

Datasheet for ABIN411280

ICAM1 ELISA Kit



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14 Publications

Overview

Quantity:	96 tests
Target:	ICAM1
Binding Specificity:	AA 28-485
Reactivity:	Mouse
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 Mouse ICAM-1
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: Q28-N485
Specificity:	Expression system for standard: NSO Immunogen sequence: Q28-N485
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:	ICAM1
Alternative Name:	ICAM1 (ICAM1 Products)
Target Type:	Viral Protein
Background:	<p>Protein Function: ICAM proteins are ligands for the leukocyte adhesion protein LFA-1 (integrin alpha-L/beta-2). During leukocyte trans- endothelial migration, ICAM1 engagement promotes the assembly of endothelial apical cups through ARHGEF26/SGEF and RHOG activation (By similarity). .</p> <p>Background: Intercellular adhesion molecule-1(ICAM-1) is an integral membrane protein, a member of the immunoglobulin superfamily, and a ligand for lymphocyte function-associated(LFA) antigens, a beta 2 leukocyte integrin. The normal function of human intercellular adhesion molecule-1(ICAM-1) is to provide adhesion between endothelial cells and leukocytes after injury or stress. ICAM-1 binds to leukocyte function-associated antigen(LFA-1) or macrophage-1 antigen(Mac-1). ICAM-1 is found on leukocytes, fibroblasts, epithelial cells and endothelial cells and its expression is regulated by inflammatory cytokines. ICAM-1 has a tissue distribution similar to that of the major histocompatibility complex class II antigens and is likely to play a role in inflammatory responses. The standard product used in this kit is produced by recombinant gene expression, which is a dimeric protein linked with disulfide bonds. The single chain is Gln28-Asn 485. It has 457 amino acids with the molecular mass of 76.8 kDa. As a result of glycosylation, the molecular mass of 110-130KDa is revealed by SDS-PAGE.</p> <p>Synonyms: Intercellular adhesion molecule 1,ICAM-1,MALA-2,MyD10,CD54,Icam1,Icam-1,</p> <p>Full Gene Name: Intercellular adhesion molecule 1</p> <p>Cellular Localisation: Membrane, Single-pass type I membrane protein.</p>
Gene ID:	15894
UniProt:	P13597
Pathways:	Cellular Response to Molecule of Bacterial Origin, Regulation of Actin Filament Polymerization,

Target Details

Carbohydrate Homeostasis, Regulation of Leukocyte Mediated Immunity, Thromboxane A2 Receptor Signaling

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 immunoglobulin superfamily. ICAM family. Tissue Specificity: Expressed at low level on a subpopulation of lymphocytes, macrophages, and endothelial cells, but is strongly induced on these cells, and on fibroblasts and epithelial cells.
Plate:	Pre-coated
Protocol:	mouse ICAM-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for ICAM-1 has been precoated onto 96-well plates. Standards(NSO, Q28-N485) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ICAM-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 mouse ICAM-1 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 mouse ICAM-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 mouse cell culture supernatants, serum, plasma(heparin, EDTA) or tissue lysates to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse ICAM-1 standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 1046, Standard deviation: 47.07, CV(%): 4.5• Sample 2: n=16, Mean(pg/ml): 3779, Standard deviation: 215.4, CV(%): 5.7• Sample 3: n=16, Mean(pg/ml): 6637, Standard deviation: 404.9, CV(%): 6.1,• Sample 1: n=24, Mean(pg/ml): 1145, Standard deviation: 61.83, CV(%): 5.4• Sample 2: n=24, Mean(pg/ml): 4476, Standard deviation: 282, CV(%): 6.3• Sample 3: n=24, Mean(pg/ml): 6450, Standard deviation: 464.4, CV(%): 7.2
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

Publications

Product cited in: Zhang, Mu, Zhou, Song, Zhang, Wu, Jiang, Wang, Zhang, Li, Shao, Wang, Li, Yang, Wu, Zhang, Tang: "Protective Effect of Irisin on Atherosclerosis via Suppressing Oxidized Low Density Lipoprotein Induced Vascular Inflammation and Endothelial Dysfunction." in: **PLoS ONE**, Vol. 11, Issue 6, pp. e0158038, (2017) ([PubMed](#)).

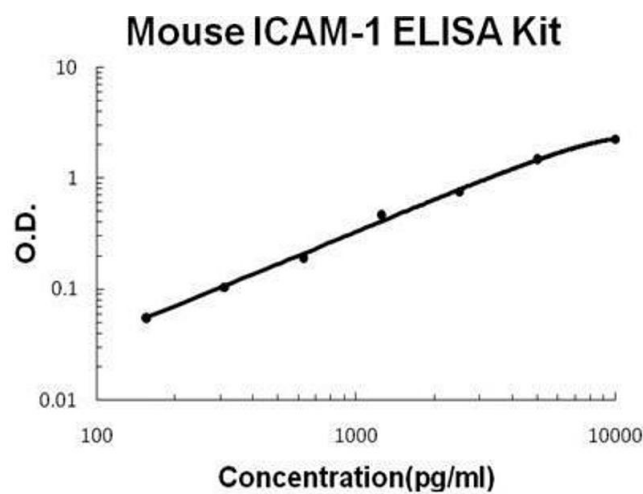
Xu, Li, Dong, Tan, Wu, Xie, Yang: "Apple Polyphenols Decrease Atherosclerosis and Hepatic Steatosis in ApoE^{-/-} Mice through the ROS/MAPK/NF-κB Pathway." in: **Nutrients**, Vol. 7, Issue 8, pp. 7085-105, (2016) ([PubMed](#)).

Barros, Borges, Ferreira, Carmo, Rosado, Fouque, Mafra: "Is there interaction between gut microbial profile and cardiovascular risk in chronic kidney disease patients?" in: **Future microbiology**, Vol. 10, Issue 4, pp. 517-26, (2015) ([PubMed](#)).

Xin, Sun, Kong, Li, Zheng, Yin, Cao, Jia, Li: "Intercellular adhesion molecule-1 expression in activated eosinophils is associated with mucosal remodeling in nasal polyps." in: **Molecular medicine reports**, Vol. 11, Issue 5, pp. 3391-7, (2015) ([PubMed](#)).

Tian, Wang, Cao, Zhong, Tu, Xiao, He, Zhai: "Comparison of protective effects of safflor injection and extract of Ginkgo biloba on lung ischemia/reperfusion injury in rabbits." in: **Chinese journal of integrative medicine**, Vol. 21, Issue 3, pp. 229-33, (2015) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



ELISA

Image 1. Mouse ICAM-1 PicoKine ELISA Kit standard curve