

## Product datasheet

# Anti-Hsp70 antibody [BB70] ab53496

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

### Overview

---

<b>Product name</b>	Anti-Hsp70 antibody [BB70]
<b>Description</b>	Mouse monoclonal [BB70] to Hsp70
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, ICC/IF, Flow Cyt, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Sheep, Rabbit, Chicken, Guinea pig, Hamster, Cow, Dog, Human, Xenopus laevis, Carp, Drosophila melanogaster, Schizosaccharomyces pombe, Rainbow trout
<b>Immunogen</b>	Chicken Hsp70/Hsp90 complex
<b>Positive control</b>	WB: Hela cell lysate; Bovine MDBK cell lysate. IHC-P: Mouse and human colon cancer tissues. Flow Cyt: Jurkat cells.
<b>General notes</b>	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&amp;As.</p>

### Properties

---

<b>Form</b>	Liquid
-------------	--------

<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol, PBS
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	BB70
<b>Isotype</b>	IgG2a

## Applications

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		Use at an assay dependent concentration.
ICC/IF		1/200.
Flow Cyt		Use 0.5µg for 10 <sup>6</sup> cells. <a href="#">ab170191</a> - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
WB		Use a concentration of 1 µg/ml. 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

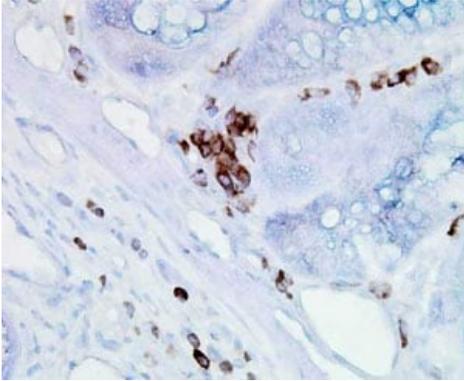
### Relevance

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

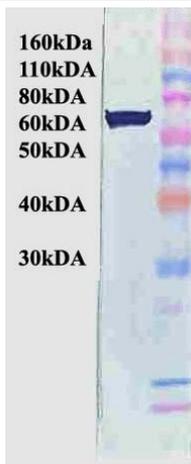
Cytoplasm. Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

## Images



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

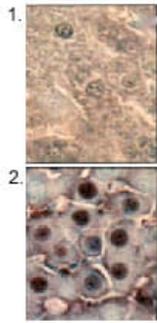
ab53496 at 100,000 dilution staining Hsp70 + Hsc70 in mouse colon cancer tissue section by immunohistochemistry (Formalin/ PFA fixed paraffin-embedded tissue sections). A antibody amplifier™ system was used for staining. A HRP-conjugated secondary antibody was used at 1/10 dilution.



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

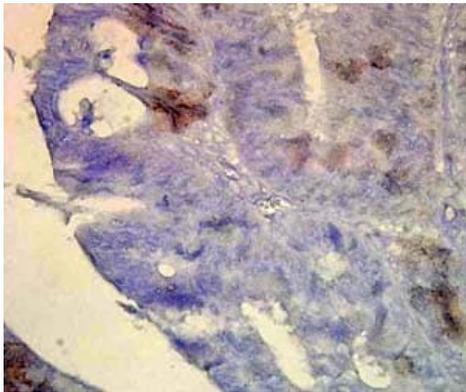
**Predicted band size: 70 kDa**



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

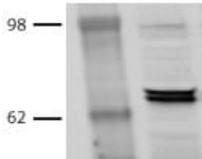
Ab53496, at a dilution of 1/200, staining Hsp70 + Hsc70 in liver smears of rat hepatocytes by Immunohistochemistry Formalin fixed Paraffin embedded tissue.

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



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

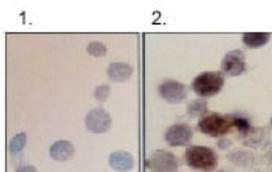
ab53496 at 100,000 dilution staining Hsp70 + Hsc70 in human colon cancer tissue section by immunohistochemistry (Formalin/PFA fixed paraffin-embedded tissue sections). A antibody amplifier™ system was used for staining.



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

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

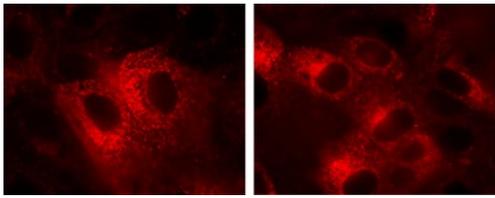
**Predicted band size: 70 kDa**



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

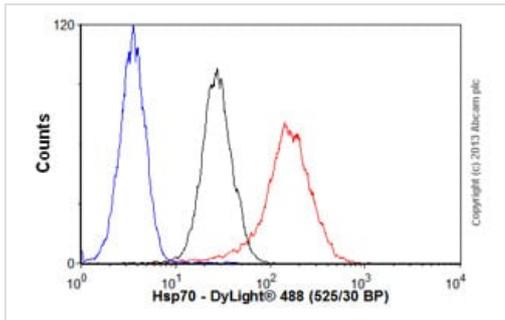


Immunocytochemistry/ Immunofluorescence - Anti-Hsp70 antibody [BB70] (ab53496)

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.

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.



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/1x10<sup>6</sup> 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 [CIGG2A] (ab91361, 1µg/1x10<sup>6</sup> 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