

lamin B1 Rabbit pAb

Catalog # AP96957

Product Information

Application	WB
Primary Accession	P14733
Other Accession	P14733
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	66786
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Lamin B
Epitope Specificity	361-460/586
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the intermediate filament family.
SUBUNIT	Homodimer. Interacts with lamin-associated polypeptides IA, IB and 2.
Post-translational modifications	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.
DISEASE	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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The nuclear lamina consists of a two-dimensional matrix of proteins located next to the inner nuclear membrane. The lamin family of proteins make up the matrix and are highly conserved in evolution. During mitosis, the lamina matrix is reversibly disassembled as the lamin proteins are phosphorylated. Lamin proteins are thought to be involved in nuclear stability, chromatin structure and gene expression. Vertebrate lamins consist of two types, A and B. This gene encodes one of the two B type proteins, B1. Alternative splicing results in transcript variants and a duplication of this gene is associated with autosomal dominant adult-onset leukodystrophy (ADLD). [provided by RefSeq, Oct 2010].

Additional Information

Gene ID 16906

Other Names	lamin-B1; ADLD; ADLDAT; LMN; LMN2; LMNB; MCPH26; LMNB1_CHICK; LMNB1; LMNB1_HUMAN; LMNB1_MOUSE; LMNB1_RAT; lamin B1
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	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: 28241138). 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: 28241138). 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: 28241138). Plays a role in sperm morphological development during late stages of spermiogenesis, particularly the anchoring of the sperm head to the tail (PubMed: 38870534). Component of the LMNB1/SUN5/SEPT12 bridge that connects the sperm proximal centriole to the implantation fossa, the bridge functions to prevent detachment of the proximal centriole from the posterior nucleus during steps 13 to 16 of spermiogenesis (PubMed: 38870534).
Cellular Location	Nucleus lamina. Note=Expressed in the posterior part of the nucleus during steps 9 to 12 of spermiogenesis, expression became more localized to the implantation fossa between steps 13 to 16 (PubMed:38870534). Expressed at the neck region in mature sperm (PubMed:38870534).
Tissue Location	Expressed during steps 9 to 12 of spermiogenesis in mature sperm (at protein level).

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