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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-HSP70 (P. Falciparum) Antibody

Rabbit Anti-P. Falciparum HSP70 (P. Falciparum) Polyclonal
Catalog No. SPC-186

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

HSP70 (P. Falciparum) Antibody

Description

Rabbit Anti-P. Falciparum HSP70 (P. Falciparum) Polyclonal

Species Reactivity

Plasmodium falciparum

Applications

WB, ICC/IF

Antibody Dilution

WB (1:2000), ICC/IF (1:50); optimal dilutions for assays should be determined by the user.

Host Species

Rabbit

Immunogen Species

P. Falciparum

Immunogen

His-tagged and purified PfHSP70, C-terminus (AA 365-681)

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

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

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Protein A purified

Clonality

Polyclonal

Specificity

Detects ~ 70kDa. Specific to P. Falciparum and does not cross-react to any protein from Human erythrocytes.

Cite This Product

Rabbit Anti-P. falciparum HSP70 Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-186)

Certificate Of Analysis

0.15 µg/ml of SPC-186 was sufficient for detection of PfHSP70 in 20 µg of P. falciparum lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

HSP70_PLAFA Antibody, Cytoplasmic antigen 74.3 kDa protein Antibody

Research Areas

Cancer, Heat Shock

Cellular Localization

Cytoplasm

Accession Number

M19753

Swiss Prot

P11144

Scientific Background

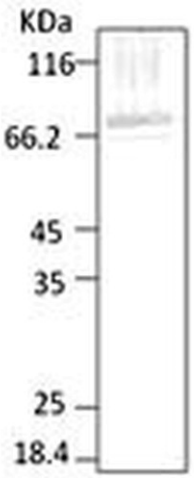
HSP70 genes encode abundant heat-inducible 70-kDa HSPs (HSP70s). In most eukaryotes HSP70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least 5O% identity (1). The N-terminal two thirds of HSP70s are more conserved than the C-terminal third. HSP70 binds ATP with high affinity and possesses a weak ATPase activity which can be stimulated by binding to unfolded proteins and synthetic peptides (2). When HSC70 (constitutively expressed) present in mammalian cells was truncated, ATP binding activity was found to reside in an N-terminal fragment of 44 kDa which lacked peptide binding capacity. Polypeptide binding ability therefore resided within the C-terminal half (3). The structure of this ATP binding domain displays multiple features of nucleotide binding proteins (4). All HSP70s, regardless of location, bind proteins, particularly unfolded ones. The molecular chaperones of the HSP70 family recognize and bind to nascent polypeptide chains as well as partially folded intermediates of proteins preventing their aggregation and misfolding. The binding of ATP triggers a critical conformational change leading to the release of the bound substrate protein (5). The universal ability of HSP70s to undergo cycles of binding to and release from hydrophobic stretches of partially unfolded proteins determines their role in a great variety of vital intracellular functions such as protein synthesis, protein folding and oligomerization and protein transport. PfHSP70-I (PF08_0054) is the major cytosolic HSP70 in Plasmodium falciparum. It is abundantly expressed in the blood stages of the parasite and is thought to constitute 1-2% of total parasite protein. It is induced upon heat shock. It is present in the parasite in different complexes with PfHSP90 and some PfHSP40 (6, 7). Looking for more information on HSP70? Visit our new HSP70 Scientific Resource Guide at http://www.HSP70.com.

References

1. Boorstein W. R., Ziegelhoffer T. & Craig E. A. (1993) J. Mol. Evol.38 (1) 1-17.
2. Rothman J. (1989) Cell 59: 591 -601.

3. DeLuca-Flaherty, et al. (1990) Cell. 62: 875-887.
4. Bork P., Sander C. & Valencia A. (1992) Proc. Natl Acad. Sci. USA. 89: 7290-7294.
5. Fink A.L. (1999) Physiol. Rev. 79: 425-449.
6. Pesce E.R., et al. (2008) Int J Biochem Cell Biol. 40(12): 2914-26.
7. Pavithra S.R, Banumathy G., Joy O., Singh V., Tatu U. (2004) J Biol Chem. 279(45): 46692-9.

Product Images



Western blot analysis of Parasite Lysates showing detection of HSP70 protein using Rabbit Anti-HSP70 Polyclonal Antibody (SPC-186). Primary Antibody: Rabbit Anti-HSP70 Polyclonal Antibody (SPC-186) at 1:2000.

Product Citations (3)

Western Blot

RIFINs are adhesins implicated in severe Plasmodium falciparum malaria.

Geol, S. et al. (2015) Nat Med. 21(4):314-7.

PubMed ID: 25751816 **Reactivity:** P. falciparum **Applications:** Western Blot

Immunocytochemistry/Immunofluorescence

Analysis of a Multi-component Multi-stage Malaria Vaccine CandidateTackling the Cocktail Challenge.

Boes, A. et al. (2015) PLoS ONE. 10(7):e0131456.

PubMed ID: 26147206 **Reactivity:** P. falciparum **Applications:** Immunocytochemistry/Immunofluorescence

Biosynthesis of GDP-fucose and Other Sugar Nucleotides in the Blood Stages of Plasmodium falciparum.

Sanz, S. et al. (2013) J Biol Chem. 288, 16506-16517.

PubMed ID: 23615908 **Reactivity:** P. falciparum **Applications:** Immunocytochemistry/Immunofluorescence

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
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