

***Klebsiella pneumoniae*, Strain MRSN 5741**

Catalog No. NR-55509

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 5741 was isolated in 2003 from a human respiratory sample in North America as part of a global surveillance program. NR-55509 was deposited as a multidrug-resistant strain, sensitive to amikacin, cefepime, ceftazidime/avibactam, ertapenem, imipenem, meropenem, tetracycline and tigecycline, intermediately resistant to gentamicin and tobramycin and resistant to ampicillin/sulbactam, aztreonam, ceftazidime, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, levofloxacin, piperacillin/tazobactam and trimethoprim/sulfamethoxazole. NR-55509 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: 70049666

Manufacturing Date: 06JAN2022

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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, mucoid and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (98%)
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 Resistant Sensitive Resistant Resistant Resistant Sensitive Intermediate Sensitive Resistant Sensitive Resistant Sensitive Sensitive Intermediate Resistant	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (4 µg/mL) ³ Sensitive (≤ 1 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (6 µg/mL) Inconclusive ⁴ Resistant (8 to 12 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (≤ 0.5 µg/mL) Intermediate (8 µg/mL) Sensitive (0.19 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (≤ 0.25 µg/mL) Resistant (≥ 128 µg/mL) Sensitive (4 µg/mL) Sensitive (0.38 µg/mL) ⁵ Intermediate (8 µg/mL) Resistant (≥ 320 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 5741 (GenBank: JAGYEX01000090.1)	99.8% sequence identity to <i>K. pneumoniae</i> , strain MRSN 5741 (GenBank: JAGYEX01000090.1) ⁶

TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood	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[®].

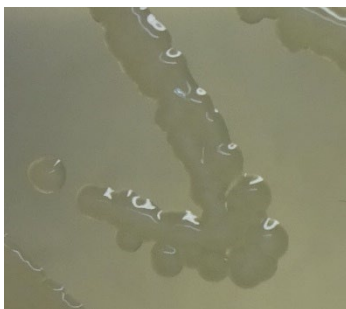
³*K. pneumoniae*, strain MRSN 5741 was deposited as resistant to aztreonam, but showed a MIC of 4 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁴*K. pneumoniae*, strain MRSN 5741 was deposited as resistant to ceftolozane/tazobactam. Antibiotic susceptibility testing performed in quadruplicate determined that for strain MRSN 5741, the ceftolozane/tazobactam MICs are 3 and 4 µg per mL, which are interpreted as sensitive and intermediately resistant, respectively.

⁵MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁶Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



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