

***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. NR-44263 was produced by inoculation of the BEI Resources seed lot 62009735 into Middlebrook 7H9 broth with ADC enrichment and grown for 7 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 7 days at 37°C in an aerobic atmosphere with 5% CO₂ to produce this lot.

Lot: 70032483

Manufacturing Date: 22JAN2020

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis¹ Cellular Morphology 11 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Middlebrook 7H10 agar with OADC enrichment Colony morphology Motility (wet mount) Growth rate Growth at 45°C Growth at 55°C Acid-fast stain Pigmentation in the dark (Scotochromogen) Photoinduction for 1 hour (Photochromogen) Nonchromogen (no pigment) Biochemical tests ^{2,3} Catalase Catalase (semiquantitative) Catalase (68°C) Iron uptake Nitrate reduction Tween 80 Urease 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 ≤ 7 days Negative Negative Positive (red colonies) Negative (no pigment) Negative Positive Positive Positive Positive Negative Report results Report results Positive Positive Positive	Gram-positive rods Irregular, flat, undulate, rough and cream (Figure 1) Non-motile 7 days Negative Negative Positive (red colonies) Negative (no pigment) Negative Positive Positive Positive Positive Negative Negative Negative Positive Positive
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1410 base pairs) Sequencing of Heat Shock Protein 65 gene (~ 440 base pairs)	≥ 99% sequence identity to <i>M. abscessus</i> , strain MA 1948 (GenBank: JAOH01000002.1) ≥ 99% sequence identity to <i>M. abscessus</i> , strain MA 1948 (GenBank: JAOH01000002.1)	99.9% sequence identity to <i>M. abscessus</i> , strain MA 1948 (GenBank: JAOH01000002.1) ⁴ 99.3% sequence identity to <i>M. abscessus</i> , strain MA 1948 (GenBank: JAOH01000002.1)
Purity (post-freeze) Middlebrook 7H10 agar with OADC enrichment 11 days at 37°C in an aerobic atmosphere with 5% CO ₂ Tryptic Soy agar 11 days at 37°C in an aerobic atmosphere with 5% CO ₂	Growth consistent with expected colony morphology Report results	Growth consistent with expected colony morphology Growth consistent with expected colony morphology
Viability 7 days at 37°C in an aerobic atmosphere with 5% CO ₂ on Middlebrook 7H10 agar with OADC enrichment	Growth	Growth

¹Information 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>.

²Negative tests are observed for > 7 days.

³Biochemical test results rule out *Mycobacterium fortuitum* group, *Mycobacterium smegmatis*, *Mycobacterium mucogenicum* and *Mycobacterium chelonae*.

⁴Also consistent with *M. abscessus* subsp. *abscessus*, *M. abscessus* subsp. *bolletii*, *M. abscessus* subsp. *massiliense* and *M. chelonae*

Figure 1: Colony Morphology



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