

PKLR (K-16) : sc-68118

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 PKLR (pyruvate kinase, liver and RBC) gene encodes the L- and R-type isoenzymes through alternative splicing events under the control of different promoters. The R-type isoform, also known as RPK (R-type pyruvate kinase) exists as a tetramer and when functioning improperly, can result in chronic/hereditary nonspherocytic hemolytic anemia (CNSHA/HNSHA) or pyruvate kinase hyperactivity (also called high red cell ATP syndrome). The L-type isoform, alternatively known as PKL (pyruvate kinase L-type), also exists as a tetramer and is upregulated by glucose with implications in maturity-onset diabetes of the young (MODY).

CHROMOSOMAL LOCATION

Genetic locus: PKLR (human) mapping to 1q22; Pklr (mouse) mapping to 3 F1.

SOURCE

PKLR (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PKLR 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-68118 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PKLR (K-16) is recommended for detection of PKLR 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).

PKLR (K-16) is also recommended for detection of PKLR in additional species, including canine.

Suitable for use as control antibody for PKLR siRNA (h): sc-62818, PKLR siRNA (m): sc-62819, PKLR shRNA Plasmid (h): sc-62818-SH, PKLR shRNA Plasmid (m): sc-62819-SH, PKLR shRNA (h) Lentiviral Particles: sc-62818-V and PKLR shRNA (m) Lentiviral Particles: sc-62819-V.

Molecular Weight of PKLR R-type monomer: 63 kDa.

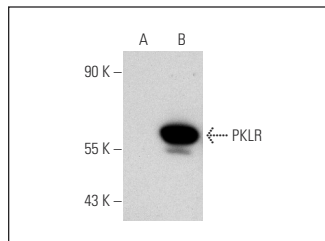
Molecular Weight of PKLR L-type monomer: 59 kDa.

Positive Controls: PKLR (h): 293T Lysate: sc-114132, PKLR (m): 293 Lysate: sc-179336 or K-562 whole cell lysate: sc-2203.

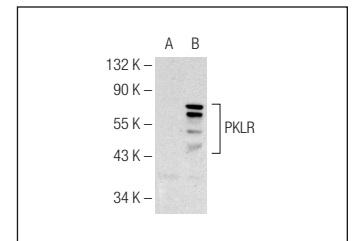
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PKLR (K-16): sc-68118. Western blot analysis of PKLR expression in non-transfected: sc-117752 (A) and human PKLR transfected: sc-114132 (B) 293T whole cell lysates.



PKLR (K-16): sc-68118. Western blot analysis of PKLR expression in non-transfected: sc-110760 (A) and mouse PKLR transfected: sc-179336 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

- Chen, J., et al. 2011. Shikonin and its analogs inhibit cancer cell glycolysis by targeting tumor pyruvate kinase-M2. *Oncogene* 30: 4297-4306.

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.

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **PKLR (E-2): sc-133222** or **PKLR (D-10): sc-166228**, our highly recommended monoclonal alternatives to PKLR (K-16).