

***Klebsiella pneumoniae*, Strain MRSN 560539**

Catalog No. NR-55571

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 560539 was isolated in 2018 from a human urine sample in North America as part of a global surveillance program. NR-55571 was deposited as an extensively drug-resistant strain (XDR), sensitive to amikacin, ceftazidime/avibactam, and tigecycline, intermediate to ceftazidime and tobramycin and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam, tetracycline and trimethoprim/sulfamethoxazole. NR-55571 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: 70051112

Manufacturing Date: 23MAR2022

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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 Intermediate Sensitive Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Resistant Sensitive Intermediate Resistant	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (2 µg/mL) ³ Resistant (24 µg/mL) ⁴ Sensitive (1.5 µg/mL) Resistant (24 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (4 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 16 µg/mL) Resistant (4 µg/mL) ^{5,6} Intermediate (8 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 560539 (GenBank: JAGYCO010000175.1)	99.5% sequence identity to <i>K. pneumoniae</i> , strain MRSN 560539 (GenBank: JAGYCO010000175.1)

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[®].

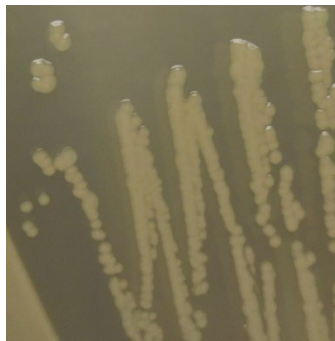
³*K. pneumoniae*, strain MRSN 560539 was deposited as resistant to cefepime but showed a MIC of 2 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁴*K. pneumoniae*, strain MRSN 560539 was deposited as intermediately resistant to ceftazidime but showed a MIC of 24 µg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

⁵*K. pneumoniae*, strain MRSN 560539 was deposited as immediately resistant to tigecycline but showed a MIC of 4 µg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

⁶MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

Figure 1: Colony Morphology



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