

Overview

Synonyms	Fractalkine/CX3CL1, Human;
Description	Fractalkine, also named neurotactin, is a novel chemokine recently identified through bioinformatics. Fractalkine has a unique C-X3-C cysteine motif near the amino-terminus and is the first member of a fourth branch of the chemokine superfamily. Unlike other known chemokines, fractalkine is a type 1 membrane protein containing a chemokine domain tethered on a long mucin-like stalk. Human fractalkine cDNA encodes a 397 amino acid (aa) residue membrane protein with a 24 aa residue predicted signal peptide, a 76 aa residue chemokine domain, a 241 aa residue stalk region containing 17 degenerate mucin-like repeats, a 19 aa residue transmembrane segment and a 37 aa residue cytoplasmic domain. The extracellular domain of human fractalkine can be released, possibly by proteolysis at the dibasic cleavage site proximal to the membrane, to generate soluble fractalkine. The soluble chemokine domain of human fractalkine was reported to be chemotactic for T cells and monocytes while the soluble chemokine domain of mouse fractalkine was reported to chemoattract neutrophils and T-lymphocytes but not monocytes.
Species	Human
Source	<i>E. coli</i>
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human T-lymphocytes is in a concentration of 5.0-10 ng/ml.
Sequence	QHHGVTKCNI TCSKMTSKIP VALLIHYQQN QASCGKRAII LETRQHRLFC ADPKEQWVKD AMQHLDQRQA ALTRNG

Properties

Measured Molecular Weight	Approximately 8.6 kDa, a single non-glycosylated polypeptide chain containing 76 amino acids and comprises only the chemokine domain of Human Fractalkine.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.4, 50 mM NaCl.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at d -20 °C. Further dilutions should be made in appropriate buffered solutions.
Endotoxin Level	Less than 1 EU/µg of rHuFractalkine/CX3CL1 as determined by LAL method.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Usage	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
Storage	This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.

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