10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Hsp60 Picoband Antibody

Catalog # ABO12028

Specification

Anti-Hsp60 Picoband Antibody - Product Information

Application	**WB, IHC-P, ICC**
Primary Accession	P10809
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for 60 kDa heat shock protein, mitochondrial(HSPD1) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Hsp60 Picoband Antibody - Additional Information

Gene ID 3329

Other Names
60 kDa heat shock protein, mitochondrial, 60 kDa chaperonin, Chaperonin 60, CPN60, Heat shock protein 60, HSP-60, Hsp60, HuCHA60, Mitochondrial matrix protein P1, P60 lymphocyte protein, HSPD1, HSP60

Calculated MW
61055 MW KDa

Application Details
Immunocytochemistry , 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Mitochondrion matrix.

Protein Name
60 kDa heat shock protein, mitochondrial

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human Hsp60 recombinant protein (Position: A260-Q496). Human Hsp60 shares 97% amino acid (aa) sequence identity with both mouse and rat Hsp60.

Purification

Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the chaperonin (HSP60) family.

Anti-Hsp60 Picoband Antibody - Protein Information

Name HSPD1

Synonyms HSP60

Function
Chaperonin implicated in mitochondrial protein import and macromolecular assembly. Together with Hsp10, facilitates the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix (PubMed:11422376, PubMed:1346131). The functional units of these chaperonins consist of heptameric rings of the large subunit Hsp60, which function as a back- to-back double ring. In a cyclic reaction, Hsp60 ring complexes bind one unfolded substrate protein per ring, followed by the binding of ATP and association with 2 heptameric rings of the co-chaperonin Hsp10. This leads to sequestration of the substrate protein in the inner cavity of Hsp60 where, for a certain period of time, it can fold undisturbed by other cell components. Synchronous hydrolysis of ATP in all Hsp60 subunits results in the dissociation of the chaperonin rings and the release of ADP and the folded substrate protein (Probable).

Cellular Location
Mitochondrion matrix.

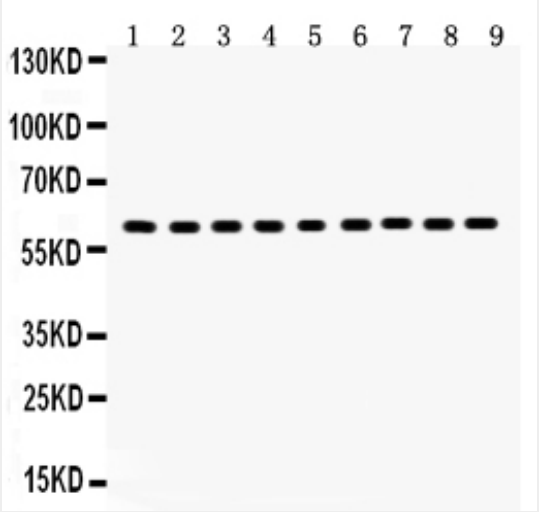
Anti-Hsp60 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

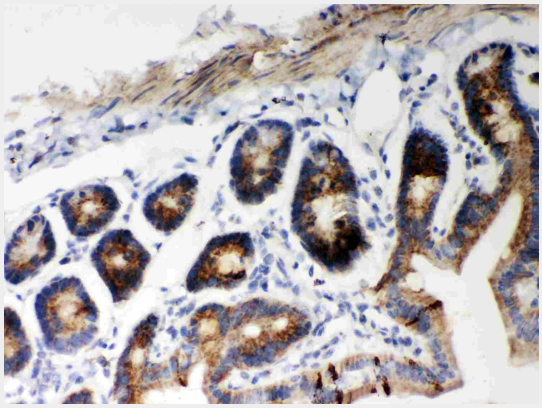
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Hsp60 Picoband Antibody - Images

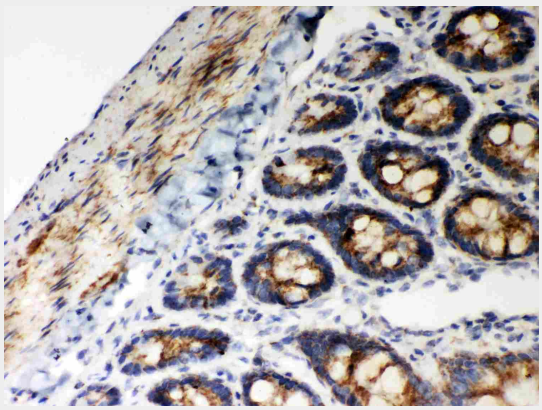
10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Anti- Hsp60 Picoband antibody, ABO12028, Western blottingAll lanes: Anti Hsp60 (ABO12028) at 0.5ug/mlLane 1: Rat Kidney Tissue Lysate at 50ugLane 2: Mouse Kidney Tissue Lysate at 50ugLane 3: HEPA Whole Cell Lysate at 40ugLane 4: NRK Whole Cell Lysate at 40ugLane 5: PC-12 Whole Cell Lysate at 40ugLane 6: SW620 Whole Cell Lysate at 40ugLane 7: A549 Whole Cell Lysate at 40ugLane 8: A431 Whole Cell Lysate at 40ugLane 9: HELA Whole Cell Lysate at 40ugPredicted bind size: 60KDObserved bind size: 60KD

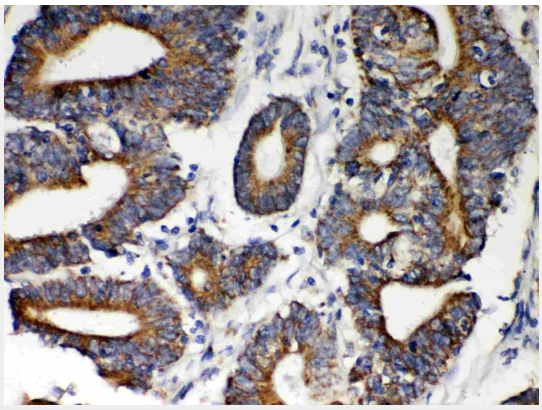


Anti- Hsp60 Picoband antibody, ABO12028, IHC(P)IHC(P): Mouse Intestine Tissue

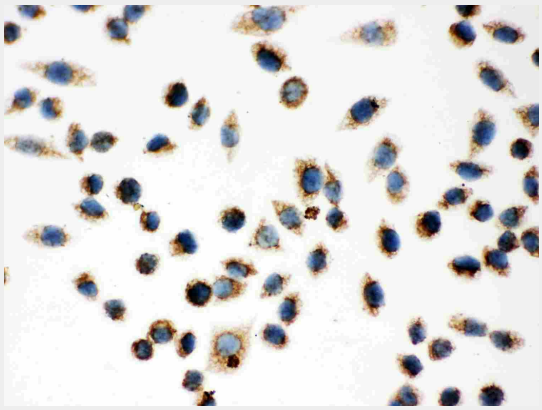


Anti- Hsp60 Picoband antibody, ABO12028, IHC(P)IHC(P): Rat Intestine Tissue

10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Anti- Hsp60 Picoband antibody, ABO12028, IHC(P)IHC(P): Human Intestinal Cancer Tissue



Anti- Hsp60 Picoband antibody, ABO12028, ICCICC: SMMC-7721 Cell

Anti-Hsp60 Picoband Antibody - Background

HSP60 is a member of the chaperonin class of protein factors, which include the Escherichia coli groEL protein and the Rubisco subunit-binding protein of chloroplasts. It acts as a costimulator of human regulatory CD4-positive/CD25 -positive T cells, which inhibit lymphoproliferation and IFNG and TNF secretion by CD4-positive and CD8-positive T cells. HSP60 enhances Treg activity via TLR2, leading to activation of an intracellular signaling cascade that included p38, as well as inhibition of ERK phosphorylation. Suppression of target T cells is mediated by both cell-to-cell contact and by secretion of TGFB and IL10, and it leads to downregulation of ERK, NFKB, and TBET expression. The self-molecule HSP60 can downregulate adaptive immune responses by upregulating Tregs through TLR2 signaling.