HSP60 (insect) polyclonal antibody

The Hsp60 of Heliothis viescens belongs to a highly conserved family of molecular chaperones from several species, including 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 share a common ancestry (>1 billion years), and this coupled with the high degree of homology between the divergent Hsp60s suggests that these proteins perform a primitive but vital function similar to all the different species. The common characteristics shared by the Hsp60s from the divergent species include high abundance; induction with environmental stress such as heat shock; homo-oligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of Mg2+ and ATP; ATPase activity; and a role in folding and assembly of oligomeric protein structures. Studies support these similarities, showing expression of the single-ring human mitochondrial homolog Hsp60 with its co-chaperonin Hsp10, in a E. coli strain engineered so that the groE operon remained under strict regulatory control. The findings demonstrate that expression of Hsp60-Hsp10 enabled successful performance of all essential in vivo functions of GroEL and its co-chaperonin, GroES. Consistent with their functions as chaperones, Hsp60 and Hsp10 may act as docking molecules with a passive role in the maturation of caspase processing. Data incidates that recombinant Hsp60 and Hsp10 accelerate the activation of procaspase-3 by cytochrome c and dATP in an ATP-dependent manner. Hsps are intracellular proteins thought to serve protective functions against infection and cellular stress; however, several studies reveal a possible link between members of the Hsp60 and a number of autoimmune diseases, atherosclerosis, and chlamydial disease.

This antibody is covered by our Worry-Free Guarantee.

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Ordering Information

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ADI-SPA-805-D	50µg

ADI-SPA-805-F	200µg

Manuals, SDS & CofA

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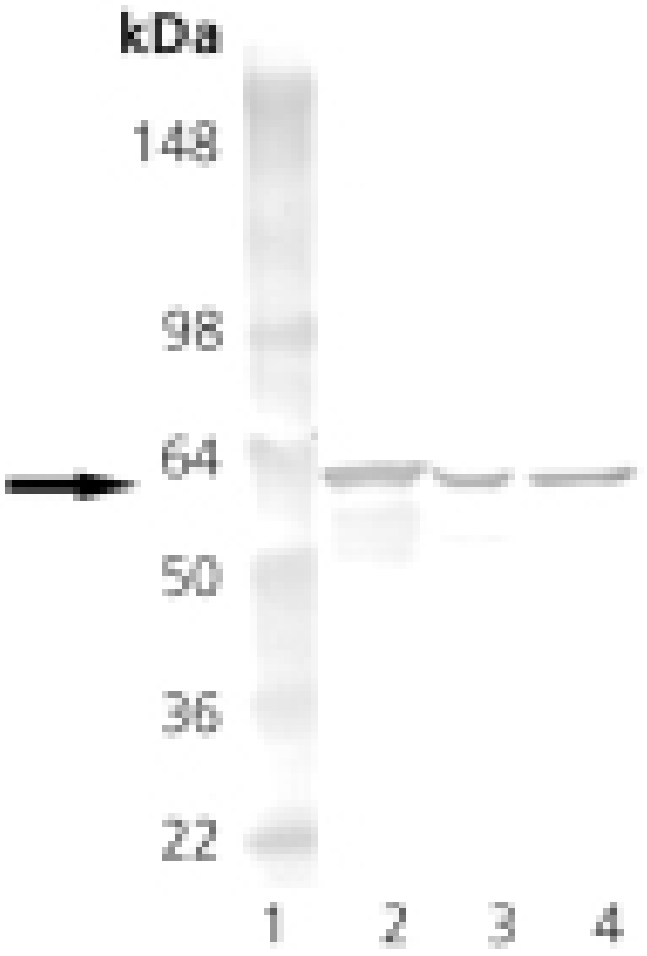

Western blot analysis of HSP60: Lane 1: MW marker, Lane 2: HeLa (Heat Shocked), Lane 3: 3T3 (Heat Shocked), Lane 4: PC-12 (Heat Shocked).

Handling & Storage

Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Chaperonin 60, CPN60, HspD1, heat shock protein 60
Application	IF, WB
Application Notes	Detects a band of ~60kDa by Western blot.
Formulation	Liquid. In PBS, pH 7.2, containing 50% glycerol and 0.09% sodium azide.
GenBank ID	X56034
Host	Rabbit
Immunogen	Native Hsp60 from Heliothis virescens (insect) sperm.
Purity Detail	Protein A affinity purified.
Recommendation Dilutions/Conditions	Western Blot (1:1,000, colorimetric)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Beluga, Bovine, Chicken, Cockroach, Coral, Crab, Dog, Drosophila, E. coli, Ehrlichia, Fish, Grasshopper, Guinea pig, Hamster, Human, Lobster, Monkey, Moth, Mouse, Mussel, Porcine, Rabbit, Rat, Scallop, Sheep
UniProt ID	P25420

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