

Recombinant Rat CX3C1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52346

Size: 10ug, 100ug

Protein Name: CX3C chemokine receptor 1 (C-X3-C CKR-1) (CX3CR1) (Fractalkine receptor)

Synonym: Cx3cr1, Rbs11

UniProt ID: P35411

UniProt Link: www.uniprot.org/uniprotkb/P35411/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 354 AA

Molecular Weight: 40 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPTSFPELDLENFEYDDSAEACYLGDIVAFGTIFLSIFYSLVFTFGLVGNLLVVLALTNSRKSKSITDIYL
LNLALSDLLFVATLPFWTHYLISHEGLHNAMCKLTAAFFFIGFFGGIFFITVISIDRYLAIVLAANSMNNR
TVQHGVITISLGVWAAAILVASPQFMFTKRKDNECLGDYPEVLQEIWPVLRNSEVNILGFVLPLLIMSF
CYFRIVRTLFSCKNRKKARAIRLILLVVVFFLFWTPYNIVIFLETCLKFYNNFFPSCGMKRDLRWALSVTE
TVAFSHCCLNPFYAFAGEKFRRYLRHLYNKCLAVLCGRP VHAGFSTESQRSRQDSILSSLTHYTSE
GEGSLLL

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 CX3C chemokine receptor 1 (C-X3-C CKR-1) (CX3CR1) (Fractalkine receptor) 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: Receptor for the C-X3-C chemokine fractalkine (CX3CL1) present on many early leukocyte cells; CX3CR1-CX3CL1 signaling exerts distinct functions in different tissue compartments, such as immune response, inflammation, cell adhesion and chemotaxis. CX3CR1-CX3CL1 signaling mediates cell migratory functions. Responsible for the recruitment of natural killer (NK) cells to inflamed tissues. Acts as a regulator of inflammation process leading to atherogenesis by mediating macrophage and monocyte recruitment to inflamed atherosclerotic plaques, promoting cell survival. Involved in airway inflammation by promoting interleukin 2-producing T helper (Th2) cell survival in inflamed lung. Involved in the migration of circulating monocytes to non-inflamed tissues, where they differentiate into macrophages and dendritic cells. Acts as a negative regulator of angiogenesis, probably by promoting macrophage chemotaxis. Plays a key role in brain microglia by regulating inflammatory response in the central nervous system (CNS) and regulating synapse maturation. Required to restrain the microglial inflammatory response in the CNS and the resulting parenchymal damage in response to pathological stimuli. Involved in brain development by participating in synaptic pruning, a natural process during which brain microglia eliminates extra synapses during postnatal development. Synaptic pruning by microglia is required to promote the maturation of circuit connectivity during brain development. Acts as an important regulator of the gut microbiota by controlling immunity to intestinal bacteria and fungi. Expressed in lamina propria dendritic cells in the small intestine, which form transepithelial dendrites capable of taking up bacteria in order to provide defense against pathogenic bacteria. Required to initiate innate and adaptive immune responses against dissemination of commensal fungi (mycobiota) component of the gut: expressed in mononuclear phagocytes (MNPs) and acts by promoting induction of antifungal IgG antibodies response to confer protection against disseminated *C.albicans* or *C.auris* infection (By similarity). Also acts as a receptor for C-C motif chemokine CCL26, inducing cell chemotaxis (By similarity).

Subcellular Localization: Cell membrane ; Multi-pass membrane protein .

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.