

Human CD31 ELISA Kit (PECAM) ab190814

重组 SimpleStep ELISA

2 References [10 图像](#)

概述

产品名称 人CD31 ELISA试剂盒(PECAM)

检测方法 Colorimetric

精确度 批次内

样品	n	Mean	SD	CV%
cell extract	8			3.4%

批次间

样品	n	Mean	SD	CV%
cell extract	3			3.3%

样品类型 Cell culture supernatant, Saliva, Urine, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma

检测类型 Sandwich (quantitative)

灵敏度 44 pg/ml

范围 226.6 pg/ml - 14500 pg/ml

回收率 特定样本回收率

样品类型	平均%	范围
Urine	80	76% - 84%
Serum	113	109% - 119%
Hep Plasma	74	71% - 80%
EDTA Plasma	103	102% - 106%
Cit plasma	91	88% - 95%

检测时间 1h 30m

实验步骤

One step assay

种属反应性

与反应: Human, Rhesus monkey

不与反应: Cow

产品概述

Human CD31 ELISA Kit (PECAM) (ab190814) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CD31 (PECAM) protein in cell culture extracts, cell culture supernatant, cit plasma, edta plasma, hep plasma, saliva, serum, tissue extracts, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CD31 (PECAM) with 44 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

说明

CD31, also known as PECAM-1, is a cell adhesion molecule which is required for leukocyte trans-endothelial migration (TEM) under most inflammatory conditions. CD31 is a 130-kDa glycoprotein constitutively expressed on endothelial cells, platelets, neutrophils, monocytes, lymphocytes and basophils. CD31 molecules is expressed in large amounts in the intracellular junctions of endothelial cells. Experiments using antibody results in blocking CD31 homophilic interaction and inhibition of leukocytes transmigration. Expression of CD31 on the cell surface is regulated by receptor shedding resulting in generation of a soluble 100-kDa extracellular domain form and a truncated 28-kDa fragment containing the transmembrane and cytoplasmic domain of CD31.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

平台

Pre-coated microplate (12 x 8 well strips)

性能

存放说明

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

组件	1 x 96 tests
10X Human CD31 Capture Antibody	1 x 600µl
10X Human CD31 Detector Antibody	1 x 600µl

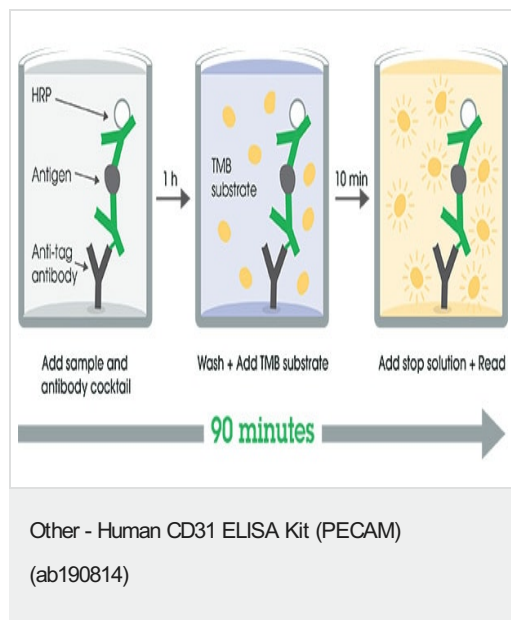
组件	1 x 96 tests
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	2 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BI	1 x 6ml
Denaturant	1 x 500µl
Human CD31 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

功能	<p>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).</p>
组织特异性	<p>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).</p>
序列相似性	<p>Contains 6 Ig-like C2-type (immunoglobulin-like) domains.</p>
结构域	<p>The Ig-like C2-type domains 2 and 3 contribute to formation of the complex with BDKRB2 and in regulation of its activity.</p>
翻译后修饰	<p>Phosphorylated on Ser and Tyr residues after cellular activation. In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation.</p>

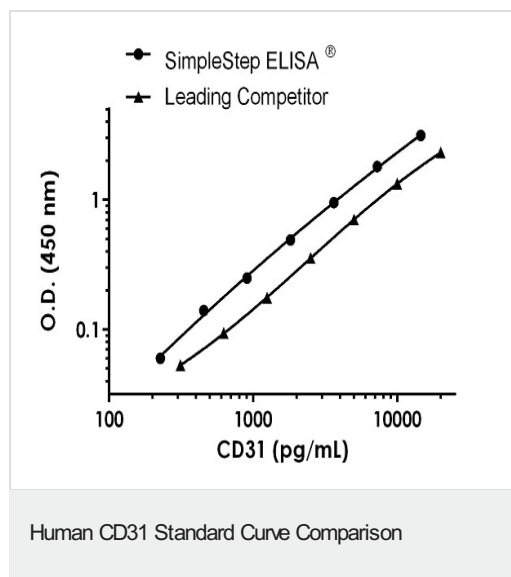
细胞定位

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.

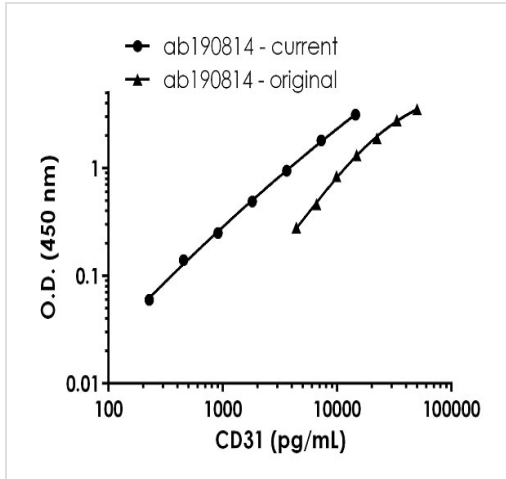
图片



SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

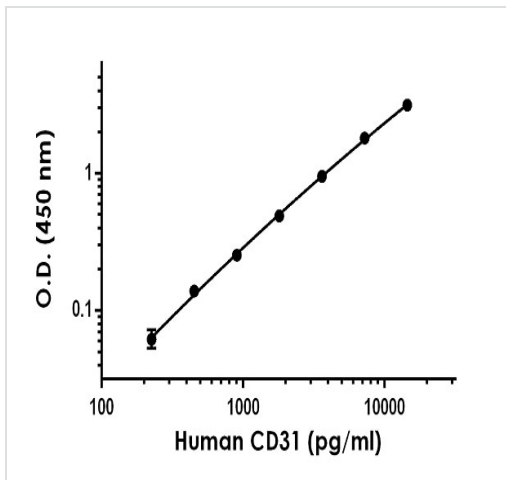


Standard Curve comparison between human CD31 SimpleStep ELISA kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows increased sensitivity.



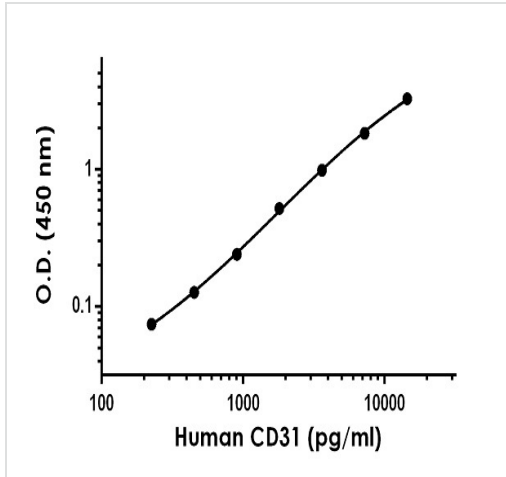
Standard Curve comparison between human CD31 new SimpleStep ELISA kit and previous ELISA kit. The new SimpleStep ELISA kit shows increased sensitivity.

Human CD31 Standard Curve Comparison



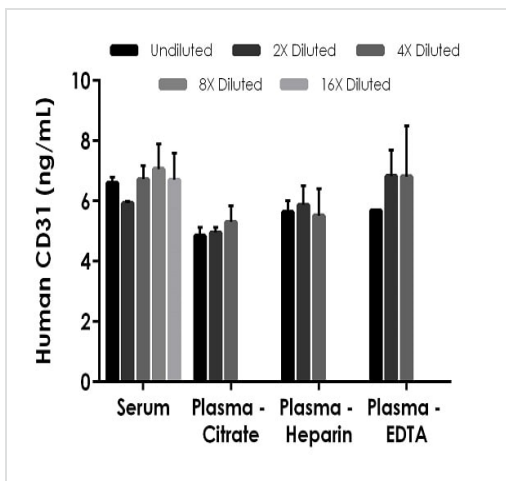
The CD31 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of human CD31 standard curve in Sample Diluent NS + Enhancer.



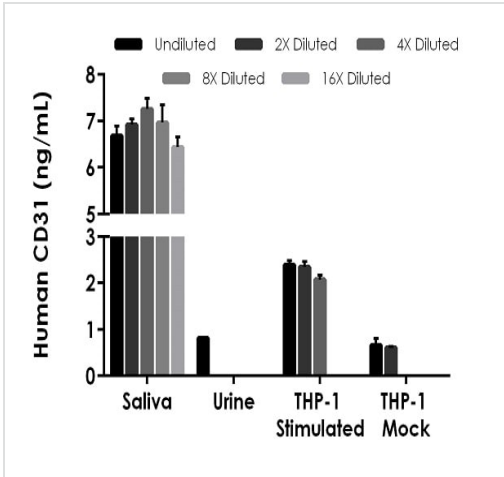
The CD31 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of human CD31 standard curve in 1X Cell Extraction Buffer PTR + Enhancer.



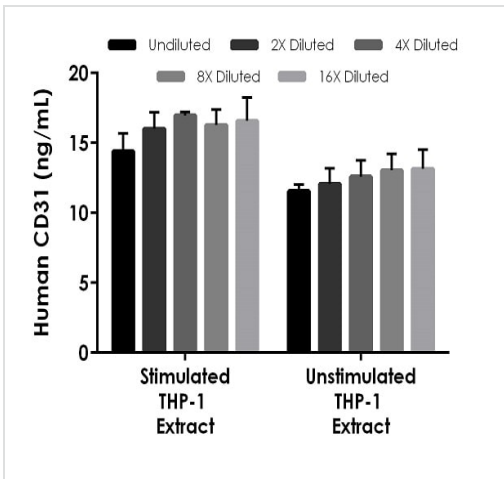
The concentrations of CD31 were measured in duplicates, interpolated from the CD31 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 36%, plasma (citrate) 9%, plasma (heparin) 9% and plasma (EDTA) 9%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CD31 concentration was determined to be 6.60 ng/mL in neat serum, 5.04 ng/mL in neat plasma (citrate), 5.67 ng/mL in neat plasma (heparin), and 6.44 ng/mL in neat plasma (EDTA).

Interpolated concentrations of native CD31 in human serum and plasma samples.



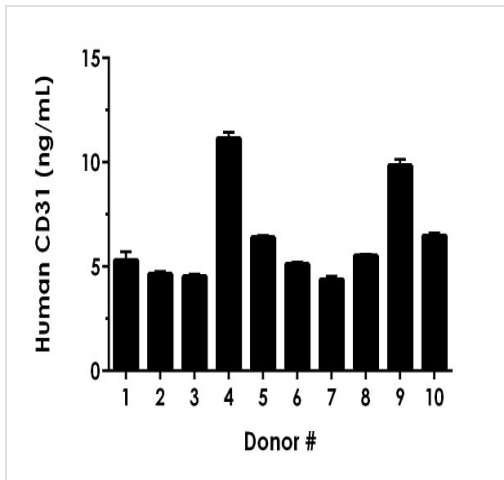
Interpolated concentrations of native CD31 in human saliva, urine, and THP-1 cell culture supernatant samples.

THP-1 cells were cultured in the presence (stimulated) or absence (mock) of 5 µg/mL LPS and 50nM PMA for 24 hours. The concentrations of CD31 were measured in duplicates, interpolated from the CD31 standard curves and corrected for sample dilution. Undiluted samples are as follows: saliva 36%, urine 36%, THP-1 stimulated supernatant 18%, and THP-1 mock supernatant 18%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CD31 concentration was determined to be 6.85 ng/mL in neat saliva, 0.81 ng/mL in neat urine, 2.27 ng/mL in neat stimulated THP-1 supernatant, and 0.64 ng/mL in neat mock THP-1 supernatant.



Interpolated concentrations of native CD31 in THP-1 cell extract samples based on a 125 µg/mL extract load.





THP-1 cells were cultured in the presence (stimulated) or absence (unstimulated) of 5 µg/mL LPS and 50nM PMA for 24 hours. The concentrations of CD31 were measured in duplicate and interpolated from the CD31 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CD31 concentration was determined to be 16.0 ng/mL in stimulated THP-1 cell extract and 12.5 ng/mL in unstimulated THP-1 cell extract.



Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean CD31 concentration was determined to be 6.34 ng/mL with a range of 4.39 – 11.1 ng/mL

Serum from ten individual healthy human female donors was measured in duplicate.

Powered by
recombinant antibodies

 Research with confidence Consistent and reproducible results	 Long-term and scalable supply Recombinant technology
 Success from the first experiment Confirmed specificity	 Ethical standards compliant Animal-free production

Sandwich ELISA - Human CD31 ELISA
Kit (PECAM) (ab190814)

To learn more about the advantages of recombinant antibodies see [here](#).

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