

Anti-PAX6 antibody [EPR15858] ab195045

リコンビナント **RabMAb**

★★★★★ **8 Abreviews** **43 References** 画像数 12

製品の概要

製品名	Anti-PAX6 antibody [EPR15858]
製品の詳細	Rabbit monoclonal [EPR15858] to PAX6
由来種	Rabbit
アプリケーション	適用あり: WB, IHC-P, ICC/IF
種交差性	交差種: Mouse, Rat, Human
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	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.
特記事項	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

製品の特性

製品の状態	Liquid
保存方法	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.
バッファー	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 40% Glycerol, 0.05% BSA</p>
精製度	Protein A purified
ポリ/モノ	モノクローナル
クローン名	EPR15858

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab195045の使用に適用されます**
 アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
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.

ターゲット情報

機能	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.
組織特異性	Fetal eye, brain, spinal cord and olfactory epithelium. Isoform 5a is less abundant than the PAX6 shorter form.
関連疾患	<p>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.</p> <p>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.</p> <p>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.</p> <p>Defects in PAX6 are a cause of keratitis hereditary (KERH) [MIM:148190]. An ocular disorder characterized by corneal opacification, recurrent stromal keratitis and vascularization.</p> <p>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.</p>

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.

配列類似性

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

発生段階

Expressed in the developing eye and brain.

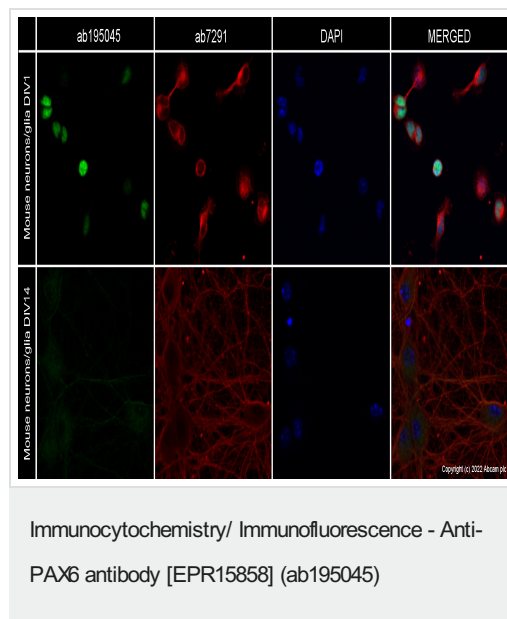
翻訳後修飾

Ubiquitinated by TRIM11, leading to ubiquitination and proteasomal degradation.

細胞内局在

Nucleus.

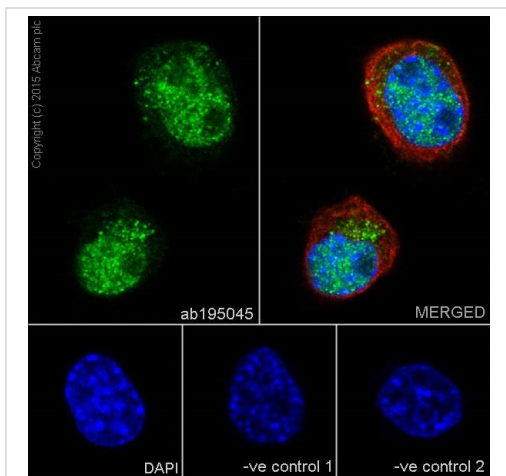
画像



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.

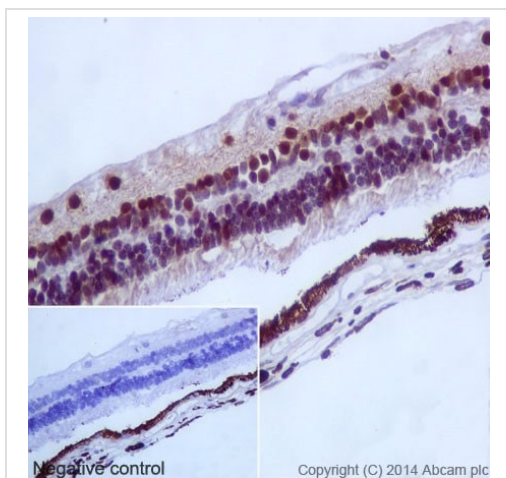
The nuclear counterstain is DAPI (blue).

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.

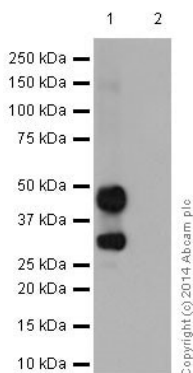


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX6 antibody [EPR15858] (ab195045)

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

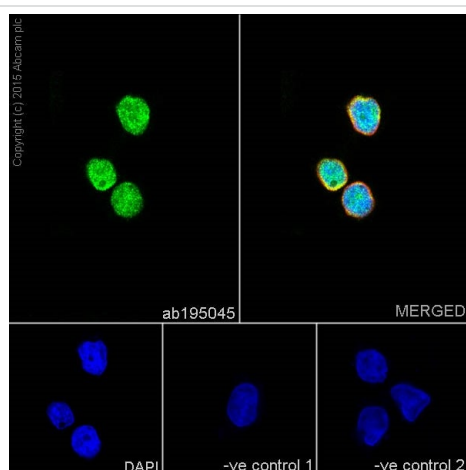
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

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).

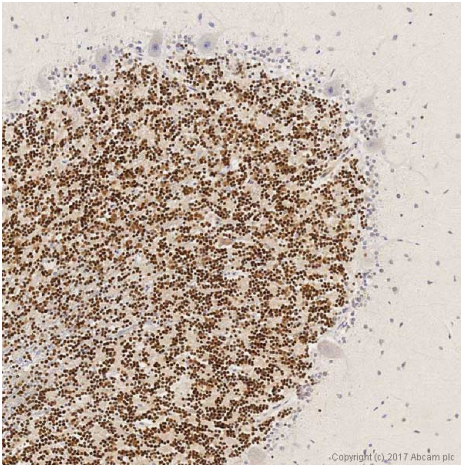
Tubulin is detected with [ab7291](#) (anti-Tubulin mouse mAb) at 1/500 and [ab150120](#) (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 (red).

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

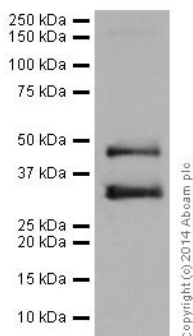
Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400.



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

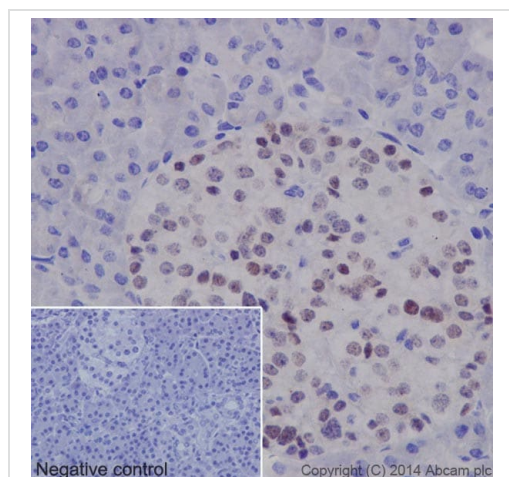
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

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.

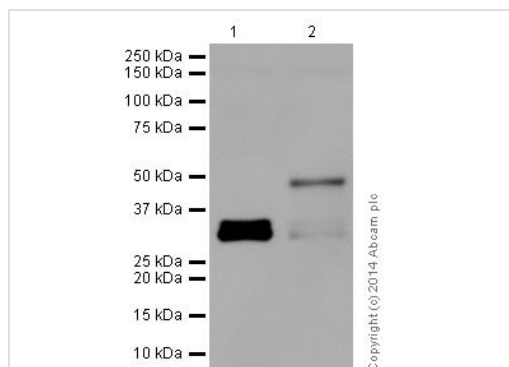


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAX6 antibody [EPR15858] (ab195045)

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

Lane 2 : HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

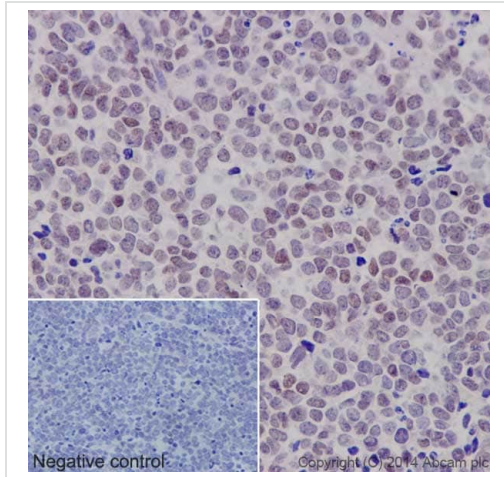
Predicted band size: 47 kDa

Observed band size: 32,33,47 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.

The 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 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.



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

IHC image of Pax6 staining in a formalin fixed, paraffin embedded normal rat 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.

Why choose a recombinant antibody?



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Long-term and scalable supply
Recombinant technology



Success from the first experiment
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Ethical standards compliant
Animal-free production

Anti-PAX6 antibody [EPR15858] (ab195045)

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