

PGK1 Antibody (Center S320)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5171

Specification

PGK1 Antibody (Center S320) - Product Information

Application	WB, IHC-P,E
Primary Accession	P00558
Other Accession	Q60HD8 , Q5J7W1
Reactivity	Human, Mouse
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=45;M=45;Rat=45 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

PGK1 Antibody (Center S320) - Additional Information

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
WB~~1:1000
IHC-P~~1:10~50

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.

PGK1 Antibody (Center S320) - Protein Information

Name PGK1**Synonyms** PGKA**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).

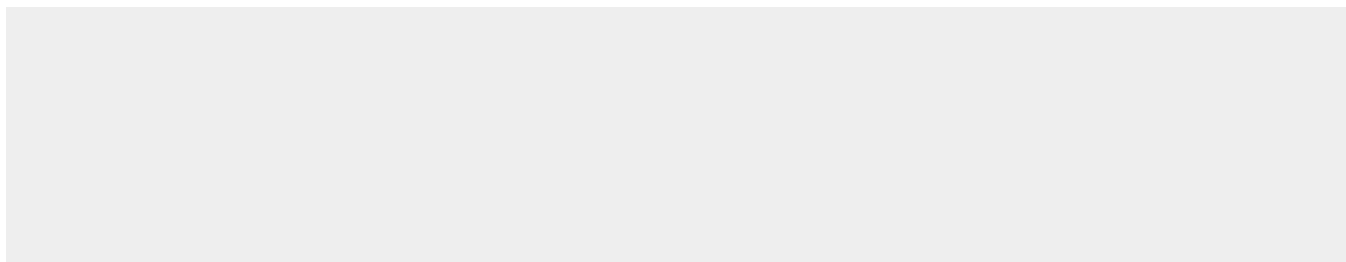
Tissue Location

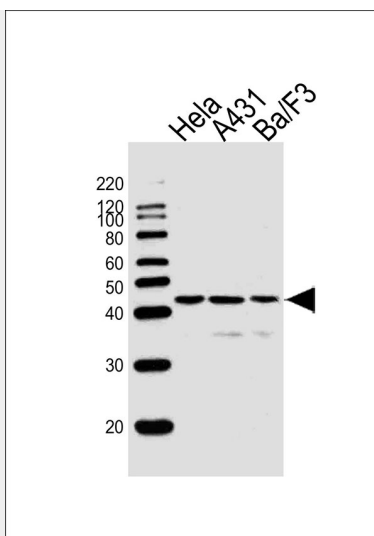
Mainly expressed in spermatogonia. Localized on the principle piece in the sperm (at protein level). Expression significantly decreased in the testis of elderly men

PGK1 Antibody (Center S320) - Protocols

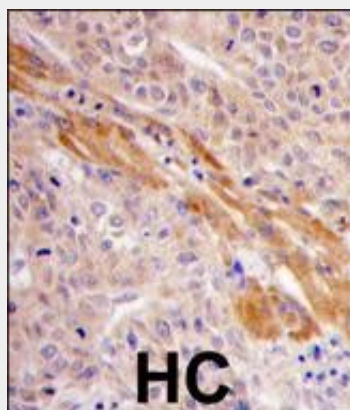
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PGK1 Antibody (Center S320) - 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 20 µg 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.

PGK1 Antibody (Center S320) - 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.

PGK1 Antibody (Center S320) - References

- Shetty, S., et al., Am. J. Respir. Cell Mol. Biol. 31(1):100-106 (2004).
- Daly, E.B., et al., Biochim. Biophys. Acta 1691(1):17-22 (2004).
- Daly, E.B., et al., Int. J. Biol. Markers 19(2):170-172 (2004).
- Saito, Y., et al., Biochem. Biophys. Res. Commun. 314(2):396-402 (2004).
- Krishnan, P., et al., J. Biol. Chem. 278(38):36726-36732 (2003).