

## Genomic DNA from *Escherichia coli*, Strain MDL 4445

Catalog No. NR-4643

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

### Contributor:

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### Product Description:

Genomic DNA was isolated from a preparation of *Escherichia coli*, strain MDL 4445, serotype O157:H7.

*Escherichia coli* (*E. coli*), strain MDL 4445 was isolated in August 2006 from a human clinical sample collected at Mercy Medical Center in California, due to an outbreak linked to spinach consumption.

*E. coli*, strain MDL 4445 is known to react with the O157 antigen and thus, it is probable that it carries the pO157 plasmid. Additionally, this strain may carry the genes for hemolysin A (*hlyA*), Shiga toxin 2 (*stx2*) and intimin (*eaeA*) that are found in most enterohemorrhagic *E. coli* (EHEC) strains.<sup>1</sup>

NR-4643 has been qualified for PCR applications by amplification of approximately 1500 bp of the 16S ribosomal RNA.

### Material Provided:

Each vial contains 4–6 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-4643 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 the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Genomic DNA from *Escherichia coli*, Strain MDL 4445, NR-4643."

### 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, 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. Escobar-Páramo, P., et al. "A Specific Genetic Background Is Required for Acquisition and Expression of Virulence Factors in *Escherichia coli*." *Mol. Biol. Evol.* 21 (2004): 1085–1094. PubMed: 15014151.
2. Jay, M. T., et al. "*Escherichia coli* O157:H7 in Feral Swine near Spinach Fields and Cattle, Central California Coast." *Emerg. Infect. Dis.* 13 (2007): 1908–1911.
3. Riley, L. W., et al. "Hemorrhagic Colitis Associated with a Rare *Escherichia coli* Serotype." *N. Engl. J. Med.* 308 (1983): 681–685. PubMed: 6338386.

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