

**Staphylococcus aureus, Strain 1002434**

**Catalog No. NR-46423**

**Product Description:**

*Staphylococcus aureus* (*S. aureus*) subsp. *aureus*, strain 1002434 was isolated in 2010 from a vaginal swab sample of an 83-year-old female in Delaware, USA. *S. aureus*, strain 1002434 is a vancomycin-resistant *S. aureus* (VRSA) strain. NR-46423 lot 70054134 was produced by inoculation of the deposited material into Brain Heart Infusion broth with 6µg/mL vancomycin and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Brain Heart Infusion agar with 6µg/mL vancomycin 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: 70054134**

**Manufacturing Date: 13JUL2022**

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TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology  Motility (wet mount) Hemolysis Biochemical characterization Catalase Coagulase <sup>1</sup> VITEK® 2 Compact (GP card)	Gram-positive cocci Report results  Report results β-hemolytic  Positive Positive <i>S. aureus</i> (≥ 89%)	Gram-positive cocci Circular, convex, entire, smooth and cream (Figure 1)  Non-motile β-hemolytic  Positive Positive <i>S. aureus</i> (99%)
<b>Antibiotic Susceptibility Profile<sup>2</sup></b> VITEK® (AST-GP78 card) Beta-lactamase Cefoxitin screen Benzylpenicillin Ceftaroline Ciprofloxacin Levofloxacin Clindamycin (inducible resistance) Erythromycin Clindamycin Linezolid Daptomycin Vancomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole Moxifloxacin	Report results Report results Report results Report results Resistant Report results Report results Resistant Report results Report results Resistant Resistant Sensitive Sensitive Resistant Report results Report results Report results Report results Sensitive Sensitive Report results	Positive Positive Resistant (≥ 0.5 µg/mL) Sensitive (0.25 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥8 µg/mL) Negative Resistant (≥ 8 µg/mL) Resistant (≥ 4 µg/mL) Sensitive (2 µg/mL) Sensitive (0.25 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) <sup>3</sup> Intermediate (64 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (10 µg/mL) Resistant (4 µg/mL)

TEST	SPECIFICATIONS	RESULTS
<b>Etest® antibiotic test strips</b> 1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar  Chloramphenicol Teicoplanin Quinupristin-dalfopristin Gentamicin Oxacillin	Report results Resistant Sensitive Resistant Sensitive	Sensitive (3 µg/mL) Resistant (≥ 256 µg/mL) Sensitive (0.25 µg/mL) Sensitive (2 µg/mL) <sup>4</sup> Resistant (96 µg/mL) <sup>5</sup>
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1490 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)</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>14 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

<sup>2</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

<sup>3</sup>MIC Interpretation Guideline: EUCAST Version 12.0 (2022)

<sup>4</sup>*Staphylococcus aureus*, Strain 1002434 was deposited as resistant to gentamicin, but showed a MIC of 2 µg/mL (interpreted as sensitive) for gentamicin during QC testing. Testing was performed in duplicate.

<sup>5</sup>*Staphylococcus aureus*, Strain 1002434 was deposited as sensitive to oxacillin, but showed a MIC of 96 µg/mL (interpreted as resistant) for oxacillin during QC testing. Testing was performed in duplicate.

Figure 1: Colony Morphology



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