Certificate of Analysis for NR-51550

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 as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 6241 was deposited as sensitive to amikacin and resistant to piperacillin/tazobactam, imipenem, ceftazidime, cefepime, gentamicin, tobramycin, aztreonam and meropenem, with intermediate resistance to ciprofloxacin and levofloxacin.

Lot: 70024975[1] **Manufacturing Date: 15MAY2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphologies[2,3]	Report results	Colony type 1: Circular, flat, undulate, smooth and cream (Figure 1) Colony type 2: Circular, low convex, entire and smooth (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK® 2 (GN card)	*P. aeruginosa* (≥ 89%)	*P. aeruginosa* (97%)
Antibiotic Susceptibility Profile[4,5]		
VITEK® (AST-GN81 Card)		
Ampicillin	Report results	Resistant (≥ 32 µg/mL)
Amoxicillin/clavulanic acid	Report results	Resistant (≥ 32 µg/mL)
Piperacillin/tazobactam	Resistant	Resistant (≥ 128 µg/mL)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ceftriaxone	Report results	Resistant (≥ 64 µg/mL)
Cefepime	Resistant	Resistant (≥ 32 µg/mL)
Meropenem	Resistant	Resistant (≥ 8 µg/mL)
Amikacin	Sensitive	Sensitive (≤ 16 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Ciprofloxacin	Intermediate	Intermediate (≥ 1 µg/mL)
Levofloxacin	Intermediate	Intermediate (4 µg/mL)
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 512 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	≥ 320 µg/mL[6]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1430 base pairs)	≥ 99% sequence identity to *P. aeruginosa*, strain MRSN 6241 (GenBank: RXTL01000085.1)	99.9% sequence identity to *P. aeruginosa*, strain MRSN 6241 (GenBank: RXTL01000085.1)
Purity (post-freeze)[7]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology[8]
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51550 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.
[2]1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar
[3]Two colony types were observed. 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*.
[4]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

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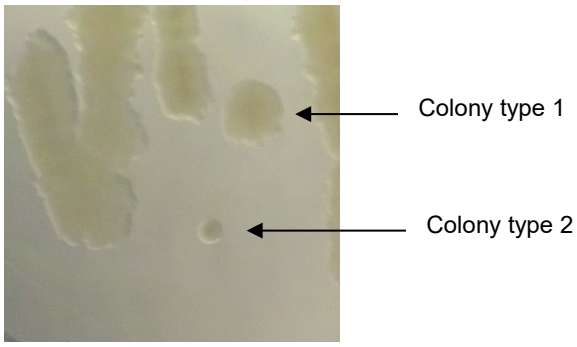
[5]Antibiotic susceptibility testing was performed for each colony type and interpretations are identical.
[6]Trimethoprim/sulfamethoxazole MIC interpretive standards are not available for *P. aeruginosa*, however most clinical isolates are resistant to trimethoprim/sulfamethoxazole. For more information, 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.
[7]Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with and without 5% CO_2 on Tryptic Soy agar.
[8]Two colony types were observed after 1 day of growth in an aerobic atmosphere with 5% CO_2. Plating of the individual colony types showed that colony type 1 did not revert and colony type 2 reverted to the mixed colony type.

Figure 1: Colony Morphologies



/Heather Couch/
Heather Couch 19 DEC 2019
Program Manager or designee, ATCC Federal Solutions

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