

Lamin B1 (B-10): sc-374015

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, functions 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 as components of the nuclear lamina, a fibrous layer on the nucleoplasmic side of the inner nuclear membrane, which is thought to provide a framework for the nuclear envelope and may also interact with chromatin. B-type lamins undergo a series of modifications, such as farnesylation and phosphorylation. Increased phosphorylation of the lamins occurs before envelope disintegration and probably plays a role in regulating lamin associations. Nuclear Lamin B is fragmented as a consequence of apoptosis by an unidentified member of the ICE family.

CHROMOSOMAL LOCATION

Genetic locus: LMNB1 (human) mapping to 5q23.2; Lmnbl (mouse) mapping to 18 D3.

SOURCE

Lamin B1 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 559-586 at the C-terminus of Lamin B1 of mouse 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 B1 (B-10) is available conjugated to agarose (sc-374015 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374015 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374015 PE), fluorescein (sc-374015 FITC), Alexa Fluor® 488 (sc-374015 AF488), Alexa Fluor® 546 (sc-374015 AF546), Alexa Fluor® 594 (sc-374015 AF594) or Alexa Fluor® 647 (sc-374015 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374015 AF680) or Alexa Fluor® 790 (sc-374015 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374015 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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

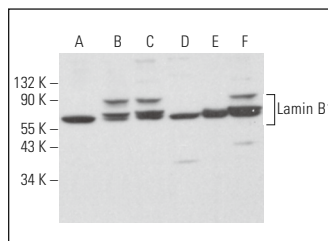
Lamin B1 (B-10) is recommended for detection of Lamin B1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Lamin B1 siRNA (h): sc-29386, Lamin B1 siRNA (m): sc-35779, Lamin B1 shRNA Plasmid (h): sc-29386-SH, Lamin B1 shRNA Plasmid (m): sc-35779-SH, Lamin B1 shRNA (h) Lentiviral Particles: sc-29386-V and Lamin B1 shRNA (m) Lentiviral Particles: sc-35779-V.

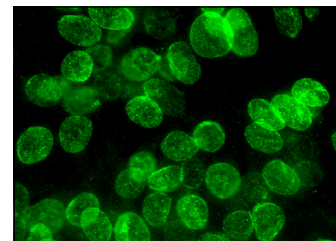
Molecular Weight of Lamin B1: 67 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, C2C12 whole cell lysate: sc-364188 or F9 cell lysate: sc-2245.

DATA



Lamin B1 (B-10): sc-374015. Western blot analysis of Lamin B1 expression in HL-60 (A), C2C12 (B), F9 (C), CCRF-CEM (D), Ramos (E) and WR19L (F) whole cell lysates.



Lamin B1 (B-10): sc-374015. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear envelope localization.

SELECT PRODUCT CITATIONS

1. Evangelisti, C., et al. 2009. TIS21/BTG2/PC3 and cyclin D1 are key determinants of nuclear diacylglycerol kinase- ζ -dependent cell cycle arrest. *Cell. Signal.* 21: 801-809.
2. Jeong Nam, Y., et al. 2017. KATP channel block inhibits the Toll-like receptor 2-mediated stimulation of NF κ B by suppressing the activation of Akt, mTOR, JNK and p38-MAPK. *Eur. J. Pharmacol.* 815: 190-201.
3. Zhang, Z., et al. 2018. PHACTR1 regulates oxidative stress and inflammation to coronary artery endothelial cells via interaction with NF κ B/p65. *Atherosclerosis* 278: 180-189.
4. Tolkach, Y., et al. 2019. Apelin and apelin receptor expression in renal cell carcinoma. *Br. J. Cancer* 120: 633-639.
5. Mun, G.I., et al. 2020. Decreased expression of FBXW7 by ERK1/2 activation in drug-resistant cancer cells confers transcriptional activation of MDR1 by suppression of ubiquitin degradation of HSF1. *Cell Death Dis.* 11: 395.

RESEARCH USE

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