

DCDC2B (E-6): sc-514743

BACKGROUND

DCDC2B (doublecortin domain containing 2B) is a 349 amino acid member of the doublecortin protein family. DCDC2B contains two doublecortin domains, which have been shown to bind tubulin and enhance microtubule polymerization. The gene that encodes DCDC2B maps to human chromosome 1, which is the largest human chromosome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. A breakpoint has been identified in 1q which disrupts the DISC1 gene and is linked to schizophrenia. Aberrations in chromosome 1 found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. *J. Exp. Med.* 172: 263-272.
2. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
4. Hennah, W., et al. 2006. Genes and schizophrenia: beyond schizophrenia: the role of DISC1 in major mental illness. *Schizophr. Bull.* 32: 409-416.
5. Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: aging nucleus gets out of shape. *Nature* 440: 32-34.

CHROMOSOMAL LOCATION

Genetic locus: DCDC2B (human) mapping to 1p35.1; Dcdc2b (mouse) mapping to 4 D2.2.

SOURCE

DCDC2B (E-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 55-76 within an internal region of DCDC2B of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

DCDC2B (E-6) is recommended for detection of DCDC2B of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DCDC2B siRNA (h): sc-88805, DCDC2B siRNA (m): sc-151569, DCDC2B shRNA Plasmid (h): sc-88805-SH, DCDC2B shRNA Plasmid (m): sc-151569-SH, DCDC2B shRNA (h) Lentiviral Particles: sc-88805-V and DCDC2B shRNA (m) Lentiviral Particles: sc-151569-V.

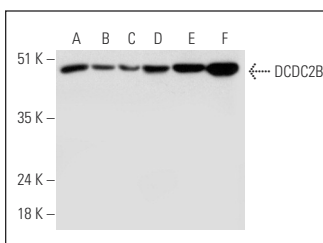
Molecular Weight of DCDC2B: 38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, human cervix extract: sc-363756 or human uterus extract: sc-363784.

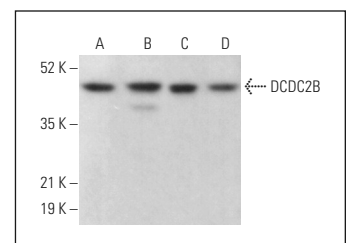
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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.

DATA



DCDC2B (E-6): sc-514743. Western blot analysis of DCDC2B expression in HeLa (A), T98G (B), ME-180 (C) and Ca Ski (D) whole cell lysates and human cervix (E) and human uterus (F) tissue extracts.



DCDC2B (E-6): sc-514743. Western blot analysis of DCDC2B expression in HeLa (A), MIA PaCa-2 (B), NIH/3T3 (C) and PC-12 (D) whole cell lysates.

STORAGE

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

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.