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# PGK1 Antibody (Center S320)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5171

## Product Information

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| **Application** | IHC-P, WB |
| **Primary Accession** | P00558 |
| **Other Accession** | Q60HD8, Q5J7W1 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Rat, Monkey |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 44615 |
| **Isotype** | Rabbit IgG |
| **Antigen Source** | HUMAN |

## Additional Information

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| **Gene ID** | 5230 |
| **Antigen Region** | 305-334 |
| **Other Names** | PGK1; PGKA; Phosphoglycerate kinase 1; Cell migration-inducing gene 10 protein; Primer recognition protein 2 |
| **Dilution** | IHC-P~~1:100~500 WB~~1:1000 |
| **Target/Specificity** | This PGK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 305-334 amino acids from the Central region of human PGK1. |
| **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** | PGK1 Antibody (Center S320) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | PGK1 ( HGNC:8896) |
| **Synonyms** | PGKA |

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| **Function** | Catalyzes one of the two ATP producing reactions in the glycolytic pathway via the reversible conversion of 1,3- diphosphoglycerate to 3-phosphoglycerate (PubMed:30323285, PubMed:7391028). Both L- and D-forms of purine and pyrimidine nucleotides can be used as substrates, but the activity is much lower on pyrimidines (PubMed:18463139). In addition to its role as a glycolytic enzyme, it seems that PGK1 acts as a polymerase alpha cofactor protein (primer recognition protein) (PubMed:2324090). Acts as a protein kinase when localized to the mitochondrion where it phosphorylates pyruvate dehydrogenase kinase PDK1 to inhibit pyruvate dehydrogenase complex activity and suppress the formation of acetyl- coenzyme A from pyruvate, and consequently inhibit oxidative phosphorylation and promote glycolysis (PubMed:26942675, PubMed:36849569). May play a role in sperm motility (PubMed:26677959). |
| **Cellular Location** | Cytoplasm, cytosol. Mitochondrion matrix. Note=Hypoxic conditions promote mitochondrial targeting (PubMed:26942675). Targeted to the mitochondrion following phosphorylation by MAPK1/ERK2, cis-trans isomerization by PIN1, and binding to mitochondrial circRNA mcPGK1 (PubMed:36849569). |
| **Tissue Location** | Mainly expressed in spermatogonia. Localized on the principle piece in the sperm (at protein level). Expression significantly decreased in the testis of elderly men |

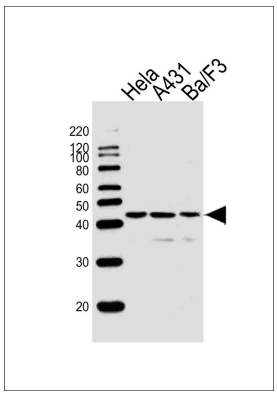
## Background

Also known as ATP:3-phosphoglycerate 1-phosphotransferase, this major enzyme in glycolysis catalyzes the reversible conversion of 1,3-diphosphoglycerate to 3-phosphoglycerate, generating one molecule of ATP. Phosphoglycerate kinase not only functions in glycolysis but is secreted by tumor cells and is proposed to participate in the angiogenic process as a disulfide reductase. Mutations in PGK1 may be associated with hemolytic anemia.

## References

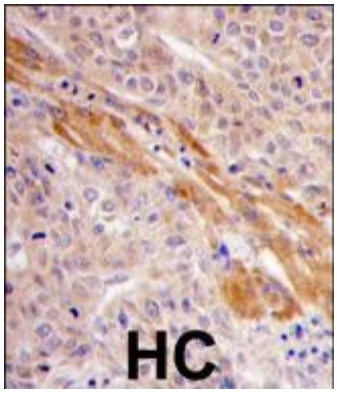

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## Images




Western blot analysis of lysates from Hela,A431,mouse Ba/F3 cell line (from left to right), using PGK1 Antibody (S320)(Cat. #AW5171). AW5171 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.

Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PGK1 Antibody




(Center S320)(Cat.#AW5171), 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.

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