

# SPRED1 (H-112): sc-98290

## 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.
5. Nonami, A., et al. 2005. The Sprouty-related protein, Spred-1, localizes in a lipid raft/caveola and inhibits ERK activation in collaboration with caveolin-1. *Genes Cells* 10: 887-895.

## CHROMOSOMAL LOCATION

Genetic locus: SPRED1 (human) mapping to 15q14; Spred1 (mouse) mapping to 2 E5.

## SOURCE

SPRED1 (H-112) is a rabbit polyclonal antibody raised against amino acids 135-246 mapping within an internal region of SPRED1 of human origin.

## PRODUCT

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

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

SPRED1 (H-112) is recommended for detection of SPRED1 of mouse, rat and human 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), 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).

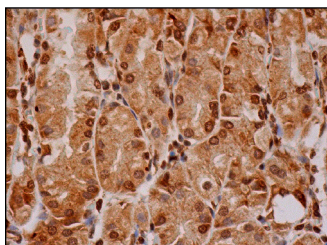
SPRED1 (H-112) is also recommended for detection of SPRED1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for SPRED1 siRNA (h): sc-90024, SPRED1 siRNA (m): sc-153783, SPRED1 shRNA Plasmid (h): sc-90024-SH, SPRED1 shRNA Plasmid (m): sc-153783-SH, SPRED1 shRNA (h) Lentiviral Particles: sc-90024-V and SPRED1 shRNA (m) Lentiviral Particles: sc-153783-V.

Molecular Weight of SPRED1: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## DATA



SPRED1 (H-112): sc-98290. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic and nuclear staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Skelton, T.S., et al. 2012. Allochimeric molecules and mechanisms in abrogation of cardiac allograft rejection. *J. Heart Lung Transplant.* 31: 73-84.

## RESEARCH USE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **SPRED1 (E-5): sc-393198** or **SPRED1 (M23-P2G3): sc-101392**, our highly recommended monoclonal alternatives to SPRED1 (H-112).