

HSPA1A

Reactivity: Human Mouse Rat

Tested applications: WB

Recommended Dilution: WB 1:2000 - 1:5000

Calculated MW: 70kDa

Observed MW: Refer to Figures

Immunogen:

A synthetic peptide of human HSPA1A

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

bhi

Synonym:

HSP72; HSPA1; HSP70I; HSP70-1; HSP70-1A; HSPA1A

Catalog #: A1507

Antibody Type:

Monoclonal Antibody

Species: Mouse

Gene ID: 3303

Isotype: IgG

Swiss Prot: P08107

Purity: Affinity purification

For research use only.

Background:

HSP70 and HSP90 are molecular chaperones expressed constitutively under normal conditions to maintain protein homeostasis and are induced upon environmental stress (1). 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 (1). 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 (2,3). The co-chaperones either regulate the intrinsic ATPase activity of the chaperones or recruit chaperones to specific substrates or subcellular compartments (1,4). When the ubiquitin ligase CHIP associates with the HSP70/HSP90 complex as a cofactor, the unfolded substrates are subjected to degradation by the proteasome (4). 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 (1,3). They also play a role in vesicle formation and protein trafficking (2).

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