

***Mycobacterium avium*, Strain DJO-44271**

Catalog No. NR-49092

Product Description: Isolation information for *Mycobacterium avium* (*M. avium*), strain DJO-44271 is not known.

Lot¹: 63066972

Manufacturing Date: 30OCT2013

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis^{2,3} Cellular morphology Colony morphology ⁴ Motility (wet mount) Growth on Brain Heart Infusion agar Growth rate Growth at 26°C Growth at 37°C 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 ⁵ Nitrate reduction Pyrazinamidase Urease Catalase Semiquantitative catalase Heat-stable catalase Iron uptake Tween 80 hydrolysis Growth in the presence of 5% sodium chloride Growth in the presence of thiophene-2-carboxylic acid hydrazide (TCH)	Gram-positive rod Report results Report results Report results ≥ 7 days Report results Positive Report results Report results Positive (red colonies) Negative (no pigment) Negative (no pigment) Positive (no pigment) Negative Report results Negative Positive Report results Report results Negative Negative Negative Positive	Gram-positive rod Punctiform and white (Figure 1) Non-motile Growth > 10 days Positive Positive Positive Negative Positive (red colonies) Negative (no pigment) Negative (no pigment) Positive (no pigment) Positive ⁶ Positive Positive ⁶ Positive Negative Positive Negative Negative Positive ⁶ Positive
Genotypic Analysis⁷ Whole Genome Sequencing (~ 5.0 megabase pairs)	Report results	Consistent with <i>M. avium</i>
Purity (post-freeze)^{8,9}	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)⁴	Growth	Growth

¹NR-49092 was produced by inoculation of the deposited material in Middlebrook 7H9 broth with ADC enrichment for 29 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 13 days at 37°C in an aerobic atmosphere with 5% CO₂ to produce this lot.

²Information on *Mycobacterium* testing is available from Ribón, W. "Biochemical Isolation and Identification of Mycobacteria" *Biochemical Testing*. (2012) Jose C. Jimenez-Lopez (Ed.), InTech, Available from: <http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-of-mycobacteria>, 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, and Magee, J. G. and A.C. Ward. "Family III. *Mycoacteriaceae* Chester 1897, 63^{AL}" *Bergey's® Manual of Systematic Bacteriology, Volume 5*. (2012) Goodfellow, M., et al. (Ed.), Springer.

³Phenotypic test rule out other slow-growing *Mycobacterium* species. (Magee, J. G. and A.C. Ward. "Family III. *Mycoacteriaceae* Chester 1897, 63^{AL}" *Bergey's® Manual of Systematic Bacteriology, Volume 5*. (2012) Goodfellow, M., et al. (Ed.), Springer.)

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

⁵Negative tests are observed for > 7 days.

⁶Specifications for these tests were obtained from 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, which

indicates that most strains of *M. avium* are negative for this test; however up to 15% of strains may be positive.

⁷Illumina[®] MiSeq[®] sequence was analyzed with CLC Genomics Workbench Version 7.0.2.

⁸Purity of this lot was assessed for 13 days at 37°C in an aerobic atmosphere with 5% CO₂ on Middlebrook 7H10 agar with OADC enrichment.

⁹Middlebrook 7H10 agar with OADC enrichment contains malachite green, which may inhibit growth of contaminating microorganisms.

Figure 1: Colony Morphology



Date: 12 NOV 2015

Signature:

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