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RGR Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9895c

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	P47804
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24687
Calculated MW	31874
Antigen Region	265-291

Additional Information

Gene ID	5995
Other Names	RPE-retinal G protein-coupled receptor, RGR
Target/Specificity	This RGR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 265-291 amino acids from the Central region of human RGR.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RGR Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RGR (HGNC:9990)
Function	Non-visual opsin that functions as a light-dependent facilitator of retinoid isomerization and trafficking in retinal pigment epithelium (RPE) and Mueller glia (PubMed:18474598). Participates in a photic visual cycle by complementing the classical enzymatic RPE65/RDH pathway for chromophore

	regeneration (By similarity). Binds all-trans-retinal via a conserved Schiff-base lysine and, upon illumination, promotes photoisomerization of all-trans-retinal to 11-cis-retinal required for regeneration of visual pigments (By similarity). Also mediates light-dependent mobilization of stored all-trans-retinyl esters from lipid droplets to endoplasmic reticulum membranes, facilitating their processing into 11-cis-retinoids (PubMed:18474598). May also modulate isomerohydrolase activity independent of light (By similarity). Although RGR is structurally a GPCR-family opsin, there is no consistent evidence that RGR activates G proteins or initiates a canonical second-messenger signaling cascade (Probable).
Cellular Location	Membrane {ECO:0000250|UniProtKB:Q9Z2B3}; Multi- pass membrane protein
Tissue Location	Preferentially expressed at high levels in the retinal pigment epithelium (RPE) and Mueller cells of the neural retina.

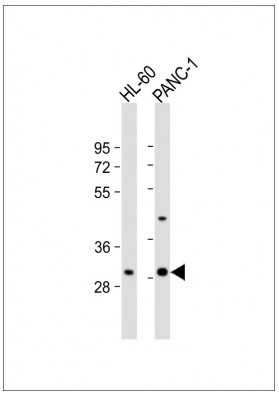
Background

This gene encodes a putative retinal G-protein coupled receptor. The gene is a member of the opsin subfamily of the 7 transmembrane, G-protein coupled receptor 1 family. Like other opsins which bind retinaldehyde, it contains a conserved lysine residue in the seventh transmembrane domain. The protein acts as a photoisomerase to catalyze the conversion of all-trans-retinal to 11-cis-retinal. The reverse isomerization occurs with rhodopsin in retinal photoreceptor cells. The protein is exclusively expressed in tissue adjacent to retinal photoreceptor cells, the retinal pigment epithelium and Mueller cells. This gene may be associated with autosomal recessive and autosomal dominant retinitis pigmentosa (arRP and adRP, respectively).

References

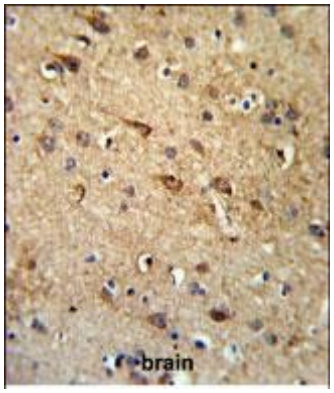
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Images

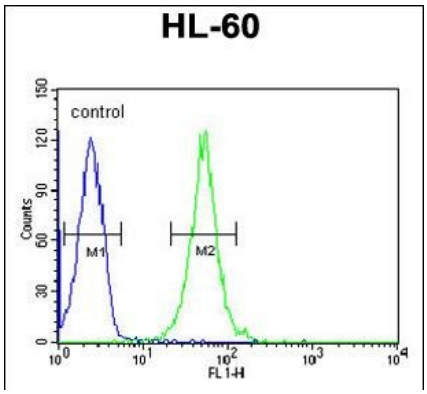


All lanes : Anti-RGR Antibody (Center) at 1:1000 dilution Lane 1: HL-60 whole cell lysate Lane 2: PANC-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 32 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

RGR Antibody (Center) (Cat. #AP9895c) IHC analysis in formalin fixed and paraffin embedded brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the RGR Antibody (Center) for



immunohistochemistry. Clinical relevance has not been evaluated.



RGR Antibody (Center) (Cat. #AP9895c) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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