SANTA CRUZ BIOTECHNOLOGY, INC.

CKR-5 (R22/7): sc-32304

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. Termed a "coreceptor", 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

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: CCR5 (human) mapping to 3p21.31.

SOURCE

CKR-5 (R22/7) is a mouse monoclonal antibody raised against a synthetic peptide near the N-terminus of CKR-5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CKR-5 (R22/7) is available conjugated to either phycoerythrin (sc-32304 PE) or fluorescein (sc-32304 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

CKR-5 (R22/7) is recommended for detection of CKR-5 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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.

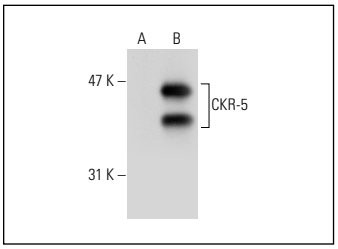
Molecular Weight of CKR-5: 46 kDa.

Positive Controls: U-937 cell lysate: sc-2239, CKR-5 (h): 293T Lysate: sc-115607 or PC-3 cell lysate: sc-2220.

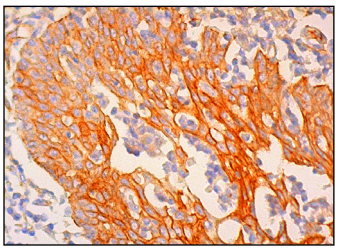
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CKR-5 (R22/7): sc-32304. 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.



CKR-5 (R22/7): sc-32304. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Bernstone, L., et al. 2012. Several commercially available anti-CCR5 monoclonal antibodies lack specificity and should be used with caution. Hybridoma 31: 7-19.
2. Jin, Q., et al. 2015. The effects of the recombinant CCR5 T4 lysozyme fusion protein on HIV-1 infection. PLoS ONE 10: e0131894.
3. Petti, L.M., et al. 2018. Regulation of C-C chemokine receptor 5 (CCR5) stability by Lys197 and by transmembrane protein aptamers that target it for lysosomal degradation. J. Biol. Chem. 293: 8787-8801.
4. Kodama, T., et al. 2020. CCL3-CCR5 axis contributes to progression of esophageal squamous cell carcinoma by promoting cell migration and invasion via Akt and ERK pathways. Lab. Invest. 100: 1140-1157.

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 for detailed protocols and support products.