

***Klebsiella pneumoniae*, Strain CHS 61**
**Catalog No. NR-48563**

**Product Description:** *Klebsiella pneumoniae* (*K. pneumoniae*), strain CHS 61 was isolated in 2013 from the urine of a non-ICU adult human patient in North Carolina, USA. *K. pneumoniae*, strain CHS 61 was deposited as a carbapenem resistant strain and is part of a Carbapenem Resistant Enterobacteriaceae (CRE) Sequencing Project at the Broad Institute. Strain CHS 61 was also deposited as resistant to meropenem and ceftazidime and susceptible to tigecycline and amikacin.

**Lot<sup>1</sup>: 63445879**
**Manufacturing Date: 15APR2015**

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>K. pneumoniae</i>	Gram-negative rods Circular, low convex, entire, smooth and gray (Figure 1) Non-motile Consistent with <i>K. pneumoniae</i>
<b>Antibiotic Susceptibility Profile</b> VITEK <sup>®</sup> (AST-GN69) <sup>3</sup> ESBL <sup>4,5</sup> Ampicillin Amoxicillin/Clavulanic Acid Ampicillin/Sulbactam Piperacillin/Tazobactam Cefazolin Ceftazidime Ceftriaxone Cefepime Ertapenem Imipenem Gentamicin Tobramycin Ciprofloxacin Levofloxacin Nitrofurantoin Trimethoprim/Sulfamethoxazole	Report results Resistant Report results Resistant Report results Resistant Resistant Resistant Report results Resistant Resistant Report results Resistant Report results Resistant Resistant Resistant Resistant Resistant	Negative Resistant (≥ 32 µg/mL) Resistant (≥ 32 µg/mL) 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>6</sup> Resistant (≥ 8 µg/mL) Resistant (= 8 µg/mL) Intermediate (= 8 µg/mL) <sup>7</sup> Resistant (≥ 16 µg/mL) Resistant (≥ 4 µg/mL) Resistant (≥ 8 µg/mL) Resistant (≥ 512 µg/mL) Resistant (≥ 320 µg/mL)
<b>Genotypic Analysis</b> Sequencing of 16S ribosomal RNA gene (~ 1490 base pairs)	Consistent with <i>K. pneumoniae</i>	Consistent with <i>K. pneumoniae</i> <sup>8,9</sup>
<b>Purity (post-freeze)<sup>10</sup></b>	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
<b>Viability (post-freeze)<sup>2</sup></b>	Growth	Growth

<sup>1</sup>NR-48563 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 under at 37°C in an aerobic atmosphere to produce this lot.

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

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

<sup>4</sup>The VITEK<sup>®</sup>2 ESBL Test is a confirmatory test for Extended-Spectrum Beta-Lactamases (ESBLs) inhibited by clavulanic acid and utilizes cefepime, cefotaxime and ceftazidime, with and without clavulanic acid, to determine a positive or negative result.

<sup>5</sup>A negative ESBL test does not rule out the presence of an ESBL as there are many types of ESBL that may not be covered with this card. Furthermore, the ESBL phenotype may be masked by an AmpC β-lactamase. For more information, refer to Gniadkowski, M. "Evolution and Epidemiology of Extended-Spectrum β-Lactamases (ESBLs) and ESBL-Producing Microorganisms." *Clin. Microbiol. Infect.* 7 (2001): 597-608.

PubMed: 11737084.

<sup>6</sup>*K. pneumoniae*, strain CHS 61 was deposited as resistant to cefepime. Antibiotic susceptibility testing performed in duplicate determined cefepime MIC for *K. pneumoniae*, strain CHS 61 as 8 µg/mL, which is considered sensitive. Because this isolate is not a confirmed ESBL-producer, CLSI recommendations are not to modify the interpretation 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 resistant *in vivo*.

<sup>7</sup>*K. pneumoniae*, strain CHS 61 was deposited as susceptible to gentamicin. Antibiotic susceptibility testing performed in duplicate determined gentamicin MIC for *K. pneumoniae*, strain CHS 61 as 8 µg/mL, which is considered an intermediate susceptibility to gentamicin.

<sup>8</sup>Also consistent with other *Klebsiella* species

<sup>9</sup>≥ 99% identical to *K. pneumoniae*, strain CHS 61 (GenBank: JMYG01000004.1)

<sup>10</sup>Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 19 NOV 2015

Signature:

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