

## Certificate of Analysis for NR-55524

### Klebsiella pneumoniae, Strain MRSN 16233

#### Catalog No. NR-55524

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

#### **Product Description:**

Klebsiella pneumoniae (K. pneumoniae), strain MRSN 16233 was isolated in 2013 from a human urine sample in Asia as part of a global surveillance program. NR-55524 was deposited as a non-multidrug-resistant strain, sensitive to amikacin, ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, tetracycline, tigecycline, tobramycin and trimethoprim/sulfamethoxazole and resistant to piperacillin/tazobactam. NR-55524 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: 70050344 Manufacturing Date: 10FEB2022

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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, mucoid and cream
Motility (wet mount)	Report results	Non-motile
VITEK <sup>®</sup> 2 (GN card)	K. pneumoniae (≥ 89%)	K. pneumoniae (98%)
Antibiotic Susceptibility Profile <sup>1,2</sup>		
Amikacin	Sensitive	Sensitive (≤ 2 μg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (4 µg/mL)
Aztreonam	Sensitive	Sensitive (≤ 1 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime/avibactam	Sensitive	Sensitive (0.125 µg/mL)
Ceftolozane/tazobactam	Sensitive	Sensitive (0.19 µg/mL)
Ceftriaxone	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (0.032 µg/mL)
Ertapenem	Sensitive	Sensitive (≤ 0.5 μg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 μg/mL)
Imipenem	Sensitive	Intermediate (1.5 µg/mL) <sup>3</sup>
Levofloxacin	Sensitive	Sensitive (≤ 0.12 μg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.25 μg/mL)
Piperacillin/tazobactam	Resistant	Sensitive (2 µg/mL) <sup>4</sup>
Tetracycline	Sensitive	Sensitive (≤ 1 μg/mL)
Tigecycline	Sensitive	Sensitive (≤ 0.5 μg/mL) <sup>5</sup>
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 20 μg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to  K. pneumoniae, strain MRSN 16233 (GenBank: JAGYEI010000075.1)	99.7% sequence identity to  K. pneumoniae, strain MRSN 16233 (GenBank: JAGYEI010000075.1) <sup>6</sup>

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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with 5% CO <sub>2</sub> on Tryptic Soy agar with 5% defibrinated sheep blood	colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

<sup>&</sup>lt;sup>1</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

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09 AUG 2022

Lead Technical Writer or designee, ATCC Federal Solutions

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<sup>&</sup>lt;sup>2</sup>Antibiotic susceptibility was tested using a combination of bioMérieux VITEK®2 GN74 and ETÉST®.

<sup>3</sup>The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

<sup>4</sup>K. pneumoniae, strain MRSN 16233 was deposited as resistant to piperacillin/tazobactam, but showed a MIC of 2 μg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

<sup>&</sup>lt;sup>5</sup>MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

<sup>&</sup>lt;sup>6</sup>Also consistent with other *Klebsiella* species