Rabbit Lamin A/C Polyclonal Antibody | anti-LMNA antibody

Phospho-Lamin A/C (Ser390) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31309	**Rabbit**	**Human, Mouse, Rat**	**Western Blot, Immunohistochemistry, Immunofluorescence, Immunocytochemistry, ELISA**

PRODUCT SYNONYMS

Lamin A/C; Polyclonal Antibody; Phospho-Lamin A/C (Ser390) Antibody; 70kDa lamin; Cardiomyopathy dilated 1A (autosomal dominant); CDCD1; CDDC; CMD1A; CMT2B1; EMD2; FPL; FPLD; FPLD2; HGPS; IDC; Lamin A; Lamin A/C like 1; Lamin; Lamin C; Lamin-A/C; LDP1; LFP; LGMD1B; Limb girdle muscular dystrophy 1B (autosomal dominant); LMN 1; LMN A; LMN C; LMN1; LMNA; LMNA_HUMAN; LMNC; LMNL1; Prelamin A/C; PRO1; Renal carcinoma antigen NY REN 32; Renal carcinoma antigen NY-REN-32; Renal carcinoma antigen NYREN32; anti-LMNA antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Lamin A/C (Ser390) Antibody detects endogenous levels of Lamin A/C only when phosphorylated at Ser390. Tissue Specificity: 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-LMNA antibody	WB (Western Blot), IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA (Peptide ELISA)
Application Notes	IHC: 1:50-1:200 IF/ICC: 1:100-1:500 WB: 1:500-1:2000 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human Lamin A/C around the phosphorylation site of Ser390.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	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.

Subunit Structure	Homodimer of lamin A and lamin C. Interacts with lamin-associated polypeptides IA, IB and TMPO-alpha, RB1 and with emerin. Interacts with SREBF1, SREBF2, SUN2 and TMEM43. Interacts with TMEM201 (By similarity). Proteolytically processed isoform A interacts with NARF. Interacts with SUN1. Prelamin-A/C interacts with EMD. Interacts with MLIP. Interacts with DMPK; may regulate nuclear envelope stability. Interacts with SUV39H1; the interaction increases stability of SUV39H1. Interacts with SYNE2. Interacts with ITSN1 isoform 2.
Similarity	Belongs to the intermediate filament family.
Subcellular Location	Nucleus. Nucleus envelope. Nucleus lamina. Nucleus>Nucleoplasm. 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.Nucleus speckle.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

Application Data
At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI (blue).

IF (Immunofluorescence)
Staining Hela cells(heat shock treatment) by IF/ICC.

IHC (Immunohistochemistry)
At 1/100 staining Human mammary cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Human mammary cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Human kidney cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
Staining Human ovarian cancer and adjacent normal tissues by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-LMNA antibody	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. Required for cardiac homeostasis.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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	383792150

NCBI GeneID	4000
NCBI Accession #	NP_001244303.1
NCBI GenBank Nucleotide #	NM_001257374.1
UniProt Accession #	P02545; P02546; Q5TCJ2; Q5TCJ3; Q969I8; Q96JA2; B4DI32; D3DVB0; E7EUI9
Molecular Weight	74,65kDa
NCBI Official Full Name	lamin isoform D
NCBI Official Synonym Full Names	lamin A/C
NCBI Official Symbol	LMNA
NCBI Official Synonym Symbols	FPL; IDC; LFP; CDDC; EMD2; FPLD; HGPS; LDP1; LMN1; LMNC; PRO1; CDCD1; CMD1A; FPLD2; LMNL1; CMT2B1; LGMD1B
NCBI Protein Information	lamin; 70 kDa lamin; prelamin-A/C; lamin A/C-like 1; renal carcinoma antigen NY-REN-32
UniProt Protein Name	Prelamin-A/C
UniProt Gene Name	**LMNA**
UniProt Synonym Gene Names	LMN1
UniProt Entry Name	LMNA_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://stage.aaabiotech.com/polyclonal/lamin-a-c-antibody-western-blot-immunohistochemistry-immunofluorescence-immunocytochemistry-peptide-elisa-elisa/31309