ARG41160
anti-Doublecortin antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes Doublecortin
Tested Reactivity	Hu, Ms, Rat
Predict Reactivity	Cow, Dog, Pig
Tested Application	ICC/IF, IHC-P, WB
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	Doublecortin
Species	Human
Immunogen	Synthetic peptide around the internal region of Human Doublecortin. (C-KTSANMKAPQS) (NP_000546.2; NP_835365.1; NP_835364.1; NP_001182482.1)
Conjugation	Un-conjugated
Alternate Names	LISX; Doublin; SCLH; Lissencephalin-X; Neuronal migration protein doublecortin; DC; Lis-X; DBCN; XLIS

Application Instructions

Application table

Application	Dilution
ICC/IF	5 - 10 µg/ml
IHC-P	2 - 4 µg/ml
WB	0.01 - 0.03 µg/ml

Application Note: WB: Recommend incubate at RT for 1h.
IHC-P: Antigen Retrieval: Microwaved tissue section in Citrate buffer (pH 6.0).
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Observed Size: ~ 45 kDa

Properties

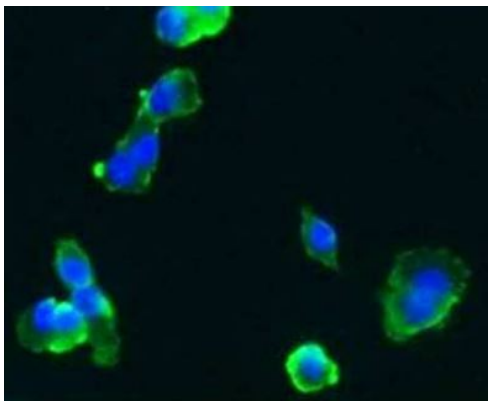
Form	Liquid
Purification	Affinity purified
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
Concentration	0.5 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

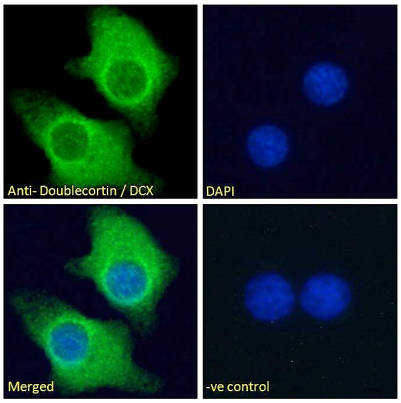
Gene Symbol	DCX
Gene Full Name	doublecortin
Background	This gene encodes a member of the doublecortin family. The protein encoded by this gene is a cytoplasmic protein and contains two doublecortin domains, which bind microtubules. In the developing cortex, cortical neurons must migrate over long distances to reach the site of their final differentiation. The encoded protein appears to direct neuronal migration by regulating the organization and stability of microtubules. In addition, the encoded 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 this gene cause abnormal migration of neurons during development and disrupt the layering of the cortex, leading to epilepsy, mental retardation, subcortical band heterotopia ("double cortex" syndrome) in females and lissencephaly ("smooth brain" syndrome) in males. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2010]
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. [UniProt]
Research Area	Controls and Markers antibody; Neuroscience antibody; Hippocampal Neurogenesis Marker antibody; Immature Neuronal Cells Marker antibody
Calculated Mw	41 kDa
PTM	Phosphorylation by MARK1, MARK2 and PKA regulates its ability to bind microtubules (By similarity). Phosphorylation at Ser-265 and Ser-297 seems to occur only in neonatal brain, the levels falling precipitously by postnatal day 21 (By similarity). Ubiquitinated by MDM2, leading to its degradation by the proteasome. Ubiquitinated by MDM2 and subsequent degradation leads to reduce the dendritic spine density of olfactory bulb granule cells. [UniProt]
Cellular Localization	Cytoplasm. Cell projection. Note=Localizes at neurite tips. [UniProt]

Images



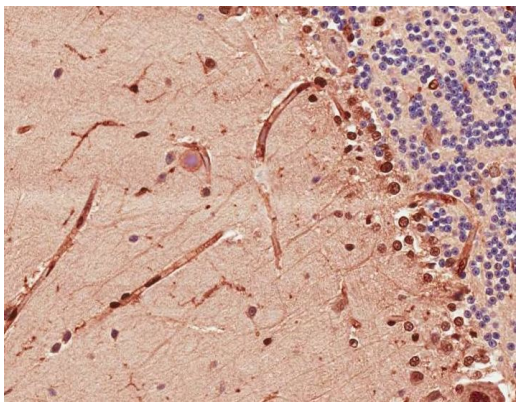
ARG41160 anti-Doublecortin antibody ICC/IF image

Immunofluorescence: Paraformaldehyde-fixed HepG2 cells, permeabilized with 0.15% Triton. Cells were stained with ARG41160 anti-Doublecortin antibody (green) at 5 µg/ml dilution for 1 hour. DAPI (blue) for nuclear staining.



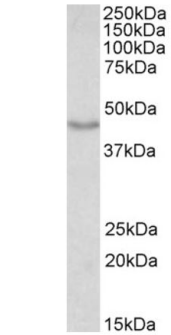
ARG41160 anti-Doublecortin antibody ICC/IF image

Immunofluorescence: Paraformaldehyde fixed KNRK cells permeabilized with 0.15% Triton. Cells were stained with ARG41160 anti-Doublecortin antibody (green) at 10 µg/ml dilution for 1 hour. DAPI (blue) for nuclear staining. Negative control: Unimmunized goat IgG (green) at 10 µg/ml dilution.



ARG41160 anti-Doublecortin antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human cerebellum stained with ARG41160 anti-Doublecortin antibody at 2 µg/ml dilution. Antigen Retrieval: Microwaved tissue section in Citrate buffer (pH 6.0).



Mouse fetal brain

ARG41160 anti-Doublecortin antibody WB image

Western blot: 35 µg of Mouse fetal brain lysate (in RIPA buffer) stained with ARG41160 anti-Doublecortin antibody at 0.01 µg/ml dilution and incubated at RT for 1 hour.