

Staphylococcus aureus, Strain 880 (BR-VRSA)

Catalog No. NR-49120

Product Description:

Staphylococcus aureus (*S. aureus*), strain 880 (BR-VRSA) was isolated in 2012 in 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 880 (BR-VRSA) was co-isolated with vancomycin-sensitive strain *S. aureus* (VSSA), strain 917 (BR-VSSA) and vancomycin-resistant *Enterococcus faecalis* (VREF), strain 918. *S. aureus*, strain 880 (BR-VRSA) is a methicillin-resistant *S. aureus* (MRSA), vancomycin-resistant *S. aureus* (VRSA) strain. NR-49120 was produced by inoculation of the BEI Resources seed lot 63885492 into Brain Heart Infusion broth with 6 µg/mL vancomycin and grown 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Brain Heart Infusion agar with 6 µg/mL vancomycin kolles, which were grown 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: 70076371

Manufacturing Date: 25JUN2025

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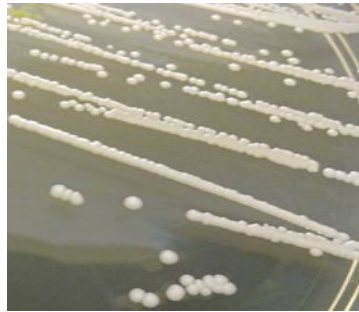
TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Hemolysis	β-hemolytic	β-hemolytic
Motility (wet mount)	Non-motile	Non-motile
Biochemical characterization		
Catalase	Positive	Positive
VITEK® MS (MALDI-TOF)	<i>S. aureus</i>	<i>S. aureus</i> (99.9%)
Antibiotic Susceptibility Profile¹		
Oxacillin ²	Resistant	Resistant (≥ 4 µg/mL)
VITEK® (AST-GP78 card)		
Beta-lactamase	Positive	Positive
Benzylpenicillin	Resistant	Resistant (≥ 0.5 µg/mL)
Cefoxitin screen	Positive	Positive
Ceftaroline	Sensitive	Sensitive (0.5 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Clindamycin	Resistant	Resistant (≥ 4 µg/mL)
Clindamycin (inducible resistance)	Negative	Negative
Daptomycin	Sensitive	Sensitive (0.5 µg/mL)
Erythromycin	Resistant	Resistant (≥ 8 µg/mL)
Gentamicin	Report results	Resistant (≥ 16 µg/mL)
Levofloxacin	Resistant	Resistant (4 µg/mL)
Linezolid	Sensitive	Sensitive (2 µg/mL)
Minocycline	Sensitive	Sensitive (≤ 0.5 µg/mL)
Moxifloxacin	Resistant	Resistant (2 µg/mL)
Nitrofurantoin	Sensitive	Sensitive (≤ 16 µg/mL)
Rifampicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Sensitive	Sensitive (≤ 1 µg/mL)
Tigecycline	Sensitive	Sensitive (≤ 0.12 µg/mL)

TEST	SPECIFICATIONS	RESULTS
Trimethoprim/sulfamethoxazole Vancomycin Etest® antibiotic test strips 1 day at 35°C in an aerobic atmosphere on Tryptic Soy agar Quinupristin/dalfoprisitin	Resistant Report results Sensitive	Resistant (≥ 320 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (0.38 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1050 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> , strain 880 (BR-VRSA) GenBank: J1CL01000036.1)	≥ 99.9% sequence identity to <i>S. aureus</i> , strain 880 (BR-VRSA) GenBank: J1CL01000036.1)
Purity (post-freeze) 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)	Growth	Growth

¹Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

²1 day at 35°C in an aerobic atmosphere on Mueller Hinton agar containing 6 µg/mL oxacillin and 4% NaCl (Oxacillin Screen Agar BBL™ 221952)

Figure 1: Colony Morphology



/Sonia Bjorum Brower/
Sonia Bjorum Brower

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Technical Manager or designee, ATCC Federal Solutions

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