

# PGK1/2 (E-20): sc-23805

## 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-bisphosphoglycerate to ADP, thereby forming ATP and 3-phosphoglycerate. The human PGK gene is interrupted by 10 introns and spans 23 kilobases, 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 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.

## CHROMOSOMAL LOCATION

Genetic locus: PGK1 (human) mapping to Xq13.3, PGK2 (human) mapping to 6p12.3; Pkg1 (mouse) mapping to X D, Pkg2 (mouse) mapping to 17 B2.

## SOURCE

PGK1/2 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-23805 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PGK1/2 (E-20) 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 (E-20) is also recommended for detection of PGK1 and PGK2 in additional species, including equine, canine, bovine, porcine and avian.

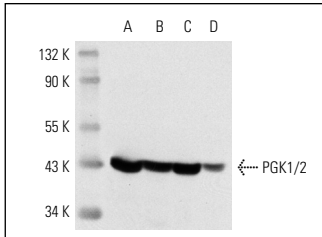
Molecular Weight of PGK1/2: 45 kDa.

Positive Controls: PGK1 (m): 293T Lysate: sc-122519, PGK1 (h2): 293T Lysate: sc-112139 or NIH/3T3 whole cell lysate: sc-2210.

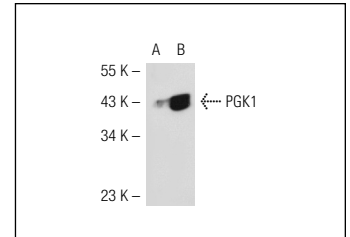
## STORAGE

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

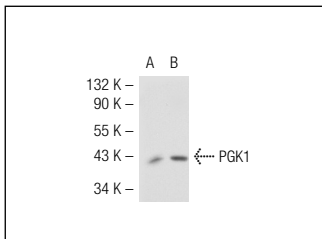
## DATA



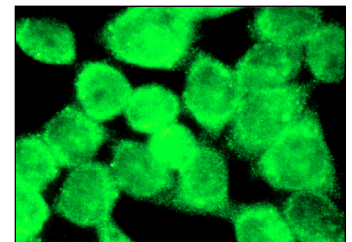
PGK1/2 (E-20): sc-23805. Western blot analysis of PGK1/2 expression in HeLa (A), JAR (B), JEG-3 (C) and NIH/3T3 (D) whole cell lysates.



PGK1/2 (E-20): sc-23805. Western blot analysis of PGK1 expression in non-transfected: sc-117752 (A) and mouse PGK1 transfected: sc-122519 (B) 293T whole cell lysates.



PGK1/2 (E-20): sc-23805. Western blot analysis of PGK1 expression in non-transfected: sc-117752 (A) and human PGK1 transfected: sc-112139 (B) 293T whole cell lysates.



PGK1/2 (E-20): sc-23805. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Merkulova, M., et al. 2011. Aldolase directly interacts with ARNO and modulates cell morphology and acidic vesicle distribution. *Am. J. Physiol., Cell Physiol.* 300: C1442-C1455.
2. Li, Z., et al. 2012. Early proteome analysis of rat pancreatic acinar AR42J cells treated with tauroolithocholic acid 3-sulfate. *Pancreatolgy* 12: 248-256.

## 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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Try **PGK1/2 (A-5): sc-48342** or **PGK1/2 (A-2): sc-166432**, our highly recommended monoclonal alternatives to PGK1/2 (E-20).