Escherichia coli, Strain RDEC-1

Catalog No. NR-104
(Derived from ATCC® 49106™)

For research only. Not for human use.

Contributor:
ATCC®

Product Description:
Bacteria Classification: *Enterobacteriaceae, Escherichia*
Species: *Escherichia coli*
Strain: RDEC-1
Serotype: O15:NM
Original Source:[1] Isolated from rabbits with diarrhea, 1976
Comment: *Escherichia coli* (*E. coli*), strain RDEC-1 was deposited at ATCC® in 1988 by J. Robert Cantey, M.D., Veterans Administration Medical Center, Charleston, South Carolina.

E. coli is a Gram-negative, rod-shaped bacterium which occurs singly or in pairs. *E. coli*, RDEC-1 is an attaching and effacing strain that causes diarrhea in post weanling rabbits. RDEC-1 has been used as an animal model of human enteropathogenic *E. coli* (EPEC) diarrhea.[2]

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 colony-purify prior to initiating work.

Packaging/Storage:
NR-104 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 tubes and plate at 37°C for 24 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Escherichia coli*, Strain RDEC-1, NR-104."

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

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References:

1. Cantey, J. R. and R. K. Blake. "Diarrhea Due to *Escherichia coli* in the Rabbit: A Novel Mechanism." J. Infect. Dis. 135 (1977): 454–462. PubMed: 321703.
2. Von Moll, L. K. and J. R. Cantey. "Peyer's Patch Adherence of Enteropathogenic *Escherichia coli* Strains in Rabbits." Infect. Immun. 65 (1997): 3788–3793. PubMed: 9284153.
3. Inman, L. R., J. R. Cantey, and S. B. Formal. "Colonization, Virulence, and Mucosal Interaction of an Enteropathogenic *Escherichia coli* (Strain RDEC-1) Expressing *Shigella* Somatic Antigen in the Rabbit Intestine." J. Infect. Dis. 154 (1986): 742–751. PubMed: 2430026.
4. Inman, L. R. and J. R. Cantey. "Specific Adherence of *Escherichia coli* (Strain RDEC-1) to Membranous (M) Cells of the Peyer's Patch in *Escherichia coli* Diarrhea in the Rabbit." J. Clin. Invest. 71 (1983): 1–8. PubMed: 6129261.
5. Cantey, J. R., W. B. Lushbaugh, and L. R. Inman. "Attachment of Bacteria to Intestinal Epithelial Cells in Diarrhea Caused by *Escherichia coli* Strain RDEC-1 in the Rabbit: Stages and Role of Capsule." J. Infect. Dis. 143 (1981): 219–230. PubMed: 6163830.
6. Cantey, J. R. and L. R. Inman. "Diarrhea Due to *Escherichia coli* Strain RDEC-1 in the Rabbit: The Peyer's Patch as the Initial Site of Attachment and Colonization." J. Infect. Dis. 143 (1981): 440–446. PubMed: 7014731.

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