

# PGK1 Rabbit mAb

Catalog # AP75900

# Specification

# PGK1 Rabbit mAb - Product Information

Application Primary Accession Reactivity Host Clonality Calculated MW WB, ICC <u>P00558</u> Human, Mouse, Rat Rabbit Monoclonal Antibody 44615

# PGK1 Rabbit mAb - Additional Information

Gene ID 5230

Other Names PGK1

**Dilution** WB~~1/500-1/1000 ICC~~N/A

**Format** 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.

**Storage** Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

# PGK1 Rabbit mAb - 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 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" 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 Rabbit mAb - Protocols**

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

- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- <u>Cell Culture</u>

#### PGK1 Rabbit mAb - Images





