

Staphylococcus aureus, Strain TN-74

Catalog No. NR-46268

Product Description: *Staphylococcus aureus* (*S. aureus*), strain TN-74 was isolated in 2005 from pleural fluid of an 11-month-old male intensive care unit (ICU) patient with empyema and pneumonia in Tennessee, USA. *S. aureus*, strain TN-74 is a clinically-associated methicillin-resistant *S. aureus* (MRSA) strain.

Lot¹: 2139

Manufacturing Date: 15DEC2016

| TEST | SPECIFICATIONS | RESULTS |
|--|--|---|
| Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount) Hemolysis ³ Biochemical characterization Catalase Coagulase ⁴ VITEK [®] 2 Compact (GP card) | Gram-positive cocci Report results Report results Report results Positive Report results ≥ 90% probability of being <i>S. aureus</i> | Gram-positive cocci Circular, convex, entire, smooth, opaque and cream (Figure 1) Non-motile β-hemolytic Positive Positive <i>S. aureus</i> (99% probability) ⁵ |
| Antibiotic Susceptibility Profile VITEK [®] (AST-GP71 card) ⁶ Beta-lactamase ⁷ Cefoxitin screen Benzylpenicillin Oxacillin Gentamicin Ciprofloxacin Levofloxacin Moxifloxacin Clindamycin (inducible resistance) Erythromycin Clindamycin Quinupristin/dalfopristin Linezolid Daptomycin Vancomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole Etest [®] antibiotic test strips ⁹ Chloramphenicol ¹⁰ Teicoplanin ¹⁰ | Report results Report results Report results Resistant Sensitive Report results Sensitive Report results Report results Resistant Sensitive Report results Sensitive Sensitive Sensitive Report results Resistant Report results Report results Sensitive Sensitive Sensitive Report results | Positive Positive Resistant (≥ 0.5 µg/mL) Resistant (≥ 4 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (= 0.25 µg/mL) Sensitive (≤ 0.25 µg/mL) Negative Resistant (≥ 8 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (= 2 µg/mL) Sensitive (= 0.25 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (≤ 0.12 µg/mL) ⁸ Sensitive (≤ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 10 µg/mL) Sensitive (= 3.0 µg/mL) Sensitive (= 1 to 1.5 µg/mL) |
| Genotypic Analysis Sequencing of 16S ribosomal RNA gene (1490 base pairs) | ≥ 99% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597) | 99.9% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597) |
| Purity (post-freeze)¹¹ | Consistent with expected colony morphology | Consistent with expected colony morphology |
| Viability (post-freeze)² | Growth | Growth |

- ¹*S. aureus*, strain TN-74 was deposited to BEI Resources as part of the NARSA collection. NR-46268 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles which were grown 1 day at 37°C in an aerobic atmosphere to produce this lot.
- ²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar
- ³1 day at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood
- ⁴4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)
- ⁵Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99% being a perfect match between the test reaction pattern and the unique biochemical pattern of the given organism or organism group. For additional information, please refer to O'Hara, C. M. and J. M. Miller. "Evaluation of the VITEK 2 ID-GNB Assay for Identification of Members of the Family *Enterobacteriaceae* and Other Nonenteric Gram-Negative Bacilli and Comparison with the VITEK GNI+ Card." *J. Clin. Microbiol.* 41 (2003): 2096-2101. PubMed: 12734254.
- ⁶Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
- ⁷The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
- ⁸MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
- ⁹1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
- ¹⁰For 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.
- ¹¹Purity of this lot was assessed for 15 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 10 APR 2017

Signature:

BEI Resources Authentication

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