

# Product Information Sheet for NR-32883

## *Clostridium difficile*, Strain P2

**Catalog No. NR-32883**

**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:** P2

**Original Source:** *Clostridium difficile* (*C. difficile*), strain P2 was obtained in 2001 from fecal material of a human patient with a *C. difficile* infection in western Pennsylvania, USA.<sup>1</sup>

**Comments:** Strain P2 was deposited as a toxigenic strain.<sup>1</sup> The complete genome of *C. difficile*, strain P2 is available (GenBank: [AVLM000000000](http://www.ncbi.nlm.nih.gov/GenBank/AVLM000000000)).

*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).<sup>2</sup> 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.<sup>3</sup>

### Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X 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-32883 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:

M Modified Reinforced Clostridial medium or equivalent  
Tryptic Soy agar with 5% defibrinated sheep blood or

equivalent

#### Incubation:

Temperature: 37°C

Atmosphere: Anaerobic (80% N<sub>2</sub>:10% CO<sub>2</sub>:10% H<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 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 48 hours.

### Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Clostridium difficile*, Strain P2, NR-32883."

### 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](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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#### References:

1. J. W. Marsh, 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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