SANTA CRUZ BIOTECHNOLOGY, INC.

CKR-4 (M-20): sc-6127

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 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

1. 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.
2. Dragic, T., et al. 1996. HIV-1 entry into CD4+ cells is mediated by the chemokine receptor CC-CKR-5. Nature 381: 667-673.
3. Deng, H., et al. 1996. Identification of a major co-receptor for primary isolates of HIV-1. Nature 381: 661-666.
4. Feng, Y., et al. 1996. HIV-1 entry cofactor: functional cDNA cloning of a seven-transmembrane, G protein-coupled receptor. Science 272: 872-877.
5. Alkhatib, G., et al. 1996. CC CKR5: a RANTES, MIP-1α, MIP-1β receptor as a fusion cofactor for macrophage-tropic HIV-1. Science 272: 1955-1958.
6. Choe, H., et al. 1996. The β-chemokine receptors CCR3 and CCR5 facilitate infection by primary HIV-1 isolates. Cell 85: 1135-1148.
7. Doranz, B.J., et al. 1996. A dual-tropic primary HIV-1 isolate that uses fusin and the β-chemokine receptors CKR-5, CKR-3, and CKR-2β as fusion cofactors. Cell 85: 1149-1158.
8. 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: Ccr4 (mouse) mapping to 9 F3.

SOURCE

CKR-4 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CKR-4 of mouse origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-6127 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CKR-4 (M-20) is recommended for detection of CKR-4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CKR-4 (M-20) is also recommended for detection of CKR-4 in additional species, including bovine.

Suitable for use as control antibody for CKR-4 siRNA (m): sc-39887, CKR-4 shRNA Plasmid (m): sc-39887-SH 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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Flugel, A., et al. 2001. Migratory activity and functional changes of green fluorescent effector cells before and during experimental autoimmune encephalomyelitis. Immunity 14: 547-560.
2. Oh, S.B., et al. 2001. Chemokines and glycoprotein120 produce pain hypersensitivity by directly exciting primary nociceptive neurons. J. Neurosci. 21: 5027-5035.
3. Liu, Q., et al. 2007. Triptolide impairs dendritic cell migration by inhibiting CCR7 and COX-2 expression through PI3-K/Akt and NFκB pathways. Mol. Immunol. 44: 2686-2696.

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.