

***Escherichia coli*, Strain 5.0959**

Catalog No. NR-17630

For research only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterobacteriaceae, Escherichia*

Species: *Escherichia coli*

Strain: 5.0959

Serotype: O121:H19^{1,2}

Original Source: *Escherichia coli* (*E. coli*), strain 5.0959 was isolated from an unknown host.^{1,2}

Comment: *E. coli*, strain 5.0959 was selected to undergo complete genome sequencing at the [J. Craig Venter Institute](#).

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 5.0959 has been typed as a non-O157, Shiga toxin-producing *E. coli* (STEC) strain.^{1,2} STEC bacteria can cause diarrhea in humans and several STEC serotypes have been frequently associated with severe human disease, such as hemorrhagic colitis and hemolytic uremic syndrome. Besides *E. coli* O157:H7, other STEC serotypes, including O121:H19, account for a subset designated as enterohemorrhagic *E. coli* (EHEC). The virulence gene profile of O121:H19 strains typically have several characteristics in common with bacteria of the EHEC 1 and EHEC 2 groups: a Shiga toxin gene, an intimin allele, and genes found on the EHEC plasmid; however, despite the similarities to classical EHEC clones, the O121:H19 clone appears to be a distinct STEC clone of pathogenic *E. coli*.³

The presence of chromosomal virulence markers *eaeA* and *stx2* and absence of chromosomal virulence marker *stx1* in NR-17630 have been confirmed by PCR amplification of extracted DNA.

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 purify prior to initiating work.

Packaging/Storage:

NR-17630 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 with 5% 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 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Escherichia coli*, Strain 5.0959, NR-17630."

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/bmbli5/index.htm.

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References:

1. C. DebRoy, personal communication
2. Kapur, V., et al. "Genome Sequencing and Analysis of Pathogenic *Escherichia coli* Strains." [J. Craig Venter Institute](#). (2009)
<http://gsc.jcvi.org/projects/gsc/e_coli/index.shtml>
3. Tarr, C. L., et al. "Molecular Characterization of a Serotype O121:H19 Clone, a Distinct Shiga Toxin-Producing Clone of Pathogenic *Escherichia coli*." [Infect. Immun.](#) 70 (2002): 6853-6859. PubMed: 12438362.

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