Anti-Rhodopsin

Catalog Number: 1840-RHO  
Size: 100 µl  
Isotype: IgG₁  
Clone: 1D4

Product Description: Mouse monoclonal antibody

Applications:  
WB: 1:1000  
IHC: 1:100

Antigen: Bovine rhodopsin.

Species reactivity: The antibody has been directly tested for reactivity in mammals and amphibians.

Biological Significance: 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.

Immunohistochemical staining of mouse retinal section showing specific immunolabeling of the rhodopsin protein in the rod spherules. Photo courtesy of Mary Raven, University of California, Santa Barbara, CA.
**Purification Method:** Protein G purified culture supernatant.

**Antibody Specificity:** Specific for the ~39k rhodopsin protein.

**Quality Control Tests:** Western blots performed on each lot.

**Product Specific References:**


**General References:**

