

**Staphylococcus aureus subsp. aureus, Strain JE2**

**Catalog No. NR-46543**

**Product Description:** *S. aureus* subsp. *aureus*, strain JE2 is a plasmid-cured derivative of strain LAC that was isolated in 2002 from a skin and soft tissue infection of an inmate in the Los Angeles County Jail in California, USA. It is the parental strain of the Nebraska Transposon Mutant Library from which the collection of transposon mutants was generated from. Strain JE2 is a methicillin-resistant *S. aureus* (MRSA) strain.

**Lot<sup>1</sup>: 70014352**

**Manufacturing Date: 04APR2018**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Motility (wet mount) Hemolysis <sup>2</sup> Biochemical characterization Catalase Coagulase <sup>3</sup> VITEK <sup>®</sup> 2 Compact (GP card)	Gram-positive cocci Report results  Non-motile β-hemolytic  Positive Positive <i>S. aureus</i> (≥ 89%)	Gram-positive cocci Circular, low convex, entire, smooth, and cream (Figure 1) Non-motile β-hemolytic  Positive Positive <i>S. aureus</i> (96%)
<b>Antibiotic Susceptibility Profile<sup>4</sup></b> VITEK <sup>®</sup> (AST-GP78 card) Beta-lactamase <sup>5</sup> Cefoxitin screen Benzylpenicillin Oxacillin Ceftaroline Gentamicin Ciprofloxacin Levofloxacin Clindamycin (inducible resistance) Erythromycin Clindamycin Linezolid Daptomycin Vancomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole Etest <sup>®</sup> antibiotic test strips <sup>7</sup> Chloramphenicol Teicoplanin Moxifloxacin	Positive Positive Resistant Resistant Report results Sensitive Resistant Resistant Negative Sensitive Sensitive Sensitive Susceptible Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive	Positive Positive Resistant (≥ 0.5 μg/mL) Resistant (≥ 4 μg/mL) Sensitive (= 0.5 μg/mL) <sup>6</sup> Sensitive (≤ 0.5 μg/mL) Resistant (≥ 8 μg/mL) Resistant (= 4 μg/mL) Negative Sensitive (≤ 0.25 μg/mL) Sensitive (= 0.25 μg/mL) Sensitive (= 2 μg/mL) Susceptible (= 1 μg/mL) Sensitive (= 1 μg/mL) Sensitive (≤ 0.5 μg/mL) Sensitive (≤ 1 μg/mL) Sensitive (≤ 0.12 μg/mL) <sup>6</sup> Sensitive (≤ 16 μg/mL) Sensitive (≤ 0.5 μg/mL) Sensitive (≤ 10 μg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> , strain JE2 (GenBank: CP020619)	100% sequence identity to <i>S. aureus</i> , strain JE2 (GenBank: CP020619) <sup>8</sup>
<b>Purity (post-freeze)<sup>9</sup></b>	Consistent with expected colony morphology	Consistent with expected colony morphology
<b>Viability (post-freeze)<sup>2</sup></b>	Growth	Growth

- <sup>1</sup>*S. aureus*, strain JE2 was deposited to BEI Resources as part of the NARSA collection. NR-46543 lot 70014352 was produced by inoculation of BEI Resources NRS-46543 lot 63043216 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.
- <sup>2</sup>1 day 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>MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
- <sup>7</sup>1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
- <sup>8</sup>Also consistent with other *Staphylococcus* species
- <sup>9</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> 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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