Certificate of Analysis for NR-51524

Pseudomonas aeruginosa, Strain MRSN 1583

Catalog No. NR-51524

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Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 1583 is a human respiratory isolate collected in 2010 as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 1583 was deposited as sensitive to amikacin, aztreonam, cefepime, ceftazidime, gentamicin, imipenem, meropenem, piperacillin/tazobactam, and tobramycin, intermediately resistant to levofloxacin and resistant to ciprofloxacin.

Lot: 70024602[1] **Manufacturing Date: 11APR2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Circular, low convex, entire, smooth and green (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 (≥ 64 µg/mL)
Ceftazidime	Sensitive	Sensitive (4-8 µg/mL)
Ceftriaxone	Report results	Resistant (≥ 32 µg/mL)
Cefepime	Sensitive	Inconclusive[4]
Meropenem	Sensitive	Sensitive (0.5-1.0 µg/mL)
Amikacin	Sensitive	Sensitive (≤ 4 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 2 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Resistant	Intermediate (2 µg/mL)[5]
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 (~ 1460 base pairs)	≥ 99% sequence identity to *P. aeruginosa,* strain MRSN 1583 (GenBank: RXVX01000155.1)	100% sequence identity to *P. aeruginosa,* strain MRSN 1583 (GenBank: RXVX01000155.1)
Purity (post-freeze)[7]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51524 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 1583 was deposited as sensitive to cefepime. Repeated antibiotic susceptibility testing determined that for strain MRSN 1583, the cefepime MICs are 32 µg/mL, 16 µg/mL and 8 µg/mL, which are interpreted as resistant, intermediate and sensitive, respectively.
[5]*P. aeruginosa*, strain MRSN 1583 was deposited as resistant to ciprofloxacin. Repeated antibiotic susceptibility testing determined that strain MRSN 1583 is intermediately resistant to ciprofloxacin.

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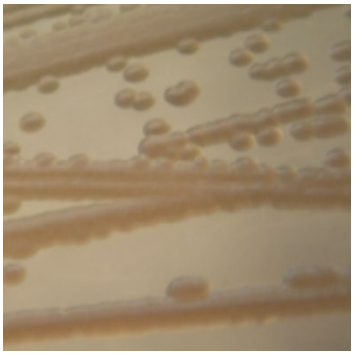
www.beiresources.org
E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

[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.

Figure 1: Colony Morphology



/Heather Couch/
Heather Couch 18 NOV 2019
Program Manager or designee, ATCC Federal Solutions

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BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898