

Rhodopsin (D1N7X) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications: W, IP	Reactivity: M R	Sensitivity: Endogenous	MW (kDa): 37, 75, 150	Source/Isotype: Rabbit IgG	UniProt ID: #P08100	Entrez-Gene Id: 6010
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Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
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.	
Specificity/Sensitivity	Rhodopsin (D1N7X) Rabbit mAb recognizes endogenous levels of total rhodopsin protein.	
Species predicted to react based on 100% sequence homology	Human	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus 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	<ol style="list-style-type: none"> 1. Arshavsky, V.Y. and Burns, M.E. (2012) <i>J Biol Chem</i> 287, 1620-6. 2. Fotiadis, D. et al. (2003) <i>Nature</i> 421, 127-8. 3. Palczewski, K. et al. (2000) <i>Science</i> 289, 739-45. 4. Rivolta, C. et al. (2002) <i>Hum Mol Genet</i> 11, 1219-27. 5. Wilson, J.H. and Wensel, T.G. (2003) <i>Mol Neurobiol</i> 28, 149-58. 6. Hartong, D.T. et al. (2006) <i>Lancet</i> 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	M: Mouse R: Rat
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