Supplementary Table S5. *Staphylococcus aureus* SdrE amino acid sequence: localization of amino acid substitutions and deletions.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strain | Protein accession number | Aa number | Query  cover  (%) | Per.  ident  (%) | Amino acid substitutions | | | | | | | | | | | | | |
| Protein region | | | | | | | | | | | | | |
| A | | | | | | | | | | | | | |
| 78 | 87 | 106 | 110 | 115 | 160 | 227 | 240 | 244 | 261 | 285 | 385 | 396 | 397 |
| Col | AAW37719.1 | 1166 | 100 | 100 | T | N | K | S | K | N | ***K*** | S | H | V | K | S | K | T |
| Newman | BAF66797.1 | 1166 | 100 | **99.91** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| FPR3757 | ABD22410.1 | 1154 | 100 | **98.80** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| N3151 | BAB41752.1 | 1141 | 100 | **97.72** | T | ***D*** | ***E*** | ***T*** | ***Q*** | ***Y*** | ***N*** | ***N*** | ***R*** | ***L*** | ***T*** | ***A*** | ***Q*** | ***A*** |
| MRSA2521 | CAG39588.1 | 1137 | 80 | **83.94** | T | ***D*** | ***E*** | ***P*** | ***Q*** | N | ***N*** | S | ***R*** | V | ***T*** | ***A*** | K | ***E*** |
| MW21 | BAB94383.1 | 1141 | 100 | **98.95** | ***A*** | ***D*** | ***E*** | ***K*** | ***Q*** | N | ***N*** | S | H | V | K | S | K | T |
| 55/2053 | No protein | - | - | **-** | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bmb9393 | AGP27563.1 | 1161 | 100 | **99.40** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| Be62 | ALY22396.1 | 1161 | 100 | **99.40** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| TW20 | CBI48512.1 | 1137 | 100 | **97.34** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| JKD6008 | ADL64631.1 | 1133 | 100 | **97.00** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| T0131 | AEB87697.1 | 1131 | 100 | **96.83** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| Z172 | n/d | - | - | **-** | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| V521 | AND35210.1 | 1137 | 100 | **97.34** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |
| SA943 | RAM46170.1 | 1029 | 100 | **99.18** | T | N | K | S | K | N | ***N*** | S | H | V | K | S | K | T |

Supplementary Table S5. *Staphylococcus aureus* SdrE amino acid sequence: localization of amino acid substitutions and deletions (continued).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strain | Protein accession number | Amino acid substitutions | | | | | | | | | | | | | Deletions / localization | | |
| Protein region | | | | | | | | | | | | | Protein region | | |
| A | | | | | | B1 606-719 | | | B2  720-829 | | B3  830-939 | | A | R | C |
| 420 | 444 | 460 | 501 | 502 | 594 | 655 | 677 | 699 | 800 | 823 | 858 | 862 | 174-  1783 | number of SD repeats/  (-number of deletions) |
| Col | AAW37719.1 | T | D | S | S | D | T | N | T | V | D | R | T | Q | - | 83/0 | - |
| Newman | BAF66797.1 | T | D | S | S | D | T | N | T | V | D | R | T | Q | - | 83/0 | - |
| FPR3757 | ABD22410.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | - | 77/ **(-6)** | - |
| N3151 | BAB41752.1 | ***S*** | ***N*** | ***T*** | ***P*** | ***N*** | ***S*** | N | ***A*** | ***I*** | ***E*** | **S** | ***K*** | ***L*** | + | 73/ **(-10)** | - |
| MRSA2521 | CAG39588.1 | ***K*** | ***T*** | ***N*** | S | ***G*** | ***S*** | N | ***A*** | V | ***E*** | ***S*** | T | Q | + | 71/ **(-12)** | - |
| MW21 | BAB94383.1 | T | D | S | S | D | T | ***K*** | T | V | ***E*** | **S** | T | Q | + | 73/ **(-10)** | - |
| 55/2053 | No protein | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bmb 9393 | AGP27563.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | **+** | 83 /(0) | - |
| Be62 | ALY22396.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | **+** | 83 / **(0)** | - |
| TW20 | CBI48512.1 | T | D | S | S | D | T | N | T | V | D | R | T | Q | **+** | 71/ **(-12)** | - |
| JKD6008 | ADL64631.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | **+** | 69/ **(-14)** | - |
| T0131 | AEB87697.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | **+** | 68/ **(-15)** | - |
| Z172 | n/d | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | ? | **?** | ? | ? |
| V521 | AND35210.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | **+** | 71/ **(-12)** | **182** |
| SA943 | RAM46170.1 | T | D | S | S | D | T | N | T | V | D | **S** | T | Q | **+** | 17/ **(-66)** | - |

Note: The SdrE regions: ligand-binding domain A; subdomains B1-3(function is unknown); R-region, containing Ser-Asp dipeptides; C-terminal end, that is involved in the protein attachment to the bacterial cell wall; 1 - bone sialoprotein-binding protein, that is allelic variant of SdrE; *S. aureus* MRSA252 carries more than 60 amino acid substitution additionally; 2- the number of amino acids that have been lost; 3- deletions of 5 amino acids: TSEPS.