

Active Recombinant Human ICAM1 protein, Fc/Avi-tagged, Biotinylated

Cat. No. ICAM1 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human ICAM1(Gln28-Glu480) protein, fused to Fc/Avi tag at the C-terminus, was expressed in HEK293 cells .
Species	Human
Source	HEK293
ProteinLength	Gln28-Glu480
Description	ICAM1 (Intercellular Adhesion Molecule-1), also known as CD54, is a transmembrane cell adhesion glycoprotein and a member of the immunoglobulin supergene family. The ICAM sub-family consists of five members, ICAM-1 through ICAM-5, and they vary in their tissue expression and number of Ig-like domains in the extracellular domain (ECD). Full-length ICAM-1 contains five Ig-like domains in the ECD, a single transmembrane domain and short intracellular domain. Alternative splicing of ICAM-1 results in at least six membrane-bound forms and one soluble form (1). The ECD of mature, full-length human ICAM-1 shares 78% and 54% amino acid sequence identity with rat and mouse ICAM-1, respectively. ICAM-1 plays an important role in both innate and adaptive immune responses and is upregulated in endothelial and epithelial cells at sites of inflammation (2, 3). ICAM-1 mediates vascular adhesion and paracellular migration of leukocytes expressing activated LFA-1 (CD11a/CD18) and Mac-1 (CD11b/CD18) 2, 3). It also binds several non-integrin ligands including CD43/Sialophorin, Fibrinogen, Hyaluronan, rhinoviruses, and Plasmodium falciparum-

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infected erythrocytes (4-8). Soluble ICAM-1 promotes angiogenesis and serves as an indicator of vascular endothelial cell activation or damage (9). Elevated levels of soluble ICAM-1 are associated with cardiovascular disease, type 2 diabetes, organ transplant dysfunction, oxidant stress, increased abdominal fat mass, hypertension, liver disease, certain malignancies, and cerebral malaria (10-18). More recently, ICAM-1 was shown to be a novel regulator of group 2 innate lymphoid cells (ILC2s) which play a key role in allergic airway inflammation (19).

Predicted N Terminal	Gln28
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Human ICAM1 Antibody is immobilized at 0.5 µg/mL (100 µL/well), Biotinylated Recombinant Human ICAM1 Fc Chimera Avi-tag binds with an ED50 of 3-18 ng/mL. Measured by its ability to support the adhesion of HSB2 human peripheral blood acute lymphoblastic leukemia cells. The ED50 for this effect is 0.3-2.7 µg/mL.
Molecular Mass	95-125 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after

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reconstitution.

Reconstitution Reconstitute at 500 µg/mL in PBS.

Conjugation Biotin

GENE INFORMATION

Gene Name ICAM1 intercellular adhesion molecule 1 [Homo sapiens]

Official Symbol ICAM1

Synonyms ICAM1; intercellular adhesion molecule 1; BB2; CD54; human rhinovirus receptor; ICAM-1; cell surface glycoprotein P3.58; major group rhinovirus receptor; intercellular adhesion molecule 1 (CD54), human rhinovirus receptor; P3.58;

Gene ID 3383

mRNA Refseq NM_000201

Protein Refseq NP_000192

MIM 147840

UniProt ID P05362

Binding Activity

SDS-PAGE 2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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