

Sprouty 2 (L-16): sc-18601

BACKGROUND

Growth factor-induced signaling by receptor tyrosine kinases (RTK) plays a central role in embryonic development and in pathogenesis and, thus, is tightly regulated by several regulatory proteins. 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 colocalization 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.

REFERENCES

- Lim, J., et al. 2000. Sprouty proteins are targeted to membrane ruffles upon growth factor receptor tyrosine kinase activation. Identification of a novel translocation domain. *J. Biol. Chem.* 275: 32837-32845.
- Impagnatiello, M.A., et al. 2001. Mammalian Sprouty 1 and 2 are membrane-anchored phosphoprotein inhibitors of growth factor signaling in endothelial cells. *J. Cell Biol.* 152: 1087-1098.

CHROMOSOMAL LOCATION

Genetic locus: SPRY2 (human) mapping to 13q31.1; Spry2 (mouse) mapping to 14 E2.3.

SOURCE

Sprouty 2 (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Sprouty 2 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.

Blocking peptide available for competition studies, sc-18601 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.

RESEARCH USE

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

APPLICATIONS

Sprouty 2 (L-16) is recommended for detection of Sprouty 2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 2 (L-16) is also recommended for detection of sprouty 2 in additional species, including equine.

Suitable for use as control antibody for Sprouty 2 siRNA (h): sc-41037, Sprouty 2 siRNA (m): sc-41038, Sprouty 2 shRNA Plasmid (h): sc-41037-SH, Sprouty 2 shRNA Plasmid (m): sc-41038-SH, Sprouty 2 shRNA (h) Lentiviral Particles: sc-41037-V and Sprouty 2 shRNA (m) Lentiviral Particles: sc-41038-V.

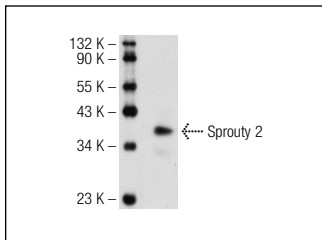
Molecular Weight of Sprouty 2: 35 kDa.

Positive Controls: C32 whole cell lysate: sc-2205.

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) 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



Sprouty 2 (L-16): sc-18601. Western blot analysis of Sprouty 2 expression in C32 whole cell lysate.

SELECT PRODUCT CITATIONS

- Jäger, S., et al. 2007. Leukemia-targeting ligands isolated from phage-display peptide libraries. *Leukemia* 21: 411-420.


 MONOS
Satisfaction
Guaranteed

Try **Sprouty 2 (SQ-5): sc-100862**, our highly recommended monoclonal alternative to Sprouty 2 (L-16).