

S4 Table. Strains used in this study. Abbreviations: Ara^{+/-} = ability to use arabinose as a carbon source present/ absent, WT = wild type.

Strain	Genotype	Reference
<i>Escherichia coli</i> BW25113 Ara ⁻	F ⁻ , Δ <i>araD-araB567</i> , Δ <i>lacZ4787::rrnB-3</i> , λ ⁻ , <i>rph-1</i> , Δ <i>rhaD-rhaB568</i> , <i>hsdR514</i>	[1]
<i>Escherichia coli</i> BW25113 Ara ⁺	F ⁻ , Δ <i>araD-araB567</i> , Δ <i>lacZ4787::rrnB-3</i> , λ ⁻ , <i>rph-1</i> , Δ <i>rhaD-rhaB568</i> , <i>hsdR514</i> , <i>araA</i>	[2]
<i>insF1- mdtB</i>	WT Ara ⁻ , Δ <i>insF1- mdtB</i>	This study
<i>ptsP</i>	WT Ara ⁻ , <i>ptsP</i> : M604R	This study
<i>yoaA</i>	WT Ara ⁻ , <i>yoaA</i> : D121Y	This study
<i>hemF</i>	WT Ara ⁻ , <i>hemF</i> : G127V	This study
<i>sspA</i>	WT Ara ⁻ , <i>sspA</i> : Q24*	This study
<i>stpA</i>	WT Ara ⁻ , <i>stpA</i> :R49S	This study
<i>uspC / flhD</i>	WT Ara ⁻ , <i>uspC / flhD</i> : +4 bp	This study
<i>wcaN</i>	WT Ara ⁻ , <i>wcaN</i> : -1 bp	This study
<i>ykfC – proB</i>	WT Ara ⁻ , Δ <i>ykfC - proB</i>	This study
<i>yhdW</i>	WT Ara ⁻ , <i>yhdW</i> : C→A	This study
<i>rpoB</i>	WT Ara ⁻ , <i>rpoB</i> :T135P	This study
<i>yqiB</i>	WT Ara ⁻ , <i>yqiB</i> : Q117K	This study
<i>ynaE / pinR</i>	WT Ara ⁻ , <i>ynaE / pinR</i> : A→G	This study

References:

1. Baba T, Ara T, Hasegawa M, Takai Y, Okumura Y, et al. Construction of *Escherichia coli* K-12 in-frame, single-gene knockout mutants: the Keio collection. Mol Sys Biol. 2006; 2:2006.0008.
2. D'Souza G, Waschina S, Pande S, Bohl K, Kaleta C, et al. Less is more: Selective advantages can explain the prevalent loss of biosynthetic genes in bacteria. Evolution. 2014; 68: 2559 - 2570.