SANTA CRUZ BIOTECHNOLOGY, INC.

Lamin B2 (M-12): sc-30269

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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, 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. 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.
4. 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.
5. Takahashi, A., et al. 1996. Cleavage of Lamin A by Mch2 a but not CPP32: multiple interleukin-1β-converting enzyme-related proteases with distinct substrate recognition properties are active in apoptosis. Proc. Natl. Acad. Sci. USA 93: 8395-8400.
6. Rao, L., et al. 1996. Lamin proteolysis facilitates nuclear events during apoptosis. J. Cell Biol. 135: 1441-1455.

CHROMOSOMAL LOCATION

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

SOURCE

Lamin B2 (M-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Lamin B2 of mouse 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-30269 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lamin B2 (M-12) is recommended for detection of Lamin B2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for Lamin B2 siRNA (m): sc-61886, Lamin B2 shRNA Plasmid (m): sc-61886-SH and Lamin B2 shRNA (m) Lentiviral Particles: sc-61886-V.

Molecular Weight of Lamin B2: 67 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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