10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GRK1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7003a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q15835
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB0900
Calculated MW	63526
Antigen Region	520-550

Additional Information

Gene ID	6011
Other Names	Rhodopsin kinase, RK, G protein-coupled receptor kinase 1, GRK1, RHOK
Target/Specificity	This GRK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 520-550 amino acids from the C-terminal region of human GRK1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	GRK1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRK1 (HGNC:10013)
Synonyms	RHOK
Function	Retina-specific kinase involved in the regulation of phototransduction, playing a key role in terminating the light- activated rhodopsin (RHO) signal in

	rod photoreceptors. Following light activation, it phosphorylates RHO, thereby promoting binding of S- arrestin (SAG) which then blocks transducin-mediated opsin signaling (PubMed:15946941). This rapid desensitization is essential for scotopic vision and permits rapid adaptation to changes in illumination (By similarity). May play a role in the maintenance of the outer nuclear layer in the retina (By similarity).
Cellular Location	Membrane {ECO:0000250|UniProtKB:P28327}; Lipid- anchor {ECO:0000250|UniProtKB:P28327}. Cell projection, cilium, photoreceptor outer segment {ECO:0000250|UniProtKB:Q9WVL4} Note=Subcellular location is not affected by light or dark conditions {ECO:0000250|UniProtKB:Q9WVL4}
Tissue Location	Retinal-specific. Expressed in rods and cones cells.

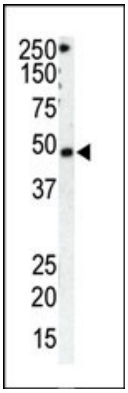
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK). The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK).

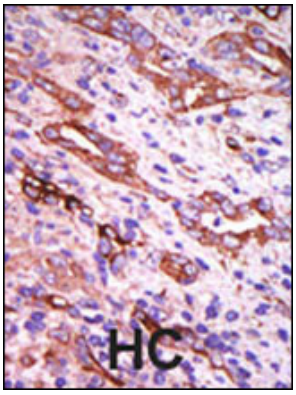
References

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Yamamoto, S., et al., Nat. Genet. 15(2):175-178 (1997).
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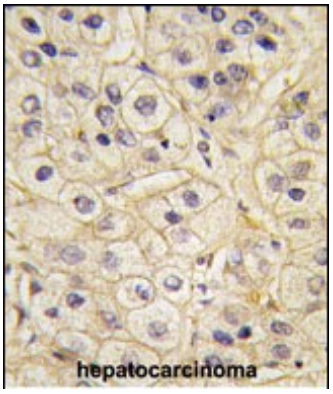
Images



The anti-GRK1 Pab (Cat. #AP7003a) is used in Western blot to detect GRK1 in HeLa cell lysate (Lane 1) and mouse spleen tissue lysate (Lane 2).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with GRK1 Antibody (C-term) (Cat.#AP7003a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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