

## Enterobacter cloacae complex, Strain BEI02

### Catalog No. NR-50392

**For research use only. Not for use in humans.**

#### Contributor and Manufacturer:

BEI Resources

#### Product Description:

**Bacteria Classification:** Enterobacteriaceae, Enterobacter

**Species:** Enterobacter cloacae complex

**Strain:** BEI02

**Original Source:** Enterobacter cloacae complex (E. cloacae complex), strain BEI02 is from an unknown origin.

Species of the *E. cloacae* complex are Gram-negative, rod-shaped, facultatively-anaerobic opportunistic bacteria that are a commensal inhabitants of the human gastrointestinal tract.<sup>1,2</sup> The *E. cloacae* complex nomenclature is mainly based on whole genome DNA-DNA hybridizations and phenotypic characterization.<sup>3,4</sup> The *E. cloacae* complex includes six species (*E. asburiae*, *E. cloacae*, *E. hormaechei*, *E. kobei*, *E. ludwigii* and *E. nimipressuralis*) and currently, only *Enterobacter* isolates that belong to the *E. cloacae* complex are considered of clinical significance and are increasingly isolated as nosocomial pathogens.<sup>1,3,5</sup> Carbapenem resistance is attributed to a natural expression of a chromosomal AmpC  $\beta$ -lactamase type cephalosporinase in addition to horizontal gene transfer of carbapenemase-encoding genes between *Enterobacteriaceae* isolates.<sup>6,7</sup>

#### Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

**Note:** If homogeneity is required for your intended use, please purify prior to initiating work.

#### Packaging/Storage:

NR-50392 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

#### Growth Conditions:

##### Media:

Tryptic Soy broth or Nutrient broth or equivalent

Tryptic Soy agar or Nutrient agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

##### Incubation:

Temperature: 37°C

Atmosphere: Aerobic

##### Propagation:

1. Keep vial frozen until ready for use, then thaw.

2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 1 day.

#### Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Enterobacter cloacae* complex, Strain BEI02, NR-50392."

#### Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. [Biosafety in Microbiological and Biomedical Laboratories \(BMBL\)](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

#### Disclaimers:

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## References:

1. Paauw, A., et al. "Genomic Diversity within the *Enterobacter cloacae* Complex." Plos One 21 (2008): e3018. PubMed: 18716657.
2. Sanders, W. E. and C. C. Sanders. "*Enterobacter* spp.: Pathogens Poised to Flourish at the Turn of the Century." Clin. Microbiol. Rev. 10 (1997): 220-241. PubMed: 9105752
3. Mezzatesta, M. L., F. Gona, and S. Stefani. "*Enterobacter cloacae* Complex: Clinical Impact and Emerging Antibiotic Resistance." Future Microbiol. 7 (2012): 887-902. PubMed: 22827309.
4. Hoffmann, H., and A. Roggenkamp. "Population Genetics of the Nomenclature Species *Enterobacter cloacae*." Appl. Environ. Microbiol. 69 (2003): 5306-5318. PubMed: 12957918.
5. Pollett, S., et al. "Phenotypic and Molecular Characteristics of Carbapenem-Resistant *Enterobacteriaceae* in a Health Care System in Los Angeles, California, from 2011 to 2013." J. Clin. Microbiol. 52 (2014): 4003-4009. PubMed: 25210072.
6. Pecora, N. D., et al. "Genomically Informed Surveillance for Carbapenem-Resistant *Enterobacteriaceae* in a Health Care System." mBio 6 (2015): e01030. PubMed: 26220969.
7. Nordmann, P., L. Dortet, and L. Poirel. "Carbapenem Resistance in *Enterobacteriaceae*: Here is the Storm!" Trends Mol. Med. 18 (2012): 263-272. PubMed: 22480775.

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