

***Pseudomonas aeruginosa*, Strain MRSN 2108**

Catalog No. NR-51538

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Product Description:

Pseudomonas aeruginosa (*P. aeruginosa*), strain MRSN 2108 was isolated in 2011 from a human tissue sample as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 2108 was deposited as sensitive to amikacin, gentamicin and tobramycin and resistant to aztreonam, meropenem, imipenem, levofloxacin and ciprofloxacin with intermediate resistance to piperacillin/tazobactam, cefepime, and ceftazidime.

Lot: 70024948¹

Manufacturing Date: 10MAY2019

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphologies ^{2,3} Motility (wet mount) VITEK [®] 2 (GN card)	Gram-negative rods Report results Report results <i>P. aeruginosa</i> (≥ 89%)	Gram-negative rods Colony type 1: Circular, low convex, entire and smooth (Figure 1) Colony type 2: Irregular, flat, undulate, opaque and green (Figure 1) Motile <i>P. aeruginosa</i> (≥ 97%)
Antibiotic Susceptibility Profile^{4,5} VITEK [®] (AST-GN81 Card) Ampicillin Amoxicillin/clavulanic acid Piperacillin/tazobactam Cefazolin Cefoxitin Ceftazidime Ceftriaxone Cefepime Meropenem Amikacin Gentamicin Tobramycin Ciprofloxacin Levofloxacin Tetracycline Nitrofurantoin Trimethoprim/sulfamethoxazole	Report results Report results Intermediate Report results Report results Intermediate Report results Intermediate Resistant Sensitive Sensitive Sensitive Resistant Resistant Report results Report results Report results	Resistant (≥ 32 µg/mL) Resistant (≥ 32 µg/mL) Intermediate (64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Variable (16-32 µg/mL) Resistant (≥ 64 µg/mL) Intermediate (16 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (≤ 2 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 1 µg/mL) Variable (2-4 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 512 µg/mL) ≥ 320 µg/mL ⁶
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1430 base pairs)	≥ 99% sequence identity to <i>P. aeruginosa</i> , strain MRSN 2108 (GenBank: RXUS01000042.1)	100% sequence identity to <i>P. aeruginosa</i> , strain MRSN 2108 (GenBank: RXUS01000042.1)
Purity (post-freeze)^{7,8}	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)²	Growth	Growth

¹NR-51538 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.

²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

³Two colony types were observed. Plating of the individual colony types showed that they reverted to the mixed colony type. VITEK[®] GN card analysis identified cells from both colony types as *P. aeruginosa*.

⁴Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

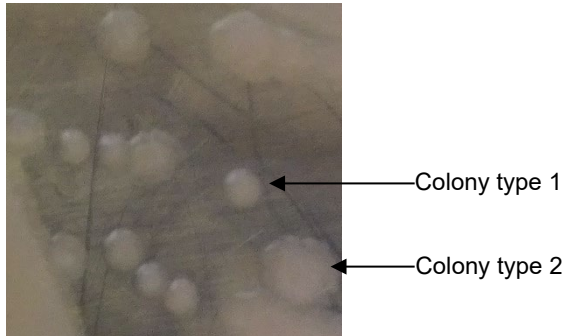
⁵Antibiotic susceptibility testing was performed for each colony type and interpretations are identical except where indicated.

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.

⁷Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with and without 5% CO₂ on Tryptic Soy agar.

⁸Two colony types were observed after 1 day of growth in an aerobic atmosphere with 5% CO₂. Plating of the individual colony types showed that they did not revert to the mixed colony type. VITEK® GN card analysis identified cells from both colony types as *P. aeruginosa*.

Figure 1: Colony Morphologies



/Heather Couch/

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