

Lamin B1 (S-20): sc-30264

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 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-30264 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lamin B1 (S-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Lamin B1 (S-20) 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.

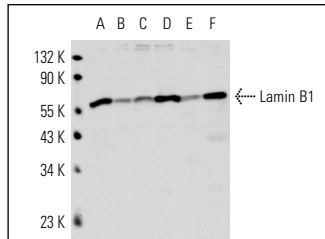
Molecular Weight of Lamin B1: 67 kDa.

Positive Controls: Y79 cell lysate: sc-2240, MOLT-4 cell lysate: sc-2233 or Lamin B1 (h): 293T Lysate: sc-111764.

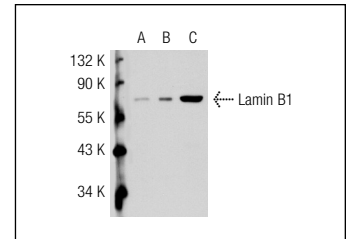
RESEARCH USE

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

DATA



Lamin B1 (S-20): sc-30264. Western blot analysis of Lamin B1 expression in Jurkat (A), Y79 (B), HeLa (C), MOLT-4 (D), F9 (E) and CCRF-CEM (F) whole cell lysates.



Lamin B1 (S-20): sc-30264. Western blot analysis of Lamin B1 expression in non-transfected 293T: sc-117752 (A), human Lamin B1 transfected 293T: sc-111764 (B) and Y79 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Vaughan, A., et al. 2001. Both emerin and lamin C depend on lamin A for localization at the nuclear envelope. *J. Cell Sci.* 114: 2577-2590.
- Reynaud, K., et al. 2005. *In vivo* meiotic resumption, fertilization and early embryonic development in the bitch. *Reproduction* 130: 193-201.
- Hall, V.J., et al. 2005. Nuclear lamin antigen and messenger RNA expression in bovine *in vitro* produced and nuclear transfer embryos. *Mol. Reprod. Dev.* 72: 471-482.
- Olins, A.L., et al. 2008. The human granulocyte nucleus: unusual nuclear envelope and heterochromatin composition. *Eur. J. Cell Biol.* 87: 279-290.
- Bijlmakers, M.J., et al. 2011. Functional analysis of the RNF114 psoriasis susceptibility gene implicates innate immune responses to double-stranded RNA in disease pathogenesis. *Hum. Mol. Genet.* 20: 3129-3137.
- Diez, H., et al. 2012. Specific roles of Akt isoforms in apoptosis and axon growth regulation in neurons. *PLoS ONE* 7: e32715.
- Mathew, R., et al. 2012. BTB-ZF factors recruit the E3 ligase cullin 3 to regulate lymphoid effector programs. *Nature* 491: 618-621.

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 or our catalog for detailed protocols and support products.



Try **Lamin B1 (A-11): sc-377000** or **Lamin B1 (8D1): sc-56144**, our highly recommended monoclonal alternatives to Lamin B1 (S-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Lamin B1 (A-11): sc-377000**.