abcam

ab248957

Anti-Myosin VIIa/MYO7A antibody [EPR7497] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR7497
Purification technique	Affinity purification
Concentration	1.03 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse, Rat
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab248957 is the carrier-free version of ab150386.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

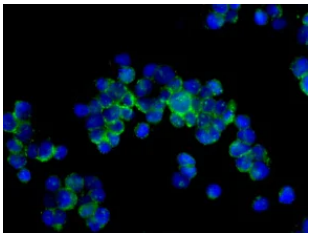
We do not recommend this combination. It is not covered by our product promise.

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.

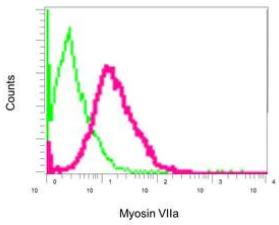
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-Myosin VIIa/MYO7A antibody [EPR7497] - BSA and Azide free (ab248957)

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

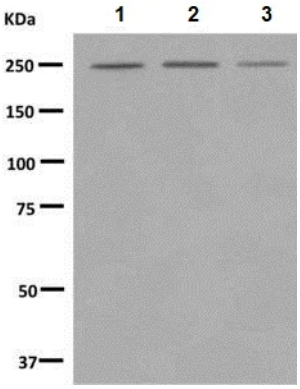
This data was developed using ab150386, the same antibody clone in a different buffer formulation.
Immunofluorescence analysis of A97 cells labeling Myosin VIIa/MYO7A with ab150386 at a 1/100 dilution.



Flow Cytometry (Intracellular) - Anti-Myosin VIIa/MYO7A antibody [EPR7497] - BSA and Azide free (ab248957)

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

This data was developed using ab150386, the same antibody clone in a different buffer formulation.
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] - BSA and Azide free (ab248957)

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

This data was developed using ab150386, the same antibody clone in a different buffer formulation.
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'.