SANTA CRUZ BIOTECHNOLOGY, INC.

Slfn4 (M-17): sc-8903

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Schlafen family members, including Slfn1, Slfn2, Slfn3 and Slfn4, are preferentially expressed in lymphoid tissues and are differentially regulated during thymocyte maturation. Schlafen proteins function as suppressors of cell growth and are thought to play a role in the maintenance of T cell quiescence. The prototype member of the Schlafen family, Slfn1, is transcriptionally unregulated during thymocyte positive selection, and the induction of Slfn1 induces a G_0/G_1 arrest, suggesting that Slfn1 participates in the regulation of cell cycle and potentially acts as a determining factor for apoptosis. These proteins all contain a largely conserved core domain within the center of the sequence, and yet they are substantially diversified at the N terminus. Slfn1 and Slfn2 are both unregulated during the double-positive (DP) and single-positive (SP) stages of thymocyte development, whereas Slfn4 is down regulated at these stages. Changes in Schalfen protein expression may contribute to phenotypic differences seen in thymic subsets.

REFERENCES

1. Marrack, P. and Kappler, J. 1997. Positive selection of thymocytes bearing alpha beta T cell receptors. Curr. Opin. Immunol. 9: 250-255.
2. Mehr, R., Perelson, A.S., Fridkis-Hareli, M. and Globerson, A. 1997. Regulatory feedback pathways in the thymus. Immunol. Today 18: 581-585.
3. Takeuchi, T., Kuro-o, M., Miyazawa, H., Ohtsuki, Y. and Yamamoto, H. 1997. Transgenic expression of a novel thymic epithelial cell antigen stimulates abberant development of thymocytes. J. Immunol. 159: 726-733.
4. Hershberger, P.A., He, H. and McCarthy, S.A. 1998. *In vitro* thymocyte maturation is associated with reduced cellular susceptibility to Fas-mediated apoptosis. Cell. Immunol. 185: 134-145.
5. Schwarz, D.A., Katayama, C.D. and Hedrick, S.M. 1998. Schlafen, a new family of growth regulatory genes that affect thymocyte development. Immunity 9: 657-668.
6. Benoist, C. and Mathis, D. 1999. T-cell development: a new marker of differentiation state. Curr. Biol. 9: R59-R61.

CHROMOSOMAL LOCATION

Genetic locus: Slfn3/Slfn4 (mouse) mapping to 11 C.

SOURCE

Slfn4 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Slfn4 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8903 P, (100 µg 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

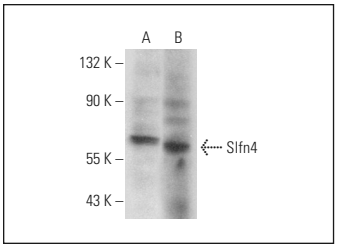
Slfn4 (M-17) is recommended for detection of Slfn4 and Slfn3 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: mouse testis extract: sc-2405 or NIH/3T3 whole cell lysate: sc-2210.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Slfn4 (M-17): sc-8903. Western blot analysis of Slfn4 expression in NIH/3T3 whole cell lysate (**A**) and mouse testis tissue extract (**B**).

SELECT PRODUCT CITATIONS

1. El-Zaatari, M., Kao, J.Y., Tessier, A., Bai, L., Hayes, M.M., Fontaine, C., Eaton, K.A. and Merchant, J.L. 2013. Gli1 deletion prevents Helicobacter-induced gastric metaplasia and expansion of myeloid cell subsets. PLoS ONE 8: e58935.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.