

# PGK1/2 (H-300): sc-28784

## BACKGROUND

Phosphoglycerate kinases 1/2 (PGK1/2, (ATP:3-phospho-D-glycerate 1-phosphotransferase, EC 2.7.2.3) are somatically expressed, glycolytic enzymes that catalyze the transfer of a phosphoryl group from the acyl phosphate of 1,3-biphosphoglycerate to ADP, thereby forming ATP and 3-phosphoglycerate. The human PGK gene is interrupted by 10 introns and spans 23 kb, and is X chromosome-linked at position Xq11-Xq13, a region implicated in prostate cancer, androgen insensitivity, perineal hypospadias and other genetic abnormalities. In addition to influencing glycolysis, the 49 kDa PGK1 is secreted by tumor cells and contributes to proliferative angiogenic processes as a disulfide reductase. PGK1 mediated reduction of disulphide bonds in the serine proteinase plasmin initiates the release of the tumor blood vessel inhibitor angiostatin, an event that is critical for blood vessel formation or angiogenesis in tumor expansion and metastasis.

## REFERENCES

1. Michelson, A.M., et al. 1985. Structure of the human phosphoglycerate kinase gene and the intron-mediated evolution and dispersal of the nucleotide-binding domain. *Proc. Natl. Acad. Sci. USA* 82: 6965-6969.
2. Ogino, T., et al. 1999. Involvement of a cellular glycolytic enzyme, phosphoglycerate kinase, in Sendai virus transcription. *J. Biol. Chem.* 274: 35999-36008.
3. Riley, D.E., et al. 1999. A hemizygous short tandem repeat polymorphism 3' to the human phosphoglycerate kinase gene. *Mol. Biol. Rep.* 26: 159-165.

## CHROMOSOMAL LOCATION

Genetic locus: PGK2 (human) mapping to 6p12.3; Pkg2 (mouse) mapping to 17 B2, Pkg1 (mouse) mapping to X D.

## SOURCE

PGK1/2 (H-300) is a rabbit polyclonal antibody raised against amino acids 119-418 mapping at the C-terminus of PGK1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

PGK1/2 (H-300) is recommended for detection of PGK1 and PGK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). PGK1/2 (H-300) is also recommended for detection of PGK1 and PGK2 in additional species, including equine, canine, bovine, porcine and avian.

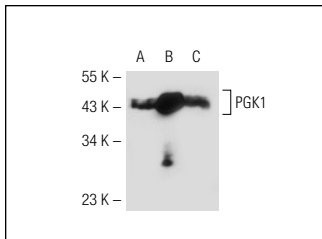
Molecular Weight of PGK1/2: 45 kDa.

Positive Controls: PGK1 (m): 293T Lysate: sc-12251, PGK1 (h2): 293T Lysate: sc-112139 or NIH/3T3 whole cell lysate: sc-2210.

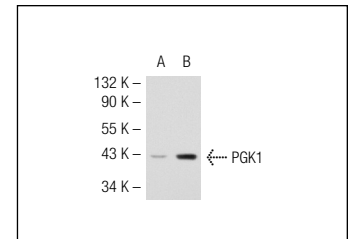
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PGK1/2 (H-300): sc-28784. Western blot analysis of PGK1 expression in non-transfected 293T: sc-117752 (A), mouse PGK1 transfected 293T: sc-122519 (B) and HeLa (C) whole cell lysates.



PGK1/2 (H-300): sc-28784. Western blot analysis of PGK1 expression in non-transfected: sc-117752 (A) and human PGK1 transfected: sc-112139 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Cooper, T.K., et al. 2010. The haploinsufficient col3a1 mouse as a model for vascular ehlers-danlos syndrome. *Vet. Pathol.* 47: 1028-1039.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Satisfaction  
Guaranteed

Try **PGK1/2 (A-5): sc-48342** or **PGK1/2 (A-2): sc-166432**, our highly recommended monoclonal alternatives to PGK1/2 (H-300).