

## Product datasheet

# Alexa Fluor® 488 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker ab194106

**KO VALIDATED**

Recombinant RabMAb

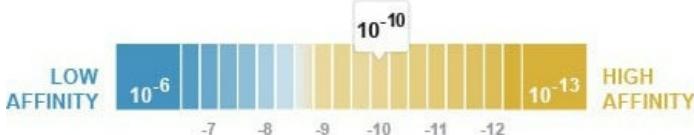
**2 References****6 Images**

---

**Overview**

<b>Product name</b>	Alexa Fluor® 488 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker
<b>Description</b>	Alexa Fluor® 488 Rabbit monoclonal [EPR8985(B)] to Lamin B1 - Nuclear Envelope Marker
<b>Host species</b>	Rabbit
<b>Conjugation</b>	Alexa Fluor® 488. Ex: 495nm, Em: 519nm
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	ICC/IF: HeLa cells and HAP1 cells. IHC-P : human bladder transitional cell carcinoma tissue, mouse cerebrum cortex tissue and rat cerebrum tissue.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> For more information <a href="#">see here</a> . Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb® patents</a> . Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or

## Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
<b>Dissociation constant (<math>K_D</math>)</b>	$K_D = 1.95 \times 10^{-10} \text{ M}$
	
	<a href="#">Learn more about <math>K_D</math></a>
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR8985(B)
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab194106 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

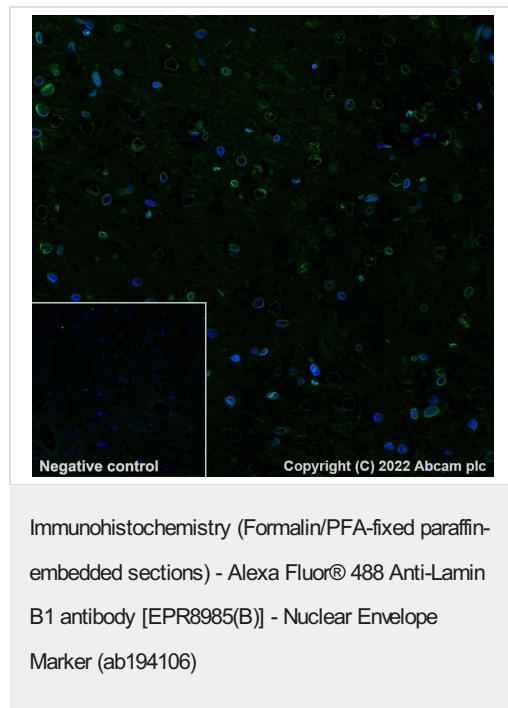
Application	Abreviews	Notes
ICC/IF		1/100.
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

## Target

<b>Function</b>	Lamins are components of the nuclear lamina, a fibrous layer on the nucleoplasmic side of the inner nuclear membrane, which is thought to provide a framework for the nuclear envelope and may also interact with chromatin.
<b>Involvement in disease</b>	Defects in LMNB1 are the cause of leukodystrophy demyelinating autosomal dominant adult-onset (ADLD) [MIM:169500]. ADLD is a slowly progressive and fatal demyelinating leukodystrophy, presenting in the fourth or fifth decade of life. Clinically characterized by early autonomic abnormalities, pyramidal and cerebellar dysfunction, and symmetric demyelination of the CNS. It differs from multiple sclerosis and other demyelinating disorders in that neuropathology shows preservation of oligodendroglia in the presence of subtotal demyelination and lack of astrogliosis.

<b>Sequence similarities</b>	Belongs to the intermediate filament family.
<b>Post-translational modifications</b>	B-type lamins undergo a series of modifications, such as farnesylation and phosphorylation. Increased phosphorylation of the lamins occurs before envelope disintegration and probably plays a role in regulating lamin associations.
<b>Cellular localization</b>	Nucleus inner membrane.

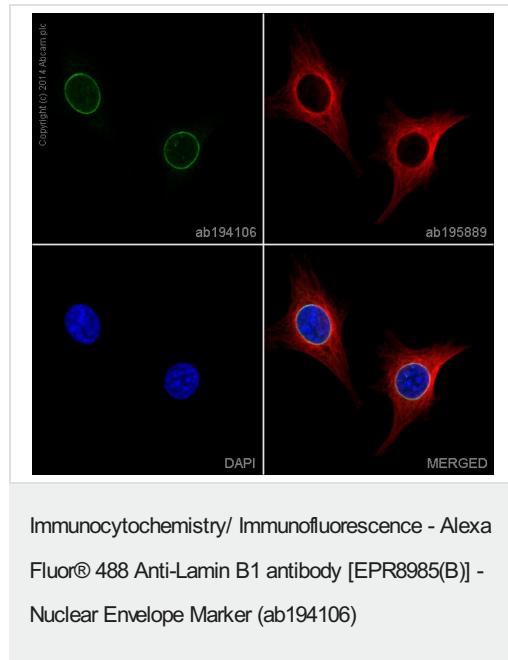
## Images



Immunohistochemistry analysis of paraffin-embedded rat cerebrum tissue sections labelling Lamin B1 with ab194106 at 1/100 dilution. The section was incubated with ab194106 for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 40 mins.

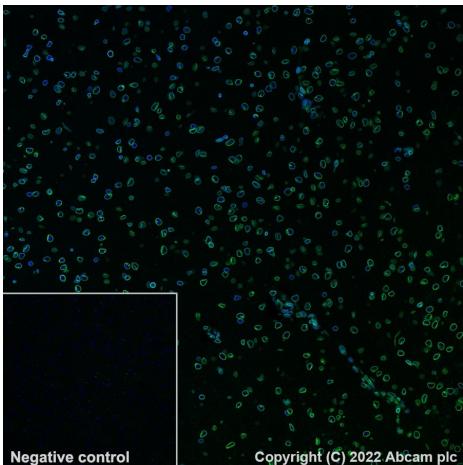
Nuclear envelope staining on rat cerebrum tissue. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Negative control : The negative control is PBS.



ab194106 staining Lamin B1 in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilised in 0.1% Triton X-100 for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with ab194106 at 1/100 dilution (shown in green) and **ab195889**, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 594, shown in red) at 1/250 dilution overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.

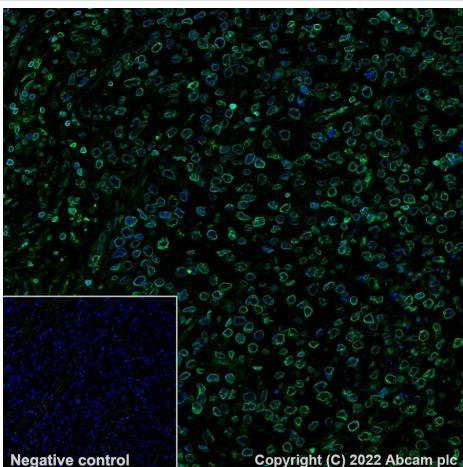
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker (ab194106)

Immunohistochemistry analysis of paraffin-embedded mouse cerebrum cortex tissue sections labelling Lamin B1 with ab194106 at 1/100 dilution. The section was incubated with ab194106 for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 40 mins. Nuclear envelope staining on mouse cerebrum cortex tissue. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Negative control : The negative control is PBS.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker (ab194106)

Immunohistochemistry analysis of paraffin-embedded human bladder transitional cell carcinoma tissue sections labelling Lamin B1 with ab194106 at 1/100 dilution. The section was incubated with ab194106 for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 40 mins.

Nuclear envelope staining on human bladder transitional cell carcinoma tissue. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Negative control : The negative control is PBS.

The figure consists of four panels arranged in a 2x2 grid. The top row is labeled 'Wildtype HAP1 cells' and the bottom row 'Lamin B1 knockout HAP1 cells'. The left column shows 'MERGED' images where blue represents DAPI (nuclei), red represents Alexa Fluor® 488 Anti-Lamin B1 antibody (Lamin B1), and green represents ab194106 (Nuclear Envelope Marker). The right column shows the 'ab194106' channel alone. The merged images show distinct green puncta in wild-type cells, which are absent in the knockout cells.

Copyright (c) 2017 Abcam plc

Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker (ab194106)

ab194106 staining Lamin B1 in wild-type HAP1 cells (top panel) and Lamin B1 knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilised in 0.1% Tween for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with ab194106 at 1/100 dilution (shown in green) and **ab195889**, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 594, shown in red) at 1/250 dilution overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.

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

### Why choose a recombinant antibody?

Research with confidence Consistent and reproducible results	Long-term and scalable supply Recombinant technology
Success from the first experiment Confirmed specificity	Ethical standards compliant Animal-free production

Alexa Fluor® 488 Anti-Lamin B1 antibody  
[EPR8985(B)] - Nuclear Envelope Marker (ab194106)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet

- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## **Terms and conditions**

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors