

## Certificate of Analysis for NR-44269

## Mycobacterium kansasii, Strain 824

## Catalog No. NR-44269

**Product Description:** *Mycobacterium kansasii* (*M. kansasii*), strain 824 was isolated in 2012 from human sputum at the University of Texas Health Science Center at Tyler, Tyler, Texas, USA.

Lot<sup>1</sup>: 62009754 Manufacturing Date: 02OCT2013

| TEST  | SPECIFICATIONS                     | RESULTS                            |
|---|------------------------------------|------------------------------------|
| Phenotypic Analysis <sup>2</sup>  |                                    |                                    |
| Cellular morphology   | Gram-positive rods                 | Gram-positive rods                 |
| Colony morphology <sup>3</sup>  | Report results                     | Punctiform and yellow (Figure 1)   |
| Motility (wet mount)  | Report results                     | Non-motile                         |
| Growth on Brain Heart Infusion agar   | Report results                     | Growth                             |
| Growth rate   | ≥ 7 days                           | ≥ 7 days                           |
| Acid-fast stain   | Positive (red colonies)            | Positive (red colonies)            |
| Photoinduction for 1 hour (Photochromogen) Biochemical tests <sup>4,5</sup> | Positive (pigment)                 | Positive (yellow pigment)          |
| Catalase  | Positive                           | Positive                           |
| Catalase (semiquantitative)   | Positive                           | Positive                           |
| Catalase (68°C)   | Positive                           | Positive                           |
| Iron uptake   | Negative                           | Negative                           |
| Nitrate reduction   | Positive                           | Positive                           |
| Tween 80 hydrolysis   | Positive                           | Positive                           |
| Genotypic Analysis <sup>6,7</sup>   |                                    |                                    |
| Whole Genome Sequencing   | Report results                     | Consistent with M. kansasii        |
| (~ 6.4 megabase pairs)  | ·                                  |                                    |
| Purity (post-freeze) <sup>8,9</sup>   | Growth consistent with M. kansasii | Growth consistent with M. kansasii |
| Viability (post-freeze) <sup>3</sup>  | Growth                             | Growth                             |

<sup>&</sup>lt;sup>1</sup>NR-44269 was produced by inoculation of the deposited material into Middlebrook 7H9 broth with ADC enrichment and grown for 8 days at 37°C in an aerobic atmosphere with 5% CO<sub>2</sub>. Broth inoculum was added to Middlebrook 7H10 agar with OADC enrichment kolles, which were grown for 8 days under propagation conditions to produce this lot.

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<sup>&</sup>lt;sup>2</sup>Information on *Mycobacterium* testing is available from Ribón, W. "Biochemical Isolation and Identification of Mycobacteria, Biochemical Testing"

<u>Biochemical Testing</u>. (2012) Jose C. Jimenez-Lopez (Ed.), InTech, Available from: <a href="http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-of-mycobacteria">http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-of-mycobacteria</a> and Lévy-Frébault, V. V. and F. Portaels. "Proposed Minimal Standards for the Genus *Mycobacterium* and for Description of New Slowly Growing *Mycobacterium* Species." <a href="https://example.com/books/biochemical-testing/biochemical-testing/biochemical-testing/biochemical-testing/biochemical Isolation and Identification of Mycobacteria, Biochemical Testing">https://example.com/books/biochemical-testing/biochemical-

<sup>&</sup>lt;sup>3</sup>9 days on Middlebrook 7H10 agar with OADC enrichment under propagation conditions

<sup>&</sup>lt;sup>4</sup>Negative tests are observed for > 7 days.

<sup>&</sup>lt;sup>5</sup>Biochemical test results rule out other slow-growing *Mycobacterium* species, including *M. africanum*, *M. asiaticum*, *M. celatum*, *M. haemophilum*, *M. marinum*, *M. simiae*, *M. ulcerans* and *M. xenopi*.

<sup>&</sup>lt;sup>6</sup>DNA was extracted from a broth culture produced from NR-44269 lot 62009754.

<sup>&</sup>lt;sup>7</sup>Illuminia<sup>®</sup> MiSeq<sup>®</sup> sequence was analyzed with CLC Genomics Workbench Version 7.0.2.

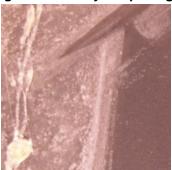
<sup>&</sup>lt;sup>8</sup>Purity of this lot was assessed for 9 days on Middlebrook 7H10 agar with OADC enrichment under propagation conditions.

<sup>&</sup>lt;sup>9</sup>Middlebrook 7H10 agar with OADC enrichment contains malachite green, which may inhibit growth of contaminating microorganisms.



## **Certificate of Analysis for NR-44269**

Figure 1: Colony Morphology



**Date:** 27 OCT 2015

Signature:

**BEI Resources Authentication** 

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