

Staphylococcus aureus, Strain VCU006
Catalog No. NR-46374
Product Description:

Staphylococcus aureus (*S. aureus*), strain VCU006 is of unknown origin. *S. aureus*, strain VCU006 (NRS846) was deposited to BEI Resources as part of the NARSA collection. NR-46374 was produced by inoculation of BEI Resources seed lot 63025382 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: 70076369
Manufacturing Date: 29MAY2025

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) Hemolysis 1 day at 37°C in an aerobic atmosphere with 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood Biochemical characterization Catalase Coagulase ¹ VITEK® MS (MALDI-TOF)	Gram-positive cocci Report results Report results Report results Positive Negative <i>S. aureus</i>	Gram-positive cocci Circular, low convex, entire, smooth and cream (Figure 1) Non-motile β-hemolytic Positive Negative <i>S. aureus</i> (99.9%)
Antibiotic Susceptibility Profile² VITEK® (AST-GP78 card) Beta-lactamase Cefoxitin screen Benzylpenicillin Ceftaroline Ciprofloxacin Clindamycin Clindamycin (inducible resistance) Daptomycin Erythromycin Gentamicin Levofloxacin Linezolid Minocycline Moxifloxacin Nitrofurantoin Oxacillin Rifampicin Tetracycline Tigecycline Trimethoprim/sulfamethoxazole Vancomycin	Positive Negative Report results Report results Sensitive Sensitive Report results Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive	Positive Negative Inconclusive (≥ 0.06 µg/mL) ³ Sensitive (0.25 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (0.25 µg/mL) Negative Sensitive (0.5 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (0.25 µg/mL) Sensitive (2 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 16 µg/mL) Sensitive (≥ 0.25 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) ⁴ Sensitive (≤ 10 µg/mL) Sensitive (1 µg/mL)

Certificate of Analysis for NR-46374

TEST	SPECIFICATIONS	RESULTS
Etest® antibiotic test strips 1 day at 35°C in an aerobic atmosphere on Mueller Hinton agar Chloramphenicol Quinupristin/dalfopristin Teicoplanin	Sensitive Sensitive Sensitive	Sensitive (3 µg/mL) Sensitive (0.38 µg/mL) Sensitive (0.5 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> , strain VCU006 (GenBank: AGTZ01000010.1)	100% sequence identity to <i>S. aureus</i> , strain VCU006 (GenBank: AGTZ01000010.1)
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

¹4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

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

³Antibiotic susceptibility testing performed in duplicate determined the penicillin MIC for *S. aureus*, strain VCU006 as 0.06 µg/mL, which is considered susceptible; however, this strain tested positive for beta-lactamase production (Cefinase™ Paper Disc BBL™ 231650). While rare, other beta-lactamase-producing, penicillin-sensitive *S. aureus* strains have been reported. For additional information, refer to Gill, V. J., C. B. Manning and C. M. Ingalls. "Correlation of Penicillin Minimum Inhibitory Concentrations and Penicillin Zone Edge Appearance with Staphylococcal Beta-Lactamase Production." *J. Clin. Microbiol.* 14 (1981): 437-440. PubMed: 6974738

⁴MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

Figure 1: Colony Morphology



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