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Rhodopsin Polyclonal Antibody

Catalog # AP72270

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P08100
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38893

Additional Information

Gene ID	6010
Other Names	RHO; OPN2; Rhodopsin; Opsin-2
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

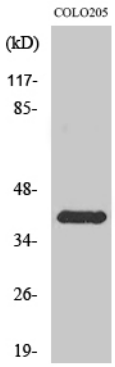
Name	RHO (HGNC:10012)
Synonyms	OPN2
Function	G protein-coupled photoreceptor that activates the G protein transducin (t) signaling pathway in response to light and is essential for image-forming vision under low-light conditions (PubMed:6140680, PubMed:7846071, PubMed:8107847). Required for postnatal photoreceptor cell viability (PubMed:12566452, PubMed:2215617). Activation occurs when the covalently bound 11-cis-retinal chromophore absorbs a photon and isomerizes to all-trans-retinal, inducing a conformational change in the opsin that triggers G protein-mediated phototransduction (Probable) (PubMed:26200343, PubMed:28753425, PubMed:8107847). Signal termination occurs via receptor phosphorylation, which promotes binding of arrestin (SAG) and displacement of the G protein alpha subunit (Probable) (PubMed:26200343).
Cellular Location	Photoreceptor outer segment membrane; Multi-pass membrane protein. Membrane; Multi-pass membrane protein Note=Synthesized in the inner segment (IS) of rod photoreceptor cells before vectorial transport to disk

	membranes in the rod outer segment (OS) photosensory cilia.
Tissue Location	Rod shaped photoreceptor cells which mediate vision in dim light.

Background

Photoreceptor required for image-forming vision at low light intensity (PubMed: 8107847, PubMed:7846071). Required for photoreceptor cell viability after birth (PubMed:2215617, PubMed:12566452). Light-induced isomerization of the chromophore 11-cis-retinal to all-trans-retinal triggers a conformational change that activates signaling via G-proteins (PubMed:8107847, PubMed:28524165, PubMed:26200343, PubMed:28753425). Subsequent receptor phosphorylation mediates displacement of the bound G- protein alpha subunit by the arrestin SAG and terminates signaling (PubMed:28524165, PubMed:26200343).

Images



Western Blot analysis of various cells using Rhodopsin Polyclonal Antibody

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.