SANTA CRUZ BIOTECHNOLOGY, INC.

Lamin B1 (ZL-5): sc-56145

SANTA CRUZ BIOTECHNOLOGY

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 (ZL-5) is a mouse monoclonal antibody raised against Lamin B1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Lamin B1 (ZL-5) 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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: HuT 78 whole cell lysate: sc-2208, HeLa whole cell lysate: sc-2200 or Y79 cell lysate: sc-2240.

STORAGE

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

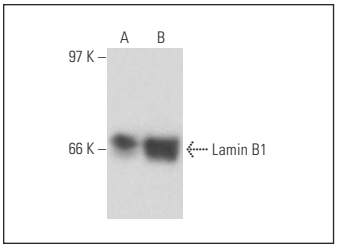
PROTOCOLS

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

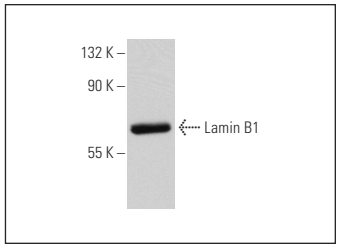
RESEARCH USE

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

DATA



Lamin B1 (ZL-5): sc-56145. Western blot analysis of Lamin B1 expression in HuT 78 (**A**) and HeLa (**B**) whole cell lysates.



Lamin B1 (ZL-5): sc-56145. Western blot analysis of Lamin B1 expression in Y79 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kim, S., et al. 2008. A proteomic approach for protein-profiling the oncogenic ras induced transformation (H-, K-, and N-Ras) in NIH/3T3 mouse embryonic fibroblasts. Proteomics 8: 3082-3093.
2. Liu, X. and Giguère, V. 2014. Inactivation of RARβ inhibits Wnt1-induced mammary tumorigenesis by suppressing epithelial-mesenchymal transitions. Nucl. Recept. Signal. 12: e004.
3. García-Dorival, I., et al. 2014. Elucidation of the Ebola virus VP24 cellular interactome and disruption of virus biology through targeted inhibition of host-cell protein function. J. Proteome Res. 13: 5120-5135.
4. Xu, X., et al. 2014. Transcriptional regulation of apolipoprotein A-IV by the transcription factor CREBH. J. Lipid Res. 55: 850-859.
5. Wang, L., et al. 2015. Intracellular CD24 disrupts the ARF-NPM interaction and enables mutational and viral oncogene-mediated p53 inactivation. Nat. Commun. 6: 5909.
6. Chong, K.Y., et al. 2015. Wnt pathway activation and ABCB1 expression account for attenuation of proteasome inhibitor-mediated apoptosis in multidrug-resistant cancer cells. Cancer Biol. Ther. 16: 149-159.
7. So, J.S., et al. 2015. IRE1α-dependent decay of CReP/Ppp1r15b mRNA increases eukaryotic initiation factor 2α phosphorylation and suppresses protein synthesis. Mol. Cell. Biol. 35: 2761-2770.
8. Liu, NA., et al. 2015. Regulation of homologous recombinational repair by lamin B1 in radiation-induced DNA damage. FASEB J. 29: 2514-2525.
9. Muthusami, S., et al. 2015. FTS is responsible for radiation-induced nuclear phosphorylation of EGFR and repair of DNA damage in cervical cancer cells. J. Cancer Res. Clin. Oncol. 141: 203-210.

CONJUGATES

See **Lamin B1 (A-11): sc-377000** for Lamin B1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.