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HSP60 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1544a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P10809
Reactivity	Human, Mouse, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	3G8
Isotype	IgG1
Calculated MW	61055
Description	This gene encodes a member of the chaperonin family. The encoded mitochondrial protein may function as a signaling molecule in the innate immune system. This protein is essential for the folding and assembly of newly imported proteins in the mitochondria. This gene is adjacent to a related family member and the region between the 2 genes functions as a bidirectional promoter. Several pseudogenes have been associated with this gene. Two transcript variants encoding the same protein have been identified for this gene. Mutations associated with this gene cause autosomal recessive spastic paraplegia 13. (provided by RefSeq)
Immunogen	Purified recombinant fragment of human HSP60 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

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
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. 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.

References

1. Clin Exp Rheumatol. 2008 Nov-Dec;26(6):1107-10. 2. APMIS. 2008 Oct;116(10):888-95.

Images

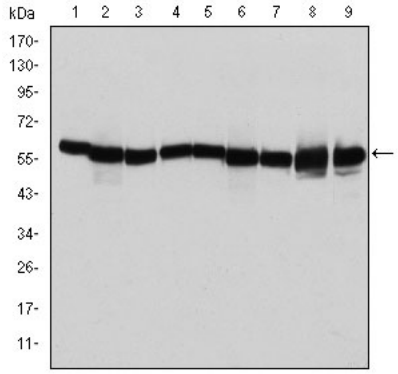


Figure 1: Western blot analysis using HSP60 mouse mAb against T47D (1), Hela (2), HepG2 (3), A549 (4), Jurkat (5), HEK293 (6), NIH/3T3 (7), PC-12 (8) and Cos7 (9) cell lysate.

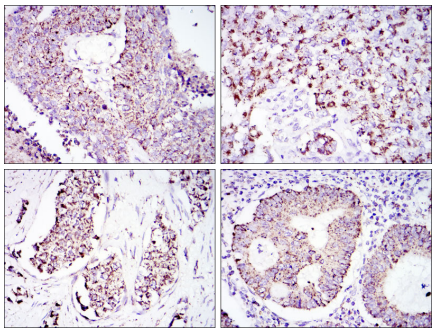
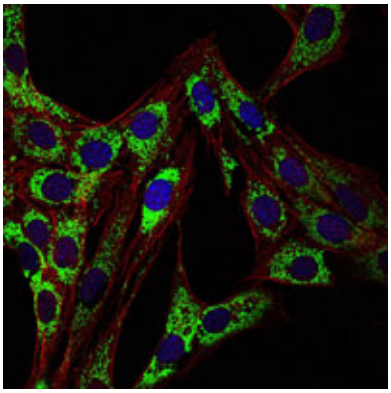


Figure 2: Immunohistochemical analysis of paraffin-embedded lung cancer tissues (left) and kidney cancer tissues (right) using HSP60 mouse mAb with DAB staining.

Figure 3: Immunohistochemical analysis of paraffin-embedded breast cancer tissues (left) and colon cancer tissues (right) using HSP60 mouse mAb with DAB staining.

Figure 4: Immunofluorescence analysis of 3T3-L1 cells using HSP60 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



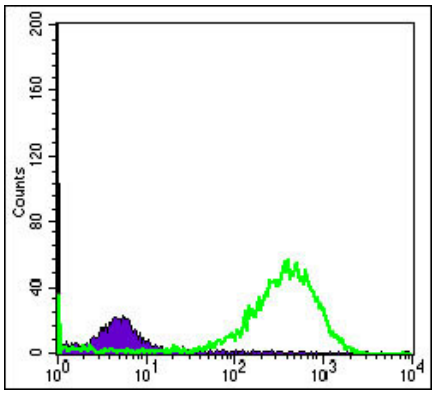


Figure 5: Flow cytometric analysis of Hela cells using HSP60 mouse mAb (green) and negative control (purple).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.