

Lamin A (H-102): sc-20680

BACKGROUND

A unique family of cysteine proteases has been described that differs in sequence, structure and substrate specificity from any previously described protease family. This family, termed CED-3/ICE, is comprised of ICE, CPP32, ICH-1/Nedd-2, Tx, Mch2, Mch3 (ICE-LAP3 or CMH-1), Mch4 and ICE-LAP6. CED-3/ICE family members function as key components of the apoptotic machinery and act to destroy specific target proteins which are critical to cellular longevity. Nuclear lamins are critical to maintaining the integrity of the nuclear envelope and cellular morphology. The nuclear Lamin A is cleaved by Mch2, but not CPP32. Nuclear Lamin B is fragmented as a consequence of apoptosis by an unidentified member of the ICE family. Lamin C is a splice variant of Lamin A, differing only at the carboxy-terminus. Lamins A and C are identical for the first 566 amino acids, with Lamin C differing only in 6 unique carboxy-terminal amino acids.

CHROMOSOMAL LOCATION

Genetic locus: LMNA (human) mapping to 1q22; Lmna (mouse) mapping to 3 F1.

SOURCE

Lamin A (H-102) is a rabbit polyclonal antibody raised against amino acids 563-664 of Lamin A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-20680 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Lamin A (H-102) is recommended for detection of Lamin A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Lamin A/C siRNA (h): sc-35776, Lamin A/C siRNA (m): sc-29385, Lamin A/C shRNA Plasmid (h): sc-35776-SH, Lamin A/C shRNA Plasmid (m): sc-29385-SH, Lamin A/C shRNA (h) Lentiviral Particles: sc-35776-V and Lamin A/C shRNA (m) Lentiviral Particles: sc-29385-V.

Molecular Weight of Lamin A: 69 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, Hs68 cell lysate: sc-2230 or FHs 173We cell lysate: sc-2417.

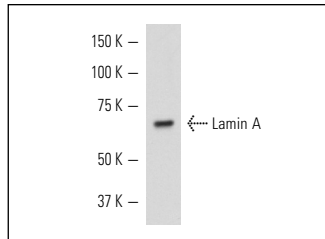
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

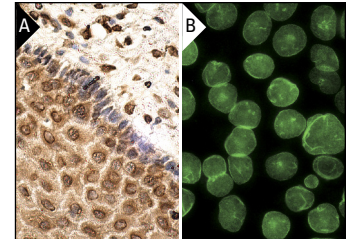
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Lamin A (H-102): sc-20680. Western blot analysis of Lamin A expression in Hs68 whole cell lysate.



Lamin A (H-102): sc-20680. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing nuclear envelope and cytoplasmic staining of squamous epithelial cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (B).

SELECT PRODUCT CITATIONS

1. Yang, S.H., et al. 2005. Blocking protein farnesyltransferase improves nuclear blebbing in mouse fibroblasts with a targeted Hutchinson-Gilford progeria syndrome mutation. *Proc. Natl. Acad. Sci. USA* 102: 10291-10296.
2. Toth, J.I., et al. 2005. Blocking protein farnesyltransferase improves nuclear shape in fibroblasts from humans with progeroid syndromes. *Proc. Natl. Acad. Sci. USA* 102: 12873-12878.
3. Yang, S.H., et al. 2011. Absence of progeria-like disease phenotypes in knock-in mice expressing a non-farnesylated version of progerin. *Hum. Mol. Genet.* 20: 436-444.
4. Kanamaluru, D., et al. 2011. Arginine methylation by PRMT5 at a naturally occurring mutation site is critical for liver metabolic regulation by small heterodimer partner. *Mol. Cell. Biol.* 31: 1540-1550.
5. Soetikno, V., et al. 2011. Curcumin ameliorates macrophage infiltration by inhibiting NFκB activation and proinflammatory cytokines in streptozotocin induced-diabetic nephropathy. *Nutr. Metab.* 8: 35.
6. Zhou, D., et al. 2012. The skeletal muscle Wnt pathway may modulate Insulin resistance and muscle development in a diet-induced obese rat model. *Obesity* 20: 1577-1584.
7. Casar, B., et al. 2012. Mxi2 sustains ERK1/2 phosphorylation in the nucleus by preventing ERK1/2 binding to phosphatases. *Biochem. J.* 441: 571-578.
8. Geraldo, M.V., et al. 2012. MicroRNA miR-146b-5p regulates signal transduction of TGF-β by repressing SMAD4 in thyroid cancer. *Oncogene* 31: 1910-1922.


 MONOS
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Try **Lamin A (4A58): sc-71481** or **Lamin A (133A2): sc-56137**, our highly recommended monoclonal alternatives to Lamin A (H-102).