



Datasheet for ABIN361801  
**anti-Hsc70 antibody**



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### Overview

Quantity:	200 µg
Target:	Hsc70 (HSPA8)
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Hsc70 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP), Immunofluorescence (IF), Immunocytochemistry (ICC), Proximity Ligation Assay (PLA), Binding Studies (Bind), Antibody Array (AA)

### Product Details

Immunogen:	Full length human HSC70
Clone:	1F2-H5
Isotype:	IgG2a kappa
Specificity:	Detects ~73 kDa. Does not cross react with HSP70.
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Protein G Purified

### Target Details

Target:	Hsc70 (HSPA8)
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## Target Details

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Alternative Name: HSC70 (HSP73) ([HSPA8 Products](#))

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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). When cells are subjected to metabolic stress (e.g., heat shock) a member of the HSP 70 family, HSP 70 (HSP72), is expressed, HSP 70 is highly related to HSC70 (>90 % sequence identity). Constitutively expressed HSC70 rapidly forms a stable complex with the highly inducible HSP70 in cells following heat shock. The interaction of HSC70 with HSP 70 is regulated by ATP. These two heat shock proteins move together in the cell experiencing stress. Furthermore, research on HSC70 has implicates it with a role in facilitating the recovery of centrosomal structure and function after heat shock (6).

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Gene ID: 3312

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NCBI Accession: [NP\\_006588](#)

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UniProt: [P11142](#)

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## Application Details

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Application Notes:

- WB (1:1000)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

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Comment: 1 µg/ml of ABIN361800 was sufficient for detection of HSC70 in 10 µg of HeLa lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

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Restrictions: For Research Use only

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## Handling

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Format: Liquid

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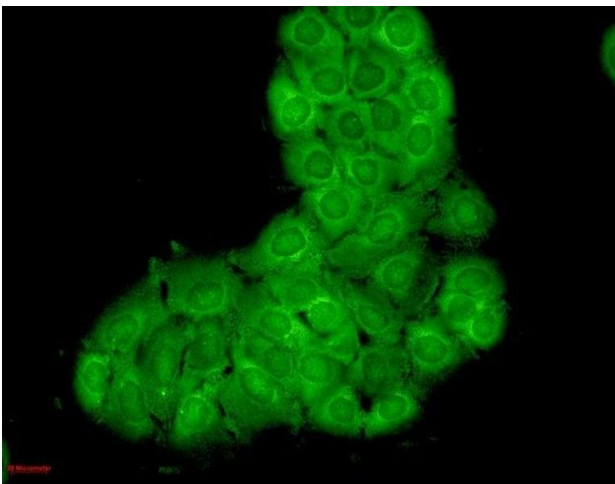
## Handling

Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 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

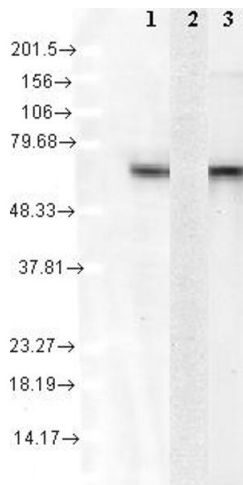
Product cited in: Ekuni, Tomofuji, Irie, Kasuyama, Umakoshi, Azuma, Tamaki, Sanbe, Endo, Yamamoto, Nishida, Morita: "Effects of periodontitis on aortic insulin resistance in an obese rat model." in: **Laboratory investigation; a journal of technical methods and pathology**, Vol. 90, Issue 3, pp. 348-59, (2010) ([PubMed](#)).

## Images

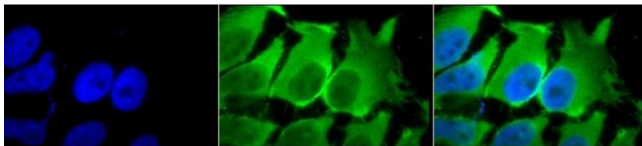


### Immunocytochemistry

**Image 1.** Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsc70 Monoclonal Antibody, Clone 1F2-H5 (ABIN361800 and ABIN361801). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100 % methanol for 10 minutes at -20 °C. Primary Antibody: Mouse Anti-Hsc70 Monoclonal Antibody (ABIN361800 and ABIN361801) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Bright cytoplasmic staining, duller nuclear staining.



**Image 2.** Hsc70 (1F2 H5) human cell line mix copy.



### Immunocytochemistry

**Image 3.** Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Hsc70 (Hsp73) Monoclonal Antibody, Clone 1F2-H5 (ABIN361800 and ABIN361801). Tissue: Heat Shocked cervical cancer cells (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-Hsc70 (Hsp73) Monoclonal Antibody (ABIN361800 and ABIN361801) at 1:100 for 12 hours at 4 °C. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Melanosome. Localizes to nucleus upon heat shock. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Hsc70 (Hsp73) Antibody. (C) Composite. Heat Shocked at 42 °C for 1h.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN361801.