

Recombinant Rat CADM1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52531

Size: 10ug, 100ug

Protein Name: Cell adhesion molecule 1 (Synaptic cell adhesion molecule) (SynCAM)
(Tumor suppressor in lung cancer 1 homolog) (TSLC-1)

Synonym: Cadm1, SynCam1

UniProt ID: Q6AYP5

UniProt Link: www.uniprot.org/uniprotkb/Q6AYP5/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 476 AA

Molecular Weight: 52 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MASPVLPSSGSQCAAAA AVAAAA APPGLRLRLLLLLLSAAALIPTGDGQNLFTKDVTVIEGEVATISCQV
NKSDDSVIQLLNPNRQTIYFRDFRPLKDSRFQLLNFSSELKVSLTNVSISDEGRYFCQLYTDPPQES
YTTITVLVPPRNLMIDIQKDTAVEGEEIEVNCTAMASKPATTIRWFKGNKELKGKSEVEEWSDMYTVT
SQLMLKVHKEDDGVPVICQVEHPAVTGNLQTQRYLEVQYKPQVQIQMTYPLQGLTREGDAFELTCE
ATGKPQPMVTWVRVDDEMPQHAVLSGPNLFINNLNKTDNGTYRCEASNTVGKAHSDYMLYVYDP
PTTIPPPTTTTTTTTTTTTTTTTILTIITDTTATTEPAVHGLTQLPNSAEELDSEDLSDSRAGEEGAIGAVD
HAVIGGVAVVVFAMLCLLIILGRYFARHKGTYFTHEAKGADDAADADTAIINAEGGQNNSEEKKEYFI

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Cell adhesion molecule 1 (Synaptic cell adhesion molecule) (SynCAM) (Tumor suppressor in lung cancer 1 homolog) (TSLC-1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Mediates homophilic cell-cell adhesion in a Ca^{2+} -independent manner. Also mediates heterophilic cell-cell adhesion with CADM3 and NECTIN3 in a Ca^{2+} -independent manner. Interaction with CRTAM promotes natural killer (NK) cell cytotoxicity and interferon-gamma (IFN- γ) secretion by CD8 $^{+}$ T-cells in vitro as well as NK cell-mediated rejection of tumors expressing CADM1 in vivo (By similarity). In mast cells, may mediate attachment to and promote communication with nerves (By similarity). CADM1, together with MITF, is essential for development and survival of mast cells in vivo. By interacting with CRTAM and thus promoting the adhesion between CD8 $^{+}$ T-cells and CD8 $^{+}$ dendritic cells, regulates the retention of activated CD8 $^{+}$ T-cell within the draining lymph node. Required for the intestinal retention of intraepithelial CD4 $^{+}$ CD8 $^{+}$ T-cells and, to a lesser extent, intraepithelial and lamina propria CD8 $^{+}$ T-cells and CD4 $^{+}$ T-cells. Interaction with CRTAM promotes the adhesion to gut-associated CD103 $^{+}$ dendritic cells, which may facilitate the expression of gut-homing and adhesion molecules on T-cells and the conversion of CD4 $^{+}$ T-cells into CD4 $^{+}$ CD8 $^{+}$ T-cells. Acts as a synaptic cell adhesion molecule and plays a role in the formation of dendritic spines and in synapse assembly. May be involved in neuronal migration, axon growth, pathfinding, and fasciculation on the axons of differentiating neurons. May play diverse roles in the spermatogenesis including in the adhesion of spermatocytes and spermatids to Sertoli cells and for their normal differentiation into mature spermatozoa (By similarity).

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Synapse . Postsynaptic cell membrane . Note=Localized to the basolateral plasma membrane of epithelial cells in gall bladder.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.