

# Dapper1 (H-180): sc-98366

## BACKGROUND

Dapper1, also known as DACT1 (dapper, antagonist of  $\beta$ -catenin, homolog 1), DPR1, HNG3 or FRODO, 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  $\beta$ -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 presenilin 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  $\alpha$ 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: DACT1 (human) mapping to 14q23.1; Dact1 (mouse) mapping to 12 C3.

## RESEARCH USE

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

## SOURCE

Dapper1 (H-180) is a rabbit polyclonal antibody raised against amino acids 281-460 mapping within an internal region of Dapper1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Dapper1 (H-180) is recommended for detection of Dapper1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Dapper1 siRNA (h): sc-77095, Dapper1 siRNA (m): sc-77096, Dapper1 shRNA Plasmid (h): sc-77095-SH, Dapper1 shRNA Plasmid (m): sc-77096-SH, Dapper1 shRNA (h) Lentiviral Particles: sc-77095-V and Dapper1 shRNA (m) Lentiviral Particles: sc-77096-V.

Molecular Weight of Dapper1: 90 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Dapper1 (D-4): sc-377030**, our highly recommended monoclonal alternative to Dapper1 (H-180).