BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Lamin A+C/LMNA Antibody Picoband®

Catalog Number: PB9280

About LMNA

Lamins are structural protein components of the nuclear lamina, a protein network underlying the inner nuclear membrane that determines nuclear shape and size. There are three types of lamins, A,B and C. The lamin A/C (LMNA) gene contains 12 exons. Alternative splicing within exon 10 gives rise to two different mRNAs that code for pre-lamin A and lamin C. Lamin A/C is mapped to 1q21.2-q21.3 and mutations in this gene cause a variety of human diseases including Emery-Dreifuss muscular dystrophy, dilated cardiomyopathy, and Hutchinson-Gilford progeria syndrome. Lamin A/C deficiency is thus associated with both defective nuclear mechanics and impaired mechanically activated gene transcription.

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Overview

Product Name	Anti-Lamin A+C/LMNA Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Lamin A+C/LMNA Antibody Picoband® catalog # PB9280. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P02545

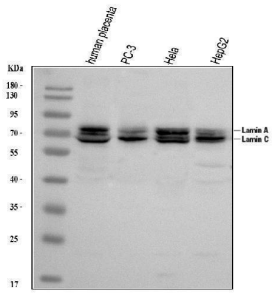
Technical Details

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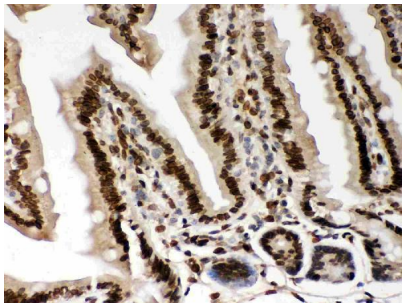
Immunogen	E.coli-derived human Lamin A/C recombinant protein (Position: Y481-Y646). Human Lamin A/C shares 90% and 92% amino acid (aa) sequence identity with mouse and rat Lamin A/C, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human, Mouse Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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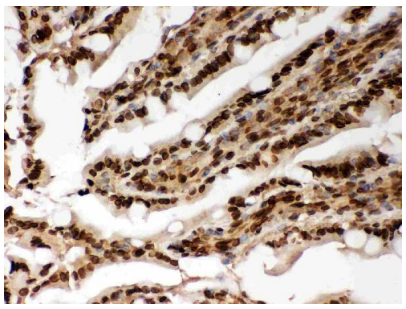
Anti-Lamin A+C/LMNA Antibody Picoband® (PB9280) Images



Western blot analysis of Lamin A/C using anti-Lamin A/C antibody (PB9280). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human placenta tissue lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human HepG2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Lamin A/C antigen affinity purified polyclonal antibody (Catalog # PB9280) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Lamin A/C at approximately 74 kDa, 63 kDa. The expected band size for Lamin A/C is at 74 kDa.



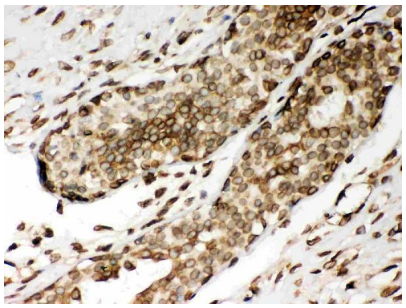
IHC analysis of Lamin A/C using anti-Lamin A/C antibody (PB9280). Lamin A/C was detected in a paraffin-embedded section of Mouse Intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Lamin A/C Antibody (PB9280) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



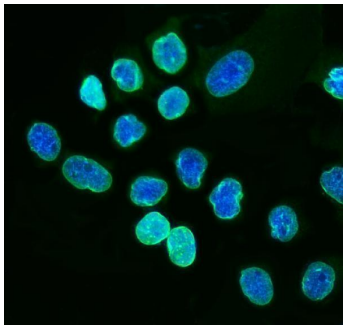
IHC analysis of Lamin A/C using anti-Lamin A/C antibody (PB9280). Lamin A/C was detected in a paraffin-embedded section of Rat Intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Lamin A/C Antibody (PB9280) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of Lamin A/C using anti-Lamin A/C antibody (PB9280). Lamin A/C was detected in a paraffin-embedded section of Human Mammary Cancer tissue. Heat mediated

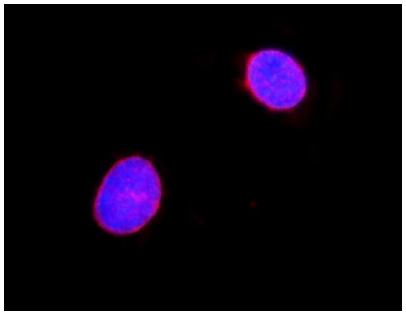
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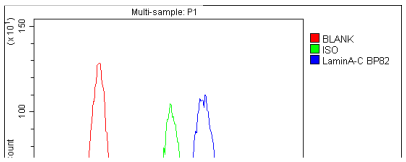
antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Lamin A/C Antibody (PB9280) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of Lamin A/C using anti-Lamin A/C antibody (PB9280). Lamin A/C was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Lamin A/C Antibody (PB9280) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of Lamin A/C using anti-Lamin A/C antibody (PB9280). Lamin A/C was detected in immunocytochemical section of NIH3T3 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Lamin A/C Antibody (PB9280) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of THP-1 cells using anti-Lamin A/C antibody (PB9280). Overlay histogram showing THP-1 cells stained with PB9280 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Lamin A/C Antibody (PB9280,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

5 Publications Citing This Product

1. PubMed ID: 10.1016/j.prp.2014.11.008, Loss of lamin A but not lamin C expression in epithelial ovarian cancer cells is associated with metastasis and poor prognosis

2. PubMed ID: 33859765, Li D,Liu J,Yang C,Tian Y,Yin C,Hu L,Chen Z,Zhao F,Zhang R,Lu A,Zhang G,Qian A.Targeting long noncoding RNA PMIF

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facilitates osteoprogenitor cells migrating to bone formation surface to promote bone formation during aging.Theranostics.2021 Mar 20;11(11):5585-5604.doi:10.7150/thno.54477. PMID:33859765;PMCID:PMC8039942.

3. PubMed ID: 25240403, Liu J, Ma J, Wu Z, Li W, Zhang D, Han L, Wang F, Reindl Km, Wu E, Ma Q. Bmc Cancer. 2014 Sep 20;14:686. Doi: 10.1186/1471-2407-14-686. Arginine Deiminase Augments The Chemosensitivity Of Argininosuccinate Synthetase-Deficient Pancreatic Cancer Cel...

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