Certificate of Analysis for NR-51852

Streptococcus pneumoniae, Strain TREP6A

Catalog No. NR-51852

Product Description:

The antibiotic-resistant variant *Streptococcus pneumoniae (S. pneumoniae),* strain TREP6A was derived from human wild-type *S. pneumoniae*, strain EF6796 by natural selection using increasing concentrations of trimethoprim. NR-51852 was produced by the inoculation of BEI Resources seed lot 20090127 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_2. 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_2 to produce this lot.

Lot: 70036770 **Manufacturing Date: 26JUN2020**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Colony morphology 1 day at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar with 5% defibrinated sheep blood	Report results	Circular, low convex, entire, smooth and gray (Figure 1)
Cellular morphology 1 day at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar with 5% defibrinated sheep blood	Gram-positive cocci	Gram-positive cocci
Hemolysis	α-hemolytic	α-hemolytic
Motility (wet mount)	Report results	Non-motile
Biochemical characterization		
Catalase	Report results	Negative
VITEK® 2 Compact GP card	*S. pneumoniae* (≥ 89%)	*S. pneumoniae* (92%)
Antibiotic Susceptibility Profile[1]		
Etest® antibiotic test strips 1 day at 35°C in an aerobic atmosphere with 5% CO_2 on Mueller Hinton agar with 5% sheep blood		
Trimethoprim (bioMérieux 412482)	Report results	> 32 µg/mL[2]
VITEK® (AST-GP74 card)		
Benzylpenicillin	Report results	Sensitive (≤ 0.06 µg/mL)
Amoxicillin	Report results	Sensitive (≤ 0.06 µg/mL)
Cefotaxime	Report results	Sensitive (≤ 0.06 µg/mL)
Ceftriaxone	Report results	Sensitive (≤ 0.06 µg/mL)
Ertapenem	Report results	Sensitive (≤ 0.5 µg/mL)
Meropenem	Report results	Sensitive (≤ 0.06 µg/mL)
Levofloxacin	Report results	Sensitive (≤ 0.05 µg/mL)
Moxifloxacin	Report results	Sensitive (≤ 0.25 µg/mL)
Ofloxacin	Report results	Sensitive (2 µg/mL)
Erythromycin	Report results	Sensitive (≤ 0.25 µg/mL)
Telithromycin	Report results	Sensitive (≤ 0.25 µg/mL)
Linezolid	Report results	Sensitive (≤ 2 µg/mL)
Vancomycin	Report results	Sensitive (≤ 1 µg/mL)
Tetracycline	Report results	Sensitive (≤ 1 µg/mL)
Chloramphenicol	Report results	Sensitive (≤ 2 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	Intermediate (< 40 µg/mL)[3]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1490 base pairs)	≥ 99% sequence identity to *S. pneumoniae* type strain (GenBank: NR_028665.1)	99.8% sequence identity to *S. pneumoniae* type strain (GenBank: NR_028665.1)[4]

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Certificate of Analysis for NR-51852

TEST	SPECIFICATIONS	RESULTS
Purity (post-freeze) 7 days at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) 1 day at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar with 5% defibrinated sheep blood	Growth	Growth

[1]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[2]No Clinical & Laboratory Standards Institute (CLSI) interpretations of this antibiotic for *S. pneumoniae* are currently available.
[3]Two MICs were observed for Trimethoprim/sulfamethoxazole (40 µg/mL and 20 µg/mL) under identical test conditions. The highest MIC is being reported as the test result.
[4]Also consistent with other *Streptococcus* species

Figure 1: Colony Morphology

/Heather Couch/
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Program Manager or designee, ATCC Federal Solutions

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