

Table S1. Primers used in this study

Primers used for lambda Red-mediated mutant construction^a:

| | |
|--------------------------------|---|
| pduD+P1_F | 5'AAATTAATGAAAAATTGCTGCGCCAGATAATTGAAGACGTACTCCGCGA <u>TTGTAGGCTGGAGCTGCTTCG3'</u> |
| pduD+P2_R | 5'CTGCGGGTTTTTGCCCGTCACGACGTACTTGGTCTCTTTAATATGCAAAA <u>CATATGAATATCCTCCTTAG3'</u> |
| eutK+P1_F | 5'ATGCGATAGCGACTACTGCGTTTACGCAACGCTCCGTCAGAAAAGAGTT <u>GTGTAGGCTGGAGCTGCTTCG3'</u> |
| eutK+P2_R | 5'CAATGCCCTGGGATTACTGGAAGTGGACGGAATGGTCGCCGCCGTCGAT <u>GCATATGAATATCCTCCTTAG3'</u> |
| cobS+P1_F | 5'GCCAGCAGAAAGATCAATTCACCAAGTTCGATCGCCGCGCCAGCGTAT <u>CTGTAGGCTGGAGCTGCTTCG3'</u> |
| cobS+P2_R | 5'ATGAGTAAGCTGTTTTGGGCCATGCTCGCTTTTATTAGCCGCTTGCCCGTC <u>ATATGAATATCCTCCTTAG3'</u> |
| pduA-X+P1_F | 5'ATGCAACAAGAAGCACTAGGAATGGTAGAAACCAAAGGCTTAACCGCAG <u>CGTGTAGGCTGGAGCTGCTTC3'</u> |
| pduA-X+P2_R | 5'TCACTGCAGTTTGACCCCGCCAGTGACCATCTTGAGTAAATGTTGTTTTG <u>ATGGGAATTAGCCATGGTCC3'</u> |
| eutK-S+P1_F | 5'ATGAATAAAGAACGCATTATTCAGGAATTTGTGCCGGGCAAACAGGTCA <u>CGTGTAGGCTGGAGCTGCTTC3'</u> |
| eutK-S+P2_R | 5'TTAATTTTTGATGCGATAGCGACTACTGCGTTTACGCAACGCTCCGTCAG <u>ATGGGAATTAGCCATGGTCC3'</u> |
| pduA-X/eutKS+P1_F ^b | 5'ATGAATAAAGAACGCATTATTCAGGAATTTGTGCCGGGCAAACAGGTCA <u>CGTGTAGGCTGGAGCTGCTTC3'</u> |
| pduA-X/eutKS+P2_R ^b | 5'TTAATTTTTGATGCGATAGCGACTACTGCGTTTACGCAACGCTCCGTCAG <u>ATGGGAATTAGCCATGGTCC3'</u> |

^a Sequences complementary to pKD3/pKD4 are underlined.

^b Primer pair to generate a double *pduA-X* and *eutKS* deletion mutant in the *pduA-X*-minus mutant background by replacement of *eutKS* with the *cat* gene.

Primers used for gene cloning and mutant complementation^c:

| | |
|---------------|---|
| XbaI+pduDX_F | 5'CCCCCTAGAAAAGCCAAGCTAACCGGCGACTATTTG3' |
| SacI+pduDX_R | 5'CCCCGAGCTCTGAAACACGCCGATGTAAAAGCCGAAT3' |
| EcoRI+eutRK_F | 5'CCCCGAATCAACCAACTATTCGGCCGCGTTCTTAAC3' |
| SacI+eutRK_R | 5'CCCCGAGCTCTACCAACCACAGACAGCAGCGAATC3' |
| EcoRI+cobTS_F | 5'CCCCGAATCCATTTTCGTGATATTGCCGGTCGGGTC3' |
| SacI+cobTS_R | 5'CCCCGAGCTCCGCATTATATCCCTTCCTTTGTCGC3' |

^c Italicized letters represent a string of four Cs followed by restriction enzyme target sequences

Primers used for qRT-PCR:

| | |
|--------|------------------------------|
| cbiE_F | 5'CCGTCGGGATAAAGG3' |
| cbiE_R | 5'TGGTTCGCTAACTGCTC3' |
| cobS_F | 5'CTACGCCCGTGAAGAGG3' |
| cobS_R | 5'AACAGAGCCAGCAGAAAAGAT3' |
| eutD_F | 5'CGCCGGACGCAGTGGAAAAG3' |
| eutD_R | 5'CTGCGGCAGCATCAGGAAAATAGA3' |

| | |
|--------|------------------------------|
| eutM_F | 5'TTGAGGCCTCCGATGCGATGGTAA3' |
| eutM_R | 5'CGCCTTTGAAGCTGATCGGGAACA3' |
| fruK_F | 5'CGTGTTGCCACCATT3' |
| fruK_R | 5'CTGAACCACCTGAAAGC3' |
| fucI_F | 5'GACGATACCTCCATTCT3' |
| fucI_R | 5'GGTTCTGGGCTTCATT3' |
| gyrB_F | 5'CGCCGATAACTCCGTGTCCGTAAC3' |
| gyrB_R | 5'CGACAGAGCGTTGACTACCGAGAC3' |
| pduE_F | 5'ACGCCCTTCGTCCGTATCGTT3' |
| pduE_R | 5'TTAATCGTCGCCTTTGAGTTTTT3' |
| pduM_F | 5'GCAGCGCATTGTCGAGGAGATTGT3' |
| pduM_R | 5'CCGAACCCGCATGCAGAACCAG3' |
| rhaA_F | 5'CCGCAGTAGGTATTGATGT3' |
| rhaA_R | 5'AGGTAAATGGCGTGTAGG3' |
| ttrC_F | 5'TACCGTCGCCCTGTCA3' |
| ttrC_R | 5'AGGTGCCGAGAATAGCC3' |