

Anti-CD31/PECAM1 Antibody Picoband®

Catalog Number: PA1950-1

About PECAM1

PECAM-1 (Platelet endothelial cell adhesion molecule), also known as cluster of differentiation 31 (CD31) is a protein that in human is encoded by the PECAM1 gene found on chromosome 17. PECAM1 is a member of the immunoglobulin (Ig) superfamily that is expressed on the surface of circulating platelets, monocytes, neutrophils, and particular T-cell subsets. Using a PCR-based analysis of somatic cell hybrids, Gumina et al. (1996) mapped PECAM1 to chromosome 17 in the region 17q23-qter. Several adhesion molecules expressed on platelets and endothelium also localized to 17q. Xie and Muller (1996) mapped the Pecam1 gene to mouse chromosome 6, region F3-G1, by fluorescence in situ hybridization. PECAM-1 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, and PECAM-1 plays a key role in removing aged neutrophils from the body.

Overview

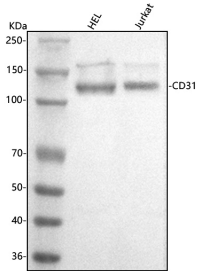
Product Name	Anti-CD31/PECAM1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-CD31/PECAM1 Antibody catalog # PA1950-1. Tested in Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior 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, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na ₂ HPO ₄ .
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	P16284

Technical Details

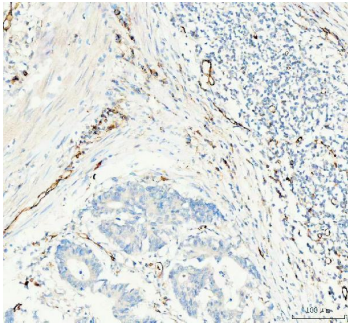
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CD31.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross 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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunofluorescence, 5 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10 ⁶ cells, Human

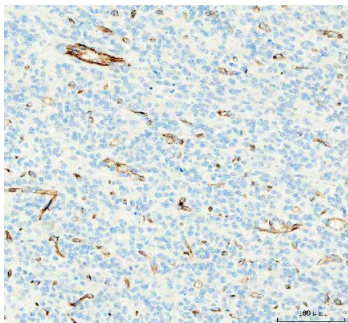
Anti-CD31/PECAM1 Antibody Picoband® (PA1950-1) Images



Western blot analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). 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 HEL whole cell lysates, Lane 2: human Jurkat 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-CD31/PECAM1 antigen affinity purified polyclonal antibody (Catalog # PA1950-1) 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 CD31/PECAM1 at approximately 120 kDa. The expected band size for CD31/PECAM1 is at 83 kDa.

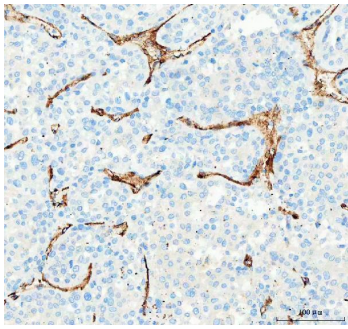


IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD31/PECAM1 Antibody (PA1950-1) 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.

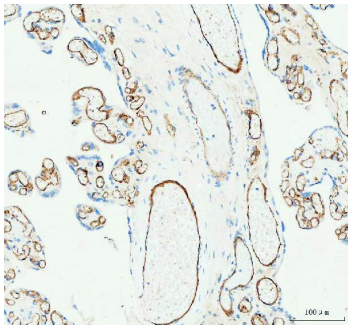


IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human glioblastoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD31/PECAM1 Antibody (PA1950-1) 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.

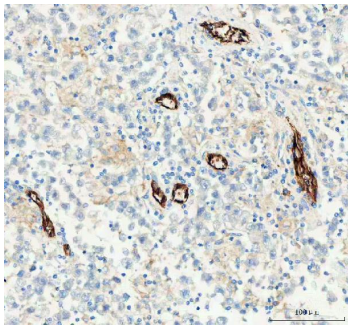
IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human liver cancer tissue.



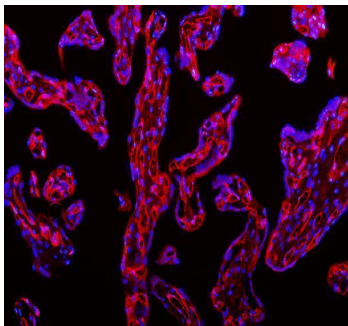
Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD31/PECAM1 Antibody (PA1950-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit 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 CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human placenta 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 2 ug/ml rabbit anti-CD31/PECAM1 Antibody (PA1950-1) 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.

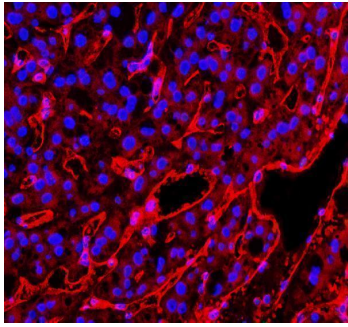


IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human testicular germ cell tumor tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD31/PECAM1 Antibody (PA1950-1) 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.

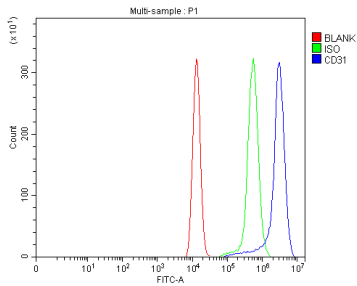


IF analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-CD31/PECAM1 Antibody (PA1950-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:500 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.

IF analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PA1950-1). CD31/PECAM1 was detected in a paraffin-embedded section of human liver cancer 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 5 ug/mL rabbit anti-CD31/PECAM1 Antibody (PA1950-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:500 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 HEL cells using anti-CD31/PECAM1 antibody (PA1950-1). Overlay histogram showing HEL cells stained with PA1950-1 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-CD31/PECAM1 Antibody (PA1950-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

40 Publications Citing This Product

1. PubMed ID: 10.1095/biolreprod.116.140939, EPHB4 Regulates Human Trophoblast Cell Line HTR-8/SVneo Function: Implications for the Role of EPHB4 in Preeclampsia
2. PubMed ID: -, Jianying Tan, Li Li, Huanran Wang, Lai Wei, Xiali Gao, Zheng Zeng, Sainan Liu, Yonghong Fan, Tao Liu, Junying Chen, Biofunctionalized fibrin gel co-embedded with BMSCs and VEGF for accelerating skin injury repair, Materials Science and Engineering: C, 2020, 111749,
3. PubMed ID: 31734410, Wang B, Lv X, Li Z, Zhang M, Yao J, Sheng N, Lu M, Wang H, Chen S. Urethra-inspired biomimetic scaffold: A therapeutic strategy to promote angiogenesis for urethral regeneration in a rabbit model. Acta Biomater. 2020 Jan 15;102:247-258. doi:10.1016/j.actbio.2019.11.0

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Anti-CD31/PECAM1 Antibody

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