

***Klebsiella pneumoniae*, Strain MRSN 468268**

Catalog No. NR-55558

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 468268 was isolated in 2017 from a human urine sample in North America as part of a global surveillance program. NR-55558 was deposited as a multidrug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, ceftolozane/tazobactam, ciprofloxacin, ertapenem, imipenem, levofloxacin, meropenem, piperacillin/tazobactam, tigecycline and tobramycin, intermediately resistant to ampicillin/sulbactam and resistant to aztreonam, cefepime, ceftazidime, ceftriaxone, gentamicin, tetracycline and trimethoprim/sulfamethoxazole. NR-55558 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: 70050682

Manufacturing Date: 02MAR2022

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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> (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 Intermediate Resistant Resistant Resistant Sensitive Sensitive Resistant Sensitive Sensitive Resistant Sensitive Sensitive Sensitive Sensitive Resistant Sensitive Sensitive Resistant	Sensitive (≤ 2 µg/mL) Intermediate (16 µg/mL) Sensitive (2 µg/mL) ³ Sensitive (2 µg/mL) ⁴ Sensitive (4 µg/mL) ⁵ Sensitive (0.125 µg/mL) Sensitive (0.19 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (0.38 µg/mL) Sensitive (≤ 0.5 µg/mL) Resistant (≥ 16 µg/mL) Sensitive (0.25 µg/mL) Sensitive (1 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 4 µg/mL) Resistant (≥ 16 µg/mL) Resistant (2 µg/mL) ^{6,7} Sensitive (2 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 468268 (GenBank: JAGYDB01000076.1)	99.5% sequence identity to <i>K. pneumoniae</i> , strain MRSN 468268 (GenBank: JAGYDB01000076.1) ⁸

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 468268 was deposited as resistant to aztreonam, 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 468268 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.

⁵*K. pneumoniae*, strain MRSN 468268 was deposited as resistant to ceftazidime, but showed a MIC of 4 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁶MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁷The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁸Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



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