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Retinal S antigen Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54701

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	P10523
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45120
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Retinal S antigen
Epitope Specificity	285-330/405
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic and Plasma membrane
SIMILARITY	Belongs to the arrestin family.
DISEASE	Defects in SAG are the cause of congenital stationary night blindness Oguchi type 1 (CSNBO1) [MIM:258100]; also known as Oguchi disease. Congenital stationary night blindness is a non-progressive retinal disorder characterized by impaired night vision. CSNBO is an autosomal recessive form associated with fundus discoloration and abnormally slow dark adaptation. Defects in SAG are the cause of retinitis pigmentosa type 47 (RP47) [MIM:613758]. RP47 is a retinal dystrophy belonging to the group of pigmentary retinopathies. Retinitis pigmentosa is characterized by retinal pigment deposits visible on fundus examination and primary loss of rod photoreceptor cells followed by secondary loss of cone photoreceptors. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Members of the Arrestin/beta-Arrestin protein family are thought to participate in agonist-mediated desensitization of G protein-coupled receptors, and cause specific dampening of cellular responses to stimuli such as hormones, neurotransmitters or sensory signals. Visual Arrestin, also known as Arrestin, retinal S-antigen or S-Arrestin, is a major soluble photoreceptor protein that regulates light-dependent signal transduction through G protein-coupled receptor (rhodopsin) activation. Visual Arrestin is expressed in retinal photoreceptor cells and the pineal gland. Visual Arrestin is the major pathogenic autoantigen in inflammatory eye disease, such as uveoretinitis and Oguchi disease, a rare autosomal recessive form of night blindness.

Additional Information

Gene ID	6295
Other Names	S-arrestin, 48 kDa protein, Retinal S-antigen, S-AG, Rod photoreceptor arrestin, SAG
Target/Specificity	Retina and pineal gland.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SAG
Function	Binds to photoactivated, phosphorylated RHO and terminates RHO signaling via G-proteins by competing with G-proteins for the same binding site on RHO (By similarity). May play a role in preventing light-dependent degeneration of retinal photoreceptor cells (PubMed:9565049).
Cellular Location	Cell projection, cilium, photoreceptor outer segment. Membrane {ECO:0000250|UniProtKB:P20443}; Peripheral membrane protein {ECO:0000250|UniProtKB:P20443}. Note=Highly expressed in photoreceptor outer segments in light-exposed retina. Evenly distributed throughout rod photoreceptor cells in dark-adapted retina (By similarity) Predominantly dectected at the proximal region of photoreceptor outer segments, near disk membranes (PubMed:3720866) {ECO:0000250|UniProtKB:P08168, ECO:0000269|PubMed:3720866}
Tissue Location	Detected in retina, in the proximal portion of the outer segment of rod photoreceptor cells (at protein level)