DCDC2 (E-8): sc-166052



The Power to Overtin

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, testis and 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

- Van Den Eynde, B.J., Gaugler, B., Probst-Kepper, M., Michaux, L., Devuyst, O., Lorge, F., Weynants, P. and Boon, T. 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.
- Cope, N., Harold, D., Hill, G., Moskvina, V., Stevenson, J., Holmans, P., Owen, M.J., O'Donovan, M.C. and Williams, J. 2005. Strong evidence that KIAA0319 on chromosome 6p is a susceptibility gene for developmental dyslexia. Am. J. Hum. Genet. 76: 581-591.
- Meng, H., Smith, S.D., Hager, K., Held, M., Liu, J., Olson, R.K., Pennington, B.F., DeFries, J.C., Gelernter, J., O'Reilly-Pol, T., Somlo, S., Skudlarski, P., Shaywitz, S.E., Shaywitz, B.A., Marchione, K., et al. 2005. DCDC2 is associated with reading disability and modulates neuronal development in the brain. Proc. Natl. Acad. Sci. USA 102: 17053-17058.
- Schumacher, J., Anthoni, H., Dahdouh, F., König, I.R., Hillmer, A.M., Kluck, N., Manthey, M., Plume, E., Warnke, A., Remschmidt, H., Hülsmann, J., Cichon, S., Lindgren, C.M., Propping, P., et al. 2005. Strong genetic evidence of DCDC2 as a susceptibility gene for dyslexia. Am. J. Hum. Genet. 78: 52-62.
- McGrath, L.M., Smith, S.D. and Pennington, B.F. 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 (E-8) 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 $\mu g \ lgG_1$ 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.

APPLICATIONS

DCDC2 (E-8) 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 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).

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.

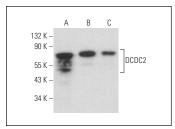
Molecular Weight of DCDC2: 53 kDa.

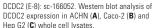
Positive Controls: DCDC2 (h): 293T Lysate: sc-116299, ACHN whole cell lysate: sc-364365 or Caco-2 cell lysate: sc-2262.

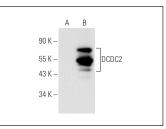
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM 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-lgG κ BP-FITC: sc-516140 or m-lgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA







DCDC2 (E-8): sc-166052. Western blot analysis of DCDC2 expression in non-transfected: sc-117752 (A) and human DCDC2 transfected: sc-116299 (B) 293T whole cell lysates.

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.