

***Klebsiella pneumoniae*, Strain MRSN 511348**

Catalog No. NR-55561

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

Product Description:

Klebsiella pneumoniae (*K. pneumoniae*), strain MRSN 511348 was isolated in 2014 from a human sample in the Middle East as part of a global surveillance program. NR-55561 was deposited as an extensively drug-resistant strain, sensitive to amikacin, ceftazidime/avibactam, levofloxacin, tetracycline and tigecycline, intermediately resistant to ciprofloxacin and imipenem and resistant to ampicillin/sulbactam, aztreonam, cefepime, ceftazidime, ceftolozane/tazobactam, ceftriaxone, ertapenem, gentamicin, meropenem, piperacillin/tazobactam, tobramycin and trimethoprim/sulfamethoxazole. NR-55561 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: 70050688

Manufacturing Date: 02MAR2022

BEI Resources is committed to ensuring digital accessibility for people with disabilities. This Certificate of Analysis contains complex tables and may not be fully accessible. Please let us know if you encounter accessibility barriers and a fully accessible document will be provided: E-mail: Contact@BEIResources.org. We try to respond to feedback within 24 hours.

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology Motility (wet mount) VITEK® 2 (GN card)	Gram-negative rods Report results Report results <i>K. pneumoniae</i> (≥ 89%)	Gram-negative rods Circular, convex, entire, smooth and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (98%)
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 Sensitive Resistant Resistant Intermediate Resistant Resistant Intermediate Sensitive Resistant Resistant Sensitive Sensitive Resistant Resistant	Sensitive (4 µg/mL) Resistant (≥ 256 µg/mL) Resistant (≥ 64 µg/mL) Inconclusive ³ Inconclusive ⁴ Sensitive (4 µg/mL) Resistant (192 µg/mL) Resistant (≥ 256 µg/mL) Intermediate (1.5 µg/mL) Resistant (1.5 to 2 µg/mL) Resistant (≥ 16 µg/mL) Intermediate (1.5 to 2 µg/mL) Sensitive (1 µg/mL) Sensitive (0.75 to 1 µg/mL) ⁵ Resistant (≥ 128 µg/mL) Sensitive (4 µg/mL) Sensitive (≤ 0.5 µg/mL) ⁶ Resistant (≥ 16 µg/mL) Resistant (160 to ≥ 320 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1470 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> , strain MRSN 511348 (GenBank: JAGYCY010000118.1)	99.9% sequence identity to <i>K. pneumoniae</i> , strain MRSN 511348 (GenBank: JAGYCY010000118.1) ⁷

TEST	SPECIFICATIONS	RESULTS
Purity 10 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Tryptic Soy agar with 5% defibrinated sheep blood	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*Klebsiella pneumoniae*, strain MRSN 511348 was deposited as being resistant to cefepime. Repeated antibiotic susceptibility testing determined that for strain MRSN 511348, the cefepime MICs are 2 µg per mL and ≥ 64 µg per mL, which are interpreted as sensitive and resistant, respectively.

⁴*Klebsiella pneumoniae*, strain MRSN 511348 was deposited as being resistant to ceftazidime. Repeated antibiotic susceptibility testing determined that for strain MRSN 511348, the ceftazidime MICs are 4 µg per mL and ≥ 64 µg per mL, which are interpreted as sensitive and resistant, respectively.

⁵*K. pneumoniae*, strain MRSN 511348 was deposited as resistant to meropenem, but showed a MIC of 0.75 to 1 µg per mL (interpreted as sensitive) for this antibiotic during QC testing. Testing was performed in duplicate.

⁶MIC Interpretation Guideline: EUCAST Version 8.0 (2018)

⁷Also consistent with other *Klebsiella* species

Figure 1: Colony Morphology



/Sonia Bjorum Brower/
Sonia Bjorum Brower

11 JUL 2022

Lead Technical Writer or designee, ATCC Federal Solutions

ATCC[®], on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC[®]'s knowledge.

ATCC[®] is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

