Certificate of Analysis for NR-51591

Pseudomonas aeruginosa, Strain MRSN 18803

Catalog No. NR-51591

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

Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 18803 was isolated in 2013 from a human respiratory sample as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 18803 was deposited as sensitive to amikacin, cefepime, ceftazidime, gentamicin, imipenem, meropenem and tobramycin, resistant to ciprofloxacin and levofloxacin with intermediate resistance to aztreonam and piperacillin/tazobactam.

Lot: 70025088[1] **Manufacturing Date: 08MAY2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Circular, flat, 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	Intermediate	Sensitive (8 µg/mL)[4]
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (≥ 64 µg/mL)
Ceftazidime	Sensitive	Sensitive (4 µg/mL)
Ceftriaxone	Report results	Resistant (≥ 64 µg/mL)
Cefepime	Sensitive	Sensitive (2 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.25 µg/mL)
Amikacin	Sensitive	Sensitive (4-8 µg/mL)
Gentamicin	Sensitive	Sensitive (2 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Resistant	Sensitive (≤ 0.25 µg/mL)[5]
Levofloxacin	Resistant	Sensitive (1 µg/mL)[6]
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 512 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	≥ 320 µg/mL[7]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 530 base pairs)	≥ 99% sequence identity to *P. aeruginosa*, strain MRSN 18803 (GenBank: RXVG01000106.1)	100% sequence identity to *P. aeruginosa*, strain MRSN 18803 (GenBank: RXVG01000106.1)
Purity (post-freeze)[8]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51591 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]*P. aeruginosa,* strain MRSN 18803 was deposited as intermediate to piperacillin/tazobactam,but showed a MIC of 8 µg/mL (interpreted as sensitive) for piperacillin/tazobactam during QC testing. Testing was performed in duplicate
[5]*P. aeruginosa,* strain MRSN 18803 was deposited as resistant to ciprofloxacin, but showed a MIC of ≤ 0.25 µg/mL (interpreted as sensitive) for ciprofloxacin during QC testing. Testing was performed in duplicate

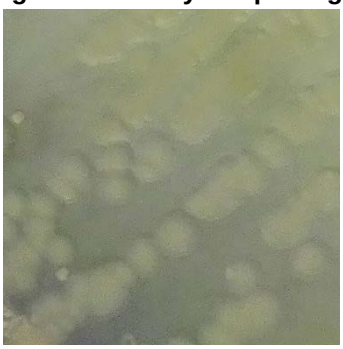
BEI Resources
www.beiresources.org
E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

[6]*P. aeruginosa,* strain MRSN 18803 was deposited as resistant to levofloxacin, but showed a MIC of ≤ 1 µg/mL (interpreted as sensitive) for levofloxacin during QC testing. Testing was performed in duplicate

[7]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.

[8]Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with and without 5% CO_2 on Tryptic Soy agar.

Figure 1: Colony Morphology



/Heather Couch/
Heather Couch 11 FEB 2020
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.

BEI Resources
www.beiresources.org

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