

***Mycobacterium avium*, Strain 2285 Rough**

Catalog No. NR-44264

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Product Description: *Mycobacterium avium* (*M. avium*), strain 2285 Rough was isolated between 2009 and 2013 from human sputum at the National Institute for Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Bethesda, Maryland, USA.

Lot¹: 70020045

Manufacturing Date: 04DEC2018

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis^{2,3} Cellular morphology Colony morphology ⁴ Motility (wet mount) Growth rate Growth at 37°C Acid-fast stain VITEK [®] MS (MALDI-TOF)	Gram-positive rods Report results Report results ≥ 7 days Positive Positive (red colonies) <i>M. avium</i> (≥ 90%)	Gram-positive rods Irregular, flat, undulate, rough and cream (Figure 1) Non-motile 10 days Positive Positive (red colonies) <i>M. avium</i> (99.9%)
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1410 base pairs)	≥ 99% sequence identity to <i>M. avium</i> , strain 2285 Rough (GenBank: JAOE01000002.1)	99.7% sequence identity to <i>M. avium</i> , strain 2285 Rough (GenBank: JAOE01000002.1)
Purity (post-freeze) Middlebrook 7H10 agar with OADC enrichment ^{5,6} Tryptic Soy agar ⁵	Growth consistent with expected colony morphology Report results	Growth consistent with expected colony morphology Growth consistent with expected colony morphology
Viability (post-freeze)⁴	Growth	Growth

¹NR-44264 was produced by inoculation of BEI Resources NRS-44264 lot 62009736 into Middlebrook 7H9 broth with ADC enrichment and grown for 17 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 8 days at 37°C in an aerobic atmosphere with 5% CO₂ to produce this lot.

²Phenotypic tests performed on NRS-44264 lot 62009736 rule out other slow-growing *Mycobacterium* species [Magee, J. G. and A. C. Ward. "Family III. *Mycobacteriaceae* Chester 1897, 63^{AL}." *Bergey's[®] Manual of Systematic Bacteriology, Second Edition, Volume Five.* (2012) Goodfellow, M., et al. (Ed.), Springer].

³Information on *Mycobacterium* testing is available from Ribón, W. "Biochemical Isolation and Identification of Mycobacteria." *Biochemical Testing.* (2012) Jose C. Jimenez-Lopez (Ed.), InTech, <http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-of-mycobacteria> and Lévy-Frébault, V. V. and F. Portaels. "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.

⁴10 days at 37°C in an aerobic atmosphere with 5% CO₂ on Middlebrook 7H10 agar with OADC enrichment

⁵Purity of this lot was assessed for 10 days at 37°C in an aerobic atmosphere with 5% CO₂.

⁶Middlebrook 7H10 agar with OADC enrichment contains malachite green, which may inhibit growth of contaminating microorganisms.

Figure 1: Colony Morphology



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