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Rhodopsin Antibody
Mouse monoclonal antibody
Catalog # AN1166

Specification

Rhodopsin Antibody - Product Information

Application	**IHC**
Primary Accession	P02699
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**monoclonal**
Isotype	**IgG1**
Calculated MW	**39 KDa**

Rhodopsin Antibody - Additional Information

Gene ID	**509933**
Gene Name	**RHO**

Other Names
Rhodopsin, RHO

Target/Specificity
Purified native bovine rhodopsin.

Dilution
IHC~~ 1:100

Format
Protein G purified culture supernatant.

Antibody Specificity
Specific for the ~ 39k rhodopsin protein.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Rhodopsin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

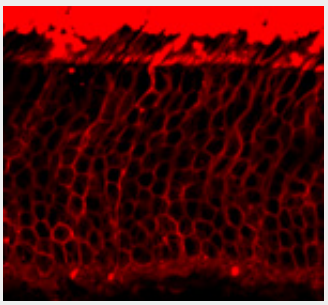
Shipping
Blue Ice

Rhodopsin 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

Rhodopsin Antibody - Images



Immunohistochemical staining of mouse retinal section showing specificimmunolabeling of the rhodopsin protein in the rod spherules. Photo courtesyof Mary Raven, University of California, Santa Barbara, CA.

Rhodopsin Antibody - Background

Rhodopsin 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 (Berson et al., 1991). 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 (Dryja et al.,1993). Several other pathological states relating to rhodopsin have been discovered including poor post-Golgi trafficking, dysregulative activation, rod outer segment instability and arrestin binding.

Rhodopsin Antibody - References

Berson EL, Rosner B, Sandberg MA, Dryja TP (1991). "Ocular findings in patients with autosomal dominant retinitis pigmentosa and a rhodopsin gene defect (Pro-23-His)". Arch. Ophthalmol. 109 (1): 92–101.
Dryja TP, Berson EL, Rao VR, Oprian DD (1993) Heterozygous missense mutation in the rhodopsin gene as a cause of congenital stationary night blindness. Nature Genet. 4:280-283.
Molday RS, MacKenzie D. (1983) Monoclonal antibodies to rhodopsin: characterization, cross-reactivity, and application as structural probes. Biochemistry. 22(3):653-60.