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Anti-Emerin EMD Antibody Picoband™ (monoclonal, 5A10)

Catalog # ABO14347

Product Information

Application	WB, IHC, ICC, FC
Primary Accession	P50402
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Emerin EMD Antibody Picoband™ (monoclonal, 5A10) . Tested in Flow Cytometry, IHC, ICC, WB applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2010
Other Names	Emerin, EMD, EDMD, STA
Calculated MW	28994
Application Details	Western blot, 0.1-0.5 □g/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1 □g/ml Immunohistochemistry (Frozen Section), 0.5-1 □g/ml Immunocytochemistry, 0.5-1 □g/ml Flow Cytometry, 1-3 □g/1x10^6 cells
Subcellular Localization	Nucleus inner membrane
Tissue Specificity	Skeletal muscle, heart, colon, testis, ovary and pancreas.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Clone Names	Clone: 5A10
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.
Cross Reactivity	No cross-reactivity with other proteins.

Storage	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.

Protein Information

Name	EMD (HGNC:3331)
Function	Stabilizes and promotes the formation of a nuclear actin cortical network. Stimulates actin polymerization in vitro by binding and stabilizing the pointed end of growing filaments (PubMed:15328537). Inhibits beta-catenin activity by preventing its accumulation in the nucleus. Acts by influencing the nuclear accumulation of beta-catenin through a CRM1-dependent export pathway (PubMed:16858403). Links centrosomes to the nuclear envelope via a microtubule association (PubMed:17785515). Required for proper localization of non-farnesylated prelamin-A/C (PubMed:19323649). Together with NEMP1, contributes to nuclear envelope stiffness in germ cells (PubMed:32923640). EMD and BAF are cooperative cofactors of HIV-1 infection. Association of EMD with the viral DNA requires the presence of BAF and viral integrase. The association of viral DNA with chromatin requires the presence of BAF and EMD.
Cellular Location	Nucleus inner membrane; Single-pass membrane protein; Nucleoplasmic side. Nucleus outer membrane. Note=Colocalized with BANF1 at the central region of the assembling nuclear rim, near spindle-attachment sites. The accumulation of different intermediates of prelamin-A/C (non-farnesylated or carboxymethylated farnesylated prelamin-A/C) in fibroblasts modify its localization in the nucleus
Tissue Location	Skeletal muscle, heart, colon, testis, ovary and pancreas

Images

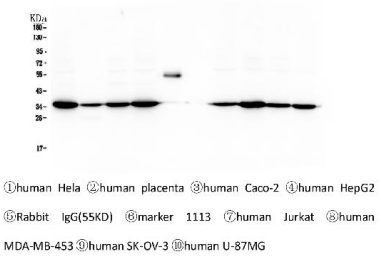


Figure 1. Western blot analysis of Emerin using anti-Emerin antibody (M00714).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human placenta tissue lysates,
Lane 3: human Caco-2 whole cell lysates,
Lane 4: human HepG2 whole cell lysates,
Lane 5: Rabbit IgG,
Lane 6: Marker 1113,
Lane 7: human Jurkat whole cell lysates.
Lane 8: human MDA-MB-453 whole cell lysates,
Lane 9: human SK-OV-3 whole cell lysates,
Lane 10: human SW620 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Emerin antigen affinity purified monoclonal antibody (Catalog # M00714) at 0.5 µg/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.

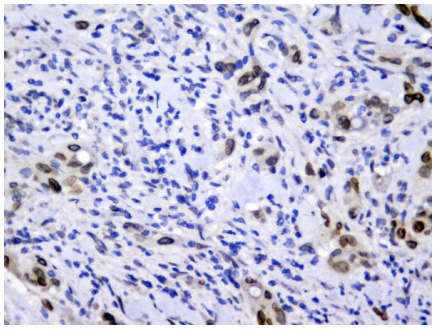


Figure 3. IHC analysis of Emerin using anti-Emerin antibody (M00714).
Emerin was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Emerin Antibody (M00714) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

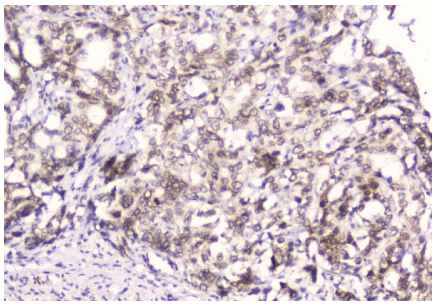


Figure 2. IHC analysis of Emerin using anti-Emerin antibody (M00714).
Emerin was detected in paraffin-embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Emerin Antibody (M00714) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

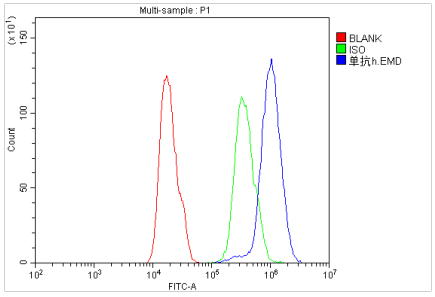


Figure 4. Flow Cytometry analysis of A431 cells using anti-Emerin antibody (M00714).
Overlay histogram showing A431 cells stained with M00714 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Emerin Antibody (M00714,1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.