

Recombinant Mouse CRTAM Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51579

Size: 10ug, 100ug

Protein Name: Cytotoxic and regulatory T-cell molecule (Class-I MHC-restricted T-cell-associated molecule) (CD antigen CD355)

Synonym: Crtam

UniProt ID: Q149L7

UniProt Link: www.uniprot.org/uniprotkb/Q149L7/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 393 AA

Molecular Weight: 44 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MWWGALSLLFWVPVQAAFLKMETVTVEEGQTLTLCVTSQTKNVSLQWLAPSGFTIFLNQHPALKS
SKYQLLHHSATQLSISVSNVTLREEGVYTCLHYGSSVKTQVRVTVLTPFQPTVEALVLRQNGEK
SVVLKCSTERSKPPPQITWLLGEGLEIYGELNHEFEADGKICNTSSMLIARAYGKNSTVHCIIQHEGLH
GRKLVAPFQFEDLVADQETSDQETSDAPEQSSLSSQALQQPTSTVSMMENSSIPETDKEEKEHATQ
DPGLSTEASAQHTGLARRKSGILLTLVSFLIFILFIIVQLFIMKLRAHVVWKKSEISEQALESYRSRS
NNEETSSQENSSQAPQSKRCMNYITRLYSGAKTKKSAQHWKLGKHSRVPESIV

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 Cytotoxic and regulatory T-cell molecule (Class-I MHC-restricted T-cell-associated molecule) (CD antigen CD355) 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 heterophilic cell-cell adhesion which regulates the activation, differentiation and tissue retention of various T-cell subsets (PubMed:15811952, PubMed:18329370, PubMed:19752223, PubMed:24687959). Interaction with CADM1 promotes natural killer (NK) cell cytotoxicity and IFNG/interferon-gamma secretion by CD8+ T-cells in vitro as well as NK cell-mediated rejection of tumors expressing CADM1 in vivo (PubMed:15811952). Regulates CD8+ T-cell proliferation in response to T-cell receptor (TCR) activation (PubMed:18329370). Appears to be dispensable for CD8+ T-cell-mediated cytotoxicity (PubMed:19752223). Interaction with SCRIB promotes the late phase of cellular polarization of a subset of CD4+ T-cells, which in turn regulates TCR-mediated proliferation and IFNG, IL17 and IL22 production (PubMed:18329370). By interacting with CADM1 on CD8+ dendritic cells, regulates the retention of activated CD8+ T-cells within the draining lymph node (PubMed:19752223). 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 (PubMed:24687959). Interaction with CADM1 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 (PubMed:24687959).

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Note=In a subset of CD4+ T-cells, colocalizes with SCRIB at the immunological synapse during the late phase of T-cell activation.

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.