

Certificate of Analysis for NR-41922

Klebsiella pneumoniae, Strain BIDMC 7A

Catalog No. NR-41922

Product Description: *Klebsiella pneumoniae (K. pneumoniae),* strain BIDMC 7A was isolated in 2012 from human urine in Boston, Massachusetts, USA. *K. pneumoniae*, strain BIDMC 7A was deposited as a carbapenem-resistant strain and is part of the Carbapenem-Resistant Enterobacteriaceae (CRE) Sequencing Project at the Broad Institute. Strain BIDMC 7A was deposited as sensitive to gentamicin and resistant to meropenem, nitrofurantoin and tobramycin.

Lot¹: 70007981 Manufacturing Date: 01SEP2017

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology ²	Report results	Circular, convex, entire, smooth,
, , ,	·	mucoid and cream (Figure 1)
Motility (wet mount)	Report results	Non-motile
VITEK® 2 Compact (GN card)	K. pneumonia (≥ 89%)	K. pneumonia (98%) ³
Antibiotic Susceptibility Profile		
VITEK® (AST-GN83)4		
Ampicillin	Report results	Resistant (≥ 32 µg/mL)
Amoxicillin/clavulanic acid	Report results	Resistant (≥ 32 µg/mL)
Ampicillin/sulbactam	Report results	Resistant (≥ 32 µg/mL)
Piperacillin/tazobactam	Report results	Resistant (≥ 128 µg/mL)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Cefuroxime	Report results	Resistant (≥ 64 µg/mL)
Cefuroxime axetil	Report results	Resistant (≥ 64 µg/mL)
Cefoxitin	Report results	Resistant (= 8 µg/mL)
Cefotaxime	Report results	Resistant (= 8 µg/mL)
Ceftazidime	Report results	Resistant (≥ 64 µg/mL)
Ceftriaxone	Report results	Resistant (= 16 μg/mL)
Cefepime	Report results	Resistant (= 2 µg/mL)
Aztreonam	Report results	Resistant (≥ 64 µg/mL)
Meropenem	Resistant	Resistant (≥ 16 µg/mL)
Amikacin	Report results	Resistant (≥ 64 µg/mL)
Gentamicin	Sensitive	Sensitive (= 2 µg/mL)
Ciprofloxacin	Report results	Resistant (≥ 4 µg/mL)
Nitrofurantoin	Resistant	Resistant (= 256 µg/mL)
Trimethoprim/sulfamethoxazole	Report results	Sensitive (≤ 20 μg/mL)
Etest® antibiotic test strips5		
Ceftriaxone ⁶	Report results	Resistant (= 32 µg/mL)
Tobramycin ⁶	Resistant	Inconclusive ⁷
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.5% sequence identity to
(~ 730 base pairs)	K. pneumonia, strain BIDMC 7A	K. pneumonia, strain BIDMC 7A
,	(GenBank: JAPO01000003.1)	(GenBank: JAPO01000003.1) ⁸
Purity (post-freeze) ⁹	Growth consistent with expected colony	Growth consistent with expected
	morphology	colony morphology
Viability (post-freeze) ²	Growth	Growth

¹NR-41922 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.

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²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

³Percent probabilities above 89% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99%



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being a perfect match between the test reaction pattern and the unique biochemical pattern of the given organism or organism group. For additional information, please refer to O'Hara, C. M. and J. M. Miller. "Evaluation of the VITEK 2 ID-GNB Assay for Identification of Members of the Family Enterobacteriaceae and Other Nonenteric Gram-Negative Bacilli and Comparison with the VITEK GNI+ Card." J. Clin. Microbiol. 41 (2003): 2096-2101. PubMed: 12734254.

⁴MIC interpretation was determined using VITEK® 2 software version 07.01 combined with the bioMérieux Advanced Expert System™ (AES) software using the interpretation standard CLSI M100-S22 (2012) and the interpretation guideline "Natural Resistance." For more information, please refer to Sanders, C. C., et al. "Potential Impact of the VITEK 2 System and the Advanced Expert System on the Clinical Laboratory of a University-Based Hospital." J. Clin. Microbiol. 39 (2001): 2379-2385. PubMed: 11427542.

⁵1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

⁶Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

7K. pneumoniae, strain BIDMC 7A was deposited with a reported MIC of >8 μg/mL, which is interpreted as resistant. Antibiotic susceptibility testing performed in duplicate determined that for strain BIDMC 7A, the tobramycin MICs were 8 μg/mL and 12 μg/mL, which are interpreted as intermediate and resistant, respectively.

⁸Also consistent with other organisms

⁹Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar.

Figure 1: Colony Morphology



Date: 05 JAN 2018

Signature:

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