

***Priestia megaterium*, Strain Ford 19**

Catalog No. NR-603

For research use only. Not for use in humans.

Contributor:

ATCC®

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Bacillaceae, Priestia*

Species: *Priestia megaterium*

Previously referred to as *Bacillus megaterium* the genus has been reclassified and the designation on the vial label refers to the old nomenclature.¹

Strain: FORD 19 (also referred to as Gibson 1060, CIP 66.20, NCTC 10342, CCM 2007, DSM 32, IAM 13418)

Original Source: *Priestia megaterium* (*P. megaterium*), strain Ford 19 was isolated by W. W. Ford and was deposited at ATCC® in 1962 by Dr. Ruth E. Gordon, Institute of Microbiology, Rutgers University, New Jersey, USA.^{2,3}

Comments: The complete genome of *P. megaterium*, strain Ford 19 has been sequenced (GenBank: [CP009920.1](#)).⁴

P. megaterium is an aerobic, Gram-positive, spore-forming, nonpathogenic motile bacillus found primarily in soil, but has also been isolated from sediment, dust, sea water and food such as honey, milk and fish.^{2,3,5} *P. megaterium* is a large bacterium both physically and genetically, with an average cell volume 100x greater than *Escherichia coli* and a relatively large five-megabase-pairs genome containing up to ten plasmids, making it well-suited for studies of cellular structure, protein localization, sporulation and membranes.^{5,6} A number of genetic tools are available for *P. megaterium* including transducing phages, mutant strains and recombinant shuttle vectors and as such, it is used in industry for production of recombinant proteins, vitamins and bioremediation activities.^{5,6}

Material Provided:

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

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

Packaging/Storage:

NR-603 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:

Nutrient broth or Tryptic Soy broth or equivalent
Nutrient agar or Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

Incubation:

Temperature: 30°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 30°C for 1 day.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Priestia megaterium*, Strain Ford 19 (Gibson 1060), NR-603."

Biosafety Level: 1

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. Gupta, R. S., et al. "Robust Demarcation of 17 Distinct Bacillus Species Clades, Proposed as Novel Bacillaceae Genera, by Phylogenomics and Comparative Genomic Analyses: Description of *Robertmurraya kyonggiensis* sp. nov. and Proposal for an Emended Genus *Bacillus* Limiting it only to the Members of the Subtilis and Cereus Clades of Species." Int. J. Syst. Evol. Microbiol. 70 (2020): 5753-5798. PubMed: 33112222.
2. Lawrence, J. S. and W. W. Ford. "Spore-Bearing Bacteria in Milk." J. Bacteriol. 1 (1916): 277-320.51. PubMed: 16558697.
3. Smith, N. R., et al. "Type Cultures and Proposed Neotype Cultures of Some Species in the Genus *Bacillus*." J. Gen. Microbiol. 34 (1964): 269-272. PubMed: 14135533.
4. Johnson, S. L., et al. "Complete Genome Sequences for 35 Biothreat Assay-Relevant *Bacillus* Species." Genome Announc. 3 (2015): pii: e00151-15. PubMed: 25931591.
5. Vary, P. S., et al. "*Bacillus megaterium*--From Simple Soil Bacterium to Industrial Protein Production Host." Appl. Microbiol. Biotechnol. 76 (2007): 957-967. PubMed: 17657486.
6. Biedendieck, R., et al. "Systems Biology of Recombinant Protein Production using *Bacillus megaterium*." Methods Enzymol. 500 (2011): 165-195. PubMed: 21943898.

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