

Datasheet for ABIN921113

CD31 ELISA Kit

[Go to Product page](#)

1 Image

2 Publications

Overview

Quantity: 96 tests

Target: CD31 (PECAM1)

Binding Specificity: AA 18-590

Reactivity: Mouse

Method Type: Sandwich ELISA

Detection Range: 156-10000 pg/mL

Minimum Detection Limit: 156 pg/mL

Application: ELISA

Product Details

Purpose: Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse PECAM-1/CD31

Brand: PicoKine™

Sample Type: Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)

Analytical Method: Quantitative

Detection Method: Colorimetric

Immunogen: Expression system for standard: NSO
Immunogen sequence: E18-K590

Specificity: Expression system for standard: NSO
Immunogen sequence: E18-K590

Cross-Reactivity (Details): There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target:	CD31 (PECAM1)
Alternative Name:	PECAM1 (PECAM1 Products)
Background:	<p>Protein Function: Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions. Tyr-679 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). Modulates BDKRB2 activation (By similarity). Induces susceptibility to atherosclerosis. .</p> <p>Background: PECAM-1 is an important target GP in DITP.1 Platelet/endothelial cell adhesion molecule-1(PECAM-1) is a 130-kD member of the Ig gene superfamily that is expressed on the surface of circulating platelets, monocytes, neutrophils, and selective T-cell subsets.2 Platelet endothelial cell adhesion molecule-1(PECAM-1/CD31) is a member of the immunoglobulin(Ig) superfamily that has distinctive features of an immunoreceptor based upon its genomic structure and the presence of intrinsic immunoreceptor tyrosine inhibitory motifs(ITIMs) in its ligand binding polypeptide.3 PECAM-1 has recently been shown to contain functional immunoreceptor tyrosine-based inhibitory motifs(ITIMs) within its cytoplasmic domain, and co-ligation of PECAM-1 with the T-cell antigen receptor(TCR) results in tyrosine phosphorylation of PECAM-1, recruitment of Src homology 2 domain-containing protein tyrosine phosphatase-2(SHP-2), and attenuation of TCR-mediated cellular signaling.4 The standard used in this kit is</p>

Target Details

the product of gene recombinant expression(extracellular part), consisting of 563 amino acids(E28-K590) with the molecular weight of 65.5KDa. After glycosylating, its molecular weight changes to 91-100KDa.

Synonyms: Platelet endothelial cell adhesion molecule,PECAM-1,CD31,Pecam1,Pecam, Pecam-1,

Full Gene Name: Platelet endothelial cell adhesion molecule

Cellular Localisation: 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..

Gene ID: 18613

UniProt: [Q08481](#)

Pathways: [Regulation of Actin Filament Polymerization](#)

Application Details

Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

Comment: Sequence similarities: Contains 6 Ig-like C2-type (immunoglobulin-like) domains.
Tissue Specificity: Isoform 1 and isoform 3 are expressed in lung and platelets. .

Plate: Pre-coated

Protocol: mouse PECAM-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for PECAM-1 has been precoated onto 96-well plates. Standards(NSO, E18-K590) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for PECAM-1 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse PECAM-1 amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL mouse PECAM-1 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that

Application Details

each mouse PECAM-1 standard solution and each sample be measured in duplicate.

Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 1425, Standard deviation: 89.8, CV(%): 6.3• Sample 2: n=16, Mean(pg/ml): 2256, Standard deviation: 169.2, CV(%): 7.5• Sample 3: n=16, Mean(pg/ml): 4926, Standard deviation: 280.8, CV(%): 5.7,• Sample 1: n=24, Mean(pg/ml): 1614, Standard deviation: 111.4, CV(%): 6.9• Sample 2: n=24, Mean(pg/ml): 2648, Standard deviation: 214.5, CV(%): 8.1• Sample 3: n=24, Mean(pg/ml): 5830, Standard deviation: 378.95, CV(%): 6.5
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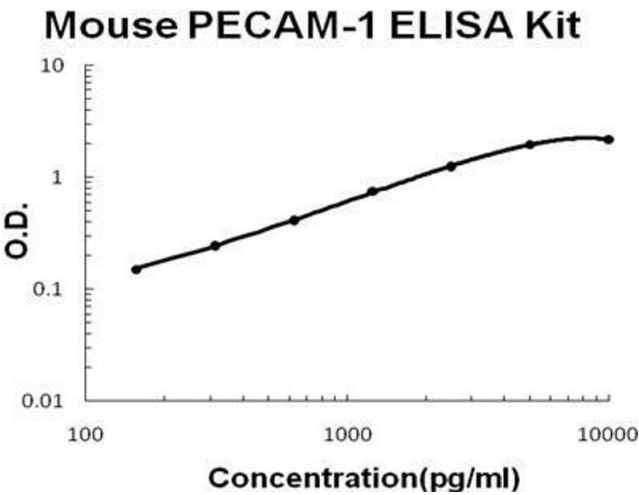
Restrictions:	For Research Use only
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Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	<p>Wang, Wei, Lin, Shi, Dong: "The inhibition of Endostar on the angiogenesis and growth of gastrointestinal stromal tumor xenograft." in: Clinical and experimental medicine, Vol. 12, Issue 2, pp. 89-95, (2012) (PubMed).</p> <p>Yang, Zhu, Cai, Cheng, Zhao, Wang, Zhao, Wang: "Role of tumor-associated lymphatic endothelial cells in metastasis: a study of epithelial ovarian tumor in vitro." in: Cancer science, Vol. 101, Issue 3, pp. 679-85, (2010) (PubMed).</p>
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ELISA

Image 1. Mouse PECAM-1/CD31 PicoKine ELISA Kit standard curve