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SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-50397

Enterobacter cloacae complex, Strain BEI07

Catalog No. NR-50397

Product Description: *Enterobacter cloacae* complex (*E. cloacae* complex), strain BEI07 is from an unknown origin.

Lot[1]: 64391835 **Manufacturing Date: 24FEB2016**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphologies[2,3]	Report results	Colony type 1: Circular, low convex, entire, smooth, and gray (Figure 1) Colony type 2: Circular, low convex, entire, smooth, and white (Figure 1)
Motility (wet mount)	Report results	Motile
Beta-lactamase[4,5]	Report results	Positive
VITEK® 2 Compact (GN card)	≥ 90% probability of being *E. cloacae* complex	*E. cloacae* complex (96% probability)[6]
Antibiotic Susceptibility Profile[5]		
VITEK® (AST-GN84 Card)[7,8]		
Amoxicillin/Clavulanic Acid	Report results	Resistant (≥ 32 µg/mL)
Piperacillin/Tazobactam	Report results	Resistant (≥ 128 µg/mL)
Cefazolin	Report results	Resistant (≥ 64 µg/mL)
Ceftriaxone	Report results	Resistant (≥ 64 µg/mL)
Cefepime	Report results	Intermediate (= 16 µg/mL)
Aztreonam	Report results	Resistant (≥ 64 µg/mL)
Ertapenem	Report results	Resistant (≥ 8 µg/mL)
Imipenem	Report results	Resistant (= 8 µg/mL)
Meropenem	Report results	Resistant (≥ 16 µg/mL)
Gentamicin	Report results	Resistant (≥ 16 µg/mL)
Ciprofloxacin	Report results	Resistant (≥ 4 µg/mL)
Levofloxacin	Report results	Resistant (≥ 8 µg/mL)
Tetracycline	Report results	Intermediate (= 8 µg /mL)
Nitrofurantoin	Report results	Intermediate (= 64 µg /mL)
Trimethoprim/Sulfamethoxazole	Report Results	Sensitive (≤ 20 µg/mL)
Etest® antibiotic test strips[9]		
Ampicillin[10]	Report results	Resistant (≥ 256 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1420 base pairs)	≥ 99% sequence identity to *E. cloacae* complex type strain (Genbank: NR_118568.1)	≥ 99% sequence identity to *E. cloacae* complex type strain (Genbank: NR_118568.1)[11]
Purity (post-freeze)[12]	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]NR-50397 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.

[2]1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

[3]Two colony types were observed. Plating of the individual colony types showed that they did not revert to the mixed colony type. The 16S ribosomal RNA gene of each colony type was sequenced and found to have a ≥ 99% sequence identity to the other colony type and to the *E. cloacae* complex type strain (Genbank: NR_118568.1). VITEK® 2 Compact (GN card) analysis identified cells from both colony types as *E. cloacae* complex.

[4]The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

[5]Testing was performed using a mixed colony suspension.

[6]Percent 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

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

[7]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

[8]No results were obtained for ampicillin, ampicillin/sulbactam and Extended-Spectrum Beta-Lactamases (ESBLs) from the VITEK® (AST-GN84 Card) analysis. Alternative methods of testing are recommended by the manufacturer.

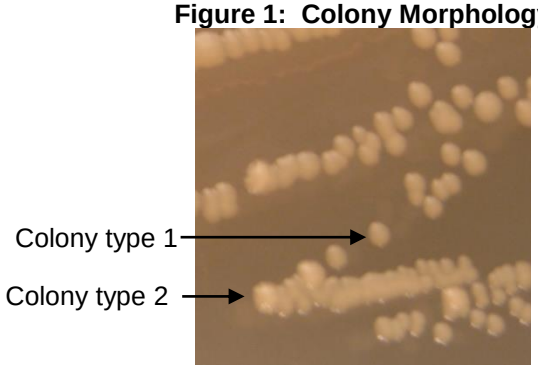
[9]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

[10]For ampicillin (bioMérieux Etest® 412252) a MIC ≤ 8 µg/mL is sensitive, a MIC = 16 µg/mL is intermediate and a MIC ≥ 32 µg/mL is resistant.

[11]Also consistent with other *Enterobacter* species

[12]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: 01 SEP 2016 **Signature:**

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