abcam

ab204987

Anti-Emerin antibody [8F5A8]

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human EMD aa 1-250. The exact immunogen used to generate this antibody is proprietary information. Database link P50402
Clone number	8F5A8
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/200 - 1/400

Notes	-

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/200 - 1/1000
Notes	-

Target data

See full target information EMD

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. 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. Links centrosomes to the nuclear envelope via a microtubule association. Required for proper localization of non-farnesylated prelamin-A/C. 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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Emerin also referred to as the emerin protein is a nuclear envelope protein with a mass of approximately 34 kDa. It belongs to a family of LEM domain proteins that localize at the inner nuclear membrane. Emerin predominantly expresses in cardiac and skeletal muscles but also appears in other tissues. Its primary mechanical role involves binding to the nuclear lamina structures and interacting with various nuclear proteins to maintain nuclear integrity and architecture.
Biological function summary	Emerin serves as an important component in mechanical signal transduction pathways. It interacts with barrier-to-autointegration factor (BAF) forming an important part of the nuclear envelope complex. This protein complex helps in chromatin organization and regulation of gene expression. Emerin influences nuclear assembly and shape and modulates chromatin attachment to the nuclear envelope playing an important role in nuclear processes.
Pathways	Emerin participates actively in the Emery-Dreifuss muscular dystrophy pathway and affects the interplay of other nuclear lamina components like lamin A/C. It stabilizes chromatin structure and cooperates with proteins such as nesprins and SUN proteins to regulate nuclear-cytoskeletal interactions. Emerin's involvement in these pathways highlights its role in maintaining mechanical resilience and functionality of the nuclear envelope impacting gene expression dynamics.
Associated diseases and disorders	Emerin mutations relate to Emery-Dreifuss muscular dystrophy (EDMD) and other musculoskeletal disorders. Alteration in emerin disrupts its interaction with lamin A/C and BAF leading to nuclear envelope defects. This dysfunction manifests in muscle weakness and cardiac anomalies typical of EDMD. Understanding emerin's role offers insights into pathogenesis and potential therapeutic targets for these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

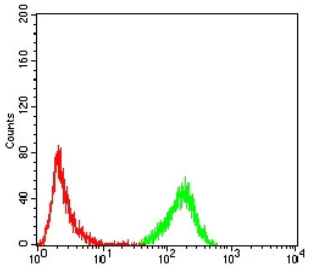
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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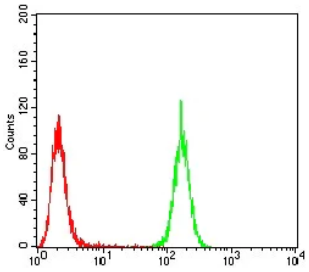
7 product images



Flow Cytometry - Anti-Emerin antibody [8F5A8] (ab204987)

Emerin Flow Cytometry staining using mouse Anti-Emerin antibody

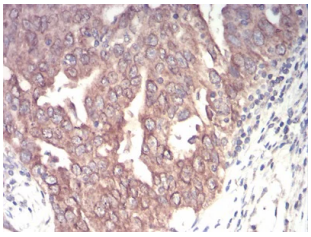
Flow Cytometry analysis of K562 cells, labeling Emerin with ab204987 at a 1/200 dilution (green) and negative control (red).



Flow Cytometry - Anti-Emerin antibody [8F5A8] (ab204987)

Emerin Flow Cytometry staining using mouse Anti-Emerin antibody

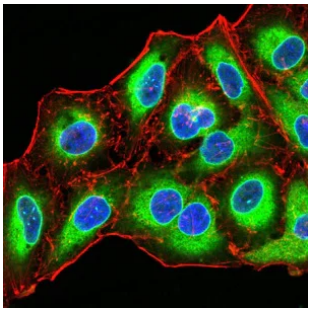
Flow Cytometry analysis of A549 cells, labeling Emerin with ab204987 at a 1/200 dilution (green) and negative control (red).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Emerin antibody [8F5A8] (ab204987)

Emerin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Emerin antibody

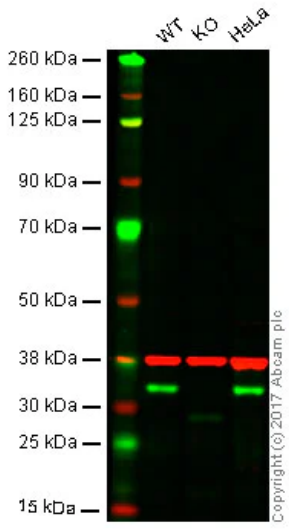
Immunohistochemical analysis of formalin/PFA-fixed paraffin-embedded Human ovarian cancer sections labeling Emerin with ab204987 at a 1/200 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Emerin antibody [8F5A8] (ab204987)

Emerin Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Emerin antibody

Immunofluorescence analysis of HeLa cells, labeling Emerin with ab204987 at a 1/200 dilution.



Western blot - Anti-Emerin antibody [8F5A8] (ab204987)

Emerin Western blot staining using mouse Anti-Emerin antibody

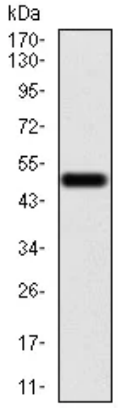
Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: Emerin knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lanes 1 - 3: Merged signal (red and green). Green - ab204987 observed at 34 kDa. Red - loading control, ab181602, observed at 37 kDa.

ab204987 was shown to recognize Emerin in wild-type HAP1 cells as signal was lost at the expected MW in Emerin knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and Emerin knockout samples were subjected to SDS-PAGE. ab204987 and ab181602 (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ab216772 and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed ab216777 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Emerin antibody [8F5A8] (ab204987)

Predicted band size: 29 kDa

Observed band size: 34 kDa

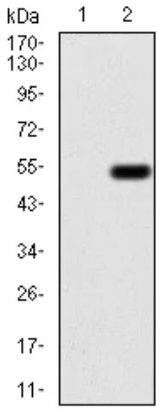


Western blot - Anti-Emerin antibody [8F5A8] (ab204987)

All lanes:
Western blot - Anti-Emerin antibody [8F5A8] (ab204987) at 1/500 dilution

All lanes:
immunogen

Predicted band size: 29 kDa



Western blot - Anti-Emerin antibody [8F5A8] (ab204987)

All lanes:
Western blot - Anti-Emerin antibody [8F5A8] (ab204987) at 1/500 dilution

Lane 1:
HEK293 cell lysate

Lane 2:
Immunogen-hIgGFc transfected HEK293 cell lysate

Predicted band size: 29 kDa

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