

***Streptococcus pneumoniae*, Strain OREP18C**

**Catalog No. NR-51856**

**Product Description:**

The antibiotic-resistant variant *Streptococcus pneumoniae* (*S. pneumoniae*), strain OREP18C was derived from human wild-type *S. pneumoniae*, strain GP116 by natural selection using increasing concentrations of optochin. NR-51856 was produced by the inoculation of BEI Resources seed lot 20090204 into Todd-Hewitt broth containing 0.5% (w/v) yeast extract, which was grown for 1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub>. Broth inoculum was added to Todd-Hewitt agar containing 0.5% (w/v) yeast extract kolles, which were grown for 1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> to produce this lot.

**Lot: 70037501**

**Manufacturing Date: 29JUL2020**

| TEST   | SPECIFICATIONS   | RESULTS  |
|--|--|--|
| <b>Phenotypic Analysis</b><br>Cellular morphology<br>1 day at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub><br>on Tryptic Soy agar with 5% defibrinated sheep blood<br>Colony morphology<br>1 day at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub><br>on Tryptic Soy agar with 5% defibrinated sheep blood<br>Hemolysis<br>Motility (wet mount)<br>Biochemical characterization<br>Catalase<br>VITEK® MS (MALDI-TOF)   | Gram-positive cocci<br><br>Report results<br><br>α-hemolytic<br>Report results<br><br>Report results<br><i>S. pneumoniae</i>   | Gram-positive cocci<br><br>Circular, low convex, entire,<br>translucent and gray (Figure 1)<br><br>α-hemolytic<br>Non-motile<br><br>Negative<br><i>S. pneumoniae</i> (99.9%)   |
| <b>Antibiotic Susceptibility Profile<sup>1</sup></b><br>HardyDisk™ antibiotic susceptibility test<br>1 day at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub><br>on Tryptic Soy agar with 5% defibrinated sheep blood<br>Optochin (Hardy Diagnostics Z7011)<br>VITEK® (AST-GP74 card)<br>Benzylpenicillin<br>Amoxicillin<br>Cefotaxime<br>Ceftriaxone<br>Ertapenem<br>Meropenem<br>Levofloxacin<br>Moxifloxacin<br>Ofloxacin<br>Erythromycin<br>Telithromycin<br>Linezolid<br>Vancomycin<br>Tetracycline<br>Chloramphenicol<br>Trimethoprim/sulfamethoxazole | Report results<br><br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results<br>Report results | ≤ 6 mm <sup>2</sup><br><br>Sensitive (≤ 0.06 µg/mL)<br>Sensitive (≤ 0.06 µg/mL)<br>Sensitive (≤ 0.06 µg/mL)<br>Sensitive (≤ 0.06 µg/mL)<br>Sensitive (≤ 0.5 µg/mL)<br>Sensitive (≤ 0.06 µg/mL)<br>Sensitive (1 µg/mL)<br>Sensitive (≤ 0.25 µg/mL)<br>Sensitive (2 µg/mL)<br>Sensitive (≤ 0.25 µg/mL)<br>Sensitive (≤ 0.25 µg/mL)<br>Sensitive (≤ 2 µg/mL)<br>Sensitive (≤ 1 µg/mL)<br>Sensitive (≤ 1 µg/mL)<br>Sensitive (≤ 2 µg/mL)<br>Sensitive (≤ 10 µg/mL) |
| <b>Genotypic Analysis</b><br>Sequencing of 16S ribosomal RNA gene<br>(~ 1490 base pairs)   | ≥ 99% sequence identity to<br><i>S. pneumoniae</i> type strain<br>(GenBank: NR_028665.1)   | 99.5% sequence identity to<br><i>S. pneumoniae</i> type strain<br>(GenBank: NR_028665.1) <sup>3</sup>  |

| TEST  | SPECIFICATIONS                                    | RESULTS   |
|---|---|---|
| <b>Purity (post-freeze)</b><br>7 days at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub> on Tryptic Soy agar with 5% defibrinated sheep blood       | Growth consistent with expected colony morphology | Growth consistent with expected colony morphology |
| <b>Viability (post-freeze)</b><br>1 day at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub> in Todd-Hewitt broth containing 0.5% (w/v) yeast extract | Growth  | Growth  |

<sup>1</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

<sup>2</sup>No Clinical & Laboratory Standards Institute (CLSI) interpretations of this antibiotic for *S. pneumoniae* are currently available.

<sup>3</sup>Also consistent with other *Streptococcus* species

Figure 1: Colony Morphology



/Heather Couch/  
 Heather Couch

04 FEB 2021

Program 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 by ATCC® 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.

