



**Supplementary Fig. S8.** *in vivo* labeling of peptidoglycan in *S. Typhi*. (a) Wild-type *S. Typhi* was grown in LB broth to logarithmic growth phase ( $OD_{600}$  0.3) and then supplemented with alkyne-D-alanine for 5 or 60 minutes. Bacteria were then fixed and subsequently treated with an azido-AF488 fluorophore (10  $\mu$ M), which was then covalently linked by click chemistry to alkyne-D-alanine that had been incorporated into the PG layer (scale bar: 5  $\mu$ m). (b) Negative control for peptidoglycan staining. Wild-type *S. Typhi* was grown for 24 hs without addition of alkyne-D-alanine. Bacteria were then fixed and click-chemistry with azido-AF488 fluorophore (green) was performed. As bacterial counterstaining a rabbit antibody directed to *S. Typhi* LPS (red) was used (scale bar: 5  $\mu$ m). These experiments were repeated at least three times.