

Staphylococcus aureus, Strain HIP06854

Catalog No. NR-46869

Product Description:

Staphylococcus aureus (*S. aureus*), strain HIP06854 was isolated in 1998 from blood of a 68-year-old male inpatient in New Jersey, USA. *S. aureus*, strain HIP06854 is a vancomycin-intermediate *S. aureus* (VISA) strain. *S. aureus*, strain HIP06854 was deposited to BEI Resources as part of the NARSA collection. NR-45869 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar 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: 70007483

Manufacturing Date: 21JUL2017

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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)	Gram-positive cocci Report results Report results Report results Positive Report results <i>S. aureus</i> (≥ 89.9%)	Gram-positive cocci Circular, convex, entire, smooth and cream (Figure 1) Non-motile β-hemolytic Positive Positive <i>S. aureus</i> (99% probability) ²
Antibiotic Susceptibility Profile³ VITEK® (AST-GP71 card) Beta-lactamase ⁴ Cefoxitin screen Benzylpenicillin Oxacillin Gentamicin Ciprofloxacin Levofloxacin Moxifloxacin Clindamycin (inducible resistance) Erythromycin Clindamycin Quinupristin/dalfopristin Linezolid Daptomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole	Report results Report results Report results Resistant Sensitive Resistant Report results Report results Report results Report results Report results Report results Sensitive Report results Report results Report results Report results Report results Report results Sensitive	Positive Positive Resistant (≥ 0.5 µg/mL) Resistant (≥ 4 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 8 µg/mL) Resistant (4 µg/mL) Resistant (2 µg/mL) Negative Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (2 µg/mL) Non-susceptible (= 2 µg/mL) ⁵ Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) ⁶ Sensitive (≤ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 10 µg/mL)

TEST	SPECIFICATIONS	RESULTS
Etest® antibiotic test strips 1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar Chloramphenicol Teicoplanin Vancomycin	Report results Report results Intermediate	Sensitive (4 µg/mL) Sensitive (2 to 3 µg/mL) Intermediate (4 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 770 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597)	100% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597)
Purity (post-freeze) 7 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Tryptic Soy agar	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).

²Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99% being a perfect match between the test reaction pattern and the unique biochemical pattern of the given organism or organism group. For additional information, please refer to O'Hara, C. M. and J. M. Miller. "Evaluation of the VITEK 2 ID-GNB Assay for Identification of Members of the Family Enterobacteriaceae and Other Nonenteric Gram-Negative Bacilli and Comparison with the VITEK GNI+ Card." *J. Clin. Microbiol.* 41 (2003): 2096-2101. PubMed: 12734254.

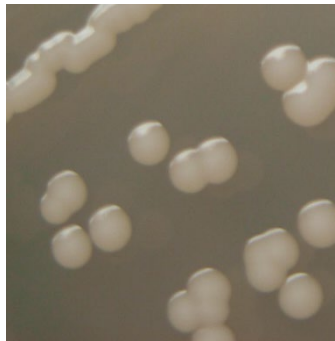
³Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012).

⁴The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁵*S. aureus*, strain HIP06854 was deposited as susceptible to daptomycin. Antibiotic susceptibility testing performed in duplicate identified strain HIP06854 as non-susceptible to daptomycin. Studies have demonstrated a correlation between reduced daptomycin susceptibility and vancomycin resistance in hVISA and VISA strains. Reduced sensitivity to these antibiotics is believed to be due to a thickening of the cell wall. For additional information, please refer to Tran, T.T., J. M. Munita and C. A. Arias. "Mechanisms of Drug Resistance: Daptomycin Resistance." *Ann. N. Y. Acad. Sci.* 1354 (2015): 32-53. PubMed: 26495887.

⁶MIC Interpretation Guideline: EUCAST Version 4.0 (2014).

Figure 1: Colony Morphology



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