Product datasheet

Anti-HSP70 Antibody

Catalog Number: *BA0928*

BOSTER®
antibody and ELISA experts
BOSTER BIOLOGICAL TECHNOLOGY
Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
East Lake High-Tech Development Zone, Wuhan.
Web: www.boster.com ***Phone:*** 027-67845390/1/2 ***Email:*** boster@boster.com

Basic Information

Product Name	Anti-HSP70 Antibody
Gene Name	HSPA1A
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, ICC/IF, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Hsp70, identical to the related rat and mouse sequence.
Concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	70 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

The 70 kilodalton heat shock proteins(Hsp70s) are a family of ubiquitously expressed heat shock proteins. The Hsp70s are an important part of the cell's machinery for protein folding, and help to protect cells from stress. All of the Hsp70 proteins have three major functional domains: An N-terminal ATPase domain binds ATP(Adenosine triphosphate) and hydrolyzes it to ADP(Adenosine diphosphate); A substrate binding domain contains a groove with an affinity for neutral, hydrophobic amino acid residues; A C-terminal domain rich in alpha helical structure acts as a 'lid' for the substrate binding domain. By binding tightly to partially-synthesized peptide sequences(incomplete proteins), Hsp70 prevents

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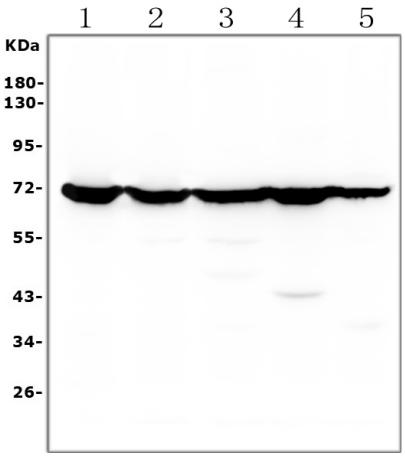
them from aggregating and being rendered nonfunctional. And it also can act to protect cells from thermal or oxidative stress. Finally, Hsp70 seems to be able to participate in disposal of damaged or defective proteins. Interaction with CHIP(Carboxyl-terminus of Hsp70 Interacting Protein)–an E3 ubiquitin ligase–allows Hsp70 to pass proteins to the cell's ubiquitination and proteolysis pathways.

Reference

Anti-HSP70 Antibody被引用在25文献中。

Selected Validation Data



Western blot analysis of HSP70 using anti-HSP70 antibody (BA0928). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HEK293 whole cell lysates,
Lane 2: human Caco-2 whole cell lysates,
Lane 3: human PC-3 whole cell lysates,
Lane 4: human THP-1 whole cell lysates,
Lane 5: human U2OS whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-HSP70 antigen affinity purified polyclonal antibody (BA0928) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for HSP70 at approximately 70 kDa. The expected band size for HSP70 is at 70 kDa.

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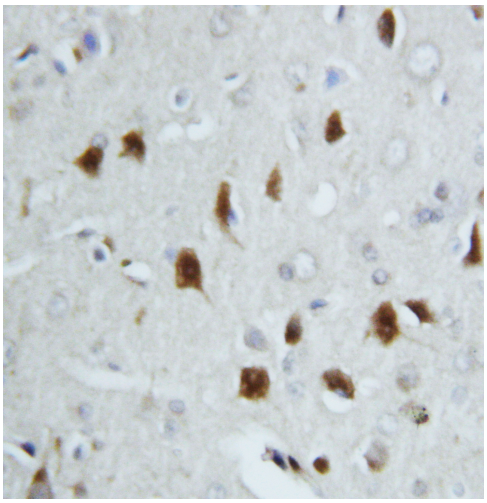
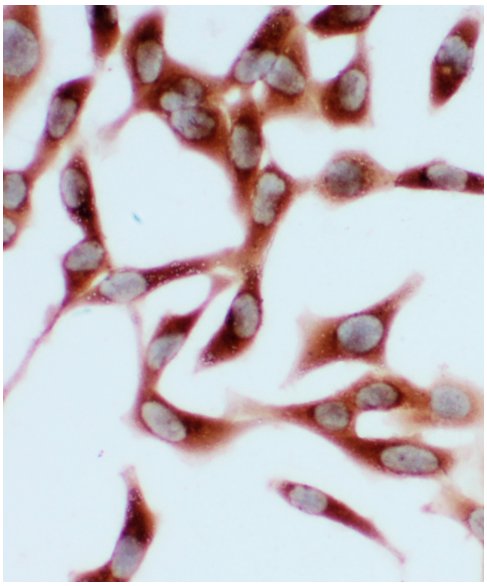
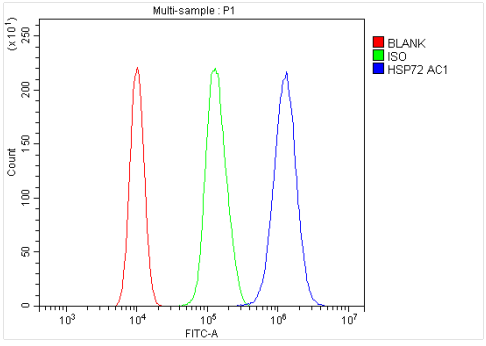


IHC analysis of HSP70 using anti-HSP70 antibody (BA0928).
HSP70 was detected in a paraffin-embedded section of rat brain tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-HSP70 Antibody (BA0928) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



ICC analysis of HSP70 using anti- HSP70 antibody (BA0928).
HSP70 was detected in an immunocytochemical section of Hela cells. The section was incubated with rabbit anti-HSP70 Antibody (BA0928) at a dilution of 1:100. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



Flow Cytometry analysis of 293T cells using anti-HSP70 antibody (BA0928).
Overlay histogram showing 293T cells stained with BA0928 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-HSP70 Antibody (BA0928) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit

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IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.