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antibody and ELISA experts

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# Anti-GRP94/HSP90B1 Antibody Picoband®

**Catalog Number:** PB9637

## About HSP90B1

Heat shock protein 90kDa beta member 1 (HSP90B1), known as endoplasmin, or GRP94, is a chaperone protein that in humans is encoded by the HSP90B1 gene. It is mapped to chromosome 12q23.3. This gene encodes a member of a family of adenosine triphosphate (ATP)-metabolizing molecular chaperones with roles in stabilizing and folding other proteins. The encoded protein is localized to melanosomes and the endoplasmic reticulum. Expression of this protein is associated with a variety of pathogenic states, including tumor formation.

## Overview

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| Product Name | Anti-GRP94/HSP90B1 Antibody Picoband® |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-GRP94/HSP90B1 Antibody Picoband® catalog # PB9637. 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 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.005mg 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 | P14625 |

## Technical Details

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| Immunogen | E.coli-derived human GRP94 recombinant protein (Position: R43-H221). Human GRP94 shares 99.4% and 98.9% amino acid (aa) sequence identity with mouse and rat GRP94, respectively. |
| 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. |

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|---|---|
| Purification | Immunogen affinity purified. |
| Suggested Dilutions | Western blot, 0.1-0.25ug/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 1-2ug/ml, Human, Mouse, Rat<br>Immunocytochemistry/Immunofluorescence, 5ug/ml, Human<br>Flow Cytometry (Fixed), 1-3ug/1x$10^6$ cells, Human |

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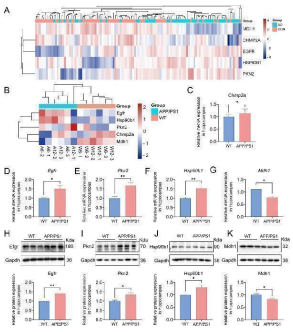
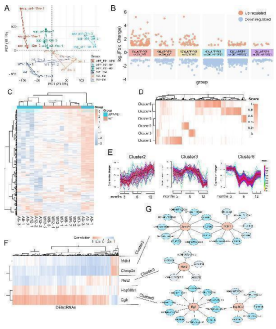
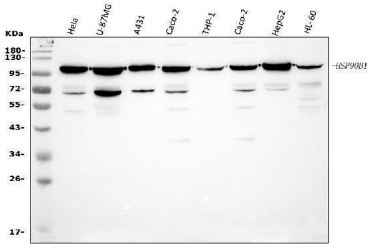
# Anti-GRP94/HSP90B1 Antibody Picoband® (PB9637) Images



Validation of the pyroptosis-AD hub genes at the level of RNA and protein in AD mice. (A) A hierarchical clustering heatmap based on the normalized expression of the five pyroptosis-AD genes in the combined dataset. (B) A clustering heatmap was constructed based on the normalized expression of the five pyroptosis-AD genes in the 6- and 12-month-old APP/PS1 and control mice. The 6- and 12-month-old APP/PS1 or WT mice were abbreviated as A6 and A12 or W6 and W12, respectively. (C–G) qPCR validation of mRNA expression of the pyroptosis-AD hub genes (Chmp2a, Egfr, Pkn2, Hsp90b1, and Mdh1, respectively) between the 12 months APP/PS1 and wild-type (WT) mice. Data are mean ± SEM ( n = 6 for WT, and n = 5 for APP/PS1 mice group, * p



Construction of lncRNA regulatory network of the pyroptosis-AD hub genes. (A) PCA of lncRNAs expression profiles of the APP/PS1 and WT mice at the age of 3, 6, and 12 months. (B) Visualization of the clustered volcano diagram for the DElncRs from six different comparisons, including APP/PS1 mice vs. WT mice at the age of 3, 6, and 12 months and comparison of APP/PS1 mice between different ages. (C) A hierarchical clustering heatmap based on the normalized expression in all samples of DElncRs. The 3-, 6-, and 12-month-old APP/PS1 or WT mice were abbreviated as A3, A6, and A12 or W3, W6, and W12, respectively. (D) The clustered heatmap was produced based on the membership scores of the six clusters obtained by time series analysis. All the DElncRs and five pyroptosis-AD hub genes were clustered into six groups. (E) Line charts showed the relative expression trend in each cluster. The five pyroptosis-AD hub genes were divided into cluster 2 (Champ2 and Mdh1), cluster 3 (Pkn2), and cluster (Egfr and Hsp90b1). The horizontal axis represents a total of nine samples in the age 3-, 6-, and 12-month groups in turn. (F) The heatmaps of correlation analysis of the five pyroptosis-AD hub genes and DElncRs. (G) Regulatory networks constructed by the five pyroptosis-AD hub genes and their top10 (show all if the numbers of lncRNA less than 10) correlated lncRNAs (the ID of lncRNAs could be queried in the NONCODE, NCBI, or Ensemble databases).Index in PubMed under a CC BY license. PMID: 40438507




Western blot analysis of GRP94 using anti-GRP94 antibody (PB9637). 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 U-87MG whole cell lysates, Lane 3: human A431 whole cell lysates, Lane 4: huamn CACO-2 whole cell lysates, Lane 5: huamn THP-1 whole cell lysates, Lane 6: huamn CACO-2 whole cell lysates, Lane 7: huamn HepG2 whole cell lysates, Lane 8: huamn

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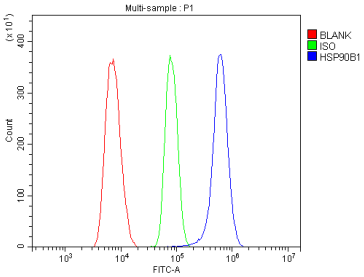
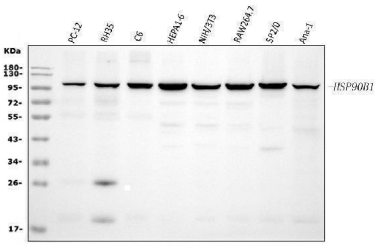
HL-60 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GRP94 antigen affinity purified polyclonal antibody (Catalog # PB9637) at 0.25 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 GRP94 at approximately 100 kDa. The expected band size for GRP94 is at 92 kDa.




Flow Cytometry analysis of THP-1 cells using anti-GRP94 antibody (PB9637).Overlay histogram showing THP-1 cells stained with PB9637 (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-GRP94 Antibody (PB9637,1ug/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.




Western blot analysis of GRP94 using anti-GRP94 antibody (PB9637). 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: rat PC-12 whole cell lysates, Lane 2: rat RH35 whole cell lysates, Lane 3: rat C6 whole cell lysates, Lane 4: mouse HEPA1-6 whole cell lysates, Lane 5: mouse NIH/3T3 whole cell lysates, Lane 6: mouse RAW264.7 whole cell lysates, Lane 7: mosue SP2/0 whole cell lysates, Lane 8: mouse ANA-1 whole cell 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-GRP94 antigen affinity purified polyclonal antibody (Catalog # PB9637) at 0.25 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 GRP94 at approximately 100 kDa. The expected band size for GRP94 is at 92 kDa.

IHC analysis of GRP94 using anti-GRP94 antibody (PB9637). GRP94 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed

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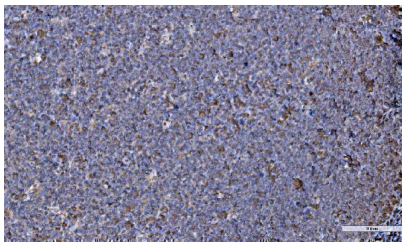
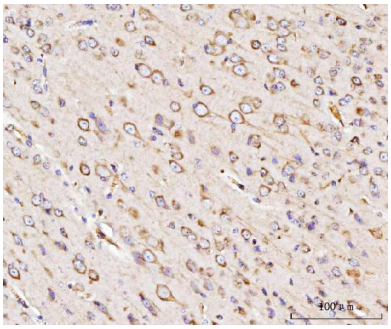
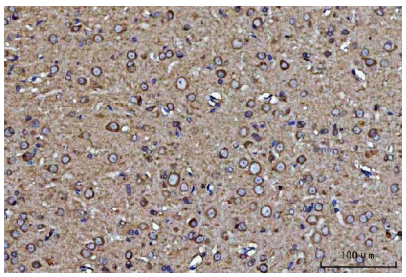


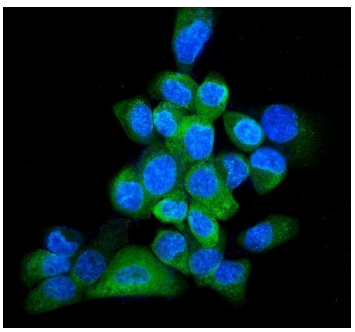
in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GRP94 Antibody (PB9637) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of GRP94 using anti-GRP94 antibody (PB9637). GRP94 was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GRP94 Antibody (PB9637) 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 GRP94 using anti-GRP94 antibody (PB9637). GRP94 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GRP94 Antibody (PB9637) 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.



IF analysis of GRP94 using anti-GRP94 antibody (PB9637). GRP94 was detected in immunocytochemical section of A431 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 5 ug/mL rabbit anti-GRP94 Antibody (PB9637) 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 Publications Citing This Product

1. PubMed ID: 27738755, Ibutilide protects against cardiomyocytes injury via inhibiting endoplasmic reticulum and mitochondrial stress pathways

Visit bosterbio.com/anti-grp94-picoband-trade-antibody-pb9637-boster.html to see all 1 publications.

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