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CX3CR1 Antibody

Catalog # ASC10055

Product Information

Application	WB, IF, FC, E, IHC-P
Primary Accession	P49238
Other Accession	NP_001328, 4503171
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	40396
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	CX3CR1 antibody can be used for detection of CX3CR1 by Western blot at 0.5 - 1 □g/mL. Antibody can also be used for immunohistochemistry starting at 2 □g/mL. For immunofluorescence start at 10 □g/mL. Flow cytometry at 0.1 □g/ml.

Additional Information

Gene ID	1524
Other Names	CX3CR1 Antibody: V28, CCRL1, GPR13, CMKDR1, GPRV28, CMKBRL1, CX3C chemokine receptor 1, Beta chemokine receptor-like 1, C-X3-C CKR-1, chemokine (C-X3-C motif) receptor 1
Target/Specificity	CX3CR1;
Reconstitution & Storage	CX3CR1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	CX3CR1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CX3CR1 {ECO:0000303|PubMed:12551893, ECO:0000312|HGNC:HGNC:2558}
Function	Receptor for the C-X3-C chemokine fractalkine (CX3CL1) present on many early leukocyte cells; CX3CR1-CX3CL1 signaling exerts distinct functions in different tissue compartments, such as immune response, inflammation, cell adhesion and chemotaxis (PubMed:12055230, PubMed:23125415, PubMed:9390561, PubMed:9782118). CX3CR1-CX3CL1 signaling mediates cell migratory functions (By similarity). Responsible for the recruitment of natural

	killer (NK) cells to inflamed tissues (By similarity). Acts as a regulator of inflammation process leading to atherogenesis by mediating macrophage and monocyte recruitment to inflamed atherosclerotic plaques, promoting cell survival (By similarity). Involved in airway inflammation by promoting interleukin 2-producing T helper (Th2) cell survival in inflamed lung (By similarity). Involved in the migration of circulating monocytes to non-inflamed tissues, where they differentiate into macrophages and dendritic cells (By similarity). Acts as a negative regulator of angiogenesis, probably by promoting macrophage chemotaxis (PubMed:14581400, PubMed:18971423). Plays a key role in brain microglia by regulating inflammatory response in the central nervous system (CNS) and regulating synapse maturation (By similarity). Required to restrain the microglial inflammatory response in the CNS and the resulting parenchymal damage in response to pathological stimuli (By similarity). Involved in brain development by participating in synaptic pruning, a natural process during which brain microglia eliminates extra synapses during postnatal development (By similarity). Synaptic pruning by microglia is required to promote the maturation of circuit connectivity during brain development (By similarity). Acts as an important regulator of the gut microbiota by controlling immunity to intestinal bacteria and fungi (By similarity). Expressed in lamina propria dendritic cells in the small intestine, which form transepithelial dendrites capable of taking up bacteria in order to provide defense against pathogenic bacteria (By similarity). Required to initiate innate and adaptive immune responses against dissemination of commensal fungi (mycobiota) component of the gut: expressed in mononuclear phagocytes (MNPs) and acts by promoting induction of antifungal IgG antibodies response to confer protection against disseminated C.albicans or C.auris infection (PubMed:29326275). Also acts as a receptor for C-C motif chemokine CCL26, inducing cell chemotaxis (PubMed:20974991).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in lymphoid and neural tissues (PubMed:7590284). Expressed in lymphocyte subsets, such as natural killer (NK) cells, gamma-delta T-cells and terminally differentiated CD8(+) T-cells (PubMed:12055230). Expressed in smooth muscle cells in atherosclerotic plaques (PubMed:14581400)

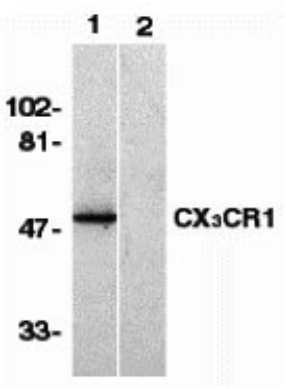
Background

CX3CR1 Antibody: CX3CR1 is one of the chemokine receptors that are required as coreceptors for HIV infection. The genes encoding human, murine, and rat CX3CR1 were cloned and designated V28 and CMKBRL1, CX3CR1, and RBS11, respectively. The encoded seven transmembrane protein was recently identified as the receptor for a novel transmembrane molecule, fractalkine, and renamed CX3CR1. Recently, CX3CR1 was found to serve as a coreceptor for HIV-1 and HIV-2 envelope fusion and virus infection, which can be inhibited by fractokine. CX3CR1 mediates leukocyte migration and adhesion. CX3CR1 is expressed in a variety of human tissues and cell lines.

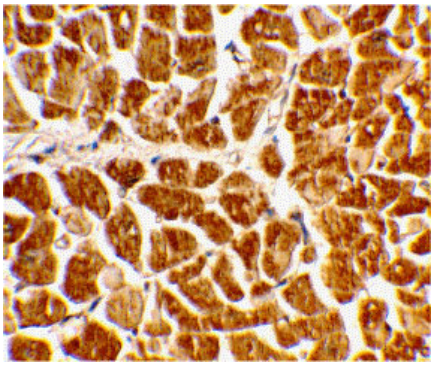
References

Raport CJ, Schweickart VL, Eddy RL JR, Shows TB, Gray PW. The orphan G-protein-coupled receptor-encoding gene V28 is closely related to genes for chemokine receptors and is expressed in lymphoid and neural tissues. Gene 1995;163:295-9
Combadiere C, Ahuja SK, Murphy PM. Cloning, chromosomal localization, and RNA expression of a human β chemokine receptor-like gene. DNA Cell Biol 1995;14:673-80
Combadiere C, Gao J, Tiffany HL, Murphy PM. Gene cloning, RNA distribution, and functional expression of mCX3CR1, a mouse chemotactic receptor for the CX3C chemokine fractalkine. Biochem Biophys Res Commun 1998;253:728-32
Harrison JK, Barber CM, Lynch KR. cDNA cloning of a G-protein-coupled receptor expressed in rat spinal cord and brain related to chemokine receptors. Neurosci Lett 1994;169:85-9

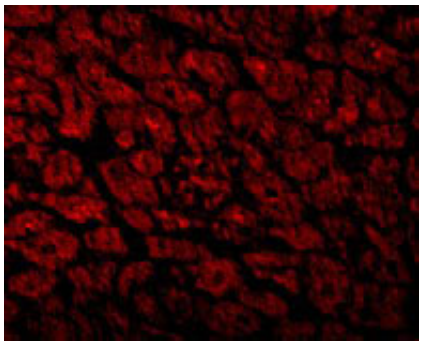
Images



Western blot analysis of CX3CR1 in human spleen lysate with CX3CR1 antibody at 1 µg/mL in the absence (lane 1) or presence of blocking peptide (lane 2).



Immunohistochemical staining of human heart tissue using CX3CR1 antibody at 2 µg/mL.



Immunofluorescence of CX3CR1 in Human Heart cells with CX3CR1 antibody at 10 µg/mL.