

Datasheet for ABIN411377  
**CD40 Ligand ELISA Kit**



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## Overview

Quantity:	96 tests
Target:	CD40 Ligand (CD40LG)
Binding Specificity:	AA 108-261
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human soluble CD40L
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: E108-L261
Specificity:	Expression system for standard: E.coli Immunogen sequence: E108-L261
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: CD40 Ligand (CD40LG)

Alternative Name: CD40LG ([CD40LG Products](#))

Background: Protein Function: Mediates B-cell proliferation in the absence of co- stimulus as well as IgE production in the presence of IL-4. Involved in immunoglobulin class switching. .  
Background: CD40 ligand(CD40L) is a type II membrane protein of 261 amino acids on activated T cells that induces B cell proliferation and immunoglobulin secretion. It has homology with tumour necrosis factor-alpha and -beta, and has important functions in B-cell activation and differentiation. Human CD40L with 5 exons, is mapped to the proximal region of the mouse X chromosome on Xq26.3-27.1, and can be detected on T cells but is absent from B cells and monocytes. Since CD40L is expressed on platelets and released from them on activation, its predictive value as a marker for clinical outcome and the therapeutic effect of inhibition of glycoprotein IIb/IIIa receptor in patients with acute coronary syndromes was investigated. The soluble CD40L may be involved in the process of restenosis and that it exerts its effect by triggering a complex group of inflammatory reactions on endothelial and mononuclear cells.CD40L plays a central role in the pathophysiology of acute coronary syndromes, and has a role in the pathogenesis of coronary artery lesions.  
Synonyms: CD40 ligand,CD40-L,T-cell antigen Gp39,TNF-related activation protein,TRAP,Tumor necrosis factor ligand superfamily member 5,CD154,CD40 ligand, membrane form,CD40 ligand, soluble form,CD40LG,CD40L, TNFSF5, TRAP,  
Full Gene Name: CD40 ligand  
Cellular Localisation: Cell membrane, Single-pass type II membrane protein.

Gene ID: 959

UniProt: [P29965](#)

Pathways: [NF-kappaB Signaling](#), [Production of Molecular Mediator of Immune Response](#), [Cancer Immune Checkpoints](#)

## 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:	Sequence similarities: Belongs to the tumor necrosis factor family. Tissue Specificity: Specifically expressed on activated CD4+ T- lymphocytes.
Plate:	Pre-coated
Protocol:	human CD40L ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for CD40L has been precoated onto 96-well plates. Standards(E.coli, E108-L261) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for CD40L 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 CD40L amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL,1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL human CD40L 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 CD40L 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): 0.44, Standard deviation: 0.026, CV(%): 5.9</li><li>• Sample 2: n=16, Mean(ng/ml): 1.26, Standard deviation: 0.064, CV(%): 5.1</li><li>• Sample 3: n=16, Mean(ng/ml): 2.38, Standard deviation: 0.145, CV(%): 6.1,</li><li>• Sample 1: n=24, Mean(ng/ml): 0.42, Standard deviation: 0.029, CV(%): 6.8</li><li>• Sample 2: n=24, Mean(ng/ml): 1.41, Standard deviation: 0.086, CV(%): 6.1</li><li>• Sample 3: n=24, Mean(ng/ml): 2.46, Standard deviation: 0.182, CV(%): 7.4</li></ul>
Restrictions:	For Research Use only

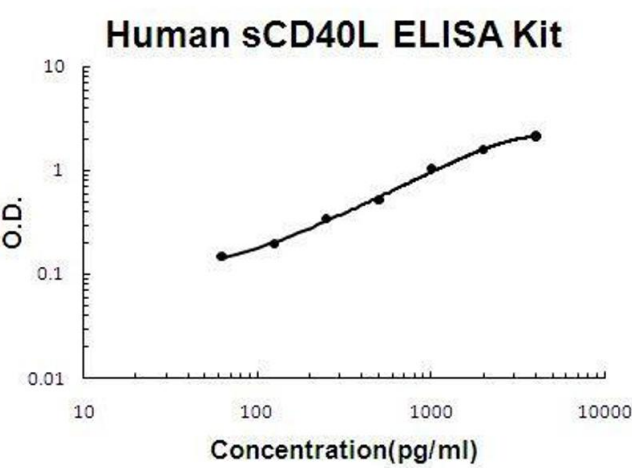
## Handling

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

Publications

Product cited in: Portillo, Corcino, Miao, Tang, Sheibani, Kern, Dubyak, Subauste: "CD40 in Retinal Müller Cells Induces P2X7-Dependent Cytokine Expression in Macrophages/Microglia in Diabetic Mice and Development of Early Experimental Diabetic Retinopathy." in: **Diabetes**, (2016) ([PubMed](#)).

Images



**ELISA**

**Image 1.** Human sCD40L PicoKine ELISA Kit standard curve