

PRODUCT DESCRIPTION:

Fractalkine, CX3CL1, is a novel multi-domain chemokine expressed as a membrane-spanning adhesion molecule that can be cleaved from the cell surface to produce a soluble chemoattractant. Mouse fractalkine cDNA encodes a 395 amino acid residue membrane protein with a 24 aa (or an alternate 21 aa) residue signal peptide, a 76 aa residue globular chemokine domain, a 239 aa residue stalk region containing degenerate mucin-like repeats, a 19 aa residue transmembrane segment, and a 37 aa residue cytoplasmic domain. The extracellular domain of mouse 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, lung, kidney, skeletal muscle, testis, and heart. Membrane-bound fractalkine has been shown to promote adhesion of leukocytes. The soluble chemokine domain of mouse fractalkine was reported to be chemotactic for T cells and neutrophils. It also induces cell survival, immunomodulation, and actin polymerization. The gene for mouse fractalkine has been mapped to chromosome 11. Mouse fractalkine binds to a specific receptor CX3CR1, and also to a seven transmembrane receptor encoded by human cytomegalovirus that binds multiple CC chemokines. The 84 amino acid residue recombinant protein has a predicted molecular mass of approximately 9.5 kDa.

SOURCE:

A DNA sequence encoding the chemokine domain of mature mouse Fractalkine (amino acid residues 22 - 105) protein sequence is expressed in *E. coli*.

PURITY:

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

FORMULATION:

The recombinant protein is 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.

StemCell Technologies

In North America
Tel: 1.604.877.0713
Fax: 1.604.877.0704
Toll Free Tel: 1.800.667.0322
Toll Free Fax: 1.800.567.2899
e-mail: info@stemcell.com
www.stemcell.com

In the United Kingdom
Tel: +44.(0).20.7537.7565
Fax: +44.(0).20.7515.5408
Toll Free within United Kingdom:
Tel: 0800.731.27.14
Fax: 0800.731.27.13
e-mail: info@stemcellgb.com

In Europe
Tel: +33.(0).4.76.04.75.30
Fax: +33.(0).4.76.18.99.63
e-mail: info@stemcellfrance.com

Revised:
May 2006

Product Information Sheet

CYTOKINES



Version 1.1.0

**Recombinant
Mouse
Fractalkine**
rm CX3CL1

Catalog #02761 25 µg

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 rm CX3CL1 can be stored under sterile conditions at 2° to 8°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.

ACTIVITY:

The activity of rm CX3CL1 is determined by the ability to chemoattract mouse BaF/3 cells transfected with hCX3CR1. The typical ED₅₀ for these effects is 0.2 - 1 µg/mL.

See Material Safety Data Sheet for more information.

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