Certificate of Analysis for NR-55579

Klebsiella pneumoniae, Strain MRSN 591344

Catalog No. NR-55579

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

Product Description:

Klebsiella pneumoniae (K. pneumoniae), strain MRSN 591344 was isolated in 2018 from a human wound sample in North America as part of a global surveillance program. NR-55579 was deposited as a multidrug-resistant strain, sensitive to amikacin, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, tobramycin and trimethoprim/sulfamethoxazole and resistant to ampicillin/sulbactam, piperacillin/tazobactam, tetracycline and tigecycline. NR-55579 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. The material from the initial growth was added to Tryptic Soy broth, which was grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed on Tryptic Soy agar under propagation conditions unless otherwise noted.

Lot: 70051128 **Manufacturing Date: 23MAR2022**

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Motility (wet mount)	Report results	Non-motile
VITEK® 2 (GN card)	*K. pneumoniae* (≥ 89%)	*K. pneumoniae* (99%)
Antibiotic Susceptibility Profile[1,2]		
Amikacin	Sensitive	Sensitive (≤ 2 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (≥ 32 µg/mL)
Aztreonam	Sensitive	Sensitive (≤ 1 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime/avibactam	Sensitive	Sensitive (2 µg/mL)
Ceftolozane/tazobactam	Sensitive	Sensitive (1.5 to 2 µg/mL)
Ceftriaxone	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (0.19 µg/mL)
Ertapenem	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (0.19 µg/mL)
Levofloxacin	Sensitive	Sensitive (0.5 to 1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.25 µg/mL)
Piperacillin/tazobactam	Resistant	Resistant (≥ 128 µg/mL)
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tigecycline	Resistant	Resistant (≥ 8 µg/mL)[3]
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 20 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to *K. pneumoniae*, strain MRSN 591344 (GenBank: JAGYCG010000089.1)	99.5% sequence identity to *K. pneumoniae*, strain MRSN 591344 (GenBank: JAGYCG010000089.1)[4]

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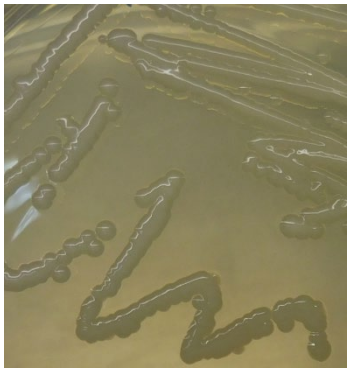
TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

[1]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)
[2]Antibiotic susceptibility was tested using a combination of bioMérieux VITEK®2 GN74 and ETEST®.
[3]MIC Interpretation Guideline: EUCAST Version 8.0 (2018)
[4]Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



/Sonia Bjorum Brower/
Sonia Bjorum Brower 07 JUL 2022
Lead Technical Writer or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

Support Provided by NIAID

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