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Hsp 60 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6800A

Product Information

Application	WB, IHC-P, E
Primary Accession	Q0VDF9
Other Accession	Q99M31
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19532
Calculated MW	54794
Antigen Region	80-109

Additional Information

Gene ID	51182
Other Names	Heat shock 70 kDa protein 14, HSP70-like protein 1, Heat shock protein HSP60, HSPA14, HSP60, HSP70L1
Target/Specificity	This Hsp 60 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 80-109 amino acids from the N-terminal region of human Hsp 60.
Dilution	WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	Hsp 60 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HSPA14
Synonyms	HSP60, HSP70L1

Function	Component of the ribosome-associated complex (RAC), a complex involved in folding or maintaining nascent polypeptides in a folding- competent state. In the RAC complex, binds to the nascent polypeptide chain, while DNAJC2 stimulates its ATPase activity.
Cellular Location	Cytoplasm, cytosol.

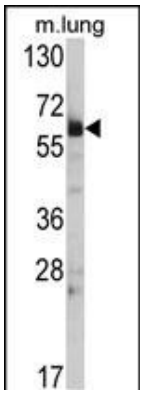
Background

Hsp60 is a member of a highly conserved family which includes molecular chaperones from several species such as plant Hsp60 (known as Rubisco binding protein), GroEL, the E.coli Hsp60 and 65 kDa major antigen of mycobacteria. In eukaryotes, Hsp60 is localized in the mitochondrial matrix and in plants Hsp60 is localized in the chloroplast. Mitochondria, chloroplasts and bacteria have a common ancestry (>1 billion years) and this fact together with the high degree of homology between the divegent Hsp60s would indicate that these proteins carry out a primitive but important function which is similar to all of these different species.The common characteristics of the Hsp60s from the divergent species are i) high abundance, ii) induction with environmental stress such as heat shock, iii) homo oligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of magnesium ions and ATP, iv) ATPase activity and v) a role in folding and assembly of oligomeric protein structures. These similarities are supported by recent studies where the single ring human mitochondrial homolog, Hsp60 with its co chaperonin, Hsp10 were expressed in a E. coli strain, engineered so that the groE operon is under strict regulatory control. This study has demonstrated that expression of Hsp60-Hsp10 was able to carry out all essential in vivo functions of GroEL and its co chaperonin, GroES. Consistent with their functions as chaperones, Hsp60 and Hsp10 have been suggested to act as docking molecules with a passive role in the maturation of caspase processing. Data demonstrates that recombinant Hsp60 and Hsp10 have been shown to accelerate the activation of procaspase 3 by cytochrome c and dATP in an ATP dependent manner. Hsps are intracellular proteins which are thought to serve protective functions against infection and cellular stress, however several recent studies indicate that members of the Hsp60 family are linked to a number of autoimmune diseases, artherosclerosis and chlamydial disease.

References

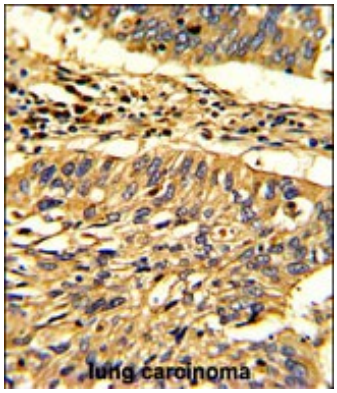
Velez,D.R., et.al., Am. J. Obstet. Gynecol. 200 (2), 209 (2009)

Images



Western blot analysis of Hsp 60 Antibody (N-term) (Cat. #AP6800a) in mouse lung tissue lysates (35ug/lane). Hsp (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human lung carcinoma with Hsp 60 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



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