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anti-Rhodopsin antibody (FITC)

3 Images



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Overview

Quantity:	100 μg
Target:	Rhodopsin (RHO)
Reactivity:	Cow
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Rhodopsin antibody is conjugated to FITC
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP), Immunocytochemistry (ICC), Immunofluorescence (IF)

Product Details

Immunogen:	Bovine Rhodopsin
Clone:	4D2
Isotype:	lgG1
Specificity:	Detects ~40 kDa. Binds specifically to the N-terminus of Rhodopsin. Does not detect Rhodopsin in invertebrates.
Cross-Reactivity:	Amphibian, Avian, Fish, Mammalian, Shark
Purification:	Protein G Purified

Target Details

Target:	Rhodopsin (RHO)	

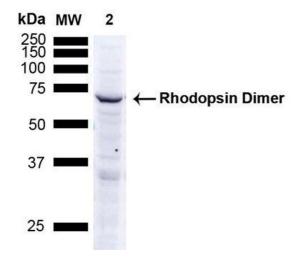
Target Details

Alternative Name:	Rhodopsin (RHO Products)	
Target Type: Chemical		
Background:	Rhodopsin consists of the protein moiety opsin and a reversibly covalently bound cofactor,	
	retinal. Opsin, a bundle of seven membrane embedded alpha-helices, binds retinal, a photo	
	reactive chromophore, in a central pocket (2, 3). In addition to being the pigment of the retina	
	that is responsible for both the formation of the photoreceptor cells, its function is to	
	specifically convey information stored in the specific geometry of the chormophore to the	
	surface of the molecule upon light absorption (2). In the active state, rhodopsin activates	
	transduction, a GTP binding protein. Once activated, transduction promotes the hydrolysis of	
	cGMP by phosphodiesterase. Rhodopsin's activity is believed to be shut off by its	
	phosphorylation followed by binding of the soluble protein arrestin (4). Mutations in the	
	rhodopsin gene lead to retinitis pigmentosa, which can be inherited as an autosomal dominant	
	an autosomal recessive or an X-linked recessive disorder (5).	
Gene ID:	509933	
NCBI Accession:	NP_001014890	
UniProt:	P02699	
Pathways:	WNT Signaling, Sensory Perception of Sound, Regulation of G-Protein Coupled Receptor Protei	
	Signaling, Phototransduction	
Application Details		
Application Notes:	• WB (1:1000)	
	• IHC (1000)	
	optimal dilutions for assays should be determined by the user.	
Comment:	1 μg/ml of ABIN2482263 was sufficient for detection of rhodopsin in 10 μg of rat eye lysate by	
	colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.	
Restrictions:	For Research Use only	
Handling		
Format:	Liquid	
Concentration:	1 mg/mL	
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated	

Handling

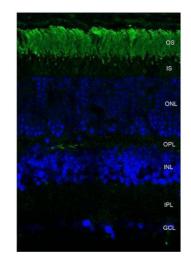
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



Western Blotting

Image 1. Western Blot analysis of Human A549 cells showing detection of ~38.9 kDa Rhodopsin protein using Mouse Anti-Rhodopsin Monoclonal Antibody, Clone 4D2 (ABIN2482263). Lane 1: MW ladder. Lane 2: Human A549 Cells 15 μg). Load: 15 μg. Block: 5 % Skim Milk Powder in TBST. Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody (ABIN2482263) at 1:1000 for 2.5 hours at RT with shaking . Secondary Antibody: Goat anti-mouse IgG:HRP at 1:1000 for 1 hour at RT with shaking . Color Development: Chemiluminescent for HRP (Moss) for 5 min in RT. Predicted/Observed Size: ~38.9 kDa. Other Band(s): Band appears at ~75 kDa indicating detection of the Rhodopsin dimer.



Immunohistochemistry

Image 2. Immunohistochemistry analysis using Mouse Anti-Rhodopsin Monoclonal Antibody, Clone 4D2. Tissue: retina. Species: Mouse. Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody at 1:1000. Secondary Antibody: FITC Goat Anti-Mouse (green). Counterstain: DAPI (blue) nuclear stain. Localization: Staining of photoreceptor outer segment (OS).

kDa 110 - Rho (trimer) 75 - Rho (dimer) 36 - Rho (monomer)

Western Blotting

Image 3. Western Blot analysis of Bovine photoreceptor membranes showing detection of Rhodopsin protein using Mouse Anti-Rhodopsin Monoclonal Antibody, Clone 4D2 (ABIN2482263). Lane 1: MW ladder. Lane 2: 10 μg. Lane 3: 5 μg. Lane 4: 2.5 μg. Primary Antibody: Mouse Anti-Rhodopsin Monoclonal Antibody (ABIN2482263) at 1:1000.