SUPPORTING INFECTIOUS DISEASE RESEARCH

### Staphylococcus aureus, Strain LIM 3

### Catalog No. NR-45882

**Product Description:** *Staphylococcus aureus* (*S. aureus*), strain LIM 3 was isolated in 1995 from purulent discharge of a 2-year-old female patient with leukemia in France. *S. aureus*, strain LIM 3 is a methicillin-resistant *S. aureus* (MRSA) and a vancomycin-intermediate *S. aureus* (VISA) strain.

## Lot<sup>1</sup>: 63358422

## Manufacturing Date: 21MAR2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology <sup>2</sup>	Report results	Circular, low convex, entire, smooth
colony morphology		and cream (Figure 1)
Motility (wet mount)	Report results	Non-motile
Hemolysis <sup>2</sup>	Report results	Non-hemolytic
Biochemical Characterization	Report results	Non hemolytic
Catalase	Positive	Positive
Coagulase <sup>3</sup>	Report results	Positive
VITEK <sup>®</sup> 2 Compact (GP card)	Consistent with <i>S. aureus</i>	Consistent with S. aureus
	Consistent with S. aureus	
Antibiotic Susceptibility Profile		
VITEK <sup>®</sup> (AST-GP71 card) <sup>4</sup>		
Beta-lactamase <sup>5</sup>	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 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 (= 2 µg/mL)
Daptomycin	Report results	Susceptible (= 1 $\mu$ g/mL) <sup>6</sup>
Vancomycin	Intermediate	Intermediate_(= 8 µg/mL)
Minocycline	Report results	Inconclusive <sup>7</sup>
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Report results	Resistant $(\geq 32 \mu g/mL)$
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest <sup>®</sup> antibiotic test strips <sup>8</sup>		
Chloramphenicol <sup>9</sup>	Report results	Sensitive (= 3-4 µg/ml)
Teicoplanin <sup>9</sup>	Intermediate	Sensitive (= 4 µg/ml) <sup>10</sup>
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	Consistent with S. aureus	Consistent with S. aureus
(~ 1500 base pairs)		
Purity (post-freeze) <sup>11</sup>	Growth consistent with S. aureus	Growth consistent with S. aureus
Viability (post-freeze) <sup>2</sup>	Growth	Growth

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# **Certificate of Analysis for NR-45882**

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<sup>1</sup>S. aureus, strain LIM 3 was deposited to BEI Resources as part of the NARSA collection. NR-45882 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 28 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 21 hours at 37°C in an aerobic atmosphere to produce this lot.
<sup>2</sup>19 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

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

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

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

<sup>6</sup>S. aureus, strain LIM 3 was deposited as being non-susceptible to daptomycin. Antibiotic susceptibility testing performed in duplicate determined that strain LIM 3 is susceptible to daptomycin.

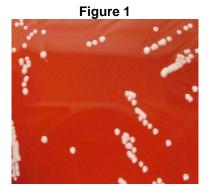
<sup>7</sup>Antibiotic susceptibility testing performed in duplicate was inconclusive and could not confirm if this strain is intermediate or sensitive to minocycline.

<sup>8</sup>23 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

<sup>9</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.

<sup>10</sup>S. aureus, strain LIM 3 was deposited as having an intermediate susceptibility to teicoplanin. Antibiotic susceptibility testing using bioMérieux Etest<sup>®</sup> antibiotic test strips and performed in duplicate determined that strain LIM 3 is sensitive to teicoplanin. For additional information on susceptibility testing of gylcopeptide intermediate *S. aureus* (GISA) strains, please refer to Walsh, T. R., et al. "Evaluation of Current Methods for Detection of Staphylococci with Reduced Susceptibility to Glycopeptides." J. Clin. Microbiol. 39 (2001): 2439-2444. PubMed: 11427551.

<sup>11</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: 28 MAY 2015

Signature:

**BEI Resources Authentication** 

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