

Product Information

Fractalkine, Extracellular Domain human
recombinant, expressed in mouse NSO cells
cell culture tested

Catalog Number **F135**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: CX3CL-1, Neurotactin

Product Description

Fractalkine is a novel chemokine identified through bioinformatics. It 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. It 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 residue membrane protein with a 24 residue predicted signal peptide, a 76 residue chemokine domain, a 241 residue stalk region containing 17 degenerate mucin-like repeats, a 19 residue transmembrane segment and a 37 residue cytoplasmic domain. The extracellular domain can be released, possibly by proteolysis at the dibasic cleavage site proximal to the membrane, to generate a soluble domain. mRNA has been detected in various tissues including the brain and heart. Expression is up-regulated in endothelial cells and microglia by inflammatory signals. The gene has been mapped to chromosome 16q. The soluble domain of mouse fractalkine is reported to chemoattract neutrophils and T-lymphocytes but not monocytes.

Fractalkine, Extracellular Domain is produced using a DNA sequence encoding the extracellular domain (residues 1-339) with Lys-Gln-Asn-His-His-His-His-His added to the carboxy terminus, expressed in a mouse myeloma cell line, NSO.¹ Due to glycosylation, the protein migrates as an ~90 kDa protein (SDS-PAGE).

Reagent

Supplied as a lyophilized powder from a 0.2 μm filtered solution in PBS containing 50 μg bovine serum albumin per 1 μg of cytokine

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

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 25 $\mu\text{g}/\text{mL}$.

Storage/Stability

Store the product tightly sealed at $-20\text{ }^{\circ}\text{C}$.

After reconstitution and for continuous use, store at $2-8\text{ }^{\circ}\text{C}$ for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers, or repeated freezing and thawing, is not recommended.

Product Profile

The biological activity is measured by its ability to chemoattract freshly isolated peripheral blood lymphocytes or mouse BaF/3 cells transfected with hCX3CR-1.

Purity: >97% (HPLC)

References

1. Bazan, J.F. et al., *Nature*, **385**, 640-644 (1997).
2. Imai, T. et al., *Cell*, **91**, 521-530 (1997).
3. Mackay, C., *Curr. Biol.*, **7**, R384-R386 (1997).
4. Pan, Y. et al., *Nature*, **387**, 611-617 (1997).

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