

***Enterobacter cloacae* complex, Strain BEI13**

Catalog No. NR-50403

For research use only. Not for human use.

Contributor and Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterobacteriaceae*, *Enterobacter*

Species: *Enterobacter cloacae* complex

Strain: BEI13

Original Source *Enterobacter cloacae* complex (*E. cloacae* complex), strain BEI13 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-50403 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 BEI13, NR-50403."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale. This material may be subject to third party patent rights.

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.

ATCC® is a trademark of the American Type Culture Collection.

