
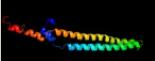

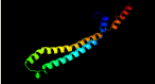



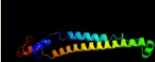

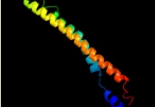



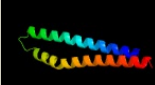



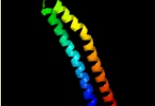



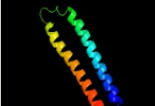


Phyre2

Email mdejesus@rockefeller.edu
 Description RVBD3135_(PPE50)_3501331_3501729
 Date Thu Aug 8 16:20:32 BST 2019
 Unique Job ID 0118182f01349829

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c5xfsB_	 Alignment		100.0	51	PDB header: protein transport Chain: B: PDB Molecule: ppe family protein ppe15; PDBTitle: crystal structure of pe8-ppe15 in complex with esp95 from m.2 tuberculosis
2	d2g38b1	 Alignment		100.0	32	Fold: Ferritin-like Superfamily: PE/PPE dimer-like Family: PPE
3	c2g38B_	 Alignment		100.0	32	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: ppe family protein; PDBTitle: a pe/ppe protein complex from mycobacterium tuberculosis
4	c4xy3A_	 Alignment		100.0	17	PDB header: protein transport Chain: A: PDB Molecule: esx-1 secretion-associated protein espb; PDBTitle: structure of esx-1 secreted protein espb
5	c4wj2A_	 Alignment		98.5	17	PDB header: unknown function Chain: A: PDB Molecule: antigen mtb48; PDBTitle: mycobacterial protein
6	c2vs0B_	 Alignment		97.8	13	PDB header: cell invasion Chain: B: PDB Molecule: virulence factor esxa; PDBTitle: structural analysis of homodimeric staphylococcal aureus2 virulence factor esxa
7	c3gvmA_	 Alignment		97.6	16	PDB header: viral protein Chain: A: PDB Molecule: putative uncharacterized protein sag1039; PDBTitle: structure of the homodimeric wxg-100 family protein from streptococcus2 agalactiae
8	c4iogD_	 Alignment		97.5	17	PDB header: unknown function Chain: D: PDB Molecule: secreted protein esxb; PDBTitle: the crystal structure of a secreted protein esxb (wild-type, in p212 space group) from bacillus anthracis str. Sterne
9	c3zbhC_	 Alignment		97.4	15	PDB header: unknown function Chain: C: PDB Molecule: esxa; PDBTitle: geobacillus thermodenitrificans esxa crystal form i
10	d1wa8a1	 Alignment		96.7	18	Fold: Ferritin-like Superfamily: EsxAB dimer-like Family: ESAT-6 like
11	c4lwsB_	 Alignment		95.2	12	PDB header: unknown function Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: esxa : esxb (semet) hetero-dimer from thermomonospora curvata

12	c4lwsA_	Alignment		95.0	18	PDB header: unknown function Chain: A; PDB Molecule: uncharacterized protein; PDBTitle: esxa : esxb (semet) hetero-dimer from thermomonospora curvata
13	d1wa8b1	Alignment		94.5	13	Fold: Ferritin-like Superfamily: EsxAB dimer-like Family: ESAT-6 like
14	c4i0xA_	Alignment		91.7	16	PDB header: structural genomics, unknown function Chain: A; PDB Molecule: esat-6-like protein mab_3112; PDBTitle: crystal structure of the mycobacterium abscessus esxef (mab_3112-2 mab_3113) complex
15	c2kg7B_	Alignment		86.5	19	PDB header: unknown function Chain: B; PDB Molecule: esat-6-like protein eshx; PDBTitle: structure and features of the complex formed by the tuberculosis2 virulence factors rv0287 and rv0288
16	c4i0xJ_	Alignment		29.2	16	PDB header: structural genomics, unknown function Chain: J; PDB Molecule: esat-6-like protein mab_3113; PDBTitle: crystal structure of the mycobacterium abscessus esxef (mab_3112-2 mab_3113) complex
17	c1bkvA_	Alignment		22.3	50	PDB header: structural protein Chain: A; PDB Molecule: t3-785; PDBTitle: collagen
18	c1bkvB_	Alignment		20.9	50	PDB header: structural protein Chain: B; PDB Molecule: t3-785; PDBTitle: collagen
19	c1bkvC_	Alignment		20.9	50	PDB header: structural protein Chain: C; PDB Molecule: t3-785; PDBTitle: collagen
20	c5frgA_	Alignment		13.8	63	PDB header: protein binding Chain: A; PDB Molecule: formin-binding protein 1-like; PDBTitle: the nmr structure of the cdc42-interacting region of toca1
21	c2iu1A_	Alignment	not modelled	13.4	14	PDB header: transcription Chain: A; PDB Molecule: eukaryotic translation initiation factor 5; PDBTitle: crystal structure of eif5 c-terminal domain
22	c2y5tG_	Alignment	not modelled	11.7	67	PDB header: immune system Chain: G; PDB Molecule: c1; PDBTitle: crystal structure of the pathogenic autoantibody ciic1 in complex with2 the triple-helical c1 peptide
23	c2y5tE_	Alignment	not modelled	11.1	67	PDB header: immune system Chain: E; PDB Molecule: c1; PDBTitle: crystal structure of the pathogenic autoantibody ciic1 in complex with2 the triple-helical c1 peptide
24	c4gyxC_	Alignment	not modelled	9.9	45	PDB header: structural protein, blood clotting Chain: C; PDB Molecule: type iii collagen fragment in a host peptide stabilized by PDBTitle: the von willebrand factor a3 domain binding region of type iii2 collagen stabilized by the cysteine knot
25	c4gyxB_	Alignment	not modelled	9.8	56	PDB header: structural protein, blood clotting Chain: B; PDB Molecule: type iii collagen fragment in a host peptide stabilized by PDBTitle: the von willebrand factor a3 domain binding region of type iii2 collagen stabilized by the cysteine knot
26	c4gyxA_	Alignment	not modelled	9.8	56	PDB header: structural protein, blood clotting Chain: A; PDB Molecule: type iii collagen fragment in a host peptide stabilized by PDBTitle: the von willebrand factor a3 domain binding region of type iii2 collagen stabilized by the cysteine knot
27	c2y5tF_	Alignment	not modelled	9.6	67	PDB header: immune system Chain: F; PDB Molecule: c1; PDBTitle: crystal structure of the pathogenic autoantibody ciic1 in complex with2 the triple-helical c1 peptide
						PDB header: receptor/peptide

28	c2wuhD_	Alignment	not modelled	9.3	67	Chain: D; PDB Molecule: collagen peptide; PDBTitle: crystal structure of the ddr2 discoidin domain bound to a2 triple-helical collagen peptide
29	c2fulE_	Alignment	not modelled	8.9	28	PDB header: translation Chain: E; PDB Molecule: eukaryotic translation initiation factor 5; PDBTitle: crystal structure of the c-terminal domain of s. cerevisiae eif5
30	c4dmtC_	Alignment	not modelled	8.9	45	PDB header: structural protein Chain: C; PDB Molecule: collagen iii derived peptide; PDBTitle: crystal structure of a vwf binding collagen iii derived triple helical2 peptide
31	c4dmtB_	Alignment	not modelled	8.9	45	PDB header: structural protein Chain: B; PDB Molecule: collagen iii derived peptide; PDBTitle: crystal structure of a vwf binding collagen iii derived triple helical2 peptide
32	c4dmtA_	Alignment	not modelled	8.9	45	PDB header: structural protein Chain: A; PDB Molecule: collagen iii derived peptide; PDBTitle: crystal structure of a vwf binding collagen iii derived triple helical2 peptide
33	c2f6aj_	Alignment	not modelled	8.8	57	PDB header: cell adhesion/structural protein Chain: J; PDB Molecule: collagen; PDBTitle: collagen adhesin and collagen complex structure
34	c2wuhC_	Alignment	not modelled	8.8	67	PDB header: receptor/peptide Chain: C; PDB Molecule: collagen peptide; PDBTitle: crystal structure of the ddr2 discoidin domain bound to a2 triple-helical collagen peptide
35	c2wuhB_	Alignment	not modelled	8.8	67	PDB header: receptor/peptide Chain: B; PDB Molecule: collagen peptide; PDBTitle: crystal structure of the ddr2 discoidin domain bound to a2 triple-helical collagen peptide
36	c4auoE_	Alignment	not modelled	8.8	67	PDB header: hydrolase/peptide Chain: E; PDB Molecule: triple-helical collagen peptide; PDBTitle: crystal structure of mmp-1(e200a) in complex with a triple-2 helical collagen peptide
37	c4auoH_	Alignment	not modelled	8.8	67	PDB header: hydrolase/peptide Chain: H; PDB Molecule: triple-helical collagen peptide; PDBTitle: crystal structure of mmp-1(e200a) in complex with a triple-2 helical collagen peptide
38	c2f6al_	Alignment	not modelled	8.2	57	PDB header: cell adhesion/structural protein Chain: I; PDB Molecule: collagen; PDBTitle: collagen adhesin and collagen complex structure
39	c2f6aE_	Alignment	not modelled	8.2	57	PDB header: cell adhesion/structural protein Chain: E; PDB Molecule: collagen; PDBTitle: collagen adhesin and collagen complex structure
40	c2f6aF_	Alignment	not modelled	8.2	57	PDB header: cell adhesion/structural protein Chain: F; PDB Molecule: collagen; PDBTitle: collagen adhesin and collagen complex structure
41	c2f6aH_	Alignment	not modelled	8.2	57	PDB header: cell adhesion/structural protein Chain: H; PDB Molecule: collagen; PDBTitle: collagen adhesin and collagen complex structure
42	c2f6aG_	Alignment	not modelled	8.2	57	PDB header: cell adhesion/structural protein Chain: G; PDB Molecule: collagen; PDBTitle: collagen adhesin and collagen complex structure
43	c6a0aA_	Alignment	not modelled	8.2	50	PDB header: structural protein Chain: A; PDB Molecule: collagen type iii peptide; PDBTitle: structure of a triple-helix region of human collagen type iii
44	c3kziE_	Alignment	not modelled	8.1	44	PDB header: electron transport Chain: E; PDB Molecule: cytochrome b559 subunit alpha; PDBTitle: crystal structure of monomeric form of cyanobacterial photosystem ii
45	c2drxB_	Alignment	not modelled	8.0	67	PDB header: structural protein Chain: B; PDB Molecule: collagen like peptide; PDBTitle: structure analysis of (pog)4-(log)2-(pog)4
46	c2drxA_	Alignment	not modelled	7.9	67	PDB header: structural protein Chain: A; PDB Molecule: collagen like peptide; PDBTitle: structure analysis of (pog)4-(log)2-(pog)4
47	c2mqSD_	Alignment	not modelled	7.6	67	PDB header: hydrolase Chain: D; PDB Molecule: thp_t_chain; PDBTitle: transient collagen triple helix binding to a key metalloproteinase in2 invasion and development: spin labels to structure
48	c6a0cB_	Alignment	not modelled	7.6	50	PDB header: structural protein Chain: B; PDB Molecule: collagen type iii peptide; PDBTitle: structure of a triple-helix region of human collagen type iii
49	c2v53B_	Alignment	not modelled	7.5	67	PDB header: cell adhesion Chain: B; PDB Molecule: collagen alpha-1(iii) chain; PDBTitle: crystal structure of a sparc-collagen complex
50	c2v53C_	Alignment	not modelled	7.5	67	PDB header: cell adhesion Chain: C; PDB Molecule: collagen alpha-1(iii) chain; PDBTitle: crystal structure of a sparc-collagen complex
51	c2v53D_	Alignment	not modelled	7.5	67	PDB header: cell adhesion Chain: D; PDB Molecule: collagen alpha-1(iii) chain; PDBTitle: crystal structure of a sparc-collagen complex
52	c2drxC_	Alignment	not modelled	7.4	67	PDB header: structural protein Chain: C; PDB Molecule: collagen like peptide; PDBTitle: structure analysis of (pog)4-(log)2-(pog)4
53	c4auoF_	Alignment	not modelled	7.4	67	PDB header: hydrolase/peptide Chain: F; PDB Molecule: triple-helical collagen peptide; PDBTitle: crystal structure of mmp-1(e200a) in complex with a triple-2 helical collagen peptide
54	c4auoD_	Alignment	not modelled	7.4	67	PDB header: hydrolase/peptide Chain: D; PDB Molecule: triple-helical collagen peptide; PDBTitle: crystal structure of mmp-1(e200a) in complex with a triple-2 helical collagen peptide

55	c4auoG	Alignment	not modelled	7.4	67	PDB header: hydrolase/peptide Chain: G: PDB Molecule: triple-helical collagen peptide; PDBTitle: crystal structure of mmp-1(e200a) in complex with a triple-2 helical collagen peptide
56	c2drtB	Alignment	not modelled	7.4	67	PDB header: structural protein Chain: B: PDB Molecule: collagen like peptide; PDBTitle: structure analysis of (pog)4-log-(pog)5
57	c2drtA	Alignment	not modelled	7.4	67	PDB header: structural protein Chain: A: PDB Molecule: collagen like peptide; PDBTitle: structure analysis of (pog)4-log-(pog)5
58	c1qsuC	Alignment	not modelled	7.3	67	PDB header: structural protein Chain: C: PDB Molecule: protein ((pro-hyp-gly)4- glu-lys-gly(pro-hyp-gly)5); PDBTitle: crystal structure of the triple-helical collagen-like peptide, (pro-2 hyp-gly)4-glu-lys-gly(pro-hyp-gly)5
59	c2drtC	Alignment	not modelled	7.3	67	PDB header: structural protein Chain: C: PDB Molecule: collagen like peptide; PDBTitle: structure analysis of (pog)4-log-(pog)5
60	c6a0aB	Alignment	not modelled	7.2	67	PDB header: structural protein Chain: B: PDB Molecule: collagen type iii peptide; PDBTitle: structure of a triple-helix region of human collagen type iii
61	c6a0aC	Alignment	not modelled	7.2	67	PDB header: structural protein Chain: C: PDB Molecule: collagen type iii peptide; PDBTitle: structure of a triple-helix region of human collagen type iii
62	c3jcue	Alignment	not modelled	7.2	33	PDB header: membrane protein Chain: E: PDB Molecule: cytochrome b559 subunit alpha; PDBTitle: cryo-em structure of spinach psii-lhcii supercomplex at 3.2 angstrom2 resolution
63	c1cagC	Alignment	not modelled	7.2	67	PDB header: collagen Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: crystal and molecular structure of a collagen-like peptide2 at 1.9 angstrom resolution
64	c1cagA	Alignment	not modelled	7.2	67	PDB header: collagen Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: crystal and molecular structure of a collagen-like peptide2 at 1.9 angstrom resolution
65	c3ponB	Alignment	not modelled	7.0	36	PDB header: unknown function Chain: B: PDB Molecule: mbl collagen-like peptide; PDBTitle: crystal structure of mbl collagen-like peptide
66	c3pobC	Alignment	not modelled	7.0	36	PDB header: hydrolase Chain: C: PDB Molecule: mbl collagen-like peptide; PDBTitle: crystal structure of masp-1 cub2 domain in complex with the collagen-2 like domain of mbl
67	c3pobB	Alignment	not modelled	7.0	36	PDB header: hydrolase Chain: B: PDB Molecule: mbl collagen-like peptide; PDBTitle: crystal structure of masp-1 cub2 domain in complex with the collagen-2 like domain of mbl
68	c3ponA	Alignment	not modelled	7.0	36	PDB header: unknown function Chain: A: PDB Molecule: mbl collagen-like peptide; PDBTitle: crystal structure of mbl collagen-like peptide
69	c3pobD	Alignment	not modelled	7.0	36	PDB header: hydrolase Chain: D: PDB Molecule: mbl collagen-like peptide; PDBTitle: crystal structure of masp-1 cub2 domain in complex with the collagen-2 like domain of mbl
70	d2axte1	Alignment	not modelled	6.9	44	Fold: Single transmembrane helix Superfamily: Cytochrome b559 subunits Family: Cytochrome b559 subunits
71	c6a0cC	Alignment	not modelled	6.7	67	PDB header: structural protein Chain: C: PDB Molecule: collagen type iii peptide; PDBTitle: structure of a triple-helix region of human collagen type iii
72	c6a0cA	Alignment	not modelled	6.7	67	PDB header: structural protein Chain: A: PDB Molecule: collagen type iii peptide; PDBTitle: structure of a triple-helix region of human collagen type iii
73	c1cagB	Alignment	not modelled	6.7	67	PDB header: collagen Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal and molecular structure of a collagen-like peptide2 at 1.9 angstrom resolution
74	c1cgdB	Alignment	not modelled	6.7	67	PDB header: collagen Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: hydration structure of a collagen peptide
75	c1cgdC	Alignment	not modelled	6.7	67	PDB header: collagen Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: hydration structure of a collagen peptide
76	c1cgdA	Alignment	not modelled	6.7	67	PDB header: collagen Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: hydration structure of a collagen peptide
77	d1vifn1	Alignment	not modelled	6.6	40	Fold: Prealbumin-like Superfamily: Cna protein B-type domain Family: Cna protein B-type domain
78	c1qsuA	Alignment	not modelled	6.5	67	PDB header: structural protein Chain: A: PDB Molecule: protein ((pro-hyp-gly)4- glu-lys-gly(pro-hyp-gly)5); PDBTitle: crystal structure of the triple-helical collagen-like peptide, (pro-2 hyp-gly)4-glu-lys-gly(pro-hyp-gly)5
79	c1qsuB	Alignment	not modelled	6.5	67	PDB header: structural protein Chain: B: PDB Molecule: protein ((pro-hyp-gly)4- glu-lys-gly(pro-hyp-gly)5); PDBTitle: crystal structure of the triple-helical collagen-like peptide, (pro-2 hyp-gly)4-glu-lys-gly(pro-hyp-gly)5
80	c6hg7A	Alignment	not modelled	6.4	67	PDB header: structural protein Chain: A: PDB Molecule: collagen alpha-1(ii) chain; PDBTitle: crystal structure of a collagen ii fragment containing the binding2 site of pedf and comp, (pog)4-lkg hrg ftg lqg-pog(4)

81	c6hg7C_	Alignment	not modelled	6.4	67	PDB header: structural protein Chain: C: PDB Molecule: collagen alpha-1(ii) chain; PDBTitle: crystal structure of a collagen ii fragment containing the binding2 site of pedf and comp, (pog)4-lkg hrg ftg lqg-pog(4)
82	c6hg7B_	Alignment	not modelled	6.4	67	PDB header: structural protein Chain: B: PDB Molecule: collagen alpha-1(ii) chain; PDBTitle: crystal structure of a collagen ii fragment containing the binding2 site of pedf and comp, (pog)4-lkg hrg ftg lqg-pog(4)
83	c2mq5B_	Alignment	not modelled	6.4	67	PDB header: hydrolase Chain: B: PDB Molecule: thp_l_and_m_chain; PDBTitle: transient collagen triple helix binding to a key metalloproteinase in2 invasion and development: spin labels to structure
84	c2mq5C_	Alignment	not modelled	6.4	67	PDB header: hydrolase Chain: C: PDB Molecule: thp_l_and_m_chain; PDBTitle: transient collagen triple helix binding to a key metalloproteinase in2 invasion and development: spin labels to structure
85	c3b2cB_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
86	c1ei8F_	Alignment	not modelled	6.3	67	PDB header: contractile protein Chain: F: PDB Molecule: collagen-like peptide (pro-hyp-gly)4-pg-(pro-hyp- PDBTitle: structural consequences of a discontinuity in the repeating2 tripeptide sequence of a collagen-like triple-helical3 peptide
87	c3b2cC_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
88	c3b2cF_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
89	c3b2cI_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: I: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
90	c1ei8B_	Alignment	not modelled	6.3	67	PDB header: contractile protein Chain: B: PDB Molecule: collagen-like peptide (pro-hyp-gly)4-pg-(pro-hyp- PDBTitle: structural consequences of a discontinuity in the repeating2 tripeptide sequence of a collagen-like triple-helical3 peptide
91	c1ei8A_	Alignment	not modelled	6.3	67	PDB header: contractile protein Chain: A: PDB Molecule: collagen-like peptide (pro-hyp-gly)4-pg-(pro-hyp- PDBTitle: structural consequences of a discontinuity in the repeating2 tripeptide sequence of a collagen-like triple-helical3 peptide
92	c3b2cG_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: G: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
93	c1ei8E_	Alignment	not modelled	6.3	67	PDB header: contractile protein Chain: E: PDB Molecule: collagen-like peptide (pro-hyp-gly)4-pg-(pro-hyp- PDBTitle: structural consequences of a discontinuity in the repeating2 tripeptide sequence of a collagen-like triple-helical3 peptide
94	c1ei8D_	Alignment	not modelled	6.3	67	PDB header: contractile protein Chain: D: PDB Molecule: collagen-like peptide (pro-hyp-gly)4-pg-(pro-hyp- PDBTitle: structural consequences of a discontinuity in the repeating2 tripeptide sequence of a collagen-like triple-helical3 peptide
95	c3b2cE_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: E: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
96	c3b2cD_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
97	c3b2cA_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
98	c3b2cH_	Alignment	not modelled	6.3	67	PDB header: structural protein Chain: H: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of the collagen triple helix model [{pro-hyp(r)-2 gly}4-{hyp(s)-pro-gly}2-{pro-hyp(r)-gly}4]3
99	c2klwC_	Alignment	not modelled	6.3	67	PDB header: de novo protein Chain: C: PDB Molecule: (pog)10; PDBTitle: solution structure of an abc collagen heterotrimer reveals a2 single-register helix stabilized by electrostatic3 interactions