BOSTER BIOLOGICAL TECHNOLOGY
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Anti-CD31/PECAM1 Antibody Picoband®

Catalog Number: PB9094

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, CD31 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.

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Overview

Product Name	Anti-CD31/PECAM1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-CD31/PECAM1 Antibody Picoband® catalog # PB9094. Tested in Flow Cytometry, 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, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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

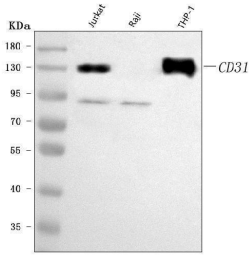
Immunogen	E.coli-derived human CD31 recombinant protein (Position: Q28-G382). Human CD31 shares 65% and 68% amino acid (aa) sequences identity with mouse and rat CD31, respectively.

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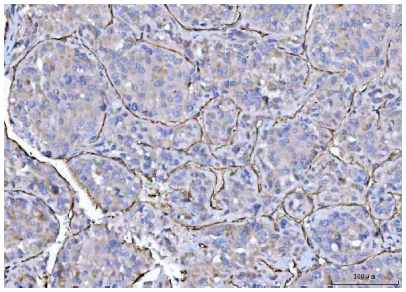
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells 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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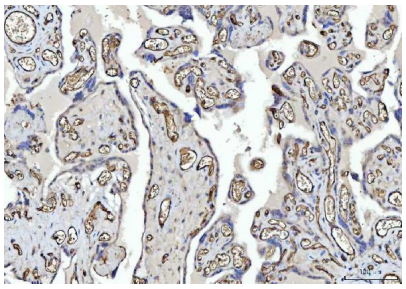
Anti-CD31/PECAM1 Antibody Picoband® (PB9094) Images



Western blot analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PB9094). 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 Jurkat whole cell lysates, Lane 2: human Raji whole cell lysates, Lane 3: human THP-1 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 # PB9094) 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 90 kDa, 130 kDa. The expected band size for CD31/PECAM1 is at 82 kDa.



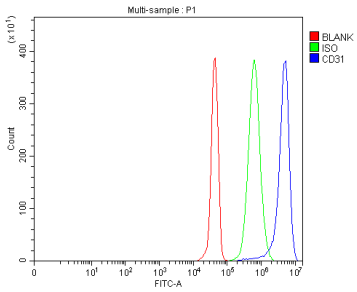
IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (PB9094). CD31/PECAM1 was detected in a paraffin-embedded section of human hepatocellular carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD31/PECAM1 Antibody (PB9094) 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 (PB9094). 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 (PB9094) 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 Jurkat cells using anti-CD31/PECAM1 antibody (PB9094). Overlay histogram

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showing Jurkat cells stained with PB9094 (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 (PB9094, 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.

41 Publications Citing This Product

1. PubMed ID: 10.1016/j.msec.2021.112171, Antibacterial polyvinyl alcohol/bacterial cellulose/nano-silver hydrogels that effectively promote wound healing

2. PubMed ID: 33858504, Tan PC,Chao PC,Cheng C,Chen CH,Huang RL,Zhou SB,Xie Y,Li QF.A randomized, controlled clinical trial of autologous stromal vascular fraction cells transplantation to promote mechanical stretch-induced skin regeneration.Stem Cell Res Ther.2021 Apr 15;12(1):243.doi:10.1186/s13287-021-02318-5.PMID:33858504;PMCID:P MC8048343.

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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