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CX3CL1

Catalog # PVGS1390

Product Information

Primary Accession	O55145
Species	Rat
Sequence	QHLGMTKCNI TCHKMTSPIP VTLLIHYQLN QESCGKRAII LETRQHRHFC ADPKEKWVQD AMKHLDHQTA ALTRNGGKFE KRVDNVTPRI TSATRGLSPT ALAKPESATV EDLTLEPTAI SQEARRPMGT SQEPPAAVTG SSPSTSKAQD AGLAAKPQST GISEVAAVST TIWPSSAVYQ SGSSLWAEEK ATESPPTIAL STQASTTSSP KQNVGSEGQP PWVQEQDSTP EKSPGPEETN PVHTDIFQDR GPGSTVHPSV APTSSEKTPS PELVASGSQA PKVEEPIHAT ADPQKLSVFI TPVPDSQAAT
Purity	> 98% as analyzed by SDS-PAGE.
Endotoxin Level	
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH_2O or PBS at 100 μg/ml.

Additional Information

Gene ID	89808
Other Names	Fractalkine, C-X3-C motif chemokine 1, CX3C membrane-anchored chemokine, Neurotactin, Small-inducible cytokine D1, Processed fractalkine, Cx3cl1, Acc1, Fkn, Scyd1
Target Background	Chemokine (C-X3-C motif) ligand 1 (CX3CL1) is a large cytokine protein of 373 amino acids. It contains multiple domains and is the only 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 cysteinesis 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. Recombinant rat Fractalkine/CX3CL1 produced in HEK293 cells is a polypeptide chain containing 310 amino acids. A fully biologically active molecule, rrFractalkine/CX3CL1 has a molecular mass of 70-90 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at .

Protein Information

Name	Cx3cl1
Synonyms	Acc1, Fkn, Scyd1
Function	Chemokine that acts as a ligand for both CX3CR1 and integrins ITGAV:ITGB3 and ITGA4:ITGB1. The CX3CR1-CX3CL1 signaling exerts distinct functions in different tissue compartments, such as immune response, inflammation, cell adhesion and chemotaxis. Regulates leukocyte adhesion and migration processes at the endothelium. Can activate integrins in both a CX3CR1-dependent and CX3CR1-independent manner. In the presence of CX3CR1, activates integrins by binding to the classical ligand-binding site (site 1) in integrins. 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.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P78423}; Single-pass type I membrane protein
Tissue Location	Highest levels in brain (neurons). Significant levels in kidney, heart, lung and adrenal gland