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Anti-PGK1 Antibody

Catalog # ABO11352

Product Information

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

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Cytoplasm.
Source	Eukaryota
Protein Name	Phosphoglycerate kinase 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human PGK1(166-180aa FGTAHRAHSSMVGVN), identical to the related rat and mouse sequences.
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.
Sequence Similarities	Belongs to the phosphoglycerate kinase family.

Protein Information

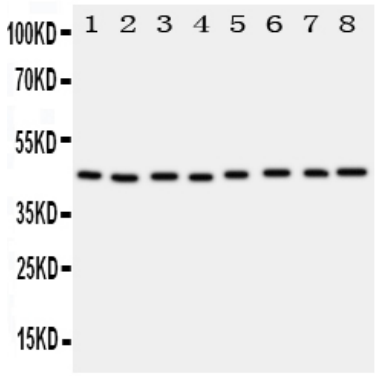
Name	PGK1 (HGNC:8896)
Synonyms	PGKA
Function	Catalyzes one of the two ATP producing reactions in the glycolytic pathway via the reversible conversion of 1,3- diphosphoglycerate to 3-phosphoglycerate (PubMed:30323285, PubMed:7391028). Both L- and D-forms of purine and pyrimidine nucleotides can be used 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

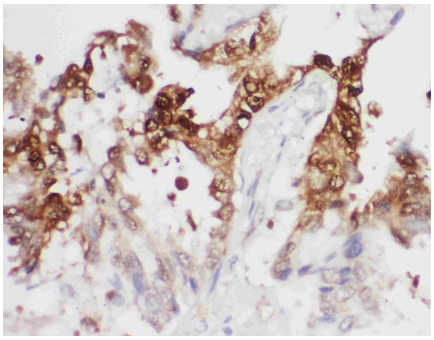
Background

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. And 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 antibody, ABO11352, Western blottingLane 1: Rat Liver Tissue LysateLane 2: Rat Brain Tissue LysateLane 3: Rat Lung Tissue LysateLane 4: A431 Cell LysateLane 5: COLO320 Cell LysateLane 6: HELA Cell LysateLane 7: A549 Cell LysateLane 8: JURKAT Cell Lysate





Anti-PGK1 antibody, ABO11352, IHC(P)IHC(P): Human Lung Cancer Tissue

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