Table S4) Strains, plasmids and oligonucleotides used in this study.

Strains and plasmids	Genotype or relevant characteristics[a]	Reference
Strains		
Escherichia coli BL21(DE3)	F$^-$ *ompT gal dcm lon hsdS*$_B$($r_B^-m_B^-$) λ(DE3 [*lacI lacUV5-T7p07 ind1 sam7 nin5*]) [*malB*$^+$]$_{K\text{-}12}$(λ^S)	(1)
E. coli DH5α	F$^-$ *endA1 glnV44 thi-1 recA1 relA1 gyrA96 deoR nupG purB20* φ80d*lacZ*ΔM15 Δ(*lacZYA-argF*)U169, hsdR17($r_K^-m_K^+$), λ$^-$	(2)
E. coli VS181	*E. coli* RP437; Δ(*cheYcheZ*)Δ*aer*Δ*tsr*Δ(*tar-tap*) Δ*trg*	(3)
Plasmids		
pET28b(+)	Protein expression plasmid; Km^R	Novagen
pET28-PctA-LBR	Km^R; pET28b(+) derivative containing a DNA fragment encoding the PctA-LBD	(4)
pET28_LBD_McpH	Km^R; pET28b(+) derivative containing a DNA fragment encoding the McpH-LBD	(5)
pET28b-LBDMcpU	Km^R; pET28b(+) derivative containing a DNA fragment encoding the McpU-LBD	(6)
pET28b-PA2652LBD	Km^R; pET28b(+) derivative containing a DNA fragment encoding the CtpM (PA2652)-LBD	(7)
pBS377	Ap^R, pQE60 derivative containing a DNA fragment encoding the McpV-LBD	(8)
pET28b-McpV-LBD	Km^R; pET28b(+) derivative containing a DNA fragment encoding the McpV-LBD	This study
pET28-Tar-LBD	Km^R; pET28b(+) derivative containing a DNA fragment encoding the Tar-LBD	This study
pET28-PcaY_PP-LBD	Km^R; pET28b(+) derivative containing a DNA fragment encoding the PcaY_PP-LBD	(9)
pETMcpS	Km^R; pET28b(+) derivative containing a DNA fragment encoding the McpS-LBD	(10)
pET28b-McpQ-LBD	Km^R; pET28b(+) derivative containing a DNA fragment encoding the McpQ-LBD	(11)
pET28-MBP	Km^R; pET28b(+) derivative containing a DNA fragment encoding the *E. coli* MBP	This study
pMAMV385	Km^R; pET28b(+) derivative containing a DNA fragment encoding the E6B08_RS28125	(12)
pNTodS	Km^R; pET28b(+) derivative containing a DNA fragment encoding the PAS1 and autokinase1 domain of TodS	(13)
pMAMV235	Km^R; pET28b(+) derivative containing a DNA fragment encoding AdmX-LBD	(14)
pANA126	Km^R; pET28b(+) derivative containing a DNA fragment encoding TtgV	(15)
pVS88	Ap^R ; CheY-EYFP / CheZ-ECFP expression plasmid	(3)
pKG116	Protein expression vector; Cm^R	(16)
pSB13	Cm^R; pKG116 derivative encoding Tar receptor, with T->C768 nucleotide substitution to remove the *Nde*I restriction site	(17)
pSB10	Cam^R; pKG116 derivative encoding hybrid McpS[1-	(18)

	295]-Tar[200-553] receptor	

Oligonucleotides

Name	Sequence (5’-3’)	Purpose
McpV-LBD-f	ATCCATATGCAGGACAAGCTGGTTGCCG	Construction of pET28b-McpV-LBD
McpV-LBD-f	TATAAGCTTTTACTGCCAGGCGCGCTCGC	
Tar-LBD-f	TAATCATATGTCTTCCCTTCACCATAGCCAG	Construction of pET28-Tar-LBD
Tar-LBD-r	TAATGGATCCTCATCGGTAATCATCTGCGTTG	
MBP-f	GGAATTCCATATGAAAATAAAAACAGGTGCACG	Construction of pET28-MBP
MBP-r	CCCGCTCGAGTTACTTGGTGATACGAGTCTGCG	

[a] Ap, ampicillin; Km, kanamycin; Tc, tetracycline. Cm, chloramphenicol.

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