

Recombinant Plasmodium Falciparum HRP-II Protein

Cat. No. PLA-536 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Plasmodium falciparum HRP-II Protein, is a recombinant HRP-II protein expressed and purified from E. coli. The Histidine-rich protein II (HRPII) is an essential P. falciparum protein and it is expressed during the intra-erythrocytic stages of the parasitic life cycle. Since HRPII is expressed only by P. falciparum, it can be used as a marker to distinguish between a P. falciparum malaria infection and infection with one of the other four non-falciparum species.

Background

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 (WHO).

Histidine-rich protein II (HRPII) is exclusively produced by the falciparum species of Plasmodium and is essential during the intra-erythrocytic stages of its parasitic life cycle. HRPII is so-called because 37% of its amino acid sequence comprises histidine residues (Pal et al., 2016). HRPII is exported by the parasite into the erythrocyte cytosol, where it is then released into the bloodstream upon cell lysis. Here it is thought to circulate act as a virulence factor by compromising the endothelial barrier integrity of the CNS and cause cerebral malaria (idib). Since HRPII is expressed only by the falciparum species and accumulates to high levels in the bloodstream, it can be used as a marker to distinguish between a P. falciparum malaria infection and infection with one of the other four non-falciparum species (Pal et al., 2017).

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Molecular Mass	~60 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	Plasmodium Falciparum HRP-II

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