

***Escherichia coli*, Strain E2539C1**

Catalog No. NR-5

(Derived from ATCC® 43886™)

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterobacteriaceae*, *Escherichia*

Species: *Escherichia coli*

Strain: E2539C1

Serotype: O25:K98:NM

Original Source:^{1,2} Isolated from human feces from a shipboard outbreak of diarrheal illness in 1976

Comment: *Escherichia coli*, strain E2539C1 was deposited at ATCC® in 1988 by Dr. Nancy A. Strockbine, The Enteric Bacteriology Section, Centers for Disease Control, Atlanta, Georgia.

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

E. coli, strain E2539C1 is known to produce heat-labile toxin (LT) which is found in most enterotoxigenic *E. coli* (ETEC) strains. The E2539C1 strain is resistant to tetracycline and sulfadiazole.¹⁻³

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 colony-purify prior to initiating work.

Packaging/Storage:

NR-5 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 slant and/or plate at 37°C for 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Escherichia coli*, Strain E2539C1, NR-5."

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.

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References:

1. Wachsmuth, K., J. Wells, P. Shipley, and R. Ryder. "Heat-Labile Enterotoxin Production in Isolates from a Shipboard Outbreak of Human Diarrheal Illness." Infect. Immun. 24 (1979): 793–797. PubMed: 381200.
2. Wachsmuth, K., et al. "Genetic Transfer of Antimicrobial Resistance and Enterotoxigenicity Among *Escherichia coli* Strains." Antimicrob. Agents Chemother. 23 (1983): 278–283. PubMed: 6340604.
3. Lang, A. L., et al. "Multiplex PCR for Detection of the Heat-Labile Toxin Gene and Shiga-Like Toxin I and II Genes in *Escherichia coli* Isolated from Natural Waters." Appl. Environ. Microbiol. 60 (1994): 3145–3149. PubMed: 7944359.
4. Lumish, R. M., et al. "Heat-Labile Enterotoxigenic *Escherichia coli* Induced Diarrhea Aboard a Miami-Based Cruise Ship." Am. J. Epidemiol. 111 (1980): 432–436. PubMed: 6990749.
5. Feng, P., P. I. Fields, B. Swaminathan, and T. S. Whittam. "Characterization of Nonmotile Variants of *Escherichia coli* O157 and Other Serotypes by Using an Antiflagellin Monoclonal Antibody." J. Clin. Microbiol. 34 (1996): 2856–2859. PubMed: 8897201.
6. Bergeron, M. G., et al. Highly Conserved Genes and Their Use to Generate Probes and Primers for Detection of Microorganisms. Infectio Diagnostic Inc, assignee. World Patent WO/2001/023604. 05 Apr. 2001.

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