

***Escherichia coli*, Strain CDC (ATCC® 12807™)**

**Catalog No. NR-99**

(Derived from ATCC® 12807™)

**For research only. Not for human use.**

**Contributor:**

ATCC®

**Product Description:**

**Bacteria Classification:** *Enterobacteriaceae, Escherichia*

**Species:** *Escherichia coli*

**Serotype:** O126:K71(B16):H

**Comment:** The atypical<sup>1</sup> enteropathogenic *E. coli* (EPEC) strain CDC was deposited at ATCC® by the National Communicable Disease Center, Atlanta, Georgia.

*Escherichia coli* is a Gram-negative rod-shaped bacterium which occurs singly or in pairs. It is a major facultative inhabitant of the large intestine.

EPEC strains cause diarrheal outbreaks and chronic diarrhea, especially in infants. EPEC pathogenesis requires the expression of genes present both on the chromosome and on an adherence factor plasmid, pEAF.<sup>2,3</sup> The complete sequence of the pEAF plasmid (also referred to as pB171) from EPEC strain B171 has been determined (68,817 bp; GenBank: AB024946).<sup>3</sup>

The presence of pEAF in NR-99 has been confirmed by PCR amplification of the marker sequence EAF from extracted nucleic acid. In addition, NR-99 carries the chromosomal marker sequence *bfpA*.

**Material Provided:**

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

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

**Packaging/Storage:**

NR-99 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 equivalent

Tryptic Soy Agar 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 Tryptic Soy Broth.
3. Use several drops of the suspension to inoculate a Tryptic Soy Agar slant and/or plate.
4. Incubate the tubes and plate at 37°C for 24 hours.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Escherichia coli*, NR-99."

**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, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm).

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**References:**

1. Alikhani, M. Y., A. Mirsalehian and M. M. Aslani. "Detection of Typical and Atypical Enteropathogenic *Escherichia coli* (EPEC) in Iranian Children With and Without Diarrhoea." *J. Med. Microbiol.* 55 (2006): 1159-1163. PubMed: 16914644.
2. Momenteau, H. "Study on Enteropathogenic *E. coli* of the O126:K71 (B16) Serotype." *Ann. Inst. Pasteur (Paris)* 113 (1967): 128-131. PubMed: 4864790.
3. Tobe, T., et al. "Complete DNA Sequence and Structural Analysis of the Enteropathogenic *Escherichia coli* Adherence Factor Plasmid." *Infect. Immun.* 67 (1999): 5455-5462. PubMed. 10496929. GenBank: AB024946.

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