

Pseudomonas aeruginosa, Strain MRSN 12365

Catalog No. NR-51573

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Product Description:

Pseudomonas aeruginosa (*P. aeruginosa*), strain MRSN 12365 was isolated in 2012 from a human respiratory sample in the United States as part of a global surveillance program. *P. aeruginosa*, strain MRSN 12365 was deposited as multi-locus sequence type (MLST) ST 253, sensitive to aztreonam, amikacin, ceftazidime, cefepime, piperacillin/tazobactam, tobramycin, intermediately resistant to ciprofloxacin and gentamicin and resistant to imipenem, levofloxacin and meropenem. NR-51573 was produced by inoculation of BEI Resources seed lot 70025044 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: 70072949

Manufacturing Date: 06DEC2024

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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 Motile <i>P. aeruginosa</i> (99.9%)
Antibiotic Susceptibility Profile^{1,2,3} Amikacin Cefazolin Cefepime Ceftazidime Ciprofloxacin Gentamicin Levofloxacin Meropenem Piperacillin/tazobactam Tobramycin	Intermediate Resistant Sensitive Sensitive Report results Intermediate Intermediate Intermediate Sensitive Sensitive	Sensitive (4 µg/mL) ⁴ Resistant (≥ 64 µg/mL) Sensitive (2 µg/mL) Sensitive (4 µg/mL) Sensitive (0.25 µg/mL) ⁵ Sensitive (3 µg/mL) ⁶ Sensitive (1 µg/mL) ⁷ Sensitive (4 µg/mL) ⁸ Sensitive (8 µg/mL) Sensitive (≤ 1 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>P. aeruginosa</i> , strain MRSN 315 (GenBank: RXWJ01000169.1)	100% sequence identity to <i>P. aeruginosa</i> , strain MRSN 315 (GenBank: RXWJ01000169.1)
Purity 7 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood	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 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, ceftriaxone, cefuroxime, ertapenem, tetracycline, tigecycline, trimethoprim/sulfamethoxazole, chloramphenicol and nitrofurantoin.

⁴*P. aeruginosa*, strain MRSN 12365 was deposited as sensitive to amikacin and was found to be intermediately resistant for lot 70025043, but showed a MIC of 4 µg/mL (interpreted as sensitive) for lot 70072949 during QC testing. Testing was performed in duplicate.

⁵*P. aeruginosa*, strain MRSN 12365 was deposited as intermediately resistant to ciprofloxacin but showed MICs of 1 µg/mL (interpreted as sensitive) and 2 µg/mL (interpreted as intermediately resistant) for lot 70025043 during QC testing, resulting in an inconclusive result. QC testing of lot 70072949 showed a MIC of 0.25 µg/mL (interpreted as sensitive). Testing was performed in duplicate.

⁶*P. aeruginosa*, strain MRSN 12365 was deposited as intermediately resistant to gentamicin, but showed a MIC of 3 µg/mL (interpreted as sensitive) for lot 70072949 during QC testing. Testing was performed in duplicate.

⁷*P. aeruginosa*, strain MRSN 12365 was deposited as resistant to meropenem and was found to be intermediately resistant for lot 70025043 during QC testing, but showed a MIC of 4 µg/mL (interpreted as sensitive) for lot 70072949 during QC testing. Testing was performed in duplicate.

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19 MAY 2025

Technical Manager or designee, ATCC Federal Solutions

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