

## Anti-Hsp60/HSPD1 Antibody Picoband®

Catalog Number: PB9337

### About HSPD1

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.

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## Overview

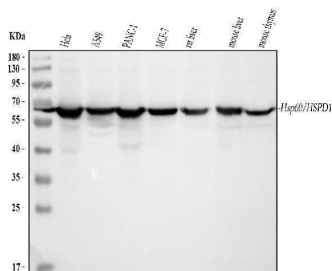
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name         | Anti-Hsp60/HSPD1 Antibody Picoband®                                                                                                                                                                                                                                                                                                                                                                                                      |
| Reactive Species     | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Description          | Boster Bio Anti-Hsp60/HSPD1 Antibody Picoband® catalog # PB9337. Tested in IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application          | IF, IHC, ICC, WB                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Clonality            | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Formulation          | Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                                                                                                                                                                                                                                                             |
| Storage Instructions | Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                    |
| Host                 | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Uniprot ID           | P10809                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Technical Details

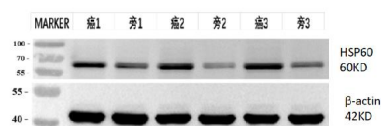
|           |                                                                                                                                                               |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                               |                                                                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.  |
| Cross Reactivity              | No cross-reactivity with other proteins                                                                                                                                                   |
| Isotype                       | Rabbit IgG                                                                                                                                                                                |
| Form                          | Lyophilized                                                                                                                                                                               |
| Concentration                 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.                                                                                                                 |
| Purification                  | Immunogen affinity purified.                                                                                                                                                              |
| Suggested Dilutions           | Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat<br>Immunocytochemistry/Immunofluorescence, 2ug/ml, Human |

## Anti-Hsp60/HSPD1 Antibody Picoband® (PB9337) Images

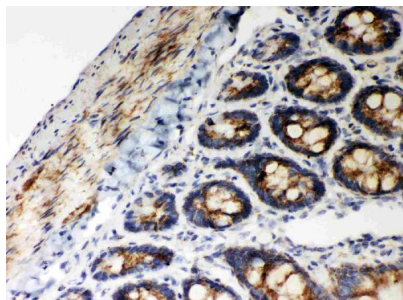
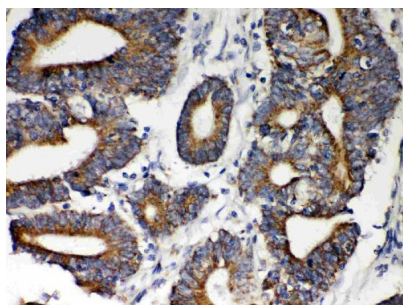


Western blot analysis of Hsp60 using anti-Hsp60 antibody (PB9337). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human A549 whole cell lysates, Lane 3: human PANC-1 whole cell lysates, Lane 4: human MCF-7 whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: mouse liver tissue lysates, Lane 7: mouse thymus tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Hsp60 antigen affinity purified polyclonal antibody (Catalog # PB9337) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Hsp60 at approximately 61 kDa. The expected band size for Hsp60 is at 61 kDa.

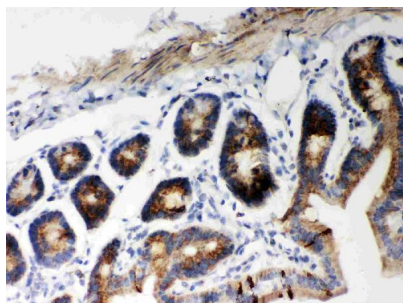


Western blot analysis of Hsp60 using anti-Hsp60 antibody (PB9337). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human cervical cancer tissue lysates, Lane 2: human cervical cancer adjacent tissue lysates, Lane 3: human cervical cancer tissue lysates, Lane 4: human cervical cancer adjacent tissue lysates, Lane 5: human cervical cancer tissue lysates, Lane 6: human cervical cancer adjacent tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Hsp60 antigen affinity purified polyclonal antibody (Catalog # PB9337) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with ChemiDoc MP system. A specific band was detected for Hsp60 at approximately 61 kDa. The expected band size for Hsp60 is at 61 kDa.

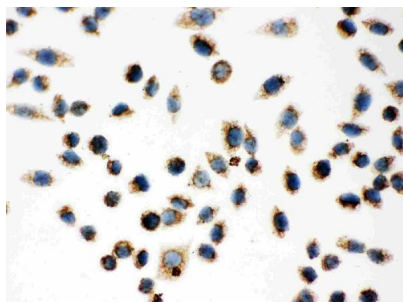
Anti-Hsp60 Picoband antibody, PB9337, IHC(P)IHC(P):  
Human Intestinal Cancer Tissue



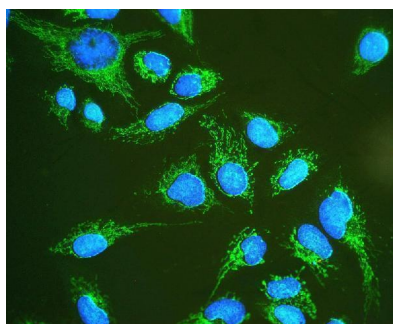
Anti-Hsp60 Picoband antibody, PB9337, IHC(P)IHC(P): Rat Intestine Tissue



Anti-Hsp60 Picoband antibody, PB9337, IHC(P)IHC(P): Mouse Intestine Tissue



IHC analysis of Hsp60 using anti-Hsp60 antibody (PB9337). Hsp60 was detected in immunocytochemical section of SMMC-7721 Cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1ug/ml rabbit anti-Hsp60 Antibody (PB9337) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IF analysis of Hsp60 using anti-Hsp60 antibody (PB9337). Hsp60 was detected in immunocytochemical section of U20S cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Hsp60 Antibody (PB9337) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

1. PubMed ID: , Denatured corona proteins mediate the intracellular bioactivities of nanoparticles via the unfolded protein response
2. PubMed ID: 24380831, Li L, Zhai S, Wang L, Si S, Wu H, Chang Z. Fish Shellfish Immunol. 2014 Feb;36(2):401-8. Doi: 10.1016/J.Fsi.2013.12.016. Epub 2013 Dec 29. Hsp60 In Caudal Fin Regeneration From Paramisgurnus Dabryanus: Molecular Cloning And Expression Characteriza...
3. PubMed ID: 24257806, Li L, Nan P, Zhai S, Wang L, Si S, Chang Z. Mol Cell Biochem. 2014 Feb;387(1-2):143-50. Doi: 10.1007/S11010-013-1879-0. Epub 2013 Nov 21. Molecular Cloning, Characterization, And Expression Of Hsp60 In Caudal Fin Regeneration Of Misgurnus Anguilli...

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### Anti-Hsp60/HSPD1 Antibody

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