

PFK-2 br/pl (P-15): sc-10090

BACKGROUND

Phosphofructokinase-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 for 6-phosphofructo-1-kinase that can then activate the glycolysis pathway. Various tissue-specific isoforms of PFK-2 are expressed, including the PFK-2 specific to the brain (br), the liver (liv) and the placenta (pl), and they are also differentially regulated and function as homodimers. A unique isoform, iPFK-2, is induced following proinflammatory stimuli, and it is also constitutively expressed in a variety of carcinoma cell lines, where it leads to an accumulation of intracellular F2,6BP. In addition, the expression of iPFK-2 correlates to increases in DNA synthesis, suggesting that iPFK-2 may contribute to cellular transformation of cells and enhanced cellular proliferation.

CHROMOSOMAL LOCATION

Genetic locus: PFKFB3 (human) mapping to 10p15.1; Pfkfb3 (mouse) mapping to 2 A1.

SOURCE

PFK-2 br/pl (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PFK-2 br/pl 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-10090 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PFK-2 br/pl (P-15) is recommended for detection of brain and placenta PFK-2 and iPFK-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PFK-2 br/pl (P-15) is also recommended for detection of brain and placenta PFK-2 and iPFK-2 in additional species, including equine, bovine and porcine.

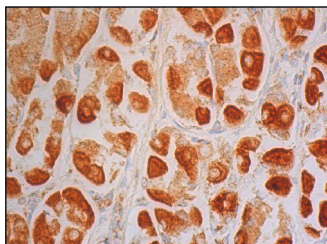
Suitable for use as control antibody for PFK-2 br/pl siRNA (h): sc-44011, PFK-2 br/pl siRNA (m): sc-39026, PFK-2 br/pl shRNA Plasmid (h): sc-44011-SH, PFK-2 br/pl shRNA Plasmid (m): sc-39026-SH, PFK-2 br/pl shRNA (h) Lentiviral Particles: sc-44011-V and PFK-2 br/pl shRNA (m) Lentiviral Particles: sc-39026-V.

Positive Controls: ECV304 cell lysate: sc-2269.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PFK-2 br/pl (P-15): sc-10090. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Desideri, E., et al. 2014. MAPK14/p38 α -dependent modulation of glucose metabolism affects ROS levels and autophagy during starvation. *Autophagy* 10: 1652-1665.

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.



Try **PFK-2 br/pl (3F3): sc-293477**, our highly recommended monoclonal alternative to PFK-2 br/pl (P-15).