SUPPORTING INFECTIOUS DISEASE RESEARCH

## Pseudomonas aeruginosa, Strain PA14

#### Catalog No. NR-50573

**Product Description:** *Pseudomonas aeruginosa (P. aeruginosa)*, strain PA14 was isolated in the early 1970s from the blood of a burn patient at Mercy Hospital in Pittsburgh, Pennsylvania, USA. *P. aeruginosa*, strain PA14 was deposited as resistant to rifampicin and susceptible to meropenem, ofloxacin, ceftazidime, amikacin and tobramycin.

#### Lot<sup>1</sup>: 70002165

### Manufacturing Date: 02FEB2017

Phenotypic Analysis Cellular morphology²         Gram-negative rods Report results         Gram-negative rods Circular, slight peaked, undula smooth and green (Figure 1 Motilie           Motility (wet mount) VITEK® MS (MALDI-TOF)         Report results         Motilie           Antibiotic Susceptibility Profile <sup>3</sup> VITEK® (AST-GN81 Card)         Motilie           Ampicillin Amoxicillin/Clavulanic Acid         Report results         Resistant (≥ 32 µg/mL)           Piperacillin/Tazobactam         Report results         Resistant (≥ 42 µg/mL)           Cefazolin         Report results         Resistant (≥ 44 µg/mL)           Cefazitime         Sensitive         Sensitive (≤ 14 µg/mL)           Cefetraidime         Sensitive         Sensitive (≤ 12 µg/mL)           Cefetraidime         Sensitive         Sensitive (≤ 12 µg/mL)           Cefetraidime         Sensitive         Sensitive (≤ 12 µg/mL)           Gentamicin         Report results         Sensitive (≤ 12 µg/mL)           Gentamicin         Sensitive         Sensitive (≤ 1 µg/mL)           Tobramycin         Sensitive         Sensitive (≤ 0.25 µg/mL)           Gentamicin <sup>6</sup> Report results         Sensitive (< 0.25 µg/mL)           Timethoprim/sulfamethoxazole         Report results         Sensitive (< 0.25 µg/mL)           Report results         Sensitive (< 0.	
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(GenBank: CP000438) (GenBank: CP000438)	
Digital DNA-DNA hybridization (dDDH)10 $\geq$ 70% for species identificationP. aeruginosa (87.2%)11	
Purity (post-freeze) <sup>12</sup> Growth consistent with expected Growth consistent with expected	ed
colony morphology colony morphology	
Viability (post-freeze) <sup>2</sup> Growth	

<sup>1</sup>NR-50573 was produced by inoculation of the deposited material into Nutrient broth and grown for 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Nutrient agar kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot.

<sup>2</sup>1 day at 37°C in an aerobic atmosphere on Nutrient agar

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# Certificate of Analysis for NR-50573

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<sup>3</sup>Minimum Inhibitory Concentration (MIC); MIC interpretation was determined using VITEK<sup>®</sup> 2 software version 07.01 combined with the bioMérieux Advanced Expert System<sup>™</sup> (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.

<sup>4</sup>1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

<sup>5</sup>Minimum Inhibitory Concentration (MIC); MIC interpretation guidelines CLSI M100-S22 (2012)

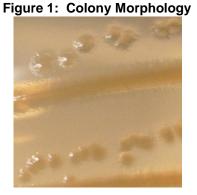
<sup>6</sup>Rifampicin MIC interpretive standards are not available for *P. aeruginosa*. Strain PA14 was reported by the depositor to be resistant to rifampicin. <sup>7</sup>Streptomycin MIC interpretive standards are not available for *P. aeruginosa*.

<sup>8</sup>Trimethoprim/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.
<sup>9</sup>MIC result is based on the trimethoprim component of the test strip.

<sup>10</sup>Relatedness between bacterial strains has traditionally been determined using DDH. For additional information, please refer to Auch, A.F., et al. "Digital DNA-DNA Hybridization for Microbial Species Delineation by Means of Genome-to-Genome Sequence Comparison." <u>Stand Genomic Sci.</u> 2 (2010): 117-134, PubMed: 21304684.

<sup>11</sup>The whole genome of *P. aeruginosa*, strain PA14 (Contig Total Length ~ 5.9 megabase pairs) was sequenced using the Illumina<sup>®</sup> MiSeq<sup>®</sup> system and was assembled and analyzed with CLC Genomics Workbench Version 7.0.2.

<sup>12</sup>Purity of this lot was assessed for 7 days on Nutrient agar at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub>



Date: 29 SEP 2017

Signature:

**BEI Resources Authentication** 

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