

***Klebsiella pneumoniae*, Strain MRSN 27989**

Catalog No. NR-55538

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 27989 was isolated in 2014 from a human wound sample in North America as part of a global surveillance program. NR-55538 was deposited as a multidrug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, ertapenem, imipenem, meropenem, tigecycline and piperacillin/tazobactam, intermediately resistant to levofloxacin and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, gentamicin, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55538 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: 70050373

Manufacturing Date: 11FEB2022

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis 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%)
Antibiotic Susceptibility Profile^{1,2} 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 Resistant Resistant Resistant Sensitive Resistant Sensitive Resistant Sensitive Resistant Sensitive Resistant Resistant Resistant Intermediate Sensitive Sensitive Resistant Sensitive Resistant Resistant	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (0.25 µg/mL) Sensitive (0.5 to 0.75 µg/mL) ³ Resistant (≥ 64 µg/mL) Resistant (4 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 (16 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (≤ 0.5 µg/mL) ⁴ Resistant (≥ 256 µg/mL) Resistant (≥ 320 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 27989 (GenBank: JAGYDV01000076.1)	99.5% sequence identity to <i>K. pneumoniae</i> , strain MRSN 27989 (GenBank: JAGYDV01000076.1) ⁵

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

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

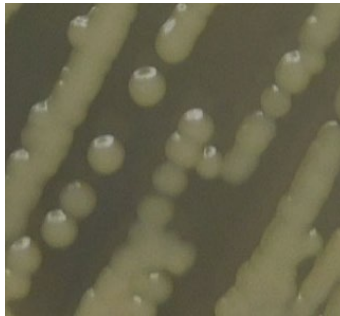
²Antibiotic susceptibility was tested using a combination of bioMérieux VITEK[®]2 GN74 and ETEST[®].

³*K. pneumoniae*, strain MRSN 27989 was deposited as resistant to ceftolozane/tazobactam, but showed a MIC of 0.5 µg per mL and 0.75 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁴MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁵Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



/Sonia Bjorum Brower/
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