10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-PECAM-1/CD31 Antibody
Catalog # ABO11256

Specification

Anti-PECAM-1/CD31 Antibody - Product Information

Application	**WB, IHC-P, IHC-F**
Primary Accession	P16284
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Platelet endothelial cell adhesion molecule(PECAM1) detection. Tested with WB, IHC-P, IHC-F in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-PECAM-1/CD31 Antibody - Additional Information

Gene ID 5175

Other Names
Platelet endothelial cell adhesion molecule, PECAM-1, EndoCAM, GPIIA', PECA1, CD31, PECAM1

Calculated MW
82536 MW KDa

Application Details
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml, Human, -
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Isoform Long: Cell membrane; Single-pass type I membrane protein. Cell membrane; Lipid-anchor. Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells.

Tissue Specificity
Expressed on platelets and leukocytes and is primarily concentrated at the borders between endothelial cells. Isoform Long predominates in all tissues examined. Isoform Delta12 is detected only in trachea. Isoform Delta14-15 is only detected in lung. Isoform Delta14 is detected in all tissues examined with the strongest expression in heart. Isoform Delta15 is expressed in brain, testis, ovary, cell surface of platelets, human umbilical vein endothelial cells (HUVECs), Jurkat T-cell leukemia, human erythroleukemia (HEL) and U-937 histiocytic lymphoma cell lines (at protein level). .

Protein Name
Platelet endothelial cell adhesion molecule

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human CD31(717-732aa RKAVPDAVESRYSRTE).

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Contains 6 Ig-like C2-type (immunoglobulin-like) domains.

Anti-PECAM-1/CD31 Antibody - Protein Information

Name PECAM1

Function
Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions (PubMed:17580308, PubMed:19342684). Tyr-690 plays a critical role in TEM and is required for efficient trafficking of PECAM1 to and from the lateral border recycling compartment (LBRC) and is also essential for the LBRC membrane to be targeted around migrating leukocytes (PubMed:19342684). Trans-homophilic interaction may play a role in endothelial cell-cell adhesion via cell junctions (PubMed:27958302). Heterophilic interaction with CD177 plays a role in transendothelial migration of neutrophils (PubMed:17580308). Homophilic ligation of PECAM1 prevents macrophage-mediated phagocytosis of neighboring viable leukocytes by transmitting a detachment signal (PubMed:12110892). Promotes macrophage-mediated phagocytosis of apoptotic leukocytes by tethering them to the phagocytic cells; PECAM1-mediated detachment signal appears to be disabled in apoptotic leukocytes (PubMed:12110892). Modulates bradykinin receptor BDKRB2 activation (PubMed:18672896). Regulates bradykinin- and hyperosmotic shock-induced ERK1/2 activation in endothelial cells (PubMed:18672896). Induces susceptibility to atherosclerosis (By similarity).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Note=Cell surface expression on neutrophils is down-regulated upon fMLP or CXCL8/IL8- mediated stimulation. [Isoform Delta15]: Cell junction. Note=Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells

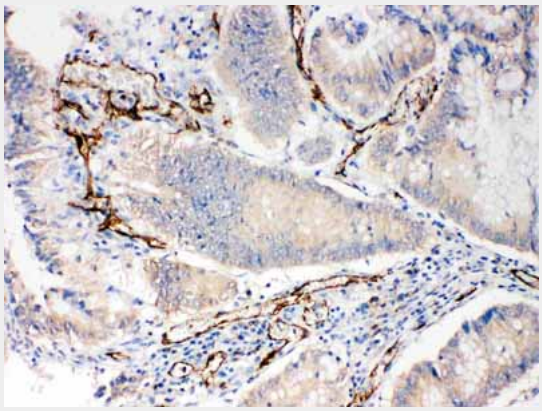
Tissue Location
Expressed on platelets and leukocytes and is primarily concentrated at the borders between endothelial cells (PubMed:18388311, PubMed:21464369). Expressed in human umbilical vein endothelial cells (HUVECs) (at protein level) (PubMed:17580308, PubMed:19342684). Expressed on neutrophils (at protein level) (PubMed:17580308). Isoform Long predominates in all tissues examined (PubMed:12433657). Isoform Delta12 is detected only in trachea (PubMed:12433657). Isoform Delta14-15 is only detected in lung (PubMed:12433657). Isoform Delta14 is detected in all tissues examined with the strongest expression in heart (PubMed:12433657). Isoform Delta15 is expressed in brain, testis, ovary, cell surface of platelets, human umbilical vein endothelial cells (HUVECs), Jurkat T- cell leukemia, human erythroleukemia (HEL) and U-937 histiocytic lymphoma cell lines (at protein level) (PubMed:12433657, PubMed:18388311).

Anti-PECAM-1/CD31 Antibody - Protocols

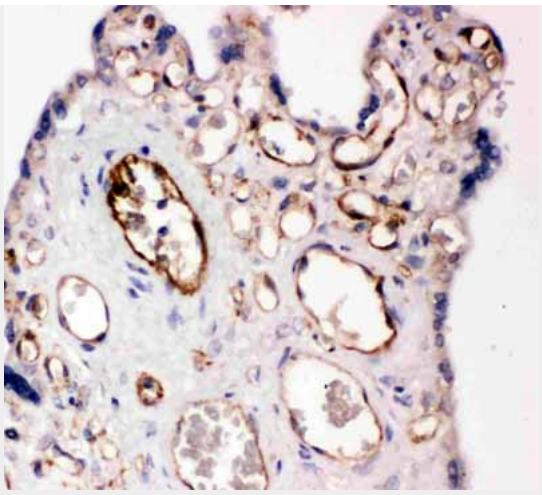
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

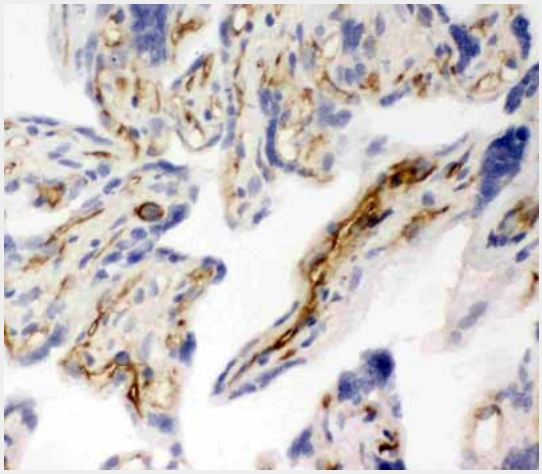
Anti-PECAM-1/CD31 Antibody - Images



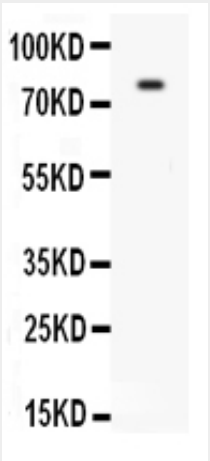
Anti-CD31 antibody, ABO11256, IHC(P)IHC(P): Human Intestinal Cancer Tissue



Anti-CD31 antibody, ABO11256, IHC(P)IHC(P): Human Placenta Tissue



Anti-CD31 antibody, ABO11256, IHC(F)IHC(F): Human Placenta Tissue



Anti-CD31 antibody, ABO11256,Western blottingAll lanes: Anti CD31 (ABO11256) at 0.5ug/mlWB : Human Placenta Tissue Lysate at 50ugPredicted bind size: 82 KDObserved bind size: 82KD

Anti-PECAM-1/CD31 Antibody - Background

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.