

Additional file 2. Oligonucleotides used in this study

Name	Sequence(5' →3')*	Comments
speC_F	GATTGCGAATTCATGAAATCAATGAATATTGCCG	EcoRI
speC_R	GCATACGAGCTCTTACTTCAACACATAACCGTACAACC	SacI
acnA_F	ATAATGGAGCTCACAGGAAACAATGTCGTCAACCCTACGAGAAG	SacI
acnA_R	GGCAGGTCTAGATTACTTCAACATATTACGAATGACATAAT	XbaI
acnB_F	ATAATGGAGCTCACAGGAAACAGTGCTAGAAGAATACCGTAAGCAC	SacI
acnB_R	GCTATGTCTAGATTAAACCGCAGTCTGAAAATCA	XbaI
ackA_F	GCTTTAGAGCTCACAGGAAACAATGTCGAGTAAGTTAGTACTGGTTCTG	SacI
ackA_R	ATTATGTCTAGATCAGGCAGTCAGGCGGCTCG	XbaI
glk_F	ATCATAGAGCTCACAGGAAACAATGACAAAGTATGCATTAGTCGG	SacI
glk_R	CGTCAGTCTAGATTACAGAATGTGACCTAAGGTCTGG	XbaI
ppc_F	ATCATAGAGCTCACAGGAAACAATGAACGAACAATATTCCGCA	SacI
ppc_R	GCTATGTCTAGATTAGCCGGTATTACGCATACCTG	XbaI
eno_F	GCTTAGAGCTCACAGGAAACAATGTCCAAAATCGTAAAAATCATC	SacI
eno_R	GCCGTCTCTAGATTATGCCTGGCCTTTGATCTC	XbaI
pgm_F	GTTATAGAGCTCACAGGAAACAATGGCAATCCACAATCGTGC	SacI
pgm_R	GCTGTGTCTAGATTACGCGTTTTTCAGAACTTCGCTAA	XbaI
gapA_F	ATCATAGAGCTCACAGGAAACAATGACTATCAAAGTAGGTATCAACGG	SacI
gapA_R	GCTGCGTCTAGATTATTTGGAGATGTGAGCGATCA	XbaI
fbaA_F	ATCATAGAGCTCACAGGAAACAATGTCTAAGATTTTTGATTCGTAA	SacI
fbaA_R	GGTGGCTCTAGATTACAGAACGTCGATCGCGT	XbaI
fbaB_F	ATCATAGAGCTCACAGGAAACAATGACAGATATTGCGCAGTTG	SacI
fbaB_R	GAGCGTGTCTAGATCAGGCGATAGTAATTTTGCTATC	XbaI
tpiA_F	ATCATAGAGCTCACAGGAAACAATGCGACATCCTTTAGTGATGG	SacI
tpiA_R	GCTCGACTCTAGATTAAAGCCTGTTTAGCCGCTTC	XbaI
pgk_F	ATCATAGAGCTCACAGGAAACAATGTCTGTAATTAAGATGACCGATC	SacI
pgk_R	GACTATGTCTAGATTACTTCTTAGCGCGCTCTTCG	XbaI
pykA_F	ATCATAGAGCTCACAGGAAACAATGTCCAGAAGGCTTCGCAG	SacI
pykA_R	GCTAGGGTCTAGATTACTCTACCGTTAAAATACGCGT	XbaI
pykF_F	ATCATAGAGCTCACAGGAAACAATGAAAAAGACCAAATTGTTTG	SacI

pykF_R	GCTATG <u>TCTAG</u> ATTACAGGACGTGAACAGATGCG	XbaI
icd_F	ACTTAC <u>GAGCTC</u> ACAGGAAACAATGGAAAGTAAAGTAGTTGTTCCG	SacI
icd_R	GCCGACT <u>TCTAG</u> ATTACATGTTTTCGATGATCGCG	XbaI
gltA_F	ATCATAG <u>GAGCTC</u> ACAGGAAACAATGGCTGATACAAAAGCAAACT	SacI
gltA_R	GCTCCG <u>TCTAG</u> ATTAACGCTTGATATCGCTTTTAAAG	XbaI

*Restriction sites are underlined.