

Datasheet for ABIN361709  
**anti-HSP70/HSC70 antibody**

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## Overview

Quantity:	50 µg
Target:	HSP70/HSC70 (HSC70-4)
Reactivity:	Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HSP70/HSC70 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunofluorescence (IF)

## Product Details

Immunogen:	Chicken HSP70/HSP90 complex
Clone:	BB70
Isotype:	IgG2a
Specificity:	Detects ~72 (HSP) and ~73 kDa (HSC).
Cross-Reactivity:	Beluga, Chicken, Cow, Dog, Drosophila melanogaster, Fish, Guinea Pig, Hamster, Human, Mouse, Pig, Rabbit, Rat, Saccharomyces cerevisiae, Sheep, Xenopus laevis
Purification:	Protein G Purified

## Target Details

Target:	HSP70/HSC70 (HSC70-4)
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## Target Details

Alternative Name: HSP70/HSC70 ([HSC70-4 Products](#))

**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). All HSP70s, regardless of location, bind proteins, particularly unfolded ones. The molecular chaperones of the HSP70 family recognize and bind to nascent polypeptide chains as well as partially folded intermediates of proteins preventing their aggregation and misfolding. The binding of ATP triggers a critical conformational change leading to the release of the bound substrate protein (6). The universal ability of HSP70s to undergo cycles of binding to and release from hydrophobic stretches of partially unfolded proteins determines their role in a great variety of vital intracellular functions such as protein synthesis, protein folding and oligomerization and protein transport. For more information visit our HSP70 Scientific Resource Guide at <http://www.HSP70.com>.

Gene ID: 423504

NCBI Accession: [NP\\_001006686](#)

UniProt: [P08106](#)

## Application Details

**Application Notes:**

- WB (1:1000)
- IHC (1:200)
- ICC/IF (1:200)
- optimal dilutions for assays should be determined by the user.

**Comment:** 1 µg/ml of ABIN361709 was sufficient for detection of HSP70 and HSC70 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

## Application Details

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Restrictions: For Research Use only

## Handling

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Format: Liquid

Concentration: 1 mg/mL

Buffer: PBS pH 7.2, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

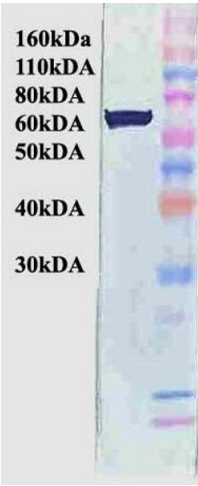
Storage Comment: -20°C

## Publications

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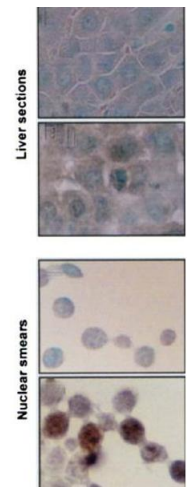
Product cited in: Sun, Wei, Xiong, Wang, Xie, Wang, Yang, Wang, Lu, Liu, Wang: "Synaptic released zinc promotes tau hyperphosphorylation by inhibition of protein phosphatase 2A (PP2A)." in: **The Journal of biological chemistry**, Vol. 287, Issue 14, pp. 11174-82, (2012) ([PubMed](#)).

Chen, Xiong, Kong, Qu, Wang, Chen, Wang, Zhu: "Neuroglobin attenuates Alzheimer-like tau hyperphosphorylation by activating Akt signaling." in: **Journal of neurochemistry**, Vol. 120, Issue 1, pp. 157-64, (2011) ([PubMed](#)).

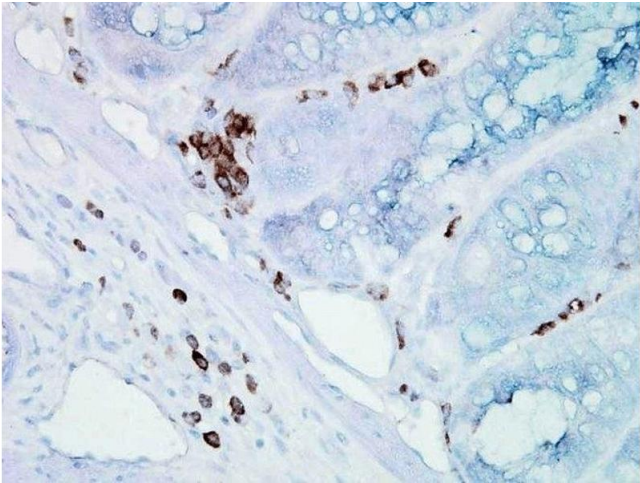


### Western Blotting

**Image 1.** Western Blot analysis of Human Cervical cancer cell line (HeLa) lysate showing detection of Hsp70 protein using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (ABIN361709 and ABIN361710). Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (ABIN361709 and ABIN361710) at 1:1000. Secondary Antibody: HRP Goat Anti-Rat.



**Image 2.** Hsp70 Hsc70 ( BB70), rat nuclear smears and liver sections (top control).



### Immunohistochemistry

**Image 3.** Immunohistochemistry analysis using Mouse Anti-Hsp70 Monoclonal Antibody, Clone BB70 (ABIN361709 and ABIN361710). Tissue: inflamed colon. Species: Mouse. Fixation: Formalin. Primary Antibody: Mouse Anti-Hsp70 Monoclonal Antibody (ABIN361709 and ABIN361710) at 1:10000 for 12 hours at 4 °C. Secondary Antibody: Biotin Goat Anti-Mouse at 1:2000 for 1 hour at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 200 µL for 2 minutes at RT. Localization: Inflammatory cells. Magnification: 40x. Inflammatory cells. HSP70/HSC70 stained brown. This image was produced using an amplifying IHC wash buffer. The antibody has therefore been diluted more than is recommended for other applications..

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN361709.