Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 200-301-G36

Rho Antibody

Overview

Description:	Anti-Rho (MOUSE) Monoclonal Antibody - 200-301-G36
Item No.:	200-301-G36
Size:	100 µg
Applications:	ELISA, IF, IHC, IP, WB
Reactivity:	Rat, Acanthodes bridgei, Amphibians, Avian, Fish, Mammalian
Host Species:	Mouse

Product Details

Background:	Rhodopsin consists of the protein moiety opsin and a reversibly covalently bound cofactor, retinal. Opsin, a bundle of seven membrane embedded alpha-helices, binds retinal, a photoreactive chromophore, in a central pocket. In addition to being the pigment of the retina that is responsible for both the formation of the photoreceptor cells, its function is to specifically convey information stored in the specific geometry of the chromophore to the surface of the molecule upon light absorption. In the active state, rhodopsin activates transduction, a GTP binding protein. Once activated, transduction promotes the hydrolysis of cGMP by phosphodiesterase. Rhodopsin's activity is believed to be shut off by its phosphorylation followed by binding of the soluble protein arrestin. Mutations in the rhodopsin gene lead to retinitis pigmentosa, which can be inherited as an autosomal dominant, an autosomal recessive or an X-linked recessive disorder.
Synonyms:	OPN2 Antibody, opsd Antibody, opsin 2 Antibody, opsin 2 rod pigment Antibody, opsin2 Antibody, RHO Antibody, RP4 Antibody, MGC138309 Antibody, Retinitis Pigmentosa 4 Antibody, Rhodopsin Antibody
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	4D2
Format:	IgG1

Target Details

Gene Name:	RHO

Reactivity:	Rat, Acanthodes bridgei, Amphibians, Avian, Fish, Mammalian
Immunogen Type:	Other
Immunogen:	Rho Antibody was produced in mice by repeated immunizations raised against bovine Rhodopsin.
Purity/Specificity:	Anti-Rho Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with Rhodopsin from Mammals, Fish, Avian, Amphibians, and Shark based on 100% homology with the immunizing sequence. Not Drosophila or other invertebrates. Cross-reactivity with Rhodopsin from other sources has not been determined. Signaling and GTPase research.
Relevant Links:	• NCBI - NP_001014890.1 • GeneID - 509933 • UniProtKB - P02699

Application Details

Tested Applications:	ELISA, IF, IHC, IP, WB
Application Note:	Anti-Rho Antibody is recommended for use in IF microscopy, IHC, IP, WB, and ELISA. Detects ~40kDa. Binds specifically to the N-terminus of Rhodopsin. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	User Optimized
IF:	User Optimized
IHC:	1:1000
IP:	User Optimized
WB:	1:1000

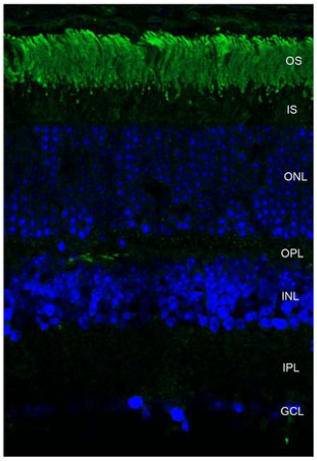
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	1X PBS, pH 7.4
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

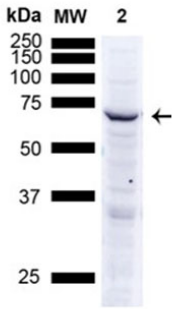
Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

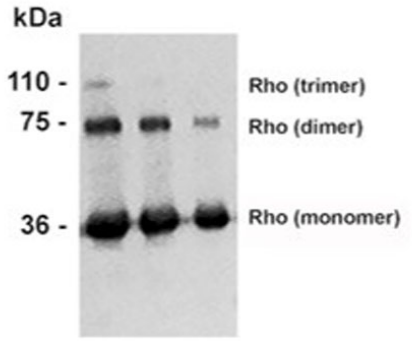
Images



Immunofluorescence Microscopy
Immunohistochemistry of Mouse Anti-Rhodopsin Monoclonal Antibody.
Tissue: mouse retina.
Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody at 1:1000.
Secondary Antibody: FITC Goat Anti-Mouse (green).
Counterstain: DAPI (blue) nuclear stain.
Localization: staining of (OS) photoreceptor outer segment.
Other layers of the retina: (IS) – inner segment; (ONL) – outer nuclear layer; (OPL) – outer plexiform layer; (INL) – inner nuclear layer; (IPL) – inner plexiform layer; (GCL) – ganglion cell layer.



Western Blot
Western Blot of Anti-Rhodopsin.
Load: 15 ug. Lane 1: MW ladder. Lane 2: Human A549 cells.
Block: 5% Skim Milk in TBST.
Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody at 1:1000 for 2.5 hours at RT.
Secondary Antibody: Goat anti-mouse IgG HRP at 1:1000 for 1 hour at RT.
Color Development: Chemiluminescent for HRP for 5 min in RT.
Predicted/Observed Size: ~38.9kDa.
Other Band(s): Band appears at ~75 kDa indicating detection of the Rhodopsin dimer.



Western Blot
Western Blot of Anti-Rhodopsin.
Load: Bovine photoreceptor membrane. Lane 1: MW ladder. Lane 2: 10µg. Lane 3: 5µg. Lane 4: 2.5µg.
Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody at 1:1000.
Predicted/Observed Size: ~38.9kDa. Other Band(s): Band appears at ~38kDa monomer; ~75kDa dimer; ~110kDa trimer.

Disclaimer