

***Klebsiella pneumoniae*, Strain MRSN 5613**

Catalog No. NR-55508

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 5613 was isolated in 2011 from a human urine sample in North America as part of a global surveillance program. NR-55508 was deposited as an extensively drug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, ertapenem, imipenem, meropenem and tigecycline, intermediately resistant to ciprofloxacin, levofloxacin and piperacillin/tazobactam and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftolozane/tazobactam, ceftriaxone, gentamicin, tetracycline, trimethoprim/sulfamethoxazole and tobramycin. NR-55508 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: 70049668

Manufacturing Date: 06JAN2022

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® MS (MALDI-TOF)	Gram-negative rods Report results Report results <i>K. pneumoniae</i>	Gram-negative rods Circular, convex, entire, smooth, mucoid and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (99.9%)
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 Resistant Resistant Intermediate Sensitive Resistant Sensitive Intermediate Sensitive Intermediate Resistant Sensitive Resistant Resistant	Sensitive ($\leq 2 \mu\text{g/mL}$) Resistant ($\geq 32 \mu\text{g/mL}$) Resistant (32 $\mu\text{g/mL}$) Sensitive (2 $\mu\text{g/mL}$)³ Resistant (16 $\mu\text{g/mL}$) Sensitive (0.75 $\mu\text{g/mL}$) Sensitive (1 $\mu\text{g/mL}$)⁴ Resistant ($\geq 64 \mu\text{g/mL}$) Resistant (4 $\mu\text{g/mL}$) ⁵ Sensitive ($\leq 0.5 \mu\text{g/mL}$) Resistant ($\geq 16 \mu\text{g/mL}$) Sensitive (0.25 $\mu\text{g/mL}$) Sensitive (1.5 to 2 $\mu\text{g/mL}$)⁶ Sensitive ($\leq 0.25 \mu\text{g/mL}$) Intermediate (24 $\mu\text{g/mL}$) Resistant ($\geq 16 \mu\text{g/mL}$) Resistant (2 $\mu\text{g/mL}$) ^{5,7} Resistant ($\geq 16 \mu\text{g/mL}$) Resistant ($\geq 320 \mu\text{g/mL}$)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	$\geq 99\%$ sequence identity to <i>K. pneumoniae</i> , strain MRSN 5613 (GenBank: JAGY EY010000099.1)	99.5% sequence identity to <i>K. pneumoniae</i> , strain MRSN 5613 (GenBank: JAGY EY010000099.1) 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 5613 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 5613 was deposited as resistant to ceftolozane/tazobactam, but showed a MIC of 1 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed twice in duplicate.

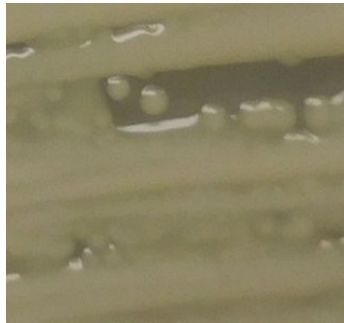
⁵The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result.

⁶*K. pneumoniae*, strain MRSN 5613 was deposited as intermediately resistant to levofloxacin, but showed a MIC of 1.5 to 2 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed twice in duplicate.

⁷MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁸Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



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