

HSP70 Monoclonal Antibody (4G4)

Product Details	
Size	50 µL
Species	Human, Mouse
Published Species	Rat, Non-human primate, Human, Mouse
Expression System	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	4G4
Conjugate	Unconjugated
Immunogen	Human recombinant HSP70 over expressed in E. coli.
Form	Liquid
Concentration	Conc. Not Determined
Storage buffer	ascites diluted in PBS
Contains	no preservative
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_325457

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	1:100 - 1:200	2 Publications
Immunocytochemistry (ICC)	1:100	-
Immunofluorescence (IF)	1:100	-
Immunohistochemistry (IHC)	1:20 - 50	-
Immunoprecipitation (IP)	1:1000	-
Inhibition Assays (IA)	Assay Dependent	-
Western Blot (WB)	1:500	12 Publications
Cytotoxicity Assay (CT)	-	1 Publication
Immunomicroscopy (IM)	-	1 Publication
Neutralization (Neu)	-	3 Publications

Product Specific Information

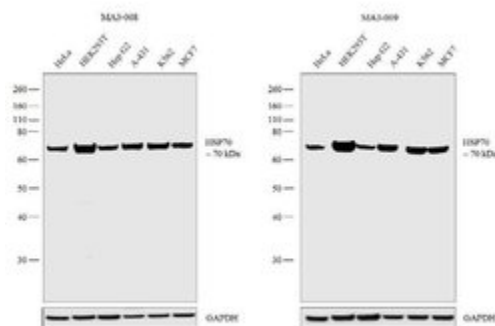
MA3-009 detects heat shock protein 70 kDa (HSP70) from mouse and human tissues. This antibody specifically detects HSP70 and does not cross-react with other members of the HSP70 family.

MA3-009 has been successfully used in Western blot, IF, blocking, FACS, inhibition assay, immunohistochemistry, and immunoprecipitation procedures. By Western blot, this antibody detects a 70 kDa protein representing HSP70 from K562 cell extract.

The MA3-009 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.

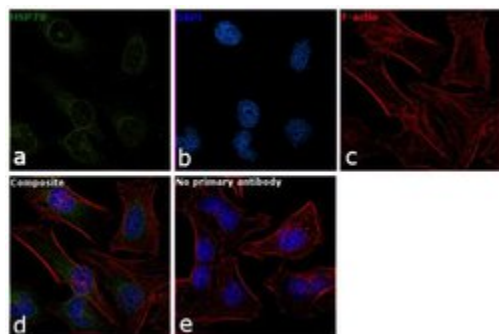
Advanced Verification Data



HSP70 Antibody (MA3-009)

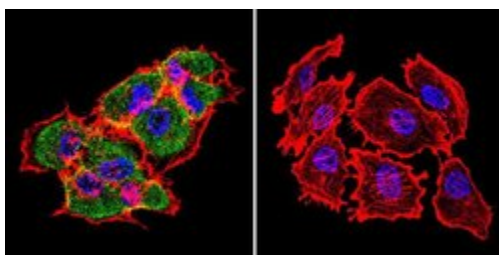
Antibody specificity was demonstrated by showing that antibodies raised against the same target protein perform similarly. Western blot of HSP70 using HSP70 Monoclonal Antibody (4G4) (Product # MA3-009), tested in parallel with HSP70 Monoclonal Antibody (2A4) (Product # MA3-008), show similar expression of HSP70 in the cell lines tested. Independent antibody validation info.

Product Images For HSP70 Monoclonal Antibody (4G4)



HSP70 Antibody (MA3-009) in IF

Immunofluorescence analysis of HSP70 was performed using 70% confluent log phase HeLa cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with HSP70 Monoclonal Antibody(4G4) (Product # MA3-009) at 1:100 dilution in 0.1% BSA and incubated overnight at 4 degree and then labeled with Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175) at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with SlowFade® Gold Antifade Mountant with DAPI (Product # S36938). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing cytoplasmic and nuclear localization. Panel e represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



HSP70 Antibody (MA3-009) in IF

Immunofluorescent analysis of Heat Shock Protein 70 (Hsp70) in NCI-H1299 Cells. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with a Heat Shock Protein 70 (Hsp70) monoclonal antibody (Product # MA3-009) at a dilution of 1:100 overnight at 4 C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody (Product # 35503). Heat Shock Protein 70 (Hsp70) staining (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Images were taken at 60X magnification.

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Neutralization (3)

Journal of the American Heart Association

Targeting Extracellular Heat Shock Protein 70 Ameliorates Doxorubicin-Induced Heart Failure Through Resolution of Toll-Like Receptor 2-Mediated Myocardial Inflammation.

"Published figure using HSP70 monoclonal antibody (Product # MA3-009) in Neutralization"

Authors: Liu P,Bao HY,Jin CC,Zhou JC,Hua F,Li K,Lv XX,Cui B,Hu ZW,Zhang XW

Species
Not Applicable

Dilution
Not Cited

Year
2019

Oncotarget

The bone marrow microenvironment enhances multiple myeloma progression by exosome-mediated activation of myeloid-derived suppressor cells.

"MA3-009 was used in Blocking experiments to investigate the effect of BMSC-derived exosomes on multiple myeloma BM cells, showing that multiple myeloma progression is enhanced through exosome-mediated activation of myeloid-derived suppressor cells."

Authors: Wang J,De Veirman K,De Beule N,Maes K,De Bruyne E, Van Valckenborgh E,Vanderkerken K,Menu E

Species
Mouse

Dilution
Not Cited

Year
2015

[View more Neu references on thermofisher.com](#)

Western Blot (12)

Scientific reports

Multiplex Biomarker Screening Assay for Urinary Extracellular Vesicles Study: A Targeted Label-Free Proteomic Approach.

"MA3-009 was used in Western Blotting to investigate the use of a multiplex biomarker screening assay focused on exosome-like vesicles for studying urinary extracellular vesicles."

Authors: Chutipongtanate S,Greis KD

Species
Human

Dilution
1:1,000

Year
2018

Nature chemical biology

Small-molecule proteostasis regulators for protein conformational diseases.

"MA3-009 was used in western blot to identify small-molecule proteostasis regulators and evaluate them"

Authors: Calamini B,Silva MC,Madoux F,Hutt DM,Khanna S,Chalfant MA,Saldanha SA,Hodder P,Tait BD,Garza D, Balch WE,Morimoto RI

Species
Human

Dilution
1:10000

Year
2011

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CT (1) **Flow (2)** **IM (1)**

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