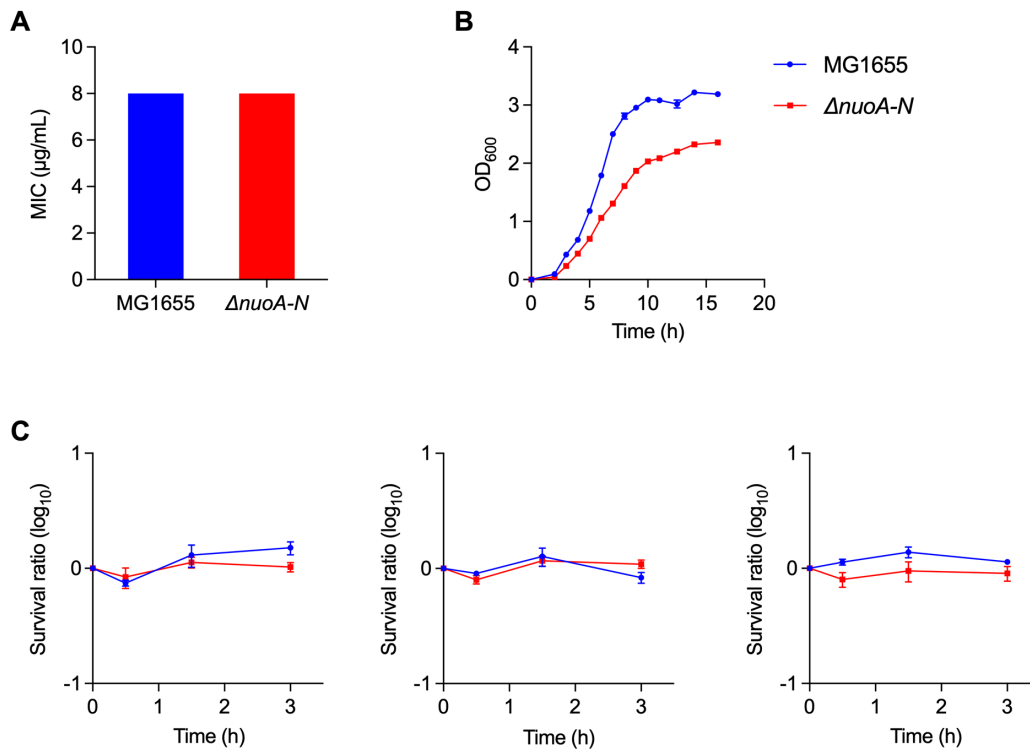


Table S1. Statistics of the Tn-seq data

| Sample | Total reads | Mapped reads | Template reads | insertion sites |
|---------------|-------------|--------------|----------------|-----------------|
| input rep1 | 25,753,217 | 24,404,314 | 6,500,135 | 310,306 |
| input rep2 | 31,753,300 | 30,205,098 | 8,836,837 | 315,462 |
| 0.25X_1h_rep1 | 21,380,597 | 20,315,792 | 7,043,278 | 264,992 |
| 0.25X_1h_rep2 | 19,447,306 | 18,334,126 | 6,297,947 | 231,769 |
| 4X_1h_rep1 | 20,757,959 | 19,441,561 | 6,237,121 | 169,843 |
| 4X_1h_rep2 | 32,511,060 | 31,375,440 | 8,412,891 | 173,228 |
| 20X_1h_rep1 | 26,169,545 | 25,181,922 | 8,804,567 | 198,803 |
| 20X_1h_rep2 | 30,306,167 | 29,298,859 | 8,421,783 | 171,766 |
| 0.25X_3h_rep1 | 19,972,476 | 19,242,890 | 8,302,520 | 277,957 |
| 0.25X_3h_rep2 | 22,424,442 | 21,589,488 | 6,146,798 | 256,845 |
| 4X_3h_rep1 | 26,113,643 | 24,981,615 | 8,229,931 | 233,279 |
| 4X_3h_rep2 | 25,581,091 | 24,660,957 | 7,248,518 | 199,745 |
| 20X_3h_rep1 | 28,846,007 | 27,221,795 | 9,050,211 | 213,391 |
| 20X_3h_rep2 | 29,543,869 | 28,362,082 | 5,477,620 | 177,598 |

Table S5. Primers used in this study

| Primer | Sequence (5'->3') | Description |
|---------------|--|--|
| Tn-adaptor-F | ATGATGGCCGGTGGATTTGTGNNANNANNNTGGTCGTGGTAT | ligate with genome |
| Tn-adaptor-R | TACCACGACCA-NH2 | DNA fragments; |
| Tn-PCR1-F | ATGATGGCCGGTGGATTTGTG | enrich DNA fragments |
| Tn-PCR1-R | AAAGCTCTCATCAACCGTGG | containing transposon; |
| Tn-PCR2-F | AATGATACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTCTCCGATCTCG GGGATCCTCTAGAGTCGACCTGC | bridge amplification before sequencing; |
| Tn-PCR2-R | CAAGCAGAAGACGGCATAACGAGATTGTTTCGAGTGACTGGAGTTCAGACGTGTGCTCTTC CGATCTATGATGGCCGGTGGATTTGTG | |
| nuo-KO-F | GAGCAGTGAATCTGGCGCTACTTTTGTAGAGTAAGCAATGATTCCGGGGATCCGTCGA | knock out <i>nuoA-N</i> |
| nuo-KO-R | TGACTTACAAAGTAACAGATTACATCAGCGGCATTGCCAATGTAGGCTGGAGCTGCTT | |
| nuo-test-F | GTCGTC AAGGATCTGGGGTG | verify $\Delta nuoA-N$ |
| nuo-test-R | AGAGAAAACCGCTTCAGGCA | |
| bamB-KO-F | GAAAATTAATAATTTGTCCATCTGAGAGGGACCCGATGATTCCGGGGATCCGTCGA | knock out <i>bamB</i> |
| bamB-KO-R | CCAGGAGCCGTTTTCAAAGTGAACGACAGACGATTATGTAGGCTGGAGCTGCTT | |
| bamB-test-F | CCTGCGTGGTGAAGCATTGC | verify $\Delta bamB$ |
| bamB-test-R | TAGCAGCCAGTCCCTTCCCG | |
| skp-test-F | CTCCTACGCCAGCCGTTCC | verify Δskp |
| skp-test-R | GGGTCATGACAACCGCGGAC | |
| recG-test-F | GCCGGAAGCAGAGCAACAAC | verify $\Delta recG$ |
| recG-test-R | CTTTGGCCCGTCGCACATG | |
| recA-test-F | GGGAATGCTTCAGCGGCGAC | verify $\Delta recA$ |
| recA-test-R | CCATAATCGGTGCCGCGAG | |
| fecA-test-F | CGGGACGTTCCCGCTGAAA | verify $\Delta fecA$ |
| fecA-test-R | CACCACAATCCGTTGTGGCG | |
| fepD-test-F | TCATCTGGATCTGCACCGGC | verify $\Delta fepD$ |
| fepD-test-R | GCGGGTTACGCATCAGCGAC | |
| fetA-test-F | CCGACAATGACCAGCGCGAC | verify $\Delta fetA$ |
| fetA-test-R | GGCTGGCATCATCCACGCTG | |
| katG-test-F | CTGCCTCGAAATGAGGGCGG | verify $\Delta katG$ |
| katG-test-R | AGTGTGAGCACAACCAGGCC | |
| exbB-test-F | GCAAATGGCGTGCTGGTGAC | verify $\Delta exbB$ |
| exbB-test-R | CGGCGTGCTGGTAGAAGCAG | |
| greA-test-F | CGCTGCCACGCTAAGATTATCC | verify $\Delta greA$ |
| greA-test-R | CTGACCTGGGACTTGTACCCGG | |
| uvrA-test-F | GCACCGTGTATCTCGACGGTTC | verify $\Delta uvrA$ |
| uvrA-test-R | CGGGAAACAAACCTGGCCAGAC | |
| gltA-test-F | GATACGGCCAGTGC GGCCAATG | verify $\Delta gltA$ |
| gltA-test-R | CTGGGTGGCTCGGGATTGCAGGG | |



Figures S1. (A) Rifampicin susceptibility (MIC₉₀) of *E. coli* MG1655 and the $\Delta nuoA-N$ mutant. (B) Grow curves of *E. coli* MG1655 and the $\Delta nuoA-N$ mutant. (C) Survival of *E. coli* MG1655 and the $\Delta nuoA-N$ mutant treated with spectinomycin (64 μg/ml, left), chloramphenicol (50 μg/ml, middle), tetracycline (10 μg/ml, right). Data shown are mean \pm SE in triplicate.