abcam

ab216723

Alexa Fluor® 594 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 594
Excitation/Emission	Ex: 590nm, Em: 617nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR8985(B)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Mouse, Rat, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information LMNB1

Function Lamins are intermediate filament proteins that assemble into a filamentous meshwork, and which constitute the major components of the nuclear lamina, a fibrous layer on the nucleoplasmic side of the inner nuclear membrane (PubMed:28716252, PubMed:32910914). Lamins provide a framework for the nuclear envelope, bridging the nuclear envelope and chromatin, thereby playing an important role in nuclear assembly, chromatin organization, nuclear membrane and telomere dynamics (PubMed:28716252, PubMed:32910914). The structural integrity of the lamina is strictly controlled by the cell cycle, as seen by the disintegration and formation of the nuclear envelope in prophase and telophase, respectively (PubMed:28716252, PubMed:32910914).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Lamin B1 also known as LMNB1 is a protein that plays an important role in the structure of the nuclear lamina a dense fibrillar network inside the nucleus of cells. This protein belongs to the lamin family and has an approximate molecular weight of 66 kDa. Lamin B1 is expressed in nearly all types of cells acting as a structural component by interacting with chromatin and anchoring the nuclear envelope. It contributes to regulating nuclear stability and mechanical support which is essential for proper cell function.
Biological function summary	Lamin B1 serves many important functions by providing structural integrity and regulating gene expression through chromatin organization. Part of the nuclear lamina complex Lamin B1 interacts with other lamin proteins such as Lamin A and Lamin C forming a mesh-like structure that supports the nuclear envelope. This protein also affects cellular processes such as DNA replication RNA transcription and cell division indicating its broad impact on various cellular activities.
Pathways	Lamin B1 plays an important role in gene expression regulation and cell cycle control. It interacts with pathways involved in chromatin remodeling influencing the access of transcription factors to DNA which affects gene expression profiles. Lamin B1 associates with related proteins such as Lamin A/C and other nuclear matrix proteins to maintain cellular architecture stability and normal cell function. This organization is vital to ensure the accuracy of cellular processes and prevent anomalies during cell division.
Associated diseases and disorders	Mutations or altered expression of Lamin B1 have been associated with several pathological conditions. One noteworthy disorder is autosomal dominant adult-onset leukodystrophy where Lamin B1 expression levels are abnormal. This protein also connects to multiple sclerosis through its role in maintaining nuclear architecture. Additionally changes in Lamin B1 expression levels can influence pathways involving Lamin A/C and potentially lead to other laminopathies highlighting its influence in maintaining cellular health and contributing to disease development.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

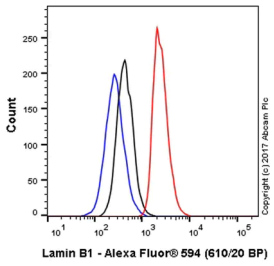
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - Alexa Fluor® 594 Anti-Lamin B1 antibody [EPR8985(B)] - Nuclear Envelope Marker (ab216723)

Lamin B1 Flow Cytometry staining using rabbit Anti-Lamin B1 antibody

Overlay histogram showing A431 cells stained with ab216723 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab216723, 1/50 dilution) for 30 min at 22°C.
Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 594 (ab208568) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Yellow/Green laser (561nm) and 610/20 bandpass filter.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.