

PFKFB4 (h3): 293T Lysate: sc-176517

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. PFK-2 tes (6PF-2-K/Fru-2,6-P2ASE testis-type isozyme), also known as PFKFB4 (6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 4) is a 469 amino acid cytoplasmic enzyme that is involved in the degradation and synthesis of fructose 2,6-bisphosphate. Specifically expressed in testis, PFK-2 tes functions as a homodimer and is regulated via phosphorylation. Expression of PFK-2 tes is upregulated in response to hypoxic conditions in a HIF-1 α dependent mechanism. Significantly, expression of PFK-2 tes is observed in a variety of cancer cell lines, suggesting that it may play a role in the Warburg effect, the observation that malignant cells produce ATP via glycolysis followed by lactic acid fermentation in the cytosol, rather than via pyruvate in the mitochondria.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PFKFB4 (human) mapping to 3p21.31.

PRODUCT

PFKFB4 (h3): 293T Lysate represents a lysate of human PFKFB4 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

PFKFB4 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive PFKFB4 antibodies. Recommended use: 10-20 μ l per lane.

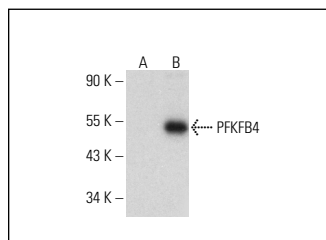
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PFKFB4 (A-1): sc-514792 is recommended as a positive control antibody for Western Blot analysis of enhanced human PFKFB4 expression in PFKFB4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



PFKFB4 (A-1): sc-514792. Western blot analysis of PFKFB4 expression in non-transfected: sc-117752 (A) and human PFKFB4 transfected: sc-176517 (B) 293T cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.