

Anti-PGK1 Picoband Antibody
Catalog # ABO12460**Specification**

Anti-PGK1 Picoband Antibody - Product Information

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.

Anti-PGK1 Picoband Antibody - Additional Information

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 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization

Cytoplasm.

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 MGLDCGPESKKYAEAVTRAKQIVWN), 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 reconstitution, 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.

Anti-PGK1 Picoband 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](http://www.uniprot.org/citations/30323285), PubMed:[7391028](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/26942675), PubMed:[36849569](http://www.uniprot.org/citations/36849569)). May play a role in sperm motility (PubMed:[26677959](http://www.uniprot.org/citations/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

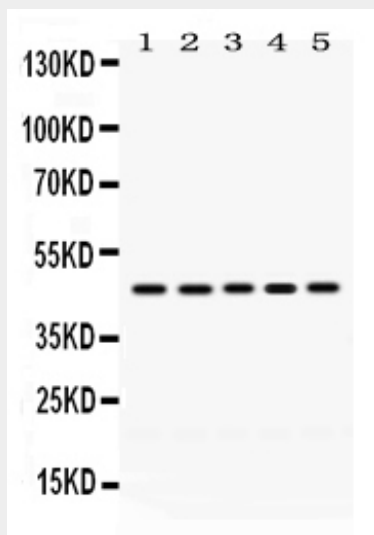
Anti-PGK1 Picoband Antibody - Protocols

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](#)

Anti-PGK1 Picoband Antibody - Images



Anti- PGK1 Picoband antibody, ABO12460, Western blotting All lanes: Anti PGK1 (ABO12460) at 0.5ug/ml
Lane 1: Rat Liver Tissue Lysate at 50ug
Lane 2: Rat Brain Tissue Lysate at 50ug
Lane 3: HELA Whole Cell Lysate at 40ug
Lane 4: 22RV1 Whole Cell Lysate at 40ug
Lane 5: COLO320 Whole Cell Lysate at 40ug
Predicted bind size: 45KD
Observed bind size: 45KD

Anti-PGK1 Picoband Antibody - 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.