

Table S1: Primers used for *mcsB/mcsA* mutagenesis and *in vitro* phosphorylation

Primers for the construction of the plasmid pRSETA-*mcsB*

pRSETA-*mcsB*-for CGGGATCCATGTGCTAAAGCATTTCAGG

pRSETA-*mcsB*-rev GGGGTACCTCATATCGATTCATCCTCCTGTC

Primers for the construction of *mcsB* point mutants using pRSETA-*mcsB*

Bs-*mcsB*-R29K-for AGCAGCAAATACGTTTAGCAAGAACTTTGAGCATA

Bs-*mcsB*-R29K-rev CTAAACGTATTTTGCTGCTGAGTACAATGTCACTTTC

Bs-*mcsB*-R31K-for CGCATAAAATTAGCAAGAACTTTGAGCATATTTCG

Bs-*mcsB*-R31K-rev TGCTAATTTTATGCGGCTGCTGAGTACAATGTCAC

Bs-*mcsB*-R34K-for TTAGCAAAAACTTTGAGCATATTTCGGTTCCTACG

Bs-*mcsB*-R34K-rev AAAGTTTTTTGCTAAACGTATGCGGCTGCTGAGTAC

pRSETA_Bs168_*mcsB*_R86K_for

TTAGAAAAGAAGGTAAGTACTTGTGAAAAACATCTAATCAGC

pRSETA_Bs168_*mcsB*_R86K_rev

AAGTACCTTCTTTTCTAAAGGCTGTGCATCATTTCATTC

pRSETA_Bs168_*mcsB*_R125K_for

ACCATATTAAGATTCAGTGTCTTTTCCCTGGATTTCAGC

pRSETA_Bs168_*mcsB*_R125K_rev

CACTGAATCTTAATATGGTCCTCTTCATTTAGCATGACG

pRSETA_Bs168_*mcsB*_R161K_for

ATGAGCAAAAGGGATACTTAACCAGCTGTCCTACAAACG

pRSETA_Bs168_*mcsB*_R161K_rev

TAAGTATCCCTTTTGCTCATTGAATGCATAATCAACTTTTTTC

Bs-*mcsB*-R176K-for GGTTTAAAAGCTTCGGTCATGATGCATCTGCCG

Bs-*mcsB*-R176K-rev CGAAGCTTTTAAACCAGTACCTACGTTTGTAGG

pRSETA_Bs168_mcsB_R190K_for

GGTTTTAACTAAGCAAATAAATCGAATTATACCGGCAATTAAT C

pRSETA_Bs168_mcsB_R190K_rev

ATTTATTTGCTTAGTTAAAACCCAGCGCCGGCAGATGCATC

pRSETA_Bs168_mcsB_R194K_for

CAAATAAATAAGATTATACCGGCAATTAATCAATTAGGCTTAG

pRSETA_Bs168_mcsB_R194K_rev

CGGTATAATCTTATTTATTTGCCTAGTTAAAACCCAGCGC

Bs-mcsB-R207K-for

GTTGTTAAAGGAATTTATGGGGAAGGCAGCGAA

Bs-mcsB-R207K-rev

AATTCCTTTAACAACCTAAGCCTAATTGATTAATTG

pRSETA_Bs168_mcsB_R252K_for

GAACAAGAAAAGTCTGCCCGAGAAGCGATTTATCAAACCTTC

pRSETA_Bs168_mcsB_R252K_rev

GGGCAGACTTTTCTTGTTCAATCAACTGAGCAGCAACAC

Bs-mcsB-R255K-for

TCTGCCAAAGAAGCGATTTATCAAACCTTCTAAAATC

Bs-mcsB-R255K-rev

CGCTTCTTTGGCAGATCGTTCTTGTTCAATCAACTG

Bs-mcsB-R269K-for

GAGGATAAAGTATATCGGTCATATGGGGTCTTGTCT

Bs-mcsB-R269K-rev

ATATACTTTATCCTCAAGTTCGATTTTAGAAGTTTG

Bs-mcsB-R272K-for

GTATATAAATCATATGGGGTCTTGTCTAATTGCCGG

Bs-mcsB-R272K-rev

ATATGATTTATATACCCGATCCTCAAGTTCGATTTTAG

pRSETA_Bs168_mcsB_R281K_for

AATTGCAAGATGATAGAATCGAAAGAACTGCAAAGTGC

pRSETA_Bs168_mcsB_R281K_rev

ATTCTATCATCTTGCAATTAGACAAGACCCCATATGACC

pRSETA_Bs168_mcsB_R296K_for

AGATGTTAAGTTAGGCATAGACTTAGGCATAATAAAAGG

pRSETA_Bs168_mcsB_R296K_rev

TGCCTAACTTAACATCTGAAAGGCACTTTGCAGTTTC

pRSETA_Bs168_mcsB_R333K_for

GAGGCGCTTTGAAGCCGAACGAAAGGGACATTCGAAGAGC

pRSETA_Bs168_mcsB_R333K_rev

GTTTCGGCTTCAAAGCGCCTCCCGAGTATTGCTGTAAAAAC

pRSETA_Bs168_mcsB_R337K_for

TCCGAACGAAAAGGACATTCGAAGAGCGGCTCTCATCAG

pRSETA_Bs168_mcsB_R337K_rev

GAATGTCCTTTTCGTTTCGGTCGCAAAGCGCCTCCCGAG

Bs-mcsB-R341K-for

ATTCGAAAAGCGGCTCTCATCAGAGAACGGCTTCAC

Bs-mcsB-R341K-rev

AGCCGCTTTTTCGAATGTCCCTTTTCGTTTCGGTCGC

Bs-mcsB-R346K-for

CTCATCAAAGAACGGCTTCACTTAGAAATGAATGG

Bs-mcsB-R346K-rev

CCGTTCTTTGATGAGAGCCGCTCTTCGAATGTCCC

pRSETA_Bs168_mcsB_R348K_for

CATCAGAGAAAAGCTTCACTTAGAAATGAATGGGAAAAGAC

pRSETA_Bs168_mcsB_R348K_rev

AGTGAAGCTTTTCTCTGATGAGAGCCGCTCTTCGAATG

pRSETA_Bs168_mcsB_R357K_for

AATGGGAAAAAGCAGGAGGATGAATCGATATGAGAATTCGG TACC

pRSETA_Bs168_mcsB_R357K_rev

ATCCTCCTGCTTTTTCCATTCTTTCTAAGTGAAGCCGTTTC

Primers for the construction of *mcsA* point mutants using pRSETA-*mcsA*

pRSETA_Bs168_mcsA_R9K_for

GTGCCACGAGAAGCCAGCCACTTTTCACTTTACAAAGGTTG

pRSETA_Bs168_mcsA_R9K_rev

TGGCTGGCTTCTCGTGGCACTCTTGACAAATCAAGGATCC

pRSETA_Bs168_mcsA_R96K_for

GAAAAATTGGCAAGTTTGGATGTTCTGAATGTTACAAAACATT TC

pRSETA_Bs168_mcsA_R96K_rev

CATCCAAACTTGCCAATTTTTCTGAATTGCTGAAAAGTCATTCC

pRSETA_Bs168_mcsA_R115K_for

AATCCTAAAGAAAGTGACACAGCGGAAACACTGTGCATG

pRSETA_Bs168_mcsA_R115K_rev

GTGCACTTTCTTTAGGATTGGTGTAAATGTTGCTATGAAATG

pRSETA_Bs168_mcsA_R131K_for

GATACCGAAAAAGATAGGCGGCAATCTTCATGTCAGACGGC AG

pRSETA_Bs168_mcsA_R131K_rev

GCCGCCTATCTTTTTCGGTATCTTACCTGCATGCACAGTGTTTC

pRSETA_Bs168_mcsA_R139K/

R140K_for CTTTCATGTCAAGAAGCAGATTGATATGCTAAAAAAGGAATTA
GAATCC

pRSETA_Bs168_mcsA_R139K/

R140K_rev TATCAATCTGCTTCTTGACATGAAGATTGCCGCCTATTCGTTTCG

pRSETA_Bs168_mcsA_R165K_for

CTCATGTAAAGGATCAAATTCGTTTATTAGAACAATCACTC

pRSETA_Bs168_mcsA_R165K_rev

ATTTGATCCTTTACATGAGCTGCATTTTCAAATTCTTCTTG

pRSETA_Bs168_mcsA_R169K_for

GATCAAATTAAGTTATTAGAACAATCACTCAAAGTACAG

pRSETA_Bs168_mcsA_R169K_rev

CTAATAACTTAATTTGATCTCTTACATGAGCTGCATTTTC