

***Bordetella pertussis*, Strain A639**

Catalog No. NR-58978

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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: A639

Original Source: *Bordetella pertussis* (*B. pertussis*), strain A639 was isolated in 1993 from a human with pertussis in the USA.¹

Comments: Strain A639 was deposited as the homozygous wild-type genotype, which is susceptible to macrolide antibiotics.² The complete genome of *B. pertussis*, strain A639 has been sequenced (GenBank: [CP046993](#)).

B. pertussis is a Gram-negative, fastidious, non-motile coccobacilli that is a highly contagious human pathogen.^{3,4} 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.^{3,4,5,6} Macrolide resistance of this organism is inspiring renewed interest.⁷

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-58978 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:

Liquid Stainer Scholte with Heptakis broth or Bordet-Gengou broth or equivalent

Regan Low agar or Bordet-Gengou agar (with or without

15% rabbit serum)¹ or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with or without 5% CO₂

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 A639, NR-58978.”

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). Current Edition. Washington, DC: U.S. Government Printing Office.

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References:

1. Tondella, M. L., Personal Communication.
2. Tatti, K. M., et al. "Novel Multitarget Real-Time PCR Assay for Rapid Detection of *Bordetella* species in Clinical Specimens." J. Clin. Microbiol. 49 (2011): 4059-4066. PubMed: 21940464.
3. Friedman, R. L. "Pertussis: The Disease and New Diagnostic Methods." Clin. Microbiol. Rev. 1 (1988): 365-376. PubMed: 2906814.
4. 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.
5. Warfel, J. M., et al. "Nonhuman Primate Model of Pertussis." Infect. Immun. 80 (2012): 1530-1536. PubMed: 22252879.
6. Sabella, C. "Pertussis: Old Foe, Persistent Problem." Cleve. Clin. J. Med. 72 (2005): 601-608. PubMed: 16044656.
7. Hill, B. C., C. N. Baker and F. C. Turner. "A Simplified Method for Testing *Bordetella pertussis* for Resistance to Erythromycin and Other Antimicrobial Agents." J. Clin. Microbiol. 38 (2000): 1151-1155.

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