

## DESCRIPTION

|                           |                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects human CX3CL1/Fractalkine Chemokine Domain in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse CX3CL1 or recombinant rat CX3CL1 is observed.          |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 51637                                                                                                                                         |
| <b>Purification</b>       | Protein A or G purified from ascites                                                                                                                                                    |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human CX3CL1/Fractalkine Chemokine Domain<br>Gln25-Arg339 (Ser199Asn) (predicted)<br>Accession # P78423                                 |
| <b>Endotoxin Level</b>    | <0.10 EU per 1 µg of the antibody by the LAL method.                                                                                                                                    |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                                                 | <b>Recommended Concentration</b> | <b>Sample</b>                                                                                             |
|-------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Intracellular Staining by Flow Cytometry</b> | 2.5 µg/10 <sup>6</sup> cells     | Human CX3CL1/Fractalkine transfected NS0 cells fixed with paraformaldehyde and permeabilized with saponin |

## PREPARATION AND STORAGE

|                                |                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>          | Reconstitute at 0.5 mg/mL in sterile PBS.                                                                                                                                                                                                                                                                                                                |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C                                                                                                                       |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

CX3CL1, also named neurotactin, is a novel chemokine identified through bioinformatics. CX3CL1 has a unique C-X<sub>3</sub>-C cysteine motif near the amino-terminus and is the first member of a fourth branch of the chemokine superfamily. Unlike other known chemokines, CX3CL1 is a type 1 membrane protein containing a chemokine domain tethered on a long mucin-like stalk. Human CX3CL1 cDNA encodes a 397 amino acid (aa) 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 CX3CL1 can be released, possibly by proteolysis at the dibasic cleavage site proximal to the membrane, to generate soluble CX3CL1. CX3CL1 mRNA has been detected in various tissues including the brain and heart. The expression of CX3CL1 was also reported to be up-regulated in endothelial cells and microglia by inflammatory signals. Membrane-bound CX3CL1 has been shown to promote adhesion of leukocytes. The soluble chemokine domain of human CX3CL1 was reported to be chemotactic for T cells and monocytes while the soluble chemokine domain of mouse CX3CL1 was reported to chemoattract neutrophils and T-lymphocytes but not monocytes.

### References:

1. Pan, Y. *et al.* (1997) *Nature* **387**:611.
2. Bazan, J.F. *et al.* (1997) *Nature* **385**:640.
3. Mackay, C.R. (1997) *Current Biology* **7**:R384.