# Certificate of Analysis for NR-49653

## Genomic DNA from *Mycobacterium africanum*, Strain NLA000017458

## Catalog No. NR-49653

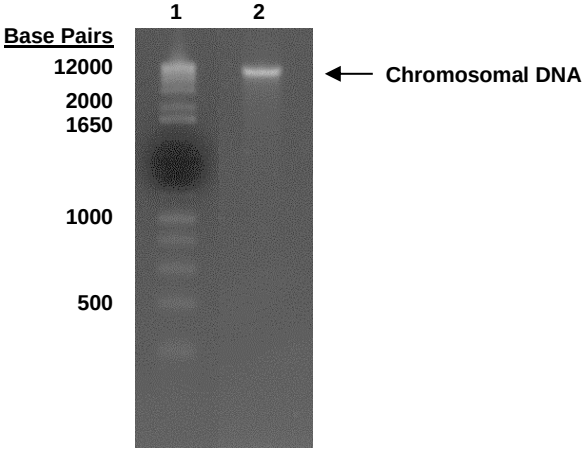
**Product Description:** Genomic DNA was extracted from a preparation of *Mycobacterium africanum (M. africanum)*, strain NLA000017458. *M. africanum*, strain NLA000017458 was isolated in May 1993 from the sputum of a human patient and was deposited to BEI Resources as an *M. africanum* West African type I strain.

**Lot[1,2]: 63954389** **Manufacturing Date: 11APR2016**

| TEST | SPECIFICATIONS | RESULTS |
|---|---|---|
| **Genotypic Analysis**<br>Sequencing of 16S ribosomal RNA gene (~ 1360 base pairs) | ≥ 99% sequence identity to *M. africanum* type strain (GenBank: AF480605.1) | 99.9% sequence identity to *M. africanum* type strain (GenBank: AF480605.1)[3] |
| **Agarose Gel Electrophoresis** | High molecular weight chromosomal DNA | High molecular weight chromosomal DNA (Figure 1) |
| **Concentration by PicoGreen® Measurement** | 0.7 to 1.5 µg in 25 to 100 µL | 0.3 µg in 33 µL per vial (8.3 µg/mL) |
| **Amount per vial** | 0.7 to 1.5 µg | 0.3 µg[4] |
| **Functional Activity by PCR Amplification**<br>16S ribosomal RNA gene | ~ 1500 base pair amplicon | ~ 1500 base pair amplicon |
| **$OD_{260}/OD_{280}$ Ratio** | 1.7 to 2.1 | 1.8 |
| **Bacterial Inactivation**<br>10% of total yield plated on agar[5,6] | No viable bacteria detected | No viable bacteria detected |

[1]The bacterial preparation used for extraction of genomic DNA was produced from the deposited material. Genomic DNA was extracted using proprietary technology.
[2]NR-49653 lot 63954389 was vialed in TE buffer (10 mM Tris-HCl, 1 mM EDTA, pH ~ 8.0).
[3]Also consistent with other *Mycobacterium* species
[4]The amount of genomic DNA per vial falls below the current specification, but does not negatively impact the final product.
[5]30 days at 37°C in an aerobic atmosphere with 5% $CO_2$ on Middlebrook 7H10 agar with OADC enrichment
[6]An extraction procedure was used that has been shown to consistently inactivate 100% of Gram-positive and Gram-negative bacteria.

**Figure 1: Agarose Gel Electrophoresis**




**Lane 1: Invitrogen™ TrackIt 1 Kb Plus DNA Ladder™**
**Lane 2: ~ 170 ng of NR-49653**

**BEI Resources**
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Heather Couch

Digitally signed by Heather Couch
Date: 2018.04.18 09:27:01 -04'00'

18 APR 2018

Program Manager or designee, ATCC Federal Solutions

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.



Support Provided by NIAID

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