

Recombinant Pan Plasmodium Aldolase Protein

Cat. No. PLA-535 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Pan Plasmodium Aldolase Protein is a recombinant Aldolase protein expressed and purified from *E. coli*. Plasmodium falciparum and Plasmodium vivax have only one aldolase isoenzyme, which is highly conserved at the amino acid sequence and structural level, and is therefore used as one of the markers for diagnosis of malaria infection.

Background

Plasmodium falciparum Aldolase is composed of the full-length amino acid sequence of the *P. falciparum* Aldolase protein, which is cloned into the bacteria expression vector. The soluble recombinant protein is purified from *E. coli* with affinity chromatography to $\geq 95\%$ purity.

P. falciparum Aldolase is a 41 kDa enzyme that binds to members of the thrombospondin-related anonymous protein (TRAP) family, including Actin and Adhesin. By doing so, Aldolase couples the actomyosin motor and cell surface adhesins involved in motility and host cell (Diaz et al., 2016) Aldolase also helps convert glucose into energy, making it critical for the intraerythrocytic merozoite life stage. Higher vertebrates usually have multiple tissue-specific aldolase isoenzymes. However, *P. falciparum* and *P. vivax* have only one aldolase isoenzyme, which is highly conserved at the amino acid sequence and structural level. Therefore, *P. falciparum* Aldolase is used as one of the markers for diagnosis of malaria infection. Plasmodium falciparum is a unicellular protozoan parasite of humans, and causes the most dangerous form of malaria, with the highest rate of complications and mortality in humans. It is transmitted through the bite of female Anopheles mosquitos and is responsible for ~50% of all malaria cases worldwide. As a result, *P. falciparum* is regarded as the deadliest parasite in humans, causing 435,000 deaths in 2017 alone

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	(WHO).
Molecular Mass	~66 kDa
Formulation	10 mM Tris-HCl, pH 8.5, 10 mM NaCl.
Applications	Can be used for immunoassay development.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease
GENE INFORMATION	
Synonyms	Pan Plasmodium Aldolase

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