

Fractalkine/CX3CL1 Protein, Rat

Cat. No.:	HY-P79193
Synonyms:	Fractalkine; Cx3cl1; C-X3-C motif chemokine 1; CX3C membrane-anchored chemokine; Neurotactin; Small-inducible cytokine D1; Acc1; Fkn; Scyd1
Species:	Rat
Source:	E. coli
Accession:	O55145 (L22-G100)
Gene ID:	89808
Molecular Weight:	Approximately 11 kDa

PROPERTIES

AA Sequence	L A G Q H L G M T K C N I T C H K M T S P I P V T L L I H Y Q L N Q E S C G K R A I I L E T R Q H R H F C A D P K E K W V Q D A M K H L D H Q T A A L T R N G
Biological Activity	Measured by its ability to chemoattract THP-1 human acute monocytic leukemia cells. The ED ₅₀ for this effect is 5.736 ng/mL, corresponding to a specific activity is 1.74×10 ⁵ U/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.8.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>Fractalkine/CX3CL1 protein serves as a multifaceted chemokine, acting as a ligand for both CX3CR1 and integrins ITGA4:ITGB3 and ITGA4:ITGB1. The CX3CR1-CX3CL1 signaling cascade exhibits diverse functions across various tissue compartments, encompassing roles in immune response modulation, inflammation regulation, cell adhesion, and chemotaxis. Specifically, it plays a crucial role in regulating leukocyte adhesion and migration processes at the endothelium. Fractalkine/CX3CL1 demonstrates the ability to activate integrins in a CX3CR1-dependent and CX3CR1-independent manner. In the presence of CX3CR1, it activates integrins by binding to the classical ligand-binding site (site 1) in integrins. Conversely, in the absence of CX3CR1, it binds to a distinct site (site 2) on integrins, enhancing the binding of</p>
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other integrin ligands to site 1. The soluble form of Fractalkine/CX3CL1 exhibits chemotactic properties for T-cells and monocytes, though not for neutrophils.

Caution: Product has not been fully validated for medical applications. For research use only.

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