

TPK1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP9142A

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9H3S4
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23174
Calculated MW	27265
Antigen Region	34-61

Additional Information

Gene ID	27010
Other Names	Thiamin pyrophosphokinase 1, hTPK1, Placental protein 20, PP20, Thiamine pyrophosphokinase 1, TPK1
Target/Specificity	This TPK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 34-61 amino acids from the N-terminal region of human TPK1.
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 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	TPK1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TPK1 {ECO:0000303 PubMed:11342111, ECO:0000312 HGNC:HGNC:17358}
Function	Catalyzes the phosphorylation of thiamine to thiamine pyrophosphate (TPP) utilizing UTP and therefore links the biosynthesis of TPP to pyrimidines metabolism (PubMed: 38547260). By producing thiamine pyrophosphate, a

cofactor of the mitochondrial pyruvate dehydrogenase indirectly regulates pyruvate oxidation and lipogenesis (PubMed:[38547260](#)). Although it can also catalyze thiamine phosphorylation using ATP and CTP in vitro, it does so with significantly lower efficiency and without physiological relevance evidence (PubMed:[11342111](#), PubMed:[38547260](#)).

Tissue Location

Detected in heart, kidney, testis, small intestine and peripheral blood leukocytes, and at very low levels in a variety of tissues.

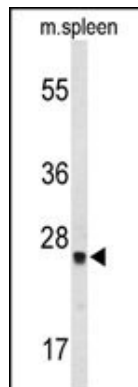
Background

TPK1 is a protein, that exists as a homodimer, which catalyzes the conversion of thiamine to thiamine pyrophosphate.

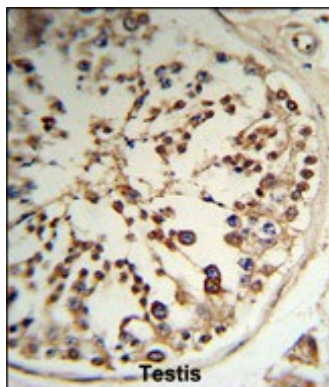
References

Bohn,H. et.al., Arch. Gynecol. 236 (4), 235-242 (1985)

Images

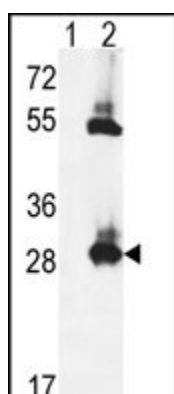


Western blot analysis of TPK1 Antibody (N-term) (Cat. #AP9142a) in mouse spleen tissue lysates (35ug/lane). TPK1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human testis tissue reacted with TPK1 Antibody (N-term), 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.

Western blot analysis of TPK1 (arrow) using rabbit polyclonal TPK1 Antibody (N-term) (Cat. #AP9142a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the TPK1 gene.



Citations

- [Impairment of Thiamine Transport at the GUT-BBB-AXIS Contributes to Wernicke's Encephalopathy.](#)

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