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

PRK2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7939a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q16513
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1040
Calculated MW	112035
Antigen Region	627-658

Additional Information

Gene ID	5586
Other Names	Serine/threonine-protein kinase N2, PKN gamma, Protein kinase C-like 2, Protein-kinase C-related kinase 2, PKN2, PRK2, PRKCL2
Target/Specificity	This PRK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 627-658 amino acids from the C-terminal region of human PRK2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	PRK2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PKN2
Synonyms	PRK2, PRKCL2
Function	PKC-related serine/threonine-protein kinase and Rho/Rac effector protein

	that participates in specific signal transduction responses in the cell. Plays a role in the regulation of cell cycle progression, actin cytoskeleton assembly, cell migration, cell adhesion, tumor cell invasion and transcription activation signaling processes. Phosphorylates CTTN in hyaluronan-induced astrocytes and hence decreases CTTN ability to associate with filamentous actin. Phosphorylates HDAC5, therefore lead to impair HDAC5 import. Direct RhoA target required for the regulation of the maturation of primordial junctions into apical junction formation in bronchial epithelial cells. Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner. Stimulates FYN kinase activity that is required for establishment of skin cell-cell adhesion during keratinocytes differentiation. Regulates epithelial bladder cells speed and direction of movement during cell migration and tumor cell invasion. Inhibits Akt pro-survival-induced kinase activity. Mediates Rho protein-induced transcriptional activation via the c-fos serum response factor (SRF). Involved in the negative regulation of ciliogenesis (PubMed:27104747).
Cellular Location	Cytoplasm. Nucleus Membrane {ECO:0000250|UniProtKB:Q8BWW9}. Cell projection, lamellipodium. Cytoplasm, cytoskeleton. Cleavage furrow. Midbody Cell junction. Note=Colocalizes with PTPN13 in lamellipodia-like structures, regions of large actin turnover. Accumulates during telophase at the cleavage furrow and concentrates finally around the midbody in cytokinesis. Recruited to nascent cell-cell contacts at the apical surface of cells. In the course of viral infection, colocalizes with HCV NS5B at perinuclear region in the cytoplasm.
Tissue Location	Ubiquitous. Expressed in numerous tumor cell lines, especially in bladder tumor cells.

Background

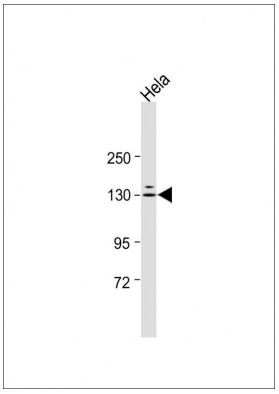
Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, 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 calcium/calmodulin-dependent kinase (CAMK) group consists of 75 kinases regulated by Ca2+/CaM and close relative family (CAMK, CAMKL, DAPK, MAPKAPK).

References

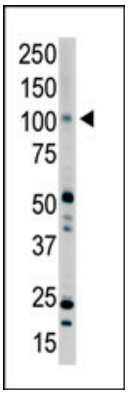
Yu, W., et al., J. Biol. Chem. 272(15):10030-10034 (1997).
Palmer, R.H., et al., FEBS Lett. 356(1):5-8 (1994).
Palmer, R.H., et al., Eur. J. Biochem. 227 (1-2), 344-351 (1995).

Images

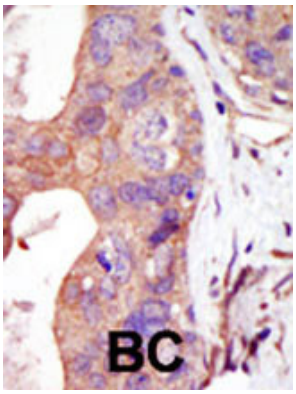
All lanes : Anti-hPRK2-E640 at 1:2000 dilution Lane 1: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG/A/M(H/L), Peroxidase



conjugated at 1/2000 dilution. Observed band size : 130kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of anti-PRK2 Pab (Cat. #AP7939a) in placenta lysate. PRK2 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



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

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