

# Sprouty 1 (H-120): sc-30048

## BACKGROUND

Members of the Sprouty family (Sprouty 1-4) are inducible negative regulators of growth factors that act through tyrosine kinase receptors. Mammalian Sprouty homologs share a well conserved cysteine-rich C-terminal domain with their *Drosophila* counterpart. Both Sprouty 1 and 2 are anchored to membranes by palmitoylation, associate with caveolin-1 in perinuclear and vesicular structures and are phosphorylated on Serine residues. Upon stimulation, a subset is recruited to the leading edge of the plasma membrane. Sprouty 2 can associate with c-Cbl, a downregulator of RTK signaling, and inhibits the activities of several growth factors. Sprouty 2 also functions as a negative regulator of embryonic lung morphogenesis and growth. The well-conserved C-terminus of Sprouty contains two domains which are necessary for Sprouty 2 co-localization with microtubules and translocation to membrane ruffles. In addition, the C-terminus is required for the inhibition of cell migration and proliferation. In conclusion, members of Sprouty inhibit FGF and VEGF-mediated cell proliferation, suggesting that they may regulate angiogenesis in normal and disease processes.

## CHROMOSOMAL LOCATION

Genetic locus: SPRY1 (human) mapping to 4q28.1; Spry1 (mouse) mapping to 3 B.

## SOURCE

Sprouty 1 (H-120) is a rabbit polyclonal antibody raised against amino acids 61-180 mapping within an internal region of Sprouty 1 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.

## APPLICATIONS

Sprouty 1 (H-120) is recommended for detection of Sprouty 1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sprouty 1 (H-120) is also recommended for detection of Sprouty 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Sprouty 1 siRNA (h): sc-41035, Sprouty 1 siRNA (m): sc-41036, Sprouty 1 shRNA Plasmid (h): sc-41035-SH, Sprouty 1 shRNA Plasmid (m): sc-41036-SH, Sprouty 1 shRNA (h) Lentiviral Particles: sc-41035-V and Sprouty 1 shRNA (m) Lentiviral Particles: sc-41036-V.

Molecular Weight of Sprouty 1: 35 kDa.

Positive Controls: Sprouty 1 (h): 293T Lysate: sc-117290 or Hep G2 cell lysate: sc-2227.

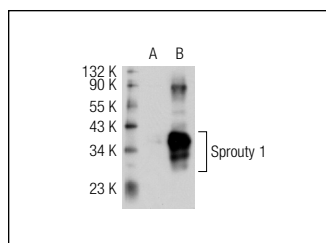
## STORAGE

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



Sprouty 1 (H-120): sc-30048. Western blot analysis of Sprouty 1 expression in non-transfected: sc-117752 (A) and human Sprouty 1 transfected: sc-117290 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Thum, T., et al. 2008. MicroRNA-21 contributes to myocardial disease by stimulating MAP kinase signalling in fibroblasts. *Nature* 456: 980-984.
2. Sayed, D., et al. 2008. MicroRNA-21 targets Sprouty2 and promotes cellular outgrowths. *Mol. Biol. Cell* 19: 3272-3282.
3. Xiang, Q., et al. 2010. The role of Caveolin1 and Sprouty1 in Genistein's regulation of vascular smooth muscle cell and endothelial cell proliferation. *Eur. J. Pharmacol.* 648: 153-161.
4. Sabatel, C., et al. 2011. MicroRNA-21 exhibits antiangiogenic function by targeting RhoB expression in endothelial cells. *PLoS ONE* 6: e16979.
5. Jung, J.E., et al. 2011. Sprouty1 regulates neural and endothelial differentiation of mouse embryonic stem cells. *Stem Cells Dev.* E-Published.
6. Chan, Y.C., et al. 2012. miR-210: the master hypoxamir. *Microcirculation* 19: 215-223.

## PROTOCOLS

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

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Try **Sprouty 1 (H-2): sc-365520** or **Sprouty 1 (RR-15): sc-100861**, our highly recommended monoclonal alternatives to Sprouty 1 (H-120).