Table S1. *Staphylococcus* spp. strains sensitive to the St\_134 phage

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| № | CEMTC\*  number | Antibiotic resistance | β-lactams | Aminoglycosides | Macrolides | Lincosamides | Fluoroquinolones | Chloramphenicol | Glycopeptides | GenBank Accession  number |
| ***S. aureus* complex (*S. roterodami/S. argenteus* ) (1/1)** | | | | | | | | | | |
| 1 | 3692 | S |  |  |  |  |  |  |  | OR856624 |
| ***S. auricularis* (1/5)** | | | | | | | | | | |
| 2 | 2738 | R |  |  |  | DA |  |  |  | MZ014399 |
| ***S. capitis* (4/4)** | | | | | | | | | | |
| 3 | 1590 | S |  |  |  |  |  |  |  | MZ014405 |
| 4 | 1680 | S |  |  |  |  |  |  |  | MZ014406 |
| 5 | 2904 | S |  |  |  |  |  |  |  | MZ014411 |
| 6 | 3590 | S |  |  |  |  |  |  |  | MZ014407 |
| ***S. caprae* (5/5)** | | | | | | | | | | |
| 7 | 1849 | S |  |  |  |  |  |  |  | MZ014408 |
| 8 | 2305 | S |  |  |  |  |  |  |  | MZ014409 |
| 9 | 2739 | S |  |  |  |  |  |  |  | MZ014410 |
| 10 | 3411 | S |  |  |  |  |  |  |  | MZ014412 |
| 11 | 3440 | S |  |  |  |  |  |  |  | MZ014413 |
| ***S. casei* (2/2)** | | | | | | | | | | |
| 12 | 1626 | S |  |  |  |  |  |  |  | MZ014416 |
| 13 | 2931\*\* | S |  |  |  |  |  |  |  | MW979954 |
| ***S. coagulans* (1/8)** | | | | | | | | | | |
| 14 | 3359\*\* | S |  |  |  |  |  |  |  | MW979970 |
| ***S. cohnii* (2/5)** | | | | | | | | | | |
| 15 | 2687 | S |  |  |  |  |  |  |  | MZ014418 |
| 16 | 3694\*\* | S |  |  |  |  |  |  |  | MW969510 |
| ***S. devriesei* (1/4)** | | | | | | | | | | |
| 17 | 700 | R |  |  | E |  |  |  |  | MZ014419 |
| ***S. epidermidis* (37/136) 27.2%** | | | | | | | | | | |
| 18 | 301 | S |  |  |  |  |  |  |  | OR856620 |
| 19 | 308 | S |  |  |  |  |  |  |  | OR856621 |
| 20 | 314 | S |  |  |  |  |  |  |  | MZ049531 |
| 21 | 1380 | S |  |  |  |  |  |  |  | MZ049534 |
| 22 | 1548 | R | FOX |  | E |  |  |  |  | MZ027385 |
| 23 | 1683 | R |  |  | E |  |  |  |  | MZ040900 |
| 24 | 1795 | S |  |  |  |  |  |  |  | OR856622 |
| 25 | 1821 | R |  |  |  | DA |  |  |  | MZ040881 |
| 26 | 2043 | MDR | CFM |  | E |  | CIP, LEV | C | VA | MZ040893 |
| 27 | 2051 | R |  |  | E |  |  |  |  | MZ040901 |
| 28 | 2058\*\*\* | R | P |  |  |  |  |  |  | OR856623 |
| 29 | 2079 | R | FOX |  | E |  |  |  |  | MZ027387 |
| 30 | 2257 | S |  |  |  |  |  |  |  |  |
| 31 | 2283 | S |  |  |  |  |  |  |  | MZ047210 |
| 32 | 2286 | R |  | CN | E |  |  |  |  | MZ040911 |
| 33 | 2831 | R |  |  | E |  |  |  |  | MZ040914 |
| 34 | 2889 | MDR | FOX | AK(I) | E |  |  |  |  | MZ027358 |
| 35 | 2908 | S |  |  |  |  |  |  |  | MZ723060 |
| 36 | 2914 | S |  |  |  |  |  |  |  | MZ047208 |
| 37 | 2922 | R |  | CN | E |  |  |  |  | MZ040905 |
| 38 | 3054 | MDR | FOX | CN | E | DA |  |  |  | MZ027389 |
| 39 | 3441 | S |  |  |  |  |  |  |  | MZ049532 |
| 40 | 3463 | S |  |  |  |  |  |  |  | MZ047207 |
| 41 | 3491 | R |  |  | E |  |  |  |  | MZ040898 |
| 42 | 3719 | S |  |  |  |  |  |  |  |  |
| 43 | 3912 | R |  |  | E |  |  |  |  | MZ040903 |
| 44 | 4380 | R | P/FOX | AK, CN |  |  |  |  |  | OR856625 |
| 45 | 4411 | R |  | CN |  |  |  |  |  | OR856626 |
| 46 | 4422 | R |  | AK | E |  |  |  |  | OR856627 |
| 47 | 4429 | R |  |  |  |  | LEV |  |  |  |
| 48 | 4430 | R | P |  |  |  |  |  |  | OR640305 |
| 49 | 4433 | R |  | AK, CN |  |  |  |  |  | OR856628 |
| 50 | 4436 | R |  | AK, CN |  |  |  |  |  | OR856629 |
| 51 | 4444 | R |  | AK, CN |  |  |  |  |  | OR856630 |
| 52 | 4449 | R |  | AK, CN |  |  |  |  |  | OR856631 |
| 53 | 4465 | MDR | FOX | AK | E | DA |  |  |  |  |
| 54 | 6765 | R | P/FOX |  | E |  |  |  |  | OR856632 |
| ***S. equorum* (2/4)** | | | | | | | | | | |
| 55 | 3183\*\* | S |  |  |  |  |  |  |  | MW969511 |
| 56 | 3636\*\* | S |  |  |  |  |  |  |  | MW979971 |
| ***S. haemolyticus* (3/28) 10.7%** | | | | | | | | | | |
| 57 | 1437\*\* | MDR | FOX | CN | E |  |  |  |  | MW979956 |
| 58 | 1700 | MDR | FOX | CN | E |  |  |  |  | MZ027398 |
| 59 | 3413 | MDR | FOX | AK, CN | E |  |  |  |  | MZ027399 |
| ***S. lugdunensis* (2/3)** | | | | | | | | | | |
| 60 | 4459 | R | FOX |  |  |  |  |  |  | OQ346157 |
| 61 | 4461 | S |  |  |  |  |  |  |  | OQ346157 |
| ***S. ureilyticus* (1/1)** | | | | | | | | | | |
| 62 | 1966 | MDR | P |  |  | DA | CIP, LEV |  |  | OQ346151 |

The number of St\_134-sensitive strains from the number of tested ones is indicated in brackets. \*– Collection of Extremophile Microorganisms and Type Cultures (CEMTC) of ICBFM SB RAS; \*\*– strains isolated from pets; \*\*\*– host strain for the St\_134 phage. Abbreviations: FOX – Cefoxitin; P – Penicillin; OX – Oxacillin; CFM – Cefixime; AK – Amikacin; CN – Gentamicin; E – Erytromycin; DA – Clindamycin; LNM – Lincomycin; CIP - Ciprofloxacin, LEV – Levofloxacin; C - Chloramphenicol; VA – Vancomycin; MDR – Multi Drug Resistance; R – Resistance; S – Sensitive.

Table S2. Open reading frames (ORFs) found in the genome of the St\_134 phage

|  |  |  |  |
| --- | --- | --- | --- |
| ORF | Location | Strand | Function |
| 1 | St\_134\_131\_499 | + | tail tip protein |
| 2 | St\_134\_516\_731 | + | hypothetical protein |
| 3 | St\_134\_746\_1138 | + | single stranded DNA-binding protein |
| 4 | St\_134\_1263\_1472 | + | hypothetical protein |
| 5 | St\_134\_1476\_1721 | + | hypothetical protein |
| 6 | St\_134\_1711\_2940 | + | receptor binding anchor protein; hydrolase |
| 7 | St\_134\_2951\_3454 | + | 5′ terminal protein |
| 8 | St\_134\_3513\_4772 | + | terminase |
| 9 | St\_134\_4830\_7121 | + | DNA polymerase |
| 10 | St\_134\_8655\_7234 | - | tail tip lysin |
| 11 | St\_134\_9070\_8648 | - | holin |
| 12 | St\_134\_10844\_9078 | - | tail knob protein |
| 13 | St\_134\_11707\_10904 | - | head fiber (Fib)protein |
| 14 | St\_134\_12595\_11708 | - | endolysin |
| 15 | St\_134\_14461\_12632 | - | receptor binding protein |
| 16 | St\_134\_15310\_14474 | - | tail stem/collar protein |
| 17 | St\_134\_16310\_15303 | - | portal protein |
| 18 | St\_134\_17548\_16331 | - | major capsid protein |
| 19 | St\_134\_17751\_17560 | - | capsid lining protein |
| 20 | St\_134\_18084\_17764 | - | portal-proximal core protein |