

Pseudomonas aeruginosa, Strain MRSN 11538

Catalog No. NR-51569

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Product Description:

Pseudomonas aeruginosa (*P. aeruginosa*), strain MRSN 11538 was isolated in 2012 from a human wound sample in the United States as part of a global surveillance program. *P. aeruginosa*, strain MRSN 11538 was deposited as multi-locus sequence type (MLST) ST 1229, sensitive to amikacin, aztreonam, ciprofloxacin, cefepime, gentamicin, levofloxacin, piperacillin/tazobactam and tobramycin, intermediately resistant to ceftazidime and resistant to imipenem and meropenem. NR-51569 was produced by inoculation of BEI Resources seed lot 700250230 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: 70072495

Manufacturing Date: 11DEC2024

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® MS (MALDI-TOF)	Gram-negative rods Report results Report results <i>P. aeruginosa</i>	Gram-negative rods Circular, low convex, entire, smooth and cream to green Motile <i>P. aeruginosa</i> (99.9%)
Antibiotic Susceptibility Profile ^{1,2,3} Amikacin Cefazolin Cefepime Ceftazidime Ciprofloxacin Gentamicin Levofloxacin Meropenem Piperacillin/tazobactam Tobramycin	Sensitive Resistant Intermediate Intermediate Sensitive Sensitive Intermediate Resistant Intermediate Sensitive	Sensitive ($\leq 2 \mu\text{g/mL}$) Resistant ($\geq 64 \mu\text{g/mL}$) Intermediate ($16 \mu\text{g/mL}$) ⁴ Intermediate ($16 \mu\text{g/mL}$) Sensitive ($1 \mu\text{g/mL}$) Sensitive ($\leq 1 \mu\text{g/mL}$) Intermediate ($4 \mu\text{g/mL}$) ⁵ Resistant ($\geq 16 \mu\text{g/mL}$) Sensitive ($16 \mu\text{g/mL}$) ⁶ Sensitive ($\leq 1 \mu\text{g/mL}$)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	$\geq 99\%$ sequence identity to <i>P. aeruginosa</i> , strain MRSN 11538 (GenBank: RXWN01000143.1)	99.9% sequence identity to <i>P. aeruginosa</i> , strain MRSN 11538 (GenBank: RXWN01000143.1)
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
Viability	Growth	Growth

¹Minimum Inhibitory Concentration (MIC); MIC interpretation was determined using VITEK® 2 software version 09.02 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 a combination of bioMérieux VITEK® 2 GN81 and ETEST®.

³*P. aeruginosa* and other nonfermentative gram-negative bacteria are intrinsically resistant to penicillin, cephalosporins I, cephalosporin II, cephamycins, clindamycin, daptomycin, fusidic acid, glycopeptides, linezolid, macrolides, quinupristin-dalfopristin, and rifampin. These antibiotics were removed from the VITEK® 2 GN81 card and are no longer tested: ampicillin, amoxicillin, amoxicillin/clavulanic acid, cefoxitin, ceftriaxone, cefuroxime, ertapenem, tetracycline, tigecycline, trimethoprim/sulfamethoxazole, chloramphenicol and nitrofurantoin.

⁴*P. aeruginosa*, strain MRSN 11538 was deposited as sensitive to cefepime, but showed a MIC of 16 µg/mL (interpreted as intermediately resistant) for lot 70025029 during QC testing.

⁵*P. aeruginosa*, strain MRSN 11538 was deposited as sensitive to levofloxacin, but showed a MIC of 4 µg/mL (interpreted as intermediately resistant) for lot 70025029 during QC testing.

⁶*P. aeruginosa*, strain MRSN 11538 was deposited as sensitive to piperacillin/tazobactam, but showed a MIC of 64 µg/mL (interpreted as intermediately resistant) for lot 70025029 during QC testing.

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12 SEP 2025

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