SANTA CRUZ BIOTECHNOLOGY, INC.

Sprouty 2 (D-6): sc-518014

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 counterparts. 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 down regulator 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.

REFERENCES

1. 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.
2. 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.
3. Mailleux, A., et al. 2001. Evidence that Sprouty 2 functions as an inhibitor of mouse embryonic lung growth and morphogenesis. Mech. Dev. 102: 81-94.

CHROMOSOMAL LOCATION

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

SOURCE

Sprouty 2 (D-6) is a mouse monoclonal antibody raised against amino acids 61-180 mapping within an internal region of Sprouty 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Sprouty 2 (D-6) is available conjugated to agarose (sc-518014 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518014 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518014 PE), fluorescein (sc-518014 FITC), Alexa Fluor® 488 (sc-518014 AF488), Alexa Fluor® 546 (sc-518014 AF546), Alexa Fluor® 594 (sc-518014 AF594) or Alexa Fluor® 647 (sc-518014 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518014 AF680) or Alexa Fluor® 790 (sc-518014 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Sprouty 2 (D-6) is recommended for detection of Sprouty 2 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

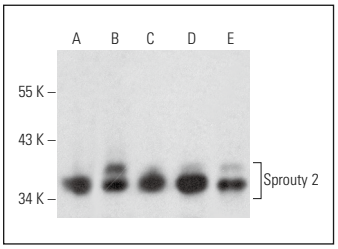
Molecular Weight of Sprouty 2: 35 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, NIH/3T3 whole cell lysate: sc-2210 or C6 whole cell lysate: sc-364373.

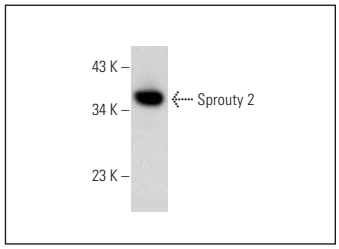
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Sprouty 2 (D-6): sc-518014. Western blot analysis of Sprouty 2 expression in NIH/3T3 (**A**), C6 (**B**), Neuro-2A (**C**), Sol8 (**D**) and L8 (**E**) whole cell lysates.



Sprouty 2 (D-6): sc-518014. Western blot analysis of Sprouty 2 expression in C32 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Oikawa, S., et al. 2018. Role of endothelial microRNA-23 clusters in angiogenesis *in vivo*. Am. J. Physiol. Heart Circ. Physiol. 315: H838-H846.

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.