

***Pseudomonas aeruginosa*, Strain MRSN 7014**

**Catalog No. NR-51554**

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**Product Description:**

*Pseudomonas aeruginosa* (*P. aeruginosa*), strain MRSN 7014 was isolated in 2012 from a human respiratory sample as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 7014 was deposited as sensitive to amikacin and tobramycin and resistant to aztreonam, ceftazidime, cefepime, imipenem, levofloxacin, meropenem and piperacillin/tazobactam with intermediate resistance to ciprofloxacin and gentamicin.

**Lot: 70024984<sup>1</sup>**

**Manufacturing Date: 30MAY2019**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Motility (wet mount) VITEK <sup>®</sup> 2 (GN card)	Gram-negative rods Report results  Report results <i>P. aeruginosa</i> (≥ 89%)	Gram-negative rods Circular, low convex, entire, smooth and cream (Figure 1)  Motile <i>P. aeruginosa</i> (98%)
<b>Antibiotic Susceptibility Profile<sup>3</sup></b> VITEK <sup>®</sup> (AST-GN81 Card) Ampicillin Amoxicillin/clavulanic acid Cefazolin Cefoxitin Ceftazidime Ceftriaxone Cefepime Meropenem Amikacin Gentamicin Tobramycin Ciprofloxacin Levofloxacin Tetracycline Nitrofurantoin Trimethoprim/sulfamethoxazole Liofilchem <sup>®</sup> antibiotic test strips <sup>6</sup> Piperacillin/tazobactam	Report results Report results Report results Report results Resistant Report results Resistant Resistant Sensitive Intermediate Sensitive Intermediate Resistant Report results Report results Report results Resistant	Resistant (≥ 32 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (32 µg/mL) Intermediate (4 µg/mL) <sup>4</sup> Sensitive (16 µg/mL) Intermediate (8 µg/mL) Sensitive (≤ 1µg/mL) Sensitive (1 µg/mL) <sup>4</sup> Intermediate (4 µg/mL) <sup>4</sup> Resistant (≥ 16 µg/mL) Resistant (≥ 512 µg/mL) 80 µg/mL <sup>5</sup>  Resistant (256 µg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>P. aeruginosa</i> , strain MRSN 7014 (GenBank: RXTH01000036.1)	>99.9% sequence identity to <i>P. aeruginosa</i> , strain MRSN 7014 (GenBank: RXTH01000036.1)
<b>Purity (post-freeze)<sup>7</sup></b>	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
<b>Viability (post-freeze)<sup>2</sup></b>	Growth	Growth

<sup>1</sup>NR-51554 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.

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

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

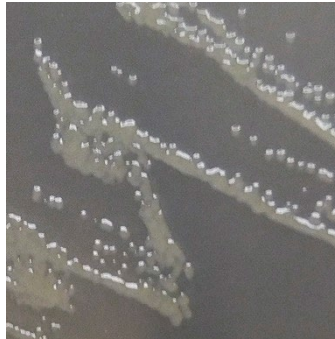
<sup>4</sup>The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

<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*." *Antimicrob. Agents Chemother.* 40 (1996): 2288-2290. PubMed: 9036831.

<sup>6</sup>1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

<sup>7</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.

**Figure 1: Colony Morphology**



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