

### Human VCAM1 ELISA Kit ab223591

**重组** SimpleStep ELISA

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#### 概述

**产品名称** 人VCAM1 ELISA试剂盒

**检测方法** Colorimetric

**精确度** 批次内

样品	n	Mean	SD	CV%
Serum	9			1.4%

批次间

样品	n	Mean	SD	CV%
Serum	3			5.23%

**样品类型** Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma

**检测类型** Sandwich (quantitative)

**灵敏度** 37 pg/ml

**范围** 0.14 ng/ml - 9 ng/ml

**回收率** 特定样本回收率

样品类型	平均%	范围
Serum	93	88% - 104%
Cell culture media	101	92% - 108%
Hep Plasma	94	89% - 103%
EDTA Plasma	97	88% - 109%
Cit plasma	95	92% - 102%

**检测时间** 1h 30m

**实验步骤** One step assay

**种属反应性****与反应:** Human**产品概述**

Human VCAM1 ELISA Kit (ab223591) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of VCAM1 protein in cit plasma, edta plasma, hep plasma, serum, and cell culture supernatant. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human VCAM1 with 37 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**

Vascular cell adhesion molecule 1 (VCAM1) is a type I transmembrane glycoprotein that facilitates the adhesion of lymphocytes, eosinophils, monocytes and basophils to vascular endothelium. VCAM1 is primarily expressed by endothelial cells, but smooth muscle cells, macrophages, oocytes, Sertoli cells, and activated neurons are all known expressers. VCAM1 expression is stimulated by cytokines, including TNF- a and IL-1, and alternatively spliced forms of the protein are known to occur. VCAM1 may be involved in cardiovascular development, atherosclerosis and rheumatoid arthritis.

**平台**

Pre-coated microplate (12 x 8 well strips)

**性能****存放说明**

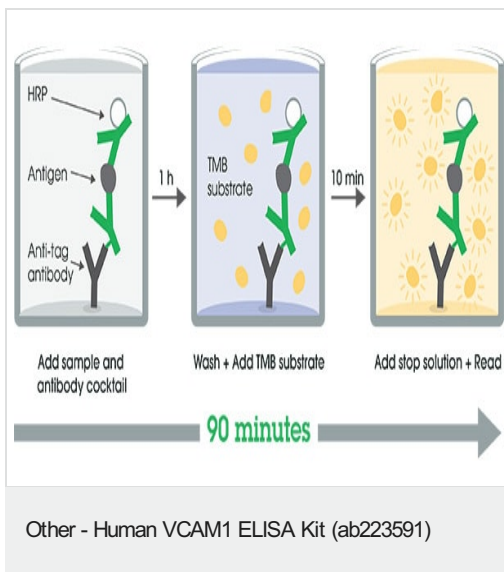
Store at +4°C. Please refer to protocols.

组件	1 x 96 tests
10X Human VCAM1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BI	1 x 6ml
Human VCAM1 Capture Antibody (Lyophilized)	1 vial
Human VCAM1 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml

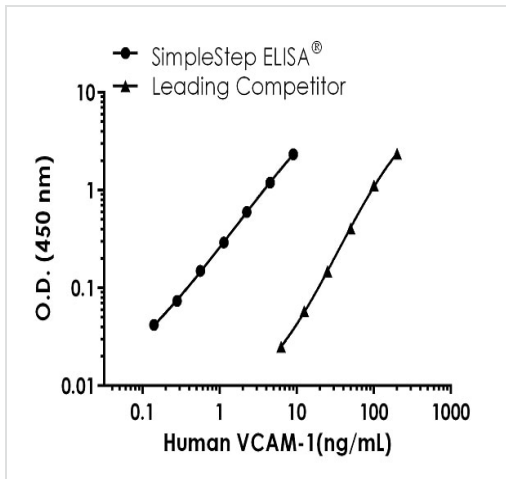
组件	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

<b>功能</b>	Important in cell-cell recognition. Appears to function in leukocyte-endothelial cell adhesion. Interacts with the beta-1 integrin VLA4 on leukocytes, and mediates both adhesion and signal transduction. The VCAM1/VLA4 interaction may play a pathophysiologic role both in immune responses and in leukocyte emigration to sites of inflammation.
<b>组织特异性</b>	Expressed on inflamed vascular endothelium, as well as on macrophage-like and dendritic cell types in both normal and inflamed tissue.
<b>序列相似性</b>	Contains 7 Ig-like C2-type (immunoglobulin-like) domains.
<b>结构域</b>	Either the first or the fourth Ig-like C2-type domain is required for VLA4-dependent cell adhesion.
<b>翻译后修饰</b>	Sialoglycoprotein.
<b>细胞定位</b>	Membrane.

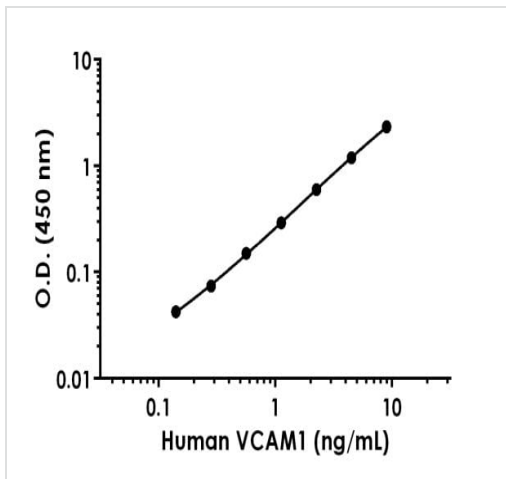
## 图片



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.



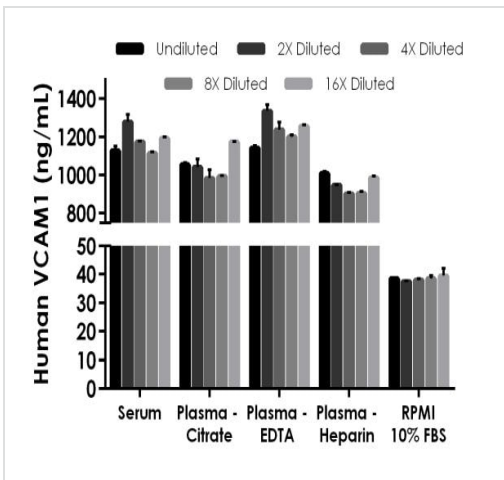
Human VCAM1 Competitor standard curve comparison



Example of human VCAM1 standard curve [in Sample Diluent NS]

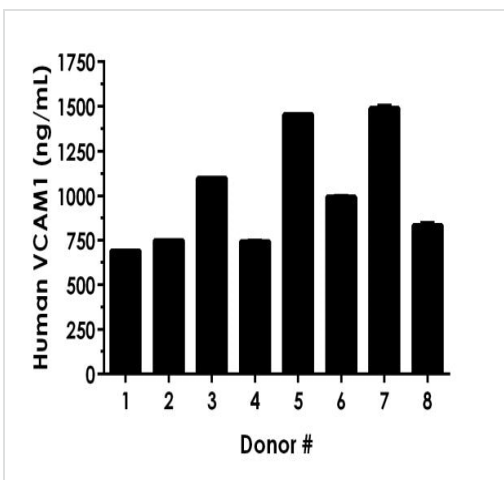
Standard curve comparison between Human VCAM1 SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows increased sensitivity.

Background-subtracted data values (mean +/- SD) are graphed.



Interpolated concentrations of native VCAM1 in human serum and plasma, and interpolated concentrations of spiked VCAM1 in cell culture supernatant samples





The concentrations of VCAM1 were measured in duplicates, interpolated from the VCAM1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 2.5%, plasma (citrate) 2.5%, plasma (EDTA) 2.5%, plasma (heparin) 2.5%, and RPMI media 20%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean VCAM1 concentration was determined to be 1196 ng/mL in neat serum, 1092 ng/mL in neat plasma (citrate), 1275 ng/mL in neat plasma (EDTA), and 976 ng/mL in neat plasma (heparin).



Serum from eight individual healthy human female donors was measured in duplicate

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean VCAM1 concentration was determined to be 1007 ng/mL with a range of 690 – 1501 ng/mL.

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recombinant antibodies

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

Sandwich ELISA - Human VCAM1 ELISA Kit  
(ab223591)

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

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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