Product Information Sheet for NR-32889

Clostridium difficile, Strain P9

Catalog No. NR-32889

For research use only. Not for human use.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Clostridiaceae, Clostridium*
Species: *Clostridium difficile*
Strain: P9
Original Source: *Clostridium difficile* (*C. difficile*), strain P9 was obtained in 2001 from fecal material of a human patient with a relapsing *C. difficile* infection in western Pennsylvania, USA.[1]
Comments: Strain P9 was deposited as a toxigenic strain.[1] The complete genome of *C. difficile*, strain P9 is available (GenBank: AVLS01000000).

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).[2] 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.[3]

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

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

Packaging/Storage:
NR-32889 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 medium or equivalent
Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

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 tube, slant and/or plate at 37°C for 24 to 72 hours.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Clostridium difficile*, Strain P9, NR-32889."

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.

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References:

1. Marsh, J. W., Personal Communication.
2. 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.
3. Kelly, C. P. and J. T. LaMont. "*Clostridium difficile* - More Difficult than Ever." N. Engl. J. Med. 359 (2008): 1932-1940. PubMed: 18971494.
4. Marsh, J. W. "Counterpoint: Is *Clostridium difficile* a Food-borne Disease?" Anaerobe 21 (2013): 62-63. PubMed: 23528985.

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