

Datasheet for ABIN411281

ICAM1 ELISA Kit



[Go to Product page](#)

1 Image 19 Publications

Overview

Quantity:	96 tests
Target:	ICAM1
Binding Specificity:	AA 28-493
Reactivity:	Rat
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 Rat ICAM-1
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: Q28-T493
Specificity:	Expression system for standard: NSO Immunogen sequence: Q28-T493
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <2pg/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: 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. In case of rhinovirus infection acts as a cellular receptor for the virus. .

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.

Synonyms: Intercellular adhesion molecule 1,ICAM-1,Major group rhinovirus receptor,CD54,ICAM1,

Full Gene Name: Intercellular adhesion molecule 1

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

Gene ID: 3383

UniProt: [P05362](#)

Pathways: [Cellular Response to Molecule of Bacterial Origin](#), [Regulation of Actin Filament Polymerization](#), [Carbohydrate Homeostasis](#), [Regulation of Leukocyte Mediated Immunity](#), [Thromboxane A2](#)

Target Details

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.
Plate:	Pre-coated
Protocol:	rat ICAM-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for ICAM-1 has been precoated onto 96-well plates. Standards(NSO, Q28-T493) 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 rat ICAM-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 rat 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 rat cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each rat ICAM-1 standard solution and each sample is measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 98.2, Standard deviation: 5.11, CV(%): 5.2• Sample 2: n=16, Mean(pg/ml): 769, Standard deviation: 39.2, CV(%): 5.1• Sample 3: n=16, Mean(pg/ml): 1420, Standard deviation: 68.16, CV(%): 4.8,• Sample 1: n=24, Mean(pg/ml): 123, Standard deviation: 10.7, CV(%): 8.7• Sample 2: n=24, Mean(pg/ml): 776, Standard deviation: 50.44, CV(%): 6.5• Sample 3: n=24, Mean(pg/ml): 1435, Standard deviation: 91.84, CV(%): 6.4
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C

Handling

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: You, Cheng, Zhang, Zhu, Zhang, Xian: "Rational Modulation of the Luminescence of Upconversion Nanomaterials with Phycocyanin for the Sensing and Imaging of Myeloperoxidase during an Inflammatory Process." in: **Analytical chemistry**, Vol. 92, Issue 7, pp. 5091-5099, (2021) ([PubMed](#)).

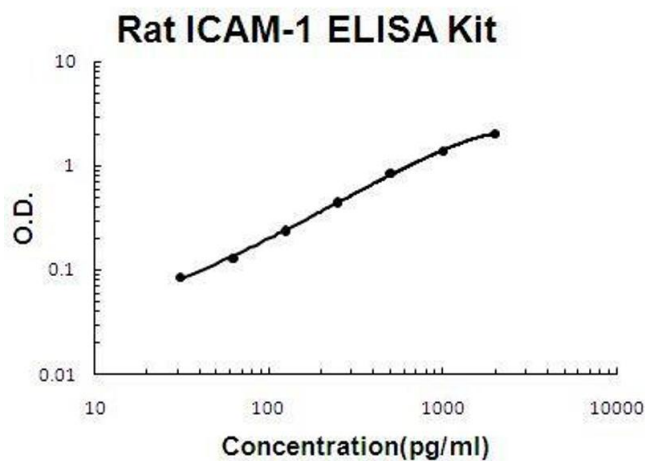
Ouyang, Liu, Pan, Han, Yang, Xia, Xu: "SHP2 deficiency promotes Staphylococcus aureus pneumonia following influenza infection." in: **Cell proliferation**, Vol. 53, Issue 1, pp. e12721, (2020) ([PubMed](#)).

Xu, Guo, Ping, Qiu, Liu, Li, Wang: "Protective Effects of SIRT6 Overexpression against DSS-Induced Colitis in Mice." in: **Cells**, Vol. 9, Issue 6, (2020) ([PubMed](#)).

Tang, Liu, Li, Lin, Hao, Zhang, Zhao, Chen, Guo, Hu: "Gambogic acid alleviates inflammation and apoptosis and protects the blood-milk barrier in mastitis induced by LPS." in: **International immunopharmacology**, Vol. 86, pp. 106697, (2020) ([PubMed](#)).

Wang, Yang, Zhao, He, Liu, Colman, Dai, Wu: "The Plasma Kallikrein-Kininogen Pathway Is Critical in the Pathogenesis of Colitis in Mice." in: **Frontiers in immunology**, Vol. 9, pp. 21, (2019) ([PubMed](#)).

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



ELISA

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