

***Streptococcus pneumoniae*, Strain GA16242**

**Catalog No. NR-19111**

**Product Description:**

*Streptococcus pneumoniae* (*S. pneumoniae*), strain GA16242 was isolated in 2001 from the blood of a patient with bacteremia in Georgia, USA. Strain GA16242 was deposited to BEI Resources as sensitive to amoxicillin, chloramphenicol, clindamycin, gatifloxacin, levofloxacin, cefotaxime, tetracycline and vancomycin, intermediately resistant to meropenem and penicillin and resistant to cefuroxime, erythromycin and trimethoprim/sulfamethoxazole. NR-19111 was produced by the inoculation of BEI Resources seed lot 62743356 into Todd-Hewitt broth and grown for 1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub>. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles, which were grown for 1 day at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub> to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

**Lot: 70061192**

**Manufacturing Date: 07JUN2023**

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TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology  Hemolysis Motility (wet mount) Catalase VITEK® MS (MALDI-TOF)	Gram-positive cocci Report results  Report results Report results Negative <i>S. pneumoniae</i>	Gram-positive cocci Circular, umbilicate, entire, smooth and gray (Figure 1)  α-hemolytic Non-motile Negative <i>S. pneumoniae</i> (99.9%)
<b>Antibiotic Susceptibility Profile<sup>1</sup></b> Etest® antibiotic test strips 1 day at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub> on Mueller-Hinton agar Cefuroxime Cefaclor Ciprofloxacin Clindamycin Gatifloxacin Quinupristin/dalfopristin Rifampin VITEK® (AST-GP74 card) Amoxicillin Benzylpenicillin Cefotaxime Ceftriaxone Chloramphenicol Ertapenem Erythromycin Levofloxacin Linezolid Meropenem Moxifloxacin Ofloxacin Telithromycin	Intermediate Resistant Report results Sensitive Sensitive Sensitive Sensitive  Sensitive Sensitive Sensitive Sensitive Sensitive Report results Resistant Sensitive Sensitive Intermediate Report results Sensitive Intermediate	Resistant (3 µg/mL) <sup>2,3</sup> Resistant (12 µg/mL) 0.5 µg/mL <sup>4</sup> Sensitive (0.19 µg/mL) Sensitive (0.125 µg/mL) <sup>5</sup> Sensitive (0.5 µg/mL) Sensitive (0.047 µg/mL)  Sensitive (2 µg/mL) Sensitive (2 µg/mL) Sensitive (1 µg/mL) Sensitive (0.5 µg/mL) Sensitive (≤ 2 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 1 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 2 µg/mL) Intermediate (0.5 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 1 µg/mL) <b>Sensitive (0.5 µg/mL)<sup>6</sup></b>

TEST	SPECIFICATIONS	RESULTS
Tetracycline Trimethoprim/sulfamethoxazole Vancomycin	Sensitive Resistant Sensitive	Sensitive ( $\leq 1 \mu\text{g/mL}$ ) Resistant (160 $\mu\text{g/mL}$ ) Sensitive ( $\leq 1 \mu\text{g/mL}$ )
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1490 base pairs)	$\geq 99\%$ sequence identity to <i>S. pneumoniae</i> , strain GA16242 (GenBank: AGPE01000007.1)	99.9% sequence identity to <i>S. pneumoniae</i> , strain GA16242 (GenBank: AGPE01000007.1)
Purity (post-freeze) 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>	Growth	Growth

<sup>1</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

<sup>2</sup>*S. pneumoniae*, strain GA16242 was deposited as resistant to cefuroxime, but showed a MIC of 1.5 to 2  $\mu\text{g/mL}$  (interpreted as intermediately resistant) for lot 62743356 during QC testing.

<sup>3</sup>The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

<sup>4</sup>Clinical & Laboratory Standards Institute (CLSI) interpretation of this antibiotic test for *S. pneumoniae* is currently not available.

<sup>5</sup>Testing was performed on BEI Resources seed lot 62743356.

<sup>6</sup>*S. pneumoniae*, strain GA16242 was found to be intermediately resistant for telithromycin for lot 62743356 during QC testing, but showed a MIC of 0.5  $\mu\text{g/mL}$  (interpreted as sensitive) for telithromycin during QC testing of lot 70061192.

Figure 1: Colony Morphology



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