

Certificate of Analysis for NR-55519

Klebsiella pneumoniae, Strain MRSN 15219

Catalog No. NR-55519

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

Product Description:

Klebsiella pneumoniae (K. pneumoniae), strain MRSN 15219 was isolated in 2013 from a human urine sample in North America as part of a global surveillance program. NR-55519 was deposited as a multidrug-resistant strain, sensitive to amikacin, cefepime, ceftazidime/avibactam, ceftolozane/tazobactam, ciprofloxacin, ertapenem, imipenem, levofloxacin, meropenem, tigecycline and piperacillin/tazobactam and resistant to aztreonam, ampicillin/sulbactam, ceftazidime, ceftriaxone, gentamicin, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55519 was produced by inoculation of the deposited 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. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70049644 Manufacturing Date: 12JAN2022

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, mucoid and cream (Figure 1)
Motility (wet mount)	Report results	Non-motile
VITEK [®] 2 (GN card)	K. pneumoniae (≥ 89%)	K. pneumoniae (98%)
Antibiotic Susceptibility Profile ^{1,2}		
Amikacin	Sensitive	Sensitive (16 µg/mL)
Ampicillin/sulbactam	Resistant	Sensitive (6 μg/mL) ³
Aztreonam	Resistant	Resistant (≥ 64 μg/mL)
Cefepime	Sensitive	Sensitive (0.75 to 1.0 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime/avibactam	Sensitive	Sensitive (0.5 µg/mL)
Ceftolozane/tazobactam	Sensitive	Sensitive (0.38 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (0.5 µg/mL)
Ertapenem	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Sensitive (0.19 µg/mL)
Levofloxacin	Sensitive	Sensitive (1 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.25 μg/mL)
Piperacillin/tazobactam	Sensitive	Sensitive (8 µg/mL)
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tigecycline	Sensitive	Sensitive (≤ 0.5 μg/mL) ⁴
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 320 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to K. pneumoniae, strain MRSN 15219 (GenBank: JAGYEN010000159.1)	99.6% sequence identity to <i>K. pneumoniae</i> , strain MRSN 15219 (GenBank: JAGYEN010000159.1) ⁵

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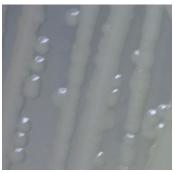


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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

¹Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

Figure 1: Colony Morphology



/Sonia Bjorum Brower/ Sonia Bjorum Brower

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Lead Technical Writer or designee, ATCC Federal Solutions

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²Antibiotic susceptibility was tested using a combination of bioMérieux VITEK®2 GN74 and ETÉST®.

³K. pneumoniae, strain MRSN 15219 was deposited as resistant to ampicillin/sulbactam, but showed a MIC of 6 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed twice in duplicate.

⁴MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁵Also consistent with other *Klebsiella* species