

Datasheet for ABIN1889293
CX3CL1 ELISA Kit



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Overview

Quantity:	96 tests
Target:	CX3CL1
Binding Specificity:	AA 25-334
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	312-20000 pg/mL
Minimum Detection Limit:	312 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat Fractalkine
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: sf21 Immunogen sequence: Q25-T334
Specificity:	Expression system for standard: sf21 Immunogen sequence: Q25-T334
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target:	CX3CL1
Alternative Name:	CX3CL1 (CX3CL1 Products)
Background:	<p>Protein Function: The soluble form is chemotactic for T-cells and monocytes, but not for neutrophils. The membrane-bound form promotes adhesion of those leukocytes to endothelial cells. May play a role in regulating leukocyte adhesion and migration processes at the endothelium. Binds to CX3CR1.</p> <p>Background: 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). 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 permits it to bind to the surface of certain cells. However a soluble(90 kD) version of this chemokine has also been observed. 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 elicits its adhesive and migratory functions by interacting with the chemokine receptor CX3CR1. Its gene is located on human chromosome 16 along with some CC chemokines known as CCL17 and CCL22. It can act as a mediator of smooth muscle cell migration in human atherosclerosis, rather than mediate inflammatory cell recruitment.</p> <p>Synonyms: Fractalkine,C-X3-C motif chemokine 1,CX3C membrane-anchored chemokine,Neurotactin,Small-inducible cytokine D1,Processed fractalkine,Cx3cl1,Acc1, Fkn, Scyd1,</p> <p>Full Gene Name: Fractalkine</p> <p>Cellular Localisation: Cell membrane, Single-pass type I membrane protein.</p>
Gene ID:	89808
UniProt:	O55145

Target Details

Pathways: [Synaptic Membrane](#)

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Tissue Specificity: Highest levels in brain (neurons). Significant levels in kidney, heart, lung and adrenal gland.
Plate:	Pre-coated
Protocol:	rat Fractalkine ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Fractalkine has been precoated onto 96-well plates. Standards (sf21, Q25-T334) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Fractalkine is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the rat Fractalkine amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 20000pg/mL, 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL rat Fractalkine standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of rat cell culture supernates, serum, plasma(heparin, EDTA) or tissue homogenates to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat Fractalkine standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(ng/ml): 1.54, Standard deviation: 0.08, CV(%): 5.2• Sample 2: n=16, Mean(ng/ml): 7.5, Standard deviation: 0.368, CV(%): 4.9• Sample 3: n=16, Mean(ng/ml): 14.3, Standard deviation: 0.615, CV(%): 4.3,• Sample 1: n=24, Mean(ng/ml): 1.32, Standard deviation: 0.099, CV(%): 7.5• Sample 2: n=24, Mean(ng/ml): 7.7, Standard deviation: 0.57, CV(%): 7.4• Sample 3: n=24, Mean(ng/ml): 15.4, Standard deviation: 1.047, CV(%): 6.8
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	Zhao, He, Pan, Xu, Song: "Kindlin-1 is a key protein in hyperbaric oxygen therapy for the treatment of neuropathic pain." in: Molecular pain , Vol. 13, pp. 1744806917730250, (2018) (PubMed).
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Images

