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antibody and ELISA experts

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Anti-CD31 PECAM1 Antibody

Catalog Number: A01513

About PECAM1

Anti-CD31 antibody was designed, produced, and validated as part of the Joy Cappel Young Investigator Award (JCYIA). CD31 (PECAM-1) is a 130 kDa platelet endothelial cell adhesion molecule encoded by the PECAM1 gene found on chromosome 17 in humans. CD31 is expressed on platelets, monocytes, neutrophils, and some types of T-cells, and makes up a large portion of endothelial cell intercellular junctions. CD31 plays a key role in modulation of integrin-mediated cell adhesion, leukocyte transendothelial migration, angiogenesis, apoptosis and macrophage phagocytosis. CD31 is also expressed in certain tumors, including epithelioid hemangioendothelioma, epithelioid sarcoma-like hemangioendothelioma, other vascular tumors, histiocytic malignancies, and plasmacytomas. Anti-CD31 is ideal for researchers interested in Stem Cell Research, Epigenetics, and Cell-cycle Regulation research.

Overview

Product Name	Anti-CD31 PECAM1 Antibody
Reactive Species	Human, Mouse
Description	Boster Bio Anti-CD31 PECAM1 Antibody (Catalog # A01513). Tested in ELISA, IHC, WB applications. This antibody reacts with Human, Mouse.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, 0.01% (w/v) Sodium Azide
Storage Instructions	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Rabbit
Uniprot ID	Q3SWT0

Technical Details

Immunogen	This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-terminal domain of rat CD31 protein.
Predicted Reactive Species	Boar, Bovine, Canine, Golden Hamster
Cross Reactivity	No cross reactivity with other proteins.
Isotype	IgG

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Form	Liquid (sterile filtered)
Concentration	90 mg/mL by Refractometry
Purification	CD31 PECAM1 antibody is directed against rat CD31 protein. The product is delipidated and defibrinated antiserum. A BLAST analysis was used to suggest cross-reactivity with CD31 from rat, human, and mouse based on a 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Suggested Dilutions	ELISA: 1:20,000 IHC: 4μg/mL WB: 1:500 CD31 antibody has been tested for use in ELISA, immunohistochemistry, and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 80 kDa in size corresponding to CD31 protein by western blotting in the appropriate stimulated tissue or cell lysate or extract.

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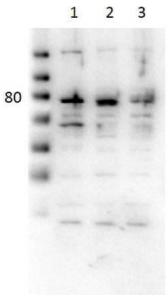
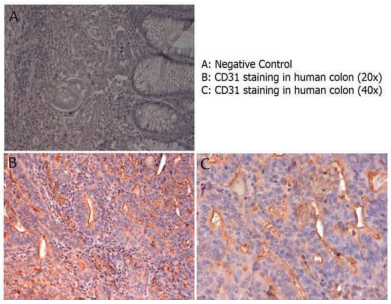
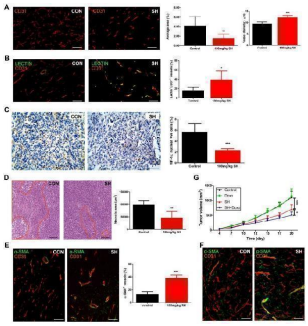
Anti-CD31 PECAM1 Antibody (A01513) Images



Western Blot of Rabbit Anti-CD31 Antibody. Lane 1: 3T3 Whole cell lysate . Lane 2: Jurkat Whole cell lysate . Lane 3: HT-29 Whole cell lysate . Load: 10µg/lane. Primary Antibody Anti-CD-31 used 1:500 with 0.75% TBS with Casein overnight. Secondary Antibody Goat anti-rabbit HRP used 1:40,000 for 30 min at room temp. Expect MW: 80kda.



Immunohistochemistry with anti-CD31 antibody showing CD31 staining of vascular endothelium in human colon at 20x and 40x (B & C). Formalin fixed/paraffin embedded sections were subjected to heat induced epitope retrieval (HIER) at pH 6.2 and then incubated with rabbit anti-human CD31 antibody at 4.0 µg/ml for 60 minutes. The reaction was developed using MACH 1 universal HRP polymer detection system and visualized with 3’3-diamino-benzidine substrate (DAB).



SH inhibits angiogenesis and promotes vessel normalization. (A) Staining for CD31 (red) showing the vessel area (CD31 + area, %) and vessel diameters in tumors. (B) Staining for FITC-conjugated lectin (green) and CD31 (red) indicating perfused lectin + CD31 + vessels (% of CD31 + vessels) in tumors. (C) The tumor oxygen supply was determined by HIF-1alpha staining (HIF-1alpha + /total cells). (D) HE staining showing necrosis (necrotic area is marked with red lines) in tumors. (E) Double staining for CD31 (red) and alpha-SMA (green) showing pericyte-covered tumor vessels within tumors which is further emphasized by confocal microscopy analysis of double staining of thick tumor sections followed by 3D projection of z-slice images (F). (G) Tumor volumes in mice injected intravenously with a suboptimal dose of doxorubicin (Doxo) or saline combined with SH administration. Bars: 100 um. Statistical significance: $P < 0.05$ (*), $P < 0.01$ (**) or $P < 0.001$ (***), N = 6–8. Index in PubMed under a CC BY license. PMID: 25749075

14 Publications Citing This Product

1. PubMed ID: 28901187, Chen X, Zhang M, Chen S, Wang X, Tian Z, Chen Y, Xu P, Zhang L, Zhang L, Zhang L. Cell Transplant. 2017 Aug;26(8):1331-1340. doi: 10.1177/0963689717721216. Peptide-Modified Chitosan Hydrogels Accelerate Skin Wound Healing by Promoting Fibroblast P...

2. PubMed ID: 23336136, Detrimental Effect of Electromagnetic Pulse Exposure on Permeability of In Vitro Blood-brain-barrier Model ZHOU Jia Xing, DING Gui Rong, ZHANG Jie %u2026

3. PubMed ID: 30008838, EPCR promotes MGC803 human gastric cancer cell tumor angiogenesis in vitro through activating ERK1/2 and AKT in a

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PAR1%u2011dependent manner

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Anti-CD31 PECAM1 Antibody

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