

Escherichia coli K-12, Strain IM93B

Catalog No. NR-49808

Product Description: *Escherichia coli* (*E. coli*) K-12, strain IM93B contains the *hsdM* (methylase) and *hsdS* (specificity) genes from *Staphylococcus aureus* JKD6159 sequence type 93 (ST93). This insertion mutant was produced in *E. coli* K-12, strain DC10B (Δdcm). *E. coli* K-12, strain IM93B was deposited as resistant to streptomycin.

Lot¹: 63849809

Manufacturing Date: 19NOV2015

| TEST | SPECIFICATIONS | RESULTS |
|--|--|--|
| Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount) VITEK [®] MS (MALDI-TOF) | Gram-negative rods Report results Report results Consistent with <i>E. coli</i> | Gram-negative rods Circular, slight peaked, entire, smooth and cream (Figure 1) Motile <i>E. coli</i> (99.9%) |
| Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs) Riboprinter [®] Microbial Characterization System | ≥ 99% sequence identity to <i>E. coli</i> K-12 strain (GenBank: NZ_CP014225.1) ≥ 85% <i>E. coli</i> | 99.5% sequence identity to <i>E. coli</i> K-12 strain (GenBank: NZ_CP014225.1) 95% <i>E. coli</i> |
| Analysis of <i>hsdMS</i> by PCR Assay³ <i>hsdM2</i> , <i>hsdS2</i> , <i>hsdS1</i> (ST93) <i>hsdM3</i> and <i>hsdS3</i> (ST93) | ~ 3200 base pair amplicon ~ 4600 base pair amplicon | ~ 3200 base pair amplicon ~ 4600 base pair amplicon |
| Analysis of <i>hsdMS</i> by Sequence Analysis³ <i>hsdM2</i> and <i>hsdS2</i> (~ 740 base pairs) <i>hsdS1</i> , <i>hsdM3</i> and <i>hsdS3</i> (~ 1010 base pairs) | Consistent with depositor sequence Consistent with depositor sequence | Consistent with depositor sequence Consistent with depositor sequence |
| Confirmation of Streptomycin Resistance² | Growth | Growth |
| Purity (post-freeze)⁴ | Growth consistent with expected colony morphology | Growth consistent with expected colony morphology |
| Viability (post-freeze)² | Growth | Growth |

¹NR-49808 was produced by inoculation of the deposited material into Tryptic Soy broth with 25 µg/mL streptomycin and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 25 µg/mL streptomycin kolles, which were grown for 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 25 µg/mL streptomycin

³PCR primers used for amplification were IM434 forward primer 5'-ACTTCTTTAAGGCTTAGAGTCAAGC-3', IM435 reverse primer 5'-TTTAACGCCACGTTCACTCTTTGC-3', 179 forward primer 5'-CGGCCATTTATACAGGAAAAGCCTA-3' and 180 reverse primer 5'-GTTACCTTCTCTATAGAGAGTGGTG-3'. For additional information, refer to Monk, I., et al. "Complete Bypass of Restriction Systems for Major *Staphylococcus aureus* Lineages." *MBio*. 26 (2015): e00308-15. PubMed: 26015493.

⁴Purity 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: Colony Morphology



Date: 15 APR 2016

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.

ATCC[®] is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

