SUPPORTING INFECTIOUS DISEASE RESEARCH

Mycobacterium tuberculosis, Strain HN1175

Catalog No. NR-20785

Product Description: Mycobacterium tuberculosis (M. tuberculosis), strain HN1175 was isolated in 1997 from an extrapulmonary source (knee) of a patient with tuberculosis in Texas, USA. Strain HN1175 was deposited as a non-drug resistant strain.

Lot¹: 63383575

Manufacturing Date: 06AUG2015

| TEST | SPECIFICATIONS | RESULTS |
|--|---|---|
| Phenotypic Analysis ² | | |
| Cellular morphology | Gram-positive rods | Gram-positive rods |
| Colony morphology ³ | Report results | Irregular, raised, undulate, rough and cream (Figure 1) |
| Growth rate | ≥ 7 days | 31 days |
| Growth at 26°C | Negative | Negative |
| Growth at 37°C | Positive | Positive |
| Acid-fast stain | Positive (red colonies) | Positive (red colonies) |
| Pigmentation in the dark (Scotochromogen) | Negative (no pigment) | Negative (no pigment) |
| Photoinduction for 1 hour (Photochromogen) | Negative (no pigment) | Negative (no pigment) |
| Nonchromogen (no pigment) | Positive (no pigment) | Positive (no pigment) |
| Biochemical tests | | |
| Niacin production ⁴ | Positive | Positive |
| Nitrate reduction | Positive | Positive |
| Pyrazinamidase | Positive | Positive |
| Genotypic Analysis | | |
| Sequencing of Heat Shock Protein 65 gene (~ 430 base pairs) | ≥ 99% sequence identity to <i>M. tuberculosis</i> type strain (GenBank: AL123456) | 100% sequence identity to <i>M. tuberculosis</i> type strain (GenBank: AL123456) ⁵ |
| Purity (post-freeze) ⁶ | Growth consistent with expected colony morphology | Growth consistent with expected colony morphology |
| Viability (post-freeze) ³ | Growth | Growth |

¹NR-20785 was produced by inoculation of the deposited material into Middlebrook 7H9 broth with ADC enrichment. Broth inoculum was added to Middlebrook 7H10 agar with OADC enrichment kolles, which were grown for 21 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, http://www.intechopen.com/books/biochemical-testing/biochemical-isolation-and-identification-ofmycobacteria 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. ³31 days at 37°C in an aerobic atmosphere with 5% CO₂ on Middlebrook 7H10 agar with OADC enrichment

⁴All mycobacteria produce niacin but only *M. tuberculosis* accumulates it, resulting in a positive test for *M. tuberculosis*.

⁵Also consistent with *M. africanum*, *M. bovis*, *M. canettii* and *M. microti*.

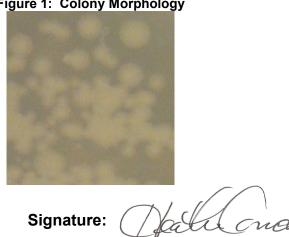
⁶Purity of this lot was assessed for 48 days at 37°C in an aerobic atmosphere with 5% CO₂ on Middlebrook 7H10 agar with OADC enrichment and 31 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar plates.

biei resources

Certificate of Analysis for NR-20785

SUPPORTING INFECTIOUS DISEASE RESEARCH

Figure 1: Colony Morphology



Date: 27 JUN 2016

BEI Resources Authentication

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

ATCC® is a trademark of the American Type Culture Collection.

You are authorized to use this product for research use only. It is not intended for human use.

