

HSP70 Rabbit monoclonal antibody

Catalog: MB66356

Host: Rabbit

Reactivity: Human, Mouse, Rat

BackGround:

HSP70 and HSP90 are molecular chaperones expressed constitutively under normal conditions to maintain protein homeostasis and are induced upon environmental stress. Both HSP70 and HSP90 are able to interact with unfolded proteins to prevent irreversible aggregation and catalyze the refolding of their substrates in an ATP- and co-chaperone-dependent manner. HSP70 has a broad range of substrates including newly synthesized and denatured proteins, while HSP90 tends to have a more limited subset of substrates, most of which are signaling molecules. HSP70 and HSP90 often function collaboratively in a multi-chaperone system, which requires a minimal set of co-chaperones: HSP40, Hop, and p23. The co-chaperones either regulate the intrinsic ATPase activity of the chaperones or recruit chaperones to specific substrates or subcellular compartments. When the ubiquitin ligase CHIP associates with the HSP70/HSP90 complex as a cofactor, the unfolded substrates are subjected to degradation by the proteasome. The biological functions of HSP70/HSP90 extend beyond their chaperone activity. They are essential for the maturation and inactivation of nuclear hormones and other signaling molecules. They also play a role in vesicle formation and protein trafficking.

Product:

Liquid in 50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA.

Molecular Weight:

~ 70 kDa

Swiss-Prot:

P0DMV8

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/100), IF/ICC (1/50 - 1/100)

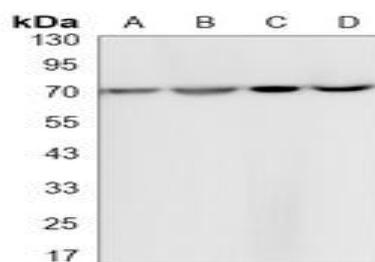
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

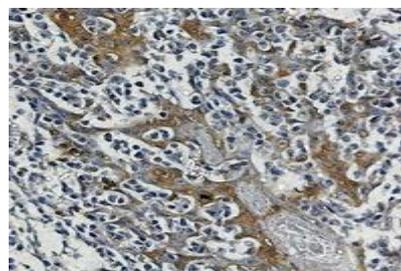
Specificity:

Recognizes endogenous levels of HSP70 protein.

DATA:



Western blot analysis of HSP70 expression in K562 (A), rat brain (B), C6 (C), NIH3T3 (D) whole cell lysates.



Immunohistochemical analysis of HSP70 staining in human tonsil formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.121). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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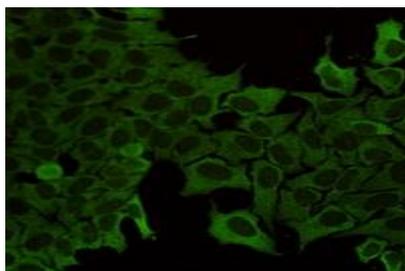
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Immunofluorescent analysis of HSP70 staining in HeLa cells. Forma-

lin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

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