

Doublecortin (h): 293T Lysate: sc-114231

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., Carrozzo, R., Shen, Y., Wehnert, M., Faustinella, F., Dobyns, W.B., Caskey, C.T. and Ledbetter, D.H. 1993. Isolation of a Miller-Dieker lissencephaly gene containing G protein β -subunit-like repeats. *Nature* 364: 717-721.
2. Garcia-Higuera, I., Fenoglio, J., Li, Y., Lewis, C., Panchenko, M.P., Reiner, O., Smith, T.F. and Neer, E.J. 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.
3. Albrecht, U., Abu-Issa, R., Ratz, B., Hattori, M., Aoki, J., Arai, H., Inoue, K. and Eichele, G. 1996. Platelet-activating factor acetylhydrolase expression and activity suggest a link between neuronal migration and platelet-activating factor. *Dev. Biol.* 180: 579-593.
4. Walsh, C.A. 1998. LISsen up! *Nat. Genet.* 19: 307-308.
5. des Portes, V., Pinard, J.M., Billuart, P., Vinet, M.C., Koulakoff, A., Carrie, A., Gelot, A., Dupuis, E., Motte, J., Berwald-Netter, Y., Catala, M., Kahn, A., Beldjord, C. and Chelly, J. 1998. A novel CNS gene required for neuronal migration and involved in X-linked subcortical laminar heterotopia and lissencephaly syndrome. *Cell* 92: 51-61.
6. Gleeson, J.G., Allen, K.M., Fox, J.W., Lamperti, E.D., Berkovic, S., Scheffer, I., Cooper, E.C., Dobyns, W.B., Minnerath, S.R., Ross, M.E. and Walsh, C.A. 1998. Doublecortin, a brain-specific gene mutated in human X-linked lissencephaly and double cortex syndrome, encodes a putative signaling protein. *Cell* 92: 63-72.

CHROMOSOMAL LOCATION

Genetic locus: DCX (human) mapping to Xq23.

PRODUCT

Doublecortin (h): 293T Lysate represents a lysate of human Doublecortin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Doublecortin (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Doublecortin antibodies. Recommended use: 10-20 μ l per lane.

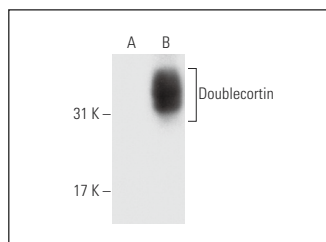
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Doublecortin (E-6): sc-271390 is recommended as a positive control antibody for Western Blot analysis of enhanced human Doublecortin expression in Doublecortin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

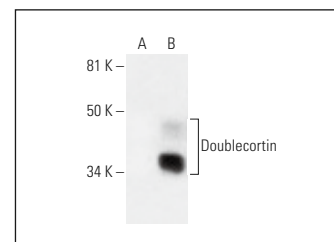
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



Doublecortin (E-6): sc-271390. Western blot analysis of Doublecortin expression in non-transfected: sc-117752 (A) and human Doublecortin transfected: sc-114231 (B) 293T whole cell lysates.



Doublecortin (E-5): sc-390645. Western blot analysis of Doublecortin expression in non-transfected: sc-117752 (A) and human Doublecortin transfected: sc-114231 (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.