

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: 3D rendering of a confocal Z-stack of a drug-treated E. coli cell expressing FtsZ-mNeonGreen and trapped in a hole. Only one Z-ring is observed. Scale bar = 1 μm .

File Name: Supplementary Movie 2

Description: Montage of SIM time-lapse images showing FtsZ dynamics in cells expressing FtsZ-GFP, treated with drugs (cephalexin and A22) and trapped in a standing position. The cell in the lower right corner was not treated with drugs. Scale bar = 1 μm .

File Name: Supplementary Movie 3

Description: Representative time-lapse imaging of dynamic ZipA-GFP densities in a drug-exposed cell with large diameter (2.26 μm). Scale bar = 1 μm .

File Name: Supplementary Movie 4

Description: 3D rendering of a confocal Z-stack of a squared-shaped cell expressing FtsZ-mNeonGreen. Scale bar = 1 μm

File Name: Supplementary Movie 5

Description: Montage of two E. coli cells expressing FtsZ-mCitrine, showing typical treadmilling motion in large, square-shaped cells. Scale bar = 1 μm .

File Name: Supplementary Movie 6

Description: Left, FtsZ-GFP treadmilling in a standing, large, squared-shaped E. coli cell. Right, untreated cell expressing FtsZ-GFP, included as a size reference. Scale bar = 1 μm .

File Name: Supplementary Movie 7

Description: FtsZ-GFP treadmilling in a standing, large, squared-shaped E. coli cell. While most FtsZ-GFP filaments were dynamic, a few were not (bright, immobile spot indicated by the red arrow). Scale bar = 1 μm .

File Name: Supplementary Movie 8

Description: FtsZ-mCitrine dynamics in the corner of a rectangular E. coli cell. Scale bar = 1 μm .

File Name: Supplementary Movie 9

Description: Confocal Fluorescence Recovery After Photobleaching (FRAP) measurement on a rectangular E. coli cell expressing FtsZ-GFP. Scale bar = 1 μm .

File Name: Supplementary Movie 10

Description: Montage of time-lapse images of E. coli cells expressing FtsZ-mCitrine and sculptured into various shapes (clock-wise from top left: heart, pentagon, triangle and half-moon). FtsZ-mCitrine appears dynamic in all shapes. A smoothing filter was applied to each movie (Walking Average plug-in in Fiji, average 2). Scale bar = 1 μm .