

***Klebsiella pneumoniae*, Strain MRSN 583141**

**Catalog No. NR-55578**

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**Product Description:**

*Klebsiella pneumoniae* (*K. pneumoniae*), strain MRSN 583141 was isolated in 2018 from a human urine sample in North America as part of a global surveillance program. NR-55578 was deposited as a multidrug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, ceftolozane/tazobactam, ertapenem, imipenem, levofloxacin, meropenem, piperacillin/tazobactam and tigecycline, intermediately resistant to ciprofloxacin and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftriaxone, gentamicin, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55578 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: 70051126**

**Manufacturing Date: 18MAR2022**

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TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology  Motility (wet mount) VITEK® 2 (GN card) VITEK® MS (MALDI-TOF)	Gram-negative rods Report results  Report results <i>K. pneumoniae</i> (≥ 89%) <i>K. pneumoniae</i>	Gram-negative rods Circular, convex, entire, smooth and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (95%) <i>K. pneumoniae</i> (99.9%)
<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 Sensitive Sensitive Sensitive Sensitive Resistant Sensitive Resistant Resistant	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Resistant (16 µg/mL) Sensitive (2 µg/mL) <sup>3</sup> Sensitive (4 µg/mL) <sup>4</sup> Sensitive (0.19 µg/mL) Sensitive (0.25 to 0.38 µg/mL) Resistant (≥ 64 µg/mL) Resistant (3 µg/mL) <sup>5</sup> Sensitive (≤ 0.5 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (0.38 µg/mL) Sensitive (1 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (16 µg/mL) Resistant (≥ 16 µg/mL) Inconclusive <sup>6,7</sup> Resistant (≥ 16 µg/mL) Resistant (≥ 320 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 583141 (GenBank: JAGYCH010000084.1)	99.5% sequence identity to <i>K. pneumoniae</i> , strain MRSN 583141 (GenBank: JAGYCH010000084.1) <sup>8</sup>

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®2 GN74 and ETEST®.

<sup>3</sup>*K. pneumoniae*, strain MRSN 583141 was deposited as resistant to cefepime, but showed a MIC of 2 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

<sup>4</sup>*K. pneumoniae*, strain MRSN 583141 was deposited as resistant to ceftazidime, but showed a MIC of 4 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

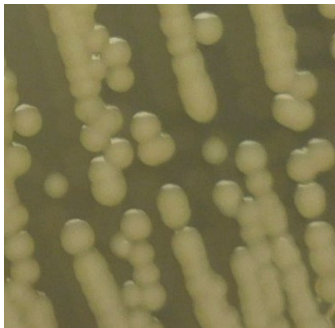
<sup>5</sup>The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

<sup>6</sup>MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

<sup>7</sup>*K. pneumoniae*, strain MRSN 583141 was deposited as being sensitive to tigecycline. Antibiotic susceptibility testing performed in duplicate determined that for strain MRSN 583141, the tigecycline MICs are 1 µg per mL and 2 µg per mL, which are interpreted as sensitive and resistant, respectively.

<sup>8</sup>Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



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