

Genomic DNA from *Escherichia coli*, Strain 1885-77 (EDL 1282)

Catalog No. NR-3051

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Contributor:
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Manufacturer:
BEI Resources

Product Description:

Genomic DNA was extracted from a preparation of *Escherichia coli* (*E. coli*), strain 1885-77 (EDL 1282), serotype O29:NM.

The enteroinvasive *E. coli* (EIEC) strain 1885-77 (EDL 1282) was isolated from human stool in 1977.¹ A high-molecular-weight (140-megadalton) plasmid and a positive Sereny test have both been associated with EIEC strains.² EIEC pathogenesis requires the expression of genes present both on the chromosome and on a large invasion plasmid, pINV (220,000 base pairs).^{3,4} The presence of pINV in *E. coli*, strain 1885-77 (EDL 1282) has been confirmed by PCR amplification of the marker sequence *invE* from extracted DNA.

NR-3051 has been qualified for PCR applications by amplification of approximately 1500 base pairs of the 16S ribosomal RNA.

Material Provided:

Each vial contains 0.7 µg to 1.5 µg of bacterial genomic DNA in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH ~ 8.0). Each vial of lot 58666832 contains 4 µg to 6 µg of bacterial genomic DNA in TE buffer (10 mM Tris-HCl and 1 mM EDTA, pH ~ 7.4). The concentration is shown on the Certificate of Analysis. The vial should be centrifuged prior to opening.

Packaging/Storage:

NR-3051 was packaged aseptically in screw-capped plastic cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be minimized.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Genomic DNA from *Escherichia coli*, Strain 1885-77 (EDL 1282), NR-3051."

Biosafety Level: 1

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/bmb15/index.htm.

Disclaimers:

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References:

1. Toledo, M. R., et al. "Invasive Strain of *Escherichia coli* Belonging to O Group 29." *J. Clin. Microbiol.* 9 (1979): 288-289. PubMed: 372230.
2. Harris, J. R., et al. "High-Molecular-Weight Plasmid Correlates with *Escherichia coli* Enteroinvasiveness." *Infect. Immun.* 37 (1982): 1295-1298. PubMed: 6752026.
3. Hsia, R.-C., P. L. C. Small, and P. M. Bavoil. "Characterization of Virulence Genes of Enteroinvasive *Escherichia coli* by *TnphoA* Mutagenesis: Identification of *invX*, a Gene Required for Entry into HEp-2 Cells." *J. Bacteriol.* 175 (1993): 4817-4823. PubMed: 8393007.
4. Lan, R., et al. "Molecular Evolutionary Relationships of Enteroinvasive *Escherichia coli* and *Shigella* spp." *Infect. Immun.* 72 (2004): 5080-5088. PubMed: 15322001.

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