

Product datasheet

Anti-Hsp70 antibody [BB70] ab53496

[7 References](#) [8 Images](#)

Overview

Product name	Anti-Hsp70 antibody [BB70]
Description	Mouse monoclonal [BB70] to Hsp70
Host species	Mouse
Specificity	Detects ~72 (Hsp) and ~73kDa (Hsc).
Tested applications	Suitable for: IHC-P, ICC/IF, Flow Cyt, WB
Species reactivity	Reacts with: Mouse, Rat, Cow, Human
Immunogen	Other Immunogen Type corresponding to Chicken Hsp70. Database link: P08106
Positive control	WB: Hela cell lysate; Bovine MDBK cell lysate. IHC-P: Mouse and human colon cancer tissues. Flow Cyt: Jurkat cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	BB70
Isotype	IgG2a

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab53496 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
IHC-P		1/200.
ICC/IF		1/200.
Flow Cyt		Use 0.5µg for 10 ⁶ cells. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
WB		1/1000. Predicted molecular weight: 70 kDa. Detects 72kDa and 73kDa proteins corresponding to the molecular mass of inducible hsp and hsc70 on SDS PAGE immunoblots.

Target

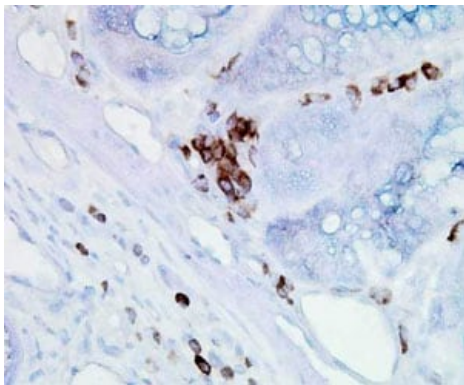
Relevance

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

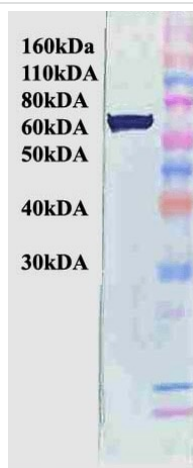
Cytoplasm. Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hsp70 antibody [BB70] (ab53496)

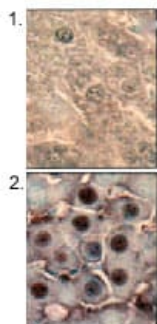
ab53496 at 100,000 dilution staining Hsp70 + Hsc70 in mouse colon cancer tissue section by immunohistochemistry (Formalin/ PFA fixed paraffin-embedded tissue sections). A antibody amplifier™ system was used for staining. A HRP-conjugated secondary antibody was used at 1/10 dilution.



Western blot - Anti-Hsp70 antibody [BB70]
(ab53496)

Anti-Hsp70 antibody [BB70] (ab53496) at 1/1000 dilution + HeLa
(human epithelial cell line from cervix adenocarcinoma) cell lysate

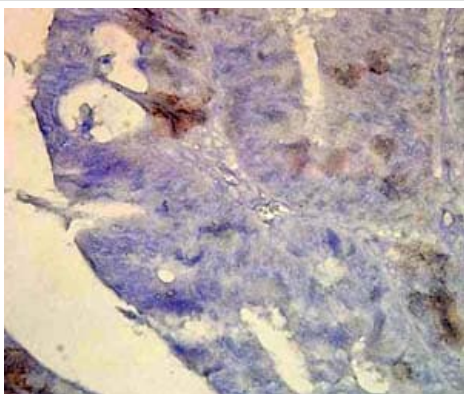
Predicted band size: 70 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-Hsp70 antibody [BB70]
(ab53496)

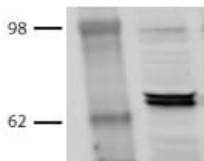
Ab53496, at a dilution of 1/200, staining Hsp70 + Hsc70 in liver
smears of rat hepatocytes by Immunohistochemistry Formalin fixed
Paraffin embedded tissue.

1. Control
2. Two hours after exposure tp hyperthermic stress



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-Hsp70 antibody [BB70]
(ab53496)

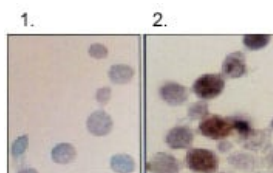
ab53496 at 100,000 dilution staining Hsp70 + Hsc70 in human
colon cancer tissue section by immunohistochemistry (Formalin/
PFA fixed paraffin-embedded tissue sections). A antibody
amplifier™ system was used for staining.



Western blot - Anti-Hsp70 antibody [BB70]
(ab53496)

Anti-Hsp70 antibody [BB70] (ab53496) at 1/1000 dilution + Bovine MDBK cells

Predicted band size: 70 kDa

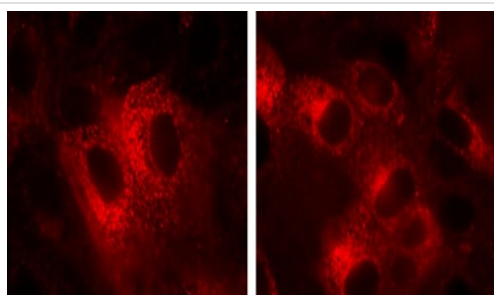


Immunocytochemistry/ Immunofluorescence - Anti-Hsp70 antibody [BB70] (ab53496)

Ab53496, at a 1/200 dilution, staining Hsp70 + Hsc70 in nuclear smears of rat hepatocytes by immunocytochemistry.

1. Control

2. Five hours after exposure to hyperthermic stress

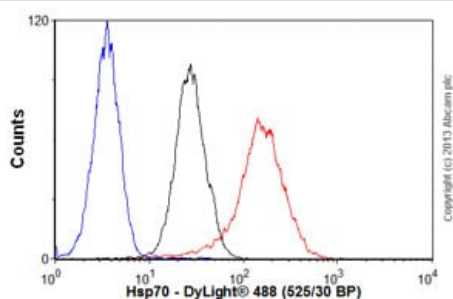


Immunocytochemistry/ Immunofluorescence - Anti-Hsp70 antibody [BB70] (ab53496)

ab53496 staining Hsp70 in LLC-PK1 cells expressing Hsp70 under cold block conditions, by Immunocytochemistry/ Immunofluorescence.

Cells were fixed with 4% paraformaldehyde, permeabilized with 0.01% Triton X-100 in PBS for 4 minutes and blocked with 1% BSA/PBS for 20 minutes. Samples were incubated with primary antibody overnight at 4°C.

Image from Rice WL et al., PLoS One. 2012;7(2):e32843. Epub 2012 Feb 28. Fig 6.; doi:10.1371/journal.pone.0032843; February 28, 2012, PLoS ONE 7(2): e32843.



Flow Cytometry - Anti-Hsp70 antibody [BB70]
(ab53496)

Overlay histogram showing Jurkat cells stained with ab53496 (red line). The cells were fixed with 4% paraformaldehyde (10 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 (ab53496, 0.5µg/1x10⁶ 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 IgG2a [ICIGG2A] ([ab91361](#), 1µg/1x10⁶ cells) used under the same conditions. Unlabelled sample (blue line). Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in Jurkat cells

fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors