SUPPLEMENTARY MATERIAL

Table S1: Oligonucleotides used in this study

Oligonucleotides	Sequence (5' → 3') and properties[a]
DNA-Sequencing	
M13-for	CGCCAGGGTTTTCCCAGTCAC
M13-rev	AGCGGATAACAATTTCACACAGGA
pAN6-for	GCTCGTATAATGTGTGGAATTGTG
pAN6-rev	CTCATCCGCCAAAACAGCCAAG
Deletion of ldhA	
ΔldhA1-for	TATAAAGCTTCTTGTAAAACAGCCAGGTTAGCAG (HindIII)
ΔldhA2-rev	*CCCATCCACTAAACTTAAACA*ACCGACGGTTTCTTTCATTTTCG
ΔldhA3-for	*TGTTTAAGTTTAGTGGATGGG*GCAAATACCCTGCGCGAAATTCAG
ΔldhA4-rev	TATAGAATTCCATGATGCAGGATGGAGTATCCG (EcoRI)
ΔldhA-out-for	GCACCAGTTGCGATGTGGGTGG
ΔldhA-out-rev	CGTTGTCGATCATCTGCTTCCAG
Deletion of *cat*	
Δcat-out-for	CGTCGTAAAGCGGAGTTTTAGG
Δcat-out-rev	CGGCACAGCGTGCGGAAAGC
Deletion of *pqo*	
Δpqo-out-for	GAGTTGTCTACACCGATCAGAAAG
Δpqo-out-rev	GCATACCTGCTGCCCAGCGCC
Deletion of *pta-ack*	
Δpta-ack-out-for	CTGCTCCTTGTCCATCACATTGTGC
Δpta-ack-out-rev	GCAGGCCTCAGCTGGCTTCGAG
Chromosomal integration of P_{tuf}-*pyc*^{P458S} construct in *Δpta-ackA* region	

mΔpta-ack1-for	TATAAAGCTTCCATAACGGATCAAACCGAAAGGC (HindIII)
mΔpta-ack2-rev	CCTGCAGGACATCGCCTTTCTAATTTCAGCCTG (SbfI)
mΔpta-ack-Ptuf-for	*GAAAGGCGATGT*CCTGCAGGCCACAGGGTAGCTGGTAGTTTG (SbfI)
GTG-Ptuf-rev	CACTGTATGTCCTCCTGGACTTC
Ptuf-pyc-for	*GAAGTCCAGGAGGACATACA*GTGTCGACTCACACATCTTCAACG
	*GGATCCTAACCAGGAGAG*CATATGTTAGGAAACGACGACGATCAA
pyc-mΔpta-ack-rev	GTC (NdeI)
mΔpta-ack3-for	CATATGCTCTCCTGGTTAGGATCCACCAC (NdeI)
mΔpta-ack4-rev	TATATCTAGAGCTTCCGCCTCCGCGAACCC (XbaI)
mΔpta-seq-for	CGCTCCGTATTGTTTTCTACGG
mΔack-seq-rev	GAGGTCTAGGGGCCAACAAGC
pyc-seq1-for	GGCATTACTTTTATTGGCCCAACC
pyc-seq2-for	GGAACCGTGGAATTCTTGGTCG
pyc-seq3-for	CCCGCACCTCCTTCAGGCTC
pyc-seq4-for	CGCGGCCGCAACACCGTGG
pyc-seq5-for	CGCACACCCGTCGCGATACC
pyc-seq6-for	GACGCTGATGATTCCAAGGAACG
pyc-seq12-rev	GGTGGATTCCGCCAAAACTGGC
pyc-seq7-for	CCATGTTGCTGCACCATTCGC

Chromosomal integration of P_{tuf}-*fdh* construct in Δ*pqo* region

Δpqo1-for	TATAAAGCTTCAACGTTGGGTTTTCGTAGGCG (HindIII)
Δpqo2-XbaI-BamHI-rev	*GGATCCGAGCTCGGTACTCTAGA*CTGCGTAGCTGTGTGCCATCTG (BamHI & XbaI)
XbaI-BamHI Dpqo3-for	*TCTAGAGTACCGAGCTCGGATCC*GCCCGTTCGAACATAAGGAATAT TC (XbaI & BamHI)
Δpqo4-rev	TATAGAATTCGCCGTGACTCCACTTCTACGATG (EcoRI)
Δpqo-out2-for	CCGAACCCCACCAGAAGAATTCC

Δpqo-out2-rev	GTACGGAAAGTGCCATCGGCTTC
Ptuf-for	TATATCTAGACCACAGGGTAGCTGGTAGTTTG (XbaI)
Ptuf-rev	TGTATGTCCTCCTGGACTTCGTG
Ptuf-fdh-for	*CACGAAGTCCAGGAGGACATACA*ATGGCAAAGGTCCTGTGCGTTC
fdh-rev	TATAGGATCCTCAGACCGCCTTCTTGAACTTGG (BamHI)
Δpqo-fdh-seq1-for	GTCGCACCAAGTTAGGCAACAC
Δpqo-fdh-seq3-rev	CAGCAGGTGTATCAATCATCATGG
fdh-seq-rev	GCGTCTCGTCATTGATCATGTGC
Construction of pEKEx2-*fdh*	
fdh-PstI-RBS-for	ATGCCTGCAGG**AAGGA**GATATAGATATGGCAAAGGTCCTGTGCG TTCT (PstI)
fdh-BamHI-rev	TATAGGATCCTCAGACCGCCTTCTTGAACTTGG (BamHI)
Construction of pAN6-*gap*	
gap-for	TATACATATGATGACCATTCGTGTTGGTATTAACG (NdeI)
gap-rev	TATAGCTAGCTTAGAGCTTGGAAGCTACGAGCTC (NheI)
gap-seq-for	CGGCTAAGGCTCACATCGAAGC

[a] In some cases oligonucleotides were designed to introduce recognition sites for restriction endonucleases (recognition sites underlined, restriction endonucleases indicated in parentheses), ribosomal binding sites (printed in bold), and complementary sequences for generating overlap-extension PCR products (printed in italics) into the resulting PCR products.