

## **Certificate of Analysis for NR-45870**

## Staphylococcus aureus, Strain HIP07256

## Catalog No. NR-45870

**Product Description:** Staphylococcus aureus (S. aureus), strain HIP07256 was isolated in 1999 in Illinois, USA from the bloodstream of a 67-year-old male ICU patient with vertebral osteomyelitis that was secondary to recurrent methicillin-resistant S. aureus (MRSA) cellulitis and bacteremia and who had a prior 14-week course of vancomycin therapy. S. aureus, strain HIP07256 is a vancomycin-intermediate S. aureus (VISA) strain.

Lot<sup>1</sup>: 62990881 Manufacturing Date: 24OCT2014

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology <sup>2</sup>	Report results	Circular, convex, entire, smooth and
, 1 3,		white (Figure 1)
Motility (wet mount)	Report results	Non-motile
Hemolysis <sup>2</sup>	Report results	Non-hemolytic
Biochemical Characterization	·	
Catalase	Positive	Positive
Coagulase <sup>3</sup>	Report results	Positive
VITEK <sup>®</sup> 2 Compact (GP card)	Consistent with S. aureus	Consistent with S. aureus
Antibiotic Susceptibility Profile		
VITEK <sup>®</sup> (AST-GP71 card)⁴		
Beta-lactamase <sup>5</sup>	Report results	Negative
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 μg/mL)
Oxacillin	Resistant	Resistant (≥ 4 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 8 μg/mL)
Levofloxacin	Report results	Resistant (≥ 8 μg/mL)
Moxifloxacin	Report results	Resistant (= 4 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Report results	Resistant (≥ 8 µg/mL)
Clindamycin	Report results	Resistant (≥ 8 µg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (= 0.5 µg/mL)
Linezolid	Report results	Sensitive (= 1 µg/mL)
Daptomycin	Report results	Susceptible (= 1 µg/mL) <sup>6</sup>
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Sensitive	Sensitive (≤ 1 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 μg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 μg/mL)
Rifampicin	Report results	Resistant (≥ 32 μg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 μg/mL)
Etest <sup>®</sup> antibiotic test strips <sup>7</sup>		
Chloramphenicol <sup>8</sup>	Report results	Sensitive (= 3 µg/ml)
Teicoplanin <sup>8</sup>	Sensitive	Sensitive (= 2 µg/ml)
Vancomycin <sup>8</sup>	Intermediate	Intermediate (= 3µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene	Consistent with S. aureus	Consistent with S. aureus
(~ 890 base pairs)	Consistent with S. aureus	Consistent with S. dureus
(~ 030 base pairs)		

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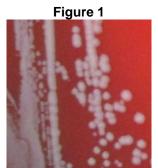
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TEST	SPECIFICATIONS	RESULTS
Purity (post-freeze) <sup>9</sup>	Consistent with S. aureus	Consistent with S. aureus
Viability (post-freeze) <sup>2</sup>	Growth	Growth

S. aureus, strain HIP07256 was deposited to BEI Resources as part of the NARSA collection. NR-45870 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 24 hours at 37°C in an aerobic atmosphere. The material from the initial growth was passaged once in Tryptic Soy broth for 24 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles which were grown 23 hours at 37°C in an aerobic atmosphere to produce this lot.

<sup>&</sup>lt;sup>9</sup>Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.



**Date:** 16 DEC 2014

Signature:

**Title:** Technical Manager, BEI Authentication or designee

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<sup>&</sup>lt;sup>2</sup>24 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

<sup>&</sup>lt;sup>3</sup>4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

<sup>&</sup>lt;sup>4</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

<sup>&</sup>lt;sup>5</sup>The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

<sup>&</sup>lt;sup>6</sup>S. aureus, strain HIP07256 was deposited as being non-susceptible to daptomycin. Antibiotic susceptibility testing performed in duplicate identified S. aureus, strain HIP07256 as susceptible to daptomycin.

<sup>&</sup>lt;sup>7</sup>24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

<sup>&</sup>lt;sup>8</sup>For both chloramphenicol (bioMérieux Etest<sup>®</sup> 412308) and teicoplanin (bioMérieux Etest<sup>®</sup> 412459), a MIC ≤ 8 μg/mL is sensitive, a MIC = 16 μg/mL is intermediate, and a MIC ≥ 32 μg/mL is resistant. For vancomycin (bioMérieux Etest<sup>®</sup> 412486), a MIC ≤ 2 μg/mL is sensitive, a MIC = 4-8 μg/mL is intermediate, and a MIC ≥ 16 μg/mL is resistant.