



FIG S1 Attachment, invasion and motility of the wild-type parent and *ryhB* mutant and wild-type parent carrying pTrc99A (vector control), pTrc99AryhB (RyhB overexpression plasmid), pUC19 (vector control) or pUC19ryhB (RyhB overexpression plasmid). (A) Rates of attached bacteria onto 96-well polystyrene plate when grown for 4 hours in RPMI1640 medium. These rates were represented as values A_{595} normalized to OD₆₀₀ of 1. Data plotted are the means of three biological replicates, error bars indicate the ranges *, $P < 0.01$. Asterisks denote significance for values relative to the wild-type control. (B) Growth curves of these UPEC strains when grown at 37 degree under 5% of CO₂ without shaking. The cell growth was monitored by an optical density at 600 nm (OD₆₀₀). (C) Rates (%) of adhered and invaded bacteria into the bladder epithelial cells. Y-axis on the graphs shows percent (%) of CFU (colony forming units) values of adhered and internalized bacteria relative to total bacterial cell numbers. Data plotted are the means from three independent experiments; error bars indicate the standard deviations *, $P < 0.01$. Asterisks denote significance for values relative to the wild-type control. (D) Transcript levels of fimbrial and motility-related genes in the wild-type parent, Δfur and $\Delta ryhB$. Transcript levels were described as relative values to that of *rpoD* (housekeeping gene). Data plotted are the means of two biological replicates, error bars indicate the ranges *, $P < 0.01$. Asterisks denote significance for values relative to the wild-type control. (E) Motilities of the wild-type parent, Δfur and $\Delta ryhB$. Bacterial migrations on the agar were represented as diameters. Data plotted are the means from three independent experiments; error bars indicate the standard deviations *, $P < 0.01$. Asterisks denote significance for values relative to the wild-type control.