

# CKR-5 (N-20): sc-8283

## 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 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.
- 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.
- Deng, H., et al. 1996. Identification of a major co-receptor for primary isolates of HIV-1. *Nature* 381: 661-666.
- 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.
- Choe, H., et al. 1996. The  $\beta$ -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  $\beta$ -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: CCR5 (human) mapping to 3p21.

## SOURCE

CKR-5 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CKR-5 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-8283 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CKR-5 (N-20) is recommended for detection of CKR-5 of human 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).

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

Molecular Weight of CKR-5: 46 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, U-937 cell lysate: sc-2239 or HuT 78 whole cell lysate: sc-2208

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

- Abe, M., et al. 2002. Role for macrophage inflammatory protein (MIP)-1 $\alpha$  and MIP-1 $\beta$  in the development of osteolytic lesions in multiple myeloma. *Blood* 100: 2195-2202.
- Elliott, M.B., et al. 2004. Inhibition of respiratory syncytial virus infection with the C-C chemokine RANTES (CCL5). *J. Med. Virol.* 73: 300-308.
- Molon, B., et al. 2005. T cell costimulation by chemokine receptors. *Nat. Immunol.* 6: 465-471.
- Zhao, X.Y., et al. 2005. Functional analysis of naturally occurring mutations in the open reading frame of CCR5 in HIV-infected Chinese patients and healthy controls. *J. Acquir. Immune Defic. Syndr.* 38: 509-517.

## 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-5 (D-6): sc-17833** or **CKR-5 (R22/7): sc-32304**, our highly recommended monoclonal alternatives to CKR-5 (N-20).