CADM1/IGSF4A Protein, Human (HEK293, His)

Cat. No.:	HY-P75462
Synonyms:	Cell adhesion molecule 1; IgSF4; NECL-2; SynCAM; TSLC-1
Species:	Human
Source:	HEK293
Accession:	Q9BY67 (Q45-H374)
Gene ID:	23705
Molecular Weight:	60-95 kDa

PROPERTIES

AA Sequence	Q N L F T K D V T V I E G E V A T I S C Q V N K S D D S V I Q L L N P N R Q T I Y F R D F R P L K D S R F Q L L N F S S S E L K V S L T N V S I S D E G R Y F C Q L Y T D P P Q E S Y T T I T V L V P P R N L M I D I Q K D T A V E G E E I E V N C T A M A S K P A T T I R W F K G N T E L K G K S E V E E W S D M Y T V T S Q L M L K V H K E D D G V P V I C Q V E H P A V T G N L Q T Q R Y L E V Q Y K P Q V H I Q M T Y P L Q G L T R E G D A L E L T C E A I G K P Q P V M V T W V R V D D E M P Q H A V L S G P N L F I N N L N K T D N G T Y R C E A S N I V G K A H S D Y M L Y V Y D P P T T I P P P T T T T T T T T T T T T I L T I I T D S R A G E E G S I R A V D H
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human CRTAM at 2 μg/mL (100 μL/well) can bind Biotinylated Human CADM1. The ED_{50} for this effect is 105.7 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	The CADM1/IGSF4A protein serves as a pivotal mediator of both homophilic and heterophilic cell-cell adhesion, operating in a Ca(2+)-independent manner. It forms homodimers and mediates homophilic adhesion, and also engages in heterophilic interactions with CADM3 and NECTIN3. The interaction between CADM1 and CRTAM promotes natural killer (NK) cell cytotoxicity, interferon-gamma (IFN-gamma) secretion by CD8+ cells, and NK cell-mediated rejection of tumors expressing CADM1. In mast cells, CADM1 plays a crucial role in attachment to and communication with nerves, being essential for mast cell development and survival in vivo. Furthermore, CADM1 is involved in the regulation of T-cell retention within the draining lymph node, required for the intestinal retention of specific T-cell subsets, and contributes to the adhesion of T-cells to gut-associated dendritic cells. Additionally, CADM1 functions as a synaptic cell adhesion molecule, playing roles in dendritic spine formation and synapse assembly. It is implicated in neuronal processes such as migration, axon growth, pathfinding, and fasciculation. Moreover, CADM1 is involved in spermatogenesis, contributing to the adhesion of spermatocytes and spermatids to Sertoli cells. In non-small-cell lung cancer (NSCLC) cells, CADM1 acts as a tumor suppressor, influencing invasive phenotypes. It forms homodimers via its Ig-like V-type domain and interacts with various proteins, including FARP1, CRTAM, EPB41L3/DAL1, MPP2, MPP3, and PALS2, facilitating diverse cellular functions and signaling pathways.

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