

***Klebsiella pneumoniae*, Strain MRSN 681054**

**Catalog No. NR-55589**

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

**Product Description:**

*Klebsiella pneumoniae* (*K. pneumoniae*), strain MRSN 681054 was isolated in 2015 from a urine sample in Asia as part of a global surveillance program. NR-55589 was deposited as an extensively drug-resistant (XDR) strain, sensitive to amikacin and tigecycline, intermediately resistant to tobramycin and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam, tetracycline and trimethoprim/sulfamethoxazole. NR-55589 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: 70051615**

**Manufacturing Date: 08APR2022**

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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 Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Sensitive Intermediate Resistant	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 256 µg/mL) Resistant (≥ 256 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (16 to 32 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 16 µg/mL) Resistant (2 µg/mL) <sup>3,4</sup> Intermediate (8 µg/mL) Resistant (≥ 320 µg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (1470 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 681054 (GenBank: JAGYBW010000061.1)	99.4% sequence identity to <i>K. pneumoniae</i> , strain MRSN 681054 (GenBank: JAGYBW010000061.1)

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

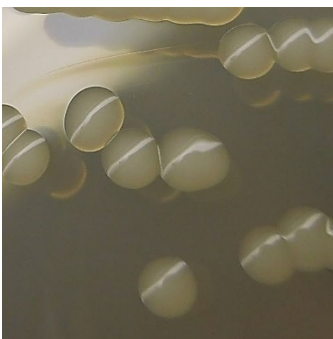
<sup>1</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

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

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

<sup>4</sup>The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

Figure 1: Colony Morphology



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20 JUN 2022

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