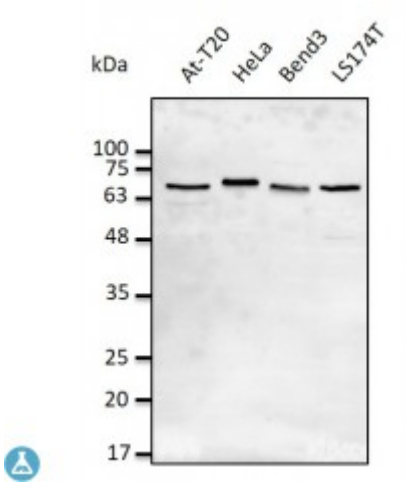
Anti-LMNA antibody



Description	Goat polyclonal to LMNA (Lamin A/C) - nucleus marker. The Lamin family of proteins make up the matrix of proteins located next to the inner nuclear membrane. During mitosis, the lamina matrix is reversibly disassembled as the Lamin proteins are phosphorylated. These proteins are thought to be involved in chromatin structure, nuclear stability and gene expression.
Model	STJ140138
Host	Goat
Reactivity	Avian, Bovine, Canine, Donkey, Feline, Goat, Guinea Pig, Hamster, Horse, Human, Mouse, Other, Porcine, Rabbit, Rat, Sheep, Simian
Applications	WB
Immunogen	Purified recombinant peptide within residues 620 aa to C-term of human LMNA produced in E. coli.
Immunogen Region	C-Term
Gene ID	4000
Gene Symbol	LMNA
Dilution range	Western blot 1:500-1:5,000 Immunofluorescence ND Immunohistochemistry (paraffin) ND Immunohistochemistry (frozen) ND
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.
Purification	This antibody is epitope-affinity purified from goat antiserum.
Note	For research use only (RUO).
Protein Name	Prelamin-A/C [Cleaved into: Lamin-A/C (70 kDa lamin) (Renal carcinoma antigen NY-REN-32)]
Molecular Weight	75 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS, 20% glycerol and 0.05% sodium azide.
Concentration	3 mg/mL
Storage Instruction	Store at -20°, and avoid repeated freeze-thaw cycles.
Database Links	HGNC:6636OMIM:115200
Alternative Names	Prelamin-A/C [Cleaved into: Lamin-A/C (70 kDa lamin) (Renal carcinoma antigen NY-REN-32)]
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.
Cellular Localization	Nucleus. Nucleus envelope. Nucleus lamina. Nucleus, nucleoplasm. Farnesylation of prelamin-A/C facilitates nuclear envelope targeting and subsequent cleaveage 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.. Isoform C: Nucleus speckle
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.