

PKM (H-59): sc-292640

BACKGROUND

In mammals, four different isoenzymes exist for pyruvate kinase. Based on their tissue distribution, the isoenzymes are designated L-type (for predominant expression in the liver), R-type (for predominant expression in red blood cells), M1-type (for predominant expression in muscle, brain and heart) and M2-type (for predominant expression in fetal tissues). Pyruvate kinases are responsible for catalyzing the final step in glycolysis: the conversion of phosphoenolpyruvate to pyruvate with the coinciding generation of ATP. The PKM (pyruvate kinase, muscle) gene encodes the M1- and M2-type isoenzymes through alternative splicing events. Both M1- and M2-type isoforms exist as tetramers and are stimulated by fructose 1,6-bisphosphate. In addition, both isoforms exhibit thyroid hormone binding activity and may be referred to as CTHBP (cytosolic thyroid hormone-binding protein) or THBP1. The M2-type isoform also interacts with Oct-4 via its C-terminal domain, functioning to enhance Oct-4 transcriptional activity.

CHROMOSOMAL LOCATION

Genetic locus: PKM (human) mapping to 15q23; Pkm2 (mouse) mapping to 9 B.

SOURCE

PKM (H-59) is a rabbit polyclonal antibody raised against amino acids 455-513 mapping near the C-terminus of PKM 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.

STORAGE

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

APPLICATIONS

PKM (H-59) is recommended for detection of PKM 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).

PKM (H-59) is also recommended for detection of PKM in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PKM siRNA (h): sc-62820, PKM siRNA (m): sc-62821, PKM shRNA Plasmid (h): sc-62820-SH, PKM shRNA Plasmid (m): sc-62821-SH, PKM shRNA (h) Lentiviral Particles: sc-62820-V and PKM shRNA (m) Lentiviral Particles: sc-62821-V.

Molecular Weight of PKM M1-type monomer: 58 kDa.

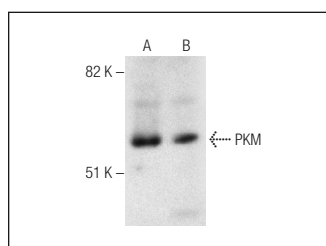
Molecular Weight of PKM M2-type monomer: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-251 MG whole cell lysate: sc-364176 or A549 whole cell lysate: sc-2413.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PKM (H-59): sc-292640. Western blot analysis of PKM expression in U-251 MG (A) and A549 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Marzano, V., et al. 2012. Proteomic profiling of ATM kinase proficient and deficient cell lines upon blockage of proteasome activity. *J. Proteomics* 75: 4632-4646.
- Lakhkar, A., et al. 2016. 20-HETE-induced mitochondrial superoxide and inflammatory phenotype in vascular smooth muscle is prevented by glucose-6-phosphate dehydrogenase inhibition. *Am. J. Physiol. Heart Circ. Physiol.* 310: H1107-H1117.

RESEARCH USE

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

PROTOCOLS

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



Try **PKM (C-11): sc-365684** or **PKM (YY-3): sc-100538**, our highly recommended monoclonal alternatives to PKM (H-59). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PKM (C-11): sc-365684**.