

LMNA Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18319c

Specification

LMNA Antibody (Center) - Product Information

Application	WB,E
Primary Accession	P02545
Other Accession	NP_733821.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	74139
Antigen Region	401-427

LMNA Antibody (Center) - Additional Information

Gene ID 4000

Other Names

Prelamin-A/C, Lamin-A/C, 70 kDa lamin,
Renal carcinoma antigen NY-REN-32, LMNA,
LMN1

Target/Specificity

This LMNA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 401-427 amino acids from the Central region of human LMNA.

Dilution

WB~~1:1000

Format

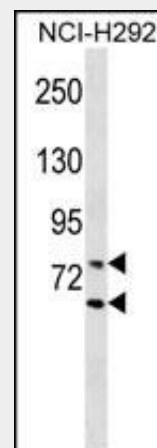
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

LMNA Antibody (Center) is for research use only and not for use in diagnostic or



LMNA Antibody (Center) (Cat. #AP18319c) western blot analysis in NCI-H292 cell line lysates (35ug/lane). This demonstrates the LMNA Antibody detected the LMNA protein (arrow).

LMNA Antibody (Center) - Background

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. Through alternate splicing, this gene encodes three type A lamin isoforms. Mutations in this gene lead to several diseases: Emery-Dreifuss muscular dystrophy, familial partial lipodystrophy, limb girdle muscular dystrophy, dilated cardiomyopathy, Charcot-Marie-Tooth disease,

therapeutic procedures.

and Hutchinson-Gilford
progeria syndrome.

LMNA Antibody (Center) - Protein Information

Name LMNA

Synonyms LMN1

Function

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. Lamin A and C are present in equal amounts in the lamina of mammals. Recruited by DNA repair proteins XRCC4 and IFFO1 to the DNA double-strand breaks (DSBs) to prevent chromosome translocation by immobilizing broken DNA ends (PubMed:31548606). Plays an important role in nuclear assembly, chromatin organization, nuclear membrane and telomere dynamics. Required for normal development of peripheral nervous system and skeletal muscle and for muscle satellite cell proliferation (PubMed:10080180, PubMed:22431096, PubMed:10814726, PubMed:11799477, PubMed:18551513). Required for osteoblastogenesis and bone formation (PubMed:12075506, PubMed:15317753, PubMed:18611980). Also prevents fat infiltration of muscle and bone marrow, helping to maintain the volume and strength of skeletal muscle and bone

LMNA Antibody (Center) - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Wegner, L., et al. J. Clin. Endocrinol. Metab. 95(8):3884-3892(2010)
Drac, H., et al. Neurol. Neurochir. Pol. 44(3):291-296(2010)
Liu, Q., et al. PLoS ONE 5 (5), E10874 (2010) :
Chaturvedi, P., et al. PLoS ONE 5 (5), E10620 (2010) :

(PubMed:10587585). Required for cardiac homeostasis (PubMed:10580070, PubMed:12927431, PubMed:18611980, PubMed:23666920).

Cellular Location

Nucleus. Nucleus envelope. Nucleus lamina. Nucleus, nucleoplasm Nucleus matrix. Note=Farnesylation of prelamin-A/C facilitates nuclear envelope targeting and subsequent cleavage by ZMPSTE24/FACE1 to remove the farnesyl group produces mature lamin-A/C, which can then be inserted into the nuclear lamina. EMD is required for proper localization of non-farnesylated prelamin-A/C

Tissue Location

In the arteries, prelamin-A/C accumulation is not observed in young healthy vessels but is prevalent in medial vascular smooth muscle cells (VSMCs) from aged individuals and in atherosclerotic lesions, where it often colocalizes with senescent and degenerate VSMCs. Prelamin-A/C expression increases with age and disease. In normal aging, the accumulation of prelamin-A/C is caused in part by the down-regulation of ZMPSTE24/FACE1 in response to oxidative stress.

LMNA Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)