

## Polyclonal Anti-CCR1 antibody

Catalog Number: CCR1-112AP

### General Information

<b>Product</b>	CCR1 Antibody Affinity Purified
<b>Description</b>	Chemokine (C-C motif) receptor 1 Antibody Affinity Purified
<b>Accession #</b>	Uniprot: P32246 GenBank: AAH64991
<b>Verified Applications</b>	ELISA, WB
<b>Species Cross Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide taken within amino acid region 1-50 on human CCR1 protein.
<b>Alternative Nomenclature</b>	C C chemokine receptor type 1 antibody, C C CKR 1 antibody, CCR1 antibody, CD191 antibody, CMKBR 1 antibody, CMKR1 antibody, HM145 antibody, LD78 receptor antibody, Macrophage inflammatory protein 1 alpha /Rantes receptor antibody, MIP-1alpha-R antibody, MIP1aR antibody, RANTES receptor antibody, SCYAR1 antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.65-0.75 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Western Blot</b>	1:500

### Related Products

### Catalog #

<b>FITC-Conjugated</b>	CCR1.112-FITC
<b>Antigenic Blocking Peptide</b>	P-CCR1.112
<b>Western Blot Positive Control</b>	PC-CCR1.112

## 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).

Activation of naïve T cells by specific antigen and cytokines, up-regulate cell adhesion molecules (CAM) as well as chemokine receptors on their surface, which directs them to migrate towards the inflamed tissues. Several subtypes of CCR have been characterized (CCR1-CCR9). The CCR1 receptors are activated by its ligand, CCL5/RANTES, and control cell migration associated with routine immune surveillance, inflammation, and development. CCR1 also plays important role in normal physiology, cancer, and AIDS, thus making them important therapeutic targets. The CCR1 receptor protein is an approximately 45 kDa (355 aa) protein which has 7 transmembrane domains, characteristic of G-protein coupled receptors. The CCR4 receptors are activated by thymus and activation-regulated chemokines (TARC) that are expressed constitutively in the thymus and transiently in stimulated peripheral blood mononuclear cells. The protein has putative N-glycosylation sites near the extra cellular N-terminal end of the proteins. The protein has a large 3rd intracellular loop which interacts with G-proteins. The short carboxy-terminal end is intracellular and has putative post-translational sites.

The Anti-CCR1-selective antibodies were generated against conserved but unique sequences from human and mouse CCR1 proteins. These sequences reside near the N-terminal end of CCR1 and are unique to CCR1 protein. The antibodies to CCR1 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 offers two antibodies for CCR1: CCR1-101AP which reacts with mouse and rat CCR1 protein, and CCR1-112AP which reacts with human CCR1 protein.

### References:

- a. Tran PB, Miller RJ. Nat Rev Neurosci. 2003 4:444-55
- b. Seeger S. Am J Kidney Dis. 2003 41, S15-8.
- c. 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.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.