SANTA CRUZ BIOTECHNOLOGY, INC.

Lamin B1 (H-90): sc-20682

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A unique family of cysteine proteases has been described that differs in se-quence, structure and substrate specificity from any previously described pro-tease 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 in-tegrity of the nuclear envelope and cellular morphology as components of the nuclear lamina, a fibrous layer on the nucleoplasmic side of the inner nu-clear membrane which is thought to provide a framework for the nuclear en-velope 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 (H-90) is a rabbit polyclonal antibody raised against amino acids 401-490 mapping near the C-terminus of Lamin B1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-20682 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Lamin B1 (H-90) is recommended for detection of 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), 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 B1 (H-90) is also recommended for detection of Lamin B1 in additional species, including equine, canine, bovine and porcine.

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.

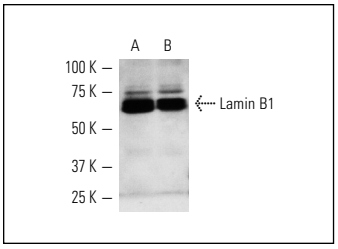
STORAGE

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

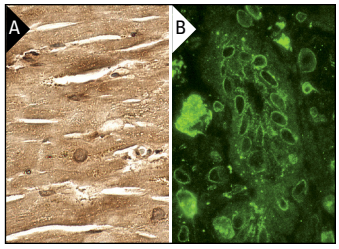
RESEARCH USE

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

DATA



Lamin B1 (H-90): sc-20682. Western blot analysis of Lamin B1 expression in Jurkat (**A**) and Y79 (**B**) whole cell lysates.



Lamin B1 (H-90): sc-20682. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing nuclear envelope and cytoplasmic staining of myocytes (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear envelope localization (**B**).

SELECT PRODUCT CITATIONS

1. Tsukamoto, H., et al. 2004. B-Raf contributes to sustained extracellular signal-regulated kinase activation associated with interleukin-2 production stimulated through the T cell receptor. J. Biol. Chem. 279: 48457-48465.
2. Squires, E.J., 2004. Cytoplasmic localization of pregnane X receptor and ligand-dependent nuclear translocation in mouse liver. J. Biol. Chem. 279: 49307-49314.
3. Roberts, O.L., et al. 2010. ERK5 is required for VEGF-mediated survival and tubular morphogenesis of primary human microvascular endothelial cells. J. Cell Sci. 123: 3189-3200.
4. Strom, A., et al. 2011. Cellular prion protein localizes to the nucleus of endocrine and neuronal cells and interacts with structural chromatin components. Eur. J. Cell Biol. 90: 414-419.
5. Tang, X., et al. 2011. Luteolin inhibits Nrf2 leading to negative regulation of the Nrf2/ARE pathway and sensitization of human lung carcinoma A549 cells to therapeutic drugs. Free Radic. Biol. Med. 50: 1599-1609.
6. Otsuka, M., et al. 2011. Receptor for activated protein kinase C: requirement for efficient microRNA function and reduced expression in hepatocellular carcinoma. PLoS ONE 6: e24359.
7. Sun, X.L., et al. 2011. Uncoupling protein 2 knockout exacerbates depression-like behaviors in mice via enhancing inflammatory response. Neuroscience 192: 507-514.