

## **Certificate of Analysis for NR-51583**

### Pseudomonas aeruginosa, Strain MRSN 16383

#### Catalog No. NR-51583

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

#### **Product Description:**

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 16383 is a human respiratory isolate collected in 2013 as part of a surveillance program in the United States. P. aeruginosa, strain MRSN 16383 was deposited as sensitive to amikacin, aztreonam, ceftazidime, meropenem, piperacillin/tazobactam and tobramycin, intermediately resistant to cefepime, gentamicin and imipenem and resistant to ciprofloxacin and levofloxacin.

Lot: 70025072<sup>1</sup> Manufacturing Date: 27JUN2019

TEST	SPECIFICATIONS	RESULTS
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Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology <sup>2</sup>	Report results	Circular, convex, 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 <sup>3</sup> VITEK® (AST-GN81 Card)		
Ampicillin	Report results	Resistant (≥ 32 µg/mL)
Amoxicillin/clavulanic acid	Report results	Resistant (≥ 32 µg/mL)
Piperacillin/tazobactam	Sensitive	Sensitive (≤ 4 μg/mL)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (≥ 64 µg/mL)
Ceftazidime	Sensitive	Sensitive (2 µg/mL)
Ceftriaxone	Report results	Sensitive (4-8 µg/mL)
Cefepime	Intermediate	Intermediate (16 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.5 µg/mL)
Amikacin	Sensitive	Sensitive (16 µg/mL)
Gentamicin	Intermediate	Intermediate (8 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 4 µg/mL)
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 256 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	≥ 40 µg/mL <sup>4</sup>
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~1460 base pairs)	≥ 99% sequence identity to <i>P. aeruginosa</i> , strain MRSN 16383 (GenBank: RXVQ01000033.1)	99.9% sequence identity to  P. aeruginosa, strain MRSN 16383 (GenBank: RXVQ01000033.1)
Purity (post-freeze) <sup>5</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-51583 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)

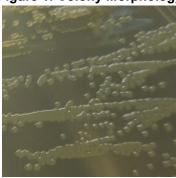
<sup>&</sup>lt;sup>4</sup>Trimethoprim/sulfamethoxazole MIC interpretive standards are not available for *P. aeruginosa*, however most clinical isolates are resistant to trimethoprim/sulfamethoxazole. For more information, please refer to Köhler, T., et al. "Multidrug Efflux in Intrinsic Resistance to Trimethoprim and Sulfamethoxazole in *Pseudomonas aeruginosa.*" <u>Antimicrob. Agents Chemother.</u> 40 (1996): 2288-2290. PubMed: 9036831.

<sup>&</sup>lt;sup>5</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with and without 5% CO<sub>2</sub> 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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