

**Hsp 60 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP6800A****Specification**

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**Hsp 60 Antibody (N-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">Q0VDF9</a>
Other Accession	<a href="#">Q99M31</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	80-109

**Hsp 60 Antibody (N-term) - 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~~1:25

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**

Hsp 60 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**Hsp 60 Antibody (N-term) - 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**

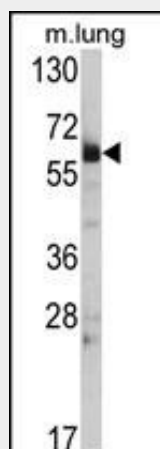
Cytoplasm, cytosol.

### Hsp 60 Antibody (N-term) - Protocols

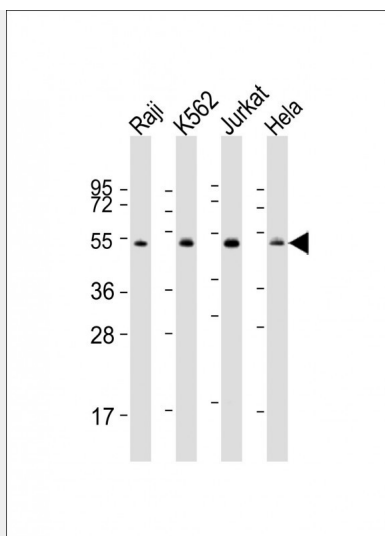
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

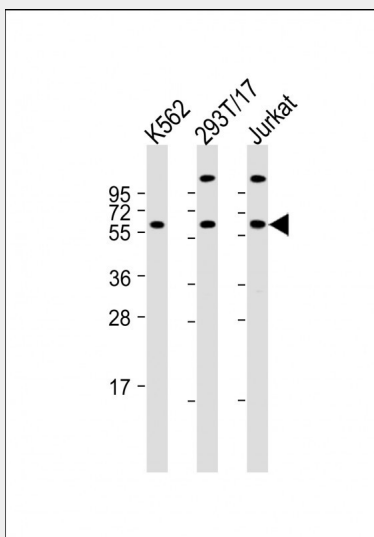
### Hsp 60 Antibody (N-term) - Images



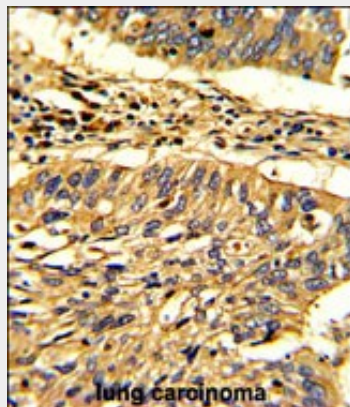
Western blot analysis of Hsp 60 Antibody (N-term) (Cat. #AP6800a) in mouse lung tissue lysates (35ug/lane). Hsp (arrow) was detected using the purified Pab.



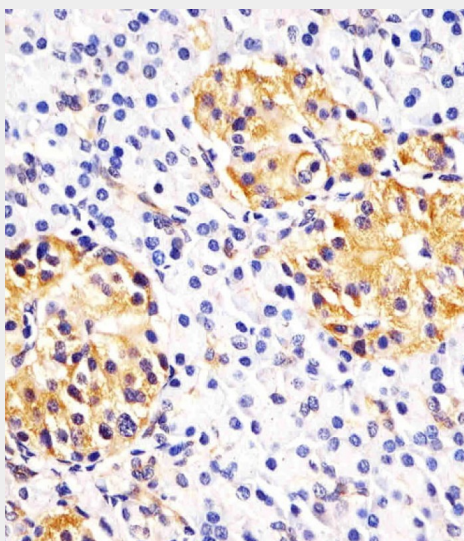
All lanes : Anti-Hsp 60 Antibody (N-term) at 1:2000 dilution Lane 1: Raji whole cell lysates Lane 2: K562 whole cell lysates Lane 3: Jurkat whole cell lysates Lane 4: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-Hsp 60 Antibody (N-term) at 1:2000 dilution Lane 1: K562 whole cell lysate Lane 2: 293T/17 whole cell lysate Lane 3: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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.



AP6800a staining Hsp 60 in human pancreas 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 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

#### **Hsp 60 Antibody (N-term) - 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 divergent 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, atherosclerosis and chlamydial disease.

#### **Hsp 60 Antibody (N-term) - References**

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