Supporting Information

Functional disruption of Staphylococcal Accessory Regulator A from *Staphylococcus aureus* by Silver Ions

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| Strain, plasmids or primers | Application                  |
|-----------------------------|------------------------------|
| **E. coli strains**         |                              |
| XL1-Blue                    | Plasmid maintenance          |
| BL21(DE3)                   | Protein expression           |
| **Staphylococcus aureus strains** |                              |
| Newman                      | Wide-type strain             |
| **Plasmids**                |                              |
| pET47b                      |                              |
| pET47b-sarA                 | SarA protein expression      |
| pET47b-sarA<sup>C98</sup>  | SarA<sup>C98</sup> protein expression |
| **Primers for SarA**        |                              |
| SarA                        |                              |
| Forward Primer              | Reverse Primer               |
| TAGCTCATATGGCAATTACAAAAATCAAT | TATGGATCTTATAGTTCATTTTGTTGTTATCAAT |
| GATTGCTTTGAGTTGTTATCAAT     | GTTTGCTTCAGTGAATTCG          |
| **Primers for qRT-PCR**     |                              |
| **16s RNA**                 |                              |
| 16s RNA                     |                              |
| Forward Primer              | Reverse Primer               |
| CCATAAAGGTGGTCTCAGTT        | CATGTCGATCTACGATTACT         |
| hla                         |                              |
| hla                         |                              |
| Forward Primer              | Reverse Primer               |
| ACAATTGAGAGCCCACTGAT        | TCCCCAATTGTGCACCACT          |
| hld                         |                              |
| hld                         |                              |
| Forward Primer              | Reverse Primer               |
| AAGAATTCTTTATATCAAGGAGGAAGGA | TTAGTGAATTGGTCATCTGCAAG    |
| GTG                         |                              |
| fnbA                        |                              |
| fnbA                        |                              |
| Forward Primer              | Reverse Primer               |
| ACAAGTTGAGGACACAGCC         | CCGCTACATCTGCTGATCTGTC       |
Figure S1 The crystal structure of the SarA (PDB:1fzp) from *Staphylococcus aureus*
Figure S2 SDS-PAGE analysis of the purified SarA
Figure S3 Ag⁺-binding capability of SarA<sup>C9S</sup> determined by ICP-MS; SarA<sup>C9S</sup> were treated with 3 molar equivalents of Ag⁺. Excess amounts of Ag⁺ were removed by a desalting column. The bound Ag⁺ contents were determined by ICP-MS and protein concentrations were measured by BCA assay.
Figure S4 The DNA binding capabilities of SarA<sup>C9S</sup> with Ag<sup>+</sup> were measured by BioLayer Interferometry (BLI). Biotinylated hla (300 nM) were captured on pre-immobilized streptavidin Dip and Read sensor heads for 3 min. Association occurred from 0 to 180 s and dissociation was monitored thereafter up to 360 s. The K<sub>d</sub> values are presented as the mean ± s.e.m. derived from a global fitting of all binding curves.