

## Certificate of Analysis for MRA-102G

## Genomic DNA from Plasmodium falciparum, Strain 3D7

## Catalog No. MRA-102G

This reagent is the tangible property of the U.S. Government.

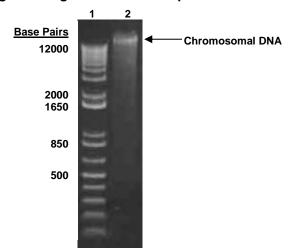
**Product Description:** Genomic DNA was extracted from a preparation of *Plasmodium falciparum* (*P. falciparum*), strain 3D7.

Lot<sup>1,2</sup>: 63834915 Manufacturing Date: 18DEC2015

| TEST   | SPECIFICATIONS   | RESULTS   |
|--|--|---|
| Sequencing of Merozoite Surface Protein 2 (MSP2) gene (~ 780 base pairs)                           | ≥ 99% sequence identity to <i>P. falciparum</i> , strain 3D7 (GenBank: LN999943.1) | 100% sequence identity to P. falciparum, strain 3D7 (GenBank: LN999943.1) |
| Agarose Gel Electrophoresis  | High molecular weight chromosomal DNA  | High molecular weight chromosomal DNA (Figure 1)                          |
| Concentration by PicoGreen® Measurement  | Report results   | ~ 500 ng in 50 μL per vial (10 ng/μL)                                     |
| Amount   | Report results   | ~ 500 ng per vial   |
| Functional Activity by PCR Amplification MSP2 locus <sup>3</sup>                                   | ~ 600-900 base pair amplicon   | ~ 900 base pair amplicon  |
| OD <sub>260</sub> /OD <sub>280</sub> Ratio   | 1.6 to 2.1   | 2.1   |
| Protozoan Inactivation Human erythrocytes exposed to 10% of total yield of MRA-102G <sup>4,5</sup> | No parasitemia observed  | No parasitemia observed   |
| Mycoplasma Contamination DNA Detection by PCR  | None detected  | None detected   |

<sup>&</sup>lt;sup>1</sup>MRA-102G was produced from a cell culture of BEI Resources MRA-102 lot 7597013. Genomic DNA was extracted using proprietary technology. <sup>2</sup>MRA-102G lot 63834915 was vialed in TE buffer (10 mM Tris-HCl and 0.5 mM EDTA, pH 9).

Figure 1: Agarose Gel Electrophoresis



Lane 1: Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder

Lane 2: 664 ng of MRA-102G

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<sup>&</sup>lt;sup>3</sup>Primer sequences and conditions for PCR are available upon request.

<sup>&</sup>lt;sup>4</sup>14 days in complete RPMI culture medium at 37°C in sealed flasks outgassed with blood-gas atmosphere (90% N<sub>2</sub>, 5% CO<sub>2</sub>, 5% O<sub>2</sub>). Complete RPMI culture medium was changed and parasitemia checked every 2 to 3 days.

<sup>&</sup>lt;sup>5</sup>An extraction procedure was used that has been shown to consistently inactivate 100% of *Plasmodium* parasites.



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/Heather Couch/ Heather Couch

28 AUG 2018

Program Manager or designee, ATCC Federal Solutions

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