

Supplementary Table S1. Primers used in this study

Primer name	Primer sequence
Primers for real-time PCR	
aroA-qpcr-LF	atggcaacagaactgcgtaa
aroA-qpcr-LR	catttgggatcaagaatcgtc
aroC-qpcr-LF	ctttggcgaagaagttgagatga
aroC-qpcr-LR	ccgttgccgtaacaggtgat
aroK-qpcr-LF	gagttgaccgagaaacaggg
aroK-qpcr-LR	ctctcatacagcggattgc
pheA-qpcr-LF	catctggacgccattacat
pheA-qpcr-LR	caatcggtacgacggcatag
tyrB-qpcr-LF	ggaatcaggcgtctgggtca
tyrB-qpcr-LR	gccgttagtcgcttcgtcata
Primers for genomic editing	
cas-aroK-N20-LF	atgatgatgattatcattcgttttagagctagaaatag
cas-aroK-N20-LR	gaatgataaatcatcatcatgctaagatctgactccataa
cas-aroK-up-LF	ggtcgcatccggctgaaatta
cas-aroK-up-LR	cttttttgaggaggacgttactcactggaaaccagtcg
cas-aroK-mid-LF	gactggtttccagtgagtaacgtccctcctcaaaaaagc
cas-aroK-mid-P9-LR	tgatactgctatgcagtatcaaggcataacggctgcttcgtcaaaccgacg ttacatac gatggtgtaaataaaa
cas-aroK-down-P9-LF	tgatactgcatagcagatatcactcataaagatcgtcaggacagaagaag catggcagagaaaacgcaat
cas-aroK-down-LR	gacaacgccacgagcggaaaga
cas-aroK-mid-P8-LR	gcggcgcaggttaaggcataacggctgcttcgtcaaaccgacgttacata cgatggtgtaaataaatgtacaa
cas-aroK-down-P8-LF	tatgccttaacctgcgccgagatatacactcataaagatcgtcaggacaga agaaagcatggcagagaaaacgcaata
cas-aroK-mid-arti-LR	ctagcacaatacctaggactgagctagctgtcaattactcactggaaacca gtc
cas-aroK-down-arti-LF	agtccatggtattgtgctagcaactttaagaaggagatatacatatggcaga gaaacgcaatat

Supplementary Table S2. Sequence of the dynamic promoters

Promoter name	Promoter sequence
P1	ACACCATATGTAACGTCGGTTAAGACGAAGCAGCCGTTATGC CTTATCCTGCATAGCAGA
P2	ACACCATATGTAACGTCGGTATGACGAAGCAGCCGTTATGC CTTAACCTGCGCCGCAGA
P3	ACACCATATGTAACGTCGGTTTGACGAAGCAGCCGTTATGC CTGAACCTGCGCCGCAGA
P4	ACACCATATGTAACGTCGGTTAGACGAAGCAGCCGTTATGC CTTAACCTGCGCCGCAGA
P5	ACACCATATGTAACGTCGGTTAGACGAAGCAGCCGTTATGC CTTATCCTGCGCCGCAGA
P6	ACACCATATGTAACGTCGGTTTGACGAAGCAGCCGTTATGC CTGATCCTGCATAGCAGA
P7	ACACCATATGTAACGTCGGTTTGACGAAGCAGCCGTTATGC CTTAACCTGCGCCGCAGA
P8	ACACCATTCGTATGTAACGTCGGTTTGACGAAGCAGCCGTTA TGCCTTAACCTGCGCCGCAGA
P9	ACACCATATGTAACGTCGGTTTGACGAAGCAGCCGTTATGC CTGATACTGCATAGCAGA
P10	ACACCATATGTAACGTCGGTTTGACGAAGCAGCCGTTATGC CTGATAATGCATAGCAGA
P11	ACACCATTCGTATGTAACGTCGGTTTGACGAAGCAGCCGTTA TGCCTTATCCTGCGCCGCAGA
P12	ACACCATTCGTATGTAACGTCGGTTTGACGAAGCAGCCGTTA TGCCTTATCCTGCATAGCAGA

Notes: Yellow highlights nucleotides represent the introduced site mutations in the promoter sequence of *tyrP*.