Escherichia coli, Strain E12061

Catalog No. NR-22051

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Enterobacteriaceae, Escherichia*
Species: *Escherichia coli*
Strain: E12061
Serotype: O157:H7[1]
Original Source: *Escherichia coli* (*E. coli*), strain E12061 was isolated in 2004 from human feces in Washington, USA.[1,2]
Comments: *E. coli*, strain E12061 is an enterohemorrhagic *E. coli* (EHEC) and contains the Shiga-like type 2 toxin (Stx2).[1]

E. coli is a Gram-negative, rod-shaped bacterium commonly found in the gut flora of warm-blooded animals and is the primary facultative anaerobe of the human gastrointestinal tract. While most *E. coli* strains are harmless and are an important part of a healthy intestinal tract, some serotypes are pathogenic, causing diarrhea, urinary tract infections, respiratory illness, pneumonia, or other illnesses in their host.[3-5] Pathogenic *E. coli* may be transmitted through contaminated food or water, or through contact with infected persons or animals. The six pathotypes associated with diarrhea and collectively referred to as diarrheagenic *E. coli* are: Shiga toxin-producing *E. coli* [STEC; also referred to as Verocytotoxin-producing *E. coli* (VTEC) or enterohemorrhagic *E. coli* (EHEC)][6], enterotoxigenic *E. coli* (ETEC)[7], enteropathogenic *E. coli* (EPEC)[8], enteroaggregative *E. coli* (EAEC)[9], enteroinvasive *E. coli* (EIEC) and diffusely adherent *E. coli* (DAEC).[10]

Many EHEC strains encode potent toxins, similar to those of *Shigella dysenteriae*, which can cause severe intestinal, kidney, and central nervous system disease.[3] *E. coli* O157:H7 is the most common EHEC serotype contributing to more than 75,000 human infections and 17 outbreaks per year.[11]

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-22051 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 24 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Escherichia coli*, Strain E12061, NR-22051."

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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