

**HSP90 (P. falciparum) Antibody**  
**Catalog # ASM10450****Specification****HSP90 (P. falciparum) Antibody - Product Information**

Application	WB, IP, ICC
Primary Accession	<a href="#">Q8IL32</a>
Other Accession	<a href="#">XP_001348591.1</a>
Host	Rabbit
Reactivity	P. falciparum
Clonality	Polyclonal

**Description**

Rabbit Anti-P. falciparum HSP90 (P. falciparum) Polyclonal

**Target/Specificity**

Detects ~ 86kDa. Specific to P. falciparum and does not cross-react to HSP90 from Human, yeast, and dictyostelium.

**Other Names**

PF14\_0417 HSP90 Antibody, Heat shock 86 kDa antibody, heat shock 90kDa protein 1 alpha antibody, Heat shock protein 90kDa alpha cytosolic class A member 1 antibody, Heat shock protein 90kDa alpha cytosolic class B member 1 antibody, Heat shock protein HSP 90 alpha antibody, Heat shock protein HSP 90 beta antibody, Heat shock protein HSP 90-alpha antibody, HSP 84 antibody, HSP 86 antibody, HSP 90 antibody, HSP90 Beta antibody, HSP90A antibody, HSP90AA1 antibody, HSP90AB1 antibody, HSP90B antibody, HSP90N antibody, HSPC1 antibody, HSPC2 antibody, HSPCA antibody, HSPCAL1 antibody, HSPCAL4 antibody, HSPCB antibody, HSPN antibody

**Immunogen**

Recombinant full length PfHSP90

**Purification**

Protein A Purified

Storage -20°C

**Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature

Blue Ice or 4°C

**Certificate of Analysis**

0.7 µg/ml of SPC-187 was sufficient for detection of PfHSP90 in 20 µg of P. falciparum lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

**Cellular Localization**

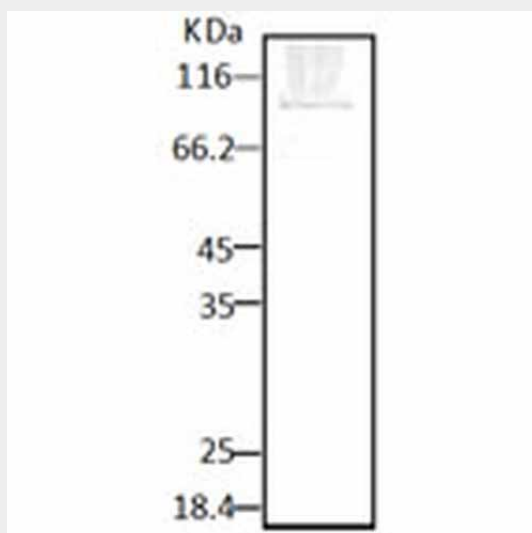
Cytoplasm | Melanosome

**HSP90 (P. falciparum) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## HSP90 (*P. falciparum*) Antibody - Images



Western blot analysis of Parasite Lysates showing detection of HSP90 protein using Rabbit Anti-HSP90 Polyclonal Antibody (ASM10450). Primary Antibody: Rabbit Anti-HSP90 Polyclonal Antibody (ASM10450) at 1:2000.

## HSP90 (*P. falciparum*) Antibody - Background

HSP90 is an abundantly and ubiquitously expressed heat shock protein. It is understood to exist in two principal forms  $\alpha$  and  $\beta$ , which share 85% sequence amino acid homology. The two isoforms of HSP90 are expressed in the cytosolic compartment (1). Despite the similarities, HSP90 $\alpha$  exists predominantly as a homodimer while HSP90 $\beta$  exists mainly as a monomer.(2) From a functional perspective, HSP90 participates in the folding, assembly, maturation, and stabilization of specific proteins as an integral component of a chaperone complex. (3-6) Furthermore, HSP90 is highly conserved between species; having 60% and 78% amino acid similarity between mammalian and the corresponding yeast and *Drosophila* proteins, respectively. HSP90 is a highly conserved and essential stress protein that is expressed in all eukaryotic cells. Despite its label of being a heat-shock protein, HSP90 is one of the most highly expressed proteins in unstressed cells (1-2% of cytosolic protein). It carries out a number of housekeeping functions - including controlling the activity, turnover, and trafficking of a variety of proteins. Most of the HSP90-regulated proteins that have been discovered to date are involved in cell signaling (7-8). The number of proteins now known to interact with HSP90 is about 100. Target proteins include the kinases v-Src, Wee1, and c-Raf, transcriptional regulators such as p53 and steroid receptors, and the polymerases of the hepatitis B virus and telomerase.5 When bound to ATP, HSP90 interacts with co-chaperones Cdc37, p23, and an assortment of immunophilin-like proteins, forming a complex that stabilizes and protects target proteins from proteasomal degradation. In most cases, HSP90-interacting proteins have been shown to co-precipitate with HSP90 when carrying out immune adsorption studies, and to exist in cytosolic heterocomplexes with it. In a number of cases, variations in HSP90 expression or HSP90 mutation has been shown to degrade signaling function via the protein or to impair a specific

function of the protein (such as steroid binding, kinase activity) in vivo. Ansamycin antibiotics, such as geldanamycin and radicicol, inhibit HSP90 function (9). Recently, Prof. Tatu's laboratory has shown the importance of HSP90 in parasite growth. They have shown that inhibition of *P. falciparum* HSP90 (PfHSP90), blocks the erythrocytic cycle by inhibiting stage transformation, leading to inhibition of parasite growth (10, 11). Looking for more information on HSP90? Visit our new HSP90 Scientific Resource Guide at <http://www.HSP90.ca>.

### **HSP90 (*P. falciparum*) Antibody - References**

1. Nemoto T., et al. (1997) *J. Biol Chem.* 272: 26179-26187.
2. Minami Y., et al. (1991) *J. Biol Chem.* 266: 10099-10103.
3. Arlander S.J.H., et al. (2003) *J. Biol Chem.* 278: 52572-52577.
4. Pearl H., et al. (2001) *Adv Protein Chem.* 59: 157-186.
5. Neckers L., et al. (2002) *Trends Mol Med.* 8: S55-S61.
6. Pratt W., Toft D. (2003) *Exp Biol Med.* 228: 111-133.
7. Pratt W., Toft D. (1997) *Endocr Rev.* 18: 306-360.
8. Pratt W.B. (1998) *Proc Soc Exptl Biol Med.* 217: 420-434.
9. Whitesell L., et al. (1994) *Proc Natl Acad Sci USA.* 91: 8324-8328.
10. Banumathy G., Singh V., Pavithra S.R., and Tatu U. (2003) *J Biol Chem.* 278(20): 18336-45.
11. Pavithra S.R, Banumathy G., Joy O., Singh V., and Tatu U. (2004) *J Biol Chem.* 279(45):46692-9.