SANTA CRUZ BIOTECHNOLOGY, INC.

p-PFK-2 car (Ser 466): sc-32966

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphofructose kinase-2 (PFK-2) belongs to the phosphoglycerate mutase family and is required for the activation of cellular glycolysis. Within the glycolysis pathway, PFK-2 regulates the synthesis and degradation of fructose 2,6-bisphosphate (F2,6BP) by enzymatically catalyzing the phosphorylation of fructose-6-phosphate to form F2,6BP. F2,6BP functions as a potent activator of 6-phosphofructo-1-kinase that can then activate the glycolysis pathway. Various tissue-specific isoforms of PFK-2 are expressed and they are differentially regulated and function as homodimers. A unique isoform, iPFK-2, is induced following proinflammatory stimuli, and it is also constituitively expressed in a variety of carcinoma cell lines, where it leads to an accumulation of intracellular F2,6BP. Activation of PFK-2 cardiac (PFK-2 car) by Insulin results from Ser 466 and Ser 483 phosphorylation and requires a PDK-1-activated protein kinase other than PKB.

CHROMOSOMAL LOCATION

Genetic locus: PFKFB2 (human) mapping to 1q31; Pfkfb2 (mouse) mapping to 1 E4.

SOURCE

p-PFK-2 car (Ser 466) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 466 phosphorylated PFK-2 car 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-32966 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-PFK-2 car (Ser 466) is recommended for detection of Ser 466 phosphorylated cardiac-type PFK-2 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).

p-PFK-2 car (Ser 466) is also recommended for detection of correspondingly phosphorylated Ser on cardiac-type PFK-2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PFK-2 car siRNA (h): sc-44675, PFK-2 car siRNA (m): sc-44676, PFK-2 car shRNA Plasmid (h): sc-44675-SH, PFK-2 car shRNA Plasmid (m): sc-44676-SH, PFK-2 car shRNA (h) Lentiviral Parti-cles: sc-44675-V and PFK-2 car shRNA (m) Lentiviral Particles: sc-44676-V.

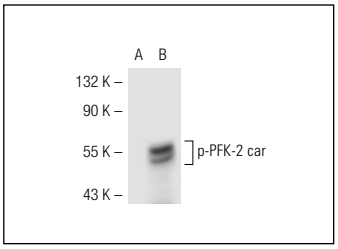
Molecular Weight of p-PFK-2 car: 55 kDa.

Positive Controls: PFK-2 car (m2): 293T Lysate: sc-122508.

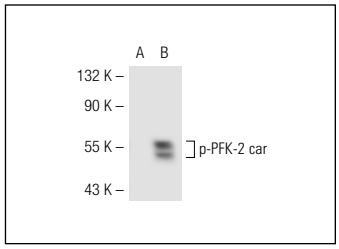
RECOMMENDED SECONDARY REAGENTS

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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



p-PFK-2 car (Ser 466): sc-32966. Western blot analysis of p-PFK-2 car phosphorylation in non-transfected: sc-117752 (**A**) and mouse p-PFK-2 car transfected: sc-122508 (**B**) 293T whole cell lysates.



p-PFK-2 car (Ser 466): sc-32966. Western blot analysis of p-PFK-2 car phosphorylation in non-transfected: sc-117752 (**A**) and mouse p-PFK-2 car transfected: sc-122507 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, M., et al. 2012. Promotion of the induction of cell pluripotency through metabolic remodeling by thyroid hormone triiodothyronine-activated PI3K/AKT signal pathway. Biomaterials 33: 5514-5523.

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.