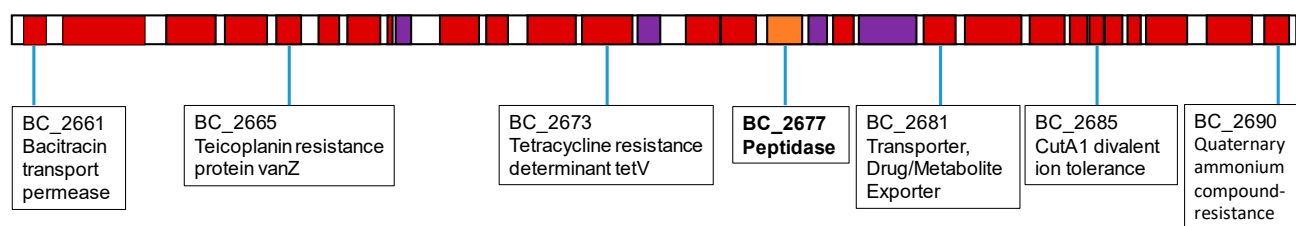


Supplemental Information

Characterization of LysBC17, a lytic endopeptidase from *Bacillus cereus*

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Supplemental Figure 1. Drug and metal resistance genes near the BC_2677 locus in the *B. cereus* ATCC 14579 genome (GenBank: AE016877.1). The 32 kb window displayed covers nucleotides 2643000 – 2675000. No holin gene or other phage genes are nearby. The BC_2677 gene does not encode a signal peptide. This suggests BC_2677 (LysBC17) is an autolysin. Orange and red boxes are coding regions in the same orientation, and purple boxes are coded on the complementary DNA strand.

PlyBC17	1	MKYHNRNVS	NLN	NKLADNT	KAAAFK	WYQYCI	DNGIEVLIYET	IRT	VEQQREY	VRKGASQTM	
Wip1	1	MYHNRN	LANLE	NKLAPHT	RQKAKQ	WYQYCV	ENGIEVLIYET	TRT	TEQQREN	VRKGASQTM	

PlyBC17	61	RSYHLVGQALDFVPI	QSN	GTEDW	NGYN	KEPWAS	AIRYAKQ	IGFEWGGDWKGFVDS	PHLQY	120
Wip1	61	KSYHLVGQALDFVP	ARE	-AEVYWD	GYRNDI	QKAIGYAKS	IGFEWGGDWKGFVDS	PXLQY	119	

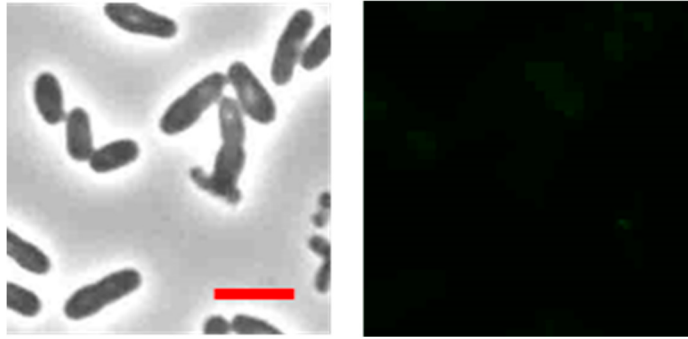
Supplemental Figure 3. Clustal Omega alignment and BoxShade view of the LysBC17 catalytic domain (residues 1-120) and the *Bacillus* phage Wip1 endolysin catalytic domain (YP_008433324, residues 1-119). Black boxes represent identity and grey boxes represent similarity.

PlyBC17	131	GKGA-QNVVTP	ETS	SNDNVG	VAYINGS	SNVNL	RKGPGTGY	QVIRQL	GKGES	SYKVE	QINSWL
Waukesha92	160	GGGSPVMPTPI	EPS	SNDG	TKVAYING	DNVNL	RKGPGTGY	AVIRKL	GKGEC	YQVNG	SNGL

PlyBC17	190	NLGGDQWVYND	PSYIRY	TGGN	VPATS	QS	SNDG	IGVVTII	ADVLRV	RTGPGTNYG	IVKNVY
Waukesha92	220	NLGGDQWVYND	SSYIRY	TGEN	APAP	SKP	SNDG	IGVVTII	ADVLRV	RTGPGTNYG	IVKNVY

PlyBC17	250	QGEKYQS	FGY	RDGWYNVGG	NQWVS	GGEYVTFVK	281
Waukesha92	280	QSEFYQS	FGY	RDGWYNVGG	DQWVS	GGEYVKFEK	311

Supplemental Figure 2. Clustal Omega alignment and BoxShade view of the LysBC17 binding domain (residues 231-281) and the *Bacillus* phage Waukesha92 endolysin binding domain (YP_009099314, residues 160-311). Black boxes represent identity and grey boxes represent similarity.



Supplemental Figure 4. LysBC17 GFP-CWB binding to *B. cereus* ATCC 13061. Bacterial cells and GFP-labeled LysBC17 CWB were mixed together, washed, and viewed by microscopy per the Methods. 1000X phase-contrast image (left panel) is shown with its corresponding fluorescent images (right panel). Exposure time for the fluorescent image was 100 ms, identical to the time used in Figure 5. Scale bar = 5 μ m.