10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Myocilin Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57428

Specification

Myocilin Polyclonal Antibody - Product Information

Application	**IHC-P, IHC-F, IF, ICC**
Primary Accession	Q99972
Reactivity	**Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**53 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human Myocilin**
Epitope Specificity	**101-200/504**
Isotype	**IgG**
Purity affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Rough endoplasmic reticulum. Secreted. Cell projection > cilium. Located preferentially in the ciliary rootlet and basal body of the connecting cilium of photoreceptor cells, and in the rough endoplasmic reticulum. Also secreted.**
SIMILARITY	**Contains 1 olfactomedin-like domain.**
Post-translational modifications	**Different isoforms may arise by post-translational modifications. Glycosylated. Palmitoylated.**
DISEASE	**Defects in MYOC are the cause of primary open angle glaucoma type 1A (GLC1A) [MIM:137750]. Primary open angle glaucoma (POAG) is characterized by a specific pattern of optic nerve and visual field defects. The angle of the anterior chamber of the eye is open, and usually the intraocular pressure is increased. The disease is asymptomatic until the late stages, by which time significant and irreversible optic nerve damage has already taken place. Defects in MYOC may also contribute to primary congenital glaucoma type 3A (GLC3A) [MIM:231300]. Defects in MYOC may contribute to this phenotype via digenic inheritance. GLC3A is an autosomal recessive form of primary congenital glaucoma (PCG). PCG is characterized by marked increase of**

intraocular pressure at birth or early choldhood, large ocular globes (buphthalmos) and corneal edema. It results from developmental defects of the trabecular meshwork and anterior chamber angle of the eye that prevent adequate drainage of aqueous humor.

Important Note

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions
MYOC encodes the protein myocilin, which is believed to have a role in cytoskeletal function. MYOC is expressed in many occular tissues, including the trabecular meshwork, and was revealed to be the trabecular meshwork glucocorticoid-inducible response protein (TIGR). The trabecular meshwork is a specialized eye tissue essential in regulating intraocular pressure, and mutations in MYOC have been identified as the cause of hereditary juvenile-onset open-angle glaucoma. [provided by RefSeq, Jul 2008]

Myocilin Polyclonal Antibody - Additional Information

Gene ID 4653

Other Names
Myocilin, Myocilin 55 kDa subunit, Trabecular meshwork-induced glucocorticoid response protein, Myocilin, N-terminal fragment, Myocilin 20 kDa N-terminal fragment, Myocilin, C-terminal fragment, Myocilin 35 kDa N-terminal fragment, MYOC, GLC1A, TIGR {ECO:0000303|PubMed:9280311}

Target/Specificity
Expressed in large amounts in various types of muscle, ciliary body, papillary sphincter, skeletal muscle, heart and other tissues. Expressed predominantly in the retina. In normal eyes, found in the inner uveal meshwork region and the anterior portion of the meshwork. In contrast, in many glaucomatous eyes, it is found in more regions of the meshwork and appeared more intensively than in normal eyes, regardless of the type or clinical severity of glaucoma.

Dilution
IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

Myocilin Polyclonal Antibody - Protein Information

Name MYOC

Synonyms GLC1A, TIGR {ECO:0000303|PubMed:9280311}

Function
Secreted glycoprotein regulating the activation of different signaling pathways in adjacent cells to control different processes including cell adhesion, cell-matrix adhesion, cytoskeleton organization

and cell migration. Promotes substrate adhesion, spreading and formation of focal contacts. Negatively regulates cell-matrix adhesion and stress fiber assembly through Rho protein signal transduction. Modulates the organization of actin cytoskeleton by stimulating the formation of stress fibers through interactions with components of Wnt signaling pathways. Promotes cell migration through activation of PTK2 and the downstream phosphatidylinositol 3-kinase signaling. Plays a role in bone formation and promotes osteoblast differentiation in a dose-dependent manner through mitogen-activated protein kinase signaling. Mediates myelination in the peripheral nervous system through ERBB2/ERBB3 signaling. Plays a role as a regulator of muscle hypertrophy through the components of dystrophin- associated protein complex. Involved in positive regulation of mitochondrial depolarization. Plays a role in neurite outgrowth. May participate in the obstruction of fluid outflow in the trabecular meshwork.

Cellular Location
Secreted. Golgi apparatus. Cytoplasmic vesicle. Secreted, extracellular space. Secreted, extracellular space, extracellular matrix. Secreted, extracellular exosome. Mitochondrion. Mitochondrion intermembrane space. Mitochondrion inner membrane. Mitochondrion outer membrane. Rough endoplasmic reticulum. Cell projection. Cell projection, cilium. Note=Located preferentially in the ciliary rootlet and basal body of the connecting cilium of photoreceptor cells, and in the rough endoplasmic reticulum (PubMed:9169133). It is only imported to mitochondria in the trabecular meshwork (PubMed:17516541). Localizes to the Golgi apparatus in Schlemm's canal endothelial cells (PubMed:11053284). Appears in the extracellular space of trabecular meshwork cells by an unconventional mechanism, likely associated with exosome-like vesicles (PubMed:15944158). Localizes in trabecular meshwork extracellular matrix (PubMed:15944158). [Myocilin, N-terminal fragment]: Endoplasmic reticulum. Note=Remains retained in the endoplasmic reticulum

Tissue Location
Detected in aqueous humor (PubMed:12697062). Detected in the eye (at protein level) (PubMed:11431441). Widely expressed. Highly expressed in various types of muscle, ciliary body, papillary sphincter, skeletal muscle, heart, and bone marrow-derived mesenchymal stem cells. Expressed predominantly in the retina. In normal eyes, found in the inner uveal meshwork region and the anterior portion of the meshwork. In contrast, in many glaucomatous eyes, it is found in more regions of the meshwork and seems to be expressed at higher levels than in normal eyes, regardless of the type or clinical severity of glaucoma. The myocilin 35 kDa fragment is detected in aqueous humor and to a lesser extent in iris and ciliary body

Myocilin Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Myocilin Polyclonal Antibody - Images