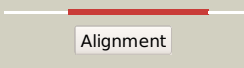

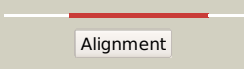

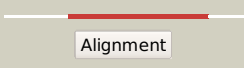

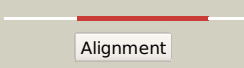

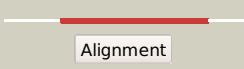

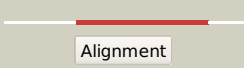

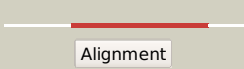

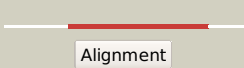

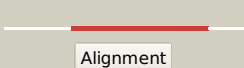

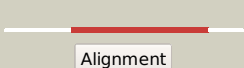

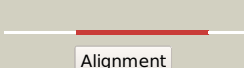












Phyre2

Email mdejesus@rockefeller.edu
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 Date Wed Jul 31 22:05:09 BST 2019
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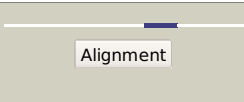
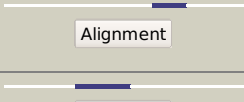
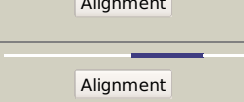
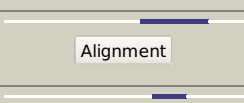
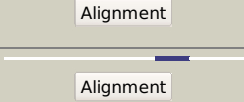
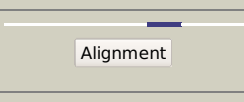
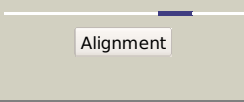
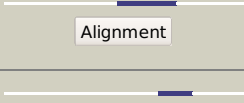
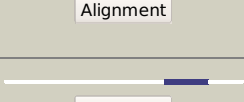
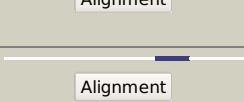
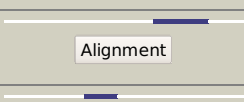
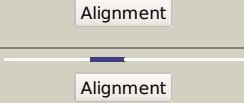
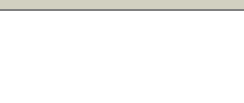



Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c5anzA_	 Alignment		100.0	26	PDB header: hydrolase Chain: A: PDB Molecule: soluble lytic transglycosylase b3; PDBTitle: crystal structure of sltb3 from pseudomonas aeruginosa.
2	d1qusa_	 Alignment		100.0	25	Fold: Lysozyme-like Superfamily: Lysozyme-like Family: Bacterial muramidase, catalytic domain
3	c4anrA_	 Alignment		100.0	21	PDB header: lyase Chain: A: PDB Molecule: soluble lytic transglycosylase b; PDBTitle: crystal structure of soluble lytic transglycosylase sltb12 from pseudomonas aeruginosa
4	c4oz9A_	 Alignment		99.6	24	PDB header: lyase Chain: A: PDB Molecule: membrane-bound lytic murein transglycosylase f; PDBTitle: crystal structure of mltf from pseudomonas aeruginosa complexed with2 isoleucine
5	c3w6dB_	 Alignment		99.6	24	PDB header: hydrolase Chain: B: PDB Molecule: lysozyme-like chitinolytic enzyme; PDBTitle: crystal structure of catalytic domain of chitinase from ralstonia sp.2 a-471 (e141q) in complex with tetrasaccharide
6	d1qsaa2	 Alignment		99.5	22	Fold: Lysozyme-like Superfamily: Lysozyme-like Family: Bacterial muramidase, catalytic domain
7	c4cfoB_	 Alignment		99.5	22	PDB header: hydrolase Chain: B: PDB Molecule: mltc; PDBTitle: structure of lytic transglycosylase mltc from escherichia2 coli in complex with tetrasaccharide at 2.9 a resolution.
8	c2y8pA_	 Alignment		99.5	20	PDB header: lyase Chain: A: PDB Molecule: endo-type membrane-bound lytic murein transglycosylase a; PDBTitle: crystal structure of an outer membrane-anchored endolytic 2 peptidoglycan lytic transglycosylase (mlte) from3 escherichia coli
9	d1qbsa_	 Alignment		99.5	30	Fold: Lysozyme-like Superfamily: Lysozyme-like Family: G-type lysozyme
10	c3gxkB_	 Alignment		99.4	24	PDB header: hydrolase Chain: B: PDB Molecule: goose-type lysozyme 1; PDBTitle: the crystal structure of g-type lysozyme from atlantic cod (gadus2 morhua l.) in complex with nag oligomers sheds new light on substrate3 binding and the catalytic mechanism. native structure to 1.9
11	c6fcqA_	 Alignment		99.4	20	PDB header: lyase Chain: A: PDB Molecule: soluble lytic murein transglycosylase; PDBTitle: the x-ray structure of lytic transglycosylase slt inactive mutant2 e503q from pseudomonas aeruginosa in complex with bulgecin a

12	c1slyA_	Alignment		99.3	19	PDB header: glycosyltransferase Chain: A; PDB Molecule: 70-kda soluble lytic transglycosylase; PDBTitle: complex of the 70-kda soluble lytic transglycosylase with2 bulgecin a
13	c3mgwA_	Alignment		99.3	25	PDB header: hydrolase Chain: A; PDB Molecule: lysozyme g; PDBTitle: thermodynamics and structure of a salmon cold-active goose-type2 lysozyme
14	c6cfcA_	Alignment		99.0	26	PDB header: hydrolase Chain: A; PDB Molecule: lytic transglycosylase; PDBTitle: crystal structure of soluble lytic transglycosylase cj0843 of2 campylobacter jejuni in complex with bulgecin a
15	c4xp8A_	Alignment		97.7	15	PDB header: hydrolase Chain: A; PDB Molecule: etga protein; PDBTitle: structure of etga d60n mutant
16	c4fdyA_	Alignment		97.7	14	PDB header: hydrolase Chain: A; PDB Molecule: similar to lipoprotein, nlp/p60 family; PDBTitle: crystal structure of a similar to lipoprotein, nlp/p60 family2 (sav0400) from staphylococcus aureus subsp. aureus mu50 at 2.23 a3 resolution
17	c4hpeA_	Alignment		97.5	13	PDB header: hydrolase Chain: A; PDB Molecule: putative cell wall hydrolase tn916-like,ctn1-orf17; PDBTitle: crystal structure of a putative cell wall hydrolase (cd630_03720) from2 clostridium difficile 630 at 2.38 a resolution
18	c3bkhA_	Alignment		94.9	26	PDB header: hydrolase Chain: A; PDB Molecule: lytic transglycosylase; PDBTitle: crystal structure of the bacteriophage phikz lytic2 transglycosylase, gp144
19	c4ow1A_	Alignment		93.7	23	PDB header: hydrolase Chain: A; PDB Molecule: resuscitation-promoting factor rpf; c; PDBTitle: crystal structure of resuscitation promoting factor c
20	c1xsfA_	Alignment		90.8	17	PDB header: cell cycle, hydrolase Chain: A; PDB Molecule: probable resuscitation-promoting factor rpf; b; PDBTitle: solution structure of a resuscitation promoting factor2 domain from mycobacterium tuberculosis
21	d1xsfA1	Alignment	not modelled	90.7	20	Fold: Lysozyme-like Superfamily: Lysozyme-like Family: RPF-like
22	c5e27B_	Alignment	not modelled	89.5	19	PDB header: cell adhesion Chain: B; PDB Molecule: resuscitation-promoting factor rpf; b; PDBTitle: the structure of resuscitation promoting factor b from m. tuberculosis2 reveals unexpected ubiquitin-like domains
23	c4qdnA_	Alignment	not modelled	86.4	15	PDB header: hydrolase Chain: A; PDB Molecule: flagellar protein flgj [peptidoglycan hydrolase]; PDBTitle: crystal structure of the endo-beta-n-acetylglucosaminidase from2 thermotoga maritima
24	c3eo5A_	Alignment	not modelled	86.1	18	PDB header: cell adhesion Chain: A; PDB Molecule: resuscitation-promoting factor rpf; b; PDBTitle: crystal structure of the resuscitation promoting factor rpf; b
25	c2zycA_	Alignment	not modelled	61.4	16	PDB header: hydrolase Chain: A; PDB Molecule: peptidoglycan hydrolase flgj; PDBTitle: crystal structure of peptidoglycan hydrolase from2 sphingomonas sp. a1
26	c3fi7A_	Alignment	not modelled	59.5	17	PDB header: hydrolase Chain: A; PDB Molecule: lmo1076 protein; PDBTitle: crystal structure of the autolysin auto (lmo1076) from listeria2 monocytogenes, catalytic domain
27	c1zy7A_	Alignment	not modelled	37.0	13	PDB header: hydrolase Chain: A; PDB Molecule: rna-specific adenosine deaminase b1, isoform PDBTitle: crystal structure of the catalytic domain of an adenosine2 deaminase that acts on rna (hadar2) bound to inositol3 hexakisphosphate (ihp)
						PDB header: dna binding protein

28	c2kngA_	Alignment	not modelled	30.0	25	Chain: A: PDB Molecule: protein lsr2; PDBTitle: solution structure of c-domain of lsr2
29	c5nm7A_	Alignment	not modelled	26.7	11	PDB header: hydrolase Chain: A: PDB Molecule: peptidoglycan-binding domain 1; PDBTitle: crystal structure of burkholderia ap3 phage endolysin
30	d1twla_	Alignment	not modelled	26.5	29	Fold: OB-fold Superfamily: Inorganic pyrophosphatase Family: Inorganic pyrophosphatase
31	c5dn4A_	Alignment	not modelled	26.0	19	PDB header: hydrolase Chain: A: PDB Molecule: peptidoglycan hydrolase flgj; PDBTitle: structure of the glycoside hydrolase domain from salmonella2 typhimurium flgj
32	c5odvB_	Alignment	not modelled	22.9	11	PDB header: virus Chain: B: PDB Molecule: coat protein; PDBTitle: structure of watermelon mosaic virus potyvirus.
33	c5wrtB_	Alignment	not modelled	22.0	19	PDB header: hydrolase Chain: B: PDB Molecule: soluble inorganic pyrophosphatase; PDBTitle: crystal structure of type i inorganic pyrophosphatase from toxoplasma2 gondii.
34	c3p0dD_	Alignment	not modelled	20.9	11	PDB header: hydrolase Chain: D: PDB Molecule: glycoside hydrolase family 9; PDBTitle: crystal structure of a multimodular ternary protein complex from2 clostridium thermocellum
35	c5m2oB_	Alignment	not modelled	19.5	31	PDB header: protein binding Chain: B: PDB Molecule: group i dockerin; PDBTitle: r. flavefaciens' third scab cohesin in complex with a group 1 dockerin
36	c5c5vB_	Alignment	not modelled	17.1	18	PDB header: hydrolase Chain: B: PDB Molecule: acidocalcisomal pyrophosphatase; PDBTitle: recombinant inorganic pyrophosphatase from t brucei brucei
37	c4mfkA_	Alignment	not modelled	15.9	19	PDB header: transferase Chain: A: PDB Molecule: putative uncharacterized protein tcp24; PDBTitle: the crystal structure of acyltransferase in complex with decanoyl-coa
38	c4uyqB_	Alignment	not modelled	15.2	7	PDB header: cell adhesion/protein binding Chain: B: PDB Molecule: cellulosomal scaffoldin adaptor protein b; PDBTitle: high resolution structure of the third cohesin scac in complex with2 the scab dockerin with a mutation in the c-terminal helix (in to si)3 from acetivibrio cellulolyticus displaying a type i interaction.
39	c2auwB_	Alignment	not modelled	14.2	27	PDB header: unknown function Chain: B: PDB Molecule: hypothetical protein ne0471; PDBTitle: crystal structure of putative dna binding protein ne0471 from2 nitrosomonas europaea atcc 19718
40	c5wruA_	Alignment	not modelled	14.1	14	PDB header: hydrolase Chain: A: PDB Molecule: probable inorganic pyrophosphatase; PDBTitle: crystal structure of type i inorganic pyrophosphatase from p2 falciparum
41	c2ediA_	Alignment	not modelled	12.7	14	PDB header: ligase Chain: A: PDB Molecule: nedd8-conjugating enzyme ube2f; PDBTitle: solution structure of the uq_con domain from human nedd8-2 conjugating enzyme nce2
42	c3d63B_	Alignment	not modelled	12.6	36	PDB header: hydrolase Chain: B: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of inorganic pyrophosphatase from burkholderia2 pseudomallei
43	c3jzaB_	Alignment	not modelled	12.5	71	PDB header: transport protein Chain: B: PDB Molecule: uncharacterized protein drra; PDBTitle: crystal structure of human rab1b in complex with the gef domain of2 drra/sidm from legionella pneumophila
44	c3t9aA_	Alignment	not modelled	12.4	22	PDB header: transferase Chain: A: PDB Molecule: inositol pyrophosphate kinase; PDBTitle: crystal structure of the catalytic domain of human diphosphoinositol2 pentakisphosphate kinase 2 (ppip5k2) in complex with amppnp at ph 7.0
45	c1ygzC_	Alignment	not modelled	12.2	36	PDB header: hydrolase Chain: C: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of inorganic pyrophosphatase from helicobacter2 pylori
46	c6c45A_	Alignment	not modelled	12.0	38	PDB header: hydrolase Chain: A: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of human inorganic pyrophosphatase in the p2121212 space group
47	c3jynM_	Alignment	not modelled	12.0	23	PDB header: virus Chain: M: PDB Molecule: penton base protein; PDBTitle: 3.6-angstrom cryoem structure of human adenovirus type 5
48	c3ld3A_	Alignment	not modelled	11.6	45	PDB header: hydrolase Chain: A: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of inorganic phosphatase from anaplasma2 phagocytophilum at 1.75a resolution
49	d1bt3a_	Alignment	not modelled	11.4	14	Fold: Di-copper centre-containing domain Superfamily: Di-copper centre-containing domain Family: Catechol oxidase
50	c4qlzA_	Alignment	not modelled	10.2	25	PDB header: hydrolase, metal binding protein Chain: A: PDB Molecule: sjchgc07024 protein; PDBTitle: the structure of inorganic pyrophosphatase from schistosoma japonicum
51	c5yanB_	Alignment	not modelled	9.8	44	PDB header: structural protein Chain: B: PDB Molecule: collagen; PDBTitle: deconstructing the salt-bridge network of a computationally designed2 collagen heterotrimer
52	d1fuia1	Alignment	not modelled	9.4	17	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Fucl/AraA C-terminal domain-like Family: L-fucose isomerase, C-terminal domain
53	d1i40a_	Alignment	not modelled	9.2	36	Fold: OB-fold Superfamily: Inorganic pyrophosphatase Family: Inorganic pyrophosphatase

54	c3emjL_	Alignment	not modelled	9.1	36	PDB header: hydrolase Chain: L: PDB Molecule: inorganic pyrophosphatase; PDBTitle: 2.2 a crystal structure of inorganic pyrophosphatase from2 rickettsia prowazekii (p21 form)
55	c5nrmB_	Alignment	not modelled	8.9	17	PDB header: cell adhesion Chain: B: PDB Molecule: doccel5: type i dockerin repeat domain from a. PDBTitle: crystal structure of the sixth cohesin from acetivibrio2 cellulolyticus' scaffoldin b in complex with cel5 dockerin s51i, l52n3 mutant
56	c4lugA_	Alignment	not modelled	8.3	45	PDB header: hydrolase Chain: A: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of inorganic pyrophosphatase ppa1 from arabidopsis2 thaliana
57	c3n6oB_	Alignment	not modelled	8.2	71	PDB header: signaling protein Chain: B: PDB Molecule: guanine nucleotide exchange factor; PDBTitle: crystal structure of the gef and p4m domain of drra/sidm from2 legionella pneumophila
58	c3lo0A_	Alignment	not modelled	8.2	45	PDB header: hydrolase Chain: A: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of inorganic pyrophosphatase from2 ehrlichia chaffeensis
59	c2zuxA_	Alignment	not modelled	8.2	24	PDB header: lyase Chain: A: PDB Molecule: yesw protein; PDBTitle: crystal structure of rhamnogalacturonan lyase yesw2 complexed with rhamnose
60	d1qeza_	Alignment	not modelled	8.2	36	Fold: OB-fold Superfamily: Inorganic pyrophosphatase Family: Inorganic pyrophosphatase
61	c3mx7A_	Alignment	not modelled	8.0	29	PDB header: apoptosis Chain: A: PDB Molecule: fas apoptotic inhibitory molecule 1; PDBTitle: crystal structure analysis of human faim-ntd
62	c5teaF_	Alignment	not modelled	8.0	36	PDB header: hydrolase Chain: F: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of an inorganic pyrophosphatase from neisseria2 gonorrhoeae
63	c3tr4C_	Alignment	not modelled	7.9	27	PDB header: hydrolase Chain: C: PDB Molecule: inorganic pyrophosphatase; PDBTitle: structure of an inorganic pyrophosphatase (ppa) from coxiella burnetii
64	d1e9ga_	Alignment	not modelled	7.9	25	Fold: OB-fold Superfamily: Inorganic pyrophosphatase Family: Inorganic pyrophosphatase
65	d1gk8a1	Alignment	not modelled	7.9	13	Fold: TIM beta/alpha-barrel Superfamily: RuBisCo, C-terminal domain Family: RuBisCo, large subunit, C-terminal domain
66	c3k8kB_	Alignment	not modelled	7.8	22	PDB header: membrane protein Chain: B: PDB Molecule: alpha-amylase, susg; PDBTitle: crystal structure of susg
67	d1wdda1	Alignment	not modelled	7.8	10	Fold: TIM beta/alpha-barrel Superfamily: RuBisCo, C-terminal domain Family: RuBisCo, large subunit, C-terminal domain
68	c3fq3H_	Alignment	not modelled	7.8	27	PDB header: hydrolase Chain: H: PDB Molecule: inorganic pyrophosphatase:bacterial/archaeal inorganic PDBTitle: crystal structure of inorganic phosphatase from brucella melitensis
69	c6n1cB_	Alignment	not modelled	7.6	27	PDB header: hydrolase Chain: B: PDB Molecule: inorganic pyrophosphatase; PDBTitle: crystal structure of inorganic pyrophosphatase from legionella2 pneumophila philadelphia 1
70	c1rldB_	Alignment	not modelled	7.3	9	PDB header: lyase(carbon-carbon) Chain: B: PDB Molecule: ribulose 1,5 bisphosphate carboxylase/oxygenase (large PDBTitle: solid-state phase transition in the crystal structure of ribulose 1,5-2 biphosphate carboxylase(/slash)oxygenase
71	d2prda_	Alignment	not modelled	7.3	36	Fold: OB-fold Superfamily: Inorganic pyrophosphatase Family: Inorganic pyrophosphatase
72	c3ul4B_	Alignment	not modelled	7.1	17	PDB header: cell adhesion/protein binding Chain: B: PDB Molecule: cellulosome enzyme, dockerin type i; PDBTitle: crystal structure of coh-olpa(cthe_3080)-doc918(cthe_0918) complex: a2 novel type i cohesin-dockerin complex from clostridium thermocellum3 attc 27405
73	d1dvoa_	Alignment	not modelled	7.0	23	Fold: FinO-like Superfamily: FinO-like Family: FinO-like
74	c4z12A_	Alignment	not modelled	6.9	16	PDB header: oxidoreductase Chain: A: PDB Molecule: aurone synthase; PDBTitle: recombinantly expressed latent aurone synthase (polyphenol oxidase)2 co-crystallized with hexatungstotellurate(vi)
75	d2cp5a1	Alignment	not modelled	6.8	26	Fold: SH3-like barrel Superfamily: Cap-Gly domain Family: Cap-Gly domain
76	c4dh2B_	Alignment	not modelled	6.5	7	PDB header: cell adhesion/protein binding Chain: B: PDB Molecule: dockerin type 1; PDBTitle: crystal structure of coh-olpc(cthe_0452)-doc435(cthe_0435) complex: a2 novel type i cohesin-dockerin complex from clostridium thermocellum3 attc 27405
77	c2n9zA_	Alignment	not modelled	6.1	67	PDB header: toxin Chain: A: PDB Molecule: tau-theraphotoxin-hs1a; PDBTitle: solution structure of k1 lobe of double-knot toxin
78	d1ohzb_	Alignment	not modelled	6.0	9	Fold: Type I dockerin domain Superfamily: Type I dockerin domain Family: Type I dockerin domain

79	c2l23A_	 Alignment	not modelled	6.0	43	PDB header: transcription Chain: A: PDB Molecule: mediator of rna polymerase ii transcription subunit 25; PDBTitle: nmr structure of the acid (activator interacting domain) of the human2 mediator med25 protein
80	c2uxsA_	 Alignment	not modelled	6.0	36	PDB header: hydrolase Chain: A: PDB Molecule: inorganic pyrophosphatase; PDBTitle: 2.7a crystal structure of inorganic pyrophosphatase (rv3628)2 from mycobacterium tuberculosis at ph 7.5
81	c3lq9B_	 Alignment	not modelled	6.0	16	PDB header: signaling protein Chain: B: PDB Molecule: dna-damage-inducible transcript 4 protein; PDBTitle: crystal structure of human redd1, a hypoxia-induced regulator of mtor
82	c3ca8B_	 Alignment	not modelled	5.9	12	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
83	d1ej7l_	 Alignment	not modelled	5.9	9	Fold: TIM beta/alpha-barrel Superfamily: RuBisCo, C-terminal domain Family: RuBisCo, large subunit, C-terminal domain
84	d1udea_	 Alignment	not modelled	5.9	36	Fold: OB-fold Superfamily: Inorganic pyrophosphatase Family: Inorganic pyrophosphatase
85	d2cp6a1	 Alignment	not modelled	5.6	26	Fold: SH3-like barrel Superfamily: Cap-Gly domain Family: Cap-Gly domain
86	c2lyiA_	 Alignment	not modelled	5.5	22	PDB header: structural protein Chain: A: PDB Molecule: protein (entity); PDBTitle: repetitive domain (rp) of aciniform spidroin 1 from nephila2 antipodiana
87	c5lxvB_	 Alignment	not modelled	5.5	23	PDB header: protein binding Chain: B: PDB Molecule: carbohydrate-binding protein wp_009985128; PDBTitle: crystal structure of ruminococcus flavefaciens scaffoldin c cohesin in2 complex with a dockerin from an uncharacterized cbm-containing3 protein
88	c5jxpA_	 Alignment	not modelled	5.4	20	PDB header: hydrolase Chain: A: PDB Molecule: asp/glu-specific dipeptidyl-peptidase; PDBTitle: crystal structure of porphyromonas endodontalis dpp11 in alternate2 conformation
89	c2y3nB_	 Alignment	not modelled	5.4	23	PDB header: structrual protein/hydrolase Chain: B: PDB Molecule: cellulosomal family-48 processive glycoside hydrolase; PDBTitle: type ii cohesin-dockerin domain from bacteroides cellulosolvens
90	d1twfa_	 Alignment	not modelled	5.3	13	Fold: beta and beta-prime subunits of DNA dependent RNA-polymerase Superfamily: beta and beta-prime subunits of DNA dependent RNA-polymerase Family: RNA-polymerase beta-prime
91	d2coya1	 Alignment	not modelled	5.3	26	Fold: SH3-like barrel Superfamily: Cap-Gly domain Family: Cap-Gly domain
92	d1jata_	 Alignment	not modelled	5.3	20	Fold: UBC-like Superfamily: UBC-like Family: UBC-related
93	c4piaA_	 Alignment	not modelled	5.2	20	PDB header: hydrolase Chain: A: PDB Molecule: autolysin e; PDBTitle: crystal structure of s. aureus autolysin e
94	d1ou8a_	 Alignment	not modelled	5.2	15	Fold: SspB-like Superfamily: SspB-like Family: Stringent starvation protein B, SspB