abcam

Product datasheet

Anti-MYO6 antibody ab106288

Overview

Product name	Anti-MYO6 antibody
Description	Rabbit polyclonal to MYO6
Host species	Rabbit
Tested applications	**Suitable for:** IHC-Fr, IHC-P, IP, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** a wide range of other species
Immunogen	The details of the immunogen for this antibody are not available.
General notes	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. 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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Constituent: Whole serum
Purity	Whole antiserum
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab106288 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-Fr		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration.

Target

Function

Myosins are actin-based motor molecules with ATPase activity. Unconventional myosins serve in intracellular movements. Myosin 6 is a reverse-direction motor protein that moves towards the minus-end of actin filaments. Has slow rate of actin-activated ADP release due to weak ATP binding. Functions in a variety of intracellular processes such as vesicular membrane trafficking and cell migration. Required for the structural integrity of the Golgi apparatus via the p53-dependent pro-survival pathway. Appears to be involved in a very early step of clathrin-mediated endocytosis in polarized epithelial cells. May act as a regulator of F-actin dynamics. May play a role in transporting DAB2 from the plasma membrane to specific cellular targets. Required for structural integrity of inner ear hair cells.

Tissue specificity

Expressed in most tissues examined including heart, brain, placenta, pancreas, spleen, thymus, prostate, testis, ovary, small intestine and colon. Highest levels in brain, pancreas, testis and small intestine. Also expressed in fetal brain and cochlea. Isoform 1 and isoform 2, containing the small insert, and isoform 4, containing neither insert, are expressed in unpolarized epithelial cells.

Involvement in disease

Defects in MYO6 are the cause of deafness autosomal dominant type 22 (DFNA22) [MIM:606346]. DFNA22 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. DFNA22 is progressive and postlingual, with onset during childhood. By the age of approximately 50 years, affected individuals invariably have profound sensorineural deafness.
Defects in MYO6 are the cause of deafness autosomal recessive type 37 (DFNB37) [MIM:607821].
Defects in MYO6 are the cause of deafness sensorineural with hypertrophic cardiomyopathy (DFNHCM) [MIM:606346].

Sequence similarities

Contains 1 IQ domain.
Contains 1 myosin head-like domain.

Domain

Divided into three regions: a N-terminal motor (head) domain, followed by a neck domain consisting of a calmodulin-binding linker domain and a single IQ motif, and a C-terminal tail region with a coiled-coil and a unique globular domain required for interaction with other proteins.

Post-translational modifications

Phosphorylation in the motor domain, induced by EGF, results in translocation of MYO6 from the cell surface to membrane ruffles and affects F-actin dynamics. Phosphorylated in vitro by p21-activated kinase (PAK).

Cellular localization

Cytoplasmic vesicle > clathrin-coated vesicle membrane; Cytoplasmic vesicle > clathrin-coated vesicle membrane. Cell projection > ruffle membrane and Golgi apparatus > trans-Golgi network membrane. Golgi apparatus. Nucleus. Cytoplasm > perinuclear region. Membrane > clathrin-coated pit. Cell projection > ruffle membrane. Also present in endocyctic vesicles, and membrane

	ruffles. Translocates from membrane ruffles, endocytic vesicles and cytoplasm to Golgi apparatus, perinuclear membrane and nucleus through induction by p53 and p53-induced DNA damage. Recruited into membrane ruffles from cell surface by EGF-stimulation. Colocalizes with DAB2 in clathrin-coated pits/vesicles. Colocalizes with OPTN at the Golgi complex and in vesicular structures close to the plasma membrane.

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