Certificate of Analysis for NR-51545

Pseudomonas aeruginosa, Strain MRSN 5508

Catalog No. NR-51545

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

Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 5508 was isolated in 2005 from human fluid as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 5508 was deposited as sensitive to amikacin, aztreonam, gentamicin and tobramycin and resistant to ceftazidime, imipenem, meropenem and piperacillin/tazobactam with intermediate resistance to cefepime, ciprofloxacin and levofloxacin.

Lot: 70024962[1] **Manufacturing Date: 17MAY2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Circular, slightly peaked, entire, smooth and green (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK® 2 (GN card)	*P. aeruginosa* (≥ 89%)	*P. aeruginosa* (≥ 95%)
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	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	Intermediate	Intermediate (16 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Intermediate	Sensitive (≤ 0.5 µg/mL)[4]
Levofloxacin	Intermediate	Sensitive (≤ 2 µg/mL)[5]
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 256 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	≥ 320 µg/mL[6]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to *P. aeruginosa,* strain MRSN 5508 (GenBank: RXTR01000155.1)	99.9% sequence identity to *P. aeruginosa,* strain MRSN 5508 (GenBank: RXTR01000155.1)
Purity (post-freeze)[7]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51545 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]*P. aeruginosa*, strain MRSN 5508 was deposited as intermediate to ciprofloxacin, but showed a MIC of ≤ 0.5 µg/mL (interpreted as sensitive) for ciprofloxacin during QC testing. Testing was performed in duplicate.
[5]*P. aeruginosa*, strain MRSN 5508 was deposited as intermediate to levofloxacin, but showed a MIC of ≤ 2 µg/mL (interpreted as sensitive) for levofloxacin during QC testing. Testing was performed in duplicate.

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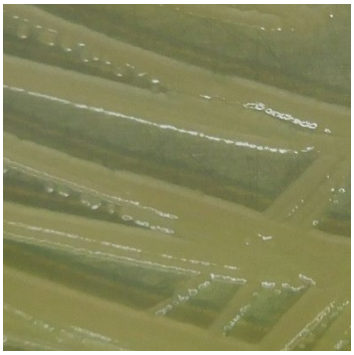
[6]Trimethoprim/sulfamethoxazole MIC interpretive standards are not available for *P. aeruginosa*, however most clinical isolates are resistant to trimethoprim/sulfamethoxazole. For more information, please refer to Köhler, T., et al. "Multidrug Efflux in Intrinsic Resistance to Trimethoprim and Sulfamethoxazole in *Pseudomonas aeruginosa*." Antimicrob. Agents Chemother. 40 (1996): 2288-2290. PubMed: 9036831.
[7]Purity of this lot was assessed for 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 24 JAN 2020
Program Manager or designee, ATCC Federal Solutions

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