

HSP70/HSC70 Antibody

HSP70/HSC70 Antibody, Clone N27F3-4

Catalog # ASM10003

Specification

HSP70/HSC70 Antibody - Product Information

Application **IHC, WB**
Primary Accession [P08107](#)
Other Accession [NP_005336.3](#)
Host **Mouse**
Isotype **IgG1**
Reactivity **Human, Mouse, Rat, Rabbit, Hamster, Monkey, Pig, Chicken, Xenopus, Bovine, C.Elegans, Sheep, Guinea Pig, Fish, Dog, Drosophila**
Clonality **Monoclonal**

Description

Mouse Anti-Human HSP70/HSC70
Monoclonal IgG1

Target/Specificity

Detects ~72 (HSP) and ~73kDa (HSC).

Other Names

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

Immunogen

Recombinant HSP70/HSC70

Purification

Protein G Purified

Storage **-20°C**

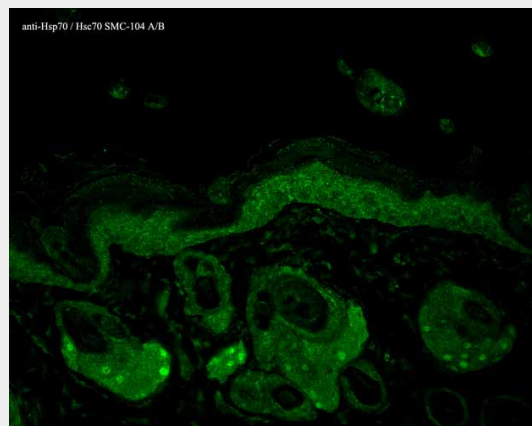
Storage Buffer

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

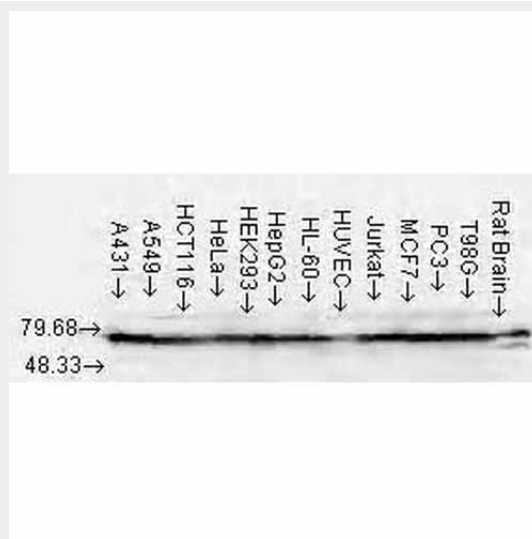
Shipping **Blue Ice or 4°C**
Temperature

Certificate of Analysis

1 µg/ml of SMC-104 was sufficient for detection of HSP70/HSC70 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.



Immunohistochemistry analysis using Mouse Anti-Hsp70 Monoclonal Antibody, Clone N27 (ASM10003). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (ASM10003) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Epidermis.



Western Blot analysis of Human Cell lysates showing detection of Hsp70 protein using Mouse Anti-Hsp70 Monoclonal Antibody, Clone N27 (ASM10003). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-Hsp70 Monoclonal

Cellular Localization
Cytoplasm

Antibody (ASM10003) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

HSP70/HSC70 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

HSP70/HSC70 Antibody - 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 50% 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. For more information visit our HSP70 Scientific Resource Guide at <http://www.HSP70.com>.

HSP70/HSC70 Antibody - References

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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. Natl Acad. Sci. USA 89: 7290-7294.
6. Fink A.L. (1999) Physiol. Rev. 79: 425-449.
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