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Anti-HSP60 Antibody

Rabbit Anti-Human HSP60 Polyclonal
Catalog No. SPC-105



Discovery through partnership | Excellence through quality

Overview

Product Name

HSP60 Antibody

Description

Rabbit Anti-Human HSP60 Polyclonal

Species Reactivity

Dog, Human, Mouse, Rat, Bovine, Chicken, Rabbit

Applications

WB, IHC, ICC/IF, IP, ELISA

Antibody Dilution

WB (1:1000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.

Host Species

Rabbit

Immunogen Species

Human

Immunogen

Human HSP60 produced through recombinant DNA methods in E.coli

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS, 50% glycerol, 0.09% sodium azide

Storage Temperature

-20°C

Shipping Temperature

Blue Ice or 4°C

Purification

Protein A purified

Clonality

Polyclonal

Specificity

Detects ~60kDa.

Cite This Product

Rabbit Anti-Human HSP60 Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-105)

Certificate Of Analysis

1 µg/ml of SPC-105 was sufficient for detection of HSP60 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using goat anti-mouse IgG as the secondary antibody.

Biological Description

Alternative Names

CPN60 Antibody, GROEL Antibody, HLD4 Antibody, HSP 60 Antibody, HSP65 Antibody, HSPD1 Antibody, HuCHA60 Antibody, SPG 13 Antibody

Research Areas

Cancer, Heat Shock

Cellular Localization

Mitochondrion, Mitochondrion Matrix

Accession Number

NP_002147.2

Gene ID

3329

Swiss Prot

P10809

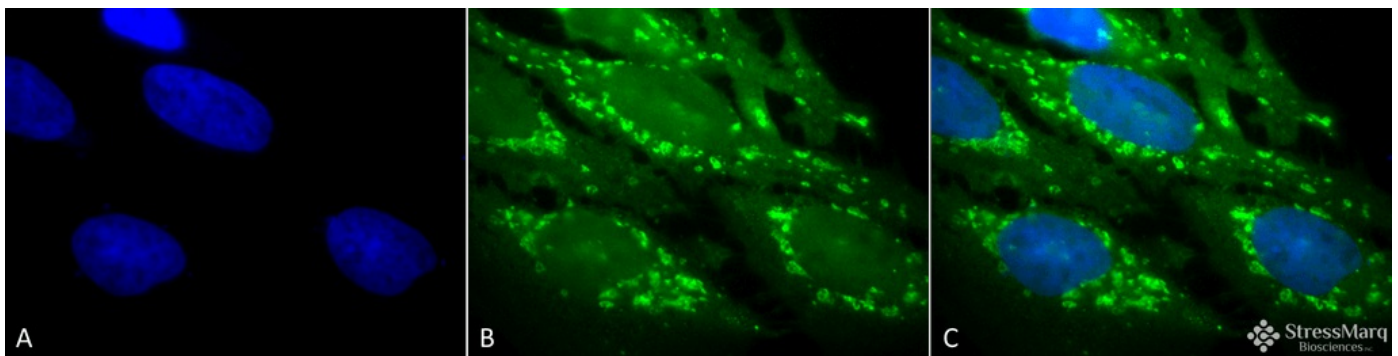
Scientific Background

In both prokaryotic and eukaryotic cells, the misfolding and aggregation of proteins during biogenesis and under conditions of cellular stress are prevented by molecular chaperones. Members of the HSP60 family of heat shock proteins are some of the best characterized chaperones. HSP60, also known as Cpn60 or GroEL, is an abundant protein synthesized constitutively in the cell that is induced to a higher concentration after brief cell shock. It is present in many species and exhibits a remarkable sequence homology among various counterparts in bacteria, plants, and mammals with more than half of the residues identical between bacterial and mammalian HSP60 (1-3). Whereas mammalian HSP60 is localized within the mitochondria, plant HSP60, or otherwise known as Rubisco-binding protein, is located in plant chloroplasts. It has been indicated that these proteins carry out a very important biological function due to the fact that HSP60 is present in so many 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) homooligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of Mg²⁺ and ATP, iv) ATPase activity and v) a role in folding and assembly of oligomeric protein structures (4). 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 (5). HSP60 has however been linked to a number of autoimmune diseases, as well as Alzheimer's, coronary artery diseases, MS, and diabetes (6-9).

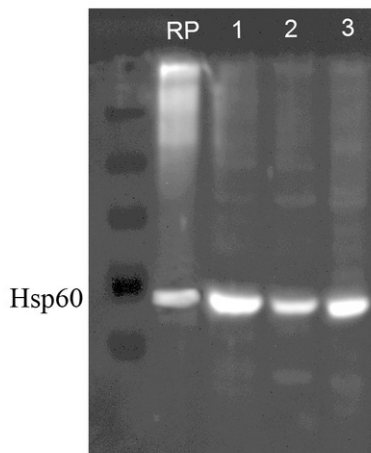
References

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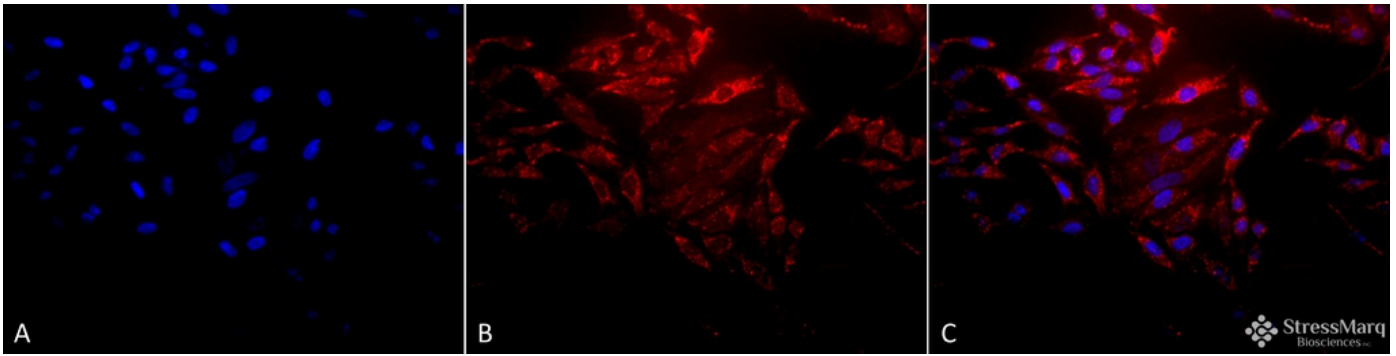
Product Images



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Hsp60 Polyclonal Antibody (SPC-105). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Hsp60 Polyclonal Antibody (SPC-105) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondrion matrix. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-Hsp60 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



Western blot analysis of Human, Dog, Mouse SKBR3, MDCK, and MEF cell line lysates showing detection of HSP60 protein using Rabbit Anti-HSP60 Polyclonal Antibody (SPC-105). Lane 1: Recom. Human Hsp60 (100ng), Lane 2, 3 and 4: SKBR3 lysate (human), MDCK lysate (dog) and MEF lysate (mouse) (al at 7.5ug). Primary Antibody: Rabbit Anti-HSP60 Polyclonal Antibody (SPC-105) at 1:1000.



Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Hsp60 Polyclonal Antibody (SPC-105). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Hsp60 Polyclonal Antibody (SPC-105) at 1:100 for 12 hours at 4°C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Mitochondrion matrix. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-Hsp60 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.