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CD31 / PECAM-1 (Endothelial Cell Marker) Mouse Monoclonal Antibody [Clone C31.7]

Purified Mouse Monoclonal Antibody
Catalog # AH10373

Product Information

Application	IF, FC
Primary Accession	P16284
Reactivity	Human, Rabbit, Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1, kappa
Clone Names	C31.7
Calculated MW	82522

Additional Information

Gene ID	5175
Other Names	EndoCAM; PECA1; Platelet Endothelial Cell Adhesion Molecule 1; GPIIA'
Target/Specificity	Recombinant full-length human CD31 protein
Application Note	Flow Cytometry (5ul per test per one million cells or 5ul per 100ul of whole blood); Immunofluorescence (1:50-1:100 for 30 minutes at RT); (Staining of formalin-fixed tissues is enhanced by boiling tissue sections in 1mM EDTA, pH 8.0, for 10-20 min followed by cooling at RT for 20 minutes) Optimal dilution for a specific application should be determined.
Format	0.5ml at 100ug/ml with BSA and azide
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD31 / PECAM-1 (Endothelial Cell Marker) Mouse Monoclonal Antibody [Clone C31.7] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

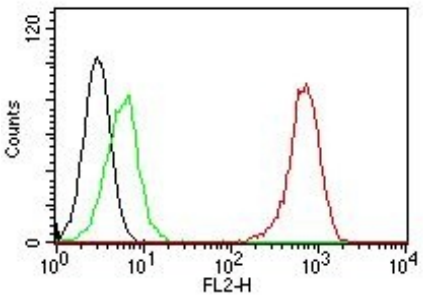
Name	PECAM1
Function	Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions (PubMed:17580308, PubMed:19342684). Tyr-690 plays a critical role in TEM and is required for efficient trafficking of PECAM1 to and from the lateral border recycling 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).

References

1. Gratzinger D et. al. Am J Clin Pathol 131:264-278 (2009).

Images



Flow Cytometric analysis of human CD31 on Jurkat Cells. Black: Cells alone; Green: Isotype Control; Red: PE-labeled CD31 MAb (C31.7).