

***Mycobacterium abscessus*, Strain MA 1948**

Catalog No. NR-44263

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Mycobacteriaceae*, *Mycobacterium*

Species: *Mycobacterium abscessus*

Strain: MA 1948 (also referred to as strain 1948)¹

Original Source: *Mycobacterium abscessus* (*M. abscessus*), strain MA 1948 was isolated between 2009 and 2013 from human sputum in the United States.¹ NR-44263 was deposited as *Mycobacterium abscessus*. Whole genome sequencing performed at ATCC® putatively identified strain MA 1948 as subspecies *bolletii*.

Note: The spelling of the subspecies on the vial label is incorrect. The correct spelling of the subspecies is *bolletii*.

Comment: *M. abscessus*, strain MA 1948 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. The complete genome of *M. abscessus*, strain MA 1948 has been sequenced (GenBank: [JAOH00000000](#)).

M. abscessus is an acid-fast, Gram-positive, non-motile, non-pigmenting, rod-shaped, rapidly growing nontuberculous mycobacterium.^{2,3} It is highly resistant to a number of antimicrobials, as well as commonly used disinfectants, particularly chlorine.^{2,3,4} *M. abscessus* is associated with chronic pneumonia in patients with chronic lung disease and with soft-tissue and post-surgical infections in both community and healthcare settings. This organism has been isolated from human, animal and environmental sources, including soil, bioaerosols and water.⁴ *M. abscessus* is subspeciated into *M. abscessus* subsp. *abscessus*, *M. abscessus* subsp. *bolletii* and *M. abscessus* subsp. *massiliense* based on the functionality of an inducible erythromycin methylase (*erm*) gene, with *M. abscessus* subsp. *massiliense* lacking a functional *erm*.^{5,6}

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-44263 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 Middlebrook 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 abscessus*, Strain MA 1948, NR-44263.”

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/bmbl5/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. Adékambi, T., et al. “*rpoB* Gene Sequence-Based Characterization of Emerging Non-Tuberculous Mycobacteria with Descriptions of *Mycobacterium bolletii* sp. nov., *Mycobacterium phocaicum* sp. nov. and *Mycobacterium aubagnense* sp. nov.” Int. J. Syst. Evol. Microbiol. 56 (2006): 133-143. PubMed: 16403878.
3. Adékambi, T. and M. Drancourt. “Dissection of Phylogenetic Relationships Among 19 Rapidly Growing *Mycobacterium* Species by 16S rRNA, *hsp65*, *sodA*, *recA* and *rpoB* Gene Sequencing.” Int. J. Syst. Evol. Microbiol. 54 (2004): 2095-2105. PubMed: 15545441.
4. Brown-Elliott, B. A. and R. J. Wallace, Jr. “Clinical and Taxonomic Status of Pathogenic Nonpigmented or Late-Pigmenting Rapidly Growing Mycobacteria.” Clin. Microbiol. Rev. 15 (2002): 716-746. PubMed: 12364376.
5. Nessar, R., et al. “*Mycobacterium abscessus*: A New Antibiotic Nightmare.” J. Antimicrob. Chemother. 67 (2012): 810-818. PubMed: 22290346.
6. Griffith, D. E. “*Mycobacterium abscessus* subsp *abscessus* Lung Disease: 'Trouble Ahead, Trouble Behind...!'” F1000Prime Rep. 6 (2014): 107. PubMed: 25580261.

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