

# Product datasheet

info@arigobio.com

## ARG58262 anti-Lamin A + C phospho (Ser22) antibody

Package: 50 μl Store at: -20°C

#### **Summary**

Product Description Rabbit Polyclonal antibody recognizes Lamin A + C phospho (Ser22)

Tested Reactivity Hu, Rat

Tested Application IP, WB

Host Rabbit

Clonality Polyclonal

Isotype IgG

Target Name Lamin A + C

Species Human

Immunogen Phospho specific peptide around Ser22 of Human Lamin A (NP\_005563.1).

Conjugation Un-conjugated

Alternate Names HGPS; Renal carcinoma antigen NY-REN-32; LDP1; FPL; LMN1; CDCD1; LMNL1; CDDC; PRO1; EMD2;

CMT2B1; 70 kDa lamin; LFP; Prelamin-A/C; LMNC; FPLD2; LGMD1B; IDC; FPLD; CMD1A

## **Application Instructions**

Application table	Application	Dilution
	IP	Assay-dependent
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	HeLa + Paclitaxel	
Observed Size	69 kDa, 78 kDa	

### **Properties**

Form Liquid

Purification Affinity purified.

Buffer PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.

Preservative 0.02% Sodium azide

Stabilizer 50% Glycerol

Storage instruction For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

#### Bioinformation

Gene Symbol

IMNA

Gene Full Name

lamin A/C

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. Alternative splicing results in multiple transcript variants. 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, and Hutchinson-Gilford progeria syndrome. [provided by RefSeq, Apr 2012]

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. 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. Required for osteoblastogenesis and bone formation. Also prevents fat infiltration of muscle and bone marrow, helping to maintain the volume and strength of skeletal muscle and bone.

Prelamin-A/C can accelerate smooth muscle cell senescence. It acts to disrupt mitosis and induce DNA damage in vascular smooth muscle cells (VSMCs), leading to mitotic failure, genomic instability, and premature senescence. [UniProt]

Calculated Mw

Lamin A: 74 kDa Lamin C: 65 kDa

PTM

Increased phosphorylation of the lamins occurs before envelope disintegration and probably plays a role in regulating lamin associations.

Proteolytic cleavage of the C-terminal of 18 residues of prelamin-A/C results in the production of lamin-A/C. The prelamin-A/C maturation pathway includes farnesylation of CAAX motif, ZMPSTE24/FACE1 mediated cleavage of the last three amino acids, methylation of the C-terminal cysteine and endoproteolytic removal of the last 15 C-terminal amino acids. Proteolytic cleavage requires prior farnesylation and methylation, and absence of these blocks cleavage.

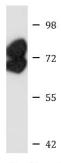
Sumoylation is necessary for the localization to the nuclear envelope.

Farnesylation of prelamin-A/C facilitates nuclear envelope targeting. [UniProt]

Cellular Localization

Nucleus, Nucleus envelope, Nucleus lamina, Nucleus speckle, nucleoplasm. [UniProt]

## **Images**



#### ARG58262 anti-Lamin A + C phospho (Ser22) antibody WB image

Western blot: 25  $\mu$ g of HeLa cells were treated by Paclitaxel (100 nM/ml) for 20 hours. The blot was stained with ARG58262 anti-Lamin A + C phospho (Ser22) antibody at 1:2000 dilution.

HeLa + Paclitaxel