Supplementary Figures and Tables

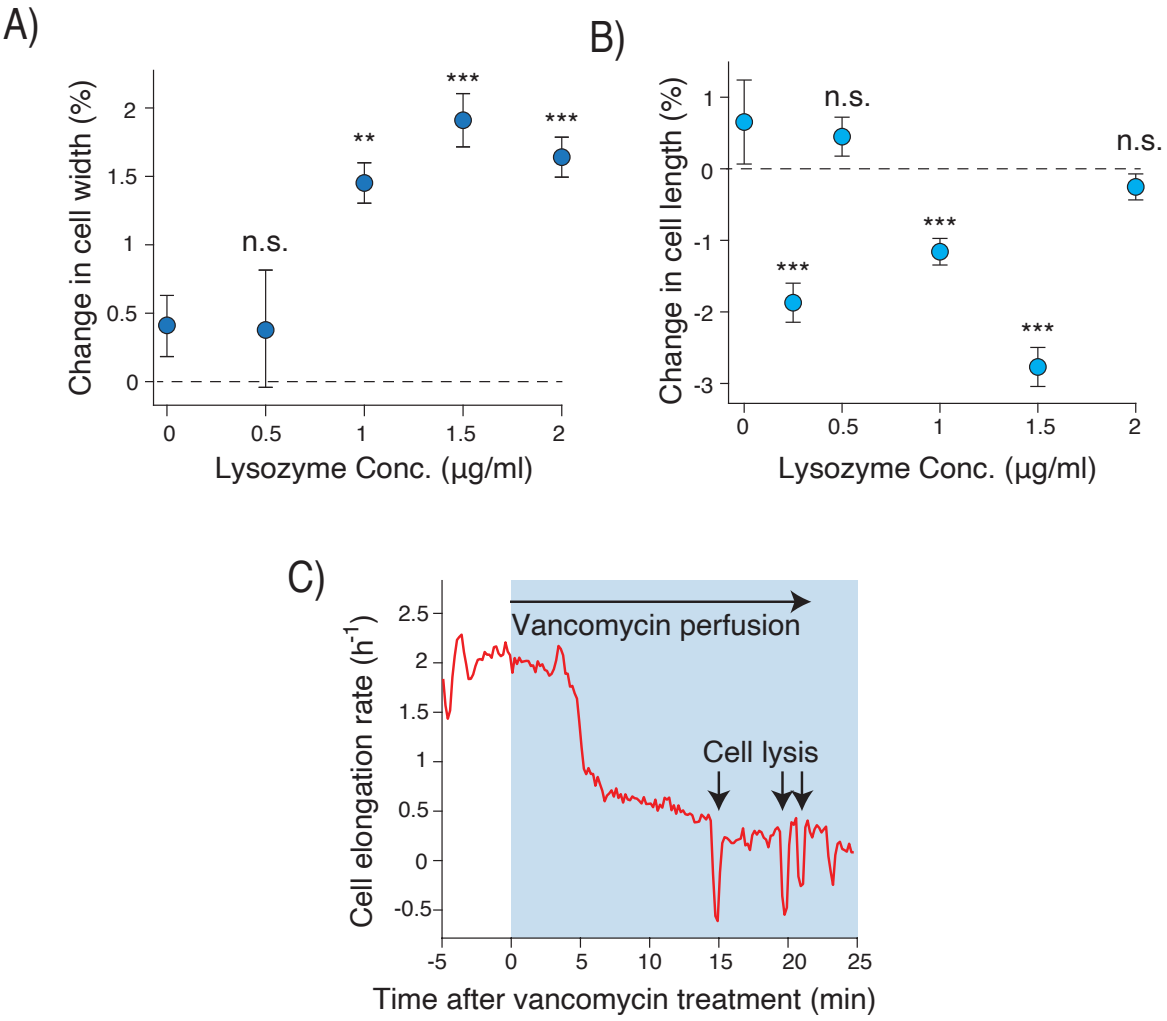

Figure S1. Lysozyme and vancomycin treatment cause cell widening. A) Mean change in cell width upon lysozyme treatment. Error bars indicate +/- 1 s.e.m. B) Mean change in cell length upon lysozyme treatment, controlling for cell growth. Error bars indicate +/- 1 s.e.m. C) Population-averaged cellular elongation rate versus time during acute perfusion with 10 μg/mL vancomycin. n=18 cells across 1 experiment.

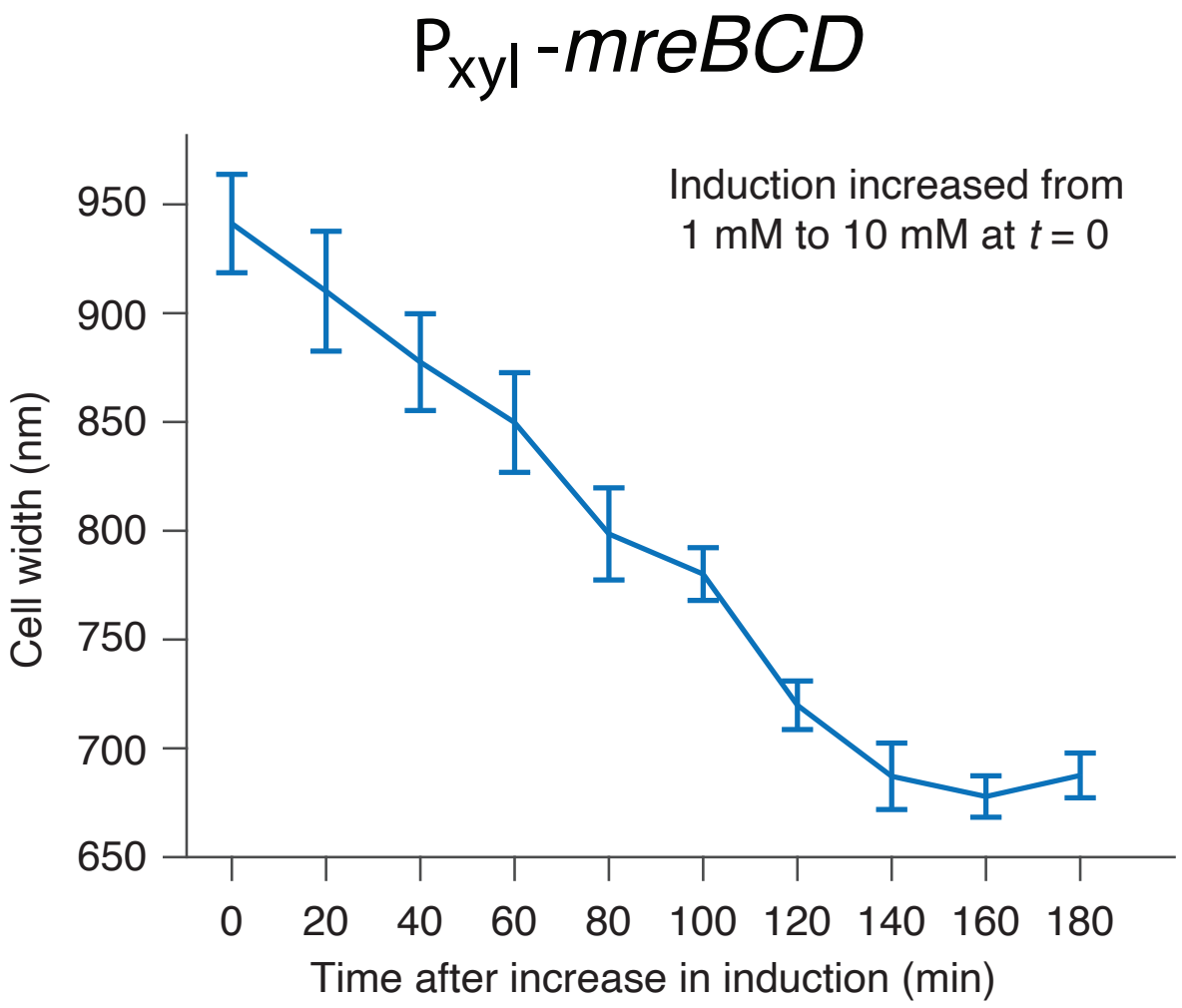

Figure S2. Acute induction of *mreBCD* causes immediate cell thinning. Cell width versus time after acute induction of *mreBCD*. Cells were grown to exponential phase in 1 mM xylose and then xylose concentration was increased to 10 mM. n=20 cells across 1 experiment for each time point.

Strain or Plasmid	Genotype	Relevant features	Source/Reference
B. subtilis PY79	wild-type		Lab stock
bMD545	*PY79 amyE::erm Pxyl-mreBCD, ΔmreBCD::spc PmreB-minCD*	Xylose inducible induction of mreBCD operon	Garner Lab[1]
pPB001	pIV::25His	pIVEX2.3d derivative carrying SPP1 endolysin gene 25	São-José Lab[2]
C. glutamicum	wild-type		Theriot Lab
E. coli	wild-type MG1655		Lab stock

Table S1. Strains and plasmids used in this study.

1. Dion (2019) Bacillus subtilis cell diameter is determined by the opposing actions of two distinct cell wall synthetic systems. *Nature Microbiol.* 4(8).
2. Fernandes (2016) More than a hole: the holin lethal function may be required to fully sensitize bacteria to the lytic action of canonical endolysins. *Molecular microbiology.* 102(1).