Certificate of Analysis for NR-51606

Pseudomonas aeruginosa, Strain MRSN 358800

Catalog No. NR-51606

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Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 358800 was isolated in 2015 from a human respiratory sample as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 358800 was deposited as sensitive to tobramycin, resistant to cefepime, levofloxacin, ceftazidime, gentamicin, aztreonam, meropenem, imipenem and ciprofloxacin and intermediately resistant to piperacillin/tazobactam and amikacin.

Lot: 70025118[1] **Manufacturing Date: 01AUG2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Circular, low convex, entire, smooth, translucent 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)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Sensitive (8 µg/mL)[4]
Ceftriaxone	Report results	Resistant (≥ 64 µg/mL)
Cefepime	Resistant	Resistant (≥ 32 µg/mL)
Amikacin	Intermediate	Sensitive (8-16 µg/mL)[5]
Gentamicin	Resistant	Sensitive (8 µg/mL)[6]
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	≥ 160 µg/mL[7]
Etest® antibiotic test strips[8]		
Meropenem	Resistant	Resistant (> 32 µg/mL)
Piperacillin/tazobactam	Intermediate	Intermediate (64 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1430 base pairs)	≥ 99% sequence identity to *P. aeruginosa*, strain MRSN 358800 (GenBank: RXUD01000144.1)	100% sequence identity to *P. aeruginosa*, strain MRSN 358800 (GenBank: RXUD01000144.1)
Purity (post-freeze)[9,10]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51606 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 358800 was deposited as resistant to ceftazidime. Repeated antibiotic susceptibility testing determined that strain MRSN 358800 is sensitive to ceftazidime.

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[5]*P. aeruginosa* strain MRSN 358800 was deposited as intermediately resistant to amikacin. Repeated antibiotic susceptibility testing determined that strain MRSN 358800 is sensitive to amikacin.
[6]*P. aeruginosa* strain MRSN 358800 was deposited as resistant to gentamicin. Repeated antibiotic susceptibility testing determined that strain MRSN 358800 is sensitive to gentamicin.
[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]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
[9]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.
[10]Two colony types were observed after 1 day under propagation conditions. Plating of the individual colony types showed that they did not revert to the mixed colony type. The 16S ribosomal RNA gene of each colony type was sequenced and found to have 100% sequence identity to the other colony type and to *P. aeruginosa*, strain MRSN 358800 (GenBank: RXUD01000144.1).

Figure 1: Colony Morphology

/Heather Couch/
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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.

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