



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 11:39 AM UTC

PDB ID : 7EG7 / pdb_00007eg7
EMDB ID : EMD-31107
Title : TFIID-based core PIC on SCP promoter
Authors : Chen, X.; Qi, Y.; Hou, H.; Wang, X.; Wu, Z.; Li, J.; Xu, Y.
Deposited on : 2021-03-24
Resolution : 6.20 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

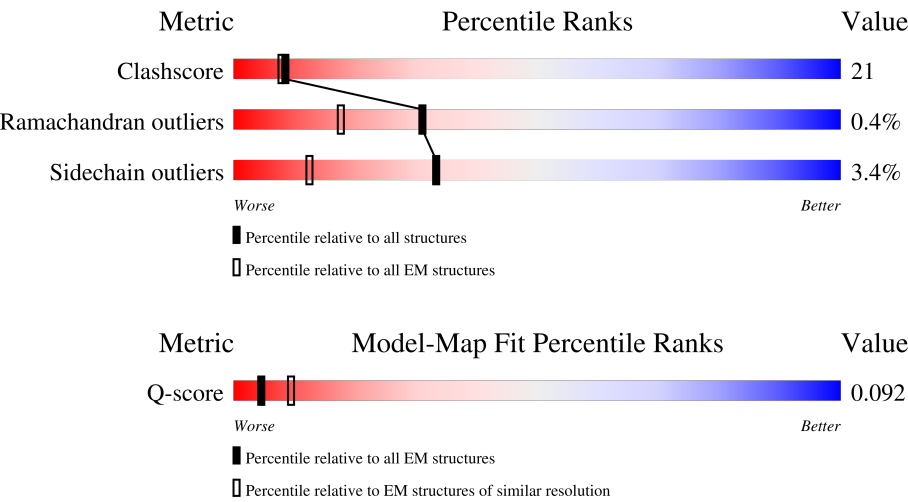
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

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

The reported resolution of this entry is 6.20 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	537 (5.70 - 6.70)

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	A	1872	12% 21%9%• 68%
2	B	1199	10% 67%12%•20%
3	D	1085	9%5%• 85%
3	d	1085	14%13%• 85%

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Mol	Chain	Length	Quality of chain
4	E	800	
4	e	800	
5	F	677	
5	f	677	
6	G	349	
7	H	310	
8	I	264	
8	i	264	
9	J	218	
9	j	218	
10	L	161	
10	l	161	
11	O	109	
12	P	339	
13	Q	376	
14	R	316	
15	S	517	
16	T	249	
17	X	79	
18	Y	79	
19	c	929	
20	k	211	
21	m	124	
22	o	1970	
23	p	1174	

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Mol	Chain	Length	Quality of chain
24	q	275	
25	r	142	
26	s	210	
27	t	127	
28	v	150	
29	w	125	
30	x	67	
31	y	117	
32	z	58	
33	u	172	

2 Entry composition [i](#)

There are 35 unique types of molecules in this entry. The entry contains 81525 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 Transcription initiation factor TFIID subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	599	Total	C	N	O	S	0	0
			4909	3132	855	894	28		

- Molecule 2 is a protein called Transcription initiation factor TFIID subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	963	Total	C	N	O	S	0	0
			7795	5011	1315	1411	58		

- Molecule 3 is a protein called Transcription initiation factor TFIID subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	165	Total	C	N	O	S	0	0
			1377	858	257	258	4		
3	d	158	Total	C	N	O	S	0	0
			1307	814	238	252	3		

- Molecule 4 is a protein called Transcription initiation factor TFIID subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	546	Total	C	N	O	S	0	0
			4364	2766	757	820	21		
4	e	539	Total	C	N	O	S	0	0
			4327	2746	748	814	19		

- Molecule 5 is a protein called Transcription initiation factor TFIID subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	F	404	Total	C	N	O	S	0	0
			3081	1954	537	572	18		
5	f	403	Total	C	N	O	S	0	0
			3081	1954	533	576	18		

- Molecule 6 is a protein called Transcription initiation factor TFIID subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	G	145	Total	C	N	O	S	0	0
			1180	748	217	211	4		

- Molecule 7 is a protein called Transcription initiation factor TFIID subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	209	Total	C	N	O	S	0	0
			1633	1034	283	311	5		

- Molecule 8 is a protein called Transcription initiation factor TFIID subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	120	Total	C	N	O	S	0	0
			959	610	166	177	6		
8	i	121	Total	C	N	O	S	0	0
			967	615	167	178	7		

- Molecule 9 is a protein called Transcription initiation factor TFIID subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	J	89	Total	C	N	O	S	0	0
			709	457	114	134	4		
9	j	95	Total	C	N	O	S	0	0
			759	488	124	143	4		

- Molecule 10 is a protein called Transcription initiation factor TFIID subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	76	Total	C	N	O	S	0	0
			622	388	109	122	3		
10	l	107	Total	C	N	O	S	0	0
			876	547	158	166	5		

- Molecule 11 is a protein called Transcription initiation factor IIA subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	O	97	Total	C	N	O	S	0	0
			771	491	133	145	2		

- Molecule 12 is a protein called TATA-box-binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	P	177	Total	C	N	O	S	0	0
			1412	918	249	238	7		

- Molecule 13 is a protein called Transcription initiation factor IIA subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Q	122	Total	C	N	O	S	0	0
			996	623	162	207	4		

- Molecule 14 is a protein called Transcription initiation factor IIB.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	R	248	Total	C	N	O	S	0	0
			1913	1200	338	358	17		

- Molecule 15 is a protein called General transcription factor IIF subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	S	134	Total	C	N	O	S	0	0
			1101	698	199	202	2		

- Molecule 16 is a protein called General transcription factor IIF subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	T	113	Total	C	N	O	S	0	0
			876	545	160	169	2		

- Molecule 17 is a DNA chain called DNA (79-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
17	X	71	Total	C	N	O	P	0	0
			1469	691	287	420	71		

- Molecule 18 is a DNA chain called DNA (79-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Y	71	Total	C	N	O	P	0	0
			1442	684	255	432	71		

- Molecule 19 is a protein called Transcription initiation factor TFIID subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	c	127	Total	C	N	O	S	0	0
			1011	638	174	193	6		

- Molecule 20 is a protein called Transcription initiation factor TFIID subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	k	98	Total	C	N	O	S	0	0
			785	499	142	139	5		

- Molecule 21 is a protein called Transcription initiation factor TFIID subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	m	87	Total	C	N	O	S	0	0
			724	456	131	131	6		

- Molecule 22 is a protein called RPB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	o	1427	Total	C	N	O	S	0	0
			11308	7114	2023	2099	72		

- Molecule 23 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	p	1134	Total	C	N	O	S	0	0
			9062	5732	1595	1671	64		

- Molecule 24 is a protein called DNA-directed RNA polymerase II subunit RPB3.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	q	257	Total	C	N	O	S	0	0
			2059	1294	351	408	6		

- Molecule 25 is a protein called DNA-directed RNA polymerase II subunit RPB4.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	r	128	Total	C	N	O	S	0	0
			1005	632	172	197	4		

- Molecule 26 is a protein called DNA-directed RNA polymerase II subunit E.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	s	209	Total	C	N	O	S	0	0
			1720	1089	300	323	8		

- Molecule 27 is a protein called DNA-directed RNA polymerase II subunit F.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	t	79	Total	C	N	O	S	0	0
			635	406	108	116	5		

- Molecule 28 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	v	148	Total	C	N	O	S	0	0
			1186	750	194	237	5		

- Molecule 29 is a protein called DNA-directed RNA polymerase II subunit RPB9.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	w	114	Total	C	N	O	S	0	0
			927	571	166	179	11		

- Molecule 30 is a protein called RPB10.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	x	64	Total	C	N	O	S	0	0
			507	328	86	87	6		

- Molecule 31 is a protein called RNA_pol_L_2 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	y	117	Total	C	N	O	S	0	0
			937	604	154	177	2		

- Molecule 32 is a protein called RPB12.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	z	44	Total	C	N	O	S	0	0
			372	231	72	63	6		

- Molecule 33 is a protein called DNA-directed RNA polymerase II subunit RPB7.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	u	171	Total	C	N	O	S	0	0
			1351	875	219	249	8		

- Molecule 34 is ZINC ION (CCD ID: ZN) (formula: Zn).

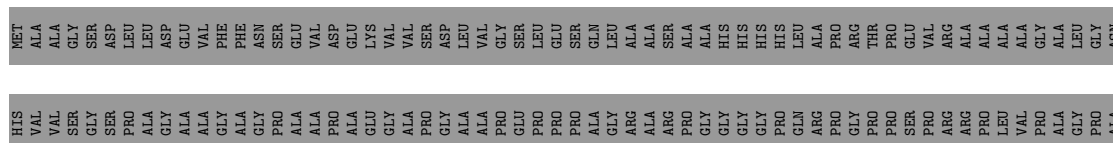
Mol	Chain	Residues	Atoms		AltConf
34	R	1	Total	Zn	0
			1	1	
34	o	2	Total	Zn	0
			2	2	
34	p	1	Total	Zn	0
			1	1	
34	q	1	Total	Zn	0
			1	1	
34	w	2	Total	Zn	0
			2	2	
34	x	1	Total	Zn	0
			1	1	
34	z	1	Total	Zn	0
			1	1	

- Molecule 35 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
35	o	1	Total	Mg	0
			1	1	



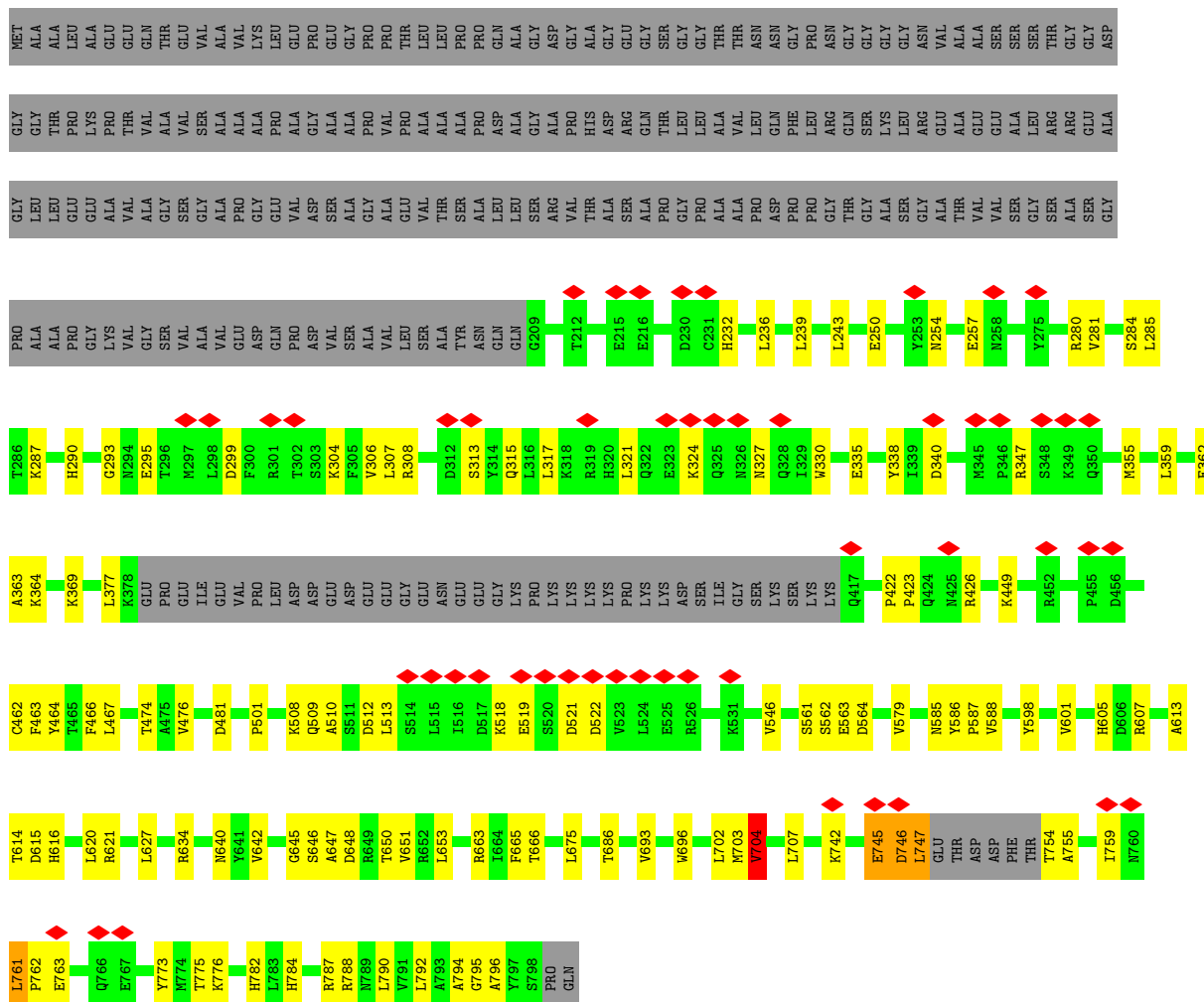
Chain B: 10% 67% 12% 20%



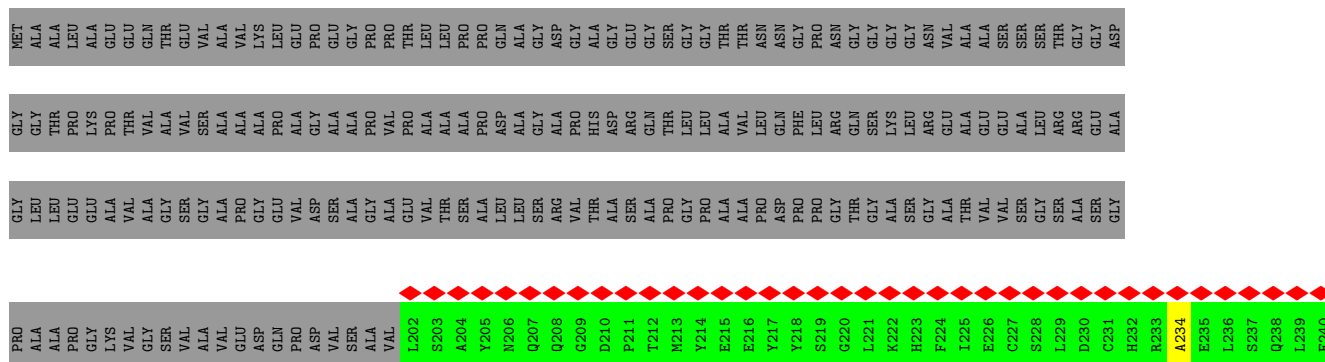
- Molecule 3: Transcription initiation factor TFIID subunit 4

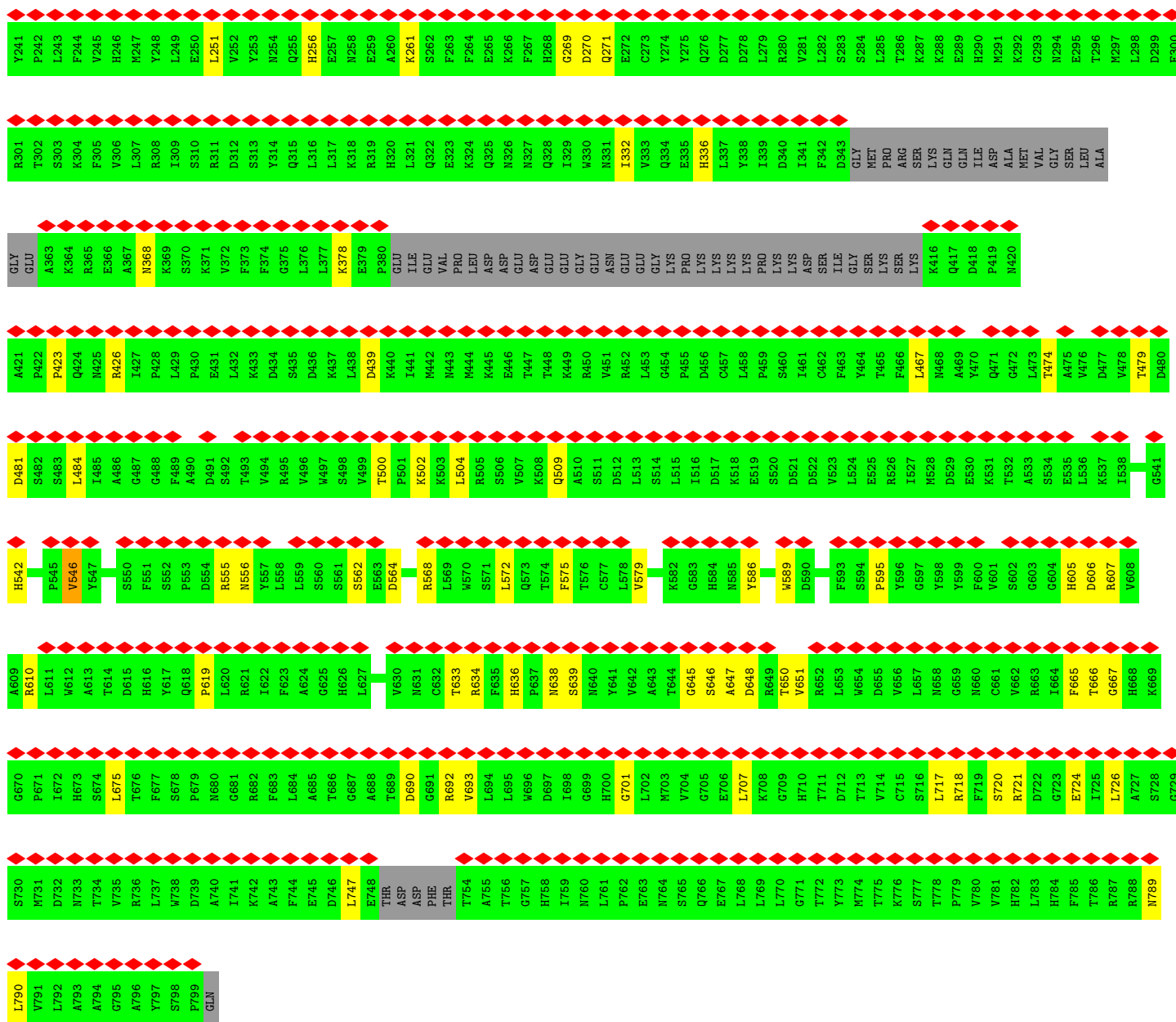


Chain E: 6% 53% 15% 32%

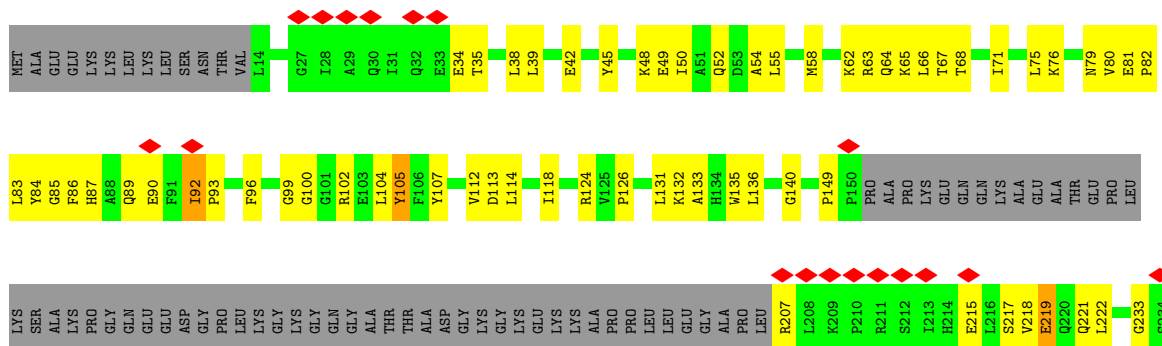


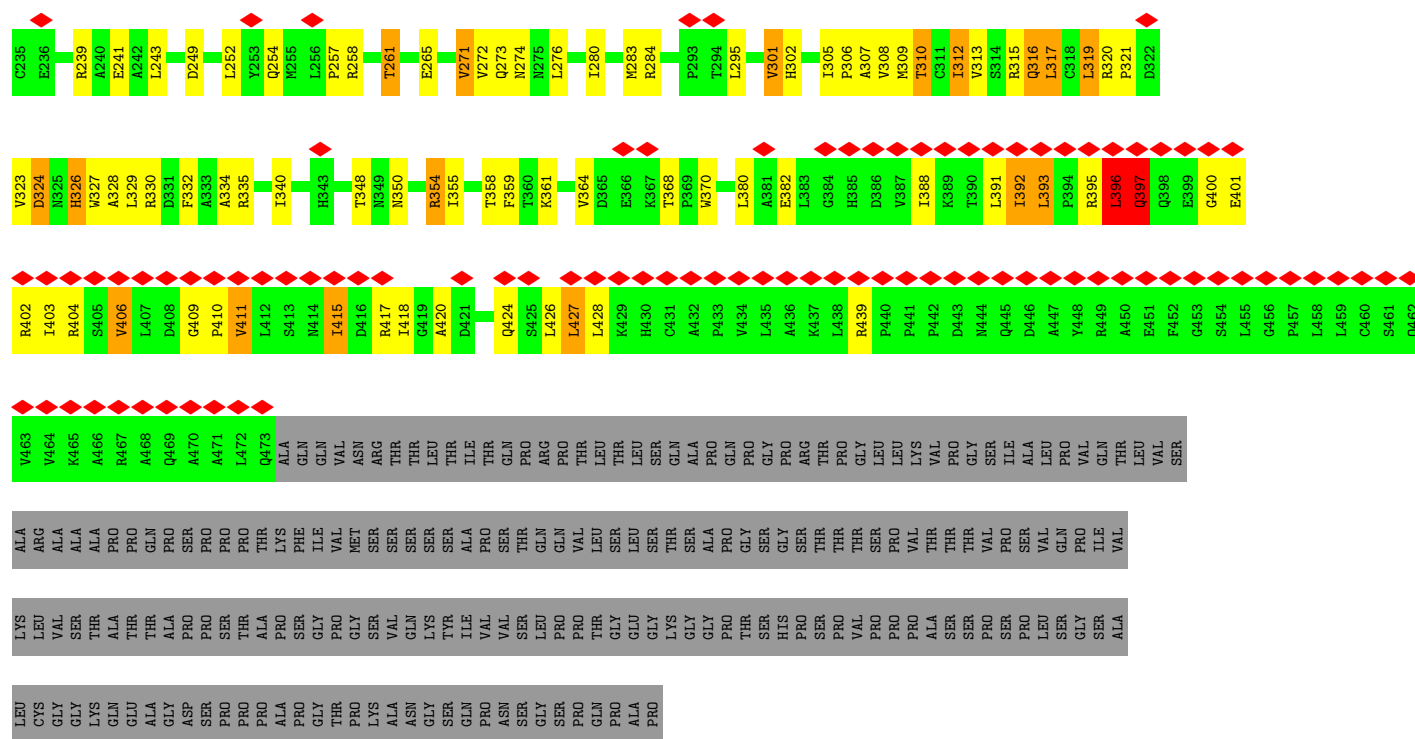
Chain e:



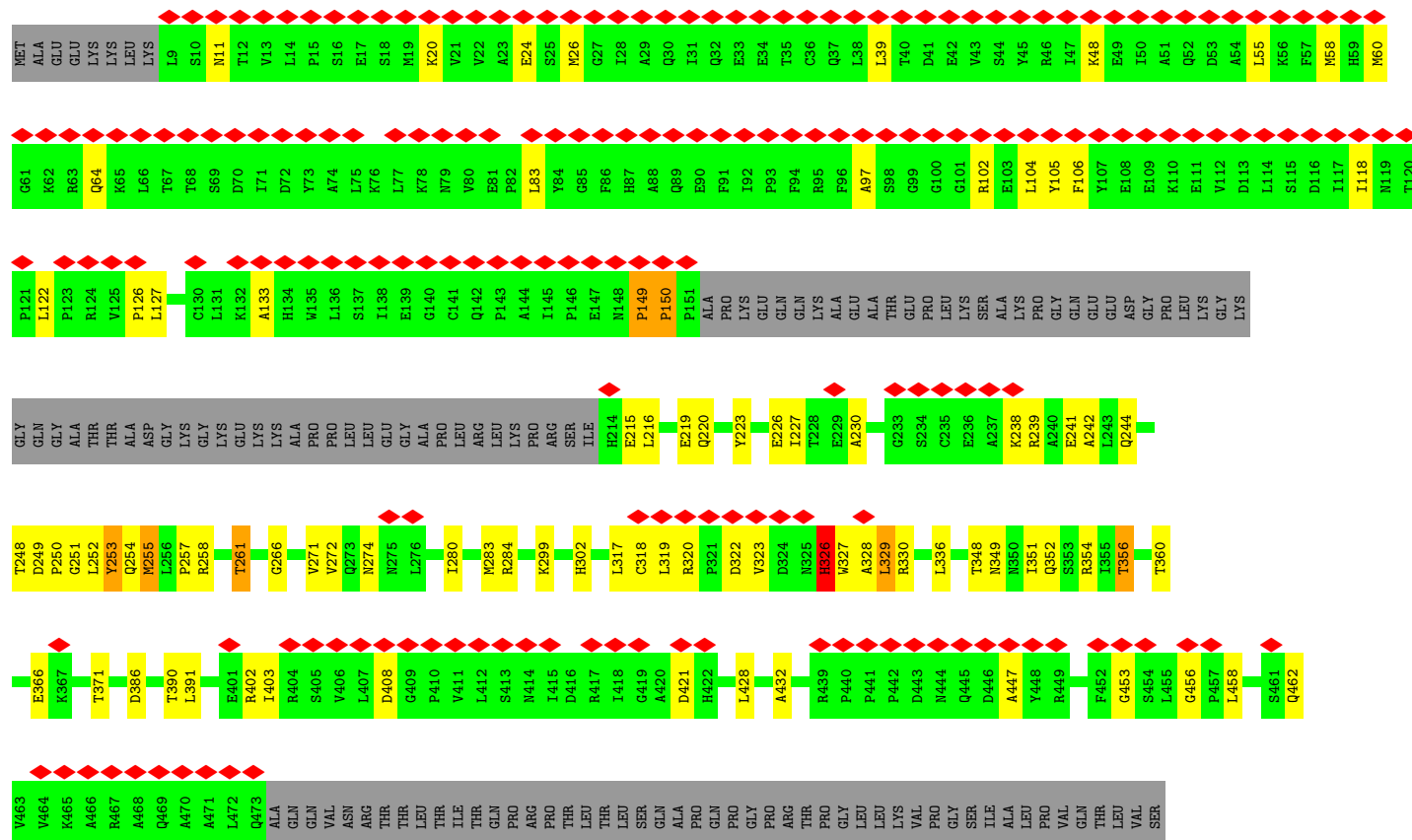


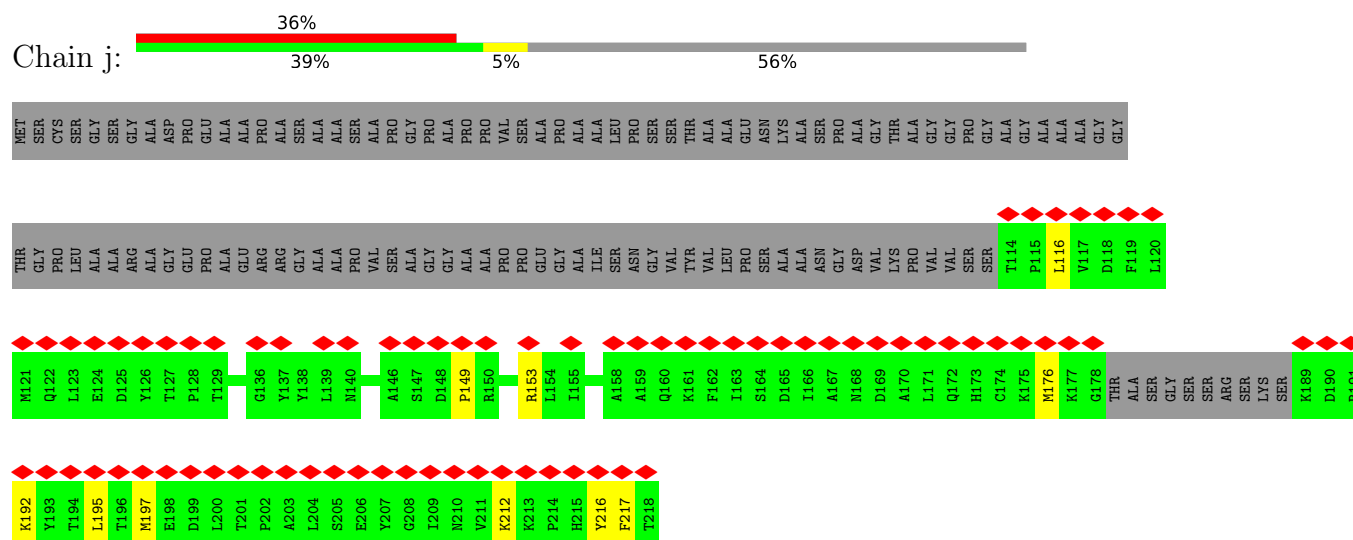
● Molecule 5: Transcription initiation factor TFIID subunit 6



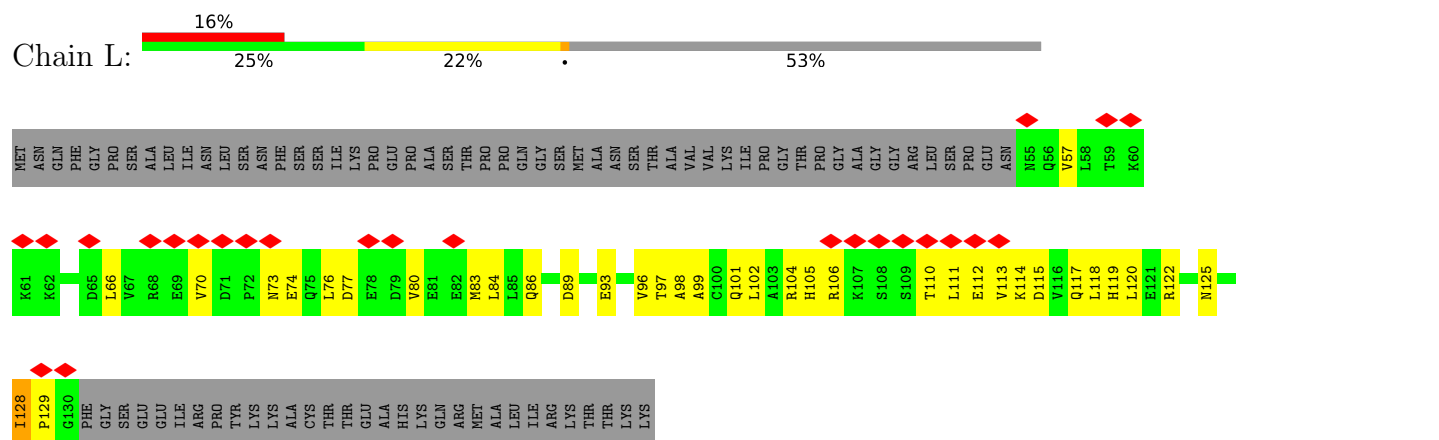


● Molecule 5: Transcription initiation factor TFIID subunit 6





- Molecule 10: Transcription initiation factor TFIID subunit 12

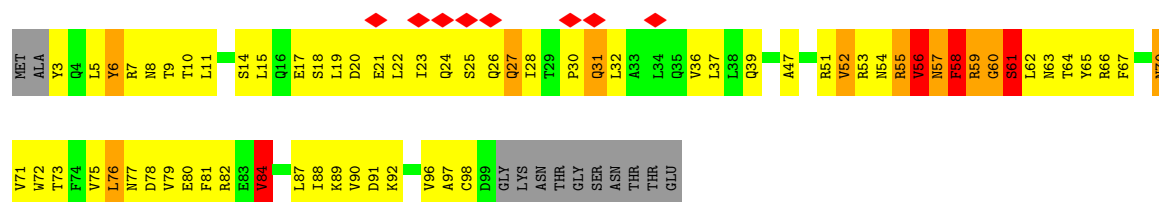


- Molecule 10: Transcription initiation factor TFIID subunit 12

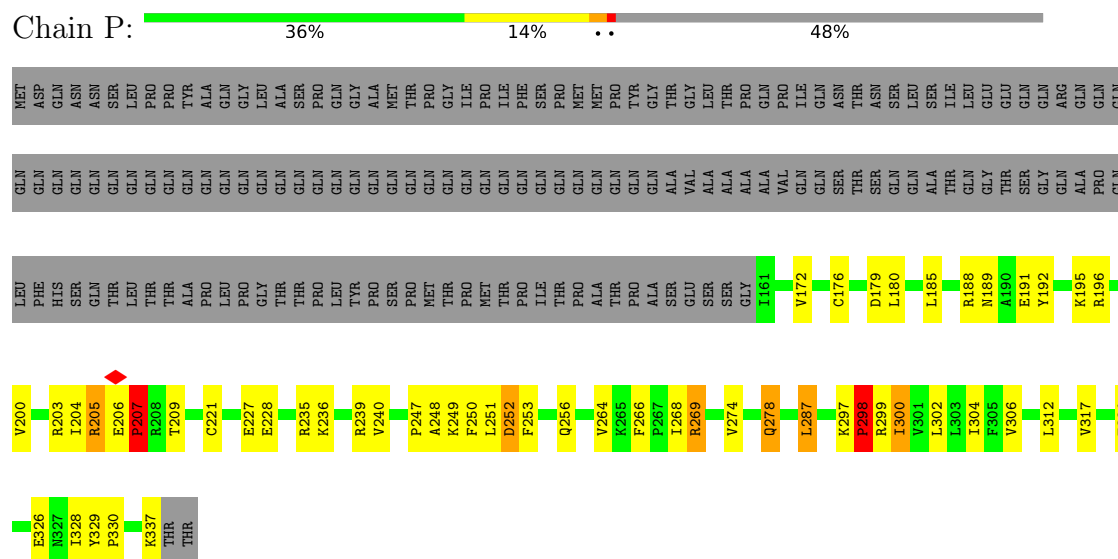


- Molecule 11: Transcription initiation factor IIA subunit 2

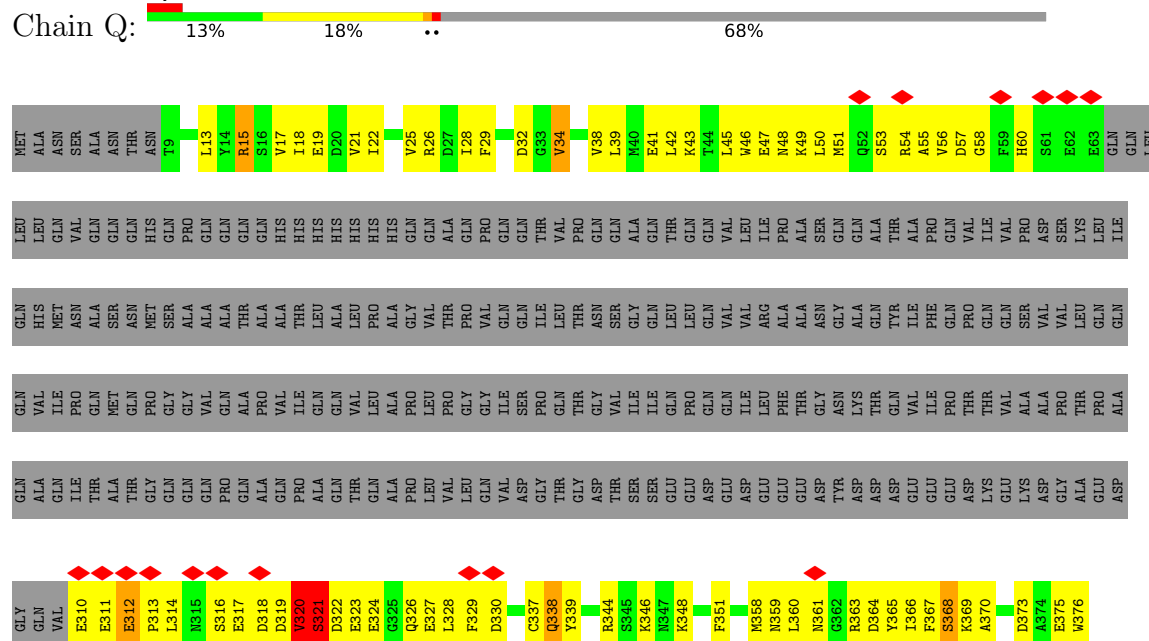




• Molecule 12: TATA-box-binding protein

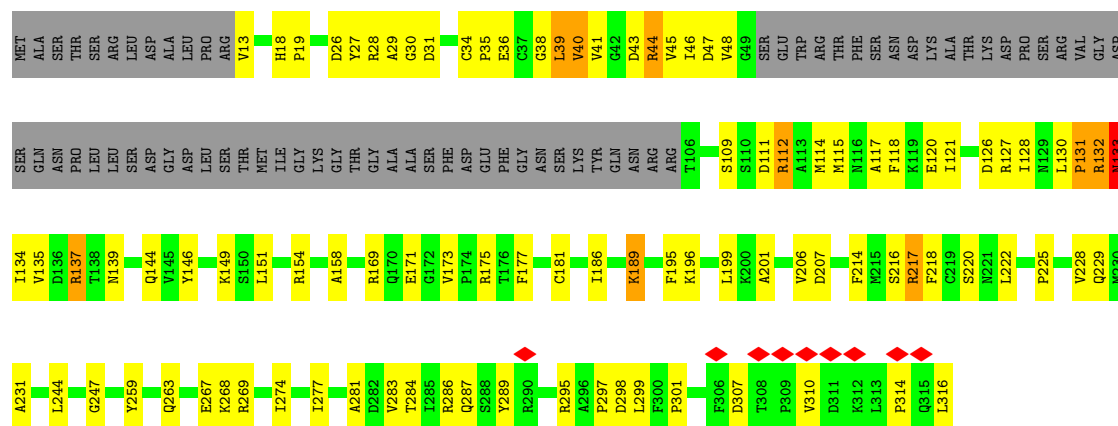


• Molecule 13: Transcription initiation factor IIA subunit 1

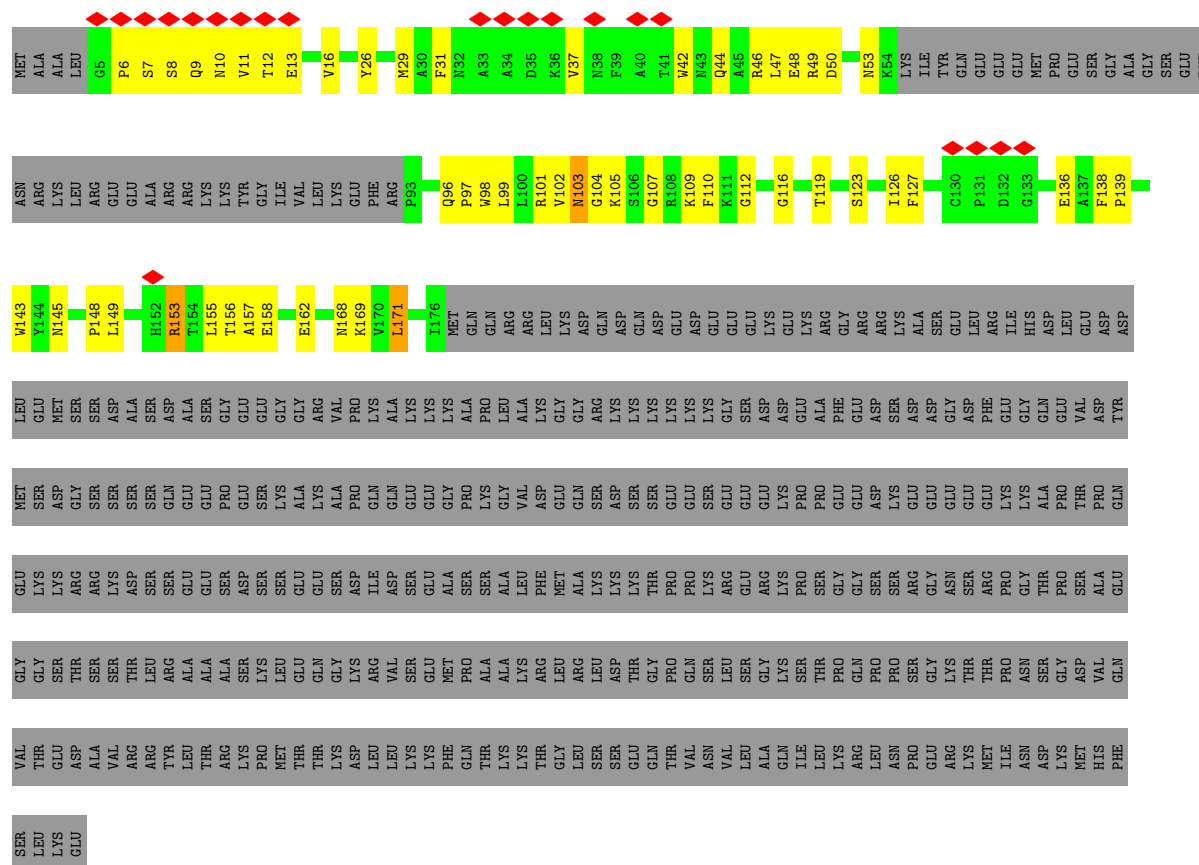


• Molecule 14: Transcription initiation factor IIB

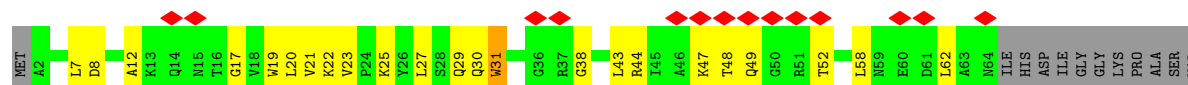
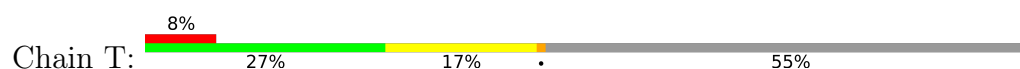




• Molecule 15: General transcription factor IIF subunit 1



• Molecule 16: General transcription factor IIF subunit 2





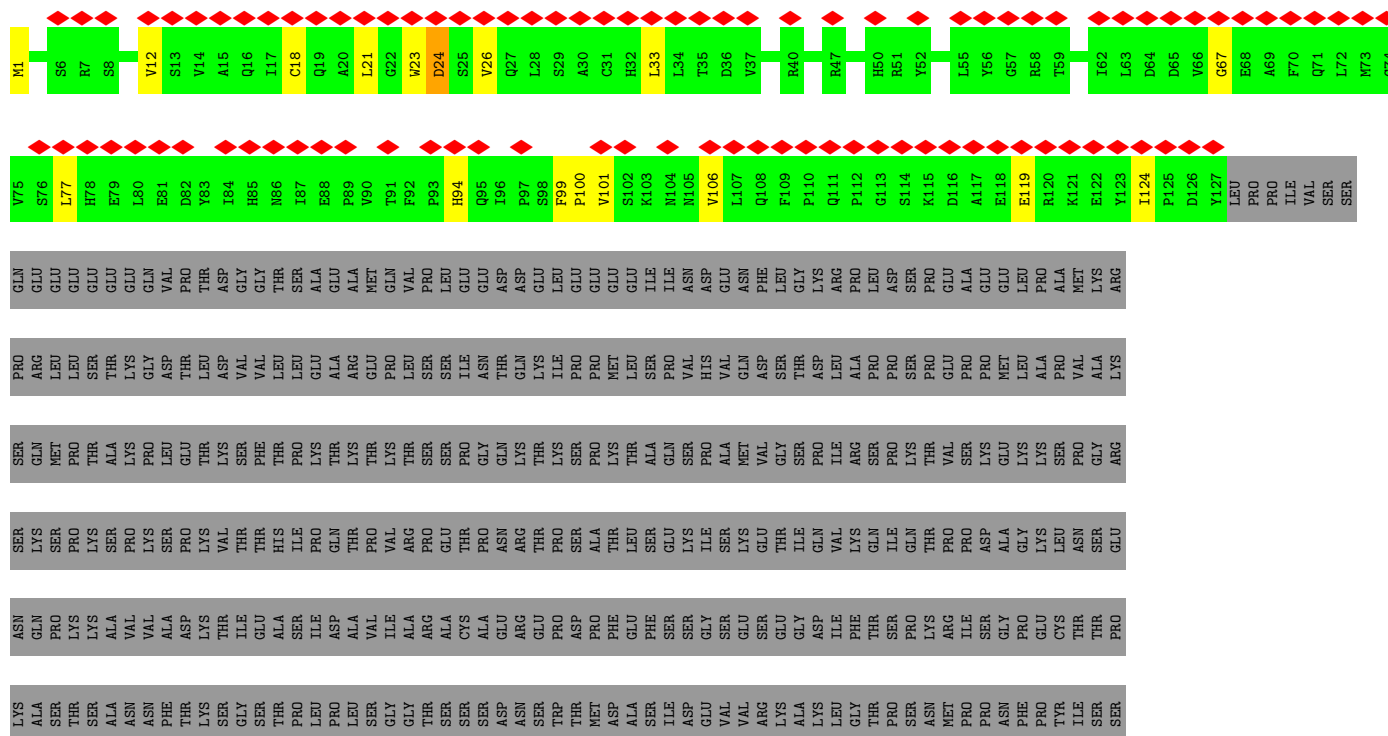
• Molecule 17: DNA (79-MER)



• Molecule 18: DNA (79-MER)

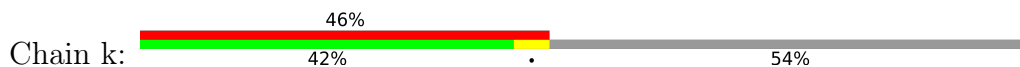


• Molecule 19: Transcription initiation factor TFIID subunit 3



[illegible]

- Molecule 20: Transcription initiation factor TFIID subunit 11

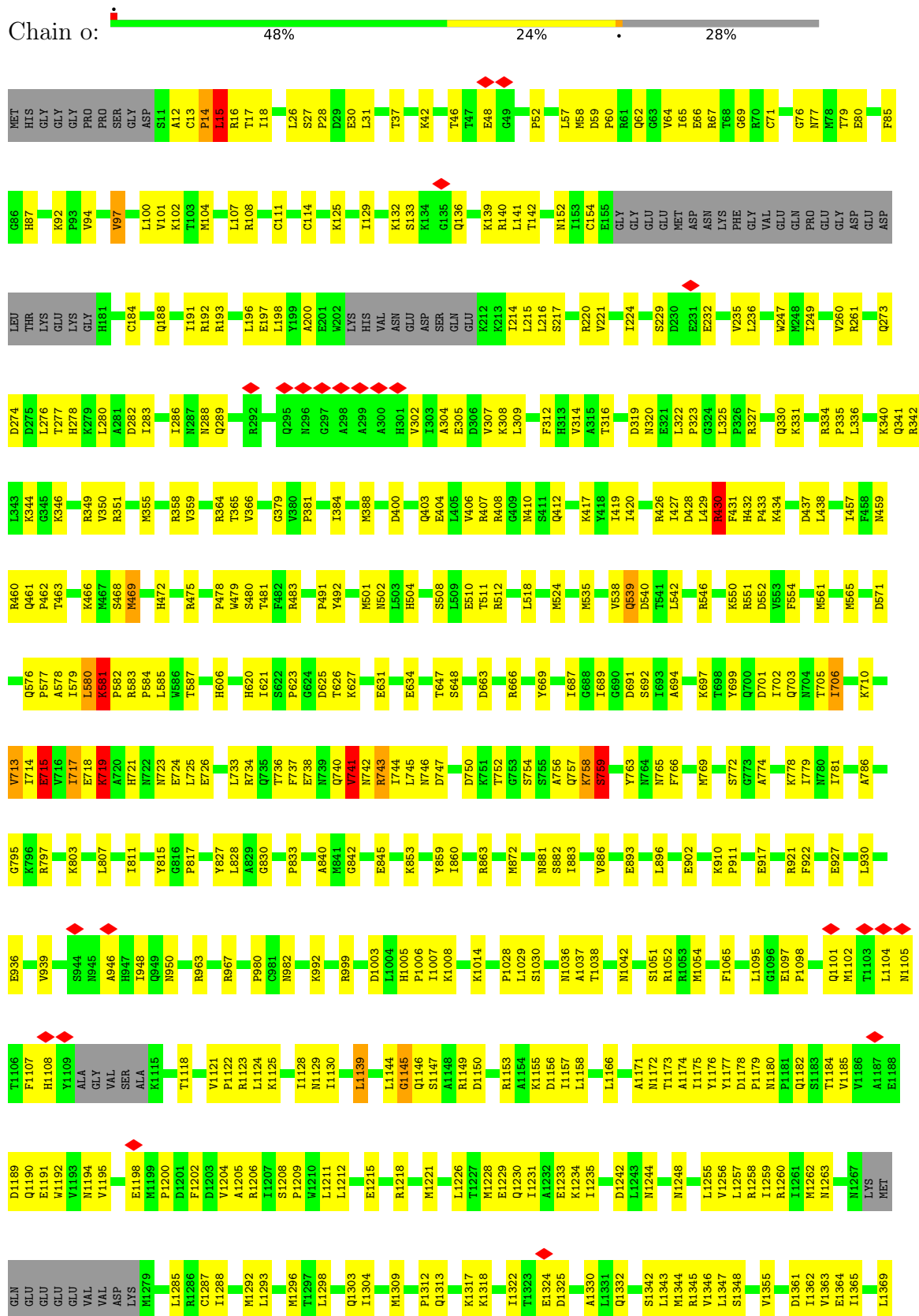


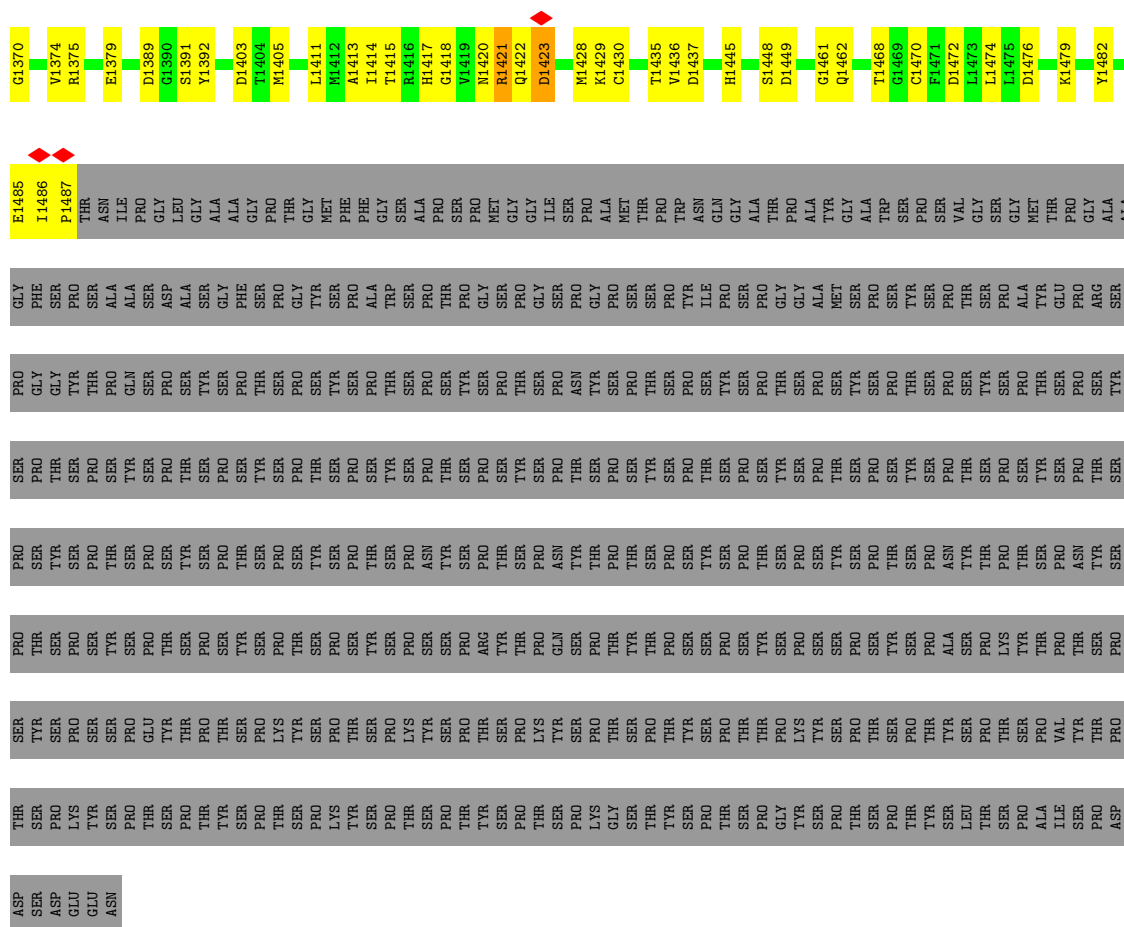
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Y121	E122	M123	Y124	R125	R126	S127	A128	F129	P130	K131	A132	A133	I134	K135	R136	L137	I138	Q139	S140	I141	T142	G143	T144	S145	V146	S147	Q148	N149	V150	V151	I152	A153	M154	S155	G156	I157	S158	K159	V160	F161	V162	G163	E164	V165	V166					
ASP	ASP	ALA	HIS	GLU	SER	PRO	SER	ASP	LYS	GLY	GLU	GLY	SER	ASP	GLU	ALA	LYS	LEU	LYS	ILE	THR	LYS	GLY	ALA	THR	THR	LYS	GLY	ILE	GLU	GLU	THR	ASP	GLY	ASP	ALA	ASP	VAL	ASP	LEU	LYS	GLU	ALA	ALA	ALA	GLU	GLY	GLY	LEU	GLU
MET	ASP	ASP	HIS	GLU	SER	PRO	SER	ASP	LYS	GLY	GLU	GLY	THR	THR	GLU	ALA	LYS	LEU	LYS	ILE	THR	LYS	GLY	ALA	THR	THR	LYS	GLY	ILE	GLU	GLU	THR	ASP	GLY	ASP	ALA	ASP	VAL	ASP	LEU	LYS	GLU	ALA	ALA	ALA	GLU	GLY	GLY	LEU	GLU

- Molecule 21: Transcription initiation factor TFIID subunit 13

[illegible]

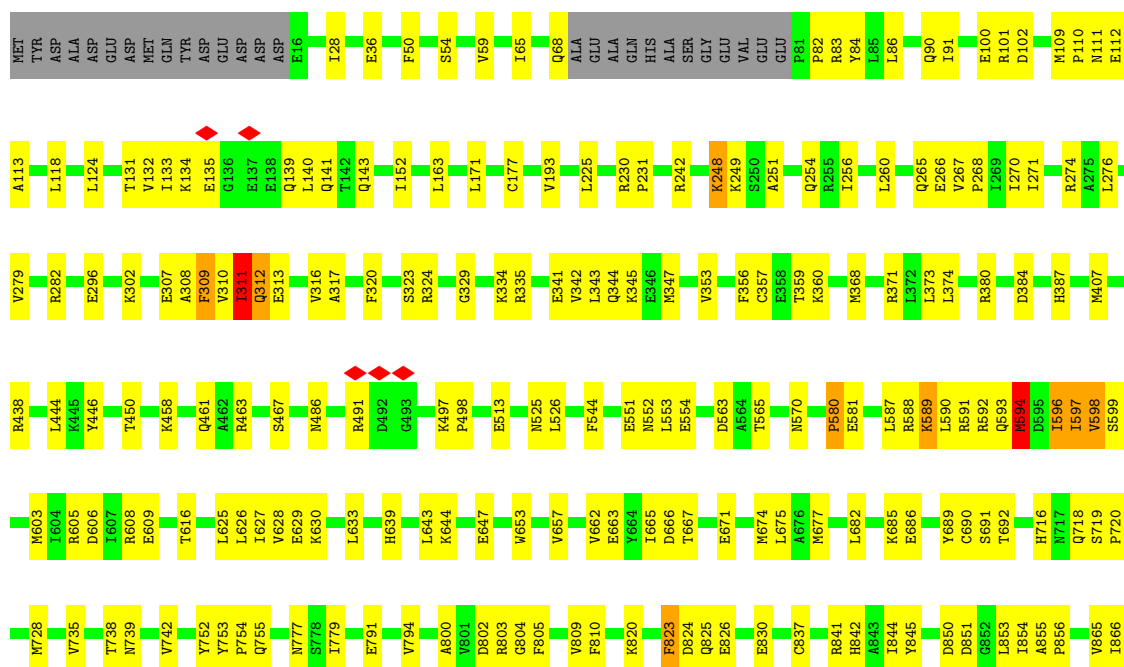
• Molecule 22: RPB1





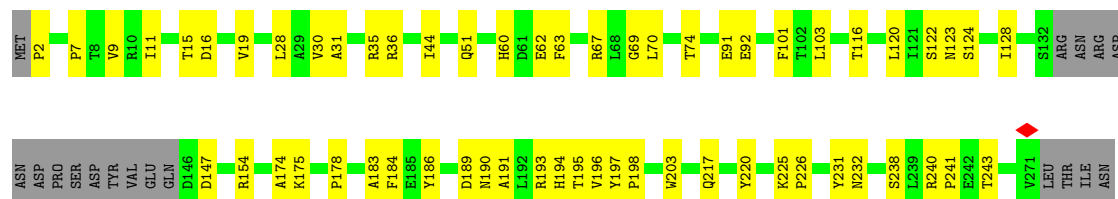
• Molecule 23: DNA-directed RNA polymerase subunit beta

Chain p: 69% 26%

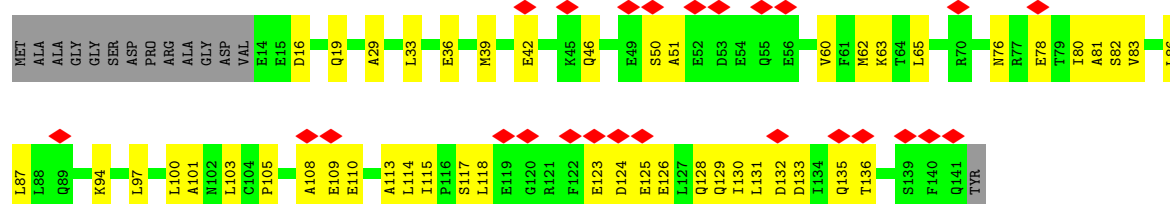




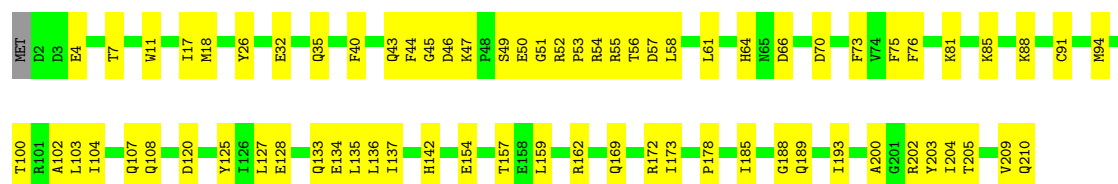
• Molecule 24: DNA-directed RNA polymerase II subunit RPB3



• Molecule 25: DNA-directed RNA polymerase II subunit RPB4

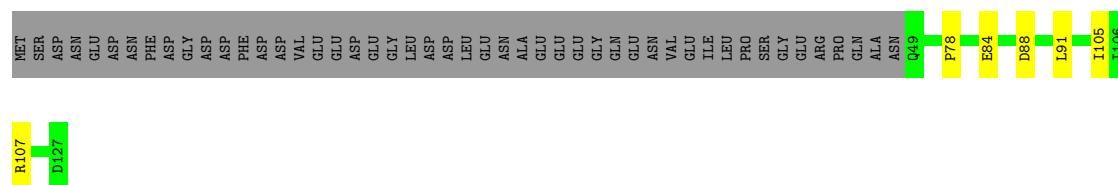


• Molecule 26: DNA-directed RNA polymerase II subunit E



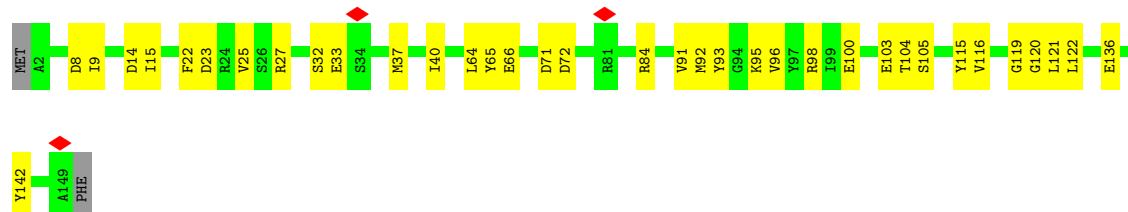
• Molecule 27: DNA-directed RNA polymerase II subunit F





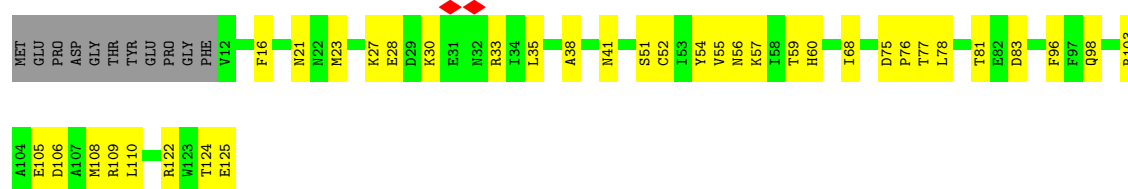
- Molecule 28: DNA-directed RNA polymerases I, II, and III subunit RPABC3

Chain v:



- Molecule 29: DNA-directed RNA polymerase II subunit RPB9

Chain w:



- Molecule 30: RPB10

Chain x:



- Molecule 31: RNA_pol_L_2 domain-containing protein

Chain y:

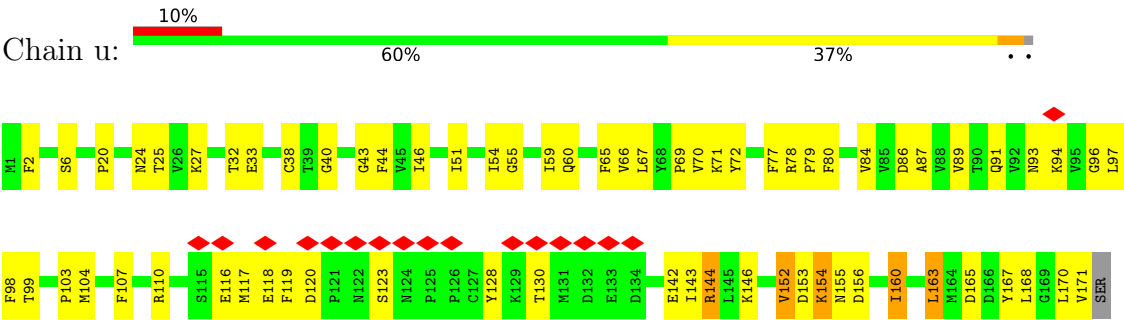


- Molecule 32: RPB12

Chain z:



● Molecule 33: DNA-directed RNA polymerase II subunit RPB7



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	72012	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50.0	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.034	Depositor
Minimum map value	-0.006	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.008	Depositor
Map size ($\text{\AA}$)	488.15997, 488.15997, 488.15997	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.356, 1.356, 1.356	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	A	0.64	0/5028	1.00	14/6785 (0.2%)
2	B	0.46	1/7992 (0.0%)	0.67	5/10835 (0.0%)
3	D	0.69	1/1391 (0.1%)	0.93	3/1859 (0.2%)
3	d	0.21	0/1321	0.44	0/1772
4	E	0.34	0/4469	0.58	1/6050 (0.0%)
4	e	0.28	0/4433	0.52	0/6004
5	F	0.63	0/3139	1.02	8/4264 (0.2%)
5	f	0.47	0/3140	0.80	6/4268 (0.1%)
6	G	0.71	0/1199	1.06	3/1612 (0.2%)
7	H	0.50	0/1673	0.76	3/2285 (0.1%)
8	I	0.34	0/981	0.50	1/1332 (0.1%)
8	i	0.21	0/989	0.40	0/1343
9	J	0.28	0/724	0.50	0/982
9	j	0.22	0/775	0.45	0/1049
10	L	0.43	0/630	0.73	0/852
10	l	0.33	0/888	0.61	0/1194
11	O	0.77	1/781 (0.1%)	1.21	12/1061 (1.1%)
12	P	0.94	0/1438	1.24	3/1935 (0.2%)
13	Q	0.57	0/1013	1.09	9/1366 (0.7%)
14	R	0.49	0/1941	1.07	7/2622 (0.3%)
15	S	0.50	0/1130	0.88	2/1528 (0.1%)
16	T	0.38	0/887	0.91	2/1193 (0.2%)
17	X	0.51	0/1652	1.03	2/2550 (0.1%)
18	Y	0.52	0/1612	1.06	5/2483 (0.2%)
19	c	0.48	0/1035	0.67	0/1406
20	k	0.29	0/799	0.53	1/1070 (0.1%)
21	m	0.31	0/733	0.55	0/977
22	o	0.53	11/11516 (0.1%)	0.70	13/15548 (0.1%)
23	p	0.38	0/9243	0.63	10/12475 (0.1%)
24	q	0.32	0/2102	0.44	0/2857
25	r	0.18	0/1019	0.45	0/1374
26	s	0.22	0/1751	0.47	0/2366

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
27	t	0.29	0/645	0.47	0/871
28	v	0.28	0/1207	0.46	0/1628
29	w	0.23	0/948	0.45	0/1284
30	x	0.36	0/516	0.44	0/696
31	y	0.31	0/956	0.47	0/1294
32	z	0.27	0/377	0.43	0/500
33	u	0.43	0/1382	0.82	3/1874 (0.2%)
All	All	0.47	14/83455 (0.0%)	0.75	113/113444 (0.1%)

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	o	715	GLU	CA-C	-6.80	1.44	1.52
3	D	1001	GLN	C-O	6.54	1.32	1.24
22	o	742	ASN	CA-C	-6.53	1.44	1.52
22	o	702	ILE	CA-CB	-6.43	1.46	1.54
2	B	61	ASN	C-O	-6.15	1.18	1.24
22	o	744	ILE	CA-CB	-5.87	1.47	1.54
22	o	743	ARG	CA-C	-5.83	1.45	1.52
22	o	719	LYS	C-O	-5.80	1.17	1.24
22	o	706	ILE	CA-CB	-5.60	1.47	1.54
22	o	746	ASN	CA-C	-5.58	1.45	1.52
22	o	741	VAL	CA-CB	-5.55	1.47	1.54
22	o	743	ARG	N-CA	-5.53	1.39	1.46
22	o	750	ASP	CA-C	-5.12	1.46	1.52
11	O	59	ARG	N-CA	5.03	1.52	1.45

All (113) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	f	149	PRO	O-C-N	9.31	125.59	121.31
14	R	112	ARG	N-CA-C	-9.21	101.24	111.28
14	R	44	ARG	CB-CA-C	9.21	124.19	111.86
23	p	1024	GLY	N-CA-C	-9.13	103.51	115.47
14	R	132	ARG	CB-CA-C	8.81	118.56	109.83
6	G	177	VAL	N-CA-C	-8.32	105.81	113.71
18	Y	23	DC	C2'-C3'-O3'	-8.21	99.18	111.50
1	A	497	PRO	N-CA-C	7.95	120.40	110.70
1	A	356	PRO	N-CA-C	7.84	124.71	114.68
22	o	717	ILE	CB-CA-C	-7.73	101.70	112.14
1	A	498	PRO	N-CA-CB	7.69	111.33	103.25
23	p	1003	ASN	N-CA-C	-7.66	102.05	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	o	759	SER	N-CA-C	7.40	121.43	108.56
7	H	163	PRO	N-CA-C	7.39	124.03	113.47
1	A	468	PHE	CA-C-N	7.30	127.28	119.76
1	A	468	PHE	C-N-CA	7.30	127.28	119.76
2	B	495	GLN	N-CA-C	-7.12	104.60	113.28
1	A	715	PRO	N-CA-C	-7.05	100.18	111.03
5	F	271	VAL	N-CA-C	-7.04	106.14	112.90
22	o	1144	LEU	N-CA-C	6.98	118.68	111.14
23	p	309	PHE	N-CA-C	-6.89	103.35	112.72
20	k	180	PRO	N-CA-C	6.76	118.95	110.70
5	f	326	HIS	N-CA-C	-6.72	104.19	112.38
5	F	82	PRO	N-CA-C	-6.67	106.01	114.35
1	A	396	LEU	N-CA-C	-6.67	104.89	113.16
18	Y	26	DT	C4'-C3'-O3'	-6.61	100.08	110.00
5	f	319	LEU	N-CA-C	-6.61	103.89	112.68
1	A	1168	TYR	CA-C-O	-6.60	114.22	121.87
17	X	-29	DA	C5'-C4'-C3'	-6.58	105.03	114.90
6	G	179	THR	CA-C-N	-6.51	113.81	122.99
6	G	179	THR	C-N-CA	-6.51	113.81	122.99
14	R	133	ASN	N-CA-C	-6.46	104.24	111.28
3	D	997	ALA	N-CA-C	-6.42	104.28	111.28
7	H	114	SER	N-CA-C	-6.42	105.48	113.38
22	o	750	ASP	N-CA-C	6.30	118.23	111.36
18	Y	32	DG	O4'-C1'-C2'	-6.27	97.00	106.40
33	u	152	VAL	N-CA-C	6.23	117.71	107.24
22	o	744	ILE	CB-CA-C	-6.16	103.83	112.14
15	S	103	ASN	N-CA-C	6.11	119.85	111.54
23	p	594	MET	N-CA-C	-6.11	103.23	111.54
14	R	217	ARG	N-CA-C	6.10	117.92	111.28
11	O	60	GLY	N-CA-C	6.04	120.46	110.55
11	O	27	GLN	CA-C-N	-6.04	112.61	122.57
11	O	27	GLN	C-N-CA	-6.04	112.61	122.57
13	Q	319	ASP	N-CA-C	6.02	117.26	107.32
3	D	1002	ARG	N-CA-C	-6.00	104.74	111.28
13	Q	368	SER	N-CA-C	-5.99	105.06	112.90
5	f	255	MET	N-CA-C	-5.96	104.85	114.09
23	p	596	ILE	N-CA-C	-5.93	107.48	113.47
15	S	153	ARG	N-CA-C	5.92	119.56	111.39
11	O	58	PHE	N-CA-C	5.91	116.39	108.23
11	O	61	SER	CA-C-O	-5.81	114.31	121.11
13	Q	338	GLN	CA-C-N	-5.81	114.50	122.93
13	Q	338	GLN	C-N-CA	-5.81	114.50	122.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	o	713	VAL	N-CA-CB	5.80	118.43	110.54
5	F	316	GLN	CB-CA-C	5.78	120.22	110.79
22	o	15	LEU	CA-C-N	-5.78	111.91	121.80
22	o	15	LEU	C-N-CA	-5.78	111.91	121.80
2	B	181	GLY	CA-C-O	-5.78	118.15	122.37
8	I	85	SER	O-C-N	-5.76	117.44	121.65
22	o	430	ARG	N-CA-C	-5.72	106.35	113.15
5	F	330	ARG	N-CA-C	-5.69	105.08	111.28
12	P	298	PRO	N-CA-C	-5.67	100.79	112.47
2	B	583	GLU	CB-CA-C	-5.67	101.39	110.79
1	A	1021	SER	N-CA-C	-5.66	101.47	109.96
5	F	324	ASP	N-CA-C	-5.65	105.21	111.71
18	Y	26	DT	C5'-C4'-C3'	-5.64	106.44	114.90
11	O	6	TYR	N-CA-C	5.63	119.23	112.93
5	f	150	PRO	N-CA-C	5.62	117.55	110.70
2	B	264	GLU	N-CA-C	-5.60	106.12	113.17
16	T	123	ASN	N-CA-C	5.58	117.36	111.28
3	D	957	ARG	CA-C-O	-5.55	115.18	121.00
13	Q	321	SER	CA-C-N	-5.50	111.62	122.02
13	Q	321	SER	C-N-CA	-5.50	111.62	122.02
11	O	70	ASN	CA-C-N	-5.48	115.82	123.10
11	O	70	ASN	C-N-CA	-5.48	115.82	123.10
18	Y	36	DC	C2'-C3'-O3'	5.45	119.67	111.50
14	R	307	ASP	N-CA-C	-5.43	107.02	113.97
22	o	1145	GLY	CA-C-O	-5.42	116.86	122.28
5	f	329	LEU	N-CA-C	-5.40	106.39	112.87
1	A	1166	LYS	O-C-N	5.39	130.24	123.23
12	P	207	PRO	N-CA-C	-5.36	101.42	112.47
17	X	-24	DA	C5'-C4'-C3'	-5.35	106.88	114.90
5	F	272	VAL	N-CA-C	-5.34	105.17	110.62
22	o	758	LYS	CA-C-N	-5.34	114.14	122.16
22	o	758	LYS	C-N-CA	-5.34	114.14	122.16
1	A	1168	TYR	N-CA-C	-5.30	103.53	110.53
22	o	752	THR	CB-CA-C	-5.28	102.03	110.79
23	p	580	PRO	N-CA-C	5.25	120.44	113.40
11	O	55	ARG	N-CA-C	5.24	118.25	110.14
1	A	1067	GLN	CB-CA-C	5.23	119.47	110.79
16	T	31	TRP	N-CA-C	5.23	117.72	111.71
12	P	205	ARG	CB-CA-C	-5.22	101.14	110.70
23	p	791	GLU	CA-C-O	-5.19	116.25	122.27
13	Q	320	VAL	CA-C-O	-5.18	115.06	120.76
13	Q	321	SER	N-CA-C	-5.18	99.77	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1056	ALA	N-CA-C	-5.17	106.65	113.12
14	R	131	PRO	N-CA-C	-5.17	107.67	114.03
5	F	392	ILE	N-CA-C	-5.15	105.69	110.53
23	p	593	GLN	N-CA-C	-5.13	106.80	113.16
33	u	160	ILE	N-CA-C	5.13	115.86	108.48
11	O	27	GLN	N-CA-C	-5.12	104.97	111.11
23	p	1010	LYS	N-CA-C	-5.09	105.62	111.07
11	O	60	GLY	CA-C-O	-5.08	116.67	121.60
33	u	96	GLY	N-CA-C	5.08	117.70	110.74
13	Q	15	ARG	N-CA-C	-5.07	105.64	111.07
1	A	793	GLY	O-C-N	-5.07	116.70	121.77
23	p	311	ILE	CA-C-O	-5.05	118.23	122.63
11	O	9	THR	N-CA-C	-5.04	101.74	109.41
2	B	541	ARG	CB-CA-C	-5.04	101.67	110.09
5	F	219	GLU	N-CA-C	-5.03	105.87	111.36
7	H	122	PRO	N-CA-C	5.03	115.96	110.58
4	E	795	GLY	N-CA-C	5.02	125.07	113.18

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4909	0	4854	384	0
2	B	7795	0	7748	197	0
3	D	1377	0	1399	266	0
3	d	1307	0	1318	25	0
4	E	4364	0	4244	195	0
4	e	4327	0	4197	46	0
5	F	3081	0	3018	277	0
5	f	3081	0	3012	184	0
6	G	1180	0	1235	116	0
7	H	1633	0	1621	264	0
8	I	959	0	969	120	0
8	i	967	0	977	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	J	709	0	710	123	0
9	j	759	0	759	18	0
10	L	622	0	620	135	0
10	l	876	0	891	53	0
11	O	771	0	764	236	0
12	P	1412	0	1506	112	0
13	Q	996	0	924	262	0
14	R	1913	0	1956	120	0
15	S	1101	0	1065	107	0
16	T	876	0	884	51	0
17	X	1469	0	792	60	0
18	Y	1442	0	798	92	0
19	c	1011	0	975	25	0
20	k	785	0	818	9	0
21	m	724	0	744	12	0
22	o	11308	0	11424	558	0
23	p	9062	0	9106	496	0
24	q	2059	0	2008	111	0
25	r	1005	0	962	54	0
26	s	1720	0	1737	62	0
27	t	635	0	665	7	0
28	v	1186	0	1147	51	0
29	w	927	0	859	81	0
30	x	507	0	523	53	0
31	y	937	0	959	26	0
32	z	372	0	379	43	0
33	u	1351	0	1358	92	0
34	R	1	0	0	0	0
34	o	2	0	0	0	0
34	p	1	0	0	0	0
34	q	1	0	0	0	0
34	w	2	0	0	0	0
34	x	1	0	0	0	0
34	z	1	0	0	0	0
35	o	1	0	0	0	0
All	All	81525	0	79925	3441	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 21.

All (3441) 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)
23:p:1040:GLN:HG2	24:q:203:TRP:CZ2	1.18	1.66
12:P:203:ARG:HB2	13:Q:376:TRP:CH2	1.34	1.63
3:D:1006:LEU:HD22	13:Q:328:LEU:CD2	1.31	1.60
22:o:687:ILE:HG22	23:p:969:PRO:CB	1.11	1.56
3:D:871:THR:CG2	10:L:66:LEU:HD22	1.31	1.55
11:O:88:ILE:HG21	13:Q:360:LEU:CB	1.24	1.55
22:o:687:ILE:CG2	23:p:969:PRO:CB	1.75	1.55
11:O:22:LEU:CB	11:O:28:ILE:HG12	1.35	1.54
12:P:203:ARG:CB	13:Q:376:TRP:CH2	1.88	1.52
8:I:60:HIS:CE1	10:L:118:LEU:HD13	1.42	1.52
25:r:63:LYS:NZ	33:u:103:PRO:CA	1.70	1.52
8:i:60:HIS:CE1	10:l:106:ARG:NH2	1.75	1.51
10:L:99:ALA:HA	10:L:119:HIS:NE2	1.26	1.50
3:D:898:VAL:CG2	10:L:113:VAL:HG22	1.43	1.48
3:D:881:ARG:NH2	10:L:57:VAL:CG2	1.75	1.48
22:o:827:TYR:HB3	23:p:978:ILE:CD1	1.39	1.47
7:H:194:MET:HE1	5:f:226:GLU:CG	1.46	1.46
7:H:194:MET:CE	5:f:226:GLU:HG3	1.47	1.44
8:I:60:HIS:HE1	10:L:118:LEU:CD1	1.27	1.44
3:D:934:TYR:CZ	8:I:129:LEU:HD21	1.52	1.43
7:H:190:LEU:HA	5:f:223:TYR:CD1	1.54	1.42
10:L:102:LEU:CD1	10:L:119:HIS:CE1	2.03	1.42
7:H:190:LEU:HD13	5:f:223:TYR:CA	1.49	1.42
1:A:409:HIS:CB	5:f:386:ASP:OD1	1.67	1.41
14:R:38:GLY:O	22:o:427:ILE:CA	1.68	1.41
12:P:188:ARG:NH2	13:Q:326:GLN:HB2	1.36	1.41
22:o:18:ILE:CD1	23:p:1171:MET:HB3	1.51	1.40
3:D:871:THR:CG2	10:L:66:LEU:CD2	2.00	1.39
3:D:871:THR:CA	10:L:66:LEU:HD13	1.49	1.39
22:o:196:LEU:HD11	22:o:325:LEU:CD1	1.50	1.39
15:S:153:ARG:CD	29:w:41:ASN:OD1	1.69	1.39
3:D:881:ARG:NH2	10:L:57:VAL:HG22	1.15	1.39
13:Q:47:GLU:OE2	13:Q:60:HIS:CE1	1.75	1.38
33:u:40:GLY:HA2	33:u:152:VAL:CG2	1.54	1.38
3:D:898:VAL:HG23	10:L:113:VAL:CG2	1.54	1.38
3:D:943:GLN:CG	4:E:510:ALA:HB2	1.53	1.38
10:L:102:LEU:HD12	10:L:119:HIS:NE2	1.36	1.37
22:o:687:ILE:CG2	23:p:969:PRO:HB3	1.40	1.37
5:F:85:GLY:C	9:J:212:LYS:HB2	1.50	1.37
12:P:203:ARG:HB3	13:Q:376:TRP:CZ3	1.59	1.36
1:A:564:PRO:HG2	2:B:744:PHE:CE2	1.59	1.36
1:A:409:HIS:HB2	5:f:386:ASP:CG	1.49	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:827:TYR:CB	23:p:978:ILE:HD12	1.51	1.35
25:r:63:LYS:NZ	33:u:103:PRO:HA	1.04	1.35
25:r:63:LYS:CE	33:u:103:PRO:HB3	1.55	1.34
11:O:79:VAL:O	11:O:90:VAL:CG1	1.76	1.32
1:A:1189:ALA:CB	6:G:162:VAL:HG11	1.59	1.32
17:X:-33:DG:N2	18:Y:33:DC:O2	1.63	1.31
11:O:22:LEU:CB	11:O:28:ILE:CG1	2.09	1.31
22:o:827:TYR:CB	23:p:978:ILE:CD1	2.07	1.31
23:p:1040:GLN:CG	24:q:203:TRP:CZ2	2.14	1.31
1:A:410:TRP:CH2	5:F:305:ILE:HG21	1.66	1.30
5:F:316:GLN:NE2	5:F:320:ARG:HA	1.46	1.30
11:O:88:ILE:CG2	13:Q:360:LEU:HB3	1.58	1.30
1:A:414:ILE:CD1	5:F:309:MET:HB3	1.62	1.30
3:D:950:LEU:CD2	4:E:518:LYS:HG2	1.62	1.30
18:Y:24:DT:OP2	18:Y:24:DT:C2'	1.77	1.29
8:i:60:HIS:ND1	10:l:106:ARG:NH2	1.79	1.29
1:A:697:ALA:HB2	6:G:86:TYR:CE2	1.67	1.28
3:D:1005:ASN:O	3:D:1009:LEU:HD13	1.19	1.28
23:p:1035:ARG:NH1	24:q:194:HIS:O	1.66	1.28
7:H:190:LEU:CD1	5:f:223:TYR:HA	1.62	1.28
11:O:22:LEU:HB2	11:O:28:ILE:CD1	1.61	1.27
4:E:615:ASP:OD1	8:I:114:ARG:HB3	1.10	1.27
10:L:101:GLN:O	10:L:105:HIS:CD2	1.88	1.27
22:o:840:ALA:HA	23:p:719:SER:OG	1.27	1.27
23:p:1036:LYS:HD3	24:q:195:THR:CG2	1.63	1.27
13:Q:310:GLU:O	13:Q:313:PRO:HD2	1.19	1.26
5:F:85:GLY:O	9:J:212:LYS:HB2	1.17	1.26
14:R:38:GLY:O	22:o:427:ILE:HA	1.19	1.26
5:F:85:GLY:O	9:J:212:LYS:CB	1.83	1.25
15:S:44:GLN:NE2	15:S:104:GLY:HA3	1.50	1.25
1:A:657:SER:O	2:B:475:LYS:CE	1.84	1.25
22:o:766:PHE:CE1	23:p:973:PRO:HB3	1.69	1.25
3:D:1006:LEU:CD2	13:Q:328:LEU:HD21	1.64	1.25
11:O:32:LEU:CD1	13:Q:32:ASP:CB	2.13	1.25
3:D:881:ARG:HH21	10:L:57:VAL:CG1	1.50	1.25
1:A:575:PRO:HD3	2:B:608:ASN:ND2	1.52	1.25
3:D:1005:ASN:O	3:D:1009:LEU:CD1	1.84	1.25
11:O:17:GLU:OE1	13:Q:49:LYS:NZ	1.66	1.24
11:O:22:LEU:HB2	11:O:28:ILE:CG1	1.65	1.24
10:l:87:ILE:O	10:l:91:PHE:CD2	1.90	1.24
3:D:950:LEU:CD2	4:E:518:LYS:CG	2.14	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:L:99:ALA:HA	10:L:119:HIS:CD2	1.73	1.23
4:E:615:ASP:OD1	8:I:114:ARG:CB	1.85	1.22
7:H:190:LEU:CA	5:f:223:TYR:CD1	2.21	1.22
15:S:6:PRO:O	15:S:10:ASN:CB	1.86	1.22
4:E:308:ARG:HG3	4:E:362:GLU:O	1.34	1.22
3:D:950:LEU:HD22	4:E:518:LYS:CB	1.69	1.22
13:Q:310:GLU:O	13:Q:313:PRO:CD	1.88	1.21
25:r:63:LYS:CE	33:u:103:PRO:CB	2.18	1.21
11:O:32:LEU:CD1	13:Q:32:ASP:CG	2.11	1.21
3:D:871:THR:N	10:L:66:LEU:CD1	2.03	1.21
3:D:934:TYR:CZ	8:I:129:LEU:CD2	2.24	1.21
15:S:6:PRO:O	15:S:10:ASN:HB2	1.36	1.21
3:D:950:LEU:HD23	4:E:518:LYS:CG	1.68	1.20
11:O:88:ILE:CG2	13:Q:360:LEU:CB	2.17	1.20
1:A:506:ASP:CG	5:f:299:LYS:HG3	1.65	1.19
1:A:657:SER:O	2:B:475:LYS:NZ	1.74	1.19
14:R:45:VAL:HG22	22:o:67:ARG:NH2	1.55	1.19
14:R:45:VAL:O	22:o:67:ARG:NH2	1.73	1.19
25:r:63:LYS:HE3	33:u:103:PRO:CB	1.72	1.19
7:H:193:PHE:CE1	5:f:242:ALA:HB2	1.78	1.19
23:p:282:ARG:HD3	29:w:21:ASN:CG	1.68	1.19
4:E:315:GLN:NE2	15:S:105:LYS:HE2	1.57	1.18
1:A:601:PRO:CG	6:G:10:HIS:HB3	1.73	1.18
1:A:414:ILE:CD1	5:F:309:MET:CB	2.22	1.17
11:O:22:LEU:HB3	11:O:28:ILE:HG12	1.21	1.17
17:X:-37:DG:N2	18:Y:37:DC:O2	1.75	1.17
1:A:475:LEU:O	5:f:354:ARG:NH2	1.78	1.17
5:F:89:GLN:OE1	9:J:210:ASN:ND2	1.76	1.17
11:O:79:VAL:O	11:O:90:VAL:HG12	1.33	1.17
8:i:60:HIS:CG	10:l:106:ARG:HH21	1.62	1.17
2:B:819:LEU:HD12	7:H:204:PHE:CZ	1.79	1.17
3:D:881:ARG:HH22	10:L:57:VAL:CG2	1.47	1.17
12:P:203:ARG:CB	13:Q:376:TRP:CZ3	2.18	1.17
12:P:203:ARG:C	13:Q:376:TRP:HH2	1.52	1.17
7:H:116:ARG:HD3	9:J:126:TYR:HE1	1.09	1.16
3:D:1006:LEU:HB3	13:Q:328:LEU:HD11	1.27	1.16
11:O:32:LEU:HD13	13:Q:32:ASP:CB	1.73	1.16
4:E:615:ASP:CG	8:I:114:ARG:HB3	1.70	1.16
11:O:17:GLU:OE1	13:Q:49:LYS:CE	1.92	1.16
16:T:83:PHE:CE1	16:T:116:CYS:SG	2.40	1.15
18:Y:33:DC:H2"	18:Y:34:DG:H5"	1.28	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:950:LEU:CD2	4:E:518:LYS:CB	2.24	1.15
3:D:950:LEU:CD2	4:E:518:LYS:HB3	1.76	1.15
4:E:308:ARG:HD2	4:E:363:ALA:O	1.46	1.15
10:L:83:MET:SD	10:L:86:GLN:OE1	2.05	1.15
23:p:1038:THR:CG2	24:q:196:VAL:HB	1.77	1.15
33:u:44:PHE:CE2	33:u:46:ILE:HG13	1.82	1.15
22:o:827:TYR:HE2	23:p:976:MET:SD	1.69	1.14
23:p:924:ARG:HD3	24:q:60:HIS:CD2	1.80	1.14
25:r:63:LYS:NZ	33:u:103:PRO:CB	2.10	1.14
33:u:38:CYS:SG	33:u:44:PHE:HA	1.86	1.14
22:o:827:TYR:CE2	23:p:976:MET:SD	2.40	1.14
1:A:575:PRO:HG3	2:B:610:GLU:HG2	1.15	1.14
1:A:410:TRP:CZ3	5:F:305:ILE:HG22	1.83	1.14
3:D:1006:LEU:CD2	13:Q:328:LEU:CD2	2.21	1.14
11:O:10:THR:CG2	13:Q:50:LEU:HD21	1.78	1.13
25:r:63:LYS:CE	33:u:103:PRO:CA	2.25	1.13
1:A:573:TYR:HA	2:B:657:ARG:HD3	1.22	1.13
3:D:871:THR:HA	10:L:66:LEU:HD13	1.17	1.13
11:O:88:ILE:HD12	13:Q:360:LEU:HD12	1.23	1.13
23:p:803:ARG:CD	30:x:7:CYS:O	1.96	1.13
23:p:803:ARG:O	30:x:8:PHE:HE1	1.28	1.13
23:p:851:ASP:CG	32:z:15:MET:HE2	1.72	1.13
1:A:410:TRP:CH2	5:F:305:ILE:CG2	2.31	1.12
22:o:18:ILE:HD12	23:p:1171:MET:CB	1.79	1.12
11:O:32:LEU:CD1	13:Q:32:ASP:HB3	1.76	1.12
23:p:1027:VAL:HG23	24:q:203:TRP:CZ3	1.84	1.12
3:D:943:GLN:HG3	4:E:510:ALA:HB2	1.30	1.12
33:u:44:PHE:CD2	33:u:46:ILE:HG13	1.85	1.12
3:D:999:MET:HE3	11:O:71:VAL:CG1	1.78	1.12
3:D:1000:ARG:HG2	11:O:5:LEU:HA	1.32	1.11
16:T:22:LYS:HB3	16:T:115:GLU:HG2	1.20	1.11
5:F:99:GLY:O	7:H:63:GLU:HG3	1.49	1.11
1:A:955:ASP:O	6:G:149:ARG:CZ	1.99	1.11
3:D:881:ARG:HH21	10:L:57:VAL:HG13	1.07	1.11
12:P:188:ARG:HH22	13:Q:326:GLN:CB	1.63	1.11
5:F:87:HIS:HB3	9:J:212:LYS:HZ1	1.01	1.11
11:O:66:ARG:HE	12:P:185:LEU:HD23	1.02	1.11
4:E:308:ARG:CG	4:E:362:GLU:O	1.99	1.11
11:O:39:GLN:OE1	13:Q:28:ILE:HD11	1.50	1.11
15:S:153:ARG:NE	29:w:41:ASN:OD1	1.83	1.11
23:p:803:ARG:O	30:x:8:PHE:CE1	2.03	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:r:63:LYS:HE3	33:u:103:PRO:HB3	1.22	1.11
3:D:934:TYR:CE2	8:I:129:LEU:CD2	2.33	1.10
4:E:315:GLN:HE22	15:S:105:LYS:CE	1.63	1.10
22:o:364:ARG:HB2	23:p:1084:LEU:HD11	1.33	1.10
23:p:1038:THR:HG23	24:q:196:VAL:CB	1.79	1.10
15:S:44:GLN:HE21	15:S:103:ASN:C	1.58	1.10
2:B:819:LEU:CD1	7:H:204:PHE:CZ	2.33	1.10
15:S:11:VAL:O	15:S:12:THR:HG23	1.51	1.10
22:o:687:ILE:CG2	23:p:969:PRO:HB2	1.63	1.10
12:P:189:ASN:HB3	13:Q:376:TRP:HZ2	1.07	1.10
33:u:40:GLY:CA	33:u:152:VAL:HG21	1.79	1.10
1:A:463:PRO:HG2	5:F:221:GLN:HB3	1.22	1.10
14:R:111:ASP:CB	14:R:114:MET:HB2	1.82	1.10
1:A:1023:TRP:HE3	17:X:2:DG:OP1	1.35	1.09
3:D:871:THR:HG22	10:L:66:LEU:CD2	1.70	1.09
1:A:564:PRO:HG2	2:B:744:PHE:CD2	1.86	1.09
14:R:111:ASP:HB3	14:R:114:MET:HB2	1.26	1.09
1:A:996:ARG:CD	17:X:2:DG:H4'	1.81	1.09
18:Y:37:DC:H2''	18:Y:38:DT:H71	1.32	1.09
22:o:196:LEU:HD11	22:o:325:LEU:HD13	1.12	1.09
1:A:996:ARG:HD3	17:X:2:DG:H4'	1.16	1.09
1:A:1200:THR:O	1:A:1204:GLU:HG2	1.52	1.09
5:F:90:GLU:OE1	9:J:208:GLY:O	1.71	1.09
11:O:88:ILE:HG23	13:Q:361:ASN:ND2	1.68	1.09
12:P:188:ARG:CZ	13:Q:323:GLU:O	2.00	1.09
23:p:1036:LYS:HD3	24:q:195:THR:HG22	1.20	1.09
1:A:506:ASP:OD1	5:f:299:LYS:HG3	1.51	1.08
4:E:315:GLN:HE22	15:S:105:LYS:HE2	0.97	1.08
11:O:88:ILE:HG21	13:Q:360:LEU:HB2	1.15	1.08
1:A:869:ARG:HH21	2:B:582:GLU:HG2	1.09	1.08
5:F:320:ARG:HD2	5:F:321:PRO:CD	1.83	1.08
10:L:102:LEU:HD11	10:L:119:HIS:CE1	1.85	1.08
11:O:32:LEU:HD11	13:Q:32:ASP:CB	1.83	1.08
11:O:88:ILE:HD13	13:Q:360:LEU:HB2	1.20	1.08
13:Q:47:GLU:OE2	13:Q:60:HIS:ND1	1.85	1.08
14:R:47:ASP:OD1	23:p:1075:MET:HE1	1.50	1.08
3:D:1006:LEU:HD13	13:Q:328:LEU:CD1	1.84	1.08
23:p:1040:GLN:CG	24:q:203:TRP:HZ2	1.59	1.08
3:D:917:ILE:CD1	3:D:1058:VAL:HG21	1.84	1.07
3:D:943:GLN:HG2	4:E:510:ALA:CB	1.84	1.07
11:O:32:LEU:HD12	13:Q:32:ASP:OD2	1.53	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:39:GLN:CD	13:Q:28:ILE:HD11	1.77	1.07
15:S:153:ARG:HD3	29:w:41:ASN:OD1	1.37	1.07
22:o:504:HIS:HB3	23:p:1106:ARG:NH1	1.67	1.07
3:D:871:THR:HG23	10:L:66:LEU:CD2	1.78	1.07
3:D:943:GLN:HG2	4:E:510:ALA:HB2	1.16	1.07
11:O:39:GLN:HG2	13:Q:28:ILE:HD12	1.13	1.07
19:c:67:GLY:HA3	9:j:116:LEU:CD1	1.84	1.07
7:H:185:ASP:HB2	5:f:251:GLY:HA3	1.31	1.07
11:O:32:LEU:HD13	13:Q:32:ASP:HB3	1.25	1.07
11:O:32:LEU:HD13	13:Q:32:ASP:CG	1.75	1.07
11:O:88:ILE:CD1	13:Q:360:LEU:HB2	1.84	1.07
23:p:1036:LYS:HB3	24:q:195:THR:HB	1.15	1.07
15:S:153:ARG:HD3	29:w:41:ASN:CG	1.80	1.07
22:o:687:ILE:HG21	23:p:969:PRO:CB	1.79	1.07
7:H:185:ASP:CB	5:f:251:GLY:HA3	1.84	1.07
7:H:197:THR:HB	5:f:238:LYS:HG2	1.16	1.06
10:L:102:LEU:HG	10:L:119:HIS:CE1	1.90	1.06
11:O:10:THR:HG22	13:Q:50:LEU:HD21	1.36	1.06
15:S:10:ASN:O	16:T:47:LYS:HB2	1.55	1.06
23:p:1040:GLN:HG2	24:q:203:TRP:CH2	1.90	1.06
4:E:280:ARG:HD3	8:I:26:MET:HA	1.36	1.06
5:F:34:GLU:OE2	8:I:72:ARG:NH2	1.87	1.06
11:O:18:SER:HA	13:Q:45:LEU:HD13	1.07	1.06
3:D:950:LEU:HD22	4:E:518:LYS:HB3	1.07	1.06
10:L:102:LEU:CD1	10:L:119:HIS:NE2	2.11	1.06
10:L:102:LEU:CG	10:L:119:HIS:CE1	2.37	1.06
12:P:250:PHE:HB2	13:Q:314:LEU:HD23	1.37	1.06
18:Y:24:DT:C6	18:Y:25:DT:H72	1.91	1.06
22:o:18:ILE:HD12	23:p:1171:MET:HB3	1.09	1.06
14:R:38:GLY:O	22:o:427:ILE:CB	2.04	1.06
2:B:838:ASN:HD21	7:H:213:LEU:HD23	1.18	1.05
5:F:71:ILE:HD11	8:I:35:VAL:HG13	1.33	1.05
3:D:881:ARG:CG	10:L:57:VAL:HG11	1.87	1.05
11:O:23:ILE:HA	11:O:28:ILE:O	1.56	1.05
7:H:116:ARG:HD3	9:J:126:TYR:CE1	1.91	1.05
3:D:999:MET:HE3	11:O:71:VAL:CB	1.86	1.05
3:D:1000:ARG:NH1	11:O:5:LEU:HD12	1.72	1.05
22:o:621:ILE:HG12	28:v:115:TYR:HE2	1.15	1.05
1:A:999:SER:HB3	18:Y:2:DG:OP1	1.56	1.05
14:R:38:GLY:C	22:o:428:ASP:H	1.64	1.05
16:T:22:LYS:CB	16:T:115:GLU:HG2	1.85	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:909:ARG:NE	10:l:91:PHE:CE1	2.24	1.05
22:o:349:ARG:NH1	23:p:1157:LEU:HD11	1.71	1.05
3:D:871:THR:CA	10:L:66:LEU:CD1	2.35	1.04
3:D:934:TYR:CE2	8:I:129:LEU:HG	1.91	1.04
7:H:193:PHE:HE1	5:f:242:ALA:HB2	1.07	1.04
23:p:282:ARG:CD	29:w:21:ASN:HB3	1.86	1.04
1:A:414:ILE:HG23	5:F:310:THR:HA	1.38	1.04
7:H:111:ALA:O	9:J:126:TYR:CZ	2.10	1.04
11:O:39:GLN:CG	13:Q:28:ILE:HD12	1.86	1.04
17:X:-33:DG:C2	18:Y:33:DC:O2	2.11	1.04
3:D:1083:PHE:HE2	4:E:585:ASN:ND2	1.54	1.04
3:D:934:TYR:CE1	8:I:129:LEU:HD21	1.92	1.03
23:p:851:ASP:N	32:z:15:MET:HE1	1.71	1.03
23:p:855:ALA:HB3	32:z:49:THR:HB	1.37	1.03
1:A:1189:ALA:HB1	6:G:162:VAL:CG1	1.87	1.03
12:P:249:LYS:HG2	13:Q:312:GLU:HG2	1.37	1.03
12:P:250:PHE:N	13:Q:311:GLU:O	1.91	1.03
22:o:766:PHE:HE1	23:p:973:PRO:CB	1.70	1.03
11:O:18:SER:CA	13:Q:45:LEU:HD13	1.88	1.03
23:p:851:ASP:CG	32:z:15:MET:CE	2.31	1.03
1:A:564:PRO:CG	2:B:744:PHE:CE2	2.42	1.03
11:O:10:THR:CG2	13:Q:50:LEU:CD2	2.36	1.02
11:O:22:LEU:HB3	11:O:28:ILE:CG1	1.79	1.02
1:A:414:ILE:HG23	5:F:310:THR:CA	1.89	1.02
1:A:1189:ALA:CB	6:G:162:VAL:CG1	2.36	1.02
15:S:44:GLN:NE2	15:S:104:GLY:CA	2.20	1.02
18:Y:24:DT:OP2	18:Y:24:DT:H2'	0.84	1.02
5:F:320:ARG:CD	5:F:321:PRO:HD3	1.90	1.02
1:A:601:PRO:HG2	6:G:10:HIS:CB	1.89	1.02
3:D:941:ARG:NE	8:I:123:THR:O	1.92	1.02
3:D:1007:THR:HA	13:Q:330:ASP:OD1	1.56	1.01
1:A:572:TYR:CD2	2:B:689:GLN:HB2	1.93	1.01
7:H:197:THR:HB	5:f:238:LYS:CG	1.89	1.01
22:o:504:HIS:HB3	23:p:1106:ARG:CZ	1.89	1.01
1:A:575:PRO:CD	2:B:608:ASN:HD22	1.72	1.01
18:Y:37:DC:H2''	18:Y:38:DT:C7	1.88	1.01
5:F:87:HIS:HB3	9:J:212:LYS:NZ	1.74	1.01
10:L:99:ALA:CA	10:L:119:HIS:NE2	2.23	1.01
11:O:79:VAL:O	11:O:90:VAL:HG13	1.54	1.01
10:L:98:ALA:O	10:L:119:HIS:CE1	2.13	1.00
11:O:39:GLN:HG2	13:Q:28:ILE:CD1	1.91	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:S:116:GLY:HA2	23:p:356:PHE:CD1	1.95	1.00
2:B:838:ASN:ND2	7:H:213:LEU:HD23	1.75	1.00
12:P:189:ASN:HB3	13:Q:376:TRP:CZ2	1.96	1.00
1:A:463:PRO:CG	5:F:221:GLN:HB3	1.91	1.00
10:L:99:ALA:CA	10:L:119:HIS:CD2	2.44	1.00
5:F:320:ARG:HD2	5:F:321:PRO:HD3	1.00	1.00
11:O:32:LEU:CD1	13:Q:32:ASP:OD2	2.07	1.00
22:o:830:GLY:HA3	23:p:716:HIS:CE1	1.95	1.00
17:X:-33:DG:N1	18:Y:33:DC:N3	2.07	1.00
2:B:819:LEU:HD13	7:H:204:PHE:CE1	1.96	0.99
3:D:1006:LEU:HD13	13:Q:328:LEU:HD13	1.04	0.99
15:S:44:GLN:HG2	15:S:103:ASN:HA	1.39	0.99
17:X:-33:DG:N1	18:Y:33:DC:C2	2.30	0.99
12:P:251:LEU:HA	13:Q:311:GLU:HG3	1.45	0.99
14:R:39:LEU:HD12	22:o:427:ILE:HG22	1.42	0.99
12:P:250:PHE:HB2	13:Q:314:LEU:CD2	1.93	0.99
25:r:63:LYS:CE	33:u:103:PRO:HA	1.89	0.99
3:D:917:ILE:HD12	3:D:1058:VAL:HG21	1.43	0.99
1:A:683:TYR:HE1	6:G:75:GLU:CD	1.70	0.99
7:H:197:THR:CB	5:f:238:LYS:HG2	1.92	0.99
19:c:77:LEU:CD1	9:j:116:LEU:HD23	1.93	0.99
22:o:26:LEU:CD2	23:p:1166:SER:HA	1.93	0.99
22:o:463:THR:HG21	23:p:1090:GLU:HG3	1.44	0.99
2:B:819:LEU:CD1	7:H:204:PHE:CE1	2.46	0.98
5:F:316:GLN:HE22	5:F:320:ARG:HA	1.28	0.98
12:P:248:ALA:HB1	13:Q:314:LEU:CD1	1.93	0.98
1:A:601:PRO:HG2	6:G:10:HIS:HB3	1.01	0.98
1:A:1168:TYR:HA	1:A:1182:CYS:HA	1.45	0.98
1:A:414:ILE:HD13	5:F:309:MET:HB3	1.00	0.98
1:A:1166:LYS:HG2	6:G:181:TRP:HA	1.43	0.98
11:O:39:GLN:CG	13:Q:28:ILE:CD1	2.40	0.98
23:p:803:ARG:HD2	30:x:7:CYS:O	1.61	0.98
3:D:1010:ALA:N	13:Q:330:ASP:OD2	1.96	0.98
7:H:119:ILE:O	9:J:131:PRO:HG3	1.63	0.98
8:i:60:HIS:CE1	10:l:106:ARG:CZ	2.47	0.98
1:A:414:ILE:HD13	5:F:309:MET:CB	1.88	0.98
1:A:569:ASN:CG	2:B:689:GLN:HA	1.89	0.98
3:D:1006:LEU:HD22	13:Q:328:LEU:HD22	1.46	0.98
11:O:10:THR:HG21	13:Q:50:LEU:CD2	1.92	0.98
15:S:44:GLN:CG	15:S:103:ASN:HA	1.93	0.98
23:p:803:ARG:HD3	30:x:7:CYS:O	1.62	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:575:PRO:HG3	2:B:610:GLU:CG	1.94	0.97
3:D:917:ILE:HD12	3:D:1058:VAL:HG11	1.45	0.97
7:H:190:LEU:HA	5:f:223:TYR:CE1	1.99	0.97
22:o:196:LEU:HD11	22:o:325:LEU:HD12	1.45	0.97
23:p:282:ARG:CD	29:w:21:ASN:CG	2.37	0.97
3:D:871:THR:N	10:L:66:LEU:HD13	1.74	0.97
3:D:1006:LEU:CB	13:Q:328:LEU:HD11	1.94	0.97
13:Q:310:GLU:HB3	13:Q:313:PRO:HG3	1.43	0.97
33:u:38:CYS:N	33:u:155:ASN:OD1	1.98	0.97
1:A:997:ARG:HD3	18:Y:1:DA:OP1	1.65	0.97
3:D:881:ARG:NH1	10:L:89:ASP:OD1	1.96	0.97
2:B:762:ASP:OD1	2:B:768:PRO:HG3	1.64	0.97
3:D:871:THR:HG22	10:L:66:LEU:HD22	0.99	0.97
1:A:725:CYS:SG	1:A:725:CYS:O	2.22	0.97
11:O:22:LEU:HB2	11:O:28:ILE:HG12	1.23	0.97
22:o:743:ARG:HH21	22:o:743:ARG:HA	1.27	0.97
3:D:999:MET:HE3	11:O:71:VAL:HB	1.47	0.96
11:O:63:ASN:O	12:P:189:ASN:OD1	1.83	0.96
3:D:999:MET:HE3	11:O:71:VAL:HG12	1.44	0.96
3:D:1006:LEU:CD1	13:Q:328:LEU:HD13	1.94	0.96
22:o:687:ILE:CG2	23:p:969:PRO:CA	2.42	0.96
3:D:1000:ARG:CZ	11:O:5:LEU:HD12	1.94	0.96
4:E:598:TYR:HE1	8:I:114:ARG:HD3	1.29	0.96
7:H:106:THR:OG1	9:J:161:LYS:NZ	1.98	0.96
23:p:1036:LYS:CD	24:q:195:THR:HG22	1.95	0.96
2:B:273:LEU:HD11	7:H:223:TYR:CE1	2.00	0.96
4:E:308:ARG:CD	4:E:362:GLU:O	2.14	0.96
12:P:203:ARG:C	13:Q:376:TRP:CH2	2.44	0.96
13:Q:47:GLU:CD	13:Q:60:HIS:ND1	2.23	0.96
22:o:196:LEU:CD1	22:o:325:LEU:HD13	1.95	0.96
10:L:93:GLU:O	10:L:97:THR:HG23	1.65	0.96
13:Q:310:GLU:C	13:Q:313:PRO:CD	2.39	0.96
23:p:1036:LYS:HB3	24:q:195:THR:CB	1.95	0.96
4:E:299:ASP:OD2	4:E:607:ARG:NH1	1.97	0.96
33:u:40:GLY:CA	33:u:152:VAL:CG2	2.39	0.96
15:S:153:ARG:CB	29:w:41:ASN:OD1	2.13	0.95
12:P:203:ARG:HB3	13:Q:376:TRP:HZ3	1.28	0.95
3:D:881:ARG:CB	10:L:57:VAL:HG11	1.96	0.95
10:L:102:LEU:HD12	10:L:119:HIS:CD2	2.00	0.95
5:F:86:PHE:HA	9:J:212:LYS:HG2	1.47	0.95
11:O:15:LEU:HD12	13:Q:42:LEU:HD11	1.43	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:717:ILE:CD1	22:o:815:TYR:HB2	1.96	0.95
4:E:621:ARG:NH2	8:I:104:LEU:HG	1.81	0.95
11:O:39:GLN:OE1	13:Q:28:ILE:CD1	2.14	0.95
3:D:934:TYR:CE2	8:I:129:LEU:CG	2.49	0.95
18:Y:37:DC:C2'	18:Y:38:DT:H71	1.96	0.95
23:p:1018:TYR:O	23:p:1020:TYR:CD1	2.20	0.95
11:O:17:GLU:OE1	13:Q:49:LYS:CD	2.15	0.94
17:X:-33:DG:N1	18:Y:33:DC:O2	2.00	0.94
22:o:721:HIS:HE1	29:w:98:GLN:HE21	1.15	0.94
5:F:65:LYS:O	8:I:31:TYR:HA	1.66	0.94
1:A:414:ILE:HG12	5:F:309:MET:HB2	1.46	0.94
3:D:1000:ARG:CZ	11:O:5:LEU:CD1	2.45	0.94
22:o:766:PHE:HE1	23:p:973:PRO:HB3	0.81	0.94
3:D:881:ARG:HB2	10:L:57:VAL:CG1	1.96	0.94
12:P:203:ARG:CA	13:Q:376:TRP:HH2	1.81	0.94
1:A:410:TRP:CZ3	5:F:305:ILE:CG2	2.48	0.94
3:D:871:THR:HG21	10:L:66:LEU:HD22	1.46	0.94
3:D:999:MET:HG2	11:O:71:VAL:HG11	1.49	0.94
8:i:60:HIS:CD2	10:l:106:ARG:NE	2.36	0.94
1:A:1166:LYS:CG	6:G:181:TRP:HA	1.98	0.94
4:E:280:ARG:O	8:I:26:MET:HE1	1.68	0.94
11:O:66:ARG:HH21	12:P:185:LEU:HA	1.31	0.94
5:F:90:GLU:CD	9:J:208:GLY:HA3	1.93	0.94
11:O:66:ARG:NE	12:P:185:LEU:HD23	1.83	0.94
8:i:60:HIS:CD2	10:l:106:ARG:HE	1.86	0.94
16:T:83:PHE:CD1	16:T:116:CYS:SG	2.59	0.94
11:O:88:ILE:HG21	13:Q:360:LEU:HB3	0.94	0.94
22:o:687:ILE:HG21	23:p:969:PRO:CA	1.97	0.94
23:p:1036:LYS:HD3	24:q:195:THR:HG21	1.48	0.93
10:l:87:ILE:O	10:l:91:PHE:HD2	1.36	0.93
22:o:587:THR:HG21	28:v:119:GLY:O	1.66	0.93
11:O:76:LEU:HB3	11:O:79:VAL:HG21	1.51	0.93
22:o:721:HIS:CE1	29:w:98:GLN:HE21	1.84	0.93
3:D:871:THR:CG2	10:L:66:LEU:HD13	1.97	0.93
15:S:8:SER:O	16:T:48:THR:C	2.11	0.93
7:H:190:LEU:HD13	5:f:223:TYR:CB	1.99	0.93
11:O:18:SER:HA	13:Q:45:LEU:CD1	1.98	0.93
18:Y:24:DT:C5	18:Y:25:DT:H72	2.03	0.93
4:E:295:GLU:CG	8:I:85:SER:HB2	1.98	0.93
8:I:60:HIS:CE1	10:L:118:LEU:CD1	2.18	0.93
19:c:67:GLY:HA3	9:j:116:LEU:HD11	1.48	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:L:102:LEU:HG	10:L:119:HIS:HE1	1.28	0.92
11:O:39:GLN:CD	13:Q:28:ILE:CD1	2.42	0.92
22:o:721:HIS:HE1	29:w:98:GLN:NE2	1.67	0.92
7:H:190:LEU:HB2	5:f:223:TYR:HB2	1.50	0.92
23:p:282:ARG:CD	29:w:21:ASN:CB	2.47	0.92
11:O:56:VAL:HG11	11:O:84:VAL:H	1.34	0.92
23:p:282:ARG:HD3	29:w:21:ASN:CB	2.00	0.92
1:A:1189:ALA:HB1	6:G:162:VAL:HG11	0.92	0.92
7:H:110:TYR:OH	9:J:160:GLN:HB3	1.70	0.92
15:S:153:ARG:NE	29:w:41:ASN:CG	2.27	0.92
22:o:1177:TYR:CD2	29:w:35:LEU:HG	2.05	0.92
3:D:871:THR:CG2	10:L:66:LEU:CD1	2.47	0.92
23:p:924:ARG:NH1	24:q:62:GLU:HG3	1.85	0.92
3:D:917:ILE:CD1	3:D:1058:VAL:HG11	2.00	0.91
4:E:598:TYR:CE1	8:I:114:ARG:HD3	2.04	0.91
7:H:185:ASP:HB3	5:f:251:GLY:N	1.84	0.91
14:R:114:MET:SD	14:R:146:TYR:CD1	2.63	0.91
33:u:38:CYS:SG	33:u:43:GLY:O	2.28	0.91
3:D:1000:ARG:NH1	11:O:5:LEU:CD1	2.32	0.91
1:A:467:ILE:H	5:F:221:GLN:NE2	1.67	0.91
1:A:999:SER:CB	18:Y:2:DG:OP1	2.17	0.91
3:D:943:GLN:HE21	4:E:510:ALA:H	1.15	0.91
1:A:869:ARG:NH2	2:B:582:GLU:HG2	1.85	0.91
3:D:917:ILE:HD12	3:D:1058:VAL:CG2	2.00	0.91
5:F:85:GLY:O	9:J:212:LYS:CA	2.17	0.91
18:Y:17:DC:OP2	18:Y:17:DC:H2'	1.68	0.91
1:A:1166:LYS:HG3	6:G:180:ARG:O	1.69	0.91
15:S:153:ARG:CD	29:w:41:ASN:CG	2.39	0.91
11:O:22:LEU:HB3	11:O:28:ILE:CG2	1.99	0.91
11:O:22:LEU:HD12	11:O:28:ILE:HD13	1.52	0.91
1:A:636:VAL:O	6:G:40:LYS:HA	1.71	0.91
7:H:118:VAL:HG21	9:J:127:THR:CG2	2.00	0.91
22:o:18:ILE:HD11	23:p:1171:MET:HB3	1.48	0.91
5:F:85:GLY:C	9:J:212:LYS:CB	2.34	0.91
8:i:60:HIS:NE2	10:l:106:ARG:CZ	2.35	0.90
10:l:87:ILE:C	10:l:91:PHE:CD2	2.49	0.90
3:D:881:ARG:NH2	10:L:57:VAL:CG1	2.30	0.90
3:D:950:LEU:HA	4:E:518:LYS:HD2	1.53	0.90
23:p:1038:THR:HG23	24:q:196:VAL:HB	0.92	0.90
23:p:282:ARG:HB2	29:w:21:ASN:O	1.70	0.90
12:P:240:VAL:HG22	13:Q:321:SER:HB3	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:924:ARG:HH11	24:q:62:GLU:HG3	1.34	0.90
5:F:309:MET:HE3	5:F:355:ILE:HG22	1.52	0.90
23:p:1035:ARG:CZ	24:q:194:HIS:O	2.19	0.90
1:A:409:HIS:HB2	5:f:386:ASP:OD1	0.72	0.90
7:H:37:LEU:HD11	9:J:138:TYR:CE2	2.07	0.90
11:O:22:LEU:HB3	11:O:28:ILE:HG23	1.50	0.90
1:A:488:ALA:HB1	5:f:271:VAL:HG23	1.54	0.90
11:O:17:GLU:OE1	13:Q:49:LYS:HD3	1.72	0.90
2:B:838:ASN:OD1	7:H:213:LEU:HD22	1.72	0.90
3:D:917:ILE:HD12	3:D:1058:VAL:CB	2.01	0.90
7:H:190:LEU:CA	5:f:223:TYR:HD1	1.69	0.90
11:O:22:LEU:CA	11:O:28:ILE:HG12	2.01	0.90
13:Q:55:ALA:O	13:Q:56:VAL:HG23	1.71	0.90
22:o:756:ALA:HB2	22:o:786:ALA:HB2	1.53	0.90
33:u:40:GLY:HA2	33:u:152:VAL:HG21	0.92	0.90
12:P:188:ARG:NH2	13:Q:323:GLU:O	2.05	0.89
18:Y:32:DG:H2''	18:Y:33:DC:H5'	1.53	0.89
3:D:1010:ALA:HB3	13:Q:330:ASP:OD2	1.71	0.89
1:A:355:VAL:CG2	1:A:497:PRO:HD3	2.01	0.89
23:p:800:ALA:HA	30:x:8:PHE:O	1.70	0.89
23:p:803:ARG:HH11	30:x:8:PHE:C	1.80	0.89
3:D:934:TYR:CD2	8:I:129:LEU:HD23	2.06	0.89
10:L:102:LEU:HA	10:L:105:HIS:HD2	1.36	0.89
23:p:1040:GLN:HE22	24:q:197:TYR:HA	1.33	0.89
23:p:100:GLU:OE2	32:z:42:ARG:HD2	1.71	0.89
10:L:102:LEU:HD12	10:L:119:HIS:CE1	1.84	0.89
13:Q:47:GLU:CD	13:Q:60:HIS:CG	2.50	0.89
3:D:917:ILE:HB	3:D:1058:VAL:CG1	2.02	0.89
15:S:153:ARG:HD3	29:w:41:ASN:CB	2.02	0.89
3:D:917:ILE:HD12	3:D:1058:VAL:CG1	2.02	0.89
5:F:89:GLN:CD	9:J:210:ASN:HD22	1.81	0.89
1:A:683:TYR:CE1	6:G:75:GLU:CD	2.51	0.89
5:F:319:LEU:H	5:F:319:LEU:HD23	1.38	0.89
1:A:409:HIS:CB	5:f:386:ASP:CG	2.27	0.88
3:D:871:THR:N	10:L:66:LEU:HD11	1.85	0.88
4:E:315:GLN:NE2	15:S:105:LYS:CE	2.30	0.88
1:A:414:ILE:HD11	5:F:309:MET:CB	2.02	0.88
12:P:249:LYS:CG	13:Q:312:GLU:HG2	2.03	0.88
13:Q:310:GLU:C	13:Q:313:PRO:HD2	1.98	0.88
7:H:193:PHE:CE1	5:f:242:ALA:CB	2.56	0.88
22:o:710:LYS:CG	22:o:817:PRO:HG3	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:u:44:PHE:CE2	33:u:46:ILE:CG1	2.57	0.88
3:D:950:LEU:CA	4:E:518:LYS:HD2	2.04	0.88
12:P:203:ARG:HB2	13:Q:376:TRP:CZ2	2.09	0.88
4:E:295:GLU:HG2	8:I:85:SER:HB2	1.56	0.87
14:R:38:GLY:O	22:o:427:ILE:HB	1.72	0.87
15:S:11:VAL:O	15:S:12:THR:CG2	2.23	0.87
12:P:188:ARG:HH22	13:Q:326:GLN:HB2	0.77	0.87
22:o:621:ILE:HG12	28:v:115:TYR:CE2	2.07	0.87
22:o:827:TYR:HB2	23:p:978:ILE:CD1	2.02	0.87
10:l:87:ILE:C	10:l:91:PHE:HD2	1.82	0.87
23:p:803:ARG:HH12	30:x:9:THR:C	1.83	0.87
5:F:99:GLY:O	7:H:63:GLU:CG	2.21	0.87
18:Y:24:DT:H2''	18:Y:25:DT:H5''	1.55	0.86
25:r:60:VAL:HG21	33:u:44:PHE:CE1	2.08	0.86
3:D:914:VAL:HG12	10:L:70:VAL:HG11	1.55	0.86
11:O:18:SER:HB3	13:Q:45:LEU:HD12	1.57	0.86
15:S:44:GLN:HG3	15:S:104:GLY:N	1.91	0.86
23:p:989:VAL:HG13	23:p:1018:TYR:HE2	1.39	0.86
1:A:657:SER:CB	2:B:475:LYS:NZ	2.38	0.86
3:D:999:MET:SD	11:O:73:THR:OG1	2.33	0.86
7:H:193:PHE:HZ	5:f:230:ALA:HB2	1.40	0.86
15:S:153:ARG:HE	29:w:41:ASN:CG	1.80	0.86
12:P:248:ALA:CB	13:Q:314:LEU:HD12	2.06	0.86
23:p:924:ARG:CD	24:q:60:HIS:CD2	2.59	0.86
11:O:22:LEU:CB	11:O:28:ILE:CD1	2.42	0.86
22:o:710:LYS:HG2	22:o:817:PRO:CG	2.06	0.86
23:p:903:ILE:HD12	24:q:62:GLU:OE2	1.73	0.86
7:H:190:LEU:CB	5:f:223:TYR:CD1	2.58	0.86
33:u:86:ASP:OD2	33:u:171:VAL:HG21	1.75	0.86
23:p:777:ASN:O	30:x:47:ARG:HD2	1.76	0.85
2:B:819:LEU:HD13	7:H:204:PHE:CZ	2.10	0.85
3:D:881:ARG:NH2	10:L:57:VAL:CB	2.38	0.85
11:O:22:LEU:CD1	11:O:28:ILE:HD13	2.06	0.85
1:A:414:ILE:CG2	5:F:310:THR:HA	2.06	0.85
22:o:18:ILE:CD1	23:p:1171:MET:CB	2.44	0.85
23:p:851:ASP:OD2	32:z:15:MET:HE2	1.76	0.85
2:B:835:ARG:NH1	7:H:184:ARG:HH11	1.73	0.85
3:D:881:ARG:NH2	10:L:57:VAL:HG13	1.90	0.85
1:A:955:ASP:O	6:G:149:ARG:NH2	2.09	0.85
5:F:71:ILE:HB	8:I:38:GLN:HE21	1.40	0.85
7:H:111:ALA:HB1	9:J:126:TYR:CE2	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:R:45:VAL:C	22:o:67:ARG:HH22	1.83	0.85
1:A:657:SER:O	2:B:475:LYS:CD	2.24	0.85
3:D:871:THR:HA	10:L:66:LEU:CD1	2.02	0.85
3:D:871:THR:HG23	10:L:66:LEU:HD21	1.57	0.85
7:H:193:PHE:HZ	5:f:230:ALA:CB	1.90	0.85
18:Y:37:DC:C2'	18:Y:38:DT:C7	2.53	0.84
5:F:87:HIS:CB	9:J:212:LYS:HZ1	1.88	0.84
11:O:22:LEU:C	11:O:28:ILE:HG12	2.02	0.84
22:o:710:LYS:HG2	22:o:817:PRO:HG3	1.58	0.84
3:D:1007:THR:CA	13:Q:330:ASP:OD1	2.24	0.84
3:D:871:THR:HG23	10:L:66:LEU:CD1	2.07	0.84
8:i:61:ALA:HA	10:l:106:ARG:HG2	1.57	0.84
1:A:355:VAL:HG21	1:A:497:PRO:HD3	1.59	0.84
12:P:249:LYS:HG2	13:Q:312:GLU:CG	2.06	0.84
8:i:60:HIS:CE1	10:l:106:ARG:HH22	1.90	0.84
22:o:26:LEU:HD21	23:p:1166:SER:HA	1.60	0.84
3:D:871:THR:CB	10:L:66:LEU:HD13	2.08	0.84
3:D:950:LEU:HD22	4:E:518:LYS:CG	1.91	0.84
5:F:87:HIS:CB	9:J:212:LYS:NZ	2.41	0.84
7:H:111:ALA:O	9:J:126:TYR:CE1	2.31	0.84
22:o:108:ARG:HH12	22:o:191:ILE:HB	1.40	0.84
3:D:881:ARG:NH2	10:L:57:VAL:HG21	1.92	0.84
18:Y:35:DC:H2''	18:Y:36:DC:H3'	1.57	0.84
1:A:466:SER:HA	5:F:221:GLN:HE22	1.43	0.83
22:o:621:ILE:CG1	28:v:115:TYR:HE2	1.91	0.83
2:B:273:LEU:HD11	7:H:223:TYR:CD1	2.12	0.83
11:O:22:LEU:O	11:O:28:ILE:N	2.09	0.83
12:P:203:ARG:HB2	13:Q:376:TRP:CZ3	1.98	0.83
23:p:282:ARG:HD2	29:w:21:ASN:HB3	1.60	0.83
23:p:988:LYS:HD2	23:p:1015:LEU:HG	1.60	0.83
25:r:63:LYS:HE3	33:u:103:PRO:CA	2.00	0.83
1:A:1065:GLU:OE1	1:A:1065:GLU:HA	1.78	0.83
22:o:579:ILE:HA	28:v:92:MET:HA	1.59	0.83
4:E:615:ASP:OD1	8:I:114:ARG:CA	2.27	0.83
22:o:769:MET:HE2	23:p:970:HIS:CE1	2.14	0.83
1:A:463:PRO:HG3	5:F:221:GLN:C	2.03	0.83
5:F:316:GLN:NE2	5:F:320:ARG:CA	2.39	0.83
12:P:203:ARG:CA	13:Q:376:TRP:CH2	2.60	0.83
14:R:30:GLY:HA3	23:p:1066:PRO:HB3	1.59	0.83
15:S:6:PRO:O	15:S:10:ASN:HB3	1.76	0.83
11:O:15:LEU:CD1	13:Q:42:LEU:HD11	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:901:TYR:CE2	10:L:120:LEU:HD12	2.13	0.83
4:E:462:CYS:HB2	5:F:135:TRP:CZ3	2.14	0.83
4:E:747:LEU:HD22	4:E:747:LEU:H	1.44	0.83
5:F:67:THR:HA	8:I:32:GLU:HG3	1.61	0.83
15:S:44:GLN:NE2	15:S:103:ASN:C	2.36	0.83
12:P:251:LEU:HA	13:Q:311:GLU:CG	2.09	0.83
1:A:657:SER:O	2:B:475:LYS:HE2	1.76	0.82
7:H:111:ALA:HB2	9:J:157:LEU:CD1	2.09	0.82
18:Y:24:DT:C7	18:Y:25:DT:H72	2.09	0.82
23:p:1036:LYS:CB	24:q:195:THR:HB	2.05	0.82
3:D:937:ALA:HB3	8:I:126:ASN:O	1.80	0.82
3:D:917:ILE:HB	3:D:1058:VAL:HG13	1.59	0.82
11:O:88:ILE:CG2	13:Q:360:LEU:HB2	1.98	0.82
1:A:1169:ARG:HE	6:G:173:ASP:HA	1.44	0.82
3:D:943:GLN:HG2	4:E:510:ALA:CA	2.08	0.82
22:o:840:ALA:HA	23:p:719:SER:HG	1.40	0.82
3:D:933:ARG:CD	9:J:117:VAL:HG11	2.09	0.82
5:F:90:GLU:OE1	9:J:208:GLY:HA3	1.80	0.82
7:H:193:PHE:CG	5:f:227:ILE:HD11	2.14	0.82
12:P:248:ALA:CB	13:Q:314:LEU:CD1	2.57	0.82
14:R:45:VAL:O	23:p:1069:ILE:CD1	2.28	0.82
15:S:44:GLN:HE21	15:S:104:GLY:N	1.78	0.82
22:o:18:ILE:HD12	23:p:1171:MET:CA	2.08	0.82
22:o:687:ILE:CB	23:p:969:PRO:HB2	2.08	0.82
4:E:788:ARG:O	7:H:145:HIS:HB2	1.79	0.82
1:A:567:LEU:HD22	2:B:745:GLN:CG	2.09	0.82
3:D:999:MET:HG2	3:D:1000:ARG:NH2	1.95	0.82
8:I:132:LEU:HG	9:J:121:MET:HE2	1.61	0.82
11:O:22:LEU:HD13	11:O:28:ILE:HG21	1.59	0.82
16:T:123:ASN:O	16:T:125:MET:HG3	1.80	0.82
2:B:846:TYR:CE1	7:H:227:LEU:HD23	2.14	0.82
2:B:838:ASN:OD1	7:H:213:LEU:CD2	2.28	0.82
23:p:302:LYS:NZ	29:w:23:MET:SD	2.52	0.82
14:R:45:VAL:O	23:p:1069:ILE:HD12	1.80	0.82
1:A:1189:ALA:HB3	6:G:162:VAL:CG1	2.09	0.81
3:D:871:THR:HG22	10:L:66:LEU:CG	2.08	0.81
5:F:85:GLY:CA	9:J:212:LYS:HB2	2.10	0.81
10:L:99:ALA:CB	10:L:119:HIS:CD2	2.63	0.81
23:p:311:ILE:HG22	23:p:316:VAL:HG13	1.62	0.81
1:A:414:ILE:CG1	5:F:309:MET:HB2	2.09	0.81
12:P:239:ARG:HH21	13:Q:318:ASP:H	1.27	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:803:ARG:HB2	30:x:8:PHE:HA	1.63	0.81
3:D:934:TYR:CE1	8:I:129:LEU:CD2	2.59	0.81
19:c:77:LEU:HD13	9:j:116:LEU:HD23	1.61	0.81
1:A:572:TYR:CE2	2:B:689:GLN:HB2	2.15	0.81
10:L:101:GLN:C	10:L:105:HIS:CD2	2.57	0.81
19:c:67:GLY:HA3	9:j:116:LEU:HD13	1.60	0.81
3:D:898:VAL:CG2	10:L:113:VAL:CG2	2.34	0.81
23:p:1036:LYS:CD	24:q:195:THR:CG2	2.54	0.81
5:F:329:LEU:HA	5:F:332:PHE:HB3	1.59	0.81
1:A:698:THR:O	6:G:85:PHE:N	2.13	0.81
13:Q:312:GLU:N	13:Q:313:PRO:CD	2.44	0.81
1:A:956:PRO:HA	6:G:149:ARG:NH1	1.96	0.81
5:F:85:GLY:O	9:J:212:LYS:N	2.13	0.81
11:O:32:LEU:HD11	13:Q:32:ASP:HB2	1.61	0.81
12:P:188:ARG:NH2	13:Q:326:GLN:CB	2.31	0.81
3:D:914:VAL:HG11	10:L:70:VAL:HG21	1.62	0.81
7:H:197:THR:HG22	5:f:238:LYS:HA	1.62	0.81
1:A:414:ILE:HG23	5:F:310:THR:N	1.95	0.80
3:D:950:LEU:HD23	4:E:518:LYS:HG2	0.84	0.80
13:Q:358:MET:HE2	13:Q:367:PHE:HD2	1.46	0.80
22:o:102:LYS:HZ2	22:o:1445:HIS:CE1	1.99	0.80
2:B:159:LEU:HD23	2:B:159:LEU:H	1.46	0.80
11:O:22:LEU:HB2	11:O:28:ILE:HD11	1.61	0.80
15:S:109:LYS:HD2	15:S:149:LEU:CD2	2.10	0.80
23:p:850:ASP:HB2	32:z:15:MET:SD	2.21	0.80
23:p:851:ASP:H	32:z:15:MET:HE1	1.44	0.80
2:B:842:LEU:HD21	7:H:214:ILE:HD13	1.63	0.80
7:H:185:ASP:CB	5:f:251:GLY:CA	2.59	0.80
7:H:193:PHE:CG	5:f:227:ILE:CD1	2.64	0.80
11:O:22:LEU:HD13	13:Q:38:VAL:CG1	2.11	0.80
23:p:779:ILE:HD13	30:x:43:TYR:CE2	2.15	0.80
11:O:88:ILE:HG23	13:Q:361:ASN:HD22	1.44	0.80
12:P:203:ARG:O	13:Q:376:TRP:CH2	2.34	0.80
3:d:1082:ALA:HB2	10:l:83:MET:HE2	1.63	0.80
5:f:447:ALA:HA	5:f:456:GLY:HA3	1.61	0.80
8:I:132:LEU:HG	9:J:121:MET:CE	2.12	0.80
1:A:467:ILE:H	5:F:221:GLN:HE21	1.28	0.80
23:p:851:ASP:H	32:z:15:MET:CE	1.94	0.80
1:A:1076:VAL:HG11	6:G:147:ARG:HH21	1.46	0.80
4:E:295:GLU:CG	8:I:85:SER:CB	2.59	0.80
7:H:73:GLY:HA3	9:J:142:ALA:HB3	1.60	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:28:ILE:CG2	13:Q:38:VAL:HG11	2.12	0.80
11:O:88:ILE:HB	13:Q:360:LEU:HD13	1.64	0.80
15:S:153:ARG:CG	29:w:41:ASN:OD1	2.29	0.80
3:D:1010:ALA:CB	13:Q:330:ASP:OD2	2.30	0.79
5:F:90:GLU:OE1	9:J:208:GLY:CA	2.29	0.79
7:H:190:LEU:HD13	5:f:223:TYR:HA	0.81	0.79
23:p:1035:ARG:NH2	24:q:194:HIS:HA	1.97	0.79
3:D:881:ARG:HB2	10:L:57:VAL:HG11	1.61	0.79
3:D:881:ARG:HG2	10:L:57:VAL:HG11	1.62	0.79
5:F:90:GLU:OE1	9:J:208:GLY:C	2.26	0.79
18:Y:21:DC:H6	18:Y:21:DC:OP2	1.65	0.79
8:i:60:HIS:NE2	10:l:106:ARG:NH2	2.29	0.79
1:A:697:ALA:HB2	6:G:86:TYR:CZ	2.17	0.79
11:O:22:LEU:HD13	13:Q:38:VAL:HG13	1.62	0.79
14:R:38:GLY:O	22:o:427:ILE:C	2.25	0.79
22:o:461:GLN:HB2	22:o:462:PRO:HD3	1.65	0.79
1:A:657:SER:HB2	2:B:475:LYS:NZ	1.96	0.79
3:D:898:VAL:HG22	10:L:113:VAL:HG22	1.63	0.79
22:o:827:TYR:CB	23:p:978:ILE:HD13	2.13	0.79
5:F:324:ASP:HA	5:F:327:TRP:HB3	1.63	0.79
2:B:846:TYR:CE1	7:H:227:LEU:CD2	2.65	0.79
4:e:747:LEU:HD23	4:e:747:LEU:H	1.47	0.79
22:o:1172:ASN:HD22	29:w:57:LYS:HE3	1.47	0.79
23:p:68:GLN:HB3	23:p:83:ARG:HB3	1.64	0.79
7:H:190:LEU:HA	5:f:223:TYR:HD1	0.99	0.79
14:R:38:GLY:O	22:o:428:ASP:N	2.16	0.79
14:R:44:ARG:HB3	23:p:1067:ILE:HG12	1.65	0.79
22:o:463:THR:HB	23:p:1093:CYS:SG	2.22	0.79
1:A:511:LEU:H	1:A:511:LEU:HD22	1.48	0.79
5:F:273:GLN:NE2	5:F:273:GLN:H	1.81	0.79
7:H:185:ASP:HB3	5:f:251:GLY:CA	2.12	0.79
12:P:203:ARG:HB3	13:Q:376:TRP:CH2	1.83	0.79
3:D:871:THR:CG2	10:L:66:LEU:CG	2.61	0.78
11:O:88:ILE:HD12	13:Q:360:LEU:CD1	2.10	0.78
22:o:587:THR:CG2	28:v:119:GLY:O	2.32	0.78
7:H:190:LEU:HD22	5:f:223:TYR:HB2	1.65	0.78
1:A:875:GLU:OE1	2:B:580:GLN:NE2	2.16	0.78
22:o:717:ILE:HD13	22:o:815:TYR:HB2	1.62	0.78
25:r:115:ILE:HG22	25:r:117:SER:H	1.48	0.78
11:O:22:LEU:HB3	11:O:28:ILE:CB	2.14	0.78
22:o:196:LEU:CD1	22:o:325:LEU:CD1	2.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:853:LEU:HB2	32:z:46:LYS:NZ	1.98	0.78
1:A:564:PRO:CG	2:B:744:PHE:CD2	2.66	0.78
4:E:295:GLU:HG2	8:I:85:SER:CB	2.13	0.78
1:A:414:ILE:CD1	5:F:309:MET:HB2	2.14	0.78
4:E:280:ARG:CZ	8:I:25:ASP:O	2.31	0.78
33:u:44:PHE:CD2	33:u:46:ILE:CG1	2.65	0.78
1:A:342:ARG:HB2	1:A:497:PRO:HG2	1.63	0.78
1:A:1023:TRP:CE3	17:X:2:DG:OP1	2.28	0.78
15:S:44:GLN:HE21	15:S:104:GLY:CA	1.90	0.78
22:o:388:MET:HG3	23:p:1063:ALA:HB2	1.66	0.78
25:r:63:LYS:HE2	33:u:103:PRO:HB3	1.62	0.78
2:B:361:ARG:HD2	2:B:367:GLU:HB2	1.67	0.77
7:H:185:ASP:HB3	5:f:251:GLY:HA3	1.67	0.77
23:p:1035:ARG:HG3	24:q:194:HIS:ND1	1.97	0.77
21:m:31:LEU:HD23	21:m:31:LEU:H	1.47	0.77
14:R:38:GLY:C	22:o:428:ASP:N	2.42	0.77
5:F:274:ASN:ND2	5:F:316:GLN:HA	1.99	0.77
5:F:309:MET:HE3	5:F:355:ILE:CG2	2.15	0.77
11:O:22:LEU:HB2	11:O:28:ILE:HD13	1.67	0.77
18:Y:24:DT:C6	18:Y:25:DT:C7	2.66	0.77
8:i:60:HIS:CG	10:l:106:ARG:NH2	2.38	0.77
14:R:109:SER:O	14:R:112:ARG:HG3	1.85	0.77
10:l:93:GLU:O	10:l:97:THR:HG23	1.83	0.77
23:p:282:ARG:CB	29:w:21:ASN:HB3	2.14	0.77
15:S:50:ASP:HB3	15:S:97:PRO:HG2	1.66	0.77
22:o:479:TRP:HD1	31:y:67:LEU:HD21	1.50	0.77
22:o:769:MET:HG2	23:p:970:HIS:NE2	2.00	0.77
4:E:280:ARG:HB2	8:I:26:MET:SD	2.25	0.77
1:A:1165:LEU:HD22	6:G:181:TRP:CD1	2.20	0.77
3:D:933:ARG:HD2	9:J:117:VAL:HG11	1.67	0.77
22:o:827:TYR:C	23:p:978:ILE:HD13	2.10	0.77
15:S:153:ARG:HH12	23:p:312:GLN:HG2	1.49	0.77
5:F:309:MET:CE	5:F:355:ILE:CG2	2.63	0.76
7:H:117:MET:O	9:J:129:THR:HA	1.84	0.76
12:P:188:ARG:NH1	13:Q:322:ASP:OD2	2.16	0.76
22:o:717:ILE:HD11	22:o:815:TYR:CB	2.15	0.76
23:p:855:ALA:CB	32:z:49:THR:HB	2.15	0.76
7:H:190:LEU:HB2	5:f:223:TYR:CD1	2.20	0.76
15:S:6:PRO:C	15:S:10:ASN:HB2	2.10	0.76
18:Y:37:DC:H2"	18:Y:38:DT:C5	2.20	0.76
22:o:719:LYS:HG3	22:o:724:GLU:HB2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:934:TYR:CG	8:I:129:LEU:HD23	2.21	0.76
7:H:102:PHE:CZ	9:J:158:ALA:HA	2.21	0.76
13:Q:43:LYS:O	13:Q:47:GLU:HG3	1.85	0.76
1:A:698:THR:HG22	6:G:85:PHE:O	1.86	0.76
15:S:44:GLN:CG	15:S:103:ASN:C	2.59	0.76
22:o:830:GLY:CA	23:p:716:HIS:ND1	2.48	0.76
23:p:83:ARG:HG3	23:p:133:ILE:HG23	1.68	0.76
2:B:842:LEU:HD21	7:H:214:ILE:CD1	2.16	0.76
12:P:239:ARG:HH21	13:Q:318:ASP:N	1.82	0.76
33:u:86:ASP:CG	33:u:171:VAL:HG21	2.10	0.76
1:A:564:PRO:HG2	2:B:744:PHE:CZ	2.20	0.76
1:A:1019:LYS:HB2	1:A:1019:LYS:NZ	2.00	0.76
3:D:1004:ALA:HA	11:O:8:ASN:OD1	1.85	0.76
7:H:36:THR:HG21	9:J:134:VAL:HG21	1.66	0.76
23:p:1038:THR:HA	24:q:196:VAL:H	1.49	0.76
1:A:1023:TRP:HB3	17:X:2:DG:P	2.26	0.76
15:S:168:ASN:HA	23:p:248:LYS:HG2	1.69	0.76
10:l:76:LEU:HD13	10:l:84:LEU:HD12	1.67	0.76
22:o:364:ARG:HB2	23:p:1084:LEU:CD1	2.15	0.76
7:H:118:VAL:HG21	9:J:127:THR:HG23	1.66	0.75
11:O:82:ARG:HE	11:O:87:LEU:HB2	1.49	0.75
18:Y:18:DA:H8	18:Y:18:DA:OP2	1.68	0.75
19:c:77:LEU:HD12	9:j:116:LEU:HD23	1.68	0.75
1:A:471:ASP:OD2	5:f:348:THR:OG1	2.02	0.75
3:D:1010:ALA:CA	13:Q:330:ASP:OD2	2.33	0.75
4:E:501:PRO:HD3	7:H:149:HIS:HB3	1.68	0.75
13:Q:310:GLU:O	13:Q:313:PRO:CG	2.35	0.75
8:i:60:HIS:O	10:l:106:ARG:NE	2.19	0.75
3:D:934:TYR:CE2	8:I:129:LEU:HD23	2.15	0.75
4:E:359:LEU:HD12	4:E:359:LEU:O	1.87	0.75
11:O:66:ARG:HE	12:P:185:LEU:CD2	1.92	0.75
22:o:840:ALA:CA	23:p:719:SER:OG	2.23	0.75
23:p:1038:THR:O	24:q:196:VAL:O	2.04	0.75
15:S:44:GLN:NE2	15:S:104:GLY:N	2.33	0.75
11:O:7:ARG:CZ	11:O:37:LEU:HB3	2.17	0.75
1:A:657:SER:HB2	2:B:475:LYS:HZ3	1.52	0.75
1:A:996:ARG:NE	17:X:2:DG:H4'	2.02	0.75
3:D:999:MET:CE	11:O:71:VAL:HG12	2.16	0.75
17:X:-33:DG:C6	18:Y:33:DC:N3	2.54	0.75
22:o:840:ALA:HA	23:p:719:SER:CB	2.16	0.75
23:p:853:LEU:HB2	32:z:46:LYS:HZ2	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:606:HIS:HB3	22:o:626:THR:HG23	1.69	0.75
3:D:881:ARG:NH1	10:L:89:ASP:HA	2.02	0.74
3:D:895:HIS:HB3	10:L:113:VAL:HG23	1.68	0.74
3:D:1006:LEU:HD22	13:Q:328:LEU:HD21	0.76	0.74
5:F:68:THR:OG1	8:I:34:ARG:HB2	1.85	0.74
18:Y:33:DC:C2'	18:Y:34:DG:H5''	2.15	0.74
12:P:189:ASN:CB	13:Q:376:TRP:HZ2	1.94	0.74
18:Y:24:DT:H2'	18:Y:24:DT:P	2.21	0.74
23:p:910:THR:OG1	32:z:42:ARG:O	2.03	0.74
23:p:735:VAL:HG11	30:x:55:LEU:HD11	1.69	0.74
1:A:491:MET:HE2	1:A:491:MET:HA	1.69	0.74
8:I:60:HIS:HE1	10:L:118:LEU:HD13	0.70	0.74
1:A:1166:LYS:O	6:G:181:TRP:HB2	1.88	0.74
22:o:827:TYR:CD2	23:p:976:MET:SD	2.80	0.74
4:E:614:THR:O	8:I:114:ARG:O	2.05	0.74
3:D:943:GLN:HE21	4:E:510:ALA:N	1.86	0.74
22:o:16:ARG:HG2	23:p:1147:SER:HB3	1.70	0.74
22:o:319:ASP:HB2	22:o:340:LYS:HD3	1.68	0.74
22:o:687:ILE:CB	23:p:969:PRO:CB	2.66	0.74
1:A:1193:ALA:HB3	6:G:166:VAL:HG21	1.67	0.74
14:R:45:VAL:HG22	22:o:67:ARG:CZ	2.16	0.74
23:p:274:ARG:HG2	23:p:279:VAL:HA	1.70	0.74
1:A:697:ALA:CB	6:G:86:TYR:CE2	2.61	0.74
7:H:190:LEU:HB2	5:f:223:TYR:CB	2.17	0.74
11:O:22:LEU:HD21	13:Q:41:GLU:CD	2.12	0.74
22:o:388:MET:HA	23:p:1063:ALA:HB1	1.70	0.74
1:A:955:ASP:O	6:G:149:ARG:NH1	2.20	0.73
12:P:248:ALA:C	13:Q:314:LEU:HD12	2.13	0.73
13:Q:312:GLU:H	13:Q:313:PRO:HD3	1.53	0.73
15:S:44:GLN:O	15:S:103:ASN:N	2.16	0.73
10:l:106:ARG:HH12	10:l:114:LYS:HG3	1.53	0.73
23:p:1027:VAL:HG23	24:q:203:TRP:CH2	2.23	0.73
23:p:1034:GLY:O	24:q:186:TYR:HE1	1.70	0.73
10:L:102:LEU:HA	10:L:105:HIS:CD2	2.21	0.73
15:S:10:ASN:HB3	16:T:47:LYS:HD2	1.67	0.73
16:T:22:LYS:HB3	16:T:115:GLU:CG	2.10	0.73
22:o:830:GLY:CA	23:p:716:HIS:CE1	2.71	0.73
23:p:100:GLU:CG	32:z:42:ARG:NH1	2.51	0.73
14:R:36:GLU:O	22:o:433:PRO:HD3	1.87	0.73
23:p:282:ARG:HD3	29:w:21:ASN:HB3	1.66	0.73
15:S:153:ARG:HD3	29:w:41:ASN:HA	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:T:47:LYS:HG2	16:T:52:THR:HG23	1.69	0.73
4:E:308:ARG:HD2	4:E:363:ALA:C	2.13	0.73
4:E:615:ASP:OD2	8:I:114:ARG:HG2	1.87	0.73
5:F:87:HIS:N	9:J:212:LYS:NZ	2.36	0.73
14:R:146:TYR:O	14:R:149:LYS:HG3	1.86	0.73
5:F:319:LEU:H	5:F:319:LEU:CD2	2.01	0.73
11:O:58:PHE:CD1	11:O:58:PHE:N	2.57	0.73
18:Y:32:DG:H1'	18:Y:33:DC:H5''	1.70	0.73
1:A:350:TYR:CZ	1:A:497:PRO:HA	2.23	0.73
1:A:572:TYR:CE1	2:B:689:GLN:OE1	2.42	0.73
25:r:87:LEU:HD22	25:r:97:LEU:HB2	1.71	0.73
15:S:126:ILE:HB	15:S:138:PHE:HB2	1.71	0.73
1:A:463:PRO:CB	5:F:221:GLN:HG2	2.18	0.72
18:Y:24:DT:H1'	18:Y:25:DT:O4'	1.89	0.72
3:D:881:ARG:HB2	10:L:57:VAL:HG12	1.71	0.72
22:o:334:ARG:NH1	22:o:335:PRO:O	2.21	0.72
29:w:81:THR:HG22	29:w:83:ASP:H	1.55	0.72
1:A:407:GLN:HA	5:f:390:THR:HG21	1.71	0.72
7:H:189:ALA:C	5:f:223:TYR:CE1	2.67	0.72
3:D:999:MET:CE	11:O:71:VAL:HB	2.19	0.72
13:Q:310:GLU:CB	13:Q:313:PRO:HG3	2.19	0.72
29:w:30:LYS:HA	29:w:33:ARG:HH21	1.53	0.72
5:F:307:ALA:O	5:F:310:THR:CG2	2.38	0.72
23:p:133:ILE:HA	23:p:139:GLN:HE22	1.55	0.72
23:p:344:GLN:NE2	23:p:353:VAL:O	2.22	0.72
1:A:639:LEU:HD11	1:A:774:ARG:HG2	1.70	0.72
1:A:1000:LEU:HD13	1:A:1022:ARG:HG2	1.69	0.72
5:F:114:LEU:HD13	7:H:53:ALA:HB3	1.70	0.72
7:H:190:LEU:HB2	5:f:223:TYR:CG	2.24	0.72
15:S:153:ARG:HD3	29:w:41:ASN:CA	2.19	0.72
18:Y:20:DC:H2'	18:Y:20:DC:OP2	1.89	0.72
22:o:18:ILE:HD12	23:p:1171:MET:C	2.14	0.72
22:o:1125:LYS:HA	22:o:1128:ILE:HB	1.70	0.72
1:A:506:ASP:OD1	5:f:299:LYS:CG	2.34	0.72
2:B:241:PRO:HG2	2:B:496:MET:HE1	1.72	0.72
4:E:464:TYR:CE2	5:F:133:ALA:HB2	2.24	0.72
4:E:621:ARG:HH22	8:I:104:LEU:HG	1.55	0.72
11:O:88:ILE:CG2	13:Q:361:ASN:ND2	2.50	0.72
13:Q:55:ALA:O	13:Q:56:VAL:CG2	2.38	0.72
22:o:197:GLU:HB2	22:o:308:LYS:NZ	2.04	0.72
23:p:803:ARG:C	30:x:8:PHE:CE1	2.66	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:838:ASN:CG	7:H:213:LEU:HD23	2.15	0.72
4:E:295:GLU:HG3	8:I:85:SER:HB2	1.68	0.72
22:o:710:LYS:HG3	22:o:817:PRO:HG3	1.71	0.72
25:r:108:ALA:HB2	25:r:128:GLN:HB2	1.71	0.72
5:F:92:ILE:HG13	5:F:93:PRO:HD3	1.71	0.72
15:S:44:GLN:CG	15:S:103:ASN:CA	2.68	0.72
22:o:1370:GLY:HA2	26:s:178:PRO:HD2	1.71	0.72
23:p:803:ARG:NH1	30:x:9:THR:C	2.47	0.72
5:F:418:ILE:H	5:F:418:ILE:HD12	1.54	0.72
16:T:83:PHE:CZ	16:T:116:CYS:SG	2.83	0.71
1:A:670:ASP:O	6:G:78:LYS:NZ	2.22	0.71
4:E:280:ARG:NH1	8:I:27:GLY:N	2.36	0.71
14:R:47:ASP:OD1	23:p:1075:MET:CE	2.35	0.71
22:o:1189:ASP:OD2	22:o:1258:ARG:NH1	2.22	0.71
1:A:480:TRP:HE1	5:f:354:ARG:NH2	1.88	0.71
15:S:44:GLN:HG3	15:S:103:ASN:C	2.15	0.71
22:o:577:PRO:O	28:v:93:TYR:HB3	1.90	0.71
1:A:409:HIS:CA	5:f:386:ASP:CG	2.63	0.71
3:D:917:ILE:CB	3:D:1058:VAL:HG11	2.20	0.71
5:F:86:PHE:CA	9:J:212:LYS:HG2	2.18	0.71
11:O:61:SER:H	11:O:79:VAL:HG22	1.55	0.71
22:o:388:MET:CG	23:p:1063:ALA:HB2	2.20	0.71
23:p:851:ASP:CG	32:z:15:MET:HE1	2.15	0.71
1:A:575:PRO:HD3	2:B:608:ASN:HD22	0.76	0.71
7:H:66:GLN:HG3	9:J:138:TYR:CE1	2.25	0.71
22:o:741:VAL:HG11	22:o:797:ARG:NH1	2.05	0.71
23:p:282:ARG:HD2	29:w:21:ASN:CB	2.16	0.71
23:p:1040:GLN:NE2	24:q:197:TYR:HA	2.05	0.71
25:r:29:ALA:O	25:r:94:LYS:NZ	2.18	0.71
6:G:129:LYS:O	6:G:129:LYS:NZ	2.23	0.71
13:Q:310:GLU:HB3	13:Q:313:PRO:CG	2.20	0.71
22:o:457:ILE:HG13	23:p:1102:PHE:CZ	2.26	0.71
1:A:414:ILE:HD11	5:F:309:MET:CG	2.21	0.71
1:A:1168:TYR:HB2	6:G:180:ARG:H	1.55	0.71
22:o:85:PHE:HZ	23:p:1164:SER:HG	1.36	0.71
22:o:457:ILE:HG13	23:p:1102:PHE:CE1	2.26	0.71
23:p:282:ARG:NH1	29:w:16:PHE:CD2	2.59	0.71
23:p:753:TYR:HE1	30:x:2:ILE:O	1.74	0.71
1:A:463:PRO:CG	5:F:221:GLN:CB	2.69	0.71
4:E:615:ASP:OD1	8:I:114:ARG:C	2.33	0.71
11:O:18:SER:CA	13:Q:45:LEU:CD1	2.63	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:55:ARG:HB2	13:Q:369:LYS:HB2	1.73	0.71
22:o:743:ARG:HA	22:o:743:ARG:NH2	2.05	0.71
1:A:875:GLU:CD	2:B:580:GLN:NE2	2.49	0.70
7:H:189:ALA:HB1	5:f:249:ASP:OD2	1.90	0.70
11:O:22:LEU:HD21	13:Q:41:GLU:OE1	1.91	0.70
14:R:39:LEU:HA	22:o:426:ARG:O	1.91	0.70
22:o:757:GLN:HE22	22:o:781:ILE:HB	1.56	0.70
23:p:755:GLN:CG	30:x:51:ALA:O	2.39	0.70
23:p:803:ARG:HB2	30:x:8:PHE:HD1	1.56	0.70
23:p:1023:ARG:C	23:p:1025:ASN:H	1.99	0.70
1:A:414:ILE:HD11	5:F:309:MET:HG3	1.73	0.70
1:A:564:PRO:HB2	2:B:744:PHE:CE2	2.27	0.70
3:D:1006:LEU:CD2	13:Q:328:LEU:HD22	2.05	0.70
4:E:308:ARG:CD	4:E:363:ALA:O	2.34	0.70
5:F:218:VAL:HG12	7:H:162:THR:HB	1.73	0.70
7:H:111:ALA:HB2	9:J:157:LEU:HD11	1.72	0.70
12:P:239:ARG:NH1	13:Q:320:VAL:HB	2.06	0.70
13:Q:47:GLU:OE2	13:Q:60:HIS:CG	2.45	0.70
1:A:564:PRO:CB	2:B:744:PHE:CE2	2.74	0.70
2:B:834:THR:HG23	7:H:213:LEU:HD21	1.72	0.70
8:I:132:LEU:HD21	9:J:121:MET:HE1	1.72	0.70
14:R:39:LEU:HG	22:o:426:ARG:O	1.90	0.70
14:R:146:TYR:O	14:R:149:LYS:CG	2.39	0.70
22:o:60:PRO:HA	22:o:65:ILE:HD11	1.71	0.70
1:A:567:LEU:HD22	2:B:745:GLN:HG2	1.73	0.70
3:D:901:TYR:HE2	10:L:120:LEU:HD12	1.56	0.70
7:H:93:ILE:HD13	9:J:155:ILE:HD11	1.72	0.70
7:H:110:TYR:CZ	9:J:160:GLN:HB3	2.26	0.70
12:P:300:ILE:HD11	12:P:320:GLU:HB3	1.73	0.70
17:X:-33:DG:H2''	17:X:-32:DC:H5	1.55	0.70
11:O:14:SER:HA	13:Q:49:LYS:HD2	1.72	0.70
17:X:-22:DG:H2''	17:X:-21:DG:H8	1.57	0.70
23:p:1040:GLN:NE2	24:q:197:TYR:HD1	1.90	0.70
11:O:28:ILE:HG21	13:Q:38:VAL:CG1	2.22	0.70
1:A:410:TRP:CZ2	5:F:305:ILE:HG21	2.24	0.70
1:A:575:PRO:CG	2:B:610:GLU:HG2	2.08	0.70
1:A:681:ALA:HB3	6:G:75:GLU:HG3	1.74	0.70
3:D:917:ILE:CG1	3:D:1058:VAL:HG21	2.21	0.70
3:D:1000:ARG:HG2	11:O:5:LEU:CA	2.18	0.70
4:E:295:GLU:HG3	8:I:85:SER:CB	2.20	0.70
22:o:406:VAL:HG21	22:o:419:ILE:HD11	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:717:ILE:CD1	22:o:815:TYR:CB	2.69	0.70
15:S:153:ARG:HB2	29:w:41:ASN:OD1	1.89	0.70
22:o:16:ARG:HG2	23:p:1147:SER:CB	2.21	0.70
1:A:409:HIS:N	5:f:386:ASP:CG	2.50	0.69
1:A:638:PRO:HB3	6:G:39:LEU:HD23	1.74	0.69
11:O:28:ILE:HG21	13:Q:38:VAL:HG11	1.71	0.69
22:o:687:ILE:HG21	23:p:969:PRO:HB2	1.53	0.69
1:A:475:LEU:HD22	5:f:354:ARG:HH21	1.57	0.69
7:H:36:THR:CG2	9:J:134:VAL:HG21	2.22	0.69
10:L:114:LYS:O	10:L:118:LEU:HG	1.91	0.69
22:o:16:ARG:HD3	23:p:1173:SER:HB3	1.71	0.69
28:v:104:THR:HG22	28:v:105:SER:H	1.57	0.69
11:O:10:THR:HG21	13:Q:50:LEU:HD22	1.73	0.69
15:S:44:GLN:HE22	15:S:104:GLY:HA3	1.54	0.69
33:u:38:CYS:O	33:u:155:ASN:HA	1.93	0.69
33:u:110:ARG:NH2	33:u:118:GLU:OE2	2.24	0.69
11:O:21:GLU:OE2	13:Q:45:LEU:HD22	1.92	0.69
8:i:60:HIS:CD2	10:l:106:ARG:CZ	2.74	0.69
11:O:88:ILE:CD1	13:Q:360:LEU:HD12	2.12	0.69
14:R:297:PRO:HB3	14:R:310:VAL:HG21	1.73	0.69
18:Y:19:DC:OP1	18:Y:19:DC:H3'	1.92	0.69
22:o:26:LEU:CD2	23:p:1166:SER:CA	2.70	0.69
22:o:107:LEU:HD13	22:o:191:ILE:HD12	1.74	0.69
22:o:1166:LEU:HB3	22:o:1293:LEU:HA	1.73	0.69
26:s:172:ARG:NH2	26:s:210:GLN:O	2.25	0.69
4:E:280:ARG:HH11	8:I:26:MET:C	2.00	0.69
4:E:464:TYR:CD2	5:F:133:ALA:HB2	2.28	0.69
5:F:86:PHE:HB2	9:J:211:VAL:HA	1.73	0.69
7:H:194:MET:HE1	5:f:226:GLU:CB	2.21	0.69
22:o:721:HIS:HA	29:w:108:MET:O	1.92	0.69
33:u:44:PHE:HE2	33:u:46:ILE:CG1	2.03	0.69
1:A:1076:VAL:HG11	6:G:147:ARG:NH2	2.06	0.69
5:F:38:LEU:HD21	8:I:72:ARG:HG3	1.73	0.69
7:H:119:ILE:HD13	9:J:129:THR:O	1.91	0.69
14:R:38:GLY:CA	22:o:428:ASP:H	2.04	0.69
23:p:851:ASP:N	32:z:15:MET:CE	2.50	0.69
1:A:475:LEU:CD2	5:f:354:ARG:NH2	2.56	0.69
1:A:657:SER:OG	2:B:475:LYS:NZ	2.23	0.69
1:A:1168:TYR:O	6:G:179:THR:HA	1.92	0.69
2:B:762:ASP:OD1	2:B:768:PRO:CG	2.39	0.69
3:D:917:ILE:HB	3:D:1058:VAL:HG11	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:102:LYS:NZ	22:o:1445:HIS:CE1	2.61	0.69
23:p:100:GLU:HG2	32:z:42:ARG:NH1	2.08	0.69
23:p:961:ILE:CD1	30:x:43:TYR:CE1	2.76	0.69
25:r:80:ILE:HA	25:r:83:VAL:HG12	1.75	0.69
33:u:93:ASN:OD1	33:u:94:LYS:N	2.26	0.69
1:A:564:PRO:HB2	2:B:744:PHE:HE2	1.58	0.69
11:O:22:LEU:CB	11:O:28:ILE:HD13	2.23	0.69
15:S:44:GLN:HG3	15:S:103:ASN:HA	1.74	0.69
23:p:1040:GLN:HG2	24:q:203:TRP:HZ2	0.88	0.69
1:A:956:PRO:HA	6:G:149:ARG:HH11	1.57	0.69
22:o:1102:MET:HE1	22:o:1124:LEU:HD13	1.74	0.69
11:O:66:ARG:HH21	12:P:185:LEU:CA	2.03	0.68
14:R:48:VAL:HG11	23:p:1077:GLY:HA2	1.75	0.68
4:E:308:ARG:HD2	4:E:362:GLU:O	1.93	0.68
11:O:88:ILE:HG22	13:Q:360:LEU:HB3	1.66	0.68
15:S:49:ARG:NH1	15:S:96:GLN:O	2.25	0.68
1:A:475:LEU:CD2	5:f:354:ARG:HH21	2.06	0.68
1:A:657:SER:CB	2:B:475:LYS:HZ1	2.03	0.68
2:B:273:LEU:CD1	7:H:223:TYR:CE1	2.75	0.68
2:B:835:ARG:CZ	7:H:184:ARG:HH11	2.06	0.68
3:D:881:ARG:CZ	10:L:57:VAL:HG22	2.17	0.68
3:D:898:VAL:HG23	10:L:113:VAL:HG22	0.70	0.68
3:D:946:PHE:CZ	4:E:513:LEU:O	2.46	0.68
5:F:99:GLY:HA3	7:H:63:GLU:HG2	1.75	0.68
11:O:28:ILE:CG2	13:Q:38:VAL:CG1	2.71	0.68
20:k:191:VAL:HG13	20:k:200:ILE:HD13	1.74	0.68
1:A:349:TRP:CZ2	5:f:266:GLY:HA3	2.28	0.68
22:o:703:GLN:HA	22:o:703:GLN:NE2	2.06	0.68
3:D:881:ARG:CZ	10:L:57:VAL:CG2	2.70	0.68
3:D:999:MET:HE1	11:O:71:VAL:O	1.92	0.68
4:E:359:LEU:HD13	4:E:627:LEU:HD12	1.76	0.68
5:F:307:ALA:O	5:F:310:THR:HG23	1.93	0.68
14:R:286:ARG:HG3	14:R:316:LEU:HG	1.74	0.68
23:p:755:GLN:HB3	30:x:51:ALA:O	1.94	0.68
1:A:1019:LYS:HB2	1:A:1019:LYS:HZ2	1.58	0.68
22:o:26:LEU:HD22	23:p:1166:SER:HA	1.76	0.68
22:o:85:PHE:CZ	23:p:1164:SER:OG	2.46	0.68
23:p:320:PHE:O	23:p:324:ARG:NH1	2.27	0.68
33:u:40:GLY:CA	33:u:152:VAL:HG22	2.22	0.68
3:D:1000:ARG:NE	3:D:1000:ARG:HA	2.05	0.68
15:S:44:GLN:HG2	15:S:103:ASN:CA	2.21	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:1027:VAL:HG23	24:q:203:TRP:CE3	2.27	0.68
4:E:790:LEU:HD13	7:H:146:ILE:HG12	1.75	0.68
5:F:274:ASN:HB2	5:F:317:LEU:H	1.58	0.68
11:O:66:ARG:NH2	12:P:185:LEU:HA	2.09	0.68
22:o:828:LEU:HA	23:p:978:ILE:HG21	1.76	0.68
23:p:282:ARG:HB2	29:w:21:ASN:HB3	1.76	0.68
23:p:755:GLN:CB	30:x:51:ALA:O	2.42	0.68
23:p:1018:TYR:O	23:p:1020:TYR:CE1	2.46	0.68
1:A:573:TYR:CD2	2:B:657:ARG:HA	2.29	0.67
33:u:38:CYS:O	33:u:155:ASN:OD1	2.12	0.67
1:A:355:VAL:HG23	1:A:497:PRO:HD3	1.73	0.67
1:A:463:PRO:HD3	5:F:222:LEU:HB2	1.75	0.67
3:D:914:VAL:CG1	10:L:70:VAL:HG21	2.24	0.67
16:T:8:ASP:HB3	16:T:105:SER:HA	1.75	0.67
5:f:447:ALA:CA	5:f:456:GLY:HA3	2.23	0.67
22:o:384:ILE:HG12	23:p:1061:SER:HB2	1.76	0.67
22:o:893:GLU:HG2	26:s:203:TYR:CE2	2.29	0.67
22:o:1156:ASP:OD1	22:o:1157:ILE:N	2.27	0.67
1:A:996:ARG:NE	17:X:2:DG:C4'	2.58	0.67
3:D:1071:ARG:NH2	5:F:80:VAL:HA	2.10	0.67
3:D:1083:PHE:HE2	4:E:585:ASN:HD21	0.76	0.67
7:H:190:LEU:CD1	5:f:223:TYR:CA	2.41	0.67
29:w:105:GLU:HG2	29:w:106:ASP:H	1.59	0.67
29:w:109:ARG:NH2	29:w:125:GLU:O	2.28	0.67
14:R:114:MET:SD	14:R:146:TYR:CE1	2.87	0.67
3:d:1082:ALA:HB2	10:l:83:MET:CE	2.25	0.67
22:o:578:ALA:O	28:v:93:TYR:N	2.23	0.67
22:o:1172:ASN:ND2	29:w:57:LYS:HE3	2.08	0.67
23:p:282:ARG:HD3	29:w:21:ASN:ND2	2.10	0.67
33:u:99:THR:HG21	33:u:143:ILE:HD11	1.76	0.67
3:D:1006:LEU:CG	13:Q:328:LEU:HD11	2.24	0.67
7:H:193:PHE:CZ	5:f:230:ALA:CB	2.76	0.67
23:p:851:ASP:OD1	32:z:15:MET:CE	2.41	0.67
5:F:66:LEU:HD22	8:I:28:ILE:HG21	1.76	0.67
7:H:118:VAL:CG2	9:J:127:THR:HG23	2.25	0.67
10:L:115:ASP:O	10:L:119:HIS:CD2	2.47	0.67
22:o:16:ARG:HD3	23:p:1173:SER:CB	2.24	0.67
23:p:1035:ARG:NH2	24:q:194:HIS:O	2.28	0.67
33:u:38:CYS:SG	33:u:44:PHE:CA	2.76	0.67
1:A:567:LEU:HA	2:B:745:GLN:NE2	2.10	0.67
15:S:10:ASN:O	16:T:47:LYS:CB	2.39	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:X:-20:DG:N2	18:Y:20:DC:N3	2.41	0.67
4:e:645:GLY:H	4:e:675:LEU:HD11	1.59	0.67
3:D:1000:ARG:HH11	11:O:5:LEU:HD12	1.60	0.67
7:H:111:ALA:HB2	9:J:157:LEU:HD13	1.76	0.67
22:o:626:THR:HG22	22:o:627:LYS:H	1.60	0.67
1:A:1021:SER:O	1:A:1025:VAL:HG23	1.95	0.67
3:D:939:ASP:HA	8:I:125:PRO:HA	1.76	0.67
5:F:67:THR:HA	8:I:32:GLU:CG	2.24	0.67
11:O:80:GLU:HG2	11:O:89:LYS:HA	1.77	0.67
12:P:248:ALA:HB1	13:Q:314:LEU:HD13	1.73	0.67
12:P:248:ALA:C	13:Q:314:LEU:CD1	2.67	0.67
22:o:687:ILE:HB	23:p:969:PRO:HB2	1.77	0.67
23:p:589:LYS:HA	23:p:592:ARG:HG2	1.76	0.67
23:p:674:MET:SD	29:w:77:THR:HA	2.34	0.67
33:u:167:TYR:CD2	33:u:167:TYR:O	2.48	0.67
1:A:601:PRO:CB	6:G:10:HIS:HB3	2.24	0.67
2:B:402:ILE:HD12	2:B:455:LEU:HD12	1.77	0.67
3:D:934:TYR:HE2	8:I:129:LEU:HG	1.55	0.67
22:o:710:LYS:CG	22:o:817:PRO:CG	2.68	0.67
33:u:153:ASP:O	33:u:155:ASN:N	2.27	0.67
3:D:910:LEU:HB2	10:L:66:LEU:HD21	1.77	0.66
4:E:299:ASP:OD2	4:E:607:ARG:CZ	2.44	0.66
14:R:26:ASP:HA	23:p:842:HIS:HE1	1.60	0.66
14:R:29:ALA:HA	23:p:1066:PRO:HD3	1.77	0.66
5:F:320:ARG:O	5:F:324:ASP:HB2	1.94	0.66
22:o:1005:HIS:HD2	22:o:1007:ILE:HG12	1.59	0.66
23:p:753:TYR:CE1	30:x:2:ILE:O	2.47	0.66
5:F:87:HIS:N	9:J:212:LYS:HZ3	1.94	0.66
8:i:60:HIS:CD2	10:l:106:ARG:NH2	2.63	0.66
23:p:854:ILE:HD12	23:p:866:ILE:HG22	1.77	0.66
1:A:409:HIS:CD2	5:f:386:ASP:OD2	2.48	0.66
3:D:999:MET:CE	11:O:71:VAL:CG1	2.66	0.66
4:E:775:THR:HG23	5:F:136:LEU:HD21	1.76	0.66
5:F:113:ASP:HA	7:H:52:SER:HA	1.77	0.66
7:H:193:PHE:CD1	5:f:227:ILE:HD13	2.31	0.66
10:L:99:ALA:HB2	10:L:119:HIS:CD2	2.30	0.66
11:O:25:SER:C	11:O:27:GLN:H	2.03	0.66
12:P:249:LYS:HG2	13:Q:312:GLU:CB	2.25	0.66
14:R:109:SER:HA	14:R:112:ARG:HD2	1.76	0.66
16:T:123:ASN:O	16:T:125:MET:CG	2.43	0.66
10:l:82:GLU:O	10:l:86:GLN:HG3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1009:LEU:HD12	3:D:1009:LEU:N	2.10	0.66
4:E:299:ASP:OD2	4:E:607:ARG:NH2	2.28	0.66
7:H:111:ALA:HA	9:J:126:TYR:OH	1.95	0.66
10:L:102:LEU:CA	10:L:105:HIS:HD2	2.08	0.66
14:R:134:ILE:HG12	14:R:171:GLU:HG3	1.76	0.66
5:f:239:ARG:HD3	5:f:284:ARG:HH11	1.60	0.66
4:E:788:ARG:HB3	7:H:145:HIS:HA	1.77	0.66
17:X:-34:DC:H2"	17:X:-33:DG:C8	2.30	0.66
23:p:908:MET:HB2	32:z:45:TYR:CE1	2.30	0.66
3:D:1000:ARG:HH11	3:D:1000:ARG:CG	2.08	0.66
3:D:1085:LYS:HZ3	10:L:83:MET:HE1	1.61	0.66
5:F:319:LEU:HD23	5:F:319:LEU:N	2.10	0.66
5:F:320:ARG:HD3	5:F:415:ILE:CG1	2.26	0.66
12:P:188:ARG:HD2	13:Q:322:ASP:OD1	1.96	0.66
12:P:240:VAL:HG22	13:Q:321:SER:CB	2.24	0.66
22:o:463:THR:CG2	23:p:1090:GLU:HG3	2.25	0.66
23:p:594:MET:HG2	23:p:599:SER:HB2	1.77	0.66
25:r:87:LEU:HD13	25:r:97:LEU:HD22	1.77	0.66
1:A:342:ARG:N	1:A:497:PRO:HB3	2.11	0.66
1:A:464:TRP:O	7:H:164:THR:OG1	2.12	0.66
4:E:315:GLN:HE22	15:S:105:LYS:NZ	1.94	0.66
7:H:107:LEU:HD11	9:J:157:LEU:C	2.21	0.66
12:P:204:ILE:HG13	12:P:207:PRO:HD2	1.78	0.66
22:o:581:LYS:HB3	22:o:582:PRO:HD3	1.78	0.66
22:o:1177:TYR:CB	29:w:35:LEU:HD11	2.25	0.66
3:D:999:MET:HG2	3:D:1000:ARG:HH22	1.61	0.66
4:E:280:ARG:NH1	8:I:26:MET:C	2.54	0.66
7:H:108:PRO:HG3	9:J:119:PHE:CD2	2.30	0.66
7:H:111:ALA:CB	9:J:157:LEU:HD11	2.26	0.66
19:c:67:GLY:CA	9:j:116:LEU:HD11	2.25	0.66
22:o:743:ARG:HH21	22:o:743:ARG:CA	2.07	0.66
22:o:922:PHE:H	22:o:1052:ARG:HH11	1.43	0.66
23:p:803:ARG:O	30:x:8:PHE:CD1	2.49	0.66
25:r:60:VAL:HG21	33:u:44:PHE:HE1	1.61	0.66
33:u:40:GLY:HA2	33:u:152:VAL:HG22	1.66	0.66
1:A:414:ILE:CG1	5:F:309:MET:CB	2.72	0.65
1:A:698:THR:O	6:G:84:THR:HA	1.95	0.65
5:F:217:SER:OG	7:H:162:THR:N	2.26	0.65
5:F:320:ARG:HD3	5:F:415:ILE:HG13	1.78	0.65
11:O:60:GLY:HA2	11:O:79:VAL:HG13	1.78	0.65
14:R:137:ARG:CZ	14:R:137:ARG:HB3	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:572:TYR:CD1	2:B:689:GLN:CD	2.74	0.65
23:p:690:CYS:SG	23:p:691:SER:N	2.69	0.65
23:p:1018:TYR:O	23:p:1020:TYR:HD1	1.78	0.65
23:p:1021:HIS:HB3	23:p:1025:ASN:O	1.95	0.65
23:p:1120:ASN:HD22	23:p:1145:GLN:HB2	1.60	0.65
11:O:18:SER:CB	13:Q:45:LEU:CD1	2.75	0.65
22:o:577:PRO:HG2	22:o:580:LEU:HG	1.77	0.65
22:o:721:HIS:CE1	29:w:98:GLN:NE2	2.52	0.65
25:r:62:MET:HA	25:r:65:LEU:HB3	1.79	0.65
3:D:941:ARG:CZ	8:I:123:THR:O	2.43	0.65
7:H:102:PHE:CE1	9:J:158:ALA:O	2.49	0.65
7:H:186:VAL:CG2	5:f:255:MET:SD	2.85	0.65
11:O:19:LEU:HA	11:O:28:ILE:HD11	1.78	0.65
22:o:769:MET:HE2	23:p:970:HIS:NE2	2.12	0.65
5:F:71:ILE:HB	8:I:38:GLN:NE2	2.08	0.65
22:o:1029:LEU:HD21	26:s:159:LEU:HD23	1.79	0.65
2:B:819:LEU:HB2	7:H:204:PHE:CE2	2.32	0.65
4:E:295:GLU:CG	8:I:85:SER:OG	2.45	0.65
4:E:426:ARG:HH11	4:E:640:ASN:HD22	1.42	0.65
7:H:108:PRO:HG3	9:J:119:PHE:CG	2.30	0.65
11:O:58:PHE:CD2	11:O:81:PHE:HD2	2.15	0.65
15:S:102:VAL:HG12	15:S:103:ASN:OD1	1.96	0.65
23:p:961:ILE:HG21	30:x:43:TYR:CZ	2.32	0.65
26:s:17:ILE:HD11	26:s:135:LEU:HD13	1.78	0.65
22:o:719:LYS:HG2	22:o:725:LEU:HD12	1.78	0.65
3:D:933:ARG:HD3	9:J:117:VAL:HG11	1.79	0.65
13:Q:26:ARG:HH21	13:Q:39:LEU:HD23	1.61	0.65
14:R:45:VAL:C	22:o:67:ARG:NH2	2.50	0.65
14:R:111:ASP:HB3	14:R:114:MET:CB	2.15	0.65
26:s:51:GLY:O	26:s:54:ARG:NH2	2.29	0.65
3:D:1006:LEU:CD1	13:Q:328:LEU:CD1	2.63	0.65
3:D:1010:ALA:HB3	13:Q:330:ASP:CG	2.21	0.65
7:H:190:LEU:CB	5:f:223:TYR:HB2	2.24	0.65
22:o:193:ARG:HA	22:o:198:LEU:HA	1.79	0.65
23:p:313:GLU:HG3	23:p:316:VAL:HG12	1.79	0.65
2:B:490:SER:HA	2:B:493:TRP:HB2	1.80	0.65
22:o:1344:MET:HE2	26:s:134:GLU:HA	1.79	0.65
15:S:11:VAL:C	15:S:12:THR:HG23	2.20	0.64
24:q:19:VAL:HG23	24:q:241:PRO:HB2	1.79	0.64
5:F:219:GLU:OE2	7:H:157:HIS:HB3	1.97	0.64
7:H:193:PHE:HE2	5:f:226:GLU:C	2.04	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:48:ASN:HA	13:Q:51:MET:HE2	1.78	0.64
22:o:1146:GLN:HB3	22:o:1149:ARG:HH21	1.62	0.64
1:A:409:HIS:CB	5:f:386:ASP:OD2	2.44	0.64
7:H:186:VAL:HG21	5:f:255:MET:SD	2.37	0.64
10:l:106:ARG:NH1	10:l:114:LYS:HG3	2.12	0.64
22:o:1474:LEU:HD11	27:t:107:ARG:NH2	2.11	0.64
1:A:355:VAL:HG23	1:A:355:VAL:O	1.97	0.64
2:B:583:GLU:CD	2:B:583:GLU:H	2.06	0.64
17:X:-22:DG:H2''	17:X:-21:DG:C8	2.31	0.64
18:Y:22:DC:O2	18:Y:22:DC:H2'	1.96	0.64
22:o:893:GLU:HG2	26:s:203:TYR:CD2	2.33	0.64
1:A:657:SER:O	2:B:475:LYS:HD3	1.98	0.64
1:A:1189:ALA:HB3	6:G:162:VAL:HG13	1.78	0.64
3:D:941:ARG:NH2	8:I:123:THR:O	2.30	0.64
7:H:132:LYS:HE2	7:H:134:LEU:H	1.62	0.64
7:H:190:LEU:CA	5:f:223:TYR:CE1	2.70	0.64
17:X:-32:DC:C2'	17:X:-31:DC:O5'	2.46	0.64
1:A:997:ARG:CD	18:Y:1:DA:OP1	2.44	0.64
2:B:431:LEU:HD22	2:B:431:LEU:H	1.62	0.64
5:F:90:GLU:CD	9:J:208:GLY:CA	2.69	0.64
18:Y:24:DT:C6	18:Y:25:DT:C5	2.86	0.64
12:P:249:LYS:CD	13:Q:312:GLU:HG2	2.27	0.64
12:P:278:GLN:CD	12:P:278:GLN:H	2.04	0.64
1:A:575:PRO:HD2	2:B:608:ASN:HB2	1.80	0.64
7:H:190:LEU:CB	5:f:223:TYR:HD1	2.04	0.64
13:Q:47:GLU:OE1	13:Q:60:HIS:ND1	2.30	0.64
15:S:44:GLN:HG3	15:S:103:ASN:CA	2.27	0.64
1:A:506:ASP:CB	5:f:299:LYS:HG3	2.27	0.64
1:A:1076:VAL:CG1	6:G:147:ARG:NH2	2.61	0.64
3:D:1002:ARG:O	3:D:1006:LEU:HG	1.97	0.64
11:O:3:TYR:C	11:O:5:LEU:H	2.04	0.64
5:f:320:ARG:NH1	5:f:320:ARG:HB3	2.12	0.64
23:p:961:ILE:HD13	30:x:43:TYR:CE1	2.32	0.64
5:F:217:SER:OG	7:H:161:LYS:HA	1.98	0.64
7:H:69:ILE:HG21	9:J:138:TYR:HB2	1.79	0.64
7:H:193:PHE:CG	5:f:227:ILE:HD13	2.33	0.64
11:O:59:ARG:HG3	13:Q:373:ASP:HB2	1.80	0.64
33:u:91:GLN:HB2	33:u:98:PHE:HD2	1.62	0.64
2:B:846:TYR:CE1	7:H:227:LEU:HD22	2.33	0.63
4:E:463:PHE:HB2	5:F:136:LEU:HG	1.78	0.63
22:o:1177:TYR:CD1	29:w:35:LEU:HD21	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:u:32:THR:OG1	33:u:33:GLU:OE1	2.14	0.63
1:A:1169:ARG:HD2	6:G:176:ALA:HB2	1.80	0.63
3:D:881:ARG:HH11	10:L:89:ASP:HA	1.61	0.63
5:F:100:GLY:O	8:I:34:ARG:NH2	2.32	0.63
11:O:72:TRP:HD1	13:Q:339:TYR:CE2	2.16	0.63
13:Q:310:GLU:C	13:Q:313:PRO:HD3	2.20	0.63
22:o:388:MET:HA	23:p:1063:ALA:CB	2.28	0.63
23:p:1027:VAL:CG2	24:q:197:TYR:HE1	2.10	0.63
24:q:15:THR:HG22	24:q:16:ASP:H	1.62	0.63
3:D:881:ARG:HD3	10:L:57:VAL:CG1	2.29	0.63
3:D:881:ARG:CD	10:L:57:VAL:HG11	2.28	0.63
22:o:16:ARG:HB2	23:p:1173:SER:OG	1.99	0.63
23:p:271:ILE:HG12	23:p:311:ILE:HG13	1.78	0.63
24:q:9:VAL:HG11	31:y:105:PHE:HD1	1.63	0.63
4:E:745:GLU:OE1	4:E:745:GLU:HA	1.98	0.63
11:O:39:GLN:CG	13:Q:25:VAL:HG12	2.29	0.63
14:R:111:ASP:O	14:R:115:MET:HB2	1.98	0.63
15:S:44:GLN:CG	15:S:104:GLY:N	2.62	0.63
22:o:17:THR:O	23:p:1173:SER:HA	1.99	0.63
22:o:1030:SER:CB	26:s:162:ARG:HE	2.12	0.63
14:R:30:GLY:CA	23:p:1066:PRO:HB3	2.27	0.63
1:A:758:PRO:HG2	6:G:136:ILE:HG23	1.80	0.63
4:E:613:ALA:HB2	4:E:620:LEU:HD11	1.81	0.63
12:P:203:ARG:O	13:Q:376:TRP:HH2	1.68	0.63
23:p:587:LEU:HB3	23:p:603:MET:SD	2.39	0.63
11:O:18:SER:HB3	13:Q:45:LEU:CD1	2.28	0.63
14:R:28:ARG:HG3	23:p:1078:ARG:HH11	1.64	0.63
23:p:802:ASP:HB3	24:q:174:ALA:HB3	1.80	0.63
3:D:1085:LYS:HZ2	10:L:83:MET:HE2	1.63	0.63
5:F:276:LEU:HD22	5:F:323:VAL:CG2	2.28	0.63
12:P:188:ARG:NE	13:Q:323:GLU:O	2.32	0.63
15:S:8:SER:HB3	16:T:49:GLN:HA	1.79	0.63
22:o:1029:LEU:HD11	26:s:159:LEU:CD2	2.28	0.63
4:E:293:GLY:O	8:I:85:SER:HB3	1.98	0.62
5:F:89:GLN:NE2	9:J:210:ASN:HD22	1.96	0.62
5:F:114:LEU:HD13	7:H:53:ALA:CB	2.29	0.62
13:Q:312:GLU:H	13:Q:313:PRO:CD	2.11	0.62
23:p:961:ILE:CD1	30:x:43:TYR:CD1	2.81	0.62
1:A:657:SER:C	2:B:475:LYS:NZ	2.56	0.62
1:A:843:ARG:HD3	18:Y:-27:DG:H3'	1.81	0.62
7:H:193:PHE:CD1	5:f:227:ILE:CD1	2.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:R:114:MET:HE2	14:R:146:TYR:CG	2.34	0.62
15:S:8:SER:O	16:T:48:THR:O	2.18	0.62
22:o:232:GLU:HA	22:o:235:VAL:HG12	1.79	0.62
1:A:1166:LYS:HE3	6:G:180:ARG:HG3	1.81	0.62
17:X:-23:DG:O6	18:Y:23:DC:O2	2.18	0.62
19:c:67:GLY:CA	9:j:116:LEU:CD1	2.70	0.62
22:o:197:GLU:HB2	22:o:308:LYS:HZ3	1.62	0.62
22:o:327:ARG:NH2	22:o:336:LEU:O	2.30	0.62
3:D:1074:SER:OG	5:F:79:ASN:OD1	2.17	0.62
11:O:18:SER:OG	13:Q:45:LEU:CB	2.47	0.62
14:R:189:LYS:HB2	17:X:-30:DT:H5''	1.81	0.62
14:R:297:PRO:HA	14:R:310:VAL:HG11	1.81	0.62
16:T:31:TRP:HD1	16:T:62:LEU:HD21	1.64	0.62
17:X:-34:DC:C2'	17:X:-33:DG:C8	2.82	0.62
22:o:27:SER:N	22:o:30:GLU:OE1	2.33	0.62
22:o:743:ARG:HB2	22:o:743:ARG:CZ	2.28	0.62
22:o:830:GLY:HA2	23:p:716:HIS:ND1	2.14	0.62
23:p:755:GLN:HG2	30:x:51:ALA:O	2.00	0.62
1:A:1076:VAL:CG1	6:G:147:ARG:HH21	2.10	0.62
10:L:99:ALA:CB	10:L:119:HIS:HD2	2.12	0.62
11:O:23:ILE:CA	11:O:28:ILE:O	2.43	0.62
17:X:-33:DG:O6	18:Y:33:DC:N3	2.33	0.62
3:D:999:MET:CG	3:D:1000:ARG:NH2	2.62	0.62
3:D:1083:PHE:CE2	4:E:585:ASN:ND2	2.43	0.62
5:F:66:LEU:O	8:I:35:VAL:HG21	1.99	0.62
7:H:193:PHE:CD2	5:f:227:ILE:HD13	2.35	0.62
23:p:82:PRO:HB3	23:p:134:LYS:HB3	1.81	0.62
1:A:500:LEU:HD22	1:A:501:THR:H	1.64	0.62
4:E:359:LEU:HD11	4:E:648:ASP:HB2	1.80	0.62
5:F:89:GLN:CD	9:J:210:ASN:ND2	2.45	0.62
7:H:197:THR:CA	5:f:238:LYS:HG2	2.30	0.62
13:Q:15:ARG:HH21	13:Q:58:GLY:HA2	1.65	0.62
22:o:587:THR:CB	28:v:119:GLY:O	2.47	0.62
23:p:800:ALA:CA	30:x:8:PHE:O	2.44	0.62
23:p:988:LYS:O	23:p:992:ASN:ND2	2.31	0.62
3:D:914:VAL:HG11	10:L:70:VAL:CG2	2.30	0.62
7:H:108:PRO:HA	9:J:119:PHE:CE1	2.34	0.62
19:c:18:CYS:O	19:c:23:TRP:HB2	2.00	0.62
3:d:884:GLU:HA	3:d:887:LYS:HE3	1.82	0.62
24:q:193:ARG:HD3	24:q:220:TYR:HD1	1.65	0.62
7:H:93:ILE:HD11	9:J:144:PHE:HZ	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:193:PHE:CE1	5:f:227:ILE:HD13	2.34	0.61
11:O:88:ILE:HB	13:Q:360:LEU:CD1	2.29	0.61
3:D:1000:ARG:CG	11:O:5:LEU:O	2.49	0.61
14:R:38:GLY:C	22:o:427:ILE:HA	2.17	0.61
22:o:16:ARG:NE	23:p:1147:SER:OG	2.28	0.61
33:u:24:ASN:HA	33:u:27:LYS:HG3	1.83	0.61
1:A:996:ARG:HE	17:X:2:DG:C4'	2.12	0.61
3:D:949:GLN:HB3	4:E:518:LYS:HE3	1.81	0.61
7:H:190:LEU:N	5:f:223:TYR:CE1	2.68	0.61
7:H:193:PHE:CD2	5:f:227:ILE:CD1	2.84	0.61
1:A:1168:TYR:HB2	6:G:180:ARG:N	2.14	0.61
18:Y:22:DC:H3'	18:Y:23:DC:C5	2.35	0.61
3:d:909:ARG:NE	10:l:91:PHE:CZ	2.56	0.61
22:o:504:HIS:CB	23:p:1106:ARG:NH1	2.56	0.61
22:o:833:PRO:HG3	23:p:1002:PHE:CD1	2.35	0.61
1:A:569:ASN:ND2	2:B:689:GLN:HA	2.16	0.61
10:L:102:LEU:HD11	10:L:119:HIS:ND1	2.15	0.61
4:E:466:PHE:CE2	5:F:131:LEU:HD13	2.34	0.61
5:F:85:GLY:C	9:J:212:LYS:CG	2.74	0.61
15:S:116:GLY:HA2	23:p:356:PHE:HD1	1.64	0.61
23:p:803:ARG:NH1	30:x:8:PHE:O	2.33	0.61
14:R:48:VAL:O	14:R:48:VAL:HG13	2.01	0.61
16:T:20:LEU:O	16:T:114:ALA:N	2.34	0.61
7:H:193:PHE:CZ	5:f:230:ALA:HB2	2.29	0.61
15:S:44:GLN:NE2	15:S:103:ASN:O	2.27	0.61
23:p:961:ILE:HD12	30:x:43:TYR:CE1	2.36	0.61
1:A:475:LEU:HD23	5:f:354:ARG:NH2	2.15	0.61
1:A:1166:LYS:HG3	6:G:181:TRP:HA	1.79	0.61
2:B:203:LYS:HD3	2:B:237:MET:HE3	1.83	0.61
3:D:943:GLN:CG	4:E:510:ALA:CB	2.46	0.61
7:H:93:ILE:HD11	9:J:144:PHE:CZ	2.36	0.61
17:X:-33:DG:H2''	17:X:-32:DC:C5	2.35	0.61
10:l:76:LEU:HD13	10:l:84:LEU:CD1	2.30	0.61
22:o:1430:CYS:O	22:o:1435:THR:HG22	2.01	0.61
23:p:961:ILE:HD13	30:x:43:TYR:CD1	2.35	0.61
7:H:192:ARG:NH1	7:H:209:SER:O	2.34	0.61
11:O:18:SER:CB	13:Q:45:LEU:HD12	2.30	0.61
13:Q:56:VAL:HG12	13:Q:57:ASP:N	2.16	0.61
4:E:280:ARG:HD3	8:I:26:MET:SD	2.41	0.60
13:Q:47:GLU:OE2	13:Q:60:HIS:NE2	2.27	0.60
5:f:330:ARG:HH22	5:f:371:THR:HB	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:136:GLN:HG3	22:o:139:LYS:HB3	1.83	0.60
23:p:407:MET:HE1	23:p:444:LEU:HG	1.81	0.60
33:u:167:TYR:O	33:u:167:TYR:CG	2.53	0.60
3:D:1000:ARG:NE	11:O:5:LEU:HD12	2.15	0.60
4:E:776:LYS:HB2	5:F:149:PRO:HD3	1.83	0.60
7:H:189:ALA:CB	5:f:249:ASP:OD2	2.49	0.60
3:d:1082:ALA:CB	10:l:83:MET:HE2	2.32	0.60
22:o:108:ARG:NH2	22:o:191:ILE:O	2.33	0.60
22:o:1175:ILE:HB	29:w:54:TYR:HB3	1.81	0.60
23:p:856:PRO:O	32:z:48:ARG:HG3	2.02	0.60
1:A:349:TRP:CZ2	5:f:266:GLY:CA	2.84	0.60
1:A:638:PRO:HG3	6:G:36:HIS:O	2.01	0.60
11:O:22:LEU:HD13	11:O:28:ILE:CG2	2.28	0.60
13:Q:26:ARG:NH2	13:Q:39:LEU:CD2	2.65	0.60
14:R:111:ASP:CG	14:R:114:MET:HB2	2.25	0.60
16:T:20:LEU:N	16:T:112:GLN:O	2.28	0.60
18:Y:16:DC:OP2	18:Y:16:DC:H6	1.85	0.60
22:o:125:LYS:O	22:o:129:ILE:HG12	2.00	0.60
22:o:687:ILE:HG22	23:p:969:PRO:CA	2.13	0.60
23:p:590:LEU:HB3	23:p:597:ILE:HD11	1.84	0.60
1:A:996:ARG:NE	17:X:2:DG:C5'	2.64	0.60
5:F:335:ARG:NE	5:F:382:GLU:OE1	2.33	0.60
13:Q:324:GLU:CD	13:Q:324:GLU:H	2.10	0.60
22:o:341:GLN:HA	22:o:344:LYS:HE3	1.82	0.60
22:o:687:ILE:CG2	23:p:969:PRO:HA	2.31	0.60
1:A:957:THR:O	6:G:149:ARG:N	2.34	0.60
4:E:501:PRO:HD3	7:H:149:HIS:CB	2.32	0.60
14:R:39:LEU:HD12	22:o:427:ILE:CG2	2.24	0.60
15:S:47:LEU:HD22	16:T:7:LEU:HD22	1.84	0.60
22:o:330:GLN:HE22	22:o:336:LEU:HD11	1.65	0.60
1:A:1168:TYR:C	1:A:1169:ARG:HG2	2.27	0.60
3:D:881:ARG:HD3	10:L:57:VAL:HG13	1.83	0.60
3:D:1000:ARG:HG3	11:O:5:LEU:O	2.02	0.60
3:D:1085:LYS:NZ	10:L:83:MET:CE	2.65	0.60
5:F:309:MET:CE	5:F:355:ILE:HG21	2.31	0.60
8:I:132:LEU:CG	9:J:121:MET:CE	2.80	0.60
12:P:249:LYS:N	13:Q:314:LEU:HD11	2.16	0.60
22:o:853:LYS:NZ	22:o:1102:MET:O	2.30	0.60
29:w:35:LEU:HD12	29:w:51:SER:HA	1.83	0.60
22:o:717:ILE:HD11	22:o:815:TYR:HB3	1.82	0.60
23:p:111:ASN:HD21	23:p:742:VAL:HG11	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:565:THR:HG21	23:p:580:PRO:HG3	1.84	0.60
1:A:869:ARG:HH21	2:B:582:GLU:CG	2.00	0.60
1:A:958:GLY:HA3	6:G:149:ARG:CB	2.32	0.60
5:F:68:THR:O	8:I:38:GLN:NE2	2.34	0.60
7:H:102:PHE:HZ	9:J:158:ALA:HA	1.65	0.60
23:p:1033:THR:O	24:q:28:LEU:HD21	2.01	0.60
24:q:44:ILE:HD12	24:q:178:PRO:HB3	1.84	0.60
1:A:854:ARG:CD	17:X:31:DC:OP1	2.50	0.60
5:F:323:VAL:O	5:F:323:VAL:HG22	2.00	0.60
15:S:153:ARG:O	15:S:153:ARG:HG2	2.02	0.60
21:m:31:LEU:HD23	21:m:31:LEU:N	2.16	0.60
22:o:930:LEU:HG	22:o:939:VAL:HG23	1.83	0.60
23:p:908:MET:HB2	32:z:45:TYR:HE1	1.66	0.60
25:r:16:ASP:HB3	25:r:19:GLN:HG2	1.83	0.60
5:F:86:PHE:CB	9:J:211:VAL:HA	2.31	0.60
12:P:250:PHE:HB2	13:Q:314:LEU:HD21	1.80	0.60
23:p:985:LEU:CD1	23:p:1015:LEU:HD23	2.32	0.60
24:q:9:VAL:HG11	31:y:105:PHE:CD1	2.37	0.60
1:A:657:SER:CB	2:B:475:LYS:HZ3	2.08	0.59
4:E:696:TRP:CE3	4:E:703:MET:HB3	2.37	0.59
5:F:392:ILE:O	5:F:393:LEU:C	2.45	0.59
23:p:692:THR:OG1	29:w:76:PRO:HA	2.02	0.59
1:A:1023:TRP:HE3	17:X:2:DG:P	2.24	0.59
3:D:946:PHE:CE2	4:E:513:LEU:O	2.55	0.59
15:S:126:ILE:N	15:S:138:PHE:O	2.23	0.59
18:Y:23:DC:OP2	18:Y:23:DC:C6	2.56	0.59
22:o:1005:HIS:CD2	22:o:1007:ILE:HG12	2.36	0.59
23:p:803:ARG:C	30:x:8:PHE:CD1	2.80	0.59
3:D:871:THR:HG22	10:L:66:LEU:HD13	1.84	0.59
5:F:67:THR:HB	8:I:32:GLU:CD	2.27	0.59
10:L:106:ARG:NH2	10:L:118:LEU:HD11	2.17	0.59
14:R:114:MET:HE2	14:R:146:TYR:HB2	1.83	0.59
24:q:154:ARG:HD3	30:x:64:PRO:HD3	1.83	0.59
2:B:431:LEU:C	2:B:431:LEU:HD23	2.27	0.59
3:D:916:LYS:HE2	3:D:1066:CYS:SG	2.41	0.59
7:H:73:GLY:HA3	9:J:142:ALA:CB	2.31	0.59
18:Y:24:DT:OP2	18:Y:24:DT:C6	2.55	0.59
19:c:67:GLY:CA	9:j:116:LEU:HD13	2.33	0.59
1:A:467:ILE:HG13	5:F:221:GLN:HE21	1.66	0.59
1:A:575:PRO:CD	2:B:608:ASN:HB2	2.33	0.59
3:D:999:MET:CE	11:O:71:VAL:O	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1000:ARG:CD	11:O:5:LEU:HD12	2.32	0.59
4:E:474:THR:OG1	4:E:546:VAL:O	2.19	0.59
5:F:359:PHE:HB3	5:F:380:LEU:HG	1.83	0.59
7:H:193:PHE:CD1	5:f:242:ALA:HA	2.37	0.59
22:o:511:THR:HG22	23:p:1101:GLN:HB3	1.84	0.59
7:H:193:PHE:CE2	5:f:226:GLU:C	2.80	0.59
11:O:66:ARG:NH2	12:P:185:LEU:O	2.35	0.59
17:X:-36:DG:H5"	17:X:-36:DG:N3	2.17	0.59
19:c:99:PHE:HB2	19:c:100:PRO:HD3	1.83	0.59
4:e:562:SER:OG	4:e:564:ASP:OD1	2.21	0.59
22:o:554:PHE:HB3	22:o:585:LEU:HD23	1.85	0.59
22:o:1184:THR:HG21	22:o:1190:GLN:HB2	1.85	0.59
3:D:1009:LEU:HD12	3:D:1009:LEU:H	1.68	0.59
7:H:193:PHE:CZ	5:f:227:ILE:HD13	2.38	0.59
22:o:552:ASP:HB3	28:v:25:VAL:CG2	2.33	0.59
14:R:36:GLU:C	22:o:433:PRO:HD3	2.27	0.59
22:o:763:TYR:OH	28:v:23:ASP:OD2	2.13	0.59
11:O:58:PHE:CG	11:O:81:PHE:CD2	2.91	0.59
5:f:349:ASN:HB3	5:f:351:ILE:HG13	1.84	0.59
22:o:1257:LEU:HD12	22:o:1259:ILE:HD11	1.85	0.59
2:B:838:ASN:CG	7:H:213:LEU:CD2	2.76	0.59
5:F:312:ILE:HG13	5:F:334:ALA:CB	2.33	0.59
11:O:22:LEU:O	11:O:28:ILE:O	2.21	0.59
14:R:126:ASP:HB2	23:p:438:ARG:HH12	1.66	0.59
23:p:986:GLN:HA	23:p:1011:ILE:HG21	1.84	0.59
1:A:342:ARG:HB2	1:A:497:PRO:CG	2.31	0.58
3:D:1006:LEU:CG	13:Q:328:LEU:CD1	2.81	0.58
4:E:586:TYR:HB3	4:E:605:HIS:HB3	1.85	0.58
7:H:118:VAL:HG21	9:J:127:THR:HG21	1.82	0.58
22:o:15:LEU:HA	23:p:1148:LEU:H	1.68	0.58
22:o:1230:GLN:HA	22:o:1233:GLU:CD	2.28	0.58
23:p:1023:ARG:C	23:p:1025:ASN:N	2.58	0.58
25:r:63:LYS:HE3	33:u:103:PRO:N	2.18	0.58
1:A:1063:LYS:HD3	1:A:1063:LYS:C	2.29	0.58
4:E:347:ARG:NH2	4:E:362:GLU:OE2	2.36	0.58
4:E:449:LYS:CG	7:H:144:PRO:HB2	2.33	0.58
5:F:114:LEU:HB2	7:H:52:SER:N	2.18	0.58
7:H:190:LEU:N	5:f:223:TYR:CD1	2.71	0.58
7:H:193:PHE:CE2	5:f:227:ILE:HD13	2.38	0.58
11:O:18:SER:OG	13:Q:45:LEU:HB3	2.03	0.58
12:P:248:ALA:HB3	13:Q:314:LEU:HD12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:T:12:ALA:HA	16:T:109:ILE:HD11	1.85	0.58
17:X:-19:DG:C6	18:Y:19:DC:C2	2.91	0.58
23:p:692:THR:O	29:w:76:PRO:HB2	2.03	0.58
1:A:635:SER:HB3	6:G:40:LYS:O	2.03	0.58
1:A:658:GLY:HA3	2:B:475:LYS:HG2	1.84	0.58
2:B:431:LEU:H	2:B:431:LEU:CD2	2.16	0.58
2:B:769:LYS:O	2:B:769:LYS:HG3	2.03	0.58
2:B:819:LEU:HD13	7:H:204:PHE:CD1	2.38	0.58
14:R:281:ALA:N	18:Y:33:DC:OP2	2.36	0.58
22:o:466:LYS:HE3	23:p:1097:HIS:HA	1.85	0.58
23:p:903:ILE:CD1	32:z:55:PHE:HE1	2.16	0.58
23:p:1040:GLN:HE22	24:q:198:PRO:HD3	1.67	0.58
1:A:463:PRO:HG2	5:F:221:GLN:CB	2.15	0.58
1:A:1157:ASN:O	1:A:1159:SER:N	2.35	0.58
19:c:12:VAL:HG23	5:f:118:ILE:HA	1.86	0.58
22:o:1129:ASN:ND2	22:o:1415:THR:HB	2.18	0.58
1:A:620:LEU:HD12	6:G:14:SER:OG	2.03	0.58
5:F:207:ARG:HD2	5:F:207:ARG:N	2.18	0.58
7:H:190:LEU:HD22	5:f:219:GLU:O	2.02	0.58
11:O:28:ILE:HG22	13:Q:38:VAL:HG11	1.82	0.58
11:O:76:LEU:HB3	11:O:79:VAL:CG2	2.31	0.58
22:o:577:PRO:HG3	22:o:584:PRO:HB3	1.86	0.58
23:p:124:LEU:HD22	23:p:152:ILE:HD11	1.85	0.58
1:A:929:THR:HG22	1:A:954:ALA:HA	1.86	0.58
7:H:171:ASP:HB3	7:H:174:VAL:HG12	1.86	0.58
16:T:22:LYS:HB2	16:T:115:GLU:HG2	1.84	0.58
17:X:-31:DC:O2	18:Y:32:DG:N2	2.37	0.58
18:Y:24:DT:H6	18:Y:25:DT:H72	1.65	0.58
19:c:21:LEU:HD12	19:c:21:LEU:C	2.29	0.58
22:o:1177:TYR:CG	29:w:35:LEU:HD21	2.38	0.58
23:p:820:LYS:HE3	23:p:826:GLU:HB2	1.85	0.58
25:r:132:ASP:HA	25:r:135:GLN:HG2	1.85	0.58
33:u:55:GLY:HA3	33:u:69:PRO:HG2	1.86	0.58
1:A:958:GLY:HA3	6:G:149:ARG:HB3	1.86	0.58
7:H:40:VAL:HG11	9:J:130:ILE:HG12	1.84	0.58
10:L:101:GLN:O	10:L:105:HIS:CG	2.52	0.58
15:S:109:LYS:HD2	15:S:149:LEU:HD22	1.84	0.58
22:o:18:ILE:HB	22:o:1462:GLN:HE22	1.68	0.58
22:o:827:TYR:HE2	23:p:976:MET:CE	2.16	0.58
23:p:754:PRO:O	30:x:53:VAL:HG12	2.02	0.58
23:p:802:ASP:CB	24:q:174:ALA:HB3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:1027:VAL:HG21	24:q:197:TYR:HE1	1.69	0.58
3:D:881:ARG:HH21	10:L:57:VAL:CB	1.98	0.58
3:D:1007:THR:N	13:Q:330:ASP:OD1	2.28	0.58
5:F:320:ARG:N	5:F:321:PRO:HD2	2.19	0.58
10:L:102:LEU:CG	10:L:119:HIS:HE1	1.97	0.58
13:Q:15:ARG:HH21	13:Q:58:GLY:CA	2.15	0.58
8:i:60:HIS:NE2	10:l:106:ARG:NE	2.50	0.58
2:B:489:GLN:OE1	2:B:489:GLN:N	2.34	0.58
12:P:227:GLU:OE1	12:P:227:GLU:N	2.37	0.58
15:S:31:PHE:HB2	16:T:92:THR:HB	1.86	0.58
4:e:484:LEU:HD21	4:e:504:LEU:HD21	1.86	0.58
22:o:1242:ASP:HA	22:o:1262:MET:HE2	1.86	0.58
1:A:470:ILE:O	1:A:470:ILE:HG22	2.02	0.58
1:A:567:LEU:HD22	2:B:745:GLN:NE2	2.19	0.58
1:A:996:ARG:HA	1:A:1026:ILE:HD13	1.85	0.58
3:D:917:ILE:HG13	3:D:1058:VAL:HG21	1.86	0.58
11:O:22:LEU:C	11:O:28:ILE:H	2.10	0.58
15:S:112:GLY:HA2	15:S:145:ASN:O	2.04	0.58
5:F:329:LEU:HA	5:F:332:PHE:CB	2.30	0.57
14:R:295:ARG:HG2	14:R:299:LEU:HG	1.86	0.57
25:r:78:GLU:HA	25:r:81:ALA:HB3	1.85	0.57
11:O:21:GLU:OE2	13:Q:45:LEU:CD2	2.52	0.57
14:R:289:TYR:OH	14:R:314:PRO:O	2.17	0.57
23:p:387:HIS:NE2	23:p:671:GLU:OE2	2.35	0.57
33:u:38:CYS:CA	33:u:155:ASN:OD1	2.52	0.57
2:B:560:TYR:CD2	2:B:581:ILE:HD11	2.39	0.57
3:D:950:LEU:CD2	4:E:518:LYS:CD	2.82	0.57
4:E:615:ASP:OD2	8:I:114:ARG:CG	2.51	0.57
5:F:66:LEU:HD22	8:I:28:ILE:HD13	1.85	0.57
4:E:615:ASP:CG	8:I:114:ARG:CB	2.56	0.57
22:o:460:ARG:HG2	22:o:461:GLN:H	1.69	0.57
25:r:130:ILE:HA	25:r:133:ASP:HB2	1.86	0.57
1:A:567:LEU:HD22	2:B:745:GLN:HE21	1.69	0.57
3:D:1000:ARG:HG2	3:D:1000:ARG:HH11	1.68	0.57
5:F:276:LEU:HD22	5:F:323:VAL:HG21	1.86	0.57
22:o:1030:SER:HB2	26:s:162:ARG:NE	2.20	0.57
25:r:63:LYS:HZ3	33:u:103:PRO:CB	2.14	0.57
28:v:27:ARG:HD2	28:v:40:ILE:HG23	1.86	0.57
3:D:1009:LEU:CD1	3:D:1009:LEU:H	2.17	0.57
5:F:80:VAL:HG12	8:I:45:ARG:HH12	1.69	0.57
3:d:909:ARG:CZ	10:l:91:PHE:CE1	2.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:219:GLU:OE1	5:f:219:GLU:N	2.26	0.57
1:A:463:PRO:HB2	5:F:221:GLN:HG2	1.86	0.57
1:A:636:VAL:HG21	6:G:43:LEU:HD23	1.86	0.57
1:A:692:MET:HE3	6:G:87:LYS:HB2	1.87	0.57
22:o:358:ARG:HB3	23:p:1073:GLN:HE21	1.70	0.57
22:o:759:SER:O	22:o:759:SER:OG	2.19	0.57
23:p:924:ARG:CZ	24:q:60:HIS:HB2	2.34	0.57
23:p:1036:LYS:HB3	24:q:195:THR:CG2	2.35	0.57
24:q:31:ALA:O	24:q:231:TYR:OH	2.23	0.57
26:s:11:TRP:NE1	26:s:35:GLN:O	2.33	0.57
22:o:17:THR:HG22	22:o:18:ILE:H	1.68	0.57
1:A:401:ASN:H	1:A:401:ASN:HD22	1.53	0.57
3:D:934:TYR:CD1	8:I:129:LEU:HD23	2.39	0.57
4:E:315:GLN:NE2	15:S:105:LYS:NZ	2.51	0.57
22:o:634:GLU:OE2	28:v:95:LYS:HE2	2.04	0.57
22:o:1172:ASN:HD22	29:w:57:LYS:CE	2.17	0.57
23:p:803:ARG:NH1	30:x:8:PHE:C	2.58	0.57
25:r:128:GLN:O	25:r:132:ASP:N	2.34	0.57
1:A:681:ALA:O	6:G:75:GLU:HG2	2.04	0.57
5:F:38:LEU:HD21	8:I:72:ARG:CG	2.35	0.57
7:H:108:PRO:HA	9:J:119:PHE:CZ	2.40	0.57
13:Q:29:PHE:HD2	13:Q:34:VAL:HG11	1.69	0.57
14:R:45:VAL:O	23:p:1069:ILE:HD11	2.03	0.57
14:R:214:PHE:HB3	14:R:218:PHE:CE2	2.40	0.57
3:d:917:ILE:HD11	3:d:1063:LEU:HD13	1.87	0.57
5:f:320:ARG:CB	5:f:320:ARG:HH11	2.18	0.57
26:s:100:THR:HG23	26:s:125:TYR:H	1.70	0.57
1:A:958:GLY:CA	6:G:149:ARG:HB3	2.34	0.56
3:D:954:GLU:HA	3:D:957:ARG:HD2	1.87	0.56
5:F:87:HIS:H	9:J:212:LYS:NZ	2.02	0.56
8:I:132:LEU:HG	9:J:121:MET:SD	2.45	0.56
22:o:621:ILE:CG1	28:v:115:TYR:CE2	2.80	0.56
23:p:989:VAL:HG13	23:p:1018:TYR:CE2	2.31	0.56
23:p:1027:VAL:HG21	24:q:197:TYR:CE1	2.40	0.56
5:F:320:ARG:CB	5:F:415:ILE:HD12	2.35	0.56
22:o:1030:SER:HB2	26:s:162:ARG:HE	1.69	0.56
3:D:950:LEU:HD22	4:E:518:LYS:CD	2.35	0.56
5:F:219:GLU:CD	7:H:156:PRO:HB2	2.30	0.56
10:L:102:LEU:CG	10:L:119:HIS:NE2	2.62	0.56
13:Q:55:ALA:C	13:Q:56:VAL:HG23	2.30	0.56
15:S:127:PHE:HB2	16:T:19:TRP:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:46:THR:HG22	22:o:57:LEU:HB2	1.87	0.56
22:o:1389:ASP:OD1	22:o:1389:ASP:N	2.38	0.56
23:p:625:LEU:HD13	23:p:675:LEU:HD21	1.88	0.56
29:w:105:GLU:HG2	29:w:106:ASP:N	2.19	0.56
1:A:463:PRO:HG3	5:F:222:LEU:N	2.19	0.56
1:A:601:PRO:HB3	6:G:10:HIS:O	2.06	0.56
4:E:308:ARG:HH11	4:E:362:GLU:HG2	1.69	0.56
4:E:742:LYS:HA	4:E:745:GLU:HG2	1.86	0.56
7:H:69:ILE:CG2	9:J:138:TYR:HB2	2.35	0.56
11:O:47:ALA:O	11:O:51:ARG:CB	2.54	0.56
22:o:1150:ASP:OD2	22:o:1153:ARG:NH1	2.39	0.56
1:A:1023:TRP:CE3	17:X:2:DG:P	2.98	0.56
14:R:169:ARG:NH1	14:R:207:ASP:O	2.37	0.56
15:S:126:ILE:O	15:S:138:PHE:N	2.35	0.56
23:p:313:GLU:OE2	23:p:316:VAL:N	2.36	0.56
23:p:677:MET:H	23:p:682:LEU:HD12	1.69	0.56
23:p:851:ASP:CA	32:z:15:MET:HE1	2.36	0.56
23:p:1046:THR:HG22	23:p:1047:TYR:H	1.70	0.56
5:F:312:ILE:HG13	5:F:334:ALA:HB3	1.88	0.56
7:H:193:PHE:HE1	5:f:242:ALA:CB	1.96	0.56
22:o:756:ALA:CB	22:o:786:ALA:HB2	2.31	0.56
23:p:627:ILE:HD11	23:p:663:GLU:HB2	1.88	0.56
1:A:355:VAL:CG2	1:A:355:VAL:O	2.54	0.56
1:A:402:PHE:HA	1:A:407:GLN:NE2	2.20	0.56
1:A:696:MET:O	6:G:86:TYR:HA	2.06	0.56
5:F:265:GLU:OE2	5:F:265:GLU:HA	2.06	0.56
5:F:320:ARG:HB2	5:F:415:ILE:HD12	1.87	0.56
10:L:80:VAL:O	10:L:84:LEU:HG	2.06	0.56
11:O:32:LEU:O	11:O:36:VAL:HG23	2.05	0.56
18:Y:37:DC:H2'	18:Y:38:DT:C7	2.35	0.56
22:o:1218:ARG:HA	22:o:1221:MET:HB2	1.88	0.56
25:r:33:LEU:HD13	25:r:101:ALA:HB1	1.87	0.56
2:B:259:ASP:HB3	2:B:262:MET:O	2.06	0.56
4:E:788:ARG:HB2	7:H:145:HIS:O	2.06	0.56
14:R:134:ILE:HD11	23:p:101:ARG:O	2.05	0.56
23:p:685:LYS:NZ	23:p:686:GLU:O	2.38	0.56
1:A:488:ALA:HB1	5:f:271:VAL:CG2	2.33	0.56
3:D:953:ILE:HG21	4:E:519:GLU:HG2	1.87	0.56
3:D:1006:LEU:HD22	13:Q:328:LEU:CG	2.28	0.56
22:o:85:PHE:HZ	23:p:1164:SER:OG	1.84	0.56
22:o:1177:TYR:CE2	29:w:35:LEU:HG	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:100:GLU:HG2	32:z:42:ARG:HH12	1.71	0.56
1:A:568:SER:HB2	2:B:389:ASN:HB2	1.88	0.56
2:B:61:ASN:O	2:B:130:VAL:HG23	2.06	0.56
11:O:82:ARG:HB2	11:O:87:LEU:HD13	1.88	0.56
12:P:250:PHE:H	13:Q:311:GLU:C	2.14	0.56
5:f:280:ILE:O	5:f:284:ARG:HG3	2.05	0.56
1:A:567:LEU:CD2	2:B:745:GLN:HE21	2.19	0.55
7:H:110:TYR:CE2	9:J:160:GLN:HB3	2.41	0.55
23:p:282:ARG:NH1	29:w:16:PHE:CG	2.74	0.55
1:A:1167:ILE:HA	6:G:179:THR:HG23	1.87	0.55
4:E:788:ARG:HB3	7:H:145:HIS:CB	2.36	0.55
5:F:114:LEU:HB2	7:H:52:SER:H	1.71	0.55
11:O:25:SER:C	11:O:27:GLN:N	2.64	0.55
12:P:192:TYR:HB2	12:P:200:VAL:HG22	1.88	0.55
14:R:173:VAL:HG11	23:p:102:ASP:HB3	1.88	0.55
4:e:636:HIS:HD2	4:e:638:ASN:H	1.53	0.55
22:o:479:TRP:NE1	31:y:67:LEU:HD11	2.21	0.55
22:o:1101:GLN:NE2	22:o:1389:ASP:OD2	2.39	0.55
22:o:1139:LEU:HD12	22:o:1139:LEU:O	2.06	0.55
23:p:803:ARG:CB	30:x:8:PHE:HD1	2.18	0.55
1:A:638:PRO:CB	6:G:39:LEU:HD23	2.37	0.55
5:F:276:LEU:HD13	5:F:323:VAL:HG11	1.87	0.55
5:F:406:VAL:HG11	5:F:420:ALA:HB2	1.88	0.55
7:H:190:LEU:CD2	5:f:223:TYR:HB2	2.33	0.55
12:P:253:PHE:CD2	12:P:253:PHE:O	2.59	0.55
14:R:111:ASP:O	14:R:115:MET:CB	2.55	0.55
22:o:1177:TYR:HB3	29:w:35:LEU:HD11	1.86	0.55
22:o:1418:GLY:HA2	22:o:1421:ARG:HE	1.71	0.55
1:A:486:TRP:CD2	1:A:486:TRP:N	2.73	0.55
1:A:511:LEU:HD22	1:A:511:LEU:N	2.19	0.55
3:D:1000:ARG:HH11	3:D:1000:ARG:CB	2.19	0.55
5:F:35:THR:OG1	8:I:68:ALA:HB2	2.06	0.55
11:O:90:VAL:HG22	11:O:92:LYS:H	1.71	0.55
22:o:1177:TYR:CD2	29:w:35:LEU:CG	2.85	0.55
23:p:803:ARG:NE	30:x:11:GLY:HA2	2.21	0.55
26:s:189:GLN:O	26:s:209:VAL:HG12	2.07	0.55
33:u:67:LEU:HD12	33:u:67:LEU:O	2.07	0.55
3:D:1071:ARG:HH21	5:F:80:VAL:HA	1.69	0.55
4:E:788:ARG:HB3	7:H:145:HIS:CA	2.36	0.55
7:H:196:LYS:HD3	5:f:241:GLU:OE1	2.06	0.55
14:R:44:ARG:HB3	23:p:1067:ILE:CG1	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:R:114:MET:HE2	14:R:146:TYR:CB	2.36	0.55
16:T:31:TRP:CD1	16:T:62:LEU:HD21	2.41	0.55
1:A:464:TRP:HA	5:F:218:VAL:HG21	1.87	0.55
7:H:47:GLU:OE1	7:H:113:ARG:NH2	2.40	0.55
12:P:188:ARG:CD	13:Q:322:ASP:OD1	2.55	0.55
14:R:214:PHE:O	14:R:218:PHE:HD2	1.89	0.55
22:o:139:LYS:HA	22:o:142:THR:HG22	1.89	0.55
22:o:1229:GLU:OE1	22:o:1229:GLU:N	2.38	0.55
23:p:570:ASN:ND2	23:p:616:THR:OG1	2.39	0.55
1:A:341:TRP:C	1:A:497:PRO:HB3	2.32	0.55
1:A:410:TRP:HH2	5:F:355:ILE:CG2	2.19	0.55
2:B:158:GLY:HA2	2:B:188:PHE:HB3	1.88	0.55
7:H:50:PHE:CZ	9:J:195:LEU:HB2	2.42	0.55
14:R:36:GLU:O	22:o:433:PRO:CD	2.54	0.55
18:Y:21:DC:OP2	18:Y:21:DC:C6	2.54	0.55
5:f:352:GLN:O	5:f:356:THR:OG1	2.25	0.55
22:o:479:TRP:HE1	31:y:67:LEU:HD11	1.71	0.55
23:p:1035:ARG:HA	24:q:186:TYR:OH	2.07	0.55
23:p:1136:GLU:HG2	23:p:1143:LYS:HE3	1.89	0.55
26:s:56:THR:HG22	26:s:57:ASP:H	1.71	0.55
2:B:159:LEU:HD23	2:B:159:LEU:N	2.17	0.55
5:F:85:GLY:HA2	9:J:212:LYS:HB2	1.88	0.55
5:F:102:ARG:HB2	5:F:104:LEU:HD21	1.87	0.55
15:S:8:SER:O	16:T:48:THR:CA	2.54	0.55
4:e:610:ARG:HD3	4:e:619:PRO:HG3	1.89	0.55
22:o:94:VAL:HG11	22:o:314:VAL:HG21	1.88	0.55
22:o:331:LYS:O	22:o:334:ARG:N	2.35	0.55
24:q:74:THR:HG23	24:q:128:ILE:O	2.07	0.55
1:A:573:TYR:CD1	2:B:657:ARG:NH1	2.75	0.55
1:A:1190:VAL:HA	6:G:166:VAL:HG22	1.88	0.55
5:f:223:TYR:HD2	5:f:255:MET:HE1	1.71	0.55
5:f:253:TYR:O	5:f:254:GLN:HB3	2.06	0.55
23:p:1040:GLN:OE1	24:q:198:PRO:CD	2.55	0.55
4:E:561:SER:HB2	4:E:588:VAL:HB	1.88	0.55
14:R:13:VAL:HG22	14:R:13:VAL:O	2.07	0.55
22:o:101:VAL:O	22:o:104:MET:HG3	2.07	0.55
22:o:1375:ARG:NE	22:o:1403:ASP:OD1	2.40	0.55
23:p:357:CYS:HB2	23:p:360:LYS:HE2	1.88	0.55
1:A:851:ASP:OD1	1:A:851:ASP:N	2.37	0.54
4:E:280:ARG:C	8:I:26:MET:HE1	2.32	0.54
5:F:306:PRO:O	5:F:310:THR:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:S:110:PHE:CD1	15:S:148:PRO:HA	2.42	0.54
15:S:119:THR:HG22	15:S:123:SER:HA	1.89	0.54
24:q:7:PRO:CG	31:y:101:LEU:HD12	2.37	0.54
1:A:414:ILE:HG21	5:F:313:VAL:HG22	1.89	0.54
2:B:66:ASN:HD21	2:B:119:PRO:HB3	1.73	0.54
3:D:950:LEU:N	4:E:518:LYS:HD2	2.21	0.54
5:F:403:ILE:O	5:F:406:VAL:HG22	2.08	0.54
4:e:646:SER:OG	4:e:647:ALA:N	2.40	0.54
22:o:691:ASP:OD2	22:o:765:ASN:ND2	2.32	0.54
23:p:909:VAL:N	32:z:44:MET:O	2.29	0.54
1:A:575:PRO:CG	2:B:610:GLU:CG	2.77	0.54
2:B:820:ASP:OD1	2:B:820:ASP:N	2.37	0.54
3:D:901:TYR:CE2	10:L:120:LEU:CD1	2.88	0.54
5:F:307:ALA:O	5:F:310:THR:HG22	2.07	0.54
14:R:267:GLU:OE1	14:R:269:ARG:NH2	2.41	0.54
17:X:-19:DG:H2"	17:X:-18:DT:C6	2.42	0.54
22:o:12:ALA:HB3	23:p:1135:TYR:CE2	2.42	0.54
22:o:1205:ALA:O	22:o:1206:ARG:NE	2.38	0.54
23:p:629:GLU:OE1	23:p:630:LYS:N	2.40	0.54
23:p:803:ARG:NH2	30:x:10:CYS:O	2.40	0.54
23:p:851:ASP:OD1	32:z:15:MET:HE1	2.07	0.54
2:B:248:SER:OG	2:B:322:MET:SD	2.65	0.54
3:D:881:ARG:CD	10:L:57:VAL:CG1	2.86	0.54
4:E:563:GLU:HG2	4:E:587:PRO:HG3	1.90	0.54
5:F:99:GLY:CA	7:H:63:GLU:HG2	2.37	0.54
7:H:116:ARG:NH1	9:J:126:TYR:CE1	2.76	0.54
23:p:1040:GLN:CG	24:q:203:TRP:CH2	2.70	0.54
1:A:721:GLU:HB3	6:G:83:LYS:HE3	1.90	0.54
4:E:280:ARG:NE	8:I:25:ASP:O	2.41	0.54
5:F:38:LEU:CD2	8:I:72:ARG:HG3	2.37	0.54
7:H:36:THR:HG21	9:J:134:VAL:CG2	2.37	0.54
7:H:40:VAL:HG21	9:J:130:ILE:HG23	1.88	0.54
3:d:911:GLN:NE2	10:l:69:GLU:OE2	2.40	0.54
4:e:251:LEU:O	4:e:256:HIS:HB2	2.08	0.54
22:o:196:LEU:CD1	22:o:325:LEU:HD12	2.29	0.54
22:o:358:ARG:H	23:p:1073:GLN:HE21	1.55	0.54
22:o:365:THR:OG1	22:o:366:VAL:N	2.40	0.54
22:o:466:LYS:O	23:p:1097:HIS:CE1	2.61	0.54
23:p:985:LEU:HD11	23:p:1012:SER:HA	1.90	0.54
33:u:51:ILE:HG22	33:u:72:TYR:HB3	1.89	0.54
1:A:854:ARG:HD2	17:X:31:DC:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:704:VAL:HG13	4:E:761:LEU:HA	1.89	0.54
7:H:37:LEU:CD1	9:J:138:TYR:CE2	2.87	0.54
7:H:111:ALA:HA	9:J:157:LEU:HD21	1.88	0.54
22:o:196:LEU:HD22	22:o:312:PHE:HA	1.90	0.54
22:o:463:THR:OG1	23:p:1089:MET:C	2.51	0.54
24:q:36:ARG:HH12	31:y:40:HIS:HB2	1.73	0.54
25:r:60:VAL:CG2	33:u:44:PHE:CE1	2.84	0.54
1:A:395:ASP:OD1	1:A:395:ASP:N	2.41	0.54
2:B:544:LEU:HD23	2:B:590:ILE:HD11	1.88	0.54
4:E:280:ARG:CG	8:I:26:MET:SD	2.96	0.54
5:F:68:THR:HG21	8:I:34:ARG:HB3	1.89	0.54
7:H:194:MET:SD	5:f:226:GLU:OE2	2.66	0.54
12:P:188:ARG:NH1	13:Q:326:GLN:OE1	2.36	0.54
18:Y:32:DG:C2'	18:Y:33:DC:H5'	2.32	0.54
4:e:368:ASN:ND2	4:e:701:GLY:HA3	2.23	0.54
22:o:535:MET:O	22:o:669:TYR:OH	2.20	0.54
22:o:1365:ILE:HG23	22:o:1369:LEU:HD12	1.89	0.54
22:o:1435:THR:OG1	22:o:1436:VAL:N	2.38	0.54
1:A:350:TYR:CE2	1:A:497:PRO:HA	2.43	0.54
1:A:575:PRO:CD	2:B:608:ASN:ND2	2.47	0.54
5:F:320:ARG:CG	5:F:415:ILE:HD12	2.38	0.54
11:O:39:GLN:HG3	13:Q:25:VAL:HG12	1.89	0.54
22:o:77:ASN:ND2	22:o:80:GLU:OE2	2.41	0.54
5:F:55:LEU:HD13	8:I:28:ILE:HG12	1.90	0.54
7:H:107:LEU:HD11	9:J:157:LEU:HB3	1.90	0.54
7:H:185:ASP:HB3	5:f:251:GLY:H	1.67	0.54
11:O:25:SER:O	11:O:27:GLN:N	2.40	0.54
23:p:248:LYS:HD2	23:p:248:LYS:C	2.33	0.54
28:v:8:ASP:OD1	28:v:9:ILE:N	2.39	0.54
4:E:340:ASP:OD2	4:E:364:LYS:HA	2.08	0.54
5:F:257:PRO:O	5:F:261:THR:OG1	2.26	0.54
5:F:305:ILE:O	5:F:309:MET:HG2	2.08	0.54
5:F:418:ILE:HD12	5:F:418:ILE:N	2.20	0.54
6:G:162:VAL:O	6:G:166:VAL:HG23	2.07	0.54
7:H:118:VAL:CG2	9:J:127:THR:OG1	2.56	0.54
13:Q:26:ARG:NH2	13:Q:39:LEU:HD23	2.23	0.54
22:o:579:ILE:HG12	28:v:92:MET:SD	2.48	0.54
22:o:1101:GLN:HE22	22:o:1391:SER:HB2	1.73	0.54
23:p:113:ALA:HA	23:p:118:LEU:HB2	1.89	0.54
23:p:1007:ASN:HB2	23:p:1010:LYS:HG3	1.90	0.54
2:B:571:LEU:HD21	2:B:619:MET:HE1	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:308:ARG:HD3	4:E:362:GLU:HG2	1.88	0.53
5:F:335:ARG:HD2	5:F:382:GLU:HB2	1.90	0.53
7:H:73:GLY:C	9:J:142:ALA:HB1	2.32	0.53
11:O:88:ILE:HD13	13:Q:360:LEU:CB	2.14	0.53
12:P:188:ARG:HH11	13:Q:322:ASP:CG	2.10	0.53
12:P:250:PHE:C	13:Q:311:GLU:O	2.50	0.53
14:R:151:LEU:HD11	14:R:201:ALA:HB2	1.91	0.53
5:f:283:MET:HG3	5:f:329:LEU:HD11	1.90	0.53
22:o:76:GLY:HA2	22:o:80:GLU:HG2	1.90	0.53
22:o:1130:ILE:HD11	22:o:1405:MET:HE2	1.89	0.53
23:p:588:ARG:HB3	23:p:592:ARG:HH21	1.73	0.53
25:r:132:ASP:O	25:r:136:THR:OG1	2.14	0.53
3:D:871:THR:HG23	10:L:66:LEU:CG	2.33	0.53
5:F:241:GLU:OE1	7:H:135:THR:HA	2.08	0.53
7:H:190:LEU:CD1	5:f:223:TYR:HD1	2.21	0.53
11:O:14:SER:HB2	13:Q:46:TRP:HA	1.89	0.53
12:P:239:ARG:HH11	13:Q:320:VAL:HB	1.70	0.53
13:Q:43:LYS:NZ	13:Q:60:HIS:HE1	2.06	0.53
18:Y:32:DG:H2''	18:Y:33:DC:C5'	2.34	0.53
22:o:364:ARG:NH1	22:o:502:ASN:OD1	2.41	0.53
22:o:554:PHE:CZ	28:v:121:LEU:HD11	2.42	0.53
25:r:123:GLU:HG2	25:r:126:GLU:HB2	1.90	0.53
5:F:39:LEU:HD11	8:I:51:LEU:HD21	1.89	0.53
14:R:225:PRO:HG2	14:R:228:VAL:HG23	1.90	0.53
25:r:42:GLU:O	25:r:46:GLN:N	2.40	0.53
1:A:601:PRO:CG	6:G:10:HIS:CB	2.65	0.53
2:B:345:CYS:HA	2:B:348:GLN:HE21	1.73	0.53
2:B:808:PRO:HA	2:B:864:ASN:HB3	1.90	0.53
11:O:19:LEU:O	11:O:28:ILE:HD11	2.08	0.53
13:Q:15:ARG:NH2	13:Q:58:GLY:HA3	2.22	0.53
16:T:30:GLN:HG2	16:T:62:LEU:HG	1.89	0.53
22:o:381:PRO:HB3	22:o:480:SER:HA	1.90	0.53
22:o:1118:THR:HG22	22:o:1123:ARG:HB2	1.90	0.53
22:o:1474:LEU:HD11	27:t:107:ARG:CZ	2.38	0.53
23:p:1037:ILE:O	24:q:195:THR:OG1	2.25	0.53
25:r:100:LEU:HA	25:r:103:LEU:HB2	1.89	0.53
1:A:635:SER:CB	6:G:40:LYS:O	2.57	0.53
4:E:645:GLY:H	4:E:675:LEU:HD11	1.72	0.53
7:H:107:LEU:HD11	9:J:157:LEU:O	2.09	0.53
10:l:106:ARG:HD2	10:l:114:LYS:NZ	2.24	0.53
33:u:59:ILE:HG12	33:u:66:VAL:HG22	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:TYR:HE1	6:G:75:GLU:CG	2.21	0.53
2:B:735:ILE:HG21	7:H:176:ARG:NH1	2.24	0.53
10:L:76:LEU:HD13	10:L:84:LEU:HD12	1.91	0.53
15:S:46:ARG:HB2	15:S:101:ARG:HB2	1.91	0.53
22:o:539:GLN:HA	22:o:774:ALA:HB1	1.90	0.53
22:o:902:GLU:OE2	22:o:982:ASN:HB2	2.09	0.53
22:o:1177:TYR:CE1	22:o:1209:PRO:HB2	2.44	0.53
22:o:1374:VAL:HG11	22:o:1411:LEU:HD21	1.90	0.53
23:p:855:ALA:HB3	32:z:49:THR:CB	2.26	0.53
23:p:892:CYS:SG	23:p:893:SER:N	2.82	0.53
2:B:629:ARG:NH1	2:B:658:ASP:OD2	2.37	0.53
4:E:653:LEU:HB2	4:E:663:ARG:HB2	1.91	0.53
8:I:132:LEU:CG	9:J:121:MET:HE2	2.38	0.53
15:S:9:GLN:O	15:S:9:GLN:HG2	2.07	0.53
22:o:911:PRO:O	22:o:963:ARG:NH2	2.42	0.53
23:p:282:ARG:CG	29:w:21:ASN:HB3	2.38	0.53
23:p:933:ASP:OD2	23:p:1050:ARG:NH2	2.41	0.53
23:p:1040:GLN:HE21	24:q:197:TYR:HD1	1.55	0.53
9:J:130:ILE:HG13	9:J:160:GLN:HE21	1.74	0.53
11:O:18:SER:OG	13:Q:45:LEU:HB2	2.07	0.53
12:P:302:LEU:HD12	12:P:302:LEU:N	2.24	0.53
18:Y:24:DT:C5	18:Y:25:DT:C7	2.87	0.53
22:o:364:ARG:HH22	22:o:461:GLN:CD	2.17	0.53
22:o:1175:ILE:N	29:w:54:TYR:O	2.40	0.53
1:A:342:ARG:CA	1:A:497:PRO:HB3	2.39	0.53
5:F:87:HIS:CB	9:J:212:LYS:HZ3	2.18	0.53
5:F:87:HIS:O	9:J:210:ASN:HB2	2.09	0.53
11:O:78:ASP:HA	11:O:91:ASP:HA	1.91	0.53
14:R:46:ILE:HG23	14:R:46:ILE:O	2.09	0.53
16:T:94:THR:HG22	16:T:109:ILE:HG23	1.91	0.53
18:Y:23:DC:C5	18:Y:23:DC:OP2	2.62	0.53
19:c:33:LEU:HD13	9:j:197:MET:HE1	1.90	0.53
3:d:963:ARG:NH2	3:d:964:GLU:OE2	2.42	0.53
22:o:400:ASP:N	22:o:400:ASP:OD1	2.41	0.53
22:o:827:TYR:HB3	23:p:978:ILE:HD12	0.61	0.53
22:o:1176:TYR:CD1	29:w:52:CYS:HB3	2.44	0.53
22:o:1313:GLN:HA	22:o:1332:GLN:HE21	1.74	0.53
1:A:636:VAL:HG22	6:G:43:LEU:HB3	1.91	0.53
2:B:202:TRP:HB2	2:B:238:LEU:HB3	1.91	0.53
2:B:628:ILE:O	2:B:644:GLN:NE2	2.41	0.53
2:B:835:ARG:NH1	7:H:184:ARG:NH1	2.53	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:304:LYS:NZ	4:E:335:GLU:O	2.42	0.53
4:E:347:ARG:NH2	4:E:355:MET:SD	2.82	0.53
7:H:102:PHE:CZ	9:J:158:ALA:CA	2.91	0.53
7:H:190:LEU:CG	5:f:223:TYR:HB2	2.39	0.53
18:Y:18:DA:OP2	18:Y:18:DA:C8	2.58	0.53
5:f:390:THR:HG23	5:f:391:LEU:HD22	1.89	0.53
22:o:1192:TRP:HA	22:o:1195:VAL:HG22	1.91	0.53
25:r:132:ASP:OD1	25:r:135:GLN:NE2	2.41	0.53
32:z:36:CYS:SG	32:z:37:ARG:N	2.82	0.53
33:u:119:PHE:HB2	33:u:128:TYR:CE1	2.44	0.53
2:B:152:LEU:HD23	2:B:155:PRO:HB3	1.90	0.52
2:B:273:LEU:HD21	7:H:223:TYR:HD1	1.74	0.52
2:B:273:LEU:HD21	7:H:223:TYR:CD1	2.44	0.52
5:F:71:ILE:HD13	8:I:39:MET:HG3	1.90	0.52
7:H:189:ALA:O	5:f:223:TYR:HE1	1.91	0.52
15:S:153:ARG:HB3	29:w:41:ASN:OD1	2.01	0.52
18:Y:19:DC:H3'	18:Y:19:DC:P	2.49	0.52
1:A:740:LEU:HD22	1:A:1070:PHE:HZ	1.74	0.52
1:A:931:PRO:O	1:A:935:THR:OG1	2.25	0.52
3:D:881:ARG:HH22	10:L:57:VAL:HG22	0.54	0.52
3:D:881:ARG:NH1	10:L:89:ASP:CG	2.66	0.52
9:J:137:TYR:OH	9:J:141:ARG:NH2	2.42	0.52
4:e:423:PRO:HG2	4:e:426:ARG:HB2	1.91	0.52
10:l:106:ARG:HH12	10:l:114:LYS:CG	1.81	0.52
22:o:97:VAL:HA	22:o:100:LEU:HD23	1.91	0.52
22:o:364:ARG:HD2	23:p:1084:LEU:HD22	1.91	0.52
22:o:1343:LEU:HB3	22:o:1364:GLU:OE2	2.09	0.52
1:A:828:GLU:HA	1:A:831:LYS:HB2	1.92	0.52
5:F:118:ILE:HA	7:H:39:VAL:HG13	1.91	0.52
23:p:242:ARG:HB2	23:p:254:GLN:HE21	1.73	0.52
25:r:125:GLU:HA	25:r:128:GLN:HB3	1.90	0.52
1:A:999:SER:O	1:A:1001:LYS:N	2.41	0.52
1:A:1083:LEU:HB2	6:G:141:LYS:HB3	1.91	0.52
2:B:762:ASP:CG	2:B:766:LEU:O	2.52	0.52
4:E:324:LYS:HG2	4:E:327:ASN:HD22	1.74	0.52
4:E:562:SER:OG	4:E:564:ASP:OD1	2.28	0.52
17:X:-19:DG:H1	18:Y:19:DC:H5'	1.74	0.52
5:f:318:CYS:SG	5:f:326:HIS:HB3	2.49	0.52
22:o:1212:LEU:HB2	22:o:1285:LEU:HD21	1.90	0.52
22:o:1437:ASP:OD1	22:o:1437:ASP:N	2.41	0.52
1:A:875:GLU:CD	2:B:580:GLN:HE22	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:490:SER:C	2:B:492:MET:N	2.65	0.52
2:B:937:THR:HG23	2:B:939:ASN:H	1.74	0.52
4:E:423:PRO:HG2	4:E:426:ARG:HB2	1.92	0.52
5:F:309:MET:HE1	5:F:355:ILE:CG2	2.38	0.52
13:Q:314:LEU:O	13:Q:317:GLU:OE1	2.27	0.52
4:e:607:ARG:NH1	8:i:87:PRO:O	2.43	0.52
23:p:1007:ASN:H	23:p:1010:LYS:HD2	1.74	0.52
26:s:94:MET:HE2	26:s:125:TYR:HD2	1.75	0.52
1:A:472:ASN:ND2	5:f:302:HIS:ND1	2.58	0.52
3:D:1000:ARG:NH1	3:D:1000:ARG:HB2	2.24	0.52
4:E:696:TRP:CZ3	4:E:703:MET:HB3	2.45	0.52
9:J:128:PRO:HB2	9:J:160:GLN:HE22	1.75	0.52
15:S:48:GLU:O	15:S:99:LEU:N	2.38	0.52
17:X:-32:DC:O5'	17:X:-32:DC:H6	1.92	0.52
17:X:-31:DC:C2	18:Y:32:DG:N2	2.78	0.52
5:f:447:ALA:O	5:f:453:GLY:HA2	2.09	0.52
23:p:134:LYS:O	23:p:135:GLU:HG3	2.10	0.52
23:p:666:ASP:OD1	23:p:667:THR:N	2.36	0.52
23:p:1035:ARG:CZ	24:q:194:HIS:HA	2.40	0.52
23:p:1035:ARG:HG3	24:q:194:HIS:CG	2.44	0.52
26:s:26:TYR:HD1	26:s:64:HIS:HA	1.75	0.52
33:u:44:PHE:HD2	33:u:46:ILE:CG1	2.19	0.52
33:u:119:PHE:HB2	33:u:128:TYR:HE1	1.73	0.52
1:A:402:PHE:CE1	5:f:360:THR:HG21	2.44	0.52
1:A:466:SER:HA	5:F:221:GLN:NE2	2.20	0.52
2:B:844:PRO:HG3	7:H:225:THR:OG1	2.10	0.52
5:F:76:LYS:HG3	5:F:96:PHE:HB3	1.91	0.52
5:F:273:GLN:H	5:F:273:GLN:CD	2.17	0.52
7:H:196:LYS:HB3	5:f:241:GLU:CG	2.39	0.52
11:O:25:SER:OG	11:O:27:GLN:HB2	2.09	0.52
11:O:56:VAL:HG11	11:O:84:VAL:N	2.14	0.52
14:R:281:ALA:HB2	18:Y:33:DC:OP2	2.09	0.52
22:o:220:ARG:O	22:o:224:ILE:HG13	2.10	0.52
22:o:1288:ILE:O	22:o:1292:MET:HG2	2.10	0.52
22:o:1476:ASP:HB3	27:t:105:ILE:HD12	1.92	0.52
23:p:1026:GLU:C	24:q:203:TRP:CH2	2.88	0.52
2:B:66:ASN:OD1	2:B:187:ARG:NH1	2.43	0.52
3:D:914:VAL:CG1	10:L:70:VAL:HG11	2.35	0.52
3:D:1000:ARG:NH1	3:D:1000:ARG:CB	2.73	0.52
10:L:101:GLN:C	10:L:105:HIS:HD2	2.17	0.52
12:P:251:LEU:CA	13:Q:311:GLU:CG	2.86	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:18:ILE:O	13:Q:22:ILE:HG12	2.10	0.52
22:o:282:ASP:OD1	22:o:283:ILE:N	2.43	0.52
24:q:190:ASN:O	24:q:193:ARG:NH1	2.42	0.52
25:r:115:ILE:HD12	25:r:118:LEU:HD12	1.91	0.52
29:w:96:PHE:HD2	29:w:110:LEU:HD11	1.75	0.52
1:A:406:THR:C	5:F:354:ARG:HH22	2.17	0.52
1:A:573:TYR:O	2:B:657:ARG:HB3	2.10	0.52
1:A:1200:THR:C	1:A:1204:GLU:HG2	2.31	0.52
5:F:396:LEU:C	5:F:397:GLN:HG3	2.35	0.52
6:G:181:TRP:CE3	6:G:181:TRP:O	2.63	0.52
7:H:110:TYR:HD2	9:J:157:LEU:HD22	1.75	0.52
7:H:110:TYR:HH	9:J:160:GLN:HB3	1.73	0.52
11:O:10:THR:HG21	13:Q:50:LEU:HD21	1.62	0.52
11:O:57:ASN:O	11:O:57:ASN:ND2	2.42	0.52
22:o:364:ARG:HH22	22:o:461:GLN:NE2	2.08	0.52
22:o:1029:LEU:HD11	26:s:159:LEU:HD23	1.90	0.52
23:p:1007:ASN:O	23:p:1011:ILE:HG13	2.10	0.52
28:v:14:ASP:OD1	28:v:15:ILE:N	2.43	0.52
14:R:218:PHE:HD1	14:R:277:ILE:HG22	1.74	0.52
22:o:687:ILE:HG21	23:p:969:PRO:C	2.35	0.52
22:o:692:SER:O	22:o:692:SER:OG	2.24	0.52
22:o:1174:ALA:HA	29:w:54:TYR:O	2.10	0.52
25:r:125:GLU:O	25:r:129:GLN:N	2.39	0.52
1:A:573:TYR:HA	2:B:657:ARG:CD	2.16	0.51
5:F:395:ARG:O	5:F:397:GLN:N	2.39	0.51
22:o:16:ARG:HG3	23:p:1173:SER:HB2	1.92	0.51
22:o:191:ILE:HG12	22:o:200:ALA:HB2	1.93	0.51
22:o:631:GLU:HG3	22:o:992:LYS:HE3	1.91	0.51
22:o:769:MET:SD	23:p:970:HIS:CD2	3.03	0.51
33:u:86:ASP:OD1	33:u:143:ILE:O	2.28	0.51
3:D:1000:ARG:HH21	11:O:96:VAL:CG1	2.23	0.51
14:R:146:TYR:O	14:R:149:LYS:HG2	2.09	0.51
22:o:304:ALA:O	22:o:307:VAL:HG12	2.10	0.51
22:o:1124:LEU:O	22:o:1128:ILE:N	2.36	0.51
22:o:1485:GLU:CD	33:u:20:PRO:CG	2.83	0.51
1:A:1168:TYR:O	1:A:1169:ARG:HG2	2.10	0.51
2:B:983:ARG:NH1	2:B:983:ARG:HG3	2.25	0.51
18:Y:19:DC:OP2	18:Y:19:DC:H2'	2.10	0.51
4:e:500:THR:HG22	4:e:502:LYS:H	1.76	0.51
5:f:320:ARG:NH1	5:f:320:ARG:CB	2.73	0.51
22:o:349:ARG:HH12	23:p:1157:LEU:HD11	1.71	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:1155:LYS:HA	22:o:1309:MET:HE1	1.92	0.51
1:A:1168:TYR:CD1	6:G:180:ARG:HB3	2.46	0.51
4:e:595:PRO:HD2	4:e:639:SER:HB3	1.91	0.51
10:l:106:ARG:CD	10:l:114:LYS:NZ	2.74	0.51
23:p:1038:THR:HG23	24:q:196:VAL:CG2	2.38	0.51
2:B:90:THR:O	2:B:968:ARG:NH2	2.43	0.51
2:B:274:LEU:HG	2:B:278:LYS:HE2	1.93	0.51
3:D:933:ARG:NH1	9:J:117:VAL:HG21	2.26	0.51
4:E:347:ARG:NH1	4:E:362:GLU:OE2	2.41	0.51
7:H:186:VAL:HG11	5:f:220:GLN:OE1	2.10	0.51
11:O:5:LEU:HD23	11:O:6:TYR:CZ	2.46	0.51
12:P:235:ARG:HB3	13:Q:317:GLU:HG2	1.92	0.51
14:R:231:ALA:HA	14:R:301:PRO:HG3	1.93	0.51
4:e:269:GLY:O	8:i:97:ARG:NH2	2.43	0.51
22:o:1287:CYS:HB2	23:p:251:ALA:HB2	1.90	0.51
23:p:230:ARG:HB2	23:p:231:PRO:HD3	1.92	0.51
1:A:997:ARG:O	1:A:997:ARG:HG2	2.10	0.51
1:A:1167:ILE:HG22	1:A:1169:ARG:HD3	1.92	0.51
2:B:656:GLU:HG2	2:B:661:ALA:HB3	1.93	0.51
2:B:983:ARG:HG3	2:B:983:ARG:HH11	1.75	0.51
3:D:871:THR:HG23	10:L:66:LEU:HD11	1.89	0.51
3:D:898:VAL:CG2	10:L:113:VAL:HA	2.41	0.51
3:D:1000:ARG:HH11	3:D:1000:ARG:HB2	1.74	0.51
4:E:280:ARG:CB	8:I:26:MET:SD	2.98	0.51
9:J:139:LEU:HB3	9:J:144:PHE:HB3	1.93	0.51
13:Q:26:ARG:NH2	13:Q:39:LEU:HD21	2.24	0.51
23:p:952:GLU:OE1	24:q:36:ARG:HB3	2.11	0.51
23:p:1026:GLU:C	24:q:203:TRP:HH2	2.19	0.51
1:A:510:ILE:HB	1:A:511:LEU:HD13	1.92	0.51
2:B:529:VAL:HG11	2:B:560:TYR:HB2	1.91	0.51
4:E:746:ASP:OD1	4:E:746:ASP:N	2.29	0.51
5:F:388:ILE:O	5:F:392:ILE:HG12	2.10	0.51
13:Q:15:ARG:NH2	13:Q:58:GLY:CA	2.74	0.51
22:o:1423:ASP:OD1	22:o:1423:ASP:N	2.44	0.51
26:s:46:ASP:OD1	26:s:52:ARG:NH2	2.44	0.51
21:m:28:ARG:HH21	21:m:31:LEU:HD21	1.75	0.51
23:p:888:THR:HG23	23:p:889:LYS:H	1.76	0.51
26:s:64:HIS:HD2	26:s:66:ASP:H	1.58	0.51
1:A:700:ILE:HG13	6:G:85:PHE:CD1	2.46	0.51
2:B:838:ASN:OD1	7:H:213:LEU:HD23	2.08	0.51
4:E:601:VAL:HG21	4:E:642:VAL:HG11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:1468:THR:HB	23:p:1100:ALA:HB3	1.93	0.51
26:s:55:ARG:HH22	26:s:107:GLN:HG3	1.75	0.51
3:D:1080:TYR:CE2	8:I:87:PRO:HG2	2.45	0.51
4:E:788:ARG:CD	7:H:145:HIS:HA	2.41	0.51
12:P:207:PRO:HD2	12:P:207:PRO:O	2.11	0.51
14:R:263:GLN:HA	14:R:268:LYS:HG2	1.92	0.51
17:X:-32:DC:H2'	17:X:-31:DC:C6	2.46	0.51
21:m:69:THR:HG23	21:m:80:ARG:HE	1.76	0.51
22:o:132:LYS:HD2	22:o:133:SER:HB3	1.93	0.51
22:o:999:ARG:NH1	28:v:103:GLU:OE2	2.40	0.51
23:p:803:ARG:HD2	30:x:8:PHE:HA	1.92	0.51
25:r:36:GLU:HG3	25:r:39:MET:HE2	1.93	0.51
28:v:65:TYR:O	28:v:66:GLU:HG2	2.11	0.51
1:A:406:THR:HG22	5:F:350:ASN:HD22	1.76	0.50
1:A:700:ILE:HG13	6:G:85:PHE:CE1	2.46	0.50
1:A:1169:ARG:HG3	1:A:1181:ARG:NH1	2.27	0.50
3:D:1000:ARG:CZ	11:O:5:LEU:HD11	2.35	0.50
11:O:88:ILE:HG21	13:Q:360:LEU:CA	2.28	0.50
19:c:21:LEU:HD12	19:c:21:LEU:O	2.11	0.50
25:r:105:PRO:HG2	25:r:131:LEU:HD11	1.92	0.50
2:B:739:ASN:ND2	2:B:782:ASN:OD1	2.44	0.50
7:H:189:ALA:HB2	5:f:249:ASP:CG	2.37	0.50
7:H:190:LEU:CD1	5:f:223:TYR:CB	2.83	0.50
15:S:44:GLN:HG3	15:S:104:GLY:H	1.75	0.50
16:T:30:GLN:NE2	16:T:62:LEU:O	2.28	0.50
17:X:-34:DC:C2'	17:X:-34:DC:O2	2.58	0.50
19:c:1:MET:HG3	5:f:126:PRO:HB3	1.94	0.50
22:o:141:LEU:HB2	22:o:236:LEU:O	2.11	0.50
22:o:833:PRO:HG3	23:p:1002:PHE:CG	2.46	0.50
23:p:800:ALA:HB1	30:x:8:PHE:HB3	1.93	0.50
25:r:129:GLN:O	25:r:133:ASP:N	2.38	0.50
32:z:16:ILE:HD11	32:z:25:GLU:HB3	1.93	0.50
1:A:409:HIS:CG	5:f:386:ASP:OD2	2.65	0.50
1:A:467:ILE:N	5:F:221:GLN:NE2	2.49	0.50
1:A:506:ASP:HA	5:f:299:LYS:HE3	1.93	0.50
1:A:638:PRO:HB3	6:G:39:LEU:CD2	2.41	0.50
3:D:881:ARG:CB	10:L:57:VAL:CG1	2.64	0.50
3:D:1009:LEU:CD1	3:D:1009:LEU:N	2.73	0.50
5:F:114:LEU:H	7:H:52:SER:HA	1.76	0.50
7:H:110:TYR:CE2	9:J:160:GLN:CB	2.95	0.50
12:P:239:ARG:CD	13:Q:320:VAL:H	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:R:26:ASP:HA	23:p:842:HIS:CE1	2.44	0.50
15:S:6:PRO:O	15:S:10:ASN:N	2.43	0.50
22:o:459:ASN:HB3	22:o:469:MET:HG3	1.94	0.50
22:o:469:MET:HE3	23:p:1093:CYS:HB2	1.93	0.50
22:o:717:ILE:HG12	22:o:737:PHE:HE1	1.76	0.50
23:p:311:ILE:HG21	23:p:317:ALA:HA	1.93	0.50
33:u:54:ILE:HG13	33:u:70:VAL:HG23	1.92	0.50
4:E:621:ARG:NH2	8:I:104:LEU:CG	2.66	0.50
7:H:116:ARG:NH1	9:J:126:TYR:CD1	2.79	0.50
7:H:189:ALA:CB	5:f:249:ASP:CG	2.84	0.50
8:I:132:LEU:CD2	9:J:121:MET:CE	2.89	0.50
4:e:693:VAL:HB	4:e:707:LEU:HB2	1.94	0.50
23:p:647:GLU:H	23:p:647:GLU:CD	2.20	0.50
25:r:63:LYS:HE3	33:u:103:PRO:CD	2.41	0.50
3:D:934:TYR:CZ	8:I:129:LEU:HD23	2.35	0.50
4:E:324:LYS:O	4:E:327:ASN:ND2	2.44	0.50
7:H:50:PHE:CE1	9:J:195:LEU:HB2	2.47	0.50
16:T:27:LEU:HD11	16:T:58:LEU:HD21	1.93	0.50
17:X:-32:DC:H2'	17:X:-31:DC:H6	1.75	0.50
19:c:77:LEU:HD23	19:c:77:LEU:O	2.12	0.50
4:e:747:LEU:HG	4:e:747:LEU:O	2.10	0.50
22:o:18:ILE:CD1	23:p:1171:MET:O	2.60	0.50
22:o:694:ALA:O	22:o:699:TYR:HE2	1.95	0.50
22:o:1318:LYS:HD3	22:o:1330:ALA:HB1	1.94	0.50
2:B:217:ASN:ND2	2:B:320:ALA:O	2.35	0.50
3:D:1004:ALA:HA	11:O:8:ASN:CG	2.37	0.50
4:E:466:PHE:HB2	4:E:796:ALA:HA	1.93	0.50
11:O:30:PRO:O	11:O:32:LEU:N	2.45	0.50
11:O:60:GLY:N	13:Q:373:ASP:O	2.42	0.50
12:P:269:ARG:HG3	12:P:337:LYS:HE2	1.94	0.50
14:R:169:ARG:HD3	14:R:207:ASP:H	1.77	0.50
17:X:-34:DC:H2'	17:X:-33:DG:C8	2.47	0.50
5:F:243:LEU:HD21	5:F:284:ARG:HB3	1.92	0.50
23:p:851:ASP:H	32:z:15:MET:HE3	1.75	0.50
1:A:1019:LYS:NZ	1:A:1019:LYS:CB	2.73	0.50
4:E:481:ASP:HB3	4:E:787:ARG:HH22	1.77	0.50
4:E:788:ARG:CB	7:H:145:HIS:HA	2.42	0.50
5:F:273:GLN:CD	5:F:273:GLN:N	2.70	0.50
5:F:309:MET:HE1	5:F:355:ILE:HB	1.94	0.50
7:H:118:VAL:CG2	9:J:127:THR:CG2	2.80	0.50
11:O:32:LEU:HD12	13:Q:32:ASP:CG	2.05	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:66:ARG:NE	12:P:185:LEU:CD2	2.64	0.50
4:e:747:LEU:H	4:e:747:LEU:CD2	2.22	0.50
22:o:743:ARG:NH2	22:o:743:ARG:CA	2.70	0.50
1:A:1190:VAL:HA	6:G:166:VAL:CG2	2.42	0.50
2:B:598:ARG:HH11	2:B:619:MET:HE3	1.77	0.50
4:E:467:LEU:HD11	5:F:132:LYS:HD3	1.94	0.50
5:F:81:GLU:HB3	5:F:83:LEU:HD13	1.94	0.50
13:Q:47:GLU:OE2	13:Q:60:HIS:CD2	2.65	0.50
4:e:439:ASP:OD1	4:e:555:ARG:NH2	2.44	0.50
22:o:66:GLU:HG2	22:o:69:GLY:H	1.76	0.50
22:o:719:LYS:CG	22:o:724:GLU:HB2	2.40	0.50
1:A:1166:LYS:HG2	6:G:181:TRP:CA	2.30	0.49
2:B:818:THR:OG1	2:B:819:LEU:N	2.45	0.49
5:F:75:LEU:HD21	8:I:42:PHE:CD1	2.47	0.49
5:F:84:TYR:HB3	8:I:41:GLU:HB3	1.93	0.49
11:O:39:GLN:OE1	13:Q:28:ILE:HD13	2.09	0.49
12:P:312:LEU:H	12:P:312:LEU:HD12	1.76	0.49
14:R:222:LEU:HD22	14:R:269:ARG:HG3	1.94	0.49
14:R:295:ARG:NH2	14:R:298:ASP:OD2	2.45	0.49
18:Y:19:DC:P	18:Y:19:DC:H2'	2.52	0.49
4:e:474:THR:OG1	4:e:546:VAL:O	2.28	0.49
23:p:497:LYS:HG3	23:p:498:PRO:HD3	1.94	0.49
23:p:830:GLU:OE2	23:p:870:THR:OG1	2.23	0.49
23:p:1119:CYS:SG	23:p:1120:ASN:N	2.85	0.49
26:s:188:GLY:N	26:s:210:GLN:OE1	2.45	0.49
5:F:68:THR:HG23	8:I:34:ARG:O	2.13	0.49
14:R:111:ASP:CA	14:R:114:MET:HB2	2.40	0.49
15:S:31:PHE:O	16:T:92:THR:N	2.44	0.49
4:e:650:THR:HG22	4:e:666:THR:HG22	1.93	0.49
5:f:24:GLU:HG2	10:l:145:THR:HG21	1.93	0.49
23:p:1034:GLY:O	24:q:186:TYR:CE1	2.58	0.49
23:p:1035:ARG:NH2	24:q:194:HIS:CA	2.73	0.49
23:p:1040:GLN:CB	24:q:203:TRP:CZ2	2.92	0.49
26:s:103:LEU:HG	26:s:128:GLU:HB2	1.94	0.49
5:F:323:VAL:HG23	5:F:326:HIS:HB2	1.94	0.49
11:O:7:ARG:NH1	11:O:37:LEU:HD13	2.27	0.49
12:P:297:LYS:HB3	12:P:298:PRO:HD3	1.94	0.49
13:Q:312:GLU:N	13:Q:313:PRO:HD2	2.25	0.49
14:R:214:PHE:HB3	14:R:218:PHE:HE2	1.75	0.49
20:k:191:VAL:HG13	20:k:200:ILE:CD1	2.41	0.49
22:o:64:VAL:HG22	22:o:71:CYS:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:340:LYS:HG2	22:o:1436:VAL:HG11	1.93	0.49
29:w:68:ILE:HG13	29:w:122:ARG:HD2	1.95	0.49
1:A:999:SER:HB2	18:Y:2:DG:OP1	2.09	0.49
3:D:950:LEU:HD21	4:E:518:LYS:CB	2.33	0.49
4:E:449:LYS:HG2	7:H:144:PRO:HB2	1.95	0.49
7:H:32:ALA:O	7:H:36:THR:OG1	2.29	0.49
7:H:189:ALA:CB	5:f:252:LEU:HD21	2.42	0.49
16:T:93:LEU:HB2	16:T:110:VAL:HB	1.93	0.49
10:l:76:LEU:CD1	10:l:84:LEU:HD12	2.39	0.49
22:o:417:LYS:HE3	22:o:430:ARG:HH12	1.77	0.49
22:o:860:ILE:HD12	22:o:1124:LEU:HD23	1.93	0.49
22:o:1036:ASN:OD1	26:s:202:ARG:HD2	2.12	0.49
24:q:183:ALA:HB3	24:q:232:ASN:HB3	1.94	0.49
3:D:871:THR:CG2	10:L:66:LEU:HD21	2.16	0.49
5:F:80:VAL:CG1	8:I:45:ARG:HH12	2.25	0.49
6:G:94:MET:HE3	6:G:96:VAL:HG22	1.94	0.49
8:I:132:LEU:CD2	9:J:121:MET:HE1	2.41	0.49
9:J:126:TYR:HE2	9:J:157:LEU:HD11	1.77	0.49
11:O:22:LEU:C	11:O:28:ILE:CG1	2.82	0.49
14:R:117:ALA:O	14:R:121:ILE:N	2.46	0.49
15:S:127:PHE:HB2	16:T:19:TRP:CB	2.43	0.49
17:X:-38:DA:C6	17:X:-37:DG:C6	3.01	0.49
22:o:104:MET:HA	22:o:107:LEU:HG	1.94	0.49
23:p:359:THR:HG21	23:p:554:GLU:HG3	1.94	0.49
1:A:573:TYR:HD2	2:B:657:ARG:HA	1.76	0.49
1:A:824:ARG:HB3	1:A:863:VAL:HG12	1.95	0.49
4:E:295:GLU:OE2	8:I:85:SER:OG	2.29	0.49
22:o:546:ARG:HD3	22:o:772:SER:HB3	1.94	0.49
22:o:1202:PHE:HZ	22:o:1262:MET:HG3	1.78	0.49
23:p:132:VAL:HG22	23:p:140:LEU:HB3	1.93	0.49
23:p:581:GLU:HB3	23:p:605:ARG:NH1	2.27	0.49
1:A:409:HIS:CA	5:f:386:ASP:OD2	2.61	0.49
3:D:936:GLN:NE2	8:I:125:PRO:HB3	2.28	0.49
7:H:190:LEU:CD2	5:f:219:GLU:O	2.61	0.49
11:O:57:ASN:HD22	11:O:57:ASN:N	2.11	0.49
14:R:35:PRO:HA	22:o:431:PHE:HB3	1.94	0.49
14:R:109:SER:C	14:R:112:ARG:HG3	2.36	0.49
22:o:795:GLY:HA3	22:o:1107:PHE:HD2	1.78	0.49
22:o:1391:SER:OG	22:o:1392:TYR:N	2.46	0.49
23:p:513:GLU:CD	23:p:525:ASN:HD22	2.20	0.49
23:p:845:TYR:CD1	23:p:865:VAL:HG11	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:934:TYR:CE1	8:I:129:LEU:HD23	2.47	0.49
3:D:943:GLN:NE2	4:E:510:ALA:N	2.57	0.49
4:E:315:GLN:OE1	15:S:105:LYS:NZ	2.45	0.49
4:E:347:ARG:HH12	4:E:362:GLU:CD	2.21	0.49
4:E:773:TYR:OH	5:F:140:GLY:HA2	2.12	0.49
7:H:43:SER:CB	7:H:119:ILE:HD11	2.43	0.49
12:P:203:ARG:O	13:Q:376:TRP:CZ2	2.65	0.49
18:Y:32:DG:C1'	18:Y:33:DC:H5''	2.42	0.49
1:A:569:ASN:HB3	1:A:572:TYR:HD2	1.78	0.49
4:E:290:HIS:HB3	5:F:45:TYR:CE2	2.48	0.49
13:Q:358:MET:HE2	13:Q:367:PHE:CD2	2.37	0.49
22:o:766:PHE:HB3	22:o:781:ILE:HD12	1.95	0.49
22:o:795:GLY:HA2	22:o:1108:HIS:NE2	2.28	0.49
22:o:827:TYR:HB2	23:p:978:ILE:HD11	1.88	0.49
24:q:193:ARG:HD3	24:q:220:TYR:CD1	2.47	0.49
5:F:328:ALA:O	5:F:332:PHE:N	2.44	0.49
3:d:916:LYS:NZ	3:d:1070:GLU:OE2	2.42	0.49
5:f:97:ALA:HB2	5:f:106:PHE:HE1	1.77	0.49
26:s:64:HIS:CD2	26:s:66:ASP:H	2.31	0.49
29:w:27:LYS:HD2	29:w:38:ALA:HB2	1.95	0.49
1:A:575:PRO:CG	2:B:610:GLU:OE1	2.60	0.48
6:G:48:HIS:HD2	6:G:54:GLY:HA2	1.78	0.48
12:P:239:ARG:CZ	13:Q:317:GLU:HB3	2.43	0.48
22:o:1184:THR:OG1	22:o:1189:ASP:OD1	2.31	0.48
22:o:1185:VAL:HG11	29:w:51:SER:HG	1.78	0.48
22:o:1242:ASP:O	22:o:1262:MET:N	2.41	0.48
24:q:189:ASP:O	24:q:191:ALA:N	2.41	0.48
1:A:854:ARG:HD3	17:X:31:DC:OP1	2.13	0.48
1:A:1014:GLU:O	1:A:1018:LYS:HB2	2.13	0.48
4:E:747:LEU:HD22	4:E:747:LEU:N	2.20	0.48
11:O:5:LEU:HD22	11:O:98:CYS:SG	2.54	0.48
14:R:114:MET:CE	14:R:146:TYR:HB2	2.43	0.48
18:Y:20:DC:OP2	18:Y:20:DC:C6	2.66	0.48
4:e:633:THR:O	4:e:634:ARG:NH2	2.45	0.48
4:e:724:GLU:OE1	4:e:789:ASN:ND2	2.46	0.48
22:o:59:ASP:HB3	22:o:62:GLN:HB2	1.95	0.48
22:o:274:ASP:OD1	22:o:277:THR:N	2.28	0.48
23:p:1137:CYS:HB3	23:p:1142:ASN:HB3	1.95	0.48
1:A:342:ARG:HA	1:A:497:PRO:HB3	1.94	0.48
1:A:575:PRO:CB	2:B:610:GLU:CD	2.86	0.48
4:E:308:ARG:CD	4:E:362:GLU:C	2.85	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:196:LYS:HB3	5:f:241:GLU:HB3	1.95	0.48
13:Q:56:VAL:CG1	13:Q:57:ASP:N	2.76	0.48
14:R:45:VAL:HG22	22:o:67:ARG:HH22	1.61	0.48
22:o:551:ARG:NH2	22:o:625:ASP:OD1	2.46	0.48
26:s:56:THR:O	26:s:57:ASP:HB3	2.13	0.48
28:v:32:SER:HB3	28:v:37:MET:H	1.78	0.48
1:A:411:GLU:HB3	5:F:358:THR:HG21	1.95	0.48
4:E:634:ARG:HG3	4:E:675:LEU:HB2	1.95	0.48
4:E:651:VAL:HB	4:E:665:PHE:HB2	1.94	0.48
11:O:54:ASN:O	13:Q:368:SER:N	2.43	0.48
13:Q:43:LYS:HE2	13:Q:47:GLU:OE2	2.13	0.48
18:Y:34:DG:H2''	18:Y:35:DC:H5'	1.95	0.48
4:e:234:ALA:HB2	4:e:648:ASP:HB2	1.94	0.48
22:o:571:ASP:OD1	22:o:571:ASP:N	2.46	0.48
22:o:1312:PRO:HG3	22:o:1317:LYS:HB2	1.96	0.48
23:p:803:ARG:HD2	30:x:8:PHE:CA	2.43	0.48
23:p:903:ILE:HD12	24:q:62:GLU:CD	2.35	0.48
23:p:1023:ARG:HA	23:p:1023:ARG:CZ	2.43	0.48
1:A:947:LEU:HG	1:A:970:ASN:HA	1.95	0.48
3:D:996:LEU:HA	3:D:999:MET:HB3	1.95	0.48
3:D:1057:ARG:NH2	10:L:77:ASP:OD1	2.47	0.48
4:E:693:VAL:HB	4:E:707:LEU:HB2	1.94	0.48
5:F:309:MET:O	5:F:313:VAL:HG22	2.14	0.48
5:F:312:ILE:HG22	5:F:313:VAL:HG13	1.94	0.48
7:H:194:MET:SD	5:f:226:GLU:CD	2.97	0.48
7:H:196:LYS:HB3	5:f:241:GLU:HG3	1.95	0.48
18:Y:19:DC:P	18:Y:19:DC:C3'	3.01	0.48
18:Y:24:DT:H72	18:Y:25:DT:H72	1.89	0.48
3:d:943:GLN:NE2	4:e:509:GLN:O	2.41	0.48
5:f:39:LEU:HD22	8:i:47:VAL:HG13	1.94	0.48
20:k:173:CYS:SG	20:k:179:MET:O	2.72	0.48
23:p:270:ILE:HB	23:p:308:ALA:CB	2.44	0.48
23:p:592:ARG:HD2	23:p:627:ILE:HD13	1.95	0.48
7:H:73:GLY:CA	9:J:142:ALA:HB3	2.40	0.48
11:O:17:GLU:OE1	13:Q:49:LYS:HE2	2.03	0.48
22:o:1461:GLY:HA3	23:p:1152:PRO:HD3	1.95	0.48
23:p:674:MET:HG2	29:w:76:PRO:O	2.13	0.48
23:p:1036:LYS:CD	24:q:195:THR:HG21	2.32	0.48
25:r:110:GLU:O	25:r:114:LEU:N	2.39	0.48
25:r:128:GLN:HA	25:r:131:LEU:HB2	1.95	0.48
2:B:329:LEU:HB3	2:B:342:THR:HG23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:560:TYR:HD2	2:B:581:ILE:HD11	1.77	0.48
10:L:93:GLU:O	10:L:97:THR:CG2	2.52	0.48
16:T:127:LEU:HD11	23:p:544:PHE:CZ	2.48	0.48
4:e:556:ASN:HA	4:e:572:LEU:HB2	1.96	0.48
22:o:459:ASN:ND2	23:p:1090:GLU:HG2	2.29	0.48
22:o:946:ALA:O	22:o:950:ASN:ND2	2.47	0.48
1:A:496:GLU:CD	1:A:496:GLU:N	2.71	0.48
2:B:846:TYR:CZ	7:H:227:LEU:CD2	2.96	0.48
3:D:996:LEU:HD13	11:O:3:TYR:HD1	1.78	0.48
15:S:49:ARG:HB3	15:S:96:GLN:HB3	1.96	0.48
4:e:586:TYR:HB3	4:e:605:HIS:HB3	1.94	0.48
4:e:720:SER:OG	4:e:721:ARG:N	2.46	0.48
22:o:278:HIS:CD2	22:o:330:GLN:HE21	2.32	0.48
22:o:551:ARG:NH1	28:v:27:ARG:HH21	2.11	0.48
22:o:551:ARG:HH12	28:v:27:ARG:HH21	1.61	0.48
22:o:552:ASP:HB3	28:v:25:VAL:HG21	1.96	0.48
22:o:1345:ARG:HG2	26:s:133:GLN:HE22	1.79	0.48
23:p:248:LYS:C	23:p:248:LYS:CD	2.86	0.48
23:p:380:ARG:HG2	23:p:608:ARG:HH22	1.78	0.48
23:p:384:ASP:HB3	23:p:387:HIS:HB2	1.95	0.48
26:s:85:LYS:HD2	26:s:88:LYS:HD2	1.96	0.48
27:t:88:ASP:HB3	27:t:91:LEU:HB2	1.96	0.48
30:x:3:ILE:HD12	30:x:4:PRO:HD2	1.95	0.48
33:u:97:LEU:HD13	33:u:128:TYR:CD2	2.49	0.48
7:H:189:ALA:HB1	5:f:223:TYR:OH	2.14	0.48
11:O:54:ASN:O	13:Q:367:PHE:HA	2.13	0.48
11:O:97:ALA:HA	13:Q:337:CYS:O	2.14	0.48
14:R:244:LEU:HD11	14:R:295:ARG:HD3	1.95	0.48
15:S:102:VAL:O	15:S:107:GLY:HA3	2.14	0.48
18:Y:17:DC:OP2	18:Y:17:DC:H6	1.96	0.48
22:o:358:ARG:H	23:p:1073:GLN:NE2	2.12	0.48
23:p:371:ARG:NH1	23:p:609:GLU:OE1	2.47	0.48
23:p:1040:GLN:NE2	24:q:198:PRO:HD3	2.29	0.48
1:A:740:LEU:CD2	1:A:1070:PHE:HZ	2.26	0.48
5:F:124:ARG:HA	7:H:123:PRO:O	2.13	0.48
5:F:415:ILE:O	5:F:415:ILE:HG12	2.13	0.48
16:T:22:LYS:HD2	16:T:115:GLU:CD	2.39	0.48
4:e:651:VAL:HG13	4:e:665:PHE:HB2	1.95	0.48
22:o:52:PRO:HA	22:o:58:MET:HE1	1.96	0.48
22:o:408:ARG:HH21	22:o:412:GLN:HB3	1.79	0.48
22:o:745:LEU:N	22:o:745:LEU:HD23	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:1040:GLN:CB	24:q:203:TRP:HZ2	2.24	0.48
24:q:197:TYR:HD2	24:q:217:GLN:HE21	1.62	0.48
26:s:102:ALA:HB3	26:s:127:LEU:HG	1.95	0.48
1:A:683:TYR:CE1	6:G:75:GLU:OE2	2.67	0.47
3:D:1003:ASP:N	3:D:1003:ASP:OD1	2.47	0.47
3:D:1006:LEU:HD21	13:Q:328:LEU:HD22	1.93	0.47
7:H:135:THR:HG22	7:H:135:THR:O	2.13	0.47
13:Q:359:ASN:HA	13:Q:363:ARG:O	2.14	0.47
3:d:922:GLN:NE2	10:l:71:ASP:OD2	2.47	0.47
22:o:26:LEU:HD23	23:p:1166:SER:HB2	1.94	0.47
22:o:842:GLY:O	22:o:845:GLU:HG3	2.14	0.47
22:o:1028:PRO:C	22:o:1030:SER:H	2.22	0.47
28:v:96:VAL:HG22	28:v:116:VAL:HG22	1.96	0.47
31:y:5:PRO:HG2	31:y:8:GLU:HG3	1.96	0.47
5:F:317:LEU:N	5:F:317:LEU:HD23	2.29	0.47
10:L:115:ASP:O	10:L:119:HIS:HD2	1.97	0.47
13:Q:17:VAL:O	13:Q:21:VAL:HG23	2.14	0.47
14:R:131:PRO:HG3	23:p:101:ARG:HG3	1.96	0.47
17:X:-33:DG:C2'	17:X:-32:DC:H5	2.25	0.47
22:o:111:CYS:SG	22:o:114:CYS:HB3	2.53	0.47
26:s:18:MET:HE2	26:s:32:GLU:HG2	1.95	0.47
1:A:639:LEU:O	1:A:643:ILE:HG13	2.14	0.47
1:A:968:ILE:HG13	1:A:969:PRO:HD2	1.94	0.47
2:B:135:TRP:HA	2:B:138:VAL:HG12	1.95	0.47
2:B:570:GLU:HA	2:B:625:LEU:HA	1.95	0.47
3:D:1085:LYS:HZ3	10:L:83:MET:CE	2.24	0.47
7:H:190:LEU:CD1	5:f:223:TYR:CD1	2.97	0.47
11:O:20:ASP:HA	11:O:23:ILE:HD12	1.95	0.47
5:f:328:ALA:C	5:f:330:ARG:N	2.72	0.47
22:o:1095:LEU:C	22:o:1098:PRO:HD2	2.39	0.47
22:o:1129:ASN:HD22	22:o:1413:ALA:HB1	1.80	0.47
23:p:131:THR:HA	23:p:141:GLN:HA	1.95	0.47
33:u:38:CYS:HG	33:u:44:PHE:HA	1.70	0.47
1:A:463:PRO:HB3	1:A:467:ILE:HD11	1.96	0.47
1:A:1026:ILE:HA	1:A:1029:VAL:HG12	1.95	0.47
2:B:819:LEU:HD12	7:H:204:PHE:HZ	1.59	0.47
4:E:232:HIS:HD1	4:E:313:SER:HG	1.57	0.47
7:H:116:ARG:CD	9:J:126:TYR:CE1	2.82	0.47
12:P:248:ALA:C	13:Q:314:LEU:HD11	2.39	0.47
12:P:299:ARG:C	12:P:300:ILE:HG12	2.39	0.47
15:S:153:ARG:HE	29:w:41:ASN:ND2	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Y:23:DC:OP2	18:Y:23:DC:H6	1.97	0.47
5:f:257:PRO:O	5:f:261:THR:OG1	2.31	0.47
22:o:196:LEU:CD2	22:o:312:PHE:HA	2.43	0.47
22:o:576:GLN:HG2	22:o:580:LEU:HD11	1.96	0.47
22:o:576:GLN:NE2	28:v:142:TYR:OH	2.47	0.47
22:o:896:LEU:HD13	22:o:980:PRO:HG3	1.95	0.47
23:p:961:ILE:HG21	30:x:43:TYR:CE1	2.49	0.47
1:A:927:VAL:O	1:A:933:ASN:ND2	2.44	0.47
3:D:950:LEU:HD22	4:E:518:LYS:HD2	1.96	0.47
7:H:197:THR:HB	5:f:238:LYS:CB	2.43	0.47
8:I:63:LYS:NZ	8:I:69:ASP:OD1	2.47	0.47
11:O:79:VAL:N	11:O:90:VAL:O	2.48	0.47
19:c:26:VAL:HG23	9:j:195:LEU:HB3	1.96	0.47
22:o:1296:MET:CG	22:o:1298:LEU:HG	2.44	0.47
26:s:61:LEU:HD12	26:s:73:PHE:HD2	1.79	0.47
28:v:64:LEU:HB3	28:v:84:ARG:HB2	1.96	0.47
1:A:698:THR:N	6:G:85:PHE:O	2.48	0.47
3:D:1000:ARG:NH1	11:O:5:LEU:HD13	2.25	0.47
3:D:1000:ARG:HH21	11:O:96:VAL:HG11	1.79	0.47
5:F:58:MET:HG3	5:F:66:LEU:H	1.79	0.47
7:H:40:VAL:CG1	9:J:130:ILE:HG12	2.43	0.47
12:P:176:CYS:SG	12:P:247:PRO:O	2.60	0.47
4:e:589:TRP:HB3	5:f:60:MET:HE3	1.96	0.47
5:f:254:GLN:O	5:f:258:ARG:NH2	2.47	0.47
22:o:859:TYR:CZ	22:o:863:ARG:HD2	2.50	0.47
22:o:1104:LEU:HG	22:o:1105:ASN:OD1	2.14	0.47
22:o:1192:TRP:CZ2	22:o:1258:ARG:HD3	2.49	0.47
22:o:1206:ARG:O	22:o:1263:ASN:ND2	2.47	0.47
23:p:265:GLN:HG2	23:p:266:GLU:N	2.29	0.47
23:p:804:GLY:CA	30:x:8:PHE:CE1	2.98	0.47
1:A:755:HIS:CE1	6:G:139:PRO:HD3	2.49	0.47
2:B:953:LEU:HD12	2:B:979:PHE:HE2	1.79	0.47
3:D:1000:ARG:CG	11:O:5:LEU:HA	2.23	0.47
5:F:102:ARG:HG2	7:H:59:GLU:HB3	1.97	0.47
5:F:112:VAL:O	7:H:53:ALA:O	2.33	0.47
5:F:427:LEU:HD12	5:F:427:LEU:HA	1.71	0.47
7:H:110:TYR:HD2	9:J:157:LEU:CD2	2.28	0.47
7:H:189:ALA:O	5:f:223:TYR:CE1	2.66	0.47
11:O:22:LEU:CB	11:O:28:ILE:CG2	2.83	0.47
11:O:39:GLN:HG2	13:Q:25:VAL:HG12	1.96	0.47
14:R:111:ASP:O	14:R:115:MET:N	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:c:119:GLU:HG3	4:e:790:LEU:HD11	1.95	0.47
5:f:102:ARG:HD3	10:l:151:ARG:HG3	1.96	0.47
5:f:330:ARG:NH1	5:f:371:THR:O	2.48	0.47
22:o:286:ILE:HG13	22:o:289:GLN:HE21	1.79	0.47
23:p:985:LEU:HD11	23:p:1015:LEU:HD23	1.95	0.47
26:s:107:GLN:HG2	26:s:108:GLN:OE1	2.15	0.47
3:D:917:ILE:CD1	3:D:1058:VAL:CG2	2.67	0.47
5:F:409:GLY:O	5:F:417:ARG:NH2	2.47	0.47
22:o:197:GLU:HB2	22:o:308:LYS:HZ1	1.78	0.47
22:o:327:ARG:CZ	22:o:335:PRO:HB2	2.45	0.47
22:o:587:THR:HB	28:v:119:GLY:O	2.14	0.47
23:p:1035:ARG:CZ	24:q:194:HIS:CA	2.93	0.47
2:B:431:LEU:CD2	2:B:431:LEU:N	2.76	0.47
5:F:320:ARG:NE	5:F:415:ILE:HB	2.29	0.47
13:Q:348:LYS:HZ2	13:Q:375:GLU:CD	2.22	0.47
15:S:143:TRP:NE1	15:S:145:ASN:OD1	2.37	0.47
22:o:460:ARG:HB2	22:o:501:MET:HE3	1.96	0.47
23:p:371:ARG:HH22	23:p:380:ARG:HH22	1.63	0.47
33:u:86:ASP:OD2	33:u:171:VAL:CG2	2.55	0.47
1:A:797:LYS:HA	1:A:797:LYS:HD2	1.57	0.47
1:A:1165:LEU:HB2	1:A:1191:ILE:HG12	1.97	0.47
5:F:317:LEU:N	5:F:317:LEU:CD2	2.77	0.47
5:F:424:GLN:O	5:F:428:LEU:HG	2.15	0.47
7:H:197:THR:HB	5:f:238:LYS:HE3	1.97	0.47
14:R:131:PRO:HD3	23:p:101:ARG:HA	1.97	0.47
18:Y:24:DT:H72	18:Y:25:DT:C7	2.45	0.47
9:j:176:MET:HE1	21:m:75:ILE:HD11	1.97	0.47
22:o:278:HIS:HD2	22:o:330:GLN:HE21	1.61	0.47
22:o:1166:LEU:HB2	22:o:1296:MET:HB2	1.97	0.47
23:p:84:TYR:CD2	23:p:132:VAL:HG12	2.50	0.47
23:p:625:LEU:HD12	23:p:665:ILE:HG13	1.98	0.47
24:q:2:PRO:HB3	31:y:54:PRO:HD2	1.96	0.47
2:B:636:VAL:HG23	2:B:638:ARG:HB3	1.96	0.46
4:E:295:GLU:HG2	8:I:85:SER:OG	2.14	0.46
4:E:579:VAL:CG2	8:I:115:LEU:HD22	2.45	0.46
5:F:105:TYR:C	5:F:107:TYR:H	2.23	0.46
8:I:119:ARG:NH1	8:I:120:TYR:OH	2.48	0.46
10:L:128:ILE:HG22	10:L:129:PRO:HD2	1.98	0.46
15:S:157:ALA:HB3	23:p:316:VAL:HG21	1.97	0.46
3:d:941:ARG:NH2	8:i:123:THR:O	2.48	0.46
22:o:410:ASN:OD1	22:o:430:ARG:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:550:LYS:NZ	28:v:22:PHE:HE1	2.13	0.46
22:o:710:LYS:HG2	22:o:817:PRO:HG2	1.92	0.46
23:p:329:GLY:HA3	23:p:335:ARG:HG3	1.97	0.46
23:p:898:THR:OG1	23:p:1079:SER:HA	2.15	0.46
23:p:1035:ARG:CZ	24:q:194:HIS:C	2.88	0.46
25:r:124:ASP:OD1	25:r:125:GLU:N	2.47	0.46
28:v:136:GLU:OE1	28:v:136:GLU:N	2.48	0.46
1:A:699:LYS:HA	6:G:84:THR:HA	1.98	0.46
1:A:801:THR:HA	1:A:804:ARG:HE	1.79	0.46
2:B:735:ILE:CG2	7:H:176:ARG:NH1	2.78	0.46
3:D:895:HIS:HB3	10:L:113:VAL:CG2	2.43	0.46
3:D:934:TYR:CD1	8:I:129:LEU:CD2	2.97	0.46
4:E:463:PHE:CD2	5:F:136:LEU:HD11	2.50	0.46
5:F:411:VAL:HG13	5:F:411:VAL:O	2.15	0.46
15:S:26:TYR:HB2	15:S:139:PRO:O	2.16	0.46
22:o:922:PHE:HB2	22:o:1052:ARG:HB2	1.96	0.46
22:o:1097:GLU:CG	22:o:1098:PRO:HD3	2.45	0.46
23:p:50:PHE:HA	23:p:54:SER:HB3	1.97	0.46
23:p:1119:CYS:HA	23:p:1146:ILE:HD13	1.98	0.46
24:q:51:GLN:CD	32:z:52:LEU:HD13	2.40	0.46
1:A:743:PHE:CZ	6:G:77:LEU:HD22	2.51	0.46
1:A:1166:LYS:O	6:G:181:TRP:CB	2.62	0.46
3:D:1085:LYS:NZ	10:L:83:MET:HE1	2.25	0.46
4:E:369:LYS:HD3	4:E:369:LYS:HA	1.74	0.46
12:P:239:ARG:NH2	13:Q:317:GLU:HB3	2.30	0.46
13:Q:314:LEU:C	13:Q:316:SER:N	2.74	0.46
18:Y:20:DC:OP2	18:Y:20:DC:H6	1.99	0.46
5:f:58:MET:HE3	5:f:64:GLN:HA	1.98	0.46
23:p:100:GLU:CD	32:z:42:ARG:NH1	2.73	0.46
23:p:779:ILE:HD13	30:x:43:TYR:HE2	1.72	0.46
1:A:575:PRO:CB	2:B:610:GLU:OE1	2.64	0.46
7:H:118:VAL:HG22	9:J:127:THR:OG1	2.15	0.46
11:O:14:SER:HA	13:Q:49:LYS:CD	2.44	0.46
11:O:57:ASN:HD22	11:O:57:ASN:H	1.64	0.46
11:O:98:CYS:O	13:Q:338:GLN:HA	2.14	0.46
12:P:236:LYS:HG2	12:P:239:ARG:HH12	1.81	0.46
3:d:909:ARG:HH11	10:l:91:PHE:HZ	1.63	0.46
22:o:221:VAL:HA	22:o:224:ILE:HD12	1.97	0.46
22:o:872:MET:HE1	22:o:1470:CYS:SG	2.55	0.46
23:p:28:ILE:HD11	23:p:644:LYS:HB3	1.97	0.46
23:p:260:LEU:HD22	23:p:347:MET:HE1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:x:24:LEU:HB3	30:x:29:TYR:HD2	1.79	0.46
1:A:682:GLU:OE1	6:G:74:MET:HG3	2.16	0.46
2:B:71:ARG:HD3	2:B:73:TYR:CE1	2.51	0.46
2:B:559:LYS:HB2	2:B:559:LYS:NZ	2.31	0.46
3:D:888:LYS:H	3:D:888:LYS:HG3	1.51	0.46
3:D:910:LEU:HB2	10:L:66:LEU:CD2	2.46	0.46
4:E:324:LYS:HA	4:E:327:ASN:HB3	1.97	0.46
10:L:83:MET:CE	10:L:86:GLN:OE1	2.63	0.46
14:R:132:ARG:HA	14:R:135:VAL:HG23	1.97	0.46
16:T:30:GLN:O	16:T:62:LEU:HD11	2.16	0.46
9:j:149:PRO:O	9:j:153:ARG:NH1	2.46	0.46
10:l:83:MET:SD	10:l:86:GLN:OE1	2.74	0.46
22:o:152:ASN:O	22:o:188:GLN:HG2	2.15	0.46
22:o:154:CYS:SG	22:o:184:CYS:HB3	2.55	0.46
22:o:1128:ILE:HG23	22:o:1414:ILE:HD11	1.97	0.46
23:p:591:ARG:C	23:p:594:MET:H	2.23	0.46
23:p:910:THR:HB	32:z:43:ILE:HA	1.97	0.46
26:s:75:PHE:HB2	26:s:104:ILE:HG22	1.96	0.46
1:A:569:ASN:ND2	2:B:689:GLN:CA	2.78	0.46
1:A:601:PRO:HG3	6:G:10:HIS:H	1.81	0.46
2:B:835:ARG:NH1	7:H:184:ARG:HE	2.13	0.46
4:E:281:VAL:HG22	5:F:52:GLN:HG3	1.97	0.46
7:H:186:VAL:HG23	5:f:255:MET:SD	2.55	0.46
14:R:29:ALA:O	23:p:1066:PRO:HB3	2.16	0.46
3:d:1061:ARG:NH1	8:i:119:ARG:O	2.48	0.46
5:f:326:HIS:O	5:f:330:ARG:HG2	2.15	0.46
5:f:327:TRP:O	5:f:330:ARG:HB2	2.16	0.46
22:o:198:LEU:HG	22:o:216:LEU:HB2	1.98	0.46
22:o:312:PHE:O	22:o:316:THR:OG1	2.27	0.46
22:o:1479:LYS:HE2	22:o:1482:TYR:HE1	1.80	0.46
23:p:59:VAL:HG11	23:p:91:ILE:HD11	1.97	0.46
23:p:1036:LYS:CB	24:q:195:THR:CG2	2.93	0.46
26:s:47:LYS:O	26:s:51:GLY:HA3	2.16	0.46
33:u:6:SER:HB3	33:u:71:LYS:NZ	2.31	0.46
33:u:97:LEU:HD13	33:u:128:TYR:HD2	1.79	0.46
11:O:88:ILE:CD1	13:Q:360:LEU:CB	2.75	0.46
13:Q:314:LEU:C	13:Q:316:SER:H	2.23	0.46
3:d:1084:LEU:HB3	8:i:99:ARG:HH21	1.81	0.46
22:o:79:THR:OG1	22:o:80:GLU:OE1	2.34	0.46
22:o:1121:VAL:N	22:o:1122:PRO:HD2	2.31	0.46
22:o:1177:TYR:HE1	22:o:1209:PRO:HB2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:446:TYR:O	23:p:450:THR:HG22	2.16	0.46
23:p:588:ARG:HA	23:p:603:MET:HE1	1.98	0.46
23:p:779:ILE:CD1	30:x:43:TYR:CE2	2.94	0.46
24:q:91:GLU:HG3	24:q:92:GLU:H	1.80	0.46
26:s:70:ASP:OD1	26:s:70:ASP:N	2.49	0.46
33:u:116:GLU:O	33:u:130:THR:HA	2.16	0.46
1:A:857:MET:HE3	1:A:858:ASP:H	1.81	0.46
3:D:1056:THR:O	10:L:74:GLU:HG3	2.16	0.46
4:E:284:SER:HB3	5:F:48:LYS:HD3	1.97	0.46
12:P:239:ARG:HD2	13:Q:320:VAL:H	1.81	0.46
12:P:287:LEU:HG	17:X:-29:DA:H5''	1.97	0.46
13:Q:369:LYS:HB3	13:Q:369:LYS:HE2	1.71	0.46
14:R:111:ASP:O	14:R:115:MET:HG3	2.15	0.46
20:k:150:VAL:HG22	21:m:82:GLN:HB3	1.98	0.46
22:o:565:MET:HE1	31:y:74:ARG:HB2	1.97	0.46
3:D:982:LEU:O	3:D:986:GLN:HG3	2.16	0.46
4:E:449:LYS:HG3	7:H:144:PRO:HB2	1.98	0.46
5:F:90:GLU:O	5:F:92:ILE:N	2.46	0.46
11:O:3:TYR:C	11:O:5:LEU:N	2.74	0.46
12:P:228:GLU:OE1	12:P:228:GLU:HA	2.16	0.46
12:P:256:GLN:HA	12:P:256:GLN:OE1	2.16	0.46
17:X:-32:DC:H2'	17:X:-31:DC:O5'	2.15	0.46
20:k:182:LEU:HD23	20:k:182:LEU:HA	1.85	0.46
22:o:565:MET:HE1	31:y:74:ARG:HD2	1.96	0.46
22:o:1347:LEU:HB3	26:s:137:ILE:HD13	1.96	0.46
23:p:276:LEU:HG	23:p:343:LEU:HD21	1.97	0.46
23:p:800:ALA:CB	30:x:8:PHE:O	2.64	0.46
24:q:193:ARG:NH2	24:q:217:GLN:OE1	2.49	0.46
29:w:124:THR:OG1	29:w:125:GLU:N	2.49	0.46
1:A:463:PRO:CG	5:F:221:GLN:HG2	2.46	0.46
1:A:997:ARG:HB2	18:Y:1:DA:OP1	2.16	0.46
1:A:1063:LYS:HD3	1:A:1063:LYS:O	2.16	0.46
3:D:1085:LYS:NZ	10:L:83:MET:HE2	2.26	0.46
4:E:280:ARG:CD	8:I:26:MET:HA	2.26	0.46
5:F:80:VAL:HG11	8:I:42:PHE:HE1	1.81	0.46
5:F:87:HIS:H	9:J:212:LYS:HZ2	1.63	0.46
5:F:426:LEU:C	5:F:426:LEU:HD23	2.41	0.46
7:H:111:ALA:CB	9:J:126:TYR:CE2	2.93	0.46
8:I:38:GLN:HA	8:I:41:GLU:HB2	1.98	0.46
11:O:55:ARG:CB	13:Q:369:LYS:HB2	2.43	0.46
18:Y:24:DT:OP2	18:Y:24:DT:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:743:ARG:HA	22:o:743:ARG:HD3	1.68	0.46
22:o:886:VAL:HB	26:s:169:GLN:O	2.15	0.46
23:p:248:LYS:HD2	23:p:248:LYS:O	2.16	0.46
23:p:809:VAL:HG22	23:p:810:PHE:H	1.80	0.46
23:p:908:MET:HE3	23:p:910:THR:HG22	1.97	0.46
2:B:568:VAL:HG22	2:B:628:ILE:HG23	1.98	0.45
3:D:999:MET:CG	11:O:71:VAL:HG11	2.35	0.45
4:E:621:ARG:CZ	8:I:104:LEU:HD21	2.46	0.45
4:E:646:SER:OG	4:E:647:ALA:N	2.49	0.45
5:F:215:GLU:O	5:F:254:GLN:NE2	2.39	0.45
6:G:41:ASP:OD1	6:G:41:ASP:N	2.48	0.45
14:R:29:ALA:C	23:p:1066:PRO:HB3	2.40	0.45
16:T:44:ARG:HH22	16:T:80:GLU:CD	2.24	0.45
22:o:305:GLU:O	22:o:309:LEU:HD23	2.16	0.45
22:o:466:LYS:O	23:p:1097:HIS:NE2	2.49	0.45
24:q:175:LYS:HZ2	32:z:57:ALA:HB3	1.81	0.45
26:s:11:TRP:HB2	26:s:40:PHE:CD2	2.51	0.45
33:u:38:CYS:HB2	33:u:44:PHE:CD1	2.51	0.45
1:A:468:PHE:HB3	1:A:469:PRO:HD2	1.99	0.45
2:B:334:MET:SD	7:H:229:PRO:HB3	2.56	0.45
2:B:490:SER:C	2:B:492:MET:H	2.23	0.45
2:B:564:LEU:HB2	2:B:581:ILE:HD13	1.97	0.45
3:D:889:HIS:HA	10:L:104:ARG:NH2	2.32	0.45
12:P:249:LYS:HB3	13:Q:311:GLU:O	2.17	0.45
22:o:1230:GLN:O	22:o:1234:LYS:HG2	2.17	0.45
22:o:1348:SER:HB3	26:s:136:LEU:HD13	1.98	0.45
23:p:739:ASN:HB3	30:x:62:TYR:OH	2.16	0.45
25:r:94:LYS:O	25:r:97:LEU:HG	2.17	0.45
33:u:84:VAL:HG12	33:u:144:ARG:HD3	1.98	0.45
1:A:404:MET:O	1:A:408:LEU:HB2	2.16	0.45
1:A:730:PHE:CD1	1:A:730:PHE:N	2.82	0.45
13:Q:310:GLU:CA	13:Q:313:PRO:HG3	2.46	0.45
3:d:1080:TYR:OH	4:e:606:ASP:OD2	2.26	0.45
10:l:76:LEU:CD1	10:l:84:LEU:CD1	2.94	0.45
22:o:37:THR:O	22:o:87:HIS:HE1	1.98	0.45
22:o:620:HIS:CE1	28:v:98:ARG:HH12	2.33	0.45
23:p:551:GLU:OE1	23:p:551:GLU:N	2.45	0.45
23:p:626:LEU:HD23	23:p:662:VAL:HG12	1.98	0.45
23:p:1035:ARG:NH1	23:p:1036:LYS:O	2.48	0.45
1:A:405:VAL:HG21	5:F:301:VAL:CG1	2.46	0.45
1:A:409:HIS:HD2	5:f:386:ASP:OD2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1182:CYS:O	1:A:1182:CYS:SG	2.75	0.45
2:B:639:LYS:NZ	2:B:641:GLU:OE2	2.42	0.45
4:E:285:LEU:HD23	5:F:45:TYR:CE1	2.51	0.45
5:F:323:VAL:CG2	5:F:326:HIS:HB2	2.46	0.45
7:H:43:SER:HB2	7:H:119:ILE:HD11	1.99	0.45
7:H:44:LEU:HD11	9:J:160:GLN:HG2	1.99	0.45
7:H:197:THR:HB	5:f:238:LYS:CE	2.46	0.45
14:R:144:GLN:OE1	23:p:823:PHE:CE2	2.69	0.45
17:X:-21:DG:H1'	17:X:-20:DG:H5'	1.99	0.45
18:Y:37:DC:H2''	18:Y:38:DT:C6	2.51	0.45
23:p:323:SER:OG	23:p:324:ARG:NH1	2.48	0.45
24:q:190:ASN:HD21	24:q:195:THR:HG23	1.81	0.45
2:B:184:ASN:ND2	2:B:184:ASN:N	2.63	0.45
3:D:895:HIS:CB	10:L:113:VAL:HG23	2.41	0.45
4:E:280:ARG:HG3	8:I:26:MET:SD	2.57	0.45
4:E:704:VAL:HG11	4:E:759:ILE:HG13	1.98	0.45
5:F:112:VAL:HG11	7:H:55:LYS:HD3	1.98	0.45
5:F:114:LEU:N	7:H:52:SER:HA	2.32	0.45
7:H:111:ALA:O	9:J:126:TYR:OH	2.33	0.45
12:P:252:ASP:OD1	12:P:252:ASP:N	2.49	0.45
17:X:-17:DG:N2	18:Y:18:DA:H1'	2.32	0.45
3:d:860:VAL:HA	21:m:47:GLN:HG2	1.98	0.45
4:e:717:LEU:HD22	4:e:726:LEU:HD11	1.97	0.45
5:f:83:LEU:HD22	8:i:41:GLU:HG2	1.99	0.45
22:o:1417:HIS:HA	22:o:1420:ASN:HB2	1.98	0.45
25:r:109:GLU:O	25:r:113:ALA:N	2.50	0.45
1:A:465:TYR:HD1	7:H:165:TYR:O	1.99	0.45
1:A:697:ALA:CB	6:G:86:TYR:CZ	2.96	0.45
1:A:698:THR:O	6:G:84:THR:CA	2.61	0.45
4:E:321:LEU:HB3	4:E:330:TRP:HB2	1.97	0.45
5:F:39:LEU:HG	8:I:71:VAL:HG11	1.99	0.45
6:G:181:TRP:CD2	6:G:181:TRP:C	2.87	0.45
11:O:53:ARG:CB	13:Q:368:SER:HB3	2.47	0.45
15:S:171:LEU:HD22	15:S:171:LEU:HA	1.73	0.45
18:Y:27:DT:H2'	18:Y:28:DA:C8	2.52	0.45
22:o:1342:SER:O	22:o:1346:VAL:HG23	2.16	0.45
33:u:43:GLY:HA2	33:u:78:ARG:HD3	1.98	0.45
5:F:65:LYS:O	8:I:30:GLU:O	2.34	0.45
5:F:316:GLN:HE21	5:F:320:ARG:HA	1.61	0.45
5:F:320:ARG:CD	5:F:415:ILE:HB	2.46	0.45
8:I:60:HIS:HB2	10:L:122:ARG:HH12	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:O:58:PHE:CD2	11:O:81:PHE:CD2	2.99	0.45
14:R:268:LYS:O	14:R:269:ARG:NH1	2.37	0.45
4:e:270:ASP:OD1	4:e:271:GLN:NE2	2.41	0.45
5:f:219:GLU:H	5:f:219:GLU:CD	2.21	0.45
22:o:346:LYS:HB2	22:o:351:ARG:HH21	1.82	0.45
22:o:479:TRP:CD1	31:y:67:LEU:HD11	2.52	0.45
23:p:1142:ASN:ND2	23:p:1145:GLN:O	2.46	0.45
1:A:1168:TYR:CG	6:G:180:ARG:HB3	2.52	0.45
2:B:367:GLU:OE2	2:B:371:LYS:NZ	2.39	0.45
3:D:917:ILE:CG1	3:D:1058:VAL:HG11	2.44	0.45
3:D:937:ALA:HB2	8:I:128:ARG:HB3	1.98	0.45
5:F:99:GLY:C	7:H:63:GLU:CG	2.89	0.45
7:H:116:ARG:HG3	7:H:116:ARG:O	2.16	0.45
11:O:61:SER:H	11:O:79:VAL:CG2	2.28	0.45
3:d:913:LEU:HD21	10:l:87:ILE:HD13	1.99	0.45
5:f:326:HIS:ND1	5:f:326:HIS:N	2.63	0.45
22:o:191:ILE:HG12	22:o:200:ALA:CB	2.46	0.45
22:o:502:ASN:CG	23:p:1084:LEU:HD13	2.42	0.45
23:p:856:PRO:HD2	32:z:48:ARG:HA	1.99	0.45
23:p:956:PHE:HE2	24:q:184:PHE:O	1.99	0.45
23:p:1040:GLN:OE1	24:q:198:PRO:HD3	2.16	0.45
24:q:123:ASN:OD1	24:q:124:SER:N	2.49	0.45
27:t:84:GLU:O	27:t:84:GLU:HG2	2.16	0.45
1:A:400:GLU:HG3	1:A:401:ASN:N	2.32	0.45
1:A:1061:ARG:HD3	1:A:1061:ARG:HA	1.63	0.45
5:F:233:GLY:HA2	5:F:239:ARG:HE	1.82	0.45
11:O:58:PHE:N	11:O:58:PHE:HD1	2.13	0.45
16:T:23:VAL:HG21	16:T:31:TRP:CZ3	2.52	0.45
5:f:317:LEU:HD12	5:f:329:LEU:HD23	1.98	0.45
22:o:261:ARG:HB3	22:o:276:LEU:HD11	1.99	0.45
23:p:308:ALA:C	23:p:310:VAL:H	2.25	0.45
23:p:1046:THR:HG22	23:p:1047:TYR:N	2.32	0.45
24:q:240:ARG:HB2	24:q:243:THR:HG22	1.99	0.45
25:r:50:SER:OG	25:r:51:ALA:N	2.50	0.45
31:y:114:GLU:OE1	31:y:114:GLU:N	2.40	0.45
1:A:401:ASN:HD22	1:A:401:ASN:N	2.14	0.45
1:A:475:LEU:HD23	1:A:480:TRP:HE1	1.82	0.45
7:H:193:PHE:CZ	5:f:230:ALA:HB3	2.52	0.45
10:L:106:ARG:HH22	10:L:118:LEU:HD11	1.82	0.45
16:T:95:VAL:O	16:T:106:LEU:HD12	2.17	0.45
3:d:910:LEU:HD11	10:l:88:ALA:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:111:CYS:SG	22:o:154:CYS:HB2	2.57	0.45
22:o:229:SER:N	22:o:232:GLU:OE2	2.48	0.45
22:o:277:THR:HA	22:o:280:LEU:HD12	1.99	0.45
22:o:481:THR:O	22:o:483:ARG:NE	2.50	0.45
22:o:917:GLU:O	22:o:921:ARG:HB2	2.17	0.45
23:p:952:GLU:HA	24:q:35:ARG:HH12	1.81	0.45
24:q:101:PHE:CE1	24:q:122:SER:HB3	2.53	0.45
1:A:996:ARG:CD	17:X:2:DG:C4'	2.73	0.44
4:E:250:GLU:O	4:E:254:ASN:ND2	2.50	0.44
4:E:784:HIS:HB3	4:E:792:LEU:HB2	1.99	0.44
5:F:219:GLU:HG2	7:H:156:PRO:C	2.42	0.44
7:H:115:GLN:H	7:H:115:GLN:HG3	1.58	0.44
13:Q:312:GLU:N	13:Q:313:PRO:HD3	2.17	0.44
22:o:552:ASP:HB3	28:v:25:VAL:HG23	1.99	0.44
29:w:103:ARG:O	29:w:103:ARG:HD3	2.18	0.44
33:u:24:ASN:OD1	33:u:25:THR:N	2.50	0.44
1:A:699:LYS:HA	6:G:83:LYS:O	2.17	0.44
1:A:997:ARG:HA	18:Y:1:DA:H5"	1.99	0.44
2:B:273:LEU:CG	7:H:223:TYR:CE1	2.99	0.44
3:D:901:TYR:CZ	10:L:117:GLN:HG2	2.52	0.44
3:D:934:TYR:O	8:I:130:LYS:HE3	2.18	0.44
5:F:320:ARG:HD3	5:F:415:ILE:HB	1.99	0.44
19:c:77:LEU:HD12	9:j:116:LEU:CD2	2.44	0.44
22:o:384:ILE:HG12	23:p:1061:SER:CB	2.46	0.44
22:o:420:ILE:HD11	22:o:426:ARG:HH21	1.83	0.44
22:o:554:PHE:HZ	28:v:121:LEU:HD11	1.82	0.44
22:o:936:GLU:HA	22:o:939:VAL:HG12	1.99	0.44
23:p:486:ASN:OD1	23:p:491:ARG:NH2	2.50	0.44
24:q:67:ARG:NH1	30:x:2:ILE:HG23	2.32	0.44
24:q:69:GLY:HA3	32:z:57:ALA:HB1	1.98	0.44
24:q:116:THR:HB	24:q:147:ASP:HB3	1.99	0.44
26:s:55:ARG:HA	26:s:58:LEU:HD12	1.98	0.44
28:v:71:ASP:O	28:v:72:ASP:HB3	2.18	0.44
1:A:509:LEU:HD12	1:A:509:LEU:HA	1.77	0.44
1:A:758:PRO:CG	6:G:136:ILE:HG23	2.46	0.44
3:D:871:THR:HG22	10:L:66:LEU:CB	2.47	0.44
11:O:23:ILE:HG23	11:O:30:PRO:HD3	1.98	0.44
22:o:504:HIS:HB3	23:p:1106:ARG:NE	2.28	0.44
22:o:621:ILE:HD11	28:v:115:TYR:CD2	2.51	0.44
22:o:719:LYS:HG2	22:o:725:LEU:CD1	2.40	0.44
22:o:1198:GLU:C	22:o:1200:PRO:HD3	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:794:VAL:HG12	23:p:967:ILE:HG22	1.99	0.44
23:p:903:ILE:HD11	32:z:55:PHE:HE1	1.82	0.44
30:x:10:CYS:SG	30:x:42:ARG:NE	2.86	0.44
31:y:42:LEU:O	31:y:45:ILE:HG22	2.17	0.44
1:A:592:SER:OG	1:A:695:GLY:O	2.31	0.44
2:B:431:LEU:HD23	2:B:431:LEU:O	2.18	0.44
3:D:871:THR:HG21	3:D:910:LEU:HD12	1.98	0.44
3:D:889:HIS:HD2	10:L:96:VAL:HG12	1.82	0.44
7:H:59:GLU:HA	7:H:62:THR:HG22	1.99	0.44
13:Q:367:PHE:C	13:Q:367:PHE:CD1	2.95	0.44
16:T:86:GLN:OE1	16:T:86:GLN:HA	2.17	0.44
19:c:24:ASP:CB	9:j:192:LYS:HD2	2.48	0.44
22:o:504:HIS:HB3	23:p:1106:ARG:HH11	1.72	0.44
22:o:576:GLN:HB3	28:v:93:TYR:CE2	2.53	0.44
22:o:827:TYR:CD2	23:p:976:MET:HB3	2.52	0.44
22:o:1185:VAL:HG11	29:w:51:SER:OG	2.17	0.44
23:p:855:ALA:HB1	32:z:49:THR:N	2.32	0.44
26:s:4:GLU:HA	26:s:7:THR:HG22	1.98	0.44
33:u:40:GLY:O	33:u:152:VAL:HG11	2.17	0.44
33:u:107:PHE:O	33:u:160:ILE:HG13	2.17	0.44
2:B:603:LYS:H	2:B:603:LYS:HG2	1.64	0.44
3:D:881:ARG:CZ	10:L:57:VAL:HG21	2.43	0.44
3:D:881:ARG:HH12	10:L:89:ASP:CG	2.07	0.44
4:E:308:ARG:HD2	4:E:362:GLU:C	2.42	0.44
4:E:315:GLN:HE22	15:S:105:LYS:HZ3	1.66	0.44
6:G:154:LYS:HA	6:G:154:LYS:HD2	1.57	0.44
7:H:27:ASP:OD1	7:H:27:ASP:N	2.46	0.44
7:H:194:MET:HE2	7:H:194:MET:HB2	1.85	0.44
14:R:45:VAL:C	23:p:1069:ILE:CD1	2.89	0.44
15:S:29:MET:HB2	16:T:96:PHE:CD1	2.52	0.44
5:f:320:ARG:HH11	5:f:320:ARG:HB2	1.83	0.44
22:o:726:GLU:OE1	22:o:726:GLU:N	2.51	0.44
23:p:341:GLU:O	23:p:345:LYS:N	2.41	0.44
23:p:628:VAL:HG22	23:p:633:LEU:HD23	2.00	0.44
23:p:951:GLN:OE1	30:x:9:THR:O	2.35	0.44
23:p:1108:PHE:HZ	23:p:1150:ARG:HG2	1.81	0.44
26:s:94:MET:HE2	26:s:125:TYR:CD2	2.52	0.44
28:v:8:ASP:OD2	28:v:32:SER:OG	2.36	0.44
1:A:352:MET:HE3	1:A:352:MET:HB3	1.82	0.44
4:E:340:ASP:CG	4:E:364:LYS:HG2	2.42	0.44
5:F:361:LYS:HA	5:F:364:VAL:HG22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:Q:348:LYS:NZ	13:Q:375:GLU:CD	2.76	0.44
18:Y:23:DC:H6	18:Y:23:DC:P	2.39	0.44
22:o:260:VAL:O	22:o:342:ARG:NH2	2.50	0.44
22:o:478:PRO:HD2	31:y:67:LEU:HD23	2.00	0.44
22:o:1003:ASP:OD1	22:o:1003:ASP:N	2.51	0.44
23:p:65:ILE:HD11	23:p:86:LEU:HD12	1.98	0.44
23:p:458:LYS:NZ	23:p:461:GLN:HB3	2.33	0.44
23:p:526:LEU:H	23:p:526:LEU:HD23	1.83	0.44
1:A:690:LEU:HD22	1:A:747:LEU:HD22	2.00	0.44
3:D:917:ILE:CG2	3:D:1058:VAL:HG11	2.47	0.44
5:F:49:GLU:OE1	8:I:83:PHE:CD2	2.71	0.44
9:J:123:LEU:O	9:J:153:ARG:NH1	2.50	0.44
14:R:45:VAL:HG22	14:R:45:VAL:O	2.18	0.44
15:S:6:PRO:O	15:S:10:ASN:CA	2.62	0.44
15:S:143:TRP:C	15:S:143:TRP:CD1	2.95	0.44
4:e:542:HIS:CE1	4:e:568:ARG:HG3	2.53	0.44
5:f:11:ASN:OD1	5:f:48:LYS:NZ	2.51	0.44
5:f:20:LYS:HE2	5:f:20:LYS:HB3	1.83	0.44
21:m:103:LEU:O	21:m:107:ASN:ND2	2.51	0.44
22:o:349:ARG:HD3	22:o:349:ARG:HA	1.80	0.44
31:y:26:LYS:HG3	31:y:27:VAL:HG22	2.00	0.44
32:z:19:CYS:SG	32:z:20:GLY:N	2.91	0.44
1:A:958:GLY:N	6:G:149:ARG:HB3	2.32	0.44
3:D:1004:ALA:CA	11:O:8:ASN:OD1	2.60	0.44
4:E:481:ASP:OD1	4:E:481:ASP:N	2.41	0.44
4:E:754:THR:OG1	4:E:755:ALA:N	2.43	0.44
11:O:36:VAL:HG13	13:Q:29:PHE:HE1	1.82	0.44
11:O:65:TYR:CD2	12:P:191:GLU:HB3	2.53	0.44
14:R:169:ARG:HD3	14:R:206:VAL:HB	1.99	0.44
15:S:46:ARG:N	15:S:101:ARG:O	2.38	0.44
18:Y:23:DC:H2'	18:Y:24:DT:C4	2.53	0.44
18:Y:24:DT:OP2	18:Y:24:DT:C3'	2.59	0.44
8:i:16:ALA:HB2	8:i:40:LEU:HD11	2.00	0.44
22:o:26:LEU:HD23	22:o:26:LEU:H	1.82	0.44
22:o:460:ARG:HG2	22:o:461:GLN:N	2.32	0.44
22:o:758:LYS:O	22:o:758:LYS:HG2	2.11	0.44
22:o:827:TYR:CE2	23:p:976:MET:CE	2.97	0.44
22:o:910:LYS:N	22:o:911:PRO:HD2	2.33	0.44
22:o:1179:PRO:HB2	29:w:33:ARG:HB3	2.00	0.44
23:p:256:ILE:HD11	23:p:373:LEU:HD21	2.00	0.44
23:p:371:ARG:NH2	23:p:380:ARG:HH22	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:63:VAL:HG22	31:y:71:ILE:HG22	2.00	0.44
33:u:60:GLN:NE2	33:u:65:PHE:HB2	2.32	0.44
33:u:165:ASP:HB2	33:u:168:LEU:HD11	1.99	0.44
3:D:1071:ARG:NH2	5:F:79:ASN:O	2.51	0.44
7:H:110:TYR:CD2	9:J:157:LEU:CD2	3.01	0.44
14:R:40:VAL:HB	14:R:43:ASP:HB3	2.00	0.44
15:S:127:PHE:CB	16:T:19:TRP:HB2	2.48	0.44
5:f:105:TYR:O	9:j:217:PHE:N	2.51	0.44
8:i:78:ARG:HA	8:i:78:ARG:HD3	1.78	0.44
22:o:17:THR:HG22	22:o:18:ILE:N	2.31	0.44
22:o:1345:ARG:HG2	26:s:133:GLN:NE2	2.32	0.44
23:p:563:ASP:OD1	23:p:563:ASP:N	2.45	0.44
23:p:590:LEU:HD21	23:p:596:ILE:HB	1.99	0.44
23:p:628:VAL:HG12	23:p:629:GLU:O	2.18	0.44
23:p:908:MET:HG3	32:z:45:TYR:CE1	2.53	0.44
1:A:847:LYS:HB3	1:A:847:LYS:HE2	1.77	0.43
2:B:839:MET:HE1	2:B:843:LEU:HD13	2.00	0.43
3:D:943:GLN:HG2	4:E:510:ALA:N	2.33	0.43
5:F:370:TRP:CZ3	5:F:420:ALA:HA	2.53	0.43
5:F:410:PRO:O	5:F:411:VAL:C	2.62	0.43
11:O:57:ASN:C	11:O:58:PHE:CD1	2.96	0.43
12:P:278:GLN:OE1	12:P:278:GLN:N	2.48	0.43
16:T:17:GLY:HA2	16:T:109:ILE:O	2.17	0.43
5:f:223:TYR:CD2	5:f:255:MET:HE1	2.52	0.43
22:o:1178:ASP:OD1	22:o:1185:VAL:HG23	2.17	0.43
23:p:110:PRO:HG2	23:p:163:LEU:HD11	2.00	0.43
29:w:75:ASP:HB3	29:w:78:LEU:HD12	1.99	0.43
33:u:86:ASP:OD1	33:u:87:ALA:N	2.51	0.43
1:A:567:LEU:HD22	2:B:745:GLN:CD	2.43	0.43
2:B:273:LEU:HG	7:H:223:TYR:HE1	1.83	0.43
2:B:414:LEU:HB2	2:B:523:VAL:HG13	1.99	0.43
3:D:943:GLN:NE2	4:E:509:GLN:HA	2.33	0.43
7:H:127:GLN:N	7:H:128:PRO:HD2	2.32	0.43
10:L:99:ALA:HB2	10:L:119:HIS:HD2	1.76	0.43
11:O:22:LEU:CB	11:O:28:ILE:HG23	2.36	0.43
11:O:63:ASN:OD1	11:O:64:THR:HG23	2.17	0.43
11:O:88:ILE:CB	13:Q:360:LEU:HB2	2.48	0.43
12:P:304:ILE:HD12	12:P:304:ILE:N	2.33	0.43
14:R:216:SER:O	14:R:220:SER:OG	2.23	0.43
15:S:47:LEU:HG	15:S:98:TRP:CE3	2.53	0.43
22:o:1190:GLN:NE2	22:o:1194:ASN:HB2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:1211:LEU:HD11	22:o:1258:ARG:NE	2.33	0.43
22:o:1248:ASN:ND2	22:o:1256:VAL:H	2.15	0.43
1:A:681:ALA:O	6:G:75:GLU:CG	2.66	0.43
1:A:925:ASP:N	1:A:925:ASP:OD1	2.51	0.43
5:F:400:GLY:O	5:F:404:ARG:HG2	2.18	0.43
11:O:22:LEU:CD2	13:Q:41:GLU:OE1	2.65	0.43
19:c:101:VAL:HG22	5:f:127:LEU:HA	2.00	0.43
22:o:14:PRO:HB2	22:o:15:LEU:H	1.58	0.43
22:o:472:HIS:NE2	22:o:492:TYR:OH	2.47	0.43
23:p:937:SER:OG	23:p:938:ARG:N	2.51	0.43
24:q:30:VAL:HG22	31:y:45:ILE:HD11	2.00	0.43
26:s:88:LYS:HA	26:s:91:CYS:HB2	1.99	0.43
31:y:37:LYS:HA	31:y:37:LYS:HD3	1.69	0.43
1:A:500:LEU:HD23	1:A:500:LEU:HA	1.81	0.43
3:D:967:MET:H	3:D:967:MET:HG2	1.43	0.43
8:I:132:LEU:CD1	9:J:121:MET:SD	3.06	0.43
11:O:58:PHE:CD2	11:O:82:ARG:O	2.71	0.43
15:S:13:GLU:HG3	16:T:44:ARG:HA	2.00	0.43
17:X:-32:DC:H2''	17:X:-31:DC:C5'	2.48	0.43
18:Y:19:DC:C2	18:Y:20:DC:N3	2.87	0.43
5:f:447:ALA:CB	5:f:456:GLY:HA3	2.49	0.43
22:o:322:LEU:HD12	22:o:323:PRO:HD2	1.99	0.43
23:p:598:VAL:C	23:p:600:GLU:H	2.26	0.43
2:B:594:SER:OG	2:B:595:LYS:N	2.51	0.43
3:D:934:TYR:CZ	8:I:129:LEU:CG	2.90	0.43
4:E:315:GLN:CD	15:S:105:LYS:NZ	2.77	0.43
5:F:38:LEU:HD23	8:I:71:VAL:HB	2.00	0.43
7:H:196:LYS:HB3	5:f:241:GLU:CB	2.49	0.43
12:P:207:PRO:O	12:P:207:PRO:CD	2.65	0.43
18:Y:24:DT:C2'	18:Y:24:DT:P	2.97	0.43
19:c:21:LEU:HD11	19:c:23:TRP:CD1	2.54	0.43
3:d:909:ARG:CZ	10:l:91:PHE:HE1	2.28	0.43
5:f:317:LEU:HG	5:f:330:ARG:HE	1.83	0.43
5:f:336:LEU:HD12	5:f:336:LEU:HA	1.89	0.43
10:l:139:TYR:HD2	21:m:73:MET:HE3	1.83	0.43
22:o:1038:THR:O	22:o:1042:ASN:ND2	2.46	0.43
23:p:1027:VAL:N	24:q:203:TRP:CZ3	2.86	0.43
1:A:414:ILE:HG21	5:F:313:VAL:CG2	2.47	0.43
1:A:821:ARG:HD3	1:A:821:ARG:HA	1.73	0.43
2:B:653:LEU:HG	2:B:684:ILE:HG13	2.00	0.43
3:D:917:ILE:HG21	3:D:1058:VAL:HG11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:788:ARG:HB3	7:H:145:HIS:HB2	1.99	0.43
5:F:62:LYS:HE2	5:F:62:LYS:HB2	1.81	0.43
5:F:312:ILE:HG13	5:F:334:ALA:HB1	2.00	0.43
11:O:89:LYS:N	13:Q:361:ASN:HD21	2.15	0.43
13:Q:366:ILE:HG22	13:Q:367:PHE:N	2.33	0.43
16:T:21:VAL:HA	16:T:114:ALA:O	2.18	0.43
20:k:203:SER:OG	21:m:67:GLU:OE1	2.29	0.43
10:l:113:VAL:O	10:l:113:VAL:HG22	2.18	0.43
22:o:561:MET:CE	31:y:57:LEU:O	2.67	0.43
22:o:687:ILE:HG21	23:p:969:PRO:HA	1.90	0.43
22:o:697:LYS:NZ	22:o:758:LYS:NZ	2.66	0.43
22:o:721:HIS:CD2	29:w:110:LEU:HD13	2.53	0.43
22:o:1429:LYS:HE2	22:o:1429:LYS:HA	2.01	0.43
23:p:296:GLU:CD	23:p:296:GLU:H	2.27	0.43
24:q:7:PRO:HG3	31:y:101:LEU:HD12	1.99	0.43
1:A:489:GLN:H	1:A:489:GLN:HG2	1.20	0.43
1:A:604:PRO:O	1:A:889:TYR:OH	2.34	0.43
7:H:193:PHE:CB	5:f:227:ILE:HD11	2.48	0.43
11:O:7:ARG:NH2	11:O:37:LEU:HB3	2.33	0.43
11:O:77:ASN:O	11:O:79:VAL:HG23	2.19	0.43
14:R:39:LEU:HA	22:o:427:ILE:HA	2.01	0.43
17:X:-37:DG:H2"	17:X:-36:DG:C4	2.53	0.43
5:f:26:MET:HB3	5:f:26:MET:HE3	1.77	0.43
10:l:106:ARG:HD2	10:l:114:LYS:HZ1	1.83	0.43
22:o:28:PRO:HA	22:o:31:LEU:HB2	2.01	0.43
22:o:111:CYS:SG	22:o:188:GLN:NE2	2.92	0.43
22:o:379:GLY:HA2	22:o:475:ARG:O	2.19	0.43
22:o:432:HIS:CE1	22:o:438:LEU:HD21	2.53	0.43
22:o:434:LYS:NZ	22:o:437:ASP:HB3	2.34	0.43
22:o:623:PRO:HA	28:v:27:ARG:HH22	1.83	0.43
22:o:663:ASP:OD1	22:o:666:ARG:NH1	2.50	0.43
22:o:689:ILE:HG22	23:p:981:LEU:HD13	2.01	0.43
22:o:1230:GLN:HB2	22:o:1234:LYS:NZ	2.34	0.43
23:p:805:PHE:HD1	30:x:8:PHE:CD2	2.37	0.43
33:u:2:PHE:CE1	33:u:77:PHE:HB2	2.54	0.43
1:A:475:LEU:HD22	5:f:354:ARG:NH2	2.24	0.43
1:A:575:PRO:HB2	2:B:610:GLU:OE1	2.18	0.43
1:A:639:LEU:O	1:A:639:LEU:CD1	2.67	0.43
2:B:925:LYS:HA	2:B:925:LYS:HD3	1.78	0.43
6:G:181:TRP:O	6:G:181:TRP:CD2	2.72	0.43
11:O:22:LEU:CD1	11:O:28:ILE:HG21	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:e:332:ILE:HA	4:e:336:HIS:HD2	1.84	0.43
22:o:403:GLN:O	22:o:406:VAL:HG12	2.19	0.43
22:o:403:GLN:HA	22:o:406:VAL:HG12	2.01	0.43
22:o:479:TRP:CD1	31:y:67:LEU:HD21	2.42	0.43
22:o:491:PRO:HG2	22:o:535:MET:HE2	2.01	0.43
22:o:579:ILE:HG23	28:v:92:MET:HG2	2.01	0.43
22:o:620:HIS:CD2	28:v:100:GLU:OE2	2.72	0.43
22:o:1028:PRO:O	22:o:1029:LEU:HB3	2.18	0.43
22:o:1097:GLU:HG2	22:o:1098:PRO:HD3	2.00	0.43
22:o:1296:MET:HG2	22:o:1298:LEU:HG	2.01	0.43
23:p:282:ARG:CB	29:w:21:ASN:O	2.55	0.43
25:r:76:ASN:O	25:r:80:ILE:HD12	2.19	0.43
1:A:463:PRO:HD3	5:F:222:LEU:CB	2.45	0.43
1:A:464:TRP:CD1	1:A:464:TRP:C	2.96	0.43
1:A:664:PHE:CD2	6:G:80:ILE:HG21	2.53	0.43
4:E:377:LEU:HD21	4:E:422:PRO:HG2	2.01	0.43
5:F:274:ASN:HB2	5:F:317:LEU:N	2.30	0.43
6:G:129:LYS:HA	6:G:129:LYS:HD2	1.76	0.43
9:J:125:ASP:OD1	9:J:125:ASP:N	2.45	0.43
13:Q:351:PHE:CD1	13:Q:351:PHE:N	2.87	0.43
14:R:135:VAL:HG12	14:R:139:ASN:ND2	2.34	0.43
4:e:504:LEU:HD23	4:e:504:LEU:HA	1.90	0.43
22:o:273:GLN:OE1	22:o:278:HIS:N	2.52	0.43
22:o:1172:ASN:HD22	29:w:57:LYS:CD	2.32	0.43
22:o:1172:ASN:CB	29:w:57:LYS:HD2	2.48	0.43
22:o:1172:ASN:HB3	29:w:57:LYS:HA	1.99	0.43
22:o:1312:PRO:O	22:o:1332:GLN:NE2	2.52	0.43
23:p:143:GLN:N	23:p:143:GLN:OE1	2.52	0.43
23:p:718:GLN:HG2	23:p:720:PRO:HD2	2.01	0.43
33:u:94:LYS:O	33:u:110:ARG:HD2	2.18	0.43
1:A:488:ALA:O	1:A:491:MET:HB2	2.18	0.43
1:A:1023:TRP:HB3	17:X:2:DG:O5'	2.17	0.43
2:B:62:ARG:H	2:B:62:ARG:HG2	1.58	0.43
2:B:496:MET:HB2	2:B:496:MET:HE3	1.83	0.43
3:D:898:VAL:HG22	10:L:113:VAL:HA	2.00	0.43
4:E:650:THR:HG22	4:E:666:THR:HG22	1.99	0.43
15:S:53:ASN:HB2	15:S:96:GLN:OE1	2.19	0.43
17:X:-20:DG:H2''	17:X:-19:DG:O5'	2.19	0.43
22:o:404:GLU:HG3	22:o:407:ARG:NH2	2.34	0.43
22:o:687:ILE:HG21	23:p:969:PRO:O	2.19	0.43
22:o:740:GLN:OE1	22:o:740:GLN:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:90:GLN:HG3	23:p:91:ILE:N	2.34	0.43
23:p:225:LEU:H	23:p:225:LEU:HD23	1.84	0.43
26:s:120:ASP:OD1	26:s:120:ASP:N	2.44	0.43
26:s:154:GLU:O	26:s:157:THR:HG22	2.17	0.43
1:A:463:PRO:HG3	5:F:221:GLN:CB	2.46	0.42
1:A:761:ASP:HB3	6:G:17:ILE:HG23	2.00	0.42
3:D:889:HIS:C	10:L:104:ARG:HH21	2.26	0.42
7:H:166:ARG:HA	7:H:166:ARG:HD2	1.87	0.42
19:c:124:ILE:HD11	5:f:133:ALA:HB1	2.00	0.42
10:l:80:VAL:O	10:l:84:LEU:HG	2.19	0.42
10:l:129:PRO:HB2	21:m:56:ILE:HG23	2.01	0.42
22:o:320:ASN:HB3	22:o:327:ARG:NE	2.34	0.42
22:o:511:THR:HA	23:p:1101:GLN:HB3	2.01	0.42
22:o:1171:ALA:HB3	22:o:1215:GLU:HG3	2.00	0.42
22:o:1248:ASN:HD21	22:o:1256:VAL:HB	1.84	0.42
23:p:282:ARG:CD	29:w:21:ASN:OD1	2.64	0.42
23:p:1027:VAL:CG2	24:q:197:TYR:CE1	2.96	0.42
1:A:569:ASN:CB	2:B:689:GLN:HA	2.49	0.42
1:A:825:ILE:HD12	1:A:830:ILE:HD11	2.02	0.42
2:B:487:LYS:O	2:B:487:LYS:CG	2.67	0.42
5:F:312:ILE:HG22	5:F:313:VAL:CG1	2.49	0.42
11:O:58:PHE:CG	11:O:81:PHE:HD2	2.30	0.42
13:Q:19:GLU:HA	13:Q:19:GLU:OE1	2.19	0.42
14:R:177:PHE:O	14:R:181:CYS:N	2.38	0.42
18:Y:39:DT:H6	18:Y:39:DT:H5'	1.84	0.42
19:c:94:HIS:CD2	5:f:122:LEU:HD22	2.54	0.42
22:o:431:PHE:O	22:o:432:HIS:C	2.61	0.42
22:o:542:LEU:HD12	22:o:542:LEU:HA	1.84	0.42
22:o:687:ILE:HG22	23:p:969:PRO:HB3	0.44	0.42
23:p:629:GLU:O	23:p:630:LYS:C	2.61	0.42
26:s:49:SER:C	26:s:50:GLU:HG3	2.44	0.42
26:s:173:ILE:O	26:s:209:VAL:HA	2.18	0.42
1:A:899:LYS:HE3	1:A:899:LYS:HB2	1.81	0.42
2:B:766:LEU:HA	2:B:807:THR:HG21	2.00	0.42
2:B:887:ARG:NH2	2:B:917:ASP:OD2	2.49	0.42
4:E:315:GLN:NE2	15:S:105:LYS:HZ3	2.18	0.42
4:E:747:LEU:N	4:E:747:LEU:HD13	2.35	0.42
5:F:219:GLU:OE1	7:H:156:PRO:HB2	2.19	0.42
5:F:283:MET:HE1	5:F:308:VAL:HG12	2.00	0.42
5:F:402:ARG:O	5:F:406:VAL:HG13	2.19	0.42
8:I:21:GLN:HE22	8:I:24:LYS:HE2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:L:76:LEU:HD13	10:L:84:LEU:CD1	2.49	0.42
12:P:264:VAL:HG23	12:P:266:PHE:H	1.84	0.42
13:Q:26:ARG:HH21	13:Q:39:LEU:CD2	2.27	0.42
18:Y:23:DC:H6	18:Y:23:DC:O5'	2.01	0.42
22:o:743:ARG:CZ	22:o:743:ARG:CB	2.96	0.42
22:o:1191:GLU:O	22:o:1195:VAL:HG13	2.19	0.42
23:p:594:MET:SD	23:p:657:VAL:HG12	2.59	0.42
23:p:912:ASN:HB3	23:p:918:PHE:CD1	2.54	0.42
24:q:44:ILE:HD11	24:q:238:SER:CB	2.50	0.42
24:q:103:LEU:HD12	24:q:120:LEU:HD22	2.00	0.42
1:A:411:GLU:CB	5:F:358:THR:HG21	2.49	0.42
1:A:697:ALA:HB1	6:G:84:THR:HG22	2.02	0.42
1:A:955:ASP:C	6:G:149:ARG:NH1	2.77	0.42
1:A:1007:LEU:HD22	1:A:1012:VAL:HG21	2.01	0.42
3:D:1005:ASN:O	3:D:1009:LEU:HD12	2.03	0.42
4:E:280:ARG:HH12	8:I:27:GLY:N	2.16	0.42
4:E:476:VAL:HB	4:E:782:HIS:HB2	2.01	0.42
5:F:219:GLU:CD	5:F:219:GLU:C	2.86	0.42
7:H:134:LEU:HD12	7:H:134:LEU:HA	1.94	0.42
11:O:39:GLN:CB	13:Q:28:ILE:CD1	2.96	0.42
11:O:92:LYS:NZ	13:Q:329:PHE:HB2	2.34	0.42
22:o:330:GLN:O	22:o:331:LYS:HE2	2.20	0.42
22:o:620:HIS:CG	28:v:98:ARG:NH1	2.87	0.42
22:o:881:ASN:OD1	22:o:882:SER:N	2.41	0.42
22:o:1485:GLU:OE2	33:u:20:PRO:HG3	2.20	0.42
1:A:410:TRP:CH2	5:F:355:ILE:CG2	3.02	0.42
1:A:567:LEU:CD2	2:B:745:GLN:NE2	2.81	0.42
1:A:727:THR:HG23	1:A:727:THR:O	2.19	0.42
1:A:958:GLY:HA3	6:G:149:ARG:CA	2.48	0.42
11:O:28:ILE:CG2	13:Q:38:VAL:HG13	2.49	0.42
14:R:18:HIS:HB2	14:R:19:PRO:HD2	2.00	0.42
17:X:-25:DA:H2'	17:X:-24:DA:C8	2.54	0.42
4:e:648:ASP:OD2	4:e:650:THR:OG1	2.34	0.42
4:e:667:GLY:O	4:e:692:ARG:NH2	2.52	0.42
20:k:130:PRO:HD3	21:m:35:GLU:HG2	2.02	0.42
22:o:581:LYS:HD3	22:o:581:LYS:HA	1.77	0.42
22:o:948:ILE:HG12	22:o:1007:ILE:HG21	2.01	0.42
22:o:1180:ASN:HB3	22:o:1182:GLN:OE1	2.18	0.42
23:p:988:LYS:HD2	23:p:1015:LEU:CG	2.42	0.42
25:r:82:SER:O	25:r:86:LEU:N	2.51	0.42
28:v:32:SER:OG	28:v:33:GLU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:345:PRO:HG3	1:A:500:LEU:HG	2.00	0.42
1:A:349:TRP:CE2	5:f:266:GLY:CA	3.03	0.42
2:B:371:LYS:HD3	2:B:371:LYS:HA	1.87	0.42
3:D:956:GLN:HA	3:D:956:GLN:NE2	2.34	0.42
4:E:284:SER:HG	5:F:45:TYR:HE1	1.64	0.42
4:E:651:VAL:HG21	4:E:686:THR:HG21	2.01	0.42
10:L:120:LEU:O	10:L:125:ASN:N	2.53	0.42
11:O:88:ILE:HG12	13:Q:365:TYR:OH	2.19	0.42
22:o:350:VAL:HG13	22:o:351:ARG:HG3	2.01	0.42
22:o:741:VAL:HG11	22:o:797:ARG:CZ	2.48	0.42
22:o:1006:PRO:HB3	22:o:1051:SER:OG	2.20	0.42
23:p:1141:ARG:HE	23:p:1143:LYS:HZ1	1.65	0.42
33:u:40:GLY:HA3	33:u:152:VAL:HG22	2.00	0.42
33:u:142:GLU:O	33:u:170:LEU:HA	2.20	0.42
33:u:153:ASP:O	33:u:156:ASP:N	2.53	0.42
3:D:987:LYS:O	3:D:991:MET:HG2	2.20	0.42
4:E:613:ALA:HB3	4:E:616:HIS:HD2	1.83	0.42
5:F:320:ARG:H	5:F:320:ARG:HG3	1.62	0.42
7:H:155:ASP:OD1	7:H:155:ASP:N	2.51	0.42
7:H:185:ASP:CB	5:f:251:GLY:N	2.66	0.42
11:O:64:THR:HG22	12:P:189:ASN:H	1.84	0.42
12:P:250:PHE:CB	13:Q:314:LEU:HD21	2.46	0.42
12:P:329:TYR:N	12:P:330:PRO:HD2	2.35	0.42
17:X:-16:DG:N2	18:Y:17:DC:O2	2.53	0.42
20:k:179:MET:HB3	20:k:180:PRO:CD	2.50	0.42
22:o:18:ILE:CG1	23:p:1171:MET:HB3	2.38	0.42
22:o:1177:TYR:CE1	29:w:28:GLU:OE1	2.73	0.42
22:o:1208:SER:O	22:o:1260:ARG:NH2	2.44	0.42
22:o:1226:LEU:HA	22:o:1230:GLN:NE2	2.34	0.42
22:o:1448:SER:OG	22:o:1449:ASP:N	2.53	0.42
33:u:78:ARG:HG3	33:u:80:PHE:CE1	2.54	0.42
1:A:638:PRO:CG	6:G:36:HIS:O	2.67	0.42
5:F:401:GLU:C	5:F:401:GLU:CD	2.87	0.42
12:P:278:GLN:CD	12:P:278:GLN:N	2.76	0.42
14:R:144:GLN:OE1	23:p:823:PHE:HE2	2.02	0.42
3:d:1078:LEU:HD21	10:l:90:ASP:OD2	2.19	0.42
4:e:479:THR:OG1	4:e:481:ASP:O	2.32	0.42
5:f:244:GLN:O	5:f:248:THR:OG1	2.34	0.42
22:o:807:LEU:HD23	22:o:807:LEU:HA	1.88	0.42
22:o:863:ARG:HH21	22:o:1415:THR:HA	1.84	0.42
22:o:1485:GLU:CD	33:u:20:PRO:HG2	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:193:VAL:O	23:p:467:SER:HA	2.20	0.42
23:p:824:ASP:OD1	23:p:825:GLN:N	2.53	0.42
33:u:38:CYS:C	33:u:155:ASN:OD1	2.62	0.42
2:B:69:GLN:NE2	2:B:156:LYS:O	2.47	0.42
3:D:934:TYR:OH	8:I:129:LEU:HD21	2.08	0.42
4:e:504:LEU:HD22	4:e:575:PHE:HZ	1.85	0.42
4:e:718:ARG:HD3	4:e:718:ARG:HA	1.77	0.42
5:f:104:LEU:HD22	9:j:216:TYR:HB2	2.02	0.42
5:f:432:ALA:HB1	5:f:462:GLN:CB	2.50	0.42
22:o:551:ARG:HG3	28:v:120:GLY:O	2.20	0.42
22:o:715:GLU:OE2	22:o:715:GLU:CA	2.68	0.42
22:o:1361:ASP:OD1	22:o:1363:VAL:HG22	2.20	0.42
2:B:219:ASP:OD1	2:B:219:ASP:N	2.52	0.42
5:F:320:ARG:N	5:F:321:PRO:CD	2.83	0.42
5:F:324:ASP:CG	5:F:327:TRP:HD1	2.28	0.42
6:G:154:LYS:O	6:G:154:LYS:NZ	2.30	0.42
11:O:58:PHE:CE1	13:Q:370:ALA:HB1	2.54	0.42
11:O:67:PHE:HE2	12:P:195:LYS:NZ	2.18	0.42
17:X:-34:DC:O2	17:X:-34:DC:H2'	2.20	0.42
17:X:-17:DG:N2	18:Y:18:DA:N3	2.68	0.42
20:k:179:MET:HB3	20:k:180:PRO:HD2	2.01	0.42
22:o:581:LYS:HB2	28:v:91:VAL:HG23	2.02	0.42
22:o:927:GLU:O	22:o:927:GLU:HG3	2.18	0.42
22:o:1145:GLY:C	22:o:1147:SER:N	2.78	0.42
22:o:1303:GLN:OE1	22:o:1303:GLN:N	2.50	0.42
23:p:177:CYS:SG	23:p:738:THR:OG1	2.59	0.42
23:p:752:TYR:CE1	24:q:63:PHE:CE2	3.08	0.42
25:r:63:LYS:HE3	33:u:103:PRO:CG	2.42	0.42
1:A:575:PRO:HD3	2:B:608:ASN:CG	2.32	0.41
1:A:697:ALA:HB2	6:G:86:TYR:CD2	2.38	0.41
2:B:492:MET:HE3	2:B:492:MET:HB2	1.85	0.41
2:B:957:MET:O	2:B:968:ARG:NH1	2.52	0.41
3:D:950:LEU:HD21	4:E:518:LYS:HB3	1.85	0.41
3:D:1006:LEU:HD22	13:Q:328:LEU:CD1	2.48	0.41
4:E:508:LYS:HB3	4:E:512:ASP:HB2	2.02	0.41
4:E:788:ARG:CB	7:H:145:HIS:HB2	2.51	0.41
8:I:23:LEU:HD22	8:I:28:ILE:HD12	2.00	0.41
11:O:62:LEU:O	12:P:205:ARG:NH2	2.52	0.41
14:R:133:ASN:HD22	14:R:133:ASN:HA	1.63	0.41
15:S:37:VAL:HG11	15:S:42:TRP:CZ2	2.55	0.41
15:S:44:GLN:CD	15:S:104:GLY:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:T:22:LYS:CE	16:T:115:GLU:OE2	2.68	0.41
4:e:721:ARG:HA	4:e:721:ARG:HD3	1.92	0.41
22:o:713:VAL:HG22	22:o:741:VAL:HG22	2.02	0.41
22:o:1029:LEU:HD11	26:s:159:LEU:HD21	1.99	0.41
22:o:1487:PRO:HD2	27:t:78:PRO:HA	2.02	0.41
23:p:552:ASN:OD1	23:p:553:LEU:N	2.49	0.41
23:p:794:VAL:HG22	23:p:944:THR:O	2.20	0.41
26:s:185:ILE:HG22	26:s:209:VAL:HG11	2.02	0.41
2:B:562:GLY:O	2:B:581:ILE:HG12	2.19	0.41
12:P:251:LEU:HB3	13:Q:311:GLU:HG2	2.02	0.41
14:R:132:ARG:HA	14:R:135:VAL:CG2	2.49	0.41
17:X:-21:DG:N2	18:Y:21:DC:N3	2.62	0.41
4:e:690:ASP:N	4:e:690:ASP:OD1	2.53	0.41
8:i:45:ARG:HG3	9:j:212:LYS:HB3	2.01	0.41
22:o:1355:VAL:O	26:s:142:HIS:NE2	2.52	0.41
23:p:1016:SER:HB3	23:p:1022:LEU:HB3	2.02	0.41
23:p:1036:LYS:CB	24:q:195:THR:CB	2.81	0.41
31:y:82:SER:OG	31:y:84:GLN:OE1	2.38	0.41
33:u:120:ASP:OD2	33:u:123:SER:OG	2.28	0.41
1:A:341:TRP:N	1:A:498:PRO:C	2.79	0.41
1:A:639:LEU:O	1:A:639:LEU:HD13	2.20	0.41
3:D:1005:ASN:C	3:D:1009:LEU:HD13	2.25	0.41
5:F:50:ILE:O	5:F:54:ALA:N	2.47	0.41
6:G:184:ILE:H	6:G:184:ILE:HG12	1.76	0.41
7:H:193:PHE:CE1	5:f:242:ALA:CA	3.03	0.41
11:O:75:VAL:HG21	13:Q:327:GLU:HG3	2.02	0.41
12:P:179:ASP:OD1	12:P:179:ASP:C	2.62	0.41
14:R:158:ALA:HA	14:R:186:ILE:HG13	2.01	0.41
14:R:214:PHE:HA	14:R:217:ARG:NH1	2.34	0.41
18:Y:32:DG:C2'	18:Y:33:DC:C5'	2.95	0.41
22:o:437:ASP:OD1	22:o:438:LEU:N	2.53	0.41
22:o:550:LYS:HZ2	28:v:22:PHE:HE1	1.67	0.41
22:o:620:HIS:CE1	28:v:98:ARG:NH1	2.88	0.41
22:o:1156:ASP:OD1	22:o:1156:ASP:C	2.63	0.41
22:o:1173:THR:O	29:w:56:ASN:N	2.48	0.41
22:o:1244:ASN:O	22:o:1259:ILE:HA	2.19	0.41
33:u:79:PRO:HG3	33:u:104:MET:SD	2.60	0.41
33:u:163:LEU:O	33:u:163:LEU:HD23	2.21	0.41
1:A:464:TRP:O	1:A:464:TRP:CD1	2.74	0.41
2:B:176:HIS:HE1	2:B:310:ASP:H	1.68	0.41
2:B:464:ILE:HG12	2:B:513:LYS:HE2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:831:GLU:OE1	2:B:835:ARG:NH2	2.52	0.41
3:D:1071:ARG:HE	5:F:81:GLU:CD	2.29	0.41
4:E:315:GLN:CD	15:S:105:LYS:HZ3	2.28	0.41
5:f:428:LEU:HD13	5:f:458:LEU:CB	2.50	0.41
22:o:15:LEU:HA	23:p:1148:LEU:O	2.20	0.41
22:o:18:ILE:CD1	23:p:1171:MET:C	2.90	0.41
22:o:1005:HIS:O	22:o:1008:LYS:HB2	2.20	0.41
22:o:1130:ILE:HG23	22:o:1362:ILE:HD11	2.02	0.41
22:o:1146:GLN:HA	22:o:1149:ARG:HE	1.84	0.41
22:o:1355:VAL:O	26:s:142:HIS:CD2	2.74	0.41
23:p:36:GLU:OE1	23:p:653:TRP:HB3	2.20	0.41
23:p:267:VAL:HG12	23:p:268:PRO:O	2.20	0.41
23:p:341:GLU:HG2	23:p:342:VAL:N	2.34	0.41
23:p:851:ASP:HB2	32:z:46:LYS:NZ	2.35	0.41
23:p:1027:VAL:HG22	24:q:197:TYR:HE1	1.82	0.41
24:q:175:LYS:NZ	32:z:57:ALA:HB3	2.36	0.41
25:r:36:GLU:OE1	25:r:36:GLU:N	2.53	0.41
31:y:11:LEU:HD12	31:y:11:LEU:HA	1.93	0.41
33:u:44:PHE:HE2	33:u:46:ILE:HG12	1.83	0.41
33:u:117:MET:HE1	33:u:163:LEU:HD22	2.02	0.41
1:A:620:LEU:HD11	1:A:766:ARG:HD3	2.02	0.41
1:A:956:PRO:O	6:G:149:ARG:HD2	2.20	0.41
1:A:1193:ALA:CB	6:G:166:VAL:HG21	2.44	0.41
2:B:27:LYS:CE	2:B:490:SER:HB3	2.50	0.41
5:F:305:ILE:HG23	5:F:309:MET:HE2	2.02	0.41
9:J:200:LEU:HD23	9:J:200:LEU:HA	1.95	0.41
14:R:35:PRO:CA	22:o:431:PHE:HB3	2.50	0.41
14:R:283:VAL:O	14:R:287:GLN:HG2	2.20	0.41
22:o:42:LYS:O	22:o:288:ASN:ND2	2.44	0.41
22:o:200:ALA:N	22:o:214:ILE:O	2.54	0.41
23:p:553:LEU:HD23	23:p:553:LEU:HA	1.87	0.41
23:p:1035:ARG:HG2	24:q:194:HIS:HB3	2.02	0.41
26:s:56:THR:HG22	26:s:57:ASP:N	2.36	0.41
26:s:81:LYS:HB3	26:s:81:LYS:HE2	1.82	0.41
1:A:410:TRP:CH2	5:F:355:ILE:HG22	2.56	0.41
1:A:957:THR:C	6:G:149:ARG:HB3	2.45	0.41
4:E:236:LEU:HD21	4:E:317:LEU:HB2	2.03	0.41
4:E:290:HIS:CG	5:F:45:TYR:CD2	3.08	0.41
5:F:258:ARG:HD2	5:F:258:ARG:HA	1.82	0.41
11:O:82:ARG:HA	11:O:87:LEU:HA	2.03	0.41
16:T:23:VAL:HG13	16:T:27:LEU:HD23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:o:286:ILE:HA	22:o:289:GLN:HG3	2.02	0.41
22:o:1037:ALA:O	26:s:200:ALA:HB1	2.21	0.41
22:o:1129:ASN:HD21	22:o:1415:THR:HB	1.85	0.41
22:o:1171:ALA:O	29:w:59:THR:HG23	2.20	0.41
22:o:1204:VAL:HG23	22:o:1205:ALA:H	1.85	0.41
22:o:1228:MET:SD	22:o:1255:LEU:HG	2.61	0.41
22:o:1472:ASP:OD1	22:o:1472:ASP:N	2.53	0.41
23:p:728:MET:HE2	23:p:942:LYS:HD3	2.02	0.41
23:p:957:THR:HG22	23:p:1028:LEU:CD2	2.51	0.41
1:A:463:PRO:HG3	5:F:221:GLN:HB3	1.93	0.41
1:A:468:PHE:HB3	1:A:469:PRO:CD	2.50	0.41
1:A:1165:LEU:HD22	6:G:181:TRP:HD1	1.81	0.41
1:A:1170:THR:HB	6:G:177:VAL:HG13	2.03	0.41
2:B:937:THR:HG22	2:B:940:MET:HG3	2.03	0.41
3:D:1000:ARG:HG2	11:O:5:LEU:HD12	2.03	0.41
5:F:219:GLU:OE2	7:H:157:HIS:CB	2.68	0.41
11:O:88:ILE:CG1	13:Q:365:TYR:OH	2.69	0.41
12:P:206:GLU:HB3	12:P:207:PRO:HD3	2.03	0.41
14:R:118:PHE:HA	14:R:121:ILE:HB	2.03	0.41
14:R:259:TYR:HD1	14:R:274:ILE:HD12	1.85	0.41
4:e:261:LYS:HE3	4:e:261:LYS:HB2	1.95	0.41
5:f:55:LEU:HD13	8:i:28:ILE:HG12	2.01	0.41
22:o:48:GLU:OE1	22:o:48:GLU:N	2.52	0.41
22:o:551:ARG:NH2	28:v:122:LEU:HD12	2.36	0.41
22:o:578:ALA:HA	28:v:93:TYR:O	2.21	0.41
23:p:109:MET:HB2	23:p:112:GLU:OE1	2.20	0.41
23:p:914:GLU:HG3	23:p:914:GLU:O	2.21	0.41
1:A:414:ILE:HG23	5:F:309:MET:C	2.46	0.41
2:B:100:GLN:O	2:B:101:ARG:NH1	2.46	0.41
3:D:887:LYS:HA	3:D:887:LYS:HD3	1.78	0.41
5:F:233:GLY:CA	5:F:239:ARG:HE	2.34	0.41
13:Q:53:SER:O	13:Q:54:ARG:HB2	2.20	0.41
14:R:44:ARG:HB3	23:p:1067:ILE:CD1	2.51	0.41
18:Y:37:DC:H2'	18:Y:38:DT:H73	2.01	0.41
22:o:140:ARG:HH12	22:o:235:VAL:HA	1.85	0.41
23:p:565:THR:HG21	23:p:580:PRO:CG	2.50	0.41
23:p:594:MET:HE2	23:p:594:MET:HB2	1.86	0.41
23:p:639:HIS:O	23:p:643:LEU:HB2	2.21	0.41
23:p:968:ASN:OD1	23:p:969:PRO:HD2	2.21	0.41
23:p:1120:ASN:ND2	23:p:1145:GLN:HB2	2.33	0.41
25:r:63:LYS:NZ	33:u:103:PRO:C	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:s:45:GLY:HA3	26:s:53:PRO:HD3	2.03	0.41
1:A:463:PRO:O	5:F:218:VAL:HG23	2.21	0.41
1:A:645:LYS:HD2	1:A:645:LYS:HA	1.77	0.41
1:A:775:GLU:OE1	6:G:29:ARG:NH1	2.53	0.41
1:A:958:GLY:HA3	6:G:149:ARG:HA	2.03	0.41
1:A:1068:ARG:HD2	1:A:1068:ARG:C	2.46	0.41
2:B:684:ILE:HD13	2:B:684:ILE:HA	1.95	0.41
3:D:1080:TYR:CD1	4:E:585:ASN:OD1	2.74	0.41
4:E:239:LEU:HB3	4:E:307:LEU:HD21	2.03	0.41
4:E:257:GLU:OE2	4:E:287:LYS:NZ	2.48	0.41
4:E:466:PHE:HE1	4:E:794:ALA:HB1	1.85	0.41
5:F:42:GLU:HG2	8:I:75:ILE:HG12	2.03	0.41
5:F:90:GLU:C	5:F:92:ILE:H	2.27	0.41
5:F:126:PRO:CD	7:H:29:TYR:HA	2.51	0.41
6:G:74:MET:HE1	6:G:136:ILE:HD12	2.02	0.41
7:H:190:LEU:HD22	5:f:223:TYR:CB	2.44	0.41
11:O:14:SER:CA	13:Q:49:LYS:HD2	2.47	0.41
11:O:19:LEU:O	11:O:23:ILE:HG13	2.20	0.41
11:O:31:GLN:NE2	11:O:31:GLN:HA	2.33	0.41
11:O:39:GLN:CB	13:Q:28:ILE:HD12	2.47	0.41
11:O:60:GLY:CA	11:O:79:VAL:HG13	2.49	0.41
11:O:66:ARG:HH21	12:P:185:LEU:C	2.28	0.41
12:P:196:ARG:HD2	12:P:196:ARG:HA	1.80	0.41
13:Q:43:LYS:HE2	13:Q:60:HIS:CE1	2.56	0.41
15:S:48:GLU:OE1	15:S:101:ARG:NH2	2.54	0.41
15:S:157:ALA:HB2	23:p:311:ILE:HA	2.03	0.41
3:d:1060:LEU:HD11	10:l:83:MET:HG3	2.02	0.41
4:e:467:LEU:HD23	4:e:467:LEU:HA	1.93	0.41
5:f:149:PRO:HA	5:f:150:PRO:HD3	1.83	0.41
22:o:355:MET:N	22:o:355:MET:SD	2.94	0.41
22:o:561:MET:HE2	31:y:57:LEU:O	2.20	0.41
22:o:830:GLY:CA	23:p:716:HIS:HD1	2.31	0.41
22:o:1036:ASN:ND2	26:s:204:ILE:CD1	2.84	0.41
22:o:1054:MET:HE1	22:o:1065:PHE:CE1	2.56	0.41
22:o:1158:LEU:HD22	22:o:1309:MET:HE3	2.02	0.41
22:o:1174:ALA:HA	29:w:55:VAL:HA	2.03	0.41
22:o:1231:ILE:O	22:o:1235:ILE:HG12	2.20	0.41
22:o:1476:ASP:HB3	27:t:105:ILE:CD1	2.50	0.41
23:p:100:GLU:HG3	32:z:42:ARG:CZ	2.51	0.41
23:p:171:LEU:HD23	23:p:171:LEU:HA	1.89	0.41
23:p:302:LYS:HG3	29:w:23:MET:HE1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:p:891:ASP:OD1	23:p:891:ASP:N	2.50	0.41
24:q:225:LYS:HG3	24:q:226:PRO:HD2	2.03	0.41
1:A:682:GLU:HA	6:G:74:MET:HA	2.02	0.41
1:A:953:VAL:O	6:G:149:ARG:NH2	2.54	0.41
4:E:306:VAL:HA	4:E:338:TYR:HB3	2.03	0.41
5:F:307:ALA:C	5:F:310:THR:HG22	2.46	0.41
5:F:370:TRP:CH2	5:F:402:ARG:HB3	2.56	0.41
7:H:38:GLN:NE2	7:H:59:GLU:OE2	2.54	0.41
7:H:185:ASP:CG	5:f:250:PRO:HB2	2.46	0.41
7:H:194:MET:CE	5:f:226:GLU:CG	2.37	0.41
11:O:22:LEU:CD1	13:Q:38:VAL:HG13	2.43	0.41
12:P:236:LYS:HD3	13:Q:320:VAL:HG21	2.03	0.41
14:R:111:ASP:CG	14:R:114:MET:CB	2.92	0.41
16:T:25:LYS:O	16:T:29:GLN:N	2.47	0.41
4:e:378:LYS:HZ3	4:e:378:LYS:HG2	1.61	0.41
5:f:83:LEU:HD11	8:i:42:PHE:HB2	2.03	0.41
22:o:457:ILE:HG21	23:p:1102:PHE:CE2	2.56	0.41
22:o:721:HIS:C	22:o:723:ASN:H	2.28	0.41
22:o:769:MET:HE2	23:p:970:HIS:CD2	2.56	0.41
22:o:1375:ARG:NH1	22:o:1379:GLU:OE1	2.54	0.41
23:p:837:CYS:HA	23:p:889:LYS:O	2.21	0.41
23:p:1119:CYS:SG	23:p:1121:LEU:HD23	2.61	0.41
26:s:55:ARG:O	26:s:76:PHE:HB2	2.21	0.41
1:A:405:VAL:HB	5:F:302:HIS:HB3	2.03	0.40
1:A:413:ASP:O	1:A:414:ILE:C	2.63	0.40
1:A:463:PRO:HD2	5:F:218:VAL:HG22	2.03	0.40
1:A:1169:ARG:CG	1:A:1181:ARG:NH1	2.84	0.40
1:A:1187:LYS:HA	1:A:1188:PRO:HD3	1.89	0.40
2:B:159:LEU:N	2:B:159:LEU:CD2	2.82	0.40
2:B:544:LEU:HD22	2:B:625:LEU:HD22	2.03	0.40
2:B:842:LEU:HD11	7:H:214:ILE:CD1	2.51	0.40
3:D:999:MET:SD	11:O:71:VAL:HG12	2.60	0.40
3:D:1057:ARG:HE	3:D:1057:ARG:HB3	1.72	0.40
5:F:418:ILE:H	5:F:418:ILE:CD1	2.26	0.40
7:H:77:LYS:HE3	7:H:77:LYS:HB3	1.93	0.40
11:O:5:LEU:CD2	11:O:98:CYS:SG	3.09	0.40
11:O:7:ARG:NH1	11:O:37:LEU:HB3	2.35	0.40
12:P:180:LEU:HD23	12:P:180:LEU:HA	1.85	0.40
13:Q:310:GLU:CB	13:Q:313:PRO:HD3	2.50	0.40
14:R:218:PHE:CD1	14:R:277:ILE:HG22	2.55	0.40
15:S:136:GLU:HG2	15:S:138:PHE:CE1	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Y:37:DC:C2'	18:Y:38:DT:H73	2.48	0.40
5:f:402:ARG:HH22	5:f:403:ILE:HD12	1.85	0.40
22:o:215:LEU:H	22:o:215:LEU:HD23	1.85	0.40
22:o:621:ILE:CD1	28:v:115:TYR:CE2	3.04	0.40
22:o:1344:MET:CE	26:s:134:GLU:HA	2.49	0.40
22:o:1428:MET:SD	22:o:1429:LYS:HG2	2.61	0.40
23:p:374:LEU:HD23	23:p:374:LEU:HA	1.85	0.40
24:q:11:ILE:HD11	31:y:109:ILE:HG22	2.03	0.40
24:q:70:LEU:HB2	30:x:5:VAL:HG21	2.03	0.40
1:A:792:PRO:HB3	1:A:798:ARG:HB3	2.02	0.40
4:E:280:ARG:HE	4:E:280:ARG:HB3	1.78	0.40
13:Q:329:PHE:HD1	13:Q:329:PHE:O	2.04	0.40
16:T:20:LEU:O	16:T:113:ARG:HA	2.21	0.40
17:X:-34:DC:C2'	17:X:-33:DG:N7	2.84	0.40
3:d:909:ARG:NH1	10:l:91:PHE:CE1	2.89	0.40
22:o:1304:ILE:O	22:o:1304:ILE:HG13	2.20	0.40
23:p:1088:GLU:OE1	23:p:1091:ARG:NH1	2.54	0.40
33:u:89:VAL:HA	33:u:99:THR:HA	2.03	0.40
33:u:146:LYS:HD3	33:u:165:ASP:OD2	2.21	0.40
33:u:154:LYS:HG3	33:u:155:ASN:H	1.85	0.40
1:A:725:CYS:SG	1:A:734:LEU:HD12	2.61	0.40
1:A:1021:SER:HB2	1:A:1024:GLU:HB2	2.04	0.40
2:B:984:PRO:HG2	2:B:987:LEU:HD22	2.03	0.40
4:E:704:VAL:HG13	4:E:762:PRO:HD3	2.02	0.40
5:F:89:GLN:HE22	9:J:210:ASN:HD22	1.67	0.40
12:P:326:GLU:OE1	12:P:326:GLU:HA	2.21	0.40
14:R:195:PHE:CZ	14:R:199:LEU:HD11	2.57	0.40
15:S:110:PHE:HD1	15:S:148:PRO:HA	1.85	0.40
5:f:216:LEU:HD21	5:f:254:GLN:O	2.21	0.40
22:o:16:ARG:CD	23:p:1173:SER:CB	2.97	0.40
22:o:247:TRP:C	22:o:249:ILE:H	2.29	0.40
22:o:1098:PRO:O	22:o:1101:GLN:HG2	2.20	0.40
22:o:1428:MET:SD	22:o:1429:LYS:HE3	2.61	0.40
23:p:368:MET:HE3	23:p:368:MET:HB2	1.85	0.40
25:r:36:GLU:HA	25:r:39:MET:HE2	2.02	0.40
26:s:193:ILE:HB	26:s:205:THR:HG23	2.03	0.40
2:B:55:PRO:HB3	2:B:60:LEU:HD22	2.02	0.40
2:B:77:ILE:HG12	2:B:146:ILE:HG23	2.03	0.40
3:D:1000:ARG:NE	11:O:5:LEU:CD1	2.79	0.40
4:E:788:ARG:HD3	7:H:144:PRO:O	2.21	0.40
5:F:249:ASP:HB3	5:F:252:LEU:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:P:312:LEU:HD12	12:P:312:LEU:N	2.36	0.40
14:R:216:SER:HA	14:R:229:GLN:NE2	2.35	0.40
16:T:123:ASN:O	16:T:126:ARG:N	2.53	0.40
22:o:358:ARG:N	23:p:1073:GLN:HE21	2.17	0.40
22:o:511:THR:HG21	23:p:1105:GLU:HB2	2.03	0.40
22:o:620:HIS:HD2	28:v:100:GLU:OE2	2.04	0.40
22:o:1486:ILE:HB	22:o:1487:PRO:HD3	2.04	0.40
23:p:598:VAL:C	23:p:600:GLU:N	2.80	0.40
23:p:980:HIS:ND1	23:p:980:HIS:O	2.54	0.40
23:p:986:GLN:HA	23:p:1011:ILE:CG2	2.51	0.40
29:w:60:HIS:O	29:w:60:HIS:ND1	2.54	0.40
33:u:27:LYS:HD3	33:u:51:ILE:HD11	2.02	0.40
1:A:657:SER:C	2:B:475:LYS:HZ3	2.21	0.40
2:B:180:CYS:HB2	2:B:313:TYR:HB2	2.04	0.40
2:B:267:HIS:HB3	2:B:277:LEU:HD11	2.03	0.40
2:B:295:LEU:HD13	2:B:477:LEU:HD11	2.03	0.40
2:B:749:LEU:HA	2:B:752:THR:HG22	2.02	0.40
4:E:243:LEU:HD23	4:E:243:LEU:HA	1.96	0.40
5:F:324:ASP:CA	5:F:327:TRP:HB3	2.44	0.40
5:F:350:ASN:O	5:F:354:ARG:NH1	2.55	0.40
7:H:186:VAL:HG21	5:f:220:GLN:HB3	2.03	0.40
8:I:60:HIS:CE1	10:L:118:LEU:HD12	2.42	0.40
9:J:141:ARG:HA	9:J:141:ARG:HD3	1.97	0.40
13:Q:15:ARG:HA	13:Q:15:ARG:HD3	1.92	0.40
13:Q:314:LEU:O	13:Q:317:GLU:CD	2.64	0.40
15:S:16:VAL:HG23	16:T:43:LEU:HB2	2.04	0.40
18:Y:19:DC:H2'	18:Y:19:DC:O5'	2.21	0.40
5:f:220:GLN:H	5:f:220:GLN:HG2	1.72	0.40
22:o:192:ARG:HG2	22:o:193:ARG:H	1.87	0.40
22:o:963:ARG:CZ	22:o:967:ARG:HH21	2.35	0.40
22:o:1014:LYS:HE2	22:o:1014:LYS:HB3	1.90	0.40
23:p:334:LYS:HA	23:p:334:LYS:HD3	1.83	0.40
23:p:463:ARG:HE	23:p:463:ARG:HB3	1.62	0.40
23:p:606:ASP:OD1	23:p:606:ASP:N	2.44	0.40
23:p:1038:THR:HA	24:q:196:VAL:N	2.25	0.40
25:r:60:VAL:HG12	33:u:46:ILE:HG23	2.03	0.40
26:s:43:GLN:NE2	26:s:44:PHE:CZ	2.90	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	A	581/1872 (31%)	543 (94%)	35 (6%)	3 (0%)	24	63
2	B	959/1199 (80%)	912 (95%)	47 (5%)	0	100	100
3	D	159/1085 (15%)	151 (95%)	7 (4%)	1 (1%)	21	59
3	d	154/1085 (14%)	150 (97%)	4 (3%)	0	100	100
4	E	540/800 (68%)	502 (93%)	36 (7%)	2 (0%)	30	67
4	e	531/800 (66%)	484 (91%)	47 (9%)	0	100	100
5	F	400/677 (59%)	376 (94%)	18 (4%)	6 (2%)	8	39
5	f	399/677 (59%)	377 (94%)	22 (6%)	0	100	100
6	G	139/349 (40%)	133 (96%)	5 (4%)	1 (1%)	18	56
7	H	207/310 (67%)	189 (91%)	15 (7%)	3 (1%)	9	40
8	I	118/264 (45%)	114 (97%)	4 (3%)	0	100	100
8	i	119/264 (45%)	115 (97%)	4 (3%)	0	100	100
9	J	85/218 (39%)	82 (96%)	3 (4%)	0	100	100
9	j	91/218 (42%)	89 (98%)	2 (2%)	0	100	100
10	L	74/161 (46%)	72 (97%)	2 (3%)	0	100	100
10	l	105/161 (65%)	101 (96%)	4 (4%)	0	100	100
11	O	95/109 (87%)	79 (83%)	12 (13%)	4 (4%)	2	17
12	P	175/339 (52%)	168 (96%)	5 (3%)	2 (1%)	11	46
13	Q	118/376 (31%)	106 (90%)	10 (8%)	2 (2%)	7	36
14	R	244/316 (77%)	233 (96%)	10 (4%)	1 (0%)	30	67
15	S	130/517 (25%)	126 (97%)	4 (3%)	0	100	100
16	T	109/249 (44%)	102 (94%)	4 (4%)	3 (3%)	4	24
19	c	125/929 (14%)	116 (93%)	9 (7%)	0	100	100
20	k	96/211 (46%)	91 (95%)	5 (5%)	0	100	100
21	m	85/124 (68%)	79 (93%)	6 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	o	1417/1970 (72%)	1303 (92%)	110 (8%)	4 (0%)	36	72
23	p	1128/1174 (96%)	1050 (93%)	77 (7%)	1 (0%)	48	83
24	q	253/275 (92%)	226 (89%)	27 (11%)	0	100	100
25	r	126/142 (89%)	119 (94%)	7 (6%)	0	100	100
26	s	207/210 (99%)	196 (95%)	11 (5%)	0	100	100
27	t	77/127 (61%)	74 (96%)	3 (4%)	0	100	100
28	v	146/150 (97%)	132 (90%)	14 (10%)	0	100	100
29	w	112/125 (90%)	103 (92%)	9 (8%)	0	100	100
30	x	62/67 (92%)	60 (97%)	2 (3%)	0	100	100
31	y	115/117 (98%)	109 (95%)	6 (5%)	0	100	100
32	z	42/58 (72%)	38 (90%)	4 (10%)	0	100	100
33	u	169/172 (98%)	157 (93%)	11 (6%)	1 (1%)	21	59
All	All	9692/17897 (54%)	9057 (93%)	601 (6%)	34 (0%)	31	67

All (34) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1000	LEU
1	A	1158	SER
4	E	704	VAL
5	F	396	LEU
7	H	141	PRO
11	O	52	VAL
13	Q	321	SER
16	T	124	TYR
22	o	14	PRO
22	o	539	GLN
22	o	581	LYS
23	p	1021	HIS
33	u	154	LYS
1	A	498	PRO
4	E	521	ASP
5	F	397	GLN
5	F	411	VAL
6	G	152	ALA
11	O	26	GLN
16	T	121	SER
3	D	936	GLN

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Mol	Chain	Res	Type
12	P	207	PRO
5	F	393	LEU
5	F	439	ARG
11	O	56	VAL
11	O	84	VAL
16	T	38	GLY
5	F	64	GLN
7	H	134	LEU
7	H	164	THR
22	o	469	MET
12	P	298	PRO
14	R	247	GLY
13	Q	312	GLU

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	A	534/1665 (32%)	475 (89%)	59 (11%)	6	20
2	B	875/1083 (81%)	860 (98%)	15 (2%)	53	69
3	D	149/815 (18%)	125 (84%)	24 (16%)	2	11
3	d	146/815 (18%)	146 (100%)	0	100	100
4	E	478/657 (73%)	470 (98%)	8 (2%)	53	69
4	e	475/657 (72%)	473 (100%)	2 (0%)	84	84
5	F	320/574 (56%)	296 (92%)	24 (8%)	12	33
5	f	322/574 (56%)	310 (96%)	12 (4%)	30	51
6	G	133/322 (41%)	121 (91%)	12 (9%)	9	27
7	H	181/270 (67%)	175 (97%)	6 (3%)	33	55
8	I	106/235 (45%)	106 (100%)	0	100	100
8	i	107/235 (46%)	107 (100%)	0	100	100
9	J	78/154 (51%)	78 (100%)	0	100	100
9	j	83/154 (54%)	83 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	L	71/141 (50%)	66 (93%)	5 (7%)	14	35
10	l	98/141 (70%)	98 (100%)	0	100	100
11	O	84/98 (86%)	73 (87%)	11 (13%)	4	15
12	P	153/293 (52%)	140 (92%)	13 (8%)	10	29
13	Q	111/324 (34%)	105 (95%)	6 (5%)	20	41
14	R	211/268 (79%)	194 (92%)	17 (8%)	11	31
15	S	117/448 (26%)	110 (94%)	7 (6%)	17	39
16	T	94/218 (43%)	92 (98%)	2 (2%)	47	65
19	c	113/833 (14%)	111 (98%)	2 (2%)	51	67
20	k	87/182 (48%)	87 (100%)	0	100	100
21	m	80/106 (76%)	79 (99%)	1 (1%)	61	74
22	o	1257/1748 (72%)	1208 (96%)	49 (4%)	28	49
23	p	993/1027 (97%)	973 (98%)	20 (2%)	48	66
24	q	234/252 (93%)	234 (100%)	0	100	100
25	r	106/126 (84%)	106 (100%)	0	100	100
26	s	191/192 (100%)	191 (100%)	0	100	100
27	t	69/111 (62%)	69 (100%)	0	100	100
28	v	129/131 (98%)	129 (100%)	0	100	100
29	w	103/112 (92%)	103 (100%)	0	100	100
30	x	53/56 (95%)	53 (100%)	0	100	100
31	y	106/106 (100%)	106 (100%)	0	100	100
32	z	41/55 (74%)	41 (100%)	0	100	100
33	u	152/153 (99%)	150 (99%)	2 (1%)	61	74
All	All	8640/15331 (56%)	8343 (97%)	297 (3%)	33	54

All (297) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	348	LEU
1	A	353	LEU
1	A	395	ASP
1	A	397	LEU
1	A	400	GLU
1	A	401	ASN

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Mol	Chain	Res	Type
1	A	403	LEU
1	A	404	MET
1	A	408	LEU
1	A	415	ILE
1	A	416	TRP
1	A	417	ASP
1	A	419	GLU
1	A	470	ILE
1	A	475	LEU
1	A	481	GLU
1	A	483	ASN
1	A	485	ILE
1	A	489	GLN
1	A	493	ARG
1	A	496	GLU
1	A	499	VAL
1	A	500	LEU
1	A	501	THR
1	A	502	LEU
1	A	505	ASN
1	A	511	LEU
1	A	639	LEU
1	A	661	GLU
1	A	667	THR
1	A	711	ASP
1	A	727	THR
1	A	730	PHE
1	A	797	LYS
1	A	798	ARG
1	A	801	THR
1	A	819	LYS
1	A	820	ASP
1	A	821	ARG
1	A	828	GLU
1	A	843	ARG
1	A	844	LYS
1	A	925	ASP
1	A	943	LYS
1	A	968	ILE
1	A	1019	LYS
1	A	1020	LEU
1	A	1052	ARG

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Mol	Chain	Res	Type
1	A	1055	VAL
1	A	1058	HIS
1	A	1062	TYR
1	A	1068	ARG
1	A	1073	GLN
1	A	1083	LEU
1	A	1084	SER
1	A	1165	LEU
1	A	1167	ILE
1	A	1169	ARG
1	A	1203	GLU
2	B	21	GLU
2	B	71	ARG
2	B	140	GLU
2	B	184	ASN
2	B	262	MET
2	B	266	THR
2	B	293	GLU
2	B	431	LEU
2	B	559	LYS
2	B	603	LYS
2	B	640	VAL
2	B	746	SER
2	B	771	VAL
2	B	818	THR
2	B	987	LEU
3	D	887	LYS
3	D	888	LYS
3	D	891	ILE
3	D	893	GLU
3	D	936	GLN
3	D	948	GLU
3	D	950	LEU
3	D	951	ASP
3	D	958	LYS
3	D	959	ASP
3	D	962	GLU
3	D	963	ARG
3	D	966	LEU
3	D	967	MET
3	D	968	ARG
3	D	980	GLU

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Mol	Chain	Res	Type
3	D	983	ARG
3	D	995	GLU
3	D	996	LEU
3	D	1000	ARG
3	D	1003	ASP
3	D	1009	LEU
3	D	1054	ARG
3	D	1055	ILE
4	E	522	ASP
4	E	702	LEU
4	E	704	VAL
4	E	745	GLU
4	E	746	ASP
4	E	747	LEU
4	E	761	LEU
4	E	763	GLU
5	F	63	ARG
5	F	92	ILE
5	F	105	TYR
5	F	261	THR
5	F	271	VAL
5	F	280	ILE
5	F	295	LEU
5	F	301	VAL
5	F	310	THR
5	F	312	ILE
5	F	315	ARG
5	F	317	LEU
5	F	319	LEU
5	F	326	HIS
5	F	340	ILE
5	F	348	THR
5	F	354	ARG
5	F	368	THR
5	F	391	LEU
5	F	396	LEU
5	F	397	GLN
5	F	406	VAL
5	F	415	ILE
5	F	427	LEU
6	G	41	ASP
6	G	129	LYS

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Mol	Chain	Res	Type
6	G	131	ILE
6	G	141	LYS
6	G	142	ASN
6	G	143	VAL
6	G	153	LYS
6	G	154	LYS
6	G	177	VAL
6	G	179	THR
6	G	181	TRP
6	G	184	ILE
7	H	115	GLN
7	H	132	LYS
7	H	135	THR
7	H	155	ASP
7	H	159	TYR
7	H	164	THR
10	L	73	ASN
10	L	110	THR
10	L	111	LEU
10	L	112	GLU
10	L	128	ILE
11	O	11	LEU
11	O	24	GLN
11	O	31	GLN
11	O	52	VAL
11	O	56	VAL
11	O	57	ASN
11	O	58	PHE
11	O	61	SER
11	O	70	ASN
11	O	76	LEU
11	O	84	VAL
12	P	172	VAL
12	P	209	THR
12	P	221	CYS
12	P	252	ASP
12	P	268	ILE
12	P	269	ARG
12	P	274	VAL
12	P	278	GLN
12	P	287	LEU
12	P	300	ILE

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Mol	Chain	Res	Type
12	P	306	VAL
12	P	317	VAL
12	P	328	ILE
13	Q	13	LEU
13	Q	34	VAL
13	Q	320	VAL
13	Q	344	ARG
13	Q	346	LYS
13	Q	364	ASP
14	R	27	TYR
14	R	31	ASP
14	R	34	CYS
14	R	39	LEU
14	R	40	VAL
14	R	41	VAL
14	R	120	GLU
14	R	127	ARG
14	R	128	ILE
14	R	130	LEU
14	R	133	ASN
14	R	137	ARG
14	R	154	ARG
14	R	175	ARG
14	R	189	LYS
14	R	196	LYS
14	R	284	THR
15	S	7	SER
15	S	155	LEU
15	S	156	THR
15	S	158	GLU
15	S	162	GLU
15	S	169	LYS
15	S	171	LEU
16	T	123	ASN
16	T	127	LEU
19	c	24	ASP
19	c	106	VAL
4	e	546	VAL
4	e	579	VAL
5	f	215	GLU
5	f	253	TYR
5	f	261	THR

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Mol	Chain	Res	Type
5	f	272	VAL
5	f	274	ASN
5	f	322	ASP
5	f	323	VAL
5	f	326	HIS
5	f	356	THR
5	f	366	GLU
5	f	408	ASP
5	f	421	ASP
21	m	31	LEU
22	o	13	CYS
22	o	15	LEU
22	o	92	LYS
22	o	97	VAL
22	o	217	SER
22	o	302	VAL
22	o	359	VAL
22	o	429	LEU
22	o	430	ARG
22	o	468	SER
22	o	508	SER
22	o	510	GLU
22	o	512	ARG
22	o	518	LEU
22	o	524	MET
22	o	538	VAL
22	o	540	ASP
22	o	580	LEU
22	o	581	LYS
22	o	583	ARG
22	o	647	THR
22	o	648	SER
22	o	701	ASP
22	o	705	THR
22	o	706	ILE
22	o	714	ILE
22	o	715	GLU
22	o	718	GLU
22	o	719	LYS
22	o	733	LEU
22	o	734	ARG
22	o	736	THR

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Mol	Chain	Res	Type
22	o	738	GLU
22	o	741	VAL
22	o	747	ASP
22	o	754	SER
22	o	759	SER
22	o	778	LYS
22	o	779	ILE
22	o	803	LYS
22	o	811	ILE
22	o	883	ILE
22	o	1139	LEU
22	o	1322	ILE
22	o	1324	GLU
22	o	1325	ASP
22	o	1421	ARG
22	o	1422	GLN
22	o	1423	ASP
23	p	248	LYS
23	p	249	LYS
23	p	307	GLU
23	p	309	PHE
23	p	311	ILE
23	p	312	GLN
23	p	589	LYS
23	p	594	MET
23	p	597	ILE
23	p	598	VAL
23	p	689	TYR
23	p	823	PHE
23	p	841	ARG
23	p	844	ILE
23	p	1006	VAL
23	p	1008	VAL
23	p	1015	LEU
23	p	1022	LEU
23	p	1023	ARG
23	p	1078	ARG
33	u	144	ARG
33	u	163	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (157) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	401	ASN
1	A	409	HIS
1	A	569	ASN
1	A	630	GLN
1	A	693	GLN
1	A	702	ASN
1	A	800	ASN
1	A	860	ASN
1	A	896	GLN
1	A	1058	HIS
1	A	1073	GLN
2	B	30	HIS
2	B	36	ASN
2	B	160	HIS
2	B	176	HIS
2	B	183	GLN
2	B	235	HIS
2	B	348	GLN
2	B	439	HIS
2	B	450	GLN
2	B	509	ASN
2	B	577	HIS
2	B	580	GLN
2	B	644	GLN
2	B	652	GLN
2	B	745	GLN
2	B	750	GLN
2	B	813	ASN
2	B	864	ASN
2	B	908	GLN
2	B	912	ASN
2	B	963	HIS
3	D	875	GLN
3	D	912	ASN
3	D	925	ASN
3	D	943	GLN
3	D	956	GLN
3	D	994	GLN
3	D	1075	HIS
4	E	238	GLN
4	E	254	ASN
4	E	268	HIS
4	E	326	ASN

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Mol	Chain	Res	Type
4	E	327	ASN
4	E	351	GLN
4	E	616	HIS
4	E	640	ASN
4	E	733	ASN
5	F	37	GLN
5	F	59	HIS
5	F	87	HIS
5	F	119	ASN
5	F	221	GLN
5	F	270	ASN
5	F	273	GLN
5	F	275	ASN
5	F	326	HIS
6	G	10	HIS
6	G	48	HIS
6	G	133	ASN
6	G	134	HIS
7	H	66	GLN
7	H	145	HIS
8	I	21	GLN
8	I	60	HIS
8	I	98	GLN
9	J	160	GLN
9	J	173	HIS
9	J	210	ASN
10	L	105	HIS
10	L	119	HIS
11	O	57	ASN
12	P	189	ASN
13	Q	60	HIS
13	Q	352	HIS
13	Q	361	ASN
14	R	229	GLN
15	S	44	GLN
16	T	14	GLN
19	c	19	GLN
19	c	27	GLN
19	c	50	HIS
3	d	912	ASN
4	e	223	HIS
4	e	256	HIS

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Mol	Chain	Res	Type
4	e	320	HIS
4	e	368	ASN
4	e	424	GLN
4	e	640	ASN
4	e	660	ASN
4	e	733	ASN
5	f	30	GLN
5	f	64	GLN
5	f	119	ASN
5	f	134	HIS
5	f	325	ASN
8	i	60	HIS
9	j	210	ASN
20	k	186	HIS
20	k	202	ASN
20	k	205	HIS
10	l	73	ASN
21	m	107	ASN
22	o	62	GLN
22	o	123	ASN
22	o	278	HIS
22	o	289	GLN
22	o	296	ASN
22	o	330	GLN
22	o	539	GLN
22	o	576	GLN
22	o	590	GLN
22	o	620	HIS
22	o	703	GLN
22	o	721	HIS
22	o	731	ASN
22	o	735	GLN
22	o	739	ASN
22	o	757	GLN
22	o	950	ASN
22	o	1005	HIS
22	o	1101	GLN
22	o	1129	ASN
22	o	1230	GLN
22	o	1248	ASN
22	o	1332	GLN
22	o	1445	HIS

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Mol	Chain	Res	Type
22	o	1462	GLN
23	p	68	GLN
23	p	111	ASN
23	p	254	GLN
23	p	287	HIS
23	p	370	HIS
23	p	502	HIS
23	p	525	ASN
23	p	537	GLN
23	p	570	ASN
23	p	749	HIS
23	p	755	GLN
23	p	777	ASN
23	p	986	GLN
23	p	1073	GLN
23	p	1094	GLN
23	p	1117	HIS
23	p	1133	HIS
23	p	1160	GLN
24	q	5	ASN
24	q	66	HIS
25	r	129	GLN
26	s	132	GLN
26	s	133	GLN
28	v	131	ASN
29	w	45	GLN
29	w	98	GLN
31	y	29	ASN
31	y	89	ASN
33	u	60	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 10 ligands modelled in this entry, 10 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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.

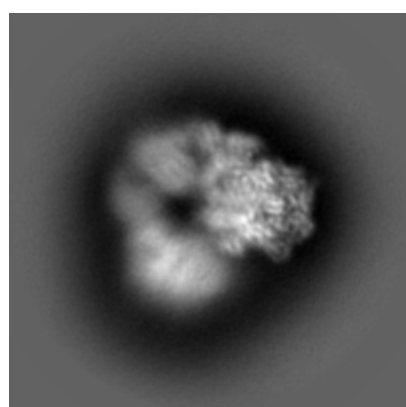
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-31107. These allow visual inspection of the internal detail of the map and identification of artifacts.

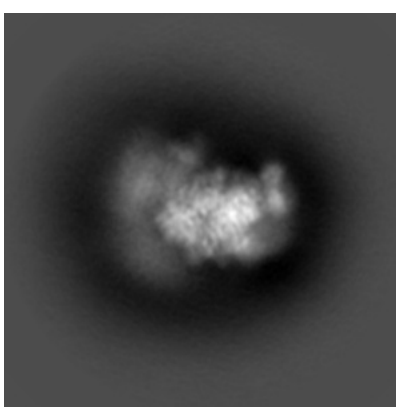
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

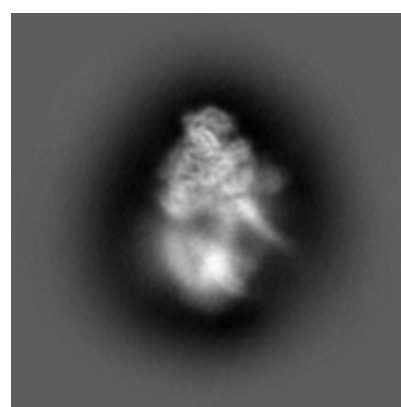
6.1.1 Primary map



X



Y

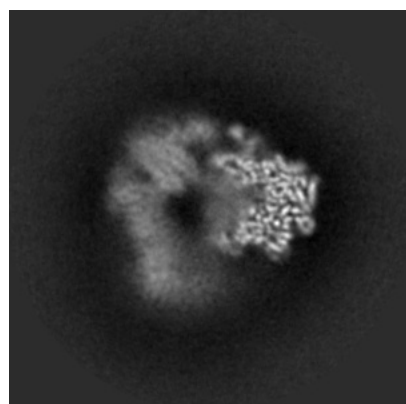


Z

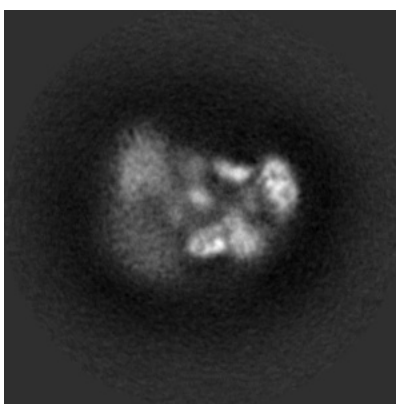
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

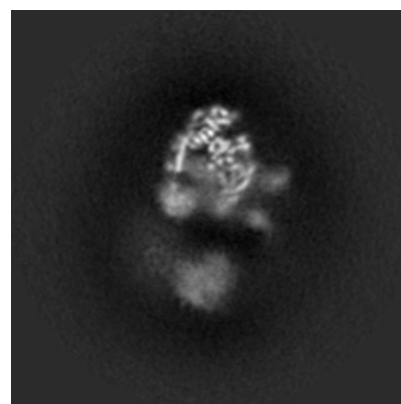
6.2.1 Primary map



X Index: 180



Y Index: 180

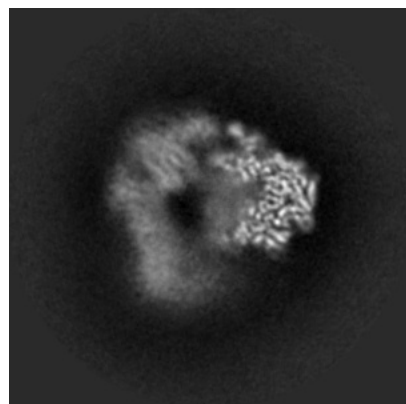


Z Index: 180

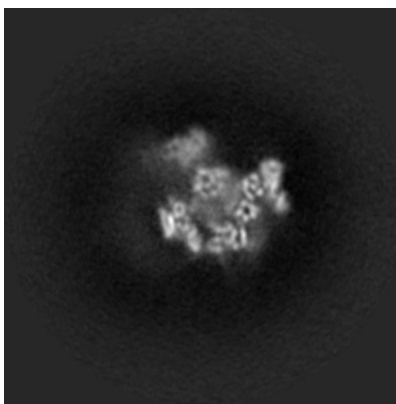
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

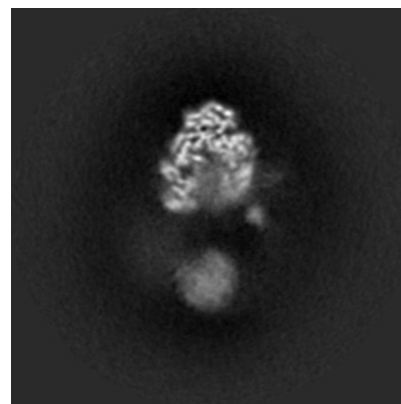
6.3.1 Primary map



X Index: 182



Y Index: 206

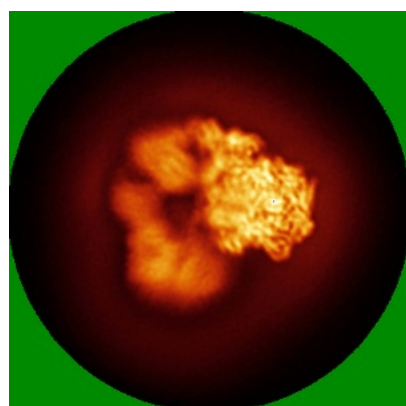


Z Index: 189

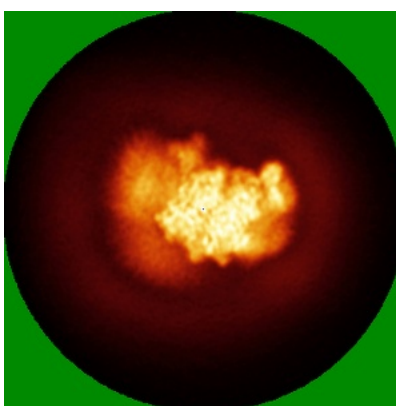
The images above show the largest variance slices of the map in three orthogonal directions.

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

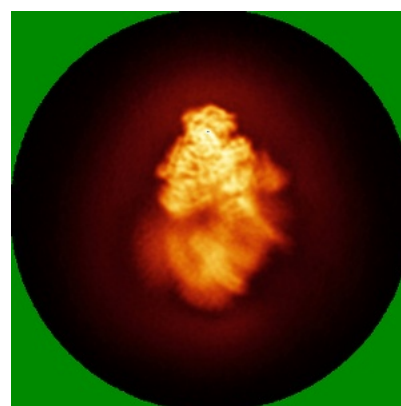
6.4.1 Primary map



X



Y

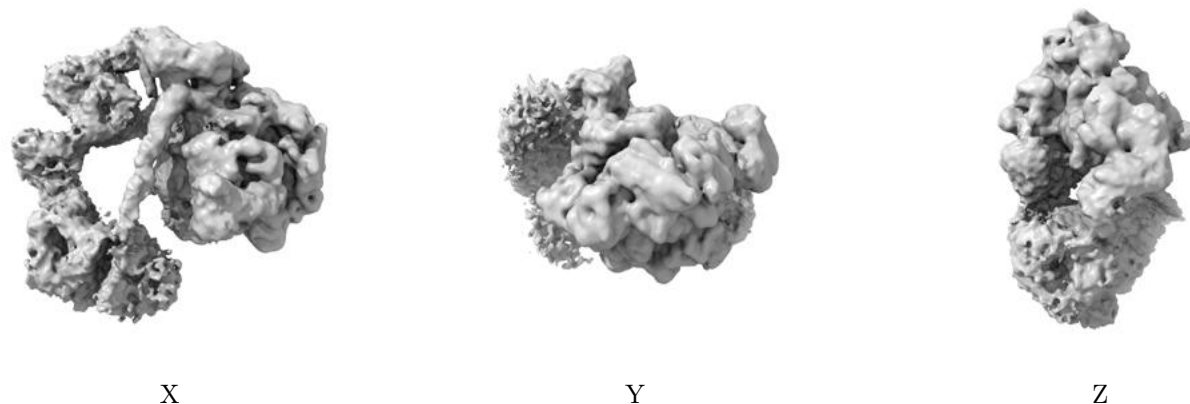


Z

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 0.008. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

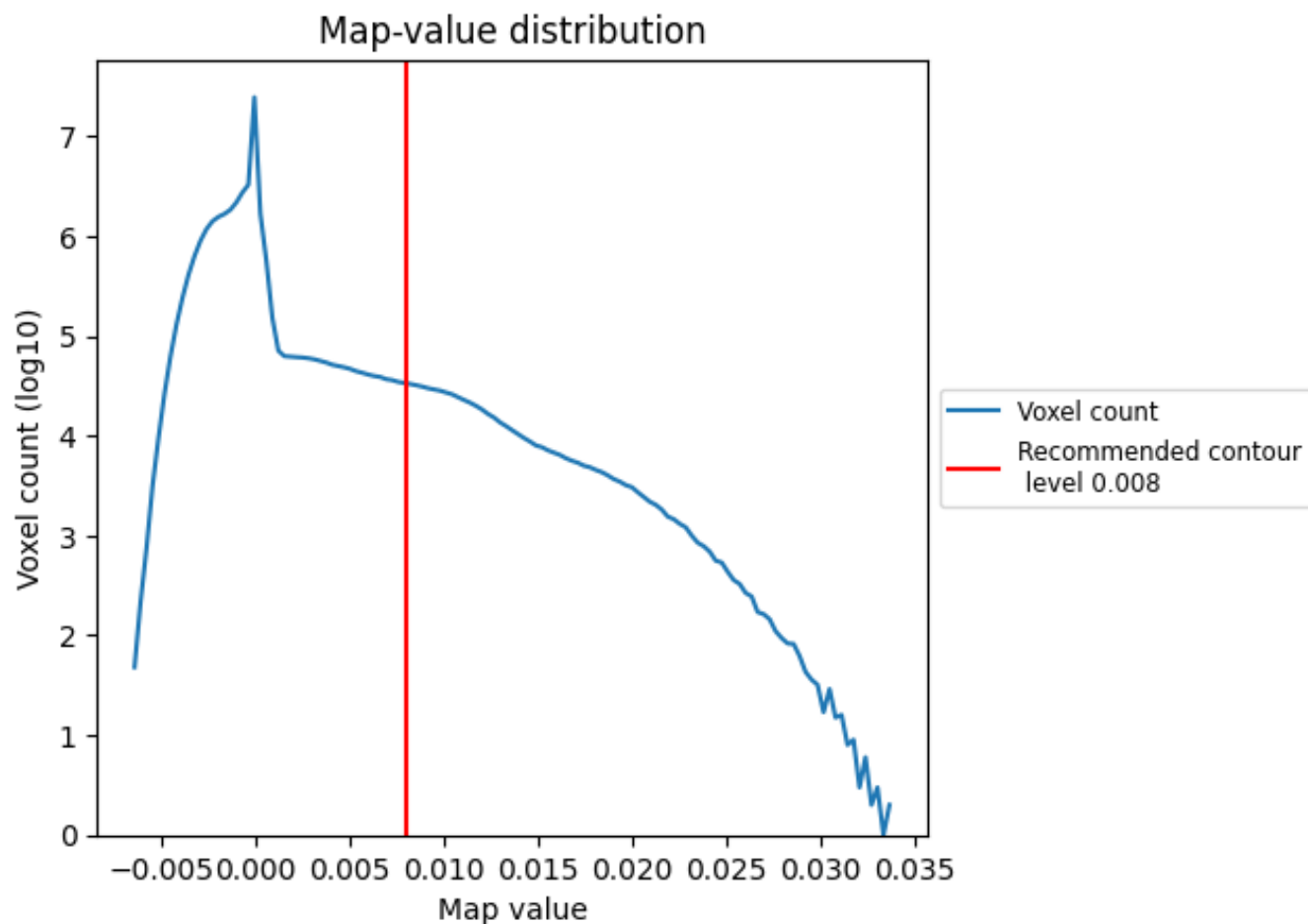
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

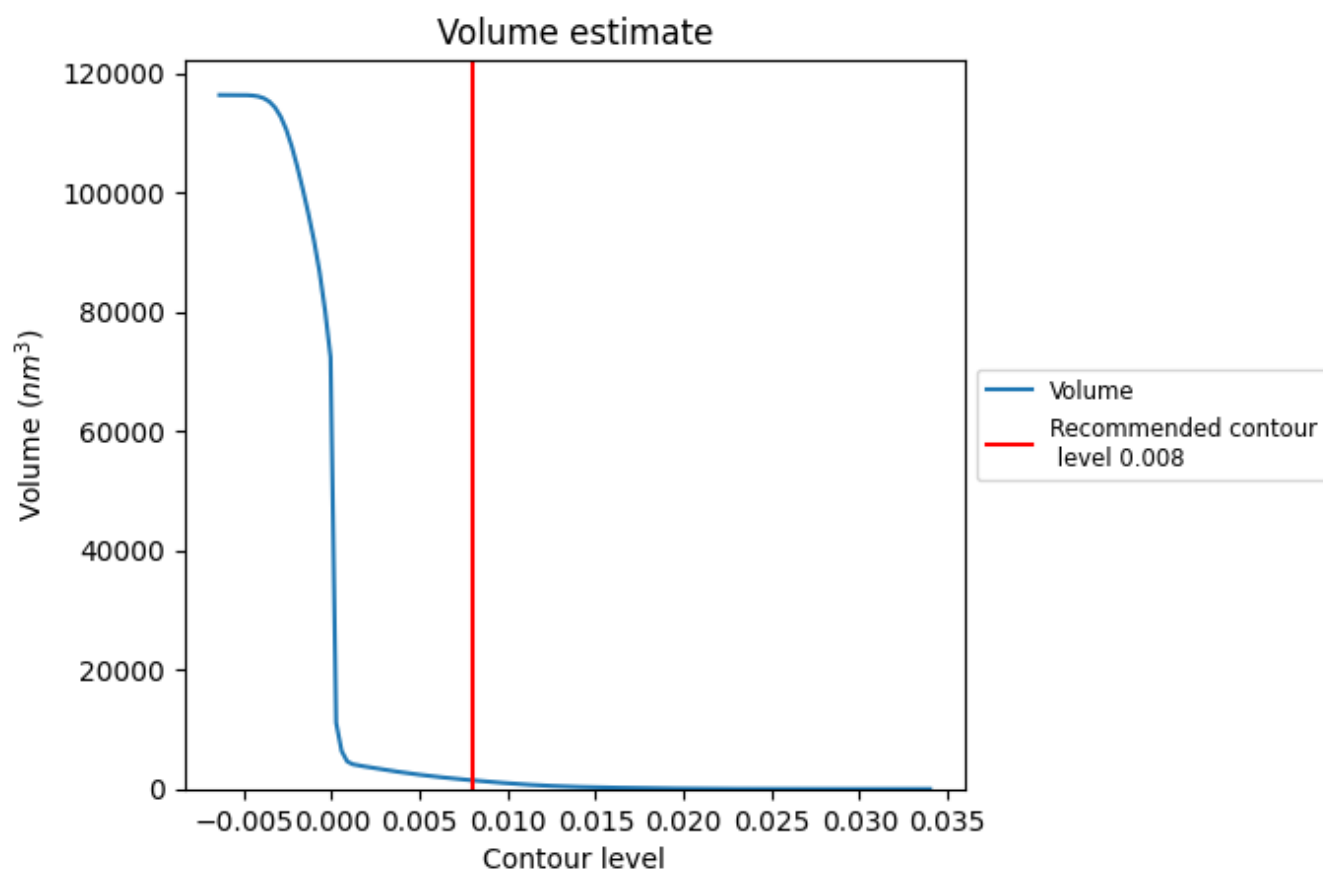
This section contains the results of statistical analysis of the map.

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.

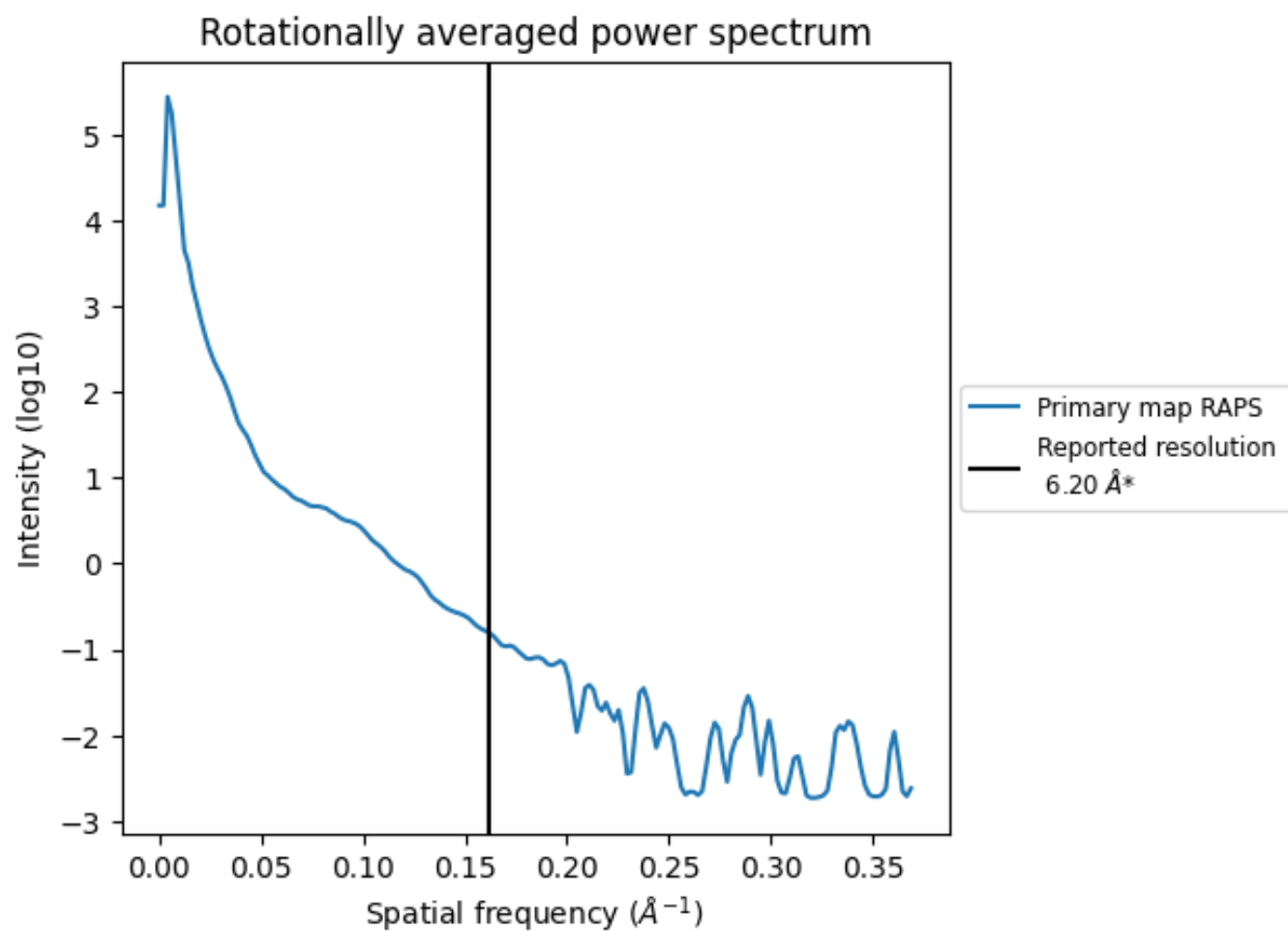
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1445 nm³; this corresponds to an approximate mass of 1305 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.161 Å⁻¹

8 Fourier-Shell correlation ⓘ

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

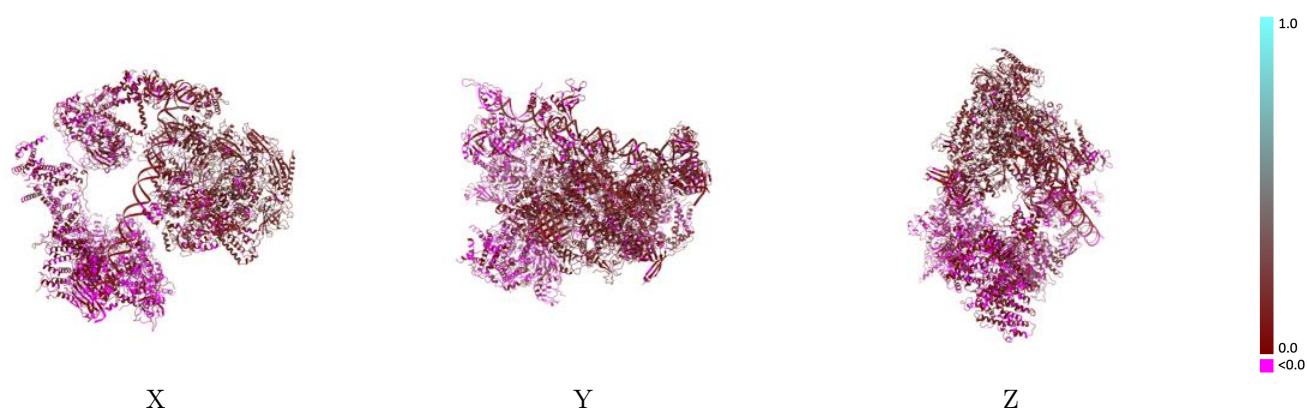
9 Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-31107 and PDB model 7EG7. Per-residue inclusion information can be found in section 3 on page 11.

9.1 Map-model overlay ⓘ

This section was not generated.

9.2 Q-score mapped to coordinate model ⓘ

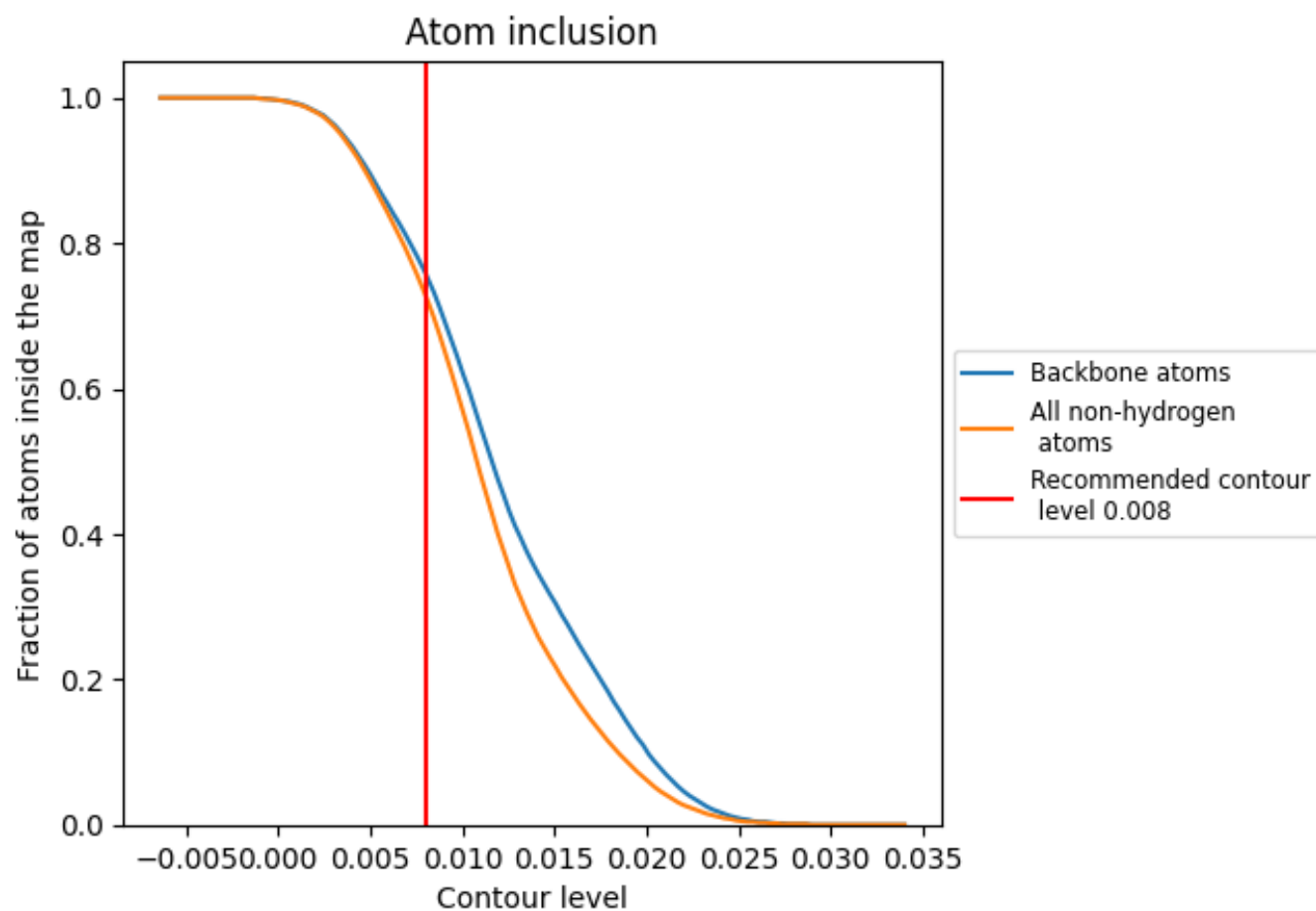


The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model ⓘ

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 76% 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 (0.008) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7290	 0.0920
A	 0.5890	 0.0280
B	 0.8520	 0.0460
D	 0.6930	 0.0990
E	 0.8650	 0.0630
F	 0.7070	 0.0540
G	 0.5640	 0.0300
H	 0.8190	 0.0590
I	 0.8570	 0.0830
J	 0.8090	 0.0350
L	 0.6230	 0.0530
O	 0.8630	 0.1070
P	 0.9540	 0.1200
Q	 0.8390	 0.0920
R	 0.9130	 0.1560
S	 0.8360	 0.1030
T	 0.7780	 0.0750
X	 0.6380	 0.1080
Y	 0.5990	 0.1090
c	 0.2220	 0.0200
d	 0.0170	 0.0020
e	 0.0500	 0.0130
f	 0.5080	 0.0280
i	 0.0040	 0.0090
j	 0.1450	 0.0020
k	 0.0170	 -0.0090
l	 0.0000	 -0.0020
m	 0.0000	 0.0330
o	 0.9420	 0.1540
p	 0.9530	 0.1540
q	 0.9360	 0.1750
r	 0.7540	 0.0880
s	 0.9610	 0.1650
t	 0.9820	 0.1850
u	 0.8520	 0.1080



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Chain	Atom inclusion	Q-score
v	 0.9250	 0.1720
w	 0.9320	 0.1570
x	 0.9660	 0.1700
y	 0.8880	 0.1760
z	 0.9690	 0.1810