

Recombinant Human CXCR4, GST-tagged

Cat. No. CXCR4-5138H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human CXCR4 Protein, With N-GST Tag (rhCXCR4) Met 1 - Ser 46 (Accession # AAH20968.1) was produced in E.coli cells

Species Human

Source E.coli

ProteinLength 1-46 a.a.

Description

C-X-C chemokine receptor type 4 also known as fusin or CD184 (cluster of differentiation 184), CXCR4, CD184, D2S201E, FB22, HM89, HSY3RR, LAP3, LCR1, LESTR, NPY3R, NPYR, NPYRL, NPYY3R or WHIM. CXCR-4 is an alpha-chemokine receptor specific for stromal-derived-factor-1 (SDF-1 also called CXCL12), a molecule endowed with potent chemotactic activity for lymphocytes. This receptor is one of several chemokine receptors that HIV isolates can use to infect CD4+ T cells. HIV isolates that use CXCR4 are traditionally known as T-cell tropic isolates. Typically, these viruses are found late in infection. It is unclear as to whether the emergence of CXCR4 using HIV is a consequence or a cause of immunodeficiency. CXCR4 is upregulated during the implantation window in natural and hormone replacement therapy cycles in the endometrium, producing, in presence of a human blastocyst, a surface polarization of the CXCR4 receptors suggesting that this receptor is implicated in the adhesion phase of human implantation. SDF-1 and CXCR4 were believed to be a relatively "monogamous" ligand-receptor pair (other chemokines tend to use several different chemokine receptors in a fairly "promiscuous" manner).

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Recent evidence demonstrates ubiquitin is also a natural ligand of CXCR4. Chronic exposure to THC increased T lymphocyte CXCR4 expression on both CD4+ and CD8+ T lymphocytes. Drugs that block the CXCR4 receptor appear to be capable of "mobilizing" hematopoietic stem cells into the bloodstream as peripheral blood stem cells.

Predicted N Terminal Met 1

Form Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with 10 mM reduced glutathione. Normally Mannitol or Trehalose are added as protectants before lyophilization. Contact us for customized product format or formulation.

Molecular Mass 32.2 kDa. DTT-reduced Protein migrates as 33 kDa.

Endotoxin Less than 1.0 EU per µg of the rhCXCR4 by the LAL method.

Purity >95% as determined by SDS-PAGE.

Storage Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC).

GENE INFORMATION

Gene Name CXCR4 chemokine (C-X-C motif) receptor 4 [Homo sapiens]

Official Symbol CXCR4

Synonyms CXCR4; chemokine (C-X-C motif) receptor 4; chemokine (C X C motif), receptor 4 (fusin); C-X-C chemokine receptor type 4; CD184; D2S201E; fusin; HM89; HSY3RR; LESTR; NPY3R; NPYR; NPYY3R; CXC-R4; CXCR-4; CD184 antigen; SDF-1

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receptor; neuropeptide Y receptor Y3; seven transmembrane helix receptor; stromal cell-derived factor 1 receptor; lipopolysaccharide-associated protein 3; seven-transmembrane-segment receptor, spleen; leukocyte-derived seven transmembrane domain receptor; leukocyte-derived seven-transmembrane-domain receptor; FB22; LAP3; LCR1; WHIM; NPYRL;

Gene ID [7852](#)

mRNA Refseq [NM_001008540](#)

Protein Refseq [NP_001008540](#)

MIM [162643](#)

UniProt ID [P61073](#)

Chromosome Location 2q21

Pathway Axon guidance, organism-specific biosystem; Axon guidance, conserved biosystem; Binding and entry of HIV virion, organism-specific biosystem; CXCR4-mediated signaling events, organism-specific biosystem; Chemokine receptors bind chemokines, organism-specific biosystem; Chemokine signaling pathway, organism-specific biosystem; Chemokine signaling pathway, conserved biosystem;

Function C-X-C chemokine receptor activity; G-protein coupled receptor activity; actin binding; coreceptor activity; myosin light chain binding; protein binding; receptor activity; signal transducer activity; ubiquitin binding; ubiquitin protein ligase binding;

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