DCAMKL1 (m2): 293T Lysate: sc-119675



The Power to Questio

BACKGROUND

Lissencephaly (smooth brain) is an abnormality of brain development characterized by incomplete neuronal migration and a smooth cerebral surface, manifesting as severe mental retardation. Genetic analysis has identified two proteins that are mutated in some cases of lissencephaly, designated lissencephaly-1 protein (LIS1) and doublecortin. LIS1 displays sequence homology to β -subunits of heterotrimeric G proteins, and doublecortin contains a consensus Abl phosphorylation site. In addition, the DCAMKL1 (doublecortin-like and CAM kinase-like 1) protein shows homology to doublecortin. All three proteins are highly expressed in developing brain and may function together to regulate microtubules involved in neuronal migration. The DCAMKL1 protein encodes a functional kinase that is capable of phosphorylating myelin basic protein and itself, but its kinase activity does not appear to affect its microtubule polymerization activity.

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.
- 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.
- 3. Albrecht, U., et al. 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., et al. 1998. A novel CNS gene required for neuronal migration and involved in X-linked subcortical laminar heterotopia and lissencephaly syndrome. Cell 92: 51-61.
- Gleeson, J.G., et al. 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.
- 7. Manabe, M., et al. 1999. Architectural organization of filiform papillae in normal and black hairy tongue epithelium: dissection of differentiation pathways in a complex human epithelium according to their patterns of keratin expression. Arch. Dermatol. 135: 177-181.
- Sossey-Alaoui, K., et al. 1999. DCAMKL1, a brain-specific transmembrane protein on 13q12.3 that is similar to doublecortin (DCX). Genomics 56: 121-126.
- 9. Lin, P.T., et al. 2000. DCAMKL1 encodes a protein kinase with homology to doublecortin that regulates microtubule polymerization. J. Neurosci. 20: 9152-9161.

CHROMOSOMAL LOCATION

Genetic locus: Dclk1 (mouse) mapping to 3 C.

PRODUCT

DCAMKL1 (m2): 293T Lysate represents a lysate of mouse DCAMKL1 transfected 293T cells and is provided as 100 μg protein in 200 μl SDS-PAGE buffer.

APPLICATIONS

DCAMKL1 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive DCAMKL1 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.

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.

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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com