SANTA CRUZ BIOTECHNOLOGY, INC.

SPRED1 (E-5): sc-393198

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SPRED1 (sprouty-related, EVH1 domain containing 1), also known as NFLS, is a 444 amino acid protein that contains one KBD domain, one sprouty domain and one WH1 domain. Localized to the cell membrane and to cholesterol-rich membrane raft fractions, SPRED1 functions as a tyrosine kinase that regulates the activity of the ERK (also known as MAP kinase) cascade by inhibiting the growth-factor-mediated activation of ERK. SPRED1 can act independently as a homodimer or can function as a heterodimer with SPRED2 and, in addition to its ability to regulate ERK, is thought to negatively regulate the development of blood cells in bone marrow. Defects in the gene encoding SPRED1 are the cause of neurofibromatosis type 1-like syndrome (NFLS), an autosomal dominant disease that is characterized by multiple cafe-au-lait spots, axillary freckling and macrocephaly.

REFERENCES

1. Wakioka, T., et al. 2001. Spred is a Sprouty-related suppressor of Ras signalling. Nature 412: 647-651.
2. Engelhardt, C.M., et al. 2004. Expression and subcellular localization of Spred proteins in mouse and human tissues. Histochem. Cell Biol. 122: 527-538.
3. Nonami, A., et al. 2004. Spred-1 negatively regulates interleukin-3-mediated ERK/mitogen-activated protein (MAP) kinase activation in hematopoietic cells. J. Biol. Chem. 279: 52543-52551.
4. King, J.A., et al. 2005. Distinct requirements for the Sprouty domain for functional activity of Spred proteins. Biochem. J. 388: 445-454.

CHROMOSOMAL LOCATION

Genetic locus: SPRED1 (human) mapping to 15q14.

SOURCE

SPRED1 (E-5) is a mouse monoclonal antibody raised against amino acids 135-246 mapping within an internal region of SPRED1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPRED1 (E-5) is available conjugated to agarose (sc-393198 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393198 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393198 PE), fluorescein (sc-393198 FITC), Alexa Fluor® 488 (sc-393198 AF488), Alexa Fluor® 546 (sc-393198 AF546), Alexa Fluor® 594 (sc-393198 AF594) or Alexa Fluor® 647 (sc-393198 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393198 AF680) or Alexa Fluor® 790 (sc-393198 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

SPRED1 (E-5) is recommended for detection of SPRED1 of 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), 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).

Suitable for use as control antibody for SPRED1 siRNA (h): sc-90024, SPRED1 shRNA Plasmid (h): sc-90024-SH and SPRED1 shRNA (h) Lentiviral Particles: sc-90024-V.

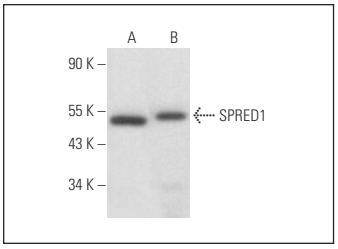
Molecular Weight of SPRED1: 50 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or K-562 whole cell lysate: sc-2203.

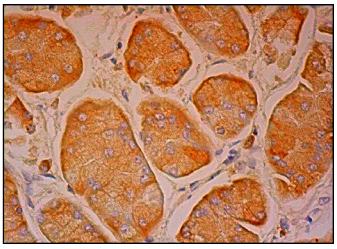
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SPRED1 (E-5): sc-393198. Western blot analysis of SPRED1 expression in HL-60 (**A**) and K-562 (**B**) whole cell lysates.



SPRED1 (E-5): sc-393198. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Togliatto, G., et al. 2016. Obesity reduces the pro-angiogenic potential of adipose tissue stem cell-derived extracellular vesicles (EVs) by impairing miR-126 content: impact on clinical applications. Int. J. Obes. 40: 102-111.
2. Bassand, K., et al. 2021. MiR-126-3p is essential for CXCL12-induced angiogenesis. J. Cell. Mol. Med. 25: 6032-6045.

RESEARCH USE

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