

Certificate of Analysis for NR-55516

Klebsiella pneumoniae, Strain MRSN 13761

Catalog No. NR-55516

This reagent is the tangible property of the U.S. Government.

Product Description:

Klebsiella pneumoniae (K. pneumoniae), strain MRSN 13761 was isolated in 2011 from a human wound sample in Europe as part of a global surveillance program. NR-55516 was deposited as an extensively drug-resistant strain, sensitive to amikacin, ceftazidime/avibactam and tigecycline, intermediately resistant to aztreonam, ceftazidime and levofloxacin and resistant to ampicillin/sulbactam, cefepime, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, meropenem, piperacillin/tazobactam, tetracycline, tobramycin and trimethoprim/sulfamethoxazole. NR-55516 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: 70049651 Manufacturing Date: 19JAN2022

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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 mucoid and cream (Figure 1)			
Motility (wet mount)	Report results	Non-motile			
VITEK® 2 (GN card)	K. pneumoniae (≥ 89%)	K. pneumoniae (99%)			
Antibiotic Susceptibility Profile ^{1,2}					
Amikacin	Sensitive	Sensitive (8 µg/mL)			
Ampicillin/sulbactam	Resistant	Resistant (≥ 32 μg/mL)			
Aztreonam	Intermediate	Resistant (24 to 32 µg/mL) ³			
Cefepime	Resistant	Intermediate (4 µg/mL) ⁴			
Ceftazidime	Intermediate	Resistant (16 μg/mL) ⁵			
Ceftazidime/avibactam	Sensitive	Sensitive (0.5 µg/mL)			
Ceftolozane/tazobactam	Resistant	Resistant (16 to 48 µg/mL)			
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)			
Ciprofloxacin	Resistant	Resistant (4 to 6 µg/mL)			
Ertapenem	Resistant	Resistant (≥ 8 μg/mL)			
Gentamicin	Resistant	Resistant (≥ 16 µg/mL)			
Imipenem	Resistant	Resistant (6 to 32 µg/mL)			
Levofloxacin	Intermediate	Sensitive (1.5 to 2 μg/mL) ⁶			
Meropenem	Resistant	Resistant (4 µg/mL)			
Piperacillin/tazobactam	Resistant	Resistant (≥ 128 µg/mL)			
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)			
Tigecycline	Sensitive	Resistant (2 µg/mL) ^{5,7}			
Tobramycin	Resistant	Resistant (≥ 16 µg/mL)			
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 320 µg/mL)			
Genotypic Analysis					
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.5% sequence identity to			
(~ 1480 base pairs)	K. pneumoniae, strain MRSN 13761 (GenBank: JAGYEQ010000100.1)				

BEI Resources www.beiresources.org E-mail: contact@beiresources.org

Tel: 800-359-7370 Fax: 703-365-2898

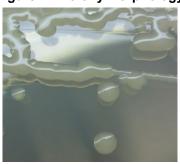


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TEST	SPECIFICATIONS			RESULTS				
Purity	Growth	consistent	with	expected	Growth	consistent	with	expected
7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	colony	y morphology			colony	/ morphology		
Viability	Growth				Growth		•	

¹Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (2018)

Figure 1: Colony Morphology



/Sonia Bjorum Brower/ Sonia Bjorum Brower

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Lead Technical Writer or designee, ATCC Federal Solutions

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²Antibiotic susceptibility was tested using a combination of bioMérieux VITEK®2 GN74 and ETEST®.

³K. pneumoniae, strain MRSN 13761 was deposited as intermediately resistant to aztreonam, but showed a MIC of 24 to 32 μg per mL (interpreted as resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

⁴K. pneumoniae, strain MRSN 13761 was deposited as resistant to cefepime, but showed a MIC of 4 μg per mL (interpreted as intermediately resistant) for this antibiotic during QC testing. Testing was performed in duplicate.

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

⁶K. pneumoniae, strain MRSN 13761 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 in duplicate.

⁷MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁸Also consistent with other Klebsiella species