










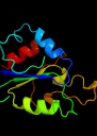








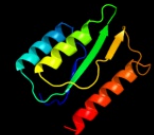


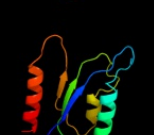
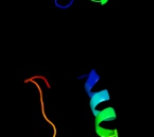





Phyre2
























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Description	P16433
Date	Thu Jan 5 11:35:09 GMT 2012
Unique Job ID	846d9a7ae17a6117

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d2fug6l	 Alignment		100.0	36	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nqo6-like
2	d1frfs_	 Alignment		99.9	22	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
3	d1e3da_	 Alignment		99.9	22	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
4	d1wuis1	 Alignment		99.9	21	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
5	c1h2aS_	 Alignment		99.9	21	PDB header: oxidoreductase Chain: S: PDB Molecule: hydrogenase; PDBTitle: single crystals of hydrogenase from desulfovibrio vulgaris
6	c3rgwS_	 Alignment		99.9	24	PDB header: oxidoreductase/oxidoreductase Chain: S: PDB Molecule: membrane-bound hydrogenase (nife) small subunit hoxk; PDBTitle: crystal structure at 1.5 a resolution of an h2-reduced, o2-tolerant2 hydrogenase from ralstonia eutropha unmasks a novel iron-sulfur3 cluster
7	d1yq9a1	 Alignment		99.9	21	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
8	d1cc1s_	 Alignment		99.9	26	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
9	c3myrE_	 Alignment		99.9	22	PDB header: oxidoreductase Chain: E: PDB Molecule: hydrogenase (nife) small subunit hyda; PDBTitle: crystal structure of [nife] hydrogenase from allochromatium vinosum in2 its ni-a state
10	c2wpaA_	 Alignment		99.8	25	PDB header: oxidoreductase Chain: A: PDB Molecule: periplasmic [nifese] hydrogenase, small subunit; PDBTitle: structure of the oxidised, as-isolated nifese hydrogenase2 from d. vulgaris hildenborough
11	c2v4jA_	 Alignment		69.5	14	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase, dissimilatory-type subunit PDBTitle: the crystal structure of desulfovibrio vulgaris2 dissimilatory sulfite reductase bound to dsrC provides3 novel insights into the mechanism of sulfate respiration

12	d2dlad2	Alignment		66.9	14	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: Formate/glycerate dehydrogenases, substrate-binding domain
13	d1e5da1	Alignment		65.7	16	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
14	c2d1eA	Alignment		56.3	16	PDB header: oxidoreductase Chain: A: PDB Molecule: phycocyanobilin:ferredoxin oxidoreductase; PDBTitle: crystal structure of pcya-biliverdin complex
15	c3rl4A	Alignment		54.9	24	PDB header: hydrolase Chain: A: PDB Molecule: metallophosphoesterase mpped2; PDBTitle: rat metallophosphodiesterase mpped2 g252h mutant
16	d1vmea1	Alignment		50.0	13	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
17	c2d3yA	Alignment		43.9	15	PDB header: hydrolase Chain: A: PDB Molecule: uracil-dna glycosylase; PDBTitle: crystal structure of uracil-dna glycosylase from thermophilus2 hb8
18	c2r47C	Alignment		41.3	17	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: uncharacterized protein mth_862; PDBTitle: crystal structure of mth_862 protein of unknown function from2 methanothermobacter thermautotrophicus
19	d1sqsa	Alignment		39.3	11	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Hypothetical protein SP1951
20	c2z1dA	Alignment		38.1	18	PDB header: metal binding protein Chain: A: PDB Molecule: hydrogenase expression/formation protein hypd; PDBTitle: crystal structure of [nife] hydrogenase maturation protein, hypd from2 thermococcus kodakaraensis
21	c3trhl	Alignment	not modelled	31.9	25	PDB header: lyase Chain: I: PDB Molecule: phosphoribosylaminoimidazole carboxylase PDBTitle: structure of a phosphoribosylaminoimidazole carboxylase catalytic2 subunit (pure) from coxiella burnetii
22	c3klbA	Alignment	not modelled	28.6	19	PDB header: flavoprotein Chain: A: PDB Molecule: putative flavoprotein; PDBTitle: crystal structure of putative flavoprotein in complex with fmn2 (yp_213683.1) from bacteroides fragilis nctc 9343 at 1.75 a3 resolution
23	c1coyA	Alignment	not modelled	27.9	15	PDB header: oxidoreductase(oxygen receptor) Chain: A: PDB Molecule: cholesterol oxidase; PDBTitle: crystal structure of cholesterol oxidase complexed with a2 steroid substrate. implications for fad dependent alcohol3 oxidases
24	c3ca8B	Alignment	not modelled	27.2	23	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: protein ydcf; PDBTitle: crystal structure of escherichia coli ydcf, an s-adenosyl-l-methionine2 utilizing enzyme
25	c3na7A	Alignment	not modelled	26.8	13	PDB header: gene regulation, chaperone Chain: A: PDB Molecule: hp0958; PDBTitle: 2.2 angstrom structure of the hp0958 protein from helicobacter pylori2 ccug 17874
26	c2q9uB	Alignment	not modelled	25.3	16	PDB header: oxidoreductase Chain: B: PDB Molecule: a-type flavoprotein; PDBTitle: crystal structure of the flavodiiiron protein from giardia2 intestinalis
27	d2dlad1	Alignment	not modelled	25.2	10	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
28	c3ikbB	Alignment	not modelled	23.7	15	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized conserved protein; PDBTitle: the structure of a conserved protein from streptococcus2

						mutans ua159.
29	c2gn0A_	Alignment	not modelled	22.9	18	PDB header: lyase Chain: A: PDB Molecule: threonine dehydratase catabolic; PDBTitle: crystal structure of dimeric biodegradative threonine deaminase (tdcb)2 from salmonella typhimurium at 1.7 a resolution (triclinic form with 3 one complete subunit built in alternate conformation)
30	c1e5dA_	Alignment	not modelled	22.8	16	PDB header: oxidoreductase Chain: A: PDB Molecule: rubredoxin: oxygen oxidoreductase; PDBTitle: rubredoxin oxygen: oxidoreductase (roo) from anaerobe2 desulfovibrio gigas
31	d1j4aa1_	Alignment	not modelled	22.6	7	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
32	d2ac7a1_	Alignment	not modelled	21.8	26	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
33	d2yt9a2_	Alignment	not modelled	20.9	50	Fold: beta-beta-alpha zinc fingers Superfamily: beta-beta-alpha zinc fingers Family: Classic zinc finger, C2H2
34	d1ycga1_	Alignment	not modelled	20.6	20	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
35	d2f2ab2_	Alignment	not modelled	20.6	27	Fold: Glutamine synthetase/guanido kinase Superfamily: Glutamine synthetase/guanido kinase Family: GatB/GatE catalytic domain-like
36	d1w85a_	Alignment	not modelled	19.4	17	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Branched-chain alpha-keto acid dehydrogenase PP module
37	c1xrsB_	Alignment	not modelled	19.3	21	PDB header: isomerase Chain: B: PDB Molecule: d-lysine 5,6-aminomutase beta subunit; PDBTitle: crystal structure of lysine 5,6-aminomutase in complex with plp, 2 cobalamin, and 5'-deoxyadenosine
38	c3bsfB_	Alignment	not modelled	19.0	17	PDB header: hydrolase Chain: B: PDB Molecule: at4g34840; PDBTitle: crystal structure of the mta/sah nucleosidase
39	c3nm5B_	Alignment	not modelled	18.7	9	PDB header: hydrolase Chain: B: PDB Molecule: mta/sah nucleosidase; PDBTitle: helicobacter pylori mta complexed with formycin a
40	c2g5iB_	Alignment	not modelled	18.1	27	PDB header: ligase Chain: B: PDB Molecule: aspartyl/glutamyl-trna(asn/gln) amidotransferase PDBTitle: structure of trna-dependent amidotransferase gatcab2 complexed with adp-alf4
41	c1ychD_	Alignment	not modelled	17.7	16	PDB header: oxidoreductase Chain: D: PDB Molecule: nitric oxide reductase; PDBTitle: x-ray crystal structures of moorella thermoacetica fpr.2 novel diiron site structure and mechanistic insights into 3 a scavenging nitric oxide reductase
42	d1jysa_	Alignment	not modelled	17.6	26	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
43	d1xm7a_	Alignment	not modelled	17.2	29	Fold: Metallo-dependent phosphatases Superfamily: Metallo-dependent phosphatases Family: Hypothetical protein aq 1666
44	d1sc6a1_	Alignment	not modelled	17.0	5	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
45	c2is8A_	Alignment	not modelled	16.8	24	PDB header: structural protein Chain: A: PDB Molecule: molybdopterin biosynthesis enzyme, moab; PDBTitle: crystal structure of the molybdopterin biosynthesis enzyme moab2 (ttha0341) from thermus thermophilus hb8
46	c1geaA_	Alignment	not modelled	16.7	60	PDB header: neuropeptide Chain: A: PDB Molecule: pituitary adenylate cyclase activating PDBTitle: receptor-bound conformation of pacap21
47	c3bl6A_	Alignment	not modelled	16.1	14	PDB header: hydrolase Chain: A: PDB Molecule: 5'-methylthioadenosine nucleosidase/s- PDBTitle: crystal structure of staphylococcus aureus 5'-2 methylthioadenosine/s-adenosylhomocysteine nucleosidase in 3 complex with formycin a
48	c2wz1A_	Alignment	not modelled	15.8	33	PDB header: viral protein Chain: A: PDB Molecule: phosphoprotein; PDBTitle: the structure of the n-rna binding domain of the mokola2 virus phosphoprotein
49	d1pwha_	Alignment	not modelled	15.7	23	Fold: Tryptophan synthase beta subunit-like PLP-dependent enzymes Superfamily: Tryptophan synthase beta subunit-like PLP-dependent enzymes Family: Tryptophan synthase beta subunit-like PLP-dependent enzymes
50	c3d3kD_	Alignment	not modelled	15.6	12	PDB header: protein binding Chain: D: PDB Molecule: enhancer of mrna-decapping protein 3; PDBTitle: crystal structure of human edc3p
51	d2f7wa1_	Alignment	not modelled	15.5	18	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
52	c1zosE_	Alignment	not modelled	15.5	14	PDB header: hydrolase Chain: E: PDB Molecule: 5'-methylthioadenosine / s-adenosylhomocysteine PDBTitle: structure of 5'-methylthioadenosine/s-adenosylhomocysteine 2 nucleosidase from s. pneumoniae with a transition-state 3 inhibitor mt-inma

53	c3eeiA	 Alignment	not modelled	15.3	14	PDB header: hydrolase Chain: A: PDB Molecule: 5-methylthioadenosine nucleosidase/s- PDBTitle: crystal structure of 5'-methylthioadenosine/s-2 adenosylhomocysteine nucleosidase from neisseria3 meningitidis in complex with methylthio-immucillin-a
54	d1wiwa	 Alignment	not modelled	15.3	25	Fold: SIS domain Superfamily: SIS domain Family: double-SIS domain
55	c3pdiB	 Alignment	not modelled	14.9	13	PDB header: protein binding Chain: B: PDB Molecule: nitrogenase mofe cofactor biosynthesis protein nifn; PDBTitle: precursor bound nifen
56	c3klyE	 Alignment	not modelled	14.7	11	PDB header: oxidoreductase Chain: E: PDB Molecule: oxidoreductase; PDBTitle: x-ray structure of oxidoreductase from corynebacterium2 diphtheriae. orthorombic crystal form, northeast structural3 genomics consortium target cdr100d
57	d2h1qa1	 Alignment	not modelled	14.4	15	Fold: PLP-dependent transferase-like Superfamily: Dhaf3308-like Family: Dhaf3308-like
58	d2bfda1	 Alignment	not modelled	14.4	11	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Branched-chain alpha-keto acid dehydrogenase PP module
59	c2rmzA	 Alignment	not modelled	14.0	19	PDB header: cell adhesion Chain: A: PDB Molecule: integrin beta-3; PDBTitle: bicelle-embedded integrin beta3 transmembrane segment
60	d1umda	 Alignment	not modelled	14.0	9	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Branched-chain alpha-keto acid dehydrogenase PP module
61	c3c7bA	 Alignment	not modelled	13.8	15	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase, dissimilatory-type subunit alpha; PDBTitle: structure of the dissimilatory sulfite reductase from archaeoglobus2 fulgidus
62	c2qneA	 Alignment	not modelled	13.8	18	PDB header: transferase Chain: A: PDB Molecule: putative methyltransferase; PDBTitle: crystal structure of putative methyltransferase (zp_00558420.1) from2 desulfitobacterium hafniense y51 at 2.30 a resolution
63	d1th5a1	 Alignment	not modelled	13.8	14	Fold: Alpha-lytic protease prodomain-like Superfamily: Fe-S cluster assembly (FSCA) domain-like Family: NifU C-terminal domain-like
64	c3npgD	 Alignment	not modelled	13.7	12	PDB header: unknown function Chain: D: PDB Molecule: uncharacterized duf364 family protein; PDBTitle: crystal structure of a protein with unknown function from duf3642 family (ph1506) from pyrococcus horikoshii at 2.70 a resolution
65	d1xwdb1	 Alignment	not modelled	13.5	19	Fold: Cystine-knot cytokines Superfamily: Cystine-knot cytokines Family: Gonadotropin/Follitropin
66	d1fyja	 Alignment	not modelled	13.4	71	Fold: S15/NS1 RNA-binding domain Superfamily: S15/NS1 RNA-binding domain Family: a tRNA synthase domain
67	c1qfwB	 Alignment	not modelled	13.4	25	PDB header: immune system Chain: B: PDB Molecule: gonadotrophin beta subunit; PDBTitle: ternary complex of human chorionic gonadotropin with fv anti alpha2 subunit and fv anti beta subunit
68	c1zj8B	 Alignment	not modelled	13.4	15	PDB header: oxidoreductase Chain: B: PDB Molecule: probable ferredoxin-dependent nitrite reductase nira; PDBTitle: structure of mycobacterium tuberculosis nira protein
69	d1hcnb	 Alignment	not modelled	13.3	25	Fold: Cystine-knot cytokines Superfamily: Cystine-knot cytokines Family: Gonadotropin/Follitropin
70	c2ax3A	 Alignment	not modelled	13.2	21	PDB header: transferase Chain: A: PDB Molecule: hypothetical protein tm0922; PDBTitle: crystal structure of a putative carbohydrate kinase (tm0922) from2 thermotoga maritima msb8 at 2.25 a resolution
71	d1nwba	 Alignment	not modelled	13.1	17	Fold: HesB-like domain Superfamily: HesB-like domain Family: HesB-like domain
72	d1fmfa	 Alignment	not modelled	13.0	15	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
73	c3edoA	 Alignment	not modelled	12.9	12	PDB header: flavoprotein Chain: A: PDB Molecule: putative trp repressor binding protein; PDBTitle: crystal structure of flavoprotein in complex with fnm2 (yp_193882.1) from lactobacillus acidophilus ncfm at 1.203 a resolution
74	c1vmeB	 Alignment	not modelled	12.7	13	PDB header: electron transport Chain: B: PDB Molecule: flavoprotein; PDBTitle: crystal structure of flavoprotein (tm0755) from thermotoga maritima at2 1.80 a resolution
75	d1m1na	 Alignment	not modelled	12.5	11	Fold: Chelatase-like Superfamily: "Helical backbone" metal receptor Family: Nitrogenase iron-molybdenum protein
76	d1ygya1	 Alignment	not modelled	12.4	15	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
77	c3dp9A	 Alignment	not modelled	12.4	20	PDB header: hydrolase Chain: A: PDB Molecule: mta/sah nucleosidase; PDBTitle: crystal structure of vibrio cholerae 5'-methylthioadenosine/s-adenosyl2 homocysteine nucleosidase (mtan) complexed with butylthio-dadme-3 immucillin a

78	d1vyia_	Alignment	not modelled	12.3	33	Fold: Phosphoprotein M1, C-terminal domain Superfamily: Phosphoprotein M1, C-terminal domain Family: Phosphoprotein M1, C-terminal domain
79	c3i4zA_	Alignment	not modelled	12.3	13	PDB header: transferase Chain: A: PDB Molecule: tryptophan dimethylallyltransferase; PDBTitle: crystal structure of the dimethylallyl tryptophan synthase fgapt2 from2 aspergillus fumigatus
80	c3ti6B_	Alignment	not modelled	12.0	17	PDB header: transferase Chain: B: PDB Molecule: purine nucleoside phosphorylase; PDBTitle: crystal structure of purine nucleoside phosphorylase from entamoeba2 histolytica
81	c2dmlA_	Alignment	not modelled	11.9	31	PDB header: isomerase Chain: A: PDB Molecule: protein disulfide-isomerase a6; PDBTitle: the solution structure of the first thioredoxin domain of2 mouse protein disulfide-isomerase a6
82	c2dbqA_	Alignment	not modelled	11.9	15	PDB header: oxidoreductase Chain: A: PDB Molecule: glyoxylate reductase; PDBTitle: crystal structure of glyoxylate reductase (ph0597) from pyrococcus2 horikoshii ot3, complexed with nadp (i41)
83	d2b4ya1	Alignment	not modelled	11.9	21	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Sir2 family of transcriptional regulators
84	d3cxeb1	Alignment	not modelled	11.7	83	Fold: 4-helical cytokines Superfamily: 4-helical cytokines Family: Short-chain cytokines
85	c2dg2D_	Alignment	not modelled	11.7	25	PDB header: protein binding Chain: D: PDB Molecule: apolipoprotein a-i binding protein; PDBTitle: crystal structure of mouse apolipoprotein a-i binding2 protein
86	d2fd6u3	Alignment	not modelled	11.6	83	Fold: Snake toxin-like Superfamily: Snake toxin-like Family: Extracellular domain of cell surface receptors
87	d2i9be3	Alignment	not modelled	11.6	83	Fold: Snake toxin-like Superfamily: Snake toxin-like Family: Extracellular domain of cell surface receptors
88	d2naca1	Alignment	not modelled	11.5	2	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
89	c3oa1B_	Alignment	not modelled	11.4	30	PDB header: chaperone Chain: B: PDB Molecule: phosphoprotein; PDBTitle: crystal structure of phosphoprotein/protein p/protein m1 residues 69-2 297 from rabies virus reveals degradation to c-terminal domain only
90	c3aerC_	Alignment	not modelled	11.4	17	PDB header: oxidoreductase Chain: C: PDB Molecule: light-independent protochlorophyllide reductase subunit n; PDBTitle: structure of the light-independent protochlorophyllide reductase2 catalyzing a key reduction for greening in the dark
91	c2g76A_	Alignment	not modelled	11.3	5	PDB header: oxidoreductase Chain: A: PDB Molecule: d-3-phosphoglycerate dehydrogenase; PDBTitle: crystal structure of human 3-phosphoglycerate dehydrogenase
92	d2db7a1	Alignment	not modelled	11.3	35	Fold: Orange domain-like Superfamily: Orange domain-like Family: Hairy Orange domain
93	c1vddC_	Alignment	not modelled	11.2	29	PDB header: recombination Chain: C: PDB Molecule: recombination protein recr; PDBTitle: crystal structure of recombinational repair protein recr
94	c3orsD_	Alignment	not modelled	11.2	21	PDB header: isomerase,biosynthetic protein Chain: D: PDB Molecule: n5-carboxyaminoimidazole ribonucleotide mutase; PDBTitle: crystal structure of n5-carboxyaminoimidazole ribonucleotide mutase2 from staphylococcus aureus
95	c2a5yA_	Alignment	not modelled	11.2	17	PDB header: apoptosis Chain: A: PDB Molecule: apoptosis regulator ced-9; PDBTitle: structure of a ced-4/ced-9 complex
96	d2ax3a2	Alignment	not modelled	11.1	21	Fold: YjeF N-terminal domain-like Superfamily: YjeF N-terminal domain-like Family: YjeF N-terminal domain-like
97	c3rfqC_	Alignment	not modelled	11.0	26	PDB header: biosynthetic protein Chain: C: PDB Molecule: pterin-4-alpha-carbinolamine dehydratase moab2; PDBTitle: crystal structure of pterin-4-alpha-carbinolamine dehydratase moab22 from mycobacterium marinum
98	d2fug71	Alignment	not modelled	11.0	71	Fold: N domain of copper amine oxidase-like Superfamily: Frataxin/Nqo15-like Family: Nqo15-like
99	c3pdiG_	Alignment	not modelled	10.8	18	PDB header: protein binding Chain: G: PDB Molecule: nitrogenase mofe cofactor biosynthesis protein nife; PDBTitle: precursor bound nifen