abcam

ab178386

Anti-Myoferlin antibody [EPR18887]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR18887
Purification technique	Affinity purification Protein A
Concentration	0.433 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat

Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/400
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.

Notes	-

Target data

See full target information MYOF

Function	Calcium/phospholipid-binding protein that plays a role in the plasmalemma repair mechanism of endothelial cells that permits rapid resealing of membranes disrupted by mechanical stress. Involved in endocytic recycling. Implicated in VEGF signal transduction by regulating the levels of the receptor KDR (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Myoferlin alternatively known as MYOF is a member of the ferlin family proteins and plays a mechanical role in membrane repair and fusion. It has a molecular mass of approximately 230 kDa. Myoferlin expresses mainly in muscle and endothelial tissues. Its function is critical during muscle development and regeneration as it participates in the fusion of myoblasts into mature myotubes. Also Myoferlin is involved in the repair of damaged sarcolemmal membranes in muscle cells.
Biological function summary	The protein supports membrane dynamics and stabilization. Myoferlin is not part of a large complex but interacts with other proteins at the cellular membrane. It regulates cellular processes such as proliferation differentiation and endocytosis. In muscle cells it assists in the organization and function of the cytoskeleton maintaining proper cellular architecture and signaling.
Pathways	Myoferlin engages in critical roles in pathways related to cell membrane repair and trafficking. It associates with pathways like the myogenesis pathway and integrin signaling. In these pathways it interacts with other proteins such as dysferlin and caveolin-3 which facilitate membrane repair and receptor localization respectively. Myoferlin ensures efficient cellular response to membrane damage maintaining tissue integrity.
Associated diseases and disorders	Myoferlin is connected to muscular dystrophies and cancer. It correlates with the progression of muscular disorder due to its deficiency in membrane repair mechanisms. Additionally in cancer its expression levels relate to tumor invasion and metastasis involving interactions with proteins like E-cadherin and MMP-9. Investigating Myoferlin's role can aid in understanding its potential as a therapeutic target in these diseases.

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

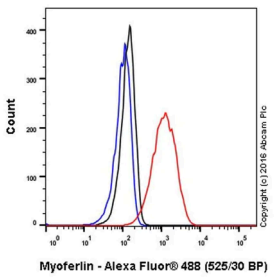
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

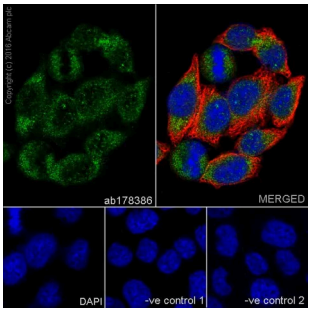
6 product images



Flow Cytometry (Intracellular) - Anti-Myoferlin antibody [EPR18887] (ab178386)

Myoferlin Flow Cytometry (Intracellular) staining using rabbit Anti-Myoferlin antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Myoferlin with ab178386 at 1/400 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.

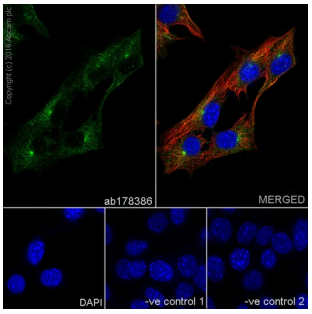


Immunocytochemistry/ Immunofluorescence - Anti-Myoferlin antibody [EPR18887] (ab178386)

Myoferlin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Myoferlin antibody

Immunofluorescent analysis of 100% methanol-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Myoferlin with ab178386 at 1/100 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HeLa cells. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:
-ve control 1: ab178386 at 1/100 dilution followed by ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor® 488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



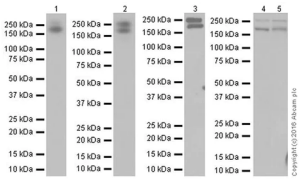
Immunocytochemistry/ Immunofluorescence - Anti-Myoferlin antibody [EPR18887] (ab178386)

Myoferlin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Myoferlin antibody

Immunofluorescent analysis of 100% methanol-fixed C2C12 (mouse myoblast cell line) cells labeling Myoferlin with ab178386 at 1/100 dilution followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on C2C12 cells. The nuclear counter stain is DAPI (blue). Tubulin is detected

with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:
-ve control 1: ab178386 at 1/100 dilution followed by ab150120 (Alexa Fluor® 594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor® 488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386)

Myoferlin Western blot staining using rabbit Anti-Myoferlin antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure times: Lane 1/5: 10 seconds; Lane 2: 15 seconds; Lane 3/4: 3 minutes.

The molecular weight observed is consistent with what has been described in the literature (PMID: 22135466, PMID: 23499551).

Lanes 1 - 2:
Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386) at 1/20000 dilution

Lanes 3 - 5:
Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386) at 1/2000 dilution

Lane 1:
MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 10 µg

Lane 2:
MDA-MB-231 (human breast adenocarcinoma cell line) whole cell lysate at 10 µg

Lane 3:
Human fetal kidney lysate at 10 µg

Lane 4:
Human fetal heart lysate at 10 µg

Lane 5:
HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 10 µg

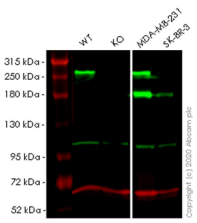
Secondary

Lanes 1 - 3:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lanes 4 - 5:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/100000 dilution

Predicted band size: 235 kDa

Observed band size: 180 kDa, 250 kDa



Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386)

Lanes 1-4: Merged signal (red and green). Green - ab178386 observed at 250,180 kDa. Red - loading control ab7291 observed at 50 kDa.
ab178386 Anti-Myoferlin antibody [EPR18887] was shown to specifically react with Myoferlin in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265782 (knockout cell lysate ab257547) was used. Wild-type and Myoferlin knockout samples were subjected to SDS-PAGE. ab178386 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) were incubated overnight at 4°C at 1 in 1000 dilution 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.

All lanes:
Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
MYOF knockout HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human MYOF (Myoferlin) knockout HeLa cell line (ab265782)

Lane 3:
MDA-MB-231 cell lysate at 20 µg

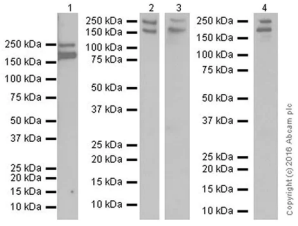
Lane 4:
SK-BR-3 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 235 kDa

Observed band size: 180 kDa, 250 kDa



Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386)

Myoferlin Western blot staining using rabbit Anti-Myoferlin antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1:3 minutes; Lane 2/4: 10 seconds; Lane 3: 3 seconds.

All lanes:
Western blot - Anti-Myoferlin antibody [EPR18887] (ab178386) at 1/2000 dilution

Lane 1:
Rat kidney lysate at 10 µg

Lane 2:
C6 (rat glial tumor cell line) whole cell lysate at 10 µg

Lane 3:
NIH/3T3 (mouse embryonic fibroblast cell line) whole cell lysate at 10 µg

Lane 4:
C2C12 (mouse myoblast cell line) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 235 kDa

Observed band size: 180 kDa, 250 kDa

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