

***Vibrio cholerae*, Strain CP1038(11) (Biovar El Tor)**

**Catalog No. NR-28822**

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

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Vibrionaceae*, *Vibrio*

Species: *Vibrio cholerae*

Serogroup: O1

Biovar: El Tor

Strain: CP1038(11)

Original Source: *Vibrio cholerae* (*V. cholerae*), strain CP1038(11) is an isolate from a patient in Zimbabwe in 2009.<sup>1,2</sup>

Comments: The complete genome sequence of *V. cholerae*, strain CP1038(11) is available (GenBank: [ALDC000000000](http://www.ncbi.nlm.nih.gov/GenBank/ALDC000000000)).

*V. cholerae* is a natural inhabitant of warm aquatic environments and the causative agent of the diarrheal disease cholera. More than 200 O-antigen serogroups have been identified but only O1 and more recently O139 are known to cause epidemic and pandemic cholera.<sup>3</sup> Occasionally, there are cholera outbreaks that result from non-O1 and non-O139 serogroups. Cholera has a high lethality if left untreated, and millions have died in the seven pandemics that have occurred since 1817.

*V. cholerae* colonizes the mucosal surface of the small intestines of humans, the only known animal host.<sup>4</sup> Cholera toxin, the toxin-coregulated pilus (TCP) and the central regulatory protein (ToxR) are recognized as significant factors in the pathogenicity of toxigenic strains of *V. cholerae* serogroups O1 and O139.<sup>5</sup>

**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-28822 was packaged aseptically in 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 Brain Heart Infusion broth or equivalent  
Tryptic Soy agar with 5% defibrinated sheep blood or Brain Heart Infusion 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 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: *Vibrio cholerae*, Strain CP1038(11) (Biovar El Tor), NR-28822."

**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](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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**References:**

1. R. R. Colwell, Personal Communication.
2. Hasan, N. A., et al. "Genomic Diversity of 2010 Haitian Cholera Outbreak Strains." Proc. Natl. Acad. Sci. USA 109 (2012): E2010-E2017. PubMed: 22711841.
3. Pang, B., et al. "Genetic Diversity of Toxigenic and Nontoxigenic *Vibrio cholerae* Serogroups O1 and O139 Revealed by Array-Based Comparative Genomic Hybridization." J. Bacteriol. 189 (2007): 4837-4849. PubMed: 17468246.
4. O'Shea, Y. A., et al. "Evolutionary Genetic Analysis of the Emergence of Epidemic *Vibrio cholerae* Isolates on the Basis of Comparative Nucleotide Sequence Analysis and Multilocus Virulence Gene Profiles." J. Clin. Microbiol. 42 (2004): 4657-4671. PubMed: 15472325.
5. 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.

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