

# **Certificate of Analysis for NR-51551**

## Pseudomonas aeruginosa, Strain MRSN 6678

### Catalog No. NR-51551

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

### **Product Description:**

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 6678 was isolated in 2012 as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 6678 was deposited as sensitive to amikacin and resistant to tobramycin, imipenem, ceftazidime, gentamicin, meropenem, piperacillin/tazobactam, cefepime, levofloxacin, aztreonam, and ciprofloxacin.

Lot: 70024977<sup>1</sup> Manufacturing Date: 15MAY2019

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology <sup>2</sup>	Report results	Circular, convex, entire, smooth and
Colony morphology	Troport rodato	cream (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK® 2 (GN card)	P. aeruginosa (≥ 89%)	P. aeruginosa (97%)
Antibiotic Susceptibility Profile <sup>3</sup>	The state of the s	( c c c c c c c c c c c c c c c c c c c
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	Intermediate (16 µg/mL) <sup>4</sup>
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Amikacin	Sensitive	Sensitive (16 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 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	≥ 320 µg/mL <sup>5</sup>
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(~ 1420 base pairs)	P. aeruginosa, strain MRSN 6678 (GenBank: RXTK01000084.1)	P. aeruginosa, strain MRSN 6678 (GenBank: RXTK01000084.1)
Purity (post-freeze) <sup>6</sup>	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze) <sup>2</sup>	Growth	Growth

<sup>&</sup>lt;sup>1</sup>NR-51551 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.

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<sup>&</sup>lt;sup>2</sup>1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

<sup>&</sup>lt;sup>3</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

<sup>&</sup>lt;sup>4</sup>P. aeruginosa, strain MRSN 6678 was deposited as resistant to cefepime. Antibiotic susceptibility testing performed in duplicate determined that susceptibility of strain MRSN 6678 to cefepime is intermediate.

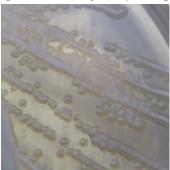
<sup>&</sup>lt;sup>5</sup>Trimethoprim/sulfamethoxazole MIC interpretive standards are not available for *P. aeruginosa*, however most clinical isolates are resistant to trimethoprim/sulfamethoxazole. For more information, please refer to Köhler, T., et al. "Multidrug Efflux in Intrinsic Resistance to Trimethoprim and Sulfamethoxazole in *Pseudomonas aeruginosa*." <u>Antimicrob. Agents Chemother.</u> 40 (1996): 2288-2290. PubMed: 9036831.

<sup>&</sup>lt;sup>6</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with and without 5% CO₂ on Tryptic Soy agar.



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**Figure 1: Colony Morphology** 



/Heather Couch/ Heather Couch

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Program Manager or designee, ATCC Federal Solutions

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