

CKR-4 (H-48): sc-7936

BACKGROUND

C-C or β 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-4 (C-C chemokine receptor type 4), also known as CCR4 or CMKBR4, is a 360 amino acid multi-pass membrane protein that localizes to the cell membrane and belongs to the C-C chemokine receptor family. Expressed at high levels in peripheral blood leukocytes and thymus tissue, CKR-4 functions as a high affinity receptor for C-C type chemokines and is thought to be involved in hippocampal-neuron survival.

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.

CHROMOSOMAL LOCATION

Genetic locus: CCR4 (human) mapping to 3p22.3; Ccr4 (mouse) mapping to 9 F3.

SOURCE

CKR-4 (H-48) is a rabbit polyclonal antibody raised against amino acids 313-360 of CKR-4 of human 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-4 (H-48) is recommended for detection of CKR-4 of mouse, rat and human 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-4 siRNA (h): sc-39886, CKR-4 siRNA (m): sc-39887, CKR-4 shRNA Plasmid (h): sc-39886-SH, CKR-4 shRNA Plasmid (m): sc-39887-SH, CKR-4 shRNA (h) Lentiviral Particles: sc-39886-V and CKR-4 shRNA (m) Lentiviral Particles: sc-39887-V.

Molecular Weight of CKR-4: 41 kDa.

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

- Ito, A., et al. 2003. Transfer of severe experimental autoimmune encephalomyelitis by IL-12- and IL-18-potentiated T cells is estrogen sensitive. *J. Immunol.* 170: 4802-4809.
- Kleinhans, M., et al. 2003. Functional expression of the eotaxin receptor CCR3 in CD30⁺ cutaneous T-cell lymphoma. *Blood* 101: 1487-1493.
- McLoughlin, R.M., et al. 2005. IL-6 *trans*-signaling via Stat3 directs T cell infiltration in acute inflammation. *Proc. Natl. Acad. Sci. USA* 102: 9589-9595.
- Marchal-Somme, J., et al. 2006. Cutting edge: nonproliferating mature immune cells form a novel type of organized lymphoid structure in idiopathic pulmonary fibrosis. *J. Immunol.* 176: 5735-5739.
- Nakamura, E.S., et al. 2006. RANKL-induced CCL22/macrophage-derived chemokine produced from osteoclasts potentially promotes the bone metastasis of lung cancer expressing its receptor CCR4. *Clin. Exp. Metastasis* 23: 9-18.
- De Paepe, B., et al. 2012. Upregulation of chemokines and their receptors in duchenne muscular dystrophy: potential for attenuation of myofiber necrosis. *Muscle Nerve* 45: 914-916.
- Fong, Y., et al. 2014. The antiproliferative and apoptotic effects of sirtinol, a sirtuin inhibitor on human lung cancer cells by modulating Akt/ β -catenin-Foxo3a axis. *ScientificWorldJournal* 2014: 937051.

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.

MONOS
Satisfaction
Guaranteed

Try **CKR-4 (G-2): sc-377357**, our highly recommended monoclonal alternative to CKR-4 (H-48).