**BACKGROUND**

Dapper1, also known as DACT1 (dapper, antagonist of β-catenin, homolog 1), DPR1, HNG3 or FR060, is an 836 amino acid protein that localizes to both the nucleus and the cytoplasm and contains a C-terminal PDZ-binding motif that is thought to mediate protein-protein interactions. Interacting with Dvl-2, Dapper1 functions to positively regulate Dvl-2-mediated developmental signaling pathways, specifically by preventing the degradation of β-catenin, thereby enhancing the transcriptional activation of select genes in the Wnt pathway. Dapper1 is downregulated in hepatocellular carcinoma, suggesting an additional role in tumor suppression. The gene encoding Dapper1 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer’s disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: DACT1 (human) mapping to 14q23.1.

**SOURCE**

Dapper1 (D-4) is a mouse monoclonal antibody raised against amino acids 281-460 mapping within an internal region of Dapper1 of human origin.

**PRODUCT**

Each vial contains 200 μg IgG; kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin. Dapper1 (D-4) is available conjugated to agarose (sc-770930 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-770930 HRP), 200 μg/ml, for WB, IHC(YP) and ELISA; to either phycoerythrin (sc-770930 PE), fluorescein (sc-770930 FITC), Alexa Fluor® 488 (sc-770930 AF488), Alexa Fluor® 546 (sc-770930 AF546), Alexa Fluor® 594 (sc-770930 AF594) or Alexa Fluor® 647 (sc-770930 AF647), 200 μg/ml, for WB (RGB), IF, IHC(YP) and FCM; and to either Alexa Fluor® 680 (sc-770930 AF680) or Alexa Fluor® 790 (sc-770930 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

Dapper1 (D-4) is recommended for detection of Dapper1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 μg per 100-500 μl of total protein [1 ml of cell lysate]), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 Dapper1 shRNA (h): sc-77095, Dapper1 shRNA Plasmid (h): sc-77095-SH and Dapper1 shRNA (h) Lentiviral Particles: sc-77095-V.

Molecular Weight of Dapper1: 90 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411 or SK-N-SH cell lysate: sc-2410.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG 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-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistochemistry: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

Dapper1 (D-4): sc-377030. Immunoperoxidase staining of formalin fixed, paraffin embedded human cerebellum tissue showing cytoplasmic and membrane staining of Purkinje cells and endothelial cells (A). Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic and nuclear localization (B).

**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.