


Product datasheet

Anti-Filamin B antibody ab97457

★★★★☆ [4 Abreviews](#) [2 References](#) [4 Images](#)

Overview

Product name	Anti-Filamin B antibody
Description	Rabbit polyclonal to Filamin B
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat 
Immunogen	Recombinant fragment corresponding to Human Filamin B aa 30-239. Database link: O75369
Positive control	WB: 293T, A431, H1299, HeLa and HepG2 whole cell lysate (ab7900) IF: 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. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 78.99% PBS, 1% BSA, 20% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab97457 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	★★★★★ (2)	1/500 - 1/3000. Predicted molecular weight: 278 kDa.
ICC/IF	★★★★★ (1)	1/100 - 1/200.

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 spondylohumerothoracic 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.

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 vertebrae. 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.

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 equinovagis 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.

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.

Contains 1 actin-binding domain.

Contains 2 CH (calponin-homology) domains.

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.

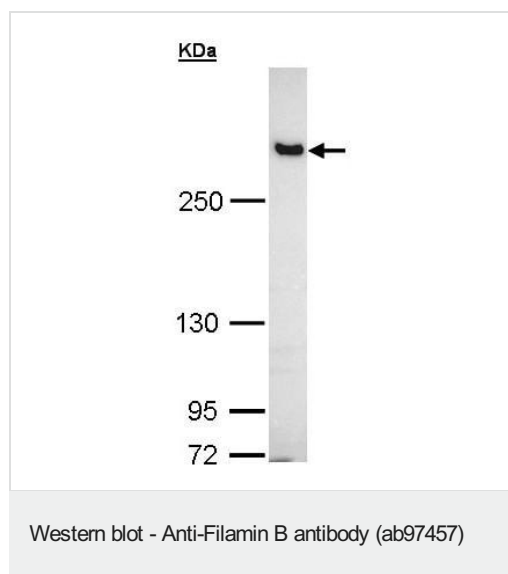
Post-translational modifications

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

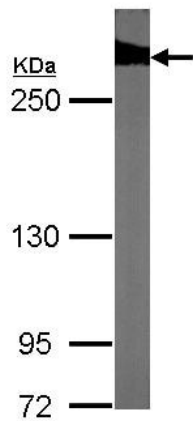


Anti-Filamin B antibody (ab97457) at 1/1000 dilution + A431 whole cell lysate at 30 µg

Predicted band size: 278 kDa

5% SDS PAGE.

Secondary antibody - goat anti-rabbit HRP (ab6721)



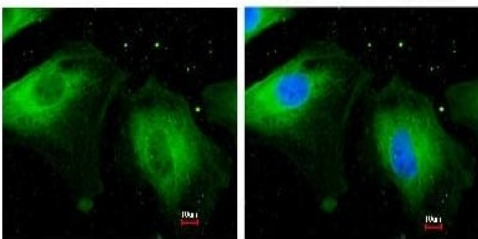
Western blot - Anti-Filamin B antibody (ab97457)

Anti-Filamin B antibody (ab97457) at 1/1000 dilution + NIH3T3 whole cell lysate at 30 µg

Predicted band size: 278 kDa

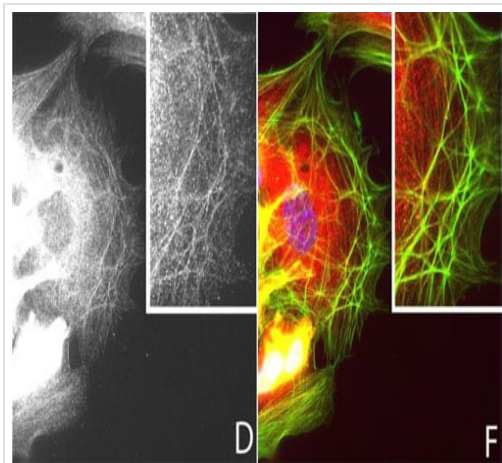
5% SDS PAGE.

Secondary antibody - goat anti-rabbit HRP (ab6721)



Immunocytochemistry/ Immunofluorescence - Anti-Filamin B antibody (ab97457)

ab97547, at a 1/200 dilution, staining Filamin B in paraformaldehyde-fixed HeLa cells by Immunofluorescence analysis. Right image is merged with a DNA probe.



Immunocytochemistry/ Immunofluorescence - Anti-Filamin B antibody (ab97457)

Image from Clark R et al., Mol Cell Proteomics 2013 12: 194-206. . Fig 5.; doi: 10.1074/mcp.M112.019745. Epub 2012 Oct 28.

Immunofluorescence analysis of Human trabecular meshwork cells, staining Filamin B with ab97457.

Left panel: Filamin B staining alone. Right panel: Filamin B staining (red) merged with F-actin staining (green).

Cells were treated with dexamethasone, before fixing in paraformaldehyde and permeabilizing with 0.2% Triton X-100. Cells were incubated with primary antibody (10 µg/ml) and AlexaFluor®488-conjugated phalloidin. Filamin B staining was detected using an AlexaFluor®546-conjugated goat anti-rabbit IgG.

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