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# Glycerol kinase (GPK2) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7131b

## Product Information

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| **Application** | WB, IHC-P, E |
| **Primary Accession** | Q14410 |
| **Other Accession** | P32189, Q0IID9, Q4R4D5, Q14409 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Monkey, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB5325 |
| **Calculated MW** | 60594 |
| **Antigen Region** | 487-515 |

## Additional Information

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| **Gene ID** | 2712 |
| **Other Names** | Glycerol kinase 2, GK 2, Glycerokinase 2, ATP:glycerol 3-phosphotransferase 2, Glycerol kinase, testis specific 2, GK2, GKP2, GKTA |
| **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). |
| **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** | Glycerol kinase (GPK2) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | GK2 |
| **Synonyms** | GKP2, GKTA |

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| **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) |

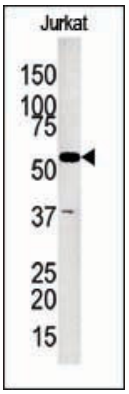
## Background

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.

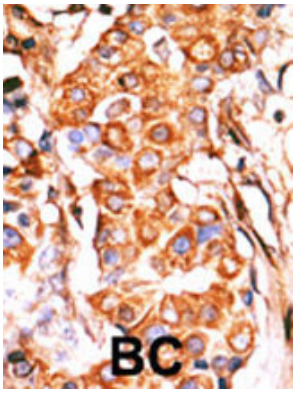
## References

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

## Images




The anti-GKP2 Pab (Cat. #AP7131b) is used in Western blot to detect GKP2 in Jurkat 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 AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.