

Lamin B (C-20): sc-6216

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.

CHROMOSOMAL LOCATION

Genetic locus: LMNB1 (human) mapping to 5q23.2, LMNB2 (human) mapping to 19p13.3; Lmnb1 (mouse) mapping to 18 D3, Lmnb2 (mouse) mapping to 10 C1.

SOURCE

Lamin B (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Lamin B1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6216 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Lamin B (C-20) is recommended for detection of Lamin B1 and, to a lesser extent, Lamin B2 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 B (C-20) is also recommended for detection of Lamin B1 and, to a lesser extent, Lamin B2 in additional species, including canine.

Molecular Weight of Lamin B: 67 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

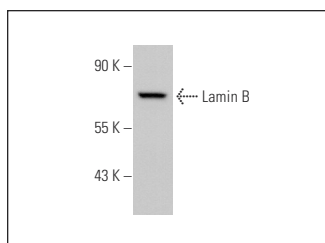
STORAGE

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

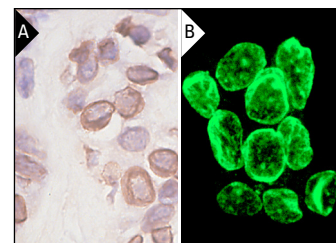
RESEARCH USE

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

DATA



Lamin B (C-20): sc-6216. Western blot analysis of Lamin B expression in CCRF-CEM whole cell lysate.



Lamin B (C-20): sc-6216. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing nuclear envelope staining (A). Immunofluorescence staining of methanol-fixed F9 cells showing nuclear lamina localization (B).

SELECT PRODUCT CITATIONS

- Barboro, P., et al. 2002. Unraveling the organization of the internal nuclear matrix: RNA-dependent anchoring of NuMA to a lamin scaffold. *Exp. Cell Res.* 279: 202-218.
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- Kosak, S.T., et al. 2002. Subnuclear compartmentalization of immunoglobulin loci during lymphocyte development. *Science* 296: 158-162.
- Paylakhi, S.H., et al. 2013. FOXC1 in human trabecular meshwork cells is involved in regulatory pathway that includes miR-204, MEIS2, and ITGβ1. *Exp. Eye Res.* 111: 112-121.
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- Poleshko, A., et al. 2013. The human protein PRR14 tethers heterochromatin to the nuclear lamina during interphase and mitotic exit. *Cell Rep.* 5: 292-301.
- Manna, S., et al. 2013. Proteasome inhibition by bortezomib increases IL-8 expression in androgen-independent prostate cancer cells: the role of IKKα. *J Immunol.* 191: 2837-2846.
- Lanzino, M., et al. 2013. DAX-1, as an androgen-target gene, inhibits aromatase expression: a novel mechanism blocking estrogen-dependent breast cancer cell proliferation. *Cell Death Dis.* 4: e724.


 MONOS
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Try **Lamin B1 (B-10): sc-374015** or **Lamin B1 (C-5): sc-365962**, our highly recommended monoclonal alternatives to Lamin B (C-20).