abcam

Product datasheet

Anti-Hsp70 antibody [C92F3A-5] ab47455

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Overview

Product name	Anti-Hsp70 antibody [C92F3A-5]
Description	Mouse monoclonal [C92F3A-5] to Hsp70
Host species	Mouse
Specificity	Detects a 70kDa protein corresponding to the molecular mass of Hsp70 of SDS PAGE immunoblots. There is no cross-reactivity to Hsc70 (Hsp73).
Tested applications	**Suitable for:** Electron Microscopy, WB, IP, ELISA, ICC/IF, Flow Cyt, IHC-Fr, IHC-P
Species reactivity	**Reacts with:** Rat, Human **Predicted to work with:** Mouse, Cow, Dog, Pig, Caenorhabditis elegans, Macaque monkey, Bos mutus grunniens, Saguinus oedipus, Onchocerca volvulus, Oncorhynchus tshawytscha
Immunogen	Recombinant fragment corresponding to Human Hsp70 aa 436-503. Sequence: YSDNQPGVLIQVYEGERAMTKDNNLLGRFELSGIPPAP RGVPQIEVTFDI DANGILNVTATDKSTGKANKITI Database link: P08107 Run BLAST with Run BLAST with
Epitope	The mapped epitope is in the region of amino acid residues 436-503.
Positive control	WB: HeLa, A431, A549, HCT116, HEK293, HepG2, HL-60, HUVEC, Jurkat, MCF7, PC3, T98G cell lysates; Rat Brain tumour lysate; Rat bone lysate. IHC-P: Mouse colon cancer tissue; human colon cancer tissue. Flow cyt: HeLa cells.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.09% Sodium azide Constituents: 50% PBS, 50% Glycerol
Purity	Protein G purified
Clonality	Monoclonal

Clone number	C92F3A-5
Isotype	IgG1

Applications

Our Abpromise guarantee covers the use of **ab47455** in the following tested applications.

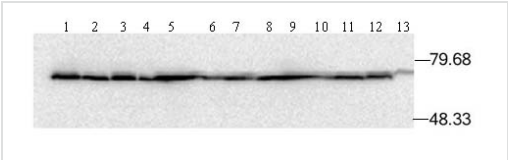
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Electron Microscopy		Use at an assay dependent concentration.
WB	★★★★☆	Use a concentration of 1 µg/ml. Predicted molecular weight: 70 kDa.
IP		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
Flow Cyt		Use 1µg for 10^6 cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IHC-Fr		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration.

Target

Relevance	Function: In cooperation with other chaperones, the Hsp70 family stabilize preexistent proteins against aggregation and mediate the folding of newly translated polypeptides in the cytosol as well as within organelles. These chaperones participate in all these processes through their ability to recognize nonnative conformations of other proteins. They bind extended peptide segments with a net hydrophobic character exposed by polypeptides during translation and membrane translocation, or following stress-induced damage. In case of rotavirus A infection, serves as a post-attachment receptor for the virus to facilitate entry into the cell. Tissue specificity: HSPA1B is testis-specific.
Cellular localization	Cytoplasm. Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Images



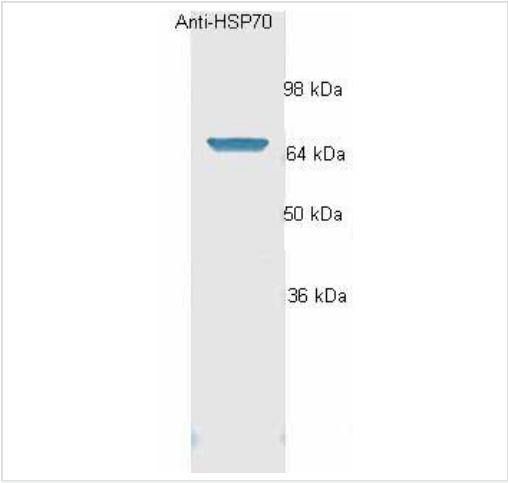
Western blot - Anti-Hsp70 antibody [C92F3A-5] (ab47455)

All lanes : Anti-Hsp70 antibody [C92F3A-5] (ab47455) at 1 µg/ml

Lane 1 : Cell lysate prepared from human A431 cell line
Lane 2 : Cell lysate prepared from human A549 cell line
Lane 3 : Cell lysate prepared from human HCT116 cells line
Lane 4 : Cell lysate prepared from human Hela cell line
Lane 5 : Cell lysate prepared from human HEK293 cell line
Lane 6 : Cell lysate prepared from human HepG2 cell line
Lane 7 : Cell lysate prepared from human HL-60 cell line
Lane 8 : Cell lysate prepared from human HUVEC cell line
Lane 9 : Cell lysate prepared from human Jurkat cell line
Lane 10 : Cell lysate prepared from human MCF7 cell line
Lane 11 : Cell lysate prepared from human PC3 cell line
Lane 12 : Cell lysate prepared from human T98G cell line
Lane 13 : Rat brain tissue lysates

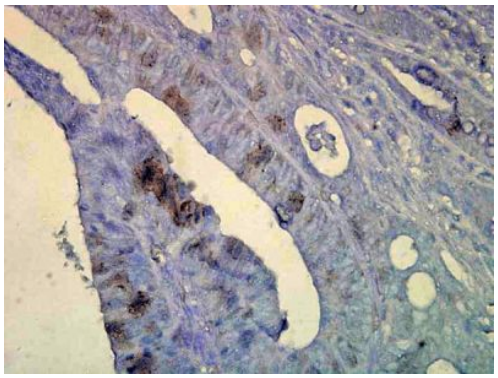
Predicted band size: 70 kDa

All are cancer cell lines.



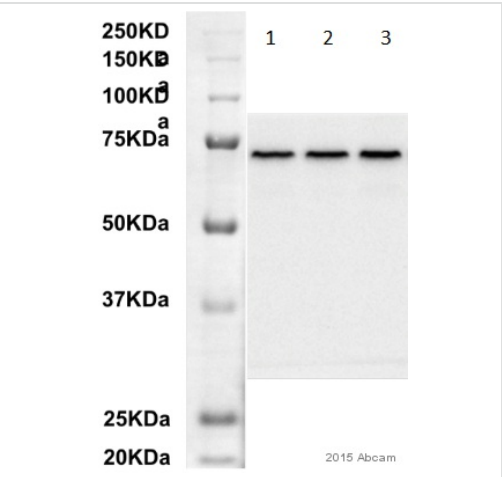
Western blot - Anti-Hsp70 antibody [C92F3A-5] (ab47455)

Western blot of Hela cell heat shock lysate, using HRP conjugated goat anti-mouse secondary antibody for detection. (1µg/mL ab47455 was used to detect in 10µg of heat shocked HeLa cell lysate)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hsp70 antibody [C92F3A-5] (ab47455)

Formalin-fixed, paraffin-embedded human colon carcinoma tissue stained for Hsp70 using ab47455 at 1/1000 dilution in immunohistochemical analysis. Counter stained with hematoxylin.



Western blot - Anti-Hsp70 antibody [C92F3A-5] (ab47455)

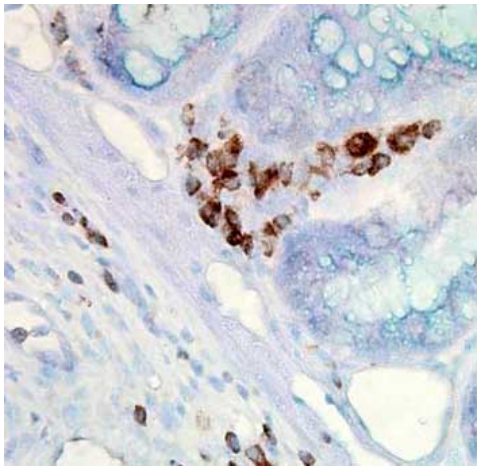
Image courtesy of an anonymous AbReview

All lanes : Anti-Hsp70 antibody [C92F3A-5] (ab47455) at 1/500 dilution

All lanes : Rat bone (tibia) whole cell lysate

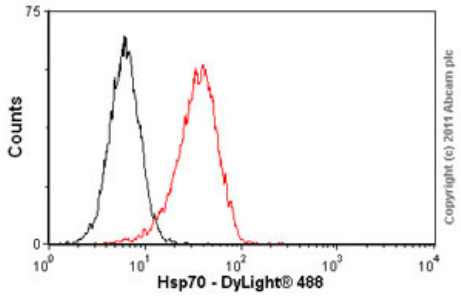
Lysates/proteins at 50 µg per lane.

Predicted band size: 70 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hsp70 antibody [C92F3A-5] (ab47455)

ab47455 staining Hsp70 in mouse colon cancer tissue section by Immunohistochemistry (Bouin's fixed paraffin embedded tissue sections). The primary antibody was diluted at 1/100,000. A Fluorophore conjugated goat anti mouse was used as secondary. An antibody amplifier™ system was used for staining.



Flow Cytometry - Anti-Hsp70 antibody [C92F3A-5] (ab47455)

Overlay histogram showing HeLa cells stained with ab47455 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab47455, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1:500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a significantly decreased signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

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