

**PGK1 Antibody**  
**Rabbit mAb**  
**Catalog # AP90539****Specification**

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**PGK1 Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">P00558</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
MGC117307; MGC142128; MGC8947; MIG10; PGKA; PGK1; PRP2;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	44615 Da

**PGK1 Antibody - Additional Information**

Dilution	WB~~1:1000 FC~~1:10~50 ICC~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human PGK1
Description	The PGK1 gene encodes phosphoglycerate kinase-1, also known as ATP:3-phosphoglycerate 1-phosphotransferase (EC 2.7.2.3), which catalyzes the reversible conversion of 1,3-diphosphoglycerate to 3-phosphoglycerate during glycolysis, generating one molecule of ATP. It belongs to the phosphoglycerate kinase family and defects in PGK1 are the cause of phosphoglycerate kinase 1 deficiency (PGK1D).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**PGK1 Antibody - 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:<a href="http://www.uniprot.org/citations/30323285" target="\_blank">30323285</a>, PubMed:<a href="http://www.uniprot.org/citations/7391028" target="\_blank">7391028</a>). Both L- and D- forms of purine and pyrimidine nucleotides can be used as substrates, but the activity is much lower on pyrimidines (PubMed:<a href="http://www.uniprot.org/citations/18463139" target="\_blank">18463139</a>). In addition to its role as a glycolytic enzyme, it seems that PGK1 acts as a polymerase alpha cofactor protein (primer recognition protein) (PubMed:<a href="http://www.uniprot.org/citations/2324090" target="\_blank">2324090</a>). 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:<a href="http://www.uniprot.org/citations/26942675" target="\_blank">26942675</a>, PubMed:<a href="http://www.uniprot.org/citations/36849569" target="\_blank">36849569</a>). May play a role in sperm motility (PubMed:<a href="http://www.uniprot.org/citations/26677959" target="\_blank">26677959</a>).

**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).

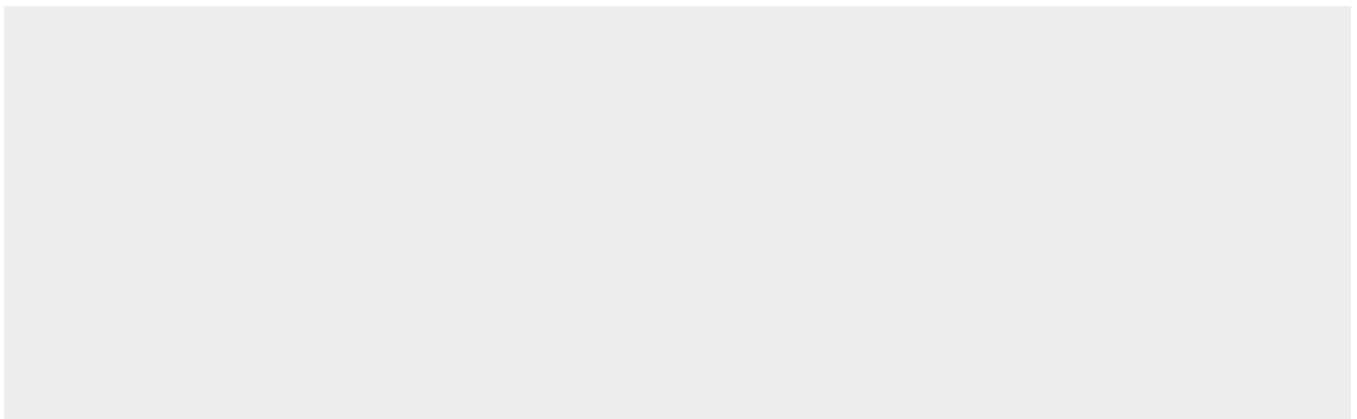
**Tissue Location**

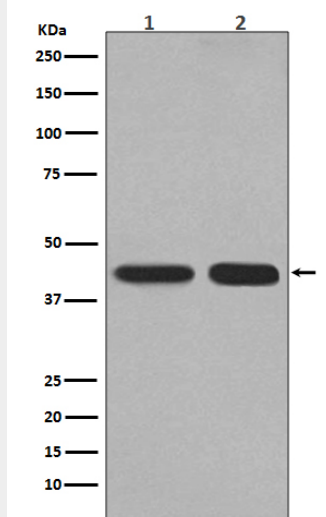
Mainly expressed in spermatogonia. Localized on the principle piece in the sperm (at protein level). Expression significantly decreased in the testis of elderly men

**PGK1 Antibody - 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 - Images**



Western blot analysis of PGK1 expression in (1) HepG2 cell lysate; (2) Mouse kidney lysate.