**Product Information Sheet for NR-46131**

**Escherichia coli – Staphylococcus aureus Shuttle Vector pCN40, Recombinant in *Staphylococcus aureus***

**Catalog No. NR-46131**

For research use only. Not for human use.

**Contributor:**
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**Manufacturer:**
BEI Resources

**Product Description:**
NR-46131 is a culture of *Staphylococcus aureus* (S. aureus), strain RN4220 (RN9594, NRS9594) containing the *Escherichia coli* (E. coli)-staphylococcal shuttle vector pCN40 (pNR-46131). Vector pCN40 contains the E. coli ColE1 replication origin, the S. aureus pT181 cop-wt-repC replicon and the P\textsubscript{phaZ} promoter. Vector pCN40 was deposited as resistant to ampicillin and erythromycin in E. coli and resistant to erythromycin in S. aureus.¹

The complete sequence and vector map of pCN40 have been determined and are available on the Certificate of Analysis for NR-46131 lot 62782861. The BEI Resources vector sequence (pNR-46131) is available (GenBank: KP255996). Vector pCN40 is a member of a series of novel shuttle vectors that were developed using PCR-designed cassettes to allow for easy exchange of vector components. The base shuttle vectors are comprised of (i) a staphylococcal replicon (pT181-based low-copy number, high-copy-number or thermosensitive replicons or pl258-based low-copy-number theta replicon), (ii) a staphylococcal selectable marker (erythromycin, tetracycline, chloramphenicol, kanamycin or spectinomycin resistance), (iii) an E. coli ColE1-based replicon (iv) an E. coli selectable marker (ampicillin resistance) and (v) a pUC19-derived expanded multiple cloning site (MCS). Additionally, some of the vectors may contain a staphylococcal $\phi$11 phage fragment, staphylococcal pathogenicity island SaPl1 fragment, an inducible or constitutive promoter, and reporter genes.¹

**Material Provided:**
Each vial of NR-46131 contains approximately 0.5 mL of bacterial culture in Casitone-Yeast (CY) broth containing 0.1 M glycerol phosphate and 10 $\mu$g/mL erythromycin supplemented with 10% glycerol.

**Packaging/Storage:**
NR-46131 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

**Growth Conditions:**

**Media:**
Casitone-Yeast broth containing 10 $\mu$g/mL erythromycin
Tryptic Soy agar containing 10 $\mu$g/mL erythromycin

**Incubation:**
Temperature: 37°C
Atmosphere: Aerobic

**Propogation:**
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 1 day.

**Citation:**
Acknowledgment for publications should read “The following reagent was provided by the Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA) for distribution by BEI Resources, NIAID, NIH: *Escherichia coli – Staphylococcus aureus* Shuttle Vector pCN40, Recombinant in *Staphylococcus aureus*, NR-46131.”

**Biosafety Level:** 2

**Disclaimers:**
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References:
Vector System for Gram-Positive Bacteria.” Appl.
15466553.

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