

***Mycobacterium simiae*, Strain MO-323**

Catalog No. NR-4434

Product Description: *Mycobacterium simiae* (*M. simiae*), strain MO-323 was isolated in June 1989 from bronchial washings of a patient diagnosed with progressive cavitory lung disease at the Southwest Texas Methodist Hospital in San Antonio, Texas, USA. Strain MO-323 was deposited as a multi-drug resistant (MDR) strain, reported by the depositor as resistant to amikacin, ethambutol, isoniazid, rifabutin and rifampin.

Lot¹: 59139677

Manufacturing Date: 06JUL2010

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis^{2,3} Cellular morphology Colony morphology ⁴ 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 Biochemical tests ⁶ Catalase Catalase (semiquantitative) Catalase (68°C) Iron uptake Nitrate reduction Pyrazinamidase Tween 80 hydrolysis Urease Growth in the presence of 5% sodium chloride Growth in the presence of thiophene-2-carboxylic acid hydrazide (TCH)	Gram-positive rods Report results Report results ≥ 7 days Positive Positive Negative Report results Positive (red colonies) Photochromogen Positive Report results Positive Negative Negative Positive Negative Positive Negative Positive	Gram-positive rods Circular, slightly convex and white (Figure 1) Growth 12 days Positive Positive Positive ⁵ Negative Positive (red colonies) Photochromogen Positive Positive Positive Negative Negative Negative ⁵ Negative Positive Negative Positive
Genotypic Analysis⁷ Whole Genome Sequencing (~ 5.9 megabase pairs)	Report results	Consistent with <i>M. simiae</i>
Purity (post-freeze)^{8,9}	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)⁴	Growth	Growth

¹The deposited material was inoculated into broth and grown, and the resulting subculture was vialled and frozen. NR-4434 was produced by inoculation of the frozen subculture into Middlebrook 7H9 broth with ADC enrichment for 17 days at 37°C in an aerobic atmosphere. Broth inoculum was added to Middlebrook 7H10 agar with OADC enrichment kolles, which were grown for 15 days at 37°C in an aerobic atmosphere conditions 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, <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.

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

⁴12 days at 37°C in an aerobic atmosphere on Middlebrook 7H10 agar with OADC enrichment

⁵Specifications for these tests were obtained from Bergey's Manual® of Systematic Bacteriology, 2nd ed., Volume 5, Part C, which indicates that a positive biochemical result is represented by > 90% of strains tested being positive and a negative result is represented by < 10% of strains tested being positive.

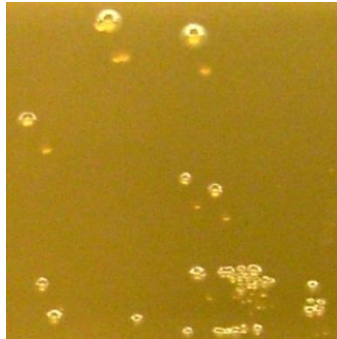
⁶Negative tests are observed for > 7 days.

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

⁸Purity of this lot was assessed for 12 days at 37°C in an aerobic atmosphere 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: 10 DEC 2015

Signature:

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