

Recombinant Human CLC7A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50202

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, UNQ539/PRO1082

UniProt ID: Q9BXN2

UniProt Link: www.uniprot.org/uniprotkb/Q9BXN2/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 247 AA

Molecular Weight: 28 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEYHPDLENLDEDGYTQLHFDSQSNTRIAVVSEKGSACAASPPWRLIAVILGILCLVILVIAVVLGTMAI
WRNSGSGNTLENGYFLSRNKENHSQPTQSSLEDSVTPTKAVKTTGVLSSPCPPNWIIYEKSCYLFS
MSLNSWDGSKRQCWQLGSNLLKIDSSNELGFIVKQVSSQPDNSFWIGLSRPQTEVPWLWEDGSTF
SSNLFQIRTTATQENPSPNCVWIHVSVIYDQLCSVPSYSICEKKFSM

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:11567029, PubMed:12423684). 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 (By similarity). Enhances cytokine production in macrophages and dendritic cells (By similarity). Mediates production of reactive oxygen species in the cell (By similarity). Mediates phagocytosis of *C.albicans* conidia (PubMed:17230442). Binds T-cells in a way that does not involve their surface glycans and plays a role in T-cell activation. Stimulates T-cell proliferation. Induces phosphorylation of SCIMP after binding beta-glucans (By similarity).

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein .; [Isoform 5]: Cytoplasm .; [Isoform 6]: Cytoplasm .; [Isoform 7]: Cytoplasm .

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.