abcam

ab8983

Anti-Lamin B2 antibody [LN43]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing LMNB2 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q03252
Clone number	LN43
Purification technique	Affinity purification Protein G
Specificity	This antibody reacts with an epitope located in the C-terminal part of lamin B2. Lamins do not appear to be universally distributed among different cell and tissue types. Please see the listed positive controls for this antibody. Other cell/tissue types have not been tested.
Epitope	Epitope located in the C-terminal part of lamin B2.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human

Dilution info	-
Notes	-

Expected

Species	Zebrafish
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Zebrafish
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	-

Expected

Species	Zebrafish
Dilution info	Use at an assay dependent concentration.

Notes	-

IHC-Fr

Tested

Species	Zebrafish
Dilution info	1/1
Notes	(when used with an avidin-biotinylated HRP complex as detection agent).

Species	Human
Dilution info	1/1
Notes	(when used with an avidin-biotinylated HRP complex as detection agent).

Target data

See full target information LMNB2

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:33033404). 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:33033404). 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:33033404).

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

Supplementary info

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

Activity summary	Lamin B2 also referred to as 'ln43' or 'lmnB2' is a lamin molecule with a molecular weight of approximately 66 kDa. It is an important component of the nuclear lamina an essential structure that provides mechanical support to the nuclear envelope. Lamin B2 is expressed in most cell types and is particularly abundant in cells with high proliferative capacity such as those in the fetal brain and liver. The protein is encoded by the LMNB2 gene and functions as an integral part of the nuclear envelope's architecture by interacting with other nuclear proteins.
Biological function summary	Lamin B2 plays a critical role in maintaining nuclear stability and chromatin organization. It is a part of a larger complex that includes Lamin B and other nuclear matrix proteins. This structural matrix is important for chromosomal segregation during cell division ensuring that the genetic material is evenly distributed between daughter cells. Lamin B2 also facilitates processes such as DNA replication and repair by serving as a scaffold for anchoring various molecular components within the nucleus.
Pathways	Lamin B2 is implicated in the regulation of the mitotic spindle formation during cell division which is a part of the cell cycle pathway. It interacts with proteins such as Lamin A and other nucleoporins contributing to the proper formation of nuclear pore complexes. Furthermore it plays a role in the pathway of apoptosis by modulating the release of factors from the nucleus that trigger cell death mechanisms. These interactions emphasize its importance in maintaining cellular function and integrity.
Associated diseases and disorders	Alterations in Lamin B2 expression or function have been linked to certain types of cancer such as glioblastoma as well as to laminopathies. Laminopathies are a group of disorders caused by mutations in lamin proteins leading to defects in nuclear structure and function. Besides aberrant Lamin B2 is associated with neurological disorders through its interactions with other nuclear envelope protein components like Lamin A/C. These connections highlight the importance of Lamin B2 in both physiological processes and pathologies.

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

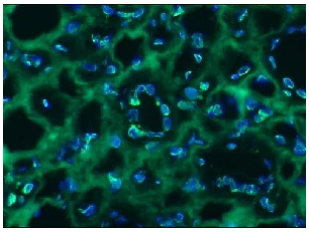
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

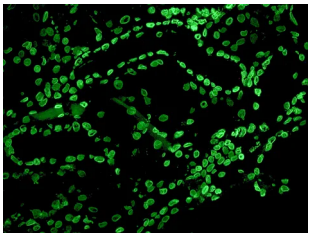
5 product images



Immunohistochemistry (Frozen sections) - Anti-Lamin B2 antibody [LN43] (ab8983)

Lamin B2 Immunohistochemistry (Frozen sections) staining using mouse Anti-Lamin B2 antibody

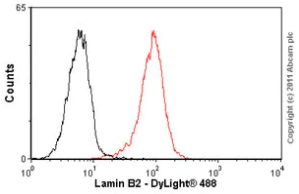
IHC-Fr of human kidney showing nuclear lamina staining in the ductal epithelium.



Immunohistochemistry (Frozen sections) - Anti-Lamin B2 antibody [LN43] (ab8983)

Lamin B2 Immunohistochemistry (Frozen sections) staining using mouse Anti-Lamin B2 antibody

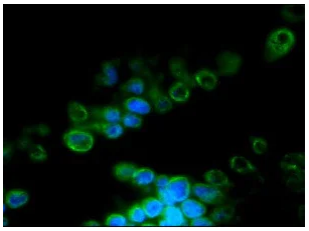
ab8983 immunohistochemistry on a frozen section of human kidney showing nuclear lamina staining in the ductal epithelium.



Flow Cytometry - Anti-Lamin B2 antibody [LN43] (ab8983)

Lamin B2 Flow Cytometry staining using mouse Anti-Lamin B2 antibody

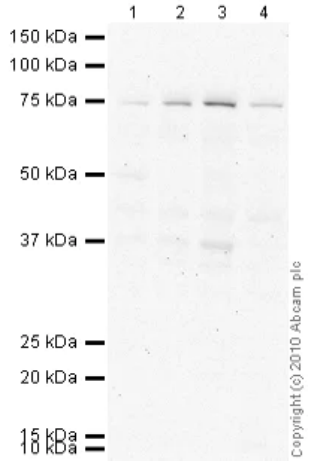
Overlay histogram showing HeLa cells stained with ab8983 (red line). The cells were fixed with 100% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum (ab7481) / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab8983, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was Mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunohistochemistry (Frozen sections) - Anti-Lamin B2 antibody [LN43] (ab8983)

Lamin B2 Immunohistochemistry (Frozen sections) staining using mouse Anti-Lamin B2 antibody

IF staining of a 9 days old zebrafish embryo.



Western blot - Anti-Lamin B2 antibody [LN43] (ab8983)

Lamin B2 Western blot staining using mouse Anti-Lamin B2 antibody

All lanes:
Western blot - Anti-Lamin B2 antibody [LN43] (ab8983) at 1 µg/mL

Lane 1:
HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate at 10 µg

Lane 2:
Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate at 10 µg

Lane 3:
U2OS (Human osteosarcoma cell line) Whole Cell Lysate at 10 µg

Lane 4:
HL60 (Human promyelocytic leukemia cell line) Whole Cell Lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 68 kDa

Observed band size: 37 kDa, 75 kDa

Exposure time: 20min

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