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Datasheet for 200-401-F62

HSP60 Antibody

Overview

Description:	Anti-HSP60 (RABBIT) Antibody - 200-401-F62
Item No.:	200-401-F62
Size:	100 µg
Applications:	IF, IHC, IP, WB
Reactivity:	Human, Mouse, Rat, Bovine, Chicken, Dog, Rabbit
Host Species:	Rabbit

Product Details

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. 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 Mg2+ 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. Hsp60 has however been linked to a number of autoimmune diseases, as well as Alzheimer's, coronary artery diseases, MS, and diabetes.
Synonyms:	CPN60, GROEL, HLD4, Hsp 60, Hsp65, HSPD1, HuCHA60, SPG 13, 60 kDa heat shock protein, mitochondrial, 60 kDa chaperonin, Chaperonin 60, CPN60, Heat shock protein 60, HSP-60, Hsp60, Mitochondrial matrix protein P1, P60 lymphocyte protein, PD1
Host Species:	Rabbit

Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HSPD1
Reactivity:	Human, Mouse, Rat, Bovine, Chicken, Dog, Rabbit
Immunogen Type:	Recombinant Protein
Immunogen:	Hsp60 Antibody was produced from whole rabbit serum prepared by repeated immunizations raised against human Hsp60 produced through recombinant DNA methods in E.coli.
Purity/Specificity:	Anti-HSP60 Antibody was purified by Protein A chromatography. A BLAST analysis was used to suggest cross-reactivity with Hsp60 from Human, Mouse, Rat, Bovine, Canine, Chicken, and Rabbit based on 100% homology with the immunizing sequence. Cross-reactivity with Hsp60 from other sources has not been determined. Heat Shock research.
Relevant Links:	• NCBI - NP_002147.2 • GeneID - 3329 • UniProtKB - P10809

Application Details

Tested Applications:	IF, IHC, IP, WB
Application Note:	Anti-HSP60 Antibody is tested for use in WB, IHC-P, IF and IP. Expect a band approximately ~60kDa protein corresponding to the molecular mass of Hsp60 on SDS PAGE immunoblots. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:200
IHC:	User Optimized
IP:	User Optimized
WB:	1:1000

Formulation

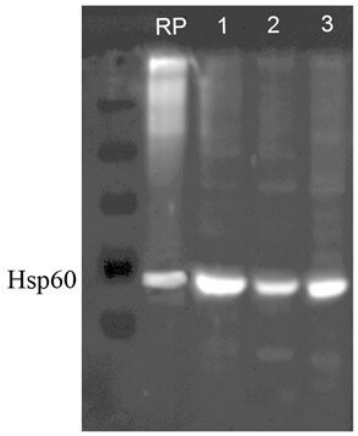
Physical State:	Liquid (sterile filtered)

Concentration:	1mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Western Blot of rabbit anti-Hsp60 antibody. Lane 1: 100ng Hsp60 recombinant protein. Lane 2: 7.5µg SKBR3 human lysate. Lane 3: 7.5µg MDCK dog lysate. Lane 4: 7.5µg MEF mouse lysate. Primary antibody: Hsp60 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 61.1 kDa for Hsp60. Other band(s): none.

References

- de Lima LA et al. Effects of vitamin D (VD3) supplementation on the brain mitochondrial function of male rats, in the 6-OHDA-induced model of Parkinson's disease. *Neurochem Int.* (2022)

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