

Lamin B2 (m): 293T Lysate: sc-121281

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.

REFERENCES

1. Moir, R.D., et al. 1995. The dynamic properties and possible functions of nuclear lamins. *Int. Rev. Cytol.* 162B: 141-182.
2. Duan, H., et al. 1996. ICE-LAP3, a novel mammalian homologue of the *Caenorhabditis elegans* cell death protein CED-3 is activated during FAS- and tumor necrosis factor-induced apoptosis. *J. Biol. Chem.* 271: 1621-1625.
3. Fernandes-Alnemri, T.F., et al. 1996. *In vitro* activation of CPP32 and Mch3 by Mch4, a novel human apoptotic Cysteine protease containing two FADD-like domains. *Proc. Natl. Acad. Sci. USA* 93: 7464-7469.
4. Takahashi, A., et al. 1996. Cleavage of Lamin A by Mch2 α but not CPP32: multiple IL-1 β -converting enzyme-related proteases with distinct substrate recognition properties are active in apoptosis. *Proc. Natl. Acad. Sci. USA* 93: 8395-8400.
5. Duan, H., et al. 1996. ICE-LAP6, a novel member of the ICE/CED-3 gene family, is activated by the cytotoxic T cell protease granzyme B. *J. Biol. Chem.* 271: 16720-16724.
6. Rao, L., et al. 1996. Lamin proteolysis facilitates nuclear events during apoptosis. *J. Cell Biol.* 135: 1441-1455.
7. SWISS-PROT/TrEMBL (125953). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: Lmnb2 (mouse) mapping to 10 C1.

PRODUCT

Lamin B2 (m): 293T Lysate represents a lysate of mouse Lamin B2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

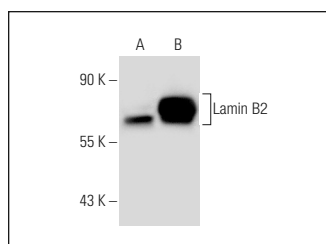
APPLICATIONS

Lamin B2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Lamin B2 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Lamin B2 (X223): sc-56147 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Lamin B2 expression in Lamin B2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



Lamin B2 (X223): sc-56147. Western blot analysis of Lamin B2 expression in non-transfected: sc-117752 (A) and mouse Lamin B2 transfected: sc-121281 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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