Certificate of Analysis for NR-51602

Pseudomonas aeruginosa, Strain MRSN 29192

Catalog No. NR-51602

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Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 29192 was isolated from human urine in 2015 as part of a surveillance program in the United States. *P. aeruginosa*, strain MRSN 29192 was deposited as sensitive to amikacin, gentamicin and tobramycin and resistant to aztreonam, ceftazidime, ciprofloxacin, cefepime, levofloxacin, meropenem and piperacillin/tazobactam with intermediate resistance to imipenem.

Lot: 70025110[1] **Manufacturing Date: 02AUG2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology[2]	Report results	Circular, convex, entire, smooth and green (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK® 2 (GN card)	*P. aeruginosa* (≥ 89%)	*P. aeruginosa* (98%)
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	Resistant	Resistant (≥ 64 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Amikacin	Sensitive	Sensitive (16 µg/mL)
Gentamicin	Sensitive	Intermediate (8 µg/mL)[4]
Tobramycin	Sensitive	Sensitive (2 µg/mL)
Ciprofloxacin	Resistant	Sensitive (1 µg/mL)[5]
Levofloxacin	Resistant	Intermediate (4 µg/mL)[6]
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Nitrofurantoin	Report results	Resistant (≥ 512 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	≥ 320 µg/mL[7]
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1460 base pairs)	≥ 99% sequence identity to *P. aeruginosa,* strain MRSN 29192 (GenBank: RXUK01000033.1)	100% sequence identity to *P. aeruginosa,* strain MRSN 29192 (GenBank: RXUK01000033.1)
Purity (post-freeze)[8]	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-51602 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 29192 was deposited as sensitive to gentamicin, but showed a MIC of 8 µg/mL (interpreted as intermediate) for gentamicin during QC testing. Testing was performed in quadruplicate.
[5]*P. aeruginosa,* strain MRSN 29192 was deposited as resistant to ciprofloxacin, but showed a MIC of 1 µg/mL (interpreted as sensitive) for ciprofloxacin during QC testing. Testing was performed in quadruplicate.

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[6]*P. aeruginosa,* strain MRSN 29192 was deposited as resistant to levofloxacin, but showed a MIC of 4 µg/mL (interpreted as intermediate) for levofloxacin during QC testing. Testing was performed in quadruplicate.
[7]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.
[8]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/
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