

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

Catalog No. NR-46156

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*. NR-46156 was produced by inoculation of the deposited material in Luria-Bertani (LB) broth with 100 µg/mL ampicillin and incubated for 1 day at 37°C in an aerobic atmosphere with shaking at ~ 200 rpm. Broth inoculum was passaged once in LB broth with 100 µg/mL ampicillin for 1 day at 37°C in an aerobic atmosphere with shaking at ~ 200 rpm to produce this lot.

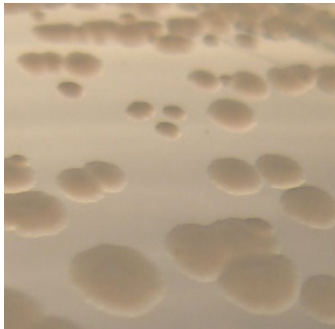
Lot: 63381375

Manufacturing Date: 11MAR2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology 1 day at 37°C in an aerobic atmosphere on LB agar with 100 µg/mL ampicillin Motility (wet mount)	Gram-negative rods Report results Report results	Gram-negative rods Circular, convex, entire, smooth and cream (Figure 1) Motile
Confirmation of pCN56 Sequence Illumina® MiSeq® sequence	Report results	Consistent with pCN56 vector description ^{1,2}
Antibiotic Resistance Erythromycin (encoded by the adenine methylase gene <i>ermC</i>) Ampicillin (encoded by the beta-lactamase gene <i>amp</i>)	<i>ermC</i> sequence present <i>amp</i> sequence present	<i>ermC</i> sequence confirmed <i>amp</i> sequence confirmed
Antibiotic Resistance Ampicillin (100 µg/mL) 1 day at 37°C in an aerobic atmosphere on LB agar with 100 µg/mL ampicillin	Resistant (growth)	Growth observed
Purity (post-freeze) 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere	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 LB agar with 100 µg/mL ampicillin	Growth	Growth

¹Illumina® MiSeq® sequence was analyzed with CLC Genomics Workbench Version 7.0.2.

²pCN56 was sequenced and annotated by BEI Resources and is consistent with the vector described in Charpentier, E., et al. "Novel Cassette-Based Shuttle Vector System for Gram-Positive Bacteria." *Appl. Environ. Microbiol.* 70 (2004): 6076-6085. PubMed: 15466553. The BEI Resources vector sequence was deposited into GenBank as NR-46156 (GenBank: [KR781471](#)).

Figure 1: Colony Morphology

/Sonia Bjorum Brower/

Sonia Bjorum Brower

20 MAR 2026

Technical Manager or designee, ATCC Federal Solutions

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.

