

***Plasmodium falciparum*, Strain D10**

Catalog No. MRA-201

Product Description:

Plasmodium falciparum (*P. falciparum*), strain D10 was isolated in Papua New Guinea and is generally considered drug sensitive. MRA-201 was produced by cultivation of BEI Resources seed lot 60369606 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 incubated at 37°C in sealed flasks outgassed with blood-gas atmosphere (90% N₂, 5% CO₂, 5% O₂) and monitored for parasitemia for 12 days. Every 1 to 3 days, uninfected, leukocyte-filtered, Type O erythrocytes in complete culture medium were added dropwise as needed to maintain 1% to 3% hematocrit.

Lot: 70079547

Manufacturing Date: 11NOV2025

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 Microscopy¹	Blood-stage parasites present	Blood-stage parasites present
Antimalarial Susceptibility Profile (<i>in vitro</i>)¹		
Half-maximal Inhibitory Concentration (IC ₅₀) by SYBR green I [®] drug sensitivity assay ²		
Chloroquine	Report results	9.2 ± 0.6 nM
Artemisinin	Report results	17.1 ± 0.8 nM
Quinine	Report results	92.3 ± 8.5 nM
Cycloguanil	Report results	9.0 ± 0.4 nM
Pyrimethamine	Report results	36.4 ± 1.7 nM
Sulfadoxine	Report results	508900 ± 35182 nM
Genotypic Analysis¹		
Sequencing of Merozoite Surface Protein 2 (MSP2) gene (~ 760 base pairs)	Consistent with <i>P. falciparum</i>	Consistent with <i>P. falciparum</i> (Figure 1)
Level of Parasitemia by Giemsa Stain Microscopy		
Pre-freeze (12 days post-infection) ³		
Ring-stage parasitemia	Report results	2.9%
Total parasitemia	≥ 2%	4.5%
Post-freeze (3 days post-infection) ¹		
Ring-stage parasitemia	Report results	2.1%
Total parasitemia	≥ 1%	4.9%
Viability (3 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	No growth	No growth
Sabouraud broth, 37°C and 26°C, aerobic	No growth	No growth
Sheep blood agar, 37°C, aerobic	No growth	No growth
Sheep blood agar, 37°C, anaerobic	No growth	No growth
Thioglycollate broth, 37°C, anaerobic	No growth	No growth
Mycoplasma Contamination¹		
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 Methods in Malaria Research Sixth Edition. (2013) Moll, K., et al. (Ed.), EVIMalaR, pp. 122-129. Available at: <https://www.beiresources.org/Publications/MethodsInMalariaResearch.aspx>]

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

Figure 1: MRA-201 MSP2 Sequence

TATTATAAATTTCTTTATTTTTGTTACCTTTAATATTTAAAAATGAAAGTAAATATAGCAACACATTCATAAACAATGCTTATAATAT
 GAGTATAAGGAGAAGTATGGCAAATGAAGGTTCTAATACTAATAGTGTAGGTGCAAATGCTCCAAATGCTGATACTATTGCTAGTGG
 AAGTCAAAGGAGTACAAATAGTGCAAGTACTAGTACTACTAATAATGGAGAATCACAACTACTACTCCTACCGCTGCTGATACTAT
 TGCTAGTGGAAGTCAAAGGAGTACAAATAGTGCAAGTACTAGTACTACTAATAATGGAGAATCACAACTACTACTCCTACCGCTGC
 TGATACCCCTACTGCTACAGAAAGTAATTCACCTTCACCACCCATCACTACTACAGAAAGTTCAAGTTCTGGCAATGCACCAAATAA
 AACAGACGGTAAAGGAGAAGAGAGTGAAAAACAAAATGAATTTAAATGAATCAACTGAAGAAGGACCCAAAAGCTCCACAAGAACCTCA
 AACGGCAGAAAATGAAAATCCTGCTGCACCAGAGAATAAAGGTACAGGACAACATGGACATATGCATGGTTCTAGAAAATAATCATCC
 ACAAATACTTCTGATAGTCAAAAAGAATGTACCGATGGTAACAAAGAAAATGTGGAGCAGCAACATCCCTCTTAAGTAACTCTAG
 TAATATTGCTTCAATAAATAAATTTGTTGTTTTAATTTTCAGCAACACTTGTTTTTATCTTTT

/Sonia Bjorum Brower/
 Sonia Bjorum Brower

23 FEB 2026

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.

