

Klebsiella pneumoniae, Strain MRSN 6031

Catalog No. NR-55511

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 6031 was isolated in 2011 from a human wound sample in Europe as part of a global surveillance program. NR-55511 was deposited as a multidrug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, ceftolozane/tazobactam, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam and tigecycline, intermediately resistant to aztreonam and ciprofloxacin and resistant to ampicillin/sulbactam, cefepime, ceftazidime, ceftriaxone, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55511 was produced by inoculation of BEI Resources seed lot 70049662 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: 70076379

Manufacturing Date: 04JUN2025

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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 Non-motile <i>K. pneumoniae</i> (≥ 89%)	Gram-negative rods Circular, convex, entire, smooth, mucoid and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (97%)
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 Sensitive Sensitive Sensitive Sensitive Resistant Resistant Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Resistant Resistant Resistant Resistant	Sensitive (4 µg/mL) Resistant (≥ 32 µg/mL) Inconclusive ³ Sensitive (2 µg/mL) ⁴ Sensitive (4 µg/mL) ⁵ Sensitive (0.125 µg/mL) Sensitive (0.25 µg/mL) Resistant (≥ 64 µg/mL) Resistant (3 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (0.19 µg/mL) Sensitive (1 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (8 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (1 to 1.5 µg/mL) ⁶ Resistant (≥ 16 µg/mL) Resistant (≥ 320 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1450 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 6031 (GenBank: JAGYEV010000085.1)	99.9% sequence identity to <i>K. pneumoniae</i> , strain MRSN 6031 (GenBank: JAGYEV010000085.1) ⁵

Certificate of Analysis for NR-55511

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 6031 was deposited as intermediately resistant to aztreonam but showed a MIC of 16 µg/mL (interpreted as resistant) for lot 70049661 during QC testing. QC testing of lot 70076379 showed MICs of 8 µg/mL (interpreted as sensitive) and 12 µg/mL (interpreted as intermediately resistant), resulting in an inconclusive result.

⁴*K. pneumoniae*, strain MRSN 6031 was deposited as resistant to cefepime but showed a MIC of 2 µg/mL (interpreted as sensitive) for lot 70049661 during QC testing.

⁵*K. pneumoniae*, strain MRSN 6031 was deposited as resistant to ceftazidime but showed a MIC of 4 µg/mL (interpreted as sensitive) for lot 70049661 during QC testing.

⁶*K. pneumoniae*, strain MRSN 6031 was deposited as sensitive to tigecycline but showed a MIC of 2 µg/mL (interpreted as resistant) for lot 70049661 during QC testing. The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result. MIC Interpretation Guideline: EUCAST Version 8.0 (2018).

⁵Also consistent with other *Klebsiella* species.

Figure 1: Colony Morphology



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