RECOMBINANT HUMAN FRACTALKINE (hCX3CL1)

Catalog # 02661 **25 µg per vial**

PRODUCT DESCRIPTION:

Fractalkine, CX3CL1, is a novel multidomain chemokine expressed as a membrane-spanning adhesion molecule that can be cleaved from the cell surface to produce a soluble chemoattractant. Human fractalkine cDNA encodes a 397 amino acid 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. This release can be inhibited by the zinc metalloproteinase inhibitor batimastat. Fractalkine mRNA has been detected in various tissues including the brain and heart. Fractalkine is produced by endothelial cells, microglia and smooth muscle in response to inflammatory signals. Membrane-bound fractalkine has been shown to promote adhesion of leukocytes. The soluble chemokine domain of human fractalkine was reported to be chemotactic for T cells, monocytes and dendritic cells. It also induces cell survival, immunomodulation and actin polymerization. The gene for human fractalkine has been mapped to chromosome 16q. The 76 amino acid residue recombinant protein has a predicted molecular mass of approximately 8.5 kDa.

SOURCE:

A DNA sequence encoding the chemokine domain of mature human Fractalkine (amino acid residues 25 - 100) (QHHGVTKCNITCSKMTSKIPVALLIHYQQNQASCGKRAIILETRQHRLFCADPKEQWVK DAMQHLDRQAAALTRNG) protein sequence was expressed in *E. coli*.

PURITY:

Greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level less than 0.1 ng per 1 µg of the cytokine as determined by the LAL method.

FORMULATION:

Lyophilized from a 0.2 µm filtered solution in 30% acetonitrile and 0.1% TFA containing 50 µg of bovine serum albumin per 1 µg of cytokine.

RECONSTITUTION:

It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 50 µg/mL.

STABILITY/STORAGE:

Lyophilized chemokines are stable for greater than six months at -20°C to -70°C.

Reconstituted hCXC3L1 can be stored under sterile conditions at 2° to 4°C for one month or at -20°C to -70°C **in a manual defrost freezer** for three months without detectable loss of activity.

Avoid repeated freeze-thaw cycles.

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Revised April 2002

ACTIVITY:

Activity was determined by ability to chemoattract freshly isolated peripheral blood lymphocytes or mouse BaF/3 cells transfected with hCX3CR-1. Typical ED_{50} for these effects were 2 - 5 ng/mL or 0.3 - 1.5 ng/mL, respectively.

THIS REAGENT IS FOR RESEARCH USE ONLY.
IT IS NOT TO BE ADMINISTERED TO HUMANS.

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