Product Information Sheet for NR-399

Campylobacter jejuni subsp. *jejuni*, Strain D3071

Catalog No. NR-399
(Derived from ATCC® BAA-221™)

For research only. Not for human use.

Contributor:
ATCC®

Product Description:
Bacteria Classification: *Campylobacteraceae, Campylobacter*
Species: *Campylobacter jejuni* subsp. *jejuni*
Strain: D3071
Serotype: O41:HL27
Original Source: Isolated from human feces by the Colorado Department of Health
Comment: The D3071 strain was deposited at ATCC® by the Centers for Disease Control and Prevention. Serotype O41:HL27 has been associated with Guillain-Barré syndrome.[1]

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.[2] *C. jejuni* is among the most frequently identified bacterial causes of human gastroenteritis in the United States and other industrialized countries.[3] 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[1,2,4] and Miller-Fisher syndrome[1] and to a reactive arthropathy, Reiter syndrome.[2]

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

Packaging/Storage:
NR-399 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% O_2 and 4–8% CO_2)
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* subsp. *jejuni*, Strain D3071, NR-399."

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.

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References:

1. 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.
2. Altekruse, 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. 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. 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>.

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