

Certificate of Analysis for NR-45971

Staphylococcus aureus, Strain A970230

Catalog No. NR-45971

Product Description: *Staphylococcus aureus* (*S. aureus*), strain A970230 was isolated in 1997 from purulent sputum of a male with scarlet fever in France. *S. aureus*, strain A970230 is an exotoxin-producing, methicillin-resistant *S. aureus* (MRSA) strain.

Lot¹: 63007594 Manufacturing Date: 16OCT2014

| TEST | SPECIFICATIONS | RESULTS |
|--|----------------------------------|---------------------------------------|
| Phenotypic Analysis | | |
| Cellular morphology | Gram-positive cocci | Gram-positive cocci |
| Colony morphology ² | Report results | Circular, convex, entire, smooth and |
| colony merphology | 1.000.1.000.10 | cream (Figure 1) |
| Motility (wet mount) | Report results | Non-motile |
| Hemolysis ² | Report results | β-hemolytic |
| Biochemical Analysis | Report results | p-nemorytic |
| Catalase | Positive | Positive |
| Catalase Coagulase ³ | | Positive |
| Coagulase | Report results | |
| VITEK [®] 2 Compact (GP card) | Consistent with S. aureus | Consistent with S. aureus |
| Antibiotic Susceptibility Profile | | |
| VITEK [®] (AST-GP71card) ⁴ | | |
| Beta-lactamase ⁵ | Report results | Positive |
| Cefoxitin screen | Report results | Positive |
| Benzylpenicillin | Report results | Resistant (≥ 0.5 µg/mL) |
| Oxacillin | Resistant | Resistant (≥ 4 μg/mL) |
| Gentamicin | Sensitive | Sensitive (≤ 0.5 µg/mL) |
| Ciprofloxacin | Resistant | Resistant (= 4 µg/mL) |
| Levofloxin | Report results | Resistant (= 4 µg/mL) |
| Moxifloxacin | | |
| | Report results | Intermediate (= 1 µg/mL) |
| Clindamycin (inducible resistance) | Report results | Negative |
| Erythromycin | Report results | Sensitive (≤ 0.25 μg/mL) ⁶ |
| Clindamycin | Report results | Sensitive (≤ 0.25 μg/mL) ⁷ |
| Quinupristin/dalfopristin | Sensitive | Sensitive (≤ 0.25 µg/mL) |
| Linezolid | Sensitive | Sensitive (= 2 µg/mL) |
| Daptomycin | Report results | Sensitive (= 1 µg/mL) |
| Vancomycin | Sensitive | Sensitive (= 1 µg/mL) |
| Minocycline | Report results | Sensitive (≤ 0.5 µg/mL) |
| Tetracycline | Report results | Sensitive (≤ 1 µg/mL) |
| Tigecycline | Report results | Sensitive (≤ 0.12 µg/mL) |
| Nitrofurantoin | Report results | Sensitive (≤ 16 µg/mL) |
| Rifampicin | Report results | Sensitive (≤ 0.5 μg/mL) |
| Trimethoprim/sulfamethoxazole | Sensitive | Sensitive (≤ 10 µg/mL) |
| Etest [®] antibiotic test strips ⁸ | | , , , , |
| Chloramphenicol ⁹ | Report results | Sensitive (= 3 µg/mL) |
| Teicoplanin ⁹ | Sensitive | Sensitive (= 1 µg/mL) |
| Constants Analysis | | |
| Genotypic Analysis | Consistent with S. aureus | Consistent with S. aureus |
| Sequencing of 16S ribosomal RNA gene | Consistent with 5. aureus | Consistent with 5. aureus |
| (~ 860 base pairs) | | |
| Purity (post-freeze) ¹⁰ | Growth consistent with S. aureus | Growth consistent with S. aureus |
| Viability (post-freeze) ² | Growth | Growth |

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¹S. aureus, strain A970230 was deposited to BEI Resources as part of the NARSA collection. NR-45971 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 24 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles which were grown 24 hours at 37°C in an aerobic atmosphere to produce this lot.

²24 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

³4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

⁴Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁵The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁶S. aureus, strain A970230 was deposited as being resistant to erythromycin. Antibiotic susceptibility testing performed in duplicate determined that strain A970230 is susceptible to erythromycin.

7S. aureus, strain A970230 was deposited as being intermediate to clindamycin. Antibiotic susceptibility testing performed in duplicate determined that strain A970230 is susceptible to clindamycin.

⁸24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

⁹For both chloramphenicol (bioMérieux Etest® 412308) and teicoplanin (bioMérieux Etest® 412459), a MIC ≤ 8 μg/mL is sensitive, a MIC = 16 μg/mL is intermediate and a MIC ≥ 32 μg/mL is resistant.

¹⁰Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.

Figure 1



Date: 29 JAN 2015

Signature:

Title: Technical Manager, BEI Authentication or designee

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