

HSP70 Monoclonal Antibody (3A3)

Product Details	
Size	50 µg
Species Reactivity	Amphibian, Arthropod, Avian, Dog, Fruit fly, Fish, Human, Mollusc, Mouse, Non-human primate, Plant, Pig, Rat, Yeast
Published Species	Algae, Rat, Yeast, Pig, Insect, Non-human primate, Mollusc, Amphibian, Crab, Arthropod, Fish, Human, Mouse, Echinoderm, Prawn, Fruit fly
Host/Isotype	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	3A3
Conjugate	Unconjugated
Immunogen	Human recombinant HSP70 overexpressed in E. coli.
Form	Liquid
Concentration	1 mg/mL
Purification	Protein G
Storage buffer	PBS
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_325454

Applications	Tested Dilution	Publications
Western Blot (WB)	1:1,000-1:5,000	64 Publications
Immunohistochemistry (IHC)	-	3 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:200	-
Immunocytochemistry (ICC/IF)	1:100	4 Publications
Flow Cytometry (Flow)	-	1 Publication
ELISA (ELISA)	-	3 Publications
Immunoprecipitation (IP)	2 µL	2 Publications
Neutralization (Neu)	-	1 Publication
Gel Shift (GS)	Assay-dependent	-
Miscellaneous PubMed (Misc)	-	2 Publications

Product Specific Information

MA3-006 detects several members of the heat shock protein 70 kDa (HSP70) gene family including HSP70, HSC70, p75, and following heat shock, HSP72 from yeast, Drosophila, fish, porcine, plant, mouse, avian, arthropod (red claw crayfish & black tiger prawn), amphibian, non-human primate, and human samples.

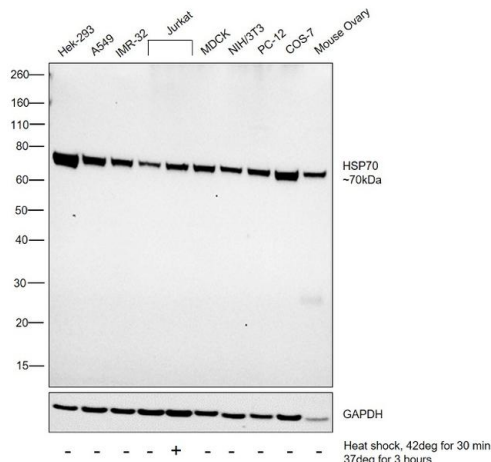
MA3-006 has been successfully used in Western blot, immunocytochemistry, immunofluorescence, gel shift, and immunoprecipitation procedures. By Western blot, this antibody detects proteins from ~70 kDa to ~78 kDa representing different members of the HSP70 family. 2-dimensional gel electrophoresis is required to resolve the heat induced form of these proteins from their constitutively expressed counterparts. Immunocytochemical staining of HSP70 in heat shocked HeLa cells with MA3-006 results in cytoplasmic staining.

The MA3-006 antigen is recombinant human HSP70 over-expressed in *E. coli*. Epitope mapping with a panel of HSP70 deletion mutants suggests that the epitope recognized is located between amino acids 504-617 of human HSP70, a region that has been shown to be involved in stress-induced nucleolar localization.

Product Images For HSP70 Monoclonal Antibody (3A3)

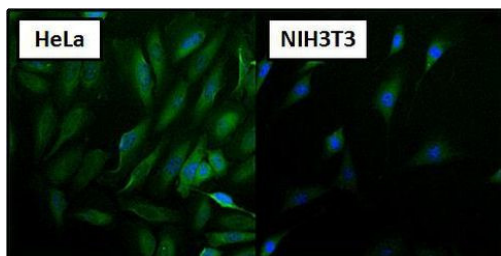
HSP70 Antibody (MA3-006)

Altered expression of proteins upon cell treatment demonstrates antibody specificity. Western blot using HSP70 Monoclonal Antibody (3A3) (Product # MA3-006), shows increased expression of proteins upon heat shock treatment. {TM}



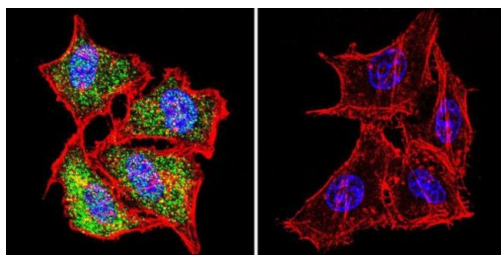
HSP70 Antibody (MA3-006) in ICC/IF

Immunofluorescent analysis of Heat Shock Protein 70 (Hsp70) (green) in HeLa and NIH3T3 cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA (Product # 37525) for 15 minutes at room temperature. Cells were probed with a Hsp70 monoclonal antibody (Product # MA3-006), at a dilution of 1:50 for at least 1 hour at room temperature, washed with PBS, and incubated with DyLight 488 goat-anti-mouse IgG secondary antibody (Product # 35502) at a dilution of 1:400 for 30 minutes at room temperature. Nuclei (blue) were stained with Hoechst 33342 dye (Product # 62249). Images were taken on a Thermo Scientific ArrayScan at 20X magnification.



HSP70 Antibody (MA3-006) in ICC/IF

Immunofluorescent analysis of Heat Shock Protein 70 using Heat Shock Protein 70 Monoclonal antibody (3A3) (Product # MA3-006) shows staining in HeLa cells. Heat Shock Protein 70 staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with or an antibody recognizing Heat Shock Protein 70 (Product # MA3-006) at a dilution of 1:100-1:200 over night at 4 °C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody (Product # 35552 for GAR, Product # 35503 for GAM). Images were taken at 60X magnification.



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Western Blot (64)

<p>Biomedicines</p> <p>gp130 Activates Mitochondrial Dynamics for Hepatocyte Survival in a Model of Steatohepatitis.</p> <p>"MA3-006 was used in Western Blotting to investigate the effect of gp130 on the components of mitochondrial dynamics in a cellular model of steatohepatitis."</p> <p>Authors: Shunkina D,Dakhnevich A,Shunkin E,Khaziakhmatova O,Shupletsova V,Vulf M,Komar A,Kirienkova E,Litvinova L</p>	<p>Year 2023</p> <p>Species Human</p>
<p>Nature communications</p> <p>Nanoscale segregation of channel and barrier claudins enables paracellular ion flux.</p> <p>"MA3-006 was used in Sample Preparation to suggest that nanoscale segregation of distinct channel-forming claudins enables barrier function combined with specific paracellular ion flux across tight junctions."</p> <p>Authors: Gonschior H,Schmied C, Van der Veen RE,Eichhorst J,Himmerkus N,Piontek J,Günzel D,Bleich M,Furuse M,Haucke V,Lehmann M</p>	<p>Year 2022</p> <p>Species Mouse</p> <p>Dilution 1:5000</p>

View more WB references on thermofisher.com

Immunohistochemistry (3)

<p>Journal of immunology research</p> <p>Neuroprotective Effects of <i>Asparagus officinalis</i> Stem Extract in Transgenic Mice Overexpressing Amyloid Precursor Protein.</p> <p>"Published figure using HSP70 monoclonal antibody (Product # MA3-006) in Immunohistochemistry"</p> <p>Authors: Peng Z,Bedi S,Mann V,Sundaresan A,Homma K,Gaskey G,Kowada M,Umar S,Kulkarni AD,Eltzschig HK,Doursout MF</p>	<p>Year 2021</p>
<p>Fish & shellfish immunology</p> <p>Histological, ultrastructural and heat shock protein 70 (HSP70) responses to heat stress in the sea cucumber <i>Apostichopus japonicus</i>.</p> <p>"MA3-006 was used in immunohistochemistry and western blot to study HSP70 in <i>Apostichopus japonicus</i>"</p> <p>Authors: Xu D,Sun L,Liu S,Zhang L,Yang H</p>	<p>Year 2015</p> <p>Species Echinoderm</p> <p>Dilution 1:200</p>

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More applications with references on thermofisher.com

- ICC/IF (4)
- Flow (1)
- ELISA (3)
- IP (2)
- Neu (1)
- Misc (2)

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