10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Fractalkine/CX3CL1
Catalog # PVGS1453

Specification

Fractalkine/CX3CL1 - Product Information

Primary Accession P78423

Species
Human

Sequence
Gln25-Arg339 (Ser199Asn)

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
The EC₅₀ value of Human Fractalkine/CX3CL1 on Ca²⁺ mobilization assay in CHO-K1/Gα15/hCX3CR1 cells (human Gα15 and hCX3CR1 stably expressed in CHO-K1 cells) is less than 1.5 µg/ml.

Expression System
CHO

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Fractalkine/CX3CL1 - Additional Information

Gene ID 6376

Other Names
Fractalkine, C-X3-C motif chemokine 1, CX3C membrane-anchored chemokine, Neurotactin, Small-inducible cytokine D1, Processed fractalkine, CX3CL1 {ECO:0000303|PubMed:9024663}

Target Background
Chemokine (C-X3-C motif) ligand 1 (CX3CL1) is a known member of the CX3C chemokine family. It is also commonly known under the names fractalkine (in humans) and neurotactin (in mice). The

polypeptide structure of CXC3L1 differs from the typical structure of other chemokines. For example, the spacing of the characteristic N-terminal cysteines is different; there are three amino acids separating the initial pair of cysteines in CX3CL1, while there are none in CC chemokines and only one in CXC chemokines. CX3CL1 is produced as a long protein (with 373-amino acid in humans) with an extended mucin-like stalk and a chemokine domain on top. The mucin-like stalk allows it to bind to the surface of certain cells. Soluble CX3CL1 potently chemoattracts T cells and monocytes, while the cell-bound chemokine promotes strong adhesion of leukocytes to activated endothelial cells, where it is primarily expressed. CX3CL1 can signal through the chemokine receptor CX3CR1.

Fractalkine/CX3CL1 - Protein Information

Name CX3CL1 {ECO:0000303|PubMed:9024663}

Function
Chemokine that acts as a ligand for both CX3CR1 and integrins ITGAV:ITGB3 and ITGA4:ITGB1 (PubMed:12055230, PubMed:21829356, PubMed:23125415, PubMed:9782118, PubMed:9931005). The CX3CR1-CX3CL1 signaling exerts distinct functions in different tissue compartments, such as immune response, inflammation, cell adhesion and chemotaxis (PubMed:12055230, PubMed:9024663, PubMed:9177350, PubMed:9782118). Regulates leukocyte adhesion and migration processes at the endothelium (PubMed:9024663, PubMed:9177350). Can activate integrins in both a CX3CR1-dependent and CX3CR1-independent manner (PubMed:23125415, PubMed:24789099). In the presence of CX3CR1, activates integrins by binding to the classical ligand-binding site (site 1) in integrins (PubMed:23125415, PubMed:24789099). In the absence of CX3CR1, binds to a second site (site 2) in integrins which is distinct from site 1 and enhances the binding of other integrin ligands to site 1 (PubMed:23125415, PubMed:24789099).

Cellular Location
Cell membrane; Single-pass type I membrane protein

Tissue Location
Expressed in the seminal plasma, endometrial fluid and follicular fluid (at protein level). Small intestine, colon, testis, prostate, heart, brain, lung, skeletal muscle, kidney and pancreas. Most abundant in the brain and heart

Fractalkine/CX3CL1 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Fractalkine/CX3CL1 - Images