10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DCAMKL1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7219B

Product Information

Application	WB, E
Primary Accession	O15075
Other Accession	Q9JLM8
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	82224
Antigen Region	690-720

Additional Information

Gene ID	9201
Other Names	Serine/threonine-protein kinase DCLK1, Doublecortin domain-containing protein 3A, Doublecortin-like and CAM kinase-like 1, Doublecortin-like kinase 1, DCLK1, DCAMKL1, DCDC3A, KIAA0369
Target/Specificity	This DCAMKL1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 690-720 amino acids of human DCAMKL1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DCAMKL1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DCLK1
Synonyms	DCAMKL1, DCDC3A, KIAA0369
Function	Probable kinase that may be involved in a calcium-signaling pathway

	controlling neuronal migration in the developing brain. May also participate in functions of the mature nervous system.
Tissue Location	In fetal tissues, highly expressed in brain, detectable in lung and liver, but not in kidney. In adult tissues, expressed ubiquitously in the brain, detectable in the heart, liver, spleen, thymus, prostate, testis, ovary, small intestine and colon. The type A isoforms seem to be expressed predominantly in fetal brain whereas type B isoforms are expressed abundantly in both fetal and adult brain.

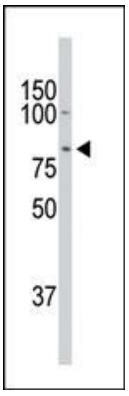
Background

Doublecortin-like kinase (DCAMKL1)(Ser/Thr protein kinase family) is essential for proper neurogenesis, neuronal migration, and axonal wiring. DCAMKL1 is involved in a calcium-signaling pathway controling neuronal migration in the developing brain, and participates in functions of the mature nervous system. DCAMKL1 protein shares high homology with doublecortin (DCX). DCLK, but not DCX, is highly expressed in regions of active neurogenesis in the neocortex and cerebellum. DCAMKL1 controls mitotic division by regulating spindle formation and also determines the fate of neural progenitors during cortical neurogenesis.

References

Matsumoto, N., et al., Genomics 56(2):179-183 (1999). Sossey-Alaoui, K., et al., Genomics 56(1):121-126 (1999). Omori, Y., et al., J. Hum. Genet. 43(3):169-177 (1998). Nagase, T., et al., DNA Res. 4(2):141-150 (1997).

Images



The DCAMKL1 Antibody (C-term)(Cat. #AP7219b) western blot analysis in mouse heart tissuelysates (35ug/lane).This demonstrates the DCAMKL1 antibody detected the DCAMKL1 protein (arrow).

Citations

- Novel protocol to observe the intestinal tuft cell using transmission electron microscopy
- Notch signaling drives development of Barrett's metaplasia from Dclk1-positive epithelial tuft cells in the murine gastric mucosa
- Advillin is a tuft cell marker in the mouse alimentary tract
- Hormonal Suppression of Stem Cells Inhibits Symmetric Cell Division and Gastric Tumorigenesis
- Dclk1 Inhibition Cancels 5-FU-induced Cell-cycle Arrest and Decreases Cell Survival in Colorectal Cancer.
- Association of doublecortin-like kinase 1 with tumor aggressiveness and poor biochemical recurrence-free survival in prostate cancer.
- Organoid Cultures for Assessing Intestinal Epithelial Differentiation and Function in Response to Type-2 Inflammation.
- Helicobacter-induced gastric inflammation alters the properties of gastric tissue stem/progenitor cells.
- Contribution of ATOH1+ Cells to the Homeostasis, Repair, and Tumorigenesis of the Colonic Epithelium.
- Enhancement of cytotoxic effects of gemcitabine by Dclk1 inhibition through suppression of Chk1 phosphorylation in human pancreatic cancer cells.
- Goblet Cell Ratio in Combination with Differentiation and Stem Cell Markers in Barrett Esophagus Allow Distinction of Patients with and without Esophageal Adenocarcinoma.

- Data showing proliferation and differentiation of intestinal epithelial cells under targeted depletion of Notch ligands in mouse intestine.
- Doublecortin-like kinase 1-positive enterocyte - a new cell type in human intestine.
- DCLK1 is up-regulated and associated with metastasis and prognosis in colorectal cancer.
- Catecholamines Facilitate Fuel Expenditure and Protect Against Obesity via a Novel Network of the Gut-Brain Axis in Transcription Factor Skn-1-deficient Mice.
- Nkx2.2 is expressed in a subset of enteroendocrine cells with expanded lineage potential.
- Cell lineage identification and stem cell culture in a porcine model for the study of intestinal epithelial regeneration.
- Glucagon-like peptide-2 increases dysplasia in rodent models of colon cancer.
- Kr □¼ppel-like factor 4 regulates intestinal epithelial cell morphology and polarity.
- Distinct ATOH1 and Neurog3 requirements define tuft cells as a new secretory cell type in the intestinal epithelium.
- DCAMKL-1 expression identifies Tuft cells rather than stem cells in the adult mouse intestinal epithelium.
- Regeneration of intestinal stem/progenitor cells following doxorubicin treatment of mice.
- Identification of a novel putative gastrointestinal stem cell and adenoma stem cell marker, doublecortin and CaM kinase-like-1, following radiation injury and in adenomatous polyposis coli/multiple intestinal neoplasia mice.