Dapper3 (2A5): sc-136159



The Power to Question

BACKGROUND

Dapper3, also known as DACT3 (dapper, antagonist of β -catenin, homolog 3) or RRR1, is a 629 amino acid protein and mammalian homolog of the *Xenopus laevis* protein dapper. As a member of the dapper family, Dapper3 plays a role in postnatal brain development and contains a C-terminal PDZ-binding motif that facilitates interaction with the PDZ domains of DSH (Dishevelled) family proteins. As the predominant dapper family member found in adult brain, Dapper3 localizes to hippocampus, Purkinje cell layer and every layer of the dorsal forebrain and cerebral cortex and is also found in the developing murine central nervous system. Dapper3 is also expressed in uterus, ventral somites, branchial arch mesenchyme, aortic sac, aortic arches, limb bud mesenchyme and craniofacical mesenchyme. Mapping to human chromosome 19q13.32, Dapper3 has been identified as a negative regulator of Wnt/ β -catenin signaling in colorectal cancer.

REFERENCES

- 1. Roelink, H. and Nusse, R. 1991. Expression of two members of the Wnt family during mouse development—restricted temporal and spatial patterns in the developing neural tube. Genes Dev. 5: 381-388.
- McMahon, A.P., Gavin, B.J., Parr, B., Bradley, A. and McMahon, J.A. 1992.
 The Wnt family of cell signalling molecules in postimplantation development of the mouse. Ciba Found. Symp. 165: 199-212.
- 3. Cheyette, B.N., Waxman, J.S., Miller, J.R., Takemaru, K., Sheldahl, L.C., Khlebtsova, N., Fox, E.P., Earnest, T. and Moon, R.T. 2002. Dapper, a Dishevelled-associated antagonist of β -catenin and JNK signaling, is required for notochord formation. Dev. Cell 2: 449-461.
- Waxman, J.S., Hocking, A.M., Stoick, C.L. and Moon, R.T. 2004. Zebrafish Dapper1 and Dapper2 play distinct roles in Wnt-mediated developmental processes. Development 131: 5909-5921.
- Fisher, D.A., Kivimäe, S., Hoshino, J., Suriben, R., Martin, P.M., Baxter, N. and Cheyette, B.N. 2006. Three Dact gene family members are expressed during embryonic development and in the adult brains of mice. Dev. Dyn. 235: 2620-2630.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611112. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 7. Jiang, X., Tan, J., Li, J., Kivimäe, S., Yang, X., Zhuang, L., Lee, P.L., Chan, M.T., Stanton, L.W., Liu, E.T., Cheyette, B.N. and Yu, Q. 2008. DACT3 is an epigenetic regulator of Wnt/β-catenin signaling in colorectal cancer and is a therapeutic target of histone modifications. Cancer Cell 13: 529-541.

CHROMOSOMAL LOCATION

Genetic locus: DACT3 (human) mapping to 19q13.32; Dact3 (mouse) mapping to 7 A2.

SOURCE

Dapper3 (2A5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 89-202 of Dapper3 of human origin.

PRODUCT

Each vial contains 50 $\mu g \; lg G_1$ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

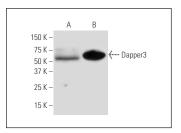
Dapper3 (2A5) is recommended for detection of Dapper3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Dapper3 siRNA (h): sc-97153, Dapper3 siRNA (m): sc-142876, Dapper3 shRNA Plasmid (h): sc-97153-SH, Dapper3 shRNA Plasmid (m): sc-142876-SH, Dapper3 shRNA (h) Lentiviral Particles: sc-97153-V and Dapper3 shRNA (m) Lentiviral Particles: sc-142876-V.

Molecular Weight of Dapper3: 65 kDa.

Positive Controls: mouse brain extract: sc-2253.

DATA



Dapper3 (2A5): sc-136159. Western blot analysis of Dapper3 expression in 293T whole cell lysate.

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.

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com