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Rhodopsin Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 37, 75	Source/Isotype: Rabbit	UniProt ID: #P08100	Entrez-Gene Id: 6010
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Rhodopsin Antibody recognizes endogenous levels of total rhodopsin protein. This antibody may also detect rhodopsin protein at 55 kDa.

Species predicted to react based on 100% sequence homology

Hamster, Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro7 of human rhodopsin protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Rhodopsin is the photoreceptor in the retinal rods. It is activated by photons, transduces visual information through its cognate G protein, transducin, and is inactivated by arrestin binding (1). Using atomic-force microscopy, rhodopsin was found to be arranged into paracrystalline arrays of dimers in mouse disc membranes (2). Rhodopsin is considered to be the prototype of G protein-coupled receptors (GPCRs), and is the first GPCR for which a crystal structure was solved (3). Research studies have linked mutations in the gene encoding rhodopsin to retinitis pigmentosa (4,5), a disease characterized by retinal degeneration resulting in reduced peripheral vision and night blindness (6).

Background References

1. Arshavsky, V.Y. and Burns, M.E. (2012) *J Biol Chem* 287, 1620-6.
2. Fotiadis, D. et al. (2003) *Nature* 421, 127-8.
3. Palczewski, K. et al. (2000) *Science* 289, 739-45.
4. Rivolta, C. et al. (2002) *Hum Mol Genet* 11, 1219-27.
5. Wilson, J.H. and Wensel, T.G. (2003) *Mol Neurobiol* 28, 149-58.
6. Hartong, D.T. et al. (2006) *Lancet* 368, 1795-809.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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