



FAPON
BIOTECH

Co-Creator of Diagnostic Ecosystem



Fapon HRP-II for Malaria

HRP-II is the secretion of Plasmodium Falciparum released into the host bloodstream. It is histidine-rich and detectable in the plasma, urine and whole blood of malaria patients. The HRP-II test will still show positive even the Plasmodium Falciparum is at low density, hence HRP-II is an effective diagnostic tool for falciparum malaria. Fapon new generation HRP-II monoclonal antibody offers excellent activity, high specificity, great stability with good batch to batch consistency.

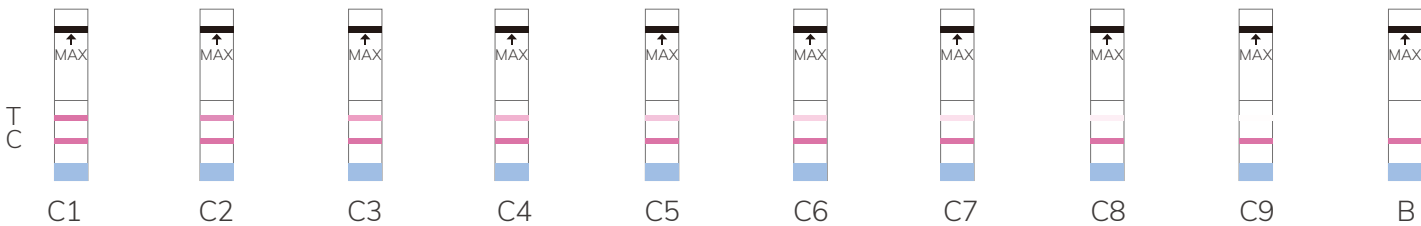
Recommended Pair

Catalog No.	Description	Recommended Usage	Applicable Platform
BRJMALS109	Monoclonal Antibody	Labeling	Colloidal Gold
BRCMALS108	Recombinant Antibody	Coating	

Activity Comparison Via WHO CDC Panel

1. Used Fapon MA-HRP-II recommended pair, Company S kit and Company N raw material to check WHO-CDC sample panel, results confirmed that Fapon MA-HRP-II recommended pair could detect all 10 different samples (10 different concentration samples). In terms of reactivity, Fapon showed 1-2 C stronger than Company N and 2-3 C stronger than Company S.

P.f. CDC Panel Samples (parasites/μl)	Fapon MA-HRP-II Material	Company N Material	Company S Kit
US 06 F FC27/A3 200	C4	C6	C7+
US 06 F FC27/A3 2000	C1++	C2	C2-
US 06 F Santa Lucia 200	C5	C7	C7
US 06 F Santa Lucia 2000	C1+	C1-	C3
US 07 F Benin I 200	C3	C5-	C5
US 07 F Benin I 2000	C1++	C1	C2
US 07 F PH1 200	C6	C8	C8
US 07 F PH1 2000	C1+	C2	C4
US 10 F Nigeria XII 200	C5	C6-	C7
US 10 F Nigeria XII 2000	C1+	C2	C3



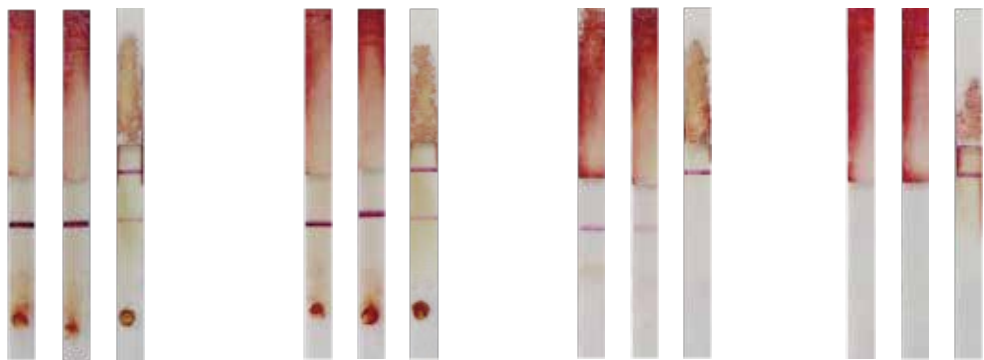
Note of color intensity: 1. The greater the color number, the lower the activity; 2. B refers to undetectable.

2. Diluted WHO-CDC sample to four different concentrations (100 parasites/μl, 50 parasites/μl, 25 parasites/μl and 10 parasites/μl) to conduct reactivity comparison trials. Fapon MA-HRP-II detected all diluted samples. For 10 parasites/μl sample, Fapon reached C9 intensity while company S kit showed no reaction.

Activity Comparison via HRP-II Antigen

Applying HRP-II antigen as the control and diluted to 5000 ng/ml, 500 ng/ml, 50 ng/ml and 5 ng/ml respectively, Fapon HRP-II showed a higher activity level than Company S & N.

Sample Concentration (ng/ml)	Fapon Material	Company N Material	Company S Kit
5000	C1++	C1+	C4
500	C1	C2+	C4
50	C3+	C4	C9
5	C8+	C9+	B+



* Fapon/Company N/Company S (From Left To Right)

Specificity

Applied Fapon HRP-II to 500 random whole blood samples, no false-positive results were observed, specificity was up to 100%.

Batch to Batch Consistency

Evaluated three batches of Fapon HRP-II on the colloidal gold platform, results showed a small color difference within 0.5C, confirming that high batch to batch consistency and product stability can be achieved in production.

Activity Comparison via HRP-II Antigen

In different temperatures, storage periods, and condition of repeated freezing/thawing, Fapon HRP-II showed no obvious changes in physical status and almost no changes in activity and specificity.

Temperature (C°)	Freeze-thaw Cycles (Times)	Storage Period (Days)
-80	--	21
-20	18	21
-4	--	21
Room Temperature	--	7/14/21
37	--	7/14/21
45	--	7

Activity Comparison via Positive Specimens

Fapon HRP-II, Company S Kit and Company N Material were tested respectively with 49 positive blood samples. Fapon HRP-II showed higher activity and detection level than others. The detection rate of Fapon HRP-II was 100%, whereas Company S reached only 91.8% and Company N was 98%.

Sample No.	Fapon Material	Company S Kit	Company N Material
1	C1++	C2+	C1+
2	C1+	C2	C1
3	C1+	C2	C1
4	C6+	C6	C6
5	C5	C7	C6
6	C5	C7	C6
7	C5	C7+	C6
8	C1+	C2	C1
9	C1+	C2	C1
10	C9	B	C9-
11	C9	B	C9-
12	C9	B	C9-
13	C9-	B	B+
14	C4+	C6	C5
15	C4+	C6-	C5-
16	C4	C6-	C6
17	C6	C7-	C7
18	C5+	C7+	C6
19	C5+	C6-	C6-
20	C4	C6	C6

Sample No.	Fapon Material	Company S Kit	Company N Material
21	C3+	C5	C4
22	C2	C4	C3+
23	C4	C5	C5
24	C4	C5	C5
25	C3	C6+	C4
26	C2+	C4+	C3+
27	C2+	C3+	C3+
28	C3+	C4-	C3
29	C2+	C4	C2
30	C4	C6	C5
31	C4+	C6+	C4
32	C5	C7	C6
33	C6	C8	C7+
34	C1	C3	C2+
35	C5	C7	C6
36	C5	C7	C6
37	C3+	C5+	C4+
38	C2	C5-	C3-
39	C2+	C5	C4
40	C2	C4-	C4
41	C2	C5+	C4+
42	C2	C5+	C4+
43	C2+	C4	C3-
44	C2+	C4	C3-
45	C1	C4-	C2-
46	C2+	C3	C3
47	C2+	C3	C3+
48	C2+	C3	C3+
49	C2+	C3	C3



FAPON
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Enable Disease Identification Earlier,
More Accurate, Convenient and Affordable

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