abcam

ab150386

Anti-Myosin VIIa/MYO7A antibody [EPR7497]

Anti-Myosin VIIa/MYO7A antibody [EPR7497] (ab150386) is a rabbit monoclonal antibody detecting Myosin VIIa/MYO7A in **Western Blot, Flow Cytometry (Intra), ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 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	EPR7497
Purity	Tissue culture supernatant

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information MYO7A

Function Myosins are actin-based motor molecules with ATPase activity. Unconventional myosins serve in intracellular movements. Their highly divergent tails bind to membranous compartments, which are then moved relative to actin filaments. In the retina, plays an important role in the renewal of the outer photoreceptor disks. Plays an important role in the distribution and migration of retinal pigment epithelial (RPE) melanosomes and phagosomes, and in the regulation of opsin transport in retinal photoreceptors. In the inner ear, plays an important role in differentiation, morphogenesis and organization of cochlear hair cell bundles. Involved in hair-cell vesicle trafficking of aminoglycosides, which are known to induce ototoxicity (By similarity). Motor protein that is a part of the functional network formed by USH1C, USH1G, CDH23 and MYO7A that mediates mechanotransduction in cochlear hair cells. Required for normal hearing.

Storage

Shipped at conditions	Conditional Ambient
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

What is this antibody validated in?
Anti-Myosin VIIa/MYO7A antibody [EPR7497] (ab150386) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of Myosin VIIa/MYO7A?
Anti-Myosin VIIa/MYO7A [EPR7497] (ab150386) specifically detects a band for Myosin VIIa/MYO7A (UniProt: Q13402) at a molecular weight of 254kDa.

Other related products
We have a range of other formats of antibody clone [EPR7497] also available for your convenience: ab150386, Carrier free - ab248957, APC - ab319262, PE - ab319410, Alexa Fluor® 488 - ab319544, Alexa Fluor® 647 - ab319657, Alexa Fluor® 594 - ab319761, Alexa Fluor® 555 - ab319903

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

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

Activity summary	Myosin VIIa also known as MYO7A or myosin 7a is a motor protein that plays an important role in cellular transport and movement. It belongs to the myosin superfamily and has a molecular mass of approximately 250 kDa. This protein is widely expressed in sensory cells especially in the inner ear and the retina. In reproductive tissues it aids in sperm tail movements. The mechanical function of MYO7A involves ATP-dependent interactions with actin filaments leading to motor activity and cargo transport within cells.

Biological function summary	Myosin VIIa is essential for the maintenance of stereocilia structure and function in the sensory hair cells of the cochlea. It forms part of a multiprotein complex that stabilizes the actin filaments contributing to auditory signal transduction. Furthermore it is critical in the retinal pigment epithelium for normal visual processes. The protein ensures the correct intracellular localization of key components affecting cell signaling and environmental responsiveness.
Pathways	Myosin VIIa is involved in both auditory and visual signal pathways key for sensory perception. In the auditory pathway it interacts with harmonin and cadherin 23 which also play a part in mechanotransduction. In the visual pathway it affects signaling processes that rely on precise positioning of visual pigments. These interactions highlight its role in maintaining proper sensory functions in complex signaling pathways.
Associated diseases and disorders	Mutations in MYO7A can lead to conditions such as Usher syndrome type 1B and nonsyndromic deafness. Usher syndrome is characterized by combined deafness and vision loss due to retinal degeneration. Non-syndromic hearing loss involves hearing impairment without other clinical disabilities. Both disorders demonstrate the critical importance of myosin VIIa in auditory and visual neurons. Connections between MYO7A and cadherin proteins further implicate these pathways in disease pathology.

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

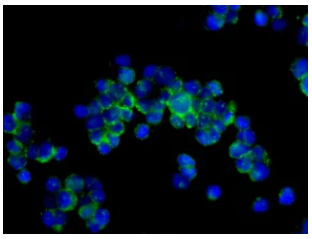
We do not recommend this combination. It is not covered by our product promise.

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.

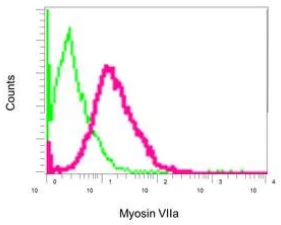
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-Myosin VIIa/MYO7A antibody [EPR7497] (ab150386)

Myosin VIIa/MYO7A Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Myosin VIIa/MYO7A antibody

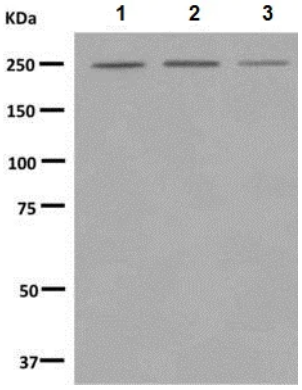
Immunofluorescence analysis of A97 cells labeling Myosin VIIa/MYO7A with ab150386 at a 1/100 dilution.



Flow Cytometry (Intracellular) - Anti-Myosin VIIa/MYO7A antibody [EPR7497] (ab150386)

Myosin VIIa/MYO7A Flow Cytometry (Intracellular) staining using rabbit Anti-Myosin VIIa/MYO7A antibody

Intracellular flow cytometric analysis of permeabilized Y79 cells labeling Myosin VIIa/MYO7A with ab150386 at a 1/100 dilution.



Western blot - Anti-Myosin VIIa/MYO7A antibody [EPR7497] (ab150386)

Myosin VIIa/MYO7A Western blot staining using rabbit Anti-Myosin VIIa/MYO7A antibody

All lanes:
Western blot - Anti-Myosin VIIa/MYO7A antibody [EPR7497] (ab150386) at 1/1000 dilution

Lane 1:
Y79 (Human retinoblastoma cell line) cell lysate at 10 µg

Lane 2:
Rat testis tissue lysate at 10 µg

Lane 3:
Mouse testis tissue lysate at 10 µg

Secondary

All lanes:
HRP labelled goat-anti rabbit antibody at 1/2000 dilution

Predicted band size: 254 kDa

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