Anti-HSP60 Antibody [9-49]

M1007-9

Product Type:	Mouse monoclonal IgG2a, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 61kDa
Clone number:	9-49

Description: HSP60, also known as chaperonins (Cpn), is a family of heat shock proteins originally sorted by their 60kDa molecular mass. They prevent misfolding of proteins during stressful situations such as high heat, by assisting protein folding. HSP60 belong to a large class of molecules that assist protein folding, called molecular chaperones. Newly made proteins usually must fold from a linear chain of amino acids into a three-dimensional tertiary structure. The energy to fold proteins is supplied by non-covalent interactions between the amino acid side chains of each protein, and by solvent effects. Most proteins spontaneously fold into their most stable three-dimensional conformation, which is usually also their functional conformation, but occasionally proteins mis-fold. Molecular chaperones catalyze protein refolding by accelerating partial unfolding of misfolded proteins, aided by energy supplied by the hydrolysis of adenosine triphosphate (ATP). Chaperonin proteins may also tag misfolded proteins to be degraded.

Immunogen: Synthetic peptide within Human HSP60 aa 301-350 / 573.

Positive control: Hela, HepG2, human kidney tissue, mouse kidney tissue, human lung cancerr tissue.

Subcellular location: Mitochondrion matrix

Database links: SwissProt: P10809 Human | P63038 Mouse | P63039 Rat

Recommended Dilutions:

WB	1:500-1;1,000
IF-Cell	1:100
IHC-P	1:50-400

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

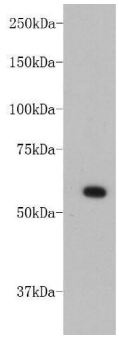

Fig1: Western blot analysis on Hela lysates using anti-HSP60 Mouse mAb (Cat. # M1007-9).

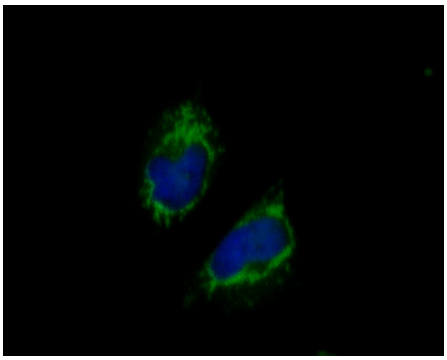

Fig2: Immunocytochemistry analysis of Hela cells labeling HSP60 with Mouse anti-HSP60 antibody (M1007-9) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 ℃, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Mouse anti-HSP60 antibody (M1007-9) at 1/100 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

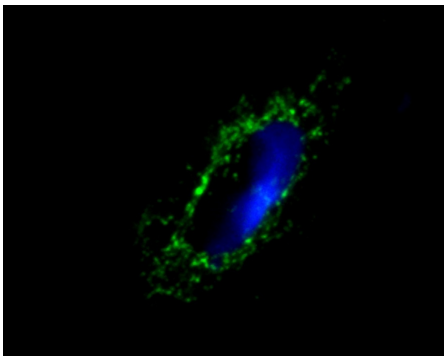

Fig3: Immunocytochemistry analysis of HepG2 cells labeling HSP60 with Mouse anti-HSP60 antibody (M1007-9) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 ℃, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Mouse anti-HSP60 antibody (M1007-9) at 1/100 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

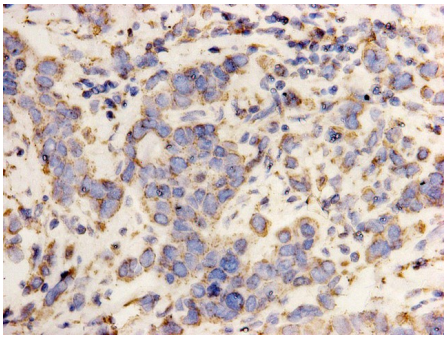

Fig4: Immunohistochemical analysis of paraffin- embedded human breast carcinoma tissue using anti-HSP60 Mouse mAb (Cat. # M1007-9).

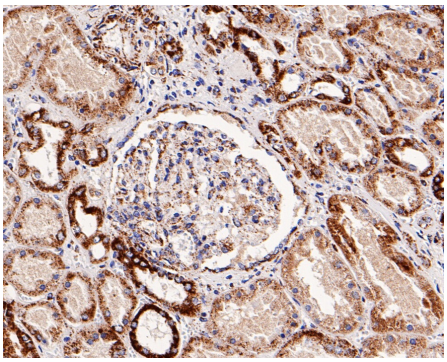

Fig5: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-HSP60 antibody (M1007-9) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (M1007-9) at 1/100 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

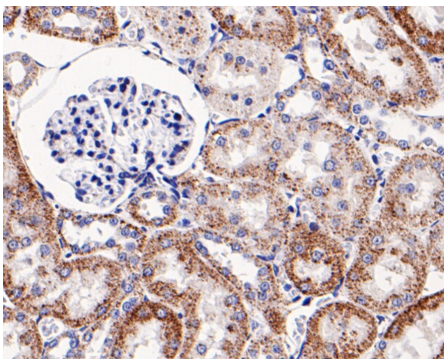

Fig6: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Mouse anti-HSP60 antibody (M1007-9) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (M1007-9) at 1/100 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

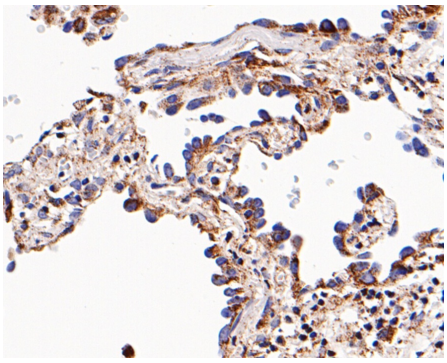

Fig7: Immunohistochemical analysis of paraffin-embedded human lung cancerr tissue with Mouse anti-HSP60 antibody (M1007-9) at 1/400 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (M1007-9) at 1/400 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Singh B., Patel H.V., Ridley R.G., Freeman K.B., Gupta R.S.; "Mitochondrial import of the human chaperonin (HSP60) protein."; Biochem. Biophys. Res. Commun. 169:391-396(1990).
2. Tanaka Y., Kanai F., Kawakami T., Tateishi K., Ijichi H., Kawabe T., Arakawa Y., Kawakami T., Nishimura T., Shirakata Y., Koike K., Omata M.; "Interaction of the hepatitis B virus X protein (HBx) with heat shock protein 60 enhances HBx-mediated apoptosis."; Biochem. Biophys. Res. Commun. 318:461-469(2004).