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PRPK Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8097c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q96S44
Other Accession	Q99PW4
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3505
Calculated MW	28160
Antigen Region	220-249

Additional Information

Gene ID	112858
Other Names	TP53-regulating kinase, Atypical serine/threonine protein kinase TP53RK, EKC/KEOPS complex subunit TP53RK, 36--, Nori-2, p53-related protein kinase, TP53RK, C20orf64, PRPK
Target/Specificity	This PRPK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 220-249 amino acids from the Central region of human PRPK.
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	PRPK Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TP53RK (HGNC:16197)
Function	Component of the EKC/KEOPS complex that is required for the formation of

a threonylcarbamoyl group on adenosine at position 37 (t(6)A37) in tRNAs that read codons beginning with adenine (PubMed:22912744, PubMed:27903914). The complex is probably involved in the transfer of the threonylcarbamoyl moiety of threonylcarbamoyl-AMP (TC-AMP) to the N6 group of A37 (PubMed:22912744, PubMed:27903914). TP53RK has ATPase activity in the context of the EKC/KEOPS complex and likely plays a supporting role to the catalytic subunit OSGEP (By similarity). Atypical protein kinase that phosphorylates 'Ser-15' of p53/TP53 protein and may therefore participate in its activation (PubMed:11546806).

Cellular Location Cytoplasm. Nucleus

Tissue Location Highly expressed in testis. Weakly expressed in heart kidney and spleen.

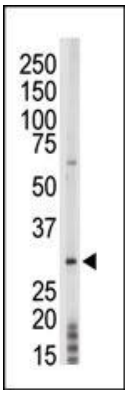
Background

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 STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

References

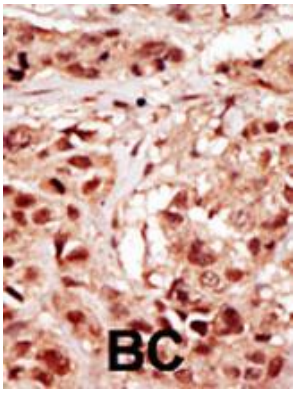
Miyoshi, A., et al., Biochem. Biophys. Res. Commun. 303(2):399-405 (2003).
Abe, Y., et al., J. Biol. Chem. 276(47):44003-44011 (2001).

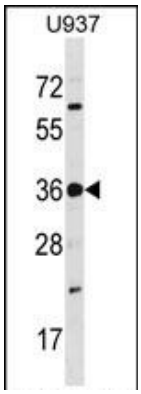
Images



The anti-PRPK Pab (Cat. #AP8097c) is used in Western blot to detect PRPK in mouse thymus tissue lysate.

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.





PRPK Antibody (V235) (Cat. #AP8097c) western blot analysis in U937 cell line lysates (35ug/lane).This demonstrates the PRPK antibody detected the PRPK protein (arrow).

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