


## Product datasheet

# Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free ab222391

**KO VALIDATED** Recombinant RabMAB

[10 References](#) [5 Images](#)

### Overview

<b>Product name</b>	Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [E398L] to Lamin B Receptor/LBR - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), IHC-P, ICC/IF, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Rat 
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	IF: HeLa cells. WB: Jurkat cell lysate. HeLa: HEK-293 cell lysate. Flow Cyt (intra): HeLa cells.
<b>General notes</b>	<p>ab222391 is the carrier-free version of <a href="#">ab32535</a>.</p> <p>Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with &lt;1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <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> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAB<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAB<sup>®</sup> patents</a>.</p>

Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

## Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	pH: 7.20 Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	E398L
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab222391 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
<b>Flow Cyt (Intra)</b>		Use at an assay dependent concentration. <b>ab199376</b> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
<b>IHC-P</b>		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>ICC/IF</b>		Use at an assay dependent concentration.
<b>WB</b>		Use at an assay dependent concentration. Detects a band of approximately 67 kDa (predicted molecular weight: 71 kDa).

## Target

<b>Function</b>	Anchors the lamina and the heterochromatin to the inner nuclear membrane.
<b>Involvement in disease</b>	Defects in LBR are a cause of Pelger-Huet anomaly (PHA) [MIM:169400]. PHA is an autosomal dominant inherited abnormality of neutrophils, characterized by reduced nuclear segmentation and an apparently looser chromatin structure. Heterozygotes show hypolobulated neutrophil nuclei with coarse chromatin. Presumed homozygous individuals have ovoid neutrophil nuclei, as well as varying degrees of developmental delay, epilepsy, and skeletal abnormalities. Defects in LBR are the cause of hydrops-ectopic calcification-moth-eaten skeletal dysplasia (HEM) [MIM:215140]; also known as Greenberg skeletal dysplasia. HEM is a rare autosomal recessive chondrodystrophy characterized by early in utero lethality and, therefore, considered to

be nonviable. Affected fetuses typically present with fetal hydrops, short-limbed dwarfism, and a marked disorganization of chondro-osseous calcification and may present with polydactyly and additional nonskeletal malformations.

Defects in LBR may be a cause of Reynolds syndrome (REYNS) [MIM:613471]. It is a syndrome specifically associating limited cutaneous systemic sclerosis and primary biliary cirrhosis. It is characterized by liver disease, telangiectasia, abrupt onset of digital paleness or cyanosis in response to cold exposure or stress (Raynaud phenomenon), and variable features of scleroderma. The liver disease is characterized by pruritis, jaundice, hepatomegaly, increased serum alkaline phosphatase and positive serum mitochondrial autoantibodies, all consistent with primary biliary cirrhosis.

### Sequence similarities

Belongs to the ERG4/ERG24 family.

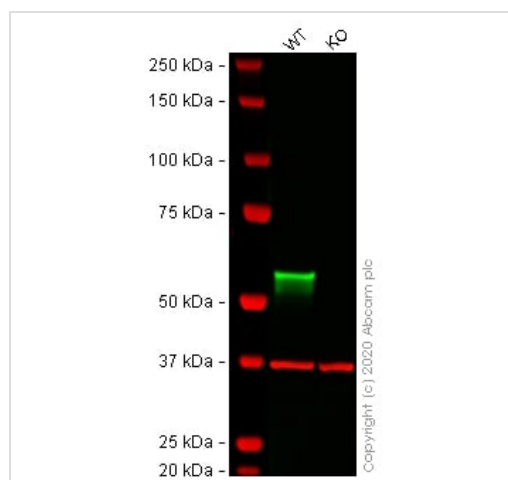
### Post-translational modifications

Phosphorylated by CDK1 protein kinase in mitosis when the inner nuclear membrane breaks down into vesicles that dissociate from the lamina and the chromatin. It is phosphorylated by different protein kinases in interphase when the membrane is associated with these structures. Phosphorylation of LBR and HP1 proteins may be responsible for some of the alterations in chromatin organization and nuclear structure which occur at various times during the cell cycle.

### Cellular localization

Nucleus inner membrane.

## Images



Western blot - Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free (ab222391)

**All lanes :** Anti-Lamin B Receptor/LBR antibody [E398L] ([ab32535](#)) at 1/500 dilution

**Lane 1 :** Wild-type HEK-293 cell lysate

**Lane 2 :** Human LBR (Lamin B Receptor) knockout HEK-293T cell lysate ([ab257503](#))

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 71 kDa

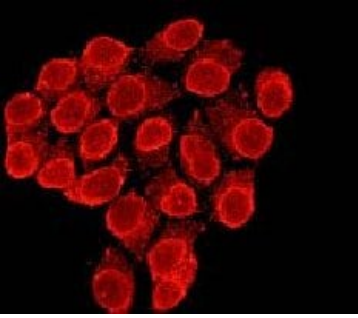
**Observed band size:** 58 kDa

This data was developed using the same antibody clone in a different buffer formulation ([ab32535](#)).

**Lanes 1 - 2:** Merged signal (red and green). Green - [ab32535](#) observed at 58 kDa. Red - loading control, [ab8245](#) (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

[ab32535](#) was shown to react with Lamin B Receptor/LBR in wild-type HEK-293 cells in western blot. Loss of signal was observed when LBR knockout cell lysate [ab257503](#) was used. Wild-type and

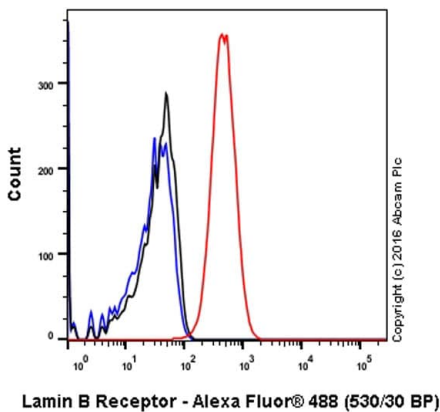
LBR knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk before incubation with **ab32535** and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 500 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (**ab216772**) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (**ab216777**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Ab32535, at a 1/500 dilution, staining Lamin B Receptor/LBR in HeLa cells by Immunofluorescence.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32535**).

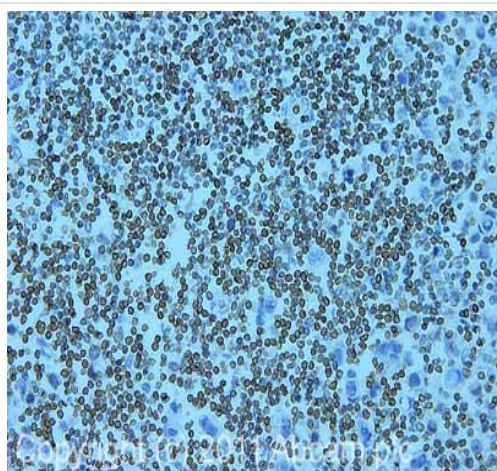
Immunocytochemistry/ Immunofluorescence - Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free (ab222391)



Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Lamin B Receptor/LBR with unpurified **ab32535** at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32535**).

Flow Cytometry (Intracellular) - Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free (ab222391)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free (ab222391)

IHC image of **ab32535** staining in human breast cancer 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, epitope retrieval solution 1) for 20 mins. The section was then incubated with **ab32535**, 5µg/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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32535**).

Why choose a recombinant antibody?

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

Anti-Lamin B Receptor/LBR antibody [E398L] - BSA and Azide free (ab222391)

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

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