b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

# Certificate of Analysis for NR-48085

## *Staphylococcus aureus* subsp. *aureus*, Strain JE2, Transposon Mutant NE1543 (SAUSA300_0961)

**Catalog No. NR-48085**

**Product Description:** *Staphylococcus aureus* (*S. aureus*) subsp. *aureus,* transposon mutant NE1543 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 NE1543 was created by disruption of *qoxC,* one of four quinol oxidase genes in the *qoxABCD* operon that encode for the terminal oxidase cytochrome $aa_3$. 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.

**Lot[1]: 63324007** **Manufacturing Date: 25FEB2015**

| TEST | SPECIFICATIONS | RESULTS | |
|---|---|---|---|
| **Phenotypic Analysis[2]** | | Colony type 1 | Colony type 2 |
| Cellular morphology | Gram-positive cocci | Gram-positive cocci | Gram-positive cocci |
| Colony morphology[3] | Report results | Circular, convex, entire, smooth and yellow (Figure 1) | Circular, convex, entire, smooth and cream (Figure 1) |
| Motility (wet mount) | Report results | Non-motile | Not reported |
| **Confirmation of Transposon Insertion[4]** | Resistant to erythromycin | Resistant to erythromycin | |
| **Purity (post-freeze)[5]** | Consistent with *S. aureus* | Consistent with *S. aureus* | |
| **Viability (post-freeze)[3]** | Growth | Growth | |

[1]NR-48085 was produced by inoculation of the deposited material into Tryptic Soy broth with 5 µg/mL erythromycin and incubated for 24 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5 µg/mL erythromycin kolles which were grown 20 hours at 37°C in an aerobic atmosphere to produce this lot.

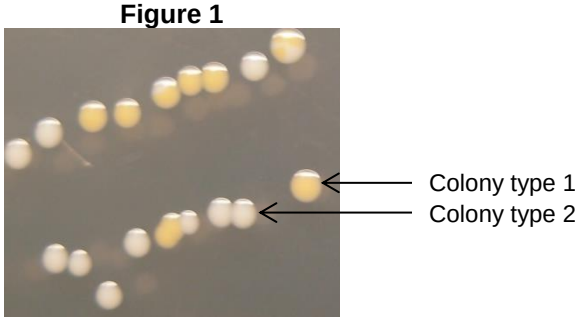
[2] Two colony types were observed. VITEK® MS (MALDI-TOF) analysis identified cells from both colony types as *S. aureus.* Since NR-48085 is a transposon mutant and is expected to produce a single colony type, colony purification of this item is highly recommended.

[3]24 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5 µg/mL erythromycin

[4]Prior 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'-GCTTTTTCTAAATGTTTTTTAAGTAAATCAAGTAC-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.

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

**Figure 1**

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# Certificate of Analysis for NR-48085

**Date:** 20 APR 2015 **Signature:**

BEI Resources Authentication

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.



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