

PGK1 Antibody (Center S320)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7169a

Specification

PGK1 Antibody (Center S320) - Product Information

Application	WB, IHC-P,E
Primary Accession	P00558
Other Accession	Q60HD8 , Q5J7W1
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	305-334

PGK1 Antibody (Center S320) - Additional Information

Gene ID 5230

Other Names

Phosphoglycerate kinase 1, Cell migration-inducing gene 10 protein, Primer recognition protein 2, PRP 2, PGK1, PGKA

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.

Dilution

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

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

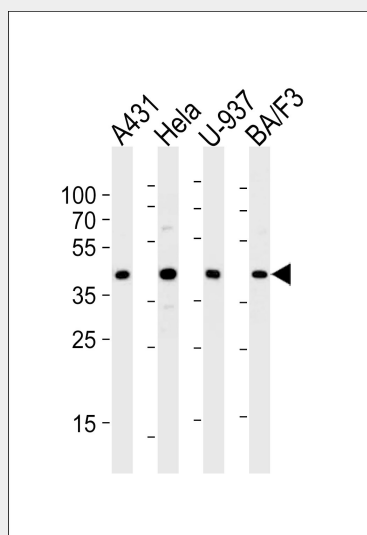
Mainly expressed in spermatogonia. Localized on the principle piece in the sperm (at protein level). Expression significantly decreased in the testis of elderly men

PGK1 Antibody (Center S320) - Protocols

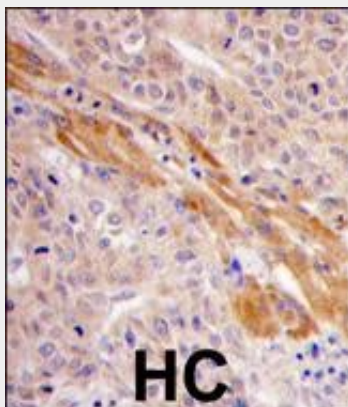
Provided below are standard protocols that you may find useful for product applications.

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

PGK1 Antibody (Center S320) - Images



Western blot analysis of lysates from A431, Hela, U-937, BA/F3 cell line (from left to right), using PGK1 Antibody (S320) (Cat. #AP7169a). AP7169a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PGK1 Antibody (Center S320)(Cat.#AP7169a), 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).

PGK1 Antibody (Center S320) - Citations

- [A biotinylated analog of the anti-proliferative prostaglandin A1 allows assessment of PPAR-independent effects and identification of novel cellular targets for covalent modification.](#)