



Full wwPDB EM Validation Report ⓘ

Aug 8, 2026 – 09:04 AM EDT

PDB ID : 11FG / pdb_000011fg
EMDB ID : EMD-75663
Title : Penton Vertex Complex of Bacteriophage Goslar
Authors : Basu, D.; Gu, Y.; Corbett, K.D.
Deposited on : 2026-02-20
Resolution : 3.57 Å(reported)
Based on initial model : .

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.dev133
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

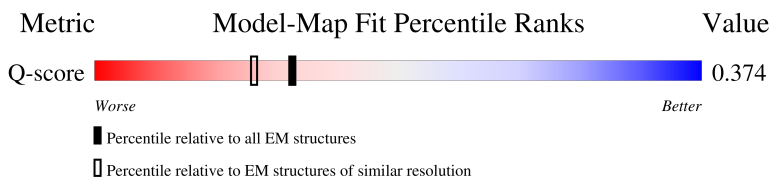
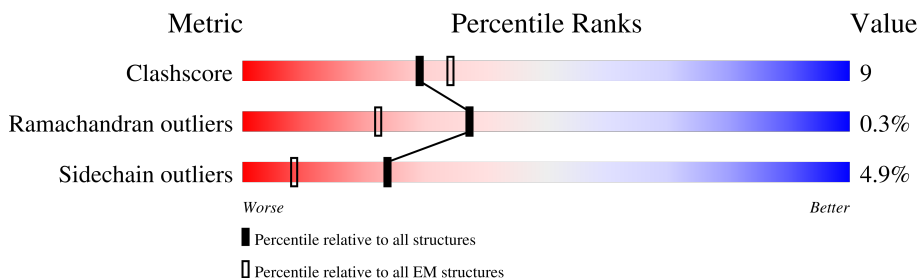
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.57 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.



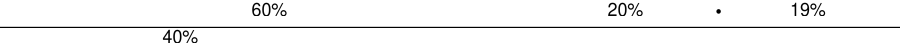
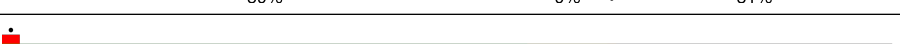
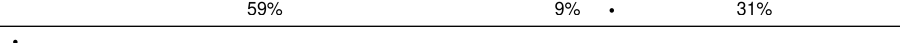
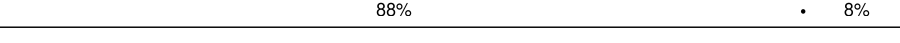
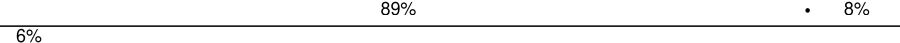
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	12682 (3.07 - 4.07)

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 $\leq 5\%$. 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	Ar	740	
1	As	740	
1	At	740	
1	Au	740	

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Mol	Chain	Length	Quality of chain
1	Av	740	
2	Z	280	
2	a	280	
2	b	280	
2	c	280	
2	d	280	
3	A	212	
3	G	212	
3	M	212	
3	S	212	
3	Y	212	
4	B	104	
4	H	104	
4	N	104	
4	T	104	
4	e	104	
5	Cj	934	
5	Ck	934	
5	Cl	934	
5	Cm	934	
5	Cn	934	
6	C	146	
6	D	146	
6	I	146	
6	J	146	

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Mol	Chain	Length	Quality of chain
6	O	146	
6	P	146	
6	U	146	
6	V	146	
6	f	146	
6	g	146	
7	E	206	
7	K	206	
7	Q	206	
7	W	206	
7	h	206	
8	F	176	
8	L	176	
8	R	176	
8	X	176	
8	i	176	

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 93990 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 Major capsid protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	Ar	576	Total	C	N	O	S	0	0
			4593	2902	799	875	17		
1	As	576	Total	C	N	O	S	0	0
			4593	2902	799	875	17		
1	At	576	Total	C	N	O	S	0	0
			4593	2902	799	875	17		
1	Au	576	Total	C	N	O	S	0	0
			4593	2902	799	875	17		
1	Av	576	Total	C	N	O	S	0	0
			4593	2902	799	875	17		

- Molecule 2 is a protein called PVC Protein gp192.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	Z	227	Total	C	N	O	S	0	0
			1786	1128	301	351	6		
2	a	227	Total	C	N	O	S	0	0
			1786	1128	301	351	6		
2	b	227	Total	C	N	O	S	0	0
			1786	1128	301	351	6		
2	c	227	Total	C	N	O	S	0	0
			1786	1128	301	351	6		
2	d	227	Total	C	N	O	S	0	0
			1786	1128	301	351	6		

- Molecule 3 is a protein called Capsid Decorator gp77.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	147	Total	C	N	O	S	0	0
			1198	763	212	216	7		
3	G	147	Total	C	N	O	S	0	0
			1198	763	212	216	7		
3	M	147	Total	C	N	O	S	0	0
			1198	763	212	216	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	S	147	Total	C	N	O	S	0	0
			1198	763	212	216	7		
3	Y	147	Total	C	N	O	S	0	0
			1198	763	212	216	7		

- Molecule 4 is a protein called Capsid Latch gp146.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	B	96	Total	C	N	O	S	0	0
			759	470	137	150	2		
4	H	96	Total	C	N	O	S	0	0
			759	470	137	150	2		
4	N	96	Total	C	N	O	S	0	0
			759	470	137	150	2		
4	T	96	Total	C	N	O	S	0	0
			759	470	137	150	2		
4	e	96	Total	C	N	O	S	0	0
			759	470	137	150	2		

- Molecule 5 is a protein called PVC Protein gp65.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	Cj	662	Total	C	N	O	S	0	0
			5383	3432	930	1003	18		
5	Ck	662	Total	C	N	O	S	0	0
			5383	3432	930	1003	18		
5	Cl	662	Total	C	N	O	S	0	0
			5383	3432	930	1003	18		
5	Cm	662	Total	C	N	O	S	0	0
			5383	3432	930	1003	18		
5	Cn	662	Total	C	N	O	S	0	0
			5383	3432	930	1003	18		

- Molecule 6 is a protein called PVC Protein gp66.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	C	124	Total	C	N	O	S	0	0
			971	624	166	176	5		
6	D	142	Total	C	N	O	S	0	0
			1079	690	185	199	5		
6	I	124	Total	C	N	O	S	0	0
			971	624	166	176	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
6	J	142	Total	C	N	O	S	0	0
			1079	690	185	199	5		
6	O	124	Total	C	N	O	S	0	0
			971	624	166	176	5		
6	P	142	Total	C	N	O	S	0	0
			1079	690	185	199	5		
6	U	124	Total	C	N	O	S	0	0
			971	624	166	176	5		
6	V	142	Total	C	N	O	S	0	0
			1079	690	185	199	5		
6	f	124	Total	C	N	O	S	0	0
			971	624	166	176	5		
6	g	142	Total	C	N	O	S	0	0
			1079	690	185	199	5		

- Molecule 7 is a protein called PVC Protein gp42.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	E	206	Total	C	N	O	S	0	0
			1629	1043	286	295	5		
7	K	206	Total	C	N	O	S	0	0
			1629	1043	286	295	5		
7	Q	206	Total	C	N	O	S	0	0
			1629	1043	286	295	5		
7	W	206	Total	C	N	O	S	0	0
			1629	1043	286	295	5		
7	h	206	Total	C	N	O	S	0	0
			1629	1043	286	295	5		

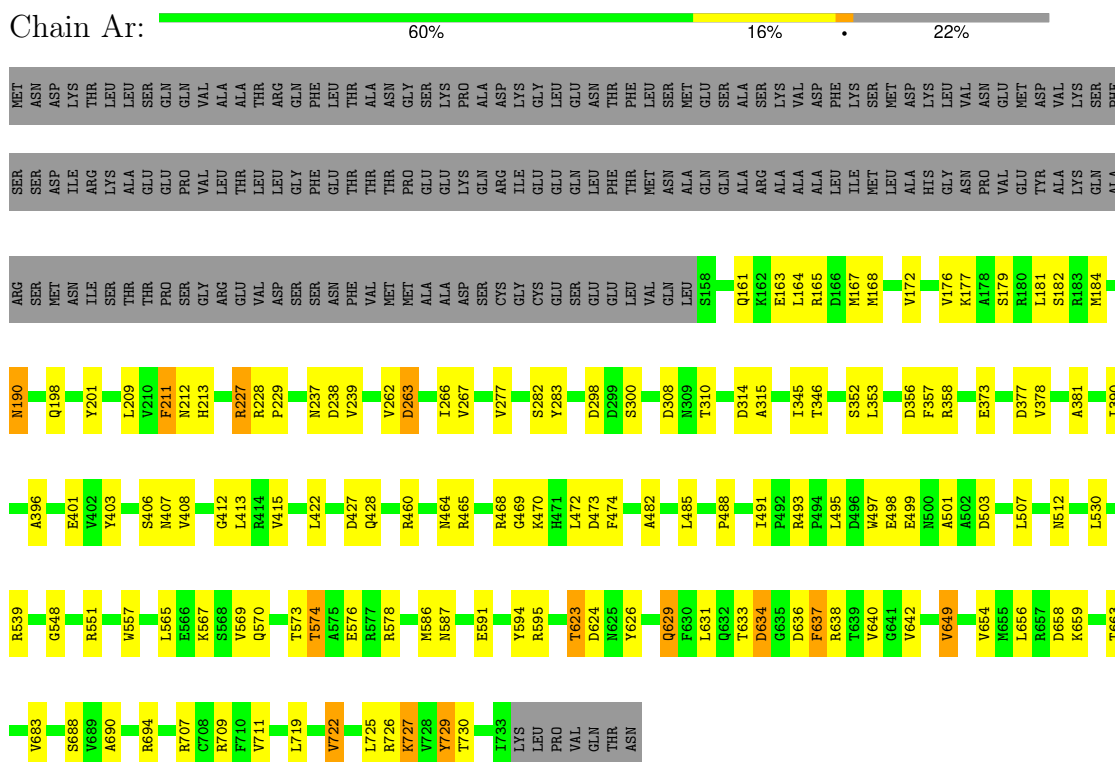
- Molecule 8 is a protein called PVC Protein gp59.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	F	172	Total	C	N	O	S	0	0
			1400	885	245	264	6		
8	L	172	Total	C	N	O	S	0	0
			1400	885	245	264	6		
8	R	172	Total	C	N	O	S	0	0
			1400	885	245	264	6		
8	X	172	Total	C	N	O	S	0	0
			1400	885	245	264	6		
8	i	172	Total	C	N	O	S	0	0
			1400	885	245	264	6		

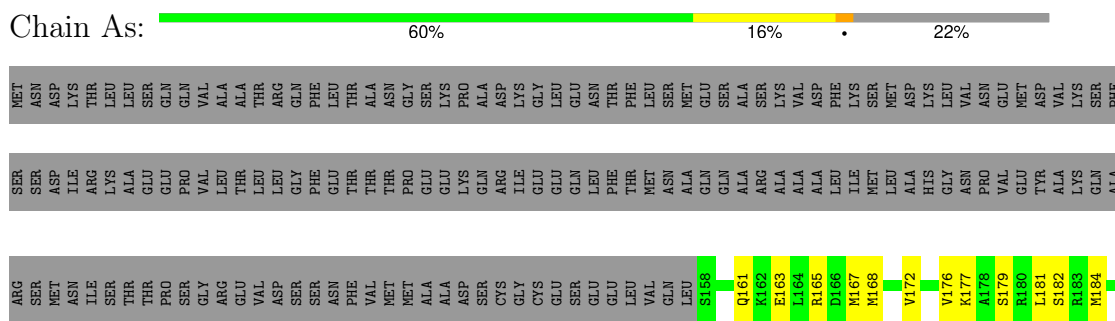
3 Residue-property plots

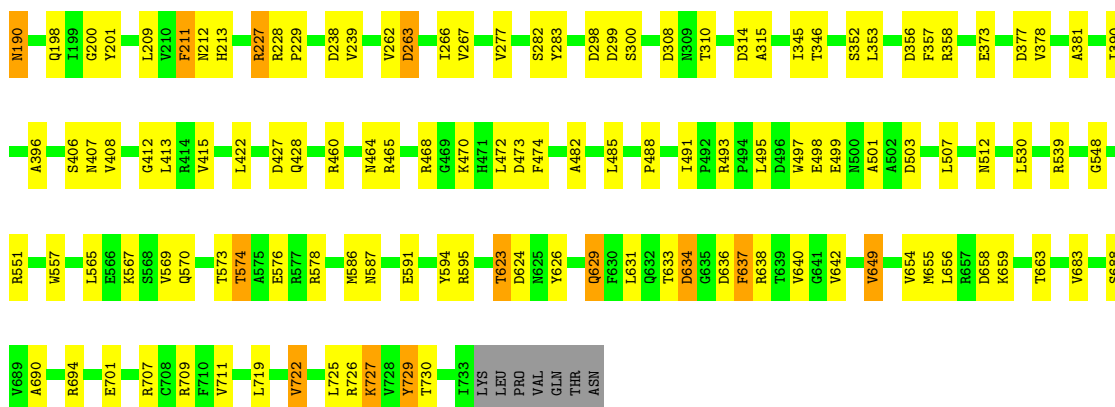
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Major capsid protein

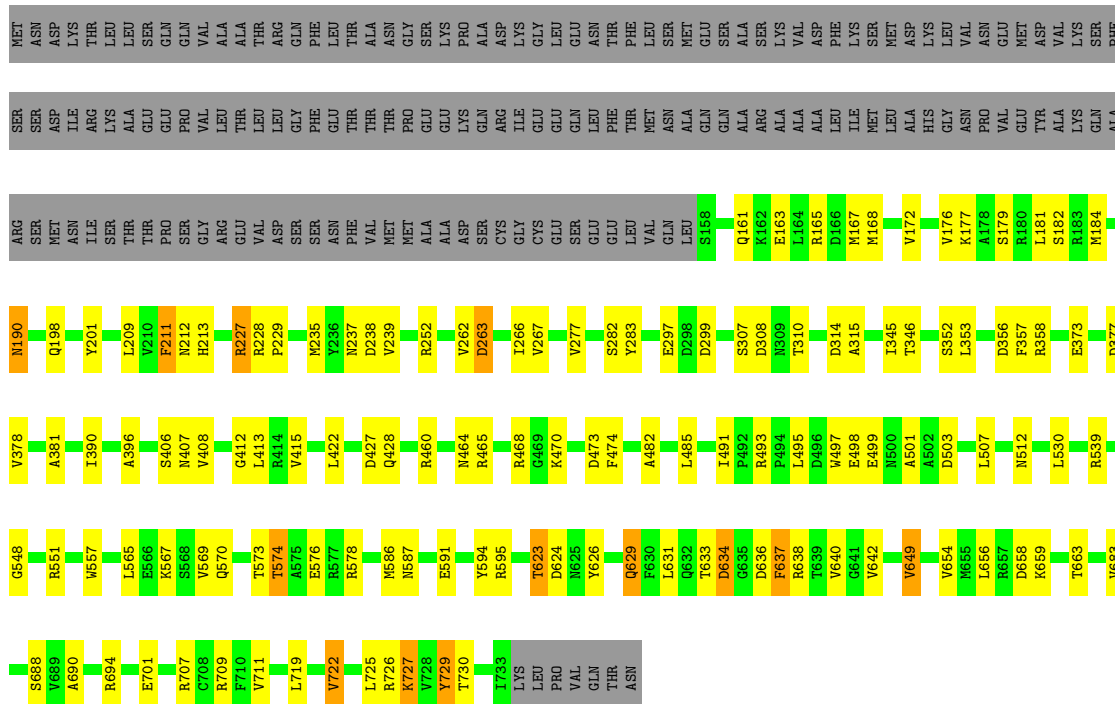


• Molecule 1: Major capsid protein

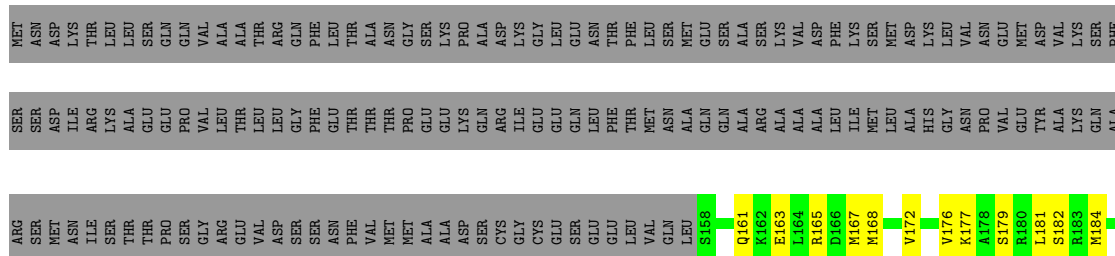


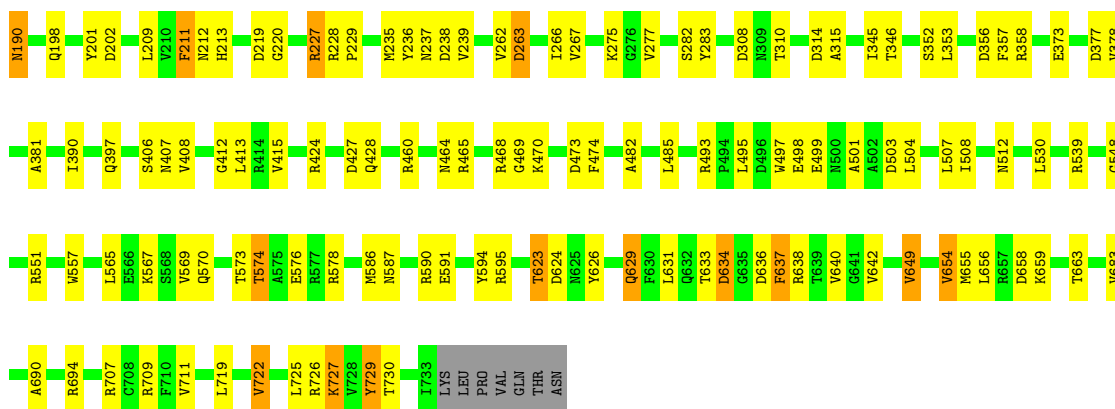


- Molecule 1: Major capsid protein

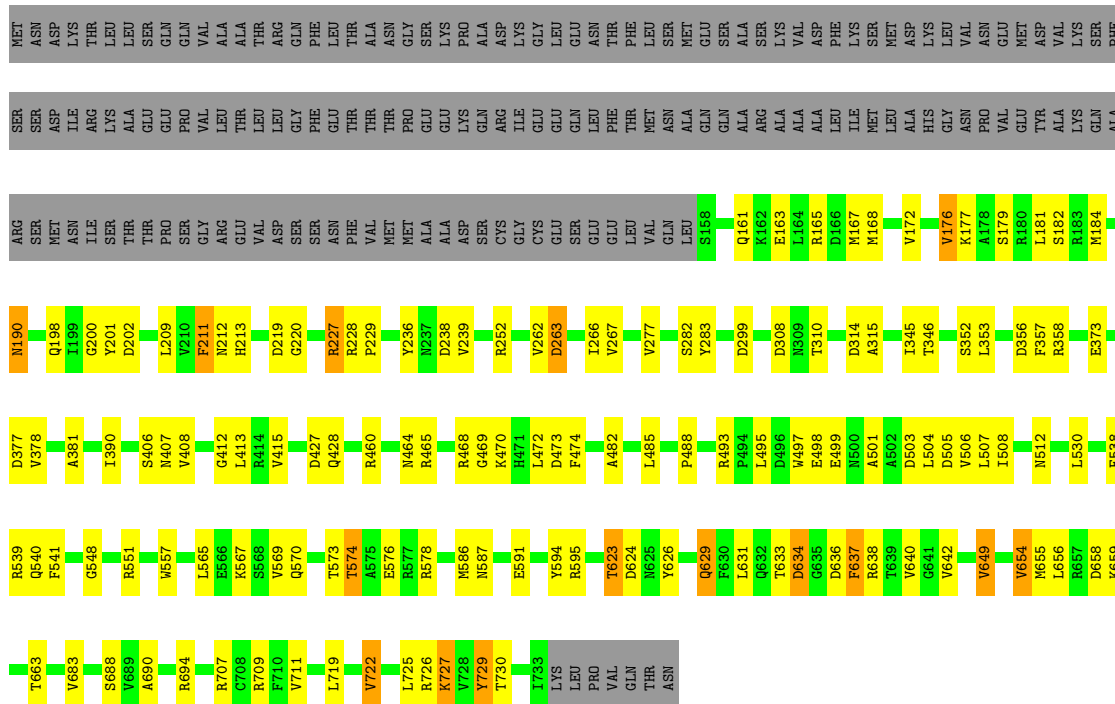


- Molecule 1: Major capsid protein

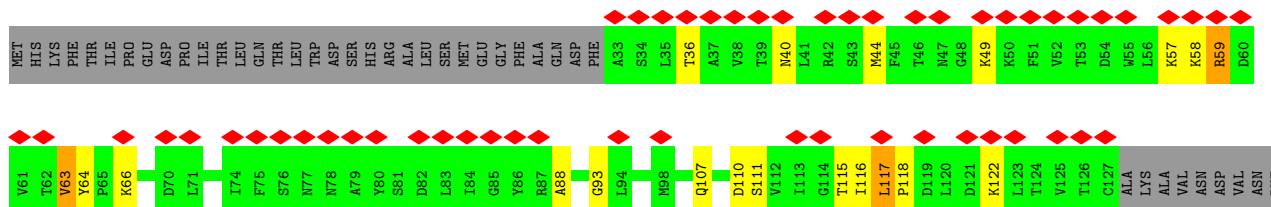
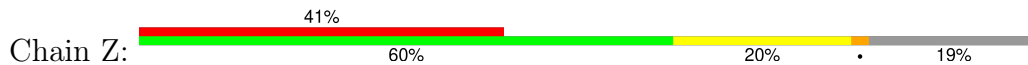


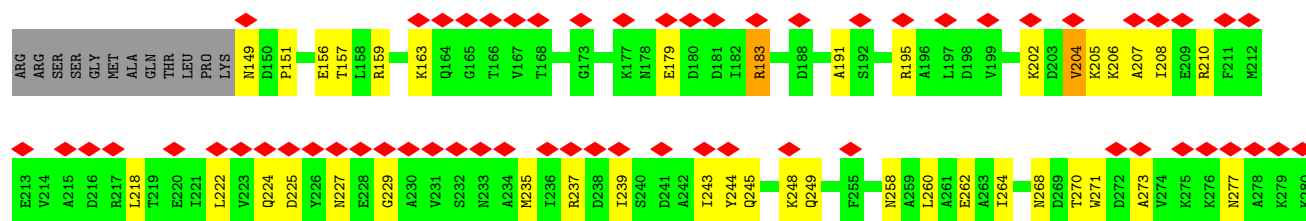


- Molecule 1: Major capsid protein

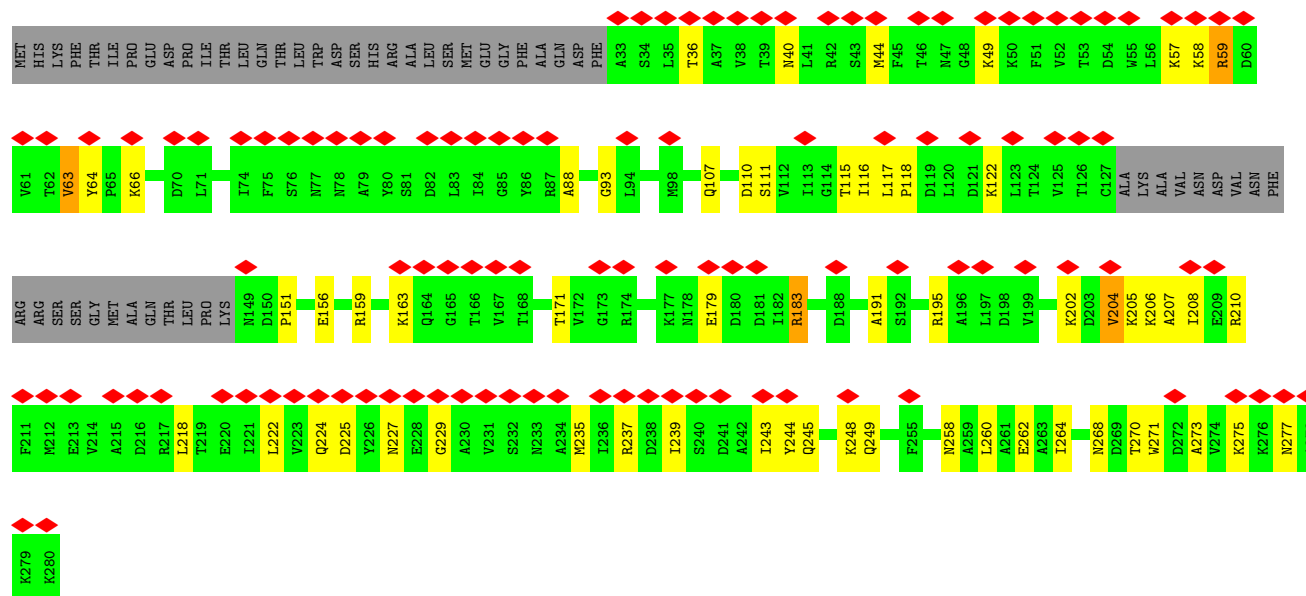


- Molecule 2: PVC Protein gp192

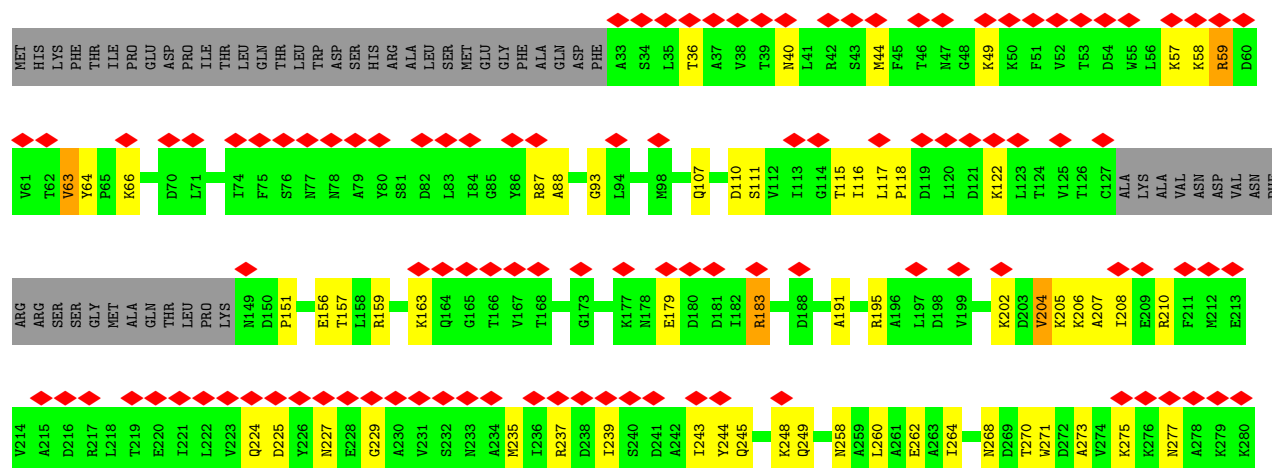




• Molecule 2: PVC Protein gp192

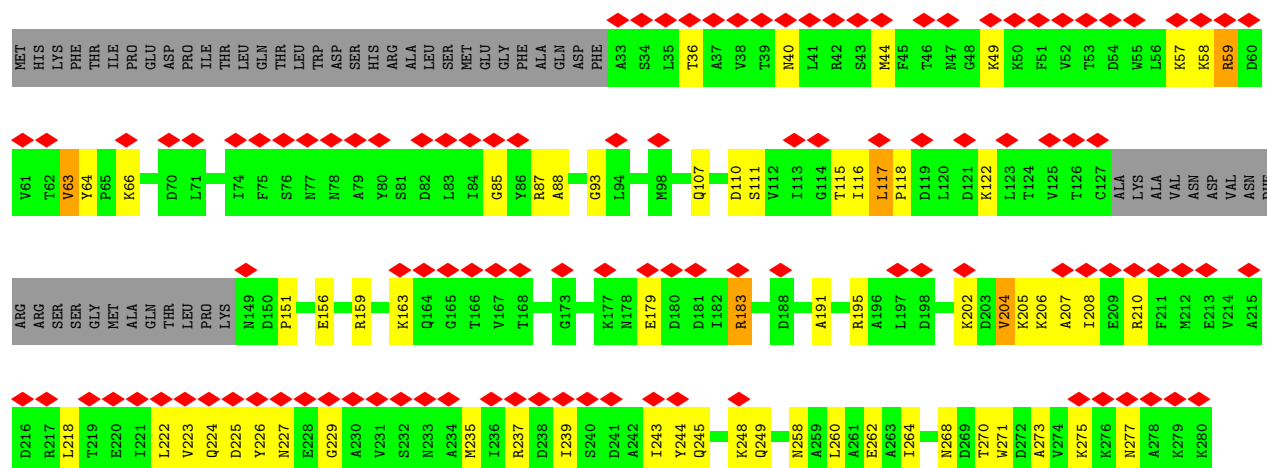


• Molecule 2: PVC Protein gp192

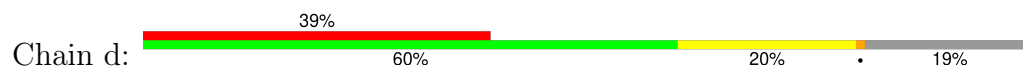


• Molecule 2: PVC Protein gp192

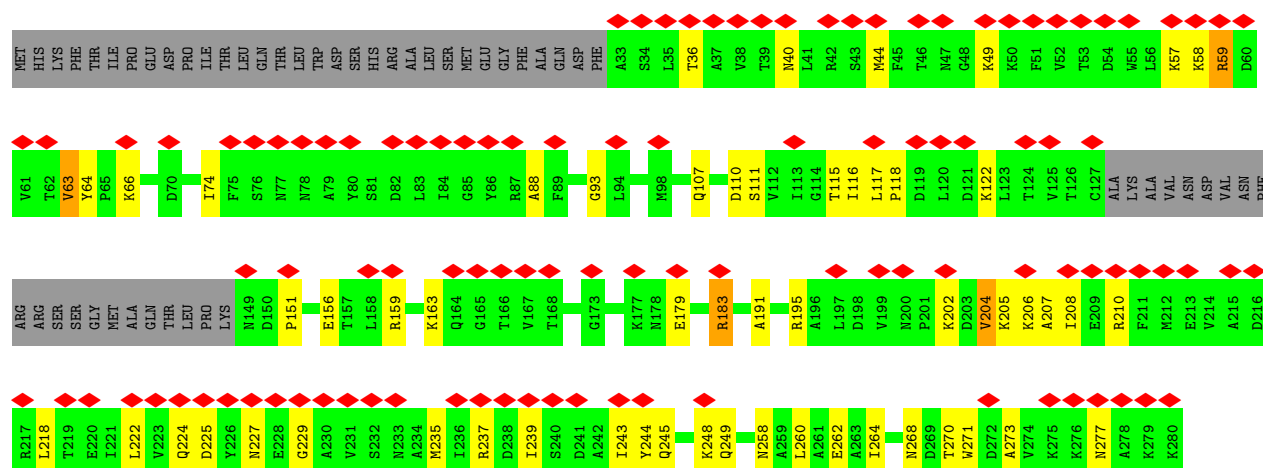




• Molecule 2: PVC Protein gp192



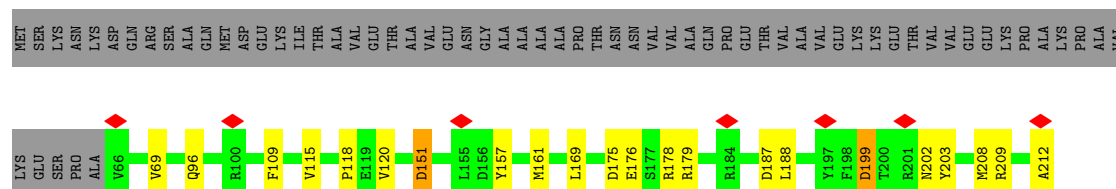
Chain d:



• Molecule 3: Capsid Decorator gp77



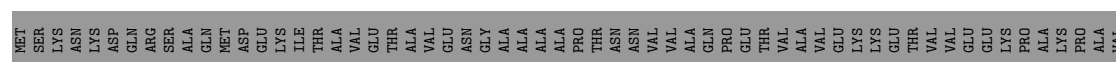
Chain A:



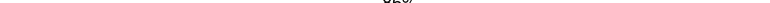
• Molecule 3: Capsid Decorator gp77



Chain G:



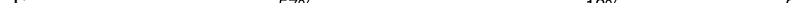
MET
SER
E3
D77
K78
T79
E82
E91
G98
SER
SER
PRO
LYS
THR
GLU

- Chain T:  86% 7% 8%

MET
SER
E3
F26
D51
D77
K78
T79
E82
V88
E91
G98
SER
SER
PRO
LYS
THR
GLU

- Chain e: 89% • 8%

Amino Acid	Approximate Information Content (bits)
MET	0.02
SER	0.02
E3	0.68
D77	0.38
K78	0.65
T79	0.38
E82	0.68
G98	0.68
SER	0.02
SER	0.02
PRO	0.02
LYS	0.02
THR	0.02
GLU	0.02

- Chain Cj: 

[illegible]

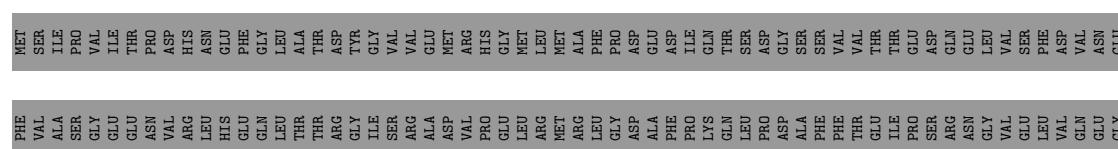
Label	Value	Color	Category
PHE	136	Grey	Amino Acids
VAL	141	Green	
ALA	142	Green	
LYS	143	Green	
VAL	150	Green	
SER	162	Green	
LYS	165	Green	
LEU	166	Green	
PHE	167	Green	
VAL	168	Green	
ASP	169	Green	Vitamins
GLY	170	Green	
ALA	171	Green	
K134	172	Green	
K135	173	Green	
V136	174	Green	
K141	175	Green	
I142	176	Green	
I143	177	Green	
F150	178	Green	
Y162	179	Green	Minerals
T165	180	Green	
N166	181	Green	
K167	182	Green	
F168	183	Green	
I169	184	Green	
A170	185	Green	
T171	186	Green	
T172	187	Green	
D173	188	Green	
D174	189	Green	Enzymes
I175	190	Green	
I176	191	Green	
K177	192	Green	
F178	193	Green	
V179	194	Green	
I180	195	Green	
D181	196	Green	
D186	197	Green	
R189	198	Green	
L194	199	Green	Other
T199	200	Green	
D202	201	Green	
S212	202	Green	
A213	203	Green	
L214	204	Green	
A220	205	Green	
N223	206	Green	

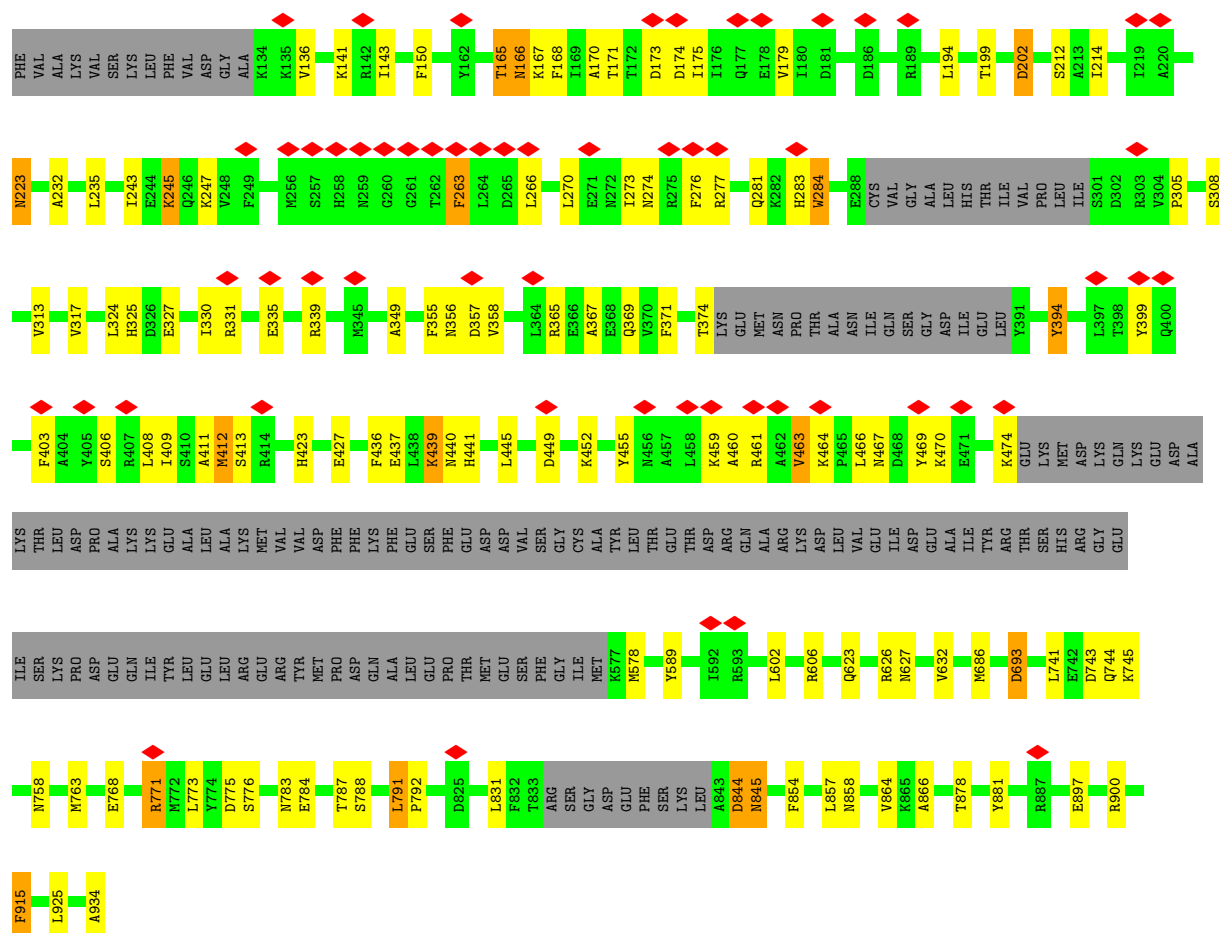
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A	V313	10	Green
	V317	10	Yellow
	L324	10	Yellow
	H325	10	Yellow
	H326	10	Yellow
	E327	10	Yellow
	I330	10	Yellow
	R331	10	Yellow
	E336	10	Red
	R339	10	Red
B	M345	10	Red
	A349	10	Yellow
	F356	10	Yellow
	N356	10	Yellow
	D357	10	Red
	V358	10	Yellow
	R366	10	Yellow
	A367	10	Yellow
	E368	10	Yellow
	Q369	10	Yellow
C	V370	10	Yellow
	F371	10	Yellow
	T374	10	Yellow
	LYS	10	Grey
	GLU	10	Grey
	MET	10	Grey
	ASN	10	Grey
	PRO	10	Grey
	THR	10	Grey
	ALA	10	Grey
D	ILE	10	Grey
	ASN	10	Grey
	GLN	10	Grey
	SER	10	Grey
	GLY	10	Grey
	ASP	10	Grey
	ILE	10	Grey
	GLU	10	Grey
	LEU	10	Grey
	Y391	10	Green
E	Y394	10	Orange
	L397	10	Red
	T398	10	Yellow
	Y399	10	Red
	Q400	10	Red

F403	F404	Y405	S406	R407	L408	I409	S410	A411	M412	S413	H423	E427	R434	A435	F436	A437	L438	K439	N440	H441	L445	D449	K452	Y455	N456	A457	L458	K459	A460	R461	A462	F463	K464	F465	L466	Y469	K470	E471	K472	F473	K474	GLU	LYS	MET	ASP	LYS	GLN	LYS	GLU	ASP
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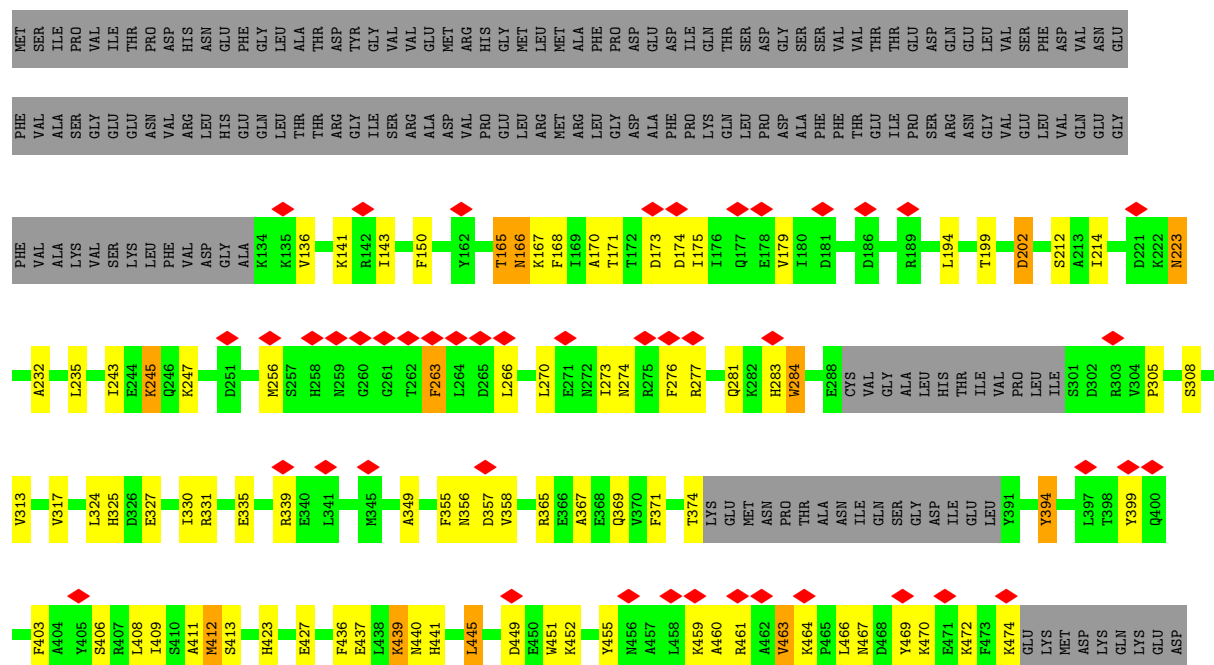
LYS	THR	LEU	ASP	PRO	ALA	LYS	LYS	GLU	ALA	LEU	ALA	LYS	MET	VAL	VAL	ASP	PHE	PHE	LYS	PHE	SER	GLU	GLY	CYS	TYR	THR	THR	ASP	ARG	GLN	ALA	ARG	LYS	ASP	LEU	VAL	GLU	ILE	ASP	GLU	ALA	ILE	TYR	THR	SER	HIS	ARG	GLY
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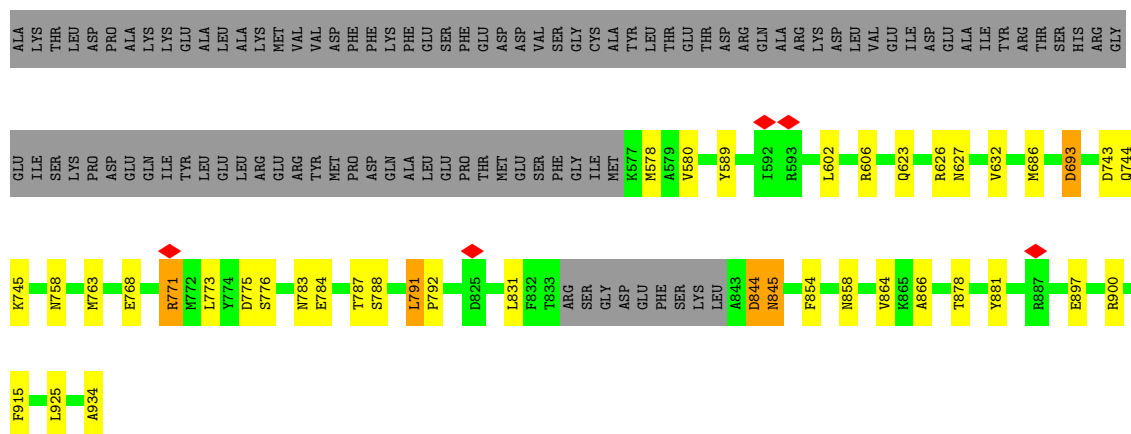
ILE	SER	LYS	PRO	ASP	GLU	GLN	ILE	TYR	LEU	GLU	LEU	ARG	GLU	ARG	TYR	MET	PRO	ASP	GLN	ALA	LEU	GLU	PRO	THR	MET	GLU	SER	PHE	GLY	ILE	MET	R577	R578	Y589	R592	R593	L602	R606	Q623	R626	N627	V632	M686	D693	D743	Q744	K745
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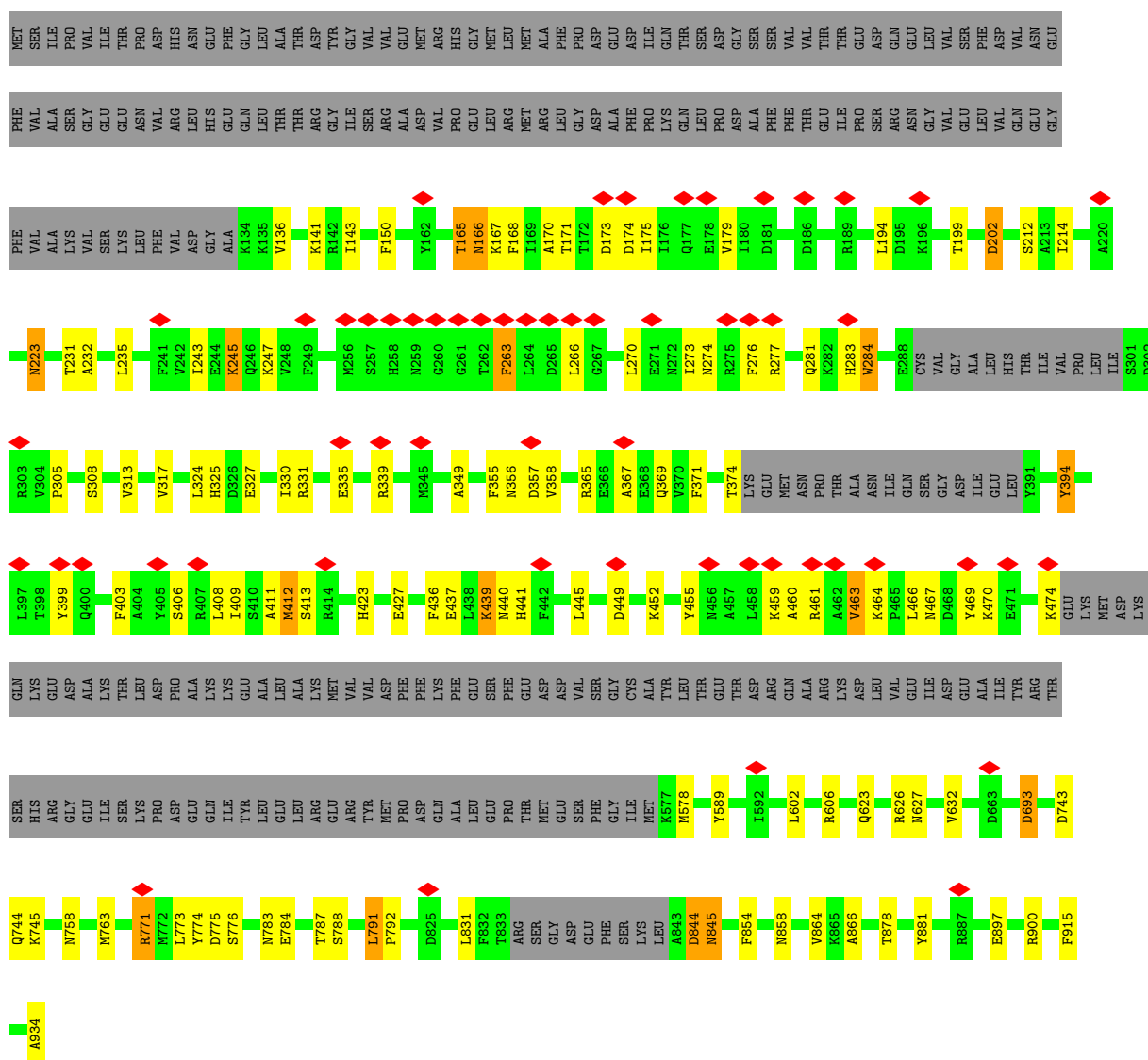


• Molecule 5: PVC Protein gp65

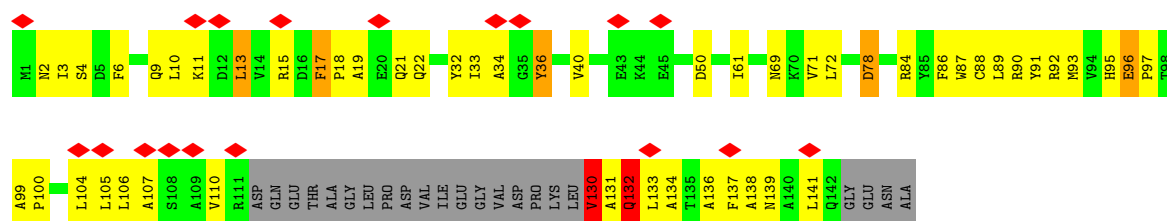




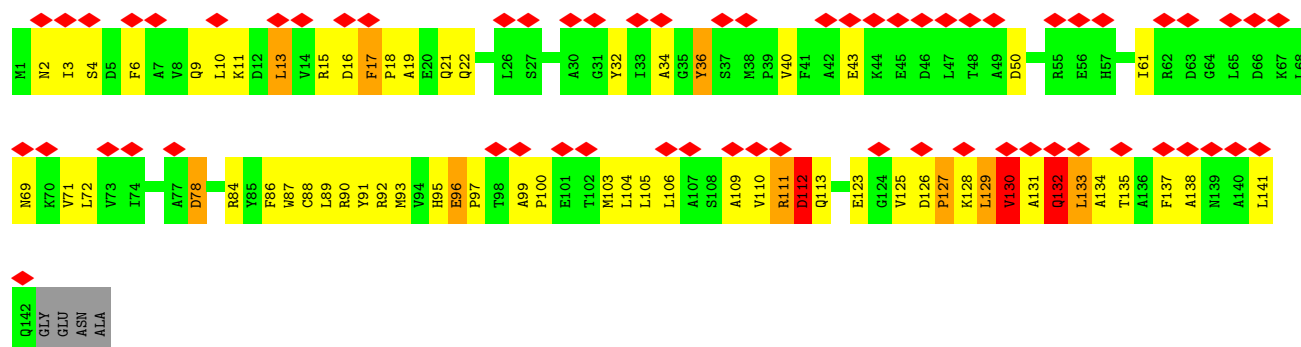
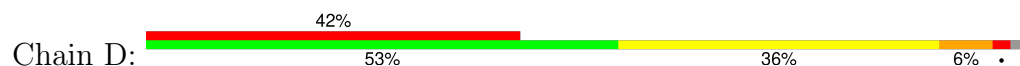
• Molecule 5: PVC Protein gp65



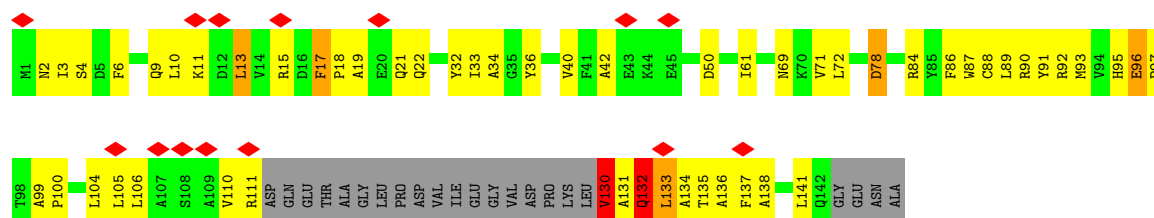
• Molecule 6: PVC Protein gp66



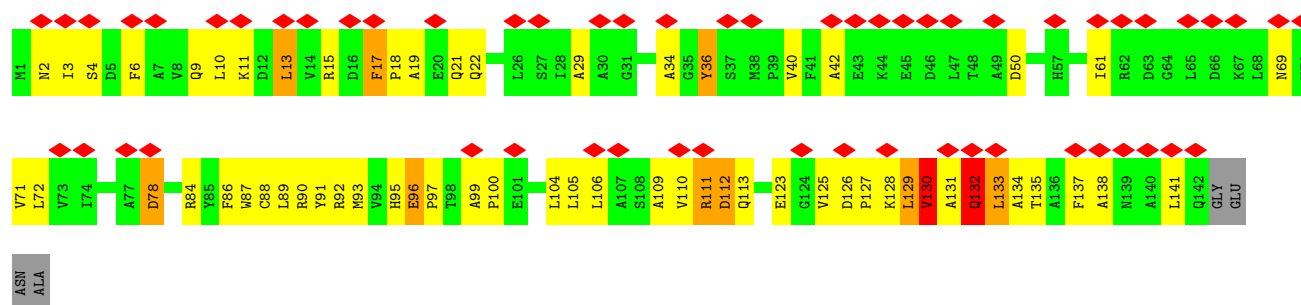
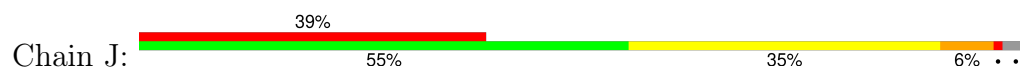
• Molecule 6: PVC Protein gp66



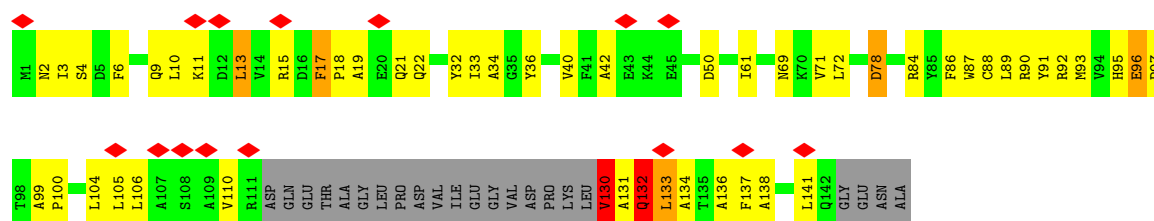
• Molecule 6: PVC Protein gp66



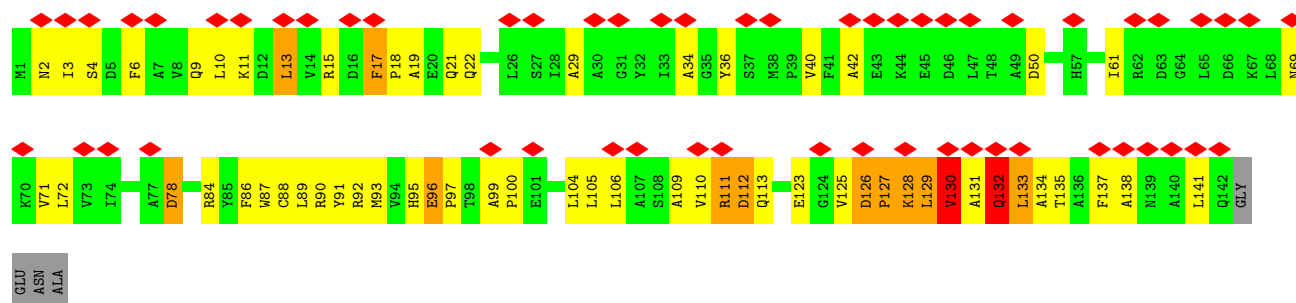
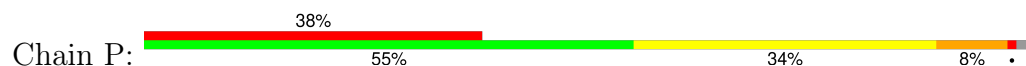
• Molecule 6: PVC Protein gp66



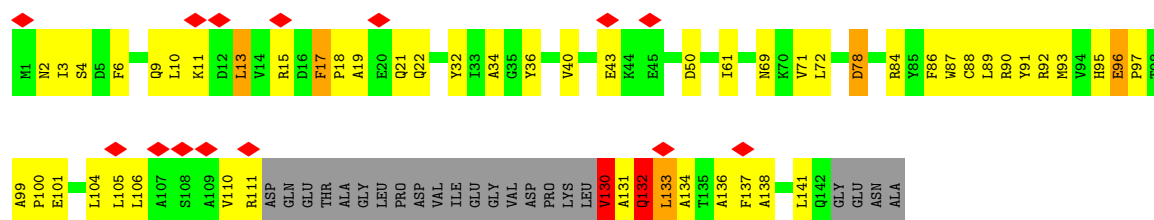
• Molecule 6: PVC Protein gp66



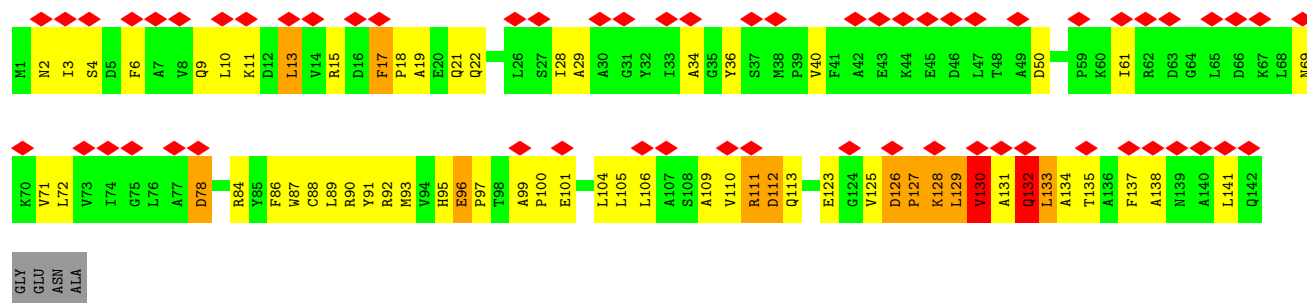
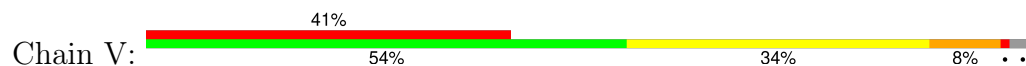
• Molecule 6: PVC Protein gp66



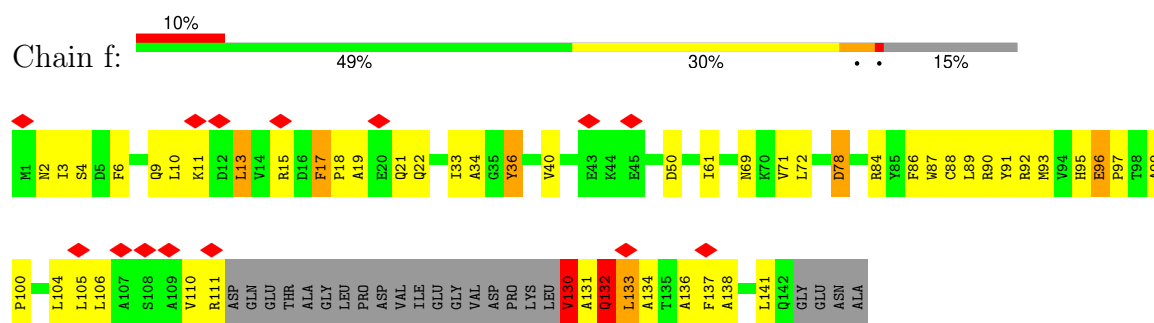
• Molecule 6: PVC Protein gp66



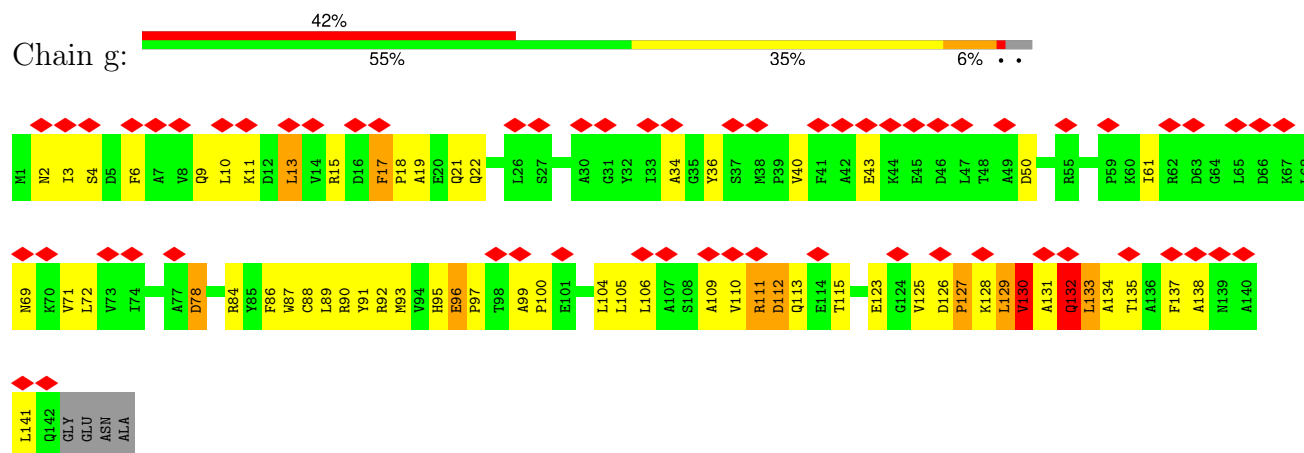
• Molecule 6: PVC Protein gp66



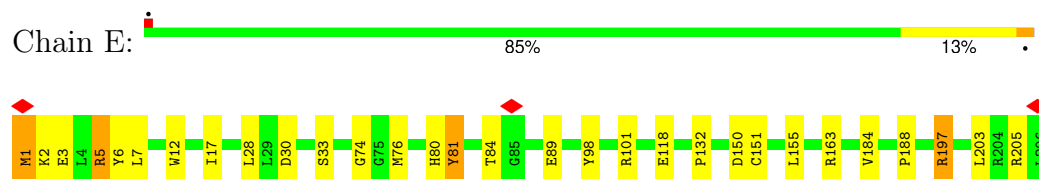
• Molecule 6: PVC Protein gp66



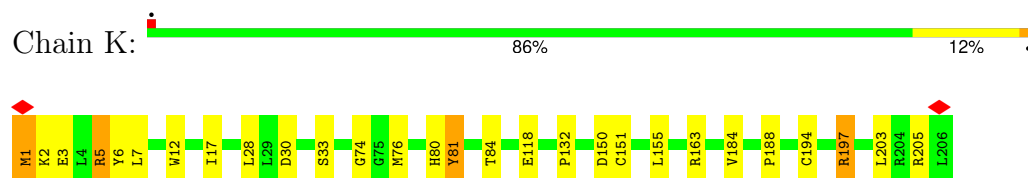
- Molecule 6: PVC Protein gp66



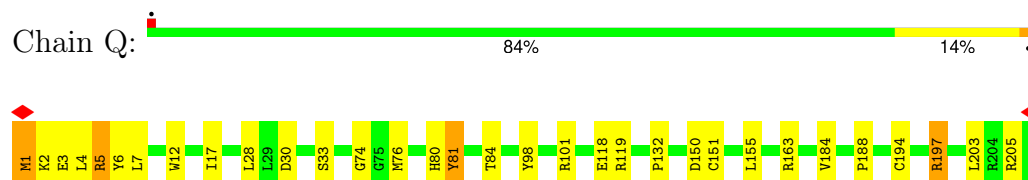
- Molecule 7: PVC Protein gp42



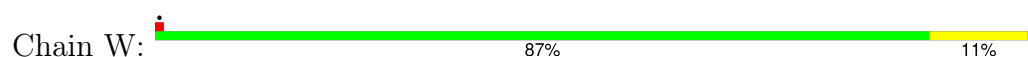
- Molecule 7: PVC Protein gp42

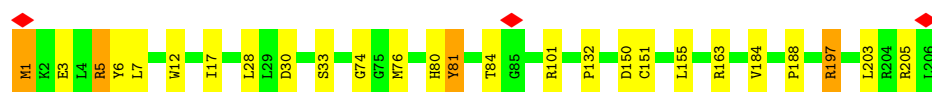


- Molecule 7: PVC Protein gp42

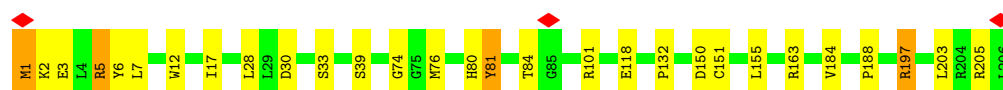
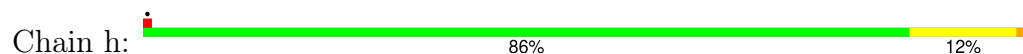


- Molecule 7: PVC Protein gp42

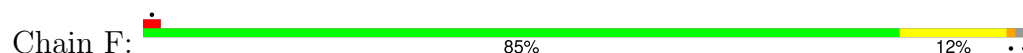




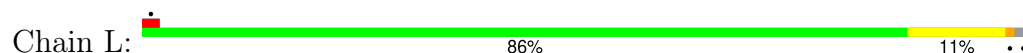
• Molecule 7: PVC Protein gp42



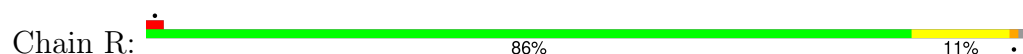
• Molecule 8: PVC Protein gp59



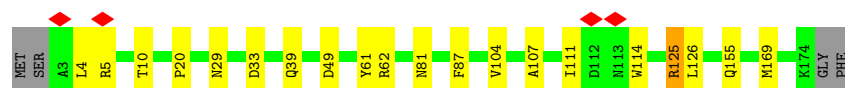
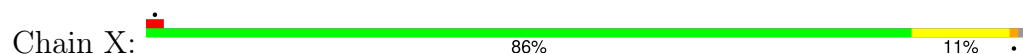
• Molecule 8: PVC Protein gp59



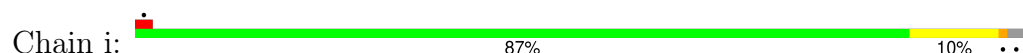
• Molecule 8: PVC Protein gp59



• Molecule 8: PVC Protein gp59



• Molecule 8: PVC Protein gp59



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C5	Depositor
Number of particles used	57747	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOCONTINUUM (6k x 4k)	Depositor
Maximum map value	0.714	Depositor
Minimum map value	-0.337	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.041	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	672.0, 672.0, 672.0	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.4, 1.4, 1.4	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	Ar	0.12	0/4676	0.37	0/6330
1	As	0.12	0/4676	0.37	0/6330
1	At	0.12	0/4676	0.37	0/6330
1	Au	0.12	0/4676	0.37	0/6330
1	Av	0.12	0/4676	0.37	0/6330
2	Z	0.17	0/1811	0.46	0/2454
2	a	0.17	0/1811	0.46	0/2454
2	b	0.17	0/1811	0.46	0/2454
2	c	0.17	0/1811	0.46	0/2454
2	d	0.17	0/1811	0.46	0/2454
3	A	0.08	0/1224	0.22	0/1656
3	G	0.08	0/1224	0.21	0/1656
3	M	0.08	0/1224	0.22	0/1656
3	S	0.08	0/1224	0.22	0/1656
3	Y	0.08	0/1224	0.22	0/1656
4	B	0.07	0/766	0.18	0/1027
4	H	0.07	0/766	0.18	0/1027
4	N	0.06	0/766	0.18	0/1027
4	T	0.06	0/766	0.18	0/1027
4	e	0.06	0/766	0.18	0/1027
5	Cj	0.11	0/5481	0.28	2/7397 (0.0%)
5	Ck	0.11	0/5481	0.28	2/7397 (0.0%)
5	Cl	0.11	0/5481	0.28	2/7397 (0.0%)
5	Cm	0.11	0/5481	0.28	2/7397 (0.0%)
5	Cn	0.11	0/5481	0.28	2/7397 (0.0%)
6	C	0.23	0/988	0.79	4/1339 (0.3%)
6	D	0.32	0/1098	0.98	11/1492 (0.7%)
6	I	0.23	0/988	0.79	4/1339 (0.3%)
6	J	0.32	0/1098	0.96	9/1492 (0.6%)
6	O	0.23	0/988	0.78	4/1339 (0.3%)
6	P	0.32	0/1098	0.96	11/1492 (0.7%)
6	U	0.23	0/988	0.79	4/1339 (0.3%)
6	V	0.33	0/1098	0.98	12/1492 (0.8%)
6	f	0.23	0/988	0.79	4/1339 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
6	g	0.31	0/1098	0.96	10/1492 (0.7%)
7	E	0.11	0/1669	0.38	0/2277
7	K	0.11	0/1669	0.38	0/2277
7	Q	0.11	0/1669	0.38	0/2277
7	W	0.11	0/1669	0.38	0/2277
7	h	0.11	0/1669	0.38	0/2277
8	F	0.09	0/1433	0.24	0/1947
8	L	0.09	0/1433	0.24	0/1947
8	R	0.09	0/1433	0.24	0/1947
8	X	0.09	0/1433	0.24	0/1947
8	i	0.09	0/1433	0.24	0/1947
All	All	0.14	0/95730	0.43	83/129595 (0.1%)

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
2	Z	0	3
2	a	0	3
2	b	0	3
2	c	0	3
2	d	0	3
6	C	0	1
6	D	0	1
6	I	0	1
6	J	0	1
6	O	0	1
6	P	0	1
6	U	0	1
6	V	0	1
6	f	0	1
6	g	0	1
All	All	0	25

There are no bond length outliers.

All (83) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	g	129	LEU	CA-C-N	8.64	137.51	121.97
6	g	129	LEU	C-N-CA	8.64	137.51	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	D	129	LEU	CA-C-N	8.24	136.81	121.97
6	D	129	LEU	C-N-CA	8.24	136.81	121.97
6	J	129	LEU	CA-C-N	8.17	136.68	121.97
6	J	129	LEU	C-N-CA	8.17	136.68	121.97
6	P	129	LEU	CA-C-N	7.82	136.04	121.97
6	P	129	LEU	C-N-CA	7.82	136.04	121.97
6	V	129	LEU	CA-C-N	7.29	135.09	121.97
6	V	129	LEU	C-N-CA	7.29	135.09	121.97
6	D	112	ASP	CA-C-N	-6.75	110.70	120.29
6	D	112	ASP	C-N-CA	-6.75	110.70	120.29
5	Cl	771	ARG	CA-CB-CG	6.53	127.16	114.10
5	Cj	771	ARG	CA-CB-CG	6.53	127.15	114.10
5	Cm	771	ARG	CA-CB-CG	6.52	127.14	114.10
5	Ck	771	ARG	CA-CB-CG	6.52	127.14	114.10
5	Cn	771	ARG	CA-CB-CG	6.51	127.12	114.10
6	V	128	LYS	N-CA-C	-6.26	104.54	111.36
6	V	126	ASP	CA-C-N	6.13	125.85	119.05
6	V	126	ASP	C-N-CA	6.13	125.85	119.05
6	P	133	LEU	N-CA-C	5.95	117.77	111.28
6	C	133	LEU	N-CA-C	5.94	117.76	111.28
6	f	133	LEU	N-CA-C	5.94	117.76	111.28
6	V	133	LEU	N-CA-C	5.93	117.75	111.28
6	I	133	LEU	N-CA-C	5.93	117.75	111.28
6	O	133	LEU	N-CA-C	5.92	117.73	111.28
6	g	133	LEU	N-CA-C	5.92	117.73	111.28
6	D	133	LEU	N-CA-C	5.91	117.72	111.28
6	J	133	LEU	N-CA-C	5.91	117.72	111.28
6	U	133	LEU	N-CA-C	5.90	117.71	111.28
6	O	132	GLN	CA-C-N	5.66	127.87	120.28
6	O	132	GLN	C-N-CA	5.66	127.87	120.28
6	f	132	GLN	CA-C-N	5.66	127.86	120.28
6	f	132	GLN	C-N-CA	5.66	127.86	120.28
6	g	126	ASP	CA-C-N	5.66	125.50	119.28
6	g	126	ASP	C-N-CA	5.66	125.50	119.28
6	J	132	GLN	CA-C-N	5.65	127.86	120.28
6	J	132	GLN	C-N-CA	5.65	127.86	120.28
6	V	132	GLN	CA-C-N	5.64	127.84	120.28
6	V	132	GLN	C-N-CA	5.64	127.84	120.28
6	g	132	GLN	CA-C-N	5.64	127.84	120.28
6	g	132	GLN	C-N-CA	5.64	127.84	120.28
6	I	132	GLN	CA-C-N	5.64	127.84	120.28
6	I	132	GLN	C-N-CA	5.64	127.84	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	P	132	GLN	CA-C-N	5.63	127.82	120.28
6	P	132	GLN	C-N-CA	5.63	127.82	120.28
6	U	132	GLN	CA-C-N	5.63	127.82	120.28
6	U	132	GLN	C-N-CA	5.63	127.82	120.28
6	C	132	GLN	CA-C-N	5.62	127.81	120.28
6	C	132	GLN	C-N-CA	5.62	127.81	120.28
6	P	126	ASP	CA-C-N	5.62	125.46	119.28
6	P	126	ASP	C-N-CA	5.62	125.46	119.28
6	D	132	GLN	CA-C-N	5.61	127.80	120.28
6	D	132	GLN	C-N-CA	5.61	127.80	120.28
6	P	128	LYS	N-CA-C	-5.60	105.26	111.36
5	Cn	771	ARG	CB-CG-CD	-5.60	98.42	111.30
5	Cm	771	ARG	CB-CG-CD	-5.60	98.43	111.30
5	Cj	771	ARG	CB-CG-CD	-5.58	98.45	111.30
5	Cl	771	ARG	CB-CG-CD	-5.58	98.46	111.30
5	Ck	771	ARG	CB-CG-CD	-5.57	98.49	111.30
6	P	126	ASP	N-CA-C	5.48	121.92	109.81
6	V	127	PRO	N-CA-C	5.45	121.10	113.53
6	D	13	LEU	CA-CB-CG	5.36	135.06	116.30
6	I	13	LEU	CA-CB-CG	5.36	135.05	116.30
6	g	127	PRO	N-CA-C	5.36	120.88	113.65
6	J	126	ASP	CA-C-N	5.35	125.17	119.28
6	J	126	ASP	C-N-CA	5.35	125.17	119.28
6	J	13	LEU	CA-CB-CG	5.35	135.02	116.30
6	U	13	LEU	CA-CB-CG	5.35	135.03	116.30
6	g	13	LEU	CA-CB-CG	5.35	135.02	116.30
6	V	13	LEU	CA-CB-CG	5.35	135.01	116.30
6	C	13	LEU	CA-CB-CG	5.34	135.01	116.30
6	P	13	LEU	CA-CB-CG	5.34	135.01	116.30
6	f	13	LEU	CA-CB-CG	5.34	135.00	116.30
6	V	126	ASP	N-CA-C	5.34	121.61	109.81
6	O	13	LEU	CA-CB-CG	5.34	134.98	116.30
6	D	126	ASP	CA-C-N	5.31	125.12	119.28
6	D	126	ASP	C-N-CA	5.31	125.12	119.28
6	J	126	ASP	N-CA-C	5.30	121.51	109.81
6	V	127	PRO	CB-CA-C	-5.07	104.26	112.62
6	P	127	PRO	N-CA-C	5.04	120.46	113.65
6	g	126	ASP	N-CA-C	5.03	120.93	109.81
6	D	127	PRO	N-CA-C	5.02	120.42	113.65

There are no chirality outliers.

All (25) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
6	C	130	VAL	Peptide
6	D	130	VAL	Peptide
6	I	130	VAL	Peptide
6	J	130	VAL	Peptide
6	O	130	VAL	Peptide
6	P	130	VAL	Peptide
6	U	130	VAL	Peptide
6	V	130	VAL	Peptide
2	Z	183	ARG	Sidechain
2	Z	237	ARG	Sidechain
2	Z	59	ARG	Sidechain
2	a	183	ARG	Sidechain
2	a	237	ARG	Sidechain
2	a	59	ARG	Sidechain
2	b	183	ARG	Sidechain
2	b	237	ARG	Sidechain
2	b	59	ARG	Sidechain
2	c	183	ARG	Sidechain
2	c	237	ARG	Sidechain
2	c	59	ARG	Sidechain
2	d	183	ARG	Sidechain
2	d	237	ARG	Sidechain
2	d	59	ARG	Sidechain
6	f	130	VAL	Peptide
6	g	130	VAL	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	Ar	4593	0	4562	92	0
1	As	4593	0	4562	91	0
1	At	4593	0	4562	90	0
1	Au	4593	0	4562	102	0
1	Av	4593	0	4562	103	0
2	Z	1786	0	1795	38	0
2	a	1786	0	1795	39	0
2	b	1786	0	1795	38	0
2	c	1786	0	1795	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	d	1786	0	1795	37	0
3	A	1198	0	1190	12	0
3	G	1198	0	1190	13	0
3	M	1198	0	1190	12	0
3	S	1198	0	1190	11	0
3	Y	1198	0	1190	12	0
4	B	759	0	770	3	0
4	H	759	0	770	3	0
4	N	759	0	770	3	0
4	T	759	0	770	7	0
4	e	759	0	770	2	0
5	Cj	5383	0	5418	74	0
5	Ck	5383	0	5418	80	0
5	Cl	5383	0	5418	79	0
5	Cm	5383	0	5418	84	0
5	Cn	5383	0	5418	74	0
6	C	971	0	989	72	0
6	D	1079	0	1073	94	0
6	I	971	0	989	58	0
6	J	1079	0	1073	82	0
6	O	971	0	989	63	0
6	P	1079	0	1073	80	0
6	U	971	0	989	50	0
6	V	1079	0	1073	75	0
6	f	971	0	989	50	0
6	g	1079	0	1073	69	0
7	E	1629	0	1559	34	0
7	K	1629	0	1559	29	0
7	Q	1629	0	1559	36	0
7	W	1629	0	1559	28	0
7	h	1629	0	1559	31	0
8	F	1400	0	1347	20	0
8	L	1400	0	1347	18	0
8	R	1400	0	1347	22	0
8	X	1400	0	1347	18	0
8	i	1400	0	1347	17	0
All	All	93990	0	93515	1750	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 9.

All (1750) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:129:LEU:HB3	6:D:132:GLN:HA	1.25	1.17
6:J:129:LEU:HB3	6:J:132:GLN:HA	1.26	1.16
6:P:129:LEU:HB3	6:P:132:GLN:HA	1.24	1.15
6:D:127:PRO:HG3	5:Cn:357:ASP:H	1.03	1.14
6:I:133:LEU:HD22	6:J:29:ALA:HB2	1.22	1.13
6:g:129:LEU:HB3	6:g:132:GLN:HA	1.28	1.12
6:V:129:LEU:HB3	6:V:132:GLN:HA	1.21	1.11
5:Cm:357:ASP:H	6:g:127:PRO:HG3	1.05	1.08
5:Cj:357:ASP:H	6:J:127:PRO:HG3	0.97	1.06
5:Cl:357:ASP:H	6:V:127:PRO:HG3	0.90	1.05
6:C:13:LEU:HD12	6:D:132:GLN:OE1	1.57	1.02
5:Ck:357:ASP:H	6:P:127:PRO:HG3	0.90	1.02
5:Cl:357:ASP:N	6:V:127:PRO:HG3	1.74	1.00
5:Ck:357:ASP:N	6:P:127:PRO:HG3	1.76	0.99
6:O:133:LEU:HD22	6:P:29:ALA:HB2	1.47	0.96
5:Cj:357:ASP:N	6:J:127:PRO:HG3	1.82	0.94
5:Cl:357:ASP:H	6:V:127:PRO:CG	1.78	0.94
5:Cm:356:ASN:ND2	6:g:123:GLU:O	2.00	0.93
6:I:32:TYR:CE1	6:J:106:LEU:HD11	2.02	0.93
6:O:13:LEU:HD12	6:P:132:GLN:OE1	1.69	0.92
6:D:127:PRO:HG3	5:Cn:357:ASP:N	1.85	0.92
5:Cm:357:ASP:N	6:g:127:PRO:HG3	1.85	0.92
6:D:127:PRO:HB3	5:Cn:358:VAL:HG23	1.52	0.91
6:V:129:LEU:O	6:V:130:VAL:HG22	1.71	0.89
6:V:129:LEU:O	6:V:134:ALA:N	2.04	0.89
6:f:36:TYR:HE2	6:g:106:LEU:HD13	1.37	0.89
6:D:43:GLU:OE2	2:c:87:ARG:HB2	1.72	0.89
6:V:129:LEU:HB3	6:V:132:GLN:CA	2.02	0.89
6:D:129:LEU:O	6:D:134:ALA:N	2.07	0.88
6:P:129:LEU:O	6:P:134:ALA:N	2.05	0.88
6:g:129:LEU:O	6:g:134:ALA:N	2.07	0.87
6:D:43:GLU:HB3	2:c:85:GLY:O	1.73	0.87
6:D:129:LEU:HB3	6:D:132:GLN:CA	2.05	0.87
6:J:129:LEU:O	6:J:134:ALA:N	2.06	0.87
6:P:129:LEU:HB3	6:P:132:GLN:CA	2.05	0.86
6:g:127:PRO:HA	6:g:130:VAL:O	1.76	0.86
6:I:42:ALA:HB3	6:J:42:ALA:HB2	1.57	0.86
6:J:129:LEU:HB3	6:J:132:GLN:CA	2.05	0.86
6:P:129:LEU:O	6:P:130:VAL:HG22	1.76	0.86
6:f:13:LEU:HD12	6:g:132:GLN:OE1	1.76	0.85
6:g:129:LEU:HB3	6:g:132:GLN:CA	2.07	0.85
7:Q:205:ARG:HH12	8:X:20:PRO:HG2	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:129:LEU:HD22	6:g:132:GLN:HG2	1.60	0.84
5:Cm:358:VAL:HG23	6:g:127:PRO:HB3	1.60	0.84
6:V:129:LEU:CB	6:V:132:GLN:HA	2.07	0.83
6:P:125:VAL:HG12	6:P:131:ALA:O	1.78	0.83
6:g:129:LEU:CB	6:g:132:GLN:HA	2.07	0.83
6:U:133:LEU:HD22	6:V:29:ALA:HB2	1.59	0.83
6:J:129:LEU:HD22	6:J:132:GLN:HG2	1.61	0.83
6:J:129:LEU:O	6:J:130:VAL:HG22	1.79	0.83
6:V:130:VAL:HG22	6:V:134:ALA:H	1.44	0.82
6:D:129:LEU:CB	6:D:132:GLN:HA	2.08	0.82
6:D:129:LEU:O	6:D:130:VAL:HG22	1.79	0.82
7:K:205:ARG:HH12	8:R:20:PRO:HG2	1.44	0.82
6:J:129:LEU:CB	6:J:132:GLN:HA	2.08	0.82
6:V:125:VAL:HG12	6:V:131:ALA:O	1.80	0.82
6:P:130:VAL:HG22	6:P:134:ALA:H	1.44	0.82
6:C:141:LEU:HD12	7:E:101:ARG:HH22	1.44	0.81
5:Ck:356:ASN:ND2	6:P:123:GLU:O	2.13	0.81
6:J:125:VAL:HG12	6:J:131:ALA:O	1.80	0.81
6:J:130:VAL:HG22	6:J:134:ALA:H	1.44	0.81
6:O:130:VAL:HG22	6:O:134:ALA:H	1.44	0.81
6:D:130:VAL:HG22	6:D:134:ALA:H	1.44	0.81
6:D:129:LEU:HD22	6:D:132:GLN:HG2	1.61	0.81
6:I:130:VAL:HG22	6:I:134:ALA:H	1.44	0.81
6:V:129:LEU:HD22	6:V:132:GLN:HG2	1.63	0.81
6:g:130:VAL:HG22	6:g:134:ALA:H	1.44	0.81
6:O:32:TYR:CE1	6:P:106:LEU:HD11	2.16	0.81
6:g:111:ARG:O	6:g:113:GLN:N	2.14	0.81
6:O:141:LEU:HD12	7:Q:101:ARG:HH22	1.44	0.80
6:D:125:VAL:HG12	6:D:131:ALA:O	1.79	0.80
6:C:130:VAL:HG22	6:C:134:ALA:H	1.45	0.80
6:P:129:LEU:CB	6:P:132:GLN:HA	2.08	0.80
6:U:130:VAL:HG22	6:U:134:ALA:H	1.44	0.79
6:f:130:VAL:HG22	6:f:134:ALA:H	1.44	0.79
6:I:32:TYR:HE1	6:J:106:LEU:HD11	1.45	0.78
6:P:129:LEU:HD22	6:P:132:GLN:HG2	1.63	0.78
6:g:129:LEU:O	6:g:130:VAL:HG22	1.83	0.78
6:J:111:ARG:O	6:J:113:GLN:N	2.17	0.78
7:W:205:ARG:HH12	8:i:20:PRO:HG2	1.48	0.78
6:P:111:ARG:O	6:P:113:GLN:N	2.17	0.77
6:D:111:ARG:O	6:D:113:GLN:N	2.18	0.77
6:V:111:ARG:O	6:V:113:GLN:N	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:123:GLU:O	5:Cn:356:ASN:ND2	2.18	0.77
6:C:33:ILE:HG12	6:D:133:LEU:HD13	1.65	0.77
6:O:33:ILE:HD11	6:P:133:LEU:HD22	1.67	0.76
5:Cj:357:ASP:H	6:J:127:PRO:CG	1.90	0.76
5:Cm:771:ARG:HH21	7:W:1:MET:N	1.84	0.76
6:g:125:VAL:HG12	6:g:131:ALA:O	1.84	0.76
5:Cl:356:ASN:ND2	6:V:123:GLU:O	2.18	0.76
6:I:13:LEU:HD12	6:J:132:GLN:OE1	1.84	0.76
7:Q:205:ARG:HH22	8:X:20:PRO:HD2	1.51	0.76
6:f:36:TYR:CE2	6:g:106:LEU:HD13	2.20	0.76
5:Cm:243:ILE:HG13	5:Cm:367:ALA:HB1	1.68	0.75
5:Cl:243:ILE:HG13	5:Cl:367:ALA:HB1	1.68	0.75
1:Ar:358:ARG:HG2	1:At:161:GLN:HE22	1.51	0.75
6:I:32:TYR:OH	6:J:106:LEU:HD21	1.86	0.74
5:Cn:243:ILE:HG13	5:Cn:367:ALA:HB1	1.68	0.74
6:I:136:ALA:HA	6:J:13:LEU:HD21	1.70	0.74
6:J:9:GLN:O	6:J:13:LEU:HB2	1.88	0.74
6:U:9:GLN:O	6:U:13:LEU:HB2	1.88	0.74
5:Cn:141:LYS:HG3	5:Cn:371:PHE:HZ	1.53	0.74
5:Cj:243:ILE:HG13	5:Cj:367:ALA:HB1	1.68	0.74
6:O:9:GLN:O	6:O:13:LEU:HB2	1.88	0.73
6:U:130:VAL:HG13	6:U:134:ALA:HB2	1.70	0.73
6:V:9:GLN:O	6:V:13:LEU:HB2	1.88	0.73
6:f:9:GLN:O	6:f:13:LEU:HB2	1.88	0.73
6:f:130:VAL:HG13	6:f:134:ALA:HB2	1.70	0.73
6:C:132:GLN:NE2	6:D:16:ASP:O	2.21	0.73
6:g:130:VAL:HG13	6:g:134:ALA:HB2	1.70	0.73
6:D:130:VAL:HG13	6:D:134:ALA:HB2	1.70	0.73
5:Ck:243:ILE:HG13	5:Ck:367:ALA:HB1	1.68	0.73
6:C:130:VAL:HG13	6:C:134:ALA:HB2	1.71	0.73
6:I:9:GLN:O	6:I:13:LEU:HB2	1.88	0.73
6:V:10:LEU:HD23	6:V:13:LEU:HD23	1.71	0.73
5:Cl:693:ASP:OD1	5:Cl:693:ASP:N	2.22	0.73
1:Au:587:ASN:ND2	1:Av:574:THR:O	2.21	0.73
5:Cm:141:LYS:HG3	5:Cm:371:PHE:HZ	1.53	0.73
6:V:130:VAL:HG13	6:V:134:ALA:HB2	1.71	0.73
6:D:10:LEU:HA	6:D:13:LEU:HD23	1.71	0.73
5:Ck:141:LYS:HG3	5:Ck:371:PHE:HZ	1.53	0.73
6:I:130:VAL:HG13	6:I:134:ALA:HB2	1.70	0.73
6:P:130:VAL:HG13	6:P:134:ALA:HB2	1.71	0.73
6:C:10:LEU:HD23	6:C:13:LEU:HD23	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cj:141:LYS:HG3	5:Cj:371:PHE:HZ	1.53	0.72
6:D:9:GLN:O	6:D:13:LEU:HB2	1.88	0.72
6:J:10:LEU:HA	6:J:13:LEU:HD23	1.71	0.72
6:g:93:MET:HE3	6:g:105:LEU:HD11	1.71	0.72
5:Cj:693:ASP:N	5:Cj:693:ASP:OD1	2.22	0.72
6:J:93:MET:HE3	6:J:105:LEU:HD11	1.71	0.72
6:O:130:VAL:HG13	6:O:134:ALA:HB2	1.70	0.72
6:f:10:LEU:HD23	6:f:13:LEU:HD23	1.71	0.72
6:I:10:LEU:HA	6:I:13:LEU:HD23	1.71	0.72
6:J:130:VAL:HG13	6:J:134:ALA:HB2	1.71	0.72
6:P:10:LEU:HA	6:P:13:LEU:HD23	1.71	0.72
6:P:10:LEU:HD23	6:P:13:LEU:HD23	1.71	0.72
6:C:93:MET:HE3	6:C:105:LEU:HD11	1.71	0.72
6:J:10:LEU:HD23	6:J:13:LEU:HD23	1.71	0.72
1:At:468:ARG:HH12	1:Au:694:ARG:HE	1.37	0.72
1:Ar:633:THR:O	1:Ar:638:ARG:NH1	2.23	0.72
6:C:10:LEU:HA	6:C:13:LEU:HD23	1.71	0.72
6:D:10:LEU:HD23	6:D:13:LEU:HD23	1.71	0.72
6:I:93:MET:HE3	6:I:105:LEU:HD11	1.71	0.72
1:At:468:ARG:NH1	1:Au:694:ARG:HE	1.86	0.72
1:Av:633:THR:O	1:Av:638:ARG:NH1	2.23	0.72
6:g:10:LEU:HD23	6:g:13:LEU:HD23	1.71	0.72
1:Au:201:TYR:HA	1:Av:167:MET:HE3	1.69	0.72
1:Au:633:THR:O	1:Au:638:ARG:NH1	2.23	0.72
6:g:10:LEU:HA	6:g:13:LEU:HD23	1.71	0.72
6:P:9:GLN:O	6:P:13:LEU:HB2	1.88	0.72
6:V:93:MET:HE3	6:V:105:LEU:HD11	1.71	0.72
6:U:10:LEU:HA	6:U:13:LEU:HD23	1.71	0.72
6:V:10:LEU:HA	6:V:13:LEU:HD23	1.71	0.72
6:g:9:GLN:O	6:g:13:LEU:HB2	1.88	0.72
6:C:9:GLN:O	6:C:13:LEU:HB2	1.88	0.72
1:At:587:ASN:ND2	1:Au:574:THR:O	2.22	0.72
6:U:10:LEU:HD23	6:U:13:LEU:HD23	1.71	0.72
6:f:93:MET:HE3	6:f:105:LEU:HD11	1.71	0.72
5:Cl:141:LYS:HG3	5:Cl:371:PHE:HZ	1.53	0.71
6:D:93:MET:HE3	6:D:105:LEU:HD11	1.71	0.71
6:O:93:MET:HE3	6:O:105:LEU:HD11	1.71	0.71
6:P:93:MET:HE3	6:P:105:LEU:HD11	1.71	0.71
1:As:633:THR:O	1:As:638:ARG:NH1	2.23	0.71
6:J:127:PRO:HA	6:J:130:VAL:O	1.90	0.71
1:As:161:GLN:HE22	1:Av:358:ARG:HG2	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:f:10:LEU:HA	6:f:13:LEU:HD23	1.71	0.71
1:At:633:THR:O	1:At:638:ARG:NH1	2.23	0.71
6:O:10:LEU:HA	6:O:13:LEU:HD23	1.71	0.71
5:Cn:771:ARG:HH21	7:h:1:MET:N	1.88	0.71
6:I:10:LEU:HD23	6:I:13:LEU:HD23	1.71	0.71
6:O:10:LEU:HD23	6:O:13:LEU:HD23	1.71	0.71
6:U:93:MET:HE3	6:U:105:LEU:HD11	1.71	0.71
1:Ar:594:TYR:OH	1:Ar:640:VAL:O	2.09	0.71
1:Ar:201:TYR:HA	1:As:167:MET:HE3	1.74	0.70
2:a:59:ARG:HH21	2:a:202:LYS:HE3	1.56	0.70
1:As:594:TYR:OH	1:As:640:VAL:O	2.09	0.70
1:At:358:ARG:HG2	1:Av:161:GLN:HE22	1.56	0.70
1:Ar:167:MET:HE3	1:Av:201:TYR:HA	1.71	0.70
2:Z:59:ARG:HH21	2:Z:202:LYS:HE3	1.56	0.70
5:Cn:693:ASP:N	5:Cn:693:ASP:OD1	2.22	0.70
5:Ck:693:ASP:N	5:Ck:693:ASP:OD1	2.22	0.70
1:Av:594:TYR:OH	1:Av:640:VAL:O	2.09	0.70
7:K:205:ARG:HH22	8:R:20:PRO:HD2	1.56	0.69
6:P:127:PRO:HA	6:P:130:VAL:O	1.92	0.69
1:Au:594:TYR:OH	1:Au:640:VAL:O	2.09	0.69
2:c:59:ARG:HH21	2:c:202:LYS:HE3	1.56	0.69
2:b:59:ARG:HH21	2:b:202:LYS:HE3	1.56	0.69
5:Cl:452:LYS:HA	5:Cl:455:TYR:HB3	1.74	0.69
2:d:59:ARG:HH21	2:d:202:LYS:HE3	1.56	0.69
2:a:191:ALA:HB1	2:a:195:ARG:HH12	1.58	0.69
6:I:33:ILE:HD11	6:J:133:LEU:HD22	1.72	0.69
6:I:97:PRO:HB3	6:J:36:TYR:CE1	2.28	0.69
1:At:594:TYR:OH	1:At:640:VAL:O	2.09	0.69
2:b:191:ALA:HB1	2:b:195:ARG:HH12	1.58	0.69
1:Ar:587:ASN:ND2	1:As:574:THR:O	2.25	0.69
5:Ck:452:LYS:HA	5:Ck:455:TYR:HB3	1.74	0.69
4:T:91:GLU:OE2	1:Av:236:TYR:OH	2.09	0.69
1:At:570:GLN:NE2	1:At:729:TYR:OH	2.26	0.69
1:Ar:161:GLN:HE22	1:Au:358:ARG:HG2	1.58	0.68
1:Av:570:GLN:NE2	1:Av:729:TYR:OH	2.26	0.68
2:Z:191:ALA:HB1	2:Z:195:ARG:HH12	1.58	0.68
2:b:116:ILE:HG23	2:b:117:LEU:HD22	1.75	0.68
2:d:191:ALA:HB1	2:d:195:ARG:HH12	1.58	0.68
5:Cj:459:LYS:O	5:Cj:463:VAL:HB	1.94	0.68
1:As:570:GLN:NE2	1:As:729:TYR:OH	2.26	0.68
2:a:116:ILE:HG23	2:a:117:LEU:HD22	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cl:436:PHE:O	5:Cl:440:ASN:ND2	2.23	0.68
5:Cn:452:LYS:HA	5:Cn:455:TYR:HB3	1.74	0.68
1:Ar:570:GLN:NE2	1:Ar:729:TYR:OH	2.26	0.68
5:Cj:436:PHE:O	5:Cj:440:ASN:ND2	2.23	0.68
6:I:133:LEU:CD2	6:J:29:ALA:HB2	2.10	0.68
6:V:129:LEU:HA	6:V:135:THR:H	1.59	0.68
6:I:133:LEU:HD22	6:J:29:ALA:CB	2.13	0.68
2:c:116:ILE:HG23	2:c:117:LEU:HD22	1.75	0.68
5:Cm:452:LYS:HA	5:Cm:455:TYR:HB3	1.75	0.68
5:Cn:459:LYS:O	5:Cn:463:VAL:HB	1.94	0.68
1:Au:427:ASP:OD1	1:Au:428:GLN:N	2.27	0.68
5:Cm:758:ASN:HB2	7:W:188:PRO:HB3	1.74	0.68
1:As:587:ASN:ND2	1:At:574:THR:O	2.26	0.68
1:Au:570:GLN:NE2	1:Au:729:TYR:OH	2.26	0.68
5:Cm:436:PHE:O	5:Cm:440:ASN:ND2	2.23	0.68
5:Cl:459:LYS:O	5:Cl:463:VAL:HB	1.94	0.67
1:Av:427:ASP:OD1	1:Av:428:GLN:N	2.27	0.67
1:As:427:ASP:OD1	1:As:428:GLN:N	2.27	0.67
5:Cn:436:PHE:O	5:Cn:440:ASN:ND2	2.23	0.67
5:Ck:459:LYS:O	5:Ck:463:VAL:HB	1.94	0.67
7:W:205:ARG:HH22	8:i:20:PRO:HD2	1.60	0.67
2:c:191:ALA:HB1	2:c:195:ARG:HH12	1.58	0.67
5:Cm:459:LYS:O	5:Cm:463:VAL:HB	1.94	0.67
5:Cj:452:LYS:HA	5:Cj:455:TYR:HB3	1.74	0.67
2:d:116:ILE:HG23	2:d:117:LEU:HD22	1.75	0.67
2:Z:116:ILE:HG23	2:Z:117:LEU:HD22	1.75	0.67
1:At:594:TYR:CE2	1:Au:629:GLN:HB3	2.30	0.67
5:Cm:693:ASP:N	5:Cm:693:ASP:OD1	2.22	0.67
1:At:358:ARG:HD2	1:At:408:VAL:HB	1.77	0.67
5:Cm:771:ARG:HH21	7:W:1:MET:H3	1.41	0.66
6:D:128:LYS:HG3	6:D:129:LEU:HD12	1.77	0.66
1:At:427:ASP:OD1	1:At:428:GLN:N	2.27	0.66
1:Au:209:LEU:HD13	1:Au:227:ARG:HG3	1.78	0.66
6:C:139:ASN:ND2	6:D:13:LEU:HD13	2.11	0.66
1:Au:358:ARG:HD2	1:Au:408:VAL:HB	1.77	0.66
1:At:209:LEU:HD13	1:At:227:ARG:HG3	1.78	0.66
1:Ar:427:ASP:OD1	1:Ar:428:GLN:N	2.27	0.66
1:Ar:574:THR:O	1:Av:587:ASN:ND2	2.28	0.66
6:D:131:ALA:O	6:D:132:GLN:HG3	1.96	0.66
6:J:131:ALA:O	6:J:132:GLN:HG3	1.96	0.66
6:O:131:ALA:O	6:O:132:GLN:HG3	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:3:ILE:HG21	6:D:71:VAL:HG21	1.78	0.66
5:Ck:602:LEU:HD23	5:Ck:897:GLU:HG3	1.78	0.66
6:I:3:ILE:HG21	6:I:71:VAL:HG21	1.78	0.66
5:Cm:277:ARG:O	5:Cm:281:GLN:NE2	2.29	0.66
1:Ar:358:ARG:HD2	1:Ar:408:VAL:HB	1.77	0.66
5:Cn:623:GLN:NE2	5:Cn:627:ASN:OD1	2.29	0.66
6:f:136:ALA:HA	6:g:13:LEU:HD11	1.76	0.66
6:g:131:ALA:O	6:g:132:GLN:HG3	1.96	0.66
6:P:131:ALA:O	6:P:132:GLN:HG3	1.96	0.66
6:I:131:ALA:O	6:I:132:GLN:HG3	1.96	0.65
5:Cl:602:LEU:HD23	5:Cl:897:GLU:HG3	1.78	0.65
6:P:3:ILE:HG21	6:P:71:VAL:HG21	1.78	0.65
5:Cn:277:ARG:O	5:Cn:281:GLN:NE2	2.29	0.65
6:J:3:ILE:HG21	6:J:71:VAL:HG21	1.78	0.65
5:Cl:623:GLN:NE2	5:Cl:627:ASN:OD1	2.29	0.65
6:V:3:ILE:HG21	6:V:71:VAL:HG21	1.78	0.65
6:V:131:ALA:O	6:V:132:GLN:HG3	1.96	0.65
6:f:3:ILE:HG21	6:f:71:VAL:HG21	1.78	0.65
6:g:3:ILE:HG21	6:g:71:VAL:HG21	1.78	0.65
1:Ar:209:LEU:HD13	1:Ar:227:ARG:HG3	1.78	0.65
2:Z:66:LYS:O	2:Z:268:ASN:ND2	2.30	0.65
2:a:66:LYS:O	2:a:268:ASN:ND2	2.30	0.65
6:C:3:ILE:HG21	6:C:71:VAL:HG21	1.78	0.65
6:U:131:ALA:O	6:U:132:GLN:HG3	1.96	0.65
6:C:131:ALA:O	6:C:132:GLN:HG3	1.96	0.65
7:E:5:ARG:NH2	7:E:6:TYR:O	2.30	0.65
1:As:358:ARG:HD2	1:As:408:VAL:HB	1.77	0.65
5:Cl:277:ARG:O	5:Cl:281:GLN:NE2	2.29	0.65
7:K:205:ARG:HH12	8:R:20:PRO:CG	2.10	0.65
6:U:3:ILE:HG21	6:U:71:VAL:HG21	1.78	0.65
6:V:127:PRO:HA	6:V:130:VAL:O	1.96	0.65
6:V:134:ALA:HA	6:V:137:PHE:HB3	1.79	0.65
6:f:131:ALA:O	6:f:132:GLN:HG3	1.96	0.65
7:h:5:ARG:NH2	7:h:6:TYR:O	2.30	0.65
2:b:66:LYS:O	2:b:268:ASN:ND2	2.30	0.65
1:Av:209:LEU:HD13	1:Av:227:ARG:HG3	1.78	0.65
1:Av:358:ARG:HD2	1:Av:408:VAL:HB	1.77	0.65
6:g:134:ALA:HA	6:g:137:PHE:HB3	1.79	0.65
5:Cj:277:ARG:O	5:Cj:281:GLN:NE2	2.29	0.65
7:W:5:ARG:NH2	7:W:6:TYR:O	2.30	0.65
6:C:134:ALA:HA	6:C:137:PHE:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:134:ALA:HA	6:I:137:PHE:HB3	1.79	0.64
5:Cl:270:LEU:O	5:Cl:274:ASN:ND2	2.30	0.64
1:As:201:TYR:HA	1:At:167:MET:HE3	1.79	0.64
7:K:5:ARG:NH2	7:K:6:TYR:O	2.30	0.64
5:Cn:270:LEU:O	5:Cn:274:ASN:ND2	2.30	0.64
1:Ar:177:LYS:HZ3	8:i:169:MET:HE3	1.62	0.64
5:Cj:143:ILE:HG21	5:Cj:406:SER:HB3	1.80	0.64
1:As:209:LEU:HD13	1:As:227:ARG:HG3	1.78	0.64
5:Ck:623:GLN:NE2	5:Ck:627:ASN:OD1	2.29	0.64
5:Cm:602:LEU:HD23	5:Cm:897:GLU:HG3	1.78	0.64
5:Cj:270:LEU:O	5:Cj:274:ASN:ND2	2.30	0.64
5:Cj:771:ARG:HH21	7:E:1:MET:N	1.95	0.64
7:Q:205:ARG:HH12	8:X:20:PRO:CG	2.11	0.64
6:O:3:ILE:HG21	6:O:71:VAL:HG21	1.78	0.64
6:O:134:ALA:HA	6:O:137:PHE:HB3	1.79	0.64
7:Q:5:ARG:NH2	7:Q:6:TYR:O	2.30	0.64
5:Cj:602:LEU:HD23	5:Cj:897:GLU:HG3	1.78	0.64
5:Ck:436:PHE:O	5:Ck:440:ASN:ND2	2.23	0.64
5:Cm:270:LEU:O	5:Cm:274:ASN:ND2	2.30	0.64
5:Cm:623:GLN:NE2	5:Cm:627:ASN:OD1	2.29	0.64
5:Cn:602:LEU:HD23	5:Cn:897:GLU:HG3	1.78	0.64
2:d:66:LYS:O	2:d:268:ASN:ND2	2.30	0.64
2:c:66:LYS:O	2:c:268:ASN:ND2	2.30	0.64
6:U:134:ALA:HA	6:U:137:PHE:HB3	1.79	0.64
5:Ck:143:ILE:HG21	5:Ck:406:SER:HB3	1.80	0.64
6:D:134:ALA:HA	6:D:137:PHE:HB3	1.79	0.63
5:Ck:277:ARG:O	5:Ck:281:GLN:NE2	2.29	0.63
5:Cj:623:GLN:NE2	5:Cj:627:ASN:OD1	2.29	0.63
6:P:134:ALA:HA	6:P:137:PHE:HB3	1.79	0.63
1:Ar:578:ARG:NH2	1:Av:586:MET:HB3	2.14	0.63
6:f:134:ALA:HA	6:f:137:PHE:HB3	1.79	0.63
6:J:128:LYS:HG3	6:J:129:LEU:HD12	1.80	0.63
8:R:169:MET:HE3	1:Au:177:LYS:NZ	2.14	0.63
6:V:125:VAL:HG12	6:V:131:ALA:C	2.23	0.63
5:Cn:143:ILE:HG21	5:Cn:406:SER:HB3	1.80	0.63
7:E:205:ARG:HH12	8:L:20:PRO:HG2	1.64	0.63
6:I:93:MET:HE1	6:J:105:LEU:HD22	1.79	0.63
7:Q:205:ARG:NH2	8:X:20:PRO:HD2	2.14	0.63
6:J:134:ALA:HA	6:J:137:PHE:HB3	1.79	0.63
6:D:43:GLU:CB	2:c:85:GLY:O	2.47	0.63
1:Ar:548:GLY:O	1:Ar:551:ARG:NH1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:As:548:GLY:O	1:As:551:ARG:NH1	2.32	0.63
1:At:465:ARG:NH1	1:Au:690:ALA:HB2	2.13	0.63
2:Z:179:GLU:OE2	2:Z:183:ARG:NH2	2.25	0.62
5:Cj:356:ASN:ND2	6:J:123:GLU:O	2.31	0.62
6:O:136:ALA:HA	6:P:13:LEU:HD21	1.80	0.62
6:P:128:LYS:HG3	6:P:129:LEU:HD12	1.81	0.62
1:At:407:ASN:OD1	1:At:408:VAL:N	2.33	0.62
5:Cl:143:ILE:HG21	5:Cl:406:SER:HB3	1.80	0.62
5:Cl:263:PHE:HA	5:Cl:266:LEU:HB3	1.82	0.62
6:C:33:ILE:HD11	6:D:133:LEU:HD22	1.80	0.62
5:Ck:358:VAL:HG23	6:P:127:PRO:HB3	1.79	0.62
6:V:129:LEU:CD2	6:V:132:GLN:HG2	2.30	0.62
1:Au:407:ASN:OD1	1:Au:408:VAL:N	2.33	0.62
1:Ar:407:ASN:OD1	1:Ar:408:VAL:N	2.33	0.62
1:Av:407:ASN:OD1	1:Av:408:VAL:N	2.33	0.62
1:As:358:ARG:HG2	1:Au:161:GLN:HE22	1.64	0.62
2:c:110:ASP:OD1	2:c:111:SER:N	2.32	0.62
5:Cm:143:ILE:HG21	5:Cm:406:SER:HB3	1.80	0.62
5:Cm:263:PHE:HA	5:Cm:266:LEU:HB3	1.81	0.62
2:a:179:GLU:OE2	2:a:183:ARG:NH2	2.25	0.62
2:b:110:ASP:OD1	2:b:111:SER:N	2.32	0.62
6:O:32:TYR:HE1	6:P:106:LEU:HD11	1.65	0.62
2:a:110:ASP:OD1	2:a:111:SER:N	2.32	0.62
5:Ck:263:PHE:HA	5:Ck:266:LEU:HB3	1.82	0.62
6:C:36:TYR:HE2	6:D:106:LEU:HD13	1.65	0.62
1:Av:548:GLY:O	1:Av:551:ARG:NH1	2.32	0.62
6:D:127:PRO:HA	6:D:130:VAL:O	1.99	0.62
4:N:79:THR:OG1	4:N:82:GLU:OE1	2.18	0.62
5:Cn:263:PHE:HA	5:Cn:266:LEU:HB3	1.82	0.62
4:B:79:THR:OG1	4:B:82:GLU:OE1	2.18	0.61
6:O:141:LEU:HD13	7:Q:101:ARG:HH12	1.64	0.61
1:Au:212:ASN:OD1	1:Au:213:HIS:N	2.32	0.61
5:Cn:273:ILE:HG22	5:Cn:277:ARG:HE	1.65	0.61
1:At:548:GLY:O	1:At:551:ARG:NH1	2.32	0.61
2:d:110:ASP:OD1	2:d:111:SER:N	2.32	0.61
6:U:32:TYR:CE1	6:V:106:LEU:HD11	2.34	0.61
2:Z:110:ASP:OD1	2:Z:111:SER:N	2.32	0.61
5:Cj:273:ILE:HG22	5:Cj:277:ARG:HE	1.65	0.61
5:Cn:626:ARG:HD3	5:Cn:934:ALA:HB1	1.83	0.61
6:g:128:LYS:HG3	6:g:129:LEU:HD12	1.81	0.61
5:Cj:626:ARG:HD3	5:Cj:934:ALA:HB1	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:As:407:ASN:OD1	1:As:408:VAL:N	2.33	0.61
5:Cl:356:ASN:HA	6:V:127:PRO:HD3	1.82	0.61
6:U:130:VAL:HG13	6:U:134:ALA:CB	2.31	0.61
8:F:20:PRO:HD2	7:h:205:ARG:HH22	1.65	0.61
6:P:130:VAL:HG13	6:P:134:ALA:CB	2.31	0.61
1:Ar:212:ASN:OD1	1:Ar:213:HIS:N	2.32	0.61
6:D:127:PRO:CB	5:Cn:358:VAL:HG23	2.29	0.61
6:I:130:VAL:HG13	6:I:134:ALA:CB	2.31	0.61
2:b:156:GLU:HA	2:b:159:ARG:HE	1.66	0.61
2:d:156:GLU:HA	2:d:159:ARG:HE	1.66	0.61
6:g:130:VAL:HG13	6:g:134:ALA:CB	2.31	0.61
2:Z:107:GLN:OE1	5:Ck:858:ASN:ND2	2.33	0.61
6:J:130:VAL:HG13	6:J:134:ALA:CB	2.31	0.61
2:d:179:GLU:OE2	2:d:183:ARG:NH2	2.25	0.61
5:Cj:263:PHE:HA	5:Cj:266:LEU:HB3	1.82	0.61
6:D:130:VAL:HG13	6:D:134:ALA:CB	2.31	0.61
5:Cl:626:ARG:HD3	5:Cl:934:ALA:HB1	1.83	0.61
6:C:136:ALA:HA	6:D:13:LEU:HD11	1.83	0.60
5:Ck:758:ASN:HB2	7:K:188:PRO:HB3	1.82	0.60
6:V:128:LYS:HG3	6:V:129:LEU:HD12	1.83	0.60
6:V:130:VAL:HG13	6:V:134:ALA:CB	2.31	0.60
6:C:134:ALA:O	6:C:138:ALA:N	2.30	0.60
6:P:125:VAL:HG12	6:P:131:ALA:C	2.26	0.60
6:P:129:LEU:HA	6:P:135:THR:H	1.66	0.60
2:Z:156:GLU:HA	2:Z:159:ARG:HE	1.66	0.60
1:As:310:THR:O	1:As:464:ASN:ND2	2.35	0.60
5:Ck:273:ILE:HG22	5:Ck:277:ARG:HE	1.65	0.60
6:P:129:LEU:CD2	6:P:132:GLN:HG2	2.31	0.60
5:Cm:273:ILE:HG22	5:Cm:277:ARG:HE	1.65	0.60
6:C:93:MET:CE	6:D:105:LEU:HD22	2.31	0.60
5:Cl:273:ILE:HG22	5:Cl:277:ARG:HE	1.65	0.60
1:Au:548:GLY:O	1:Au:551:ARG:NH1	2.32	0.60
2:c:156:GLU:HA	2:c:159:ARG:HE	1.66	0.60
4:T:79:THR:OG1	4:T:82:GLU:OE1	2.18	0.60
5:Cm:771:ARG:NH2	7:W:1:MET:HG2	2.16	0.60
4:e:79:THR:OG1	4:e:82:GLU:OE1	2.18	0.60
5:Cl:212:SER:HB2	5:Cl:331:ARG:HH21	1.67	0.60
6:C:130:VAL:HG13	6:C:134:ALA:CB	2.31	0.60
6:D:134:ALA:O	6:D:138:ALA:N	2.30	0.60
1:As:465:ARG:NH1	1:At:690:ALA:HB2	2.16	0.60
5:Cm:626:ARG:HD3	5:Cm:934:ALA:HB1	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Av:310:THR:O	1:Av:464:ASN:ND2	2.35	0.60
3:Y:175:ASP:OD1	3:Y:176:GLU:N	2.35	0.60
2:b:179:GLU:OE2	2:b:183:ARG:NH2	2.25	0.60
6:V:134:ALA:O	6:V:138:ALA:N	2.30	0.60
6:C:36:TYR:CE2	6:D:106:LEU:HD13	2.37	0.60
2:a:156:GLU:HA	2:a:159:ARG:HE	1.66	0.60
4:H:79:THR:OG1	4:H:82:GLU:OE1	2.18	0.60
6:f:130:VAL:HG13	6:f:134:ALA:CB	2.31	0.60
1:As:373:GLU:HA	1:As:390:ILE:HG12	1.84	0.59
1:Au:310:THR:O	1:Au:464:ASN:ND2	2.35	0.59
6:J:125:VAL:HG12	6:J:131:ALA:C	2.26	0.59
1:At:310:THR:O	1:At:464:ASN:ND2	2.35	0.59
5:Cm:212:SER:HB2	5:Cm:331:ARG:HH21	1.67	0.59
5:Cm:412:MET:N	5:Cm:412:MET:SD	2.76	0.59
1:Av:190:ASN:N	1:Av:190:ASN:OD1	2.35	0.59
6:O:130:VAL:HG13	6:O:134:ALA:CB	2.31	0.59
5:Ck:270:LEU:O	5:Ck:274:ASN:ND2	2.30	0.59
1:Av:634:ASP:OD1	1:Av:634:ASP:N	2.35	0.59
5:Ck:771:ARG:HH21	7:K:1:MET:N	2.01	0.59
1:At:373:GLU:HA	1:At:390:ILE:HG12	1.84	0.59
1:At:634:ASP:N	1:At:634:ASP:OD1	2.35	0.59
5:Ck:626:ARG:HD3	5:Ck:934:ALA:HB1	1.83	0.59
1:At:586:MET:HB3	1:Au:578:ARG:NH2	2.17	0.59
1:Ar:310:THR:O	1:Ar:464:ASN:ND2	2.35	0.59
5:Cm:369:GLN:NE2	6:f:111:ARG:O	2.36	0.59
6:g:129:LEU:HB3	6:g:132:GLN:C	2.27	0.59
1:Ar:634:ASP:N	1:Ar:634:ASP:OD1	2.35	0.59
1:As:190:ASN:OD1	1:As:190:ASN:N	2.35	0.59
7:W:205:ARG:HH12	8:i:20:PRO:CG	2.14	0.59
5:Cn:212:SER:HB2	5:Cn:331:ARG:HH21	1.67	0.59
3:A:175:ASP:OD1	3:A:176:GLU:N	2.35	0.59
7:K:205:ARG:NH2	8:R:20:PRO:HD2	2.17	0.59
1:At:567:LYS:HD3	1:At:567:LYS:H	1.67	0.59
5:Cj:212:SER:HB2	5:Cj:331:ARG:HH21	1.67	0.59
1:As:586:MET:HB3	1:At:578:ARG:NH2	2.18	0.59
5:Ck:212:SER:HB2	5:Ck:331:ARG:HH21	1.67	0.59
4:N:77:ASP:HA	1:Au:275:LYS:HA	1.85	0.59
1:Au:190:ASN:OD1	1:Au:190:ASN:N	2.35	0.59
6:U:136:ALA:HA	6:V:13:LEU:HD21	1.85	0.59
6:f:134:ALA:O	6:f:138:ALA:N	2.30	0.59
3:G:175:ASP:OD1	3:G:176:GLU:N	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:134:ALA:O	6:J:138:ALA:N	2.30	0.58
6:U:32:TYR:HE2	6:V:133:LEU:HD12	1.67	0.58
5:Cn:412:MET:N	5:Cn:412:MET:SD	2.76	0.58
5:Cj:412:MET:N	5:Cj:412:MET:SD	2.76	0.58
6:C:141:LEU:HD13	7:E:101:ARG:HH12	1.68	0.58
6:D:127:PRO:HD3	5:Cn:356:ASN:OD1	2.04	0.58
1:As:567:LYS:H	1:As:567:LYS:HD3	1.67	0.58
5:Ck:412:MET:N	5:Ck:412:MET:SD	2.75	0.58
5:Ck:768:GLU:OE2	7:K:1:MET:HA	2.03	0.58
1:Ar:190:ASN:OD1	1:Ar:190:ASN:N	2.35	0.58
1:Ar:586:MET:HB3	1:As:578:ARG:NH2	2.18	0.58
5:Cl:412:MET:N	5:Cl:412:MET:SD	2.76	0.58
8:R:39:GLN:NE2	1:Au:172:VAL:O	2.36	0.58
2:c:57:LYS:HG2	2:c:58:LYS:HG3	1.85	0.58
1:Au:239:VAL:O	1:Au:470:LYS:NZ	2.37	0.58
1:Au:634:ASP:N	1:Au:634:ASP:OD1	2.35	0.58
1:Ar:567:LYS:HD3	1:Ar:567:LYS:H	1.67	0.58
1:At:239:VAL:O	1:At:470:LYS:NZ	2.37	0.58
1:Av:373:GLU:HA	1:Av:390:ILE:HG12	1.84	0.58
1:Av:567:LYS:H	1:Av:567:LYS:HD3	1.67	0.58
6:C:86:PHE:CZ	6:D:106:LEU:HD12	2.39	0.58
1:At:201:TYR:HA	1:Au:167:MET:HE3	1.86	0.58
1:Au:356:ASP:OD1	1:Au:357:PHE:N	2.37	0.58
1:Au:373:GLU:HA	1:Au:390:ILE:HG12	1.84	0.58
8:X:39:GLN:NE2	1:Av:172:VAL:O	2.36	0.58
5:Ck:235:LEU:HD11	5:Ck:409:ILE:HG12	1.86	0.58
3:M:175:ASP:OD1	3:M:176:GLU:N	2.35	0.58
5:Cl:897:GLU:OE1	5:Cl:900:ARG:NH2	2.37	0.58
2:d:57:LYS:HG2	2:d:58:LYS:HG3	1.85	0.58
6:J:129:LEU:CD2	6:J:132:GLN:HG2	2.32	0.58
5:Cm:235:LEU:HD11	5:Cm:409:ILE:HG12	1.86	0.58
5:Cn:235:LEU:HD11	5:Cn:409:ILE:HG12	1.86	0.58
1:Ar:373:GLU:HA	1:Ar:390:ILE:HG12	1.84	0.58
1:As:239:VAL:O	1:As:470:LYS:NZ	2.37	0.58
1:At:356:ASP:OD1	1:At:357:PHE:N	2.37	0.58
1:Au:567:LYS:HD3	1:Au:567:LYS:H	1.67	0.58
2:a:107:GLN:HA	2:a:110:ASP:OD2	2.04	0.57
2:b:107:GLN:HA	2:b:110:ASP:OD2	2.04	0.57
1:At:190:ASN:N	1:At:190:ASN:OD1	2.35	0.57
5:Cl:235:LEU:HD11	5:Cl:409:ILE:HG12	1.86	0.57
2:c:107:GLN:HA	2:c:110:ASP:OD2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:244:TYR:O	2:c:248:LYS:HG3	2.04	0.57
1:Ar:594:TYR:CE2	1:As:629:GLN:HB3	2.39	0.57
2:Z:107:GLN:HA	2:Z:110:ASP:OD2	2.04	0.57
7:E:205:ARG:HH12	8:L:20:PRO:HD2	1.69	0.57
1:As:212:ASN:OD1	1:As:213:HIS:N	2.32	0.57
5:Ck:897:GLU:OE1	5:Ck:900:ARG:NH2	2.37	0.57
1:At:623:THR:OG1	1:At:624:ASP:N	2.37	0.57
5:Cm:897:GLU:OE1	5:Cm:900:ARG:NH2	2.37	0.57
1:Av:356:ASP:OD1	1:Av:357:PHE:N	2.37	0.57
1:Ar:694:ARG:HE	1:Av:468:ARG:NH1	2.03	0.57
2:Z:57:LYS:HG2	2:Z:58:LYS:HG3	1.85	0.57
1:As:623:THR:OG1	1:As:624:ASP:N	2.38	0.57
2:b:57:LYS:HG2	2:b:58:LYS:HG3	1.85	0.57
1:Av:239:VAL:O	1:Av:470:LYS:NZ	2.37	0.57
5:Cn:897:GLU:OE1	5:Cn:900:ARG:NH2	2.37	0.57
1:Ar:167:MET:HG3	1:Av:200:GLY:O	2.05	0.57
6:g:129:LEU:CD2	6:g:132:GLN:HG2	2.34	0.57
5:Cj:235:LEU:HD11	5:Cj:409:ILE:HG12	1.86	0.57
6:C:50:ASP:HB3	6:C:84:ARG:HH21	1.70	0.57
1:As:179:SER:O	1:As:512:ASN:ND2	2.38	0.57
1:As:634:ASP:OD1	1:As:634:ASP:N	2.35	0.57
2:b:244:TYR:O	2:b:248:LYS:HG3	2.05	0.57
6:V:129:LEU:HB3	6:V:132:GLN:C	2.30	0.57
1:Av:212:ASN:OD1	1:Av:213:HIS:N	2.32	0.57
2:d:107:GLN:HA	2:d:110:ASP:OD2	2.04	0.57
5:Cn:771:ARG:HH21	7:h:1:MET:H1	1.51	0.57
1:Ar:491:ILE:HG12	1:Av:472:LEU:HB2	1.85	0.57
8:F:19:PHE:HD1	7:h:205:ARG:NH2	2.03	0.57
2:a:57:LYS:HG2	2:a:58:LYS:HG3	1.85	0.57
1:Au:623:THR:OG1	1:Au:624:ASP:N	2.38	0.57
6:U:18:PRO:HB2	6:U:21:GLN:OE1	2.05	0.57
1:Ar:179:SER:O	1:Ar:512:ASN:ND2	2.38	0.57
1:Ar:239:VAL:O	1:Ar:470:LYS:NZ	2.37	0.57
5:Cj:897:GLU:OE1	5:Cj:900:ARG:NH2	2.37	0.57
6:C:18:PRO:HB2	6:C:21:GLN:OE1	2.05	0.57
2:a:244:TYR:O	2:a:248:LYS:HG3	2.04	0.57
8:L:169:MET:HE3	1:At:177:LYS:HZ3	1.70	0.57
6:P:50:ASP:HB3	6:P:84:ARG:HH21	1.70	0.57
1:Av:314:ASP:OD1	1:Av:315:ALA:N	2.36	0.57
1:Ar:356:ASP:OD1	1:Ar:357:PHE:N	2.37	0.57
8:F:20:PRO:HG2	7:h:205:ARG:HH12	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:P:18:PRO:HB2	6:P:21:GLN:OE1	2.05	0.57
2:c:179:GLU:OE2	2:c:183:ARG:NH2	2.25	0.57
6:I:18:PRO:HB2	6:I:21:GLN:OE1	2.05	0.56
6:J:50:ASP:HB3	6:J:84:ARG:HH21	1.70	0.56
6:f:50:ASP:HB3	6:f:84:ARG:HH21	1.70	0.56
6:O:42:ALA:HB3	6:P:42:ALA:HB2	1.86	0.56
6:D:50:ASP:HB3	6:D:84:ARG:HH21	1.70	0.56
6:D:129:LEU:HB3	6:D:132:GLN:C	2.30	0.56
5:Ck:771:ARG:HG3	7:K:1:MET:HE3	1.88	0.56
7:K:17:ILE:HD11	7:K:28:LEU:HD21	1.88	0.56
1:At:179:SER:O	1:At:512:ASN:ND2	2.38	0.56
5:Cl:771:ARG:HH21	7:Q:1:MET:N	2.04	0.56
1:Au:179:SER:O	1:Au:512:ASN:ND2	2.38	0.56
1:Au:468:ARG:NH1	1:Av:694:ARG:HE	2.03	0.56
6:V:18:PRO:HB2	6:V:21:GLN:OE1	2.05	0.56
6:f:92:ARG:HH22	7:h:118:GLU:HG3	1.69	0.56
6:g:50:ASP:HB3	6:g:84:ARG:HH21	1.70	0.56
7:h:17:ILE:HD11	7:h:28:LEU:HD21	1.88	0.56
1:Ar:314:ASP:OD1	1:Ar:315:ALA:N	2.36	0.56
1:As:356:ASP:OD1	1:As:357:PHE:N	2.37	0.56
1:As:468:ARG:NH1	1:At:694:ARG:HE	2.03	0.56
8:R:169:MET:HE3	1:Au:177:LYS:HZ3	1.71	0.56
6:J:129:LEU:HB3	6:J:132:GLN:C	2.30	0.56
6:f:18:PRO:HB2	6:f:21:GLN:OE1	2.05	0.56
8:L:5:ARG:H	8:L:5:ARG:HD2	1.71	0.56
8:R:5:ARG:H	8:R:5:ARG:HD2	1.71	0.56
6:g:18:PRO:HB2	6:g:21:GLN:OE1	2.05	0.56
1:Ar:623:THR:OG1	1:Ar:624:ASP:N	2.37	0.56
3:S:175:ASP:OD1	3:S:176:GLU:N	2.35	0.56
1:Av:179:SER:O	1:Av:512:ASN:ND2	2.38	0.56
3:Y:69:VAL:HG13	3:Y:120:VAL:HG22	1.88	0.56
6:g:125:VAL:HG12	6:g:131:ALA:C	2.31	0.56
2:Z:59:ARG:NH2	2:Z:202:LYS:HE3	2.21	0.56
6:I:50:ASP:HB3	6:I:84:ARG:HH21	1.70	0.56
6:J:18:PRO:HB2	6:J:21:GLN:OE1	2.05	0.56
6:O:18:PRO:HB2	6:O:21:GLN:OE1	2.05	0.56
6:U:50:ASP:HB3	6:U:84:ARG:HH21	1.70	0.56
6:V:50:ASP:HB3	6:V:84:ARG:HH21	1.70	0.56
2:Z:244:TYR:O	2:Z:248:LYS:HG3	2.04	0.56
6:I:134:ALA:O	6:I:138:ALA:N	2.30	0.56
6:O:13:LEU:HD11	6:P:132:GLN:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:468:ARG:HH12	1:Av:694:ARG:HE	1.54	0.56
8:i:5:ARG:H	8:i:5:ARG:HD2	1.71	0.56
6:D:125:VAL:HG12	6:D:131:ALA:C	2.30	0.56
8:F:5:ARG:H	8:F:5:ARG:HD2	1.71	0.56
5:Ck:771:ARG:NH2	7:K:1:MET:HG2	2.20	0.56
6:P:134:ALA:O	6:P:138:ALA:N	2.30	0.56
6:U:134:ALA:O	6:U:138:ALA:N	2.30	0.56
2:d:244:TYR:O	2:d:248:LYS:HG3	2.04	0.56
6:g:129:LEU:HA	6:g:135:THR:OG1	2.05	0.56
6:g:134:ALA:O	6:g:138:ALA:N	2.30	0.56
6:D:18:PRO:HB2	6:D:21:GLN:OE1	2.05	0.55
7:K:28:LEU:O	7:K:81:TYR:OH	2.24	0.55
8:X:5:ARG:H	8:X:5:ARG:HD2	1.71	0.55
1:Av:623:THR:OG1	1:Av:624:ASP:N	2.38	0.55
7:E:17:ILE:HD11	7:E:28:LEU:HD21	1.88	0.55
3:G:69:VAL:HG13	3:G:120:VAL:HG22	1.88	0.55
6:C:97:PRO:HB3	6:D:36:TYR:CZ	2.41	0.55
1:Au:659:LYS:HG3	1:Au:719:LEU:HD11	1.89	0.55
2:c:59:ARG:NH2	2:c:202:LYS:HE3	2.21	0.55
2:d:59:ARG:NH2	2:d:202:LYS:HE3	2.21	0.55
1:Ar:266:ILE:HG22	1:Ar:267:VAL:HG23	1.89	0.55
2:a:271:TRP:HA	2:a:271:TRP:CE3	2.42	0.55
7:W:17:ILE:HD11	7:W:28:LEU:HD21	1.88	0.55
7:h:28:LEU:O	7:h:81:TYR:OH	2.24	0.55
1:As:659:LYS:HG3	1:As:719:LEU:HD11	1.89	0.55
2:a:59:ARG:NH2	2:a:202:LYS:HE3	2.21	0.55
1:At:659:LYS:HG3	1:At:719:LEU:HD11	1.89	0.55
6:O:50:ASP:HB3	6:O:84:ARG:HH21	1.70	0.55
1:Av:266:ILE:HG22	1:Av:267:VAL:HG23	1.89	0.55
2:Z:271:TRP:CE3	2:Z:271:TRP:HA	2.42	0.55
6:P:129:LEU:HB3	6:P:132:GLN:C	2.31	0.55
7:Q:17:ILE:HD11	7:Q:28:LEU:HD21	1.88	0.55
7:K:194:CYS:SG	8:R:61:TYR:OH	2.46	0.55
6:U:32:TYR:CE2	6:V:133:LEU:HD12	2.42	0.55
3:A:69:VAL:HG13	3:A:120:VAL:HG22	1.88	0.55
6:D:129:LEU:CD2	6:D:132:GLN:HG2	2.33	0.55
1:At:314:ASP:OD1	1:At:315:ALA:N	2.36	0.55
1:At:345:ILE:HG13	1:At:346:THR:HG23	1.89	0.55
6:J:129:LEU:HA	6:J:135:THR:OG1	2.07	0.55
5:Cl:763:MET:HE3	5:Cl:878:THR:HG21	1.89	0.55
2:c:271:TRP:HA	2:c:271:TRP:CE3	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:As:345:ILE:HG13	1:As:346:THR:HG23	1.89	0.54
1:At:212:ASN:OD1	1:At:213:HIS:N	2.32	0.54
1:At:266:ILE:HG22	1:At:267:VAL:HG23	1.89	0.54
5:Cm:763:MET:HE3	5:Cm:878:THR:HG21	1.89	0.54
7:W:28:LEU:O	7:W:81:TYR:OH	2.24	0.54
6:C:40:VAL:HG22	6:C:87:TRP:NE1	2.22	0.54
3:G:199:ASP:N	3:G:199:ASP:OD1	2.39	0.54
3:M:176:GLU:HA	3:M:179:ARG:HB2	1.90	0.54
5:Cl:317:VAL:HG21	5:Cl:411:ALA:HB1	1.89	0.54
6:P:40:VAL:HG22	6:P:87:TRP:NE1	2.22	0.54
6:D:129:LEU:HA	6:D:135:THR:H	1.72	0.54
2:b:59:ARG:NH2	2:b:202:LYS:HE3	2.21	0.54
2:d:271:TRP:HA	2:d:271:TRP:CE3	2.42	0.54
6:f:40:VAL:HG22	6:f:87:TRP:NE1	2.23	0.54
1:Ar:659:LYS:HG3	1:Ar:719:LEU:HD11	1.89	0.54
5:Cj:758:ASN:HB2	7:E:188:PRO:HB3	1.88	0.54
1:As:482:ALA:O	1:As:709:ARG:NH1	2.41	0.54
6:O:93:MET:HE1	6:P:105:LEU:HD22	1.89	0.54
8:R:155:GLN:HE21	1:Au:501:ALA:HB2	1.73	0.54
1:Au:266:ILE:HG22	1:Au:267:VAL:HG23	1.89	0.54
1:Au:465:ARG:NH1	1:Av:690:ALA:HB2	2.22	0.54
3:S:69:VAL:HG13	3:S:120:VAL:HG22	1.88	0.54
5:Cm:317:VAL:HG21	5:Cm:411:ALA:HB1	1.89	0.54
5:Cj:317:VAL:HG21	5:Cj:411:ALA:HB1	1.89	0.54
5:Cj:763:MET:HE3	5:Cj:878:THR:HG21	1.89	0.54
3:G:176:GLU:HA	3:G:179:ARG:HB2	1.90	0.54
6:J:40:VAL:HG22	6:J:87:TRP:NE1	2.23	0.54
5:Cn:317:VAL:HG21	5:Cn:411:ALA:HB1	1.89	0.54
6:D:40:VAL:HG22	6:D:87:TRP:NE1	2.22	0.54
6:I:40:VAL:HG22	6:I:87:TRP:NE1	2.23	0.54
1:At:482:ALA:O	1:At:709:ARG:NH1	2.41	0.54
3:M:69:VAL:HG13	3:M:120:VAL:HG22	1.88	0.54
6:U:40:VAL:HG22	6:U:87:TRP:NE1	2.22	0.54
1:Av:659:LYS:HG3	1:Av:719:LEU:HD11	1.89	0.54
6:D:129:LEU:HA	6:D:135:THR:OG1	2.08	0.54
1:Au:314:ASP:OD1	1:Au:315:ALA:N	2.36	0.54
1:Au:482:ALA:O	1:Au:709:ARG:NH1	2.41	0.54
3:S:176:GLU:HA	3:S:179:ARG:HB2	1.90	0.54
1:Ar:308:ASP:OD1	1:Ar:310:THR:OG1	2.25	0.54
5:Ck:317:VAL:HG21	5:Ck:411:ALA:HB1	1.89	0.54
1:At:406:SER:OG	1:At:412:GLY:O	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:199:ASP:OD1	3:M:199:ASP:N	2.39	0.54
5:Cn:763:MET:HE3	5:Cn:878:THR:HG21	1.89	0.54
1:Ar:482:ALA:O	1:Ar:709:ARG:NH1	2.41	0.54
3:A:199:ASP:N	3:A:199:ASP:OD1	2.39	0.54
1:Au:345:ILE:HG13	1:Au:346:THR:HG23	1.89	0.54
8:X:169:MET:HE3	1:Av:177:LYS:HZ3	1.73	0.54
7:E:28:LEU:O	7:E:81:TYR:OH	2.24	0.53
1:As:308:ASP:OD1	1:As:310:THR:OG1	2.25	0.53
1:As:314:ASP:OD1	1:As:315:ALA:N	2.36	0.53
2:a:59:ARG:NH1	2:a:205:LYS:HE3	2.24	0.53
6:J:111:ARG:O	6:J:112:ASP:C	2.51	0.53
1:Ar:629:GLN:HB3	1:Av:594:TYR:CE2	2.44	0.53
2:Z:59:ARG:NH1	2:Z:205:LYS:HE3	2.24	0.53
5:Ck:165:THR:HG22	5:Ck:168:PHE:HB3	1.91	0.53
5:Ck:763:MET:HE3	5:Ck:878:THR:HG21	1.89	0.53
6:J:129:LEU:HA	6:J:135:THR:H	1.72	0.53
1:At:198:GLN:NE2	1:Au:168:MET:SD	2.82	0.53
1:Ar:345:ILE:HG13	1:Ar:346:THR:HG23	1.89	0.53
2:b:271:TRP:CE3	2:b:271:TRP:HA	2.42	0.53
6:O:134:ALA:O	6:O:138:ALA:N	2.30	0.53
6:O:136:ALA:HA	6:P:13:LEU:HD11	1.90	0.53
1:Au:308:ASP:OD1	1:Au:310:THR:OG1	2.26	0.53
3:Y:176:GLU:HA	3:Y:179:ARG:HB2	1.90	0.53
6:f:33:ILE:HG12	6:g:133:LEU:HD13	1.89	0.53
6:g:40:VAL:HG22	6:g:87:TRP:NE1	2.22	0.53
5:Cj:165:THR:HG22	5:Cj:168:PHE:HB3	1.91	0.53
6:V:40:VAL:HG22	6:V:87:TRP:NE1	2.23	0.53
3:A:176:GLU:HA	3:A:179:ARG:HB2	1.90	0.53
5:Cj:578:MET:HB3	5:Cj:866:ALA:HB1	1.91	0.53
6:C:137:PHE:CD1	6:D:32:TYR:CE2	2.97	0.53
7:Q:28:LEU:O	7:Q:81:TYR:OH	2.24	0.53
2:c:59:ARG:NH1	2:c:205:LYS:HE3	2.24	0.53
5:Cm:165:THR:HG22	5:Cm:168:PHE:HB3	1.90	0.53
2:d:59:ARG:NH1	2:d:205:LYS:HE3	2.24	0.53
2:b:59:ARG:NH1	2:b:205:LYS:HE3	2.24	0.53
6:O:40:VAL:HG22	6:O:87:TRP:NE1	2.22	0.53
1:Av:308:ASP:OD1	1:Av:310:THR:OG1	2.25	0.53
1:Av:345:ILE:HG13	1:Av:346:THR:HG23	1.89	0.53
5:Cn:578:MET:HB3	5:Cn:866:ALA:HB1	1.91	0.53
6:g:111:ARG:O	6:g:112:ASP:C	2.52	0.53
1:As:266:ILE:HG22	1:As:267:VAL:HG23	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:32:TYR:CZ	6:J:106:LEU:HD11	2.44	0.53
1:Av:482:ALA:O	1:Av:709:ARG:NH1	2.41	0.53
7:E:150:ASP:OD1	7:E:151:CYS:N	2.42	0.53
5:Ck:578:MET:HB3	5:Ck:866:ALA:HB1	1.91	0.53
7:Q:194:CYS:SG	8:X:61:TYR:OH	2.48	0.53
5:Cm:247:LYS:HD3	5:Cm:374:THR:HG22	1.91	0.53
2:b:202:LYS:HB3	2:b:206:LYS:HE3	1.91	0.53
2:c:202:LYS:HB3	2:c:206:LYS:HE3	1.91	0.53
1:Ar:694:ARG:HE	1:Av:468:ARG:HH12	1.57	0.52
2:a:202:LYS:HB3	2:a:206:LYS:HE3	1.91	0.52
7:K:150:ASP:OD1	7:K:151:CYS:N	2.42	0.52
7:W:205:ARG:NH2	8:i:20:PRO:HD2	2.22	0.52
6:I:32:TYR:CE2	6:J:133:LEU:HD12	2.44	0.52
5:Cn:247:LYS:HD3	5:Cn:374:THR:HG22	1.91	0.52
6:f:92:ARG:HH22	7:h:118:GLU:CG	2.23	0.52
1:Ar:465:ARG:NH1	1:As:690:ALA:HB2	2.24	0.52
1:Ar:468:ARG:NH1	1:As:694:ARG:HE	2.07	0.52
5:Cl:758:ASN:HB2	7:Q:188:PRO:HB3	1.91	0.52
6:O:84:ARG:NH1	7:Q:119:ARG:NH1	2.57	0.52
7:Q:150:ASP:OD1	7:Q:151:CYS:N	2.42	0.52
2:c:107:GLN:OE1	5:Cn:858:ASN:ND2	2.42	0.52
3:S:199:ASP:OD1	3:S:199:ASP:N	2.39	0.52
6:f:86:PHE:CZ	6:g:106:LEU:HD12	2.44	0.52
5:Cj:247:LYS:HD3	5:Cj:374:THR:HG22	1.91	0.52
3:G:118:PRO:HB3	3:G:203:TYR:HE1	1.75	0.52
5:Cm:578:MET:HB3	5:Cm:866:ALA:HB1	1.91	0.52
3:Y:118:PRO:HB3	3:Y:203:TYR:HE1	1.75	0.52
5:Cn:165:THR:HG22	5:Cn:168:PHE:HB3	1.91	0.52
5:Cj:232:ALA:HB1	5:Cj:355:PHE:HB3	1.92	0.52
6:C:92:ARG:HH12	7:E:118:GLU:CG	2.23	0.52
5:Cl:578:MET:HB3	5:Cl:866:ALA:HB1	1.91	0.52
7:W:150:ASP:OD1	7:W:151:CYS:N	2.42	0.52
3:Y:199:ASP:N	3:Y:199:ASP:OD1	2.39	0.52
7:h:150:ASP:OD1	7:h:151:CYS:N	2.42	0.52
7:E:205:ARG:HH12	8:L:20:PRO:CG	2.22	0.52
5:Cl:166:ASN:ND2	5:Cl:349:ALA:O	2.43	0.52
6:O:33:ILE:HG12	6:P:133:LEU:HD13	1.90	0.52
6:f:141:LEU:HD12	7:h:101:ARG:HH22	1.75	0.52
2:Z:258:ASN:O	2:Z:262:GLU:HG2	2.10	0.52
7:E:205:ARG:HH12	8:L:20:PRO:CD	2.22	0.52
5:Ck:232:ALA:HB1	5:Ck:355:PHE:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cm:166:ASN:ND2	5:Cm:349:ALA:O	2.43	0.52
5:Cm:771:ARG:HE	7:W:1:MET:HB3	1.74	0.52
2:Z:202:LYS:HB3	2:Z:206:LYS:HE3	1.91	0.52
3:A:118:PRO:HB3	3:A:203:TYR:HE1	1.75	0.52
6:I:97:PRO:HB3	6:J:36:TYR:CZ	2.45	0.52
3:M:118:PRO:HB3	3:M:203:TYR:HE1	1.75	0.52
5:Cl:247:LYS:HD3	5:Cl:374:THR:HG22	1.91	0.52
6:P:111:ARG:O	6:P:112:ASP:C	2.53	0.52
7:W:197:ARG:HA	7:W:197:ARG:HE	1.75	0.52
2:d:202:LYS:HB3	2:d:206:LYS:HE3	1.91	0.52
6:C:107:ALA:CB	7:E:89:GLU:CD	2.83	0.52
1:As:594:TYR:CE2	1:At:629:GLN:HB3	2.44	0.52
7:K:197:ARG:HA	7:K:197:ARG:HE	1.75	0.52
5:Cn:166:ASN:ND2	5:Cn:349:ALA:O	2.43	0.52
1:Ar:168:MET:SD	1:Av:198:GLN:NE2	2.83	0.52
2:a:258:ASN:O	2:a:262:GLU:HG2	2.10	0.52
5:Ck:470:LYS:HB3	5:Ck:474:LYS:HE2	1.92	0.52
4:N:91:GLU:OE2	1:Au:236:TYR:OH	2.22	0.52
5:Cl:470:LYS:HB3	5:Cl:474:LYS:HE2	1.92	0.52
2:c:258:ASN:O	2:c:262:GLU:HG2	2.10	0.52
5:Cn:232:ALA:HB1	5:Cn:355:PHE:HB3	1.92	0.52
1:Ar:690:ALA:HB2	1:Av:465:ARG:NH1	2.25	0.51
2:Z:225:ASP:O	2:Z:229:GLY:N	2.43	0.51
4:B:26:PHE:CE2	1:As:299:ASP:HB3	2.45	0.51
5:Ck:247:LYS:HD3	5:Ck:374:THR:HG22	1.91	0.51
1:Au:626:TYR:HD1	1:Au:629:GLN:HE21	1.58	0.51
5:Cj:771:ARG:HH21	7:E:1:MET:H1	1.58	0.51
1:As:472:LEU:HB2	1:At:491:ILE:HG12	1.91	0.51
5:Cl:165:THR:HG22	5:Cl:168:PHE:HB3	1.91	0.51
7:Q:197:ARG:HA	7:Q:197:ARG:HE	1.75	0.51
1:Av:626:TYR:HD1	1:Av:629:GLN:HE21	1.59	0.51
7:h:197:ARG:HA	7:h:197:ARG:HE	1.75	0.51
5:Cj:166:ASN:ND2	5:Cj:349:ALA:O	2.43	0.51
8:F:169:MET:HE3	1:As:177:LYS:NZ	2.25	0.51
2:b:258:ASN:O	2:b:262:GLU:HG2	2.10	0.51
5:Cm:223:ASN:OD1	5:Cm:223:ASN:N	2.43	0.51
1:Av:503:ASP:O	1:Av:507:LEU:HG	2.11	0.51
6:C:36:TYR:CE2	6:D:106:LEU:HD22	2.45	0.51
6:O:32:TYR:OH	6:P:106:LEU:HD21	2.09	0.51
5:Cj:463:VAL:HA	5:Cj:466:LEU:HB3	1.93	0.51
1:As:503:ASP:O	1:As:507:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:P:129:LEU:HA	6:P:135:THR:OG1	2.10	0.51
8:F:155:GLN:HE21	1:As:501:ALA:HB2	1.75	0.51
6:I:136:ALA:CA	6:J:13:LEU:HD21	2.37	0.51
1:At:308:ASP:OD1	1:At:310:THR:OG1	2.25	0.51
5:Cl:232:ALA:HB1	5:Cl:355:PHE:HB3	1.92	0.51
2:d:258:ASN:O	2:d:262:GLU:HG2	2.10	0.51
3:G:175:ASP:OD2	3:G:178:ARG:NH1	2.44	0.51
1:At:235:MET:O	1:Au:654:VAL:HG13	2.10	0.51
1:Au:235:MET:O	1:Av:654:VAL:HG13	2.10	0.51
2:c:225:ASP:O	2:c:229:GLY:N	2.43	0.51
6:U:34:ALA:HB1	6:U:61:ILE:HG23	1.93	0.51
3:Y:175:ASP:OD2	3:Y:178:ARG:NH1	2.44	0.51
5:Cn:223:ASN:OD1	5:Cn:223:ASN:N	2.43	0.51
5:Cn:463:VAL:HA	5:Cn:466:LEU:HB3	1.93	0.51
6:C:34:ALA:HB1	6:C:61:ILE:HG23	1.93	0.51
6:D:34:ALA:HB1	6:D:61:ILE:HG23	1.93	0.51
2:b:225:ASP:O	2:b:229:GLY:N	2.44	0.51
5:Cl:768:GLU:OE2	7:Q:1:MET:HA	2.10	0.51
4:T:79:THR:HG22	1:Av:212:ASN:ND2	2.24	0.51
1:Ar:198:GLN:NE2	1:As:168:MET:SD	2.83	0.51
3:A:175:ASP:OD2	3:A:178:ARG:NH1	2.44	0.51
6:D:111:ARG:O	6:D:112:ASP:C	2.54	0.51
7:E:197:ARG:HA	7:E:197:ARG:HE	1.75	0.51
6:J:34:ALA:HB1	6:J:61:ILE:HG23	1.93	0.51
3:M:175:ASP:OD2	3:M:178:ARG:NH1	2.44	0.51
6:O:92:ARG:HH12	7:Q:118:GLU:CG	2.24	0.51
6:C:92:ARG:HH12	7:E:118:GLU:HG3	1.76	0.51
2:a:225:ASP:O	2:a:229:GLY:N	2.43	0.51
5:Ck:166:ASN:ND2	5:Ck:349:ALA:O	2.43	0.51
5:Ck:223:ASN:OD1	5:Ck:223:ASN:N	2.44	0.51
6:O:92:ARG:HH12	7:Q:118:GLU:HG3	1.75	0.51
3:S:118:PRO:HB3	3:S:203:TYR:HE1	1.75	0.51
6:f:34:ALA:HB1	6:f:61:ILE:HG23	1.93	0.51
1:Ar:503:ASP:O	1:Ar:507:LEU:HG	2.11	0.50
8:F:20:PRO:HD2	7:h:205:ARG:HH12	1.76	0.50
5:Ck:463:VAL:HA	5:Ck:466:LEU:HB3	1.93	0.50
7:K:205:ARG:HH12	8:R:20:PRO:CD	2.25	0.50
2:d:225:ASP:O	2:d:229:GLY:N	2.43	0.50
1:At:626:TYR:HD1	1:At:629:GLN:HE21	1.59	0.50
3:S:175:ASP:OD2	3:S:178:ARG:NH1	2.44	0.50
5:Cm:232:ALA:HB1	5:Cm:355:PHE:HB3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:At:503:ASP:O	1:At:507:LEU:HG	2.11	0.50
1:As:357:PHE:HD2	1:Au:161:GLN:NE2	2.10	0.50
6:I:34:ALA:HB1	6:I:61:ILE:HG23	1.93	0.50
6:I:136:ALA:CB	6:J:13:LEU:HD21	2.41	0.50
6:J:109:ALA:O	6:J:113:GLN:CB	2.60	0.50
5:Cn:470:LYS:HB3	5:Cn:474:LYS:HE2	1.92	0.50
1:Ar:177:LYS:O	1:Ar:512:ASN:ND2	2.42	0.50
1:Ar:626:TYR:HD1	1:Ar:629:GLN:HE21	1.59	0.50
5:Cm:470:LYS:HB3	5:Cm:474:LYS:HE2	1.92	0.50
6:V:111:ARG:O	6:V:112:ASP:C	2.53	0.50
5:Cn:771:ARG:HH21	7:h:1:MET:H3	1.58	0.50
6:C:32:TYR:CE1	6:D:106:LEU:HD11	2.47	0.50
6:I:13:LEU:HD11	6:J:132:GLN:HB3	1.94	0.50
1:At:237:ASN:ND2	1:Au:655:MET:SD	2.85	0.50
5:Cm:313:VAL:HG11	5:Cm:408:LEU:HD23	1.94	0.50
5:Cm:463:VAL:HA	5:Cm:466:LEU:HB3	1.93	0.50
5:Cj:313:VAL:HG11	5:Cj:408:LEU:HD23	1.94	0.50
6:C:97:PRO:HB2	6:C:137:PHE:CZ	2.47	0.50
6:P:34:ALA:HB1	6:P:61:ILE:HG23	1.93	0.50
1:Au:503:ASP:O	1:Au:507:LEU:HG	2.11	0.50
1:Ar:472:LEU:HB2	1:As:491:ILE:HG12	1.94	0.50
5:Cj:369:GLN:NE2	6:I:111:ARG:O	2.45	0.50
8:F:20:PRO:CD	7:h:205:ARG:HH12	2.25	0.50
6:I:32:TYR:HE2	6:J:133:LEU:HD12	1.77	0.50
6:I:97:PRO:HB2	6:I:137:PHE:CZ	2.47	0.50
5:Cl:463:VAL:HA	5:Cl:466:LEU:HB3	1.93	0.50
5:Cn:313:VAL:HG11	5:Cn:408:LEU:HD23	1.94	0.50
8:F:39:GLN:NE2	1:As:172:VAL:O	2.45	0.49
1:As:626:TYR:HD1	1:As:629:GLN:HE21	1.59	0.49
5:Cl:223:ASN:N	5:Cl:223:ASN:OD1	2.44	0.49
5:Cl:771:ARG:HH21	7:Q:1:MET:H1	1.59	0.49
6:O:97:PRO:HB2	6:O:137:PHE:CZ	2.47	0.49
1:Au:473:ASP:OD1	1:Au:474:PHE:N	2.45	0.49
5:Cn:773:LEU:HB2	5:Cn:791:LEU:HD12	1.94	0.49
1:Ar:165:ARG:HA	1:Ar:165:ARG:CZ	2.42	0.49
2:Z:245:GLN:O	2:Z:249:GLN:HG3	2.13	0.49
5:Ck:449:ASP:OD1	5:Ck:449:ASP:N	2.44	0.49
5:Ck:773:LEU:HB2	5:Ck:791:LEU:HD12	1.94	0.49
1:At:473:ASP:OD1	1:At:474:PHE:N	2.45	0.49
6:O:34:ALA:HB1	6:O:61:ILE:HG23	1.93	0.49
2:c:93:GLY:O	2:c:163:LYS:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:260:LEU:O	2:c:264:ILE:HG13	2.12	0.49
8:X:155:GLN:HE21	1:Av:501:ALA:HB2	1.77	0.49
2:d:36:THR:HG22	2:d:40:ASN:HD21	1.78	0.49
6:g:97:PRO:HB2	6:g:137:PHE:CZ	2.47	0.49
5:Cj:470:LYS:HB3	5:Cj:474:LYS:HE2	1.92	0.49
6:C:92:ARG:HH22	7:E:118:GLU:HG3	1.78	0.49
5:Ck:313:VAL:HG11	5:Ck:408:LEU:HD23	1.94	0.49
6:O:136:ALA:CB	6:P:13:LEU:HD21	2.43	0.49
6:P:97:PRO:HB2	6:P:137:PHE:CZ	2.47	0.49
8:R:169:MET:HB2	1:Au:177:LYS:HZ1	1.77	0.49
5:Cm:771:ARG:HG3	7:W:1:MET:HE3	1.94	0.49
6:V:34:ALA:HB1	6:V:61:ILE:HG23	1.93	0.49
6:g:34:ALA:HB1	6:g:61:ILE:HG23	1.93	0.49
1:As:468:ARG:HH12	1:At:694:ARG:HE	1.60	0.49
2:a:36:THR:HG22	2:a:40:ASN:HD21	1.77	0.49
7:W:12:TRP:H	7:W:12:TRP:CD1	2.31	0.49
1:Av:165:ARG:CZ	1:Av:165:ARG:HA	2.43	0.49
1:Ar:465:ARG:NH2	1:As:688:SER:OG	2.46	0.49
2:Z:36:THR:HG22	2:Z:40:ASN:HD21	1.77	0.49
6:D:43:GLU:O	2:c:85:GLY:HA3	2.12	0.49
2:a:245:GLN:O	2:a:249:GLN:HG3	2.13	0.49
1:At:165:ARG:CZ	1:At:165:ARG:HA	2.43	0.49
6:P:109:ALA:O	6:P:113:GLN:CB	2.61	0.49
1:Au:165:ARG:HA	1:Au:165:ARG:CZ	2.43	0.49
5:Cm:773:LEU:HB2	5:Cm:791:LEU:HD12	1.94	0.49
6:V:97:PRO:HB2	6:V:137:PHE:CZ	2.47	0.49
1:Ar:172:VAL:O	8:i:39:GLN:NE2	2.45	0.49
2:Z:260:LEU:O	2:Z:264:ILE:HG13	2.12	0.49
6:D:97:PRO:HB2	6:D:137:PHE:CZ	2.47	0.49
5:Cl:313:VAL:HG11	5:Cl:408:LEU:HD23	1.94	0.49
6:U:97:PRO:HB2	6:U:137:PHE:CZ	2.47	0.49
1:Ar:406:SER:OG	1:Ar:412:GLY:O	2.21	0.49
2:a:260:LEU:O	2:a:264:ILE:HG13	2.12	0.49
6:I:100:PRO:O	6:I:104:LEU:HG	2.13	0.49
1:At:198:GLN:OE1	1:Au:167:MET:HA	2.12	0.49
6:U:32:TYR:HE1	6:V:106:LEU:HD11	1.78	0.49
1:Av:228:ARG:HD2	1:Av:229:PRO:HD2	1.94	0.49
2:d:260:LEU:O	2:d:264:ILE:HG13	2.12	0.49
6:g:100:PRO:O	6:g:104:LEU:HG	2.13	0.49
6:g:129:LEU:HA	6:g:135:THR:H	1.78	0.49
1:As:165:ARG:CZ	1:As:165:ARG:HA	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Au:406:SER:OG	1:Au:412:GLY:O	2.21	0.49
2:c:36:THR:HG22	2:c:40:ASN:HD21	1.77	0.49
6:V:100:PRO:O	6:V:104:LEU:HG	2.13	0.49
6:f:97:PRO:HB2	6:f:137:PHE:CZ	2.47	0.49
5:Cj:223:ASN:OD1	5:Cj:223:ASN:N	2.44	0.49
6:C:92:ARG:HH22	7:E:118:GLU:CG	2.26	0.49
6:C:100:PRO:O	6:C:104:LEU:HG	2.13	0.49
2:b:260:LEU:O	2:b:264:ILE:HG13	2.12	0.49
6:O:100:PRO:O	6:O:104:LEU:HG	2.13	0.49
6:P:9:GLN:O	6:P:13:LEU:CB	2.59	0.49
1:Ar:177:LYS:NZ	8:i:169:MET:HE3	2.27	0.49
5:Cj:365:ARG:O	5:Cj:369:GLN:HG3	2.13	0.49
5:Ck:356:ASN:HA	6:P:127:PRO:HD3	1.94	0.49
6:J:97:PRO:HB2	6:J:137:PHE:CZ	2.47	0.49
2:b:93:GLY:O	2:b:163:LYS:N	2.44	0.49
5:Cl:773:LEU:HB2	5:Cl:791:LEU:HD12	1.94	0.49
5:Cn:136:VAL:HG13	5:Cn:403:PHE:HE1	1.78	0.49
1:Ar:164:LEU:HD11	1:Ar:358:ARG:NH1	2.28	0.48
5:Ck:365:ARG:O	5:Ck:369:GLN:HG3	2.13	0.48
5:Cm:449:ASP:OD1	5:Cm:449:ASP:N	2.44	0.48
6:U:9:GLN:O	6:U:13:LEU:CB	2.59	0.48
5:Cn:844:ASP:OD1	5:Cn:844:ASP:N	2.45	0.48
5:Cj:773:LEU:HB2	5:Cj:791:LEU:HD12	1.94	0.48
6:C:93:MET:HE1	6:D:105:LEU:HD22	1.95	0.48
6:J:9:GLN:O	6:J:13:LEU:CB	2.59	0.48
5:Cl:365:ARG:O	5:Cl:369:GLN:HG3	2.13	0.48
6:I:93:MET:CE	6:J:105:LEU:HD22	2.43	0.48
5:Cn:758:ASN:HB2	7:h:188:PRO:HB3	1.94	0.48
4:H:51:ASP:OD1	4:H:51:ASP:N	2.38	0.48
1:Ar:469:GLY:HA3	1:As:488:PRO:O	2.14	0.48
5:Cj:136:VAL:HG13	5:Cj:403:PHE:HE1	1.79	0.48
1:At:211:PHE:HB3	1:At:227:ARG:HB3	1.96	0.48
1:Ar:228:ARG:HD2	1:Ar:229:PRO:HD2	1.94	0.48
5:Cm:365:ARG:O	5:Cm:369:GLN:HG3	2.13	0.48
5:Cn:365:ARG:O	5:Cn:369:GLN:HG3	2.13	0.48
1:Ar:468:ARG:HH12	1:As:694:ARG:HE	1.60	0.48
2:b:245:GLN:O	2:b:249:GLN:HG3	2.13	0.48
6:f:100:PRO:O	6:f:104:LEU:HG	2.13	0.48
1:Ar:228:ARG:HD2	1:Ar:229:PRO:HD2	1.94	0.48
2:a:107:GLN:OE1	5:Cl:858:ASN:ND2	2.46	0.48
5:Cl:771:ARG:HG3	7:Q:1:MET:HE3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AU:198:GLN:NE2	1:AV:168:MET:SD	2.86	0.48
6:U:100:PRO:O	6:U:104:LEU:HG	2.13	0.48
1:AR:377:ASP:OD1	1:AR:381:ALA:N	2.47	0.48
2:Z:157:THR:HG23	5:CK:580:VAL:HG11	1.96	0.48
1:AS:228:ARG:HD2	1:AS:229:PRO:HD2	1.94	0.48
6:J:100:PRO:O	6:J:104:LEU:HG	2.13	0.48
6:J:109:ALA:O	6:J:113:GLN:HB3	2.14	0.48
1:AT:377:ASP:OD1	1:AT:381:ALA:N	2.47	0.48
1:AU:238:ASP:OD1	1:AU:238:ASP:N	2.47	0.48
4:T:77:ASP:OD1	4:T:77:ASP:N	2.46	0.48
5:CM:270:LEU:HD23	5:CM:273:ILE:HD12	1.96	0.48
6:V:126:ASP:O	6:V:129:LEU:HB2	2.14	0.48
1:AV:473:ASP:OD1	1:AV:474:PHE:N	2.45	0.48
6:D:100:PRO:O	6:D:104:LEU:HG	2.13	0.48
5:CK:844:ASP:OD1	5:CK:844:ASP:N	2.46	0.48
6:J:2:ASN:OD1	6:J:4:SER:OG	2.27	0.48
6:V:9:GLN:O	6:V:13:LEU:CB	2.59	0.48
8:X:169:MET:HE3	1:AV:177:LYS:NZ	2.29	0.48
2:D:245:GLN:O	2:D:249:GLN:HG3	2.13	0.48
1:AR:211:PHE:HB3	1:AR:227:ARG:HB3	1.96	0.48
2:Z:149:ASN:N	5:CK:863:GLN:NE2	2.61	0.48
6:P:100:PRO:O	6:P:104:LEU:HG	2.13	0.48
7:W:205:ARG:HH12	8:I:20:PRO:CD	2.27	0.48
7:E:205:ARG:NH2	8:L:19:PHE:HD1	2.12	0.47
8:F:169:MET:HE3	1:AS:177:LYS:HZ3	1.78	0.47
1:AS:468:ARG:HD3	1:AT:701:GLU:OE2	2.14	0.47
5:CL:270:LEU:HD23	5:CL:273:ILE:HD12	1.96	0.47
5:CL:463:VAL:O	5:CL:467:ASN:N	2.34	0.47
7:Q:12:TRP:CD1	7:Q:12:TRP:H	2.31	0.47
2:C:245:GLN:O	2:C:249:GLN:HG3	2.13	0.47
5:CM:136:VAL:HG13	5:CM:403:PHE:HE1	1.78	0.47
6:F:9:GLN:O	6:F:13:LEU:CB	2.59	0.47
7:H:12:TRP:CD1	7:H:12:TRP:H	2.31	0.47
1:AS:473:ASP:OD1	1:AS:474:PHE:N	2.45	0.47
2:A:93:GLY:O	2:A:163:LYS:N	2.45	0.47
1:AT:228:ARG:HD2	1:AT:229:PRO:HD2	1.94	0.47
2:B:36:THR:HG22	2:B:40:ASN:HD21	1.78	0.47
5:CL:844:ASP:N	5:CL:844:ASP:OD1	2.46	0.47
1:AU:211:PHE:HB3	1:AU:227:ARG:HB3	1.96	0.47
1:AS:485:LEU:HG	1:AS:707:ARG:HG2	1.96	0.47
8:L:169:MET:HE3	1:AT:177:LYS:NZ	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:224:GLN:HA	2:b:227:ASN:ND2	2.30	0.47
3:M:96:GLN:OE1	3:M:96:GLN:N	2.40	0.47
6:U:32:TYR:OH	6:V:106:LEU:HD21	2.14	0.47
6:f:91:TYR:CZ	6:f:95:HIS:HD2	2.33	0.47
2:Z:88:ALA:HA	2:Z:270:THR:HG23	1.96	0.47
6:C:132:GLN:CD	6:D:17:PHE:CD2	2.92	0.47
2:b:88:ALA:HA	2:b:270:THR:HG23	1.96	0.47
5:Cm:844:ASP:OD1	5:Cm:844:ASP:N	2.46	0.47
6:U:93:MET:HE1	6:V:105:LEU:HD22	1.97	0.47
7:E:12:TRP:CD1	7:E:12:TRP:H	2.31	0.47
2:a:88:ALA:HA	2:a:270:THR:HG23	1.96	0.47
1:Au:377:ASP:OD1	1:Au:381:ALA:N	2.47	0.47
6:U:91:TYR:CZ	6:U:95:HIS:HD2	2.33	0.47
5:Cj:844:ASP:N	5:Cj:844:ASP:OD1	2.46	0.47
1:As:377:ASP:OD1	1:As:381:ALA:N	2.47	0.47
2:a:207:ALA:HA	2:a:210:ARG:HE	1.79	0.47
2:a:224:GLN:HA	2:a:227:ASN:ND2	2.30	0.47
5:Ck:136:VAL:HG13	5:Ck:403:PHE:HE1	1.78	0.47
2:b:239:ILE:O	2:b:243:ILE:HG12	2.15	0.47
1:Au:177:LYS:O	1:Au:512:ASN:ND2	2.42	0.47
1:Au:474:PHE:CZ	1:Av:506:VAL:HG21	2.49	0.47
7:W:132:PRO:HG2	7:W:163:ARG:HD2	1.96	0.47
1:Ar:725:LEU:HA	1:Ar:727:LYS:HE2	1.97	0.47
2:Z:224:GLN:HA	2:Z:227:ASN:ND2	2.30	0.47
5:Cj:845:ASN:OD1	5:Cj:845:ASN:N	2.47	0.47
1:As:211:PHE:HB3	1:As:227:ARG:HB3	1.96	0.47
1:As:238:ASP:N	1:As:238:ASP:OD1	2.47	0.47
1:As:406:SER:OG	1:As:412:GLY:O	2.21	0.47
2:a:239:ILE:O	2:a:243:ILE:HG12	2.15	0.47
6:I:91:TYR:CZ	6:I:95:HIS:HD2	2.33	0.47
7:K:12:TRP:CD1	7:K:12:TRP:H	2.31	0.47
6:O:32:TYR:CE2	6:P:133:LEU:HD12	2.50	0.47
2:c:88:ALA:HA	2:c:270:THR:HG23	1.96	0.47
2:c:224:GLN:HA	2:c:227:ASN:ND2	2.30	0.47
5:Cm:589:TYR:HD2	5:Cm:854:PHE:HD2	1.62	0.47
6:U:13:LEU:HD12	6:V:132:GLN:OE1	2.15	0.47
1:Av:377:ASP:OD1	1:Av:381:ALA:N	2.47	0.47
2:d:93:GLY:O	2:d:163:LYS:N	2.45	0.47
2:d:239:ILE:O	2:d:243:ILE:HG12	2.15	0.47
5:Cn:270:LEU:HD23	5:Cn:273:ILE:HD12	1.96	0.47
5:Cn:845:ASN:N	5:Cn:845:ASN:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cj:270:LEU:HD23	5:Cj:273:ILE:HD12	1.96	0.47
5:Cj:335:GLU:OE2	5:Cj:339:ARG:NH2	2.48	0.47
5:Ck:335:GLU:OE2	5:Ck:339:ARG:NH2	2.48	0.47
2:b:273:ALA:O	2:b:277:ASN:ND2	2.48	0.47
5:Cl:845:ASN:N	5:Cl:845:ASN:OD1	2.47	0.47
7:Q:132:PRO:HG2	7:Q:163:ARG:HD2	1.96	0.47
1:Av:406:SER:OG	1:Av:412:GLY:O	2.21	0.47
5:Cn:463:VAL:O	5:Cn:467:ASN:N	2.34	0.47
1:Ar:485:LEU:HG	1:Ar:707:ARG:HG2	1.97	0.47
6:C:91:TYR:CZ	6:C:95:HIS:HD2	2.33	0.47
5:Ck:463:VAL:O	5:Ck:467:ASN:N	2.34	0.47
1:At:725:LEU:HA	1:At:727:LYS:HE2	1.97	0.47
2:b:207:ALA:HA	2:b:210:ARG:HE	1.79	0.47
2:c:273:ALA:O	2:c:277:ASN:ND2	2.48	0.47
5:Cm:845:ASN:OD1	5:Cm:845:ASN:N	2.47	0.47
1:Av:211:PHE:HB3	1:Av:227:ARG:HB3	1.96	0.47
2:d:207:ALA:HA	2:d:210:ARG:HE	1.79	0.47
5:Cn:589:TYR:HD2	5:Cn:854:PHE:HD2	1.63	0.47
6:g:91:TYR:CZ	6:g:95:HIS:HD2	2.33	0.47
5:Cl:436:PHE:O	5:Cl:439:LYS:HG3	2.15	0.47
6:O:91:TYR:CZ	6:O:95:HIS:HD2	2.33	0.47
1:Au:725:LEU:HA	1:Au:727:LYS:HE2	1.97	0.47
1:Av:725:LEU:HA	1:Av:727:LYS:HE2	1.97	0.47
2:d:224:GLN:HA	2:d:227:ASN:ND2	2.30	0.47
6:D:2:ASN:OD1	6:D:4:SER:OG	2.27	0.46
6:D:9:GLN:O	6:D:13:LEU:CB	2.60	0.46
5:Cl:136:VAL:HG13	5:Cl:403:PHE:HE1	1.79	0.46
6:P:109:ALA:O	6:P:113:GLN:HB3	2.15	0.46
4:T:51:ASP:OD1	4:T:51:ASP:N	2.38	0.46
6:V:129:LEU:HA	6:V:135:THR:OG1	2.15	0.46
6:D:91:TYR:CZ	6:D:95:HIS:HD2	2.33	0.46
1:As:725:LEU:HA	1:As:727:LYS:HE2	1.97	0.46
2:a:171:THR:HG23	6:U:43:GLU:OE2	2.15	0.46
6:J:91:TYR:CZ	6:J:95:HIS:HD2	2.33	0.46
6:O:2:ASN:OD1	6:O:4:SER:OG	2.27	0.46
6:P:89:LEU:O	6:P:93:MET:HG3	2.16	0.46
6:P:91:TYR:CZ	6:P:95:HIS:HD2	2.33	0.46
5:Cm:335:GLU:OE2	5:Cm:339:ARG:NH2	2.48	0.46
6:U:2:ASN:OD1	6:U:4:SER:OG	2.27	0.46
1:Ar:636:ASP:OD1	1:Ar:637:PHE:N	2.47	0.46
2:Z:207:ALA:HA	2:Z:210:ARG:HE	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cj:743:ASP:C	5:Cj:745:LYS:H	2.24	0.46
7:E:132:PRO:HG2	7:E:163:ARG:HD2	1.96	0.46
2:a:273:ALA:O	2:a:277:ASN:ND2	2.48	0.46
5:Cl:335:GLU:OE2	5:Cl:339:ARG:NH2	2.48	0.46
1:Av:485:LEU:HG	1:Av:707:ARG:HG2	1.97	0.46
6:g:9:GLN:O	6:g:13:LEU:CB	2.59	0.46
1:Ar:624:ASP:HB3	1:Ar:656:LEU:O	2.16	0.46
5:Cj:356:ASN:HA	6:J:127:PRO:HD3	1.98	0.46
5:Ck:436:PHE:O	5:Ck:439:LYS:HG3	2.15	0.46
1:Au:591:GLU:CD	1:Au:595:ARG:HH21	2.24	0.46
6:V:89:LEU:O	6:V:93:MET:HG3	2.16	0.46
6:V:109:ALA:O	6:V:113:GLN:CB	2.64	0.46
2:d:273:ALA:O	2:d:277:ASN:ND2	2.48	0.46
5:Cn:335:GLU:OE2	5:Cn:339:ARG:NH2	2.48	0.46
5:Cn:436:PHE:O	5:Cn:439:LYS:HG3	2.15	0.46
2:Z:239:ILE:O	2:Z:243:ILE:HG12	2.15	0.46
5:Ck:270:LEU:HD23	5:Ck:273:ILE:HD12	1.96	0.46
6:J:89:LEU:O	6:J:93:MET:HG3	2.16	0.46
1:At:357:PHE:HD2	1:Av:161:GLN:NE2	2.14	0.46
2:b:157:THR:HG23	5:Cm:580:VAL:HG11	1.98	0.46
6:O:9:GLN:O	6:O:13:LEU:CB	2.59	0.46
1:Au:485:LEU:HG	1:Au:707:ARG:HG2	1.96	0.46
2:c:207:ALA:HA	2:c:210:ARG:HE	1.79	0.46
6:U:89:LEU:O	6:U:93:MET:HG3	2.16	0.46
7:h:132:PRO:HG2	7:h:163:ARG:HD2	1.96	0.46
2:Z:273:ALA:O	2:Z:277:ASN:ND2	2.48	0.46
6:D:138:ALA:HA	6:D:141:LEU:HG	1.98	0.46
7:E:205:ARG:NH1	8:L:20:PRO:HD2	2.31	0.46
5:Ck:845:ASN:N	5:Ck:845:ASN:OD1	2.47	0.46
6:O:89:LEU:O	6:O:93:MET:HG3	2.16	0.46
1:Au:397:GLN:NE2	1:Av:538:PHE:CD2	2.84	0.46
3:S:151:ASP:N	3:S:151:ASP:OD1	2.49	0.46
1:Ar:473:ASP:OD1	1:Ar:474:PHE:N	2.45	0.46
1:As:624:ASP:HB3	1:As:656:LEU:O	2.16	0.46
1:At:591:GLU:CD	1:At:595:ARG:HH21	2.24	0.46
6:P:138:ALA:HA	6:P:141:LEU:HG	1.98	0.46
5:Cj:589:TYR:HD2	5:Cj:854:PHE:HD2	1.63	0.46
5:Cj:787:THR:OG1	5:Cj:788:SER:N	2.49	0.46
5:Ck:787:THR:OG1	5:Ck:788:SER:N	2.49	0.46
6:I:138:ALA:HA	6:I:141:LEU:HG	1.98	0.46
5:Cl:273:ILE:O	5:Cl:277:ARG:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:169:LEU:HD22	3:S:208:MET:HE1	1.98	0.46
5:Cm:436:PHE:O	5:Cm:439:LYS:HG3	2.15	0.46
6:V:91:TYR:CZ	6:V:95:HIS:HD2	2.33	0.46
4:e:77:ASP:OD1	4:e:77:ASP:N	2.46	0.46
5:Cn:449:ASP:OD1	5:Cn:449:ASP:N	2.44	0.46
5:Cn:743:ASP:C	5:Cn:745:LYS:H	2.24	0.46
8:i:107:ALA:O	8:i:111:ILE:HG13	2.16	0.46
5:Cj:273:ILE:O	5:Cj:277:ARG:HG3	2.16	0.46
6:C:11:LYS:O	6:C:15:ARG:HG3	2.16	0.46
5:Ck:273:ILE:O	5:Ck:277:ARG:HG3	2.16	0.46
5:Ck:589:TYR:HD2	5:Ck:854:PHE:HD2	1.62	0.46
6:I:89:LEU:O	6:I:93:MET:HG3	2.16	0.46
6:J:138:ALA:HA	6:J:141:LEU:HG	1.98	0.46
6:P:2:ASN:OD1	6:P:4:SER:OG	2.27	0.46
8:R:107:ALA:O	8:R:111:ILE:HG13	2.16	0.46
2:c:239:ILE:O	2:c:243:ILE:HG12	2.15	0.46
2:d:88:ALA:HA	2:d:270:THR:HG23	1.96	0.46
6:f:89:LEU:O	6:f:93:MET:HG3	2.16	0.46
6:g:11:LYS:O	6:g:15:ARG:HG3	2.16	0.46
5:Cj:436:PHE:O	5:Cj:439:LYS:HG3	2.15	0.46
5:Cj:775:ASP:OD1	5:Cj:776:SER:N	2.49	0.46
6:D:11:LYS:O	6:D:15:ARG:HG3	2.16	0.46
6:J:11:LYS:O	6:J:15:ARG:HG3	2.16	0.46
1:At:468:ARG:CZ	1:Au:694:ARG:HH21	2.29	0.46
5:Cl:743:ASP:C	5:Cl:745:LYS:H	2.24	0.46
6:V:11:LYS:O	6:V:15:ARG:HG3	2.16	0.46
1:Av:624:ASP:HB3	1:Av:656:LEU:O	2.16	0.46
5:Cn:273:ILE:O	5:Cn:277:ARG:HG3	2.16	0.46
5:Cn:775:ASP:OD1	5:Cn:776:SER:N	2.49	0.46
6:f:11:LYS:O	6:f:15:ARG:HG3	2.16	0.46
1:Ar:726:ARG:O	1:Ar:730:THR:HG23	2.16	0.45
3:A:169:LEU:HD22	3:A:208:MET:HE1	1.98	0.45
7:E:30:ASP:OD2	7:E:33:SER:OG	2.28	0.45
5:Cl:171:THR:HA	5:Cl:174:ASP:OD2	2.16	0.45
5:Cl:589:TYR:HD2	5:Cl:854:PHE:HD2	1.63	0.45
5:Cm:787:THR:OG1	5:Cm:788:SER:N	2.49	0.45
6:U:11:LYS:O	6:U:15:ARG:HG3	2.16	0.45
6:J:19:ALA:HA	6:J:22:GLN:CG	2.47	0.45
6:O:93:MET:CE	6:P:105:LEU:HD22	2.47	0.45
6:P:11:LYS:O	6:P:15:ARG:HG3	2.16	0.45
6:U:17:PHE:HB2	6:U:22:GLN:NE2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Av:726:ARG:O	1:Av:730:THR:HG23	2.16	0.45
3:Y:169:LEU:HD22	3:Y:208:MET:HE1	1.98	0.45
7:h:2:LYS:HE3	7:h:2:LYS:HB3	1.86	0.45
1:Ar:401:GLU:OE1	1:Ar:403:TYR:OH	2.29	0.45
2:Z:93:GLY:O	2:Z:163:LYS:N	2.45	0.45
6:C:9:GLN:O	6:C:13:LEU:CB	2.59	0.45
6:D:19:ALA:HA	6:D:22:GLN:CG	2.47	0.45
1:As:177:LYS:O	1:As:512:ASN:ND2	2.42	0.45
7:K:132:PRO:HG2	7:K:163:ARG:HD2	1.96	0.45
1:At:267:VAL:HG22	1:At:378:VAL:HG11	1.98	0.45
1:At:485:LEU:HG	1:At:707:ARG:HG2	1.96	0.45
6:O:138:ALA:HA	6:O:141:LEU:HG	1.98	0.45
6:P:17:PHE:HB2	6:P:22:GLN:NE2	2.31	0.45
6:P:19:ALA:HA	6:P:22:GLN:CG	2.47	0.45
1:Au:267:VAL:HG22	1:Au:378:VAL:HG11	1.98	0.45
1:Au:624:ASP:HB3	1:Au:656:LEU:O	2.16	0.45
1:Av:591:GLU:CD	1:Av:595:ARG:HH21	2.24	0.45
6:f:17:PHE:HB2	6:f:22:GLN:NE2	2.31	0.45
6:I:19:ALA:HA	6:I:22:GLN:CG	2.47	0.45
1:At:238:ASP:OD1	1:At:238:ASP:N	2.47	0.45
1:At:282:SER:OG	1:At:283:TYR:N	2.50	0.45
2:b:63:VAL:HG12	2:b:64:TYR:H	1.82	0.45
5:Cm:273:ILE:O	5:Cm:277:ARG:HG3	2.16	0.45
8:X:107:ALA:O	8:X:111:ILE:HG13	2.16	0.45
5:Cn:171:THR:HA	5:Cn:174:ASP:OD2	2.16	0.45
6:g:89:LEU:O	6:g:93:MET:HG3	2.16	0.45
6:D:17:PHE:HB2	6:D:22:GLN:NE2	2.31	0.45
6:D:89:LEU:O	6:D:93:MET:HG3	2.16	0.45
8:F:33:ASP:OD2	8:F:62:ARG:NH2	2.50	0.45
2:a:63:VAL:HG12	2:a:64:TYR:H	1.82	0.45
5:Ck:171:THR:HA	5:Ck:174:ASP:OD2	2.16	0.45
6:I:11:LYS:O	6:I:15:ARG:HG3	2.16	0.45
8:R:33:ASP:OD2	8:R:62:ARG:NH2	2.50	0.45
1:Au:282:SER:OG	1:Au:283:TYR:N	2.50	0.45
6:U:19:ALA:HA	6:U:22:GLN:CG	2.47	0.45
6:V:138:ALA:HA	6:V:141:LEU:HG	1.98	0.45
5:Cj:171:THR:HA	5:Cj:174:ASP:OD2	2.16	0.45
6:C:89:LEU:O	6:C:93:MET:HG3	2.16	0.45
6:C:100:PRO:HD3	7:E:98:TYR:CZ	2.52	0.45
5:Ck:771:ARG:HH21	7:K:1:MET:H1	1.62	0.45
3:M:169:LEU:HD22	3:M:208:MET:HE1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:~Au:497:TRP:NE1	1:~Au:499:GLU:O	2.50	0.45
5:~Cm:768:GLU:OE2	7:~W:1:MET:HA	2.16	0.45
6:~U:138:ALA:HA	6:~U:141:LEU:HG	1.98	0.45
6:~V:17:PHE:HB2	6:~V:22:GLN:NE2	2.31	0.45
1:~Av:497:TRP:NE1	1:~Av:499:GLU:O	2.50	0.45
3:~Y:151:ASP:OD1	3:~Y:151:ASP:N	2.49	0.45
6:~f:138:ALA:HA	6:~f:141:LEU:HG	1.98	0.45
1:~Ar:565:LEU:O	1:~Ar:569:VAL:HG23	2.17	0.45
6:~C:19:ALA:HA	6:~C:22:GLN:CG	2.47	0.45
6:~C:138:ALA:HA	6:~C:141:LEU:HG	1.98	0.45
6:~D:88:CYS:O	6:~D:92:ARG:HG3	2.17	0.45
1:~As:267:VAL:HG22	1:~As:378:VAL:HG11	1.98	0.45
1:~As:565:LEU:O	1:~As:569:VAL:HG23	2.17	0.45
1:~As:591:GLU:CD	1:~As:595:ARG:HH21	2.24	0.45
8:~L:107:ALA:O	8:~L:111:ILE:HG13	2.16	0.45
5:~Cm:743:ASP:C	5:~Cm:745:LYS:H	2.24	0.45
5:~Cn:771:ARG:NH2	7:~h:1:MET:HG2	2.31	0.45
1:~As:497:TRP:NE1	1:~As:499:GLU:O	2.50	0.45
3:~G:96:GLN:OE1	3:~G:96:GLN:N	2.40	0.45
5:~Ck:743:ASP:C	5:~Ck:745:LYS:H	2.24	0.45
6:~I:2:ASN:OD1	6:~I:4:SER:OG	2.27	0.45
2:~b:107:GLN:OE1	5:~Cm:858:ASN:ND2	2.50	0.45
5:~Cl:170:ALA:HA	5:~Cl:173:ASP:OD2	2.17	0.45
6:~O:11:LYS:O	6:~O:15:ARG:HG3	2.16	0.45
6:~g:19:ALA:HA	6:~g:22:GLN:CG	2.47	0.45
6:~g:138:ALA:HA	6:~g:141:LEU:HG	1.98	0.45
1:~Ar:497:TRP:NE1	1:~Ar:499:GLU:O	2.50	0.45
8:~F:107:ALA:O	8:~F:111:ILE:HG13	2.16	0.45
1:~As:726:ARG:O	1:~As:730:THR:HG23	2.16	0.45
6:~J:17:PHE:HB2	6:~J:22:GLN:NE2	2.31	0.45
6:~J:88:CYS:O	6:~J:92:ARG:HG3	2.17	0.45
5:~Cl:787:THR:OG1	5:~Cl:788:SER:N	2.49	0.45
2:~c:63:VAL:HG12	2:~c:64:TYR:H	1.82	0.45
5:~Cm:771:ARG:CZ	7:~W:1:MET:HG2	2.46	0.45
6:~V:2:ASN:OD1	6:~V:4:SER:OG	2.27	0.45
1:~Av:282:SER:OG	1:~Av:283:TYR:N	2.50	0.45
1:~Av:565:LEU:O	1:~Av:569:VAL:HG23	2.17	0.45
2:~d:63:VAL:HG12	2:~d:64:TYR:H	1.82	0.45
6:~f:88:CYS:O	6:~f:92:ARG:HG3	2.17	0.45
1:~Ar:267:VAL:HG22	1:~Ar:378:VAL:HG11	1.98	0.45
1:~Ar:688:SER:OG	1:~Av:465:ARG:NH2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cj:170:ALA:HA	5:Cj:173:ASP:OD2	2.17	0.45
1:As:637:PHE:HD1	1:As:637:PHE:HA	1.65	0.45
6:I:9:GLN:O	6:I:13:LEU:CB	2.59	0.45
6:I:88:CYS:O	6:I:92:ARG:HG3	2.17	0.45
6:O:136:ALA:CA	6:P:13:LEU:HD11	2.46	0.45
1:Au:636:ASP:OD1	1:Au:637:PHE:N	2.47	0.45
2:c:275:LYS:HE2	2:c:275:LYS:HB3	1.87	0.45
5:Cm:170:ALA:HA	5:Cm:173:ASP:OD2	2.17	0.45
5:Cm:171:THR:HA	5:Cm:174:ASP:OD2	2.17	0.45
6:U:78:ASP:OD1	6:U:78:ASP:N	2.50	0.45
6:V:19:ALA:HA	6:V:22:GLN:CG	2.47	0.45
8:X:33:ASP:OD2	8:X:62:ARG:NH2	2.50	0.45
6:g:17:PHE:HB2	6:g:22:GLN:NE2	2.31	0.45
6:g:88:CYS:O	6:g:92:ARG:HG3	2.17	0.45
8:i:33:ASP:OD2	8:i:62:ARG:NH2	2.50	0.45
3:A:151:ASP:OD1	3:A:151:ASP:N	2.49	0.44
6:I:92:ARG:HH22	7:K:118:GLU:HG3	1.82	0.44
1:At:624:ASP:HB3	1:At:656:LEU:O	2.16	0.44
5:Cl:202:ASP:OD1	5:Cl:202:ASP:N	2.51	0.44
5:Cl:437:GLU:HG2	5:Cl:441:HIS:CE1	2.52	0.44
6:O:88:CYS:O	6:O:92:ARG:HG3	2.17	0.44
6:O:136:ALA:CA	6:P:13:LEU:HD21	2.46	0.44
7:Q:2:LYS:HE3	7:Q:2:LYS:HB3	1.85	0.44
1:Au:726:ARG:O	1:Au:730:THR:HG23	2.16	0.44
6:C:17:PHE:HB2	6:C:22:GLN:NE2	2.31	0.44
3:G:151:ASP:OD1	3:G:151:ASP:N	2.49	0.44
5:Ck:281:GLN:HA	5:Ck:284:TRP:CD1	2.52	0.44
1:At:594:TYR:CD2	1:Au:629:GLN:HB3	2.52	0.44
6:O:17:PHE:HB2	6:O:22:GLN:NE2	2.31	0.44
6:O:19:ALA:HA	6:O:22:GLN:CG	2.47	0.44
1:Au:184:MET:HA	1:Au:649:VAL:HG11	2.00	0.44
5:Cm:775:ASP:OD1	5:Cm:776:SER:N	2.49	0.44
5:Cn:437:GLU:HG2	5:Cn:441:HIS:CE1	2.52	0.44
6:g:129:LEU:HB3	6:g:132:GLN:O	2.17	0.44
1:Ar:181:LEU:HB3	1:Ar:182:SER:H	1.55	0.44
5:Cj:460:ALA:O	5:Cj:464:LYS:HG3	2.17	0.44
6:C:93:MET:HE2	6:D:105:LEU:HD22	1.97	0.44
5:Ck:775:ASP:OD1	5:Ck:776:SER:N	2.49	0.44
8:L:33:ASP:OD2	8:L:62:ARG:NH2	2.50	0.44
1:At:184:MET:HA	1:At:649:VAL:HG11	2.00	0.44
1:At:497:TRP:NE1	1:At:499:GLU:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:At:726:ARG:O	1:At:730:THR:HG23	2.17	0.44
2:b:122:LYS:HE3	2:b:122:LYS:HB2	1.89	0.44
5:Cm:369:GLN:OE1	6:f:111:ARG:O	2.34	0.44
6:U:88:CYS:O	6:U:92:ARG:HG3	2.17	0.44
1:Av:177:LYS:O	1:Av:512:ASN:ND2	2.42	0.44
5:Cn:194:LEU:HD21	5:Cn:441:HIS:CE1	2.53	0.44
2:Z:63:VAL:HG12	2:Z:64:TYR:H	1.82	0.44
6:C:88:CYS:O	6:C:92:ARG:HG3	2.17	0.44
3:G:169:LEU:HD22	3:G:208:MET:HE1	1.98	0.44
1:At:181:LEU:HB3	1:At:182:SER:H	1.55	0.44
5:Cl:460:ALA:O	5:Cl:464:LYS:HG3	2.17	0.44
1:Au:181:LEU:HB3	1:Au:182:SER:H	1.55	0.44
1:Au:565:LEU:O	1:Au:569:VAL:HG23	2.17	0.44
6:V:78:ASP:N	6:V:78:ASP:OD1	2.50	0.44
7:W:30:ASP:OD2	7:W:33:SER:OG	2.28	0.44
5:Cn:170:ALA:HA	5:Cn:173:ASP:OD2	2.17	0.44
6:f:19:ALA:HA	6:f:22:GLN:CG	2.47	0.44
6:g:109:ALA:O	6:g:113:GLN:CB	2.66	0.44
1:Ar:238:ASP:N	1:Ar:238:ASP:OD1	2.47	0.44
1:Ar:591:GLU:CD	1:Ar:595:ARG:HH21	2.24	0.44
4:B:51:ASP:OD1	4:B:51:ASP:N	2.38	0.44
6:I:17:PHE:HB2	6:I:22:GLN:NE2	2.31	0.44
1:At:565:LEU:O	1:At:569:VAL:HG23	2.17	0.44
5:Cl:281:GLN:HA	5:Cl:284:TRP:CD1	2.53	0.44
5:Cl:771:ARG:NH2	7:Q:1:MET:HG2	2.32	0.44
6:g:78:ASP:OD1	6:g:78:ASP:N	2.50	0.44
5:Cj:194:LEU:HD21	5:Cj:441:HIS:CE1	2.53	0.44
7:E:74:GLY:O	7:E:188:PRO:HG2	2.18	0.44
5:Ck:170:ALA:HA	5:Ck:173:ASP:OD2	2.17	0.44
5:Ck:194:LEU:HD21	5:Ck:441:HIS:CE1	2.53	0.44
5:Ck:460:ALA:O	5:Ck:464:LYS:HG3	2.17	0.44
5:Cl:775:ASP:OD1	5:Cl:776:SER:N	2.49	0.44
1:Av:267:VAL:HG22	1:Av:378:VAL:HG11	1.98	0.44
5:Cn:202:ASP:N	5:Cn:202:ASP:OD1	2.50	0.44
5:Cn:281:GLN:HA	5:Cn:284:TRP:CD1	2.52	0.44
6:f:78:ASP:N	6:f:78:ASP:OD1	2.50	0.44
6:C:132:GLN:NE2	6:D:17:PHE:CD1	2.85	0.44
5:Ck:437:GLU:HG2	5:Ck:441:HIS:CE1	2.52	0.44
7:K:74:GLY:O	7:K:188:PRO:HG2	2.18	0.44
6:P:88:CYS:O	6:P:92:ARG:HG3	2.17	0.44
5:Cm:437:GLU:HG2	5:Cm:441:HIS:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Av:184:MET:HA	1:Av:649:VAL:HG11	2.00	0.44
1:Av:586:MET:HE2	1:Av:631:LEU:HA	2.00	0.44
5:Cn:460:ALA:O	5:Cn:464:LYS:HG3	2.17	0.44
5:Cj:172:THR:OG1	5:Cj:434:ARG:NE	2.42	0.44
1:As:263:ASP:N	1:As:263:ASP:OD1	2.51	0.44
6:J:78:ASP:OD1	6:J:78:ASP:N	2.50	0.44
1:At:586:MET:HE2	1:At:631:LEU:HA	2.00	0.44
1:At:636:ASP:OD1	1:At:637:PHE:N	2.46	0.44
7:Q:205:ARG:HH12	8:X:20:PRO:CD	2.30	0.44
1:Au:202:ASP:N	1:Av:167:MET:SD	2.91	0.44
4:T:88:VAL:HG22	1:Av:540:GLN:OE1	2.17	0.44
5:Cm:460:ALA:O	5:Cm:464:LYS:HG3	2.17	0.44
6:f:92:ARG:NH2	7:h:118:GLU:HG3	2.32	0.44
1:Ar:167:MET:CE	1:Av:201:TYR:HA	2.45	0.44
6:D:78:ASP:OD1	6:D:78:ASP:N	2.50	0.44
1:As:586:MET:HE2	1:As:631:LEU:HA	2.00	0.44
6:I:97:PRO:HB2	6:I:137:PHE:HZ	1.83	0.44
7:Q:74:GLY:O	7:Q:188:PRO:HG2	2.18	0.44
5:Cm:281:GLN:HA	5:Cm:284:TRP:CD1	2.53	0.44
6:V:88:CYS:O	6:V:92:ARG:HG3	2.17	0.44
5:Cj:281:GLN:HA	5:Cj:284:TRP:CD1	2.53	0.43
8:F:20:PRO:CG	7:h:205:ARG:HH12	2.29	0.43
6:U:136:ALA:HA	6:V:13:LEU:HD11	1.98	0.43
1:Ar:282:SER:OG	1:Ar:283:TYR:N	2.50	0.43
1:Ar:501:ALA:HB2	8:i:155:GLN:HE21	1.83	0.43
5:Cj:437:GLU:HG2	5:Cj:441:HIS:CE1	2.52	0.43
5:Cj:771:ARG:HH21	7:E:1:MET:H3	1.64	0.43
6:C:13:LEU:HD11	6:D:132:GLN:HB3	1.99	0.43
6:C:13:LEU:CD1	6:D:132:GLN:OE1	2.48	0.43
1:At:297:GLU:OE2	1:At:307:SER:OG	2.25	0.43
2:b:87:ARG:HB2	6:g:43:GLU:OE2	2.19	0.43
5:Cl:194:LEU:HD21	5:Cl:441:HIS:CE1	2.53	0.43
5:Cm:202:ASP:N	5:Cm:202:ASP:OD1	2.51	0.43
1:Av:636:ASP:OD1	1:Av:637:PHE:N	2.46	0.43
2:d:204:VAL:O	2:d:208:ILE:HG13	2.19	0.43
7:h:74:GLY:O	7:h:188:PRO:HG2	2.18	0.43
5:Cj:202:ASP:N	5:Cj:202:ASP:OD1	2.50	0.43
1:As:539:ARG:NH1	1:As:557:TRP:HD1	2.16	0.43
1:As:658:ASP:HB3	1:As:722:VAL:HG23	2.00	0.43
3:M:151:ASP:OD1	3:M:151:ASP:N	2.49	0.43
6:O:78:ASP:OD1	6:O:78:ASP:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:30:ASP:OD2	7:Q:33:SER:OG	2.28	0.43
1:Au:539:ARG:NH1	1:Au:557:TRP:HD1	2.16	0.43
6:V:97:PRO:HB2	6:V:137:PHE:HZ	1.83	0.43
5:Cj:358:VAL:HG23	6:J:127:PRO:HB3	2.01	0.43
1:As:184:MET:HA	1:As:649:VAL:HG11	1.99	0.43
1:At:539:ARG:NH1	1:At:557:TRP:HD1	2.17	0.43
5:Cm:194:LEU:HD21	5:Cm:441:HIS:CE1	2.53	0.43
7:W:74:GLY:O	7:W:188:PRO:HG2	2.18	0.43
7:W:76:MET:N	7:W:76:MET:SD	2.92	0.43
7:E:2:LYS:HE3	7:E:2:LYS:HB3	1.85	0.43
6:P:86:PHE:CE2	6:P:90:ARG:HD2	2.54	0.43
6:P:97:PRO:HB2	6:P:137:PHE:HZ	1.83	0.43
7:Q:5:ARG:HB3	7:Q:5:ARG:CZ	2.48	0.43
2:c:122:LYS:HE3	2:c:122:LYS:HB2	1.89	0.43
2:c:204:VAL:O	2:c:208:ILE:HG13	2.19	0.43
1:Av:252:ARG:HD3	1:Av:252:ARG:HA	1.81	0.43
3:Y:187:ASP:OD1	3:Y:188:LEU:N	2.51	0.43
7:h:5:ARG:HB3	7:h:5:ARG:CZ	2.48	0.43
8:i:81:ASN:ND2	8:i:114:TRP:O	2.52	0.43
1:Ar:184:MET:HA	1:Ar:649:VAL:HG11	1.99	0.43
5:Cj:472:LYS:HE2	5:Cj:472:LYS:HB3	1.87	0.43
6:C:136:ALA:HA	6:D:13:LEU:CG	2.49	0.43
6:D:97:PRO:HB2	6:D:137:PHE:HZ	1.83	0.43
8:F:81:ASN:ND2	8:F:114:TRP:O	2.52	0.43
6:O:86:PHE:CE2	6:O:90:ARG:HD2	2.54	0.43
7:Q:155:LEU:HA	7:Q:163:ARG:HH12	1.84	0.43
2:c:117:LEU:HB2	2:c:118:PRO:HD3	2.01	0.43
6:U:141:LEU:HD12	7:W:101:ARG:HH22	1.84	0.43
1:Av:263:ASP:N	1:Av:263:ASP:OD1	2.51	0.43
6:f:86:PHE:CE2	6:f:90:ARG:HD2	2.54	0.43
1:Ar:352:SER:OG	1:Ar:353:LEU:N	2.52	0.43
1:Ar:488:PRO:O	1:Av:469:GLY:HA3	2.19	0.43
1:Ar:539:ARG:NH1	1:Ar:557:TRP:HD1	2.16	0.43
1:As:282:SER:OG	1:As:283:TYR:N	2.50	0.43
2:a:122:LYS:HB2	2:a:122:LYS:HE3	1.89	0.43
6:J:86:PHE:CE2	6:J:90:ARG:HD2	2.54	0.43
8:L:39:GLN:NE2	1:At:172:VAL:O	2.52	0.43
1:At:658:ASP:HB3	1:At:722:VAL:HG23	2.00	0.43
7:Q:76:MET:N	7:Q:76:MET:SD	2.92	0.43
5:Cm:356:ASN:OD1	6:g:127:PRO:HD3	2.18	0.43
8:X:81:ASN:ND2	8:X:114:TRP:O	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Av:238:ASP:OD1	1:Av:238:ASP:N	2.47	0.43
6:f:2:ASN:OD1	6:f:4:SER:OG	2.27	0.43
1:Ar:586:MET:HE2	1:Ar:631:LEU:HA	2.00	0.43
6:C:137:PHE:HB2	6:D:32:TYR:HE2	1.84	0.43
6:I:86:PHE:CE2	6:I:90:ARG:HD2	2.54	0.43
7:K:5:ARG:CZ	7:K:5:ARG:HB3	2.48	0.43
7:K:76:MET:SD	7:K:76:MET:N	2.92	0.43
1:At:352:SER:OG	1:At:353:LEU:N	2.52	0.43
2:b:204:VAL:O	2:b:208:ILE:HG13	2.19	0.43
3:M:187:ASP:OD1	3:M:188:LEU:N	2.51	0.43
6:O:97:PRO:HB2	6:O:137:PHE:HZ	1.83	0.43
1:Au:586:MET:HE2	1:Au:631:LEU:HA	2.00	0.43
2:d:117:LEU:HB2	2:d:118:PRO:HD3	2.01	0.43
3:A:187:ASP:OD1	3:A:188:LEU:N	2.52	0.43
6:C:33:ILE:HD11	6:D:133:LEU:CD2	2.47	0.43
6:J:6:PHE:HA	6:J:9:GLN:HG2	2.01	0.43
1:At:252:ARG:HA	1:At:252:ARG:HD3	1.81	0.43
1:Au:263:ASP:OD1	1:Au:263:ASP:N	2.51	0.43
1:Au:590:ARG:HD2	1:Av:578:ARG:NH2	2.34	0.43
3:S:187:ASP:OD1	3:S:188:LEU:N	2.52	0.43
6:V:129:LEU:HG	6:V:135:THR:HB	2.00	0.43
1:Av:539:ARG:NH1	1:Av:557:TRP:HD1	2.17	0.43
7:h:76:MET:N	7:h:76:MET:SD	2.92	0.43
1:Ar:263:ASP:OD1	1:Ar:263:ASP:N	2.51	0.43
7:E:76:MET:N	7:E:76:MET:SD	2.92	0.43
1:As:198:GLN:NE2	1:At:168:MET:SD	2.91	0.43
7:K:155:LEU:HA	7:K:163:ARG:HH12	1.84	0.43
1:Au:590:ARG:HD2	1:Av:578:ARG:CZ	2.49	0.43
4:T:26:PHE:CE2	1:Av:299:ASP:HB3	2.53	0.43
6:V:86:PHE:CE2	6:V:90:ARG:HD2	2.54	0.43
6:V:96:GLU:HB3	6:V:99:ALA:HB2	2.01	0.43
1:Av:181:LEU:HB3	1:Av:182:SER:H	1.55	0.43
2:Z:122:LYS:HE3	2:Z:122:LYS:HB2	1.89	0.42
2:Z:204:VAL:O	2:Z:208:ILE:HG13	2.19	0.42
5:Cj:175:ILE:O	5:Cj:179:VAL:HG23	2.19	0.42
6:C:96:GLU:HB3	6:C:99:ALA:HB2	2.01	0.42
6:D:6:PHE:HA	6:D:9:GLN:HG2	2.01	0.42
6:D:133:LEU:H	6:D:133:LEU:HG	1.61	0.42
1:As:352:SER:OG	1:As:353:LEU:N	2.52	0.42
1:As:636:ASP:OD1	1:As:637:PHE:N	2.47	0.42
6:O:136:ALA:N	6:P:13:LEU:HD11	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:P:78:ASP:OD1	6:P:78:ASP:N	2.50	0.42
1:Au:237:ASN:ND2	1:Av:655:MET:SD	2.91	0.42
6:V:109:ALA:O	6:V:113:GLN:HB3	2.18	0.42
8:X:125:ARG:HG3	8:X:126:LEU:N	2.34	0.42
1:Ar:298:ASP:OD2	1:Ar:300:SER:OG	2.37	0.42
3:A:96:GLN:OE1	3:A:96:GLN:N	2.40	0.42
3:A:157:TYR:O	3:A:161:MET:HG2	2.19	0.42
6:C:136:ALA:HA	6:D:13:LEU:HD21	2.00	0.42
6:D:86:PHE:CE2	6:D:90:ARG:HD2	2.54	0.42
2:a:40:ASN:HB3	2:a:44:MET:HE3	2.01	0.42
3:G:157:TYR:O	3:G:161:MET:HG2	2.19	0.42
5:Ck:771:ARG:HE	7:K:1:MET:HB3	1.83	0.42
1:At:586:MET:HB3	1:Au:578:ARG:CZ	2.50	0.42
5:Cl:357:ASP:HB2	6:V:127:PRO:HB2	2.02	0.42
8:R:81:ASN:ND2	8:R:114:TRP:O	2.52	0.42
1:Au:658:ASP:HB3	1:Au:722:VAL:HG23	2.00	0.42
5:Cm:175:ILE:O	5:Cm:179:VAL:HG23	2.19	0.42
6:U:96:GLU:HB3	6:U:99:ALA:HB2	2.01	0.42
7:h:155:LEU:HA	7:h:163:ARG:HH12	1.84	0.42
2:Z:40:ASN:HB3	2:Z:44:MET:HE3	2.01	0.42
2:Z:151:PRO:HG2	2:Z:249:GLN:N	2.35	0.42
7:E:205:ARG:HH22	8:L:20:PRO:HD2	1.84	0.42
8:F:20:PRO:HD2	7:h:205:ARG:NH2	2.31	0.42
2:a:57:LYS:HE2	2:a:57:LYS:HB3	1.82	0.42
8:L:81:ASN:ND2	8:L:114:TRP:O	2.52	0.42
5:Cl:245:LYS:HD2	5:Cl:245:LYS:HA	1.85	0.42
5:Cl:791:LEU:N	5:Cl:792:PRO:HD2	2.35	0.42
6:O:96:GLU:HB3	6:O:99:ALA:HB2	2.01	0.42
6:P:129:LEU:HG	6:P:135:THR:HB	2.01	0.42
7:W:5:ARG:CZ	7:W:5:ARG:HB3	2.48	0.42
8:X:10:THR:OG1	8:X:20:PRO:HA	2.19	0.42
2:d:74:ILE:H	2:d:74:ILE:HG13	1.70	0.42
3:Y:157:TYR:O	3:Y:161:MET:HG2	2.20	0.42
5:Cn:175:ILE:O	5:Cn:179:VAL:HG23	2.19	0.42
6:f:36:TYR:CE2	6:g:106:LEU:HD22	2.53	0.42
6:f:96:GLU:HB3	6:f:99:ALA:HB2	2.01	0.42
6:g:96:GLU:HB3	6:g:99:ALA:HB2	2.01	0.42
6:D:96:GLU:HB3	6:D:99:ALA:HB2	2.01	0.42
7:E:5:ARG:HB3	7:E:5:ARG:CZ	2.48	0.42
8:F:19:PHE:CD1	7:h:205:ARG:NH2	2.87	0.42
3:G:187:ASP:OD1	3:G:188:LEU:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:96:GLU:HB3	6:I:99:ALA:HB2	2.01	0.42
2:b:235:MET:O	2:b:239:ILE:HG13	2.19	0.42
5:Cl:175:ILE:O	5:Cl:179:VAL:HG23	2.19	0.42
6:U:86:PHE:CE2	6:U:90:ARG:HD2	2.54	0.42
2:d:57:LYS:HE2	2:d:57:LYS:HB3	1.82	0.42
6:g:97:PRO:HB2	6:g:137:PHE:HZ	1.83	0.42
1:Ar:658:ASP:HB3	1:Ar:722:VAL:HG23	2.00	0.42
5:Ck:202:ASP:N	5:Ck:202:ASP:OD1	2.50	0.42
6:I:78:ASP:N	6:I:78:ASP:OD1	2.50	0.42
8:L:87:PHE:CG	8:L:111:ILE:HD11	2.55	0.42
5:Cl:358:VAL:HG23	6:V:127:PRO:HB3	2.00	0.42
1:Av:352:SER:OG	1:Av:353:LEU:N	2.52	0.42
3:Y:96:GLN:OE1	3:Y:96:GLN:N	2.40	0.42
2:Z:235:MET:O	2:Z:239:ILE:HG13	2.19	0.42
5:Cj:791:LEU:N	5:Cj:792:PRO:HD2	2.35	0.42
6:D:129:LEU:HG	6:D:135:THR:HB	2.02	0.42
8:F:72:GLU:O	8:F:75:SER:OG	2.31	0.42
2:a:275:LYS:HE2	2:a:275:LYS:HB3	1.87	0.42
6:J:97:PRO:HB2	6:J:137:PHE:HZ	1.83	0.42
2:b:59:ARG:HH12	2:b:205:LYS:HE3	1.84	0.42
7:Q:4:LEU:HD12	7:Q:4:LEU:HA	1.89	0.42
1:Au:352:SER:OG	1:Au:353:LEU:N	2.52	0.42
3:S:157:TYR:O	3:S:161:MET:HG2	2.19	0.42
2:d:235:MET:O	2:d:239:ILE:HG13	2.19	0.42
5:Cn:791:LEU:N	5:Cn:792:PRO:HD2	2.34	0.42
6:g:86:PHE:CE2	6:g:90:ARG:HD2	2.54	0.42
8:i:87:PHE:CG	8:i:111:ILE:HD11	2.55	0.42
1:Ar:468:ARG:HD3	1:As:701:GLU:OE2	2.20	0.42
8:F:10:THR:OG1	8:F:20:PRO:HA	2.19	0.42
6:J:69:ASN:HA	6:J:72:LEU:O	2.20	0.42
2:b:117:LEU:HB2	2:b:118:PRO:HD3	2.01	0.42
6:O:32:TYR:HE2	6:P:133:LEU:HD12	1.84	0.42
1:Au:594:TYR:CE2	1:Av:629:GLN:HB3	2.54	0.42
2:c:235:MET:O	2:c:239:ILE:HG13	2.19	0.42
5:Cm:256:MET:HE3	5:Cm:256:MET:HB3	1.97	0.42
6:g:2:ASN:OD1	6:g:4:SER:OG	2.27	0.42
1:Ar:637:PHE:HD1	1:Ar:637:PHE:HA	1.65	0.42
5:Cj:783:ASN:N	5:Cj:783:ASN:OD1	2.53	0.42
6:C:86:PHE:CE2	6:C:90:ARG:HD2	2.54	0.42
6:D:69:ASN:HA	6:D:72:LEU:O	2.20	0.42
8:F:87:PHE:CG	8:F:111:ILE:HD11	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:a:151:PRO:HG2	2:a:249:GLN:N	2.35	0.42
2:a:204:VAL:O	2:a:208:ILE:HG13	2.19	0.42
6:I:69:ASN:HA	6:I:72:LEU:O	2.20	0.42
7:K:205:ARG:HH12	8:R:20:PRO:HD2	1.84	0.42
3:M:157:TYR:O	3:M:161:MET:HG2	2.19	0.42
5:Cl:915:PHE:HD1	5:Cl:915:PHE:HA	1.74	0.42
5:Cl:925:LEU:HD23	5:Cl:925:LEU:HA	1.86	0.42
6:P:6:PHE:HA	6:P:9:GLN:HG2	2.01	0.42
6:P:96:GLU:HB3	6:P:99:ALA:HB2	2.01	0.42
8:R:87:PHE:CG	8:R:111:ILE:HD11	2.55	0.42
2:c:57:LYS:HE2	2:c:57:LYS:HB3	1.82	0.42
6:U:6:PHE:HA	6:U:9:GLN:HG2	2.01	0.42
7:W:205:ARG:HH12	8:i:20:PRO:HD2	1.85	0.42
1:Av:658:ASP:HB3	1:Av:722:VAL:HG23	2.00	0.42
2:d:40:ASN:HB3	2:d:44:MET:HE3	2.01	0.42
6:f:133:LEU:H	6:f:133:LEU:HG	1.61	0.42
2:Z:117:LEU:HB2	2:Z:118:PRO:HD3	2.01	0.42
5:Cj:831:LEU:HD21	5:Cj:900:ARG:HA	2.02	0.42
6:C:6:PHE:HA	6:C:9:GLN:HG2	2.01	0.42
6:C:97:PRO:HB2	6:C:137:PHE:HZ	1.83	0.42
6:D:93:MET:CE	6:D:105:LEU:HD11	2.46	0.42
7:E:155:LEU:HA	7:E:163:ARG:HH12	1.84	0.42
8:F:125:ARG:HG3	8:F:126:LEU:N	2.34	0.42
5:Ck:606:ARG:HG3	5:Ck:900:ARG:NH1	2.35	0.42
1:At:493:ARG:HG3	1:At:497:TRP:CD1	2.55	0.42
6:O:69:ASN:HA	6:O:72:LEU:O	2.20	0.42
6:O:92:ARG:NH1	7:Q:118:GLU:HG3	2.35	0.42
2:c:59:ARG:HH12	2:c:205:LYS:HE3	1.84	0.42
3:S:209:ARG:HA	3:S:212:ALA:HB3	2.02	0.42
5:Cm:463:VAL:O	5:Cm:467:ASN:N	2.34	0.42
6:U:97:PRO:HB2	6:U:137:PHE:HZ	1.83	0.42
6:V:69:ASN:HA	6:V:72:LEU:O	2.20	0.42
8:X:87:PHE:CG	8:X:111:ILE:HD11	2.55	0.42
2:d:271:TRP:HA	2:d:271:TRP:HE3	1.85	0.42
3:Y:209:ARG:HA	3:Y:212:ALA:HB3	2.02	0.42
5:Cn:150:PHE:CE1	5:Cn:413:SER:HB2	2.55	0.42
6:g:115:THR:OG1	7:h:39:SER:HB3	2.20	0.42
1:As:298:ASP:OD2	1:As:300:SER:OG	2.37	0.42
6:J:129:LEU:HG	6:J:135:THR:HB	2.02	0.42
8:L:155:GLN:HE21	1:At:501:ALA:HB2	1.85	0.42
2:b:40:ASN:HB3	2:b:44:MET:HE3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:209:ARG:HA	3:M:212:ALA:HB3	2.02	0.42
7:Q:194:CYS:SG	8:X:61:TYR:CZ	3.12	0.42
1:Av:637:PHE:HD1	1:Av:637:PHE:HA	1.65	0.42
6:f:97:PRO:HB2	6:f:137:PHE:HZ	1.83	0.42
6:C:132:GLN:HB2	6:D:17:PHE:CE2	2.55	0.41
6:J:96:GLU:HB3	6:J:99:ALA:HB2	2.01	0.41
8:L:10:THR:OG1	8:L:20:PRO:HA	2.20	0.41
1:Au:493:ARG:HG3	1:Au:497:TRP:CD1	2.55	0.41
5:Cm:606:ARG:HG3	5:Cm:900:ARG:NH1	2.35	0.41
6:V:93:MET:CE	6:V:105:LEU:HD11	2.46	0.41
7:W:155:LEU:HA	7:W:163:ARG:HH12	1.84	0.41
8:i:10:THR:OG1	8:i:20:PRO:HA	2.19	0.41
5:Ck:356:ASN:OD1	6:P:127:PRO:HD3	2.20	0.41
6:I:6:PHE:HA	6:I:9:GLN:HG2	2.01	0.41
6:I:135:THR:C	6:J:13:LEU:HD11	2.45	0.41
6:O:92:ARG:HH22	7:Q:118:GLU:HG3	1.85	0.41
8:R:125:ARG:HG3	8:R:126:LEU:N	2.34	0.41
1:Au:465:ARG:NH2	1:Av:688:SER:OG	2.52	0.41
2:c:151:PRO:HG2	2:c:249:GLN:N	2.35	0.41
5:Cm:369:GLN:CD	6:f:111:ARG:O	2.62	0.41
5:Cn:787:THR:OG1	5:Cn:788:SER:N	2.49	0.41
6:f:13:LEU:CD1	6:g:132:GLN:OE1	2.58	0.41
6:g:129:LEU:HG	6:g:135:THR:HB	2.02	0.41
7:h:30:ASP:OD2	7:h:33:SER:OG	2.28	0.41
5:Cj:606:ARG:HG3	5:Cj:900:ARG:NH1	2.35	0.41
6:C:92:ARG:NH1	7:E:118:GLU:HG3	2.35	0.41
1:As:465:ARG:NH2	1:At:688:SER:OG	2.53	0.41
5:Ck:831:LEU:HD21	5:Ck:900:ARG:HA	2.02	0.41
7:K:30:ASP:OD2	7:K:33:SER:OG	2.28	0.41
2:b:151:PRO:HG2	2:b:249:GLN:N	2.35	0.41
5:Cl:369:GLN:NE2	6:U:111:ARG:O	2.53	0.41
6:O:6:PHE:HA	6:O:9:GLN:HG2	2.01	0.41
8:R:10:THR:OG1	8:R:20:PRO:HA	2.19	0.41
5:Cm:771:ARG:HH21	7:W:1:MET:H1	1.61	0.41
6:U:69:ASN:HA	6:U:72:LEU:O	2.20	0.41
6:V:106:LEU:O	6:V:110:VAL:HG22	2.21	0.41
2:d:122:LYS:HE3	2:d:122:LYS:HB2	1.89	0.41
2:d:151:PRO:HG2	2:d:249:GLN:N	2.35	0.41
5:Cn:831:LEU:HD21	5:Cn:900:ARG:HA	2.02	0.41
6:g:69:ASN:HA	6:g:72:LEU:O	2.20	0.41
1:Ar:493:ARG:HG3	1:Ar:497:TRP:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Cj:150:PHE:CE1	5:Cj:413:SER:HB2	2.55	0.41
2:a:117:LEU:HB2	2:a:118:PRO:HD3	2.01	0.41
2:a:235:MET:O	2:a:239:ILE:HG13	2.19	0.41
5:Ck:150:PHE:CE1	5:Ck:413:SER:HB2	2.55	0.41
6:I:106:LEU:O	6:I:110:VAL:HG22	2.21	0.41
8:L:125:ARG:HG3	8:L:126:LEU:N	2.34	0.41
6:O:106:LEU:O	6:O:110:VAL:HG22	2.20	0.41
6:P:69:ASN:HA	6:P:72:LEU:O	2.20	0.41
1:Au:179:SER:C	1:Au:181:LEU:H	2.29	0.41
1:Av:179:SER:C	1:Av:181:LEU:H	2.29	0.41
5:Cn:606:ARG:HG3	5:Cn:900:ARG:NH1	2.35	0.41
2:Z:179:GLU:HG2	2:Z:183:ARG:HE	1.86	0.41
6:C:78:ASP:N	6:C:78:ASP:OD1	2.50	0.41
6:D:106:LEU:O	6:D:110:VAL:HG22	2.20	0.41
2:a:179:GLU:HG2	2:a:183:ARG:HE	1.86	0.41
5:Ck:305:PRO:HG2	5:Ck:308:SER:OG	2.21	0.41
6:I:17:PHE:HD1	6:I:17:PHE:HA	1.80	0.41
6:J:106:LEU:O	6:J:110:VAL:HG22	2.21	0.41
1:At:725:LEU:HD23	1:At:727:LYS:HE2	2.03	0.41
5:Cl:606:ARG:HG3	5:Cl:900:ARG:NH1	2.35	0.41
5:Cl:783:ASN:N	5:Cl:783:ASN:OD1	2.53	0.41
5:Cm:791:LEU:N	5:Cm:792:PRO:HD2	2.34	0.41
5:Cj:305:PRO:HG2	5:Cj:308:SER:OG	2.21	0.41
1:As:181:LEU:HB3	1:As:182:SER:H	1.55	0.41
1:As:396:ALA:HB1	1:As:422:LEU:HD11	2.03	0.41
5:Ck:783:ASN:OD1	5:Ck:783:ASN:N	2.53	0.41
2:b:271:TRP:HA	2:b:271:TRP:HE3	1.85	0.41
6:O:130:VAL:CG1	6:O:134:ALA:HB2	2.47	0.41
6:P:130:VAL:CG1	6:P:134:ALA:HB2	2.47	0.41
5:Cm:150:PHE:CE1	5:Cm:413:SER:HB2	2.55	0.41
6:U:133:LEU:HD13	6:V:28:ILE:HG22	2.03	0.41
1:Av:594:TYR:HD1	1:Av:594:TYR:HA	1.72	0.41
1:Av:725:LEU:HD23	1:Av:727:LYS:HE2	2.03	0.41
6:f:6:PHE:HA	6:f:9:GLN:HG2	2.01	0.41
6:J:129:LEU:HB3	6:J:132:GLN:O	2.21	0.41
2:b:275:LYS:HB3	2:b:275:LYS:HE2	1.87	0.41
5:Cl:686:MET:HE2	5:Cl:686:MET:HB3	1.95	0.41
6:O:92:ARG:HH22	7:Q:118:GLU:CG	2.34	0.41
2:c:40:ASN:HB3	2:c:44:MET:HE3	2.01	0.41
6:D:40:VAL:HG21	6:D:90:ARG:HH12	1.86	0.41
1:As:357:PHE:CD2	1:Au:161:GLN:NE2	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Ck:175:ILE:O	5:Ck:179:VAL:HG23	2.19	0.41
5:Ck:791:LEU:N	5:Ck:792:PRO:HD2	2.35	0.41
5:Cl:150:PHE:CE1	5:Cl:413:SER:HB2	2.55	0.41
6:P:126:ASP:O	6:P:129:LEU:HB2	2.21	0.41
1:Av:424:ARG:NH1	1:Av:541:PHE:CD2	2.89	0.41
1:Av:725:LEU:HD23	1:Av:727:LYS:HE2	2.03	0.41
5:Cm:686:MET:HE2	5:Cm:686:MET:HB3	1.95	0.41
6:g:6:PHE:HA	6:g:9:GLN:HG2	2.01	0.41
1:Ar:167:MET:SD	1:Av:202:ASP:N	2.94	0.41
1:Ar:725:LEU:HD23	1:Ar:727:LYS:HE2	2.03	0.41
2:Z:59:ARG:HH12	2:Z:205:LYS:HE3	1.84	0.41
3:A:209:ARG:HA	3:A:212:ALA:HB3	2.02	0.41
5:Cj:273:ILE:HD13	5:Cj:394:TYR:CE1	2.56	0.41
6:C:2:ASN:OD1	6:C:4:SER:OG	2.27	0.41
6:D:103:MET:HE2	6:D:103:MET:HB2	1.96	0.41
6:D:129:LEU:HB3	6:D:132:GLN:O	2.21	0.41
1:As:493:ARG:HG3	1:As:497:TRP:CD1	2.55	0.41
3:G:109:PHE:HD1	3:G:109:PHE:HA	1.75	0.41
4:H:26:PHE:CE2	1:At:299:ASP:HB3	2.56	0.41
5:Ck:273:ILE:HD13	5:Ck:394:TYR:CE1	2.56	0.41
5:Ck:472:LYS:HE2	5:Ck:472:LYS:HB3	1.87	0.41
6:I:133:LEU:H	6:I:133:LEU:HG	1.61	0.41
6:J:40:VAL:HG21	6:J:90:ARG:HH12	1.86	0.41
1:At:177:LYS:O	1:At:512:ASN:ND2	2.42	0.41
1:At:263:ASP:OD1	1:At:263:ASP:N	2.51	0.41
1:At:396:ALA:HB1	1:At:422:LEU:HD11	2.03	0.41
5:Cl:273:ILE:HD13	5:Cl:394:TYR:CE1	2.56	0.41
1:Av:590:ARG:HB2	1:Av:578:ARG:NH2	2.36	0.41
5:Cm:273:ILE:HD13	5:Cm:394:TYR:CE1	2.56	0.41
5:Cm:925:LEU:HD23	5:Cm:925:LEU:HA	1.86	0.41
6:U:93:MET:CE	6:V:105:LEU:HD22	2.50	0.41
6:V:6:PHE:HA	6:V:9:GLN:HG2	2.02	0.41
6:V:40:VAL:HG21	6:V:90:ARG:HH12	1.86	0.41
1:Av:493:ARG:HG3	1:Av:497:TRP:CD1	2.55	0.41
5:Cn:305:PRO:HG2	5:Cn:308:SER:OG	2.21	0.41
5:Cn:783:ASN:OD1	5:Cn:783:ASN:N	2.53	0.41
6:f:40:VAL:HG21	6:f:90:ARG:HH12	1.86	0.41
6:g:106:LEU:O	6:g:110:VAL:HG22	2.20	0.41
5:Cj:449:ASP:N	5:Cj:449:ASP:OD1	2.44	0.41
5:Cj:686:MET:HE2	5:Cj:686:MET:HB3	1.95	0.41
6:C:69:ASN:HA	6:C:72:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:As:179:SER:C	1:As:181:LEU:H	2.29	0.41
1:As:725:LEU:HD23	1:As:727:LYS:HE2	2.03	0.41
3:G:209:ARG:HA	3:G:212:ALA:HB3	2.02	0.41
5:Ck:256:MET:HE3	5:Ck:256:MET:HB3	1.97	0.41
5:Cl:305:PRO:HG2	5:Cl:308:SER:OG	2.21	0.41
5:Cl:449:ASP:OD1	5:Cl:449:ASP:N	2.44	0.41
8:R:169:MET:HB3	1:Au:177:LYS:CE	2.51	0.41
5:Cm:783:ASN:OD1	5:Cm:783:ASN:N	2.53	0.41
2:d:179:GLU:HG2	2:d:183:ARG:HE	1.86	0.41
6:C:33:ILE:CG1	6:D:133:LEU:HD13	2.43	0.40
6:C:92:ARG:NH2	7:E:118:GLU:HG3	2.35	0.40
1:As:200:GLY:O	1:At:167:MET:HG3	2.20	0.40
6:J:133:LEU:H	6:J:133:LEU:HG	1.61	0.40
5:Cl:741:LEU:HD12	5:Cl:857:LEU:HD11	2.03	0.40
5:Cl:831:LEU:HD21	5:Cl:900:ARG:HA	2.02	0.40
1:Au:637:PHE:HD1	1:Au:637:PHE:HA	1.65	0.40
5:Cm:245:LYS:HD2	5:Cm:245:LYS:HA	1.86	0.40
6:U:106:LEU:O	6:U:110:VAL:HG22	2.21	0.40
1:Av:219:ASP:OD1	1:Av:220:GLY:N	2.54	0.40
1:Av:504:LEU:O	1:Av:508:ILE:HG13	2.21	0.40
6:C:40:VAL:HG21	6:C:90:ARG:HH12	1.86	0.40
6:C:86:PHE:CE1	6:D:109:ALA:HB3	2.56	0.40
6:D:109:ALA:O	6:D:113:GLN:CB	2.69	0.40
6:O:100:PRO:HD3	7:Q:98:TYR:CZ	2.56	0.40
1:Au:219:ASP:OD1	1:Au:220:GLY:N	2.54	0.40
1:Au:469:GLY:HA3	1:Av:488:PRO:O	2.21	0.40
1:Au:504:LEU:O	1:Au:508:ILE:HG13	2.21	0.40
2:c:179:GLU:HG2	2:c:183:ARG:HE	1.86	0.40
2:c:218:LEU:O	2:c:222:LEU:HG	2.22	0.40
5:Cm:472:LYS:HE2	5:Cm:472:LYS:HB3	1.87	0.40
2:d:218:LEU:O	2:d:222:LEU:HG	2.22	0.40
6:f:106:LEU:O	6:f:110:VAL:HG22	2.20	0.40
1:Ar:179:SER:C	1:Ar:181:LEU:H	2.29	0.40
1:Ar:237:ASN:ND2	1:As:655:MET:SD	2.93	0.40
2:Z:218:LEU:O	2:Z:222:LEU:HG	2.22	0.40
2:a:218:LEU:O	2:a:222:LEU:HG	2.22	0.40
6:U:130:VAL:CG1	6:U:134:ALA:HB2	2.47	0.40
5:Cn:231:THR:HG22	5:Cn:412:MET:HG3	2.04	0.40
5:Cn:273:ILE:HD13	5:Cn:394:TYR:CE1	2.56	0.40
5:Cj:231:THR:HG22	5:Cj:412:MET:HG3	2.04	0.40
6:C:86:PHE:CZ	6:D:106:LEU:CD1	3.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:a:59:ARG:HH12	2:a:205:LYS:HE3	1.84	0.40
5:Ck:172:THR:OG1	5:Ck:434:ARG:NE	2.42	0.40
5:Ck:227:LYS:O	5:Ck:231:THR:OG1	2.37	0.40
7:K:2:LYS:HE3	7:K:2:LYS:HB3	1.86	0.40
6:P:106:LEU:O	6:P:110:VAL:HG22	2.21	0.40
2:c:271:TRP:HA	2:c:271:TRP:HE3	1.85	0.40
6:V:101:GLU:O	6:V:105:LEU:HG	2.22	0.40
5:Cn:245:LYS:HA	5:Cn:245:LYS:HD2	1.85	0.40
6:g:40:VAL:HG21	6:g:90:ARG:HH12	1.86	0.40
1:Ar:396:ALA:HB1	1:Ar:422:LEU:HD11	2.03	0.40
5:Cj:774:TYR:CD1	5:Cj:792:PRO:HD3	2.57	0.40
6:C:106:LEU:O	6:C:110:VAL:HG22	2.20	0.40
5:Ck:231:THR:HG22	5:Ck:412:MET:HG3	2.04	0.40
7:K:194:CYS:SG	8:R:61:TYR:CZ	3.14	0.40
6:O:40:VAL:HG21	6:O:90:ARG:HH12	1.86	0.40
6:P:93:MET:CE	6:P:105:LEU:HD11	2.46	0.40
8:R:105:GLN:HE21	8:R:105:GLN:HB3	1.73	0.40
2:c:223:VAL:HA	2:c:226:TYR:CD2	2.57	0.40
5:Cm:305:PRO:HG2	5:Cm:308:SER:OG	2.21	0.40
5:Cm:445:LEU:HA	5:Cm:451:TRP:HE3	1.87	0.40
5:Cm:831:LEU:HD21	5:Cm:900:ARG:HA	2.02	0.40
6:U:101:GLU:O	6:U:105:LEU:HG	2.22	0.40
1:Av:176:VAL:HG11	1:Av:505:ASP:OD1	2.22	0.40
5:Cn:774:TYR:CD1	5:Cn:792:PRO:HD3	2.57	0.40
6:f:69:ASN:HA	6:f:72:LEU:O	2.20	0.40
6:g:130:VAL:HG23	6:g:132:GLN:H	1.87	0.40
8:i:125:ARG:HG3	8:i:126:LEU:N	2.34	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	Ar	574/740 (78%)	532 (93%)	41 (7%)	1 (0%)	43	72
1	As	574/740 (78%)	532 (93%)	41 (7%)	1 (0%)	43	72
1	At	574/740 (78%)	531 (92%)	42 (7%)	1 (0%)	43	72
1	Au	574/740 (78%)	531 (92%)	42 (7%)	1 (0%)	43	72
1	Av	574/740 (78%)	531 (92%)	42 (7%)	1 (0%)	43	72
2	Z	223/280 (80%)	217 (97%)	6 (3%)	0	100	100
2	a	223/280 (80%)	218 (98%)	5 (2%)	0	100	100
2	b	223/280 (80%)	218 (98%)	5 (2%)	0	100	100
2	c	223/280 (80%)	217 (97%)	6 (3%)	0	100	100
2	d	223/280 (80%)	218 (98%)	5 (2%)	0	100	100
3	A	145/212 (68%)	140 (97%)	5 (3%)	0	100	100
3	G	145/212 (68%)	140 (97%)	5 (3%)	0	100	100
3	M	145/212 (68%)	140 (97%)	5 (3%)	0	100	100
3	S	145/212 (68%)	140 (97%)	5 (3%)	0	100	100
3	Y	145/212 (68%)	140 (97%)	5 (3%)	0	100	100
4	B	94/104 (90%)	93 (99%)	1 (1%)	0	100	100
4	H	94/104 (90%)	93 (99%)	1 (1%)	0	100	100
4	N	94/104 (90%)	93 (99%)	1 (1%)	0	100	100
4	T	94/104 (90%)	93 (99%)	1 (1%)	0	100	100
4	e	94/104 (90%)	93 (99%)	1 (1%)	0	100	100
5	Cj	652/934 (70%)	629 (96%)	22 (3%)	1 (0%)	43	72
5	Ck	652/934 (70%)	629 (96%)	22 (3%)	1 (0%)	43	72
5	Cl	652/934 (70%)	630 (97%)	21 (3%)	1 (0%)	43	72
5	Cm	652/934 (70%)	629 (96%)	22 (3%)	1 (0%)	43	72
5	Cn	652/934 (70%)	630 (97%)	21 (3%)	1 (0%)	43	72
6	C	120/146 (82%)	112 (93%)	7 (6%)	1 (1%)	16	49
6	D	140/146 (96%)	129 (92%)	7 (5%)	4 (3%)	3	25
6	I	120/146 (82%)	112 (93%)	7 (6%)	1 (1%)	16	49
6	J	140/146 (96%)	129 (92%)	7 (5%)	4 (3%)	3	25
6	O	120/146 (82%)	112 (93%)	7 (6%)	1 (1%)	16	49
6	P	140/146 (96%)	129 (92%)	7 (5%)	4 (3%)	3	25
6	U	120/146 (82%)	112 (93%)	7 (6%)	1 (1%)	16	49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	V	140/146 (96%)	129 (92%)	7 (5%)	4 (3%)	3	25
6	f	120/146 (82%)	112 (93%)	7 (6%)	1 (1%)	16	49
6	g	140/146 (96%)	129 (92%)	7 (5%)	4 (3%)	3	25
7	E	204/206 (99%)	187 (92%)	17 (8%)	0	100	100
7	K	204/206 (99%)	187 (92%)	17 (8%)	0	100	100
7	Q	204/206 (99%)	188 (92%)	16 (8%)	0	100	100
7	W	204/206 (99%)	188 (92%)	16 (8%)	0	100	100
7	h	204/206 (99%)	187 (92%)	17 (8%)	0	100	100
8	F	170/176 (97%)	160 (94%)	10 (6%)	0	100	100
8	L	170/176 (97%)	160 (94%)	10 (6%)	0	100	100
8	R	170/176 (97%)	160 (94%)	10 (6%)	0	100	100
8	X	170/176 (97%)	160 (94%)	10 (6%)	0	100	100
8	i	170/176 (97%)	160 (94%)	10 (6%)	0	100	100
All	All	11610/14720 (79%)	10999 (95%)	576 (5%)	35 (0%)	37	65

All (35) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	Ar	642	VAL
6	D	111	ARG
6	D	112	ASP
6	D	130	VAL
1	As	642	VAL
6	J	111	ARG
6	J	112	ASP
6	J	130	VAL
1	At	642	VAL
6	P	111	ARG
6	P	112	ASP
6	P	130	VAL
1	Au	642	VAL
6	V	111	ARG
6	V	112	ASP
6	V	130	VAL
1	Av	642	VAL
6	g	111	ARG
6	g	112	ASP

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Mol	Chain	Res	Type
6	g	130	VAL
5	Cj	327	GLU
5	Ck	327	GLU
5	Cl	327	GLU
5	Cm	327	GLU
5	Cn	327	GLU
6	C	132	GLN
6	D	132	GLN
6	I	132	GLN
6	J	132	GLN
6	O	132	GLN
6	P	132	GLN
6	U	132	GLN
6	V	132	GLN
6	f	132	GLN
6	g	132	GLN

5.3.2 Protein sidechains ⓘ

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	Ar	500/644 (78%)	471 (94%)	29 (6%)	18	45
1	As	500/644 (78%)	471 (94%)	29 (6%)	18	45
1	At	500/644 (78%)	471 (94%)	29 (6%)	18	45
1	Au	500/644 (78%)	471 (94%)	29 (6%)	18	45
1	Av	500/644 (78%)	471 (94%)	29 (6%)	18	45
2	Z	195/241 (81%)	190 (97%)	5 (3%)	40	62
2	a	195/241 (81%)	191 (98%)	4 (2%)	47	65
2	b	195/241 (81%)	191 (98%)	4 (2%)	47	65
2	c	195/241 (81%)	190 (97%)	5 (3%)	40	62
2	d	195/241 (81%)	191 (98%)	4 (2%)	47	65
3	A	125/177 (71%)	120 (96%)	5 (4%)	28	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	G	125/177 (71%)	120 (96%)	5 (4%)	28	53
3	M	125/177 (71%)	120 (96%)	5 (4%)	28	53
3	S	125/177 (71%)	120 (96%)	5 (4%)	28	53
3	Y	125/177 (71%)	120 (96%)	5 (4%)	28	53
4	B	83/91 (91%)	83 (100%)	0	100	100
4	H	83/91 (91%)	83 (100%)	0	100	100
4	N	83/91 (91%)	83 (100%)	0	100	100
4	T	83/91 (91%)	83 (100%)	0	100	100
4	e	83/91 (91%)	83 (100%)	0	100	100
5	Cj	573/811 (71%)	538 (94%)	35 (6%)	17	44
5	Ck	573/811 (71%)	538 (94%)	35 (6%)	17	44
5	Cl	573/811 (71%)	538 (94%)	35 (6%)	17	44
5	Cm	573/811 (71%)	538 (94%)	35 (6%)	17	44
5	Cn	573/811 (71%)	538 (94%)	35 (6%)	17	44
6	C	101/118 (86%)	96 (95%)	5 (5%)	22	48
6	D	108/118 (92%)	103 (95%)	5 (5%)	24	50
6	I	101/118 (86%)	96 (95%)	5 (5%)	22	48
6	J	108/118 (92%)	103 (95%)	5 (5%)	24	50
6	O	101/118 (86%)	96 (95%)	5 (5%)	22	48
6	P	108/118 (92%)	103 (95%)	5 (5%)	24	50
6	U	101/118 (86%)	96 (95%)	5 (5%)	22	48
6	V	108/118 (92%)	103 (95%)	5 (5%)	24	50
6	f	101/118 (86%)	96 (95%)	5 (5%)	22	48
6	g	108/118 (92%)	103 (95%)	5 (5%)	24	50
7	E	168/186 (90%)	158 (94%)	10 (6%)	17	44
7	K	168/186 (90%)	158 (94%)	10 (6%)	17	44
7	Q	168/186 (90%)	158 (94%)	10 (6%)	17	44
7	W	168/186 (90%)	158 (94%)	10 (6%)	17	44
7	h	168/186 (90%)	158 (94%)	10 (6%)	17	44
8	F	155/160 (97%)	150 (97%)	5 (3%)	34	58
8	L	155/160 (97%)	150 (97%)	5 (3%)	34	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	R	155/160 (97%)	150 (97%)	5 (3%)	34	58
8	X	155/160 (97%)	150 (97%)	5 (3%)	34	58
8	i	155/160 (97%)	150 (97%)	5 (3%)	34	58
All	All	10040/12730 (79%)	9548 (95%)	492 (5%)	24	49

All (492) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Ar	163	GLU
1	Ar	176	VAL
1	Ar	190	ASN
1	Ar	211	PHE
1	Ar	227	ARG
1	Ar	262	VAL
1	Ar	263	ASP
1	Ar	277	VAL
1	Ar	413	LEU
1	Ar	415	VAL
1	Ar	460	ARG
1	Ar	495	LEU
1	Ar	498	GLU
1	Ar	530	LEU
1	Ar	573	THR
1	Ar	574	THR
1	Ar	576	GLU
1	Ar	623	THR
1	Ar	629	GLN
1	Ar	634	ASP
1	Ar	637	PHE
1	Ar	649	VAL
1	Ar	654	VAL
1	Ar	663	THR
1	Ar	683	VAL
1	Ar	711	VAL
1	Ar	722	VAL
1	Ar	727	LYS
1	Ar	729	TYR
2	Z	49	LYS
2	Z	63	VAL
2	Z	115	THR
2	Z	117	LEU

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Mol	Chain	Res	Type
2	Z	204	VAL
3	A	109	PHE
3	A	115	VAL
3	A	151	ASP
3	A	199	ASP
3	A	202	ASN
5	Cj	165	THR
5	Cj	166	ASN
5	Cj	167	LYS
5	Cj	199	THR
5	Cj	202	ASP
5	Cj	214	ILE
5	Cj	223	ASN
5	Cj	245	LYS
5	Cj	263	PHE
5	Cj	276	PHE
5	Cj	283	HIS
5	Cj	284	TRP
5	Cj	324	LEU
5	Cj	325	HIS
5	Cj	330	ILE
5	Cj	394	TYR
5	Cj	399	TYR
5	Cj	412	MET
5	Cj	423	HIS
5	Cj	427	GLU
5	Cj	439	LYS
5	Cj	445	LEU
5	Cj	461	ARG
5	Cj	463	VAL
5	Cj	469	TYR
5	Cj	632	VAL
5	Cj	693	ASP
5	Cj	744	GLN
5	Cj	784	GLU
5	Cj	791	LEU
5	Cj	844	ASP
5	Cj	845	ASN
5	Cj	864	VAL
5	Cj	881	TYR
5	Cj	915	PHE
6	C	17	PHE

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Mol	Chain	Res	Type
6	C	36	TYR
6	C	78	ASP
6	C	96	GLU
6	C	130	VAL
6	D	17	PHE
6	D	36	TYR
6	D	78	ASP
6	D	96	GLU
6	D	130	VAL
7	E	1	MET
7	E	3	GLU
7	E	5	ARG
7	E	7	LEU
7	E	80	HIS
7	E	81	TYR
7	E	84	THR
7	E	184	VAL
7	E	197	ARG
7	E	203	LEU
8	F	4	LEU
8	F	29	ASN
8	F	49	ASP
8	F	104	VAL
8	F	125	ARG
1	As	163	GLU
1	As	176	VAL
1	As	190	ASN
1	As	211	PHE
1	As	227	ARG
1	As	262	VAL
1	As	263	ASP
1	As	277	VAL
1	As	413	LEU
1	As	415	VAL
1	As	460	ARG
1	As	495	LEU
1	As	498	GLU
1	As	530	LEU
1	As	573	THR
1	As	574	THR
1	As	576	GLU
1	As	623	THR

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Mol	Chain	Res	Type
1	As	629	GLN
1	As	634	ASP
1	As	637	PHE
1	As	649	VAL
1	As	654	VAL
1	As	663	THR
1	As	683	VAL
1	As	711	VAL
1	As	722	VAL
1	As	727	LYS
1	As	729	TYR
2	a	49	LYS
2	a	63	VAL
2	a	115	THR
2	a	204	VAL
3	G	109	PHE
3	G	115	VAL
3	G	151	ASP
3	G	199	ASP
3	G	202	ASN
5	Ck	165	THR
5	Ck	166	ASN
5	Ck	167	LYS
5	Ck	199	THR
5	Ck	202	ASP
5	Ck	214	ILE
5	Ck	223	ASN
5	Ck	245	LYS
5	Ck	263	PHE
5	Ck	276	PHE
5	Ck	283	HIS
5	Ck	284	TRP
5	Ck	324	LEU
5	Ck	325	HIS
5	Ck	330	ILE
5	Ck	394	TYR
5	Ck	399	TYR
5	Ck	412	MET
5	Ck	423	HIS
5	Ck	427	GLU
5	Ck	439	LYS
5	Ck	445	LEU

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Mol	Chain	Res	Type
5	Ck	461	ARG
5	Ck	463	VAL
5	Ck	469	TYR
5	Ck	632	VAL
5	Ck	693	ASP
5	Ck	744	GLN
5	Ck	784	GLU
5	Ck	791	LEU
5	Ck	844	ASP
5	Ck	845	ASN
5	Ck	864	VAL
5	Ck	881	TYR
5	Ck	915	PHE
6	I	17	PHE
6	I	36	TYR
6	I	78	ASP
6	I	96	GLU
6	I	130	VAL
6	J	17	PHE
6	J	36	TYR
6	J	78	ASP
6	J	96	GLU
6	J	130	VAL
7	K	1	MET
7	K	3	GLU
7	K	5	ARG
7	K	7	LEU
7	K	80	HIS
7	K	81	TYR
7	K	84	THR
7	K	184	VAL
7	K	197	ARG
7	K	203	LEU
8	L	4	LEU
8	L	29	ASN
8	L	49	ASP
8	L	104	VAL
8	L	125	ARG
1	At	163	GLU
1	At	176	VAL
1	At	190	ASN
1	At	211	PHE

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Mol	Chain	Res	Type
1	At	227	ARG
1	At	262	VAL
1	At	263	ASP
1	At	277	VAL
1	At	413	LEU
1	At	415	VAL
1	At	460	ARG
1	At	495	LEU
1	At	498	GLU
1	At	530	LEU
1	At	573	THR
1	At	574	THR
1	At	576	GLU
1	At	623	THR
1	At	629	GLN
1	At	634	ASP
1	At	637	PHE
1	At	649	VAL
1	At	654	VAL
1	At	663	THR
1	At	683	VAL
1	At	711	VAL
1	At	722	VAL
1	At	727	LYS
1	At	729	TYR
2	b	49	LYS
2	b	63	VAL
2	b	115	THR
2	b	204	VAL
3	M	109	PHE
3	M	115	VAL
3	M	151	ASP
3	M	199	ASP
3	M	202	ASN
5	Cl	165	THR
5	Cl	166	ASN
5	Cl	167	LYS
5	Cl	199	THR
5	Cl	202	ASP
5	Cl	214	ILE
5	Cl	223	ASN
5	Cl	245	LYS

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Mol	Chain	Res	Type
5	C1	263	PHE
5	C1	276	PHE
5	C1	283	HIS
5	C1	284	TRP
5	C1	324	LEU
5	C1	325	HIS
5	C1	330	ILE
5	C1	394	TYR
5	C1	399	TYR
5	C1	412	MET
5	C1	423	HIS
5	C1	427	GLU
5	C1	439	LYS
5	C1	445	LEU
5	C1	461	ARG
5	C1	463	VAL
5	C1	469	TYR
5	C1	632	VAL
5	C1	693	ASP
5	C1	744	GLN
5	C1	784	GLU
5	C1	791	LEU
5	C1	844	ASP
5	C1	845	ASN
5	C1	864	VAL
5	C1	881	TYR
5	C1	915	PHE
6	O	17	PHE
6	O	36	TYR
6	O	78	ASP
6	O	96	GLU
6	O	130	VAL
6	P	17	PHE
6	P	36	TYR
6	P	78	ASP
6	P	96	GLU
6	P	130	VAL
7	Q	1	MET
7	Q	3	GLU
7	Q	5	ARG
7	Q	7	LEU
7	Q	80	HIS

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Mol	Chain	Res	Type
7	Q	81	TYR
7	Q	84	THR
7	Q	184	VAL
7	Q	197	ARG
7	Q	203	LEU
8	R	4	LEU
8	R	29	ASN
8	R	49	ASP
8	R	104	VAL
8	R	125	ARG
1	Au	163	GLU
1	Au	176	VAL
1	Au	190	ASN
1	Au	211	PHE
1	Au	227	ARG
1	Au	262	VAL
1	Au	263	ASP
1	Au	277	VAL
1	Au	413	LEU
1	Au	415	VAL
1	Au	460	ARG
1	Au	495	LEU
1	Au	498	GLU
1	Au	530	LEU
1	Au	573	THR
1	Au	574	THR
1	Au	576	GLU
1	Au	623	THR
1	Au	629	GLN
1	Au	634	ASP
1	Au	637	PHE
1	Au	649	VAL
1	Au	654	VAL
1	Au	663	THR
1	Au	683	VAL
1	Au	711	VAL
1	Au	722	VAL
1	Au	727	LYS
1	Au	729	TYR
2	c	49	LYS
2	c	63	VAL
2	c	115	THR

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Mol	Chain	Res	Type
2	c	117	LEU
2	c	204	VAL
3	S	109	PHE
3	S	115	VAL
3	S	151	ASP
3	S	199	ASP
3	S	202	ASN
5	Cm	165	THR
5	Cm	166	ASN
5	Cm	167	LYS
5	Cm	199	THR
5	Cm	202	ASP
5	Cm	214	ILE
5	Cm	223	ASN
5	Cm	245	LYS
5	Cm	263	PHE
5	Cm	276	PHE
5	Cm	283	HIS
5	Cm	284	TRP
5	Cm	324	LEU
5	Cm	325	HIS
5	Cm	330	ILE
5	Cm	394	TYR
5	Cm	399	TYR
5	Cm	412	MET
5	Cm	423	HIS
5	Cm	427	GLU
5	Cm	439	LYS
5	Cm	445	LEU
5	Cm	461	ARG
5	Cm	463	VAL
5	Cm	469	TYR
5	Cm	632	VAL
5	Cm	693	ASP
5	Cm	744	GLN
5	Cm	784	GLU
5	Cm	791	LEU
5	Cm	844	ASP
5	Cm	845	ASN
5	Cm	864	VAL
5	Cm	881	TYR
5	Cm	915	PHE

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Mol	Chain	Res	Type
6	U	17	PHE
6	U	36	TYR
6	U	78	ASP
6	U	96	GLU
6	U	130	VAL
6	V	17	PHE
6	V	36	TYR
6	V	78	ASP
6	V	96	GLU
6	V	130	VAL
7	W	1	MET
7	W	3	GLU
7	W	5	ARG
7	W	7	LEU
7	W	80	HIS
7	W	81	TYR
7	W	84	THR
7	W	184	VAL
7	W	197	ARG
7	W	203	LEU
8	X	4	LEU
8	X	29	ASN
8	X	49	ASP
8	X	104	VAL
8	X	125	ARG
1	Av	163	GLU
1	Av	176	VAL
1	Av	190	ASN
1	Av	211	PHE
1	Av	227	ARG
1	Av	262	VAL
1	Av	263	ASP
1	Av	277	VAL
1	Av	413	LEU
1	Av	415	VAL
1	Av	460	ARG
1	Av	495	LEU
1	Av	498	GLU
1	Av	530	LEU
1	Av	573	THR
1	Av	574	THR
1	Av	576	GLU

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Mol	Chain	Res	Type
1	Av	623	THR
1	Av	629	GLN
1	Av	634	ASP
1	Av	637	PHE
1	Av	649	VAL
1	Av	654	VAL
1	Av	663	THR
1	Av	683	VAL
1	Av	711	VAL
1	Av	722	VAL
1	Av	727	LYS
1	Av	729	TYR
2	d	49	LYS
2	d	63	VAL
2	d	115	THR
2	d	204	VAL
3	Y	109	PHE
3	Y	115	VAL
3	Y	151	ASP
3	Y	199	ASP
3	Y	202	ASN
5	Cn	165	THR
5	Cn	166	ASN
5	Cn	167	LYS
5	Cn	199	THR
5	Cn	202	ASP
5	Cn	214	ILE
5	Cn	223	ASN
5	Cn	245	LYS
5	Cn	263	PHE
5	Cn	276	PHE
5	Cn	283	HIS
5	Cn	284	TRP
5	Cn	324	LEU
5	Cn	325	HIS
5	Cn	330	ILE
5	Cn	394	TYR
5	Cn	399	TYR
5	Cn	412	MET
5	Cn	423	HIS
5	Cn	427	GLU
5	Cn	439	LYS

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Mol	Chain	Res	Type
5	Cn	445	LEU
5	Cn	461	ARG
5	Cn	463	VAL
5	Cn	469	TYR
5	Cn	632	VAL
5	Cn	693	ASP
5	Cn	744	GLN
5	Cn	784	GLU
5	Cn	791	LEU
5	Cn	844	ASP
5	Cn	845	ASN
5	Cn	864	VAL
5	Cn	881	TYR
5	Cn	915	PHE
6	f	17	PHE
6	f	36	TYR
6	f	78	ASP
6	f	96	GLU
6	f	130	VAL
6	g	17	PHE
6	g	36	TYR
6	g	78	ASP
6	g	96	GLU
6	g	130	VAL
7	h	1	MET
7	h	3	GLU
7	h	5	ARG
7	h	7	LEU
7	h	80	HIS
7	h	81	TYR
7	h	84	THR
7	h	184	VAL
7	h	197	ARG
7	h	203	LEU
8	i	4	LEU
8	i	29	ASN
8	i	49	ASP
8	i	104	VAL
8	i	125	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (132) such sidechains are listed below:

Mol	Chain	Res	Type
1	Ar	161	GLN
1	Ar	242	ASN
1	Ar	367	HIS
1	Ar	430	ASN
1	Ar	461	ASN
1	Ar	570	GLN
2	Z	40	ASN
2	Z	78	ASN
2	Z	107	GLN
2	Z	153	ASN
2	Z	227	ASN
2	Z	277	ASN
3	A	101	HIS
5	Cj	281	GLN
5	Cj	448	ASN
5	Cj	636	HIS
5	Cj	733	GLN
6	C	57	HIS
6	D	57	HIS
7	E	141	ASN
8	F	79	ASN
8	F	103	ASN
8	F	105	GLN
8	F	123	HIS
8	F	155	GLN
1	As	161	GLN
1	As	367	HIS
1	As	461	ASN
1	As	570	GLN
2	a	40	ASN
2	a	78	ASN
2	a	107	GLN
2	a	153	ASN
2	a	227	ASN
2	a	277	ASN
3	G	101	HIS
5	Ck	281	GLN
5	Ck	448	ASN
5	Ck	636	HIS
5	Ck	733	GLN
5	Ck	858	ASN
6	I	9	GLN
6	I	57	HIS

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Mol	Chain	Res	Type
6	I	132	GLN
6	J	57	HIS
7	K	141	ASN
7	K	174	HIS
8	L	79	ASN
8	L	103	ASN
8	L	105	GLN
8	L	123	HIS
8	L	155	GLN
1	At	161	GLN
1	At	242	ASN
1	At	367	HIS
1	At	430	ASN
1	At	461	ASN
1	At	545	GLN
1	At	570	GLN
2	b	40	ASN
2	b	78	ASN
2	b	107	GLN
2	b	153	ASN
2	b	227	ASN
2	b	277	ASN
3	M	101	HIS
5	Cl	281	GLN
5	Cl	448	ASN
5	Cl	636	HIS
5	Cl	733	GLN
5	Cl	858	ASN
6	O	57	HIS
6	O	132	GLN
6	P	57	HIS
7	Q	141	ASN
8	R	79	ASN
8	R	103	ASN
8	R	105	GLN
8	R	123	HIS
8	R	155	GLN
1	Au	161	GLN
1	Au	213	HIS
1	Au	304	ASN
1	Au	367	HIS
1	Au	397	GLN

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Mol	Chain	Res	Type
1	Au	430	ASN
1	Au	461	ASN
1	Au	570	GLN
2	c	40	ASN
2	c	78	ASN
2	c	107	GLN
2	c	153	ASN
2	c	227	ASN
2	c	277	ASN
3	S	101	HIS
5	Cm	281	GLN
5	Cm	448	ASN
5	Cm	636	HIS
5	Cm	733	GLN
5	Cm	858	ASN
6	U	57	HIS
6	V	57	HIS
7	W	141	ASN
8	X	79	ASN
8	X	103	ASN
8	X	123	HIS
8	X	155	GLN
1	Av	161	GLN
1	Av	242	ASN
1	Av	367	HIS
1	Av	461	ASN
1	Av	570	GLN
1	Av	629	GLN
2	d	40	ASN
2	d	78	ASN
2	d	153	ASN
2	d	227	ASN
2	d	277	ASN
3	Y	101	HIS
5	Cn	281	GLN
5	Cn	448	ASN
5	Cn	636	HIS
5	Cn	733	GLN
5	Cn	858	ASN
6	f	57	HIS
6	g	57	HIS
7	h	141	ASN

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Mol	Chain	Res	Type
8	i	79	ASN
8	i	103	ASN
8	i	105	GLN
8	i	123	HIS
8	i	155	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

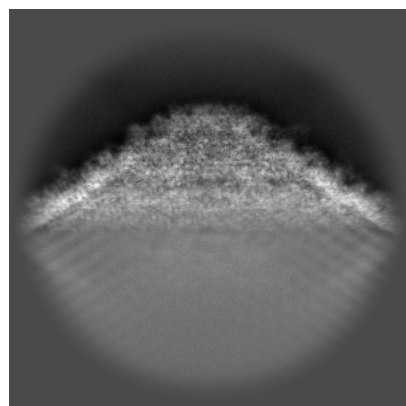
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-75663. These allow visual inspection of the internal detail of the map and identification of artifacts.

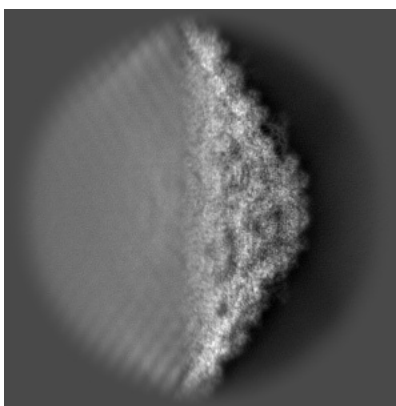
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

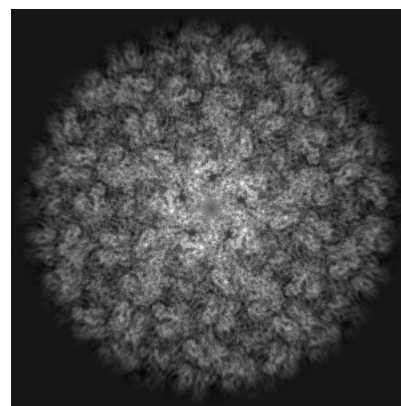
6.1.1 Primary map



X

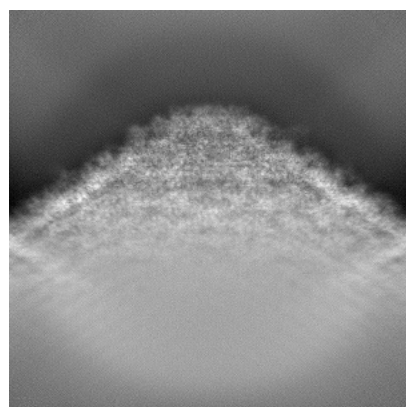


Y

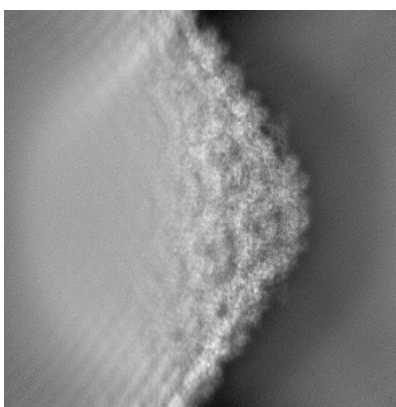


Z

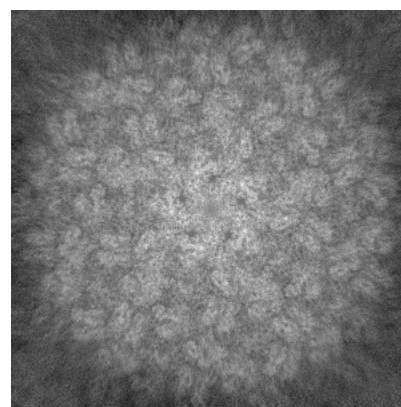
6.1.2 Raw map



X



Y

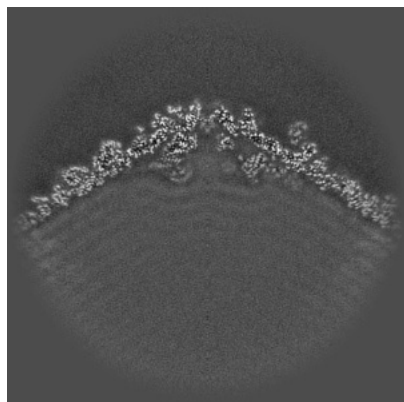


Z

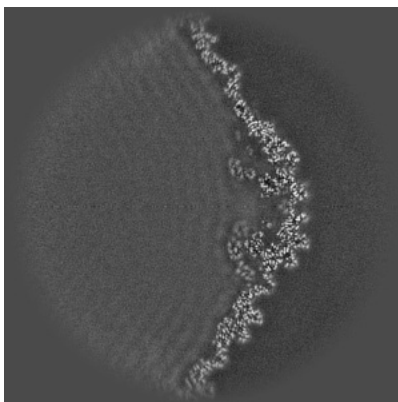
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

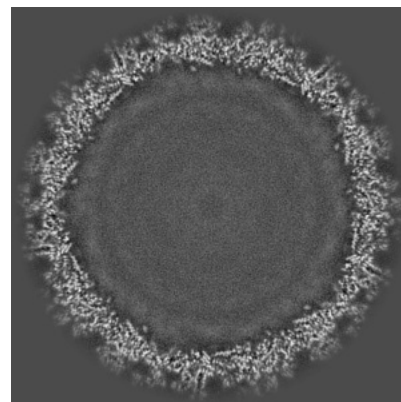
6.2.1 Primary map



X Index: 240

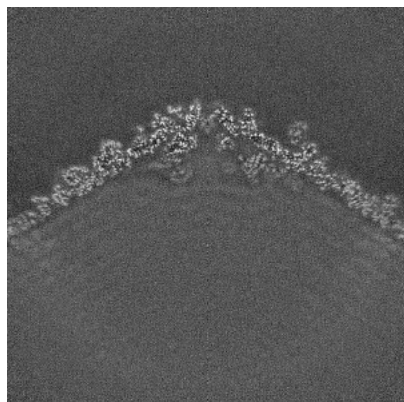


Y Index: 240

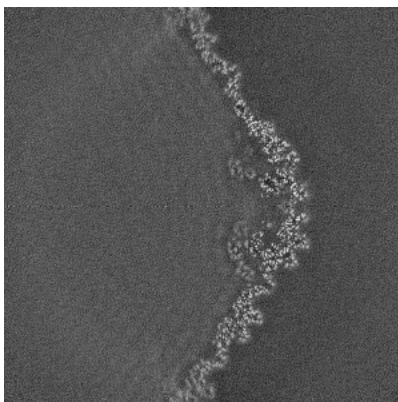


Z Index: 240

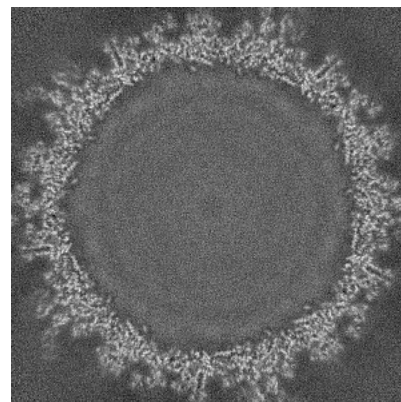
6.2.2 Raw map



X Index: 240



Y Index: 240

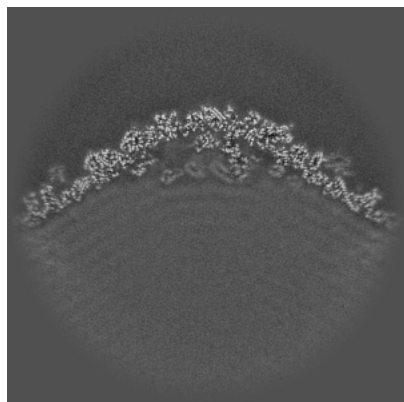


Z Index: 240

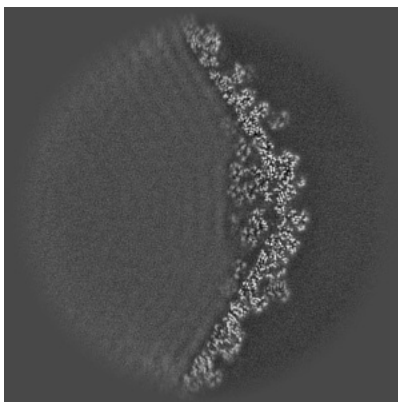
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

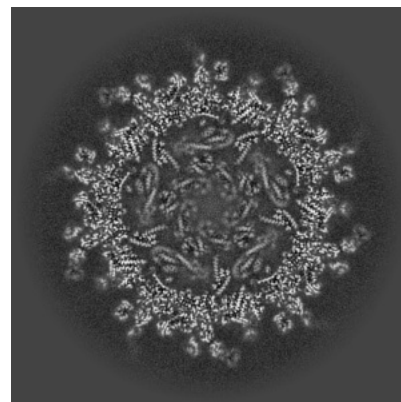
6.3.1 Primary map



X Index: 260

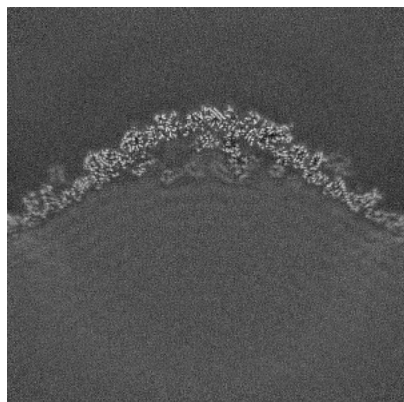


Y Index: 276

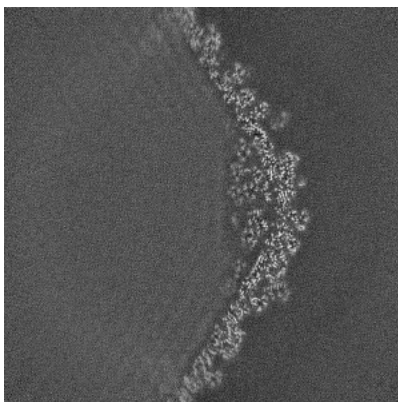


Z Index: 282

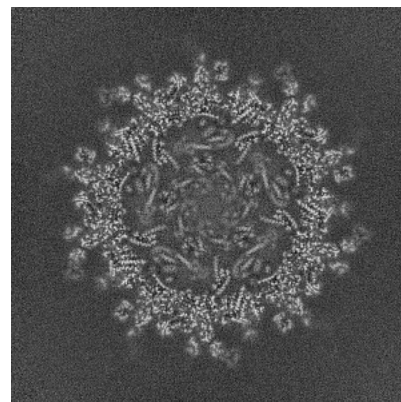
6.3.2 Raw map



X Index: 260



Y Index: 277

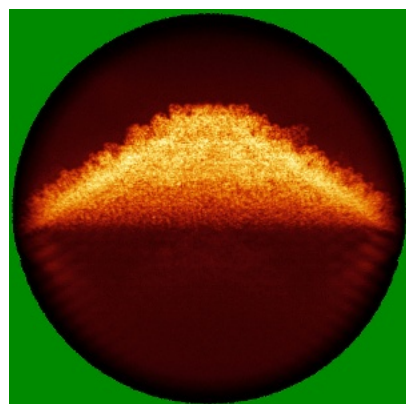


Z Index: 282

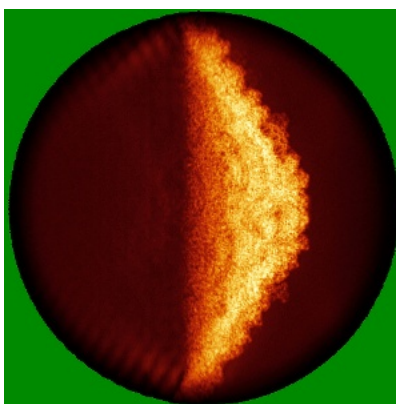
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

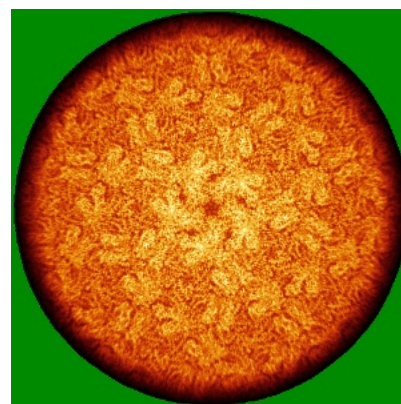
6.4.1 Primary map



X

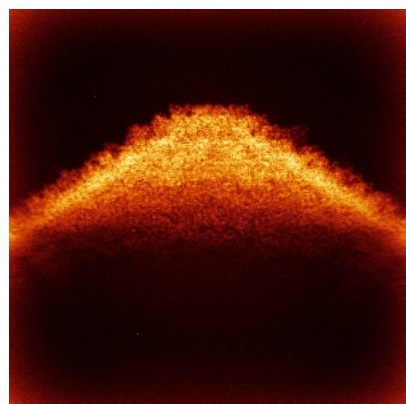


Y

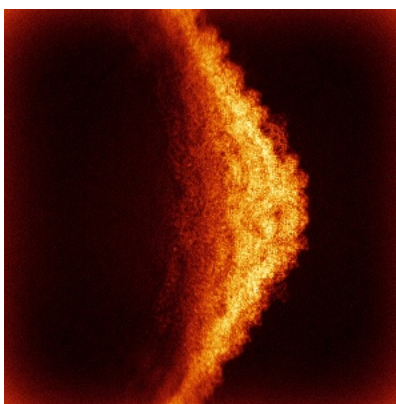


Z

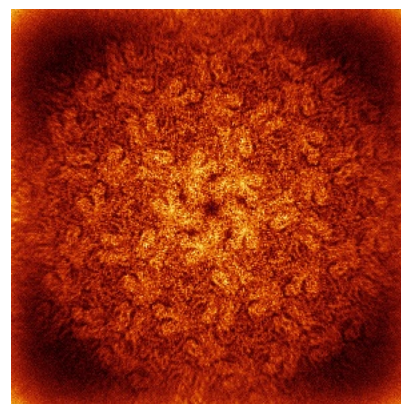
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

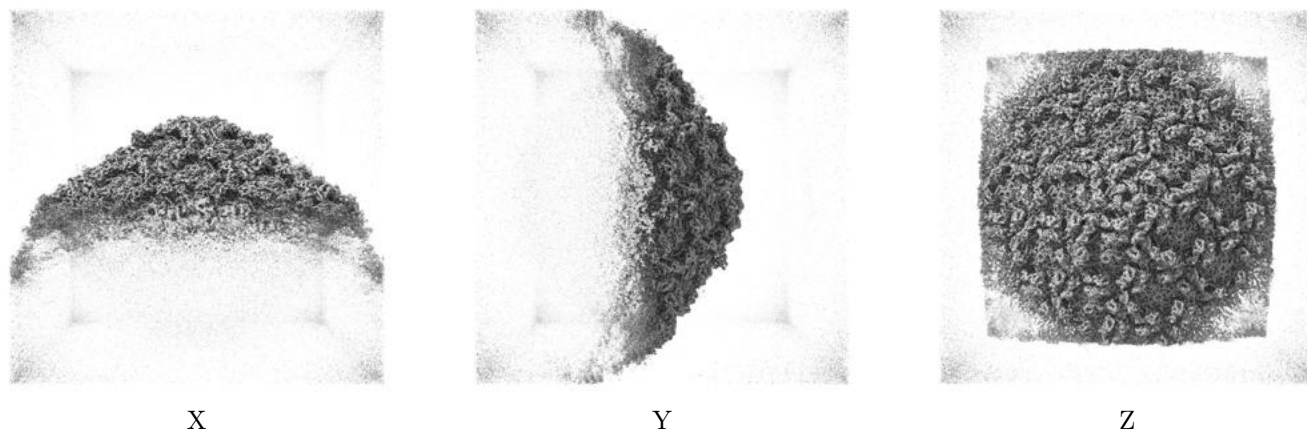
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

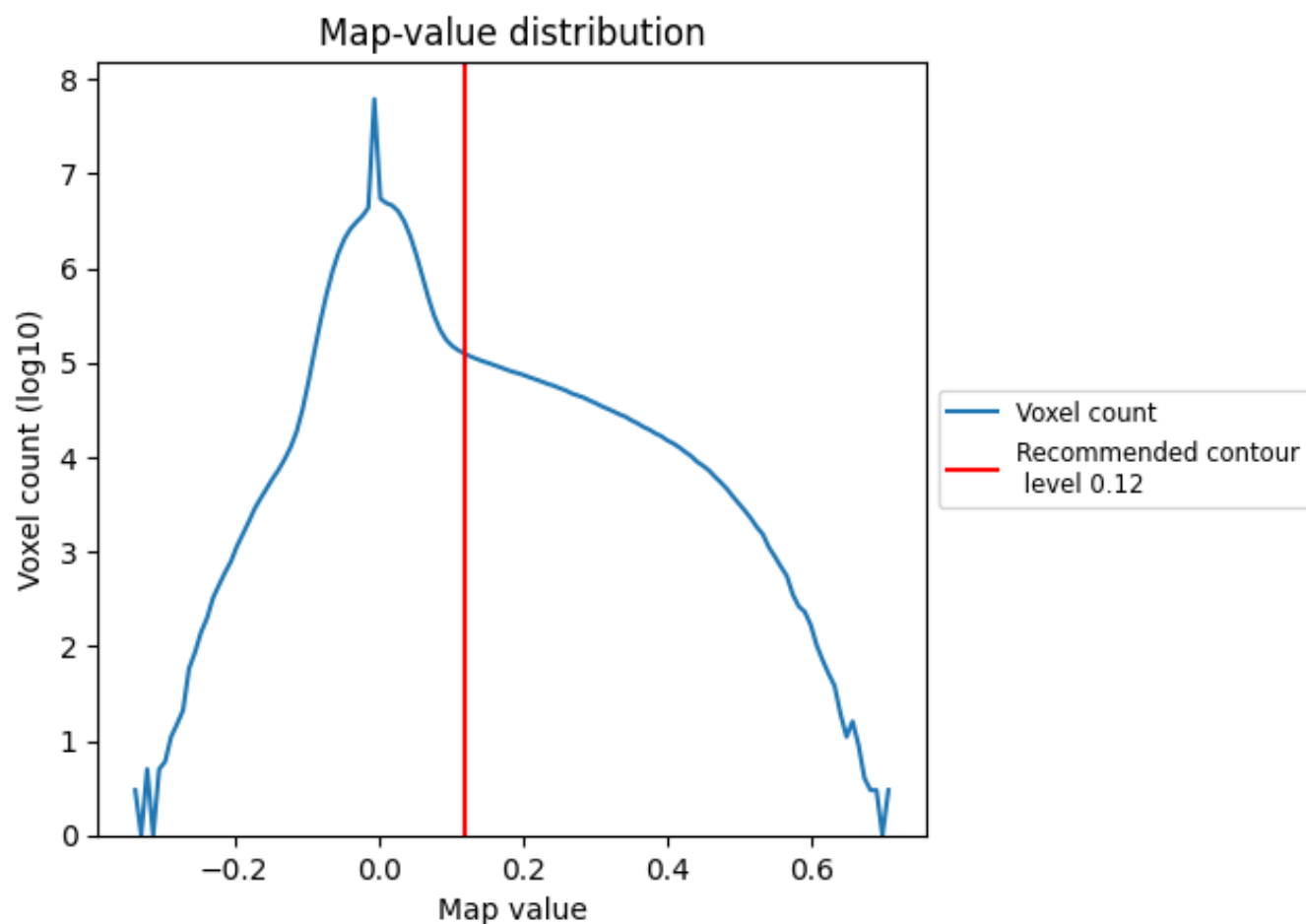
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

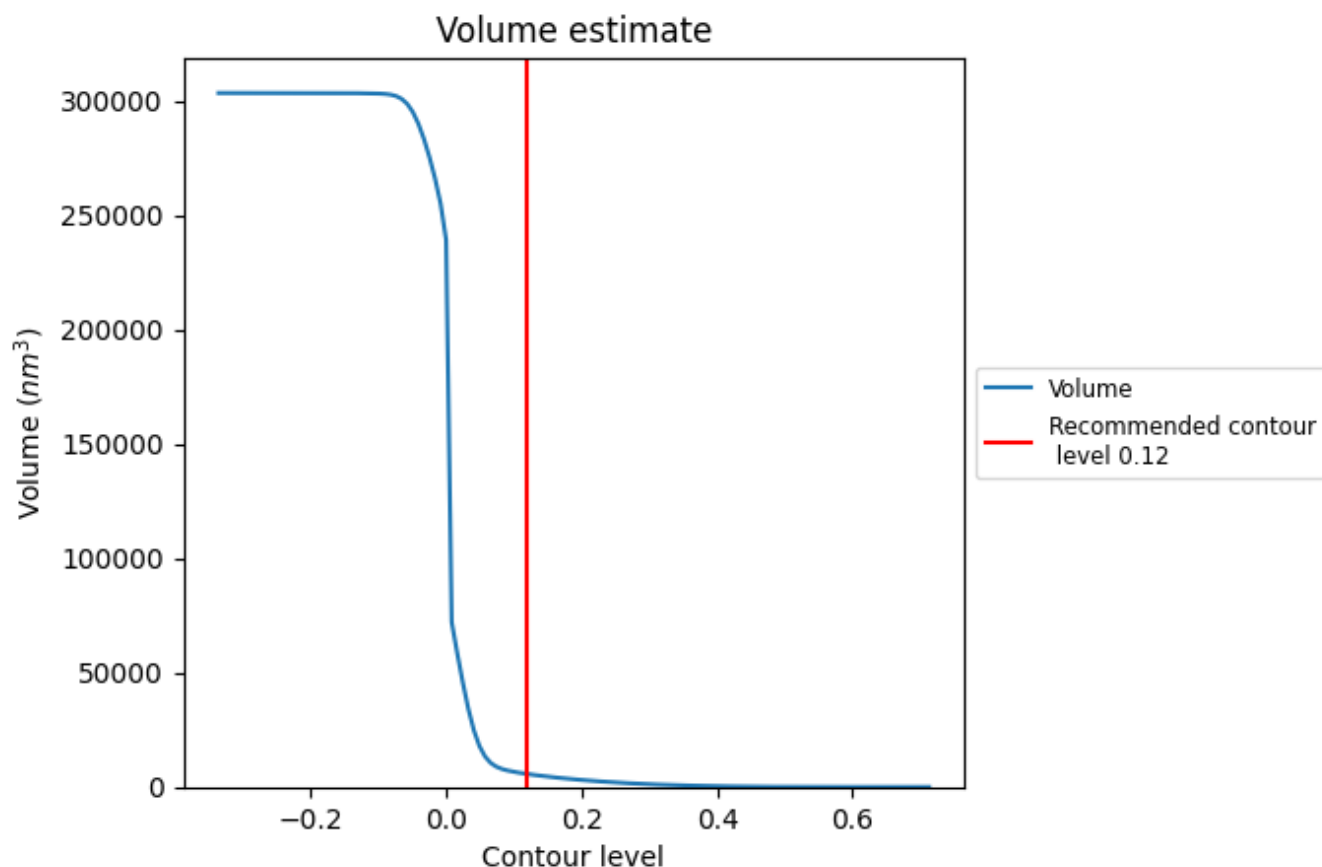
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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.

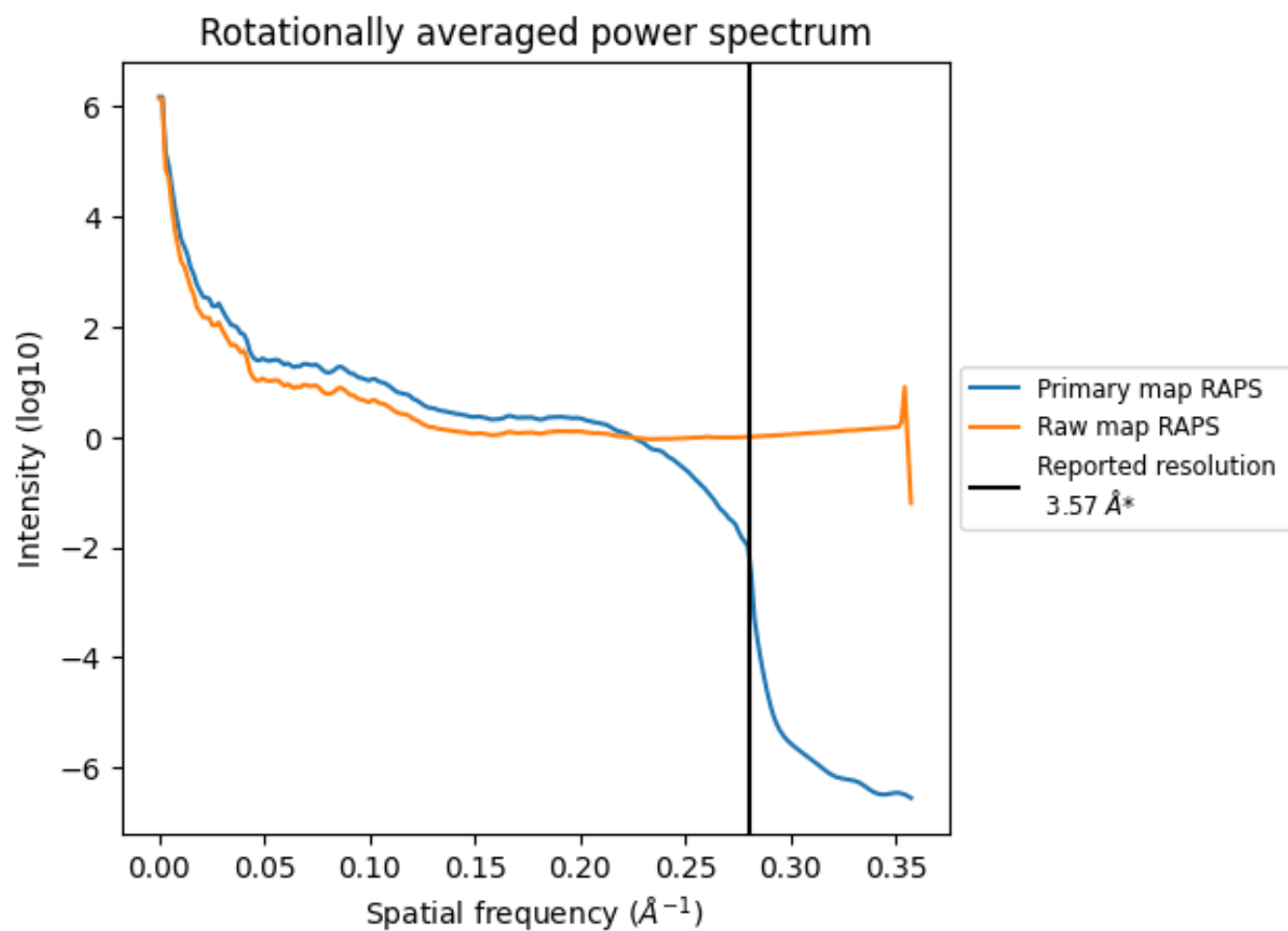
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 5651 nm³; this corresponds to an approximate mass of 5105 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 ⓘ

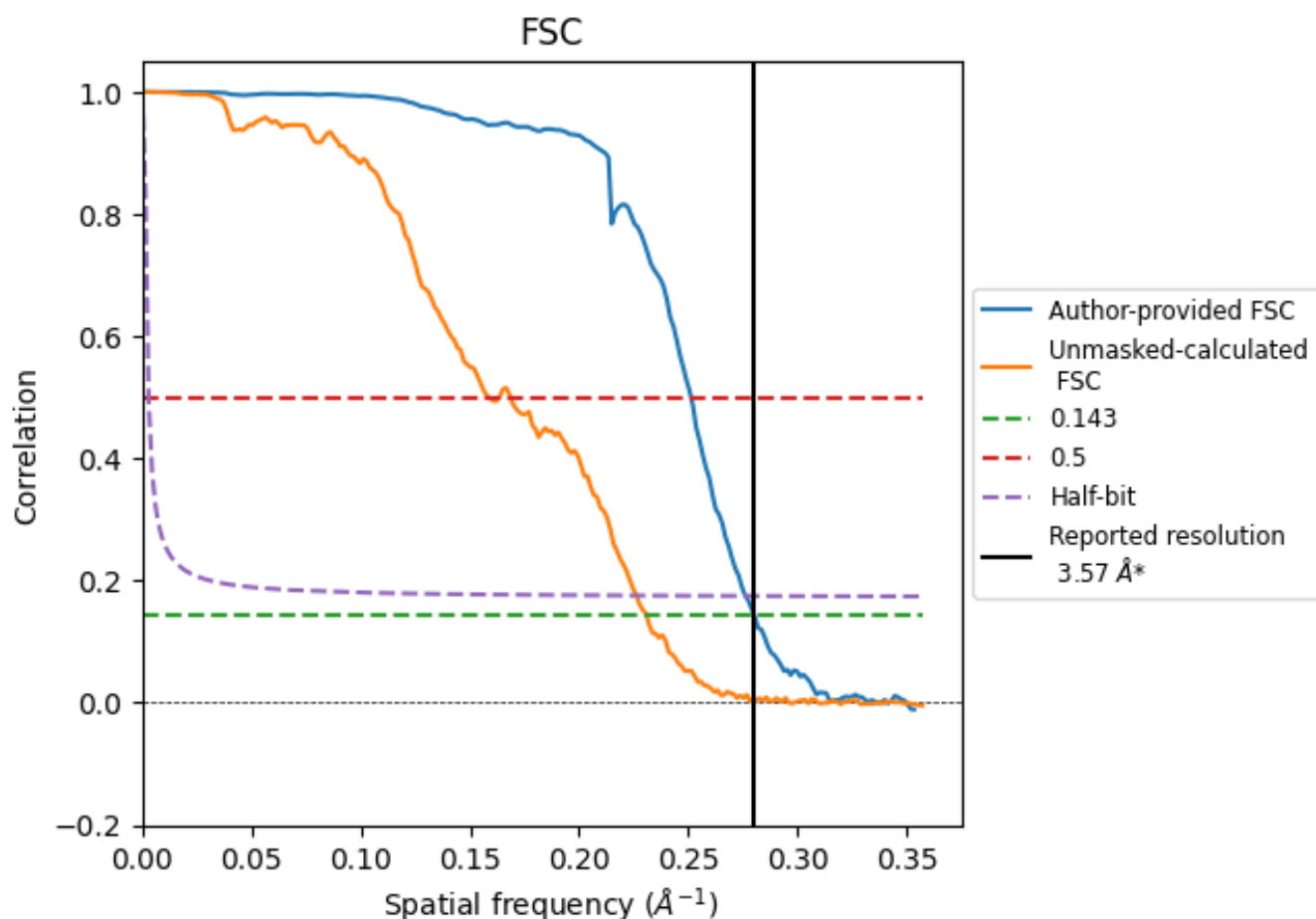


*Reported resolution corresponds to spatial frequency of 0.280 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.280 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

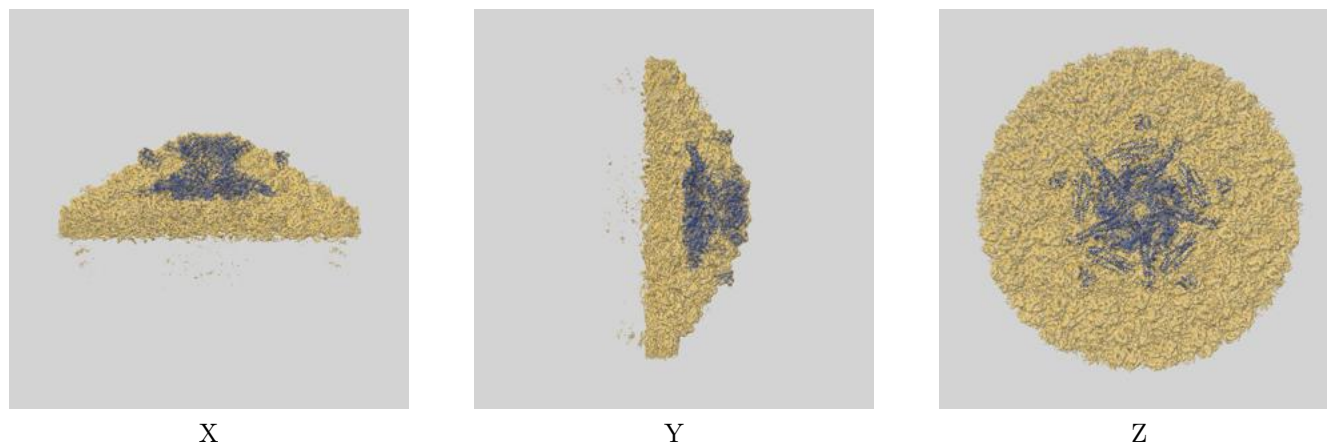
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.57	-	-
Author-provided FSC curve	3.57	3.98	3.62
Unmasked-calculated*	4.33	6.30	4.42

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.33 differs from the reported value 3.57 by more than 10 %

9 Map-model fit [i](#)

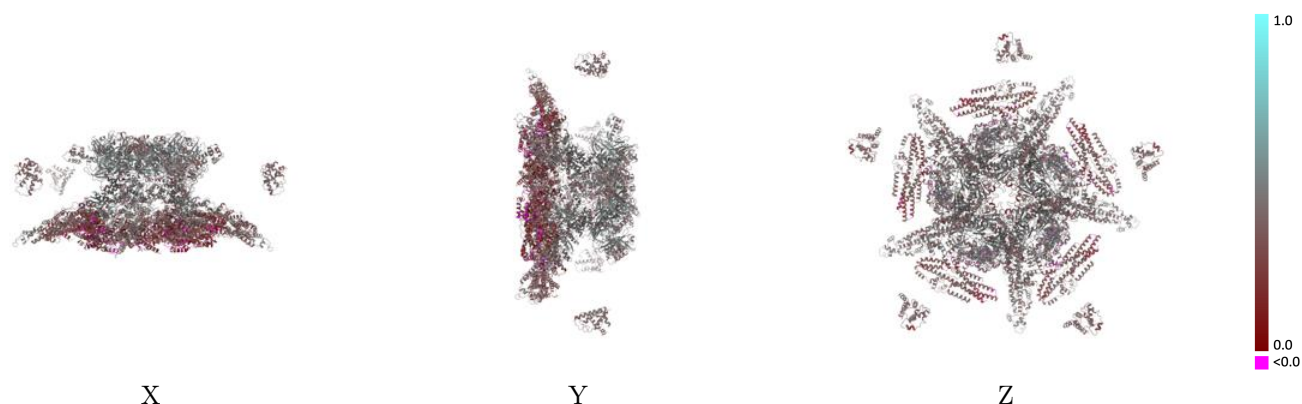
This section contains information regarding the fit between EMDB map EMD-75663 and PDB model 11FG. Per-residue inclusion information can be found in section [3](#) on page [8](#).

9.1 Map-model overlay [i](#)



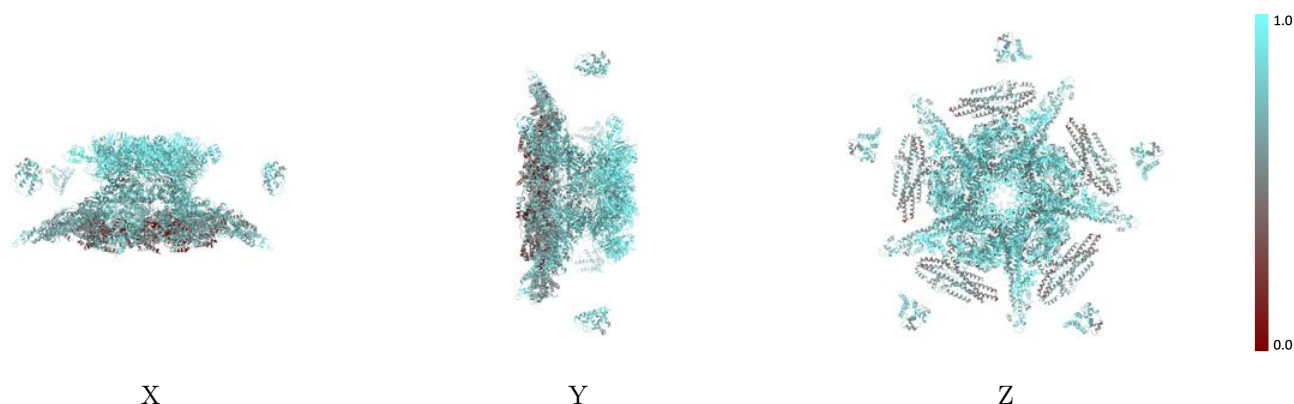
The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



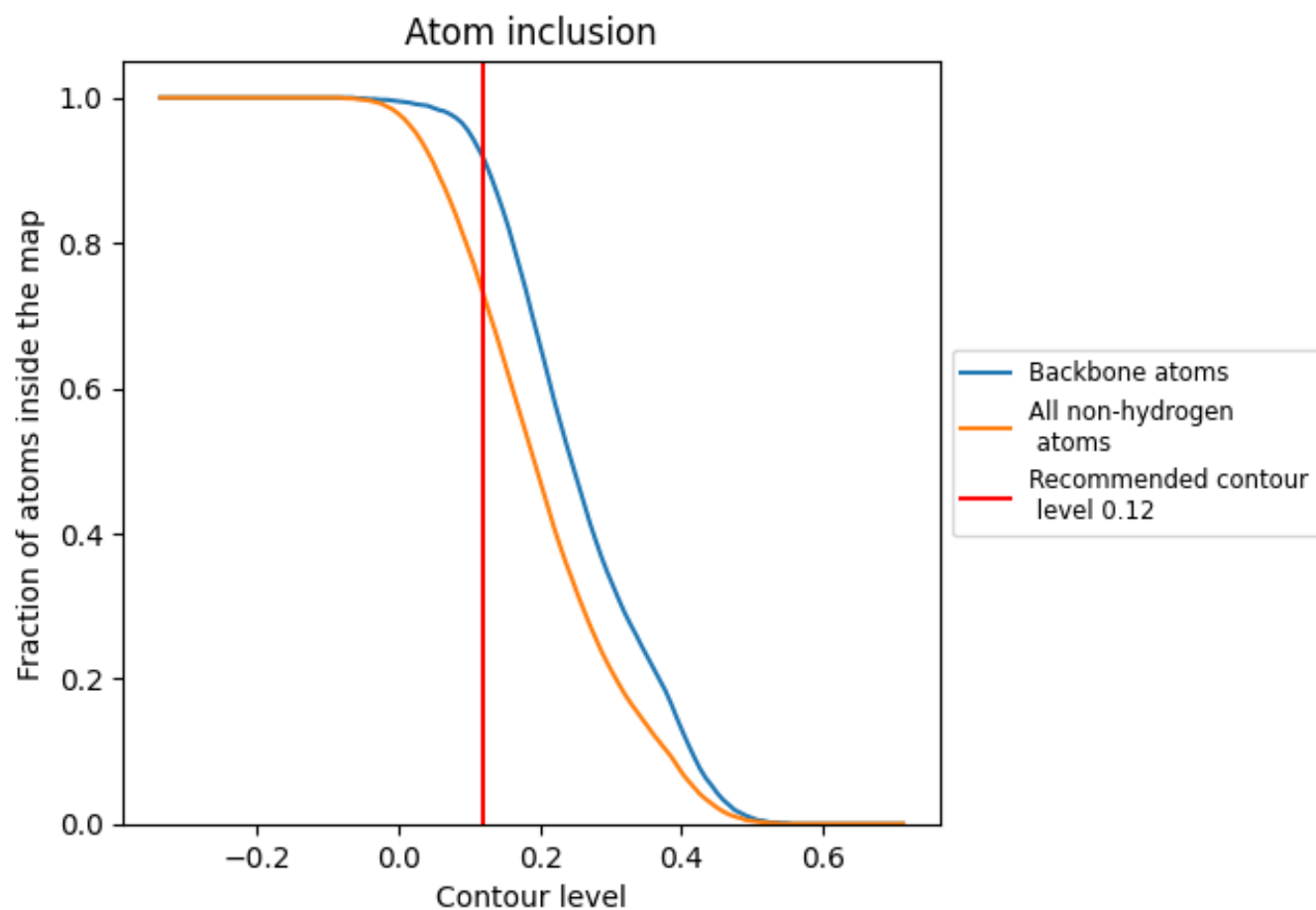
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



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 (0.12).

9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 73% 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 (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7300	 0.3740
A	 0.7320	 0.3910
Ar	 0.9290	 0.4690
As	 0.9270	 0.4670
At	 0.9270	 0.4680
Au	 0.9280	 0.4680
Av	 0.9250	 0.4660
B	 0.9170	 0.4140
C	 0.6230	 0.2700
Cj	 0.6550	 0.3500
Ck	 0.6550	 0.3490
Cl	 0.6530	 0.3480
Cm	 0.6540	 0.3490
Cn	 0.6530	 0.3490
D	 0.4790	 0.1290
E	 0.8270	 0.4360
F	 0.8370	 0.4430
G	 0.7370	 0.3900
H	 0.9210	 0.4150
I	 0.6430	 0.2860
J	 0.4710	 0.1220
K	 0.8320	 0.4350
L	 0.8480	 0.4460
M	 0.7320	 0.3900
N	 0.9150	 0.4140
O	 0.6430	 0.2750
P	 0.4820	 0.1300
Q	 0.8260	 0.4350
R	 0.8430	 0.4420
S	 0.7340	 0.3920
T	 0.9190	 0.4260
U	 0.6400	 0.2840
V	 0.4650	 0.1250
W	 0.8280	 0.4350
X	 0.8440	 0.4430



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Chain	Atom inclusion	Q-score
Y	 0.7330	 0.3920
Z	 0.3980	 0.2760
a	 0.3920	 0.2800
b	 0.4060	 0.2790
c	 0.4030	 0.2800
d	 0.3900	 0.2610
e	 0.9150	 0.4170
f	 0.6440	 0.2870
g	 0.4530	 0.1030
h	 0.8190	 0.4320
i	 0.8460	 0.4430