

***Mycobacterium avium* subsp. *avium*, Strain 2285 Smooth**

**Catalog No. NR-44265**

**For research use only. Not for human use.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Mycobacteriaceae*, *Mycobacterium*

Species: *Mycobacterium avium* subsp. *avium*

Strain: 2285 Smooth

Original Source: *Mycobacterium avium* (*M. avium*) subsp. *avium*, strain 2285 Smooth was isolated between 2009 and 2013 from human sputum at NIAID, NIH, Bethesda, Maryland, USA.<sup>1</sup> NR-44265 was deposited to BEI Resources as *M. avium*. Whole genome sequencing at ATCC® identified strain 2285 Smooth as subsp. *avium*.

Comment: *M. avium* subsp. *avium*, strain 2285 Smooth is part of the Top Priority Nontuberculous Mycobacteria Whole Genome Sequencing Project at the [Genomic Sequencing Center for Infectious Diseases](#) (GSCID) at University of Maryland School of Medicine.

*M. avium* is an acid-fast, Gram-positive, non-motile, nonchromogenic, slow-growing bacillus ubiquitous in a number of environmental sources including water, soil and plants.<sup>2</sup> This opportunistic pathogen is capable of causing disease in both humans and animals. *M. avium* is subspeciated into *M. avium* subsp. *avium*, *M. avium* subsp. *hominissuis*, *M. avium* subsp. *paratuberculosis* and *M. avium* subsp. *silvaticum*, each of which has a specific host or hosts but shares many genotypic and phenotypic features.<sup>3,4,5</sup>

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Middlebrook 7H9 broth with ADC enrichment supplemented with 10% glycerol.

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

**Packaging/Storage:**

NR-44265 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:

Middlebrook 7H9 broth with ADC enrichment or equivalent  
Middlebrook 7H10 agar with OADC enrichment or  
Lowenstein-Jensen agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with 5% CO<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 2 to 6 weeks.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Mycobacterium avium* subsp. *avium*, Strain 2285 Smooth, NR-44265."

**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/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

This publication recommends that practices with this agent include the use of respiratory protection and the implementation of specific procedures and use of specialized equipment to prevent and contain aerosols.

**Disclaimers:**

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**References:**

1. Ordway, D., Personal Communication.
2. Inderlied, C. B., C. A. Kemper and L. E. Bermudez. "The *Mycobacterium avium* Complex." Clin. Microbiol. Rev. 6 (1993): 266-310. PubMed: 8358707.
3. Thorel, M. F., M. Krichevsky and V. V. Levy-Frebault. "Numerical Taxonomy of Mycobactin-Dependent Mycobacteria, Emended Description of *Mycobacterium avium*, and Description of *Mycobacterium avium* subsp. *avium* subsp. nov., *Mycobacterium avium* subsp. *paratuberculosis* subsp. nov., and *Mycobacterium avium* subsp. *silvaticum* subsp. nov." Int. J. Syst. Bacteriol. 40 (1990): 254-260. PubMed: 2397193.
4. Turenne, C. Y., R. Wallace, Jr. and M. A. Behr. "*Mycobacterium avium* in the Postgenomic Era." Clin. Microbiol. Rev. 20 (2007): 205-229. PubMed: 17428883.
5. Mackenzie, N., et al. "Genomic Comparison of PE and PPE in Genes in the *Mycobacterium avium* Complex." J. Clin. Microbiol. 47 (2009): 1002-1011. PubMed: 19144814.

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