

Datasheet for 600-101-MH8S**Doublecortin Antibody****Overview**

Description:	Anti-Doublecortin (GOAT) Antibody - 600-101-MH8S
Item No.:	600-101-MH8S
Size:	25 µg
Applications:	IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Goat

Product Details

Background:	DCX (Neuronal Migration Protein Doublecortin) is a microtubule-associated protein required for initial steps of neuronal dispersion and cortex lamination during cerebral cortex development. It may act by competing with the putative neuronal protein kinase DCLK1 in binding to a target protein. In that way, it may 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. Doublecortin may be part with PAFAH1B1/LIS-1 of overlapping, but distinct, signaling pathways that promote neuronal migration. Mutations in this gene cause abnormal migration of neurons during development and disrupt the layering of the cortex, leading to epilepsy, cognitive disability, subcortical band heterotopia ("double cortex" syndrome) in females and lissencephaly ("smooth brain" syndrome) in males. Anti-Neuronal Migration Protein Doublecortin Antibody is useful for researcher interested in developmental biology, cytoskeletal signaling, neuroscience, and protein kinase binding.
Synonyms:	Goat Anti-Doublecortin Antibody, Lissencephalin-X, Doublecortex, Dublin, Lis-X, DBCN, LISX, Doublecortex Lissencephaly X-Linked (Doublecortin), Neuronal Migration Protein Doublecortin, SCLH, XLIS, DC
Host Species:	Goat
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	DCX
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Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Doublecortin antibody was prepared from whole goat serum produced by repeated immunizations with a synthetic peptide corresponding to a near C-terminal portion of human doublecortin conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against human Neuronal migration protein doublecortin. This product was affinity purified from monospecific antiserum by immunoaffinity purification. Blast analysis the immunogen sequence shows 100% identity with rat.
Relevant Links:	• UniProtKB - O43602 • NCBI - NP_000546.2 • GeneID - 1641

Application Details

Tested Applications:	IF, IHC, WB
Application Note:	Anti-Doublecortin Antibody has been tested in WB, IF, and IHC. Expect bands ~40.6 kDa in western blot using appropriate lysates. Positive control used: PND2-6 brain cells in western blot; PND1 in immunofluorescence; and mouse dentate gyrus for immunohistochemistry.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000-1:50,000
IF:	15 µg/mL
IHC:	1:200
WB:	1:1000

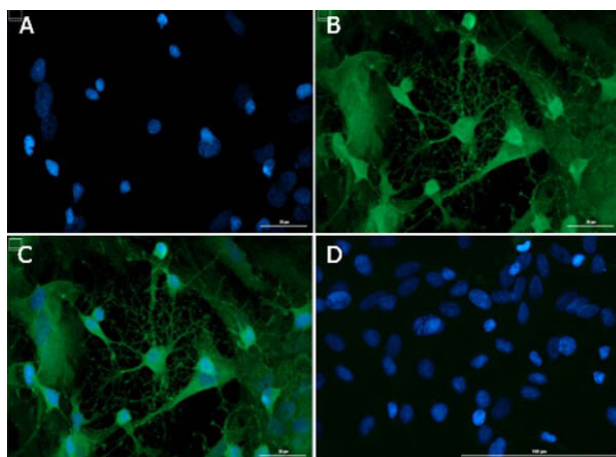
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.3 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

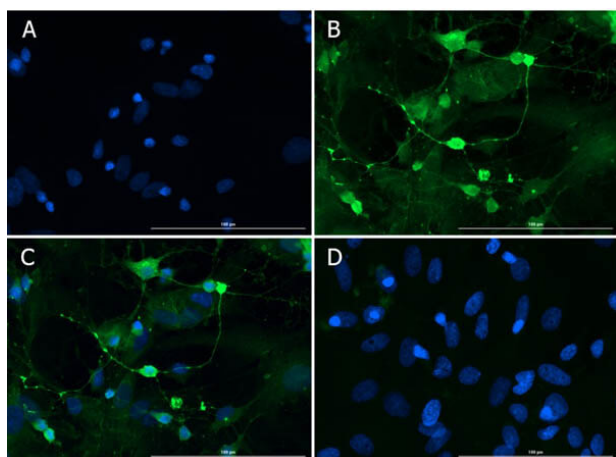
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



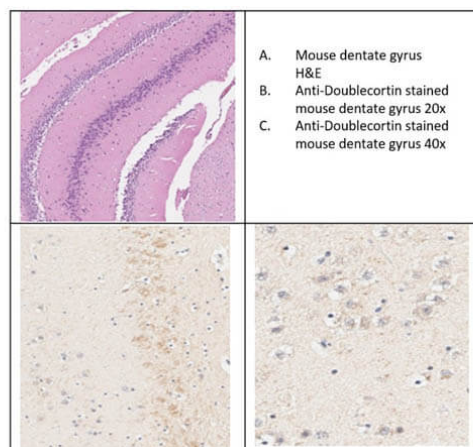
Immunofluorescence Microscopy

Immunofluorescence microscopy of Anti-Doublecortin in PND1 cells. Post-natal rat pup (PND1) heterogeneous brain cells were fixed with 4% PFA, permeabilization 0.3% Triton X-100. Incubated with 15µg/mL of anti-Doublecortin primary antibody at 4°C overnight. Counterstain Donkey anti-Goat IgG Dylight™488 Conjugated antibody (p/n 605-741-125) at 5µg/mL for 1hr at room temperature. Nuclei were counterstained with DAPI present in mounting medium. Predicted cell localization is cytoplasm, cell projection. Image A). DAPI only. B). Anti-Doublecortin Antibody + secondary. C). Merged A+B. D). Secondary only.



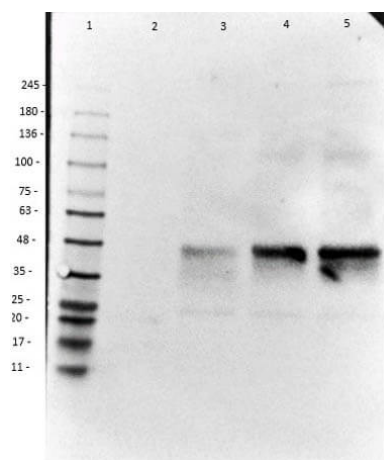
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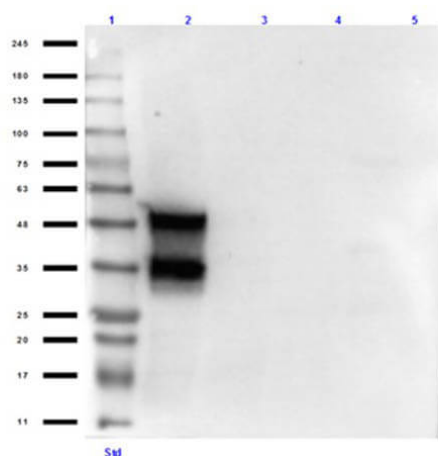
Immunohistochemistry

Immunohistochemistry of Goat Anti-Doublecortin antibody in mouse brain. Tissue: mouse dentate gyrus tissue. Antigen retrieval: heat induced (HIER) using Citrate Buffer for 20min. Primary antibody: Doublecortin antibody at 1:200 for 30min at RT. Secondary Antibody: Donkey Anti-Goat-HRP Antibody at 4 μ l/mL for 20min at RT. Counter Stain: Hematoxylin. Localization: Doublecortin (DCX) showed selective staining of soma and nuclei of cells in the dentate gyrus in mouse brain.



Western Blot

Western Blot of Goat Anti-Doublecortin Antibody. Lane 1: Opal Pre-stained MW ladder (p/n MB-210-0500). Lane 2: HEK293T Lysate (p/n W09-001-GX5) [15 μ g]. Lane 3: Rat brain, post natal, Whole Cell Lysate (p/n W12-001-MQ6) [15 μ g]. Lane 4: Rat pup PND2-6 - minimal cortex brain lysate [15 μ g]. Lane 5: Rat pup PND2-6 - minimal cortex brain lysate [35 μ g]. Primary antibody: Doublecortin antibody at 1:1000 for overnight at 4°C. Secondary antibody: Donkey anti-goat secondary HRP antibody (p/n 605-703-125) at 1:40,000 for 1 hr at RT. Blocking: BlockOut (p/n MB-073) for 30 min at RT. Expected: ~40kDa. Observed size: ~45kDa.



Western Blot

Western Blot of Goat Anti-Doublecortin Antibody. Lane 1: Opal Pre-stained MW ladder (p/n MB-210-0500). Lane 2: Doublecortin (human) Over Expressing HEK293T Lysate C-MYC/DDK tagged. Lane 3: HEK293T Lysate (p/n W09-001-GX5). Lane 4: Ms adult brain (normal tissue) (p/n W10-000-T004). Lane 5: Rat adult brain (normal tissue) (p/n W12-000-T077). Load: 10 μ g per lane. Primary antibody: Doublecortin antibody at 1:1000 for overnight at 4°C. Secondary antibody: Donkey anti-goat secondary HRP antibody (p/n 605-703-125) at 1:40,000 for 1 hr at RT. Blocking: BlockOut (p/n MB-073) for 30 min at RT. Expected: ~48kDa (overexpressing). Observed size: ~48/35kDa for Doublecortin.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.