

# CKR-4 (KH-4F5): sc-101375

## BACKGROUND

C-C or  $\beta$  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<sup>+</sup> 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 $\alpha$ , MIP-1 $\beta$  receptor as a fusion cofactor for macrophage tropic HIV-1. *Science* 272: 1955-1958.

## CHROMOSOMAL LOCATION

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

## SOURCE

CKR-4 (KH-4F5) is a mouse monoclonal antibody raised against CKR-4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CKR-4 (KH-4F5) is available conjugated to agarose (sc-101375 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101375 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101375 PE), fluorescein (sc-101375 FITC), Alexa Fluor<sup>®</sup> 488 (sc-101375 AF488), Alexa Fluor<sup>®</sup> 546 (sc-101375 AF546), Alexa Fluor<sup>®</sup> 594 (sc-101375 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-101375 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-101375 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-101375 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

CKR-4 (KH-4F5) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) 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.

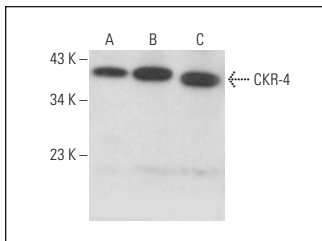
Molecular Weight of CKR-4: 41 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HEK293 whole cell lysate: sc-45136 or Raji whole cell lysate: sc-364236.

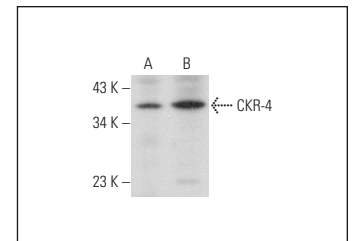
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



CKR-4 (KH-4F5): sc-101375. Western blot analysis of CKR-4 expression in HL-60 (A), HEK293 (B) and Raji (C) whole cell lysates.



CKR-4 (KH-4F5): sc-101375. Western blot analysis of CKR-4 expression in C2C12 (A) and L6 (B) whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.