

DAPLE (S-12): sc-137418

BACKGROUND

DAPLE, also known as CCDC88C (coiled-coil domain containing 88C) or HkRP2 (hook-related protein 2), is a 2,028 amino acid protein that exists as a homo-oligomer and belongs to the CCDC88 family. Existing as three alternative isoforms, DAPLE is a negative regulator of the canonical Wnt signaling pathway where it inhibits β -catenin stabilization downstream from Dvl. DAPLE contains multiple leucine residues, interacts with Dvl-1 through its PDZ domain and is encoded by a gene mapping to human chromosome 14q32.11. Chromosome 14 houses over 700 genes, comprises nearly 3.5% of the human genome and 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 α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

- Oshita, A., et al. 2003. Identification and characterization of a novel Dvl-binding protein that suppresses Wnt signalling pathway. *Genes Cells* 8: 1005-1017.
- Le-Niculescu, H., et al. 2005. Identification and characterization of GIV, a novel $G_{\alpha i/s}$ -interacting protein found on COPI, endoplasmic reticulum-Golgi transport vesicles. *J. Biol. Chem.* 280: 22012-22020.
- Kobayashi, H., et al. 2005. Novel DAPLE-like protein positively regulates both the Wnt/ β -catenin pathway and the Wnt/JNK pathway in *Xenopus*. *Mech. Dev.* 122: 1138-1153.
- Simpson, F., et al. 2005. A novel hook-related protein family and the characterization of hook-related protein 1. *Traffic* 6: 442-458.
- Enomoto, A., et al. 2006. Girdin, a novel Actin-binding protein, and its family of proteins possess versatile functions in the Akt and Wnt signaling pathways. *Ann. N.Y. Acad. Sci.* 1086: 169-184.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611204. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Larner, A.J. and Doran, M. 2009. Genotype-phenotype relationships of Presenilin 1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
- Topic, A., et al. 2009. α 1-antitrypsin phenotypes in adult liver disease patients. *Ups. J. Med. Sci.* 114: 228-234.

CHROMOSOMAL LOCATION

Genetic locus: CCDC88C (human) mapping to 14q32.11; Ccdc88c (mouse) mapping to 12 E.

SOURCE

DAPLE (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DAPLE of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-137418 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DAPLE (S-12) is recommended for detection of DAPLE isoforms 1-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

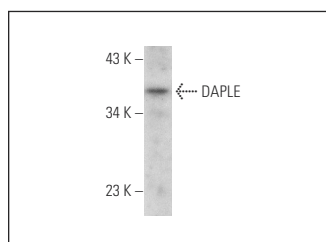
DAPLE (S-12) is also recommended for detection of DAPLE isoforms 1-3 in additional species, including canine.

Suitable for use as control antibody for DAPLE siRNA (h): sc-92206, DAPLE siRNA (m): sc-142874, DAPLE shRNA Plasmid (h): sc-92206-SH, DAPLE shRNA Plasmid (m): sc-142874-SH, DAPLE shRNA (h) Lentiviral Particles: sc-92206-V and DAPLE shRNA (m) Lentiviral Particles: sc-142874-V.

Molecular Weight of DAPLE isoforms: 228/58/49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



DAPLE (S-12): sc-137418. Western blot analysis of DAPLE expression in HeLa 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.

PROTOCOLS

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