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Polyclonal Antibody to HSP60 (31-50) - Aff - Purified

Alternate names: 60 kDa chaperonin, 60 kDa heat shock protein mitochondrial, CPN60, Chaperonin 60, GROEL, GroEL Homolog, HSP-60, HSPD1, Heat shock protein 60, HuCHA60, Mitochondrial matrix protein P1, P60 lymphocyte protein

Catalog No.: AP08179PU-N

Quantity: 50 µg

Concentration: 0.2 mg/ml

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.

Uniprot ID: P10809

NCBI: NP_002147.2

GeneID: 3329

Host / Isotype: Rabbit / IgG

Immunogen: Synthetic peptide corresponding to the Amino acids 31 to 50 of human HSPD1.

Format:

State: Liquid purified Ig fraction.
Purification: Affinity Chromatography.
Buffer System: PBS, pH 7.4 containing 0.05% Sodium Azide as preservative and 0.2% BSA as stabilizer.

Applications:

Immunohistochemistry on Paraffin Sections: 1-2 µg/ml.
Western Blot.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

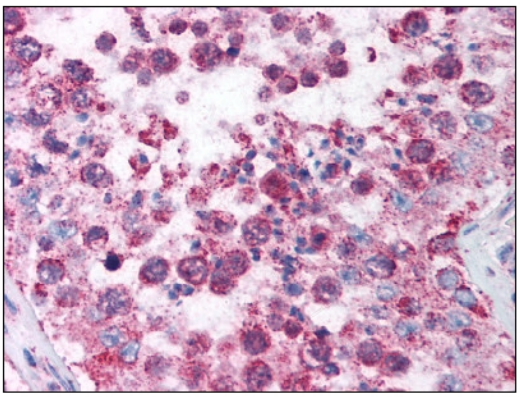
This antibody is specific to Heat Shock 60kDa Protein 1 (Chaperonin) (HSPD1).
Species: Human, Mouse and Rat.
Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Pictures:

Testis: Formalin-Fixed Paraffin-Embedded (FFPE)



Liver: Formalin-Fixed Paraffin-Embedded (FFPE)