Certificate of Analysis for NR-51516

Pseudomonas aeruginosa, Strain MRSN 317

Catalog No. NR-51516

This reagent is the tangible property of the U.S. Government.

Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 317 was isolated in 2010 from a human wound as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 317 was deposited as sensitive to amikacin, gentamicin and tobramycin and resistant to aztreonam, cefepime, ceftazidime, ciprofloxacin, imipenem, levofloxacin, meropenem and piperacillin/tazobactam.

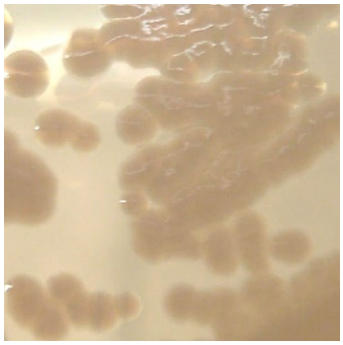
Lot: 70024586[1] **Manufacturing Date: 12APR2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Circular, slight peaked, entire, smooth and cream (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK® 2 (GN card)	*P. aeruginosa* (≥ 89%)	*P. aeruginosa* (98%)
Antibiotic Susceptibility Profile[3]		
VITEK® (AST-GN81 Card)		
Ampicillin	Report results	Resistant (≥ 32 µg/mL)
Amoxicillin/clavulanic Acid	Report results	Resistant (≥ 32 µg/mL)
Piperacillin/tazobactam	Resistant	Resistant (≥ 128 µg/mL)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ceftriaxone	Report results	Resistant (≥ 64 µg/mL)
Cefepime	Resistant	Resistant (≥ 64 µg/mL)
Meropenem	Resistant	Intermediate (4 µg/mL)[4]
Amikacin	Sensitive	Sensitive (≤ 2 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 512 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	80 µg/mL[5]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1440 base pairs)	≥ 99% sequence identity to *P. aeruginosa,* strain MRSN 317 (GenBank: RXUH01000043)	100% sequence identity to *P. aeruginosa,* strain MRSN 317 (GenBank: RXUH01000043)
Purity (post-freeze)[6]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51516 was produced by inoculation of the depositor material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot.
[2]1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar
[3]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)
[4]Susceptibility results for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.
[5]Trimethoprim/sulfamethoxazole MIC interpretive standards are not available for *P. aeruginosa*, however most clinical isolates are resistant to trimethoprim/sulfamethoxazole. For more information, please refer to Köhler, T., et al. "Multidrug Efflux in Intrinsic Resistance to Trimethoprim and Sulfamethoxazole in *Pseudomonas aeruginosa*." Antimicrob. Agents Chemother. 40 (1996): 2288-2290. PubMed: 9036831.
[6]Purity of this lot was assessed for 8 days at 37°C in an aerobic atmosphere with and without 5% CO_2 on Tryptic Soy agar.

BEI Resources
www.beiresources.org
E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

Figure 1: Colony Morphology



/Heather Couch/
Heather Couch 21 NOV 2019
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 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.

Support Provided by NIAID

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898