

Mouse Rhodopsin Monoclonal Antibody | anti-RHO antibody

Rhodopsin Antibody: ATTO 594

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA103189	Mouse	All mammalian species (Human, Mice, Rat, Bovine, Pig etc.), most Fish, Birds, Amphibians (Frogs, Xenopus), Anchovies. Not Drosophila or other invertebrates.	ELISA, Immunofluorescence, Immunoprecipitation, Immunohistochemistry, Immunocytochemistry

PRODUCT SYNONYMS

Rhodopsin; Monoclonal Antibody; Rhodopsin Antibody: ATTO 594; OPN2; opsd; opsin 2; opsin 2 rod pigment; opsin2; RHO; RP4; MGC138309; Retinitis Pigmentosa 4; anti-RHO antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	All mammalian species (Human, Mice, Rat, Bovine, Pig etc.), most Fish, Birds, Amphibians (Frogs, Xenopus), Anchovies. Not Drosophila or other invertebrates.
Clonality	Monoclonal
Isotype	IgG1
Clone Number	4D2
Specificity	Detects ~40kDa. Binds specifically to the N-terminus of Rhodopsin. Does not detect Rhodopsin in invertebrates.
Purity/Purification	Protein G purified
Form/Format	PBS pH7.4, 50% glycerol, 0.09% sodium azide *Storage buffer may change when conjugated
Concentration	1mg/mL (varies by lot)
Sequence Length	348
Applicable Applications for anti-RHO antibody	ELISA, IF (Immunofluorescence), IP (Immunoprecipitation), IHC (Immunohistochemistry), ICC (Immunocytochemistry)
Function	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 photo reactive 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.
Conjugate	ATTO 594
Immunogen	Bovine Rhodopsin
Research Areas	Cell Signaling, Neuroscience, Neurotransmitter Receptors, Rhodopsins
Cellular Localization	Membrane
Preparation and Storage	-20 degree C. Avoid freeze thaw cycles.

IMAGES



IHC (Immunohistochemistry)
Immunohistochemistry analysis using Mouse Anti-Rhodopsin Monoclonal Antibody, Clone 4D2. Tissue: retina. Species: Mouse. 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 photoreceptor outer segment (OS). 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.

ADDITIONAL INFORMATION

Product Categories/Family for anti-RHO antibody	GTPase
References	1. Molday R.S., Hicks D., and Molday L. (1987) Invest Ophthalmol Vis Sci. 28: 50-61. 2. Ridge K.D., Lee S.S.J., and Abdulaev N.G. (1996) J of Biol Chem. 271: 7860-7867. 3. Matsuyama T., Yamashita T., Imai H. and Shichida Y. (2009) J Biol Chem. Manuscript M109.063875. 4. Feurstein S.E., et al. (2009) Biochemistry. 48(45): 10733-10742. 5. Iannaccone A., et al. (2006) Vision Res. 46(27): 4556-4567. 1. Cheng, C.L., Djajadi, H. and Molday, R.S. (2012). Cell-Specific Markers for the Identification of Retinal Cells by Immunofluorescence Microscopy. Methods in Molecular Biology. 935, 185-199. doi: 10.1007/978-1-62703-080-9_12

NCBI AND UNIPROT INFORMATION

NCBI GI #	62460472
NCBI GeneID	509933
NCBI Accession #	NP_001014890.1
NCBI GenBank Nucleotide #	NM_001014890.1
UniProt Accession #	P02699
NCBI Official Full Name	rhodopsin
NCBI Official Synonym Full Names	rhodopsin<
NCBI Official Symbol	RHO
NCBI Protein Information	rhodopsin; rhodopsin (opsin 2, rod pigment) (retinitis pigmentosa 4, autosomal dominant)
UniProt Protein Name	Rhodopsin
UniProt Gene Name	RHO
UniProt Entry Name	OPSD_BOVIN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/rhodopsin-antibody-clone-4d2-immunofluorescence-immunoprecipitation-immunohistochemistry-immunocytochemistry-elisa/103189>