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

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; Pgk1 (mouse) mapping to 17 B2, and Pgk2 (mouse) mapping to 6p12.3; Pgk1 (mouse) mapping to X D, Pgk2 (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.

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.

APPLICATION
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: mlgA, BP-HRP: sc-01602.

SELECT PRODUCT CITATIONS

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

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

DATA