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PNKP Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14116a

Product Information

Application	WB, E
Primary Accession	Q96T60
Other Accession	NP_009185.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34114
Calculated MW	57076
Antigen Region	109-138

Additional Information

Gene ID	11284
Other Names	Bifunctional polynucleotide phosphatase/kinase, DNA 5'-kinase/3'-phosphatase, Polynucleotide kinase-3'-phosphatase, Polynucleotide 3'-phosphatase, 2'(3')-polynucleotidase, Polynucleotide 5'-hydroxyl-kinase, PNKP
Target/Specificity	This PNKP antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 109-138 amino acids from the N-terminal region of human PNKP.
Dilution	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	PNKP Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PNKP {ECO:0000303|PubMed:10446192, ECO:0000312|HGNC:HGNC:9154}
Function	Plays a key role in the repair of DNA damage, functioning as part of both the

	non-homologous end-joining (NHEJ) and base excision repair (BER) pathways (PubMed:10446192, PubMed:10446193, PubMed:15385968, PubMed:20852255, PubMed:28453785). Through its two catalytic activities, PNK ensures that DNA termini are compatible with extension and ligation by either removing 3'-phosphates from, or by phosphorylating 5'-hydroxyl groups on, the ribose sugar of the DNA backbone (PubMed:10446192, PubMed:10446193).
Cellular Location	Nucleus. Chromosome. Note=Localizes to site of double-strand breaks.
Tissue Location	Expressed in many tissues with highest expression in spleen and testis, and lowest expression in small intestine (PubMed:10446192). Expressed in higher amount in pancreas, heart and kidney and at lower levels in brain, lung and liver (PubMed:10446193)

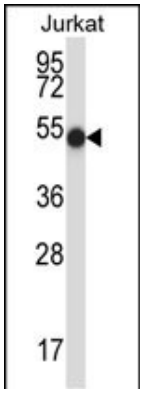
Background

This locus represents a gene involved in DNA repair. In response to ionizing radiation or oxidative damage, the protein encoded by this locus catalyzes 5' phosphorylation and 3' dephosphorylation of nucleic acids. Mutations at this locus have been associated with microcephaly, seizures, and developmental delay.

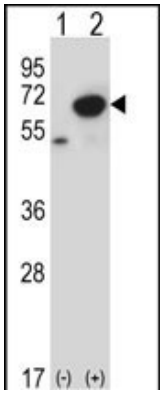
References

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Thyagarajan, B., et al. Biol. Blood Marrow Transplant. 16(8):1084-1089(2010)
Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)
Shen, J., et al. Nat. Genet. 42(3):245-249(2010)
Ali, A.A., et al. Nucleic Acids Res. 37(5):1701-1712(2009)

Images



PNKP Antibody (N-term) (Cat. #AP14116a) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the PNKP antibody detected the PNKP protein (arrow).



Western blot analysis of PNKP (arrow) using rabbit polyclonal PNKP Antibody (N-term) (Cat. #AP14116a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the PNKP gene.

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