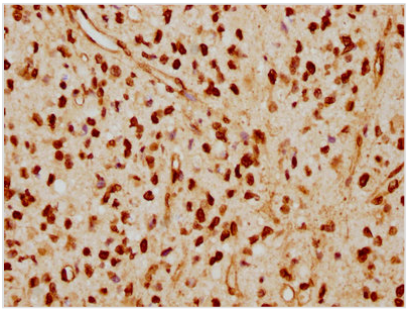
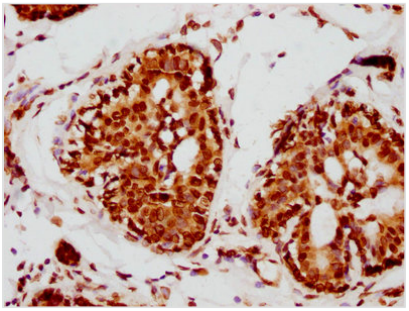
LMNA Recombinant Monoclonal Antibody

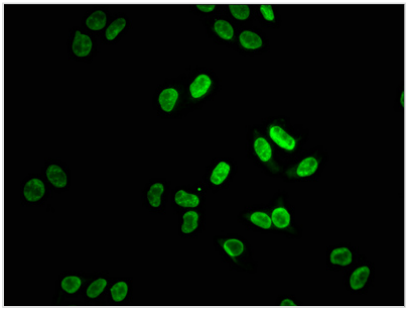
Product Code	CSB-RA013003A0HU
Abbreviation	Prelamin-A/C
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P02545
Immunogen	A synthesized peptide derived from human LMNA
Species Reactivity	Human
Tested Applications	ELISA, IHC, IF, FC, IP; Recommended dilution: IHC:1:50-1:200, IF:1:20-1:200, IP:1:200-1:1000
Relevance	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 (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).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Prelamin-A/C, Lamin-A/C, 70 kDa lamin, Renal carcinoma antigen NY-REN-32, LMNA, LMN1
Immunogen Species	Homo sapiens (Human)
Research Area	Cell Biology
Gene Names	LMNA
Clone No.	4H7
Image	



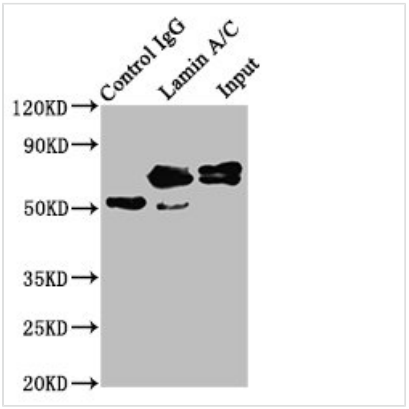
IHC image of CSB-RA013003A0HU diluted at 1:115 and staining in paraffin-embedded human glioma cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



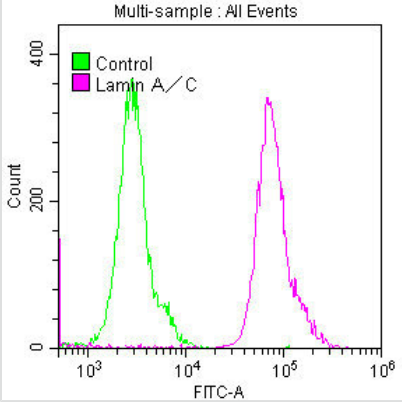
IHC image of CSB-RA013003A0HU diluted at 1:115 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence staining of Hela cells with CSB-RA013003A0HU at 1:38, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Immunoprecipitating Lamin A/C in Hela whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA013003A0HU in Hela whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
Lane 2: CSB-RA013003A0HU (3μg) + Hela whole cell lysate (500μg)
Lane 3: Hela whole cell lysate (20μg)



Overlay histogram showing Hela cells stained with CSB-RA013003A0HU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then permeabilized with 0.3% Triton X-100 for 2 min. The cells were then incubated in 1x PBS /10% normal goat serum to block non-specific protein-protein interactions followed by primary antibody for 1 h at 4?. The secondary antibody used was FITC goat anti-rabbit IgG (H+L) at 1/200 dilution for 1 h at 4?. Control antibody (green line) was used under the same conditions. Acquisition of >10,000 events was performed.

Description

The LMNA recombinant monoclonal antibody is produced by transfecting the antibody DNA gene-vector clones into the cell line for in vitro expression. The antibody DNA gene encodes a synthesized peptide derived from human LMNA protein. It is purified through the affinity-chromatography approach. And it is recommended for ELISA, IHC, IF, FC, IP applications.

Nuclear lamin A/C is a crucial component of the intricate protein mesh that underlies the inner nuclear membrane. It mainly makes nuclear and cytosolic rigid. It appears to play a role in DNA replication, chromatin organization, spatial arrangements of nuclear pore complexes, nuclear growth, and anchorage of nuclear envelope proteins.