

***Vibrio cholerae*, Strain HC-61A2**

**Catalog No. NR-28876**

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

**Contributor:**

Rita R. Colwell, Distinguished Professor, University of Maryland College Park and Johns Hopkins University Bloomberg School of Public Health, Maryland, USA

**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Vibrionaceae*, *Vibrio*

Species: *Vibrio cholerae*

Serogroup: non-O1/non-O139

Strain: HC-61A2

Original Source: *Vibrio cholerae* (*V. cholerae*), strain HC-61A2 is a clinical isolate collected in 2010 from a patient in Haiti.<sup>1</sup>

Comment: The complete genome sequence of *V. cholerae*, strain HC-61A2 is available (GenBank: [AJRU00000000](#)).

*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 Marine broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

**Packaging/Storage:**

NR-28876 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:

Marine broth, 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 HC-61A2, NR-28876."

**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/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

**Disclaimers:**

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](http://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither the ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

**Use Restrictions:**

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

**References:**

1. Colwell, R. R., 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.

ATCC® is a trademark of the American Type Culture Collection.

