Datasheet for ABIN1672809

OLR1 ELISA Kit

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Overview

Quantity:	96 tests
Target:	OLR1
Binding Specificity:	AA 61-273
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human LOX-1/OLR1
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: S61-Q273
Specificity:	Expression system for standard: NSO Immunogen sequence: S61-Q273
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:	OLR1
Alternative Name:	OLR1 (OLR1 Products)
Background:	Protein Function: Receptor that mediates the recognition, internalization and degradation of oxidatively modified low density lipoprotein (oxLDL) by vascular endothelial cells. OxLDL is a marker of atherosclerosis that induces vascular endothelial cell activation and dysfunction, resulting in pro-inflammatory responses, pro- oxidative conditions and apoptosis. Its association with oxLDL induces the activation of NF-kappa-B through an increased production of intracellular reactive oxygen and a variety of pro- atherogenic cellular responses including a reduction of nitric oxide (NO) release, monocyte adhesion and apoptosis. In addition to binding oxLDL, it acts as a receptor for the HSP70 protein involved in antigen cross-presentation to naive T-cells in dendritic cells, thereby participating in cell-mediated antigen cross-presentation. Also involved in inflammatory process, by acting as a leukocyte-adhesion molecule at the vascular interface in endotoxin-induced inflammation. Also acts as a receptor for advanced glycation end (AGE) products, activated platelets, monocytes, apoptotic cells and both Gram-negative and Gram- positive bacteria. . Background: LOX-1(lectin-type oxidized LDL receptor 1) also known as OLR1, is a protein that in humans is encoded by the OLR1 gene. LOX-1 is a receptor protein which belongs to the C-type lectin superfamily. The LOX1 gene is mapped to 12p13-p12 by fluorescence in situ hybridization. LOX1 is expressed on the plasma membrane of differentiated macrophages, but not on monocytes. The LOX1 protein acts as a macrophage scavenger receptor. LOX1 expression was detected in all choroidal neovascular membranes, regardless of structure, whereas there was no evidence of LOX1 within the posterior segments of normal eyes. LOX1 plays an active role in the pathogenesis of choroidal neovascularization, especially in ARMD. Synonyms: Oxidized low-density lipoprotein receptor 1,Ox-LDL receptor 1,C-type lectin domain family 8 member A,Lectin-like oxidized LDL receptor 1,LOX-1,Lectin-like oxLDL receptor 1,hLOX-1,Lectin-type oxidized LDL receptor 1,Oxidized low-density lipoprotein receptor 1, soluble form,OLR1,CLEC8A, LOX1,

Target Details

	Full Gene Name: Oxidized low-density lipoprotein receptor 1 Cellular Localisation: Cell membrane, Lipid-anchor. Cell membrane, Single-pass type II membrane protein. Membrane raft. Secreted. A secreted form also exists. Localization to membrane rafts requires palmitoylation.
Gene ID:	4973
UniProt:	P78380

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 1 C-type lectin domain. Tissue Specificity: Expressed at high level in endothelial cells and vascular-rich organs such as placenta, lung, liver and brain, aortic intima, bone marrow, spinal cord and substantia nigra. Also expressed at the surface of dendritic cells. Widely expressed at intermediate and low level. .
Plate:	Pre-coated
Protocol:	human LOX-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for LOX-1 has been precoated onto 96-well plates. Standards(NSO, S61-Q273) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for LOX-1 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 LOX-1 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL human LOX-1 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 and plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human LOX-1 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 236, Standard deviation: 12.51, CV(%): 5.3 • Sample 2: n=16, Mean(pg/ml): 819, Standard deviation: 50, CV(%): 6.1 • Sample 3: n=16, Mean(pg/ml): 1237, Standard deviation: 59.4, CV(%): 4.8,

Application Details

- Sample 1: n=24, Mean(pg/ml): 326, Standard deviation: 21.19, CV(%): 6.5
- Sample 2: n=24, Mean(pg/ml): 928, Standard deviation: 66.82, CV(%): 7.2
- Sample 3: n=24, Mean(pg/ml): 1528, Standard deviation: 84.04, CV(%): 5.5

Restrictions:	For Research Use only

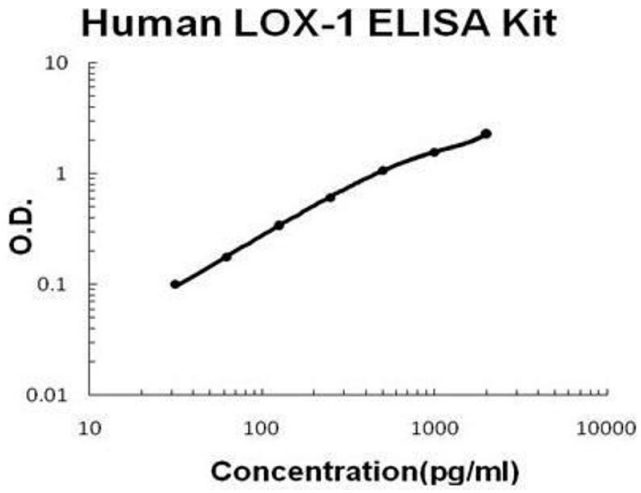
Handling

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:	Gao, Xie, Kong, Liu, Sun, Xiong, Huang, Yan, Sheng, Xiang: "Polyphenol- and Caffeine-Rich Postfermented Pu-erh Tea Improves Diet-Induced Metabolic Syndrome by Remodeling Intestinal Homeostasis in Mice." in: **Infection and immunity**, Vol. 86, Issue 1, (2017) (PubMed).

Images



ELISA

Image 1. Human LOX-1/OLR1 PicoKine ELISA Kit standard curve