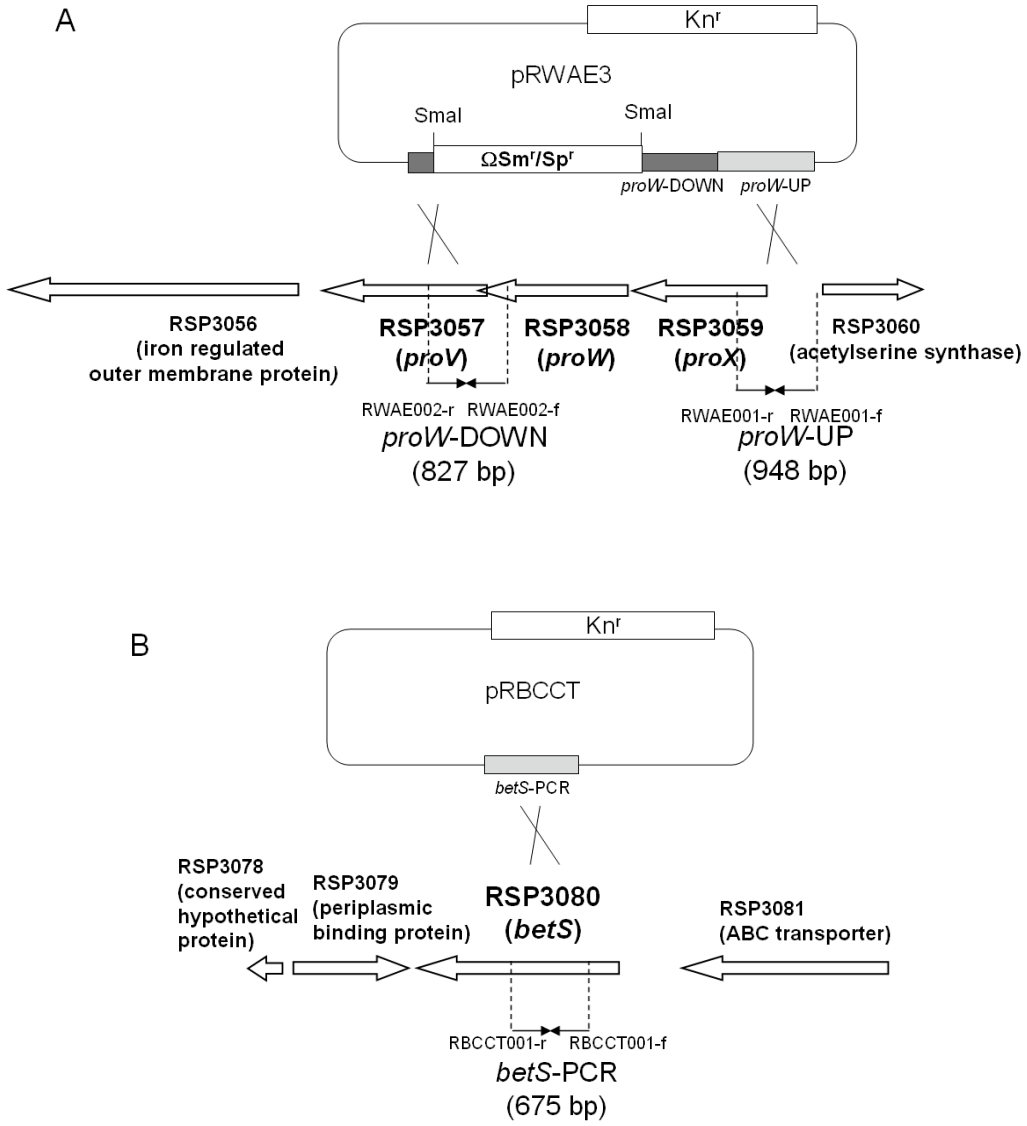

Figure S1. Maps of plasmids pRWAE3 and pRBCCT that were used to construct the *proXWV* mutant RWAE and the *betS* mutant RBCCT, respectively. (A) Schematic of plasmid pRWAE3. PCR products *proW*-UP and *proW*-DOWN were generated by amplification of *R. sphaeroides* 2.4.1 genomic DNA using primers RWAE001-f (5'-GACTCT*AG ACCACGCGACATGTCAG*-3') and RWAE001-r (5'-CGTAAG*CTTCATCTCGGCGATGCTG*-3'), and RWAE002-f (5'-GATAAG*CTTCGACCGCACGAGCCAG*-3') and RWAE002-r (5'-GCTGGTA*CCGCATCACGATGTCCTG*-3'), respectively. (B) Schematic of plasmid pRBCCT. PCR product *betS*-PCR was generated by amplification of genomic DNA using primers RBCCT001-f (5'-AAGTCTA*GACCTCGAACCTCGCCTG*-3') and RBCCT-r (5'-TCCGAA*TTCACGCCCTTGTCCATGC*-3'). In all cases, X's indicate regions of homologous recombination between the plasmids and the chromosome. The underlined-italicized residues within the primer sequences correspond to *R. sphaeroides* 2.4.1 DNA sequences.

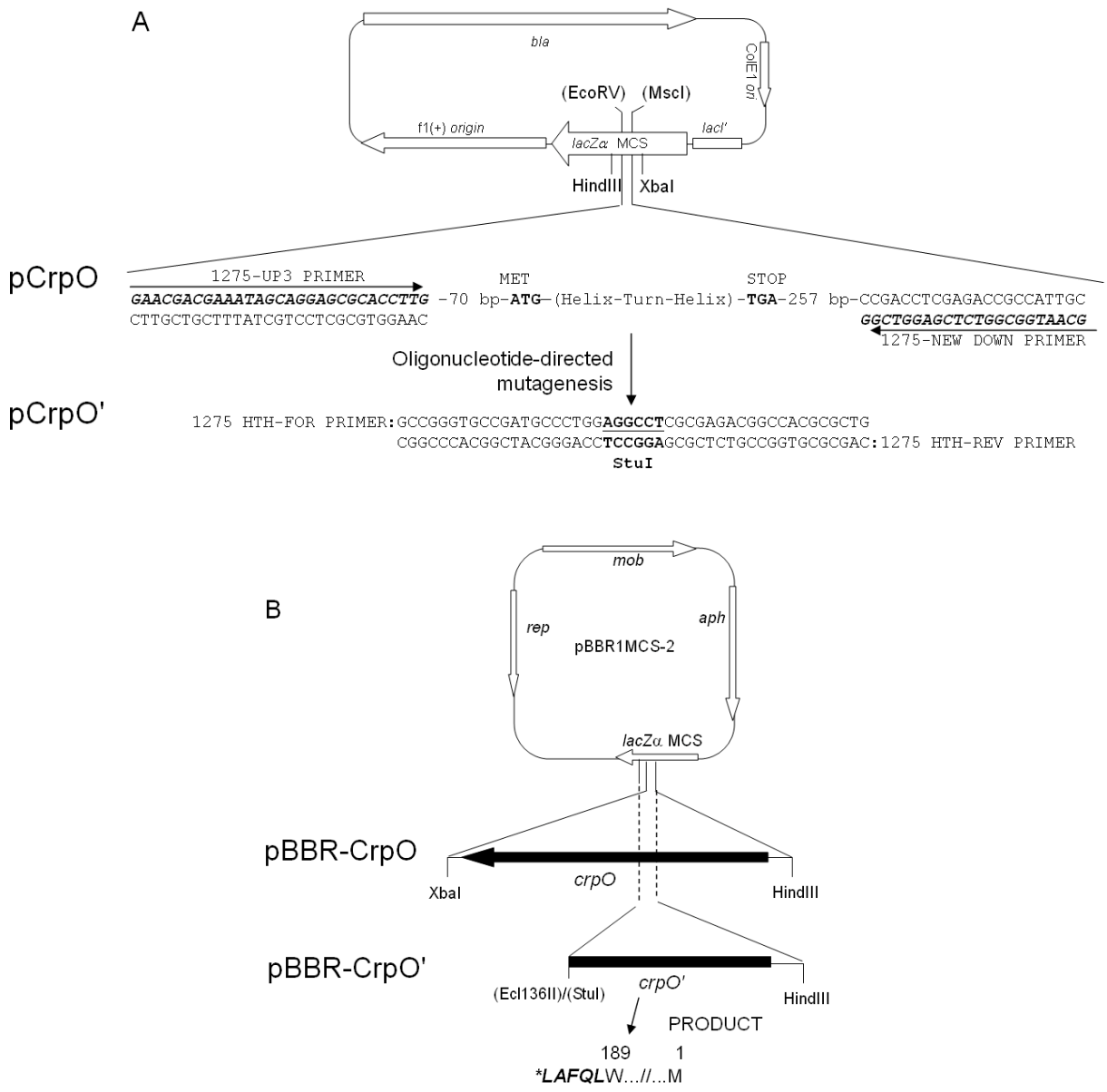

Figure S2. Maps of the *crpO* and *crpO*' plasmids that were used in this study. (A) Plasmid pCrpO with primers used to amplify the *crpO* sequences from *R. sphaeroides* 2.4.1 genomic DNA, and plasmid pCrpO' derived from pCrpO by oligonucleotide-directed mutagenesis using the primers indicated. (B) Plasmids pBBR-CrpO and pBBR-CrpO' derived from pCrpO and pCrpO', respectively. The amino acid sequence of the truncated product encoded by *crpO'* is shown, where amino acids in bold correspond to the five resides added by (pBBR1MCS-2) vector sequences, followed by a nonsense codon.