

Description of Additional Supplementary Files:

Supplementary Data 1: Published Acrs and their properties.

Supplementary Data 2: Comparison between putative Acrs and published Acrs.

Supplementary Data 3: Performance of Acr prediction tools with AcrVA5Bsp.

Supplementary Data 4: Putative Acrs structurally homologous to two known Acrs.

Supplementary Data 5: Comparison between putative anti-phage proteins and published defense systems.

Supplementary Data 6: Nucleic acid sequences used in this study.

Supplementary Data 7: Bacteria strain and plasmids used in this study.