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antibody and ELISA experts

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Anti-ICAM1 Antibody Picoband®

Catalog Number: A00171

About ICAM1

CD54, also known as ICAM-1. Intercellular adhesion molecule-1 (ICAM1) is a ligand for lymphocyte function-associated (LFA) antigens. ICAM-1 is an integral membrane protein, a member of the immunoglobulin superfamily, and a ligand for LFA-1, a beta 2 leukocyte integrin. This protein is the major human rhinovirus receptor. The ICAM1 gene is mapped to human chromosome 19. In humans, lymphocyte adhesion to cells is mediated by the protein heterodimer CD11a/CD18 (Leu-CAMa, LFA-1) and its ligand CD54 (ICAM-1).

Overview

Product Name	Anti-ICAM1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ICAM1 Antibody Picoband® catalog # A00171. Tested in ELISA, 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	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
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	P05362

Technical Details

Immunogen	E. coli-derived human ICAM1 recombinant protein (Position: Q28-R268).
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, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 2ug/ml Flow Cytometry (Fixed), 1-3ug/1x10^6 cells ELISA, 0.1-0.5ug/ml

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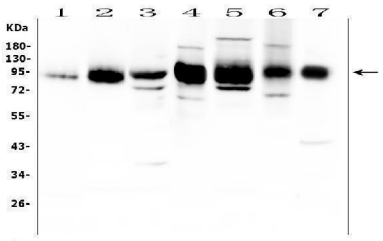
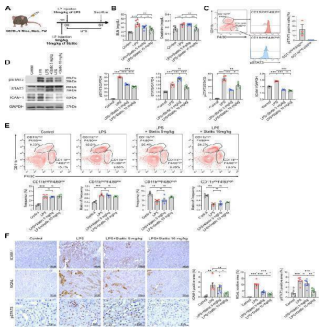
Anti-ICAM1 Antibody Picoband® (A00171) Images



Western blot analysis of ICAM1 using anti-ICAM1 antibody (A00171). 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 lysate,Lane 2: rat thymus tissue lysate,Lane 3: rat RH35 cell lysate,Lane 4: mouse spleen tissue lysate,Lane 5: mouse thymus tissue lysate,Lane 6: mouse HEPA1-6 cell lysate,Lane 7: mouse heart tissue lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-ICAM1 antigen affinity purified polyclonal antibody (Catalog # A00171) 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 1:10000 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 ICAM1 at approximately 90 kDa. The expected band size for ICAM1 is at 58 kDa.



STAT3 inhibitor attenuates L-AKI and restores kidney function. A Schematic diagram of the animal model. B BUN and serum creatinine were measured to assess kidney function. Groups: Control, LPS, LPS + Stattic (5 mg/kg) and LPS + Stattic (10 mg/kg) (n = 6 in each group). C Flow cytometric comparison of pSTAT3 levels was conducted between two populations (kidney macrophages, CD11b high F4/80 low and CD11b low F4/80 high) in LPS-induced kidneys. D Western blotting representative image (left) and quantification (right) of pSTAT3, STAT3 and ICAM-1. Each band shows a typical group, as indicated. E Changes in the proportion of two macrophage subpopulations between each group were observed with FACS analysis, and the frequency and ratio of individual populations were quantified using GraphPad Prism. F Upregulated expression of ICAM-1, NGAL, and pSTAT3 by LPS induction in IHC analysis (n = 6 in each group) decreased with Stattic treatment. Scale bars, 100 um (100X) and 50 um (400X). All experiments were independently replicated at least three times, and the data are presented as mean ± SEM. * P

Single-cell transcriptional profiling of intracranial fusiform aneurysmal cells (A - K) and multi-color immunofluorescence (mIF) of smooth muscle cells (SMCs) markers and inflammatory markers between intracranial fusiform aneurysms (IFAs) and normal cerebral arteries (NCAs) (L - M). T-SNE visualization of intracranial fusiform aneurysmal cells type. Colored according to cell type (A). Visualization of specific gene expression patterns related to cell subsets identified in (A) using a bubble plot (B). T-SNE

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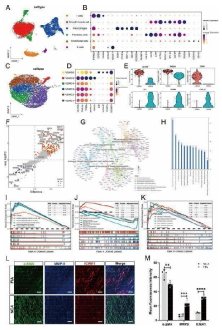
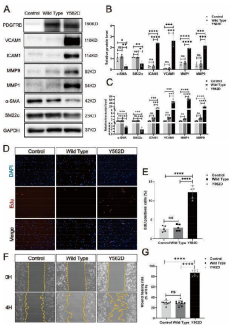


visualization of VSMC cell clusters. Colored according to clusters (C). Visualization of structural protein and inflammation-related genes expression patterns within the subsets of smooth muscle cells identified in (C) using a bubble plot (D). The violin plots show the expression differences of structural protein genes and inflammatory genes between the contraction subgroup (VSMC5) and the inflammatory subgroup (VSMC6) (E). The volcano plot specifically shows the gene expression differences between the two cell groups (F). The petal plot displays the GO enrichment analysis results of differential genes between the VSMC5 and VSMC6 (G). The bar graph shows the KEGG enrichment analysis results of differential genes between these two cell subsets (H). The GSEA enrichment analysis results of differential genes between the two groups. The enrichment results of differential genes related to signaling pathways (I). The enrichment results of differential genes related to structural protein genes (J). The enrichment results of differential genes related to the process of inflammatory factor secretion (K). alpha-SMA (green, SMCs marker), MMP-9 (blue, inflammatory marker) and ICAM-1 (red, inflammatory marker) in FIAs and NCAs are detected using mIF. Scale bar, 100 um (L). Statistical analysis of mean fluorescence intensity about SMCs marker (alpha-SMA) and inflammatory markers (ICAM-1 and MMP-9) between NCAs (n = 4) and FIAs (n = 5). 'n' represented the number of samples. Three random fields were selected for statistical analysis in each sample, and the average value represented the detection value of this marker in this sample. The Student's t-test is utilized to examine the statistical differences among each marker. ns, no significant; ** p



PDGFRB somatic mutation induce phenotypic modulation in SMCs. Immunostaining reveals the expression levels of smooth muscle markers (a-SMA and SM22a) and inflammatory markers (VCAM1, ICAM1, MMP1 and MMP9) in HBVSMCs transfected with different viruses (Control: vector; Wild Type: PDGFRB; Y562D: PDGFRB Y562D) (a). The relative density of immunoblot bands about markers shown in (A) were display (B) (normalized to those in cells transfected with vector viruses). RT-qPCR (C) of SMCs markers (alpha-SMA and SM22alpha) and inflammatory markers (VCAM-1, ICAM1, MMP-9 and MMP-1) in HBVSMCs underwent different treatments. Student's t-test and Benjamini–Hochberg correction are employed to assess the statistical significance. Edu assay exhibit the proliferation ability of HBVSMCs under different treatment conditions (D). Statistical analysis of the proportion of Edu-positive cells in the different groups from 5 different fields of each group at × 200 magnification. Tukey's multiple comparisons test is used for statistical differences (E). Scratch assay displays migratory ability of HBVSMCs underwent different treatment (F). Statistical analysis of the rate of wound healing (reduced area at 4H /area at 0H) in the different groups from 9 different fields of each group at × 200 magnification. Tukey's multiple comparisons test is utilized to evaluate the statistical significance. * p adj<0.05, ** p adj<0.01, *** p adj<0.001, **** p adj<0.0001 (G). The above experiments are all repeated three times Index in PubMed under a CC BY

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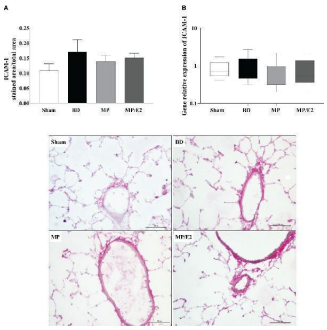
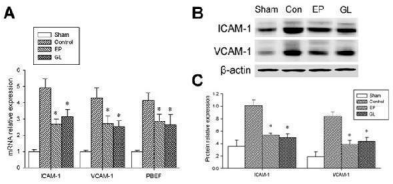
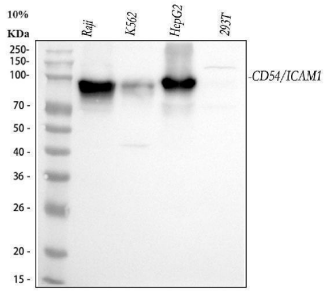


Protein (A) (immunohistochemistry) and gene (B) expression of ICAM-1. Sham, false-operated rats; BD, rats submitted to brain death; MP, rats treated with methylprednisolone (MP) after 3h of confirmation of BD and MP/E2, rats treated with 17beta-estradiol (E2) and methylprednisolone after 3h of confirmation of BD. Data expressed as mean ± SEM from 5-8 animals per group (A) . Data expressed as median and 95th percentile from 6-8 animals (B) . 1 section per animal and 10 areas per section were analyzed. The photomicrographs (x20) are representative of protein expression on each group. (A) p (Kruskal Wallis) =0.6009; (B) p (Kruskal Wallis) =0.7960.Index in PubMed under a CC BY license. PMID: 38765005



mRNA expression of ICAM-1, VCAM-1 and PBEF and protein expression of ICAM-1 and VCAM-1 in lung . A) Real-time PCR showed that the expression levels of ICAM-1, VCAM-1 and PBEF mRNA decreased significantly in the EP and GL groups compared to the control group. B) Western-blot showed that the expression levels of ICAM-1 and VCAM-1 protein decreased significantly in the EP and GL groups compared to the control group. C) Quantitative assessment of protein relative to beta-actin showed that the expression levels of ICAM-1 and VCAM-1 protein decreased significantly in the EP and GL groups compared to the control group. * P < 0.05 versus the control group. EP, ethyl pyruvate; GL, glycyrrhizin; ICAM-1, intercellular adhesion molecule-1; PBEF, pre-B-cell colony-enhancing factor; VCAM-1, vascular cell adhesion molecule 1. Index in PubMed under a CC BY license. PMID: 23497622



Western blot analysis of ICAM1 using anti-ICAM1 antibody (A00171). 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 Raji whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human 293T 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-ICAM1 antigen affinity purified polyclonal antibody (Catalog # A00171) 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 ICAM1 at approximately 90 kDa. The expected band size for ICAM1 is at 58 kDa.

IHC analysis of ICAM1 using anti-ICAM1 antibody (A00171).

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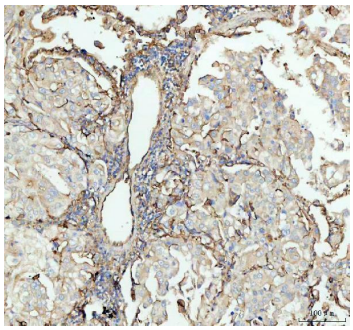
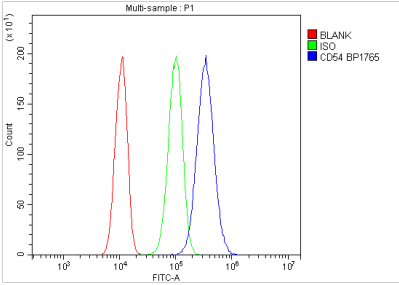
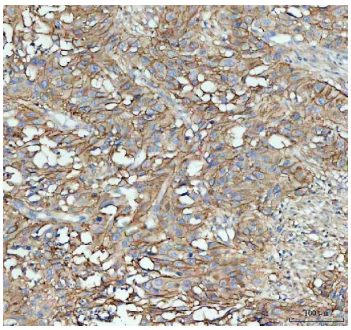


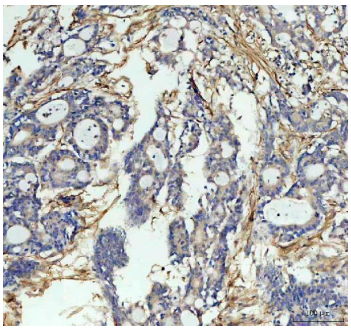
ICAM1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ICAM1 Antibody (A00171) 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.



Flow Cytometry analysis of PC-3 cells using anti-ICAM1 antibody (A00171).



IHC analysis of ICAM1 using anti-ICAM1 antibody (A00171). ICAM1 was detected in paraffin-embedded section of human bladder urothelial carcinoma 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 1ug/ml rabbit anti-ICAM1 Antibody (A00171) 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 ICAM1 using anti-ICAM1 antibody (A00171). ICAM1 was detected in paraffin-embedded section of human colorectal adenocarcinoma 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 1ug/ml rabbit anti-ICAM1 Antibody (A00171) 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 ICAM1 using anti-ICAM1 antibody (A00171). ICAM1 was detected in paraffin-embedded section of human placenta 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 1ug/ml rabbit anti-ICAM1 Antibody (A00171) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary

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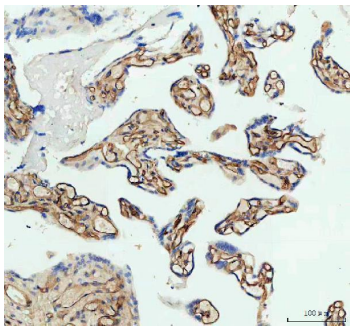
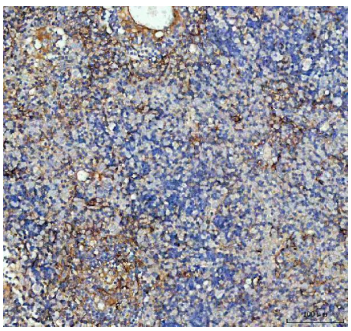
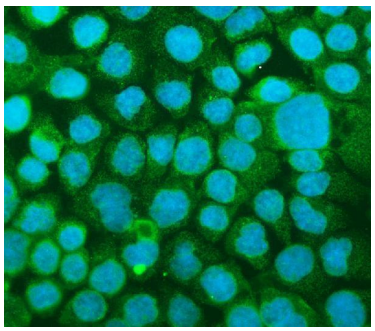


antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of ICAM1 using anti-ICAM1 antibody (A00171). ICAM1 was detected in paraffin-embedded section of human spleen 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 1ug/ml rabbit anti-ICAM1 Antibody (A00171) 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.



IF analysis of ICAM1 using anti-ICAM1 antibody (A00171). ICAM1 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 2ug/mL rabbit anti-ICAM1 Antibody (A00171) 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.

42 Publications Citing This Product

1. PubMed ID: 10.1186/s12906-016-1520-3, Effects of aqueous extracts of Taraxacum Officinale on expression of tumor necrosis factor-alpha and intracellular adhesion molecule 1 in LPS-stimulated RMMVECs

2. PubMed ID: PMID:26097529, Anti-inflammatory and antioxidant effects of curcumin on acute lung injury in a rodent model of intestinal ischemia reperfusion by inhibiting the pathway of NF-Kb

3. PubMed ID: 10.1211/jpp.61.06.0009, Protective effect of JBP485 on concanavalin A□induced liver injury in mice

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Anti-ICAM1 Antibody

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