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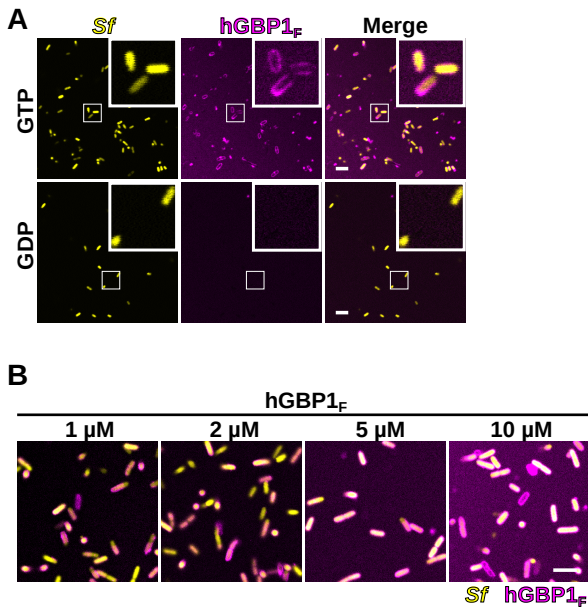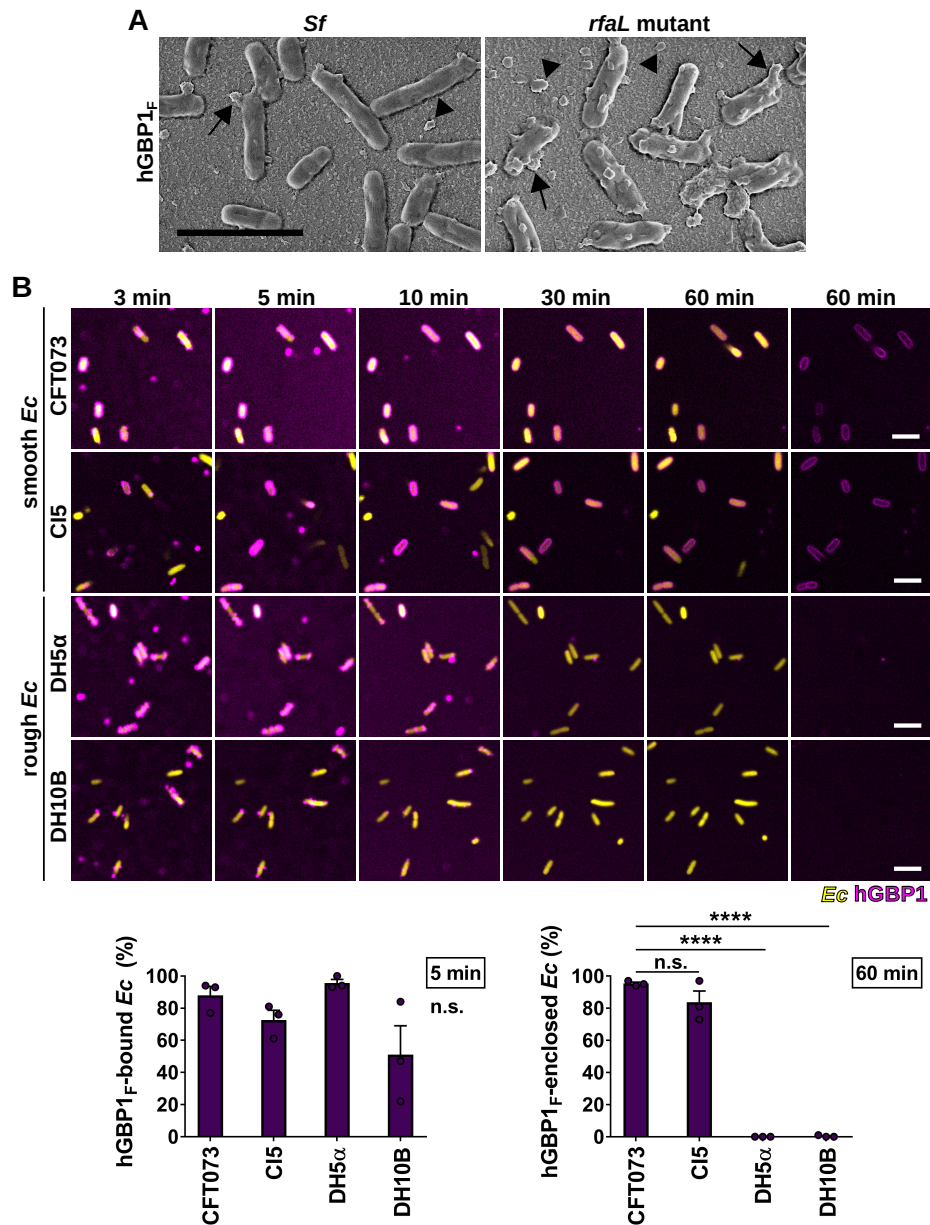**Appendix Figure S1**

Appendix Figure S2

Appendix Figure S1. Related to Figure 1. **hGBP1$_F$ binds to live *S. flexneri* in the presence of GTP.**

(A) Confocal images of GFP$^+$ *S. flexneri* following 45 min incubation with 25 µM Alexa-Fluor647-labeled hGBP1$_F$ and 20 mM GTP or 5 mM GDP. Scale bars equal 5 µm. **(B)** Confocal images of formaldehyde fixed GFP$^+$ *S. flexneri* following 45 min incubation with varying concentrations of Alexa-Fluor647-hGBP1$_F$ and 2 mM GTP. All scale bars equal 5 µm.

Appendix Figure S2. Related to Figure 5. **O-antigen is required for hGBP1$_F$ protein coating of *E. coli*.**

(A) Scanning-electron micrographs of live wild type and *rfaL S. flexneri* incubated for 45 min with 5 µM of hGBP1$_F$ in the presence of 2 mM GTP. Arrowheads point to unattached hGBP1 polymers and arrows point to hGBP1 polymers attached to bacteria. **(B)** Confocal time-lapse microscopy of formaldehyde fixed smooth and rough *E. coli* strains expressing RFP (UPEC CFT073, UPEC CI5) or GFP (DH5α, DH10B) after addition of 10 µM Alexa-Fluor488- or Alexa-Fluor647-hGBP1$_F$ supplemented with 2 mM GTP. Binding of hGBP1$_F$ polymers to bacteria at 5 min and enclosure of bacteria with hGBP1$_F$ protein coats after 60 min were quantified. Mean frequencies ± SEM of combined data from three independent experiments are shown. Significance was determined by one-way ANOVA with Tukey's multiple comparison test . n.s., not significant; ****, P ≤ 0.0001. Scale bars equal 5 µm.