

**Staphylococcus aureus, Strain GA-355**

**Catalog No. NR-46214**

**Product Description:** *Staphylococcus aureus* (*S. aureus*), strain GA-355 was isolated in 2006 from the blood of a 60-year-old male with bloodstream, osteomyelitis and/or an infected abscess in Georgia, USA. *S. aureus*, strain GA-355 is a methicillin-resistant *S. aureus* (MRSA) strain.

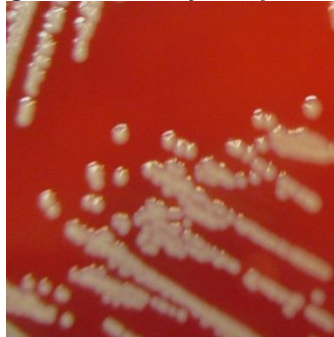
**Lot<sup>1</sup>: 64044898**

**Manufacturing Date: 11FEB2016**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Motility (wet mount) Hemolysis <sup>2</sup> Biochemical characterization Catalase Coagulase <sup>3</sup> VITEK <sup>®</sup> 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 and yellow (Figure 1) Non-motile β-hemolytic  Positive Positive <i>S. aureus</i> (99% probability) <sup>4</sup>
<b>Antibiotic Susceptibility Profile</b> VITEK <sup>®</sup> (AST-GP71 card) <sup>5</sup> Beta-lactamase <sup>6</sup> 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 <sup>®</sup> antibiotic test strips <sup>9</sup> Chloramphenicol <sup>10</sup> Teicoplanin <sup>10</sup>	Report results Report results Report results Resistant Sensitive Report results Resistant Report results Report results Report results Sensitive Report results Sensitive Sensitive Sensitive Report results Sensitive Report results Report results Sensitive Resistant  Sensitive Report results	Positive 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 Intermediate (= 4 µg/mL) <sup>7</sup> Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (= 2 µg/mL) Sensitive (= 0.25-0.5 µg/mL) Sensitive (= 1 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) <sup>8</sup> Sensitive (≤ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 320 µg/mL)  Sensitive (= 8 µg/mL) Sensitive (= 1-1.5 µg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1500 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)
<b>Purity (post-freeze)<sup>11</sup></b>	Consistent with expected colony morphology	Consistent with expected colony morphology
<b>Viability (post-freeze)<sup>2</sup></b>	Growth	Growth

- <sup>1</sup>*S. aureus*, strain GA-355 was deposited to BEI Resources as part of the NARSA collection. NR-46214 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.
- <sup>2</sup>1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood
- <sup>3</sup>4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)
- <sup>4</sup>Percent 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.
- <sup>5</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
- <sup>6</sup>The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
- <sup>7</sup>*S. aureus*, strain GA-355 was deposited as being resistant to erythromycin. Antibiotic susceptibility testing performed in duplicate determined that strain GA-355 as having intermediate susceptibility to erythromycin.
- <sup>8</sup>MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
- <sup>9</sup>1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
- <sup>10</sup>For 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.
- <sup>11</sup>Purity 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: 31 MAR 2016

Signature:

BEI Resources Authentication

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

ATCC® is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

