ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Anti-parasite specific lactate dehydrogenase (pLDH) (P. ovale)

☐ **Cat.** PLDH14-M Mouse Anti-parasite specific lactate dehydrogenase (pLDH), (P. ovale specific), clone 14 **SIZE**: 100 ug

Malaria is a mosquito-borne infectious disease caused by a eukaryotic protist of the genus Plasmodium. It is widespread in tropical and subtropical regions, including parts of the Americas, Asia, and Africa. Each year, there are approximately 350–500 million cases of malaria,[1] killing between one and three million people, the majority of whom are young children in sub-Saharan Africa. Malaria parasites are members of the genus Plasmodium (phylum Apicomplexa). In humans malaria is caused by P. falciparum, P. malariae, P. ovale, P. vivax and P. knowlesi. P. falciparum is the most common cause of infection and is responsible for about 80% of all malaria cases, and is also responsible for about 90% of the deaths from malaria. Parasitic Plasmodium species also infect birds, reptiles, monkeys, chimpanzees and rodents. There have been documented human infections with several simian species of malaria, namely P. knowlesi, P. inui, P. cynomolgi,[26] P. simiovale, P. brazilianum, P. schwetzi and P. simium; however, with the exception of P. knowlesi, these are mostly of limited public health importance.

Malaria diagnosis is done using only a drop of blood and Immunochromatographic tests (also called: Malaria Rapid Diagnostic Tests, Antigen-Capture Assay or "Dipsticks") that detects P.falciparum lactate dehydrogenase or pLDH, P.falciparum lactate dehydrogenase (pLDH) is a 33 kDa oxidoreductase [EC 1.1.1.27].[14]. It is the last enzyme of the glycolytic pathway, essential for ATP generation and one o the most abundant enzymes expressed by P.falciparum. PLDH does not persist in the blood but clears about the same time as the parasites following successful treatment. The lack of antigen persistence after treatment makes the pLDH test useful in predicting treatment failure. In this respect, pLDH is similar to pGluDH. LDH from P. vivax, P.malariae, and P.ovale exhibit 90-92% identity to pLDH from P.falciparum.

Source of Antigen and Antibodies

Antigen	Recombinant pLDH protein
Ab Host/type	Mouse, monoclonal, IgG1
Ab Format	Purified IgG (**cat #PLDH14-M**) supplied in PBS, pH 7.4, 0.05% azide
-ve control	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control
Secondary antibodies	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

☐ 100 ug/100ul

☐ solution ☐ lyophilized powder

Buffer: PBS pH 7.5 0.05% azide

Reconstitute powder PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-3 ug/ml using ECL.

ELISA (0.1-1 ug/ml indirect ELISA or to at 1-10 ug/ml in ELISA.

Histochemistry & Immunofluorescence: not tested.

Specificity & Cross-reactivity

The PLDH14-M reacts with pLDH from P. ovale. No significant reactivity is observed with other plasmodium types or proteins.

General References:

Bzik DJ (1993) Mol Biochem. Parastiol. 59, 155-156; Vander DL (1981) Mol Bioche.. Parastiol. 4, 255-264; Iqbal J (2004) J. Clin. Microbiol. 42, 4237-4241;

*This product is for in vitro research use only.

Related material available from ADI

Catalog#	ProdDescription
MFV11- M	Mouse Anti-Malaria (clone 1); reacts to P.vivax/falciparum
MFV12-M	Mouse Anti-Malaria (clone 3); reacts to P.vivax/falciparum specific
MPF13-M	Mouse Anti-Malaria (clone 2); P.falciparum specific
RP-649	Recombinant Malaria Protein HSP
RP-650	Recombinant Malaria Cs Mosaic
SP-88358-1	MSP-1 P2, Malaria Merozoite Surface Peptide – 1 (AA: Gly-Tyr-Arg-Lys-Pro-Leu-Asp-Asn-Ile-Lys-Asp-Asn-Val-Gly-Lys-Met-Glu-Asp-Tyr-Ile-Lys-Lys) (MW: 2625.07)
CSPF16-R	Recombinant (E. coli) Circumsporozoite (CSP) mosaic protein (107-129, 334-351 aa) (P.falciparum) purified
HRPF21-M	Mouse Anti-Histidine rich glycoprotein II (HRP II, P. falciparum) IgG, aff pure #1
MSPF15-R	Recombinant (E. coli) merozoite surface protein-1 (MSP-1; P. falciparum)
MSPF25-R	Recombinant (E. coli) merozoite surface protein-2 (MSP-2; P. falciparum)

PLDH14-M 121204A

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