

## HSC70 (HSP73) Antibody

Catalog # ASM10354

### Specification

#### HSC70 (HSP73) Antibody - Product Information

Application	WB, IHC, IP, ICC
Primary Accession	<a href="#">P11142</a>
Other Accession	<a href="#">NP_006588.1</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat, Hamster
Clonality	Polyclonal

#### Description

Rabbit Anti-Human HSC70 (HSP73) Polyclonal

#### Target/Specificity

Detects 73kDa. Does not cross-react with HSP70.

#### Other Names

HSC54 Antibody, HSC71 Antibody, HSC73 Antibody, HSP71 Antibody, HSP73 Antibody, HSPA10 Antibody, HSPA8 Antibody, LAP1 Antibody, NIP71 Antibody

#### Immunogen

Amino acids 650-670 of human HSP73

#### Purification

Rabbit Antiserum

#### Storage

4°C

#### Storage Buffer

Rabbit Antiserum

#### Shipping Temperature

Blue Ice or 4°C

#### Certificate of Analysis

0.5 µg/ml of SPC-102 was sufficient for detection of HSC70 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

#### Cellular Localization

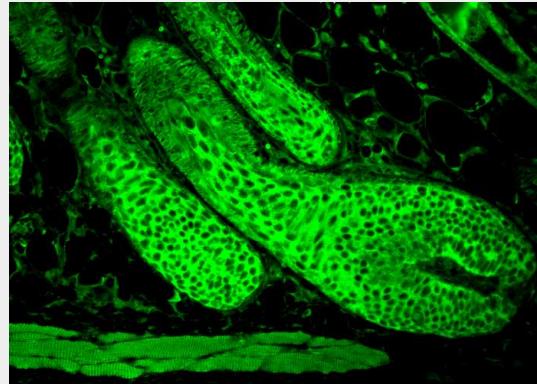
Cytoplasm | Melanosome

#### HSC70 (HSP73) Antibody - Protocols

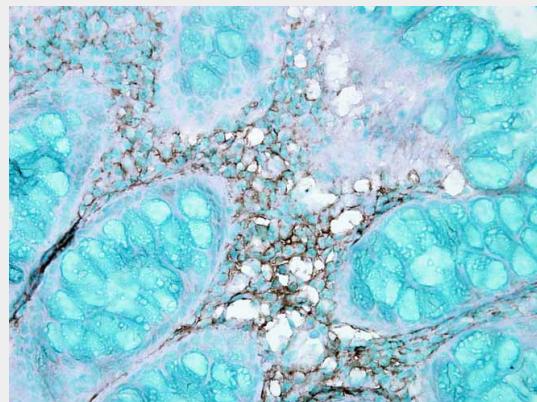
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

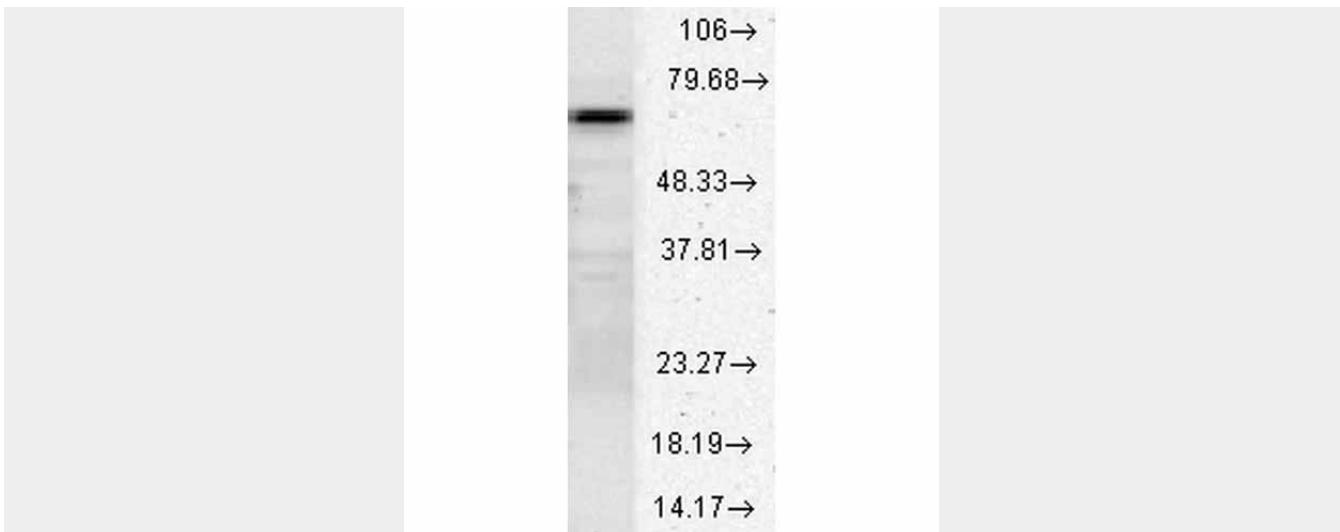
- [Flow Cytometry](#)
- [Cell Culture](#)

**HSC70 (HSP73) Antibody - Images**

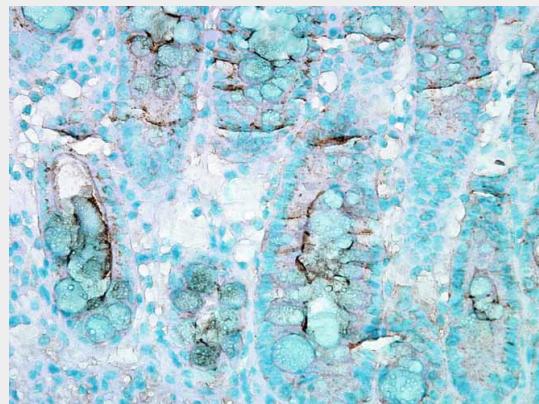
Immunohistochemistry analysis using Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Cytoplasm.



Immunohistochemistry analysis using Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354). Tissue: colon carcinoma. Species: Human. Fixation: Formalin. Primary Antibody: Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354) at 1:10000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Rabbit at 1:2000 for 1 hour at RT. Counterstain: Methyl Green at 200uL for 2 min at RT.



Western blot analysis of Human Cell line lysates showing detection of HSC70 protein using Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354). Load: 15 µg protein. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354) at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Immunohistochemistry analysis using Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354). Tissue: Inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Rabbit Anti-HSC70 Polyclonal Antibody (ASM10354) at 1:50000 for 12 hours at 4°C. Secondary Antibody: Biotin Goat Anti-Rabbit at 1:2000 for 1 hour at RT. Counterstain: Methyl Green at 200uL for 2 min at RT.

### **HSC70 (HSP73) 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).

When cells are subjected to metabolic stress (e.g. heat shock) a member of the HSP 70 family, HSP 70 (HSP72), is expressed; HSP 70 is highly related to HSC70 (>90% sequence identity).

Constitutively expressed HSC70 rapidly forms a stable complex with the highly inducible HSP70 in

cells following heat shock. The interaction of HSC70 with HSP 70 is regulated by ATP. These two heat shock proteins move together in the cell experiencing stress. Furthermore, research on HSC70 has implicates it with a role in facilitating the recovery of centrosomal structure and function after heat shock (6).

#### **HSC70 (HSP73) Antibody - References**

1. Brown C.L. et al. (1993) J. Cell Biol., 120 (5): 1101-1112.
2. Boorstein W.R., Ziegelhoffer T., and 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., and Valencia A. (1992) Proc. Natl Acad. Sci. USA 89: 7290-7294.
6. Brown C.L. et al. (1996) J. Biol. Chem. 271(2): 833-840.