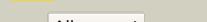
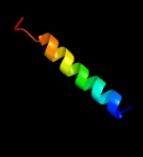
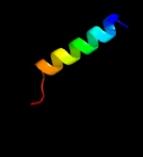
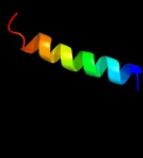
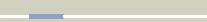


Phyre²

Email	mdejesus@rockefeller.edu
Description	RVBD2144c_(-)_2404173_2404529
Date	Mon Aug 5 13:25:26 BST 2019
Unique Job ID	90bc2885310e3d49

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c6c6IO	 Alignment		88.8	47	PDB header: membrane protein Chain: O: PDB Molecule: v-type proton atpase subunit f; PDBTitle: yeast vacuolar atpase vo in lipid nanodisc
2	c5kk2E	 Alignment		73.1	21	PDB header: membrane protein, transport protein, sig Chain: E: PDB Molecule: voltage-dependent calcium channel gamma-2 subunit; PDBTitle: architecture of fully occupied glua2 ampa receptor - tarp complex2 elucidated by single particle cryo-electron microscopy
3	c3arct	 Alignment		62.2	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of oxygen-evolving photosystem ii at 1.9 angstrom2 resolution
4	c6qkcl	 Alignment		59.4	13	PDB header: membrane protein Chain: J: PDB Molecule: voltage-dependent calcium channel gamma-8 subunit; PDBTitle: glua1/2 in complex with auxiliary subunit gamma-8
5	c3a0bT	 Alignment		46.7	15	PDB header: electron transport Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of br-substituted photosystem ii complex
6	c5vhxE	 Alignment		40.6	33	PDB header: transport protein Chain: E: PDB Molecule: glutamate receptor 2, germ cell-specific gene 1-like PDBTitle: glua2-1xgsg1l bound to zk
7	c6akfC	 Alignment		38.2	23	PDB header: membrane protein/toxin Chain: C: PDB Molecule: claudin-3; PDBTitle: crystal structure of mouse claudin-3 p134a mutant in complex with c-2 terminal fragment of clostridium perfringens enterotoxin
8	c3x29A	 Alignment		35.5	18	PDB header: cell adhesion Chain: A: PDB Molecule: claudin-19; PDBTitle: crystal structure of mouse claudin-19 in complex with c-terminal2 fragment of clostridium perfringens enterotoxin
9	c4p79A	 Alignment		34.7	23	PDB header: cell adhesion Chain: A: PDB Molecule: claudin-15; PDBTitle: crystal structure of mouse claudin-15
10	c1ijjA	 Alignment		34.2	46	PDB header: signaling protein Chain: A: PDB Molecule: erbb-2 receptor protein-tysine kinase; PDBTitle: solution structure of the neu/erbb-2 membrane spanning2 segment
11	c2l5bA	 Alignment		27.8	29	PDB header: apoptosis Chain: A: PDB Molecule: activator of apoptosis harakiri; PDBTitle: solution structure of the transmembrane domain of bcl-2 member2 harakiri in micelles

12	c2kncA			27.1	25	PDB header: cell adhesion Chain: A: PDB Molecule: integrin alpha-iib; PDBTitle: platelet integrin alfa1b-beta3 transmembrane-cytoplasmic2 heterocomplex
13	c2ktmA			26.3	42	PDB header: antibiotic Chain: A: PDB Molecule: lchb; PDBTitle: spatial structure of lch-beta peptide from two-component lantibiotic2 lichenicidin vk21
14	c3mk7F			22.1	10	PDB header: oxidoreductase Chain: F: PDB Molecule: cytochrome c oxidase, cbb3-type, subunit p; PDBTitle: the structure of cbb3 cytochrome oxidase
15	c5z62N			16.3	31	PDB header: electron transport Chain: N: PDB Molecule: cytochrome c oxidase subunit ndufa4; PDBTitle: structure of human cytochrome c oxidase
16	c6bd4A			14.5	17	PDB header: membrane protein Chain: A: PDB Molecule: frizzled-4/rubredoxin chimeric protein; PDBTitle: crystal structure of human apo-frizzled4 receptor
17	c2l8sA			14.0	31	PDB header: cell adhesion Chain: A: PDB Molecule: integrin alpha-1; PDBTitle: solution nmr structure of transmembrane and cytosolic regions of2 integrin alpha1 in detergent micelles
18	c1r7gA			13.8	30	PDB header: membrane protein Chain: A: PDB Molecule: genome polyprotein; PDBTitle: nmr structure of the membrane anchor domain (1-31) of the2 nonstructural protein 5a (ns5a) of hepatitis c virus3 (minimized average structure, sample in 100mm dpc)
19	c1r7cA			13.8	30	PDB header: membrane protein Chain: A: PDB Molecule: genome polyprotein; PDBTitle: nmr structure of the membrane anchor domain (1-31) of the2 nonstructural protein 5a (ns5a) of hepatitis c virus3 (minimized average structure, sample in 50% tfe)
20	c4hg6A			13.3	28	PDB header: transferase Chain: A: PDB Molecule: cellulose synthase subunit a; PDBTitle: structure of a cellulose synthase - cellulose translocation2 intermediate
21	c5aeza		not modelled	13.1	17	PDB header: membrane protein Chain: A: PDB Molecule: mep2; PDBTitle: crystal structure of candida albicans mep2
22	c4blpD		not modelled	12.5	46	PDB header: hydrolase Chain: D: PDB Molecule: packaging enzyme p4; PDBTitle: p4 protein from bacteriophage phi13
23	c2m67A		not modelled	12.4	26	PDB header: transport protein Chain: A: PDB Molecule: merf; PDBTitle: full-length mercury transporter protein merf in lipid bilayer2 membranes
24	c4bloC		not modelled	12.4	38	PDB header: hydrolase Chain: C: PDB Molecule: packaging enzyme p4; PDBTitle: p4 protein from bacteriophage phi6 in complex with adp
25	c6f46A		not modelled	11.6	50	PDB header: apoptosis Chain: A: PDB Molecule: bcl-2-like protein 1; PDBTitle: structure of the transmembrane helix of bclxl in phospholipid2 nanodiscs
26	c2jpxA		not modelled	10.8	32	PDB header: viral protein Chain: A: PDB Molecule: vpu protein; PDBTitle: a18 vpu tm structure in lipid bilayers
27	c5mx2T		not modelled	10.7	15	PDB header: oxidoreductase Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: photosystem ii depleted of the mn4ca05 cluster at 2.55 a resolution
28	d1pw4a		not modelled	10.3	21	Fold: MFS general substrate transporter Superfamily: MFS general substrate transporter Family: Glycerol-3-phosphate transporter
						PDB header: electron transport, photosynthesis

29	c5b66T	Alignment	not modelled	9.6	15	Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure analysis of photosystem ii complex
30	c5b5et	Alignment	not modelled	9.4	15	PDB header: electron transport, photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure analysis of photosystem ii complex
31	c4il6T	Alignment	not modelled	9.4	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: structure of sr-substituted photosystem ii
32	c4pj0t	Alignment	not modelled	9.3	15	PDB header: oxidoreductase, electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: structure of t.elongatus photosystem ii, rows of dimers crystal2 packing
33	c4pj0T	Alignment	not modelled	9.3	15	PDB header: oxidoreductase, electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: structure of t.elongatus photosystem ii, rows of dimers crystal2 packing
34	c5mx2t	Alignment	not modelled	9.3	15	PDB header: oxidoreductase Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: photosystem ii depleted of the mn4ca05 cluster at 2.55 a resolution
35	c1q90M	Alignment	not modelled	9.3	33	PDB header: photosynthesis Chain: M; PDB Molecule: cytochrome b6f complex subunit petm; PDBTitle: structure of the cytochrome b6f (plastoquinone : plastocyanin2 oxidoreductase) from chlamydomonas reinhardtii
36	d1q90m	Alignment	not modelled	9.3	33	Fold: Single transmembrane helix Superfamily: PetM subunit of the cytochrome b6f complex Family: PetM subunit of the cytochrome b6f complex
37	c5ws6T	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (preflash two-flash dataset)
38	c5ws6t	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (preflash two-flash dataset)
39	c5h2ft	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of the psbm-deletion mutant of photosystem ii
40	c5v2ct	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: re-refinement of crystal structure of photosystem ii complex
41	c5gtiT	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (two flash dataset)
42	c3wu2T	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure analysis of photosystem ii complex
43	c5ws5T	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (preflash dark dataset)
44	c5gtht	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (dark dataset)
45	c5gtit	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (two flash dataset)
46	c5kait	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: nh3-bound rt xfel structure of photosystem ii 500 ms after the 2nd2 illumination (2f) at 2.8 a resolution
47	c5v2cT	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: re-refinement of crystal structure of photosystem ii complex
48	c5kaft	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii in the dark state at 3.0 a2 resolution
49	c3wu2t	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure analysis of photosystem ii complex
50	c5ws5t	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (preflash dark dataset)
51	c5h2ft	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of the psbm-deletion mutant of photosystem ii
52	c5gthT	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native xfel structure of photosystem ii (dark dataset)
53	c5kaft	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii in the dark state at 3.0 a2 resolution
54	c5kaiT	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: nh3-bound rt xfel structure of photosystem ii 500 ms after the 2nd2 illumination (2f) at 2.8 a resolution
55	c5tisT	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: room temperature xfel structure of the native, doubly-

						illuminated2 photosystem ii complex
56	c4il6t	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: structure of sr-substituted photosystem ii
57	c4ub6T	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native structure of photosystem ii (dataset-1) by a femtosecond x-ray2 laser
58	c5b66t	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure analysis of photosystem ii complex
59	c5b5eT	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure analysis of photosystem ii complex
60	c5zznt	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of photosystem ii from an sqdg-deficient mutant of 2 thermosynechococcus elongatus
61	c5tist	Alignment	not modelled	9.3	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: room temperature xfel structure of the native, doubly-illuminated2 photosystem ii complex
62	c5znnT	Alignment	not modelled	9.3	15	PDB header: electron transport Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of photosystem ii from an sqdg-deficient mutant of 2 thermosynechococcus elongatus
63	c4ub8t	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native structure of photosystem ii (dataset-2) by a femtosecond x-ray2 laser
64	c4ub8T	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native structure of photosystem ii (dataset-2) by a femtosecond x-ray2 laser
65	c4ub6t	Alignment	not modelled	9.3	15	PDB header: electron transport, photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: native structure of photosystem ii (dataset-1) by a femtosecond x-ray2 laser
66	c3bz2T	Alignment	not modelled	9.2	15	PDB header: electron transport Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of cyanobacterial photosystem ii (part 2 of 2). this2 file contains second monomer of psii dimer
67	c4ixrt	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt fs x-ray diffraction of photosystem ii, first illuminated state
68	c4ixrT	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt fs x-ray diffraction of photosystem ii, first illuminated state
69	c3bz1T	Alignment	not modelled	9.2	15	PDB header: electron transport Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of cyanobacterial photosystem ii (part 1 of 2). this2 file contains first monomer of psii dimer
70	c4ixqt	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt fs x-ray diffraction of photosystem ii, dark state
71	c4fbyg	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: G: PDB Molecule: photosystem q(b) protein 1; PDBTitle: fs x-ray diffraction of photosystem ii
72	c4tnit	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii 500 ms after the third2 illumination at 4.6 a resolution
73	c4tnkT	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii 250 microsec after the third2 illumination at 5.2 a resolution
74	c4tnkt	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii 250 microsec after the third2 illumination at 5.2 a resolution
75	c4tnjT	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii 500 ms after the 2nd illumination2 (2f) at 4.5 a resolution
76	c3prqT	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of cyanobacterial photosystem ii in complex with2 terbutryn (part 1 of 2). this file contains first monomer of psii3 dimer
77	c4ixqT	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt fs x-ray diffraction of photosystem ii, dark state
78	c4tniT	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii 500 ms after the third2 illumination at 4.6 a resolution
79	c4tnjt	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii 500 ms after the 2nd illumination2 (2f) at 4.5 a resolution
80	c3prrT	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of cyanobacterial photosystem ii in complex with2 terbutryn (part 2 of 2). this file contains second monomer of psii3 dimer
81	c4tnpt	Alignment	not modelled	9.2	15	PDB header: electron transport,photosynthesis Chain: T: PDB Molecule: photosystem ii reaction center protein t;

81	c4uhmT	Alignment	not modelled	9.2	15	PDBTitle: rt xfel structure of photosystem ii in the dark state at 4.9 a2 resolution PDB header: electron transport,photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: rt xfel structure of photosystem ii in the dark state at 4.9 a2 resolution
82	c4tnhT	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: fs x-ray diffraction of photosystem ii
83	c4fbbyT	Alignment	not modelled	9.2	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: architecture of the photosynthetic oxygen evolving center
84	c1s5lt	Alignment	not modelled	9.1	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii psbt protein; PDBTitle: architecture of the photosynthetic oxygen evolving center
85	c1s5lT	Alignment	not modelled	9.1	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii psbt protein; PDBTitle: architecture of the photosynthetic oxygen evolving center
86	c5e79T	Alignment	not modelled	9.0	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: macromolecular diffractive imaging using imperfect crystals
87	c3a0hT	Alignment	not modelled	9.0	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of i-substituted photosystem ii complex
88	c3a0ht	Alignment	not modelled	9.0	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of i-substituted photosystem ii complex
89	c5e79t	Alignment	not modelled	9.0	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: macromolecular diffractive imaging using imperfect crystals
90	d2axtt1	Alignment	not modelled	9.0	15	Fold: Single transmembrane helix Superfamily: Photosystem II reaction center protein T, PsbT Family: PsbT-like
91	c2axtT	Alignment	not modelled	9.0	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center t protein; PDBTitle: crystal structure of photosystem ii from thermosynechococcus elongatus
92	c5e7ct	Alignment	not modelled	9.0	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: macromolecular diffractive imaging using imperfect crystals - bragg2 data
93	c5e7ct	Alignment	not modelled	9.0	15	PDB header: photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: macromolecular diffractive imaging using imperfect crystals - bragg2 data
94	c2axtt	Alignment	not modelled	9.0	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center t protein; PDBTitle: crystal structure of photosystem ii from thermosynechococcus elongatus
95	c3kzIT	Alignment	not modelled	9.0	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of monomeric form of cyanobacterial photosystem ii
96	c3arcT	Alignment	not modelled	9.0	15	PDB header: electron transport, photosynthesis Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of oxygen-evolving photosystem ii at 1.9 angstrom2 resolution
97	c3a0bt	Alignment	not modelled	9.0	15	PDB header: electron transport Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: crystal structure of br-substituted photosystem ii complex
98	c4rvyT	Alignment	not modelled	9.0	15	PDB header: oxidoreductase Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: serial time resolved crystallography of photosystem ii using a2 femtosecond x-ray laser. the s state after two flashes (s3)
99	c4rvyt	Alignment	not modelled	9.0	15	PDB header: oxidoreductase Chain: T; PDB Molecule: photosystem ii reaction center protein t; PDBTitle: serial time resolved crystallography of photosystem ii using a2 femtosecond x-ray laser. the s state after two flashes (s3)