


Product datasheet

Anti-Emerin antibody ab40688

KO VALIDATED

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Overview

Product name	Anti-Emerin antibody
Description	Rabbit polyclonal to Emerin
Host species	Rabbit
Tested applications	Suitable for: IP, ICC/IF, WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Cow 
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 100 - 200 of Human Emerin. Read Abcam's proprietary immunogen policy (Peptide available as ab40723)
Positive control	WB: HEK-293T, HAP1 and HeLa whole cell lysates; HeLa nuclear lysate. IHC-P: HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified

Clonality	Polyclonal
Isotype	IgG

Applications

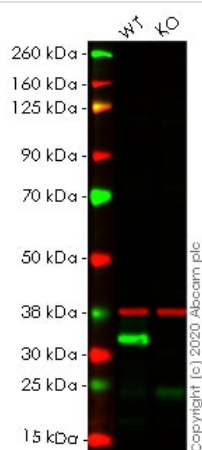
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab40688 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP		Use a concentration of 5 µg/ml.
ICC/IF		Use a concentration of 1 µg/ml.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 35 kDa (predicted molecular weight: 25, 29 kDa).

Target

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. 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. Required for proper localization of non-farnesylated prelamin-A/C.
Tissue specificity	Skeletal muscle, heart, colon, testis, ovary and pancreas.
Involvement in disease	Defects in EMD are the cause of Emery-Dreifuss muscular dystrophy type 1 (EDMD1) [MIM:310300]. A degenerative myopathy characterized by weakness and atrophy of muscle without involvement of the nervous system, early contractures of the elbows Achilles tendons and spine, and cardiomyopathy associated with cardiac conduction defects.
Sequence similarities	Contains 1 LEM domain.
Post-translational modifications	Found in four different phosphorylated forms, three of which appear to be associated with the cell cycle.
Cellular localization	Nucleus inner membrane. Nucleus outer membrane. 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.

Images



Western blot - Anti-Emerin antibody (ab40688)

All lanes : Anti-Emerin antibody (ab40688) at 1 µg/ml

Lane 1 : Wild-type HEK-293T cell lysate

Lane 2 : EMD knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

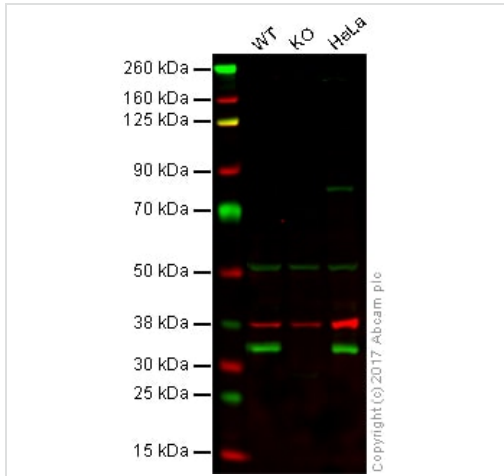
Performed under reducing conditions.

Predicted band size: 25, 29 kDa

Observed band size: 35 kDa

Lanes 1-2: Merged signal (red and green). Green - ab40688 observed at 35 kDa. Red - loading control **ab8245** observed at 37 kDa.

ab40688 Anti-Emerin antibody was shown to specifically react with Emerin in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line **ab266336** (knockout cell lysate **ab257423**) was used. Wild-type and Emerin knockout samples were subjected to SDS-PAGE. ab40688 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Emerin antibody (ab40688)

All lanes : Anti-Emerin antibody (ab40688) at 1 µg/ml

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : Emerin knockout HAP1 whole cell lysate

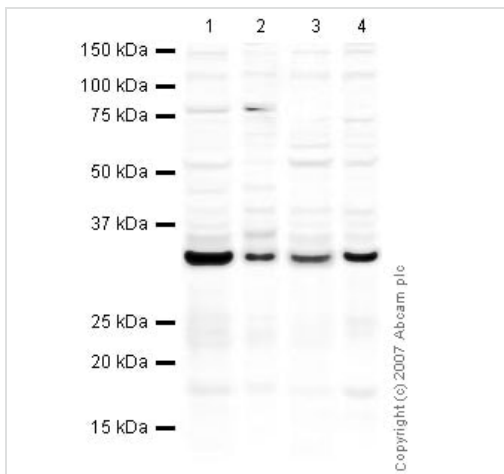
Lane 3 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 25, 29 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab40688 observed at 35 kDa. Red - loading control, [ab9484](#), observed at 37 kDa.

ab40688 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. Ab40688 and [ab9484](#) (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1 µg/ml and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Emerin antibody (ab40688)

All lanes : Anti-Emerin antibody (ab40688) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : HeLa (Human epithelial carcinoma cell line) Nuclear Lysate

Lane 3 : Jurkat whole cell lysate ([ab7899](#))

Lane 4 : Jurkat nuclear extract lysate ([ab14844](#))

Lysates/proteins at 10 µg per lane.

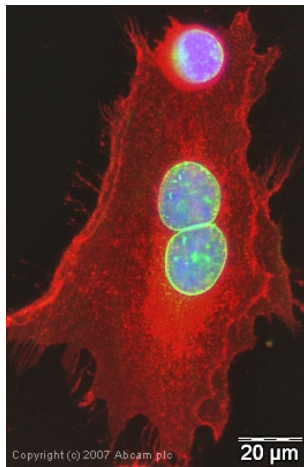
Secondary

All lanes : IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

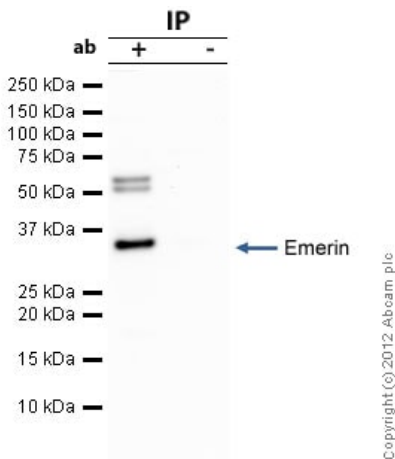
Predicted band size: 25, 29 kDa

Observed band size: 33 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Emerin antibody (ab40688)

ICC/IF image of ab40688 stained human HeLa cells. The cells were methanol fixed (5 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab40688, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).



Immunoprecipitation - Anti-Emerin antibody (ab40688)

Emerin was immunoprecipitated using 0.5mg Hela whole cell extract, 5µg of Rabbit polyclonal to Emerin and 50µl of protein G magnetic beads (+). No antibody was added to the control (-). The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab40688.

Secondary: Clean-Blot IP Detection Reagent (HRP) at 1/500 dilution.

Band: 33kDa; Emerin; non specific bands - 52 and 60kDa: We are unsure as to the identity of this extra band.

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