

Certificate of Analysis for NR-55541

Klebsiella pneumoniae, Strain MRSN 28880

Catalog No. NR-55541

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

Product Description:

Klebsiella pneumoniae (K. pneumoniae), strain MRSN 28880 was isolated in 2014 from a human urine sample in North America as part of a global surveillance program. NR-55541 was deposited as a susceptible strain, sensitive to amikacin, ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftazidime/avibactam, ceftolozane/tazobactam, ceftriaxone, ciprofloxacin, ertapenem, gentamicin, imipenem, levofloxacin, meropenem, piperacillin/tazobactam, tigecycline, tobramycin, tetracycline and trimethoprim/sulfamethoxazole. NR-55541 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: 70050379 Manufacturing Date: 16FEB2022

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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 (≤ 2 μg/mL)
Ampicillin/sulbactam	Sensitive	Sensitive (4 µg/mL)
Aztreonam	Sensitive	Sensitive (≤ 1 µg/mL)
Cefepime	Sensitive	Sensitive (≤ 1 μg/mL)
Ceftazidime	Sensitive	Sensitive (≤ 1 µg/mL)
Ceftazidime/avibactam	Sensitive	Sensitive (0.25 µg/mL)
Ceftolozane/tazobactam	Sensitive	Sensitive (0.25 µg/mL)
Ceftriaxone	Sensitive	Sensitive (≤ 1 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (0.032 µg/mL)
Ertapenem	Sensitive	Sensitive (≤ 0.5 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 1 μg/mL)
Imipenem	Sensitive	Sensitive (0.38 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 0.12 μg/mL)
Meropenem	Sensitive	Sensitive (≤ 0.25 μg/mL)
Piperacillin/tazobactam	Sensitive	Sensitive (≤ 4 μg/mL)
Tetracycline	Sensitive	Sensitive (≤ 1 μg/mL)
Tigecycline	Sensitive	Sensitive (≤ 0.5 μg/mL) ³
Tobramycin	Sensitive	Sensitive (≤ 1 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 20 μg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1460 base pairs)	≥ 99% sequence identity to K. pneumoniae, strain MRSN 28880 (GenBank: JAGYDS010000071.1)	99.3% sequence identity to K. pneumoniae, strain MRSN 28880 (GenBank: JAGYDS010000071.1) ⁴

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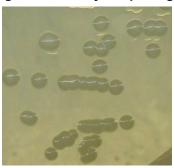


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TEST	SPECIFICATIONS	RESULTS
Purity 7 days at 37°C in an aerobic atmosphere with and without 5% CO ₂ on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability	Growth	Growth

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

Figure 1: Colony Morphology



/Heather Couch/

Heather Couch 11 MAY 2022

Program Manager or designee, ATCC Federal Solutions

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

³MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁴Also consistent with other Klebsiella species