

***Klebsiella pneumoniae*, Strain MRSN 731029**

**Catalog No. NR-55596**

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

**Product Description:**

*Klebsiella pneumoniae* (*K. pneumoniae*), strain MRSN 731029 was isolated in 2019 from a human urine sample in Asia as part of a global surveillance program. NR-55596 was deposited as a multidrug-resistant strain (MDR) sensitive to amikacin, ceftazidime/avibactam, ceftolozane/tazobactam, ertapenem, imipenem, meropenem, piperacillin/tazobactam, tigecycline, tobramycin, and trimethoprim/sulfamethoxazole, intermediately resistant to ciprofloxacin and levofloxacin and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftriaxone, gentamicin, and tetracycline. NR-55596 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: 70051630**

**Manufacturing Date: 06APR2022**

BEI Resources is committed to ensuring digital accessibility for people with disabilities. This Certificate of Analysis contains complex tables and may not be fully accessible. Please let us know if you encounter accessibility barriers and a fully accessible document will be provided: E-mail: [Contact@BEIResources.org](mailto:Contact@BEIResources.org). We try to respond to feedback within 24 hours.

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology  Motility (wet mount) VITEK® 2 (GN card)	Gram-negative rods Report results  Report results <i>K. pneumoniae</i> (≥ 89%)	Gram-negative rods Circular, convex, entire, smooth and cream (Figure 1)  Non-motile <i>K. pneumoniae</i> (99%)
<b>Antibiotic Susceptibility Profile<sup>1,2</sup></b> Amikacin Ampicillin/sulbactam Aztreonam Cefepime Ceftazidime Ceftazidime/avibactam Ceftolozane/tazobactam Ceftriaxone Ciprofloxacin Ertapenem Gentamicin Imipenem Levofloxacin Meropenem Piperacillin/tazobactam Tetracycline Tigecycline Tobramycin Trimethoprim/sulfamethoxazole	Sensitive Resistant Resistant Resistant Resistant Sensitive Sensitive Resistant Intermediate Sensitive Resistant Sensitive Intermediate Sensitive Sensitive Resistant Sensitive Sensitive Sensitive	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (≤ 1 µg/mL) <sup>3</sup> Sensitive (≤ 1 µg/mL) <sup>3</sup> Sensitive (≤ 1 µg/mL) <sup>3</sup> Sensitive (0.125 µg/mL) Sensitive (0.19 µg/mL) Resistant (32 to 64 µg/mL) Intermediate (1.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (0.19 to 0.25 µg/mL) Intermediate (4 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (2 µg/mL) <sup>4,5</sup> Sensitive (2 µg/mL) Sensitive (≤ 20 µg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1460 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 731029 (GenBank: JAGYBP010000103.1)	99.3% sequence identity to <i>K. pneumoniae</i> , strain MRSN 731029 (GenBank: JAGYBP010000103.1)

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

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

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

<sup>3</sup>*K. pneumoniae*, strain MRSN 731029 was deposited as resistant to aztreonam, cefepime and ceftazidime but showed a MIC of ≤ 1 µg per mL (interpreted as sensitive) for these antibiotics during QC testing. Testing was performed in duplicate.

<sup>4</sup>MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

<sup>5</sup>The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



/Sonia Bjorum Brower/  
Sonia Bjorum Brower

27 JUN 2022

Lead Technical Writer or designee, ATCC Federal Solutions

ATCC<sup>®</sup>, 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<sup>®</sup>'s knowledge.

ATCC<sup>®</sup> is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

