

Recombinant Human CLC4E Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50199

Size: 10ug, 100ug

Protein Name: C-type lectin domain family 4 member E (C-type lectin superfamily member 9) (Macrophage-inducible C-type lectin) (MINCLE)

Synonym: CLEC4E, CLECSF9, MINCLE, UNQ218/PRO244

UniProt ID: Q9ULY5

UniProt Link: www.uniprot.org/uniprotkb/Q9ULY5/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 219 AA

Molecular Weight: 25 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MNSSKSSETQCTERGCFSSQMFLWTVAGIPILFLSACFITRCVVTFRIFQTCDEKKFQLPENFTELSC
YNYGSGSVKNCCPLNWEYFQSSCYFFSTDTISWALSLKNCSAMGAHLVVINSQEEQEFLSYKKPKM
REFFIGLSDQVVEGQWQWVDGTPLTKLSFWDVGEPNNIATLEDCATMRDSSNPRQNWNDVTCFL
NYFRICEMVGINPLNKGKSL

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 4 member E (C-type lectin superfamily member 9) (Macrophage-inducible C-type lectin) (Mincle) 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: Calcium-dependent lectin that acts as a pattern recognition receptor (PRR) of the innate immune system: recognizes damage-associated molecular patterns (DAMPs) of abnormal self and pathogen-associated molecular patterns (PAMPs) of bacteria and fungi (PubMed:18509109, PubMed:23602766). The PAMPs notably include mycobacterial trehalose 6,6'-dimycolate (TDM), a cell wall glycolipid with potent adjuvant immunomodulatory functions (PubMed:23602766, PubMed:24101491). Interacts with signaling adapter Fc receptor gamma chain/FCER1G to form a functional complex in myeloid cells (By similarity). Binding of mycobacterial trehalose 6,6'-dimycolate (TDM) to this receptor complex leads to phosphorylation of the immunoreceptor tyrosine-based activation motif (ITAM) of FCER1G, triggering activation of SYK, CARD9 and NF-kappa-B, consequently driving maturation of antigen-presenting cells and shaping antigen-specific priming of T-cells toward effector T-helper 1 and T-helper 17 cell subtypes (By similarity). Also recognizes alpha-mannose residues on pathogenic fungi of the genus *Malassezia* and mediates macrophage activation (By similarity). Through recognition of DAMPs released upon nonhomeostatic cell death, enables immune sensing of damaged self and promotes inflammatory cell infiltration into the damaged tissue (By similarity).

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein . Cell projection, phagocytic cup .

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.