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Glycerol kinase (GPK2) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5534

Product Information

Application	IHC-P, WB
Primary Accession	Q14410
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60594
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	2712
Antigen Region	487-515
Other Names	Glycerol kinase 2, GK 2, Glycerokinase 2, ATP:glycerol 3-phosphotransferase 2, Glycerol kinase, testis specific 2, GK2, GKP2, GKTA
Dilution	IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This Glycerol kinase (GPK2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 487-515 amino acids from the C-terminal region of human Glycerol kinase (GPK2).
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	Glycerol kinase (GPK2) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GK2
Synonyms	GKP2, GKTA
Function	Key enzyme in the regulation of glycerol uptake and metabolism. Essential

	for male fertility and sperm mitochondrial sheath formation (By similarity). Required for proper arrangement of crescent- like mitochondria to form the mitochondrial sheath during spermatogenesis (By similarity). Can induce mitochondrial clustering through interactions with PLD6 and up-regulation of phosphatidic acid synthesis in the mitochondria (PubMed:28852571).
Cellular Location	Mitochondrion outer membrane {ECO:0000250|UniProtKB:Q9WU65}; Single-pass type IV membrane protein {ECO:0000250|UniProtKB:Q9WU65}. Cytoplasm. Note=In sperm the majority of the enzyme is bound to mitochondria {ECO:0000250|UniProtKB:Q9WU65}
Tissue Location	Testis-specific (PubMed:33536340). Expressed in the midpiece of spermatozoa (PubMed:28852571)

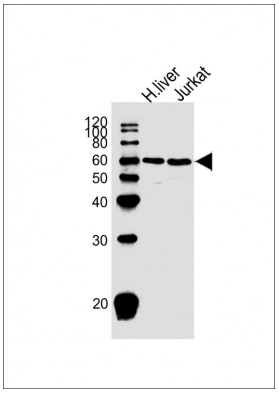
Background

The human glycerol kinase gene family consists of at least 3 expressed loci. The GK1 locus on Xp21.3 is the site of mutations (deletions) causing glycerol kinase deficiency. It comprises 19 exons and is probably ancestral to several other genes which, because they are intronless, are suspected of having arisen by reverse transcriptase mediated events. These include 2 genes on chromosome 4. They are expressed as a single mRNA species in testis where expression is at a high level.

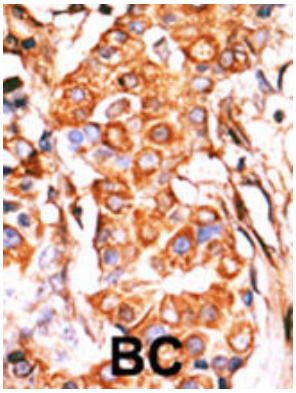
References

Sargent, C.A., et al., Hum. Mol. Genet. 3(8):1317-1324 (1994).

Images



All lanes : Anti-GPK2/3 Antibody (T502) at 1:1000 dilution Lane 1: human liver lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 61 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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.