Datasheet for ABIN2859261

CD5L ELISA Kit

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Overview

Quantity:	96 tests
Target:	CD5L
Binding Specificity:	AA 20-347
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10.000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of activated Human CD5L
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: S20-G347
Specificity:	Expression system for standard: NSO Immunogen sequence: S20-G347
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/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:	CD5L
Alternative Name:	CD5L (CD5L Products)
Background:	Protein Function: Secreted protein that acts as a key regulator of lipid synthesis: mainly expressed by macrophages in lymphoid and inflammed tissues and regulates mechanisms in inflammatory responses, such as infection or atherosclerosis. Able to inhibit lipid droplet size in adipocytes. Following incorporation into mature adipocytes via CD36-mediated endocytosis, associates with cytosolic FASN, inhibiting fatty acid synthase activity and leading to lipolysis, the degradation of triacylglycerols into glycerol and free fatty acids (FFA). CD5L-induced lipolysis occurs with progression of obesity: participates to obesity-associated inflammation following recruitment of inflammatory macrophages into adipose tissues, a cause of insulin resistance and obesity- related metabolic disease. Regulation of intracellular lipids mediated by CD5L has a direct effect on transcription regulation mediated by nuclear receptors ROR-gamma (RORC). Acts as a key regulator of metabolic switch in T-helper Th17 cells. Regulates the expression of pro-inflammatory genes in Th17 cells by altering the lipid content and limiting synthesis of cholesterol ligand of RORC, the master transcription factor of Th17-cell differentiation. CD5L is mainly present in non-pathogenic Th17 cells, where it decreases the content of polyunsaturated fatty acyls (PUFA), affecting two metabolic proteins MSMO1 and CYP51A1, which synthesize ligands of RORC, limiting RORC activity and expression of pro-inflammatory genes. Participates in obesity- associated autoimmunity via its association with IgM, interfering with the binding of IgM to Fcalpha/mu receptor and enhancing the development of long-lived plasma cells that produce high-affinity IgG autoantibodies (By similarity). Also acts as an inhibitor of apoptosis in macrophages: promotes macrophage survival from the apoptotic effects of oxidized lipids in case of atherosclerosis (PubMed:24295828). Involved in early response to microbial infection against various pathogens by acting as a pattern recognition receptor and by promoting autophagy (PubMed:16030018, PubMed:24223991, PubMed:24583716, PubMed:25713983). . Background: CD5 antigen-like, also known as Sp alpha and AIM, is a protein that in humans is

Target Details

	encoded by the CD5L gene. It is mapped to 1q21-q23 by fluorescence in situ hybridization. It is found that Aim expression is induced in mouse macrophages in response to loading with highly oxidized low density lipoprotein (oxLDL), and that Aim is expressed in foam cells within atherosclerotic lesions. Both the expression of Aim in lesions and its induction by oxLDL require Lxr /Rxr heterodimers. Aim-null macrophages are highly susceptible to oxLDL-induced apoptosis in vitro and undergo accelerated apoptosis in atherosclerotic lesions in vivo. Double knockout of Aim and Ldlr reduce atherosclerotic lesions. Therefore, it is concluded that AIM expression protects macrophages from apoptosis within atherosclerotic lesions, promoting early lesion development. Synonyms: CD5 antigen-like,Apoptosis inhibitor expressed by macrophages ,hAIM ,CT-2 ,IgM-associated peptide ,SP-alpha ,CD5L,API6,UNQ203/PRO229 , Full Gene Name: CD5 antigen-like Cellular Localisation: Secreted . Cytoplasm . Secreted by macrophages and circulates in the blood (PubMed:24223991, PubMed:24804991). Transported in the cytoplasm via CD36-mediated endocytosis (By similarity)..
Gene ID:	922
UniProt:	O43866

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: Contains 3 SRCR domains. Tissue Specificity: Expressed in spleen, lymph node, thymus, bone marrow, and fetal liver, but not in non-lymphoid tissues. .
Plate:	Pre-coated
Protocol:	human CD5L ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for CD5L has been precoated onto 96-well plates. Standards(NSO, S20-G347) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for CD5L 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

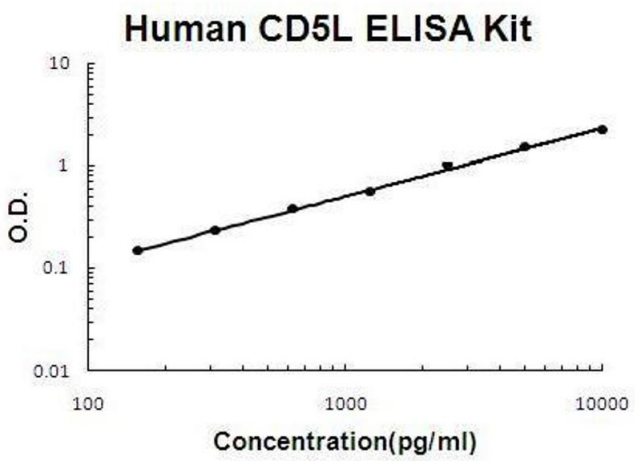
Application Details

	proportional to the human CD5L amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 313pg/mL, 156pg/mL human CD5L 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 CD5L standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 498, Standard deviation: 18.92, CV(%): 3.8 • Sample 2: n=16, Mean(pg/ml): 1880, Standard deviation: 84.6, CV(%): 4.5 • Sample 3: n=16, Mean(pg/ml): 8512, Standard deviation: 434.11, CV(%): 5.1, • Sample 1: n=24, Mean(pg/ml): 578, Standard deviation: 27.17, CV(%): 4.7 • Sample 2: n=24, Mean(pg/ml): 2273, Standard deviation: 131.83, CV(%): 5.8 • Sample 3: n=24, Mean(pg/ml): 9015, Standard deviation: 558.93, CV(%): 6.2
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

Images



ELISA

Image 1. Human CD5L PicoKine ELISA Kit standard curve