

***Klebsiella pneumoniae*, Strain MRSN 614201**

Catalog No. NR-55583

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 614201 was isolated in 2018 from an environmental sample in Africa as part of a global surveillance program. NR-55583 was deposited as a multidrug-resistant (MDR) strain, sensitive to amikacin, ceftazidime/avibactam, ceftolozane/tazobactam, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam, tetracycline, tigecycline, tobramycin and trimethoprim/sulfamethoxazole and resistant to ampicillin/sulbactam, aztreonam, ceftazidime, ceftriaxone and cefepime. NR-55583 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: 70051603

Manufacturing Date: 06APR2022

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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 Resistant Sensitive Sensitive Resistant Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive Sensitive	Sensitive (≤ 2 µg/mL) Sensitive (4 µg/mL) ³ Sensitive (2 µg/mL) ⁴ Sensitive (≤ 1 µg/mL) ⁵ Sensitive (4 µg/mL) ⁶ Sensitive (0.094 µg/mL) Sensitive (0.125 µg/mL) Resistant (16 µg/mL) Sensitive (0.016 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (0.25 µg/mL) Sensitive (≤ 0.12 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 4 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.5 µg/mL) ⁷ Sensitive (≤ 1 µg/mL) Sensitive (≤ 20 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (1470 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 614201 (GenBank: JAGYCC010000052.1)	99.9% sequence identity to <i>K. pneumoniae</i> , strain MRSN 614201 (GenBank: JAGYCC010000052.1)

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 614201 was deposited as resistant to ampicillin/sulbactam 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 614201 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.

⁵*K. pneumoniae*, strain MRSN 614201 was deposited as resistant to cefepime but showed a MIC of ≤ 1 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁶*K. pneumoniae*, strain MRSN 614201 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.

⁷MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

Figure 1: Colony Morphology



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23 JUN 2022

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