**Supplemental Figure 1.** Cysteine substitutions in IpaB do not alter *S. flexneri* invasion into host cells. Infection of HeLa monolayers with *S. flexneri ΔipaB* expressing wildtype IpaB or a single IpaB cysteine substitution derivative. Positive control, wildtype *S. flexneri*. Negative control, *S. flexneri ΔipaB*. Quantification of colony forming units from three independent experiments. (A) IpaB cysteine derivatives within TM1, TM2, and C-terminal extracellular domain. Means ± SEM are plotted. Black dots represent values obtained from individual experiments. ***, p<0.01; ANOVA with Dunnett’s *post hoc* test comparing colony forming units of *S. flexneri ΔipaB*, *S. flexneri ΔipaB* expressing each IpaB cysteine derivative, and *S. flexneri ΔipaB* expressing WT IpaB (pWT) to colony forming units of WT *S. flexneri*. (B) IpaB cysteine derivatives within the cytosolic region. The trends observed for data in panel B do not reach statistical significance.