

***Bordetella pertussis*, Strain D420**

**Catalog No. NR-56498**

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**For research use only. Not for use in humans.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Alcaligenaceae*, *Bordetella*

Species: *Bordetella pertussis*

Strain: D420 (also referred to as BPD420)<sup>1,2</sup>

Original Source: *Bordetella pertussis* (*B. pertussis*), strain

D420 was isolated in 2002 from a human infant with severe respiratory distress in United States.<sup>1,3</sup>

Comments: The complete genome of *B. pertussis*, strain

D420 has been sequenced (GenBank: [LN849008](#)).<sup>2</sup>

*B. pertussis* is a Gram-negative, fastidious, non-motile coccobacilli that is a highly contagious, exclusively human pathogen. It is the causative agent of pertussis (whooping cough), an acute upper respiratory tract infection characterized by coughing fits (paroxysms), a whooping noise heard in the subsequent inspiration following a paroxysm and prolonged clinical course lasting for several weeks. Infection in adolescents and adults is typically mild; however, in children, particularly young infants, infection can be severe and sometimes deadly.<sup>4,5,6</sup>

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Bordet Gengou broth supplemented with 10% glycerol.

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

**Packaging/Storage:**

NR-56498 was packaged aseptically in 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:

Stainer-Scholte broth with Heptakis or Bordet Gengou broth (with 15% rabbit serum) or equivalent

Regan-Lowe agar or Bordet Gengou agar (with 15% rabbit serum) or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

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 2 to 7 days.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Bordetella pertussis*, Strain D420, NR-56498."

**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 \(BMBL\)](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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**References:**

1. Warfel, J. M., et al. "Nonhuman Primate Model of Pertussis." *Infect. Immun.* 80 (2012): 1530-1536. PubMed: 22252879.
2. Boinett, C. J., et al. "Complete Genome Sequence of *Bordetella pertussis* D420." *Genome Announc.* 3 (2015): e00657-15. PubMed: 26067980. Erratum in: *Genome Announc.* 3 (2015): e00842-15. PubMed: 26184951.
3. Tondella, M. L., Personal Communication.
4. Friedman, R. L. "Pertussis: The Disease and New Diagnostic Methods." *Clin. Microbiol. Rev.* 1 (1998): 365-376. PubMed: 2906814.
5. Mattoo, S. and J. D. Cherry. "Molecular Pathogenesis, Epidemiology, and Clinical Manifestations of Respiratory Infections Due to *Bordetella pertussis* and Other *Bordetella* Subspecies." *Clin. Microbiol. Rev.* 18 (2005): 326-382. PubMed: 15831828.
6. Sabella, C. "Pertussis: Old Foe, Persistent Problem." *Cleve. Clin. J. Med.* 72 (2005): 601-608. PubMed: 16044656.

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