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CCR3 Antibody

Catalog # ASC10006

Product Information

Application	WB, E
Primary Accession	P51677
Other Accession	NP_847899, 30581170
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	41044
Conjugate	Unconjugated
Application Notes	CCR3 antibody can be used for the detection of CCR3 by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	1232
Other Names	CCR3 Antibody: CKR3, CD193, CMKBR3, CC-CKR-3, C-C chemokine receptor type 3, Eosinophil eotaxin receptor, C-C CKR-3, chemokine (C-C motif) receptor 3
Target/Specificity	CCR3;
Reconstitution & Storage	CCR3 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	CCR3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CCR3
Synonyms	CMKBR3
Function	G protein-coupled receptor (GPCR) that plays a key role in the immune system by regulating the migration and activation of white blood cells in response to chemokines (PubMed:28994588). Selectively interacts with eosinophil-attracting chemokines such as eotaxin/CCL11, eotaxin-2/CCL24 and eotaxin-3/CCL26 (PubMed:7622448, PubMed:8642344, PubMed:8676064). Ligand binding triggers intracellular signaling that leads to chemotaxis of immune cells. Mechanistically, signals through GNA14 or GNA16 to induce stimulation of phospholipase Cbeta/PLCB2 and subsequently chemotaxis

	(PubMed:18406577). Alternatively, transduces signal via GNAI1 resulting in elevated intracellular calcium levels and activation of the PI3K/AKT pathway (PubMed:8676064, PubMed:35570218). May also act as a possible functional receptor for NARS1 (PubMed:30171954).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	In eosinophils as well as trace amounts in neutrophils and monocytes.

Background

CCR3 Antibody: Human immunodeficiency virus (HIV) and related virus require coreceptors to infect target cells. Some G protein-coupled receptors including CCR5, CXCR4, CCR3, CCR2b, CCR8, GPR15, STRL33, and CX3CR1 in the chemokine receptor family were recently identified as HIV coreceptors. CCR5, CXCR4 and CCR3 are the principal receptors for HIV fusion and entry of target cells. CCR3 facilitates infection by a subset of virus. CCR3 and CCR5 promote efficient infection of microglia, the major target cells in the CNS. High levels of CCR3 and CXCR4 expression were found on the neurons from both the central and peripheral nervous systems. The CCR3 ligand, eotaxin, and an anti-CCR3 antibody inhibited HIV infection of microglia. These results indicate CCR3 plays an important role in HIV infection of CNS.

References

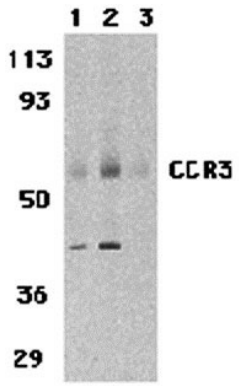
Feng Y, Broder CC, Kennedy PE, et al. HIV-1 entry cofactor: functional cDNA cloning of a seven-transmembrane, G protein-coupled receptor. Science 1996; 272:872-7.

Deng H, Liu R, Ellmeier W, et al. Identification of a major co-receptor for primary isolates of HIV-1. Nature 1996; 381:661-6.

Choe H, Farzan M, Sun Y, et al. The β-chemokine receptors CCR3 and CCR5 facilitate infection by primary HIV-1 isolates. Cell 1996; 85:1135-48.

He J, Chen Y, Farzan M, et al. CCR3 and CCR5 are co-receptors for HIV-1 infection of microglia. Nature 1997; 385:645-9.

Images



Western blot analysis of CCR3 in human spleen tissue lysates with CCR3 antibody at 1 (lane 1) and 2 µg/mL (lane 2), and 2 µg/mL in the presence of blocking peptide (lane 3).