

Plasmodium falciparum, Strain Tanzania (2000708)

Catalog No. MRA-1169

Product Description:

Plasmodium falciparum (*P. falciparum*), strain Tanzania (2000708) was isolated in September 2006 from the blood of a 3-year-old patient with mild malaria in Morogoro, Tanzania, and adapted to culture at SBRI. MRA-1169 was produced by cultivation of BEI Resources seed lot 61535334 in fresh human erythrocytes suspended in RPMI 1640 medium adjusted to contain 10% (v/v) heat-inactivated human serum (Type A), 25 mM HEPES, 2 mM L-glutamine, 2 g/L D-glucose, 27 µg/mL hypoxanthine and 5 µg/mL gentamicin. The culture was propagated in human Type O erythrocytes at 37°C in sealed flasks outgassed with a blood-gas atmosphere (90% N₂, 5% CO₂, 5% O₂) and monitored for parasitemia for 14 days. Every 1 to 4 days, uninfected, leukocyte-filtered, Type O erythrocytes in complete culture medium were added dropwise as needed to maintain 1% to 3% hematocrit. The culture was harvested when the total parasitemia reached ≥ 2% to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70074522

Manufacturing Date: 07MAR2025

BEI Resources is committed to ensuring digital accessibility for people with disabilities. This Certificate of Analysis contains complex tables and may not be fully accessible. Please let us know if you encounter accessibility barriers and a fully accessible document will be provided: E-mail: Contact@BEIResources.org. We try to respond to feedback within 24 hours.

TEST	SPECIFICATIONS	RESULTS
Identification by Giemsa Stain Microscopy ¹	Blood-stage parasites present	Blood-stage parasites present
Genotypic Analysis ¹ Sequencing of Merozoite Surface Protein 2 (MSP2) gene (~ 730 base pairs)	Consistent with <i>P. falciparum</i>	Consistent with <i>P. falciparum</i> (Figure 1)
Antimalarial Susceptibility Profile (in vitro) ¹ Half-maximal Inhibitory Concentration (IC ₅₀) by SYBR Green I [®] drug sensitivity assay ² Chloroquine Artemisinin Quinine Cycloguanil Pyrimethamine Sulfadoxine	Report results Report results Report results Report results Report results Report results	22.9 ± 1.6 nM 10.5 ± 0.5 nM 120.8 ± 11.1 nM 1045 ± 96.4 nM 25190 ± 2323 nM 212300 ± 49317 nM
Level of Parasitemia by Giemsa Stain Microscopy Pre-freeze (14 days post-infection) ³ Ring-stage parasitemia Total parasitemia Post-freeze (4 days post-infection) ¹ Ring-stage parasitemia Total parasitemia	Report results ≥ 2% Report results ≥ 1%	 2.7% 4.1% 2.1% 3.8%
Viability (4 days post-infection) ¹	Growth in infected red blood cells	Growth in infected red blood cells
Sterility (14-day incubation) ¹ Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Sheep blood agar, 37°C, aerobic Sheep blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic	No growth No growth No growth No growth No growth	No growth No growth No growth No growth No growth
Mycoplasma Contamination ¹ DNA detection by PCR	None detected	None detected

¹Testing completed on vial, post-freeze material.

²A SYBR Green I[®] anti-malarial drug sensitivity assay in 96-well plates was used to determine IC₅₀ values of an active (> 70% ring stage) parasite culture in the presence of each antimalarial drug [Hartwig, C. L., et al. "XI: I. SYBR Green I[®]-Based Parasite Growth Inhibition Assay for Measurement of Antimalarial Drug Susceptibility in *Plasmodium falciparum*." In: Moll, K., et al. (Eds.), Methods in Malaria Research, 6th ed. EVIMalaR, 2013. 122-129. Methods in Malaria Research Sixth Edition is available on the [BEI Resources website](http://www.beiresearch.com).]

³Testing completed on bulk material prior to vialing and freezing.

Figure 1: MRA-1169 MSP2 Sequence

```
CTTTAATATTAAAAATGAAAGTAAATATAGCAACACATTCATAAACAATGCTTATAATATGAGTATAAGGAGAAGTATGTCAGAAAAG
TAAGCCTCCTACTGGTGCTAGTGGTAGTGCTGGTTCTGGTTCTGGTGCTGTTGCTAGTGCTGGTAATGGTGCTAATCCTGGTGCAGA
TGCTAAGAGAAGTCCAAGTACTCCCCTACTCCCCTACTCCCCTACTCCCCTACTCCCCTACTCCCCTACTCCCCTACTCCCCTACTAC
CACAACACTACCACAACACTACTAATGATGCAGAAGCATCTACCAGTACCTCTTCAGAAAATTCAAATCATAATAATGCCGAAACAAATCC
AAAAGGTAAAGGAGAAGTTCAAGAACCAAATCAAGCAAATAAAGAAACTCAAATAACTCAAATGTTCAACAAGACTCTCAAATAA
ATCAAATGTTCCACCCACTCAAGATGCAGACACTAAAAGTCTACTGCACAACCTGAACAAGCTGAAAATTCTGCTCCAACAGCCGA
ACAAACTGAATCCCCCGAATTACAATCTGCACCAGAGAATAAAGGTACAGGACAACATGGACATATGCATGGTTCTAGAAATAATCA
TCCACAAAATACTTCTGATAGTCAAAAAGAATGTACCGATGGTAACAAAGAAAACCTGTGGAGCAGCAACATCCCTCTTAAATAACTC
TAGTAATATTGCTTCAATAAATAAATTTGT
```

/Sonia Bjorum Brower/

Sonia Bjorum Brower

01 OCT 2025

Technical 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.

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.

