WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report (i)

Jun 12, 2024 – 07:36 AM EDT

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PDB ID	:	1SKY
Title	:	CRYSTAL STRUCTURE OF THE NUCLEOTIDE FREE ALPHA3BETA3 SUB-COMPLEX OF F1-ATPASE FROM THE THERMOPHILIC BACIL-LUS PS3
Authors	:	Shirakihara, Y.; Leslie, A.G.W.; Abrahams, J.P.; Walker, J.E.; Ueda, T.; Sekimoto, Y.; Kambara, M.; Saika, K.; Kagawa, Y.; Yoshida, M.
Deposited on	:	1997-02-26
Resolution	:	3.20 Å(reported)

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 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	Percentile Ranks	Value
Clashscore		26
Ramachandran outliers		2.2%
Sidechain outliers		8.2%
RSRZ outliers		3.6%

Worse   *Better*

▮ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution
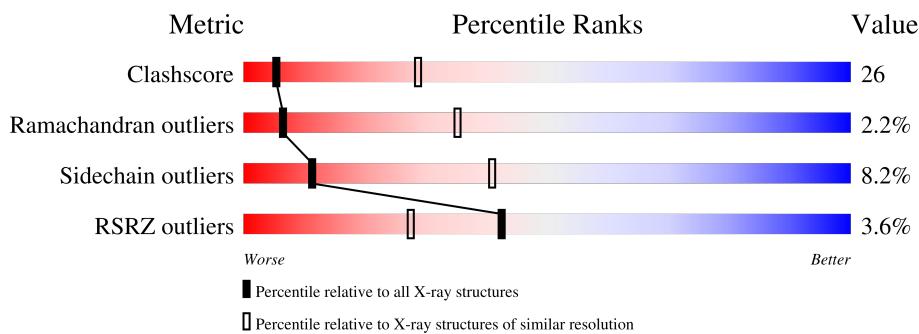
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)

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

Mol	Chain	Length	Quality of chain
1	B	502	5% / 49% / 43% / · · 5%
2	E	473	2% / 53% / 40% / 6% ·

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 7299 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called F1-ATPASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	479	Total	C	N	O	S	0	0	0
			3660	2312	640	697	11			

- Molecule 2 is a protein called F1-ATPASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	E	470	Total	C	N	O	S	0	0	0
			3629	2289	630	696	14			

- Molecule 3 is SULFATE ION (three-letter code: SO4) (formula: O_4S).
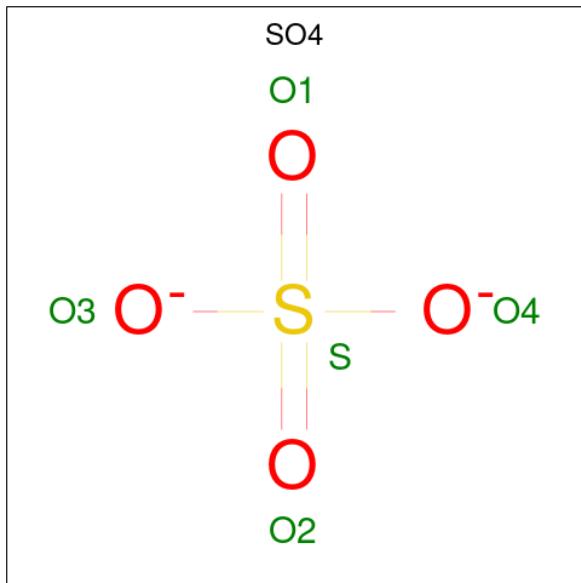
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	B	1	Total	O	S	0	0
			5	4	1		
3	E	1	Total	O	S	0	0
			5	4	1		

3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: F1-ATPASE

Chain B:
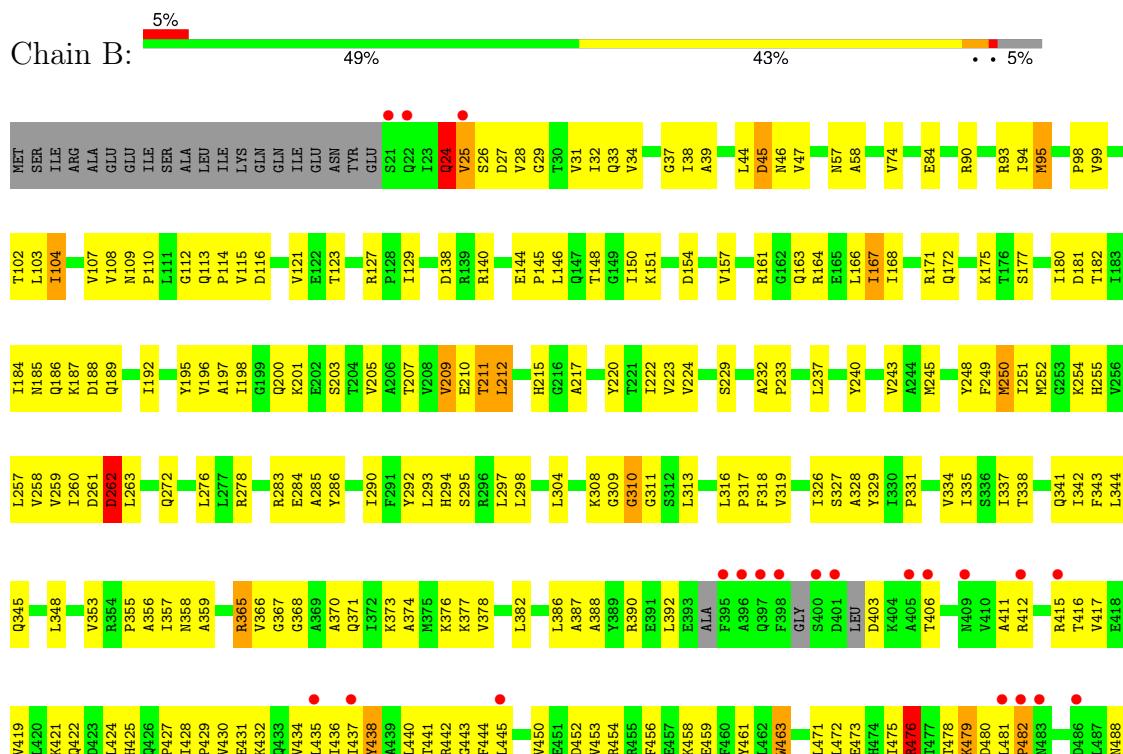
- Molecule 2: F1-ATPASE

Chain E:
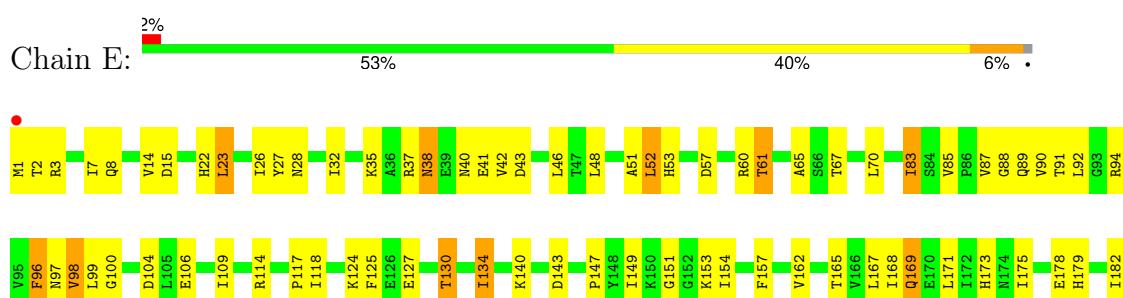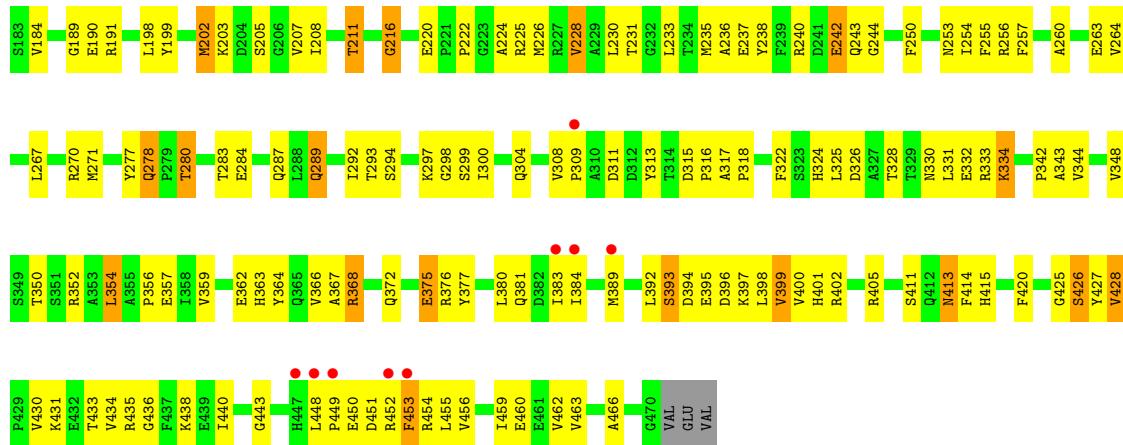
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 3	Depositor
Cell constants a, b, c, α, β, γ	159.50Å 159.50Å 159.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	6.00 – 3.20 48.09 – 3.00	Depositor EDS
% Data completeness (in resolution range)	99.1 (6.00-3.20) 98.6 (48.09-3.00)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.71 (at 3.01Å)	Xtriage
Refinement program	X-PLOR	Depositor
R, R_{free}	0.222 , 0.299 0.218 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	76.0	Xtriage
Anisotropy	0.000	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 77.0	EDS
L-test for twinning[2]	$< |L| > = 0.51, < L^2 > = 0.35$	Xtriage
Estimated twinning fraction	0.020 for l,-k,h	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	7299	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.01% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.
[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: SO4

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	B	0.54	0/3716	0.76	2/5035 (0.0%)
2	E	0.54	0/3692	0.74	2/4998 (0.0%)
All	All	0.54	0/7408	0.75	4/10033 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	365	ARG	NE-CZ-NH2	7.45	124.02	120.30
2	E	216	GLY	N-CA-C	-5.29	99.87	113.10
1	B	262	ASP	N-CA-C	5.23	125.12	111.00
2	E	98	VAL	CB-CA-C	-5.19	101.55	111.40

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	B	3660	0	3718	203	0
2	E	3629	0	3644	191	0
3	B	5	0	0	0	0
3	E	5	0	0	0	0
All	All	7299	0	7362	384	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 26.

All (384) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:167:ILE:HG22	1:B:342:ILE:HB	1.40	1.02
2:E:240:ARG:HG3	2:E:299:SER:N	1.90	0.85
1:B:475:ILE:HG12	1:B:481:LEU:HD21	1.59	0.84
2:E:254:ILE:O	2:E:257:PHE:HB3	1.79	0.82
2:E:178:GLU:HG3	2:E:427:TYR:CE2	2.16	0.80
2:E:289:GLN:HE22	2:E:304:GLN:HE22	1.28	0.80
1:B:99:VAL:HG11	1:B:248:TYR:HB2	1.63	0.79
1:B:319:VAL:HG21	1:B:334:VAL:HG11	1.65	0.79
2:E:448:LEU:HD22	2:E:452:ARG:NH1	1.99	0.78
2:E:413:ASN:HD21	2:E:456:VAL:HA	1.49	0.78
2:E:330:ASN:ND2	2:E:348:VAL:HG12	1.99	0.78
1:B:26:SER:HB3	1:B:46:ASN:ND2	1.99	0.77
2:E:143:ASP:HB3	2:E:430:VAL:HG22	1.65	0.77
2:E:448:LEU:HB3	2:E:452:ARG:HD2	1.63	0.77
1:B:198:ILE:HD11	1:B:260:ILE:HG23	1.65	0.77
1:B:345:GLN:HG2	1:B:358:ASN:HB2	1.64	0.77
1:B:434:VAL:HG21	1:B:475:ILE:HG21	1.66	0.76
1:B:104:ILE:HA	1:B:222:ILE:HD13	1.67	0.75
1:B:429:PRO:HD2	1:B:432:LYS:HE2	1.68	0.75
1:B:197:ALA:HB1	1:B:200:GLN:HG3	1.69	0.75
2:E:308:VAL:HG11	2:E:313:TYR:CD1	2.21	0.75
2:E:189:GLY:O	2:E:256:ARG:HG2	1.86	0.74
2:E:92:LEU:HD11	2:E:182:ILE:HG12	1.68	0.74
2:E:334:LYS:HA	2:E:334:LYS:HE2	1.69	0.74
2:E:448:LEU:HD22	2:E:452:ARG:HH11	1.51	0.74
1:B:146:LEU:HD11	1:B:257:LEU:HD12	1.70	0.73
2:E:342:PRO:HG3	2:E:414:PHE:CZ	2.23	0.73
2:E:260:ALA:O	2:E:264:VAL:HG23	1.88	0.73
1:B:272:GLN:O	1:B:276:LEU:HD23	1.90	0.71
2:E:384:ILE:HD12	2:E:389:MET:SD	2.31	0.71
2:E:449:PRO:HG2	2:E:452:ARG:HG3	1.72	0.71
2:E:289:GLN:NE2	2:E:304:GLN:HE22	1.90	0.70
1:B:103:LEU:HB3	1:B:222:ILE:HD12	1.74	0.70
1:B:140:ARG:HG3	1:B:140:ARG:HH11	1.56	0.70
1:B:167:ILE:HD11	1:B:318:PHE:HE1	1.57	0.69
2:E:413:ASN:H	2:E:413:ASN:HD22	1.40	0.69
1:B:109:ASN:HD21	1:B:113:GLN:NE2	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:430:VAL:O	2:E:434:VAL:HG23	1.93	0.68
1:B:472:LEU:HA	1:B:475:ILE:HD12	1.76	0.68
1:B:431:GLU:HG2	1:B:476:ARG:HB2	1.73	0.68
2:E:38:ASN:HD21	2:E:41:GLU:HG3	1.58	0.68
1:B:450:VAL:HA	1:B:453:VAL:HG23	1.75	0.68
2:E:278:GLN:H	2:E:278:GLN:NE2	1.92	0.68
2:E:372:GLN:O	2:E:375:GLU:HB3	1.93	0.68
1:B:435:LEU:O	1:B:438:TYR:HB3	1.94	0.67
1:B:472:LEU:HD12	1:B:473:GLU:N	2.10	0.67
2:E:38:ASN:ND2	2:E:41:GLU:HG3	2.10	0.67
1:B:209:VAL:HG11	2:E:125:PHE:HZ	1.60	0.66
2:E:87:VAL:HG12	2:E:235:MET:HA	1.76	0.66
1:B:107:VAL:HB	1:B:116:ASP:HB3	1.76	0.66
1:B:416:THR:HA	1:B:440:LEU:HD12	1.79	0.65
1:B:259:VAL:HG22	1:B:316:LEU:HB2	1.78	0.65
1:B:262:ASP:H	1:B:318:PHE:HB2	1.62	0.65
1:B:261:ASP:HA	1:B:318:PHE:CD2	2.32	0.64
1:B:205:VAL:O	1:B:209:VAL:HG12	1.98	0.64
2:E:38:ASN:HD22	2:E:40:ASN:H	1.44	0.64
1:B:435:LEU:HD21	1:B:475:ILE:HD11	1.80	0.63
2:E:405:ARG:HD3	2:E:453:PHE:CZ	2.33	0.63
1:B:377:LYS:HE2	1:B:481:LEU:HB2	1.81	0.63
2:E:202:MET:HB3	2:E:208:ILE:HB	1.80	0.63
1:B:31:VAL:HG11	1:B:34:VAL:HG22	1.81	0.63
1:B:445:LEU:HD21	1:B:453:VAL:HG22	1.80	0.63
1:B:304:LEU:O	1:B:310:GLY:HA2	1.99	0.63
2:E:48:LEU:HB3	2:E:61:THR:CG2	2.30	0.62
1:B:481:LEU:HD22	1:B:489:GLN:HE22	1.65	0.62
1:B:331:PRO:O	1:B:335:ILE:HG13	2.00	0.61
1:B:355:PRO:HB2	1:B:357:ILE:HG12	1.81	0.61
2:E:413:ASN:HD21	2:E:456:VAL:CA	2.13	0.61
1:B:198:ILE:CD1	1:B:260:ILE:HG23	2.30	0.61
1:B:377:LYS:HG3	1:B:378:VAL:H	1.65	0.61
2:E:332:GLU:HG2	2:E:334:LYS:HB2	1.83	0.61
1:B:109:ASN:HD21	1:B:113:GLN:HE21	1.49	0.60
1:B:108:VAL:HG12	1:B:114:PRO:HA	1.84	0.60
1:B:416:THR:HA	1:B:440:LEU:CD1	2.31	0.60
2:E:453:PHE:HA	2:E:462:VAL:HG22	1.82	0.60
1:B:161:ARG:NH1	1:B:255:HIS:CD2	2.70	0.60
1:B:278:ARG:HG2	2:E:271:MET:HG3	1.83	0.60
1:B:417:VAL:O	1:B:421:LYS:HG3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:278:ARG:HA	2:E:271:MET:SD	2.42	0.59
2:E:449:PRO:HD2	2:E:452:ARG:NE	2.16	0.59
2:E:220:GLU:HB3	2:E:224:ALA:HB3	1.84	0.59
1:B:438:TYR:O	1:B:441:THR:HG22	2.03	0.59
2:E:173:HIS:NE2	2:E:415:HIS:ND1	2.51	0.59
2:E:255:PHE:CE1	2:E:309:PRO:HG3	2.38	0.59
1:B:151:LYS:H	1:B:422:GLN:HE22	1.48	0.59
1:B:47:VAL:HG12	1:B:90:ARG:HG2	1.83	0.59
1:B:196:VAL:HG13	1:B:224:VAL:HB	1.85	0.59
1:B:434:VAL:HG21	1:B:475:ILE:CG2	2.32	0.58
2:E:97:ASN:HD21	2:E:99:LEU:HB2	1.67	0.58
2:E:32:ILE:HD11	2:E:48:LEU:HD11	1.85	0.58
2:E:97:ASN:ND2	2:E:99:LEU:HB2	2.17	0.58
1:B:188:ASP:HB2	1:B:189:GLN:OE1	2.04	0.58
1:B:25:VAL:HA	1:B:28:VAL:HG12	1.84	0.58
2:E:199:TYR:OH	2:E:203:LYS:HE3	2.03	0.58
1:B:26:SER:HA	1:B:45:ASP:HB2	1.86	0.58
1:B:434:VAL:CG2	1:B:475:ILE:HG21	2.33	0.57
1:B:151:LYS:H	1:B:422:GLN:NE2	2.02	0.57
1:B:497:THR:O	1:B:500:VAL:HG22	2.04	0.57
2:E:205:SER:OG	2:E:207:VAL:HG22	2.04	0.57
2:E:368:ARG:HH11	2:E:372:GLN:HG3	1.67	0.57
2:E:463:VAL:O	2:E:466:ALA:HB3	2.05	0.57
2:E:94:ARG:HD2	2:E:104:ASP:OD2	2.03	0.57
2:E:149:ILE:HD12	2:E:149:ILE:N	2.20	0.57
1:B:207:THR:O	1:B:211:THR:HG22	2.05	0.57
2:E:459:ILE:HD12	2:E:462:VAL:HG21	1.87	0.57
1:B:109:ASN:HB2	1:B:110:PRO:HD2	1.85	0.57
1:B:496:LYS:O	1:B:500:VAL:HG13	2.05	0.56
2:E:165:THR:HG23	2:E:198:LEU:CD1	2.36	0.56
2:E:453:PHE:CD2	2:E:462:VAL:HG11	2.40	0.56
1:B:103:LEU:HD12	1:B:121:VAL:HG11	1.86	0.56
1:B:164:ARG:HD3	1:B:298:LEU:O	2.06	0.56
1:B:192:ILE:HD12	1:B:249:PHE:CG	2.39	0.56
1:B:450:VAL:HA	1:B:453:VAL:CG2	2.35	0.56
2:E:151:GLY:HA2	2:E:300:ILE:O	2.05	0.56
1:B:161:ARG:NH1	1:B:255:HIS:HD2	2.04	0.56
1:B:377:LYS:HG3	1:B:378:VAL:N	2.21	0.56
1:B:432:LYS:O	1:B:436:ILE:HD13	2.05	0.56
2:E:169:GLN:HG3	2:E:207:VAL:HG21	1.85	0.56
2:E:318:PRO:O	2:E:322:PHE:HD1	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:308:VAL:HG11	2:E:313:TYR:CE1	2.41	0.56
1:B:278:ARG:HG2	2:E:271:MET:CG	2.36	0.56
1:B:428:ILE:HG23	1:B:432:LYS:HE3	1.87	0.56
2:E:85:VAL:HG12	2:E:100:GLY:HA3	1.86	0.56
2:E:88:GLY:HA2	2:E:238:TYR:CE2	2.41	0.56
1:B:290:ILE:O	1:B:293:LEU:HB3	2.05	0.56
2:E:48:LEU:HB3	2:E:61:THR:HG23	1.87	0.55
2:E:35:LYS:HA	2:E:43:ASP:OD1	2.06	0.55
2:E:356:PRO:HD3	2:E:364:TYR:CG	2.41	0.55
2:E:411:SER:HB2	2:E:455:LEU:HD23	1.87	0.55
1:B:26:SER:O	1:B:46:ASN:HB2	2.07	0.55
1:B:138:ASP:OD2	1:B:308:LYS:HE3	2.07	0.55
1:B:431:GLU:O	1:B:434:VAL:HG22	2.06	0.55
1:B:491:ILE:O	1:B:494:PHE:HB2	2.07	0.55
2:E:1:MET:HG3	2:E:2:THR:H	1.71	0.55
2:E:342:PRO:HB2	2:E:344:VAL:HG23	1.89	0.55
1:B:292:TYR:HA	1:B:295:SER:OG	2.06	0.55
2:E:178:GLU:HG3	2:E:427:TYR:CD2	2.42	0.55
2:E:362:GLU:O	2:E:366:VAL:HG23	2.08	0.54
1:B:424:LEU:HD23	1:B:425:HIS:N	2.22	0.54
2:E:222:PRO:HG3	2:E:263:GLU:OE2	2.08	0.54
2:E:396:ASP:O	2:E:400:VAL:HG23	2.07	0.54
1:B:32:ILE:HG22	1:B:33:GLN:HG3	1.88	0.54
1:B:99:VAL:CG1	1:B:248:TYR:HB2	2.35	0.54
1:B:150:ILE:HA	1:B:422:GLN:HE22	1.73	0.54
1:B:496:LYS:O	1:B:499:VAL:HG12	2.06	0.54
1:B:161:ARG:HH11	1:B:255:HIS:CD2	2.26	0.54
1:B:294:HIS:O	1:B:297:LEU:HB3	2.08	0.54
2:E:124:LYS:HB2	2:E:127:GLU:HG3	1.89	0.54
2:E:208:ILE:HA	2:E:211:THR:HG23	1.88	0.54
2:E:220:GLU:HB2	2:E:225:ARG:HG3	1.89	0.54
2:E:362:GLU:HG3	2:E:438:LYS:NZ	2.22	0.54
2:E:384:ILE:HG23	2:E:389:MET:SD	2.48	0.54
1:B:163:GLN:OE1	1:B:366:VAL:HG22	2.08	0.53
1:B:432:LYS:HD2	1:B:461:TYR:CD1	2.44	0.53
2:E:263:GLU:O	2:E:267:LEU:HD12	2.09	0.53
2:E:415:HIS:HD2	2:E:425:GLY:HA3	1.73	0.53
2:E:356:PRO:HD3	2:E:364:TYR:CD2	2.42	0.53
1:B:207:THR:HG22	2:E:130:THR:O	2.09	0.53
1:B:163:GLN:HG2	1:B:164:ARG:N	2.22	0.53
2:E:354:LEU:HD11	2:E:367:ALA:HB1	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:429:PRO:HG2	1:B:432:LYS:HG2	1.91	0.53
1:B:445:LEU:HG	1:B:456:PHE:HD2	1.74	0.53
1:B:491:ILE:HA	1:B:494:PHE:HD2	1.74	0.52
2:E:94:ARG:NH1	2:E:106:GLU:HB2	2.25	0.52
2:E:208:ILE:HG12	2:E:208:ILE:O	2.09	0.52
1:B:107:VAL:HG12	1:B:115:VAL:CG2	2.40	0.52
2:E:283:THR:O	2:E:287:GLN:HG3	2.10	0.52
2:E:384:ILE:HD13	2:E:392:LEU:HD11	1.91	0.52
1:B:440:LEU:HB3	1:B:445:LEU:HD13	1.92	0.52
1:B:167:ILE:HG13	1:B:318:PHE:CD1	2.45	0.52
1:B:258:VAL:CG2	1:B:313:LEU:HD21	2.40	0.52
1:B:496:LYS:HA	1:B:499:VAL:HG12	1.91	0.52
1:B:297:LEU:HG	1:B:298:LEU:HD12	1.92	0.52
1:B:459:GLU:HG2	1:B:463:TRP:NE1	2.25	0.51
2:E:15:ASP:OD1	2:E:60:ARG:HA	2.10	0.51
2:E:348:VAL:O	2:E:350:THR:HG23	2.11	0.51
1:B:99:VAL:HG13	1:B:245:MET:HA	1.91	0.51
1:B:148:THR:HG23	1:B:182:THR:OG1	2.10	0.51
1:B:197:ALA:HA	1:B:261:ASP:HB3	1.92	0.51
2:E:402:ARG:NH2	2:E:443:GLY:HA3	2.26	0.51
2:E:294:SER:HA	2:E:299:SER:HA	1.91	0.51
1:B:210:GLU:HG3	2:E:130:THR:OG1	2.11	0.51
1:B:249:PHE:HB3	1:B:254:LYS:HB2	1.93	0.51
1:B:57:ASN:O	1:B:58:ALA:HB3	2.11	0.51
1:B:31:VAL:HG12	1:B:84:GLU:HA	1.94	0.50
1:B:377:LYS:HE3	1:B:378:VAL:HG13	1.94	0.50
2:E:392:LEU:HB2	2:E:397:LYS:HG3	1.94	0.50
2:E:278:GLN:HG3	2:E:280:THR:HG22	1.93	0.50
1:B:445:LEU:HG	1:B:456:PHE:CD2	2.47	0.50
2:E:226:MET:HE2	2:E:264:VAL:HG21	1.93	0.50
1:B:24:GLN:O	1:B:26:SER:N	2.44	0.50
2:E:226:MET:CE	2:E:264:VAL:HG21	2.42	0.50
2:E:253:ASN:ND2	2:E:256:ARG:HD3	2.26	0.50
2:E:175:ILE:HA	2:E:179:HIS:HD2	1.76	0.50
2:E:413:ASN:HD22	2:E:413:ASN:N	2.08	0.50
2:E:428:VAL:HG22	2:E:433:THR:OG1	2.11	0.50
2:E:331:LEU:HA	2:E:343:ALA:O	2.10	0.49
1:B:217:ALA:HA	1:B:220:TYR:CE2	2.47	0.49
2:E:162:VAL:O	2:E:162:VAL:HG12	2.12	0.49
2:E:23:LEU:HD21	2:E:57:ASP:HA	1.94	0.49
1:B:257:LEU:HD21	1:B:259:VAL:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:209:VAL:HG11	2:E:125:PHE:CZ	2.46	0.49
1:B:365:ARG:C	1:B:367:GLY:H	2.14	0.49
1:B:182:THR:O	1:B:186:GLN:HG2	2.13	0.49
2:E:309:PRO:HG2	2:E:315:ASP:OD2	2.13	0.49
2:E:48:LEU:HD13	2:E:61:THR:HG21	1.93	0.49
2:E:190:GLU:O	2:E:191:ARG:HB2	2.13	0.49
1:B:171:ARG:O	1:B:172:GLN:HB3	2.13	0.48
2:E:48:LEU:HB3	2:E:61:THR:HG21	1.95	0.48
2:E:143:ASP:O	2:E:363:HIS:CE1	2.67	0.48
2:E:157:PHE:HE2	2:E:328:THR:HG1	1.59	0.48
2:E:401:HIS:CE1	2:E:405:ARG:HH12	2.31	0.48
2:E:3:ARG:HG3	2:E:3:ARG:HH11	1.78	0.48
2:E:413:ASN:HB2	2:E:426:SER:OG	2.14	0.48
1:B:198:ILE:CD1	1:B:260:ILE:CG2	2.91	0.48
1:B:419:VAL:HG21	1:B:440:LEU:HD13	1.96	0.48
2:E:91:THR:HA	2:E:96:PHE:HZ	1.79	0.48
1:B:355:PRO:HD3	1:B:422:GLN:H	1.78	0.48
1:B:37:GLY:O	1:B:38:ILE:HD13	2.14	0.48
1:B:283:ARG:HG2	1:B:284:GLU:N	2.27	0.48
1:B:371:GLN:O	1:B:376:LYS:HE3	2.14	0.48
2:E:380:LEU:O	2:E:383:ILE:N	2.46	0.47
1:B:313:LEU:HD23	1:B:313:LEU:C	2.34	0.47
1:B:478:THR:O	1:B:479:LYS:HB2	2.14	0.47
1:B:368:GLY:C	1:B:370:ALA:H	2.18	0.47
1:B:374:ALA:O	1:B:378:VAL:HG22	2.14	0.47
2:E:333:ARG:O	2:E:333:ARG:HG2	2.14	0.47
1:B:150:ILE:HD11	1:B:181:ASP:HB2	1.97	0.47
2:E:46:LEU:CD1	2:E:65:ALA:HB3	2.44	0.47
2:E:90:VAL:HG11	2:E:109:ILE:HG23	1.96	0.47
2:E:393:SER:O	2:E:395:GLU:N	2.48	0.47
1:B:166:LEU:HA	1:B:317:PRO:HD2	1.96	0.47
1:B:412:ARG:O	1:B:416:THR:HG23	2.15	0.47
2:E:97:ASN:HD22	2:E:99:LEU:H	1.61	0.47
1:B:494:PHE:O	1:B:498:PHE:HB2	2.13	0.47
1:B:252:MET:HG2	1:B:252:MET:O	2.15	0.47
1:B:434:VAL:O	1:B:437:ILE:HG22	2.14	0.47
2:E:184:VAL:HG21	2:E:236:ALA:HB2	1.97	0.47
2:E:368:ARG:O	2:E:372:GLN:HG3	2.15	0.47
1:B:278:ARG:HG2	2:E:271:MET:SD	2.55	0.46
2:E:216:GLY:HA3	2:E:228:VAL:HG11	1.97	0.46
1:B:430:VAL:O	1:B:434:VAL:HG13	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:438:TYR:HE1	1:B:442:ARG:CZ	2.27	0.46
2:E:317:ALA:HB3	2:E:318:PRO:CD	2.46	0.46
2:E:240:ARG:HG3	2:E:299:SER:H	1.73	0.46
2:E:277:TYR:CD2	2:E:316:PRO:HB2	2.50	0.46
1:B:145:PRO:HB3	1:B:370:ALA:O	2.15	0.46
1:B:168:ILE:HD11	1:B:331:PRO:HB3	1.98	0.46
2:E:85:VAL:HG11	2:E:231:THR:HG23	1.97	0.46
2:E:167:LEU:CD2	2:E:331:LEU:HD21	2.45	0.46
1:B:99:VAL:HG21	1:B:127:ARG:HB3	1.98	0.46
2:E:134:ILE:HD12	2:E:147:PRO:HB3	1.98	0.46
1:B:181:ASP:HA	1:B:184:ILE:HD12	1.97	0.46
1:B:471:LEU:HD21	1:B:489:GLN:CG	2.46	0.46
1:B:425:HIS:O	1:B:427:PRO:HD3	2.15	0.46
2:E:354:LEU:HD23	2:E:354:LEU:HA	1.75	0.46
1:B:144:GLU:HB2	1:B:161:ARG:HD2	1.99	0.45
1:B:309:GLY:O	1:B:311:GLY:N	2.49	0.45
1:B:365:ARG:C	1:B:367:GLY:N	2.69	0.45
1:B:31:VAL:HG11	1:B:34:VAL:CG2	2.45	0.45
2:E:140:LYS:HE2	2:E:428:VAL:HG11	1.98	0.45
2:E:26:ILE:O	2:E:27:TYR:HB2	2.16	0.45
2:E:326:ASP:O	2:E:352:ARG:HB2	2.16	0.45
2:E:362:GLU:HG3	2:E:438:LYS:HZ1	1.80	0.45
2:E:233:LEU:O	2:E:237:GLU:HG3	2.16	0.45
2:E:413:ASN:CB	2:E:425:GLY:HA2	2.46	0.45
1:B:463:TRP:HA	1:B:463:TRP:CE3	2.51	0.45
2:E:401:HIS:CG	2:E:405:ARG:HH12	2.34	0.45
2:E:230:LEU:HD23	2:E:230:LEU:HA	1.78	0.45
2:E:328:THR:CG2	2:E:350:THR:H	2.29	0.45
1:B:151:LYS:HB2	1:B:151:LYS:HZ2	1.81	0.45
1:B:195:TYR:CE2	1:B:197:ALA:HB2	2.52	0.45
2:E:153:LYS:HE3	2:E:292:ILE:HB	1.98	0.45
1:B:250:MET:HE3	1:B:250:MET:HB3	1.85	0.45
1:B:492:GLU:HA	1:B:495:LYS:HG2	1.98	0.45
2:E:42:VAL:HG12	2:E:43:ASP:N	2.32	0.45
2:E:277:TYR:CE2	2:E:316:PRO:HB2	2.52	0.45
2:E:289:GLN:HE22	2:E:304:GLN:NE2	2.05	0.45
1:B:95:MET:SD	1:B:129:ILE:HD12	2.57	0.45
1:B:443:GLY:O	1:B:445:LEU:N	2.50	0.44
1:B:496:LYS:HD2	1:B:496:LYS:N	2.32	0.44
1:B:163:GLN:HG2	1:B:164:ARG:H	1.81	0.44
1:B:298:LEU:HD23	1:B:338:THR:HG22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:443:GLY:C	1:B:445:LEU:H	2.19	0.44
1:B:463:TRP:HA	1:B:463:TRP:HE3	1.82	0.44
2:E:67:THR:O	2:E:70:LEU:HG	2.18	0.44
2:E:449:PRO:HD2	2:E:452:ARG:CD	2.47	0.44
1:B:140:ARG:HG3	1:B:140:ARG:NH1	2.28	0.44
1:B:164:ARG:HD2	1:B:298:LEU:HB3	1.99	0.44
1:B:326:ILE:HD13	1:B:326:ILE:HA	1.83	0.44
1:B:373:LYS:HA	1:B:376:LYS:HB2	2.00	0.44
2:E:207:VAL:O	2:E:211:THR:HG22	2.17	0.44
1:B:195:TYR:HB3	1:B:223:VAL:HG22	1.99	0.44
2:E:431:LYS:O	2:E:435:ARG:HG2	2.18	0.44
1:B:488:ASN:O	1:B:492:GLU:HG2	2.18	0.44
2:E:154:ILE:N	2:E:154:ILE:HD12	2.33	0.44
2:E:413:ASN:HB3	2:E:425:GLY:HA2	2.00	0.44
2:E:240:ARG:HG3	2:E:298:GLY:C	2.36	0.44
1:B:189:GLN:OE1	1:B:189:GLN:N	2.51	0.44
1:B:284:GLU:C	1:B:286:TYR:H	2.20	0.44
1:B:175:LYS:HG3	1:B:344:LEU:HD12	2.00	0.43
1:B:240:TYR:HA	1:B:243:VAL:HG22	2.00	0.43
2:E:114:ARG:HH12	2:E:242:GLU:CD	2.22	0.43
2:E:240:ARG:HD3	2:E:300:ILE:HG13	2.00	0.43
1:B:29:GLY:HA3	1:B:44:LEU:HG	2.00	0.43
2:E:14:VAL:HB	2:E:61:THR:HG22	2.01	0.43
2:E:89:GLN:HE22	2:E:243:GLN:HE22	1.66	0.43
1:B:345:GLN:CG	1:B:358:ASN:HB2	2.42	0.43
2:E:2:THR:HB	2:E:22:HIS:CE1	2.53	0.43
1:B:109:ASN:ND2	1:B:113:GLN:HE21	2.16	0.43
1:B:481:LEU:N	1:B:482:PRO:HD3	2.33	0.43
2:E:359:VAL:HB	2:E:363:HIS:HB3	1.99	0.43
2:E:117:PRO:O	2:E:117:PRO:HG2	2.18	0.43
2:E:168:ILE:HG23	2:E:250:PHE:CE2	2.54	0.43
2:E:334:LYS:HA	2:E:334:LYS:CE	2.43	0.43
1:B:167:ILE:CD1	1:B:318:PHE:HE1	2.27	0.43
2:E:376:ARG:CB	2:E:399:VAL:HG11	2.49	0.43
2:E:413:ASN:N	2:E:413:ASN:ND2	2.66	0.43
2:E:171:LEU:HD23	2:E:171:LEU:HA	1.80	0.43
2:E:280:THR:HG23	2:E:284:GLU:HG3	2.00	0.43
2:E:222:PRO:CB	2:E:264:VAL:HG22	2.49	0.43
2:E:395:GLU:O	2:E:398:LEU:HB3	2.18	0.43
1:B:480:ASP:O	1:B:481:LEU:HD23	2.19	0.42
2:E:51:ALA:C	2:E:52:LEU:HG	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:471:LEU:HD21	1:B:489:GLN:HG2	2.01	0.42
2:E:253:ASN:HD22	2:E:256:ARG:HD3	1.84	0.42
1:B:295:SER:HA	1:B:337:ILE:HD13	2.02	0.42
2:E:451:ASP:HA	2:E:454:ARG:HB2	2.00	0.42
1:B:388:ALA:O	1:B:392:LEU:HG	2.19	0.42
2:E:175:ILE:O	2:E:179:HIS:HB2	2.19	0.42
1:B:250:MET:O	1:B:311:GLY:HA3	2.19	0.42
2:E:328:THR:HG22	2:E:350:THR:OG1	2.19	0.42
2:E:377:TYR:CD1	2:E:400:VAL:HG13	2.54	0.42
2:E:436:GLY:O	2:E:440:ILE:HG13	2.20	0.42
1:B:284:GLU:O	1:B:285:ALA:HB3	2.20	0.42
2:E:297:LYS:HA	2:E:297:LYS:HD2	1.86	0.42
1:B:454:ARG:O	1:B:458:LYS:HG3	2.19	0.42
2:E:23:LEU:HD12	2:E:53:HIS:CE1	2.54	0.42
2:E:322:PHE:HA	2:E:325:LEU:HG	2.00	0.42
1:B:492:GLU:O	1:B:495:LYS:HB2	2.19	0.42
2:E:427:TYR:HD1	2:E:427:TYR:O	2.03	0.42
1:B:104:ILE:H	1:B:104:ILE:HG12	1.71	0.42
2:E:83:ILE:O	2:E:118:ILE:HG12	2.19	0.42
2:E:97:ASN:HD22	2:E:99:LEU:N	2.18	0.42
1:B:232:ALA:HB3	1:B:233:PRO:HD3	2.01	0.41
1:B:98:PRO:CG	1:B:112:GLY:HA3	2.50	0.41
1:B:387:ALA:HA	1:B:390:ARG:CZ	2.49	0.41
2:E:94:ARG:HH11	2:E:106:GLU:HB2	1.84	0.41
1:B:172:GLN:OE1	2:E:352:ARG:HA	2.20	0.41
2:E:99:LEU:HD23	2:E:99:LEU:HA	1.80	0.41
2:E:143:ASP:O	2:E:363:HIS:HE1	2.03	0.41
2:E:237:GLU:HA	2:E:300:ILE:HD11	2.02	0.41
1:B:185:ASN:HB2	1:B:427:PRO:HB3	2.03	0.41
1:B:74:VAL:HG13	1:B:233:PRO:HG3	2.03	0.41
1:B:201:LYS:HD2	2:E:324:HIS:HA	2.02	0.41
1:B:345:GLN:HB3	1:B:348:LEU:HD23	2.02	0.41
1:B:215:HIS:ND1	1:B:215:HIS:N	2.68	0.41
1:B:167:ILE:HD11	1:B:318:PHE:CE1	2.47	0.41
1:B:387:ALA:HA	1:B:390:ARG:NH2	2.36	0.41
2:E:173:HIS:CD2	2:E:173:HIS:C	2.93	0.41
1:B:25:VAL:HG12	1:B:45:ASP:OD1	2.21	0.41
1:B:33:GLN:O	1:B:39:ALA:HA	2.21	0.41
1:B:94:ILE:HD13	1:B:94:ILE:HA	1.96	0.41
1:B:166:LEU:O	1:B:341:GLN:HA	2.20	0.41
1:B:377:LYS:HE2	1:B:481:LEU:CB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:403:ASP:HB3	1:B:406:THR:OG1	2.20	0.41
1:B:471:LEU:HD11	1:B:489:GLN:HG3	2.02	0.41
1:B:476:ARG:O	1:B:479:LYS:HD2	2.21	0.41
1:B:326:ILE:O	1:B:328:ALA:N	2.54	0.41
2:E:167:LEU:O	2:E:171:LEU:HG	2.21	0.41
1:B:255:HIS:HE1	1:B:310:GLY:O	2.03	0.40
2:E:7:ILE:HG22	2:E:8:GLN:HG3	2.03	0.40
2:E:140:LYS:HG3	2:E:428:VAL:HG11	2.02	0.40
2:E:452:ARG:NH1	2:E:466:ALA:HB1	2.35	0.40
1:B:24:GLN:C	1:B:26:SER:N	2.75	0.40
1:B:180:ILE:HD12	1:B:212:LEU:HD21	2.03	0.40
1:B:166:LEU:HD23	1:B:341:GLN:HB3	2.03	0.40
1:B:180:ILE:HD13	1:B:180:ILE:HA	1.88	0.40
2:E:354:LEU:HD22	2:E:364:TYR:HD1	1.85	0.40
1:B:263:LEU:HD23	1:B:263:LEU:HA	1.68	0.40
2:E:167:LEU:HD22	2:E:331:LEU:HD21	2.03	0.40
2:E:376:ARG:HB2	2:E:399:VAL:HG11	2.03	0.40
2:E:413:ASN:ND2	2:E:426:SER:OG	2.55	0.40
2:E:413:ASN:ND2	2:E:456:VAL:O	2.54	0.40

There are no symmetry-related clashes.

5.3   Torsion angles ⓘ

5.3.1   Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	471/502 (94%)	397 (84%)	60 (13%)	14 (3%)	4	28
2	E	468/473 (99%)	407 (87%)	54 (12%)	7 (2%)	10	44
All	All	939/975 (96%)	804 (86%)	114 (12%)	21 (2%)	6	35

All (21) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	24	GLN
1	B	310	GLY
1	B	411	ALA
1	B	499	VAL
2	E	394	ASP
1	B	25	VAL
1	B	356	ALA
1	B	444	PHE
1	B	476	ARG
1	B	482	PRO
2	E	244	GLY
2	E	311	ASP
2	E	450	GLU
1	B	262	ASP
1	B	327	SER
1	B	329	TYR
2	E	393	SER
1	B	359	ALA
2	E	23	LEU
1	B	353	VAL
2	E	83	ILE

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 X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	391/410 (95%)	359 (92%)	32 (8%)	11	41
2	E	387/390 (99%)	355 (92%)	32 (8%)	11	40
All	All	778/800 (97%)	714 (92%)	64 (8%)	11	41

All (64) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	24	GLN
1	B	27	ASP
1	B	45	ASP

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Mol	Chain	Res	Type
1	B	93	ARG
1	B	95	MET
1	B	102	THR
1	B	104	ILE
1	B	123	THR
1	B	154	ASP
1	B	157	VAL
1	B	167	ILE
1	B	177	SER
1	B	187	LYS
1	B	203	SER
1	B	209	VAL
1	B	211	THR
1	B	212	LEU
1	B	229	SER
1	B	237	LEU
1	B	250	MET
1	B	251	ILE
1	B	262	ASP
1	B	343	PHE
1	B	382	LEU
1	B	386	LEU
1	B	415	ARG
1	B	438	TYR
1	B	452	ASP
1	B	463	TRP
1	B	476	ARG
1	B	479	LYS
1	B	499	VAL
2	E	28	ASN
2	E	37	ARG
2	E	38	ASN
2	E	52	LEU
2	E	61	THR
2	E	96	PHE
2	E	98	VAL
2	E	130	THR
2	E	134	ILE
2	E	169	GLN
2	E	202	MET
2	E	211	THR
2	E	228	VAL

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Mol	Chain	Res	Type
2	E	242	GLU
2	E	270	ARG
2	E	278	GLN
2	E	280	THR
2	E	289	GLN
2	E	293	THR
2	E	334	LYS
2	E	354	LEU
2	E	357	GLU
2	E	368	ARG
2	E	375	GLU
2	E	381	GLN
2	E	399	VAL
2	E	413	ASN
2	E	420	PHE
2	E	426	SER
2	E	428	VAL
2	E	453	PHE
2	E	460	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	46	ASN
1	B	113	GLN
1	B	230	GLN
1	B	255	HIS
1	B	422	GLN
1	B	466	GLN
1	B	489	GLN
2	E	20	ASN
2	E	38	ASN
2	E	89	GLN
2	E	196	ASN
2	E	200	HIS
2	E	217	GLN
2	E	219	ASN
2	E	278	GLN
2	E	289	GLN
2	E	330	ASN
2	E	372	GLN
2	E	407	GLN

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Mol	Chain	Res	Type
2	E	413	ASN
2	E	423	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 ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

2 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	SO4	E	474	-	4,4,4	0.56	0	6,6,6	0.37	0
3	SO4	B	503	-	4,4,4	0.51	0	6,6,6	0.81	0

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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	B	479/502 (95%)	0.03	24 (5%)	28	16	22, 54, 155, 249	0
2	E	470/473 (99%)	-0.15	10 (2%)	63	49	26, 51, 121, 192	0
All	All	949/975 (97%)	-0.06	34 (3%)	42	27	22, 53, 152, 249	0

All (34) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	401	ASP	17.3
1	B	397	GLN	15.1
1	B	21	SER	8.4
1	B	482	PRO	7.7
1	B	396	ALA	7.7
1	B	395	PHE	7.3
1	B	398	PHE	7.3
1	B	489	GLN	6.2
1	B	497	THR	5.5
1	B	22	GLN	4.1
1	B	406	THR	4.0
2	E	452	ARG	4.0
2	E	383	ILE	3.9
2	E	453	PHE	3.7
1	B	483	ASN	3.6
1	B	400	SER	3.5
2	E	384	ILE	3.3
1	B	25	VAL	3.3
1	B	415	ARG	3.1
2	E	1	MET	2.9
1	B	409	ASN	2.9
1	B	498	PHE	2.9
1	B	481	LEU	2.7
1	B	437	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
2	E	449	PRO	2.6
1	B	445	LEU	2.5
2	E	447	HIS	2.5
1	B	405	ALA	2.3
1	B	412	ARG	2.3
1	B	486	ASP	2.2
1	B	435	LEU	2.2
2	E	389	MET	2.2
2	E	309	PRO	2.1
2	E	448	LEU	2.1

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	SO4	E	474	5/5	0.88	0.17	135,135,135,136	0
3	SO4	B	503	5/5	0.95	0.23	63,63,64,64	0

6.5 Other polymers ⓘ

There are no such residues in this entry.