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Datasheet for 200-301-E29

Rhodopsin Antibody

Overview

Description:	Anti-Rhodopsin (MOUSE) Monoclonal Antibody - 200-301-E29
Item No.:	200-301-E29
Size:	100 µL
Applications:	IHC, WB
Reactivity:	Amphibians, Mammalian
Host Species:	Mouse

Product Details

Background:	Rhodopsin antibody detects rhodopsin which is a photoreceptor protein found in retinal rods. It is a complex formed by the binding of retinaldehyde, the oxidized form of retinol, to the protein opsin and undergoes a series of complex reactions in response to visible light resulting in the transmission of nerve impulses to the brain. Mutation of the rhodopsin gene is a major contributor to various retinopathies such as retinitis pigmentosa. The disease-causing protein generally aggregates with ubiquitin in inclusion bodies, disrupts the intermediate filament network and impairs the ability of the cell to degrade non-functioning proteins which leads to photoreceptor apoptosis. Other mutations on rhodopsin lead to X-linked congenital stationary night blindness, mainly due to constitutive activation, when the mutations occur around the chromophore binding pocket of rhodopsin. Several other pathological states relating to rhodopsin have been discovered including poor post-Golgi trafficking, dysregulative activation, rod outer segment instability and arrestin binding. Anti-Rhodopsin Antibody is ideal for investigators involved in Cell Signaling, Neuroscience, Signal Transduction research.
Synonyms:	OPN2, Rhodopsin, RHO, Anti-Rhodopsin monoclonal, photoreceptor proteins
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	1D4
Format:	IgG1

Target Details

Gene Name:	RHO

Reactivity:	Amphibians, Mammalian
Immunogen Type:	Native Protein
Immunogen:	Anti-Rhodopsin Monoclonal Antibody was produced in mouse by repeated immunizations with purified native bovine rhodopsin.
Purity/Specificity:	Anti-Rhodopsin antibody is directed against bovine Rhodopsin. Rhodopsin antibodies are Protein G purified from cell culture supernantant. Reactivity is predicted to human and mouse based on strong homology. Cross reactivity from other sources has not been determined.
Relevant Links:	• UniProtKB - P02699 • GeneID - 509933 • UniProtKB - P02699.1

Application Details

Tested Applications:	IHC, WB
Application Note:	Anti-Rhodopsin antibody has been tested in Western Blot and Immunohistochemistry. Expect a band of approximately 39 kDa in size corresponding to the rhodopsin proteins in Western blot in the appropriate cell lysate or extract. Researchers should determine optimal titers for applications that are not stated below.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IHC:	1:100
WB:	1:1000

Formulation

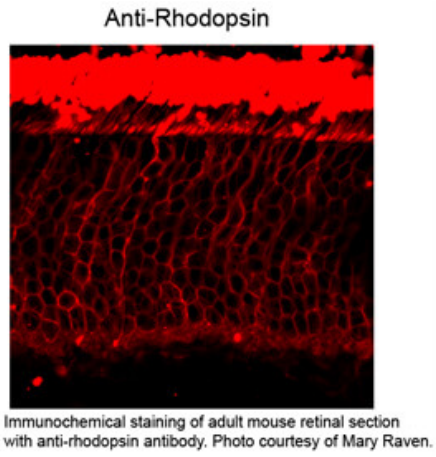
Physical State:	Liquid
Concentration:	Titrated value sufficient to run approximately 10 mini blots.
Buffer:	0.01 M HEPES, 0.15 M Sodium Chloride, pH 7.5
Stabilizer:	0.1 mg/ml Bovine Serum Albumin (BSA) - IgG and Protease free, 50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunochemical staining of adult mouse retinal section with anti-rhodopsin antibody. Photo courtesy of Mary Raven.

Immunohistochemistry
Immunohistochemistry of Mouse anti-Rhodopsin antibody. Tissue: mouse retinal. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: Rhodopsin antibody at 1:100 for 1 h at RT. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: Rhodopsin is in the rod spherules. Staining: Rhodopsin as precipitated red signal.

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