**Lamin A/C (E-1): sc-376248**

**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. Lamin C and D are identical for the first 566 amino acids, with Lamin D differing only in 6 unique carboxy-terminal amino acids.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

Lamin A/C (E-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of Lamin A/C of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lamin A/C (E-1) is available conjugated to agarose (sc-376248 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376248 HRP), 200 µg/ml, for WB, IHC/IP and ELISA; to either phycoerythrin (sc-376248 PE), fluorescein (sc-376248 FITC), Alexa Fluor® 488 (sc-376248 AF488), Alexa Fluor® 546 (sc-376248 AF546), Alexa Fluor® 594 (sc-376248 AF594) or Alexa Fluor® 647 (sc-376248 AF647), 200 µg/ml, for WB (RGB), IF, IHC/IP and FCM; and to either Alexa Fluor® 680 (sc-376248 AF680) or Alexa Fluor® 790 (sc-376248 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376248 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**RESEARCH USE**

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

**APPLICATIONS**

Lamin A/C (E-1) is recommended for detection of Lamin A and Lamin C of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Lamin A/C (E-1) is also recommended for detection of Lamin A and Lamin C in additional species, including equine, canine, bovine and porcine.


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

Positive Controls: U-251-MG whole cell lysate: sc-364176, C6 whole cell lysate: sc-364373 or CCD-1064Sk cell lysate: sc-2263.

**DATA**

Lamin A/C (E-1): sc-376248. Western blot analysis of Lamin A/C expression in U-251-MG (A), Oil (B), C6 (C) and NIH/3T3 (D) whole cell lysates.

Lamin A/C (E-1): sc-376248. Immunoperoxidase detection of Lamin A/C in formalin-fixed, paraffin-embedded human skin tissue, showing nuclear envelope staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes. Detection reagent used: m-IgG BP-HRP: sc-516102 (A); Lamin A/C (E-1) Alexa Fluor® 488: sc-376248-AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear envelope localization. Blocked with UltraCruz® Blocking Reagent: sc-51214 (B).

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**STORAGE**

**Santa Cruz Biotechnology, Inc.**


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