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/HSC70 Antibody [BB70]

Mouse Anti-Chicken HSP70/HSC70 Monoclonal IgG2a
Catalog No. SMC-106

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

HSP70/HSC70 Antibody

Description

Mouse Anti-Chicken HSP70/HSC70 Monoclonal IgG2a

Species Reactivity

Dog, Human, Mouse, Rat, African clawed frog (Xenopus laevis), Beluga, Bovine, Chicken, Fish, Fruit Fly (Drosophila melanogaster), Guinea Pig (Cavia porcellus), Hamster, Pig, Rabbit, Sheep, Yeast

Applications

WB, IHC, IP

Antibody Dilution

WB (1:1000), IHC (1:200), ICC/IF (1:200); optimal dilutions for assays should be determined by the user.

Host Species

Mouse

Immunogen Species

Chicken

Immunogen

Chicken HSP70/HSP90 complex

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

BB70

Isotype

IgG2a

Specificity

Detects ~72 (Hsp) and ~73kDa (Hsc).

Cite This Product

Mouse Anti-Chicken HSP70/HSC70 Monoclonal, Clone BB70 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-106)

Certificate Of Analysis

1 µg/ml of SMC-106 was sufficient for detection of HSP70 and HSC70 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

HSC54 Antibody, HSC70 Antibody, HSC71 Antibody, HSP70 1 Antibody, HSP701/HSP70 2 Antibody, HSP70.1 Antibody, HSP71 Antibody, HSP72 Antibody, HSP73 Antibody, HSPA1 Antibody, HSPA10 Antibody, HSPA1A Antibody, HSPA1B Antibody, LAP1 Antibody, NIP71 Antibody

Research Areas

Cancer, Heat Shock

Cellular Localization

Cytoplasm

Accession Number

NP_001006686.1

Gene ID

423504

Swiss Prot

P08106

Scientific Background

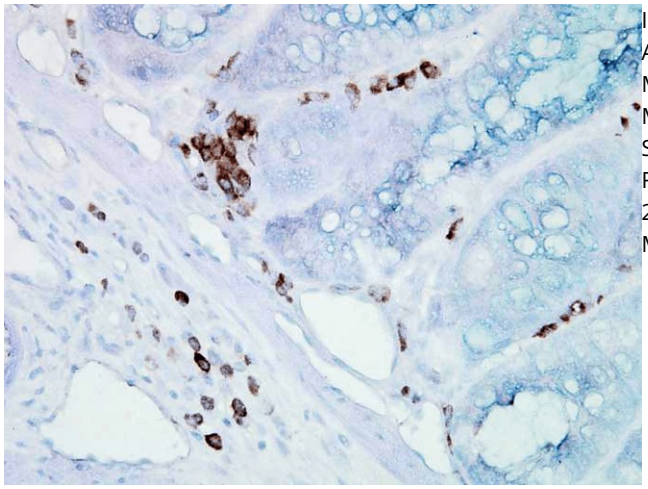
HSP70 genes encode abundant heat-inducible 70-kDa HSPs (HSP70s). In most eukaryotes HSP70 genes exist as part of a multigene family. They are found in most cellular compartments of eukaryotes including nuclei, mitochondria, chloroplasts, the endoplasmic reticulum and the cytosol, as well as in bacteria. 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.

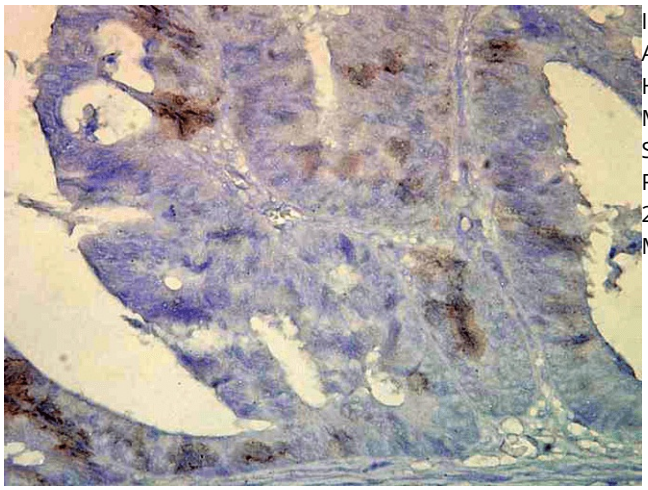
References

1. Zho J. (1998) Cell 94 : 471-480.
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.
7. Smith D.F., et al, (1993) Mol. Cell. Biol. 13(2): 869-876.
8. Prapapanich V., et al. (1996) Mol. Cell. Biol. 16(11):6200-6207.
9. Fernandez-Funez et al., (2000) Nature 408(6808): 101-106.

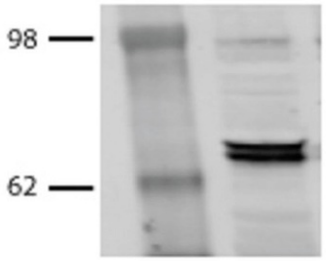
Product Images



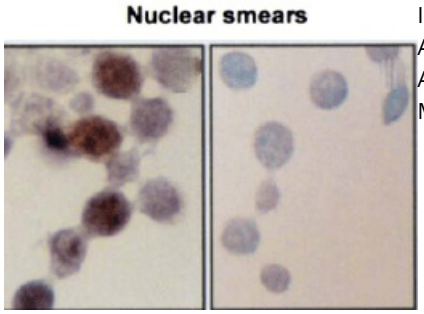
Immunohistochemistry analysis using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (SMC-106). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-106) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 µl for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x.



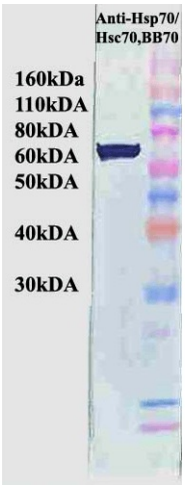
Immunohistochemistry analysis using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (SMC-106). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-106) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 µl for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x.



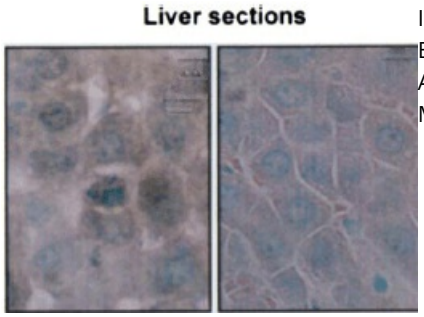
Western Blot analysis of Bovine MDBK cell lysates showing detection of Hsp70 protein using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (SMC-106). Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-106) at 1:1000.



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (SMC-106). Tissue: hepatocyte nuclei. Species: Rat. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-106) at 1:200. Courtesy of: G. Matic, University of Belgrade, Serbia.



Western Blot analysis of Human HeLa cell lysates showing detection of Hsp70 protein using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (SMC-106). Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-106) at 1:1000. Secondary Antibody: HRP Goat Anti-Rat.



Immunohistochemistry analysis using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (SMC-106). Tissue: hepatocytes. Species: Rat. Fixation: Paraffin Embedded. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (SMC-106) at 1:200. Courtesy of: G. Matic, University of Belgrade, Serbia.

Product Citations (4)

Western Blot

Affinity Purification Probes of Potential Use To Investigate the Endogenous Hsp70 Interactome in Cancer.

Rodina, A. et al. (2014) ACS Chem Biol. 9(8):1698-705.

PubMed ID: 24934503 **Reactivity:** Human **Applications:** Western Blot

Heat Shock Protein 70 Inhibitors.1.2,5'-Thiodipyrimidine and 5-(Phenylthio)pyrimidine Acrylamides as Irreversible Binders to an Allosteric Site on Heat Shock Protein 70.

Kang, Y. et al. (2014) J Med Chem. 57(4):1188-207.

PubMed ID: 24548207 **Reactivity:** Human **Applications:** Western Blot

Heat Shock Protein 70 Inhibitors.2.2,5'-Thiodipyrimidines, 5-(Phenylthio)pyrimidines, 2-(Pyridin-3-ylthio)pyrimidines, and 3-(Phenylthio)pyridines as Reversible Binders to an Allosteric Site on Heat Shock Protein 70.

Taldone, T. et al. (2014) J Med Chem. 57(4):1208-24.

PubMed ID: 24548239 **Reactivity:** Human **Applications:** Western Blot

Other Citations

Identification of an Allosteric Pocket on Human Hsp70 Reveals a Mode of Inhibition of This Therapeutically Important Protein.

Rodina, A. et al. (2013) Chem Biol. 20(12):1469-80.

PubMed ID: 24239008 **Reactivity:** Human **Applications:** Protein Binding Assay

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
June 14, 2016: