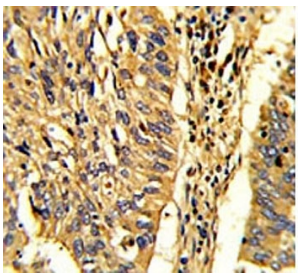
HSP60 Antibody / HSPD1 (F49879)

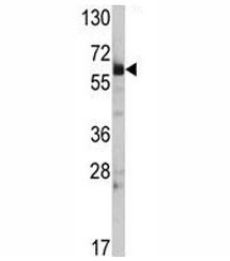
Catalog No.	Formulation	Size
F49879-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F49879-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

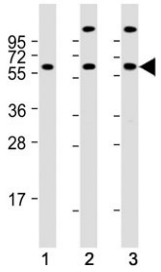
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q0VDF9
Localization	Cytoplasmic
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:50-1:100
Limitations	This HSP60 antibody is available for research use only.



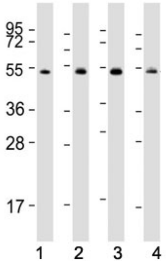
IHC analysis of FFPE human lung carcinoma with HSP60 antibody.



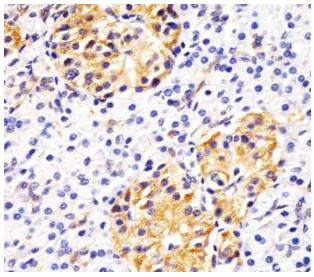
Western blot analysis of HSP60 antibody and mouse lung tissue lysate. Expected molecular weight: 55-70 kDa.



Western blot testing of human 1) K562, 2) 293 and 3) Jurkat cell lysate with HSP60 antibody. Expected molecular weight: 55-70 kDa.



Western blot testing of human 1) Raji, 2) K562, 3) Jurkat and 4) HeLa cell lysate with HSP60 antibody. Expected molecular weight: 55-70 kDa.



IHC analysis of FFPE human pancreas tissue with HSP60 antibody.

Description

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.

Application Notes

Titration of the HSP60 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 80-109 from the human protein was used as the immunogen for this HSP60 antibody.

Storage

Aliquot the HSP60 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.