BOSTER
antibody and ELISA experts

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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.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.
Predicted Reactive Species	Bovine, Canine, Monkey, Rabbit
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

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Immunocytochemistry , 0.5-1ug/ml, Human, - Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry, 1-3ug/1x10^6 cells, Human

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

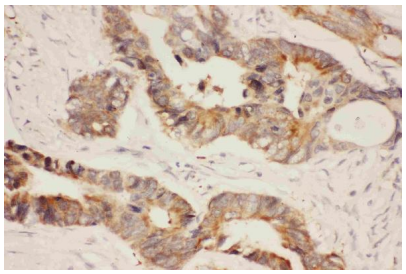

Figure 1. IHC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089).
Hsp90 Alpha was detected in a paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked 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.

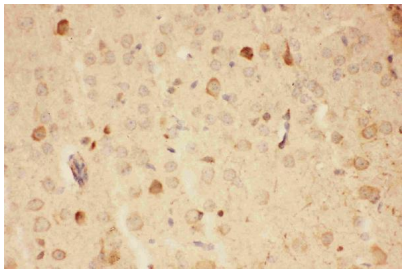

Figure 2. IHC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089).
Hsp90 Alpha was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) overnight at 4°C. 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.

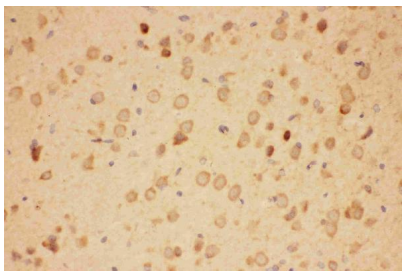

Figure 3. IHC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089).
Hsp90 Alpha was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Hsp90 Alpha Antibody (PB9089) overnight at 4°C. 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.

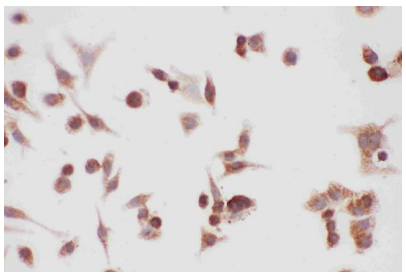

Figure 4. ICC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089).
Hsp90 Alpha was detected in an immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. 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.

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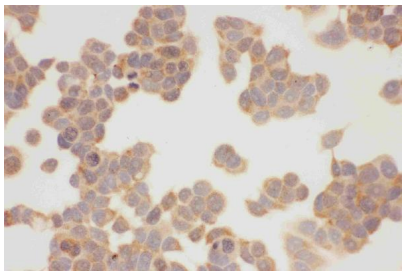

Figure 5. ICC analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089).
Hsp90 Alpha was detected in an immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. 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.

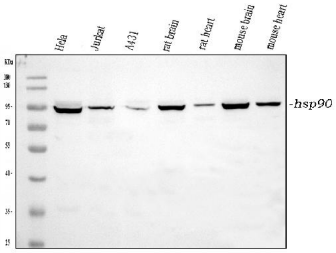

Figure 6. Western blot analysis of Hsp90 Alpha using anti-Hsp90 Alpha antibody (PB9089).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human 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.

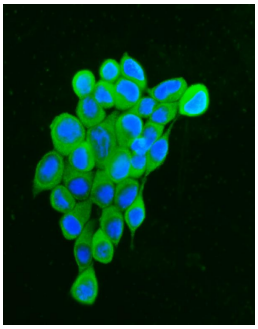

Figure 7. IF analysis of Hsp90 alpha using anti-Hsp90 alpha antibody (PB9089).
Hsp90 alpha was detected in immunocytochemical section of MCF-7 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And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

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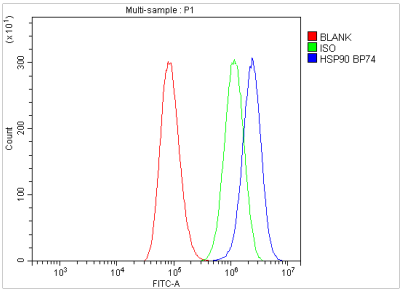

Figure 8. Flow Cytometry analysis of A549 cells using anti-Hsp90 alpha antibody (PB9089).
Overlay histogram showing A549 cells stained with PB9089 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Hsp90 alpha Antibody (PB9089, 1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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

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

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