ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Life Technologies™ Your Molecular & Cell Technology Partner

Merozoite surface protein-2 (MSP-2, P. falciparum)

Cat. MSPF25-R Recombinant (E. coli) merozoite surface protein-2 (MSP-2; P. falciparum) **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.

MSP2 is an ~30 kDa polypeptide, which like MSP1, is anchored into the plasma membrane of the merozoite by a C-terminal glycosylphosphatidylinositol (GPI) moiety [11]. However, MSP2 differs from both MSP1 and AMA1 in that it lacks multiple intramolecular disulphide bonds and there is no knowledge of the three-dimensional structural features of the protein that are important for inducing a protective immune response to MSP2. MSP2 is highly polymorphic with conserved N- and C-terminal domains flanking a central variable region, which contains tandemly arrayed repetitive sequences [12,13]. All MSP2 alleles have been categorized into two groups typified by the 3D7 and FC27 alleles, respectively, because of differences in the repeats and flanking variable sequences.

Merozoite surface protein 2 (MSP2) is another antigen under development as a potential component of a vaccine against the asexual blood-stages of P. falciparum.

Source of Antigen and Antibodies

#MSPF25-R is a MSP-2 recombinant protein expressed in E. coli and purified (>95%). It is supplied in PBS, pH 7.2, 0.05% azide (see lot sp concn on the vial) or in powder form. **Reconstitute** powder in PBS at 1 mg/ml**.** Store at -20oC for ~1 year.

Form & Storage of Antibodies/Peptide Control

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: 12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

ELISA
Use at 1-5 ug/ml for coating or as ELISA standards.

Western
Load 50-200 ng/well and probe with appropriate antibodies.

General References: Ahlborg N (200) 68, 2102-2109; Blackman M (1990) J. Exp. Med. 172, 379-382; Blackman M (1991) Mol. Biochem. Parastiol. 49, 29-34; 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
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)
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)
MSPV14-M	Mouse Anti-Merozoite surface protein-1 (MSP-1; P. vivax) IgG, aff pure #1
MSPV16-R	Recombinant (E. coli) merozoite surface protein-1 (MSP-1; 108-aa; P. vivax)
MSPV26-R	Recombinant (E. coli) merozoite surface protein-2 (MSP-2; 460-aa; P. vivax)

MSPF25-R 111011A

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