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antibody and ELISA experts

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Anti-CD31/Pecam1 Antibody Picoband®

Catalog Number: A01513-3

About Pecam1

CD31 also known as Platelet endothelial cell adhesion molecule (PECAM-1), is a protein that in human is encoded by the PECAM1 gene. Encoded protein is a member of the immunoglobulin superfamily and this gene is mapped to 17q23.3. CD31 is found on the surface of platelets, monocytes, neutrophils, and some types of T-cells, and makes up a large portion of endothelial cell intercellular junctions. It is demonstrated that CD31 expression on human PBSCs may positively affect both neutrophil and platelet engraftment. Meanwhile, CD31 is involved in leukocyte migration and angiogenesis, which are key components of venous thrombus resolution.

Overview

Product Name	Anti-CD31/Pecam1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CD31/Pecam1 Antibody Picoband® catalog # A01513-3. Tested in ELISA, IHC, 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, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	Q3SWT0

Technical Details

Immunogen	E.coli-derived rat CD31/Pecam1 recombinant protein (Position: Q41-E491).
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).
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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Rat ELISA, 0.1-0.5ug/ml,

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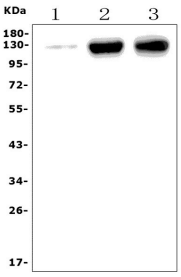
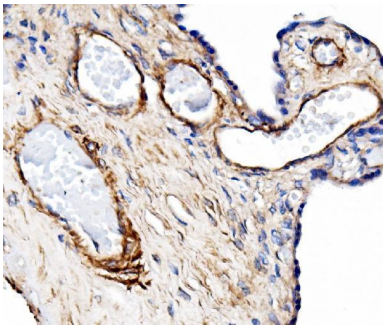
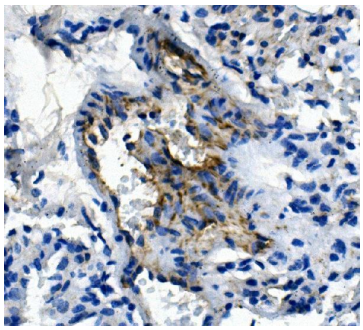
Anti-CD31/Pecam1 Antibody Picoband® (A01513-3) Images



Western blot analysis of Pecam1 using anti-Pecam1 antibody (A01513-3). 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 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: rat lung tissue lysates, Lane 3: mouse lung tissue lysates. 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-Pecam1 antigen affinity purified polyclonal antibody (Catalog # A01513-3) 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 Pecam1 at approximately 120-130KD. The expected band size for Pecam1 is at 82KD.



IHC analysis of Pecam1 using anti-Pecam1 antibody (A01513-3). Pecam1 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-Pecam1 Antibody (A01513-3) 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 Pecam1 using anti-Pecam1 antibody (A01513-3). Pecam1 was detected in paraffin-embedded section of mouse lung 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-Pecam1 Antibody (A01513-3) 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 Pecam1 using anti-Pecam1 antibody (A01513-3). Pecam1 was detected in paraffin-embedded section of rat liver 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-Pecam1 Antibody (A01513-3) overnight at 4°C.

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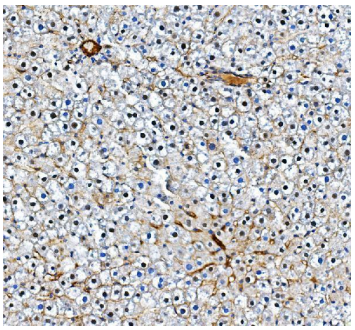
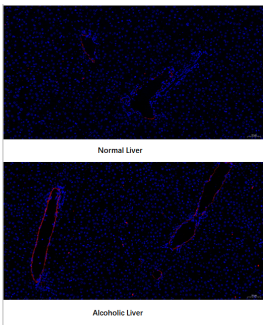
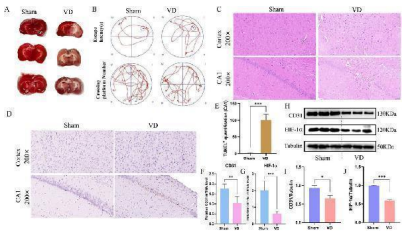


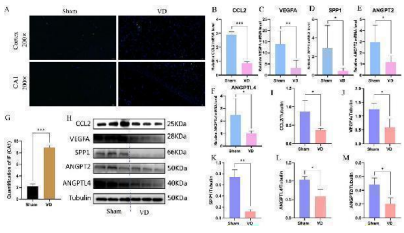
Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of Pecam1 using anti-Pecam1 antibody (A01513-3). Pecam1 was detected in a paraffin-embedded section of human normal liver and alcoholic liver 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 1:200 rabbit anti-Pecam1 Antibody (A01513-3) overnight at 4°C. DyLight 594 Donkey Anti-Mouse IgG (H+L) was used as secondary antibody at 1:500 dilution and incubated for 45 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Construction of animal models and analysis of pathological damage. (A) TTC staining plots of the Sham and VD group. (B) Motion trajectory diagram. (C) Representative images stained with HE (scale bars = 50 um). (D) Representative histopathological images obtained from TUNEL staining (scale bars = 50 um), showing changes in the cortex hippocampus CA1. (E) Quantification of TUNEL+ cells in the hippocampal CA1 (n = 3). (F) Expression profile of CD31 between Sham and VD groups (qPCR). **P < 0.01. (G) Expression profile of HIF-1alpha between Sham and VD groups (qPCR; n = 6). ***P < 0.001. (H) WB strips. (I) Expression profile of CD31 between Sham and VD groups (WB). *P < 0.05. (J) Expression profile of HIF-1alpha between Sham and VD groups (WB; n = 3). ***P < 0.001.Index in PubMed under a CC BY license. PMID: 40988927



Experimental validation of the key genes in vivo . (A) Representative images of immunofluorescence. (B–F) Expression profile of CCL2, VEGFA, SPP1, ANGPT2, and ANGPTL4 between Sham and VD groups (qPCR; n = 6). *P < 0.05; **P < 0.01; ***P < 0.001. (G) Immunofluorescence quantification of CD31. ***P < 0.001. (H) WB representative strips of the 5 key genes. (I–M) Protein expression level of CCL2, VEGFA, SPP1, ANGPT2, and ANGPTL4 between Sham and VD groups (WB; n = 3). *P < 0.05; **P < 0.01; ***P < 0.001.Index in PubMed under a CC BY license. PMID: 40988927

Light flicker stimulation at 40 Hz does not increase angiogenesis in mice with rUCCAO. (a , b) CD31 immunohistochemical staining in the frontal lobe and

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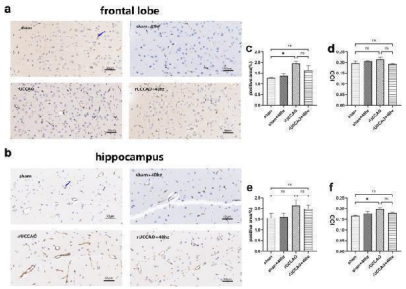

hippocampus. Scale bar = 50 um; the blue arrow indicates the positive area. (c – f) Positive area (%) and IOD of CD31 protein in the frontal lobe and hippocampus, respectively (n = 3/group. Means ± SEMs, *p<0.05, n.s. not significant).
 PMID: 38049571

31 Publications Citing This Product

1. PubMed ID: 10.3892/ol.2016.4690, Label-retaining assay enriches tumor-initiating cells in glioblastoma spheres cultivated in serum-free medium

2. PubMed ID: 10.1254/jphs.14077FP, SKLB-M8 Induces Apoptosis Through the AKT/mTOR Signaling Pathway in Melanoma Models and Inhibits Angiogenesis With Decrease of ERK1/2 Phosphorylation

3. PubMed ID: 10.3760/cma.j.issn.0366-6999.2009.05.011, Solitary pulmonary nodules: comparison of multi-slice computed tomography perfusion study with vascular endothelial growth factor and microvessel density

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