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: 70027050[1-3] **Manufacturing Date: 20SEP2019**

TEST	SPECIFICATIONS	RESULTS
Sequencing of Merozoite Surface Protein 2 (MSP2) gene (~ 770 base pairs)	≥ 99% sequence identity to *P. falciparum*, strain 3D7 (GenBank: LN999943.1)	100% sequence identity to *P. falciparum*, strain 3D7 (GenBank: LN999943.1)[4]
Agarose Gel Electrophoresis	High molecular weight chromosomal DNA	High molecular weight chromosomal DNA (Figure 1)
Concentration by PicoGreen® Measurement	Report results	~ 0.5 µg in 50 µL per vial (10 µg/mL)
Amount per Vial	Report results	~ 0.5 µg
Functional Activity by PCR Amplification MSP2 locus[5]	~ 600-900 base pair amplicon	~ 900 base pair amplicon
OD_{260}/OD_{280} Ratio	1.6 to 2.1	1.9
Protozoan Inactivation Human erythrocytes exposed to 10% of total yield of MRA-102G[6,7]	No parasitemia observed	No parasitemia observed
Mycoplasma Contamination DNA Detection by PCR	None detected	None detected

[1]MRA-102G was produced from a cell culture of BEI Resources MR-MRA-102 lot 63085271. Genomic DNA was extracted using proprietary technology.
[2]MRA-102G lot 70027050 was vialed in AE buffer (10 mM Tris-HCl and 0.5 mM EDTA, pH 9).
[3]Testing was completed on bulk material prior to freezing.
[4]Next-generation sequencing assembled using MRA-102G lot 61875543 as the reference sequence
[5]Primer sequences and conditions for PCR are available upon request.
[6]14 days in complete RPMI culture medium at 37°C in sealed flasks outgassed with blood-gas atmosphere (90% N_2, 5% CO_2, 5% O_2). Complete RPMI culture medium was changed and parasitemia checked every 1 to 5 days.
[7]An extraction procedure was used that has been shown to consistently inactivate 100% of *Plasmodium* parasites.

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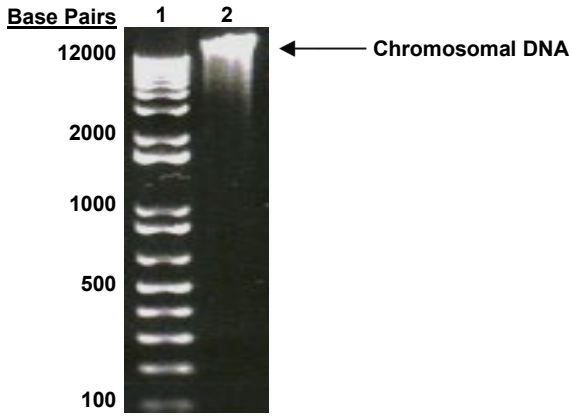
Figure 1: Agarose Gel Electrophoresis



Lane 1: Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder
Lane 2: ~ 200 ng of MRA-102G

/Heather Couch/
Heather Couch 12 DEC 2019
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.

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