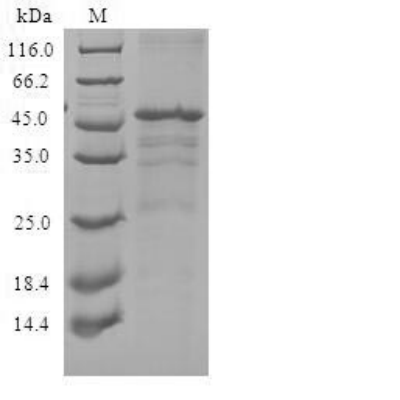
# Recombinant Human C-X-C chemokine receptor type 3 (CXCR3)

| | |
|---|---|
| **Product Code** | CSB-CF006253HUb0 |
| **Relevance** | Isoform 1: Receptor for the C-X-C chemokine CXCL9, CXCL10 and CXCL11 and mediates the proliferation, survival and angiogenic activity of human mesangial cells (HMC) through a heterotrimeric G-protein signaling pathway. Binds to CCL21. Probably promotes cell chemotaxis response. Isoform 2: Receptor for the C-X-C chemokine CXCL4 and also mediates the inhibitory activities of CXCL9, CXCL10 and CXCL11 on the proliferation, survival and angiogenic activity of human microvascular endothelial cells (HMVEC) through a cAMP-mediated signaling pathway. Does not promote cell chemotaxis respons. Interaction with CXCL4 or CXCL10 leads to activation of the p38MAPK pathway and contributes to inhibition of angiogenesis. Overexpression in renal cancer cells down-regulates expression of the anti-apoptotic protein HMOX1 and promotes apoptosis. Isoform 3: Mediates the activity of CXCL11. |
| **Abbreviation** | Recombinant Human CXCR3 protein |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| **Uniprot No.** | P49682 |
| **Product Type** | Transmembrane Protein |
| **Immunogen Species** | Homo sapiens (Human) |
| **Purity** | Greater than 90% as determined by SDS-PAGE. |
| **Sequence** | MVLEVSDHQVLNDAEVAALLENFSSSYDYGENESDSCCTSPPCPQDFSLNFD<br>RAFLPALYSLLFLLGLLGNGAVAAVLLSRRTALSSTDTFLLHLAVADTLLVLTLPL<br>WAVDAAVQWVFGSGLCKVAGALFNINFYAGALLLACISFDRYLNIVHATQLYR<br>RGPPARVTLTCLAVWGLCLLFALPDFIFLSAHHDERLNATHCQYNFPQVGRTA<br>LRVLQLVAGFLLPLLVMAYCYAHILAVLLVSRGQRRLRAMRLVVVVVVAFALC<br>WTPYHLVVLVDILMDLGALARNCGRESRVDVAKSVTSGLGYMHCCLNPLLYAF<br>VGVKFRERMWMLLLRLGCPNQRGLQRQPSSSRRDSSWSETSEASYSGL |
| **Research Area** | Immunology |
| **Source** | in vitro E.coli expression system |
| **Target Names** | CXCR3 |
| **Protein Names** | CKR-L2 G protein-coupled receptor 9 Interferon-inducible protein 10 receptor |
| **Expression Region** | 1-368aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | N-terminal 10xHis-tagged |

| | |
|---|---|
| **Mol. Weight** | 46.5kDa |
| **Protein Length** | Full Length |

**Image**




(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

**Description**

The recombinant Human CXCR3 protein is a cell-free system in vitro E.coli expressed Full Length protein. In cell-free systems, synthesis of the protein can be carried out in vitro using extracts of whole cells that are compatible with translation. These cell extracts contain all the molecules and enzymes that are needed to transcribe, translate, and post-translationally modify the recombinant protein. With additional supplements of cofactors, CXCR3 proteins can be formed in a few hours. However, this system may not be applicable for the large-scale production of recombinant proteins. Advantages of this system include that proteins can be synthesized without cell culturing; also, it is possible to express many proteins together.

CXCR3, also called GPR9 or CD183, is an interferon (IFN)-gamma inducible chemokine receptor selectively expressed on monocytes, Th1 T cells, CD8 T cells, NKT cells, NK cells, dendritic cells, and some tumor cells. CXCR3 and its ligands, CXCL9, CXCL10, and CXCL11 are key immune chemoattractants during interferon-induced inflammatory responses and play a crucial role in the activation, differentiation, and effector T cell function. CXCR3/ligand interactions exert a dual role in tumor progression and immunity. CXCR3/ligand axis affects the tumor microenvironments (TME) by regulating angiogenesis, recruiting activated immune cells, and influencing tumor cells in divergent roles either by promoting or inhibiting tumor progression.

**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

**Shelf Life**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.
Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.