Revision 4

Store at -20C

#27182

Rhodopsin (D4B9B) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IHC-P, IF-F	H M R	Endogenous	Rabbit IgG	#P08100	6010

Product Usage Information

Application	Dilution
Immunohistochemistry (Paraffin)	1:1000
Immunofluorescence (Frozen)	1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #59698.

Specificity/Sensitivity

Rhodopsin (D4B9B) Rabbit mAb recognizes endogenous levels of total rhodopsin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu194 of human rhodopsin protein.

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).

Applications Key

IHC-P: Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

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

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Limited Uses

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