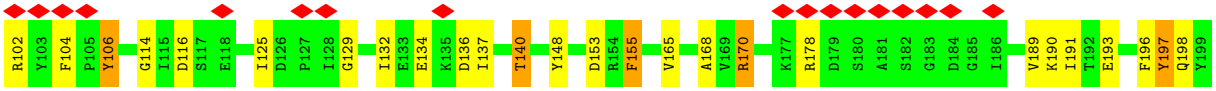
• Molecule 2: Proteasome subunit beta

Chain k:



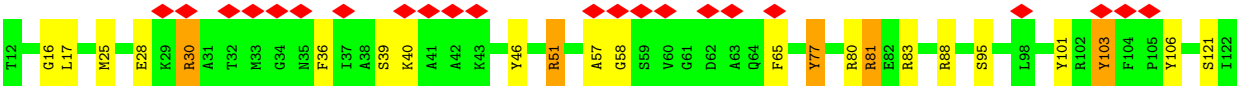
• Molecule 2: Proteasome subunit beta

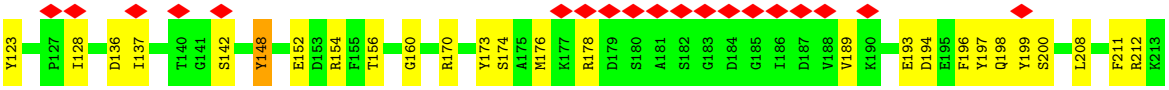
Chain 5:



• Molecule 2: Proteasome subunit beta

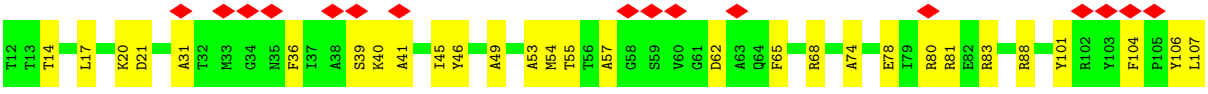
Chain l:

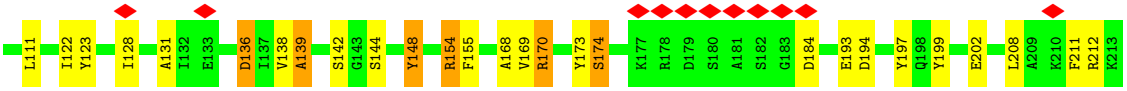




• Molecule 2: Proteasome subunit beta

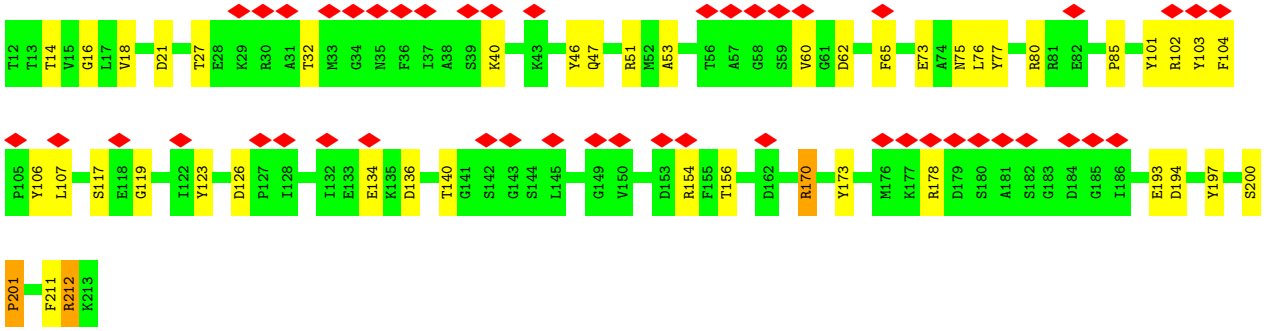
Chain 6:



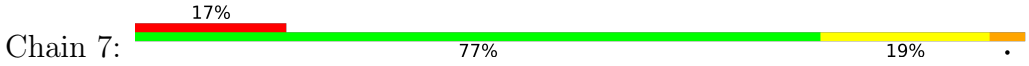


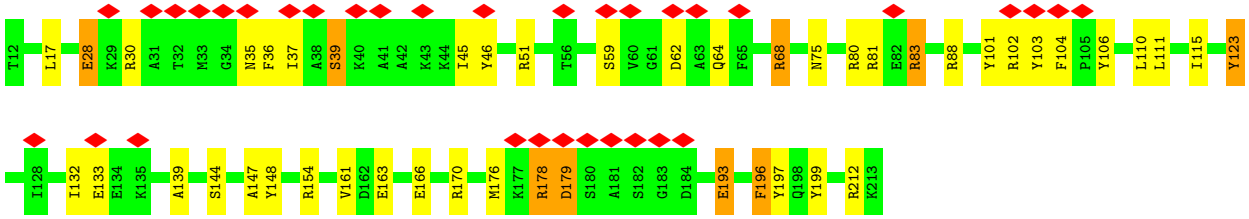
• Molecule 2: Proteasome subunit beta

Chain m:

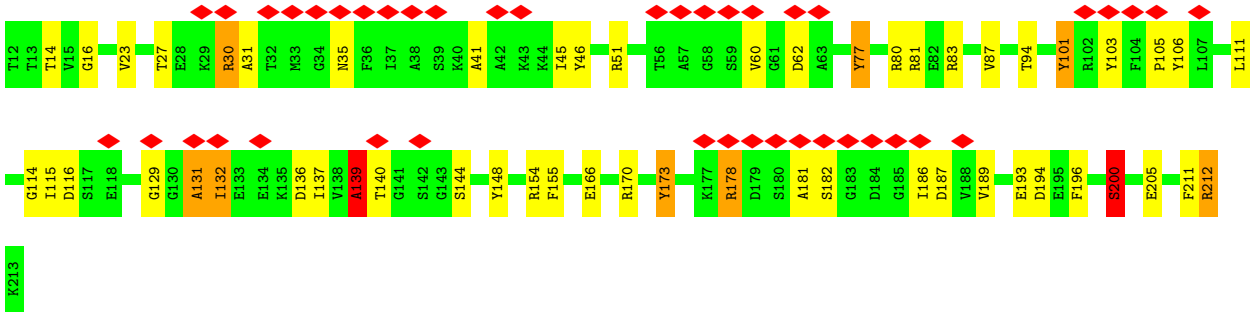


• Molecule 2: Proteasome subunit beta

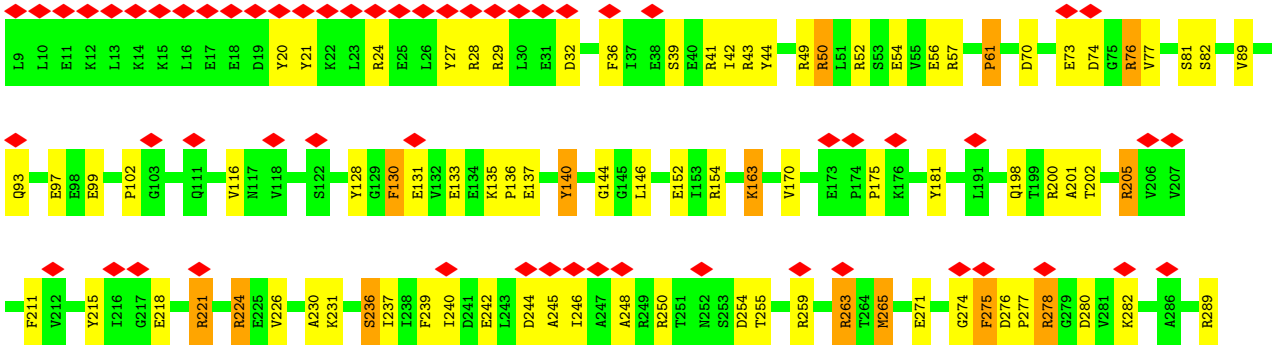


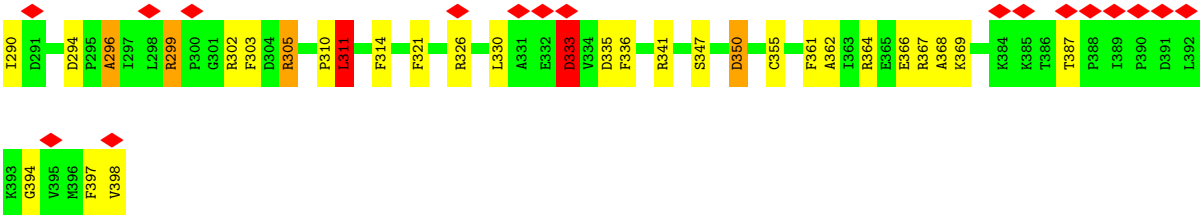


• Molecule 2: Proteasome subunit beta



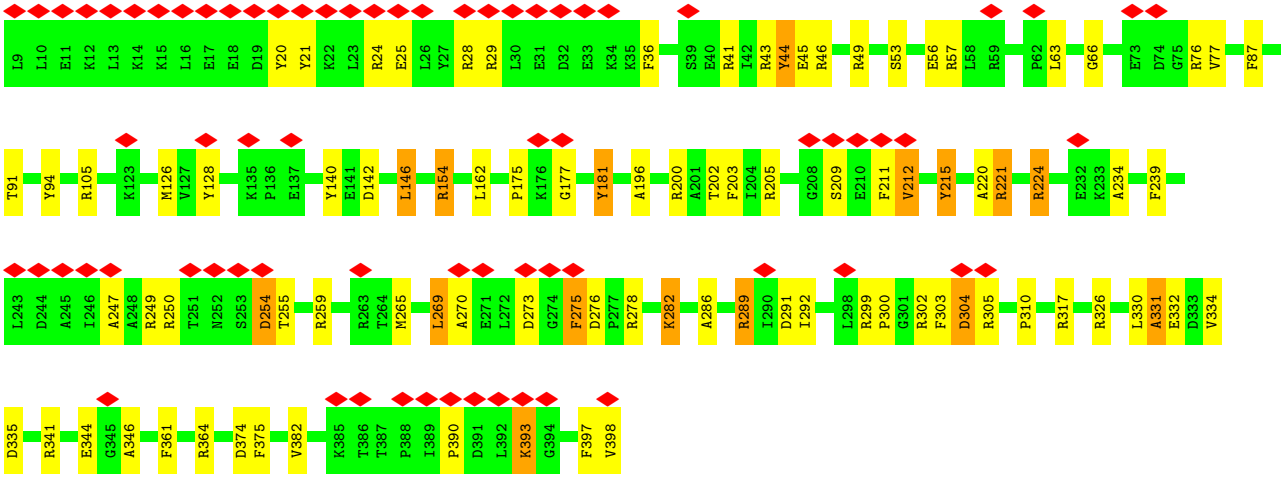
• Molecule 3: Proteasome-activating nucleotidase





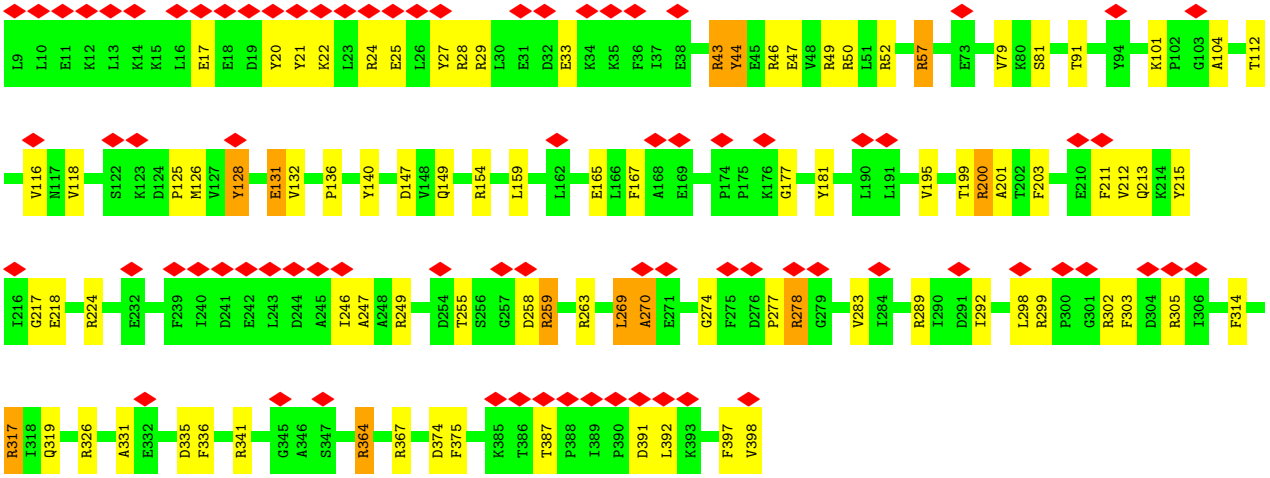
• Molecule 3: Proteasome-activating nucleotidase

Chain I:



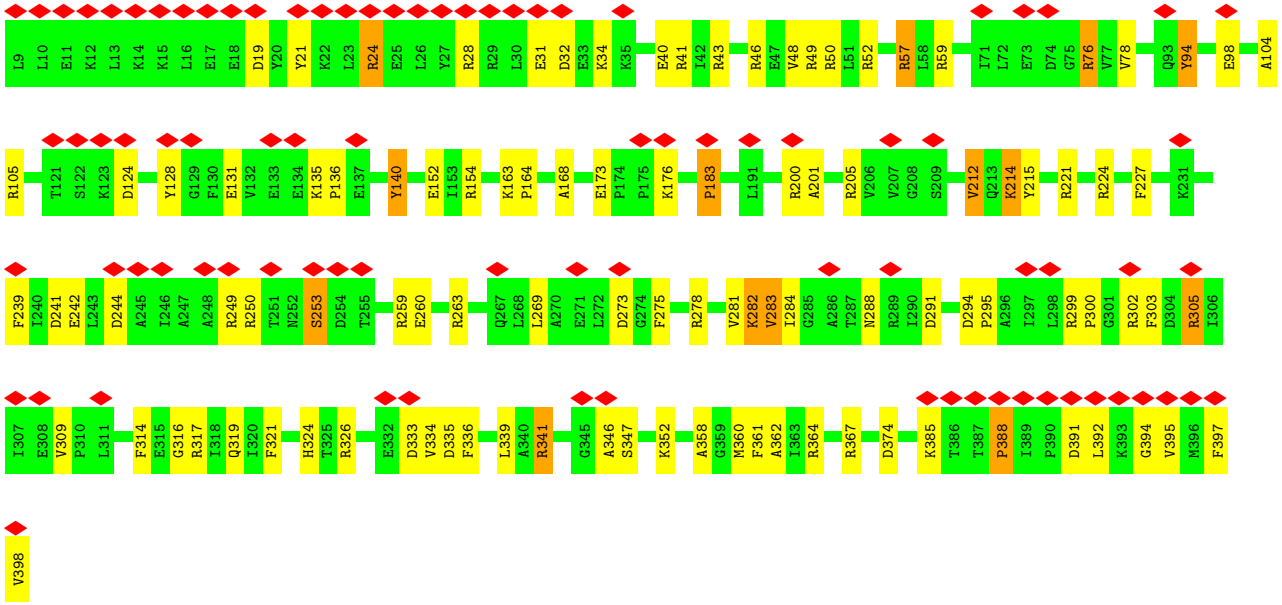
• Molecule 3: Proteasome-activating nucleotidase

Chain K:



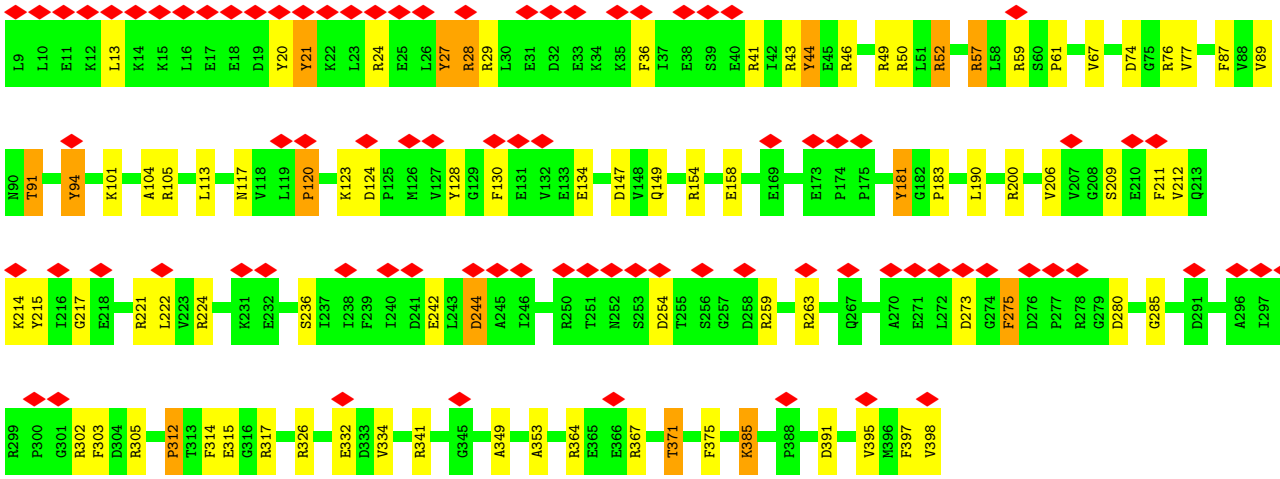
• Molecule 3: Proteasome-activating nucleotidase

Chain L:



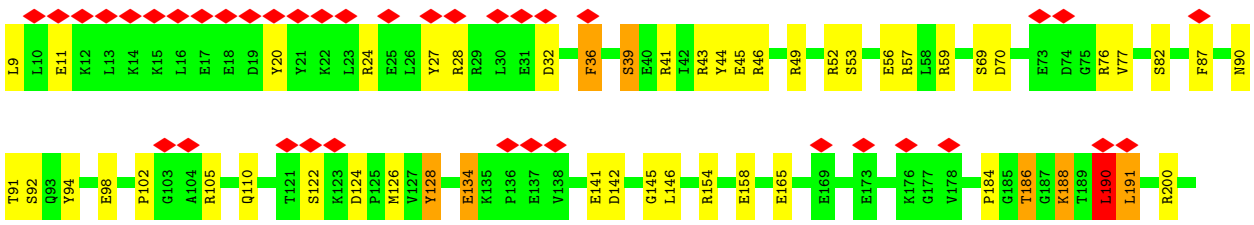
• Molecule 3: Proteasome-activating nucleotidase

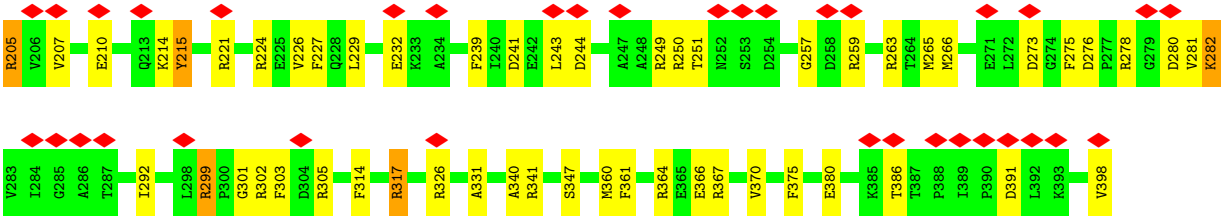
Chain M:



• Molecule 3: Proteasome-activating nucleotidase

Chain J:




R205 V206 V207 E210 Q213 K214 Y215 R221 R224 E225 V226 F227 Q228 L229 E232 K233 A234 F239 I240 D241 E242 L243 D244 A247 A248 R249 R250 T251 N252 S253 D254 G257 D258 R259 R263 T264 M265 M266 E271 L272 D273 G274 F275 D276 P277 R278 G279 D280 V281 K282
V283 I284 G285 A286 T287 I292 L298 R299 P300 G301 R302 F303 D304 R305 F314 R317 R326 A331 A340 R341 S347 M360 F361 R364 E365 E366 R367 V370 F375 E380 K385 T386 T387 P388 I389 P390 D391 L392 K393 V398

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	46148	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.061	Depositor
Minimum map value	-0.048	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0075	Depositor
Map size (Å)	514.56, 514.56, 514.56	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.34, 1.34, 1.34	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: ATP, ADP, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	1.71	17/1934 (0.9%)	2.08	49/2605 (1.9%)
1	B	1.77	19/1934 (1.0%)	1.97	60/2605 (2.3%)
1	C	1.74	22/1934 (1.1%)	1.98	52/2605 (2.0%)
1	D	1.72	19/1934 (1.0%)	1.94	53/2605 (2.0%)
1	E	1.78	27/1934 (1.4%)	2.11	64/2605 (2.5%)
1	F	1.71	20/1934 (1.0%)	2.05	52/2605 (2.0%)
1	G	1.74	15/1934 (0.8%)	2.07	60/2605 (2.3%)
1	a	1.75	21/1892 (1.1%)	2.00	46/2549 (1.8%)
1	b	1.79	19/1892 (1.0%)	1.96	45/2549 (1.8%)
1	c	1.76	20/1892 (1.1%)	1.98	52/2549 (2.0%)
1	d	1.78	15/1892 (0.8%)	1.93	47/2549 (1.8%)
1	e	1.77	17/1892 (0.9%)	2.01	54/2549 (2.1%)
1	f	1.80	20/1892 (1.1%)	2.09	56/2549 (2.2%)
1	g	1.83	28/1892 (1.5%)	1.98	47/2549 (1.8%)
2	1	1.72	14/1573 (0.9%)	1.94	43/2121 (2.0%)
2	2	1.74	23/1573 (1.5%)	1.93	43/2121 (2.0%)
2	3	1.74	16/1573 (1.0%)	1.98	53/2121 (2.5%)
2	4	1.76	14/1573 (0.9%)	2.01	41/2121 (1.9%)
2	5	3.33	26/1573 (1.7%)	2.29	52/2121 (2.5%)
2	6	1.72	15/1573 (1.0%)	1.98	40/2121 (1.9%)
2	7	1.78	21/1573 (1.3%)	2.02	44/2121 (2.1%)
2	h	1.77	15/1573 (1.0%)	2.06	49/2121 (2.3%)
2	i	1.74	9/1573 (0.6%)	2.05	48/2121 (2.3%)
2	j	1.71	17/1573 (1.1%)	1.94	37/2121 (1.7%)
2	k	1.67	15/1573 (1.0%)	1.98	47/2121 (2.2%)
2	l	3.32	23/1573 (1.5%)	2.19	34/2121 (1.6%)
2	m	1.76	17/1573 (1.1%)	1.92	37/2121 (1.7%)
2	n	1.79	14/1573 (0.9%)	1.94	36/2121 (1.7%)
3	H	1.82	47/3146 (1.5%)	1.91	71/4240 (1.7%)
3	I	1.76	32/3146 (1.0%)	1.92	70/4240 (1.7%)
3	J	1.76	38/3146 (1.2%)	1.96	81/4240 (1.9%)
3	K	1.77	38/3146 (1.2%)	1.94	64/4240 (1.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
3	L	1.81	40/3146 (1.3%)	1.97	86/4240 (2.0%)
3	M	1.76	38/3146 (1.2%)	1.92	82/4240 (1.9%)
All	All	1.86	751/67680 (1.1%)	1.99	1795/91212 (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	6
1	B	0	11
1	C	0	8
1	D	0	11
1	E	0	10
1	F	0	13
1	G	0	10
1	a	0	6
1	b	0	4
1	c	0	7
1	d	0	9
1	e	0	9
1	f	0	6
1	g	0	8
2	1	0	4
2	2	0	6
2	3	0	4
2	4	0	6
2	5	0	7
2	6	0	8
2	7	0	7
2	h	0	12
2	i	0	6
2	j	0	3
2	k	0	6
2	l	0	7
2	m	0	2
2	n	0	7
3	H	0	20
3	I	0	13
3	J	0	9
3	K	0	17

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	L	0	10
3	M	0	14
All	All	0	286

All (751) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	l	170	ARG	CZ-NH1	60.57	2.11	1.33
2	5	170	ARG	CZ-NH1	58.68	2.09	1.33
2	l	211	PHE	CG-CD2	49.04	2.12	1.38
2	5	211	PHE	CG-CD2	47.11	2.09	1.38
2	l	211	PHE	CG-CD1	44.50	2.05	1.38
2	5	211	PHE	CG-CD1	44.19	2.05	1.38
2	5	211	PHE	CE1-CZ	38.32	2.10	1.37
2	l	211	PHE	CE1-CZ	36.78	2.07	1.37
2	5	211	PHE	CD1-CE1	36.10	2.11	1.39
2	5	211	PHE	CE2-CZ	35.98	2.05	1.37
2	l	211	PHE	CE2-CZ	35.55	2.04	1.37
2	l	211	PHE	CD2-CE2	31.46	2.02	1.39
2	5	211	PHE	CD2-CE2	29.88	1.99	1.39
2	l	211	PHE	CD1-CE1	29.59	1.98	1.39
3	J	398	VAL	C-O	-12.08	1.00	1.23
3	I	398	VAL	C-O	-12.06	1.00	1.23
3	L	398	VAL	C-O	-12.06	1.00	1.23
3	M	398	VAL	C-O	-12.06	1.00	1.23
3	H	398	VAL	C-OXT	-12.05	1.00	1.23
3	I	398	VAL	C-OXT	-12.05	1.00	1.23
3	L	398	VAL	C-OXT	-12.04	1.00	1.23
3	M	398	VAL	C-OXT	-12.05	1.00	1.23
3	K	398	VAL	C-OXT	-12.03	1.00	1.23
3	H	398	VAL	C-O	-12.03	1.00	1.23
3	K	398	VAL	C-O	-12.03	1.00	1.23
3	J	398	VAL	C-OXT	-12.03	1.00	1.23
3	I	128	TYR	CE1-CZ	9.80	1.51	1.38
2	7	68	ARG	CD-NE	9.55	1.62	1.46
1	g	15	PHE	CG-CD2	9.21	1.52	1.38
1	f	86	ARG	CZ-NH1	8.74	1.44	1.33
1	d	28	ARG	CD-NE	8.66	1.61	1.46
1	f	241	ARG	CZ-NH1	8.53	1.44	1.33
3	H	21	TYR	CE2-CZ	8.48	1.49	1.38
3	H	250	ARG	CZ-NH2	8.46	1.44	1.33
3	H	355	CYS	CB-SG	8.40	1.96	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	m	173	TYR	CE2-CZ	8.28	1.49	1.38
3	M	59	ARG	CZ-NH1	8.07	1.43	1.33
2	3	19	CYS	CA-C	-8.06	1.32	1.52
1	f	179	TYR	CE2-CZ	7.95	1.48	1.38
3	K	128	TYR	CE2-CZ	7.93	1.48	1.38
1	B	242	GLU	CG-CD	7.90	1.63	1.51
1	a	213	TYR	CG-CD2	7.88	1.49	1.39
2	7	30	ARG	NE-CZ	7.86	1.43	1.33
3	L	367	ARG	CZ-NH2	7.81	1.43	1.33
1	g	33	ARG	CZ-NH1	7.79	1.43	1.33
1	a	91	ARG	CZ-NH1	7.78	1.43	1.33
2	n	16	GLY	CA-C	-7.76	1.39	1.51
2	m	16	GLY	CA-C	-7.74	1.39	1.51
2	j	154	ARG	CZ-NH2	7.70	1.43	1.33
3	H	259	ARG	CZ-NH2	7.69	1.43	1.33
3	I	278	ARG	CZ-NH2	7.67	1.43	1.33
1	G	91	ARG	NE-CZ	7.63	1.43	1.33
1	f	100	ARG	NE-CZ	7.62	1.43	1.33
1	C	241	ARG	CD-NE	7.60	1.59	1.46
2	l	152	GLU	CG-CD	7.57	1.63	1.51
2	h	117	SER	CB-OG	7.53	1.52	1.42
2	7	46	TYR	CZ-OH	7.53	1.50	1.37
1	d	213	TYR	CG-CD1	7.50	1.49	1.39
3	J	141	GLU	CD-OE2	7.49	1.33	1.25
2	7	166	GLU	CG-CD	7.44	1.63	1.51
3	H	82	SER	CA-CB	7.43	1.64	1.52
2	h	65	PHE	CG-CD2	7.43	1.49	1.38
3	K	217	GLY	N-CA	-7.41	1.34	1.46
2	5	88	ARG	CD-NE	7.36	1.58	1.46
1	f	10	ARG	CZ-NH2	7.35	1.42	1.33
2	n	212	ARG	CD-NE	7.33	1.58	1.46
1	g	93	ARG	CZ-NH1	7.32	1.42	1.33
2	4	81	ARG	NE-CZ	7.31	1.42	1.33
3	J	326	ARG	CZ-NH2	7.24	1.42	1.33
3	L	215	TYR	CG-CD1	7.24	1.48	1.39
1	G	235	ARG	CZ-NH2	7.21	1.42	1.33
3	I	326	ARG	CZ-NH2	7.19	1.42	1.33
2	4	51	ARG	CD-NE	7.17	1.58	1.46
3	H	128	TYR	CZ-OH	7.16	1.50	1.37
1	g	128	GLY	CA-C	-7.15	1.40	1.51
3	M	29	ARG	NE-CZ	7.15	1.42	1.33
2	2	88	ARG	CZ-NH1	7.12	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	28	ARG	CZ-NH1	7.10	1.42	1.33
3	K	49	ARG	CZ-NH2	7.10	1.42	1.33
1	E	133	GLY	N-CA	-7.08	1.35	1.46
1	d	106	PRO	N-CA	-7.07	1.35	1.47
3	H	28	ARG	CZ-NH2	7.01	1.42	1.33
1	a	10	ARG	CZ-NH1	7.01	1.42	1.33
2	m	51	ARG	NE-CZ	7.00	1.42	1.33
3	I	36	PHE	CG-CD2	7.00	1.49	1.38
2	i	51	ARG	CZ-NH2	6.96	1.42	1.33
1	D	232	TYR	CZ-OH	6.95	1.49	1.37
2	1	199	TYR	CG-CD1	6.94	1.48	1.39
2	6	174	SER	CA-CB	6.94	1.63	1.52
2	4	83	ARG	CZ-NH1	6.93	1.42	1.33
1	d	91	ARG	CZ-NH1	6.93	1.42	1.33
1	F	235	ARG	NE-CZ	6.91	1.42	1.33
2	6	80	ARG	NE-CZ	6.91	1.42	1.33
1	D	28	ARG	CZ-NH2	6.90	1.42	1.33
3	K	375	PHE	CG-CD2	6.87	1.49	1.38
1	f	53	ARG	NE-CZ	6.87	1.42	1.33
1	b	45	GLY	CA-C	-6.84	1.41	1.51
3	L	239	PHE	CB-CG	-6.83	1.39	1.51
1	E	126	TYR	CG-CD2	6.83	1.48	1.39
3	M	76	ARG	CZ-NH1	6.82	1.42	1.33
2	n	81	ARG	CD-NE	6.80	1.58	1.46
2	j	170	ARG	CZ-NH1	6.79	1.41	1.33
2	6	39	SER	CA-CB	6.78	1.63	1.52
1	F	10	ARG	CZ-NH2	6.78	1.41	1.33
1	B	168	ARG	NE-CZ	6.78	1.41	1.33
3	L	278	ARG	C-N	6.74	1.45	1.33
2	i	22	GLY	N-CA	-6.74	1.35	1.46
3	I	200	ARG	CZ-NH2	6.72	1.41	1.33
2	m	53	ALA	N-CA	-6.69	1.32	1.46
3	M	43	ARG	CD-NE	6.68	1.57	1.46
2	k	77	TYR	CZ-OH	6.68	1.49	1.37
2	k	68	ARG	CZ-NH2	6.66	1.41	1.33
2	2	46	TYR	CE2-CZ	6.65	1.47	1.38
2	l	51	ARG	CZ-NH1	6.65	1.41	1.33
1	b	68	TYR	CE2-CZ	6.63	1.47	1.38
2	6	123	TYR	CG-CD2	6.63	1.47	1.39
1	D	228	GLU	CG-CD	6.59	1.61	1.51
2	k	199	TYR	CE1-CZ	6.59	1.47	1.38
1	G	10	ARG	CD-NE	6.58	1.57	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	d	235	ARG	NE-CZ	6.57	1.41	1.33
2	3	30	ARG	CZ-NH2	6.57	1.41	1.33
3	K	43	ARG	CZ-NH2	6.57	1.41	1.33
1	C	20	ARG	NE-CZ	6.55	1.41	1.33
1	f	159	TYR	CE1-CZ	6.55	1.47	1.38
2	m	103	TYR	CG-CD1	6.55	1.47	1.39
2	5	200	SER	CA-CB	6.54	1.62	1.52
2	2	178	ARG	CD-NE	6.53	1.57	1.46
3	H	274	GLY	N-CA	-6.53	1.36	1.46
1	C	241	ARG	NE-CZ	6.53	1.41	1.33
2	h	212	ARG	NE-CZ	6.53	1.41	1.33
2	5	106	TYR	CE1-CZ	6.52	1.47	1.38
2	k	102	ARG	CZ-NH2	6.52	1.41	1.33
1	a	103	TYR	CG-CD2	6.51	1.47	1.39
1	A	100	ARG	CD-NE	6.51	1.57	1.46
1	c	126	TYR	CG-CD1	6.51	1.47	1.39
1	E	103	TYR	CZ-OH	6.51	1.49	1.37
3	K	177	GLY	CA-C	-6.50	1.41	1.51
2	m	80	ARG	NE-CZ	6.50	1.41	1.33
2	l	81	ARG	CD-NE	6.49	1.57	1.46
2	i	173	TYR	CE2-CZ	6.48	1.47	1.38
1	b	213	TYR	CE1-CZ	6.47	1.47	1.38
3	M	24	ARG	CZ-NH2	6.46	1.41	1.33
2	i	68	ARG	NE-CZ	6.46	1.41	1.33
1	A	132	PHE	CE2-CZ	6.45	1.49	1.37
2	l	173	TYR	CB-CG	-6.45	1.42	1.51
1	E	168	ARG	CD-NE	6.45	1.57	1.46
2	j	133	GLU	CD-OE1	6.44	1.32	1.25
1	a	100	ARG	CZ-NH1	6.44	1.41	1.33
1	f	241	ARG	NE-CZ	6.44	1.41	1.33
1	G	130	ARG	NE-CZ	6.42	1.41	1.33
2	l	160	GLY	CA-C	6.40	1.62	1.51
1	g	42	CYS	CB-SG	6.38	1.93	1.82
1	f	178	GLU	CD-OE2	6.38	1.32	1.25
3	H	152	GLU	CD-OE2	6.38	1.32	1.25
1	G	241	ARG	NE-CZ	6.38	1.41	1.33
2	1	178	ARG	CZ-NH1	6.37	1.41	1.33
3	J	45	GLU	CD-OE1	-6.37	1.18	1.25
2	6	211	PHE	CE1-CZ	6.36	1.49	1.37
1	D	100	ARG	CD-NE	6.35	1.57	1.46
1	C	72	GLU	CD-OE2	6.35	1.32	1.25
3	L	302	ARG	CD-NE	6.35	1.57	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	I	181	TYR	CE2-CZ	6.34	1.46	1.38
3	I	361	PHE	CG-CD1	6.34	1.48	1.38
3	I	249	ARG	CZ-NH1	6.34	1.41	1.33
3	J	59	ARG	CZ-NH1	6.34	1.41	1.33
3	J	49	ARG	CD-NE	6.33	1.57	1.46
3	J	49	ARG	CZ-NH2	6.31	1.41	1.33
1	F	8	TYR	CD1-CE1	6.31	1.48	1.39
1	a	28	ARG	CZ-NH1	6.30	1.41	1.33
2	1	158	GLU	CG-CD	6.30	1.61	1.51
2	2	170	ARG	CD-NE	6.30	1.57	1.46
3	M	57	ARG	CZ-NH1	6.30	1.41	1.33
2	j	196	PHE	CE2-CZ	6.29	1.49	1.37
3	L	346	ALA	CA-CB	6.29	1.65	1.52
3	M	154	ARG	NE-CZ	6.29	1.41	1.33
1	f	219	ARG	NE-CZ	6.29	1.41	1.33
1	a	127	GLY	N-CA	-6.28	1.36	1.46
3	M	43	ARG	CZ-NH1	6.27	1.41	1.33
3	L	140	TYR	CZ-OH	6.26	1.48	1.37
2	6	88	ARG	NE-CZ	6.26	1.41	1.33
1	g	139	ALA	N-CA	-6.26	1.33	1.46
3	H	76	ARG	CZ-NH1	6.25	1.41	1.33
2	4	81	ARG	CZ-NH1	6.24	1.41	1.33
1	b	68	TYR	CG-CD2	6.24	1.47	1.39
1	e	100	ARG	NE-CZ	6.24	1.41	1.33
2	2	197	TYR	CG-CD2	6.24	1.47	1.39
1	D	26	TYR	CB-CG	6.23	1.60	1.51
1	c	20	ARG	NE-CZ	6.23	1.41	1.33
3	H	56	GLU	CG-CD	6.22	1.61	1.51
1	E	8	TYR	CG-CD2	6.22	1.47	1.39
3	I	209	SER	CA-CB	6.21	1.62	1.52
3	J	76	ARG	CZ-NH2	6.21	1.41	1.33
3	L	316	GLY	CA-C	-6.21	1.42	1.51
1	c	100	ARG	CZ-NH2	6.21	1.41	1.33
1	g	95	GLU	CA-CB	6.20	1.67	1.53
3	H	181	TYR	CE1-CZ	6.20	1.46	1.38
3	M	49	ARG	NE-CZ	6.20	1.41	1.33
2	7	101	TYR	CD2-CE2	6.20	1.48	1.39
3	H	102	PRO	C-N	6.20	1.44	1.33
1	A	148	TYR	CB-CG	-6.19	1.42	1.51
3	H	154	ARG	CZ-NH2	6.19	1.41	1.33
2	j	68	ARG	NE-CZ	6.19	1.41	1.33
3	I	29	ARG	CZ-NH2	6.18	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	130	ARG	CZ-NH1	6.18	1.41	1.33
1	F	100	ARG	CZ-NH1	6.17	1.41	1.33
2	k	81	ARG	CZ-NH2	6.16	1.41	1.33
3	J	59	ARG	CZ-NH2	6.16	1.41	1.33
1	A	239	ARG	CZ-NH1	6.16	1.41	1.33
3	L	341	ARG	NE-CZ	6.16	1.41	1.33
2	m	134	GLU	CD-OE2	6.15	1.32	1.25
3	H	341	ARG	CD-NE	6.15	1.56	1.46
1	G	93	ARG	NE-CZ	6.14	1.41	1.33
2	6	144	SER	CA-CB	6.13	1.62	1.52
2	j	63	ALA	CA-C	-6.13	1.37	1.52
3	I	21	TYR	CG-CD2	6.12	1.47	1.39
3	K	341	ARG	CZ-NH1	6.12	1.41	1.33
1	G	86	ARG	CZ-NH1	6.11	1.41	1.33
1	g	213	TYR	CE2-CZ	6.11	1.46	1.38
3	M	259	ARG	NE-CZ	6.11	1.41	1.33
2	5	77	TYR	CE2-CZ	6.10	1.46	1.38
2	n	148	TYR	CG-CD1	6.10	1.47	1.39
1	b	201	GLU	CD-OE1	-6.09	1.19	1.25
1	B	56	SER	CA-CB	6.09	1.62	1.52
2	k	81	ARG	CD-NE	6.09	1.56	1.46
1	F	165	GLY	CA-C	-6.09	1.42	1.51
3	K	25	GLU	CD-OE2	6.09	1.32	1.25
1	f	28	ARG	CZ-NH1	6.08	1.41	1.33
1	G	20	ARG	NE-CZ	6.08	1.41	1.33
1	g	235	ARG	NE-CZ	6.08	1.41	1.33
1	E	86	ARG	CZ-NH2	6.07	1.41	1.33
1	D	241	ARG	CZ-NH2	6.05	1.41	1.33
2	h	199	TYR	CD2-CE2	6.04	1.48	1.39
1	F	123	TYR	CZ-OH	6.04	1.48	1.37
2	l	170	ARG	CD-NE	6.04	1.56	1.46
2	5	30	ARG	NE-CZ	6.03	1.40	1.33
1	c	91	ARG	CD-NE	6.03	1.56	1.46
2	4	123	TYR	CE2-CZ	6.02	1.46	1.38
1	b	28	ARG	CZ-NH2	6.02	1.40	1.33
3	L	299	ARG	CD-NE	6.01	1.56	1.46
1	E	235	ARG	NE-CZ	6.00	1.40	1.33
3	H	299	ARG	CZ-NH1	6.00	1.40	1.33
1	E	109	VAL	C-N	5.99	1.47	1.34
1	e	72	GLU	CD-OE1	5.99	1.32	1.25
3	K	259	ARG	CZ-NH2	5.99	1.40	1.33
2	l	77	TYR	CD2-CE2	5.99	1.48	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	c	20	ARG	CZ-NH1	5.99	1.40	1.33
2	5	114	GLY	CA-C	-5.98	1.42	1.51
1	a	123	TYR	CE2-CZ	5.98	1.46	1.38
1	g	100	ARG	CZ-NH1	5.98	1.40	1.33
3	H	200	ARG	NE-CZ	5.98	1.40	1.33
3	M	302	ARG	CD-NE	5.98	1.56	1.46
1	B	33	ARG	CZ-NH2	5.97	1.40	1.33
3	I	28	ARG	CD-NE	5.97	1.56	1.46
3	K	289	ARG	NE-CZ	5.97	1.40	1.33
3	J	56	GLU	CG-CD	5.97	1.60	1.51
2	l	154	ARG	NE-CZ	5.96	1.40	1.33
1	A	10	ARG	NE-CZ	5.96	1.40	1.33
3	I	76	ARG	CZ-NH1	5.96	1.40	1.33
1	e	227	GLU	CG-CD	5.95	1.60	1.51
3	M	200	ARG	CZ-NH2	5.94	1.40	1.33
1	F	239	ARG	CZ-NH1	5.94	1.40	1.33
2	6	83	ARG	CZ-NH1	5.94	1.40	1.33
1	C	93	ARG	CZ-NH2	5.94	1.40	1.33
2	h	173	TYR	CE2-CZ	5.93	1.46	1.38
3	H	175	PRO	N-CD	-5.93	1.39	1.47
2	m	123	TYR	CG-CD1	5.93	1.46	1.39
2	i	212	ARG	CD-NE	5.92	1.56	1.46
1	a	93	ARG	CZ-NH1	5.92	1.40	1.33
1	E	93	ARG	CZ-NH2	5.92	1.40	1.33
3	J	232	GLU	CD-OE2	5.92	1.32	1.25
1	b	20	ARG	CZ-NH1	5.91	1.40	1.33
1	c	159	TYR	CB-CG	5.91	1.60	1.51
1	b	79	SER	CA-CB	5.90	1.61	1.52
3	H	265	MET	CA-CB	5.90	1.67	1.53
2	4	154	ARG	NE-CZ	5.90	1.40	1.33
3	K	104	ALA	CA-CB	5.90	1.64	1.52
3	I	302	ARG	CZ-NH1	5.90	1.40	1.33
1	c	213	TYR	CZ-OH	5.89	1.47	1.37
2	i	203	GLU	CG-CD	5.89	1.60	1.51
3	K	364	ARG	NE-CZ	5.89	1.40	1.33
1	b	80	GLY	N-CA	-5.88	1.37	1.46
2	2	51	ARG	CD-NE	5.88	1.56	1.46
2	m	211	PHE	CG-CD2	5.88	1.47	1.38
3	L	59	ARG	CZ-NH1	5.87	1.40	1.33
1	c	239	ARG	CD-NE	5.87	1.56	1.46
3	L	259	ARG	CZ-NH2	5.87	1.40	1.33
2	k	88	ARG	NE-CZ	5.87	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	c	168	ARG	CD-NE	5.87	1.56	1.46
2	j	199	TYR	CZ-OH	5.87	1.47	1.37
3	H	81	SER	CA-CB	5.86	1.61	1.52
1	a	202	SER	CA-CB	5.85	1.61	1.52
2	2	212	ARG	CZ-NH2	5.85	1.40	1.33
1	B	227	GLU	CD-OE2	5.85	1.32	1.25
2	1	95	SER	CA-CB	5.85	1.61	1.52
3	H	263	ARG	CZ-NH2	5.84	1.40	1.33
3	H	24	ARG	CD-NE	5.84	1.56	1.46
3	L	299	ARG	NE-CZ	5.84	1.40	1.33
1	F	33	ARG	CZ-NH2	5.83	1.40	1.33
1	g	241	ARG	NE-CZ	5.82	1.40	1.33
2	3	83	ARG	NE-CZ	5.82	1.40	1.33
3	H	224	ARG	CZ-NH1	5.81	1.40	1.33
3	L	200	ARG	CZ-NH1	5.81	1.40	1.33
1	g	123	TYR	CE1-CZ	5.80	1.46	1.38
2	3	51	ARG	CZ-NH2	5.80	1.40	1.33
1	C	130	ARG	NE-CZ	5.80	1.40	1.33
1	G	126	TYR	CD2-CE2	5.79	1.48	1.39
1	d	239	ARG	CD-NE	5.79	1.56	1.46
2	2	124	SER	CA-CB	5.78	1.61	1.52
3	L	263	ARG	CZ-NH1	5.78	1.40	1.33
3	L	57	ARG	CZ-NH2	5.77	1.40	1.33
1	A	126	TYR	CE1-CZ	5.77	1.46	1.38
1	F	130	ARG	CD-NE	5.77	1.56	1.46
2	4	178	ARG	CZ-NH2	5.77	1.40	1.33
1	b	173	GLU	CG-CD	5.76	1.60	1.51
1	E	202	SER	CA-CB	5.76	1.61	1.52
2	4	117	SER	N-CA	-5.76	1.34	1.46
1	B	133	GLY	N-CA	-5.76	1.37	1.46
2	n	105	PRO	N-CD	-5.76	1.39	1.47
2	7	101	TYR	CB-CG	5.75	1.60	1.51
1	f	168	ARG	CZ-NH2	5.75	1.40	1.33
2	7	83	ARG	CZ-NH1	5.75	1.40	1.33
3	J	205	ARG	CZ-NH1	5.75	1.40	1.33
3	L	24	ARG	NE-CZ	5.75	1.40	1.33
1	g	178	GLU	CG-CD	5.75	1.60	1.51
2	n	101	TYR	CE2-CZ	5.74	1.46	1.38
2	n	101	TYR	CG-CD1	5.74	1.46	1.39
3	K	57	ARG	CZ-NH1	5.74	1.40	1.33
3	L	76	ARG	CZ-NH1	5.74	1.40	1.33
1	e	16	SER	CA-CB	5.73	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	l	170	ARG	NE-CZ	5.73	1.40	1.33
2	m	178	ARG	NE-CZ	5.73	1.40	1.33
1	G	123	TYR	CE1-CZ	-5.72	1.31	1.38
2	7	46	TYR	CG-CD1	5.72	1.46	1.39
3	L	152	GLU	CG-CD	5.72	1.60	1.51
2	h	121	SER	CA-CB	5.71	1.61	1.52
2	j	80	ARG	CZ-NH2	5.71	1.40	1.33
1	D	223	GLU	N-CA	-5.71	1.34	1.46
3	L	46	ARG	CD-NE	5.71	1.56	1.46
2	1	30	ARG	NE-CZ	5.71	1.40	1.33
2	2	102	ARG	NE-CZ	5.71	1.40	1.33
3	J	76	ARG	NE-CZ	5.70	1.40	1.33
2	3	143	GLY	N-CA	-5.70	1.37	1.46
2	7	144	SER	CA-CB	5.70	1.61	1.52
3	I	317	ARG	CZ-NH1	5.70	1.40	1.33
1	g	239	ARG	NE-CZ	5.69	1.40	1.33
1	b	95	GLU	CG-CD	5.68	1.60	1.51
1	E	93	ARG	CD-NE	5.68	1.56	1.46
1	D	53	ARG	NE-CZ	5.67	1.40	1.33
3	K	305	ARG	NE-CZ	5.67	1.40	1.33
2	j	103	TYR	CG-CD1	5.67	1.46	1.39
2	j	101	TYR	CE2-CZ	5.66	1.46	1.38
3	L	98	GLU	CG-CD	5.66	1.60	1.51
2	m	211	PHE	CE2-CZ	5.65	1.48	1.37
3	I	28	ARG	CZ-NH2	5.65	1.40	1.33
2	4	82	GLU	CG-CD	5.65	1.60	1.51
3	J	154	ARG	NE-CZ	5.64	1.40	1.33
1	B	239	ARG	CD-NE	5.64	1.56	1.46
1	F	68	TYR	CE2-CZ	5.64	1.45	1.38
3	M	57	ARG	NE-CZ	5.64	1.40	1.33
3	J	145	GLY	CA-C	-5.64	1.42	1.51
2	5	178	ARG	CZ-NH2	5.64	1.40	1.33
2	j	154	ARG	NE-CZ	5.63	1.40	1.33
3	I	53	SER	CA-CB	5.63	1.61	1.52
3	K	341	ARG	NE-CZ	5.63	1.40	1.33
1	c	28	ARG	NE-CZ	5.63	1.40	1.33
1	c	148	TYR	CZ-OH	5.63	1.47	1.37
1	g	10	ARG	CZ-NH2	5.63	1.40	1.33
2	7	123	TYR	CE2-CZ	5.63	1.45	1.38
3	J	43	ARG	CZ-NH1	5.63	1.40	1.33
1	g	55	GLY	CA-C	-5.62	1.42	1.51
1	B	168	ARG	CD-NE	5.62	1.56	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	n	80	ARG	CZ-NH2	5.62	1.40	1.33
1	d	180	ARG	CD-NE	5.62	1.56	1.46
1	g	176	GLU	CG-CD	5.62	1.60	1.51
1	B	224	VAL	CB-CG1	5.62	1.64	1.52
1	F	17	PRO	CA-CB	-5.61	1.42	1.53
2	m	117	SER	CA-CB	5.61	1.61	1.52
3	I	41	ARG	CZ-NH2	5.61	1.40	1.33
3	M	305	ARG	CZ-NH2	5.61	1.40	1.33
1	f	127	GLY	CA-C	-5.60	1.42	1.51
2	h	20	LYS	N-CA	-5.60	1.35	1.46
2	j	30	ARG	CD-NE	5.60	1.55	1.46
2	3	80	ARG	NE-CZ	5.60	1.40	1.33
1	g	239	ARG	CZ-NH1	5.59	1.40	1.33
2	2	196	PHE	CG-CD2	5.59	1.47	1.38
1	a	105	GLU	CB-CG	5.59	1.62	1.52
3	K	57	ARG	NE-CZ	5.59	1.40	1.33
1	B	180	ARG	CD-NE	5.58	1.55	1.46
3	L	253	SER	CA-CB	5.58	1.61	1.52
3	K	224	ARG	NE-CZ	5.57	1.40	1.33
1	a	241	ARG	CZ-NH2	5.57	1.40	1.33
1	C	72	GLU	CD-OE1	5.57	1.31	1.25
1	E	203	GLU	CD-OE1	-5.57	1.19	1.25
3	I	224	ARG	NE-CZ	5.57	1.40	1.33
3	K	20	TYR	CG-CD1	5.57	1.46	1.39
1	B	126	TYR	CE1-CZ	5.56	1.45	1.38
3	I	215	TYR	CG-CD2	5.56	1.46	1.39
3	M	21	TYR	CZ-OH	5.55	1.47	1.37
3	J	69	SER	CB-OG	5.55	1.49	1.42
1	b	20	ARG	CD-NE	5.55	1.55	1.46
2	3	199	TYR	CG-CD1	5.55	1.46	1.39
2	k	104	PHE	CG-CD1	5.55	1.47	1.38
2	5	168	ALA	CA-CB	5.55	1.64	1.52
1	g	126	TYR	CA-CB	5.55	1.66	1.53
1	F	53	ARG	CZ-NH1	5.54	1.40	1.33
1	g	44	GLU	CG-CD	5.54	1.60	1.51
2	l	77	TYR	CB-CG	-5.54	1.43	1.51
2	7	68	ARG	NE-CZ	5.54	1.40	1.33
1	c	53	ARG	CZ-NH2	5.54	1.40	1.33
2	1	68	ARG	CZ-NH1	5.54	1.40	1.33
2	k	197	TYR	CZ-OH	5.54	1.47	1.37
1	b	184	SER	CA-CB	5.54	1.61	1.52
1	C	28	ARG	CD-NE	5.53	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	c	170	ALA	CA-CB	5.52	1.64	1.52
2	k	46	TYR	CZ-OH	5.52	1.47	1.37
3	M	128	TYR	CE1-CZ	5.52	1.45	1.38
1	e	10	ARG	NE-CZ	5.52	1.40	1.33
1	F	213	TYR	CE2-CZ	5.52	1.45	1.38
1	b	135	SER	CB-OG	5.51	1.49	1.42
3	H	52	ARG	NE-CZ	5.51	1.40	1.33
1	C	219	ARG	CZ-NH1	5.51	1.40	1.33
2	2	81	ARG	CZ-NH2	5.51	1.40	1.33
2	n	114	GLY	N-CA	-5.50	1.37	1.46
2	1	82	GLU	CD-OE2	5.50	1.31	1.25
3	I	364	ARG	CD-NE	5.50	1.55	1.46
2	k	80	ARG	NE-CZ	5.49	1.40	1.33
3	L	275	PHE	CE1-CZ	5.49	1.47	1.37
3	L	41	ARG	CZ-NH2	5.49	1.40	1.33
3	L	260	GLU	CD-OE2	5.49	1.31	1.25
1	e	223	GLU	CG-CD	5.48	1.60	1.51
2	2	182	SER	CA-CB	5.48	1.61	1.52
2	4	155	PHE	CE1-CZ	5.48	1.47	1.37
1	E	185	PHE	CE2-CZ	5.48	1.47	1.37
3	M	130	PHE	CG-CD2	5.48	1.47	1.38
1	C	180	ARG	NE-CZ	5.47	1.40	1.33
1	D	86	ARG	CZ-NH1	5.47	1.40	1.33
3	J	305	ARG	NE-CZ	5.47	1.40	1.33
2	5	51	ARG	CZ-NH1	5.46	1.40	1.33
2	i	154	ARG	CZ-NH1	5.46	1.40	1.33
1	A	180	ARG	NE-CZ	5.46	1.40	1.33
3	H	144	GLY	C-N	5.46	1.42	1.33
1	g	28	ARG	CZ-NH1	5.45	1.40	1.33
2	5	80	ARG	NE-CZ	5.45	1.40	1.33
3	K	43	ARG	CZ-NH1	5.45	1.40	1.33
3	K	249	ARG	CZ-NH2	5.45	1.40	1.33
3	H	397	PHE	CE1-CZ	5.45	1.47	1.37
3	M	209	SER	CA-CB	5.45	1.61	1.52
1	D	235	ARG	CZ-NH2	5.45	1.40	1.33
1	G	103	TYR	CG-CD1	5.45	1.46	1.39
2	2	78	GLU	CD-OE1	5.45	1.31	1.25
1	C	26	TYR	CD2-CE2	5.44	1.47	1.39
1	F	123	TYR	CG-CD1	5.44	1.46	1.39
1	d	221	PHE	CA-CB	5.44	1.66	1.53
3	H	99	GLU	CG-CD	5.44	1.60	1.51
2	3	68	ARG	NE-CZ	5.43	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	K	27	TYR	CG-CD2	5.43	1.46	1.39
2	2	106	TYR	CG-CD1	5.43	1.46	1.39
2	j	88	ARG	CZ-NH1	5.43	1.40	1.33
1	B	10	ARG	CD-NE	5.43	1.55	1.46
1	f	105	GLU	CD-OE2	5.43	1.31	1.25
3	K	278	ARG	CZ-NH1	5.43	1.40	1.33
3	K	33	GLU	CD-OE1	5.43	1.31	1.25
2	3	81	ARG	NE-CZ	5.42	1.40	1.33
3	J	53	SER	CA-CB	5.42	1.61	1.52
1	b	111	GLU	CG-CD	5.42	1.60	1.51
3	M	242	GLU	CB-CG	5.42	1.62	1.52
1	B	68	TYR	N-CA	-5.42	1.35	1.46
2	h	83	ARG	CZ-NH2	5.42	1.40	1.33
2	2	154	ARG	CD-NE	5.42	1.55	1.46
3	I	205	ARG	NE-CZ	5.42	1.40	1.33
2	m	73	GLU	CB-CG	5.41	1.62	1.52
1	d	95	GLU	CD-OE1	-5.41	1.19	1.25
1	e	20	ARG	CA-CB	5.41	1.65	1.53
2	1	154	ARG	NE-CZ	5.41	1.40	1.33
3	K	24	ARG	CZ-NH1	5.41	1.40	1.33
3	J	224	ARG	CD-NE	5.41	1.55	1.46
1	D	93	ARG	CZ-NH2	5.41	1.40	1.33
1	F	53	ARG	CD-NE	5.41	1.55	1.46
2	5	85	PRO	N-CA	-5.40	1.38	1.47
1	E	140	GLY	CA-C	-5.40	1.43	1.51
1	B	231	PRO	N-CD	-5.40	1.40	1.47
3	J	24	ARG	CD-NE	5.40	1.55	1.46
3	J	102	PRO	N-CD	-5.40	1.40	1.47
2	3	22	GLY	CA-C	-5.39	1.43	1.51
2	l	123	TYR	CZ-OH	5.39	1.47	1.37
3	M	315	GLU	C-N	5.39	1.42	1.33
2	1	212	ARG	CZ-NH2	5.39	1.40	1.33
3	L	128	TYR	CZ-OH	5.39	1.47	1.37
3	I	239	PHE	N-CA	-5.39	1.35	1.46
2	2	83	ARG	CD-NE	5.38	1.55	1.46
2	7	46	TYR	CE1-CZ	5.38	1.45	1.38
3	H	289	ARG	CZ-NH1	5.38	1.40	1.33
3	J	57	ARG	CZ-NH2	5.38	1.40	1.33
1	C	180	ARG	CZ-NH2	5.38	1.40	1.33
2	4	170	ARG	CZ-NH2	5.38	1.40	1.33
1	E	184	SER	CA-CB	5.38	1.61	1.52
3	L	43	ARG	CZ-NH1	5.38	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	J	28	ARG	CZ-NH2	5.38	1.40	1.33
1	b	123	TYR	CG-CD2	5.38	1.46	1.39
1	C	53	ARG	CZ-NH2	5.38	1.40	1.33
3	I	344	GLU	CD-OE2	5.38	1.31	1.25
3	K	52	ARG	NE-CZ	5.38	1.40	1.33
2	3	81	ARG	CD-NE	5.37	1.55	1.46
3	K	128	TYR	CB-CG	5.37	1.59	1.51
1	E	123	TYR	CE2-CZ	5.37	1.45	1.38
3	I	209	SER	N-CA	-5.37	1.35	1.46
2	2	159	ILE	C-N	5.37	1.42	1.33
2	6	142	SER	CA-CB	5.37	1.61	1.52
2	n	80	ARG	CA-CB	5.37	1.65	1.53
1	A	29	GLU	CD-OE1	5.37	1.31	1.25
1	A	239	ARG	CZ-NH2	5.37	1.40	1.33
1	g	22	PHE	CG-CD2	5.37	1.46	1.38
1	g	143	GLU	CG-CD	5.36	1.59	1.51
2	l	39	SER	CA-CB	5.36	1.60	1.52
1	a	228	GLU	CD-OE1	5.36	1.31	1.25
1	c	180	ARG	CZ-NH2	5.36	1.40	1.33
2	k	100	SER	CA-CB	5.36	1.60	1.52
2	3	30	ARG	CZ-NH1	5.35	1.40	1.33
1	B	16	SER	CA-CB	5.34	1.60	1.52
1	D	159	TYR	CB-CG	5.34	1.59	1.51
3	K	46	ARG	CZ-NH2	5.34	1.40	1.33
3	M	105	ARG	CZ-NH1	5.34	1.40	1.33
2	h	101	TYR	CZ-OH	5.34	1.47	1.37
1	e	56	SER	CA-CB	5.34	1.60	1.52
2	j	149	GLY	CA-C	-5.33	1.43	1.51
1	b	180	ARG	CZ-NH2	5.33	1.40	1.33
2	h	178	ARG	CZ-NH1	5.33	1.40	1.33
1	c	53	ARG	CZ-NH1	5.33	1.40	1.33
2	5	85	PRO	N-CD	-5.33	1.40	1.47
2	7	163	GLU	CB-CG	5.33	1.62	1.52
3	K	218	GLU	CB-CG	5.33	1.62	1.52
2	5	68	ARG	CZ-NH2	5.32	1.40	1.33
3	K	211	PHE	CD2-CE2	5.32	1.49	1.39
2	h	81	ARG	NE-CZ	5.32	1.40	1.33
2	h	190	LYS	CA-CB	5.32	1.65	1.53
2	l	58	GLY	CA-C	-5.32	1.43	1.51
1	E	28	ARG	NE-CZ	5.32	1.40	1.33
1	G	83	ALA	N-CA	-5.31	1.35	1.46
2	2	81	ARG	CZ-NH1	5.31	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	H	200	ARG	CZ-NH1	5.31	1.40	1.33
2	n	106	TYR	CE2-CZ	5.30	1.45	1.38
1	f	174	PHE	CG-CD1	5.30	1.46	1.38
1	F	103	TYR	CZ-OH	5.30	1.46	1.37
2	k	212	ARG	CZ-NH1	5.30	1.40	1.33
2	7	154	ARG	CD-NE	5.30	1.55	1.46
1	C	126	TYR	CB-CG	5.30	1.59	1.51
2	n	182	SER	CA-CB	-5.30	1.45	1.52
2	2	102	ARG	CZ-NH1	5.29	1.40	1.33
2	j	46	TYR	CB-CG	-5.29	1.43	1.51
3	M	52	ARG	CZ-NH1	5.29	1.40	1.33
3	H	54	GLU	CB-CG	5.29	1.62	1.52
3	L	21	TYR	CZ-OH	5.29	1.46	1.37
2	n	205	GLU	CB-CG	5.29	1.62	1.52
2	k	30	ARG	CZ-NH1	5.28	1.40	1.33
2	5	65	PHE	CG-CD1	5.28	1.46	1.38
3	J	224	ARG	CZ-NH1	5.28	1.40	1.33
1	c	54	VAL	CB-CG1	5.28	1.64	1.52
1	e	33	ARG	CZ-NH1	5.28	1.40	1.33
1	E	194	VAL	CA-C	-5.28	1.39	1.52
1	g	24	VAL	CB-CG2	5.28	1.64	1.52
1	C	179	TYR	CE2-CZ	5.27	1.45	1.38
3	L	250	ARG	NE-CZ	5.27	1.40	1.33
1	d	93	ARG	CZ-NH1	5.27	1.39	1.33
2	l	212	ARG	N-CA	-5.27	1.35	1.46
1	D	28	ARG	CD-NE	5.27	1.55	1.46
2	6	155	PHE	CB-CG	-5.27	1.42	1.51
3	M	52	ARG	CD-NE	5.27	1.55	1.46
2	2	51	ARG	CZ-NH2	5.27	1.39	1.33
1	a	15	PHE	CE2-CZ	5.26	1.47	1.37
1	E	119	PHE	CG-CD2	5.26	1.46	1.38
1	a	33	ARG	NE-CZ	5.26	1.39	1.33
1	c	205	VAL	CB-CG1	5.25	1.63	1.52
1	e	130	ARG	CD-NE	5.25	1.55	1.46
2	7	178	ARG	CZ-NH2	5.25	1.39	1.33
3	K	274	GLY	CA-C	-5.25	1.43	1.51
2	7	83	ARG	CD-NE	5.25	1.55	1.46
2	3	102	ARG	CZ-NH2	5.25	1.39	1.33
2	n	144	SER	CB-OG	5.25	1.49	1.42
3	J	98	GLU	CD-OE2	5.25	1.31	1.25
2	7	80	ARG	NE-CZ	5.24	1.39	1.33
3	L	388	PRO	N-CA	-5.24	1.38	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	25	GLU	CG-CD	5.24	1.59	1.51
3	M	317	ARG	CZ-NH2	5.24	1.39	1.33
3	M	211	PHE	CG-CD1	5.24	1.46	1.38
1	a	33	ARG	CD-NE	5.24	1.55	1.46
1	C	80	GLY	CA-C	-5.23	1.43	1.51
1	D	28	ARG	CZ-NH1	5.23	1.39	1.33
2	h	63	ALA	CA-CB	5.23	1.63	1.52
3	H	73	GLU	CB-CG	5.23	1.62	1.52
3	I	275	PHE	CG-CD1	5.22	1.46	1.38
3	M	28	ARG	CZ-NH1	5.22	1.39	1.33
2	1	36	PHE	CE1-CZ	5.21	1.47	1.37
2	m	119	GLY	CA-C	-5.21	1.43	1.51
1	C	39	GLY	N-CA	-5.21	1.38	1.46
3	H	24	ARG	N-CA	-5.21	1.35	1.46
1	a	219	ARG	CD-NE	5.21	1.55	1.46
3	M	221	ARG	CD-NE	5.21	1.55	1.46
1	d	93	ARG	CZ-NH2	5.21	1.39	1.33
3	I	45	GLU	CG-CD	5.21	1.59	1.51
1	d	168	ARG	CZ-NH2	5.20	1.39	1.33
2	4	194	ASP	CB-CG	5.20	1.62	1.51
2	7	101	TYR	CA-CB	5.20	1.65	1.53
1	A	100	ARG	NE-CZ	5.20	1.39	1.33
1	C	26	TYR	CE1-CZ	5.20	1.45	1.38
1	e	159	TYR	CZ-OH	5.20	1.46	1.37
3	J	57	ARG	CZ-NH1	5.20	1.39	1.33
1	a	180	ARG	CZ-NH2	5.20	1.39	1.33
3	L	250	ARG	CZ-NH1	5.20	1.39	1.33
1	f	181	ASP	N-CA	-5.19	1.35	1.46
1	E	234	GLU	CD-OE2	5.19	1.31	1.25
1	A	20	ARG	NE-CZ	5.19	1.39	1.33
1	e	28	ARG	NE-CZ	5.19	1.39	1.33
2	5	155	PHE	CG-CD1	5.19	1.46	1.38
2	6	68	ARG	CZ-NH2	5.19	1.39	1.33
3	H	364	ARG	NE-CZ	5.19	1.39	1.33
3	J	259	ARG	NE-CZ	5.19	1.39	1.33
1	f	180	ARG	CD-NE	5.17	1.55	1.46
3	J	20	TYR	CG-CD1	5.17	1.45	1.39
1	d	10	ARG	NE-CZ	5.17	1.39	1.33
1	d	91	ARG	CD-NE	5.17	1.55	1.46
1	G	53	ARG	CZ-NH1	5.17	1.39	1.33
3	J	347	SER	CA-CB	5.17	1.60	1.52
2	1	95	SER	CB-OG	-5.17	1.35	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	h	199	TYR	CG-CD1	5.17	1.45	1.39
3	J	191	LEU	N-CA	-5.17	1.36	1.46
2	2	205	GLU	CB-CG	5.17	1.61	1.52
3	I	177	GLY	CA-C	-5.17	1.43	1.51
1	e	153	SER	CA-CB	5.16	1.60	1.52
2	1	131	ALA	CA-C	-5.16	1.39	1.52
2	2	117	SER	CB-OG	5.16	1.49	1.42
1	c	26	TYR	CE1-CZ	5.16	1.45	1.38
3	L	28	ARG	CD-NE	5.16	1.55	1.46
1	F	26	TYR	CG-CD1	5.16	1.45	1.39
1	E	175	PHE	CD1-CE1	5.16	1.49	1.39
3	K	17	GLU	CB-CG	5.15	1.61	1.52
3	M	50	ARG	CZ-NH1	5.15	1.39	1.33
3	M	263	ARG	CZ-NH2	5.15	1.39	1.33
1	g	159	TYR	CE1-CZ	5.15	1.45	1.38
1	G	219	ARG	CZ-NH2	5.15	1.39	1.33
3	J	52	ARG	NE-CZ	5.15	1.39	1.33
2	7	51	ARG	CD-NE	5.14	1.55	1.46
3	K	317	ARG	CZ-NH2	5.14	1.39	1.33
1	D	15	PHE	CG-CD2	5.14	1.46	1.38
1	F	153	SER	CB-OG	5.14	1.49	1.42
2	5	81	ARG	CZ-NH1	5.14	1.39	1.33
3	J	44	TYR	CG-CD1	5.14	1.45	1.39
3	M	375	PHE	CG-CD2	5.14	1.46	1.38
2	l	95	SER	N-CA	-5.14	1.36	1.46
2	2	29	LYS	CA-CB	5.14	1.65	1.53
1	a	130	ARG	CZ-NH2	5.13	1.39	1.33
1	b	210	GLU	CD-OE2	5.13	1.31	1.25
1	C	148	TYR	CE2-CZ	5.13	1.45	1.38
2	h	198	GLN	CG-CD	5.13	1.62	1.51
2	7	197	TYR	CE2-CZ	5.13	1.45	1.38
2	m	75	ASN	CB-CG	5.13	1.62	1.51
3	I	56	GLU	CG-CD	5.13	1.59	1.51
3	M	236	SER	CA-CB	5.13	1.60	1.52
1	c	239	ARG	NE-CZ	5.13	1.39	1.33
2	m	170	ARG	NE-CZ	5.13	1.39	1.33
2	3	142	SER	CA-CB	5.13	1.60	1.52
2	6	62	ASP	CB-CG	5.13	1.62	1.51
3	K	149	GLN	CG-CD	5.12	1.62	1.51
3	M	46	ARG	CZ-NH2	5.12	1.39	1.33
2	j	46	TYR	CG-CD1	5.12	1.45	1.39
3	L	221	ARG	CD-NE	5.12	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	J	94	TYR	CZ-OH	5.12	1.46	1.37
3	H	61	PRO	C-N	-5.12	1.24	1.34
3	J	158	GLU	CG-CD	5.12	1.59	1.51
2	4	80	ARG	CZ-NH1	5.12	1.39	1.33
2	6	80	ARG	CZ-NH2	5.12	1.39	1.33
1	e	202	SER	CA-CB	5.11	1.60	1.52
3	K	47	GLU	CD-OE1	5.11	1.31	1.25
1	b	93	ARG	CZ-NH1	5.11	1.39	1.33
3	H	305	ARG	NE-CZ	5.11	1.39	1.33
1	C	68	TYR	CB-CG	-5.11	1.44	1.51
1	f	130	ARG	CZ-NH1	5.11	1.39	1.33
3	L	94	TYR	CG-CD1	5.11	1.45	1.39
1	A	86	ARG	CZ-NH2	5.10	1.39	1.33
3	L	40	GLU	CB-CG	5.10	1.61	1.52
1	a	212	GLY	CA-C	-5.10	1.43	1.51
1	E	207	GLU	CG-CD	5.10	1.59	1.51
3	H	81	SER	CB-OG	5.10	1.48	1.42
2	5	106	TYR	CG-CD1	5.10	1.45	1.39
1	E	126	TYR	CB-CG	5.09	1.59	1.51
3	H	278	ARG	CZ-NH2	5.09	1.39	1.33
3	M	285	GLY	N-CA	-5.09	1.38	1.46
1	E	8	TYR	CE1-CZ	5.09	1.45	1.38
1	B	235	ARG	CZ-NH1	5.09	1.39	1.33
1	D	123	TYR	CE2-CZ	-5.09	1.31	1.38
3	H	50	ARG	CZ-NH2	5.09	1.39	1.33
3	H	271	GLU	CD-OE1	5.09	1.31	1.25
3	H	89	VAL	CB-CG2	5.09	1.63	1.52
1	d	53	ARG	CZ-NH1	5.08	1.39	1.33
3	H	181	TYR	CZ-OH	5.08	1.46	1.37
1	B	179	TYR	CE2-CZ	5.08	1.45	1.38
2	3	154	ARG	CD-NE	5.08	1.55	1.46
3	I	44	TYR	CB-CG	5.08	1.59	1.51
3	M	154	ARG	CD-NE	5.08	1.55	1.46
3	M	326	ARG	CD-NE	5.08	1.55	1.46
1	G	197	GLY	CA-C	-5.07	1.43	1.51
3	H	303	PHE	CG-CD1	5.07	1.46	1.38
1	C	219	ARG	CD-NE	5.07	1.55	1.46
2	i	87	VAL	CB-CG2	5.07	1.63	1.52
1	e	53	ARG	CZ-NH1	5.07	1.39	1.33
1	f	126	TYR	CB-CG	5.07	1.59	1.51
2	6	78	GLU	CA-CB	5.07	1.65	1.53
3	H	163	LYS	CA-CB	5.07	1.65	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	c	179	TYR	CE1-CZ	5.07	1.45	1.38
3	H	57	ARG	NE-CZ	5.07	1.39	1.33
2	i	155	PHE	CG-CD2	5.07	1.46	1.38
2	4	170	ARG	CZ-NH1	5.07	1.39	1.33
3	J	302	ARG	CZ-NH1	5.07	1.39	1.33
2	j	68	ARG	CZ-NH2	5.06	1.39	1.33
3	M	117	ASN	CB-CG	5.06	1.62	1.51
1	D	48	LEU	N-CA	-5.06	1.36	1.46
3	L	105	ARG	CZ-NH2	5.06	1.39	1.33
1	F	126	TYR	CE1-CZ	5.06	1.45	1.38
1	C	91	ARG	NE-CZ	5.05	1.39	1.33
1	g	14	VAL	CB-CG2	5.05	1.63	1.52
3	L	76	ARG	CD-NE	5.05	1.55	1.46
1	A	226	PRO	N-CA	-5.05	1.38	1.47
1	g	110	LYS	CE-NZ	-5.05	1.36	1.49
3	J	200	ARG	CZ-NH2	5.05	1.39	1.33
3	H	52	ARG	CD-NE	5.04	1.55	1.46
1	e	105	GLU	CB-CG	5.04	1.61	1.52
2	m	154	ARG	CD-NE	5.04	1.55	1.46
1	E	241	ARG	CZ-NH1	5.04	1.39	1.33
3	K	24	ARG	CD-NE	5.04	1.55	1.46
1	a	235	ARG	NE-CZ	5.04	1.39	1.33
2	1	103	TYR	CG-CD2	5.04	1.45	1.39
1	e	68	TYR	CE1-CZ	5.03	1.45	1.38
1	E	238	GLU	CG-CD	5.03	1.59	1.51
1	F	225	SER	CA-CB	5.03	1.60	1.52
2	5	137	ILE	N-CA	-5.03	1.36	1.46
2	l	178	ARG	CZ-NH2	5.03	1.39	1.33
2	1	46	TYR	CE2-CZ	5.03	1.45	1.38
1	D	33	ARG	CZ-NH2	5.03	1.39	1.33
2	k	154	ARG	CD-NE	5.03	1.54	1.46
1	D	239	ARG	CZ-NH2	5.02	1.39	1.33
3	K	154	ARG	CZ-NH2	5.02	1.39	1.33
2	3	81	ARG	CZ-NH1	5.02	1.39	1.33
1	B	223	GLU	CB-CG	5.01	1.61	1.52
1	f	225	SER	CB-OG	-5.01	1.35	1.42
2	5	129	GLY	N-CA	-5.01	1.38	1.46
1	E	22	PHE	CG-CD1	5.01	1.46	1.38
2	6	212	ARG	CD-NE	5.01	1.54	1.46
2	7	59	SER	CA-CB	5.01	1.60	1.52
3	L	326	ARG	CZ-NH1	5.01	1.39	1.33
1	A	44	GLU	CG-CD	5.01	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	158	GLU	CD-OE1	-5.01	1.20	1.25
1	g	175	PHE	CG-CD1	5.00	1.46	1.38

All (1795) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	l	170	ARG	NE-CZ-NH2	-45.72	97.44	120.30
2	5	170	ARG	NE-CZ-NH2	-41.16	99.72	120.30
2	5	170	ARG	NE-CZ-NH1	22.19	131.40	120.30
1	B	179	TYR	CB-CG-CD2	-19.58	109.25	121.00
3	I	57	ARG	NE-CZ-NH1	18.79	129.69	120.30
2	l	170	ARG	NE-CZ-NH1	18.14	129.37	120.30
1	a	213	TYR	CB-CG-CD2	17.41	131.45	121.00
1	E	26	TYR	CB-CG-CD1	-17.12	110.73	121.00
1	A	221	PHE	CB-CG-CD1	16.79	132.56	120.80
3	K	289	ARG	NE-CZ-NH2	-16.73	111.94	120.30
1	A	221	PHE	CB-CG-CD2	-16.59	109.19	120.80
1	f	126	TYR	CB-CG-CD2	-16.36	111.18	121.00
1	E	28	ARG	NE-CZ-NH2	-16.25	112.18	120.30
1	f	241	ARG	NE-CZ-NH1	-16.09	112.26	120.30
1	b	28	ARG	NE-CZ-NH1	15.56	128.08	120.30
1	G	159	TYR	CB-CG-CD1	-15.52	111.69	121.00
3	K	263	ARG	NE-CZ-NH1	-15.39	112.60	120.30
1	E	93	ARG	NE-CZ-NH2	-15.39	112.61	120.30
3	K	367	ARG	NE-CZ-NH1	15.32	127.96	120.30
1	G	179	TYR	CB-CG-CD1	-15.21	111.87	121.00
3	K	249	ARG	NE-CZ-NH1	15.14	127.87	120.30
1	G	179	TYR	CB-CG-CD2	14.81	129.88	121.00
1	g	28	ARG	NE-CZ-NH1	14.78	127.69	120.30
2	3	101	TYR	CB-CG-CD2	-14.71	112.17	121.00
1	E	130	ARG	NE-CZ-NH1	14.52	127.56	120.30
1	C	175	PHE	CB-CG-CD1	14.42	130.89	120.80
2	k	68	ARG	NE-CZ-NH1	14.32	127.46	120.30
1	C	179	TYR	CB-CG-CD2	-14.16	112.50	121.00
2	5	51	ARG	NE-CZ-NH2	14.10	127.35	120.30
1	C	175	PHE	CB-CG-CD2	-14.00	111.00	120.80
3	L	105	ARG	NE-CZ-NH2	-13.90	113.35	120.30
1	G	241	ARG	NE-CZ-NH1	13.76	127.18	120.30
3	H	44	TYR	CB-CG-CD1	-13.65	112.81	121.00
1	A	100	ARG	NE-CZ-NH1	-13.63	113.48	120.30
1	F	20	ARG	NE-CZ-NH1	13.63	127.11	120.30
1	g	159	TYR	CB-CG-CD2	-13.63	112.82	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	2	123	TYR	CB-CG-CD1	-13.48	112.91	121.00
3	I	57	ARG	NE-CZ-NH2	-13.45	113.57	120.30
1	c	123	TYR	CB-CG-CD2	13.42	129.05	121.00
1	f	123	TYR	CB-CG-CD2	13.41	129.05	121.00
2	4	51	ARG	NE-CZ-NH2	13.41	127.00	120.30
1	b	28	ARG	NE-CZ-NH2	-13.33	113.64	120.30
3	K	305	ARG	NE-CZ-NH2	-13.32	113.64	120.30
3	J	41	ARG	NE-CZ-NH1	-13.25	113.67	120.30
1	a	213	TYR	CB-CG-CD1	-13.21	113.08	121.00
1	f	126	TYR	CB-CG-CD1	13.15	128.89	121.00
3	J	76	ARG	NE-CZ-NH1	13.12	126.86	120.30
2	6	154	ARG	NE-CZ-NH2	-13.03	113.79	120.30
1	A	26	TYR	CB-CG-CD2	12.93	128.76	121.00
3	J	28	ARG	NE-CZ-NH1	12.92	126.76	120.30
1	c	168	ARG	NE-CZ-NH2	-12.91	113.85	120.30
2	5	178	ARG	NE-CZ-NH2	-12.88	113.86	120.30
3	K	302	ARG	NE-CZ-NH2	-12.82	113.89	120.30
3	M	367	ARG	NE-CZ-NH1	12.75	126.67	120.30
3	K	28	ARG	NE-CZ-NH2	-12.58	114.01	120.30
2	l	170	ARG	NH1-CZ-NH2	12.54	133.19	119.40
1	E	241	ARG	NE-CZ-NH2	12.51	126.55	120.30
2	4	199	TYR	CB-CG-CD2	-12.44	113.54	121.00
2	h	196	PHE	CB-CG-CD2	-12.39	112.13	120.80
3	H	205	ARG	NE-CZ-NH1	-12.31	114.15	120.30
3	M	24	ARG	NE-CZ-NH1	12.24	126.42	120.30
1	F	179	TYR	CB-CG-CD2	-12.21	113.68	121.00
3	J	154	ARG	NE-CZ-NH2	-12.19	114.20	120.30
1	G	86	ARG	NE-CZ-NH1	-12.19	114.21	120.30
2	i	148	TYR	CB-CG-CD1	12.15	128.29	121.00
3	J	278	ARG	NE-CZ-NH1	12.08	126.34	120.30
2	4	173	TYR	CB-CG-CD2	-12.06	113.76	121.00
1	f	132	PHE	CB-CG-CD2	-12.05	112.36	120.80
1	E	126	TYR	CB-CG-CD1	12.04	128.22	121.00
3	L	391	ASP	CB-CG-OD1	12.03	129.13	118.30
1	A	86	ARG	NE-CZ-NH2	-12.02	114.29	120.30
3	H	211	PHE	CB-CG-CD1	11.99	129.20	120.80
3	L	200	ARG	NE-CZ-NH1	11.99	126.30	120.30
3	L	321	PHE	CB-CG-CD2	11.98	129.19	120.80
1	F	33	ARG	NE-CZ-NH1	11.94	126.27	120.30
2	n	51	ARG	NE-CZ-NH1	-11.87	114.36	120.30
1	C	20	ARG	NE-CZ-NH1	-11.85	114.38	120.30
1	B	100	ARG	NE-CZ-NH1	11.83	126.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	4	51	ARG	NE-CZ-NH1	-11.78	114.41	120.30
3	I	326	ARG	NE-CZ-NH1	11.77	126.19	120.30
2	k	77	TYR	CB-CG-CD1	-11.75	113.95	121.00
3	H	200	ARG	NE-CZ-NH2	-11.72	114.44	120.30
2	i	81	ARG	NE-CZ-NH2	-11.66	114.47	120.30
1	G	86	ARG	NE-CZ-NH2	11.65	126.12	120.30
2	h	196	PHE	CB-CG-CD1	11.65	128.95	120.80
1	F	20	ARG	NE-CZ-NH2	-11.60	114.50	120.30
1	e	168	ARG	NE-CZ-NH1	11.59	126.09	120.30
3	H	44	TYR	CB-CG-CD2	11.59	127.95	121.00
2	m	212	ARG	NE-CZ-NH2	-11.58	114.51	120.30
2	j	103	TYR	CB-CG-CD2	11.56	127.94	121.00
1	F	104	ASP	CB-CG-OD1	-11.54	107.92	118.30
3	J	239	PHE	CB-CG-CD2	-11.52	112.74	120.80
3	J	49	ARG	NE-CZ-NH1	11.49	126.05	120.30
1	A	180	ARG	NE-CZ-NH2	11.47	126.04	120.30
1	B	119	PHE	CB-CG-CD2	-11.44	112.80	120.80
3	L	21	TYR	CB-CG-CD1	11.43	127.86	121.00
1	B	168	ARG	NE-CZ-NH2	-11.40	114.60	120.30
1	c	159	TYR	CB-CG-CD1	-11.36	114.19	121.00
1	F	91	ARG	NE-CZ-NH2	-11.36	114.62	120.30
1	b	123	TYR	CB-CG-CD1	11.32	127.79	121.00
3	L	140	TYR	CB-CG-CD2	-11.30	114.22	121.00
1	F	159	TYR	CG-CD2-CE2	-11.29	112.27	121.30
3	J	76	ARG	NE-CZ-NH2	-11.24	114.68	120.30
3	L	321	PHE	CB-CG-CD1	-11.22	112.95	120.80
1	C	179	TYR	CB-CG-CD1	11.12	127.67	121.00
1	f	148	TYR	CB-CG-CD2	-11.03	114.38	121.00
2	1	212	ARG	NE-CZ-NH1	11.02	125.81	120.30
2	l	197	TYR	CB-CG-CD1	-10.97	114.42	121.00
1	e	130	ARG	NE-CZ-NH1	10.97	125.78	120.30
2	7	102	ARG	NE-CZ-NH1	-10.95	114.82	120.30
1	b	202	SER	N-CA-CB	10.95	126.92	110.50
3	I	326	ARG	NE-CZ-NH2	-10.94	114.83	120.30
1	D	103	TYR	CB-CG-CD2	-10.93	114.44	121.00
1	f	123	TYR	CB-CG-CD1	-10.93	114.44	121.00
2	l	173	TYR	CB-CG-CD2	-10.87	114.48	121.00
2	5	102	ARG	NE-CZ-NH1	-10.87	114.86	120.30
1	d	123	TYR	CB-CG-CD1	-10.85	114.49	121.00
2	j	103	TYR	CB-CG-CD1	-10.85	114.49	121.00
2	h	51	ARG	NE-CZ-NH2	10.84	125.72	120.30
2	3	101	TYR	CB-CG-CD1	10.79	127.47	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	239	ARG	NE-CZ-NH1	10.78	125.69	120.30
2	4	102	ARG	NE-CZ-NH2	10.78	125.69	120.30
2	7	148	TYR	CB-CG-CD2	-10.74	114.55	121.00
1	e	18	ASP	CB-CG-OD1	10.74	127.96	118.30
2	h	170	ARG	NE-CZ-NH2	10.63	125.61	120.30
3	L	227	PHE	CB-CG-CD1	10.62	128.24	120.80
2	i	101	TYR	CB-CG-CD2	-10.61	114.63	121.00
2	i	81	ARG	NE-CZ-NH1	10.56	125.58	120.30
2	k	199	TYR	CB-CG-CD2	-10.55	114.67	121.00
1	d	26	TYR	CB-CG-CD2	-10.51	114.69	121.00
1	E	100	ARG	NE-CZ-NH2	10.47	125.54	120.30
1	F	179	TYR	CB-CG-CD1	10.46	127.28	121.00
2	4	104	PHE	CB-CG-CD1	-10.46	113.48	120.80
1	b	86	ARG	NE-CZ-NH1	10.46	125.53	120.30
2	i	199	TYR	CB-CG-CD2	-10.44	114.74	121.00
1	c	68	TYR	CB-CG-CD1	-10.43	114.74	121.00
3	M	44	TYR	CB-CG-CD2	-10.43	114.75	121.00
2	i	30	ARG	NE-CZ-NH1	-10.40	115.10	120.30
2	3	81	ARG	NE-CZ-NH2	-10.35	115.13	120.30
3	K	249	ARG	NE-CZ-NH2	-10.32	115.14	120.30
2	i	30	ARG	NE-CZ-NH2	10.31	125.46	120.30
2	m	103	TYR	CB-CG-CD2	10.29	127.18	121.00
2	4	104	PHE	CB-CG-CD2	10.28	128.00	120.80
1	F	119	PHE	CB-CG-CD2	10.23	127.96	120.80
2	4	68	ARG	NE-CZ-NH1	10.22	125.41	120.30
1	A	175	PHE	CB-CG-CD1	10.16	127.91	120.80
2	j	154	ARG	NE-CZ-NH2	-10.15	115.22	120.30
2	m	101	TYR	CB-CG-CD1	10.13	127.08	121.00
2	5	88	ARG	NE-CZ-NH1	-10.12	115.24	120.30
3	L	302	ARG	NE-CZ-NH2	-10.12	115.24	120.30
3	H	294	ASP	CB-CG-OD1	10.11	127.40	118.30
3	J	128	TYR	CB-CG-CD1	10.09	127.06	121.00
1	g	100	ARG	NE-CZ-NH1	-10.04	115.28	120.30
2	4	88	ARG	NE-CZ-NH2	10.04	125.32	120.30
2	7	148	TYR	CB-CG-CD1	10.04	127.02	121.00
3	I	20	TYR	CB-CG-CD1	10.03	127.02	121.00
1	G	33	ARG	NE-CZ-NH1	10.03	125.31	120.30
1	e	241	ARG	NE-CZ-NH1	-10.03	115.29	120.30
2	3	123	TYR	CB-CG-CD1	10.02	127.01	121.00
1	A	186	ASP	CB-CG-OD2	10.01	127.31	118.30
3	L	305	ARG	NE-CZ-NH2	-10.01	115.30	120.30
1	a	241	ARG	NE-CZ-NH1	10.01	125.30	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L	391	ASP	CB-CG-OD2	-10.01	109.30	118.30
1	c	213	TYR	CB-CG-CD2	-9.98	115.01	121.00
3	K	44	TYR	CB-CG-CD2	9.97	126.98	121.00
3	I	341	ARG	NE-CZ-NH1	9.96	125.28	120.30
3	H	140	TYR	CB-CG-CD2	-9.94	115.04	121.00
1	A	239	ARG	NE-CZ-NH2	-9.93	115.33	120.30
1	d	241	ARG	NE-CZ-NH2	9.92	125.26	120.30
1	C	62	ASP	CB-CG-OD2	9.90	127.21	118.30
3	L	224	ARG	NE-CZ-NH1	-9.89	115.35	120.30
1	A	159	TYR	CB-CG-CD2	-9.89	115.06	121.00
1	A	135	SER	N-CA-CB	9.87	125.30	110.50
1	D	20	ARG	NE-CZ-NH2	-9.86	115.37	120.30
2	5	81	ARG	NE-CZ-NH1	9.85	125.23	120.30
2	6	68	ARG	NE-CZ-NH2	-9.85	115.37	120.30
1	G	28	ARG	NE-CZ-NH1	-9.84	115.38	120.30
2	m	101	TYR	CB-CG-CD2	-9.84	115.09	121.00
2	6	88	ARG	NE-CZ-NH2	9.82	125.21	120.30
1	b	213	TYR	CB-CG-CD2	-9.80	115.12	121.00
2	l	81	ARG	NE-CZ-NH2	9.80	125.20	120.30
2	i	197	TYR	CB-CG-CD2	9.79	126.88	121.00
1	c	91	ARG	NE-CZ-NH2	9.78	125.19	120.30
3	K	326	ARG	NE-CZ-NH1	9.77	125.19	120.30
1	c	123	TYR	CB-CG-CD1	-9.77	115.14	121.00
1	A	180	ARG	NE-CZ-NH1	-9.75	115.42	120.30
1	f	68	TYR	CB-CG-CD2	9.72	126.83	121.00
1	e	179	TYR	CB-CG-CD2	-9.71	115.17	121.00
1	e	22	PHE	CB-CG-CD1	-9.71	114.01	120.80
3	H	27	TYR	CB-CG-CD1	-9.70	115.18	121.00
3	L	361	PHE	CB-CG-CD1	-9.68	114.03	120.80
1	A	26	TYR	CB-CG-CD1	-9.67	115.20	121.00
1	C	10	ARG	NE-CZ-NH1	9.67	125.13	120.30
1	a	26	TYR	CB-CG-CD1	9.66	126.80	121.00
3	H	326	ARG	NE-CZ-NH2	9.63	125.12	120.30
3	H	20	TYR	CB-CG-CD2	-9.62	115.23	121.00
1	G	20	ARG	NE-CZ-NH1	9.61	125.11	120.30
1	g	159	TYR	CG-CD1-CE1	-9.58	113.64	121.30
3	L	302	ARG	NE-CZ-NH1	9.57	125.09	120.30
3	H	20	TYR	CB-CG-CD1	9.54	126.73	121.00
1	a	148	TYR	CB-CG-CD2	-9.54	115.28	121.00
3	I	105	ARG	NE-CZ-NH2	-9.54	115.53	120.30
1	B	123	TYR	CB-CG-CD2	-9.52	115.29	121.00
1	E	26	TYR	CB-CG-CD2	9.51	126.71	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	h	65	PHE	CB-CG-CD2	9.51	127.45	120.80
2	h	80	ARG	NE-CZ-NH1	-9.49	115.55	120.30
2	l	101	TYR	CB-CG-CD2	9.49	126.69	121.00
2	7	178	ARG	NE-CZ-NH1	9.49	125.04	120.30
3	M	364	ARG	NE-CZ-NH1	9.47	125.04	120.30
1	f	159	TYR	CB-CG-CD1	-9.46	115.33	121.00
3	I	154	ARG	NE-CZ-NH2	9.45	125.03	120.30
1	f	68	TYR	CB-CG-CD1	-9.45	115.33	121.00
2	5	88	ARG	NE-CZ-NH2	9.43	125.02	120.30
3	I	397	PHE	CB-CG-CD1	9.42	127.39	120.80
2	6	88	ARG	NE-CZ-NH1	-9.41	115.59	120.30
3	M	259	ARG	NE-CZ-NH2	-9.40	115.60	120.30
1	e	148	TYR	CB-CG-CD2	9.40	126.64	121.00
2	1	83	ARG	NE-CZ-NH2	9.38	124.99	120.30
2	4	199	TYR	CB-CG-CD1	9.36	126.62	121.00
1	e	148	TYR	CB-CG-CD1	-9.36	115.39	121.00
1	F	8	TYR	CB-CG-CD2	-9.35	115.39	121.00
2	3	154	ARG	NE-CZ-NH2	-9.34	115.63	120.30
1	g	103	TYR	CB-CG-CD2	9.34	126.61	121.00
3	L	314	PHE	CB-CG-CD1	9.34	127.33	120.80
2	m	80	ARG	NE-CZ-NH1	-9.33	115.64	120.30
3	I	203	PHE	CB-CG-CD2	9.33	127.33	120.80
2	1	123	TYR	CB-CG-CD2	-9.32	115.41	121.00
1	g	168	ARG	NE-CZ-NH1	9.31	124.96	120.30
1	G	123	TYR	CB-CG-CD1	9.31	126.59	121.00
3	J	361	PHE	CB-CG-CD2	-9.29	114.30	120.80
1	f	91	ARG	NE-CZ-NH2	9.29	124.94	120.30
1	e	22	PHE	CB-CG-CD2	9.28	127.29	120.80
1	A	175	PHE	CB-CG-CD2	-9.27	114.31	120.80
3	M	147	ASP	CB-CG-OD2	-9.26	109.97	118.30
1	f	51	ASP	CB-CG-OD1	-9.25	109.98	118.30
2	5	46	TYR	CZ-CE2-CD2	9.23	128.11	119.80
1	F	219	ARG	NE-CZ-NH2	-9.23	115.68	120.30
1	f	53	ARG	NE-CZ-NH1	-9.21	115.69	120.30
1	f	239	ARG	NE-CZ-NH2	-9.20	115.70	120.30
1	g	174	PHE	CB-CG-CD1	9.20	127.24	120.80
2	7	123	TYR	CB-CG-CD2	-9.20	115.48	121.00
2	k	196	PHE	CB-CG-CD1	-9.20	114.36	120.80
3	H	321	PHE	CB-CG-CD2	-9.18	114.37	120.80
2	j	104	PHE	CB-CG-CD2	-9.18	114.38	120.80
3	J	239	PHE	CB-CG-CD1	9.16	127.21	120.80
3	M	224	ARG	NE-CZ-NH1	-9.15	115.73	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	a	20	ARG	NE-CZ-NH2	9.15	124.87	120.30
1	F	185	PHE	CB-CG-CD2	-9.14	114.40	120.80
1	A	186	ASP	CB-CG-OD1	-9.14	110.08	118.30
3	M	305	ARG	NE-CZ-NH2	-9.14	115.73	120.30
2	1	81	ARG	NE-CZ-NH1	9.11	124.86	120.30
1	c	130	ARG	NE-CZ-NH1	9.11	124.86	120.30
1	E	218	ASP	CB-CG-OD1	-9.10	110.11	118.30
1	a	132	PHE	CB-CG-CD1	9.10	127.17	120.80
2	7	104	PHE	CB-CG-CD2	-9.09	114.44	120.80
2	l	197	TYR	CB-CG-CD2	9.08	126.45	121.00
2	7	170	ARG	NE-CZ-NH1	-9.08	115.76	120.30
1	G	221	PHE	CB-CG-CD2	-9.08	114.44	120.80
1	D	239	ARG	NE-CZ-NH2	-9.06	115.77	120.30
1	G	6	MET	CG-SD-CE	-9.06	85.71	100.20
3	I	364	ARG	NE-CZ-NH2	-9.05	115.77	120.30
2	2	199	TYR	CB-CG-CD2	-9.04	115.57	121.00
1	C	18	ASP	CB-CG-OD2	-9.04	110.17	118.30
3	I	29	ARG	NE-CZ-NH1	9.04	124.82	120.30
1	a	93	ARG	NE-CZ-NH1	9.00	124.80	120.30
1	f	219	ARG	NE-CZ-NH1	8.99	124.80	120.30
2	2	51	ARG	NE-CZ-NH1	-8.99	115.81	120.30
2	i	101	TYR	CB-CG-CD1	8.97	126.38	121.00
2	m	106	TYR	CB-CG-CD2	8.95	126.37	121.00
1	d	174	PHE	CB-CG-CD2	8.95	127.06	120.80
2	j	197	TYR	CB-CG-CD2	-8.94	115.63	121.00
1	c	126	TYR	CB-CG-CD2	-8.93	115.64	121.00
1	d	123	TYR	CB-CG-CD2	8.92	126.35	121.00
1	C	126	TYR	CB-CG-CD2	8.92	126.35	121.00
1	E	53	ARG	NE-CZ-NH2	-8.92	115.84	120.30
1	c	213	TYR	CB-CG-CD1	8.91	126.35	121.00
3	J	27	TYR	CB-CG-CD1	-8.90	115.66	121.00
3	M	49	ARG	NE-CZ-NH1	8.84	124.72	120.30
2	6	170	ARG	NE-CZ-NH2	8.83	124.71	120.30
1	D	189	MET	CG-SD-CE	-8.81	86.10	100.20
3	M	375	PHE	CB-CG-CD1	8.81	126.97	120.80
1	B	148	TYR	CB-CG-CD2	-8.79	115.73	121.00
3	I	76	ARG	NE-CZ-NH1	8.79	124.69	120.30
1	F	119	PHE	CB-CG-CD1	-8.77	114.66	120.80
1	b	132	PHE	CB-CG-CD2	-8.76	114.67	120.80
3	H	27	TYR	CB-CG-CD2	8.76	126.25	121.00
3	K	367	ARG	NE-CZ-NH2	-8.75	115.93	120.30
1	D	221	PHE	CB-CG-CD1	8.70	126.89	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	J	263	ARG	NE-CZ-NH2	-8.70	115.95	120.30
3	L	28	ARG	NE-CZ-NH2	8.68	124.64	120.30
2	3	106	TYR	CB-CG-CD2	-8.68	115.79	121.00
1	C	232	TYR	CB-CG-CD2	-8.68	115.80	121.00
1	D	175	PHE	CB-CG-CD2	-8.67	114.73	120.80
1	e	86	ARG	NE-CZ-NH2	8.66	124.63	120.30
2	6	211	PHE	CB-CG-CD1	-8.65	114.74	120.80
3	M	302	ARG	NE-CZ-NH2	-8.64	115.98	120.30
3	M	49	ARG	NE-CZ-NH2	-8.63	115.98	120.30
1	b	33	ARG	NE-CZ-NH2	-8.63	115.98	120.30
3	L	244	ASP	CB-CG-OD2	-8.63	110.53	118.30
2	h	194	ASP	N-CA-CB	8.63	126.13	110.60
1	G	51	ASP	CB-CG-OD1	-8.62	110.54	118.30
1	E	181	ASP	CB-CG-OD1	-8.61	110.55	118.30
2	5	170	ARG	NH1-CZ-NH2	8.61	128.87	119.40
1	g	235	ARG	NE-CZ-NH2	8.60	124.60	120.30
3	M	147	ASP	CB-CG-OD1	8.60	126.04	118.30
1	c	126	TYR	CG-CD1-CE1	-8.59	114.43	121.30
3	I	43	ARG	NE-CZ-NH2	-8.56	116.02	120.30
3	H	221	ARG	NE-CZ-NH1	8.56	124.58	120.30
1	G	93	ARG	NE-CZ-NH1	-8.53	116.03	120.30
1	D	148	TYR	CB-CG-CD1	8.53	126.12	121.00
2	4	68	ARG	NE-CZ-NH2	-8.52	116.04	120.30
2	k	68	ARG	NE-CZ-NH2	-8.51	116.05	120.30
1	e	232	TYR	CB-CG-CD1	8.51	126.10	121.00
2	k	199	TYR	CB-CG-CD1	8.51	126.10	121.00
2	7	30	ARG	NE-CZ-NH1	-8.50	116.05	120.30
2	h	179	ASP	CB-CG-OD1	8.50	125.95	118.30
2	n	178	ARG	NE-CZ-NH1	-8.49	116.06	120.30
1	D	103	TYR	CB-CG-CD1	8.48	126.09	121.00
2	m	27	THR	CA-CB-CG2	-8.47	100.55	112.40
3	M	44	TYR	CB-CG-CD1	8.46	126.08	121.00
1	C	86	ARG	NE-CZ-NH2	-8.46	116.07	120.30
2	5	31	ALA	N-CA-CB	8.43	121.91	110.10
1	c	219	ARG	NE-CZ-NH2	8.43	124.51	120.30
1	a	148	TYR	CB-CG-CD1	8.42	126.05	121.00
1	f	26	TYR	CB-CG-CD2	-8.42	115.95	121.00
3	J	94	TYR	CG-CD2-CE2	-8.41	114.57	121.30
3	M	224	ARG	NE-CZ-NH2	8.41	124.50	120.30
2	5	46	TYR	CB-CG-CD2	-8.40	115.96	121.00
1	e	26	TYR	CB-CG-CD2	-8.40	115.96	121.00
2	j	199	TYR	CG-CD2-CE2	-8.39	114.58	121.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	d	53	ARG	NE-CZ-NH1	-8.39	116.10	120.30
1	e	232	TYR	CB-CG-CD2	-8.39	115.97	121.00
1	g	232	TYR	CG-CD1-CE1	8.39	128.01	121.30
1	e	18	ASP	CB-CG-OD2	-8.38	110.75	118.30
1	F	159	TYR	CZ-CE2-CD2	8.38	127.34	119.80
2	1	68	ARG	NE-CZ-NH2	8.35	124.48	120.30
1	F	159	TYR	CB-CG-CD2	-8.34	116.00	121.00
2	k	123	TYR	CB-CG-CD1	-8.34	116.00	121.00
2	5	81	ARG	NE-CZ-NH2	-8.34	116.13	120.30
2	2	173	TYR	CB-CG-CD2	-8.33	116.00	121.00
1	b	175	PHE	CB-CG-CD2	-8.32	114.97	120.80
1	G	10	ARG	NE-CZ-NH1	-8.31	116.14	120.30
3	M	371	THR	CA-CB-CG2	-8.29	100.79	112.40
3	K	331	ALA	N-CA-CB	8.29	121.70	110.10
1	e	10	ARG	NE-CZ-NH1	-8.28	116.16	120.30
2	3	50	ASP	CB-CG-OD1	-8.28	110.85	118.30
1	g	123	TYR	CZ-CE2-CD2	8.28	127.25	119.80
2	4	110	LEU	CB-CG-CD2	8.28	125.07	111.00
3	H	364	ARG	NE-CZ-NH2	-8.27	116.17	120.30
1	b	175	PHE	CB-CG-CD1	8.26	126.58	120.80
1	C	187	ASP	CB-CG-OD1	-8.25	110.87	118.30
1	c	179	TYR	CB-CG-CD2	-8.25	116.05	121.00
2	1	88	ARG	NE-CZ-NH1	-8.25	116.18	120.30
2	7	51	ARG	NE-CZ-NH1	-8.24	116.18	120.30
3	J	87	PHE	CB-CG-CD1	-8.24	115.03	120.80
2	2	173	TYR	CB-CG-CD1	8.23	125.94	121.00
1	d	148	TYR	CB-CG-CD2	8.23	125.94	121.00
1	E	86	ARG	NE-CZ-NH1	8.22	124.41	120.30
3	L	215	TYR	CB-CG-CD1	-8.21	116.07	121.00
1	g	179	TYR	CB-CG-CD2	8.21	125.93	121.00
1	g	239	ARG	NE-CZ-NH2	8.21	124.40	120.30
3	H	29	ARG	NE-CZ-NH1	8.20	124.40	120.30
1	A	86	ARG	NE-CZ-NH1	8.20	124.40	120.30
2	l	80	ARG	NE-CZ-NH1	-8.18	116.21	120.30
2	h	51	ARG	NE-CZ-NH1	-8.18	116.21	120.30
1	g	85	ALA	N-CA-CB	8.17	121.53	110.10
2	7	81	ARG	NE-CZ-NH2	-8.16	116.22	120.30
1	E	76	ALA	N-CA-CB	8.15	121.51	110.10
1	e	126	TYR	CB-CG-CD2	-8.14	116.12	121.00
2	3	170	ARG	NE-CZ-NH2	8.13	124.37	120.30
2	6	36	PHE	CB-CG-CD1	8.13	126.49	120.80
1	c	130	ARG	N-CA-CB	8.13	125.23	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	f	93	ARG	NE-CZ-NH2	8.13	124.36	120.30
2	n	101	TYR	CB-CG-CD1	8.13	125.88	121.00
1	e	220	THR	CA-CB-CG2	-8.12	101.03	112.40
1	f	221	PHE	CB-CG-CD1	-8.10	115.13	120.80
2	5	116	ASP	CB-CG-OD1	8.10	125.59	118.30
1	g	91	ARG	NE-CZ-NH2	8.10	124.35	120.30
1	g	33	ARG	CD-NE-CZ	-8.09	112.28	123.60
1	D	180	ARG	NE-CZ-NH1	-8.07	116.27	120.30
1	E	126	TYR	CB-CG-CD2	-8.05	116.17	121.00
1	e	142	ASP	CB-CG-OD1	-8.05	111.05	118.30
3	I	382	VAL	CG1-CB-CG2	8.05	123.78	110.90
1	F	28	ARG	NE-CZ-NH1	8.05	124.33	120.30
3	I	282	LYS	N-CA-CB	8.02	125.03	110.60
1	E	100	ARG	NE-CZ-NH1	-7.99	116.30	120.30
2	h	211	PHE	CB-CG-CD2	7.99	126.39	120.80
3	M	397	PHE	CB-CG-CD2	-7.98	115.21	120.80
2	i	196	PHE	CB-CG-CD1	-7.98	115.21	120.80
1	c	100	ARG	NE-CZ-NH2	7.97	124.28	120.30
2	h	154	ARG	NE-CZ-NH2	7.96	124.28	120.30
2	6	83	ARG	NE-CZ-NH1	7.96	124.28	120.30
2	i	196	PHE	CB-CG-CD2	7.95	126.37	120.80
3	I	24	ARG	NE-CZ-NH2	-7.92	116.34	120.30
2	l	200	SER	N-CA-CB	7.91	122.37	110.50
1	e	28	ARG	NE-CZ-NH2	-7.90	116.35	120.30
2	k	196	PHE	CB-CG-CD2	7.90	126.33	120.80
2	3	50	ASP	CB-CG-OD2	7.88	125.39	118.30
1	E	217	ASP	CB-CG-OD1	-7.87	111.22	118.30
3	J	364	ARG	NE-CZ-NH1	7.86	124.23	120.30
3	H	333	ASP	CB-CG-OD1	-7.86	111.22	118.30
1	G	168	ARG	NE-CZ-NH1	7.86	124.23	120.30
1	e	175	PHE	CB-CG-CD1	7.85	126.30	120.80
2	3	68	ARG	NE-CZ-NH2	-7.85	116.38	120.30
1	B	18	ASP	CB-CG-OD1	-7.85	111.24	118.30
1	g	26	TYR	CG-CD2-CE2	7.85	127.58	121.30
2	j	200	SER	N-CA-CB	7.84	122.26	110.50
1	B	179	TYR	CB-CG-CD1	7.84	125.70	121.00
3	L	19	ASP	CB-CG-OD1	7.83	125.35	118.30
2	1	154	ARG	NE-CZ-NH1	-7.83	116.39	120.30
2	i	123	TYR	CG-CD2-CE2	-7.81	115.05	121.30
2	l	46	TYR	CG-CD1-CE1	-7.80	115.06	121.30
3	H	275	PHE	CB-CG-CD2	7.80	126.26	120.80
2	4	184	ASP	CB-CG-OD2	7.79	125.32	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	2	103	TYR	CB-CG-CD2	-7.79	116.32	121.00
1	B	235	ARG	NE-CZ-NH2	7.79	124.20	120.30
1	E	123	TYR	CB-CG-CD2	-7.79	116.33	121.00
3	H	154	ARG	NE-CZ-NH2	-7.79	116.40	120.30
2	m	197	TYR	CB-CG-CD2	-7.78	116.33	121.00
3	J	299	ARG	NE-CZ-NH2	-7.76	116.42	120.30
2	7	80	ARG	NE-CZ-NH2	7.76	124.18	120.30
1	G	84	ASP	CB-CG-OD2	-7.76	111.32	118.30
1	E	148	TYR	CB-CG-CD1	7.75	125.65	121.00
3	L	336	PHE	CB-CG-CD1	7.75	126.22	120.80
2	m	77	TYR	CB-CG-CD2	7.74	125.64	121.00
1	g	219	ARG	NE-CZ-NH1	7.74	124.17	120.30
3	J	105	ARG	NE-CZ-NH1	7.74	124.17	120.30
3	K	57	ARG	NE-CZ-NH1	-7.73	116.44	120.30
2	m	197	TYR	CB-CG-CD1	7.73	125.64	121.00
1	D	33	ARG	NE-CZ-NH2	-7.72	116.44	120.30
2	m	46	TYR	CB-CG-CD1	-7.72	116.37	121.00
1	c	22	PHE	CB-CG-CD2	-7.72	115.40	120.80
2	k	176	MET	CG-SD-CE	-7.71	87.86	100.20
3	L	250	ARG	NE-CZ-NH1	7.71	124.15	120.30
1	d	130	ARG	NE-CZ-NH1	7.70	124.15	120.30
1	f	186	ASP	CB-CG-OD1	7.70	125.23	118.30
2	5	212	ARG	NE-CZ-NH1	7.70	124.15	120.30
3	H	239	PHE	CB-CG-CD1	-7.70	115.41	120.80
3	L	294	ASP	CB-CG-OD2	-7.69	111.38	118.30
3	J	36	PHE	CB-CG-CD1	-7.69	115.42	120.80
1	f	168	ARG	NE-CZ-NH1	7.68	124.14	120.30
2	n	80	ARG	NE-CZ-NH1	7.68	124.14	120.30
3	L	339	LEU	CB-CG-CD2	7.68	124.06	111.00
1	D	65	GLU	N-CA-CB	7.68	124.43	110.60
2	h	21	ASP	CB-CG-OD1	-7.67	111.39	118.30
3	M	397	PHE	CB-CG-CD1	7.67	126.17	120.80
2	2	123	TYR	CG-CD1-CE1	-7.67	115.17	121.30
1	C	26	TYR	CB-CG-CD1	-7.66	116.40	121.00
1	e	189	MET	CG-SD-CE	7.66	112.45	100.20
3	H	397	PHE	CB-CG-CD2	-7.66	115.44	120.80
3	L	317	ARG	NE-CZ-NH1	-7.63	116.48	120.30
2	l	103	TYR	CB-CG-CD2	-7.63	116.42	121.00
1	G	104	ASP	CB-CG-OD2	-7.63	111.44	118.30
3	L	41	ARG	NE-CZ-NH2	-7.62	116.49	120.30
2	i	197	TYR	CB-CG-CD1	-7.62	116.43	121.00
1	f	91	ARG	NE-CZ-NH1	-7.62	116.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	3	102	ARG	NE-CZ-NH1	-7.62	116.49	120.30
1	G	161	ALA	N-CA-CB	7.59	120.73	110.10
1	A	13	THR	CA-CB-CG2	-7.59	101.78	112.40
3	I	374	ASP	CB-CG-OD1	-7.58	111.47	118.30
1	f	159	TYR	CD1-CG-CD2	7.58	126.24	117.90
2	5	212	ARG	NE-CZ-NH2	-7.58	116.51	120.30
3	M	36	PHE	CB-CG-CD1	-7.58	115.50	120.80
3	I	76	ARG	NE-CZ-NH2	-7.56	116.52	120.30
2	h	101	TYR	CB-CG-CD2	7.56	125.53	121.00
1	B	174	PHE	CB-CG-CD2	7.55	126.09	120.80
3	K	364	ARG	NE-CZ-NH1	7.54	124.07	120.30
2	3	24	VAL	CA-CB-CG1	7.52	122.18	110.90
2	6	80	ARG	NE-CZ-NH1	-7.52	116.54	120.30
1	D	180	ARG	NE-CZ-NH2	7.51	124.06	120.30
1	E	22	PHE	CB-CG-CD2	-7.51	115.54	120.80
1	g	217	ASP	CB-CG-OD1	7.51	125.06	118.30
2	1	173	TYR	CB-CG-CD2	-7.51	116.50	121.00
2	i	106	TYR	CB-CG-CD2	-7.50	116.50	121.00
1	b	10	ARG	NE-CZ-NH1	-7.50	116.55	120.30
3	M	375	PHE	CB-CG-CD2	-7.50	115.55	120.80
3	J	128	TYR	CB-CG-CD2	-7.50	116.50	121.00
3	I	397	PHE	CB-CG-CD2	-7.50	115.55	120.80
3	J	263	ARG	NE-CZ-NH1	7.50	124.05	120.30
1	f	175	PHE	CB-CG-CD1	7.49	126.05	120.80
1	B	159	TYR	CB-CG-CD2	-7.49	116.50	121.00
1	G	213	TYR	CB-CG-CD1	-7.48	116.51	121.00
1	g	174	PHE	CB-CG-CD2	-7.48	115.56	120.80
3	L	333	ASP	CB-CG-OD2	7.48	125.03	118.30
2	h	101	TYR	CB-CG-CD1	-7.48	116.51	121.00
2	2	154	ARG	NE-CZ-NH2	7.47	124.03	120.30
1	a	77	ALA	N-CA-CB	7.46	120.55	110.10
2	n	77	TYR	CD1-CE1-CZ	-7.46	113.09	119.80
1	D	161	ALA	N-CA-CB	7.45	120.53	110.10
2	h	25	MET	CG-SD-CE	-7.44	88.29	100.20
1	e	108	THR	CA-CB-CG2	-7.43	102.00	112.40
3	M	128	TYR	CB-CG-CD2	-7.43	116.54	121.00
3	J	278	ARG	NE-CZ-NH2	-7.43	116.59	120.30
2	5	83	ARG	NE-CZ-NH1	-7.42	116.59	120.30
2	m	170	ARG	NE-CZ-NH2	-7.42	116.59	120.30
2	7	147	ALA	N-CA-CB	7.42	120.49	110.10
1	a	185	PHE	CB-CG-CD1	7.42	125.99	120.80
1	d	10	ARG	NE-CZ-NH1	-7.42	116.59	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	4	81	ARG	NE-CZ-NH2	-7.42	116.59	120.30
1	c	119	PHE	CB-CG-CD1	-7.41	115.61	120.80
3	H	294	ASP	CB-CG-OD2	-7.41	111.63	118.30
1	E	175	PHE	CB-CG-CD2	-7.41	115.62	120.80
3	H	221	ARG	NE-CZ-NH2	-7.39	116.60	120.30
3	H	211	PHE	CB-CG-CD2	-7.39	115.63	120.80
1	f	232	TYR	CB-CG-CD2	-7.38	116.57	121.00
1	F	232	TYR	CB-CG-CD1	-7.38	116.58	121.00
2	5	106	TYR	CB-CG-CD2	7.37	125.42	121.00
1	a	126	TYR	CB-CG-CD2	-7.37	116.58	121.00
1	G	123	TYR	CB-CG-CD2	-7.37	116.58	121.00
2	k	184	ASP	CB-CG-OD2	-7.37	111.67	118.30
2	k	101	TYR	CB-CG-CD1	-7.37	116.58	121.00
1	g	235	ARG	NE-CZ-NH1	-7.36	116.62	120.30
2	2	50	ASP	CB-CG-OD1	-7.35	111.68	118.30
3	H	28	ARG	NE-CZ-NH1	7.35	123.97	120.30
1	B	168	ARG	NE-CZ-NH1	7.35	123.97	120.30
3	J	91	THR	CA-CB-CG2	-7.35	102.12	112.40
3	M	317	ARG	NE-CZ-NH2	-7.34	116.63	120.30
2	n	200	SER	N-CA-CB	7.33	121.50	110.50
3	J	314	PHE	CB-CG-CD1	7.32	125.92	120.80
2	5	25	MET	N-CA-CB	7.32	123.77	110.60
1	b	130	ARG	NE-CZ-NH1	7.31	123.96	120.30
1	G	33	ARG	NE-CZ-NH2	-7.31	116.64	120.30
3	K	81	SER	N-CA-CB	7.29	121.44	110.50
3	M	41	ARG	NE-CZ-NH1	7.29	123.94	120.30
2	h	148	TYR	CB-CG-CD1	7.29	125.37	121.00
1	F	93	ARG	NE-CZ-NH1	7.28	123.94	120.30
2	h	30	ARG	NE-CZ-NH2	-7.28	116.66	120.30
1	F	68	TYR	CB-CG-CD1	-7.28	116.63	121.00
2	5	30	ARG	NE-CZ-NH1	-7.28	116.66	120.30
1	E	185	PHE	CB-CG-CD1	7.28	125.89	120.80
2	h	140	THR	N-CA-CB	7.27	124.12	110.30
3	I	278	ARG	NE-CZ-NH1	7.27	123.94	120.30
2	l	198	GLN	N-CA-C	-7.27	91.38	111.00
2	6	184	ASP	CB-CG-OD1	-7.26	111.76	118.30
3	I	196	ALA	CB-CA-C	-7.26	99.20	110.10
3	J	229	LEU	CB-CG-CD2	7.26	123.34	111.00
1	e	20	ARG	NE-CZ-NH2	-7.25	116.67	120.30
2	m	62	ASP	CB-CG-OD1	7.25	124.83	118.30
2	3	170	ARG	CD-NE-CZ	-7.25	113.45	123.60
1	F	114	LYS	N-CA-CB	7.24	123.64	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	h	197	TYR	CD1-CE1-CZ	7.24	126.32	119.80
1	c	168	ARG	NE-CZ-NH1	7.24	123.92	120.30
3	M	221	ARG	NE-CZ-NH2	7.22	123.91	120.30
2	7	196	PHE	CB-CG-CD2	-7.22	115.75	120.80
2	j	199	TYR	CD1-CG-CD2	7.22	125.84	117.90
2	k	36	PHE	CG-CD1-CE1	-7.21	112.86	120.80
3	K	374	ASP	CB-CG-OD1	-7.21	111.81	118.30
1	C	123	TYR	CB-CG-CD1	7.21	125.33	121.00
1	a	179	TYR	CB-CG-CD1	-7.20	116.68	121.00
1	B	91	ARG	NE-CZ-NH2	7.20	123.90	120.30
3	L	295	PRO	N-CA-CB	7.20	111.94	103.30
1	f	190	VAL	CA-CB-CG2	-7.18	100.12	110.90
1	G	91	ARG	NE-CZ-NH1	-7.18	116.71	120.30
2	k	33	MET	CG-SD-CE	7.18	111.69	100.20
1	e	239	ARG	NE-CZ-NH1	-7.17	116.71	120.30
2	h	103	TYR	CB-CG-CD1	7.17	125.30	121.00
3	H	230	ALA	N-CA-CB	7.17	120.14	110.10
1	b	100	ARG	NE-CZ-NH1	-7.17	116.72	120.30
1	C	166	MET	CG-SD-CE	-7.17	88.73	100.20
2	h	21	ASP	CB-CG-OD2	7.17	124.75	118.30
2	k	197	TYR	CB-CG-CD2	-7.17	116.70	121.00
1	F	126	TYR	CB-CG-CD1	7.17	125.30	121.00
1	G	213	TYR	CB-CG-CD2	7.15	125.29	121.00
2	1	51	ARG	NE-CZ-NH2	-7.15	116.72	120.30
2	5	153	ASP	CB-CG-OD1	7.15	124.73	118.30
1	E	28	ARG	NE-CZ-NH1	7.15	123.88	120.30
1	g	179	TYR	CB-CG-CD1	-7.15	116.71	121.00
2	k	126	ASP	CB-CG-OD1	-7.14	111.87	118.30
1	F	213	TYR	CB-CG-CD2	-7.14	116.72	121.00
2	7	80	ARG	NE-CZ-NH1	-7.13	116.73	120.30
2	6	184	ASP	CB-CG-OD2	7.13	124.71	118.30
2	l	46	TYR	CB-CG-CD1	-7.12	116.73	121.00
3	H	305	ARG	NE-CZ-NH1	7.12	123.86	120.30
3	H	397	PHE	CB-CG-CD1	7.11	125.78	120.80
1	c	186	ASP	CB-CG-OD1	7.11	124.69	118.30
1	E	15	PHE	CB-CG-CD1	-7.10	115.83	120.80
1	C	18	ASP	CB-CG-OD1	7.10	124.69	118.30
1	C	235	ARG	NE-CZ-NH1	-7.10	116.75	120.30
2	1	63	ALA	N-CA-CB	7.10	120.04	110.10
3	L	140	TYR	CB-CG-CD1	7.10	125.26	121.00
2	7	101	TYR	CB-CG-CD2	-7.09	116.74	121.00
2	h	175	ALA	CB-CA-C	-7.08	99.48	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	k	123	TYR	CB-CG-CD2	7.08	125.25	121.00
3	J	361	PHE	CB-CG-CD1	7.08	125.76	120.80
1	a	132	PHE	CB-CG-CD2	-7.07	115.85	120.80
1	C	100	ARG	NE-CZ-NH2	7.06	123.83	120.30
1	G	159	TYR	CB-CG-CD2	7.06	125.23	121.00
3	I	211	PHE	CB-CG-CD1	-7.06	115.86	120.80
2	l	208	LEU	CB-CG-CD1	7.05	122.99	111.00
3	K	314	PHE	CB-CG-CD1	-7.05	115.87	120.80
2	j	104	PHE	CB-CG-CD1	7.05	125.73	120.80
2	6	49	ALA	CB-CA-C	7.04	120.67	110.10
3	J	82	SER	N-CA-CB	7.04	121.05	110.50
2	1	83	ARG	NE-CZ-NH1	-7.03	116.78	120.30
1	B	93	ARG	NE-CZ-NH1	7.03	123.81	120.30
3	I	211	PHE	CB-CG-CD2	7.02	125.72	120.80
3	J	303	PHE	CB-CG-CD2	-7.02	115.88	120.80
1	F	126	TYR	CZ-CE2-CD2	-7.02	113.48	119.80
3	M	154	ARG	NE-CZ-NH1	-7.02	116.79	120.30
1	B	104	ASP	N-CA-CB	7.01	123.23	110.60
2	i	102	ARG	NE-CZ-NH1	-7.01	116.79	120.30
1	b	213	TYR	CB-CG-CD1	7.01	125.21	121.00
3	I	289	ARG	NE-CZ-NH2	-7.01	116.79	120.30
3	K	167	PHE	CB-CG-CD2	-7.00	115.90	120.80
3	L	128	TYR	CB-CG-CD2	7.00	125.20	121.00
1	e	187	ASP	CB-CG-OD2	7.00	124.60	118.30
3	K	289	ARG	NH1-CZ-NH2	6.98	127.08	119.40
1	f	179	TYR	CB-CG-CD1	-6.98	116.81	121.00
2	6	139	ALA	C-N-CA	6.98	139.15	121.70
1	C	62	ASP	CB-CG-OD1	-6.96	112.04	118.30
3	H	335	ASP	CB-CG-OD2	6.95	124.56	118.30
3	L	347	SER	N-CA-CB	6.95	120.93	110.50
1	A	147	LEU	CB-CG-CD1	6.94	122.80	111.00
2	k	106	TYR	CB-CG-CD1	-6.94	116.83	121.00
2	2	116	ASP	CB-CG-OD1	-6.94	112.06	118.30
2	j	46	TYR	CB-CG-CD1	-6.94	116.84	121.00
1	e	142	ASP	CB-CG-OD2	6.93	124.54	118.30
3	H	277	PRO	CA-N-CD	6.93	121.41	111.70
2	5	196	PHE	CB-CG-CD1	-6.92	115.95	120.80
1	A	239	ARG	NE-CZ-NH1	6.92	123.76	120.30
2	i	102	ARG	NE-CZ-NH2	6.92	123.76	120.30
2	1	178	ARG	NE-CZ-NH1	-6.91	116.84	120.30
1	C	50	ALA	CB-CA-C	6.91	120.47	110.10
1	D	148	TYR	CB-CG-CD2	-6.91	116.86	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	10	ARG	NE-CZ-NH1	6.89	123.75	120.30
2	h	179	ASP	CB-CG-OD2	-6.89	112.10	118.30
3	H	361	PHE	CB-CG-CD1	-6.89	115.97	120.80
2	i	139	ALA	N-CA-CB	6.89	119.75	110.10
3	L	104	ALA	N-CA-CB	6.89	119.75	110.10
3	I	317	ARG	NE-CZ-NH2	6.88	123.74	120.30
2	m	51	ARG	NE-CZ-NH1	-6.88	116.86	120.30
2	i	194	ASP	CB-CG-OD2	-6.88	112.11	118.30
2	h	88	ARG	NE-CZ-NH1	6.88	123.74	120.30
1	d	179	TYR	CB-CG-CD2	-6.88	116.88	121.00
1	d	148	TYR	CB-CG-CD1	-6.87	116.88	121.00
2	m	60	VAL	CA-CB-CG1	6.87	121.20	110.90
1	e	91	ARG	NE-CZ-NH2	6.87	123.73	120.30
2	4	140	THR	N-CA-CB	6.86	123.34	110.30
2	4	156	THR	N-CA-C	-6.86	92.47	111.00
2	j	199	TYR	CB-CG-CD2	-6.86	116.89	121.00
2	4	211	PHE	CB-CG-CD1	6.86	125.60	120.80
1	A	68	TYR	CB-CG-CD2	-6.85	116.89	121.00
2	4	23	VAL	CG1-CB-CG2	-6.85	99.94	110.90
2	j	50	ASP	CB-CG-OD1	-6.84	112.14	118.30
1	C	31	VAL	CA-CB-CG2	-6.84	100.64	110.90
2	j	199	TYR	CB-CG-CD1	-6.84	116.90	121.00
1	F	219	ARG	NE-CZ-NH1	6.83	123.72	120.30
1	a	100	ARG	NE-CZ-NH1	-6.83	116.88	120.30
3	M	273	ASP	CB-CA-C	-6.83	96.75	110.40
3	L	205	ARG	NE-CZ-NH2	-6.82	116.89	120.30
1	D	30	ALA	N-CA-CB	6.81	119.64	110.10
3	H	278	ARG	NE-CZ-NH1	6.81	123.70	120.30
1	c	185	PHE	CB-CG-CD1	-6.81	116.04	120.80
1	C	26	TYR	CB-CG-CD2	6.80	125.08	121.00
2	j	46	TYR	CB-CG-CD2	6.80	125.08	121.00
3	I	317	ARG	NE-CZ-NH1	-6.80	116.90	120.30
2	j	51	ARG	NE-CZ-NH1	-6.79	116.90	120.30
1	a	136	LEU	CB-CG-CD2	6.79	122.54	111.00
2	i	103	TYR	CD1-CE1-CZ	6.79	125.91	119.80
1	G	179	TYR	CD1-CE1-CZ	-6.79	113.69	119.80
2	k	83	ARG	NE-CZ-NH2	6.79	123.69	120.30
1	E	134	VAL	CA-CB-CG2	6.78	121.07	110.90
2	5	46	TYR	CG-CD2-CE2	-6.78	115.88	121.30
1	A	53	ARG	NE-CZ-NH2	-6.77	116.92	120.30
1	b	199	SER	N-CA-CB	6.76	120.64	110.50
2	k	103	TYR	CB-CG-CD2	-6.76	116.94	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L	250	ARG	NE-CZ-NH2	-6.76	116.92	120.30
3	I	291	ASP	CB-CG-OD1	-6.75	112.22	118.30
1	e	28	ARG	NE-CZ-NH1	6.75	123.68	120.30
2	1	196	PHE	CB-CG-CD2	6.75	125.53	120.80
3	I	341	ARG	NE-CZ-NH2	-6.75	116.92	120.30
1	C	159	TYR	CD1-CE1-CZ	-6.75	113.72	119.80
1	d	10	ARG	NE-CZ-NH2	6.75	123.67	120.30
1	g	241	ARG	NE-CZ-NH2	6.74	123.67	120.30
2	3	178	ARG	NE-CZ-NH1	-6.73	116.94	120.30
1	d	26	TYR	CB-CG-CD1	6.72	125.03	121.00
1	C	33	ARG	NE-CZ-NH1	-6.71	116.94	120.30
2	7	196	PHE	N-CA-C	-6.71	92.88	111.00
2	k	212	ARG	NE-CZ-NH1	6.71	123.65	120.30
1	B	241	ARG	NE-CZ-NH1	6.70	123.65	120.30
3	I	259	ARG	NE-CZ-NH2	6.70	123.65	120.30
2	k	77	TYR	CB-CG-CD2	6.70	125.02	121.00
1	A	168	ARG	NE-CZ-NH1	-6.69	116.95	120.30
2	i	104	PHE	N-CA-CB	6.69	122.64	110.60
2	2	155	PHE	CB-CG-CD2	-6.69	116.12	120.80
3	J	24	ARG	NE-CZ-NH2	-6.68	116.96	120.30
3	J	11	GLU	OE1-CD-OE2	6.68	131.31	123.30
2	5	189	VAL	CG1-CB-CG2	6.68	121.58	110.90
3	I	94	TYR	CB-CG-CD2	-6.68	116.99	121.00
1	E	135	SER	N-CA-CB	-6.66	100.51	110.50
1	F	161	ALA	N-CA-CB	6.66	119.42	110.10
1	f	148	TYR	CB-CG-CD1	6.66	125.00	121.00
3	L	43	ARG	NE-CZ-NH2	-6.66	116.97	120.30
2	6	74	ALA	N-CA-CB	6.65	119.41	110.10
1	b	20	ARG	NE-CZ-NH1	-6.64	116.98	120.30
1	c	166	MET	CG-SD-CE	-6.64	89.57	100.20
1	G	186	ASP	CB-CG-OD2	-6.64	112.32	118.30
3	M	94	TYR	CB-CG-CD2	-6.64	117.01	121.00
1	B	26	TYR	CB-CG-CD2	6.64	124.98	121.00
2	n	196	PHE	CB-CG-CD2	6.64	125.45	120.80
1	E	179	TYR	CB-CG-CD2	6.64	124.98	121.00
2	n	211	PHE	CB-CG-CD2	-6.64	116.16	120.80
3	L	281	VAL	O-C-N	-6.63	112.08	122.70
2	i	36	PHE	CG-CD1-CE1	-6.63	113.51	120.80
2	k	103	TYR	CG-CD2-CE2	-6.63	116.00	121.30
1	G	214	VAL	CA-CB-CG2	-6.62	100.97	110.90
3	J	134	GLU	CB-CA-C	-6.62	97.16	110.40
3	L	59	ARG	NE-CZ-NH1	-6.62	116.99	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	M	105	ARG	NE-CZ-NH2	6.61	123.61	120.30
2	5	155	PHE	CB-CG-CD1	-6.60	116.18	120.80
1	B	196	MET	CG-SD-CE	6.59	110.75	100.20
2	7	179	ASP	CB-CG-OD2	-6.59	112.37	118.30
1	c	126	TYR	CB-CG-CD1	6.59	124.95	121.00
1	B	33	ARG	NE-CZ-NH2	6.59	123.59	120.30
3	K	140	TYR	CB-CG-CD2	-6.58	117.05	121.00
1	g	103	TYR	CB-CG-CD1	-6.58	117.06	121.00
3	H	364	ARG	NH1-CZ-NH2	6.57	126.63	119.40
3	I	66	GLY	N-CA-C	-6.57	96.67	113.10
3	L	314	PHE	CB-CG-CD2	-6.56	116.21	120.80
2	h	77	TYR	CB-CG-CD1	-6.56	117.06	121.00
3	I	224	ARG	NE-CZ-NH1	6.56	123.58	120.30
3	M	105	ARG	NE-CZ-NH1	-6.56	117.02	120.30
2	j	102	ARG	NE-CZ-NH2	6.55	123.58	120.30
2	m	46	TYR	CB-CG-CD2	6.55	124.93	121.00
3	J	303	PHE	CB-CG-CD1	6.55	125.38	120.80
2	5	106	TYR	CB-CG-CD1	-6.54	117.08	121.00
3	J	27	TYR	CB-CG-CD2	6.54	124.92	121.00
2	h	156	THR	CA-CB-CG2	-6.53	103.25	112.40
2	3	187	ASP	CB-CG-OD2	-6.53	112.42	118.30
2	6	131	ALA	N-CA-CB	6.53	119.25	110.10
1	e	129	VAL	N-CA-C	-6.53	93.37	111.00
2	7	199	TYR	CB-CG-CD1	6.53	124.92	121.00
2	3	51	ARG	NE-CZ-NH1	-6.53	117.04	120.30
3	L	32	ASP	CB-CG-OD2	6.52	124.17	118.30
2	m	14	THR	CA-CB-CG2	-6.52	103.28	112.40
2	i	77	TYR	CB-CG-CD1	6.51	124.91	121.00
2	l	156	THR	CA-CB-CG2	-6.51	103.28	112.40
3	M	57	ARG	NE-CZ-NH1	-6.51	117.04	120.30
2	1	153	ASP	CB-CG-OD2	6.51	124.16	118.30
1	B	92	ALA	CB-CA-C	-6.51	100.33	110.10
2	3	103	TYR	CB-CG-CD1	-6.50	117.10	121.00
1	d	49	ILE	CB-CA-C	6.50	124.60	111.60
2	5	102	ARG	NE-CZ-NH2	6.50	123.55	120.30
1	a	219	ARG	NE-CZ-NH1	6.50	123.55	120.30
1	a	221	PHE	CB-CG-CD2	-6.49	116.26	120.80
1	D	13	THR	CA-CB-CG2	-6.49	103.31	112.40
1	a	93	ARG	NH1-CZ-NH2	-6.49	112.27	119.40
2	1	88	ARG	NE-CZ-NH2	6.49	123.54	120.30
3	K	46	ARG	NE-CZ-NH1	6.49	123.54	120.30
2	4	194	ASP	CB-CG-OD1	-6.48	112.47	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	126	TYR	CG-CD1-CE1	6.48	126.48	121.30
1	B	239	ARG	NE-CZ-NH2	-6.48	117.06	120.30
2	n	31	ALA	O-C-N	6.47	133.06	122.70
2	7	36	PHE	CG-CD2-CE2	-6.47	113.68	120.80
1	D	159	TYR	CB-CG-CD2	-6.46	117.12	121.00
2	k	212	ARG	NE-CZ-NH2	-6.46	117.07	120.30
3	J	317	ARG	NE-CZ-NH1	6.46	123.53	120.30
1	a	20	ARG	NE-CZ-NH1	-6.45	117.07	120.30
1	g	182	ASP	CB-CG-OD1	-6.45	112.49	118.30
2	3	83	ARG	NE-CZ-NH1	-6.45	117.07	120.30
1	A	10	ARG	NE-CZ-NH2	-6.44	117.08	120.30
2	n	101	TYR	CB-CG-CD2	-6.44	117.14	121.00
2	3	102	ARG	NE-CZ-NH2	6.44	123.52	120.30
2	i	104	PHE	CB-CG-CD2	-6.43	116.30	120.80
2	j	101	TYR	CB-CG-CD1	-6.43	117.14	121.00
3	J	341	ARG	NE-CZ-NH2	-6.43	117.08	120.30
3	M	27	TYR	CZ-CE2-CD2	6.43	125.58	119.80
1	B	130	ARG	NE-CZ-NH2	6.42	123.51	120.30
1	G	232	TYR	CB-CG-CD1	-6.42	117.15	121.00
2	m	85	PRO	N-CD-CG	6.42	112.83	103.20
1	e	59	LEU	CB-CG-CD1	6.41	121.90	111.00
3	H	364	ARG	NE-CZ-NH1	-6.41	117.09	120.30
1	E	130	ARG	NH1-CZ-NH2	-6.41	112.35	119.40
1	b	141	VAL	N-CA-C	-6.41	93.70	111.00
1	f	159	TYR	CG-CD2-CE2	-6.40	116.18	121.30
2	h	95	SER	N-CA-CB	6.40	120.10	110.50
2	5	77	TYR	CZ-CE2-CD2	-6.40	114.04	119.80
1	f	104	ASP	CB-CG-OD2	-6.39	112.55	118.30
1	a	114	LYS	CA-CB-CG	6.39	127.46	113.40
2	j	148	TYR	CB-CG-CD2	6.39	124.83	121.00
3	M	130	PHE	CB-CG-CD1	-6.38	116.33	120.80
1	c	68	TYR	CB-CG-CD2	6.38	124.83	121.00
3	L	244	ASP	CB-CG-OD1	6.38	124.04	118.30
1	D	62	ASP	CB-CG-OD2	6.37	124.04	118.30
1	d	179	TYR	CG-CD2-CE2	-6.37	116.20	121.30
2	l	25	MET	CG-SD-CE	-6.37	90.01	100.20
2	m	106	TYR	CB-CG-CD1	-6.37	117.18	121.00
1	c	103	TYR	CG-CD1-CE1	-6.36	116.21	121.30
2	h	148	TYR	CB-CG-CD2	-6.36	117.18	121.00
3	J	340	ALA	N-CA-CB	6.36	119.00	110.10
3	J	266	MET	CG-SD-CE	-6.36	90.03	100.20
2	3	51	ARG	NE-CZ-NH2	6.35	123.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	101	LEU	CB-CG-CD2	-6.35	100.21	111.00
1	B	68	TYR	CB-CG-CD1	-6.35	117.19	121.00
3	J	43	ARG	NE-CZ-NH1	6.35	123.47	120.30
1	e	115	LYS	O-C-N	-6.34	112.55	122.70
2	h	154	ARG	NE-CZ-NH1	-6.34	117.13	120.30
1	c	118	ASP	CB-CG-OD1	-6.34	112.60	118.30
2	h	40	LYS	CB-CA-C	-6.34	97.73	110.40
3	M	124	ASP	CB-CG-OD2	6.33	124.00	118.30
3	M	280	ASP	CB-CG-OD2	-6.33	112.60	118.30
2	n	94	THR	CA-CB-CG2	-6.33	103.54	112.40
1	d	181	ASP	CB-CG-OD1	-6.33	112.61	118.30
1	E	159	TYR	CB-CG-CD2	-6.33	117.20	121.00
1	d	93	ARG	NE-CZ-NH1	6.32	123.46	120.30
1	g	22	PHE	CB-CG-CD1	-6.32	116.38	120.80
1	E	213	TYR	CB-CG-CD2	-6.32	117.21	121.00
1	B	221	PHE	CB-CG-CD2	6.32	125.22	120.80
1	e	78	THR	CA-CB-CG2	-6.32	103.56	112.40
1	g	68	TYR	CB-CG-CD2	6.32	124.79	121.00
2	m	194	ASP	CB-CG-OD1	-6.32	112.61	118.30
3	I	221	ARG	NE-CZ-NH2	6.32	123.46	120.30
2	l	36	PHE	CB-CG-CD1	-6.31	116.39	120.80
3	J	28	ARG	NE-CZ-NH2	-6.31	117.15	120.30
3	L	105	ARG	NH1-CZ-NH2	6.30	126.33	119.40
2	6	148	TYR	CB-CG-CD1	6.30	124.78	121.00
2	l	174	SER	CB-CA-C	-6.30	98.13	110.10
3	H	198	GLN	CB-CA-C	-6.30	97.80	110.40
1	a	235	ARG	CD-NE-CZ	-6.30	114.78	123.60
1	E	57	LYS	N-CA-CB	6.30	121.93	110.60
3	J	215	TYR	N-CA-CB	6.30	121.94	110.60
1	E	22	PHE	CB-CG-CD1	6.29	125.21	120.80
2	j	131	ALA	N-CA-CB	6.29	118.91	110.10
2	k	31	ALA	O-C-N	6.29	132.76	122.70
2	i	80	ARG	NE-CZ-NH2	6.29	123.44	120.30
1	C	168	ARG	CG-CD-NE	-6.28	98.61	111.80
3	M	391	ASP	CB-CG-OD1	-6.28	112.65	118.30
2	5	17	LEU	CB-CG-CD1	-6.27	100.33	111.00
2	i	106	TYR	CB-CG-CD1	6.27	124.76	121.00
1	A	213	TYR	CG-CD2-CE2	-6.27	116.29	121.30
3	K	147	ASP	CB-CG-OD1	6.26	123.94	118.30
1	E	91	ARG	NE-CZ-NH1	6.26	123.43	120.30
1	G	132	PHE	CB-CG-CD2	-6.25	116.42	120.80
2	n	212	ARG	NE-CZ-NH1	6.25	123.42	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	123	TYR	CG-CD1-CE1	-6.25	116.30	121.30
3	L	200	ARG	NE-CZ-NH2	-6.25	117.17	120.30
1	E	90	ASP	N-CA-CB	6.25	121.84	110.60
2	2	170	ARG	CD-NE-CZ	-6.25	114.86	123.60
2	5	137	ILE	N-CA-C	-6.25	94.14	111.00
1	A	30	ALA	N-CA-CB	6.24	118.83	110.10
1	a	16	SER	N-CA-CB	6.23	119.85	110.50
1	G	219	ARG	N-CA-CB	6.23	121.82	110.60
3	K	303	PHE	N-CA-CB	6.23	121.82	110.60
2	1	211	PHE	CB-CG-CD2	6.23	125.16	120.80
3	K	20	TYR	CB-CG-CD2	6.23	124.74	121.00
1	B	123	TYR	CB-CG-CD1	6.23	124.74	121.00
1	E	28	ARG	N-CA-CB	6.22	121.81	110.60
3	H	201	ALA	CB-CA-C	-6.22	100.76	110.10
2	1	106	TYR	CB-CG-CD2	-6.22	117.27	121.00
2	i	88	ARG	CB-CA-C	-6.22	97.95	110.40
3	J	370	VAL	CA-CB-CG2	-6.22	101.57	110.90
3	M	20	TYR	CB-CG-CD2	-6.22	117.27	121.00
2	4	27	THR	CA-CB-CG2	-6.22	103.69	112.40
1	c	221	PHE	CB-CG-CD2	-6.22	116.45	120.80
1	C	148	TYR	CB-CG-CD1	-6.21	117.27	121.00
1	d	241	ARG	NH1-CZ-NH2	-6.21	112.56	119.40
3	H	362	ALA	N-CA-CB	6.21	118.80	110.10
1	c	123	TYR	CG-CD1-CE1	6.21	126.27	121.30
2	2	139	ALA	N-CA-CB	6.21	118.79	110.10
3	K	116	VAL	CA-CB-CG1	-6.21	101.59	110.90
3	M	244	ASP	CB-CG-OD2	6.20	123.88	118.30
2	6	123	TYR	CB-CG-CD1	-6.20	117.28	121.00
1	C	119	PHE	CB-CG-CD1	6.20	125.14	120.80
3	K	336	PHE	CB-CG-CD2	6.20	125.14	120.80
2	j	81	ARG	NE-CZ-NH2	-6.19	117.20	120.30
2	k	36	PHE	CB-CG-CD2	-6.19	116.47	120.80
1	a	84	ASP	CB-CG-OD2	6.19	123.87	118.30
1	G	121	GLN	CG-CD-OE1	-6.19	109.22	121.60
2	2	169	VAL	CA-CB-CG1	6.19	120.18	110.90
2	3	103	TYR	CB-CG-CD2	6.19	124.71	121.00
3	L	215	TYR	CB-CG-CD2	6.19	124.71	121.00
1	B	119	PHE	CB-CG-CD1	6.18	125.13	120.80
3	J	364	ARG	NE-CZ-NH2	-6.18	117.21	120.30
3	L	78	VAL	CA-CB-CG2	-6.18	101.63	110.90
3	J	70	ASP	CB-CG-OD1	-6.18	112.74	118.30
3	K	29	ARG	NE-CZ-NH2	-6.17	117.21	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	M	275	PHE	CB-CG-CD1	-6.17	116.48	120.80
1	B	91	ARG	NE-CZ-NH1	-6.17	117.22	120.30
1	E	176	GLU	OE1-CD-OE2	6.17	130.70	123.30
3	K	335	ASP	CB-CG-OD2	-6.17	112.75	118.30
1	d	218	ASP	CB-CG-OD2	-6.16	112.76	118.30
1	E	123	TYR	CG-CD1-CE1	-6.16	116.37	121.30
2	2	154	ARG	NE-CZ-NH1	-6.16	117.22	120.30
2	6	14	THR	CA-CB-CG2	-6.16	103.78	112.40
1	b	219	ARG	NE-CZ-NH2	-6.16	117.22	120.30
3	H	368	ALA	CB-CA-C	-6.15	100.87	110.10
1	E	8	TYR	CB-CG-CD1	6.15	124.69	121.00
1	e	53	ARG	NE-CZ-NH2	6.15	123.38	120.30
2	i	36	PHE	CB-CG-CD1	-6.14	116.50	120.80
2	j	170	ARG	NE-CZ-NH2	6.14	123.37	120.30
3	K	112	THR	CA-CB-CG2	-6.14	103.80	112.40
1	C	142	ASP	CB-CG-OD1	6.14	123.83	118.30
3	J	282	LYS	N-CA-CB	6.14	121.65	110.60
3	M	273	ASP	N-CA-CB	6.14	121.65	110.60
1	f	208	ASN	N-CA-CB	6.14	121.65	110.60
2	n	23	VAL	N-CA-C	-6.13	94.44	111.00
2	n	155	PHE	CZ-CE2-CD2	-6.13	112.74	120.10
2	5	134	GLU	N-CA-CB	6.13	121.64	110.60
1	B	175	PHE	CB-CG-CD1	6.13	125.09	120.80
2	3	42	ALA	N-CA-CB	6.13	118.68	110.10
3	H	74	ASP	CB-CG-OD1	-6.13	112.78	118.30
3	M	302	ARG	NH1-CZ-NH2	6.12	126.13	119.40
1	F	213	TYR	CG-CD1-CE1	-6.12	116.41	121.30
1	g	62	ASP	N-CA-CB	6.12	121.61	110.60
3	L	283	VAL	C-N-CA	6.12	137.00	121.70
1	c	207	GLU	N-CA-CB	6.12	121.61	110.60
3	J	39	SER	N-CA-CB	6.11	119.67	110.50
1	E	123	TYR	CD1-CE1-CZ	6.11	125.30	119.80
3	I	375	PHE	CB-CG-CD1	-6.11	116.53	120.80
2	2	182	SER	N-CA-CB	6.10	119.65	110.50
2	6	148	TYR	N-CA-CB	6.10	121.58	110.60
3	I	28	ARG	NE-CZ-NH1	6.09	123.35	120.30
1	b	155	ALA	N-CA-CB	6.09	118.63	110.10
2	h	173	TYR	CB-CG-CD2	-6.09	117.35	121.00
1	F	135	SER	N-CA-CB	6.08	119.62	110.50
2	i	133	GLU	OE1-CD-OE2	6.08	130.60	123.30
2	i	122	ILE	CB-CA-C	6.07	123.75	111.60
3	I	128	TYR	N-CA-CB	6.07	121.53	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	K	24	ARG	NE-CZ-NH1	6.07	123.34	120.30
2	k	36	PHE	CD1-CE1-CZ	6.07	127.38	120.10
2	6	212	ARG	NE-CZ-NH2	-6.07	117.26	120.30
1	a	28	ARG	N-CA-CB	6.07	121.52	110.60
1	A	183	LEU	N-CA-CB	6.07	122.53	110.40
1	c	22	PHE	CB-CG-CD1	6.07	125.05	120.80
2	5	46	TYR	CD1-CE1-CZ	6.07	125.26	119.80
2	5	14	THR	CA-CB-CG2	-6.06	103.91	112.40
3	I	162	LEU	CB-CG-CD1	-6.06	100.70	111.00
2	3	55	THR	N-CA-CB	6.06	121.81	110.30
2	j	103	TYR	CG-CD1-CE1	-6.06	116.45	121.30
2	3	153	ASP	CB-CG-OD2	6.05	123.75	118.30
2	k	126	ASP	CB-CG-OD2	6.05	123.75	118.30
1	d	91	ARG	NE-CZ-NH2	6.05	123.33	120.30
1	d	220	THR	N-CA-C	-6.05	94.67	111.00
2	n	189	VAL	CA-CB-CG2	-6.05	101.83	110.90
1	d	103	TYR	CB-CG-CD1	6.05	124.63	121.00
3	I	305	ARG	NE-CZ-NH2	6.04	123.32	120.30
3	J	241	ASP	CB-CG-OD1	6.04	123.74	118.30
1	b	33	ARG	NH1-CZ-NH2	6.04	126.04	119.40
2	5	140	THR	N-CA-CB	6.04	121.77	110.30
3	I	212	VAL	CG1-CB-CG2	6.04	120.56	110.90
2	7	199	TYR	CB-CG-CD2	-6.03	117.38	121.00
3	K	317	ARG	NE-CZ-NH1	6.03	123.31	120.30
3	J	126	MET	CG-SD-CE	-6.03	90.56	100.20
1	G	93	ARG	NH1-CZ-NH2	6.03	126.03	119.40
1	B	207	GLU	OE1-CD-OE2	6.02	130.53	123.30
1	e	15	PHE	CB-CG-CD2	6.02	125.02	120.80
2	h	136	ASP	C-N-CA	6.02	136.76	121.70
1	e	130	ARG	NH1-CZ-NH2	-6.02	112.78	119.40
2	7	62	ASP	CB-CG-OD2	6.02	123.72	118.30
2	4	173	TYR	CG-CD1-CE1	-6.02	116.49	121.30
1	c	22	PHE	N-CA-CB	6.01	121.43	110.60
1	c	239	ARG	NE-CZ-NH1	-6.01	117.29	120.30
2	2	148	TYR	CB-CG-CD1	-6.01	117.39	121.00
3	M	24	ARG	NE-CZ-NH2	-6.01	117.29	120.30
1	G	186	ASP	O-C-N	6.01	132.31	122.70
1	E	48	LEU	CB-CG-CD2	-6.01	100.79	111.00
2	7	154	ARG	NE-CZ-NH2	-6.00	117.30	120.30
3	K	154	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	c	26	TYR	CB-CG-CD2	6.00	124.60	121.00
1	E	26	TYR	CG-CD2-CE2	-6.00	116.50	121.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	b	142	ASP	CB-CG-OD2	6.00	123.70	118.30
3	K	326	ARG	NE-CZ-NH2	-6.00	117.30	120.30
3	M	124	ASP	CB-CG-OD1	-6.00	112.90	118.30
1	a	91	ARG	NE-CZ-NH2	5.99	123.30	120.30
1	G	93	ARG	NE-CZ-NH2	-5.99	117.30	120.30
3	I	205	ARG	NE-CZ-NH2	5.99	123.29	120.30
2	l	80	ARG	NE-CZ-NH2	5.98	123.29	120.30
1	g	132	PHE	CB-CG-CD2	-5.98	116.61	120.80
1	B	179	TYR	CD1-CG-CD2	5.98	124.48	117.90
1	E	155	ALA	N-CA-CB	5.98	118.47	110.10
2	2	204	VAL	CA-CB-CG2	-5.98	101.93	110.90
1	A	182	ASP	CB-CG-OD1	5.97	123.67	118.30
1	g	213	TYR	CB-CG-CD1	-5.97	117.42	121.00
2	2	88	ARG	NE-CZ-NH1	-5.96	117.32	120.30
1	G	232	TYR	CG-CD1-CE1	-5.96	116.53	121.30
1	G	219	ARG	NE-CZ-NH1	5.95	123.28	120.30
2	n	62	ASP	CB-CG-OD1	-5.95	112.95	118.30
3	M	130	PHE	CB-CG-CD2	5.95	124.96	120.80
1	G	232	TYR	CD1-CE1-CZ	5.94	125.15	119.80
2	1	104	PHE	CB-CG-CD2	-5.94	116.64	120.80
1	C	180	ARG	NE-CZ-NH2	-5.93	117.33	120.30
1	D	241	ARG	NE-CZ-NH1	5.93	123.27	120.30
3	L	367	ARG	NE-CZ-NH1	5.93	123.27	120.30
1	e	39	GLY	N-CA-C	-5.93	98.27	113.10
1	g	68	TYR	CB-CG-CD1	-5.93	117.44	121.00
2	m	18	VAL	CA-CB-CG2	-5.92	102.02	110.90
3	L	397	PHE	CB-CG-CD1	-5.92	116.66	120.80
1	F	28	ARG	NE-CZ-NH2	-5.92	117.34	120.30
1	E	179	TYR	CG-CD1-CE1	5.92	126.03	121.30
2	k	178	ARG	NE-CZ-NH1	5.92	123.26	120.30
3	J	205	ARG	NE-CZ-NH1	5.91	123.26	120.30
1	d	59	LEU	CB-CG-CD2	5.91	121.05	111.00
2	5	165	VAL	CA-CB-CG1	-5.91	102.04	110.90
2	n	83	ARG	NE-CZ-NH2	5.91	123.25	120.30
2	i	44	LYS	N-CA-CB	5.91	121.23	110.60
1	G	181	ASP	CB-CA-C	-5.90	98.60	110.40
1	b	189	MET	CG-SD-CE	-5.90	90.76	100.20
2	5	116	ASP	CB-CG-OD2	-5.90	112.99	118.30
3	I	331	ALA	N-CA-CB	5.90	118.36	110.10
3	M	94	TYR	CB-CG-CD1	5.90	124.54	121.00
1	D	62	ASP	CB-CG-OD1	-5.90	112.99	118.30
2	h	104	PHE	CB-CG-CD1	-5.90	116.67	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	161	ALA	CB-CA-C	-5.89	101.26	110.10
3	J	49	ARG	NH1-CZ-NH2	-5.89	112.92	119.40
1	d	161	ALA	N-CA-CB	5.89	118.35	110.10
1	E	220	THR	CA-CB-CG2	5.89	120.64	112.40
2	1	173	TYR	CB-CG-CD1	5.89	124.53	121.00
3	M	20	TYR	CB-CG-CD1	5.88	124.53	121.00
1	D	9	ASP	CB-CG-OD2	5.88	123.59	118.30
1	A	15	PHE	CB-CG-CD1	-5.88	116.68	120.80
1	a	168	ARG	NE-CZ-NH1	5.88	123.24	120.30
2	l	83	ARG	N-CA-CB	5.88	121.19	110.60
3	J	90	ASN	CB-CG-OD1	-5.88	109.84	121.60
2	n	154	ARG	NE-CZ-NH1	-5.88	117.36	120.30
3	H	49	ARG	NE-CZ-NH2	-5.87	117.36	120.30
2	n	173	TYR	CB-CG-CD1	5.87	124.52	121.00
3	L	397	PHE	CB-CG-CD2	5.87	124.91	120.80
2	n	111	LEU	N-CA-C	-5.87	95.16	111.00
1	A	117	CYS	N-CA-CB	5.87	121.16	110.60
3	I	346	ALA	N-CA-CB	5.87	118.31	110.10
1	f	221	PHE	CB-CG-CD2	5.86	124.91	120.80
3	H	347	SER	N-CA-CB	5.86	119.30	110.50
1	d	168	ARG	NE-CZ-NH2	-5.86	117.37	120.30
1	e	239	ARG	NE-CZ-NH2	5.86	123.23	120.30
1	C	71	ASP	CB-CG-OD1	-5.86	113.03	118.30
1	G	186	ASP	CB-CG-OD1	5.86	123.57	118.30
3	J	249	ARG	NE-CZ-NH2	-5.86	117.37	120.30
1	A	11	ALA	N-CA-CB	5.86	118.30	110.10
1	F	174	PHE	CB-CG-CD1	-5.86	116.70	120.80
1	D	8	TYR	CG-CD2-CE2	5.85	125.98	121.30
3	M	27	TYR	CB-CG-CD1	-5.85	117.49	121.00
1	D	232	TYR	CB-CG-CD2	5.84	124.51	121.00
2	m	46	TYR	N-CA-C	-5.84	95.23	111.00
1	B	217	ASP	CA-CB-CG	5.84	126.25	113.40
3	I	300	PRO	N-CA-CB	5.84	110.31	103.30
3	L	48	VAL	CA-CB-CG1	5.83	119.65	110.90
2	4	184	ASP	CB-CG-OD1	-5.83	113.05	118.30
1	g	217	ASP	CB-CG-OD2	-5.83	113.05	118.30
3	J	360	MET	CG-SD-CE	-5.83	90.88	100.20
1	g	101	LEU	CB-CG-CD2	-5.83	101.09	111.00
2	j	114	GLY	CA-C-O	5.83	131.09	120.60
1	d	28	ARG	NE-CZ-NH1	-5.83	117.39	120.30
2	6	169	VAL	CA-CB-CG1	-5.83	102.16	110.90
2	6	65	PHE	CB-CG-CD1	5.82	124.88	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	M	50	ARG	NE-CZ-NH1	5.82	123.21	120.30
1	g	100	ARG	NE-CZ-NH2	5.82	123.21	120.30
1	c	130	ARG	NE-CZ-NH2	-5.82	117.39	120.30
1	a	62	ASP	CB-CG-OD1	5.81	123.53	118.30
3	L	358	ALA	CB-CA-C	-5.81	101.38	110.10
2	3	140	THR	N-CA-CB	5.81	121.34	110.30
1	e	56	SER	N-CA-CB	5.81	119.21	110.50
3	K	247	ALA	N-CA-CB	5.81	118.23	110.10
1	g	204	LEU	CB-CG-CD2	5.81	120.87	111.00
1	f	221	PHE	N-CA-CB	5.80	121.05	110.60
2	4	178	ARG	NE-CZ-NH1	5.80	123.20	120.30
3	M	52	ARG	NE-CZ-NH2	5.80	123.20	120.30
3	L	201	ALA	N-CA-CB	5.80	118.22	110.10
1	d	147	LEU	N-CA-C	-5.80	95.34	111.00
2	5	178	ARG	NE-CZ-NH1	5.80	123.20	120.30
2	h	116	ASP	CB-CG-OD1	-5.79	113.08	118.30
2	3	46	TYR	CA-CB-CG	-5.79	102.39	113.40
2	3	36	PHE	CG-CD1-CE1	-5.79	114.43	120.80
3	I	87	PHE	CB-CG-CD1	5.79	124.85	120.80
1	c	89	ILE	O-C-N	-5.79	113.44	122.70
1	E	232	TYR	CB-CG-CD1	-5.78	117.53	121.00
1	e	221	PHE	CG-CD1-CE1	-5.78	114.44	120.80
1	F	185	PHE	O-C-N	5.78	131.96	122.70
1	G	174	PHE	CB-CG-CD1	-5.78	116.75	120.80
2	1	150	VAL	CG1-CB-CG2	-5.78	101.65	110.90
3	M	120	PRO	C-N-CA	5.78	136.15	121.70
1	c	216	VAL	CA-CB-CG1	5.78	119.56	110.90
2	5	81	ARG	CD-NE-CZ	-5.78	115.51	123.60
3	M	303	PHE	CB-CG-CD1	5.78	124.84	120.80
2	1	102	ARG	NE-CZ-NH2	5.77	123.19	120.30
2	k	121	SER	N-CA-CB	5.77	119.16	110.50
3	K	28	ARG	NE-CZ-NH1	5.77	123.19	120.30
2	5	46	TYR	CG-CD1-CE1	-5.77	116.68	121.30
2	5	148	TYR	CG-CD2-CE2	-5.77	116.68	121.30
3	H	32	ASP	CB-CG-OD1	5.77	123.49	118.30
1	C	70	ILE	N-CA-C	-5.77	95.43	111.00
1	c	205	VAL	N-CA-C	-5.77	95.43	111.00
2	4	21	ASP	CB-CG-OD2	-5.77	113.11	118.30
3	K	224	ARG	NE-CZ-NH1	-5.76	117.42	120.30
2	3	192	THR	CA-CB-CG2	5.76	120.47	112.40
3	L	49	ARG	NE-CZ-NH2	-5.76	117.42	120.30
3	M	91	THR	CA-CB-CG2	-5.76	104.33	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	i	24	VAL	CA-CB-CG2	-5.75	102.27	110.90
1	f	179	TYR	CD1-CE1-CZ	5.75	124.98	119.80
3	L	21	TYR	CB-CG-CD2	-5.75	117.55	121.00
3	J	341	ARG	NE-CZ-NH1	5.75	123.17	120.30
1	C	123	TYR	CB-CG-CD2	-5.75	117.55	121.00
2	1	30	ARG	NE-CZ-NH1	-5.74	117.43	120.30
2	h	199	TYR	CB-CG-CD2	-5.74	117.55	121.00
2	3	32	THR	O-C-N	5.74	131.88	122.70
3	M	364	ARG	NH1-CZ-NH2	-5.74	113.09	119.40
2	7	104	PHE	CB-CG-CD1	5.74	124.82	120.80
3	M	222	LEU	CB-CA-C	-5.74	99.30	110.20
3	L	212	VAL	N-CA-CB	5.74	124.12	111.50
3	H	289	ARG	NE-CZ-NH2	-5.73	117.43	120.30
3	M	364	ARG	CD-NE-CZ	-5.73	115.58	123.60
1	e	146	LYS	N-CA-CB	5.73	120.91	110.60
1	A	96	ALA	CB-CA-C	-5.73	101.51	110.10
1	f	212	GLY	N-CA-C	-5.73	98.78	113.10
1	C	28	ARG	NE-CZ-NH1	-5.72	117.44	120.30
2	n	14	THR	N-CA-CB	5.71	121.16	110.30
1	C	13	THR	CA-CB-CG2	-5.71	104.40	112.40
2	6	111	LEU	CB-CA-C	-5.71	99.36	110.20
1	E	132	PHE	N-CA-CB	5.70	120.86	110.60
2	6	122	ILE	O-C-N	-5.70	113.58	122.70
2	1	106	TYR	CB-CG-CD1	5.70	124.42	121.00
1	c	105	GLU	N-CA-CB	5.70	120.85	110.60
1	G	84	ASP	CB-CG-OD1	5.70	123.42	118.30
2	k	108	VAL	CG1-CB-CG2	5.70	120.01	110.90
3	K	147	ASP	CB-CG-OD2	-5.70	113.17	118.30
2	m	136	ASP	CB-CG-OD2	5.69	123.42	118.30
1	D	93	ARG	NE-CZ-NH1	5.69	123.14	120.30
1	a	111	GLU	OE1-CD-OE2	5.69	130.12	123.30
3	I	29	ARG	NE-CZ-NH2	-5.69	117.46	120.30
1	E	150	THR	N-CA-CB	5.68	121.10	110.30
2	4	153	ASP	CB-CG-OD2	5.68	123.42	118.30
2	m	102	ARG	NE-CZ-NH2	5.68	123.14	120.30
1	b	171	VAL	CA-CB-CG2	-5.68	102.38	110.90
1	G	206	PRO	N-CA-CB	5.68	110.12	103.30
2	1	103	TYR	CB-CG-CD1	5.68	124.41	121.00
3	M	303	PHE	N-CA-C	-5.68	95.66	111.00
1	g	201	GLU	N-CA-CB	5.68	120.83	110.60
3	I	224	ARG	NE-CZ-NH2	-5.68	117.46	120.30
1	C	241	ARG	NE-CZ-NH2	5.68	123.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	I	20	TYR	CB-CG-CD2	-5.67	117.59	121.00
1	D	10	ARG	NE-CZ-NH1	-5.67	117.47	120.30
2	5	155	PHE	CB-CG-CD2	5.67	124.77	120.80
1	a	26	TYR	CG-CD1-CE1	5.67	125.83	121.30
1	G	33	ARG	CG-CD-NE	-5.67	99.89	111.80
1	f	241	ARG	NE-CZ-NH2	5.67	123.13	120.30
2	m	32	THR	N-CA-CB	5.67	121.06	110.30
2	i	156	THR	CA-CB-CG2	-5.67	104.47	112.40
2	k	102	ARG	N-CA-CB	5.66	120.80	110.60
1	D	64	ILE	C-N-CA	5.66	135.85	121.70
1	B	76	ALA	N-CA-CB	5.66	118.03	110.10
2	3	123	TYR	O-C-N	-5.66	113.65	122.70
2	m	21	ASP	CB-CG-OD2	5.66	123.39	118.30
1	g	159	TYR	CD1-CG-CD2	5.66	124.12	117.90
3	H	333	ASP	CB-CG-OD2	5.66	123.39	118.30
3	M	334	VAL	CA-CB-CG1	5.66	119.39	110.90
1	b	232	TYR	CB-CG-CD1	5.66	124.39	121.00
1	d	53	ARG	NE-CZ-NH2	5.66	123.13	120.30
3	I	335	ASP	CB-CG-OD2	5.66	123.39	118.30
1	E	93	ARG	NH1-CZ-NH2	5.65	125.62	119.40
2	i	212	ARG	N-CA-CB	5.65	120.78	110.60
1	b	26	TYR	CG-CD1-CE1	5.65	125.82	121.30
2	n	60	VAL	CG1-CB-CG2	5.65	119.94	110.90
3	M	13	LEU	CB-CG-CD2	5.65	120.61	111.00
1	F	68	TYR	CB-CG-CD2	5.65	124.39	121.00
2	n	155	PHE	CB-CG-CD2	5.65	124.75	120.80
2	i	185	GLY	N-CA-C	-5.65	98.98	113.10
3	L	288	ASN	CA-CB-CG	-5.65	100.98	113.40
1	C	162	THR	CA-CB-CG2	5.64	120.30	112.40
2	3	162	ASP	CB-CG-OD1	-5.64	113.22	118.30
1	A	30	ALA	CB-CA-C	-5.64	101.64	110.10
2	m	103	TYR	CB-CG-CD1	-5.64	117.62	121.00
1	B	134	VAL	CA-CB-CG2	-5.64	102.44	110.90
1	D	132	PHE	CB-CG-CD1	-5.64	116.85	120.80
2	5	21	ASP	CB-CA-C	5.64	121.67	110.40
1	a	86	ARG	NE-CZ-NH1	5.64	123.12	120.30
3	I	41	ARG	CG-CD-NE	-5.64	99.96	111.80
1	G	144	VAL	N-CA-C	-5.63	95.78	111.00
2	1	46	TYR	CB-CG-CD2	5.63	124.38	121.00
2	4	140	THR	CA-CB-CG2	-5.63	104.52	112.40
1	C	15	PHE	CB-CG-CD1	-5.63	116.86	120.80
2	n	196	PHE	CB-CG-CD1	-5.63	116.86	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	e	90	ASP	N-CA-CB	5.62	120.72	110.60
2	l	65	PHE	CB-CG-CD1	5.62	124.74	120.80
1	C	126	TYR	CB-CG-CD1	-5.62	117.63	121.00
2	6	57	ALA	N-CA-CB	5.62	117.97	110.10
1	d	182	ASP	CB-CG-OD2	5.62	123.36	118.30
3	L	282	LYS	N-CA-CB	5.62	120.71	110.60
3	J	105	ARG	NE-CZ-NH2	-5.62	117.49	120.30
3	J	154	ARG	NE-CZ-NH1	5.62	123.11	120.30
2	l	77	TYR	CD1-CE1-CZ	5.62	124.85	119.80
1	F	103	TYR	CG-CD2-CE2	5.61	125.79	121.30
1	B	221	PHE	CB-CG-CD1	-5.61	116.87	120.80
2	j	18	VAL	CA-CB-CG1	5.61	119.32	110.90
1	d	182	ASP	CB-CG-OD1	-5.61	113.25	118.30
2	j	179	ASP	CB-CG-OD1	5.61	123.35	118.30
3	J	281	VAL	C-N-CA	5.61	135.71	121.70
3	I	140	TYR	CB-CG-CD1	-5.60	117.64	121.00
2	h	146	THR	CA-CB-OG1	5.60	120.76	109.00
3	J	215	TYR	CB-CG-CD1	-5.60	117.64	121.00
2	i	148	TYR	CG-CD2-CE2	5.60	125.78	121.30
1	D	187	ASP	CB-CG-OD1	5.60	123.34	118.30
2	k	209	ALA	N-CA-CB	5.60	117.93	110.10
1	b	113	ALA	N-CA-CB	5.59	117.93	110.10
3	K	270	ALA	N-CA-CB	5.59	117.93	110.10
2	n	45	ILE	CA-CB-CG1	5.59	121.62	111.00
3	H	77	VAL	CA-CB-CG2	-5.59	102.51	110.90
2	2	51	ARG	CA-C-O	5.59	131.84	120.10
1	B	85	ALA	N-CA-CB	5.59	117.92	110.10
3	K	283	VAL	CG1-CB-CG2	-5.59	101.96	110.90
3	M	74	ASP	CB-CG-OD1	5.59	123.33	118.30
3	K	44	TYR	CB-CG-CD1	-5.59	117.65	121.00
2	2	197	TYR	CG-CD2-CE2	-5.58	116.83	121.30
2	6	194	ASP	CB-CG-OD2	-5.58	113.28	118.30
1	F	166	MET	CG-SD-CE	-5.58	91.28	100.20
2	1	33	MET	N-CA-CB	5.58	120.64	110.60
2	6	53	ALA	CB-CA-C	-5.58	101.74	110.10
3	M	259	ARG	N-CA-CB	5.57	120.63	110.60
1	A	67	ILE	N-CA-CB	5.57	123.61	110.80
3	J	124	ASP	CB-CG-OD1	-5.57	113.29	118.30
1	a	96	ALA	N-CA-CB	-5.57	102.30	110.10
1	F	213	TYR	N-CA-CB	5.57	120.62	110.60
1	f	159	TYR	CB-CG-CD2	-5.57	117.66	121.00
1	D	81	LEU	CB-CG-CD1	-5.57	101.54	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	1	51	ARG	NE-CZ-NH1	5.57	123.08	120.30
2	1	197	TYR	CB-CG-CD2	-5.57	117.66	121.00
3	L	392	LEU	N-CA-C	-5.57	95.97	111.00
1	F	63	THR	C-N-CA	5.56	135.61	121.70
2	5	148	TYR	CB-CG-CD2	-5.56	117.67	121.00
2	6	138	VAL	CG1-CB-CG2	5.56	119.79	110.90
3	H	369	LYS	N-CA-C	-5.56	95.99	111.00
1	A	65	GLU	CA-C-N	5.55	129.42	117.20
1	d	213	TYR	CG-CD2-CE2	5.55	125.74	121.30
2	5	51	ARG	NH1-CZ-NH2	-5.55	113.29	119.40
2	n	193	GLU	CA-C-N	-5.55	104.98	117.20
3	K	104	ALA	CB-CA-C	-5.55	101.77	110.10
1	c	56	SER	N-CA-CB	5.55	118.83	110.50
1	e	179	TYR	CB-CG-CD1	5.55	124.33	121.00
1	E	148	TYR	CB-CG-CD2	-5.55	117.67	121.00
1	e	233	VAL	CA-CB-CG2	-5.55	102.58	110.90
2	7	103	TYR	CZ-CE2-CD2	5.55	124.79	119.80
2	h	196	PHE	CD1-CE1-CZ	-5.54	113.45	120.10
3	L	394	GLY	C-N-CA	5.54	135.56	121.70
2	1	211	PHE	CB-CG-CD1	-5.54	116.92	120.80
1	b	214	VAL	N-CA-C	-5.54	96.05	111.00
2	1	46	TYR	CB-CG-CD1	-5.54	117.68	121.00
3	K	258	ASP	N-CA-CB	5.54	120.56	110.60
1	G	133	GLY	N-CA-C	-5.53	99.27	113.10
1	G	33	ARG	CD-NE-CZ	-5.53	115.86	123.60
2	h	88	ARG	NH1-CZ-NH2	-5.53	113.32	119.40
3	J	142	ASP	N-CA-C	-5.53	96.07	111.00
2	n	136	ASP	CB-CG-OD2	-5.53	113.32	118.30
1	g	241	ARG	NE-CZ-NH1	-5.53	117.54	120.30
3	M	326	ARG	NE-CZ-NH2	5.53	123.06	120.30
2	2	100	SER	N-CA-CB	5.53	118.79	110.50
3	K	91	THR	CA-CB-CG2	-5.53	104.66	112.40
3	K	259	ARG	NE-CZ-NH2	-5.53	117.54	120.30
1	A	118	ASP	CB-CG-OD1	-5.52	113.33	118.30
2	h	91	ALA	CB-CA-C	-5.52	101.81	110.10
2	7	36	PHE	CZ-CE2-CD2	5.52	126.73	120.10
2	j	140	THR	N-CA-C	-5.52	96.09	111.00
1	F	154	GLY	N-CA-C	-5.52	99.31	113.10
2	h	197	TYR	CG-CD1-CE1	-5.51	116.89	121.30
2	k	194	ASP	CB-CA-C	-5.51	99.37	110.40
1	B	20	ARG	NE-CZ-NH2	-5.51	117.54	120.30
2	1	78	GLU	O-C-N	-5.51	113.88	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	d	62	ASP	CB-CG-OD2	-5.51	113.34	118.30
2	3	107	LEU	CB-CG-CD2	5.51	120.37	111.00
2	6	104	PHE	CB-CG-CD1	5.51	124.66	120.80
2	n	46	TYR	CB-CG-CD2	-5.51	117.69	121.00
1	C	213	TYR	CG-CD1-CE1	-5.51	116.89	121.30
1	g	108	THR	CA-CB-CG2	-5.50	104.70	112.40
3	I	142	ASP	CB-CG-OD1	-5.50	113.35	118.30
1	B	103	TYR	CD1-CE1-CZ	5.50	124.75	119.80
2	1	15	VAL	CA-CB-CG1	-5.50	102.65	110.90
2	3	204	VAL	CA-CB-CG2	-5.50	102.65	110.90
2	4	108	VAL	CB-CA-C	5.50	121.85	111.40
2	5	52	MET	CG-SD-CE	-5.50	91.40	100.20
1	B	235	ARG	CD-NE-CZ	-5.50	115.91	123.60
1	A	65	GLU	N-CA-CB	5.49	120.49	110.60
1	f	184	SER	N-CA-CB	5.49	118.74	110.50
2	2	108	VAL	N-CA-C	-5.49	96.17	111.00
3	H	394	GLY	O-C-N	5.49	131.49	122.70
2	5	83	ARG	NE-CZ-NH2	5.49	123.05	120.30
1	f	187	ASP	CB-CG-OD1	-5.49	113.36	118.30
3	L	303	PHE	N-CA-C	-5.49	96.17	111.00
2	7	147	ALA	CB-CA-C	-5.49	101.87	110.10
1	E	22	PHE	CG-CD2-CE2	-5.49	114.77	120.80
2	l	173	TYR	CB-CG-CD1	5.49	124.29	121.00
1	f	51	ASP	CB-CG-OD2	5.48	123.23	118.30
1	f	105	GLU	N-CA-C	-5.48	96.20	111.00
2	i	36	PHE	CD1-CG-CD2	5.48	125.43	118.30
2	k	139	ALA	C-N-CA	5.48	135.40	121.70
1	F	232	TYR	CG-CD1-CE1	-5.48	116.92	121.30
2	2	153	ASP	CB-CG-OD1	-5.48	113.37	118.30
2	m	47	GLN	N-CA-CB	5.48	120.46	110.60
2	7	81	ARG	N-CA-CB	5.48	120.46	110.60
1	F	112	LEU	CB-CG-CD2	5.47	120.31	111.00
2	3	14	THR	CA-CB-CG2	-5.47	104.74	112.40
1	D	151	ASP	CA-CB-CG	-5.47	101.37	113.40
2	1	65	PHE	CB-CG-CD1	-5.47	116.97	120.80
3	I	390	PRO	N-CD-CG	5.47	111.40	103.20
3	J	146	LEU	N-CA-CB	5.47	121.33	110.40
2	1	184	ASP	CB-CG-OD2	-5.46	113.38	118.30
2	i	123	TYR	CB-CG-CD2	-5.46	117.72	121.00
3	L	227	PHE	CG-CD1-CE1	5.46	126.81	120.80
2	4	154	ARG	NE-CZ-NH2	5.46	123.03	120.30
2	3	36	PHE	CB-CG-CD1	-5.46	116.98	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	l	148	TYR	CB-CG-CD1	-5.46	117.73	121.00
3	M	134	GLU	CB-CG-CD	-5.46	99.47	114.20
1	D	193	LEU	CB-CG-CD1	5.45	120.27	111.00
1	d	46	VAL	CG1-CB-CG2	5.45	119.62	110.90
1	g	160	LYS	N-CA-CB	5.45	120.41	110.60
2	i	80	ARG	CB-CA-C	-5.45	99.50	110.40
3	L	241	ASP	CB-CG-OD2	-5.45	113.40	118.30
2	2	83	ARG	NE-CZ-NH1	-5.45	117.58	120.30
3	I	275	PHE	CB-CG-CD1	5.44	124.61	120.80
1	D	86	ARG	NE-CZ-NH1	5.44	123.02	120.30
3	J	77	VAL	CG1-CB-CG2	5.44	119.60	110.90
1	c	180	ARG	NE-CZ-NH1	-5.44	117.58	120.30
1	E	185	PHE	CB-CG-CD2	-5.44	116.99	120.80
1	F	130	ARG	NE-CZ-NH2	-5.44	117.58	120.30
2	2	45	ILE	N-CA-C	-5.44	96.32	111.00
1	G	235	ARG	NE-CZ-NH2	5.44	123.02	120.30
2	7	37	ILE	N-CA-C	-5.43	96.33	111.00
3	H	116	VAL	CA-CB-CG2	5.43	119.05	110.90
3	J	391	ASP	CB-CG-OD1	-5.43	113.41	118.30
1	G	46	VAL	N-CA-C	-5.43	96.33	111.00
2	i	206	GLN	CB-CA-C	5.43	121.26	110.40
2	4	30	ARG	NE-CZ-NH1	-5.43	117.58	120.30
2	1	140	THR	N-CA-C	-5.43	96.34	111.00
2	4	134	GLU	OE1-CD-OE2	-5.43	116.78	123.30
2	k	165	VAL	CA-CB-CG1	-5.43	102.76	110.90
2	l	189	VAL	N-CA-C	-5.43	96.34	111.00
2	7	28	GLU	N-CA-CB	5.43	120.37	110.60
3	L	303	PHE	N-CA-CB	5.43	120.37	110.60
2	4	45	ILE	N-CA-C	-5.43	96.35	111.00
2	4	76	LEU	CB-CG-CD1	5.43	120.23	111.00
2	k	140	THR	N-CA-CB	5.43	120.61	110.30
1	b	26	TYR	CD1-CE1-CZ	-5.42	114.92	119.80
1	a	88	LEU	CB-CG-CD1	5.42	120.22	111.00
1	c	91	ARG	NH1-CZ-NH2	-5.42	113.44	119.40
2	h	65	PHE	CB-CG-CD1	-5.42	117.00	120.80
2	5	56	THR	CA-CB-CG2	-5.42	104.81	112.40
2	6	199	TYR	CB-CG-CD2	-5.42	117.75	121.00
3	L	57	ARG	NE-CZ-NH1	5.42	123.01	120.30
1	f	42	CYS	N-CA-CB	5.42	120.35	110.60
3	L	333	ASP	C-N-CA	5.42	135.25	121.70
2	j	132	ILE	CA-CB-CG2	-5.42	100.07	110.90
1	b	145	PRO	O-C-N	5.41	131.36	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	f	28	ARG	NE-CZ-NH2	5.41	123.01	120.30
1	G	26	TYR	CD1-CE1-CZ	-5.41	114.93	119.80
3	K	199	THR	C-N-CA	5.41	135.23	121.70
1	d	200	ILE	CA-CB-CG2	-5.41	100.08	110.90
2	j	101	TYR	CB-CG-CD2	5.41	124.25	121.00
2	i	199	TYR	CB-CG-CD1	5.41	124.25	121.00
2	n	131	ALA	N-CA-CB	5.41	117.67	110.10
3	I	265	MET	CA-CB-CG	5.41	122.49	113.30
1	G	185	PHE	CB-CG-CD1	5.40	124.58	120.80
1	e	216	VAL	CB-CA-C	-5.40	101.13	111.40
2	1	184	ASP	CB-CG-OD1	5.40	123.16	118.30
3	H	296	ALA	N-CA-C	-5.40	96.42	111.00
2	m	140	THR	CA-CB-CG2	-5.40	104.84	112.40
2	n	83	ARG	NE-CZ-NH1	-5.40	117.60	120.30
2	h	199	TYR	CB-CG-CD1	5.39	124.24	121.00
2	6	154	ARG	NH1-CZ-NH2	5.39	125.33	119.40
1	b	124	THR	CA-CB-CG2	5.39	119.95	112.40
1	d	129	VAL	N-CA-C	-5.39	96.44	111.00
1	G	22	PHE	CB-CG-CD1	-5.39	117.03	120.80
1	g	123	TYR	CG-CD2-CE2	-5.39	116.99	121.30
2	i	165	VAL	CA-CB-CG1	-5.39	102.81	110.90
2	7	102	ARG	NH1-CZ-NH2	5.39	125.33	119.40
1	b	126	TYR	CB-CG-CD1	-5.38	117.77	121.00
1	F	239	ARG	NE-CZ-NH2	-5.38	117.61	120.30
2	j	103	TYR	CZ-CE2-CD2	-5.38	114.95	119.80
2	n	187	ASP	CB-CG-OD1	-5.38	113.45	118.30
3	K	101	LYS	N-CA-CB	5.38	120.28	110.60
2	i	124	SER	N-CA-C	-5.38	96.47	111.00
1	G	67	ILE	N-CA-C	-5.38	96.48	111.00
2	h	139	ALA	N-CA-C	-5.38	96.48	111.00
1	g	238	GLU	OE1-CD-OE2	5.38	129.75	123.30
1	f	210	GLU	N-CA-C	-5.37	96.49	111.00
3	M	28	ARG	NE-CZ-NH1	-5.37	117.61	120.30
1	a	46	VAL	CA-CB-CG2	5.37	118.96	110.90
1	G	242	GLU	OE1-CD-OE2	5.37	129.75	123.30
2	j	187	ASP	CB-CG-OD1	5.37	123.13	118.30
1	C	159	TYR	CG-CD1-CE1	5.37	125.59	121.30
2	1	206	GLN	O-C-N	-5.37	114.11	122.70
3	M	87	PHE	CB-CA-C	-5.37	99.67	110.40
3	J	221	ARG	NE-CZ-NH2	-5.37	117.62	120.30
1	E	10	ARG	NE-CZ-NH1	5.37	122.98	120.30
1	b	76	ALA	N-CA-CB	5.37	117.61	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L	300	PRO	N-CD-CG	5.37	111.25	103.20
3	M	50	ARG	CD-NE-CZ	-5.37	116.09	123.60
1	e	148	TYR	N-CA-CB	5.36	120.25	110.60
2	6	62	ASP	CB-CG-OD2	-5.36	113.47	118.30
1	d	150	THR	CA-CB-CG2	-5.36	104.90	112.40
2	3	197	TYR	CB-CG-CD2	-5.36	117.78	121.00
2	l	154	ARG	NE-CZ-NH2	5.36	122.98	120.30
2	n	139	ALA	C-N-CA	5.36	135.10	121.70
2	5	165	VAL	CG1-CB-CG2	5.36	119.47	110.90
1	A	148	TYR	CZ-CE2-CD2	-5.36	114.98	119.80
2	2	21	ASP	CB-CG-OD2	-5.36	113.48	118.30
2	k	46	TYR	CB-CG-CD2	-5.35	117.79	121.00
1	B	113	ALA	O-C-N	-5.35	114.14	122.70
1	B	239	ARG	NE-CZ-NH1	5.35	122.98	120.30
2	h	77	TYR	CG-CD1-CE1	-5.35	117.02	121.30
2	2	33	MET	CG-SD-CE	-5.35	91.64	100.20
3	I	146	LEU	CB-CG-CD2	-5.35	101.90	111.00
2	k	162	ASP	CB-CG-OD1	-5.35	113.48	118.30
3	H	236	SER	C-N-CA	5.35	135.07	121.70
3	H	39	SER	N-CA-CB	5.34	118.52	110.50
3	H	367	ARG	CB-CA-C	-5.34	99.71	110.40
1	B	235	ARG	NE-CZ-NH1	-5.34	117.63	120.30
3	I	254	ASP	O-C-N	-5.34	114.15	122.70
3	M	67	VAL	N-CA-CB	5.34	123.25	111.50
3	M	87	PHE	CG-CD1-CE1	5.34	126.67	120.80
1	c	93	ARG	N-CA-CB	5.33	120.20	110.60
2	2	28	GLU	N-CA-CB	5.33	120.20	110.60
1	D	187	ASP	CB-CG-OD2	-5.33	113.50	118.30
2	i	193	GLU	N-CA-CB	5.33	120.20	110.60
1	e	101	LEU	CB-CG-CD1	-5.33	101.94	111.00
1	b	47	ILE	O-C-N	-5.33	114.18	122.70
1	b	219	ARG	NE-CZ-NH1	5.33	122.96	120.30
1	c	31	VAL	CA-CB-CG1	-5.33	102.91	110.90
2	m	212	ARG	NH1-CZ-NH2	5.33	125.26	119.40
2	3	139	ALA	C-N-CA	5.32	135.01	121.70
3	H	42	ILE	O-C-N	-5.32	114.19	122.70
1	B	233	VAL	CB-CA-C	-5.32	101.29	111.40
1	D	163	ALA	CB-CA-C	-5.32	102.12	110.10
2	3	148	TYR	CB-CA-C	-5.32	99.76	110.40
1	a	119	PHE	CB-CG-CD2	-5.32	117.08	120.80
2	4	107	LEU	CB-CG-CD1	5.32	120.04	111.00
2	k	142	SER	CB-CA-C	-5.32	100.00	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	7	170	ARG	NE-CZ-NH2	5.32	122.96	120.30
1	e	93	ARG	NE-CZ-NH2	5.32	122.96	120.30
2	3	107	LEU	N-CA-C	-5.32	96.65	111.00
2	7	35	ASN	C-N-CA	5.32	134.99	121.70
3	L	326	ARG	CD-NE-CZ	-5.32	116.16	123.60
1	D	198	LEU	CB-CG-CD1	-5.31	101.97	111.00
2	5	204	VAL	CA-CB-CG1	-5.31	102.93	110.90
1	c	235	ARG	NE-CZ-NH1	-5.31	117.65	120.30
1	c	143	GLU	OE1-CD-OE2	5.31	129.67	123.30
1	g	71	ASP	N-CA-CB	5.30	120.15	110.60
3	J	276	ASP	CB-CG-OD1	5.30	123.07	118.30
1	a	103	TYR	CD1-CE1-CZ	5.30	124.57	119.80
1	b	78	THR	O-C-N	-5.30	114.22	122.70
2	1	103	TYR	CB-CG-CD2	-5.30	117.82	121.00
3	M	398	VAL	CA-C-O	-5.30	108.97	120.10
3	J	257	GLY	C-N-CA	5.30	134.96	121.70
1	F	141	VAL	CB-CA-C	-5.30	101.33	111.40
2	6	31	ALA	N-CA-CB	5.30	117.52	110.10
3	K	398	VAL	CA-C-O	-5.30	108.98	120.10
1	b	62	ASP	CB-CG-OD2	-5.29	113.53	118.30
3	K	52	ARG	CD-NE-CZ	-5.29	116.19	123.60
1	a	234	GLU	N-CA-CB	5.29	120.13	110.60
1	b	180	ARG	NE-CZ-NH2	5.29	122.95	120.30
1	b	194	VAL	CG1-CB-CG2	-5.29	102.43	110.90
1	d	76	ALA	CB-CA-C	-5.29	102.16	110.10
3	L	398	VAL	CA-C-O	-5.29	108.98	120.10
1	D	210	GLU	C-N-CA	5.29	134.93	121.70
3	K	319	GLN	CB-CA-C	-5.29	99.82	110.40
3	M	181	TYR	CB-CG-CD1	-5.29	117.83	121.00
1	c	148	TYR	N-CA-CB	5.29	120.12	110.60
1	A	66	LYS	O-C-N	-5.29	114.24	122.70
1	F	114	LYS	CB-CA-C	-5.29	99.82	110.40
1	G	112	LEU	CB-CG-CD1	5.29	119.99	111.00
2	l	30	ARG	CD-NE-CZ	5.29	131.00	123.60
3	J	398	VAL	CA-C-O	-5.29	108.99	120.10
1	C	117	CYS	N-CA-CB	5.29	120.11	110.60
1	d	39	GLY	O-C-N	5.29	131.16	122.70
3	H	398	VAL	CA-C-O	-5.29	109.00	120.10
3	M	302	ARG	NE-CZ-NH1	-5.29	117.66	120.30
1	F	61	ALA	CB-CA-C	-5.28	102.17	110.10
1	F	171	VAL	CA-CB-CG1	5.28	118.82	110.90
1	F	233	VAL	CA-CB-CG1	5.28	118.82	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	6	54	MET	N-CA-C	-5.28	96.74	111.00
3	I	334	VAL	O-C-N	5.28	131.15	122.70
2	n	30	ARG	N-CA-CB	5.28	120.11	110.60
3	H	314	PHE	CB-CG-CD1	-5.28	117.10	120.80
3	L	124	ASP	CA-C-O	-5.28	109.01	120.10
1	E	91	ARG	NH1-CZ-NH2	-5.28	113.60	119.40
2	2	123	TYR	CB-CG-CD2	5.28	124.17	121.00
1	G	103	TYR	CB-CG-CD1	5.28	124.17	121.00
2	1	169	VAL	O-C-N	-5.28	114.26	122.70
3	I	63	LEU	CB-CA-C	-5.28	100.18	110.20
3	I	398	VAL	CA-C-O	-5.28	109.02	120.10
1	a	153	SER	CB-CA-C	-5.27	100.08	110.10
1	B	12	ILE	CA-CB-CG1	5.27	121.01	111.00
1	B	23	GLN	C-N-CA	5.27	134.88	121.70
1	D	187	ASP	CB-CA-C	-5.27	99.86	110.40
1	f	228	GLU	OE1-CD-OE2	5.27	129.62	123.30
2	1	81	ARG	NE-CZ-NH2	-5.27	117.67	120.30
2	h	52	MET	N-CA-CB	5.27	120.08	110.60
2	j	66	LEU	CB-CG-CD1	-5.27	102.05	111.00
3	L	154	ARG	NE-CZ-NH2	5.27	122.93	120.30
3	M	273	ASP	C-N-CA	5.27	133.36	122.30
3	H	226	VAL	CA-CB-CG2	5.27	118.80	110.90
3	K	217	GLY	CA-C-O	-5.27	111.12	120.60
2	i	105	PRO	CA-N-CD	-5.26	104.13	111.50
1	A	10	ARG	NE-CZ-NH1	5.26	122.93	120.30
2	6	107	LEU	N-CA-C	-5.26	96.79	111.00
1	F	232	TYR	CB-CG-CD2	5.26	124.16	121.00
2	i	156	THR	N-CA-C	-5.26	96.80	111.00
2	4	154	ARG	NE-CZ-NH1	-5.26	117.67	120.30
3	L	168	ALA	CB-CA-C	-5.26	102.21	110.10
3	L	364	ARG	NE-CZ-NH2	-5.26	117.67	120.30
1	B	219	ARG	N-CA-CB	5.26	120.07	110.60
1	d	24	VAL	CA-CB-CG1	5.26	118.79	110.90
3	M	395	VAL	CA-CB-CG1	-5.26	103.02	110.90
3	J	226	VAL	CA-CB-CG1	5.26	118.78	110.90
3	J	251	THR	CA-CB-CG2	5.26	119.76	112.40
1	B	232	TYR	CZ-CE2-CD2	5.25	124.53	119.80
3	K	118	VAL	CG1-CB-CG2	-5.25	102.49	110.90
3	J	94	TYR	CD1-CG-CD2	5.25	123.68	117.90
1	b	148	TYR	N-CA-CB	5.25	120.06	110.60
1	a	212	GLY	N-CA-C	-5.25	99.97	113.10
1	D	8	TYR	CB-CG-CD1	5.25	124.15	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	2	67	ALA	CB-CA-C	-5.25	102.22	110.10
1	C	126	TYR	N-CA-CB	5.25	120.05	110.60
2	3	92	THR	OG1-CB-CG2	-5.25	97.93	110.00
3	K	128	TYR	CA-CB-CG	-5.25	103.43	113.40
1	d	33	ARG	NE-CZ-NH1	-5.25	117.68	120.30
1	g	82	VAL	CG1-CB-CG2	5.24	119.29	110.90
3	I	361	PHE	CB-CG-CD2	-5.24	117.13	120.80
3	J	94	TYR	CD1-CE1-CZ	-5.24	115.08	119.80
1	c	169	ASN	O-C-N	5.24	131.08	122.70
2	l	103	TYR	CB-CG-CD1	5.24	124.14	121.00
1	A	106	PRO	N-CA-CB	5.24	109.58	103.30
1	B	203	GLU	N-CA-CB	5.24	120.02	110.60
2	k	36	PHE	CB-CG-CD1	5.24	124.47	120.80
1	a	175	PHE	CB-CG-CD2	-5.23	117.14	120.80
1	C	8	TYR	CB-CG-CD1	5.23	124.14	121.00
1	C	105	GLU	OE1-CD-OE2	5.23	129.58	123.30
1	C	205	VAL	N-CA-C	-5.23	96.88	111.00
3	H	311	LEU	CB-CG-CD2	5.23	119.89	111.00
3	K	397	PHE	N-CA-CB	5.23	120.01	110.60
1	D	223	GLU	CB-CA-C	5.23	120.86	110.40
2	j	136	ASP	CB-CG-OD2	5.23	123.00	118.30
2	j	164	ALA	CB-CA-C	-5.23	102.26	110.10
2	n	155	PHE	CG-CD1-CE1	5.23	126.55	120.80
3	J	200	ARG	NE-CZ-NH1	5.23	122.91	120.30
3	H	70	ASP	N-CA-CB	5.22	120.00	110.60
3	L	374	ASP	CB-CG-OD1	5.22	123.00	118.30
1	D	86	ARG	CD-NE-CZ	-5.22	116.29	123.60
1	e	196	MET	CG-SD-CE	-5.22	91.84	100.20
2	2	191	ILE	N-CA-C	-5.22	96.90	111.00
3	J	305	ARG	NE-CZ-NH2	-5.22	117.69	120.30
1	B	53	ARG	NE-CZ-NH2	-5.22	117.69	120.30
2	4	212	ARG	NE-CZ-NH1	5.22	122.91	120.30
3	J	142	ASP	CB-CG-OD1	-5.22	113.61	118.30
2	4	173	TYR	CB-CG-CD1	5.21	124.13	121.00
3	H	28	ARG	CD-NE-CZ	-5.21	116.30	123.60
2	h	155	PHE	CB-CG-CD1	-5.21	117.15	120.80
3	L	154	ARG	CA-CB-CG	5.21	124.86	113.40
3	M	353	ALA	CB-CA-C	-5.21	102.29	110.10
1	D	185	PHE	CB-CG-CD2	-5.21	117.16	120.80
3	L	173	GLU	CA-CB-CG	5.21	124.85	113.40
2	1	163	GLU	OE1-CD-OE2	5.20	129.54	123.30
1	B	158	GLU	CA-CB-CG	5.20	124.84	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	71	ASP	CB-CG-OD1	-5.20	113.62	118.30
2	3	123	TYR	CB-CG-CD2	-5.20	117.88	121.00
3	I	126	MET	CG-SD-CE	-5.20	91.88	100.20
1	e	241	ARG	NE-CZ-NH2	5.20	122.90	120.30
3	H	275	PHE	CB-CG-CD1	-5.20	117.16	120.80
3	K	195	VAL	CA-CB-CG2	-5.20	103.11	110.90
1	B	148	TYR	CB-CG-CD1	5.19	124.12	121.00
2	i	148	TYR	CB-CG-CD2	-5.19	117.88	121.00
3	H	130	PHE	CB-CG-CD2	-5.19	117.17	120.80
3	K	292	ILE	N-CA-C	-5.19	96.98	111.00
3	J	366	GLU	N-CA-CB	5.19	119.95	110.60
1	A	218	ASP	CB-CG-OD1	-5.19	113.63	118.30
1	a	10	ARG	NE-CZ-NH1	-5.19	117.70	120.30
1	C	130	ARG	NE-CZ-NH1	5.19	122.89	120.30
1	E	148	TYR	CG-CD2-CE2	-5.19	117.15	121.30
1	f	219	ARG	CD-NE-CZ	-5.19	116.34	123.60
3	H	128	TYR	CG-CD1-CE1	-5.19	117.15	121.30
2	m	201	PRO	O-C-N	5.18	130.99	122.70
2	7	176	MET	CA-CB-CG	5.18	122.11	113.30
3	H	350	ASP	CB-CG-OD1	5.18	122.96	118.30
2	n	41	ALA	CB-CA-C	-5.18	102.33	110.10
2	6	138	VAL	CA-CB-CG1	-5.18	103.14	110.90
3	M	50	ARG	NE-CZ-NH2	-5.18	117.71	120.30
1	a	234	GLU	OE1-CD-OE2	5.17	129.51	123.30
1	e	83	ALA	N-CA-CB	-5.17	102.86	110.10
1	C	46	VAL	N-CA-C	-5.17	97.03	111.00
1	C	53	ARG	NE-CZ-NH2	-5.17	117.71	120.30
1	G	145	PRO	N-CA-CB	5.17	109.50	103.30
3	M	312	PRO	N-CD-CG	5.17	110.95	103.20
1	E	10	ARG	NE-CZ-NH2	-5.17	117.72	120.30
2	l	142	SER	CB-CA-C	-5.17	100.28	110.10
2	6	168	ALA	CB-CA-C	-5.17	102.35	110.10
2	7	39	SER	N-CA-CB	5.17	118.25	110.50
3	K	397	PHE	CB-CG-CD2	5.17	124.42	120.80
1	b	35	ALA	C-N-CA	5.16	134.61	121.70
1	d	219	ARG	NE-CZ-NH1	5.16	122.88	120.30
2	3	170	ARG	NH1-CZ-NH2	-5.16	113.72	119.40
2	h	92	THR	CA-CB-CG2	-5.16	105.17	112.40
1	a	91	ARG	NE-CZ-NH1	-5.16	117.72	120.30
3	L	362	ALA	N-CA-CB	5.16	117.32	110.10
2	3	110	LEU	CB-CG-CD2	-5.16	102.23	111.00
2	5	125	ILE	CA-CB-CG2	-5.16	100.59	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	K	126	MET	CG-SD-CE	-5.16	91.95	100.20
3	L	31	GLU	OE1-CD-OE2	5.16	129.49	123.30
1	a	221	PHE	CB-CG-CD1	5.15	124.41	120.80
1	E	205	VAL	CA-C-N	5.15	131.53	117.10
1	E	181	ASP	CB-CG-OD2	5.15	122.94	118.30
2	m	212	ARG	CD-NE-CZ	5.15	130.81	123.60
3	H	231	LYS	CB-CA-C	-5.15	100.10	110.40
3	M	21	TYR	CG-CD1-CE1	-5.15	117.18	121.30
3	J	303	PHE	CB-CA-C	-5.15	100.10	110.40
2	3	112	ILE	N-CA-C	-5.15	97.10	111.00
2	5	197	TYR	CZ-CE2-CD2	5.15	124.43	119.80
3	L	360	MET	CA-CB-CG	5.15	122.05	113.30
1	c	219	ARG	N-CA-CB	5.15	119.86	110.60
2	6	173	TYR	CD1-CE1-CZ	5.15	124.43	119.80
2	l	196	PHE	CB-CG-CD1	-5.14	117.20	120.80
2	m	107	LEU	CB-CG-CD2	5.14	119.75	111.00
1	d	231	PRO	N-CA-CB	5.14	109.47	103.30
1	g	85	ALA	CB-CA-C	-5.14	102.39	110.10
2	h	88	ARG	NE-CZ-NH2	5.14	122.87	120.30
3	J	9	LEU	CB-CA-C	-5.14	100.43	110.20
1	d	168	ARG	NE-CZ-NH1	5.14	122.87	120.30
1	f	232	TYR	O-C-N	5.14	130.93	122.70
3	L	309	VAL	CA-CB-CG2	-5.14	103.19	110.90
1	g	21	LEU	CB-CG-CD1	-5.14	102.27	111.00
1	b	123	TYR	CB-CG-CD2	-5.14	117.92	121.00
1	F	223	GLU	OE1-CD-OE2	5.14	129.46	123.30
1	f	15	PHE	CG-CD2-CE2	-5.14	115.15	120.80
2	2	109	GLN	N-CA-C	-5.14	97.13	111.00
2	3	158	GLU	OE1-CD-OE2	5.14	129.46	123.30
2	4	109	GLN	CB-CA-C	-5.14	100.13	110.40
3	H	43	ARG	NE-CZ-NH2	-5.14	117.73	120.30
1	A	187	ASP	N-CA-CB	5.13	119.84	110.60
1	d	139	ALA	N-CA-CB	5.13	117.29	110.10
2	6	65	PHE	CA-CB-CG	-5.13	101.58	113.90
2	7	28	GLU	CB-CA-C	5.13	120.67	110.40
2	5	104	PHE	CB-CG-CD2	-5.13	117.21	120.80
2	7	81	ARG	NH1-CZ-NH2	5.13	125.04	119.40
1	A	56	SER	N-CA-CB	5.13	118.19	110.50
1	c	223	GLU	C-N-CA	5.13	134.52	121.70
2	2	197	TYR	CB-CG-CD1	-5.13	117.92	121.00
3	J	191	LEU	N-CA-C	5.13	124.85	111.00
1	F	126	TYR	CB-CG-CD2	-5.13	117.92	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	k	188	VAL	CA-CB-CG1	5.13	118.59	110.90
2	l	16	GLY	N-CA-C	-5.12	100.29	113.10
3	K	167	PHE	CB-CG-CD1	5.12	124.39	120.80
1	B	120	LYS	CB-CA-C	-5.12	100.15	110.40
1	e	30	ALA	N-CA-CB	5.12	117.27	110.10
3	L	32	ASP	CB-CG-OD1	-5.12	113.69	118.30
1	f	224	VAL	CA-CB-CG1	-5.12	103.22	110.90
2	3	178	ARG	CD-NE-CZ	5.12	130.77	123.60
2	7	75	ASN	CB-CA-C	-5.12	100.16	110.40
3	I	36	PHE	CD1-CG-CD2	-5.12	111.64	118.30
3	K	374	ASP	CB-CG-OD2	5.12	122.91	118.30
2	4	77	TYR	CB-CG-CD1	-5.12	117.93	121.00
1	a	133	GLY	O-C-N	5.12	130.89	122.70
1	F	142	ASP	N-CA-CB	5.12	119.81	110.60
2	3	106	TYR	CD1-CE1-CZ	-5.12	115.19	119.80
2	4	94	THR	CA-CB-CG2	-5.12	105.24	112.40
2	2	46	TYR	CB-CG-CD2	-5.12	117.93	121.00
2	7	51	ARG	O-C-N	-5.12	114.51	122.70
3	I	25	GLU	CB-CG-CD	-5.12	100.39	114.20
3	J	243	LEU	CB-CG-CD2	-5.12	102.30	111.00
2	2	49	ALA	N-CA-CB	5.11	117.26	110.10
2	2	199	TYR	N-CA-C	5.11	124.81	111.00
1	D	68	TYR	CG-CD2-CE2	-5.11	117.21	121.30
3	J	186	THR	CA-CB-CG2	-5.11	105.24	112.40
1	f	93	ARG	NE-CZ-NH1	-5.11	117.75	120.30
2	2	166	GLU	CB-CA-C	-5.11	100.18	110.40
1	e	50	ALA	N-CA-CB	5.11	117.25	110.10
2	3	201	PRO	N-CD-CG	5.11	110.86	103.20
1	E	22	PHE	CD1-CE1-CZ	-5.10	113.97	120.10
1	f	213	TYR	CB-CG-CD1	5.10	124.06	121.00
1	G	96	ALA	CB-CA-C	-5.10	102.44	110.10
1	B	68	TYR	CB-CG-CD2	5.10	124.06	121.00
3	J	94	TYR	CB-CG-CD2	-5.10	117.94	121.00
1	D	241	ARG	NE-CZ-NH2	-5.10	117.75	120.30
2	m	126	ASP	CB-CG-OD2	-5.10	113.71	118.30
1	D	71	ASP	CB-CG-OD2	5.10	122.89	118.30
3	I	304	ASP	CB-CG-OD2	5.10	122.89	118.30
1	B	189	MET	CG-SD-CE	-5.10	92.04	100.20
1	C	93	ARG	C-N-CA	5.10	134.44	121.70
1	C	214	VAL	N-CA-C	-5.10	97.23	111.00
2	4	157	PRO	C-N-CA	5.10	134.44	121.70
3	K	335	ASP	N-CA-CB	5.10	119.77	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	207	GLU	CB-CG-CD	-5.10	100.44	114.20
1	F	105	GLU	N-CA-C	-5.09	97.24	111.00
1	a	59	LEU	CB-CA-C	-5.09	100.52	110.20
2	k	60	VAL	CA-CB-CG1	-5.09	103.26	110.90
2	m	104	PHE	CB-CG-CD1	-5.09	117.24	120.80
2	7	111	LEU	CB-CG-CD1	5.09	119.66	111.00
1	b	105	GLU	CB-CA-C	-5.09	100.22	110.40
3	H	146	LEU	C-N-CA	5.09	134.42	121.70
1	E	182	ASP	CB-CG-OD1	-5.09	113.72	118.30
2	3	88	ARG	NE-CZ-NH2	5.09	122.84	120.30
1	G	134	VAL	CA-CB-CG1	5.08	118.53	110.90
2	3	197	TYR	CG-CD1-CE1	-5.08	117.23	121.30
1	A	146	LYS	N-CA-CB	5.08	119.75	110.60
1	e	86	ARG	NH1-CZ-NH2	-5.08	113.81	119.40
2	n	186	ILE	N-CA-C	-5.08	97.27	111.00
3	I	91	THR	O-C-N	5.08	130.83	122.70
3	J	215	TYR	CB-CG-CD2	5.08	124.05	121.00
2	i	99	ASN	CB-CG-OD1	-5.08	111.44	121.60
2	k	170	ARG	NE-CZ-NH2	5.08	122.84	120.30
2	m	173	TYR	CB-CG-CD2	-5.08	117.95	121.00
2	7	83	ARG	NE-CZ-NH2	-5.08	117.76	120.30
1	f	158	GLU	CB-CA-C	5.08	120.56	110.40
2	k	154	ARG	NE-CZ-NH1	-5.08	117.76	120.30
3	K	341	ARG	NE-CZ-NH1	-5.08	117.76	120.30
2	j	126	ASP	CB-CG-OD2	5.08	122.87	118.30
2	7	101	TYR	CB-CA-C	-5.08	100.25	110.40
3	H	170	VAL	O-C-N	-5.08	114.57	123.20
1	F	221	PHE	CB-CG-CD2	5.08	124.35	120.80
1	E	175	PHE	CB-CG-CD1	5.07	124.35	120.80
3	K	21	TYR	CB-CG-CD2	5.07	124.05	121.00
1	f	42	CYS	N-CA-C	-5.07	97.31	111.00
1	B	181	ASP	CA-CB-CG	-5.07	102.24	113.40
1	c	165	GLY	N-CA-C	-5.07	100.43	113.10
2	2	139	ALA	N-CA-C	-5.07	97.31	111.00
2	4	107	LEU	N-CA-C	-5.07	97.31	111.00
3	K	131	GLU	OE1-CD-OE2	5.07	129.38	123.30
3	K	302	ARG	N-CA-C	-5.07	97.32	111.00
1	d	175	PHE	CB-CG-CD2	-5.06	117.25	120.80
2	k	77	TYR	CG-CD1-CE1	-5.06	117.25	121.30
1	f	141	VAL	N-CA-C	-5.06	97.33	111.00
3	H	93	GLN	N-CA-CB	5.06	119.71	110.60
1	C	148	TYR	CA-CB-CG	-5.06	103.78	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	g	80	GLY	N-CA-C	-5.06	100.45	113.10
1	B	20	ARG	NE-CZ-NH1	5.06	122.83	120.30
1	b	68	TYR	CD1-CE1-CZ	5.06	124.35	119.80
1	g	161	ALA	N-CA-CB	5.06	117.18	110.10
2	k	137	ILE	N-CA-C	-5.06	97.34	111.00
3	I	234	ALA	CB-CA-C	-5.06	102.51	110.10
3	L	358	ALA	N-CA-CB	5.06	117.19	110.10
1	B	157	LEU	N-CA-CB	5.06	120.51	110.40
1	f	54	VAL	CA-CB-CG1	-5.05	103.32	110.90
2	m	76	LEU	C-N-CA	5.05	134.34	121.70
2	3	184	ASP	CB-CG-OD2	5.05	122.85	118.30
3	I	77	VAL	CA-CB-CG1	-5.05	103.32	110.90
3	M	349	ALA	N-CA-CB	5.05	117.17	110.10
1	C	204	LEU	CB-CG-CD1	-5.05	102.42	111.00
3	L	164	PRO	N-CD-CG	5.05	110.77	103.20
3	L	34	LYS	CB-CA-C	-5.05	100.31	110.40
3	L	50	ARG	NE-CZ-NH1	-5.05	117.78	120.30
2	k	164	ALA	O-C-N	-5.05	114.63	122.70
1	B	159	TYR	CA-CB-CG	-5.04	103.81	113.40
3	M	104	ALA	N-CA-CB	5.04	117.16	110.10
1	b	42	CYS	N-CA-CB	5.04	119.68	110.60
3	M	87	PHE	CD1-CE1-CZ	-5.04	114.05	120.10
3	M	77	VAL	N-CA-C	-5.04	97.39	111.00
1	b	100	ARG	CG-CD-NE	-5.04	101.22	111.80
1	D	146	LYS	N-CA-CB	5.04	119.67	110.60
1	E	179	TYR	CZ-CE2-CD2	5.04	124.33	119.80
1	G	212	GLY	N-CA-C	-5.04	100.50	113.10
2	2	106	TYR	CB-CG-CD1	5.04	124.02	121.00
2	j	122	ILE	N-CA-CB	5.04	122.39	110.80
3	H	282	LYS	CB-CA-C	-5.04	100.32	110.40
3	M	303	PHE	CB-CG-CD2	-5.04	117.27	120.80
1	A	212	GLY	O-C-N	-5.04	114.64	122.70
1	f	146	LYS	O-C-N	5.04	130.76	122.70
1	D	172	THR	N-CA-CB	5.04	119.87	110.30
2	1	69	ILE	CB-CA-C	-5.04	101.53	111.60
1	B	175	PHE	CB-CG-CD2	-5.03	117.28	120.80
1	c	86	ARG	N-CA-CB	5.03	119.66	110.60
1	c	100	ARG	NH1-CZ-NH2	-5.03	113.86	119.40
2	l	57	ALA	N-CA-CB	5.03	117.14	110.10
1	d	188	ALA	N-CA-CB	5.03	117.14	110.10
1	B	81	LEU	CB-CG-CD1	5.03	119.55	111.00
2	h	136	ASP	CA-CB-CG	-5.03	102.34	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	j	50	ASP	CB-CA-C	-5.03	100.34	110.40
2	6	208	LEU	CB-CG-CD1	5.03	119.55	111.00
2	7	193	GLU	N-CA-CB	5.03	119.65	110.60
2	2	104	PHE	N-CA-CB	5.03	119.64	110.60
2	i	155	PHE	CB-CG-CD2	5.03	124.32	120.80
3	H	211	PHE	CA-CB-CG	-5.02	101.84	113.90
3	M	275	PHE	CB-CG-CD2	5.02	124.32	120.80
1	E	26	TYR	CZ-CE2-CD2	5.02	124.32	119.80
2	3	36	PHE	CD1-CG-CD2	5.02	124.83	118.30
2	j	103	TYR	CG-CD2-CE2	5.02	125.31	121.30
1	D	8	TYR	CD1-CG-CD2	-5.02	112.38	117.90
1	e	77	ALA	CB-CA-C	-5.02	102.57	110.10
2	7	212	ARG	CG-CD-NE	-5.02	101.27	111.80
1	c	71	ASP	N-CA-C	-5.01	97.46	111.00
1	D	232	TYR	CG-CD2-CE2	5.01	125.31	121.30
3	I	273	ASP	C-N-CA	5.01	132.83	122.30
3	L	214	LYS	N-CA-CB	5.01	119.63	110.60
1	E	180	ARG	NE-CZ-NH1	5.01	122.81	120.30
2	1	130	GLY	C-N-CA	5.01	134.23	121.70
2	2	41	ALA	N-CA-CB	5.01	117.12	110.10
2	7	88	ARG	NE-CZ-NH1	-5.01	117.79	120.30
3	L	163	LYS	N-CA-C	-5.01	97.47	111.00
3	L	263	ARG	NE-CZ-NH2	5.01	122.81	120.30
1	D	130	ARG	NE-CZ-NH2	-5.01	117.80	120.30
1	E	62	ASP	CB-CG-OD1	-5.01	113.79	118.30
2	3	126	ASP	CB-CG-OD2	5.01	122.81	118.30
3	H	250	ARG	CG-CD-NE	-5.01	101.28	111.80
1	d	103	TYR	CG-CD2-CE2	5.01	125.31	121.30
2	l	46	TYR	CD1-CE1-CZ	5.01	124.31	119.80
3	L	46	ARG	NE-CZ-NH2	-5.01	117.80	120.30
3	I	286	ALA	N-CA-CB	5.01	117.11	110.10
1	f	195	ALA	N-CA-CB	5.00	117.11	110.10
2	2	196	PHE	N-CA-C	-5.00	97.49	111.00
1	A	48	LEU	O-C-N	5.00	130.71	122.70
3	M	52	ARG	N-CA-CB	5.00	119.61	110.60
1	A	139	ALA	N-CA-CB	5.00	117.10	110.10
1	A	236	ALA	N-CA-CB	5.00	117.10	110.10

There are no chirality outliers.

All (286) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	1	123	TYR	Sidechain
2	1	178	ARG	Sidechain
2	1	51	ARG	Sidechain
2	1	83	ARG	Sidechain
2	2	102	ARG	Sidechain
2	2	103	TYR	Sidechain
2	2	139	ALA	Peptide,Mainchain
2	2	154	ARG	Sidechain
2	2	170	ARG	Sidechain
2	3	106	TYR	Sidechain
2	3	170	ARG	Sidechain
2	3	199	TYR	Sidechain
2	3	46	TYR	Sidechain
2	4	102	ARG	Sidechain
2	4	139	ALA	Peptide
2	4	148	TYR	Sidechain
2	4	211	PHE	Sidechain
2	4	68	ARG	Sidechain
2	4	83	ARG	Sidechain
2	5	101	TYR	Sidechain
2	5	106	TYR	Sidechain
2	5	132	ILE	Peptide
2	5	155	PHE	Sidechain
2	5	170	ARG	Sidechain
2	5	197	TYR	Sidechain
2	5	211	PHE	Sidechain
2	6	101	TYR	Sidechain
2	6	106	TYR	Sidechain
2	6	148	TYR	Sidechain
2	6	154	ARG	Sidechain
2	6	170	ARG	Sidechain
2	6	197	TYR	Sidechain
2	6	46	TYR	Sidechain
2	6	81	ARG	Sidechain
2	7	106	TYR	Sidechain
2	7	123	TYR	Sidechain
2	7	132	ILE	Peptide
2	7	139	ALA	Peptide
2	7	178	ARG	Sidechain
2	7	196	PHE	Sidechain
2	7	68	ARG	Sidechain
1	A	174	PHE	Sidechain
1	A	180	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	A	26	TYR	Sidechain
1	A	65	GLU	Peptide
1	A	66	LYS	Peptide
1	A	91	ARG	Sidechain
1	B	14	VAL	Mainchain
1	B	159	TYR	Sidechain
1	B	175	PHE	Sidechain
1	B	20	ARG	Sidechain
1	B	213	TYR	Sidechain
1	B	220	THR	Peptide
1	B	232	TYR	Sidechain
1	B	235	ARG	Sidechain
1	B	26	TYR	Sidechain
1	B	66	LYS	Peptide
1	B	93	ARG	Sidechain
1	C	100	ARG	Sidechain
1	C	123	TYR	Sidechain
1	C	126	TYR	Sidechain
1	C	168	ARG	Sidechain
1	C	220	THR	Peptide
1	C	26	TYR	Sidechain
1	C	65	GLU	Peptide
1	C	66	LYS	Peptide
1	D	10	ARG	Sidechain
1	D	123	TYR	Sidechain
1	D	15	PHE	Sidechain
1	D	175	PHE	Sidechain
1	D	179	TYR	Sidechain
1	D	180	ARG	Sidechain
1	D	185	PHE	Sidechain
1	D	20	ARG	Sidechain
1	D	220	THR	Peptide
1	D	8	TYR	Sidechain
1	D	91	ARG	Sidechain
1	E	10	ARG	Sidechain
1	E	100	ARG	Sidechain
1	E	126	TYR	Sidechain
1	E	159	TYR	Sidechain
1	E	213	TYR	Sidechain
1	E	22	PHE	Sidechain
1	E	220	THR	Peptide
1	E	235	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	E	86	ARG	Sidechain
1	E	93	ARG	Sidechain
1	F	10	ARG	Sidechain
1	F	103	TYR	Sidechain
1	F	123	TYR	Sidechain
1	F	15	PHE	Sidechain
1	F	175	PHE	Sidechain
1	F	179	TYR	Sidechain
1	F	180	ARG	Sidechain
1	F	220	THR	Peptide
1	F	235	ARG	Sidechain
1	F	28	ARG	Sidechain
1	F	53	ARG	Sidechain
1	F	68	TYR	Sidechain
1	F	86	ARG	Sidechain
1	G	103	TYR	Sidechain
1	G	126	TYR	Sidechain
1	G	15	PHE	Sidechain
1	G	179	TYR	Sidechain
1	G	220	THR	Peptide
1	G	241	ARG	Sidechain
1	G	28	ARG	Sidechain
1	G	33	ARG	Sidechain
1	G	5	GLN	Peptide
1	G	86	ARG	Sidechain
3	H	130	PHE	Sidechain
3	H	140	TYR	Sidechain
3	H	205	ARG	Sidechain
3	H	215	TYR	Peptide
3	H	218	GLU	Peptide
3	H	221	ARG	Sidechain
3	H	224	ARG	Sidechain
3	H	236	SER	Peptide
3	H	240	ILE	Peptide
3	H	254	ASP	Peptide
3	H	263	ARG	Sidechain
3	H	276	ASP	Peptide
3	H	278	ARG	Sidechain
3	H	305	ARG	Sidechain
3	H	311	LEU	Peptide
3	H	336	PHE	Sidechain
3	H	36	PHE	Sidechain

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Mol	Chain	Res	Type	Group
3	H	387	THR	Peptide
3	H	50	ARG	Sidechain
3	H	76	ARG	Sidechain
3	I	154	ARG	Sidechain
3	I	181	TYR	Peptide,Mainchain
3	I	215	TYR	Sidechain
3	I	220	ALA	Peptide
3	I	224	ARG	Sidechain
3	I	254	ASP	Peptide
3	I	269	LEU	Peptide
3	I	289	ARG	Sidechain
3	I	303	PHE	Peptide
3	I	44	TYR	Sidechain
3	I	46	ARG	Sidechain
3	I	49	ARG	Sidechain
3	J	186	THR	Peptide
3	J	190	LEU	Peptide
3	J	207	VAL	Peptide
3	J	215	TYR	Sidechain
3	J	299	ARG	Sidechain
3	J	317	ARG	Sidechain
3	J	36	PHE	Sidechain
3	J	367	ARG	Sidechain
3	J	46	ARG	Sidechain
3	K	128	TYR	Sidechain
3	K	181	TYR	Sidechain
3	K	201	ALA	Peptide
3	K	203	PHE	Sidechain
3	K	213	GLN	Peptide
3	K	215	TYR	Sidechain
3	K	259	ARG	Sidechain
3	K	269	LEU	Peptide,Mainchain
3	K	277	PRO	Peptide
3	K	299	ARG	Sidechain
3	K	317	ARG	Sidechain
3	K	364	ARG	Sidechain
3	K	43	ARG	Sidechain
3	K	44	TYR	Sidechain
3	K	50	ARG	Sidechain
3	K	57	ARG	Sidechain
3	L	140	TYR	Sidechain
3	L	24	ARG	Sidechain

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Mol	Chain	Res	Type	Group
3	L	249	ARG	Sidechain
3	L	305	ARG	Sidechain
3	L	341	ARG	Sidechain
3	L	385	LYS	Peptide
3	L	52	ARG	Sidechain
3	L	57	ARG	Sidechain
3	L	76	ARG	Sidechain
3	L	94	TYR	Sidechain
3	M	21	TYR	Sidechain
3	M	215	TYR	Sidechain,Peptide
3	M	254	ASP	Peptide
3	M	27	TYR	Sidechain
3	M	28	ARG	Sidechain
3	M	314	PHE	Sidechain
3	M	341	ARG	Sidechain
3	M	371	THR	Peptide
3	M	385	LYS	Peptide
3	M	44	TYR	Sidechain
3	M	52	ARG	Sidechain
3	M	57	ARG	Sidechain
3	M	94	TYR	Sidechain
1	a	126	TYR	Sidechain
1	a	148	TYR	Sidechain
1	a	220	THR	Peptide
1	a	241	ARG	Sidechain
1	a	46	VAL	Mainchain
1	a	91	ARG	Sidechain
1	b	126	TYR	Sidechain
1	b	179	TYR	Sidechain
1	b	220	THR	Peptide
1	b	28	ARG	Sidechain
1	c	123	TYR	Sidechain
1	c	126	TYR	Sidechain
1	c	159	TYR	Sidechain
1	c	175	PHE	Sidechain
1	c	219	ARG	Sidechain
1	c	53	ARG	Sidechain
1	c	68	TYR	Sidechain
1	d	10	ARG	Sidechain
1	d	123	TYR	Sidechain
1	d	159	TYR	Sidechain
1	d	179	TYR	Sidechain

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Mol	Chain	Res	Type	Group
1	d	220	THR	Peptide
1	d	239	ARG	Sidechain
1	d	241	ARG	Sidechain
1	d	26	TYR	Sidechain
1	d	91	ARG	Sidechain
1	e	100	ARG	Sidechain
1	e	103	TYR	Sidechain
1	e	123	TYR	Sidechain
1	e	168	ARG	Sidechain
1	e	180	ARG	Sidechain
1	e	213	TYR	Sidechain
1	e	220	THR	Peptide
1	e	239	ARG	Sidechain
1	e	68	TYR	Sidechain
1	f	100	ARG	Sidechain
1	f	123	TYR	Sidechain
1	f	126	TYR	Sidechain
1	f	220	THR	Peptide
1	f	68	TYR	Sidechain
1	f	86	ARG	Sidechain
1	g	103	TYR	Sidechain
1	g	159	TYR	Sidechain
1	g	213	TYR	Sidechain
1	g	219	ARG	Sidechain
1	g	220	THR	Peptide
1	g	28	ARG	Sidechain
1	g	53	ARG	Sidechain
1	g	68	TYR	Sidechain
2	h	101	TYR	Sidechain
2	h	102	ARG	Sidechain
2	h	103	TYR	Sidechain
2	h	123	TYR	Sidechain
2	h	139	ALA	Peptide
2	h	154	ARG	Sidechain
2	h	155	PHE	Sidechain
2	h	173	TYR	Sidechain
2	h	196	PHE	Sidechain
2	h	199	TYR	Sidechain
2	h	30	ARG	Sidechain
2	h	51	ARG	Sidechain
2	i	104	PHE	Sidechain
2	i	106	TYR	Sidechain

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Mol	Chain	Res	Type	Group
2	i	139	ALA	Peptide
2	i	178	ARG	Sidechain
2	i	197	TYR	Sidechain
2	i	83	ARG	Sidechain
2	j	101	TYR	Sidechain
2	j	139	ALA	Peptide
2	j	77	TYR	Sidechain
2	k	103	TYR	Sidechain
2	k	123	TYR	Sidechain
2	k	196	PHE	Sidechain
2	k	199	TYR	Sidechain
2	k	36	PHE	Sidechain
2	k	46	TYR	Sidechain
2	l	103	TYR	Sidechain
2	l	106	TYR	Sidechain
2	l	148	TYR	Sidechain
2	l	51	ARG	Sidechain
2	l	77	TYR	Sidechain
2	l	81	ARG	Sidechain
2	l	88	ARG	Sidechain
2	m	212	ARG	Sidechain
2	m	65	PHE	Sidechain
2	n	101	TYR	Sidechain
2	n	132	ILE	Peptide
2	n	139	ALA	Peptide
2	n	170	ARG	Sidechain
2	n	173	TYR	Sidechain
2	n	178	ARG	Sidechain
2	n	77	TYR	Sidechain

5.2 Too-close contacts (i)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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	240/242 (99%)	226 (94%)	12 (5%)	2 (1%)	19	60
1	B	240/242 (99%)	225 (94%)	9 (4%)	6 (2%)	5	32
1	C	240/242 (99%)	226 (94%)	9 (4%)	5 (2%)	7	36
1	D	240/242 (99%)	225 (94%)	11 (5%)	4 (2%)	9	42
1	E	240/242 (99%)	227 (95%)	11 (5%)	2 (1%)	19	60
1	F	240/242 (99%)	225 (94%)	12 (5%)	3 (1%)	12	48
1	G	240/242 (99%)	224 (93%)	13 (5%)	3 (1%)	12	48
1	a	235/242 (97%)	223 (95%)	9 (4%)	3 (1%)	12	48
1	b	235/242 (97%)	219 (93%)	14 (6%)	2 (1%)	17	56
1	c	235/242 (97%)	220 (94%)	13 (6%)	2 (1%)	17	56
1	d	235/242 (97%)	218 (93%)	12 (5%)	5 (2%)	7	36
1	e	235/242 (97%)	219 (93%)	12 (5%)	4 (2%)	9	42
1	f	235/242 (97%)	223 (95%)	10 (4%)	2 (1%)	17	56
1	g	235/242 (97%)	220 (94%)	8 (3%)	7 (3%)	4	28
2	1	200/202 (99%)	186 (93%)	11 (6%)	3 (2%)	10	45
2	2	200/202 (99%)	179 (90%)	15 (8%)	6 (3%)	4	28
2	3	200/202 (99%)	182 (91%)	13 (6%)	5 (2%)	5	32
2	4	200/202 (99%)	184 (92%)	10 (5%)	6 (3%)	4	28
2	5	200/202 (99%)	184 (92%)	10 (5%)	6 (3%)	4	28
2	6	200/202 (99%)	182 (91%)	12 (6%)	6 (3%)	4	28
2	7	200/202 (99%)	184 (92%)	12 (6%)	4 (2%)	7	38
2	h	200/202 (99%)	178 (89%)	14 (7%)	8 (4%)	3	23
2	i	200/202 (99%)	184 (92%)	12 (6%)	4 (2%)	7	38
2	j	200/202 (99%)	186 (93%)	10 (5%)	4 (2%)	7	38
2	k	200/202 (99%)	182 (91%)	13 (6%)	5 (2%)	5	32
2	l	200/202 (99%)	182 (91%)	12 (6%)	6 (3%)	4	28
2	m	200/202 (99%)	192 (96%)	6 (3%)	2 (1%)	15	54
2	n	200/202 (99%)	181 (90%)	8 (4%)	11 (6%)	2	19
3	H	388/390 (100%)	346 (89%)	25 (6%)	17 (4%)	2	22
3	I	388/390 (100%)	352 (91%)	20 (5%)	16 (4%)	3	22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
3	J	388/390 (100%)	347 (89%)	27 (7%)	14 (4%)	3 25
3	K	388/390 (100%)	350 (90%)	28 (7%)	10 (3%)	5 31
3	L	388/390 (100%)	354 (91%)	21 (5%)	13 (3%)	3 26
3	M	388/390 (100%)	357 (92%)	25 (6%)	6 (2%)	10 45
All	All	8453/8556 (99%)	7792 (92%)	459 (5%)	202 (2%)	9 33

All (202) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	67	ILE
1	B	64	ILE
1	C	20	ARG
1	C	66	LYS
1	C	67	ILE
1	F	64	ILE
1	f	12	ILE
1	G	20	ARG
2	h	140	THR
2	2	41	ALA
2	2	182	SER
2	3	139	ALA
2	4	140	THR
2	l	128	ILE
2	6	139	ALA
2	n	131	ALA
2	n	139	ALA
3	H	237	ILE
3	I	247	ALA
3	I	255	THR
3	I	270	ALA
3	I	292	ILE
3	K	269	LEU
3	K	270	ALA
3	K	278	ARG
3	J	128	TYR
3	J	190	LEU
3	J	191	LEU
3	J	280	ASP
1	a	161	ALA
1	b	143	GLU
1	C	221	PHE

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Mol	Chain	Res	Type
1	c	179	TYR
1	D	65	GLU
1	D	161	ALA
1	d	143	GLU
1	d	161	ALA
1	d	221	PHE
1	E	221	PHE
1	e	161	ALA
1	f	179	TYR
1	G	143	GLU
1	G	221	PHE
1	g	143	GLU
2	1	39	SER
2	2	140	THR
2	i	41	ALA
2	3	212	ARG
2	j	136	ASP
2	j	212	ARG
2	4	33	MET
2	k	181	ALA
2	5	136	ASP
2	l	194	ASP
2	7	83	ARG
2	7	133	GLU
2	n	30	ARG
2	n	35	ASN
2	n	132	ILE
2	n	181	ALA
2	n	194	ASP
3	H	163	LYS
3	H	242	GLU
3	H	245	ALA
3	H	248	ALA
3	H	255	THR
3	H	280	ASP
3	H	333	ASP
3	I	146	LEU
3	I	269	LEU
3	I	282	LYS
3	I	310	PRO
3	I	331	ALA
3	I	332	GLU

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Mol	Chain	Res	Type
3	K	131	GLU
3	K	200	ARG
3	K	246	ILE
3	K	392	LEU
3	L	131	GLU
3	L	212	VAL
3	L	282	LYS
3	L	388	PRO
3	M	212	VAL
3	J	122	SER
3	J	134	GLU
3	J	282	LYS
3	J	292	ILE
1	B	65	GLU
1	B	73	HIS
1	B	143	GLU
1	B	221	PHE
1	b	66	LYS
1	D	143	GLU
1	d	12	ILE
1	E	73	HIS
1	F	221	PHE
1	g	66	LYS
1	g	73	HIS
1	g	218	ASP
2	1	136	ASP
2	h	20	LYS
2	h	41	ALA
2	2	106	TYR
2	3	181	ALA
2	j	193	GLU
2	4	136	ASP
2	4	211	PHE
2	k	135	LYS
2	5	191	ILE
2	5	212	ARG
2	l	193	GLU
2	6	20	LYS
2	6	41	ALA
2	m	193	GLU
2	7	39	SER
3	H	310	PRO

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Mol	Chain	Res	Type
3	H	366	GLU
3	I	212	VAL
3	I	221	ARG
3	K	212	VAL
3	K	391	ASP
3	L	183	PRO
3	L	273	ASP
3	L	395	VAL
3	J	273	ASP
3	J	301	GLY
3	J	331	ALA
1	A	64	ILE
1	B	60	GLU
1	C	143	GLU
1	d	14	VAL
1	e	14	VAL
1	e	62	ASP
1	e	104	ASP
1	g	217	ASP
1	g	221	PHE
2	h	21	ASP
2	h	35	ASN
2	2	139	ALA
2	i	140	THR
2	3	39	SER
2	k	41	ALA
2	5	193	GLU
2	l	40	LYS
2	6	136	ASP
2	6	193	GLU
2	7	193	GLU
2	n	137	ILE
2	n	140	THR
3	H	61	PRO
3	H	135	LYS
3	H	296	ALA
3	I	330	LEU
3	I	393	LYS
3	K	125	PRO
3	L	135	LYS
3	L	242	GLU
3	L	335	ASP

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Mol	Chain	Res	Type
3	M	91	THR
3	J	188	LYS
3	J	214	LYS
3	J	275	PHE
1	g	106	PRO
2	1	183	GLY
2	h	191	ILE
2	2	42	ALA
2	i	193	GLU
2	3	140	THR
2	4	107	LEU
2	4	193	GLU
2	5	35	ASN
2	5	200	SER
3	H	290	ILE
3	I	202	THR
3	L	284	ILE
3	M	385	LYS
1	F	9	ASP
2	h	137	ILE
2	k	30	ARG
2	l	30	ARG
2	m	200	SER
3	H	136	PRO
3	H	202	THR
3	H	246	ILE
3	I	275	PHE
3	L	253	SER
3	M	61	PRO
3	M	123	LYS
1	c	12	ILE
2	h	183	GLY
3	M	217	GLY
2	l	137	ILE
2	k	200	SER
1	a	54	VAL
1	D	64	ILE
2	i	207	ILE
2	j	200	SER
2	6	128	ILE
2	n	200	SER
1	a	34	GLY

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Mol	Chain	Res	Type
2	n	129	GLY
3	L	334	VAL

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	203/203 (100%)	196 (97%)	7 (3%)	37	60
1	B	203/203 (100%)	197 (97%)	6 (3%)	41	63
1	C	203/203 (100%)	193 (95%)	10 (5%)	25	50
1	D	203/203 (100%)	192 (95%)	11 (5%)	22	47
1	E	203/203 (100%)	199 (98%)	4 (2%)	55	74
1	F	203/203 (100%)	197 (97%)	6 (3%)	41	63
1	G	203/203 (100%)	191 (94%)	12 (6%)	19	45
1	a	199/203 (98%)	190 (96%)	9 (4%)	27	52
1	b	199/203 (98%)	191 (96%)	8 (4%)	31	55
1	c	199/203 (98%)	186 (94%)	13 (6%)	17	42
1	d	199/203 (98%)	192 (96%)	7 (4%)	36	59
1	e	199/203 (98%)	190 (96%)	9 (4%)	27	52
1	f	199/203 (98%)	190 (96%)	9 (4%)	27	52
1	g	199/203 (98%)	194 (98%)	5 (2%)	47	68
2	1	164/164 (100%)	154 (94%)	10 (6%)	18	44
2	2	164/164 (100%)	155 (94%)	9 (6%)	21	47
2	3	164/164 (100%)	159 (97%)	5 (3%)	41	63
2	4	164/164 (100%)	158 (96%)	6 (4%)	34	58
2	5	164/164 (100%)	154 (94%)	10 (6%)	18	44
2	6	164/164 (100%)	156 (95%)	8 (5%)	25	50
2	7	164/164 (100%)	156 (95%)	8 (5%)	25	50
2	h	164/164 (100%)	157 (96%)	7 (4%)	29	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	i	164/164 (100%)	155 (94%)	9 (6%)	21 47
2	j	164/164 (100%)	159 (97%)	5 (3%)	41 63
2	k	164/164 (100%)	159 (97%)	5 (3%)	41 63
2	l	164/164 (100%)	158 (96%)	6 (4%)	34 58
2	m	164/164 (100%)	160 (98%)	4 (2%)	49 69
2	n	164/164 (100%)	156 (95%)	8 (5%)	25 50
3	H	338/338 (100%)	324 (96%)	14 (4%)	30 55
3	I	338/338 (100%)	332 (98%)	6 (2%)	59 77
3	J	338/338 (100%)	321 (95%)	17 (5%)	24 49
3	K	338/338 (100%)	328 (97%)	10 (3%)	41 63
3	L	338/338 (100%)	328 (97%)	10 (3%)	41 63
3	M	338/338 (100%)	323 (96%)	15 (4%)	28 53
All	All	7138/7166 (100%)	6850 (96%)	288 (4%)	35 55

All (288) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	67	ILE
1	A	86	ARG
1	A	87	VAL
1	A	108	THR
1	A	121	GLN
1	A	169	ASN
1	A	217	ASP
1	a	21	LEU
1	a	40	ILE
1	a	91	ARG
1	a	129	VAL
1	a	166	MET
1	a	169	ASN
1	a	213	TYR
1	a	217	ASP
1	a	234	GLU
1	B	6	MET
1	B	36	THR
1	B	57	LYS
1	B	71	ASP
1	B	178	GLU

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Mol	Chain	Res	Type
1	B	229	LEU
1	b	15	PHE
1	b	28	ARG
1	b	42	CYS
1	b	108	THR
1	b	121	GLN
1	b	143	GLU
1	b	172	THR
1	b	187	ASP
1	C	24	VAL
1	C	56	SER
1	C	68	TYR
1	C	73	HIS
1	C	81	LEU
1	C	106	PRO
1	C	125	GLN
1	C	142	ASP
1	C	144	VAL
1	C	166	MET
1	c	14	VAL
1	c	18	ASP
1	c	22	PHE
1	c	24	VAL
1	c	102	THR
1	c	121	GLN
1	c	142	ASP
1	c	166	MET
1	c	173	GLU
1	c	178	GLU
1	c	180	ARG
1	c	213	TYR
1	c	222	LYS
1	D	14	VAL
1	D	22	PHE
1	D	28	ARG
1	D	73	HIS
1	D	121	GLN
1	D	147	LEU
1	D	187	ASP
1	D	213	TYR
1	D	217	ASP
1	D	218	ASP

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Mol	Chain	Res	Type
1	D	229	LEU
1	d	13	THR
1	d	40	ILE
1	d	54	VAL
1	d	89	ILE
1	d	130	ARG
1	d	134	VAL
1	d	158	GLU
1	E	22	PHE
1	E	42	CYS
1	E	43	LYS
1	E	213	TYR
1	e	40	ILE
1	e	62	ASP
1	e	84	ASP
1	e	116	ILE
1	e	121	GLN
1	e	142	ASP
1	e	180	ARG
1	e	181	ASP
1	e	208	ASN
1	F	97	GLN
1	F	125	GLN
1	F	144	VAL
1	F	206	PRO
1	F	226	PRO
1	F	238	GLU
1	f	10	ARG
1	f	21	LEU
1	f	43	LYS
1	f	46	VAL
1	f	64	ILE
1	f	129	VAL
1	f	134	VAL
1	f	181	ASP
1	f	220	THR
1	G	5	GLN
1	G	24	VAL
1	G	57	LYS
1	G	73	HIS
1	G	78	THR
1	G	84	ASP

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Mol	Chain	Res	Type
1	G	99	ASN
1	G	102	THR
1	G	121	GLN
1	G	189	MET
1	G	217	ASP
1	G	220	THR
1	g	59	LEU
1	g	121	GLN
1	g	130	ARG
1	g	151	ASP
1	g	219	ARG
2	1	27	THR
2	1	45	ILE
2	1	64	GLN
2	1	107	LEU
2	1	120	LYS
2	1	142	SER
2	1	159	ILE
2	1	189	VAL
2	1	202	GLU
2	1	208	LEU
2	h	52	MET
2	h	107	LEU
2	h	116	ASP
2	h	121	SER
2	h	195	GLU
2	h	201	PRO
2	h	205	GLU
2	2	17	LEU
2	2	27	THR
2	2	45	ILE
2	2	71	LYS
2	2	84	LYS
2	2	106	TYR
2	2	110	LEU
2	2	132	ILE
2	2	201	PRO
2	i	45	ILE
2	i	64	GLN
2	i	104	PHE
2	i	105	PRO
2	i	122	ILE

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Mol	Chain	Res	Type
2	i	137	ILE
2	i	140	THR
2	i	170	ARG
2	i	211	PHE
2	3	110	LEU
2	3	140	THR
2	3	187	ASP
2	3	197	TYR
2	3	213	LYS
2	j	30	ARG
2	j	33	MET
2	j	45	ILE
2	j	136	ASP
2	j	148	TYR
2	4	45	ILE
2	4	56	THR
2	4	136	ASP
2	4	146	THR
2	4	154	ARG
2	4	188	VAL
2	k	60	VAL
2	k	82	GLU
2	k	120	LYS
2	k	170	ARG
2	k	212	ARG
2	5	13	THR
2	5	27	THR
2	5	33	MET
2	5	40	LYS
2	5	45	ILE
2	5	78	GLU
2	5	140	THR
2	5	190	LYS
2	5	198	GLN
2	5	205	GLU
2	l	17	LEU
2	l	28	GLU
2	l	121	SER
2	l	136	ASP
2	l	176	MET
2	l	199	TYR
2	6	17	LEU

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Mol	Chain	Res	Type
2	6	21	ASP
2	6	40	LYS
2	6	45	ILE
2	6	55	THR
2	6	136	ASP
2	6	174	SER
2	6	202	GLU
2	m	40	LYS
2	m	156	THR
2	m	170	ARG
2	m	201	PRO
2	7	17	LEU
2	7	28	GLU
2	7	45	ILE
2	7	64	GLN
2	7	110	LEU
2	7	115	ILE
2	7	161	VAL
2	7	179	ASP
2	n	27	THR
2	n	87	VAL
2	n	103	TYR
2	n	115	ILE
2	n	116	ASP
2	n	166	GLU
2	n	200	SER
2	n	212	ARG
3	H	41	ARG
3	H	97	GLU
3	H	131	GLU
3	H	133	GLU
3	H	137	GLU
3	H	244	ASP
3	H	265	MET
3	H	275	PHE
3	H	299	ARG
3	H	302	ARG
3	H	311	LEU
3	H	330	LEU
3	H	333	ASP
3	H	350	ASP
3	I	175	PRO

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Mol	Chain	Res	Type
3	I	250	ARG
3	I	276	ASP
3	I	299	ARG
3	I	304	ASP
3	I	393	LYS
3	K	22	LYS
3	K	79	VAL
3	K	132	VAL
3	K	136	PRO
3	K	159	LEU
3	K	165	GLU
3	K	200	ARG
3	K	255	THR
3	K	298	LEU
3	K	387	THR
3	L	136	PRO
3	L	176	LYS
3	L	183	PRO
3	L	214	LYS
3	L	269	LEU
3	L	283	VAL
3	L	291	ASP
3	L	319	GLN
3	L	324	HIS
3	L	352	LYS
3	M	89	VAL
3	M	101	LYS
3	M	113	LEU
3	M	120	PRO
3	M	149	GLN
3	M	158	GLU
3	M	181	TYR
3	M	183	PRO
3	M	190	LEU
3	M	206	VAL
3	M	214	LYS
3	M	244	ASP
3	M	275	PHE
3	M	312	PRO
3	M	332	GLU
3	J	32	ASP
3	J	39	SER

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Mol	Chain	Res	Type
3	J	92	SER
3	J	110	GLN
3	J	165	GLU
3	J	184	PRO
3	J	188	LYS
3	J	190	LEU
3	J	205	ARG
3	J	210	GLU
3	J	227	PHE
3	J	244	ASP
3	J	250	ARG
3	J	265	MET
3	J	375	PHE
3	J	380	GLU
3	J	386	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	121	GLN
1	A	125	GLN
1	a	99	ASN
1	a	121	GLN
1	B	121	GLN
1	B	125	GLN
1	b	237	ASN
1	C	237	ASN
1	c	121	GLN
1	D	121	GLN
1	D	125	GLN
1	d	125	GLN
1	d	237	ASN
1	E	121	GLN
1	F	125	GLN
1	f	73	HIS
1	f	97	GLN
1	f	125	GLN
1	f	237	ASN
2	h	96	ASN
2	2	96	ASN
2	i	64	GLN
2	5	35	ASN

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Mol	Chain	Res	Type
2	l	96	ASN
2	6	96	ASN
2	7	96	ASN
2	7	99	ASN
2	7	206	GLN
2	n	75	ASN
3	H	109	ASN
3	H	213	GLN
3	H	288	ASN
3	L	262	GLN
3	M	117	ASN
3	M	213	GLN
3	M	262	GLN
3	J	109	ASN

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

Of 10 ligands modelled in this entry, 5 are monoatomic - leaving 5 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	ATP	H	401	5	26,33,33	1.98	6 (23%)	31,52,52	2.51	7 (22%)
4	ATP	I	401	5	26,33,33	1.52	4 (15%)	31,52,52	2.31	3 (9%)
4	ATP	J	401	5	26,33,33	1.12	2 (7%)	31,52,52	2.71	5 (16%)
4	ATP	K	401	5	26,33,33	0.96	0	31,52,52	2.20	8 (25%)
6	ADP	L	401	5	24,29,29	1.26	3 (12%)	29,45,45	1.78	5 (17%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	ATP	H	401	5	-	5/18/38/38	0/3/3/3
4	ATP	I	401	5	-	5/18/38/38	0/3/3/3
4	ATP	J	401	5	-	2/18/38/38	0/3/3/3
4	ATP	K	401	5	-	5/18/38/38	0/3/3/3
6	ADP	L	401	5	-	6/12/32/32	0/3/3/3

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	H	401	ATP	C2'-C1'	-5.26	1.45	1.53
4	H	401	ATP	O4'-C1'	-4.63	1.34	1.41
4	I	401	ATP	C2'-C1'	-3.59	1.48	1.53
4	I	401	ATP	C2-N3	3.41	1.37	1.32
4	J	401	ATP	O3'-C3'	3.21	1.50	1.43
4	H	401	ATP	O2'-C2'	-2.74	1.36	1.43
4	H	401	ATP	C5'-C4'	2.72	1.60	1.51
4	I	401	ATP	C4-N3	-2.62	1.32	1.35
4	I	401	ATP	C8-N7	-2.42	1.30	1.34
6	L	401	ADP	C2'-C1'	-2.41	1.50	1.53
6	L	401	ADP	C8-N7	-2.38	1.30	1.34
4	J	401	ATP	C2-N3	2.36	1.35	1.32
6	L	401	ADP	C3'-C4'	2.24	1.58	1.53
4	H	401	ATP	C2-N1	2.20	1.38	1.33
4	H	401	ATP	C8-N7	-2.07	1.31	1.34

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	J	401	ATP	PA-O3A-PB	9.63	165.86	132.83
4	J	401	ATP	PB-O3B-PG	8.84	163.16	132.83
4	I	401	ATP	PB-O3B-PG	8.66	162.54	132.83
4	I	401	ATP	PA-O3A-PB	8.20	160.97	132.83
4	H	401	ATP	PA-O3A-PB	7.29	157.83	132.83
4	H	401	ATP	PB-O3B-PG	6.86	156.37	132.83
6	L	401	ADP	PA-O3A-PB	6.80	156.16	132.83
4	K	401	ATP	N6-C6-N1	6.62	132.31	118.57
4	H	401	ATP	N6-C6-N1	5.80	130.62	118.57
4	K	401	ATP	PB-O3B-PG	5.25	150.84	132.83
4	K	401	ATP	C5-C6-N1	-4.37	110.44	120.35
4	J	401	ATP	N6-C6-N1	4.27	127.45	118.57
4	J	401	ATP	C5-C6-N1	-3.66	112.05	120.35
4	K	401	ATP	PA-O3A-PB	3.42	144.57	132.83
4	K	401	ATP	C4-C5-N7	-3.25	106.01	109.40
4	H	401	ATP	C5-C6-N6	-3.10	115.64	120.35
6	L	401	ADP	N6-C6-N1	3.01	124.82	118.57
4	H	401	ATP	C5-C6-N1	-2.92	113.73	120.35
6	L	401	ADP	N3-C2-N1	2.89	133.20	128.68
4	J	401	ATP	O3G-PG-O2G	2.83	118.44	107.64
4	K	401	ATP	C5-C6-N6	-2.67	116.29	120.35
4	H	401	ATP	O3B-PG-O1G	-2.56	97.01	111.19
6	L	401	ADP	O5'-C5'-C4'	2.42	117.34	108.99
6	L	401	ADP	C5-C6-N1	-2.42	114.87	120.35
4	K	401	ATP	C2-N1-C6	2.41	122.88	118.75
4	H	401	ATP	C5'-C4'-C3'	-2.23	106.82	115.18
4	I	401	ATP	N6-C6-N1	2.04	122.81	118.57
4	K	401	ATP	O3B-PG-O1G	-2.03	99.92	111.19

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	H	401	ATP	C5'-O5'-PA-O3A
4	I	401	ATP	C5'-O5'-PA-O2A
4	K	401	ATP	C5'-O5'-PA-O3A
4	J	401	ATP	C5'-O5'-PA-O2A
4	J	401	ATP	C5'-O5'-PA-O3A
6	L	401	ADP	C5'-O5'-PA-O1A
6	L	401	ADP	C5'-O5'-PA-O2A
4	I	401	ATP	PA-O3A-PB-O1B
4	K	401	ATP	C4'-C5'-O5'-PA
4	I	401	ATP	C5'-O5'-PA-O3A

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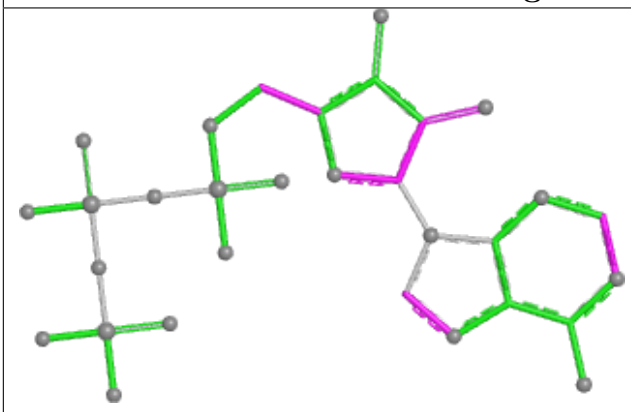
Mol	Chain	Res	Type	Atoms
4	H	401	ATP	PA-O3A-PB-O2B
4	K	401	ATP	PA-O3A-PB-O2B
6	L	401	ADP	PB-O3A-PA-O1A
4	H	401	ATP	C5'-O5'-PA-O1A
4	I	401	ATP	C5'-O5'-PA-O1A
4	K	401	ATP	C5'-O5'-PA-O1A
6	L	401	ADP	C4'-C5'-O5'-PA
4	I	401	ATP	PA-O3A-PB-O2B
6	L	401	ADP	C5'-O5'-PA-O3A
4	H	401	ATP	PG-O3B-PB-O2B
4	H	401	ATP	PA-O3A-PB-O1B
4	K	401	ATP	PA-O3A-PB-O1B
6	L	401	ADP	PB-O3A-PA-O2A

There are no ring outliers.

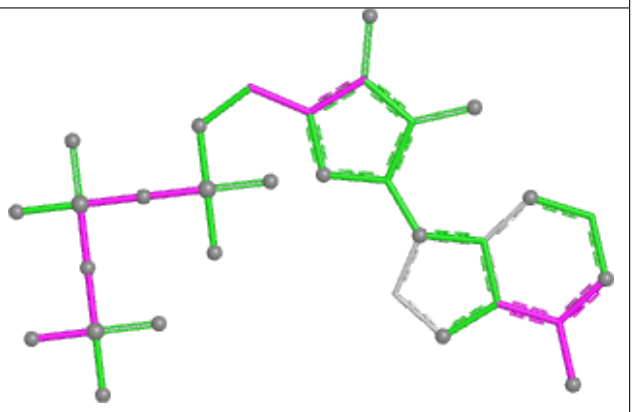
No monomer is involved in short contacts.

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

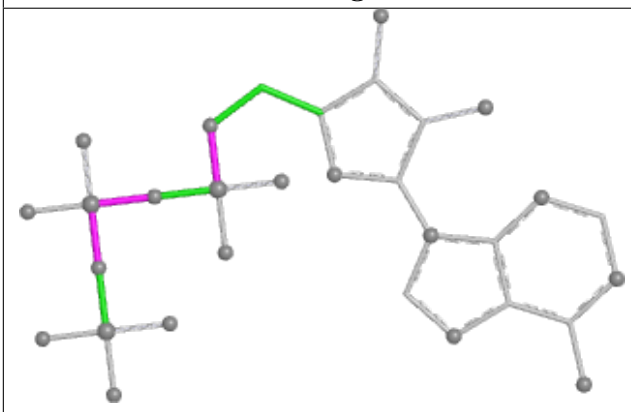
Ligand ATP H 401



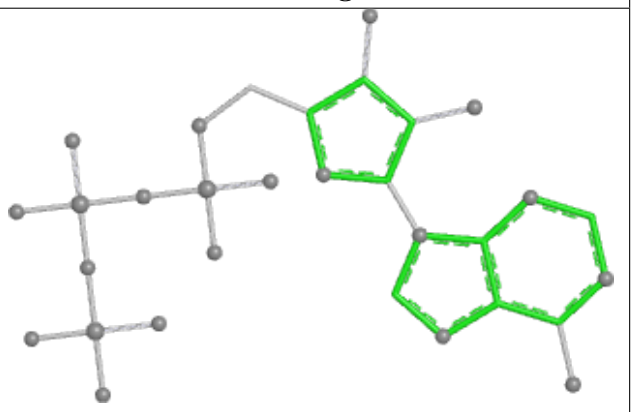
Bond lengths



Bond angles

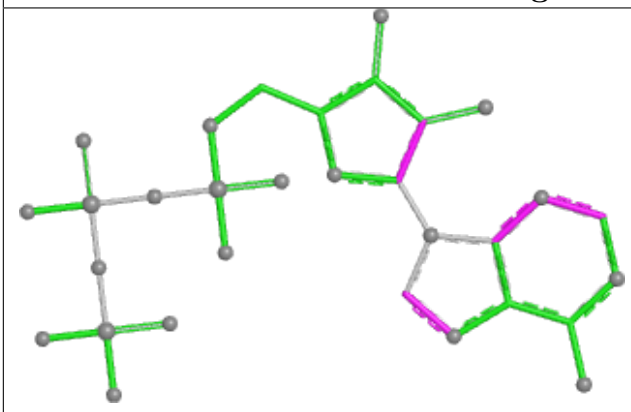


Torsions

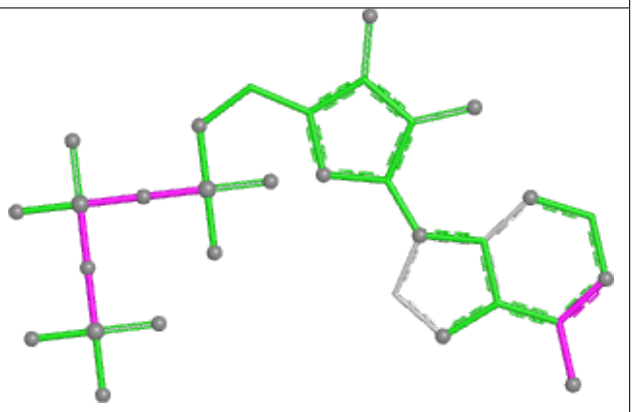


Rings

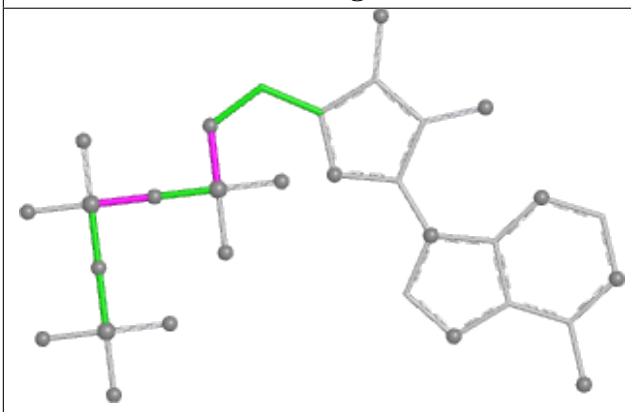
Ligand ATP I 401



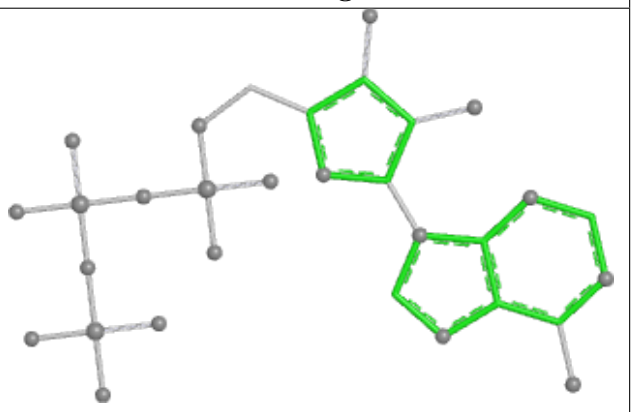
Bond lengths



Bond angles

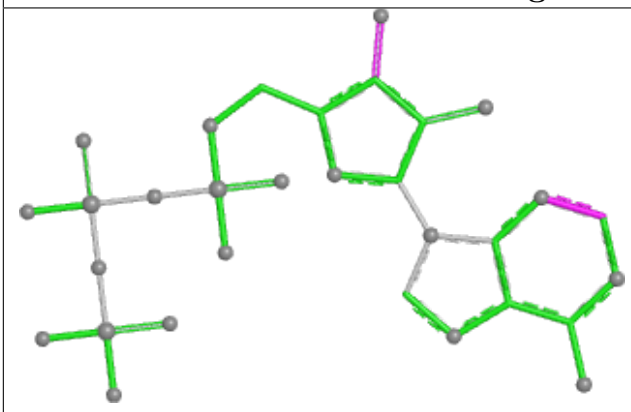


Torsions

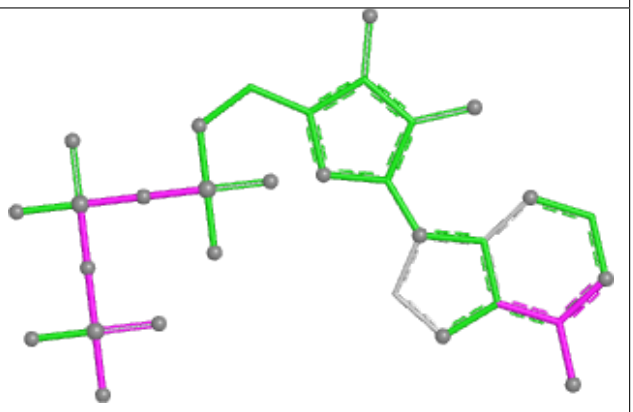


Rings

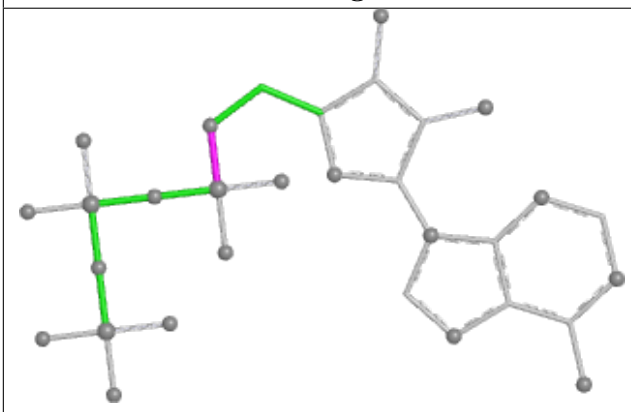
Ligand ATP J 401



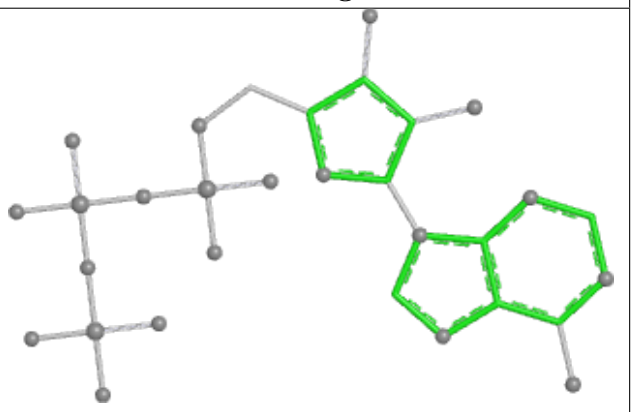
Bond lengths



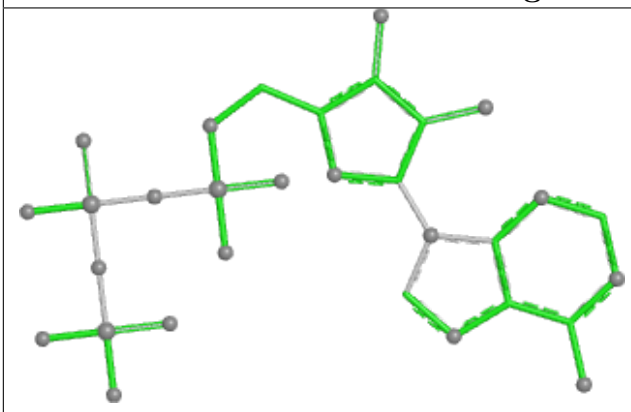
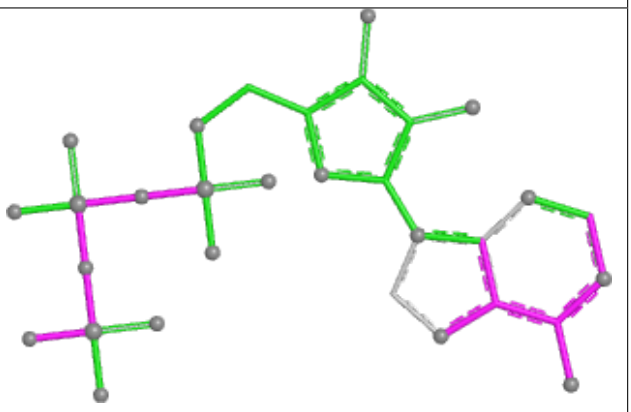
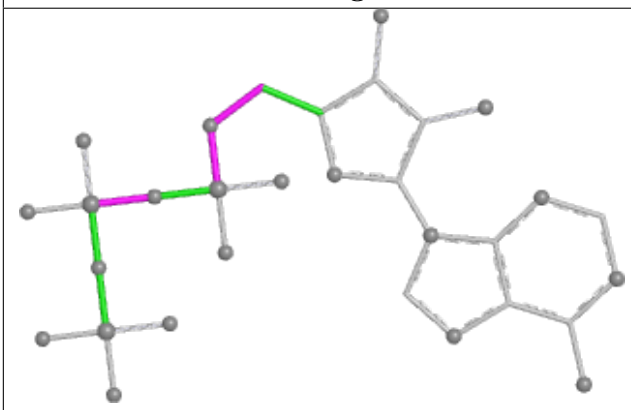
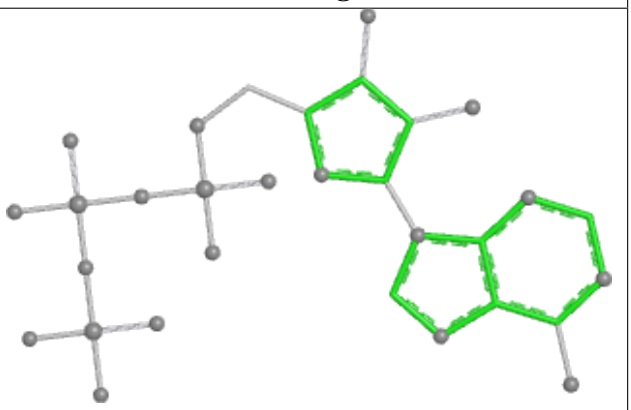
Bond angles

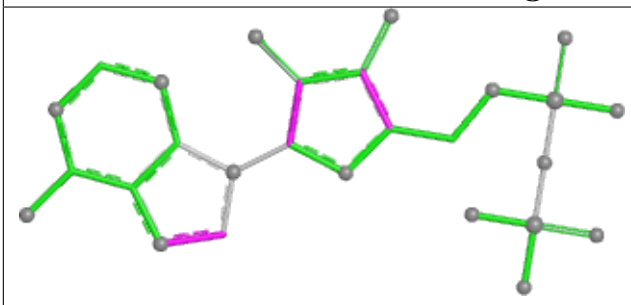
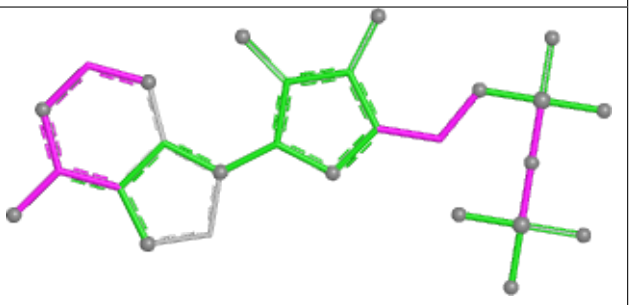
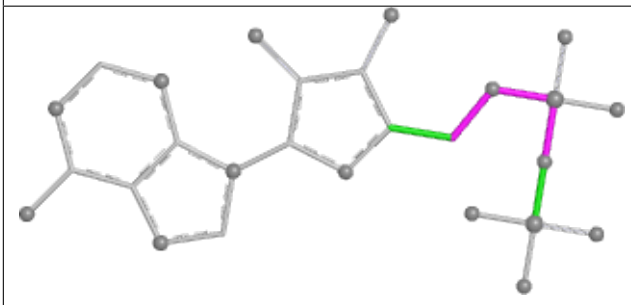
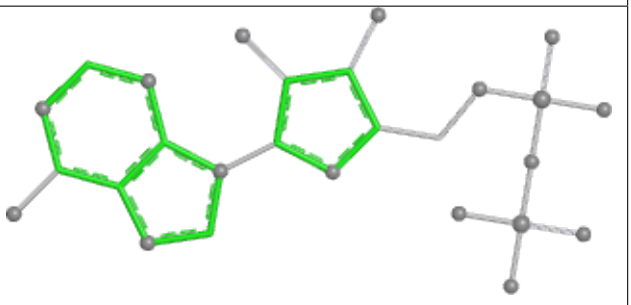


Torsions



Rings

Ligand ATP K 401	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand ADP L 401	
 Bond lengths	 Bond angles
 Torsions	 Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Map visualisation

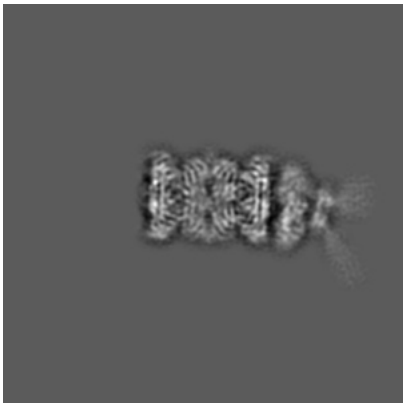
This section contains visualisations of the EMDB entry EMD-0213. These allow visual inspection of the internal detail of the map and identification of artifacts.

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.

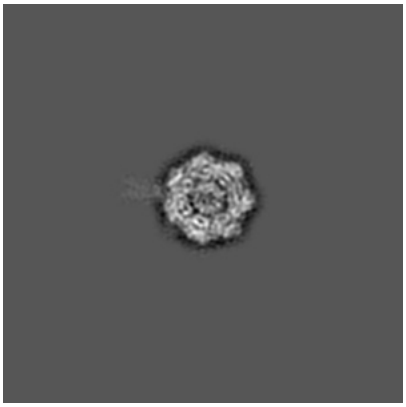
6.1 Orthogonal projections

6.1.1 Primary map

X



Y



Z

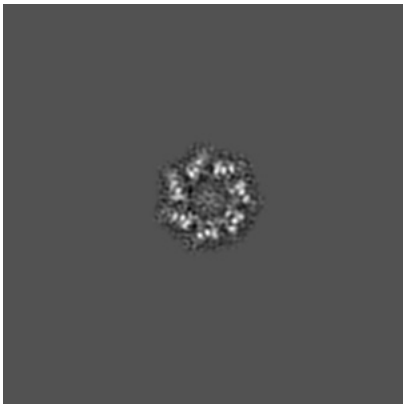
The images above show the map projected in three orthogonal directions.

6.2 Central slices

6.2.1 Primary map

X Index: 192

Y Index: 192



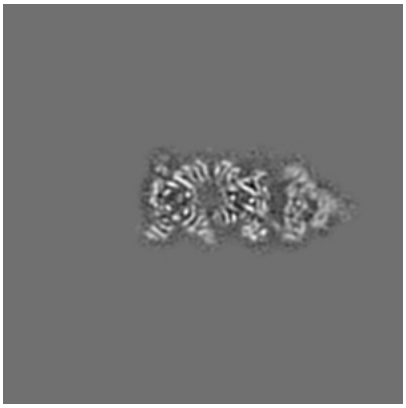
Z Index: 192

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: 179



Y Index: 180

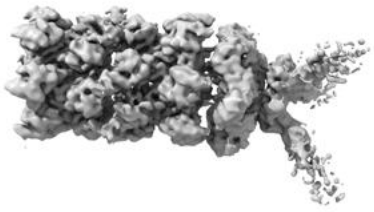
Z Index: 250

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

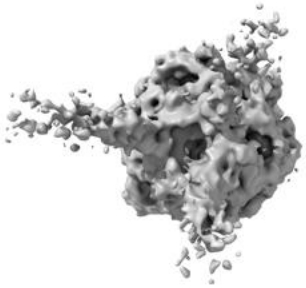
6.4 Orthogonal surface views (i)

6.4.1 Primary map

X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0075. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

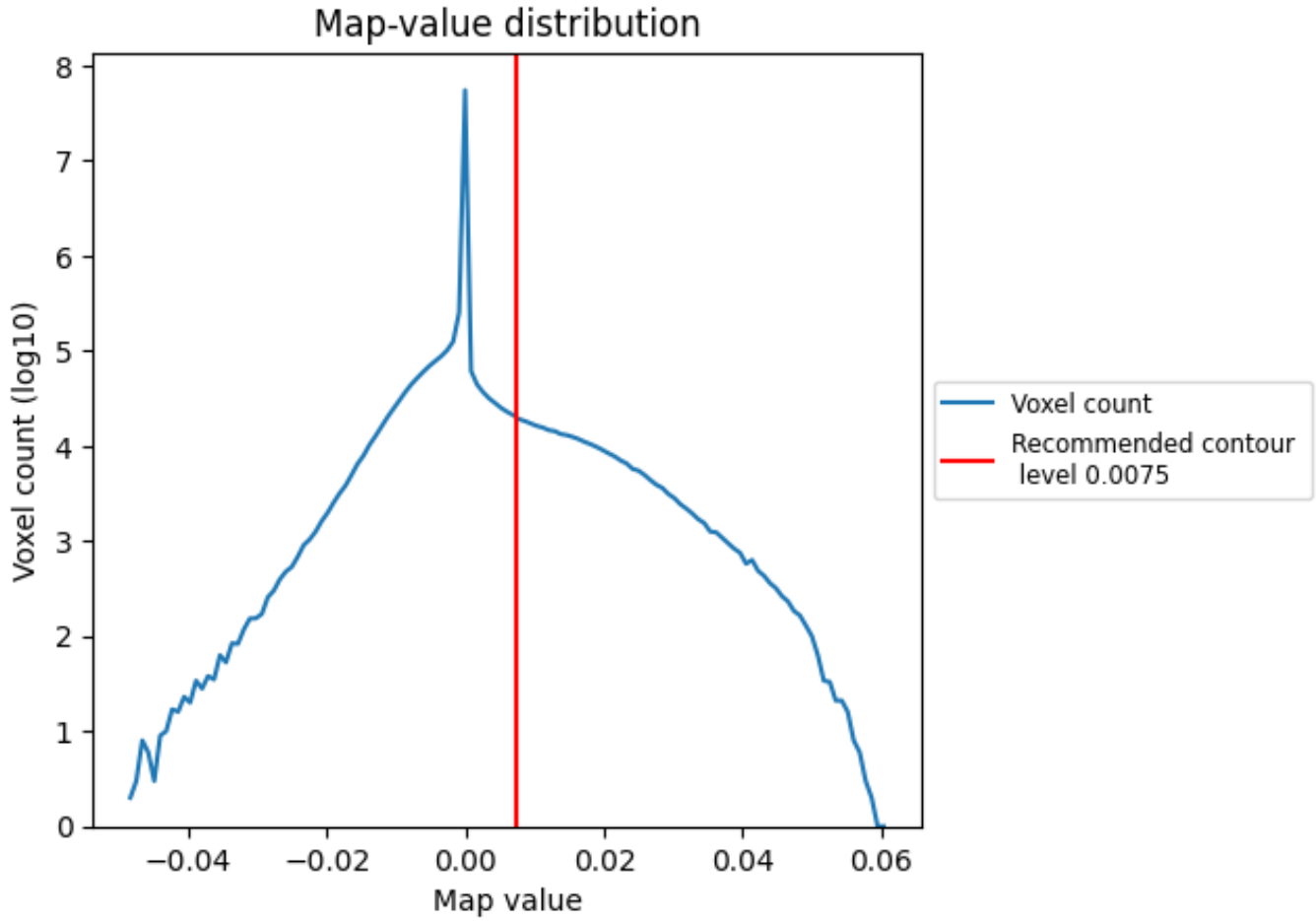
6.5 Mask visualisation (i)

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

7 Map analysis

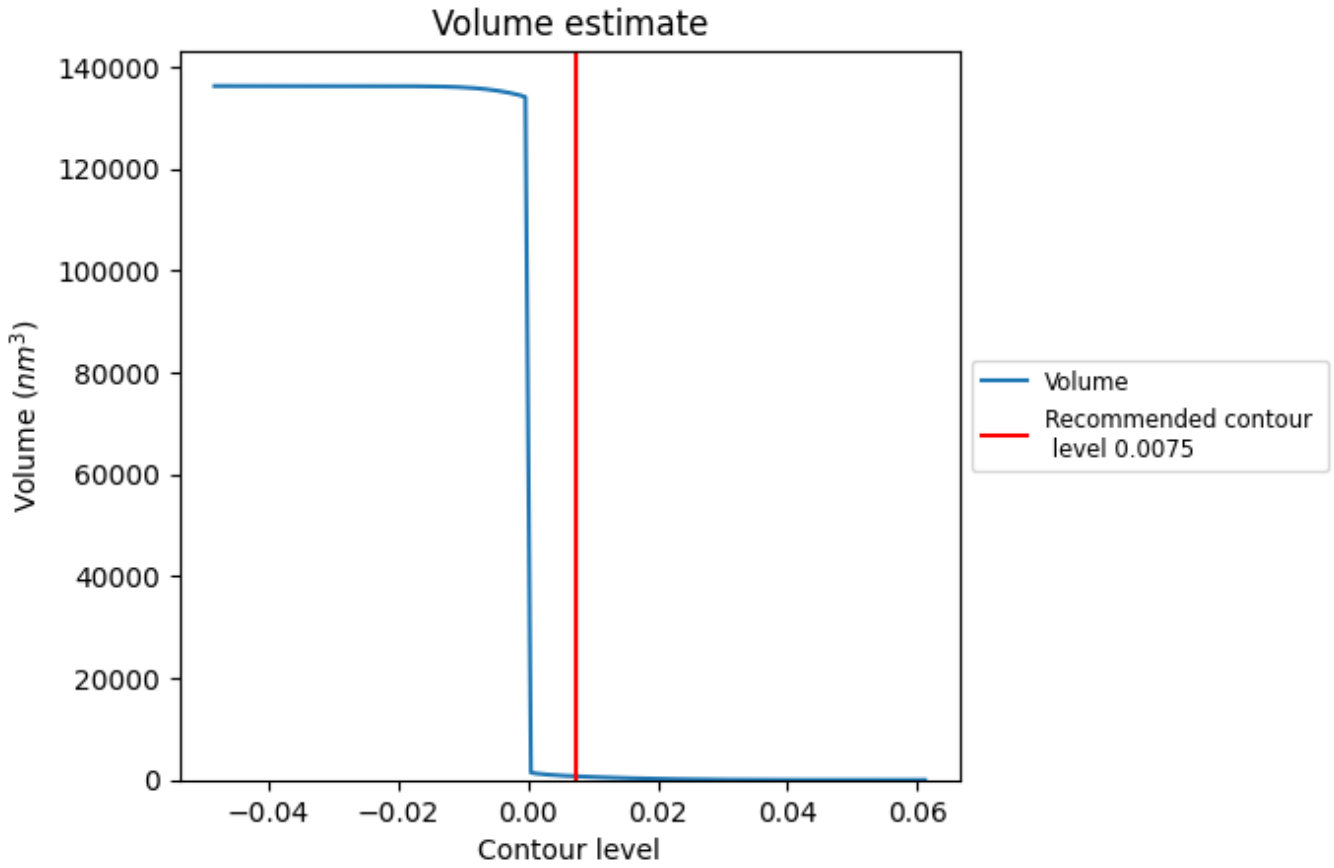
This section contains the results of statistical analysis of the map.

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.

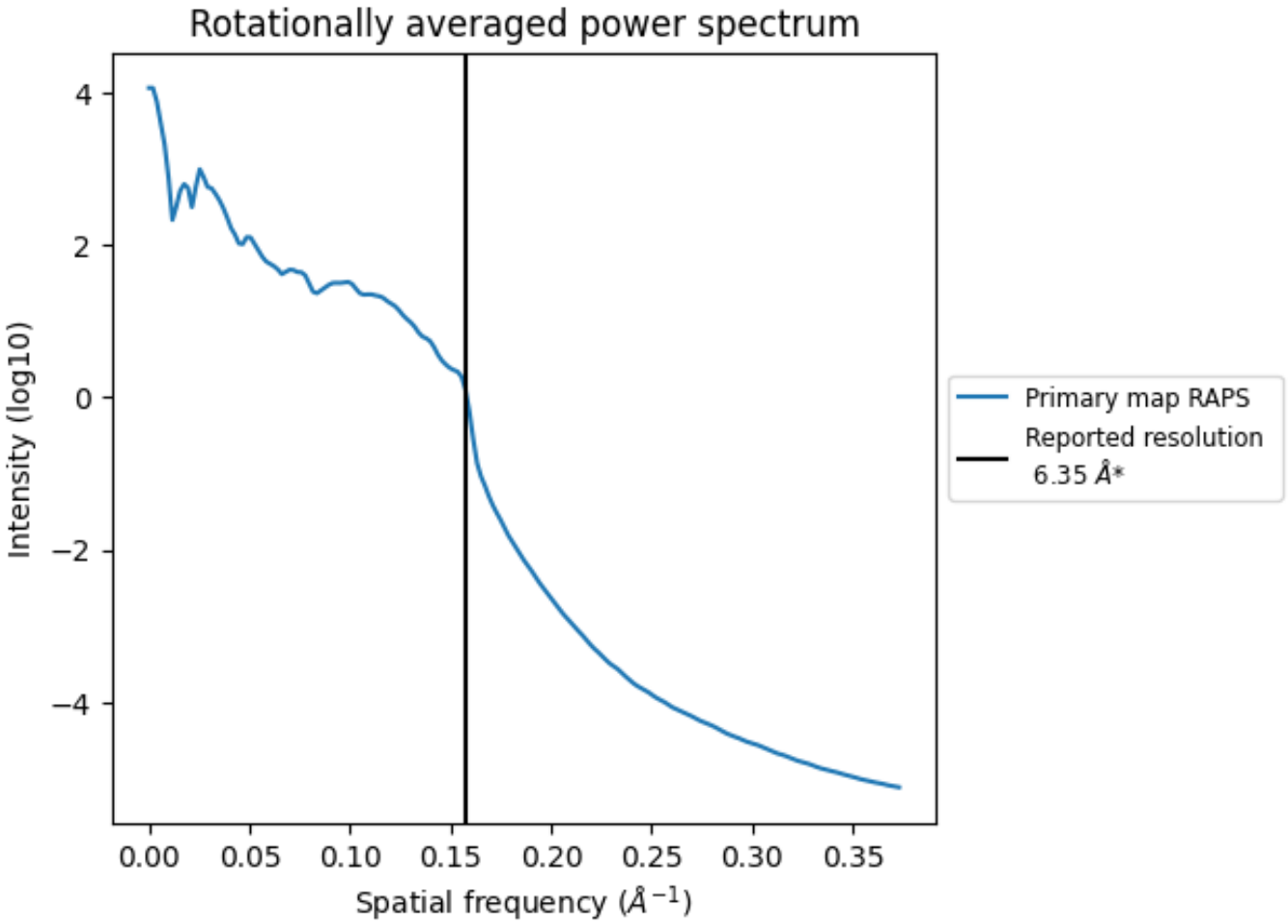
7.2 Volume estimate



The volume at the recommended contour level is 712 nm^3; this corresponds to an approximate mass of 643 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 0.157 Å^{-1}

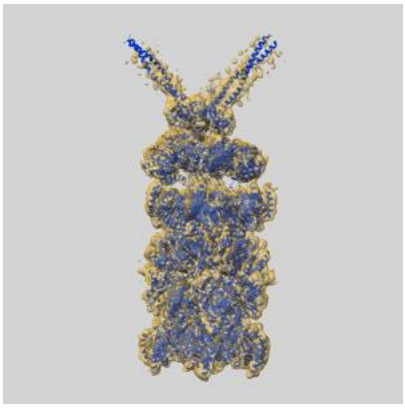
8 Fourier-Shell correlation (i)

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

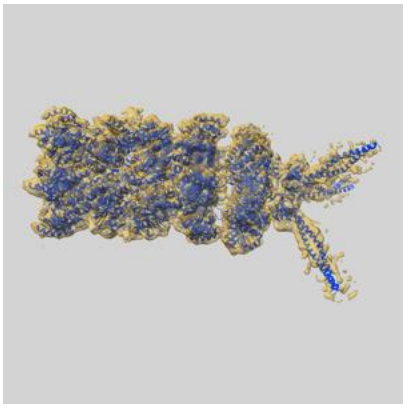
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-0213 and PDB model 6HE9. Per-residue inclusion information can be found in section 3 on page 8.

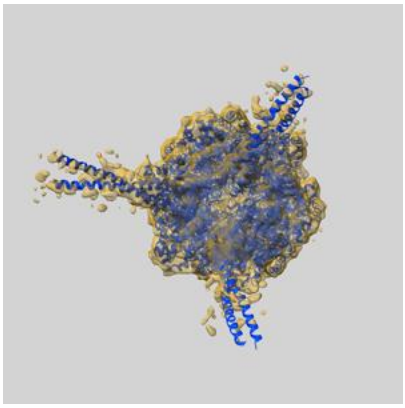
9.1 Map-model overlay



X



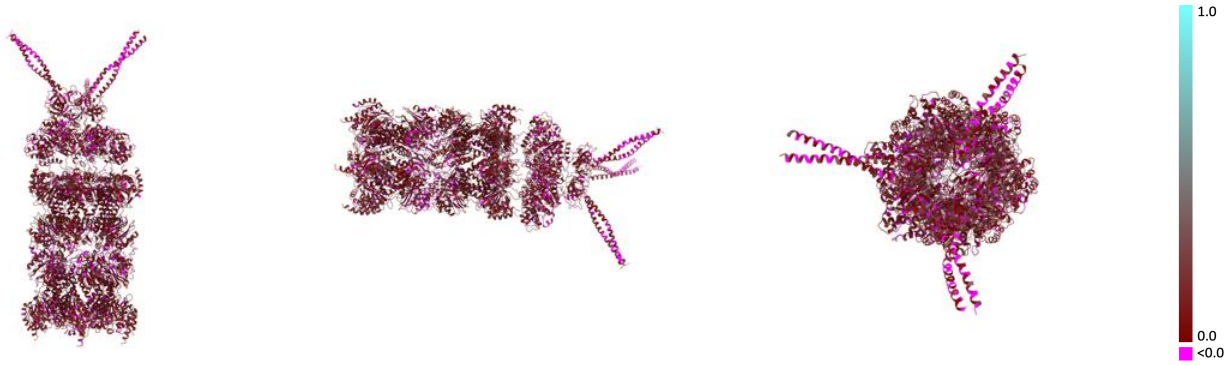
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0075 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.

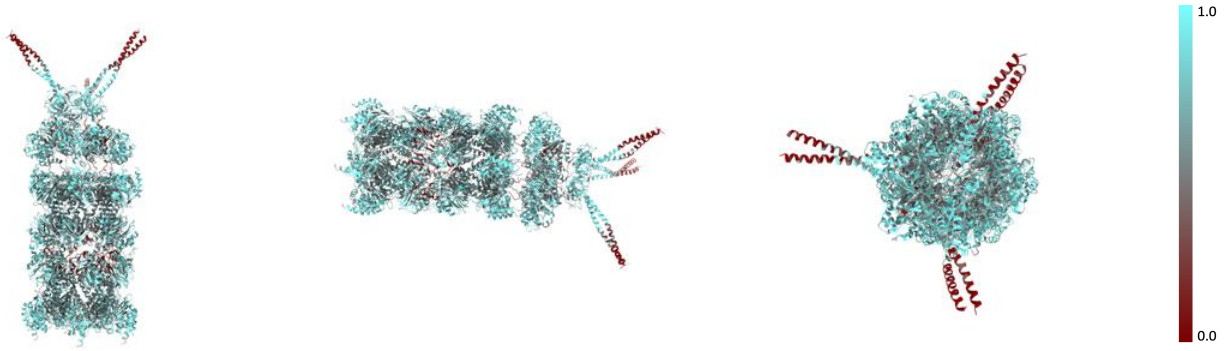
9.2 Q-score mapped to coordinate model



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.

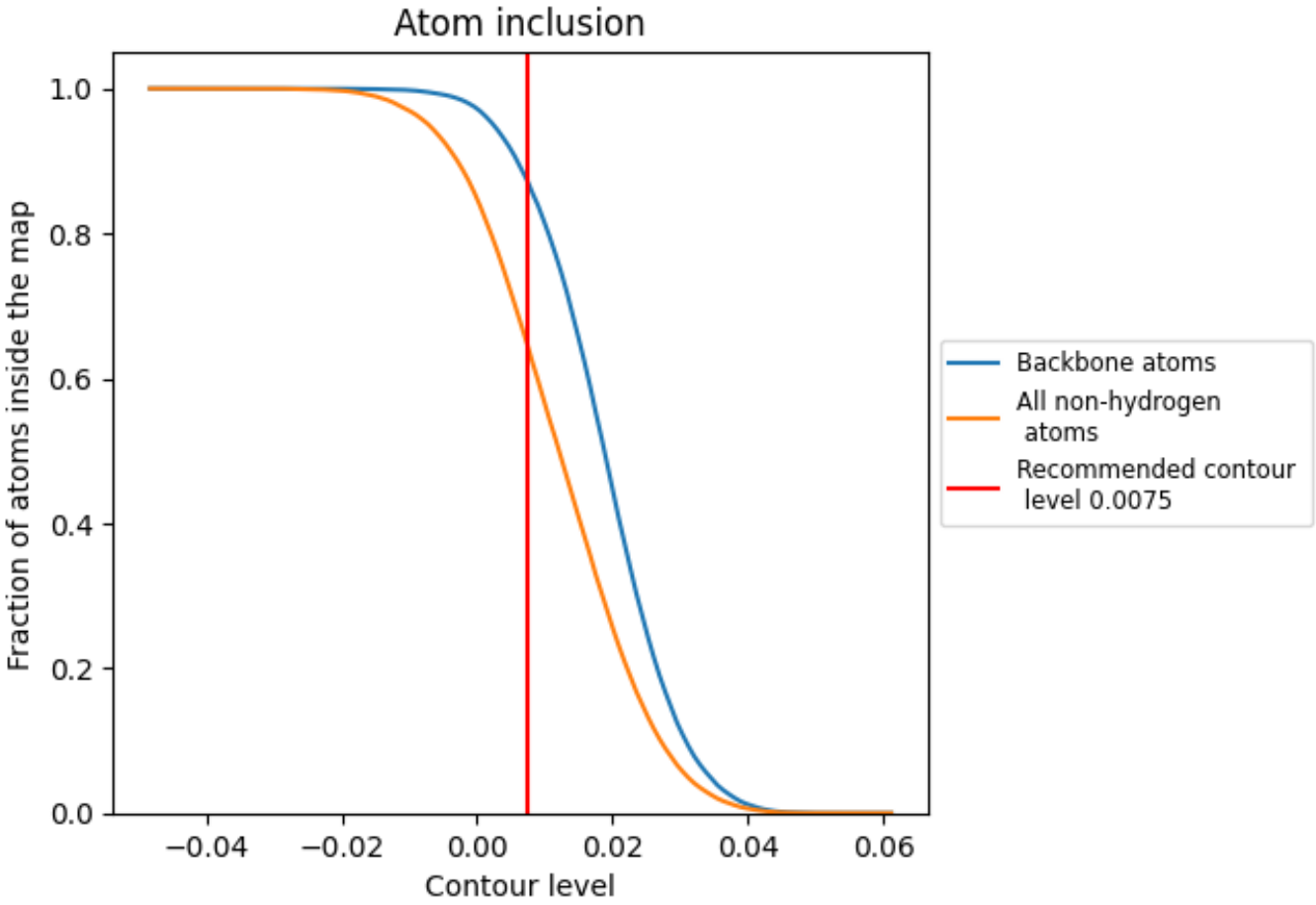
9.3 Atom inclusion mapped to coordinate model



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 (0.0075).

9.4 Atom inclusion (i)



At the recommended contour level, 87% of all backbone atoms, 64% 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 (0.0075) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6448	0.1230
1	0.5984	0.1270
2	0.6116	0.1290
3	0.6267	0.1220
4	0.6043	0.1280
5	0.6215	0.1270
6	0.6215	0.1300
7	0.6122	0.1190
A	0.6905	0.1380
B	0.6840	0.1410
C	0.6695	0.1330
D	0.6754	0.1360
E	0.6738	0.1380
F	0.6862	0.1390
G	0.6722	0.1350
H	0.6502	0.1130
I	0.6384	0.1080
J	0.6509	0.1130
K	0.6407	0.1130
L	0.6223	0.1100
M	0.6419	0.1160
a	0.6798	0.1260
b	0.6634	0.1280
c	0.6732	0.1300
d	0.6771	0.1320
e	0.6754	0.1360
f	0.6678	0.1230
g	0.6793	0.1320
h	0.6096	0.1110
i	0.6030	0.1170
j	0.6090	0.1140
k	0.6103	0.1070
l	0.6063	0.1200
m	0.6050	0.1100
n	0.6024	0.1110