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RHO Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16977b

Product Information

Application	WB, E
Primary Accession	P08100
Other Accession	Q28886, NP_000530.1
Reactivity	Human, Rat, Mouse
Predicted	Monkey, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36659
Calculated MW	38893
Antigen Region	310-339

Additional Information

Gene ID	6010
Other Names	Rhodopsin, Opsin-2, RHO, OPN2
Target/Specificity	This RHO antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 310-339 amino acids from the C-terminal region of human RHO.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RHO Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RHO (HGNC:10012)
Synonyms	OPN2
Function	G protein-coupled photoreceptor that activates the G protein transducin (t)

signaling pathway in response to light and is essential for image-forming vision under low-light conditions (PubMed:6140680, PubMed:7846071, PubMed:8107847). Required for postnatal photoreceptor cell viability (PubMed:12566452, PubMed:2215617). Activation occurs when the covalently bound 11-cis-retinal chromophore absorbs a photon and isomerizes to all-trans-retinal, inducing a conformational change in the opsin that triggers G protein-mediated phototransduction (Probable) (PubMed:26200343, PubMed:28753425, PubMed:8107847). Signal termination occurs via receptor phosphorylation, which promotes binding of arrestin (SAG) and displacement of the G protein alpha subunit (Probable) (PubMed:26200343).

Cellular Location

Photoreceptor outer segment membrane; Multi-pass membrane protein. Membrane; Multi-pass membrane protein Note=Synthesized in the inner segment (IS) of rod photoreceptor cells before vectorial transport to disk membranes in the rod outer segment (OS) photosensory cilia.

Tissue Location

Rod shaped photoreceptor cells which mediate vision in dim light.

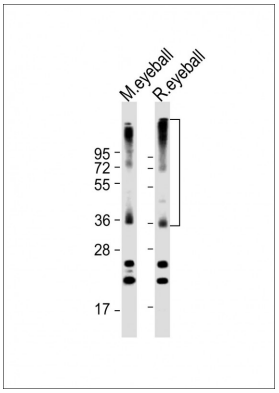
Background

Retinitis pigmentosa is an inherited progressive disease which is a major cause of blindness in western communities. It can be inherited as an autosomal dominant, autosomal recessive, or X-linked recessive disorder. In the autosomal dominant form,which comprises about 25% of total cases, approximately 30% of families have mutations in the gene encoding the rod photoreceptor-specific protein rhodopsin. This is the transmembrane protein which, when photoexcited, initiates the visual transduction cascade. Defects in this gene are also one of the causes of congenital stationary night blindness.

References

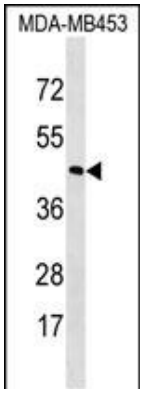
Clark, G.R., et al. Ophthalmology 117(11):2169-2177(2010)
Li, S., et al. Biochem. Biophys. Res. Commun. 401(1):42-47(2010)
Pulagam, L.P., et al. J. Biol. Chem. 285(38):29446-29456(2010)
Audo, I., et al. Arch. Ophthalmol. 128(8):1036-1045(2010)
Audo, I., et al. Invest. Ophthalmol. Vis. Sci. 51(7):3687-3700(2010)

Images



All lanes : Anti-RHO Antibody (C-term) at 1:2000 dilution Lane 1: mouse eyeball lysate Lane 2: rat eyeball lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 39 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

RHO Antibody (C-term) (Cat. #AP16977b) western blot analysis in MDA-MB453 cell line lysates (35ug/lane).This demonstrates the RHO antibody detected the RHO protein (arrow).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.