

Recombinant Mouse CLC7A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51692

Size: 10ug, 100ug

Protein Name: C-type lectin domain family 7 member A (Beta-glucan receptor) (C-type lectin superfamily member 12) (Dendritic cell-associated C-type lectin 1) (DC-associated C-type lectin 1) (Dectin-1) (CD antigen CD369)

Synonym: Clec7a, Bgr, Clecsf12, Dectin1

UniProt ID: Q6QLQ4

UniProt Link: www.uniprot.org/uniprotkb/Q6QLQ4/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 244 AA

Molecular Weight: 27 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MKYHSHIENLDEDGYTQLDFSTQDIHKRPRGSEKGSQAPSSPWRPIAVGLGILCFVWVVAVLGAL
GEYGHNSGRNPEEKDNFLSRNKENHKPTESLDEKVAPSKASQTTGGFSQPCLPNWIMHGKSCYL
FSFSGNSWYGSKRHCSQLGAHLLKIDNSKEFEFIESQTSSHRINAFWIGLSRNQSEGPWFWDGSA
FFPNSFQVRNTAPQESLLHNCVWIHGSEVYNQICNTSSYSICEKEL

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 7 member A (Beta-glucan receptor) (C-type lectin superfamily member 12) (Dendritic cell-associated C-type lectin 1) (DC-associated C-type lectin 1) (Dectin-1) (CD antigen CD369) 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: Lectin that functions as a pattern recognizing receptor (PRR) specific for beta-1,3-linked and beta-1,6-linked glucans, which constitute cell wall constituents from pathogenic bacteria and fungi (PubMed:11544516, PubMed:15213161, PubMed:17159984). Necessary for the TLR2-mediated inflammatory response and activation of NF-kappa-B: upon beta-glucan binding, recruits SYK via its ITAM motif and promotes a signaling cascade that activates some CARD domain-BCL10-MALT1 (CBM) signalosomes, leading to the activation of NF-kappa-B and MAP kinase p38 (MAPK11, MAPK12, MAPK13 and/or MAPK14) pathways which stimulate expression of genes encoding pro-inflammatory cytokines and chemokines (PubMed:12719479, PubMed:15731053, PubMed:16825490, PubMed:32358020). Enhances cytokine production in macrophages and dendritic cells (PubMed:15845454). Mediates production of reactive oxygen species in the cell (PubMed:12719479, PubMed:15731053, PubMed:16825490). Mediates phagocytosis of *C.albicans* conidia (PubMed:15729357, PubMed:16825490). Binds T-cells in a way that does not involve their surface glycans and plays a role in T-cell activation (PubMed:10779524). Stimulates T-cell proliferation (PubMed:10779524). Induces phosphorylation of SCIMP after binding beta-glucans (PubMed:27288407).

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein . Note=Enriched on zymosan phagosomes. Enrichment does not depend on opsonization.

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.