

Human CD105 ELISA Kit ab217773

重组 SimpleStep ELISA

9 图像

概述

产品名称	人CD105 ELISA试剂盒				
检测方法	Colorimetric				
精确度	批次内				
	样品	n	Mean	SD	CV%
	Human serum	3			1.8%
	批次间				
	样品	n	Mean	SD	CV%
	Human serum	5			3%
样品类型	Cell culture supernatant, Serum, Cell culture extracts, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma				
检测类型	Sandwich (quantitative)				
灵敏度	11.1 pg/ml				
范围	78.125 pg/ml - 5000 pg/ml				
回收率	特定样本回收率				

样品类型	平均 %	范围
Serum	107	84% - 120%
Cell culture extracts	103	99% - 110%
Tissue Extracts	106	96% - 119%
Cell culture media	107	95% - 116%
Hep Plasma	88	71% - 113%
EDTA Plasma	100	84% - 119%

样品类型	平均%	范围
Cit plasma	80	74% - 84%

#### 检测时间

1h 30m

#### 实验步骤

One step assay

#### 种属反应性

**与反应:** Human

**不与反应:** Cow

#### 产品概述

Human CD105 ELISA Kit (ab217773) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of CD105 protein in cell culture extracts, cell culture supernatant, cit plasma, edta plasma, hep plasma, serum, and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human CD105 with 11.1 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

CD105 is a major glycoprotein of vascular endothelium. CD105 is involved in the regulation of angiogenesis. It may play a critical role in the binding of endothelial cells to integrins and/or other RGD receptors. CD105 acts as TGF-beta co-receptor and is involved in the TGF-beta/BMP signaling cascade. It is required for GDF2/BMP9 signaling through SMAD1 in endothelial cells and it modulates TGF-beta1 signaling through SMAD3. CD105 is a homodimer that forms a heteromeric complex with the signaling receptors for transforming growth factor-beta: TGFBR1 and/or TGFBR2. It is able to bind TGF-beta 1, and 3 efficiently and TGF-beta 2 less efficiently. Circulating soluble form of CD105 is elevated in patients with preeclampsia, atherosclerosis and certain cancers including breast, colorectal, and myeloid malignancies.

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

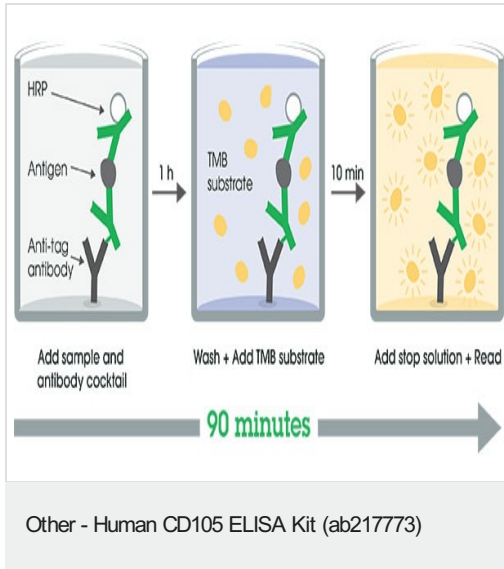
#### 存放说明

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

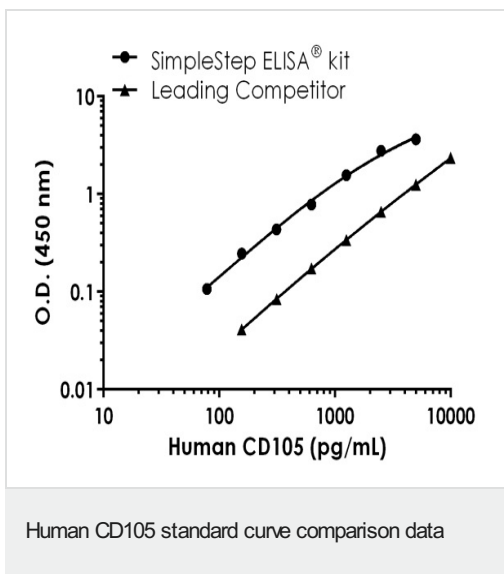
组件	1 x 96 tests
10X Human CD105 Capture Antibody	1 x 600µl
10X Human CD105 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 5BI	1 x 6ml
Denaturant	1 x 500µl
Human CD105 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

<b>功能</b>	Major glycoprotein of vascular endothelium. May play a critical role in the binding of endothelial cells to integrins and/or other RGD receptors.
<b>组织特异性</b>	Endoglin is restricted to endothelial cells in all tissues except bone marrow.
<b>疾病相关</b>	Defects in ENG are the cause of hereditary hemorrhagic telangiectasia type 1 (HHT1) [MIM:187300, 108010]; also known as Osler-Rendu-Weber syndrome 1 (ORW1). HHT1 is an autosomal dominant multisystemic vascular dysplasia, characterized by recurrent epistaxis, muco-cutaneous telangiectases, gastro-intestinal hemorrhage, and pulmonary (PAVM), cerebral (CAVM) and hepatic arteriovenous malformations; all secondary manifestations of the underlying vascular dysplasia. Although the first symptom of HHT1 in children is generally nose bleed, there is an important clinical heterogeneity.
<b>细胞定位</b>	Membrane.

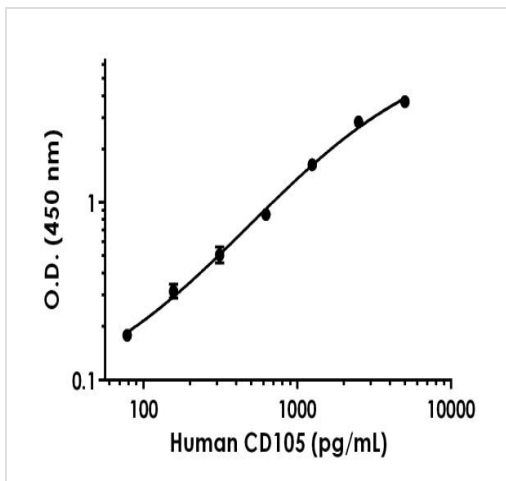
**图片**



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.

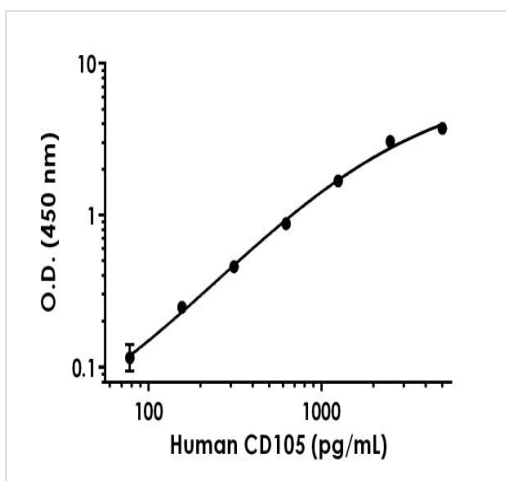


Standard curve comparison between human CD105 SimpleStep ELISA® kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows comparable sensitivity.



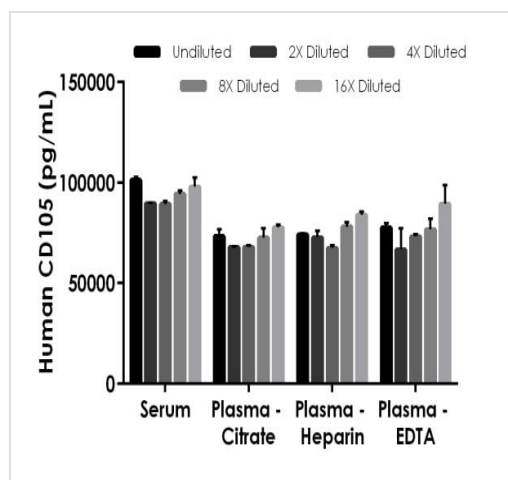
Background-subtracted data values (mean  $\pm$  SD) are graphed.

Example of human CD105 standard curve in Sample Diluent NS + Enhancer.



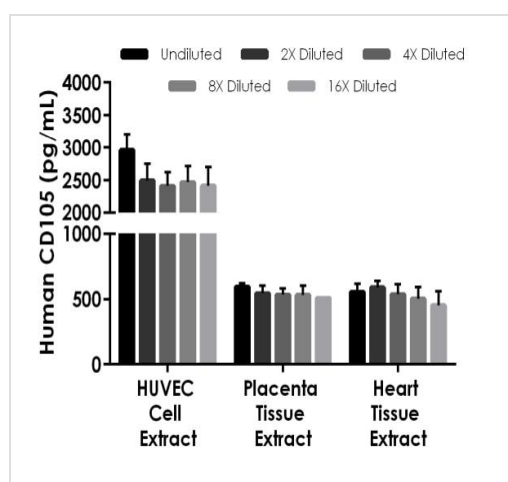
Background-subtracted data values (mean  $\pm$  SD) are graphed.

Example of human CD105 standard curve in 1X Cell Extraction Buffer PTR + Enhancer.



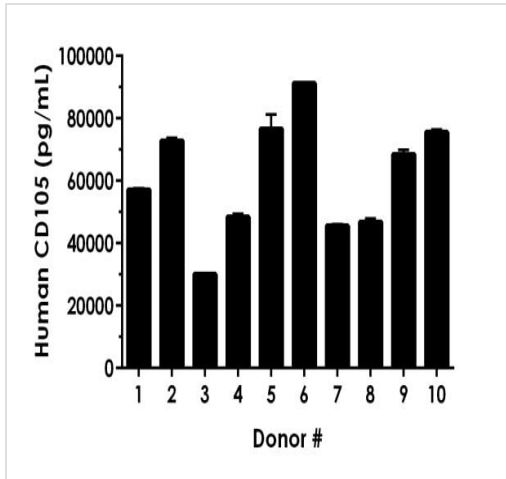
Interpolated concentrations of native CD105 in human serum and plasma samples.

The concentrations of CD105 were measured in duplicates, interpolated from the CD105 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 2.225%, plasma (citrate) 2.225%, plasma (heparin) 2.225% and plasma (EDTA) 2.225%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean CD105 concentration was determined to be 94,646 pg/mL in neat serum, 71,971 pg/mL in neat plasma (citrate), 75,408 pg/mL in neat plasma (heparin), and 76,842 pg/mL in neat plasma (EDTA).



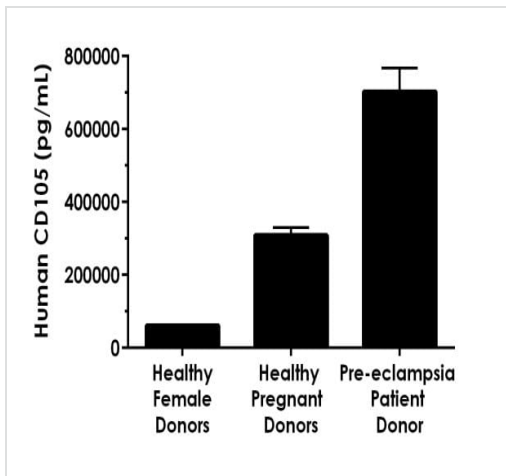
Interpolated concentrations of native CD105 in HUVEC cell extract, human placenta tissue extract and human heart tissue extract.

Interpolated concentrations of native CD105 in HUVEC cell extract based on a 40  $\mu$ g/mL extract load, human placenta tissue extract based on a 90  $\mu$ g/mL extract load, and human heart tissue extract based on a 60  $\mu$ g/mL extract load. The concentrations of CD105 were measured in duplicate and interpolated from the CD105 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean CD105 concentration was determined to be 2548 pg/mL in HUVEC cell extract, 542.9 pg/mL in placenta tissue extract, and 528.1 pg/mL in heart tissue extract.



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

Interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean CD105 concentration was determined to be 61,333 pg/mL with a range of 30,103 – 91,256 pg/mL.



Serum levels of CD105 are increased during the third trimester of pregnancy, especially in women with pre-eclampsia.

Serum from 10 healthy (not pregnant) female individuals, 5 healthy females in the third trimester of pregnancy (pooled), and 1 individual female in the third trimester showing signs of mild pre-eclampsia were tested for levels of CD105. The concentrations of CD105 were measured from serum in samples in 3 different dilutions in duplicates and interpolated from the CD105 standard curve. The interpolated values are plotted (mean  $\pm$  SD,  $n=3$ ). The mean CD105 concentration was determined to be 61,333 pg/mL in healthy female donor serum, 30,895 pg/mL in healthy pregnant donor serum, and 703,119 pg/mL in pre-eclampsia patient serum.

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 CD105 ELISA Kit  
(ab217773)

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"

### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.cn/abpromise> or contact our technical team.

### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors