## Certificate of Analysis for NR-50391

## Enterobacter cloacae complex, Strain BEI01

## Catalog No. NR-50391

This reagent is the tangible property of the U.S. Government.

## Product Description:

Enterobacter cloacae complex (E. cloacae complex), strain BEI01 is from an unknown origin. NR-50391 was produced by inoculation of BEI Resources seed lot 64391822 into Tryptic Soy broth and grown for 1 day at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown for 1 day at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere to produce this lot.

Lot: 70049055
Manufacturing Date: 22DEC2021

| TEST | SPECIFICATIONS | RESULTS |
| :---: | :---: | :---: |
| Phenotypic Analysis <br> Cellular morphology <br> 1 day at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere on <br> Tryptic Soy agar <br> Colony morphology <br> 1 day at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere on <br> Tryptic Soy agar <br> Motility (wet mount) <br> Beta-lactamase ${ }^{1}$ <br> Biochemical tests <br> VITEK ${ }^{\circledR} 2$ (GN card) | Gram-negative rods <br> Report results <br> Motile <br> Positive <br> E. cloacae complex ( $\geq 89 \%$ ) | Gram-negative rods <br> Circular, convex, entire, smooth, and cream (Figure 1) <br> Motile <br> Positive <br> E. cloacae complex (94\%) |
| Antibiotic Susceptibility Profile ${ }^{2}$ <br> VITEK ${ }^{\circledR}$ (AST-GN84 Card) ${ }^{3}$ <br> Amoxicillin/Clavulanic Acid <br> Aztreonam <br> Cefazolin <br> Cefepime <br> Ceftriaxone <br> Ciprofloxacin <br> Ertapenem <br> Gentamicin <br> Imipenem <br> Levofloxacin <br> Meropenem <br> Nitrofurantoin <br> Piperacillin/Tazobactam <br> Trimethoprim/Sulfamethoxazole <br> Etest ${ }^{\circledR}$ antibiotic test strips <br> 1 day at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere on Mueller Hinton agar <br> Ampicillin <br> Gentamicin <br> Tetracycline | Resistant <br> Resistant <br> Resistant <br> Sensitive <br> Resistant <br> Resistant <br> Resistant <br> Resistant <br> Resistant <br> Resistant <br> Resistant <br> Intermediate <br> Resistant <br> Sensitive <br> Resistant <br> Resistant <br> Sensitive | Resistant ( $\geq 32 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 64 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 64 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Intermediate $(4 \mu \mathrm{~g} / \mathrm{mL})^{4}$ <br> Resistant ( $\geq 64 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 4 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 8 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( 8 to $12 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 8 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 8 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 16 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Intermediate ( $64 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 128 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Sensitive ( $40 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant ( $\geq 256 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Resistant (8 to $12 \mu \mathrm{~g} / \mathrm{mL}$ ) <br> Sensitive ( $4 \mu \mathrm{~g} / \mathrm{mL}$ ) |
| Genotypic Analysis <br> Sequencing of 16S ribosomal RNA gene ( 1370 base pairs) | $\geq 99 \%$ sequence identity to <br> E. cloacae complex type strain (Genbank: NR_118568.1) | 99.8\% sequence identity to <br> E. cloacae complex type strain (Genbank: NR_118568.1) ${ }^{5}$ |

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SUPPORTING INFECTIOUS DISEASE RESEARCH

| TEST | SPECIFICATIONS | RESULTS |
| :--- | :--- | :--- |
| Purity (post-freeze) <br> 7 days at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere with and <br> without $5 \% \mathrm{CO}_{2}$ on Tryptic Soy agar | Growth consistent with expected <br> colony morphology | Growth consistent with expected <br> colony morphology |
| Viability (post-freeze) <br> 1 day at $37^{\circ} \mathrm{C}$ in an aerobic atmosphere on Tryptic <br> Soy agar | Growth | Growth | | ${ }^{1}$ The production of beta-lactamase was detected using a Cefinase ${ }^{2}$ Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S28 (23185). |
| :--- |
| ${ }^{3}$ No results were obtained for Extended-Spectrum Beta-Lactamases (ESBLs) and ampicillin from the VITEK ${ }^{\text {( }}$ (AST-GN84 Card) analysis. Alternative |
| methods of testing are recommended by the manufacturer. |
| ${ }^{4}$ The susceptibility result for this antibiotic is within one doubling dilution of specification, which is considered an equivalent result. |
| ${ }^{5}$ Also consistent with other Enterobacter species |

Figure 1: Colony Morphology


## /Sonia Bjorum Brower/

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Program Manager or designee, ATCC Federal Solutions
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