SANTA CRUZ BIOTECHNOLOGY, INC.

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

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 Dickkopf (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.

PRODUCT

Soggy-1 (m): 293T Lysate represents a lysate of mouse Soggy-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Soggy-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Soggy-1 antibodies. Recommended use: 10-20 µl per lane.

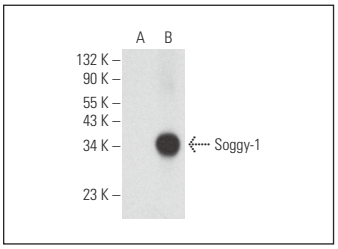
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Soggy-1 (H-11): sc-515409 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Soggy-1 expression in Soggy-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

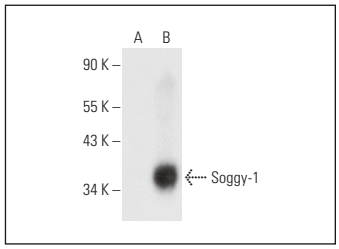
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Soggy-1 (H-11): sc-515409. Western blot analysis of Soggy-1 expression in non-transfected: sc-117752 (**A**) and mouse Soggy-1 transfected: sc-127566 (**B**) whole cell lysates.



Soggy-1 (E-12): sc-271563. 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.

PROTOCOLS

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