SANTA CRUZ BIOTECHNOLOGY, INC.

Soggy-1 (D-10): sc-393691

BACKGROUND

The Wnt genes, a group of well-conserved, cysteine-rich, secreted glycoproteins, are required for numerous developmental processes, including embryogenesis, asymmetric cell division and central nervous system (CNS) patterning. The association of the Wnt protein with the seven membrane spanning receptor frizzled activates dishevelled, which downregulates glycogen synthase kinase (GSK) through serine phosphorylation. Reduced levels of active GSK results in the accumulation of β-catenin and subsequent regulation of developmentally significant Wnt target genes. Wnt antagonists, which include Dick-kopf (Dkk1-4), Soggy-1 (also designated DkkL1), frizzled-related protein (sFRP) and Wnt inhibitory factor-1 (WIF-1), are necessary to ensure normal spatial and temporal patterns of Wnt activity during developmental processes. Soggy-1 is a secreted antagonist of Wnt expressed in preimplantation mouse embryos and developing neural tissue, as well as adult testis tissue. Soggy-1 is subjected to posttranslational modification by glycosylation; additional modifications have been observed and are yet to be characterized. The molecular weight of Soggy-1 has been observed to vary depending on tissue and cell type.

REFERENCES

1. Krasnow, R.E., et al. 1995. Dishevelled is a component of the frizzled signaling pathway in *Drosophila*. Development 121: 4095-4102.
2. Cadigan, K.M., et al. 1997. Wnt signaling: a common theme in animal development. Genes Dev. 11: 3286-3305.
3. Sakanaka, C., et al. 1998. Bridging of β-catenin and glycogen synthase kinase-3β by axin and inhibition of β-catenin-mediated transcription. Proc. Natl. Acad. Sci. USA 95: 3020-3023.
4. Glinka, A., et al. 1998. Dickkopf-1 is a member of a new family of secreted proteins and functions in head induction. Nature 391: 357-362.
5. Krupnik, V.E., et al. 1999. Functional and structural diversity of the human Dickkopf gene family. Gene 238: 301-313.
6. Kaneko, K.J., et al. 2000. Soggy, a spermatocyte-specific gene, lies 3.8 kb upstream of and antipodal to TEAD-2, a transcription factor expressed at the beginning of mouse development. Nucleic Acids Res. 28: 3982-3990.
7. Kohn, M.J., et al. 2005. DkkL1 (Soggy), a Dickkopf family member, localizes to the acrosome during mammalian spermatogenesis. Mol. Reprod. Dev. 71: 516-522.

CHROMOSOMAL LOCATION

Genetic locus: Dkkl1 (mouse) mapping to 7 B4.

SOURCE

Soggy-1 (D-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 21-42 at the N-terminus of Soggy-1 of mouse origin.

STORAGE

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

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.

Blocking peptide available for competition studies, sc-393691 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Soggy-1 (D-10) is recommended for detection of Soggy-1 of mouse 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 Soggy-1 siRNA (m): sc-45756, Soggy-1 shRNA Plasmid (m): sc-45756-SH and Soggy-1 shRNA (m) Lentiviral Particles: sc-45756-V.

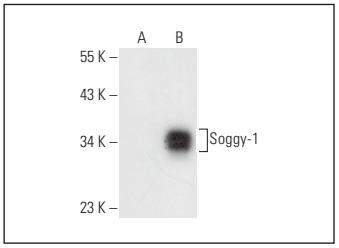
Molecular Weight of Soggy-1: 25-35 kDa.

Positive Controls: Soggy-1 (m): 293T Lysate: sc-127566.

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



Soggy-1 (D-10): sc-393691. Western blot analysis of Soggy-1 expression in non-transfected: sc-117752 (**A**) and mouse Soggy-1 transfected: sc-127566 (**B**) 293T whole cell lysates.

RESEARCH USE

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