

Anti-Lamin B1/LMNB1 Antibody Picoband®

Catalog Number: PB9611

About LMNB1

Lamin-B1 is a protein that in humans is encoded by the LMNB1 gene. The nuclear lamina consists of a two-dimensional matrix of proteins located next to the inner nuclear membrane. The lamin family of proteins make up the matrix and are highly conserved in evolution. During mitosis, the lamina matrix is reversibly disassembled as the lamin proteins are phosphorylated. Lamin proteins are thought to be involved in nuclear stability, chromatin structure and gene expression. Vertebrate lamins consist of two types, A and B. This gene encodes one of the two B type proteins, B1.

Overview

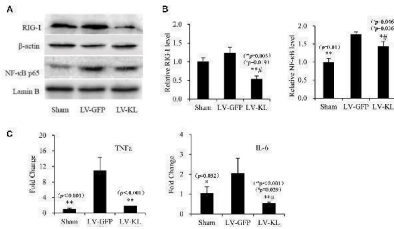
Product Name	Anti-Lamin B1/LMNB1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Lamin B1/LMNB1 Antibody Picoband® catalog # PB9611. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates 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, IP, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
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	P20700

Technical Details

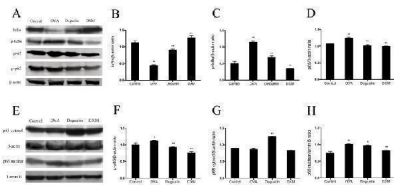
Immunogen	E.coli-derived human Lamin B1 recombinant protein (Position: Q266-C583). Human Lamin B1 shares 95.9% and 95% amino acid (aa) sequence identity with mouse and rat Lamin B1, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) 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, 0.1-0.5 ug/ml Immunohistochemistry (Paraffin-embedded Section), 2-5 ug/ml Immunocytochemistry/Immunofluorescence, 5 ug/ml Immunoprecipitation, 0.5-2 ug/ml Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells

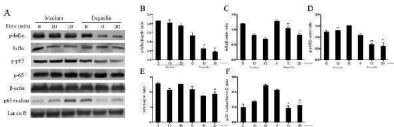
Anti-Lamin B1/LMN B1 Antibody Picoband® (PB9611) Images



Effects of Klotho overexpression on neuroinflammatory responses in the ischemic brain induced by 2VO in mice. Four weeks after the intracerebroventricular injection of a lentivirus that encoded Klotho (LV-KL) or GFP (LV-GFP), the mice were exposed to 20 min 2VO and 72 h reperfusion. Western blot and qPCR were performed 72 h after surgery. (A) Representative Western blots and quantitative analysis of the expression of RIG-1 and the nuclear translocation of NF-kappaB. (B) The amount of RIG-I expression and NF-kappaB that translocated to the nucleus was normalized to beta-actin or Lamin B, respectively. The results were expressed as each normalized value relative to LV-GFP-treated sham controls. (C) The mRNA levels of TNF-alpha and IL-6 in the brain. The results were normalized to the corresponding reporter gene GAPDH and are presented as a fold change relative to the sham-operated group. The data are expressed as mean \pm SEM. One-way ANOVA followed by Dunnett's test. n = 3-4 per group. * p < 0.05, ** p < 0.01, vs. LV-GFP-treated 2VO group; # p < 0.05, vs. LV-GFP-treated sham group. Index in PubMed under a CC BY license. PMID: 29403373

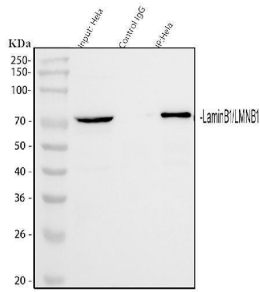


Deguelin suppressed OVA-induced NF-kappaB activation in lung tissues. Total protein, cytosol protein and nuclear protein were separately extracted from lung tissues 24 h after the last OVA challenge. (A) Expressions of NF-kappaB p65, phospho-p65, IkappaBα, and phospho-IkappaBα were analyzed by western blotting analysis. beta-actin was used as an internal control. (E) Expressions of cytosol p65 and nuclear p65 were analyzed by western blotting. beta-actin and Lamin B were used as internal controls. (B, C, D, F, G, H) Grey values of the indicated proteins were measured by Quantity One software. Values are shown as mean \pm SEM (n = 6 for each group). DXM = dexamethasone. # P

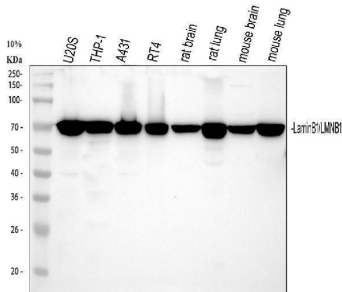


Effects of deguelin on TNF-alpha induced NF-kappaB activation in BEAS-2B cells. BEAS-2B cells were pretreated with 10 uM deguelin for 24 h and then exposed to 10 ng/ml TNF-alpha for the indicated times. (A) Expressions of NF-kappaB p65, phospho-p65, IkappaBα, phospho-IkappaBα and nuclear p65 were analyzed by Western Blotting analysis. beta-actin and Lamin B were used as internal controls. (B, C, D, E, F) Grey values of the indicated proteins were measured by Quantity One software. Values are shown as mean \pm SEM of three independent experiments. # P

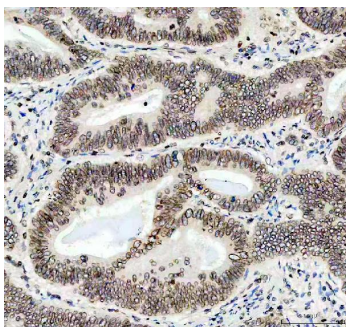
Immunoprecipitating Lamin B1 in HeLa whole cell lysate. Western blot analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lane 1: HeLa whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-Lamin B1 antibody in HeLa whole cell lysate, Lane 3: anti-Lamin B1 antibody



(2ug) + HeLa whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-Lamin B1 antigen affinity purified polyclonal antibody (PB9611) at a dilution of 0.5 ug/mL and probed with a mouse anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for Lamin B1 at approximately 66 kDa. The expected band size for Lamin B1 is at 72 kDa.

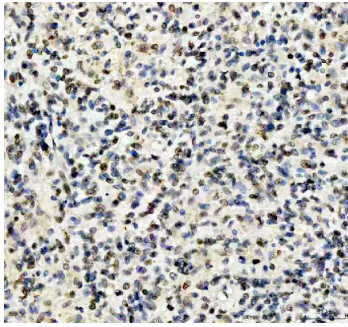


Western blot analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human U2OS whole cell lysates, Lane 2: human THP-1 whole cell lysates, Lane 3: human A431 whole cell lysates, Lane 4: human RT4 whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat lung tissue lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse lung tissue 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 B1 antigen affinity purified polyclonal antibody (Catalog # PB9611) 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 B1 at approximately 72 kDa. The expected band size for Lamin B1 is at 66 kDa.

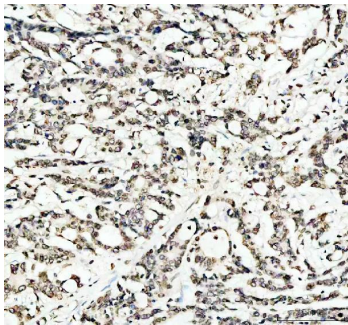


IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of human stomach cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) 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.

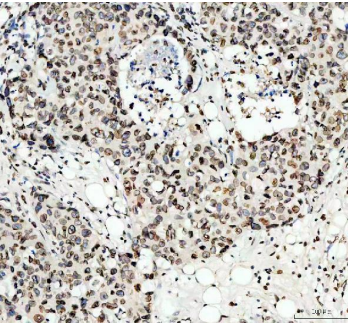
IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of human glioblastoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit



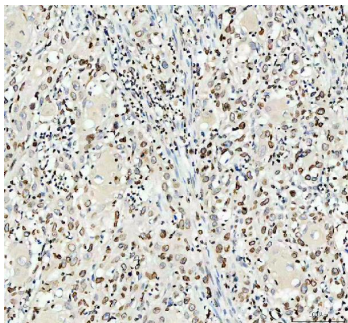
IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of human colorectal adenocarcinoma 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 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) 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.

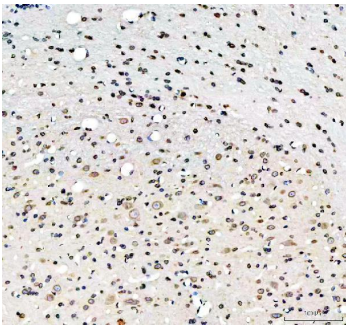


IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) 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.

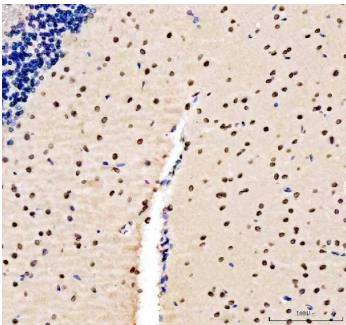


IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of human urothelial carcinoma of the bladder with squamous differentiation tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) 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.

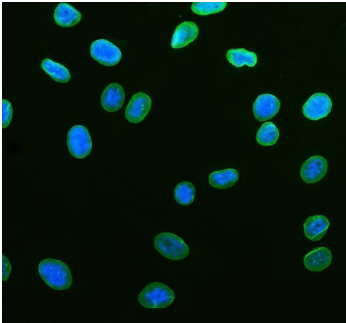
IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of mouse cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope



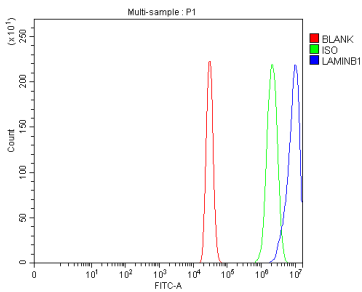
retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of Lamin B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in a paraffin-embedded section of rat cerebellum 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 2 ug/ml rabbit anti-Lamin B1 Antibody (PB9611) 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 B1 using anti-Lamin B1 antibody (PB9611). Lamin B1 was detected in immunocytochemical section of U2OS 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 5ug/mL rabbit anti-Lamin B1 Antibody (PB9611) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 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 A431 cells using anti-Lamin B1 antibody (PB9611). Overlay histogram showing A431 cells stained with PB9611 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Lamin B1 Antibody (PB9611, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

49 Publications Citing This Product

1. PubMed ID: 10.1186/1465-9921-11-33, Histone deacetylase inhibitor, butyrate, attenuates lipopolysaccharide-induced acute lung injury in mice

2. PubMed ID: 10.7150/ijbs.17238, Deguelin Attenuates Allergic Airway Inflammation via Inhibition of NF-kappab Pathway in Mice

3. PubMed ID: PMID:26191193, Clinicopathologic and prognostic significance of p21 (Cip1/Waf1) expression in bladder cancer

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