

# Lamin B1 (8D1): sc-56144



The Power to Question

## 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, 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 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, such as Lamin B1, undergo a series of modifications, such as farnesylation and phosphorylation. Lamin B1 is a 586 amino acid protein that is encoded by a gene which, when mutated, is involved in the pathogenesis of autosomal dominant adult-onset leukodystrophy (ADLD), a disease characterized by cerebellar dysfunction and symmetric demyelination of the central nervous system.

## CHROMOSOMAL LOCATION

Genetic locus: LMNB1 (human) mapping to 5q23.2; Lmnb1 (mouse) mapping to 18 D3.

## SOURCE

Lamin B1 (8D1) is a mouse monoclonal antibody raised against nuclei purified from HeLa epitheloid carcinoma of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lamin B1 (8D1) is available conjugated to agarose (sc-56144 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56144 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56144 PE), fluorescein (sc-56144 FITC), Alexa Fluor® 488 (sc-56144 AF488), Alexa Fluor® 546 (sc-56144 AF546), Alexa Fluor® 594 (sc-56144 AF594) or Alexa Fluor® 647 (sc-56144 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56144 AF680) or Alexa Fluor® 790 (sc-56144 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Lamin B1 (8D1) is recommended for detection of farnesylated and endoproteolysed Lamin B1 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with Lamin B2.

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.

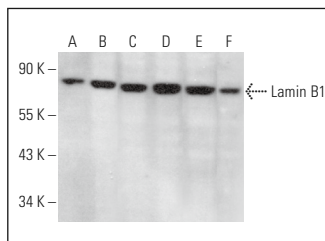
Molecular Weight of Lamin B1: 67 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225.

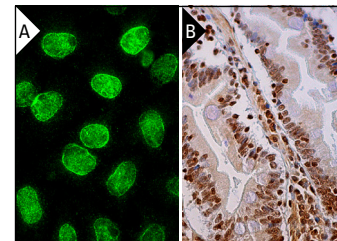
## STORAGE

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

## DATA



Lamin B1 (8D1): sc-56144. Western blot analysis of Lamin B1 expression in COLO 205 (A), MDA-MB-231 (B), HeLa (C), CCRF-CEM (D), MCF7 (E) and A-431 (F) whole cell lysates.



Lamin B1 (8D1): sc-56144. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear envelope localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

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- Song, L., et al. 2021. Ginsenoside Rg5 inhibits cancer cell migration by inhibiting the nuclear factor-κB and erythropoietin-producing hepatocellular receptor A2 signaling pathways. *Oncol. Lett.* 21: 452.
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## RESEARCH USE

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

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