
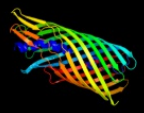

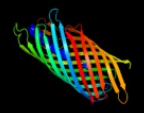





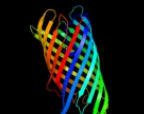

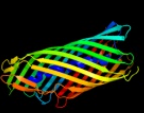

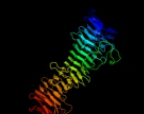





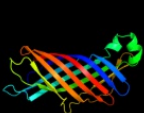

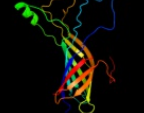
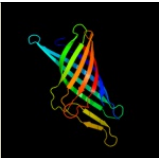
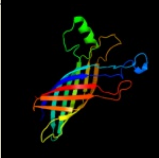
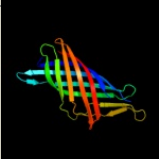

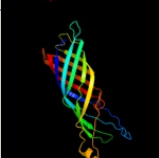


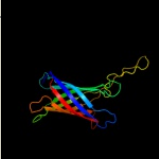
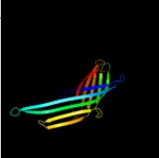

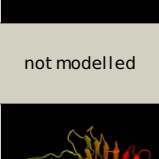


# Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P52143
Date	Wed Jan 25 15:20:58 GMT 2012
Unique Job ID	294182ceab3e8127

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">c3sljA_</a>	 Alignment		100.0	16	<b>PDB header:</b> protein transport <b>Chain:</b> A: <b>PDB Molecule:</b> serine protease esp; <b>PDBTitle:</b> pre-cleavage structure of the autotransporter esp - n1023a mutant
2	<a href="#">c3aehB_</a>	 Alignment		100.0	20	<b>PDB header:</b> hydrolase <b>Chain:</b> B: <b>PDB Molecule:</b> hemoglobin-binding protease hbp autotransporter; <b>PDBTitle:</b> integral membrane domain of autotransporter hbp
3	<a href="#">c3qq2C_</a>	 Alignment		100.0	25	<b>PDB header:</b> membrane protein/protein transport <b>Chain:</b> C: <b>PDB Molecule:</b> brka autotransporter; <b>PDBTitle:</b> crystal structure of the beta domain of the bordetella autotransporter2 brka
4	<a href="#">d1uynx_</a>	 Alignment		100.0	17	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Autotransporter <b>Family:</b> Autotransporter
5	<a href="#">c2qomB_</a>	 Alignment		100.0	17	<b>PDB header:</b> hydrolase <b>Chain:</b> B: <b>PDB Molecule:</b> serine protease esp; <b>PDBTitle:</b> the crystal structure of the e.coli esp autotransporter beta-domain.
6	<a href="#">c3kvnA_</a>	 Alignment		100.0	13	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> esterase esta; <b>PDBTitle:</b> crystal structure of the full-length autotransporter esta from2 pseudomonas aeruginosa
7	<a href="#">d1daba_</a>	 Alignment		99.9	16	<b>Fold:</b> Single-stranded right-handed beta-helix <b>Superfamily:</b> Pectin lyase-like <b>Family:</b> Virulence factor P.69 pertactin
8	<a href="#">c3ml3A_</a>	 Alignment		99.6	21	<b>PDB header:</b> protein transport <b>Chain:</b> A: <b>PDB Molecule:</b> outer membrane protein icsa autotransporter; <b>PDBTitle:</b> crystal structure of the icsa autochaperone region
9	<a href="#">c3h09B_</a>	 Alignment		99.6	17	<b>PDB header:</b> hydrolase <b>Chain:</b> B: <b>PDB Molecule:</b> immunoglobulin a1 protease; <b>PDBTitle:</b> the structure of haemophilus influenzae iga1 protease
10	<a href="#">d1p4ta_</a>	 Alignment		99.3	23	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> OMPA-like <b>Family:</b> Outer membrane protein
11	<a href="#">c2k0IA_</a>	 Alignment		99.3	13	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> outer membrane protein a; <b>PDBTitle:</b> nmr structure of the transmembrane domain of the outer2 membrane protein a from klebsiella pneumoniae in dhpc3 micelles.

12	<a href="#">d1qjpa_</a>	Alignment		99.2	13	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> OMPA-like <b>Family:</b> Outer membrane protein
13	<a href="#">d1g90a_</a>	Alignment		99.2	16	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> OMPA-like <b>Family:</b> Outer membrane protein
14	<a href="#">c3nb3C_</a>	Alignment		99.2	14	<b>PDB header:</b> virus <b>Chain:</b> C: <b>PDB Molecule:</b> outer membrane protein a; <b>PDBTitle:</b> the host outer membrane proteins ompa and ompc are packed at specific2 sites in the shigella phage sf6 virion as structural components
15	<a href="#">c3syjA_</a>	Alignment		99.1	12	<b>PDB header:</b> cell adhesion <b>Chain:</b> A: <b>PDB Molecule:</b> adhesion and penetration protein autotransporter; <b>PDBTitle:</b> crystal structure of the haemophilus influenzae hap adhesin
16	<a href="#">c2x27X_</a>	Alignment		99.1	12	<b>PDB header:</b> membrane protein <b>Chain:</b> X: <b>PDB Molecule:</b> outer membrane protein oprg; <b>PDBTitle:</b> crystal structure of the outer membrane protein oprg from2 pseudomonas aeruginosa
17	<a href="#">c3qraA_</a>	Alignment		99.0	14	<b>PDB header:</b> cell invasion <b>Chain:</b> A: <b>PDB Molecule:</b> attachment invasion locus protein; <b>PDBTitle:</b> the crystal structure of ail, the attachment invasion locus protein of2 yersinia pestis
18	<a href="#">c2f1tB_</a>	Alignment		98.9	14	<b>PDB header:</b> membrane protein <b>Chain:</b> B: <b>PDB Molecule:</b> outer membrane protein w; <b>PDBTitle:</b> outer membrane protein ompw
19	<a href="#">c2jmmA_</a>	Alignment		98.9	12	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> outer membrane protein a; <b>PDBTitle:</b> nmr solution structure of a minimal transmembrane beta-2 barrel platform protein
20	<a href="#">d1qi8a_</a>	Alignment		98.8	18	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> OMPA-like <b>Family:</b> Outer membrane protein
21	<a href="#">c2zj6A_</a>	Alignment		98.6	18	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> lipase; <b>PDBTitle:</b> crystal structure of d337a mutant of pseudomonas sp. mis38 lipase
22	<a href="#">c2iwwD_</a>	Alignment	not modelled	98.4	13	<b>PDB header:</b> ion channel <b>Chain:</b> D: <b>PDB Molecule:</b> outer membrane protein g; <b>PDBTitle:</b> structure of the monomeric outer membrane porin ompg in the2 open and closed conformation
23	<a href="#">c2qubG_</a>	Alignment		98.3	11	<b>PDB header:</b> hydrolase <b>Chain:</b> G: <b>PDB Molecule:</b> extracellular lipase; <b>PDBTitle:</b> crystal structure of extracellular lipase lipa from serratia2 marcescens
24	<a href="#">c2lhfa_</a>	Alignment	not modelled	98.3	21	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> outer membrane protein h1; <b>PDBTitle:</b> solution structure of outer membrane protein h (oprh) from p.2 aeruginosa in dhpc micelles
25	<a href="#">c2wjgA_</a>	Alignment	not modelled	98.1	10	<b>PDB header:</b> transport protein <b>Chain:</b> A: <b>PDB Molecule:</b> probable n-acetylneuraminic acid outer membrane channel <b>PDBTitle:</b> nanc porin structure in hexagonal crystal form.
26	<a href="#">c2x4mD_</a>	Alignment	not modelled	97.8	12	<b>PDB header:</b> hydrolase <b>Chain:</b> D: <b>PDB Molecule:</b> coagulase/fibrinolysin; <b>PDBTitle:</b> yersinia pestis plasminogen activator pla
						<b>PDB header:</b> hydrolase (serine protease)

27	<a href="#">c1satA_</a>	Alignment	not modelled	97.6	13	<b>Chain:</b> A: <b>PDB Molecule:</b> serratia protease; <b>PDBTitle:</b> crystal structure of the 50 kda metallo protease from s.2 marcescens
28	<a href="#">c3a2rX_</a>	Alignment	not modelled	97.6	10	<b>PDB header:</b> membrane protein <b>Chain:</b> X: <b>PDB Molecule:</b> outer membrane protein ii; <b>PDBTitle:</b> crystal structure of outer membrane protein porb from neisseria2 meningitidis
29	<a href="#">c1om8A_</a>	Alignment	not modelled	97.3	11	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> serralyisin; <b>PDBTitle:</b> crystal structure of a cold adapted alkaline protease from pseudomonas2 tac ii 18, co-crystallized with 10 mm edta
30	<a href="#">d2fgqx1</a>	Alignment	not modelled	97.2	18	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Porin
31	<a href="#">c1k7qA_</a>	Alignment	not modelled	97.1	11	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> secreted protease c; <b>PDBTitle:</b> prtc from erwinia chrysanthemi: e189a mutant
32	<a href="#">d1g9ka1</a>	Alignment	not modelled	96.9	10	<b>Fold:</b> Single-stranded right-handed beta-helix <b>Superfamily:</b> beta-Roll <b>Family:</b> Serralyisin-like metalloprotease, C-terminal domain
33	<a href="#">d2vdfa1</a>	Alignment	not modelled	96.9	14	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> OMPT-like <b>Family:</b> Outer membrane adhesin/invasin OpcA
34	<a href="#">c3dwoX_</a>	Alignment	not modelled	96.8	14	<b>PDB header:</b> membrane protein <b>Chain:</b> X: <b>PDB Molecule:</b> probable outer membrane protein; <b>PDBTitle:</b> crystal structure of a pseudomonas aeruginosa fadl homologue
35	<a href="#">d1kapp1</a>	Alignment	not modelled	96.7	16	<b>Fold:</b> Single-stranded right-handed beta-helix <b>Superfamily:</b> beta-Roll <b>Family:</b> Serralyisin-like metalloprotease, C-terminal domain
36	<a href="#">d1i78a_</a>	Alignment	not modelled	96.6	13	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> OMPT-like <b>Family:</b> Outer membrane protease OMPT
37	<a href="#">d1k7ia1</a>	Alignment	not modelled	96.5	15	<b>Fold:</b> Single-stranded right-handed beta-helix <b>Superfamily:</b> beta-Roll <b>Family:</b> Serralyisin-like metalloprotease, C-terminal domain
38	<a href="#">d1t16a_</a>	Alignment	not modelled	96.3	13	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Outer membrane protein transport protein
39	<a href="#">c1jiwP_</a>	Alignment	not modelled	96.3	14	<b>PDB header:</b> hydrolase/hyrolase inhibitor <b>Chain:</b> P: <b>PDB Molecule:</b> alkaline metalloproteinase; <b>PDBTitle:</b> crystal structure of the apr-aprin complex
40	<a href="#">d3prna_</a>	Alignment	not modelled	96.2	12	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Porin
41	<a href="#">d2pora_</a>	Alignment	not modelled	96.2	15	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Porin
42	<a href="#">d1sata1</a>	Alignment	not modelled	95.8	13	<b>Fold:</b> Single-stranded right-handed beta-helix <b>Superfamily:</b> beta-Roll <b>Family:</b> Serralyisin-like metalloprotease, C-terminal domain
43	<a href="#">c2agmA_</a>	Alignment	not modelled	95.7	11	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> poly(beta-d-mannuronate) c5 epimerase 4; <b>PDBTitle:</b> solution structure of the r-module from alge4
44	<a href="#">d2zfga1</a>	Alignment	not modelled	95.7	13	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Porin
45	<a href="#">d1osma_</a>	Alignment	not modelled	95.5	12	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Porin
46	<a href="#">c3nsgA_</a>	Alignment	not modelled	95.3	14	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> outer membrane protein f; <b>PDBTitle:</b> crystal structure of ompf, an outer membrane protein from salmonella2 typhi
47	<a href="#">d1phoa_</a>	Alignment	not modelled	94.9	11	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Porin
48	<a href="#">c3brzA_</a>	Alignment	not modelled	93.1	16	<b>PDB header:</b> transport protein <b>Chain:</b> A: <b>PDB Molecule:</b> todx; <b>PDBTitle:</b> crystal structure of the pseudomonas putida toluene2 transporter todx
49	<a href="#">c3bryB_</a>	Alignment	not modelled	90.7	12	<b>PDB header:</b> transport protein <b>Chain:</b> B: <b>PDB Molecule:</b> tbux; <b>PDBTitle:</b> crystal structure of the ralstonia pickettii toluene2 transporter tbux
50	<a href="#">c2ervA_</a>	Alignment	not modelled	90.6	17	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> hypothetical protein paer03002360; <b>PDBTitle:</b> crystal structure of the outer membrane enzyme pagl
51	<a href="#">c1xkW_A_</a>	Alignment	not modelled	86.6	10	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> fe(iii)-pyochelin receptor; <b>PDBTitle:</b> pyochelin outer membrane receptor fpta from pseudomonas2 aeruginosa
52	<a href="#">c3p4qD_</a>	Alignment	not modelled	83.9	12	<b>PDB header:</b> antifreeze protein <b>Chain:</b> D: <b>PDB Molecule:</b> antifreeze protein; <b>PDBTitle:</b> x-ray crystal structure of a hyperactive, ca2+-dependent, beta-helical2 antifreeze protein from an antarctic bacterium
53	<a href="#">c2grxB_</a>	Alignment	not modelled	83.8	14	<b>PDB header:</b> metal transport <b>Chain:</b> B: <b>PDB Molecule:</b> ferrichrome-iron receptor; <b>PDBTitle:</b> crystal structure of tonb in complex with fhua, e. coli2 outer membrane receptor for ferrichrome <b>PDB header:</b> metal transport

54	<a href="#">c3qlbA_</a>	Alignment	not modelled	72.6	14	<b>Chain:</b> A: <b>PDB Molecule:</b> enantio-pyochelin receptor; <b>PDBTitle:</b> enantiopyochelin outer membrane tonb-dependent transporter from2 pseudomonas fluorescens bound to the ferri-enantiopyochelin
55	<a href="#">c2iahA_</a>	Alignment	not modelled	68.4	12	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> ferripyoverdine receptor; <b>PDBTitle:</b> crystal structure of the ferripyoverdine receptor of the outer2 membrane of pseudomonas aeruginosa bound to ferripyoverdine.
56	<a href="#">c1xkhC_</a>	Alignment	not modelled	61.9	13	<b>PDB header:</b> membrane protein <b>Chain:</b> C: <b>PDB Molecule:</b> ferripyoverdine receptor; <b>PDBTitle:</b> pyoverdine outer membrane receptor fpva from pseudomonas aeruginosa2 pao1 bound to pyoverdine
57	<a href="#">c2hdiA_</a>	Alignment	not modelled	54.1	11	<b>PDB header:</b> protein transport,antimicrobial protein <b>Chain:</b> A: <b>PDB Molecule:</b> colicin i receptor; <b>PDBTitle:</b> crystal structure of the colicin i receptor cir from e.coli in complex2 with receptor binding domain of colicin ia.
58	<a href="#">c2o4vA_</a>	Alignment	not modelled	48.5	12	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> porin p; <b>PDBTitle:</b> an arginine ladder in oprp mediates phosphate specific transfer across2 the outer membrane
59	<a href="#">c3jtyB_</a>	Alignment	not modelled	37.7	12	<b>PDB header:</b> transport protein <b>Chain:</b> B: <b>PDB Molecule:</b> benf-like porin; <b>PDBTitle:</b> crystal structure of a benf-like porin from pseudomonas fluorescens2 pf-5
60	<a href="#">d1by5a_</a>	Alignment	not modelled	27.6	11	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Ligand-gated protein channel
61	<a href="#">d2gufa1</a>	Alignment	not modelled	25.4	10	<b>Fold:</b> Transmembrane beta-barrels <b>Superfamily:</b> Porins <b>Family:</b> Ligand-gated protein channel
62	<a href="#">d2gr7a1</a>	Alignment	not modelled	21.1	16	<b>Fold:</b> Pili subunits <b>Superfamily:</b> Pili subunits <b>Family:</b> YadA C-terminal domain-like
63	<a href="#">c2gr7C_</a>	Alignment	not modelled	21.1	16	<b>PDB header:</b> membrane protein <b>Chain:</b> C: <b>PDB Molecule:</b> adhesin; <b>PDBTitle:</b> hia 992-1098
64	<a href="#">c3fy3A_</a>	Alignment	not modelled	15.4	10	<b>PDB header:</b> toxin <b>Chain:</b> A: <b>PDB Molecule:</b> hemolysin; <b>PDBTitle:</b> crystal structure of truncated hemolysin a from p. mirabilis
65	<a href="#">d2gr8a1</a>	Alignment	not modelled	13.0	19	<b>Fold:</b> Pili subunits <b>Superfamily:</b> Pili subunits <b>Family:</b> YadA C-terminal domain-like
66	<a href="#">d1k18a_</a>	Alignment	not modelled	11.6	27	<b>Fold:</b> Zinc finger domain of DNA polymerase-alpha <b>Superfamily:</b> Zinc finger domain of DNA polymerase-alpha <b>Family:</b> Zinc finger domain of DNA polymerase-alpha
67	<a href="#">c2y0hA_</a>	Alignment	not modelled	9.6	9	<b>PDB header:</b> transport protein <b>Chain:</b> A: <b>PDB Molecule:</b> probable porin; <b>PDBTitle:</b> crystal structure of pseudomonas aeruginosa opd1
68	<a href="#">c1al0B_</a>	Alignment	not modelled	9.6	36	<b>PDB header:</b> virus <b>Chain:</b> B: <b>PDB Molecule:</b> scaffolding protein gpb; <b>PDBTitle:</b> procapsid of bacteriophage phix174
69	<a href="#">c3emoA_</a>	Alignment	not modelled	8.8	14	<b>PDB header:</b> membrane protein/cell adhesion <b>Chain:</b> A: <b>PDB Molecule:</b> hia (adhesin); <b>PDBTitle:</b> crystal structure of transmembrane hia 973-1098
70	<a href="#">d3bba1</a>	Alignment	not modelled	7.1	32	<b>Fold:</b> alpha/beta knot <b>Superfamily:</b> alpha/beta knot <b>Family:</b> EMG1/NEP1-like
71	<a href="#">d1zszc1</a>	Alignment	not modelled	6.3	17	<b>Fold:</b> SspB-like <b>Superfamily:</b> SspB-like <b>Family:</b> Stringent starvation protein B, SspB
72	<a href="#">d1jmx4</a>	Alignment	not modelled	6.1	20	<b>Fold:</b> Immunoglobulin-like beta-sandwich <b>Superfamily:</b> E set domains <b>Family:</b> Quinohemoprotein amine dehydrogenase A chain, domains 4 and 5
73	<a href="#">c2qtkB_</a>	Alignment	not modelled	5.9	13	<b>PDB header:</b> membrane protein <b>Chain:</b> B: <b>PDB Molecule:</b> probable porin; <b>PDBTitle:</b> crystal structure of the outer membrane protein opdK from2 pseudomonas aeruginosa
74	<a href="#">d1gmua2</a>	Alignment	not modelled	5.6	33	<b>Fold:</b> Ferredoxin-like <b>Superfamily:</b> Urease metallochaperone UreE, C-terminal domain <b>Family:</b> Urease metallochaperone UreE, C-terminal domain
75	<a href="#">c3mjdA_</a>	Alignment	not modelled	5.6	32	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> orotate phosphoribosyltransferase; <b>PDBTitle:</b> 1.9 angstrom crystal structure of orotate2 phosphoribosyltransferase (pyre) francisella tularensis.