

PGK2 (F-25): sc-133905

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 PGK1 gene is interrupted by 10 introns, spans 23 kilobases and is X chromosome-linked at position Xq21.1, a region implicated in prostate cancer, androgen insensitivity, perineal hypospadias and other genetic abnormalities. In addition to influencing glycolysis, 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., Blake, C.C., Evans, S.T. and Orkin, S.H. 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., Iwama, M., Kinouchi, J., Shibagaki, Y., Tsukamoto, T. and Mizumoto, K. 1999. Involvement of a cellular glycolytic enzyme, phosphoglycerate kinase, in Sendai virus transcription. *J. Biol. Chem.* 274: 35999-36008.
3. Riley, D.E., Cho, I.R. and Krieger, J.N. 1999. A hemizygous short tandem repeat polymorphism 3' to the human phosphoglycerate kinase gene. *Mol. Biol. Rep.* 26: 159-165.
4. Lay, A.J., Jiang, X.M., Kisker, O., Flynn, E., Underwood, A., Condron, R. and Hogg, P.J. 2000. Phosphoglycerate kinase acts in tumour angiogenesis as a disulphide reductase. *Nature* 408: 869-873.
5. LocusLink Report (LocusID: 5230). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PGK2 (human) mapping to 6p12.3; Pgk2 (mouse) mapping to 17 B2.

SOURCE

PGK2 (F-25) is an affinity purified rabbit polyclonal antibody raised against synthetic PGK2 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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.

APPLICATIONS

PGK2 (F-25) is recommended for detection of PGK2 of mouse 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PGK2 siRNA (h): sc-39121, PGK2 siRNA (m): sc-39122, PGK2 shRNA Plasmid (h): sc-39121-SH, PGK2 shRNA Plasmid (m): sc-39122-SH, PGK2 shRNA (h) Lentiviral Particles: sc-39121-V and PGK2 shRNA (m) Lentiviral Particles: sc-39122-V.

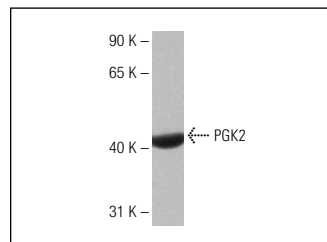
Molecular Weight of PGK2: 45 kDa.

Positive Controls: human placenta extract: sc-363772.

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).

DATA



PGK2 (F-25): sc-133905. Western blot analysis of PGK2 expression in human placenta tissue extract.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **PGK1/2 (A-5): sc-48342**, our highly recommended monoclonal alternative to PGK2 (F-25).