

## Datasheet for ABIN4987078

### ICAM1 ELISA Kit



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#### 1 Image

#### Overview

Quantity:	96 tests
Target:	ICAM1
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

#### Product Details

Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (citrate), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	Natural and recombinant Human sICAM-1 Ligand
Sensitivity:	31 pg/mL
Material not included:	<ul style="list-style-type: none"> <li>• Microplate reader.</li> <li>• Pipettes and pipette tips.</li> <li>• EP tube Deionized or distilled water.</li> </ul>

#### Target Details

Target:	ICAM1
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## Target Details

Alternative Name: sICAM-1 ([ICAM1 Products](#))

Target Type: Viral Protein

Background: Intercellular Adhesion Molecule 1 (ICAM-1), also known as CD54, is a nearly ubiquitous transmembrane glycoprotein that plays a key role in leukocyte migration and activation (1, 2). Human ICAM-1 contains five Ig-like domains in its extracellular domain (ECD) and associates into non-covalently linked dimers (3, 4). Soluble forms of monomeric and dimeric ICAM-1 (sICAM-1) can be generated via proteolytic cleavage by cathepsin G, elastase, MMP-9, MMP-14/MT1-MMP, and TACE/ADAM17 (5 - 8). In the mouse, alternate splicing generates isoforms that lack particular Ig-like domains and are differentially sensitive to proteolysis (5). Within the ECD, human ICAM-1 shares 53 % amino acid sequence identity with mouse and rat ICAM-1. The principal binding partners of ICAM-1 are the leukocyte integrins LFA-1 (CD11a/CD18) and Mac-1 (CD11b/CD18) (9 - 11). The multivalency of dimeric ICAM-1 increases its strength of interaction with LFA-1 (9, 10). ICAM-1 also binds several non-integrin ligands including CD43/sialophorin, fibrinogen, hyaluronan, rhinoviruses, and Plasmodium falciparum-infected erythrocytes (12 - 16). At sites of inflammation, ICAM-1 is upregulated on endothelial and epithelial cells where it mediates the adhesion and paracellular migration of leukocytes expressing activated LFA-1 and Mac-1 (17 - 20). ICAM-1 ligation prolongs antigen presentation by dendritic cells and promotes T cell proliferation and cytokine release (21 - 23). ICAM-1 activation also participates in angiogenesis, wound healing, and bone metabolism (24 - 26). Soluble ICAM-1 has been reported in serum, cerebrospinal fluid, urine, and bronchoalveolar lavage fluid (2, 27 - 31). Elevated levels of sICAM-1 in these fluids are associated with cardiovascular disease, type 2 diabetes, organ transplant dysfunction, oxidant stress, abdominal fat mass, hypertension, liver disease, and certain malignancies (32 - 40). sICAM-1 promotes angiogenesis and serves as an indicator of vascular endothelial cell activation or damage (41, 42). It also functions as an inhibitor of transmembrane ICAM-1 mediated activities such as monocyte adhesion to activated endothelial cells and sensitivity of tumor cells to NK cell-mediated lysis (7, 8).

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

## Application Details

Application Notes: Detection Wavelength: 450 nm

Sample Volume: 20 µL

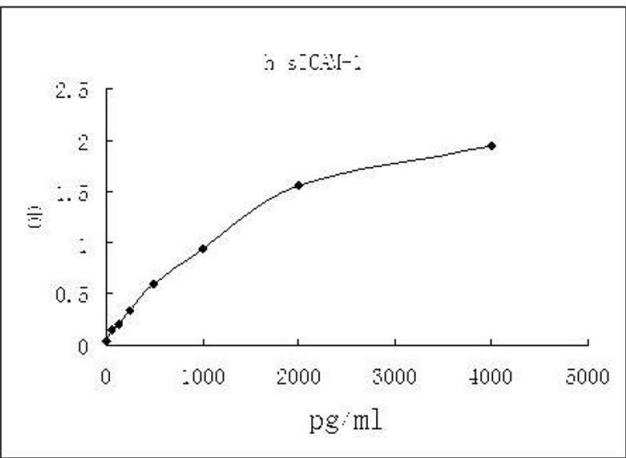
Application Details

Assay Time:	3 h
Plate:	Pre-coated
Restrictions:	For Research Use only

Handling

Storage:	4 °C
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Images



ELISA

Image 1.