

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

Catalog No. NR-44263

Product Description: *Mycobacterium abscessus* (*M. abscessus*), strain MA 1948 was isolated between 2009 and 2013 from human sputum in the United States.

Lot¹: 62009760

Manufacturing Date: 25NOV2013

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis² Cellular morphology Colony morphology ³ Motility (wet mount) Growth on Brain Heart Infusion agar Growth on MacConkey agar (without crystal violet) Growth rate Growth at 37°C Growth at 45°C Growth at 55°C Acid-fast stain Biochemical tests ^{4,5} Nitrate reduction Aryl sulfate (3 days) Aryl sulfate (14 days) Iron uptake Growth in the presence of 5% sodium chloride Growth in the presence of thiophene-2-carboxylic acid hydrazide (TCH)	Report results Report results Report results Report results Report results ≤ 7 days Positive Negative Negative Positive (red colonies) Negative Positive Positive Negative Report results Positive	Gram-positive rods Irregular, low convex, lobate, rough, rugose, opaque and cream (Figure 1) Non-motile Growth Growth 7 days Positive Negative Negative Positive (red colonies) Negative Positive Positive Negative Positive Positive
Genotypic Analysis⁶ Sequencing of HSP65 gene (430 base pairs)	Report results	Consistent with <i>M. abscessus</i> ⁷
Whole Genome Sequencing^{6,8}	Report results	Consistent with <i>M. abscessus</i>
Purity (post-freeze)^{9,10}	Growth consistent with <i>M. abscessus</i>	Growth consistent with <i>M. abscessus</i>
Viability (post-freeze)³	Growth	Growth

¹NR-44263 was produced by inoculation of the deposited material in Middlebrook 7H9 broth with ADC enrichment for 14 days at 37°C in an aerobic atmosphere with 5% CO₂. Broth inoculum was added to Middlebrook 7H10 agar with OADC enrichment kolles, which were grown for 10 days under propagation conditions to produce this lot.

²Information on *Mycobacterium* testing is available from Ribón, W. "Biochemical Isolation and Identification of Mycobacteria, Biochemical Testing" *Biochemical Testing*. (2012) Jose C. Jimenez-Lopez (Ed.), InTech, Available from: <http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-of-mycobacteria> and Lévy-Frédault, V. V. and F. Portals. "Proposed Minimal Standards for the Genus *Mycobacterium* and for Description of New Slowly Growing *Mycobacterium* Species." *Int. J. Syst. Bacteriol.* 42 (1992): 315-323. PubMed: 1581193.

³11 days on Middlebrook 7H10 Agar with OADC enrichment under propagation conditions

⁴Negative tests are observed for >7 days.

⁵Biochemical test results rule out *Mycobacterium fortuitum* group, *Mycobacterium smegmatis*, *Mycobacterium mucogenicum* and *Mycobacterium chelonae*.

⁶DNA was extracted from a broth culture produced from NR-44263 lot 62009760.

⁷Consistent with *M. abscessus* subsp. *abscessus*, *M. abscessus* subsp. *bolletii*, *M. abscessus* subsp. *massiliense* and *M. chelonae*

⁸Illumina[®] MiSeq[®] sequence was analyzed with CLC Genomics Workbench Version 7.0.2.

⁹Purity of this lot was assessed for 11 days on Middlebrook 7H10 agar with OADC enrichment under propagation conditions.

¹⁰Middlebrook 7H10 agar with OADC enrichment contains malachite green, which may inhibit growth of contaminating microorganisms.

Figure 1: Colony Morphology



Date: 18 SEP 2015

Signature:

A handwritten signature in black ink, appearing to read "David C. Archer".

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