

Synonym

CXCR4,CD184,Fusin,D2S201E,FB22,HM89,HSY3RR,LAP3,LCR1,LESTR,NPY3R,NPYR,NPYRL,NPYY3R,WHIM

Source

Human CXCR4, Fc Tag (CX4-H5269) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Ser 46 (Accession # [AAH20968.1](#)).

Molecular Characterization

Fc(Thr 106 - Lys 330) P01857	CXCR4(Met 1 - Ser 46) AAH20968.1
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This protein carries a human IgG1 Fc tag at the N-terminus.

The protein has a calculated MW of 32.3 kDa. The protein migrates as 35-45 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

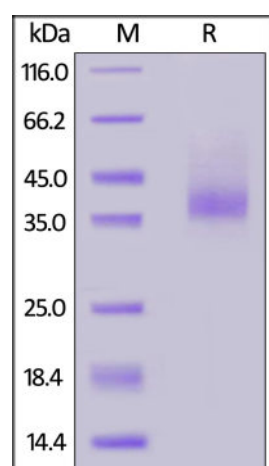
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human CXCR4, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Background

C-X-C chemokine receptor type 4 is 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). 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.

References

- (1) [Saini V, Marchese A, Majetschak M, 2010, J. Biol. Chem. 285 \(20\): 15566–76.](#)
- (2) [LeCapitaine NJ, et al., 2011, J Neuroimmune Pharmacol., 6\(4\): 540-5.](#)

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.