Synonym

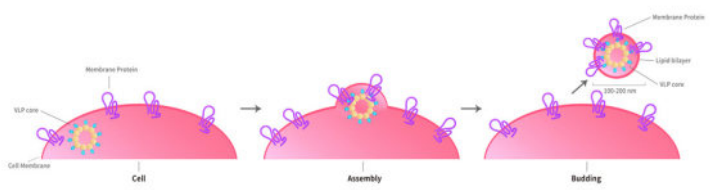
CXCR4,CD184,Fusin,D2S201E,FB22,HM89,HSY3RR,LAP3,LCR1,LESTR,NPY3R,NPYR,NPYRL,NPYY3R,WHIM

Source

Human CXCR4 Full Length Protein-VLP(CX4-H5219) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Ser 352 (Accession # P61073-1).
Predicted N-terminus: His

Molecular Characterization

Virus-like particles(VLPs) are formed by self-assembly of envelop/capsid proteins from viruses. Membrance Proteins can be constituted in-situ with VLPs produced from HEK293 cell cultures. These VLPs concentrate conformationally intact membrane proteins directly on the cell surface and produce soluble, high-concentration proteins perfect for immunization and antibody screening.



The VLPs provide the display of properly folded membrane proteins in their native cellular membrane in a compact size of 100~300 nm diameter (similar to the size of most viruses) making it optimal targets for dendritic cells in vivo and surface attachment for phage display.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Formulation

The VLPs are highly immunogenic, so the immunization strategy should be optimized (antigen dose, regimen and adjuvant).

Supplied as 0.2 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped as sterile liquid solution with dry ice, please inquire the shipping cost.

Storage

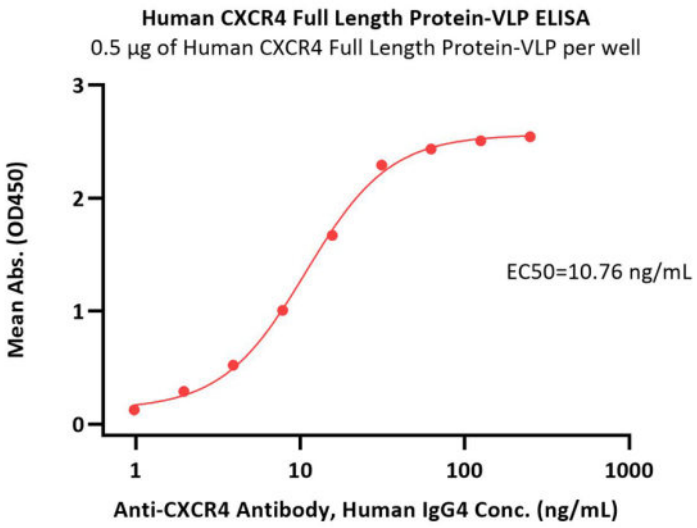
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

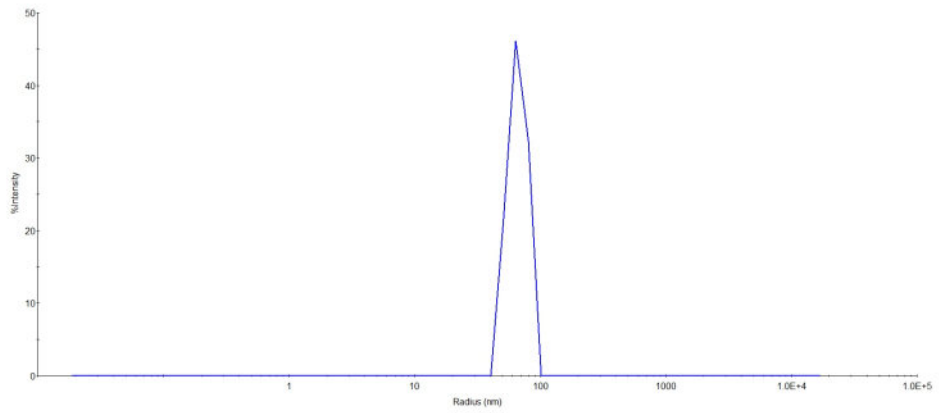
*The isotype control of empty/mock VLP (Cat. No. VLP-N5213) is sold separately and not included in protein, you can follow this link for product information.

Bioactivity-ELISA



Immobilized Human CXCR4 Full Length Protein-VLP (Cat. No. CX4-H5219) at 5 μg/mL (100 μL/well) can bind Human ulocuplumab, Human IgG4 with a linear range of 1-31 ng/mL (QC tested).

Identity-DLS



The mean peak Radius of VLP is 55-75 nm with more than 95% intensity as determined by dynamic light scattering (DLS).

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.

Clinical and Translational Updates

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