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Hsp60 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22115a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P10809
Other Accession	P31081, Q5NVM5
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB55969
Calculated MW	61055

Additional Information

Gene ID	3329
Other Names	60 kDa heat shock protein, mitochondrial, 60 kDa chaperonin, Chaperonin 60, CPN60, Heat shock protein 60, HSP-60, Hsp60, HuCHA60, Mitochondrial matrix protein P1, P60 lymphocyte protein, HSPD1, HSP60
Target/Specificity	This Hsp60 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 340-374 amino acids from the human region of human Hsp60.
Dilution	WB~~1:2000 IHC-P~~1:100~500 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Hsp60 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HSPD1
Synonyms	HSP60

Function	Chaperonin implicated in mitochondrial protein import and macromolecular assembly. Together with Hsp10, facilitates the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix (PubMed:11422376, PubMed:1346131). The functional units of these chaperonins consist of heptameric rings of the large subunit Hsp60, which function as a back-to-back double ring. In a cyclic reaction, Hsp60 ring complexes bind one unfolded substrate protein per ring, followed by the binding of ATP and association with 2 heptameric rings of the co-chaperonin Hsp10. This leads to sequestration of the substrate protein in the inner cavity of Hsp60 where, for a certain period of time, it can fold undisturbed by other cell components. Synchronous hydrolysis of ATP in all Hsp60 subunits results in the dissociation of the chaperonin rings and the release of ADP and the folded substrate protein (Probable).
Cellular Location	Mitochondrion matrix.

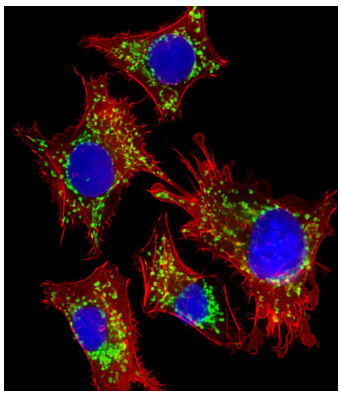
Background

Implicated in mitochondrial protein import and macromolecular assembly. May facilitate the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix.

References

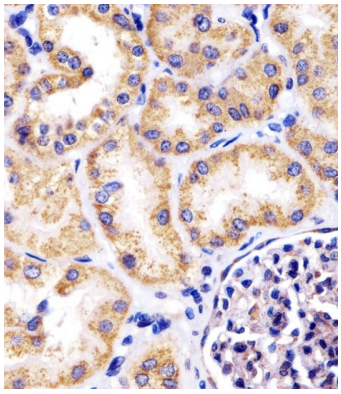
Jindal S.,et al.Mol. Cell. Biol. 9:2279-2283(1989).
Venner T.J.,et al.DNA Cell Biol. 9:545-552(1990).
Hansen J.J.,et al.Hum. Genet. 112:71-77(2003).
Tan J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images

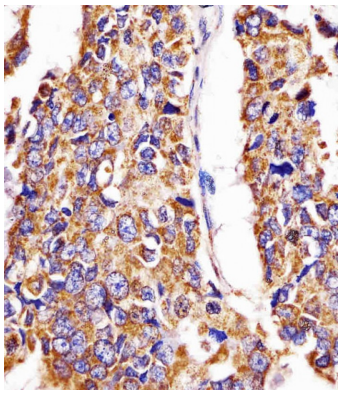


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (human liver hepatocellular carcinoma cell line) cells labeling Hsp60 with AP22115a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HepG2 cell line. The nuclear counter stain is DAPI (blue).

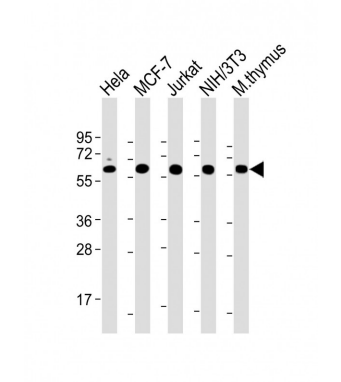
AP22115a staining Hsp60 in human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent



antibody was used as the secondary antibody.



AP22115a staining Hsp60 in human lung adenocarcinoma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



All lanes : Anti-Hsp60 Antibody at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: MCF-7 whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: NIH/3T3 whole cell lysate Lane 5: mouse thymus lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.