

Staphylococcus epidermidis, Strain NRS34

Catalog No. NR-45879

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Product Description:

Staphylococcus epidermidis (*S. epidermidis*), strain NRS34 was isolated in October 2000 from a catheter tip of an 83-year-old male ICU inpatient in California, USA. *S. epidermidis*, strain NRS34 is a vancomycin-intermediate *S. epidermidis* (VISE) strain and was deposited as positive for *mec* and negative for *vanA*, *vanB*, *vanC*, *vanD* and *vanE*. *S. epidermidis* was deposited to BEI Resources as part of the NARSA collection. NR-45879 was produced by inoculation of BEI Resources seed lot 70011107 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.

Lot: 70056673

Manufacturing Date: 23NOV2022

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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 on Tryptic Soy agar with 5% defibrinated sheep blood Biochemical characterization Catalase Coagulase ¹ VITEK® 2 Compact (GP Card) VITEK® MS (MALDI-TOF)	Gram-positive cocci Report results Report results Report results Positive Report results <i>S. epidermidis</i> (≥ 89%) <i>S. epidermidis</i>	Gram-positive cocci Circular, low convex, entire, smooth and white (Figure 1) Non-motile Non-hemolytic Positive Negative <i>S. epidermidis</i> (96%) <i>S. epidermidis</i> (99.9%)
Antibiotic Susceptibility Profile² VITEK® (AST-GP78 card) Benzylpenicillin Beta-lactamase ³ Cefoxitin screen Ciprofloxacin Clindamycin (inducible resistance) Erythromycin Levofloxacin Linezolid Minocycline Moxifloxacin Nitrofurantoin Oxacillin Rifampicin Tetracycline Tigecycline Vancomycin	Resistant Report results Report results Resistant Report results Resistant Resistant Sensitive Sensitive Resistant Sensitive Resistant Sensitive Sensitive Sensitive Sensitive Intermediate	Resistant (≥ 0.5 µg/mL) Positive Positive Resistant (≥ 8 µg/mL) Positive ⁴ Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (1 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (≤ 16 µg/mL) Resistant (≥ 4 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) ⁵ Intermediate (8 µg/mL)

TEST	SPECIFICATIONS	RESULTS
Etest® antibiotic test strips 1 day at 35°C in an aerobic atmosphere on Mueller Hinton agar Daptomycin Gentamicin Quinupristin/dalfopristin Teicoplanin Trimethoprim/sulfamethoxazole	Non-susceptible Sensitive Sensitive Sensitive Resistant	Sensitive (1 µg/mL) ⁶ Resistant (24 µg/mL) ⁷ Sensitive (0.25 µg/mL) Sensitive (6 µg/mL) Sensitive (2 µg/mL) ⁸
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 570 base pairs)	≥ 99% sequence identity to <i>S. epidermidis</i> type strain (GenBank: Z26894)	99.5% sequence identity to <i>S. epidermidis</i> type strain (GenBank: Z26894) ⁹
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

¹1 day at 37°C in an aerobic atmosphere in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

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

³The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁴The VITEK® AST-GP78 card tests for both clindamycin resistance and inducible clindamycin resistance (ICR). A positive ICR test is indicative of inducible MLS_B resistance, which confers resistance to macrolides, lincosamides, and type B streptogramin and the isolate should be considered resistant to clindamycin. *S. epidermidis*, strain NRS34 was found to be sensitive to clindamycin but had a positive ICR test and therefore is considered resistant to clindamycin. For additional information, please refer to Mahesh, C. B., B. K. Ramakant and V. S. Jagadeesh. "The Prevalence of Inducible and Constitutive Clindamycin Resistance Among the Nasal Isolates of Staphylococci." *J. Clin. Diagn. Res.* 7 (2013): 1620-1622. PubMed: 24086856.

⁵MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

⁶*S. epidermidis*, strain NRS34 was deposited as non-susceptible to daptomycin, but showed a MIC of 1 µg/mL (interpreted as sensitive) for daptomycin during QC testing. Testing was performed in quadruplicate.

⁷*S. epidermidis*, strain NRS34 was deposited as resistant to gentamycin and was found to be sensitive in lot 70011106 but showed a MIC of 24 µg/mL (interpreted as resistant) for gentamycin during QC testing. Testing was performed in quadruplicate.

⁸*S. epidermidis*, strain NRS34 was deposited as resistant to trimethoprim/sulfamethoxazole, but showed a MIC of 2 µg/mL (interpreted as sensitive) for trimethoprim/sulfamethoxazole during QC testing. Testing was performed in duplicate.

⁹Also consistent with other *Staphylococcus* species

Figure 1: Colony Morphology


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