

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 β -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; Dcx (mouse) mapping to X F2.

SOURCE

Doublecortin (E-6) is a mouse monoclonal antibody raised against amino acids 81-365 mapping at the C-terminus of Doublecortin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271390 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271390 PE), fluorescein (sc-271390 FITC), Alexa Fluor[®] 488 (sc-271390 AF488), Alexa Fluor[®] 546 (sc-271390 AF546), Alexa Fluor[®] 594 (sc-271390 AF594) or Alexa Fluor[®] 647 (sc-271390 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271390 AF680) or Alexa Fluor[®] 790 (sc-271390 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Doublecortin (E-6) is recommended for detection of Doublecortin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for Doublecortin siRNA (h): sc-35214, Doublecortin siRNA (m): sc-35215, Doublecortin shRNA Plasmid (h): sc-35214-SH, Doublecortin shRNA Plasmid (m): sc-35215-SH, Doublecortin shRNA (h) Lentiviral Particles: sc-35214-V and Doublecortin shRNA (m) Lentiviral Particles: sc-35215-V.

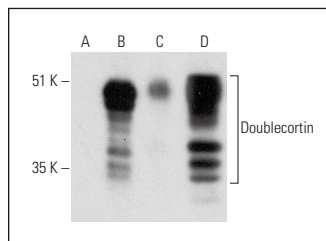
Molecular Weight of Doublecortin: 40 kDa.

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

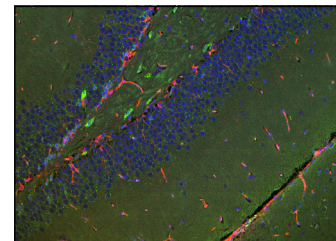
STORAGE

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

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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- Odaira, T., et al. 2019. Mechanisms underpinning AMP-activated protein kinase-related effects on behavior and hippocampal neurogenesis in an animal model of depression. *Neuropharmacology* 150: 121-133.
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RESEARCH USE

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