

# fractalkine (C-20): sc-7225

## BACKGROUND

Chemokines are members of a superfamily of inducible, secreted, pro-inflammatory cytokines. Members of the chemokine family exhibit 20-50% homology in their predicted amino acid sequences and are divided into 4 subfamilies. In the subfamily designated C-C or  $\beta$ , the first two cysteines are adjacent. In the C-X-C or  $\alpha$  subfamily, the first two of four cysteine residues are separated by a single amino acid. C subfamily members, also designated  $\gamma$  chemokines, lack the first and third cysteine residues of the conserved motif. Chemokines in these three subfamilies are small, secreted proteins. Fractalkine, also designated neurotactin, is the first characterized member of a fourth chemokine subfamily. Fractalkine contains a novel C-X3-C motif in which the first two cysteines are separated by three amino acid residues. Fractalkine mRNA has been detected in brain and heart and is upregulated in microglia and endothelial cells by inflammatory signals. The protein can exist both as a membrane-bound form and as a chemotactic soluble form.

## CHROMOSOMAL LOCATION

Genetic locus: CX3CL1 (human) mapping to 16q21; Cx3cl1 (mouse) mapping to 8 C5.

## SOURCE

fractalkine (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of fractalkine of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7225 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

fractalkine (C-20) is recommended for detection of fractalkine of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

fractalkine (C-20) is also recommended for detection of fractalkine in additional species, including canine.

Suitable for use as control antibody for fractalkine siRNA (h): sc-43771, fractalkine siRNA (m): sc-145235, fractalkine shRNA Plasmid (h): sc-43771-SH, fractalkine shRNA Plasmid (m): sc-145235-SH, fractalkine shRNA (h) Lenti-viral Particles: sc-43771-V and fractalkine shRNA (m) Lentiviral Particles: sc-145235-V.

Molecular Weight of fractalkine: 76 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or SW-13 cell lysate: sc-24778.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

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- Donadelli, R., et al. 2003. Protein overload induces fractalkine upregulation in proximal tubular cells through nuclear factor  $\kappa$ B- and p38 mitogen-activated protein kinase-dependent pathways. *J. Am. Soc. Nephrol.* 14: 2436-2446.
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- Wada, T., et al. 2004. Gene therapy via blockade of monocyte chemo-attractant protein-1 for renal fibrosis. *J. Am. Soc. Nephrol.* 15: 940-948.
- Huang, D., et al. 2006. The neuronal chemokine CX3CL1/fractalkine selectively recruits NK cells that modify experimental autoimmune encephalomyelitis within the central nervous system. *FASEB J.* 20: 896-905.
- Tsubota, K., et al. 2009. The role of fractalkine as an accelerating factor on the autoimmune exocrinopathy in mice. *Invest. Ophthalmol. Vis. Sci.* 50: 4753-4760.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



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Try **fractalkine (A-9): sc-166200** or **fractalkine (B-1): sc-137046**, our highly recommended monoclonal alternatives to fractalkine (C-20).