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DCLK2 Antibody

Catalog # ASC11080

Product Information

Application	WB, E, IHC-P
Primary Accession	Q8N568
Other Accession	NP_001035350, 156713428
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	83606
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	DCLK2 antibody can be used for detection of DCLK2 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	166614
Other Names	Serine/threonine-protein kinase DCLK2, 2.7.11.1, CaMK-like CREB regulatory kinase 2, CL2, CLICK-II, CLICK2, Doublecortin domain-containing protein 3B, Doublecortin-like and CAM kinase-like 2, Doublecortin-like kinase 2, DCLK2, DCAMKL2, DCDC3B, DCK2
Target/Specificity	DCLK2;
Reconstitution & Storage	DCLK2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	DCLK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DCLK2
Synonyms	DCAMKL2, DCDC3B, DCK2
Function	Protein kinase with a significantly reduced C(a2+)/CAM affinity and dependence compared to other members of the CaMK family. May play a role in the down-regulation of CRE-dependent gene activation probably by phosphorylation of the CREB coactivator CRTC2/TORC2 and the resulting retention of TORC2 in the cytoplasm (By similarity).

Cellular Location	Cytoplasm, cytoskeleton. Note=Colocalizes with microtubules.
Tissue Location	Expressed in the brain, heart and eyes.

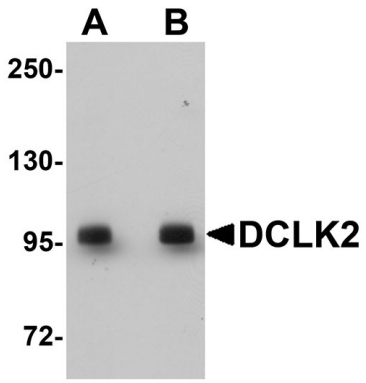
Background

DCLK2 Antibody: DCLK2 is one of three doublecortin-like kinases similar to the Ca2+/calmodulin-dependent protein kinase (CaMK) family. DCLK2 mRNA, like that of the homologous DCLK1 and DCLK3, is highly expressed in adult brain, but only DCLK1 and DCLK2 transcripts are present in human fetal brain and the developing mouse embryo, suggesting that DCLK1 and DCLK2 may play roles in cortical development. The DCLK proteins are homologous to Doublecortin (DCX), a protein that is mutated in X-linked human lissencephaly. In mouse models where the DCX gene has been disrupted, DCLK1 expression increases slightly and appears to compensate for the loss of DCX, as mice mutant for both DCX and DCLK1 show a severe phenotype including perinatal lethality, disorganized neocortical layering, and profound hippocampal cytoarchitectural disorganization. Unlike DCLK1, DCLK2 expression does not change in DCX-null mice.

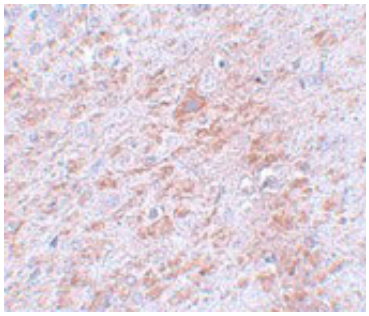
References

Sossey-Alaoui K and Srivastava AK. DCAMKL1, a brain specific transmembrane protein on 13q12.3 that is similar to doublecortin (DCX), Genomics1999; 56:121-6.
Ohmae S, Takemoto-Kimura S, Okamura M, et al. Molecular identification and characterization of a family of kinases with homology to Ca2+/calmodulin-dependent protein kinases I/IV. J. Biol. Chem.2006; 281:20427-39.
Tuy FPD, Saillour Y, Kappeler C, et al. Alternative transcripts of Dlck1 and Dlck2 and their expression in doublecortin knockout mice. Dev. Neurosci.2008; 30:171-86.
Reiner O and Coquelle FM. Missense mutations resulting in type 1 lissencephaly. Cell Mol. Life Sci.2005; 62:425-34.

Images



Western blot analysis of DCLK2 in rat brain tissue lysate with DCLK2 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of DLCK2 in rat brain tissue with DLCK2 antibody at 5 µg/mL.