SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Anti-HSP70 Antibody [5A5]

Mouse Anti-Human HSP70 Monoclonal IgG1
Catalog No. SMC-162

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

HSP70 Antibody

Description

Mouse Anti-Human HSP70 Monoclonal IgG1

Species Reactivity

Human, Mouse, Rat, Amphibians, Chicken, Fish, Fruit Fly (Drosophila melanogaster), Yeast, Yeast (Saccharomyces cerevisiae)

Applications

WB, IHC, ICC/IF, IP

Antibody Dilution

WB (1:1000), ICC/IF (1:500), IP (1µg); optimal dilutions for assays should be determined by the user.

Host Species

Mouse

Immunogen Species

Human

Immunogen

Human recombinant HSP70 overexpressed in E.coli

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 pH7.2, 50% glycerol, 0.09% sodium azide

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Protein G Purified

Clonality

Monoclonal

Clone Number

5A5

Isotype

IgG1

Specificity

Detects ~70kDa. May detect HSP70, HSC70, Grp78 and HSP72.

Cite This Product

Mouse Anti-Human HSP70 Monoclonal, Clone 5A5 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-162)

Certificate Of Analysis

1 µg/ml of SMC-162 was sufficient for detection of HSP70 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

HSP70 1 Antibody, HSP70 2 Antibody, HSP70.1 Antibody, HSP72 Antibody, HSPA1 Antibody, HSPA1A Antibody, HSPA1B Antibody

Research Areas

Cancer, Heat Shock

Cellular Localization

Cytoplasm

Accession Number

NP_005336.3

Gene ID

3303

Swiss Prot

P08107

Scientific Background

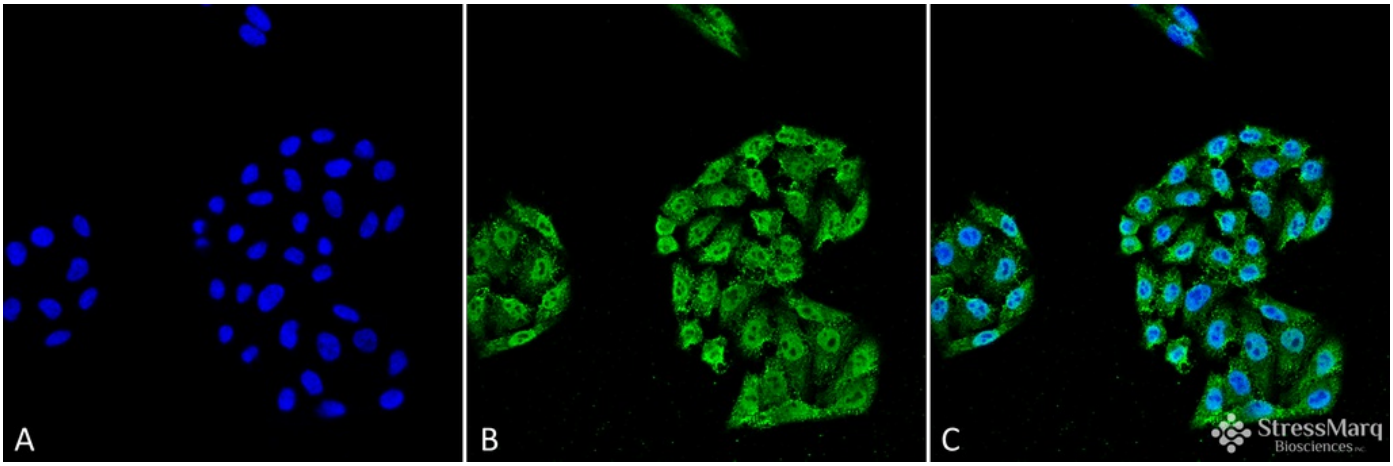
HSP70 genes encode abundant heat-inducible 70-kDa HSPs (HSP70s). In most eukaryotes HSP70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. The genes show a high degree of conservation, having at least 5O% identity (2). 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 (3). 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 (4). The structure of this ATP binding domain displays multiple features of nucleotide binding proteins (5).
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 (6). 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. Looking for more information on HSP70? Visit our new HSP70 Scientific Resource Guide at http://www.HSP70.com.

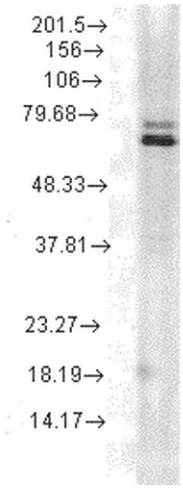
References

1. Balashova N. et al. (2005) J Biol Chem 280:2186-96.
2. Boorstein W. R., Ziegelhoffer T. & Craig E. A. (1993) J. Mol. Evol.38 (1): 1-17.
3. Rothman J. (1989) Cell 59: 591 -601.
4. DeLuca-Flaherty et al. (1990) Cell 62: 875-887.
5. Bork P., Sander C. & Valencia A. (1992) Proc. Nat Acad. Sci. USA 89: 7290-7294.
6. Fink A.L. (1999) Physiol. Rev. 79: 425-449.

Product Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-HSP70 Monoclonal Antibody, Clone 5A5 (SMC-162). Tissue: Cervical Cancer cell line (HeLa). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-HSP70 Monoclonal Antibody (SMC-162) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:100 for 60 min at RT. Counterstain: DAPI (blue) nuclear stain at 1:5000 for 5 min RT. Localization: Nucleus, Cytoplasm. Magnification: 40X.



Western Blot analysis of Rat skeletal muscle tissue lysate showing detection of Hsp70 protein using Mouse Anti-Hsp70 Monoclonal Antibody, Clone 5A5 (SMC-162). Load: 15 µg protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-162) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

Product Citations (2)

Other Citations

Biomarker Analysis with Grating Coupled Surface Plasmon Coupled Fluorescence.

Mendoza, A., Dias, J.A., Zeltner, T. and Lawrence, D.A. (2014) J Adv Bio & Biotech. 1(1): 1-22.

PubMed ID: **Reactivity:** Human **Applications:** Antibody Microarray

Biomarker Analysis with Grating Coupled Surface Plasmon Coupled Fluorescence.

Mendoza, A., Dias, J.A., Zeltner, T. and Lawrence, D.A. (2014) J Adv Bio & Biotech. 1(1): 1-22.

PubMed ID: **Reactivity:** Mouse **Applications:** Antibody Microarray

Reviews

There are no reviews yet.