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Lamin A Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10210

Specification

Lamin A Antibody - Product Information

Application	**WB**
Primary Accession	P02545
Other Accession	BC033088
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**74139**

Lamin A Antibody - Additional Information

Gene ID 4000

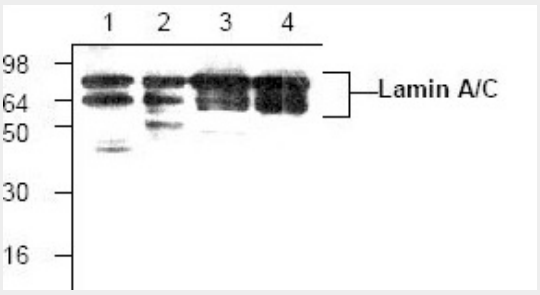
Application & Usage	**Western blot analysis (0.5-4 µg/ml) and Immunohistochemistry (15-20 µg/ml). However, the optimal conditions should be determined individually. The antibody mainly detects full length (~70 kDa) and in a much lesser extent the cleaved fragments (45 kDa and 23 kDa) of Lamin A/C.**

Other Names
LMNA, HGPS, EMD2, FPLD, CDCD1, LDP1, LGMD1B, IDC, Lamin-A/C, CDDC , LMN1 , CMD1A, PRO1

Target/Specificity
Lamin A

Antibody Form
Liquid

Appearance



Western blot analysis of Lamin A/C in lysates from Jurkat cells (Lane 1 and 2), mouse small intestine (Lane 3) and rat kidney (Lane 4).

Lamin A Antibody - Background

Lamins are nuclear membrane structural components that are important in maintaining normal cell functions such as cell cycle control, DNA replication and chromatin organization. Lamin A is specifically cleaved by caspase-6 and therefore serves as a marker for caspase-6 activation. During apoptosis the 70 kDa lamin A is cleaved to a large (40-45 kDa) and small (23 kDa) fragment. The cleavage of lamins results in nuclear disregulation and cell death.

Colorless liquid

Formulation
100 µg (0.2 mg/ml) affinity purified rabbit anti-Lamin A polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Lamin A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Lamin A Antibody - 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 (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.

Lamin A Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture