
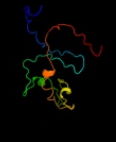

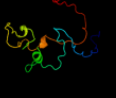
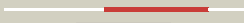





















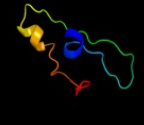






Phyre2

| | |
|---------------|-----------------------------|
| Email | I.a.kelley@imperial.ac.uk |
| Description | P0ABL3 |
| Date | Thu Jan 5 11:15:46 GMT 2012 |
| Unique Job ID | 28bb400d24cb4613 |

Detailed template information

| # | Template | Alignment Coverage | 3D Model | Confidence | % i.d. | Template Information |
|----|-------------------------|---|---|------------|--------|--|
| 1 | dlogyb_ |  Alignment |  | 100.0 | 43 | Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif |
| 2 | c3o5aB_ |  Alignment |  | 100.0 | 47 | PDB header: oxidoreductase Chain: B: PDB Molecule: di-heme cytochrome c napb; PDBTitle: crystal structure of partially reduced periplasmic nitrate reductase2 from cupriavidus necator using ionic liquids |
| 3 | c1jniA_ |  Alignment |  | 100.0 | 73 | PDB header: oxidoreductase Chain: A: PDB Molecule: di-heme cytochrome c napb; PDBTitle: structure of the napb subunit of the periplasmic nitrate2 reductase from haemophilus influenzae. |
| 4 | d1jnia_ |  Alignment |  | 100.0 | 73 | Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif |
| 5 | c2j7aE_ |  Alignment |  | 95.5 | 29 | PDB header: oxidoreductase Chain: E: PDB Molecule: cytochrome c nitrite reductase nrfa; PDBTitle: crystal structure of cytochrome c nitrite reductase nrfa2 complex from desulfovibrio vulgaris |
| 6 | c2vr0A_ |  Alignment |  | 95.0 | 29 | PDB header: oxidoreductase Chain: A: PDB Molecule: cytochrome c nitrite reductase, catalytic subunit nrfa; PDBTitle: crystal structure of cytochrome c nitrite reductase nrfa2 complex bound to the hqno inhibitor |
| 7 | d2rdza1 |  Alignment |  | 91.8 | 21 | Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif |
| 8 | d1qdba_ |  Alignment |  | 91.2 | 21 | Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif |
| 9 | c2p0bA_ |  Alignment |  | 87.8 | 21 | PDB header: electron transport Chain: A: PDB Molecule: cytochrome c-type protein nrfb; PDBTitle: crystal structure of chemically-reduced e.coli nrfb |
| 10 | d1fs7a_ |  Alignment |  | 79.7 | 28 | Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif |
| 11 | c1fs9A_ |  Alignment |  | 79.7 | 28 | PDB header: oxidoreductase Chain: A: PDB Molecule: cytochrome c nitrite reductase; PDBTitle: cytochrome c nitrite reductase from wolinetella succinogenes-azide2 complex |

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|----|-------------------------|-----------|---|------|----|---|
| 12 | c1qo8A_ | Alignment |  | 75.9 | 29 | PDB header: oxidoreductase Chain: A: PDB Molecule: flavocytochrome c3 fumarate reductase; PDBTitle: the structure of the open conformation of a flavocytochrome2 c3 fumarate reductase |
| 13 | d1oaha_ | Alignment |  | 75.5 | 14 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Di-heme elbow motif |
| 14 | c1oahA_ | Alignment |  | 75.5 | 14 | PDB header: reductase Chain: A: PDB Molecule: cytochrome c nitrite reductase; PDBTitle: cytochrome c nitrite reductase from desulfovibrio2 desulfuricans atcc 27774: the relevance of the two3 calcium sites in the structure of the catalytic subunit4 (nrfa). |
| 15 | d1aqea_ | Alignment |  | 72.2 | 35 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Cytochrome c3-like |
| 16 | c3f29A_ | Alignment |  | 70.0 | 31 | PDB header: oxidoreductase Chain: A: PDB Molecule: eight-heme nitrite reductase; PDBTitle: structure of the thioalkalivibrio nitratreducens2 cytochrome c nitrite reductase in complex with sulfite |
| 17 | d2cy3a_ | Alignment |  | 69.3 | 29 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Cytochrome c3-like |
| 18 | c1jrxA_ | Alignment |  | 65.1 | 38 | PDB header: oxidoreductase Chain: A: PDB Molecule: flavocytochrome c; PDBTitle: crystal structure of arg402ala mutant flavocytochrome c32 from shewanella frigidimarina |
| 19 | d1i77a_ | Alignment |  | 63.5 | 15 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Cytochrome c3-like |
| 20 | c3mk7B_ | Alignment |  | 62.8 | 23 | PDB header: oxidoreductase Chain: B: PDB Molecule: cytochrome c oxidase, cbb3-type, subunit o; PDBTitle: the structure of cbb3 cytochrome oxidase |
| 21 | c2bq4A_ | Alignment | not modelled | 60.0 | 36 | PDB header: electron transport Chain: A: PDB Molecule: basic cytochrome c3; PDBTitle: crystal structure of type i cytochrome c3 from2 desulfovibrio africanus |
| 22 | c3ov0A_ | Alignment | not modelled | 59.9 | 20 | PDB header: electron transport Chain: A: PDB Molecule: cytochrome c family protein; PDBTitle: structure of dodecaheme cytochrome c gsu1996 |
| 23 | c2j7aC_ | Alignment | not modelled | 58.6 | 27 | PDB header: oxidoreductase Chain: C: PDB Molecule: cytochrome c quinol dehydrogenase nrhf; PDBTitle: crystal structure of cytochrome c nitrite reductase nrfa2 complex from desulfovibrio vulgaris |
| 24 | d1d4ca1 | Alignment | not modelled | 58.2 | 26 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Di-heme elbow motif |
| 25 | d1ft5a_ | Alignment | not modelled | 55.2 | 22 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Di-heme elbow motif |
| 26 | c3oueA_ | Alignment | not modelled | 55.0 | 22 | PDB header: electron transport Chain: A: PDB Molecule: cytochrome c family protein; PDBTitle: structure of c-terminal hexaheme fragment of gsu1996 |
| 27 | d1m1qa_ | Alignment | not modelled | 51.5 | 25 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Di-heme elbow motif |
| 28 | d3caoa_ | Alignment | not modelled | 50.5 | 33 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes Family: Cytochrome c3-like |
| 29 | d1gyoa_ | Alignment | not modelled | 50.0 | 41 | Fold: Multi heme cytochromes Superfamily: Multi heme cytochromes |

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|----|-------------------------|-----------|--------------|------|---|
| | | | | | Family: Cytochrome c3-like |
| 30 | c2a3mA | Alignment | not modelled | 50.0 | 21 PDB header: electron transport Chain: A: PDB Molecule: cog3005: nitrate/tmao reductases, membrane-bound tetraheme PDBTitle: structure of desulfovibrio desulfuricans g20 tetraheme cytochrome2 (oxidized form) |
| 31 | d1sp3a | Alignment | not modelled | 49.2 | 22 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif |
| 32 | d1duwa | Alignment | not modelled | 49.2 | 23 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 33 | d1y0pa1 | Alignment | not modelled | 49.0 | 22 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif |
| 34 | d1h21a | Alignment | not modelled | 48.8 | 24 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif |
| 35 | d1cota | Alignment | not modelled | 46.9 | 36 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 36 | d1vyda | Alignment | not modelled | 45.3 | 36 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 37 | d1up9a | Alignment | not modelled | 44.8 | 29 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 38 | c3b47A | Alignment | not modelled | 43.8 | 32 PDB header: signaling protein Chain: A: PDB Molecule: methyl-accepting chemotaxis protein; PDBTitle: periplasmic sensor domain of chemotaxis protein gsu0582 |
| 39 | d3c2ca | Alignment | not modelled | 42.7 | 20 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 40 | c3ouqA | Alignment | not modelled | 41.6 | 20 PDB header: electron transport Chain: A: PDB Molecule: cytochrome c family protein; PDBTitle: structure of n-terminal hexaheme fragment of gsu1996 |
| 41 | c3pmqA | Alignment | not modelled | 37.3 | 20 PDB header: electron transport Chain: A: PDB Molecule: decaheme cytochrome c mtrf; PDBTitle: crystal structure of the outer membrane decaheme cytochrome mtrf |
| 42 | c2czsB | Alignment | not modelled | 36.9 | 29 PDB header: electron transport Chain: B: PDB Molecule: cytochrome c, putative; PDBTitle: crystal structure analysis of the diheme c-type cytochrome dhc2 |
| 43 | d1yeba | Alignment | not modelled | 35.1 | 27 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 44 | d1ql3a | Alignment | not modelled | 34.4 | 24 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 45 | d1rwja | Alignment | not modelled | 34.0 | 21 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 46 | c3m97X | Alignment | not modelled | 31.9 | 24 PDB header: electron transport Chain: X: PDB Molecule: cytochrome c-552; PDBTitle: structure of the soluble domain of cytochrome c552 with its flexible2 linker segment from paracoccus denitrificans |
| 47 | c2elmA | Alignment | not modelled | 31.6 | 45 PDB header: transcription Chain: A: PDB Molecule: zinc finger protein 406; PDBTitle: solution structure of the 10th c2h2 zinc finger of human2 zinc finger protein 406 |
| 48 | c3o0rC | Alignment | not modelled | 31.1 | 21 PDB header: immune system/oxidoreductase Chain: C: PDB Molecule: nitric oxide reductase subunit c; PDBTitle: crystal structure of nitric oxide reductase from pseudomonas2 aeruginosa in complex with antibody fragment |
| 49 | d1i8oa | Alignment | not modelled | 30.8 | 30 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 50 | d1qo8a1 | Alignment | not modelled | 30.6 | 21 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif |
| 51 | c2je2A | Alignment | not modelled | 30.4 | 42 PDB header: metal binding protein Chain: A: PDB Molecule: cytochrome p460; PDBTitle: cytochrome p460 from nitrosomonas europaea - probable2 nonphysiological oxidized form |
| 52 | d155ca | Alignment | not modelled | 29.4 | 40 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 53 | d1c6sa | Alignment | not modelled | 29.3 | 8 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 54 | d1jdla | Alignment | not modelled | 28.5 | 20 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 55 | d1ppjd1 | Alignment | not modelled | 28.3 | 38 Fold: Cytochrome c Superfamily: Cytochrome c Family: Cytochrome bc1 domain |
| 56 | d1qn2a | Alignment | not modelled | 27.0 | 36 Fold: Cytochrome c Superfamily: Cytochrome c |

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|----|-------------------------|-----------|--------------|------|---|
| | | | | | Family: monodomain cytochrome c |
| 57 | d1j0pa_ | Alignment | not modelled | 25.8 | 19 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 58 | d1pbya1 | Alignment | not modelled | 25.5 | 50 Fold: Cytochrome c Superfamily: Cytochrome c Family: Quinohemoprotein amine dehydrogenase A chain, domains 1 and 2 |
| 59 | d1lmsa_ | Alignment | not modelled | 25.4 | 31 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 60 | c3h34A_ | Alignment | not modelled | 25.3 | 47 PDB header: electron transport Chain: A: PDB Molecule: cytochrome c7; PDBTitle: ppce, a cytochrome c7 from geobacter sulfurreducens |
| 61 | d1h32a2 | Alignment | not modelled | 24.9 | 16 Fold: Cytochrome c Superfamily: Cytochrome c Family: Di-heme cytochrome c SoxA |
| 62 | d1cxca_ | Alignment | not modelled | 24.8 | 44 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 63 | d3cx5d1 | Alignment | not modelled | 24.4 | 38 Fold: Cytochrome c Superfamily: Cytochrome c Family: Cytochrome bc1 domain |
| 64 | c2zxyA_ | Alignment | not modelled | 24.4 | 30 PDB header: oxygen binding, transport protein Chain: A: PDB Molecule: cytochrome c552; PDBTitle: crystal structure of cytochrome c555 from aquifex aeolicus |
| 65 | c3oa8B_ | Alignment | not modelled | 24.4 | 18 PDB header: heme-binding protein/heme-binding protei Chain: B: PDB Molecule: soxx; PDBTitle: diheme soxax |
| 66 | c2yiuE_ | Alignment | not modelled | 24.3 | 30 PDB header: oxidoreductase Chain: E: PDB Molecule: cytochrome c1, heme protein; PDBTitle: x-ray structure of the dimeric cytochrome bc1 complex from2 the soil bacterium paracoccus denitrificans at 2.73 angstrom resolution |
| 67 | d1ofwa_ | Alignment | not modelled | 24.2 | 18 Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 68 | c1p84D_ | Alignment | not modelled | 24.1 | 38 PDB header: oxidoreductase Chain: D: PDB Molecule: cytochrome c1, heme protein; PDBTitle: hdbt inhibited yeast cytochrome bc1 complex |
| 69 | c3cwbQ_ | Alignment | not modelled | 23.8 | 38 PDB header: oxidoreductase Chain: Q: PDB Molecule: mitochondrial cytochrome c1, heme protein; PDBTitle: chicken cytochrome bc1 complex inhibited by an iodinated analogue of2 the polyketide crocacin-d |
| 70 | c3b42B_ | Alignment | not modelled | 23.7 | 27 PDB header: signaling protein Chain: B: PDB Molecule: methyl-accepting chemotaxis protein, putative; PDBTitle: periplasmic sensor domain of chemotaxis protein gsu0935 |
| 71 | c1zrtD_ | Alignment | not modelled | 23.7 | 50 PDB header: oxidoreductase/metal transport Chain: D: PDB Molecule: cytochrome c1; PDBTitle: rhodobacter capsulatus cytochrome bc1 complex with2 stigmatellin bound |
| 72 | d1ycca_ | Alignment | not modelled | 23.3 | 31 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 73 | d351ca_ | Alignment | not modelled | 23.2 | 30 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 74 | d1wejf_ | Alignment | not modelled | 23.1 | 23 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 75 | c2d0sA_ | Alignment | not modelled | 23.1 | 30 PDB header: electron transport Chain: A: PDB Molecule: cytochrome c; PDBTitle: crystal structure of the cytochrome c552 from moderate2 thermophilic bacterium, hydrogenophilus thermoluteolus |
| 76 | d1ytca_ | Alignment | not modelled | 22.9 | 26 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 77 | d1jmxal | Alignment | not modelled | 22.9 | 50 Fold: Cytochrome c Superfamily: Cytochrome c Family: Quinohemoprotein amine dehydrogenase A chain, domains 1 and 2 |
| 78 | c1z1nX_ | Alignment | not modelled | 22.9 | 40 PDB header: electron transport Chain: X: PDB Molecule: sixteen heme cytochrome; PDBTitle: crystal structure of the sixteen heme cytochrome from desulfovibrio2 gigas |
| 79 | d1cora_ | Alignment | not modelled | 22.7 | 30 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 80 | c2fynH_ | Alignment | not modelled | 22.0 | 22 PDB header: oxidoreductase Chain: H: PDB Molecule: cytochrome c1; PDBTitle: crystal structure analysis of the double mutant rhodobacter2 sphaeroides bc1 complex |
| 81 | d1j3sa_ | Alignment | not modelled | 21.2 | 23 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 82 | d1ccra_ | Alignment | not modelled | 20.8 | 29 Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |

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|----|-------------------------|-----------|--------------|------|----|---|
| 83 | c2xtsD_ | Alignment | not modelled | 20.7 | 24 | PDB header: oxidoreductase/electron transport Chain: D: PDB Molecule: cytochrome; PDBTitle: crystal structure of the sulfane dehydrogenase soxcd from paracoccus2 pantotrophus |
| 84 | d1h32b_ | Alignment | not modelled | 20.1 | 21 | Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 85 | d1fi3a_ | Alignment | not modelled | 19.9 | 40 | Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 86 | c3h4nB_ | Alignment | not modelled | 19.4 | 42 | PDB header: electron transport Chain: B: PDB Molecule: cytochrome c7; PDBTitle: ppcd, a cytochrome c7 from geobacter sulfurreducens |
| 87 | c2jneA_ | Alignment | not modelled | 19.3 | 57 | PDB header: metal binding protein Chain: A: PDB Molecule: hypothetical protein yfgj; PDBTitle: nmr structure of e.coli yfgj modelled with two zn+2 bound.2 northeast structural genomics consortium target er317. |
| 88 | d2jneal | Alignment | not modelled | 19.3 | 57 | Fold: Rubredoxin-like Superfamily: Yfgj-like Family: Yfgj-like |
| 89 | c2bpbB_ | Alignment | not modelled | 18.8 | 50 | PDB header: oxidoreductase Chain: B: PDB Molecule: sulfite\cytochrome c oxidoreductase subunit b; PDBTitle: sulfite dehydrogenase from starkeya novella |
| 90 | d2cvca1 | Alignment | not modelled | 18.6 | 19 | Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 91 | d1eb7a1 | Alignment | not modelled | 18.4 | 25 | Fold: Cytochrome c Superfamily: Cytochrome c Family: Di-heme cytochrome c peroxidase |
| 92 | c2c1dB_ | Alignment | not modelled | 18.3 | 20 | PDB header: oxidoreductase Chain: B: PDB Molecule: soxx; PDBTitle: crystal structure of soxxa from p. pantotrophus |
| 93 | c2l4dA_ | Alignment | not modelled | 18.2 | 20 | PDB header: electron transport Chain: A: PDB Molecule: sco1/senc family protein/cytochrome c; PDBTitle: cytochrome c domain of pp3183 protein from pseudomonas putida |
| 94 | d1os6a_ | Alignment | not modelled | 18.1 | 33 | Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like |
| 95 | d1cc5a_ | Alignment | not modelled | 17.7 | 39 | Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 96 | c2jrpA_ | Alignment | not modelled | 17.4 | 57 | PDB header: structural genomics, unknown function Chain: A: PDB Molecule: putative cytoplasmic protein; PDBTitle: solution nmr structure of yfgj from salmonella typhimurium2 modeled with two zn+2 bound, northeast structural genomics3 consortium target str86 |
| 97 | d1ynra1 | Alignment | not modelled | 17.3 | 30 | Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c |
| 98 | c3facE_ | Alignment | not modelled | 17.0 | 27 | PDB header: unknown function Chain: E: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of rhodobacter sphaeroides protein2 rsp_2168. northeast structural genomics target rhr83. |
| 99 | d1nmla2 | Alignment | not modelled | 16.9 | 8 | Fold: Cytochrome c Superfamily: Cytochrome c Family: Di-heme cytochrome c peroxidase |