

CXCR-3 (Y-16): sc-9902

BACKGROUND

The C-X-C or α chemokine family is characterized by a pair of cysteine residues separated by a single amino acid and primarily functions as chemoattractants for neutrophils. The C-X-C family includes IL-8, NAP-2, MSGA and stromal cell derived factor-1 (SDF-1). SDF-1 was originally described as a pre-B cell stimulatory factor, but has since been shown to function as a potent chemoattractant for T cells and monocytes but not neutrophils. Receptors for the C-X-C family are G protein-coupled, seven pass transmembrane domain proteins which include IL-8RA, IL-8RB, CXCR-3 and fusin (also designated LESTR or CXCR-4). CXCR-3, also known as IP-10/MIG receptor, mediates Ca^{2+} mobilization and chemotaxis in response to the C-X-C chemokines IP-10 and MIG. CXCR-3 is highly expressed in IL-2-activated T lymphocytes, but not in resting T lymphocytes, B lymphocytes, monocytes or granulocytes.

REFERENCES

1. Laterveer, L., et al. 1996. Rapid mobilization of hematopoietic progenitor cells in rhesus monkeys by a single intravenous injection of interleukin-8. *Blood* 87: 781-788.
2. Deng, H., et al. 1996. Identification of a major co-receptor for primary isolates of HIV-1. *Nature* 381: 661-666.
3. Nagasawa, T., et al. 1996. Defects of B cell lymphopoiesis and bone-marrow myelopoiesis in mice lacking the CXC chemokine PBSF/SDF-1. *Nature* 382: 635-638.

CHROMOSOMAL LOCATION

Genetic locus: *Cxcr3* (mouse) mapping to X D.

SOURCE

CXCR-3 (Y-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CXCR-3 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9902 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CXCR-3 (Y-16) is recommended for detection of CXCR-3 of mouse and rat 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 CXCR-3 siRNA (m): sc-39903, CXCR-3 shRNA Plasmid (m): sc-39903-SH and CXCR-3 shRNA (m) Lentiviral Particles: sc-39903-V.

Molecular Weight of CXCR-3: 38 kDa.

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

SELECT PRODUCT CITATIONS

1. Thomas, M.S., et al. 2002. Differential role of IFN- γ -inducible protein 10 kDa in a cockroach antigen-induced model of allergic airway hyperactivity: systemic versus local effects. *J. Immunol.* 169: 7045-7053.
2. Inngjerdigen, M., et al. 2003. Activating and inhibitory Ly49 receptors modulate NK cell chemotaxis to CXC chemokine ligand (CXCL) 10 and CXCL12. *J. Immunol.* 171: 2889-2895.
3. Thomas, M.S., et al. 2004. Regulation of cockroach antigen-induced allergic airway hyperreactivity by the CXCR-3 ligand CXCL9. *J. Immunol.* 173: 615-623.
4. Morimoto, J., et al. 2004. CXC chemokine ligand 10 neutralization suppresses the occurrence of diabetes in nonobese diabetic mice through enhanced β cell proliferation without affecting insulinitis. *J. Immunol.* 173: 7017-7024.
5. Lundberg, P., et al. 2007. Effects of CXCR3 signaling on development of fatal encephalitis and corneal and periocular skin disease in HSV-infected mice are mouse-strain dependent. *Invest. Ophthalmol. Vis. Sci.* 48: 4162-4170.
6. Kagami, S., et al. 2008. CCL27-transgenic mice show enhanced contact hypersensitivity to Th2, but not Th1 stimuli. *Eur. J. Immunol.* 38: 647-657.
7. Esensten, J.H., et al. 2009. T-bet-deficient NOD mice are protected from diabetes due to defects in both T cell and innate immune system function. *J. Immunol.* 183: 75-82.
8. Shegarfi, H., et al. 2010. *Listeria monocytogenes* infection affects a subset of Ly49-expressing NK cells in the rat. *PLoS ONE* 5: e15579.
9. Xia, R.H., et al. 2010. Selective expression and cellular localization of pro-inflammatory chemokine ligand/receptor pairs in the sciatic nerves of a severe murine experimental autoimmune neuritis model of Guillain-Barré syndrome. *Neuropathol. Appl. Neurobiol.* 36: 388-398.

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.