SANTA CRUZ BIOTECHNOLOGY, INC.

CKR-1 (H-52): sc-7934

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-1 (C-C chemokine receptor type 1), also known as CMKBR1, CMKR1, SCYAR1, or HM145, is a 355 amino acid member of the C-C chemokine receptor family. Localized to the cell membrane, CKR-1 is widely expressed and functions as a receptor for proteins such as MIP-1α and MIP-1δ, thereby influencing intracellular calcium levels and affecting signal transduction throughout the cell. Additionally, CKR-1 plays an important role in stem cell proliferation.

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. Deng, H., et al. 1996. Identification of a major co-receptor for primary isolates of HIV-1. Nature 381: 661-666.

CHROMOSOMAL LOCATION

Genetic locus: CCR1 (human) mapping to 3p21.31; Ccr1 (mouse) mapping to 9 F4.

SOURCE

CKR-1 (H-52) is a rabbit polyclonal antibody raised against amino acids 156-207 including an extracellular domain of CKR-1 of human origin.

PRODUCT

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

APPLICATIONS

CKR-1 (H-52) is recommended for detection of CKR-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-1 siRNA (h): sc-39880, CKR-1 siRNA (m): sc-39881, CKR-1 shRNA Plasmid (h): sc-39880-SH, CKR-1 shRNA Plasmid (m): sc-39881-SH, CKR-1 shRNA (h) Lentiviral Particles: sc-39880-V and CKR-1 shRNA (m) Lentiviral Particles: sc-39881-V.

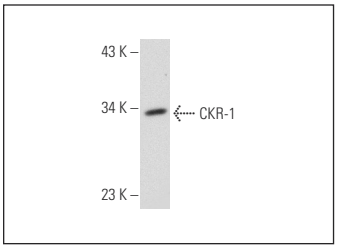
Molecular Weight of CKR-1: 41 kDa.

Positive Controls: human platelet extract: sc-363773.

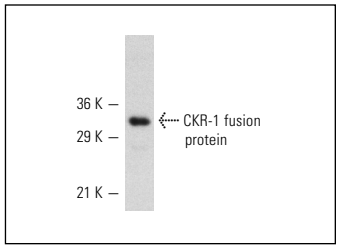
STORAGE

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

DATA



CKR-1 (H-52): sc-7934. Western blot analysis of CKR-1 expression in human platelet extract.



CKR-1 (H-52): sc-7934. Western blot analysis of human recombinant CKR-1 fusion protein.

SELECT PRODUCT CITATIONS

1. Shahrara, S., et al. 2003. Chemokine receptor expression and *in vivo* signaling pathways in the joints of rats with adjuvant-induced arthritis. Arthritis Rheum. 48: 3568-3583.
2. Zhang, N., et al. 2004. Proinflammatory chemokines, such as C-C chemokine ligand 3, desensitize µ-opioid receptors on dorsal root ganglia neurons. J. Immunol. 173: 594-599.
3. 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.
4. Coates, P.T., et al. 2004. CCR and C-C chemokine expression in relation to Flt3 ligand-induced renal dendritic cell mobilization. Kidney Int. 66: 1907-1917.
5. Zhang, N., et al. 2005. A proinflammatory chemokine, CCL3, sensitizes the heat- and capsaicin-gated ion channel TRPV1. Proc. Natl. Acad. Sci. USA 102: 4536-4541.
6. Shahrara, S., et al. 2005. Amelioration of rat adjuvant-induced arthritis by Met-RANTES. Arthritis Rheum. 52: 1907-1919.
7. Thirkill, T.L., et al. 2006. Macaque trophoblast migration toward RANTES is inhibited by cigarette smoke-conditioned medium. Toxicol. Sci. 91: 557-567.
8. Raborn, E.S., et al. 2008. The cannabinoid δ-9-tetrahydrocannabinol mediates inhibition of macrophage chemotaxis to RANTES/CCL5: linkage to the CB2 receptor. J. Neuroimmune Pharmacol. 3: 117-129.
9. Suffee, N., et al. 2012. RANTES/CCL5-induced pro-angiogenic effects depend on CCR1, CCR5 and glycosaminoglycans. Angiogenesis 15: 727-744.

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.