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antibody and ELISA experts

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Anti-Lamin A+C/LMNA Antibody Picoband™ (monoclonal, 5F3C12)

Catalog Number: M00438-6

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.

Overview

Product Name	Anti-Lamin A+C/LMNA Antibody Picoband™ (monoclonal, 5F3C12)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Lamin A+C/LMNA Antibody Picoband™ (monoclonal, 5F3C12) catalog # M00438-6. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Monoclonal 5F3C12
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	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 freezing and thawing.
Host	Mouse
Uniprot ID	P02545

Technical Details

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.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	IgG2b
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.25-0.5 μg/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 μg/ml, Human

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Anti-Lamin A+C/LMNA Antibody Picoband™ (monoclonal, 5F3C12) (M00438-6) Images

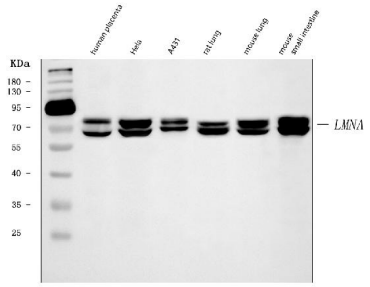

Figure 1. Western blot analysis of Lamin A+C/LMNA using anti-Lamin A+C/LMNA antibody (M00438-6).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human placenta tissue lysates,
Lane 2: human Hela whole cell lysates,
Lane 3: human A431 whole cell lysates,
Lane 4: rat lung tissue lysates,
Lane 5: mouse lung tissue lysates,
Lane 6: mouse small intestine 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 mouse anti-Lamin A+C/LMNA antigen affinity purified monoclonal antibody (Catalog # M00438-6) 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-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Lamin A+C/LMNA at approximately 74 kDa. The expected band size for Lamin A+C/LMNA is at 70 kDa.

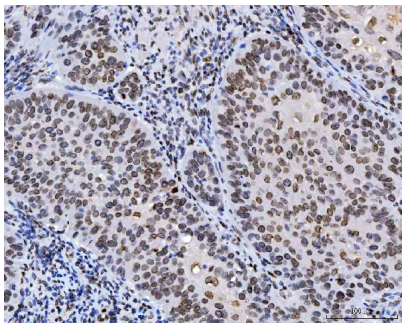

Figure 2. IHC analysis of Lamin A+C/LMNA using anti-Lamin A+C/LMNA antibody (M00438-6).
Lamin A+C/LMNA was detected in a paraffin-embedded section of human laryngeal squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-Lamin A+C/LMNA Antibody (M00438-6) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

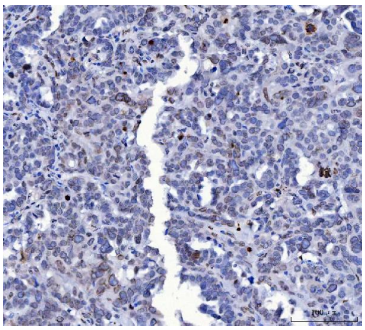

Figure 3. IHC analysis of Lamin A+C/LMNA using anti-Lamin A+C/LMNA antibody (M00438-6).
Lamin A+C/LMNA was detected in a paraffin-embedded section of human ovarian cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-Lamin A+C/LMNA Antibody (M00438-6) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was

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developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

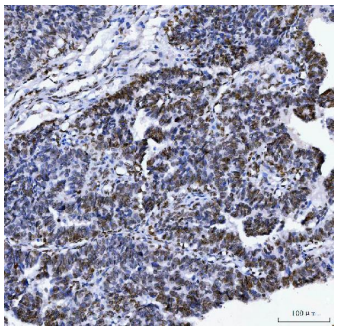

Figure 4. IHC analysis of Lamin A+C/LMNA using anti-Lamin A+C/LMNA antibody (M00438-6).
Lamin A+C/LMNA was detected in a paraffin-embedded section of human bladder epithelial carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-Lamin A+C/LMNA Antibody (M00438-6) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

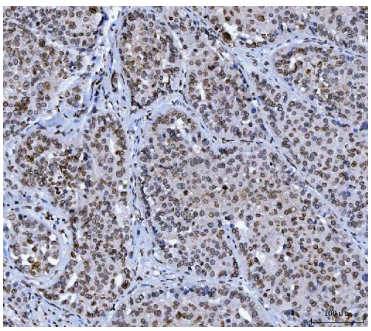

Figure 5. IHC analysis of Lamin A+C/LMNA using anti-Lamin A+C/LMNA antibody (M00438-6).
Lamin A+C/LMNA was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-Lamin A+C/LMNA Antibody (M00438-6) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.