

ICAM-1/CD54 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P73113
Synonyms:	Intercellular Adhesion Molecule 1; ICAM-1; CD54
Species:	Mouse
Source:	HEK293
Accession:	P13597 (Q28-N485)
Gene ID:	15894
Molecular Weight:	80-90 kDa

PROPERTIES

AA Sequence

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M A S T R A K P T L
P           L L L A L V T V V I   P G P G D A Q V S I   H P R E A F L P Q G
G S V Q V N C S S S   C K E D L S L G L E   T Q W L K D E L E S   G P N W K L F E L S
E I G E D S S P L C   F E N C G T V Q S S   A S A T I T V Y S F   P E S V E L R P L P
A W Q Q V G K D L T   L R C H V D G G A P   R T Q L S A V L L R   G E E I L S R Q P V
G G H P K D P K E I   T F T V L A S R G D   H G A N F S C R T E   L D L R P Q G L A L
F S N V S E A R S L   R T F D L P A T I P   K L D T P D L L E V   G T Q Q K L F C S L
E G L F P A S E A R   I Y L E L G G Q M P   T Q E S T N S S D S   V S A T A L V E V T
E E F D R T L P L R   C V L E L A D Q I L   E T Q R T L T V Y N   F S A P V L T L S Q
L E V S E G S Q V T   V K C E A H S G S K   V V L L S G V E P R   P P T P Q V Q F T L
N A S S E D H K R S   F F C S A A L E V A   G K F L F K N Q T L   E L H V L Y G P R L
D E T D C L G N W T   W Q E G S Q Q T L K   C Q A W G N P S P K   M T C R R K A D G A
L L P I G V V K S V   K Q E M N G T Y V C   H A F S S H G N V T   R N V Y L T V L Y H
S Q N N
  
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Biological Activity

Measured by the ability of the immobilized protein to support the adhesion of PMA-stimulated HSB2 human peripheral blood acute lymphoblastic leukemia cells. When cells are added to mouse ICAM1 coated plates (12.5 µg/mL, 100 µL/well), approximately > 40% cells will adhere specifically.

Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION**Background**

ICAM-1/CD54 protein emerges as a pivotal component in mediating cellular interactions, serving as a ligand for the leukocyte adhesion protein LFA-1 (integrin alpha-L/beta-2). Notably, during the trans-endothelial migration of leukocytes, ICAM-1 engagement plays a crucial role in facilitating the assembly of endothelial apical cups through ARHGEF26/SGEF and RHOG activation. This intricate molecular process, resembling other members of the ICAM family, underscores ICAM-1's involvement in regulating immune responses and inflammatory reactions. Beyond its role in leukocyte adhesion, ICAM-1 functions as a homodimer and interacts with MUC1, promoting cell aggregation in epithelial cells. Additionally, ICAM-1 establishes interactions with ARHGEF26/SGEF and associates with CD81, CD247, and CD9 on the T cell side, contributing to the formation of immunological synapses between antigen-presenting cells and T cells. These multifaceted interactions highlight the diverse functions of ICAM-1 in cellular adhesion and immune modulation.

Caution: Product has not been fully validated for medical applications. For research use only.

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