

Product datasheet

Anti-Otoferlin antibody [13A9] ab53233

★★★★★ [3 Abreviews](#) [33 References](#) [2 Images](#)

Overview

Product name	Anti-Otoferlin antibody [13A9]
Description	Mouse monoclonal [13A9] to Otoferlin
Host species	Mouse
Specificity	This antibody reacts specifically with human Otoferlin protein (220 kDa).
Tested applications	Suitable for: Flow Cyt, ICC/IF
Species reactivity	Reacts with: Mouse, Human
Immunogen	Fusion protein corresponding to Human Otoferlin aa 1-400. Database link: Q9HC10
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. 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	Constituents: 1.21% Tris, 0.75% Glycine, 2% Sucrose
Purity	Protein A purified
Clonality	Monoclonal
Clone number	13A9
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab53233 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
Flow Cyt		Use 1µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★★ (1)	1/100 - 1/500.

Target

Function

Key calcium ion sensor involved in the Ca(2+)-triggered synaptic vesicle-plasma membrane fusion and in the control of neurotransmitter release at these output synapses. Interacts in a calcium-dependent manner to the presynaptic SNARE proteins at ribbon synapses of cochlear inner hair cells (IHCs) to trigger exocytosis of neurotransmitter. Also essential to synaptic exocytosis in immature outer hair cells (OHCs). May also play a role within the recycling of endosomes.

Tissue specificity

Isoform 1 and isoform 3 are found in adult brain. Isoform 2 is expressed in the fetus and in adult brain, heart, placenta, skeletal muscle and kidney.

Involvement in disease

Defects in OTOF are the cause of deafness autosomal recessive type 9 (DFNB9) [MIM:601071]. DFNB9 is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information.

Defects in OTOF are a cause of non-syndromic auditory neuropathy autosomal recessive (NSRAN) [MIM:601071]. NSRAN is a form of sensorineural hearing impairment with absent or severely abnormal auditory brainstem response but normal otoacoustic emissions. Auditory neuropathies result from a lesion in the area including the inner hair cells, connections between the inner hair cells and the cochlear branch of the auditory nerve, the auditory nerve itself and auditory pathways of the brainstem. In some cases NSRAN phenotype can be temperature sensitive.

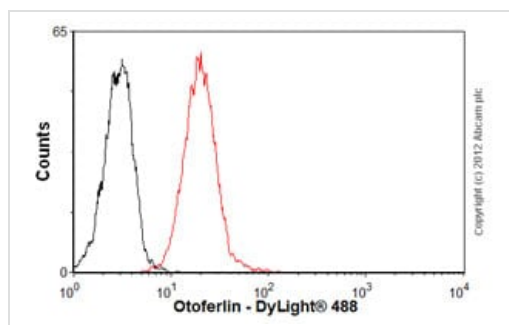
Sequence similarities

Belongs to the ferlin family.
Contains 4 C2 domains.

Cellular localization

Cytoplasmic vesicle > secretory vesicle > synaptic vesicle membrane. Basolateral cell membrane. Endoplasmic reticulum membrane. Cell membrane. Detected at basolateral cell membrane with synaptic vesicles surrounding the ribbon and at the presynaptic plasma membrane in the inner hair cells (IHCs). Colocalizes with GPR25 and RAB8B in inner hair cells.

Images



Flow Cytometry - Anti-Otoferlin antibody [13A9]
(ab53233)

Overlay histogram showing SHSY-5Y cells stained with ab53233 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab53233, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SHSY-5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-Otoferlin antibody [13A9] (ab53233)

ICC/IF analysis of mouse inner ear tissue labeling Otoferlin with [ab181781](#). At 30 days postnatal, Otoferlin is detected in the hair cells of the crista ampullaris (CA), utricular macula (UM) and saccular macula (SM).

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