

CKR-5 (T21/8): sc-53792

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. Termed a "co-receptor", CKR-5, along with CD4, has been shown to be a major receptor for HIV. CKR-5 tends to associate with macrophage tropic viruses, such as macrophage tropic HIV-1, while CKR-2B and CKR-3 bind a minority of viruses.

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-CKR-5: 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.

CHROMOSOMAL LOCATION

Genetic locus: CCR5 (human) mapping to 3p21.31; Ccr5 (mouse) mapping to 9 F4.

SOURCE

CKR-5 (T21/8) is a mouse monoclonal antibody raised against CKR-5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CKR-5 (T21/8) is available conjugated to either phycoerythrin (sc-53792 PE) or fluorescein (sc-53792 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

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.

APPLICATIONS

CKR-5 (T21/8) is recommended for detection of CKR-5 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CKR-5 siRNA (h): sc-35062, CKR-5 siRNA (m): sc-35063, CKR-5 shRNA Plasmid (h): sc-35062-SH, CKR-5 shRNA Plasmid (m): sc-35063-SH, CKR-5 shRNA (h) Lentiviral Particles: sc-35062-V and CKR-5 shRNA (m) Lentiviral Particles: sc-35063-V.

Molecular Weight of CKR-5: 46 kDa.

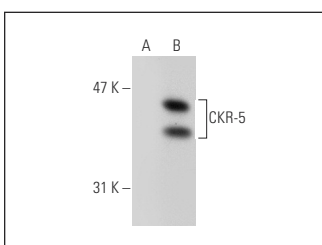
Positive Controls: CKR-5 (h): 293T Lysate: sc-115607, U-937 cell lysate: sc-2239 or HuT 78 whole cell lysate: sc-2208.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CKR-5 (T21/8): sc-53792. Western blot analysis of CKR-5 expression in non-transfected: sc-117752 (A) and human CKR-5 transfected: sc-115607 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Qiu, M., et al. 2012. Lignosulfonic acid exhibits broadly anti-HIV-1 activity-potential as a microbicide candidate for the prevention of HIV-1 sexual transmission. *PLoS ONE* 7: e35906.

PROTOCOLS

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