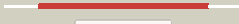



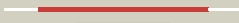



















Phyre2

Email	mdejesus@rockefeller.edu
Description	RVBD3293_(pcd)_3673599_3675083
Date	Thu Aug 8 16:20:50 BST 2019
Unique Job ID	8dca28a2b04fa09d

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2jg7G_	 Alignment		100.0	48	PDB header: oxidoreductase Chain: G: PDB Molecule: antiquitin; PDBTitle: crystal structure of seabream antiquitin and elucidation of2 its substrate specificity
2	c6fk3B_	 Alignment		100.0	35	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase; PDBTitle: structure and function of aldehyde dehydrogenase from thermus2 thermophilus: an enzyme with an evolutionarily-distinct c-terminal3 arm (recombinant full-length protein in complex with propanal)
3	c4f9iA_	 Alignment		100.0	27	PDB header: oxidoreductase Chain: A: PDB Molecule: proline dehydrogenase/delta-1-pyrroline-5-carboxylate PDBTitle: crystal structure of proline utilization a (puta) from geobacter2 sulfurreducens pca
4	c6dbbA_	 Alignment		100.0	61	PDB header: oxidoreductase Chain: A: PDB Molecule: putative aldehyde dehydrogenase family protein; PDBTitle: crystal structure of a putative aldehyde dehydrogenase family protein2 burkholderia cenocepacia j2315 in complex with partially reduced nadh
5	c5ur2C_	 Alignment		100.0	30	PDB header: oxidoreductase Chain: C: PDB Molecule: bifunctional protein puta; PDBTitle: crystal structure of proline utilization a (puta) from belloviobrio2 bacteriovorus inactivated by n-propargylglycine
6	d1a4sa_	 Alignment		100.0	29	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
7	c3ed6B_	 Alignment		100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: 1.7 angstrom resolution crystal structure of betaine aldehyde2 dehydrogenase (betb) from staphylococcus aureus
8	c4pxnB_	 Alignment		100.0	46	PDB header: oxidoreductase Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: structure of zm ald7 in complex with nad
9	c2d4eB_	 Alignment		100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: 5-carboxymethyl-2-hydroxyruconate semialdehyde PDBTitle: crystal structure of the hpcc from thermus thermophilus hb8
10	c4o5hD_	 Alignment		100.0	32	PDB header: oxidoreductase Chain: D: PDB Molecule: phenylacetaldehyde dehydrogenase; PDBTitle: x-ray crystal structure of a putative phenylacetaldehyde dehydrogenase2 from burkholderia cenocepacia
11	c3u4jB_	 Alignment		100.0	33	PDB header: oxidoreductase Chain: B: PDB Molecule: nad-dependent aldehyde dehydrogenase; PDBTitle: crystal structure of nad-dependent aldehyde dehydrogenase from2 sinorhizobium meliloti

12	c1t90B_	Alignment		100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: probable methylmalonate-semialdehyde dehydrogenase; PDBTitle: crystal structure of methylmalonate semialdehyde dehydrogenase from2 bacillus subtilis
13	c4go4E_	Alignment		100.0	29	PDB header: oxidoreductase Chain: E: PDB Molecule: putative gamma-hydroxymuconic semialdehyde dehydrogenase; PDBTitle: crystal structure of pnpe in complex with nicotinamide adenine2 dinucleotide
14	c4zz7E_	Alignment		100.0	29	PDB header: oxidoreductase Chain: E: PDB Molecule: methylmalonate-semialdehyde dehydrogenase; PDBTitle: crystal structure of methylmalonate-semialdehyde dehydrogenase (ddc)2 from oceanimonas doudoroffii
15	c3qanB_	Alignment		100.0	27	PDB header: oxidoreductase Chain: B: PDB Molecule: 1-pyrroline-5-carboxylate dehydrogenase 1; PDBTitle: crystal structure of 1-pyrroline-5-carboxylate dehydrogenase from2 bacillus halodurans
16	c3iwkB_	Alignment		100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: aminoaldehyde dehydrogenase; PDBTitle: crystal structure of aminoaldehyde dehydrogenase 1 from pisum sativum2 (psamadh1)
17	c4jz6A_	Alignment		100.0	28	PDB header: oxidoreductase Chain: A: PDB Molecule: salicylaldehyde dehydrogenase nahf; PDBTitle: crystal structure of a salicylaldehyde dehydrogenase from pseudomonas2 putida g7 complexed with salicylaldehyde
18	c5izdE_	Alignment		100.0	29	PDB header: oxidoreductase Chain: E: PDB Molecule: d-glyceraldehyde dehydrogenase (nadp(+)); PDBTitle: wild-type glyceraldehyde dehydrogenase from thermoplasma acidophilum2 in complex with nadp
19	d1bxsA_	Alignment		100.0	29	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
20	c4h73E_	Alignment		100.0	29	PDB header: oxidoreductase Chain: E: PDB Molecule: aldehyde dehydrogenase; PDBTitle: thermostable aldehyde dehydrogenase from pyrobaculum sp. complexed2 with nadp+
21	c5kf6B_	Alignment	not modelled	100.0	32	PDB header: oxidoreductase Chain: B: PDB Molecule: bifunctional protein puta; PDBTitle: structure of proline utilization a from sinorhizobium meliloti2 complexed with l-tetrahydrofuroic acid and nad+ in space group p21
22	d1wndA_	Alignment	not modelled	100.0	31	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
23	d1o9ja_	Alignment	not modelled	100.0	29	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
24	c6mvtA_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: structure of a bacterial ald16 complexed with nadh
25	c2o2qA_	Alignment	not modelled	100.0	31	PDB header: oxidoreductase Chain: A: PDB Molecule: formyltetrahydrofolate dehydrogenase; PDBTitle: crystal structure of the c-terminal domain of rat2 10'formyltetrahydrofolate dehydrogenase in complex with nadp
26	c4e4gF_	Alignment	not modelled	100.0	25	PDB header: oxidoreductase Chain: F: PDB Molecule: methylmalonate-semialdehyde dehydrogenase; PDBTitle: crystal structure of putative methylmalonate-semialdehyde2 dehydrogenase from sinorhizobium meliloti 1021
27	c3rh9A_	Alignment	not modelled	100.0	26	PDB header: oxidoreductase Chain: A: PDB Molecule: succinate-semialdehyde dehydrogenase (nad(p)(+)); PDBTitle: the crystal structure of oxidoreductase from marinobacter aquaeolei
28	c2ve5H_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: H: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: crystallographic structure of betaine aldehyde2 dehydrogenase from pseudomonas aeruginosa

29	c4dalB_	Alignment	not modelled	100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: putative aldehyde dehydrogenase; PDBTitle: crystal structure of putative aldehyde dehydrogenase from2 sinorhizobium meliloti 1021
30	c3ek1C_	Alignment	not modelled	100.0	31	PDB header: oxidoreductase Chain: C: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from brucella2 melitensis biovar abortus 2308
31	c5x5uB_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: alpha-ketoglutaric semialdehyde dehydrogenase; PDBTitle: crystal structure of alpha-ketoglutarate-semialdehyde dehydrogenase2 (kgsadh) complexed with nad
32	c5u0mB_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: n-succinylglutamate 5-semialdehyde dehydrogenase; PDBTitle: fatty aldehyde dehydrogenase from marinobacter aquaeolei vt8 and2 cofactor complex
33	d1uzba_	Alignment	not modelled	100.0	27	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
34	c4pt3C_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: C: PDB Molecule: aldehyde dehydrogenase; PDBTitle: nadph complex structure of aldehyde dehydrogenase from bacillus cereus
35	c4knaA_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: n-succinylglutamate 5-semialdehyde dehydrogenase; PDBTitle: crystal structure of an n-succinylglutamate 5-semialdehyde2 dehydrogenase from burkholderia thailandensis
36	c3ifgH_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: H: PDB Molecule: succinate-semialdehyde dehydrogenase (nadp+); PDBTitle: crystal structure of succinate-semialdehyde dehydrogenase from2 burkholderia pseudomallei, part 1 of 2
37	d1o04a_	Alignment	not modelled	100.0	28	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
38	c4pxlB_	Alignment	not modelled	100.0	27	PDB header: oxidoreductase Chain: B: PDB Molecule: cytosolic aldehyde dehydrogenase rf2c; PDBTitle: structure of zm ald2-3 (rf2c) in complex with nad
39	c4i25B_	Alignment	not modelled	100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: 2-aminomuconate 6-semialdehyde dehydrogenase; PDBTitle: 2.00 angstroms x-ray crystal structure of nad- and substrate-bound 2-2 aminomuconate 6-semialdehyde dehydrogenase from pseudomonas3 fluorescens
40	c4yweE_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: E: PDB Molecule: putative aldehyde dehydrogenase; PDBTitle: crystal structure of a putative aldehyde dehydrogenase from2 burkholderia cenocepacia
41	d1ky8a_	Alignment	not modelled	100.0	28	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
42	c3k2wD_	Alignment	not modelled	100.0	27	PDB header: oxidoreductase Chain: D: PDB Molecule: betaine-aldehyde dehydrogenase; PDBTitle: crystal structure of betaine-aldehyde dehydrogenase from2 pseudoalteromonas atlantica t6c
43	d1ag8a_	Alignment	not modelled	100.0	28	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
44	c2w8qA_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: succinate-semialdehyde dehydrogenase, PDBTitle: the crystal structure of human ssadh in complex with ssa.
45	c3b4wA_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of mycobacterium tuberculosis aldehyde dehydrogenase2 complexed with nad+
46	c3r31A_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: crystal structure of betaine aldehyde dehydrogenase from agrobacterium2 tumefaciens
47	c3prlD_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: D: PDB Molecule: nadp-dependent glyceraldehyde-3-phosphate dehydrogenase; PDBTitle: crystal structure of nadp-dependent glyceraldehyde-3-phosphate2 dehydrogenase from bacillus halodurans c-125
48	c3jz4C_	Alignment	not modelled	100.0	32	PDB header: oxidoreductase Chain: C: PDB Molecule: succinate-semialdehyde dehydrogenase [nadp+]; PDBTitle: crystal structure of e. coli nadp dependent enzyme
49	d1euha_	Alignment	not modelled	100.0	26	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
50	c5vbfH_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: H: PDB Molecule: nad-dependent succinate-semialdehyde dehydrogenase; PDBTitle: crystal structure of succinate semialdehyde dehydrogenase from2 burkholderia vietnamiensis
51	c4qyJ_	Alignment	not modelled	100.0	31	PDB header: oxidoreductase Chain: D: PDB Molecule: aldehyde dehydrogenase; PDBTitle: structure of phenylacetaldehyde dehydrogenase from pseudomonas putida2 s12
52	c5j6bB_	Alignment	not modelled	100.0	29	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from burkholderia2 thailandensis in covalent complex with nadph PDB header: oxidoreductase

76	d1ez0a_	Alignment	not modelled	100.0	21	Superfamily: ALDH-like Family: ALDH-like
77	c5nnoA_	Alignment	not modelled	100.0	22	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: structure of tbaldh3 complexed with nad and an3057 aldehyde
78	c4oe4A_	Alignment	not modelled	100.0	24	PDB header: oxidoreductase Chain: A: PDB Molecule: delta-1-pyrroline-5-carboxylate dehydrogenase, PDBTitle: crystal structure of yeast ald4a1 complexed with nad+
79	c6d97B_	Alignment	not modelled	100.0	19	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase 12; PDBTitle: structure of aldehyde dehydrogenase 12 (aldh12) from zea mays
80	c5iuuA_	Alignment	not modelled	100.0	33	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase family protein; PDBTitle: crystal structure of indole-3-acetaldehyde dehydrogenase in apo form
81	c3v4cB_	Alignment	not modelled	100.0	23	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase (nadp+); PDBTitle: crystal structure of a semialdehyde dehydrogenase from sinorhizobium2 meliloti 1021
82	c4dngB_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: uncharacterized aldehyde dehydrogenase aldy; PDBTitle: crystal structure of putative aldehyde dehydrogenase from bacillus2 subtilis subsp. subtilis str. 168
83	c5ujuA_	Alignment	not modelled	100.0	21	PDB header: oxidoreductase Chain: A: PDB Molecule: nad-dependent aldehyde dehydrogenase; PDBTitle: crystal structure of nad-dependent aldehyde dehydrogenase from2 burkholderia multivorans
84	c3v9iD_	Alignment	not modelled	100.0	24	PDB header: oxidoreductase Chain: D: PDB Molecule: delta-1-pyrroline-5-carboxylate dehydrogenase, PDBTitle: crystal structure of human 1-pyrroline-5-carboxylate dehydrogenase2 mutant s352l
85	c3lnsD_	Alignment	not modelled	100.0	27	PDB header: oxidoreductase Chain: D: PDB Molecule: benzaldehyde dehydrogenase; PDBTitle: benzaldehyde dehydrogenase, a class 3 aldehyde dehydrogenase, with2 bound nadp+ and benzoate adduct
86	c5j78B_	Alignment	not modelled	100.0	16	PDB header: oxidoreductase Chain: B: PDB Molecule: acetaldehyde dehydrogenase (acetylating); PDBTitle: crystal structure of an acetylating aldehyde dehydrogenase from2 geobacillus thermoglucosidasius
87	c4c3sA_	Alignment	not modelled	100.0	19	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: structure of a propionaldehyde dehydrogenase from the clostridium2 phytofermentans fucose utilisation bacterial microcompartment
88	c3k9dD_	Alignment	not modelled	100.0	18	PDB header: oxidoreductase Chain: D: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of probable aldehyde dehydrogenase from listeria2 monocytogenes egd-e
89	c5jfnA_	Alignment	not modelled	100.0	21	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of rhodopseudomonas palustris propionaldehyde2 dehydrogenase with bound coa and acylated cys330
90	d1o20a_	Alignment	not modelled	100.0	20	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
91	c4jbeA_	Alignment	not modelled	100.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: gamma-glutamyl phosphate reductase; PDBTitle: 1.95 angstrom crystal structure of gamma-glutamyl phosphate reductase2 from saccharomonospora viridis.
92	c3my7A_	Alignment	not modelled	100.0	18	PDB header: oxidoreductase Chain: A: PDB Molecule: alcohol dehydrogenase/acetaldehyde dehydrogenase; PDBTitle: the crystal structure of the acdh domain of an alcohol dehydrogenase2 from vibrio parahaemolyticus to 2.25a
93	c4ghkB_	Alignment	not modelled	100.0	19	PDB header: oxidoreductase Chain: B: PDB Molecule: gamma-glutamyl phosphate reductase; PDBTitle: x-ray crystal structure of gamma-glutamyl phosphate reductase from2 burkholderia thailandensis
94	c2h5gA_	Alignment	not modelled	100.0	18	PDB header: oxidoreductase Chain: A: PDB Molecule: delta-1-pyrroline-5-carboxylate synthetase; PDBTitle: crystal structure of human pyrroline-5-carboxylate synthetase
95	d1vluA_	Alignment	not modelled	100.0	18	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
96	c1vluB_	Alignment	not modelled	100.0	17	PDB header: oxidoreductase Chain: B: PDB Molecule: gamma-glutamyl phosphate reductase; PDBTitle: crystal structure of gamma-glutamyl phosphate reductase (yor323c) from2 saccharomyces cerevisiae at 2.40 a resolution
97	d1k75a_	Alignment	not modelled	98.4	19	Fold: ALDH-like Superfamily: ALDH-like Family: L-histidinol dehydrogenase HisD
98	c4gicB_	Alignment	not modelled	97.7	18	PDB header: oxidoreductase Chain: B: PDB Molecule: histidinol dehydrogenase; PDBTitle: crystal structure of a putative histidinol dehydrogenase (target psi-2 014034) from methylococcus capsulatus
99	c6an0A_	Alignment	not modelled	97.5	12	PDB header: oxidoreductase Chain: A: PDB Molecule: histidinol dehydrogenase; PDBTitle: crystal structure of histidinol dehydrogenase from elizabethkingia2 anophelis
						PDB header: oxidoreductase

100	c4g07A_	Alignment	not modelled	97.5	20	Chain: A: PDB Molecule: histidinol dehydrogenase; PDBTitle: the crystal structure of the c366s mutant of hdh from bruceella suis
101	c5vldC_	Alignment	not modelled	96.8	17	PDB header: oxidoreductase Chain: C: PDB Molecule: histidinol dehydrogenase, chloroplastic; PDBTitle: crystal structure of medicago truncatula l-histidinol dehydrogenase in2 complex with l-histidine and nad+
102	d1s7ia_	Alignment	not modelled	46.2	13	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: DGPF domain (Pfam 04946)
103	c2yvqA_	Alignment	not modelled	41.8	15	PDB header: ligase Chain: A: PDB Molecule: carbamoyl-phosphate synthase; PDBTitle: crystal structure of medicago truncatula l-histidinol-phosphate2 synthetase from homo sapiens
104	d1a9xa2	Alignment	not modelled	32.3	7	Fold: Methylglyoxal synthase-like Superfamily: Methylglyoxal synthase-like Family: Carbamoyl phosphate synthetase, large subunit allosteric, C-terminal domain
105	c2ec4A_	Alignment	not modelled	31.5	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: fas-associated factor 1; PDBTitle: solution structure of the uas domain from human fas-2 associated factor 1
106	c5n9mA_	Alignment	not modelled	29.4	13	PDB header: transferase Chain: A: PDB Molecule: cobyric acid synthase; PDBTitle: crystal structure of gatd - a glutamine amidotransferase from2 staphylococcus aureus involved in peptidoglycan amidation
107	c3jtpB_	Alignment	not modelled	22.8	20	PDB header: protein binding Chain: B: PDB Molecule: adapter protein meca 1; PDBTitle: crystal structure of the c-terminal domain of meca
108	c4ksaD_	Alignment	not modelled	22.2	21	PDB header: lyase Chain: D: PDB Molecule: malonyl-coa decarboxylase; PDBTitle: crystal structure of malonyl-coa decarboxylase from rhodopseudomonas2 palustris, northeast structural genomics consortium target rpr127
109	c1u57A_	Alignment	not modelled	21.5	36	PDB header: viral protein Chain: A: PDB Molecule: gag polyprotein; PDBTitle: nmr structure of the (345-392)gag sequence from hiv-1