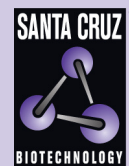


CXCR-4 (A-17): sc-6191



The Power to Question

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 or SDF-1. SDF-1 was originally described as a pre-B cell stimulatory factor, but has now 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 and fusin (variously referred to as LESTR or CXCR-4). Fusin is highly homologous to the IL-8 receptors, sharing 37% sequence identity at the amino acid level. The IL-8 receptors bind to IL-8, NAP-2 and MSGA, while fusin binds to its cognate ligand, SDF-1. Fusin has been identified as the major coreceptor for T-tropic HIV-1 and SDF-1 has been shown to inhibit HIV-1 infection.

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.
4. Bleul, C.C., et al. 1996. The lymphocyte chemoattractant SDF-1 is a ligand for LESTR/fusin and blocks HIV-1 entry. *Nature* 382: 829-833.
5. Ahuja, S.K., et al. 1996. CXC chemokines bind to unique sets of selectivity determinants that can function independently and are broadly distributed on multiple domains of human interleukin-8 receptor B. Determinants of high affinity binding and receptor activation are distinct. *J. Biol. Chem.* 271: 225-232.

CHROMOSOMAL LOCATION

Genetic locus: CXCR4 (human) mapping to 2q21.3; Cxcr4 (mouse) mapping to 1 E4.

SOURCE

CXCR-4 (A-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CXCR-4 of human 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-6191 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CXCR-4 (A-17) is recommended for detection of CXCR-4 of mouse, rat and 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).

CXCR-4 (A-17) is also recommended for detection of CXCR-4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CXCR-4 siRNA (h): sc-35421, CXCR-4 siRNA (m): sc-35422, CXCR-4 shRNA Plasmid (h): sc-35421-SH, CXCR-4 shRNA Plasmid (m): sc-35422-SH, CXCR-4 shRNA (h) Lentiviral Particles: sc-35421-V and CXCR-4 shRNA (m) Lentiviral Particles: sc-35422-V.

Molecular Weight of CXCR-4: 40-47 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HL-60 whole cell lysate: sc-2209 or U-937 cell lysate: sc-2239.

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. Flugel, A., et al. 2001. Migratory activity and functional changes of green fluorescent effector cells before and during experimental autoimmune encephalomyelitis. *Immunity* 14: 547-560.
2. Klassen, H., et al. 2007. Neural precursors isolated from the developing cat brain show retinal integration following transplantation to the retina of the dystrophic cat. *Vet. Ophthalmol.* 10: 245-253.
3. Akashi, T., et al. 2008. Chemokine receptor CXCR4 expression and prognosis in patients with metastatic prostate cancer. *Cancer Sci.* 99: 539-542.

RESEARCH USE

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



Try **CXCR-4 (4G10): sc-53534**, our highly recommended monoclonal alternative to CXCR-4 (A-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CXCR-4 (4G10): sc-53534**.