

Klebsiella pneumoniae, Strain MRSN 401050

Catalog No. NR-55552

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 401050 was isolated in 2016 from a human fluid sample in North America as part of a global surveillance program. NR-55552 was deposited as a multidrug-resistant strain, sensitive to amikacin, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ertapenem, gentamicin, imipenem, meropenem, tetracycline, tobramycin and tigecycline, intermediately resistant to levofloxacin, and resistant to ampicillin/sulbactam, ciprofloxacin, piperacillin/tazobactam and trimethoprim/sulfamethoxazole. NR-55552 was produced by inoculation BEI Resources seed lot 70050671 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: 70078603

Manufacturing Date: 16OCT2025

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth, mucoid and cream (Figure 1)
Motility (wet mount)	Report results	Non-motile
VITEK® MS (MALDI-TOF)	<i>K. pneumoniae</i>	<i>K. pneumoniae</i> (99.9%)
Antibiotic Susceptibility Profile^{1,2}		
Amikacin	Sensitive	Sensitive (≤ 2 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (≥ 32 µg/mL)
Aztreonam	Sensitive	Sensitive (≤ 1 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime/avibactam	Sensitive	Sensitive (0.25 µg/mL)
Ceftolozane/tazobactam	Sensitive	Sensitive (0.38 µg/mL)
Ceftriaxone	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Intermediate	Intermediate (2 µg/mL) ³
Ertapenem	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 µg/mL)
Imipenem	Sensitive	Sensitive (0.125 µg/mL)
Levofloxacin	Intermediate	Intermediate (4 µg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.25 µg/mL)
Piperacillin/tazobactam	Resistant	Resistant (≥ 128 µg/mL)
Tetracycline	Sensitive	Sensitive (4 µg/mL)
Tigecycline	Sensitive	Resistant (2 µg/mL) ⁴
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 320 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	$\geq 99\%$ sequence identity to <i>K. pneumoniae</i> , strain MRSN 401050 (GenBank: JAGYDH010000094.1)	99.7% sequence identity to <i>K. pneumoniae</i> , strain MRSN 401050 (GenBank: JAGYDH010000094.1) 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 401050 was deposited as resistant to ciprofloxacin, but showed a MIC of 2 µg/mL (interpreted as intermediately resistant) for lot 70050670 during QC testing.

⁴The 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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