

***Campylobacter jejuni* subsp. *jejuni*, Strain MK 104**

**Catalog No. NR-4084**

(Derived from ATCC® 43446™)

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

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Campylobacteraceae*,  
*Campylobacter*

Species: *Campylobacter jejuni* subsp. *jejuni*

Strain: MK 104

Serotype: O:19

Original Source: *Campylobacter jejuni* (*C. jejuni*) subsp. *jejuni*, strain MK 104 was isolated by Dr. M. Karmali from human feces at The Hospital for Sick Children in Toronto, Ontario, Canada.

Comment: This strain was deposited to the ATCC® by Dr. J. L. Penner in 1986.<sup>1</sup>

*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.<sup>2</sup> *C. jejuni* is among the most frequently identified bacterial causes of human gastroenteritis in the United States and other industrialized countries.<sup>3</sup> 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<sup>2,4,5</sup> and Miller-Fisher syndrome<sup>4</sup> and to a reactive arthropathy, Reiter syndrome.<sup>2</sup>

**Material Provided:**

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

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

**Packaging/Storage:**

NR-4084 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, Tryptic soy broth or equivalent  
Tryptic Soy agar with 5% defibrinated sheep blood or Brucella agar or equivalent

Incubation:

Temperature: 37°C to 42°C

Atmosphere: Microaerophilic (3 to 5% O<sub>2</sub> and 4 to 8% CO<sub>2</sub>)

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 the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C to 42°C for 24 to 48 hours.

Note: The thawed vial may be plated directly on TSA with 5% defibrinated sheep blood and grown at 37°C to 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 BEI Resources, NIAID, NIH: *Campylobacter jejuni* subsp. *jejuni*, Strain MK 104, NR-4084."

**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).

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**References:**

1. Mills, S. D., L. A. Kurjanczyk, and J. L. Penner. "Identification of an Antigen Common to Different Species of the Genus *Campylobacter*." J. Clin. Microbiol. 26 (1988): 1411–1413. PubMed: 2457601.
2. Altekruze, S. F., et al. "*Campylobacter jejuni*-An Emerging Foodborne Pathogen." Emerg. Infect. Dis. 5 (1999): 28-35. PubMed: 10081669.
3. Gibreel, A. and D. E. Taylor. "Macrolide Resistance in *Campylobacter jejuni* and *Campylobacter coli*." J. Antimicrob. Chemother. 58 (2006): 243-255. PubMed: 16735431.
4. Woodward, D. L. and F. G. Rodgers. "Identification of *Campylobacter* Heat-Stable and Heat-Labile Antigens by Combining Penner and Lior Serotyping Schemes." J. Clin. Microbiol. 40 (2002): 741–745. PubMed: 11880386.
5. Sinha, S., et al. "Detection of Preceding *Campylobacter jejuni* Infection by Polymerase Chain Reaction in Patients with Guillain-Barre Syndrome." Trans. R. Soc. Trop. Med. Hyg. 98 (2004): 342-346. PubMed: 15099989.

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