



FIG. S1. The *ksgA* gene map of *B. glumae*. The nucleotide sequence shown above the gene map reveals the silent nucleotide difference between the KSM-sensitive (210 and 3) and KSM-resistant (5091, 4-1-9 and 9-1-1) strains of *B. glumae*. The nucleotide sequences shown under the gene map reveal the silent nucleotide differences between strain 3 and other strains.

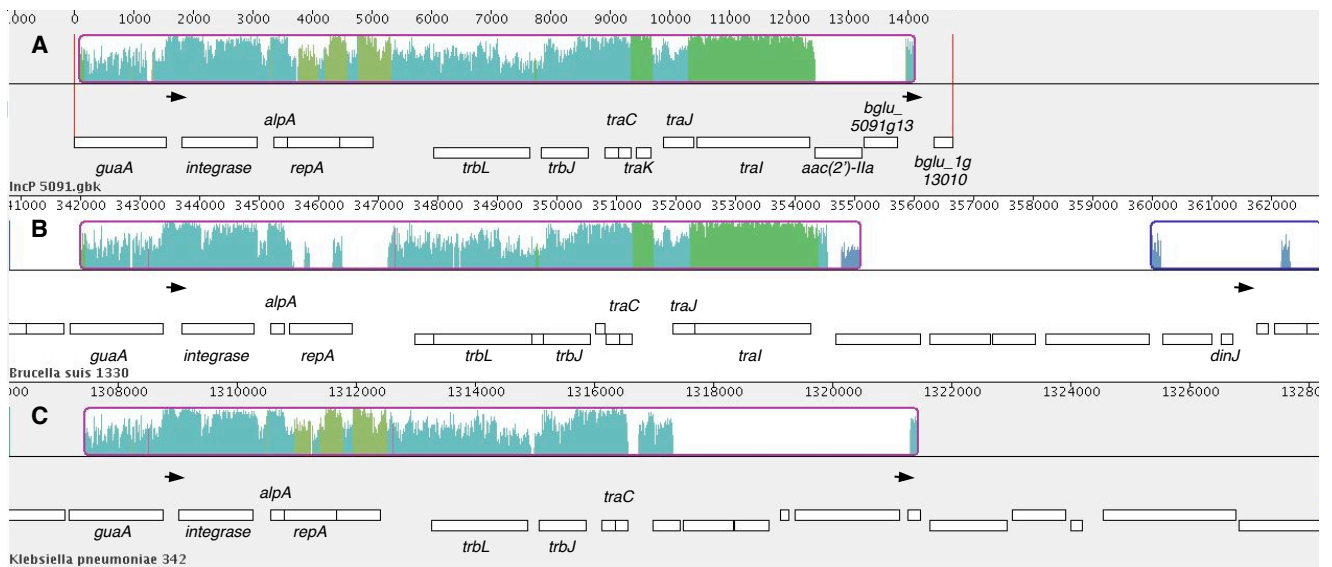


FIG. S2. Mauve alignment of the IncP islands from *B. glumae* 5091 (A), *Brucella suis* 1330 (B) and *Klebsiella pneumoniae* 342 (C). The arrows indicate the boundaries of each IncP island. The region of sequence covering a colored block reveals entire collinearity and homology among the genomes. Parts of the similarity plot which are turquoise are conserved among all three genomes while green portions are conserved regions among (A) and (B). The (A) and (C) conserved regions are colored as olive.

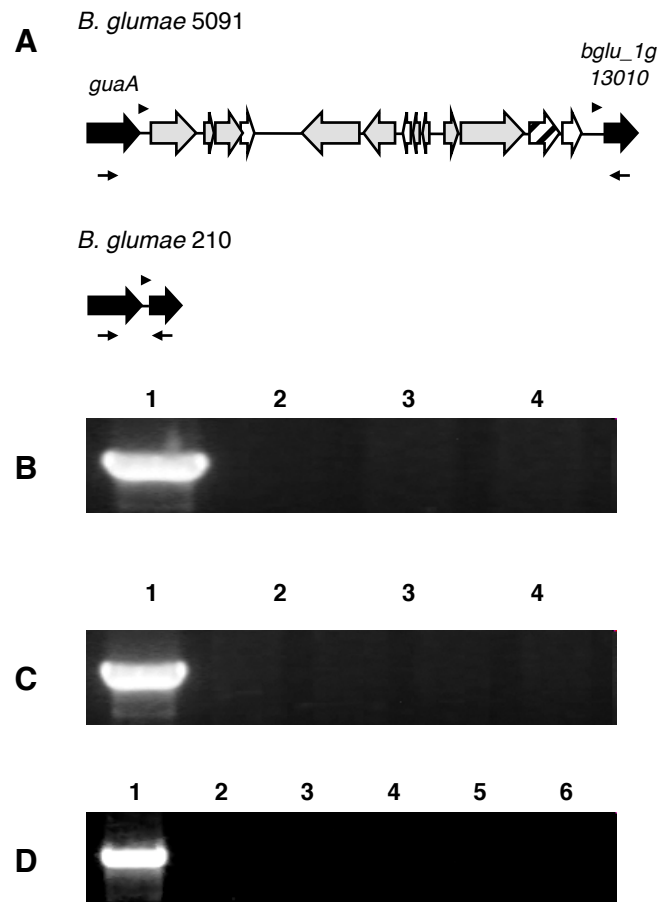


FIG. S3. Analysis of excision activity of the IncP island from KSM-resistant *B. glumae*. (A) Comparison of the IncP island region of KSM-resistant 5091 strain with KSM-sensitive 210 strain. The small black arrows indicate the primer positions to amplify the *guaA* - *bglu_1g13010* gene region for detecting the excision of the genomic island. The small black arrowheads indicate the 19-bp direct repeats. (B) Analysis of excision activity of 5091 strain cultured for 24 h, 48 h and 72 h (lanes 2-4). Lane 1 shows the result of PCR product from *B. glumae* 210. PCR analyses were conducted using *guaA*77-F (5'-ACGTCTATTGCGAGATTCATCCGAACGAT-3') and E1-5466R (5'-AGGTCCTTGTTGATGAGGACGATAGAACG-3') primers. (C) Analysis of excision activity of 5091 strain cultured with SOS response inducer (mitomycin C; MMC) or KSM. Lane 1: *B. glumae* 210. Lanes 2-4: *B. glumae* 5091. Lane 2: no drug, Lane 3: mitomycin C (2 μ g/ml), Lane 4: KSM (100 μ g/ml). MMC and KSM were added to the culture medium at O.D.=0.8, and incubated for 1.5 h with slow shaking (80 rpm at 28°C). (D) Analysis of excision activity of KSM-resistant strains of *B. glumae*. Lane 1: *B. glumae* 210 (KSM: S). Lanes 2-6: *B. glumae* 5091, 4-1-1, 4-1-9, 9-1-1 and 11-1-1 (KSM: R).