SANTA CRUZ BIOTECHNOLOGY, INC.

p-CKR-5 (E11/19): sc-32305

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 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. Agonist binding to the CKR-5 induces the phosphorylation of four distinct serine residues that are located in the CKR-5 carboxy terminus. This terminus is involved in the coupling to G-proteins and also contains a cysteine site along with the phosphorylation sites, and all are involved in receptor desensitization.

REFERENCES

1. Schweickart, V.L., Raport, C.J., Godiska, R., Byers, M.G., Eddy, R.L. Jr., Shows, T.B. and Gray, P.W. 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.
3. Dragic, T., et al. 1996. HIV-1 entry into CD4+ cells is mediated by the chemokine receptor CC-CKR-5. Nature 381: 667-673.
4. Feng, Y., et al. 1996. HIV-1 entry cofactor: functional cDNA cloning of a seven-transmembrane, G protein-coupled receptor. Science 272: 872-877.
5. Alkhatib, G., et al. 1996. CC CKR5: a RANTES, MIP-1α, MIP-1β receptor as a fusion cofactor for macrophage-tropic HIV-1. Science 272: 1955-1958.
6. Choe, H., et al. 1996. The β-chemokine receptors CCR3 and CCR5 facilitate infection by primary HIV-1 isolates. Cell 85: 1135-1148.
7. Doranz, B.J., et al. 1996. A dual-tropic primary HIV-1 isolate that uses fusin and the β-chemokine receptors CKR-5, CKR-3, and CKR-2b as fusion cofactors. Cell 85: 1149-1158.
8. 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 3p21.31.

SOURCE

p-CKR-5 (E11/19) is a mouse monoclonal antibody raised against a synthetic peptide near the C-terminus of CKR-5 of human origin

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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.

APPLICATIONS

p-CKR-5 (E11/19) is recommended for detection of Ser 349 phosphorylated CKR-5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

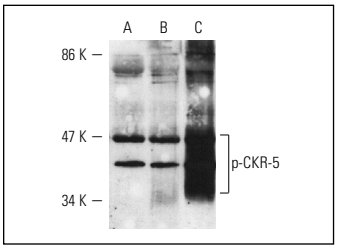
Molecular Weight of p-CKR-5: 41/46 kDa.

Positive Controls: RBL-2H3 whole cell lysate.

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, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



p-CKR-5 (E11/19): sc-32305. Western blot analysis of CKR-5 expression in non-transfected RBL-2H3 (**A**) CKR-5 transfected RBL-2H3 (**B**) and RANTES treated, CKR-5 transfected RBL-2H3 (**C**) whole cell lysates. Kindly provided by Prof. Oppermann at Georg-August University, Germany.

SELECT PRODUCT CITATIONS

1. Venuti, A., et al. 2015. ERK1-based pathway as a new selective mechanism to modulate CCR5 with natural antibodies. J. Immunol. 195: 3045-3057.

STORAGE

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