BOSTER BIOLOGICAL TECHNOLOGY
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Anti-MRP8/S100A8 Antibody Picoband®

Catalog Number: PB9742

About S100a8

S100 calcium-binding protein A8 (S100A8) is a protein that in humans is encoded by the S100A8 gene. It is also known as calgranulin A. The protein encoded by this gene is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. 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 and as a cytokine. Altered expression of this protein is associated with the disease cystic fibrosis.

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Overview

Product Name	Anti-MRP8/S100A8 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-MRP8/S100A8 Antibody Picoband® catalog # PB9742. Tested in 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	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg 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	P27005

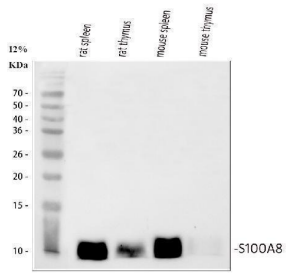
Technical Details

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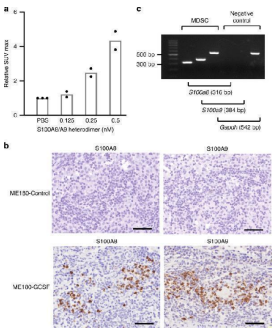
Immunogen	E.coli-derived mouse S100A8 recombinant protein (Position: P2-E89). Mouse S100A8 shares 58.6% and 80.5% amino acid (aa) sequence identity with human and rat S100A8, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for 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 recombinant human S100A8 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, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Mouse Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Mouse 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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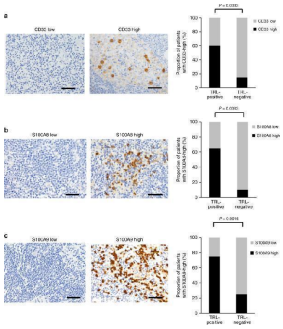
Anti-MRP8/S100A8 Antibody Picoband® (PB9742) Images



Western blot analysis of S100A8 using anti-S100A8 antibody (PB9742). 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 spleen tissue lysates, Lane 2: rat thymus tissue lysates, Lane 3: mouse spleen tissue lysates, Lane 4: 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-S100A8 antigen affinity purified polyclonal antibody (Catalog # PB9742) 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 S100A8 at approximately 11 kDa. The expected band size for S100A8 is at 11 kDa.



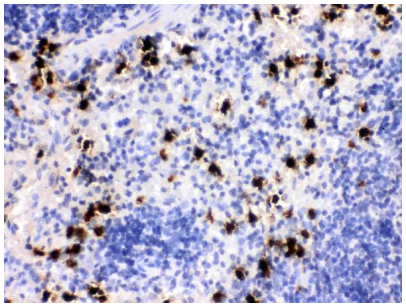
S100A8/A9 produced by MDSC induce 18F-FDG-uptake. a The SUV max of on the site of S100A8/A9 heterodimer injection by 18F-FDG-PET/CT. Mice were subcutaneously injected with indicated concentrations of S100A8/A9 heterodimer. 18F-FDG-PET/CT was performed 24 h after the injection, and the SUV max of the injection site was analyzed (PBS, n = 3; others, n = 2). b Representative immunoreactivities of resected paraaortic lymph nodes for S100A8 and S100A9 (ME180-Control-derived tumor- or ME180-GCSF-derived tumor-bearing rats). Scale bars, 50 um. c Representative image of S100a8 and S100a9 mRNA expression in MDSC of ME180-GCSF-derived tumor-bearing mice as evaluated by RT-PCR. bp, base pairs. Source data are provided as a Source Data file. Index in PubMed under a CC BY license. PMID: 32170086



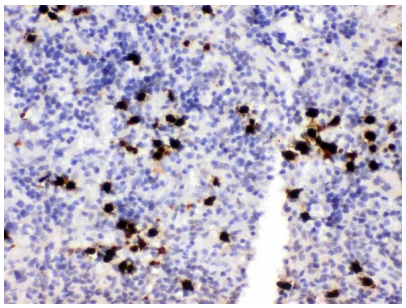
Immunoreactivities of resected lymph nodes for CD33 and S100A8/9 in cervical cancer patients TRL-positive versus TRL-negative patients. a CD33 expression in cervical cancer patients according to white blood cell counts. Photographs; representative CD33-stained lymph node sections from cervical cancer patients. A graph; proportion of patients with CD33-high. b S100A8 expression in cervical cancer patients according to white blood cell counts. Photographs; representative S100A8-stained lymph node sections from cervical cancer patients. A graph; proportion of patients with S100A8-high. (c) S100A9 expression in cervical cancer patients according to white blood cell counts. Photographs; representative S100A9-stained lymph node sections from cervical cancer patients. A graph; proportion of patients with S100A9-high. Scale bars, 50 um. Statistical significance was assessed using two-sided Fisher’s exact test (TRL-positive:

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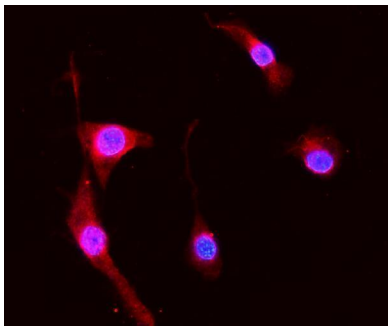
WBC ≥ 9000/mL, n = 20; TRL-negative: WBC < 9000/mL, n = 20). Source data are provided as a Source Data file. Index in PubMed under a CC BY license. PMID: 32170086



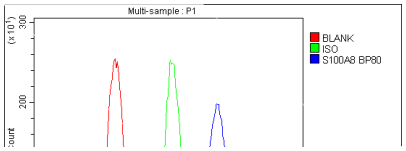
IHC analysis of S100A8 using anti-S100A8 antibody (PB9742). S100A8 was detected in a paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-S100A8 Antibody (PB9742) 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 S100A8 using anti-S100A8 antibody (PB9742). S100A8 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-S100A8 Antibody (PB9742) 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 S100A8 using anti-S100A8 antibody (PB9742). S100A8 was detected in immunocytochemical section of NIH3T3 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 2ug/mL rabbit anti-S100A8 Antibody (PB9742) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) 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 HEPA 1-6 cells using anti-S100A8 antibody (PB9742). Overlay histogram showing HEPA 1-6 cells stained with PB9742 (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-S100A8 Antibody (PB9742, 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.

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2 Publications Citing This Product

1. PubMed ID: , Pretreatment tumor-related leukocytosis misleads positron emission tomography-computed tomography during lymph node staging in gynecological malignancies

2. PubMed ID: 32170086, Mabuchi S,Komura N,Sasano T,Shimura K,Yokoi E,Kozasa K,Kuroda H,Takahashi R,Kawano M,Matsumoto Y,Kato H,Hatazawa J,Kimura T.Pretreatment tumor-related leukocytosis misleads positron emission tomography-computed tomography during lymph node staging in gyne

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Anti-MRP8/S100A8 Antibody

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