

***Klebsiella pneumoniae*, Strain CHS 66**

Catalog No. NR-48568

Product Description: *Klebsiella pneumoniae* (*K. pneumoniae*), strain CHS 66 was isolated in 2013 from the urine of a non-ICU adult human patient in North Carolina, USA. *K. pneumoniae*, strain CHS 66 was deposited as a carbapenem resistant strain and is part of a Carbapenem Resistant Enterobacteriaceae (CRE) Sequencing Project at the Broad Institute. Strain CHS 66 was also deposited as resistant to meropenem and ceftazidime and intermediately susceptible to tigecycline and amikacin.

Lot¹: 63885488

Manufacturing Date: 18NOV2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount) VITEK [®] MS (MALDI-TOF) VITEK [®] 2 Compact (GN card)	Gram-negative rods Report results Report results <i>K. pneumoniae</i> ≥ 90% probability of being <i>K. pneumoniae</i>	Gram-negative rods Circular, low convex, entire, smooth, mucoid, opaque and cream (Figure 1) Non-motile <i>K. pneumoniae</i> (99.9%) <i>K. pneumoniae</i> (99% probability) ³
Antibiotic Susceptibility Profile VITEK [®] (AST-GN69) ⁴ ESBL ^{5,6} 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 Resistant Resistant Report results Resistant Report results Intermediate Report results Resistant Resistant Resistant Resistant	Positive 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) Resistant (≥ 64 µg/mL) Intermediate (= 1 µg/mL) ⁷ Sensitive (≤ 0.25 µg/mL) ⁸ Intermediate (= 8 µg/mL) Resistant (≥ 16 µg/mL) Resistant (≥ 4 µg/mL) Resistant (≥ 8 µg/mL) Resistant (= 256 µg/mL) Resistant (≥ 320 µg/mL)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to <i>K. pneumoniae</i> type strain	99.6% sequence identity to Y17656 ^{9,10}
Purity (post-freeze)¹¹	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)²	Growth	Growth

¹NR-48568 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.

²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

³Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99% being a perfect match between the test reaction pattern and the unique biochemical pattern of the given organism or organism group. For additional information, please refer to O'Hara, C.M. and J. M. Miller. "Evaluation of the Vitek 2 ID-GNB Assay for Identification of Members of the

Family *Enterobacteriaceae* and Other Nonenteric Gram-Negative Bacilli and Comparison with the Vitek GNI+ Card." J. Clin. Microbiol. 41 (2003): 2096-2101. PubMed: 12734254.

⁴Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁵The VITEK[®]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.

⁶A 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.

⁷*K. pneumoniae*, strain CHS 66 was deposited as resistant to ertapenem. Antibiotic susceptibility testing performed in duplicate determined that strain CHS66 is intermediately susceptible to ertapenem.

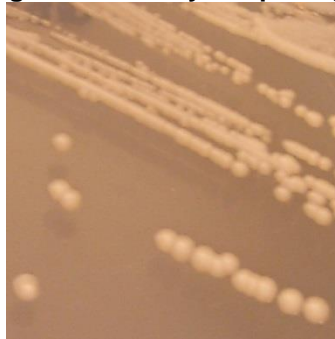
⁸*K. pneumoniae*, strain CHS 66 was deposited as resistant to imipenem. Antibiotic susceptibility testing performed in duplicate determined that strain CHS66 is susceptible to imipenem.

⁹Also consistent with other *Klebsiella* species

¹⁰99.9% identical to *K. pneumoniae*, strain CHS 66 (GenBank: JMYL0100022.1)

¹¹Purity of this lot was assessed for 8 days at 37°C in an aerobic atmosphere on Tryptic Soy agar.

Figure 1: Colony Morphology



Date: 24 FEB 2016

Signature:

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