


Anti-Doublecortin antibody ab18723

★★★★★ [59 Abreviews](#) [400 References](#) [16 图像](#)

概述

产品名称	Anti-Doublecortin抗体
描述	兔多克隆抗体to Doublecortin
宿主	Rabbit
特异性	Please note: Low dilutions of this antibody can cause high background in IHC. Please use as high a dilution as possible. Optimal working dilutions are batch dependent.
经测试应用	适用于: WB, IHC-FoFr, ICC/IF, IHC-Fr, IHC-P
种属反应性	与反应: Mouse, Rat, Quail 预测可用于: Human, Cynomolgus monkey 
免疫原	Synthetic peptide conjugated to KLH derived from within residues 300 to the C-terminus of Human Doublecortin. 参阅Abcam的 专有抗源政策 (Peptide available as ab19804 .)
常规说明	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
纯度	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help. Immunogen affinity purified

克隆 多克隆
同种型 IgG

应用

The Abpromise guarantee **Abpromise™** 承诺保证使用ab18723于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB	★★★★★ (6)	Use a concentration of 1 µg/ml. Detects a band of approximately 45 kDa (predicted molecular weight: 40-45 kDa).
IHC-FoFr	★★★★★ (11)	1/1300 - 1/2000.
ICC/IF	★★★★★ (7)	Use a concentration of 1 - 5 µg/ml.
IHC-Fr	★★★★★ (7)	1/2000 - 1/7000. This antibody works well on Formalin fixed frozen sections, but will not work on fresh-frozen sections. For IHC-Fr, we recommend to use PFA perfusion fixed tissues. After dissection, fix the tissue further in PFA overnight, wash in PBS and incubate overnight in 30% sucrose/PBS, and then embed in OCT compound and cryosection.
IHC-P	★★★★★ (16)	Use a concentration of 0.05 - 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

靶标

功能	Seems to be required for initial steps of neuronal dispersion and cortex lamination during cerebral cortex development. May act by competing with the putative neuronal protein kinase DCAMKL1 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 LIS-1 of an overlapping, but distinct, signaling pathways that promote neuronal migration.
组织特异性	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.
疾病相关	Defects in DCX are the cause of lissencephaly X-linked type 1 (LISX1) [MIM:300067]; also called X-LIS or LIS. LISX1 is a classic lissencephaly characterized by mental retardation and seizures that are more severe in male patients. Affected boys show an abnormally thick cortex with absent or severely reduced gyri. Clinical manifestations include feeding problems, abnormal muscular tone, seizures and severe to profound psychomotor retardation. Female patients display a less severe phenotype referred to as 'doublecortex'. Defects in DCX are the cause of subcortical band heterotopia X-linked (SBHX) [MIM:300067]; also known as double cortex or subcortical laminar heterotopia (SCLH). SBHX is a mild brain malformation of the lissencephaly spectrum. It is characterized by bilateral and symmetric plates

or bands of gray matter found in the central white matter between the cortex and cerebral ventricles, cerebral convolutions usually appearing normal.
 Note=A chromosomal aberration involving DCX is found in lissencephaly. Translocation t(X;2) (q22.3;p25.1).

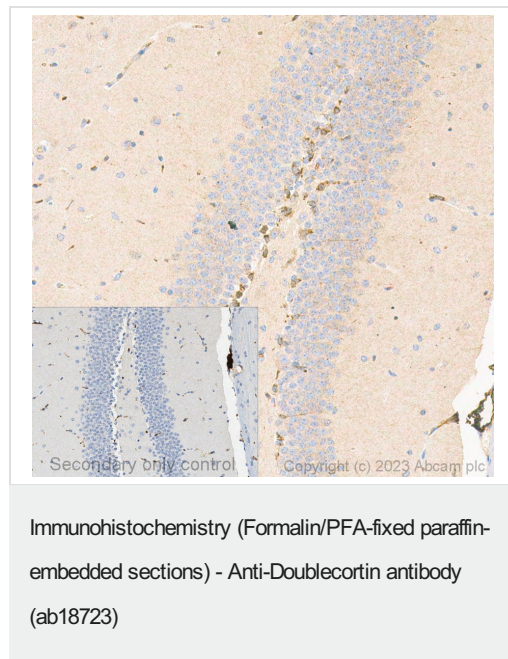
序列相似性

Contains 2 doublecortin domains.

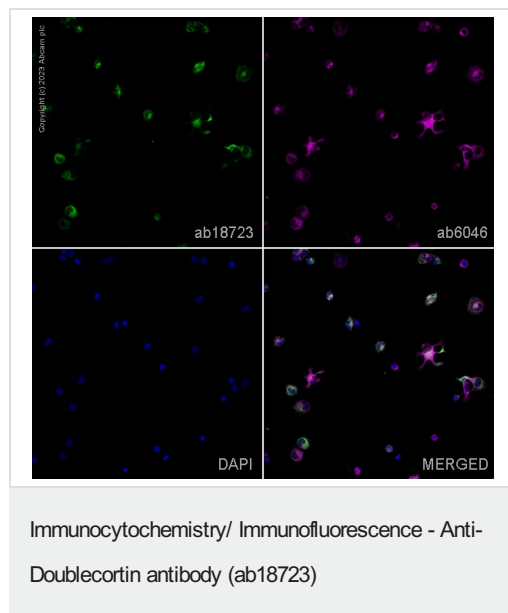
细胞定位

Cytoplasm.

图片



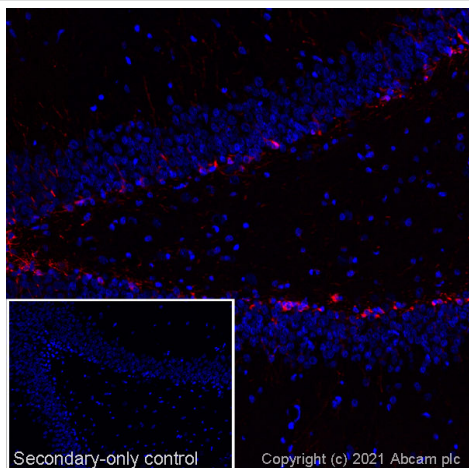
Immunohistochemical analysis of formalin-fixed paraffin-embedded mouse brain labelling doublecortin with ab18723 at a dilution of 0.8µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with an OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was conducted for 32min with ULTRA cell conditioning solution (CC1 pH8.5). ab18723 anti doublecortin antibody was incubated at 37°C for 16min. Sections were counterstained is with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.



ab18723 staining Doublecortin in Rt Primary Neurons DIV1 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab18723 at 5µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 4% paraformaldehyde (10 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

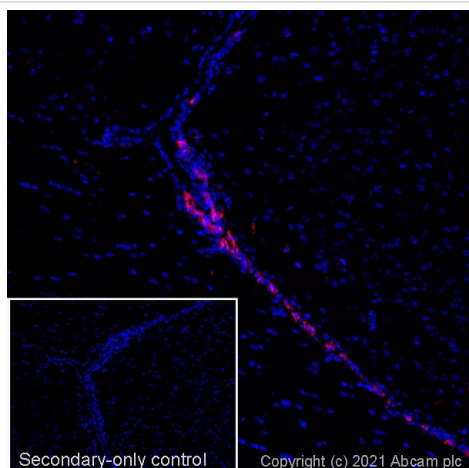


Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Doublecortin antibody (ab18723)

IHC image of Doublecortin staining in a section of frozen PFA perfusion fixed 6 week old rat dentate gyrus. After dissection, the tissue was further fixed in PFA overnight, washed in PBS and then incubated overnight in 30% sucrose. It was then embedded in OCT and cryosectioned. Non-specific protein-protein interactions were blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab18723 at 1/1300 dilution and then incubated with **ab150080** (Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) preabsorbed, (Shown in red) 1/1000) for 1 hour at room temperature. DAPI was used to stain the cell nuclei (blue). The secondary-only control insert image is taken from an identical assay without primary antibody.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.

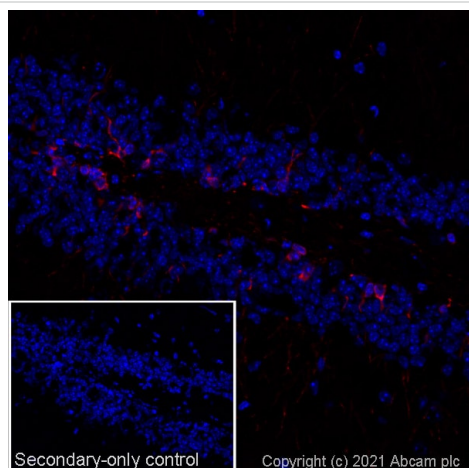


Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Doublecortin antibody (ab18723)

IHC image of Doublecortin staining in a section of frozen PFA perfusion fixed 8 week old mouse SVZ. After dissection, the tissue was further fixed in PFA overnight, washed in PBS and then incubated overnight in 30% sucrose. It was then embedded in OCT and cryosectioned. Non-specific protein-protein interactions were blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab18723 at 1/2000 dilution and then incubated with **ab150080** (Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) preabsorbed, (Shown in red) 1/1000) for 1 hour at room temperature. DAPI was used to stain the cell nuclei (blue). The secondary-only control insert image is taken from an identical assay without primary antibody.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.

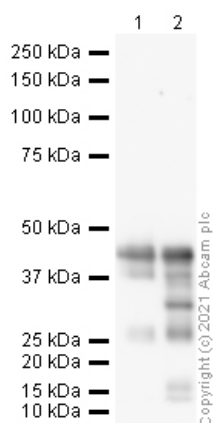


Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Doublecortin antibody (ab18723)

IHC image of Doublecortin staining in a section of frozen PFA perfusion fixed 8 week old mouse dentate gyrus. After dissection, the tissue was further fixed in PFA overnight, washed in PBS and then incubated overnight in 30% sucrose. It was then embedded in OCT and cryosectioned. Non-specific protein-protein interactions were blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab18723 at 1/2000 dilution and then incubated with **ab150080** (Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) preabsorbed, (Shown in red) 1/1000) for 1 hour at room temperature. DAPI was used to stain the cell nuclei (blue). The secondary-only control insert image is taken from an identical assay without primary antibody.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.



Western blot - Anti-Doublecortin antibody (ab18723)

All lanes : Anti-Doublecortin antibody (ab18723) at 1 µg/ml

Lane 1 : Mouse brain tissue lysate - total protein (0 days)

Lane 2 : Rat brain tissue lysate - total protein (0 days)

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/50000 dilution

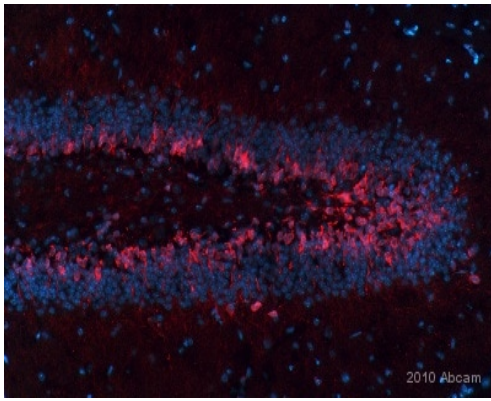
Predicted band size: 40-45 kDa

Observed band size: 45 kDa

Blocking buffer: 3% Milk

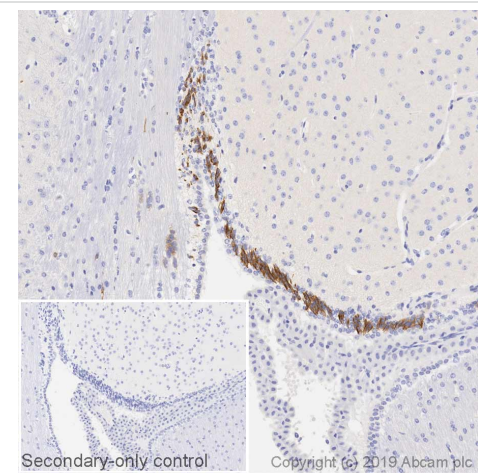
Gel type: MOPS

Exposure Time: 1 minute 30 seconds



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Doublecortin antibody (ab18723)
This image is courtesy of an anonymous abreview.

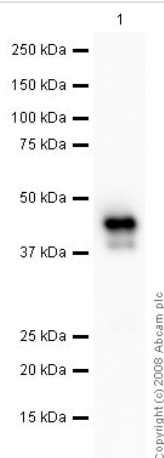
IHC-FoFr image of Doublecortin staining in Mouse adult dentate gyrus sections using ab18723 (1/100 dilution). The sections were fixed in paraformaldehyde and permeabilized using 1x TBST. The sections were then blocked using 10% donkey serum for 1 hour at 25°C. ab18723 was diluted 1/100 and incubated with the sections for 12 hours at 25°C. The secondary antibody used was Donkey anti-rabbit conjugated to Cy3 Dye (1/500 dilution). DAPI was used to stain the nuclei.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Doublecortin antibody (ab18723)

IHC image of ab18723 staining in Mouse 8 weeks brain formalin fixed paraffin embedded tissue section, performed on a Leica BOND™ system using the standard protocol F (with no post primary). The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab18723, 0.1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. Secondary-only control image is shown as insert.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-Doublecortin antibody (ab18723)

Anti-Doublecortin antibody (ab18723) at 1 µg/ml + Mouse brain tissue lysate - total protein (0 days) (**ab7188**) at 10 µg

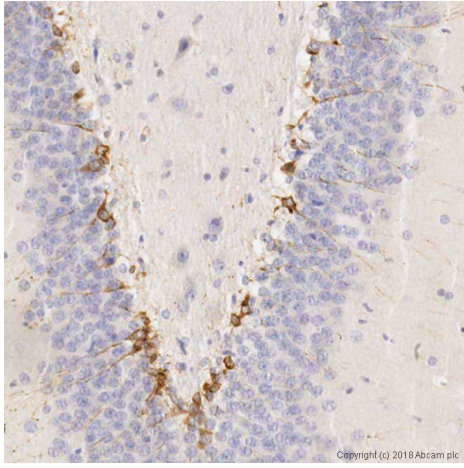
Secondary

Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 40-45 kDa

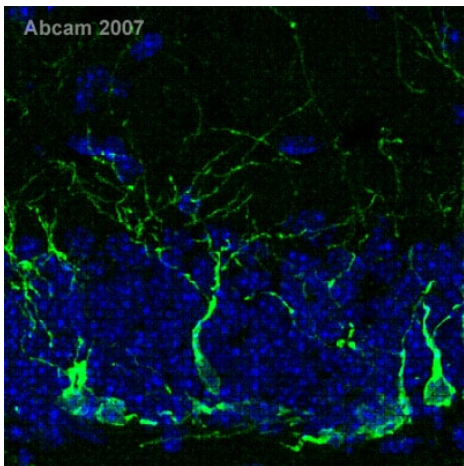
Observed band size: 45 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Doublecortin antibody (ab18723)

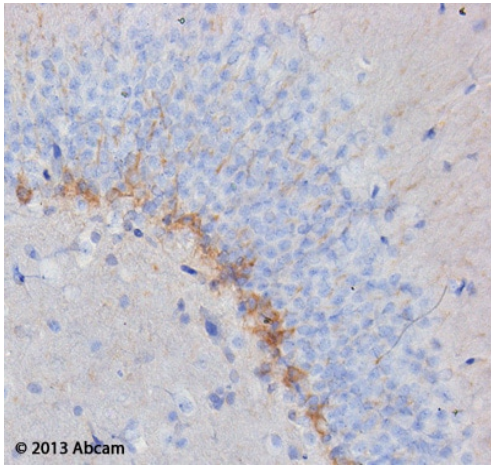
IHC image of ab18723 staining in rat 6 week brain formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6) for 20 mins. The section was then incubated with ab18723, 0.1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Doublecortin antibody (ab18723)
This image is courtesy of Francois Guillemot, NIMR, UK

Doublecortin expression in the dentate gyrus of a 1 month-old mouse brain. Doublecortin staining using ab18723 (1/500) in the dentate gyrus of a 1 month-old mouse brain. The mouse has been perfused with paraformaldehyde 4% (50ml). After dissection, the brain has been incubated overnight in sucrose 20%, embedded in OCT and cryosectioned (10 µm). No antigen retrieval was used. The secondary antibody used was a non-Abcam Goat anti-rabbit Alexa488.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Doublecortin antibody (ab18723)

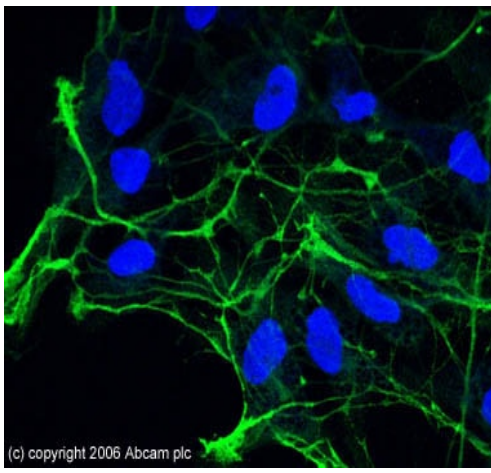
ab18723 staining 6 week rat brain tissue dentate gyrus (DG) by IHC-P using rabbit-specific EXPOSE IHC detection kit ([ab80437](#)). Formalin fixed paraffin embedded tissue sections were pre-treated using heat mediated antigen retrieval (using a pressure cooker) with sodium citrate buffer (pH6) for 30 mins. The section was incubated with ab18723, 0.1 µg/ml, for 1 hour at room temperature. DAB was used as the chromogen and the section was counterstained with haematoxylin and mounted with DPX.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Doublecortin antibody (ab18723)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

ab18723 at 1/200 staining mouse E18 body T/S spinal cord tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step was performed before incubation with the antibody for 24 hours. A biotinylated goat antibody was used as the secondary.



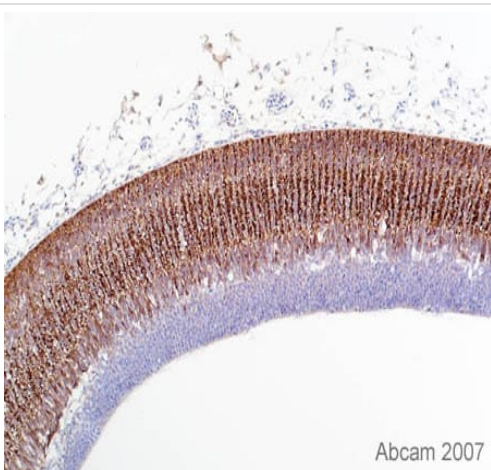
Immunocytochemistry/ Immunofluorescence - Anti-Doublecortin antibody (ab18723)

This image is courtesy of Randal Moldrich, CNRS UMR7637, ESPCI, France

Doublecortin antibody (ab18723; green) labeling cell extensions from rat embryos consistent with dendrite morphology in 4 day old cultures. Preincubation of ab18723 with its immunising peptide (**ab19804**) quenched immunostaining (see review).

Dorsal root ganglion explants were dissected from 16 day-old rat embryos and cultured for 4 days in vitro with Neurobasal Medium containing 10% fetal calf serum and B27 supplement.

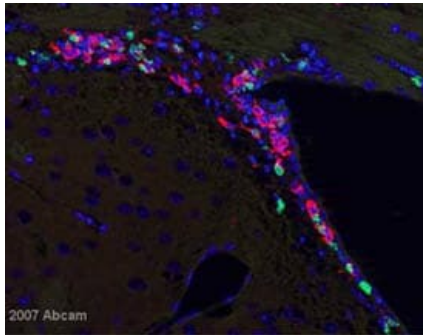
Immunocytochemistry: All steps were performed in PBS. Cells or explants were fixed in 4% PFA for 15min, permeabilised with 0.1% TX100 for 10min and blocked with 5% BSA, 0.1% TX100 for 45min. ab18723 was incubated at 5µg/ml for 12h in 5% BSA, 0.1% TX100 at 4°C. For peptide blocking experiments preincubation of the peptide (**ab19804**; 250µg/ml) and antibody (5µg/ml) was performed for 2h at 37°C. Cultures were washed (3x) of primary antibody solution. Goat anti-rabbit AlexaFluor 488 was used as secondary antibody (1/400) in 5% BSA, 0.1% TX100 for 2h at R



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Doublecortin antibody (ab18723)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

Immunohistochemical staining (on formaldehyde/PFA-fixed paraffin-embedded sections) of Doublecortin antibody - Neuronal Marker (ab18723) on Quail Tissue sections (E6/7 brain (Sagittal section). Antigen retrieval step: Heat mediated. Blocking step: 1% BSA for 10 mins at RT. Primary Antibody ab18723 incubated at 1/400 for 2 hours RT. Secondary Antibody: Biotin conjugated goat anti rabbit Ig (1/300).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Doublecortin antibody (ab18723)

This image is courtesy of Carl Hobbs, King's College London, United Kingdom

ab18723 at 1/2000 staining mouse brain svr: progenitor olfactory neurones by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step was performed before incubation with the antibody for 16 hours. An Alexa-Fluor® 488 conjugated goat antibody was used as the secondary (green). The tissue was also stained for Ki67 (shown in red).

The MIP image was derived from Apotome-generated Z-stacks from the greyscale image of each of the channels in the MIP.

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