abcam

Product datasheet

# Anti-Filamin B antibody [EPR24525-3] ab282106

Recombinant RabMAb

1 References 14 Images

## Overview

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|---|---|
| **Product name** | Anti-Filamin B antibody [EPR24525-3] |
| **Description** | Rabbit monoclonal [EPR24525-3] to Filamin B |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** WB, ICC/IF, Flow Cyt (Intra), IHC-P<br>**Unsuitable for:** IP |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Human |
| **Immunogen** | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | WB: A-204, HEK-293T, A375 and HT-1080 whole cell lysates; Human lung tissue lysate; Mouse lung, colon and stomach tissue lysates; Rat lung tissue lysate. IHC-P: Mouse colon tissue; Human colon and skin tissue; Rat colon tissue. ICC/IF: HT-1080 and C2C12 cells. Flow Cyt: HT-1080, HEK-293T and C2C12 cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

## Properties

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| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | pH: 7.2<br>Preservative: 0.01% Sodium azide<br>Constituents: 59.94% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |

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| **Clone number** | EPR24525-3 |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab282106 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 |
|---|---|---|
| **WB** | | 1/1000. Detects a band of approximately 315 kDa (predicted molecular weight: 278 kDa). |
| **ICC/IF** | | 1/50. |
| **Flow Cyt (Intra)** | | 1/500. |
| **IHC-P** | | 1/5000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

**Application notes** Is unsuitable for IP.

## Target

**Function** Connects cell membrane constituents to the actin cytoskeleton. May promote orthogonal branching of actin filaments and links actin filaments to membrane glycoproteins. Anchors various transmembrane proteins to the actin cytoskeleton. Interaction with FLNA may allow neuroblast migration from the ventricular zone into the cortical plate. Various interactions and localizations of isoforms affect myotube morphology and myogenesis. Isoform 6 accelerates muscle differentiation in vitro.

**Tissue specificity** Ubiquitous. Isoform 1 and isoform 2 are expressed in placenta, bone marrow, brain, umbilical vein endothelial cells (HUVEC), retina and skeletal muscle. Isoform 1 is predominantly expressed in prostate, uterus, liver, thyroid, stomach, lymph node, small intestine, spleen, skeletal muscle, kidney, placenta, pancreas, heart, lung, platelets, endothelial cells, megakaryocytic and erythroleukemic cell lines. Isoform 2 is predominantly expressed in spinal cord, platelet and Daudi cells. Also expressed in thyroid adenoma, neurofibrillary tangles (NFT), senile plaques in the hippocampus and cerebral cortex in Alzheimer disease (AD). Isoform 3 and isoform 6 are expressed predominantly in lung, heart, skeletal muscle, testis, spleen, thymus and leukocytes. Isoform 4 and isoform 5 are expressed in heart.

**Involvement in disease** Note=Interaction with FLNA may compensate for dysfunctional FLNA homodimer in the periventricular nodular heterotopia (PVNH) disorder.
Defects in FLNB are the cause of atelosteogenesis type 1 (AO1) [MIM:108720]; also known as giant cell chondrodysplasia or spondylohumerofemoral hypoplasia. Atelosteogenesis are lethal short-limb skeletal dysplasias with vertebral abnormalities, disharmonious skeletal maturation, poorly modeled long bones and joint dislocations.
Defects in FLNB are the cause of atelosteogenesis type 3 (AO3) [MIM:108721]. Atelosteogenesis are short-limb lethal skeletal dysplasias with vertebral abnormalities, disharmonious skeletal maturation, poorly modeled long bones and joint dislocations. In AO3 recurrent respiratory insufficiency and/or infections usually result in early death.

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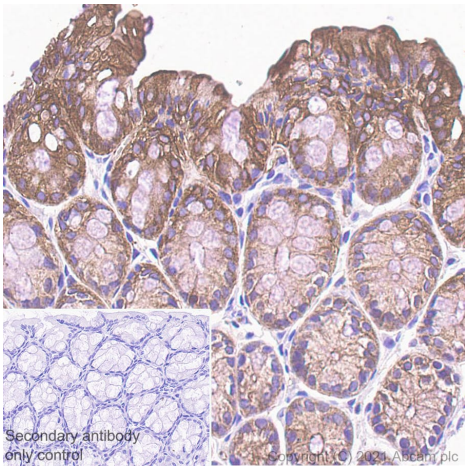
| | Defects in FLNB are the cause of boomerang dysplasia (BOOMD) [MIM:112310]. This is a perinatal lethal osteochondrodysplasia characterized by absence or underossification of the limb bones and vertebre. Boomerang dysplasia is distinguished from atelosteogenesis on the basis of a more severe defect in mineralisation, with complete absence of ossification in some limb elements and vertebral segments.<br>Defects in FLNB are the cause of Larsen syndrome (LRS) [MIM:150250]. An osteochondrodysplasia characterized by large-joint dislocations and characteristic craniofacial abnormalities. The cardinal features of the condition are dislocations of the hip, knee and elbow joints, with equinovarus or equinovalgus foot deformities. Spatula-shaped fingers, most marked in the thumb, are also present. Craniofacial anomalies include hypertelorism, prominence of the forehead, a depressed nasal bridge, and a flattened midface. Cleft palate and short stature are often associated features. Spinal anomalies include scoliosis and cervical kyphosis. Hearing loss is a well-recognized complication.<br>Defects in FLNB are the cause of spondylocarpotarsal synostosis syndrome (SCT) [MIM:272460]; also known as spondylocarpotarsal syndrome (SCT) or congenital synspondylism or vertebral fusion with carpal coalition or congenital scoliosis with unilateral unsegmented bar. The disorder is characterized by short stature and vertebral, carpal and tarsal fusions. |
| **Sequence similarities** | Belongs to the filamin family.<br>Contains 1 actin-binding domain.<br>Contains 2 CH (calponin-homology) domains.<br>Contains 24 filamin repeats. |
| **Domain** | Comprised of a NH2-terminal actin-binding domain, 24 internally homologous repeats and two hinge regions. Repeat 24 and the second hinge domain are important for dimer formation. The first hinge region prevents binding to ITGA and ITGB subunits. |
| **Post-translational modifications** | ISGylation prevents ability to interact with the upstream activators of the JNK cascade and inhibits IFNA-induced JNK signaling. |
| **Cellular localization** | Cytoplasm > cytoskeleton. Polarized at the periphery of myotubes; Cytoplasm > cytoskeleton. Predominantly localized at actin stress fibers and Cytoplasm > cell cortex. Cytoplasm > cytoskeleton. Cytoplasm > myofibril > sarcomere > Z line. In differentiating myotubes, isoform 1, isoform 2 and isoform 3 are localized diffusely throughout the cytoplasm with regions of enrichment at the longitudinal actin stress fiber. In differentiated tubes, isoform 1 is also detected within the Z-lines. |

**Images**

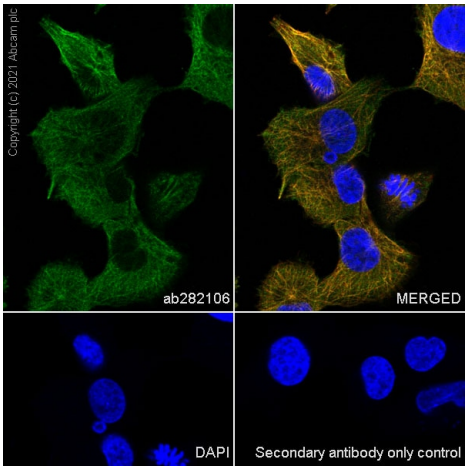



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Filamin B antibody [EPR24525-3] (ab282106)

Immunohistochemical analysis of paraffin-embedded Mouse colon tissue labelling Filamin B with ab282106 at 1/5000 (0.103 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on Mouse colon. The section was incubated with ab282106 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

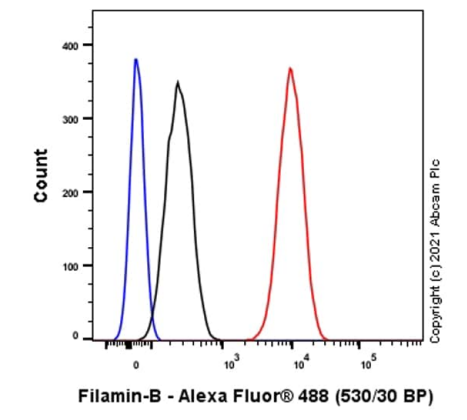
Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.




Immunocytochemistry/ Immunofluorescence - Anti-Filamin B antibody [EPR24525-3] (ab282106)

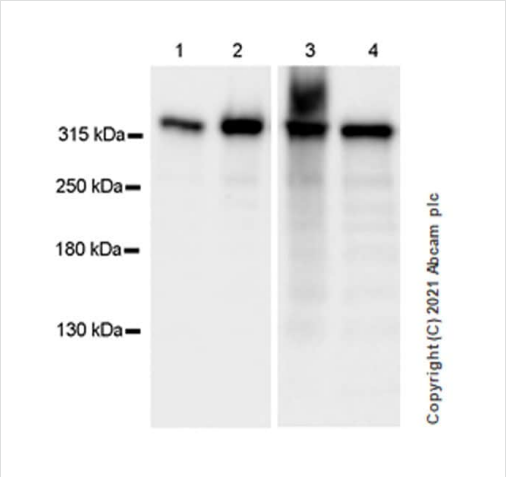
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HT-1080 cells labelling Filamin B with ab282106 at 1/50 (10.3 ug/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoskeletal staining in HT-1080 cell line. **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.




Flow Cytometry (Intracellular) - Anti-Filamin B antibody [EPR24525-3] (ab282106)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized HT-1080 (Human fibrosarcoma epithelial cell) cells labelling Filamin B with ab282106 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.




Western blot - Anti-Filamin B antibody [EPR24525-3] (ab282106)

**All lanes :** Anti-Filamin B antibody [EPR24525-3] (ab282106) at 1/1000 dilution

**Lane 1 :** A-204 (human muscle rhabdomyosarcoma) whole cell lysate
**Lane 2 :** HEK-293T (human embryonic kidney epithelial cell) whole cell lysate
**Lane 3 :** A375 (human malignant melanoma epithelial cell) whole cell lysate
**Lane 4 :** HT-1080 (human fibrosarcoma epithelial cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

**Secondary**
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

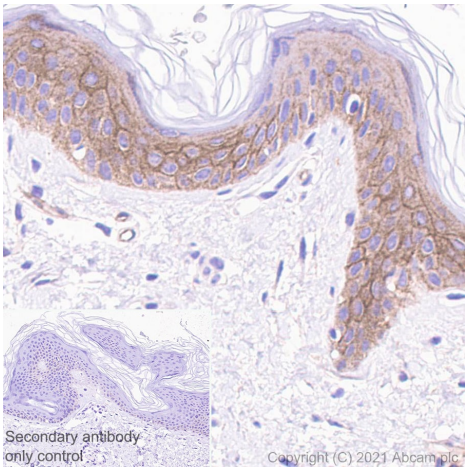
**Predicted band size:** 278 kDa
**Observed band size:** 315 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with what has been described in the literature (PMID: 28175289, 11807098).

Lysates were made freshly and used in WB test immediately to minimize protein degradation.

Exposure time: Lanes 1-2: 15 seconds; lanes 3-4: 8 seconds.

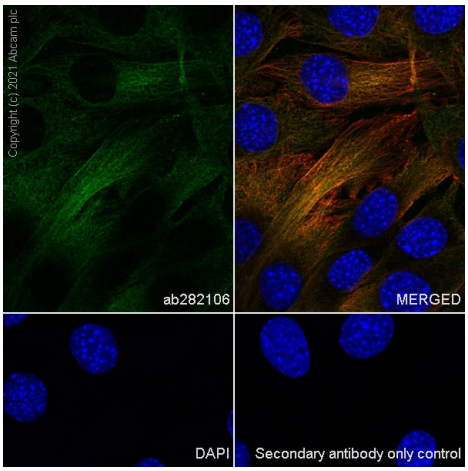



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Filamin B antibody [EPR24525-3] (ab282106)

Immunohistochemical analysis of paraffin-embedded Human skin tissue labelling Filamin B with ab282106 at 1/5000 (0.103 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human skin. The section was incubated with ab282106 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.




Immunocytochemistry/ Immunofluorescence - Anti-Filamin B antibody [EPR24525-3] (ab282106)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized C2C12 cells labelling Filamin B with ab282106 at 1/50 (10.3 ug/ml) dilution, followed by **ab150077** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoskeletal staining in C2C12 cell line. **ab195889** Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

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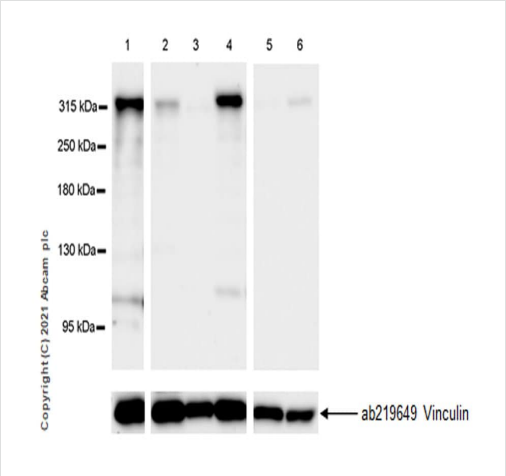



Western blot - Anti-Filamin B antibody [EPR24525-3] (ab282106)

**All lanes :** Anti-Filamin B antibody [EPR24525-3] (ab282106) at 1/1000 dilution

**Lane 1 :** Human lung tissue lysate
**Lane 2 :** Human heart tissue lysate
**Lane 3 :** Human skeletal muscle tissue lysate
**Lane 4 :** Mouse lung tissue lysate
**Lane 5 :** Mouse skeletal muscle tissue lysate
**Lane 6 :** Mouse brain tissue lysate

Lysates/proteins at 20 µg per lane.

**Secondary**
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

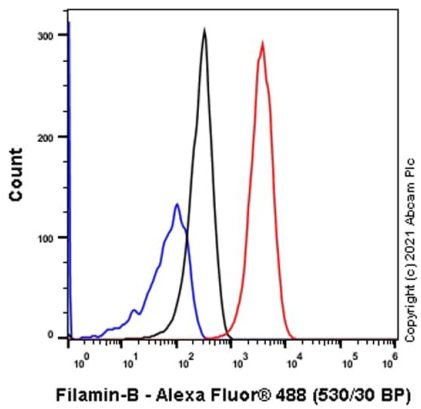
**Predicted band size:** 278 kDa
**Observed band size:** 315 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with what has been described in the literature (PMID: 28175289, 11807098).

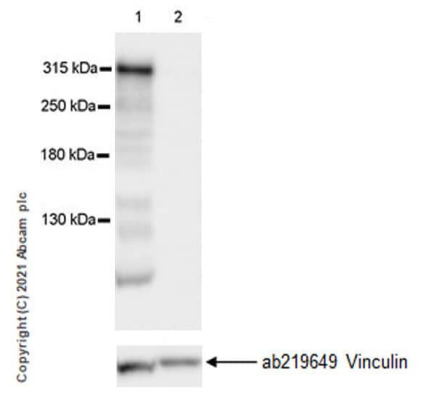
**Low expression:** skeletal muscle (PMID: 28175289, 11807098).

Exposure time: 26 seconds.




Flow Cytometry (Intracellular) - Anti-Filamin B antibody [EPR24525-3] (ab282106)

Flow cytometric analysis of 4% paraformaldehyde-fixed 90% methanol permeabilized 293T (Human embryonic kidney epithelial cell) cells labelling Filamin B with ab282106 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (**ab172730**) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) at 1/2000 dilution was used as the secondary antibody.




Western blot - Anti-Filamin B antibody [EPR24525-3] (ab282106)

**All lanes :** Anti-Filamin B antibody [EPR24525-3] (ab282106) at 1/1000 dilution

**Lane 1 :** Rat lung tissue lysate
**Lane 2 :** Rat skeletal muscle tissue lysate

Lysates/proteins at 20 µg per lane.

**Secondary**
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

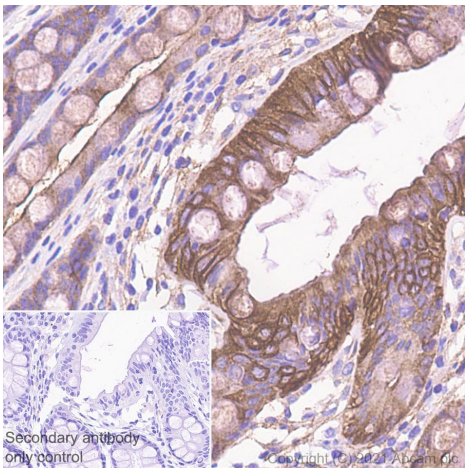
**Predicted band size:** 278 kDa
**Observed band size:** 315 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with what has been described in the literature (PMID: 28175289, 11807098).

**Low expression:** skeletal muscle (PMID: 28175289, 11807098).

Exposure time: 10 seconds.




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Filamin B antibody [EPR24525-3] (ab282106)

Immunohistochemical analysis of paraffin-embedded Human colon tissue labelling Filamin B with ab282106 at 1/5000 (0.103 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human colon. (PMID: 32907537) The section was incubated with ab282106 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

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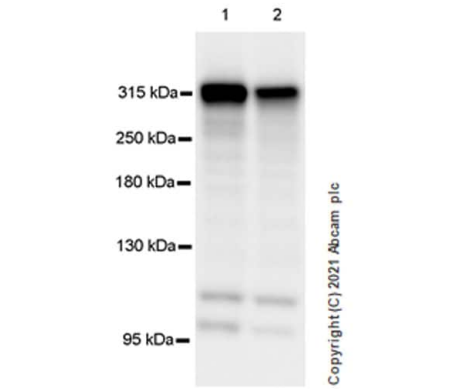



Western blot - Anti-Filamin B antibody [EPR24525-3] (ab282106)

**All lanes :** Anti-Filamin B antibody [EPR24525-3] (ab282106) at 1/1000 dilution

**Lane 1 :** Mouse colon tissue lysate
**Lane 2 :** Mouse stomach tissue lysate

Lysates/proteins at 20 µg per lane.

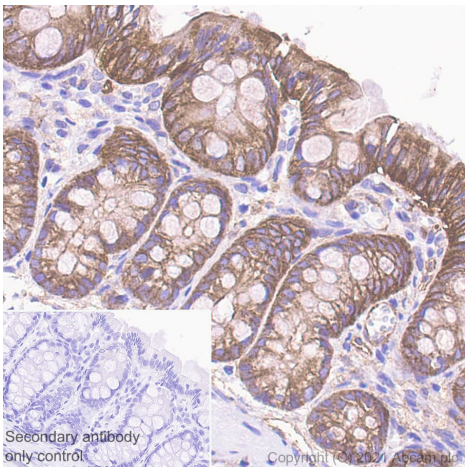
**Secondary**
**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/50000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

**Predicted band size:** 278 kDa
**Observed band size:** 315 kDa

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The expression profile/molecular weight observed is consistent with what has been described in the literature (PMID: 28175289, 11807098).

Exposure time: 3 seconds.

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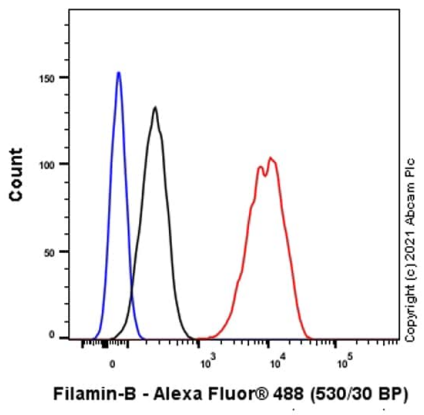


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Anti-Filamin B antibody [EPR24525-3] (ab282106)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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