abcam

Product datasheet

Anti-PAX6 antibody [EPR15858] ab195045

重组 RabMAb

★★★★★ 8 Abreviews 43 References 12 图像

概述

产品名称	Anti-PAX6抗体[EPR15858]
描述	兔单克隆抗体[EPR15858] to PAX6
宿主	Rabbit
经测试应用	**适用于:** WB, IHC-P, ICC/IF
种属反应性	**与反应:** Mouse, Rat, Human
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
阳性对照	IHC-P: Mouse eyeball,Human pancreas, cerebellum, retina and retinoblastoma tissues WB: Y79 and HeLa cell lysates; PAX6 transfected 293T cell lysate. ICC/IF: Y79 and Neuro-2a cells, mouse brain.
常规说明	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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 long term. Avoid freeze / thaw cycle.
存储溶液	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	EPR15858

同种型	IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab195045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		1/1000. Detects a band of approximately 47, 33, 32 kDa (predicted molecular weight: 47 kDa).
IHC-P	★★★★★ (1)	1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF	★★★★★ (5)	1/350.

靶标

功能 Transcription factor with important functions in the development of the eye, nose, central nervous system and pancreas. Required for the differentiation of pancreatic islet alpha cells (By similarity). Competes with PAX4 in binding to a common element in the glucagon, insulin and somatostatin promoters. Regulates specification of the ventral neuron subtypes by establishing the correct progenitor domains (By similarity). Isoform 5a appears to function as a molecular switch that specifies target genes.

组织特异性 Fetal eye, brain, spinal cord and olfactory epithelium. Isoform 5a is less abundant than the PAX6 shorter form.

疾病相关 Defects in PAX6 are the cause of aniridia (AN) [MIM:106210]. A congenital, bilateral, panocular disorder characterized by complete absence of the iris or extreme iris hypoplasia. Aniridia is not just an isolated defect in iris development but it is associated with macular and optic nerve hypoplasia, cataract, corneal changes, nystagmus. Visual acuity is generally low but is unrelated to the degree of iris hypoplasia. Glaucoma is a secondary problem causing additional visual loss over time.
Defects in PAX6 are a cause of Peters anomaly (PAN) [MIM:604229]. Peters anomaly consists of a central corneal leukoma, absence of the posterior corneal stroma and Descemet membrane, and a variable degree of iris and lenticular attachments to the central aspect of the posterior cornea.
Defects in PAX6 are a cause of foveal hypoplasia (FOVHYP) [MIM:136520]. Foveal hypoplasia can be isolated or associated with presenile cataract. Inheritance is autosomal dominant.
Defects in PAX6 are a cause of keratitis hereditary (KERH) [MIM:148190]. An ocular disorder characterized by corneal opacification, recurrent stromal keratitis and vascularization.
Defects in PAX6 are a cause of coloboma ocular (COLO) [MIM:120200]; also known as uveoretinal coloboma or coloboma of iris, choroid and retina. Ocular colobomas are a set of malformations resulting from abnormal morphogenesis of the optic cup and stalk, and the fusion of the fetal fissure (optic fissure). Severe colobomatous malformations may cause as much as 10% of the childhood blindness. The clinical presentation of ocular coloboma is variable. Some individuals may present with minimal defects in the anterior iris leaf without other ocular defects. More complex malformations create a combination of iris, uveoretinal and/or optic nerve defects without or with microphthalmia or even anophthalmia.

Defects in PAX6 are a cause of coloboma of optic nerve (COLON) [MIM:120430].
Defects in PAX6 are a cause of bilateral optic nerve hypoplasia (BONH) [MIM:165550]; also known as bilateral optic nerve aplasia. A congenital anomaly in which the optic disc appears abnormally small. It may be an isolated finding or part of a spectrum of anatomic and functional abnormalities that includes partial or complete agenesis of the septum pellucidum, other midline brain defects, cerebral anomalies, pituitary dysfunction, and structural abnormalities of the pituitary.
Defects in PAX6 are a cause of aniridia cerebellar ataxia and mental deficiency (ACAMD) [MIM:206700]; also known as Gillespie syndrome. A rare condition consisting of partial rudimentary iris, cerebellar impairment of the ability to perform coordinated voluntary movements, and mental retardation.

序列相似性

Belongs to the paired homeobox family.
Contains 1 homeobox DNA-binding domain.
Contains 1 paired domain.

发展阶段

Expressed in the developing eye and brain.

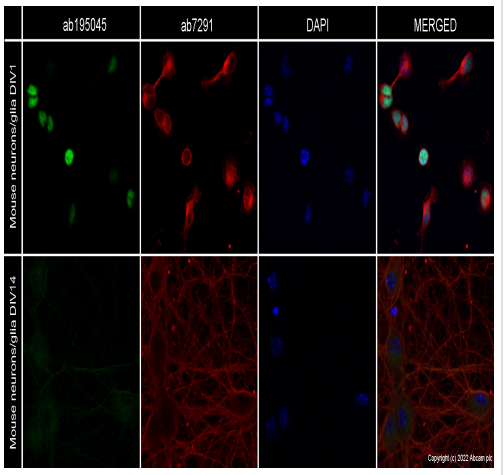
翻译后修饰

Ubiquitinated by TRIM11, leading to ubiquitination and proteasomal degradation.

细胞定位

Nucleus.

图片

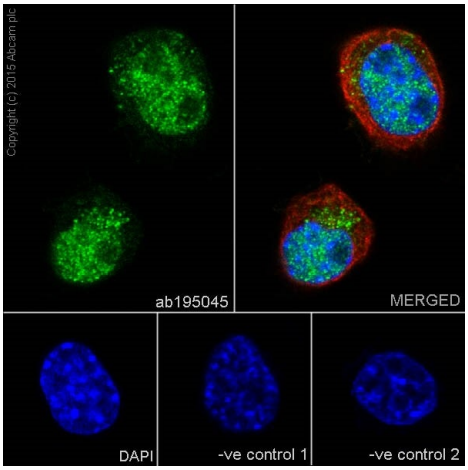


Immunocytochemistry/ Immunofluorescence - Anti-PAX6 antibody [EPR15858] (ab195045)

Ab195045 staining Pax6 in primary mouse neurons/glia, DIV1 (top row) and DIV14 (bottom row) both prepared from E18 mouse hippocampal brain area (obtained from Transnetyx Tissue by BrainBits, LLC, cat.no. C57EHP). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 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 ab195045 at 0.2 µg/ml and **ab7291**, mouse monoclonal [DM1A] to alpha Tubulin, at 1/1000 dilution. Cells were then incubated with **ab150081**, Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat Anti-Mouse IgG H&L (Alexa Fluor® 594) preadsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).

A subset of cells showed staining in the nucleus at DIV1 (likely neuroprogenitor cells), while differentiated neurons (DIV14) where Pax6 negative.

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



Immunocytochemistry/ Immunofluorescence - Anti-PAX6 antibody [EPR15858] (ab195045)

Immunofluorescence analysis of 4% paraformaldehyde-fixed, 0.1% tritonX-100 Neuro-2a (mouse neuroblastoma) cells labeling PAX6 with ab195045 at 1/350, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/400 (green).

Confocal image showing cytoplasmic and nuclear staining on Neuro-2a cell line.

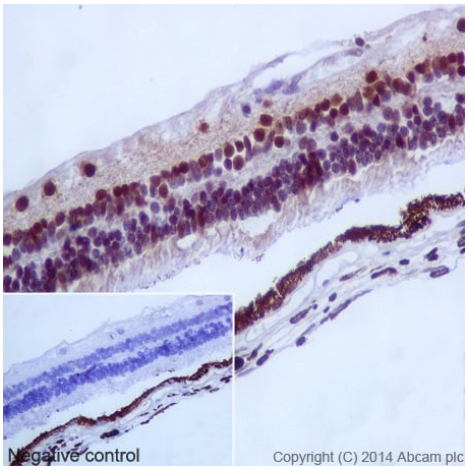
The nuclear counterstain is DAPI (blue).

Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 (red).

The negative controls are as follows:-

-ve control 1: ab195045 at 1/350 followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500.

-ve control 2: **ab7291** at 1/500 followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400.

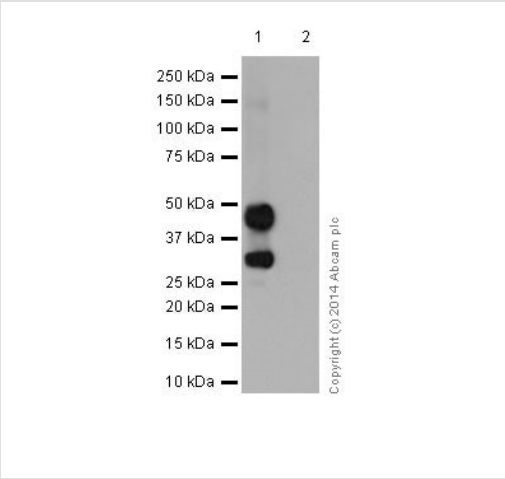


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX6 antibody [EPR15858] (ab195045)

Immunohistochemical analysis of paraffin-embedded Human retina tissue labeling PAX6 with ab195045 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) secondary antibody (**ab97051**) at 1/500 dilution. Nuclear staining on human retina tissue is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-PAX6 antibody [EPR15858] (ab195045)

All lanes : Anti-PAX6 antibody [EPR15858] (ab195045) at 1/10000 dilution

Lane 1 : PAX6 transfected 293T cell lysate
Lane 2 : Non-transfected 293T cell lysate

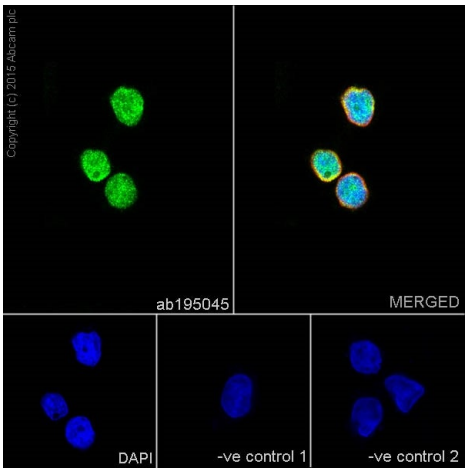
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 47 kDa
Observed band size: 32,33,47 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

The Transfected lysate spans the immunogenic region: aa1-aa422(47kDa).



Immunocytochemistry/ Immunofluorescence - Anti-PAX6 antibody [EPR15858] (ab195045)

Immunofluorescence analysis of 4% paraformaldehyde-fixed, 0.1% tritonX-100 Y79 (Human retinoblastoma cell line) cells labeling PAX6 with ab195045 at 1/350, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/400 (green).

Confocal image showing cytoplasmic and nuclear staining on Y79 cell line.

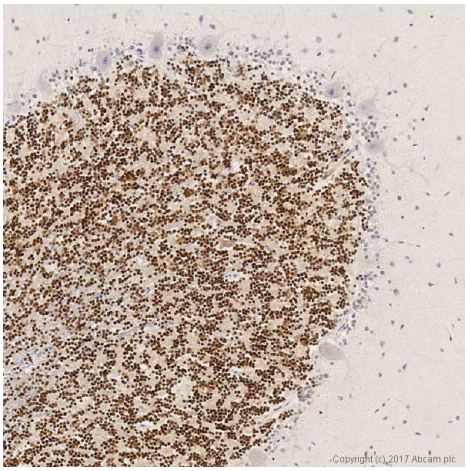
The nuclear counterstain is DAPI (blue).

Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 (red).

The negative controls are as follows:-
-ve control 1: ab195045 at 1/350 followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500.

-ve control 2: **ab7291** at 1/500 followed by **ab150077** (Alexa

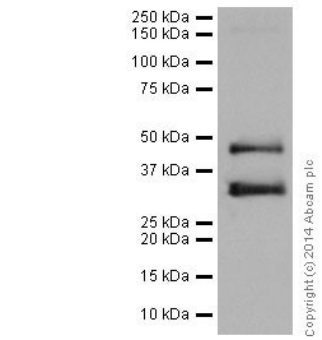
Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX6 antibody [EPR15858] (ab195045)

IHC image of Pax6 staining in a formalin fixed, paraffin embedded normal human cerebellum 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, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab195045, 1/1000 dilution, 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.



Western blot - Anti-PAX6 antibody [EPR15858] (ab195045)

Anti-PAX6 antibody [EPR15858] (ab195045) at 1/1000 dilution + Mouse eyeball lysate at 20 µg

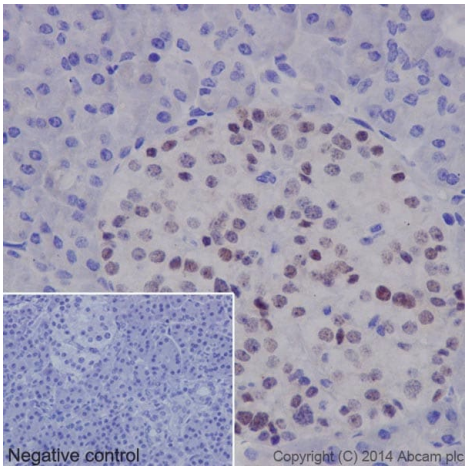
Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 47 kDa
Observed band size: 32,33,47 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

The 47kDa band represents the full length PAX6, we hypothesis the 32kDa & 33kDa bands represent the PAX6p32 & PAX6p33 fragments.

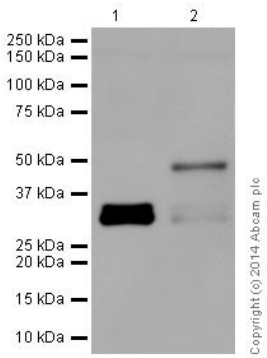


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX6 antibody [EPR15858] (ab195045)

Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling PAX6 with ab195045 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) secondary antibody (**ab97051**) at 1/500 dilution. Nuclear staining on human pancreas tissue is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-PAX6 antibody [EPR15858] (ab195045)

All lanes : Anti-PAX6 antibody [EPR15858] (ab195045) at 1/10000 dilution

Lane 1 : Y79 cell lysate
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Lysates/proteins at 20 µg per lane.

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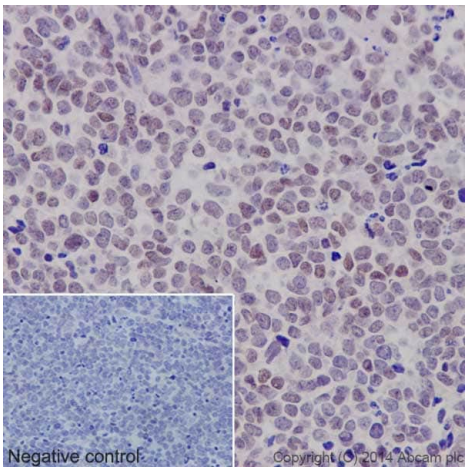
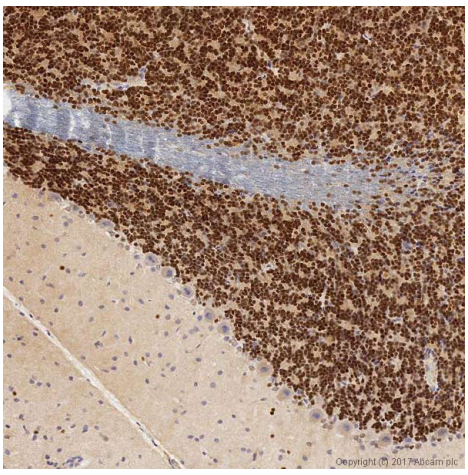


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX6 antibody [EPR15858] (ab195045)

Immunohistochemical analysis of paraffin-embedded Human retinoblastoma tissue labeling PAX6 with ab195045 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) secondary antibody (**ab97051**) at 1/500 dilution. Nuclear staining on human retinoblastoma tissue is observed. Counter stained with Hematoxylin.

Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



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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.

Anti-PAX6 antibody [EPR15858] (ab195045)

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