

Enterobacter cloacae complex, Strain BEI01

Catalog No. NR-50391

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Contributor and Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: Enterobacteriaceae, Enterobacter

Species: Enterobacter cloacae complex

Strain: BEI01

Original Source: Enterobacter cloacae complex (E. cloacae complex), strain BEI01 is from an unknown origin.

Species of the E. cloacae complex are Gram-negative, rod-shaped, facultatively-anaerobic opportunistic bacteria that are a commensal inhabitant of the human gastrointestinal tract.^{1,2} The E. cloacae complex nomenclature is mainly based on whole genome DNA-DNA hybridizations and phenotypic characterization.^{3,4} 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.^{1,3,5} Carbapenem resistance is attributed to a natural expression of a chromosomal AmpC β -lactamase type cephalosporinase in addition to horizontal gene transfer of carbapenemase-encoding genes between Enterobacteriaceae isolates.^{6,7}

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-50391 was packaged aseptically, in screw-capped plastic 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 BEI01, NR-50391."

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](#), 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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References:

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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 Nomenclotype *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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