

PFKFB2 (G-7): sc-515528

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, and 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).

REFERENCES

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3. Zeitschel, U., et al. 2002. Changes in activity and expression of phosphofructokinase in different rat brain regions after basal forebrain cholinergic lesion. *J. Neurochem.* 83: 371-380.
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5. Sotgia, F., et al. 2003. Phosphofructokinase muscle-specific isoform requires caveolin-3 expression for plasma membrane recruitment and caveolar targeting: implications for the pathogenesis of caveolin-related muscle diseases. *Am. J. Pathol.* 163: 2619-2634.
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CHROMOSOMAL LOCATION

Genetic locus: PFKFB2 (human) mapping to 1q32.2; Pfkfb2 (mouse) mapping to 1 E4.

RESEARCH USE

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

SOURCE

PFKFB2 (G-7) is a mouse monoclonal antibody raised against amino acids 6-305 mapping near the N-terminus of PFKFB2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PFKFB2 (G-7) is recommended for detection of PFKFB2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for PFKFB2 siRNA (h): sc-44675, PFKFB2 siRNA (m): sc-44676, PFKFB2 shRNA Plasmid (h): sc-44675-SH, PFKFB2 shRNA Plasmid (m): sc-44676-SH, PFKFB2 shRNA (h) Lentiviral Particles: sc-44675-V and PFKFB2 shRNA (m) Lentiviral Particles: sc-44676-V.

Molecular Weight of PFKFB2: 58 kDa.

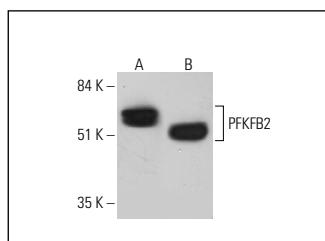
Positive Controls: mouse pancreas extract: sc-364244, Jurkat whole cell lysate: sc-2204 or human heart extract: sc-363763.

RECOMMENDED SUPPORT REAGENTS

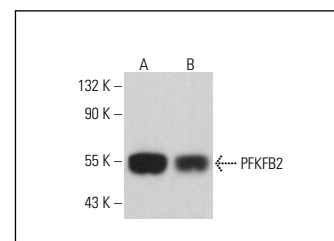
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



PFKFB2 (G-7): sc-515528. Western blot analysis of PFKFB2 expression in Jurkat whole cell lysate (A) and human heart tissue extract (B).



PFKFB2 (G-7): sc-515528. Western blot analysis of PFKFB2 expression in Jurkat whole cell lysate (A) and mouse pancreas tissue extract (B).

STORAGE

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