

**Staphylococcus aureus, Strain HIP5827**

**Catalog No. NR-45858**

**Product Description:** *Staphylococcus aureus* (*S. aureus*), strain HIP5827 was isolated in 1997 in Michigan, USA from a 59-year-old male diabetic dialysis patient with peritonitis who had a history of vancomycin therapy for methicillin-resistant *S. aureus* peritonitis associated with dialysis. *S. aureus*, strain HIP5827 is a vancomycin-intermediate *S. aureus* (VISA) strain.

**Lot<sup>1</sup>: 62990863**

**Manufacturing Date: 10OCT2014**

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) Phosphatase production D-ribose utilization	Gram-positive cocci Report results  Report results Report results  Positive Report results Consistent with <i>S. aureus</i> Positive Positive	Gram-positive cocci Circular, convex, entire, smooth and cream (Figure 1) Non-motile Non-hemolytic  Positive Positive Consistent with <i>S. aureus</i> <sup>4</sup> Positive <sup>4</sup> Positive <sup>4,5</sup>
<b>Antibiotic Susceptibility Profile</b> VITEK <sup>®</sup> (AST-GP71 card) <sup>6</sup> Beta-lactamase <sup>7</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>10</sup> Chloramphenicol <sup>11</sup> Teicoplanin <sup>11</sup>	Report results Report results Report results Resistant Resistant Resistant Report results Report results Report results Report results Report results Report results Sensitive Report results Non-susceptible Intermediate Report results Sensitive Report results Report results Report results Sensitive Report results Intermediate	Positive Positive Resistant (≥ 0.5 µg/mL) Resistant (≥ 4 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Resistant (= 4 µg/mL) Negative Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (= 0.5 µg/mL) Sensitive (= 2-4 µg/mL) Inconclusive <sup>8</sup> Intermediate (= 4-8 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (= 2 µg/mL) Sensitive (= 0.25 µg/mL) Sensitive (≤ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) Inconclusive <sup>9</sup> Sensitive (= 2 µg/ml) Intermediate (= 24 µg/ml)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 850 base pairs)	Consistent with <i>S. aureus</i>	Consistent with <i>S. aureus</i>

TEST	SPECIFICATIONS	RESULTS
Purity (post-freeze) <sup>12</sup>	Growth consistent with <i>S. aureus</i>	Growth consistent with <i>S. aureus</i>
Viability (post-freeze) <sup>2</sup>	Growth	Growth

<sup>1</sup>*S. aureus*, strain HIP5827 was deposited to BEI Resources as part of the NARSA collection. NR-45858 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 24 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 20 hours at 37°C in an aerobic atmosphere to produce this lot.

<sup>2</sup>24 hours 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>The VITEK® 2 Compact (GP card) performed in duplicate could not distinguish between *S. aureus* and *S. lugdunensis* based on the alkaline phosphatase and D-ribose test results. Additional individual biochemical testing was completed and was consistent with *S. aureus*. For additional information on the differentiating characteristics of *S. aureus* and *S. lugdunensis*, please refer to Freney, J., et al. "Staphylococcus lugdunensis sp. nov. and Staphylococcus schleiferi sp. nov., Two Species from Human Clinical Specimens." *Int. J. Syst. Bacteriol.* 38 (1988): 168-172.

<sup>5</sup>*S. aureus* is expected to be positive for D-ribose utilization and *S. lugdunensis* is expected to be negative for D-ribose utilization.

<sup>6</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

<sup>7</sup>The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

<sup>8</sup>*S. aureus*, strain HIP5827 was deposited as being non-susceptible to daptomycin. Antibiotic susceptibility testing performed in duplicate was inconclusive and could not confirm if this strain is susceptible to daptomycin.

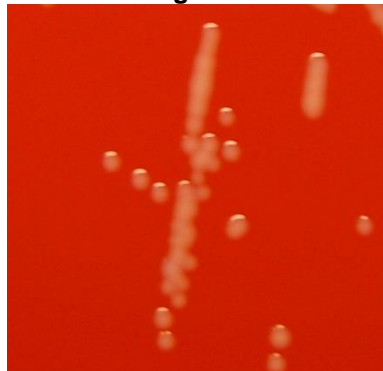
<sup>9</sup>*S. aureus*, strain HIP5827 was deposited as sensitive to trimethoprim/sulfamethoxazole. Antibiotic susceptibility testing performed in duplicate was inconclusive and could not confirm if this strain is resistant or susceptible to trimethoprim/sulfamethoxazole.

<sup>10</sup>24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

<sup>11</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>12</sup>Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.

Figure 1



Date: 05 FEB 2015

Signature:

Title:

Technical Manager, BEI Authentication or designee

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