

muscle FBPase (m): 293T Lysate: sc-121871

BACKGROUND

Fructose-1,6-bisphosphatase (FBPase) mediates the key reaction of carbohydrate metabolism. It catalyzes the splitting of fructose-1,6-bisphosphate into fructose 6-phosphate and inorganic phosphate. FBPase is encoded by two genes, FBP1 and FBP2, which express the liver and muscle isoforms, respectively. FBPase appears to be present in all living organisms and is regulated by AMP inhibition in most species. Inhibition of FBPase by AMP affects the turnover of bound substrate and not its affinity for substrate. The liver FBPase isoform is composed of four identical subunits. Mutations in the FBP1 gene is inherited as an autosomal recessive disorder that leads to a deficiency of FBPase, which is associated with hypoglycemia and metabolic acidosis. Muscle FBPase is located on both sides of the z-line.

REFERENCES

1. Dzugaj, A. and Kochman, M. 1980. Purification of human liver fructose-1,6-bisphosphatase. *Biochim. Biophys. Acta* 614: 407-412.
2. Marcus, F., Rittenhouse, J., Gontero, B. and Harrsch, P.B. 1987. Function, structure and evolution of fructose-1,6-bisphosphatase. *Arch. Biol. Med. Exp.* 20: 371-378.
3. Matsuura, T., Chinen, Y., Arashiro, R., Katsuren, K., Tamura, T., Hyakuna, N. and Ohta, T. 2002. Two newly identified genomic mutations in a Japanese female patient with fructose-1,6-bisphosphatase (FBPase) deficiency. *Mol. Genet. Metab.* 76: 207-210.
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5. Rakus, D., Pasek, M., Krotkiewski, H. and Dzugaj, A. 2004. Interaction between muscle aldolase and muscle fructose 1,6-bisphosphatase results in the substrate channeling. *Biochemistry* 43: 14948-14957.
6. Gizak, A., Rakus, D. and Dzugaj, A. 2005. Nuclear localization of fructose 1,6-bisphosphatase in smooth muscle cells. *J. Mol. Histol.* 36: 243-248.

CHROMOSOMAL LOCATION

Genetic locus: Fbp2 (mouse) mapping to 13 B3.

PRODUCT

muscle FBPase (m): 293T Lysate represents a lysate of mouse muscle FBPase transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

PROTOCOLS

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

APPLICATIONS

muscle FBPase (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive muscle FBPase antibodies. Recommended use: 10-20 µl per lane.

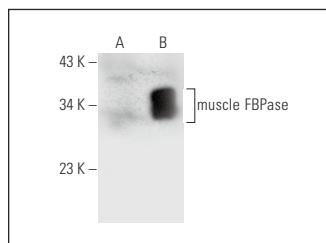
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

muscle FBPase (G-1): sc-271799 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse muscle FBPase expression in muscle FBPase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

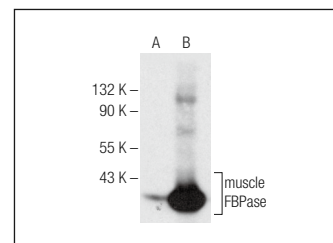
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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



muscle FBPase (G-1): sc-271799. Western blot analysis of muscle FBPase expression in non-transfected: sc-117752 (A) and mouse muscle FBPase transfected: sc-121871 (B) 293T whole cell lysates.



muscle FBPase (E-11): sc-390209. Western blot analysis of muscle FBPase expression in non-transfected: sc-117752 (A) and mouse muscle FBPase transfected: sc-121871 (B) 293T whole cell lysates.

RESEARCH USE

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