

# Recombinant Mouse CX3C1 Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP51993

Size: 10ug, 100ug

Protein Name: CX3C chemokine receptor 1 (C-X3-C CKR-1) (CX3CR1) (mCX3CR1)  
(Fractalkine receptor)

Synonym: Cx3cr1

UniProt ID: Q9Z0D9

UniProt Link: [www.uniprot.org/uniprotkb/Q9Z0D9/entry](http://www.uniprot.org/uniprotkb/Q9Z0D9/entry)

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 354 AA

Molecular Weight: 40 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MSTSFPELDLENFEYDDSAEACYLGDIVAFGTIFLSVFYALVFTFGLVGNLLVVLALTNSRKPKSITDIY  
LLNLALSDLLFVATLPFWTHYLISHEGLHNAMCKLTТАFFFIGFFGGIFFITVISIDRYLAIVLAANSMNN  
RTVQHGVTISLGVWAAAILVASPQFMFTKRKDNECLGDYPEVLQEMWPVLRNSEVNILGFALPLLIM  
SFCYFRIIQTLSCKNRKKARAVRLILLVVFАFFLFWTPYNIMIFLETЛKFYNFFPSCDMKRDRLALSV  
TETVAFSHCCLNPFIIYAFAGEKFRRYLGHLYRKCLAVLCGHPVHTGFSPESQRSRQDSILSSFTHYT  
SEGDGSLLL

## 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) (mCX3CR1) (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 (PubMed:10187784, PubMed:9918795). CX3CR1-CX3CL1 signaling mediates cell migratory functions (PubMed:11544273, PubMed:12871640, PubMed:16675847, PubMed:18322241). Responsible for the recruitment of natural killer (NK) cells to inflamed tissues (PubMed:11544273, PubMed:16675847). Acts as a regulator of inflammation process leading to atherogenesis by mediating macrophage and monocyte recruitment to inflamed atherosclerotic plaques, promoting cell survival (PubMed:12569158, PubMed:18971423). Involved in airway inflammation by promoting interleukin 2-producing T helper (Th2) cell survival in inflamed lung (PubMed:21037587). Involved in the migration of circulating monocytes to non-inflamed tissues, where they differentiate into macrophages and dendritic cells (PubMed:12871640). Acts as a negative regulator of angiogenesis, probably by promoting macrophage chemotaxis (PubMed:18322241). Plays a key role in brain microglia by regulating inflammatory response in the central nervous system (CNS) and regulating synapse maturation (PubMed:16732273, PubMed:21778362, PubMed:24487234). Required to restrain the microglial inflammatory response in the CNS and the resulting parenchymal damage in response to pathological stimuli (PubMed:16732273). Involved in brain development by participating in synaptic pruning, a natural process during which brain microglia eliminates extra synapses during postnatal development (PubMed:21778362). Synaptic pruning by microglia is required to promote the maturation of circuit connectivity during brain development (PubMed:24487234). Acts as an important regulator of the gut microbiota by controlling immunity to intestinal bacteria and fungi (PubMed:15653504, PubMed:29326275). 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 (PubMed:15653504). 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 (PubMed:29326275, PubMed:33548172). 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.