

## Anti-CD31/PECAM1 Antibody Picoband® (monoclonal, 2D4)

Catalog Number: M01513-4

### 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.

### Overview

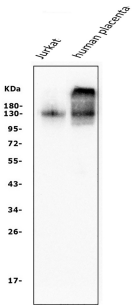
Product Name	Anti-CD31/PECAM1 Antibody Picoband® (monoclonal, 2D4)
Reactive Species	Human
Description	Boster Bio Anti-CD31/PECAM1 Antibody Picoband® (monoclonal, 2D4) catalog # M01513-4. Tested in IHC, IHC-F, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium 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	IHC, IHC-F, WB
Clonality	Monoclonal 2D4
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	Mouse
Uniprot ID	P16284

### Technical Details

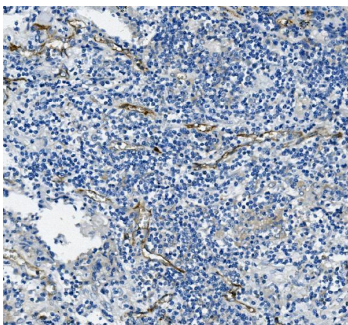
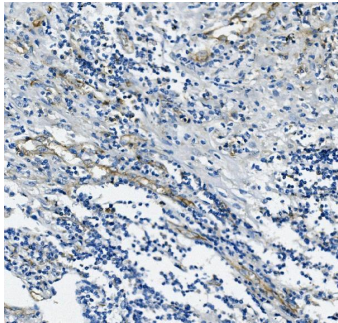
Immunogen	E.coli-derived human CD31 recombinant protein (Position: Q28-G382). Human CD31 shares 65% and 68% amino acid (aa) sequences identity with mouse and rat CD31, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and IHC(F).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
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), 0.5-1ug/ml, Human Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human

## Anti-CD31/PECAM1 Antibody Picoband® (monoclonal, 2D4) (M01513-4) Images

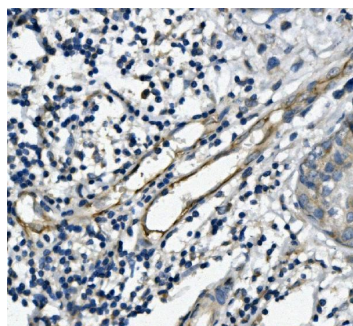


Western blot analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (M01513-4). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Jurkat whole cell lysates; Lane 2: human placenta 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 mouse anti-CD31/PECAM1 antigen affinity purified monoclonal antibody (Catalog # M01513-4) 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-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for CD31/PECAM1 at approximately 130KD. The expected band size for CD31/PECAM1 is at 130KD.

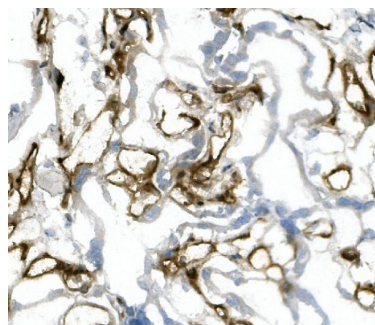


IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (M01513-4). CD31/PECAM1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CD31/PECAM1 Antibody (M01513-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (M01513-4). CD31/PECAM1 was detected in paraffin-embedded section of human mammary 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 mouse anti-CD31/PECAM1 Antibody (M01513-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of CD31/PECAM1 using anti-CD31/PECAM1 antibody (M01513-4). CD31/PECAM1 was detected in frozen section of human placenta tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-CD31/PECAM1 Antibody (M01513-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1021) with DAB as the chromogen.

## 4 Publications Citing This Product

1. PubMed ID: 10.4161/cbt.8.5.7687, Combined endostatin and TRAIL gene transfer suppresses human hepatocellular carcinoma growth and angiogenesis in nude mice
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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