# Active Chemokine C-X3-C-Motif Ligand 1 (CX3CL1)

*Catalog#:PEH12049*

## 概述（Summary）

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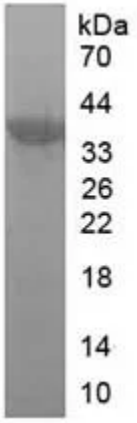
| **别称（Alternative Names）** | NTN; ABCD3; C3Xkine; CXC3; CXC3C; NTT; SCYD1; ABCD3; FKN; Neurotactin; Fractalkine; Small Inducible Cytokine Subfamily D(Cys-X3-Cys)Member 1 |
| **纯度（Purity）** | Greater than 95% as determined by reducing SDS-PAGE. |
| **内毒素（Endotoxin level）** | Please contact with the lab for this information |
| **蛋白构建（Construction）** | 【Trp81-Ala336】 |
| **Accession #** | P78423 |
| **表达宿主（Host）** | E.coli |
| **种属（Species）** | Homo sapiens (Human) |
| **预测分子量（Predicted MW）** | 28.5 kDa |
| **制剂（Form）** | Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300. |
| **运输方式（Shipping）** | The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below. |
| **稳定性&储存（Stability &Storage）** | 12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles. |
| **复溶（Reconstitution）** | Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex. |
| **背景介绍（References）** | 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 |

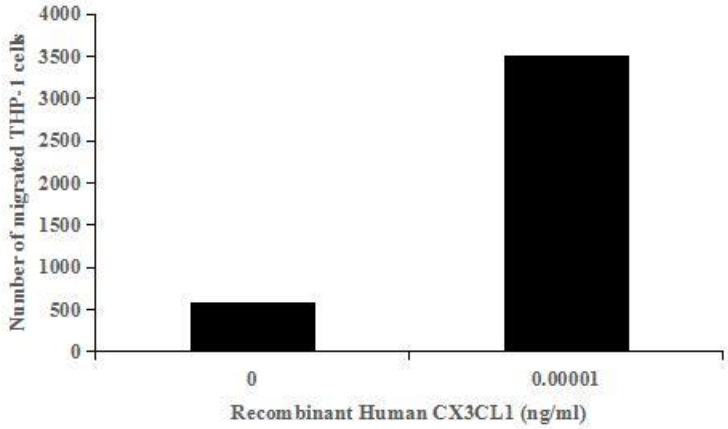
enhances the binding of other integrin ligands to site 1.; The soluble form is chemotactic for T-cells and monocytes, but not for neutrophils.; The membrane-bound form promotes adhesion of those leukocytes to endothelial cells.

## 电泳图（SDS-PAGE image）




Greater than 95% as determined by reducing SDS-PAGE.

## 活性图（Bioactivity image）




Chemokine C-X3-C-Motif Ligand 1 (CX3CL1) also known as fractalkine is a large cytokine protein of 373 amino acids, it contains multiple domains and is the only known member of the CX3C chemokine family. 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.Thus, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of CX3CL1 on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (150ul cell suspension,106 cells/ml in RPMI 1640 with FBS free) and CX3CL1 (0.1ng/ml, 0.01ng/ml ,0.001ng/ml, 0.0001 and 0.00001ng/ml diluted separately in serum free RPMI 1640 ) was added in lower chamber with a polycarbonate filter(8um pore size) used to separate the two compartments. After incubation at 37°C with 5% CO2 for 1h, the filter was removed,then cells in low chamber were observed by inverted microscope at low magnification (×10) and the number of migrated cells were counted using Fluorescence Activating Cell Sorter. Result shows CX3CL1 is able to induce migration of THP-1 cells. The migrated THP-1 cells in low chamber at low magnification(×10) were shown in Figure 1. Statistical results of FACS were shown in Figure 2. The optimum chemotaxis of CX3CL1 occurs at 0.001-0.00001ng/ml. Figure 2.The chemotactic effect of CX3CL1 on THP-1 cells

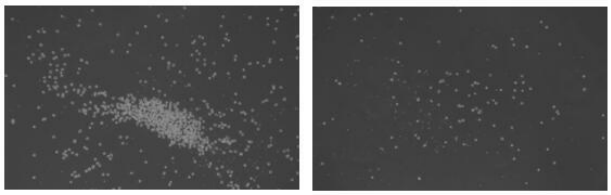


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Figure 1.The chemotactic effect of CX3CL1 on THP-1 cells

(A) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 with 0.00001 ng/ml CX3CL1 was added in lower chamber, then cells in lower chamber were observed at low magnification(×10) after incubation for 1h;
(B) THP-1 cells were seeded into the upper chambers and serum free RPMI 1640 without CX3CL1 was added in lower chamber, then cells in lower chamber were observed at low magnification(×10) after incubation for 1h.

## 注意事项（Note）

For Research Use Only , Not for Diagnostic Use.