

Bacterial Organism	Bacterial Order	Genome Assembly	Transcript Annotation	aa	N-terminus	C-terminus	Identity % (Order subject)
<i>Acinetobacter baumannii</i> (P)	Pseudomonadales	LYFD01000069	OIB81003	120	QDKYEPID	SFKDFLES	BmorCSP2
		LYGG01000091	OIC85870	87	QDKYEPID	QMAKQLAQ	51 (Lepidoptera)
			WP_139161459	117	QDKYEPID	SFKDFLES	42 (Lepidoptera)
			WP_171259474	124	QDKYEPID	SFKDFLES	42 (Lepidoptera)
			WP_171259475	88	DDKYTDKY	NELKDHLO	99 (Lepidoptera)
			WP_205684415	98	QDKYEPID	QMAKQLAQ	51 (Lepidoptera)
<i>Actinomycetia</i> (A)	Acidothermales-Streptomycetales		WP_149730636	127	DDKYTDKY	KELREIKA	BmorCSP8
<i>Aeromonas veronii</i> (P)	Aeromonadales		WP_167574426	129	QDKYTTKY	AGIELPAQ	48 (Lepidoptera)
<i>Bacillus amyloliquefasciens</i> (F)	Bacillales	JALMGM010000101	MCQ9140773	121	SSTYTDKY	SQKYEKEL	69 (Lepidoptera)
			WP_256881044	121	SSTYTDKY	SQKYEKEL	69 (Lepidoptera)
			WP_256881053	114	AEDKYDSS	VAYYDPQG	78 (Lepidoptera)
			WP_256881057	107	VEKYTDKY	IWKELTDK	76 (Lepidoptera)
<i>Bacterium LRH843</i>	Unclassified	JAAIFC010000213	NEU32919	121	ESQYTTKY	AAKRGIKV	43 (Lepidoptera)
		JAAIFC010000214	NEU32920	126	DEKYTDID	KAFLSGTD	40 (Lepidoptera)
		JAAIFC010000830	NEU33491	105	EPSYPTSW	KKPELWKE	41 (Lepidoptera)
<i>Escherichia coli</i> (P)	Enterobacterales		WP_089438515	131	AEKYTDKY	EGFLAGQN	BmorCSP6
			WP_176227825	70	QDMYENAN	PEALETR-	66 (Lepidoptera)
			WP_248788231	128	ASKYTDKF	LDDARSKA	82 (Lepidoptera)
<i>Goodfellowiella sp. AN110305</i> (A)	Pseudonocardiales		WP_149855366	127	PEQYTDKY	TELKRVTA	BmorCSP9
			WP_188317135	126	DDKYTVRY	KELREIKA	53 (Lepidoptera)
			WP_223199665	135	DDKYTDKY	KELREIKA	BmorCSP8
<i>Kitasatospora griseola</i> (A)	Streptomycetales		WP_043907137	142	RAAAASGN	AENFAEGG	30 (Lepidoptera)
<i>Kitasatospora purpeofusca</i> (A)	Streptomycetales		WP_078880044	142	AEPDHEKY	DGQPPRRR	38 (Lepidoptera)

<i>Kitasatospora sp. CB01950 (A)</i>	Streptomycetales		WP_073810176	142	RLATASDN	ENGFAEND	34 (Lepidoptera)
<i>Kitasatospora sp. MBT66 (A)</i>	Streptomycetales		WP_082558797	142	AEPDHEKY	DGQPPRRRA	38 (Lepidoptera)
<i>Klebsiella pneumoniae (A)</i>	Enterobacterales		MCP6484304	119	TSTYTNKY	LEKDYNKE	78 (Hemiptera)
			WP_159189367	96	GEHYTDRY	RHHGEHYT	48 (Lepidoptera)
<i>Lysobacter capsici (P)</i>	Xanthomodales	CP023465	ATE74135	491	TTRYDNVD	QPGALADN	84 (Nematode) <i>f</i>
			WP_198338922	489	TTRYDNVD	QPGALADN	46 (Lepidoptera)
			WP_191821471	489	TTRYDNAD	QPGALADN	42 (Lepidoptera)
			WP_215496118^	489	TTRYDNVD	QPDALAAH	83 (Diptera)
<i>Lysobacter sp. ISL-42 (P)</i>	Xanthomodales	JAGGRH010000048	MBT2748247	489	ASRNDNVD	DCRKCYKC	92 (Nematode) <i>f</i>
<i>Macrococcus caseolyticus (P)</i>	Bacillales	RBVL01000175	RKO11126	127	DDKYTDKY	ANGIQIPE	72 (Lepidoptera)
		RBVL01000176	RKO11079	131	QDQYESAN	AWKDFLQE	42 (Lepidoptera)
		RBVL01000208	RKO10632	150	TSTYTTRY	KNETKEST	41 (Lepidoptera)
		RBVL01000221	RKO10462	122	ADFYNKY	DKFLAEQD	40 (Lepidoptera)
<i>Nocardioides antri (A)</i>	Propionibacteriales	VUJW01000090	KAA1418028	127	DDKYTDKY	AKGIVIFE	BmorCSP1
			WP_149752341	104	ETYSSEND	LLSAVANS	37 (Lepidoptera)
			WP_223162851	139	DDKDTDKY	AKGIVIFE	BmorCSP1
<i>Nocardioides sp. BN130099 (A)</i>	Propionibacteriales		WP_149730578	79	PEKYTDKY	CTKA----	BmorCSP9
			WP_149730636	127	DDKYTDRY	KELREIKA	BmorCSP8
<i>Nocardioides sp. BN140041 (A)</i>	Propionibacteriales		WP_149752338	127	DDKYTDKY	AKGIVIFE	BmorCSP1
			WP_149752367	126	DDKYTVRY	EILREIKA	BmorCSP8

<i>Salinarimonas</i> sp. BN140002 (P)	Rhizobiales		WP_149752341	104	ETYSSSEND	LLSAVANS	BmorCSP12
			WP_149822401	125	PEQYTDKY	TELKRVTA	BmorCSP9
			WP_149822421	101	DDEFTVRC	ELTAKYDP	94 (Lepidoptera) †
			WP_210247692	137	PEQYTDKY	TELKRVTA	BmorCSP9
<i>Salinarimonas soli</i> (P)	Hyphomicrobiales	VUOA01000128	KAA2228302	125	EQYTDKYD	TELKRVTA	BmorCSP9
<i>Shewanella</i> sp. A25 (P)	Alteromonadales		MCH1932606	89	EGYTTKWD	GADKA---	76 (Heteroptera)
<i>Shewanella</i> sp. C32 (P)	Alteromonadales		WP_238898550	96	-----ILHN	AEKKGIKL	71 (Heteroptera)
<i>Streptomyces</i> sp. MBT27 (A)	Streptomycetales		WP_167161532	73	PSPYTSKY	GACQ----	46 (Lepidoptera)
<i>Streptomyces</i> sp. WAC07061 (A)	Streptomycetales		WP_125602430	144	AVTRAEGP	DAAPTWAS	44 (Lepidoptera)
<i>Streptomyces</i> sp. YIM121038 (A)	Streptomycetales		WP_138958772	136	PTPPGATY	GVYWTGPQ	43 (Lepidoptera)
<i>Streptomyces xanthochromogenes</i> (A)	Streptomycetales		WP_189762537	73	PSSYTSKY	GACQ----	46 (Lepidoptera)
<i>Vibrio vulnificus</i> (P)	Vibrionales		WP_146043471	100	-----YDNI	AELKTVTA	66 (Lepidoptera)

Table 2. Identification of CSPs in actinomycetes (A), firmicutes (F), and proteobacteria (P). Analysis of microbial protein database (NCBI) and *EnsemblBacteria* (bacterial.ensembl.org; Ensembl Genomes, Yates et al., 2022) using *B. mori* CSPs and insect consensus sequences as templates, and iterative blastp or tBLASTN search. *Acinetobacter baumannii* (Pseudomonadota, Gammaproteobacteria, Moraxellaceae), *Actinomycetia* (Actinomycetota, Actinobacteria, Arthrobacteria), *Aeromonas veronii* (Pseudomonadota, Gammaproteobacteria, Aeromonadaceae), *Bacillus amyloliquefasciens* (Firmicutes, Bacilli, Bacillaceae), *Bacterium LRH843* (Unclassified bacteria), *Escherichia coli* (Pseudomonadota, Gammaproteobacteria, Enterobacteriaceae), *Goodfellowiella* sp. AN110305 (Actinomycetota, Actinomycetia, Pseudonocardiaceae), *Kitasatospora griseola* (Actinomycetota, Actinomycetia, Streptomycetaceae), *Kitasatospora purpeofusca* (Actinomycetota, Actinomycetia, Streptomycetaceae), *Kitasatospora* sp. CB01950 (Unclassified *Kitasatospora*), *Kitasatospora* sp. MBT66 (Unclassified *Kitasatospora*), *Klebsiella pneumoniae* (Pseudomonadota, Gammaproteobacteria, Enterobacteriaceae), *Lysobacter capsici* (Pseudomonadota, Gammaproteobacteria, Xanthomonadaceae), *Macroccoccus caseolyticus* (Bacillota, Bacilli, Staphylococcaceae), *Nocardioides antri* (Propionibacteria, Actinomycetota, Propionibacteriaceae), *Nocardioides* sp. BN130099 (*Nocardioides humilatus*, Actinomycetota,

Actinomycetes, Nocardiodaceae), *Nocardioides sp. BN140041* (Actinomycetota, Actinomycetes, Nocardiodaceae), *Salinarimonas soli* (Pseudomonadota, Alphaproteobacteria, Salinarimonadaceae), *Salinarimonas sp. BN140002* (Pseudomonadota, Alphaproteobacteria, Salinarimonadaceae), *Shewanella* (Pseudomonadota, Gammaproteobacteria, Shewanellaceae), *Streptomyces sp. MBT27* (Actinomycetota, Actinomycetia, Streptomycetaceae), *Streptomyces sp. WAC07061* (Unclassified Streptomyces), *Streptomyces sp. YIM121038* (Unclassified Streptomyces), *Streptomyces xanthochromogenes* (Actinomycetota, Actinomycetia, Streptomycetaceae), *Vibrio vulnificus* (Pseudomonadota, Gammaproteobacteria, Vibrionaceae).

†: five Cys, ^: hypothetical transmembrane protein, f: fatty acid retinoid binding protein,
Glucan-binding protein B *Streptococcus thermophilus* CAG:236