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DCX Antibody (S128)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2768a

Product Information

Application	IHC-P, WB, E
Primary Accession	O43602
Other Accession	Q9ESI7, O88809
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15193
Calculated MW	40574
Antigen Region	107-137

Additional Information

Gene ID	1641
Other Names	Neuronal migration protein doublecortin, Doublin, Lissencephalin-X, Lis-X, DCX, DBCN, LISX
Target/Specificity	This DCX antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 107-137 amino acids from human DCX.
Dilution	IHC-P~~1:100~500 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 purified through a protein A column, followed by peptide affinity purification.
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	DCX Antibody (S128) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DCX
Synonyms	DBCN, LISX
Function	Microtubule-associated protein required for initial steps of neuronal

	dispersion and cortex lamination during cerebral cortex development. May act by competing with the putative neuronal protein kinase DCLK1 in binding to a target protein. May in that way participate in a signaling pathway that is crucial for neuronal interaction before and during migration, possibly as part of a calcium ion-dependent signal transduction pathway. May be part with PAFAH1B1/LIS-1 of overlapping, but distinct, signaling pathways that promote neuronal migration.
Cellular Location	Cytoplasm. Cell projection, neuron projection {ECO:0000250|UniProtKB:Q9ESI7}. Note=Localizes at neurite tips. {ECO:0000250|UniProtKB:Q9ESI7}
Tissue Location	Highly expressed in neuronal cells of fetal brain (in the majority of cells of the cortical plate, intermediate zone and ventricular zone), but not expressed in other fetal tissues. In the adult, highly expressed in the brain frontal lobe, but very low expression in other regions of brain, and not detected in heart, placenta, lung, liver, skeletal muscles, kidney and pancreas

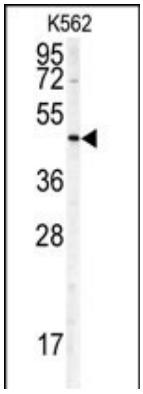
Background

In the developing cortex, cortical neurons must migrate over long distances to reach the site of their final differentiation. DCX is a cytoplasmic protein which appears to direct neuronal migration by regulating the organization and stability of microtubules. It contains two doublecortin domains, which bind microtubules. In addition, this protein interacts with LIS1, the regulatory gamma subunit of platelet activating factor acetylhydrolase, and this interaction is important to proper microtubule function in the developing cortex. Mutations in the gene encoding DCX are a cause of X-linked lissencephaly.

References

Leger,P.L., Neurogenetics (2008)
Zhang,Y., Biochem. Biophys. Res. Commun. 363 (3), 694-700 (2007)

Images



Western blot analysis of anti-DCX Antibody (S128) (Cat.#AP2768a) in K562 cell line lysates (35ug/lane). DCX (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with DCX Antibody (S128) (Cat.#AP2768a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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