

***Bacillus megaterium*, Strain Ford 19
(Gibson 1060)**

Catalog No. NR-52259
(Derived from ATCC® 14581™)

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Contributor:
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Manufacturer:
BEI Resources

Product Description:

Bacteria Classification: *Bacillaceae*, *Bacillus*

Species: *Bacillus megaterium*

Strain: Ford 19 (Gibson 1060; CIP 66.20 NCTC 10342, CCM 2007, DSM 32, IAM 13418)

Original Source: *Bacillus megaterium* (*B. 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 Brunswick, New Jersey, USA.^{1,2}

Comments: The complete genome of *B. megaterium*, strain Ford 19 has been sequenced (GenBank: [CP009920.1](https://www.ncbi.nlm.nih.gov/nucl/CP009920.1)).³

B. 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.^{1,2,4} *B. 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. A number of genetic tools are available for *B. 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.

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-52259 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: *Bacillus megaterium*, Strain Ford 19 (Gibson 1060), NR-52259."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmb15/index.htm.

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References:

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2. 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.
3. Johnson, S. L., et al. "Complete Genome Sequences for 35 Biothreat Assay-Relevant *Bacillus* Species." Genome Announc. 3 (2015): pii: e00151-15. PubMed: 25931591.
4. 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.
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6. Yang, L.-M., et al. "Microbial Metabolism of Steviol and Steviol-16 α ,17-Epoxyde." Phytochemistry 68 (2007): 562–570. PubMed: 17207824.
7. Xu, D. and J.-C. Côté. "Phylogenetic Relationships between *Bacillus* Species and Related Genera Inferred from Comparison of 3' End 16S rDNA and 5' End 16S–23S ITS Nucleotide Sequences." Int. J. Syst. Evol. Microbiol. 53 (2003): 695–704. PubMed: 12807189.
8. Chiou, C.-Y., H.-H. Wang, and G.-C. Shaw. "Identification and Characterization of the Non-PTS *fru* Locus of *Bacillus megaterium* ATCC 14581." Mol. Genet. Genomics 268 (2002): 240–248. PubMed: 12395198.

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