Product Information Sheet for NR-13435

Clostridioides difficile, Isolate 9

Catalog No. NR-13435

For research use only. Not for human use.

Contributor and Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Peptostreptococcaceae*[1]; *Clostridioides*[2,3]
Species: *Clostridioides difficile* (Previously referred to as *Clostridium difficile*, this genus has been reclassified[2,3] and the genus designation on the vial label refers to the old nomenclature.)
Isolate: 9
Original Source: *Clostridioides difficile (C. difficile)*, isolate 9 was obtained from a human patient from the Mid-Atlantic region of the United States in 2008/2009.

C. difficile is a Gram-positive, spore-forming, obligate anaerobe that commonly inhabits the intestinal tract of various mammalian species, reptiles and birds, and may also be found in the environment. Pathogenic strains of *C. difficile* produce a potent cytotoxin (toxin B) and in most cases an enterotoxin (toxin A).[4] It is the production of these toxins in the gut which ultimately leads to pseudomembranous colitis (PMC) and *C. difficile* associated diarrhea (CDAD), which often occur as a complication of antibiotic therapy in elderly hospitalized patients.[5]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Modified Reinforced Clostridial broth supplemented with 10% glycerol.

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

Packaging/Storage:
NR-13435 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:
Modified Reinforced Clostridial broth
Reinforced Clostridial agar or Anaerobic Blood agar
Incubation:
Temperature: 37°C
Atmosphere: Anaerobic
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 tubes and plate at 37°C for 2 to 3 days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Clostridioides difficile*, Isolate 9, NR-13435."

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/bmbl5/index.htm.

Disclaimers:
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References:

1. "List of New Names and New Combinations Previously Effectively, but not Validly, Published." Int. J. Syst. Evol. Microbiol. 60 (2010): 469-472.
2. Lawson, P. A., et al. "Reclassification of *Clostridium difficile* as *Clostridioides difficile* (Hall and O'Toole 1935) Prévot 1938." Anaerobe 40 (2016): 95-99. PubMed: 27370902.
3. Oren, A. and G. M. Garrity. "List of New Names and New Combinations Previously Effectively, but not Validly, Published." Int. J. Syst. Evol. Microbiol. 66 (2016): 3761-3764. PubMed: 27902176.
4. Rupnik, M., M. H. Wilcox and D. N. Gerding. "*Clostridium difficile* Infection: New Developments in Epidemiology and Pathogenesis." Nat. Rev. Microbiol. 7 (2009): 526-536. PubMed: 19528959.
5. Kelly, C. P. and J. T. LaMont. "*Clostridium difficile* - More Difficult than Ever." N. Engl. J. Med. 359 (2008): 1932-1940. PubMed: 18971494.

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