

***Klebsiella pneumoniae*, Strain MRSN 539414**

Catalog No. NR-55569

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 539414 was isolated in 2017 from a human blood sample in North America as part of a global surveillance program. NR-55569 was deposited as a multidrug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, ceftolozane/tazobactam, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam and tigecycline, intermediately resistant to aztreonam and ceftazidime and resistant to ampicillin/sulbactam, cefepime, ceftriaxone, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55569 was produced by inoculation of the deposited material into Tryptic Soy broth and grown for 1 day at 37°C in an aerobic atmosphere. The material from the initial growth was added to Tryptic Soy broth, which was grown for 1 day at 37°C in an aerobic atmosphere to produce this lot. Quality control testing was completed on Tryptic Soy agar under propagation conditions unless otherwise noted.

Lot: 70051108

Manufacturing Date: 24MAR2022

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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> (95%)
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 Intermediate Resistant Intermediate Sensitive Sensitive Resistant Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Resistant Sensitive Resistant Resistant	Sensitive (4 µg/mL) Resistant (≥ 32 µg/mL) Resistant (48 µg/mL) ³ Resistant (≥ 64 µg/mL) Intermediate (8 to 12 µg/mL) Sensitive (0.19 µg/mL) Sensitive (0.19 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (0.064 to 0.094 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (0.19 µg/mL) Sensitive (≤ 0.12 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (8 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (1 µg/mL) ⁴ Resistant (≥ 16 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 539414 (GenBank: JAGYQCQ010000070.1)	99.8% sequence identity to <i>K. pneumoniae</i> , strain MRSN 539414 (GenBank: JAGYQCQ010000070.1) 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 539414 was deposited as intermediate to aztreonam, but showed a MIC of 48 µg per mL (interpreted as resistant) 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



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13 JUN 2022

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