

Recombinant Rat CXCR4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52195

Size: 10ug, 100ug

Protein Name: C-X-C chemokine receptor type 4 (CXC-R4) (CXCR-4) (Fusin) (Leukocyte-derived seven transmembrane domain receptor) (LESTR) (Stromal cell-derived factor 1 receptor) (SDF-1 receptor) (CD antigen CD184)

Synonym: Cxcr4, Cmkar4

UniProt ID: O08565

UniProt Link: www.uniprot.org/uniprotkb/O08565/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 349 AA

Molecular Weight: 39 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEIYTS DNYSEE VGS GDYDS NKEPC FRDEN ENFNRI FLPTIY FIIFLT GIVGNGLVILVMGYQKKLRSM
TDKYRLHLSVADLLFVITLPFWAVDAMADWYFGKFLCKAVHIIYTVNLYSSVLILAFISLD RYLAIVHAT
NSQRPRKLLAEKAVYVGWIPALLLTIPDIIFADV SQGDGRYICDRLYPDSLWMVVFQFQHIMVGLILP
GIVILSCYCIISKL SHSKGHQKRKALKTTVILILAFFACWLPYYVGISIDSFILLEVIKQGCEFESVVKHWI
SITEALAFFHCCLNPILYAFLGAKFKSSAQHALNSMSRGSSSLKILSKGKRGGHSSVSTESSESSSFHSS

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-X-C chemokine receptor type 4 (CXC-R4) (CXCR-4) (Fusin) (Leukocyte-derived seven transmembrane domain receptor) (LESTR) (Stromal cell-derived factor 1 receptor) (SDF-1 receptor) (CD antigen CD184) 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-X-C chemokine CXCL12/SDF-1 that transduces a signal by increasing intracellular calcium ion levels and enhancing MAPK1/MAPK3 activation. Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as adenylate cyclase. CXCR4 is coupled to G(i) G alpha proteins and mediates inhibition of adenylate cyclase. Involved in the AKT signaling cascade. Plays a role in regulation of cell migration, e.g. during wound healing. Also acts as a receptor for extracellular ubiquitin; leading to enhanced intracellular calcium ions and reduced cellular cAMP levels. Binds bacterial lipopolysaccharide (LPS) et mediates LPS-induced inflammatory response, including TNF secretion by monocytes (By similarity). Involved in hematopoiesis and in cardiac ventricular septum formation. Also plays an essential role in vascularization of the gastrointestinal tract, probably by regulating vascular branching and/or remodeling processes in endothelial cells. Involved in cerebellar development; in the CNS, could mediate hippocampal-neuron survival (By similarity).

Subcellular Localization: Cell membrane ; Multi-pass membrane protein . Cell junction . Early endosome . Late endosome . Lysosome . Note=In unstimulated cells, diffuse pattern on plasma membrane. On agonist stimulation, colocalizes with ITCH at the plasma membrane where it becomes ubiquitinated. In the presence of antigen, distributes to the immunological synapse forming at the T-cell-APC contact area, where it localizes at the peripheral and distal supramolecular activation cluster (SMAC).

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.