BP4505S

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Polyclonal Antibody to Lamin-A/C (LMNA) (C Isoform specific) - Aff - Purified

Alternate names: 70 kDa Lamin, LMN1, LMNA, Lamin A, Lamin A + C, Lamin-A/C, NY-REN-32, NYREN32, Nuclear Envelope Marker, Renal carcinoma antigen NY-REN-32

Catalog No.: BP4505S

Quantity: 0.1 mg

Concentration: 1.0 mg/ml

Background: An important part of the cell nucleus is formed by nuclear lamina. Nuclear Lamins form a network of filaments at the nucleoplasmic site of the nuclear membrane. Two main subtypes of nuclear Lamins can be distinguished, i.e. A-type Lamins and B-type Lamins. The A-type Lamins comprise a set of three proteins arising from the same gene by alternative splicing, i.e. Lamin A, Lamin C and Lamin Adel10, while the B-type Lamins include two proteins arising from two distinct genes, i.e. Lamin B1 and lamin B2. The nuclear Lamins comprise a unique subclass of the intermediate filament protein family. They share a molecular domain organisation with the other intermediate filament proteins in that they are fibrous molecules that have an aminoterminal globular head, a central rod of a-helices and a carboxyterminal globular domain. Many biochemical and molecular features of Lamins have been studied, but their functions remain still largely undetermined. One of the functions ascribed to the lamina is the maintenance of the structural integrity of the nucleus. Besides interactions with the nuclear membrane and other intermediate filaments, lamins interact with the nuclear chromatin. Eukaryotic chromatin is organised into loops, which are attached to the nuclear matrix. This organisation is thought to contribute to compaction of the chromatin and regulation of gene expression. Lamins, as part of the nuclear matrix, may be involved in these processes since chromatin binding sites have been detected in both A- and B-type lamins.

Uniprot ID: P02545

NCBI: NP_005563.1

GeneID: 4000

Host: Rabbit

Immunogen: A peptide made from the last 8 amino acids of Lamin C, including an N-terminal lysine as a linker (KHHVSGSRR), coupled to KLH

Format:
State: Liquid purified Ig fraction
Purification: Affinity Chromatography
Buffer System: PBS
Preservatives: 0.09% Sodium Azide

Applications:
Immunoblotting: 1/50-1/100.
Immunofluorescence.

Immunohistochemistry on Frozen Sections.
Immunohistochemistry on Paraffin Sections: 1/100.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody reacts exclusively with Lamin C.
It reacts strongly in Immunoblotting with fragments corresponding to peptide 319-572 aa of Lamin C. When tested against nuclear protein extracts from HeLa cells it reacts with a single band migrating at 65 kDa.

Species Reactivity: **Tested:** Human, Mouse and Rat.

Storage: Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:
1. Venables RS, McLean S, Luny D, Moteleb E, Morley S, Quinlan RA, et al. Expression of individual lamins in basal cell carcinomas of the skin. Br J Cancer. 2001 Feb;84(4):512-9. PubMed PMID: 11207047.
2. Tilli, C. M., Ramaekers, F. C., Broers, J. L., Hutchison, C. J., and Neumann, H. A. (2003). Lamin expression in normal human skin, actinic keratosis, squamous cell carcinoma and basal cell carcinoma. Br J Dermatol 148, 102-109. PMID: 11207047
3. Broers JL, Bronnenberg NM, Kuijpers HJ, Schutte B, Hutchison CJ, Ramaekers FC. Partial cleavage of A-type lamins concurs with their total disintegration from the nuclear lamina during apoptosis. Eur J Cell Biol. 2002 Dec;81(12):677-91. PubMed PMID: 12553668.

Pictures: Immunohistochemistry showing Lamin C on Formalin fixed paraffin embedded skin tissue at 1/100