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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 μ g/mL vancomycin. n=18 cells across 1 experiment.

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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.

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

Table S1.	Strains and	plasmids	used in	this	study.
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- 1. Dion (2019) Bacillus subtilis cell diameter is determined by the opposing actions of two distinct cell wall synthetic systems. *Nature Microbiol.* 4(8).
- 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).