

Pseudomonas aeruginosa, Strain MRSN 9718

Catalog No. NR-51562

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

Product Description:

Pseudomonas aeruginosa (*P. aeruginosa*), strain MRSN 9718 was isolated in 2012 from a human urine sample in the United States as part of a global surveillance program. *P. aeruginosa*, strain MRSN 9718 deposited as multi-locus sequence type (MLST) ST 1601, sensitive to amikacin, aztreonam, ceftazidime, ciprofloxacin, cefepime, gentamicin, imipenem and tobramycin, intermediately resistant to piperacillin/tazobactam and resistant to levofloxacin and meropenem. NR-51562 was produced by inoculation of BEI Resources seed lot 70025002 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: 70074998

Manufacturing Date: 26MAR2025

BEI Resources is committed to ensuring digital accessibility for people with disabilities. This Certificate of Analysis contains complex tables and may not be fully accessible. Please let us know if you encounter accessibility barriers and a fully accessible document will be provided: E-mail: Contact@BEIResources.org. We try to respond to feedback within 24 hours.

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, undulate, 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 Sensitive Sensitive Resistant Sensitive Resistant Report results Sensitive Sensitive	Sensitive (≤ 2 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (8 µg/mL) Sensitive (4 µg/mL) Resistant (≥ 4 µg/mL) ⁴ Sensitive (2 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL) ⁵ Sensitive (16 µg/mL) ⁶ Sensitive (≤ 1 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1460 base pairs)	$\geq 99\%$ sequence identity to <i>P. aeruginosa</i> , strain MRSN 9718 (GenBank: RXSZ01000188.1)	100% sequence identity to <i>P. aeruginosa</i> , strain MRSN 9718 (GenBank: RXSZ01000188.1)
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 bioMérieux VITEK® 2 GN81.

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.

Certificate of Analysis for NR-51562

⁴*P. aeruginosa* strain MRSN 9718 was deposited as sensitive to ciprofloxacin, but showed a MIC of ≥ 4 $\mu\text{g/mL}$ (interpreted as resistant) for lot 70025001 during QC testing.

⁵*P. aeruginosa* strain MRSN 9718 was deposited as resistant to meropenem, but showed MICs of 4 $\mu\text{g/mL}$ (interpreted as sensitive) and ≥ 16 $\mu\text{g/mL}$ (interpreted as resistant) during QC testing for lot 700025001, resulting in an inconclusive result.

⁶*P. aeruginosa* strain MRSN 9718 was deposited as intermediately resistant to piperacillin/tazobactam, but showed a MIC of 16 $\mu\text{g/mL}$ (interpreted as sensitive) for lot 70025001 during QC testing.

/Sonia Bjorum Brower/

Sonia Bjorum Brower

13 AUG 2025

Technical Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

ATCC® is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

