

# DCDC2 (M-125): sc-68418

## 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., 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.
2. 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.
3. 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., Wang, Y., Paramasivam, M., 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., 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., Zucchelli, M., Ziegler, A., Peyrard-Janvid, M., Schulte-Körne, G., Nöthen, M.M. and Kere, J. 2005. Strong genetic evidence of DCDC2 as a susceptibility gene for dyslexia. *Am. J. Hum. Genet.* 78: 52-62.
5. 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: Dcdc2a (mouse) mapping to 13 A3.1.

## SOURCE

DCDC2 (M-125) is a rabbit polyclonal antibody raised against amino acids 351-475 mapping at the C-terminus of DCDC2 of mouse origin.

## PRODUCT

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

## RESEARCH USE

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

## APPLICATIONS

DCDC2 (M-125) is recommended for detection of DCDC2 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with isoform 2.

Suitable for use as control antibody for DCDC2 siRNA (m): sc-60506, DCDC2 shRNA Plasmid (m): sc-60506-SH and DCDC2 shRNA (m) Lentiviral Particles: sc-60506-V.

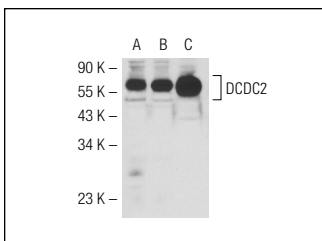
Molecular Weight of DCDC2: 53 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or rat kidney extract: sc-2394.

## 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.

## DATA



DCDC2 (M-125): sc-68418. Western blot analysis of DCDC2 expression in mouse brain (A), rat brain (B) and rat kidney (C) tissue extracts.

## STORAGE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **DCDC2 (B-5): sc-398248** or **DCDC2 (C-4): sc-166051**, our highly recommended monoclonal alternatives to DCDC2 (M-125).