

***Klebsiella pneumoniae*, Strain MRSN 430414**

Catalog No. NR-55556

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Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 430414 was isolated in 2013 from a human blood sample in the Middle East as part of a global surveillance program. NR-55556 was deposited as an extensively drug-resistant strain, sensitive to amikacin, ceftazidime/avibactam and imipenem, intermediately resistant to tigecycline and tobramycin and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, levofloxacin, meropenem, piperacillin/tazobactam, tetracycline and trimethoprim/sulfamethoxazole. NR-55556 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: 70050678

Manufacturing Date: 02MAR2022

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream
Motility (wet mount)	Report results	Non-motile
VITEK® 2 (GN card)	<i>K. pneumoniae</i> (≥ 89%)	<i>K. pneumoniae</i> (99%)
Antibiotic Susceptibility Profile^{1,2}		
Amikacin	Sensitive	Sensitive (16 µg/mL)
Ampicillin/sulbactam	Resistant	Resistant (≥ 32 µg/mL)
Aztreonam	Resistant	Resistant (≥ 64 µg/mL)
Cefepime	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime/avibactam	Sensitive	Sensitive (1 to 1.5 µg/mL)
Ceftolozane/tazobactam	Resistant	Resistant (24 to 48 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 32 µg/mL)
Ertapenem	Resistant	Resistant (≥ 8 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)
Imipenem	Sensitive	Resistant (3 µg/mL) ³
Levofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Piperacillin/tazobactam	Resistant	Resistant (≥ 128 µg/mL)
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tigecycline	Intermediate	Resistant (2 to 3 µg/mL) ^{4,5}
Tobramycin	Intermediate	Intermediate (8 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	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 430414 (GenBank: JAGYDD010000079.1)	99.5% sequence identity to <i>K. pneumoniae</i> , strain MRSN 430414 (GenBank: JAGYDD010000079.1) ⁶

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[®].

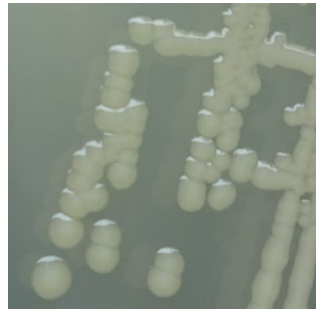
³*K. pneumoniae*, strain MRSN 430414 was deposited as sensitive to imipenem, but showed a MIC of 3 µg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

⁴MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁵*K. pneumoniae*, strain MRSN 430414 was deposited as intermediately resistant to tigecycline, but showed a MIC of 2 to 3 µg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

⁶Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



/Sonia Bjorum Brower/
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