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Anti-S100A9 Antibody Picoband®

Catalog Number: PB9678

About S100a9

S100 calcium-binding protein A9 (S100A9), also known as migration inhibitory factor-related protein 14 (MRP14) or calgranulin B, is a protein that in humans is encoded by the S100A9 gene. S100-A9 is a member of the S100 family of proteins containing 2 EF hand calcium-binding motifs. And S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. S100 genes include at least 13 members which are located as a cluster on chromosome 1q21. This protein may function in the inhibition of casein kinase.

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Overview

Product Name	Anti-S100A9 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-S100A9 Antibody Picoband® catalog # PB9678. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with 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	ELISA, 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	P31725

Technical Details

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Immunogen	E. coli-derived mouse S100A9 recombinant protein (Position: A2-K113). Mouse S100A9 shares 59.8% and 78.6% amino acid (aa) sequence identity with human and rat S100A9, 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	Cross-reactivity with recombinant human S100A9 is observed.
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, Mouse Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5ug/ml, Mouse Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Mouse ELISA, 0.1-0.5ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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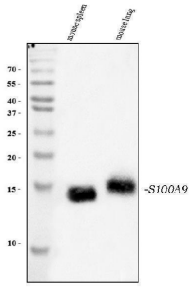
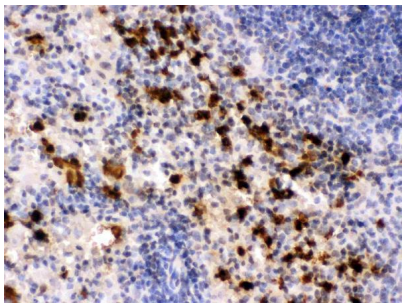
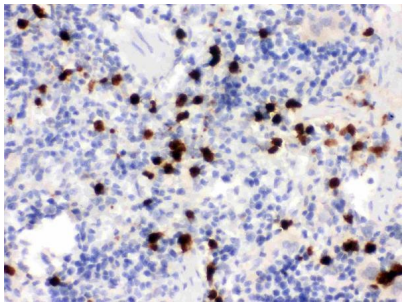
Anti-S100A9 Antibody Picoband® (PB9678) Images



Western blot analysis of S100A9 using anti-S100A9 antibody (PB9678). 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: mouse spleen tissue lysates, Lane 2: mouse lung 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-S100A9 antigen affinity purified polyclonal antibody (Catalog # PB9678) 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 S100A9 at approximately 13-15 kDa. The expected band size for S100A9 is at 13 kDa.



IHC analysis of S100A9 using anti-S100A9 antibody (PB9678). S100A9 was detected in a paraffin-embedded section of mouse spleen 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-S100A9 Antibody (PB9678) 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 S100A9 using anti-S100A9 antibody (PB9678). S100A9 was detected in a paraffin-embedded section of rat spleen 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-S100A9 Antibody (PB9678) 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 S100A9 using anti-S100A9 antibody (PB9678). S100A9 was detected in immunocytochemical section of HEPA1-6 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-S100A9 Antibody (PB9678) overnight at 4°C. DyLight®488 Conjugated Goat

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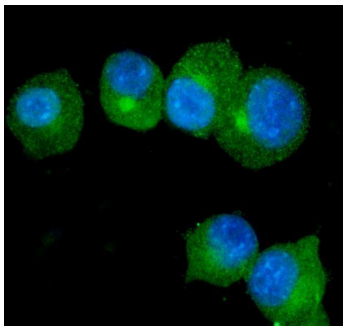
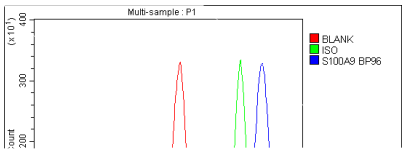
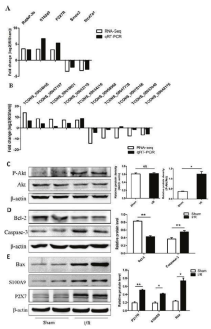


Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of HEPA1-6 cells using anti-S100A9 antibody (PB9678). Overlay histogram showing HEPA1-6 cells stained with PB9678 (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-S100A9 Antibody (PB9678, 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.



Validation of differential expression mRNAs and lncRNAs in spinal cord by real time RT-qPCR and Western blot analysis. (A) The differential expression mRNA levels were validated by qRT-PCR. (B) Five upregulated lncRNAs and five downregulated lncRNAs were validated by qRT-PCR. The levels of mRNAs and lncRNAs were normalized to GAPDH and expressed as fold of change compared to sham group. The results represent the mean± SEM of three independent experiments. *p < 0.05; **p < 0.01 compared with the sham group. Western blot analysis shown protein expression levels of Akt, P-Akt (C) , Bcl-2, Caspase-3 (D) , P2×7R, S100A9, Bax (E) . Each bar represents the mean ± SEM for at least 6 animals. *p< 0.05, **p< 0.01 vs Sham group.Index in PubMed under a CC BY license. PMID: 28881824

2 Publications Citing This Product

1. PubMed ID: 28881824, Liu QQ, Liu H, He ZG, Zhang SJ, Liu BW, Wang L, Qiu WH, Xu Q, Xiang HB, Lv YM. Oncotarget. 2017 Jun 20;8(32):53465-53481. doi: 10.18632/oncotarget.18584. eCollection 2017 Aug 8. Differential gene and lncRNA expression in the lower thoracic spinal ...

2. PubMed ID: 25100170, Age Dependent Changes in Cartilage Matrix, Subchondral Bone Mass, and Estradiol Levels in Blood Serum, in Naturally Occurring Osteoarthritis in Guinea Pigs

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