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Reporting Summary

Nature Research wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Research policies, see <u>Authors & Referees</u> and the <u>Editorial Policy Checklist</u>.

Statistical parameters

When statistical analyses are reported, confirm that the following items are present in the relevant location (e.g. figure legend, table legend, main text, or Methods section).

n/a	Cor	nfirmed			
		The exact sample size (n) for each experimental group/condition, given as a discrete number and unit of measurement			
		An indication of whether measurements were taken from distinct samples or whether the same sample was measured repeatedly			
		The statistical test(s) used AND whether they are one- or two-sided Only common tests should be described solely by name; describe more complex techniques in the Methods section.			
\boxtimes		A description of all covariates tested			
\boxtimes		A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons			
		A full description of the statistics including <u>central tendency</u> (e.g. means) or other basic estimates (e.g. regression coefficient) AND <u>variation</u> (e.g. standard deviation) or associated <u>estimates of uncertainty</u> (e.g. confidence intervals)			
\boxtimes		For null hypothesis testing, the test statistic (e.g. <i>F</i> , <i>t</i> , <i>r</i>) with confidence intervals, effect sizes, degrees of freedom and <i>P</i> value noted Give <i>P</i> values as exact values whenever suitable.			
\ge		For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings			
\ge		For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes			
\boxtimes		Estimates of effect sizes (e.g. Cohen's d, Pearson's r), indicating how they were calculated			
		Clearly defined error bars State explicitly what error bars represent (e.g. SD, SE, CI)			
Our web collection on statistics for biologists may be useful.					

Software and code

Policy information about availability of computer code				
Data collection	All data collection was performed on commercially available microscopy systems.			
Data analysis	All analysis was performed using free and open sources, e.g. ImageJ.			

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors/reviewers upon request. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Research guidelines for submitting code & software for further information.

Data

Policy information about availability of data

All manuscripts must include a data availability statement. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A list of figures that have associated raw data
- A description of any restrictions on data availability

Data presented and material used in this paper can be available upon request from the authors.

Field-specific reporting

Please select the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

Life sciences

Behavioural & social sciences

Ecological, evolutionary & environmental sciences For a reference copy of the document with all sections, see <u>nature.com/authors/policies/ReportingSummary-flat.pdf</u>

Life sciences study design

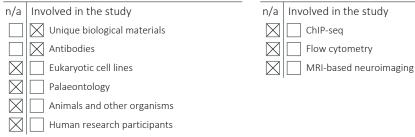
All studies must disclose on these points even when the disclosure is negative.

Sample size	At least 100 cells were analyzed for new findings in this study. 100 cells is a common sample size in the bacterial cell division field. For confirmatory results were between 97 and 10 repeats made.
Data exclusions	Apart from cells that were moving during image acquisition, No data was excluded from analysis.
Replication	Data was collected at least three different times from different cultures.
Randomization	No randomization was necessary for this study.
Blinding	No blinding was necessary for this study.

Reporting for specific materials, systems and methods

Materials & experimental systems

Methods



Unique biological materials

Policy information about availability of materials

Obtaining unique materials Biological material (i.e. strains, plasmids) are available upon request from the authors.

Antibodies

Antibodies used	Anti-FtsZ (Agrisera, prod number AS10 715)
Validation	Commercially available (https://www.agrisera.com/shop?funk=visa_artikel&artnr=AS10%20715) antibody against FtsZ. Has been previously validated in a number of publications.