

**Table S6. Oligonucleotides used in this study**

<b>Primers for constructing deletion mutants</b>		
BT2167_5f – forward primer for the region upstream of <i>BT2167 (fusA2)</i> : GCTCTAGAACTAGTGGATCCTTCGCCGGGCAGTCCGTAA	This stud y	W3 569
BT2167_5r – reverser primer for the region upstream of <i>BT2167 (fusA2)</i> : AATATATAAGATTTAGTAATTACTCAGTATGTTCTCGC	This stud y	W3 570
BT2167_3f – forward primer for the region downstream of <i>BT2167 (fusA2)</i> : TTACTAAAATCTTATATATTACAATAATTCTCTCAAAACTGTTAAA ACCG	This stud y	W3 571
BT2167_3r – reverse primer for the region downstream of <i>BT2167 (fusA2)</i> : AAGATAAACATTCGAGTCGACCGTCTAACATGTCCAACACTACTT C	This stud y	W3 572
mutP2167uR – reverse primer for the region upstream of the 22bp motif in <i>BT2167 (fusA2)</i> promoter: TATTATGACAGTGTACTATCCGTTATGGGTAGCAG	This stud y	W4 686
mutP2167dF – forward primer for the region downstream of the 22bp motif in <i>BT2167 (fusA2)</i> promoter: TAGAACACTGTCATAAAATATTGCTTT	This stud y	W4 687
mutP2167dR – reverse primer for the region downstream of 22bp motif in <i>BT2167 (fusA2)</i> promoter: AAGATAAACATTCGAGTCGACACCAATGCTTATGCATTTC	This stud y	W4 688

<b>Primers for constructing pNBU2-tetQ plasmids</b>		
PmalRF – forward primer to generate a construct encoding wild-type BT4338 or BT4338 with a C-terminal epitope tag in pNBU2-tetQ:  GCTCTAGAACTAGTGGATCCTCAAAGTACTGGTACCGCAAATGA	PMI  D:  2772  9509	W2  935  2772  9509
nbu4338-4xG-HAr – reverse primer to generate a construct encoding BT4338 with a C-terminal epitope tag in pNBU2-tetQ:  GAAGATAGGCAATTAGTCGACTTAAGCGTAGTCTGGGACGTCGTA TGGGTACCCGCCACCTCCTCCTATCTTGCTTATTTCTTGAGTTTTC	This  stud  y	W4  101  y
nbu4338r – reverse primer to generate a construct encoding wild-type BT4338 in pNBU2-tetQ:  AAGATAGGCAATTAGTCGACTTATCCTATCTTGCTTATTTCTTGA GTTT	This  stud  y	W3  185  y
<b>Primers for constructing pKNOCK-tetQ plasmids</b>		
pKOBT2167f – forward primer to generate a construct encoding the C-terminal of BT2167 epitope tag in pKNOCK-tetQ:  AGTGGATCCCCGAAGATTCCGTATCGTGA	This  stud  y	W3  592  y
nbuBT2167FL – reverse primer to generate a construct encoding the C-terminal of BT2167 epitope tag in pKNOCK-tetQ:  AAGATAGGCAATTAGTCGACTTACTTGTACATCGTCATCCTATAAT CTTCCTCTGTTGTTAGCTTCAAAATC	This  stud  y	W3  591  y
koBo04581f – forward primer to generate a construct encoding the 157-556 bp of BT4338 sequolog in <i>B. ovatus</i> ( <i>Bovatus_RS22425</i> ) in pKNOCK-tetQ	This  stud  y	W4  645  y

koBo04581r – reverse primer to generate a construct encoding the 157-556 bp of BT4338 sequolog in <i>B. ovatus</i> ( <i>Bovatus_RS22425</i> ) in pKNOCK-tetQ	This stud y	W4 646
<b>Primers for measuring gene expression by qPCR</b>		
qBT16sF – forward primer for measuring the <i>fusA2</i> transcript by qPCR: qPCR: GGTAGTCCACACACTAAACGATGAA	PMI D: 2772 9509	102 56
qBT16sRr – reverse primer for measuring the <i>fusA2</i> transcript by qPCR: CCCCGTCAAATTCTTTGAGTTTC	PMI D: 2772 9509	102 57
qBT2167f – forward primer for measuring the <i>fusA2</i> transcript by qPCR: AAAACGTCGCGGATCTGTTG	This stud y	W3 565
qBT2167r – reverse primer for measuring the <i>fusA2</i> transcript by qPCR: TTTCCAGACGCCACTTCAAC	This stud y	W3 566
q2729F890 – forward primer for measuring the <i>fusA</i> transcript by qPCR: CGAATACAGGTGCAGAAGAA	This stud y	W4 344
q2729R990 – reverse primer for measuring the <i>fusA</i> transcript by qPCR: GTCAAACGACCTACATAAGGG	This stud y	W4 345

qBT0356F – forward primer for measuring the <i>araM</i> transcript by qPCR:  AACGGCAACGGATATGATCAC	PMI D: 2772 9509	W1 784
qBT0356R – reverse primer for measuring the <i>araM</i> transcript by qPCR:  GCTACCTGCGAGATGTCACCTT	PMI D: 2772 9509	W1 785
<b>ChIP-qPCR primers</b>		
1311chipF – forward primer for measuring the ChIP-enrichment of <i>BT1311</i> promoter: GTCAGTGATCTGGAAGAAGCAATG	PMI D: 2504 1429	136 21
1331chipR – reverse primer for measuring the ChIP-enrichment of <i>BT1311</i> promoter: GGGAAATACACCTGTCAGGAACAA	PMI D: 2504 1429	136 22
CHIP2167F1 – forward primer for measuring the ChIP-enrichment of <i>fusA2</i> promoter: GCATCACTAAATTAAATGGTATGCG	This stud y	W4 852
CHIP2167R1 – reverse primer for measuring the ChIP-enrichment of <i>fusA2</i> promoter: CCCAACAAAGGCAATGTTCT	This stud y	W4 853

CHIPBT0356F – forward primer for measuring the ChIP-enrichment of <i>fusA2</i> promoter: CGGCTTCCGAGCTGACTTTA	This stud y	W3 335
CHIPBT0356R – reverse primer for measuring the ChIP-enrichment of <i>fusA2</i> promoter: GGGCATTGTTCACTTCTGTTG	This stud y	W3 336
3348chipF – forward primer for measuring the ChIP-enrichment of <i>BT3348</i> promoter: CTGTGCAAATATGCCCTTCAAG	PMI D: 2504 1429	133 13
3348chipR – reverse primer for measuring the ChIP-enrichment of <i>B3348</i> promoter: GAATAGACCGTCCCAAATAATCCA	PMI D: 2504 1429	133 14
<b>qPCR primers for bar-coded strains</b>		
pNBU2_tet_BC01 – forward primer for measuring the bar-code in <i>pNBU2-tetQ::BC01</i> : ATGTCGCCAATTGTCACTTCTCA	PMI D: 1899 6345	W1 701
pNBU2_tet_BC03 – forward primer for measuring the bar-code in <i>pNBU2-tetQ::BC03</i> : TTATGACCAGCCGCAAATGAAAAG	PMI D: 1899 6345	W1 702

