

***Vibrio cholerae*, Strain EI Tor 34-D 23**

Catalog No. NR-150

(Derived from ATCC® 14731™)

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Contributor:

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Product Description:

Bacteria Classification: *Vibrionaceae*, *Vibrio*

Species: *Vibrio cholerae*

Strain: EI Tor 34-D 23 (NCTC 4715)

Serogroup: O:3 (non-O1, non-O139)¹

Original Source: Isolated in 1934 from a healthy pilgrim at the EI Tor Quarantine camp²

Comment: *Vibrio cholerae* (*V. cholerae*), strain EI Tor 34-D 23 was deposited at ATCC® in 1962 by Dr. Kenneth J. Steel, National Collection of Type Cultures, Central Public Health Laboratory, London, England.

V. cholerae non-O1, non-O139 strains are generally recognized as less pathogenic than the classical or EI Tor biotypes. Most outbreaks are sporadic and localized, therefore lacking any epidemic potential. In 1992 a departure from this trend occurred when a non-O1 serogroup, which later was assigned a new serogroup O139, caused epidemic of cholera-like disease. Since then there has been an escalating interest in non-O1, non-O139 serogroups. Emergence of a newer variant by horizontal gene transfer from O1 to a non-O1 serogroup has been reported, as in the genesis of *V. cholerae* O139. *V. cholerae* non-O1, non-O139 strains possess ToxR, a protein that regulate several virulence factors, and can acquire the toxin-coregulated pilus (TCP) from toxigenic *V. cholerae* O1 by horizontal gene transfer; this is essential for host intestinal colonization and plays an important role in the pathogenesis of cholera.^{3,4}

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-150 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 broth.
3. Use several drops of the suspension to inoculate an 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: *Vibrio cholerae*, Strain EI Tor 34-D 23, NR-150."

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. Nair, G. B., et al. "Laboratory Diagnosis of *Vibrio cholerae* O139 Bengal, the New Pandemic Strain of Cholera." LabMedica International XI (1994a): 8-11.
2. Gardner, A. D. and K. V. Venkatraman. "The Antigens of the Cholera Group of Vibrios." J. Hyg. 35 (1935): 262-282.
3. Singh, D. V., et al. "Molecular Analysis of *Vibrio cholerae* O1, O139, non-O1, and non-O139 Strains: Clonal Relationships between Clinical and Environmental Isolates." Appl. Environ. Microbiol. 67 (2001): 910-921. PubMed: 11157262.
4. Sharma, C., et al. "Molecular Analysis of Non-O1, Non-O139 *Vibrio cholerae* Associated with an Unusual Upsurge in the Incidence of Cholera-Like Disease in Calcutta, India." J. Clin. Microbiol. 36 (1998): 756-763. PubMed: 9508308.
5. Faruque, S. M., M. J. Albert, and J. J. Mekalanos. "Epidemiology, Genetics, and Ecology of Toxigenic *Vibrio cholerae*." Microbiol. Mol. Biol. Rev. 62 (1998): 1301-1314. PubMed: 9841673.

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