

# Fractalkine

## Human, Recombinant (rHuFractalkine/rHuCX3CL1)

Expressed in *E. coli*

Cat. No. CRP08141

Lot. No. (See product label)

### PRODUCT INFORMATION

**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.

**Amino-Acid Sequence:** 76aa. non-glycosylated

**M. W. :** 8.5 kDa

**Recombinant:** Expressed in *E. coli*

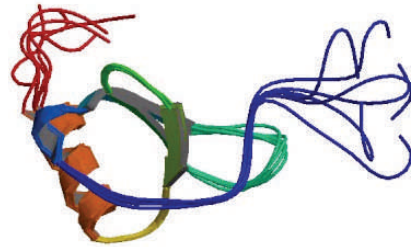
**Purity:** >97% by SDS-PAGE and HPLC analyses.

**Formulation:** Lyophilized from a 0.2mm filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 7.4, 50mM NaCl.

**Endotoxin:** Less than 1EU/mg of rHuFractalkine/CX3CL1 as determined by LAL method.

**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  $\leq -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Storage:** This lyophilized preparation is stable for several weeks at 2-8 $^{\circ}\text{C}$ , but should be kept at  $-20^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 $^{\circ}\text{C}$ . For maximal stability, apportion the reconstituted preparation into working aliquots and store at  $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$ . Avoid repeated freeze/thaw cycles.



[PDB](#) rendering based on 1b2t.  
Available structures: [1b2t](#), [1f2l](#)

### GENE INFORMATION

**Gene Name:** [CX3CL1](#)

**Synonyms:** ABCD-3; C3Xkine; CXC3; CXC3C; NTN; NTT; SCYD1; fractalkine; neurotactin; A-152E5.2; C3Xkine; FKN; NTN; NTT; Neurotactin; fractalkine; neurotactin; C-X3-C motif chemokine 1; CX3C membrane-anchored chemokine; Small-inducible cytokine D1; chemokine (C-X3-C motif) ligand 1; small inducible cytokine subfamily D (Cys-X3-Cys), member 1 (fractalkine, neurotactin); small inducible cytokine subfamily D (Cys-X3-Cys), member-1; X3CL1\_HUMAN; Fractalkine [Precursor].

**UniProt ID:** [P78423](#)

**mRNA Refseq:** [NM\\_002996](#)

**Protein Refseq:** [NP\\_002987](#)

**MIM:** [601880](#)

**GeneID:** [6376](#)

**Chromosome Location:** 16q13

**Pathway:** Cytokine-cytokine receptor interaction

**Function:** chemokine activity.

### REFERENCES

1. Pan et al. Neurotactin, a membrane-anchored chemokine upregulated in brain inflammation. *Nature*.1997; 387: 611-617.
2. Bazan et al. A new class of membrane-bound chemokine with a CX3C motif. *Nature*. 1997; 385: 640-644.
3. Imai et al. Identification and molecular characterization of fractalkine receptor CX3CR1, which mediates both leukocyte migration and adhesion. *Cell*. 1997; 91: 521-530.

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