

# Doublecortin (E-6): sc-271390

## BACKGROUND

Lissencephaly (smooth brain) is an abnormality of brain development characterized by incomplete neuronal migration and a smooth cerebral surface, resulting in severe mental retardation. Genetic analysis identified two proteins that are mutated in some cases of lissencephaly, designated lissencephaly-1 protein (LIS1) and Doublecortin. LIS1 shows sequence homology to  $\beta$ -subunits of heterotrimeric G proteins. Doublecortin contains a consensus Abl phosphorylation site, and it has some sequence homology to a predicted kinase protein. Both proteins are highly expressed in developing brain, suggesting that they may be involved in a signal transduction pathway that is crucial to brain development.

## CHROMOSOMAL LOCATION

Genetic locus: DCX (human) mapping to Xq23, DCLK1 (human) mapping to 13q13.3; Dcx (mouse) mapping to X F2, Dclk1 (mouse) mapping to 3 C.

## SOURCE

Doublecortin (E-6) is a mouse monoclonal antibody raised against amino acids 123-402 mapping to the C-terminus of Doublecortin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Doublecortin (E-6) is available conjugated to agarose (sc-271390 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271390 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271390 PE), fluorescein (sc-271390 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271390 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271390 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271390 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271390 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271390 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271390 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Doublecortin (E-6) is recommended for detection of Doublecortin and DCAMK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Doublecortin: 40 kDa.

Positive Controls: Doublecortin (h): 293T Lysate: sc-114231, SK-N-SH cell lysate: sc-2410 or mouse embryo extract: sc-364239.

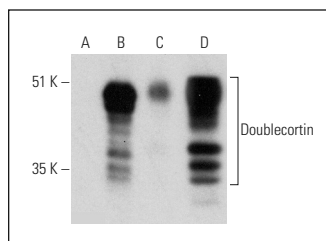
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

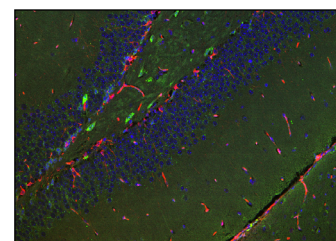
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



Doublecortin (E-6) HRP: sc-271390 HRP. Direct western blot analysis of Doublecortin expression in non-transfected: sc-117752 (A) and human Doublecortin transfected: sc-114231 (B) 293T whole cell lysates and mouse embryo (C) and mouse postnatal brain (D) tissue extracts.



Doublecortin (E-6): sc-271390. Mouse hippocampus (formalin fixed, paraffin) stained with sc-271390; 1:50 overnight with AlexaFluor-568 (red). Green-active caspase-3, Blue-DAPI. Kindly provided by Dr. Svetlana Zonis, Cedars-Sinai Medical Center.

## SELECT PRODUCT CITATIONS

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- Zonis, S., et al. 2018. Inflammation-induced Gro1 triggers senescence in neuronal progenitors: effects of estradiol. *J. Neuroinflammation* 15: 260.
- Zhang, R., et al. 2018. Radix scutellariae attenuates CUMS-induced depressive-like behavior by promoting neurogenesis via cAMP/PKA pathway. *Neurochem. Res.* 43: 2111-2120.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.