

***Klebsiella pneumoniae*, Strain MRSN 581745**

Catalog No. NR-55575

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 581745 was isolated in 2018 from a human urine sample in Asia as part of a global surveillance program. NR-55575 was deposited as an extensively drug-resistant strain (XDR), sensitive to amikacin and gentamicin, intermediately resistant to levofloxacin and meropenem, and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, imipenem, piperacillin/tazobactam, tetracycline, tigecycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55575 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: 70051120

Manufacturing Date: 18MAR2022

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® 2 (GN card) VITEK® MS (MALDI-TOF)	Gram-negative rods Report results Report results <i>K. pneumoniae</i> (≥ 89%) <i>K. pneumoniae</i>	Gram-negative rods Circular, convex, entire, smooth, mucoid and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (95%) <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 Resistant Resistant Resistant Resistant Resistant Sensitive Resistant Intermediate Intermediate Resistant Resistant Resistant Resistant Resistant	Sensitive (≤ 2 µg/mL) Resistant (≥ 32 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (> 256 µg/mL) Resistant (> 256 µg/mL) Resistant (≥ 64 µg/mL) Resistant (> 32 µg/mL) Resistant (≥ 8 µg/mL) Sensitive (≤ 1 µg/mL) Resistant (> 32 µg/mL) Intermediate (4 µg/mL) Resistant (> 32 µg/mL) ³ Resistant ≥ 128 µg/mL Resistant (≥ 16 µg/mL) Resistant (≥ 8 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 581745 (GenBank: JAGYCK010000159.1)	99.6% sequence identity to <i>K. pneumoniae</i> , strain MRSN 581745 (GenBank: JAGYCK010000159.1) 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 581745 was deposited as intermediately resistant to meropenem, but showed a MIC of >32 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



/Heather Couch/
Heather Couch

31 MAY 2022

Program Manager or designee, ATCC Federal Solutions

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