

***Campylobacter jejuni*, Strain UA466**

Catalog No. NR-4085

(Derived from ATCC® 43503™)

For research only. Not for human use.

Contributor:

ATCC®

Product Description:

Bacteria Classification: *Campylobacteraceae*,
Campylobacter

Species: *Campylobacter jejuni*

Strain: UA466

Original Source: Isolated from human in the United States

Comment: The UA466 strain was deposited at ATCC® in 1986 by Professor Diane E. Taylor, Department of Medical Microbiology and Infectious Diseases, University of Alberta, Edmonton, Canada. This strain contains a tetracycline resistance plasmid.^{1,2}

Campylobacter jejuni (*C. jejuni*) is a Gram-negative, slender, curved, motile rod commonly found in animal feces. It is a microaerophilic organism that is very sensitive to environmental stresses.³ *C. jejuni* is among the most frequently identified bacterial causes of human gastroenteritis in the United States and other industrialized countries.⁴ Food poisoning caused by *C. jejuni* can be largely attributed to the consumption of contaminated food animal products, especially poultry. In most cases, the resulting infection can be severely debilitating but is rarely life-threatening. However, in some cases, *C. jejuni* infections have been linked to the subsequent development of two neuropathies, Guillain-Barré syndrome^{3,5,6} and Miller-Fisher syndrome⁵ and to a reactive arthropathy, Reiter syndrome.³

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Brucella Broth supplemented with 10% glycerol.

Packaging/Storage:

NR-4085 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:

Brucella Broth on Tryptic Soy Agar (TSA) with 5% defibrinated sheep blood or equivalent

Incubation:

Temperature: 37–42°C

Atmosphere: Microaerophilic (3–5% O₂ and 4–8% CO₂)

Propagation:

1. Keep vial frozen until ready to use, then thaw.
2. Transfer the entire thawed aliquot into Brucella Broth.
3. Inoculate a TSA with 5% defibrinated sheep blood slant with the suspension.
4. Incubate the slant at 37–42°C, under microaerophilic conditions, for 48 hours.
5. Harvest the slant with Brucella Broth and add to TSA with 5% defibrinated sheep blood Kolle.
6. Incubate an additional 24 hours at 37–42°C, under microaerophilic conditions.

Note:

The thawed vial may be plated directly on TSA with 5% defibrinated sheep blood and grown at 37–42°C in a microaerophilic atmosphere. This may require a longer incubation time than the biphasic culture.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Campylobacter jejuni*, Strain UA466, NR-4085.”

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.

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.

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 make any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither 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. Taylor, D. E. "Plasmid-Mediated Tetracycline Resistance in *Campylobacter jejuni*: Expression in *Escherichia coli* and Identification of Homology with Streptococcal Class M Determinant." J. Bacteriol. 165 (1986): 1037–1039. PubMed: 3005233.
2. Aminov, R. I., N. Garrigues-Jeanjean, and R. I. Mackie. "Molecular Ecology of Tetracycline Resistance: Development and Validation of Primers for Detection of Tetracycline Resistance Genes Encoding Ribosomal Protection Proteins." Appl. Environ. Microbiol. 67 (2001): 22–32. PubMed: 11133424.
3. Altekruse, S. F., et al. "*Campylobacter jejuni*—An Emerging Foodborne Pathogen." Emerg. Infect. Dis. 5 (1999): 28–35. PubMed: 10081669.
4. Gibreel, A. and D. E. Taylor. "Macrolide Resistance in *Campylobacter jejuni* and *Campylobacter coli*." J. Antimicrob. Chemother. 58 (2006): 243–255. PubMed: 16735431.
5. Woodward, D. L. and F. G. Rodgers. "Identification of *Campylobacter* Heat-Stable and Heat-Labile Antigens by Combining the Penner and Lior Serotyping Schemes." J. Clin. Microbiol. 40 (2002): 741–745. PubMed: 11880386.
6. Sinha, S., et al. "Detection of Preceding *Campylobacter jejuni* Infection by Polymerase Chain Reaction in Patients with Guillain-Barré Syndrome." Trans. R. Soc. Trop. Med. Hyg. 98 (2004): 342–346. PubMed: 15099989.
7. Hunt, J. M., C. Abeyta, and T. Tran. Bacteriological Analytical Manual, 8th Edition, Revision A. U.S. Food and Drug Administration 1998. 26-04-2007 <<http://www.cfsan.fda.gov/~ebam/bam-7.html>>.

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

