

CKR-2 (M-50): sc-30032

BACKGROUND

C-C or b chemokine family members are characterized by a pair of adjacent cysteine residues and serve as potent chemoattractants and activators of monocytes and T cells. C-C chemokine receptor family members include CKR-1, CKR-2A, CKR-2B, CKR-3, CKR-4, CKR-5, CKR-6, CKR-7, CKR-8, CKR-9, CKR-10 and the Duffy blood group antigen. Each of these receptors are G protein-coupled, seven pass transmembrane domain proteins whose major physiological role is to function in the chemotaxis of T cells and phagocytic cells to areas of inflammation. However, this receptor family has also been shown to facilitate viral infection. CKR-2 (C-C chemokine receptor type 2) is a 374 amino acid multi-pass membrane protein that belongs to the C-C chemokine receptor family and is expressed as 2 isoforms, designated CKR-2A and CKR-2B. Both CKR-2 isoforms function as receptors for a variety of proteins, including MCP-1 and MCP-3, thereby influencing intracellular calcium levels and affecting signal transduction throughout the cell.

REFERENCES

- Schweickart, V.L., et al. 1994. Cloning of human and mouse EBI1, a lymphoid-specific G protein-coupled receptor encoded on human chromosome 17q12-q21.2. *Genomics* 23: 643-650.
- Deng, H., et al. 1996. Identification of a major co-receptor for primary isolates of HIV-1. *Nature* 381: 661-666.
- Dragic, T., et al. 1996. HIV-1 entry into CD4⁺ cells is mediated by the chemokine receptor CC-CKR-5. *Nature* 381: 667-673.
- Feng, Y., et al. 1996. HIV-1 entry cofactor: functional cDNA cloning of a seven-transmembrane, G protein-coupled receptor. *Science* 272: 872-877.
- Alkhatib, G., et al. 1996. CC CKR5: a RANTES, MIP-1 α , MIP-1 β receptor as a fusion cofactor for macrophage-tropic HIV-1. *Science* 272: 1955-1958.
- Choe, H., et al. 1996. The β -chemokine receptors CCR3 and CCR5 facilitate infection by primary HIV-1 isolates. *Cell* 85: 1135-1148.
- Doranz, B.J., et al. 1996. A dual-tropic primary HIV-1 isolate that uses fusin and the b-chemokine receptors CKR-5, CKR-3, and CKR-2B as fusion cofactors. *Cell* 85: 1149-1158.
- Baba, M., et al. 1997. Identification of CCR6, the specific receptor for a novel lymphocyte-directed CC chemokine LARC. *J. Biol. Chem.* 272: 14893-14898.

CHROMOSOMAL LOCATION

Genetic locus: Ccr2 (mouse) mapping to 9 F4.

SOURCE

CKR-2 (M-50) is a rabbit polyclonal antibody raised against amino acids 1-50 mapping within an N-terminal extracellular domain of CKR-2 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CKR-2 (M-50) is recommended for detection of CKR-2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CKR-2 siRNA (m): sc-44766, CKR-2 siRNA (r): sc-156075, CKR-2 shRNA Plasmid (m): sc-44766-SH, CKR-2 shRNA Plasmid (r): sc-156075-SH, CKR-2 shRNA (m) Lentiviral Particles: sc-44766-V and CKR-2 shRNA (r) Lentiviral Particles: sc-156075-V.

Molecular Weight of CKR-2: 47 kDa.

Positive Controls: mouse spleen extract: sc-2391.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Lee, Y., et al. 2010. *In vivo* MR evaluation of the effect of the CCR2 antagonist on macrophage migration. *Magn. Reson. Med.* 64: 72-79.
- Goto, K.T., et al. 2011. Hyperocclusion stimulates osteoclastogenesis via CCL2 expression. *J. Dent. Res.* 90: 793-798.
- Tsutsumi, T., et al. 2013. Hyperocclusion up-regulates CCL3 expression in CCL2- and CCR2-deficient mice. *J. Dent. Res.* 92: 65-70.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.