Certificate of Analysis for NR-51581

Pseudomonas aeruginosa, Strain MRSN 16344

Catalog No. NR-51581

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Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 16344 was isolated in 2013 from a human wound as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 16344 was deposited as sensitive to aztreonam, ceftazidime and piperacillin/tazobactam, intermediately resistant to amikacin, cefepime and meropenem and resistant to ciprofloxacin, gentamicin, imipenem, levofloxacin and tobramycin.

Lot: 70025068[1] **Manufacturing Date: 03JUL2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Punctiform (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK® 2 (GN card)	*P. aeruginosa* (≥ 89%)	*P. aeruginosa* (≥ 97%)
Antibiotic Susceptibility Profile[3]		
VITEK® (AST-GN81 Card)		
Ampicillin	Report results	Resistant (≥ 32 µg/mL)
Amoxicillin/clavulanic acid	Report results	Resistant (≥ 32 µg/mL)
Piperacillin/tazobactam	Sensitive	Sensitive (≤ 8 µg/mL)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (≥ 32 µg/mL)
Ceftazidime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftriaxone	Report results	Resistant (≥ 64 µg/mL)
Cefepime	Intermediate	Sensitive (≤ 8 µg/mL)[4]
Meropenem	Intermediate	Sensitive (1 µg/mL)[5]
Amikacin	Intermediate	Sensitive (16 µg/mL)[4]
Gentamicin	Resistant	Intermediate (8 µg/mL)[4]
Tobramycin	Resistant	Sensitive (≤ 4 µg/mL)[6]
Ciprofloxacin	Resistant	Intermediate (2 µg/mL)[7]
Levofloxacin	Resistant	Intermediate (4 µg/mL)[8]
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 512 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	≥ 320 µg/mL[9]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1420 base pairs)	≥ 99% sequence identity to *P. aeruginosa*, strain MRSN 16344 (GenBank: RXVS01000152.1)	99.9% sequence identity to *P. aeruginosa*, strain MRSN 16344 (GenBank: RXVS01000152.1)
Purity (post-freeze)[10]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51581 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]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)
[4]Susceptibilty results for this antibiotic are within one doubling dilution of specification, which is considered an equivalent result.
[5]*P. aeruginosa*, strain MRSN 16344 was deposited as intermediately resistant to meropenem. Repeated antibiotic susceptibility testing determined that strain MRSN 16344 is sensitive to meropenem.

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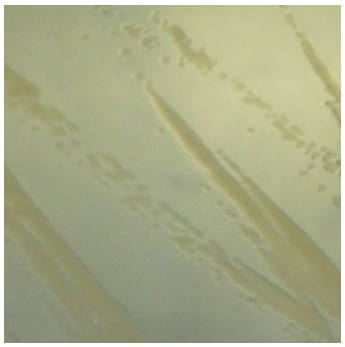
[6]*P. aeruginosa*, strain MRSN 16344 was deposited as resistant to tobramycin. Repeated antibiotic susceptibility testing determined that strain MRSN 16344 is sensitive to tobramycin.
[7]*P. aeruginosa*, strain MRSN 16344 was deposited as resistant to ciprofloxacin. Repeated antibiotic susceptibility testing determined that strain MRSN 16344 is intermediately resistant to ciprofloxacin.
[8]*P. aeruginosa*, strain MRSN 16344 was deposited as resistant to levofloxacin. Repeated antibiotic susceptibility testing determined that strain MRSN 16344 is intermediately resistant to levofloxacin.
[9]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.
[10]Purity of this lot was assessed for 8 days at 37°C in an aerobic atmosphere with and without 5% CO_2 on Tryptic Soy agar.

Figure 1: Colony Morphology



/Heather Couch/
Heather Couch 11 DEC 2019
Program Manager or designee, ATCC Federal Solutions

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