

***Pseudomonas aeruginosa*, Strain MRSN 6241**

Catalog No. NR-51550

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Product Description:

Pseudomonas aeruginosa (*P. aeruginosa*), strain MRSN 6241 was isolated in 2011 from a human wound sample in the United States as part of a global surveillance program. *P. aeruginosa*, strain MRSN 6241 was deposited as multi-locus sequence type (MLST) ST 3043, sensitive to amikacin and resistant to aztreonam, cefepime, ceftazidime, ciprofloxacin, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam and tobramycin. NR-51550 was produced by inoculation of BEI Resources seed lot 70024976 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. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70060471

Manufacturing Date: 03MAY2023

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® 2 (GN card)	Gram-negative rods Report results Report results <i>P. aeruginosa</i> (≥ 89%)	Gram-negative rods Circular, low convex, undulate, smooth and cream Motile <i>P. aeruginosa</i> (97%)
Antibiotic Susceptibility Profile^{1,2} Amikacin Amoxicillin/clavulanic acid Ampicillin Cefazolin Cefepime Cefoxitin Ceftazidime Ceftriaxone Ciprofloxacin Gentamicin Levofloxacin Meropenem Nitrofurantoin Piperacillin/tazobactam Tetracycline Tobramycin Trimethoprim/sulfamethoxazole	Sensitive Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Report results Resistant Intermediate Resistant Resistant Resistant Resistant Resistant Report results	Sensitive (16 µg/mL) 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 (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Intermediate (2 µg/mL) ³ Resistant (≥ 16 µg/mL) Resistant (≥ 8 µg/mL) ^{4,5} Resistant (≥ 16 µg/mL) Resistant (≥ 512 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 16 µg/mL) ≥ 320 µg/mL ⁶
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>P. aeruginosa</i> , strain MRSN 6241 (GenBank: RXTL01000085.1)	99.9% sequence identity to <i>P. aeruginosa</i> , strain MRSN 6241 (GenBank: RXTL01000085.1)
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Minimum Inhibitory Concentration (MIC); MIC interpretation was determined using VITEK® 2 software version 07.01 combined with the bioMérieux Advanced Expert System™ (AES) software using the interpretation standard CLSI M100-S28 (2018) and the interpretation guideline "Natural Resistance." For more information, please refer to Sanders, C. C., et al. "Potential Impact of the VITEK® 2 System and the Advanced Expert System on the Clinical Laboratory of a University-Based Hospital." *J. Clin. Microbiol.* 39 (2001): 2379-2385. PubMed: 11427542.

²Antibiotic susceptibility was tested using bioMérieux VITEK® 2 GN81.

³A. *baumannii*, strain MRSN 6241 was deposited as resistant to ciprofloxacin but showed MICs of 1 µg/mL (interpreted as sensitive) and 2 µg/mL (interpreted as intermediately resistant) for lot 70024975 during QC testing, resulting in an inconclusive result. Testing was performed in duplicate.

⁴A. *baumannii*, strain MRSN 6241 was deposited as resistant to levofloxacin, but showed a MIC of 4 µg/mL (interpreted as intermediately resistant) for lot 70024975 during QC testing. Testing was performed in duplicate.

⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁶Trimethoprim/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.

/Sonia Bjorum Brower/

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Technical Manager or designee, ATCC Federal Solutions

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