

**Enterobacter aerogenes, Strain UCI 15**

**Catalog No. NR-48555**

**Product Description:** *Enterobacter aerogenes* (*E. aerogenes*), strain UCI 15 was isolated from aspirate taken from a patient in intensive care in Irvine, California, in 2013. *E. aerogenes*, strain UCI 15 was deposited as a carbapenem resistant strain and is part of a Carbapenem Resistant Enterobacteriaceae (CRE) Sequencing Project at the Broad Institute. Strain UCI 15 was also deposited as resistant to ampicillin, ampicillin/sulbactam, meropenem and cefoxitin and sensitive to amikacin.

**Lot<sup>1</sup>: 63445872**

**Manufacturing Date: 17APR2015**

TEST	SPECIFICATIONS	RESULTS
<b>Phenotypic Analysis</b> Cellular morphology Colony morphology <sup>2</sup>  Motility (wet mount) VITEK <sup>®</sup> MS (MALDI-TOF)	Gram-negative rods Report results  Report results Consistent with <i>E. aerogenes</i>	Gram-negative rods Circular, low convex, entire, smooth, mucoid and gray (Figure 1) Motile Consistent with <i>E. aerogenes</i>
<b>Antibiotic Susceptibility Profile</b> VITEK <sup>®</sup> (AST-GN69 Card) <sup>3,4</sup> Amoxicillin/Clavulanic Acid Piperacillin/Tazobactam Cefazolin Ceftazidime Ceftriaxone Cefepime Ertapenem Imipenem Gentamicin Tobramycin Ciprofloxacin Levofloxacin Nitrofurantoin Trimethoprim/Sulfamethoxazole	Report results Report results Resistant Resistant Resistant Resistant Intermediate Resistant Resistant Report results Sensitive Sensitive Resistant Resistant	Resistant (≥ 32 µg/mL) Resistant (≥ 128 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Resistant (≥ 64 µg/mL) Sensitive (8 µg/mL) <sup>5</sup> Resistant (≥ 8 µg/mL) <sup>6</sup> Intermediate (2 µg/mL) <sup>7</sup> Resistant (≥ 16 µg/mL) Intermediate (8 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 0.12 µg/mL) Resistant (256 µg/mL) Resistant (≥ 320 µg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	Consistent with <i>E. aerogenes</i>	Consistent with <i>E. aerogenes</i> <sup>8</sup>
<b>Purity (post-freeze)<sup>9</sup></b>	Growth consistent with <i>E. aerogenes</i>	Growth consistent with <i>E. aerogenes</i>
<b>Viability (post-freeze)<sup>2</sup></b>	Growth	Growth

<sup>1</sup>NR-48555 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 with 5% defibrinated sheep blood kolles, which were grown for 1 day at 37°C in an aerobic atmosphere to produce this lot.

<sup>2</sup>1 day on Tryptic soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere

<sup>3</sup>Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

<sup>4</sup>No results were obtained for ampicillin, ampicillin/sulbactam and Extended-Spectrum Beta-Lactamases (ESBLs) from the VITEK<sup>®</sup> (AST-GN69 Card) analysis. Alternative methods of testing are recommended by the manufacturer.

<sup>5</sup>*E. aerogenes*, strain UCI 15 was deposited as having intermediate susceptibility to cefepime. Antibiotic susceptibility testing, performed in duplicate, determined that the MIC for cefepime was 8 µg/mL, which is considered sensitive. Since this isolate is not a confirmed ESBL-producer, the CLSI recommends utilization of the interpretation without subjugation to modifications based on the susceptibilities of other antibiotics in the same class. However, while this strain appears sensitive *in vitro*, there is a possibility that it is intermediately susceptible or resistant *in vivo*.

<sup>6</sup>*E. aerogenes*, strain UCI 15 was deposited as having intermediate susceptibility to ertapenem with a MIC of ≥ 1 µg/mL. Antibiotic susceptibility testing, performed in duplicate, determined the ertapenem MIC was ≥ 8 µg/mL, which is considered resistant.

<sup>7</sup>*E. aerogenes*, strain UCI 15 was deposited as resistant to imipenem with a MIC of ≥ 16 µg/mL. Antibiotic susceptibility testing, performed in duplicate, determined the imipenem MIC was 2 µg/mL, which is considered an intermediate susceptibility.

<sup>8</sup>≥ 99.7% sequence identity to *E. aerogenes*, strain UCI 15 (GenBank: JCKZ01000009.1)

<sup>9</sup>Purity of this lot was assessed for 8 days on Tryptic soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.

Figure 1: Colony Morphology



Date: 22 OCT 2015

Signature: 

BEI Resources Authentication

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