

Product Information

Anti-Fractalkine

Developed In Goat
Affinity Isolated Antibody

Product Number **F 3303**

Product Description

Anti-Mouse Fractalkine is developed in goat using purified recombinant mouse fractalkine chemokine domain expressed in *Escherichia coli* as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-fractalkine antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Mouse Fractalkine recognizes mouse fractalkine. The antibody may be used in ELISA and immunoblotting assays. By ELISA, the antibody shows approximately 50% cross-reactivity with human fractalkine, 20% cross-reactivity with recombinant human MCP-1, 15% cross-reactivity with recombinant mouse eotaxin and recombinant human MCP-2, 10% cross-reactivity with recombinant human eotaxin, and less than 5% cross-reactivity with recombinant human 6CKine, recombinant mouse GCP-2, and recombinant mouse MARC.

Fractalkine/CX3CL-1, also termed neurotactin, is a member of the delta chemokine subfamily that contains a unique CX₃C cysteine motif near the N-terminal.^{1, 2} Unlike other known chemokines, fractalkine is a type 1 membrane protein containing a chemokine domain tethered on a long mucin-like stalk.³ Native mouse fractalkine cDNA encodes a 395 amino acid residue precursor protein with a predicted 24 or an alternative 21 amino acid residue signal peptide, a 76 amino acid residue globular chemokine domain, a 239 amino acid residue stalk region (rich in Gly, Pro, Ser, and Thr and containing degenerate mucin-like repeats), a 19 amino acid residue transmembrane segment, and a 37 amino acid residue cytoplasmic domain.

Fractalkine, a leukocyte chemoattractant, is expressed in various tissues including the brain, heart, lung, kidney, skeletal muscle, and testis. The soluble chemokine domain of mouse fractalkine chemoattracts neutrophils and T-cells, but not monocytes. The expression of fractalkine is reported to be up-regulated in endothelial cells and microglia by inflammatory signals.³ Membrane-bound fractalkine has been shown to promote adhesion of leukocytes. CX3CR1, a specific receptor for fractalkine, mediates both leukocyte migration and adhesion.⁴ The gene for mouse fractalkine has been mapped to chromosome 11.

Reagents

Anti-Mouse Fractalkine is supplied lyophilized from a 0.2 µm filtered solution of phosphate buffered saline.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm filtered PBS to produce a 0.1 mg/ml stock solution of antibody. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at -20°C. Reconstituted product may be stored at 2-8°C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing. Do not store in a "frost-free" freezer.

Product Profile

For immunoblotting, a working antibody concentration of 0.1-0.2 µg/ml is recommended. The detection limit for mouse fractalkine is approximately 2 ng/lane under non-reducing and reducing conditions.

For ELISAs, a working antibody concentration of 0.5-1.0 µg/ml is recommended. The detection limit for recombinant mouse fractalkine is approximately 0.3 ng/well.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining the optimal working dilutions by titration.

Endotoxin: < 10 ng/mg antibody as determined by the *Limulus* amoebocyte lysate (LAL) method.

References

1. Mackay, C.R., *Curr. Biol.*, **7**, 384 (1997).
2. Bazan, J.F., et al., *Nature*, **385**, 640 (1997)
3. Pan, Y., et al., *Nature*, **387**, 611 (1997).
4. Imai, T., et al., *Cell*, **91**, 521 (1997).

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