

**Anti-Hsp60 Picoband Antibody**  
**Catalog # ABO12028****Specification**

---

**Anti-Hsp60 Picoband Antibody - Product Information**

Application	WB, IHC-P, ICC
Primary Accession	<a href="#">P10809</a>
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, -<br>Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Mitochondrion matrix.

**Protein Name**

60 kDa heat shock protein, mitochondrial

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**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 reconstitution, 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](http://www.uniprot.org/citations/11422376), PubMed: [1346131](http://www.uniprot.org/citations/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).

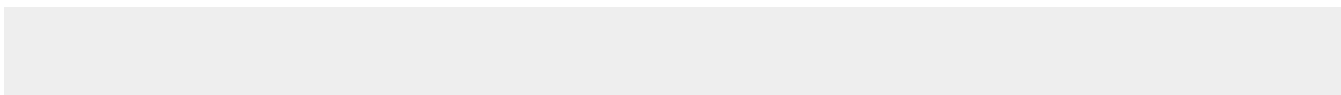
**Cellular Location**

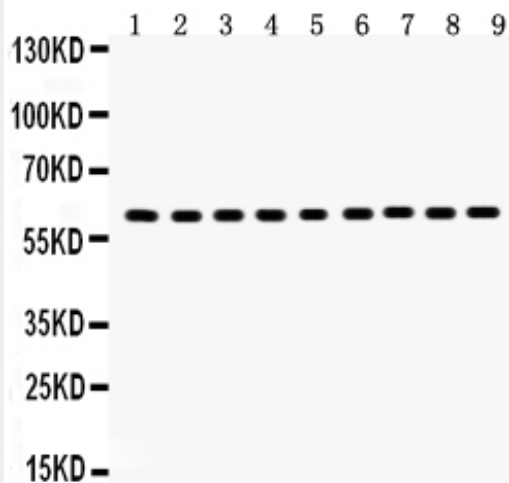
Mitochondrion matrix.

**Anti-Hsp60 Picoband Antibody - Protocols**

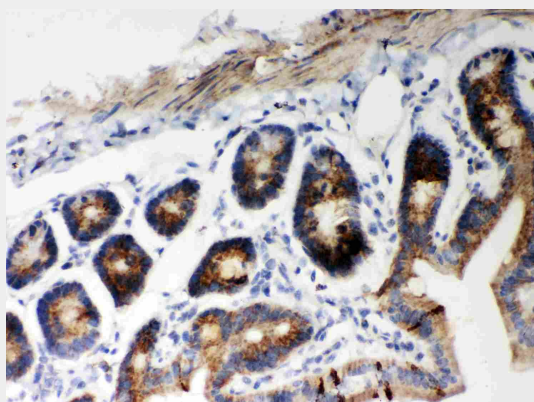
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

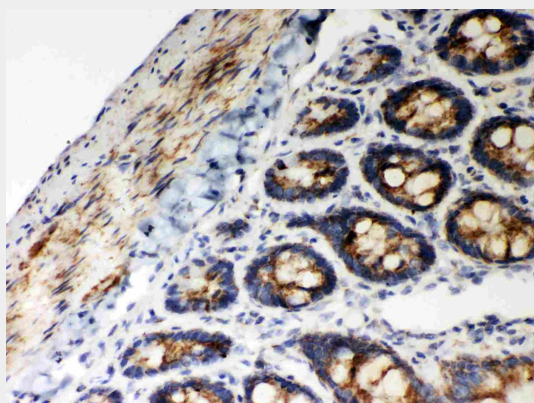
**Anti-Hsp60 Picoband Antibody - Images**



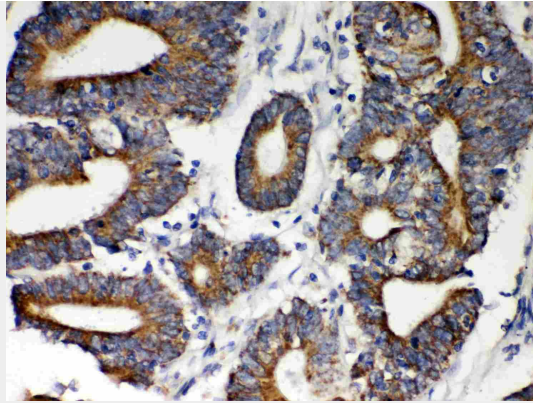
Anti- Hsp60 Picoband antibody, ABO12028, Western blotting All lanes: Anti Hsp60 (ABO12028) at 0.5ug/ml  
Lane 1: Rat Kidney Tissue Lysate at 50ug  
Lane 2: Mouse Kidney Tissue Lysate at 50ug  
Lane 3: HEPA Whole Cell Lysate at 40ug  
Lane 4: NRK Whole Cell Lysate at 40ug  
Lane 5: PC-12 Whole Cell Lysate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



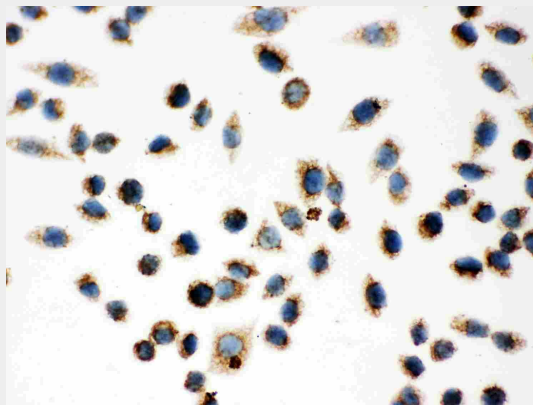
Anti- Hsp60 Picoband antibody, ABO12028, IHC(P) IHC(P): Mouse Intestine Tissue



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



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.