SANTA CRUZ BIOTECHNOLOGY, INC.

DCDC2 (C-4): sc-166051

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The DCDC2 gene encodes the DCDC2 protein (Doublecortin-containing protein 2, RU2, RU2S) which contains two Doublecortin peptide domains similar to those in the Doublecortin gene. DCDC2 is transcribed as a "normal" gene, which results in a sense transcript (RU2S), but when it is transcribed in the opposite direction, a shorter antisense transcript (RU2AS), which is found in tumors, results. The DCDC2 protein demonstrates ubiquitous expression, whereas RU2AS expression is restricted to normal kidney, bladder, liver and testis, and to tumors of various histologic origins. The deduced DCDC2 protein contains 476 amino acids, while the RU2AS protein contains 84 residues. There is a significant association between dyslexia and several SNPs within the DCDC2 gene.

REFERENCES

1. Van Den Eynde, B.J., et al. 2000. A new antigen recognized by cytolytic T lymphocytes on a human kidney tumor results from reverse strand transcription. J. Exp. Med. 190: 1793-1800.
2. Cope, N., et al. 2005. Strong evidence that KIAA0319 on chromosome 6p is a susceptibility gene for developmental dyslexia. Am. J. Hum. Genet. 76: 581-591.
3. Meng, H., et al. 2005. DCDC2 is associated with reading disability and modulates neuronal development in the brain. Proc. Natl. Acad. Sci. USA 102: 17053-17058.
4. Schumacher, J., et al. 2005. Strong genetic evidence of DCDC2 as a susceptibility gene for dyslexia. Am. J. Hum. Genet. 78: 52-62.
5. McGrath, L.M., et al. 2006. Breakthroughs in the search for dyslexia candidate genes. Trends Mol. Med. 12: 333-341.

CHROMOSOMAL LOCATION

Genetic locus: DCDC2 (human) mapping to 6p22.3.

SOURCE

DCDC2 (C-4) is a mouse monoclonal antibody raised against amino acids 331-476 mapping at the C-terminus of DCDC2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

DCDC2 (C-4) is recommended for detection of all DCDC2 human isoforms of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 DCDC2 siRNA (h): sc-60505, DCDC2 shRNA Plasmid (h): sc-60505-SH and DCDC2 shRNA (h) Lentiviral Particles: sc-60505-V.

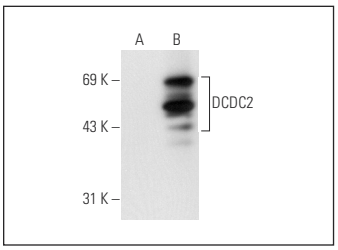
Molecular Weight of DCDC2: 53 kDa.

Positive Controls: DCDC2 (h): 293T Lysate: sc-116299.

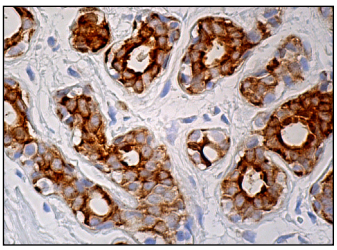
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DCDC2 (C-4): sc-166051. Western blot analysis of DCDC2 expression in non-transfected: sc-117752 (**A**) and human DCDC2 transfected: sc-116299 (**B**) 293T whole cell lysates.



DCDC2 (C-4): sc-166051. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Grammatikopoulos, T., et al. 2016. Mutations in DCDC2 (Doublecortin domain containing protein 2) in neonatal sclerosing cholangitis. J. Hepatol. 65: 1179-1187.
2. Vogel, G.F., et al. 2020. Co-existence of ABCB11 and DCDC2 disease: infantile cholestasis requires both next-generation sequencing and clinical-histopathologic correlation. Eur. J. Hum. Genet. 28: 840-844.

RESEARCH USE

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