

DATASHEET

Version 20181206

Fractalkine/CX3CL1, Rat

Cat. No.: Z03267-10

Size: 10.0 ug

Synonyms: Fractalkine, Neurotactin, CX3CL1

Description:

Chemokine (C-X3-C motif) ligand 1 (CX3CL1) is a large cytokine protein of 373 amino acids. It contains multiple domains and is the only known member of the CX3C chemokine family. It is also commonly known under the names fractalkine (in humans) and neurotactin (in mice). The polypeptide structure of CX3CL1 differs from the typical structure of other chemokines. For example, the spacing of the characteristic N-terminal cysteines is different; there are three amino acids separating the initial pair of cysteines in CX3CL1, while there are none in CC chemokines and only one in CXC chemokines. CX3CL1 is produced as a long protein (with 373-amino acid in humans) with an extended mucin-like stalk and a chemokine domain on top. The mucin-like stalk allows it to bind to the surface of certain cells. Soluble CX3CL1 potently chemoattracts T cells and monocytes, while the cell-bound chemokine promotes strong adhesion of leukocytes to activated endothelial cells, where it is primarily expressed. CX3CL1 can signal through the chemokine receptor CX3CR1.

Recombinant rat Fractalkine/CX3CL1 produced in HEK293 cells is a polypeptide chain containing 310 amino acids. A fully biologically active molecule, rrFractalkine/CX3CL1 has a molecular mass of 70-90 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 QHLMGTCNI TCHKMTSPIP VTLIIHYQLN QESCGKRAII
00041 LETRQHRHFC ADPKEKWVQD AMKHLHDQTA ALTRNGGKFE
00081 KRVDNVTPRI TSATRGLSPT ALAKPESATV EDLTLEPTAI
00121 SQEARRPMGT SQEPAAVTG SSPSTSKAQD AGLAAKPQST
00161 GISEVAAVST TIWPSSAVYQ SGSSLWAEK ATEPPTIAL
00201 STQASTTSSP KQNVGSEGQP PWVQEQDSTP EKSPGPEETN
00241 PVHTDIFQDR GPGSTVHPSV APTSSEKTPS PELVASGSQA
00281 PKVEEPIHAT ADPQKLSVFI TPVPDSQAAT
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Source: HEK 293

Species: Rat

Biological Activity: The EC₅₀ value of rat Fractalkine/CX3CL1 on Ca²⁺ mobilization assay in CHO-K1/G α 15/rCX3CR1 cells (human G α 15 and rat CX3CR1 stably expressed in CHO-K1 cells) is less than 1 ng/ml.

Molecular Weight: 70-90 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100µg/ml.

Purity: > 98% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant Rat Fractalkine/CX3CL1 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, recombinant Rat Fractalkine/CX3CL1 should be stable up to 1 week at 4°C or up to 2 months at -20°C.