

# **Certificate of Analysis for NR-55523**

### Klebsiella pneumoniae, Strain MRSN 16008

### Catalog No. NR-55523

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

### **Product Description:**

Klebsiella pneumoniae (K. pneumoniae), strain MRSN 16008 was isolated in 2013 from a human urine sample in North America as part of a global surveillance program. NR-55523 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, piperacillin/tazobactam, tetracycline, tigecycline and tobramycin and resistant to trimethoprim/sulfamethoxazole. NR-55523 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: 70050342 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 (Figure 1)			
Motility (wet mount)	Report results	Non-motile			
VITEK® 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 (0.19 µg/mL)			
Ceftolozane/tazobactam	Sensitive	Sensitive (0.19 to 0.25 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	Sensitive (0.25 µg/mL)			
Levofloxacin	Sensitive	Sensitive (≤ 0.12 µg/mL)			
Meropenem	Sensitive	Sensitive (≤ 0.25 μg/mL)			
Piperacillin/tazobactam	Sensitive	Sensitive (≤ 4 μg/mL)			
Tetracycline	Sensitive	Sensitive (≤ 1 μg/mL)			
Tigecycline	Sensitive	Sensitive (≤ 0.5 μg/mL) <sup>3</sup>			
Tobramycin	Sensitive	Sensitive (≤ 1 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 16008  (GenBank: JAGYEJ010000098.1)	99.5% sequence identity to  K. pneumoniae, strain MRSN 16008 (GenBank: JAGYEJ010000098.1) <sup>4</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					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)

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

<sup>&</sup>lt;sup>3</sup>MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

<sup>&</sup>lt;sup>4</sup>Also consistent with other Klebsiella species