abcam

## Product datasheet

# Anti-Myosin VIIa/MYO7A antibody ab3481

9 Abreviews 12 References 7 Images

### Overview

| | |
|---|---|
| **Product name** | Anti-Myosin VIIa/MYO7A antibody |
| **Description** | Rabbit polyclonal to Myosin VIIa/MYO7A |
| **Host species** | Rabbit |
| **Specificity** | Detects Myosin VIIa/MYO7A from mouse tissues as well as recombinant. By Western blot, this antibody detects an ~220 kDa protein representing myosin VIIa/MYO7A from mouse testes preparations. This antibody detects recombinant mouse myosin VIIa/MYO7A overexpressed in Sf9 insect cell lysate. |
| **Tested applications** | **Suitable for:** IHC-P, Flow Cyt, ICC, IP, WB, ICC/IF, IHC-Fr |
| **Species reactivity** | **Reacts with:** Mouse, Rat, Guinea pig, Hamster, Cow, Dog, Human, Pig |
| **Immunogen** | Synthetic peptide corresponding to Mouse Myosin VIIa/MYO7A aa 16-31.<br>Sequence:<br>SGQEFDVPIGAVVKLC<br><br>(Peptide available as ab4996)<br>Run BLAST with Run BLAST with |
| **Positive control** | WB: mouse testes lysate IHC-P: mouse ear |
| **General notes** | This product was previously labelled as Myosin VIIa |

### Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | Preservative: 0.05% Sodium azide<br>Constituents: 0.1% BSA, 99% PBS |
| **Purity** | Immunogen affinity purified |
| **Primary antibody notes** | Myosin VIIa is a member of the myosin superfamily of actin-based motor proteins. Defects in the myosin VIIa gene are responsible for hearing impairment in shaker-1 (sh1) mice and causes Usher syndrome IB in humans. Usher syndrome associates congenital deafness, vestibular dysfunction, and retinitis pigmentosa and is the most common form of combined deafness and |

| | |
|---|---|
| | blindness. Structural features of myosin VIIa protein include an ATP binding N-terminal motor domain, a central region which possess five light-chain binding (IQ) motifs, and a C-terminal domain with three myosin tail homology (MyTH4) and talin-like homology regions. |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |

## Applications

Our Abpromise guarantee covers the use of **ab3481** in the following tested applications.

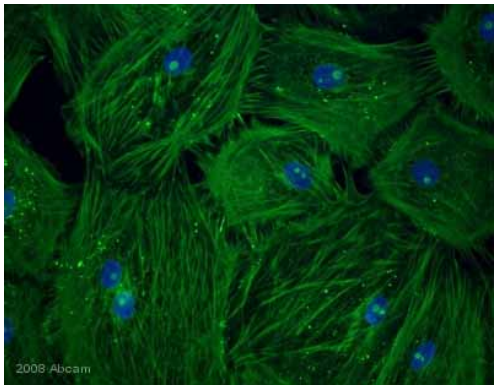
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| IHC-P | ★★★★★ | 1/500. Perform enzymatic antigen retrieval before commencing with IHC staining protocol. |
| Flow Cyt | | Use 3-5µg for $10^6$ cells. |
| ICC | | 1/50. |
| IP | | Use at an assay dependent concentration. |
| WB | ★★★★★ | Use a concentration of 5 µg/ml. Detects a band of approximately 220 kDa.Can be blocked with Myosin VIIa/MYO7A peptide (ab4996). |
| ICC/IF | ★★★★★ | Use at an assay dependent concentration. PubMed: 19429027 |
| IHC-Fr | | Use at an assay dependent concentration. PubMed: 20461409 |

## Target

| | |
|---|---|
| **Relevance** | Myosins are actin-based motor molecules with ATPase activity. Unconventional myosins serve in intracellular movements. Their highly divergent tails are presumed to bind to membranous compartments, which would be moved relative to actin filaments. In retina, myosin VIIa may play a role in trafficking of ribbon-synaptic vesicle complexes and renewal of the outer photoreceptors disks. In inner ear, it may maintain the rigidity of stereocilia during the dynamic movements of the bundle. |
| **Cellular localization** | Cytoplasmic, cytoskeleton |

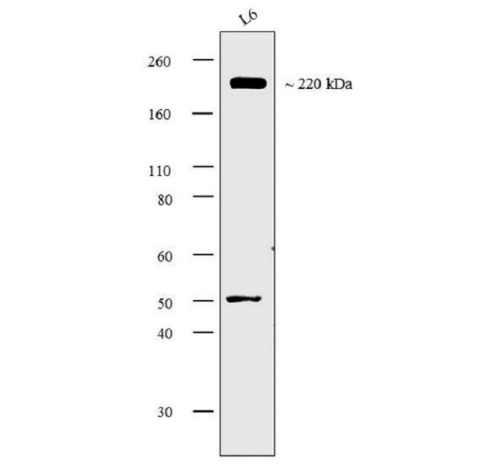
## Images




Immunocytochemistry/ Immunofluorescence - Anti-Myosin VIIa/MYO7A antibody (ab3481)

This image is courtesy of an Abreview submitted by Dr Vladimir Milenkovic

ab3481 staining primary cell culture of Pig retinal pigment epithelium by ICC/IF. Cells were PFA fixed and permeabilized in 0.5% Triton X-100 prior to blocking in 5% serum for 20 minutes at 25°C. The primary antibody was diluted 1/500 and incubated with the sample for 16 hours at 4°C. An Alexa Fluor® 148 conjugated goat anti-rabbit antibody, diluted 1/750, was used as the secondary.

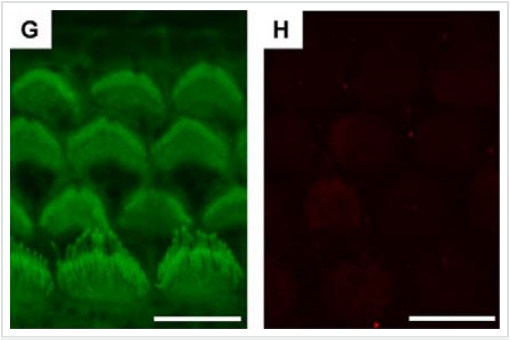



Western blot - Anti-Myosin VIIa/MYO7A antibody (ab3481)

Anti-Myosin VIIa/MYO7A antibody (ab3481) at 5 µg/ml + Membrane enriched extracts of L6 at 30 µg with Skimmed milk at 5 %

**Secondary**

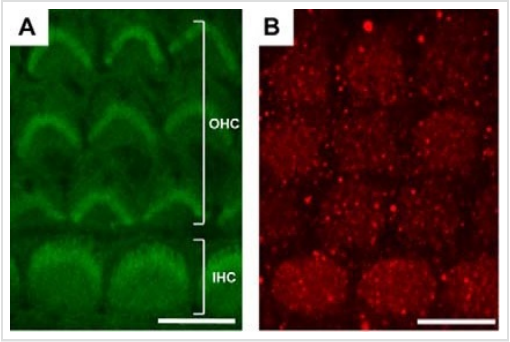
HRP conjugated goat anti-rabbit IgG (H+L) at 1/4000 dilution




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Myosin VIIa/MYO7A antibody (ab3481)

Image from Miller KA et al., PLoS One. 2012;7(12):e51284. Fig 8.; doi: 10.1371/journal.pone.0051284. Epub 2012 Dec 12

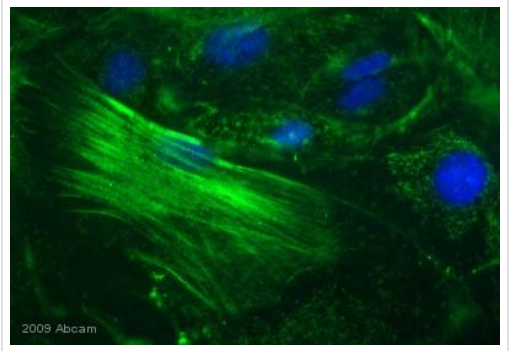
(G) Histochemical staining of mouse P5 cochlear sensory epithelia inner hair cells (IHC) and outer hair cells (OHC) with Alexa Fluor 488® phalloidin. (H) Immunohistochemical staining of mouse P5 cochlear sensory epithelia with rabbit IgG as an isotype control and an Alexa Fluor 594®-conjugated goat anti-rabbit antibody as the secondary antibody (dilution 1/2500). The scale bars represent 8 µm.




Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Myosin VIIa/MYO7A antibody (ab3481)

Image from Miller KA et al., PLoS One. 2012;7(12):e51284. Fig 8.; doi: 10.1371/journal.pone.0051284. Epub 2012 Dec 12

(A) Histochemical staining of mouse P5 cochlear sensory epithelia inner hair cells (IHC) and outer hair cells (OHC) with Alexa Fluor 488® phalloidin. (B) Immunohistochemical staining of mouse P5 cochlear sensory epithelia with ab3481 as the primary antibody (dilution 1/900) and an Alexa Fluor 594®-conjugated goat anti-rabbit antibody as the secondary antibody (dilution 1/2500). The scale bars represent 8 µm.



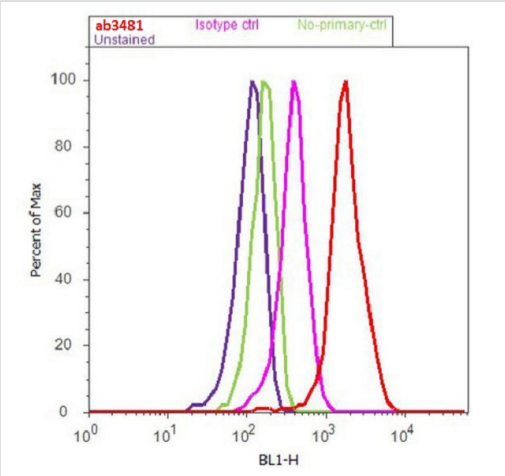

Immunocytochemistry/ Immunofluorescence - Anti-Myosin VIIa/MYO7A antibody (ab3481)

This image was kindly supplied by Dr Vladimir Milenkovic by Abreview

ab3481 at a 1/500 dilution staining Myosin VIIa/MYO7A in Mouse retinal pigment epithelium primary cells by Immunocytochemistry/ Immunofluorescence, incubated for 16 hours at 4°C in 1% goat serum, 0.1% Triton X-100, 1X PBS. Fixed in formalin. Permeabilized using 0.5% Triton X-100. Blocked with 5% serum for 20 minutes at 25°C. Secondary used at 1/500 polyclonal Goat anti-rabbit conjugated to Alexa Fluor 488.


Western blot - Anti-Myosin VIIa/MYO7A antibody (ab3481)

Western blot detection of Myosin VIIa/MYO7A in mouse testes tissue extract using ab3481.




Flow Cytometry - Anti-Myosin VIIa/MYO7A antibody (ab3481)

ab3481 staining Myosin VIIa/MYO7A (red histogram) on L6 cells by Flow Cytometry. Cells were fixed with 70% ethonal, permeabilized with Triton and blocked with 5% BSA for 30 minutes at room temperature. The sample was incubated with the primary antibody (3-5 ug/10^6 in 2.5% BSA) for 2 hours at room temperature. An Alexa fluor® 488-conjugated Goat anti-rabbit IgG (1/400) was used as the secondary antibody. Purple histogram represents unstained control, pink histogram represents rabbit isotype control and green histogram represents no primary antibody control



## Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

## Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors