

PFK-2 liv (H-45): sc-48828

BACKGROUND

Phosphofructokinases (PFK) are regulatory glycolytic enzymes that convert fructose 6-phosphate and ATP into fructose 1,6-bisphosphate (through PFK-1), fructose 2,6-bisphosphate (through PFK-2) and ADP. Human PFK-1 is tetrameric, and isoenzymes include PFK-1 muscle (PFKM, PFK-A), PFK-1 liver (PFKL, PFK-B) and PFK-1 platelet (PFKP, PFK-C, PFKF). PFK-1 is inhibited by ATP and citrate (from the tricarboxylic acid cycle). PFK-1 undergoes activation in the presence of elevated AMP. The most potent activator is fructose-2,6-bisphosphate, which is produced by PFK-2 from the same substrate, fructose 6-phosphate. PFK-2 is bifunctional and a key regulator for PFK-1. PFK-2 catalyzes the synthesis of fructose-2,6-bisphosphate and contains fructose-2,6-bisphosphatase activity that catalyzes the degradation of fructose-2,6-bisphosphate. PFK-2 is dimeric and isoenzymes include PFK-2 liver (PFKFB1, PFRX), PFK-2 cardiac (PFKFB2), PFK-2 placental (PFKFB3, inducible PFK-2) and PFK-2 testis (PFKFB4).

SOURCE

PFK-2 liv (H-45) is a rabbit polyclonal antibody raised against amino acids 229-273 mapping within an internal region of PFK-2 liv 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.

RESEARCH USE

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

APPLICATIONS

PFK-2 liv (H-45) is recommended for detection of PFK-2 bisphosphatase 1,2,3,4 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), 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 liv (H-45) is also recommended for detection of PFK-2 bisphosphatase 1,2,3,4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PFK-2 liv siRNA (h): sc-39032, PFK-2 liv siRNA (m): sc-39033, PFK-2 liv shRNA Plasmid (h): sc-39032-SH, PFK-2 liv shRNA Plasmid (m): sc-39033-SH, PFK-2 liv shRNA (h) Lentiviral Particles: sc-39032-V and PFK-2 liv shRNA (m) Lentiviral Particles: sc-39033-V.

Molecular Weight (predicted) of PFK-2 liv: 55 kDa.

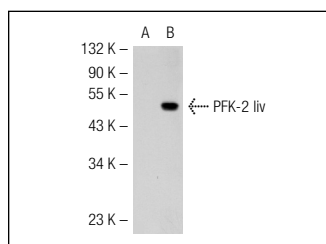
Molecular Weight (observed) of PFK-2 liv: 66 kDa.

Positive Controls: PFK-2 tes (h): 293T lysate: sc-113498 or mouse liver extract: sc-2256.

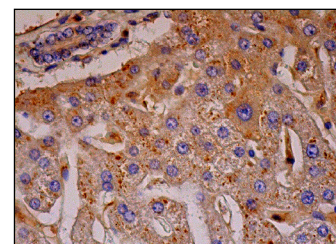
RECOMMENDED SECONDARY REAGENTS

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 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 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PFK-2 liv (H-45): sc-48828. Western blot analysis of PFK-2 liv expression in non-transfected: sc-117752 (A) and human PFK-2 liv transfected: sc-113498 (B) 293T whole cell lysates.



PFK-2 liv (H-45): sc-48828. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes, bile duct cells and hepatic sinusoid cells.

SELECT PRODUCT CITATIONS

1. Cosin-Roger, J., et al. 2013. Identification of a novel Pfkfb1 mRNA variant in rat fetal liver. *Biochem. Biophys. Res. Commun.* 431: 36-40.

PROTOCOLS

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