

Recombinant Human X3CL1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51073

Size: 10ug, 100ug

Protein Name: Fractalkine (C-X3-C motif chemokine 1) (CX3C membrane-anchored chemokine) (Neurotactin) (Small-inducible cytokine D1) [Cleaved into: Processed fractalkine]

Synonym: CX3CL1, FKN, NTT, SCYD1, A-152E5.2

UniProt ID: P78423

UniProt Link: www.uniprot.org/uniprotkb/P78423/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 397 AA

Molecular Weight: 42 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAPISLSWLLRLATFCHLTVLLAGQHGHGVTCKNITCSKMTSKIPVALLIHYQQNQASCGKRAIILETRQ
HRLFCADPKEQWVKDAMQHLDRQAAALTRNGGTFEKQIGEVKPRTPAAGGMDESIVLEPEATGE
SSSLEPTPSSQEAQRALGTSPLEPTGVTGSSGTRLPPTPKAQDGGPVGTELFRVPPVSTAATWQSS
APHQPGPSLWAEAKTSEAPSTQDPSTQASTASSPAPEENAPSEGQRVWGQQGQSPRPENSLEREE
MGPVPAHTDAFQDWGPGSMHVSVVPVSSEGTPSREPVASGSWTPKAEPIHATMDPQRLGVLIT
PVPDAQAATRRQAVGLLAFLGLLFCLGVAMFTYQSLQGCPKRMAGEMAEGLRYIPRSCGSNSYVLV
PV

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 Fractalkine (C-X3-C motif chemokine 1) (CX3C membrane-anchored chemokine) (Neurotactin) (Small-inducible cytokine D1) [Cleaved into: Processed fractalkine] 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: Chemokine that acts as a ligand for both CX3CR1 and integrins ITGA4:ITGB1 (PubMed:12055230, PubMed:21829356, PubMed:23125415, PubMed:9782118, PubMed:9931005). The CX3CR1-CX3CL1 signaling exerts distinct functions in different tissue compartments, such as immune response, inflammation, cell adhesion and chemotaxis (PubMed:12055230, PubMed:9024663, PubMed:9177350, PubMed:9782118). Regulates leukocyte adhesion and migration processes at the endothelium (PubMed:9024663, PubMed:9177350). Can activate integrins in both a CX3CR1-dependent and CX3CR1-independent manner (PubMed:23125415, PubMed:24789099). In the presence of CX3CR1, activates integrins by binding to the classical ligand-binding site (site 1) in integrins (PubMed:23125415, PubMed:24789099). In the absence of CX3CR1, binds to a second site (site 2) in integrins which is distinct from site 1 and enhances the binding of other integrin ligands to site 1 (PubMed:23125415, PubMed:24789099).; [Processed fractalkine]: The soluble form is chemotactic for T-cells and monocytes, but not for neutrophils.; [Fractalkine]: The membrane-bound form promotes adhesion of those leukocytes to endothelial cells.; (Microbial infection) Mediates the cytoadherence of erythrocytes infected with parasite *P.falciparum* (strain 3D7) with endothelial cells by interacting with *P.falciparum* CBP1 and CBP2 expressed at the surface of erythrocytes (PubMed:27653778). The adhesion prevents the elimination of infected erythrocytes by the spleen (Probable).

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein .; [Processed fractalkine]: Secreted .

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.