

Staphylococcus aureus, Strain CT-174

Catalog No. NR-46202

Product Description: *Staphylococcus aureus* (*S. aureus*), strain CT-174 was isolated in 2006 from the blood of an 81-year-old male with a bloodstream infection in Connecticut, USA. *S. aureus*, strain CT-174 is a clinically-associated methicillin-resistant *S. aureus* (MRSA) strain.

Lot¹: 64044895

Manufacturing Date: 18FEB2016

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount) Hemolysis ² Biochemical characterization Catalase Coagulase ³ 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, low convex, entire, smooth and white (Figure 1) Non-motile Non-hemolytic Positive Positive <i>S. aureus</i> (99% probability) ⁴
Antibiotic Susceptibility Profile VITEK [®] (AST-GP71 card) ⁵ Beta-lactamase ⁶ 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 ⁸ Chloramphenicol ⁹ Teicoplanin ⁹	Report results Report results Report results Resistant Sensitive Report results Resistant Report results Report results Resistant Resistant Report results Sensitive Sensitive Sensitive Sensitive Report results Sensitive Report results Report results Sensitive Sensitive Report results Report results	Negative Positive Resistant (≥ 0.5 µg/mL) Resistant (≥ 4 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Negative Resistant (≥ 8 µg/mL) Resistant (≥ 8 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) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) ⁷ Sensitive (≤ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 10 µg/mL) Sensitive (= 4 µg/mL) ¹⁰ Sensitive (= 1.5 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 820 base pairs)	≥ 99% sequence identity to <i>S.aureus</i> type strain strain (GenBank: L37597)	100% 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 CT-174 was deposited to BEI Resources as part of the NARSA collection. NR-46202 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 with 5% defibrinated sheep blood 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 with 5% defibrinated sheep blood
- ³4 hours at 37°C in rabbit serum with 0.85% sodium citrate and 0.85% sodium chloride (BBL™ Coagulase Plasma 240658)
- ⁴Percent 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.
- ⁵Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
- ⁶The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
- ⁷MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
- ⁸1 day 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.
- ¹⁰*S. aureus*, strain CT-174 was deposited as having an intermediate susceptibility to chloramphenicol. Antibiotic susceptibility testing performed in duplicate determined that strain CT-174 is susceptible to chloramphenicol.
- ¹¹Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 17 MAR 2016

Signature:

BEI Resources Authentication

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