Escherichia coli – Staphylococcus aureus Shuttle Vector pCN56, Recombinant in Escherichia coli

Catalog No. NR-46156

For research use only. Not for human use.

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Manufacturer:
BEI Resources

Product Description:
NR-46156 is a culture of Escherichia coli (E. coli) DH5α (RN9621, NRS621) containing the E. coli-staphylococcal shuttle vector pCN56. Vector pCN56 contains the E. coli ColE1 replication origin, the high-copy-number Staphylococcus aureus (S. aureus) pT181 cop-623-repC replicon, the GFP reporter gene gfpmut2 and the blaZ transcriptional terminator. Vector pCN56 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 pCN56 have been determined and are available on the Certificate of Analysis for lot 63381375. The BEI Resources vector sequence was deposited into GenBank as NR-46156 (GenBank: KR781471).

Vector pCN56 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 φ11 phage fragment, staphylococcal pathogenicity island SaP11 fragment, an inducible or constitutive promoter, and reporter genes.1

Material Provided:
Each vial of NR-46156 contains approximately 0.5 mL of bacterial culture in Luria-Bertani (LB) broth containing 100 µg/mL ampicillin supplemented with 10% glycerol.

Packaging/Storage:
NR-46156 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:
- LB broth containing 100 µg/mL ampicillin
- LB agar containing 100 µg/mL ampicillin
Incubation:
- Temperature: 37°C
- Atmosphere: Aerobic
Propagation:
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 18 to 24 hours.

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 pCN56, Recombinant in Escherichia coli, NR-46156.”

Biosafety Level: 1

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References:

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