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

# Anti-PGK1 Picoband Antibody

Catalog # ABO12460

## Product Information

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| **Application** | WB |
| **Primary Accession** | P00558 |
| **Host** | Rabbit |
| **Reactivity** | Human, Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Phosphoglycerate kinase 1(PGK1) detection. Tested with WB in Human;Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 5230 |
| **Other Names** | Phosphoglycerate kinase 1, 2.7.2.3, Cell migration-inducing gene 10 protein, Primer recognition protein 2, PRP 2, PGK1, PGKA |
| **Calculated MW** | 44615 |
| **Application Details** | Western blot, 0.1-0.5 □g/ml, Human, Rat |
| **Subcellular Localization** | Cytoplasm. |
| **Source** | Eukaryota |
| **Protein Name** | Phosphoglycerate kinase 1 |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Immunogen** | A synthetic peptide corresponding to a sequence at the C-terminus of human PGK1 (312-337aa MGLDCGPESSKKYAEAVTRAKQIVWN), different from the related mouse and rat sequences by two amino acids. |
| **Purification** | Immunogen affinity purified. |
| **Cross Reactivity** | No cross reactivity with other proteins. |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing. |

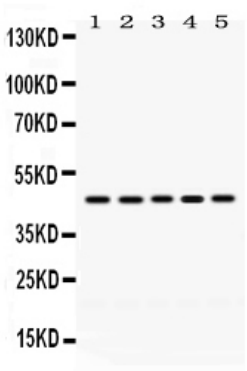
## Protein Information

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| **Name** | PGK1 ( HGNC:8896) |
| **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 |

## Background

PGK1 (Phosphoglycerate Kinase 1), also known as PGKA, is an enzyme that in humans is encoded by the PGK1 gene. The protein encoded by this gene is a glycolytic enzyme that catalyzes the conversion of 1,3-diphosphoglycerate to 3-phosphoglycerate. The encoded protein may also act as a cofactor for polymerase alpha. Additionally, this protein is secreted by tumor cells where it participates in angiogenesis by functioning to reduce disulfide bonds in the serine protease, plasmin, which consequently leads to the release of the tumor blood vessel inhibitor angiostatin. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Deficiency of the enzyme is associated with a wide range of clinical phenotypes hemolytic anemia and neurological impairment. Pseudogenes of this gene have been defined on chromosomes 19, 21 and the X chromosome.

## Images




Anti- PGK1 Picoband antibody, ABO12460, Western blottingAll lanes: Anti PGK1 (ABO12460) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: Rat Brain Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: 22RV1 Whole Cell Lysate at 40ugLane 5: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 45KDObserved bind size: 45KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.