

Staphylococcus aureus, Strain 99.3795.V

Catalog No. NR-45883

Product Description: *Staphylococcus aureus* (*S. aureus*), strain 99.3795.V was isolated in May 1999 from urine of an ICU inpatient in Scotland. *S. aureus*, strain 99.3795.V is a glycopeptide-intermediate *S. aureus* (GISA) strain.

Lot¹: 70011108

Manufacturing Date: 28DEC2017

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount) Hemolysis ² Biochemical characterization Catalase Coagulase ⁴ VITEK [®] 2 Compact (GP card) VITEK [®] MS (MALDI-TOF)	Gram-positive cocci Report results Report results Report results Positive Report results <i>S. aureus</i> (≥ 89%) <i>S. aureus</i>	Gram-positive cocci Circular, low convex, entire, smooth and white (Figure 1) Non-motile β-hemolytic ³ Positive Positive <i>S. aureus</i> (98%) <i>S. aureus</i> (99.9%)
Antibiotic Susceptibility Profile⁵ VITEK [®] (AST-GP71 card) Beta-lactamase ⁶ Cefoxitin screen Benzylpenicillin Oxacillin Gentamicin Ciprofloxacin Levofloxacin Moxifloxacin Clindamycin (inducible resistance) Erythromycin Clindamycin Quinupristin/dalfopristin Linezolid Daptomycin Vancomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole Etest [®] antibiotic test strips ⁹ Chloramphenicol Teicoplanin	Report results Report results Report results Resistant Resistant Resistant Report results Report results Report results Report results Report results Report results Sensitive Report results Non-susceptible Intermediate Report results Resistant Report results Report results Report results Sensitive Report results Intermediate	Positive Positive Resistant (≥ 0.5 µg/mL) Resistant (≥ 4 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Resistant (= 2 µg/mL) Negative Resistant (≥ 8 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (= 2 µg/mL) Susceptible (= 1 µg/mL) ⁷ Intermediate (= 8 µg/mL) Intermediate (= 8 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (= 0.25 µg/mL) ⁸ Sensitive (≤ 16 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (≤ 10 µg/mL) Sensitive (= 8 µg/mL) Intermediate (= 12 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 720 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) ¹⁰
Purity (post-freeze)¹¹	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)²	Growth	Growth

¹*S. aureus*, strain 99.3795.V was deposited to BEI Resources as part of the NARSA collection. NR-45883 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 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 1 day at 37°C in an aerobic atmosphere to produce this lot.

²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

³β-hemolysis was observed after 2 days

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

⁵Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁶The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁷*S. aureus*, strain 99.3795.V was deposited as susceptible to non-daptomycin. Antibiotic susceptibility testing performed in duplicate identified strain 99.3795.V as susceptible to daptomycin. Studies have demonstrated a correlation between reduced daptomycin susceptibility and vancomycin resistance in GISA 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.

⁸MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

⁹1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

¹⁰Also consistent with other *Staphylococcus* species

¹¹Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



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Program Manager or designee, ATCC Federal Solutions

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