

## Chicken polyclonal to Lamin A/C

<b>Catalogue No.:</b>	C-1698-100
<b>Description:</b>	<p>The Lamin proteins are members of the intermediate filament protein family but are located inside the nucleus rather than in the cytoplasm (1). The lamins function as skeletal components tightly associated with the inner nuclear membrane. Originally the proteins of the nuclear cytoskeleton were named Lamin A, B and C, from top to bottom as visualized on SDS-PAGE gels. Subsequently it was found that Lamins A and C were coded for by a single gene (2), while the Lamin B band may contain two proteins encoded by two genes now called Lamin B1 and Lamin B2. Lamin A has a mass of about 74kDa while Lamin C is 65kDa. The Lamin A protein includes 98 amino acids missing from Lamin C, while Lamin C has a C-terminal 6 amino acid peptide not present in Lamin A. Apart from these regions Lamin A and C are identical so that antibodies raised against either protein are likely to cross react with the other, as is the case with this monoclonal. Lamin polymerization and depolymerization is regulated by phosphorylation by cyclin dependent protein kinase 1 (CDK1), the key component of "maturation promoting factor", the central regulator of cell division. Activity of this kinase increases during cell division and is responsible for the breakdown of the nuclear lamina. Mutations in the LMNA gene are associated with several serious human diseases, including Emery-Dreifuss muscular dystrophy, familial partial lipodystrophy, limb girdle muscular dystrophy, dilated cardiomyopathy, Charcot-Marie-Tooth disease type 2B1, and Hutchinson-Gilford progeria syndrome. This family of diseases belong to a larger group which are often referred to as Laminopathies, though some laminopathies are associated in defects in Lamin B1, B2 or one or other of the numerous nuclear lamina binding proteins. A truncated version of lamin A, commonly known as progerin, causes Hutchinson-Gilford progeria syndrome, a form of premature aging (3).</p>
<b>Batch No.:</b>	See vial label
<b>Unit size:</b>	100 uL
<b>Antigen:</b>	Full length recombinant human Lamin C
<b>Antibody Type:</b>	Polyclonal
<b>Produced in:</b>	Chicken
<b>Applications:</b>	Immunocytochemistry (ICC) and Western Blotting (WB). A dilution of 1:1,000-1:2,000 is recommended for WB. A dilution of 1:500-1:1,000 is recommended for ICC. The optimal dilution should be determined by the end user.
<b>Specificity:</b>	Lamin A and Lamin C. The antibody reacts with a 74kDa and 65kDa band by Western blot on HeLa cell extract. It has also been used successfully for immunocytochemistry on HeLa cell cultures.
<b>Species Against:</b>	Human, bovine, porcine, mouse and rat. It is expected that it will work on other mammal tissues.
<b>Form:</b>	Lyophilized from PBS. Contains 5% trehalose and 0.5% sodium azide.
<b>Appearance:</b>	White powder
<b>Reconstitution:</b>	Reconstitute in sterile distilled water. Centrifuge to remove any insoluble material.

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**Storage:** After reconstitution of lyophilized antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.

**Expiry Date:** 12 months after purchase

**General References:** 1. Fisher, D. Z., Chaudhary, N., Blobel, G. cDNA sequencing of nuclear lamins A and C reveals primary and secondary structural homology to intermediate filament proteins. Proc. Nat. Acad. Sci. 83: 6450-6454 (1986).

2. McKeon, F. D., Kirschner, M. W., Caput, D. Homologies in both primary and secondary structure between nuclear envelope and intermediate filament proteins. Nature 319: 463-468 (1986).

3. Liu, B. and Zhou, Z. Lamin A/C, laminopathies and premature ageing. Histol. Histopathol. 23: 747-763 (2006).



Crude HeLa cell extract stained with Chicken anti-Lamin A/C. Two bands at 74kDa and 65kDa, corresponding to Lamin A and C.

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