

Human CD31 ELISA Kit (PECAM1) αb45910

1 References 1 Image

Overview

Product name Human CD31 ELISA Kit (PECAM1)

Detection method Colorimetric

Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Sample A	11	5.323ng/ml	0.19	3.5%
	Sample B	11	1.236ng/ml	0.077	6.2%

	Inter-assay				
	Sample	n	Mean	SD	CV%
	Sample A	11	5.406ng/ml	0.292	5.4%
	Sample B	11	1.205ng/ml	0.058	4.8%

Sample type Cell culture supernatant, Serum, Plasma

Assay type Sandwich (quantitative)

Sensitivity < 0.04 ng/ml

Range 0.31 ng/ml - 10 ng/ml

Assay time 2h 45m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Abcam's CD31 (PECAM1) Human *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of CD31 in Human serum, plasma, buffered solutions and cell culture medium

A monoclonal antibody specific for CD31 has been coated onto the wells of the microtiter strips provided. Samples, including standards of known CD31 concentrations, control specimens or unknowns are pipetted into these wells. During the first incubation, the standards or samples and a biotinylated monoclonal antibody specific for CD31 are simultaneously incubated. After washing, the enzyme Streptavidin-HRP, that binds the biotinylated antibody is added, incubated

and washed. A TMB substrate solution is added which acts on the bound enzyme to induce a colored reaction product. The intensity of this colored product is directly proportional to the concentration of CD31 present in the samples.

This kit will recognize both endogenous and recombinant Human CD31.

Get results in 90 minutes with Human CD31 ELISA Kit (PECAM) ([ab190814](#)) from our SimpleStep ELISA® range.

Platform

Microplate

Properties

Storage instructions

Store at +4°C. Please refer to protocols.

Components	Identifier	1 x 96 tests	2 x 96 tests
10X Standard Diluent Buffer	Black	1 x 15ml	1 x 25ml
200X Wash Buffer	White	1 x 10ml	2 x 10ml
Biotinylated Antibody Diluent	Red	1 x 7ml	1 x 13ml
Biotinylated anti-CD31 antibody	Red	1 x 400µl	2 x 400µl
CD31 Control	Silver	2 vials	4 vials
CD31 Microplate (12 x 8 well strips)		1 unit	2 units
CD31 Standard	Yellow	2 vials	4 vials
Chromogen TMB Substrate Solution		1 x 11ml	1 x 24ml
HRP Diluent	Red	1 x 12ml	1 x 23ml
Stop Reagent	Black	1 x 11ml	2 x 11ml
Streptavidin-HRP		2 x 5µl	4 x 5µl

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).

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).

Sequence similarities

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

Domain

The Ig-like C2-type domains 2 and 3 contribute to formation of the complex with BDKRB2 and in regulation of its activity.

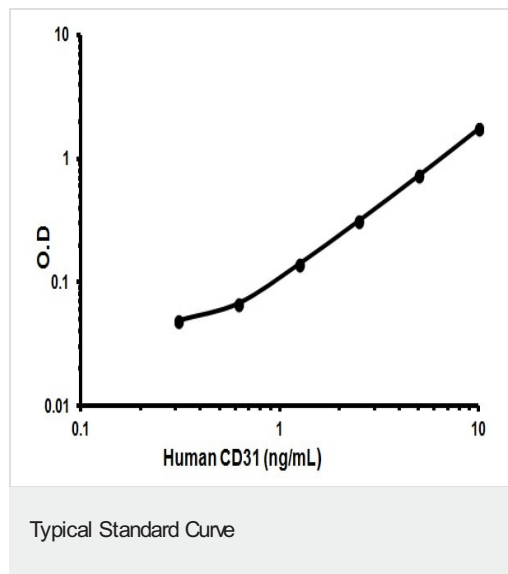
Post-translational modifications

Phosphorylated on Ser and Tyr residues after cellular activation. In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation.

Cellular localization

Membrane. Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells and Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells.

Images



Representative Standard Curve using ab45910.

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