

KD-Validated Anti-Phosphoglycerate Kinase 1 Mouse Monoclonal Antibody
Mouse monoclonal antibody
Catalog # AGI1789**Specification****KD-Validated Anti-Phosphoglycerate Kinase 1 Mouse Monoclonal Antibody - Product Information**

Application	WB, ICC
Primary Accession	P00558
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG
Calculated MW	Predicted, 45 kDa, observed, 44 kDa kDa
Gene Name	PGK1
Aliases	PGK1; Phosphoglycerate Kinase 1; Cell Migration-Inducing Gene 10 Protein; Primer Recognition Protein; EC 2.7.2.3; PRP; PGKA; Epididymis Secretory Sperm Binding Protein Li 68p; HEL-S-68p; MIG10
Immunogen	Recombinant protein of human PGK1

KD-Validated Anti-Phosphoglycerate Kinase 1 Mouse Monoclonal Antibody - Additional Information

Gene ID	5230
Other Names	
Phosphoglycerate kinase 1, 2.7.11.1, 2.7.2.3, Cell migration-inducing gene 10 protein, Primer recognition protein 2, PRP 2, PGK1, PGKA	

KD-Validated Anti-Phosphoglycerate Kinase 1 Mouse Monoclonal 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

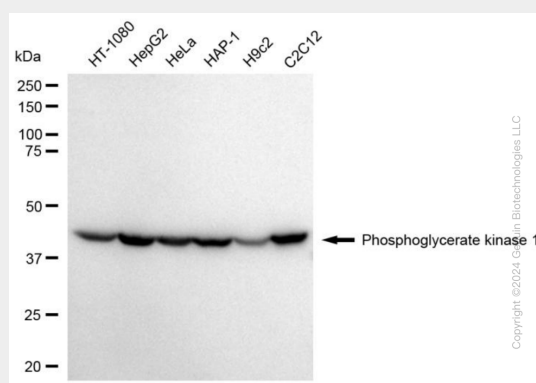
Mainly expressed in spermatogonia. Localized on the principle piece in the sperm (at protein level). Expression significantly decreased in the testis of elderly men

KD-Validated Anti-Phosphoglycerate Kinase 1 Mouse Monoclonal Antibody - Protocols

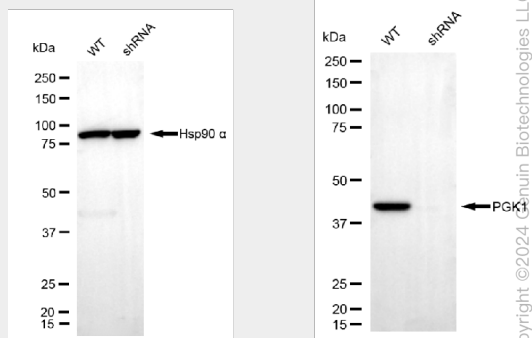
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

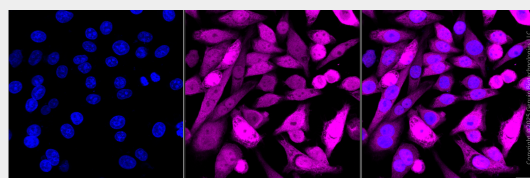
KD-Validated Anti-Phosphoglycerate Kinase 1 Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-Phosphoglycerate kinase 1 antibody (Cat#AGI1789). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Phosphoglycerate kinase 1 antibody (Cat#AGI1789, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-phosphoglycerate kinase 1 antibody (Cat#AGI1789). Phosphoglycerate kinase 1 expression in wild-type (WT) and phosphoglycerate kinase 1 (PGK1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-phosphoglycerate kinase 1 antibody (Cat#AGI1789, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Immunocytochemical staining of HepG2 cells with anti-Phosphoglycerate kinase 1 antibody (Cat#AGI1789, 1:1,000). Nuclei were stained blue with DAPI; Phosphoglycerate kinase 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar, 20 µm.