

Product Datasheet

HSP70 (*P. falciparum*) Antibody: APC (orb152065)

Description

Rabbit polyclonal to Hsp70 (APC). 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 50% identity. 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. 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. The structure of this ATP binding domain displays multiple features of nucleotide binding proteins. 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. 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 ...

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| Species/Host | Rabbit |
| Reactivity | Bacteria |
| Conjugation | APC |
| Tested Applications | ICC, IF, IHC |
| Immunogen | His-tagged and purified PfHSP70, C-terminus (AA 365-681) |

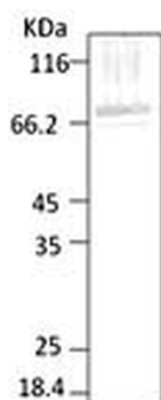
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|--------------------------|--|
| Target | HSP70 |
| Preservatives | 95.64mM Phosphate, 2.48mM MES and 2mM EDTA |
| Concentration | 1 mg/ml |
| Storage | Conjugated antibodies should be stored according to the product label |
| Note | For research use only |
| Application notes | 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. |
| Clonality | Polyclonal |
| MW | 70kDa |
| Uniprot ID | P11144 |
| NCBI | M19753 |
| Dilution Range | WB (1:2000), ICC/IF (1:50) |
| Expiration Date | 12 months from date of receipt. |



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

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