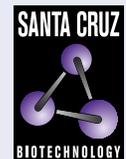


# PGK1/2 (A-5): sc-48342



The Power to Question

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: PGK1 (human) mapping to Xq21.1, PGK2 (human) mapping to 6p12.3; Pkg1 (mouse) mapping to X D, Pkg2 (mouse) mapping to 17 B2.

## SOURCE

PGK1/2 (A-5) is a mouse monoclonal antibody raised against amino acids 119-418 of PGK1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PGK1/2 (A-5) is available conjugated to agarose (sc-48342 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48342 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48342 PE), fluorescein (sc-48342 FITC), Alexa Fluor® 488 (sc-48342 AF488), Alexa Fluor® 546 (sc-48342 AF546), Alexa Fluor® 594 (sc-48342 AF594) or Alexa Fluor® 647 (sc-48342 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48342 AF680) or Alexa Fluor® 790 (sc-48342 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

PGK1/2 (A-5) is recommended for detection of PGK1 and PGK2 of mouse, rat and human origin by Western Blotting (starting dilution 1:1000, dilution range 1:1000-1:10000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

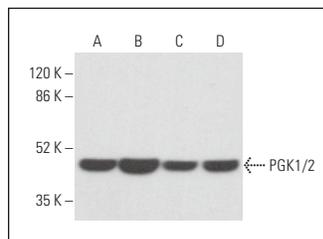
Molecular Weight of PGK1/2: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, JAR cell lysate: sc-2276 or HeLa whole cell lysate: sc-2200.

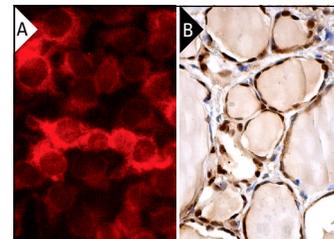
## STORAGE

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

## DATA



PGK1/2 (A-5): sc-48342. Western blot analysis of PGK1/2 expression in JAR (A), HeLa (B), Hep G2 (C) and A549 (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



PGK1/2 (A-5): sc-48342. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human thyroid tissue showing nuclear and cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

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- Davis, J.C., et al. 2020. Glucose response by stem cell-derived β cells *in vitro* is inhibited by a bottleneck in glycolysis. *Cell Rep.* 31: 107623.
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## RESEARCH USE

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