

Lamin A (4A58): sc-71481

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 (4A58) is a mouse monoclonal antibody raised against partially purified recombinant Lamin A of human origin.

PRODUCT

Each vial contains 50 µg IgG₃ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Lamin A (4A58) is recommended for detection of Lamin A of mouse, rat, human, bovine and canine 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Lamin C.

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.

RESEARCH USE

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

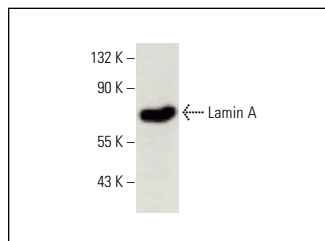
PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE

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

DATA



Lamin A (4A58): sc-71481. Western blot analysis of Lamin A expression in Hs68 whole cell lysate.

SELECT PRODUCT CITATIONS

- Rosa-Ribeiro, R., et al. 2014. Desquamation is a novel phenomenon for collective prostate epithelial cell deletion after castration. *Histochem. Cell Biol.* 141: 213-220.
- Li, B., et al. 2017. MiR-146a modulates autoreactive Th17 cell differentiation and regulates organ-specific autoimmunity. *J. Clin. Invest.* 127: 3702-3716.
- Choppara, S., et al. 2018. The SCFF^{FBX046} ubiquitin ligase complex mediates degradation of the tumor suppressor FBX031 and thereby prevents premature cellular senescence. *J. Biol. Chem.* 293: 16291-16306.
- Zhang, Y., et al. 2018. Melatonin protects H9c2 cells against ischemia/reperfusion-induced apoptosis and oxidative stress via activation of the Nrf2 signaling pathway. *Mol. Med. Rep.* 18: 3497-3505.
- El-Houjeiri, L., et al. 2019. The transcription factors TFEB and TFE3 link the FLCN-AMPK signaling axis to innate immune response and pathogen resistance. *Cell Rep.* 26: 3613-3628.
- Šoltic, D., et al. 2019. Lamin A/C dysregulation contributes to cardiac pathology in a mouse model of severe spinal muscular atrophy. *Hum. Mol. Genet.* 28: 3515-3527.
- Di Biase, S., et al. 2019. Creatine uptake regulates CD8 T cell antitumor immunity. *J. Exp. Med.* 216: 2869-2882.
- Aguilar-Cuenca, R., et al. 2020. Tyrosine phosphorylation of the myosin regulatory light chain controls non-muscle Myosin II assembly and function in migrating cells. *Curr. Biol.* 30: 2446-2458.e6.
- Catanzaro, M., et al. 2020. Eye-light on age-related macular degeneration: targeting Nrf2-pathway as a novel therapeutic strategy for retinal pigment epithelium. *Front. Pharmacol.* 11: 844.

CONJUGATES

See **Lamin A/C (E-1): sc-376248** for Lamin A/C antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.