

***Staphylococcus aureus* subsp. *aureus*, Strain JE2, Transposon Mutant NE27 (SAUSA300_1895)**

Catalog No. NR-46570

Product Description: *Staphylococcus aureus* (*S. aureus*) subsp. *aureus*, transposon mutant NE27 was derived from *S. aureus* subsp. *aureus*, strain JE2. Mutagenesis occurred through the use of the *mariner*-based transposon *bursa aurealis* resulting in an erythromycin-resistant deletion strain of JE2. *S. aureus* subsp. *aureus*, transposon mutant NE27 was created by disruption of SAUSA300_1895, which encodes for a nitric oxide synthase oxygenase that catalyzes nitric oxide production from L-arginine and may contribute to methicillin-resistant *S. aureus* (MRSA) innate immune and antibiotic resistance phenotypes. 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.

Lot¹: 70013195

Manufacturing Date: 22FEB2018

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount)	Gram-positive cocci Report results Report results	Gram-positive cocci Circular, low convex, entire, smooth and cream (Figure 1) Non-motile
Confirmation of Transposon Insertion³	Resistant to erythromycin	Resistant to erythromycin
Purity (post-freeze)⁴	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)²	Growth	Growth

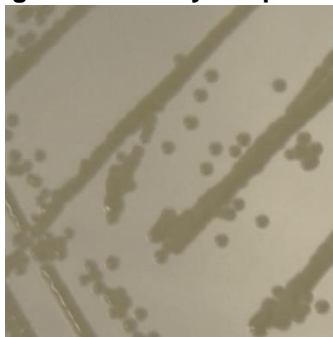
¹NR-46570 lot 70013195 was produced by inoculation of BEI Resources NRS-46570 lot 63303083 into Tryptic Soy broth with 5 µg/mL erythromycin and incubated for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5 µg/mL erythromycin kolles which were grown 1 day at 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 µg/mL erythromycin

³Prior to initiating work, it is recommended that the presence and location of the transposon is confirmed. Gene specific primers should be paired with either the "Upstream" primer (5'-CTCGATTCTATTAACAAGGG-3') for transposons in the "plus" orientation or the "Buster" primer (5'-GCTTTTCTAAATGTTTTTAAGTAAATCAAGTAC-3') for transposons in the "minus" orientation. For additional information, refer to Fey, P. D., et al. "A Genetic Resource for Rapid and Comprehensive Phenotype Screening of Nonessential *Staphylococcus aureus* Genes." *mBio* 4 (2013): e00537-12. PubMed: 23404398.

⁴Purity 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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