

**S5 Table.** Mutations identified in the parental MG1655 strain compared to the reference sequence.

Position	Mutation	Annotation	Gene
263,322	G→T	L50L (CTC→CTA)	<i>ykfH</i> ←
547,694	A→G	pseudogene (114/252 nt)	<i>ylbE</i> →
547,835	+G	pseudogene (4/1008 nt)	<i>ylbE</i> →
1,196,725	C→T	G11R (GGA→AGA)	<i>yfmD</i> ←
1,976,527	Δ776 bp		<i>insB1-insA</i>
2,677,547	G→T	A1074D (GCT→GAT)	<i>yphG</i> ←
3,411,593	T→C	intergenic (-106/-293)	<i>envR</i> ← / → <i>acrE</i>
3,957,957	C→T	intergenic (-121/+78)	<i>ppiC</i> ← / ← <i>yifN</i>