

Doublecortin (H-280): sc-28939

BACKGROUND

Lissencephaly (smooth brain) is an abnormality of brain development characterized by incomplete neuronal migration and a smooth cerebral surface, resulting in severe mental retardation. Genetic analysis identified two proteins that are mutated in some cases of lissencephaly, designated lissencephaly-1 protein (LIS1) and Doublecortin. LIS1 shows sequence homology to β -subunits of heterotrimeric G proteins. Doublecortin contains a consensus Abl phosphorylation site, and it has some sequence homology to a predicted kinase protein. Both proteins are highly expressed in developing brain, suggesting that they may be involved in a signal transduction pathway that is crucial to brain development.

REFERENCES

1. Reiner, O., et al. 1993. Isolation of a Miller-Dieker lissencephaly gene containing G protein β -subunit-like repeats. *Nature* 364: 717-721.
2. Garcia-Higuera, I., et al. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein β subunit. *Biochemistry* 35: 13985-13994.

CHROMOSOMAL LOCATION

Genetic locus: DCX (human) mapping to Xq23, DCLK1 (human) mapping to 13q13.3; Dcx (mouse) mapping to X F2, Dcl1 (mouse) mapping to 3 C.

SOURCE

Doublecortin (H-280) is a rabbit polyclonal antibody raised against amino acids 162-441 mapping at the C-terminus of Doublecortin of human origin.

PRODUCT

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

APPLICATIONS

Doublecortin (H-280) is recommended for detection of Doublecortin and DCAMKL1 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).

Doublecortin (H-280) is also recommended for detection of doublecortin and DCAMKL1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Doublecortin siRNA (h): sc-35214, Doublecortin siRNA (m): sc-35215, Doublecortin shRNA Plasmid (h): sc-35214-SH, Doublecortin shRNA Plasmid (m): sc-35215-SH, Doublecortin shRNA (h) Lentiviral Particles: sc-35214-V and Doublecortin shRNA (m) Lentiviral Particles: sc-35215-V.

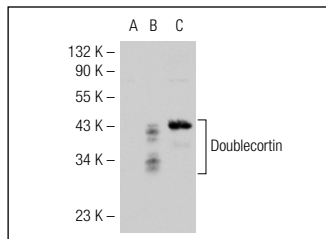
Molecular Weight of Doublecortin: 40 kDa.

Positive Controls: Doublecortin (m): 293T Lysate: sc-119675, Doublecortin (h): 293T Lysate: sc-114231 or SK-N-SH cell lysate: sc-2410.

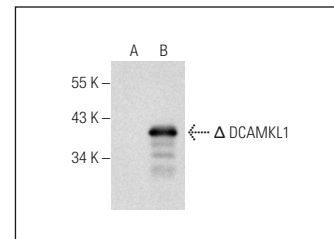
STORAGE

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

DATA



Doublecortin (H-280): sc-28939. Western blot analysis of Doublecortin expression in non-transfected 293T: sc-117752 (A), human Doublecortin transfected 293T: sc-114231 (B) and SK-N-SH (C) whole cell lysates.



Doublecortin (H-280): sc-28939. Western blot analysis of DCAMKL1 expression in non-transfected: sc-117752 (A) and truncated mouse DCAMKL1 transfected: sc-119675 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lu, J., et al. 2005. SMAD pathway mediation of BDNF and TGF β 2 regulation of proliferation and differentiation of hippocampal granule neurons. *Development* 132: 3231-3242.
2. Kimura, A., et al. 2008. Antagonism of sphingosine 1-phosphate receptor-2 enhances migration of neural progenitor cells toward an area of brain. *Stroke* 39: 3411-3417.
3. Platel, J.C., et al. 2009. GFAP-GFP neural progenitors are antigenically homogeneous and anchored in their enclosed mosaic niche. *Glia* 57: 66-78.
4. Bennett, L., et al. 2009. Circumventricular organs: a novel site of neural stem cells in the adult brain. *Mol. Cell. Neurosci.* 41: 337-347.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **Doublecortin (E-6): sc-271390** or **Doublecortin (E-5): sc-390645**, our highly recommended monoclonal alternatives to Doublecortin (H-280). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Doublecortin (E-6): sc-271390**.