

Anti-Pf11_0513 (Hsp40)

Catalog# SPC-184 C/D

Size: 25/100µg

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StressMarq

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This product is for *in vitro* research use only and is not intended for use in humans or animals

Product	Rabbit anti-Pf11_0513 antibody; polyclonal
Clone	N/A
Immunogen	C-terminal peptide of PF11_0513 conjugated to KLH.
Host and Subclass	Rabbit
Applications	WB, IF
Specificity	This protein A Affinity purified antibody detects an 62kDa protein, corresponding to <i>P. falciparum</i> Hsp40 on SDS PAGE immunoblot; in samples from <i>P. falciparum</i> origin.
Species cross-reactivity	It is species specific to <i>P. falciparum</i> and does not cross-react to any protein from human erythrocytes.
Format	PBS pH 7.4; 50% glycerol, 0.09% azide. Protein A affinity purified.
Concentration and working dilution	1.8mg/ml; 1:2000 dilution for western blot and a 1:50 dilution for IF. Higher dilutions can be tried.
Storage and stability	-20°C; 1 year+; shipped on cold packs or ambient

Scientific Background

DnaJ/Hsp40 proteins have been preserved throughout evolution and are important for protein translation, folding, unfolding, translocation, and degradation, primarily by stimulating the ATPase activity of chaperone proteins, Hsp70s. Because the ATP hydrolysis is essential for the activity of Hsp70s, DnaJ/Hsp40 proteins actually determine the activity of Hsp70s by stabilizing their interaction with substrate proteins. DnaJ/Hsp40 proteins all contain the J domain through which they bind to Hsp70s.

Hsp40, also known as HDJ1 (1), is a basic mammalian 40kDa heat shock protein which is not only homologous to the bacterial heat shock protein (DnaJ), but also yeast DnaJ-related proteins such as SCJ1, Sec63/Np11, YDJ1 and SIS1 (2-6). Hsp 40 is inducible by stress including

heat after which it moves from the cytoplasm to the nucleus and nucleoli; an intracellular pattern similar to Hsc70/Hsp70, the mammalian homologues of the bacterial heat shock protein, DnaK (3).

PF11_0513 belongs to the Hsp40 family of chaperones. This protein has a Plasmodium export element (PEXEL). It is exported out of the parasite into the infected erythrocytic compartment.

Selected References

- Ohtsuka, K. (1993) *Biochem. Biophys. Res. Commun.* 197: 235-240.
- Melville, M. W. *et al.* (1997) *PNAS USA*, 94: 97-102
- Hattori, H., Liu, Y-C., Tohnai, I., Ueda, M., Kaneda, T., Kobayashi, T., Tanabe, K., and Ohtsuka, K. (1992) *Cell Structure and Function* 17: 77-86.
- Ohtsuka, K. Masuda, A., Nakai, A., and Nagata, K. (1990) *Biochem. Biophys. Res. Commun.* 166: 642-647.
- Bardwell, J.C.A., Tilly, K., Craig, E., King, J., Zyllicz, M. and Georgopoulos, C. (1986) *J. Biol. Chem.* 261: 1782-1785.
- Ohku, M., Tamura, F., Nishimura, S., and Uchida, H. (1986) *J. Biol. Chem.* 261: 1778-1781.

Certificate of Analysis

0.9 µg/mL of SPC-184 was sufficient for detection of Pf11_0513 in 20µg of P. falciparum lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Material Safety Data Sheet

Anti-Pf11_5013 (Hsp40) (Polyclonal Antibody) SPC-184

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

<u>Known Hazardous Components</u>	<u>CAS Number</u>	<u>Percent</u>
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of rabbit immunoglobulin in PBS containing 0.09% azide in 50% glycerol shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Authorized: StressMarq Biosciences Inc.

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