

Staphylococcus aureus, Strain GA-442

Catalog No. NR-46218

Product Description: *Staphylococcus aureus* (*S. aureus*), strain GA-442 was isolated in 2006 from the blood of a 50-year-old male in Georgia, USA. *S. aureus*, strain GA-442 is a methicillin-resistant *S. aureus* (MRSA) strain.

Lot¹: 62363099

Manufacturing Date: 06FEB2014

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 Consistent with <i>S. aureus</i>	Gram-positive cocci Circular, low convex, entire, smooth and gray (Figure 1) Non-motile β-hemolytic Positive Positive Consistent with <i>S. aureus</i>
Antibiotic Susceptibility Profile VITEK [®] (AST-GP71 card) ⁴ Beta-lactamase ⁵ Cefoxitin screen Benzylpenicillin Oxacillin Gentamicin Ciprofloxacin Levofloxacin Moxifloxacin Clindamycin (inducible resistance) Erythromycin Quinupristin/dalfopristin Linezolid Daptomycin Vancomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole Etest [®] antibiotic test strips ⁷ Chloramphenicol ⁸ Teicoplanin ⁸	Report results Report results Report results Resistant Sensitive Report results Sensitive Report results Report results Resistant Report results Sensitive Sensitive Sensitive Report results Sensitive Report results Report results Sensitive Sensitive Sensitive 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) Positive ⁶ Resistant (≥ 8 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (= 2 µg/mL) Sensitive (= 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) Sensitive (≤ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 10 µg/mL) Sensitive (= 3 µg/mL) Sensitive (= 1.5 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1490 base pairs)	Consistent with <i>S. aureus</i>	Consistent with <i>S. aureus</i>
Viability (post-freeze)²	Growth	Growth

¹ *S. aureus*, strain GA-442 was deposited to BEI Resources as part of the NARSA collection. NR-46218 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 22 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 25 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed for 8 days under propagation conditions.

²19 hours at 37°C and 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)

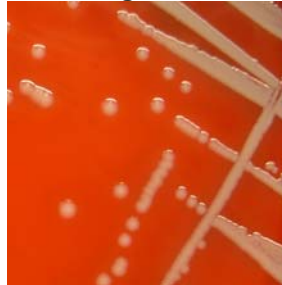
⁵The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁶The VITEK® AST-GP71 card tests for both clindamycin resistance and inducible clindamycin resistance (ICR). A positive ICR test is indicative of inducible MLS_b resistance, which confers resistance to macrolides, lincosamides, and type B streptogramin and the isolate should be considered resistant to clindamycin. *S. aureus*, strain GA-442 was found to be sensitive to clindamycin but had a positive ICR test and therefore is considered resistant to clindamycin.

⁷24 hours at 37°C and aerobic atmosphere on Mueller Hinton agar

⁸For 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.

Figure 1



Date: 11 JUN 2014

Signature:

Title:

Technical Manager, BEI Authentication or designee

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