

Datasheet for ABIN863186

anti-HSPD1 antibody

4 Images

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Overview

Quantity:	100 µg
Target:	HSPD1
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This HSPD1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP)

Product Details

Immunogen:	Human HSP60 produced through recombinant DNA methods in E.coli
Specificity:	Detects ~60 kDa.
Cross-Reactivity:	Chicken, Cow, Dog, Hamster, Human, Mouse, Rabbit, Rat
Purification:	Protein A Purified

Target Details

Target:	HSPD1
Alternative Name:	HSP60 (HSPD1 Products)
Background:	<p>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</p>

Target Details

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) homo-oligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of Mg^{2+} 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).

Gene ID: 3329

NCBI Accession: [NP_002147](#)

UniProt: [P10809](#)

Pathways: [Activation of Innate immune Response](#), [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Production of Molecular Mediator of Immune Response](#), [Positive Regulation of Endopeptidase Activity](#)

Application Details

Application Notes:

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

Comment: 1 µg/ml of ABIN863185 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.

Restrictions: For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Publications

Product cited in:

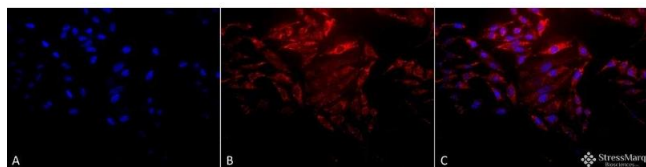
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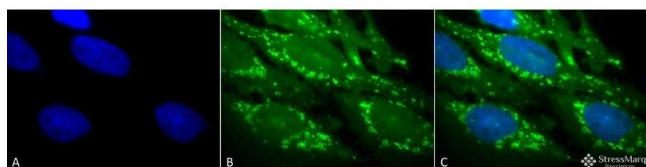
Zhang, Sun, Ding, Huang, Zhang, Jia: "Inhibition of Mitochondrial Complex-1 Prevents the Downregulation of NKCC2 and ENaCa in Obstructive Kidney Disease." in: **Scientific reports**, Vol. 5, pp. 12480, (2015) ([PubMed](#)).

Carattino, Mueller, Palmer, Frindt, Rued, Hughey, Kleyman: "Prostasin interacts with the epithelial Na⁺ channel and facilitates cleavage of the γ -subunit by a second protease." in: **American journal of physiology. Renal physiology**, Vol. 307, Issue 9, pp. F1080-7, (2014) ([PubMed](#)).



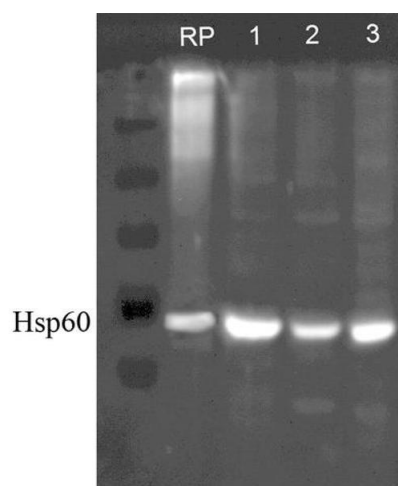
Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Hsp60 Polyclonal Antibody (ABIN863185 and ABIN863186). Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Hsp60 Polyclonal Antibody (ABIN863185 and ABIN863186) 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.



Immunocytochemistry

Image 2. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Hsp60 Polyclonal Antibody (ABIN863185 and ABIN863186). Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Hsp60 Polyclonal Antibody (ABIN863185 and ABIN863186) 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 Blotting

Image 3. 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 (ABIN863185 and ABIN863186). Lane 1: Recom. Human Hsp60 (100 ng), Lane2, 3 and 4: SKBR3 lysate (human), MDCK lysate (dog) and MEF lysate (mouse) (all at 7.5 µg). Primary Antibody: Rabbit Anti-HSP60 Polyclonal Antibody (ABIN863185 and ABIN863186) at 1:1000.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN863186.