Anti-Lamin A + Lamin C Antibody [A6F5-R] - BSA and Azide free

HA610149

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 74/65 kDa
Clone number:	A6F5-R

Description: Prelamin-A/C, or lamin A/C is a protein that in humans is encoded by the LMNA gene. Lamin A/C belongs to the lamin family of proteins. DNA double-strand damages can be repaired by either homologous recombination (HR) or non-homologous end joining (NHEJ). LMNA promotes genetic stability by maintaining the levels of proteins that have key roles in HR and NHEJ. Mouse cells that are deficient for maturation of prelamin A have increased DNA damage and chromosome aberrations, and show increased sensitivity to DNA damaging agents. In progeria, the inadequacy of DNA repair, due to defective LMNA, may cause features of premature aging (see DNA damage theory of aging).

Immunogen: Recombinant protein within human Lamin A/C aa 151-350/664.

Positive control: HeLa cell lysate, HepG2 cell lysate, THP-1 cell lysate, NIH/3T3 cell lysate, PC-12 cell lysates, HeLa, human breast tissue, human kidney tissue, human skin tissue, mouse colon tissue, rat heart tissue, rat small intestine tissue.

Subcellular location: Nucleus lamina, Nucleus envelope, nucleoplasm, Nucleus matrix; Nucleus speckle.

Database links: SwissProt: P02545 Human | P48678 Mouse | P48679 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:100
IHC-P	1:200-1:500

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

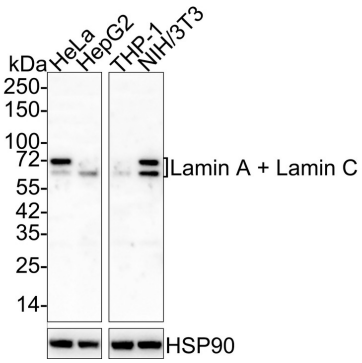

Fig1: Western blot analysis of Lamin A + Lamin C on different lysates with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/2,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: HepG2 cell lysate
Lane 3: THP-1 cell lysate
Lane 4: NIH/3T3 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 74/65 kDa
Observed band size: 74/65 kDa

Exposure time: 1 minute 2 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA610149) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

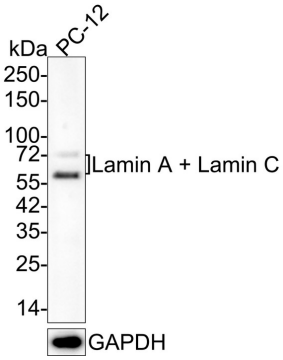

Fig2: Western blot analysis of Lamin A + Lamin C on PC-12 cell lysates with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/2,000 dilution.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 74/65 kDa
Observed band size: 74/65 kDa

Exposure time: 4 minutes 22 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA610149) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

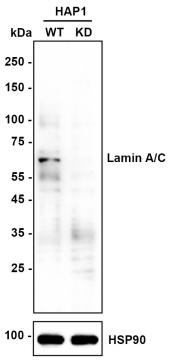

Fig3: Western blot analysis of Lamin A + Lamin C on different lysates with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/5,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-Lamin A + Lamin C KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 74/65 kDa
Observed band size: 74/65 kDa

Exposure time: 3 minutes; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA610149) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

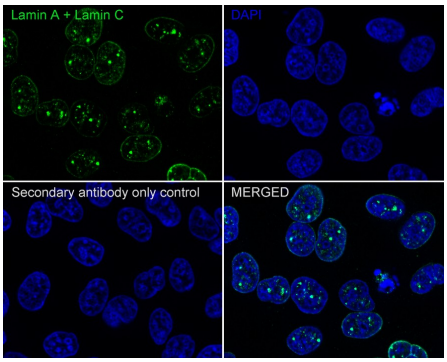

Fig4: Immunocytochemistry analysis of HeLa cells labeling Lamin A + Lamin C with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/100 dilution.

Cells were fixed in 100% precooled methanol for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

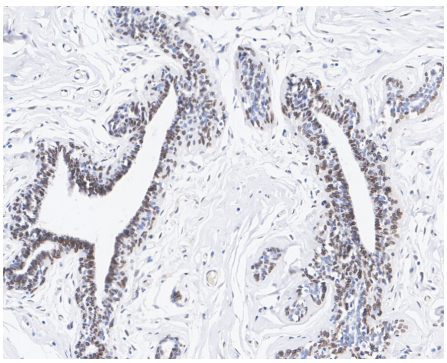

Fig5: Immunohistochemical analysis of paraffin-embedded human breast tissue with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610149) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

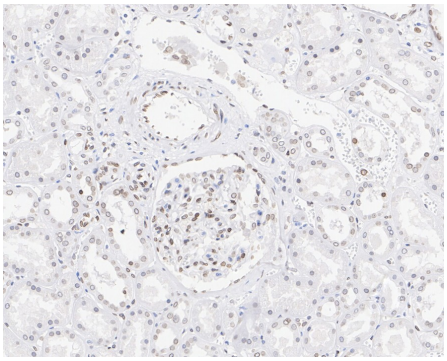

Fig6: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610149) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

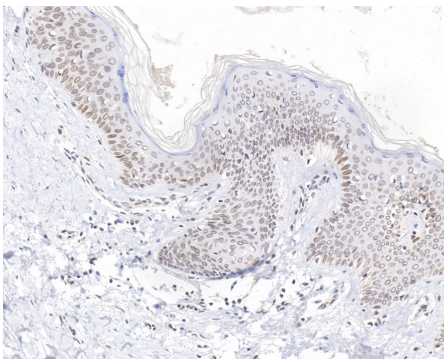

Fig7: Immunohistochemical analysis of paraffin-embedded human skin tissue with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610149) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

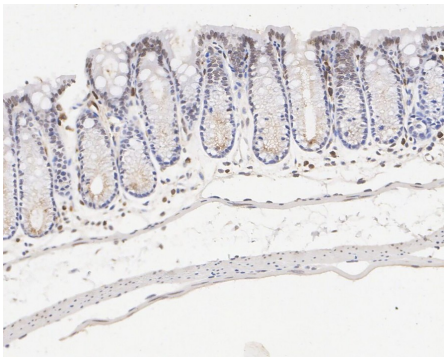

Fig8: Immunohistochemical analysis of paraffin-embedded mouse colon tissue with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610149) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

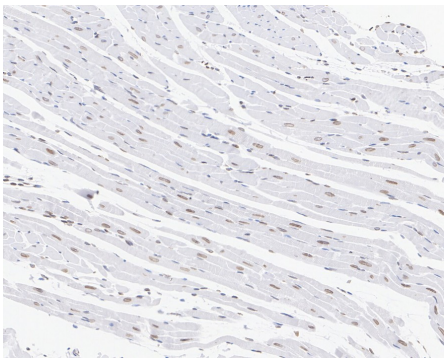

Fig9: Immunohistochemical analysis of paraffin-embedded rat heart tissue with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610149) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

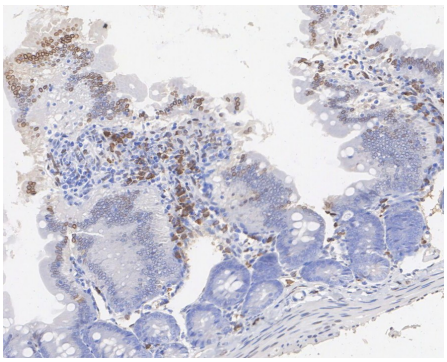

Fig10: Immunohistochemical analysis of paraffin-embedded rat small intestine tissue with Mouse anti-Lamin A + Lamin C antibody (HA610149) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA610149) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Donnaloja F. et. al. Lamin A/C Mechanotransduction in Laminopathies. Cells. 2020 May
2. Saez A. et. al. Lamin A/C and the Immune System: One Intermediate Filament, Many Faces. Int J Mol Sci. 2020 Aug