

Datasheet for ABIN411389

**Endoglin ELISA Kit**[Go to Product page](#)**1** Image

## Overview

Quantity:	96 tests
Target:	Endoglin (ENG)
Binding Specificity:	AA 26-586
Reactivity:	Human
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 Human CD105
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: CHO Immunogen sequence: E26-G586
Specificity:	Expression system for standard: CHO Immunogen sequence: E26-G586
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity: <15pg/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: Endoglin (ENG)

Alternative Name: ENG ([ENG Products](#))

Background: Protein Function: Major glycoprotein of vascular endothelium. Involved in the regulation of angiogenesis. May play a critical role in the binding of endothelial cells to integrins and/or other RGD receptors. Acts as TGF-beta coreceptor and is involved in the TGF- beta/BMP signaling cascade. Required for GDF2/BMP9 signaling through SMAD1 in endothelial cells and modulates TGF-beta1 signaling through SMAD3. .

Background: CD105, also called Endoglin, is a homodimeric membrane glycoprotein primarily associated with human vascular endothelium. It is also found on bone marrow proerythroblasts, activated monocytes, and lymphoblasts in childhood leukemia. Endoglin is a component of the transforming growth factor-beta(TGFB) receptor complex and binds TGFB1 with high affinity.<sup>1</sup> CD105 gene is mapped to 9q34.1. The coding region of the gene contains 14 exons.<sup>2</sup> The protein consists of a homodimer of 180 kDa with disulfide links. Endoglin has a role in the development of the cardiovascular system and in vascular remodeling. Its expression is regulated during heart development. Furthermore, it also has a role in the balance of ALK1 and ALK5 signaling to regulate endothelial cell proliferation.<sup>3</sup> Moreover, the elevated expression of endoglin in the surgically excised CNVMs suggested a persisting postmitotic activation in an advanced stage of neovascular tissue.<sup>4</sup> The standard product used in this kit is extracellular part of recombinant human CD105, from E26 to G586. As a result of glycosylation, the molecular mass is 75-85KDa.

Synonyms: Endoglin,CD105,ENG,END,

Full Gene Name: Endoglin

Cellular Localisation: Membrane, Single-pass type I membrane protein.

Gene ID: 2022

UniProt: [P17813](#)

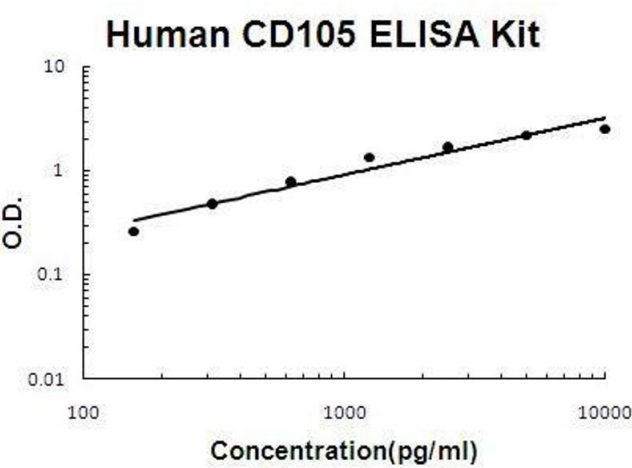
## Application Details

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:	Tissue Specificity: Endoglin is restricted to endothelial cells in all tissues except bone marrow.
Plate:	Pre-coated
Protocol:	human CD105 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for CD105 has been precoated onto 96-well plates. Standards(CHO, E26-G586) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for CD105 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 human CD105 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 human CD105 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 human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human CD105 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(ng/ml): 0.62, Standard deviation: 0.022, CV(%): 3.5</li><li>• Sample 2: n=16, Mean(ng/ml): 1.67, Standard deviation: 0.078, CV(%): 4.7</li><li>• Sample 3: n=16, Mean(ng/ml): 3.59, Standard deviation: 0.151, CV(%): 4.2,</li><li>• Sample 1: n=24, Mean(ng/ml): 0.71, Standard deviation: 0.051, CV(%): 7.2</li><li>• Sample 2: n=24, Mean(ng/ml): 1.78, Standard deviation: 0.126, CV(%): 7.1</li><li>• Sample 3: n=24, Mean(ng/ml): 3.46, Standard deviation: 0.266, CV(%): 7.7</li></ul>

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



**ELISA**

**Image 1.** Human CD105 PicoKine ELISA Kit standard curve