b|**e**|**i** resources

SUPPORTING INFECTIOUS DISEASE RESEARCH

Pseudomonas aeruginosa, Strain MRSN 7014

Catalog No. NR-51554

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

Product Description:

Pseudomonas aeruginosa (P. aeruginosa), strain MRSN 7014 was isolated in 2012 from a human respiratory sample in the United States as part of a global surveillance program. *P. aeruginosa*, strain MRSN 7014 was deposited as multilocus sequence type (MLST) 1129, sensitive to amikacin and tobramycin, intermediately resistant to ciprofloxacin and gentamicin and resistant to aztreonam, ceftazidime, cefepime, imipenem, levofloxacin, meropenem and piperacillin/tazobactam. NR-51554 was produced by inoculation of BEI Resources seed lot 70024985 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: 70064789

Manufacturing Date: 15NOV2023

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: <u>Contact@BEIResources.org</u>. We try to respond to feedback within 24 hours.

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, convex, entire, smooth and cream (Figure 1)
Motility (wet mount)	Report results	Motile
VITEK [®] MS (MALDI-TOF)	P. aeruginosa	P. aeruginosa (99.9%)
Antibiotic Susceptibility Profile ^{1,2}		
Amikacin	Sensitive	Sensitive (16 µg/mL)
Amoxicillin/clavulanic acid	Resistant	Resistant (≥ 32 µg/mL)
Ampicillin	Resistant	Resistant (≥ 32 µg/mL)
Cefazolin	Resistant	Resistant (≥ 64 µg/mL)
Cefepime	Resistant	Resistant (32 µg/mL)
Cefoxitin	Resistant	Resistant (≥ 64 µg/mL)
Ceftazidime	Resistant	Resistant (≥ 64 µg/mL)
Ceftriaxone	Resistant	Resistant (≥ 64 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (1 µg/mL) ³
Gentamicin	Intermediate	Intermediate (8 µg/mL)
Levofloxacin	Intermediate	Intermediate (4 µg/mL) ⁴
Meropenem	Intermediate	Intermediate (4 µg/mL) ⁵
Nitrofurantoin	Resistant	Resistant (≥ 512 µg/mL)
Piperacillin/tazobactam	Resistant	Resistant (> 256 µg/mL)
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tobramycin	Sensitive	Sensitive (≤ 1 μg/mL)
Trimethoprim/sulfamethoxazole	Report results	80 μg/mL ⁶
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1440 base pairs)	≥ 99% sequence identity to <i>P. aeruginosa</i> , strain MRSN 7014 (GenBank: RXTH01000036.1)	99.9% sequence identity to <i>P. aeruginosa</i> , strain MRSN 7014 (GenBank: RXTH01000036.1)
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 morphology	colony morphology

E-mail: <u>contact@beiresources.org</u> Tel: 800-359-7370 Fax: 703-365-2898 di**c**ii resources

Certificate of Analysis for NR-51554

SUPPORTING INFECTIOUS DISEASE RESEARCH

TEST	SPECIFICATIONS	RESULTS
Viability	Growth	Growth

¹Minimum Inhibitory Concentration (MIC); MIC 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-S28 (2018) 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.

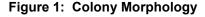
²Antibiotic susceptibility was tested using a combination of bioMérieux VITEK[®] 2 GN81 and ETEST[®].

³P. aeruginosa, strain MRSN 7014 was deposited as intermediately resistant to ciprofloxacin but showed a MIC of 1 µg/mL (interpreted as sensitive) for lot 70024984 during QC testing.

⁴*P. aeruginosa*, strain MRSN 7014 was deposited as resistant to levofloxacin but showed a MIC of 4 μg/mL (interpreted as intermediately resistant) for lot 70024984 during QC testing.

⁵P. aeruginosa, strain MRSN 7014 was deposited as resistant to meropenem, but showed a MIC of 4 μg/mL (interpreted as intermediately resistant) for lot 70024984 during QC testing.

⁶Trimethoprim/sulfamethoxazole MIC interpretive standards are not available for *P. aeruginosa*, however most clinical isolates are resistant to trimethoprim/sulfamethoxazole. For more information, please refer to Köhler, T., et al. "Multidrug Efflux in Intrinsic Resistance to Trimethoprim and Sulfamethoxazole in *Pseudomonas aeruginosa*." <u>Antimicrob. Agents Chemother.</u> 40 (1996): 2288-2290. PubMed: 9036831.





/Sonia Bjorum Brower/

<u>Sonia Bjorum Brower</u>

Technical Manager 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.



19 FEB 2024