BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Emerin/EMD Antibody Picoband®

Catalog Number: A00714

About EMD

Emerin is a serine-rich nuclear membrane protein that in humans is encoded by the EMD gene. And this gene is mapped to Xq28. Emerin is a member of the nuclear lamina-associated protein family. It mediates membrane anchorage to the cytoskeleton. Emery–Dreifuss muscular dystrophy is an X-linked inherited degenerative myopathy resulting from mutation in the EMD (also known clinically as STA) gene. Emerin appears to be involved in mechanotransduction, as emerin-deficient mouse fibroblasts failed to transduce normal mechanosensitive gene expression responses to strain stimuli. In cardiac muscle, emerin is also found complexed to beta-catenin at adherens junctions of intercalated discs, and cardiomyocytes from hearts lacking emerin showed beta-catenin redistribution as well as perturbed intercalated disc architecture and myocyte shape. This interaction appears to be regulated by glycogen synthase kinase 3 beta.

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Overview

Product Name	Anti-Emerin/EMD Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Emerin/EMD Antibody Picoband® catalog # A00714. 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	P50402

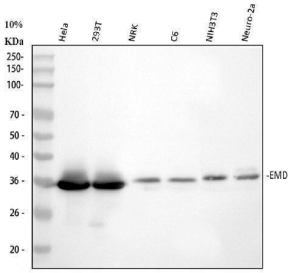
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Technical Details

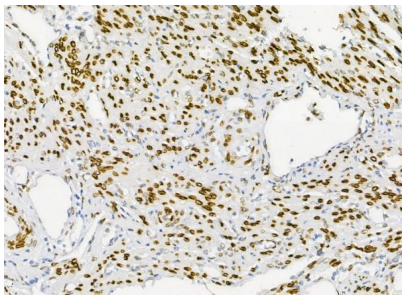
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Emerin, different from the related mouse sequence by eight amino acids, and from the related rat sequence by nine amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit 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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunofluorescence, 2ug/ml, Human Immunocytochemistry/Immunofluorescence, 2ug/ml, Human 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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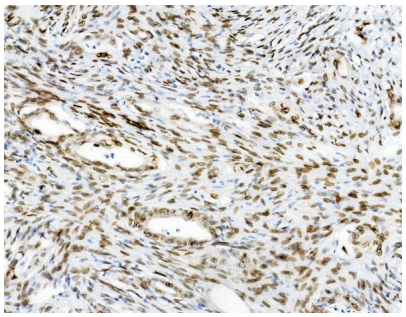
Anti-Emerin/EMD Antibody Picoband® (A00714) Images



Western blot analysis of Emerin using anti-Emerin antibody (A00714). 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 Hela whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: rat NRK whole cell lysates, Lane 4: rat C6 whole cell lysates, Lane 5: mouse NIH/3T3 whole cell lysates, Lane 6: mouse Neuro-2a 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-Emerin antigen affinity purified polyclonal antibody (Catalog # A00714) 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 Emerin at approximately 34 kDa. The expected band size for Emerin is at 29 kDa.



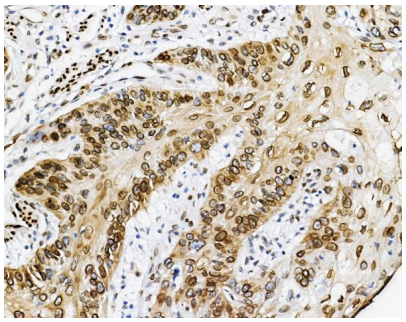
IHC analysis of Emerin using anti-Emerin antibody (A00714). Emerin was detected in paraffin-embedded section of human endometrial carcinoma tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Emerin Antibody (A00714) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



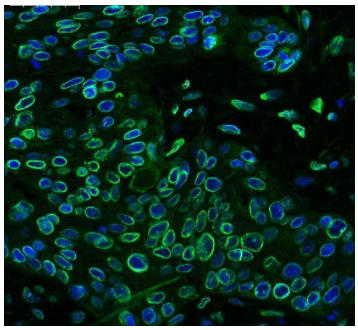
IHC analysis of Emerin using anti-Emerin antibody (A00714). Emerin was detected in paraffin-embedded section of human colon cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Emerin Antibody (A00714) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

IHC analysis of Emerin using anti-Emerin antibody (A00714). Emerin was detected in paraffin-embedded section of human oesophagus squama cancer tissues. Heat mediated

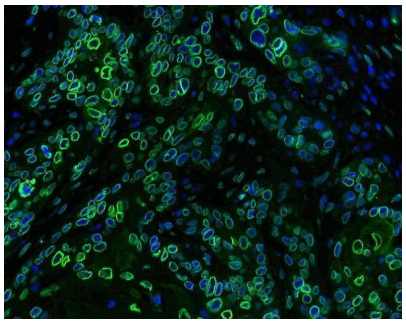
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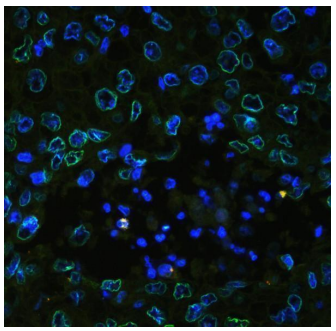
antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Emerin Antibody (A00714) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IF analysis of Emerin using anti-Emerin antibody (A00714) Emerin was detected in paraffin-embedded section of human oesophagus squama cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/mL rabbit anti-Emerin Antibody (A00714) 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.



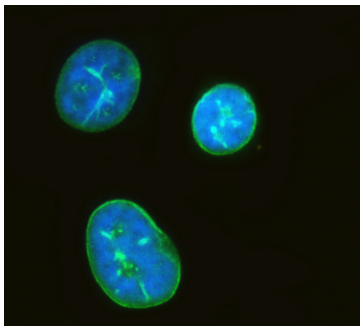
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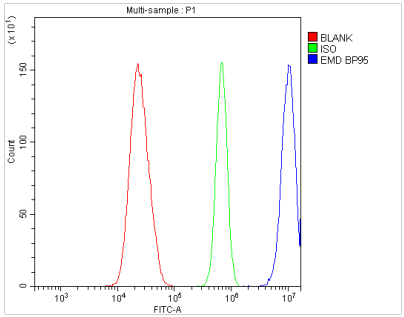
IF analysis of Emerin using anti-Emerin antibody (A00714). Emerin was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL rabbit anti-Emerin Antibody (A00714) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

IF analysis of Emerin using anti-Emerin antibody (A00714). Emerin was detected in an immunocytochemical section of

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PC-3 cells. The cells were permeabilized with 0.1% Triton X-100 for 10 minutes at room temperature and blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Emerin Antibody (A00714) overnight at 4°C. Fluoro488 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 U20S cells using anti-Emerin antibody (A00714). Overlay histogram showing U20S cells stained with A00714 (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-Emerin Antibody (A00714,1ug/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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Anti-Emerin/EMD Antibody

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