b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-15411

Klebsiella pneumoniae, Isolate 2

Catalog No. NR-15411

Product Description: *Klebsiella pneumoniae (K. pneumoniae)*, isolate 2 contains the β-lactamase *K. pneumoniae* carbapenemase (bla_{KPC}) gene.

Lot[1]: 58855072 **Manufacturing Date: 22JAN2010**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Report results	Gram-negative rod
Colony morphology[2]	Report results	Convex, entire, and opaque (Figure 1)
Analytical profile index (API® 20 E)	Consistent with *K. pneumoniae*	Consistent with *K. pneumoniae*
Antibiotic resistance[3]		
Penicillin family[4]	Report results	Resistant
Penicillin family/β-lactamase inhibitor combinations[5]	Report results	Resistant
Cephalosporin family[6]	Report results	Resistant
Aminoglycoside family[7]	Report results	Resistant
Carbapenem family[8]	Report results	Resistant
Fluoroquinolone family[9]	Report results	Resistant
Tetracycline	Report results	Sensitive
Tigecycline	Report results	Sensitive
Trimethoprim/sulfamethoxazole combination	Report results	Resistant
Nitrofurantoin	Report results	Resistant
Monobactam (aztreonam)	Report results	Resistant
Extended spectrum β-lactamase	Report results	Negative
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 680 bp)	Consistent with *K. pneumoniae*	Consistent with *K. pneumoniae*
RiboPrinter Microbial Characterization System	Consistent with *K. pneumoniae*	Consistent with *K. pneumoniae*
PCR Assay of Extracted DNA		
Presence of β-lactamase (bla_{KPC}) gene[10]	~ 1000 bp amplicon	~ 1000 bp amplicon
Viability (post-freeze)[2]	Growth	Growth

[1]NR-15411 was produced by inoculation of the deposited material into Tryptic Soy Broth and incubated for 24 hours at 37°C in an aerobic atmosphere. Broth was added to Kolles and incubated for 24 hours at 37°C in an aerobic atmosphere to produce this lot.
[2]24 hours at 37°C and aerobic atmosphere on Tryptic Soy Agar
[3]Vitek 2 Cards AST-EXN7 and AST-GN24
[4]Penicillin family members tested include: Ampicillin, Ticarcillin, and Piperacillin.
[5]Penicillin family/β-lactamase inhibitor combinations tested include: Ampicillin/Sulbactam, Amoxicillin/Clavulanic Acid, Ticarcillin/Clavulanic Acid, and Piperacillin/Tazobactam.
[6]Cephalosporin family members tested include: Cefotaxime, Ceftizoxime, Cefazolin, Cefuroxime, Cefuroxime Axetil, efotetan, Ceftazidime, Ceftriaxone, Cefepime, Cefalotin, Cefoxitin, and Cefpodoxime.
[7]Aminoglycoside family members tested include: Tobramycin, Amikacin, and Gentamicin.
[8]Carbapenem family members tested include: Imipenem, Meropenem, and Ertapenem.
[9]Fluoroquinolone family members tested include: Moxifloxacin, Naladixic Acid, Ciprofloxacin, Levofloxacin, and Norfloxacin.
[10]Yigit, H., et al. "Novel Carbapenem-Hydrolyzing β-Lactamase, KPC-1, from a Carbapenem-Resistant Strain of *Klebsiella pneumoniae*." Antimicrob. Agents Chemother. 45 (2001): 1151-1161. PubMed: 11257029.

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Certificate of Analysis for NR-15411

Figure 1

Date: 09 MAY 2012 **Signature:**

Title: Technical Manager, BEI Authentication or designee

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.

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