BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Hsp90 alpha/HSP90AA1 Antibody Picoband®

Catalog Number: PB9089

About HSP90AA1

Heat shock protein HSP 90-alpha is a protein that in humans is encoded by the HSP90AA1 gene. The gene, HSP90AA1, encodes the human stress-inducible 90-kDa heat shock protein alpha (Hsp90A). Complemented by the constitutively expressed paralog Hsp90B which shares over 85% amino acid sequence identity, Hsp90A expression is initiated when a cell experiences proteotoxic stress. Once expressed Hsp90A dimers operate as molecular chaperones that bind and fold other proteins into their functional 3-dimensional structures. This molecular chaperoning ability of Hsp90A is driven by a cycle of structural rearrangements fueled by ATP hydrolysis. Current research on Hsp90A focuses in its role as a drug target due to its interaction with a large number of tumor promoting proteins and its role in cellular stress adaptation.

Overview

Product Name	Anti-Hsp90 alpha/HSP90AA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Hsp90 alpha/HSP90AA1 Antibody Picoband® catalog # PB9089. Tested in Flow Cytometry, 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	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	P07900

Technical Details

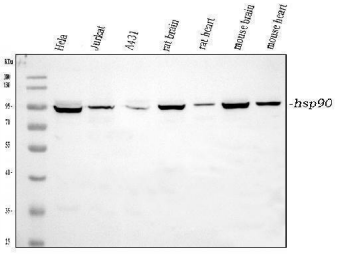
Immunogen	E.coli-derived human Hsp90 alpha recombinant protein (Position: P2-V365). Human Hsp90 alpha shares 99% amino acid (aa) sequence identity with both mouse and rat Hsp90 alpha.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

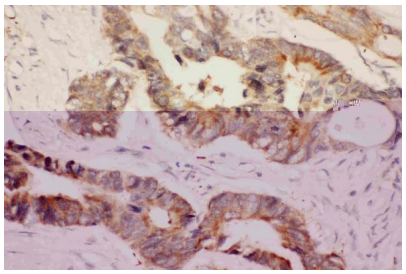
	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry , 0.5-1ug/ml, Human, - Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

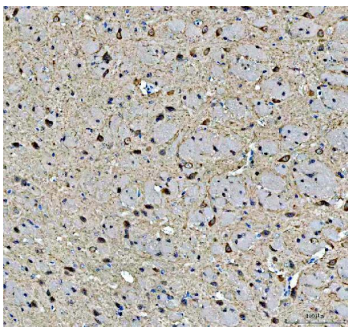
Anti-Hsp90 alpha/HSP90AA1 Antibody Picoband® (PB9089) Images



Western blot analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089). 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 Jurkat whole cell lysates, Lane 3: human A431 whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat heart tissue lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse heart 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-Hsp90 Alpha antigen affinity purified polyclonal antibody (Catalog # PB9089) 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 Hsp90 Alpha at approximately 95 kDa. The expected band size for Hsp90 Alpha is at 85 kDa.



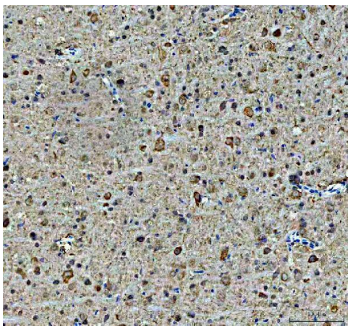
IHC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089). Hsp90 Alpha was detected in a paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



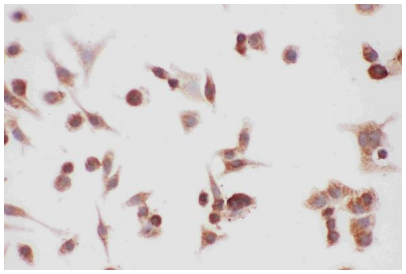
IHC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089). Hsp90 Alpha was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089). Hsp90 Alpha was detected in a paraffin-embedded

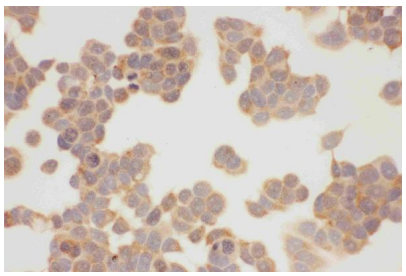
BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



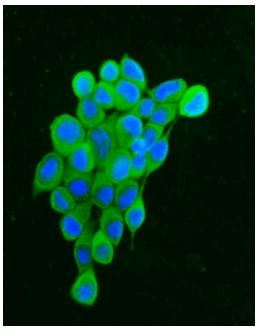
section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



ICC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089). Hsp90 Alpha was detected in an immunocytochemical section of A549 cells. 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 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



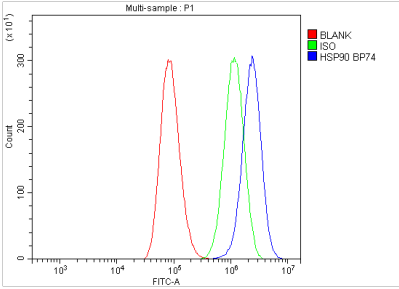
ICC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089). Hsp90 Alpha was detected in an immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



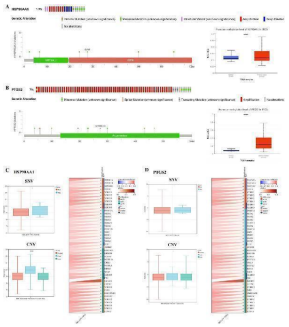
IF analysis of Hsp90 alpha using anti-Hsp90 alpha antibody (PB9089). Hsp90 alpha was detected in immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-Hsp90 alpha Antibody (PB9089) 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.

Flow Cytometry analysis of A549 cells using anti-Hsp90 alpha antibody (PB9089). Overlay histogram showing A549 cells stained with PB9089 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Hsp90 alpha Antibody

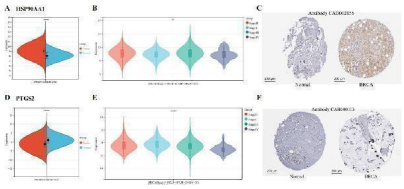
BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



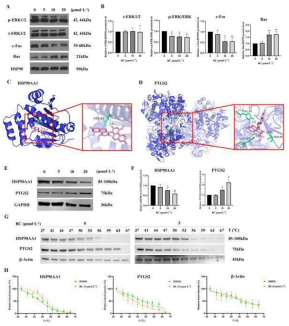
(PB9089, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



HSP90AA1 and PTGS2 gene mutation and methylation in BRCA. (A, B) The alteration frequency, mutation types, mutation sites, and promoter methylation level of HSP90AA1 and PTGS2. (C) The relationship between SNV, CNV and HSP90AA1 expression, and the correlation between HSP90AA1 and the expression of 44 marker genes of RNA modification. (D) The relationship between SNV, CNV and PTGS2 expression, and the correlation between PTGS2 and the expression of 44 marker genes of RNA modification. (* P < 0.05, **** P < 0.0001 versus control group).Index in PubMed under a CC BY license. PMID: 39502536



Expression of hub genes in BCRA from TCGA and GTEx data. (A) HSP90AA1 was upregulated in BRCA. (B) The expression of HSP90AA1 was associated with the stage of BRCA. (C) The protein expression of HSP90AA1 in BRCA. (D) PTGS2 was downregulated in BRCA. (E) The expression of PTGS2 was associated with the stage of BRCA. (F) The protein expression of PTGS2. (* P < 0.05 and **** P < 0.0001 versus control group).Index in PubMed under a CC BY license. PMID: 39502536



Effect of BC on the expression of diverse proteins in BT549 cells. (A) Image of MAPK signaling pathway-related protein expression bands. (B) The expression of MAPK signaling pathway-related proteins after BC treatment of BT549 cells. (* P < 0.05, ** P < 0.01 versus control group). (C) Molecular docking diagram of BC and HSP90AA1 protein. (D) Molecular docking diagram of BC and PTGS21 protein. (E) Image of hub protein expression bands. (F) The expression of hub proteins after BC treatment of BT549 cells. (G) Images of HSP90AA1, PTGS2, and beta-Actin protein expression bands of the cellular thermal shift assay. (H) Statistical results of HSP90AA1, PTGS2, and beta-Actin protein expression bands of the cellular thermal shift assay. (* P < 0.05, ** P < 0.01 versus control group).Index in PubMed under a CC BY license. PMID: 39502536

7 Publications Citing This Product

1. PubMed ID: 10.3390/ijms15010186, The Effect of 5-Adenylic Acid on Hepatic Proteome of Mice Radiated by 60Co gamma-ray

2. PubMed ID: 10.3892/ijo.2015.3039, Autophagy is involved in recombinant Newcastle disease virus (rL-RVG)-induced cell death of stomach adenocarcinoma cells in vitro

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

3. PubMed ID: 10.1016/j.cellbi.2009.01.008, Rat bone marrow derived mesenchymal progenitor cells support mouse ES cell growth and germ-like cell differentiation

Visit bosterbio.com/anti-hsp90-alpha-picoband-trade-antibody-pb9089-boster.html to see all 7 publications.

Anti-Hsp90 alpha/HSP90AA1 Antibody

For Research Use Only. Not for use in diagnostic procedures.