SANTA CRUZ BIOTECHNOLOGY, INC.

SDF-4 (E-12): sc-393930

SANTA CRUZ BIOTECHNOLOGY

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 chemo-attractants for neutrophils. The C-X-C family includes IL-8, NAP-2, MSGA, stromal cell derived factor-1 (SDF-1) and SDF-4. SDF-1 was originally described as a pre-B cell stimulatory factor, but has now been shown to function as a potent chemo-attractant for T cells and monocytes but not neutrophils. SDF-4, also designated Cab45, contains six EF-hand calcium-binding motifs. SDF-4 is ubiquitously expressed and localizes to the Golgi where it may regulate calcium-dependent activities.

REFERENCES

1. Deng, H., et al. 1996. Identification of a major co-receptor for primary isolates of HIV-1. Nature 381: 661-666.
2. 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.
3. 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.
4. 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.
5. Scherer, P.E., et al. 1996. Cab45, a novel (Ca^{2+})-binding protein localized to the Golgi lumen. J. Cell Biol. 133: 257-268.
6. Koivu, T., et al. 1997. Sequence of a human cDNA encoding Cab45, a Ca^{2+}-binding protein with six EF-hand motifs. DNA Seq. 7: 217-220.

CHROMOSOMAL LOCATION

Genetic locus: SDF4 (human) mapping to 1p36.33; Sdf4 (mouse) mapping to 4 E2.

SOURCE

SDF-4 (E-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 196-219 within an internal region of SDF-4 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-393930 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

SDF-4 (E-12) is recommended for detection of mature SDF-4 and Cab45 precursor of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SDF-4 siRNA (h): sc-61508, SDF-4 siRNA (m): sc-61509, SDF-4 shRNA Plasmid (h): sc-61508-SH, SDF-4 shRNA Plasmid (m): sc-61509-SH, SDF-4 shRNA (h) Lentiviral Particles: sc-61508-V and SDF-4 shRNA (m) Lentiviral Particles: sc-61509-V.

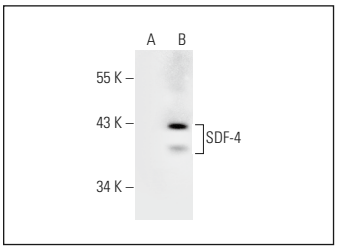
Molecular Weight of SDF-4: 45 kDa.

Positive Controls: SDF-4 (h): 293 Lysate: sc-112321 or TK-1 whole cell lysate: sc-364798.

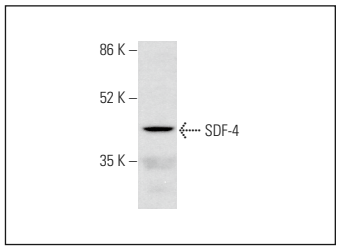
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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.

DATA



SDF-4 (E-12): sc-393930. Western blot analysis of SDF-4 expression in non-transfected: sc-110760 (**A**) and human SDF-4 transfected: sc-112321 (**B**) 293 whole cell lysates.



SDF-4 (E-12): sc-393930. Western blot analysis of SDF-4 expression in TK-1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Gómez-Mendoza, D.P., et al. 2020. Moving pieces in a cellular puzzle: a cryptic peptide from the scorpion toxin Ts14 activates Akt and ERK signaling and decreases cardiac myocyte contractility via dephosphorylation of phospholamban. J. Proteome Res. 19: 3467-3477.

RESEARCH USE

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