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Rabbit Anti-CD31 antibody

SL0195R

Product Name:	CD31
Chinese Name:	血小板endothelial cells黏附分子1抗体
Alias:	platelet endothelial cell adhesion molecule precursor-1; PECAM-1; PECAM1; Adhesion molecule; CD31 antigen; CD31 EndoCAM; Endocam; FLJ34100; FLJ58394; GPIIA; Pecam 1; PECA1_HUMAN; PECAM 1 CD31 EndoCAM; PECA1; Pecam1; Platelet endothelial cell adhesion molecule; Platelet/endothelial cell adhesion molecule 1; Adhesion molecule; Platelet/endothelial cell adhesion molecule.
文献引用 PubMed :	**Specific References(16)**|SL0195R has been referenced in 16 publications. **[IF=7.60]**Han, Fengxuan, et al. "Performance of a multilayered small-diameter vascular scaffold dual-loaded with VEGF and PDGF."?Biomaterials?(2013).**Rabbit**. PubMed:23830580 **[IF=7.60]**Zhang, Hong, et al. "Dual-delivery of VEGF and PDGF by double-layered electrospun membranes for blood vessel regeneration." Biomaterials (2013).**Rat**. PubMed:23290468 **[IF=4.58]**Lu, Cong-Xiao, et al. "Sulfated polymannuroguluronate, a novel anti-AIDS drug candidate, inhibits HIV-1 Tat-induced angiogenesis in Kaposi's sarcoma cells." Biochemical pharmacology 74.9 (2007): 1330-1339.**Human**. PubMed:17868650 **[IF=3.73]**Lv, Fang, et al. "Repeated Abortion Affects Subsequent Pregnancy Outcomes in BALB/c Mice." PloS one 7.10 (2012): e48384.**IHC-P;Mouse**. PubMed:23119001 **[IF=2.51]**Gao, Qian, et al. "Expression pattern of embryonic stem cell markers in DFAT cells and ADSCs." Molecular biology reports 39.5 (2012): 5791-5804.**IF(ICC);Rat**.

PubMed:22237862

[IF=1.93]Lee, Hye Sook, Ji Hyun Lee, and Jae Wook Yang. "Effect of porcine chondrocyte derived extracellular matrix on the pterygium in mouse model." Graefes Archive for Clinical and Experimental Ophthalmology (2014) 1-10.**IHC-P;Mouse**.

PubMed:24562465

[IF=3.17]Liu, Yang, et al. "Amelioration of Stroke-Induced Neurological Deficiency by Lyophilized Powder of Catapol and Puerarin." International Journal of Biological Sciences 10.4 (2014): 448-456.**IHC-P;Mouse**.

PubMed:24719562

[IF=7.60]Choi, Byung Hyune, et al. "Inhibition of blood vessel formation by a chondrocyte-derived extracellular matrix." Biomaterials (2014).**IHC-P;Rabbit**.

PubMed:24768193

[IF=1.93]Lee, Hye Sook, et al. "Anti-neovascular effect of chondrocyte-derived extracellular matrix on corneal alkaline burns in rabbits." Graefes Archive for Clinical and Experimental Ophthalmology (2014): 1-11.**WB;Rabbit**.

PubMed:24789464

[IF=3.53]Lee, Tao-Chen, et al. "Comparison of Surface Markers between Human and Rabbit Mesenchymal Stem Cells." PLOS ONE 9.11 (2014): e111390.**FCM;Rabbit**.

PubMed:25380245

[IF=2.81]Sun, Wei, et al. "Adipose-Derived Stem Cells Alleviate Radiation-Induced Muscular Fibrosis by Suppressing the Expression of TGF-1." (2015) Stem Cells International.**FCM;Rabbit**.

PubMed:26649050

[IF=2.04]Karaca, T., et al. "Effects of hyperthyroidism on expression of vascular endothelial growth factor (VEGF) and apoptosis in fetal adrenal glands."European Journal of Histochemistry 59.4 (2015).**IHC-P;Rat**.

PubMed:26708182

[IF=2.47]Struecker, B., et al. "Implantation of a Tissue-Engineered Neo-Bile Duct in Domestic Pigs." European Surgical Research 56.1-2 (2015): 61-75.**IHC-P;Pig**.

PubMed:26684913

[IF=2.20]Zhang, Jue-yu, et al. "Local application of paeonol prevents early restenosis: a study with a rabbit vein graft model." Journal of Surgical Research (2016).**WB;Rabbit**.

	PubMed:28550918 [IF=2.54]Wang, Li, et al. "Ghrelin inhibits atherosclerotic plaque angiogenesis and promotes plaque stability in a rabbit atherosclerotic model." Peptides (2017).**IHC-P;Rabbit**. PubMed:28189525 [IF=3.04]Korkmaz, H. Ibrahim, et al. "Neutrophil Extracellular Traps Coincide with a Pro-coagulant Status of Microcirculatory Endothelium in Burn Wounds." Wound Repair and Regeneration (2017).**IHC-P;Rat**. PubMed:28727215
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000Flow-Cyt=1μg/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	78kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CD31:681-738/738<Cytoplasmic>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This protein is a cell adhesion molecule expressed on platelets and at endothelial cell intercellular junctions. Type I membrane protein. SIZE: 738 amino acids; 82536 Da. SUBCELLULAR LOCATION: Membrane; Single-pass type I membrane protein. TISSUE SPECIFICITY: Long isoform predominates all tissues examined, isoform Delta12 was detected only in trachea and isoform Delta14-15 only in lung, isoform Delta14 was detected in all tissues examined with the strongest expression in heart. PTM: Phosphorylated on Ser and Tyr residues after cellular activation. SIMILARITY: Contains 6 Ig-like C2-type (immunoglobulin-like) domains. CD31, also known as platelet endothelial cell adhesion molecule 1 (PECAM1), is a type I integral membrane glycoprotein and a member of the immunoglobulin superfamily of cell surface receptors. It 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. CD31 is implicated in several functions, including transendothelial migration of leukocytes, angiogenesis, and integrin activation. Tyr-690 plays a critical role in leukocyte transendothelial migration (TEM) and is required for efficient trafficking of CD31 to and from the lateral border recycling compartment (LBRC) and is also essential for the LBRC membrane to be targeted around migrating leukocytes. CD31 prevents phagocyte ingestion of closely apposed viable cells by transmitting 'detachment' signals, and changes function on apoptosis, promoting tethering of dying cells to phagocytes (the encounter of a viable cell with a phagocyte via the homophilic interaction of CD31 on both cell surfaces leads to the viable cell's active repulsion from the phagocyte. During apoptosis, the inside-out signaling of CD31 is somehow disabled so that the apoptotic cell does not actively reject the phagocyte anymore. The lack of this repulsion signal together with the interaction of the eat-me signals and their respective receptors causes the attachment of the apoptotic cell to the phagocyte, thus triggering the process of engulfment). CD31 has been used to measure angiogenesis in association with tumor recurrence. Other studies have also indicated that CD31 and CD34 can be used as markers for myeloid progenitor cells and recognize different subsets of myeloid leukemia infiltrates (granular sarcomas).

Function:
Induces susceptibility to atherosclerosis (By similarity). Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions. 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. Prevents phagocyte ingestion of closely apposed viable cells by transmitting 'detachment' signals, and changes function on apoptosis, promoting tethering of dying cells to phagocytes (the encounter of a viable cell with a phagocyte via the homophilic interaction of PECAM1 on both cell surfaces leads to the viable cell's active repulsion from the phagocyte. During apoptosis, the inside-out signaling of PECAM1 is somehow disabled so that the apoptotic cell does not actively reject the phagocyte anymore. The lack of this repulsion signal together with the interaction of the eat-me signals and their respective receptors causes the attachment of the apoptotic cell to the phagocyte, thus triggering the process of engulfment). Isoform Delta15 is unable to protect against apoptosis. Modulates BDKRB2 activation. Regulates bradykinin- and hyperosmotic shock-induced ERK1/2 activation in human umbilical cord vein cells (HUVEC).

Subunit:
Interacts with PTPN11; Tyr-713 is critical for PTPN11 recruitment. Forms a complex with BDKRB2 and GNAQ. Interacts with BDKRB2 and GNAQ.

Subcellular Location:
Isoform Long: Membrane; Single-pass type I membrane protein. Cell junction. Note=Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells.
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 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 U937 histiocytic lymphoma cell lines (at protein level).

Post-translational modifications:
Phosphorylated on Ser and Tyr residues after cellular activation. Phosphorylated on tyrosine residues by FER and FES in response to FCER1 activation (By similarity). In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation.

Similarity:
Contains 6 Ig-like C2-type (immunoglobulin-like) domains.

SWISS:
P16284

Gene ID:
5175

Database links:

Entrez Gene: 5175Human

Entrez Gene: 18613Mouse

Omim: 173445Human

SwissProt: P16284Human

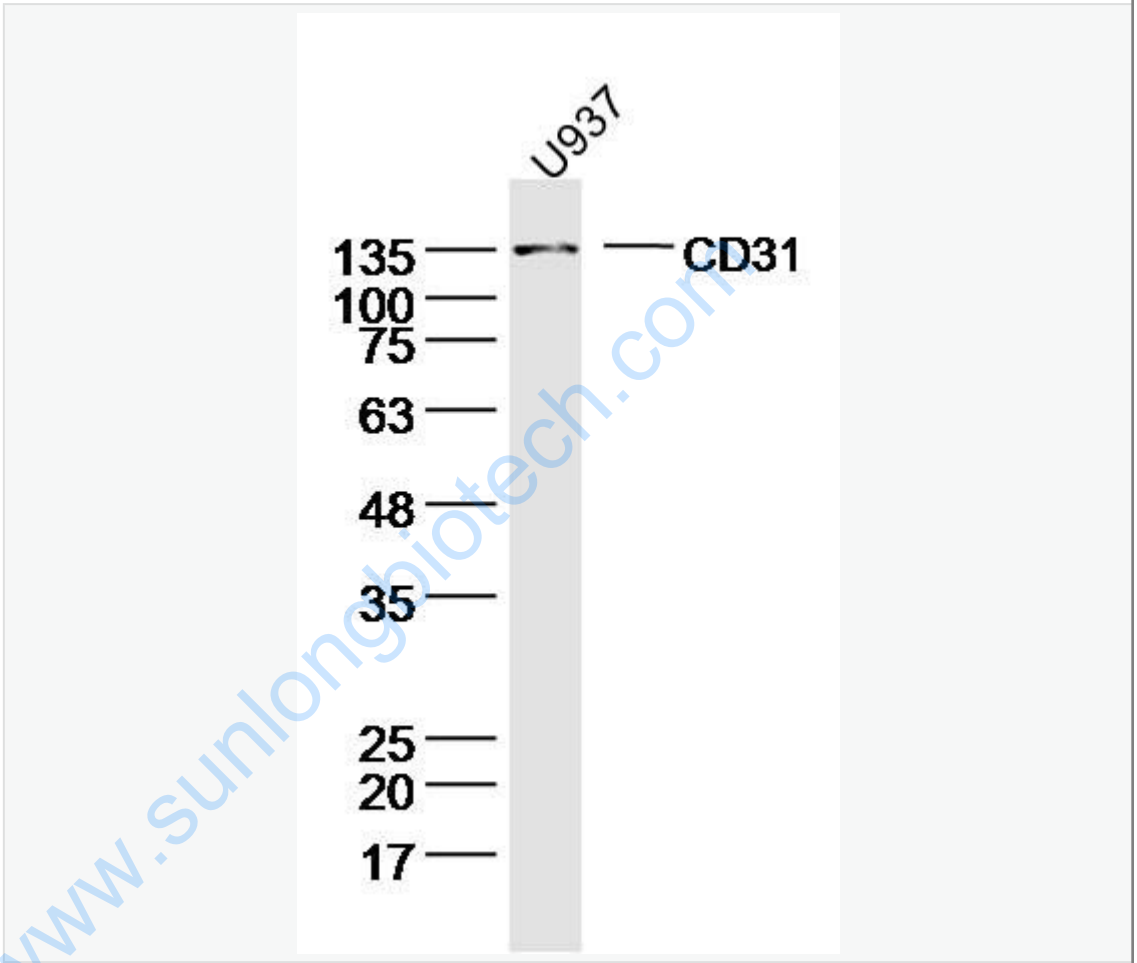
SwissProt: Q08481Mouse

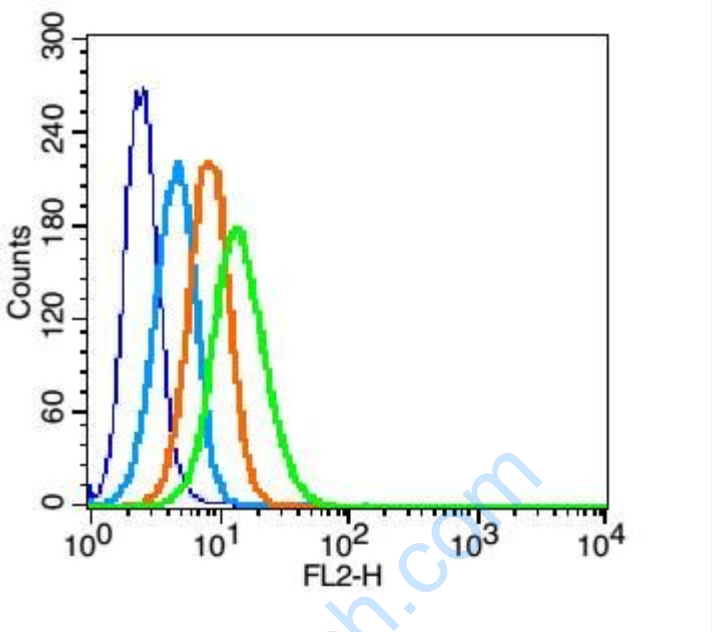
Unigene: 376675Human

Unigene: 514412Human

Unigene: 343951Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

	血小板endothelial cells黏附分子-1 (Platelet/ endothelial cell adhesion molecule, PECAM-1)在血小板、endothelial cells、单核细胞、嗜中性细胞及某些T细胞亚群上表达的质膜glycoprotein，属于免疫球蛋白超基因家族成员，在细胞外结构域中有6个C2亚类免疫球蛋白样保守性同原单位。在炎症应答中起作用。
Picture:	 Sample: U937 (human)Cell Lysate at 40 ug Primary: Anti- CD31 (SL0195R) at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 78 kD Observed band size: 135kD



Blank control: U937(blue).

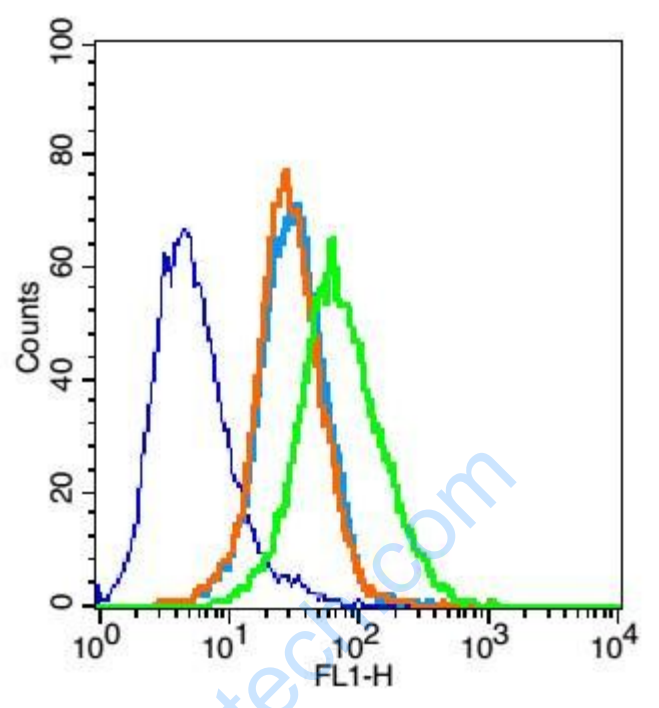
Primary Antibody: Rabbit Anti-CD31 antibody(SL0195R), Dilution: 1μg in 100 μL 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG (orange) ,used under the same conditions.

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min).Primary antibody (SL0195R) were incubated for 30 min on the ice, followed by 1 X PBS containing 0.5% BSA + 10% goat serum (15 min) to block non-specific protein-protein interactions. Then the Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.



Overlay histogram showing HL 60 cells stained with bs-0195R (Green line).

The cells were fixed with 90% methanol (5 min) and then permeabilized with 0.01M PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (SL0195R) for 30 min at 22℃. The secondary antibody used was fluorescein isothiocyanate goat anti-rabbit IgG (H+L) (SL0195R) at 1/200 dilution for 30 min at 22℃. Isotype control antibody was rabbit IgG (polyclonal,bs-0295P,Orange line) (3µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of 20,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.