

### CCR2 Antibody

Rabbit Polyclonal Antibody Catalog # ABV10303

### Specification

# CCR2 Antibody - Product Information

Application Primary Accession Other Accession Reactivity Host Clonality Isotype Calculated MW WB <u>O55193</u> <u>NP\_068638.1</u> Human, Mouse, Rat Rabbit Polyclonal Rabbit IgG 42763

# CCR2 Antibody - Additional Information

Gene ID 60463

Application & Usage

Western blotting (0.5-4 µg/ml). However, the optimal conditions should be determined individually. The antibody detects ~42 kDa of CCR2 in samples from human, mouse and rat origins. Reactivity to other species has not been determined.

Other Names CCR2A, CCR2B, Chemokine CC Motif Receptor 2, CKR2, Monocyte Chemotactic Protein 1 Receptor,

Target/Specificity CCR2

Antibody Form Liquid

Appearance Colorless liquid

Formulation

100  $\mu$ g (0.5 mg/ml) affinity purified rabbit anti-CCR2 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol and 0.01% Thimerosal.

Handling The antibody solution should be gently mixed before use.

Reconstitution & Storage -20 °C

**Background Descriptions** 



### Precautions

CCR2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## CCR2 Antibody - Protein Information

Name Ccr2

Synonyms Cmkbr2

### Function

Key functional receptor for CCL2 but can also bind CCL7 and CCL12 (By similarity). Its binding with CCL2 on monocytes and macrophages mediates chemotaxis and migration induction through the activation of the PI3K cascade, the small G protein Rac and lamellipodium protrusion (By similarity). Also acts as a receptor for the beta-defensin DEFB106A/DEFB106B (By similarity). Regulates the expression of T-cell inflammatory cytokines and T-cell differentiation, promoting the differentiation of T-cells into T-helper 17 cells (Th17) during inflammation (By similarity). Facilitates the export of mature thymocytes by enhancing directional movement of thymocytes to sphingosine-1-phosphate stimulation and up-regulation of S1P1R expression; signals through the JAK-STAT pathway to regulate FOXO1 activity leading to an increased expression of S1P1R (By similarity). Increases NMDA-mediated synaptic transmission in both dopamine D1 and D2 receptor-containing neurons, which may be caused by MAPK/ERK-dependent phosphorylation of GRIN2B/NMDAR2B (By similarity). Mediates the recruitment of macrophages and monocytes to the injury site following brain injury (By similarity).

### **Cellular Location**

Cell membrane {ECO:0000250|UniProtKB:P41597}; Multi-pass membrane protein. Note=The chemoattractant receptors are distributed throughout the cell surface; after stimulation with a ligand, such as CCL2, they are rapidly recruited into microdomain clusters at the cell membrane {ECO:0000250|UniProtKB:P41597}

#### **Tissue Location**

Expressed in lung, spleen, kidney, thymus and macrophages.

### **CCR2 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- <u>Dot Blot</u>
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

# CCR2 Antibody - Images

## CCR2 Antibody - Background

Chemokines play important roles in inflammation and critical for the recruitment of effector immune cells to sites of infection. Chemokines activate leukocytes by binding to G protein coupled receptors. The ever-growing chemokine receptor subtypes can be divided into 2 major groups,



CXCR and CCR, based on the 2 major classes of chemokines. One of the CCR receptors, CCR1, is expressed on neutrophils, monocytes, lymphocytes, and eosinophils and binds the leukocyte chemoattractant and hemopoiesis regulator macrophage-inflammatory protein (MIP-1), eotaxin, as well as several other related chemokines. Mice lacking the chemokine receptor CCR1 have defects in neutrophil trafficking and proliferation.