10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PGK1 Antibody
Rabbit mAb
Catalog # AP90539

Specification

PGK1 Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P00558
Reactivity	**Rat**
Clonality	**Monoclonal**

Other Names
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: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 - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PGK1 Antibody - Images

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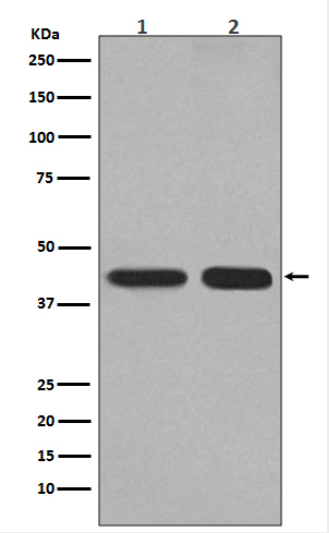

Western blot analysis of PGK1 expression in (1) HepG2 cell lysate; (2) Mouse kidney lysate.