

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

Catalog No. NR-44265

For research use only. Not for human use.

Contributor:

Diane Ordway, Ph.D., Assistant Professor, Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, Colorado, USA and National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Bethesda, Maryland, USA

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.¹ NR-44265 was deposited to BEI Resources as *M. avium*. Whole genome sequencing identified strain 2285 Smooth as subsp. *avium*.

Comments: *M. avium* subsp. *avium*, strain 2285 Smooth is part of the [Top Priority Nontuberculosis Mycobacteria Whole Genome Sequencing Project](#) at the Genomic Sequencing Center for Infectious Diseases (GSCID) at University of Maryland School of Medicine. The complete genome of *M. avium* subsp. *avium*, strain 2285 Smooth is available (GenBank: [CP009482](#)).

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.² This opportunistic pathogen is capable of causing disease in both humans and animals. *M. avium* is subspecies 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.³⁻⁵

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% 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 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.

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:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

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 Genes in the *Mycobacterium avium* Complex." J. Clin. Microbiol. 47 (2009): 1002-1011. PubMed: 19144814.

ATCC® is a trademark of the American Type Culture Collection.

