

Plasmodium falciparum, Strain INDO

Catalog No. MRA-819

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Product Description:

Plasmodium falciparum (*P. falciparum*), strain INDO is an *in vitro* culture-adapted clone from Indochina. MRA-819 was produced by cultivation of the BEI Resources seed lot 7398268 in fresh human erythrocytes suspended in RPMI 1640 medium, adjusted to contain 10% (v/v) heat-inactivated human serum (pooled 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 every 1 to 3 days for 11 days. Every 1 to 3 days, uninfected, leukocyte filtered, Type O erythrocytes in complete culture medium were added dropwise to the culture as needed and monitored for hematocrit.

Lot: 70076303

Manufacturing Date: 07OCT2025

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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 Artemisinin Quinine Cycloguanil Pyrimethamine Sulfadoxine	Report results Report results Report results Report results Report results Report results	26.9 ± 0.6 nM 17.3 ± 0.4 nM 332 ± 7.6 nM 1396 ± 96.5 nM 28400 ± 1963 nM 457500 ± 31628 nM
Genotypic Analysis¹ Sequencing of Merozoite Surface Protein 2 (MSP2) gene (~ 752 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 (11 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%	3.53% 4.79% 10.38% 12.42%
Viability (4 days post-infection)¹	Growth in infected red blood cells	Growth in infected red blood cells
Sterility (14-day incubation) 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 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. *Methods in Malaria Research Sixth Edition* is available on the [BEI Resources website](#).]

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

Figure 1: MRA-819 MSP2 Sequence

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TTCTTTATTTTGTACCTTTAATATTAAAAATGAAAGTAAATATAGCAACACATTCATAAACAAATGCTTATAATATGAGTATAAGGAGAAGTATGG
CAGTAAGTAAGCCTCCTACTGGTGTCTGGTGTCTGGTGTCTAGTGGTCGTGCTGGTCTGGTGTATGGTGTCTGTGCTAGTGTCTGGTCTGGTGTATGGTGC
TGTTGCTAGTGTCTGGTAAATGGTGTCTAATCCTGGTGCAGATGCTGAGGGAAGTTCAAGTACTCCCGCTACTACCACAACTACCACAACTACTAATGAT
GCAGAAGCATCTACCAGTACCTCTTCAGAAAATCCAAATCATAATAATGCCGAAACAAATCCAAAAGGTAAAGGAGAAGTTCAAAAACCAAATCAAG
CAAATAAAGAACTCAAAATAACTCAATGTTCAACAAGACTCTCAAACTAAATCAATGTTCCACCCACTCAAGATGCAGACACTAAAAGTCTCTAC
TGCACAACCTGAACAAGCTGAAAATTCTGCTCCAACAGCCGAACAACTGAATCCCCGAATTACAATCTGCACCAGAGAATAAAGGTACAGGACAA
CATGGACATATGCATGGTCTAGAAAATAATCATCCACAAAATACCTTCTGATAGTCAAAAAGAATGTACCGATGGTAACAAAGAAAACCTGTGGAGCAG
CAACATCCCTCTTAAATAACTCTAGTAATATTGCTTCAATAAATAAATTTGTTGTTTAAATTCAGCAACACT
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20 MAY 2026

Technical Manager or designee, ATCC Federal Solutions

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