FabGennix International Incorporated

FabGennix International, Inc.
9191 Kyser Way Bldg. 4 Suite 402
Frisco, TX 75033

Tel: (214)-387-8105, 1-800-786-1236 Fax: (214)-387-8105 Email: info@fabgennix.com Web: www.FabGennix.com

Rabbit Polyclonal Anti-CCR2 antibody

Catalog Number: CCR2-201AP

Lot Number:

General Information

Product	CCR2 Antibody Affinity Purified
Description	C-C chemokine receptor type 2 Antibody Affinity Purified
Accession #	Uniprot: P41597
Verified Applications	ELISA, WB
Species Cross Reactivity	Human
Host	Rabbit
Immunogen	Synthetic peptide taken within amino acid region 20-70 on human CCR2 protein.
Alternative Nomenclature	C C chemokine receptor type 2 antibody, C C CKR 2 antibody, CCR 2 antibody, CCR1L antibody, CCR5L antibody, CD192 antibody, CKR 2 antibody, CMKBR2 antibody, MCP 1 R antibody, MCP1 RECEPTOR antibody, Monocyte Chemotactic Protein 1 Receptor antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	0.61-0.71 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20ºC for long term storage.

Recommended Dilutions

DOT Blot	1:10,000
ELISA	1:10,000
Western Blot	1:500

Related Products	Catalog #
FITC-Conjugated	CCR2-FITC
Antigenic Blocking Peptide	P-CCR2
Western Blot Positive Control	PC-CCR2

Overview:

Chemokine receptors represent a subfamily of ~20 GPCRs that were originally identified by their roles in immune cell trafficking. Macrophage inflammatory protein-1 alpha (MIP-1 alpha) and RANTES, members of the beta chemokine family of leukocyte chemo-attractants, bind to a common seven-transmembrane-domain human receptor. Chemokines (Chemo-attractant Cytokines) are small peptides that are potent activators and chemo-attractants for leukocyte subpopulations and other non-hemopoietic cells. Chemokine receptors (CCR) belong to the superfamily of G protein-coupled receptors (GPCR), which regulate the trafficking and activation of leukocytes, and operate as co-receptors in the entry of HIV-1 and directing the proliferation and migration of immature neurons, glia and their precursors (1). Furthermore, chemokine receptors participate in the etiology and progression of various brain disorders, including AIDS dementia, neuro-inflammatory disease and neuroplasia, making them important potential therapeutic targets in these cases. Induction of chemokines and infiltration of chemokine receptor-bearing cells has also been shown in a variety of animal models of renal diseases, as well as in human diseases and allograft rejection (2).

Monocyte activation protein 1 (MACP1) or CCL2 is the ligand for CCR2, upon activation CCR2 mediate robust release of Ca+2 and monocytic infiltration of tissues in atherosclerosis and other inflammatory diseases. The CCR2 receptors are most closely related to MCP1/CCR1/RANTES receptors.CCR2 receptor are also implicated in several neuropathological syndromes including neuropathic pain (3). CCR2 and CXCR3 receptors also mediate leukocyte adhesion and migration in to acute kidney injury caused by ischemia-reperfusion. CCR2 is a multi-pass membrane protein, containing 7TMDs with apparent MW of 46 kDa (373 aa) expressed on many different blood cells. The CCR2 protein has putative N-glycosylation sites near the extra cellular N-terminal end of the proteins. The protein has a large 3rd intra cellular loop which interacts with G-proteins. The short carboxy terminal is intracellular and has putative post-translational sites.

The Anti-CCR2-selective antibodies were generated against conserved but unique sequences from N-terminal region of human CCR2 receptor proteins. The peptide sequence resides between aa 30-60 of CCR2 and are unique to CCR2 protein. Antibodies generated against this peptide are specific for CCR2, these antibodies are affinity purified over immobilized antigen based chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. The affinity purified antibodies are also conjugated to FITC and biotin for direct applications in IHC and cell sorting experiments. FabGennix also provide limited quantities of antigenic blocking peptides for CCR2 antibodies. Antibodies to CCR2 will label CCR2 protein in humans, chimpanzee, and gibbon in different protocols. The antibodies will not label rat and mouse protein. Limited quantities of antigenic blocking peptide and Western blot positive control for CCR2 antibodies are also available in ready-to-use buffer for SDS-PAGE and western blotting experiments.

References:

a. Tran PB, Miller RJ. Nat Rev Neurosci. 2003 4:444-55
b. Segerer S. Am J Kidney Dis. 2003 41, :S15-8.
c. Hosung Jung et. Al., Visualization of Chemokine Receptor Activation in Transgenic Mice Reveals Peripheral Activation of CCR2 Receptors in States of Neuropathic Pain. J Neurosci. 2009 June 24; 29(25): 8051–8062.
d. Mulder KW, Brenkman AB, Inagaki A, van den Broek NJ, Timmers HT. Regulation of histone H3K4 tri-methylation and PAF complex recruitment by The Ccr4-Not complex. Nucleic Acids Res. 2007 Mar 28; [Epub ahead of print

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.