

SPRED3 (E-14): sc-240924

BACKGROUND

SPRED3 (sprouty-related, EVH1 domain-containing protein 3) is a 410 amino acid peripheral membrane protein belonging to the sprouty/SPRED family of proteins. SPRED3 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. SPRED3 is subject to tyrosine phosphorylation and contains one KBD domain, one SPR (sprouty) domain and one WH1 domain. The gene encoding SPRED3 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families and Fc receptors (FcRs).

REFERENCES

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- Lock, P., et al. 2006. Spred-2 steady-state levels are regulated by phosphorylation and Cbl-mediated ubiquitination. *Biochem. Biophys. Res. Commun.* 351: 1018-1023.
- Katoh, Y. and Katoh, M. 2006. FGF signaling inhibitor, SPRY4, is evolutionarily conserved target of WNT signaling pathway in progenitor cells. *Int. J. Mol. Med.* 17: 529-532.
- King, J.A., et al. 2006. Eve-3: a liver enriched suppressor of Ras/MAPK signaling. *J. Hepatol.* 44: 758-767.
- Bundschu, K., et al. 2007. Getting a first clue about SPRED functions. *Bioessays* 29: 897-907.
- Guy, G.R., et al. 2009. Sprouty proteins: modified modulators, matchmakers or missing links? *J. Endocrinol.* 203: 191-202.

CHROMOSOMAL LOCATION

Genetic locus: SPRED3 (human) mapping to 19q13.2; Spred3 (mouse) mapping to 7 B1.

SOURCE

SPRED3 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPRED3 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-240924 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.

APPLICATIONS

SPRED3 (E-14) is recommended for detection of SPRED3 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); non cross-reactive with SPRED1 or SPRED2.

SPRED3 (E-14) is also recommended for detection of SPRED3 in additional species, including porcine.

Suitable for use as control antibody for SPRED3 siRNA (h): sc-97920, SPRED3 siRNA (m): sc-153785, SPRED3 shRNA Plasmid (h): sc-97920-SH, SPRED3 shRNA Plasmid (m): sc-153785-SH, SPRED3 shRNA (h) Lentiviral Particles: sc-97920-V and SPRED3 shRNA (m) Lentiviral Particles: sc-153785-V.

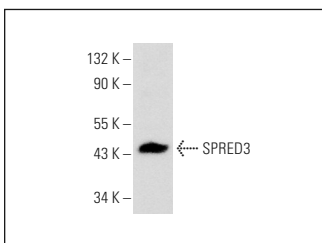
Molecular Weight of SPRED3: 43 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



SPRED3 (E-14): sc-240924. Western blot analysis of SPRED3 expression in U-251-MG whole cell lysate.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.