








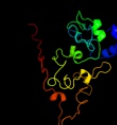

















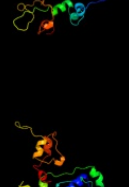
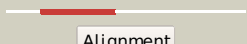
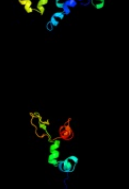
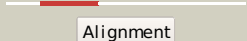






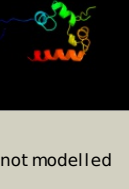

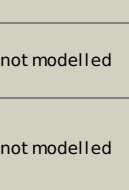

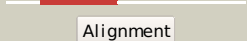

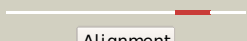







Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P33226
Date	Thu Jan 5 11:51:25 GMT 2012
Unique Job ID	5d916efdee91563b

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2j7aC_	 Alignment		99.9	29	PDB header: oxidoreductase Chain: C: PDB Molecule: cytochrome c quinol dehydrogenase nrhf; PDBTitle: crystal structure of cytochrome c nitrite reductase nrhf2 complex from desulfovibrio vulgaris
2	d1fgja_	 Alignment		99.7	18	Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif
3	c1fgjA_	 Alignment		99.7	18	PDB header: oxidoreductase Chain: A: PDB Molecule: hydroxylamine oxidoreductase; PDBTitle: x-ray structure of hydroxylamine oxidoreductase
4	c2bpbB_	 Alignment		98.6	17	PDB header: oxidoreductase Chain: B: PDB Molecule: sulfite\cytochrome c oxidoreductase subunit b; PDBTitle: sulfite dehydrogenase from starkeya novella
5	d1sp3a_	 Alignment		98.5	16	Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif
6	c2p0bA_	 Alignment		98.3	17	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c-type protein nrfb; PDBTitle: crystal structure of chemically-reduced e.coli nrfb
7	d1ft5a_	 Alignment		98.3	20	Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif
8	d2rdza1	 Alignment		98.2	26	Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif
9	d1fs7a_	 Alignment		98.1	20	Fold: Multi-heme cytochromes Superfamily: Multi-heme cytochromes Family: Di-heme elbow motif
10	c1fs9A_	 Alignment		98.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: cytochrome c nitrite reductase; PDBTitle: cytochrome c nitrite reductase from wolfinella succinogenes-azide2 complex
11	d1pbya1	 Alignment		98.0	20	Fold: Cytochrome c Superfamily: Cytochrome c Family: Quinohemoprotein amine dehydrogenase A chain, domains 1 and 2

12	d1jmx1		Alignment		97.8	27	Fold: Cytochrome c Superfamily: Cytochrome c Family: Quinohemoprotein amine dehydrogenase A chain, domains 1 and 2
13	c2fwta		Alignment		97.7	30	PDB header: electron transport Chain: A: PDB Molecule: dhc, diheme cytochrome c; PDBTitle: crystal structure of dhc purified from rhodobacter2 sphaeroides
14	c2vr0A		Alignment		97.7	34	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
15	c3f29A		Alignment		97.6	26	PDB header: oxidoreductase Chain: A: PDB Molecule: eight-heme nitrite reductase; PDBTitle: structure of the thioalkalivibrio nitratireducens2 cytochrome c nitrite reductase in complex with sulfite
16	c2j7aE		Alignment		97.6	34	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
17	c3pmqA		Alignment		97.6	25	PDB header: electron transport Chain: A: PDB Molecule: decaheme cytochrome c mtrf; PDBTitle: crystal structure of the outer membrane decaheme cytochrome mtrf
18	d1qdba		Alignment		97.5	27	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif
19	d1oaha		Alignment		97.5	29	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif
20	c1oahA		Alignment		97.5	29	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).
21	c1kb0A		Alignment	not modelled	97.3	21	PDB header: oxidoreductase Chain: A: PDB Molecule: quinohemoprotein alcohol dehydrogenase; PDBTitle: crystal structure of quinohemoprotein alcohol dehydrogenase from2 comamonas testosteroni
22	c3oueA		Alignment	not modelled	96.9	18	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c family protein; PDBTitle: structure of c-terminal hexaheme fragment of gsu1996
23	c2a3mA		Alignment	not modelled	96.7	26	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)
24	c1pbyA		Alignment	not modelled	96.6	24	PDB header: oxidoreductase Chain: A: PDB Molecule: quinohemoprotein amine dehydrogenase 60 kda PDBTitle: structure of the phenylhydrazine adduct of the2 quinohemoprotein amine dehydrogenase from paracoccus3 denitrificans at 1.7 a resolution
25	d1mz4a		Alignment	not modelled	96.6	11	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
26	d1h9xa1		Alignment	not modelled	96.5	18	Fold: Cytochrome c Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
27	c3cp5A		Alignment	not modelled	96.5	22	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c; PDBTitle: cytochrome c from rhodothermus marinus
							Fold: Cytochrome c

28	dlmira1	Alignment	not modelled	96.5	29	Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
29	c3ouqA	Alignment	not modelled	96.4	21	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c family protein; PDBTitle: structure of n-terminal hexaheme fragment of gsu1996
30	dli77a	Alignment	not modelled	96.3	22	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
31	c1w5cT	Alignment		96.3	15	PDB header: photosynthesis Chain: T: PDB Molecule: cytochrome c-550; PDBTitle: photosystem ii from thermosynechococcus elongatus
32	c1jmxA	Alignment	not modelled	96.2	26	PDB header: oxidoreductase Chain: A: PDB Molecule: amine dehydrogenase; PDBTitle: crystal structure of a quinoxemoprotein amine dehydrogenase2 from pseudomonas putida
33	dle29a	Alignment	not modelled	96.2	15	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
34	c2zonG	Alignment	not modelled	96.2	30	PDB header: oxidoreductase/electron transport Chain: G: PDB Molecule: cytochrome c551; PDBTitle: crystal structure of electron transfer complex of nitrite2 reductase with cytochrome c
35	dle2rb1	Alignment	not modelled	96.2	21	Fold: Cytochrome c Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
36	dlf1ca	Alignment	not modelled	96.1	17	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
37	dly0pa1	Alignment	not modelled	96.1	27	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif
38	cljrxA	Alignment	not modelled	96.0	26	PDB header: oxidoreductase Chain: A: PDB Molecule: flavocytochrome c; PDBTitle: crystal structure of arg402ala mutant flavocytochrome c32 from shewanella frigidimarina
39	c2xtsD	Alignment	not modelled	96.0	25	PDB header: oxidoreductase/electron transport Chain: D: PDB Molecule: cytochrome; PDBTitle: crystal structure of the sulfane dehydrogenase soxcd from paracoccus2 pantotrophus
40	dlhzua1	Alignment	not modelled	96.0	22	Fold: Cytochrome c Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
41	c1kv9A	Alignment	not modelled	95.9	25	PDB header: oxidoreductase Chain: A: PDB Molecule: type ii quinoxemoprotein alcohol dehydrogenase; PDBTitle: structure at 1.9 a resolution of a quinoxemoprotein alcohol2 dehydrogenase from pseudomonas putida hk5
42	dlis9a	Alignment	not modelled	95.9	22	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
43	d1kv9a1	Alignment	not modelled	95.9	27	Fold: Cytochrome c Superfamily: Cytochrome c Family: Quinoxemoprotein alcohol dehydrogenase, C-terminal domain
44	d1ytca	Alignment	not modelled	95.9	28	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
45	c2zxyA	Alignment	not modelled	95.9	17	PDB header: oxygen binding, transport protein Chain: A: PDB Molecule: cytochrome c552; PDBTitle: crystal structure of cytochrome c555 from aquifex aeolicus
46	dlgyoa	Alignment	not modelled	95.9	41	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
47	dlwvec1	Alignment	not modelled	95.9	25	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
48	d2gc4d1	Alignment	not modelled	95.8	24	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
49	d1d4ca1	Alignment	not modelled	95.8	26	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif
50	c1nnoA	Alignment	not modelled	95.7	29	PDB header: oxidoreductase Chain: A: PDB Molecule: nitrite reductase; PDBTitle: conformational changes occurring upon no binding in nitrite2 reductase from pseudomonas aeruginosa
51	dlwada	Alignment	not modelled	95.7	32	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
52	d2ctha	Alignment	not modelled	95.7	25	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
53	d1j0pa	Alignment	not modelled	95.7	34	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like

54	c1qo8A	Alignment	not modelled	95.6	20	PDB header: oxidoreductase Chain: A: PDB Molecule: flavocytochrome c3 fumarate reductase; PDBTitle: the structure of the open conformation of a flavocytochrome2 c3 fumarate reductase
55	dlh1oa2	Alignment	not modelled	95.6	20	Fold: Cytochrome c Superfamily: Cytochrome c Family: Two-domain cytochrome c
56	dlccra	Alignment	not modelled	95.6	27	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
57	dl1fma	Alignment	not modelled	95.5	27	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
58	dlhj3a1	Alignment	not modelled	95.5	25	Fold: Cytochrome c Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
59	dlwejf	Alignment	not modelled	95.5	25	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
60	dl ye ba	Alignment	not modelled	95.5	21	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
61	c2d0wA	Alignment	not modelled	95.5	19	PDB header: electron transport Chain: A: PDB Molecule: cytochrome cl; PDBTitle: crystal structure of cytochrome cl from hyphomicrobium2 denitrificans
62	dlycca	Alignment	not modelled	95.5	20	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
63	dlfc dc1	Alignment	not modelled	95.4	17	Fold: Cytochrome c Superfamily: Cytochrome c Family: Two-domain cytochrome c
64	dlkb0a1	Alignment	not modelled	95.4	22	Fold: Cytochrome c Superfamily: Cytochrome c Family: Quinoprotein alcohol dehydrogenase, C-terminal domain
65	dlc75a	Alignment	not modelled	95.4	27	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
66	dlqo8a1	Alignment	not modelled	95.4	23	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif
67	c2w9kA	Alignment	not modelled	95.4	25	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c; PDBTitle: crithidia fasciculata cytochrome c
68	c3dmiA	Alignment	not modelled	95.4	23	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c6; PDBTitle: crystallization and structural analysis of cytochrome c62 from the diatom phaeodactylum tricornutum at 1.5 a3 resolution
69	dlqksa1	Alignment	not modelled	95.4	25	Fold: Cytochrome c Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
70	dl du wa	Alignment	not modelled	95.3	29	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
71	c2l4dA	Alignment	not modelled	95.3	16	PDB header: electron transport Chain: A: PDB Molecule: sco1/senc family protein/cytochrome c; PDBTitle: cytochrome c domain of pp3183 protein from pseudomonas putida
72	dlc52a	Alignment	not modelled	95.3	28	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
73	dlm70a1	Alignment	not modelled	95.3	28	Fold: Cytochrome c Superfamily: Cytochrome c Family: Two-domain cytochrome c
74	dl of wa	Alignment	not modelled	95.2	27	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
75	c2e84A	Alignment	not modelled	95.2	28	PDB header: electron transport Chain: A: PDB Molecule: high-molecular-weight cytochrome c; PDBTitle: crystal structure of high-molecular weight cytochrome c2 from desulfovibrio vulgaris (mizayaki f) in the presence3 of zinc ion
76	c2zooA	Alignment	not modelled	95.2	23	PDB header: oxidoreductase Chain: A: PDB Molecule: probable nitrite reductase; PDBTitle: crystal structure of nitrite reductase from pseudoalteromonas2 halo planktis tac125
77	dlup9a	Alignment	not modelled	95.2	20	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
78	dlj3sa	Alignment	not modelled	95.2	29	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
79	c3dr0B	Alignment	not modelled	95.2	19	PDB header: electron transport Chain: B: PDB Molecule: cytochrome c6; PDBTitle: structure of reduced cytochrome c6 from synechococcus sp.2 pcc 7002
80	dlkx7a	Alignment	not modelled	95.1	18	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c

81	d1dy7b1	Alignment	not modelled	95.1	21	Fold: Cytochrome c Superfamily: Cytochrome c Family: N-terminal (heme c) domain of cytochrome cd1-nitrite reductase
82	d1cc5a	Alignment	not modelled	95.1	23	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
83	d1cyja	Alignment	not modelled	95.1	24	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
84	d1c53a	Alignment	not modelled	95.1	29	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
85	d1f1fa	Alignment	not modelled	95.0	26	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
86	c3a9fA	Alignment	not modelled	95.0	18	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c; PDBTitle: crystal structure of the c-terminal domain of cytochrome cz2 from chlorobium tepidum
87	c3cu4A	Alignment	not modelled	95.0	19	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c family protein; PDBTitle: omcf, outer membrane cytochrome f from geobacter2 sulfurreducens
88	d1m1qa	Alignment	not modelled	94.9	22	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Di-heme elbow motif
89	d1fcdc2	Alignment	not modelled	94.9	12	Fold: Cytochrome c Superfamily: Cytochrome c Family: Two-domain cytochrome c
90	d1hroa	Alignment	not modelled	94.8	22	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
91	d1aqea	Alignment	not modelled	94.8	20	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
92	d1cnoa	Alignment	not modelled	94.7	28	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
93	d2c8sa1	Alignment	not modelled	94.7	20	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
94	c2v07A	Alignment	not modelled	94.7	23	PDB header: photosynthesis Chain: A: PDB Molecule: cytochrome c6; PDBTitle: structure of the arabidopsis thaliana cytochrome c6a v52q2 variant
95	d2cvca1	Alignment	not modelled	94.7	38	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
96	d1ctja	Alignment	not modelled	94.7	24	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
97	c3o0rC	Alignment	not modelled	94.7	16	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
98	d1c6sa	Alignment	not modelled	94.6	17	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
99	c2zzsW	Alignment	not modelled	94.6	22	PDB header: electron transport Chain: W: PDB Molecule: PDBTitle: crystal structure of cytochrome c554 from vibrio2 parahaemolyticus strain rimd2210633
100	c1eysC	Alignment	not modelled	94.4	30	PDB header: electron transport Chain: C: PDB Molecule: photosynthetic reaction center; PDBTitle: crystal structure of photosynthetic reaction center from a2 thermophilic bacterium, thermochromatium tepidum
101	d1eysc	Alignment	not modelled	94.4	30	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Photosynthetic reaction centre (cytochrome subunit)
102	d1gdva	Alignment	not modelled	94.4	16	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
103	d1c6ra	Alignment	not modelled	94.2	25	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
104	d1m70a2	Alignment	not modelled	94.2	25	Fold: Cytochrome c Superfamily: Cytochrome c Family: Two-domain cytochrome c
105	d1dvha	Alignment	not modelled	94.1	31	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
106	d1co6a	Alignment	not modelled	94.0	24	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
107	c1w21A	Alignment	not modelled	93.8	26	PDB header: oxidoreductase Chain: A: PDB Molecule: cytochrome oxidase subunit ii; PDBTitle: cytochrome c domain of caa3 oxygen oxidoreductase
						PDB header: electron transport

108	c2cvcA_	Alignment	not modelled	93.8	39	Chain: A: PDB Molecule: high-molecular-weight cytochrome c precursor; PDBTitle: crystal structure of high-molecular weight cytochrome c2 from desulfovibrio vulgaris (hildenborough)
109	c1gq1B_	Alignment	not modelled	93.7	17	PDB header: oxidoreductase Chain: B: PDB Molecule: cytochrome cd1 nitrite reductase; PDBTitle: cytochrome cd1 nitrite reductase, y25s mutant, oxidised2 form
110	c2k3vA_	Alignment	not modelled	93.4	24	PDB header: electron transport Chain: A: PDB Molecule: tetraheme cytochrome c-type; PDBTitle: solution structure of a tetrahaem cytochrome from2 shewanella frigidimarina
111	c2d0sA_	Alignment	not modelled	93.3	19	PDB header: electron transport Chain: A: PDB Molecule: cytochrome c; PDBTitle: crystal structure of the cytochrome c552 from moderate2 thermophilic bacterium, hydrogenophilus thermoluteolus
112	d1fi3a_	Alignment	not modelled	93.1	18	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
113	d2i5nc1	Alignment	not modelled	93.1	25	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Photosynthetic reaction centre (cytochrome subunit)
114	c2jblC_	Alignment	not modelled	93.1	25	PDB header: electron transport Chain: C: PDB Molecule: photosynthetic reaction center cytochrome c PDBTitle: photosynthetic reaction center from blastochloris viridis
115	c1fcdD_	Alignment	not modelled	93.0	12	PDB header: electron transport(flavocytochrome) Chain: D: PDB Molecule: flavocytochrome c sulfide dehydrogenase PDBTitle: the structure of flavocytochrome c sulfide dehydrogenase2 from a purple phototrophic bacterium chromatium vinosum at3 2.5 angstroms resolution
116	d2cy3a_	Alignment	not modelled	93.0	26	Fold: Multiheme cytochromes Superfamily: Multiheme cytochromes Family: Cytochrome c3-like
117	c3m97X_	Alignment	not modelled	93.0	22	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
118	d1qn2a_	Alignment	not modelled	92.9	19	Fold: Cytochrome c Superfamily: Cytochrome c Family: monodomain cytochrome c
119	c1z1nX_	Alignment	not modelled	92.9	29	PDB header: electron transport Chain: X: PDB Molecule: sixteen heme cytochrome; PDBTitle: crystal structure of the sixteen heme cytochrome from desulfovibrio2 gigas
120	c3cwbQ_	Alignment	not modelled	92.8	19	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