

# Lamin A/C (636): sc-7292

## 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 six unique carboxy-terminal amino acids.

## CHROMOSOMAL LOCATION

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

## SOURCE

Lamin A/C (636) is a mouse monoclonal antibody raised against Lamin preparation of porcine origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for ChIP application, sc-7292 X, 200 µg/0.1 ml.

Lamin A/C (636) is available conjugated to agarose (sc-7292 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-7292 PE), Alexa Fluor® 546 (sc-7292 AF546) or Alexa Fluor® 594 (sc-7292 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7292 AF680) or Alexa Fluor® 790 (sc-7292 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Lamin A/C (636) is recommended for detection of Lamin A and Lamin C 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 flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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.

Lamin A/C (636) X TransCruz antibody is recommended for ChIP assays.

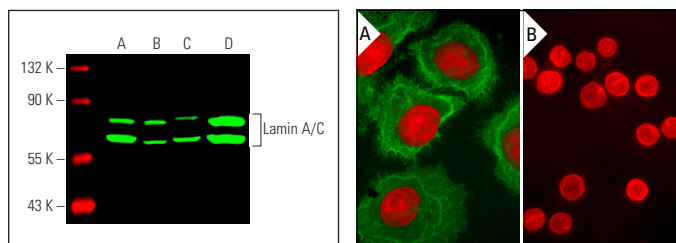
Molecular Weight of Lamin A/C: 69/62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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/C (636) Alexa Fluor® 680: sc-7292 AF680. Direct near-infrared western blot analysis of Lamin A/C expression in U-87 MG (A), HeLa (B), A-431 (C) and PC-3 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 790: sc-516731.

Lamin A/C (636) PE: sc-7292 PE and HCAM (DF1485) Alexa Fluor® 488: sc-7297 AF488. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear envelope (red) and membrane (green) localization (A). Lamin A/C (636) Alexa Fluor® 594: sc-7292 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear envelope localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (B).

## SELECT PRODUCT CITATIONS

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- Scaturro, P., et al. 2014. Characterization of the mode of action of a potent dengue virus capsid inhibitor. *J. Virol.* 88: 11540-11555.
- Moiseeva, O., et al. 2015. Mutant Lamin A links prophase to a p53 independent senescence program. *Cell Cycle* 14: 2408-2421.
- Moudry, P., et al. 2016. TOPBP1 regulates Rad51 phosphorylation and chromatin loading and determines PARP inhibitor sensitivity. *J. Cell Biol.* 212: 281-288.
- Chung, S., et al. 2017. Identification of EGF-NFκB-FOXO1 signaling axis in basal-like breast cancer. *Cell Commun. Signal.* 15: 22.
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- Lochhead, P.A., et al. 2020. Paradoxical activation of the protein kinase-transcription factor ERK5 by ERK5 kinase inhibitors. *Nat. Commun.* 11: 1383.
- Kychygina, A., et al. 2021. Progerin impairs 3D genome organization and induces fragile telomeres by limiting the dNTP pools. *Sci. Rep.* 11: 13195.

## RESEARCH USE

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

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