

Escherichia coli* – Staphylococcal *aureus* Shuttle Vector pCN38, Recombinant in *Staphylococcus aureus

Catalog No. NR-46128

Product Description:

NR-46128 is a culture of *Staphylococcus aureus* (*S. aureus*), strain 4220 (RN9591, NRS591) containing the *Escherichia coli* (*E. coli*) - staphylococcal shuttle vector pCN38. Vector pCN38 contains the *E. coli* ColE1 replication origin and the *S. aureus* pT181 *cop-wt-repC* replicon. Vector pCN38 was deposited as resistant to ampicillin and chloramphenicol in *E. coli* and resistant to chloramphenicol in *S. aureus*. NR-46128 was produced by inoculation of BEI Resources seed lot 63341059 in Casitone-Yeast broth containing 0.1 M glycerol phosphate and 10 µg/mL chloramphenicol. Broth inoculum was added to a Tryptic Soy agar plate containing 10 µg/mL chloramphenicol, and both were grown for 1 day at 37°C in an aerobic atmosphere. Colonies from the Tryptic Soy agar plate containing 10 µg/mL chloramphenicol were suspended in the Casitone-Yeast broth containing 0.1 M glycerol phosphate and 10 µg/mL chloramphenicol broth growth and the mixture was added to Casitone-Yeast broth containing 0.1 M glycerol phosphate and 10 µg/mL chloramphenicol, which was grown for 1 day at 37°C in an aerobic atmosphere with shaking at approximately 200 rpm to produce this lot.

Lot: 70064244

Manufacturing Date: 02NOV2023

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology 1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar containing 10 µg/mL chloramphenicol Motility (wet mount) Hemolysis 1 day at 37°C in an aerobic atmosphere with 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood Catalase VITEK® MS (MALDI-TOF)	Gram-positive cocci Report results Report results β-hemolytic Positive <i>S. aureus</i>	Gram-positive cocci Circular, convex, entire, smooth and cream (Figure 1) Non-motile β-hemolytic Positive <i>S. aureus</i> (99.9%)
Antibiotic Resistance Chloramphenicol (10 µg/mL)	Resistant	Resistant
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1460 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> type strain (GenBank: CP000253.1)	100% sequence identity to <i>S. aureus</i> type strain (GenBank: CP000253.1)
Purity (post-freeze) 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) 1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar containing 10 µg/mL chloramphenicol	Growth	Growth

Figure 1: Colony Morphology



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