

**Staphylococcus aureus, Strain 917 (BR-VSSA)**

**Catalog No. NR-49121**

**Product Description:**

*Staphylococcus aureus* (*S. aureus*), strain 917 (BR-VSSA) was isolated in 2012 in Sao Paulo, Brazil, from the blood of a 35-year-old male patient with recurrent skin and soft tissue infections (SSTI), which were treated with numerous antibiotics, including vancomycin and teicoplanin. The patient had a history of mycosis fungoides, cocaine addiction and diabetes mellitus. Strain 917 (BR-VSSA) was co-isolated with vancomycin-resistant *S. aureus* (VRSA), strain 880 (BR-VRSA) and vancomycin-resistant *Enterococcus faecalis* (VREF), strain 918. *S. aureus*, strain 917 (BR-VSSA) is a methicillin-resistant *S. aureus* (MRSA), vancomycin-sensitive *S. aureus* (VSSA) strain. NR-49121 was produced by inoculation of BEI Resources seed lot 63885493 into Tryptic Soy broth and grown for 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 for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

**Lot: 70061191**

**Manufacturing Date: 07JUN2023**

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TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology  Hemolysis Motility (wet mount) Biochemical characterization Catalase VITEK® MS (MALDI-TOF)	Gram-positive cocci Report results  Report results Report results  Positive <i>S. aureus</i>	Gram-positive cocci Circular, convex, entire, smooth and cream (Figure 1) β-hemolytic Non-motile  Positive <i>S. aureus</i> (99.9%)
<b>Antibiotic Susceptibility Profile<sup>1</sup></b> Etest® antibiotic test strips 1 day at 35°C in an aerobic atmosphere on Mueller Hinton agar Levofloxacin Moxifloxacin Quinupristin/dalfopristin VITEK® (AST-GP78 card) Benzylpenicillin Beta-lactamase <sup>2</sup> Cefoxitin screen Ciprofloxacin Clindamycin Clindamycin (inducible resistance) Daptomycin Erythromycin Gentamicin Linezolid Minocycline Nitrofurantoin Oxacillin Rifampicin	Resistant Resistant Sensitive  Resistant Report results Report results Resistant Resistant Report results Sensitive Resistant Sensitive Sensitive Sensitive Sensitive Resistant Sensitive	Resistant (8 µg/mL) Resistant (1.5 µg/mL) Sensitive (0.25 µg/mL)  Resistant (≥ 0.5 µg/mL) Positive Positive Resistant (≥ 8 µg/mL) Resistant (≥ 4 µg/mL) Negative Sensitive (0.5 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (1 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 16 µg/mL) Resistant (≥ 4 µg/mL) Sensitive (≤ 0.5 µg/mL)

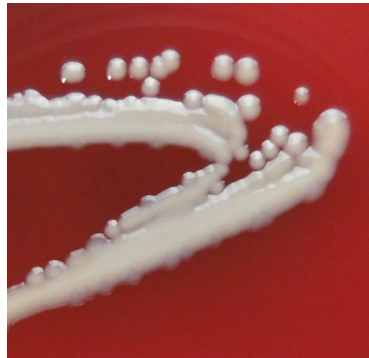
TEST	SPECIFICATIONS	RESULTS
Tetracycline Tigecycline Trimethoprim/sulfamethoxazole Vancomycin	Sensitive Sensitive Resistant Sensitive	Sensitive ( $\leq 1 \mu\text{g/mL}$ ) Sensitive ( $\leq 0.12 \mu\text{g/mL}$ ) <sup>3</sup> Resistant ( $\geq 320 \mu\text{g/mL}$ ) Sensitive ( $\leq 0.5 \mu\text{g/mL}$ )
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1500 base pairs)	$\geq 99\%$ sequence identity to <i>S. aureus</i> , strain 917 (BR-VSSA) (GenBank: JXBU01000101.1)	99.9% sequence identity to <i>S. aureus</i> , strain 917 (BR-VSSA) (GenBank: JXBU01000101.1)
<b>Purity (post-freeze)</b> 7 days at 37°C in an aerobic atmosphere with and without 5% CO <sub>2</sub> on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
<b>Viability (post-freeze)</b>	Growth	Growth

<sup>1</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2018)

<sup>2</sup>The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

<sup>3</sup>MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

Figure 1: Colony Morphology



/Sonia Bjorum Brower/  
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Technical Manager or designee, ATCC Federal Solutions

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