

# SDF-1 (FL-93): sc-28876

## BACKGROUND

The C-X-C or  $\alpha$  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 (also designated 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 co-receptor for T-tropic HIV-1, and SDF-1 has been shown to inhibit HIV-1 infection. Six human SDF-1 isoforms exist due to alternative splicing of CXCL12, the gene encoding SDF-1. Three isoforms are known for mouse and rat.

## CHROMOSOMAL LOCATION

Genetic locus: CXCL12 (human) mapping to 10q11.21; Cxcl12 (mouse) mapping to 6 F1.

## SOURCE

SDF-1 (FL-93) is a rabbit polyclonal antibody raised against amino acids 1-93 representing full-length SDF-1 of human origin.

## PRODUCT

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

## APPLICATIONS

SDF-1 (FL-93) is recommended for detection of all known isoforms of SDF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SDF-1 (FL-93) is also recommended for detection of all known isoforms of SDF-1 in additional species, including canine.

Suitable for use as control antibody for SDF-1 siRNA (h): sc-39367, SDF-1 siRNA (m): sc-39368, SDF-1 shRNA Plasmid (h): sc-39367-SH, SDF-1 shRNA Plasmid (m): sc-39368-SH, SDF-1 shRNA (h) Lentiviral Particles: sc-39367-V and SDF-1 shRNA (m) Lentiviral Particles: sc-39368-V.

Molecular Weight of SDF-1: 10 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or human fetal lung tissue extract.

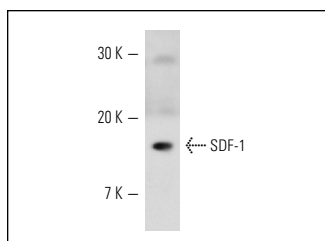
## STORAGE

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

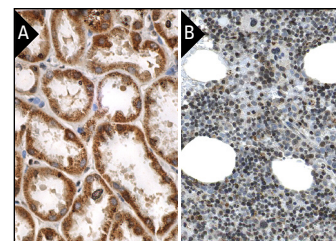
## RESEARCH USE

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

## DATA



SDF-1 (FL-93): sc-28876. Western blot analysis of SDF-1 expression in RAW 264.7 whole cell lysate.



SDF-1 (FL-93): sc-28876. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear and cytoplasmic staining of bone marrow poietic cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

- Hiasa, K., et al. 2004. Gene transfer of stromal cell-derived factor-1 $\alpha$  enhances ischemic vasculogenesis and angiogenesis via vascular endothelial growth factor/endothelial nitric oxide synthase-related pathway: next-generation chemokine therapy for therapeutic neovascularization. *Circulation* 109: 2454-2461.
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- Miljkovic, D., et al. 2011. CXCL12 expression within the CNS contributes to the resistance against experimental autoimmune encephalomyelitis in Albino Oxford rats. *Immunobiology* 216: 979-987.
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- Markovic, J., et al. 2013. PARP-1 and YY1 are important novel regulators of CXCL12 gene transcription in rat pancreatic  $\beta$  cells. *PLoS ONE* 8: e59679.
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Try **SDF-1 (P-159X): sc-74271**, our highly recommended monoclonal alternative to SDF-1 (FL-93).