

## Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Septin cage entrapment of *S. flexneri*  $\Delta rfaL$  (related to Fig. 5b). Time-lapse epifluorescence microscopy showing the recruitment of SEPT6WT-containing septin complexes (green) to *S. flexneri*  $\Delta rfaL$  mCherry. Time is shown as min:s (top right corner). Scale bar, 2  $\mu\text{m}$ .

File Name: Supplementary Movie 2

Description: Septin cage entrapment of *M. smegmatis* (related to Fig. 5b). Time-lapse epifluorescence microscopy showing the recruitment of SEPT6WT-containing septin complexes (green) to *M. smegmatis* DsRed. Time is shown as min:s (top right corner). Scale bar, 2  $\mu\text{m}$ .

File Name: Supplementary Movie 3

Description: *E. coli* is not entrapped in septin cages (related to Fig. 5). Time-lapse epifluorescence microscopy showing the absence of recruitment of SEPT6WT-containing septin complexes (green) to *E. coli*. Time is shown as min:s (top right corner). Scale bar, 5  $\mu\text{m}$ .

File Name: Supplementary Movie 4

Description: Septin cage entrapment of *S. flexneri*  $\Delta rfaL$  (related to Fig. 5b). Time-lapse epifluorescence microscopy showing the recruitment of SEPT6DAH-containing septin complexes (green) to *S. flexneri*  $\Delta rfaL$  mCherry. Time is shown as min:s (top right corner). Scale bar, 2  $\mu\text{m}$ .

File Name: Supplementary Software

Description: A custom python script (Supplementary Software related to Fig. 1h and 6e) was developed to quantify the distance between septin filaments and the bacterial surface. A custom MATLAB script (Supplementary Software related to Fig. 5) was developed for image analysis and rate calculation.