

**Staphylococcus aureus, Strain SR4035**

**Catalog No. NR-50510**

**Product Description:** *Staphylococcus aureus* (*S. aureus*), strain SR4035 was isolated in 2011 from human blood in Alabama, USA. *S. aureus*, strain SR4035 is a heterogeneous vancomycin-intermediate *S. aureus* (hVISA) strain.

**Lot<sup>1</sup>: 70001340**

**Manufacturing Date: 13JAN2017**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Motility (wet mount) Hemolysis <sup>2</sup> Biochemical Characterization Catalase VITEK® 2 Compact (GP card)	Gram-positive cocci Report results  Report results Report results  Positive ≥ 90% probability of being <i>S. aureus</i>	Gram-positive cocci Circular, convex, entire, smooth and white (Figure 1) Non-motile β-hemolytic  Positive <i>S. aureus</i> (96% probability) <sup>3</sup>
<b>Antibiotic Susceptibility Profile</b> VITEK® (AST-GP71 card) <sup>4</sup> Beta-lactamase <sup>5</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® antibiotic test strips <sup>8</sup> Teicoplanin <sup>9</sup>	Report results Report results Report results Resistant Report results Report results Sensitive Report results Report results Sensitive Sensitive Report results Report results Sensitive Sensitive Report results Report results Sensitive Sensitive Report results Report results Intermediate 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 Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (= 0.25 µg/mL) Sensitive (= 2 µg/mL) Non-susceptible (= 4 µg/mL) Sensitive (= 2 µg/mL) <sup>6</sup> Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (= 0.12 µg/mL) <sup>7</sup> Sensitive (≤ 16 µg/mL) Intermediate (≤ 2 µg/mL) Sensitive (≤ 10 µg/mL)  Sensitive (= 4 µg/ml)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (820 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597)	100% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597)
<b>Purity (post-freeze)<sup>10</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>NR-50510 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>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>4</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

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

<sup>6</sup>*S. aureus*, strain SR4035 was deposited as a hVISA strain as determined by population analysis profiling with area under the curve (PAP-AUC) method. Antibiotic susceptibility testing using the VITEK® AST-GP71 card failed to detect vancomycin resistant subpopulations. Confirmatory vancomycin susceptibility testing is recommended. For additional information, please refer to Richter, S. S., et al. "Detection of *Staphylococcus aureus* Isolates with Heterogeneous Intermediate-Level Resistance to Vancomycin in the United States." *J. Clin. Microbiol.* 49 (2011): 4203-4207. PubMed: 21976769.

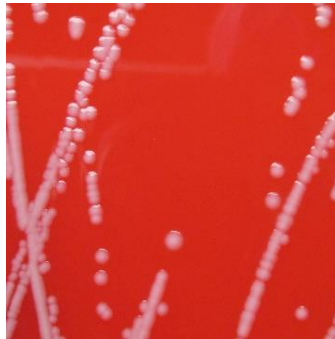
<sup>7</sup>MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

<sup>8</sup>1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

<sup>9</sup>For 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>10</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 10 APR 2017

Signature:

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