

***Plasmodium falciparum*, Strain Dd2**

Catalog No. MRA-156

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Product Description:

Plasmodium falciparum (*P. falciparum*), strain Dd2 is a clone derived from W2-MEF, which was selected from clone W2-MCII after 6 months of continuous cultivation in the presence of mefloquine. W2-MCII was derived from clone W2'82 after 12 months of continuous cultivation in the presence of mefloquine, which was itself derived from Indochina III/CDC. *P. falciparum*, strain Dd2 is reported to be resistant to chloroquine, pyrimethamine and mefloquine. MRA-156 was produced by cultivation of the BEI Resources seed lot 54523802 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 17 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: 70074059

Manufacturing Date: 03MAR2025

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TEST	SPECIFICATIONS	RESULTS
Identification by Giemsa Stain Microscopy¹	Blood-stage parasites present	Blood-stage parasites present
Genotypic Analysis¹ Sequencing of Merozoite Surface Protein 2 (MSP2) gene (~ 790 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 (17 days post-infection) ² Ring-stage parasitemia Total parasitemia Post-freeze (4 days post-infection) ¹ Ring-stage parasitemia Total parasitemia	Report results ≥ 2% Report results ≥ 1%	2.5% 3.6% 7.2% 8.7%
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 DMEM with 10% FBS, 37°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 No growth No growth
Mycoplasma Contamination¹ DNA detection by PCR3	None detected	None detected

¹Testing completed on vial, post-freeze material

²Testing completed on bulk material prior to vialing and freezing

Figure 1: MRA-156 MSP2 Sequence

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TGTTACCTTTAATATTAATAAATGAAAGTAAATATAGCAACACATTCATAAAACAATGCTTATAATATGAGTATAAGGAGAAGTATGGCAAATGAAGGT
TCTAATACTACTAGTGTAGGTGCAAATGCTCCAAATGCTGATACTATTGCTAGTGGAAAGTCAAAGTAGTACAAATAGTGCAAGTACTAGTACTACTA
ATAATGGAGAATCACAACTACTACTCCTACCGCTGCTGATACTATTGCTAGTGGAAAGTCAAAGGAGTACAAATAGTGCAAGTACTAGTACTACTAA
TAATGGAGAATCACAACTACTACTCCTACCGCTGCTGATACTATTGCTAGTGGAAAGTCAAAGGAGTACAAATAGTGCAAGTACTAGTACTACTAAT
AATGGAGAATCACAACTACTACTCCTACCGCTGCTGATACTATTGCTAGTGGAAAGTCAAAGGAGTACAAATAGTGCAAGTACTAGTACTACTAAT
CAAGTTCGGCAATGCACCAATAAAAACAGACGGTAAAGGAGAAGAGAGTAAAAACAATAAATGAATTAATGAATCAACTGAAGAAGGACCCAAAGC
TCCACAAGAACCTCAAACGGCAGAAAAAGAAAATCCTGCTGCACCAGAGAATAAAGGTACAGGACAACATGGACATATGCATGGTTCTAGAAATAAT
CATCCACAAAATACTTCTGATAGTCAAAAAGAATGTACCGATGGTAACAAAGAAAAGTGGAGCAGCAACATCCCTCTTAATAACTCTAGTAATA
TTGCTCAATAAATAAATTTGT
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Technical Manager or designee, ATCC Federal Solutions

04 SEP 2025

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