

Recombinant Human CLC10 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50196

Size: 10ug, 100ug

Protein Name: C-type lectin domain family 10 member A (C-type lectin superfamily member 14) (DC-asialoglycoprotein receptor) (DC-ASGPR) (Macrophage galactose-type lectin) (MGL) (Macrophage lectin 2) (CD antigen CD301)

Synonym: CLEC10A, CLECSF13, CLECSF14, HML

UniProt ID: Q8IUN9

UniProt Link: www.uniprot.org/uniprotkb/Q8IUN9/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 316 AA

Molecular Weight: 35 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTRTYENFQYLENKVKVQGFKNGPLPLQSLQRLCSGPCHLLLSLGLGLLLLVIICVVGFGQNSKFQRD
LVTLRTDFSNFTSNTVAEIQALTSQGSSLEETIASLKAEEVEGFKQERQAGVSELQEHTTQKAHLGHCP
HCPVSVCPVHSEMLLRVQQLVQDLKKLTCQVATLNNASTEGTCCPVNWVEHQDSCYWFSHSGM
SWAEAEKYCQLKNAHLVVINSREEQNFVQKYLGSAYTWMGLSDPEGAWKWVDGTDYATGFQNWK
PGQPDDWQGHGLGGGEDCAHFHPDGRWNDDVCQRPYHWWCEAGLGQTSQESH

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 C-type lectin domain family 10 member A (C-type lectin superfamily member 14) (DC-asialoglycoprotein receptor) (DC-ASGPR) (Macrophage galactose-type lectin) (MGL) (Macrophage lectin 2) (CD antigen CD301) 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: C-type lectin receptor involved in recognition of N-acetylgalactosamine (GalNAc)-terminated glycans by myeloid antigen presenting cells (APCs) (PubMed:15802303, PubMed:16998493, PubMed:17616966, PubMed:22213806, PubMed:33724805, PubMed:8598452). Binds in a Ca(2+)-dependent manner to alpha- and beta-linked GalNAc residues on glycoprotein and glycolipid antigens, including alphaGalNAc- and Galbeta1->3GalNAc-O-Ser/Thr also known as Tn and T antigens, LacdiNAc epitope GalNAcbeta1->4GlcNAc and its derivative GalNAcbeta1->4-(Fucalpha1->3)GlcNAc, O-linked core 5 and 6 glycans, and GM2 and GD2 gangliosides (PubMed:15802303, PubMed:23507963). Acts as a signaling receptor at the interface of APC-T cell interactions. On immature dendritic cells, recognizes Tn antigen-carrying PTPRC/CD45 receptor on effector T cells and down-regulates PTRPN/CD45 phosphatase activity with an impact on T cell activation threshold, cytokine production and proliferation. Modulates dendritic cell maturation toward a tolerogenic phenotype leading to generation of regulatory CD4-positive T cell subset with immune suppressive functions (PubMed:15802303, PubMed:16998493, PubMed:22213806). Acts as an endocytic pattern recognition receptor involved in antitumor immunity. During tumorigenesis, recognizes Tn antigens and its sialylated forms Neu5Ac-Tn and Neu5Gc-Tn expressed on tumor cell mucins. On immature dendritic cells, can internalize Tn-terminated immunogens and target them to endolysosomal compartment for MHC class I and II antigen presentation to CD8-positive and CD4-positive T cells, respectively (PubMed:15802303, PubMed:17616966, PubMed:17804752).

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein. Early endosome membrane ; Single-pass type II membrane protein. Lysosome membrane ; Single-pass type II membrane protein. Note=Recycles between the plasma membrane and the endolysosomal compartment. Upon antigen binding, internalizes via endocytosis and then dissociates from antigen at acidic pH characteristic of endolysosomal vesicles.

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.