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HSP70/HSC70 Antibody
HSP70/HSC70 Antibody, Clone N27F3-4
Catalog # ASM10003

Specification

HSP70/HSC70 Antibody - Product Information

Application	**WB, IHC, ICC, IP, FC, IEM**
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**
Format	**HRP**

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	**-20ºC**

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

Shipping Temperature	**Blue Ice or 4ºC**

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.

Cellular Localization
Cytoplasm

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 Cytomety
- Cell Culture

HSP70/HSC70 Antibody - Images

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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