

***Campylobacter jejuni* subsp. *jejuni*,
Strain LRA 094.06.89**

Catalog No. NR-128
(Derived from ATCC® 49943™)

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Contributor:
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Product Description:

Bacteria Classification: *Campylobacteraceae*, *Campylobacter*

Species: *Campylobacter jejuni* subsp. *jejuni*

Strain: LRA 094.06.89

Comment: Quality control strain for bioMerieux

Campylobacter jejuni (*C. jejuni*) is a Gram-negative, slender, curved, motile rod commonly found in animal feces. It is a thermophilic and microaerophilic organism that is sensitive to environmental stresses.¹ *C. jejuni* is among the most frequently identified bacterial causes of human gastroenteritis in the U.S. and other industrialized countries.² 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 and Miller-Fisher syndrome³ and to a reactive arthropathy, Reiter syndrome.¹⁻⁴ Recently, cytolethal distending toxin was identified in many strains of *C. jejuni* (including LRA 094.06.89) and is an important virulence determinant.⁵

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-128 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 (TSB)

Tryptic Soy Agar (TSA) with 5% defibrinated sheep blood

Incubation:

Temperature: 37 to 42°C

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

Propagation:

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

Note:

The thawed vial may be plated directly on TSA with 5% defibrinated sheep blood and grown at 37 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 the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Campylobacter jejuni* subsp. *jejuni*, Strain LRA 094.06.89, NR-128."

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/bmb15/bmb15toc.htm.

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References:

1. Altekruse, S. F., et al. "*Campylobacter jejuni*—An Emerging Foodborne Pathogen." Emerg. Infect. Dis. 5 (1999): 28-35. PubMed: 10081669.
2. Gibreel, A. and D. E. Taylor. "Macrolide Resistance in *Campylobacter jejuni* and *Campylobacter coli*." J. Antimicrob. Chemother. 58 (2006): 243-255. PubMed: 16735431.
3. 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.
4. 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.
5. Dassanayake, R. P., et al. "Characterization of Cytotoxic Distending Toxin of *Campylobacter* Species Isolated from Captive Macaque Monkeys." J. Clin. Microbiol. 43 (2005): 641-649. PubMed: 15695658.
6. Snelling, W. J., et al. "*Campylobacter jejuni*." Lett. Appl. Microbiol. 41 (2005): 297-302. PubMed: 16162134.

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