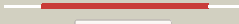
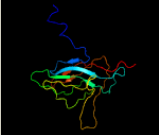

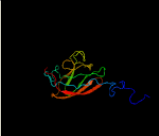
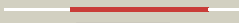







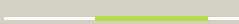


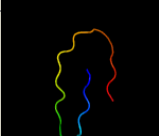



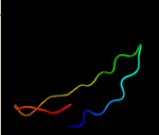

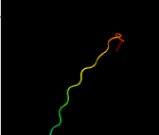

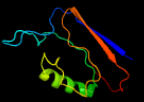



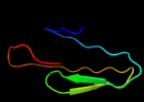

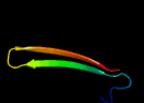
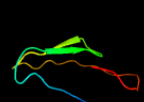


Phyre2

Email mdejesus@rockefeller.edu
 Description RVBD3584_(lpqE)_4026009_4026557
 Date Fri Aug 9 18:20:26 BST 2019
 Unique Job ID 10535d4eaec81510

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c6adqW_	 Alignment		100.0	55	PDB header: electron transport Chain: W: PDB Molecule: lpqe protein; PDBTitle: respiratory complex ciii2civ2sod2 from mycobacterium smegmatis
2	d1x9la_	 Alignment		99.9	17	Fold: Common fold of diphtheria toxin/transcription factors/cytochrome f Superfamily: DR1885-like metal-binding protein Family: DR1885-like metal-binding protein
3	c2k6zA_	 Alignment		99.9	14	PDB header: metal transport Chain: A: PDB Molecule: putative uncharacterized protein ttha1943; PDBTitle: solution structures of copper loaded form pcua (trans2 conformation of the peptide bond involving the nitrogen of3 p14)
4	c3zk0A_	 Alignment		99.9	14	PDB header: chaperone Chain: A: PDB Molecule: sco3965; PDBTitle: the crystal structure of a cu(i) metallochaperone from2 streptomyces lividans in its apo form
5	d1libya_	 Alignment		63.9	26	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Nitrosocyanin
6	d1qnia1	 Alignment		63.8	24	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Nitrosocyanin
7	d1cuoa_	 Alignment		61.5	13	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
8	c4f2fA_	 Alignment		59.0	14	PDB header: metal binding protein Chain: A: PDB Molecule: cation-transporting atpase, e1-e2 family protein; PDBTitle: crystal structure of the metal binding domain (mbd) of the2 streptococcus pneumoniae d39 cu(i) exporting p-type atpase copa with3 cu(i)
9	c4f2eA_	 Alignment		57.0	21	PDB header: metal transport Chain: A: PDB Molecule: cupa; PDBTitle: crystal structure of the streptococcus pneumoniae d39 copper chaperone2 cupa with cu(i)
10	d2cuab_	 Alignment		56.4	15	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Periplasmic domain of cytochrome c oxidase subunit II
11	c5of1A_	 Alignment		52.9	22	PDB header: protein fibril Chain: A: PDB Molecule: spore coat-associated protein n; PDBTitle: the structural versatility of tasa in b. subtilis biofilm formation

12	c2aanA	Alignment		51.6	21	PDB header: electron transport Chain: A: PDB Molecule: auracyanin a; PDBTitle: auracyanin a: a "blue" copper protein from the green thermophilic2 photosynthetic bacterium, chloroflexus aurantiacus
13	d1jzga	Alignment		50.8	13	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
14	d1fwxa1	Alignment		49.2	19	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Nitrosocyanin
15	d1o75a2	Alignment		41.6	22	Fold: Immunoglobulin-like beta-sandwich Superfamily: Tp47 lipoprotein, middle and C-terminal domains Family: Tp47 lipoprotein, middle and C-terminal domains
16	d1cc3a	Alignment		38.1	29	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
17	c4hcgA	Alignment		35.7	23	PDB header: oxidoreductase Chain: A: PDB Molecule: cupredoxin 1; PDBTitle: uncharacterized cupredoxin-like domain protein cupredoxin_1 with zinc2 bound from bacillus anthracis
18	c1xmeB	Alignment		33.4	15	PDB header: oxidoreductase Chain: B: PDB Molecule: cytochrome c oxidase polypeptide ii; PDBTitle: structure of recombinant cytochrome ba3 oxidase from thermus2 thermophilus
19	c2gw4D	Alignment		33.3	17	PDB header: luminescent protein Chain: D: PDB Molecule: kaede; PDBTitle: crystal structure of stony coral fluorescent protein kaede, red form
20	d2cuaa	Alignment		29.5	17	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Periplasmic domain of cytochrome c oxidase subunit II
21	c3rwaE	Alignment	not modelled	28.4	17	PDB header: fluorescent protein Chain: E: PDB Molecule: fluorescent protein fp480; PDBTitle: crystal structure of circular-permuted mkate
22	d2ccwa1	Alignment	not modelled	27.1	25	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
23	c4ohsB	Alignment	not modelled	25.4	23	PDB header: fluorescent protein Chain: B: PDB Molecule: far-red fluorescent protein aq143; PDBTitle: the structure of a far-red fluorescent protein, aq143
24	c3evpA	Alignment	not modelled	25.2	13	PDB header: signaling protein Chain: A: PDB Molecule: green fluorescent protein, green fluorescent protein; PDBTitle: crystal structure of circular-permuted egfp
25	d1xqma	Alignment	not modelled	25.0	20	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
26	c2zmwC	Alignment	not modelled	23.8	30	PDB header: luminescent protein Chain: C: PDB Molecule: fluorescent protein; PDBTitle: crystal structure of monomeric kusabira-orange (mko), orange-emitting2 gfp-like protein, at ph 6.0
27	d1wu2a1	Alignment	not modelled	23.6	14	Fold: beta-clip Superfamily: MoeA C-terminal domain-like Family: MoeA C-terminal domain-like
28	d2rh7a1	Alignment	not modelled	23.3	23	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
29	d1v54b1	Alignment	not modelled	23.1	15	Fold: Cupredoxin-like Superfamily: Cupredoxins

						Family: Periplasmic domain of cytochrome c oxidase subunit II
30	c2g3dB	Alignment	not modelled	22.9	13	PDB header: luminescent protein Chain: B: PDB Molecule: green fluorescent protein; PDBTitle: structure of s65g y66a gfp variant after spontaneous2 peptide hydrolysis
31	c1yzwB	Alignment	not modelled	21.9	20	PDB header: luminescent protein Chain: B: PDB Molecule: gfp-like non-fluorescent chromoprotein; PDBTitle: the 2.1a crystal structure of the far-red fluorescent2 protein hcred: inherent conformational flexibility of the3 chromophore
32	d3dtub1	Alignment	not modelled	21.3	15	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Periplasmic domain of cytochrome c oxidase subunit II
33	c3gb3B	Alignment	not modelled	21.3	20	PDB header: fluorescent protein Chain: B: PDB Molecule: killerred; PDBTitle: x-ray structure of genetically encoded photosensitizer killerred in2 native form
34	c2c9jG	Alignment	not modelled	21.2	17	PDB header: luminescent protein Chain: G: PDB Molecule: green fluorescent protein fp512; PDBTitle: structure of the fluorescent protein cmfp512 at 1.35a from2 cerianthus membranaceus
35	d1joia	Alignment	not modelled	20.7	25	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
36	d1uisa	Alignment	not modelled	19.9	23	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
37	d1jv2a2	Alignment	not modelled	19.8	19	Fold: Immunoglobulin-like beta-sandwich Superfamily: Integrin domains Family: Integrin domains
38	c3ay2A	Alignment	not modelled	19.8	25	PDB header: antitumor protein, antiviral protein Chain: A: PDB Molecule: lipid modified azurin protein; PDBTitle: crystal structure of neisserial azurin
39	d1nwpa	Alignment	not modelled	19.7	25	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
40	d1mywa	Alignment	not modelled	19.0	13	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
41	c3akoG	Alignment	not modelled	19.0	13	PDB header: fluorescent protein Chain: G: PDB Molecule: venus; PDBTitle: crystal structure of the reassembled venus
42	c2h47C	Alignment	not modelled	19.0	25	PDB header: oxidoreductase/electron transport Chain: C: PDB Molecule: azurin; PDBTitle: crystal structure of an electron transfer complex between2 aromatic amine dehydrogenase and azurin from alcaligenes3 faecalis (form 1)
43	d1ggxa	Alignment	not modelled	19.0	20	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
44	d1kp5a	Alignment	not modelled	18.8	13	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
45	c4uznA	Alignment	not modelled	18.8	17	PDB header: hydrolase Chain: A: PDB Molecule: endo-beta-1,4-glucanase (celulase b); PDBTitle: the native structure of the family 46 carbohydrate-binding2 module (cbm46) of endo-beta-1,4-glucanase b (cel5b) from3 bacillus halodurans
46	d1nkqa	Alignment	not modelled	18.6	13	Fold: FAH Superfamily: FAH Family: FAH
47	d3ehbb1	Alignment	not modelled	18.4	11	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Periplasmic domain of cytochrome c oxidase subunit II
48	c2otbB	Alignment	not modelled	18.2	27	PDB header: fluorescent protein Chain: B: PDB Molecule: gfp-like fluorescent chromoprotein cfp484; PDBTitle: crystal structure of a monomeric cyan fluorescent protein in the2 fluorescent state
49	d1qhqa	Alignment	not modelled	18.1	21	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
50	c2ddcA	Alignment	not modelled	17.8	13	PDB header: luminescent protein Chain: A: PDB Molecule: photoconvertible fluorescent protein; PDBTitle: unique behavior of a histidine responsible for an engineered green-to-2 red photoconversion process
51	c2m9lA	Alignment	not modelled	17.8	67	PDB header: toxin Chain: A: PDB Molecule: beta-theraphotoxin-tp1a; PDBTitle: solution structure of protoxin-1
52	c3nezA	Alignment	not modelled	17.6	23	PDB header: fluorescent protein Chain: A: PDB Molecule: mrojao; PDBTitle: mrojao
53	c2zo7A	Alignment	not modelled	17.5	23	PDB header: luminescent protein Chain: A: PDB Molecule: cyan/green-emitting gfp-like protein, kusabira-cyan mutant PDBTitle: crystal structure of a kusabira-cyan mutant (kcy-r1), a cyan/green-2 emitting gfp-like protein
54	c4ndkA	Alignment	not modelled	17.5	13	PDB header: fluorescent protein, de novo protein Chain: A: PDB Molecule: e23p-yfp, gfp-like fluorescent chromoprotein fp506, PDBTitle: crystal structure of a computational designed engrailed homeodomain2 variant fused with yfp
						Fold: beta-clip

55	d1xi8a1	Alignment	not modelled	17.4	10	Superfamily: MoeA C-terminal domain-like Family: MoeA C-terminal domain-like
56	d1h6ra	Alignment	not modelled	17.4	13	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
57	c3ai4A	Alignment	not modelled	17.3	13	PDB header: fluorescent protein, replication Chain: A: PDB Molecule: yeast enhanced green fluorescent protein,dna polymerase PDBTitle: crystal structure of yeast enhanced green fluorescent protein - mouse2 polymerase iota ubiquitin binding motif fusion protein
58	c3cglE	Alignment	not modelled	17.2	27	PDB header: fluorescent protein Chain: E: PDB Molecule: gfp-like fluorescent chromoprotein dsfp483; PDBTitle: crystal structure and raman studies of dsfp483, a cyan fluorescent2 protein from discosoma striata
59	d1azca	Alignment	not modelled	17.1	29	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
60	c3vhtB	Alignment	not modelled	17.0	13	PDB header: fluorescent protein/protein binding Chain: B: PDB Molecule: green fluorescent protein,atpase wrnip1; PDBTitle: crystal structure of gfp-wrnip1 ubz domain fusion protein in complex2 with ubiquitin
61	d1oxda	Alignment	not modelled	16.9	13	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
62	c4bduC	Alignment	not modelled	16.6	13	PDB header: apoptosis Chain: C: PDB Molecule: green fluorescent protein, apoptosis regulator bax; PDBTitle: bax bh3-in-groove dimer (gfp)
63	d1ehxa	Alignment	not modelled	16.4	17	Fold: Immunoglobulin-like beta-sandwich Superfamily: E set domains Family: Cellulosomal scaffoldin protein CipC, module x2.1
64	c5y00A	Alignment	not modelled	16.3	17	PDB header: fluorescent protein Chain: A: PDB Molecule: green fluorescent protein; PDBTitle: acid-tolerant monomeric gfp, gamillus, fluorescence (on) state
65	c2zo6A	Alignment	not modelled	16.2	23	PDB header: luminescent protein Chain: A: PDB Molecule: cyan-emitting gfp-like protein, kusabira-cyan (kcy); PDBTitle: crystal structure of kusabira-cyan (kcy), a cyan-emitting gfp-like2 protein
66	c3u0kA	Alignment	not modelled	16.1	23	PDB header: fluorescent protein Chain: A: PDB Molecule: rcamp; PDBTitle: crystal structure of the genetically encoded calcium indicator rcamp
67	c3nezB	Alignment	not modelled	15.8	23	PDB header: fluorescent protein Chain: B: PDB Molecule: mrojoa; PDBTitle: mrojoa
68	c4xbiA	Alignment	not modelled	15.7	13	PDB header: chaperone Chain: A: PDB Molecule: clpb protein, putative,green fluorescent protein; PDBTitle: structure of a malarial protein involved in proteostasis
69	c4pfeB	Alignment	not modelled	15.7	13	PDB header: fluorescent protein Chain: B: PDB Molecule: green fluorescent protein; PDBTitle: crystal structure of vsfgfp-0
70	c3ai5A	Alignment	not modelled	15.6	13	PDB header: fluorescent protein, transcription Chain: A: PDB Molecule: yeast enhanced green fluorescent protein,ubiquitin; PDBTitle: crystal structure of yeast enhanced green fluorescent protein-2 ubiquitin fusion protein
71	c2ib5H	Alignment	not modelled	15.4	13	PDB header: luminescent protein Chain: H: PDB Molecule: chromo protein; PDBTitle: structural characterization of a blue chromoprotein and its yellow2 mutant from the sea anemone cnidopus japonicus
72	c6efrA	Alignment	not modelled	14.7	13	PDB header: choline-binding protein Chain: A: PDB Molecule: inicsnfr 1.0, a genetically encoded nicotinic biosensor, PDBTitle: crystal structure of inicsnfr 1.0
73	c4he4A	Alignment	not modelled	14.6	17	PDB header: fluorescent protein Chain: A: PDB Molecule: yellow fluorescent protein; PDBTitle: crystal structure of the yellow fluorescent protein phiyfp (phalidium2 sp.)
74	c2zouB	Alignment	not modelled	14.4	12	PDB header: cell adhesion Chain: B: PDB Molecule: spondin-1; PDBTitle: crystal structure of human f-spondin reeler domain (fragment 2)
75	c6f8sD	Alignment	not modelled	14.3	17	PDB header: toxin Chain: D: PDB Molecule: putative killer protein; PDBTitle: toxin-antitoxin complex grata
76	c2jadA	Alignment	not modelled	14.0	13	PDB header: electron transport Chain: A: PDB Molecule: yellow fluorescent protein glutaredoxin fusion protein; PDBTitle: yellow fluorescent protein - glutaredoxin fusion protein
77	c2bzvA	Alignment	not modelled	13.9	11	PDB header: viral protein Chain: A: PDB Molecule: fiber protein 2; PDBTitle: human enteric adenovirus serotype 41 short fiber head (ph8)
78	c4txvB	Alignment	not modelled	13.6	19	PDB header: protein binding Chain: B: PDB Molecule: cytochrome c oxidase subunit 2; PDBTitle: crystal structure of the mixed disulfide intermediate between2 thioredoxin-like tpas(c110s) and subunit ii of cytochrome c oxidase3 coxcpd (c233s)
79	d1uz5a1	Alignment	not modelled	13.2	13	Fold: beta-clip Superfamily: MoeA C-terminal domain-like Family: MoeA C-terminal domain-like
						PDB header: cell adhesion

80	c3cooB_	Alignment	not modelled	13.1	12	Chain: B; PDB Molecule: spondin-1; PDBTitle: the crystal structure of reelin-n domain of f-spondin
81	d1g0da1	Alignment	not modelled	13.0	12	Fold: Immunoglobulin-like beta-sandwich Superfamily: E set domains Family: Transglutaminase N-terminal domain
82	c2icrD_	Alignment	not modelled	12.0	19	PDB header: fluorescent protein Chain: D; PDB Molecule: red fluorescent protein zoanrfp; PDBTitle: red fluorescent protein zrfp574 from zoanthus sp.
83	c3evrA_	Alignment	not modelled	11.9	13	PDB header: signaling protein Chain: A; PDB Molecule: myosin light chain kinase, green fluorescent protein, PDBTitle: crystal structure of calcium bound monomeric gcamp2
84	c5e6wA_	Alignment	not modelled	11.4	19	PDB header: cell adhesion Chain: A; PDB Molecule: integrin beta-2; PDBTitle: re-refinement of the crystal structure of the plexin-semaphorin-2 integrin domain/hybrid domain/i-egf1 segment from the human integrin3 b2 subunit
85	c1o75A_	Alignment	not modelled	11.4	22	PDB header: lipoproteinIntNtgen Chain: A; PDB Molecule: 47 kda membrane antigen; PDBTitle: tp47, the 47-kilodalton lipoprotein of treponema pallidum
86	c2p28A_	Alignment	not modelled	11.4	25	PDB header: cell adhesion Chain: A; PDB Molecule: integrin beta-2; PDBTitle: structure of the phe2 and phe3 fragments of the integrin beta2 subunit
87	c3woaA_	Alignment	not modelled	11.1	11	PDB header: dna binding protein, sugar binding prote Chain: A; PDB Molecule: repressor protein ci, maltose-binding periplasmic protein; PDBTitle: crystal structure of lambda repressor (1-45) fused with maltose-2 binding protein
88	c5fguA_	Alignment	not modelled	11.0	13	PDB header: metal binding, dna binding protein Chain: A; PDB Molecule: green fluorescent protein,extracellular streptodornase d; PDBTitle: structure of sda1 nuclease apoprotein as an egfp fixed-arm fusion
89	c5j3nA_	Alignment	not modelled	10.9	13	PDB header: hydrolase Chain: A; PDB Molecule: green fluorescent protein,hsdr; PDBTitle: c-terminal domain of ecor124i hsdR subunit fused with the ph-sensitive2 gfp variant ratiometric phluorin
90	d1fftb1	Alignment	not modelled	10.5	7	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Periplasmic domain of cytochrome c oxidase subunit II
91	c6a8zB_	Alignment	not modelled	10.3	23	PDB header: hydrolase Chain: B; PDB Molecule: zinc metalloprotease, putative; PDBTitle: crystal structure of m1 zinc metallopeptidase from deinococcus2 radiodurans
92	c4xl8B_	Alignment	not modelled	10.1	11	PDB header: viral protein Chain: B; PDB Molecule: fiber-1; PDBTitle: crystal structure of human adenovirus 52 short fiber knob in complex2 with 2-o-methyl-5-n-acetylneuraminic acid
93	c4jrbA_	Alignment	not modelled	10.1	13	PDB header: lipid binding protein Chain: A; PDB Molecule: green fluorescent protein; PDBTitle: structure of cockroach allergen bla g 1 tandem repeat as a egfp fusion
94	c2z6zA_	Alignment	not modelled	10.0	15	PDB header: fluorescent protein Chain: A; PDB Molecule: fluorescent protein dronpa; PDBTitle: crystal structure of a photoswitchable gfp-like protein2 dronpa in the bright-state
95	d1rkra_	Alignment	not modelled	10.0	29	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Plastocyanin/azurin-like
96	c6m9yD_	Alignment	not modelled	9.9	13	PDB header: fluorescent protein Chain: D; PDB Molecule: fluorescent protein lanfp6a; PDBTitle: x-ray structure of branchiostoma floridae fluorescent protein lanfp6a
97	c2c9iG_	Alignment	not modelled	9.9	19	PDB header: luminescent protein Chain: G; PDB Molecule: green fluorescent protein asfp499; PDBTitle: structure of the fluorescent protein asfp499 from anemonia2 sulcata
98	d1moua_	Alignment	not modelled	9.6	23	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
99	c6dgvA_	Alignment	not modelled	9.3	13	PDB header: fluorescent protein Chain: A; PDB Molecule: fluorescent gaba sensor precursor; PDBTitle: igabasnfr fluorescent gaba sensor precursor